City of Fernley



NEVADA

AGENDA
Regular Meeting
City Council
Wednesday, February 15, 2023 • 5:00 PM

Mayor
Neal E. McIntyre

City Council
Ward 1 - Ryan Hanan
Ward 2 - Felicity Zoberski
Ward 3 - Stan Lau
Ward 4 - Albert Torres
Ward 5 - Fran McKay

City Manager

Fernley City Council Chambers, 595 Silver Lace Boulevard, Fernley, NV 89408

Zoom information:
Please click the following link to join the webinar: https://us02web.zoom.us/j/82966343247, or one tap mobile: 12532158782, Dial: 669 900 9128, Webinar ID: 829 6634 3247

Public Notice: This agenda has been physically posted in compliance with 241.020 at Fernley City Hall, 595 Silver Lace Blvd. In addition, this agenda has been electronically posted in compliance with NRS 241.020(3) at www.cityoffernley.org and NRS 232.2175 at https://notice.nv.gov/ To obtain further documentation regarding posting, please contact the City Clerk's Office at (775) 784-9830 or cityclerk@cityoffernley.org

Public Comment: Those wishing to address the City Council may submit public comment through the online public comment form found at https://www.cityoffernley.org/forms, or by sending an email to cityclerk@cityoffernley.org. Comments received prior to 4:00 pm the day of the meeting will be provided to City Council and added to the record but will not be read during the live meeting. Public comments received after 4 pm the day of the meeting will be included in the record by may not reach council members before action is taken. Public comment, whether on action items or public comment, is limited to three (3) minutes per person. Unused time may not be reserved by the speaker, nor allocated to another speaker. The public may comment on any matter that is not specifically included on an agenda as an action item or comment on a specific agenda item. Items not included on the agenda cannot be acted upon other than to place them on a future agenda. Additionally, if you wish you can comment in person at the meeting or use the Raise your Hand feature in Zoom (*9 if you are participating via phone).

Accommodations: City Council and staff will make reasonable efforts to assist and accommodate individuals with disabilities desiring to attend the meeting. Please contact the City Clerk's Office at (775) 784-9830 in advance so that arrangements can be made.

Supporting Material: Staff reports and supporting material for the meeting are available at the City Clerk's Office, and on the City's website at www.cityoffernley.org Pursuant to NRS 241.020(6), supporting material is made available to the general public at the same time it is provided to the City Council.

Order of Business: The presiding officer shall determine the order of the agenda. The Fernley City Council may combine two or more agenda items for consideration; remove an item from the agenda; or delay discussion relating to an item on the agenda at any time. All items are action items unless otherwise noted. Items scheduled to be heard at a specific time will be heard no earlier than the stated time but may be heard later.

1. INTRODUCTORY ITEMS

1.1. Roll Call

1.2. Public Forum

1.3. (Possible Action) Approval of Agenda

2. CONSENT AGENDA

(PLEASE NOTE: ALL MATTERS LISTED UNDER THE CONSENT AGENDA ARE CONSIDERED ROUTINE, AND MAY BE ACTED UPON BY THE COUNCIL MEMBERS IN ONE MOTION, AND WITHOUT AN EXTENSIVE HEARING. ANY MEMBER OF THE COUNCIL MAY REQUEST THAT AN ITEM BE TAKEN FROM THE CONSENT AGENDA, DISCUSSED, AND ACTED UPON SEPARATELY DURING THIS MEETING.)

2.1. (Possible Action) Approval of the Voucher Report

2.2. (Possible Action) Approval of Minutes

2.3. (Possible Action) Approval of Business Licenses

2.4. Possible action to approve a contract with Shaw Engineering for an amount not to exceed $66,500 for professional engineering services for the design of a new treated water reservoir at the City of Fernley water treatment plant as part of the surface water treatment project.

2.5. Possible Action to Approve the City of Fernley Annual Road and Street Mileage Report to be submitted to the Nevada Department of Transportation (NDOT).

2.6. For Possible Action To approve the award of a contract to Sullivan Structures for the Depot Roofing construction project for an amount of $331,914 plus a 20% contingency of $66,382.80 for a total amount of $398,296.80.

2.7. Possible Action to Approve the Will-Serve Request from Sandbank Properties II LLC for .78 ERC's for Water and 1.96 ERC's for Sewer for 250 Logan lane Commercial Building for Lyon County Parcel 021-071-28 located on Logan Lane Fernley, NV 89408.

2.8. Possible Action to Approve the Will-Serve Request from TD Fernley Properties, LLC for .25 ERC's for Water and no sewer – irrigation only for Dolan Auto Car Sales Lot for Lyon County Parcel 021-232-20 located at 1375 E. Newlands Lane Fernley, NV 89408

2.9. Possible Action to Approve the change of city representative to the NV League of Cities Legislative Committee.

3. REPORTS - THIS ITEM IS FOR VARIOUS PUBLIC ENTITY REPRESENTATIVES TO PROVIDE GENERAL INFORMATION TO THE COUNCIL AND PUBLIC. NO ACTION WILL BE TAKEN.

3.1. Reports by City Staff, City Council, and the Mayor, including but not limited to monthly statistical reports by city departments.

3.2. State of Nevada Legislative update.

4. PROCLAMATIONS BY THE MAYOR

5. PRESENTATIONS

5.1. State of the City by Mayor Neal E. McIntyre

6. PUBLIC HEARINGS

6.1. For Possible Action – Public Hearing, TSM22005 – Tentative Subdivision Map Consideration and possible action on a tentative subdivision map application from Phelps Engineering Services to allow for the development of Sherwood Villages, a 316-unit multifamily residential complex on a site ±26.25-acres in size and generally located north of Fremont Street, south of US Interstate 80, west of Wildwood Drive, and east of Vine Street

(APNs: 021-092-05, 021-092-23, 021-092-26, 021-092-27, 021-092-46, 021-092-47, 021-092-54, & 021-092-55).

6.2. For Possible Action - Public Hearing, ZMA22009 - Zoning Map Amendment
Consideration and possible action on a zoning map amendment application by ERGS, Inc. to change the zoning designation of a ±20.80-acre project site located at approximately 501 River Ranch Road (APNs: 021-281-03, 021-281-10, and portions of 021-281-04 and 021-281-09) from Industrial (I), Employment Center (EC), and General Commercial (C2) to Mixed Use (MU) to facilitate the construction of a 320-unit multi-family project called River Ranch Apartments.

7. STAFF REPORTS

7.1. Discussion and possible action to allow the Mayor to modify the organization chart.

7.2. Possible Action to Receive and Approve the Five-year Comprehensive Economic Development Strategy for the City of Fernley.

7.3. Possible Action to approve the Community Response & Resource Center project Design Development Submittal.

7.4. Discussion and Possible Action to approve the City of Fernley Maximum Allowed Operating Property Tax Rate to to Levied for Fiscal Year 2024 and for Submission to the Department of Taxation.

7.5. Discussion and Possible Action to approve a Memorandum of Understanding (MOU) between the City of Fernley and Mark IV concerning the RAISE Grant Administration.

8. PUBLIC FORUM

9. ADDRESS REQUEST(S) FOR FUTURE AGENDA ITEMS

10. ADJOURNMENT

Next Meeting: March 1st @5pm

Report Criteria:
Detail report.
Invoice detail records above $0 included.
Paid and unpaid invoices included.
Vendor.Vendor Number = {<>} 2201

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
A & K EARTH MOVERS, INC.								
304	A & K EARTH MOVERS, INC.	Pay req #6	Green Valley park construction services	01/27/2023	15,252.73		230-575-730 Improve other than Buildings	123
Total 304:					15,252.73			
ADAPCO, INC								
1751	ADAPCO, INC	133425	vectomax and briquets	01/30/2023	9,070.00	02/02/2023	100-528-617 Supplies-Chemical	123
Total 1751:					9,070.00			
AECOM TECHNICAL SERVICES, INC.								
8633	AECOM TECHNICAL SERVICES, INC.	2000717187	Gustafson bridge engineering assessment	01/31/2023	12,020.50		100-475-342 Tech Services-Other	123
Total 8633:					12,020.50			
AFLAC								
5690	AFLAC	439551	SUPPLEMENTAL INSURANCE	01/24/2023	318.92	02/02/2023	100-217400 AFLAC Insurance Payable	123
5690	AFLAC	85578	SUPPLEMENTAL INSURANCE	12/28/2022	478.38	02/02/2023	100-217400 AFLAC Insurance Payable	1222
Total 5690:					797.30			
AIT ADVANCED INTERPRETING & TRANSLATION								
8498	AIT ADVANCED INTERPRETING & TRANSLATION	202301A-FMC	Spanish Interp Heriberto Rodriguez-Guttierez	01/30/2023	160.00		100-425-330 PROF SERV-INTERPRETER	123
8498	AIT ADVANCED INTERPRETING & TRANSLATION	202301-FMC	Spanish Interp M. Molina-Contreras, B. Estrada De Moreno a	01/25/2023	320.00		100-425-330 PROF SERV-INTERPRETER	123
Total 8498:					480.00			
ANIMAL CARE CENTER								
245	ANIMAL CARE CENTER	139746	Muffin; exam and drops	01/18/2023	154.68		100-525-322 Prof Serv-Other	123
Total 245:					154.68			
ARAMARK								
1895	ARAMARK	5980065148	Shop - WD Pants Service	01/23/2023	48.53	02/02/2023	510-810-614 Supplies-Plant/Shop/Maint	123
1895	ARAMARK	5980065168	uniforms	01/23/2023	48.30	02/02/2023	100-475-616 Supplies-Safety	123
1895	ARAMARK	5980066649	SHOP MATT SERVICE	01/26/2023	77.17	02/02/2023	510-810-614 Supplies-Plant/Shop/Maint	123
1895	ARAMARK	5980066675	PS rags and rugs	01/26/2023	105.16	02/02/2023	510-840-420 Contract Services	123
1895	ARAMARK	5980066685	mats	01/26/2023	175.52	02/02/2023	100-475-614 Supplies-Plant/Shop/Maint	123

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
1895	ARAMARK	5980067227	Shop - WD Pants Service	01/30/2023	48.53		510-810-614 Supplies-Plant/Shop/Maint	123
1895	ARAMARK	5980067251	UNIFORMS	01/30/2023	43.80	02/02/2023	100-480-600 GENERAL SUPPLIES/TOOLS	123
1895	ARAMARK	5980067254	uniforms	01/30/2023	48.30	02/02/2023	100-475-616 Supplies-Safety	123
	Total 1895:				595.31			
ASSA ABLOY								
8928	ASSA ABLOY	SEI 1584760	door pivot by courts	12/22/2022	242.36	02/02/2023	100-417-420 Contract Services	1222
8928	ASSA ABLOY	SEI 1585272	installed closing arm and auto lock for court door	12/27/2022	1,233.98	02/02/2023	100-417-420 Contract Services	1222
	Total 8928:				1,476.34			
AT&T								
13	AT&T	98670 FEB 23	775-786-2229 867 0	01/20/2023	2,357.10	02/13/2023	100-417-530 Communications (Internet,Cell)	123
	Total 13:				2,357.10			
ATLAS COPCO USA HOLDINGS INC								
5884	ATLAS COPCO USA HOLDINGS INC	1123010118	Compressor Panels and install	01/28/2023	5,393.79	02/02/2023	510-840-430 Service-Repair and Maintenance	123
	Total 5884:				5,393.79			
AUTO & TRUCK ELECTRIC, INC								
8868	AUTO & TRUCK ELECTRIC, INC	43272	BATTERY INSTALL	01/25/2023	280.00	02/02/2023	100-475-430 Service-Repair and Maintenance	123
8868	AUTO & TRUCK ELECTRIC, INC	43272	BATTERY	01/25/2023	140.00	02/02/2023	510-810-610 Automotive Supplies	123
8868	AUTO & TRUCK ELECTRIC, INC	43293	BATTERY CHANGE	01/27/2023	135.00		100-475-430 Service-Repair and Maintenance	123
	Total 8868:				555.00			
BIG R OF FERNLEY								
20	BIG R OF FERNLEY	16110/5	extension cords	01/25/2023	79.98	02/02/2023	100-575-600 General Supplies	123
20	BIG R OF FERNLEY	16114/5	Extension Cord & Lock Pins	01/26/2023	105.11		510-810-614 Supplies-Plant/Shop/Maint	123
20	BIG R OF FERNLEY	16124/5	shovels	01/27/2023	135.96	02/02/2023	100-575-600 General Supplies	123
20	BIG R OF FERNLEY	16140/5	EMERGENCY TRAILER BRAKES	01/30/2023	7.22	02/02/2023	100-605-610 Automotive Supplies	123
20	BIG R OF FERNLEY	16148/5	eye bolt	01/31/2023	29.88		100-475-600 General Supplies	123
20	BIG R OF FERNLEY	16152/5	misc. screw drivers	01/31/2023	37.47		100-417-600 General Supplies	123
20	BIG R OF FERNLEY	16175/5	FIRE DEPT YOKE PULLER	02/02/2023	.96		100-126000 Intergovernmental Receivable	223
	Total 20:				396.58			
BLUE BEACON INTERNATIONAL								
200	BLUE BEACON INTERNATIONAL	4024972	VacCon wash	01/31/2023	82.00		520-810-610 Supplies-Automotive	123
200	BLUE BEACON INTERNATIONAL	60188696	truck wash	01/26/2023	68.30	02/02/2023	100-475-610 Automotive Supplies	123

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
Total 200:					150.30			
BOB'S PRINTING AND SIGNAGE								
6970	BOB'S PRINTING AND SIGNAGE	102822-2	Name plate/Bus cards T Wood	11/08/2022	13.11		100-575-601 Office Supplies	1122
6970	BOB'S PRINTING AND SIGNAGE	102822-2	Name plate/Bus cards T Wood	11/08/2022	17.48		520-810-601 Office Supplies	1122
6970	BOB'S PRINTING AND SIGNAGE	102822-2	Name plate/Bus cards T Wood	11/08/2022	8.74		100-417-601 OFFICE SUPPLIES	1122
6970	BOB'S PRINTING AND SIGNAGE	102822-2	Name plate/Bus cards T Wood	11/08/2022	21.85		100-475-601 Supplies-Office	1122
6970	BOB'S PRINTING AND SIGNAGE	102822-2	Name plate/Bus cards T Wood	11/08/2022	17.48		510-810-601 Office Supplies	1122
6970	BOB'S PRINTING AND SIGNAGE	102822-2	Name plate/Bus cards T Wood	11/08/2022	8.74		510-840-601 Office Supplies	1122
6970	BOB'S PRINTING AND SIGNAGE	11923-1	Name plate; Lydia Altick	01/31/2023	28.44		100-413-550 Printing and Postage	123
Total 6970:					115.84			
BRADY INDUSTRIES OF NEVADA LLC								
8837	BRADY INDUSTRIES OF NEVADA LLC	7827490	tissues urinal gem2	02/03/2023	466.26		100-417-614 Supplies-Plant/Shop/Maint	223
Total 8837:					466.26			
CDW GOVERNMENT INC.								
27	CDW GOVERNMENT INC.	GL55302	USB Bluetooth 5.0 adapter	01/30/2023	28.26		100-418-600 General Supplies	123
27	CDW GOVERNMENT INC.	GM45390	Hi-speed USB cable	01/31/2023	7.62		100-418-600 General Supplies	123
Total 27:					35.88			
CEMEX CONSTRUCTION MATERIALS PACIFIC								
154	CEMEX CONSTRUCTION MATERIALS PACIFIC	9447553729	Shop Stockpile - Sand & Base	01/27/2023	1,207.41		510-810-431 Repairs & Maintenance-Roads	123
Total 154:					1,207.41			
CHASE PAYMENTECH MERCHANT SERVICES								
8637	CHASE PAYMENTECH MERCHANT SERVICES	DEC 2022	Finance-Cc Processing Fees 6291057	12/31/2022	450.10	12/31/2022	100-415-609 Credit Card Fees - Govt Svcs	1222
8637	CHASE PAYMENTECH MERCHANT SERVICES	DEC 2022	Water-CC Processing Fees 6181757	12/31/2022	3,028.37	12/31/2022	510-810-609 Credit Card Fees	1222
8637	CHASE PAYMENTECH MERCHANT SERVICES	DEC 2022	Sewer-CC Processing Fees 6181757	12/31/2022	3,028.36	12/31/2022	520-810-609 Credit Card Fees	1222
8637	CHASE PAYMENTECH MERCHANT SERVICES	DEC 2022	finance-cc processing fees 6291058	12/31/2022	52.11	12/31/2022	100-415-609 Credit Card Fees - Govt Svcs	1222
8637	CHASE PAYMENTECH MERCHANT SERVICES	JAN 2023	Finance-Cc Processing Fees 6291057	01/31/2023	469.85	01/31/2023	100-415-609 Credit Card Fees - Govt Svcs	123
8637	CHASE PAYMENTECH MERCHANT SERVICES	JAN 2023	Water-CC Processing Fees 6181757	01/31/2023	2,971.79	01/31/2023	510-810-609 Credit Card Fees	123
8637	CHASE PAYMENTECH MERCHANT SERVICES	JAN 2023	Sewer-CC Processing Fees 6181757	01/31/2023	2,971.78	01/31/2023	520-810-609 Credit Card Fees	123
8637	CHASE PAYMENTECH MERCHANT SERVICES	JAN 2023	finance-cc processing fees 6291058	01/31/2023	60.78	01/31/2023	100-415-609 Credit Card Fees - Govt Svcs	123
Total 8637:					13,033.14			
COLONIAL INSURANCE								
3520	COLONIAL INSURANCE	31039340101076	E3103934 SUPPLEMENTAL INSURANC	01/01/2023	55.16	02/02/2023	100-218000 COLONIAL INSURANCE PAYABL	123

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
3520	COLONIAL INSURANCE	31039340201083	E3103934 SUPPLEMENTAL INSURANC	02/01/2023	55.16	02/02/2023	100-218000 COLONIAL INSURANCE PAYABL	223
	Total 3520:				110.32			
EMPLOYEES, CITY OF FERNLEY								
8639	EMPLOYEES, CITY OF FERNLEY	011223	REIMB BOTTLED WATER	01/12/2023	13.98	01/26/2023	100-605-600 General Supplies	123
8639	EMPLOYEES, CITY OF FERNLEY	16184916	REIMB OSHA 30 COMPLETION	01/13/2023	164.00	01/26/2023	100-528-580 Travel and Training	123
8639	EMPLOYEES, CITY OF FERNLEY	45453713RUP	REIMB RESTRICTED USE PESTICIDES	01/25/2023	50.00	01/26/2023	100-475-580 Training	123
8639	EMPLOYEES, CITY OF FERNLEY	CSO-189 NM	REIMB COLLECTION CERT RENEWAL	01/25/2023	130.00	02/02/2023	520-810-642 Permits and Licenses	123
	Total 8639:				357.98			
FARR CONSTRUCTION								
668	FARR CONSTRUCTION	App No. 8	Construction services for Farm District Road Lift Station	01/31/2023	29,588.08		520-166100 Construction In Progress	123
	Total 668:				29,588.08			
FARR WEST ENGINEERING								
6275	FARR WEST ENGINEERING	01	Fernley Map Review	12/12/2022	472.50		100-610-322 Prof Serv-Other	1222
6275	FARR WEST ENGINEERING	2	Fernley Map Review	01/06/2023	270.00		100-610-322 Prof Serv-Other	123
6275	FARR WEST ENGINEERING	2	Fernley Map Review	01/06/2023	270.00		100-228311 Engineering Reimb. (Maps)	123
	Total 6275:				1,012.50			
FLYERS ENERGY, LLC								
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - FLEET	01/15/2023	282.81		100-480-626 GASOLINE	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - VECTOR	01/15/2023	28.74		100-528-626 Gasoline	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - ANIMAL CONTROL	01/15/2023	130.32		100-525-626 Gasoline	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - COURT	01/15/2023	54.72		100-425-626 Gasoline	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - SEWER	01/15/2023	1,544.37		520-810-626 Gasoline	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - FACILITIES	01/15/2023	237.52		100-417-626 Gasoline	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - WATER DIST	01/15/2023	1,237.61		510-810-626 Gasoline	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - CDD BUILDING	01/15/2023	133.40		100-605-626 Gasoline	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - WTP	01/15/2023	47.42		510-840-626 Gasoline	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - PARKS	01/15/2023	282.09		100-575-626 Gasoline	123
18	FLYERS ENERGY, LLC	CFS-3296388	GASOLINE - STREETS	01/15/2023	1,228.84		100-475-626 Gasoline	123
	Total 18:				5,207.84			
FLYNN GIUDICI GOVERNMENT AFFAIRS LLC								
8869	FLYNN GIUDICI GOVERNMENT AFFAIRS LLC	INV-0145	Lobbyist Contract FY22/23 Feb 23	02/01/2023	5,800.00		100-413-322 Prof Serv-Other	223
	Total 8869:				5,800.00			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
Government Finance Officers Assoc.								
8927	Government Finance Officers Assoc.	14483	Cert of Achievement Review FY2022	01/17/2023	530.00	02/02/2023	100-415-322 Prof Serv-Other	123
	Total 8927:				530.00			
HACH COMPANY								
406	HACH COMPANY	13439907	Service Agreement Calibrations	01/26/2023	.00		510-166100 Construction In Progress	123
	Total 406:				.00			
HANNEMAN SERVICE								
70	HANNEMAN SERVICE	111336	propane	01/30/2023	395.30	02/02/2023	100-475-623 Propane	123
	Total 70:				395.30			
HARRIS INDUSTRIAL GASES								
8630	HARRIS INDUSTRIAL GASES	8838-1900078	SHOP SUPPLIES	01/27/2023	22.90	02/02/2023	100-480-600 GENERAL SUPPLIES/TOOLS	123
	Total 8630:				22.90			
HOMETOWN HEALTH								
4842	HOMETOWN HEALTH	24901-020	3721P GROUP HEALTH INSURANCE	02/01/2023	74,771.38	01/26/2023	100-217000 HEALTH INSURANCE PAYABLE	223
	Total 4842:				74,771.38			
IBEW Local 1245								
83	IBEW Local 1245	JAN 2023-2	UNION DUES, ONE HALF OF MONTH	01/27/2023	803.78	01/27/2023	100-219900 OTHER PAYROLL PAYABLES	123
	Total 83:				803.78			
INTERNAL REVENUE SERVICE								
7879	INTERNAL REVENUE SERVICE	JAN 2023-2	MED TAX PAYABLE, PAYROLL	01/27/2023	5,222.74	01/27/2023	100-211000 FICA PAYABLE	123
7879	INTERNAL REVENUE SERVICE	JAN 2023-2	W/HOLD TAX PAYABLE, PAYROLL	01/27/2023	17,536.07	01/27/2023	100-212000 FEDERAL WITHHOLDING PAYAB	123
7879	INTERNAL REVENUE SERVICE	JAN 2023-2	FICA TAX PAYABLE, PAYROLL	01/27/2023	223.38	01/27/2023	100-211000 FICA PAYABLE	123
	Total 7879:				22,982.19			
INTERNATIONAL CODE COUNCIL								
617	INTERNATIONAL CODE COUNCIL	1001630504	Brochures for High School Presentation	01/26/2023	68.02	02/02/2023	100-605-640 Books and Periodicals	123
	Total 617:				68.02			
J & R INVESTMENTS								
5469	J & R INVESTMENTS	BL17-5166	BUSINESS LICENSE OVERPAYMENT	01/30/2023	239.99	02/02/2023	100-320-100 Business License Fees	123

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
	Total 5469:				239.99			
KALBACHER ASSOCIATES, LLC								
8888	KALBACHER ASSOCIATES, LLC	20230201	Comprehensive Grant Serv Contract Jan 23	02/01/2023	2,250.00		100-413-322 Prof Serv-Other	223
	Total 8888:				2,250.00			
KOCH ELEVATOR CO.								
8751	KOCH ELEVATOR CO.	30831	elevator Mintenance	02/01/2023	190.00		100-417-420 Contract Services	223
	Total 8751:				190.00			
KOLVET, BRENT								
8611	KOLVET, BRENT	JAN 2023	JUDGE PRO TEM COVERAGE 1/23 & 1/26/2023	01/26/2023	596.76	01/26/2023	100-425-335 PROF SERV-SENIOR JUDGE	123
	Total 8611:				596.76			
LAVOIE ROOFING, INC.								
1360	LAVOIE ROOFING, INC.	012323	BUSINESS LICENSE OVERPAYMENT	01/23/2023	250.90	02/02/2023	100-320-100 Business License Fees	123
	Total 1360:				250.90			
LB FENCE COMPANY								
8631	LB FENCE COMPANY	1862	gate cottonwood yard	02/05/2023	2,440.00		100-475-614 Supplies-Plant/Shop/Maint	223
	Total 8631:				2,440.00			
LOWES CREDIT SERVICES								
7650	LOWES CREDIT SERVICES	002136	Heaters Cottonwood trailer	01/25/2023	113.00	02/02/2023	100-475-614 Supplies-Plant/Shop/Maint	123
7650	LOWES CREDIT SERVICES	002194	bag concrete	01/25/2023	67.20	02/02/2023	100-417-612 Building Maintenance Supplies	123
7650	LOWES CREDIT SERVICES	002322	misc supplies	01/26/2023	178.49		510-840-614 Plant/Shop/Maint. Supplies	123
7650	LOWES CREDIT SERVICES	02038	couplings	01/24/2023	11.32	02/02/2023	100-575-600 General Supplies	123
7650	LOWES CREDIT SERVICES	02053	Conduit	01/24/2023	57.18	02/02/2023	100-575-600 General Supplies	123
7650	LOWES CREDIT SERVICES	1089	gutter down spouts	01/26/2023	15.12	02/02/2023	100-417-612 Building Maintenance Supplies	123
7650	LOWES CREDIT SERVICES	2013	pallet of cold mix	01/31/2023	1,360.30		100-475-600 General Supplies	123
7650	LOWES CREDIT SERVICES	2157	Well 13 - Outdoor Light Bulbs	02/01/2023	34.14		510-810-614 Supplies-Plant/Shop/Maint	223
7650	LOWES CREDIT SERVICES	2266	air filters for cabinets signal lights	01/26/2023	68.04	02/02/2023	100-475-422 Contract-Traffic Light Mainten	123
7650	LOWES CREDIT SERVICES	2372	bag concrete	01/26/2023	40.32	02/02/2023	100-417-612 Building Maintenance Supplies	123
7650	LOWES CREDIT SERVICES	23929	Maintenance Supplies	01/31/2023	114.38	02/02/2023	510-810-614 Supplies-Plant/Shop/Maint	123
7650	LOWES CREDIT SERVICES	60592	Concrete, Batteries & Shop Supplies	01/26/2023	602.67		510-810-614 Supplies-Plant/Shop/Maint	123
	Total 7650:				2,662.16			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
LUMOS & ASSOCIATES INC								
370	LUMOS & ASSOCIATES INC	116063	Annual pavement maintenance project engineering services	01/08/2023	22,232.25		100-475-430 Service-Repair and Maintenance	123
	Total 370:				22,232.25			
LYON COUNTY CLERK/TREASURER								
106	LYON COUNTY CLERK/TREASURER	TLT Jan 23	Transient Lodging Tax	01/31/2023	1,964.71		225-227010 TLT Payable to County	123
	Total 106:				1,964.71			
MARSHALL'S SEPTIC CARE								
8509	MARSHALL'S SEPTIC CARE	I10216	Portable BMX track	02/01/2023	113.33		100-575-420 Contract Services	223
8509	MARSHALL'S SEPTIC CARE	I10217	Portable Autumn winds park	02/01/2023	113.33		100-575-420 Contract Services	223
8509	MARSHALL'S SEPTIC CARE	I10218	Portable OTP	02/01/2023	514.65		100-575-420 Contract Services	223
8509	MARSHALL'S SEPTIC CARE	I10220	Portable Green Valley park	02/01/2023	200.66		100-575-420 Contract Services	223
8509	MARSHALL'S SEPTIC CARE	I10221	Portable ITP	02/01/2023	200.66		100-575-420 Contract Services	223
8509	MARSHALL'S SEPTIC CARE	I10222	Portable Ponderosa park	02/01/2023	113.33		100-575-420 Contract Services	223
8509	MARSHALL'S SEPTIC CARE	I10228	Portable Depot	02/01/2023	113.33		100-575-420 Contract Services	223
	Total 8509:				1,369.29			
MATHEUS, SENIOR JUDGE LORI								
8042	MATHEUS, SENIOR JUDGE LORI	JAN 2023	MUNICIPAL COURT JUDGE	01/31/2023	3,750.00	01/26/2023	100-425-322 Prof Serv-Other	123
	Total 8042:				3,750.00			
MISCELLANEOUS ONE TIME VENDOR								
1111	MISCELLANEOUS ONE TIME VENDOR	01262023	REIMB MEALS	01/26/2023	22.54	01/26/2023	100-413-650 Community Support	123
	Total 1111:				22.54			
MSC INDUSTRIAL SUPPLY CO								
115	MSC INDUSTRIAL SUPPLY CO	79531366	HWY 50 water pump motor	01/24/2023	483.51	02/02/2023	520-810-430 Service-Repair and Maintenance	123
	Total 115:				483.51			
NAPA AUTO & TRUCK PARTS								
58	NAPA AUTO & TRUCK PARTS	384640	Lift Station Filters	01/05/2023	55.80		520-810-614 Supplies-Plant/Shop/Maint	123
58	NAPA AUTO & TRUCK PARTS	385624	GRADER REPAIR	01/27/2023	69.99	02/02/2023	100-475-430 Service-Repair and Maintenance	123
58	NAPA AUTO & TRUCK PARTS	385672	WIPER BLADES	01/28/2023	17.88	02/02/2023	100-475-610 Automotive Supplies	123
58	NAPA AUTO & TRUCK PARTS	386115	filter for parks	02/06/2023	19.25		100-575-430 Service-Repair and Maintenance	223
	Total 58:				162.92			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
NATIONS MEDICAL								
8502	NATIONS MEDICAL	108529	SAFETY SUPPLIES	01/25/2023	149.55	02/02/2023	100-475-616 Supplies-Safety	123
8502	NATIONS MEDICAL	108737	First aid kit supplies	01/25/2023	227.60		510-840-616 Safety Supplies	123
Total 8502:					377.15			
NEVADA COMMISSION ON ETHICS								
707	NEVADA COMMISSION ON ETHICS	N327-23-2	Commission on Ethics DEC 19 22 Assessment FY22-23	12/19/2022	2,128.89	02/02/2023	100-413-348 Tech Service-Comm on Ethics	1222
Total 707:					2,128.89			
NEVADA DEPARTMENT OF TAXATION								
6378	NEVADA DEPARTMENT OF TAXATION	TLT Jan 23	Transient Lodging Tax	01/31/2023	1,178.83		225-227015 TLT Payable to State	123
Total 6378:					1,178.83			
NEVADA SEAL & PUMP								
4339	NEVADA SEAL & PUMP	NSP5227	Hwy 50 pump deragging	01/23/2023	750.00	02/02/2023	520-810-430 Service-Repair and Maintenance	123
Total 4339:					750.00			
NEVADA STATE BANK								
5645	NEVADA STATE BANK	01252023	Increase cash drawer for City Clerk's office	01/17/2023	300.00	01/26/2023	100-101100 CHANGE DRAWER CITY CLERK'	123
Total 5645:					300.00			
NUTRIEN AG SOLUTIONS								
3033	NUTRIEN AG SOLUTIONS	50202137	peremergent	01/31/2023	3,300.00		100-575-617 Supplies-Chemical	123
3033	NUTRIEN AG SOLUTIONS	50202140	cleanTraxx	01/31/2023	3,300.00		100-575-617 Supplies-Chemical	123
Total 3033:					6,600.00			
NV ENERGY								
167	NV ENERGY	12019 JAN 23	34596505012019 ACH	12/16/2022	5,204.86	01/06/2023	510-810-622 Electricity	1222
167	NV ENERGY	13050 DEC 22	48768103613050 ACH	12/09/2022	2,244.60	12/29/2022	100-417-622 Electricity	1222
167	NV ENERGY	13818 DEC 22	34596405113818 ACH	12/29/2022	47.06	01/18/2023	100-475-622 Electricity	1222
167	NV ENERGY	13924 DEC 22	48768108113924 ACH	12/29/2022	33.28	01/18/2023	100-575-622 Electricity	1222
167	NV ENERGY	14319 NOV 22	34596405214319 ACH	12/09/2022	123.67	12/29/2022	100-575-622 Electricity	1222
167	NV ENERGY	26093 DEC 22	34596402626093 ACH	12/07/2022	1,378.98	12/27/2022	100-575-622 Electricity	1222
167	NV ENERGY	26093 JAN 23	34596402626093 ACH	01/07/2023	1,376.00	01/26/2023	100-575-622 Electricity	123
167	NV ENERGY	26100 DEC 22	34596502626100 ACH	12/07/2022	40.99	12/27/2022	520-810-622 Electricity	1222
167	NV ENERGY	26100 DEC 22	34596502626100 ACH	12/07/2022	18,329.43	12/27/2022	510-810-622 Electricity	1222
167	NV ENERGY	26100 JAN 23	34596502626100 ACH	01/07/2023	42.60	01/26/2023	520-810-622 Electricity	123
167	NV ENERGY	26100 JAN 23	34596502626100 ACH	01/07/2023	19,171.85	01/26/2023	510-810-622 Electricity	123

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
167	NV ENERGY	26445 DEC 22	34596505226445 ACH	12/28/2022	5,237.14	01/17/2023	510-840-622 Electricity	1222
167	NV ENERGY	28458 DEC 22	34596505228458 ACH	12/28/2022	10,631.88	01/17/2023	510-840-622 Electricity	1222
167	NV ENERGY	29499 NOV 22	13677906929499 ACH	12/01/2022	76.26	12/19/2022	100-475-622 Electricity	1222
167	NV ENERGY	30037 DEC 22	34596403630037 ACH	12/16/2022	35.92	01/06/2023	100-576-622 Electricity	1222
167	NV ENERGY	30672 DEC 22	213677908230672 ACH	12/29/2022	43.30	01/18/2023	100-575-622 Electricity	1222
167	NV ENERGY	34991 NOV 22	34596407734991 ACH	12/10/2022	52.90	12/30/2022	510-810-622 Electricity	1222
167	NV ENERGY	37594 NOV 22	80865904937594 ACH	12/10/2022	33.60	12/30/2022	100-475-622 Electricity	1222
167	NV ENERGY	41110 JAN 23	82190403641110 ACH	01/07/2023	36.61	12/27/2022	520-810-622 Electricity	123
167	NV ENERGY	41110JAN23	82190403641110 ACH	01/07/2023	.06	12/27/2022	520-810-622 Electricity	123
167	NV ENERGY	42683 JAN 23	82190404842683 ACH	01/07/2023	1,088.43	01/26/2023	510-810-622 Electricity	123
167	NV ENERGY	42683 JAN 23	82190404842683 ACH	01/07/2023	8,206.32	01/26/2023	520-810-622 Electricity	123
167	NV ENERGY	42683 JAN 23	82190404842683 ACH	01/07/2023	64.12	01/26/2023	100-475-622 Electricity	123
167	NV ENERGY	42683 JAN 23	82190404842683 ACH	01/07/2023	560.19	01/26/2023	100-575-622 Electricity	123
167	NV ENERGY	65197 DEC 22	34596407565197 ACH	12/09/2022	33.28	12/29/2022	510-810-622 Electricity	1222
167	NV ENERGY	67463 DEC 22	34596404867463 ACH	12/10/2022	180.68	12/30/2022	100-575-622 Electricity	1222
167	NV ENERGY	68387 NOV 22	345964082-68387	12/10/2022	33.96	12/30/2022	100-475-622 Electricity	1222
167	NV ENERGY	71493 DEC 22	271223607571493 ACH	12/29/2022	42.71	01/18/2023	100-475-622 Electricity	1222
167	NV ENERGY	84389 DEC 22	34596503684389 ACH	12/09/2022	128.34	12/29/2022	100-417-622 Electricity	1222
167	NV ENERGY	97731 DEC 22	213677908197731 ACH	12/29/2022	44.23	01/18/2023	100-575-622 Electricity	1222
167	NV ENERGY	97899 JAN 23	80865904797899 ACH	01/07/2023	16,117.64	01/26/2023	100-475-622 Electricity	123
167	NV ENERGY	98954 JAN 23	82190405098954 ACH	01/07/2023	3,553.70	12/27/2022	520-810-622 Electricity	123
Total 167:					94,194.59			
OFFICE DEPOT								
133	OFFICE DEPOT	284461754001	Printing BC Bldg Inspector	01/12/2023	23.09	02/02/2023	100-605-550 Printing and Postage	123
133	OFFICE DEPOT	284468727001	Return folders	01/20/2023	27.66-		100-413-600 General Supplies	123
133	OFFICE DEPOT	284571263001	Toner; folders; markers; tape	01/13/2023	259.58	02/02/2023	100-525-600 General Supplies	123
133	OFFICE DEPOT	285071236001	Scansnap scanner	01/13/2023	495.99	02/02/2023	100-525-605 Minor Equipment	123
133	OFFICE DEPOT	286002586001	Toner	01/13/2023	130.45		510-810-601 Office Supplies	123
133	OFFICE DEPOT	287628457001	Dual monitor mount	01/26/2023	19.00		510-840-601 Office Supplies	123
133	OFFICE DEPOT	287628457001	Dual monitor mount	01/26/2023	19.00		510-810-601 Office Supplies	123
133	OFFICE DEPOT	287628457001	Dual monitor mount	01/26/2023	18.99		100-417-601 OFFICE SUPPLIES	123
133	OFFICE DEPOT	287628457001	Dual monitor mount	01/26/2023	19.00		100-475-601 Supplies-Office	123
133	OFFICE DEPOT	287628457001	Dual monitor mount	01/26/2023	19.00		100-575-601 Office Supplies	123
133	OFFICE DEPOT	287635544001	Office Chair	01/26/2023	65.98		100-417-601 OFFICE SUPPLIES	123
133	OFFICE DEPOT	287635544001	Office Chair	01/26/2023	66.00		100-475-601 Supplies-Office	123
133	OFFICE DEPOT	287635544001	Office Chair	01/26/2023	66.00		510-810-601 Office Supplies	123
133	OFFICE DEPOT	287635544001	Office Chair	01/26/2023	66.00		510-840-601 Office Supplies	123
133	OFFICE DEPOT	287635544001	Office Chair	01/26/2023	66.00		100-575-601 Office Supplies	123
133	OFFICE DEPOT	287810947001	Highlighter; pens; push pins; folders	01/26/2023	51.59		100-610-601 Office Supplies	123
133	OFFICE DEPOT	289099327001	Return office chair	01/17/2023	103.98-	02/02/2023	100-416-600 General Supplies	123
133	OFFICE DEPOT	289099351001	Return post-its	01/17/2023	6.27-	02/02/2023	100-416-600 General Supplies	123
133	OFFICE DEPOT	290103191001	Toner	02/01/2023	104.70		100-412-600 General Supplies	223

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	Total 133:				1,352.46			
OLYMPUS AND ASSOCIATES, INC.								
3648	OLYMPUS AND ASSOCIATES, INC.	pay req 5	Sage Tank recoating final construction services	01/26/2023	7,096.13		510-166100 Construction In Progress	123
	Total 3648:				7,096.13			
O'REILLY AUTO PARTS								
6230	O'REILLY AUTO PARTS	3599-229023	seat belt	01/12/2023	138.77		100-475-610 Automotive Supplies	123
6230	O'REILLY AUTO PARTS	3599-230476	TOW ROPE	01/25/2023	144.09	02/02/2023	100-480-610 AUTOMOTIVE SUPPLIES	123
6230	O'REILLY AUTO PARTS	3599-230499	FUEL FILTER CHANGE	01/25/2023	87.54	02/02/2023	100-126000 Intergovernmental Receivable	123
6230	O'REILLY AUTO PARTS	3599-230565	LITE POST MAINT	01/26/2023	5.29	02/02/2023	100-475-430 Service-Repair and Maintenance	123
6230	O'REILLY AUTO PARTS	3599-230566	HEATER FIX	01/26/2023	92.11	02/02/2023	100-126000 Intergovernmental Receivable	123
6230	O'REILLY AUTO PARTS	3599-231059	EMERGENCY BRAKES	01/30/2023	7.99	02/02/2023	100-575-610 Automotive Supplies	123
6230	O'REILLY AUTO PARTS	3599-231258	SERPENTINE BELT	02/01/2023	17.58		100-126000 Intergovernmental Receivable	223
6230	O'REILLY AUTO PARTS	3599-231276	MARKER LIGHTS	02/01/2023	8.08		100-475-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-231381	chevy diesel truck filters	02/02/2023	41.85		100-126000 Intergovernmental Receivable	223
6230	O'REILLY AUTO PARTS	3599-231392	fire dept truck diesel solenoid	02/02/2023	330.28		100-126000 Intergovernmental Receivable	223
6230	O'REILLY AUTO PARTS	3599-231397	chevy diesel	02/02/2023	59.99		100-126000 Intergovernmental Receivable	223
6230	O'REILLY AUTO PARTS	3599-231431	dump trailer lift	02/02/2023	33.21		100-575-430 Service-Repair and Maintenance	223
6230	O'REILLY AUTO PARTS	3599-231505	return for wrong parts	02/03/2023	330.28-		100-126000 Intergovernmental Receivable	223
6230	O'REILLY AUTO PARTS	3599-232044	parts for fire dept.	02/07/2023	113.91		100-126000 Intergovernmental Receivable	223
6230	O'REILLY AUTO PARTS	3599-232045	credit memo belt buckle	01/12/2023	138.77-		100-475-610 Automotive Supplies	123
	Total 6230:				611.64			
OUT WEST BUILDINGS								
8674	OUT WEST BUILDINGS	7984	Storage container for combustibles	01/20/2023	4,995.00	02/02/2023	510-840-430 Service-Repair and Maintenance	123
	Total 8674:				4,995.00			
PAC MACHINE COMPANY, INC.								
8597	PAC MACHINE COMPANY, INC.	89334	Hwy 50 pump repair	02/02/2023	1,925.50		520-810-430 Service-Repair and Maintenance	223
	Total 8597:				1,925.50			
PACIFIC OFFICE AUTOMATION								
8929	PACIFIC OFFICE AUTOMATION	COF-MY1	CAO	01/10/2023	544.91		100-414-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY1	Utilities	01/10/2023	272.46		510-810-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY1	HR	01/10/2023	544.91		100-413-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY1	Clerk	01/10/2023	544.91		100-416-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY1	FMC	01/10/2023	544.91		100-425-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY1	Utilities	01/10/2023	272.45		520-810-550 Printing and Postage	123

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
8929	PACIFIC OFFICE AUTOMATION	COF-MY1	Main	01/10/2023	544.91		100-417-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY2	HR	01/10/2023	544.91		100-413-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY2	CAO	01/10/2023	544.91		100-414-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY2	Utilities	01/10/2023	272.46		520-810-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY2	Main	01/10/2023	544.91		100-417-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY2	Clerk	01/10/2023	544.91		100-416-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY2	Utilities	01/10/2023	272.45		510-810-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY2	FMC	01/10/2023	544.91		100-425-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY3	Utilities	01/10/2023	272.45		520-810-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY3	Main	01/10/2023	544.91		100-417-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY3	HR	01/10/2023	544.91		100-413-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY3	Utilities	01/10/2023	272.46		510-810-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY3	FMC	01/10/2023	544.91		100-425-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY3	Clerk	01/10/2023	544.91		100-416-550 Printing and Postage	123
8929	PACIFIC OFFICE AUTOMATION	COF-MY3	CAO	01/10/2023	544.91		100-414-550 Printing and Postage	123
	Total 8929:				9,808.38			
PACIFIC STORAGE COMPANY								
8876	PACIFIC STORAGE COMPANY	5141524	Shred Services	01/10/2023	66.00	02/02/2023	100-416-420 Contract Services	123
	Total 8876:				66.00			
PAPE KENWORTH								
3097	PAPE KENWORTH	11679343	SANDER WHEELS	01/25/2023	102.19	02/02/2023	100-475-430 Service-Repair and Maintenance	123
3097	PAPE KENWORTH	11679343/2	SANDER WHEELS	01/25/2023	67.19	02/02/2023	100-475-430 Service-Repair and Maintenance	123
3097	PAPE KENWORTH	11695979	spinners for sanders	01/25/2023	169.38		100-475-430 Service-Repair and Maintenance	123
3097	PAPE KENWORTH	14194919	block heater	02/03/2023	168.38		100-475-430 Service-Repair and Maintenance	223
	Total 3097:				507.14			
PDM								
139	PDM	506108-01	STEEL FOR STORM DRAIN AT CITY HALL	01/25/2023	498.33	02/02/2023	100-575-600 General Supplies	123
	Total 139:				498.33			
RELIANT ELECTRIC, LLC								
4934	RELIANT ELECTRIC, LLC	23024-1	Hwy 50 pump motor troubleshooting	01/21/2023	1,265.00	02/02/2023	520-810-428 Contract Services-ELECTRICAL	123
	Total 4934:				1,265.00			
RENO GAZETTE JOURNAL								
152	RENO GAZETTE JOURNAL	5315188	5554132 - Bill #324	01/01/2023	135.00		100-610-540 Advertising	123
152	RENO GAZETTE JOURNAL	5315188	5554125 - t1vac22001	01/01/2023	127.00		100-610-540 Advertising	123

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
	Total 152:				262.00			
RESOURCE CONCEPTS								
8602	RESOURCE CONCEPTS	23-0035	Villa park water and sewer replacement design services	01/20/2023	3,081.00		100-475-745 RTC REIMBURSABLE EXPENDI	123
8602	RESOURCE CONCEPTS	23-0035	Villa park water and sewer replacement design services	01/20/2023	2,695.88		520-166100 Construction In Progress	123
8602	RESOURCE CONCEPTS	23-0035	Villa park water and sewer replacement design services	01/20/2023	1,925.62		510-166100 Construction In Progress	123
	Total 8602:				7,702.50			
SECTRAN SECURITY, INC.								
8629	SECTRAN SECURITY, INC.	23010517	ARMORED SERVICE - WATER	01/11/2023	182.99	02/02/2023	510-810-342 Tech Services-Other	123
8629	SECTRAN SECURITY, INC.	23010517	ARMORED SERVICE - GF	01/11/2023	182.97	02/02/2023	100-415-322 Prof Serv-Other	123
8629	SECTRAN SECURITY, INC.	23010517	ARMORED SERVICE - SEWER	01/11/2023	182.99	02/02/2023	520-810-342 Tech Services-Other	123
	Total 8629:				548.95			
SIGNA MECHANICAL								
6530	SIGNA MECHANICAL	230139	Two New E-One Pumps	01/23/2023	7,338.59	02/02/2023	520-810-615 E-One R & M	123
	Total 6530:				7,338.59			
SILVER STATE ANALYTICAL LABORATORIES								
7856	SILVER STATE ANALYTICAL LABORATORIES	RN294106	Quarterly DBP Samping	12/21/2022	980.00		510-810-423 Contract Services-ANALYTICAL	1222
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295444	lab samples	01/25/2023	20.00	02/02/2023	510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295445	lab samples	01/25/2023	17.00	02/02/2023	510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295446	Lab samples	01/25/2023	135.00	02/02/2023	510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295570	January Coliform Sampling #2	01/30/2023	240.00		510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295579	F5 New Construction - Coliform Sampling	01/30/2023	160.00		510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN296171	lab sample	02/07/2023	17.00		510-810-423 Contract Services-ANALYTICAL	223
	Total 7856:				1,569.00			
SILVER STATE BARRICADE								
170	SILVER STATE BARRICADE	131226	class 3 sweatshirts	01/26/2023	394.60	02/02/2023	100-475-616 Supplies-Safety	123
	Total 170:				394.60			
SILVER STATE INTERNATIONAL TRUCKS								
265	SILVER STATE INTERNATIONAL TRUCKS	R201013760:01	NEW BCM VACTOR	01/26/2023	3,061.89		100-475-430 Service-Repair and Maintenance	123
265	SILVER STATE INTERNATIONAL TRUCKS	X201100983:01	10 WHEEL SHIFT KNOB	02/01/2023	114.36		100-475-430 Service-Repair and Maintenance	223
	Total 265:				3,176.25			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
SOUTHWEST GAS CORP								
204	SOUTHWEST GAS CORP	18971 DEC 22	910000818971 ACH	12/15/2022	30.24	01/03/2023	520-810-621 Natural Gas	1222
204	SOUTHWEST GAS CORP	33096 DEC 22	910001133096 ACH	12/28/2022	778.35	01/17/2023	510-810-621 Natural Gas	1222
204	SOUTHWEST GAS CORP	33438 JAN 23	910001133438 ACH	12/21/2022	2,753.31	01/09/2023	100-417-621 Natural Gas	1222
204	SOUTHWEST GAS CORP	86744 DEC 22	910001086744 WTP	12/12/2022	4,813.50	01/03/2023	510-840-621 Natural Gas	1222
	Total 204:				8,375.40			
STATE COLLECTION & DISB. UNIT (SCaDU)								
176	STATE COLLECTION & DISB. UNIT (SCaDU)	JAN 2023-2	CHILD SUPPORT	01/27/2023	319.85	02/02/2023	100-219900 OTHER PAYROLL PAYABLES	123
	Total 176:				319.85			
THATCHER COMPANY, INC.								
8646	THATCHER COMPANY, INC.	2023250108371	Ferric Chloride	01/26/2023	15,883.20	02/02/2023	510-840-617 Chemicals	123
8646	THATCHER COMPANY, INC.	2023400110111	Sierra Pure Chlor	01/31/2023	4,681.91		520-810-617 Supplies-Chemical	123
	Total 8646:				20,565.11			
TSK								
8714	TSK	21-058.00-11	TSK Schematic Design CRRC Services 1/1/23-1/31/23	01/01/2023	158,022.00		220-480-810 ARPA	123
	Total 8714:				158,022.00			
U S POSTAL SERVICE								
7344	U S POSTAL SERVICE	FEB 2023	PREPAID IN-HOUSE POSTAGE	02/01/2023	1,500.00	02/02/2023	510-810-550 Printing and Postage	223
7344	U S POSTAL SERVICE	FEB 2023	PREPAID IN-HOUSE POSTAGE	02/01/2023	1,500.00	02/02/2023	520-810-550 Printing and Postage	223
	Total 7344:				3,000.00			
ULTIMATE AIR, INC.								
8575	ULTIMATE AIR, INC.	6440	heater at trailer cottonwood shop	01/20/2023	189.00	02/02/2023	100-475-614 Supplies-Plant/Shop/Maint	123
	Total 8575:				189.00			
USA BLUEBOOK								
464	USA BLUEBOOK	244134	WWTP Chart Recorder Parts	01/23/2023	240.08	02/02/2023	520-810-430 Service-Repair and Maintenance	123
464	USA BLUEBOOK	248996	WWTP Chart Recorder Pen Motor	01/26/2023	207.04	02/02/2023	520-810-430 Service-Repair and Maintenance	123
464	USA BLUEBOOK	249260	Lab supplies	01/26/2023	567.48		510-840-430 Service-Repair and Maintenance	123
	Total 464:				1,014.60			
VERUS ASSOCIATES NEVADA, LLC								
8606	VERUS ASSOCIATES NEVADA, LLC	2154	Camille SCADA Install	01/17/2023	13,031.75	02/02/2023	520-166100 Construction In Progress	123

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
	Total 8606:				13,031.75			
VOYA FINANCIAL								
8591	VOYA FINANCIAL	JAN 2023-2	DEFERRED COMPENSATION, 457	01/27/2023	3,764.00	01/27/2023	100-215000 457 PAYABLE	123
8591	VOYA FINANCIAL	JAN 2023-2	ROTH IRA	01/27/2023	150.00	01/27/2023	100-215000 457 PAYABLE	123
	Total 8591:				3,914.00			
WALKER LAKE DISPOSAL								
6118	WALKER LAKE DISPOSAL	23-0514	WWTP Dumpster Service	02/02/2023	297.00		520-810-412 Utility Service-Refuse	223
	Total 6118:				297.00			
WALTHER LAW OFFICES								
8875	WALTHER LAW OFFICES	FEB 2023	PUBLIC DEFENDER FEB 2023	02/01/2023	10,000.00	01/26/2023	100-413-322 Prof Serv-Other	223
	Total 8875:				10,000.00			
WASTE MANAGEMENT								
447	WASTE MANAGEMENT	33001 FEB 23	11-60772-33001	02/03/2023	103.14		100-417-412 Utility Services-Refuse	223
447	WASTE MANAGEMENT	33005 FEB 23	11-60745-33005	02/03/2023	14.39		510-840-412 Utility Service-Refuse	223
447	WASTE MANAGEMENT	33009 FEB 23	11-60774-33009	02/03/2023	84.39		510-810-412 Utility Service-Refuse	223
447	WASTE MANAGEMENT	43003 FEB 23	11-60760-43003	02/03/2023	42.20		520-810-412 Utility Service-Refuse	223
447	WASTE MANAGEMENT	65007 JAN 23	6-82641-65007	02/01/2023	33.48		100-417-412 Utility Services-Refuse	223
	Total 447:				277.60			
WESTERN INSURANCE SPECIALTIES								
881	WESTERN INSURANCE SPECIALTIES	FEB 2023	SUPPLEMENTAL INSURANCE	02/01/2023	188.14	02/02/2023	100-218100 Western Insurance Payable	223
	Total 881:				188.14			
WESTERN NEVADA SUPPLY CO.								
195	WESTERN NEVADA SUPPLY CO.	19384113F	Freight Charge	02/02/2023	.00		510-810-613 Supplies-Meter Service	223
195	WESTERN NEVADA SUPPLY CO.	19512704-2	Binstock: Brass Fittings	01/23/2023	143.05	02/02/2023	510-810-613 Supplies-Meter Service	123
195	WESTERN NEVADA SUPPLY CO.	19607325	Sensus Iperl Water Meters	01/23/2023	4,461.60	02/02/2023	510-166100 Construction In Progress	123
195	WESTERN NEVADA SUPPLY CO.	19607326	Binstock: Brass Fittings	01/23/2023	130.27	02/02/2023	510-810-613 Supplies-Meter Service	123
195	WESTERN NEVADA SUPPLY CO.	19612451	Sensus Flexnet MXUs	01/23/2023	4,646.70	02/02/2023	510-166100 Construction In Progress	123
195	WESTERN NEVADA SUPPLY CO.	19620461	Binstock: Brass Fittings, Repair Clamps, Resetters	01/30/2023	1,803.97		510-810-613 Supplies-Meter Service	123
195	WESTERN NEVADA SUPPLY CO.	19625001	Repair Parts for Westward - Pipe & Fittings	01/27/2023	1,820.64		510-810-430 Repairs & Maintenance	123
195	WESTERN NEVADA SUPPLY CO.	19634986	Hwy 50 by-pass valve	02/06/2023	1,238.94		520-810-605 Minor Equipment	223

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
	Total 195:				14,245.17			
WETLAB - WESTERN ENVIRON TESTING LAB								
8709	WETLAB - WESTERN ENVIRON TESTING LAB	23010071	WWTP Influent & Effluent Samples	01/31/2023	362.36		520-810-423 Contract Services-ANALYTICAL	123
8709	WETLAB - WESTERN ENVIRON TESTING LAB	23010537	Fecal Re-test for January	01/31/2023	33.60		520-810-423 Contract Services-ANALYTICAL	123
	Total 8709:				395.96			
XPRESS BILL PAY LLC								
2468	XPRESS BILL PAY LLC	DEC 2022	CREDIT CARD PROCESSING FEES	12/31/2022	1,390.63	12/31/2022	510-810-609 Credit Card Fees	1222
2468	XPRESS BILL PAY LLC	DEC 2022	CREDIT CARD PROCESSING FEES	12/31/2022	1,390.62	12/31/2022	520-810-609 Credit Card Fees	1222
2468	XPRESS BILL PAY LLC	JAN 2023	CREDIT CARD PROCESSING FEES	01/31/2023	1,564.14	01/31/2023	510-810-609 Credit Card Fees	123
2468	XPRESS BILL PAY LLC	JAN 2023	CREDIT CARD PROCESSING FEES	01/31/2023	1,564.13	01/31/2023	520-810-609 Credit Card Fees	123
	Total 2468:				5,909.52			
	Grand Totals:				638,215.51			

Dated: _____

Mayor: _____

City Treasurer: _____

Report Criteria:

Detail report.

Invoice detail records above $0 included.

Paid and unpaid invoices included.

Vendor.Vendor Number = {<>} 2201

MINUTES OF THE

FERNLEY CITY COUNCIL MEETING

FEBRUARY 1, 2023

Mayor McIntyre called the meeting to order at 05:04 PM at Fernley City Hall, 595 Silver Lave Blvd., Fernley, NV 89408

1. INTRODUCTORY ITEMS

1.1. Roll Call

Present: Mayor McIntyre, Councilwoman McKay, Councilman Lau, Councilman Hanan, Councilman Torres, Councilwoman Zoberski; Staff: Kim Swanson, City Clerk; Sandy Harris, City Clerk Administrative Specialist, Brandi Jensen, City Attorney; Shay League, Associate Planner; Charity Birkel, Building Official; Dave Whalen, Public Works Director; Derek Starkey, City Engineer; Denise Lewis, City Treasurer, Charity Birkel, Building Official.

1.2. Public Forum

None

1.3. (For Possible Action) Approval of Agenda

Motion: MOVE TO APPROVE AGENDA **Action:** Approve , **Moved by** Councilman Stan Lau, **Seconded by** Councilwoman Fran McKay. **Vote:** Passed, **Summary:** Yes 5. **Yes:** Councilwoman Zoberski, Councilman Lau, Councilman Torres, Councilwoman McKay, Councilman Hanan.

2. CONSENT AGENDA

2.1. (Possible Action) Approval of the Voucher Report

2.2. (For Possible Action) Approval of Minutes from January 11th & January 18, 2023.

2.3. (Possible Action) Approval of Business Licenses

2.4. (For Possible Action) Approval of the American Rescue Plan Act sub-award agreement between the City of Fernley and Lyon County Human Services to respond to the negative economic impacts of the COVID-19 public health emergency in the amount of $216,000 for the dates of December 1, 2022 through December 31, 2024.

2.5. (For Possible Action) Approval of the final subdivision map associated with FSM 2019-002 for Friendly 5, Village 1.

2.6. Possible Action to Approve the Will-Serve Request from Norman Ventures NV, LLC (GNCU) for .01 ERCs for Water and .36 ERCs for Sewer for Greater Nevada Credit Union TI for Lyon County Parcel 021-232-67 located on East Newlands Fernley, NV 89408

2.7. Possible action to authorize the execution of the water rights banking and dedication agreement

with Steven L. Ball, APN 021-101-12 TCID serial number 1020-2 in the amount of 5.58 acre-feet.

2.8. Possible Action to Approve the Will-Serve Request from Goudy Investments LLC for 4 ERCs for Water and 4 ERCs for Sewer for future development for Lyon County Parcel 021-201-47 located on Nevada Pacific Blvd and Hwy 50 Fernley, NV 89408.

Motion: MOVE TO APPROVE THE CONSENT AGENDA. **Action:** Approve , **Moved by** Councilman Hanan, **Seconded by** Councilman Lau. **Vote:** Passed, **Summary:** Yes 5. **Yes:** Councilman Lau, Councilman, Torres, Councilwoman McKay, Councilwoman Zoberski.

3. REPORTS - this item is for various public entity representatives to provide general information to the Council and public. No action will be taken.

3.1. Reports by City Staff, City Council, and the Mayor, including but not limited to monthly statistical reports by city departments.

Building Official Charity Birkel gave building department stats for the month of January 2023.

Councilman Hanan reported on his ride-along with the Sheriff's Department on "Saturation Night" in Fernley. He stated he learned a lot about policing in Fernley. He thanked the Sheriff's Department for letting him attend.

Councilman Torres gave a reminder of the Senior Advisory Board Meeting on February 10, 2023 at 9:00.

Councilwoman McKay stated that she attended the State of the Counties meeting in Carson City. The State of the Counties covers Douglas, Lyon, Mineral, Storey and Carson counties. The two most interesting take aways were (1) one of the counties has a Community Conversation Time, which lets the community have its say in regards to their concerns, and (2) there is a community that has a fund match to help downtown businesses improve the looks of business. On Wednesday she went to the EDAWN Luncheon. She also announced that at the WNDD meeting Andy Haskens had been approved by the Commissioners to be the new Lyon County Manager.

Mayor McIntyre stated he attended the EDAWN luncheon which focused on the economy and recession. He also stated that he went on a Tesla tour with Elan Musk and the Governor. During his time with the Governor, he asked the Governor what Fernley could do to help him achieve his goals, and the Governor stated to build homes. He also gave a reminder that the Fernley Aces Board project theme is Revolution, for the Community Art show on Saturday, February 4th, 3:00 - 7:00 at Fernley Art Center.

3.2. State of Nevada Legislative update.

Nick Vanderpool, Flynn Guidici Government Affairs, gave an overview of the basics of what it takes to get a law through at the Nevada Legislature 120 day calendar. He introduced Tim Robb, the Fernley representative from Governor's office.

4. PROCLAMATIONS BY THE MAYOR

There were none.

5. PRESENTATIONS

5.1. Presentation on the City Attorneys Accomplishments and Goals for 2022-2023

Brandi Jensen, City Attorney, gave presentation on the City Attorneys' office accomplishments and goals for 2022-2023.

City Attorney Jensen presented Goals and Accomplishments for 2023-2023

Councilwoman Zoberski stated she would like to see an evaluation all departments.

Motion: MOTION TO ACCEPT JOB EVALUATION. **Action:** Approved, **Moved by** Councilman Albert Torres, **Seconded by** Councilman Ryan Hanan. **Vote:** Passed, **Summary:** Yes 5. **Yes:** Councilwoman Zoberski, Councilman Lau, Councilman Torres, Councilwoman McKay, Councilman Hanan.

6. ORDINANCES

6.1. (For Possible Action) First Reading, Introduction of Bill # 324 and possible action on a ZMA22009 Public Hearing Continuation Request. Introduction of Bill # 324 as an ordinance associated with ZMA22009, a zoning map amendment submitted in support of the River Ranch Apartment project, and request to continue the public hearing for ZMA22009 from 02/01/2023 to 02/15/2023 due to delay getting Bill # 324 prepared for the first reading.

Associate Planner Shay League presented the project.

Motion: MOVE THAT CITY COUNCIL CONTINUE THE PUBLIC HEARING FOR ZMA22009, ASSOCIATED WITH THE RIVER RANCH APARTMENT PROJECT, FROM FEBRUARY 1ST, 2023 TO OUR NEXT MEETING ON FEBRUARY 15TH, 2023. **Action:** Approved , **Moved by** Councilman Albert Torres, **Seconded by** Councilman Stan Lau. **Vote:** Passed, **Summary:** Yes 5. **Yes:** Councilwoman Zoberski, Councilman Lau, Councilman Torres, Councilwoman McKay, Councilman Hanan.

7. STAFF REPORTS

7.1. (Possible Action) Approval of the Fourth Amendment to a Contract between the City of Fernley and Hinton Burdick, CPAs & Advisors for Independent Audit Services dated January 1, 2023.

Finance Director Lewis asked to combine items 7.1 and 7.2. She added Hinton Burdick, CPAs have done a great job for the City of Fernley and asked City Council to approve their contract.

Motion: I MOVE TO APPROVE THE FOURTH AMENDMENT TO A CONTRACT BETWEEN THE CITY OF FERNLEY AND HINTON BURDICK, CPAS & ADVISORS FOR INDEPENDENT AUDIT SERVICES DATED JANUARY 1, 2023, AND TO DESIGNATE HINTON BURDICK CPAS & ADVISORS AS THE INDEPENDENT AUDIT FIRM TO PERFORM THE CITY'S ANNUAL FINANCIAL AUDIT FOR FISCAL YEAR ENDING JUNE 30, 2023. **Action:** Approved, **Moved by** Councilman Stan Lau, **Seconded by** Councilwoman Fran McKay. **Vote:** Passed, **Summary:** Yes 5. **Yes:** Councilwoman Zoberski, Councilman Lau, Councilman Torres, Councilwoman McKay, Councilman Hanan.

7.2. Discussion and Possible Action to designate Hinton Burdick CPAs & Advisors as the Independent Audit Firm to perform the City' Annual Financial Audit for the Fiscal Year ending June 30, 2023.

Combined with 7.1

8. PUBLIC HEARINGS

8.1. (For Possible Action) Consideration and possible action on a type I vacation (T1VAC22001) to abandon a public right of way known as "Dolores Court" generally located north of Fremont Street, south of US Interstate 80, west of Wildwood Drive, and east of Vine Street (abutting APNs: 021-092-46, 021-092-47, 021-092-54, & 021-092-55) to facilitate the development of Sherwood Villages by request of Phelps Engineering Services.

Shay League, Associate Planner, gave presentation on vacation site.

Motion: AFTER REVIEWING THE FACTS SET FORTH IN THE STAFF REPORT, I AM SATISFIED THAT THE PUBLIC WILL NOT BE MATERIALLY INJURED BY THE PROPOSED VACATION AND MOVE TO APPROVE THE TYPE I VACATION ASSOCIATED WITH T1VAC22001. **Action:** Approved, **Moved by** Councilwoman Fran McKay, **Seconded by** Councilman Ryan Hanan. **Vote:** Passed, **Summary:** Yes 5. **Yes:** Councilwoman Zoberski, Councilman Lau, Councilman Torres, Councilwoman McKay, Councilman Hanan.

9. ITEMS REQUESTED BY MAYOR OR CITY COUNCIL MEMBERS

9.1. For possible action and consideration requesting a future agenda item to discuss water rates, water bond repayment, future 5-year infrastructure project list and possible rate reduction. (Councilman Hanan)

Councilman Hanan stated he would like to have staff prepare presentation and analysis of bond and repayment of debt including how water rates are calculated.

Motion: MOTION TO MOVE ITEM 9.1 TO APRIL AGENDA **Action:** Approved, **Moved by** Councilman Ryan Hanan, **Seconded by** Councilman Stan Lau. **Vote:** Passed, **Summary:** Yes 5. **Yes:** Councilwoman Zoberski, Councilman Lau, Councilman Torres, Councilwoman McKay, Councilman Hanan.

9.2. For possible action, consideration and discussion requesting a future agenda item to create a noise ordinance for the City of Fernley. (Councilman Hanan)

Councilman Hanan discussed how the city has no specific noise ordinance and would like to have discussions with the Sheriff's department on the impact of having one.

Councilman Torres and Councilwoman McKay were against a specific time ordinance.

Mayor McIntrye would like to discuss with the sheriff's department how a time specific noise ordinance would impact law enforcement.

Motion: MOVE TO CONTINUE MATTER OF A NOISE ORDINANCE AFTER DISCUSSION WITH SHERIFF'S DEPARTMENT **Action:** Passed, **Moved by** Councilman Ryan Hanan, **Seconded by** Councilman Stan Lau. **Vote:** Passed, **Summary:** Yes 3, No 2. **Yes:** Councilwoman Zoberski, Councilman Lau, Councilman Hanan, **No:** Councilman Torres, Councilwoman McKay.

10. ADDRESS REQUEST(S) FOR FUTURE AGENDA ITEMS

Councilwoman Zoberski stated she would like newsletter brought back.

Councilman Lau would like to set up a future legislative tour, showing them the area and growth of Fernley.

11. PUBLIC FORUM

There was none.

12. ADJOURNMENT

There being no further business to come before it, the Fernley City Council meeting adjourned at 6:58.

Approved by the Fernley City Council on February 15, 2023 by a vote of:

AYES _____ NAYS:_____ ABSTENTIONS:_____ ABSENT:_____

_____ _____

Mayor Neal E. McIntyre ATTEST: Kim Swanson, City Clerk

Report Criteria:

Business.License status = Active

Business.Origination Date = 01/25/2023-02/07/2023

Bus Name	Name	Mail Addr1	Mail City	Mail St	Mail Zip	Business Tel	Business Description
Gigawatt Operations Inc.	Frank Rieger & Steve Hamile	4305 Dean Martin Drive, Suite 15	Las Vegas	NV	89103	702-586-9800	Solar Sales & Installation Contractor #75025
Kleinfelder Inc.	Louis Armstrong	770 First Ave, Ste 400	San Diego	CA	92101	(619) 831-4600	Engineering and Consulting
Olive Grace Salon	Rebecca Myer	4517 Spaight Way	Fernley	NV	89408	(775) 302-3257	Salon
Performance Plus Installation	Scott Seymour/Douglas Hayden/R	17260 Newhope St.	Fountain Valley	CA	92708	714-888-2544	Building Accessories/Specialties: Platform In
San Joaquin Electric Inc.	Douglas Talbert/Roger Schrum	PO Box 30068	Stockton	CA	95213	(775) 800-5280	Electrical Contractor
Sanchez Landscaping LLC	Oscar Sanchez	440 Spruce Dr	Fernley	NV	89408	(775) 400-5314	Lawn care, sprinklers, turf, landscaping
Sierra Boiler Service, Inc.	Candice George/T Scott Wil/G Pfi	2969 S Highland Dr	Las Vegas	NV	89109	775-475-1996	Boilers Contractor #87509, C-1A
Tephra Solar LLC	Steve Slemboski	14193 Minuteman Drive	Draper	UT	84020	(844) 833-5784	Solar Installer
The Greener Side	Darin Trousdale	715 Miller Ln	Fernley	NV	89408	(775) 690-8969	Lawn & Yard Maint.
The Tungland Company, LLC	COO, Brett Cohen	1535 Old Hot Springs Rd, Suite 8	Carson City	NV	89706	775-461-3200	Service provider for peope with DD/ID
Wire Me Electric	Christine/Benjamin Matlock	PO Box 60113	Reno	NV	89506	(775) 843-9473	Electrical Contractor
Yupana, Inc.	Muzaffer Mete Dalan	325 W Channel Rd	Benicia	CA	94510	925-482-0657	Telecommunications engineering

Grand Totals:

12

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Kari Weitzel**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes:X	No:	Yes:X	No:	510-166-100

ACTION REQUESTED: Consent

AGENDA ITEM: (For Possible Action):

Possible action to approve a contract with Shaw Engineering for an amount not to exceed $66,500 for professional engineering services for the design of a new treated water reservoir at the City of Fernley water treatment plant as part of the surface water treatment project.

AGENDA ITEM BRIEF:

Staff is seeking approval to execute a contract for all engineering design, bidding, and construction support for the proposed new treated water reservoir.

RECOMMENDED MOTION:

"I move to approve the contract with Shaw Engineering for an amount not to exceed $66,500 for professional engineering services for the design of a new treated water reservoir at the City of Fernley water treatment plant as part of the surface water treatment project "

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

City Council could choose not to award this contract at this time.

BACKGROUND:

This contract is for the design of an additional treated water reservoir at the City's water treatment facility. The tank is part of the improvements needed at the water treatment plant in order to treat and serve surface water from the Truckee Canal. The City is currently completing the outtake structure and pipeline from the canal to the water treatment plant. That project is estimated to be completed by the summer of 2023.

The current treated water reservoir is a single 1.5 million gallon tank located at the water treatment plant. Water is pumped from the city's production wells to the plant where the treatment and filtration process is completed. The final stop for the treated water is the treated water reservoir. The water is stored in the tank in order to meet contact time requirements for final disinfection. It is then pumped into the water distribution system and the system's storage tanks where it is consumed by customers.

The additional treated water reservoir will be constructed with the appropriate baffling and other internal components to ensure the treated water has the appropriate contact time for final disinfection. The reservoir will be a 1.5 million gallon welded steel above ground tank to match the existing tank. The tank will be designed to meet City of Fernley and Nevada Department of Environmental Protection - Bureau of Safe Drinking Water (BSDW) requirements and will be owned and operated by the City of Fernley.

Once online, the additional reservoir will allow the existing reservoir to be taken offline for service, repairs, and maintenance. Currently, the City is unable to take the existing treated water reservoir offline because there is not a back-up tank. Currently, in order to complete major maintenance or repairs on the reservoir, the city would need to rent or construct a temporary reservoir to operate while the tank is drained and being worked on.

Other improvements required to treat surface water will be needed at the water treatment plant and will be designed and constructed separate from this contract.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

NRS 625 - Professional Engineers and Land Surveyors

FINANCIAL IMPLICATIONS:

The funding for the Truckee Canal Water Conveyance and Treatment Integration project was approved for the current fiscal year 2022/2023. The funding is part of the water enterprise capital project budget. The total approved amount is $5,500,000.00

ATTACHMENTS:

1. 2022.10.19 Professional Contract - Shaw (Attachement A)
2. 2023.01.11 Fernley WTP Tank Design Proposal - Shaw (Attachment B)

CONTRACT

A Contract For Design Professional Services

THIS CONTRACT is made and entered into this __19th__ day of October __2022__, by and between the CITY OF FERNLEY, a municipal corporation within the State of Nevada whose address is 595 Silver Lace Blvd, Fernley, Nevada 89408 (the "City"), and __Shaw Engineering_____, a __Consultant_____, whose address is _20 Vine St. Reno, NV 89503_____ ("Contractor").

WHEREAS, Nevada Revised Statutes ("NRS") Chapter 266 authorizes the City to engage the services of independent contractors; and

WHEREAS, the services of Contractor are deemed to be both necessary and in the best interests of the City; and

WHEREAS, the City desires to retain the services of Contractor on the terms and conditions set forth in this Contract;

NOW, THEREFORE, in consideration of the aforesaid premises, the parties mutually agree as follows:

1. **CONTRACT TERM:** This Contract shall be effective from the day it is approved by the City Council (which date shall be inserted into the introductory paragraph of this Contract) and, subject to appropriation, shall remain in full force and effect until the services are completed unless terminated earlier pursuant to Section 6.

2. **CONTRACTOR'S SERVICES:**

   a. **Description of Services.**

      i. **Attachments:**

         1. **Attachment A:** Scope of Work with Fee Schedule. Contractor hereby agrees to provide the services set forth in the Scope of Work attached hereto as Attachment A and incorporated herein by this reference.

         2. **Attachment B:** N/A

         3. **Attachment C:** N/A

         4. **Attachment D:** N/A

   b. **Standard Of Care:** Notwithstanding anything to the contrary in this agreement or in any other contract document relating to the project, in

performing its work under this agreement Contractor shall perform its services to the standard of care of a reasonable professional that is performing the same or similar work, at the same time and locality and under the same or similar conditions faced by Contractor Cooperation with City. Contractor agrees that its officers, associates, employees and subcontractors will cooperate with the City in providing the services under this Contract and will be, with advance notice, available for consultation with the City at such reasonable times as to not conflict with the City's other responsibilities.

c. **Notice to Proceed.** Contractor shall not commence work until the Contract is fully executed by City and Contractor and a Notice to Proceed (NTP) has been issued to the Contractor by the City.

d. **Optional Services.** The City shall have the right to exercise its option(s) for all or any part of the OPTIONAL tasks or subtasks identified in Attachment B Fee Schedule, (and further described in Attachment A Scope of Services). The Contractor shall not commence work on any OPTIONAL task prior to issuance of a NTP for the OPTIONAL task by the City.

3. REQUIRED APPROVALCOMPENSATION AND TERMS OF PAYMENT:

a. **Compensation.** The City agrees to pay Contractor for the services set forth in the Scope of Work either a lump sum fee or an hourly fee based on the Fee Schedule attached hereto as Attachment A and incorporated herein by this reference.

b. **Reimbursable Expenses.** Contractor agrees that all of its direct and indirect expenses are included in the lump sum or hourly fee set forth in the Fee Schedule, unless the Fee Schedule specifically provides otherwise.

c. **Payment Invoicing.** Contractor shall submit an invoice for payment for the services provided by Contractor based on the manner or method of payment set forth in Attachment A (Scope of Work and Fee Schedule).

d. **Timeliness of Billing.** Contractor acknowledges and agrees that timeliness of billing is of the essence to this Contract and recognizes that the City is on a fiscal year ending on June 30. All invoices for services rendered prior to July 1 must be submitted to the City no later than 30 days after the end of the fiscal year

e. **Not to Exceed.** The maximum amount payable to Contractor to complete each task is equal to the not-to-exceed amounts identified in Attachment B. Contractor may submit a written request to the City's Project Manager to reallocate not-to-exceed amounts between Tasks. The request to

reallocate must be accompanied by a revised fee schedule with associated revised not-to-exceed amounts and must be approved in writing by the City's Project Manager prior to performance of the work. Contractor shall not be compensated in excess of the Total not-to-exceed Contract amount:

Subtotal Professional Services: (Tasks 1.0 to 4.0)	$ 66,500
Subtotal OPTIONAL Professional Services: (Task X.X)	$ 0
Total NTE Amount (Including OPTIONAL Services)	$66,500

f. **NOTICE:** All notices or other communications required or permitted to be given hereunder shall be deemed delivered: (i) when written notice is received by the party to whom it is directed, if delivered personally, or by email; or (ii) three (3) days after deposit with the United States Post Office, if mailed by certified mail, return receipt requested, postage prepaid and addressed to the party to be notified. Notices shall be addressed as follows:

If to the City: City Engineer Department
City of Fernley
595 Silverlace Blvd.
Fernley, NV 89408

If to Contractor: Contractor
Address
City State

4. INSPECTION & AUDIT:

a. **Books and Records**. Contractor agrees to keep and maintain under general accepted accounting principles (GAAP) full, true and complete records, contracts, books, and documents as are necessary to fully disclose to the City, the State of Nevada or the United States Government, or their authorized representatives, upon audits or reviews, sufficient information to determine compliance with all state and federal regulations and statutes.

b. **Inspection & Audit**. Contractor agrees that the relevant books, records (written, electronic, computer related or otherwise), including, without limitation, relevant accounting procedures and practices of Contractor or its subcontractors, financial statements and supporting documentation, and documentation related to the performance of this Contract shall be subject, at any reasonable time, to inspection, examination, review, audit, and copying at any office or location of Contractor where such records may be found, with or without notice by the City, and with regard to any federal

funding, the relevant federal agency, the Comptroller General, the General Accounting Office, the Office of the Inspector General, or any of their authorized representatives. All subcontracts shall reflect the requirements of this paragraph.

c. **Period of Retention**. All books, records, reports, and statements relevant to this Contract must be retained a minimum three years and for five years if any federal funds are used under this Contract. The retention period runs from the date of payment for the relevant services by the City, or from the date of termination of this Contract, whichever is later. Retention time shall be extended when an audit is scheduled or in progress for a period reasonably necessary to complete an audit and/or to complete any administrative and judicial litigation which may ensue.

5. TERMINATION OR SUSPENSION:

a. **Suspension**. The City may suspend, without cause, the performance by Contract under this Contract for such period of time as the City, in its sole discretion, may prescribe by providing written notice to Contractor. The suspension shall be effective as of the date set forth in the written notice. With such suspension, the City agrees to pay Contractor the amount of compensation earned as of the effective date of the suspension.

b. **Termination Without Cause**. The City reserves the right to terminate this Contract without cause or default on the part of Contractor with ten (10) days' prior written notice to Contractor. In the event of termination, without cause or default, the City agrees to pay Contractor for the services performed before the date that notice of termination is received by Contractor.

c. **Termination for Non-Appropriation**. Contractor acknowledges that the City is a governmental entity and the Contract's validity is based upon the availability of public funding under its authority. The City reserves the right to reduce estimated or actual quantities, in whatever amount necessary, without prejudice or liability to the City, if funding is not available or if legal restrictions are placed upon the expenditure of monies for the services required under this Contract. In addition, without prejudice or liability to the City, if funding is not appropriated or otherwise made available to support the continuation of this Contract in any fiscal year succeeding the first fiscal year, this Contract will be deemed to have been terminated automatically when appropriated funds expire and are not available.

d. **Default or Breach.** A default or breach (an "Event of Default") may be declared with or without termination. Each of the following shall constitute an Event of Default:

   i. If Contractor fails, in the judgment of the City, to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or services called for by this Contract, and such failure continues for more than fifteen (15) days after written notice is delivered to Contractor provided that if the nature of such breach is such that although curable, the breach cannot reasonably be cured within a fifteen (15) day period, an Event of Default shall not exist if Contractor shall commence to cure such breach and thereafter rectifies and cures such breach with due diligence, but in no event later than sixty (60) days after the written notice;

   ii. If any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by Contractor to provide the goods or services required by this Contract is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or

   iii. If Contractor: (i) becomes insolvent, subject to receivership, or voluntarily or involuntarily subject to the jurisdiction of the bankruptcy court; (ii) makes a general assignment for the benefit of creditors; (iii) admits in writing to the inability to pay its debts as they become due; or (iv) takes any action for the purpose of effecting any of the foregoing.

e. **For Cause Termination and Time to Correct. For Cause Termination and Time to Correct**. This Contract may be terminated by the non-defaulting party upon a declared default or breach only after service of formal written notice as specified in paragraph (4), and the subsequent failure of the defaulting party within a reasonable time of receipt of that notice to provide evidence, satisfactory to the non-defaulting party, showing that the declared default or breach has been corrected or is being corrected as expeditiously as is prudent and practicable.

f. **Winding Up Affairs upon Termination.** In the event that this Contract is terminated for any reason, the parties agree that the provisions of this paragraph survive termination:

   i. The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Contract. Neither party

may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination.

ii. Contractor shall satisfactorily complete work in progress at the agreed rate (or a pro rata basis if necessary) if requested by the City.

iii. Contractor shall execute any documents and take any actions necessary to effectuate an assignment of this Contract if requested by the City; and

iv. Contractor shall preserve, protect, and promptly deliver possession to the City of all proprietary information in accordance with Section 18.

v. In the event that dispute(s) arise during the winding up of affairs upon termination, the parties agree to meet and negotiate in good faith to resolve any such disputes(s).

6. **REMEDIES:** Except as otherwise provided for by law or this Contract, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, actual damages exclusive of lost profits.

7. **ATTORNEYS' FEES, COSTS, AND EXPENSES:** Unless otherwise stated herein, the parties will bear their own attorneys' fees, costs, and expenses in connection with the negotiation, execution, and performance of this Contract.

8. **LIMITED LIABILITY:** Contract liability of both parties shall not be subject to punitive damages. Liquidated damages shall not apply unless otherwise specified in the Attachments. Damages for any default or breach by the City shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to Contractor, for the fiscal year budget in existence at the time of the default or breach.

9. **FORCE MAJEURE:** Neither party shall be deemed to be in violation of this Contract if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, civil or military authority, act of public enemy, accidents, fires, explosions, or acts of God, including, without limitation, earthquakes, floods, winds, or storms. In such an event the intervening cause must not be through the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of this Contract after the intervening cause ceases.

10. **INDEMNIFICATION:** The City does not require the Contractor to defend, indemnify or hold harmless the public body or the employees, officers or agents of that public

body from any liability, damage, loss, claim, action or proceeding caused by the negligence, errors, omissions, recklessness or intentional misconduct of the employees, officers or agents of the public body.

a. The City does require the Contractor to indemnify and hold harmless the public body, and the employees, officers and agents of the public body from any liabilities, damages, losses, claims, actions or proceedings, including, without limitation, reasonable attorneys' fees and costs, to the extent that such liabilities, damages, losses, claims, actions or proceedings are caused by the negligence, errors, omissions, recklessness or intentional misconduct of the Contractor or the employees or agents of the Contractor in the performance of the contract.

b. The City does not require the Contractor to defend the public body and the employees, officers and agents of the public body with respect to the liabilities, damages, losses, claims, actions or proceedings caused by the negligence, errors, omissions, recklessness or intentional misconduct of the Contractor or the employees or agents of the Contractor which are based upon or arising out of the professional services of the Contractor. If the Contractor is adjudicated to be liable by a trier of fact, the trier of fact shall award reasonable attorney's fees and costs to be paid to the public body, as reimbursement for the attorney's fees and costs incurred by the public body in defending the action, by the Contractor in an amount which is proportionate to the liability of the Contractor.

c. The City does require the Contractor to defend the public body and the employees, officers and agents of the public body with respect to the liabilities, damages, losses, claims, actions or proceedings caused by the negligence, errors, omissions, recklessness or intentional misconduct of the Contractor or the employees or agents of the Contractor which are not based upon or arising out of the professional services of the Contractor.

11. <u>INDEPENDENT CONTRACTOR</u>: Contractor is associated with the City only for the purposes and to the extent specified in this Contract, and in respect to performance of the contracted services pursuant to this Contract, Contractor is and shall be an independent contractor and, subject only to the terms of this Contract, shall have the sole right to supervise, manage, operate, control, and direct performance of the details incident to its duties under this Contract. Nothing contained in this Contract shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for the City whatsoever with respect to the indebtedness, liabilities, and obligations of Contractor or any other party. Contractor shall be solely responsible for, and the City shall have no obligation with respect to: (1) withholding of income taxes, FICA or any other taxes or fees; (2) industrial insurance coverage; (3) participation in any group

insurance plans available to employees of the City; (4) participation or contributions by either Contractor or the Public Employees Retirement System; (5) accumulation of vacation leave or sick leave; or (6) unemployment compensation coverage provided by the City. Contractor shall indemnify and hold the City harmless from, and defend the City against, any and all losses, damages, claims, costs, penalties, liabilities, and expenses arising or incurred because of, incident to, or otherwise with respect to any such taxes or fees. Neither Contractor nor its employees, agents, or representatives shall be considered employees, agents, or representatives of the City.

12. INSURANCE: Unless expressly waived in writing by the City, Contractor shall, at Contractor's sole expense, procure, maintain and keep in force during the entire term of this Contract those policies of insurance which have been agreed to by the parties as evidenced by the parties initials in the signature spaces provided below. The City shall have no liability except as specifically provided in this Contract. Contractor shall not commence work before Contractor has provided the required evidence of insurance to the City. Any insurance or self-insurance available to the City shall be in excess of, and non-contributing with, any insurance required from Contractor. Contractor's insurance policies shall apply on a primary basis. Until such time as the insurance is no longer required by the City, Contractor shall provide the City with renewal or replacement evidence of insurance no less than thirty (30) days before the expiration or replacement of the required insurance. If at any time during the period when insurance is required by this Contract, an insurer or surety shall fail to comply with the requirements of this Contract, as soon as Contractor has knowledge of any such failure, Contractor shall immediately notify the City and immediately replace such insurance or bond with an insurer meeting the requirements.

CoF CTR

a. **Workers' Compensation and Employer's Liability Insurance**. Industrial insurance protecting Contractor and the City from potential employee claims based upon job-related sickness, injury, or accident, during the performance of this Contract. Contractor shall provide a work certificate issued by a qualified insurer in accordance with NRS 616B.627. Prior to commencing any work, Contractor shall complete and provide the following written request to a qualified insurer: ****CONTACTOR NAME has entered into a contract with Owner to perform work from THE ___ DAY OF _____, 20__ to THE ___ DAY OF _____, 20__ and requests that an industrial insurance provider qualified and licensed to offer such insurance within the State of Nevada, provide to The City of Fernley, Nevada 1) a certificate of coverage issued pursuant to NRS 616B.627 and 2) notice of any lapse in coverage or nonpayment of coverage that Contractor is required to maintain. The certificate and notice should be mailed to:

City of Fernley

595 Silver Lace Blvd
Fernley, NV 89408

i. Contractor may, in lieu of furnishing a certificate of an insurer, provide an affidavit indicating that Contractor is a sole proprietor and that:

1. In accordance with the provisions of NRS 616B.659, Contractor has not elected to be included within the terms, conditions, and provisions of NRS chapters 616A to 616D, inclusive; and

2. Contractor is otherwise in compliance with those terms, conditions and provisions.

COF CTR

b. **Professional Liability Insurance**. Minimum Coverage Limit required (not deductible amount): $1,000,000 Each Claim, $2,000,000 Aggregate.

i. Retroactive date: Prior to commencement of the performance of this Contract

ii. Discovery period: Three (3) years after the termination date of this Contract.

c. **General Requirements**.

i. Additional Insured: By endorsement to the general liability insurance policy evidenced by Contractor, ***the City of Fernley, its officers, employees, and immune contractors*** shall be named as additional insureds for all liability arising from this Contract.

ii. Waiver of Subrogation: Each insurance policy shall provide for a waiver of subrogation in favor of the City.

iii. Cross-Liability: All required liability policies shall provide cross-liability coverage as would be achieve under the standard ISO separation of insureds clause.

iv. Deductibles and Self-Insured Retentions: Insurance maintained by Contractor shall apply on a first dollar basis without application of a deductible or self-insured retention unless otherwise specifically agreed to by the City. Such approval shall not relieve Contractor from the obligation to pay any deductible or self-insured retention. Any deductible or self-insured retention shall not exceed $5,000 per occurrence, unless otherwise approved by the City.

v. Policy Cancellation: Except for ten days' notice for non-payment of premium, each insurance policy shall be endorsed to state that; without thirty (30) days prior written notice to the City, the policy shall not be canceled, non-renewed or coverage and/or limits reduced or materially altered, and shall provide that notices required by this paragraph shall be sent by certified mail to the address shown below.

vi. Approved Insurer: Each insurance policy shall be issued by insurance companies: (a) authorized to do business in the State of Nevada or eligible surplus lines insurers acceptable to the City and having agents in the State of Nevada upon whom service of process may be made; and (b) currently rated by A.M. Best as "A-VII" or better.

d. **Evidence of Insurance.** Prior to the start of any work, Contractor must provide the following documents to the City:

i. Certificate of Insurance: The Acord 25 Certificate of Insurance form or a form substantially similar must be submitted to the City to evidence the insurance policies and coverages required of Contractor.

ii. Additional Insured Endorsement: An Additional Insured Endorsement (CG20 10 or C20 26), signed by an authorized insurance company representative, **must** be submitted to the City to evidence the endorsement of the City as an additional insured per General Requirements, Subsection 1) above.

iii. Schedule of Underlying Insurance Policies: If an Umbrella or Excess insurance policy is evidenced to comply with minimum limits, a copy of the underlying schedule from the Umbrella or Excess insurance policy may be required.

iv. Review and Approval: Documents specified above must be submitted for review and approval by the City prior to the commencement of work by Contractor. Neither approval by the City nor failure to disapprove the insurance furnished by Contractor shall relieve Contractor of Contractor's full responsibility to provide the insurance required by this Contract. Compliance with the insurance requirements of this Contract shall not limit the liability of Contractor or its sub-contractors, employees or agents to the City or others, and shall be in addition to and not in lieu of any other remedy available to the City under this Contract or otherwise. The City reserves the right to request and review a copy of any required insurance policy or endorsement to assure compliance with these requirements. Contractor will mail all required insurance documents to the City at the address identified in section 4 of this Contract.

e. **Failure to Maintain Required Coverages.** If Contractor fails to carry the required insurance, the City may: (i) order Contractor to stop further performance of the Contract, and declare contractor in breach, terminate the Contract if such breach is not remedied; or (ii) purchase replacement insurance and withhold the costs or premium payments made from the payments due to Contractor or charge the replacement insurance costs back to Contractor.

13. **COMPLIANCE WITH LEGAL OBLIGATIONS:** Contractor shall procure and maintain for the duration of this Contract any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by Contractor to provide the goods or services required by this Contract. Contractor will be responsible to pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are the responsibility of Contractor in accordance with NRS 361.157 and 361.159. Contractor agrees to be responsible for payment of any such government obligations not paid by its subcontractors during performance of this Contract.

14. **WAIVER OF BREACH:** Failure to declare a breach or the actual waiver of any particular breach of this Contract or its material or nonmaterial terms by either party shall not operate as a waiver by such party of any of its rights or remedies as to any other default or breach.

15. **SEVERABILITY:** If any portion, provision, or part of this Contract is held, determined, or adjudicated by any court of competent jurisdiction to be invalid, unenforceable, or void for any reason whatsoever, each such portion, provision, or part shall be severed from the remaining portions, provisions, or parts of this Contract, and such determination or adjudication shall not affect the validity or enforceability of such remaining portions, provisions, or parts.

16. **ASSIGNMENT/DELEGATION:** To the extent that any assignment of any right under this Contract changes the duty of either party, increases the burden or risk involved, impairs the chances of obtaining the performance of this Contract, attempts to operate as a novation, or includes a waiver or abrogation of any defense to payment by the City, such offending portion of the assignment shall be void, and shall be a breach of this Contract. Contractor shall neither assign, transfer nor delegate any rights, obligations, or duties under this Contract without the prior written consent of the City.

17. **PROPRIETARY INFORMATION:** Any reports, histories, studies, tests, manuals, instructions, photographs, negatives, blue prints, plans, maps, data, system designs, computer code (which is intended to be consideration under this Contract), or any other documents or drawings, prepared or in the course of preparation by Contractor (or its subcontractors) in performance of its obligations under this Contract shall be the exclusive property of the City and all such materials shall be delivered into the possession of the City by Contractor upon completion, termination, or cancellation of

this Contract. Contractor shall not use, willingly allow, or cause to have such materials used for any purpose other than performance of Contractor's obligations under this Contract without the prior written consent of the City. Notwithstanding the foregoing, the City shall have no proprietary interest in any materials licensed for use by the City that are subject to patent, trademark, or copyright protection.

18. PUBLIC RECORDS: Pursuant to NRS 239.010, information or documents received from Contractor may be open to public inspection and copying. The City will have the duty to disclose unless a particular record is made confidential by law or a common law balancing of interests. Contractor may label specific parts of an individual document as a "trade secret" or "confidential," provided that Contractor thereby agrees to indemnify and defend the City for honoring such a designation. The failure to so label any document that is released by the City shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

19. FEDERAL FUNDING: In the event federal funds are used for payment of all or part of this Contract:

a. Contractor certifies, by signing this Contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency. This certification is made pursuant to the regulations implementing Executive Order 12549, Debarment and Suspension, 28 C.F.R. pt. 67, § 67.510, as published as pt. VII of the May 26, 1988, Federal Register (pp. 19160-19211), and any relevant program-specific regulations. This provision shall be required of every subcontractor receiving any payment in whole or in part from federal funds.

b. Contractor and its subcontractors shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1990 (P.L. 101-136), 42 U.S.C. 12101, as amended, and regulations adopted thereunder contained in 28 C.F.R. 26.101-36.999, inclusive, and any relevant program-specific regulations.

c. Contractor and its subcontractors shall comply with the requirements of the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, P.L. 93-112, as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or offeror for employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition (including AIDS and AIDS-related conditions.)

20. LOBBYING: The parties agree, whether expressly prohibited by federal, state or local law, or otherwise, that no funding associated with this Contract will be used for any purpose associated with or related to lobbying or influencing or attempting to lobby or influence any of the following: (a) any federal, state, county or local agency,

legislature, commission, council or board; (b) any federal, state, county or local legislator, commission member, council member, board member, or other elected official; or (c) any officer or employee of any federal, state, county or local agency; legislature, commission, council or board.

21. **CERTIFICATION REQUIRED BY NEVADA SENATE BILL 26 (2017):** By signing this Agreement, the CONSULTANT provides a written certification, as a material part of this Agreement, that the CONSULTANT is not currently engaged in, and during the Term shall not engage in, a boycott of Israel. The term "boycott of Israel" has the meaning ascribed to that term in Section 3 of Nevada Senate Bill 26 (2017). The CONSULTANT shall be responsible for fines, penalties, and repayment of any State of Nevada or federal funds that may arise (including those that the CITY pays, becomes liable to pay, or becomes liable to repay) as a direct result of the CONSULTANT's non-compliance with this Section. If, at any time during the formation or duration of this Agreement, CONSUTLANT is engaged or engages in a boycott of Israel, it will constitute a material breach of this Agreement.

22. **PROPER AUTHORITY:** Contractor represents and warrants Contractor has full power and authority to enter into this Contract. Any services performed by Contractor before this Contract is effective or after it ceases to be effective are performed at the sole risk of Contractor.

23. **GOVERNING LAW; VENUE:** This Contract will be interpreted, and the rights and liabilities of the parties determined, in accordance with the laws of the State of Nevada, excluding its conflict of laws rules. In any action or proceeding arising under this Contract, each party (a) consents to the jurisdiction of Nevada Courts, and of the pertinent appellate courts, and consents to the venue of such action or proceeding in Lyon County, Nevada courts, (b) irrevocably agrees that all actions or proceedings arising out of or relating to this Contract shall be litigated in such courts, and (c) consents to personal jurisdiction within Lyon County, Nevada. Each party accepts for itself, generally and unconditionally, the exclusive jurisdiction and venue of the aforesaid courts and waives any defense of lack of personal jurisdiction, improper venue, inconvenient forum or any similar defense, and irrevocably agrees to be bound by any non-appealable judgment rendered thereby in connection with this Contract.

24. **INTEGRATED CONTRACT:** This Contract (including any addenda, exhibits, or attachments incorporated into and made a part of this contract) constitutes the entire agreement and understanding among the parties regarding the matters set forth herein and supersedes all previous negotiations, discussions, and understandings regarding such matters. The parties acknowledge and represent that they have not relied on any promise, inducement, representation, or other statement made in connection with this Contract that is not expressly contained herein. The terms of this Contract are contractual and not a mere recital.

25. **COUNTERPARTS:** This Contract may be executed in multiple counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same instrument.

26. **ADVICE OF COUNSEL:** Each party hereto represents and agrees that it has had the opportunity to seek and has sought from attorneys any such advice as it deems appropriate with respect to signing this Contract or the meaning of it. Each party has undertaken such independent investigation and evaluation as it deems appropriate and is entering into this Contract in reliance on that and not in reliance on any advice, disclosure, representation or information provided by or expected from any other party or such party's attorneys. This is an agreement of settlement and compromise, made in recognition that the parties may have different, disputed or incorrect understandings, information and contentions, as to facts and law, and with each party compromising and settling any potential correctness or incorrectness of its understandings, information and contentions as to the facts, law, claims, duties, disclosures and conduct occurring before or during the entry into this Contract. No conduct, failure, misunderstanding or misinformation and no claim of fraud or fraudulent inducement occurring prior to or in connection with the execution hereof shall be a ground for rescission hereof or for recovery of damages, except as otherwise expressly provided herein.

27. **MODIFICATION; NO WAIVER:** The provisions of this Contract, including this paragraph, may be modified or waived only in writing signed by both parties. No waiver with respect to any portion of this Contract shall apply to any other portion of the Contract, and a waiver on one occasion shall not be deemed to be a waiver of the same or any other breach on a future occasion. No course of dealing by any party, and no failure, omission, delay, or forbearance by any party in exercising such party's rights or remedies shall be deemed a waiver of any such rights or remedies or a modification of this Contract.

28. **INTERPRETATION OF AGREEMENT:** This Contract shall be construed without regard to the party or parties responsible for its preparation and shall be deemed to have been prepared collectively by the parties. Any ambiguity or uncertainty arising herein shall not be interpreted or construed against any party hereto on the basis that a party prepared or drafted a particular provision of this Contract.

29. **COOPERATION OF PARTIES:** The parties agree to cooperate to accomplish the purpose of this Contract and to execute any and all supplementary documents and to take all additional actions not inconsistent with the terms set forth in this Contract that are necessary and appropriate to give full force and effect to the terms and intent of this Contract.

30. **NON-DISCRIMINATION:** In connection with the performance of work under this Contract, Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation,

gender identity or expression, or age, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including, without limitation, apprenticeship. Contractor further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

In witness whereof, the parties hereto have caused this Contract to be signed and intend to be legally bound thereby:

CITY OF FERNLEY

_____
Mayor, City of Fernley Date

_____
City Clerk, City of Fernley Date

Approved as to form:

_____
City Attorney, City of Fernley Date

Originating Department:

_____
Department Head Date

CONTRACT

A Contract For Design Professional Services

CONTRACTOR, being first duly sworn, deposes and says: That CONTRACTOR. is the Contractor**;** that NAME OF PERSON REPRESENTING CONTRACTOR has read the foregoing Contract; and that he understands the terms, conditions, and requirements thereof.

CONTRACTOR
BY:
TITLE:
FIRM:
BUSINESS LICENSE #:
Address:
City: State: Zip Code:
Telephone: Fax #:
E-mail Address:

_____
(Signature of Contractor)

DATED this _____ day of _____, 20__.

STATE OF _____)
) ss
County of _____ _____)

On this _____ day of , in the year 20__, before me, _____ / Notary Public, personally appeared , personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to this instrument, and acknowledged that he executed it.

WITNESS my hand and official seal.

_____
Notary's Signature

My Commission Expires: _____

January 11, 2023

Salvador Plietez, P.E.
Senior Project Manager
595 Silver Lace Boulevard
Fernley, NV 89408

Re: **Proposal for Engineering Services**
Fernley Water Treatment Plant Tank Design
Fernley, NV

Dear Mr. Plietez:

At your request Shaw Engineering (Shaw) is pleased to submit an engineering services proposal for the design of one treated water storage tank located at the existing water treatment plant in Fernley, NV.

The project will include one tank site with one 1,500,000 gallon welded steel treated water storage reservoir. The tank will be designed to meet City of Fernley (City) and NDEP Bureau of Safe Drinking Water (BSDW) requirements and will be owned and operated by the City of Fernley. This proposal will coordinate all design and permitting of the tanks. The scope of work envisioned for the tank design is provided below:

Scope of Work

Task 1 Preliminary Coordination and Design Development
As part of this task, Shaw will utilize preliminary base files/drawings from CDM Smith to develop a tank site and pipeline alignment. Shaw will coordinate and meet with the City to obtain feedback on the site plan. Shaw will also coordinate with the City throughout the design stage to ensure proper accommodations are planned for electrical service, tank overflow piping and baffling for chlorine contact. This task also includes survey to ensure the base elevation of the new tank matches that of the existing tank.

Task 2 Final Tank Design
Shaw will continue to develop the site plan and details based on the design development phase and any additional comments/feedback from the City. Shaw will also coordinate with a tank vendor during this phase to ensure any additional value engineering items are incorporated into the details of the tank. The final tank design will include details for all site features such as valve vaults, fill/drain line appurtenances, valve specifications and sizing, fencing, etc. All applicable Nevada Administrative Code (NAC) Chapter 445A requirements will be incorporated into the tank design. The design will also include all tank details, such as vents, access ladders, rails, inlet and outlet piping, check valves, drain/overflow piping, tank fill-line circulation piping design coordination, baffling, and all required miscellaneous piping and appurtenances.

The final tank design will be coordinated, as necessary, with NDEP-BSDW prior to final permit submittal. Permit submittal stamped drawings and opinions of probable construction costs will be provided to the City.

Task 3 Permitting Support

During permitting through NDEP-BDSW, Shaw will be available to provide any additional requested design coordination. This task will include review of any BSDW comments and up to two rounds of revisions to the plans to satisfy agency review comments.

Task 4 Bidding and Construction Administration

Shaw will assist the City in advertisement, bidding documents, pre-bid meeting and bid opening for the project. Shaw will respond to the bidder RFI's, review alternative materials proposed by bidders, attend the pre-bid meeting, and provide review of all bids and provide a recommendation of award.

During construction Shaw will provide intermittent inspections and field support to the City. Shaw and/or its subcontractors will review overflow piping, tank coating, review material submittals, inspect SCADA, inspect the concrete foundation and backfill, review excavations, including pipeline installation and ensure all project items are in place prior to the tank being placed online. Shaw will coordinate filling and disinfection procedures with the contractor and the City, ensure all operating parameters are met and all SCADA and electrical components are performing as planned.

Our engineering fee to complete this work is as follows:

Task 1 Preliminary Coordination and Design Development	$7,500
Task 2 Final Tank Design	$42,000
Task 3 Permitting Support	$4,500
Task 4 Bidding and Construction Administration	$12,500
Estimated Total Fee:	$66,500

Our fee to provide these services will be billed monthly based on time and materials at our current fee schedule attached. Our total fee for this project will not exceed $66,500 without prior authorization. These fees will provide all stamped drawings and related requirements for complete permitting through the Bureau of Safe Drinking Water. Minor site grading for areas immediately around the tank is included. It is understood that the City would like the construction of the new tank to be completed by July 2023. Thank you for the opportunity to submit this proposal.

If you have any questions please call.

Sincerely,
SHAW ENGINEERING



Steve Brigman, P.E.
Principal Engineer

_____
Signature Above is Owners' Acknowledgment for Shaw Engineering to Proceed with the Work

2022 FEE SCHEDULE

PROFESSIONAL

Principal	$180.00/hr
Project Manager	$160.00/hr
Senior Engineer	$150.00/hr
Professional Engineer II	$140.00/hr
Professional Engineer I	$120.00/hr
Staff Engineer II	$110.00/hr
Staff Engineer I	$100.00/hr
Expert Testimony	
Consultations	$250.00/hr
Reports/Preparations	$500.00/hr
Trial/Depositions	$750.00/hr (4 hr.Min.)

TECHNICAL

Engineering Technician	$ 95.00/hr
Planning Technician	$ 85.00/hr
Drafting/Technician II	$ 85.00/hr
Drafting/Technician I	$ 75.00/hr
Construction Inspector II	$100.00/hr
Construction Inspector I	$ 90.00/hr

ADMINISTRATIVE

Office Administrator	$ 75.00/hr
Administrative Assistant II	$ 65.00/hr
Administrative Assistant I	$ 55.00/hr

OTHER

Subconsultants	Cost + 15%
Mileage	$0.75/mile
Per Diem	$150.00/day
Expenses	At Cost

The cost for office equipment, office supplies, hardware and software utilized during a Project is included in the fee schedule. Per Diem applies to Construction Inspectors that are required to spend one night or more on the Project.

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Jessica Dover**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes: X	No:	Yes:	No:	N/A

ACTION REQUESTED: Consent

AGENDA ITEM: (For Possible Action):

Possible Action to Approve the City of Fernley Annual Road and Street Mileage Report to be submitted to the Nevada Department of Transportation (NDOT).

AGENDA ITEM BRIEF:

The Motor Vehicle Fuel Tax is allocated based upon area, population, road mileage and vehicle travel miles. Certification letters were last submitted to NDOT in February 2022. Since the 2022 submittal (2021 Data Year), approximately 0.844 centerline miles of public roadway have been accepted by the City of Fernley (City). No centerline miles have changed classification during the 2022 Data Year. The total area managed by the City within the corporate boundary map has increased from 128.15 square miles to 129.55 square miles during the 2022 Data Year.

RECOMMENDED MOTION:

"I move to Approve the City of Fernley Annual Road and Street Mileage Report to be submitted to the Nevada Department of Transportation (NDOT)."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

1. City Council may review: *2023 Certification of Public Road Mileage and Motor Fuel Tax Mileage* Certification, and approve the Certification for submittal to NDOT by the March 01, 2023 deadline
2. City Council may review: *2023 Certification of Public Road Mileage and Motor Fuel Tax Mileage* Certification, and provide additional direction to the Acting City Manager

BACKGROUND:
NRS 365.550 Section 8 (a)(b) states the following:

"Each county and incorporated city shall, not later than March 1 of each year, submit a list to the Department of Transportation setting forth:

1. Each improved road or street that is maintained by the county or city; and
2. The beginning and ending points and the total mileage of each of those improved roads or streets.

Each county and incorporated city shall, at least 10 days before the list is submitted to the Department of Transportation, hold a public hearing to identify and determine the improved roads and streets maintained by the county or city."

The City has a database of roads and streets within the City that is updated as projects are completed. This database, along with the required NDOT Form (*2023 Certification of Public Road Mileage and Motor Fuel Tax Mileage* Certification Form, attached), will be submitted to NDOT subsequent to Council approval.

Per NRS 365.550, every 10 years NDOT is required to perform a physical road audit of the roads maintained by the City for Motor Fuel Tax purposes. This audit was most recently completed by NDOT Roadway Systems Division in Fall 2015. In general, NDOT evaluates total centerline mileage included within the City's Corporate Boundary, and compares their audit totals to certified mileage totals as submitted by the City.

If the total mileage obtained by NDOT after an audit is within 5% of the mileage submitted by the City, the City's mileage is accepted by the State without any major revisions necessary, and the higher mileage amount is assigned to the City. The City's certified mileage amount was within the required 5%, however, the total mileage driven by NDOT exceeded the total mileage submitted by the City. As a result, in 2016 the City's new certified mileage became 129.202; (total centerline mileage derived through NDOT's audit in Fall, 2015) a slight increase from 128.72 miles, reported in recent years preceding the audit.

A total of 0.855 additional Roadway Centerline Miles were accepted by the City during Data Year 2019.

No additional centerline miles of public roadway were accepted by the City for the 2020 Data Year.

A total of 0.704 additional Roadway Centerline Miles were accepted by the City during Data Year 2021.

No centerline miles have changed classification during the 2022 Data Year. The total area managed by the City within the corporate boundary map has increased from 128.15 square miles to 129.55 square miles during the 2022 Data Year.

The following roadway improvements were accepted by the City of Fernley during the 2022 Data Year:

Resolution #22-017, (Approved by FCC September 07, 2022)

Resolution #22-017 to accept Public Improvements including roadway, water, sewer, storm drain, retention basin and lift station infrastructure for the Eagle Meadows Subdivision.

White Eagle LN – 624.76' (0.118 Miles)
Rose LN – 1,542.32' (0.292 Miles)
White Hawk RD – 657.98' (0.125 Miles)
Total = 2,825.06' (0.535 Miles)

Resolution #22-020, (Approved by FCC December 21, 2022)

Resolution #22-020 to accept Public Improvements including roadway, water, sewer and storm drain infrastructure for the Nelson Meadows Phase 2 Subdivision.

Nevada Pacific BLVD – 1,458.18' (0.276 Miles)
Westward LN – 172.11' (0.033 Miles)
Total = 1,630.29' (0.309 Miles)

Total Additional Roadway Centerline Miles Accepted by the City during Data Year 2022: 0.844 Miles

Total Certified Mileage, Data Year 2022: 130.761 + 0.844 = 131.605 Centerline Miles, 98.193 Paved Miles

RELEVANT LAWS, STATUTES, AND REGULATIONS:

Nevada Statutes: NRS 365
Other: CFR Title 23, Chapter 1, parts 460.1-460.3 and USC 23, Chapter 4, Section 402 c

FINANCIAL IMPLICATIONS:

Proper reporting of roadway centerline miles maintained by the City of Fernley is critical for distribution of the Motor Vehicle Fuel Tax. This tax is allocated based upon area, population, road mileage and vehicle travel miles.

ATTACHMENTS:

1. Certification of Public Road Mileage and Fuel Tax Mileage Form v2, signed

2023
(2022 Data Year)

Certification of Public Road Mileage and Fuel Tax Mileage
To Nevada Department of Transportation

Annual Certification of city owned/maintained Public Road/Street mileage, Fuel Tax Road/Street mileage and area in square miles within Fernley.

Public Road Mileage: I hereby certify that there are 131.605 centerline miles of Public Road/Streets within the corporate limits as of December 31, 2022.

Number of Paved Miles: 98.193 Number of Unpaved Miles: 33.412

Square Mileage: I certify the area in square miles within the corporate limits are 129.55.

I am also submitting a corporate boundary map showing these corporate limits.

Please submit an inventory of your Certified Public Mileage roads in one of the following formats:

1. Excel Spreadsheet
2. File Geodatabase
3. Shapefile
4. Map

Motor Fuel Tax Mileage:

Note: *Nevada Department of Transportation is requesting that you submit your Motor Fuel Tax mileage certification by* ***March 1, 2023****. If you do not submit your certification by this date, we will be unable to provide your certified mileage to the Department of Taxation and your agency will not receive reimbursable fuel taxes.*

I hereby certify that there are 98.193 Motor Fuel Tax centerline road miles maintained by Fernley as of December 31, 2022.

Please submit an inventory of your Motor Fuel Tax roads in one of the following formats:

1. Excel Spreadsheet
2. File Geodatabase
3. Shapefile

Note: Your certification must include an inventory of all maintained roads to include the begin and end points of the road and the total length, per NRS 365.550, Sections 8 (a)(b). Please submit a full copy of your database.

I _____ hereby certify that the above values accurately reflect the roadways under our jurisdiction.

Printed Name: David Whalen, P.E., CEM Date: 01/31/2023

Title: Public Works Director, City of Fernley

Public Road miles/mileage is defined in C.F.R. Title 23 Parts 460.1-460.3 and U.S.C. 23 Chapter 4 Section 402(c)
Motor Fuel Tax miles/mileage is defined in NRS 365.550

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Barry Williams**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes:x	No:	Yes:x	No:	300-425-730

ACTION REQUESTED: Consent

AGENDA ITEM: (For Possible Action):

For Possible Action To approve the award of a contract to Sullivan Structures for the Depot Roofing construction project for an amount of $331,914 plus a 20% contingency of $66,382.80 for a total amount of $398,296.80.

AGENDA ITEM BRIEF:

During the 2022/2023 budget cycle, staff budgeted $600,000 to demolish and replace the roof at the Fernley-Lassen Train Depot located at 675 Main St. E as part of the Depot rehabilitation project.

RECOMMENDED MOTION:

“I move to…. Approve the award of a contract to Sullivan Structures for the Depot Roofing construction project for an amount of $331,914 plus a 20% contingency of $66,382.80 for a total amount of $398,296.80.”

BUSINESS IMPACT (per NRS Chapter 237):

N/A

See attached report for background, analysis, alternatives.

ALTERNATIVES:

Council may choose to deny the contract award and provide further direction to staff.

BACKGROUND:

In December 2016, Council approved the Depot Rehabilitation Project as one of the “City Council Priorities”.

Depot improvements were budgeted during the FY 17/18 budget approval process to potentially re-paint and reroof the structure. In 2017, the lead-based paint removal, encapsulation and re-Painting portion was completed. In February 2022, staff contracted with Farr West Engineering (now known as DOWL) to provide architectural design and construction services, which included project management, scheduling, Architectural design and consulting as well as contract bidding and construction assistance throughout the project. The roofing project was advertised for bid on 12/15/2022, and bids were opened on 1/12/2023. One bid was received.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

NRS 338

FINANCIAL IMPLICATIONS:

$600,000 was budgeted within the General Fund Capital Improvement portion of the FY 2022/2023 budget using G.L # 300-425-730.

ATTACHMENTS:

1. Bid Submittal #2134_TrainDepot_SullivanStructures_01.12.23

CITY OF FERNLEY

CITY COUNCIL
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT THRU:	**Neil McIntyre, Mayor**
REPORT FROM:	**Barry Williams, Deputy Public Works Director**
REVIEWED BY:	Brandi Jensen, City Attorney
REVIEWED BY:	Denise Lewis, City Treasurer

FINANCIAL IMPACT:	**CURRENTLY BUDGETED:**	**FUND/ACCOUNT:**
Yes: ☒ **No:** ☐	**Yes:** ☒ **No:** ☐	**300-425-730**

ACTION REQUESTED: ☒Consent ☐Ordinance ☐Resolution ☐Motion ☐Receive/File

AGENDA ITEM: Staff Report (For Possible Action): To approve the award of a contract to Sullivan Structures for the Depot Roofing construction project for an amount of $331,914 plus a 20% contingency of $66,382.80 for a total amount of $398,296.80.

Agenda Item Brief: During the 2022/2023 budget cycle, staff budgeted $600,000 to demolish and replace the roof at the Fernley-Lassen Train Depot located at 675 Main St. E as part of the Depot rehabilitation project.

Recommended Motion:
"I move to…. Approve the award of a contract to Sullivan Structures for the Depot Roofing construction project for an amount of $331,914 plus a 20% contingency of $66,382.80 for a total amount of $398,296.80."

Business Impact (per NRS Chapter 237):

☐ A Business Impact Statement is Attached.

☒ A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

ALTERNATIVES: Council may choose to deny the contract award and provide further direction to staff.

BACKGROUND:

In December 2016, Council approved the Depot Rehabilitation Project as one of the "City Council Priorities".

Depot improvements were budgeted during the FY 17/18 budget approval process to potentially re-paint and re-roof the structure. In 2017, the lead-based paint removal, encapsulation and re-Painting portion was completed.

In February 2022, staff contracted with Farr West Engineering (now known as DOWL) to provide architectural design and construction services which included project management, scheduling, Architectural design and consulting as well as contract bidding and construction assistance throughout the project.

The roofing project advertised for bid on 12/15/2022, and bids were opened on 1/12/2023. One bid was received.

LEGAL IMPLICATIONS:

Nevada Statues: NRS 338

FINANCIAL IMPLICATIONS:
$600,000 was budgeted within the General Fund Capital Improvement portion of the FY 2022/2023 budget using G.L # 300-425-730.

ATTACHMENTS:

Bid Submittal # 2134 Train Depot Sullivan Structures

ATTACHMENT 1

SECTION 00410

BID FORM FOR CONSTRUCTION CONTRACTS

Fernley Train Depot Roof Replacement

PWP LY-2023-140

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ARTICLE 1 – BID RECIPIENT

1.1 This Bid is submitted to Owner address as identified in Section 00100 – Advertisement for Bidders.

1.2 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.1 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

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ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.1 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date
#1	1/7/2023

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

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J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.1 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.1 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

BASE BID SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Amount
1.	Fernley Train Depot Roof Replacement	1	LS	$**329,964.00**	$ **329,964.00**
2.	Force Account	1	LS	$40,000	$40,000

TOTAL BASE BID (Items 1-2) PRICE - $ 369,964.00

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$ Three Hundred Sixty Nine Thousand Nine Hundred Sixty Four Dollars and Zero Cents

In Words

ALTERNATE 1 - BID SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Amount
3.	Ridge Cap Replacement	1	LS	$ 1,950.00	$ 1,950.00

TOTAL ALTERNATE 1 (Item 3) BID PRICE - $ 1,950.00

$ One Thousand Nine Hundred Fifty Dollars and Zero Cents

In Words

In the comparison of Bids, the alternate will be applied and the sum of the base bid and alternate will be used for determination of low bid. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Unit Prices have been computed in accordance with Paragraph 13.03.B of the General Conditions.

The requirements of Nevada Revised Statues (NRS) shall apply to this project. The BIDDER is responsible for compliance with all applicable statues. These statutes include, but are not limited to:

A. NRS 338.020: Hourly and daily rate of wages must not be less than prevailing wage in County.

B. NRS 338.080: Exemptions

C. NRS 338.141: Bids to include certain information concerning subcontractors; when bids deemed not responsive with respect to subcontractors; requirements for substitution of named subcontracts.

D. NRS 338.147: Award of Contract to Contractor who submits best bid.

ARTICLE 6 – TIME OF COMPLETION

6.1 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

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6.2 Bidder accepts the provisions of the Agreement as to Liquidated Damages.

ARTICLE 7 – ATTACHMENT TO THIS BID

7.1 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in the form of a Bid Bond (EJCDC C-430);

B. 5% Subcontractor List (Section 00440);

C. 1% Subcontractor List (Section 00441) within the required timeframe per NRS 338.141;

D. Required Bidder Qualifications Statement with supporting data (EJCDC C-451);

E. Evidence of authority to do business in City of Fernley and the State of Nevada; and

F. Contractor's License No. (may be combined with another attachment).

7.2 Each Bidder submitting a Bid on a public work project whose estimated cost exceeds $250,000 is responsible for ascertaining whether the Bidder intends to utilize the referenced statute for five percent (5%) preference and is also eligible for the bidder preference and other matters relating thereto provided in NRS Chapter 338.0117 and 338.147.2(a). The Bidder claiming the bid preference shall:

A. Submit with his or her Bid a valid certificate of eligibility to receive a preference in bidding on public works issued to the Bidder by the State of Nevada Contractors' Board; and

B. Within 2 hours after the completion of the opening of bids by City of Fernley or its authorized representative, submit a signed affidavit (Section 00445).

C. Failure to submit the Certificate of Eligibility and Affidavit shall result in a waiver of any Bidder preference.

ARTICLE 8 – DEFINED TERMS

8.1 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

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ATTACHMENT 1

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

Sullivan Structures LLC

By:

[Signature] 

[Printed name] **Patrick Sullivan**

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature] 

[Printed name] **AJ Trimble**

Title: **Project Manager**

Submittal Date: **1/12/2023**

Address for giving notices:

4910 Air Center Circle Suite 101 Reno, NV 89502

Telephone Number: **(775) 849-0220**

Fax Number:

Contact Name and e-mail address: **AJ Trimble aj@sullivanstructuresllc.com**

Bidder's License No.: **74914**

(where applicable)

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EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

PENAL SUM FORM

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*: Sullivan Structures, LLC
1325 Dunbar Cir.
Washoe Valley, NV 89704

SURETY *(Name, and Address of Principal Place of Business)*: Endurance Assurance Corporation
155 NE 100th Street, Suite 201
Seattle, WA 98125

OWNER *(Name and Address)*: City of Fernley
595 Silver Lace Boulevard
Fernley, VA 89408

BID

Bid Due Date: January 12, 2023

Description *(Project Name — Include Location)*: Fernley Train Depot Roof Replacement; PWP: LY-2023-140
Fernley, Nevada

BOND

Bond Number: N/A

Date: January 9, 2023

Penal sum Five Percent of Total Amount Bid *(Words)* $ 5% of Total Amount Bid *(Figures)*

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
Sullivan Structures, LLC (Seal)	Endurance Assurance Corporation (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: [signature]	By: [signature]
Signature	Signature (Attach Power of Attorney)
PATRICK E. SULLIVAN	Andrea Cantlon
Print Name	Print Name
CEO-MANAGING MEMBER	Attorney-In-Fact
Title	Title
Attest: [signature]	Attest: [signature]
Signature	Signature Carey Morgan
Title WITNESS / PROJECT MANAGER	Title Witness

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SOMPO INTERNATIONAL
INSURANCE

POWER OF ATTORNEY

6664

KNOW ALL BY THESE PRESENTS, that **Endurance Assurance Corporation**, a Delaware corporation, **Endurance American Insurance Company**, a Delaware corporation, **Lexon Insurance Company**, a Texas corporation, and/or **Bond Safeguard Insurance Company**, a South Dakota corporation, each, a "Company" and collectively, "**Sompo International**," do hereby constitute and appoint: **Andrea Cantlon, Pat Owens, Teri L. Wood, Carey Morgan, Shelly Demaray** as true and lawful Attorney(s)-In-Fact to make, execute, seal, and deliver for, and on its behalf as surety or co-surety; bonds and undertakings given for any and all purposes, also to execute and deliver on its behalf as aforesaid renewals, extensions, agreements, waivers, consents or stipulations relating to such bonds or undertakings provided, however, that no single bond or undertaking so made, executed and delivered shall obligate the Company for any portion of the penal sum thereof in excess of the sum of **ONE HUNDRED MILLION Dollars ($100,000,000.00).**

Such bonds and undertakings for said purposes, when duly executed by said attorney(s)-in-fact, shall be binding upon the Company as fully and to the same extent as if signed by the President of the Company under its corporate seal attested by its Corporate Secretary.

This appointment is made under and by authority of certain resolutions adopted by the sole shareholder of each Company by unanimous written consent effective the 15th day of June, 2019, a copy of which appears below under the heading entitled "Certificate".

This Power of Attorney is signed and sealed by facsimile under and by authority of the following resolution adopted by the sole shareholder of each Company by unanimous written consent effective the 15th day of June, 2019 and said resolution has not since been revoked, amended or repealed:

RESOLVED, that the signature of an individual named above and the seal of the Company may be affixed to any such power of attorney or any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signature or seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

IN WITNESS WHEREOF, each Company has caused this instrument to be signed by the following officers, and its corporate seal to be affixed this 15th day of June, 2019.

Endurance Assurance Corporation
By: Richard M Appel
Richard Appel; SVP & Senior Counsel

Endurance American Insurance Company
By: Richard M Appel
Richard Appel; SVP & Senior Counsel

Lexon Insurance Company
By: Richard M Appel
Richard Appel; SVP & Senior Counsel

Bond Safeguard Insurance Company
By: Richard M Appel
Richard Appel; SVP & Senior Counsel

ACKNOWLEDGEMENT

On this 15th day of June, 2019, before me, personally came the above signatories known to me, who being duly sworn, did depose and say that he/they is/are officer of each of the Companies; and that he executed said instrument on behalf of each Company by authority of his office under the by-laws of each Company.

By: Amy Taylor
Amy Taylor, Notary Public / My Commission Expires 5/9/23

CERTIFICATE

I, the undersigned Officer of each Company, DO HEREBY CERTIFY that:

1. That the original power of attorney of which the foregoing is a copy was duly executed on behalf of each Company and has not since been revoked, amended or modified; that the undersigned has compared the foregoing copy thereof with the original power of attorney, and that the same is a true and correct copy of the original power of attorney and of the whole thereof.
2. The following are resolutions which were adopted by the sole shareholder of each Company by unanimous written consent effective June 15, 2019 and said resolutions have not since been revoked, amended or modified:

   "RESOLVED, that each of the individuals named below is authorized to make, execute, seal and deliver for and on behalf of the Company any and all bonds, undertakings or obligations in surety or co-surety with others: RICHARD M. APPEL, BRIAN J. BEGGS, CHRISTOPHER DONELAN, SHARON L. SIMS, CHRISTOPHER L. SPARRO, MARIANNE L. WILBERT

   , and be it further

   RESOLVED, that each of the individuals named above is authorized to appoint attorneys-in-fact for the purpose of making, executing, sealing and delivering bonds, undertakings or obligations in surety or co-surety for and on behalf of the Company."
3. The undersigned further certifies that the above resolutions are true and correct copies of the resolutions as so recorded and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal this 9th day of January 2023.

By:
Daniel S. Lurie, Secretary

NOTICE: U. S. TREASURY DEPARTMENT'S OFFICE OF FOREIGN ASSETS CONTROL (OFAC)

No coverage is provided by this Notice nor can it be construed to replace any provisions of any surety bond or other surety coverage provided. This Notice provides information concerning possible impact on your surety coverage due to directives issued by OFAC. **Please read this Notice carefully.**

The Office of Foreign Assets Control (OFAC) administers and enforces sanctions policy, based on Presidential declarations of "national emergency". OFAC has identified and listed numerous foreign agents, front organizations, terrorists, terrorist organizations, and narcotics traffickers as "Specially Designated Nationals and Blocked Persons". This list can be located on the United States Treasury's website – https://www.treasury.gov/resource-center/sanctions/SDN-List.

In accordance with OFAC regulations, if it is determined that you or any other person or entity claiming the benefits of any coverage has violated U.S. sanctions law or is a Specially Designated National and Blocked Person, as identified by OFAC, any coverage will be considered a blocked or frozen contract and all provisions of any coverage provided are immediately subject to OFAC. When a surety bond or other form of surety coverage is considered to be such a blocked or frozen contract, no payments nor premium refunds may be made without authorization from OFAC. Other limitations on the premiums and payments may also apply.

Any reproductions are void.

Surety Claims Submission: LexonClaimAdministration@sompo-intl.com
Telephone: 615-553-9500 Mailing Address: Sompo International; 12890 Lebanon Road; Mount Juliet, TN 37122-2870

SECTION 00440

5% SUBCONTRACTOR LIST

Per NRS Chapter 338.141, each Bid submitted must include the name of the prime contractor and each first tier subcontractor who will provide labor or a portion of the work on the public work to the prime contractor for which the first tier subcontractor will be paid an amount exceeding five (5) percent of the prime contractor's total bid.

If a Bidder fails to provide a complete list, their Bid shall be deemed not responsive. Subcontractors must not be on a disqualified status with the State Public Works Board.

Complete the following table for the prime contractor and first tier subcontractors who will be employed and the segregation of the Work each will perform if the Contract is awarded to the party or parties listed herein.

First tier subcontractor is defined as a contractor who contracts directly with a prime contractor to provide labor, materials, or services for a construction project, as defined by NRS 338.141(8)(a).

Work to be Performed	Percentage of Total Contract	Subcontractor's Name, Address, and License Number
1. **General Labor, General Carpentry, Supervision, PM**	**41%**	*(Prime Contractor)* **Sullivan Structures 4910 Air Center Cir #101 Reno, NV 74914**
2. **Roofing, General Sheet Metal**	**44%**	*(Subcontractor)* **CTR Roofing 395 Freeport Blvd #5 Sparks, NV 89431 84675**
3. **Carpentry/ Finish Carpentry**	**7%**	*(Subcontractor)* **Diamond Ridge Framing LLC 1698 Arboleda Dr. Reno, NV 89521 86126**
4.		*(Subcontractor)*
5.		*(Subcontractor)*
6.		*(Subcontractor)*

NOTE: *Additional numbered pages may be attached if needed.*

SECTION 00441

1% SUBCONTRACTOR LIST

Per NRS Chapter 338.141, within 2 hours after the completion of the opening of the bids, the prime contractors who submitted the three lowest bids must submit a list containing:

(1) The name of each first tier subcontractor who will provide labor or a portion of the work on the public work to the prime contractor for which the first tier subcontractor will be paid an amount **exceeding** $250,000.

OR

(2) If any one of the prime contractors who submitted one of the three lowest bids will employ a first tier subcontractor who will provide labor or a portion of the work on the public work to the prime contractor for which the first tier subcontractor will **not** be paid an amount exceeding $250,000, the name of each first tier subcontractor who will provide labor or a portion of the work on the public work to the prime contractor for which the first tier subcontractor will be paid 1 percent of the prime contractor's total bid or $50,000, whichever is greater.

If a Bidder fails to provide a complete list with all requested information provided, their Bid shall be deemed not responsive. Subcontractors must not be on a disqualified status with the State Public Works Board.

Complete the following table for the prime contractor and first tier subcontractors who will be employed and the segregation of the Work each will perform if the Contract is awarded to the party or parties listed herein.

First tier subcontractor is defined as a contractor who contracts directly with a prime contractor to provide labor, materials, or services for a construction project, as defined by NRS 338.141(8)(a).

Work to be Performed	Percentage of Total Contract	Subcontractor's Name, Address, and License Number
1. **General Labor, General Carpentry, Supervision, PM**	**41%**	*(Prime Contractor)* **Sullivan Structures 4910 Air Center Cir #101 Reno, NV 74914**
2. **Roofing, General Sheet Metal**	**44%**	*(Subcontractor)* **CTR Roofing 395 Freeport Blvd #5 Sparks, NV 89431 84675**
3.		*(Subcontractor)*
4.		*(Subcontractor)*
5.		*(Subcontractor)*

NOTE: *Additional numbered pages may be attached if needed.*

SECTION 00445

PUBLIC WORKS BIDDER'S PREFERENCE AFFIDAVIT

I, **Patrick Sullivan**, on behalf of **Sullivan Structures LLC** ("Contractor"), hereby certify and affirm under penalty of perjury, for purposes of qualifying for a preference in bidding under Nevada Revised Statutes Chapter 338 on Project No. **LY-2023-140**, Project Name **Fernley Train Depot Roof Replacement** ("Project"), that the following requirements will be adhered to, documented and attained for the duration of the Project:

1. At least fifty percent (50%) of workers employed on the Project (including Subcontractors) hold a valid driver's license or identification card issued by the Nevada Department of Motor Vehicles;

2. All vehicles used primarily for the Project will be (a) registered and (where applicable) partially apportioned to Nevada; or (b) registered in Nevada;

3. At least fifty percent (50%) of the design professionals who work on the Project (including subcontractors) hold a valid driver's license or identification card issued by the Nevada Department of Motor Vehicles;

4. The Contractor shall maintain and make available for inspection within Nevada all payroll records related to this Project.

Contractor recognizes and accepts that failure to comply with the requirements herein shall be a material breach of the contract and entitle the Lyon County Utilities ("Owner") to liquidated damages in the amount set by statute. In addition, the Contractor recognizes and accepts that failure to comply with any requirements herein may lose its certification for preference in bidding for five (5) years and/or the ability to bid on any contracts for public works for one (1) year pursuant to NRS Chapter 338.

Signature: _____

By: PATRICK E. SULLIVAN

Title: CEO - MANAGING MEMBER Date: 1-12-23

State of Nevada)
)ss.
County of Washoe)

Signed and sworn to (or affirmed) before me on this 12th day of January, 2023, by Patrick Sullivan (name of person making statement).

TAMI L. THOMPSON
Notary Public - State of Nevada
County of Washoe
APPT. NO. 19-3144-02
My App. Expires Oct. 18, 2023

STAMP AND SEAL

_____
Notary Signature

NEVADA STATE CONTRACTORS BOARD

5390 KIETZKE LANE, SUITE 102, RENO, NEVADA, 89511 (775) 688-1141 FAX (775) 688-1271, INVESTIGATIONS (775) 688-1150
8400 WEST SUNSET ROAD, SUITE 150, LAS VEGAS, NEVADA, 89113, (702) 486-1100 FAX (702) 486-1190, INVESTIGATIONS (702) 486-1110

CERTIFICATE OF ELIGIBILITY
PER NRS 338.147 and NRS 338.1389

CERTIFICATE NUMBER: ***BPC-19-11-13-0597***

SULLIVAN STRUCTURES LLC (HEREIN THE "GENERAL CONTRACTOR") NEVADA STATE CONTRACTORS' LICENSE NUMBER: ***0074914*** ORIGINAL ISSUE DATE: ***05/21/2010*** BUSINESS TYPE: ***LIMITED LIABILITY COMPANY*** CLASSIFICATION: ***B-2 RESIDENTIAL & SMALL COMMERCIAL*** MONETARY LICENSE LIMIT: ***$700,000*** STATUS: ***ACTIVE,*** IS HEREBY ISSUED THIS CERTIFICATE BY THE NEVADA STATE CONTRACTORS' BOARD, BASED UPON THE INFORMATION CONTAINED IN THE STATEMENT OF COMPLIANCE WITH NEVADA REVISED STATUTES (NRS) 338.147 AND NRS 338.1389 AND THE AFFIDAVIT OF CERTIFIED PUBLIC ACCOUNTANT SUBMITTED TO THE NEVADA STATE CONTRACTORS BOARD AS PROOF OF CONTRACTOR'S COMPLIANCE WITH THE PROVISIONS OF NRS 338.147 AND NRS 338.1389. IN ACCORDANCE WITH THE PROVISIONS OF NRS 338.147(3), THE ABOVE-NAMED GENERAL CONTRACTOR AND A CERTIFIED PUBLIC ACCOUNTANT HAVE SUBMITTED FULLY *EXECUTED AND* NOTARIZED SWORN *AFFIDAVITS AS PROOF* OF PREFERENTIAL BIDDER STATUS, UNDER PENALTY OF PERJURY, CERTIFYING THAT THE GENERAL CONTRACTOR IS QUALIFIED TO RECEIVE A PREFERENCE IN BIDDING AS SET FORTH IN NRS 338.147 AND NRS 338.1389 AND OTHER MATTERS RELATING THERETO.

THIS CERTIFICATE OF ELIGIBILITY IS ISSUED ON ***JUNE 1, 2022*** AND EXPIRES ON ***MAY 31, 2023***, UNLESS SOONER REVOKED OR SUSPENDED BY THE NEVADA STATE CONTRACTORS BOARD.

/s/ Nancy Mathias 5/31/2022

NANCY MATHIAS, LICENSING ADMINISTRATOR — DATE
MARGI A. GREIN, EXECUTIVE OFFICER

The Nevada State Contractors Board assumes no liability or responsibility for the accuracy or validity of the information contained in the Contractors Statement of Compliance or the Affidavit of Certified Public Accountant as Proof of Contractors Compliance with the Provisions of NRS 338.147 and NRS 338.1389. The above-named General Contractor shall bear the responsibility to ascertain the accuracy and validity of the affidavits provided to support the issuance of this certificate.

SECTION 00451

QUALIFICATIONS STATEMENT

THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT PERMITTED BY LAWS AND REGULATIONS

1. SUBMITTED BY:

Official Name of Firm: Sullivan Structures LLC

Address: 4910 Air Center Circle Suite 101

Reno, NV 89502

2. SUBMITTED TO: Farr West Engineering/City of Fernly

3. SUBMITTED FOR:

Owner: City of Fernley

Project Name: City of Fernley Fernley Train Depot Roof Replacement

TYPE OF WORK: General Construction, Remove old wood shingle roof and replace with new composite shingles

4. CONTRACTOR'S CONTACT INFORMATION

Contact Person: AJ Trimble

Title: Project Manager

Phone: (775) 771-1995

Email: aj@sullivanstructuresllc.com

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5. AFFILIATED COMPANIES:

Name: N/A

Address: _____

_____

_____

6. TYPE OF ORGANIZATION:

☐ SOLE PROPRIETORSHIP

Name of Owner: _____

Doing Business As: _____

Date of Organization: _____

☐ PARTNERSHIP

Date of Organization: _____

Type of Partnership: _____

Name of General Partner(s): _____

_____

_____

☐ CORPORATION

State of Organization: _____

Date of Organization: _____

Executive Officers:

President: _____

Vice President(s): _____

_____

_____

Treasurer: _____

Secretary: _____

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☒ LIMITED LIABILITY COMPANY

State of Organization: Nevada

Date of Organization: 5/31/2010

Members: Tawny Sullivan

Patrick Sullivan

☐ JOINT VENTURE

Sate of Organization:

Date of Organization:

Form of Organization:

Joint Venture Managing Partner

Name:

Address:

Joint Venture Managing Partner

Name:

Address:

Joint Venture Managing Partner

Name:

Address:

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7. LICENSING

Jurisdiction: State of Nevada

Type of License: B-2

License Number: 74914

Jurisdiction: _____

Type of License: _____

License Number: _____

8. CERTIFICATIONS CERTIFIED BY:

Disadvantage Business Enterprise: _____

Minority Business Enterprise: _____

Woman Owned Enterprise: _____

Small Business Enterprise: _____

Other (_____): _____

9. BONDING INFORMATION

Bonding Company: Endurance Assurance Coprporation

Address: 155 NE 100th Street Suite 201

Seattle, Washington 98125

Bonding Agent: LP Insurance

Address: 300 E 2nd St.
Reno, NV 89501

Contact Name: Andrea Cantlon

Phone: (775) 996-6000

Aggregate Bonding Capacity: $700,000

Available Bonding Capacity: $700,000
(as of date of this submittal)

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10. FINANCIAL INFORMATION

Financial Institution: **Wells Fargo Bank**

Address: **18100 Wedge Parkway**
Reno, NV 89511

Account Manager: **Pablo Gutierrez**

Phone: **(775) 324-9850**

11. CONSTRUCTION EXPERIENCE:

Current Experience:

List on **Schedule A** all uncompleted projects currently under contract (If Joint Venture list each participant's projects separately).

Previous Experience:

List on **Schedule B** all projects completed within the last 5 Years (If Joint Venture list each participant's projects separately).

Has firm listed in Section 1 ever failed to complete a construction contract awarded to it?

☐ YES ☒ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Has any Corporate Officer, Partner, Joint Venture participant or Proprietor ever failed to complete a construction contract awarded to them in their name or when acting as a principal of another entity?

☐ YES ☒ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Are there any judgments, claims, disputes or litigation pending or outstanding involving the firm listed in Section 1 or any of its officers (or any of its partners if a partnership or any of the individual entities if a joint venture)?

☐ YES ☒ NO

If YES, attach as an Attachment details including Project Owner's contact information.

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12. SAFETY PROGRAM:

Name of Contractor's Safety Officer: **Patrick Sullivan**

Include the following as attachments:

Provide as an Attachment Contractor's OSHA Form No. 300 and 300A - Log & Summary of Occupational Injuries & Illnesses for the past 5 years.

Provide as an Attachment Contractor's list of all OSHA Citations & Notifications of Penalty (monetary or other) received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide as an Attachment Contractor's list of all safety citations or violations under any state all received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide the following for the firm listed in Section V the following (attach additional sheets as necessary):

Workers' compensation Experience Modification Rate (EMR) for the last 5 years:

YEAR	**2022**	EMR	**1.00**
YEAR	**2021**	EMR	**0.96**
YEAR	**2020**	EMR	**0.96**
YEAR	**2019**	EMR	**1.00**
YEAR	**2018**	EMR	**1.00**

Total Recordable Frequency Rate (TRFR) for the last 5 years:

YEAR	**2022**	TRFR	**0.00**
YEAR	**2021**	TRFR	**0.00**
YEAR	**2020**	TRFR	**0.00**
YEAR	**2019**	TRFR	**0.00**
YEAR	**2018**	TRFR	**0.00**

Total number of man-hours worked for the last 5 Years:

YEAR	**2022**	TOTAL NUMBER OF MAN-HOURS	**6466**
YEAR	**2021**	TOTAL NUMBER OF MAN-HOURS	**7559**
YEAR	**2020**	TOTAL NUMBER OF MAN-HOURS	**6685**
YEAR	**2019**	TOTAL NUMBER OF MAN-HOURS	**5786**
YEAR	**2018**	TOTAL NUMBER OF MAN-HOURS	**4542**

Provide Contractor's Days Away From Work, Days of Restricted Work Activity or Job Transfer (DART) incidence rate for the particular industry or type of Work to be performed by Contractor for the last 5 years:

YEAR	**2022**	DART	**0.00**
YEAR	**2021**	DART	**0.00**
YEAR	**2020**	DART	**0.00**
YEAR	**2019**	DART	**0.00**

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YEAR 2018 DART 0.00

13. EQUIPMENT:

MAJOR EQUIPMENT:

List on **Schedule C** all pieces of major equipment available for use on Owner's Project.

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I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HEREWITH, INCLUDING ANY ATTACHMENTS, IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME OF ORGANIZATION: SULLIVAN STRUCTURES LLC

BY: [signature]

TITLE: CEO - MANAGING MEMBER

DATED: 1-12-23

NOTARY ATTEST: Tami L. Thompson

SUBSCRIBED AND SWORN TO BEFORE ME

THIS 12th DAY OF January, 2023

NOTARY PUBLIC - STATE OF Nevada

COUNTY OF Washoe

MY COMMISSION EXPIRES: 10/18/2023

TAMI L. THOMPSON
Notary Public - State of Nevada
County of Washoe
APPT. NO. 19-3144-02
My App. Expires Oct. 18, 2023

REQUIRED ATTACHMENTS

1. Schedule A (Current Experience).
2. Schedule B (Previous Experience).
3. Schedule C (Major Equipment).
4. Evidence of authority for individuals listed in Section 6 to bind organization to an agreement.
5. Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
6. Required safety program submittals listed in Section 12.
7. Additional items as pertinent.

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SCHEDULE A

CURRENT EXPERIENCE

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
Our Place Building Improvments	Name: **Bill Wardell** Address: **1001 E. 9th St Reno, NV** Telephone: **(775) 328-3636**	Name: **Washoe County** Company: Telephone: **(775) 328-3636**	**5/10/22**	**Carpentry, Landscaping, Painting, Masonry, Concrete**	**75%**	**$541,487.00**
Our Place- Site and Facility Fencing Project	Name: **Bill Wardell** Address: **1001 E. 9th St Reno, NV** Telephone: **(775) 328-3636**	Name: **Washoe County** Company: Telephone: **(775) 328-3636**	**5/10/22**	**Carpentry, Fencing, Electrical, Concrete**	**Text**	**$548,817.00**
SK Food Group Boiler Door Install	Name: **Bob Miles** Address: **5555 Quail Manor Ct. Reno, NV** Telephone: **(775) 284-2629**	Name: Company: **SK Food Group** Telephone: **(775) 284-2629**		**Carpentry, Doors and Frames**	**45%**	**$10,890.00**
Washoe County School District Admin Warehouse Racking and Fire Sprinkler Replacement	Name: **Hud Horton** Address: **14101 Old Virginia Rd. Reno, NV** Telephone: **(775) 850-8040**	Name: **Lance Dehne** Company: **ARTineering** Telephone: **(775) 825-0454**	**08/15/22**	**Carpentry, Fire Sprinklers Fire Alarm, Racking,**	**95%**	**$329,321.00**
SNC Cyber Ops Center Remodel	Name: **Dave Smith** Address: **444 Salomon Rd. Sparks, NV** Telephone: **(775) 331-0222**	Name: **Nick McCormick** Company: **TreanorHL** Telephone: **(302) 298-4700**	**VE**	**Tenant Improvement**	**0%**	**$546,389.00**
	Name: Address: Telephone:	Name: Company: Telephone:				

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SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
SK Food Group North Bathroom Renovation	Name: **Bob Miles** Address: **5555 Quail Manor Ct. Reno, NV** Telephone: **(775) 284-2629**	Name: Company: **SK Food Group** Telephone: **(775) 284-2629**	**08/2022**	**Tenant Improvements**	**100%**	**$479,710.00**
SK Food Group Turnstile	Name: **Bob Miles** Address: **5555 Quail Manor Ct. Reno, NV** Telephone: **(775) 284-2629**	Name: **Gordon Northan** Company: **Zephyr Architects** Telephone: **(775) 351-4694**	**02/2018**	**Tenant Improvements**	**100%**	**$66,997.00**
Truckee Meadows Fire Department Station 46 Restroom Renovation	Name: **Wayne Cirone** Address: **1001 E. 9th St. Reno, NV** Telephone: **(775) 326-6000**	Name: Company: **TMFD** Telephone: **(775) 326-6000**	**04/2019**	**Tenant Improvements**	**100%**	**$9,487.00**
Interstate Oil Rear Roll Up Door Concrete Replacement	Name: **Jim Motsinger** Address: **50 Lillard Dr. Sparks, NV** Telephone: **(775) 359-1586**	Name: Company: **Interstate Oil** Telephone: **(775) 359-1586**	**07/2022**	**Concrete Replacement**	**100%**	**$17,336.00**
Mineral County Courthouse Improvements	Name: **Mineral County Public Works** Address: **300 O Street Hawthorne, NV** Telephone: **(775) 359-1586**	Name: **Mike Maddox** Company: **Paul Cavin Architect LLC** Telephone: **(775) 284-7083**	**03/2021**	**Tenant Improvements**	**100%**	**$227,648.00**
Snap On Tools Roof Access Stairs and Roof Guardrails	Name: **Ryan Boyd** Address: **1880 Fairview Dr. Carson City, NV** Telephone: **(775) 883-7455**	Name: **Brett McElhaney** Company: **McElhaney Structural Engineers** Telephone: **(775) 853-5525**	**01/2018**	**Exterior Structural Stairs and Guard Rails**	**100%**	**$118,405.00**

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SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
Nevada Behavioral Health Systems	Name: **Jackie Early** Address: **855 Mill St. Reno, NV** Telephone: **(775) 722-0828**	Name: **James Molder** Company: **Concept Architects** Telephone: **(775) 247-7889**	**11/2021**	**Tenant Improvements**	**100%**	**$479,710.00**
Washoe County Bowers Mansion Repairs Phase III	Name: **Brett Steinhardt** Address: **1001 E. 9th St Reno, NV** Telephone: **(775) 328-2040**	Name: **Melvyn Green** Company: **Melvyn Green & Associates Inc** Telephone: **(310) 792-9252**	**02/2020**	**Structural Improvements,**	**100%**	**$510,840.00**
Washoe County Courts Covid Court Room	Name: **Brett Steinhardt** Address: **1001 E. 9th St Reno, NV** Telephone: **(775) 328-2040**	Name: Company: **MSA Engineering Consultants** Telephone: **(775) 828-4889**	**11/2020**	**Tenant Improvements**	**100%**	**$256,335.00**
Washoe County Justice Court Remodel	Name: **Brett Steinhardt** Address: **1001 E. 9th St Reno, NV** Telephone: **(775) 328-2040**	Name: **Paul Fraga** Company: **Paul Cavin Architect LLC** Telephone: **(775) 284-7083**	**06/2021**	**Tenant Improvements**	**100%**	**$340,320.00**
Washoe County School District Incline High School Metal Panel Replacement	Name: **Rebecca Bradley** Address: **14101 Old Virginia Rd. Reno, NV** Telephone: **(775) 850-8040**	Name: Company: **H+K Architects** Telephone: **(775) 332-6640**	**10/2021**	**Exterior Metal Siding Panel Replacement**	**100%**	**$80,210.00**
Ormat Technolgies	Name: **Sarah Morgan** Address: **6140 Plumas St. Reno, NV** Telephone: **(775) 356-9029**	Name: **Barret Donovan** Company: **Tectonics Design Group** Telephone: **(775) 525-5366**	**05/2020**	**Tenant Improvements**	**100%**	**$185,889.00**

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SCHEDULE C

LIST OF MAJOR EQUIPMENT AVAILABLE

ITEM	PURCHASE DATE	CONDITION	ACQUIRED VALUE
NONE			

EJCDC® C-451, Qualifications Statement Schedules.
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and American Society of Civil Engineers. All rights reserved.

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 20 18

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name SULLIVAN STRUCTURES LLC

City Reno State NV

Identify the person			Describe the case			Classify the case (CHECK ONLY ONE box for each case based on the most serious outcome for that case)				Enter the number of days the injured or ill worker was:		Check the "injury" column or choose one type of illness:					
								Remained at Work				(M)					
(A) Case no.	(B) Employee's name	(C) Job title (e.g., Welder)	(D) Date of injury or onset of illness	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from acetylene torch)	Death (G)	Days away from work (H)	Job transfer or restriction (I)	Other recordable cases (J)	Away from work (K)	On job transfer or restriction (L)	Injury (1)	Skin disorder (2)	Respiratory condition (3)	Poisoning (4)	Hearing loss (5)	All other illnesses (6)
0	None	—	—	—	—	☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
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			month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
					Page totals ➤	0	0	0	0	0	0	(1) Injury	(2) Skin disorder	(3) Respiratory condition	(4) Poisoning	(5) Hearing loss	(6) All other illnesses

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Page 1 of 1

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 20 1 8

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	0	0
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0	0
(K)	(L)

Injury and Illness Types

Total number of . . .	(M)		
(1) Injuries	0	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	0	(6) All other illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment Information

Your establishment name: SULLIVAN STRUCTURES LLC

Street: 4910 Air Center Circle # 101

City: Reno State: NV ZIP: 89502

Industry description (e.g., *Manufacture of motor truck trailers*): CONSTRUCTION

Standard Industrial Classification (SIC), if known (e.g., *3715*): — — — —

OR

North American Industrial Classification (NAICS), if known (e.g., 336212): — — — — — —

Employment Information

(If you don't have these figures, see the Worksheet on the back of this page to estimate.)

Annual average number of employees: 3

Total hours worked by all employees last year: _____

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive: [signature] Title: CEO

Phone: 775 849 - 0220 Date: 10/31/2018

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 20 19

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name Sullivan Structures LLC

City Reno State NV

Identify the person			Describe the case			Classify the case (CHECK ONLY ONE box for each case based on the most serious outcome for that case)				Enter the number of days the injured or ill worker was:		Check the "Injury" column or choose one type of illness:					
								Remained at Work				(M)					
(A) Case no.	(B) Employee's name	(C) Job title (e.g., Welder)	(D) Date of injury or onset of illness	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from acetylene torch)	Death (G)	Days away from work (H)	Job transfer or restriction (I)	Other recordable cases (J)	Away from work (K)	On job transfer or restriction (L)	Injury (1)	Skin disorder (2)	Respiratory condition (3)	Poisoning (4)	Hearing loss (5)	All other illnesses (6)
0	none	—	—/ month/day	—	—	☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
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			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
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Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

(1) (2) (3) (4) (5) (6)

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 20 19

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	0	0
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0	0
(K)	(L)

Injury and Illness Types

Total number of . . .	(M)		(M)
(1) Injuries	0	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	0	(6) All other illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name: Sullivan Structures LLC

Street: 4910 Air Center Cv. #101

City: Reno State: NV ZIP: 89502

Industry description (e.g., Manufacture of motor truck trailers): Construction

Standard Industrial Classification (SIC), if known (e.g., 3715): 1541

OR

North American Industrial Classification (NAICS), if known (e.g., 336212):

Employment information (If you don't have these figures, see the Worksheet on the back of this page to estimate.)

Annual average number of employees: 3

Total hours worked by all employees last year:

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive: [signature] Title: CEO

Phone: 775 849 . 0220 Date: 1/6/2020

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 20 2 0

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name Sollund Stalestoresllc

City Reno State NV

Identify the person			Describe the case			Classify the case (CHECK ONLY ONE box for each case based on the most serious outcome for that case)				Enter the number of days the injured or ill worker was:		Check the "Injury" column or choose one type of illness:					
								Remained at Work				(M)					
(A) Case no.	(B) Employee's name	(C) Job title (e.g., Welder)	(D) Date of injury or onset of illness	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from acetylene torch)	Death (G)	Days away from work (H)	Job transfer or restriction (I)	Other recordable cases (J)	Away from work (K)	On job transfer or restriction (L)	Injury (1)	Skin disorder (2)	Respiratory condition (3)	Poisoning (4)	Hearing loss (5)	All other illnesses (6)
0	NONE		month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
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Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 20 2 0

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0 (G)	0 (H)	0 (I)	0 (J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0 (K)	0 (L)

Injury and Illness Types

Total number of . . .	(M)		
(1) Injuries	0	(4) Poisonings	0
		(5) Hearing loss	0
(2) Skin disorders	0	(6) All other illnesses	0
(3) Respiratory conditions	0		

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name: Sullivan Structures LLC

Street: 4910 Air Center Circle #101

City: Reno State: NV ZIP: 89521

Industry description (*e.g., Manufacture of motor truck trailers*)

Commercial

Standard Industrial Classification (SIC), if known (*e.g., 3715*)

1 5 4 1

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information

(If you don't have these figures, see the Worksheet on the back of this page to estimate.)

Annual average number of employees: 3

Total hours worked by all employees last year:

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive

CEO
Title

(775) 849-0220
Phone

01/04/2021
Date

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 20 2 1

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name SULLIVAN STAFFING LLC

City Reno State NV

Identify the person			Describe the case			Classify the case (CHECK ONLY ONE box for each case based on the most serious outcome for that case)				Enter the number of days the injured or ill worker was:		Check the "Injury" column or choose one type of illness:					
								Remained at Work				(M)					
(A) Case no.	(B) Employee's name	(C) Job title (e.g., Welder)	(D) Date of injury or onset of illness	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from acetylene torch)	Death (G)	Days away from work (H)	Job transfer or restriction (I)	Other recordable cases (J)	Away from work (K)	On job transfer or restriction (L)	Injury (1)	Skin disorder (2)	Respiratory condition (3)	Poisoning (4)	Hearing loss (5)	All other illnesses (6)
0	NONE		month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 20 2 1

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0 (G)	0 (H)	0 (I)	0 (J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0 (K)	0 (L)

Injury and Illness Types

Total number of . . . (M)			
(1) Injuries	0	(4) Poisonings	0
		(5) Hearing loss	0
(2) Skin disorders	0	(6) All other illnesses	0
(3) Respiratory conditions	0		

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name: Sullivan Structures LLC

Street: 4910 Air Center Circle #101

City: Reno State: NV ZIP: 89521

Industry description (e.g., *Manufacture of motor truck trailers*)

Commercial

Standard Industrial Classification (SIC), if known (e.g., *3715*)

1 5 4 1

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information *(If you don't have these figures, see the Worksheet on the back of this page to estimate.)*

Annual average number of employees: 3

Total hours worked by all employees last year:

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive: [signature] Title: CEO

Phone: (775) 849-0220 Date: 01/03/2022

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 20 2 2

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name SULLIVAN STRUCTURES INC.
City RENO State NV

Identify the person			Describe the case			Classify the case (CHECK ONLY ONE box for each case based on the most serious outcome for that case)				Enter the number of days the injured or ill worker was:		Check the "Injury" column or choose one type of illness:					
								Remained at Work				(M)					
(A) Case no.	(B) Employee's name	(C) Job title (e.g., Welder)	(D) Date of injury or onset of illness	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from acetylene torch)	Death (G)	Days away from work (H)	Job transfer or restriction (I)	Other recordable cases (J)	Away from work (K)	On job transfer or restriction (L)	Injury (1)	Skin disorder (2)	Respiratory condition (3)	Poisoning (4)	Hearing loss (5)	All other illnesses (6)
0	NONE		month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 20 2 2

U.S. Department of Labor
Occupational Safety and Health Administration
Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

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Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0 (G)	0 (H)	0 (I)	0 (J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0 (K)	0 (L)

Injury and Illness Types

Total number of . . . (M)			
(1) Injuries	0	(4) Poisonings	0
		(5) Hearing loss	0
(2) Skin disorders	0	(6) All other illnesses	0
(3) Respiratory conditions	0		

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name: Sullivan Structures LLC

Street: 4910 Air Center Circle #101

City: Reno State: NV ZIP: 89521

Industry description (e.g., *Manufacture of motor truck trailers*)

Commercial

Standard Industrial Classification (SIC), if known (e.g., *3715*)

1 5 4 1

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information *(If you don't have these figures, see the Worksheet on the back of this page to estimate.)*

Annual average number of employees: 3

Total hours worked by all employees last year:

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive: [signature] Title: CEO

Phone: (775) 849-0220 Date: 01/03/2023

SULLIVAN STRUCTURES

COMMERCIAL • INDUSTRIAL • PUBLIC WORKS

NV LIC #74914

Provide as an Attachment Contractor's list of all OSHA Citations & Notifications of Penalty (monetary or other) received within the last 5 years (indicate disposition as applicable)

NONE

SULLIVAN STRUCTURES

COMMERCIAL • INDUSTRIAL • PUBLIC WORKS

NV LIC #74914

Provide as an Attachment Contractor's list of all safety citations or violations under any state all received within the last 5 years (indicate disposition as applicable)

NONE

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Kari Weitzel**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes:X	No:	Yes:X	No:	510-395-910, 520-395-910

ACTION REQUESTED: Consent

AGENDA ITEM: (For Possible Action):

Possible Action to Approve the Will-Serve Request from Sandbank Properties II LLC for .78 ERC's for Water and 1.96 ERC's for Sewer for 250 Logan lane Commercial Building for Lyon County Parcel 021-071-28 located on Logan Lane Fernley, NV 89408.

AGENDA ITEM BRIEF:

1. Sandbank Properties II LLC is seeking a Will-Serve for 250 Logan lane Commercial Building tenant improvements in Fernley, NV 89408.
2. This project requires .78 ERC's of water, which is equal to .87 acre-ft and 1.98 ERC's for sewer for 250 Logan lane Commercial Building tenant improvements.
3. Sandbank Properties II LLC has 10.41 – acre-feet of beneficial interest in water rights.

RECOMMENDED MOTION:

"I move to approve the Will-Serve Request from Sandbank Properties II LLC for .78 ERC's for Water and 1.96 ERC's for Sewer for 250 Logan lane Commercial Building for Lyon County Parcel 021-071-28 located on Logan Lane Fernley, NV 89408."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

N/A

BACKGROUND:

PROJECT SUMMARY:

Sandbank Properties II LLC is seeking a will-serve of .78 ERC's for Water and 1.96 ERC's for Sewer for tenant improvements for Lyon County Parcel 021-071-28 located on Logan Lane Fernley, NV 89408.

Water and Sewer connection fees will be paid at the time of issuance of the building permit.
Water Connection: $5,460.00
Sewer Connection: $9,800.00

BACKGROUND:

As of December 2022, Sandbank Properties II LLC had a beneficial interest of 10.41 AF.

After the issuance of this will serve Sandbank Properties II LLC will have 9.54 AF of water left for future development.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

N/A

FINANCIAL IMPLICATIONS:

N/A

ATTACHMENTS:

1. 2023.02.15 Will Serve 250 Logan Ln (Sandbank Properties)
2. 2023.01.26 FE Assignment to WIll Serve

THE CITY OF FERNLEY

Public Works Department

595 Silver Lace Blvd

Fernley, NV 89408

The City of Fernley hereby certifies that it has adequate water distribution capability and wastewater treatment plant capacity to serve and will serve: Sandbank Properties II LLC (250 Logan Ln) (Development/ project or property located at 250 Logan Lane Fernley, Nevada with .78 water connections and/or 1.96 sewer connections for Service to 1 unit, upon the following terms and conditions:

1. All applicable fees and costs must be paid, including the utility connection fees in effect at the time of this will-serve certification, currently $7,000.00 per unit for water and $5,000.00 per Equivalent Residential Capacity (ERC) unit for sewer.

2. Applicant must comply with all applicable laws, statutes, ordinances and regulations.

3. Said fees and costs must be paid in full before connections to water/sewer services. **Connections to utility service shall be completed within a reasonable time from the date of original approval of this Will-Serve by the Fernley City Council. Failure to diligently pursue connection to utility service may render this Will-Serve null and void.** Public Works, at its sole discretion, shall have authority to determine whether connection to utility service is being diligently pursued and, with sixty (60) days written notice to the party who requested this Will-Serve, may cancel this Will-Serve for failure to connect to utility service within a reasonable time.

4. Service shall be provided only to the project or site identified above. **This Will-Serve is limited to the project or property described above and is not transferable to any other project or property.**

5. Service shall be provided pursuant to the plans and specifications submitted to and approved by Public Works. Service shall not be provided pursuant to any alterations to or deviation from the same without the express written approval of Public Works Department. **This will-serve is to be considered conditional unless public improvement plans have been approved by Public Works.**

6. This Will-Serve applies to: APN# 021-071-28

Fernley City Council Approved Will-Serve on February 15th , 2023

Public Works Director **Mayor – City of Fernley**

Applicant **Date**

APN: **021-071-28**
When Recorded mail to:
City of Fernley
595 Silver Lace Blvd.
Fernley, NV 89408

2nd

ASSIGNMENT OF BENEFICIAL INTEREST IN WATER RIGHTS BANKING AND DEDICATION AGREEMENT TO WILL SERVE COMMITMENT

This Assignment of Beneficial Interest in Water Rights to Will Serve Commitments is executed this 23rd day of January, 2023, by Sandbank Properties II LLC (hereinafter "Assignor").

1. Assignor is the holder of the beneficial interest in that certain Water Rights Dedication and Banking Agreement (hereinafter the "Banking Agreement") by and between Sandbank Properties II LLC and the City of Fernley executed on the 2nd day of December, 2022.

2. Assignor desires to assign a portion of its beneficial interest in and to **0.87** acre-feet of water dedicated pursuant to the Banking Agreement to the City of Fernley in exchange for **0.78** Equivalent Residential Credits (hereinafter "ERC's") of water utility will-serve commitments for the development of the **Logan Lane Business Park Building 100** project located at **250 Logan Lane** (hereinafter the "Project").

3. Assignor acknowledges and agrees that the assignment of the beneficial interest transferred herein is for the benefit of the Project. Assignor also acknowledges and agrees that the will-serve commitments issued pursuant to this Agreement shall be an appurtenance to the parcel(s), lot(s), or portion of the Project that will receive water service under said will-serve commitment. In the event that said parcel(s), lot(s), or portion of the project is encumbered by a mortgage, deed of trust, or other similar encumbrance, Assignor agrees that said mortgage, deed of trust, or other similar encumbrance shall also encumber the will-serve commitments issued pursuant to this Agreement in the same manner and to the same extent as it encumbers the parcel(s), lot(s), or portion of the project.

4. Assignor acknowledges and agrees that by assigning its beneficial interest in the water rights under this Agreement in exchange for the will-serves commitments described in Section 2 herein, that Assignor is forever relinquishing all of its right, title, and interest in and to the beneficial interest assigned herein and that the terms of this Agreement shall, to the extent applicable, replace and supersede the terms of the Banking Agreement identified in Section 1 herein, as well as any amendments or assignments of said Banking Agreement, with respect to the assigned water rights. Assignor further acknowledges and agrees that upon execution of this Agreement it shall have no further claim, right, title, or interest in or to the beneficial interest assigned herein.

5. Assignor agrees to indemnify and hold harmless the City of Fernley from any with respect to any claims, damages, or losses (including, without limitation, attorney's fees and costs), whether known or unknown, disclosed or undisclosed arising from, by reason of, or in connection with any part or portion of this Agreement.

6. Assignor hereby represents and warrants it has not sold, assigned, transferred, conveyed, hypothecated, pledged, or otherwise disposed of or encumbered the beneficial interest transferred herein, or the water right underlying said beneficial interest, except as provided in this Agreement, the Banking Agreement, or any amendments or assignments of the Banking Agreement. Assignee acknowledges and agrees that the City makes no representation or warranty as to the title of the water rights underlying the beneficial interest transferred herein, and that in the event that any claim or dispute relating to said title renders such water rights unusable within, or unavailable to, the City's water delivery system, the City may, at its sole discretion and in addition to any other remedies provided for by law, rescind the Banking Agreement and withhold the will-serve commitments provided for therein. In the event that such will-serve commitments have already been issued, the City, in addition to any other remedies provided by law, may require Assignor to immediately acquire and dedicate to the City the same quantity and quality of water rights as the water rights rendered unusable within, or unavailable to, the City's water delivery system and/or the City may assign any other banked or reserved water rights in which Assignor has a beneficial interest, and that remain uncommitted to will-serve commitments, to the will-serve commitments already issued pursuant to this Agreement or the Banking Agreement.

7. This Agreement shall be governed, interpreted and construed by, through and under the laws of the State of Nevada in the district courts of Lyon County, Nevada.

8. All costs incurred by the City of Fernley in enforcing this Agreement including, without limitation, reasonable attorneys' fees through any court proceedings shall be paid by Assignee.

9. This Agreement shall inure to the benefit of and be binding upon the parties hereto as well as their successors and assigns, heirs and personal representatives.

[Signature pages follow]

ASSIGNOR.

Company Name
Sandbank Associates, Its Manager

Signatory Name and Title
Kyle Chisholm, VP

Date: January 23, 2023

STATE OF Nevada)
) ss.
COUNTY OF Washoe)

This instrument was acknowledged before me on the 23 day of January, 2023, by Kyle Chisholm.

NOTARY PUBLIC

NATASHA YOUNGER-EHLERS
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 99-50851-2 - Expires May 15, 2024

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Kari Weitzel**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes:X	No:	Yes:X	No:	510-395-910, 520-395-910

ACTION REQUESTED: Consent

AGENDA ITEM: (For Possible Action):

Possible Action to Approve the Will-Serve Request from TD Fernley Properties, LLC for .25 ERC's for Water and no sewer – irrigation only for Dolan Auto Car Sales Lot for Lyon County Parcel 021-232-20 located at 1375 E. Newlands Lane Fernley, NV 89408

AGENDA ITEM BRIEF:

1. TD Fernley Properties, LLC is seeking a Will-Serve for 1375 E. Newlands Lane for Dolan Auto Car Sales lot.
2. This project requires .25 ERC's of water (0.27 acre ft) and no sewer – irrigation only for 1375 E. Newlands Lane for Dolan Auto Car Sales lot.
3. The project qualifies to pay a fee in lieu of dedication of water rights pursuant to FMC 32.39.060 (a).

RECOMMENDED MOTION:

"I move to approve the Will-Serve Request from TD Fernley Properties, LLC for .25 ERC's for Water and no sewer – irrigation only for Dolan Auto Car Sales Lot for Lyon County Parcel 021-232-20 located at 1375 E. Newlands Fernley, NV 89408."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

N/A

BACKGROUND:

Pursuant to FMC 32.39.060(a), commercial properties where the calculated ERC is less than 0.5 may pay a fee in lieu of dedication of a water right. The in lieu of fee is currently $7,700 per acre-foot. Accordingly, the fee for the requested will-serve is $2,079.00. The water connection fee for this project is $1,802.50 of which will be required to be paid before the issuance of the will-serve commitment.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

The water needed for this project has been previously dedicated under a prior banking agreement. City staff has determined that the City has adequate water and sewer resources to support the requested will-serve commitment.

FINANCIAL IMPLICATIONS:

ATTACHMENTS:

1. 2023.02.15 Will Serve Dolan Auto Car Lot

THE CITY OF FERNLEY

Public Works Department

595 Silver Lace Blvd

Fernley, NV 89408

The City of Fernley hereby certifies that it has adequate water distribution capability and wastewater treatment plant capacity to serve and will serve: TD Fernley Properties LLC (Dolan Auto Car Lot) (Development/ project or property located at 1375 E Newlands Fernley, Nevada with .25 water connections and/or 0 sewer connections for Service to 1 unit, upon the following terms and conditions:

1. All applicable fees and costs must be paid, including the utility connection fees in effect at the time of this will-serve certification, currently $7,210.00 per unit for water and $0 per Equivalent Residential Capacity (ERC) unit for sewer.

2. Applicant must comply with all applicable laws, statutes, ordinances and regulations.

3. Said fees and costs must be paid in full before connections to water/sewer services. **Connections to utility service shall be completed within a reasonable time from the date of original approval of this Will-Serve by the Fernley City Council. Failure to diligently pursue connection to utility service may render this Will-Serve null and void.** Public Works, at its sole discretion, shall have authority to determine whether connection to utility service is being diligently pursued and, with sixty (60) days written notice to the party who requested this Will-Serve, may cancel this Will-Serve for failure to connect to utility service within a reasonable time.

4. Service shall be provided only to the project or site identified above. **This Will-Serve is limited to the project or property described above and is not transferable to any other project or property.**

5. Service shall be provided pursuant to the plans and specifications submitted to and approved by Public Works. Service shall not be provided pursuant to any alterations to or deviation from the same without the express written approval of Public Works Department. **This will-serve is to be considered conditional unless public improvement plans have been approved by Public Works.**

6. This Will-Serve applies to: APN# 021-232-20

Fernley City Council Approved Will-Serve on February 15th , 2023

Public Works Director **Mayor – City of Fernley**

Applicant **Date**

Mayor's appointments to various Boards and Committees
January 1st thru December 31, 2023

Board, Commission, Committee	Current Representative	Alternate
4th of July Committee	Zoberski and Hanan	
Arts & Culture Committee	McKay and Zoberski	Hanan
Capital Improvement Committee	Hanan and Lau	
Chamber of Commerce Representative	Mayor and Kim Swanson	
Code Enforcement Committee	McKay and Hanan	Torres
City Legislative Team	Mayor , Torres, McKay, City Staff and Lobbyist	Hanan
Lyon County Debt Management Commission	Mayor	Torres
Lyon County Room Tax Board	McKay	Hanan
Nevada League of Cities	McKay, Lau, CAO	Hanan
NV League of Cities Legislative Committee	Mayor, Torres, Zoberski, CAO	Hanan
Neighborhood Watch Representative	Zoberski and Hanan	Lau
Northern Nevada Development Authority	Mayor, Torres, McKay	Lau
Pool/Pact	Mayor and City Manager, CAO	
Regional Transportation Commission	Lau	Torres
Senior Citizen Advisory Committee	Torres	Zoberski
STEM Committee	Hanan	Lau
Union Negotiation Team	Mayor, Hanan and Torres, CAO	McKay
Water Team	Mayor, Torres, McKay	Hanan
Western Nevada Development District	Mayor and Lau	Torres

Mayor Neal E. McIntyre	775-866-0234	
Ryan Hanan - Ward 1	510-693-6954	02/07/23
Felicity Zoberski - Ward 2	775-800-3232	Zoberski City Representative
Stan Lau - Ward 3	775-404-2352	
Albert Torres- Ward 4	775-560-5900	
Fran McKay - Ward 5	775-846-2583	



CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Shay League, Nikil Manayathara**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes:	No: X	Yes:	No: X	N/A

ACTION REQUESTED: Ordinance
Motion

AGENDA ITEM: (For Possible Action):

For Possible Action – Public Hearing, TSM22005 – Tentative Subdivision Map
Consideration and possible action on a tentative subdivision map application from Phelps Engineering Services to allow for the development of Sherwood Villages, a 316-unit multifamily residential complex on a site ±26.25-acres in size and generally located north of Fremont Street, south of US Interstate 80, west of Wildwood Drive, and east of Vine Street (APNs: 021-092-05, 021-092-23, 021-092-26, 021-092-27, 021-092-46, 021-092-47, 021-092-54, & 021-092-55).

AGENDA ITEM BRIEF:

The applicant is seeking approval for a tentative subdivision map request to subdivide the proposed 18 multi-family buildings into 18 distinct lots, with common areas and roadways expected to be privately owned and maintained. These parcels are master planned as Mixed Residential (MR), and zoned Residential – Medium Density Residential, 14 dwelling units per acre maximum (MDR14), which is an equivalent zoning district.

RECOMMENDED MOTION:

Staff recommends approval:
"I move to approve the tentative subdivision map associated with TSM22005 subject to conditions of approval 1 through 26 as presented by staff and based on findings TM1 through TM11 and the supporting data as set forth in the staff report."

Planning Commission recommends denial:
"Based on information received in written materials and at the public hearings on this matter, I move to deny the tentative subdivision map associated with TSM22005 because I have determined the proposed changes are detrimental to the public's health, safety, and general welfare and am unable to

make the following required finding: I am unable to make the finding TM4 as it relates to the availability and accessibility of public services such as transportation and schools. Therefore, I cannot recommend approval of the subdivision map."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

Note: Though further specific language has not been provided, all other motions acceptable under City Council parliamentary procedure are possible. Of specific note, the conditions of approval may be altered if the Council feels that approval is possible but more (or less) stringent conditions are required for this application to comply with the required findings.

BACKGROUND:

Project application summary:

TSM22005 Sherwood
This application was initially reviewed by Planning Commission and recommended for approval by a vote of 5-0 on May 11, 2022. Due to changes made to the project, it was never submitted for a ruling by City Council. The application is now different enough that staff felt it merited a second review by Planning Commission.

Planning Commission voted 5-1 to recommend denial of this iteration of the tentative subdivision map on January 11, 2023, due to concerns about the availability and accessibility of public services, specifically transportation and schools.

ZMA22003 Sherwood Village
City Council approved a rezone from Residential, Single-family – 6,000 square foot minimum lot size (SF6), Residential, Single-family – 12,000 square foot minimum lot size (SF12), and Residential, Rural – 1-acre minimum lot size (RR1) to Residential, Medium Density Residential – 14 dwelling units per acre (MDR14) on October 12, 2020. The land rezoned through this application has since been divided into two projects, this one known as Sherwood and a second known as Fernwood. Fernwood is a duplex-style development still in the planning phases that is proposed to abut this project site on the east.

CUP20006 Sherwood
Approved by Planning Commission May 12, 2021, this application established an apartment complex with 100 or greater units as a conditional use allowed on this site. The original approval was extended by 1 year on May 11, 2022. Should construction to accommodate this conditional use not have started and/or should construction for the use not continue to be diligently pursued, this permit will expire on May 12, 2023. It is ineligible for renewal and the applicant would need to reapply to Planning Commission for a new conditional use permit in the case of expiration. This conditional use permit was heavily conditioned to ensure the developer will complete extensive improvements along Fremont Street to maintain the road level of service and provide adequate City infrastructure to serve this development.

T2V22001 Sherwood
Approved by City Council November 2, 2022. This vacation request asked that City of Fernley abandon a 20-foot wide utility easement that was intended for the construction of another project. The developer is to rededicate utility easements more appropriate for this project as part of the tentative and final subdivision map process. Though this was submitted as a planning application, this was not presented to Planning Commission because the code requires it to be approved by the City Council as presented by the City Engineer.

T1VAC22001 Sherwood
Approved by City Council February 1, 2023. This vacation request asked that City of Fernley abandon the public right-of-way known as "Dolores Court". It was previously dedicated to Lyon County in June of 1995 as a part of a project that was never constructed. The Sherwood Villages project developer owns all parcels abutting the right-of-way dedication and there was no public road construction completed in the right-of-way.

FINDINGS:
Note: These findings contain excerpts written by former Assistant Planner Nikil Manayathara with edits for stylistic preference and updates to any information that has changed since the initial presentation of this application to Planning Commission.

TM1. Compliance with environmental and health laws and regulations concerning water and air pollution, solid waste disposal, water supply facilities, community, or public sewage disposal, and, where applicable, individual systems for sewage disposal:
The developer will comply with all standards, codes, and requirements regarding connection to the city's sanitary sewer and potable water systems, including but not limited to associated fees, easements, design standards, system looping, development code requirements, and state requirements. The map must be reviewed by the Nevada Department of Environmental Protection prior to construction, and the developer is to submit a final utility plan for review by staff before recording a final map. Many of the conditions of approval are specifically targeted at ensuring that the development meets these requirements.

TM2. Availability of water that meets applicable health standards and is sufficient for the reasonably foreseeable needs of the subdivision:
The conditions of approval require that City of Fernley's consultant engineer firm conduct water modeling and the developer is to construct any additional infrastructure or capacity identified by the modeling.

TM3. Availability and accessibility of utilities:
The development is expected to connect to existing municipal water and sewer service. Initial modeling provided by Shaw Engineering identified that the proposed Sherwood subdivision will generate a peak sewage flow of 135.41 gallons per minute, which translates to approximately 194,990 GPD (Gallons per Day). The project will utilize the existing 21-inch diameter main located underneath Fremont Street, and the 10-inch main located underneath Fernwood Drive.

There is currently sufficient capacity within the city's sewer infrastructure system for the development of the Sherwood Subdivision, and any connections or extensions of the city's infrastructure will be constructed to all applicable standards and regulations. An 8-inch diameter pipe will be used for water connection and will also be connected to the existing infrastructure within Fremont Street and Fernwood Street/Wildwood Drive.

TM4. Availability and accessibility of public services such as schools, police and fire protection, transportation, recreation facilities, and parks:

Schools
Students residing within this development will attend Fernley Elementary School, Fernley Intermediate School, Silverland Middle School, and Fernley High School. Current School District capacity rates indicate that Fernley High School and Fernley Intermediate school will be close to or in excess of 100% capacity by 2025. As indicated by the Lyon County School District, an additional $6.43 million in construction capital is required to provide sufficient service to the expected 185 new students this project and the neighboring Fernwood project are expected to bring to the area. That number was determined as the expense to build 7 new classrooms for an anticipated 185 new students. The School District does not anticipate that their portion of development fees and tax revenue will be sufficient to support those construction fees; their comment letter is attached for your review.

Police and Fire
The project is expected to be served by the Lyon County Sheriff's Office and the North Lyon County Fire Protection District. The proposed project is located approximately 1.75 miles from the Sheriff's office on Main Street, and approximately 2.20 miles from the North Lyon County Fire Protection District office, also located on Main Street.

Transportation
The developer is proposing improvement of Fremont Street, to ensure it can handle an increase in traffic. These improvements were conditioned by the City Engineer.

Recreation Facilities and Parks
The project site is located approximately 1.5 miles from the Out of Town Park and approximately 1.45 miles from the PAW-sitive Play Dog Park. Additionally, the Green Valley Dog Park is approximately 2.3 miles away, south of the project site.

TM5. Consistency with the zoning district regulations:
The current zone of the project site is MDR14. The proposed subdivision is expected to have 316 residential multi-family dwelling units within the ±26.25-acre project site. This amounts to an overall site density of 12.03 dwelling units per acre.

The Development Code does not limit parcel size but does have a minimum site size of 6,000 square feet. At ±26.25 acres, this site far exceeds the minimum. As the developer moves into the construction phase of this project, they must comply with all applicable development requirements for the MDR14 zone, including but not limited to dimensional standards (FMC 32.06.080) and design standards (FMC 32.06.080).

TM6. Conformity with the Master streets & highways plan:
This project will bring this area of the city further into conformance with our streets & highways master plan. Fremont Street has a varying width, and the developer is required to ensure that sufficient improvements not already addressed by the Fremont Street apartments are made from the project site to the intersection of Fremont Street with US HWY 95A. The development agreement allows them to make these improvements in phases that are tied to phases of development within the project itself.

TM7. Effect of the proposed subdivision on existing public streets, and the need for new streets or highways to serve the subdivision:
The new streets expected to serve the Sherwood subdivision are Wildwood Drive, Sherwood Drive, Dogwood Drive, and the internal roadway network that circulates throughout Sherwood. Based on the initial traffic study provided by the applicant, the proposed development is expected to generate an additional ±2300 daily trips, which includes approximately 145 AM peak hour trips, and approximately 177 PM peak hour trips. This development is intended to be constructed in conjunction with the nearby Fernwood Subdivision, and as a result, the traffic impacts and recommendations are similar for both projects.

The main improvements for the Sherwood project are those to Fremont Street as conditioned by staff for this application and in the prior conditional use permit already granted. Because Fremont Street is a public right-of-way, these improvements benefit existing property owners that currently use Fremont Street in addition to the future tenants of this project. The pertinent conditions of approval expected to minimize the impact on existing public streets are numbers 5, 9, 11, and 15 – 19.

TM8. Physical characteristics such as floodplain, slope, soil, and elevation differentials with abutting properties:
The project site has a relatively consistent grade throughout and ranges 1-2% across the project site. Should a grading permit be required for site development, both the City Engineer and Building Official will review it for compliance with all applicable regulations.

The project site has multiple TCID/Bureau of Reclamation facilities within its boundary. As such, the developer is required to work with the respective agencies to ensure that these drainage easements are rerouted or vacated as necessary. The Bureau of Reclamation specifically requested this project be conditioned so that "the relocation of irrigation facilities in a manner and location acceptable to Reclamation" is required. That item is addressed condition of approval number 24.

The project site is within an area of 'minimal flood risk' as designated by FEMA (Federal Emergency Management Association) in FEMA Firmette 32019C0105E. The referenced document places the project site within Flood Zone X, which falls outside the annual 0.2% chance floodplain. On-site drainage will be handled via 5 retention basins. Runoff collected via these basins will infiltrate into the soil below. Any infrastructure relating to drainage will be developed in accordance with the City's Public Works and Engineering Design Standards.

TM9. Recommendation and comments of review bodies:
All application materials were distributed to the City of Fernley development team (Planning, Engineering, Building, Public Works, and North Lyon County Fire District), as well as several outside reviewing agencies. Feedback provided by City of Fernley staff and comments received in a letter from Bureau of Reclamation have been incorporated into the conditions of approval. A second outside agency letter was received from Lyon County School District. Both letters from outside agencies are attached to this report for your review.

TM10. Conformity to the Master Sewer and Water Utility Plan:
The developer will comply with all standards, codes, and requirements regarding connection to the city's sanitary sewer and potable water systems, including but not limited to: associated fees, easements, design standards, system looping, development code requirements, and state requirements. The map must be reviewed by the Nevada Department of Environmental Protection prior to construction, and the developer is to submit a final utility plan for review by staff before recording a final map. Many of the conditions of approval are specifically targeted at ensuring that the development meets these requirements.

TM11. Compliance with this code and all other applicable regulations:
Staff has conditioned this project in such a way that we believe this project does meet the requirements of Fernley Municipal Code and all other applicable regulations.

RELEVANT LAWS, STATUTES, AND REGULATIONS:
Nevada Revised Statutes (NRS) Chapter 278 – Planning and Zoning
Fernley Municipal Code (FMC), Title 32 – Development Code
City of Fernley Comprehensive Master Plan, August 2018 (3rd Update)

Specific items of direct relevance:

- NRS 278.320 – 278.3295 – Subdivision of Land: General Provisions
- NRS 278.330 – 278.353 – Subdivision of Land: Tentative Maps
- FMC Section 32.03.020, Table 32.03.020-1 – Development Code, Administration, Review and decision-making bodies, Summary Table of Development Review Procedures
- FMC Section 32.03.060 (f) – Development Code, Administration, Land division applications, Subdivision maps
- FMC Section 32.06.080 – Development Code, Zoning Districts, Residential – Multiple family (MDR14, MF21, and MF30)
- FMC Chapter 32.09 – Development Code, Development Standards
- Master Plan, Chapter 3, Page 63 – Land Use, Residential Land Uses, Mixed Residential (MR)

FINANCIAL IMPLICATIONS:

N/A

ATTACHMENTS:

1. TSM22005 Conditions of Approval
2. Vicinity Map
3. Tentative Map
4. Existing Sherwood Plans
5. Traffic Study
6. 2020-08-31 Trip Generation Letter
7. 2022-12-01 Trip Generation Letter
8. Lyon County School District Comments
9. Bureau of Reclamation Comments
10. Bureau of Reclamation Comments, Enclosure 1

Conditions of Approval for TSM22005
Tentative Subdivision Map

SCOPE AND DURATION OF APPROVAL

1. **APPROVAL:**

   THE TENTATIVE SUBDIVISION MAP IS APPROVED AS SUBMITTED AND CONDITIONED. ANY SUBSTANTIVE CHANGE SHALL REQUIRE REVIEW AND APPROVAL BY CITY COUNCIL AS AN AMENDMENT TO THIS TENTATIVE SUBDIVISION MAP.

2. **PROJECT DESCRIPTION:**

   THE PROJECT APPROVAL IS LIMITED TO A RESIDENTIAL MULTI-FAMILY DEVELOPMENT WITH A MAXIMUM OF 18 LOTS ON ±26.28 ACRES.

3. **EXPIRATION DATE:**

   THE TENTATIVE SUBDIVISION MAP APPROVAL SHALL EXPIRE WITHIN FOUR (4) YEARS OF THE DATE OF CITY COUNCIL APPROVAL, UNLESS THE FINAL PARCEL MAP HAS BEEN RECORDED IN ACCORDANCE WITH NEVADA REVISED STATUTES (N.R.S.) 278.360.

4. **DESIGN STANDARDS:**

   THE DEVELOPER SHALL COMPLY WITH DESIGN STANDARDS AND REGULATIONS SET FORTH IN FERNLEY MUNICIPAL CODE (FMC) AND CITY OF FERNLEY DEPARTMENT OF PUBLIC WORKS DESIGN STANDARDS MANUAL (COF DESIGN MANUAL). THE GOVERNING VERSION OF EACH SHALL BE THE VERSION EFFECTIVE AT THE TIME ANY MAP, BUILDING PERMIT, CIVIL IMPROVEMENT PERMIT, OR OTHER TYPE OF APPLICATION IS SUBMITTED.

   CURRENT RELEVANT DESIGN STANDARDS INCLUDE BUT ARE NOT LIMITED TO: DIMENSIONAL STANDARDS, SITE PLANNING, PARKING AND CIRCULATION, COMMUNITY AMENITIES, LANDSCAPING AND SCREENING, BUILDING ARCHITECTURE, ADJACENCY STANDARDS, GRADING, BUFFER REQUIREMENTS, LIGHTING, STREETS, MECHANICAL AND TRASH SCREENING, AND UTILITY CONSIDERATIONS.

FINAL SUBDIVISION MAP RECORDING REQUIREMENTS

5. **IMPROVEMENT PLANS:**

   WITH SUBMITTAL OF ANY FINAL SUBDIVISION MAP APPLICATION, THE DEVELOPER SHALL SUBMIT THE ASSOCIATED IMPROVEMENT PLANS FOR REVIEW AND APPROVAL. THE IMPROVEMENT PLANS SHALL BE APPROVED, PRIOR TO RECORDING OF THE SUBMITTED FINAL SUBDIVISION MAP. THE UTILITIES AND INFRASTRUCTURE FOR EACH PHASE MUST OPERATE INDEPENDENTLY OF FUTURE PHASES YET TO BE CONSTRUCTED.

   UNLESS OTHERWISE ADDRESSED BY DEVELOPMENT AGREEMENT DA22002, PRIOR TO RECORDING ANY FINAL SUBDIVISION MAP FOR THIS PROJECT, THE DEVELOPER SHALL CONSTRUCT ALL REQUIRED PUBLIC IMPROVEMENTS OR PROVIDE A SURETY BOND IN ACCORDANCE WITH PROVISIONS SET FORTH IN FERNLEY MUNICIPAL CODE CHAPTER 32.13, IMPROVEMENTS AND AGREEMENTS. FURTHER, THE DEVELOPER MUST MEET ALL THE REQUIREMENTS OF CHAPTER 32.03 OF FERNLEY MUNICIPAL CODE, LAND DIVISION APPLICATIONS. THE REQUIRED PUBLIC IMPROVEMENTS INCLUDE BUT ARE NOT LIMITED TO: PUBLIC UTILITY AND ROADWAY INFRASTRUCTURE ASSOCIATED WITH THE PROJECT.

6. **WATER RIGHTS:**

THE DEVELOPER SHALL COMPLY WITH ALL CITY OF FERNLEY MUNICIPAL CODES REGARDING DEDICATION OF WATER RIGHTS, INCLUDING ASSOCIATED FEES FOR CONNECTING TO THE CITY'S MUNICIPAL WATER SYSTEM THAT ARE INDEPENDENTLY CALCULATED FOR EACH PHASE WHEN APPLICABLE, PRIOR TO RECORDING A FINAL SUBDIVISION MAP.

7. **WATER AND SEWER:**

   THE DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTING ALL IMPROVEMENTS DEEMED NECESSARY TO SERVE THE PROJECT, AS IDENTIFIED IN THE APPROVED WATER AND SEWER MODELING REPORTS, SUBJECT TO APPROVAL OF THE CITY ENGINEER, PRIOR TO RECORDING ANY FINAL SUBDIVISION MAP.

   THE DEVELOPER SHALL COMPLY WITH ALL CITY OF FERNLEY MUNICIPAL CODES REGARDING THE SANITARY SEWER AND WATER SYSTEMS, INCLUDING ASSOCIATED CONNECTION FEES, PRIOR TO ISSUING A BUILDING PERMIT FOR THE PUBLIC IMPROVEMENTS FOR THIS PROJECT.

8. **STORM WATER TREATMENT AND DRAINAGE:**

   THE DEVELOPER SHALL UTILIZE STRUCTURAL CONTROLS FOR THE TREATMENT OF STORM WATER RUNOFF, IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES, SUBJECT TO APPROVAL OF THE PUBLIC WORKS DIRECTOR AND CITY ENGINEER. DRAINAGE CONVEYANCE FACILITIES AND OTHER IMPROVEMENTS MUST BE CONSTRUCTED AND FUNCTIONAL, PRIOR TO RECORDING A FINAL SUBDIVISION MAP.

   ALL INTERNAL STORM DRAIN INFRASTRUCTURE SHALL BE MAINTAINED BY THE PROPERTY OWNER.

9. **STREETS AND SIGNAGE:**

   STREET IDENTIFICATION SIGNS MUST BE IN PLACE AND STREETS WITHIN THE SUBDIVISION MUST BE COMPLETE TO THE APPROVAL OF THE CITY ENGINEER AND FIRE CHIEF.

10. **WASTE MANAGEMENT:**

    THE DEVELOPER SHALL PROVIDE A WILL SERVE FROM WASTE MANAGEMENT, SUBJECT TO APPROVAL OF THE ADMINISTRATOR, PRIOR TO RECORDING ANY FINAL SUBDIVISION MAP.

11. **RECIPROCAL EASEMENTS:**

    THE DEVELOPER SHALL PROVIDE IRREVOCABLE RECIPROCAL PARKING, ACCESS, STORM DRAINAGE MAINTENANCE, WATER INFRASTRUCTURE MAINTENANCE, SANITARY SEWER INFRASTRUCTURE MAINTENANCE, AND LANDSCAPE MAINTENANCE EASEMENTS OVER THE ENTIRE SITE, SUBJECT TO APPROVAL OF THE ADMINISTRATOR, PRIOR TO RECORDING ANY FINAL SUBDIVISION MAP. THESE EASEMENTS SHALL BE INCORPORATED INTO THE RECORDED DOCUMENTS FOR THE SITE.

12. **FINAL SUBDIVISION MAP PHASING:**

    IF APPLICABLE, EACH MAP PHASE SUBMITTED MUST BE DESIGNED TO MEET THE PUBLIC FACILITIES AND IMPROVEMENT STANDARDS AND BE ABLE TO OPERATE INDEPENDENTLY AND AS PART OF THE OVERALL DESIGN. CHANGES TO THE PHASING PLAN WILL REQUIRE REVIEW AND APPROVAL BY THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR, PRIOR TO IMPLEMENTATION.

OTHER IMPROVEMENTS AND REQUIREMENTS

13. **WATER AND SEWER SYSTEM MODELING:**

THE DEVELOPER SHALL COMPLETE WATER AND SEWER MODELING FOR THE PROJECT PRIOR TO ISSUE OF A CIVIL PERMIT. THE DEVELOPER SHALL CONSTRUCT ANY IMPROVEMENTS IDENTIFIED BY THE MODELING AS NECESSARY TO SERVE THE PROJECT IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS PRIOR TO ISSUE OF A BUILDING PERMIT.

14. **WATER METERING:**

THE PROJECT SHALL UTILIZE A MASTER METER FOR DOMESTIC WATER SERVICE FOR EACH BUILDING OR GROUP OF BUILDINGS. THE DEVELOPER MAY INSTALL A SEPARATE IRRIGATION METER OR INSTALL THE IRRIGATION CONNECTION DOWNSTREAM OF THE DOMESTIC MASTER METER WITH APPROPRIATE BACKFLOW PREVENTION. INDIVIDUAL SERVICE METERS FOR EACH UNIT WILL NOT BE ALLOWED. ALL INTERNAL WATER AND SEWER MAINS SHALL BE MAINTAINED BY THE PROPERTY OWNER UNLESS APPROVED FOR ACCEPTANCE BY THE CITY OF FERNLEY PUBLIC WORKS DIRECTOR AND CITY ENGINEER.

15. **FREMONT STREET IMPROVEMENTS:**

THE DEVELOPER SHALL COMPLY WITH THE REQUIREMENTS OF DEVELOPMENT AGREEMENT DA22002 FOR THE COMPLETION OF REQUIRED IMPROVEMENTS ALONG THE FREMONT STREET CORRIDOR.

16. **FREMONT INTERSECTION CAPACITY IMPROVEMENTS:**

THE EXISTING TRAFFIC VOLUMES PLUS PROJECT TRAFFIC WILL CREATE A LEVEL OF SERVICE D ON THE FREMONT STREET/U.S. HIGHWAY 95A INTERSECTION.

PER THE CITY OF FERNLEY DESIGN STANDARDS SECTION 3.3.3.c.ii, THE DEVELOPER SHALL COMPLETE MITIGATION MEASURES FOR INTERSECTIONS THAT OPERATE AT A LEVEL OF SERVICE D OR LESS. POSSIBLE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, SIGNALIZATION OR SIGNALIZATION IMPROVEMENTS, CHANNELIZED MEDIANS, TURNING LANES, STORAGE LANE INCREASE, RESTRICTED TURNS AND/OR ADDITIONAL LANES.

THE APPROVED JANUARY 2020 TRAFFIC STUDY IDENTIFIES RESTRIPING THE EASTBOUND APPROACH OF FREMONT STREET TO INCLUDE A SEPARATE RIGHT TURN LANE AS WELL AS THE ADDITION OF A SEPARATE RIGHT TURN LANE ON THE WESTBOUND APPROACH OF CHISHOLM TRAIL.

THE DEVELOPER SHALL SUBMIT IMPROVEMENT PLANS FOR THE IDENTIFIED MITIGATION MEASURES, PRIOR TO ISSUE OF THE FIRST BUILDING PERMIT FOR THE PROJECT. THE MITIGATION MEASURE WILL NEED TO BE REVIEWED AND APPROVED BY THE ADMINISTRATOR, CITY ENGINEER, PUBLIC WORKS DIRECTOR, AND NEVADA DEPARTMENT OF TRANSPORTATION (NDOT).

THE MITIGATION MEASURES SHALL BE CONSTRUCTED AND ACCEPTED, PRIOR TO ISSUE OF THE CERTIFICATE OF OCCUPANCY FOR THE FIRST BUILDING PERMIT OF THE PROJECT.

17. **ACCESS AND CIRCULATION:**

THE DEVELOPER SHALL USE APPROPRIATE STRIPING AND SIGNAGE AS MAY BE NECESSARY TO MINIMIZE TRAFFIC CONFLICT WITHIN THE DEVELOPMENT SITE FOR THE LIFE OF THE PROJECT, SUBJECT TO APPROVAL OF THE ADMINISTRATOR AND CITY ENGINEER.

THE PROPOSED PINEWOOD DRIVE EXTENSION SHALL BE A GATED, VEHICULAR EMERGENCY ACCESS ONLY. THE DEVELOPER SHALL PROVIDE PEDESTRIAN ACCESS FROM THE PROJECT TO THE SINGLE-FAMILY RESIDENTIAL SUBDIVISION TO THE EAST. BOTH THE PINEWOOD DRIVE EXTENSION AND THE PROPOSED SHERWOOD DRIVE SHALL REMAIN PRIVATE AND NOT DEDICATED TO THE CITY.

THE DEVELOPER SHALL COMPLY WITH ANY OTHER REQUIREMENTS PERTAINING TO ACCESS AND CIRCULATION OF THE CITY OF FERNLEY AND NORTH LYON COUNTY FIRE PROTECTION DISTRICT, SUBJECT TO APPROVAL OF THE FIRE CHIEF, PUBLIC WORKS DIRECTOR, CITY ENGINEER, AND ADMINISTRATOR.

18. **PARKING:**

VISITOR PARKING SHALL BE PROVIDED THROUGHOUT THE SITE. THE DEVELOPER SHALL SUBMIT IMPROVEMENT PLANS THAT SHOW APPROPRIATE STRIPING AND SIGNAGE FOR THE VISITOR PARKING STALLS, PRIOR TO ISSUE OF ANY BUILDING PERMIT.

19. **PEDESTRIAN CIRCULATION:**

PEDESTRIAN PATHWAYS SHALL BE CONSTRUCTED WITHIN THE DEVELOPMENT INCLUDING CONNECTIONS TO THE SIDEWALKS ALONG FREMONT STREET. THE DEVELOPER SHALL SUBMIT IMPROVEMENT PLANS THAT SHOW ALL PROPOSED PEDESTRIAN PATHWAYS WITHIN THE DEVELOPMENT, PRIOR TO ISSUE OF ANY BUILDING PERMIT.

CONSTRUCTION PHASE

20. **GRADING PERMIT:**

PRIOR TO ISSUE OF A GRADING PERMIT FOR THE DEVELOPMENT, THE DEVELOPER SHALL POST A SURETY BOND FOR REGRADING AND RECLAMATION OF THE SITE. THE DEVELOPER SHALL COMPLY WITH ALL GRADING REQUIREMENTS SET FORTH IN THE CITY OF FERNLEY DEVELOPMENT CODE AS WELL AS ALL STATE AND FEDERAL REGULATIONS INCLUDING, BUT NOT LIMITED TO, STORM WATER POLLUTION PREVENTION AND AIR QUALITY RELATED TO SURFACE AREA DISTURBANCE.

THE DEVELOPER SHALL PROVIDE VERIFICATION OF A STORM WATER DISCHARGE PERMIT FROM THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBJECT TO APPROVAL OF THE CITY ENGINEER, PRIOR TO ISSUE OF A GRADING OR BUILDING PERMIT FOR THE DEVELOPMENT.

21. **CONSTRUCTION MAINTENANCE:**

THE DEVELOPER SHALL LOCATE AND UTILIZE A SUFFICIENT NUMBER OF TRASH CONTAINERS ON-SITE TO BE UTILIZED DURING THE CONSTRUCTION OF THE PROJECT TO MAINTAIN THE PROJECT SITE IN A CLEAN AND ORDERLY STATE, SUBJECT TO APPROVAL OF THE ADMINISTRATOR.

22. **CONSTRUCTION HOURS:**

THE DEVELOPER SHALL LIMIT ALL CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES TO BETWEEN THE HOURS OF 7:00 AM TO 7:00 PM, SEVEN DAYS A WEEK. THE DEVELOPER SHALL INSTALL SIGNS AT ALL ACCESS POINTS TO THE PROJECT THAT CLEARLY INDICATE THE HOURS OF ACTIVITY ON-SITE, PRIOR TO THE START OF ANY CONSTRUCTION-RELATED ACTIVITIES, SUBJECT TO APPROVAL OF THE ADMINISTRATOR. THE DEVELOPER SHALL MAINTAIN THESE SIGNS IN GOOD REPAIR FOR THE DURATION OF THE CONSTRUCTION OF THE PROJECT. ONCE CONSTRUCTION IS FINISHED, THE DEVELOPER SHALL REMOVE THESE SIGNS.

23. **PROJECT CONTACT:**

THE DEVELOPER SHALL DESIGNATE TO THE ADMINISTRATOR A PROJECT CONTACT PERSON RESPONSIBLE AND AUTHORIZED TO CORRECT PROBLEMS REGARDING THE PROJECT ON A 24-HOUR, 7-DAYS-PER-WEEK BASIS. THE DEVELOPER SHALL DESIGNATE A PROJECT CONTACT PERSON TO THE ADMINISTRATOR, PRIOR TO ISSUE OF A GRADING PERMIT FOR THE PROJECT.

REGULATORY AGENCIES

24. **BUREAU OF RECLAMATION (BOR) AND TRUCKEE CARSON IRRIGATION DISTRICT (TCID):**

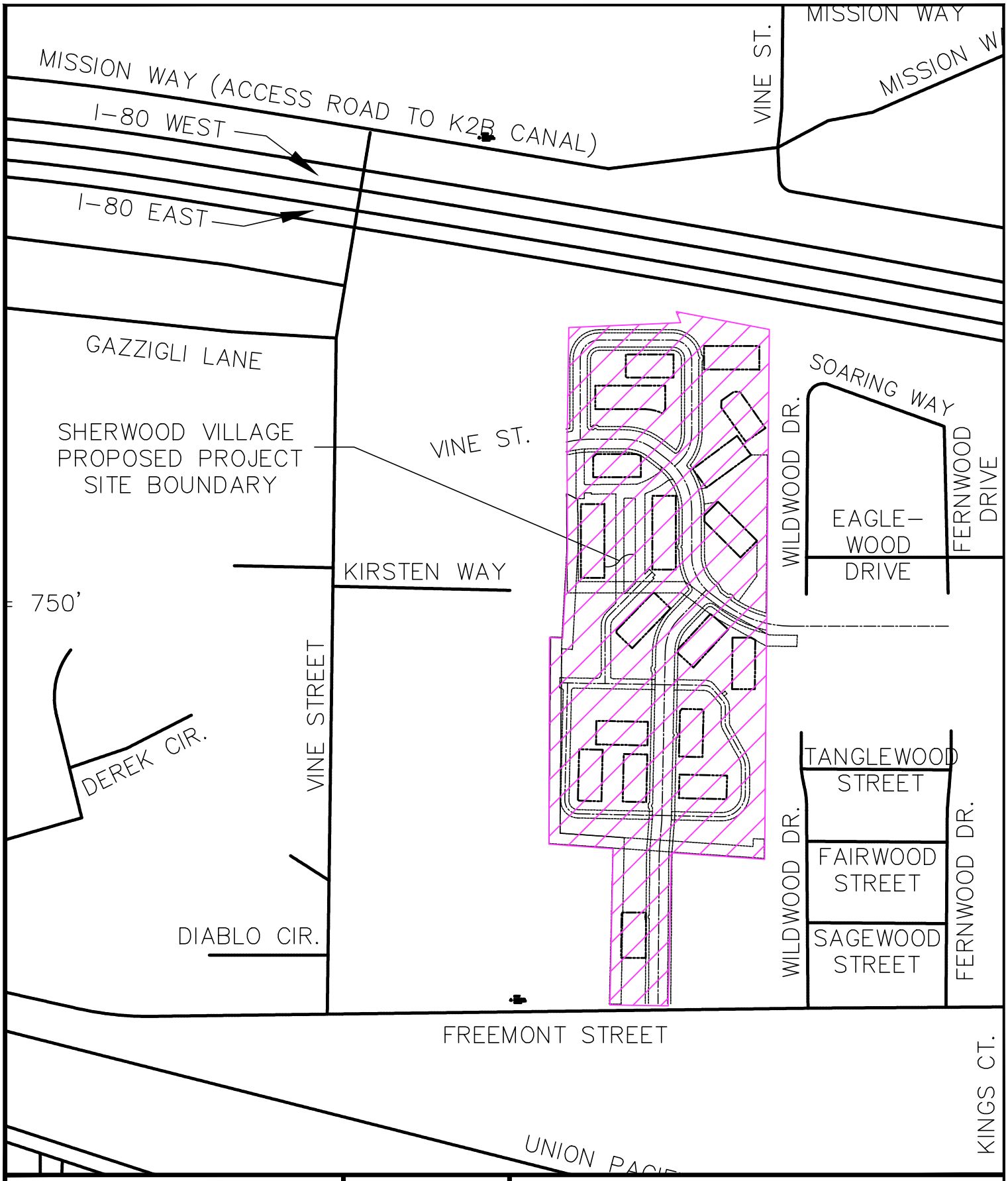
THE DEVELOPER SHALL PROVIDE WRITTEN DOCUMENTATION FROM BOR AND TCID THAT ANY PROPOSED IMPROVEMENTS AFFECTING ANY BOR FACILITY HAVE BEEN REVIEWED AND APPROVED BY THE BOR AND/OR TCID. THE WRITTEN DOCUMENTATION MUST ALSO SPECIFICALLY STATE THAT ALL IRRIGATION FACILITIES HAVE BEEN RELOCATED IN A MANNER AND LOCATION ACCEPTABLE TO BOR. FULFILLMENT OF THIS CONDITION IS SUBJECT TO APPROVAL OF THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR.

25. **NORTH LYON COUNTY FIRE PROTECTION DISTRICT:**

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NORTH LYON COUNTY FIRE PROTECTION DISTRICT, INCLUDING BUT NOT LIMITED TO: DEVELOPING A PLAN TO PROVIDE ADEQUATE EMERGENCY ACCESS THROUGHOUT THE SITE, DEVELOPING A MASTER FIRE HYDRANT AND FIRE FLOW PLAN, DEVELOPING A MASTER FIRE DEPARTMENT CONNECTION (FDC) PLAN, AND INSTALLING FIRE SUPPRESSION AND/OR ALARM SYSTEMS, SUBJECT TO APPROVAL OF THE FIRE CHIEF, PRIOR TO ISSUE OF ANY BUILDING PERMIT.

26. **FEDERAL, STATE, AND LOCAL AGENCIES:**

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF ANY FEDERAL, STATE, LOCAL AGENCY, DEPARTMENT, OR LICENSED PROFESSIONAL WITH JURISDICTION OVER THE PROJECT INCLUDING, BUT NOT LIMITED TO: NEVADA DEPARTMENT OF TRANSPORTATION (NDOT), NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP), NEVADA DIVISION OF WATER RESOURCES (NDWR), NEVADA BUREAU OF WATER POLLUTION CONTROL, NEVADA BUREAU OF SAFE DRINKING WATER, NEVADA STATE ENVIRONMENTAL COMMISSION, THE CITY OF FERNLEY BUILDING OFFICIAL, THE CITY OF FERNLEY ENGINEER, CITY OF FERNLEY PLANNING DEPARTMENT, CITY OF FERNLEY PUBLIC WORKS DEPARTMENT, AND THE CITY OF FERNLEY PROFESSIONAL LAND SURVEYOR.



PHELPS ENGINEERING
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www.phelpsengineering.net

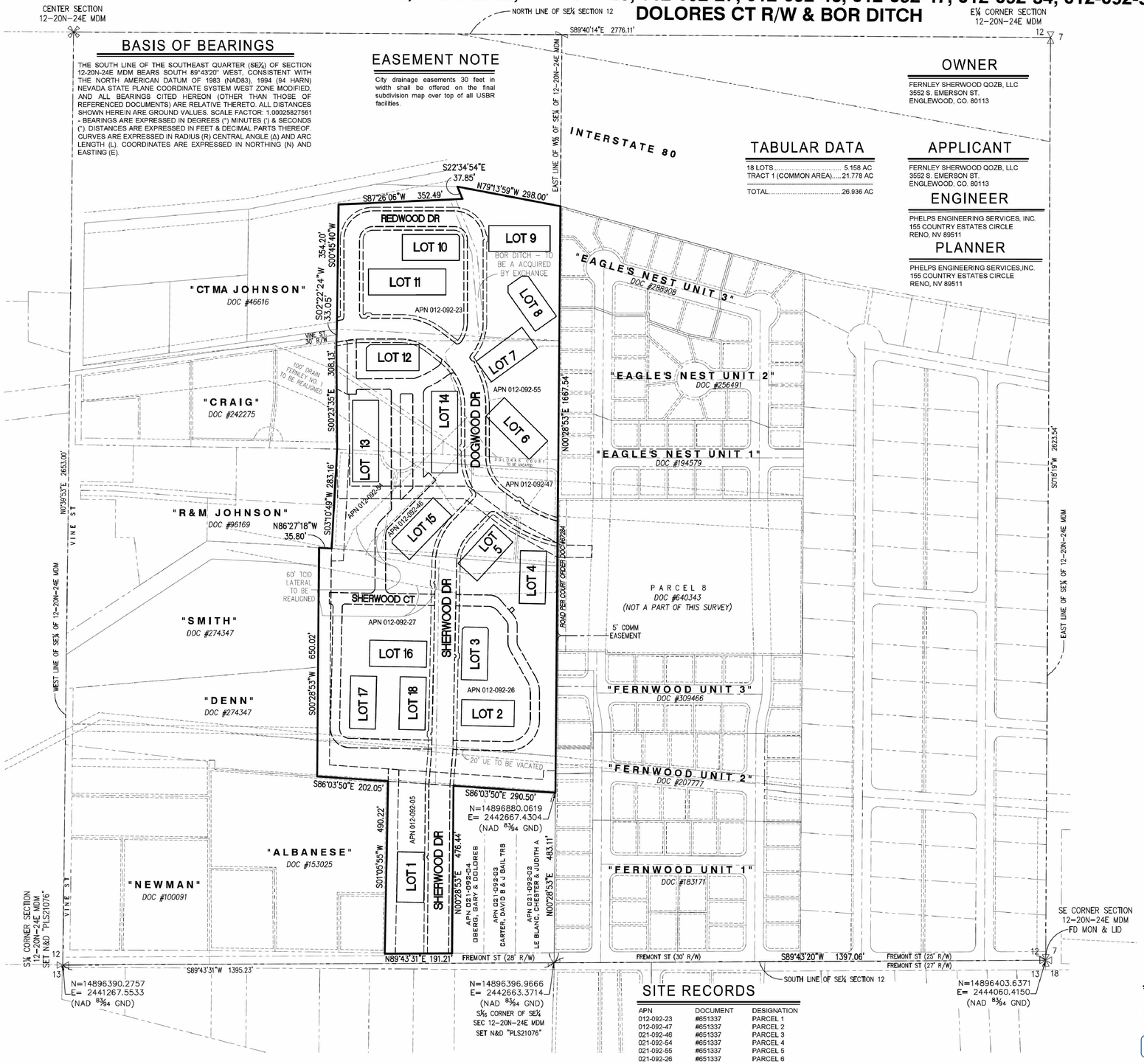
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DRAWN BY:	JTN
CHECKED BY:	JTN

VICINITY MAP FOR SHERWOOD VILLAGE

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TENTATIVE MAP
FOR
SHERWOOD VILLAGES
APNs 012-092-05, 012-092-23, 012-092-026, 012-092-27, 012-092-46, 012-092-47, 012-092-54, 012-092-55
DOLORES CT R/W & BOR DITCH

GRAPHIC SCALE
0 150 300 Feet
1"=150'



BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE¼) OF SECTION 12-20N-24E MDM BEARS SOUTH 89°43'20" WEST, CONSISTENT WITH THE NORTH AMERICAN DATUM OF 1983 (NAD83), 1994 (94 HARN) NEVADA STATE PLANE COORDINATE SYSTEM WEST ZONE MODIFIED, AND ALL BEARINGS CITED HEREON (OTHER THAN THOSE OF REFERENCED DOCUMENTS) ARE RELATIVE THERETO. ALL DISTANCES SHOWN HEREIN ARE GROUND VALUES. SCALE FACTOR: 1.00025827561 - BEARINGS ARE EXPRESSED IN DEGREES (°) MINUTES (') & SECONDS (") DISTANCES ARE EXPRESSED IN FEET & DECIMAL PARTS THEREOF. CURVES ARE EXPRESSED IN RADIUS (R) CENTRAL ANGLE (Δ) AND ARC LENGTH (L). COORDINATES ARE EXPRESSED IN NORTHING (N) AND EASTING (E).

EASEMENT NOTE

City drainage easements 30 feet in width shall be offered on the final subdivision map over top of all USBR facilities.

TABULAR DATA

18 LOTS	5.158 AC
TRACT 1 (COMMON AREA)	21.778 AC
TOTAL	26.936 AC

OWNER

FERNLEY SHERWOOD QOZB, LLC
3552 S. EMERSON ST.
ENGLEWOOD, CO. 80113

APPLICANT

FERNLEY SHERWOOD QOZB, LLC
3552 S. EMERSON ST.
ENGLEWOOD, CO. 80113

ENGINEER

PHELPS ENGINEERING SERVICES, INC.
155 COUNTRY ESTATES CIRCLE
RENO, NV 89511

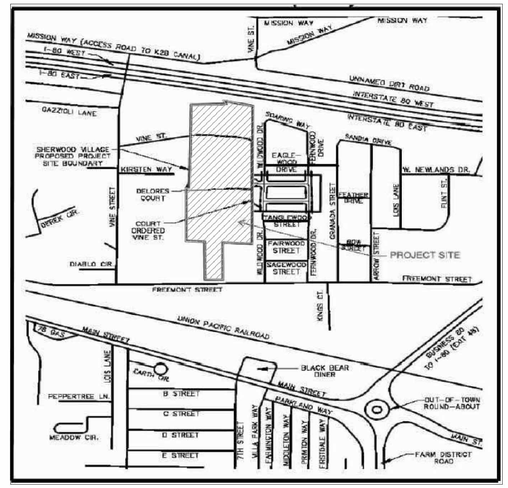
PLANNER

PHELPS ENGINEERING SERVICES,INC.
155 COUNTRY ESTATES CIRCLE
RENO, NV 89511

SITE RECORDS

APN	DOCUMENT	DESIGNATION
012-092-23	#651337	PARCEL 1
012-092-47	#651337	PARCEL 2
021-092-46	#651337	PARCEL 3
021-092-54	#651337	PARCEL 4
021-092-55	#651337	PARCEL 5
021-092-26	#651337	PARCEL 6
021-092-27	#651337	PARCEL 7
021-092-05	#649464	EXHIBIT "A"
012-092-23	#651337	BOR DITCH
N/A	#183107	DOLORES CT

VICINITY MAP (NTS)



ABBREVIATIONS

AC	ASPHALT CONCRETE	LT	LEFT
AWWA	AMERICAN WATER WORKS ASSOC	MH	MANHOLE
BOR	BUREAU OF RECLAMATION	MDD	MAX DRY DENSITY
BC	BEGIN CURVE	NTS	NOT TO SCALE
BW	BACK OF WALK	OD	OUTSIDE DIAMETER
BVC	BEGIN VERTICAL CURVE	PCC	PORTLAND CEMENT CONCRETE
CAP	CAPACITY	PF	PUBLIC FACILITY
CB	CATCH BASIN	PL	PROPERTY LINE
CFS	CUBIC FEET PER SECOND	PM	PARCEL MAP
℄	CENTERLINE	POT	POINT OF TANGENT
CMP	CORRUGATED METAL PIPE	PR	PRESSURE RATING
C/O	CLEANOUT	PSI	POUNDS PER SQUARE INCH
CONC	CONCRETE	PUE	PUBLIC UTILITY EASEMENT
CMU	CONCRETE MASONRY UNIT	PVC	POLYVINYL CHLORIDE PIPE
CONST	CONSTRUCT	PVI	POINT OF VERTICAL INTERSECTION
CP	CONCRETE PIPE	Q	VOLUME FLOW RATE
CR	CURB RETURN	R	RADIUS
DET	DETAIL	RCP	REINFORCED CONCRETE PIPE
Δ	CURVE DELTA	REF	REFERENCE
DI	DIAMETER	RET	CURB RETURN
DWY	DRIVEWAY	REQ	REQUIRED
E	ELECTRICAL	RT	RIGHT
EC	END OF CURVE	R/W	RIGHT-OF-WAY
EG	EXISTING GRADE	S	SLOPE
ELEV	ELEVATION	SD	STORM DRAIN
EVC	END OF VERTICAL CURVE	SDMH	STORM DRAIN MANHOLE
(e)	EXISTING	SF	SQUARE FEET
EXIST	EXISTING	SS	SANITARY SEWER
FES	FLARED END SECTION	SSMH	SANITARY SEWER MANHOLE
FF	FINISHED FLOOR	SUB	SUBDRAIN
FDC	FIRE DEPARTMENT CONNECTION	SW	SIDEWALK
FFC	FRONT FACE OF CURB	T	TRANSFORMER
FG	FINISHED GRADE	t	TELEPHONE
FH	FIRE HYDRANT	TBC	TOP BACK OF CURB
FL	FLOW LINE	TC	TOP OF CURB
FT	FEET	TOP	TOP OF STEP
G	GAS	TP	TEST PIT
GB	GRADE BREAK	TW	TOP OF WALL
HORIZ	HORIZONTAL	TYP	TYPICAL
HP	HIGH POINT	VC	VERTICAL CURVE
HS	HOUSE SERVICE	VERT	VERTICAL
IE	INVERT ELEVATION	VPI	VERTICAL POINT OF INTERSECTION
INT	INTERSECTION	W	WATER
L	LENGTH	WM	WATER MAIN
LF	LINEAR FEET		

SHEET INDEX

1 OF 3	TITLE SHEET
2 OF 3	HORIZONTAL CONTROL
3 OF 3	HORIZONTAL CONTROL

UTILITY PROVIDERS

CABLE TV	CHARTER SPECTRUM
ELECTRIC	NV ENERGY
GAS	SOUTHWEST GAS
SEWER	FERNLEY UTILITIES
SOLID WASTE	CAPITOL SANITATION
TELEPHONE	A.T. & T.
WATER	FERNLEY PUBLIC WORKS

PROJECT DATA

PROPERTY ADDRESS: FREMONT ST
ASSESSOR'S PARCEL NO.s: 021-92-05, 021-092-23, 021-26, 021-092-27, 021-092-46, 021-092-47, 021-92-54, 021-092-55
MASTERPLAN DESIGN: MEDIUM DENSITY RESIDENTIAL
CURRENT ZONING: MH12
PARCEL SIZE:
NUMBER OF LOTS: 18
TYPICAL LOT SIZE: VARIES
LARGEST LOT SIZE:
COMMON OPEN SPACE:
PROPOSED DENSITY:
PROJECT IS LOCATED WITHIN A PORTION OF THE W½ OF THE SE¼ OF SECTION 12, T20N, R24E, MDM
THERE ARE NO FAULT LINES WITHIN THE PROXIMITY OF THIS SITE
PROJECT LOCATED WITHIN FEMA ZONE "X"

SURVEYOR'S STATEMENT:

"I HEREBY AFFIRM THAT THIS TENTATIVE MAP FOR THE RIVERSTONE APARTMENTS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE CITY OF FERNLEY AND STATE OF NEVADA STANDARDS AND STATUES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS TO SAID PLANS".

DocuSigned by: Richard A. Pedraza PLS21076 – expires 12/30/23 — 12/2/2022 | 2:11 PM EST
9CC2EF61BF5242E...

RICHARD A. PEDRAZA, PSM/PLS — DATE
PROFESSIONAL LAND SURVEYOR
STATE OF NEVADA LICENSE NO. 21076
PHELPS ENGINEERING SERVICES

No.	REVISIONS	DATE	BY
2	ADDED STORM DRAIN EASEMENT	11/30/22	RAP
1	ADDED MISSING TC4-1-1 TOID LATERAL	11/08/22	RAP

ENGINEERS · PLANNERS · SURVEYORS · ANALYSTS
PHELPS ENGINEERING
10661 Professional Circle, Suite "A" · Reno, NV. 89521

SURVEYOR · STATE OF NEVADA · RICHARD · Exp 12-30-23 · No. 21076

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DESIGNED BY: JMG
DRAWN BY: RAP
CHECKED BY: LEP

HORIZONTAL CONTROL
TENTATIVE MAP
TITLE SHEET
(775) 24-3697 · www.phelpsengineering.net · info@phelpsengineering.net

SHERWOOD VILLAGES
CITY OF FERNLEY
LYON COUNTY, NV

DATE: 02/15/2022
PROJECT NO.: 21603
SHEET 1 OF 3

Drawing name: C:\Users\rpedraza\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Tentative Map\21603_Sherwood_TM.dwg HEV 1-3 Dec 02, 2022 9:00am by: RPedraza

DocuSign Envelope ID: ABF86A98-123A-4CC6-A5B5-1B439A3D1C23

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE¼) OF SECTION 12-20N-24E MDM BEARS SOUTH 89°43'20" WEST, CONSISTENT WITH THE NORTH AMERICAN DATUM OF 1983 (NAD83), 1994 (94 HARN) NEVADA STATE PLANE COORDINATE SYSTEM WEST ZONE MODIFIED, AND ALL BEARINGS CITED HEREON (OTHER THAN THOSE OF REFERENCED DOCUMENTS) ARE RELATIVE THERETO. ALL DISTANCES SHOWN HEREIN ARE GROUND VALUES. SCALE FACTOR: 1.00025827561 - BEARINGS ARE EXPRESSED IN DEGREES (°) MINUTES (') & SECONDS ("). DISTANCES ARE EXPRESSED IN FEET & DECIMAL PARTS THEREOF. CURVES ARE EXPRESSED IN RADIUS (R) CENTRAL ANGLE (Δ) AND ARC LENGTH (L). COORDINATES ARE EXPRESSED IN NORTHING (N) AND EASTING (E).

FREMONT ST
22' R/W
R/W WIDTH VARIES
S LINE SEC 12-20N-24E MDM

FREMONT ST
28' R/W (BY DEED)

30' R/W

DENN
DOC #274347
230 VINE ST
APN 021-092-36

SMITH
DOC #274347
240 VINE ST
APN 021-092-37

250 VINE ST
APN 021-092-08

ALBANESE
DOC #153025
840 FREMONT ST
APN 021-092-40
820 FREMONT ST
APN 021-092-44

735 FREMONT ST
APN 021-101-06
805 FREMONT ST
APN 021-101-07
815 FREMONT ST
APN 021-101-08
845 FREMONT ST
APN 021-101-09
875 FREMONT ST
APN 021-101-10
925 FREMONT ST
APN 021-101-21

860 FREMONT ST
APN 021-092-04
870 FREMONT ST
APN 021-092-03
880 FREMONT ST
APN 021-092-02

201 WILWOOD DR APN 020-514-06
213 WILWOOD DR APN 020-514-05
213 WILWOOD DR APN 020-514-04
217 WILWOOD DR APN 020-514-03
219 WILWOOD DR APN 020-514-02
221 WILWOOD DR APN 020-514-01
223 WILWOOD DR APN 020-514-10
225 WILWOOD DR APN 020-514-09
227 WILWOOD DR APN 020-514-08
229 WILWOOD DR APN 020-514-07
231 WILWOOD DR APN 020-517-01

S00°28'53"W 650.02'
N86°27'18"W 35.80'
S03°10'49"W 283.16'
S86°03'50"E 202.05'
S01°05'55"W 490.22'
N89°43'31"E 191.21'
N00°28'53"E 476.44'
S86°03'50"E 280.30'
N00°28'53"E 483.11'
N00°28'53"E 1667.54'

35' B.O.R. DRAINAGE EASEMENT
35' SURFACE DRAINAGE EASEMENT
℄ 26' ACCESS & UTILITY EASEMENT
℄ 32' ACCESS & UTILITY EASEMENT
30' ACCESS & UTILITY EASEMENT
10' UTILITY EASEMENT
ACCESS & UTILITY EASEMENT

SHERWOOD COURT
N1°18'00"E 368.79'
S0°01'06"E 180.79'
SHERWOOD DRIVE
SHERWOOD COURT
DOGWOOD DRIVE

L=14.19'
Δ=90°19'16"
R=9.00'
L=11.74'
Δ=89°40'44"
R=7.50'
Δ=90°09'35"
R=42.00'
L=79.33'
R=75.00'
Δ=29°21'37"
L=38.43'
R=75.00'
Δ=44°57'44"
R=18.00'
L=14.12'
Δ=42°37'13"
L=111.58'
R=150.00'
Δ=42°37'13"
L=111.58'
R=150.00'
L=28.80'
Δ=48°32'08"
R=34.00'
L=25.00'
Δ=40°55'36"
R=35.00'
L=18.22'
Δ=29°49'11"
R=35.00'
L=23.17'
Δ=36°52'12"
R=36.00'
L=29.65'
Δ=48°32'08"
R=35.00'
L=141.62'
R=350.00'
Δ=23°11'00"
Δ=7°08'37"
L=43.62'

LOT 1
10,992 S.F.
LOT 2
11,100 S.F.
LOT 3
11,065 S.F.
LOT 4
11,100 S.F.
LOT 5
11,100 S.F.
LOT 15
12,853 S.F.
LOT 16
11,988 S.F.
LOT 17
11,092 S.F.
LOT 18
11,097 S.F.

TRACT 1
COMMON AREA
±21.778 AC

FERNWOOD UNIT 3
PARCEL B-2A
DOC #309466
ROAD PER COURT ORDER DOC #67284

MATCH LINE SEE SHEET 3 OF 3

GRAPHIC SCALE
0 50 100 Feet
1"=50'

DocuSigned by:
Richard H. Pedraza PLS21076 – expires 12/30/23
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12/2/2022 | 2:11 PM EST

No.	REVISIONS	DATE	BY
2	ADDED STORM DRAIN EASEMENT	11/30/22	RAP
1	ADDED MISSING TC4-1-1 TOD LATERAL	11/08/22	RAP

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(775) 241-9807 · www.phelpsengineering.net · info@phelpsengineering.net

RICHARD PEDRAZA
SURVEYOR STATE OF NEVADA
Exp 12-31-23
No. 21076

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NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36"
DESIGNED BY: JMG
DRAWN BY: RAP
CHECKED BY: LEP

TENTATIVE MAP
HORIZONTAL CONTROL PLAN

SHERWOOD VILLAGES
CITY OF FERNLEY
LYON COUNTY, NV

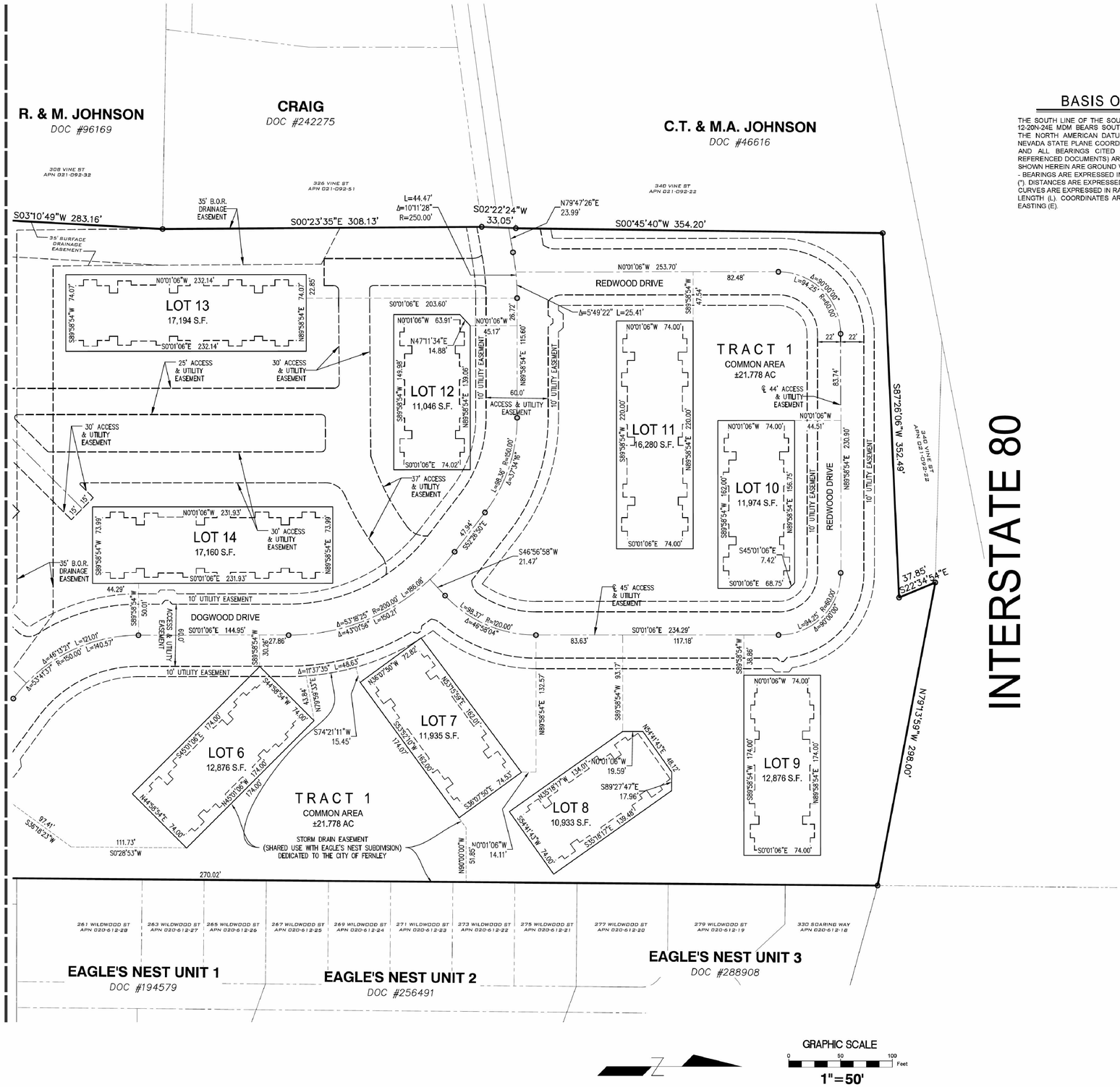
DATE: 02/15/2022
PROJECT NO.: 21603
SHEET 2 OF 3

Drawing name: G:\Users\rpedraza\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Tentative Map\21603_Sherwood_TM.dwg PLAN 2-3 Dec 02, 2022 7:29am by: RPedraza

DocuSign Envelope ID: ABF86A98-123A-4CC6-A5B5-1B439A3D1C23

SEE SHEET 2 OF 3

MATCH LINE SEE SHEET 2 OF 3



BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE¼) OF SECTION 12-20N-24E MDM BEARS SOUTH 89°43'20" WEST, CONSISTENT WITH THE NORTH AMERICAN DATUM OF 1983 (NAD83), 1994 (94 HARN) NEVADA STATE PLANE COORDINATE SYSTEM WEST ZONE MODIFIED, AND ALL BEARINGS CITED HEREON (OTHER THAN THOSE OF REFERENCED DOCUMENTS) ARE RELATIVE THERETO. ALL DISTANCES SHOWN HEREIN ARE GROUND VALUES. SCALE FACTOR: 1.00025827561 - BEARINGS ARE EXPRESSED IN DEGREES (°) MINUTES (') & SECONDS (") DISTANCES ARE EXPRESSED IN FEET & DECIMAL PARTS THEREOF. CURVES ARE EXPRESSED IN RADIUS (R) CENTRAL ANGLE (Δ) AND ARC LENGTH (L). COORDINATES ARE EXPRESSED IN NORTHING (N) AND EASTING (E).

GRAPHIC SCALE
0 50 100 Feet
1"=50'

No.	REVISIONS	DATE	BY
2	ADDED STORM DRAIN EASEMENT	11/30/22	RAP
1	ADDED MISSING TC4-1-1 TOID LATERAL	11/08/22	RAP

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PHELPS ENGINEERING
1951 Professional Circle, Suite A · Reno, NV 89521

PROFESSIONAL LAND SURVEYOR STATE OF NEVADA RICHARD D. PEDRAZA Expir 12-31-23 No. 21076

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TENTATIVE MAP
HORIZONTAL CONTROL PLAN

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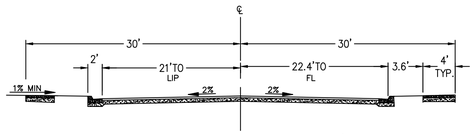
SHERWOOD VILLAGES
CITY OF FERNLEY
LYON COUNTY, NV

DATE: 02/15/2022
PROJECT NO.: 21603
SHEET 3 OF 3

DocuSigned by:
Richard D. Pedraza PLS21076 – expires 12/31/23
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12/2/2022 | 2:11 PM EST

Drawing name: C:\Users\rpedraza\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Tentative Map\21603_Sherwood_TM.dwg PLAN 3-3 Dec 02, 2022 7:43am by: RPedraza

SHERWOOD VILLAGE
TENTATIVE SUBDIVISION MAP
A.P.N. 21-092-05,23,26,27,46,47,54 & 55
FERNLEY, LYON COUNTY, NEVADA



TYPICAL ROADWAY SECTION – 60'

LAND DATA

APN 21-092-23	5.28 AC
APN 21-092-26	5.19 AC
APN 21-092-27	5.13 AC
APN 21-092-46	1.94 AC
APN 21-092-47	0.99 AC
APN 21-092-54	2.00 AC
APN 21-092-55	3.69 AC
APN 21-092-05	2.06 AC
TOTAL ACREAGE	26.28 AC

PROJECT INFORMATION

TOTAL PARCELS:	18
DENSITY:	14 DU/AC
ZONING:	MDR14
COMPREHENSIVE PLAN:	RESIDENTIAL MULTI-FAMILY
LINEAL FEET OF NEW STREETS:	5460 LF

EARTHWORK QUANITIES

CUT= 36,492 CU YDS
FILL= 58,628 CU YDS W/ 10% COMPACTION
NET= 22,136 CU YDS (IMPORT)

DEVELOPMENT STANDARDS AND NOTES

1. MINIMUM LOT SIZE.....5871 SF
2. MINIMUM AVERAGE LOT WIDTH.....45 FT.
3. SETBACKS.....FRONT; 15 FT , 20 GARAGE
   SIDE: 10 FT (0 FT ON SHARED LOT LINE)
   REAR: 10 FT.
4. THIS DEVELOPMENT IS IN ZONE "X" ACCORDING TO THE FLOOD INSURANCE RATE MAP PANEL 32019C0105E (EFFECTIVE JANUARY 16, 2009) ZONE "X" IS IDENTIFIED AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN.
5. HISTORICALLY, THE PROJECT SITE WAS USED FOR AGRICULTURAL PURPOSES, AN IRRIGATED FIELD
6. DOMESTIC WATER SUPPLIED FROM COMMUNITY WATER SYSTEM.
7. DOMESTIC SEWAGE DISPOSAL BY COMMUNITY SEWER SYSTEM, ESTIMATED AMOUNT OF SEWAGE CONTRIBUTED IS 130 GAL/DAY/DU (MULTI-FAMILY); 200 GAL/DAY/DU (DUPLEXES).
8. ALL UTILITIES TO BE PLACED UNDERGROUND
9. ALL STREET AND UTILITY IMPROVEMENTS WILL BE CONSTRUCTED TO CITY STANDARDS
10. STORM DRAINAGE WILL BE RETAINED ON SITE
11. WATER RIGHT SHALL BE IN ACCORDANCE WITH CITY ORDINANCE #714 BILL 696 PASSED 12-21-04
12. THE DISTANCE FROM THE SUBDIVISION TO THE COMMUNITY SEWAGE SYSTEM IS APPROXIMATELY 100 FEET.
13. ALL ROADS AND DRAINAGE FACILITIES ARE PRIVATELY OWNED AND SHALL BE MAINTAINED BY THE HOME OWNER'S ASSOCIATION.

UTILITIES:

CHARTER COMMUNICATIONS 9335 PROTOTYPE DRIVE RENO, NV. 89511 (775) 850-7243	SOUTHWEST GAS CORPORATION 400 EAGLE STATION LANE CARSON CITY, NV. 89702 (775) 887-2720	FERNLEY PUBLIC WORKS DEPT. 595 SILVER LACE LANE FERNLEY, NV. 89408 (775) 575-2307
SBC NEVADA BELL 645 E. PLUMB LANE P.O. BOX 11010 RENO, NV. 89520 (775) 333-4363	SIERRA PACIFIC POWER CO. 346 N. MAIN STREET FALLON, NV. 89406 (775) 423-3636	

BASIS OF BEARINGS

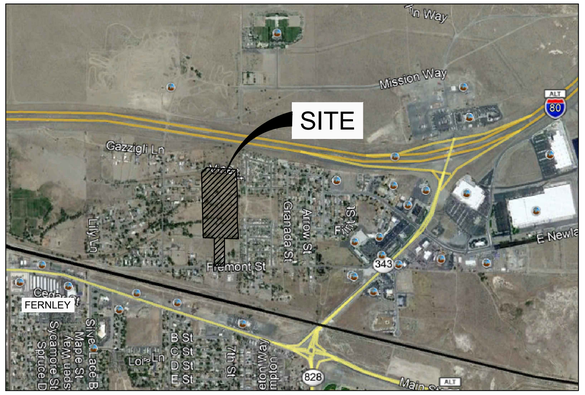
N 89°39'51" W ALONG THE SOUTH LINE OF THE SW1/4-SW1/4 OF SECTION 15, T20N, R24 E M.D.B.&M., AS SHOWN ON THE DIVISION INTO LARGE PARCEL MAP FOR FERNLEY HILLS ENTERPRISES, INC. FILE #239717 IN THE LYON COUNTY RECORDS.

DATUM STATEMENT:

SURVEY CONTROL IS BASED UPON UTILIZING THE ONLINE POSITIONING USER SERVICE (OPUS) PROVIDED BY THE NATIONAL GEODETIC SURVEY (NGS).

POINT # 1 IS A NO. 5 REBAR SET ON THE EAST SIDE OF THE INTERSECTION OF TANGLEWOOD DRIVE AND FERNWOOD DRIVE.

POSITIONAL DATA FOR POINT #1:
LATITUDE: 39°36'35.10922 N
LONGITUDE: 119°13'45.99844 W
EL HEIGHT: 1236.801 M OR 4057.746 US FT
ORTHO HEIGHT: 1260.956 M OR 4136.995 US FT NAVD 88 DATUM
PROCESSED ON 11/21/19



VICINITY MAP
SCALE: 1" = 6,000'

Sheet List Table	
Sheet Number	Sheet Title
C1	COVER SHEET
C2	GENERAL NOTES
C3	EX. CONDITIONS OVERALL MAP
C4	EX. CONDITIONS AND DEMO PLAN
C5	EX. CONDITIONS AND DEMO PLAN
C6	GRADING PLAN 1
C7	GRADING PLAN 2
C8	GRADING PLAN 3
C9	SWM NORTH
C10	SWM SOUTH
C11	SITE PLAN 1
C12	SITE PLAN 2
C13	UTILITY PLAN 1
C14	UTILITY PLAN 2
C15	WATER DETAILS
C16	WATER AND SANITARY SEWER DETAILS
C17	SANITARY SEWER AND SITE DETAILS
C18	SITE DETAILS
C19	POND DETAILS

CITY APPROVAL:

APPROVED BY THE PLANNING COMMISSION OF THE CITY OF FERNLEY THIS _____ DAY OF _____, 20__.

_____
PUBLIC WORKS

_____
COMMUNITY DEVELOPMENT

_____
CITY ENGINEER

_____
NORTH LYON COUNTY FIRE PREVENTION DISTRICT

_____
TRUCKEE-CARSON IRRIGATION DISTRICT

_____
ATTEST: CITY CLERK



12/02/2022

PROJECT CONTACTS:

OWNER/DEVELOPER	ENGINEER	SURVEYOR
VERTEX FUND 1, LLC 3522 S. EMERSON ST. DENVER, CO 80113 MATT HURLEY (720) 544-1820	PHELPS ENGINEERING SERVICES, LLC 155 COUNTRY ESTATES CIRCLE SUITE 300 RENO, NV. 89511 (775) 399-2200	PHELPS 155 COUNTRY ESTATES CIRCLE SUITE 300 RENO, NV. 89511 (775) 399-2200

LEGAL DESCRIPTION:

ALL THAT CERTAIN REAL PROPERTY SITUATE IN THE COUNTY OF LYON, STATE OF NEVADA, DESCRIBED AS FOLLOWS:

PARCEL 1:

A PARCEL OF LAND SITUATE IN THE NORTHWEST ¼ OF THE SOUTHEAST ¼ OF SECTION 12, TOWNSHIP 20 NORTH, RANGE 24 EAST, M.D.B.&M., MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT AN IRON BOLT SET IN PAVEMENT WHICH MARKS THE SOUTHEAST CORNER OF THE WEST ½ OF THE SOUTHEAST ¼ OF SECTION 12, TOWNSHIP 20 NORTH, RANGE 20 EAST, M.D.B.&M.; AND RUNNING THENCE NORTH ALONG THE EAST SIDE OF SAID WEST ½ OF THE SOUTHEAST ¼ FOR A DISTANCE OF 1786.03 FEET TO A POINT WHICH SAID POINT IS THE SOUTHEAST CORNER OF THIS PARCEL AND THE TRUE POINT OF BEGINNING, AND THENCE AROUND THE PARCEL AS FOLLOWS: NORTH 89°30' 00" WEST FOLLOWING GENERALLY PARALLEL TO AN EXISTING FENCE LINE FOR A DISTANCE OF 632.70 FEET TO THE SOUTHWEST CORNER; THENCE NORTH 0°17' 34" EAST FOR A DISTANCE OF 354.20 FEET TO THE NORTHWEST CORNER; THENCE NORTH 86°58' 00" EAST FOR A DISTANCE OF 352.49 FEET TO A POINT; AND THENCE NORTH 23°03' 00" WEST FOR A DISTANCE OF 37.85 FEET TO THE SOUTH RIGHT OF WAY LINE OF HIGHWAY NO. 80; AND THENCE FOLLOWING SAID SOUTH LINE AT A BEARING OF SOUTH 79°42' 05" EAST, FOR A DISTANCE OF 298 FEET TO THE POINT OF INTERSECTION WITH THE EAST LINE OF THE NORTHWEST ¼ OF THE SOUTHEAST ¼ AFORESAID AND THENCE RUNNING SOUTH ALONG SAID EAST LINE OF A DISTANCE OF 382 FEET TO THE POINT OF BEGINNING.

EXCEPTING FROM THE ABOVE PARCEL A 15 FOOT STRIP OF LAND TO BE USED FOR AN IRRIGATION DITCH WHOSE CENTER LINE IS DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE EAST LINE OF THE NORTHWEST ¼ OF THE SOUTHEAST ¼ OF SECTION 12, TOWNSHIP 20 NORTH, RANGE 24 EAST, M.D.B&M. FROM WHENCE THE SOUTHEAST CORNER OF THE WEST ½ BEARS SOUTH A DISTANCE OF 1786.03 FEET; AND THENCE NORTH 89°01' 40" WEST, FOR A DISTANCE OF 220 FEET TO THE TRUE POINT OF BEGINNING; AND THENCE FOLLOWING GENERALLY THE CENTER LINE OF AN EXISTING DITCH NORTH 5°27' WEST FOR A DISTANCE OF 245 FEET TO AN ANGLE POINT; AND THENCE NORTH 22°27' 05" WEST, FOR A DISTANCE OF 165 FEET TO THE POINT OF ENDING.

NOTE: THE ABOVE METES AND BOUNDS DESCRIPTION APPEARED PREVIOUSLY IN THAT CERTAIN DEED RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF LYON COUNTY, NEVADA ON FEBRUARY 28, 2005, AS DOCUMENT NO. 343926 OF OFFICIAL RECORDS.

APN: 021-092-23

PARCEL 2:

PARCEL A AS SHOWN ON THE PARCEL MAP FOR KENNETH D. HORTON AND JIMMIE DALE HORTON, RECORDED IN THE OFFICIAL RECORDS OF LYON COUNTY, NEVADA, ON JUNE 13, 1995, AS DOCUMENT NO. 183107.

APN: 021-092-47

PARCEL 3:

PARCEL B AS SHOWN ON THE PARCEL MAP FOR KENNETH D. HORTON AND JIMMIE DALE HORTON, RECORDED IN THE OFFICIAL RECORDS OF LYON COUNTY, NEVADA, ON JUNE 13, 1995, AS DOCUMENT NO. 183107.

APN: 021-092-46

PARCEL 4:
A PARCEL OF LAND LOCATED IN A PORTION OF SOUTHEAST ¼ OF SECTION 12, TOWNSHIP 20 NORTH, RANGE 24 EAST, M.D.B.&M., BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE DOLORES COURT RIGHT OF WAY, AS SHOWN ON THE HORTON PARCEL MAP, FILE NO. 183107, LYON COUNTY RECORDS; THENCE NORTH 86°21' 14" WEST A DISTANCE OF 328.92 FEET TO THE POINT OF BEGINNING; THENCE NORTH 03°38' 46" EAST A DISTANCE OF 50.00 FEET; THENCE NORTH 55°24' 20" WEST A DISTANCE OF 365.79 FEET; THENCE SOUTH 00°20' 58" WEST A DISTANCE OF 238.51 FEET; THENCE SOUTH 03°54' 16" WEST A DISTANCE OF 283.24 FEET; THENCE SOUTH 84°45' 19" EAST A DISTANCE OF 138.94 FEET; THENCE NORTH 11°52' 26" EAST A DISTANCE OF 239.84 FEET; THENCE AROUND A CURVE TO THE LEFT, CONCAVE NORTHEASTERLY, HAVING A RADIAL BEARING OF NORTH 11°53' 20" EAST, AN ARC LENGTH OF 71.6 FEET, A CENTRAL ANGLE OF 82°02' 39" AND A RADIUS OF 50.0 FEET; THENCE SOUTH 86°21' 14" EAST A DISTANCE OF 170.90 FEET, TO THE POINT OF BEGINNING.

NOTE: THE ABOVE METES AND BOUNDS DESCRIPTION APPEARED PREVIOUSLY IN THAT CERTAIN DEED RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF LYON COUNTY, NEVADA ON FEBRUARY 28, 2005, AS DOCUMENT NO. 343926 OF OFFICIAL RECORDS.

APN: 021-092-54

PARCEL 5:

A PARCEL OF LAND LOCATED IN A PORTION OF THE SOUTHEAST ¼ OF SECTION 12, TOWNSHIP 20 NORTH, RANGE 24 EAST, M.D.B.&M., BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE DOLORES COURT RIGHT OF WAY, AS SHOWN ON THE HORTON PARCEL MAP, FILE NO. 183107, LYON COUNTY RECORDS, THE POINT OF BEGINNING; THENCE NORTH 86°21' 14" WEST A DISTANCE OF 328.92 FEET; THENCE NORTH 03°38' 46" EAST A DISTANCE OF 50.00 FEET; THENCE NORTH 55°24' 20" EAST A DISTANCE OF 365.79 FEET; THENCE NORTH 00°20' 58" EAST A DISTANCE OF 69.64 FEET; THENCE SOUTH 89°15' 15" EAST A DISTANCE OF 633.22 FEET; THENCE SOUTH 01°14' 53" WEST A DISTANCE OF 339.97 FEET; TO THE POINT OF BEGINNING.

APN: 021-092-55

APN: 021-092-23,46,47,54,55

"I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS FOR THE SHERWOOD FERNWOOD SUBDIVISION – WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE CITY OF FERNLEY AND STATE OF NEVADA STANDARDS AND STATUES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS TO SAID PLANS".

_____
LONNY E. PHELPS
DATE
REGISTERED PROFESSIONAL ENGINEER
STATE OF NEVADA NO. 25230
PHELPS ENGINEERING

PHELPS ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE SIZE, MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	12/02/2022	TD

PHELPS ENGINEERING
155 County Estates Circle, Suite 300
Reno, Nevada 89511 (775) 399-2200
www.phelpsengineering.net

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NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36

DESIGNED BY: JJP
DRAWN BY: NW
CHECKED BY: LEP

COVER SHEET

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

PROJECT NO.: 21603

C1

Drawing name: C:\Users\Zach\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Sheets\C0s\COVER.dwg 1 COVER SHEET Dec 02, 2022 11:26am by: Zach

GENERAL NOTE FOR ALL DETAILS

1. ALL MATERIALS FURNISHED AND WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC OR ORANGE BOOK).

GENERAL NOTES FOR WATER SERVICE

1. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND CHAPTER 618 OF NRS, IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE COMPLETION OF THIS PROJECT.
2. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS AT THE JOB SITE, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK ACCORDING TO GENERALLY ACCEPTED CONSTRUCTION PRACTICES.
3. ALL UNDERGROUND VALVES LARGER THAN 2", TEES, ETC., SHALL BE COATED IN MASTIC.
4. NOTIFY CITY OF FERNLEY 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
5. FIBER-REINFORCED PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS:
   4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS;
   MIN 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45;
   AIR ENTRAINMENT 6% ± 1.5%;
   SLUMP AT 1 TO 4 INCHES;
   ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
   POLYPROPYLENE FIBERS SHALL BE ADDED TO THE P.C.C. PER THE MANUFACTURERS RECOMMENDATIONS.
6. NO OTHER UTILITIES MAY BE PLACED IN A WATER OR SEWER TRENCH.
7. BACKFLOW PREVENTION IS REQUIRED PER DETAILS # 31 THRU # 40. RESIDENTIAL SUBDIVISIONS DO NOT TYPICALLY REQUIRE DETAILS # 31 THRU # 40. CITY OF FERNLEY WILL NOTIFY WHEN THESE SHEETS ARE REQUIRED.
8. CONTRACTORS SHALL COMPLY WITH HOST EMPLOYER (CITY OF FERNLEY) SAFETY PROGRAM
9. CONTRACTOR IS RESPONSIBLE FOR REVIEWING HOST EMPLOYER'S SAFETY PROGRAM. CONTRACTOR AT PRE-BID SHALL FURNISH CITY OF FERNLEY SAFETY RECORDS FROM THE LAST THREE YEAR PERIOD AND A COPY OF ITS OWN COMPANY SAFETY PROGRAM.
10. ALL VALVE BOXES, MANHOLE STRUCTURES, AND CLEANOUTS SHALL BE MARKED AND ACCESSIBLE AT ALL TIMES.
11. FOR DETAILS NOT SHOWN, CONTACT CITY OF FERNLEY @ 775-784-9910, FAX 775-784-9966.
12. THE OWNER IS RESPONSIBLE FOR FURNISHING QUALIFIED SITE INSPECTIONS DURING CONSTRUCTION OF PUBLIC IMPROVEMENTS.
13. CITY OF FERNLEY SHALL APPROVE OF THE INSPECTOR & TESTING FIRM PRIOR TO CONSTRUCTION.
14. THE INSPECTOR SHALL INVENTORY ALL CONSTRUCTION MATERIALS TO ENSURE QUALITY CONTROL. REJECTION OF DEFECTIVE MATERIALS MUST BE COORDINATED WITH CITY OF FERNLEY.
15. PERFORM PLASTIC PIPE BALL AND MANDREL TESTS ON NEWLY INSTALLED SEWER PIPE IN ACCORDANCE WITH SECTION 336.03.09 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
16. PERFORM AIR PRESSURE TESTING ON NEWLY INSTALLED SEWER PIPE IN ACCORDANCE WITH SECTION 336.03.07.04 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
17. ALL NEW PUBLIC WATER MAINS SHALL BE 8" OR LARGER.
18. CONTRACTOR IS RESPONSIBLE TO MAKE FIELD MEASUREMENTS TO LOCATE AND SIZE EXISTING FACILITIES OR UNDERGROUND UTILITIES.
19. PLACE CHLORINE TABLETS IN WATER LINES AS FOLLOWS:
    3 TABLETS PER 6" DIAMETER OF LINE;
    4 TABLETS PER 8" DIAMETER LENGTH OF LINE;
    5 TABLETS PER 10" DIAMETER LENGTH OF LINE;
    6 TABLETS PER 12" OR GREATER DIAMETER LENGTH OF LINE;
    TABLETS MUST BE GLUED AT EQUALLY SPACED INTERVALS TO INSIDE OF PIPE USING APPROVED ADHESIVE.
    DISINFECTION SHALL MEET AWWA STANDARD C651.
20. CONTRACTOR SHALL SUBMIT CUT SHEETS & SHOP DRAWINGS FOR REVIEW TO THE PROJECT ENGINEER, AND/OR THE UTILITY ENGINEER PRIOR TO ORDERING CONSTRUCTION MATERIALS. A SIGNED SET OF DRAWINGS MUST ALWAYS BE AVAILABLE ONSITE DURING CONSTRUCTION.
21. PER THE CITY OF FERNLEY RULES AND REGULATIONS, SECTION 1.04.054, A BOND MUST BE IN PLACE PRIOR TO THE START OF CONSTRUCTION.

GENERAL NOTES	Detail No. 1 GEN NOTES	DATE	REVISIONS	BY
		05/08	RELOCATED NOTES WITH DETAIL ID	

WATER MAIN PRESSURE & BACTERIA TESTING

1. CONTRACTOR SHALL MAINTAIN TEST PRESSURE WITHIN 5 PSI FOR A PERIOD OF 2 HOURS. TEST PRESSURE SHALL BE 150 AND 200 PSI, PER PRESSURE ZONE, AS INDICATED ON PLANS.
2. ALLOWABLE LEAKAGE SHALL BE DETERMINED BY THE FOLLOWING:

   $$\text{ALLOWABLE LEAKAGE (GALLONS PER HOUR)} = \frac{SD\sqrt{P}}{133{,}200}$$

   WHERE S = LENGTH OF PIPE IN TEST SECTION (FEET)
   D = PIPE DIAMETER (INCHES)
   P = TEST PRESSURE (PSIG)
3. LEAKAGE SHALL BE MEASURED BY THE VOLUME OF WATER REQUIRED TO MAINTAIN THE TEST PRESSURE WITHIN 5 PSI FOR THE TEST PERIOD, NOT THE DROP IN PRESSURE.
4. INSPECTOR IS RESPONSIBLE FOR OBTAINING AND DELIVERING TESTING LAB SAMPLE BOTTLES AND COLLECTING SAMPLES FOR BACTERIA TESTING. INSPECTOR SHALL PRESENT TEST RESULTS TO THE UTILITY.

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY (RP):

1. THE RP SHALL ALWAYS BE INSTALLED ABOVE GRADE AND WILL NOT BE ALLOWED IN BASEMENTS.
2. A DRAIN SHALL BE INSTALLED IN THE BOX FOR OUTDOOR INSTALLATIONS AND A DAYLIGHT DRAIN AND A FLOOR DRAIN SHALL BE INSTALLED FOR INDOOR INSTALLATIONS. REFER TO **TABLE A** FOR MINIMUM REQUIRED DRAIN SIZES.
3. AN AIR GAP (VERTICAL PHYSICAL SEPARATION) OF AT LEAST 2 TIMES THE DIAMETER OF THE RELIEF VALVE OPENING, WITH A MINIMUM OF 1", SHALL BE MAINTAINED BETWEEN THE WATER DISCHARGE POINT ON THE RELIEF VALVE AND THE DRAIN OR 1" ABOVE THE MINIMUM FLOOD LEVEL, WHICHEVER IS HIGHEST.

TABLE A

RP SIZE	MIN. ID DRAIN SIZE
3/4 - 1 ½"	2"
1 ½ - 2"	4"
2 ¼ - 3"	6"
4 - 10"	8"

DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY (DC):

1. BELOW GROUND VAULTS SHALL REMAIN DRY THROUGHOUT THE YEAR.

PRESSURE VACUUM BREAKER (PVB) SPILL RESISTANT PRESSURE VACUUM BREAKER (SVB) BACKFLOW PREVENTION ASSEMBLY:

1. THE PVB SHALL NOT BE SUBJECT TO ANY BACK PRESSURE FROM: ELEVATED DOWNSTREAM PIPING, INJECTION SYSTEMS, COMPRESSED AIR, PUMPS, OR OTHER MEANS. IF BACK PRESSURE EXISTS, AN RP MUST BE INSTALLED.

DC, RP, AND PVB/SVB ASSEMBLIES:

1. SUPPORTS SHALL BE PROVIDED AS NECESSARY.
2. ELECTRIC SUPPLY SOCKETS SHALL BE AWAY FROM RELIEF VALVE & TESTCOCK.
3. FREEZE PROOF INSULATION BOX AND 1 TYPE OF HEAT ARE REQUIRED. 2 TYPES ARE STRONGLY RECOMMENDED.
4. PLACE WATERTIGHT, FLEXIBLE SEALANT AT PIPE PENETRATIONS.
5. INSULATED BOX SHALL EITHER SWING CLEAR OF ASSEMBLY OR BE SIZED TO PROVIDE CLEARANCES SHOWN IN THE DETAILS.
6. SPRING LOADED LID IS REQUIRED ON LARGE BOXES.
7. EITHER VALVE BOXES OR PIPE RISERS MAY BE USED FOR THE SHUT OFF VALVES.
8. MANUAL SHUTOFF VALVES SHALL BE BRASS GLOBE OR CURB VALVE SIZED THE SAME AS SERVICE LINE.
9. DRAIN CONFIGURATION SHALL BE AN INLINE TEE TO BRASS SHUTOFF VALVE WITH A RUBBER SEAT & SCHEDULE 80 1/2" 90° ELBOW WITH FEMALE THREADS. ADD 1/2" RED FREEZE KING DRAIN.
10. USE 2 FULL TURNS OF TEFLON TAPE ON ALL THREADED JOINTS.
11. NO STOP AND WASTE VALVES.
12. ADEQUATE CLEARANCE MUST BE PROVIDED FOR OPERATION OF VALVES AND REPAIR AND TESTING OF THE ASSEMBLIES.
13. NO OUTLET, TEE, OR AN CONNECTION MAY BE MADE TO THE SERVICE LINE BETWEEN THE METER AND THE ASSEMBLY.
14. ALL ASSEMBLIES MUST BE INSTALLED IN THE HORIZONTAL ORIENTATION UNLESS USC APPROVED IN A DIFFERENT ORIENTATION.
15. ASSEMBLIES MUST BE INSTALLED AS CLOSELY AS PRACTICAL TO THE WATER METER.
16. CITY OF FERNLEY RECOMMENDS PROTECTING THE ASSEMBLIES FROM VANDALISM IN SUSCEPTIBLE AREAS. REQUIRED CLEARANCES MUST STILL BE MET AND UTILITY ACCESS MUST BE PROVIDED.
17. ASSEMBLIES LESS THAN 2" REQUIRE 1 CU. FT OF CLEAN GRAVEL AND ASSEMBLIES GREATER THAN OR EQUAL TO 2" REQUIRE 8 CU. FT OF CLEAN GRAVEL FOR ALL DRAINS.

GENERAL NOTES	Detail No. 2 GEN NOTES	DATE	REVISIONS	BY
		05/08	RELOCATED NOTES WITH DETAIL ID	

AIR GAP SEPARATION

1. THE TANK AND PUMP SHALL BE DESIGNED TO SUIT CUSTOMER'S NEEDS.
2. AN AIR GAP (THE DISTANCE BETWEEN THE LOWEST POINT OF THE SUPPLY LINE ANDOVERFLOW ELEVATION OF THE RECEIVING TANK) MUST BE AT LEAST 2 TIMES THE DIAMETER OF THE SUPPLY LINE, WITH A MINIMUM AIR GAP OF 1".
3. FREEZE PROTECTION SHALL BE PROVIDED FOR THE SUPPLY PIPE AND THE RECEIVING TANK WHERE NECESSARY.
4. THE WATER METER SHALL BE LOCATED UPSTREAM OF THE AIR GAP.
5. AIR GAP BYPASSES MUST BE AUTHORIZED BY THE UTILITY.

TYPICAL LOCATIONS WHERE RP ASSEMBLIES ARE REQUIRED
(THIS LIST IS ACCORDING TO NAC 445A.67195, CITY OF FERNLEY MAY REQUIRE AN RP FOR APPLICATIONS NOT LISTED HERE):

A BUILDING THAT:
- CONTAINS A HOTEL, MOTEL, CASINO, CONDOMINIUM OR TOWNHOUSE, OR ANY APARTMENTS;
- IS USED FOR UNIDENTIFIED COMMERCIAL PURPOSES;
- UTILIZES ANY SEWAGE PUMPS OR EJECTORS;
- UTILIZES A HYDRONIC HEATING SYSTEM WITH A CHEMICAL ADDITIVE;
- HAS A BAPTISMAL FONT;
- UTILIZES A BOTTLING SYSTEM;
- IS A BREWERY, CANNERY, PACKING HOUSE, DAIRY PROCESSING FACILITY, RESTAURANT, OR OTHER FACILITY WHERE FOOD IS PROCESSED OR SERVED, DENTAL CLINIC, MEDICALFACILITY, HOSPITAL, CONVALESCENT HOME, SANITARIUM, MORGUE, MORTUARY, FACILITY FOR CONDUCTING AUTOPSIES, LABORATORY, SCHOOL, COLLEGE, UNIVERSITY, PUBLISHING OR PRINTING FACILITY, VETERINARY CLINIC, PET SHOP, PET GROOMING FACILITY, LAUNDRY OR DRY CLEANING FACILITY, DYEING FACILITY, ANY ELECTROCHEMICAL PLATING FACILITY, FACILITY THAT HAS A POOL OR SPA, A PARK FOR MOBILE HOMES OR RECREATIONAL VEHICLES, FACILITY FOR PRODUCTION OF POWER, FACILITY THAT HANDLES, PROCESSES OR STORES RADIOACTIVE MATERIALS, FACILITY THAT PROCESSES SAND OR GRAVEL, FACILITY THAT MANUFACTURES OR UTILIZES CHEMICALS, FACILITY FOR THE MANUFACTURING, REPAIR, OR WASHING OF MOTOR VEHICLES, FACILITY FOR MANUF. OR PROCESSING OF FILM, FACILITY FOR MANUFACTURING OF ICE, A FACILITY FOR MANUF., PROCESSING OR CLEANING OF METAL, FACILITY FOR MANUF. OF ANY RUBBER, FACILITY FOR MANUF. OF ANY PAPER, ANY FACILITY FOR MANUF., PROCESSING OR FABRICATION, CLASS 4, CLASS 5, OR CLASS 6 FIRE SPRINKLER SYSTEMS, IRRIGATION SYSTEMS WHERE CHEMICALS ARE INJECTED OR BOOSTER PUMPS ARE ADDED.

TYPICAL LOCATIONS WHERE DC OR PVB/SVB ASSEMBLIES OR AIR GAPS ARE REQUIRED
(THIS LIST IS ACCORDING TO NAC 445A.67195, CITY OF FERNLEY MAY REQUIRE A DC, PVB/SVB OR AG FOR APPLICATIONS NOT LISTED HERE):

A DC IS REQUIRED FOR A BUILDING WITH CLASS 1, CLASS 2, OR CLASS 3 FIRE SPRINKLER SYSTEMS, A SITE WITH AN AUXILIARY WATER SUPPLY, AND A SITE WITH TWO METERS. A PVB/SVB IS REQUIRED FOR IRRIGATION SYSTEMS WITH NO PUMPS OR CHEMICAL INJECTION SYSTEMS. AN AIR GAP IS REQUIRED FOR STORM DRAINAGE SYSTEMS, SEWAGE COLLECTION, DISTRIBUTION, OR TREATMENT SYSTEMS, AND FILL LOCATIONS FOR PORTABLE SPRAYING OR CLEANING EQUIPMENT.

CITY OF FERNLEY CROSS-CONNECTION CONTROL PROGRAM REQUIREMENTS

1. ALL BACKFLOW PREVENTION ASSEMBLIES MUST BE INSPECTED BY A UTILITYREPRESENTATIVE AND A TEST FORM (COMPLETED BY A HEALTH DISTRICT CERTIFIED TESTER)MUST BE SUBMITTED TO CITY OF FERNLEY BEFORE SERVICE IS ACTIVATED.
2. THE TEST FORM MUST BE SUBMITTED TO CITY OF FERNLEY ANNUALLY WITHIN 30 DAYS OF THE ASSEMBLY INSTALLATION ANNIVERSARY DATE.
3. CITY OF FERNLEY MAY TEST THE ASSEMBLY AT ANY TIME AT ITS OWN EXPENSE.
4. THE CUSTOMER IS RESPONSIBLE TO PROTECT HISHER SYSTEM FROM THERMAL EXPANSION BY INSTALLING EITHER AN EXPANSION TANK OR PRESSURE RELIEF VALVE IN THE FEED LINE TO THE WATER HEATER (NO PROTECTION COULD RESULT IN SERIOUS DAMAGE AND/OR INJURY).
5. ALL ASSEMBLIES MUST BE USC APPROVED.
6. ALL WATER USED DURING CONSTRUCTION SHALL BE METERED AND SHALL FLOW THROUGHAN APPROVED BACKFLOW PREVENTION ASSEMBLY. UNAUTHORIZED FIRE HYDRANT USAGE SHALL RESULT IN COLLECTION OF REVENUES, FINES, POSSIBLE LEGAL ACTION, AND INVOLVEMENT OF STATE/LOCAL LICENSING BOARDS.
7. IF A CONTINUOUS WATER SUPPLY IS CRITICAL TO A PREMISE, PARALLEL ASSEMBLIES SHOULD BE INSTALLED.
8. IT IS THE CUSTOMER'S RESPONSIBILITY TO ACCOUNT FOR PRESSURE LOSSES FROM THE ASSEMBLY.
9. BACKFLOW PREVENTION SHALL NOT BE RELOCATED, REMOVED, OR REPLACED WITHOUT PRIOR APPROVAL FROM CITY OF FERNLEY.
10. PLEASE NOTE THAT THE REQUIRED ASSEMBLIES PROTECT THE PUBLIC WATER SYSTEM ONLY.
11. ENGINEER TO PROVIDE DOCUMENTATION THAT THE ASSEMBLIES ARE USC APPROVED.

GENERAL NOTES	Detail No. 3 GEN NOTES	DATE	REVISIONS	BY
		05/08	RELOCATED NOTES WITH DETAIL ID	

GENERAL NOTES FOR SANITARY SEWER

1. SEWER LINE CLEANING SHALL BE PERFORMED WITH HYDRAULICALLY PROPELLED, HIGH-VELOCITY JET, MECHANICALLY POWERED EQUIPMENT, OR OTHER PUBLIC WORKS APPROVED DEVICES. THE CLEANING SHALL RESTORE THE SEWER LINES TO A MINIMUM OF 95% OF THE LINES ORIGINAL CARRYING CAPACITY. FINAL ACCEPTANCE SHALL BE MADE AFTER SUCCESSFUL INSPECTION TO THE PUBLIC WORKS INSPECTORS SATISFACTION THAT THE CONDITIONS ABOVE HAVE BEEN MET.
2. SEWER GRADES SHALL BE VERIFIED AT EACH MANHOLE. INSPECTOR SHALL VERIFY PROPER OPERATION OF LEVELING EQUIPMENT AND PROCEDURE.
3. ALL NEW PUBLIC COLLECTOR SEWERS SHALL BE 8 INCHES OR LARGER.

GENERAL NOTES FOR E-ONE SEWER

1. MINIMUM BURY DEPTH IS 30 INCHES.
2. ALL LOW PRESSURE FORCE MAIN PIPING SHALL BE SDR 21 PVC FOR 2" AND 3" MAINS AND C900 PVC FOR 4" AND LARGER MAINS.
3. INSTALL AIR-RELEASE VALVES AT SYSTEM HIGH POINTS OR EVERY 2000 FT OF PIPE RUN.
4. INSTALL FLUSHING STATIONS AND ISOLATION VALVES AT EVERY 1500 FT OF PIPE RUN AND WHENEVER TWO OR MORE MAINS COME TOGETHER.
5. 'LOOPED' SYSTEMS ARE NOT ALLOWED.
6. SIZE SEWER MAINS IN ACCORDANCE WITH TABLES 4 AND 7 (MAXIMUM NUMBER OF GRINDER PUMP CORES OPERATING DAILY AND SCH 40 PVC PIPE FLUID DYNAMICS) FROM THE ENVIROMENT-ONE CATALOG.
7. USE OF ENVIROMENT-ONE SYSTEM COMPONENTS HAS BEEN AUTHORIZED BY THE UTILITY. ALTERNATE SYSTEM WILL BE REVIEWED ON A CASE-BY CASE BASIS.
8. 'FLAPPER' TYPE STOP-CHECK VALVES SHALL BE INSTALLED AS CLOSE TO THE MAIN LINE AS FEASIBLE.

GEOTECHNICAL NOTE:

1. BACKFILL OF L.P. SEWER TRENCHES SHALL BE IN ACCORDANCE WITH THE DETAIL ON PAGE ONE OF THESE CITY OF FERNLEY STANDARDS. THE REQUIREMENT FOR CLASS 'A' BEDDING SAND MAY BE WAIVED IF THE TRENCH IS IN A NON-STRUCTURAL LOCATION AND THE NATIVE MATERIAL HAS A PLASTICITY INDEX OF LESS THAN 20.

SYSTEM TESTING:

1. THE CITY OF FERNLEY OR IT'S AUTHORIZED INSPECTOR SHALL INSPECT ALL SYSTEMS PRIOR TO BURIAL.
2. COMPACTION TESTING (>90% ASTM D1557A) IS REQUIRED IN ALL STRUCTURAL AREAS.
3. HYDROSTATIC ALLY TEST THE LINE TO 150% OF DEAD HEAD PRESSURE (90 psi) FOR 2 HOURS. SYSTEM SHALL NOT LOSE MORE THAN 5 psi WITHIN THIS TESTING PERIOD.

GENERAL NOTES	Detail No. 4 GEN NOTES	DATE	REVISIONS	BY
		05/08	RELOCATED NOTES WITH DETAIL ID	

GENERAL NOTES FOR ROADWAY GEOMETRICS

1. THE ENGINEER SHALL SUBMIT A TRAFFIC REPORT AND PAVEMENT SECTION DESIGN WITH THE IMPROVEMENT PLANS, UNLESS APPROVED OTHERWISE BY THE CITY ENGINEER.
2. THE ENGINEER OF RECORD SHALL SUBMIT THE PAVEMENT MIX DESIGN TWO (2) WEEKS PRIOR TO PAVING TO THE CITY OF FERNLEY PUBLIC WORKS DEPARTMENT FOR REVIEW.
3. DESIGN OF THE STRUCTURAL SECTION FOR ASPHALT CONCRETE PAVEMENT FOR BOTH PUBLIC AND PRIVATE STREETS SHALL CONFORM TO THE PROCEDURES AS SET FORTH IN THE CURRENT ASPHALT INSTITUTE MANUAL SERIES NO. 1 (MS-L) OR AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (ASSHTO) DESIGN GUIDE , BASED ON SUBGRADE STRENGTH VALUES DETERMINED BY RESILIENT MODULUS (MR) VALUE, RESISTANCE (R) VALUE OR CALIFORNIA BEARING RATIO (CBR), AND TRAFFIC DATA PROVIDED IN APPROVED TRAFFIC STUDY FOR THE PROJECT. SUFFICIENT TESTS SHALL BE MADE TO FULLY EVALUATE EACH DIFFERENT SOIL TYPE IN THE PROJECT. MAJOR ARTERIAL, MINOR ARTERIAL, INDUSTRIAL AND COMMERCIAL STREETS SHALL BE A TYPE 2 AC-20P ASPHALT CONCRETE (AC) PAVEMENT MIX DESIGN WITH HYDRATED LIME (MINERAL FILLER) ADDED AT ONE AND ONE-HALF PERCENT OF THE WEIGHT OF THE DRY AGGREGATES. COLLECTOR AND LOCAL/RESIDENTIAL STREETS SHALL BE A TYPE 3 AC-20 ASPHALT CONCRETE (AC) PAVEMENT MIX DESIGN WITH HYDRATED LIME (MINERAL FILLER) ADDED AT ONE AND ONE-HALF PERCENT OF THE WEIGHT OF THE DRY AGGREGATES. THE MINIMUM DESIGN LIFE OF THE STRUCTURAL SECTION SHALL BE 20 YEARS. MINIMUM STREET STRUCTURAL SECTIONS FOR BOTH PUBLIC AND PRIVATE STREETS SHALL BE 3" AC ON 6" OF TYPE 2, CLASS B AGGREGATE BASE FOR LOCAL/RESIDENTIAL STREETS, 3" AC ON 6" TYPE 2, CLASS B AGGREGATE BASE FOR MINOR ARTERIAL, INDUSTRIAL, COMMERCIAL AND COLLECTOR STREETS, AND 4" AC ON 6" TYPE 2, CLASS B AGGREGATE BASE FOR EXPRESSWAYS AND MAJOR ARTERIAL STREETS. ALL STREETS, BOTH PUBLIC AND PRIVATE,WHICH ARE TO BE UTILIZED BY CONSTRUCTION VEHICLES DURING DEVELOPMENT, SHALL BE DESIGNED TO CARRY THE MAXIMUM ANTICIPATED LOADS. CONCRETE STREETS MAY BE PERMITTED UPON APPROVAL OF STRUCTURAL DESIGNS BY PUBLIC WORK.

STRIPING AND SIGNAGE

1. PAVEMENT STRIPING SHALL BE NDOT TYPE II WATERBORNE PAINT WITH A MINIMUM FILM THICKNESS OF 25 MILS APPLIED IN TWO COATS. DROP ON GLASS BEADS SHALL BE APPLIED ON SECOND COAT. SEE SECTION 632 OF THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SILVER BOOK).
2. PAVEMENT SYMBOL MARKINGS, YIELD LINES, AND STOP BARS SHALL BE REFLECTIVE THERMOPLASTIC MATERIAL MEETING THE CURRENT SPECIFICATIONS FROM SECTION 634 OF THE SILVER BOOK.
3. THE DESIGN AND INSTALLATION OF TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.

TRENCHING AND PATCHING

1. THE DESIGN AND INSTALLATION OF TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.

GENERAL NOTES	Detail No. 5 GEN NOTES	DATE	REVISIONS	BY
		05/08	RELOCATED NOTES WITH DETAIL ID	

GENERAL NOTES FOR CONCRETE WORK

1. NO CONCRETE SHALL BE PLACED UNTIL FORMS AND SUBGRADE ARE INSPECTED BY THE CITY EXCAVATION PERMIT INSPECTOR OR APPLICABLE ENGINEER OF RECORD
2. FIBER-REINFORCED PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS;
   4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS.
   MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45.
   AIR ENTRAINMENT 6% ± 1.5%.
   SLUMP AT 1 TO 4 INCHES.
   ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
   POLYPROPYLENE FIBERS SHALL BE ADDED TO THE P.C.C. PER THE MANUFACTURERS RECOMMENDATIONS.
3. COMMERCIAL DRIVEWAYS SHALL HAVE #4 BARS AT 18" ON-CENTER LONGITUDINAL AND TRANSVERSE EXTENDING INTO GUTTER PAN AND DRIVEWAY WINGS. MINIMUM 2" CONCRETE COVER FOR ALL REINFORCING BARS.
4. IF EXPANSION JOINT EXISTS WITHIN 4 FEET OF DRIVEWAY, REMOVE SIDEWALK AND CURB AND GUTTER TO THAT JOINT.
5. CONCRETE REMOVAL SHALL BE TO NEAT SAWCUT LINES
6. REMOVE CONCRETE WHEN CONSTRUCTING DRIVEWAY WHERE CURB AND GUTTER EXIST
7. DEPRESSED CURB LENGTH TO MATCH DRIVEWAY WIDTH
8. WEAKENED PLAIN JOINTS AT 5'-0" O.C. WITH EXPANSION JOINT IF NECESSARY

GENERAL NOTES	Detail No. 6 GEN NOTES	DATE	REVISIONS	BY
		05/08	RELOCATED NOTES WITH DETAIL ID	

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	2/10/2022	TD

PHELPS ENGINEERING
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www.phelpsengineering.net

PROFESSIONAL ENGINEER-STATE OF NEVADA
JOHN E. PHELPS
Exp. 12/31/23
CIVIL
No. 25230

Know what's below. Call 811 before you dig.

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36

DESIGNED BY: JJP
DRAWN BY: NW
CHECKED BY: LEP

GENERAL NOTES

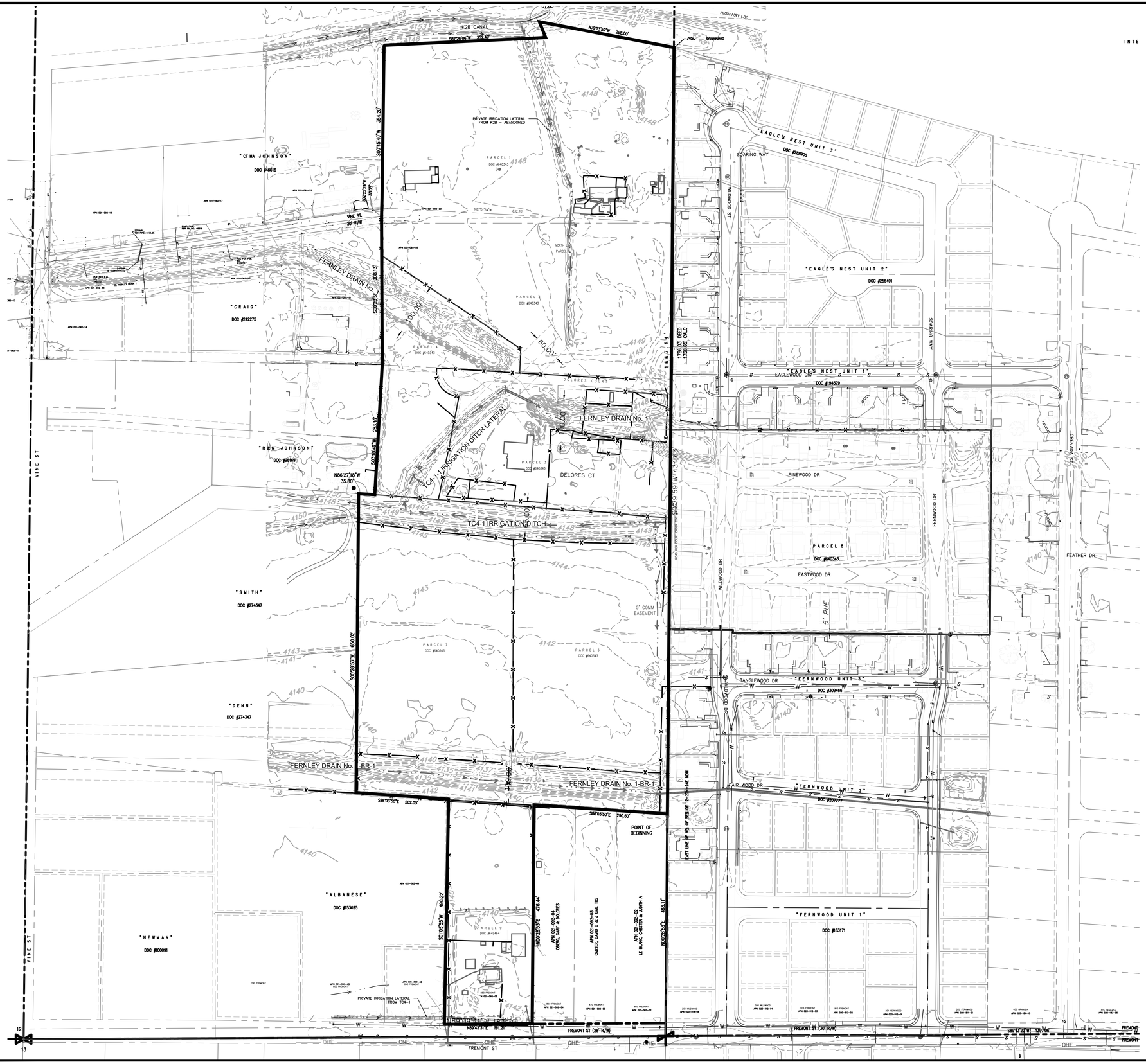
SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

PROJECT NO.: 21603

C2

Drawing name: C:\Users\Zach\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Sheets\Cbs\COVER.dwg
2 GENERAL NOTES Dec 02, 2022 11:26am by: Zach



UTILITY LEGEND:

- PROPERTY LINE
- LOT LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ROAD CENTER LINE
- EXISTING ROAD CENTER LINE
- TRACT
- EDGE OF PAVEMENT
- CURB & GUTTER
- DRAINAGE FLOWLINE
- STORM SEWER W/INLET AND FES
- EXISTING STORM SEWER
- EXISTING STORM MANHOLE
- EXISTING WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- WATER METER
- PLUG W/ 2" BLOWOFF
- AIR RELEASE VALVE
- EXISTING SANITARY SEWER W/MANHOLE
- 8-INCH Ø SANITARY SEWER W/MANHOLE
- EXISTING GAS LINE
- NATURAL GAS LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING ELECTRIC
- ELECTRIC LINE
- EXISTING POWER / LIGHT POLE
- PROPOSED LIGHT POLE

NOTES:
MINIMUM COVER ON SANITARY SEWER IS 3.5' UNLESS PREVIOUSLY APPROVED BY DESIGN ENGINEER AND CITY OF FERNLEY.
PVC PIPE FOR WATER DISTRIBUTION SHALL BE IN CONFORMANCE WITH 8" DIAMETER AWWA C900.
PVC PIPE FOR SANITARY SEWER SHALL BE 8" SDR 35 UNLESS OTHERWISE NOTED.
REFER TO CITY OF FERNLEY STANDARD NOTES ON SHEET 2 FOR ADDITIONAL INFORMATION.

0 50 100 200
HORIZ SCALE: 1" = 100'

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	12/02/2022	TD

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155 County Station Ct. Suite 300
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CHECKED BY: LEP

EX. CONDITIONS OVERALL MAP

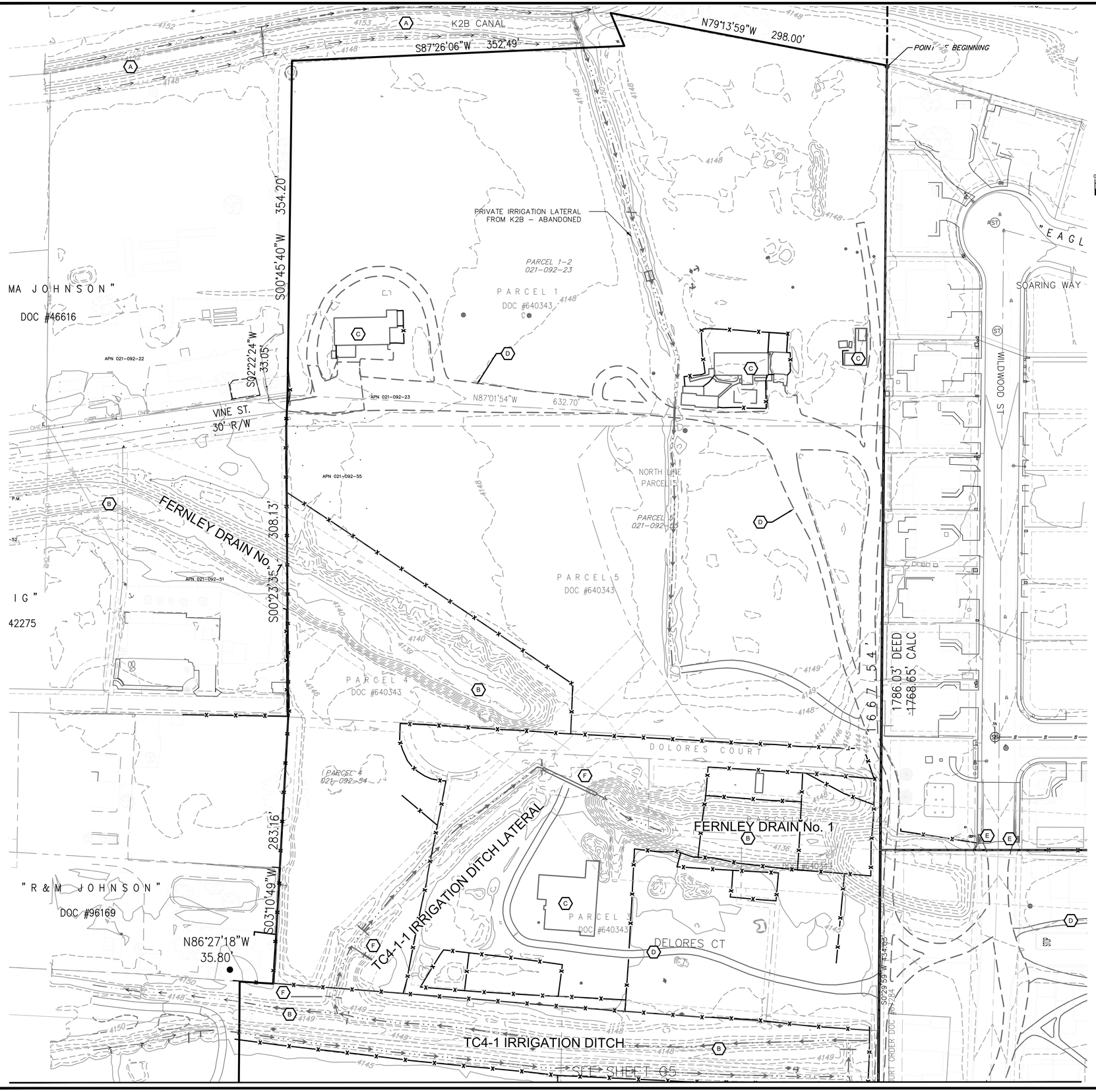
SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

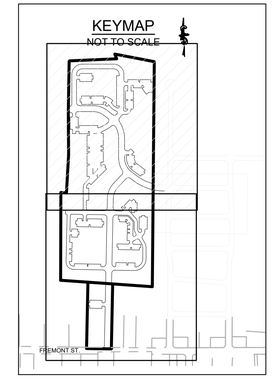
PROJECT NO.: 21603

C3

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KEYMAP
NOT TO SCALE



UTILITY LEGEND:

- PROPERTY LINE
- LOT LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ROAD CENTER LINE
- EXISTING ROAD CENTER LINE
- TRACT
- EDGE OF PAVEMENT
- CURB & GUTTER
- DRAINAGE FLOWLINE
- STORM SEWER W/INLET AND FES
- EXISTING STORM SEWER
- (ST) EXISTING STORM MANHOLE
- (W) EXISTING WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- (M) WATER METER
- PLUG W/ 2" BLOWOFF
- AIR RELEASE VALVE
- (SS) EXISTING SANITARY SEWER W/MANHOLE
- 8"SS 8-INCH Ø SANITARY SEWER W/MANHOLE
- G EXISTING GAS LINE
- G NATURAL GAS LINE
- OHE EXISTING OVERHEAD ELECTRIC
- E EXISTING ELECTRIC
- E ELECTRIC LINE
- EXISTING POWER / LIGHT POLE
- PROPOSED LIGHT POLE

NOTES:
MINIMUM COVER ON SANITARY SEWER IS 3.5' UNLESS PREVIOUSLY APPROVED BY DESIGN ENGINEER AND CITY OF FERNLEY.
PVC PIPE FOR WATER DISTRIBUTION SHALL BE IN CONFORMANCE WITH 8" DIAMETER AWWA C900.
PVC PIPE FOR SANITARY SEWER SHALL BE 8" SDR 35 UNLESS OTHERWISE NOTED.
REFER TO CITY OF FERNLEY STANDARD NOTES ON SHEET 2 FOR ADDITIONAL INFORMATION

REMOVE AND DEMOLISH KEY NOTES:

- (A) EXISTING DITCH TO BE RELOCATED AND PIPED
- (B) EXISTING DITCH TO BE RELOCATED AND PIPED
- (C) STRUCTURE TO BE DEMOLISHED
- (D) TRAIL SYSTEM TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- EXISTING FENCE TO BE DEMOLISHED
- (E) EXISTING STORM SEWER INLET
- (F) EXISTING 18" STORM PIPE TO BE REMOVED

DEMOLITION NOTES:

ALL ON SITE STRUCTURES, UTILITIES, VEGETATION, WALLS, FENCES AND OTHER ITEMS TO BE REMOVED UNLESS OTHERWISE NOTED

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LONNY E. PHELPS
Ex. 12/31/23
CIVIL
No. 25230

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DESIGNED BY: JJP
DRAWN BY: NW
CHECKED BY: LEP

EX. CONDITIONS AND DEMO PLAN

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

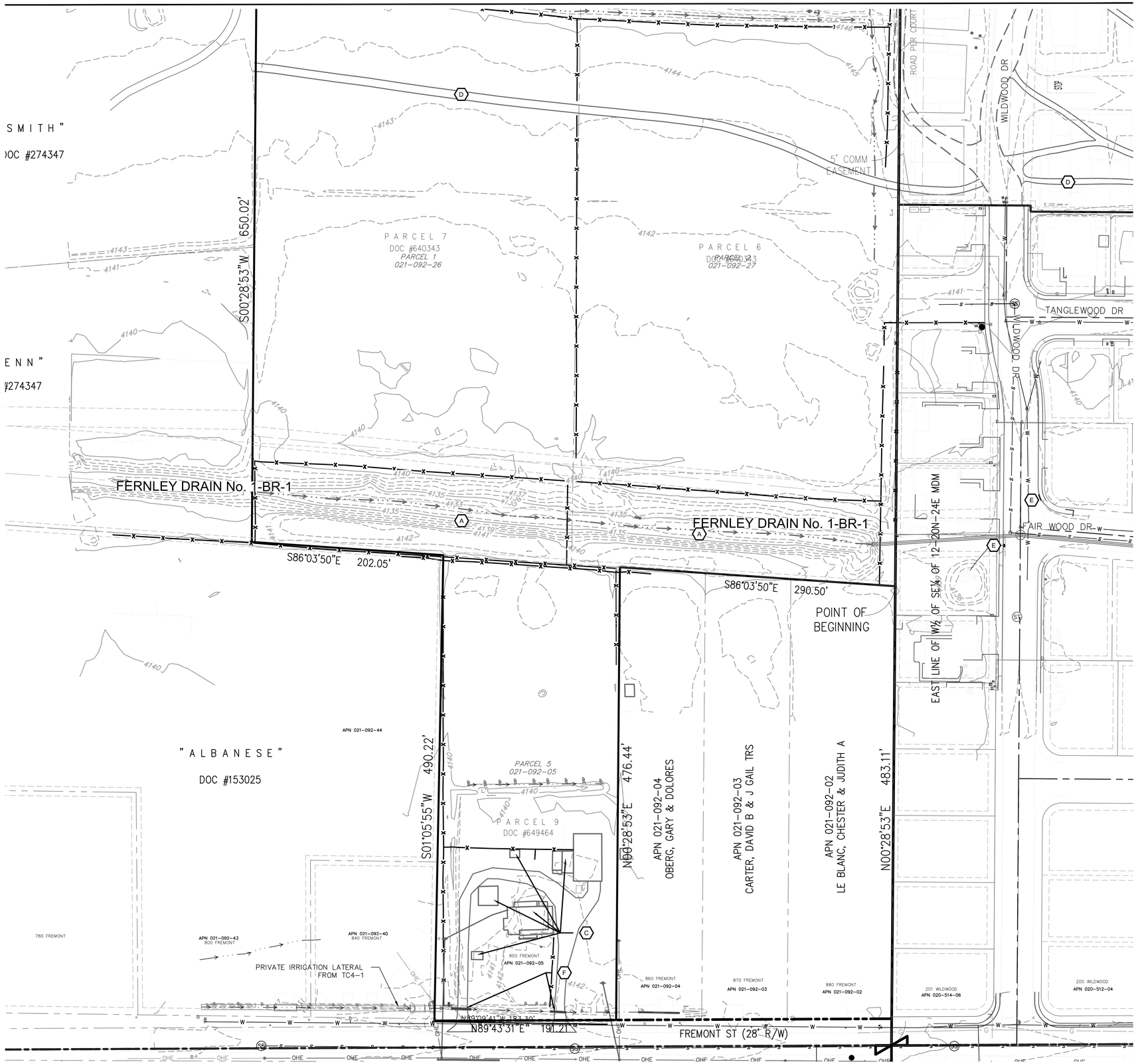
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PROJECT NO.: 21603

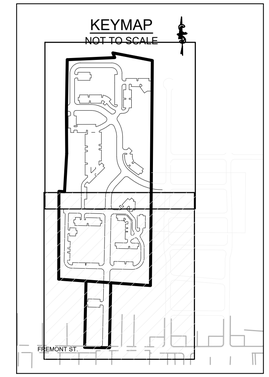
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SEE SHEET C4



KEYMAP
NOT TO SCALE



UTILITY LEGEND:

- PROPERTY LINE
- LOT LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ROAD CENTER LINE
- EXISTING ROAD CENTER LINE
- TRACT
- EDGE OF PAVEMENT
- CURB & GUTTER
- DRAINAGE FLOWLINE
- STORM SEWER W/INLET AND FES
- EXISTING STORM SEWER
- EXISTING STORM MANHOLE
- EXISTING WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- WATER METER
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- 8-INCH Ø SANITARY SEWER W/MANHOLE
- EXISTING GAS LINE
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- PROPOSED LIGHT POLE

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DEMOLITION NOTES:

ALL ON SITE STRUCTURES, UTILITIES, VEGETATION, WALLS, FENCES AND OTHER ITEMS TO BE REMOVED UNLESS OTHERWISE NOTED

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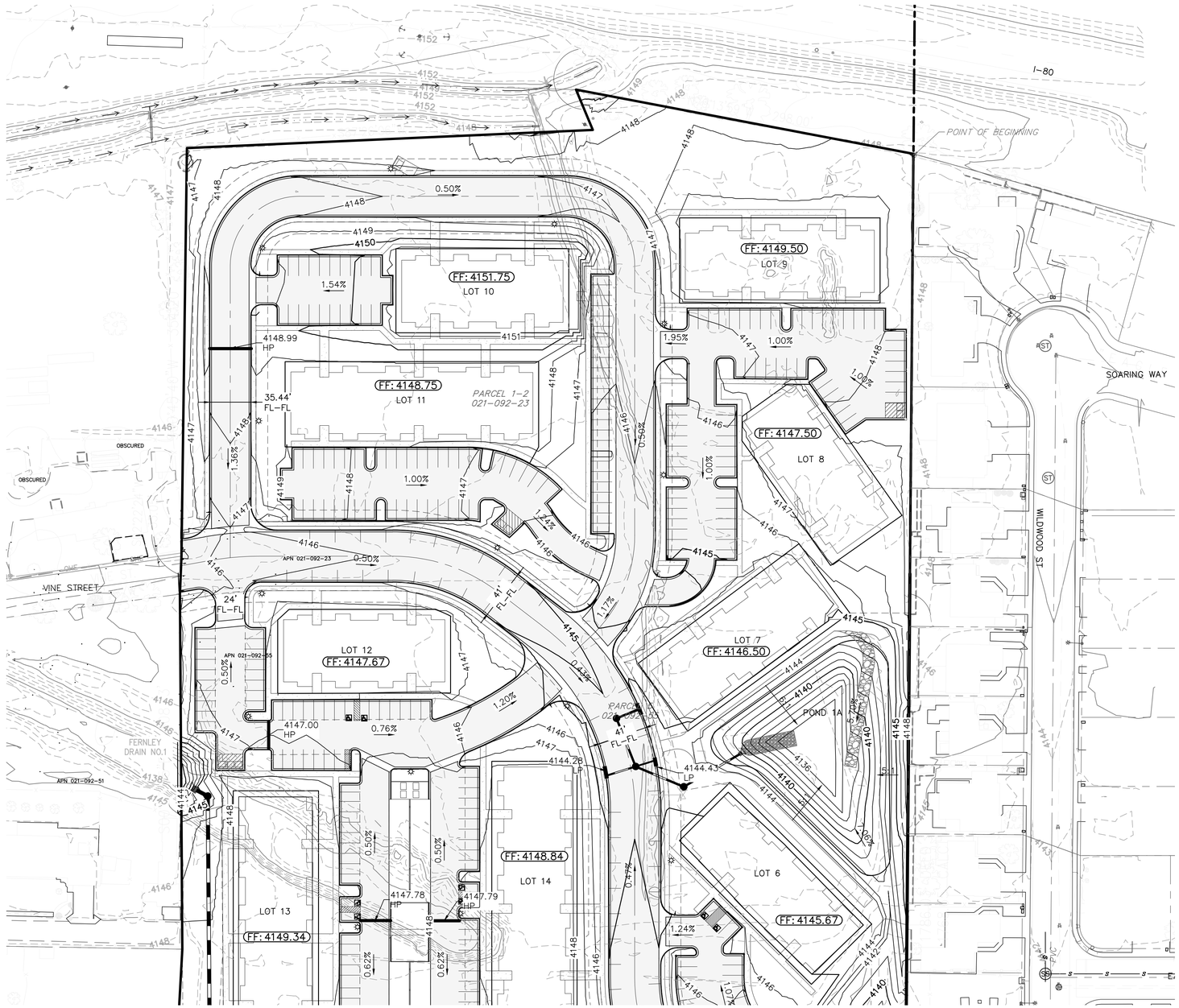
EX. CONDITIONS AND DEMO PLAN

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021
PROJECT NO.: 21603

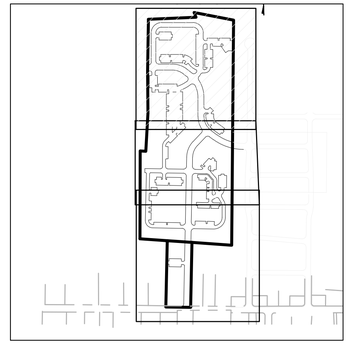
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SEE SHEET C7

EARTHWORK QUANITIES
CUT= 36,492 CU YDS
FILL= 58,628 CU YDS W/ 10% COMPACTION
NET= 22,136 CU YDS (IMPORT)



KEY MAP
N.T.S.

GRADING LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- LOT LINE
- SETBACK LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPERTY LINE
- EXISTING BOUNDARY LINE
- EXISTING SECTION LINE
- TRACT
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ALIGNMENT CENTER LINE
- EXISTING ROAD CENTER LINE
- EDGE OF PAVEMENT
- PROPOSED CURB & GUTTER
- STORM SEWER W/INLET AND FES
- DRAINAGE FLOWLINE
- 100-YR FLOOD PLAIN
- EXISTING 100-YR FLOOD PLAIN

0 25 50 100
HORIZ SCALE: 1" = 50'

BASIS OF BEARINGS

N 89°39'51" W ALONG THE SOUTH LINE OF THE SW1/4-SW1/4 OF SECTION 15, T20N, R24 E M.D.B.&M., AS SHOWN ON THE DIVISION INTO LARGE PARCEL MAP FOR FERNLEY HILLS ENTERPRISES, INC. FILE #239717 IN THE LYON COUNTY RECORDS.

DATUM STATEMENT

SURVEY CONTROL IS BASED UPON UTILIZING THE ONLINE POSITIONING USER SERVICE (OPUS) PROVIDED BY THE NATIONAL GEODETIC SURVEY (NGS).

POINT # 1 IS A NO. 5 REBAR SET ON THE EAST SIDE OF THE INTERSECTION OF TANGLEWOOD DRIVE AND FERNWOOD DRIVE.

POSITIONAL DATA FOR POINT #1:
LATITUDE: 39°36'35.10922 N
LONGITUDE: 119°13'45.99844 W
EL HEIGHT: 1236.801 M OR 4057.746 US FT
ORTHO HEIGHT: 1260.956 M OR 4136.995 US FT NAVD 88 DATUM
PROCESSED ON 11/21/19

No.	REVISIONS	DATE	BY
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GRADING PLAN 1

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

PROJECT NO.: 21603

C6

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BASIS OF BEARINGS

N 89°39'51" W ALONG THE SOUTH LINE OF THE SW1/4–SW1/4 OF SECTION 15, T20N, R24 E M.D.B.&M., AS SHOWN ON THE DIVISION INTO LARGE PARCEL MAP FOR FERNLEY HILLS ENTERPRISES, INC. FILE #239717 IN THE LYON COUNTY RECORDS.

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PROCESSED ON 11/21/19

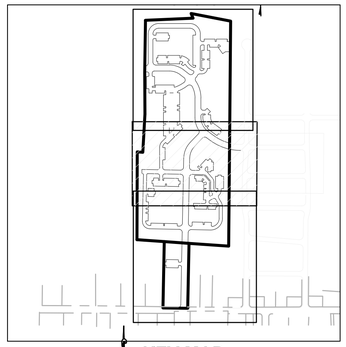
EARTHWORK QUANITIES

CUT= 36,492 CU YDS
FILL= 58,628 CU YDS W/ 7% COMPACTION
NET= 22,136 CU YDS (IMPORT)

0 25 50 100
HORIZ SCALE: 1" = 50'

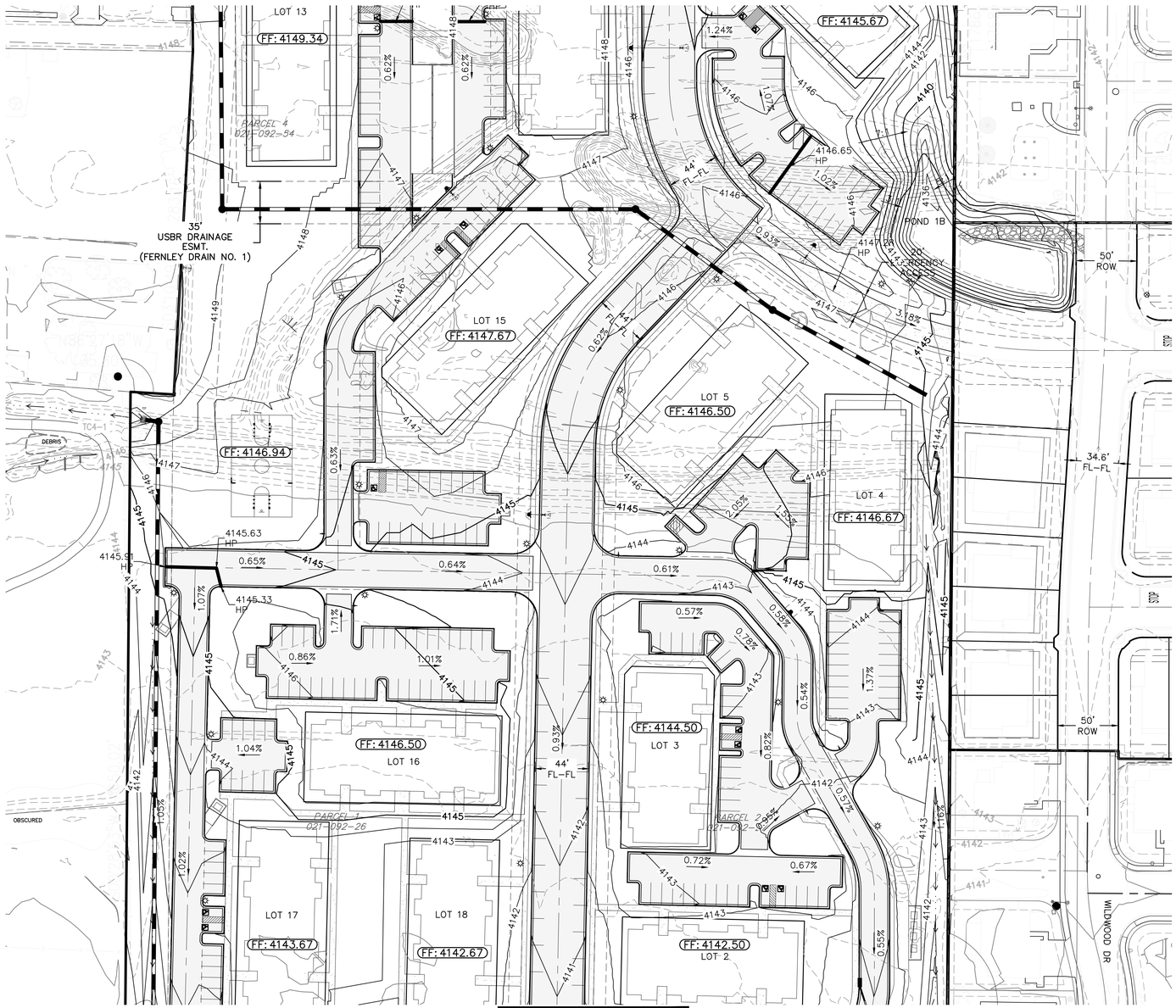
GRADING LEGEND:

- 8600 — EXISTING CONTOURS
- 8600 — PROPOSED CONTOURS
- LOT LINE
- SETBACK LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPERTY LINE
- EXISTING BOUNDARY LINE
- EXISTING SECTION LINE
- TRACT
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ALIGNMENT CENTER LINE
- EXISTING ROAD CENTER LINE
- EDGE OF PAVEMENT
- PROPOSED CURB & GUTTER
- STORM SEWER W/INLET AND FES
- DRAINAGE FLOWLINE
- 100-YR FLOOD PLAIN
- EXISTING 100-YR FLOOD PLAIN



KEY MAP
N.T.S.

SEE SHEET C6



SEE SHEET C8

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GRADING PLAN 2

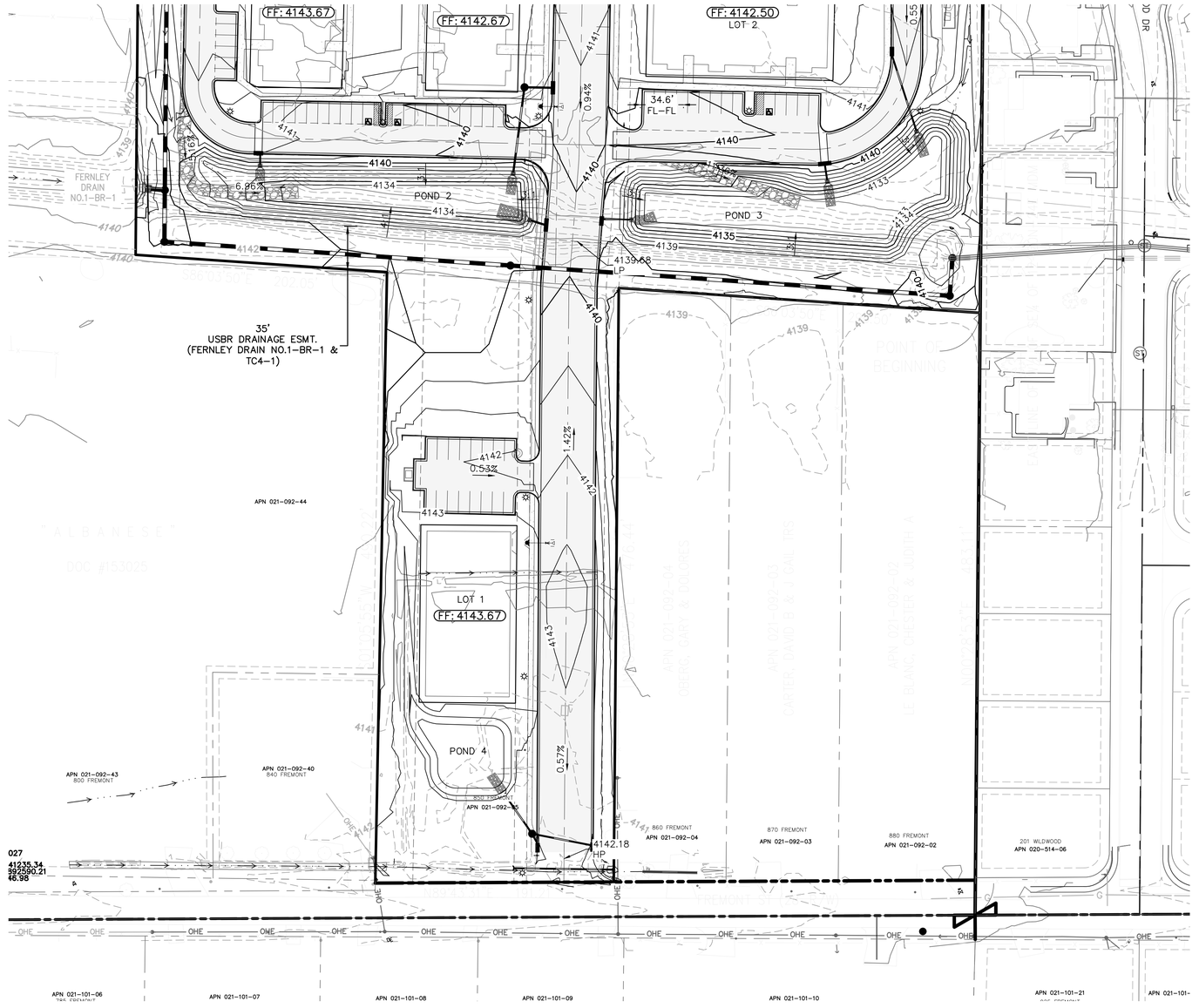
SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

PROJECT NO.: 21603

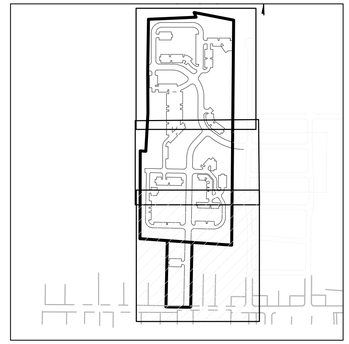
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EARTHWORK QUANITIES

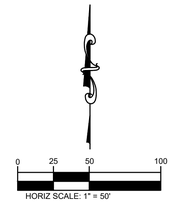
CUT= 36,492 CU YDS
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NET= 22,136 CU YDS (IMPORT)



KEY MAP
N.T.S.

GRADING LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- LOT LINE
- SETBACK LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPERTY LINE
- EXISTING BOUNDARY LINE
- EXISTING SECTION LINE
- TRACT
- EASEMENT LINE
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- EXISTING ROAD CENTER LINE
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- STORM SEWER W/INLET AND FES
- DRAINAGE FLOWLINE
- 100-YR FLOOD PLAIN
- EXISTING 100-YR FLOOD PLAIN



BASIS OF BEARINGS

N 89°39'51" W ALONG THE SOUTH LINE OF THE SW1/4-SW1/4 OF SECTION 15, T20N, R24 E M.D.B.&M., AS SHOWN ON THE DIVISION INTO LARGE PARCEL MAP FOR FERNLEY HILLS ENTERPRISES, INC. FILE #239717 IN THE LYON COUNTY RECORDS.

DATUM STATEMENT

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PROCESSED ON 11/21/19

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	12/02/2022	TD

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CHRISTOPHER E. PHELPS
12/31/23
Exp:
CIVIL
No. 25230

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GRADING PLAN 3

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021
PROJECT NO.: 21603

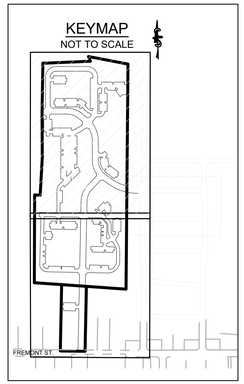
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NOTES

1. ALL GRADING ACTIVITY SHALL COMPLY WITH THE APPROPRIATE NRS AND NAC REGULATIONS REGARDING AIR QUALITY PERMITS AND GRADING.
2. ALL AREAS THAT HAVE BEEN GRADED THAT ARE UNDER CONSTRUCTION SHALL BE WATERED DAILY OR AS NEED OR BE TREATED WITH DUST PALLIATIVE.
3. ALL AREAS THAT HAVE BEEN CLEARED OF NATIVE SOIL AND VEGETATION AS A RESULT OF CONSTRUCTION BUT REMAIN UNIMPROVED SHALL BE SEEDED WITH NATIVE VEGETATION AND IRRIGATED WITH TEMPORARY IRRIGATION.

KEYMAP
NOT TO SCALE



GRADING LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- LOT LINE
- SETBACK LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
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- EDGE OF PAVEMENT
- PROPOSED CURB & GUTTER
- STORM SEWER W/INLET AND FES
- DRAINAGE FLOWLINE
- 100-YR FLOOD PLAIN
- EXISTING 100-YR FLOOD PLAIN

SWM LEGEND:

- SSA — STABILIZED STAGING AREA
- VTC — VEHICLE TRACKING CONTROL
- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- TCF — TEMPORARY CONSTRUCTION FENCE
- CM — CONSTRUCTION MARKER
- CWA — CONCRETE WASHOUT AREA
- ECB — EROSION CONTROL BLANKET
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- RRC — REINFORCED ROCK BERM FOR CULVERT PROTECTION
- SW — STRAW WATTLES
- SB-# — SEDIMENT BASIN
- SR — SURFACE ROUGHENING
- RCD — REINFORCED CHECK DAM
- FLOW ARROW (FINISHED GRADE)

0 25 50 100
HORIZ SCALE: 1" = 50'

BMP QUANTITIES

BMP	Unit	Quanitity
Concrete Washout Area	EA	1
Diversion Ditch	LF	1640
Erosion Control Blanket	SY	7500
Inlet Protection	LF	120
RRB for Culvert Protection	LF	72
Sediment Basin	EA	3
Seeding and Mulching	AC	9
Silt Fence	LF	4000
Stabilized Staging Area	SY	1000
Straw Wattles	LF	8000
Vehicle Tracking Control	EA	1

SEE SHEET C10

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CIVIL
No. 25230

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CHECKED BY: LEP

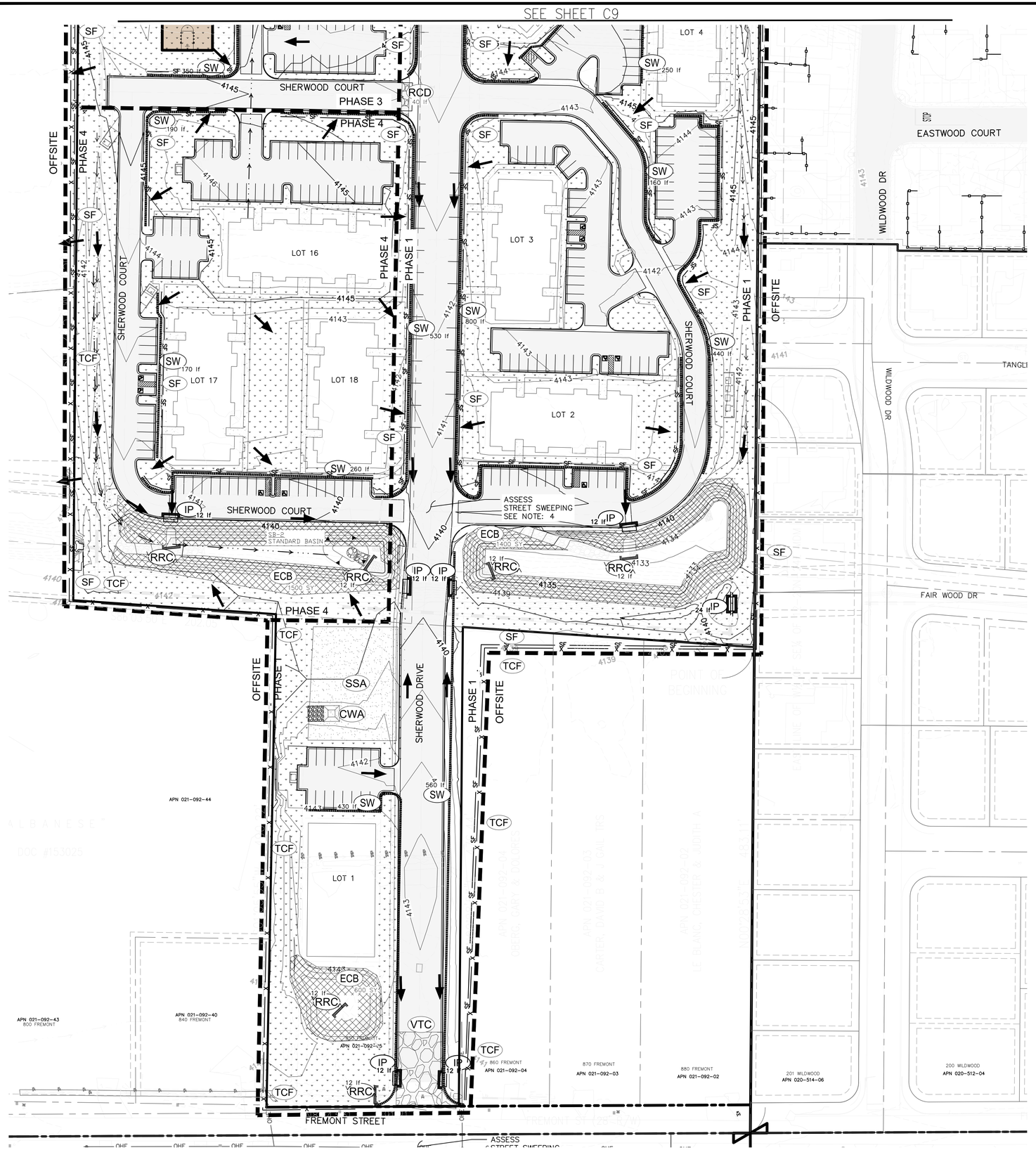
SWM NORTH

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021
PROJECT NO.: 21603

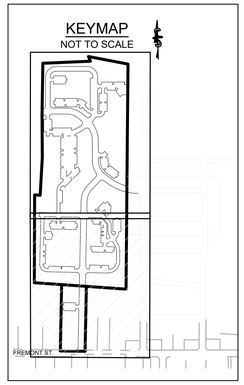
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NOTES

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GRADING LEGEND:

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- EXISTING 100-YR FLOOD PLAIN

SWM LEGEND:

- SSA — STABILIZED STAGING AREA
- VTC — VEHICLE TRACKING CONTROL
- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- TCF — TEMPORARY CONSTRUCTION FENCE
- CM — CONSTRUCTION MARKER
- CWA — CONCRETE WASHOUT AREA
- ECB — EROSION CONTROL BLANKET
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- RRC — REINFORCED ROCK BERM FOR CULVERT PROTECTION
- SW — STRAW WATTLES
- SB-# — SEDIMENT BASIN
- SR — SURFACE ROUGHENING
- RCD — REINFORCED CHECK DAM
- FLOW ARROW (FINISHED GRADE)
- SM — SEEDING AND MULCHING

BMP QUANTITIES

BMP	Unit	Quanitity
Concrete Washout Area	EA	1
Diversion Ditch	LF	1640
Erosion Control Blanket	SY	7500
Inlet Protection	LF	120
RRB for Culvert Protection	LF	72
Sediment Basin	EA	3
Seeding and Mulching	AC	9
Silt Fence	LF	4000
Stabilized Staging Area	SY	1000
Straw Wattles	LF	8000
Vehicle Tracking Control	EA	1

0 25 50 100
HORIZ SCALE: 1" = 50'

No.	REVISIONS	DATE	BY
	PER CITY COMMENTS	12/02/2022	TD

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DESIGNED BY: JJP
DRAWN BY: NW
CHECKED BY: LEP

SWM SOUTH

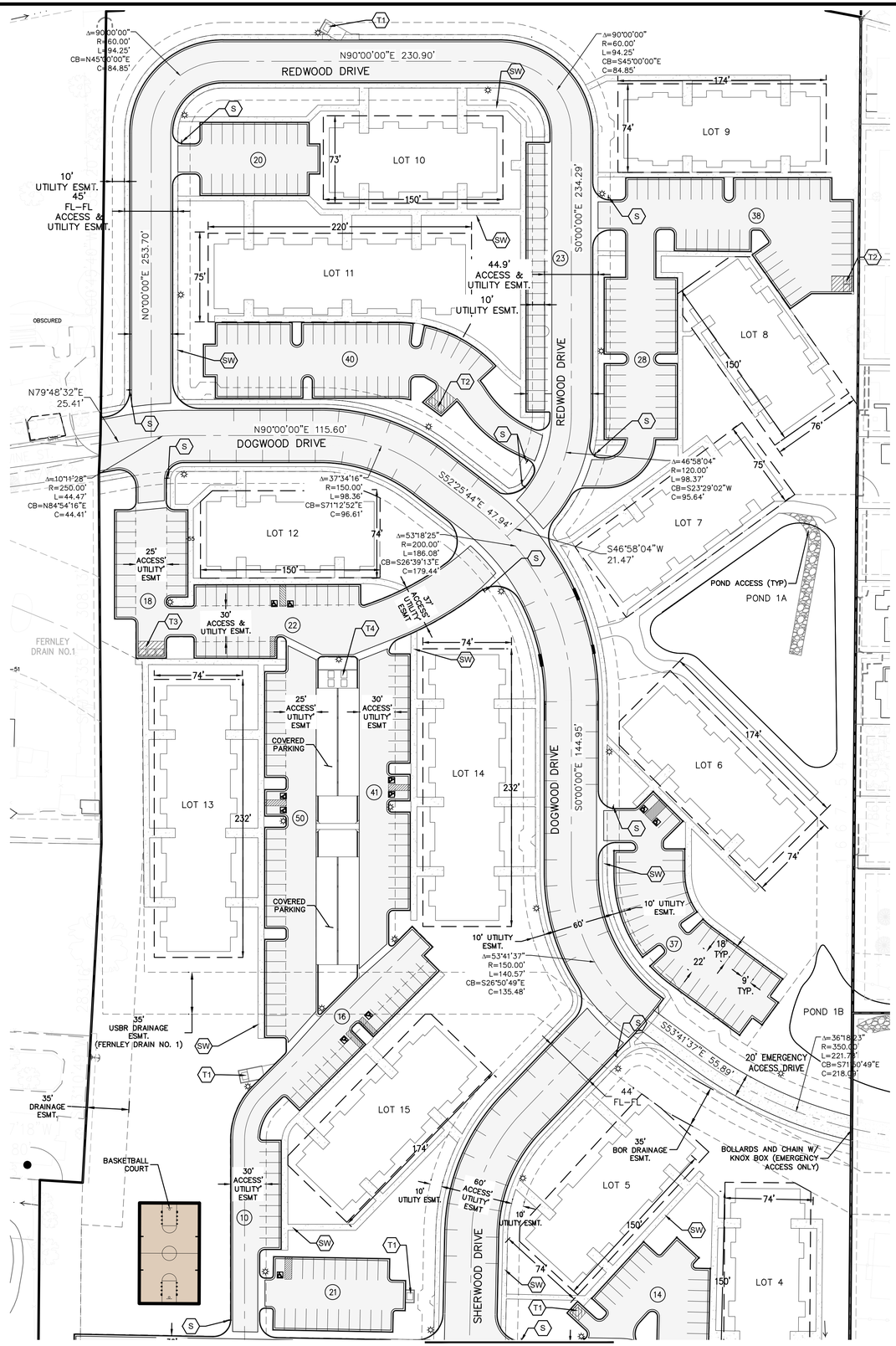
SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

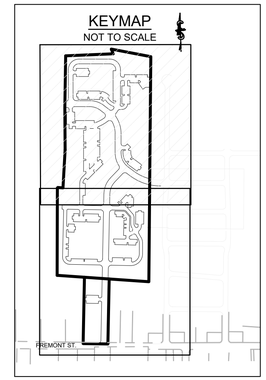
PROJECT NO.: 21603

C10

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SEE SHEET C12



KEY MAP
N.T.S.

UTILITY LEGEND:

- PROPERTY LINE
- LOT LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ROAD CENTER LINE
- EXISTING ROAD CENTER LINE
- TRACT
- EDGE OF PAVEMENT
- CURB & GUTTER
- DRAINAGE FLOWLINE
- STORM SEWER W/INLET AND FES
- EXISTING STORM SEWER
- (ST) EXISTING STORM MANHOLE
- W EXISTING WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- (M) WATER METER
- PLUG W/ 2" BLOWOFF
- AIR RELEASE VALVE
- (SS) s s EXISTING SANITARY SEWER W/MANHOLE
- 8"SS 8-INCH Ø SANITARY SEWER W/MANHOLE
- G EXISTING GAS LINE
- G NATURAL GAS LINE
- OHE EXISTING OVERHEAD ELECTRIC
- E EXISTING ELECTRIC
- E ELECTRIC LINE
- EXISTING POWER / LIGHT POLE
- PROPOSED LIGHT POLE
- BUILDING LOT/SETBACK

NOTES:
MINIMUM COVER ON SANITARY SEWER IS 3.5' UNLESS PREVIOUSLY APPROVED BY DESIGN ENGINEER AND CITY OF FERNLEY.
PVC PIPE FOR WATER DISTRIBUTION SHALL BE IN CONFORMANCE WITH 8" DIAMETER AWWA C900.
PVC PIPE FOR SANITARY SEWER SHALL BE 8" SDR 35 UNLESS OTHERWISE NOTED.
REFER TO CITY OF FERNLEY STANDARD NOTES ON SHEET 2 FOR ADDITIONAL INFORMATION.

0 100 50 25
HORIZ SCALE: 1" = 50

SITE KEY NOTES:

- (4W) 4-FT WIDE SIDEWALK
- (T) TRASH ENCLOSURE & QUANTITY
- (S) STOP SIGN (R1-1) AND STREET SIGN LOCATION
- (20) PARKING COUNT

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	12/02/2022	TD

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PROFESSIONAL ENGINEER STATE OF NEVADA
LONNY E. PHELPS
12/31/23
Exp. Date
CIVIL
No. 25230

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DRAWN BY: NW
CHECKED BY: LEP

SITE PLAN 1

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

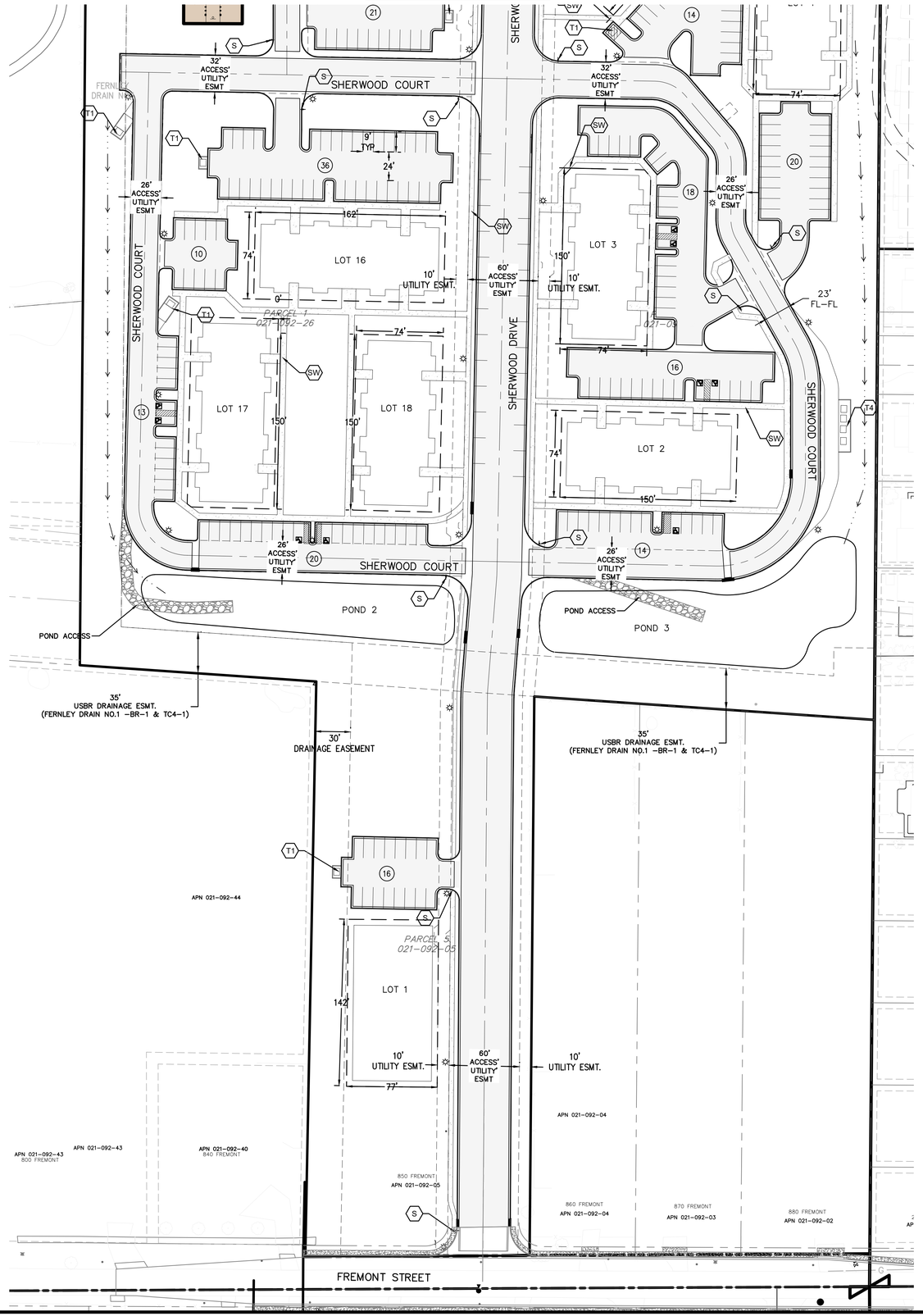
11/24/2021

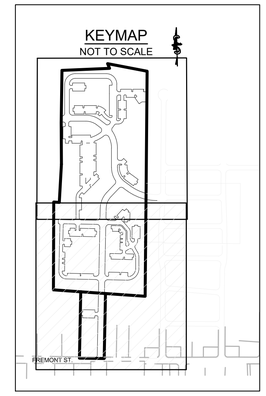
PROJECT NO.: 21603

C11

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SEE SHEET C11





UTILITY LEGEND:

- PROPERTY LINE
- LOT LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
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- EXISTING WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- WATER LINE W/FIRE HYDRANT AND GATE/BUTTERFLY VALVE
- WATER METER
- PLUG W/ 2" BLOWOFF
- AIR RELEASE VALVE
- EXISTING SANITARY SEWER W/MANHOLE
- 8"SS 8-INCH Ø SANITARY SEWER W/MANHOLE
- EXISTING GAS LINE
- NATURAL GAS LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING ELECTRIC
- ELECTRIC LINE
- EXISTING POWER / LIGHT POLE
- PROPOSED LIGHT POLE
- BUILDING LOT/SETBACK

0 100 50 25
HORIZ SCALE: 1" = 50

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SITE KEY NOTES:

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(S) STOP SIGN (R1-1) AND STREET SIGN LOCATION
(20) PARKING COUNT
(T1) TRASH ENCLOSURE & QUANTITY

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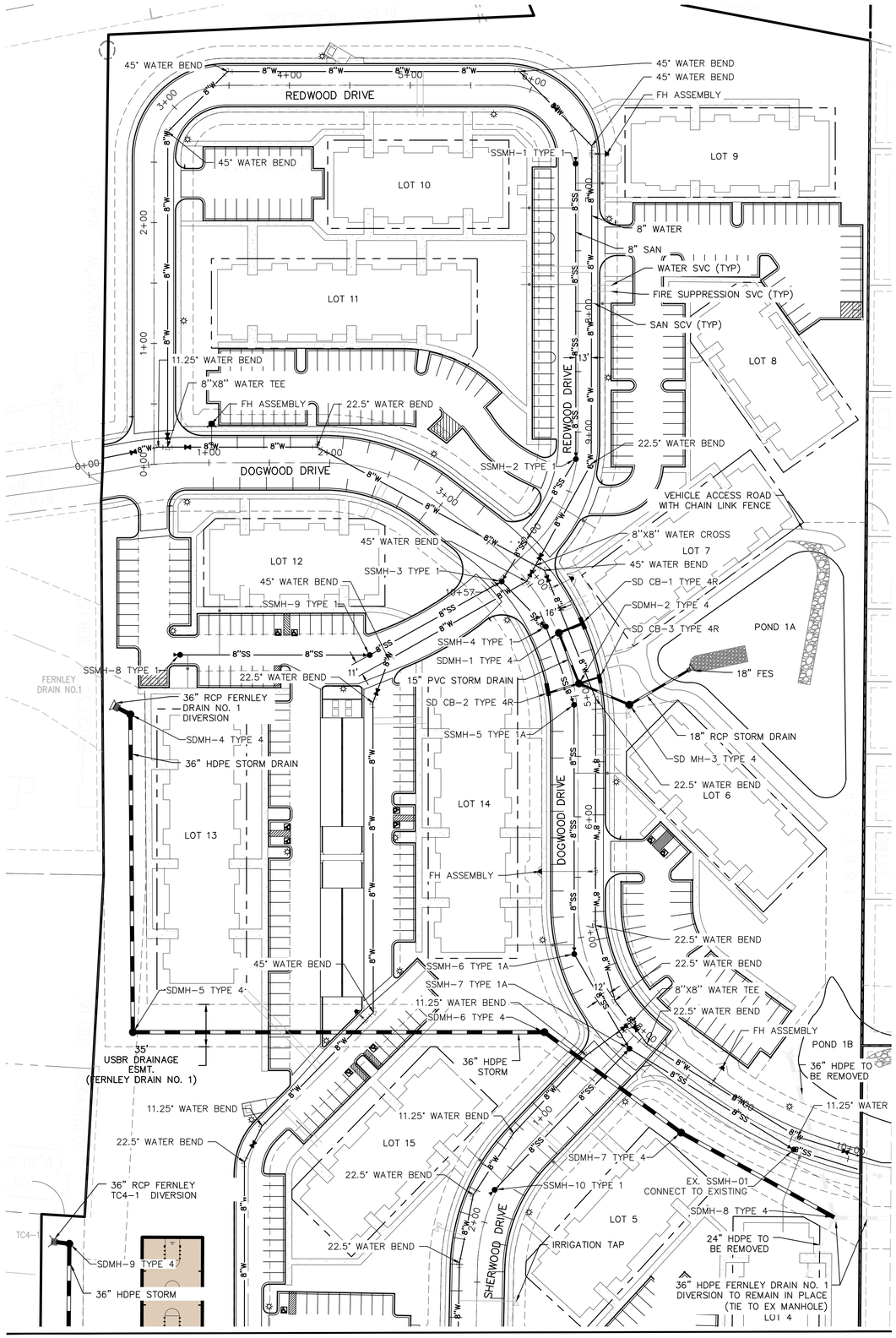
SITE PLAN 2

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021
PROJECT NO.: 21603

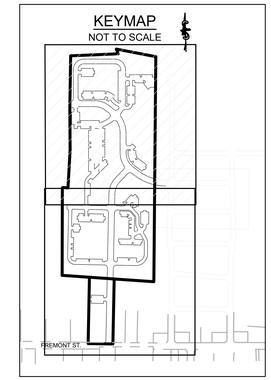
C12

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SEE SHEET C14

KEYMAP
NOT TO SCALE



UTILITY LEGEND:

- PROPERTY LINE
- LOT LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
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HORIZ SCALE: 1" = 50

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- REFER TO CITY OF FERNLEY STANDARD NOTES ON SHEET 2 FOR ADDITIONAL INFORMATION.
- WATER FOR MULTI-FAMILY STRUCTURES WILL BE METERED AT THE BUILDING

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	12/02/2022	KD

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UTILITY PLAN 1

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

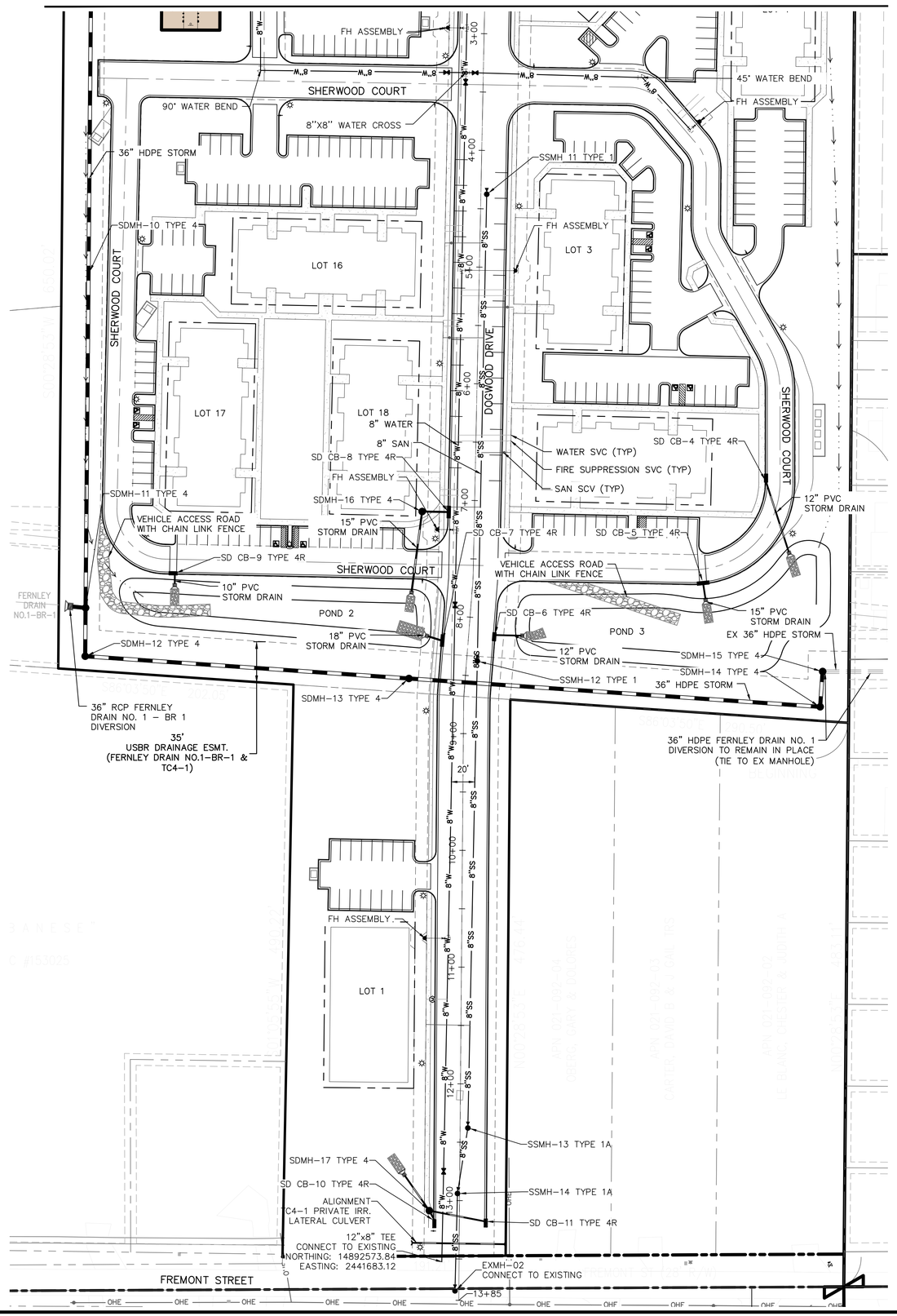
11/24/2021

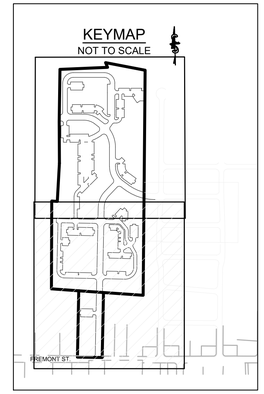
PROJECT NO.: 21603

C13

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UTILITY LEGEND:

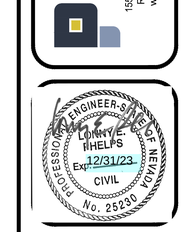
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0 100 50 25
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No.	REVISIONS	DATE	BY
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CHECKED BY: LEP

UTILITY PLAN 2

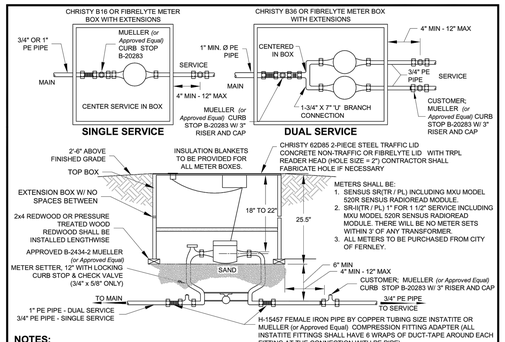
SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

PROJECT NO.: 21603

C14

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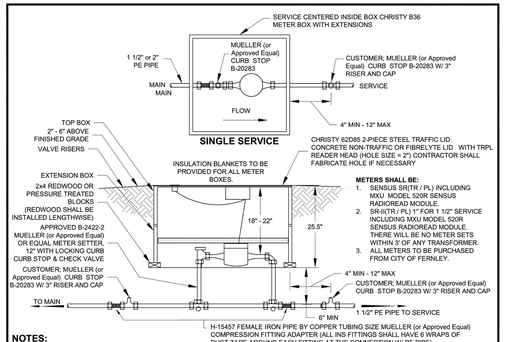
NOTES:

1. THERE SHALL BE NO OBSTRUCTION WITHIN 3' OF METER BOX.
2. CITY OF FERNLEY SHALL SET METER IN YOKE AND LOCK OUT AFTER SUCCESSFUL BACTERIOLOGICAL TEST. 48 HOURS ADVANCE NOTIFICATION IS REQUIRED.
3. FENCING SHALL IN NO WAY PREVENT ACCESS BY CITY PERSONNEL FOR READING AND FOR MAINTENANCE. METER BOXES SHALL NOT BE INSTALLED IN DRIVEWAYS OR SIDEWALKS AND THE FRONT OF THE METER BOX SHALL BE INSTALLED NO CLOSER THAN 1' AND NO FURTHER THAN 4' BEHIND BACK OF WALK.
4. TUBING (3/4" & 1") SHALL BE PE- COPPER TUBE SIZE EQUIVALENT.
5. ALL PIPE AND FITTINGS SHALL BE 200 PSI PRESSURE RATED.
6. H-20 CONCRETE BOXES & LID ASSEMBLIES SHALL BE USED IN ALL HEAVY TRAFFIC AREAS.
7. CITY OF FERNLEY REQUIRES SENSUS TR / PL METER INCLUDING MXU MODEL 520R SENSUS RADIOREAD MODULE.
8. SERVICES MUST BE CENTERED INSIDE THE BOX WITH DIRT 4" BELOW IDLER.

3/4"- 1" WATER METER

Detail No. 17 — WATER

DATE	REVISIONS	BY
12/00	WATER METER BYPASS NOTE	MJ
05/01	MXU WITHIN 8' OF TRANSFORMER	MJ
09/01	WATER METER LOC. IN DRIVEWAYS	MJ
03/04	MODIFY MUELLER P / N & PIPE MIN SIZE, MISC TEXT EDITS	MJ
10/04	ADD FIBRELYTE OPTION, EDIT NOTE 1	MJ
06/07	COMPREHENSIVE UPDATE	EB
03/08	BULLET 2 TEXT ADDITION	LP



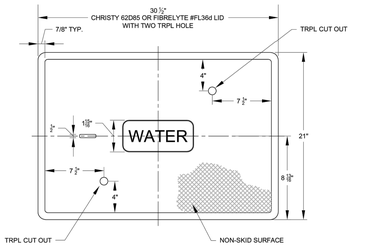
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4. ALL PIPE AND FITTINGS SHALL BE 200 PSI PRESSURE RATED.
5. H-20 CONCRETE BOXES & LID ASSEMBLIES SHALL BE USED IN ALL HEAVY TRAFFIC AREAS.
6. METER SIZES LARGER THAN 2" SHALL BE DESIGNED BY AN ENGINEER AND APPROVED BY CITY OF FERNLEY.
7. METER SIZES LARGER THAN 3" SHALL INCLUDE A BYPASS LINE TO BE DESIGNED BY AN ENGINEER.
8. CITY OF FERNLEY REQUIRES SENSUS TR / PL METER INCLUDING MXU MODEL 520R SENSUS RADIO READ MODULE.

1 1/2" - 2" WATER METER

Detail No. 18 — WATER

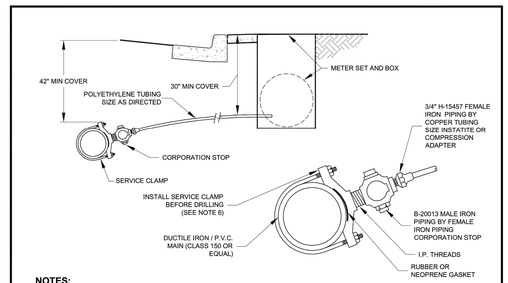
DATE	REVISIONS	BY
12/00	WATER METER BYPASS NOTE	MJ
05/01	MXU WITHIN 8' OF TRANSFORMER	MJ
09/01	WATER METER LOC. IN DRIVEWAYS	MJ
10/04	ADD FIBRELYTE OPTION, EDIT NOTES 1 & 2, MISC TEXT EDITS	MJ
06/07	COMPREHENSIVE UPDATE	EB
03/08	MISC TEXT EDITS	LP



METER BOX LID

Detail No. 19 — WATER

DATE	REVISIONS	BY
10/04	ADD CHRISTY OPTION, MISC TEXT EDIT	MJ
06/07	GENERAL EDITS	EB



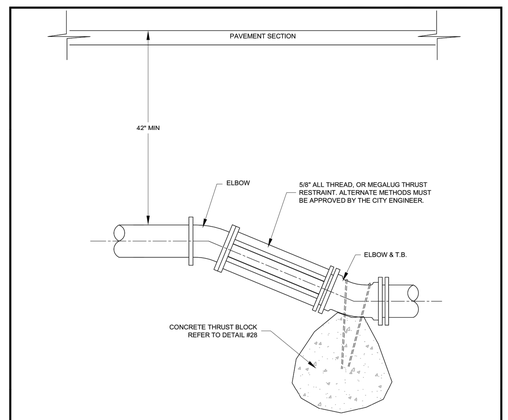
NOTES:

1. ALL CONNECTIONS SHALL BE MUELLER COMPRESSION COUPLINGS (OR APPROVED EQUAL) OR INSTATITE TAPED WITH 6 WRAPS OF DUCT TAPE AFTER PIPE INSERTED.
2. ALL VALVES SHALL BE RING TIGHT (RT) OR RESILIENT SEAL VALVES.
3. WATER SERVICE LINES SHALL BE 3/4" SDR 7 CLASS 200 (ASTM D2239) OR APPROVED EQUAL.
4. ALL SERVICE LINES SHALL HAVE A MINIMUM TEST PRESSURE RATING OF 200 PSI.
5. LOCATE FRONT OF METER BOX NO CLOSER THAN 1' AND NO FURTHER THAN 4' BEHIND SIDEWALK. WHERE CURB OR SIDEWALK DOES NOT EXIST, LOCATE METER BOX AS DIRECTED BY CITY OF FERNLEY.
6. SERVICE CLAMPS SHALL BE 317 STAINLESS STEEL DOUBLE-STRAP EPOXY-COATED (OR APPROVED EQUAL), O.D. CONTROLLED SADDLE FOR DISTRIBUTION MAINS.
7. ALL SINGLE AND DUAL WATER METER BOXES SHALL HAVE A REMOTE READER CABLE PROVISION IN LID (SEE WATER METER DETAILS #17 & #18).
8. MINIMUM DISTANCE BETWEEN TAPS AND COUPLINGS 18".
9. CORPORATION STOP, CURB STOP, AND SERVICE LINE TO BE THE SAME SIZE.
10. COUPLINGS 3/4" AND 1" SHALL BE COMPRESSION OR INSTATITE COUPLINGS. 1 1/2" & 2" SHALL BE BRASS COMPRESSION COUPLING WITH SLEEVE.
11. CUSTOMERS ARE REQUIRED TO HAVE A SHUTOFF DEVICE ON THEIR SIDE OF THE WATER METER FOR EMERGENCY
12. ALL POLYETHYLINE TUBING SHALL CONFORM TO AWWA STANDARD C901 "POLYETHYLENE (PE) PRESSURE PIPE AND TUBING, ½ INCH THROUGH 3 INCH FOR WATER SERVICE" AND ASTM D2737 SPECIFICATION FOR POLYETHYLENE (PE) PLASTIC TUBING.

WATER SERVICE CONNECTION

Detail No. 20 — WATER

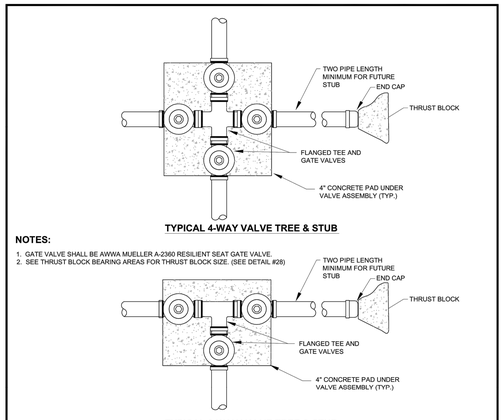
DATE	REVISIONS	BY
10/04	REMOVE CURB MARKER TEXT, MISC TEXT EDITS	MJ
11/07	NDKP EDIT: NOTE 12 ADDED	EB
03/08	TEXT EDITS	LP



VERTICAL RESTRAINT

Detail No. 21 — WATER

DATE	REVISIONS	BY
06/07	ADD THRUST BLOCK REF 12/W-10	EB



TYPICAL 4-WAY VALVE TREE & STUB

NOTES:

1. GATE VALVE SHALL BE AWWA MUELLER A-2360 RESILIENT SEAT GATE VALVE.
2. SEE THRUST BLOCK BEARING AREAS FOR THRUST BLOCK SIZE. (SEE DETAIL #28)

TYPICAL 3-WAY VALVE TREE & STUB

3-WAY & 4-WAY VALVE ASSEMBLIES

Detail No. 23 — WATER

DATE	REVISIONS	BY
02/01	ADDED DETAIL	MJ
04/01	THRUST BLOCK FOR VALVE	MJ

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	12/02/2022	TD

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Reno, NEVADA (775) 360-2200
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PROFESSIONAL ENGINEER — STATE OF NEVADA — JOANNE L. PHELPS — 12/31/23 Exp. — CIVIL — No. 25230

811 Know what's below. Call 811 before you dig.

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36

DESIGNED BY: JJP
DRAWN BY: NW
CHECKED BY: LEP

WATER DETAILS

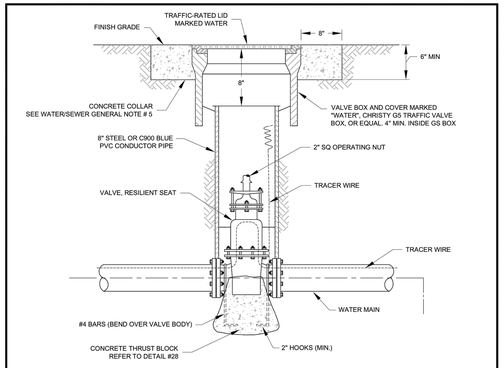
SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

PROJECT NO.: 21603

C15

Drawing name: C:\Users\Zach\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Sheets\C0s\21603 - DETAILS.dwg 34 GENERAL NOTES & DETAILS Dec 02, 2022 11:31am by: Zach



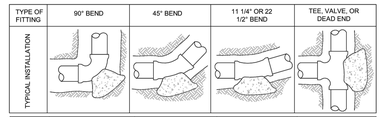
NOTES:

1. GATE VALVE SHALL BE AWWA MUELLER A-2360 RESILIENT SEAT GATE VALVE (OR APPROVED EQUAL).
2. SEE THRUST BLOCK BEARING AREAS FOR THRUST BLOCK SIZE. (SEE DETAIL #28)
3. WHERE CENTER OF PIPE EXCEEDS 5 FOOT DEPTH, PROVIDE EXTENSION STEM WITH STEM GUIDE.
4. ALL VALVES SHALL BE RING TIGHT (RT) RESILIENT SEAT VALVES.
5. VALVES 12" AND SMALLER SHALL BE GATE VALVES AND VALVES LARGER THAN 12" SHALL BE BUTTERFLY VALVES (MUELLER LINESEAL III).
6. CONTRACTOR MUST ENSURE THAT THE VALVE BOX IS CLEAN AND ACCESSIBLE.

VALVE & VALVE BOX

Detail No. 24 — WATER

DATE:	REVISIONS	BY:
10/04	TRACER WIRE ADDED	MJ
05/07	NOTE TRAFFIC RATED LID	
06/07	CHG CONC TO 5', ADD TRACER WIRE	EB



TYPE OF FITTING	90° BEND	45° BEND	11 1/4° OR 22 1/2° BEND	TEE OR DEAD END	CROSS W / PLUG	TEE W / PLUG	REDUCER
SIZE OF PIPE 4"	2	1	1	2	2	2	N/A
6"	4	4	2	4	4	4	SEE DETAIL
8"	7	4	2	5	7	7	SEE DETAIL
10"	12	6	3	8	12	12	SEE DETAIL
12"	16	10	5	12	16	16	SEE DETAIL
14"	20	12	6	14	20	20	SEE DETAIL
16"	27	15	8	18	27	27	SEE DETAIL
18"	45	25	13	32	45	45	SEE DETAIL
24"	65	35	18	46	65	65	SEE DETAIL

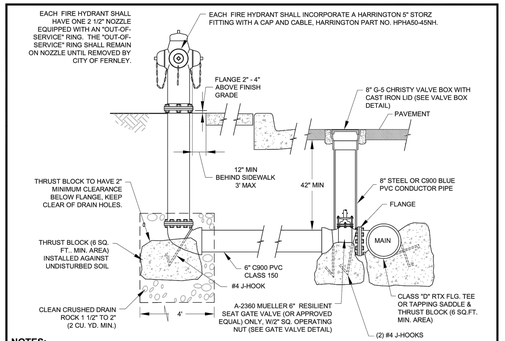
NOTES:

1. THRUST BLOCKS TO BE CONSTRUCTED OF 3000 PSI CONCRETE.
2. AREAS GIVEN ARE FOR CLASS 150 PIPE AT TEST PRESSURE OF 150 P.S.I. WITH 2000 P.S.F. SOIL BEARING CAPACITY. INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES, AND / OR SOIL TYPES SHOULD ADJUST AREAS ACCORDINGLY, SUBJECT TO APPROVAL OF ENGINEER.
3. BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL.
4. JOINTS AND FACE OF PLUGS TO BE KEPT CLEAR OF CONCRETE.

THRUST BLOCK BEARING AREAS (IN SQ. FT.)

Detail No. 28 — WATER

DATE:	REVISIONS	BY:
12/04	ADD "SOIL" TO NOTE #2	
03/06	GENERAL NOTES EDITS	LP



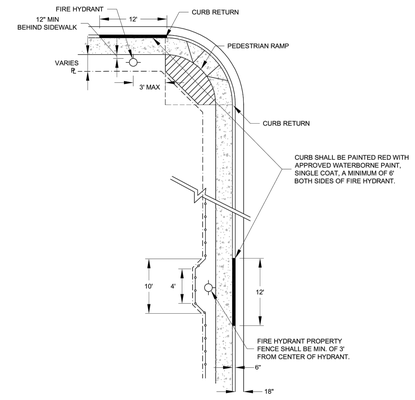
NOTES:

1. HYDRANTS SHALL BE MUELLER A-423, 5 1/4 VO., SUPER CENTURION, 250 PSI HYDRANT WITHOUT EXCEPTION.
2. HYDRANT SHALL BE ENAMELED RED USING SHERWIN-WILLIAMS B54R38 OR EQUAL AS PER NLCFPD REQUIREMENTS.
3. ALL HYDRANTS SHALL HAVE (2) 2 1/2" HOSE NOZZLES AND (1) 4 1/2" STEAMER NOZZLE. ALL THREADS SHALL BE AS SPECIFIED FOR AMERICAN NATIONAL HOSE COUPLING STANDARD.
4. OPERATING NUT SHALL BE 1 1/2" PENTAGON.
5. QUALITY ASSURANCE FIRM INSPECTION REQUIRED PRIOR TO BACKFILLING. 48 HOUR NOTICE REQUIRED.
6. MINIMUM DEPTH OF MAIN SHALL BE 42" TO TOP OF PIPE.
7. HYDRANTS MUST BE FREE OF OBSTRUCTIONS WITHIN A 5' RADIUS
8. HYDRANTS SET @ ONE-QUARTER BUBBLE BACK FROM PLUMB
9. FIRE HYDRANTS ARE TO BE INSTALLED ON THE OPPOSITE SIDE OF THE STREET FROM UTILITIES (GAS, ELECTRIC, ETC.)

FIRE HYDRANT

Detail No. 29 — WATER

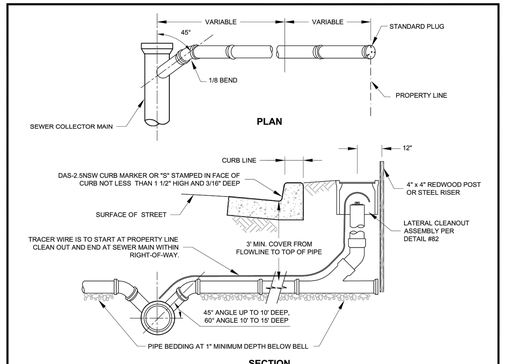
DATE:	REVISIONS	BY:
05/99	FIRE HYDRANT VALVE SPACING	WBH
03/01	FIRE HYDRANT STORZ FITTING	MJ
10/04	CURB SPACING EDIT	MJ
12/04	TEXT EDITS	LP
06/07	GENERAL EDITS	EB



FIRE HYDRANT LOCATIONS

Detail No. 30 — WATER

DATE:	REVISIONS	BY:
10/04	ADD PEDESTRIAN RAMP	MJ
12/04	ADD "CURB RETURN" NOTE	MJ
06/07	ADD PAINT NOTE	EB



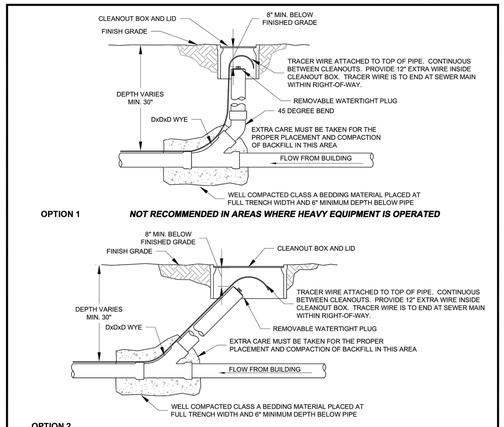
NOTES:

1. IN NO CASE SHALL A LATERAL CONNECT TO THE SEWER MAIN DIRECTLY ON TOP OF THE PIPE.
2. SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 2%.
3. ALL JOINTS ON SEWER LATERAL PIPE SHALL BE COMPRESSION TYPE OR APPROVED SOLVENT WELD.
4. LATERAL SHALL EXTEND TO PROPERTY LINE UNLESS OTHERWISE SHOWN ON PLANS.
5. ON EXISTING INTERCEPTORS, SADDLE WYES AND SADDLE TEES SHALL BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
6. ON ALL NEW INTERCEPTORS W / LATERALS, STANDARD WYES OR TEES WILL BE SLIP-GASKETED SEWER FITTINGS.
7. THERE SHALL BE 12" MINIMUM CLEARANCE WHEN SEWER LATERAL CROSSES WATER MAIN.

SEWER LATERAL CONNECTION

Detail No. 80 — SEWER

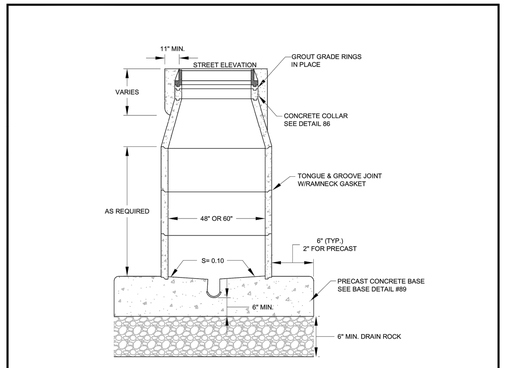
DATE:	REVISIONS	BY:
02/01	ADD LATERAL DETAIL	MJ
12-04	CHG PLAN & SECTION VIEWS	MJ
	TEXT EDITS	
06/07	GENERAL EDITS, ADD MIN LATERAL NO	EB



LATERAL CLEANOUT ASSEMBLY

Detail No. 82 — SEWER

DATE:	REVISIONS	BY:
12/03	ADD LATERAL CLEANOUT DETAIL	MJ



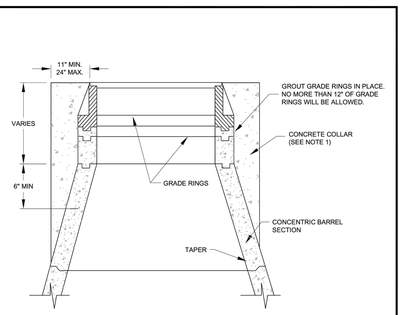
NOTES:

1. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE MANHOLE SECTION.
2. MANHOLES 5' DEEP OR MORE REQUIRE LADDERS (SEE DETAIL #86).
3. MANHOLES SHALL BE VACUUM TESTED PER ASTM C1244-93 OR HYDROSTATIC TESTED.
4. MANHOLES 5' OR LESS IN HEIGHT MAY BE CONCENTRIC

TYPE I STANDARD MANHOLE

Detail No. 87 — SEWER

DATE:	REVISIONS	BY:
12-04	ADD DETAIL	MJ



NOTES:

1. CONCRETE COLLAR SHALL BE PER WATER/SEWER GENERAL NOTE # 5.
2. HEIGHT OF COLLAR SHALL BE CONSISTENT ALL AROUND MANHOLE.
3. ALL MANHOLES SHALL INCLUDE D&L SUPPLY A-1024 FRAME AND COVER ASSEMBLY, OR EQUAL, WITH THE LETTERS ***"SANITARY SEWER"*** CLEARLY DISPLAYED ON THE COVER.
4. CONCRETE COLLAR SHALL BE FLUSH WITH ADJACENT PAVEMENT (0.00' TO 0.02')
5. CONSTRUCT AFTER PAVING IS COMPLETE
6. CASTING AND COLLAR SHALL BE 12" TO 18" ABOVE GRADE IN UNIMPROVED AREAS

TYPE 1 MANHOLE COLLAR WITHOUT LADDER

Detail No. 88 — SEWER

DATE:	REVISIONS	BY:
10/04	ADD 2 GRADE RING RESTRICTION	MJ
12-04	RENUMBER DETAIL	MJ
	ADD "COLLAR" TO NOTE 1	

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LONNY E. PHELPS 12/31/23 EXP. CIVIL No. 25230 STATE OF NEVADA PROFESSIONAL ENGINEER

811 Know what's below. Call 811 before you dig.

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36

DESIGNED BY: JJP
DRAWN BY: NW
CHECKED BY: LEP

WATER AND SANITARY SEWER DETAILS

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

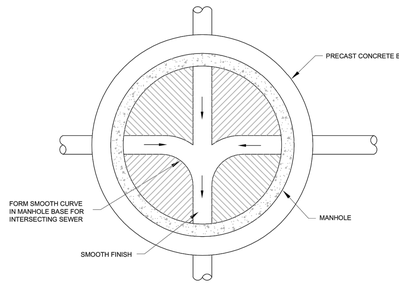
11/24/2021

PROJECT NO.: 21603

C16

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	2/02/2022	TD

Drawing name: C:\Users\Zach\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Sheets\C0s\21603_DETAILS.dwg 35 WATER AND SANITARY SEWER DETAILS Dec 02, 2022 11:31am by: Zach



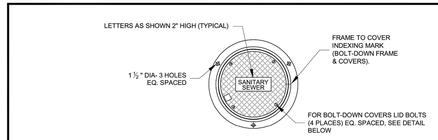
NOTES:

1. ALL MANHOLE BASE MATERIALS (DRAIN ROCK) SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
2. CAP ANY UNUSED STUB-OUTS UNLESS WAIVED BY THE UTILITY.
3. 4 WAY MANHOLES ARE TO BE INSTALLED ONLY WHERE REQUIRED.

TYPICAL BASE

Detail No. 89 — SEWER

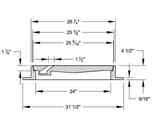
DATE	REVISIONS	BY
12-04	RENUMBER DETAIL ADD "CRAIN ROCK" TO NOTE 1	MJ



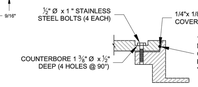
BOLT-DOWN LIDS REQUIRED ONLY IN EASEMENT AREAS, AREAS OF POTENTIAL FLOODING, AND WHERE REQUIRED BY THE CITY ENGINEER



SECTION DETAIL TAPERED FRAME & COVER



SECTION VIEW

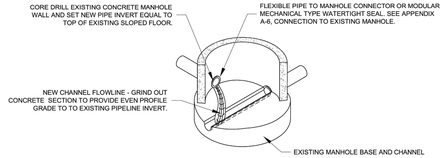


SECTION DETAIL BOLT-DOWN FRAME & COVER

MANHOLE FRAME AND COVER

Detail No. 90 — SEWER

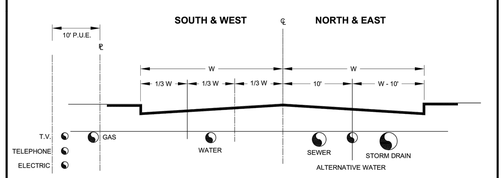
DATE	REVISIONS	BY
12/03	ADD MANHOLE FRAME AND COVER	MJ
12-04	RENUMBER	MJ



PIPE CONNECTION TO EXISTING MANHOLE

Detail No. 92 — SEWER

DATE	REVISIONS	BY
12/03	ADD PIPE CONNECT TO EXISTING MH	MJ
12-04	RENUMBER	MJ

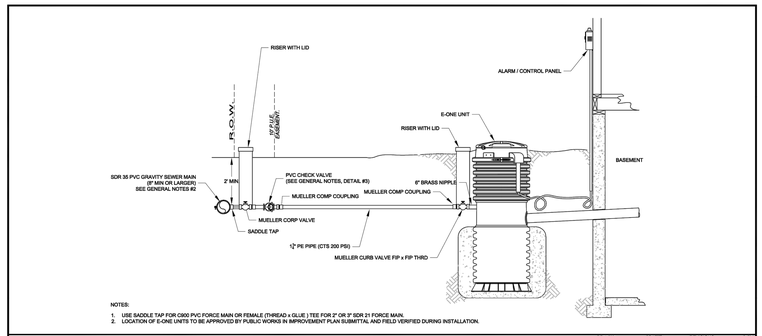


TYPICAL SECTION 'A'
DETAIL IS FOR HORIZONTAL LOCATIONS ONLY

TYPICAL UTILITY MAIN LOCATIONS

Detail No. 131 — STREETS

DATE:	REVISIONS	BY
12/03	ADD ALTERNATIVE WATER LOCATION	MJ
06/07	ADD HORIZONTAL LOCATION ONLY	



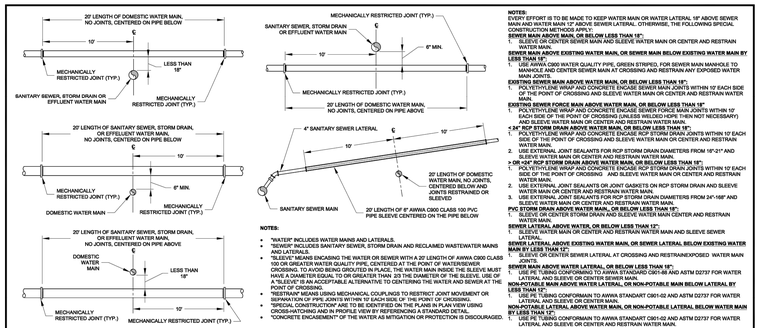
NOTES:

1. USE SADDLE TAP FOR C900 PVC FORCE MAIN OR FEMALE (THREAD x GLUE) TEE FOR 2" OR 3" SDR 21 FORCE MAIN.
2. LOCATION OF E-ONE UNITS TO BE APPROVED BY PUBLIC WORKS IN IMPROVEMENT PLAN SUBMITTAL AND FIELD VERIFIED DURING INSTALLATION.

TYPICAL LATERAL INSTALLATION GRAVITY MAIN

Detail No. 96 — SEWER

DATE	REVISIONS	BY
12/09	RELUBELLER COUPLING/MADE NIPPLE	MJ
01/03	ADD REFERENCE TO GENERAL NOTE #2	MJ



NOTES:

- "WATER" INCLUDES WATER MAINS AND LATERALS.
- "SEWER" INCLUDES SANITARY SEWER, STORM DRAIN AND RECLAIMED WASTEWATER MAINS AND LATERALS.
- "SLEEVE" MEANS ENCASING THE WATER OR SEWER WITH A 20' LENGTH OF AWWA C900 CLASS 100 PVC PIPE WITH A DIAMETER EQUAL TO OR GREATER THAN 2/3 THE DIAMETER OF THE CROSSING, TO AVOID BEING GROUTED IN PLACE, THE WATER MAIN INSIDE THE SLEEVE MUST HAVE A DIAMETER EQUAL TO OR GREATER THAN 2/3 THE DIAMETER OF THE SLEEVE. USE OF A "SLEEVE" IS AN ACCEPTABLE ALTERNATIVE TO CENTERING THE WATER AND SEWER AT THE POINT OF CROSSING.
- "RESTRAIN" MEANS USING MECHANICAL COUPLINGS TO RESTRICT JOINT MOVEMENT OR SEPARATION OF PIPE JOINTS WITHIN 10' EACH SIDE OF THE POINT OF CROSSING.
- "CROSS-HATCHING" MEANS THE AREA OF THE PLAN VIEW FOR PIPE CROSSING USING CROSS-HATCHING AND ON PROFILE VIEW BY REFERENCING A STANDARD DETAIL.
- "CONCRETE ENCASEMENT" OF THE WATER AS MITIGATION OR PROTECTION IS DISCOURAGED.

NOTES:

EVERY EFFORT IS TO BE MADE TO KEEP WATER MAIN OR WATER LATERAL 18" ABOVE SEWER MAIN AND WATER MAIN 12" ABOVE SEWER LATERAL. OTHERWISE, THE FOLLOWING SPECIAL CONSTRUCTION METHODS APPLY:

SEWER MAIN ABOVE MAIN, OR BELOW LESS THAN 18":

1. SLEEVE OR CENTER SEWER MAIN AND SLEEVE WATER MAIN OR CENTER AND RESTRAIN WATER MAIN.

SEWER MAIN ABOVE OR BELOW EXISTING WATER MAIN, OR SEWER MAIN BELOW EXISTING WATER MAIN BY LESS THAN 18":

1. USE AWWA C900 WATER QUALITY PIPE, GREEN STRIPED, FOR SEWER MAIN MANHOLE TO MANHOLE AND CENTER SEWER MAIN AT CROSSING AND RESTRAIN ANY EXPOSED WATER MAIN JOINTS.

EXISTING SEWER MAIN ABOVE WATER MAIN, OR BELOW LESS THAN 18":

1. POLYETHYLENE WRAP AND CONCRETE ENCASE SEWER MAIN JOINTS WITHIN 10' EACH SIDE OF THE POINT OF CROSSING AND SLEEVE WATER MAIN OR CENTER AND RESTRAIN WATER MAIN.

EXISTING SEWER FORCE MAIN ABOVE WATER MAIN, OR BELOW LESS THAN 18"

1. POLYETHYLENE WRAP AND CONCRETE ENCASE SEWER FORCE MAIN JOINTS WITHIN 10' EACH SIDE OF THE POINT OF CROSSING (CONCRETE ENCASEMENT OF PIPE JOINTS MAY NOT NECESSARY) AND SLEEVE WATER MAIN OR CENTER AND RESTRAIN WATER MAIN.

<24" RCP STORM DRAIN ABOVE WATER MAIN, OR BELOW LESS THAN 18":

1. POLYETHYLENE WRAP AND CONCRETE ENCASE RCP STORM DRAIN JOINTS WITHIN 10' EACH SIDE OF THE POINT OF CROSSING AND SLEEVE WATER MAIN OR CENTER AND RESTRAIN WATER MAIN.
2. USE EXTERNAL JOINT SEALANTS FOR RCP STORM DRAIN DIAMETERS FROM 18"-21" AND SLEEVE WATER MAIN OR CENTER AND RESTRAIN WATER MAIN.

> OR =24" RCP STORM DRAIN ABOVE WATER MAIN, OR BELOW LESS THAN 18":

1. POLYETHYLENE WRAP AND CONCRETE ENCASE RCP STORM DRAIN JOINTS WITHIN 10' EACH SIDE OF THE POINT OF CROSSING AND SLEEVE WATER MAIN OR CENTER AND RESTRAIN WATER MAIN.
2. USE EXTERNAL JOINT SEALANTS OR JOINT GASKETS ON RCP STORM DRAIN AND SLEEVE WATER MAIN OR CENTER AND RESTRAIN WATER MAIN.
3. USE EXTERNAL JOINT SEALANTS FOR RCP STORM DRAIN DIAMETERS FROM 24"-108" AND SLEEVE WATER MAIN OR CENTER AND RESTRAIN WATER MAIN.

PVC STORM DRAIN ABOVE WATER MAIN, OR BELOW LESS THAN 18":

1. SLEEVE OR CENTER STORM DRAIN AND SLEEVE WATER MAIN CENTER AND RESTRAIN WATER MAIN.

SEWER LATERAL ABOVE WATER, OR BELOW LESS THAN 12":

1. SLEEVE WATER MAIN OR CENTER AND RESTRAIN WATER MAIN AND SLEEVE SEWER LATERAL.

SEWER LATERAL ABOVE EXISTING WATER MAIN, OR SEWER LATERAL BELOW EXISTING WATER MAIN BY LESS THAN 12":

1. SLEEVE OR CENTER SEWER LATERAL AT CROSSING AND RESTRAINUNEXPOSED WATER MAIN JOINTS.

SEWER MAIN ABOVE WATER LATERAL, OR BELOW LESS THAN 18":

1. USE PE TUBING CONFORMING TO AWWA STANDARD C901-08 AND ASTM D2737 FOR WATER LATERAL AND SLEEVE OR CENTER SEWER MAIN.

>LATERAL MAIN ABOVE WATER LATERAL, OR NON-POTABLE MAIN BELOW LATERAL BY LESS THAN 12":

1. USE PE TUBING CONFORMAN TO AWWA STANDART C901-02 AND ASTM D2737 FOR WATER LATERAL AND SLEEVE OR CENTER MAIN.

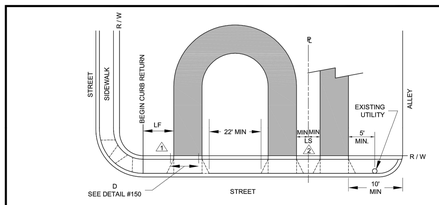
NON-POTABLE LATERAL ABOVE WATER MAIN, OR NON-POTABLE LATERAL BELOW WATER MAIN BY LESS THAN 12":

1. USE PE TUBING CONFORMAN TO AWWA STANDART C901-02 AND ASTM D2737 FOR WATER LATERAL AND SLEEVE OR CENTER AND RESTRAIN WATER MAIN.

SEWER/STORM DRAIN CROSSING WATER MAIN

Detail No. 103 — SEWER

DATE	REVISIONS	BY
09/04	UPDATE ENCASEMENT REQUIREMENTS	MJ
06/07	GENERAL EDITS MIN LAT SZ ADDED	EB
11/07	ADD NOTE 11 SEWER MAIN ABOVE	EB
11/07	REDUCE MIN SEPARATION TO 6"	EB
04/08	MAJOR REVISIONS	EB



	RESIDENTIAL 2	LIGHT COMMERCIAL 4	HEAVY COMMERCIAL AND INDUSTRIAL 3
D (DRIVEWAY WIDTH)	12' MIN. 24' MAX.	14' MIN. (ONE-WAY) 24' MIN. (TWO-WAY) 34' MAX.	14' MIN. (ONE-WAY) 30' MIN. (TWO-WAY) 54' MAX. (HEAVY TRUCK)

1. LF (FRONT-SIDEYARD SETBACK) = 30' MIN.
2. LS (SIDEYARD SETBACK) = 5' MIN.
3. LIGHT COMMERCIAL INCLUDES OFFICE BUILDINGS AND OTHER COMMERCIAL BUILDINGS 2 STORIES IN HEIGHT. MOTEL DRIVEWAYS SHALL NOT EXCEED 30'.
4. HEAVY COMMERCIAL INCLUDES DRIVE-IN ESTABLISHMENTS, FACTORIES, SERVICE STATIONS AND WAREHOUSES.
5. RESIDENTIAL DEVELOPMENTS WITH THREE (3) CAR GARAGE LAYOUTS MAY INCREASE DRIVEWAY WIDTHS TO 30' MAXIMUM.

ANY DEVIATION FROM THESE DIMENSIONS MUST BE SUBMITTED AND APPROVED BY THE AGENCY ENGINEER

NOTES:

1. THE MAXIMUM SLOPE FOR RESIDENTIAL DRIVEWAYS SHALL BE 14%
2. WHEN EXISTING SIDEWALK IS SETBACK FROM THE DRIVEWAY APRON (i.e. PARKWAY AREA) THE TRANSITION LENGTH FOR THE DRIVEWAY APRON WINGS MAY BE HALF THE VALUES SHOWN IN THE TABLE BELOW. THE TRANSITION TABLE IS BASED ON A 6" CURB HEIGHT. FOR DIFFERENT CURB HEIGHTS, THE TRANSITION LENGTH SHOWN ON THE TABLE SHALL VARY BASED UPON MAINTAINING A MAXIMUM SLOPE OF 12:1

DRIVEWAY GEOMETRICS

Detail No. 130 — STREETS

DATE:	REVISIONS	BY
12/02	UPDATED	RRB
02/05	RESIDENTIAL DWY INCREASE 30' MAX	RRB
06/07	ADD NOTE 1	EB

NOTES:

1. 'FF' AND H ARE MEASURED TO TBC FOR TYPE 1 CURB.
2. STRUCTURAL SECTION SHALL BE DETERMINED BY ENGINEERING DESIGN BASED ON R-VALUE OR CBR TESTING, BUT IN NO CASE LESSS THAN THE MINIMUM SHOWN.

R/W WIDTH	H	FF	M	S	U	NOTES OR REMARKS
128	56.5	49.5	7	5	1	EXPRESSWAY (MIN. 4" AC w/6" AGG BASE)
100	43.5	36.5	7	4	2.5	MAJOR ARTERIAL (MIN. 4" AC w/6" AGG BASE)
80	34.5	-	-	4	1.5	MINOR ARTERIAL / INDUSTRIAL (MIN. 3" AC w/6" AGG BASE)
60	22	-	-	4	4	COLLECTOR / COMMERCIAL (MIN. 3" AC w/6" AGG BASE)
50	18.5	-	-	4	2.5	LOCAL / RESIDENTIAL (MIN. 3" AC w/6" AGG BASE)

R/W WIDTH	H	FF	M	TW	U	NOTES OR REMARKS
128	56	49	7	38	4.5	EXPRESSWAY (MIN. 4" AC w/6" AGG BASE)
100	43	36	7	24	5.5	MAJOR ARTERIAL (MIN. 4" AC w/6" AGG BASE)
80	34	-	-	24	4.0	MINOR ARTERIAL / INDUSTRIAL (MIN. 3" AC w/6" AGG BASE)
60	21.5	-	-	12	8.5	COLLECTOR / COMMERCIAL (MIN. 3" AC w/6" AGG BASE)
50	18	-	-	12	5.0	LOCAL / RESIDENTIAL (MIN. 3" AC w/6" AGG BASE)

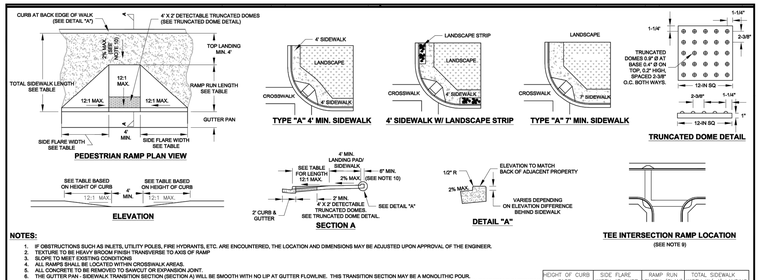
GENERAL NOTES:

1. THE ENGINEER SHALL SUBMIT A TRAFFIC REPORT AND PAVEMENT SECTION DESIGN WITH THE IMPROVEMENT PLANS, UNLESS APPROVED OTHERWISE BY THE CITY ENGINEER.
2. THE ENGINEER OF RECORD SHALL SUBMIT THE PAVEMENT MIX DESIGN TWO (2) WEEKS PRIOR TO PAVING TO THE CITY OF FERNLEY PUBLIC WORKS DEPARTMENT FOR REVIEW.

ROADWAY GEOMETRICS AND SPECIFICATIONS

Detail No. 129 — STREETS

DATE	REVISIONS	BY
12/02	UPDATED	RRB
04/04	UPD LANDWORK / RENUMBER	RRB



NOTES:

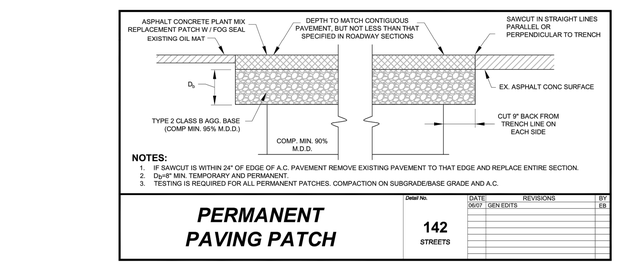
1. IF OBSTRUCTIONS SUCH AS INLETS, UTILITY POLES, FIRE HYDRANTS, ETC. ARE ENCOUNTERED, THE LOCATION AND DIMENSIONS MAY BE ADJUSTED UPON APPROVAL OF THE ENGINEER.
2. TEXTURE TO BE HEAVY BROOM FINISH TRANSVERSE TO AXIS OF RAMP
3. SLOPE TO MEET EXISTING CONDITIONS
4. ALL RAMPS SHALL BE LOCATED WITHIN CROSSWALK AREAS.
5. ALL CONCRETE TO BE REMOVED TO SAWCUT OR EXPANSION JOINT.
6. THE GUTTER PAN - SIDEWALK TRANSITION SECTION (SECTION A) WILL BE SMOOTH WITH NO LIP AT GUTTER FLOWLINE. THIS TRANSITION SECTION MAY BE A MONOLITHIC POUR.
7. SLOPE ON WINGS AT 1:12, SLOPE ON RAMP FROM FLOWLINE TO BACK OF WALK 1:12 WITH CURB ON THE BACK SIDE, IF NEEDED,CURB DETAIL "A" USED ONLY WHERE AN ELEVATION DIFFERENCE IS PRESENT BETWEEN BACK OF WALK AND BACK OF CURB.
8. **ANY PORTION OF SIDEWALK THAT EXCEEDS 2% MAX. CROSS-SLOPE SHALL BE REMOVED AND REPLACED. SLOPES MUST BE VERIFIED WITH A SMART LEVEL BY INSPECTOR.**
9. PEDESTRIAN RAMPS ARE REQUIRED AT ALL INTERSECTIONS. MINIMUM THREE PEDESTRIAN RAMPS ARE REQUIRED AT TEE INTERSECTIONS. PEDESTRIAN RAMPS SHALL BE PERPENDICULAR TO ROAD.
10. MID-BLOCK RAMPS ARE NOT REQUIRED IN RESIDENTIAL AREAS, UNLESS REQUESTED BY CITY ENGINEER. IF MID-BLOCK RAMPS ARE REQUESTED BY THE CITY ENGINEER, STRIPING AND SIGNAGE WILL BE REQUIRED PER THE MUTCD.
11. SEE CONCRETE WORK GENERAL NOTE 2.

HEIGHT OF CURB FACE (IN)	SIDE FLARE WIDTH AT CURB (IN)	RAMP RUN LENGTH (FLAN) (IN)	TOTAL SIDEWALK WIDTH W/ 4' LANDING (IN)
4	48	53	111
5	60	66	123
6	72	79	135
7	84	111	147
7.5	90	118.5	155.5
8	96	126	174

PEDESTRIAN RAMP FOR THE DISABLED

Detail No. 135 — STREETS

DATE	REVISIONS	BY
12/08	UPDATED	RRB
06/07	ADD NOTE 10 EDITS TO NOTES & PED RAMP	EB



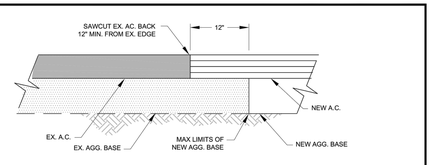
NOTES:

1. IF SAWCUT IS WITHIN 24" OF EDGE OF A.C. PAVEMENT REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION.
2. D_2=6" MIN. TEMPORARY AND PERMANENT.
3. TESTING IS REQUIRED FOR ALL PERMANENT PATCHES. COMPACTION ON SUBGRADE/BASE GRADE AND A.C.

PERMANENT PAVING PATCH

Detail No. 142 — STREETS

DATE	REVISIONS	BY
06/07	GEN EDITS	EB



SAWCUT DETAIL

Detail No. 141 — STREETS

DATE:	REVISIONS	BY

PHELPS ENGINEERING
155 County Station Court, Suite 300
Reno, Nevada 89511 (775) 360-9300
www.phelpsengineering.net

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	12/02/2021	TD

LONNY E. PHELPS — EXPIRES 12/31/23 — CIVIL — No. 25230 — STATE OF NEVADA — PROFESSIONAL ENGINEER

Know what's below. Call 811 before you dig.

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36

DESIGNED BY: MJP
DRAWN BY: NW
CHECKED BY: LEP

SANITARY SEWER AND SITE DETAILS

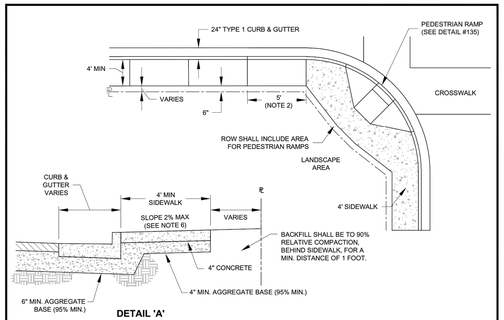
SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

PROJECT NO.: 21603

C17

Drawing name: C:\Users\Zach\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Sheets\C0s\216C3_DETAILS.dwg 36 SANITARY SEWER AND SITE DETAILS Dec 02, 2022 11:31am by: Zach



DETAIL 'A'

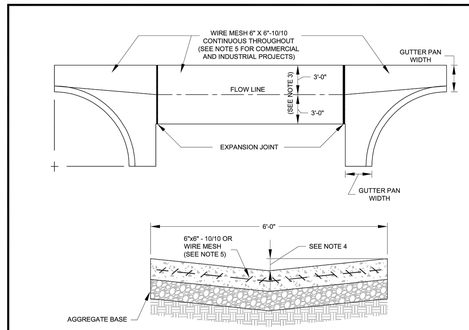
NOTE:

1. MIN. CURB RETURN RADIUS SHALL BE 20 FEET UNLESS OTHER SPECIFIED
   a. TRANSVERSE EXPANSION JOINTS 1/2" WIDE SHALL BE CONSTRUCTED AT ALL SIDEWALK RETURNS, OPPOSITE EXPANSION JOINTS INADJACENT CURB. ISOLATION JOINTS SHALL BE INSTALLED AROUND ALL STRUCTURES.EXPANSION & ISOLATION JOINTS SHALL BE FILED W/ JOINT FILLER STRIPS 1/2" THICK. JOINT MATERIAL SHALL CONFORM TO SEC.202.10.
2. ALL AGGREGATE BASE SHALL BE TYPE 2, CLASS B.
3. ON SIDEWALKS WIDER THAN 5, JOINTING PATTERN SHALL BE .8-.12 TIMES THE WIDTH OF THE SIDEWALK.
4. SEE CONCRETE WORK GENERAL NOTE 2.
5. **OBSTRUCTIONS WILL NOT BE PERMITTED WITHIN A 3' MIN. WIDTH IN ANY SIDEWALK. ANY PORTION OF SIDEWALK THAT EXCEEDS 2% MAX. CROSS-SLOPE SHALL BE REMOVED AND REPLACED. SLOPES MUST BE VERIFIED WITH A SMART LEVEL BY INSPECTOR.**

TYPICAL SIDEWALK

Detail No. 136 STREETS

DATE	REVISIONS	BY
07/02	ADD FIBER-REINFORCED / NOTE 5	RRB
01/03	ADD NOTE 6	RRB
12/04	REMOVE REF TO ROLLED CURB UPD PED RAMP, TEXT EDITS	RRB
06/07	GEN EDITS	EB



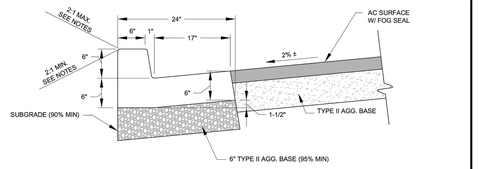
NOTES:

1. AGGREGATE BASE SHALL BE TYPE 2, CLASS B AND BE COMPACTED TO A MIN. 95% OF MAX. DENSITY.
2. PORTLAND CEMENT CONCRETE SHALL BE FIBER-REINFORCED AND MEET 4,000 PSI MIN. AT 28 DAYS, 6% ±1.5% ENTRAINED AIR. ALL MATERIAL SHALL CONFORM TO SSPWC, CURRENT EDITION.
3. GUTTER PAN WIDTH SHALL BE 3'-0" TOTAL WIDTH OR 1'-6" HALF WIDTH ON PRIVATE PROPERTY.
4. FLOW LINE VARIES TO MATCH GUTTER 1%.
5. CITY OF FERNLEY ENGINEER SHALL REQUIRE #4 BARS AT 12" EACH DIRECTION IN VALLEY GUTTERS WITHIN ROADWAY IN INDUSTRIAL AND COMMERCIAL PROJECTS.

P.C.C. VALLEY GUTTER

Detail No. 137 STREETS

DATE	REVISIONS	BY
06/19/02	CLARIFY DIM ON NOTE 4	RRB
07/02	ADD FIBER-REINFORCED / NOTE 2	RRB
12/04	CHG NOTE 5 TO REQUIREMENT IN COMMERCIAL AND INDUSTRIAL AREAS	RRB



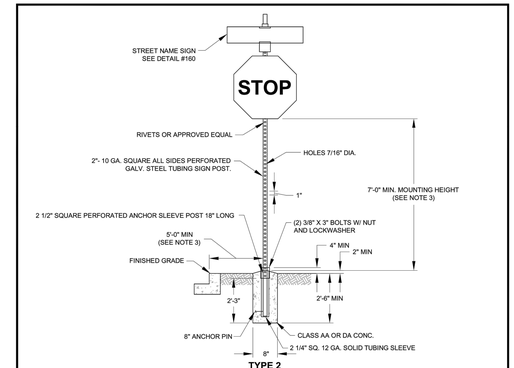
NOTES:

1. SEE CONCRETE WORK GENERAL NOTE 2.
2. ALL CONCRETE CURB, GUTTER, AND SIDEWALK SHALL HAVE 1/2" EXPANSION JOINTS AT ALL CURB RETURNS AND SHALL HAVE WEAKENED PLANE JOINTS EVERY 10 FEET.
3. AGGREGATE BASE MATERIAL SHALL CONFORM TO THE SPECIFICATIONS FOR TYPE 2 CLASS B AGGREGATE BASE AND BE COMP. TO A MIN. 95% MAX. DRY DENSITY.
4. ALL MATERIALS SHALL CONFORM TO SSPWC CURRENT EDITION.
5. FOR SLOPE STABILIZATION REFER TO SECTION 3.4.9 OF CURRENT CITY OF FERNLEY DESIGN STANDARDS.

TYPE I CURB & GUTTER

Detail No. 138 STREETS

DATE	REVISIONS	BY
6/19/02	BEING REVISED	MU
7/02	ADD FIBER REINFORCED / NOTE 1	RRB
2/05	DEL 30' EXCEPTION, NOTE 2	RRB
06/07	ADD SLOPE STABILIZATION NOTE	EB



TYPE 2

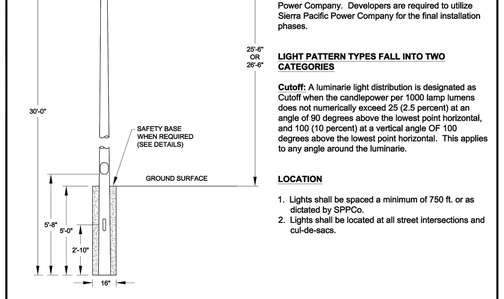
NOTES:

1. SIGN MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. STREET NAME SIGN SHALL BE AS SPECIFIED BY THE GOVERNING AGENCY AND MOUNTED WITH VANDAL-PROOF HARDWARE. (SEE AGENCY SECTION).
3. ON STREETS WHERE CURBING DOES NOT EXIST, SET SIGN 6' MINIMUM FROM PAVEMENT EDGE. MIN. MOUNTING HEIGHT = 7'-0".

STANDARD STREET / TRAFFIC SIGN INSTALLATION

Detail No. 156 STREETS

DATE	REVISIONS	BY



NOTES:

The City of Fernley Public Works Department shall review and approve the type and location of street lights in public right-of-way, decorative or standard, when the project improvement plans are submitted to the city for review. All public street light fixtures shall be a **Cutoff** style and design and will be selected from the available choices approved for use by Sierra Pacific Power Company. Developers are required to utilize Sierra Pacific Power Company for the final installation phases.

LIGHT PATTERN TYPES FALL INTO TWO CATEGORIES

Cutoff: A luminaire light distribution is designated as Cutoff when the candlepower per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above the lowest point horizontal, and 100 (10 percent) at a vertical angle OF 100 degrees above the lowest point horizontal. This applies to any angle around the luminaire.

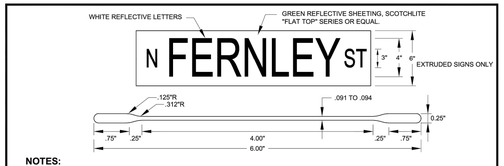
LOCATION

1. Lights shall be spaced a minimum of 750 ft. or as dictated by SPPCo.
2. Lights shall be located at all street intersections and cul-de-sacs.

TRAFFIC POLE TYPE 7

Detail No. 151 STREETS

DATE	REVISIONS	BY
6/19/02	Revised	MU
12/04	DELETE NON-CUTOFF NOTE	



NOTES:

1. STREET NAME SIGN SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE M.U.T.C.D.
2. REFLECTIVE MATERIALS SHALL BE MOUNTED ON EXTRUDED ALUMINUM No. 6063-T6 (SEE DETAIL).

STREET NAME SIGN

Detail No. 160 STREETS

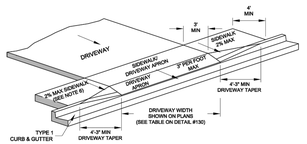
DATE	REVISIONS	BY

NOTES:

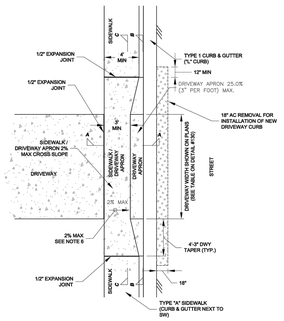
1. **DRIVEWAY SLOPE SHALL BE 25.0% (3" PER FOOT) MAXIMUM WITH TYPE "A" SIDEWALK.**
2. **COMMERCIAL DRIVEWAYS SHALL HAVE REBAR. SEE CONCRETE WORK GENERAL NOTE # 3.**
3. **ASPHALT SHALL BE REMOVED 18" MINIMUM IN AC FOR REMOVAL OF CURB FOR NEW DRIVEWAY UNLESS APPROVED OTHERWISE BY CITY ENGINEER.**
4. **SEE CONCRETE WORK GENERAL NOTE 2**
5. **ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202, CURRENT EDITION.**
6. **THIS STANDARD DETAIL IS ALSO APPLICABLE TO RETROFITTING EXISTING INFRASTRUCTURE (SEE NOTE 3).**
7. **OBSTRUCTIONS WILL NOT BE PERMITTED WITHIN A 3' MIN. WIDTH ON ANY SIDEWALK. ANY PORTION OF SIDEWALK THAT EXCEEDS 2% MAX. CROSS-SLOPE SHALL BE REMOVED AND REPLACED. SLOPES MUST BE VERIFIED WITH A SMART LEVEL BY INSPECTOR.**

TRANSITION LENGTH TABLE FOR 12:1 SIDE SLOPE

GRADE % "B" TO "A"	"A" MINIMUM	"B" MINIMUM
-6 TO -5.01	4'-8"	21'-6"
-5 TO -4.01	4'-8"	19'-0"
-4 TO -3.01	4'-8"	12'-0"
-3 TO -2.01	5'-0"	9'-6"
-2 TO -1.01	5'-8"	8'-0"
-1 TO 1	7'-0"	7'-0"
1.01 TO 2	8'-0"	5'-9"
2.01 TO 3	9'-6"	5'-0"
3.01 TO 4	12'-0"	4'-6"
4.01 TO 5	15'-0"	4'-6"
5.01 TO 6	21'-6"	4'-6"

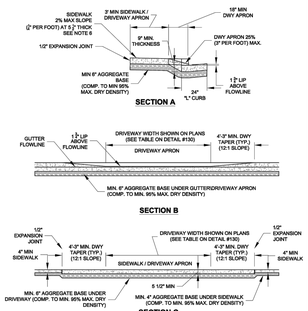


ISOMETRIC DRIVEWAY APRON



PLANVIEW DRIVEWAY APRON

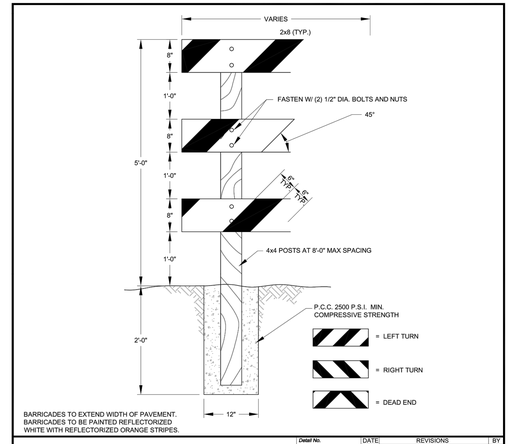
SCALE: NTS



DRIVEWAY APRON

Detail No. 150 STREETS

DATE	REVISIONS	BY
01/03	RENUMBERED, ADD NOTE 6	RRB

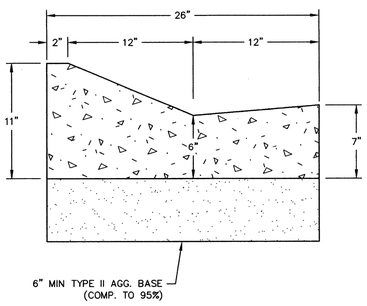


BARRICADES TO EXTEND WIDTH OF PAVEMENT. BARRICADES TO BE PAINTED REFLECTORIZED WHITE WITH REFLECTORIZED ORANGE STRIPES.

TYPE 3 BARRICADE

Detail No. 159 STREETS

DATE	REVISIONS	BY



NOTE:

1. ALL P.C.C. CURB, GUTTER AND SIDEWALK SHALL BE MIN 6sack OF CEMENT PER CU.YD. OF CONC UNLESS OTHERWISE SPECIFIED (4000psi) W/4.5–7.5% AIR. MAX SLUMP SHALL BE 4." MAX WATER/CEMENT RATIO SHALL BE .45.
2. (a) ALL CONC CURB, GUTTER, AND SIDEWALK SHALL HAVE WEAKENED PLANE JOINTS EVERY 10 FEET.
   (b) EXPANSION JOINTS 1/2" WIDE SHALL BE LOCATED IN CURBS & GUTTERS @ EA. SIDE OF STRUCTURES @ ENDS OF ALL CURB RETURNS, & ABUTTING HARDENED IN-PLACE CURB & GUTTER, EXCEPT THAT EXPANSION JTS. SHALL NOT BE INSTALLED WITHIN 20' OF AN ISLAND NOSE. EXPANSION JOINTS SHALL BE 1/2" THICK, SHAPED TO THE CROSS-SECTION OF THE CURB & GUTTER, & SHALL BE CONSTRUCTED @ RIGHT ANGLES TO THE CURB & GUTTER. JOINT FILLER MATERIAL SHALL CONFORM TO SECTION 202.10.
3. THIS TYPE OF CURB AND GUTTER IS ALLOWED ONLY IN RESIDENTIAL AREAS AND ONLY ON LOCAL AND COLLECTOR SECTIONS.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION LYON Co.
			TYPE 2 P.C.C. CURB & GUTTER	DRAWING NO. L-17
				DATE 8/97 PAGE 17

339658LG

No.	REVISIONS	DATE	BY
1	PER CITY COMMENTS	12/02/2021	EP

PHELPS ENGINEERING
155 County Station Road, Suite 300
Reno, Nevada 89501
(775) 360-2200
www.phelpsengineering.net

PROFESSIONAL ENGINEER STATE OF NEVADA
LONNY E. PHELPS
12/31/23
Exp
CIVIL
No. 25230

811 Know what's below. Call 811 before you dig.

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36"

DESIGNED BY: JJP
DRAWN BY: NW
CHECKED BY: LEP

SITE DETAILS

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

PROJECT NO.: 21603

C18

Drawing name: C:\Users\Zach\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Sheets\C0s\21603_DETAILS.dwg 37 SITE DETAILS Dec 02, 2022 11:32am by: Zach

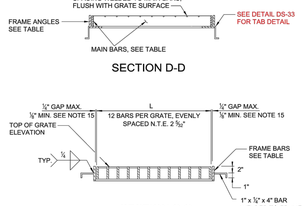
BILL OF MATERIALS, RCP HDPE CMP

PIPE SIZE INCH	H MIN. FT.	SINGLE, ONE GRATE ★CONCRETE CU. YD. BASE QUAN. H MIN.	ADD RATE C.Y./FT.	★REINF. LB. BASE QUAN. H MIN.	ADD RATE LB./FT.	STR. STEEL LB.	DOUBLE, TWO GRATES ★CONCRETE CU. YD. BASE QUAN. H MIN.	ADD RATE C.Y./FT.	★REINF. LB. BASE QUAN. H MIN.	ADD RATE LB./FT.	STR. STEEL LB.	TRIPLE, THREE GRATES ★CONCRETE CU. YD. BASE QUAN. H MIN.	ADD RATE C.Y./FT.	★ REINF. LB. BASE QUAN. H MIN.	ADD RATE LB./FT.	STR. STEEL LB.
≤ 15	2.50	0.71	0.19	36	10	211	1.06	0.26	50	13	397	1.41	0.33	70	17	583
18	3.00	0.89	0.20	40	10	306	1.31	0.28	56	13	574	1.72	0.35	77	18	842
24	3.50	1.08	0.22	58	12	349	1.56	0.30	80	15	652	2.04	0.37	105	20	956
30	4.00	1.28	0.24	63	12	390	1.83	0.31	86	16	729	2.38	0.39	113	20	1068
36	4.50	1.50	0.26	67	13	524	2.11	0.33	92	16	980	2.72	0.41	120	21	1435
42	5.00	1.71	0.28	90	15	575	2.39	0.35	120	18	1073	3.07	0.43	154	22	1571
48	5.50	1.94	0.30	95	15	707	2.68	0.37	127	18	1329	3.42	0.44	163	23	1951

★THE CONCRETE AND REINFORCING QUANTITIES ARE BASED ON THE H MIN. SHOWN. INCREASE THE CONCRETE AND REINFORCING BASE QUANTITY BY THE CORRESPONDING ADD RATE, PER FOOT OF INCREASED H, IF THE H SPECIFIED IS LARGER THAN H MIN

TABLE OF DIMENSIONS, RCP HDPE CMP

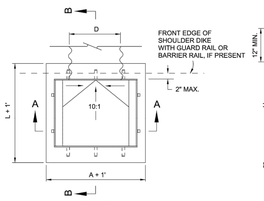
PIPE SIZE INCH	A	MAIN BARS INCH	FRAME ANGLES INCH	FRAME BARS INCH	L, FEET TYP. SINGLE GRATE	L, FEET TYP. DOUBLE GRATE	L, FEET TYP. TRIPLE GRATE
≤ 15	2'	3 ½ x ⅜	4 x 3 x ⅜	4 x ⅜	2	4	6
18	2' - 6"	4 ½ x ⅜	5 x 3 x ⅜	5 x ⅜	2	4	6
24	3'	4 ½ x ⅜	5 x 3 x ⅜	5 x ⅜	2	4	6
30	3' - 6"	4 ½ x ⅜	5 x 3 x ⅜	5 x ⅜	2	4	6
36	4'	5 ½ x ⅜	6 x 3 ½ x ⅜	6 x ⅜	2	4	6
42	4' - 6"	5 ½ x ⅜	6 x 3 ½ x ⅜	6 x ⅜	2	4	6
48	5'	5 ½ x 5/16	6 x 3 ½ x ⅜	6 x ⅜	2	4	6



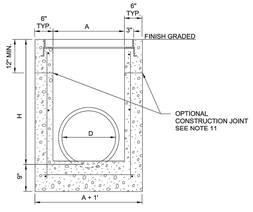
SECTION B-B

SECTION D-D

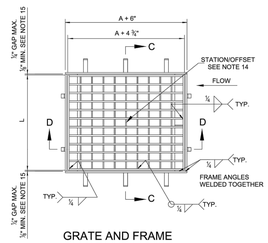
SECTION C-C



PLAN



SECTION A-A



GRATE AND FRAME

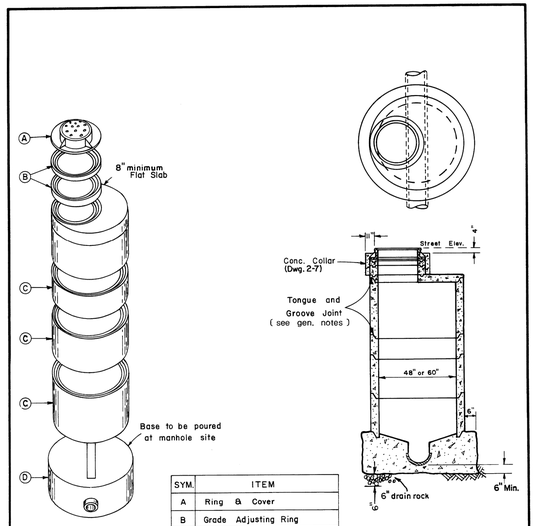
NOTES:

1. All concrete shall be class A or AA.
2. Reinforcing steel shall be No. 4 bars with maximum spacing at 18-inches on center, wired tightly at all intersections and embedded 2-inches clear of all concrete surfaces.
3. Exposed edges of concrete shall be chamfered 1-inch.
4. Dimensions may be varied to fit local conditions if ordered by the Engineer. If a D.I. is to be precast, contractor shall verify actual "H" value prior to casting, to account for varying field conditions. This will then be approved by the Engineer.
5. Commercial prefabricated gratings approved by the bridge division may be used in lieu of the field-welded grating shown.
6. Extreme low cover situations to be reviewed by hydraulics engineer.
7. Slope catch basin floors 10:1 from all directions toward outlet pipe. If basin is used as a junction, shape flow line(s) to outlet pipe and provide a 10:1 slope to flow line(s).
8. See detail DS-27 for details if connecting HDPE pipe.
9. A single Type 2 drop inlet shall be constructed unless a double or triple is specified.
10. Single grate configuration shown for clarity. Outside dimensions of each grate shall measure 2-feet by A + 4 ⅞-inches.
11. Run rebar continuously through construction joint. Joint must be a minimum of 3-inches from horizontal bars.
12. Weld one tab on ℄ of grate and remaining two tabs 6-inches from edge of frame. Six tabs per inlet, three tabs on each side.
13. Weld tabs 6-inches from edge of frame. Four tabs per grate, two on each side.
14. For multiple grate installations, the station/offset is to the center of the concrete drop inlet structure.
15. Grate is to fit in the frame and be easily removed. If the gap between the grate and frame is greater than ½-inches on each side of the grate, the grate and frame shall be removed and reconstructed to the tolerances specified, or with approval of the Engineer, a filler strip up to ½-inches in thickness may be welded flush to the top of the frame to reduce the gap to a maximum of ½-inches.
16. Additional pipe penetrations may be placed in any wall. Pipe penetrations are to be to the center of the structure wall unless specified otherwise.
17. "A" dimension is parallel to the flow or edge of pavement/shoulder dike or barrier rail, and "L" is perpendicular to the flow or edge of pavement/shoulder dike or barrier rail.
18. "L" dimension can be less than 2-feet. If less than 2-feet, bar spacing shall not exceed 2 ½-inches.

NEVADA DEPARTMENT OF TRANSPORTATION | CHIEF HYDRAULICS ENGR. SIGNED ORIGINAL ON FILE | ADOPTED 11/1970 | REVISED 10/2015

DROP INLET TYPE 2

SPEC. # 609 | DETAIL NUMBER DS-32



SYM.	ITEM
A	Ring & Cover
B	Grade Adjusting Ring
C	Precast manhole section
D	Base

NOTES:

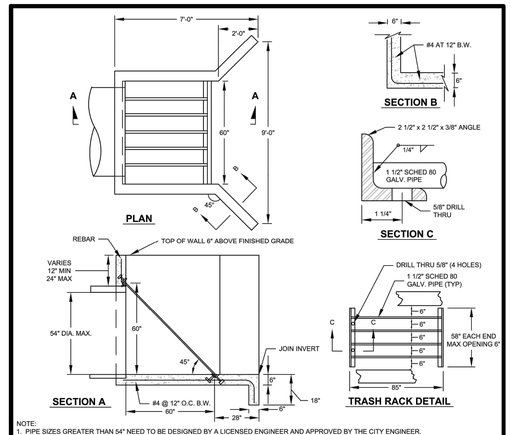
1. Manhole section lengths arranged to fit depth.
2. Precast base may be used if approved by Governing Agency.
3. Lander Co. Only - Manholes constructed in non-paved areas shall have min. wall thickness of 5" on cone and barrel sections.

NO.	REVISION	DATE
1	NOTE 3	3-83
2	ITEM C, D	8-85
3	Collar, dr.rock	5-95vp

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

MANHOLE TYPE I-B

SECTION 2 | DRAWING NO. 2 - 3.3 (306) | DATE 7 - 81 | PAGE 6

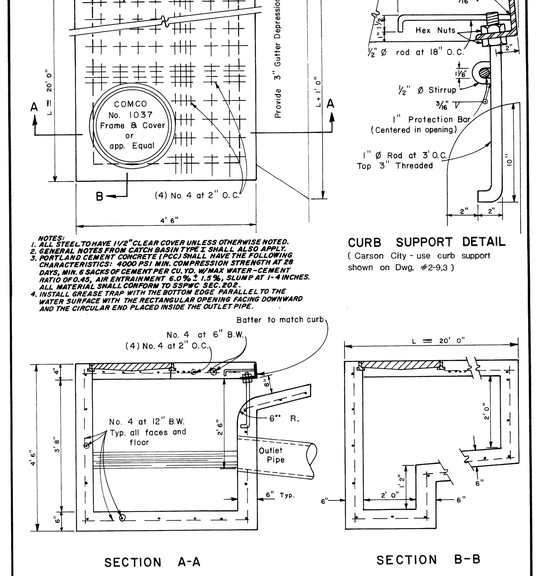


NOTE:
1. PIPE SIZES GREATER THAN 54" NEED TO BE DESIGNED BY A LICENSED ENGINEER AND APPROVED BY THE CITY ENGINEER.

TRASH RACK (27" THRU 54" PIPE)

Detail No. 185 STORM DRAIN

DATE	REVISIONS	BY



NOTES:
1. ALL STEEL TO HAVE 1½" CLEAR COVER UNLESS OTHERWISE NOTED.
2. GENERAL NOTES FROM CATCH BASIN TYPE 1 SHALL ALSO APPLY.
3. PORTLAND CEMENT CONCRETE (PCC) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSION STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CU.YD. W/MAX WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6.0 % ± 1.5 %, SLUMP AT 1-4 INCHES. ALL MATERIAL SHALL CONFORM TO SSPWC SEC. 202.
4. INSTALL GREASE TRAP WITH THE BOTTOM EDGE PARALLEL TO THE WATER SURFACE WITH THE RECTANGULAR OPENING FACING DOWNWARD AND THE CIRCULAR END PLACED INSIDE THE OUTLET PIPE.

CURB SUPPORT DETAIL
(Carson City - use curb support shown on Dwg. #2-9,3)

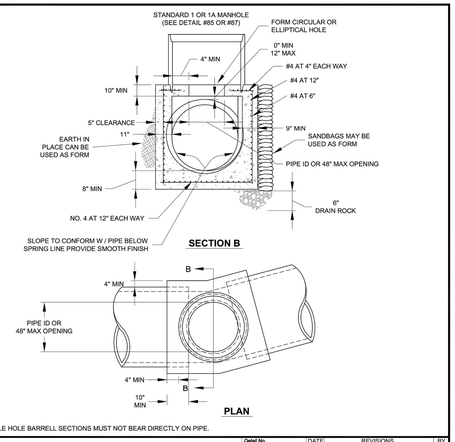
SECTION A-A SECTION B-B

NO.	REVISION	DATE
1	6" Radius	3-83
2	NOTES	6-95

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

CATCH BASIN TYPE 2

SECTION 2 | DRAWING NO. 2-9 (306) | DATE 7-81 | PAGE 12

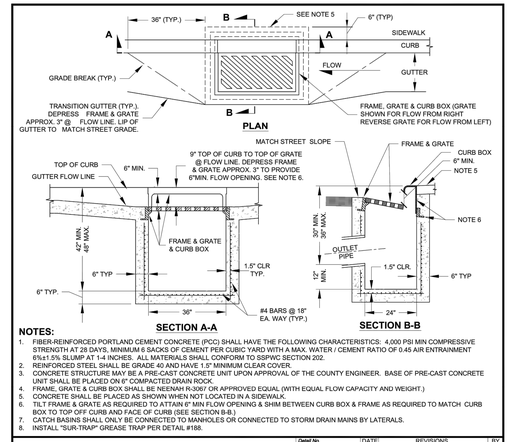


NOTE
1. MANHOLE HOLE BARRELL SECTIONS MUST NOT BEAR DIRECTLY ON PIPE.

MANHOLE TYPE IV (ANGLE POINT)

Detail No. 183 STORM DRAIN

DATE	REVISIONS	BY
12/04	RENUMBER, ADD NOTE	RBS



NOTES:
1. FIBER-REINFORCED PORTLAND CEMENT CONCRETE (PCC) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4,000 PSI MIN COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER / CEMENT RATIO OF 0.45 AIR ENTRAINMENT 6%±1.5% SLUMP AT 1-4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
2. REINFORCED STEEL SHALL BE GRADE 40 AND HAVE 1.5" MINIMUM CLEAR COVER.
3. CONCRETE STRUCTURE MAY BE A PRE-CAST CONCRETE UNIT UPON APPROVAL OF THE COUNTY ENGINEER. BASE OF PRE-CAST CONCRETE UNIT SHALL BE PLACED ON 6" COMPACTED DRAIN ROCK.
4. FRAME, GRATE & CURB BOX SHALL BE NEENAH R-3067 OR APPROVED EQUAL (WITH EQUAL FLOW CAPACITY AND WEIGHT.)
5. CONCRETE SHALL BE PLACED AS SHOWN WHEN NOT LOCATED IN A SIDEWALK.
6. TILT FRAME & GRATE AS REQUIRED TO ATTAIN 6" MIN FLOW OPENING & SHIM BETWEEN CURB BOX & FRAME AS REQUIRED TO MATCH CURB BOX TO TOP OFF CURB AND FACE OF CURB (SEE SECTION B-B.)
7. CATCH BASINS SHALL ONLY BE CONNECTED TO MANHOLES OR CONNECTED TO STORM DRAIN MAINS BY LATERALS.
8. INSTALL "SUR-TRAP" GREASE TRAP PER DETAIL #188.

TYPE 4R CATCH BASIN

Detail No. 180 STORM DRAIN

DATE	REVISIONS	BY
12/04	RENUMBER, ADD NOTE 7	RBS

PHELPS ENGINEERING
155 County Station Rd. Suite 300
Minden, NV 89423 (775) 392-3900
www.phelpsengineering.net

LONNY E. PHELPS — STATE OF NEVADA — PROFESSIONAL ENGINEER — No. 25230 — Exp 12/31/23 — CIVIL

811 Know what's below. Call 811 before you dig.

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36"

DESIGNED BY: LJP
DRAWN BY: NW
CHECKED BY: LEP

POND DETAILS

SHERWOOD VILLAGES
TENTATIVE SUBDIVISION MAP
LYON COUNTY
FERNLEY, NEVADA

11/24/2021

PROJECT NO.: 21603

C19

No.	PER CITY COMMENTS	DATE	BY
1		12/02/2021	TD

REVISIONS

Drawing name: C:\Users\Zach\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Engineering\Sheets\C08\POND DETAILS.dwg 38 Pond Details Dec 02, 2022 11:32pm by: Zach

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SHERWOOD VILLAGE

TRAFFIC ANALYSIS

JANUARY 2020



Prepared by:
Solaegui Engineers, Ltd.
715 H Street
Sparks, Nevada 89431
(775) 358-1004

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SHERWOOD VILLAGE

TRAFFIC ANALYSIS

EXECUTIVE SUMMARY

The proposed Sherwood Village development will be located in the City of Fernley, Nevada. The project site is generally located south of I-80, north of Fremont Street, and west of US-95A. The project site is currently undeveloped land. The purpose of this traffic study is to address the project's impact upon the adjacent street network. The US-95A/Newlands Drive and US-95A/Fremont Street/Chisholm Trail intersections have been identified for AM and PM peak hour capacity analysis for the existing, existing plus project, existing plus project plus other project, 2040 base, and 2040 base plus project scenarios. The other projects include the entitled townhome and hotel projects located on the east side of US-95A. Sandia Drive, Wildwood Drive and Fernwood Drive were identified for roadway capacity analysis for the existing plus project scenario.

The proposed Sherwood Village development will consist of the construction of a multi-family housing project containing a total of 434 dwelling units. The site plan indicates that project access will be provided from Wildwood Drive and Fernwood Drive via street connections to Newlands Drive and Fremont Street and ultimately to US-95A. The Sherwood Village development is anticipated to generate 3,325 average weekday trips with 219 trips occurring during the AM peak hour and 273 trips occurring during the PM peak hour.

Traffic generated by the Sherwood Village development will have some impact on the adjacent street network. The following recommendations are made to mitigate project traffic impacts.

It is recommended that any required signing, striping, or traffic control improvements comply with City of Fernley and Nevada Department of Transportation requirements.

It is recommended that the US-95A/Fremont Street/Chisholm Trail intersection be improved to include separate left turn, through and right turn lanes at the west Fremont Street and east Chisholm Trail approaches. It is recommended that the traffic signal at the US-95A/Fremont Street/Chisholm Trail intersection be modified to contain overlap phasing for the right turn movement at the west Fremont Street approach.

It is recommended that the new on-site segments of Wildwood Drive and Fernwood Drive be constructed per City of Fernley standards. It is recommended that the new east/west street segment located within the duplex portion of the project be constructed per City of Fernley standards.

It is recommended that the on-site roundabout, streets, and parking areas be designed per City of Fernley standards.

INTRODUCTION

STUDY AREA

The proposed Sherwood Village development will be located in the City of Fernley, Nevada. The project site is generally located south of I-80, north of Fremont Street, and west of US-95A. Figure 1 shows the location of the project site. The purpose of this traffic study is to address the project's impact upon the adjacent street network. The US-95A/Newlands Drive and US-95A/Fremont Street/Chisholm Trail intersections have been identified for AM and PM peak hour capacity analysis for the existing, existing plus project, existing plus project plus other project, 2040 base, and 2040 base plus project scenarios. Sandia Drive, Wildwood Drive and Fernwood Drive were identified for roadway capacity analysis for the existing plus project scenario.

EXISTING AND PROPOSED LAND USES

The project site is currently undeveloped land. Adjacent properties include residential dwelling units to the north, south, east and west. The proposed Sherwood Village development will consist of the construction of a multi-family housing project containing a total of 434 dwelling units. The site plan indicates that project access will be provided from Wildwood Drive and Fernwood Drive via street connections to Newlands Drive and Fremont Street and ultimately to US-95A.

EXISTING AND PROPOSED ROADWAYS AND INTERSECTIONS

US-95A is a four-lane roadway with two through lanes in each direction in the vicinity of the site. The speed limit is posted for 35 miles per hour. Roadway improvements generally include curb, gutter, sidewalk, and a bike lane on both sides of the street and a raised center median with openings at key intersections.

Newland Drive is a two-lane roadway with one through lane in each direction west of US-95A and a four-lane roadway with two through lanes in each direction east of US-95A. The two-lane segment is posted for 25 miles per hour and the four-lane segment is posted for 35 miles per hour. Roadway improvements near US-95A include curb, gutter, and sidewalk on both sides of the street and a striped centerline. Roadway improvements include curb, gutter, and sidewalk on both sides of the street. A raised center median exists on the four-lane segment.

Fremont Street is a two-lane roadway with one through lane in each direction west of US-95A. The speed limit is not posted but assumed to be 25 miles per hour. Roadway improvements near US-95A include curb, gutter, and sidewalk on both sides of the street and a striped centerline. Roadway improvements near the project site include curb, gutter and sidewalk on the north side of the street and a graded shoulder on the south side of the street.

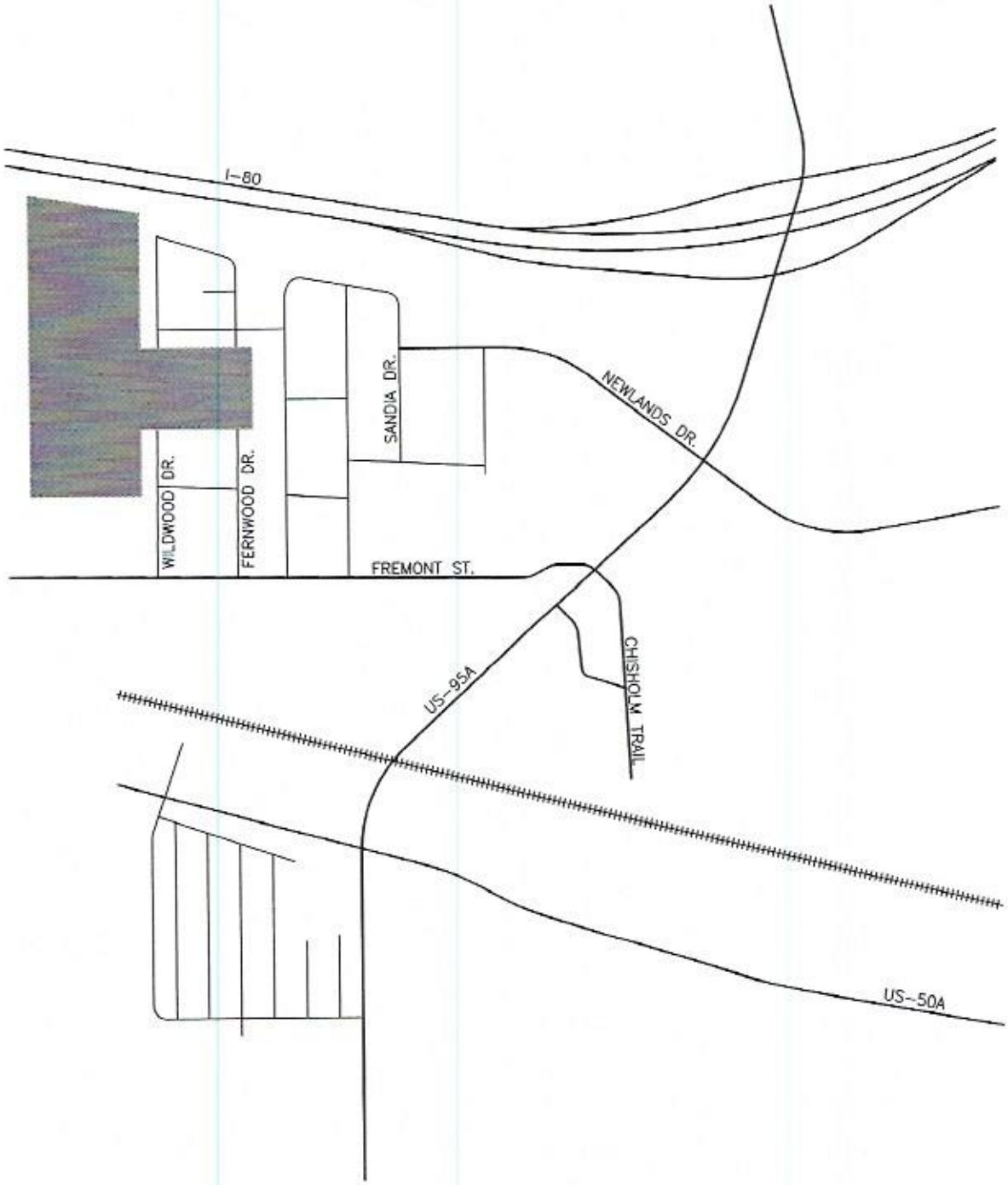
Chisholm Trail is a two-lane roadway with one through lane in each direction southeast of US-95A. The speed limit is not posted but assumed to be 25 miles per hour. Roadway improvements include curb, gutter, and sidewalk on both sides of the street. Parking is allowed on both sides of the street.

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LEGEND

PROJECT SITE



SHERWOOD VILLAGE

VICINITY MAP
FIGURE 1

The US-95A/Newlands Drive intersection is a signalized four-leg intersection with protected phasing for all left turn movements. The north approach contains two left turn lanes, one through lane and one shared through-right turn lane. The south approach contains one left turn lane, two through lanes and one right turn lane. The east approach contains two left turn lanes, one through lane and one right turn lane. The west approach contains one left turn lane, one through lane and one shared through-right turn lane. The intersection contains pedestrian crosswalks at the north, south, east and west approaches.

The US-95A/Fremont Street/Chisholm Trail intersection is a signalized four-leg intersection with protected phasing for all left turn movements. The north and south approaches each contain one left turn lane, one through lane and one shared through-right turn lane. The east and west approaches each contain one left turn lane and one shared through-right turn lane. The intersection contains pedestrian crosswalks at the east, west and south approaches.

TRIP GENERATION

In order to assess the magnitude of traffic impacts of the proposed project on the key roadways and intersections, trip generation rates and peak hours had to be determined. Trip generation rates were obtained from the *10th Edition of ITE Trip Generation* (2018) for Land Uses 210: Single Family Detached Housing and 220: Multifamily Housing (Low-Rise).

The proposed Sherwood Village development will consist of the construction of a multi-family housing project containing a total of 434 dwelling units. The units include 70 duplexes and 364 apartments. The Multifamily Housing land use was used to calculate trips for only the apartments since the description for that land use accounts for buildings with at least four units. The single family land use was therefore used to calculate trip generation for the duplexes.

Trip generation was calculated for an average weekday and the weekday peak hours occurring between 7:00 AM and 9:00 AM and 4:00 PM and 6:00 PM. These periods correspond to the peak hours of adjacent street traffic. Table 1 shows a summary of the average daily traffic (ADT) volume and AM and PM peak hour traffic volumes generated by the proposed project. The trip generation summary sheets are included in the Appendix.

TABLE 1
TRIP GENERATION

ITE LAND USE	ADT	AM PEAK HOUR			PM PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Single Family (70 Dwelling Units)	661	13	39	52	43	26	69
Multifamily Housing (364 Dwelling Units)	2,664	38	129	167	128	76	204
Total Trip Generation	3,325	51	168	219	171	102	273

TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of project generated traffic to the key intersections was based on existing peak hour traffic patterns and the locations of attractions and productions in the area. Figure 2 shows the anticipated trip distribution percentages. The trips shown in Table 1 were subsequently assigned to the key roadways and intersections based on the trip distribution percentages shown on Figure 2. Figure 3 shows the trip assignment for an average weekday and weekday peak hours.

EXISTING AND PROJECTED TRAFFIC VOLUMES

Figure 4 shows the existing traffic volumes at the key intersections during the AM and PM peak hours and the existing average daily traffic volumes on the key roadways. The existing peak hour traffic volumes at the US-95A/Fremont Street/Chisholm Trail intersection were obtained from manual traffic counts conducted in November of 2019. The existing peak hour traffic volumes at the US-95A/Newlands Drive intersection were obtained from manual traffic counts conducted in January of 2020. The existing average daily traffic volumes on Sandia Drive, Wildwood Drive and Fernwood Drive were obtained from pneumatic tube counts conducted in December of 2019.

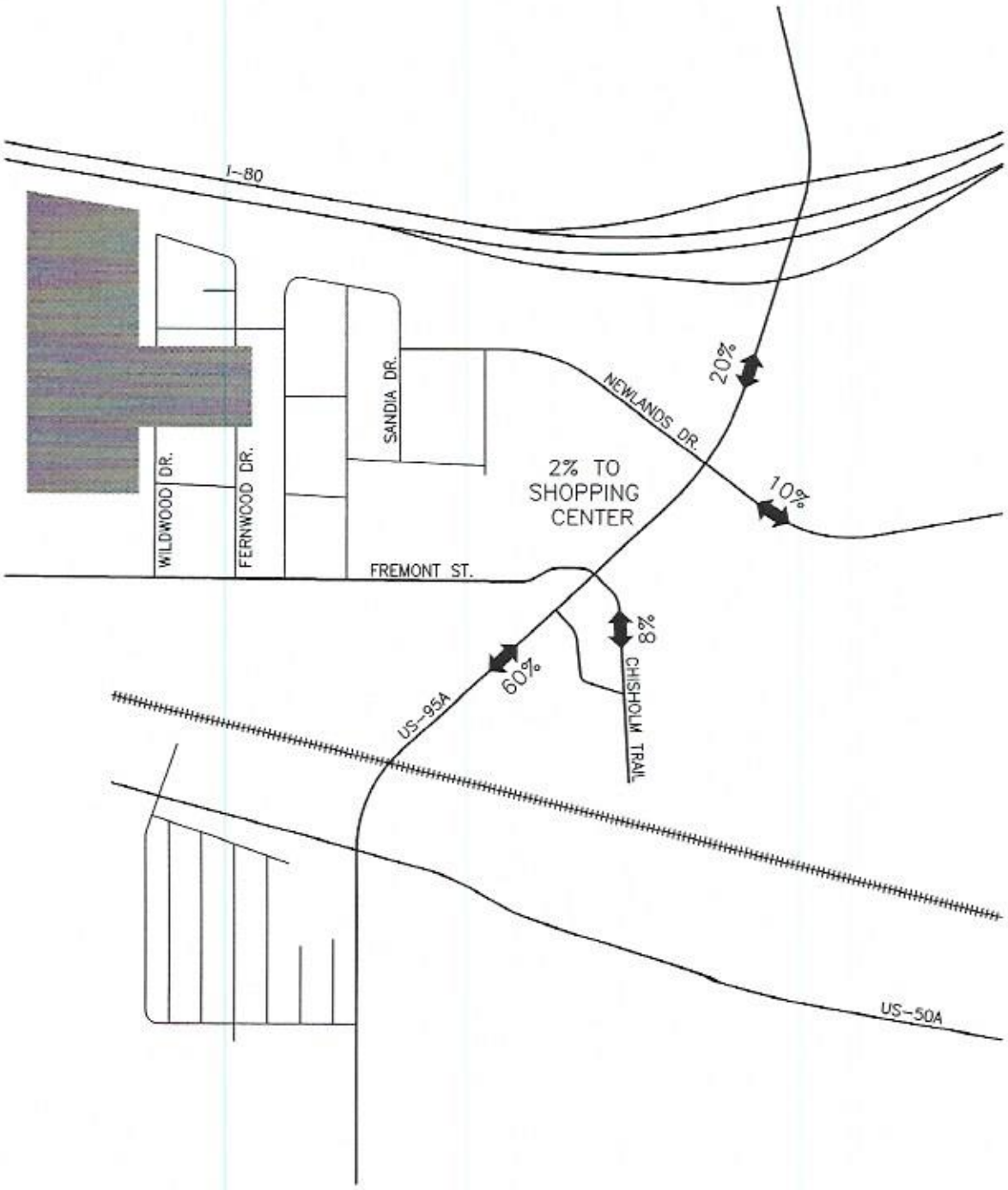
Figure 5 shows the existing plus project traffic volumes on the key roadways and at the key intersections during the AM and PM peak hours. The existing plus project traffic volumes were obtained by adding the trip assignment volumes shown on Figure 3 to the existing traffic volumes shown on Figure 4.

Figure 6 shows the existing plus project plus other traffic volumes at the key intersections during the AM and PM peak hours. The existing plus project plus other traffic volumes were obtained by adding trips generated by the entitled townhome and hotel projects to the existing plus project traffic volumes shown on Figure 5. The trip assignment for the townhome project was obtained from the Fernley Multi-Family Traffic Study dated June 2019. The trip assignment for the hotel project was obtained from the Hampton Inn & Suites Traffic Study dated July 2017.

Figure 7 shows the 2040 base traffic volumes at the key intersections during the AM and PM peak hours. The 2040 base traffic volumes were estimated by applying a 2.2% average annual growth rate to the existing traffic volumes and then re-routing 30% of the through volume on US-95A to Nevada Pacific Boulevard to account for its connection to US-50A. The growth rate was derived from 20-year historic traffic count data obtained from the Nevada Department of Transportation's (NDOT) Annual Traffic Reports for count stations on US-95A and on the East Fernley Interchange ramps. Traffic generated by the entitled townhome and hotel projects is included in the growth rate.

Figure 8 shows the 2040 base plus project traffic volumes at the key intersections during the AM and PM peak hours. The 2040 base plus project traffic volumes were obtained by adding the trip assignment volumes shown on Figure 3 to the 2040 base traffic volumes shown on Figure 7.

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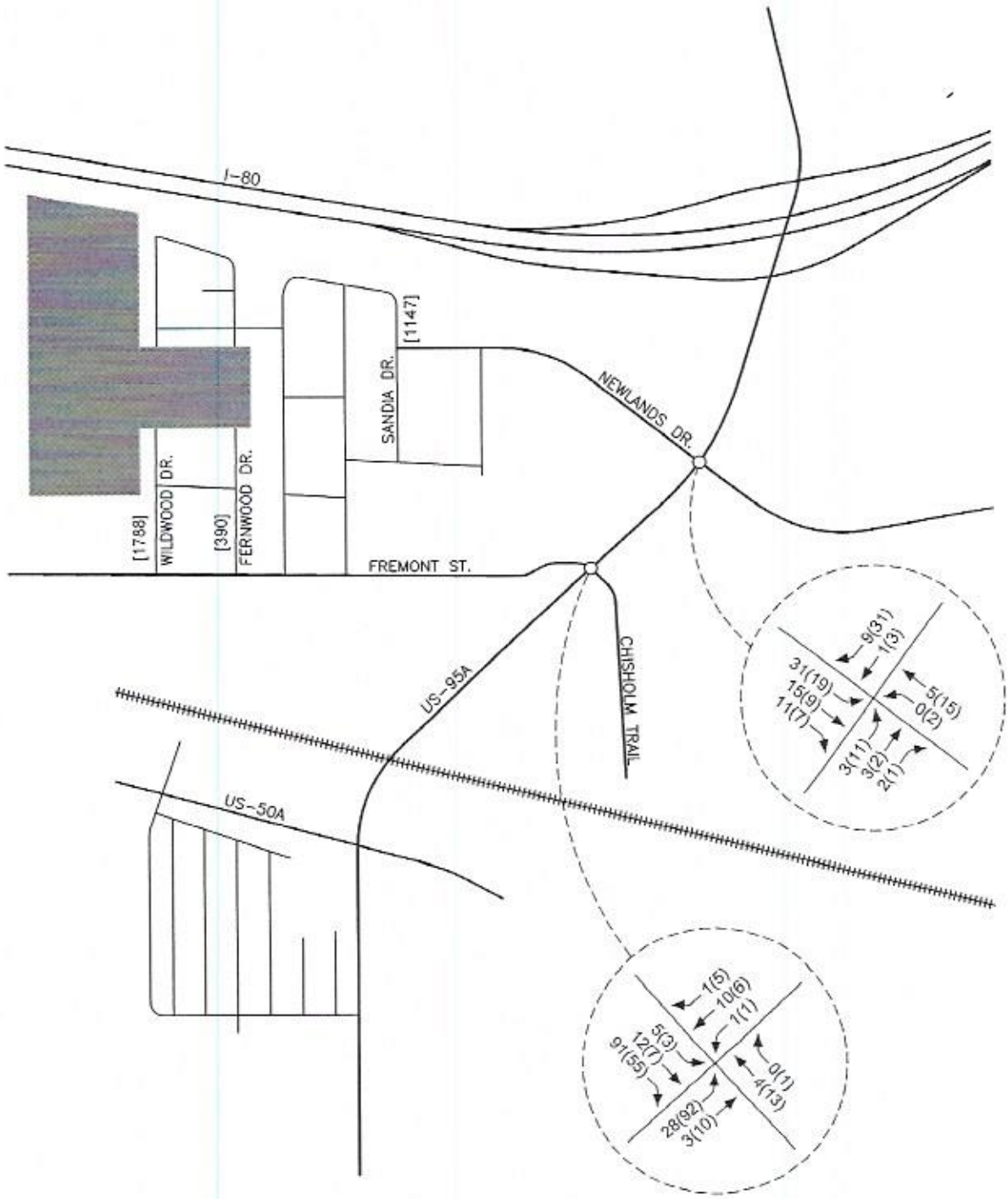
SHERWOOD VILLAGE

TRIP DISTRIBUTION
FIGURE 2

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LEGEND
– AM PEAK HOUR
(–) PM PEAK HOUR
[–] ADT

N.T.S.

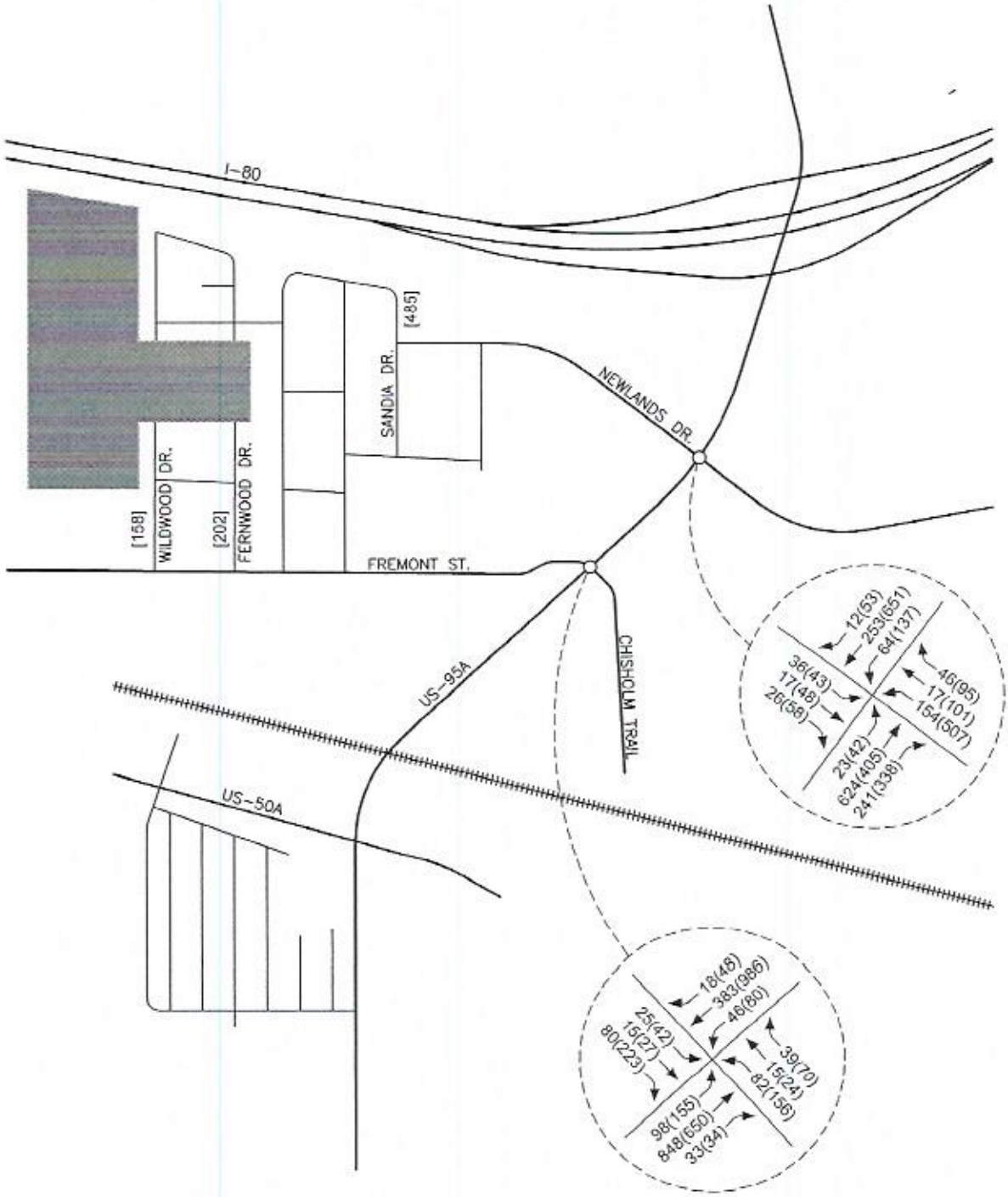


SHERWOOD VILLAGE
TRIP ASSIGNMENT
FIGURE 3

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LEGEND
– AM PEAK HOUR
(–) PM PEAK HOUR
[–] ADT

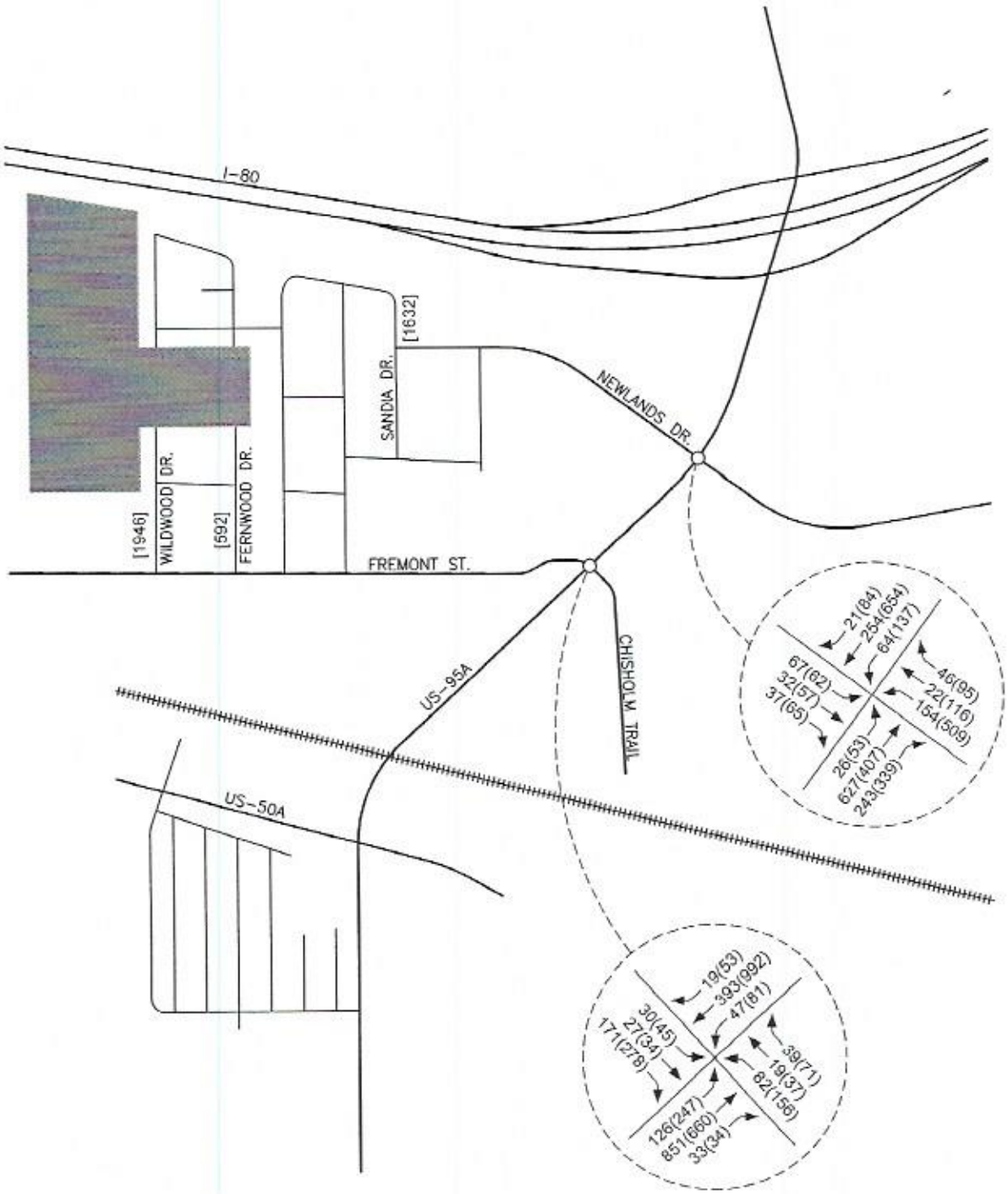


SHERWOOD VILLAGE
EXISTING TRAFFIC VOLUMES
FIGURE 4

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LEGEND
– AM PEAK HOUR
(–) PM PEAK HOUR
[–] ADT

N.T.S.

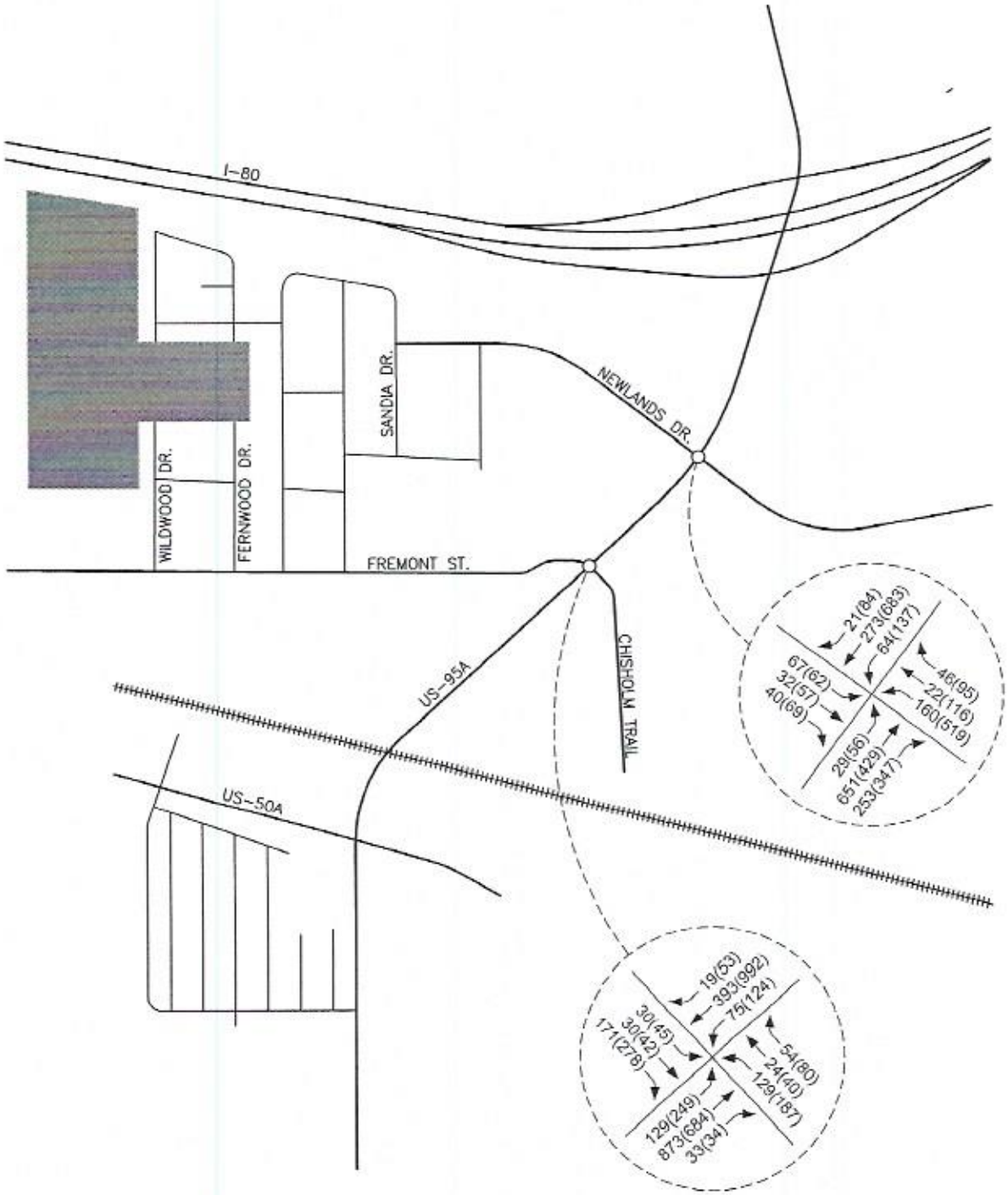


SHERWOOD VILLAGE
EXISTING PLUS PROJECT TRAFFIC VOLUMES
FIGURE 5

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LEGEND
– AM PEAK HOUR
(–) PM PEAK HOUR

N.T.S.



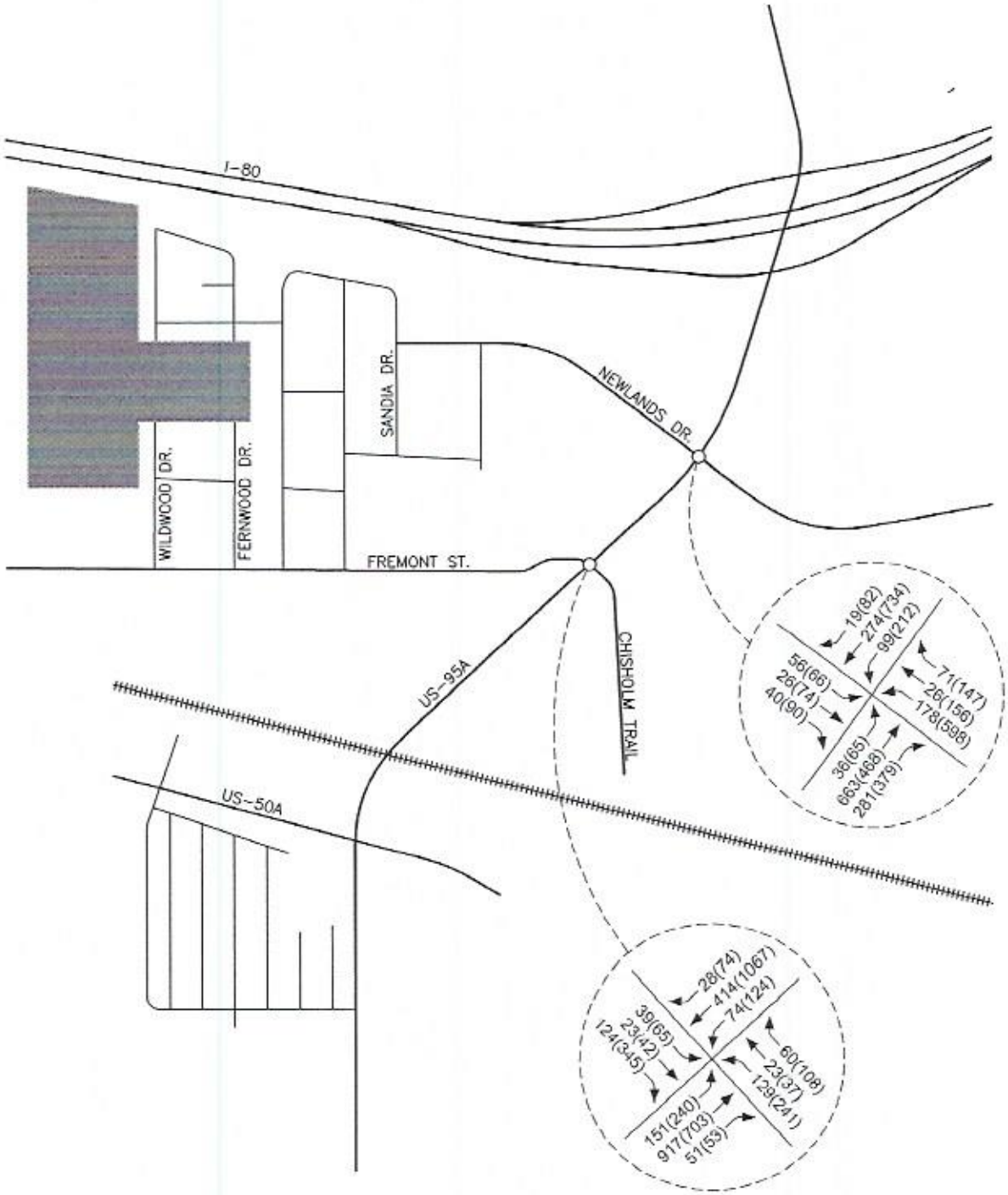
SHERWOOD VILLAGE

EXISTING PLUS PROJECT PLUS OTHER VOLUMES
FIGURE 6

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LEGEND
– AM PEAK HOUR
(–) PM PEAK HOUR

N.T.S.

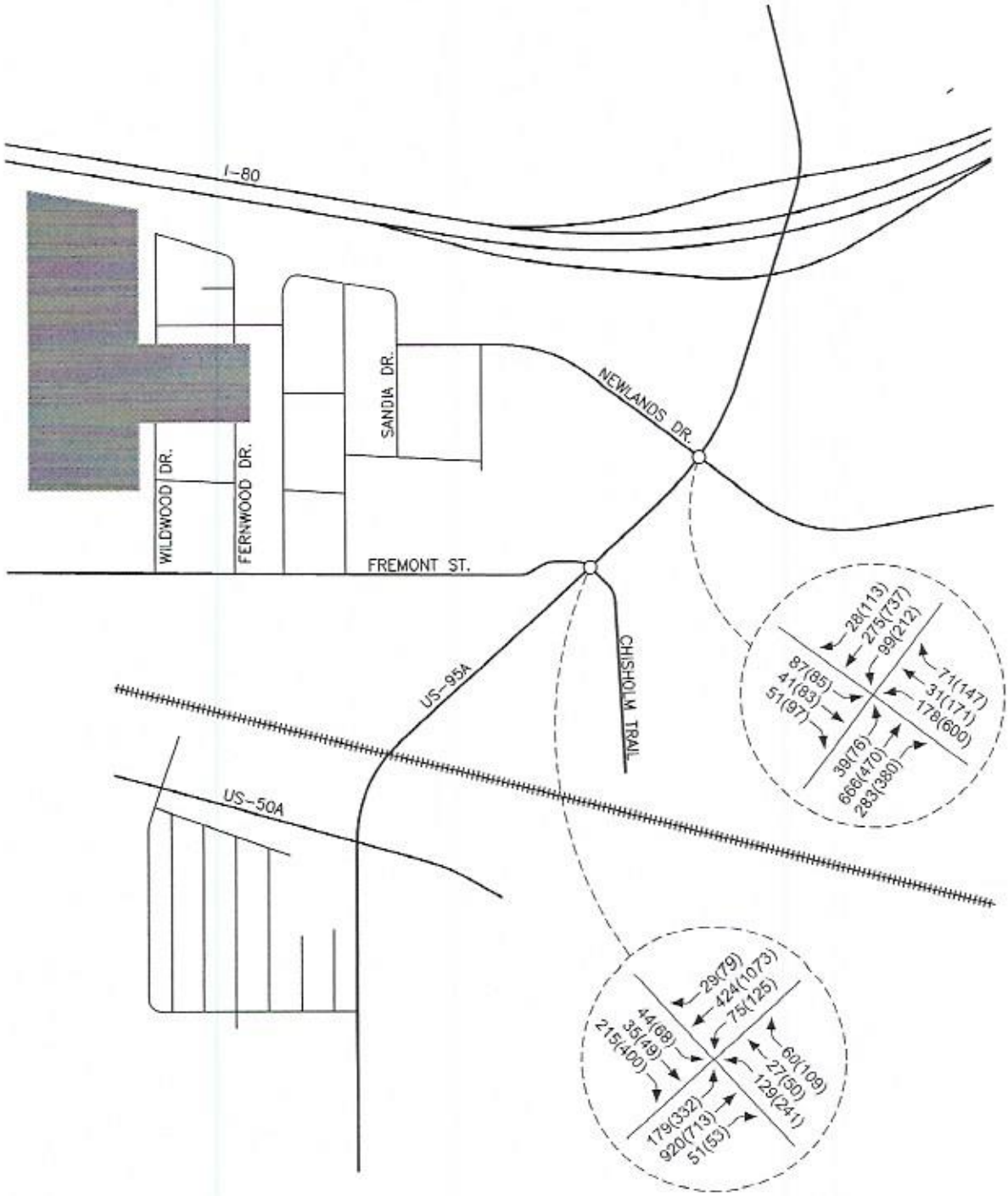


SHERWOOD VILLAGE
2040 BASE TRAFFIC VOLUMES
FIGURE 7

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LEGEND
– AM PEAK HOUR
(–) PM PEAK HOUR

N.T.S.



SHERWOOD VILLAGE

2040 BASE PLUS PROJECT TRAFFIC VOLUMES
FIGURE 8

INTERSECTION CAPACITY ANALYSIS

The key intersections were analyzed for capacity based on procedures presented in the *Highway Capacity Manual (6th Edition)*, prepared by the Transportation Research Board, for signalized intersections using the Synchro computer software.

The result of capacity analysis is a level of service (LOS) rating for each signalized intersection. Level of service is a qualitative measure of traffic operating conditions where a letter grade "A" through "F", corresponding to progressively worsening traffic operation, is assigned to the intersection.

Level of service for signalized intersections is stated in terms of the average control delay per vehicle for a peak 15 minute analysis period. The level of service criteria for signalized intersections is shown in Table 2.

TABLE 2
LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (SEC)
A	≤10
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

Table 3 shows a summary of the level of service and delay results at the key intersections for the existing, existing plus project, existing plus project plus other, 2040 base and 2040 base plus project scenarios. The capacity analysis worksheets are included in the Appendix.

TABLE 3
INTERSECTION LEVEL OF SERVICE AND DELAY RESULTS

	EXISTING		EXISTING + PROJECT		EXISTING + PROJECT + OTHER		2040 BASE		2040 BASE + PROJECT	
INTERSECTION	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
US-95A/Newlands Existing Improvements	C25.8 N/A	D52.4 N/A	C27.6 N/A	D52.8 N/A	C27.6 N/A	D53.1 N/A	D47.9 D46.2	E60.0 D53.8	D48.3 D46.5	E60.8 D54.8
US-95A/Fremont Existing Improvements	C30.3 N/A	D48.2 N/A	C32.6 C32.3	E56.7 D42.3	C34.6 C33.9	E68.5 D50.7	D43.1 D38.0	F92.8 D54.4	D46.7 D38.2	F112 D54.8

US-95A/Newlands Drive Intersection

The US-95A/Newlands Drive intersection was analyzed as a signalized four-leg intersection with the existing approach lanes and signal phasing for all scenarios. The intersection currently operates at LOS C with a delay of 25.8 seconds per vehicle during the AM peak hour and LOS D with a delay of 52.4 seconds per vehicle during the PM peak hour. For the existing plus project traffic volumes the intersection continues to operate at LOS C with delay increasing to 27.6 seconds per vehicle during the AM peak hour and LOS D with delay increasing to 52.8 seconds per vehicle during the PM peak hour. For the existing plus project plus other traffic volumes the intersection continues to operate at LOS C with a delay of 27.6 seconds per vehicle during the AM peak hour and LOS D with delay increasing to 53.1 seconds per vehicle during the PM peak hour. For the 2040 base traffic volumes the intersection operates at LOS D with a delay of 47.9 seconds per vehicle during the AM peak hour and LOS E with a delay of 60.0 seconds per vehicle during the PM peak hour. For the 2040 base plus project traffic volumes the intersection continues to operate at LOS D with delay increasing to 48.3 seconds per vehicle during the AM peak hour and LOS E with delay increasing to 60.8 seconds per vehicle during the PM peak hour.

The US-95A/Newlands Drive intersection meets the Nevada Department of Transportation's policy LOS D standard for the existing, existing plus project and existing plus project plus other scenarios but not for the 2040 base and 2040 base plus project scenarios. The US-95A/Newlands Drive intersection was subsequently re-analyzed with traffic signal timing improvements for the 2040 base and 2040 base plus project traffic volumes and is anticipated to operates at LOS D during the AM and PM peak hours. The traffic signal timing improvements include overlap phasing for the northbound right turn movement. Overlap phasing will allow the northbound right turn and westbound left turn movements to run concurrently.

US-95A/Fremont Street/Chisholm Trail Intersection

The US-95A/Fremont Street/Chisholm Trail intersection was analyzed as a signalized four-leg intersection with the existing approach lanes and signal phasing for all scenarios. The intersection currently operates at LOS C with a delay of 30.3 seconds per vehicle during the AM peak hour and LOS D with a delay of 48.2 seconds per vehicle during the PM peak hour. For the existing plus project traffic volumes the intersection continues to operate at LOS C with delay increasing to 32.6 seconds per vehicle during the AM peak hour but drops to LOS E with a delay of 56.7 seconds per vehicle during the PM peak hour. For the existing plus project plus other traffic volumes the intersection continues to operate at LOS C with delay increasing to 34.6 seconds per vehicle during the AM peak hour and LOS E with delay increasing to 68.5 seconds per vehicle during the PM peak hour. For the 2040 base traffic volumes the intersection operates at LOS D with a delay of 43.1 seconds per vehicle during the AM peak hour and LOS F with a delay of 92.8 seconds per vehicle during the PM peak hour. For the 2040 base plus project traffic volumes the intersection continues to operate at LOS D with delay increasing to 46.7 seconds per vehicle during the AM peak hour and LOS F with delay increasing to 111.9 seconds per vehicle during the PM peak hour.

The US-95A/Fremont Street/Chisholm Trail intersection meets the Nevada Department of Transportation's policy LOS D standard for the existing scenario but not for the remaining scenarios. The US-95A/Fremont Street/Chisholm Trail intersection was subsequently re-analyzed with capacity and signal timing improvements and is anticipated to operates at LOS D or better during the AM and PM peak hours. The capacity improvements include the addition of exclusive right turn lanes at the east Chisholm Trail and west Fremont Street approaches. The traffic signal timing improvements include overlap phasing for the eastbound right turn movement. Overlap phasing will allow the eastbound right turn and northbound left turn movements to run concurrently.

It is recommended that the US-95A/Fremont Street/Chisholm Trail intersection be improved to include separate left turn, through and right turn lanes at the west Fremont Street and east Chisholm Trail approaches. It is recommended that the traffic signal at the US-95A/Fremont Street/Chisholm Trail intersection be modified to contain overlap phasing for the right turn movement at the west Fremont Street approach.

STREET CAPACITY ANALYSIS

Sandia Drive, Wildwood Drive and Fernwood Drive were identified for street capacity analysis for the existing plus project average daily traffic volumes. City of Fernley design standards do not appear to have street capacity thresholds. Sandia Drive, Wildwood Drive and Fernwood Drive were therefore reviewed for capacity based on traffic volume thresholds established by other agencies in the region, in this case Washoe County, Nevada. The Washoe County street standards indicate that 32 feet wide streets, measured from the front face of curbs, can serve a maximum of 1,000 ADT. Also, Washoe County street standards indicate that 40 feet wide streets, measured from the front face of curbs, can serve a maximum of 2,000 ADT when the street provides residential driveway access as is the case for Sandia Drive, Wildwood Drive and Fernwood Drive. Sandia Drive has a street width of ±39.5 feet and is anticipated to serve ±1,630 ADT which generally meets Washoe County's 40 foot street width with maximum 2,000 ADT standard. Fernwood Drive has a street width of ±35 feet and is anticipated to serve ±600 ADT which meets Washoe County's 32 foot street width with maximum 1,000 ADT standard. Wildwood Drive has a street width of ±35 feet and is anticipated to serve ±1,950 ADT which does not meet Washoe County's 32 foot and 40 foot street width standards.

SITE PLAN REVIEW

A copy of the site plan for Sherwood Village is included in the Appendix. The site plan indicates that project access will be provided from Wildwood Drive and Fernwood Drive via existing street connections to Newlands Drive and Fremont Street and ultimately US-95A. Wildwood Drive and Fernwood Drive will be constructed through the eastern portion of the project site that contains duplexes. It is recommended that the new segments of Wildwood Drive and Fernwood Drive be constructed per City of Fernley standards.

The site plan also indicates that a new on-site street will be constructed beginning at Fernwood Drive and running westerly through Wildwood Drive and ending at a roundabout in the apartment portion of the project. It is recommended that the segment of the new east/west street located within the duplex portion of the project be constructed per City of Fernley standards. It is anticipated that the segment of the new east/west street located within the apartment portion of the project will be a private street. However, if this segment is intended to be a public street then the ninety-degree parking spaces shown on the site plan will not be allowed per City of Fernley requirements.

The new east/west is anticipated to provide all access to the apartment complex. The site plan indicates that street stubs will be provided at the west property line near the roundabout and at the east property line in the vicinity of Tanglewood Drive. It is anticipated that these street stubs will be gated for emergency access only.

The main entry street will intersect four additional on-site streets at the proposed roundabout. These internal streets will circulate through the site. On-site parking is provided along the interior streets. The proposed roundabout, interior streets, and parking areas are anticipated to provide good access and on-site circulation. It is recommended that the on-site roundabout, streets, and parking areas be designed per City of Fernley standards.

RECOMMENDATIONS

Traffic generated by the Sherwood Village development will have some impact on the adjacent street network. The following recommendations are made to mitigate project traffic impacts.

It is recommended that any required signing, striping, or traffic control improvements comply with City of Fernley and Nevada Department of Transportation requirements.

It is recommended that the US-95A/Fremont Street/Chisholm Trail intersection be improved to include separate left turn, through and right turn lanes at the west Fremont Street and east Chisholm Trail approaches. It is recommended that the traffic signal at the US-95A/Fremont Street/Chisholm Trail intersection be modified to contain overlap phasing for the right turn movement at the west Fremont Street approach.

It is recommended that the new on-site segments of Wildwood Drive and Fernwood Drive be constructed per City of Fernley standards. It is recommended that the new east/west street segment located within the duplex portion of the project be constructed per City of Fernley standards.

It is recommended that the on-site roundabout, streets, and parking areas be designed per City of Fernley standards.

APPENDIX

SHERWOOD VILLAGE CONCEPT MAP

PHELPS ENGINEERING

	1 Bedroom	2 Bedroom	3 Bedroom	3/5
Number of Units	153	77	80	384
Unit Square Feet	663	1,130	1,500	
Total Square Feet	**118,560**	**132,100**	**90,000**	**342,050**
Unit Mix	53%	33%	15%	100%
Duplex Units				50
Total Units				434
Total Acreage				31
Units Per Acre				14.00

PHASE TWO: DUPLEX

OPEN SPACE

PARK

PHASE ONE: APARTMENTS

RETENTION

50' IRRIGATION EASEMENT

RETENTION

50' IRRIGATION EASEMENT

OPEN SPACE

N

The concept plan is illustrative in nature and does not guarantee layout or any entitlements related development rights.

Single-Family Detached Housing
(210)

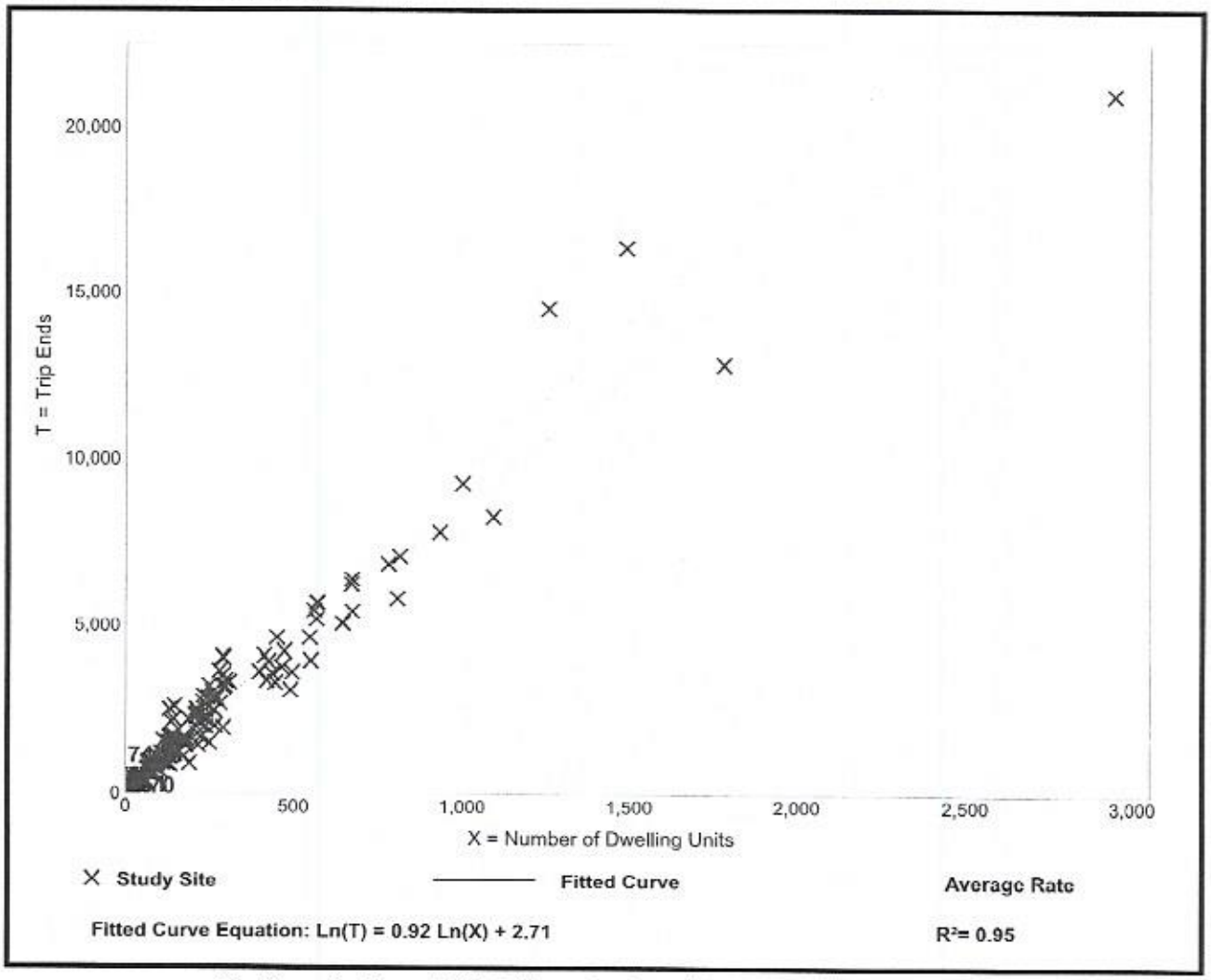
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

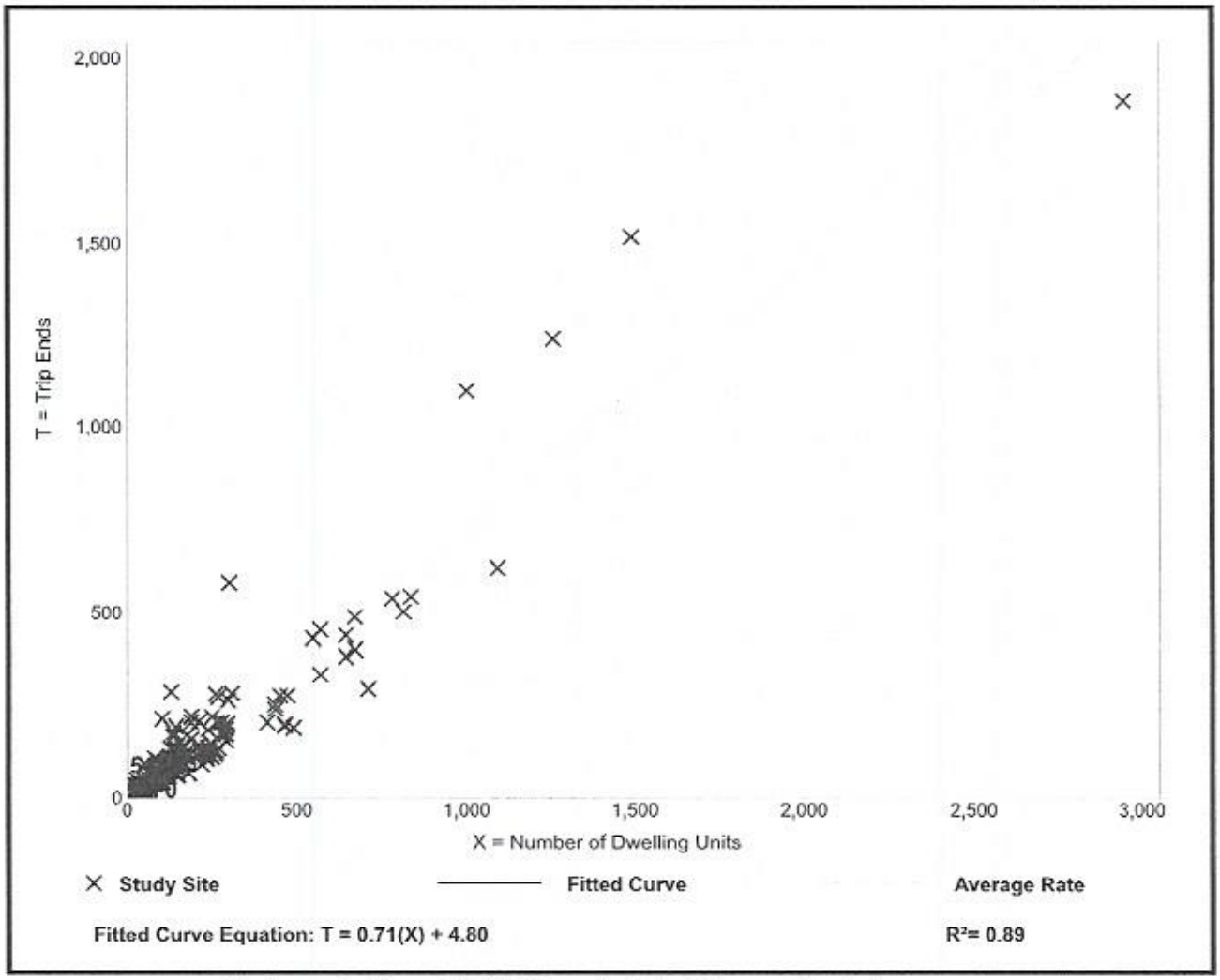
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 173
Avg. Num. of Dwelling Units: 219
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



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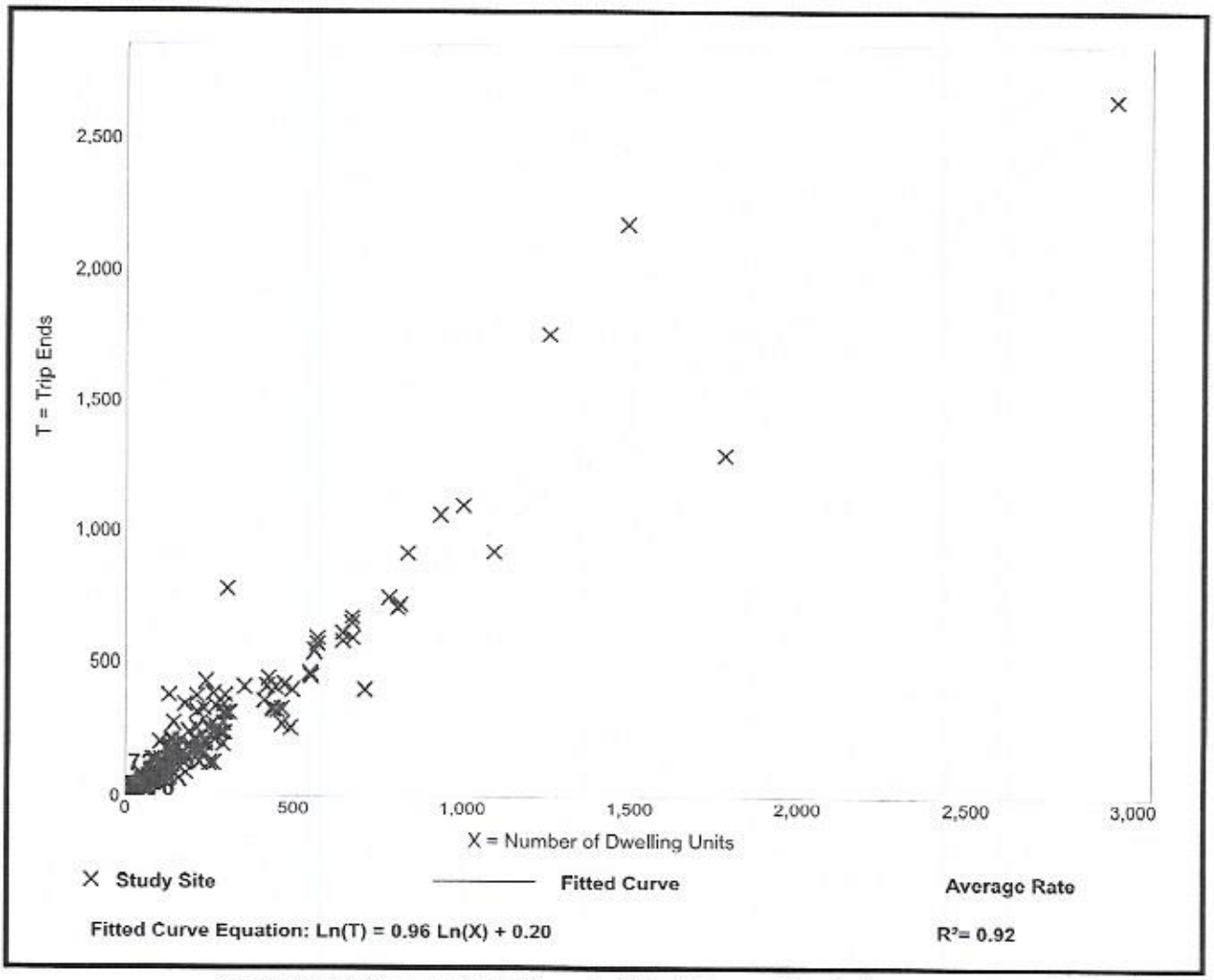
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 190
Avg. Num. of Dwelling Units: 242
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Multifamily Housing (Low-Rise)
(220)

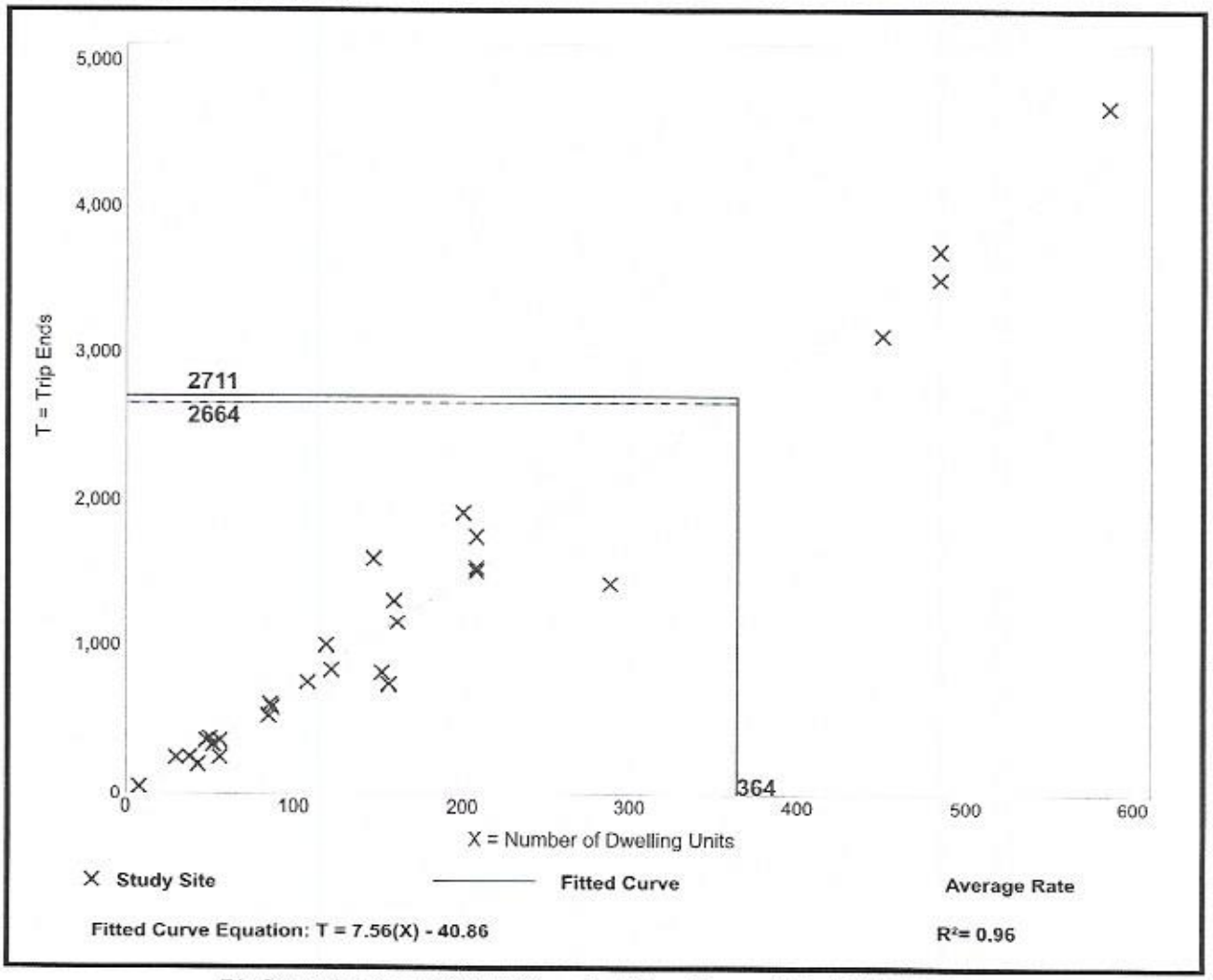
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 29
Avg. Num. of Dwelling Units: 168
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.32	4.45 - 10.97	1.31

Data Plot and Equation



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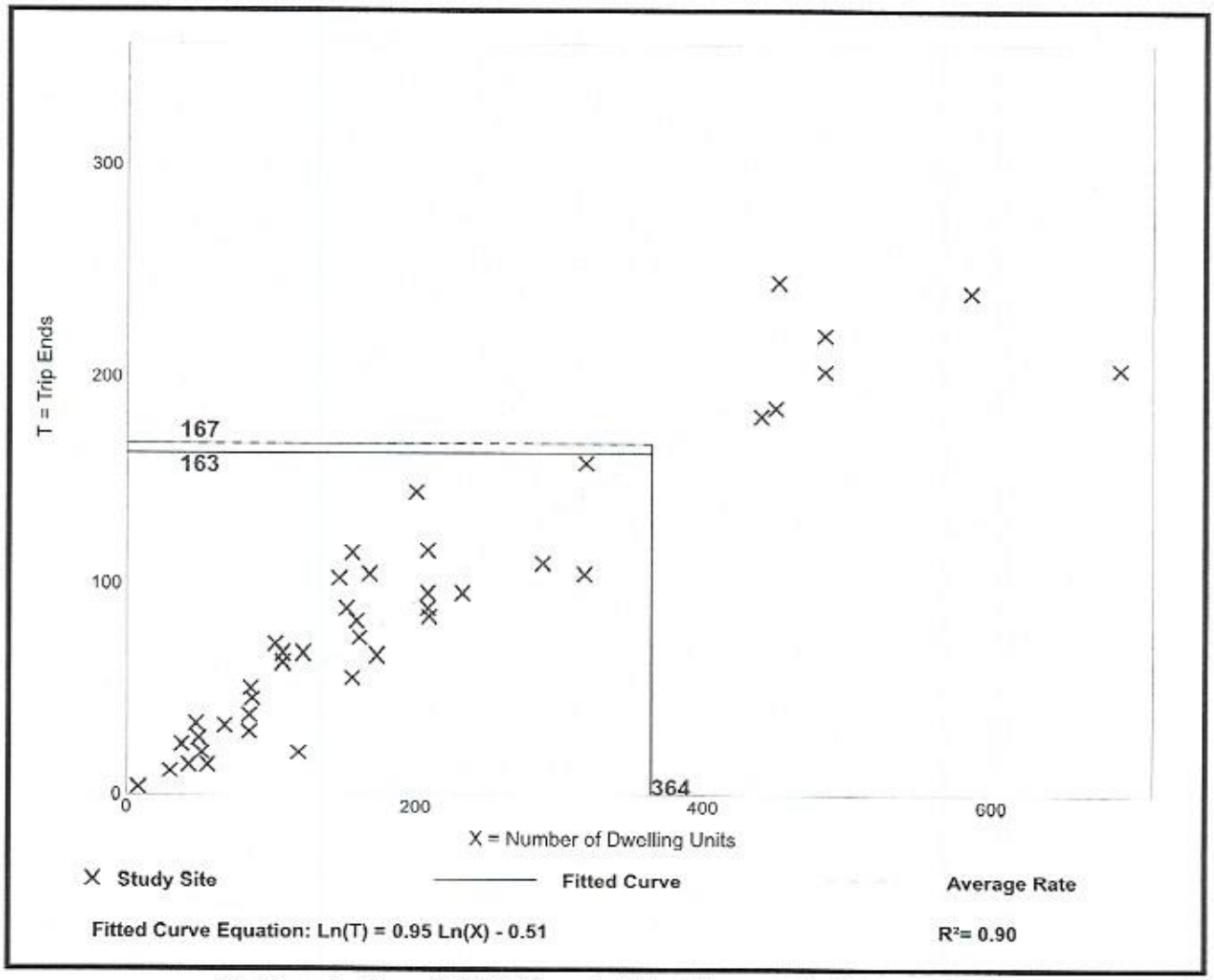
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 42
Avg. Num. of Dwelling Units: 199
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation



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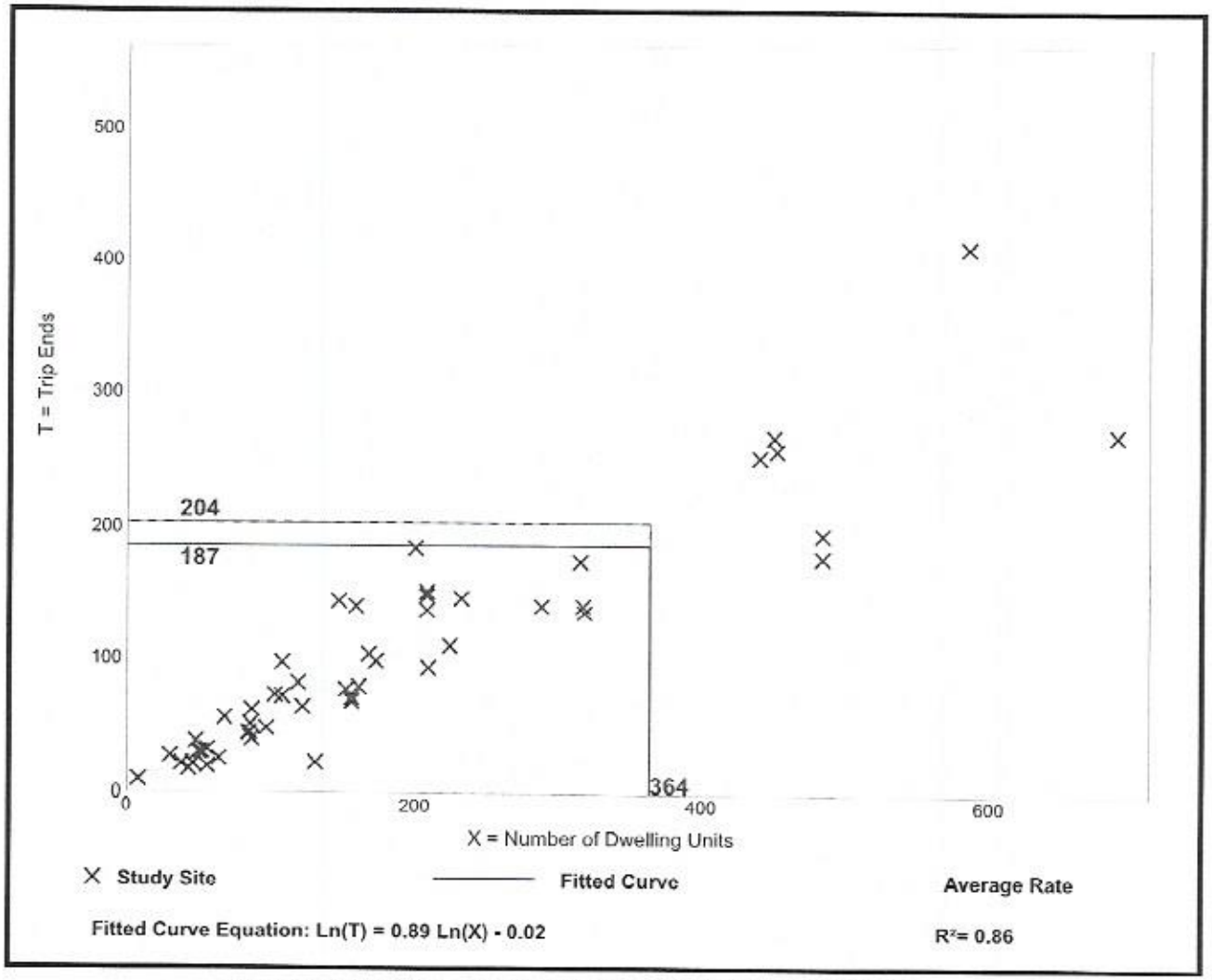
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	50
Avg. Num. of Dwelling Units:	187
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Data Plot and Equation





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	17	26	154	17	46	23	624	241	64	253	12
Future Volume (veh/h)	36	17	26	154	17	46	23	624	241	64	253	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	39	18	28	167	18	50	25	678	262	70	275	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	106	80	71	226	96	81	612	1186	529	655	1246	59
Arrive On Green	0.06	0.05	0.05	0.07	0.05	0.05	0.69	0.67	0.67	0.37	0.36	0.36
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3428	161
Grp Volume(v), veh/h	39	18	28	167	18	50	25	678	262	70	141	147
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1826
Q Serve(g_s), s	2.3	1.1	1.9	5.3	1.0	3.4	0.5	11.3	9.0	2.9	6.1	6.1
Cycle Q Clear(g_c), s	2.3	1.1	1.9	5.3	1.0	3.4	0.5	11.3	9.0	2.9	6.1	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	106	80	71	226	96	81	612	1186	529	655	641	664
V/C Ratio(X)	0.37	0.22	0.39	0.74	0.19	0.62	0.04	0.57	0.50	0.11	0.22	0.22
Avail Cap(c_a), veh/h	106	598	533	249	663	558	612	1186	529	655	641	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	50.7	51.1	50.4	50.0	51.1	11.4	13.8	13.4	22.7	24.2	24.2
Incr Delay (d2), s/veh	2.1	1.4	3.5	10.0	0.9	7.5	0.0	1.8	3.0	0.1	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.5	0.8	2.5	0.5	1.5	0.2	3.5	2.9	1.2	2.6	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.8	52.1	54.5	60.4	50.9	58.7	11.4	15.6	16.4	22.7	25.0	25.0
LnGrp LOS	D	D	D	E	D	E	B	B	B	C	C	C
Approach Vol, veh/h		85			235			965			358	
Approach Delay, s/veh		52.8			59.3			15.7			24.6	
Approach LOS		D			E			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	45.8	42.0	12.3	10.0	42.8	45.0	11.6	10.6
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	37.0	8.0	37.0	5.0	40.0	6.0	39.0
Max Q Clear Time (g_c+I1), s	4.9	13.3	7.3	3.9	2.5	8.1	4.3	5.4
Green Ext Time (p_c), s	0.0	5.7	0.0	0.2	0.0	1.6	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	15	80	82	15	39	98	848	33	46	383	18
Future Volume (veh/h)	25	15	80	82	15	39	98	848	33	46	383	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	27	16	87	89	16	42	107	922	36	50	416	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	165	21	116	113	25	66	134	1352	53	498	2038	98
Arrive On Green	0.09	0.08	0.08	0.06	0.06	0.06	0.08	0.39	0.39	0.56	1.00	1.00
Sat Flow, veh/h	1781	252	1371	1781	456	1198	1781	3459	135	1781	3425	164
Grp Volume(v), veh/h	27	0	103	89	0	58	107	470	488	50	214	222
Grp Sat Flow(s),veh/h/ln	1781	0	1624	1781	0	1655	1781	1763	1831	1781	1763	1826
Q Serve(g_s), s	1.5	0.0	6.8	5.4	0.0	3.8	6.5	24.3	24.3	1.4	0.0	0.0
Cycle Q Clear(g_c), s	1.5	0.0	6.8	5.4	0.0	3.8	6.5	24.3	24.3	1.4	0.0	0.0
Prop In Lane	1.00		0.84	1.00		0.72	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	165	0	137	113	0	91	134	689	716	498	1049	1087
V/C Ratio(X)	0.16	0.00	0.75	0.79	0.00	0.64	0.80	0.68	0.68	0.10	0.20	0.20
Avail Cap(c_a), veh/h	165	0	399	194	0	511	211	689	716	498	1049	1087
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	46.0	0.0	49.2	50.8	0.0	50.9	50.1	27.8	27.8	17.8	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	8.0	11.3	0.0	7.2	11.0	5.4	5.2	0.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	3.1	2.8	0.0	1.8	3.3	11.0	11.3	0.6	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	57.3	62.1	0.0	58.1	61.0	33.2	33.0	17.9	0.4	0.4
LnGrp LOS	D	A	E	E	A	E	E	C	C	B	A	A
Approach Vol, veh/h		130			147			1065			486	
Approach Delay, s/veh		55.0			60.5			35.9			2.2	
Approach LOS		E			E			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.7	48.0	12.0	14.3	13.3	70.5	15.2	11.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	43.0	12.0	27.0	13.0	38.0	5.0	34.0
Max Q Clear Time (g_c+I1), s	3.4	26.3	7.4	8.8	8.5	2.0	3.5	5.8
Green Ext Time (p_c), s	0.0	5.6	0.1	0.5	0.1	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	48	58	507	101	95	42	405	338	137	651	53
Future Volume (veh/h)	43	48	58	507	101	95	42	405	338	137	651	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	47	52	63	551	110	103	46	440	367	149	708	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	61	105	94	598	373	313	502	1112	496	525	1091	89
Arrive On Green	0.03	0.06	0.06	0.17	0.20	0.20	0.09	0.10	0.10	0.30	0.33	0.33
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3300	270
Grp Volume(v), veh/h	47	52	63	551	110	103	46	440	367	149	378	388
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1807
Q Serve(g_s), s	3.4	3.7	5.1	20.6	6.5	3.9	3.1	15.2	29.5	8.4	23.8	23.8
Cycle Q Clear(g_c), s	3.4	3.7	5.1	20.6	6.5	3.9	3.1	15.2	29.5	8.4	23.8	23.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	61	105	94	598	373	313	502	1112	496	525	583	598
V/C Ratio(X)	0.77	0.50	0.67	0.92	0.30	0.33	0.09	0.40	0.74	0.28	0.65	0.65
Avail Cap(c_a), veh/h	137	506	451	607	719	605	502	1112	496	525	583	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.3	59.3	59.9	52.8	44.3	12.6	43.7	46.7	53.1	35.0	37.1	37.1
Incr Delay (d2), s/veh	18.5	3.6	8.1	19.5	0.4	0.6	0.1	1.0	8.9	0.3	5.5	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	3.2	4.0	15.7	5.5	5.0	2.5	11.6	19.5	6.6	16.5	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.8	62.9	68.1	72.3	44.7	13.3	43.8	47.6	62.0	35.3	42.6	42.5
LnGrp LOS	F	E	E	E	D	B	D	D	E	D	D	D
Approach Vol, veh/h		162			764			853			915	
Approach Delay, s/veh		70.1			60.4			53.6			41.3	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	43.7	46.0	27.7	12.7	41.7	48.0	9.4	30.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	9.0	41.0	23.0	37.0	7.0	43.0	10.0	50.0
Max Q Clear Time (g_c+I1), s	10.4	31.5	22.6	7.1	5.1	25.8	5.4	8.5
Green Ext Time (p_c), s	0.0	3.0	0.1	0.6	0.0	4.4	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	52.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	27	223	156	24	70	155	650	34	80	986	48
Future Volume (veh/h)	42	27	223	156	24	70	155	650	34	80	986	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	46	29	242	170	26	76	168	707	37	87	1072	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	59	32	266	196	110	321	311	1389	73	256	1290	63
Arrive On Green	0.03	0.18	0.18	0.11	0.26	0.26	0.17	0.41	0.41	0.14	0.38	0.38
Sat Flow, veh/h	1781	172	1439	1781	420	1229	1781	3408	178	1781	3422	166
Grp Volume(v), veh/h	46	0	271	170	0	102	168	366	378	87	552	572
Grp Sat Flow(s),veh/h/ln	1781	0	1611	1781	0	1649	1781	1763	1823	1781	1763	1826
Q Serve(g_s), s	3.3	0.0	21.4	12.2	0.0	6.3	11.2	20.1	20.2	5.7	36.9	37.0
Cycle Q Clear(g_c), s	3.3	0.0	21.4	12.2	0.0	6.3	11.2	20.1	20.2	5.7	36.9	37.0
Prop In Lane	1.00		0.89	1.00		0.75	1.00		0.10	1.00		0.09
Lane Grp Cap(c), veh/h	59	0	297	196	0	431	311	719	743	256	664	688
V/C Ratio(X)	0.77	0.00	0.91	0.87	0.00	0.24	0.54	0.51	0.51	0.34	0.83	0.83
Avail Cap(c_a), veh/h	123	0	335	233	0	444	311	719	743	256	664	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	62.3	0.0	52.0	56.9	0.0	37.8	48.9	28.8	28.8	50.1	36.7	36.7
Incr Delay (d2), s/veh	19.0	0.0	26.3	24.6	0.0	0.3	1.9	2.6	2.5	0.6	9.5	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	0.0	16.3	11.2	0.0	4.8	8.8	13.8	14.2	4.7	23.4	24.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.3	0.0	78.3	81.5	0.0	38.1	50.7	31.3	31.3	50.7	46.2	45.9
LnGrp LOS	F	A	E	F	A	D	D	C	C	D	D	D
Approach Vol, veh/h		317			272			912			1211	
Approach Delay, s/veh		78.7			65.3			34.9			46.4	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.7	58.0	19.3	29.0	27.7	54.0	9.3	38.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	13.0	53.0	17.0	27.0	17.0	49.0	9.0	35.0
Max Q Clear Time (g_c+I1), s	7.7	22.2	14.2	23.4	13.2	39.0	5.3	8.3
Green Ext Time (p_c), s	0.1	4.9	0.1	0.6	0.1	5.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	48.2
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
3: US-95A & Newlands

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	32	37	154	22	46	26	627	243	64	254	21
Future Volume (veh/h)	67	32	37	154	22	46	26	627	243	64	254	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	73	35	40	167	24	50	28	682	264	70	276	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	108	82	73	226	96	81	610	1186	529	653	1199	99
Arrive On Green	0.06	0.05	0.05	0.07	0.05	0.05	0.68	0.67	0.67	0.37	0.36	0.36
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3296	273
Grp Volume(v), veh/h	73	35	40	167	24	50	28	682	264	70	147	152
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1806
Q Serve(g_s), s	4.4	2.1	2.7	5.3	1.4	3.4	0.6	11.4	9.1	2.9	6.4	6.4
Cycle Q Clear(g_c), s	4.4	2.1	2.7	5.3	1.4	3.4	0.6	11.4	9.1	2.9	6.4	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	108	82	73	226	96	81	610	1186	529	653	641	657
V/C Ratio(X)	0.68	0.43	0.55	0.74	0.25	0.62	0.05	0.58	0.50	0.11	0.23	0.23
Avail Cap(c_a), veh/h	108	598	533	249	663	558	610	1186	529	653	641	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	51.0	51.3	50.4	50.1	51.1	11.5	13.8	13.4	22.8	24.3	24.3
Incr Delay (d2), s/veh	15.6	3.5	6.2	10.0	1.3	7.4	0.0	1.8	3.0	0.1	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.3	1.8	2.2	4.6	1.2	2.7	0.4	6.3	5.2	2.1	5.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	54.5	57.5	60.4	51.4	58.5	11.5	15.6	16.4	22.8	25.1	25.1
LnGrp LOS	E	D	E	E	D	E	B	B	B	C	C	C
Approach Vol, veh/h		148			241			974			369	
Approach Delay, s/veh		61.1			59.1			15.7			24.7	
Approach LOS		E			E			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	45.7	42.0	12.3	10.1	42.7	45.0	11.7	10.7
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	37.0	8.0	37.0	5.0	40.0	6.0	39.0
Max Q Clear Time (g_c+I1), s	4.9	13.4	7.3	4.7	2.6	8.4	6.4	5.4
Green Ext Time (p_c), s	0.0	5.8	0.0	0.4	0.0	1.7	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	27	171	82	19	39	126	851	33	47	393	19
Future Volume (veh/h)	30	27	171	82	19	39	126	851	33	47	393	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	33	29	186	89	21	42	137	925	36	51	427	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	288	34	218	113	32	65	166	1352	53	370	1729	85
Arrive On Green	0.16	0.16	0.16	0.06	0.06	0.06	0.09	0.39	0.39	0.42	1.00	1.00
Sat Flow, veh/h	1781	218	1400	1781	557	1113	1781	3459	135	1781	3420	168
Grp Volume(v), veh/h	33	0	215	89	0	63	137	471	490	51	220	228
Grp Sat Flow(s),veh/h/ln	1781	0	1618	1781	0	1670	1781	1763	1831	1781	1763	1825
Q Serve(g_s), s	1.7	0.0	14.2	5.4	0.0	4.1	8.3	24.5	24.5	2.0	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	14.2	5.4	0.0	4.1	8.3	24.5	24.5	2.0	0.0	0.0
Prop In Lane	1.00		0.87	1.00		0.67	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	288	0	253	113	0	97	166	689	716	370	891	923
V/C Ratio(X)	0.11	0.00	0.85	0.79	0.00	0.65	0.83	0.68	0.68	0.14	0.25	0.25
Avail Cap(c_a), veh/h	288	0	397	194	0	516	211	689	716	370	891	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	39.4	0.0	45.2	50.8	0.0	50.7	49.0	27.9	27.9	26.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	10.0	11.3	0.0	7.2	18.9	5.4	5.2	0.2	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	10.6	5.0	0.0	3.4	8.0	16.4	16.9	1.5	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	55.1	62.1	0.0	57.9	67.9	33.3	33.1	26.2	0.6	0.6
LnGrp LOS	D	A	E	E	A	E	E	C	C	C	A	A
Approach Vol, veh/h		248			152			1098			499	
Approach Delay, s/veh		53.1			60.3			37.5			3.3	
Approach LOS		D			E			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.8	48.0	12.0	22.2	15.2	60.6	22.8	11.4
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	43.0	12.0	27.0	13.0	38.0	5.0	34.0
Max Q Clear Time (g_c+I1), s	4.0	26.5	7.4	16.2	10.3	2.0	3.7	6.1
Green Ext Time (p_c), s	0.0	5.6	0.1	0.9	0.1	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	27	171	82	19	39	126	851	33	47	393	19
Future Volume (veh/h)	30	27	171	82	19	39	126	851	33	47	393	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	33	29	186	89	21	42	137	925	36	51	427	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	277	258	219	113	86	73	166	1352	53	402	1791	88
Arrive On Green	0.16	0.14	0.14	0.06	0.05	0.05	0.09	0.39	0.39	0.45	1.00	1.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3459	135	1781	3420	168
Grp Volume(v), veh/h	33	29	186	89	21	42	137	471	490	51	220	228
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1763	1831	1781	1763	1825
Q Serve(g_s), s	1.8	1.5	12.6	5.4	1.2	2.9	8.3	24.5	24.5	1.8	0.0	0.0
Cycle Q Clear(g_c), s	1.8	1.5	12.6	5.4	1.2	2.9	8.3	24.5	24.5	1.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	277	258	219	113	86	73	166	689	716	402	923	956
V/C Ratio(X)	0.12	0.11	0.85	0.79	0.24	0.58	0.83	0.68	0.68	0.13	0.24	0.24
Avail Cap(c_a), veh/h	277	459	389	194	578	490	211	689	716	402	923	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	40.0	41.5	46.3	50.8	50.6	51.4	49.0	27.9	27.9	23.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.2	8.9	11.3	1.5	7.0	18.9	5.4	5.2	0.1	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	1.3	9.4	5.0	1.1	2.3	8.0	16.4	16.9	1.4	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	41.7	55.2	62.1	52.1	58.4	67.9	33.3	33.1	24.0	0.6	0.6
LnGrp LOS	D	D	E	E	D	E	E	C	C	C	A	A
Approach Vol, veh/h		248			152			1098			499	
Approach Delay, s/veh		51.6			59.7			37.5			3.0	
Approach LOS		D			E			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.8	48.0	12.0	20.2	15.2	62.6	22.1	10.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	43.0	12.0	27.0	13.0	38.0	5.0	34.0
Max Q Clear Time (g_c+I1), s	3.8	26.5	7.4	14.6	10.3	2.0	3.8	4.9
Green Ext Time (p_c), s	0.0	5.6	0.1	0.6	0.1	2.7	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
3: US-95A & Newlands

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	57	65	509	116	95	53	407	339	137	654	84
Future Volume (veh/h)	62	57	65	509	116	95	53	407	339	137	654	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	67	62	71	553	126	103	58	442	368	149	711	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	86	115	103	599	358	301	519	1031	460	555	992	127
Arrive On Green	0.05	0.06	0.06	0.17	0.19	0.19	0.20	0.20	0.20	0.31	0.32	0.32
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3144	402
Grp Volume(v), veh/h	67	62	71	553	126	103	58	442	368	149	398	404
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1783
Q Serve(g_s), s	4.8	4.4	5.7	20.6	7.6	3.8	3.5	14.3	29.0	8.2	26.0	26.0
Cycle Q Clear(g_c), s	4.8	4.4	5.7	20.6	7.6	3.8	3.5	14.3	29.0	8.2	26.0	26.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	86	115	103	599	358	301	519	1031	460	555	556	562
V/C Ratio(X)	0.78	0.54	0.69	0.92	0.35	0.34	0.11	0.43	0.80	0.27	0.72	0.72
Avail Cap(c_a), veh/h	137	506	451	607	719	605	519	1031	460	555	556	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	58.9	59.5	52.8	45.6	12.1	38.5	42.7	48.7	33.4	39.4	39.4
Incr Delay (d2), s/veh	14.2	3.9	8.0	19.7	0.6	0.7	0.1	1.2	12.7	0.3	7.7	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	3.8	4.5	15.7	6.4	5.1	2.8	10.7	19.1	6.4	18.1	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.4	62.8	67.6	72.5	46.1	12.8	38.6	43.9	61.3	33.6	47.1	47.0
LnGrp LOS	E	E	E	E	D	B	D	D	E	C	D	D
Approach Vol, veh/h		200			782			868			951	
Approach Delay, s/veh		68.7			60.4			51.0			45.0	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	45.9	43.0	27.7	13.4	42.9	46.0	11.3	29.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	12.0	38.0	23.0	37.0	9.0	41.0	10.0	50.0
Max Q Clear Time (g_c+I1), s	10.2	31.0	22.6	7.7	5.5	28.0	6.8	9.6
Green Ext Time (p_c), s	0.1	2.4	0.1	0.7	0.0	4.1	0.0	1.0

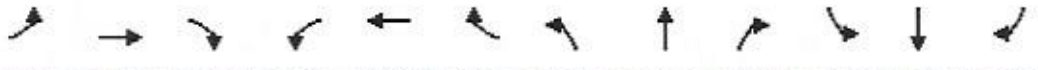
Intersection Summary	
HCM 6th Ctrl Delay	52.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	34	278	156	37	71	247	660	34	81	992	53
Future Volume (veh/h)	45	34	278	156	37	71	247	660	34	81	992	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	49	37	302	170	40	77	268	717	37	88	1078	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	63	37	298	192	160	308	301	1469	76	178	1230	66
Arrive On Green	0.04	0.21	0.21	0.11	0.28	0.28	0.17	0.43	0.43	0.10	0.36	0.36
Sat Flow, veh/h	1781	176	1436	1781	572	1101	1781	3411	176	1781	3402	183
Grp Volume(v), veh/h	49	0	339	170	0	117	268	370	384	88	558	578
Grp Sat Flow(s),veh/h/ln	1781	0	1612	1781	0	1672	1781	1763	1824	1781	1763	1823
Q Serve(g_s), s	3.5	0.0	27.0	12.2	0.0	7.0	19.1	19.7	19.7	6.1	38.5	38.5
Cycle Q Clear(g_c), s	3.5	0.0	27.0	12.2	0.0	7.0	19.1	19.7	19.7	6.1	38.5	38.5
Prop In Lane	1.00		0.89	1.00		0.66	1.00		0.10	1.00		0.10
Lane Grp Cap(c), veh/h	63	0	335	192	0	468	301	759	786	178	637	659
V/C Ratio(X)	0.77	0.00	1.01	0.89	0.00	0.25	0.89	0.49	0.49	0.49	0.88	0.88
Avail Cap(c_a), veh/h	123	0	335	192	0	468	301	759	786	178	637	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	62.2	0.0	51.5	57.2	0.0	36.2	52.8	26.7	26.7	55.4	38.8	38.8
Incr Delay (d2), s/veh	17.9	0.0	52.4	35.5	0.0	0.3	26.0	2.2	2.2	1.7	12.8	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	0.0	22.5	11.9	0.0	5.4	16.0	13.5	13.8	5.0	24.8	25.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.1	0.0	103.9	92.7	0.0	36.5	78.8	28.9	28.8	57.1	51.6	51.3
LnGrp LOS	F	A	F	F	A	D	E	C	C	E	D	D
Approach Vol, veh/h		388			287			1022			1224	
Approach Delay, s/veh		100.9			69.8			42.0			51.9	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	61.0	19.0	32.0	27.0	52.0	9.6	41.4
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	13.0	56.0	14.0	27.0	22.0	47.0	9.0	32.0
Max Q Clear Time (g_c+I1), s	8.1	21.7	14.2	29.0	21.1	40.5	5.5	9.0
Green Ext Time (p_c), s	0.1	5.1	0.0	0.0	0.1	3.7	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	56.7
HCM 6th LOS	E

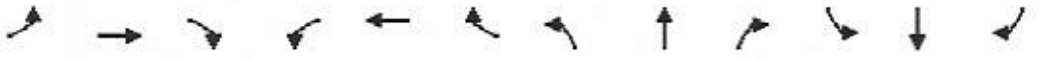


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	34	278	156	37	71	247	660	34	81	992	53
Future Volume (veh/h)	45	34	278	156	37	71	247	660	34	81	992	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	49	37	302	170	40	77	268	717	37	88	1078	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	63	111	597	192	246	208	566	1469	76	443	1230	66
Arrive On Green	0.04	0.06	0.06	0.11	0.13	0.13	0.32	0.43	0.43	0.25	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3411	176	1781	3402	183
Grp Volume(v), veh/h	49	37	302	170	40	77	268	370	384	88	558	578
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1763	1824	1781	1763	1823
Q Serve(g_s), s	3.5	2.5	4.5	12.2	2.5	3.6	15.7	19.7	19.7	5.1	38.5	38.5
Cycle Q Clear(g_c), s	3.5	2.5	4.5	12.2	2.5	3.6	15.7	19.7	19.7	5.1	38.5	38.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.10
Lane Grp Cap(c), veh/h	63	111	597	192	246	208	566	759	786	443	637	659
V/C Ratio(X)	0.77	0.33	0.51	0.89	0.16	0.37	0.47	0.49	0.49	0.20	0.88	0.88
Avail Cap(c_a), veh/h	123	388	833	192	460	390	566	759	786	443	637	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	62.2	58.7	14.6	57.2	50.1	20.2	35.6	26.7	26.7	38.6	38.8	38.8
Incr Delay (d2), s/veh	17.9	1.7	0.7	35.5	0.3	1.1	0.6	2.2	2.2	0.2	12.8	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	2.2	8.0	11.9	2.1	4.2	11.2	13.5	13.8	4.0	24.8	25.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.1	60.4	15.2	92.7	50.4	21.3	36.2	28.9	28.8	38.8	51.6	51.3
LnGrp LOS	F	E	B	F	D	C	D	C	C	D	D	D
Approach Vol, veh/h		388			287			1022			1224	
Approach Delay, s/veh		27.7			67.6			30.8			50.5	
Approach LOS		C			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.3	61.0	19.0	12.7	46.3	52.0	9.6	22.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	13.0	56.0	14.0	27.0	22.0	47.0	9.0	32.0
Max Q Clear Time (g_c+I1), s	7.1	21.7	14.2	6.5	17.7	40.5	5.5	5.6
Green Ext Time (p_c), s	0.1	5.1	0.0	1.2	0.3	3.7	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
3: US-95A & Newlands



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	32	40	160	22	46	29	651	253	64	273	21
Future Volume (veh/h)	67	32	40	160	22	46	29	651	253	64	273	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	73	35	43	174	24	50	32	708	275	70	297	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	115	86	76	233	96	81	619	1186	529	646	1176	91
Arrive On Green	0.06	0.05	0.05	0.07	0.05	0.05	0.69	0.67	0.67	0.37	0.35	0.35
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3317	255
Grp Volume(v), veh/h	73	35	43	174	24	50	32	708	275	70	157	163
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1810
Q Serve(g_s), s	4.4	2.1	2.9	5.5	1.4	3.4	0.6	12.1	9.7	2.9	6.9	7.0
Cycle Q Clear(g_c), s	4.4	2.1	2.9	5.5	1.4	3.4	0.6	12.1	9.7	2.9	6.9	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	115	86	76	233	96	81	619	1186	529	646	625	642
V/C Ratio(X)	0.63	0.41	0.56	0.75	0.25	0.62	0.05	0.60	0.52	0.11	0.25	0.25
Avail Cap(c_a), veh/h	115	598	533	249	663	558	619	1186	529	646	625	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	50.8	51.2	50.3	50.1	51.1	11.0	13.9	13.5	23.0	25.2	25.2
Incr Delay (d2), s/veh	10.9	3.1	6.3	11.0	1.3	7.4	0.0	1.9	3.2	0.1	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	1.8	2.3	4.8	1.2	2.7	0.5	6.6	5.4	2.2	5.5	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	53.9	57.6	61.3	51.4	58.5	11.1	15.9	16.7	23.1	26.1	26.1
LnGrp LOS	E	D	E	E	D	E	B	B	B	C	C	C
Approach Vol, veh/h		151			248			1015			390	
Approach Delay, s/veh		58.4			59.8			15.9			25.6	
Approach LOS		E			E			B			C	

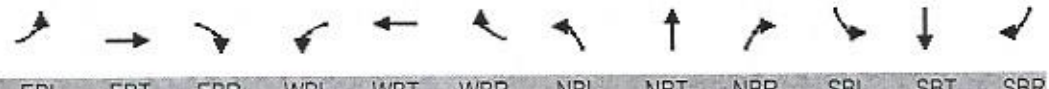
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	45.2	42.0	12.5	10.3	43.2	44.0	12.1	10.7
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	37.0	8.0	37.0	6.0	39.0	6.0	39.0
Max Q Clear Time (g_c+I1), s	4.9	14.1	7.5	4.9	2.6	9.0	6.4	5.4
Green Ext Time (p_c), s	0.0	6.0	0.0	0.4	0.0	1.8	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	30	171	129	24	54	129	873	33	75	393	19
Future Volume (veh/h)	30	30	171	129	24	54	129	873	33	75	393	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	33	33	186	140	26	59	140	949	36	82	427	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	321	39	218	168	37	83	169	1385	53	295	1610	79
Arrive On Green	0.18	0.16	0.16	0.09	0.07	0.07	0.09	0.40	0.40	0.33	0.94	0.94
Sat Flow, veh/h	1781	244	1378	1781	509	1154	1781	3463	131	1781	3420	168
Grp Volume(v), veh/h	33	0	219	140	0	85	140	483	502	82	220	228
Grp Sat Flow(s),veh/h/ln	1781	0	1622	1781	0	1663	1781	1763	1832	1781	1763	1825
Q Serve(g_s), s	1.7	0.0	14.5	8.5	0.0	5.5	8.5	24.9	24.9	3.7	1.1	1.1
Cycle Q Clear(g_c), s	1.7	0.0	14.5	8.5	0.0	5.5	8.5	24.9	24.9	3.7	1.1	1.1
Prop In Lane	1.00		0.85	1.00		0.69	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	321	0	257	168	0	120	169	705	733	295	830	859
V/C Ratio(X)	0.10	0.00	0.85	0.83	0.00	0.71	0.83	0.69	0.69	0.28	0.26	0.27
Avail Cap(c_a), veh/h	321	0	398	194	0	514	211	705	733	295	830	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	37.6	0.0	45.1	48.9	0.0	49.9	48.9	27.3	27.3	32.0	1.7	1.7
Incr Delay (d2), s/veh	0.1	0.0	10.4	22.8	0.0	7.4	19.6	5.4	5.2	0.5	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	10.8	8.5	0.0	4.6	8.2	16.6	17.1	2.8	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	0.0	55.4	71.7	0.0	57.3	68.5	32.6	32.4	32.5	2.5	2.5
LnGrp LOS	D	A	E	E	A	E	E	C	C	C	A	A
Approach Vol, veh/h		252			225			1125			530	
Approach Delay, s/veh		53.1			66.3			37.0			7.1	
Approach LOS		D			E			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.2	49.0	15.4	22.4	15.4	56.8	24.9	13.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	44.0	12.0	27.0	13.0	38.0	5.0	34.0
Max Q Clear Time (g_c+I1), s	5.7	26.9	10.5	16.5	10.5	3.1	3.7	7.5
Green Ext Time (p_c), s	0.0	5.8	0.0	1.0	0.1	2.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	30	171	129	24	54	129	873	33	75	393	19
Future Volume (veh/h)	30	30	171	129	24	54	129	873	33	75	393	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	33	33	186	140	26	59	140	949	36	82	427	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	313	259	219	168	107	91	169	1385	53	330	1678	82
Arrive On Green	0.18	0.14	0.14	0.09	0.06	0.06	0.09	0.40	0.40	0.37	0.98	0.98
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3463	131	1781	3420	168
Grp Volume(v), veh/h	33	33	186	140	26	59	140	483	502	82	220	228
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1763	1832	1781	1763	1825
Q Serve(g_s), s	1.7	1.7	12.6	8.5	1.5	4.0	8.5	24.9	24.9	3.5	0.3	0.3
Cycle Q Clear(g_c), s	1.7	1.7	12.6	8.5	1.5	4.0	8.5	24.9	24.9	3.5	0.3	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	313	259	219	168	107	91	169	705	733	330	865	896
V/C Ratio(X)	0.11	0.13	0.85	0.83	0.24	0.65	0.83	0.69	0.69	0.25	0.25	0.26
Avail Cap(c_a), veh/h	313	459	389	194	578	490	211	705	733	330	865	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	38.1	41.6	46.3	48.9	49.6	50.8	48.9	27.3	27.3	29.3	0.5	0.5
Incr Delay (d2), s/veh	0.1	0.2	8.8	22.8	1.2	7.6	19.6	5.4	5.2	0.4	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	1.5	9.4	8.5	1.3	3.2	8.2	16.6	17.1	2.6	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	41.8	55.1	71.7	50.7	58.4	68.5	32.6	32.4	29.7	1.2	1.2
LnGrp LOS	D	D	E	E	D	E	E	C	C	C	A	A
Approach Vol, veh/h		252			225			1125			530	
Approach Delay, s/veh		51.1			65.8			37.0			5.6	
Approach LOS		D			E			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.4	49.0	15.4	20.2	15.4	59.0	24.3	11.3
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	44.0	12.0	27.0	13.0	38.0	5.0	34.0
Max Q Clear Time (g_c+I1), s	5.5	26.9	10.5	14.6	10.5	2.3	3.7	6.0
Green Ext Time (p_c), s	0.0	5.8	0.0	0.6	0.1	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	57	69	519	116	95	56	429	347	137	683	84
Future Volume (veh/h)	62	57	69	519	116	95	56	429	347	137	683	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	67	62	75	564	126	103	61	466	377	149	742	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	86	120	107	607	367	309	497	1031	460	547	1021	125
Arrive On Green	0.05	0.07	0.07	0.18	0.20	0.20	0.19	0.20	0.20	0.31	0.32	0.32
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3161	388
Grp Volume(v), veh/h	67	62	75	564	126	103	61	466	377	149	414	419
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1786
Q Serve(g_s), s	4.8	4.4	6.0	21.1	7.5	3.8	3.7	15.2	29.9	8.3	27.0	27.0
Cycle Q Clear(g_c), s	4.8	4.4	6.0	21.1	7.5	3.8	3.7	15.2	29.9	8.3	27.0	27.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	86	120	107	607	367	309	497	1031	460	547	570	577
V/C Ratio(X)	0.78	0.52	0.70	0.93	0.34	0.33	0.12	0.45	0.82	0.27	0.73	0.73
Avail Cap(c_a), veh/h	137	506	451	607	719	605	497	1031	460	547	570	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	58.6	59.3	52.7	45.0	12.1	39.6	43.1	49.0	33.8	38.9	38.9
Incr Delay (d2), s/veh	14.2	3.4	8.1	21.0	0.6	0.6	0.1	1.2	13.3	0.3	7.9	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	3.7	4.8	16.1	6.4	5.1	3.0	11.1	19.5	6.5	18.6	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.4	62.0	67.4	73.7	45.6	12.7	39.7	44.3	62.3	34.1	46.8	46.7
LnGrp LOS	E	E	E	E	D	B	D	D	E	C	D	D
Approach Vol, veh/h		204			793			904			982	
Approach Delay, s/veh		68.4			61.3			51.5			44.8	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	45.2	43.0	28.0	13.8	41.2	47.0	11.3	30.5
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	12.0	38.0	23.0	37.0	8.0	42.0	10.0	50.0
Max Q Clear Time (g_c+I1), s	10.3	31.9	23.1	8.0	5.7	29.0	6.8	9.5
Green Ext Time (p_c), s	0.1	2.3	0.0	0.7	0.0	4.2	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	53.1
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	42	278	187	40	80	249	684	34	124	992	53
Future Volume (veh/h)	45	42	278	187	40	80	249	684	34	124	992	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	49	46	302	203	43	87	271	743	37	135	1078	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	63	44	292	227	166	335	307	1262	63	252	1152	62
Arrive On Green	0.04	0.21	0.21	0.13	0.30	0.30	0.17	0.37	0.37	0.05	0.11	0.11
Sat Flow, veh/h	1781	214	1404	1781	552	1117	1781	3418	170	1781	3402	183
Grp Volume(v), veh/h	49	0	348	203	0	130	271	383	397	135	558	578
Grp Sat Flow(s),veh/h/ln	1781	0	1618	1781	0	1669	1781	1763	1825	1781	1763	1823
Q Serve(g_s), s	3.5	0.0	27.0	14.6	0.0	7.7	19.3	22.8	22.8	9.6	40.8	40.9
Cycle Q Clear(g_c), s	3.5	0.0	27.0	14.6	0.0	7.7	19.3	22.8	22.8	9.6	40.8	40.9
Prop In Lane	1.00		0.87	1.00		0.67	1.00		0.09	1.00		0.10
Lane Grp Cap(c), veh/h	63	0	336	227	0	501	307	651	674	252	597	617
V/C Ratio(X)	0.77	0.00	1.04	0.89	0.00	0.26	0.88	0.59	0.59	0.54	0.94	0.94
Avail Cap(c_a), veh/h	123	0	336	233	0	501	307	651	674	252	597	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	62.2	0.0	51.5	55.8	0.0	34.6	52.5	33.0	33.0	57.8	56.3	56.4
Incr Delay (d2), s/veh	17.9	0.0	58.7	31.7	0.0	0.3	24.6	3.9	3.8	1.7	20.2	19.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	0.0	23.6	13.4	0.0	5.8	16.0	15.6	16.0	7.8	29.6	30.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.1	0.0	110.2	87.5	0.0	34.8	77.1	36.9	36.8	59.5	76.5	76.1
LnGrp LOS	F	A	F	F	A	C	E	D	D	E	E	E
Approach Vol, veh/h		397			333			1051			1271	
Approach Delay, s/veh		106.5			66.9			47.2			74.6	
Approach LOS		F			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	53.0	21.6	32.0	27.4	49.0	9.6	44.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	48.0	17.0	27.0	22.0	44.0	9.0	35.0
Max Q Clear Time (g_c+I1), s	11.6	24.8	16.6	29.0	21.3	42.9	5.5	9.7
Green Ext Time (p_c), s	0.2	4.9	0.0	0.0	0.1	0.8	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	68.5
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	42	278	187	40	80	249	684	34	124	992	53
Future Volume (veh/h)	45	42	278	187	40	80	249	684	34	124	992	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	49	46	302	203	43	87	271	743	37	135	1078	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	63	120	602	227	293	248	562	1262	63	508	1152	62
Arrive On Green	0.04	0.06	0.06	0.13	0.16	0.16	0.32	0.37	0.37	0.19	0.23	0.23
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3418	170	1781	3402	183
Grp Volume(v), veh/h	49	46	302	203	43	87	271	383	397	135	558	578
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1763	1825	1781	1763	1823
Q Serve(g_s), s	3.5	3.1	5.1	14.6	2.6	3.6	16.0	22.8	22.8	8.4	40.4	40.4
Cycle Q Clear(g_c), s	3.5	3.1	5.1	14.6	2.6	3.6	16.0	22.8	22.8	8.4	40.4	40.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.10
Lane Grp Cap(c), veh/h	63	120	602	227	293	248	562	651	674	508	597	617
V/C Ratio(X)	0.77	0.38	0.50	0.89	0.15	0.35	0.48	0.59	0.59	0.27	0.94	0.94
Avail Cap(c_a), veh/h	123	388	830	233	504	427	562	651	674	508	597	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	62.2	58.3	13.6	55.8	47.3	16.0	35.9	33.0	33.0	41.0	48.9	48.9
Incr Delay (d2), s/veh	17.9	2.0	0.6	31.7	0.2	0.8	0.6	3.9	3.8	0.2	20.2	19.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	2.8	7.5	13.4	2.2	4.6	11.3	15.6	16.0	6.7	28.4	29.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.1	60.3	14.3	87.5	47.6	16.8	36.5	36.9	36.8	41.2	69.1	68.7
LnGrp LOS	F	E	B	F	D	B	D	D	D	D	E	E
Approach Vol, veh/h		397			333			1051			1271	
Approach Delay, s/veh		27.7			63.9			36.8			65.9	
Approach LOS		C			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	42.0	53.0	21.6	13.4	46.0	49.0	9.6	25.3
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	48.0	17.0	27.0	22.0	44.0	9.0	35.0
Max Q Clear Time (g_c+I1), s	10.4	24.8	16.6	7.1	18.0	42.4	5.5	5.6
Green Ext Time (p_c), s	0.2	4.9	0.0	1.3	0.3	1.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	50.7
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
3: US-95A & Newlands

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	26	40	178	26	71	36	663	281	99	274	19
Future Volume (veh/h)	56	26	40	178	26	71	36	663	281	99	274	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	61	28	43	193	28	77	39	721	305	108	298	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	92	82	73	250	126	106	619	1087	485	717	1225	86
Arrive On Green	0.05	0.05	0.05	0.07	0.07	0.07	0.11	0.10	0.10	0.41	0.37	0.37
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3342	234
Grp Volume(v), veh/h	61	28	43	193	28	77	39	721	305	108	156	163
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1813
Q Serve(g_s), s	4.0	1.8	3.2	6.6	1.7	5.8	2.3	23.6	22.3	4.6	7.4	7.5
Cycle Q Clear(g_c), s	4.0	1.8	3.2	6.6	1.7	5.8	2.3	23.6	22.3	4.6	7.4	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	92	82	73	250	126	106	619	1087	485	717	646	665
V/C Ratio(X)	0.66	0.34	0.59	0.77	0.22	0.72	0.06	0.66	0.63	0.15	0.24	0.24
Avail Cap(c_a), veh/h	178	563	502	314	577	485	619	1087	485	717	646	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	55.5	56.1	54.6	53.0	54.8	35.7	47.9	47.3	22.6	26.4	26.4
Incr Delay (d2), s/veh	7.9	2.4	7.3	8.8	0.9	9.0	0.0	2.8	5.2	0.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.9	1.4	3.1	0.8	2.5	1.0	11.6	10.1	1.9	3.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	57.9	63.4	63.5	53.8	63.8	35.7	50.6	52.6	22.7	27.3	27.3
LnGrp LOS	E	E	E	E	D	E	D	D	D	C	C	C
Approach Vol, veh/h		132			298			1065			427	
Approach Delay, s/veh		62.4			62.7			50.6			26.1	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	53.7	42.0	13.8	10.5	46.7	49.0	11.2	13.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	14.0	37.0	11.0	38.0	7.0	44.0	12.0	37.0
Max Q Clear Time (g_c+I1), s	6.6	25.6	8.6	5.2	4.3	9.5	6.0	7.8
Green Ext Time (p_c), s	0.1	4.5	0.1	0.4	0.0	1.9	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	47.9
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	23	124	129	23	60	151	917	51	74	414	28
Future Volume (veh/h)	39	23	124	129	23	60	151	917	51	74	414	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	42	25	135	140	25	65	164	997	55	80	450	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	248	30	163	168	34	88	585	1302	72	422	979	65
Arrive On Green	0.14	0.12	0.12	0.09	0.07	0.07	0.33	0.38	0.38	0.24	0.29	0.29
Sat Flow, veh/h	1781	254	1370	1781	460	1195	1781	3397	187	1781	3355	223
Grp Volume(v), veh/h	42	0	160	140	0	90	164	517	535	80	236	244
Grp Sat Flow(s),veh/h/ln	1781	0	1624	1781	0	1655	1781	1763	1822	1781	1763	1815
Q Serve(g_s), s	2.5	0.0	11.6	9.3	0.0	6.4	8.2	30.7	30.7	4.3	13.1	13.2
Cycle Q Clear(g_c), s	2.5	0.0	11.6	9.3	0.0	6.4	8.2	30.7	30.7	4.3	13.1	13.2
Prop In Lane	1.00		0.84	1.00		0.72	1.00		0.10	1.00		0.12
Lane Grp Cap(c), veh/h	248	0	193	168	0	122	585	676	698	422	514	529
V/C Ratio(X)	0.17	0.00	0.83	0.83	0.00	0.73	0.28	0.77	0.77	0.19	0.46	0.46
Avail Cap(c_a), veh/h	248	0	365	238	0	483	585	676	698	422	514	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	45.5	0.0	51.7	53.4	0.0	54.4	29.8	32.3	32.3	36.6	34.8	34.8
Incr Delay (d2), s/veh	0.3	0.0	8.7	15.9	0.0	8.2	0.3	8.1	7.8	0.2	2.8	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	5.2	4.9	0.0	3.0	3.5	14.3	14.7	1.9	6.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	0.0	60.3	69.3	0.0	62.6	30.1	40.4	40.1	36.8	37.6	37.5
LnGrp LOS	D	A	E	E	A	E	C	D	D	D	D	D
Approach Vol, veh/h		202			230			1216			560	
Approach Delay, s/veh		57.3			66.7			38.9			37.4	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.4	51.0	16.3	19.3	44.4	40.0	21.7	13.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	11.0	46.0	16.0	27.0	22.0	35.0	8.0	35.0
Max Q Clear Time (g_c+I1), s	6.3	32.7	11.3	13.6	10.2	15.2	4.5	8.4
Green Ext Time (p_c), s	0.1	5.5	0.1	0.7	0.3	2.6	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	43.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	26	40	178	26	71	36	663	281	99	274	19
Future Volume (veh/h)	56	26	40	178	26	71	36	663	281	99	274	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	61	28	43	193	28	77	39	721	305	108	298	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	92	82	73	250	126	106	619	1087	600	717	1225	86
Arrive On Green	0.05	0.05	0.05	0.07	0.07	0.07	0.11	0.10	0.10	0.41	0.37	0.37
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3342	234
Grp Volume(v), veh/h	61	28	43	193	28	77	39	721	305	108	156	163
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1813
Q Serve(g_s), s	4.0	1.8	3.2	6.6	1.7	5.8	2.3	23.6	13.0	4.6	7.4	7.5
Cycle Q Clear(g_c), s	4.0	1.8	3.2	6.6	1.7	5.8	2.3	23.6	13.0	4.6	7.4	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	92	82	73	250	126	106	619	1087	600	717	646	665
V/C Ratio(X)	0.66	0.34	0.59	0.77	0.22	0.72	0.06	0.66	0.51	0.15	0.24	0.24
Avail Cap(c_a), veh/h	178	563	502	314	577	485	619	1087	600	717	646	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	55.5	56.1	54.6	53.0	54.8	35.7	47.9	39.0	22.6	26.4	26.4
Incr Delay (d2), s/veh	7.9	2.4	7.3	8.8	0.9	9.0	0.0	2.8	2.7	0.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.9	1.4	3.1	0.8	2.5	1.0	11.6	5.8	1.9	3.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	57.9	63.4	63.5	53.8	63.8	35.7	50.7	41.7	22.7	27.3	27.3
LnGrp LOS	E	E	E	E	D	E	D	D	D	C	C	C
Approach Vol, veh/h		132			298			1065			427	
Approach Delay, s/veh		62.4			62.7			47.6			26.1	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	53.7	42.0	13.8	10.5	46.7	49.0	11.2	13.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	14.0	37.0	11.0	38.0	7.0	44.0	12.0	37.0
Max Q Clear Time (g_c+I1), s	6.6	25.6	8.6	5.2	4.3	9.5	6.0	7.8
Green Ext Time (p_c), s	0.1	4.5	0.1	0.4	0.0	1.9	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	46.2
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	23	124	129	23	60	151	917	51	74	414	28
Future Volume (veh/h)	39	23	124	129	23	60	151	917	51	74	414	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	42	25	135	140	25	65	164	997	55	80	450	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	136	78	709	168	111	94	723	1302	72	560	979	65
Arrive On Green	0.08	0.04	0.04	0.09	0.06	0.06	0.41	0.38	0.38	0.42	0.39	0.39
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3397	187	1781	3355	223
Grp Volume(v), veh/h	42	25	135	140	25	65	164	517	535	80	236	244
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1763	1822	1781	1763	1815
Q Serve(g_s), s	2.7	1.6	1.5	9.3	1.5	4.8	7.2	30.7	30.7	3.3	12.0	12.0
Cycle Q Clear(g_c), s	2.7	1.6	1.5	9.3	1.5	4.8	7.2	30.7	30.7	3.3	12.0	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.12
Lane Grp Cap(c), veh/h	136	78	709	168	111	94	723	676	698	560	514	529
V/C Ratio(X)	0.31	0.32	0.19	0.83	0.22	0.69	0.23	0.77	0.77	0.14	0.46	0.46
Avail Cap(c_a), veh/h	136	421	1000	238	546	462	723	676	698	560	514	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	52.4	55.9	8.5	53.4	53.8	55.3	23.3	32.3	32.3	24.9	29.7	29.7
Incr Delay (d2), s/veh	1.3	2.3	0.1	15.9	1.0	8.6	0.2	8.1	7.8	0.1	2.8	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.8	1.3	4.9	0.8	2.2	3.1	14.3	14.7	1.4	5.1	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.7	58.2	8.6	69.3	54.8	64.0	23.5	40.4	40.1	25.0	32.5	32.5
LnGrp LOS	D	E	A	E	D	E	C	D	D	C	C	C
Approach Vol, veh/h		202			230			1216			560	
Approach Delay, s/veh		24.1			66.2			38.0			31.4	
Approach LOS		C			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	42.7	51.0	16.3	10.0	53.7	40.0	14.2	12.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	11.0	46.0	16.0	27.0	22.0	35.0	8.0	35.0
Max Q Clear Time (g_c+I1), s	5.3	32.7	11.3	3.6	9.2	14.0	4.7	6.8
Green Ext Time (p_c), s	0.1	5.5	0.1	0.5	0.3	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
3: US-95A & Newlands

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	74	90	598	156	147	65	468	379	212	734	82
Future Volume (veh/h)	66	74	90	598	156	147	65	468	379	212	734	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	69	78	95	629	164	155	68	493	399	223	773	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	88	142	126	661	418	351	443	957	427	553	1074	119
Arrive On Green	0.05	0.08	0.08	0.19	0.22	0.22	0.08	0.09	0.09	0.31	0.34	0.34
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3199	356
Grp Volume(v), veh/h	69	78	95	629	164	155	68	493	399	223	426	433
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1792
Q Serve(g_s), s	5.4	5.9	8.2	25.4	10.5	6.0	5.0	18.7	35.3	13.9	29.6	29.6
Cycle Q Clear(g_c), s	5.4	5.9	8.2	25.4	10.5	6.0	5.0	18.7	35.3	13.9	29.6	29.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	88	142	126	661	418	351	443	957	427	553	592	601
V/C Ratio(X)	0.79	0.55	0.75	0.95	0.39	0.44	0.15	0.52	0.93	0.40	0.72	0.72
Avail Cap(c_a), veh/h	165	470	419	661	681	573	443	957	427	553	592	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.8	62.0	63.1	55.9	46.3	11.9	50.5	54.9	62.5	37.8	40.7	40.7
Incr Delay (d2), s/veh	14.1	3.3	8.6	23.6	0.6	0.9	0.1	1.7	26.8	0.5	7.4	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	5.0	6.5	19.0	8.6	8.0	4.1	13.7	24.6	10.1	20.1	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.9	65.3	71.7	79.5	46.9	12.8	50.7	56.6	89.3	38.3	48.1	48.0
LnGrp LOS	E	E	E	E	D	B	D	E	F	D	D	D
Approach Vol, veh/h		242			948			960			1082	
Approach Delay, s/veh		72.0			62.9			69.8			46.0	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.8	43.0	32.0	16.2	39.8	52.0	11.9	36.3
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	38.0	27.0	37.0	9.0	47.0	13.0	51.0
Max Q Clear Time (g_c+I1), s	15.9	37.3	27.4	10.2	7.0	31.6	7.4	12.5
Green Ext Time (p_c), s	0.1	0.4	0.0	1.0	0.0	4.8	0.1	1.5

Intersection Summary	
HCM 6th Ctrl Delay	60.0
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	42	345	241	37	108	240	703	53	124	1067	74
Future Volume (veh/h)	65	42	345	241	37	108	240	703	53	124	1067	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	68	44	363	254	39	114	253	740	56	131	1123	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	87	34	277	254	121	353	344	1305	99	229	1099	76
Arrive On Green	0.05	0.19	0.19	0.14	0.29	0.29	0.19	0.39	0.39	0.04	0.11	0.11
Sat Flow, veh/h	1781	174	1437	1781	420	1229	1781	3322	251	1781	3344	232
Grp Volume(v), veh/h	68	0	407	254	0	153	253	393	403	131	592	609
Grp Sat Flow(s),veh/h/ln	1781	0	1612	1781	0	1649	1781	1763	1810	1781	1763	1814
Q Serve(g_s), s	5.3	0.0	27.0	20.0	0.0	10.2	18.7	24.4	24.4	10.1	46.0	46.0
Cycle Q Clear(g_c), s	5.3	0.0	27.0	20.0	0.0	10.2	18.7	24.4	24.4	10.1	46.0	46.0
Prop In Lane	1.00		0.89	1.00		0.75	1.00		0.14	1.00		0.13
Lane Grp Cap(c), veh/h	87	0	311	254	0	473	344	693	711	229	579	596
V/C Ratio(X)	0.78	0.00	1.31	1.00	0.00	0.32	0.74	0.57	0.57	0.57	1.02	1.02
Avail Cap(c_a), veh/h	153	0	311	254	0	473	344	693	711	229	579	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	65.9	0.0	56.5	60.0	0.0	39.2	53.2	33.2	33.2	63.2	62.4	62.4
Incr Delay (d2), s/veh	14.3	0.0	160.5	55.9	0.0	0.4	8.0	3.3	3.3	2.6	37.9	37.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	0.0	37.6	18.9	0.0	7.7	14.1	16.4	16.8	8.2	36.0	37.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.1	0.0	217.0	115.9	0.0	39.6	61.2	36.5	36.5	65.8	100.3	100.2
LnGrp LOS	F	A	F	F	A	D	E	D	D	E	F	F
Approach Vol, veh/h		475			407			1049			1332	
Approach Delay, s/veh		197.4			87.2			42.5			96.9	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	60.0	25.0	32.0	32.0	51.0	11.8	45.2
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	55.0	20.0	27.0	27.0	46.0	12.0	35.0
Max Q Clear Time (g_c+I1), s	12.1	26.4	22.0	29.0	20.7	48.0	7.3	12.2
Green Ext Time (p_c), s	0.1	5.3	0.0	0.0	0.4	0.0	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	92.8
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
3: US-95A & Newlands

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	74	90	598	156	147	65	468	379	212	734	82
Future Volume (veh/h)	66	74	90	598	156	147	65	468	379	212	734	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	69	78	95	629	164	155	68	493	399	223	773	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	88	142	126	661	418	351	443	957	730	553	1074	119
Arrive On Green	0.05	0.08	0.08	0.19	0.22	0.22	0.08	0.09	0.09	0.31	0.34	0.34
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3199	356
Grp Volume(v), veh/h	69	78	95	629	164	155	68	493	399	223	426	433
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1792
Q Serve(g_s), s	5.4	5.9	8.2	25.4	10.5	6.0	5.0	18.7	5.8	13.9	29.6	29.6
Cycle Q Clear(g_c), s	5.4	5.9	8.2	25.4	10.5	6.0	5.0	18.7	5.8	13.9	29.6	29.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	88	142	126	661	418	351	443	957	730	553	592	601
V/C Ratio(X)	0.79	0.55	0.75	0.95	0.39	0.44	0.15	0.52	0.55	0.40	0.72	0.72
Avail Cap(c_a), veh/h	165	470	419	661	681	573	443	957	730	553	592	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.8	62.0	63.1	55.9	46.3	11.9	50.5	54.9	36.6	37.8	40.7	40.7
Incr Delay (d2), s/veh	14.1	3.3	8.6	23.6	0.6	0.9	0.1	1.7	2.6	0.5	7.4	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	5.0	6.5	19.0	8.6	8.0	4.1	13.7	19.1	10.1	20.1	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.9	65.3	71.7	79.5	46.9	12.8	50.7	56.7	39.2	38.3	48.1	48.0
LnGrp LOS	E	E	E	E	D	B	D	E	D	D	D	D
Approach Vol, veh/h		242			948			960			1082	
Approach Delay, s/veh		72.0			62.9			49.0			46.0	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.8	43.0	32.0	16.2	39.8	52.0	11.9	36.3
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	38.0	27.0	37.0	9.0	47.0	13.0	51.0
Max Q Clear Time (g_c+I1), s	15.9	20.7	27.4	10.2	7.0	31.6	7.4	12.5
Green Ext Time (p_c), s	0.1	4.4	0.0	1.0	0.0	4.8	0.1	1.5

Intersection Summary	
HCM 6th Ctrl Delay	53.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	42	345	241	37	108	240	703	53	124	1067	74
Future Volume (veh/h)	65	42	345	241	37	108	240	703	53	124	1067	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	68	44	363	254	39	114	253	740	56	131	1123	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	87	153	511	278	353	299	833	1210	92	455	1266	88
Arrive On Green	0.05	0.08	0.08	0.16	0.19	0.19	0.24	0.36	0.36	0.08	0.12	0.12
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	3456	3322	251	1781	3344	232
Grp Volume(v), veh/h	68	44	363	254	39	114	253	393	403	131	592	609
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1728	1763	1810	1781	1763	1814
Q Serve(g_s), s	5.3	3.1	8.0	19.7	2.4	5.3	8.4	25.5	25.5	9.7	46.2	46.3
Cycle Q Clear(g_c), s	5.3	3.1	8.0	19.7	2.4	5.3	8.4	25.5	25.5	9.7	46.2	46.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.13
Lane Grp Cap(c), veh/h	87	153	511	278	353	299	833	642	659	455	667	687
V/C Ratio(X)	0.78	0.29	0.71	0.91	0.11	0.38	0.30	0.61	0.61	0.29	0.89	0.89
Avail Cap(c_a), veh/h	153	361	688	305	521	442	833	642	659	455	667	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	65.9	60.5	18.9	58.2	47.0	17.7	43.5	36.4	36.4	52.2	58.3	58.3
Incr Delay (d2), s/veh	14.3	1.0	2.2	29.0	0.1	0.8	0.2	4.3	4.2	0.3	12.8	12.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	2.8	10.9	16.7	2.1	6.3	6.5	17.3	17.7	7.7	31.4	32.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.1	61.5	21.1	87.2	47.2	18.5	43.7	40.7	40.6	52.4	71.1	70.9
LnGrp LOS	F	E	C	F	D	B	D	D	D	D	E	E
Approach Vol, veh/h		475			407			1049			1332	
Approach Delay, s/veh		33.3			64.1			41.4			69.2	
Approach LOS		C			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.7	56.0	26.8	16.4	38.7	58.0	11.8	31.4
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	51.0	24.0	27.0	16.0	53.0	12.0	39.0
Max Q Clear Time (g_c+I1), s	11.7	27.5	21.7	10.0	10.4	48.3	7.3	7.3
Green Ext Time (p_c), s	0.2	5.1	0.2	1.5	0.4	3.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
3: US-95A & Newlands

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	41	51	178	31	71	39	666	283	99	275	28
Future Volume (veh/h)	87	41	51	178	31	71	39	666	283	99	275	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	95	45	55	193	34	77	42	724	308	108	299	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	119	98	87	273	127	107	591	1087	485	690	1187	118
Arrive On Green	0.07	0.06	0.06	0.08	0.07	0.07	0.11	0.10	0.10	0.39	0.37	0.37
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3238	322
Grp Volume(v), veh/h	95	45	55	193	34	77	42	724	308	108	162	167
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1798
Q Serve(g_s), s	6.3	2.9	4.1	6.6	2.1	5.8	2.5	23.7	22.6	4.8	7.7	7.8
Cycle Q Clear(g_c), s	6.3	2.9	4.1	6.6	2.1	5.8	2.5	23.7	22.6	4.8	7.7	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	119	98	87	273	127	107	591	1087	485	690	646	659
V/C Ratio(X)	0.80	0.46	0.63	0.71	0.27	0.72	0.07	0.67	0.64	0.16	0.25	0.25
Avail Cap(c_a), veh/h	178	563	502	314	577	485	591	1087	485	690	646	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	55.0	55.5	53.9	53.1	54.8	36.8	47.9	47.4	23.8	26.5	26.5
Incr Delay (d2), s/veh	13.9	3.3	7.3	6.0	1.1	8.8	0.0	2.8	5.3	0.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	1.4	1.8	3.0	1.0	2.5	1.1	11.6	10.2	2.0	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.1	58.3	62.8	59.9	54.2	63.7	36.9	50.7	52.7	23.9	27.4	27.5
LnGrp LOS	E	E	E	E	D	E	D	D	D	C	C	C
Approach Vol, veh/h		195			304			1074			437	
Approach Delay, s/veh		64.9			60.2			50.7			26.6	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	51.8	42.0	14.6	11.6	44.8	49.0	13.0	13.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	14.0	37.0	11.0	38.0	7.0	44.0	12.0	37.0
Max Q Clear Time (g_c+I1), s	6.8	25.7	8.6	6.1	4.5	9.8	8.3	7.8
Green Ext Time (p_c), s	0.1	4.5	0.1	0.5	0.0	1.9	0.1	0.4

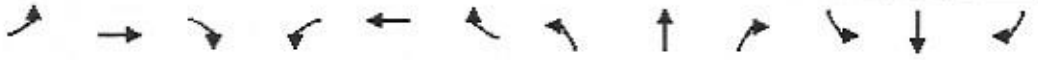
Intersection Summary	
HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	35	215	129	27	60	179	920	51	75	424	29
Future Volume (veh/h)	44	35	215	129	27	60	179	920	51	75	424	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	48	38	234	140	29	65	195	1000	55	82	461	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	365	42	261	168	39	88	464	1302	72	300	976	68
Arrive On Green	0.21	0.19	0.19	0.09	0.08	0.08	0.26	0.38	0.38	0.11	0.20	0.20
Sat Flow, veh/h	1781	226	1393	1781	513	1150	1781	3398	187	1781	3345	232
Grp Volume(v), veh/h	48	0	272	140	0	94	195	519	536	82	242	251
Grp Sat Flow(s),veh/h/ln	1781	0	1620	1781	0	1663	1781	1763	1822	1781	1763	1814
Q Serve(g_s), s	2.6	0.0	19.7	9.3	0.0	6.6	10.9	30.9	30.9	5.1	14.6	14.7
Cycle Q Clear(g_c), s	2.6	0.0	19.7	9.3	0.0	6.6	10.9	30.9	30.9	5.1	14.6	14.7
Prop In Lane	1.00		0.86	1.00		0.69	1.00		0.10	1.00		0.13
Lane Grp Cap(c), veh/h	365	0	303	168	0	127	464	676	698	300	514	529
V/C Ratio(X)	0.13	0.00	0.90	0.83	0.00	0.74	0.42	0.77	0.77	0.27	0.47	0.47
Avail Cap(c_a), veh/h	365	0	364	238	0	485	464	676	698	300	514	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	39.0	0.0	47.6	53.4	0.0	54.3	36.9	32.3	32.3	46.5	40.1	40.1
Incr Delay (d2), s/veh	0.2	0.0	21.4	15.9	0.0	8.2	0.6	8.2	7.9	0.5	3.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	9.8	4.9	0.0	3.1	4.8	14.3	14.8	2.3	7.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	0.0	69.0	69.3	0.0	62.4	37.5	40.5	40.3	47.0	43.0	43.0
LnGrp LOS	D	A	E	E	A	E	D	D	D	D	D	D
Approach Vol, veh/h		320			234			1250			575	
Approach Delay, s/veh		64.5			66.6			39.9			43.6	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.2	51.0	16.3	27.5	36.2	40.0	29.6	14.2
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	11.0	46.0	16.0	27.0	22.0	35.0	8.0	35.0
Max Q Clear Time (g_c+I1), s	7.1	32.9	11.3	21.7	12.9	16.7	4.6	8.6
Green Ext Time (p_c), s	0.0	5.5	0.1	0.8	0.3	2.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	46.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	41	51	178	31	71	39	666	283	99	275	28
Future Volume (veh/h)	87	41	51	178	31	71	39	666	283	99	275	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	95	45	55	193	34	77	42	724	308	108	299	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	119	98	87	273	127	107	591	1087	610	690	1187	118
Arrive On Green	0.07	0.06	0.06	0.08	0.07	0.07	0.11	0.10	0.10	0.39	0.37	0.37
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3238	322
Grp Volume(v), veh/h	95	45	55	193	34	77	42	724	308	108	162	167
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1798
Q Serve(g_s), s	6.3	2.9	4.1	6.6	2.1	5.8	2.5	23.7	12.4	4.8	7.7	7.8
Cycle Q Clear(g_c), s	6.3	2.9	4.1	6.6	2.1	5.8	2.5	23.7	12.4	4.8	7.7	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	119	98	87	273	127	107	591	1087	610	690	646	659
V/C Ratio(X)	0.80	0.46	0.63	0.71	0.27	0.72	0.07	0.67	0.50	0.16	0.25	0.25
Avail Cap(c_a), veh/h	178	563	502	314	577	485	591	1087	610	690	646	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	55.0	55.5	53.9	53.1	54.8	36.8	47.9	38.4	23.8	26.5	26.5
Incr Delay (d2), s/veh	13.9	3.3	7.3	6.0	1.1	8.8	0.0	2.8	2.6	0.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	1.4	1.8	3.0	1.0	2.5	1.1	11.7	5.5	2.0	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.1	58.3	62.8	59.9	54.2	63.7	36.9	50.8	41.0	23.9	27.4	27.5
LnGrp LOS	E	E	E	E	D	E	D	D	D	C	C	C
Approach Vol, veh/h		195			304			1074			437	
Approach Delay, s/veh		64.9			60.2			47.4			26.6	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	51.8	42.0	14.6	11.6	44.8	49.0	13.0	13.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	14.0	37.0	11.0	38.0	7.0	44.0	12.0	37.0
Max Q Clear Time (g_c+I1), s	6.8	25.7	8.6	6.1	4.5	9.8	8.3	7.8
Green Ext Time (p_c), s	0.1	4.5	0.1	0.5	0.0	1.9	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	46.5
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	35	215	129	27	60	179	920	51	75	424	29
Future Volume (veh/h)	44	35	215	129	27	60	179	920	51	75	424	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	48	38	234	140	29	65	195	1000	55	82	461	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	148	91	709	168	112	95	711	1302	72	548	976	68
Arrive On Green	0.08	0.05	0.05	0.09	0.06	0.06	0.40	0.38	0.38	0.31	0.29	0.29
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3398	187	1781	3345	232
Grp Volume(v), veh/h	48	38	234	140	29	65	195	519	536	82	242	251
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1763	1822	1781	1763	1814
Q Serve(g_s), s	3.0	2.4	2.8	9.3	1.8	4.8	8.9	30.9	30.9	4.0	13.5	13.6
Cycle Q Clear(g_c), s	3.0	2.4	2.8	9.3	1.8	4.8	8.9	30.9	30.9	4.0	13.5	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.13
Lane Grp Cap(c), veh/h	148	91	709	168	112	95	711	676	698	548	514	529
V/C Ratio(X)	0.32	0.42	0.33	0.83	0.26	0.69	0.27	0.77	0.77	0.15	0.47	0.47
Avail Cap(c_a), veh/h	148	421	989	238	546	462	711	676	698	548	514	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	51.9	55.5	9.1	53.4	53.9	55.3	24.3	32.3	32.3	30.2	34.9	34.9
Incr Delay (d2), s/veh	1.3	3.1	0.3	15.9	1.2	8.5	0.2	8.2	7.9	0.1	3.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.2	2.4	4.9	0.9	2.2	3.7	14.3	14.8	1.7	6.2	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	58.5	9.4	69.3	55.1	63.9	24.5	40.5	40.3	30.3	37.9	37.8
LnGrp LOS	D	E	A	E	E	E	C	D	D	C	D	D
Approach Vol, veh/h		320			234			1250			575	
Approach Delay, s/veh		21.8			66.0			37.9			36.8	
Approach LOS		C			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.9	51.0	16.3	10.8	52.9	40.0	15.0	12.2
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	11.0	46.0	16.0	27.0	22.0	35.0	8.0	35.0
Max Q Clear Time (g_c+I1), s	6.0	32.9	11.3	4.8	10.9	15.6	5.0	6.8
Green Ext Time (p_c), s	0.1	5.5	0.1	1.0	0.4	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	38.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	83	97	600	171	147	76	470	380	212	737	113
Future Volume (veh/h)	85	83	97	600	171	147	76	470	380	212	737	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	89	87	102	632	180	155	80	495	400	223	776	119
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	110	151	134	661	403	339	434	957	427	545	1029	158
Arrive On Green	0.06	0.08	0.08	0.19	0.22	0.22	0.08	0.09	0.09	0.31	0.34	0.34
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3064	470
Grp Volume(v), veh/h	89	87	102	632	180	155	80	495	400	223	446	449
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1771
Q Serve(g_s), s	6.9	6.6	8.8	25.5	11.7	6.2	5.9	18.8	35.4	14.0	31.5	31.5
Cycle Q Clear(g_c), s	6.9	6.6	8.8	25.5	11.7	6.2	5.9	18.8	35.4	14.0	31.5	31.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	110	151	134	661	403	339	434	957	427	545	592	595
V/C Ratio(X)	0.81	0.58	0.76	0.96	0.45	0.46	0.18	0.52	0.94	0.41	0.75	0.75
Avail Cap(c_a), veh/h	165	470	419	661	681	573	434	957	427	545	592	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	61.7	62.7	55.9	47.7	12.7	51.4	55.0	62.5	38.3	41.4	41.4
Incr Delay (d2), s/veh	15.8	3.5	8.5	24.5	0.8	1.0	0.2	1.6	26.1	0.5	8.7	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	5.6	6.9	19.2	9.4	8.0	4.9	13.6	24.4	10.2	21.4	21.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.6	65.1	71.2	80.5	48.4	13.7	51.5	56.6	88.7	38.8	50.0	50.0
LnGrp LOS	F	E	E	F	D	B	D	E	F	D	D	D
Approach Vol, veh/h		278			967			975			1118	
Approach Delay, s/veh		72.3			63.8			69.3			47.8	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.1	43.0	32.0	16.9	39.1	52.0	13.7	35.2
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	38.0	27.0	37.0	9.0	47.0	13.0	51.0
Max Q Clear Time (g_c+I1), s	16.0	37.4	27.5	10.8	7.9	33.5	8.9	13.7
Green Ext Time (p_c), s	0.1	0.3	0.0	1.0	0.0	4.7	0.1	1.6

Intersection Summary	
HCM 6th Ctrl Delay	60.8
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
6: US-95A & Fremont/Chisholm

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	49	400	241	50	109	332	713	53	125	1073	79
Future Volume (veh/h)	68	49	400	241	50	109	332	713	53	125	1073	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	72	52	421	254	53	115	349	751	56	132	1129	83
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	91	34	277	254	149	324	344	1307	97	229	1094	80
Arrive On Green	0.05	0.19	0.19	0.14	0.28	0.28	0.19	0.39	0.39	0.04	0.11	0.11
Sat Flow, veh/h	1781	177	1435	1781	525	1140	1781	3326	248	1781	3330	245
Grp Volume(v), veh/h	72	0	473	254	0	168	349	398	409	132	597	615
Grp Sat Flow(s),veh/h/ln	1781	0	1612	1781	0	1665	1781	1763	1811	1781	1763	1812
Q Serve(g_s), s	5.6	0.0	27.0	20.0	0.0	11.2	27.0	24.8	24.8	10.2	46.0	46.0
Cycle Q Clear(g_c), s	5.6	0.0	27.0	20.0	0.0	11.2	27.0	24.8	24.8	10.2	46.0	46.0
Prop In Lane	1.00		0.89	1.00		0.68	1.00		0.14	1.00		0.14
Lane Grp Cap(c), veh/h	91	0	311	254	0	474	344	693	711	229	579	595
V/C Ratio(X)	0.79	0.00	1.52	1.00	0.00	0.35	1.02	0.57	0.58	0.58	1.03	1.03
Avail Cap(c_a), veh/h	153	0	311	254	0	474	344	693	711	229	579	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	65.7	0.0	56.5	60.0	0.0	39.9	56.5	33.3	33.3	63.3	62.4	62.4
Incr Delay (d2), s/veh	13.9	0.0	250.4	55.9	0.0	0.5	52.7	3.4	3.4	2.6	40.2	40.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.3	0.0	50.4	18.9	0.0	8.3	24.0	16.7	17.1	8.2	36.6	37.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.5	0.0	306.9	115.9	0.0	40.3	109.2	36.8	36.7	65.9	102.6	102.6
LnGrp LOS	E	A	F	F	A	D	F	D	D	E	F	F
Approach Vol, veh/h		545			422			1156			1344	
Approach Delay, s/veh		276.9			85.8			58.6			99.0	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	60.0	25.0	32.0	32.0	51.0	12.2	44.8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	55.0	20.0	27.0	27.0	46.0	12.0	35.0
Max Q Clear Time (g_c+I1), s	12.2	26.8	22.0	29.0	29.0	48.0	7.6	13.2
Green Ext Time (p_c), s	0.1	5.4	0.0	0.0	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	111.9
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
3: US-95A & Newlands

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	83	97	600	171	147	76	470	380	212	737	113
Future Volume (veh/h)	85	83	97	600	171	147	76	470	380	212	737	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	89	87	102	632	180	155	80	495	400	223	776	119
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	3
Cap, veh/h	110	151	134	661	403	339	434	957	730	545	1029	158
Arrive On Green	0.06	0.08	0.08	0.19	0.22	0.22	0.08	0.09	0.09	0.31	0.34	0.34
Sat Flow, veh/h	1781	1777	1585	3428	1870	1572	1781	3526	1572	1767	3064	470
Grp Volume(v), veh/h	89	87	102	632	180	155	80	495	400	223	446	449
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1714	1870	1572	1781	1763	1572	1767	1763	1771
Q Serve(g_s), s	6.9	6.6	8.8	25.5	11.7	6.2	5.9	18.8	5.9	14.0	31.5	31.5
Cycle Q Clear(g_c), s	6.9	6.6	8.8	25.5	11.7	6.2	5.9	18.8	5.9	14.0	31.5	31.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	110	151	134	661	403	339	434	957	730	545	592	595
V/C Ratio(X)	0.81	0.58	0.76	0.96	0.45	0.46	0.18	0.52	0.55	0.41	0.75	0.75
Avail Cap(c_a), veh/h	165	470	419	661	681	573	434	957	730	545	592	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	61.7	62.7	55.9	47.7	12.7	51.4	55.0	36.6	38.3	41.4	41.4
Incr Delay (d2), s/veh	15.8	3.5	8.5	24.5	0.8	1.0	0.2	1.7	2.5	0.5	8.7	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	5.6	6.9	19.2	9.4	8.0	4.9	13.7	19.0	10.2	21.4	21.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.6	65.1	71.2	80.5	48.4	13.7	51.5	56.7	39.2	38.8	50.0	50.0
LnGrp LOS	F	E	E	F	D	B	D	E	D	D	D	D
Approach Vol, veh/h		278			967			975			1118	
Approach Delay, s/veh		72.3			63.8			49.1			47.8	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.1	43.0	32.0	16.9	39.1	52.0	13.7	35.2
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	38.0	27.0	37.0	9.0	47.0	13.0	51.0
Max Q Clear Time (g_c+I1), s	16.0	20.8	27.5	10.8	7.9	33.5	8.9	13.7
Green Ext Time (p_c), s	0.1	4.4	0.0	1.0	0.0	4.7	0.1	1.6

Intersection Summary	
HCM 6th Ctrl Delay	54.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	49	400	241	50	109	332	713	53	125	1073	79
Future Volume (veh/h)	68	49	400	241	50	109	332	713	53	125	1073	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	72	52	421	254	53	115	349	751	56	132	1129	83
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	91	179	511	278	375	318	784	1212	90	430	1261	93
Arrive On Green	0.05	0.10	0.10	0.16	0.20	0.20	0.23	0.36	0.36	0.08	0.12	0.12
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	3456	3326	248	1781	3330	245
Grp Volume(v), veh/h	72	52	421	254	53	115	349	398	409	132	597	615
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1728	1763	1811	1781	1763	1812
Q Serve(g_s), s	5.6	3.6	9.7	19.7	3.3	5.3	12.2	25.9	26.0	9.8	46.7	46.8
Cycle Q Clear(g_c), s	5.6	3.6	9.7	19.7	3.3	5.3	12.2	25.9	26.0	9.8	46.7	46.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.14
Lane Grp Cap(c), veh/h	91	179	511	278	375	318	784	642	660	430	667	686
V/C Ratio(X)	0.79	0.29	0.82	0.91	0.14	0.36	0.44	0.62	0.62	0.31	0.90	0.90
Avail Cap(c_a), veh/h	153	361	665	305	521	442	784	642	660	430	667	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	65.7	58.9	19.9	58.2	46.1	17.9	46.5	36.5	36.5	53.4	58.5	58.5
Incr Delay (d2), s/veh	13.9	0.9	6.4	29.0	0.2	0.7	0.4	4.5	4.3	0.3	13.1	13.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.3	3.2	13.4	16.7	2.8	6.3	9.0	17.5	17.9	7.7	31.6	32.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.5	59.8	26.3	87.2	46.2	18.6	46.9	41.0	40.9	53.7	71.7	71.5
LnGrp LOS	E	E	C	F	D	B	D	D	D	D	E	E
Approach Vol, veh/h		545			422			1156			1344	
Approach Delay, s/veh		36.5			63.4			42.7			69.8	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.8	56.0	26.8	18.4	36.8	58.0	12.2	33.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	51.0	24.0	27.0	16.0	53.0	12.0	39.0
Max Q Clear Time (g_c+I1), s	11.8	28.0	21.7	11.7	14.2	48.8	7.6	7.3
Green Ext Time (p_c), s	0.1	5.1	0.2	1.7	0.2	2.7	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	54.8
HCM 6th LOS	D

SOLAEGUI
ENGINEERS

August 31, 2020

Mr. Derek Starkey, P.E.
City of Fernley
595 Silver Lace Boulevard
Fernley, Nevada 89408

Re: Sherwood Village, Trip Generation Letter

Dear Derek:

This letter contains the findings of our trip generation comparison of the current site plan of Sherwood Village and the site plan which was the basis of our January 2020 traffic study and further discussion about updated street connections. The project is generally located west of Fernwood Drive and north of Freemont Street in Fernley, Nevada. The original density included 70 duplex dwelling units and 364 multifamily dwelling units. The current site plan has 58 duplex units and 376 multifamily units. The new site plan is attached. Table 1 shows the trip generation summary for the project being calculated as "Single Family Detached Housing for the duplex units and Multifamily (Low Rise) for the remainder. The ITE multifamily land use description limits the use of this category to building containing three or more units. For that reason trip generation totals for the duplexes were calculated at the single homes values. "ITE Land Use #210 for the Single Family Detached Housing land use and #220 Multifamily (Low Rise) were taken from the Tenth Edition of ITE Trip Generation.

TABLE 1
TRIP GENERATION

LAND USE	ADT	AM PEAK HOUR TOTAL	PM PEAK HOUR TOTAL
January 2020 Study			
Single Family			
70 Dwelling Units	661	52	69
Multifamily			
364 Dwelling units	2,664	167	204
Total	3,325	219	273
August New Site Plan			
Single Family			
58 Dwelling Units	630	46	60
Multifamily			
376 Dwelling units	2,802	168	192
Total	3,427	214	252
Difference (August Compared to January)	+102	-5	-21

Solaegui Engineers Ltd. • 715 H Street • Sparks, Nevada 89431 • 775/358-1004 • FAX 775/358-1098
Civil & Traffic Engineers
e-mail: psolaegui@aol.com

As indicated in Table 1, the new site plan results in project trip generation of 3,427 average daily trips with 214 AM peak hour trips and 252 PM peak hour trips. These totals are 102 more average daily trips with 5 fewer AM peak hour trips and 21 fewer PM peak hour trips then the January totals. Because the traffic study capacity analysis work is based on peak hour trips and both new peak hour totals are slightly lower then the traffic study values the January capacity analysis represents worse case project traffic impacts. For that reason the study was not updated for the new site plan.

In recent City of Fernley comments regarding the Vine Street connection to the west and the additional street connection to Freemont Street on the south we have the following comments. We acknowledge that the new Vine Street connection will allow project traffic to conveniently access the local street network west of the site. However, because of the lack of collector or arterial street connecting infrastructure to the west we do not see any significant volume of project residents using that route to access the regional street network. In our opinion the project trip assignment found in the original traffic study is still valid.

The additional on-site street connection to Freemont Street will be attractive to project traffic. In fact as much as 75% of the project traffic bound for Freemont Street will use the new street rather than the Wildwood Drive and Fernwood Drive connections. This new street connection will greatly reduce project traffic impacts on Wildwood Drive and Fernwood Drive. The new on-site street, providing the additional connection to Freemont Street, should be designed to accommodate 2,000 average daily trips.

We trust that this information will be adequate for your review. Please contact us if you have questions or comments.

Very truly yours,
SOLAEGUI ENGINEERS, LTD

Paul W. Solaegui, P.E.

8-31-20
EXP 6-30-22

Enclosures
Letters/ Sherwood Village Letter 2

No.	REVISIONS	DATE	BY
1	PER SAWA ENGINEERING COMMENTS	9/02/2020	DT

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DRAWN BY: MH
CHECKED BY: RSF

SITE PLAN 3

SHERWOOD VILLAGES
TENTATIVE MAP
LYON COUNTY
FERNLEY, NEVADA

09/01/2020
PROJECT NO: 19239

10 of 20

KEYMAP
NOT TO SCALE

SITE KEY NOTES:
(3) 4-FT WIDE SIDEWALK
(A) PARKING LOT WITH SQUARE FOOTAGE
(B) PARKING COUNT
(C) PARKING CANOPY
(D) BUILDING NUMBER

SITE LEGEND:
BOUNDARY LINE
LOT LINE
RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY
EXISTING SECTION LINE
EASEMENT LINE
EXISTING EASEMENT LINE
ROAD CENTER LINE
EXISTING ROAD CENTER LINE
EDGE OF PAVEMENT
CURB & GUTTER
DRAINAGE FLOWLINE
EXISTING TELEPHONE
EXISTING GAS
EXISTING OVERHEAD ELECTRIC
EXISTING ELECTRIC
EXISTING POWER POLE
EXISTING LIGHT POLE
PROPOSED LIGHT POLE
EXISTING FENCE
EXISTING UNPAVED ROAD
LOT NUMBER
43 7743 LOT SIZE IN SQUARE FEET

HORIZ SCALE: 1" = 60'

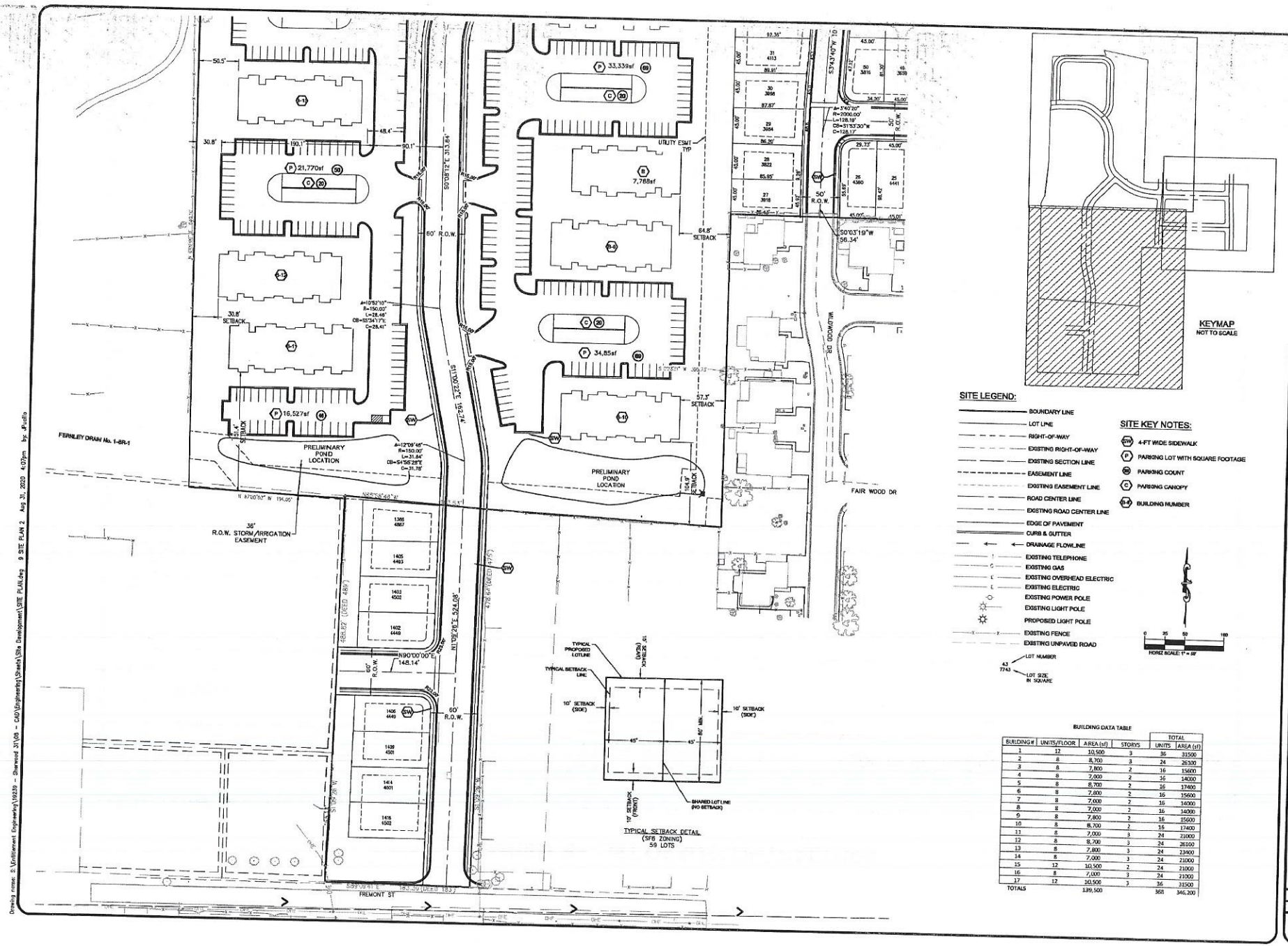
BUILDING DATA TABLE

BUILDING #	UNITS/FLOOR	AREA (sf)	STORYS	TOTAL UNITS	TOTAL AREA (sf)
1	12	10,500	3	36	31500
2	8	8,700	3	24	26100
3	8	7,800	2	16	15600
4	8	7,000	2	16	14000
5	8	8,700	2	16	17400
6	8	7,500	2	16	15000
7	8	7,000	2	16	14000
8	8	7,000	2	16	14000
9	8	7,800	2	16	15600
10	8	8,700	2	16	17400
11	8	7,000	3	24	21000
12	8	8,700	3	24	26100
13	8	8,700	3	24	26100
14	8	7,000	3	24	21000
15	13	10,500	2	26	21000
16	8	7,900	3	24	21000
17	12	10,500	3	36	31500
TOTALS		139,500		368	346,200

TYPICAL SETBACK DETAIL (SFD, DUPLEX/SFA) 59 LOTS

EAGLEWOOD DR
VINE ST
LEMMART POND ICATION

Drawing name: S:\Entitlement Engineering\19239 - Sherwood 31\08 - CAD\Engineering\Sheets\Site Development\SITE PLAN.dwg 10 SITE PLAN 3 Aug 31, 2020 4:07pm bjc uflecito



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DRAWN BY: JTN
CHECKED BY: FGF

SITE PLAN 2

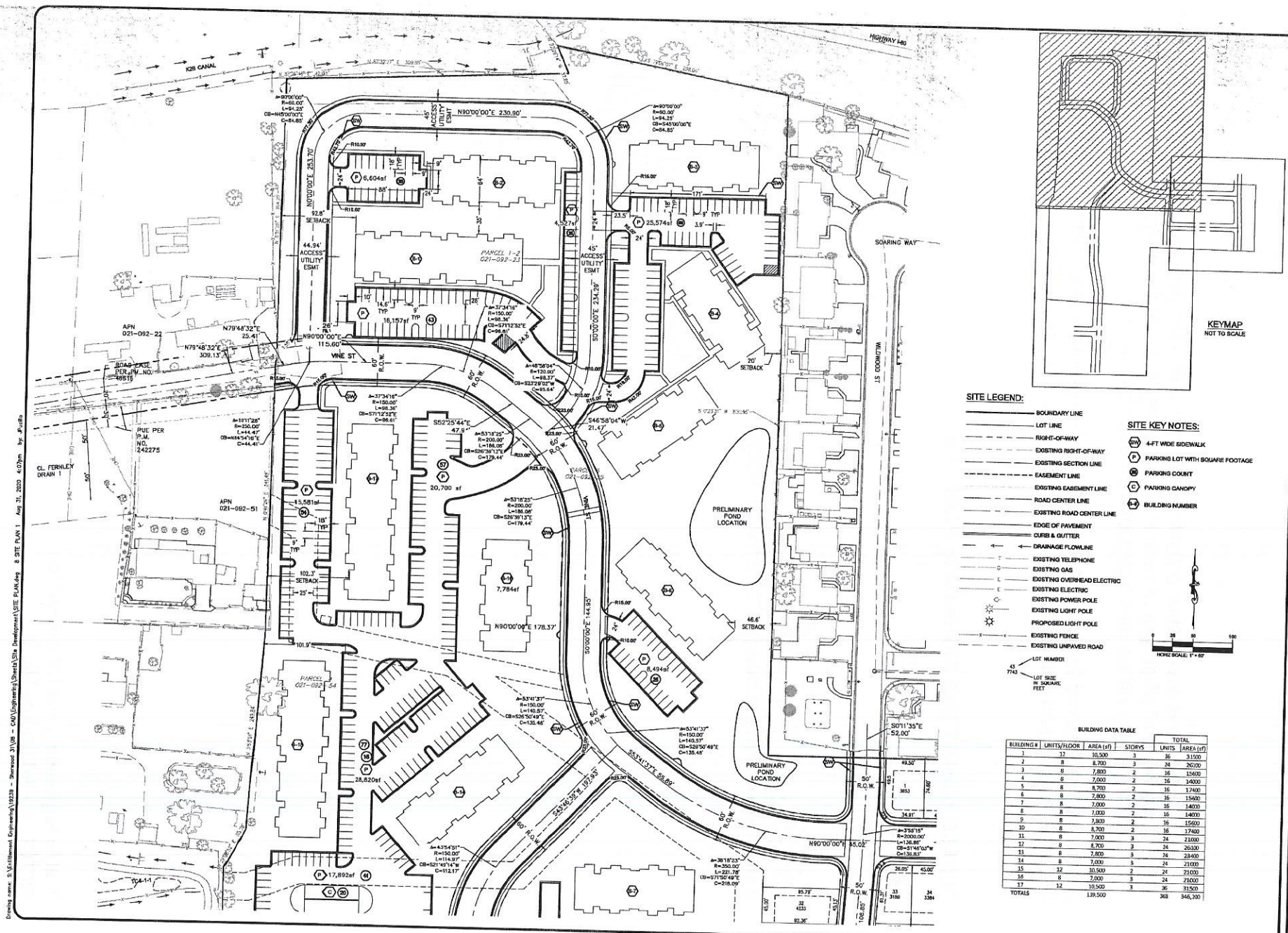
SHERWOOD VILLAGES
TENTATIVE MAP
LYON COUNTY
FERNLEY, NEVADA

09/01/2020
PROJECT NO.: 19239

9 of 20

NO.	REVISIONS	DATE	BY
1	PER SHAW ENGINEERING COMMENTS	9/02/2020	CT

Drawing name: S:\Entitlement Engineering\19239 - Sherwood 31\08 - CAD\Engineering\Sheets\Site Development\SITE PLAN.dwg 9 SITE PLAN 2 Aug 31, 2020 4:07pm by: JPudlo



BUILDING DATA TABLE

BUILDING #	UNITS/FLOOR	AREA (sf)	STORYS	TOTAL UNITS	TOTAL AREA (sf)
1	12	10,500	3	36	31500
2	8	8,700	3	24	26100
3	8	7,800	2	16	15600
4	8	7,000	2	16	14000
5	8	8,700	2	16	17400
6	8	7,800	2	16	15600
7	8	7,000	2	16	14000
8	8	7,000	2	16	14000
9	8	7,800	2	16	15600
10	8	8,700	2	16	17400
11	8	7,000	3	24	21000
12	8	8,700	3	24	26100
13	8	7,800	3	24	23400
14	8	7,000	3	24	21000
15	12	10,500	2	24	21000
16	8	7,000	3	24	21000
17	12	10,500	3	36	31500
TOTALS		139,500		368	346,200

NO.	REVISIONS	DATE	BY
1	FOR SWPP ENGINEERING COMMENTS	8/10/2020	JTN

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DESIGNED BY: FDF
DRAWN BY: JTN
CHECKED BY: FDF

SITE PLAN 1

SHERWOOD VILLAGES
TENTATIVE MAP
LYON COUNTY
FERNLEY, NEVADA

09/01/2020
PROJECT NO.: 19239

8 of 20

Drawing name: S:\Entitlement Engineering\19239 - Sherwood 31\08 - CAD\Engineering\Sheets\Site Development\SITE PLAN.dwg 8 SITE PLAN 1 Aug 31, 2020 4:07pm by JFoffo

Single-Family Detached Housing
(210)

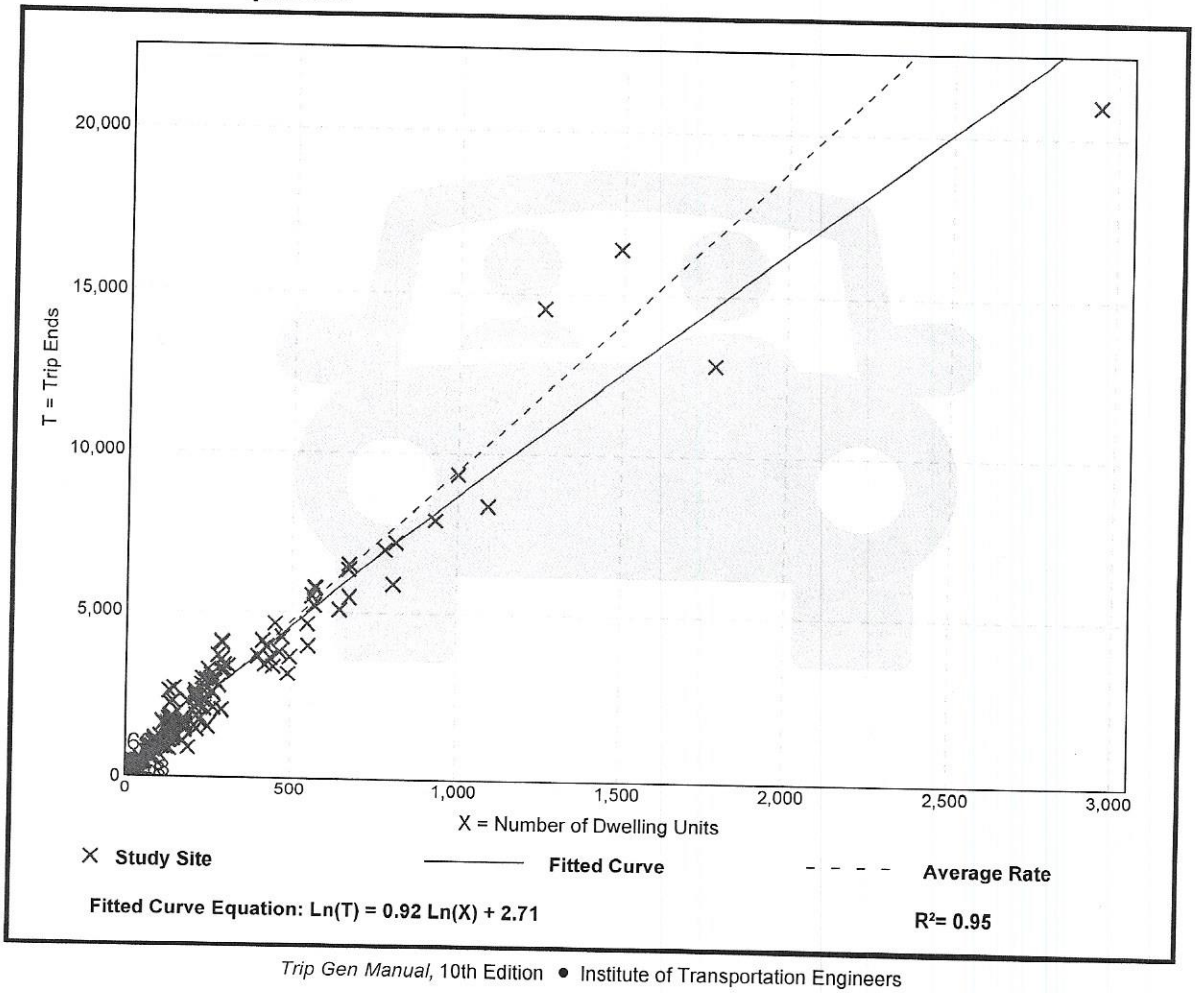
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

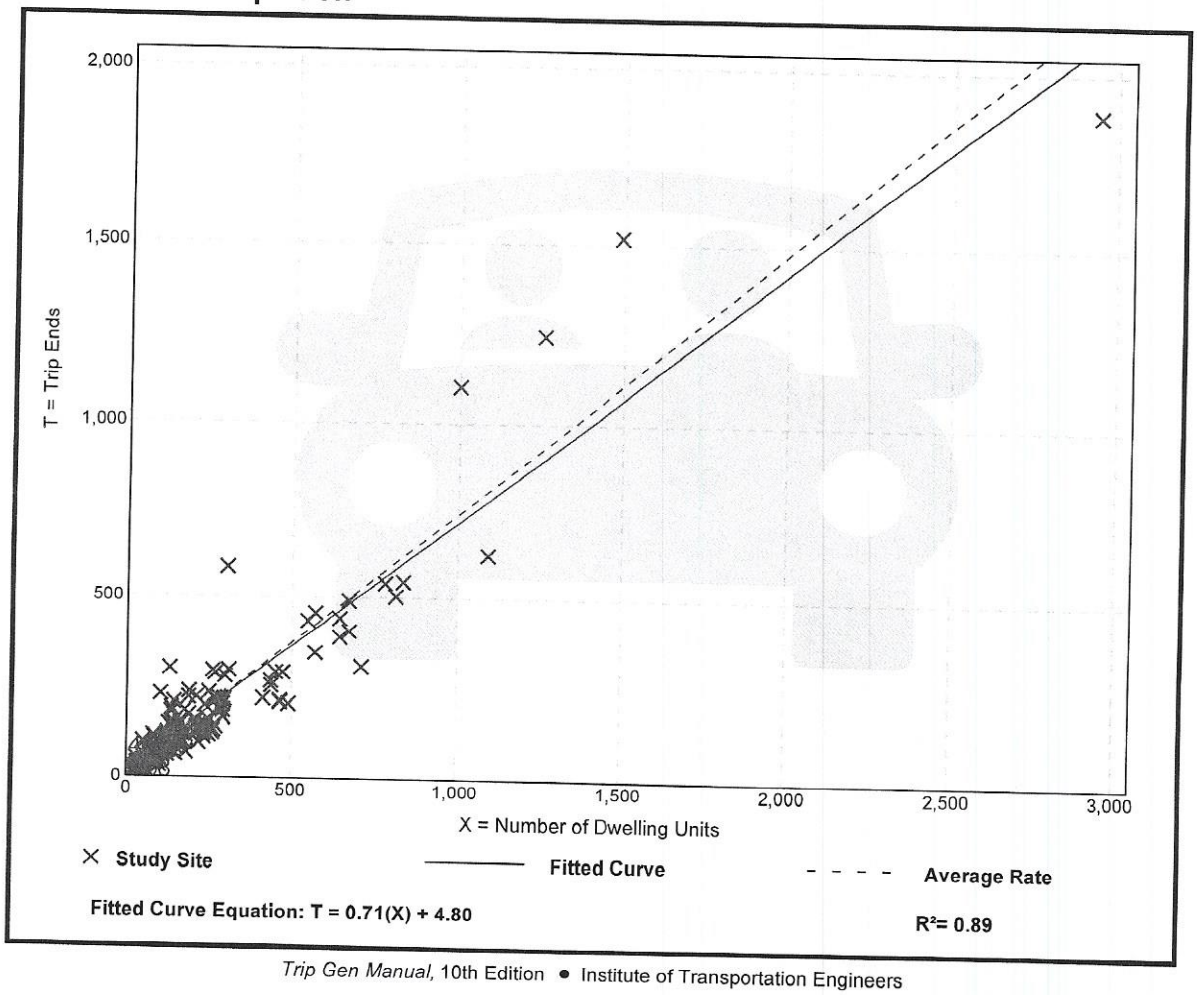
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 173
Avg. Num. of Dwelling Units: 219
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



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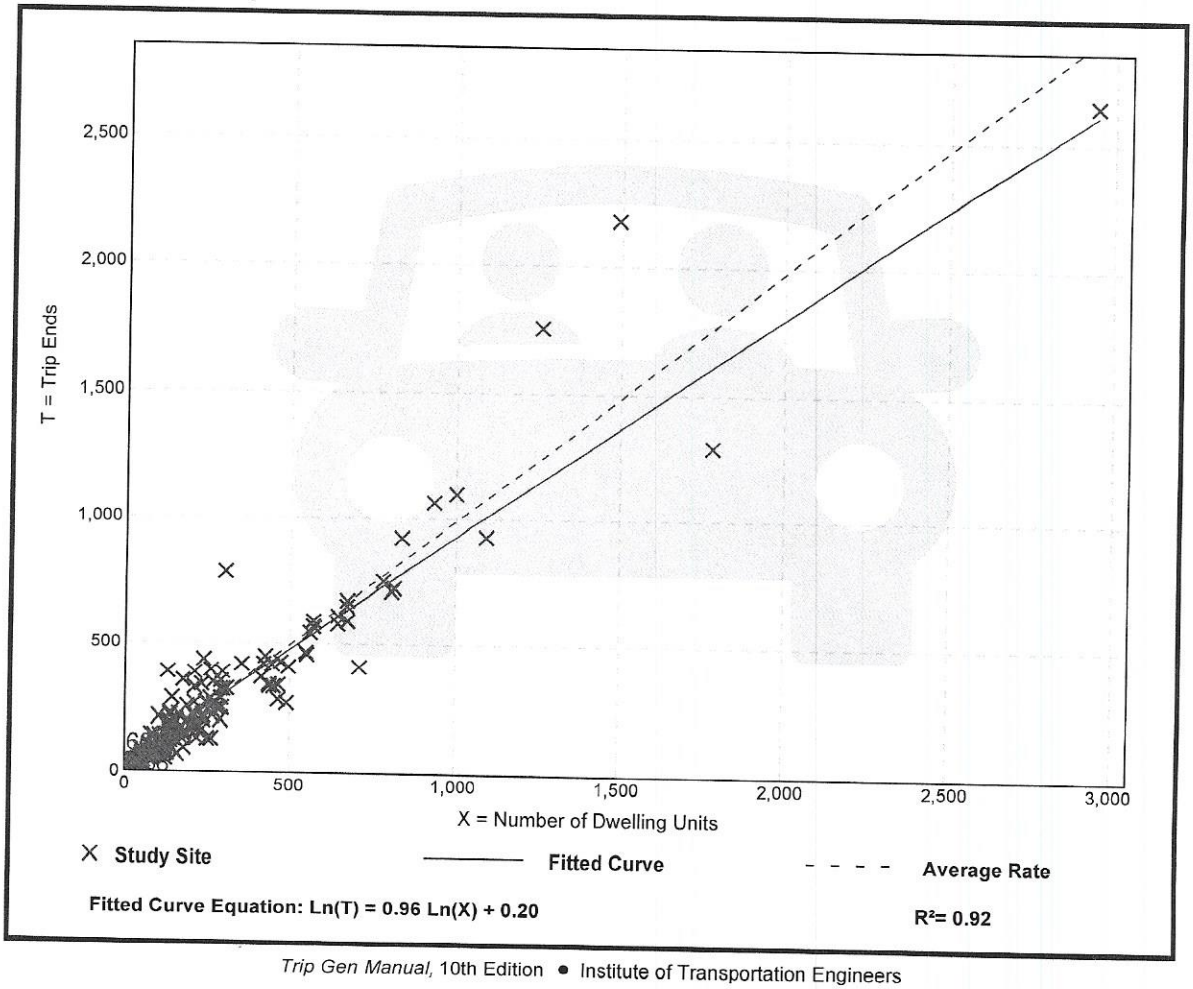
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 190
Avg. Num. of Dwelling Units: 242
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

Multifamily Housing (Low-Rise)
(220)

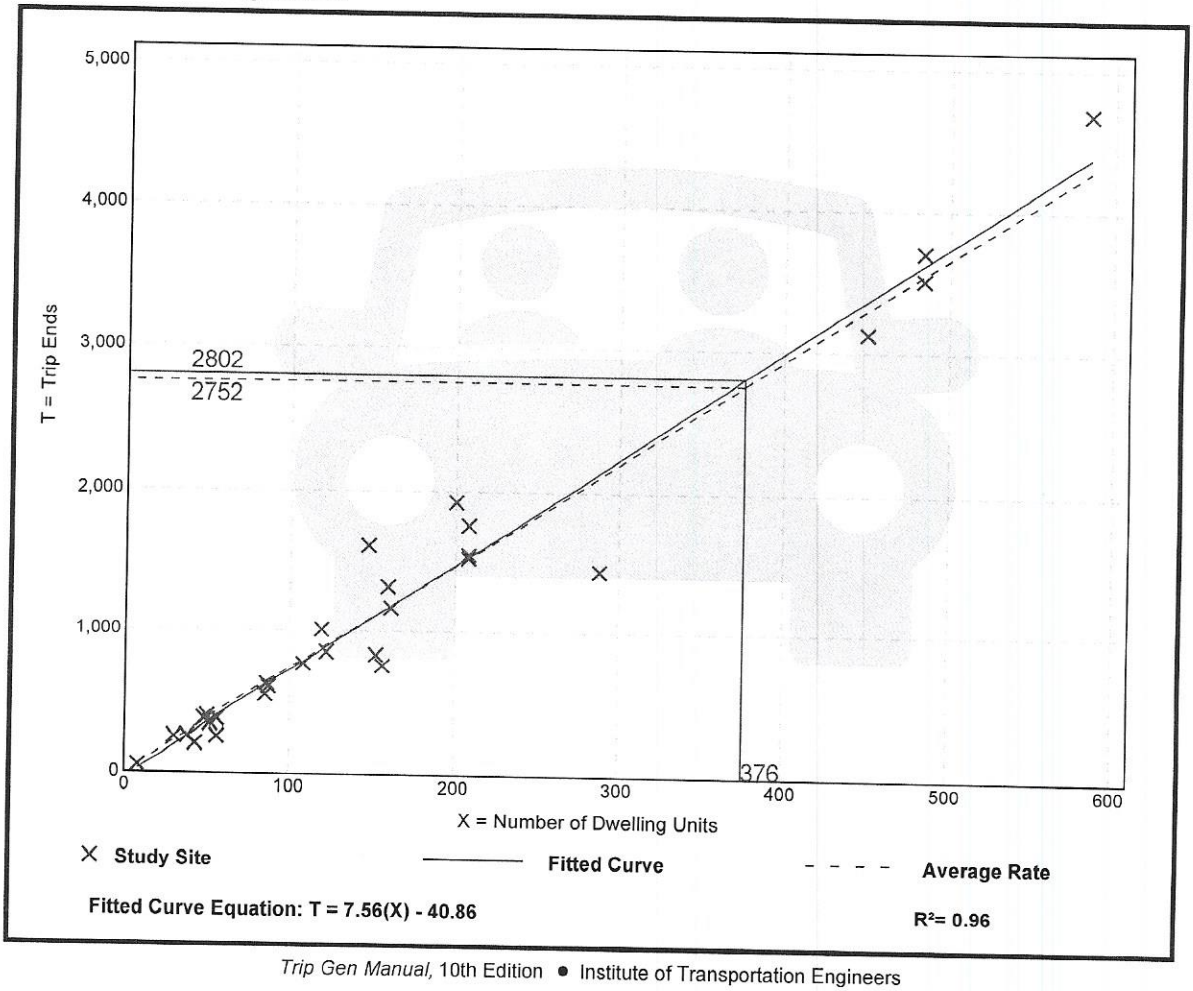
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 29
Avg. Num. of Dwelling Units: 168
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.32	4.45 - 10.97	1.31

Data Plot and Equation



Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

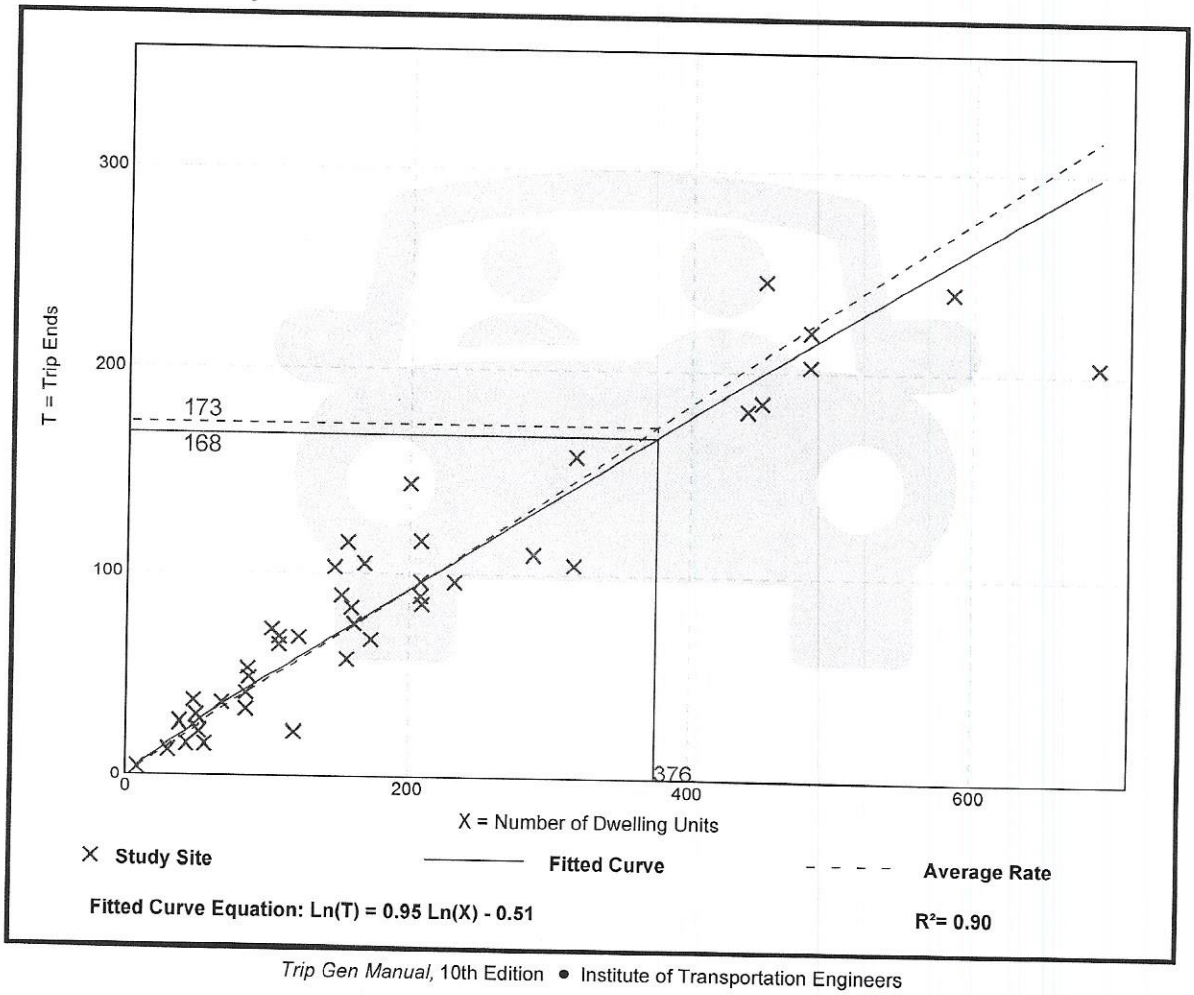
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 42
Avg. Num. of Dwelling Units: 199
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation



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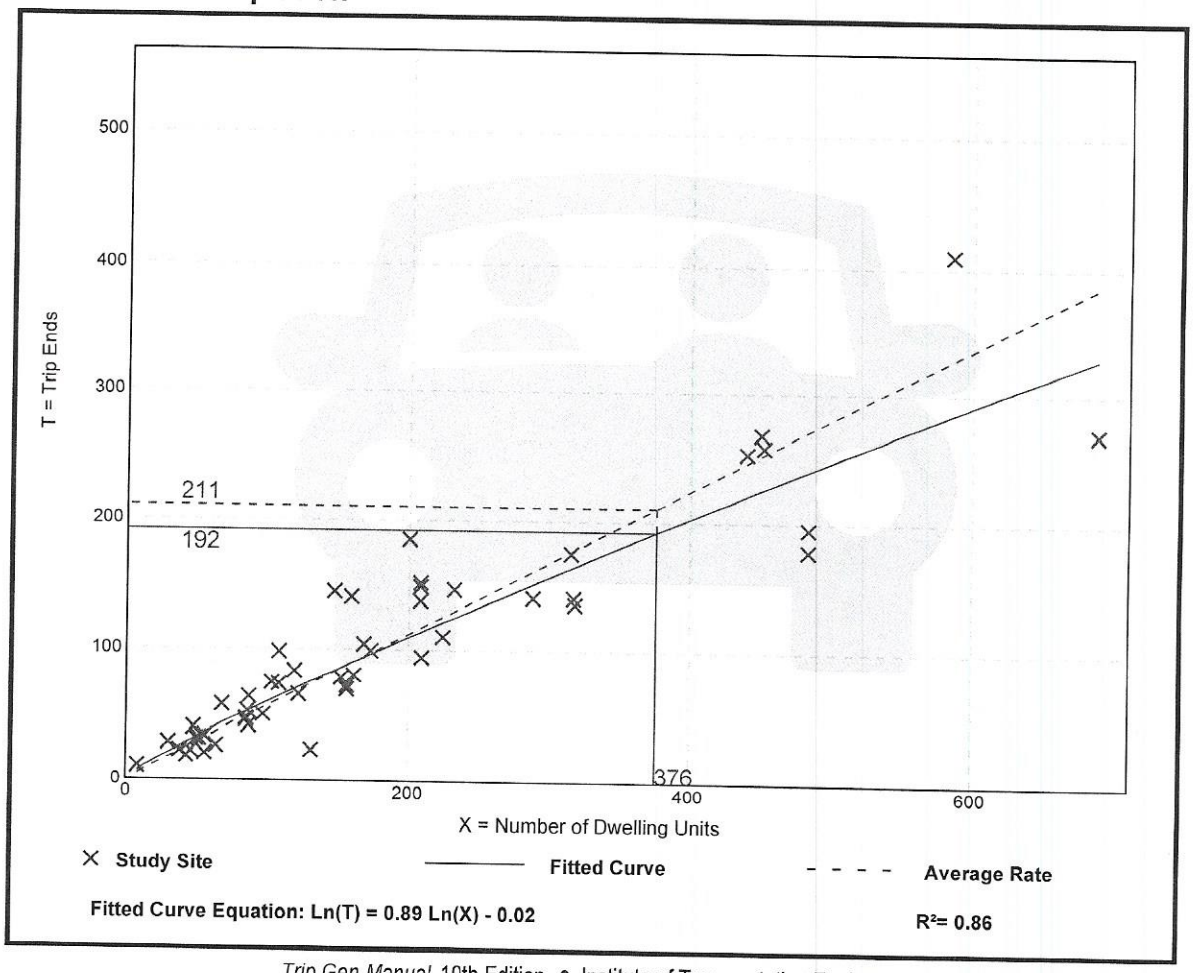
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 50
Avg. Num. of Dwelling Units: 187
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Data Plot and Equation



Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

PHELPS
ENGINEERING
DESIGN & DEVELOPMENT SERVICES

December 1, 2022

City of Fernley
Shay League, City Planner
595 Silverlace Blvd
Fernley, NV 89408

RE: December 2022 Sherwood Village, Trip Generation Update Letter

Dear Shay,

This letter contains the findings of our trip generation comparison of the current site plan for Sherwood Village, dated August 25, 2022 and included as an attachment to this letter, and the previous site plans that were the basis of our January 2020 Sherwood Village Traffic Analysis and August 2020 Sherwood Village Trip Generation Letter (attached). The project is located west of Fernwood Drive and north of Fremont Street in Fernley, Nevada. The August 2020 development planned density included fifty-eight single-family attached dwelling units and 376 multi-family dwelling units. Since then, the development was divided into two separate residential developments, Sherwood Village containing apartments and Fernwood Village containing single-family attached units. On February 9, 2021, the project submitted the Fernwood Village Tentative Subdivision Map and Fernwood Trip Generation Letter (attached), which presented a separate traffic analysis for the development with a total of fifty-four single-family attached units. Therefore, the current site plan for Sherwood Village contains zero single-family attached units and 316 multi-family units as shown in the building dwelling unit summary below.

PHASE 1 // BUILDING INFORMATION						
BLDG TYPE	BLDG #	UNITS / FLOOR	STOREYS	UNITS / BLDG	GROSS SF / STOREY	GROSS SF
A	1	8	2	16	7560	15120
A	2	8	2	16	7560	15120
C	3	8	2	16	8056	16112
C	4	8	3	24	8056	24168
SITE TOTALS				72	31,232	70,520
PHASE 2 // BUILDING INFORMATION						
BLDG TYPE	BLDG #	UNITS / FLOOR	STOREYS	UNITS / BLDG	GROSS SF / STOREY	GROSS SF
B	5	8	2	16	8692	17384
A	6	8	2	16	7560	15120
C	7	8	2	16	8056	16112
B	8	8	2	16	8692	17384
A	9	8	2	16	7560	15120
D	10	12	2	24	11340	22680
SITE TOTALS				104	51,900	103,800
PHASE 3 // BUILDING INFORMATION						
BLDG TYPE	BLDG #	UNITS / FLOOR	STOREYS	UNITS / BLDG	GROSS SF / STOREY	GROSS SF
A	11	8	2	16	7560	15120
D	12	12	3	36	11340	34020
D	13	12	2	24	11340	22680
B	14	8	2	16	8692	17384
SITE TOTALS				92	38,932	89,204
PHASE 4 // BUILDING INFORMATION						
BLDG TYPE	BLDG #	UNITS / FLOOR	STOREYS	UNITS / BLDG	GROSS SF / STOREY	GROSS SF
C	15	8	2	16	8056	16112
C	16	8	2	16	8056	16112
A	17	8	2	16	7560	15120
SITE TOTALS				48	23,672	47,344
ALL PHASES TOTAL						
SITE TOTALS				316	145,736	310,868

Table 1: Building dwelling unit summary from Sherwood Village Site Plan dated 8-25-2022.

Table 2 below shows the August 2020 trip generation values for the project being calculated as "Single-Family Detached Housing" for the single-family attached units and "Multi-family (Low Rise)" for the remainder. The ITE multi-family land use description limits the use of this category to building containing three or more units. For that reason, trip generation totals for the single-family attached units were calculated at the single home values. ITE Land Use #210 for the Single-Family Detached Housing land use and #220 Multi-family (Low Rise) were taken from the Tenth Edition of ITE *Trip Generation Manual*.

PHELPS ENGINEERING
DESIGN & DEVELOPMENT SERVICES

TABLE 1
TRIP GENERATION

LAND USE	ADT	AM PEAK HOUR TOTAL	PM PEAK HOUR TOTAL
January 2020 Study			
Single Family			
70 Dwelling Units	661	52	69
Multifamily			
364 Dwelling units	2,664	167	204
Total	3,325	219	273
August New Site Plan			
Single Family			
58 Dwelling Units	630	46	60
Multifamily			
376 Dwelling units	2,802	168	192
Total	3,427	214	252
Difference (August Compared to January)	+102	-5	-21

Table 2: Table 1 from the Sherwood Village, Trip Generation Letter dated 8-31-2020 (attached).

As indicated in Table 2, the August 2020 site plan results in project trip generation of 3,427 average daily trips with 214 AM peak hour trips and 252 PM peak hour trips. As indicated in Table 3 below, the current site plan for Sherwood Village results in 2,301 average daily trips generated with 146 AM peak hour trips and 181 PM peak hour trips. The new trip generation totals are 1,126 fewer average daily trips with sixty-eight fewer AM peak hour trips and seventy-one fewer PM peak hour trips when compared to the August 2020 trip generation totals.

LAND USE	DWELLING UNITS	AVERAGE DAILY TRIPS (ADT)	AM PEAK HOUR TOTAL	PM PEAK HOUR TOTAL
Single-Family Housing (Townhome)	0	0	0	0
Multi-Family Housing (Apartment)	316	2,301	146	181
TOTAL		**2,301**	**146**	**181**
DIFFERENCE (Aug. 2020 Compared to Dec. 2022)		**-1,126**	**-68**	**-71**

Table 3: December 2022 Trip Generation summary based on the current Sherwood Village site plan.

The new trip generation estimates are significantly lower than before because of the elimination of single-family attached units from Sherwood Village and a reduction in the number of apartment units included

in the current site plan. The impacts of site generated traffic on the adjacent road network are also diminished due to lower anticipated traffic volumes. Table 4 below shows the intersection level of service and delay results from the original traffic impact study completed in January 2020.

TABLE 3
INTERSECTION LEVEL OF SERVICE AND DELAY RESULTS

INTERSECTION	EXISTING		EXISTING + PROJECT		EXISTING + PROJECT + OTHER		2040 BASE		2040 BASE + PROJECT	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
US-95A/Newlands Existing Improvements	C25.8 N/A	D52.4 N/A	C27.6 N/A	D52.8 N/A	C27.6 N/A	D53.1 N/A	D47.9 D46.2	E60.0 D53.8	D48.3 D46.5	E60.8 D54.8
US-95A/Fremont Existing Improvements	C30.3 N/A	D48.2 N/A	C32.6 C32.3	E56.7 D42.3	C34.6 C33.9	E68.5 D50.7	D43.1 D38.0	F92.8 D54.4	D46.7 D38.2	F112 D54.8

Table 4: Table 3 Intersection Level of Service and Delay Results from the Sherwood Village Traffic Analysis dated 1-20-2020.

Table 4 shows that the development was anticipated to generate enough traffic during the PM peak hour that the level of service and vehicle delay at the intersection of US-95A/Fremont St./Chisholm Trl. was below NDOT's minimum standards of LOS D or average delay less than or equal to 55.0 sec/veh for NHS highways. Therefore, both the original January 2020 Traffic Analysis and August 2020 Trip Generation Letter recommended that the US-95A/Fremont St./Chisholm Trl. intersection, "be improved to include separate left-turn, through, and right-turn lanes at the west Fremont Street and east Chisholm Trail approaches." These capacity improvements plus the addition of "overlap phasing for the right turn movement at the west Fremont Street approach," were shown to improve the intersection level of service enough to meet NDOT's minimum standard of LOS D for NHS highways.

Now, based on the updated site generated traffic volumes, the following intersection level of service and delay results were calculated using the *Highway Capacity Manual, 6th Edition*, published by the Transportation Research Board, as done previously.

Intersection	**Existing**		**Existing + Project**		**2040 Base**		**2040 Base + Project**	
	AM	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Existing	C 30.3	D 48.2	D 35.1	D 52.1	D 43.1	F 92.8	D 41.8	F 109.9
With Improvements	N/A	N/A	C 29.5	D 42.1	D 38.0	D 54.4	D 33.2	D 53.6

Table 5: December 2022 intersection level of service and delay (sec/veh) results.

The updated capacity analysis at the intersection of US-95A/Fremont St./Chisholm Trl. demonstrates that the intersection as a whole is anticipated to operate at LOS D with the additional traffic generated by

Sherwood Village during the AM and PM peak hours. However, the Chisholm Trl. approach alone is anticipated to operate at LOS E, with an average delay of 57.9 sec/veh, during the AM peak hour and at LOS D during the PM peak hour with the additional trips generated by the Sherwood Village development. Left-turning vehicles experience the highest amount of delay with an average of 64.6 sec/veh during the AM peak hour and an average of 64.9 sec/veh during the PM peak hour.

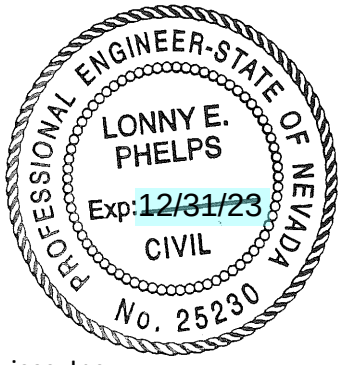
To address the significant delay for left-turning vehicles during the AM and PM peak hours, it is recommended that the Chisholm Trl. approach be improved to allow more vehicles per cycle to make a left-turn from Chisholm Trl. on to US-95A. The improvements could include extending the green time for protected left-turns or allowing permissive left turns to occur during the minor street's green light time. Our traffic analysis (included in the attached intersection level of service reports) demonstrates that LOS D or better can be achieved on the Chisholm Trl. approach by allowing protected/permissive left turns during the AM and PM peak hours. Adding a dedicated right-turn lane on Chisholm Trl., as previously recommended in the January 2020 Traffic Analysis and August 2020 Traffic Letter, is not shown to improve the average approach delay by a significant amount of time, and the approach would continue to operate at a LOS E because a dedicated right-turn lane would not improve delay for the left-turning vehicles.

It is important to acknowledge that the new on-site east-west collector street, named Pinewood Drive in the attached site plan, will be gated at the west and east limits of the Sherwood Village property, and will not allow vehicular traffic to access the local street network west or east of the site. 100 percent of the traffic generated by Sherwood Village will use the Sherwood Drive/Fremont St. intersection to access the site. Therefore, the new on-site north-south collector street, named Sherwood Drive, should be designed to accommodate 2,400 average daily trips. In our opinion, the project trip distribution found in the original traffic study from January 2020 is still valid.

We trust that this information will be adequate for your review. Please contact us if you have questions or comments.

Sincerely,

Lonny Phelps



President
Phelps Engineering Services, Inc.

Attachments: Sherwood Village, Trip Generation Letter; Fernwood, Trip Generation Letter; Sherwood Village Site Plan; Intersection Level of Service Reports

SOLAEGUI
ENGINEERS

August 31, 2020

Mr. Derek Starkey, P.E.
City of Fernley
595 Silver Lace Boulevard
Fernley, Nevada 89408

Re: Sherwood Village, Trip Generation Letter

Dear Derek:

This letter contains the findings of our trip generation comparison of the current site plan of Sherwood Village and the site plan which was the basis of our January 2020 traffic study and further discussion about updated street connections. The project is generally located west of Fernwood Drive and north of Freemont Street in Fernley, Nevada. The original density included 70 duplex dwelling units and 364 multifamily dwelling units. The current site plan has 58 duplex units and 376 multifamily units. The new site plan is attached. Table 1 shows the trip generation summary for the project being calculated as "Single Family Detached Housing for the duplex units and Multifamily (Low Rise) for the remainder. The ITE multifamily land use description limits the use of this category to building containing three or more units. For that reason trip generation totals for the duplexes were calculated at the single homes values. "ITE Land Use #210 for the Single Family Detached Housing land use and #220 Multifamily (Low Rise) were taken from the Tenth Edition of ITE Trip Generation.

TABLE 1
TRIP GENERATION

LAND USE	ADT	AM PEAK HOUR TOTAL	PM PEAK HOUR TOTAL
January 2020 Study			
Single Family			
70 Dwelling Units	661	52	69
Multifamily			
364 Dwelling units	2,664	167	204
Total	3,325	219	273
August New Site Plan			
Single Family			
58 Dwelling Units	630	46	60
Multifamily			
376 Dwelling units	2,802	168	192
Total	3,427	214	252
Difference (August Compared to January)	+102	-5	-21

Solaegui Engineers Ltd. • 715 H Street • Sparks, Nevada 89431 • 775/358-1004 • FAX 775/358-1098
Civil & Traffic Engineers
e-mail: psolaegui@aol.com

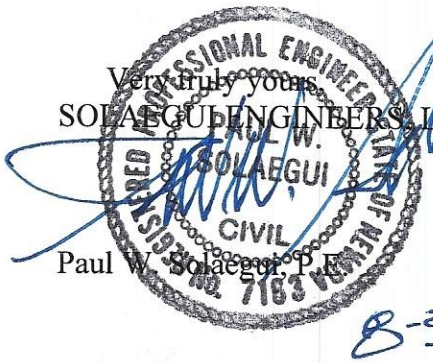
As indicated in Table 1, the new site plan results in project trip generation of 3,427 average daily trips with 214 AM peak hour trips and 252 PM peak hour trips. These totals are 102 more average daily trips with 5 fewer AM peak hour trips and 21 fewer PM peak hour trips then the January totals. Because the traffic study capacity analysis work is based on peak hour trips and both new peak hour totals are slightly lower then the traffic study values the January capacity analysis represents worse case project traffic impacts. For that reason the study was not updated for the new site plan.

In recent City of Fernley comments regarding the Vine Street connection to the west and the additional street connection to Freemont Street on the south we have the following comments. We acknowledge that the new Vine Street connection will allow project traffic to conveniently access the local street network west of the site. However, because of the lack of collector or arterial street connecting infrastructure to the west we do not see any significant volume of project residents using that route to access the regional street network. In our opinion the project trip assignment found in the original traffic study is still valid.

The additional on-site street connection to Freemont Street will be attractive to project traffic. In fact as much as 75% of the project traffic bound for Freemont Street will use the new street rather than the Wildwood Drive and Fernwood Drive connections. This new street connection will greatly reduce project traffic impacts on Wildwood Drive and Fernwood Drive. The new on-site street, providing the additional connection to Freemont Street, should be designed to accommodate 2,000 average daily trips.

We trust that this information will be adequate for your review. Please contact us if you have questions or comments.

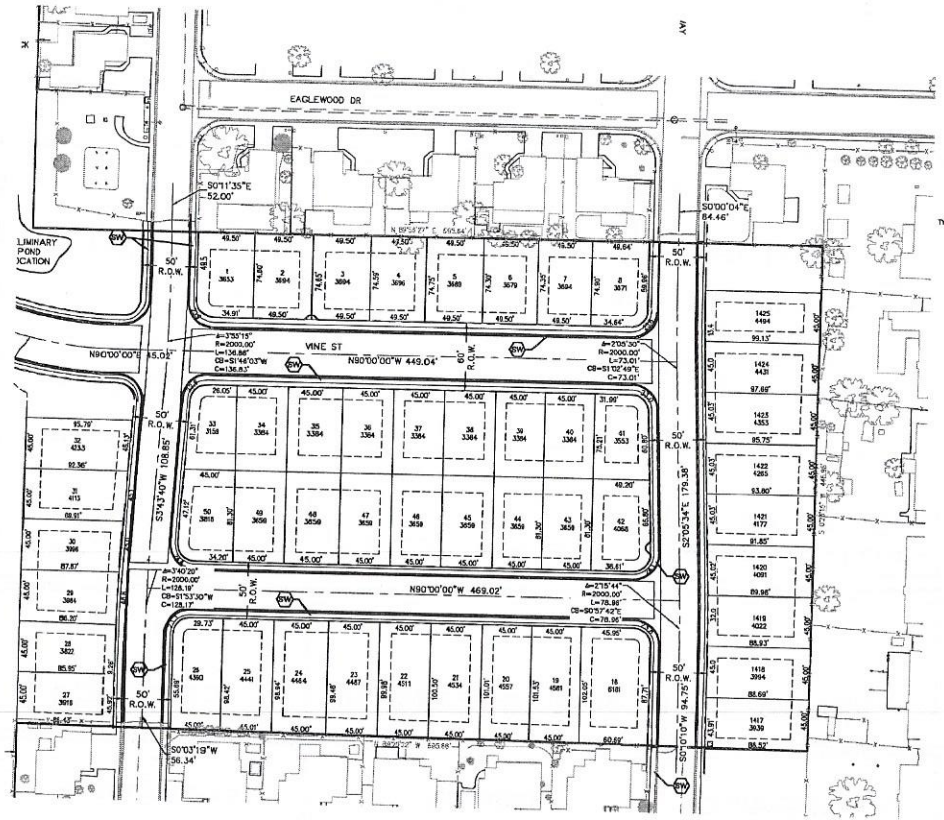
Very truly yours,
SOLAEGUI ENGINEERS, LTD

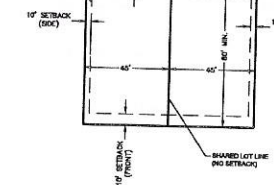


Paul W. Solaegui, P.E.

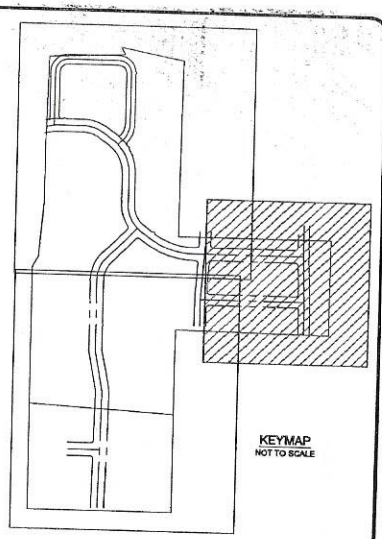
8-31-20
EXP 6-30-22

Enclosures
Letters/ Sherwood Village Letter 2





TYPICAL SETBACK DETAIL
(5FB ZONING)
59 LOTS



KEYMAP
NOT TO SCALE

SITE LEGEND:

- BOUNDARY LINE
- LOT LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ROAD CENTER LINE
- EXISTING ROAD CENTER LINE
- EDGE OF PAVEMENT
- CURB & GUTTER
- DRAINAGE FLOWLINE
- EXISTING TELEPHONE
- EXISTING GAS
- EXISTING OVERHEAD ELECTRIC
- EXISTING ELECTRIC
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- PROPOSED LIGHT POLE
- EXISTING FENCE
- EXISTING UNPAVED ROAD
- LOT NUMBER
- LOT SIZE IN SQUARE FEET

SITE KEY NOTES:

- SW 4-FT WIDE SIDEWALK
- P PARKING LOT WITH SQUARE FOOTAGE
- 30 PARKING COUNT
- C PARKING CANOPY
- B-# BUILDING NUMBER

HORIZ SCALE: 1" = 50'

BUILDING DATA TABLE

BUILDING #	UNITS/FLOOR	AREA (sf)	STORYS	TOTAL UNITS	TOTAL AREA (sf)
1	12	10,500	3	36	31500
2	8	8,700	3	24	26100
3	8	7,800	2	16	15600
4	8	7,000	2	16	14000
5	8	8,700	2	16	17400
6	8	7,800	2	16	15600
7	8	7,000	2	16	14000
8	8	7,000	2	16	14000
9	8	7,800	2	16	15600
10	8	8,700	2	16	17400
11	8	7,000	3	24	21000
12	8	8,700	3	24	26100
13	8	7,800	3	24	23400
14	8	7,000	3	24	21000
15	12	10,500	2	24	21000
16	8	7,000	3	24	21000
17	12	10,500	3	36	31500
TOTALS		139,500		368	346,200

NO.	REVISIONS	DATE	BY
1	PER SWRA ENGINEERING COMMENTS	07/07/2020	DC

PHELPS ENGINEERING
185 Caperton Station Drive, Suite 200
Reno, NV 89511 (775) 398-7200
www.phelpsengineering.net

NOT FOR CONSTRUCTION
80% PROGRESS SET

811 Know what's below. Call 811 before you dig.

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36"
DESIGNED BY: FGF
DRAWN BY: JTN
CHECKED BY: FGF

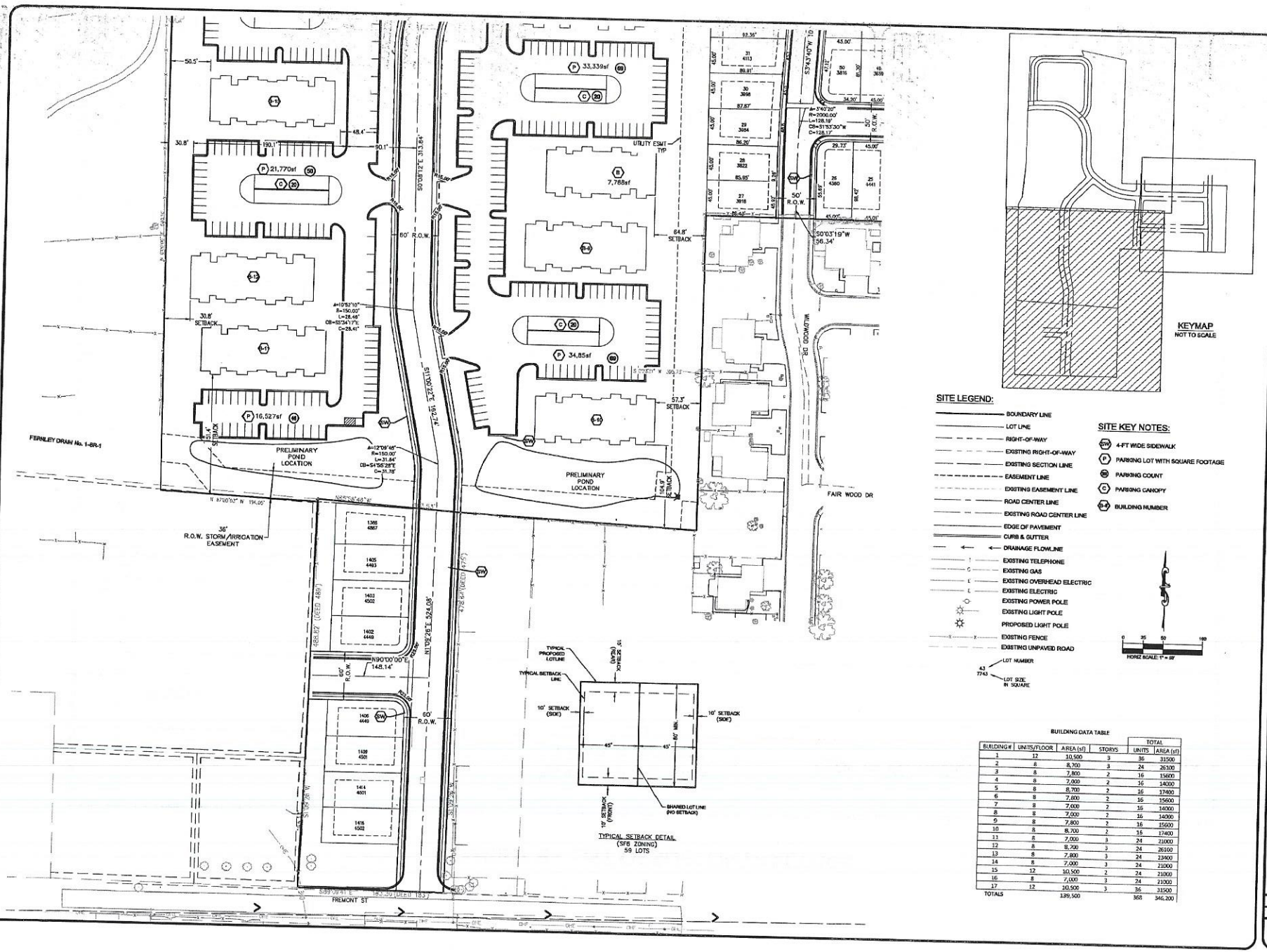
SITE PLAN 3

SHERWOOD VILLAGES
TENTATIVE MAP
LYON COUNTY
FERNLEY, NEVADA

09/01/2020
PROJECT NO.: 19239

10 of 20

Drawing name: S:\Entitlement Engineering\19239 - Sherwood 31\08 - CAD\Engineering\Sheet A\Site Development\SITE PLAN.dwg 10 SITE PLAN 3 Aug 31, 2020 4:07pm by JPadilla



BUILDING #	UNITS/FLOOR	AREA (sf)	STORYS	TOTAL UNITS	TOTAL AREA (sf)
1	12	10,500	3	36	31500
2	8	8,700	3	24	26100
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6	8	7,800	2	16	15600
7	8	7,000	2	16	14000
8	8	7,000	2	16	14000
9	8	7,800	2	16	15600
10	8	8,700	2	16	17400
11	8	7,000	3	24	21000
12	8	8,700	3	24	26100
13	8	7,800	3	24	23400
14	8	7,000	3	24	21000
15	12	10,500	2	24	21000
16	8	7,000	3	24	21000
17	12	10,500	3	36	31500
TOTALS		139,500		368	346,200

NO.	REVISIONS	DATE	BY
1	PER SWM ENGINEERING COMMENTS	09/02/2020	BT

PHELPS ENGINEERING
155 Country Estates Circle, Suite 100
Reno, NV 89511 (775) 359-7200
www.phelpsengineering.net

NOT FOR CONSTRUCTION
80% PROGRESS SET

811 Know what's below. Call 811 before you dig.

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36"
DESIGNED BY: FGF
DRAWN BY: JTN
CHECKED BY: FGF

SITE PLAN 2

SHERWOOD VILLAGES
TENTATIVE MAP
LYON COUNTY
FERNLEY, NEVADA

09/01/2020
PROJECT NO.: 19239

9 of 20

Drawing name: S:\Entitlement Engineering\19239 - Sherwood 31\08 - CAD\Engineering\Sheets\Site Development\SITE PLAN.dwg 9 SITE PLAN 2 Aug 31, 2020 4:07pm by: JPudlo

Drawing name: S:\Entitlement Engineering\19239 - Sherwood 3\dgn - CAD\Engineering\Sheets\Site Development\SITE PLAN.dwg 8 SITE PLAN 1 Aug 31, 2020 4:07pm bjr JPuebla

SOLAEGUI
ENGINEERS

February 4, 2021

Mr. Derek Starkey, P.E.
City of Fernley
595 Silver Lace Boulevard
Fernley, Nevada 89408

Re: Fernwood, Trip Generation Letter

Dear Derek:

At the request of our clients this letter contains the findings of our trip generation review of the current site plan of Fernwood. The project is generally located at the north ends of the Fernwood Drive and Wildwood Drive street stubs in Fernley, Nevada. The current site plan has 54 duplex units. The site plan is attached. Table 1 shows the trip generation summary for the project being calculated as "Single Family Detached Housing" for the duplex units. The ITE multifamily land use description limits the use of this category to building containing three or more units. For that reason trip generation totals for the duplexes are calculated at the single family home values. "ITE Land Use #210 for the "Single Family Detached Housing" land use was taken from the Tenth Edition of ITE Trip Generation.

TABLE 1
TRIP GENERATION

LAND USE	ADT	AM PEAK HOUR TOTAL	PM PEAK HOUR TOTAL
Single Family (Duplex Units) 54 Dwelling Units	590	43	56

As indicated in Table 1, the new site plan results in project trip generation of 590 average daily trips with 43 AM peak hour trips and 56 PM peak hour trips. These totals are below the threshold that triggers the need for a full traffic study.

We trust that this information will be adequate for your review. Please contact us if you have questions or comments.

Very truly yours,
SOLAEGUI ENGINEERS, LTD.

PAUL W. SOLAEGUI
Civil
No. 7163
STATE OF NEVADA
PROFESSIONAL ENGINEER

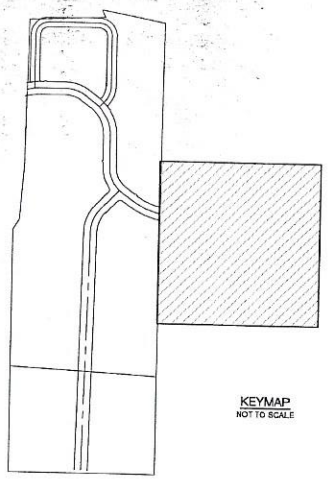
Paul W. Solaegui, P.E.

2-4-21
EXP 6-30-22

Enclosures
Letters/ Fernwood Letter

Solaegui Engineers Ltd. • 715 H Street • Sparks, Nevada 89431 • 775/358-1004 • FAX 775/358-1098
Civil & Traffic Engineers
e-mail: psolaegui@aol.com





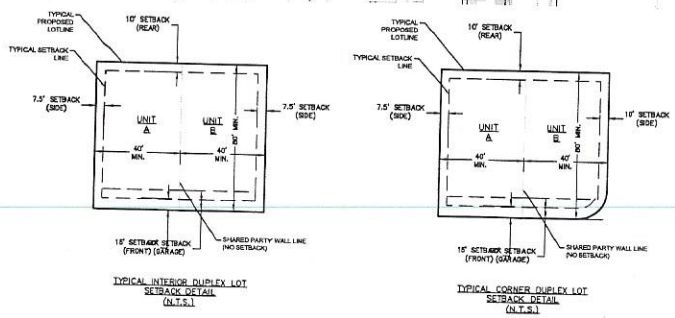
SITE LEGEND:

- BOUNDARY LINE
- LOT LINE
- RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ROAD CENTER LINE
- EXISTING ROAD CENTER LINE
- EDGE OF PAVEMENT
- CURB & GUTTER
- DRAINAGE FLOWLINE
- EXISTING TELEPHONE
- EXISTING GAS
- EXISTING OVERHEAD ELECTRIC
- EXISTING ELECTRIC
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- PROPOSED LIGHT POLE
- EXISTING FENCE
- EXISTING UNPAVED ROAD
- LOT NUMBER
- LOT SIZE IN SQUARE FEET

SITE KEY NOTES:

- SW 4-FT WIDE SIDEWALK
- P PARKING LOT WITH SQUARE FOOTAGE
- 20 PARKING COUNT
- C PARKING CANOPY
- BLDG BUILDING NUMBER





STANDARD LOT SETBACK DETAILS
(MDR14 ZONING)
28 LOTS
7045 AVG. LOT SIZE

NO.	REVISIONS	DATE	BY
1			

PHELPS ENGINEERING
155 Country Club Drive, Suite 200
Reno, NV 89511 (775) 853-7900
www.phelpsengineering.net

NOT FOR CONSTRUCTION

811 Know what's below. Call 811 before you dig.

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36"
DESIGNED BY: FGF
DRAWN BY: JJP
CHECKED BY: FGF

SITE PLAN

CONDITIONAL USE PERMIT
FERNWOOD
LYON COUNTY
FERNLEY, NEVADA

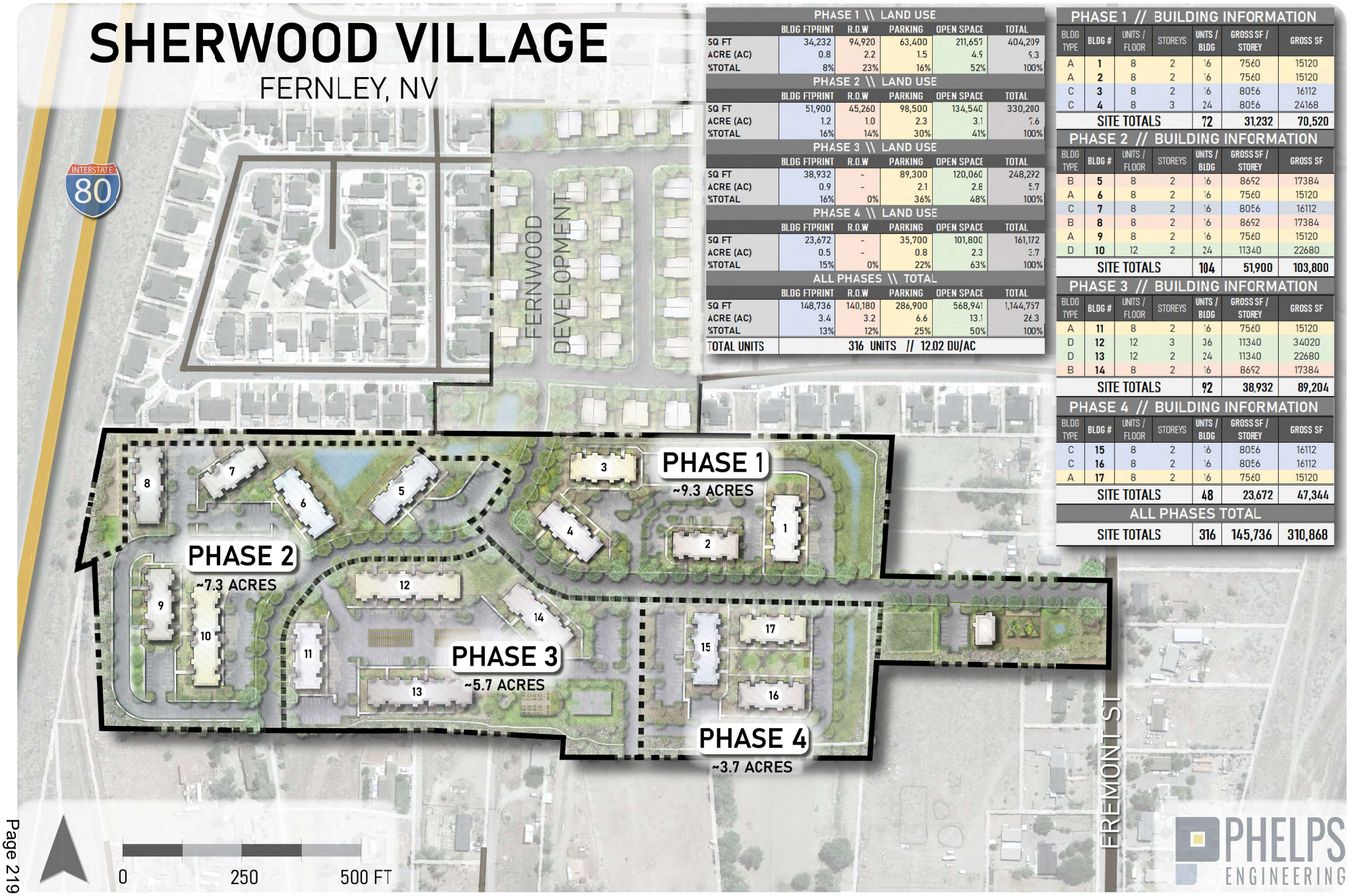
9/1/2020
PROJECT NO.: 19239

4 of 6

Drawing name: S:\Entitlement Engineering\19239 - Sherwood 31\08 - CAD\Engineering\Sheets\Site Development\SITE PLAN.dwg FERN CUP SITE PLAN Jan 15, 2021 12:25pm by JPullin

SHERWOOD VILLAGE

FERNLEY, NV



PHASE 1 \\ LAND USE					
	BLDG FTPRINT	R.O.W	PARKING	OPEN SPACE	TOTAL
SQ FT	34,232	94,920	63,400	211,657	404,209
ACRE (AC)	0.8	2.2	1.5	4.9	9.3
%TOTAL	8%	23%	16%	52%	100%

PHASE 2 \\ LAND USE					
	BLDG FTPRINT	R.O.W	PARKING	OPEN SPACE	TOTAL
SQ FT	51,900	45,260	98,500	134,540	330,200
ACRE (AC)	1.2	1.0	2.3	3.1	7.6
%TOTAL	16%	14%	30%	41%	100%

PHASE 3 \\ LAND USE					
	BLDG FTPRINT	R.O.W	PARKING	OPEN SPACE	TOTAL
SQ FT	38,932	-	89,300	120,060	248,292
ACRE (AC)	0.9	-	2.1	2.8	5.7
%TOTAL	16%	0%	36%	48%	100%

PHASE 4 \\ LAND USE					
	BLDG FTPRINT	R.O.W	PARKING	OPEN SPACE	TOTAL
SQ FT	23,672	-	35,700	101,800	161,172
ACRE (AC)	0.5	-	0.8	2.3	3.7
%TOTAL	15%	0%	22%	63%	100%

ALL PHASES \\ TOTAL					
	BLDG FTPRINT	R.O.W	PARKING	OPEN SPACE	TOTAL
SQ FT	148,736	140,180	286,900	568,941	1,144,757
ACRE (AC)	3.4	3.2	6.6	13.1	26.3
%TOTAL	13%	12%	25%	50%	100%
TOTAL UNITS	316 UNITS // 12.02 DU/AC				

PHASE 1 // BUILDING INFORMATION						
BLDG TYPE	BLDG #	UNITS / FLOOR	STOREYS	UNITS / BLDG	GROSS SF / STOREY	GROSS SF
A	1	8	2	16	7560	15120
A	2	8	2	16	7560	15120
C	3	8	2	16	8056	16112
C	4	8	3	24	8056	24168
SITE TOTALS				72	31,232	70,520

PHASE 2 // BUILDING INFORMATION						
BLDG TYPE	BLDG #	UNITS / FLOOR	STOREYS	UNITS / BLDG	GROSS SF / STOREY	GROSS SF
B	5	8	2	16	8692	17384
A	6	8	2	16	7560	15120
C	7	8	2	16	8056	16112
B	8	8	2	16	8692	17384
A	9	8	2	16	7560	15120
D	10	12	2	24	11340	22680
SITE TOTALS				104	51,900	103,800

PHASE 3 // BUILDING INFORMATION						
BLDG TYPE	BLDG #	UNITS / FLOOR	STOREYS	UNITS / BLDG	GROSS SF / STOREY	GROSS SF
A	11	8	2	16	7560	15120
D	12	12	3	36	11340	34020
D	13	12	2	24	11340	22680
B	14	8	2	16	8692	17384
SITE TOTALS				92	38,932	89,204

PHASE 4 // BUILDING INFORMATION						
BLDG TYPE	BLDG #	UNITS / FLOOR	STOREYS	UNITS / BLDG	GROSS SF / STOREY	GROSS SF
C	15	8	2	16	8056	16112
C	16	8	2	16	8056	16112
A	17	8	2	16	7560	15120
SITE TOTALS				48	23,672	47,344

ALL PHASES TOTAL			
SITE TOTALS	316	145,736	310,868

PHELPS ENGINEERING

Intersection Level Of Service Report
Intersection 1: New Intersection

Control Type:	Signalized	Delay (sec / veh):	35.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.486

Intersection Setup

Name	Chisholm Trl			Fremont St			US-95A			US-95A		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	480.00	100.00	100.00	266.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name	Chisholm Trl			Fremont St			US-95A			US-95A		
Base Volume Input [veh/h]	82	15	39	25	15	80	98	848	33	46	383	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	2	0	23	6	46	13	0	0	0	0	6
Site-Generated Trips [veh/h]	0	3	0	34	9	67	20	0	0	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	20	39	82	30	193	131	848	33	46	383	34
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	5	11	22	8	52	36	230	9	13	104	9
Total Analysis Volume [veh/h]	89	22	42	89	33	210	142	922	36	50	416	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	21	0	30	36	0	21	59	0	10	48	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	17	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	17	26	32	17	55	55	6	44	44
g / C, Green / Cycle	0.09	0.14	0.22	0.27	0.14	0.46	0.46	0.05	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.05	0.04	0.05	0.15	0.08	0.26	0.26	0.03	0.12	0.12
s, saturation flow rate [veh/h]	1781	1676	1781	1623	1781	1870	1845	1781	1870	1817
c, Capacity [veh/h]	163	237	386	433	252	857	846	89	686	666
d1, Uniform Delay [s]	52.11	45.96	38.75	37.95	48.03	23.72	23.72	55.71	27.43	27.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.46	2.77	1.39	5.19	8.79	2.66	2.70	23.17	1.31	1.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.27	0.23	0.56	0.56	0.56	0.56	0.56	0.33	0.34
d, Delay for Lane Group [s/veh]	64.57	48.73	40.15	43.14	56.83	26.38	26.42	78.88	28.74	28.81
Lane Group LOS	E	D	D	D	E	C	C	E	C	C
Critical Lane Group	Yes	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.13	1.89	2.33	6.79	4.52	10.20	10.07	2.03	4.89	4.79
50th-Percentile Queue Length [ft/ln]	78.28	47.37	58.13	169.65	112.90	254.88	251.81	50.76	122.20	119.83
95th-Percentile Queue Length [veh/ln]	5.64	3.41	4.19	11.06	8.00	15.43	15.28	3.65	8.51	8.38
95th-Percentile Queue Length [ft/ln]	140.90	85.27	104.64	276.46	200.03	385.79	381.93	91.37	212.84	209.59

Movement, Approach, & Intersection Results

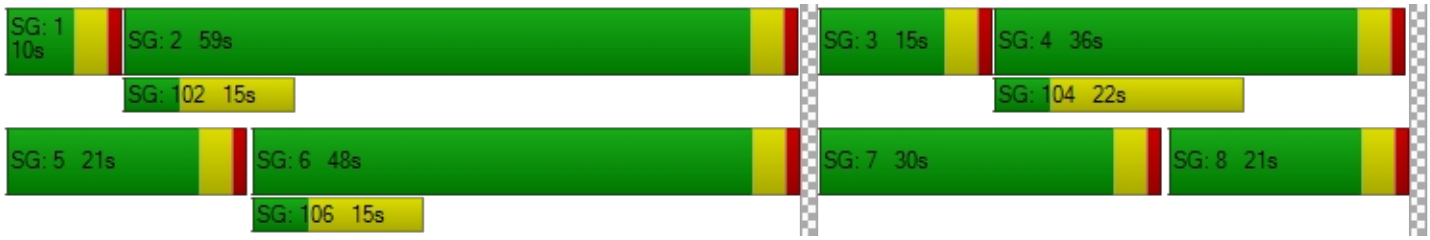
d_M, Delay for Movement [s/veh]	64.57	48.73	48.73	40.15	43.14	43.14	56.83	26.40	26.42	78.88	28.77	28.81
Movement LOS	E	D	D	D	D	D	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	57.94			42.34			30.33			33.75		
Approach LOS	E			D			C			C		
d_I, Intersection Delay [s/veh]	35.09											
Intersection LOS	D											
Intersection V/C	0.486											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.044	2.129	2.787	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	283	533	917	733
d_b, Bicycle Delay [s]	44.20	32.27	17.60	24.07
l_b,int, Bicycle LOS Score for Intersection	1.812	2.107	2.467	1.975
Bicycle LOS	A	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Option 2: Copy of New Intersection

Number	1											
Intersection	New Intersection											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Chisholm Trl			Fremont St			US-95A			US-95A		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	82	15	39	25	15	80	98	848	33	46	383	18
Total Analysis Volume [veh/h]	89	22	42	89	33	212	142	922	36	50	416	37

Intersection Settings

Cycle Length [s]	120											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fixed time											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	4	5	2	0	1	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	29	0	16	35	35	23	64	0	11	52	0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	17	17	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.34	0.21	0.34	0.26	0.26	0.16	0.50	0.50	0.06	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.07	0.04	0.06	0.02	0.13	0.08	0.26	0.26	0.03	0.12	0.12
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3			3			3		
s, saturation flow rate [veh/h]	1261	1676	1489	1870	1589	1781	1870	1845	1781	1870	1817
c, Capacity [veh/h]	505	349	556	483	411	282	935	923	104	748	727
X, volume / capacity	0.18	0.18	0.16	0.07	0.52	0.50	0.52	0.52	0.48	0.31	0.31
d, Delay for Lane Group [s/veh]	28.14	40.25	28.05	33.87	42.67	52.48	22.24	22.27	69.84	25.67	25.74
Lane Group LOS	C	D	C	C	D	D	C	C	E	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No

50th-Percentile Queue Length [veh/ln]	1.89	1.68	1.88	0.77	5.86	4.38	9.48	9.37	1.90	4.69	4.59
50th-Percentile Queue Length [ft/ln]	47.31	41.90	47.02	19.26	146.62	109.43	237.01	234.14	47.55	117.16	114.87
95th-Percentile Queue Length [veh/ln]	3.41	3.02	3.39	1.39	9.84	7.81	14.53	14.38	3.42	8.24	8.11
95th-Percentile Queue Length [ft/ln]	85.15	75.42	84.63	34.66	245.91	195.21	363.25	359.61	85.60	205.92	202.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.14	40.25	40.25	28.05	33.87	42.67	52.48	22.26	22.27	69.84	25.70	25.74
Movement LOS	C	D	D	C	C	D	D	C	C	E	C	C
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	33.21			37.90			26.16			30.09		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	29.50											
Intersection LOS	C											
Intersection V/C	0.456											

Intersection Level Of Service Report
Intersection 1: New Intersection

Control Type:	Signalized	Delay (sec / veh):	52.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.802

Intersection Setup

Name	Chisholm Trl			Fremont St			US-95A			US-95A		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	480.00	100.00	100.00	266.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name	Chisholm Trl			Fremont St			US-95A			US-95A		
Base Volume Input [veh/h]	156	24	70	42	27	223	155	650	34	80	986	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	6	0	13	4	27	45	0	0	0	0	23
Site-Generated Trips [veh/h]	0	9	0	20	5	41	68	0	0	0	0	34
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	156	39	70	75	36	291	268	650	34	80	986	105
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	11	19	20	10	79	73	177	9	22	268	29
Total Analysis Volume [veh/h]	170	42	76	82	39	316	291	707	37	87	1072	114
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	38	0	11	32	0	25	59	0	12	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	20	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	34	7	28	21	56	56	7	42	42
g / C, Green / Cycle	0.11	0.28	0.06	0.23	0.18	0.46	0.46	0.06	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.10	0.07	0.05	0.22	0.16	0.20	0.20	0.05	0.32	0.32
s, saturation flow rate [veh/h]	1781	1679	1781	1616	1781	1870	1837	1781	1870	1808
c, Capacity [veh/h]	193	475	104	376	312	866	851	111	655	634
d1, Uniform Delay [s]	52.74	33.18	55.79	45.25	48.81	21.65	21.65	55.44	37.33	37.39
k, delay calibration	0.11	0.11	0.11	0.36	0.20	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.17	0.27	12.59	27.67	19.37	1.58	1.61	11.19	20.04	20.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.25	0.79	0.94	0.93	0.43	0.43	0.78	0.92	0.92
d, Delay for Lane Group [s/veh]	64.91	33.45	68.39	72.93	68.19	23.23	23.26	66.63	57.36	58.33
Lane Group LOS	E	C	E	E	E	C	C	E	E	E
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.70	2.70	2.81	13.21	10.08	7.21	7.09	2.90	19.91	19.48
50th-Percentile Queue Length [ft/ln]	142.41	67.58	70.33	330.37	252.04	180.16	177.20	72.53	497.70	486.95
95th-Percentile Queue Length [veh/ln]	9.61	4.87	5.06	19.18	15.29	11.61	11.45	5.22	27.23	26.72
95th-Percentile Queue Length [ft/ln]	240.26	121.64	126.59	479.42	382.22	290.22	286.36	130.55	680.63	667.90

Movement, Approach, & Intersection Results

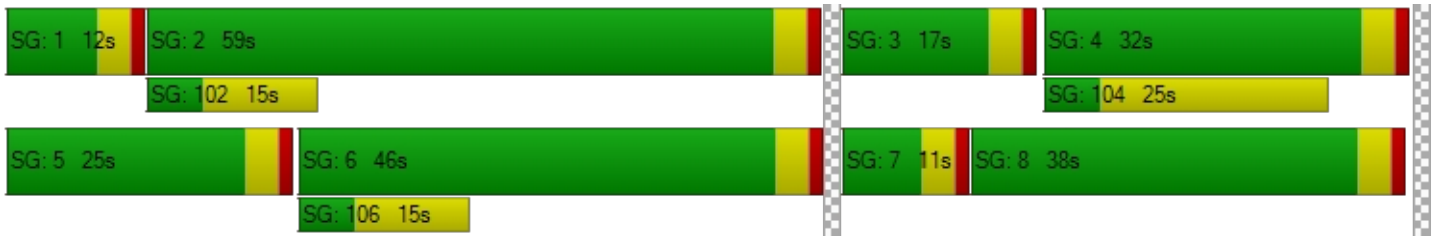
d_M, Delay for Movement [s/veh]	64.91	33.45	33.45	68.39	72.93	72.93	68.19	23.24	23.26	66.63	57.79	58.33
Movement LOS	E	C	C	E	E	E	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	52.02			72.08			35.88			58.44		
Approach LOS	D			E			D			E		
d_I, Intersection Delay [s/veh]	52.10											
Intersection LOS	D											
Intersection V/C	0.802											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.102	2.243	2.989	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	467	917	700
d_b, Bicycle Delay [s]	30.82	35.27	17.60	25.35
l_b,int, Bicycle LOS Score for Intersection	2.035	2.281	2.413	2.610
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Option 2: Copy of New Intersection

Number	1											
Intersection	New Intersection											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Chisholm Trl			Fremont St			US-95A			US-95A		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	156	24	70	42	27	223	155	650	34	80	986	48
Total Analysis Volume [veh/h]	170	42	76	82	39	317	292	707	37	87	1072	115

Intersection Settings

Cycle Length [s]	120											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	4	5	2	0	1	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	37	0	10	31	31	26	30	0	43	47	0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	17	17	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.34	0.26	0.34	0.22	0.22	0.18	0.50	0.50	0.06	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.14	0.07	0.06	0.02	0.20	0.16	0.20	0.20	0.05	0.32	0.32
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3			3			3		
s, saturation flow rate [veh/h]	1258	1679	1368	1870	1589	1781	1870	1837	1781	1870	1807
c, Capacity [veh/h]	495	431	478	403	343	318	935	919	114	722	697
X, volume / capacity	0.34	0.27	0.17	0.10	0.93	0.92	0.40	0.40	0.76	0.84	0.84
d, Delay for Lane Group [s/veh]	29.71	35.97	28.11	37.81	69.35	65.82	20.04	20.07	65.28	44.41	44.97
Lane Group LOS	C	D	C	D	E	E	C	C	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	No	Yes

50th-Percentile Queue Length [veh/ln]	3.68	2.82	1.68	0.94	11.42	10.09	6.79	6.68	2.91	17.85	17.42
50th-Percentile Queue Length [ft/ln]	91.94	70.45	41.93	23.45	285.57	252.27	169.76	166.97	72.74	446.19	435.50
95th-Percentile Queue Length [veh/ln]	6.62	5.07	3.02	1.69	16.97	15.30	11.06	10.92	5.24	24.78	24.26
95th-Percentile Queue Length [ft/ln]	165.49	126.82	75.48	42.22	424.14	382.51	276.60	272.92	130.94	619.40	606.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.71	35.97	35.97	28.11	37.81	69.35	65.82	20.05	20.07	65.28	44.66	44.97
Movement LOS	C	D	D	C	D	E	E	C	C	E	D	D
Critical Movement	No	No	No	No	No	Yes	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	32.27			58.82			32.95			46.09		
Approach LOS	C			E			C			D		
d_I, Intersection Delay [s/veh]	42.13											
Intersection LOS	D											
Intersection V/C	0.760											

Superintendent
Wayne Workman

Deputy Superintendent
Tim Logan

Board of Trustees

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Michael Hogan
Sherry Parsons
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Lyon County School District
25 E. Goldfield Ave.
Yerington, NV 89447

Ph. (775) 463-6800
Fax (775) 463-6808

www.lyoncsd.org

Shey League
City of Fernley Planning Department
595 Silver Lance Blvd.
Fernley NV, 89408

RE: Proposed Sherwood Village and Frenwood Village developments

Dear Shey League,

Phillips Engineering Services proposed projects Sherwood Village and Frenwood Village will consist of 316 multi-family and 54 single family units. This project will impact Lyon County School District (LCSD) facilities as it is currently zoned for the following schools:

Fernley Elementary School
Cottonwood Elementary School
Fernley Intermediate School
Silverland Middle School
Fernley High School

Traditionally, LCSD has been able to count on approximately .5 children for every new unit built in Lyon County. Therefore, LCSD is predicting 185 new students with this proposed Sherwood and Frenwood Village developments. Increasing capacity throughout LCSD is an immediate need but unfortunately current property tax abatements and caps prevent the collection of enough revenue to meet the increasing facility needs.

MGT Master Plan study in 2016 predicted enrollment and utilization at Fernley Elementary, Cottonwood Elementary, Fernley Intermediate, Silverland Middle, and Fernley High to be adequate or approaching inadequate levels by 2025. Today, 3 of the 5 have already approached "adequate" utilization and 2 of those 3 are soon to be "approaching inadequate" levels all well before the MGT 2025 utilization projections.

LYON COUNTY SCHOOL DISTRICT	
CURRENT AND PROJECTED UTILIZATION RATES	
UTILIZATION	DESCRIPTION
>110	Inadequate
100-109.9	Approaching Inadequate
85-99.9	Adequate
70-84.9	Approaching Inefficient
<70	Inefficient

School	Enrollment Oct 1, 2021	Enrollment Sept 1, 2022	Enrollment Dec 11, 2022	Capacity* please see notes below	MGT 2015 Utilization	MGT 2025 Utilization	Utilization as of Dec 11, 2022
Cottonwood ES, Prek-4	576	583	592	711	105%	107%	83%
Fernley ES, Prek-4	438	424	427	606	82%	91%	70%
Fernley IS, 5-6	620	633	649	680	81%	96%	95%
Silverland MS, 7-8	649	646	644	759	73%	86%	85%
Fernley HS, 9-12	1,236	1,311	1,301	1,346	92%	106%	97%
Total Fernley (46% of LCSD)	**3,519**	**3,597**	**3,613**	4,102			**88%**

Capacity Formula:
= # of rooms x 20 (preK) or x 25 (K-6) or x 30 (7-12) x scheduling factor (high 75%, middle 85%, elem 95%)
(please see pg 44 of Lyon CSD MGT Master Facility Plan for an example on estimating capacity)
*** Capacity Adjustments**
Fernley HS - Includes 4 modular buildings increasing capacity (8 classrooms)
Cottonwood ES - Includes 2 modular buildings increasing capacity (4 classrooms)

The most recent project LCSD completed to increase capacity was at East Valley Elementary School. This project netted 8 new classrooms at total project cost of $7.35 million or $918,750 per classroom. Sherwood and Frenwood Village developments project 185 new students which would require approximately 7 new classrooms or $6,431,250 ($918,750 x 7) in construction only capital. LCSD has relied on Bond Funding to build new schools and additions. Unfortunately, given the district current bonding capacity and nationwide increased construction costs, it's not possible for the district to have sufficient capital to build anything alleviating student capacity concerns.

LCSD recognizes that growth is an inevitable product of living in a great community and will always strive to provide world class educational opportunities to our students. However, as long as new, young families move into our community, LCSD will be tasked with the challenges associated with growth. Facility needs will always lag new growth, increasing the stress and strain on a local education agency.

LCSD appreciates the opportunity to provide input and is grateful for the relationships we have with the city and district leaders. As our communities grow with new developments, we hope school district leadership will continue to be engaged. Given our challenges to raise capital funds in the necessary amounts to build new schools LCSD advocates for a school-friendly allowance or other creative solutions that may be possible from a developer of each new residential plan in Lyon County.

Thanks again for the opportunity to provide this input.

United States Department of the Interior

BUREAU OF RECLAMATION
Lahontan Basin Area Office
705 North Plaza Street, Room 320
Carson City, NV 89701-4015

IN REPLY REFER TO:

Dec 23, 2022

LO-620
2.2.3.19

VIA ELECTRONIC MAIL

Ms. Lisa Warner
City of Fernley
595 Silverlace Blvd.
Fernley, Nevada 89408
lwarner@cityoffernley.org

Subject: Comments Regarding the Resubmission of Sherwood Subdivision Tentative Subdivision Map 22002, Section 12, T. 20 N., R. 24 E., Mount Diablo Base & Meridian, Fernley Drain No.1 and No. 1 BR 1 Drains, TC 4-1 and TC 4-1-1 Laterals, Newlands Project, Fernley, Nevada

Dear Ms. Warner:

The Bureau of Reclamation (Reclamation) has received an electronic mail notice seeking comments regarding the Resubmission of the Tentative Subdivision Map for the Sherwood Subdivision in Fernley, Nevada.

Reclamation offers the following comments and request for conditions of approval:

- The United States has four irrigation facilities on the subject property, Fernley Drain No. 1, Fernley Drain No. 1 BR 1, TC 4-1 Lateral and TC 4-1-1 Lateral. The facilities are depicted on the enclosed map (Enclosure 1). The drains are each located on 100-foot-wide easements and the laterals are located on 60-foot easements. The developer has submitted the required application to relocate and modify these facilities. Until such application is approved, no part of the development may disturb the easements for the four federal facilities.
- The developer has proposed to relocate the above drains and TC-4-1 lateral into 35-foot easements with those facilities being piped. Additionally, the developer has proposed to eliminate the TC 4-1-1 lateral. Reclamation is not conceptually opposed to these plans, provided the storm water is not directed into the federal facilities and that the developer constructs detention ponds that will handle at least 100-year flood events. Reclamation Directives and Standards do not allow storm water into Federal canals, ditches, or laterals without complying with Clean Water Act National Pollutant Discharge Elimination System permit requirements.
- Reclamation has concerns regarding the statement that storm water easements will be placed “over top” of Reclamation easements. See Developer’s Response No. 5 in the

December 2, 2022, letter to the City Engineer (Enclosure 2). This comment will need to be clarified by the developer and might not be acceptable to Reclamation.

- Permanent structures within the easement will not be permitted.
- No landscaping or fences will be allowed within the aforementioned easements.
- The developer and Reclamation have had several meetings to discuss the easements and storm water concerns, but an agreement has not yet been reached.
- The final map shall be transmitted to Reclamation.

Because the easements and irrigation facilities occupy so much of the Sherwood property (see Enclosure 1), and the development depends upon the relocation of those facilities, Reclamation requests that approval of the TSM be deferred or that a conditional approval be adopted requiring the relocation of irrigation facilities in a manner and location acceptable to Reclamation.

Reclamation appreciates the opportunity to comment. Should you have any questions regarding this matter, please contact Mr. Peter M. Schannauer, Water and Lands Specialist, at (775) 884-8349, by email to pschannauer@usbr.gov, or TTY Federal Relay System (800) 877-8339.

Sincerely,

KENNETH VICENCIO Digitally signed by KENNETH VICENCIO
Date: 2022.12.23 08:22:34 -08'00'

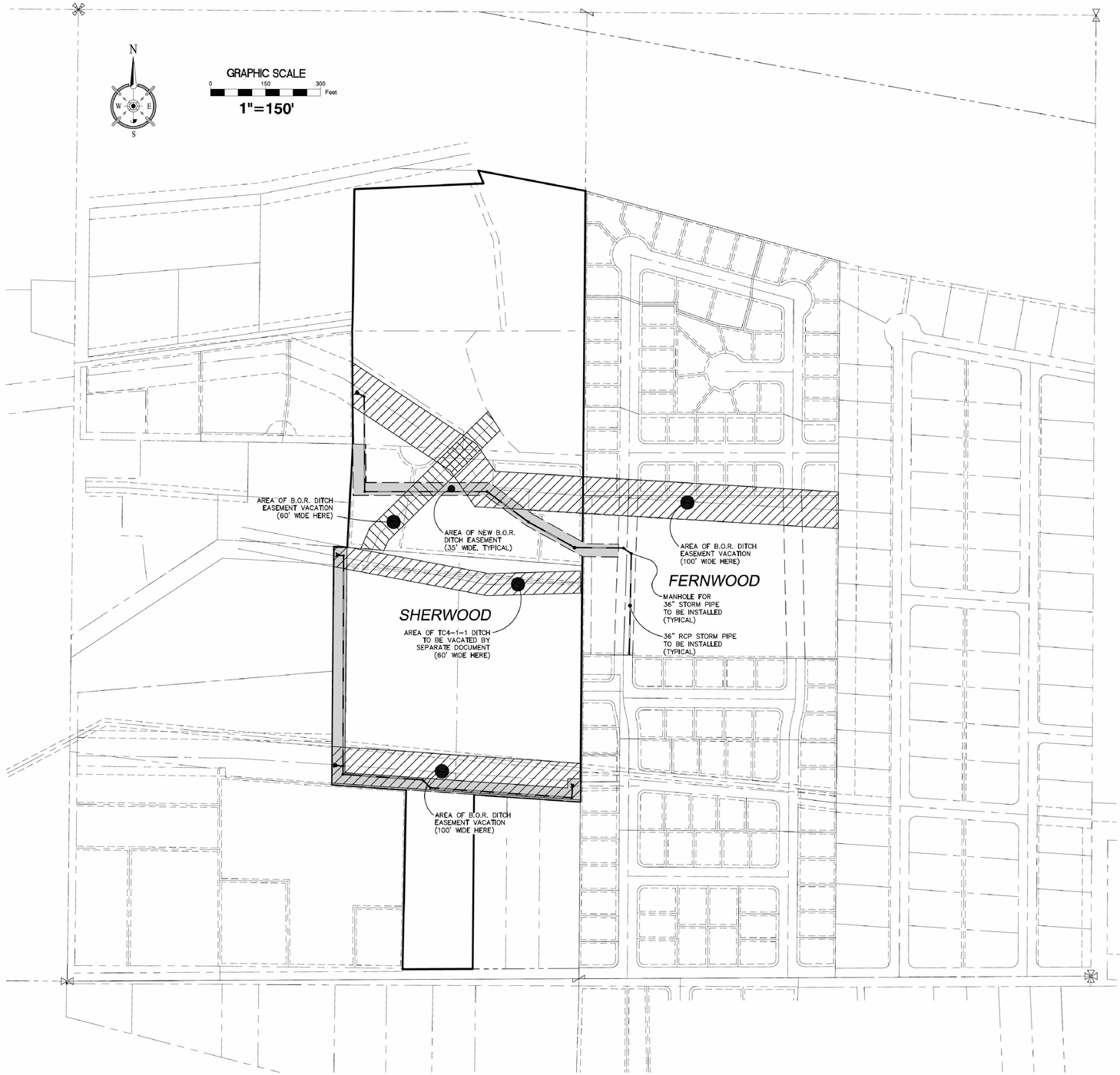
for Rena Ballew
Resource Division Manager

Enclosures - 2

cc: Ms. Ida Adams
Truckee-Carson Irrigation District
P.O. Box 1356
Fallon, Nevada 89407-1356
(w/encl)

SHERWOOD / FERNWOOD B.O.R. EXHIBIT

PART OF THE W½ OF THE SE¼ OF SECTION 12, TOWNSHIP 24N, RANGE 20E, MDM, LYON CO., NV, LISTED ADDRESS: 0, CITY OF FERNLEY, NV 89408



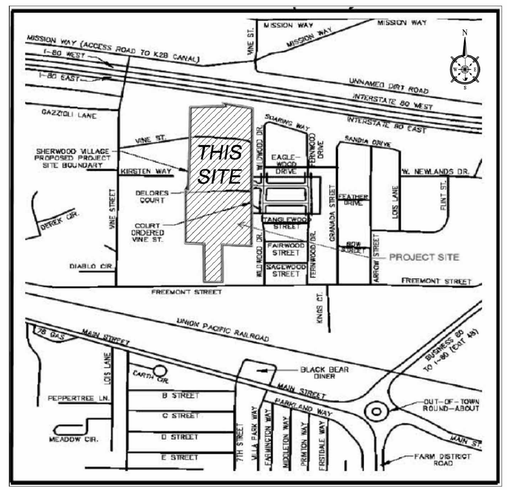
BASIS OF BEARINGS

BEARINGS ARE BASED UPON THE NEVADA STATE PLANE COORDINATE SYSTEM OF 1983, WEST ZONE, ADJUSTED TO GROUND VALUES, AS ESTABLISHED BY REAL TIME KINEMATIC (RTK) GPS METHODS, USING A GRID TO GROUND SCALE FACTOR OF **1.0002827561** – BEARINGS ARE EXPRESSED IN DEGREES, MINUTES & SECONDS – DISTANCES ARE EXPRESSED IN FEET & DECIMAL PARTS THEREOF – CURVES ARE EXPRESSED IN RADIUS (R) CENTRAL ANGLE (Δ) AND ARC LENGTH (L) – COORDINATES ARE EXPRESSED IN NORTHING (N) & EASTING (E).

FLOOD ZONE DATA

THE SITE FALLS IN ZONE "X" DEFINED AS "0.2% ANNUAL CHANCE FLOOD HAZARD WITH AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS LESS THAN ONE FOOT OR WITH DRAINAGE AREAS OF LESS THAN ONE SQUARE MILE" FOUND IN NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP (FIRM) PANEL NUMBER **32019C0105E** EFFECTIVE DATE: **01-16-09** – FIRMETTE PRODUCED BY THIS OFFICE, DATE: **05-05-22**

VICINITY MAP (NTS)



PREPARED FOR

PETER SCHANAUER
BUREAU OF
RECLAMATION

NOTES

1. RCP = REINFORCED CONCRETE PIPE
2. APPROXIMATE GROUND AFFECT DIMENSIONS OF RELOCATED FERNLEY DRAIN No. 1:
   LENGTH = 650 LINEAR FEET ±
   WIDTH = 75 LINEAR FEET ±
   DEPTH = 15 LINEAR FEET ±
3. APPROXIMATE LENGTH OF FERNLEY DRAIN No. 1 & TC-4 LATERAL, EXISTING AND RELOCATED
   OLD EASEMENT LENGTH = 3,211 LINEAR FEET ± (66% AT 100' WIDTH, 34% AT 60' WIDTH)
   NEW EASEMENT LENGTH = 2,300 LINEAR FEET ± (100% AT 35' WIDTH)
4. EXCAVATION TO BE IMPLEMENTED WITH A BACKHOE
5. THIS IS NOT A SURVEY

AFFECTED APNs:
021-092-05
021-092-23
021-092-26
021-092-27
021-092-46
021-092-47
021-092-54
021-092-55

REFERENCES

NO.	NAME	DATE OF RECORD	DOCUMENT NO.
1)	Sandia Manor Unit No. 1	09/17/74	020127
2)	Rancho Sierra Sub	02/02/78	035794
3)	CT & MA Johnson Prop	06/28/79	046616
4)	Chisholm	02/12/80	051624
5)	Roy & Mabel Johnson	11/07/85	096169
6)	Newman	06/11/86	100091
7)	Gilliland/Mongolo	06/16/88	116731
8)	Albanese	06/30/92	153025
9)	Horton	06/13/95	183107
10)	Fernwood No. 1	06/15/95	183171
11)	Eagles Nest No. 1	06/20/96	194579
12)	Fernwood No. 2	07/17/97	207777
13)	Craig	12/13/99	242275
14)	Eagles Nest No. 2	01/18/01	256491
15)	Denn	03/27/02	274347
16)	Grant/Fain	04/10/02	275037
17)	Eagles Nest No. 3	01/14/03	288908
18)	Fernwood No. 3	12/02/03	309466
19)	Sherwood Fernwood	06/30/21	640343
20)	Court ordered road	06/30/66	067284
21)	Fremont St site (Parcel 9)	12/09/21	649464
22)	Abandoned Ditch Tract 6	04/29/22	656685

(ALL OF THE ABOVE IN THE OFFICIAL RECORDS OF LYON COUNTY, NEVADA)

THIS IS NOT A SURVEY

No.	REVISIONS	DATE	BY

ENGINEERS - PLANNERS - SURVEYORS - ANALYSTS
PHELPS ENGINEERING
10551 Professional Circle, Suite "A" - Reno, NV. 89521
www.phelpsengineering.net • tel: 775-241-3807

PROFESSIONAL SURVEYOR-SITE
RICHARD A. PEDRAZA
Exp 12-30-23
No. 21076
STATE OF NEVADA

MAP

NOT TO SCALE IF SHEET SIZE OTHER THAN 24"x36

DESIGNED BY: RAP
DRAWN BY: RAP
CHECKED BY: RAP

EXHIBIT PREPARED FOR:
PETER SCHANAUER
BUREAU OF RECLAMATION

EXHIBIT SHOWING B.O.R. RELOCATIONS
TRACT 1 THRU TRACT 8, A.K.A.
"SHERWOOD VILLAGE" PER THAT
R.O.S. FOUND IN DOCUMENT No. ____
CITY OF FERNLEY, LYON CO., NV

DATE: 11/18/2022
PROJECT NO.: 21602

1 OF 3

Drawing name: C:\Users\rpedraza\OneDrive - Phelps Engineering Services\Company\Entitlement Engineering\21603 - Sherwood\08 - CAD\Surveying\Exhibit\BOR\21063_Sherwood_BOR.dwg KEY Nov 16, 2022 9:01pm by: RPedraza

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Shay League**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes:	No: X	Yes:	No: X	N/A

ACTION REQUESTED: Ordinance
Motion

AGENDA ITEM: (For Possible Action):

For Possible Action - Public Hearing, ZMA22009 - Zoning Map Amendment
Consideration and possible action on a zoning map amendment application by ERGS, Inc. to change the zoning designation of a ±20.80-acre project site located at approximately 501 River Ranch Road (APNs: 021-281-03, 021-281-10, and portions of 021-281-04 and 021-281-09) from Industrial (I), Employment Center (EC), and General Commercial (C2) to Mixed Use (MU) to facilitate the construction of a 320-unit multi-family project called River Ranch Apartments.

AGENDA ITEM BRIEF:

The ±20.80-acre project site is currently composed of ±15.13-acres Industrial (I), ±3.67-acres Employment Center (EC), and ±2.00-acres General Commercial (C2). ERGS is requesting we rezone this site to Mixed Use (MU). The land use indicated by the Comprehensive Master Plan is Suburban Mixed Use (SMU). I, EC, and C2 are not equivalent land use categories for SMU; the proposed MU is an equivalent land use category, as are Residential, Medium Density Residential, 14 dwelling units per acre maximum (MDR14), Residential, Multiple Family, 30 dwelling units per acre maximum (MF30), and Neighborhood Commercial (C1).

RECOMMENDED MOTION:

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

BACKGROUND:

Staff is still piecing together supportive information and recommendations for this project and intends to have a full report in place prior to the 02/15/2023 meeting.

RELEVANT LAWS, STATUTES, AND REGULATIONS:
Nevada Revised Statutes (NRS), Chapter 278 - Planning and Zoning
Fernley Municipal Code (FMC), Title 32 - Development Code
City of Fernley Comprehensive Master Plan - August 2018, 3rd Update
City of Fernley Department of Public Works Design Standards and Review Guidelines for Streets, Potable Water, Sewer Storm Drains, & Alternative Water (May 2008)
City of Fernley Standard Details for Public Works Construction
Items of specific interest:

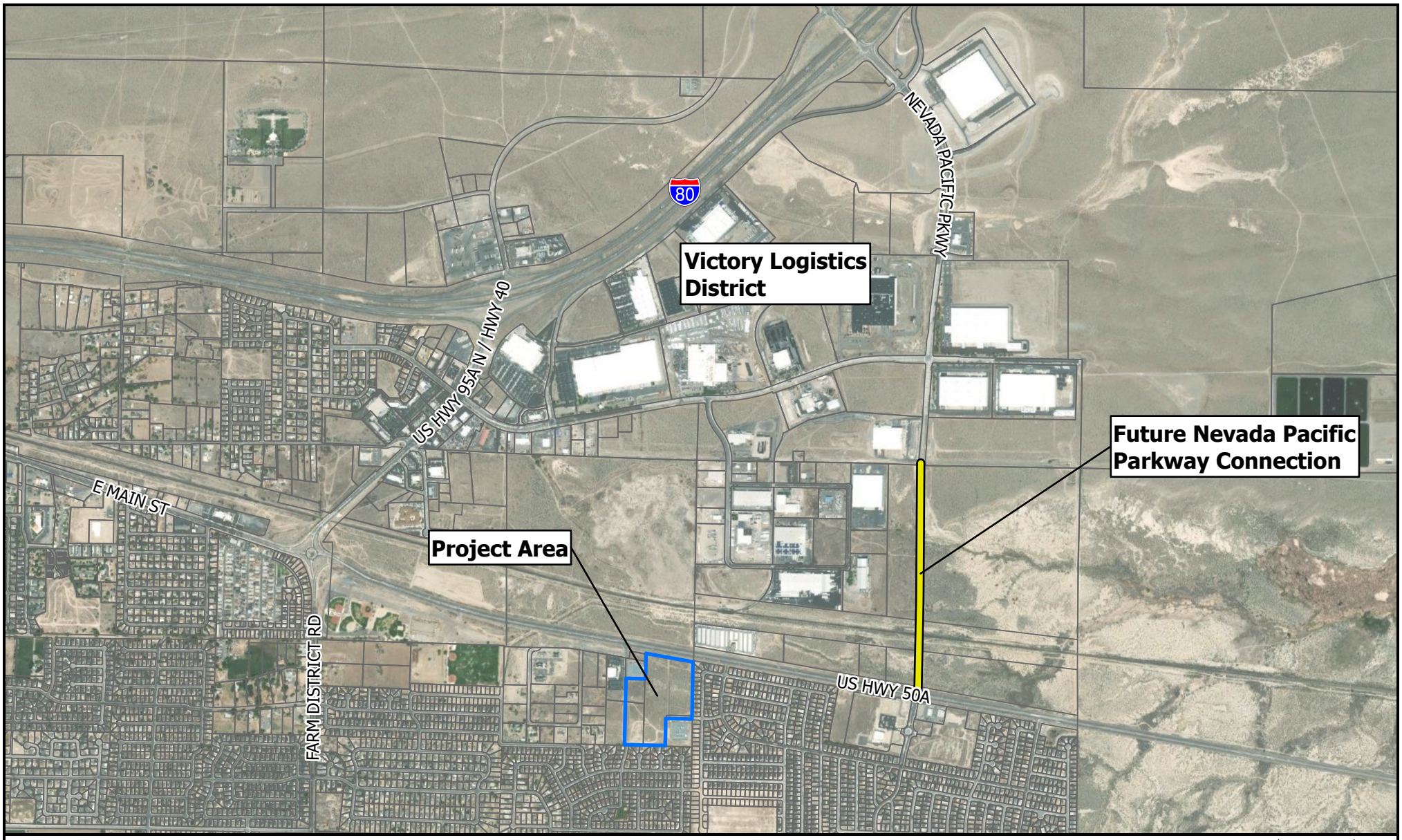
- NRS 278.260 - Planning and Zoning | Planning Commissions | Determination, establishment, enforcement and amendment of zoning regulations, restrictions, and boundaries: Procedure and prerequisites; notice and hearing; signs; additional fee for certain applications.
- FMC Chapter 32.03.040 (e) - Development Code | Administration | Annexation, comprehensive master plan, and zoning applications | Zoning map amendments (rezoning)
- FMC Chapter 32.06.090 - Development Code | Zoning Districts | Mixed Use (MU)
- FMC Chapter 32.12.010 (d) - Development Code | Adequate Public Facilities | Determination of adequate public facilities
- Fernley Master Plan, Section 3.3, p. 66 - Land Use | Non-Residential Land Uses | Suburban Mixed Use (SMU)
- Fernley Master Plan, Section. 4.2, pp. 86-88 - Transportation | Functional Classifications

FINANCIAL IMPLICATIONS:

N/A

ATTACHMENTS:

1. Vicinity Map
2. Existing and Proposed Zoning
3. Project Description
4. Initial Conditions
5. Approved Conditions
6. Exhibits
7. Technical Reports
8. Full Size Plans



VICINITY MAP

RIVER RANCH APARTMENTS

FERNLEY, NV

SEPTEMBER 2022

Future Nevada Pacific Parkway

BLA_Project_Boundary

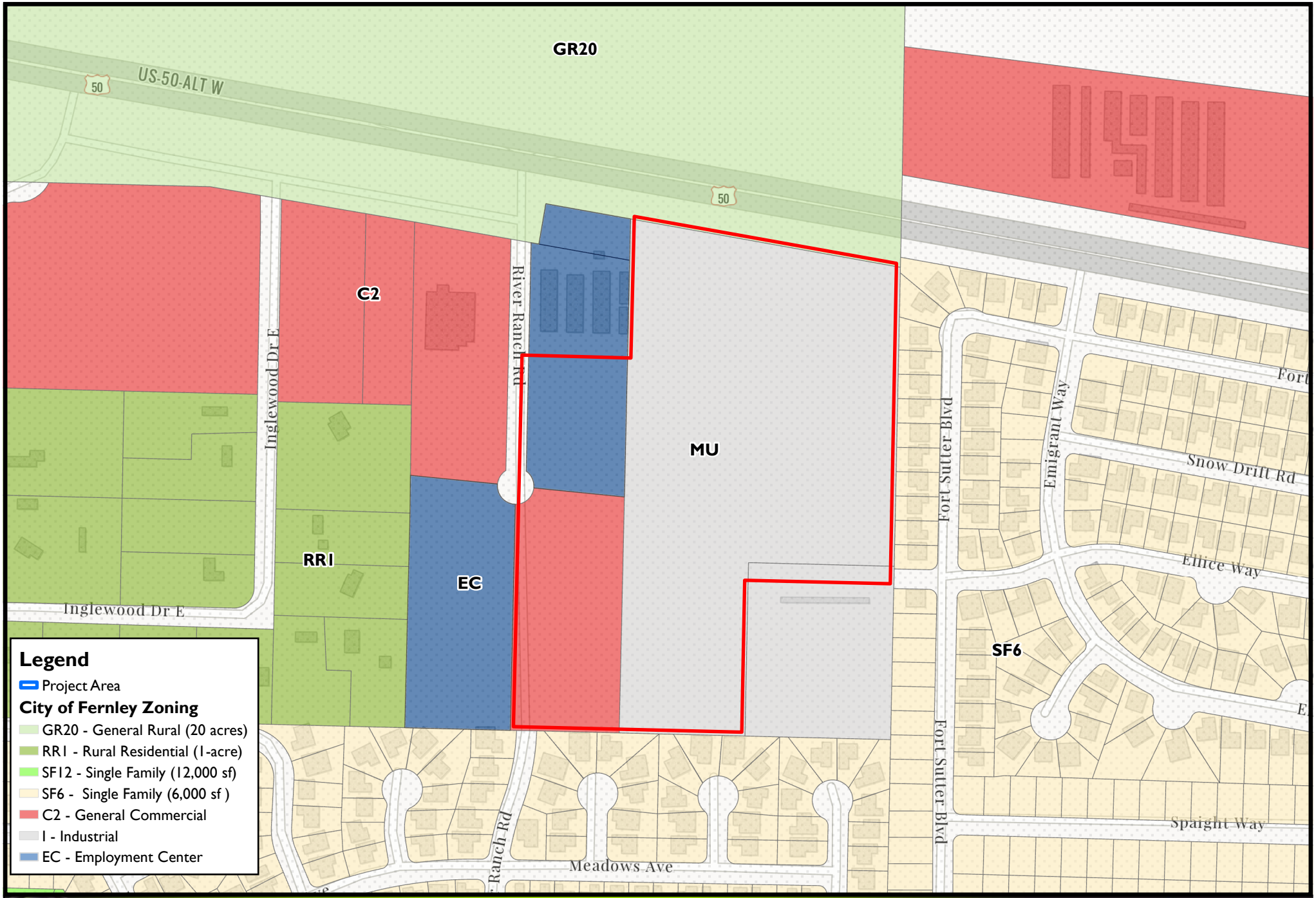
0 500 1,000 2,000

Feet

NORTH

WOOD RODGERS

J:\Jobs\3034_ERGS\River_Rnch_Double_R_OA\GIS\ArcGIS_Pro\River_Ranch_Double_R_Apts\River_Ranch_Double_R_Apts.aprx 9/9/2022 10:41 AM ethompson

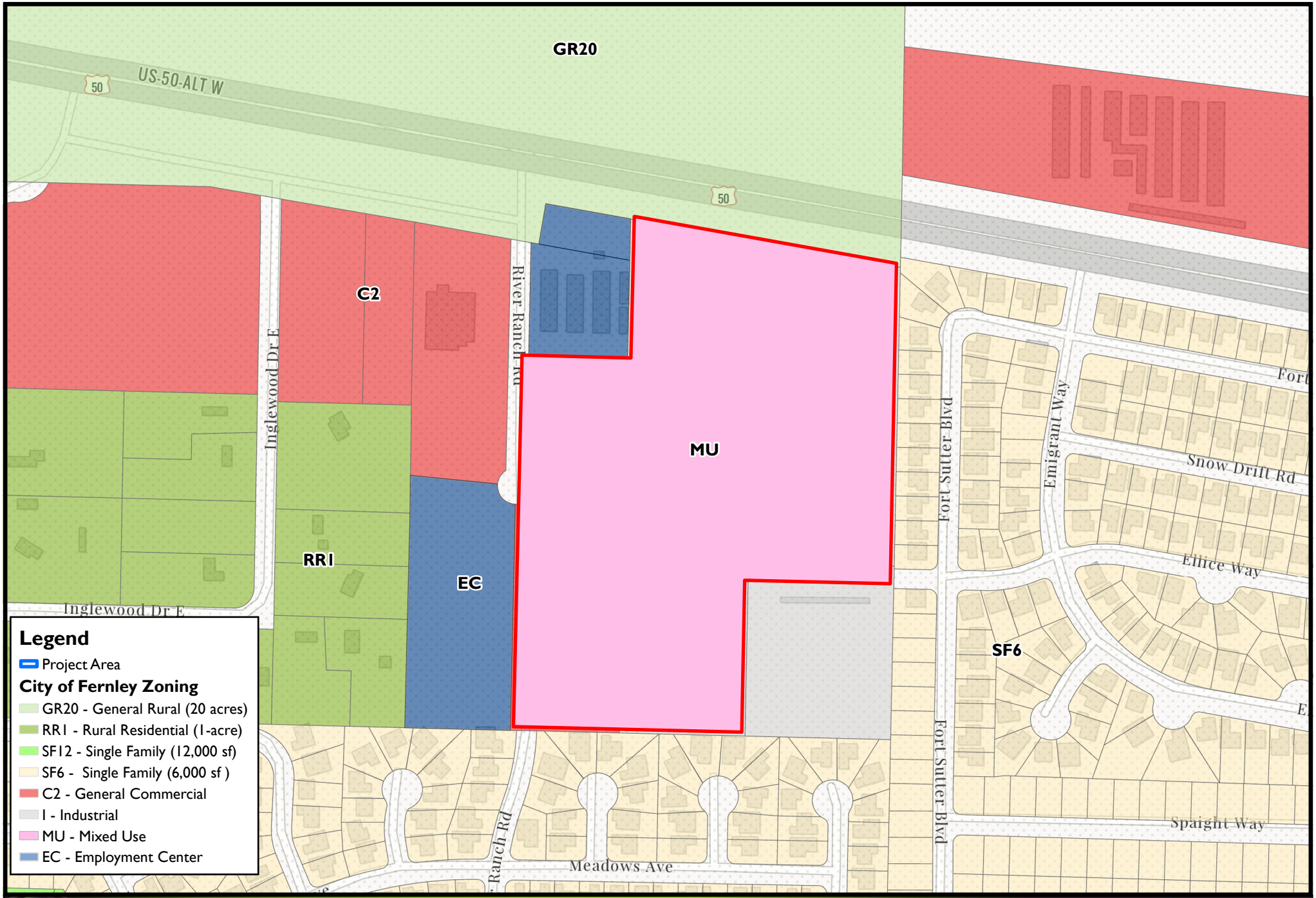


Existing Zoning

River Ranch Apartments

September 2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
Fax: 775.823.4066



Proposed Zoning

River Ranch Apartments

September 2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
Fax: 775.823.4066

SECTION 2 – PROJECT DESCRIPTION AND FINDINGS

PROJECT DESCRIPTION

OVERALL REQUEST

The request is for the following:

(1) A Zoning Map Amendment to change the designation on 20.80± acres as follows:
   a. 15.13± acres from I to MU
   b. 3.67± acres from EC to MU
   c. 2.00± acres from C2 to MU

   and;

(2) A Conditional Use Permit to allow a multi-family project over 100 units in size in the MU zone. The proposed project includes 320 units and the overall density is 15.38 units per acre.

BACKGROUND INFORMATION

LOCATION

The subject site consists of 20.80± acres and is generally located north of Meadows Avenue; south of U.S. Route 50 Alternate; east of River Ranch Road and; west of Fort Sutter Boulevard. The site is in close proximity to the Victory Logistics District, a 4,300± acre developing manufacturing, distribution, logistics and data center which will result in significant job growth in Fernley. In addition, with the recent announcement of federal funding to complete the extension of Nevada Pacific Parkway from I-80 to U.S. Highway 50 Alternate the connection will facilitate quick and easy access from the project site to work locations in the district.

(Refer to VICINITY MAP in Section 3 of this Submittal Packet).

PARCEL NUMBERS, OWNERSHIP, ACREAGES, MASTER PLAN AND ZONING DESIGNATIONS

The site includes the following Assessor Parcels with current ownership, existing and proposed acreage, comprehensive master plan and zoning designations noted as follows:

Assessor Parcel Number (APN) /Current Owner	Existing Acreage/Proposed Acreage	Comprehensive Plan Designation	Zoning Designation
021-281-03 ERGS Fernley LLC	3.67± acres/3.67± acres	Suburban Mixed Use (SMU)	EC (Employment Center)
021-281-04* Cardin, Carl D.	3.67± acres/2.00± acres**	Suburban Mixed Use (SMU)	C2 (General Commercial)
021-281-09* Sierra Pacific Power Co.	3.55± acres/.45± acres **	Suburban Mixed Use (SMU)	I (Industrial)
021-281-10 ERGS Fernley LLC	14.68± acres/14.68± acres	Suburban Mixed Use (SMU)	I (Industrial)

* Current APN.

** Acreage to be part of the subject project area and ownership will be ERGS Fernley LLC upon final approval of boundary line adjustments by the City of Fernley and sale/transfer of property.

(*Refer to ASSESSOR PARCEL MAP, PARCEL AREAS, EXISTING ZONING MAP and MASTER PLAN LAND USE MAP EXHIBITS in Section 3 of this Submittal Packet).*

SITE CHARACTERISTICS

The property is undeveloped and is characterized by disturbed and undisturbed areas with sparse native vegetation. There are a number of dirt/gravel trails and roads that cross the site. In addition, there are overhead power lines adjacent to the site to the north within the U.S. 50 Alternate right-of-way and to the east within the adjacent residential rear yards.

Easements on the property include a north/south 50 foot relocatable access easement from U.S. Highway 50 Alternate providing access to the NV Energy Lonely Substation utility facility (under the ownership of SPPCo) located southeast of the site; a 10 foot PUE adjacent to the easterly property boundary; an east/west 10 foot PUE for a gas feeder main and distribution main near the northerly portion of the site; and a 50± foot Public Roadway and Utility easement adjacent to the westerly boundary which is partially improved as River Ranch Road. In addition, there is a 55-foot wide access easement along the northerly property line of the (SPPCo owned) Lonely Substation site that provides access from the subject site and the SPPCo property to Fort Sutter Boulevard.

(*Refer to SITE PHOTOS and SITE AERIAL in Section 3 and SITE CONDITIONS in Section 3 or 5 of this Submittal Packet).*

There are no streams, waterways, drainageways or wetlands located on the property. The FEMA designation is Zone X. *A PRELIMINARY DRAINAGE REPORT addressing existing and proposed drainage conditions, as well as a GEOTECHNICAL REPORT outlining soil conditions is included in Section 4 of this Submittal Packet.*

The site slopes from south to north. The Fernley Municipal Code Title 32 Development Code (Code), Section 32.09.130, Slopes, Hilltops and Ridges is applicable to property that has slopes 10% or greater on 25% of the site.

The following is a summary of slopes on the property:

Slope (%)	Area (Acres)	% of Total
0-10	18.70	89.70
10+	2.10	10.30
TOTAL	20.80	100.00

Slopes exceeding 10% only occur on 10.30% of the site. Section 32.09.130 is, therefore, not applicable to this project.

(Refer to SLOPE MAP in Section 3 and SITE CONDITIONS EXHIBIT in Section 3 or 5 of this Submittal Packet).

SURROUNDING USES AND DESIGNATIONS

Surrounding and nearby properties include a variety of uses, as well as a mix of master plan and zoning designations as provided in the table below. *A Noticing Map and List of Addresses of properties within 300 feet of the project boundaries is included in Section 1 of this Submittal Packet.*

DIRECTION	USES	CITY OF FERNLEY MASTER PLAN LAND USE MAP	CITY OF FERNLEY ZONING
North	U.S. Highway 50 Alternate	Open Space and Parks (OSP)	GR20
South	Single Family Residential* and Lonely Utility Substation	Single Family Residential (SFR) and Suburban Mixed Use (SMU)	SF6 and I
East	Single Family Residential** and Lonely Substation Utility Facility	Single Family Residential (SFR) and Suburban Mixed Use (SMU)	SF6 and I
West	Mini-warehouses with outside storage; Pioneer Crossing Casino; Undeveloped Land	Suburban Mixed Use (SMU)	EC and C2

* There are 7 single family residential lots with rear yards abutting the property. The average lot size is 9,334± square feet. All lots are developed with single story homes and include 6 foot rear yard wood fences.

** There are 12 single family residential lots with rear yards abutting the property. The average lot size is 7,151 square feet. Eleven lots are developed with single story homes and one lot includes a two-story home. All lots include 6 foot rear yard wood fences.

(Refer to NOTICING MAP and LIST OF ADDRESSES WITHIN 300 FEET in Section 1 and EXISTING ZONING MAP, MASTER PLAN LAND USE MAP and SITE PHOTOS in Section 3 of this Submittal Packet).

1. ZONING MAP AMENDMENT REQUEST

The request is for a Zoning Map Amendment to change the designation on 20.80± acres from I, EC and C2 to MU.

(Refer to LEGAL DESCRIPTIONS and ZONING MAP AMENDMENT BOUNDARY MAP in Section 1 and EXISTING and PROPOSED ZONING MAP in Section 3 of this Submittal Packet).

REASON AND JUSTIFICATION

As outlined above, the project site currently has three different zoning classifications. The three classifications make it inefficient and problematic to plan and develop the 20.80± acre site as an integrated project. All properties, however, are designated Suburban Mixed Use (SMU) on the City of Fernley Master Plan Land Use Map.

(Refer to EXISTING ZONING and MASTER PLAN LAND USE MAPS in Section 3 of this Submittal Packet).

Pursuant to the City of Fernley Comprehensive Plan (Master Plan), the compatible zoning districts for property designated SMU include: MDR14; MF-30; MU; C1 and PD. The current zoning designations of I, EC and C2 on the properties are not consistent with the Master Plan.

The proposed project is a multi-family development which is compatible and consistent with the Master Plan goals and action strategies, associated with the Suburban Mixed Use (SMU) designation. The overall density of the project is 15.38 units per acre. The density is slightly higher than the limits of the MDR14 zone (7 to 14 units per acre) and lower than the MF30 zone (21 to 30 units per acre). The MU density range as provided in the Master Plan is 10 to 30 dwelling units per acre. Based on the project density, the MU zone is the appropriate conforming zoning for the property.

As noted in the Code, Table 32.06.090-1 Mixed Use Density/Intensity Standards, multi-family residential projects shall utilize MF30 design standards. Compliance

with the MF30 design standards is addressed in detail in the *Conditional Use Permit Request Section of this Submittal Packet.*

The proposed project density and MU zoning provides an excellent transition from the single family residences to the east and south to the commercial and industrial type uses (Lonely Substation utility facility, mini-warehouses with outside storage, and Pioneer Crossing Casino) to the south and west. Given the site's location in close proximity to the projected job growth associated with the Victory Logistics District and the Nevada Pacific Parkway extension, this housing project is the perfect fit for the City of Fernley. The proposed MU zoning is fully consistent with the Master Plan as outlined below.

COMPREHENSIVE MASTER PLAN COMPLIANCE

The following is a discussion of Goals and Policies from the 2018 (3rd updated) Master Plan that support the proposed Zoning Map Amendment. A full discussion of the specific project's compliance with the Master Plan is additionally provided in the *Conditional Use Permit Request Section of this Submittal Packet.*

PROJECT COMPLIANCE: The CHAPTER 3. LAND USE section of the Master Plan states that future growth and development, as well as the planned extension of infrastructure and services are all based on the Land Use Map. This section also states that a balanced land plan for the City of Fernley provides for a diverse mix of housing types. To accomplish these goals, the updated Plan added a number of land use categories including the Suburban Mixed Use (SMU) to encourage a broad mix of uses including high-density residential within close proximity to services and employment. The Plan states the goal for the City is to effectuate growth and redevelopment as depicted on the Land Use Map and to have the Master Plan and Zoning Maps in conformance with each other.

The updated Land Use Map designated several acres of land (including the subject 20.80± acres) south of U.S. Highway 50 Alternate and east and west of River Ranch Road as SMU. As outlined in Section 3.6 - Implementation, general guidelines necessary for the implementation of the plan including promoting the Land Use Map to encourage new employment opportunities, revitalization of the downtown core, and housing projects that support the Land Use Chapter. The

proposed Zoning Map Amendment to MU is supported by these guidelines and will allow for a new residential project (the River Ranch Apartments) to help meet workforce housing needs in the City of Fernley.

The following also specifically supports the Zoning Map Amendment:

3.7 GOALS AND ACTION STRATEGIES

> **L.U.1.2 Encourage new development to be in accordance with the Comprehensive Master Plan land use category, and other land use controls to accomplish community principles.**

PROJECT COMPLIANCE: The project site is designated SMU on the Comprehensive Master Plan. Existing sit zoning designations of I, EC and C2 are not in compliance with the SMU designation. The requested zone change to MU, however, is consistent with the SMU designation and is supported by this goal and action strategy. The MU zoning will allow for diverse housing options including multi-family projects and is in compliance with other specific Master Plan Goals and Action Strategies for Population, Housing and Employment and Land Use as further discussed in the *Conditional Use Permit Request Section of this Submittal Packet.*

(Refer to EXISTING MASTER PLAN EXHIBIT and EXISTING and PROPOSED ZONING EXHIBITS in Section 3 of this Submittal Packet).

ZONING MAP AMENDMENT FINDINGS

The following outlines the required findings and provides responses to address the requested zoning map amendments as outlined in the Code.

Section 32.03.040 (e) Zoning Map Amendments (rezoning) (6) outlines Findings for approval and states a zoning map amendment is committed to the city council's legislative discretion. The zoning map amendment be approved if it is:

a. Consistent with the city's master plan and otherwise consistent with state and federal law.

APPLICANT'S RESPONSE: The proposed MU zoning is fully consistent with the master plan Suburban Mixed Use (SMU) land use map designation, characteristics and location, as well as the equivalent consistent zoning categories. The existing zoning on the property (I, EC and C2) is currently not consistent with the master plan designation. Goals and Action Strategies fully support bringing zoning into conformance with the Land Use Plan. The zoning map amendment will be beneficial to the City of Fernley as it will encourage medium to high-density development to meet future housing demands in the City of Fernley.

b. Consistent with the surrounding land uses.

APPLICANT'S RESPONSE: The existing zoning on the project site abutting the single family residences located to the south and east is I, EC and C2. These zones typically allow the more intense and heavier industrial uses including those labeled in the Code Section 32.06.150 – Unlisted Uses and Use Table under the categories of Vehicles and Equipment; Manufacturing and Employment; Warehousing, Storage and Distribution; and Waste Related Facilities. These uses can result in compatibility related issues with single family residential neighbors. The MU zoning, however, provides an opportunity for a mix of residential and commercial uses and can be more appropriate to help create a slightly higher residential density transition from lower intensity single family homes to the higher intensity commercial/industrial uses (mini-warehouses with outside storage and Pioneer Crossing Casino) to the west. The MU zone is consistent with the master plan designation of Suburban Mixed Use and is a better and more consistent zoning transition option adjacent to the surrounding land uses.

c. Public notice was given, and a public hearing held per the requirements of the development code and Nevada Revised Statutes.

APPLICANT'S RESPONSE: The City of Fernley is responsible for providing public notice in accordance with the Development Code and Nevada

Revised Statues. A public hearing or hearings will be properly noticed and held with a decision as to the zoning amendment made in accordance with all legal requirements.

2. CONDITIONAL USE PERMIT REQUEST

Pursuant to Section 32.06.150-2 Use Table of the Code, a Conditional Use Permit is required for a multi-family project over 100 units in size in the MU zone. The proposed project includes 320 units, therefore, a Conditional Use Permit is required and requested as part of this application. The details of the Conditional Use Permit project and compliance with various Code sections are outlined *in this Section of the Submittal Packet.*

SITE PLAN

The 20.80± acre site has been designed to provide a high quality and well designed multi-family community to meet the needs of existing and future residents relocating to or moving within Fernley including those pursuing new nearby employment opportunities in the Victory Logistics District. The site plan ensures safe primary, as well as emergency access, accommodates (agreed upon) relocated access to the NV Energy Lonely Substation, respects gas and utility easements and minimizes impacts to and from adjacent uses through the use of landscape buffers, walls and generous setbacks.

The applicant has worked with adjacent property owners to add 2.00± acres of undeveloped land to the site from the southerly portion of APN 021-281-04 via a Boundary Line Adjustment (BLA) application that was recently submitted to the City. In addition, .45± acres of excess property from the northerly portion of the Lonely Substation property (APN 021-281-09) will be added to the site via a BLA application to be submitted in the near future.

The site plan considers topography, grading, drainage, access, buffering and ADA accessibility needs to create a well-planned community. Building pads are stepped down from the south to the north. To accommodate drainage, a retention basin has been located at the northeast corner of the site and provides additional buffering adjacent to U.S. Highway 50 Alternate. Access to U.S. Highway 50 Alternate has also been eliminated for safety purposes. Direct access is only provided from one point on River Ranch Road. The site plan also includes ample parking and community open space with passive and active spaces

throughout the project site. Construction of the project will be phased in a logical manner to ensure access and utilities connections are appropriate.

(Refer to PRELIMINARY PHASING PLAN in Section 3 and PRELIMINARY SITE, GRADING, UTILITY and LANDSCAPE PLANS in Sections 3 or 5 and PRELIMINARY DRAINAGE REPORT in Section 4 of this Submittal Packet).

PROJECT DETAILS

The proposed 320-unit apartment community includes 40 Apartment Buildings, a Clubhouse Building, a Maintenance Building, ample parking and landscaping, as well as community amenities. The overall density of the project is 15.38 units per acre. The project will provide high quality, needed housing to accommodate existing and future residents of Fernley including those pursuing employment opportunities in the nearby Victory Logistics District.

COMMUNITY FEATURES

The River Ranch Apartment community will feature the following:

- BUILDINGS
  The project includes the following building types:

  - "CLUBHOUSE": A one-story, 2,670± square foot clubhouse building including an office space and leasing area for leasing staff, a staff kitchen, restrooms, a community exercise studio and a mail room. The CLUBHOUSE is located at the main entrance to the ±community.
  - "MAINTENANCE": A one-story, 1,395± square foot maintenance building including an office for maintenance staff, a restroom, tool room, key room and warehouse storage area. The MAINTENANCE building is located across from the Lonely Substation near the southeast corner of the site.
  - "RESIDENCES"
    All residential buildings are two-stories in height (28.50± - 31± feet high) and include 8 apartments per building. Buildings vary in size, however, the architectural style, materials, colors, and roof lines are

compatible and consistent. The buildings are spread throughout the site along with parking, landscaping and active and passive common open space areas. The building pads are stepped to accommodate grading needs and provide visual interest. Buildings are separated by a minimum of 20 feet to comply with fire access and separation requirements.

All individual residences include a lower-level outdoor patio or upper-level deck with storage space (featuring a half wall design for privacy); a laundry area with washer and dryer provided; living/dining space; closet space; separate bedrooms and bathrooms; a well-designed kitchen with a refrigerator, dishwasher, cooktop/oven and microwave, as well as central heat and air conditioning.

The following is a description of each apartment type:

- ONE BEDROOM (THE ONE): Thirteen buildings with a building height of 29.5± feet and a footprint of 4,322± square feet featuring one bedroom/one bath units are proposed. A total of 104 one bedroom apartments will be available in the community. Each one bedroom apartment is approximately 801 square feet in size.

- TWO BEDROOM (THE STANDARD): Twelve buildings with a footprint of square feet with a building height of 29± feet featuring two bedroom/two bath units are proposed. A total of 96 STANDARD units will be provided. Each STANDARD apartment is 1,068± square feet in size.

- TWO BEDROOM SUITE (THE SUITE): Thirteen buildings with a footprint of 6,652± square feet and a height of about 29± feet featuring larger two bedroom/two bath suite units are proposed. A total of 104 SUITE apartments will be offered in the community. Each SUITE apartment is 1,148 square feet in size.

- THREE BEDROOM (THE TRIO): Two buildings with a footprint of 7,284 square feet and a height of 31± feet featuring three bedroom/two bath units are proposed. A total of 16 apartments will be provided. Each TRIO apartment is 1,434 square feet in size.

- PARKING, LANDSCAPING AND AMENITIES
  - The project includes 698 Parking Spaces including 680 standard and 18 ADA accessible spaces.
  - A total of 6.98± acres (34.70% of the site) is dedicated to landscape area including buffers, parkway treatments, median/entry features, passive and active community spaces including open turf areas, a dog park and areas with children's play structures. The site includes integrated sidewalks throughout with connections to a meandering sidewalk along River Ranch Road.

*(Refer to BUILDING ELEVATIONS, FLOOR PLANS, PRELIMINARY SITE PLAN and PRELIMINARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet)***.**

ARCHITECTURE

Building design incorporates the use of a variety of color, accents and materials, window size variations, pitched roofs, as well as building plane articulation including recesses and projections. A separate entrance and lower-level patios or upper-level balconies are provided for each unit. Each patio and balcony features a minimum outdoor use size of 140± square feet and includes an enclosed storage area and solid half-wall design for privacy. Building materials include wood frame construction with stucco exteriors and accents. Roof elements include a combination of hip, gable and shed roofing. Roof materials will consist of composite architectural shingles. Building colors include Tuscan, French and Spanish body color and trim palettes.

(*Refer to COLOR PALETTE in Section 3 and BUILDING ELEVATIONS and FLOOR PLANS in Sections 3 or 5 of this Submittal Packet).*

LANDSCAPING, OPEN SPACE AND AMENITIES

The Code requirement for landscaping for MU zoned projects is 15% of the project site area. The required landscape area is 135,918 square feet (3.12 acres). Based on the required area and number of parking spaces, a minimum of 341 trees and 2,718 shrubs will be planted on the site. Planting will include screening trees on the south and east boundaries of the site to additionally buffer the existing residences. The project includes 6.98± acres of open space/landscape area for a total of 34.70±% of the site area. The project **exceeds** Code requirements for the amount of landscape area provided.

(Refer to PRELIMARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet).

In addition, the community includes the following amenities:

- A Community Exercise Studio in the Clubhouse near the entrance to the community;
- 2 Playgrounds, with children's play structures, one located in the northerly portion and one located in the southerly portion of the community.
- 4 open Turf Areas, throughout the community for active outdoor play, passive and general use.
- A fenced Dog Park with tables and benches located in the north central portion of the community.

All landscaping and community amenities, as well as buildings, parking, drainage facilities, fencing and walls, etc. will be maintained by the owner with on-site management provided.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

NOISE AND VISUAL BUFFERING

The project has been designed with noise and visual buffering of adjacent uses in mind. Residential buildings will include dual pane windows, fiberglass filled exterior doors, 6-inch exterior walls with R19 insulation, central air conditioning and patios and balconies with half-wall designs to help mitigate privacy and noise

concerns from U.S. Highway 50 Alternate, River Ranch Road, the Lonely Substation, nearby commercial establishments and adjacent residences.

In addition, overall building setbacks; perimeter landscape buffers; a retaining wall adjacent to the north boundary of the Lonely Substation; and a retention basin located in the northeast corner of the site will allow for ample separation between the proposed buildings and the property boundaries. To further visually buffer the site and to provide sound attenuation, a 6-foot high decorative solid masonry type wall will be placed around most of the perimeter of the site with the exception of the River Ranch Road frontage which will include split rail fencing.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 and PRELIMINARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet).

TRAFFIC AND ACCESS

The project is anticipated to generate approximately 2,157 Average Daily Trip with 163 PM peak hour trips. *A TRAFFIC IMPACT STUDY outlining trip generation details, existing and projected traffic volumes, analysis of key intersections and impacts on the adjacent street network is provided in Section 4 of this Submittal Packet.* Per the Study, the addition of project traffic does not have any significant impact on nearby intersections that would require mitigation.

With development access easements will be relocated and half-street improvements will be made to River Ranch Road in accordance with recommendations provided in the Traffic Impact Study**.** River Ranch Road adjacent to the property is currently within a 50-foot wide easement on the project site. With the project, street improvements will be made and .70± acres of right-of-way will be dedicated to the City. A meandering 5-foot wide sidewalk in a landscape strip on the project site adjacent to the street dedication area will also be constructed.

(Refer to Proposed Street Section on PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

Vehicular access to the project will be from one main entrance point off of River Ranch Road. The entry into the community is via a divided roadway with a landscape median. The entry is located in the central portion of the site providing easy access to the Clubhouse Building which includes the leasing office, exercise area and mail room. Vehicular access throughout the community is provided through perimeter and interior loops for emergency access and tenant convenience.

Access to U.S. Highway 50 Alternate will be eliminated with the project. This will ensure safety for residents. Secondary gated access to River Ranch Road at the southerly end of the project site will provide emergency access, as well as (agreed upon relocated) NV Energy access to the Lonely Substation property. In addition, gated access to Fort Sutter Boulevard will be provided near the southeasterly corner of the property. Sidewalks and walkways are provided to each building and throughout the community. Internal sidewalks will also connect to a meandering sidewalk along River Ranch Road to facilitate safe pedestrian travel along the roadway.

PARKING

The Code Table 32.09.120- 2 – Parking Ratios for multi-family projects of over 100 units requires the following: 1.5 spaces per 1 bedroom/studio units and 2 parking spaces per unit for 2 bedrooms and up plus .25 guest spaces.

Per Code, a total of 668 spaces are required as follows:

104 - 1 bedroom units x 1.5	=	156
216 - 2 and 3 bedroom units x 2	=	432
320 units x .25 guests	=	80
TOTAL	=	668

Of the required total parking amount, 2% of the total shall be designed as accessible parking spaces for a total of 14 ADA accessible spaces.

Site parking in the community consists of 698 spaces as follows:

- 680 standard spaces
- 18 ADA accessible spaces

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

With final design and consideration of trash receptacle locations and grading needs, however, it is possible that the overall final number of parking spaces may be reduced. The proposed parking, however, is expected to **exceed** Code requirements by 20-30 spaces.

SITE LIGHTING

Dark sky friendly lighting will be provided throughout the community to ensure the safety of residents and guests without contributing to light pollution. Exterior lighting will feature building mounted wall pack fixtures with cut off shields to reduce glare. Ground-mounted lighting will be provided for signage and the flag pole located near the project entry. Lighting will not project over the property boundaries. Parking lot pole lighting/street lighting is not proposed. A photometric analysis by an electrical engineer will be provided with final design of the project.

SIGNAGE

Project signage consisting of large granite boulders with individual black metal lettering identifying the River Ranch Apartment Community will be located on both sides of the entry driveway facing River Ranch Road. In addition, boulder type sign may be used to identify the office location. A Project Directory showing the site layout and the individual buildings will also be provided near the entry to assist visitors and emergency access personnel. Signage will be lit with ground level lighting fixtures.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 of this Submittal Packet).

UTILITIES

Public utilities are available to serve the site include:

- Water - City of Fernley - *(PRELIMINARY WATER CALCULATIONS are provided in Section 4 of this Submittal Packet).*
- Sanitary Sewer - City of Fernley (*A SEWER REPORT is provided in Section 4 of this Submittal Packet).*
- Gas – Southwest Gas (note this project is an electric only project and will not use gas)
- Electric – NV Energy
- Telephone – AT&T
- Cable TV/Internet – Charter, AT&T

SCHOOLS

Children residing in the community will attend the following Lyon County schools:

- East Valley Elementary School
- Fernley Intermediate School
- Silverland Middle School
- Fernley High School

DEVELOPMENT CODE COMPLIANCE

The following provides details as to how the project complies with various sections of the Code.

MIXED USE DENSITY/INTENSITY STANDARDS

The project is in compliance with **ALL** requirements of Table 32.06.090 -1 pertaining to the Mixed Use (MU) Density/Intensity Standards as follows:

- Density/Intensity:
  The Code maximum is 30 dwelling units per acre. The project is 15.38 units per acre. The Code states multi-family residential in the MU zone shall utilize MF30 design standards per Chapter 32.06. The project follows the MF30 design standards which are explained in detail *in this Submittal Packet.*

- Lot:
  The Code minimum lot size is 6,000 square feet. The overall site (lot size) is 20.80± acres (906,048± square feet). The Code minimum site width is 30 feet. The overall project site has a minimum lot width of approximately 655 feet. The overall project site **exceeds** the minimum requirements for both lot size and width.

- Setbacks (principal buildings):
  - Front/exterior side (non-residential): Required 10 feet (Front applies to River Ranch Road on the west and U.S. 50 Alternate on the north and; Exterior Side applies adjacent to south and east boundaries of self storage project (APN 021-281-04) and adjacent to the north and west boundaries of the Lonely Substation (APN 021-281-09): Minimum setbacks provided **exceed** the requirements.

  - Rear: Required – 0 or 10 feet (N/A due to project site configuration)

- Side or Rear (abutting any residential district): Required – Building height x 1 foot (applies adjacent to east and south property boundaries). The height of the tallest building is 31± feet resulting in a setback requirement of 31 feet. Minimum setbacks provided **exceed** the requirements.

  (Refer to SETBACK EXHIBIT in Section 3 of this Submittal Packet).

- Height (maximum): Residential – 35 feet; Actual Building Height of Buildings ranges between 29± and 31± feet which is **below** the height maximum.

ADJACENCY STANDARDS

Section 32.09.030 of the Code outlines Adjacency Standards to minimize impacts on adjacent properties. The 20.80± acre project site is adjacent to a total of 19 single family residences and has been designed to minimize impacts as follows:

SOUTH:

Seven single family residences, all one story in height, are located on the south side of the site. To minimize impacts there are only three buildings with six upper and six lower units oriented with fronts (including unit entrances and lower-level patio and upper-level balcony areas) facing the rear yards of these residences. Blinds for tenant privacy and energy efficiency purposes are included for all windows for all apartment units. Both lower-level patios and upper-level balconies feature half-wall designs for screening and tenant privacy. Parking, landscape buffers and walls separate the buildings from the residences. Setbacks in this area range from 97± to 105± feet. The building pads and parking areas are stepped down from the southerly property boundary so that the residential lots are 7-8± feet higher than the proposed adjacent parking and finished floor of the first floor of the buildings. In addition, buffering will include a 20+ foot wide landscape area which will be planted with screening trees and a 6-foot high solid masonry wall located on the property line.

EAST:

Twelve single family residences (11 single story and 1 two-story) are located on the east side of the site. To minimize impacts, there are only five apartment buildings with ten upper and ten lower units with sides (windows only) facing eight of these residences. Blinds for tenant privacy and energy efficiency purposes are included for all windows for all apartment units. Parking and landscape buffers and walls, as well as a retention basin separate the buildings from the residences. The retention basin is located at the northeasterly boundary of the property adjacent to two of the residences. The side of the one-story maintenance building also faces two of the residences near the southeasterly boundary of the site. Setbacks range from a minimum of 39± feet near the northeasterly boundary of the site to a maximum of 97± feet. The setback from the maintenance building near the southeasterly corner of the site in 77± feet. Buffering will include a landscape area ranging in width from 6± to 39± feet which will be planted with screening trees and a 6-foot high solid masonry wall located on the property line.

(Refer to SITE PHOTOS in Section 3 and PRELIMINARY SITE PLAN, PRELIMARY GRADING PLAN, CROSS SECTIONS, BUILDING ELEVATIONS and FLOOR PLANS in Sections 3 or 5 of this Submittal Packet).

Lot adjacency standards per Section 32.090.030 (c) Generally (1) a-e apply and are discussed below:

a. EXTERIOR LIGHTING

   The applicant fully embraces Nevada's Dark Sky Designation Program. Dark sky friendly lighting will be provided throughout the community to ensure the safety of residents and guests without contributing to light pollution. Exterior lighting will feature building mounted wall pack fixtures with cut off shields to reduce glare. Ground-mounted lighting will be provided for signage and the flag pole located near the project entry. Lighting will not project over the property boundaries. Parking lot pole lighting/street lighting is not proposed. In addition, all residential units will be provided with blinds to limit spillage of interior lighting to the outside.

SOUTH:
As previously mentioned, setbacks in this area range from 97± to 105± feet and building pads and parking areas are stepped down from the southerly property boundary. The distance and grade difference between the existing residences and the buildings where the wall pack fixtures will be attached, as well as landscape buffers and walls will minimize overall lighting impacts.

EAST:
Setbacks range from 39± feet near the northeasterly boundary of the site to 97± feet. Buffering will include a landscape area ranging in width from 6± to 39± feet which will be planted with screening trees and a 6-foot high solid masonry wall located on the property line to buffer and minimize overall lighting impacts.

(Refer to SETBACK EXHIBIT in Section 3 and PRELIMINARY SITE PLAN and PRELIMINARY GRADING PLAN in Sections 3 or 5 of this Submittal Packet).

b. NOISE
Residential buildings will include dual pane windows, fiberglass filled exterior doors, 6-inch exterior walls with R19 insulation and central air conditioning to help mitigate noise concerns generated from inside the units. Amenity areas including the clubhouse, open turf play areas, children's playgrounds and the dog park are all located in the interior portions of the site to minimize outside noise.

SOUTH:
Only three buildings face the southerly property boundary. Blinds for all windows are included with all apartment units. As previously mentioned, setbacks in this area are robust and building pads and parking areas are stepped down from the property boundary. Visibility, noise and privacy impacts from the six lower units will, therefore, be minimal. The overall distance, grade differences and half-wall design of the upper-level balconies will help to mitigate noise impacts from the upper units. In addition, buffering will include a 20+ foot wide landscape area which will be

planted with screening trees and a 6-foot high solid masonry wall located on the property line to help attenuate noise.

EAST:
Only the side areas of five buildings face the easterly property boundary. Blinds for all windows are included with all apartment units. Setbacks meet and exceed adjacency requirements. Landscape buffering ranging from 6± to 39± feet including screening trees and a 6-foot high solid masonry wall located on the property line with help attenuate noise.

c. LOCATION OF OFF-STREET PARKING
Off-street parking and landscape buffers have been located around the perimeter of the site to provide for more setback separation between apartment buildings and existing residences. Parking lot pole lighting is not proposed.

SOUTH:
Parking is located adjacent to six of the seven adjacent residences. The nearest parking area is a minimum of 20 feet away from the south property line and separated by a landscape buffer which will be planted with screening trees and a 6-foot high solid masonry wall. The parking area also includes landscape islands for additional screening and visual relief. In addition, due to topography and grading, the parking in this area will be between 7± and 8± feet lower than the grade of the finish floor grade of the existing residences.

EAST:
Parking is not located adjacent to the four most northerly residences. Parking next to the other eight residences is separated by a 6-foot wide landscape buffer which will be planted with screening trees and a 6-foot high solid masonry wall. The parking area also includes landscape islands for additional screening and visual relief.

(Refer to PRELIMINARY SITE PLAN, PRELIMINARY GRADING PLAN and CROSS SECTIONS in Sections 3 or 5 of this Submittal Packet).

d. WINDOW PLACEMENT

SOUTH:

Only three buildings face the southerly property boundary. Windows facing the south are minimal and screened by lower-level half-wall designs associated with patios and balconies. In addition, setbacks in this area are robust and building pads and parking areas are stepped down from the property boundary. Visibility, noise and privacy impacts from the six lower units will, therefore, be minimal. The overall distance, grade to mitigate visibility from upper-level windows.

EAST:

Only the side areas (windows) of five buildings face the easterly property boundary. Blinds for all windows are included with all apartment units. Setbacks meet and exceed adjacency requirements and range from 39± to 97± feet. Landscape buffering ranging from 6± to 39± feet, screening trees and a 6-foot high solid masonry wall located on the property line will limit visibility through lower-level unit windows and help mitigate visibility from upper-level windows to the east.

(Refer to BUILDING FLOOR PLANS and ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

e. SETBACKS

SOUTH:

There are only three apartment buildings facing the south property line. Building setbacks in this area are generous and range from 97± to 105± feet. Setbacks **exceed** all Code requirements including the adjacency setback transition technique as discussed below.

EAST:

There are only five apartment buildings with sides only facing the east property line. Setbacks in this area range from 39± to 97± feet.

Setbacks **exceed** all Code requirements including the adjacency setback transition technique as further discussed.

(Refer to SETBACK EXHIBIT in Section 3 of this Submittal Packet).

ADDITIONAL TRANSITION ADJACENCY STANDARDS

In addition, Code sections 32.090.030 (e) Lot adjacency standards – Multiple-family residential (1) a-e, apply and are also discussed below:

Existing homes with the exception of one two-story home are one story in height. The proposed apartment buildings do not exceed the height of adjacent existing homes by more than one story as they are only two stories in height, however, the buildings are larger in terms of overall mass. Therefore, transitions using at least three techniques as outline in the Code are required on the east and south boundaries of the site.

The project includes the following three transition techniques as outlined in the Code under (1) b; c; and d as discussed below:

b. Increasing side yard setback a minimum of five feet beyond that which is required and providing a landscape buffer along a shared lot edge.

   PROJECT COMPLIANCE: The side yard setback required is the highest building height x 1 foot. Building heights range from approximately 29.5 feet to 31 feet. For the purpose of this calculation the tallest building has been used. To comply with this transition technique a setback of 31 + 5 feet for a total of 36 feet would be required along with a landscape buffer on the south and east project boundaries.

   SOUTH:
   There are only three apartment buildings that are located adjacent to the seven residential lots that border the site on the south. Setbacks in this area range from 97± to 105± feet and include a 20-foot minimum wide landscape buffer with wider portions at the easterly and westerly edges of the buffer adjacent to the residential lots. In addition, a solid 6-foot high wall will be constructed along the shared lot edge.

EAST:
All buildings near the east property line are oriented so sides only face the rear yards of the existing single family residences. The closest building to the east property line is the one-bedroom building which is approximately 29.5 feet in height and has the smallest footprint of the four building types. This setback from this location is building is 39± feet and is entirely landscaped with shrubs and screening trees. All other buildings are setback between 77± and 97± feet and include a 6-foot wide landscape buffer, as well as a solid 6-foot high wall along the shared lot edge.

The project design **exceeds** the requirements of this transition technique.

(Refer to SETBACK EXHIBIT in Section 3 and PRELIMINARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet).

c. Providing variations in the side building wall and roof form so that new structures have a comparable scale as adjacent homes along a shared side.

***PROJECT COMPLIANCE*:** All buildings have been designed with variations in front and side walls and roof forms to provide visual interest.

SOUTH:
There are only three apartment buildings that front the adjacent seven residential lots bordering the site on the south. Three different building types are located in this area to provide visual interest. Variations in the building fronts, walls, colors and roof forms are provided. Setbacks in this area range from 97± to 105± feet and include a 20-foot minimum wide landscape buffer with wider portions at the easterly and westerly edges of the buffer adjacent to the residential lots. A solid 6-foot high wall will be constructed along the shared lot edge. In addition, due to topography and grading, the finished floors of the buildings are situated between 7± and 8± feet below the finished floor of

the existing residences. The proposed buildings have similar plate heights as typical two-story homes and due to grading in this area will be comparable in scale.

EAST:
All buildings (5 residential and the maintenance building) located near the east property line are oriented so sides only face the rear yards of the existing single family residences. Three building types are located in this area to provide visual interest. Variations in the building sides, walls, colors and roof forms are provided.

The closest building to the east property line, adjacent to the existing two-story single family residence, is the one-bedroom building. This building is approximately 29.5 feet in height and has the smallest footprint of the three building types making it comparable in scale. The setback from this location is 39± feet and is entirely landscaped with shrubs and screening trees. All other buildings are setback between 77± and 97± feet and include a 6-foot wide landscape buffer, as well as a solid 6-foot high wall along the shared lot edge. The proposed buildings have similar plate heights as typical two-story homes and with setbacks and architectural side wall and roof design variations are comparable in scale.

The project design **meets and/or exceeds** the requirements of this transition technique.

(Refer to SITE PHOTOS in Section 3 and PRELIMINARY SITE PLAN, PRELIMINARY GRADING PLAN, CROSS SECTIONS and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

d. Utilizing a roof pitch and overhang similar to that of the adjacent structures.

PROJECT COMPLIANCE:

SOUTH and EAST:

Adjacent homes to the south and east have gable roofs with one to two-foot overhangs and a common roof pitch. Roofs are not flat. The project utilizes a combination of gable, hip and shed roofs of varying pitches with two-foot overhangs. The building roof forms complement the roof lines of adjacent residential properties.

The project design **meets and/or exceeds** the requirements of this transition technique.

(Refer to SITE PHOTOS in Section 3 and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

MF30 DESIGN STANDARDS

Table 32.06.090-1 of the Code addresses MU Density/Intensity Standards and states that multi-family projects in the MU zone shall follow the MF30 design standards. Section 32.06.080 outlines Residential Multiple family (MDR14, MF21 and MF30) design standards. Each standard (abbreviated) is stated below along with the applicant's project compliance response.

(c) *Design Standards*

(1) Site planning standards

(a) Site Character

1. Natural Site Features shall be preserved…

APPLICANT'S RESPONSE: The site is characterized by disturbed and undisturbed land with sparse native vegetation. There are no natural site features to be preserved.

(Refer to AERIAL and SITE PHOTOS and SITE CONDITIONS EXHIBITS in Section 3 of this Submittal Packet).

2. *Natural features such as mature trees, creeks…*

   APPLICANT'S RESPONSE: There are no trees, creeks or riparian corridors on the site. There are no natural site features to be preserved.

   (Refer to AERIAL and SITE PHOTOS and SITE CONDITIONS EXHIBITS in Section 3 of this Submittal Packet).

3. *Multifamily developments should be served by arterial and collector…*

   APPLICANT'S RESPONSE: The project will be served by one entry point from River Ranch Road. River Ranch Road provides access to U.S. Highway 50 Alternate to the north and serves the Pioneer Crossing Casino and mini-warehouse facility to the north, as well as residential uses to the south. Half street improvements in accordance with the City's Collector Street standards are proposed with the project.

   (Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

(b) Site Design

1. Provide landscape, open space and amenity areas…

APPLICANT'S RESPONSE: The site includes 6.98± acres (34.70% of the site area) of landscape area which will beautify the entire community. Amenity areas including a clubhouse with an exercise studio, passive and active open space, turf areas, children's playgrounds and a dog park are located throughout the development ensuring access and useability for residents.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

2. *Provide convenient pedestrian circulation…*

   APPLICANT'S RESPONSE: The project site includes an integrated sidewalk system throughout the community. Pedestrian circulation includes access to parking, buildings and community amenity areas. Internal sidewalks will be 4-feet in width. In addition, the network provides access to the proposed 5-foot wide meandering sidewalk adjacent to River Ranch Road.

   (Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

3. *Provide appropriate buffering…*

   APPLICANT'S RESPONSE: The site is well buffered to and from adjacent uses. Setbacks and landscaping exceed Code requirements. A solid masonry type wall 6 feet in height will be provided adjacent to existing residences to the south and east, as well as adjacent to U.S. Highway 50 Alternate.

   (Refer to SETBACK and FENCE, WALL AND SIGNAGE EXHIBITS in Section 3, as well as PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

4. *Provide convenient and adequate resident and guest parking.*

   APPLICANT'S RESPONSE*:* Parking convenient to the Clubhouse and each apartment building is located throughout the project site. Parking exceeds Code requirements for residents and guests.

   (Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

5. *Activate street frontages with interesting building design, landscaping…*

   APPLICANT'S RESPONSE: With the project, River Ranch Road will be improved with half street improvements. A 5-foot wide meandering sidewalk with be constructed within landscape areas along the street frontage with decorative split rail fencing as a pedestrian amenity. The meandering sidewalk will connect to 4-foot wide interior sidewalks located throughout the community. Buildings adjacent to the frontage vary in size and orientation to provide interest from the street.

   (Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 and PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

c. *Building Orientation*
   1. *Buildings shall be generally oriented with varying setbacks…*

      APPLICANT'S RESPONSE: The site plan has been designed to include buildings of varying sizes, orientations, offsets and setbacks to provide visual interest. In addition, open space areas have been included adjacent to and between the buildings to avoid a monotonous appearance.

      (Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

   2. *Buildings shall be oriented in such a way as to create courtyards and open space areas…*

      APPLICANT'S RESPONSE: Buildings are oriented to provide open space yards and corridors between the structures to meet Fire Safety requirements and for strategic location of community amenities. The site includes 6.98± acres (34.70%) of landscape area. All units

include private patios and access to open space via an integrated sidewalk system throughout the community.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

3. *To provide indoor privacy between living spaces, there should be distance separations, buffering or changes in the angle of units. Private outdoor space…*

APPLICANT'S RESPONSE: The orientation of the buildings varies with some fronts facing each other, some sides facing sides, some fronts facing sides and a mix facing open space or amenity areas. The buildings also step down from south to north and setbacks are varied to provide project interest and privacy between living units. All buildings are separated by at least 20 feet. Blinds for tenant privacy are provided for all windows for all apartment units. Private outdoor lower-level patios and upper-level balconies are provided for each unit. Solid half-wall designs help provide privacy for outdoor use of the patios and balconies. Community open space and amenities are located and spread throughout the project. All common open space and amenity areas are located in accessible and useable areas. There are no steep slopes or riparian areas on the project site.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS and BUILDING FOOTPRINTS and ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

(2) Parking and Circulation

a. Vehicular access

1. *Two points of ingress/egress shall…*

APPLICANT'S RESPONSE: There are three points of ingress/egress for the project. The primary access is from River Ranch Road near the center portion of the community. This access point includes a center

median. In addition, there is a gated access from River Ranch Road at the southerly boundary of the site. This access is intended for emergency access purposes, as well as for restricted access by NV Energy to the Lonely Substation. The third access point is located at the southeast corner of the site and will be gated for emergency access to and from Fort Sutter Boulevard to the east.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

2. *No vehicular access shall be provided on a local street…*

APPLICANT'S RESPONSE: River Ranch Road borders the site on the west and will provide primary access to the community. River Ranch Road provides direct access from this site, as well as the single family neighborhood to the south, to the north to U.S. Highway 50 Alternate. Access to the south through the residential neighborhood by future residents is not efficient and not anticipated to be frequent. No direct via Fort Sutter Boulevard. Access in this location will be gated for emergency vehicle use only.

b. *(Driveways) Entry driveways shall have a sidewalk on both sides and shall include…*

APPLICANT'S RESPONSE: There is only one entry driveway proposed from River Ranch Road located near the center portion of the site. The entry drive will have a 4-foot wide sidewalk on each side connecting to internal sidewalks, the Clubhouse and the 5 foot wide meandering sidewalk on River Ranch Road. The entry area will incorporate three features including ground lighted monument signage (large granite boulders on each side with raised individual lettering identifying the River Ranch Apartments); enhanced landscaping and a lighted flag pole.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

c. *Parking*

1. *Off-street parking shall be designed to minimize…*

APPLICANT'S RESPONSE: Off-street parking is located throughout the community. There are only a few spaces located adjacent to River Ranch Road at the southwesterly corner of the site. These spaces, however, are separated from the road with a landscape buffer and meandering sidewalk. In addition, the design of the parking area includes a number of landscaped islands for visual relief.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

2. *On-site parking spaces shall be provided…*

APPLICANT'S RESPONSE: On-site surface parking is provided throughout the community. All parking is located to conveniently serve the residents. Parking spaces are within 150 feet or less from each building.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

3. *Carports and garages shall be designed…*

APPLICANT'S RESPONSE: N/A. Carports and garages will not be provided with this project.

4. *To the maximum extent possible, detached garages…*

APPLICANT'S RESPONSE: N/A. Carports and garages will not be provided with this project.

5. *Detached garages and carports shall be…*

   APPLICANT'S RESPONSE: N/A. Carports and garages will not be provided with this project.

d. *Pedestrian Circulation*
1. *All multifamily/attached single-family developments shall…*

   APPLICANT'S RESPONSE: Sidewalks, 4-feet in width, are provided throughout the community to facilitate access to and connections between parking, buildings, the Clubhouse, and all open space and amenity areas. The sidewalk system is integrated and connects to the 5-foot wide meandering sidewalk adjacent to River Ranch Road.

   (Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

2. *Sidewalks along public streets shall…*

   APPLICANT'S RESPONSE: The proposed meandering sidewalk along River Ranch Road is 5-feet in width.

   (Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

3. *The parking area shall be designed in a manner which links…*

   APPLICANT'S RESPONSE: All parking areas on the site have been designed with links to sidewalks that provide access to all buildings and open space amenity areas.

   (*Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).*

(3) Community Amenities

a. *Clusters of buildings shall be arranged…*

***APPLICANT'S RESPONSE*:** Common open spaces and recreational amenities are located throughout the project site. Clusters of buildings are arranged to frame and enclose these areas providing views from the fronts and side windows of the units.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

b. *Multifamily/attached single-family developments shall have useable community…*

APPLICANT'S RESPONSE: The project features useable community amenities including the Clubhouse exercise studio, passive and active open space areas, children's playgrounds, and a dog park to foster recreation and social activities.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

c. *Multifamily developments shall provide recreational amenities …*

APPLICANT'S RESPONSE: The project includes 320 multifamily units. According to Table 32.03.080-2, at least 6 amenities are required. The project includes 8 amenities.

d. *Developments shall choose from the following recreational facilities…*

APPLICANT'S RESPONSE: The project includes the following 8 recreational facilities that are included on the list:

- Exercise equipment (Exercise studio in Clubhouse)
- Court and lawn areas for field games (4 large turf areas for open play and games)
- Play Structure (2 playground areas designated for Children's Play Structures)
- Dog Park (including fencing, tables and benches)

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

e. *To ensure that recreational facilities are conveniently located…*

1. *Be located within 1,000 feet…*

APPLICANT'S RESPONSE: The site length (longest portion) is 1,266± feet and the width (widest portion) is 925± feet. Recreational amenities are spread throughout the site and are within 1,000 feet from any dwelling unit.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

2. *Be connected to residential buildings…*

APPLICANT'S RESPONSE: All recreational amenities are connected to buildings by 4-foot wide internal sidewalks and open space.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

f. All living units shall have a private open space…

***APPLICANT'S RESPONSE**:* All units have either lower-level private outdoor patios or upper-level balconies featuring half-wall designs for tenant privacy. Patios and balconies are a minimum of 140 square feet in size and **exceed** Code requirements.

(Refer to BUILDING FLOOR PLANS and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

(4) Landscaping and Screening

a. Perimeter landscaping and buffers…

APPLICANT'S RESPONSE: Landscaping and buffers are provided around the perimeter of the community in accordance with Code Landscaping standards and requirements.

(Refer to PRELIMINARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet).

b. Perimeter fencing and/or walls shall be a maximum of six feet tall except for the following conditions:

1. Walls that are adjacent to areas occupied or zoned for commercial development shall be eight feet tall.

APPLICANT'S RESPONSE: All walls are proposed to be 6-feet in height. The site is adjacent to property zoned EC (mini-warehouses with outside storage) and I (Lonely Substation utility facility) which are industrial type uses but is not adjacent to property occupied or zoned commercial.

2. Walls that are adjacent to property occupied by or zoned for single family…

APPLICANT'S RESPONSE: All walls adjacent to property occupied or zoned for single family residences will be 6 feet in height. This applies to the south and east property boundaries where properties are zoned SF6 and occupied by single family residences.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 and PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

3. *Fencing and wall shall incorporate the use of durable, decorative materials…*

APPLICANT'S RESPONSE: Solid masonry type walls (pre-cast decorative Verti-Crete or equivalent) and durable wood, split rail fences will be provided around perimeter areas of the site.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 of this Submittal Packet).

4. *Continuous lengths of blank walls or fencing without variation…*

APPLICANT'S RESPONSE: Walls will include a decorative type finish. Capped pillars will be provided approximately every 13 feet to provide interest and variation in the walls**.**

c. *To promote visual interest, projects are encouraged to incorporate a combination of solid and open materials with offsets…*

APPLICANT'S RESPONSE: To promote visual interest, the project includes solid decorative type masonry walls and open view split rail fencing around the perimeter of the site. Solid walls include capped

pillars approximately every 13 feet providing visual interest, variation and offsets in the horizontal plane of the wall. All walls and fences are adjacent to landscape areas featuring planted trees and shrubs to also provide screening and visual relief.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 and PRELIMINARY LANDSCAPE PLAN in Section 3 or 5 of this Submittal Packet).

(5) Building Architecture

a. Building Design

1. *There is no specific architectural "style" required…*

   ***APPLICANT'S RESPONSE*:** The architectural style including form, size, color, materials and roof lines of all building types is compatible and complimentary throughout the community.

2. *In order to avoid boxy and monotonous facades that lack…*

   APPLICANT'S RESPONSE: All buildings incorporate articulation including the use of stairs, wall plane variations including recesses and projections, patio and balcony projections, windows, color bands and color variations to avoid boxy and monotonous facades. There are no flat wall planes exceeding 50 feet vertically or horizontally.

3. *Architectural features shall be incorporated to emphasize building features…*

   APPLICANT'S RESPONSE: The buildings have been designed with a distinct architectural style emphasizing features such as private, covered entries; lower-level

patios and upper-level balconies; variation in window sizes and shapes, as well as wall planes including recesses and projections and varying roof forms.

4. *The following standards apply:*
    a. *The architectural character (i.e. exterior materials, window trims, cornices, arches, etc.) of the exterior elevations…*

       APPLICANT'S RESPONSE: The buildings have been situated on the site to include different sized buildings and orientations facing the River Ranch Road public street. The architectural character of the exterior elevations is consistent on all sides of all buildings.

    b. *Roof shall have variations in plane accomplished by changes in plane or by…*

       APPLICANT'S RESPONSE: The buildings include a combination of hip, gable and shed roofing. The primary roof has a 4:12 pitch and the patio roof have a 3:12 pitch. There are no flat roofs proposed.

    c. *Stairs shall be compatible with the architecture…*

       APPLICANT'S RESPONSE: Individual stairs serve the individual upper units and provide access to covered entries. Stairs are integrated into the design of the buildings. Stair steps are concrete and include black metal railings.

d. Access points to units shall be clustered…

***APPLICANT'S RESPONSE*:** Private, covered access entry points are provided to each unit. Two entry points, one to the lower unit and one to the upper unit via a stairway, are provided on each side of the building (front and back). The lower and upper-level front doors line up with each other in a clustered manner. Entry doors are painted an accent color for distinction.

(Refer to COLOR PALETTE in Section 3 and BUILDING FLOOR PLANS and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

b. Roof Forms

1. Roof forms shall be designed to correspond…

APPLICANT'S RESPONSE: The buildings include a combination of hip, gable and shed roof forms. The various forms have been designed to correspond to building elements and functions including entries, building plane variation areas and patios/balconies.

2. All roof vents, pipes, other roof penetrations and attachments…

***APPLICANT'S RESPONSE**:* Roof penetrations are limited and will not extend above roof ridgelines. No chimneys or equipment on the roof are proposed. All roof vents, pipes and other penetrations will be painted to match and blend in with the roof design to minimize visual impacts from River Ranch Road and other public areas.

c. *Building Materials*

1. *Exterior elevation shall demonstrate…*

   APPLICANT'S RESPONSE: Exterior elevations provide a unified appearance and include a logical use of complementary materials and colors to prevent expansive areas of visual monotony.

2. *Change of materials or color shall occur at changes in plane…*

   APPLICANT'S RESPONSE: Changes in color and the use of accents occur at changes in wall plane recesses and projections and logical break points. In addition, the buildings include the use of distinctive door colors.

3. *Building materials and color schemes shall be consistent with the…*

   APPLICANT'S RESPONSE: Building materials include stucco and complimentary composite architectural shingles and are consistent with the architectural style. Color schemes for the individual buildings include Tuscan, French and Spanish body color and trim palettes.
   The use of compatible color schemes avoid monotony and provides visual interest throughout the community.

4. *Materials such as brick and stone shall be left in their natural colors.*

   ***APPLICANT'S RESPONSE*:** All accent materials including brick and stone, if and where used, will be left in their natural colors.

(Refer to COLOR PALETTE in Section 3 and BUILDING FLOOR PLANS and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

COMPREHENSIVE MASTER PLAN COMPLIANCE

The following is an overview of specific Chapters, Sections and Goals and Policies Strategies provided in the 2018 Comprehensive Master Plan that support the proposed River Ranch Apartment project.

As stated in the document, the purpose of the Plan is to guide decision making regarding the physical development of the City. Growth, future employment and economic development opportunities are discussed, as well as the need for Fernley to consider a variety of land uses and economic development strategies. The Plan states the need to diversify the current housing stock by providing options including additional multi-family and renter-occupied housing opportunities.

PROJECT COMPLIANCE: The proposed project provides new multi-family renter-occupied housing in the City of Fernley in accordance with the comprehensive plan including the following:

CHAPTER 1 - POPULATION, HOUSING AND EMPLOYMENT

1.4 EMPLOYMENT, POPULATION AND HOUSING PROJECTIONS

This section discusses the growth in employment through new job creation leading to significant increases in the demand for housing in the Northern Nevada region. It also cites the need for Fernley to compete by diversifying the housing stock and providing workforce housing units to meet future population and employment demands. The proposed River Ranch Apartments project is specifically in compliance with the following Goals and Action Strategies outlined in the Plan:

1.5 GOALS AND ACTION STRATEGIES

HP.1.1 Enhance Fernley's vitality as a community by providing a variety of housing types, density and costs that accommodate the needs, desires and financial abilities of the current and future households.

PROJECT COMPLIANCE: The multi-family project has a density of 15.38 units per acre and will add to the diversity of housing options in the City of Fernley. The project will provide entry-level rental housing to accommodate the needs of existing and future residents seeking nearby job opportunities.

HP.1.1.4 Encourage the efficient use of land and existing infrastructure by focusing on achieving good design in new housing or redeveloped housing on either vacant land, infill parcels and/or underdeveloped parcels.

PROJECT COMPLIANCE: The project is efficiently designed at a density of 15.38 units per acre. The project is served by existing infrastructure and is well designed in full accordance with MU density/intensity standards, adjacency standards and MF30 design standards.

(Refer to PRELIMINARY SITE PLAN and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

HP.1.4 Provide opportunities for high-density residential development near the downtown core and in the community where elsewhere in the community where appropriate.

PROJECT COMPLIANCE: The project is a multi-family residential project with a density of 15.38 units per acre and is located in an appropriate area designated on the Comprehensive Master Plan for Suburban Mixed Use Development. The project provides a logical transition from single family residences to the south and east to more intense industrial and commercial type uses to the north and west.

(Refer to EXISTING MASTER PLAN EXHIBIT in Section 3 of this Submittal Packet).

HP.1.4.1 Multi-family land use should be dispersed throughout the community near employment centers and transportation corridors rather than concentrated in a few areas.

PROJECT COMPLIANCE: The site is located south of U.S. Highway 50 Alternate with direct access from River Ranch Road. The site is in close proximity to the Victory Logistics District employment center and the

planned extension of Nevada Pacific Parkway. The project will be key in providing needed close by workforce housing.

(Refer to VICINITY MAP in Section 3 of this Submittal Packet).

HP.1.6 Provide a spectrum of high quality housing to meet the City's need.

PROJECT COMPLIANCE: The project has been well designed as a high quality entry-level multi-family apartment community that will provide new housing opportunities for existing and future residents. The project meets all City design standards.

(Refer to PRELIMINARY SITE PLAN and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

3. LAND USE

This section references that future growth and development, as well as the planned extension of infrastructure and services are all based on the Land Use Map. This section also states that a balanced land plan for the City of Fernley provides for a diverse mix of housing types. The Plan adds the Suburban Mixed Use land use designation to encourage a broad mix of uses including high-density residential within close proximity to services and employment. The Plan further states the goal for the City is to effectuate growth and redevelopment as depicted on the Land Use Map and to have the Master Plan and Zoning Maps in conformance with each other.

3.7 GOALS AND ACTION STRATEGIES

L.U.1.2 Encourage new development to be in accordance with the Comprehensive Master Plan land use category, and other land use controls to accomplish community principles.

PROJECT COMPLIANCE: The project site is designated Suburban Mixed Use on the Comprehensive Master Plan and is in compliance with the Master Land Use Plan and specific Master Plan Goals and Action Strategies for Population, Housing and Employment and Land Use.

(Refer to EXISTING MASTER PLAN EXHIBIT in Section 3 of this Submittal Packet).

L.U.1.4 Ensure existing and future land uses are compatible.

PROJECT COMPLIANCE: The project design meets all Adjacency Standards and is compatible with existing and future land uses. The project density provides a logical transition from existing single family residences to the south and east and more intense industrial and commercial type uses to the north and west.

(Refer to PRELIMINARY SITE PLAN and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

CONDITIONAL USE PERMIT FINDINGS

The following outlines the required findings and provides responses to address the requested Conditional Use Permit request as outlined in the Development Code per Section 32.03.050 (b) Conditional Use Permit (6) a-f:

a. The approving agency must make findings that the proposed conditional use will be in compliance with the master plan;

APPLICANT'S RESPONSE: The master plan designation for this property is Suburban Mixed Use (SMU). The requested Conditional Use Permit, as well as the Zoning Change to MU, is consistent with the master land use plan and meets all the requirements of the Code. The proposed project is additionally in conformance with specific Population, Housing and Employment and Land Use Goals and Action Strategies.

b. The conditional use will be compatible with the existing or permitted uses of adjacent properties;

APPLICANT'S RESPONSE: The project density is 15.38 dwelling units per acre and provides a perfect density transition from the adjacent single family residences to the south and east and the more intensive industrial and commercial type uses (mini-warehouses, Lonely Substation utility facility and Pioneer Crossing Casino) to the south and west. The project has been designed to be compatible with existing and planned adjacent uses.

The project meets and/or exceeds all compatibility requirements including mixed use density/intensity standards; adjacency standards and MF30 design standards.

c. The potential impairment of natural resources and the total population, which the available natural resources will support without unreasonable impairment;

APPLICANT'S RESPONSE: There is no potential impairment of natural resources as a result of the proposed project. The site consists of disturbed and undisturbed land with sparse native vegetation. There are no trees, streams, waterways, drainageways, wetlands or other natural resources located on the property. In terms of water resources, water rights to support the residential and irrigation needs of the project are readily available and will be dedicated to the City with development.

d. The availability of and need for affordable housing in the community, including affordable housing that is accessible to persons with disabilities;

APPLICANT'S RESPONSE: The need for additional affordable housing in Northern Nevada including Fernley is well documented. In August, 2022, United States Secretary of Transportation, Pete Buttigieg, visited the City of Fernley to announce a grant to complete Nevada Pacific Parkway linking I-80 with U.S. Highway 50 Alternate. During the ceremony, various officials spoke and announced 10,000 new jobs would be coming to Fernley largely in the Victory Logistics District which is in close proximity to the project site.

(Refer to VICINITY MAP in Section 3 of this Submittal Packet).

The River Ranch Apartments project will provide homes to many of the anticipated 10,000 workers. The project is an entry-level, obtainable, market rate 320-unit development. All ground floor units (160 apartments) will be accessible and a minimum of two percent of those units will be fully handicap adapted in compliance with the Fair Housing Act (FHA) and Americans with Disabilities Act (ADA). Additionally, there will be fully

accessible amenities, accessible sidewalks and handicap parking to meet requirements throughout the community.

e. The conditional use permits impact have been conditioned to address identified impacts;

APPLICANT'S RESPONSE: The submitted Conditional Use Permit application addresses all City of Fernley requirements for projects located in a MU zone including density/intensity standards, multi-family design standards and residential adjacency standards. The City of Fernley will be responsible for providing any conditions to address impacts that have not been mitigated by the applicant through the submitted project application.

f. Public notice has been given and a public hearing held per the requirements of the development code and the Nevada Revised Statutes.

APPLICANT'S RESPONSE: The City of Fernley is responsible for providing public notice in accordance with the Development Code and Nevada Revised Statues. A public hearing or hearings will be properly noticed and held with a decision as to the Conditional Use Permit request made in accordance with all legal requirements.

OVERALL PROJECT SUMMARY

- The project site consists of 20.80± acres and is located south of U.S. Highway 50 Alternate and east of River Ranch Road in close proximity to the Victory Logistics District and within easy access to the proposed extension of Nevada Pacific Parkway.
- Infrastructure and utilities are available to serve the proposed project.
- In the coming years, approximately 10,000 new jobs are expected to be created in Fernley as a result of the opportunities in the Victory Logistics District and other new employment areas.
- A variety of new housing options including entry level multi-family projects with rental opportunities are needed to accommodate future anticipated work force growth.
- The project is a well designed apartment community in an ideal location to help meet the future housing needs of the City of Fernley.

ZONING MAP AMENDMENT

- The proposed MU Zoning is in full conformance with the SMU master land use plan designation, as well as applicable Goals and Action Strategies.
- The existing site zoning (I, EC and C2) is not in conformance with the existing master plan designation of Suburban Mixed Use (SMU).
- The Comprehensive Master Plan states the City's goal is to have Zoning be in conformance with the Master Land Use Plan.
- All Zoning Map Amendment Required Findings are justified in detail and can be made by the Planning Commission and City Council.

CONDITIONAL USE PERMIT

- The project is a 320-unit multi-family apartment community and will provide entry level housing options to meet the needs of new and existing residents seeking new job opportunities in the City of Fernley.

- The project has a density of 15.38 units per acre and provides a logical transition from existing single family residences to the south and east and higher intensity industrial and commercial type uses to the north and west.
- The project has been well designed to be compatible with surrounding land uses.
- The project is in compliance with all zoning and land use compatibility requirements including MU Density/Intensity Standards; Adjacency Standards; and MF30 Design Standards.
- The project is in compliance with the Comprehensive Master Plan Land Use Plan designation of Suburban Mixed Use (SMU), as well as specific Goals and Action Strategies relating to Population, Housing and Employment and Land Use.
- All Conditional Use Permit Required Findings are justified in detail and can be made by the Planning Commission and City Council.

Conditions of Approval for CUP22004
Conditional Use Permit

1. APPROVAL:

   THE PROJECT IS APPROVED AS SUBMITTED AND CONDITIONED. ANY SUBSTANTIVE CHANGE SHALL REQUIRE REVIEW AND APPROVAL BY THE PLANNING COMMISSION AS AN AMENDMENT TO THIS CONDITIONAL USE PERMIT.

2. PROJECT DESCRIPTION:

   THE PROJECT APPROVAL IS LIMITED TO A MAXIMUM OF 320 MULTI-FAMILY UNITS ON ±20.80 ACRES.

3. EXPIRATION DATE:
   THE CONDITIONAL USE PERMIT SHALL EXPIRE WITHIN ONE (1) YEAR OF THE DATE OF APPROVAL, UNLESS THE PERMITTED USE HAS BEEN ESTABLISHED OR CONSTRUCTION TO ACCOMMODATE THAT USE HAS BEGUN AND IS BEING DILIGENTLY PURSUED. A ONE-YEAR EXTENSION MAY BE GRANTED BY THE PLANNING COMMISSION IF REQUESTED PRIOR TO THE EXPIRATION DATE OF THE CONDITIONAL USE PERMIT APPROVAL.

4. WATER RIGHTS:
   THE DEVELOPER SHALL COMPLY WITH ALL CITY OF FERNLEY MUNICIPAL CODES REGARDING THE DEDICATION OF WATER RIGHTS, INCLUDING ALL ASSOCIATED FEES, FOR THE CONNECTION TO THE CITY'S MUNICIPAL WATER SYSTEM IN THE AMOUNT THAT IS REQUIRED PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR ANY PHASE OF THE PROJECT.

5. LANDSCAPING/IRRIGATION:
   THE DEVELOPER SHALL SUBMIT A LANDSCAPING AND IRRIGATION PLAN FOR THE PROJECT IN CONFORMANCE WITH THE CITY OF FERNLEY'S DEVELOPMENT CODE FOR REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT. THE LANDSCAPING AND IRRIGATION SHALL BE INSTALLED PER THE APPROVED PLANS PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR EACH BUILDING TO THE APPROVAL OF THE ADMINISTRATOR.

6. WATER AND SEWER MAINS AND SERVICES:
   THE DEVELOPER SHALL COMPLY WITH ALL STANDARDS, CODES, AND REQUIREMENTS REGARDING CONNECTION TO THE CITY'S SANITARY SEWER AND POTABLE WATER SYSTEMS, INCLUDING BUT NOT LIMITED TO, ASSOCIATED FEES, EASEMENTS, DESIGN STANDARDS, SYSTEM LOOPING, DEVELOPMENT CODE REQUIREMENTS, AND STATE REQUIREMENTS.

   THE DEVELOPER SHALL PROVIDE THE CITY WITH A UTILITY PLAN FOR WATER AND SANITARY SEWER THAT IS IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE AND PUBLIC WORKS DESIGN MANUAL TO THE APPROVAL OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR, AND ADMINISTRATOR. EACH PHASE MUST ALSO BE REVIEWED AND APPROVED BY THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION PRIOR TO CONSTRUCTION.

7. UTILITY EASEMENTS:
   THE DEVELOPER SHALL PROVIDE EASEMENTS TO THE CITY OF FERNLEY FOR THE MAINTENANCE OF THE PUBLIC INFRASTRUCTURE BEING INSTALLED ON PRIVATE PROPERTY. THE EASEMENTS SHALL INCLUDE THE CITY OF FERNLEY'S STANDARD EASEMENT LANGUAGE AND SHALL BE RECORDED PRIOR TO ISSUING A PERMIT TO START CONSTRUCTION OF THE INFRASTRUCTURE. IN NO SITUATION SHALL WORK TAKE PLACE ON PRIVATE PROPERTY WITHOUT A RECORDED EASEMENT IN PLACE.

8. WATER SYSTEM LOOPING:

   THE DEVELOPER SHALL PROVIDE THE CITY WITH A UTILITY PLAN FOR THE WATER SYSTEM THAT DEMONSTRATES ADEQUATE SYSTEM LOOPING PRIOR TO THE ISSUANCE OF A PERMIT. THE PLAN SHALL BE IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE, NEVADA ADMINISTRATIVE CODE, AND PUBLIC WORKS DESIGN MANUAL TO THE APPROVAL OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR, AND ADMINISTRATOR.

9. WATER AND SEWER SYSTEM MODELING:
   THE DEVELOPER SHALL COMPLETE WATER AND SEWER MODELING FOR THE PROJECT PRIOR TO THE ISSUANCE OF A PERMIT. THE DEVELOPER SHALL CONSTRUCT ANY IMPROVEMENTS IDENTIFIED BY THE MODELING AS NECESSARY TO SERVE THE PROJECT IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. THE PROJECT WILL REQUIRE CAPACITY UPGRADES TO BE COMPLETED AT THE EXISTING TMAI LIFT STATION. THE WORK SHALL BE COMPLETED PRIOR TO ISSUING FIRST CERTIFICATE OF OCCUPANCY FOR ANY BUILDING ON THE PROJECT SITE.

10. NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION – BUREAU OF SAFE DRINKING WATER AND BUREAU OF WATER POLLUTION CONTROL FOR THE WATER AND SEWER INFRASTRUCTURE DESIGN AND CONSTRUCTION TO THE APPROVAL OF THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR.

11. GRADING PERMIT:
    THE DEVELOPER SHALL SUBMIT A GRADING PLAN FOR ANY PHASE OF THE PROJECT TO THE APPROVAL OF THE CITY ENGINEER. PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE DEVELOPMENT, THE DEVELOPER SHALL POST A SURETY BOND FOR REGRADING AND RECLAMATION OF THE SITE. THE DEVELOPER SHALL PROVIDE A STAMPED ENGINEER'S ESTIMATE FOR REGRADING AND RECLAMATION OF THE SITE. THE DEVELOPER SHALL COMPLY WITH ALL GRADING REQUIREMENTS SET FORTH IN THE CITY OF FERNLEY'S DEVELOPMENT CODE AS WELL AS ALL STATE AND FEDERAL REGULATIONS. THE DEVELOPER OR THEIR DESIGNEE SHALL BE RESPONSIBLE FOR OBTAINING AND MAINTAINING A STORM WATER POLLUTION PREVENTION PERMIT WITH THE STATE OF NEVADA AS WELL AS A SURFACE AREA DISTURBANCE PERMIT.

12. STORM DRAINAGE:
    THE DEVELOPER SHALL PROVIDE A FINAL DRAINAGE REPORT FOR THE PROJECT IN CONFORMANCE WITH THE FERNLEY MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO APPROVAL OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT. EACH SUCCESSIVE PHASE OF THE PROJECT SHALL SUBMIT AN UPDATED DRAINAGE REPORT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER SHOWING THE CUMULATIVE EFFECT OF THE DEVELOPED PORTION OF THE PROJECT ALONG WITH THE PROPOSED PHASE'S EFFECT ON THE TOTAL DISCHARGE INTO THE DRAINAGE SYSTEM. THE STORM WATER AND DRAINAGE PLANS FOR THE PHASES OF THE DEVELOPMENT SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE PHASES OF THE PROJECT.

    ALL INTERNAL STORM DRAIN INFRASTRUCTURE SHALL BE MAINTAINED BY THE PROPERTY OWNER.

13. GEOTECHNICAL REPORT:
    THE DEVELOPER SHALL PROVIDE A GEOTECHNICAL REPORT FOR THE PROJECT IN CONFORMANCE WITH THE REQUIREMENTS OF THE DEVELOPMENT CODE FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO THE APPROVAL OF A GRADING PERMIT OR BUILDING PERMIT FOR ANY PORTION OF THE PROJECT.

14. STRUCTURAL CONTROLS:
    THE DEVELOPER SHALL UTILIZE STRUCTURAL CONTROLS FOR THE TREATMENT OF STORM WATER RUNOFF IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES TO THE APPROVAL OF THE PUBLIC WORKS DIRECTOR AND CITY ENGINEER.

15. SANITARY SEWER REPORT:
    THE DEVELOPER SHALL PROVIDE A FINAL SANITARY SEWER REPORT FOR THE PROJECT IN CONFORMANCE WITH THE FERNLEY MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT.

16. DESIGN STANDARDS:
    THE DEVELOPER SHALL COMPLY WITH ANY DESIGN STANDARDS AND REGULATIONS AS SET FORTH IN THE CITY OF FERNLEY DEVELOPMENT CODE AND CITY OF FERNLEY DESIGN STANDARDS UNLESS IN CONFLICT WITH THE LOCAL, STATE OR FEDERAL REGULATIONS, IN WHICH CASE THE MORE STRINGENT REGULATION WILL TAKE PRECEDENCE.

17. ENGINEERING/PUBLIC WORKS:
    THE DEVELOPER SHALL COMPLY WITH ALL THE REQUIREMENTS OF THE CITY OF FERNLEY MUNICIPAL CODE, DEVELOPMENT CODE, AND PUBLIC WORKS DESIGN MANUAL FOR THE CONSTRUCTION OF ANY PUBLIC OR PRIVATE INFRASTRUCTURE TO THE APPROVAL OF THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE PROJECT.

18. NORTH LYON COUNTY FIRE PROTECTION DISTRICT:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NORTH LYON COUNTY FIRE PROTECTION DISTRICT, INCLUDING BUT NOT LIMITED TO: DEVELOPING A PLAN TO PROVIDE ADEQUATE EMERGENCY ACCESS THROUGHOUT THE SITE, DEVELOPING A MASTER FIRE HYDRANT AND FIRE FLOW PLAN, DEVELOPING A MASTER FIRE DEPARTMENT CONNECTION (FDC) PLAN, AND INSTALLING FIRE SUPPRESSION AND/OR ALARM SYSTEMS TO THE APPROVAL OF THE FIRE CHIEF PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

19. BUILDING DEPARTMENT:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE BUILDING DEPARTMENT TO THE APPROVAL OF THE BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

20. ACCESS AND CIRCULATION:
    THE DEVELOPER SHALL USE APPROPRIATE STRIPING AND SIGNAGE AS MAY BE NECESSARY TO MINIMIZE TRAFFIC CONFLICT WITHIN THE DEVELOPMENT SITE TO THE APPROVAL OF THE ADMINISTRATOR AND CITY ENGINEER FOR THE LIFE OF THE PROJECT.

21. FEDERAL, STATE, AND LOCAL AGENCIES:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF ANY FEDERAL, STATE, OR LOCAL AGENCY WITH JURISDICTION OVER THE PROJECT TO THE APPROVAL OF THE ADMINISTRATOR.

22. TRAFFIC ANALYSIS REPORT:
    THE DEVELOPER SHALL PROVIDE A TRAFFIC ANALYSIS REPORT FOR THE PROJECT IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT. EACH SUCCESSIVE PHASE OF THE PROJECT SHALL SUBMIT AN UPDATED TRAFFIC ANALYSIS REPORT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR SHOWING THE CUMULATIVE EFFECT

OF THE DEVELOPED PORTION OF THE PROJECT ALONG WITH THE PROPOSED PHASE'S EFFECT.

23. PARKING:
    VISITOR PARKING SHALL BE PROVIDED THROUGHOUT THE SITE. THE DEVELOPER SHALL SUBMIT IMPROVEMENT PLANS THAT SHOW APPROPRIATE STRIPING AND SIGNAGE FOR THE VISITOR PARKING STALLS.

24. CONSTRUCTION MAINTENANCE:
    THE DEVELOPER SHALL LOCATE AND UTILIZE A SUFFICIENT NUMBER OF TRASH CONTAINERS ON-SITE TO BE UTILIZED DURING THE CONSTRUCTION OF THE PROJECT TO MAINTAIN THE PROJECT SITE IN A CLEAN AND ORDERLY STATE TO THE APPROVAL OF THE ADMINISTRATOR.

25. CONSTRUCTION HOURS:
    THE DEVELOPER SHALL LIMIT ALL CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES TO BETWEEN THE HOURS OF 7:00 AM TO 7:00 PM, SEVEN DAYS A WEEK. THE DEVELOPER SHALL INSTALL SIGNS AT ALL ACCESS POINTS TO THE PROJECT THAT CLEARLY INDICATE THE HOURS OF ACTIVITY ON-SITE PRIOR TO THE START OF ANY CONSTRUCTION-RELATED ACTIVITIES TO THE APPROVAL OF THE ADMINISTRATOR. THE DEVELOPER SHALL MAINTAIN THESE SIGNS IN GOOD REPAIR FOR THE DURATION OF THE CONSTRUCTION OF THE PROJECT. ONCE CONSTRUCTION IS FINISHED, THE DEVELOPER SHALL REMOVE THESE SIGNS.

26. PROJECT CONTACT:
    THE DEVELOPER SHALL DESIGNATE TO THE ADMINISTRATOR A PROJECT CONTACT PERSON RESPONSIBLE/AUTHORIZED TO CORRECT PROBLEMS REGARDING THE PROJECT ON A 24-HOUR/7-DAYS A WEEK BASIS. THE DEVELOPER SHALL DESIGNATE THE PROJECT CONTACT PERSON TO THE ADMINISTRATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT.

27. ARCHITECTURE/BUILDING ELEVATIONS:
    THE DEVELOPMENT OF THE SUBJECT SITE SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE ARCHITECTURAL/BUILDING ELEVATIONS SUBMITTED AS PART OF THIS APPLICATION. SUBSTANTIAL CHANGES TO THE ARCHITECTURE/BUILDING ELEVATIONS SHALL REQUIRE REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THAT BUILDING. THE DEVELOPER SHALL ARTICULATE LONG FACADES BY VARYING BUILDING MASS, FORM, TEXTURE, MATERIALS, AND INTERPLAY OF SOLID AND OPEN AREAS.

28. TRASH ENCLOSURES:
    THE DEVELOPER SHALL LOCATE AND INSTALL TRASH ENCLOSURES TO THE APPROVAL OF WASTE MANAGEMENT AND THE ADMINISTRATOR INCLUDING THE APPROPRIATE SIZE AND LOCATION. THE TRASH ENCLOSURES SHALL MATCH THE PROJECT'S ARCHITECTURE AND BUILDING MATERIALS TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE INDIVIDUAL BUILDINGS.

29. UTILITY SCREENING:
    THE DEVELOPER SHALL WORK IN CONJUNCTION WITH THE UTILITY COMPANIES TO LOCATE UTILITY EQUIPMENT SUCH AS ELECTRICAL, GAS, AND WATER JUNCTION BOXES, INCLUDING TRANSFORMER BOXES, VAULTS, AND ELECTRICAL PANELS, IN AREAS WHERE THE EQUIPMENT IS SCREENED BY EITHER ARCHITECTURAL ELEMENTS THAT MATCH THE MAIN STRUCTURE'S COLORS AND MATERIALS OR BY ADJUSTING THE APPROVED LANDSCAPING TO COMPENSATE TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR EACH INDIVIDUAL BUILDING.

30. SCREENING:
    THE MECHANICAL EQUIPMENT SHALL BE SCREENED FROM VIEW OF THE PARKING LOT, ADJACENT PUBLIC STREETS, AND PUBLIC AREAS BY USING AN ARCHITECTURAL ELEMENT OF THE BUILDING CONSISTING OF THE SAME, DURABLE MATERIALS AS THE BUILDING TO THE APPROVAL OF ADMINISTRATOR. ANY LOADING DOCKS AND SERVICE AREAS INCLUDING TRASH COMPACTION AND/OR DUMPSTER(S) SHALL BE SCREENED FROM VIEW OF PARKING LOTS AND PUBLIC AREAS. LOADING DOCK SCREENING SHALL BE HIGH ENOUGH TO SCREEN THE TRUCKS. THE SCREENING SHALL BE REVIEWED AND APPROVED BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR EACH INDIVIDUAL BUILDING.

31. LIGHTING:
    THE DEVELOPER SHALL SUBMIT A LIGHTING PLAN FOR REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. THE DEVELOPER IS REQUIRED TO COMPLY WITH THE LIGHTING STANDARDS AND REQUIREMENTS IN THE CITY OF FERNLEY MUNICIPAL CODE. TO REDUCE THE IMPACT OF GLARE AND MINIMIZE THE EFFECT OF FIELD AND PARKING LIGHTING, LIGHTING FIXTURES WITH EXTERNAL “HOODS” AND INTERNAL GLARE REDUCTION LOUVERS SHALL BE USED.

32. RESIDENTIAL CONSTRUCTION TAX:

    THE DEVELOPER IS SUBJECT TO THE PROVISIONS OF FERNLEY MUNICIPAL CODE RELATED TO RESIDENTIAL CONSTRUCTION TAX. THE RESIDENTIAL CONSTRUCTION TAX FEE SHALL BE PAID PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR EACH BUILDING.

33. ADDRESSING AND STREET NAMES:

    THE DEVELOPER SHALL SUBMIT A REQUEST FOR ADDRESSING AND STREET NAME RESERVATION APPLICATION TO THE CITY OF FERNLEY FOR REVIEW AND APPROVAL. ALL ADDRESSING OF LOTS SHALL BE COMPLETED BY THE CITY. STREET NAMES SHALL BE APPROVED BY THE CITY PRIOR TO THE SUBMITTAL OF A FINAL MAP FOR THE PROJECT.

34. PROJECT PHASING:

    THE PROJECT SHALL BE DEVELOPED IN ACCORDANCE WITH THE PHASING PLAN INCLUDED AS PART OF THIS APPROVAL. EACH PHASE SUBMITTED MUST BE DESIGNED TO MEET THE PUBLIC FACILITIES AND IMPROVEMENT STANDARDS AND BE ABLE TO OPERATE INDEPENDENTLY AND AS PART OF THE OVERALL DESIGN. CHANGES TO THE PHASING PLAN WILL REQUIRE REVIEW AND APPROVAL BY THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR PRIOR TO BEING IMPLEMENTED.

35. WASTE MANAGEMENT:

    THE DEVELOPER SHALL PROVIDE A WILL SERVE FROM WASTE MANAGEMENT TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO THE APPROVAL AND RECORDATION OF A FINAL MAP.

36. NEVADA DEPARTMENT OF TRANSPORTATION:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NEVADA DEPARTMENT OF TRANSPORTATION TO THE APPROVAL OF THE ADMINISTRATOR, PUBLIC WORKS DIRECTOR, AND CITY ENGINEER.

37. UNITED STATES POSTAL SERVICE:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE UNITED STATES POSTAL SERVICE FOR MAIL DELIVERY AND MAILBOX DESIGN AND LOCATION TO THE APPROVAL OF THE ADMINISTRATOR, PUBLIC WORKS

DIRECTOR, AND CITY ENGINEER PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT.

38. RIVER RANCH ROAD AND US-50 INTERSECTION IMPROVEMENTS:

    THE DEVELOPER SHALL SUBMIT A PROPOSED PLAN FOR THE RIVER RANCH/US-50 INTERSECTION, TO THE APPROVAL OF THE CITY ENGINEER, ADMINISTRATOR, PUBLIC WORKS DIRECTOR, AND THE NEVADA DEPARTMENT OF TRANSPORTATION. THE PLAN SHALL INCLUDE RECOMMENDATIONS FOR STRIPING, LIGHTING, AND PEDESTRIAN ACCESS AND SAFETY INCLUDING ADA COMPLIANT PEDESTRIAN RAMPS.

39. RIVER RANCH ROAD IMPROVEMENTS:

    THE DEVELOPER SHALL COMPLETE IMPROVEMENTS ON RIVER RANCH ROAD FROM US-50 TO THE ENTRANCE TO THE SINGLE-FAMILY HOME SUBDIVISION TO THE SOUTH OF THE PROJECT IN ACCORDANCE WITH THE CITY OF FERNLEY DEVELOPMENT CODE. ADEQUATE RIGHT OF WAY SHALL BE DEDICATED BY THE DEVELOPER AND ACQUIRED BY THE DEVELOPER AND OFFERED FOR DEDICATION TO THE CITY OF FERNLEY. AT A MINIMUM, RIVER RANCH ROAD SHALL BE IMPROVED TO THE CITY'S 60-FOOT RIGHT-OF-WAY STANDARD INCLUDING CURB AND GUTTER AND SIDEWALK ALONG THE EASTERN BOUNDARY OF THE STREET. THE IMPROVEMENTS SHALL ALSO INCLUDE APPROPRIATE PEDESTRIAN CROSSINGS, STRIPING, SIGNAGE, AND LIGHTING. IMPROVEMENTS ALONG THE WESTERN BOUNDARY OF THE STREET THAT DO NOT ALREADY HAVE CURB AND GUTTER SHALL ADEQUATELY ADDRESS DRAINAGE TO THE SATISFACTION OF THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR.

January 6, 2023

Melissa Lindell, AICP
ERGS, Inc.
melissa@ergsinc.com

RE: Final Action – Conditional Use Permit CUP22004 – River Ranch Apartments

Dear Applicant:

On December 14, 2022, the City of Fernley Planning Commission reviewed a Conditional Use Permit request to allow for the development of a 320-unit apartment community located on APNs: 021-281-03, 021-281-04, 021-281-09, and 021-281-10 located at approximately north of Meadows Avenue, south of U.S. Route 50 Alternate, east of River Ranch Road, ad west of Fort Sutter Blvd.

Following careful consideration based upon the written materials and public comment, the Planning Commission voted to approve the Conditional Use Permit request subject to the Conditions of Approval 1 through 39 as attached hereto. No appeal was filed in accordance with the provisions outlines in Fernley Municipal Code Section 32.03.090(e); therefore, the Planning Commission's action is final.

You may not conduct or establish the use for which this application was approved until all conditions of approval have been satisfied to the approval of the Planning Department. If you have any questions concerning this application, please contact the Planning Department at (775) 784-9810.

Sincerely,

Lisa Warner

Lisa Warner
Assistant Planner

Attachments: Conditions of Approval for CUP22004

Conditions of Approval for CUP22004
Conditional Use Permit

1. APPROVAL:

   THE PROJECT IS APPROVED AS SUBMITTED AND CONDITIONED. ANY SUBSTANTIVE CHANGE SHALL REQUIRE REVIEW AND APPROVAL BY THE PLANNING COMMISSION AS AN AMENDMENT TO THIS CONDITIONAL USE PERMIT.

2. PROJECT DESCRIPTION:

   THE PROJECT APPROVAL IS LIMITED TO A MAXIMUM OF 320 MULTI-FAMILY UNITS ON ±20.80 ACRES.

3. EXPIRATION DATE:
   THE CONDITIONAL USE PERMIT SHALL EXPIRE WITHIN ONE (1) YEAR OF THE DATE OF APPROVAL, UNLESS THE PERMITTED USE HAS BEEN ESTABLISHED OR CONSTRUCTION TO ACCOMMODATE THAT USE HAS BEGUN AND IS BEING DILIGENTLY PURSUED. A ONE-YEAR EXTENSION MAY BE GRANTED BY THE PLANNING COMMISSION IF REQUESTED PRIOR TO THE EXPIRATION DATE OF THE CONDITIONAL USE PERMIT APPROVAL.

4. WATER RIGHTS:
   THE DEVELOPER SHALL COMPLY WITH ALL CITY OF FERNLEY MUNICIPAL CODES REGARDING THE DEDICATION OF WATER RIGHTS, INCLUDING ALL ASSOCIATED FEES, FOR THE CONNECTION TO THE CITY'S MUNICIPAL WATER SYSTEM IN THE AMOUNT THAT IS REQUIRED PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR ANY PHASE OF THE PROJECT.

5. LANDSCAPING/IRRIGATION:
   THE DEVELOPER SHALL SUBMIT A LANDSCAPING AND IRRIGATION PLAN FOR THE PROJECT IN CONFORMANCE WITH THE CITY OF FERNLEY'S DEVELOPMENT CODE FOR REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT. THE LANDSCAPING AND IRRIGATION SHALL BE INSTALLED PER THE APPROVED PLANS PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR EACH BUILDING TO THE APPROVAL OF THE ADMINISTRATOR.

6. WATER AND SEWER MAINS AND SERVICES:
   THE DEVELOPER SHALL COMPLY WITH ALL STANDARDS, CODES, AND REQUIREMENTS REGARDING CONNECTION TO THE CITY'S SANITARY SEWER AND POTABLE WATER SYSTEMS, INCLUDING BUT NOT LIMITED TO, ASSOCIATED FEES, EASEMENTS, DESIGN STANDARDS, SYSTEM LOOPING, DEVELOPMENT CODE REQUIREMENTS, AND STATE REQUIREMENTS.

   THE DEVELOPER SHALL PROVIDE THE CITY WITH A UTILITY PLAN FOR WATER AND SANITARY SEWER THAT IS IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE AND PUBLIC WORKS DESIGN MANUAL TO THE APPROVAL OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR, AND ADMINISTRATOR. EACH PHASE MUST ALSO BE REVIEWED AND APPROVED BY THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION PRIOR TO CONSTRUCTION.

7. UTILITY EASEMENTS:
   THE DEVELOPER SHALL PROVIDE EASEMENTS TO THE CITY OF FERNLEY FOR THE MAINTENANCE OF THE PUBLIC INFRASTRUCTURE BEING INSTALLED ON PRIVATE PROPERTY. THE EASEMENTS SHALL INCLUDE THE CITY OF FERNLEY'S STANDARD EASEMENT LANGUAGE AND SHALL BE RECORDED PRIOR TO ISSUING A PERMIT TO START CONSTRUCTION OF THE INFRASTRUCTURE. IN NO SITUATION SHALL WORK TAKE PLACE ON PRIVATE PROPERTY WITHOUT A RECORDED EASEMENT IN PLACE.

8. WATER SYSTEM LOOPING:

   THE DEVELOPER SHALL PROVIDE THE CITY WITH A UTILITY PLAN FOR THE WATER SYSTEM THAT DEMONSTRATES ADEQUATE SYSTEM LOOPING PRIOR TO THE ISSUANCE OF A PERMIT. THE PLAN SHALL BE IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE, NEVADA ADMINISTRATIVE CODE, AND PUBLIC WORKS DESIGN MANUAL TO THE APPROVAL OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR, AND ADMINISTRATOR.

9. WATER AND SEWER SYSTEM MODELING:
   THE DEVELOPER SHALL COMPLETE WATER AND SEWER MODELING FOR THE PROJECT PRIOR TO THE ISSUANCE OF A PERMIT. THE DEVELOPER SHALL CONSTRUCT ANY IMPROVEMENTS IDENTIFIED BY THE MODELING AS NECESSARY TO SERVE THE PROJECT IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. THE PROJECT WILL REQUIRE CAPACITY UPGRADES TO BE COMPLETED AT THE EXISTING TMAI LIFT STATION. THE WORK SHALL BE COMPLETED PRIOR TO ISSUING FIRST CERTIFICATE OF OCCUPANCY FOR ANY BUILDING ON THE PROJECT SITE.

10. NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION – BUREAU OF SAFE DRINKING WATER AND BUREAU OF WATER POLLUTION CONTROL FOR THE WATER AND SEWER INFRASTRUCTURE DESIGN AND CONSTRUCTION TO THE APPROVAL OF THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR.

11. GRADING PERMIT:
    THE DEVELOPER SHALL SUBMIT A GRADING PLAN FOR ANY PHASE OF THE PROJECT TO THE APPROVAL OF THE CITY ENGINEER. PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE DEVELOPMENT, THE DEVELOPER SHALL POST A SURETY BOND FOR REGRADING AND RECLAMATION OF THE SITE. THE DEVELOPER SHALL PROVIDE A STAMPED ENGINEER'S ESTIMATE FOR REGRADING AND RECLAMATION OF THE SITE. THE DEVELOPER SHALL COMPLY WITH ALL GRADING REQUIREMENTS SET FORTH IN THE CITY OF FERNLEY'S DEVELOPMENT CODE AS WELL AS ALL STATE AND FEDERAL REGULATIONS. THE DEVELOPER OR THEIR DESIGNEE SHALL BE RESPONSIBLE FOR OBTAINING AND MAINTAINING A STORM WATER POLLUTION PREVENTION PERMIT WITH THE STATE OF NEVADA AS WELL AS A SURFACE AREA DISTURBANCE PERMIT.

12. STORM DRAINAGE:
    THE DEVELOPER SHALL PROVIDE A FINAL DRAINAGE REPORT FOR THE PROJECT IN CONFORMANCE WITH THE FERNLEY MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO APPROVAL OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT. EACH SUCCESSIVE PHASE OF THE PROJECT SHALL SUBMIT AN UPDATED DRAINAGE REPORT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER SHOWING THE CUMULATIVE EFFECT OF THE DEVELOPED PORTION OF THE PROJECT ALONG WITH THE PROPOSED PHASE'S EFFECT ON THE TOTAL DISCHARGE INTO THE DRAINAGE SYSTEM. THE STORM WATER AND DRAINAGE PLANS FOR THE PHASES OF THE DEVELOPMENT SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE PHASES OF THE PROJECT.

    ALL INTERNAL STORM DRAIN INFRASTRUCTURE SHALL BE MAINTAINED BY THE PROPERTY OWNER.

13. GEOTECHNICAL REPORT:
    THE DEVELOPER SHALL PROVIDE A GEOTECHNICAL REPORT FOR THE PROJECT IN CONFORMANCE WITH THE REQUIREMENTS OF THE DEVELOPMENT CODE FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO THE APPROVAL OF A GRADING PERMIT OR BUILDING PERMIT FOR ANY PORTION OF THE PROJECT.

14. STRUCTURAL CONTROLS:
    THE DEVELOPER SHALL UTILIZE STRUCTURAL CONTROLS FOR THE TREATMENT OF STORM WATER RUNOFF IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES TO THE APPROVAL OF THE PUBLIC WORKS DIRECTOR AND CITY ENGINEER.

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    THE DEVELOPER SHALL PROVIDE A FINAL SANITARY SEWER REPORT FOR THE PROJECT IN CONFORMANCE WITH THE FERNLEY MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT.

16. DESIGN STANDARDS:
    THE DEVELOPER SHALL COMPLY WITH ANY DESIGN STANDARDS AND REGULATIONS AS SET FORTH IN THE CITY OF FERNLEY DEVELOPMENT CODE AND CITY OF FERNLEY DESIGN STANDARDS UNLESS IN CONFLICT WITH THE LOCAL, STATE OR FEDERAL REGULATIONS, IN WHICH CASE THE MORE STRINGENT REGULATION WILL TAKE PRECEDENCE.

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    THE DEVELOPER SHALL COMPLY WITH ALL THE REQUIREMENTS OF THE CITY OF FERNLEY MUNICIPAL CODE, DEVELOPMENT CODE, AND PUBLIC WORKS DESIGN MANUAL FOR THE CONSTRUCTION OF ANY PUBLIC OR PRIVATE INFRASTRUCTURE TO THE APPROVAL OF THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE PROJECT.

18. NORTH LYON COUNTY FIRE PROTECTION DISTRICT:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NORTH LYON COUNTY FIRE PROTECTION DISTRICT, INCLUDING BUT NOT LIMITED TO: DEVELOPING A PLAN TO PROVIDE ADEQUATE EMERGENCY ACCESS THROUGHOUT THE SITE, DEVELOPING A MASTER FIRE HYDRANT AND FIRE FLOW PLAN, DEVELOPING A MASTER FIRE DEPARTMENT CONNECTION (FDC) PLAN, AND INSTALLING FIRE SUPPRESSION AND/OR ALARM SYSTEMS TO THE APPROVAL OF THE FIRE CHIEF PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

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    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE BUILDING DEPARTMENT TO THE APPROVAL OF THE BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

20. ACCESS AND CIRCULATION:
    THE DEVELOPER SHALL USE APPROPRIATE STRIPING AND SIGNAGE AS MAY BE NECESSARY TO MINIMIZE TRAFFIC CONFLICT WITHIN THE DEVELOPMENT SITE TO THE APPROVAL OF THE ADMINISTRATOR AND CITY ENGINEER FOR THE LIFE OF THE PROJECT.

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    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF ANY FEDERAL, STATE, OR LOCAL AGENCY WITH JURISDICTION OVER THE PROJECT TO THE APPROVAL OF THE ADMINISTRATOR.

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    THE DEVELOPER SHALL PROVIDE A TRAFFIC ANALYSIS REPORT FOR THE PROJECT IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT. EACH SUCCESSIVE PHASE OF THE PROJECT SHALL SUBMIT AN UPDATED TRAFFIC ANALYSIS REPORT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR SHOWING THE CUMULATIVE EFFECT

OF THE DEVELOPED PORTION OF THE PROJECT ALONG WITH THE PROPOSED PHASE'S EFFECT.

23. PARKING:
    VISITOR PARKING SHALL BE PROVIDED THROUGHOUT THE SITE. THE DEVELOPER SHALL SUBMIT IMPROVEMENT PLANS THAT SHOW APPROPRIATE STRIPING AND SIGNAGE FOR THE VISITOR PARKING STALLS.

24. CONSTRUCTION MAINTENANCE:
    THE DEVELOPER SHALL LOCATE AND UTILIZE A SUFFICIENT NUMBER OF TRASH CONTAINERS ON-SITE TO BE UTILIZED DURING THE CONSTRUCTION OF THE PROJECT TO MAINTAIN THE PROJECT SITE IN A CLEAN AND ORDERLY STATE TO THE APPROVAL OF THE ADMINISTRATOR.

25. CONSTRUCTION HOURS:
    THE DEVELOPER SHALL LIMIT ALL CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES TO BETWEEN THE HOURS OF 7:00 AM TO 7:00 PM, SEVEN DAYS A WEEK. THE DEVELOPER SHALL INSTALL SIGNS AT ALL ACCESS POINTS TO THE PROJECT THAT CLEARLY INDICATE THE HOURS OF ACTIVITY ON-SITE PRIOR TO THE START OF ANY CONSTRUCTION-RELATED ACTIVITIES TO THE APPROVAL OF THE ADMINISTRATOR. THE DEVELOPER SHALL MAINTAIN THESE SIGNS IN GOOD REPAIR FOR THE DURATION OF THE CONSTRUCTION OF THE PROJECT. ONCE CONSTRUCTION IS FINISHED, THE DEVELOPER SHALL REMOVE THESE SIGNS.

26. PROJECT CONTACT:
    THE DEVELOPER SHALL DESIGNATE TO THE ADMINISTRATOR A PROJECT CONTACT PERSON RESPONSIBLE/AUTHORIZED TO CORRECT PROBLEMS REGARDING THE PROJECT ON A 24-HOUR/7-DAYS A WEEK BASIS. THE DEVELOPER SHALL DESIGNATE THE PROJECT CONTACT PERSON TO THE ADMINISTRATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT.

27. ARCHITECTURE/BUILDING ELEVATIONS:
    THE DEVELOPMENT OF THE SUBJECT SITE SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE ARCHITECTURAL/BUILDING ELEVATIONS SUBMITTED AS PART OF THIS APPLICATION. SUBSTANTIAL CHANGES TO THE ARCHITECTURE/BUILDING ELEVATIONS SHALL REQUIRE REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THAT BUILDING. THE DEVELOPER SHALL ARTICULATE LONG FACADES BY VARYING BUILDING MASS, FORM, TEXTURE, MATERIALS, AND INTERPLAY OF SOLID AND OPEN AREAS.

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    THE DEVELOPER SHALL LOCATE AND INSTALL TRASH ENCLOSURES TO THE APPROVAL OF WASTE MANAGEMENT AND THE ADMINISTRATOR INCLUDING THE APPROPRIATE SIZE AND LOCATION. THE TRASH ENCLOSURES SHALL MATCH THE PROJECT'S ARCHITECTURE AND BUILDING MATERIALS TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE INDIVIDUAL BUILDINGS.

29. UTILITY SCREENING:
    THE DEVELOPER SHALL WORK IN CONJUNCTION WITH THE UTILITY COMPANIES TO LOCATE UTILITY EQUIPMENT SUCH AS ELECTRICAL, GAS, AND WATER JUNCTION BOXES, INCLUDING TRANSFORMER BOXES, VAULTS, AND ELECTRICAL PANELS, IN AREAS WHERE THE EQUIPMENT IS SCREENED BY EITHER ARCHITECTURAL ELEMENTS THAT MATCH THE MAIN STRUCTURE'S COLORS AND MATERIALS OR BY ADJUSTING THE APPROVED LANDSCAPING TO COMPENSATE TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR EACH INDIVIDUAL BUILDING.

30. SCREENING:
    THE MECHANICAL EQUIPMENT SHALL BE SCREENED FROM VIEW OF THE PARKING LOT, ADJACENT PUBLIC STREETS, AND PUBLIC AREAS BY USING AN ARCHITECTURAL ELEMENT OF THE BUILDING CONSISTING OF THE SAME, DURABLE MATERIALS AS THE BUILDING TO THE APPROVAL OF ADMINISTRATOR. ANY LOADING DOCKS AND SERVICE AREAS INCLUDING TRASH COMPACTION AND/OR DUMPSTER(S) SHALL BE SCREENED FROM VIEW OF PARKING LOTS AND PUBLIC AREAS. LOADING DOCK SCREENING SHALL BE HIGH ENOUGH TO SCREEN THE TRUCKS. THE SCREENING SHALL BE REVIEWED AND APPROVED BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR EACH INDIVIDUAL BUILDING.

31. LIGHTING:
    THE DEVELOPER SHALL SUBMIT A LIGHTING PLAN FOR REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. THE DEVELOPER IS REQUIRED TO COMPLY WITH THE LIGHTING STANDARDS AND REQUIREMENTS IN THE CITY OF FERNLEY MUNICIPAL CODE. TO REDUCE THE IMPACT OF GLARE AND MINIMIZE THE EFFECT OF FIELD AND PARKING LIGHTING, LIGHTING FIXTURES WITH EXTERNAL “HOODS” AND INTERNAL GLARE REDUCTION LOUVERS SHALL BE USED.

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    THE DEVELOPER IS SUBJECT TO THE PROVISIONS OF FERNLEY MUNICIPAL CODE RELATED TO RESIDENTIAL CONSTRUCTION TAX. THE RESIDENTIAL CONSTRUCTION TAX FEE SHALL BE PAID PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR EACH BUILDING.

33. ADDRESSING AND STREET NAMES:

    THE DEVELOPER SHALL SUBMIT A REQUEST FOR ADDRESSING AND STREET NAME RESERVATION APPLICATION TO THE CITY OF FERNLEY FOR REVIEW AND APPROVAL. ALL ADDRESSING OF LOTS SHALL BE COMPLETED BY THE CITY. STREET NAMES SHALL BE APPROVED BY THE CITY PRIOR TO THE SUBMITTAL OF A FINAL MAP FOR THE PROJECT.

34. PROJECT PHASING:

    THE PROJECT SHALL BE DEVELOPED IN ACCORDANCE WITH THE PHASING PLAN INCLUDED AS PART OF THIS APPROVAL. EACH PHASE SUBMITTED MUST BE DESIGNED TO MEET THE PUBLIC FACILITIES AND IMPROVEMENT STANDARDS AND BE ABLE TO OPERATE INDEPENDENTLY AND AS PART OF THE OVERALL DESIGN. CHANGES TO THE PHASING PLAN WILL REQUIRE REVIEW AND APPROVAL BY THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR PRIOR TO BEING IMPLEMENTED.

35. WASTE MANAGEMENT:

    THE DEVELOPER SHALL PROVIDE A WILL SERVE FROM WASTE MANAGEMENT TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO THE APPROVAL AND RECORDATION OF A FINAL MAP.

36. NEVADA DEPARTMENT OF TRANSPORTATION:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NEVADA DEPARTMENT OF TRANSPORTATION TO THE APPROVAL OF THE ADMINISTRATOR, PUBLIC WORKS DIRECTOR, AND CITY ENGINEER.

37. UNITED STATES POSTAL SERVICE:
    THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE UNITED STATES POSTAL SERVICE FOR MAIL DELIVERY AND MAILBOX DESIGN AND LOCATION TO THE APPROVAL OF THE ADMINISTRATOR, PUBLIC WORKS

DIRECTOR, AND CITY ENGINEER PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT.

38. RIVER RANCH ROAD AND US-50 INTERSECTION IMPROVEMENTS:

THE DEVELOPER SHALL SUBMIT A PROPOSED PLAN FOR THE RIVER RANCH/US-50 INTERSECTION, TO THE APPROVAL OF THE CITY ENGINEER, ADMINISTRATOR, PUBLIC WORKS DIRECTOR, AND THE NEVADA DEPARTMENT OF TRANSPORTATION. THE PLAN SHALL INCLUDE RECOMMENDATIONS FOR STRIPING, LIGHTING, AND PEDESTRIAN ACCESS AND SAFETY INCLUDING ADA COMPLIANT PEDESTRIAN RAMPS.

39. RIVER RANCH ROAD IMPROVEMENTS:

AS MODIFIED IN THE PLANNING COMMISSION MEETING ON DECEMBER 14, 2022:

THE DEVELOPER SHALL COMPLETE IMPROVEMENTS ON RIVER RANCH ROAD ADJACENT TO THE ENTIRE PROJECT SITE AND NORTH OF THE SITE TO US 50 IN ACCORDANCE WITH THE CITY OF FERNLEY DEVELOPMENT CODE WITH MODIFICATIONS AS OUTLINED BELOW:

1. **ADJACENT TO PROJECT SITE:** RIVER RANCH ROAD SHALL BE IMPROVED TO HALF STREET IMPROVEMENTS FOR A TYPICAL 60 FOOT STREET SECTION TO INCLUDE 20 FEET OF PAVEMENT PLUS TWO FEET TO ACCOMMODATE CURB AND GUTTER PLUS AN ADDITIONAL EIGHT FEET TO ACCOMMODATE SIDEWALK AND LANDSCAPING. RIGHT OF WAY TO ACCOMMODATE THE IMPROVEMENTS SHALL BE DEDICATED TO THE CITY OF FERNLEY BY THE DEVELOPER. THE TOTAL IMPROVEMENT WIDTH SHALL BE 30 FEET FROM THE EXISTING CENTERLINE OF RIVER RANCH ROAD.

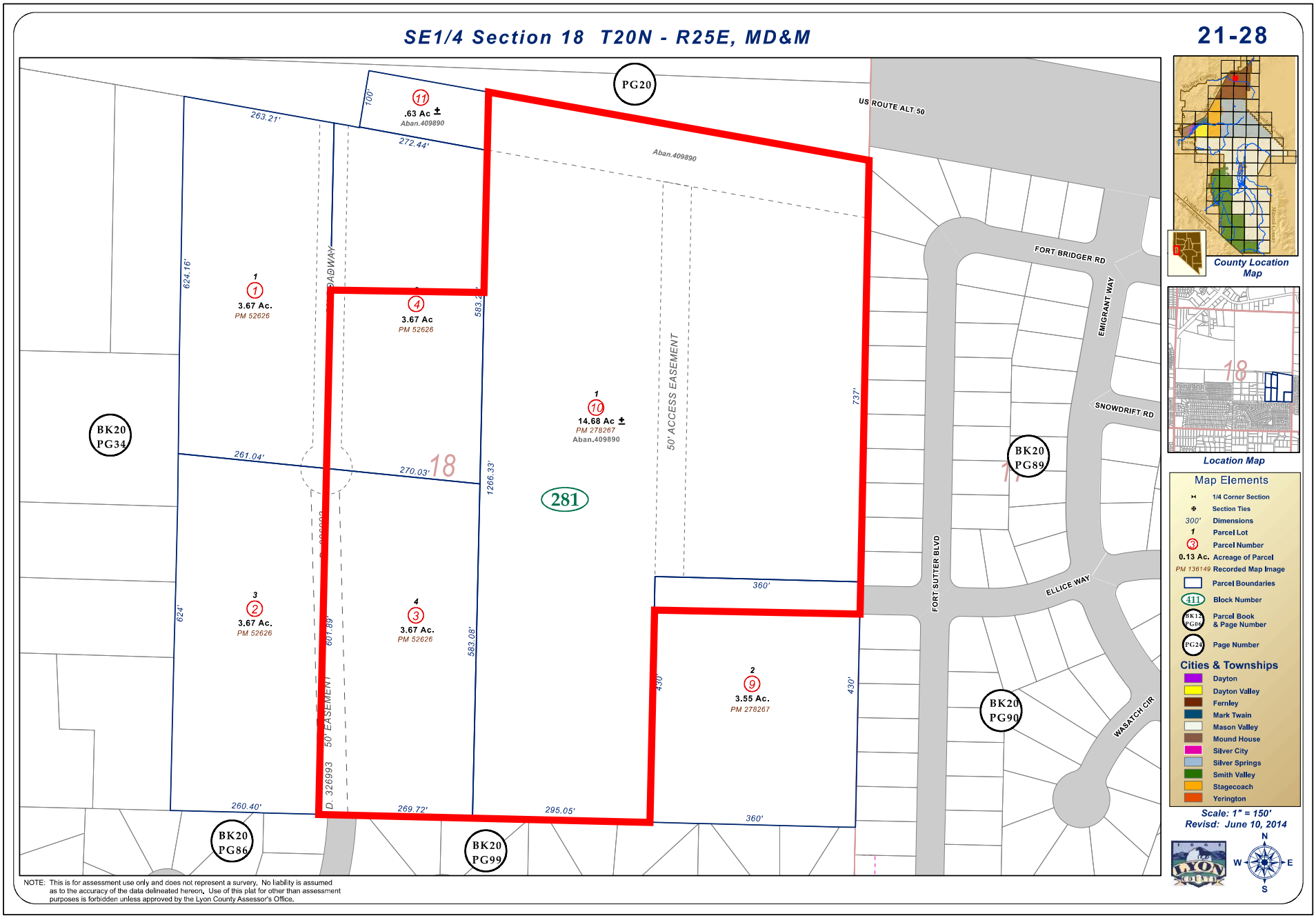
2. **NORTH OF THE PROJECT SITE TO US 50:** RIVER RANCH ROAD SHALL BE IMPROVED TO MODIFIED HALF STREET IMPROVEMENTS FOR A TYPICAL 60 FOOT STREET SECTION TO INCLUDED 19’ 10” OF PAVEMENT PLUS TWO FEET TO ACCOMMODATE CURB AND GUTTER. CROSSWALKS TO DIRECT PEDESTRIANS TO THE EXISTING SIDEWALK ON THE WEST SIDE OF RIVER RANCH ROAD ADJACENT TO THE PIONEER CROSSING CASINO SHALL BE PROVIDED IN LOCATIONS AS DIRECTED BY THE CITY ENGINEER. DUE TO THE EXISTING CONSTRAINTS, SIDEWALK AND LANDSCAPING SHALL NOT BE REQUIRED IN THIS AREA, THEREFORE, THE TOTAL IMPROVEMENT WIDTH SHALL BE A MINIMUM OF 21’10” FROM THE EXISTING CENTERLINE OF RIVER RANCH ROAD.

3. **RIVER RANCH ROAD DRAINAGE:** THE DEVELOPER SHALL MITIGATE THE EXISTING DRAINAGE ISSUES LOCATED AT THE NORTH END OF RIVER RANCH ROAD TO THE APPROVAL OF THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR.

ALL IMPROVEMENTS SHALL INCLUDE APPROPRIATE PEDESTRIAN CROSSINGS, STRIPING, SIGNAGE AND LIGHTING. IMPROVEMENTS ALONG THE WESTERN BOUNDARY OF RIVER RANCH ROAD ACROSS FROM THE SITE THAT DO NOT ALREADY HAVE CURB AND GUTTER SHALL ADEQUATELY ADDRESS DRAINAGE TO THE SATISFACTION OF THE ADMINISTRATOR, CITY ENGINEER AND PUBLIC WORKS DIRECTOR.

SECTION 3 – MAPS AND EXHIBITS

ASSESSOR'S PARCEL MAP

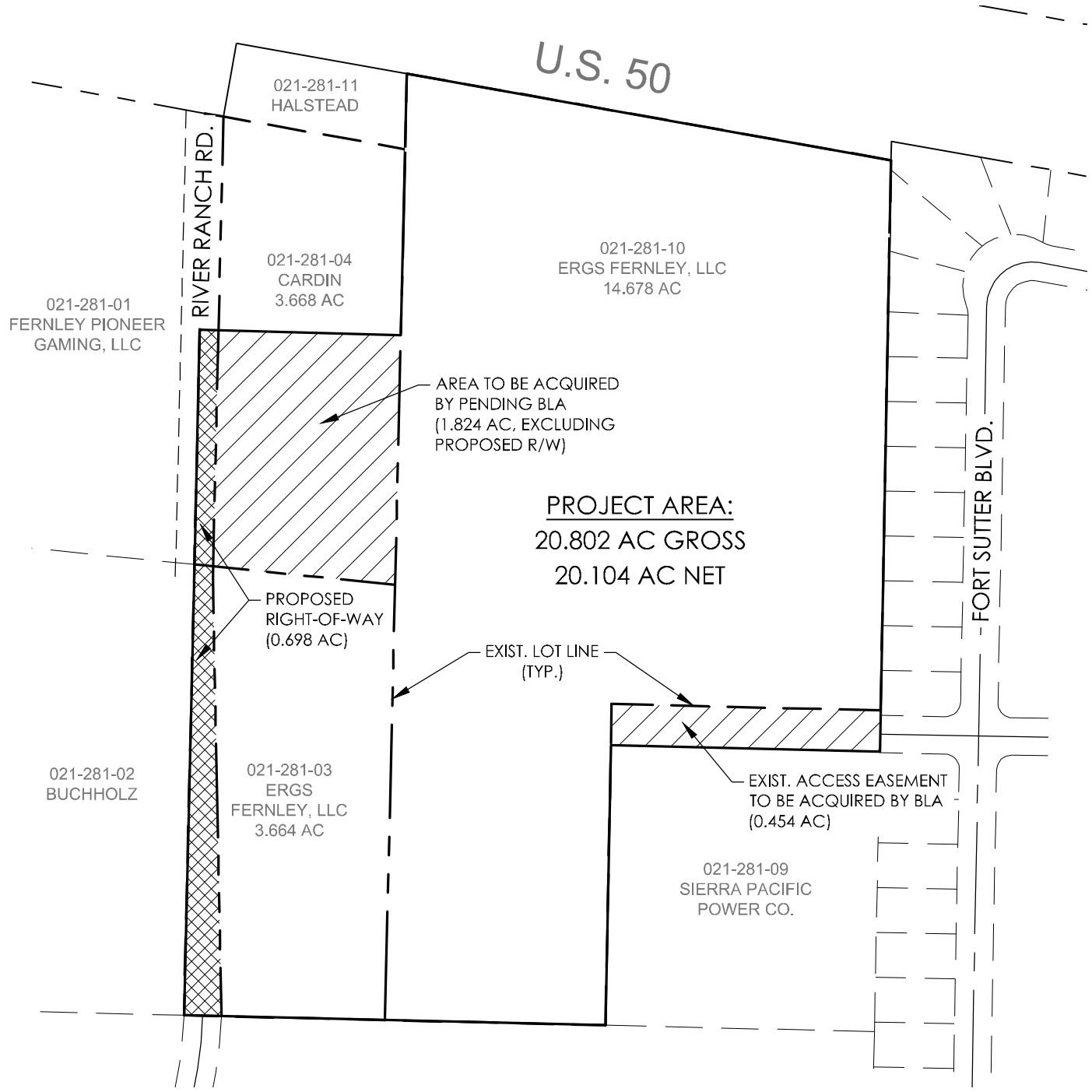


ZMA / CUP FOR RIVER RANCH APARTMENTS

PARCEL AREAS

FERNLEY, NEVADA

SEPTEMBER 2022

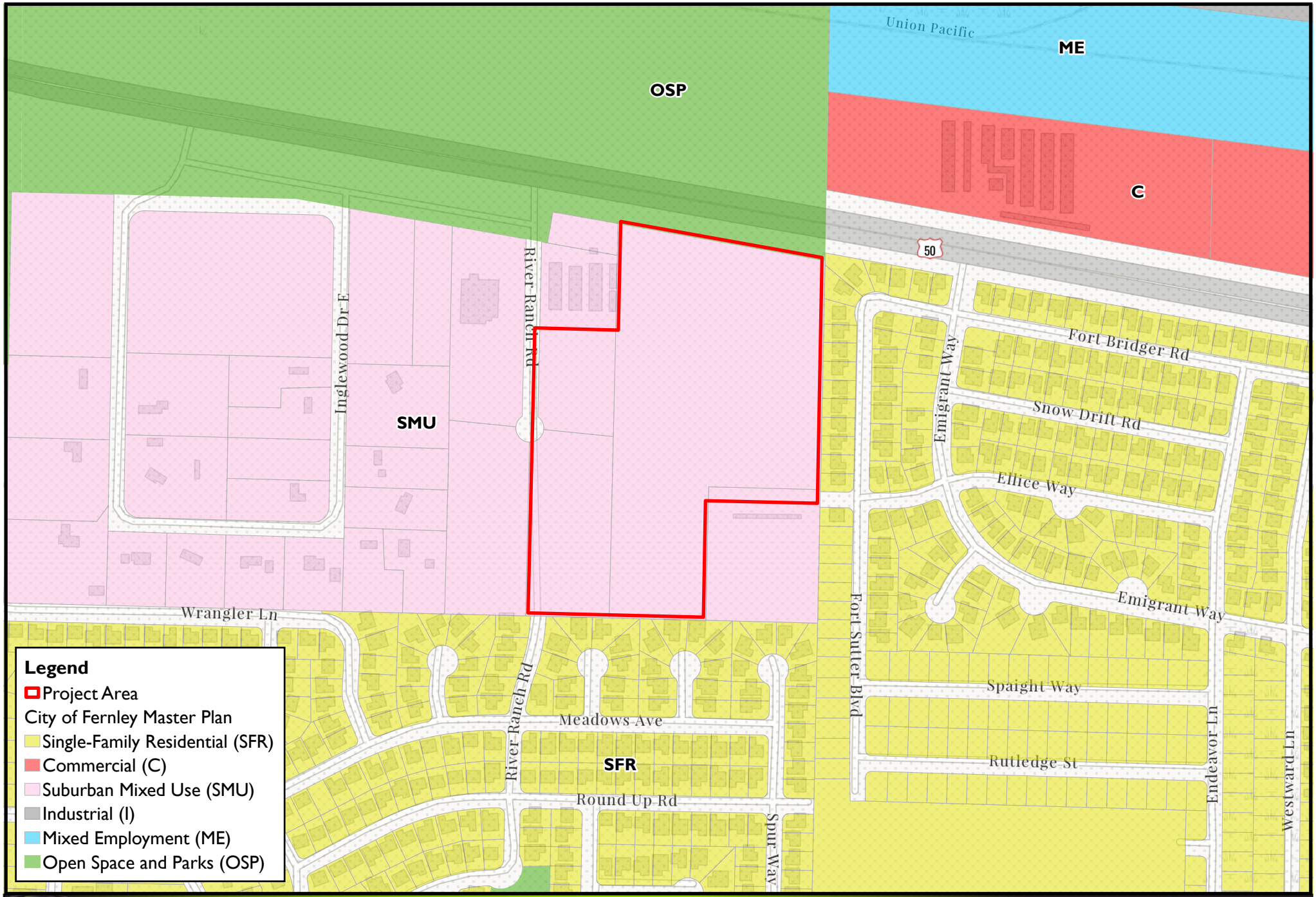


NORTH

SCALE: 1"=200'

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel 775.823.4068
Fax 775.823.4066

J:\Jobs\3034_ERGS\River_Rnch_Double_R_OA\Planning\Exhibits\EXH_DoubleR_ParcelAreas.dwg 9/10/2022 1:23 PM Evan Nikirk



Existing Master Plan

River Ranch Apartments

September 2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
Fax: 775.823.4066

SITE PHOTOS

River Ranch Apartments ZMA-CUP



Overall site – view northeast



Overall site – view north



Overall site – view southeast



NV Energy substation panorama – view northeast



NV Energy substation panorama – view east



NV Energy substation panorama – view southeast

SITE PHOTOS

River Ranch Apartments ZMA-CUP



Houses on south boundary – view southeast



Houses on south boundary – view south



Houses on south boundary – view southwest



Houses on east boundary – view south-southeast



Houses on east boundary – view north-northeast

SITE PHOTOS

River Ranch Apartments ZMA-CUP



Highway 50A on north boundary – view east



Highway 50A on north boundary – view west



Self-storage units on adjacent (NW) parcel – view southwest



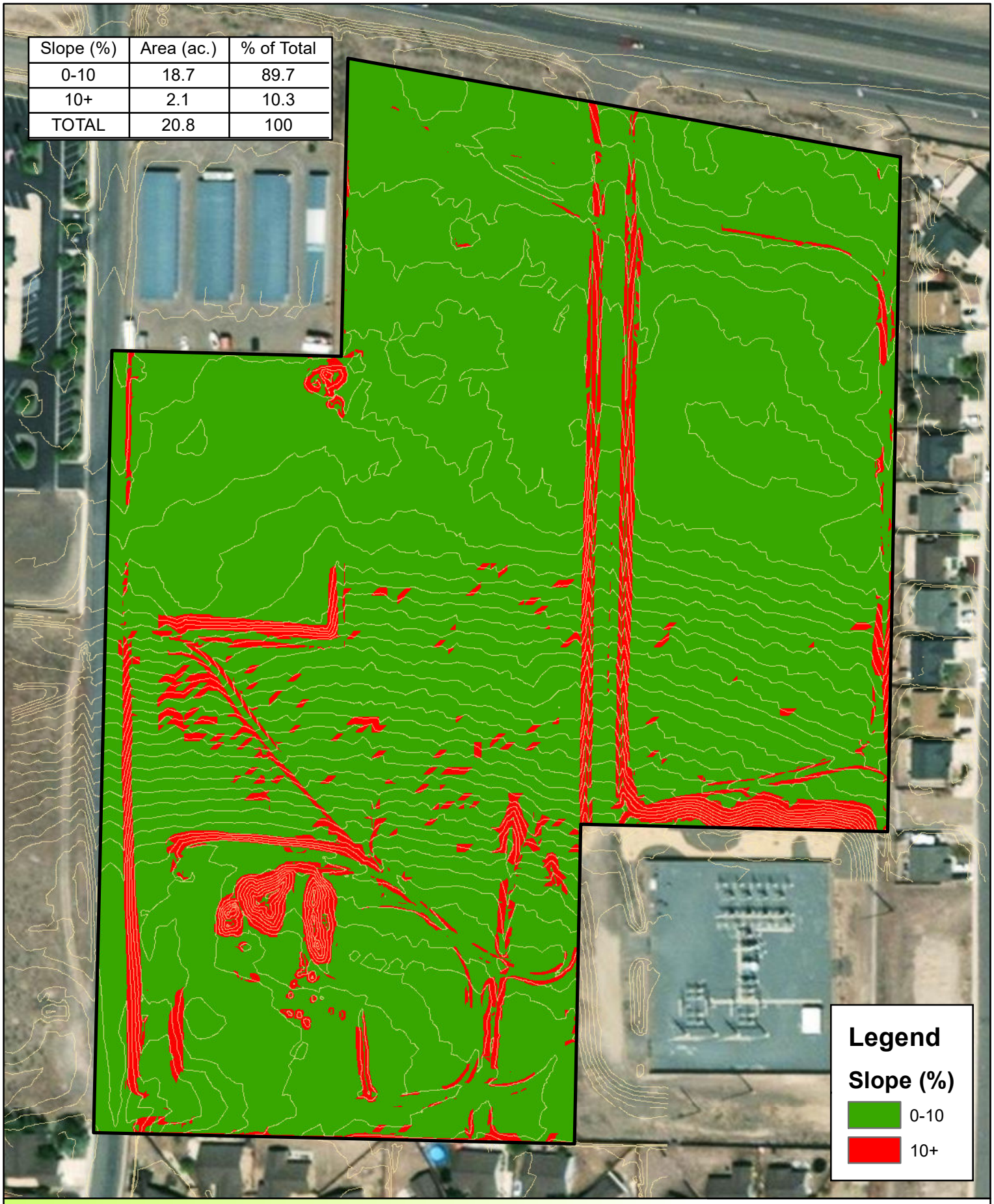
Aerial Map

River Ranch Apartments ZMA/CUP

September 2022

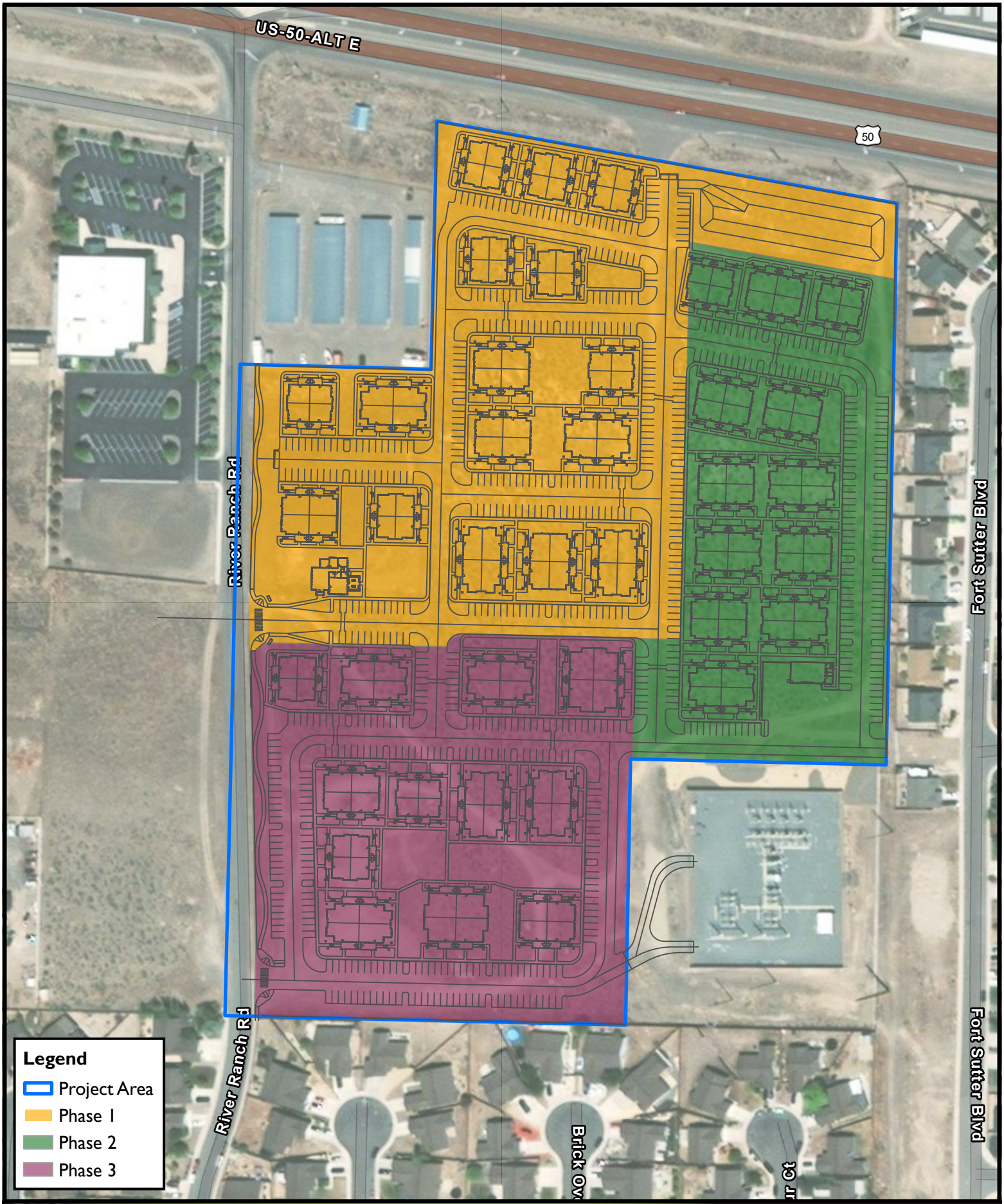
0 180 360
Feet

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1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
Fax: 775.823.4066



Slope Map
River Ranch Apartments
Fernley, NV
August 2022

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Reno, NV 89502
Tel: 775.823.4068

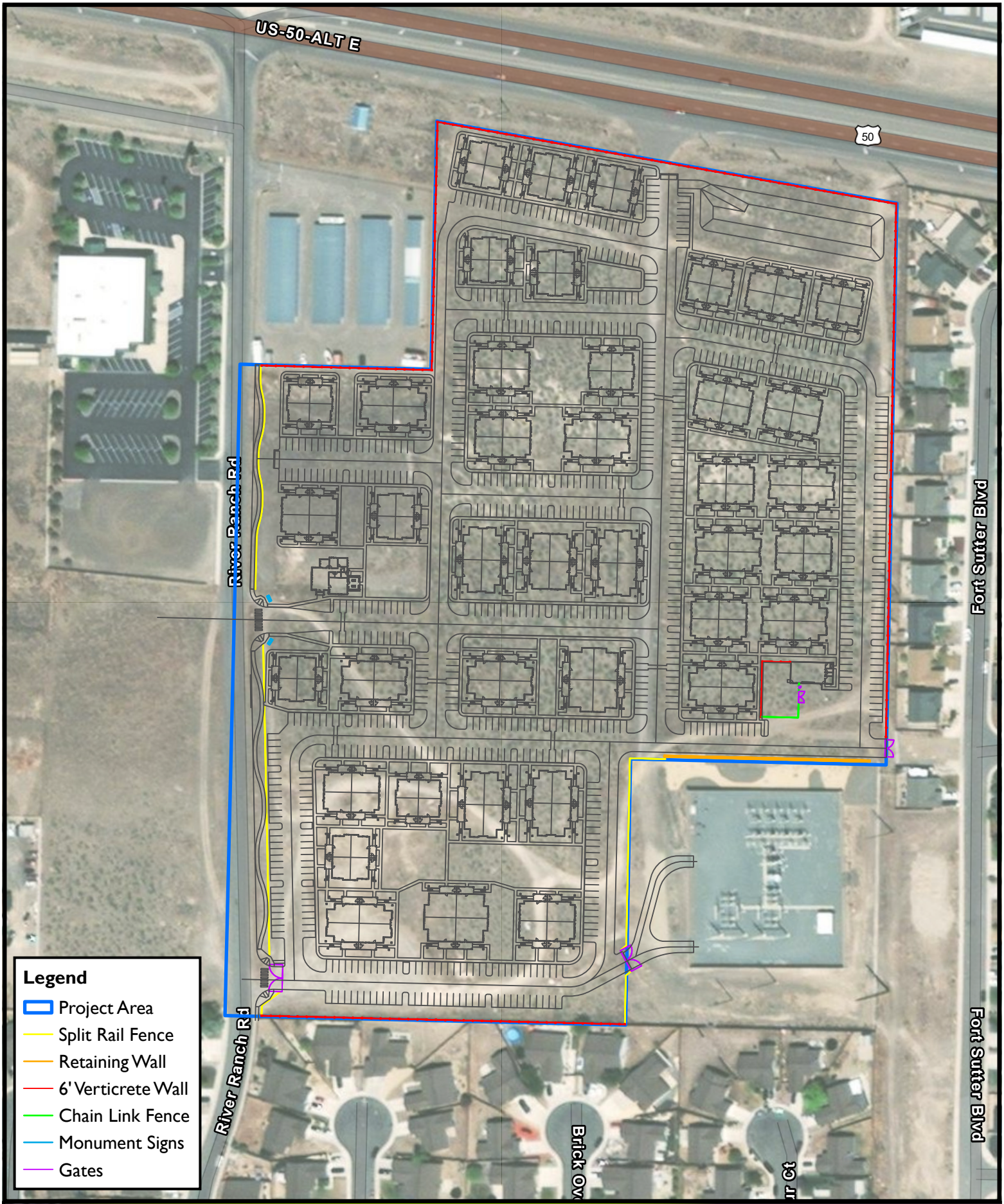


Proposed Phasing

River Ranch Apartments ZMA/CUP

September 2022

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BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
Fax: 775.823.4066

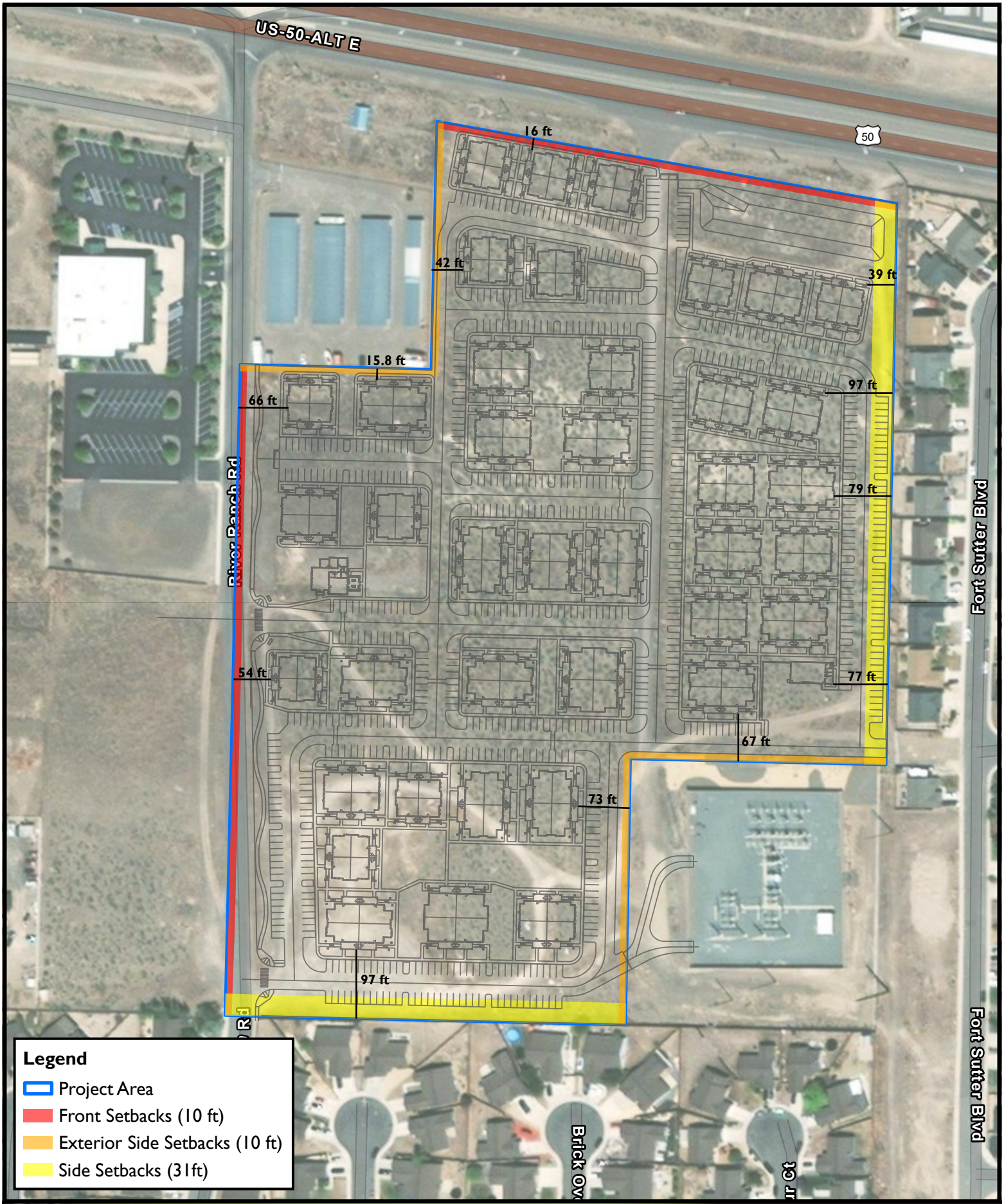


Proposed Fences & Walls

River Ranch Apartments ZMA/CUP

September 2022

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BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
Fax: 775.823.4066



Setbacks Exhibit

River Ranch Apartments ZMA/CUP

September 2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
Fax: 775.823.4066



TUSCAN



Body Color #1:
Frazee #CL 2707N
Cinder

Body Color #2:
Frazee #CL2745D
Magic Eye

Body Color #3:
Frazee #CL2876N
Dug Up

Trim Color:
Frazee #CL3277N
Bon Nuit





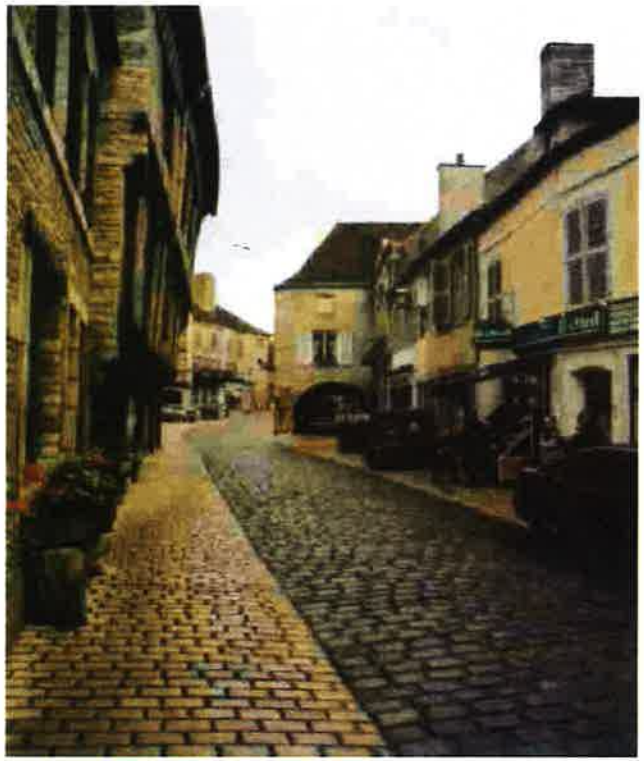
FRENCH

Body Color #1:
Frazee #CL2925A
Sicklepod

Body Color #2:
Frazee #CL2834D
Falcon

Body Color #3:
Frazee #CL2886N
Sea Blite

Trim Color:
Frazee #CL3277N
Bon Nuit







SPANISH



Body Color #1:
Frazee #CL2824M
Shareware

Body Color #2:
Frazee #CL2747N
Rover

Body Color #3:
Frazee #CLC1283N
Caffeine

Trim Color:
Frazee #CL3277N
Bon Nuit



SECTION 4 – REPORTS

GEOTECHNICAL DESIGN REPORT
River Ranch Apartments

Fernley, Lyon County, Nevada

Submitted To:

Greg Peek
ERGS, INC.
9345 Lemmon Drive
Reno, Nevada 89506

Project No.

3034059

Date

September 2022

Digitally signed by Lilian Lorincz
Date: 2022.09.12 13:44:26-07'00'



Lilian Lorincz, PE
RE Number 030237 (NV)

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EXECUTIVE SUMMARY

The project is located in Fernley, Nevada and consists of constructing an apartment complex with structures up to two stories in height, founded on standard spread foundations with concrete slab on grade flooring. Utilities and associated parking and access drives will also be part of the project. A storm water retention pond is also proposed to be constructed in the northeastern portion of the property. Access to the property is from US Highway 50 and River Ranch Road.

During the geotechnical investigation, a 3-feet thick fill layer consisting of clayey sand was encountered within the southwestern portion of the site. Overall, the site is mapped as Holocene-age alluvial and lacustrine deposits consisting of aeolian sands, silts, and clays interlayered with colluvial gravels. Native soils encountered in the geotechnical investigation typically consisted of non-plastic silty and poorly graded sands, low plasticity silts, and clayey sands and gravels. Additionally, a high plasticity sandy clay zone was encountered, at an average thickness approaching 1-foot in two of the test pits. Groundwater was not encountered during investigation.

A grading plan was not available at the time of preparation of this report. However, maximum cuts and fills are currently anticipated to approach 14-feet and 5-feet, respectively.

Sloughing soils should be anticipated during trenching and excavating, especially in deeper excavations.

Mitigation of corrosive soils should also be anticipated. Severe sulfate levels were measured in the site soils. Therefore, special concrete considerations have been presented as discussed and addressed by the American Concrete Institute (ACI). Chloride ion concentration was measured at 58 mg/Kg. The structural engineer should specify any required mitigation due to the presence of chlorides.

Special inspection and materials' testing services are integral to the success of any geotechnical and/or construction project and have been recommended herein as required by the International Building Code and City of Fernley adoptions to the Standard Specifications for Public Works Construction and Engineer-of-Record program.

1. INTRODUCTION

Presented herein are the results of Wood Rodgers' geotechnical exploration, laboratory testing, and associated geotechnical design recommendations for the proposed River Ranch Apartments development in Fernley, Nevada. The assessments and recommendations presented in this geotechnical report have been determined, in part, around the surface and subsurface conditions identified by our exploration program which was developed to be consistent with locally accepted industry practices regarding exploratory means and methods for geotechnical investigations of similar projects. The proposed structural elements, topography, grading design, soils, and geology are all unique; therefore, the engineering judgment employed by those in responsible charge of geotechnical design is in general conformance with the accepted standards of care for engineering analyses as defined by the Nevada State Board of Engineers and Land Surveyors.

This report has been prepared in consideration of the applicable provisions of the International Building Code (IBC, 2018), ASCE 7, and the amendments and modifications adopted by the City of Fernley. These documents establish the minimum requirements to safeguard the public health, safety and general welfare of the occupants as well as the minimum level of structural integrity, life safety, and fire safety for inhabitants of new and existing structures. Geotechnical considerations for public improvements have been formulated around the requirements of the City of Fernley Public Works Design Manual and the Standard Specifications for Public Works Construction. Performance standards around which our primary recommendations have been framed are based upon the requirements of the referenced documents. Any expectations of performance inconsistent with, outside the purview of, or exceeding the requirements of the referenced documents are subjective and, therefore, a function of materials, design, workmanship, and ownership. Unless these expectations of performance are specifically stipulated or quantified herein, they are considered in excess to the scope and design standards of this report.

The objectives of this study were to:

1. Explore, test, and assess general soil, geology, and ground water conditions pertaining to design and construction considerations for the proposed development as required by the IBC.
2. Provide recommendations associated with the design and construction of the project, as related to the identified geotechnical conditions and the stipulated design levels and performance standards established herein, and the requirements of the IBC.

2. SCOPE OF SERVICES

As indicated in our proposal, upon completion of our field and office studies, a geotechnical investigation report, consistent with the requirements of the 2018 International Building Code (IBC), was to be completed for the project and would present the following:

- General summary of the site soils and geology, including documented geotechnical natural hazards as they might affect foundations.
- Summary of surface and ground water conditions encountered.
- Summary of seismic hazards including site seismicity, design parameters, and potential for surface fault rupture.
- Determination of Site Class.
- A preliminary assessment of liquefaction susceptibility.
- Site preparation and grading recommendations based on the results of our field exploration and laboratory testing.
- Types of suitable foundations, allowable bearing pressures, appropriate footing depths and widths, and anticipated settlement.
- Lateral earth pressures and design parameters, as applicable for planned structures.
- Concrete and concrete slab-on-grade support options.
- Drainage considerations that may affect foundation and concrete slab-on-grade performance.
- Structural pavement sections for parking and drive areas.
- Percolation test results for design of the storm water retention pond.

Our study included field exploration, laboratory testing, and engineering analyses to identify the physical and mechanical properties of the various on-site materials. Results of our field exploration and testing programs are included in this report. In consideration of the stated design levels and performance standards, these results form the basis for our conclusions and recommendations.

3. PROJECT CHARACTERIZATION

3.1. Project Description

- The project is located in Fernley, Nevada and encompasses APN's 021-281-03, -10, and a portion of -04. (Figure 1 – Vicinity Map)
- The project consists of constructing an apartment complex with planned structures up to two stories in height with standard spread foundation and concrete slab on grade flooring. Associated utilities, access drives, parking, and public improvements (Figure 2 – Improvement Plan) will also be constructed.
- Maximum cuts and fills are anticipated to be on the order of 14-feet and 5-feet, respectively.
- The northeastern portion of the property has been reserved for the construction of a storm water retention pond.
- Services will be provided by a combination of public and private utilities.

3.2. Site Conditions

- The overall site encompasses an area of approximately 19 acres.
- The development area is located at a central latitude and longitude of 39.5981°N and 119.2100°W, respectively.
- Single family residential developments border the property to the east and south. US Highway 50 and River Ranch Road border the site to the north and west, respectively.
- A Nevada Energy substation is located proximate to the southeastern portion of the site. Markers for an existing gas line, trending northeast, were observed in the northern portion of the property.
- The site is mostly undeveloped with native vegetation consisting of brush and grasses. A portion of the southwestern project area has been capped with soil stockpiles consisting mostly of clayey and silty sands.

3.3. Exploration

3.3.1. Excavating and Sampling

- The project was explored in July 2022 by advancing a series of 15 test pits with a rubber-tired backhoe utilizing a 24-inch bucket.
- Approximate exploration locations are presented in Figure 3 - Site Map and Approximate Exploration Locations in Appendix A of this report.

- Maximum depths of exploration advance extended to 10-feet below the existing ground surface. Refusal was met as shallow as 7-feet due to sloughing of the soils.
- Wood Rodgers' personnel examined and classified soils in the field in general accordance with ASTM D2488 (Description and Identification of Soils).
- Representative bulk samples were sampled from the trench sidewalls and placed in sealed plastic bags or buckets and returned to our Reno, Nevada laboratory for testing.

3.3.2. Geophysical Methods

- Seismic refraction methods (ReMi ™) were utilized to measure shear wave velocity and determine $V_{S\ 100}$.
- Shear wave velocity measurements have been relied upon to aid in the determination of an appropriate Site Class (ASCE 7). Figure B-3 (Appendix B) presents the shear wave geophysical profile.

3.4. Sampling, Classification and Reporting

- Wood Rodgers' personnel examined and classified soils in the field in general accordance with ASTM D2488 (Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)).
- It should be noted that soil classifications preformed for geotechnical investigations are specific to geotechnical engineering characterization of soils and do not meet the scientifically based quantitative sampling protocols necessary for consideration in bidding.
- Representative bulk samples were placed in sealed plastic bags and returned to our Reno, Nevada laboratory for testing.
- Logs of the test pits are presented as figures B-1a through B-1o in Appendix B.

3.5. Percolation Testing

- Percolation testing was performed to assess retention characteristics at the proposed storm retention pond location in Test Pits 1, 2, and 3, shown in Figure 3 – Site Map and Approximate Exploration Locations.
- Percolation tests were prepared by excavating an 8-inch diameter hole to a depth of 12-inches, backfilling with gravel to preclude sloughing, pre-soaking the hole and performing the designated slow percolation test per Lyon County's Standards (Lyon County, 2019).
- Percolation test results are presented on B-1a through B-1c and summarized in Table 1.

Table 1: Summary of Percolation Test Results

Location and Depth (ft)	Existing Ground Surface Elevation[1] (ft)	Percolation Test Elevation[2] (ft)	Percolation Rate (min/in)
TP-1 @ 8	4127	4119	7.6
TP-2 @ 8	4129	4121	4.8
TP-3 @ 8	4128	4120	1.5[3]

[1] Approximate elevation is based on Lyon County Contours (NAVD 88).
[2] Elevation is approximate based on ground surface elevation.
[3] Percolation test was performed in soils that had sloughed from the sidewall during excavating.

3.6. Laboratory Testing

- Soil testing performed in the Wood Rodgers' laboratory was conducted in general accordance with the standards and methods described in Volume 4.08 (Soil and Rock; Dimension Stone; Geosynthetics) of the ASTM Standards.
- Samples of significant soil types were analyzed to determine in-situ moisture contents (ASTM D2216), grain size distributions (ASTM D6913), and plasticity indices (ASTM D4318).
- Test results were used to classify the soils according the USCS (ASTM D2487) and to verify the field logs which were then updated.
- The USCS explanatory chart of soil unit symbols and related descriptions has been included as B-2 - Unified Soil Classification and Key to Soil Descriptions.
- Results of the laboratory testing is presented in Appendix C in C-1a through C-1d. Table 2 also presents a summary of the test data.

Table 2 - Summary of Test Data

Test Hole	Depth (Ft.)	Moisture (%)	%Gravel (+ #4)*	% Sand (#4-#200)	%Fines (-#200)	Liquid Limit	Plastic Index	R-Value	USCS
ASTM Standard		D2216	D6913			D4318		D2844	D2487
TP-1	8.0-10.0	5.3	0.1	94.6	5.3	---	---	---	SP-SM[2]
TP-2	3.0-4.0	21.7	0.0	5.9	94.1	--	---	---	ML[2]

Table 2 - Summary of Test Data

Test Hole	Depth (Ft.)	Moisture (%)	%Gravel (+ #4)*	% Sand (#4-#200)	%Fines (-#200)	Liquid Limit	Plastic Index	R-Value	USCS
ASTM Standard		D2216	D6913			D4318		D2844	D2487
TP-4	0-2.0	---	---	---	---	NP	NP	70	SM[2]
TP-5	3.0-4.0	10.7	61.4	25.8	12.8	51	25	---	GC
TP-6	5.0-6.0	13.2	36.7	37.6	25.7	51	29	---	SC
TP-7	5.0-6.0	14.7	0.0	20.2	79.8	41	15	---	ML
TP-8	2.0-3.0	6.3	1.8	67.1	31.1	23	10	---	SC
TP-9	7.0-8.0	15.4	0.4	61.6	38.0	31	7	---	SM

[1] Since ASTM D2487 is limited by a maximum particle size of 3", the gradation test data presented is based on a maximum particle size of 3". Larger particles (i.e., 8 to 12" in diameter) if observed in our test holes would be documented on the logs and should be anticipated as part of grading.
[2] ASTM D2488, Description and Identification of Soils (Visual – Manual Procedure)

- R-Value Testing, ASTM D2844, resulted in a subgrade R-Value of 70.
- Chemical testing, performed to indicate the potential for corrosion to concrete and steel elements, is presented on C-2 (Appendix C).

Wood Rodgers, Inc. is not a corrosion engineering firm. Therefore, a corrosion engineer or structural engineer knowledgeable in the project steel specifications should be consulted for final assessments of corrosion potential at the site.

3.7. Geologic and General Soil and Groundwater Conditions

- Based on geologic mapping by Faulds and Ramelli (2005), the site is mapped in an area of Holocene alluvial and lacustrine deposits (Qfe, Qsmb, Qc). These deposits consist of aeolian sands, clays, and silts with layers of colluvial gravels.
- A 3-feet thick fill layer consisting of clayey sand was encountered near the southwestern portion of the site in Test Pits 8, 9, and 10. Google Earth Imagery from 2004 shows evidence of grading and development within the southwestern portion of the site.

- A sporadic high plasticity sandy clay layer was encountered at an average thickness approaching 1-foot in Test Pits 2, 3, 6, and 7.
- In addition to the sporadic clay zone, the native soils encountered in our explorations typically consisted of non-plastic silty and poorly graded sands, low plasticity silts, and clayey sands and gravels.
- The gravels can also present a significant amount of highly plastic clay fines.
- Groundwater was not encountered to the depths explored. Domestic well logs indicate groundwater levels approaching 30-feet below ground surface (NDWR, 2022).

4. SEISMIC HAZARDS

The International Building Code (IBC) requires that structures assigned to Seismic Design Category D, E, or F be evaluated for the following potential geologic and seismic hazards: surface rupture or displacement due to faulting, slope instability, liquefaction including the potential for seismically induced spreading or lateral flow, and slope instability. The following sections present our discussion and assessments of the stipulated hazards.

4.1. Surface Rupture

4.1.1. Evaluation Guidelines

In 1998, the Nevada Earthquake Safety Council formulated guidelines for evaluating potential surface rupture due to faulting. The intent of the guidelines is to provide *a standardized minimum level of investigation for fault rupture in Nevada*; these guidelines have been adopted with the 2018 Northern Nevada Amendments of the IBC. Specifically, the guidelines state that investigation of sites for potential surface rupture or hazards shall be included in all geotechnical investigations. Further, if any Quaternary age surface rupture is mapped or otherwise interpreted to be present on the site, the feature is to be investigated further.

In addition to establishing the minimum level of investigation for fault rupture, the guidelines also offer recommendations for dealing with or mitigating identified hazards, including:

- Holocene active faults (evidence of movement within the past 10,000 years) shall be set-back a minimum distance of 50-feet for occupied structures.
- Late Quaternary (evidence of movement within the past 130,000 years) faults shall not be spanned by any critical facilities (hospitals, schools, fire stations, etc.). The facility under investigation does not meet the requisite requirements to be considered critical.

These guidelines allow for set-back distances to be adjusted by the competent professional. No additional constraints regarding fault-structure location are presented in the guidelines.

4.1.2. Investigation

- The United States Geological Survey's (USGS) interactive fault map was accessed to determine the presence of any mapped features transecting the property. No faults have been mapped crossing, intersecting, or trending toward the property.

4.2. Liquefaction

Liquefaction is a loss of soil shear strength that can occur during a seismic event as excessive pore water pressure between the soil grains is induced by cyclic shear stresses. This phenomenon is limited to poorly consolidated (Standard Penetration Test less than 30, overburden stress corrected shear wave velocity less than 700 fps) clean to silty sand/sandy silt lying below the ground water table (typically less than 50

feet deep). In addition, we are using AASHTO's recommendation of Bray and Sancio (2006) criteria for assessing liquefaction susceptibility of soils which suggests that a soil with a plasticity index less than 12 and a water content to liquid limit ratio greater than 0.85 will be susceptible to liquefaction.

- Due to the soil stiffness (based on shear wave velocity) and a review of anticipated depth to groundwater and geotechnical data from investigations performed in the nearby area, the potential for liquefaction induced settlement or lateral spread is considered low.

4.2.1. Lateral Spread

- Liquefaction induced horizontal ground displacement from lateral spreading or flow failure has been calculated from our software using the Zhang et al. 2004 method to be less than one foot.

4.3. Slope Instability

- When evaluating for slope instability, the terms incidence and susceptibility are used. Susceptibility is the likelihood a landslide would occur based on local terrain. Incidence reflects the number of known landslides, irrespective of the age or climate at the time they occurred.
- MyHAZARDS – MyHAZARDS – Nevada was reviewed for a mapped susceptibility rating. The absence of a susceptibility rating would indicate that less than unless widespread artificial cutting or high precipitation would occur, the area would present a less than 1.5 percent of the land area be considered susceptible to landslides.
- Provided the final site grading recommendations presented in this report are incorporated in cut and fill slope designs, the susceptibility for future potential slope instability would be considered very low.

4.4. Seismic Compression

- Seismic compression is an accrual of volumetric strains during seismic events in unsaturated soil and is typically confined to poorly compacted engineered fills and Holocene soils.
- The bulk of the site soils, as mapped, are older than Holocene and would therefore not be considered susceptible to seismic compression.
- When considering engineered fills, the settlement potential due to seismic compression is considered negligible providing the recommendations for site preparation and grading are followed.

5. DISCUSSION AND RECOMMENDATIONS

5.1. General Information

- *Conformance with the Geotechnical Report:* The recommendations provided herein, particularly under Site Preparation, Grading and Filling, Foundations, Site Drainage, and Construction Observations and Testing Services are intended to reduce risks of structural distress related to consolidation or expansion of native soils and/or structural fills. These recommendations, along with proper design and construction of the planned structure(s) and associated improvements, work together as a system to improve overall performance. If any aspect of this system is ignored or poorly implemented, the performance of the project will suffer.

- *Clarification of Structural Areas:* Structural areas referred to in this report include all areas of buildings, concrete slabs, asphalt pavements, as well as pads for any minor structures or retaining walls. Areas which extend behind or under rockery or other retaining structures are considered structural zones. In addition, the structural zone shall be considered to extend at a 1:1 (H:V) slope out from the edge of the structural footprint. All compaction requirements presented in this report are relative to ASTM D 1557 (ASTM D Volume 4, 2022).

- *Hazardous Materials:* Any evaluation of the site for the presence of surface or subsurface hazardous substances is beyond the scope of this study. When suspected hazardous substances are encountered during routine geotechnical investigations, they are noted in the exploration logs and reported to the client. No such substances were identified during our exploration.

- *Backfill of Exploration Locations:* Explorations were advanced at the approximate locations shown on the Site Map and Approximate Exploration Locations (Figure 3). Each exploration was backfilled upon completion of the field portion of our study, and the backfill was compacted to the extent possible with the equipment on hand. However, the backfill was not compacted to the requirements presented herein under Grading and Filling. If structures, concrete flatwork, pavement, utilities, or other improvements located in the vicinity of any of the test pits, the backfill should be removed and re-compacted in accordance with the requirements contained in the soils report. Failure to properly compact backfill could result in excessive settlement of improvements located over test pits.

- *SWPPP Requirements:* The site-specific Stormwater Pollution Prevention Plan (SWPPP), as required by the State of Nevada, will be the responsibility of the general contractor and/or owner. Recommendations presented herein regarding moisture conditioning are for the benefit of creating a targeted fill behavior. Moisture conditioning recommendations are not intended to direct the contractor in their means and methods for dust and SWPPP control.

- *Public Improvements:* Recommendations for paved improvements in right-of-way areas will be consistent with City of Fernley standards. On-site parking and driveway recommendations are in

general conformance with AASHTO's Low Volume Road design protocols, the Portland Cement Association (PCA) and American Concrete Institute (ACI) recommendations. Underground utilities will be provided by a variety of public and private companies; trenching and backfill recommendations presented herein are generally consistent with OSHA and City of Fernley's requirements, respectively.

5.2. Soil Profile Type Amplification Factors

- Seismic design values were determined based on a representative latitude and longitude of 39.5981°N and 119.2100°W, respectively.
- In accordance with ASCE 7-16 (Table 20.3-1) and the Northern Nevada Amendments of the 2018 IBC, Site Class D has been assigned to the project and Seismic Risk Category II has been evaluated for soil profile type amplification factors. (Appendix D)
- Per ASCE 7-16, the site's modified Peak Ground Acceleration (PGA_M) to be used for engineering analyses is equal to 0.61g.

5.3. Earthwork

5.3.1. Clarification of Geomaterials

The following definitions characterize terms utilized in this report:

- Rock fill possesses more than 30-percent retained on the 3/4-inch sieve. Rock fill may present particles up to 12-inches.
- Fine-grained soil possesses more than 40 percent by weight passing the number 200 sieve and exhibits a plasticity index lower than 15.
- Clay soil possesses more than 30 percent passing the number 200 sieve and exhibits a plasticity index greater than 15.
- Granular soil does not meet the above criteria and has a maximum particle size less than 6-inches.

It should be noted these definitions have been formulated around anticipated soil behavior and may not coincide with classifications provided by the Unified Soil Classification System.

5.3.2. Clearing and Grubbing

- All vegetation and topsoil are to be cleared and grubbed from structural areas. A minimum stripping depth of 0.3 to 0.5 feet is anticipated.
- Vegetation and organic debris should be disposed of offsite or placed in designated non-structural areas.

- If on-site disposal is approved, vegetation could be blended with soil (at a maximum ratio of 1:10 vegetation to soil, by mass) prior to placement in nonstructural fill or landscape areas.
- Organic material should be broken up using a large sheep's foot roller or chipper prior to blending with soil and moisture conditioning.

5.3.3. Undocumented Fill

- Approximately 3-feet of undocumented fill was encountered in Test Pits 8, 9, and 10.
- All undocumented fills must be dozed up, stockpiled, and qualified prior to use as fill. Assessments during the geotechnical investigation and test results so far indicate the stockpiled fills would be suitable as structural fill.
- Refer to Section 5.3.6 for placement limitations of undocumented fill.
- Refer to Section 5.3.6 for material quality and compaction requirements for reuse of undocumented fill.

5.3.4. Subgrade Preparation

- Prior to placing fill or constructing improvements, subgrade soils shall be scarified for a minimum depth of 12-inches, moisture conditioned to within 3-percent of optimum moisture content and compacted to not less than 90-percent of the soil's maximum dry density (ASTM D1557).
- In all cases, the final subgrade shall be smooth, firm, and relatively unyielding as determined by the testing agencies' qualified representative.

5.3.5. Subgrade Stabilization

- The fine-grained soils encountered within the project limits may tend to pump and or destabilize when moisture content exceeds optimum.
- Care should be taken during grading to assure irrigation water, precipitation, or construction activities do not lead to an increase in or ponding of water on exposed grade.
- Pumping soils may be scarified and allowed to dry or removed and replaced with a layer of clean, angular, 12-inch minus rock fill or stabilized with a geogrid.
- The size of the rock could vary depending on the soil's consistency and depth of soft, saturated soils.
- Typically, a stabilization depth of 12 to 18-inches is adequate to develop a firm and relatively unyielding subgrade, but variations may exist.
- The rock zone should be separated from the adjacent soils by encasing the rock in a geomembrane such as Mirafi 180N installed per the manufacturer's instructions.

- As an alternative, the use of a stabilizing geogrid (such as Tensar TX160), complemented by an aggregate layer to bridge unstable and/or pumping subgrade, may be used to stabilize subgrade.
- The City of Reno requires prior approval where subgrade stabilization measures incorporating geomembrane or geogrid are used.
- Subgrade stabilization is a trial-and-error process, and it is recommended that a test section of suitable depth and length be conducted.
- The contractor should propose a stabilization protocol that is consistent with their readily available means and methods, and this proposal presented for review, by the owner, the general contractor, and grading inspector.
- Subgrade stabilization is considered adequate if the subgrade is firm and relatively unyielding (as approved by the engineer) when proof-rolled with a fully loaded water truck.
- Subgrade stabilization may not be required for walkways or private improvements subject solely to foot traffic providing the required compaction levels are achieved.
- Where walkways or private improvements are structurally connected to the building, subgrade stabilization is required.

5.3.6. Mass Grading

- Verification testing of onsite soils to be qualified as structural fill shall be in accordance with ASTM D75, ASTM D6913, and ASTM D4318 and shall meet the requirements of Table 3.
- For fill generated on-site, material should be excavated, dozed, and processed into a uniform stockpile prior to being sampled and tested for material quality prior to acceptance.
- Existing fill and native soils generated from cut and meeting the requirements of Table 3 may be placed as structural fill to pad grade.
- Existing fill and native soils generated from cut and not meeting the requirements of Table 3 may be placed as structural fill at least 4-feet below pad grade.
- Import structural fill, meeting the requirements of Table 3, shall be obtained from a commercial borrow source.
- Prior to importing material to the site, a submittal verifying import quality shall be received and approved by Wood Rodgers.

Table 3 - Guideline Specification for Import Structural Fill

Sieve Size (ASTM D6913)		Percent by Weight Passing Sieve	
6 Inch[1]		100	
4 Inch		90 - 100	
¾ Inch[2]		50 - 100	
Percent Passing #200 (ASTM D6913)	Maximum Liquid Limit (ASTM D4318)[3]	Maximum Plasticity Index (ASTM D4318)[3]	Maximum Expansion Index (ASTM D4829)
5 - 20	50	25	20
20 - 40	50	15	20
Soluble Sulfate Level (ACI 318, Table 4.3.1)		Negligible	
R-Value (ASTM D2844)[4]		30 Min.	

[1] Pending approval of the means and methods of the contractor, maximum particle size may be increased to 12-inches.

[2] Material presenting more than 30-percent material retained on the ¾" sieve shall be referred to as rockfill. (Section 5.3.7)

[3] Dry Method

[4] Within right-of-way only.

- All fill soils shall be moisture conditioned to within 3-percent of optimum, placed in 12-inch maximum loose lifts, and compacted to not less than 90-percent of the soil's maximum dry density.
- Some of the soils on-site meet the definition of rockfill (i.e. greater than 30% of the soil mass is retained on the ¾-inch sieve) and rockfill placement protocols (Section 5.3.7) will be required for verification of fill placement.

5.3.7. Rockfill Placement and Verification

Soils that are classified as rockfill should be placed and verified in accordance with the following placement procedures.

- Oversize (i.e., rock > 6-inches in least dimension but less than 12-inches) must be blended and placed in such a manner that: nesting of the rock does not occur, rock is uniformly distributed throughout the fill lift, and voids are uniformly filled with the soil matrix.
- A maximum lift thickness of 12-inches should be observed for 6-inch minus rock fill. A maximum lift thickness of 18-inches should be observed for 12-inch minus rock fill.

5.3.7.a. Rockfill Verification Protocols

- Determine a moisture-density relationship (ASTM D1557 Method C) on the portion of the sample passing the ¾-inch sieve.
- Rockfill shall be placed and compacted with the ¾-inch minus fraction moisture conditioned to at least optimum as determined in accordance with ASTM D1557, Method C.
- Where standard density testing cannot be performed due to oversize material, performance criteria for acceptance of the compacted fill shall be established; otherwise rockfill shall be compacted to not less than 90-percent of the soil's maximum dry density.
- For acceptance based on performance criteria, an initial rolling pattering consisting of at least five single passes with a minimum 20-ton roller (815 Caterpillar "Sheepsfoot" compactor, or equivalent) for mass grading, or five complete passes with hand compactors or pneumatic trench roller in footing trenches is recommended.
- Increase the number of passes as necessary until no notable increase in density can be measured (ASTM D6938, Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods) or notable deflection is reduced to negligible.
- Modifications to the rolling pattern will be required with change in percentage of + ¾-inch rock and/or changes in moisture content of the ¾-inch minus portion of the rockfill.
- The established rolling patterns, and estimated percentage of + ¾-inch material, shall be recorded.

5.3.8. Trenching and Excavations

- OSHA - Regulations amended in Part 1926, Volume 54, Number 209 of the Federal Register (Table B-1, October 31, 1989) require that the temporary sidewall slopes be limited to maintain trench stability. Minimum sidewall slopes and acceptable trench configurations are also presented in the referenced register.
- Zones of difficulty with excavatability should be expected due to the presence of cobbles and sloughing soils.
- Should any large precipitation events be forecast, open excavations should be protected from flooding. Covering trenches with plates or tarps, constructing berms around the excavations, daylighting trenches to drain or temporary backfilling should be considered by the contractor to prevent flooding damage and erosion in general.

- Based on the results of our exploration program, it is our opinion that the bulk of the native site soils appear to be predominately Type C, although variations exist.
- All fills should conservatively be considered Type C unless directed otherwise by the contractor's competent individual trained in trench safety.
- All trenching should be performed and stabilized in accordance with local, state, and OSHA standards. Bank stability is the responsibility of the contractor or contractor's qualified representative who is present at the site, able to observe changes in ground conditions, and has control over personnel and equipment.
- Pipe bedding, initial backfill, and trench backfill shall be consistent with the approved civil and/or utility plans.

5.3.9. Earthwork Testing and Observation

- Verification of subgrade and fills should be performed by a firm that is AMRL accredited in ASTM E329.
- Special inspection of fill soils is required during mass grading of the development; the Special Inspector should be ICC certified in soils or NAQTC certified in Sampling and Density disciplines.
- The special inspector shall verify and document that placement of fill is consistent with the Mass Grading (5.3.6) section and Rockfill Placement and Verification Requirements (5.3.7).
- Density testing of fills should be in accordance with ASTM D6938 (Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods) or ASTM D1556 (Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method).
- Subgrade should be density tested approximately every 500 square yards.
- Fill should be density tested once for every 1,000 square yards per lift of material placed during mass grading and one test per 300 feet of footing trenches or overexcavation of footings.
- One density test should be performed for each 500 square yards or per each lift for smaller, localized fill zones.
- Full time construction observation is required for mass graded fills and for any rock fill placement.
- The testing frequency should be increased if the contractor is having difficulty achieving and maintaining the required moisture levels.
- Utility bedding and trench backfill should be density tested per the requirements of the governing agency. Typically, agencies prescribe density testing per foot of bedding/backfill thickness, at a frequency of one test between manholes or valves, or one test every 500 lineal feet, including laterals.

- Nonstructural fills should be density tested for every 2,000 yards or for every 2-feet of fill for smaller, localized fill zones.

5.3.10. Embankments

- The surface of any embankment should be compacted to the same percent compaction as the body of the fill. This may be accomplished by compacting the surface of the embankment as it is constructed or by overbuilding the fill and cutting back to its compacted core.
- The exterior face of embankments should be constructed with an inclination no steeper than 2H:1V.
- Minor variations in slope gradient due to sculpting or landscaping of the slope face should not be considered inconsistent with the recommendations of this report or adverse to the ultimate performance of the global stability of the overall slope.
- Refer to Section 5.6.1 Slopes and Drainage for erosion protection considerations.

5.4. Structures

The following sections have been developed based on the understanding and expectation that the requirements specified in Section 5.3 Earthwork of this report have been met.

5.4.1. Standard Spread Foundations

The following table and supporting statements present design values and considerations for use in the development of standard spread foundation design.

Table 4 - Allowable Foundation Bearing Pressures for Standard Spread Foundations

Loading Condition	Maximum Net Allowable Bearing Pressure (PSF)[1]
Dead Load Plus Full Time Live Load	2,500
Dead Load Plus Live Loads, Plus Transient Wind or Seismic Loads	3,300

[1] Net allowable bearing pressure is that pressure at the base of the footing is in addition to the adjacent overburden pressure.

- For frost protection, footings should be founded at least 1 ½-feet below adjacent outside or unheated interior finish grades.
- Interior footings not located within frost prone areas should be founded at least 12 inches below surrounding ground or slab level for confinement.
- Regardless of loading, individual pad foundations and continuous spread foundations should be at least 18 and 12 inches wide, respectively, or as required by code.

- The minimum footing sizes recommended are based on the ability to develop bearing capacity. Footing dimensions should be determined by the engineer responsible for structural design.
- Lateral loads, such as wind or seismic, may be resisted by passive soil pressure and friction on the bottom of the footing. A coefficient of base friction of 0.45 is typical to the structural fills and native granular or fine-grained soils.
- Design values for active and passive equivalent fluid pressures of 35 and 350 pounds per square foot per foot of depth, respectively, can be utilized.
- When designing for passive pressure, the upper one foot of the soil profile should not be included unless confined by a concrete slab, or pavement.
- The integrity of the foundation support soils shall be maintained until concrete is placed.
- Total post-construction settlement for the structures is anticipated to be on the order of 1-inch, or less.
- Differential settlement between foundations with similar loads and sizes is anticipated to be half of the total settlement across 40-feet.

5.4.1.a. Slab-on-Grade Flooring

- A 4-inch minimum compacted aggregate base course (Type 2, Class B, Standard Specifications for Public Works Construction) compacted to 95-percent relative compaction is recommended beneath interior or exterior concrete slabs-on-grade subject solely to foot traffic.
- Some floor coverings, such as tile or linoleum, are sensitive to moisture that can be transmitted through slabs. Floor coverings should be installed in accordance with the manufacturer's recommendations including restrictions related to maximum vapor transmission rates.
- Wood Rodgers typically recommends a moisture vapor retarder, consisting of Stego Wrap (15 mil), or equal, to be placed beneath the aggregate base course as part of the moisture vapor system.

Wood Rodgers does not practice in the field of moisture vapor transmission evaluation/mitigation. Therefore, if a vapor retarder system more rigorous than the requirement of the IBC/IRC is desired, we recommend that a qualified person/firm be engaged/consulted with to evaluate the general and specific moisture vapor transmission paths and any impact on the proposed construction.

5.4.1.b. Site Drainage

- Adequate surface drainage must be constructed and maintained away from the structures.
- Permanent finish slopes away from the structures should be constructed to allow water to drain away quickly from and prevent any ponding of water adjacent to the structure per code requirements.
- Runoff should be collected within permanent drainage paths that can convey water off the property or to designated collection facilities. A system of roof gutters and downspouts are recommended to collect roof drainage and direct it away from foundations.
- Foundation and stem wall backfill should be densified to at least 90 percent relative compaction in accordance with the requirements given in the Grading and Filling Section. Compacting the backfill material decreases permeability and reduces the amount of irrigation and storm water available to enter under floor areas.

5.4.2. Retaining Structures

- Recommended lateral earth pressures for consideration in the design of retaining walls and landscaping walls are presented in Table 5.

Table 5 - Lateral Earth Pressures[1]

Condition	Minimum Cohesion Modeled (psf)	Active (psf/f)		Passive (psf/f)		At Rest
		Static	Pseudo-Static	Static	Pseudo-Static	
Level	50	35	65	350	250	57

[1] Walls retaining sloping backfill or are greater than six feet in exposed height, require specific analyses and design values should be evaluated and presented by the geotechnical engineer.

- Changes in earth pressures due to seismic influences were assessed via the AASHTO LRFD protocol that considers some component of cohesion will be maintained within the backfill.
- In addition, it has been assumed that some displacement is allowable during the design event, and our recommended values have therefore been based on 50% of the USGS' predicted PGA.
- The values presented in Table 5 do not consider hydrostatic pressures or surcharge loading.
- Excessive wall pressures can be developed due to heavy compaction equipment proximate to the wall during backfill placement. Therefore, due care during placement and compaction of backfill is required.

- Backfill behind retaining structures should be granular and compacted to not less than 90 percent of the soils' maximum dry density.
- French drains, a drainage gravel backfill layer wrapped in geotextile such as Mirafi 140 N, or a pre-manufactured drain system such as Tensor ® DC1200 should be utilized if buildup of hydrostatic pressure is possible which may cause excessive loading on pool walls or buoyancy conditions.
- Site preparation and foundations for retaining structures shall be consistent with Section 5.3 Earthwork and Section 5.4.1 Standard Spread Foundations.
- Walls retaining sloping backfill, or walls greater than six feet in exposed height, require specific analyses, and design values should be evaluated and presented by the geotechnical engineer.

5.5. Concrete

The American Concrete Institute (ACI) considers three different exposure classes to address the degree of severity for environmental conditions: freezing and thawing (Exposure Category F), concrete in contact with soil that contains water soluble sulfate ions (Exposure Category S), and Exposure Class W for concrete in contact with water. Exposure categories F and S, and potential mitigation, are discussed in Section 5.5.1.

5.5.1. Materials

The concrete material recommendations vary between Exposure Class F and Exposure Class S. Therefore, those specifying concrete subject to both freezing and thawing and water-soluble sulfate ions should consider the potential exposure conditions for Class F and Class S and select the most appropriate. When considering post-tensioned slabs-on-grade chlorides can also present an aggressive environment (Section 5.5.1c).

5.5.1.a. Exposure Class F

- Class F3 has been assigned because of the potential for some portions of concrete to absorb sufficient water to be saturated prior to freezing and the potential application of deicing salts.
- Per ACI, concrete for Class F3 should present a maximum water: cement ratio of 0.40, a minimum 28-day compressive strength of 5,000 psi, and be air entrained to 6.0 $\pm$ 1.5-percent.
- Per the Standard Specifications for Public Works Construction (Table 337.10.01.03-I), the 28-day compressive strength minimum is specified at 4,000 psi.

5.5.1.b. Exposure Class S

Mitigation for sulfate exposure is required based on the test results. The summary below presents excerpts from ACI and SSPWC. Refer to the referenced standards in their entirety

when specifying sulfate resistance exceeding the presented geotechnical or civil considerations.

Mitigation for sulfate exposure is required based on the chemical test results (C-2, Appendix C). The summary below presents excerpts from ACI and SSPWC. Refer to the referenced standards in their entirety when specifying sulfate resistance exceeding the presented geotechnical or civil considerations.

- Sulfate testing on the native soils yielded results in the S2 severe range (ACI 318, 0.20 % $\leq$ SO_4^{2-} % < 2 % SO_4^{2-} , by mass).
- Per ACI, concrete for Class S2 should: present a maximum water: cementitious ratio of 0.45, and a minimum 28-day compressive strength of 4,500 psi. Type IP cement is recommended for use.
- Per the SSPWC (Table 337.10.01.03-I), concrete subject to severe sulfate exposure shall present a maximum water: cementitious ratio of 0.45, a minimum 28-day compressive strength of 4,000 psi, and be air entrained to 6.0 $\pm$ 1.5-percent. Type II + Flyash (25% min.) cementitious materials are recommended for use.
- Because signification grading will occur across the project site, soils should be retested for sulfate levels at the end of grading and the mitigation requirements presented herein lessened as appropriate.

5.5.1.c. Chlorides

- Chemical testing on the native soils presented chloride ion concentrations of 58 mg/kg.
- The structural engineer will identify any required mitigation due to the presence of chlorides.

5.5.2. Construction

- Concrete placement and curing should be performed in accordance with procedures outlined by the American Concrete Institute. Special considerations should be given to concrete placed and cured during hot or cold weather conditions.
- The occurrence of concrete shrinkage cracking may be reduced and/or controlled by limiting the amount of water within the mix (water cement ratio of 0.45 or less), the incorporation of crack control joints and proper concrete placing and curing practices including ACI 318 provisions for areas subject to freeze thaw conditions.
- Proper curing, finishing, control joints and reinforcing should be provided to minimize any damage resulting from shrinkage including cracks and slab curling.

- Western Nevada is a region with absorptive aggregates and exceptionally low relative humidity. Therefore, concrete flatwork will shrink and curl in a manner which is not typical of many other US regions.
- Proper site preparation and placement of reinforcement are imperative to the performance of slab-on-grade improvements.
- Joint spacing, locally, is typically on 10-to-12-foot centers for large slabs and no more than five feet for sidewalks.
- Cracking that occurs within the slab-on-grade floors will often reflect through overlying improvements even if adequate substrate preparation has occurred.
- Control of the rate of moisture loss in concrete slab-on-grade improvements by using curing compounds, fogging, or other suitable means is imperative to protecting the slab from excessive curling.
- Slabs-on-grade will still exhibit some cracking and curling. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics.

5.6. Public Improvements

Unless noted otherwise, dedicated improvements shall be designed and constructed in accordance with the approved civil plans, the Standard Specifications for Public Works Construction, and the jurisdiction's standard details.

5.6.1. Slopes and Drainage

- Surface drainage shall be per the approved project Civil design drawings.
- Refer to Section 5.3.10 for embankment considerations.
- Due to the sloughing soils encountered during our exploration program, temporary slope protection may be required in deeper trenches and/or on the sidewalls of the retention basin especially if vibration loading due to construction equipment is proximate.
- The second aspect of slope stability involves erosion potential which is dependent on numerous factors involving grain size distribution, cohesion, moisture content, slope angle and the velocity of the water or wind across the ground surface.
- Erosion protection should be as indicated on the approved Civil drawings and/or per the jurisdiction's design standards.
- Typically, 2:1 (H:V) slopes typically require armoring. Slopes steeper than 3:1 (H:V) are typically addressed with a combination of revegetation and localize armoring or landscape retaining walls.

- Temporary (during construction) and permanent (after construction) erosion control will be required for all disturbed areas.
- Brow ditches are recommended above any slopes greater than 10-feet in height and should be incorporated into the overall drainage considerations presented on the civil drawings.
- Provisions for drainage from behind common retaining walls should be considered and presented in the approved civil plans.
- In compliance with all applicable city, county, state and federal regulations the contractor shall prevent dust from being generated during construction, and the contractor shall submit an acceptable dust control plan prior to starting site preparation or earthwork.

5.6.2. Structural Pavement Sections

- Materials and workmanship shall be consistent with the requirements of the jurisdiction and the Standard Specifications for Public Works Construction.
- Table 6 presents the recommended minimum structural pavement sections for the development based on planned use. Minimum sections required by the jurisdictions shall govern if more than specified in Table 6.

Table 6 - Structural Pavement Sections[1]

Road Type	Pavement Thickness (In.)	Pavement Type[2]	Type II Class B Base Course Thickness (In.)
Main Access Drives	4	2" Type 3 + Lime / 2" Type 2	6
Parking and Automobile Traffic Driveways	3	Type 3 + Lime	6
Dumpster Aprons[4]	6	Reinforced Portland Cement Concrete	6

[1] Per City of Fernley Public Works Department Standard Details. Final design shall be verified based on lot distribution, street loading, subgrade R-value and separation requirements.
[2] Per the Standard Specifications for Public Works Construction.

The Contractor should submit a pavement mix design to the Owner or Engineer, for approval, at least five working days prior to paving. When pavement is placed directly adjacent to concrete flatwork, the finish compacted grade of the pavement should be at least ½ of an inch higher than the edge of adjacent concrete surface to allow adequate compaction of the pavement without damaging the concrete.

5.6.3. Pavement Design Life

- Maintenance is mandatory to ensure long-term pavement performance and to meet or exceed the assumed 20-year design life.

- Maintenance refers to any activity performed on the pavement that is intended to preserve its original service life or load-carrying capacity. Examples of maintenance activities include patching, crack or joint sealing, and seal coats. If these maintenance activities are ignored or deferred, premature failure of the pavement will occur.
- Premature failure of asphaltic concrete frequently occurs adjacent to poorly graded ponding areas and/or landscape areas. Failures may occur due to excessive precipitation, irrigation and landscaping water infiltrating into the subgrade soils causing subgrade failure.
- In areas where saturation of the subgrade soils beneath asphaltic pavement may occur, it is strongly recommended the owner/project manager include provisions by design for a subdrain system to eliminate the potential for saturation of subgrade soils. The subdrain system should discharge into a permanent drainage area that will not impede drainage flow to cause the system to back-up and/or clog. Appropriate maintenance procedures should be implemented to ensure the subdrain system does not plug and allow for proper drainage of surface and subsurface water beneath paved areas. Subdrain location and configuration should be evaluated once final grading and landscaping plans have been prepared.
- If the ultimate traffic exceeds the anticipated levels, it may be necessary to reevaluate and overlay the pavement at some time in the future.
- The cost associated with proper maintenance is generally much less than the cost for reconstruction due to the premature failure of the pavement. Therefore, it is strongly recommended the owner/project manager implement a pavement management program.

6. CONSTRUCTION OBSERVATION AND TESTING SERVICES

- The recommendations presented in this report assume that the contractors perform their work as required by the project documents and that owner/project manager provides for sufficient field-testing and construction review during each phase of construction.
- Prior to construction, the owner/project manager should schedule a pre-construction conference including, but not limited to representatives of the owner, architect, civil engineer, the general contractor, earthwork and materials subcontractors, building official, and geotechnical engineer.
- It is the owner's/project manager responsibility to set-up this meeting and contact all responsible parties. The conference will allow parties to review the project plans, specifications, scheduling and recommendations presented in this report, and discuss applicable material quality and mix design requirements.
- Quality control reports should be submitted to the owner/project manager for review and distributed to the appropriate parties. It is essential that any changes or revisions to project plans be provided to Wood Rodgers in a timely fashion to ensure contractor compliance and avoid construction delays or the need to remove completed work.
- During construction, Wood Rodgers Incorporated should have the opportunity to provide sufficient on-site observation of site preparation and grading, over-excavation, fill placement, foundation installation, and paving.

These observations would allow us to document the geotechnical conditions are as anticipated and that the contractor's work meets with the criteria in the approved plans and specifications. Verification of horizontal and vertical control must be provided by whoever was responsible for establishing those boundaries and constructing associated improvements.

7. STANDARD LIMITATION CLAUSE

- This report has been prepared in accordance with generally accepted local geotechnical practices.
- The analyses and recommendations submitted are based upon field exploration performed at the specific locations identified and the conditions encountered, as discussed in our report.
- No guarantee or warranty as to the continuity of soil conditions between exploration points is implied or intended.
- Therefore, this report does not reflect soil variations that may become evident during the construction period, at which time re-evaluation of the recommendations may be necessary.
- Final plans and specifications should be reviewed by the design engineer responsible for this geotechnical report to determine if they have been prepared in accordance with the recommendations contained in this report prior to submitting to the building department for review.
- It is the owner's/project manager responsibility to provide the plans and specifications to the engineer.
- This report is issued with the understanding that it is the responsibility of the owner or their representative to ensure that the information and recommendations contained herein are brought to the attention of the design team for the project and incorporated into the plans and specifications, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
- We recommend our firm be retained to perform construction observation in all phases of the project related to geotechnical factors to document compliance with our recommendations.
- The owner/project manager is responsible for distribution of this geotechnical report to all designers and contractors whose work is related to geotechnical factors.
- It is the contractor’s responsibility for the grading and construction of the designed improvements. This responsibility includes the means, methods, techniques, sequence, and procedures of construction and safety of construction at the site.
- All construction shall conform to the requirements of the most recently adopted version of the Standard Specifications for Public Works Construction and the requirements of the City of Fernley and Lyon County, Nevada.
- Failure to inspect the work shall not relieve the contractor from his obligation to perform sound and reliable work as described herein and as described in the Standard Specifications for Public Works Construction.

- In the event of changes in the design, location, or ownership of the project after presentation of this report, our recommendations should be reviewed and possibly modified by the Geotechnical Engineer.
- If the Geotechnical Engineer is not accorded the privilege of making this recommended review, we can assume no responsibility for misinterpretation or misapplication of our recommendations or their validity in the event changes have been made in the original design concept without our prior review. The engineer makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement and included in this report.
- This report was prepared by Wood Rodgers, Inc. for the benefit of ERGS, Inc. and their duly assigned agents or other responsible parties.
- The material in this report reflects Wood Rodgers' best judgment considering the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties.
- Wood Rodgers accepts no responsibility for damages, if any, suffered by any third party because of decisions made by third parties or actions based on this report without consultation with Wood Rodgers and written approval for such actions.

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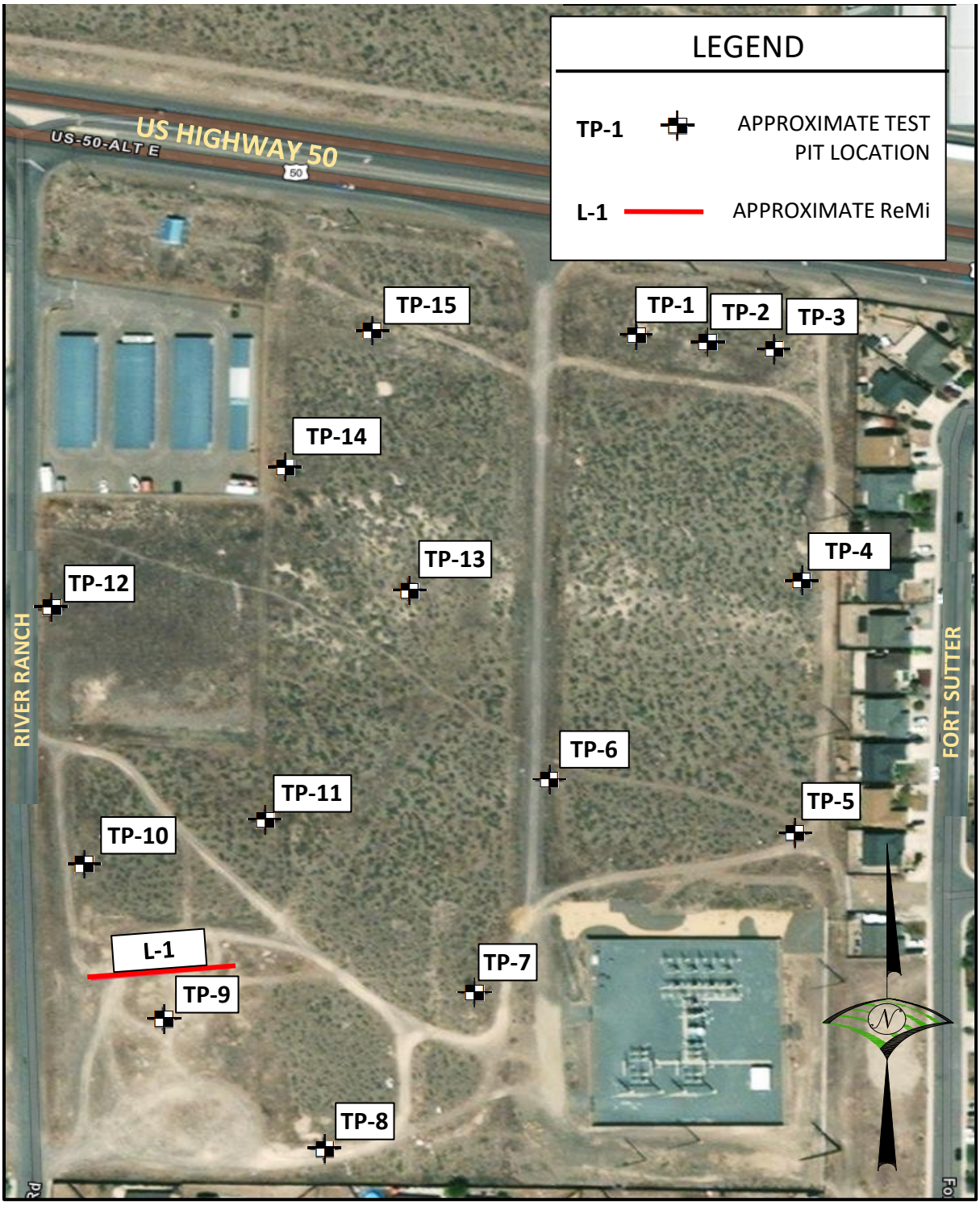
APPENDIX A
FIGURES



RIVER RANCH APARTMENTS	VICINITY MAP	FIGURE 1



RIVER RANCH APARTMENTS	IMPROVEMENT PLAN	FIGURE 2



RIVER RANCH APARTMENTS	SITE PLAN & APPROXIMATE EXPLORATION LOCATIONS	FIGURE 3

APPENDIX B
FIELD EXPLORATION

TEST PIT NUMBER TP-1

Wood Rodgers

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments

PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada

DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4127 ft **TEST PIT SIZE** 24 inches

EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**

EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59946, -119.2092 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 1A									
		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 1B									
5		Medium dense	GB 1C									
		Silt seams	GB 1D									
		PERCOLATION TEST, sloughing	GB 1E					2.6				5.3
10												

Bottom of Test Pit at 10.0 Feet.

Soil Percolation Recorded Measurements

1.Depth to test : 8 ft

2.Time of 1st saturation to 12" 9:50 *Date :* 7/13/2022

If 12" of water drains from hole in 10 mins or less, refill to 12".

3.Time of 2nd saturation : 10:00

4.If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.

5.If either filling exceeds 10 mins to drain from hole,begin a 4-hr pre-soak.

Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022

Hole # : TP-1 *Diameter :* 8 in *Depth :* 12 in *Soil Type :* SP-SM

Reading	Time		Water Level (in)		Elapsed	Water
	Start	Finish	Start	Finish	Time min	Fall (in)
1	10:06	10:16	6	8 1/16	10	2 1/16
2	10:16	10:26	6	7 5/8	10	1 5/8
3	10:26	10:36	6	7 5/8	10	1 5/8
4	10:36	10:46	6	7 3/8	10	1 3/8
5	10:46	10:56	6	7 5/16	10	1 5/16
6	10:56	11:06	6	7 5/16	10	1 5/16

Stabilized Rate : 7.6 Min/inch *Tested by:* SB

Checked by : LL

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TEST PIT NUMBER TP-2

Wood Rodgers

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments

PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada

DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4129 ft **TEST PIT SIZE** 24 inches

EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**

EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59944, -119.2089 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		SANDY FAT CLAY, (CH) stiff, dry, yellowish brown, high plasticity										
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic	GB 2A									
		SILT, (ML) very stiff, slightly moist, olive yellow, low plasticity	GB 2B					21.7				94.1
5		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 2C									
		Medium dense	GB 2D									
		Loose, sloughing, PERCOLATION TEST										

Bottom of Test Pit at 9.5 Feet.

Soil Percolation Recorded Measurements

1.Depth to test : *8 ft*

2.Time of 1st saturation to 12" *10:50* *Date :* *7/13/2022*

If 12" of water drains from hole in 10 mins or less, refill to 12".

3.Time of 2nd saturation : *11:00*

4.If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.

5.If either filling exceeds 10 mins to drain from hole,begin a 4-hr pre-soak.

Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022

Hole # : *TP-2* *Diameter :* *8 in* *Depth :* *12 in* *Soil Type :* SP-SM

Reading	Time		Water Level		Elapsed	Water
	Start	Finish	Start	Finish	Time min	Fall (in)
1	10:10	10:20	6	8 7/16	10	2 7/16
2	10:20	10:30	6	8 1/4	10	2 1/4
3	10:30	10:40	6	8 1/8	10	2 1/8
4	10:40	10:50	6	8 1/8	10	2 1/8
5	10:50	11:00	6	8 1/16	10	2 1/16

Stabilized Rate : 4.8 Min/inch *Tested by:* SB

Checked by : LL

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TEST PIT NUMBER TP-3

Wood Rodgers

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments

PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada

DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4128 ft **TEST PIT SIZE** 24 inches

EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**

EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.2086 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		SANDY FAT CLAY, (CH) stiff, dry, yellowish brown, high plasticity	GB 3A									
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic										
		SILT, (ML) stiff, slightly moist, yellowish brown, low plasticity										
		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 3B									
5		Sloughing	GB 3C									

Bottom of Test Pit at 7.5 Feet.

Soil Percolation Recorded Measurements

1.Depth to test : *8 ft*

2.Time of 1st saturation to 12" *11:45* *Date :* *7/13/2022*

If 12" of water drains from hole in 10 mins or less, refill to 12".

3.Time of 2nd saturation : *11:55*

4.If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.

5.If either filling exceeds 10 mins to drain from hole,begin a 4-hr pre-soak.

Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022

Hole # : *TP-3* *Diameter :* *8 in* *Depth :* *12 in* *Soil Type :* SP-SM

Reading	Time		Water Level		Elapsed	Water
	Start	Finish	Start	Finish	Time min	Fall (in)
1			6	9 9/16	5	
2			6	9 7/16	5	
3			6	9 3/8	5	
4			6	9 5/16	5	
5			6	9 5/16	5	
6			6	9 1/4	5	
7			6	9 1/4	5	
8			6	9 1/4	5	
9			6	9 1/4	5	

Stabilized Rate : 1.5 Min/inch*

***Rate may be due to test performed in sloughed soils**

Tested by: SB

Checked by : LL

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Wood Rodgers

TEST PIT NUMBER TP-4

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4133 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59857, -119.2085 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic	GB 4A			70			NP	NP	NP	
2.5			GB 4B									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 4C									
7.5		SILT, (ML) very stiff, dry, olive yellow, low plasticity										
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-5

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4142 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.2086 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		CLAYEY GRAVEL WITH SAND, (GC) medium dense, dry, yellowish brown, medium plasticity	GB 5A									
2.5		Dense, slightly moist	GB 5B					10.7	51	26	25	12.8
5.0			GB 5C									
7.5			GB 5D									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-6

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4144 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59784, -119.2095 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FAT CLAY WITH SAND, (CH) stiff, dry, olive brown, high plasticity	GB 6A									
2.5		CLAYEY SAND WITH GRAVEL, (SC) dense, slightly moist, yellowish brown, high plasticity Rootlets	GB 6B									
5.0			GB 6C					13.2	51	22	29	25.7
7.5												
10.0			GB 6D									

Bottom of Test Pit at 10.0 Feet.

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Wood Rodgers

TEST PIT NUMBER TP-7

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4160 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59706, -119.2098 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FAT CLAY WITH SAND, (CH) stiff, dry, olive brown, high plasticity, rootlets	GB 7A									
		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity										
2.5			GB 7B									
5.0		Slightly moist	GB 7C					14.7	41	26	15	79.8
7.5		CLAYEY SAND WITH GRAVEL, (SC) dense, dry, yellowish brown, high plasticity	GB 7D									
		SILT WITH GRAVEL, (ML) stiff, dry, yellowish brown, low plasticity	GB 7E									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-8

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4161 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.2086 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity	GB 8A									
2.5			GB 8B					6.3	23	13	10	31.1
		SILT WITH SAND, (ML) stiff, dry, olive yellow, low plasticity										
5.0		Yellowish brown	GB 8C									
7.5		POORLY GRADED SAND WITH SILT, (SP-SM) dense, dry, light brownish gray, non plastic	GB 8D									
10.0		Bottom of Test Pit at 10.0 Feet.										

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TEST PIT NUMBER TP-9

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4162 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59696, -119.2111 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity, construction debris	GB 9A									
2.5		SILTY SAND, (SM) medium dense, dry, yellowish brown, low plasticity, rootlets	GB 9B									
5.0		Dense, olive yellow	GB 9C									
7.5		Slightly moist	GB 9D					15.4	31	24	7	38.0
10.0			GB 9E									

Bottom of Test Pit at 10.0 Feet.

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Wood Rodgers

TEST PIT NUMBER TP-10

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4153 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59753, -119.2114 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity, construction debris	GB 10A									
2.5		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 10B									
5.0		Very stiff	GB 10C									
7.5		SILT WITH GRAVEL, (ML) very stiff, slightly moist, olive yellow, non plastic	GB 10D									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-11

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4149 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59769, -119.2106 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) loose, dry, yellowish brown, non plastic	GB 11A									
2.5		Silt seam										
		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 11B									
5.0			GB 11C									
7.5		POORLY GRADED SAND WITH GRAVEL, (SP) medium dense, dry, light brownish gray to olive brown, non plastic	GB 11D									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-12

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4135 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59845, -119.2115 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILT WITH GRAVEL, (ML) stiff, dry, yellowish brown, medium plasticity	GB 12A									
		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 12B									
2.5		SILTY SAND, (SM) medium dense, dry, yellowish brown, low plasticity	GB 12C									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 12D									
7.5		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 12E									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-13

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4135 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59853, -119.2104 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 13A									
2.5		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 13B									
5.0		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 13C									
7.5		Slightly moist	GB 13D									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-14

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4133 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59899, -119.2106 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) medium dense, dry, yellowish brown, non plastic	GB 14A									
2.5		Low plasticity, silt seam	GB 14B									
5.0		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 14C									
7.5		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 14D									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-15

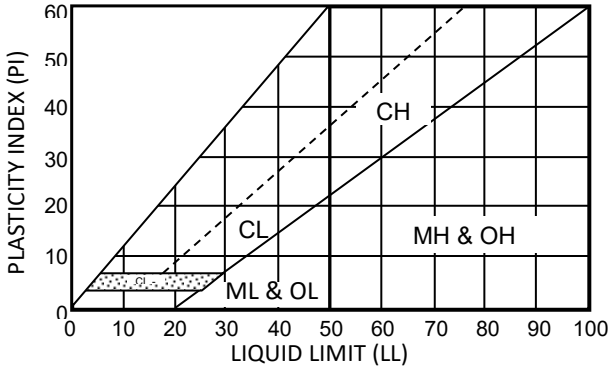
CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4131 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59949, -119.21024
AFTER EXCAVATION --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 15A									
2.5		SILT WITH SAND, (ML) very stiff, dry, yellowish brown, medium plasticity	GB 15B									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 15C									
		Sloughing										

Bottom of Test Pit at 7.0 Feet.

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MAJOR DIVISION				TYPICAL NAMES	
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	**GRAVEL** MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES		GW	WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
				GP	POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 12% FINES		GM	SILTY GRAVELS, SILTY GRAVELS WITH SAND
				GC	CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SAND MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES		SW	WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
				SP	POORLY GRADED SAND WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES		SM	SILTY SANDS WITH OR WITHOUT GRAVEL
				SC	CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	**SILT AND CLAY** LIQUID LIMIT 50% OR LESS			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
				OL	ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILT AND CLAY LIQUID LIMIT GREATER THAN 50%			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOLID, ELASTIC SILTS
				CH	INORGANIC CLAYS OR HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC SILTS OR CLAYS MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT AND OTHER HIGHLY ORGANIC SOILS



CONSISTENCY		RELATIVE DENSITY	
SILTS & CLAYS	SPT BLOW* COUNTS (N)	SANDS & GRAVELS	SPT BLOW* COUNTS (N)
VERY SOFT	0 - 2	VERY LOOSE	0 - 4
SOFT	3 - 4	LOOSE	5 - 10
MEDIUM STIFF	5 - 8	MD DENSE	11 - 30
STIFF	9 - 15	DENSE	31 - 50
VERY STIFF	16 - 30	VERY DENSE	50 +
HARD	30 +		

* The Standard Penetration Resistance (N) In blows per foot is obtained by the ASTM D1585 procedure using 2" O.D., 1 3/8" I.D. samplers.

PLASTICITY DESCRIPTIONS			
DESCRIPTION	RANGE	DESCRIPTION	RANGE
NONPLASTIC	<5	MEDIUM	10-20
LOW	< 10	MEDIUM-HIGH	15 - 25
LOW-MEDIUM	5 - 15	HIGH	>25

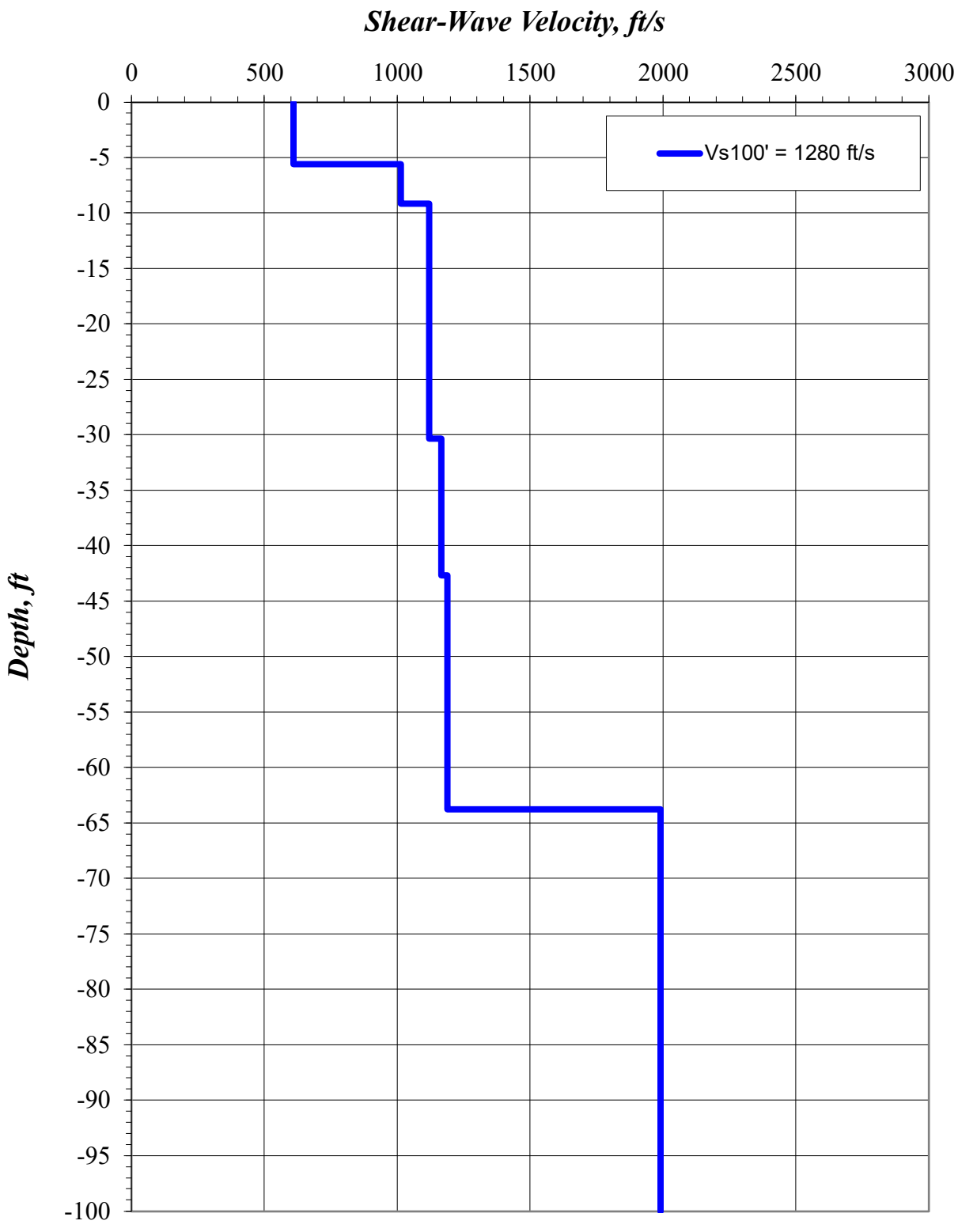
DESCRIPTION OF ESTIMATED PERCENTAGES OF GRAVEL, SAND, AND FINES	
TRACE	Particles are present but est. < 5%
FEW	5% - 10%
LITTLE	15% - 20%
SOME	30% - 45%
MOSTLY	50% - 100%

DEFINITIONS OF SOIL FRACTIONS	
SOIL COMPONENT	PARTICLE SIZE RANGE
BOULDERS	> 12 INCHES
COBBLES	3 to 12 Inches
GRAVEL	3 IN. TO NO. 4 SIEVE
COARSE GRAVEL	3 IN. TO 3/4 IN.
FINE GRAVEL	3/4 IN. TO NO. 4 SIEVE
SAND	NO. 4 TO NO. 200
COARSE SAND	NO. 4 TO NO. 10
MEDIUM SAND	NO. 10 TO NO. 40
FINE SAND	NO. 40 TO NO. 200
FINES (SILT OR CLAY)	MINUS NO. 200 SIEVE

NOTE: Percentages are presented within soil description for soil horizon with laboratory tested soil samples.

RIVER RANCH APARTMENTS	UNIFIED SOIL CLASSIFICATION AND KEY TO SOIL DESCRIPTIONS	B-2

River Ranch Apartments, 165': Vs Model



RIVER RANCH APARTMENTS	S-WAVE ReMi RESULTS	FIGURE B-3

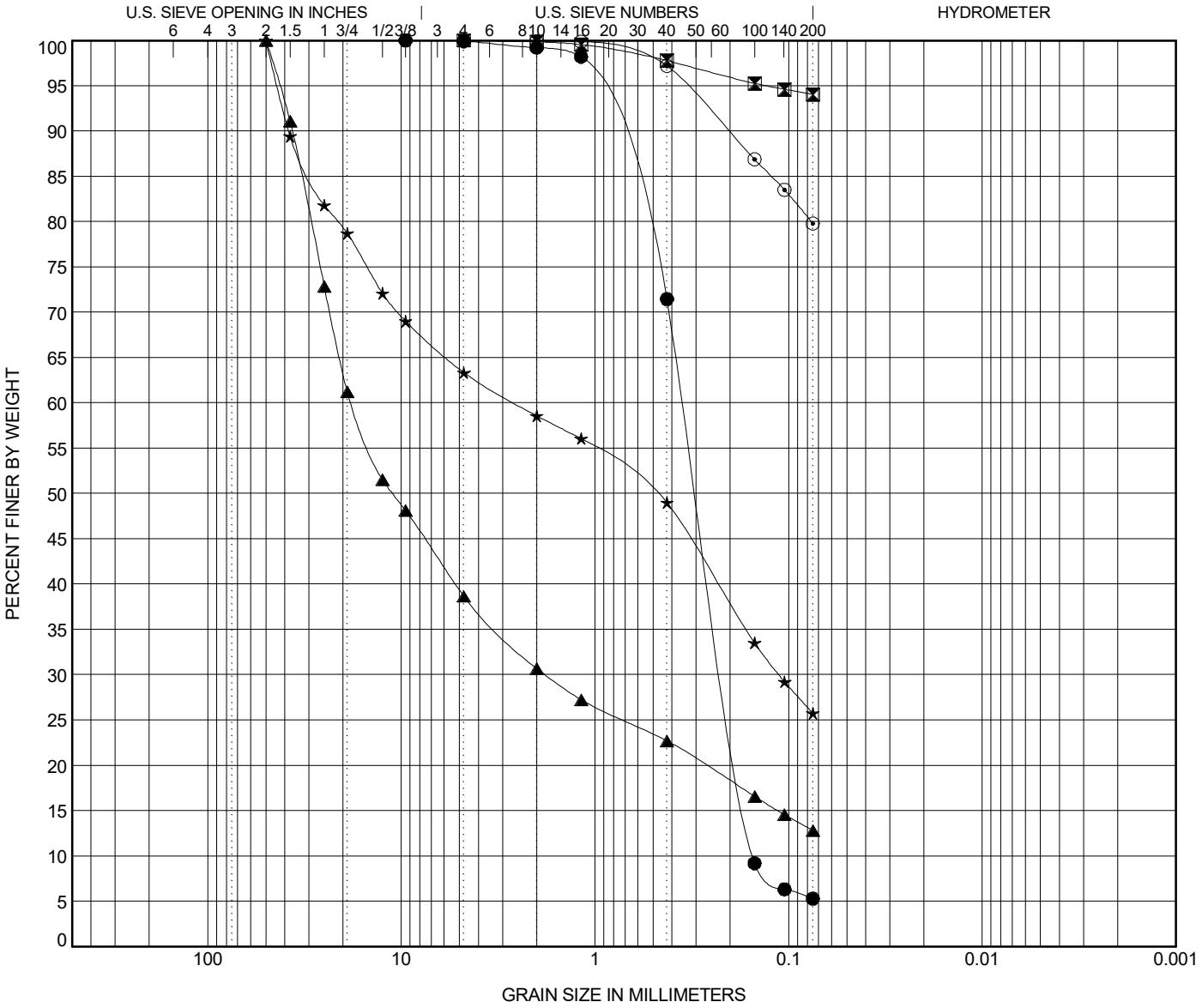
APPENDIX C
LABORATORY TESTING RESULTS

Wood Rodgers Inc.
1361 Corporate Blvd
Reno NV 89521
Telephone: 775-823-4068
Fax: 775-823-4066

GRAIN SIZE DISTRIBUTION

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments

PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

TEST PIT		DEPTH	Classification	LL	PL	PI	Cc	Cu
●	TP-1	8.0	POORLY GRADED SAND with SILT (SP-SM)				0.85	2.31
⊠	TP-2	3.0	SILT (ML)					
▲	TP-5	3.0	CLAYEY GRAVEL with SAND(GC)	51	26	25		
★	TP-6	5.0	CLAYEY SAND with GRAVEL(SC)	51	22	29		
⊙	TP-7	5.0	SILT with SAND(ML)	41	26	15		

TEST PIT		DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	TP-1	8.0	9.5	0.351	0.212	0.152	0.1	94.6	5.3	
⊠	TP-2	3.0	4.75				0.0	5.9	94.1	
▲	TP-5	3.0	50	18.025	1.808		61.4	25.8	12.8	
★	TP-6	5.0	50	2.593	0.112		36.7	37.6	25.7	
⊙	TP-7	5.0	9.5				0.0	20.2	79.8	

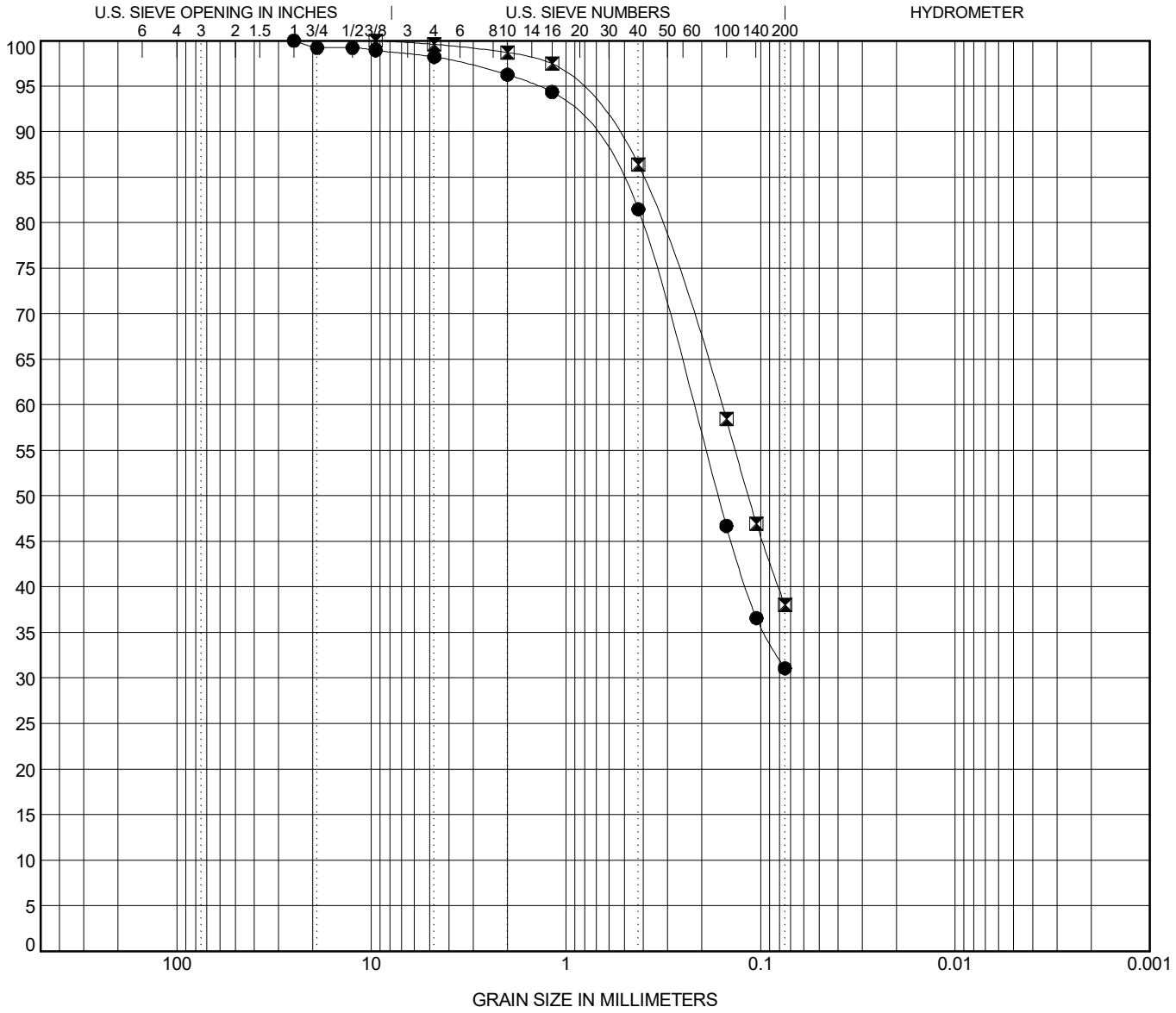
GRAIN SIZE DEPTH - GINT STD US LAB.GDT - 8/1/22 08:14 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GEOTECH\06 GINT\RIVER RANCH APARTMENTS.GPJ

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GRAIN SIZE DISTRIBUTION

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments

PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	TEST PIT	DEPTH	Classification	LL	PL	PI	Cc	Cu
●	**TP-8**	**2.0**	**CLAYEY SAND(SC)**	**23**	**13**	**10**		
⧓	**TP-9**	**7.0**	**SILTY SAND(SM)**	**31**	**24**	**7**		

	TEST PIT	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**TP-8**	**2.0**	**25**	**0.223**			**1.8**	**67.1**	**31.1**	
⧓	**TP-9**	**7.0**	**9.5**	**0.159**			**0.4**	**61.6**	**38.0**	

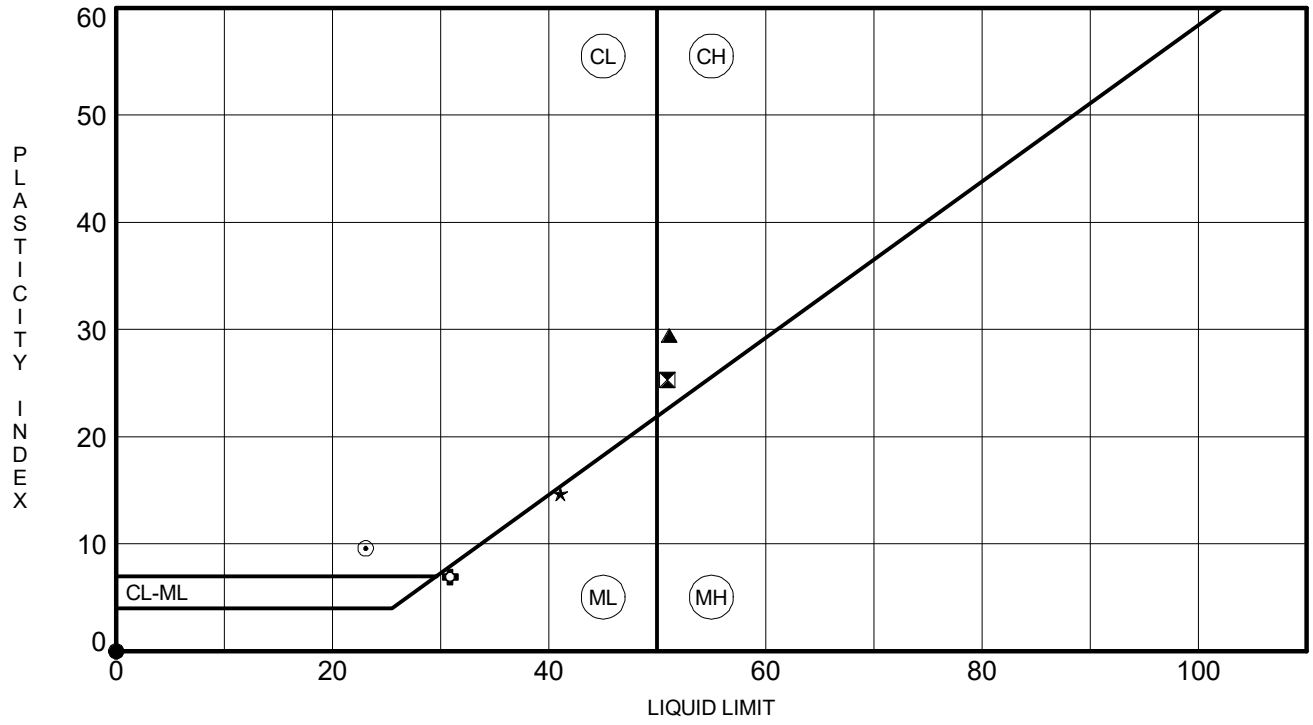
GRAIN SIZE DEPTH - GINT STD US LAB.GDT - 8/1/22 08:14 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GEOTECH\06 GINT\RIVER RANCH APARTMENTS.GPJ

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ATTERBERG LIMITS' RESULTS

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments

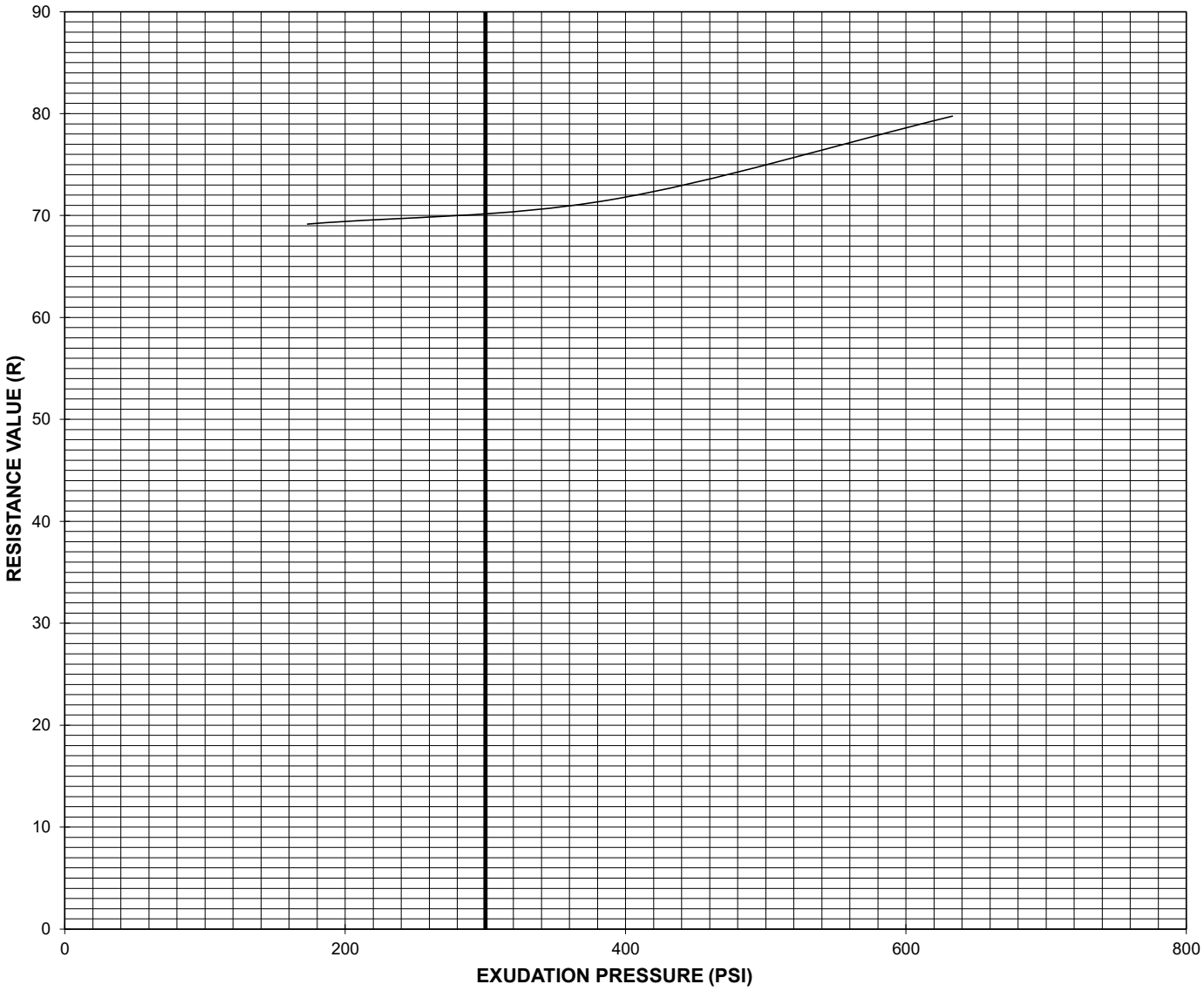
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada



	TEST PIT	DEPTH	LL	PL	PI	Fines	Classification
●	**TP-4**	**0.0**	**NP**	**NP**	**NP**		**SILTY SAND (SM)**
⊠	**TP-5**	**3.0**	**51**	**26**	**25**	**12.8**	**CLAYEY GRAVEL with SAND(GC)**
▲	**TP-6**	**5.0**	**51**	**22**	**29**	**25.7**	**CLAYEY SAND with GRAVEL(SC)**
★	**TP-7**	**5.0**	**41**	**26**	**15**	**79.8**	**SILT with SAND(ML)**
⊙	**TP-8**	**2.0**	**23**	**13**	**10**	**31.1**	**CLAYEY SAND(SC)**
✿	**TP-9**	**7.0**	**31**	**24**	**7**	**38.0**	**SILTY SAND(SM)**

ATTERBERG LIMITS DEPTH - GINT STD US LAB.GDT - 8/1/22 08:14 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GEOTECH\06 GINT\RIVER RANCH APARTMENTS.GPJ

R-Value and Expansion Pressure of Compacted Soils AASHTO T190 / ASTM D2844



Lab Log #	Sample Source	Material	Expansion Pressure (psf) @ 300 (psi)	R-Value @ 300 (psi)
6388	TP - 4 @ 0' - 2'	SILTY SAND (SM)	0	70

POINT #	WATER CONTENT (%)	DRY DENSITY (PCF)	EXUDATION PRESS. (PSI)	EXPANSION PRESS. (PSF)	RESISTANCE VALUE (R)
1	11.0	115.9	633	0	80
2	12.1	113.4	388	0	72
3	13.2	111.5	173	-62	69
4					
5					

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
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River Ranch Apartments
0

AASHTO ACCREDITED

TESTED BY	JOB NUMBER	APPROVED	DATE	REVISED	DATE
BL	3034059		7/18/2022		

SilverState Analytical Laboratories
Sierra Environmental Monitoring
Silver State Labs-Reno
1135 Financial Blvd
Reno, NV 89502
(775) 857-2400 FAX: (888) 398-7002
www.ssalabs.com

Analytical Report

Workorder#: **22070953**
Date Reported: **8/3/2022**

Client: Wood Rodgers
Project Name: River Ranch Apartments / 3034059 / TP-9 5-6'
PO #: LAB 3961

Sampled By: Client

Laboratory Accreditation Number: NV015/CA2990

Laboratory ID	Client Sample ID	Date/Time Sampled	Date Received
22070953-01	TP - 9 @ 5'-6'	07/20/2022 9:30	7/20/2022

Parameter	Method	Result	Units	PQL	Analyst	Date/Time Analyzed	Data Flag
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Sodium Sulfate as Na2SO4	Calculation	< 0.01	%	0.01	AC	08/01/2022 14:47	
Sulfate	SM4500 SO4E	1.2	%	0.01	SR	08/01/2022 10:29	

Laboratory Accreditation Number: NV015/CA2990

Laboratory ID	Client Sample ID	Date/Time Sampled	Date Received
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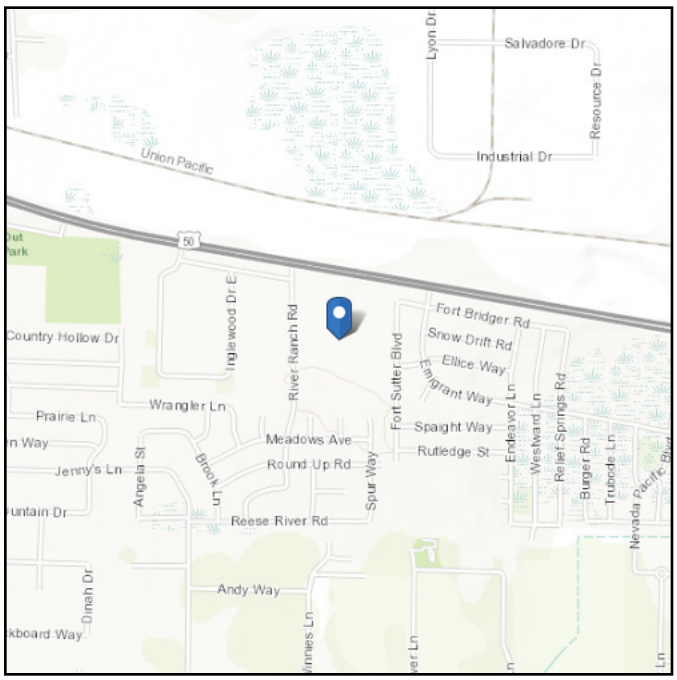
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Oxidation-Reduction Potential	SM 2580B	227	mV		AC	07/28/2022 9:28	
pH	SW-846 9045D	7.44	pH Units		AC	07/27/2022 15:06	
pH Temperature	SW-846 9045D	22.0	°C		AC	07/27/2022 15:06	
Resistivity	AASHTO T288	90	Ohms-cm		AL	08/01/2022 14:15	
Sodium	ASTM D2791	< 0.01	%	0.01	AC	07/29/2022 8:38	
Sodium Sulfate as Na2SO4	Calculation	< 0.01	%	0.01	AC	08/01/2022 14:47	
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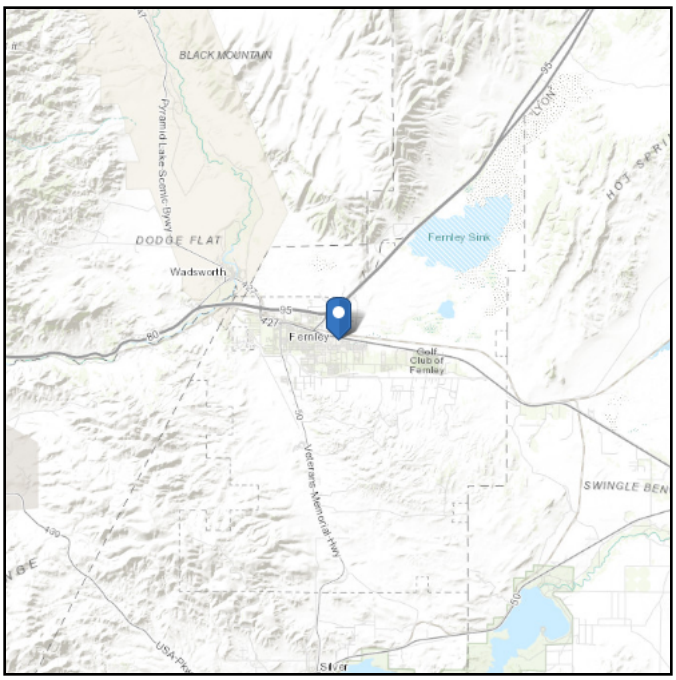
APPENDIX D
ASCE 7 HAZARDS REPORT

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-16	**Elevation:**	4139.01 ft (NAVD 88)
Risk Category:	II	**Latitude:**	39.598122
Soil Class:	D - Stiff Soil	**Longitude:**	-119.210001





Seismic

Site Soil Class: D - Stiff Soil

Results:

S_S :	1.215	S_{D1} :	N/A
S_1 :	0.44	T_L :	6
F_a :	1.014	PGA :	0.553
F_v :	N/A	PGA_M :	0.608
S_{MS} :	1.232	F_{PGA} :	1.1
S_{M1} :	N/A	I_e :	1
S_{DS} :	0.821	C_v :	1.343

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

Data Accessed: Wed Aug 24 2022

Date Source: USGS Seismic Design Maps

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

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PRELIMINARY DRAINAGE REPORT

FOR THE

RIVER RANCH APARTMENTS
CONDITIONAL USE PERMIT

FERNLEY, NEVADA

Prepared for:

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9345 Lemmon Drive
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SEPTEMBER 13, 2022

Prepared by:

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Associate

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EXP: 12.31.23
CIVIL
No. 11466
09.13.2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME

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1 INTRODUCTION

This report describes existing drainage conditions and provides preliminary estimates of storm water runoff and facility sizing for the conceptual design of the proposed River Ranch apartment complex in Fernley, Nevada. The report has been prepared in support of the Conditional Use Permit and will provide the foundation for subsequent detailed analysis and facility design pursuant to Chapter 10 of the *City of Fernley Department of Public Works Design Standards*, dated May 2008 (*Design Standards*). The following sections summarize the design criteria, flow analysis, and preliminary design of facilities proposed to collect and convey runoff generated within the project boundary. Supporting exhibits, data, and calculations are included in the appendices to this report.

The project parcels are not currently served by storm drain facilities in either River Ranch Road or U.S. Highway 50A, both of which front the site. Both roadways have unimproved shoulders, with neither curb and gutter nor roadside ditch installed along the edge of pavement. Curb and gutter has been installed on the west side of River Ranch Road where it fronts the Pioneer Crossing Casino located northwest of the project. All storm water runoff generated within project limits will be collected by swales, yard drains, curb and gutter, and catch basins for routing to an on-site retention pond. The surface impoundment will be constructed with sufficient storage capacity to manage the entire volume of anticipated post-development runoff for the 100-year, 24-hour storm event. The private pond will be maintained by the apartment complex.

1.1 PROJECT LOCATION

The River Ranch apartment project will be a multi-family residential complex created from two existing parcels, which will be modified by two boundary line adjustments (BLAs), in central Fernley, as shown on the Vicinity Map enclosed in Appendix A. The project parcels are located at 501 River Ranch Road (APN 021-281-03) and 1855 U.S. Highway 50A (APN 021-281-10). The site is bounded by River Ranch Road to the west, U.S. Highway 50A to the north, single-family residences in the Donner Trails Estates subdivision on its eastern border, and single-family residences in the River Ranch subdivision on its southern boundary. A NV Energy substation located on a parcel (APN 021-281-09) at the southeast corner of the project, and an existing self-storage warehouse business is located on a parcel (APN 021-281-04) at the northwest corner of the site. According to the Public Land Survey System, the site is situated within the southeast quarter of Section 18, Township 20 North, Range 25 East, Mount Diablo Meridian (SE1/4, Sec. 18, T.20 N., R.25 E., M.D.M.). The centroid of the site is approximately located at latitude 39.5982°N, longitude -119.2096°W.

1.2 PROJECT DESCRIPTION

The owner proposes to construct a network of paved drive aisles with parking, curb and gutter, sidewalk, and utility infrastructure for 40 apartment buildings comprising 320 dwelling units. The complex will also include an office / clubhouse, a maintenance building, amenities, landscaped areas, and a storm water retention pond at the northeast corner of the site. There will be four styles of apartment buildings, each

of which contains eight units, with sizes ranging from one-bedroom to three-bedroom floor plans. The general layout of the development and its infrastructure is shown on the "Preliminary Storm Drain Exhibit," enclosed in Appendix A. Type 4R catch basins will collect runoff from curb and gutter and route flows via ten-inch-diameter PVC SDR35 laterals to storm drain manholes installed in the drive aisles. Yard drains will collect runoff from walks and landscaped areas around the buildings and connect to storm drains by blind tap. The 12-inch-diameter PVC SDR35 storm drain mains will gravity flow to the north for discharge to the retention pond constructed adjacent to the U.S. Highway50A right-of-way at the northeast corner of the site.

Site infrastructure will include 26-foot-wide paved drive aisles with curb, gutter, sidewalk, pedestrian ramps, storm drain facilities, water and sewer systems extended from the City's existing networks, and dry utilities (i.e., power, telephone, cable television). The site entrance will connect with River Ranch Road directly across from the unnamed connector street currently being constructed as part of The Meadows at Inglewood development. Emergency access connections will be made at two locations: River Ranch Road at the southwest corner of the site and Ellice Way on the eastern boundary adjacent to the NV Energy substation.

1.3 SITE TOPOGRAPHY AND VEGETATION

The combined adjusted parcels comprise a net project area (i.e., less proposed River Ranch Road right-of-way) of 20.104 acres, as shown in the "Parcel Areas" exhibit included in Appendix A. The project site is currently undeveloped. High-voltage power poles and backyard wood fencing from the adjacent Donner Trails Estates subdivision border the eastern boundary, and backyard wood fencing and a segmental block retaining wall on lots in the adjacent River Ranch subdivision border the south boundary. The project site is bisected by a 50-foot-wide access easement with a gravel road from U.S. Highway 50A to the NV Energy substation. Existing terrain generally slopes from south to north at an overall average rate of 2.5 percent, with relatively flat areas in the southern and northern thirds of the site separated by a 6.0 percent slope in the middle third. Elevations range from highs between 4156 feet to 4164 feet along the south property line to lows between 4127 feet and 4132 feet at the highway right-of-way on the north boundary. Native vegetation includes sparse desert grasses and shrubs.

1.4 SITE SOILS

A geotechnical site investigation was performed in July, 2022 (Wood Rodgers, 2022) to evaluate soil, bedrock, and ground water conditions and to provide design recommendations for site development. Field work included exploration of subsurface conditions with 15 tests pits extended to 10 feet below ground surface (bgs) to evaluate the soil horizon and ground water conditions. Test pit locations are shown in the exhibit enclosed in Appendix B. Soils were classified in the field and representative bulk samples were obtained for laboratory index testing. Shear wave velocity measurements were also made to a depth of 100 feet to characterize soil stiffness and determine the approriate Site Class for structural design. Laboratory testing included in-situ moisture content, soil classification, grain size distribution,

plasticity indices, and chemical testing for corrosion potential. Free water was not encountered in test pits, and nearby well records indicate the static groundwater level is about 30 feet bgs.

In general, near-surface soils consist of non-plastic silty sands and poorly-graded sands, low plasticity silts, clayey sands, and and clayey gravels.

Because on-site retention ponds are proposed for storm water infiltration, percolation tests were performed in three test pits at the proposed location of the storm water retention pond at the northeast corner of the site. Test results indicate infiltration rates of less than 10 minutes per inch, which is well below the maximum rate of 60 minutes per inch specified in the City's Design Standards. The test pit locations are shown in Figure 3 from the geotechnical design report, a copy of which is enclosed in Appendix C; test pit logs and test results are also enclosed in Appendix C.

1.5 FLOOD HAZARD INFORMATION

According to Flood Insurance Rate Map (FIRM) Panel 32019C0105E, effective January 16, 2009, prepared by the Federal Emergency Management Agency (FEMA, 2009), the project parcel is located within an "Unshaded X" Flood Zone, which indicates an area of minimal flood hazard. An excerpt of the FIRM panel ("FIRMette") for the subject area is included in Appendix B.

1.6 PRIOR DRAINAGE STUDIES

No prior drainage studies are known to have been prepared for the project site. Prior to the current proposal, the site was undeveloped.

1.7 REGULATORY PERSPECTIVE

The project site is located within the City of Fernley jurisdiction. The drainage facilities will not be dedicated to the City of Fernley but will be privately owned and maintained by the apartment complex.

2 HYDROLOGIC METHODOLOGY, CRITERIA, AND DESIGN

The preliminary hydrologic analysis for the River Ranch apartments consists of peak runoff flow and volumetric computations for post-development conditions in accordance with City of Fernley Municipal Code and the City of Fernley Department of Public Works Design Standards (May 2008). Runoff generated on the project site will be retained on-site. For this preliminary analysis, the 5-year design storm was not considered but rather peak flows were developed for storm drain design using the 25-year, 6-hour design storm. The 100-year, 24-hour storm event is used to determine the minimum required retention pond storage volume.

The Rational Method was used to compute peak runoff flow rates for proposed site conditions for the 25-year, 6-hour design storm. The Rational Method requires only the area of the basin or watershed, the

rainfall intensity corresponding to the time of concentration, and the Rational Runoff Coefficient correlating to the anticipated land use. Peak runoff flows are determined using the following equation:

$$Q = ciA$$

Where:

Q = peak runoff in cubic feet per second (cfs).
c = Rational runoff coefficient (dimensionless)
i = rainfall intensity for design storm (inches/hr)
A = area of the basin (acres)

Rational Method runoff coefficients were taken from Table 701, Runoff Coefficient Table in the Truckee Meadows Regional Drainage Manual (TMRDM) for post-development conditions. Table 701 was used rather than the table provided in Chapter 10 of the Design Standards because it provides coefficients for the 5-year and 100-year storm events and a value for the 25-year storm event can be estimated by linear interpolation. A copy of the Rational Runoff Coefficient table is included in Appendix B.

The time of concentration (t_c) is defined as the time required for water to flow from the hydraulically most distant part of the drainage area to the point of consideration. Usually, the point of consideration is the discharge point of the hydrologic basin or sub-basin. Time of concentration is used in the Rational Method to determine the corresponding rainfall intensity for calculation of the peak runoff rate of a given storm event for the basin or sub-basin. The final time of concentration is the greater of the calculated t_c (equations not shown) or 10 minutes, per Section 10.3.2.1 of Chapter 10 in the Design Standards.

For design of the retention pond, the Natural Resources Conservation Service (formerly SCS) unit hydrograph method was used to determine total runoff volumes for proposed conditions. The SCS method requires a curve number (CN) and accumulated rainfall depth. The equations for the SCS method are:

$$V = q_d \cdot A / (12 \text{ in. / ft.})$$

$$q_d = (P - 0.2S)^2 / (P - 0.8S)$$

$$S = \left(\frac{1000}{CN}\right) - 10$$

Where:

V = Storm volume (cubic feet)
A = Area of the hydrologic basin (square feet)
q_d = Excess rainfall depth (inches)
P = Accumulated rainfall depth (inches)
S = Currently-available soil moisture storage deficit (inches)
CN = Curve number (dimensionless)

For preliminary storm drain design, the analysis used the prescribed 25-year storm return frequency with a 6-hour duration. The minimum storage volume for on-site retention basins was estimated from the 100-year, 24-hour storm event using the SCS method (above).

3 HYDROLOGIC ANALYSIS

The hydrologic analyses for post-development conditions consist of peak discharge computations using the Rational Method and volumetric runoff calculations using the SCS Unit Hydrograph Method, as described above.

3.1 DESIGN RAINFALL DATA

Precipitation intensity and depth estimates were taken from the Point Precipitation Frequency Data Server website for Atlas 14, Volume 1, Version 5, which is maintained by the National Oceanic and Atmospheric Administration (NOAA). The Point Precipitation Frequency Data Server provides site-specific rainfall data based on latitude and longitude. The latitude and longitude used to obtain storm intensities and depths for the 5-, 25-, and 100-year storm events were 39.5982°N and -119.2096°W, respectively. The resulting tables with precipitation intensities and depths for various storm durations and return intervals are included in Appendix B of this report.

3.2 RUNOFF COEFFICIENTS

For the multi-unit residential development, C-values of 0.60 and 0.78 are applied to developed areas for the 5-year and 100-year storm events, respectively, based on Table 701. The resulting coefficient for the 25-year storm is interpolated as 0.64.

3.3 CURVE NUMBER

The Runoff Curve Number (CN) for each hydrologic basin is determined by overlaying land use information, vegetation type and coverage or surface material, and soil data available for the area. Soil types are rated from A to D with correspondingly higher curve number values for higher runoff potential. Based on test pit logs, percolation test results, and the general presence of gravels and poorly-graded sands, the preliminary watershed identified for this analysis was estimated to be in hydrologic soil group (HSG) “A”. This HSG is assigned to soils with a low runoff potential and high infiltration rate. For apartments, townhouses, and very small residential lots, the corresponding curve number for HSG “A” is 77. The SCS table for runoff curve numbers in urban areas is included in Appendix B.

4 EXISTING HYDROLOGIC CONDITIONS

Historically the site drains from south to north at an overall average slope of 2.5 percent but the ground is sloped at approximatley 6 percent in the middle third of the site. Nominal runoff from surfaces abutting River Ranch Road discharge off-site, but the majority of sheet flow historically discharges to the self-storage warehouse business at the northwest corner of the site and to the U.S. Highway 50A right-of-way. In addition, the gravel access road to the NV Energy substation has roadside ditches on each site; these

terminate off-site at the highway shoulder. The site sits below the residential lots along the southern and eastern perimeters, but those lots are sloped toward the streets they front, largely eliminating storm water run-on to the project site. Existing topography is depicted in the figure, "Existing Conditions" exhibit included in Appendix A.

5 PROPOSED DRAINAGE SYSTEM

The proposed drainage system will consist of swales and yard drains in landscape areas around buildings, with curb and gutter on the downhill side of drive aisles to collect and convey runoff to catch basins at curb returns. Runoff will be routed via 12-inch-diameter storm drains for discharge into the proposed retention pond at the northeast corner of the site. Runoff stored in the retention pond will drain into the underlying soil through infiltration. The general layout of the development and its storm water facilities are shown on the "Preliminary Storm Drain Exhibit" enclosed in Appendix A.

5.1 PROPOSED HYDROLOGIC BASINS

For final design the proposed development will be analyzed in detail with hydrologic basins delineated by the storm drain they contribute to, but for purposes of this preliminary analysis the site has been analyzed as a single basin. The total runoff volume for the 25-year, 6-hour and 100-year, 24-hour storm and the peak discharge for the 25-year, 6-hour storm event are calculated in the following sections.

5.2 PROPOSED STORM DRAIN SYSTEM

Proposed drainage control facilities will consist of landscape swales, yard drains, curb and gutter, and catch basins to collect and convey runoff to the retention pond. Catch basin laterals will be 10-inch-diameter PVC SDR35 pipe and the storm drain main will be 12-inch-diameter PVC SDR35 pipe. Runoff from roofs will be collected by roof gutters and discharged via downspouts to landscape swales and yard drains, which will discharge to the storm drain fronting the area.

The storm water retention pond will be 6 to 8 feet deep and provide a storage capacity of at least 45,000 cubic feet below the one-foot freeboard. It will be constructed with 3:1 (horizontal to vertical) sideslopes and a 10-foot-wide paved ramp will be constructed to provide maintenance access to the pond interior and base. The final pond dimensions will be determined during detailed design.

5.3 WATER QUALITY CONTROLS

The retention pond will settle sediment or pollutants transported by storm water runoff. Water quality controls that will be utilized during construction of subdivision improvements will include fiber rolls on the exterior boundary of the grading, construction entrances, and any additional best management practices presented in the approved Erosion Control Plan.

5.4 RESULTS OF DRAINAGE ANALYSES

For purposes of this preliminary study, the site was analyzed as a single watershed, with all storm drains combining and flowing to the retention pond at the northeast corner of the site. The peak flow rate calculated for the overall hydrologic basin in post-development conditions and the 25-year, 6-hour storm event is as follows:

$$Q = (0.64)(0.205 \text{ in/hr})(20.10 \text{ ac}) = 2.64 \text{ cfs}$$

During detailed design, hydraulic calculations will be performed using the computer software FlowMaster® V8i by Bentley Systems (Watertown, CT) to determine flow characteristics for peak discharge in each hydrologic sub-basin.

The results of post-development volumetric analyses by the SCS method as described above indicate a 25-year, 6-hour storm event will generate approximately 8,070 cubic fee (cf) of runoff, whereas an estimated 44,670 cf will be generated for the 100-year, 24-hour design storm.

5.5 RETENTION REQUIREMENTS

The proposed River Ranch apartment complex will use a single retention pond to collect and temporarily store runoff generated on-site. The pond will be sized to accommodate the full post-development runoff volume of the 100-year, 24-hour storm event. To provide a conservative design that includes an adequate freeboard and a factor of safety for the assumptions made, the design volume of the pond will have a minimum capacity of 44,670 cubic feet at the 1-foot freeboard. Detailed stage-storage volume calculations for the pond will be prepared during final design.

In addition, the storm drain discharging into the retention pond will be analyzed during detailed design to ensure the pipe won't back up into the street and will continue to flow under pressure. The basin depth will provide adequate capacity below the invert elevations of storm drain outlets for most storm events.

6 SPECIAL FLOOD HAZARDS

As noted above, the entire site lies within a FEMA "Unshaded X" flood hazard area, which indicates that the project is outside the 0.2% probability per year flood zone. As such, there are no special flood hazard considerations proposed with this project.

6.1 IMPACTS OF PROPOSED DEVELOPMENT ON FLOOD HAZARD AREA

On a broad scale, the project is within a closed hydrologic basin and, theoretically, storm water runoff discharged from site will ultimately drain to the Fernley Reservoir Number 1 / Fernley Wildlife Management Area. However, no runoff is expected to be discharged from the site and no negative impacts on downstream facilities are anticipated.

6.2 FEMA AND LOCAL CODE COMPLIANCE

Development of the Desert Shadows subdivision will be compliant with all federal and local code requirements.

7 CONCLUSIONS

The proposed River Ranch apartment complex will be designed to collect, convey, and retain storm flows generated on-site. Increases in runoff from relatively impervious surfaces following site development will be temporarily stored in the proposed on-site retention pond, where it will infiltrate into the underlying soil. Storm water quality measures will be installed during construction to reduce probability of sediment being discharged off-site by storm runoff. No negative downstream impacts are anticipated from the development of the project.

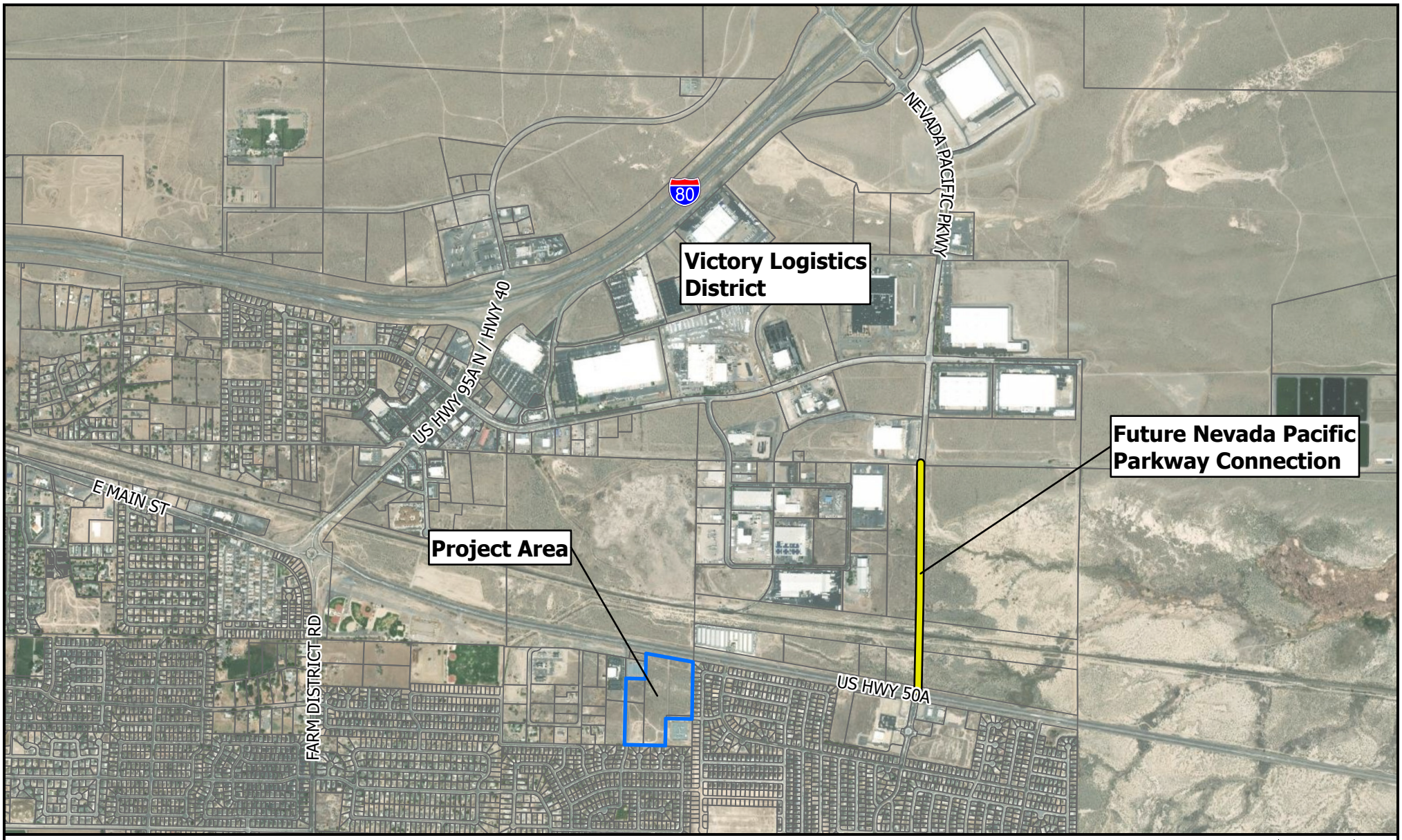
8 REFERENCES

Fernley, 2008a. *City of Fernley Department of Public Works Design Standards and Review Guidelines for Streets, Potable Water, Sewer, Storm Drains & Alternative Water*, published by the City of Fernley Department of Public Works, Fernley, Nevada, May 2008. http://www.cityoffernley.org/DocumentCenter/Index/279.

Wood Rodgers, 2022. *Geotechnical Design Report, River Ranch Apartments*, unpublished report prepared by Wood Rodgers, Inc.. for ERGS, Inc.; Wood Rodgers, Inc., Reno, Nevada, September 2022.

APPENDIX A

EXHIBITS



VICINITY MAP
RIVER RANCH APARTMENTS
FERNLEY, NV
SEPTEMBER 2022

Future Nevada Pacific Parkway
BLA_Project_Boundary

0 500 1,000 2,000
Feet

NORTH

WOOD RODGERS

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Aerial Map

River Ranch Apartments ZMA/CUP

September 2022

0 180 360
Feet

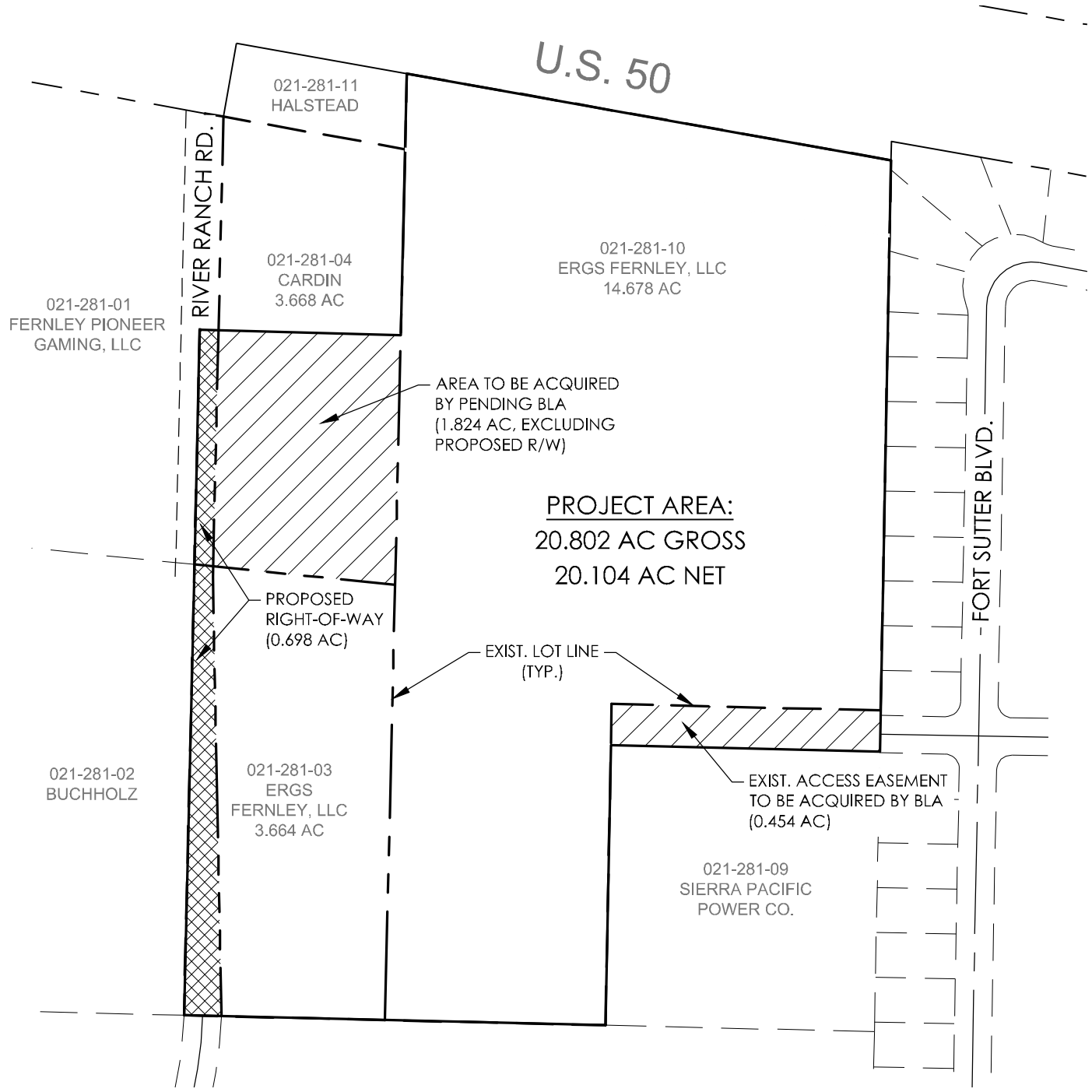
WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
Fax: 775.823.4066

ZMA / CUP FOR RIVER RANCH APARTMENTS

PARCEL AREAS

FERNLEY, NEVADA

SEPTEMBER 2022



NORTH
SCALE: 1"=200'

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Reno, NV 89502
Tel 775.823.4068
Fax 775.823.4066

J:\Jobs\3034_ERGS\River_Rnch_Double_R_OA\Planning\Exhibits\EXH_DoubleR_ParcelAreas.dwg 9/10/2022 1:23 PM Evan Nikirk

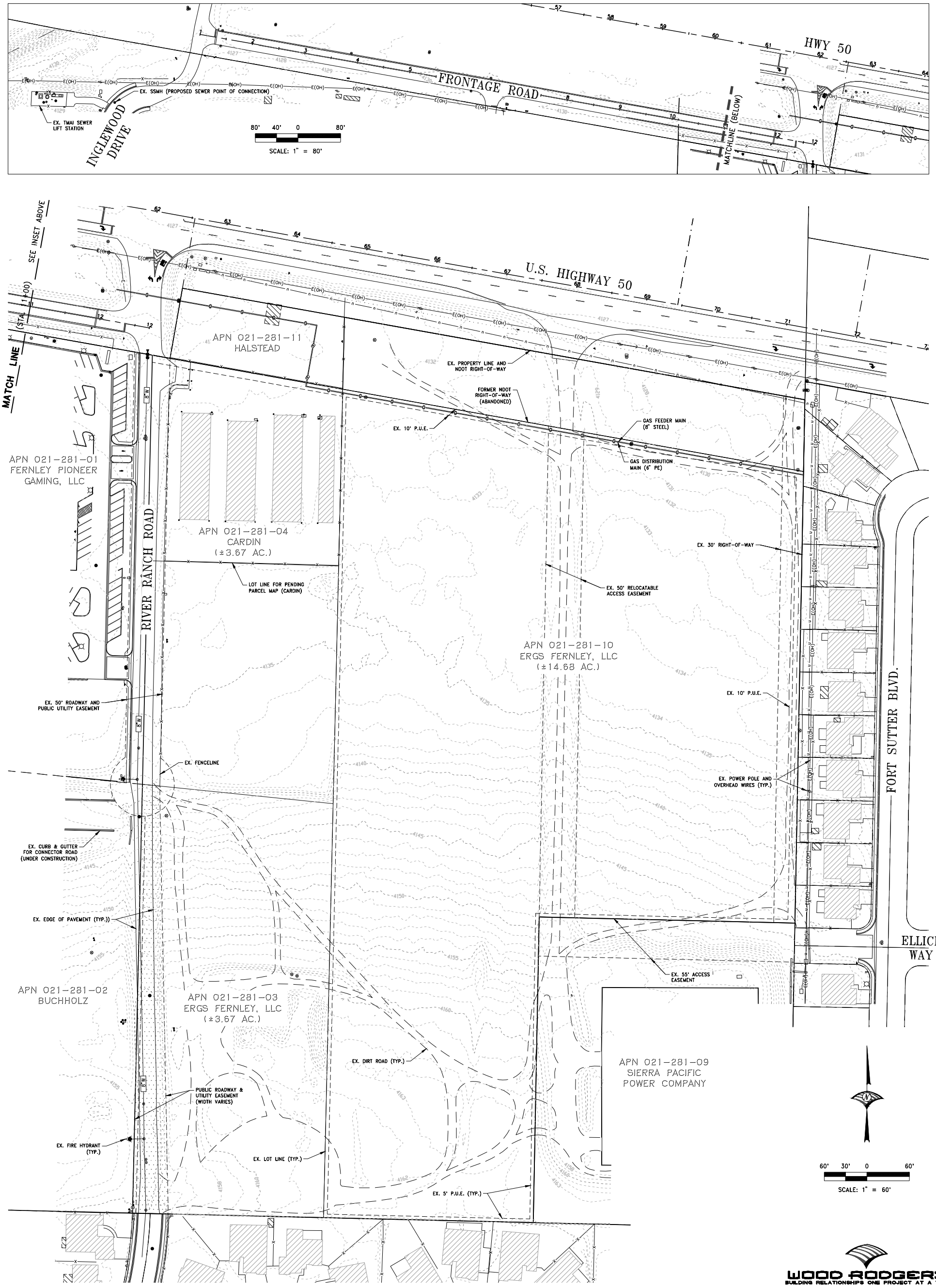
RIVER RANCH APARTMENTS

EXISTING CONDITIONS

ERGS, INC.

FERNLEY **NEVADA**

AUGUST 29, 2022



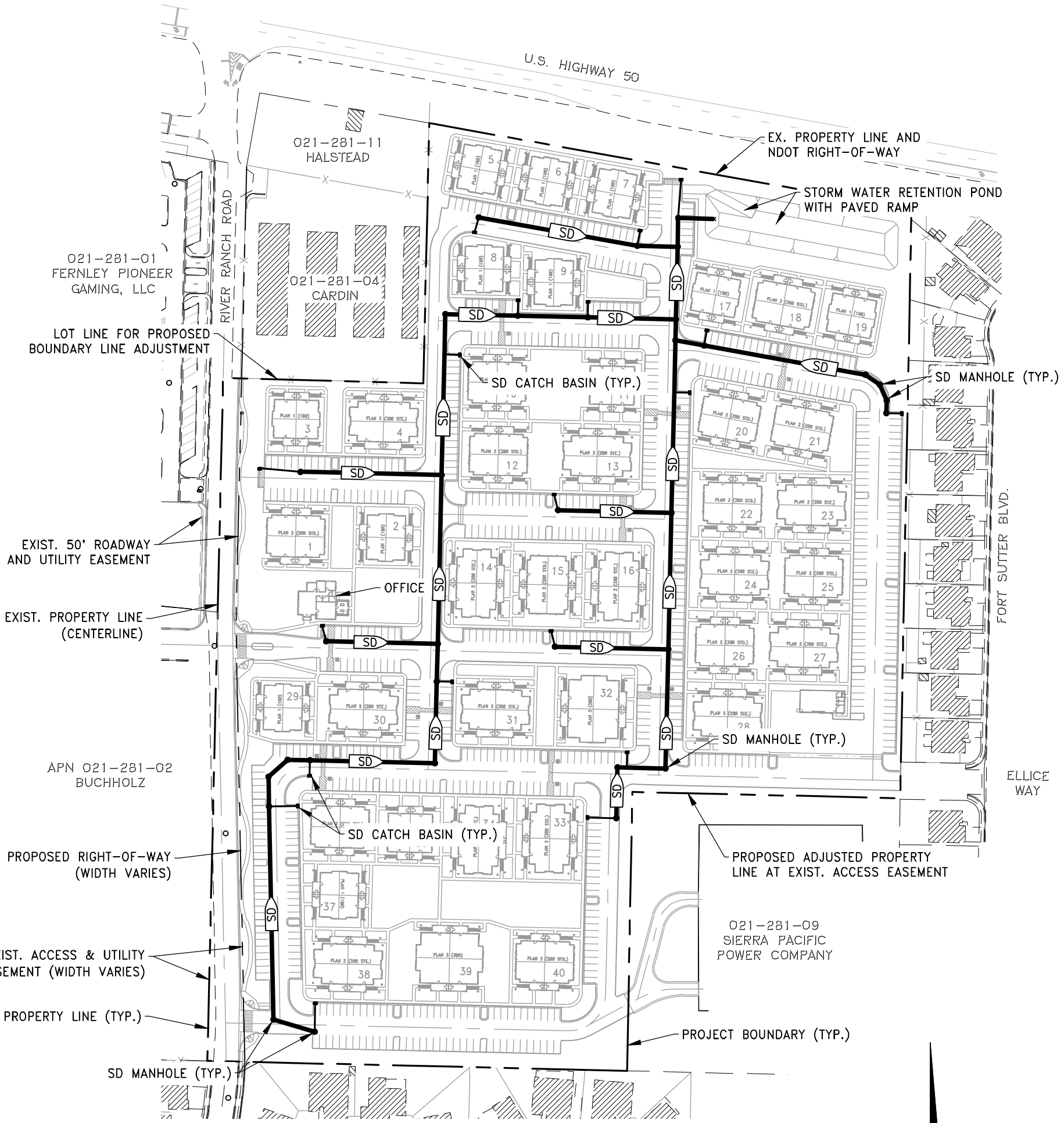
NOTE: BASE SURVEY AND TOPOGRAPHY PREPARED BY WOOD RODGERS, INC. (RENO). DATE OF PHOTOGRAPHY: JUNE 30, 2022.

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1361 Corporate Boulevard Tel 775.823.4068
Reno, NV 89502 Fax 775.823.4066

RIVER RANCH APTS

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PRELIMINARY STORM DRAIN EXHIBIT
RIVER RANCH APARTMENTS
ERGS FERNLEY, LLC
FERNLEY, NEVADA
SEPTEMBER, 2022



150' 75' 0 150'

SCALE: 1" = 150'

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard Reno, NV 89502
Tel 775.823.4068 Fax 775.823.4066

J:\Jobs\3034_ERGS\River_Rnch_Double_R_OA\Planning\Exhibits\EXH_RiverRanch_Prelim STORM.dwg 9/13/2022 2:34 AM Evan Nikirk

APPENDIX B

PRECIPITATION AND HYDROLOGIC DATA

National Flood Hazard Layer FIRMette

FEMA

119°12'54"W 39°36'7"N



119°12'17"W 39°35'40"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/24/2022 at 10:55 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

NOAA Atlas 14, Volume 1, Version 5
Location name: Fernley, Nevada, USA*
Latitude: 39.5982°, Longitude: -119.2096°
Elevation: 4136.3 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.101** (0.083-0.121)	**0.127** (0.103-0.154)	**0.170** (0.140-0.207)	**0.210** (0.170-0.256)	**0.274** (0.217-0.337)	**0.333** (0.256-0.413)	**0.402** (0.300-0.503)	**0.484** (0.347-0.619)	**0.614** (0.417-0.814)	**0.733** (0.474-0.990)
10-min	**0.153** (0.126-0.185)	**0.193** (0.157-0.234)	**0.259** (0.212-0.316)	**0.319** (0.259-0.389)	**0.417** (0.330-0.514)	**0.507** (0.390-0.629)	**0.612** (0.456-0.765)	**0.737** (0.529-0.941)	**0.935** (0.635-1.24)	**1.12** (0.722-1.51)
15-min	**0.190** (0.156-0.229)	**0.239** (0.195-0.290)	**0.321** (0.263-0.391)	**0.396** (0.322-0.483)	**0.517** (0.409-0.637)	**0.629** (0.484-0.780)	**0.759** (0.565-0.949)	**0.913** (0.655-1.17)	**1.16** (0.787-1.54)	**1.38** (0.895-1.87)
30-min	**0.257** (0.210-0.309)	**0.322** (0.263-0.391)	**0.433** (0.355-0.527)	**0.533** (0.433-0.650)	**0.696** (0.550-0.858)	**0.847** (0.651-1.05)	**1.02** (0.761-1.28)	**1.23** (0.882-1.57)	**1.56** (1.06-2.07)	**1.86** (1.21-2.52)
60-min	**0.318** (0.260-0.382)	**0.398** (0.326-0.483)	**0.536** (0.439-0.653)	**0.659** (0.536-0.804)	**0.862** (0.681-1.06)	**1.05** (0.806-1.30)	**1.26** (0.942-1.58)	**1.52** (1.09-1.95)	**1.93** (1.31-2.56)	**2.31** (1.49-3.11)
2-hr	**0.395** (0.333-0.482)	**0.495** (0.418-0.602)	**0.641** (0.536-0.784)	**0.766** (0.632-0.937)	**0.955** (0.766-1.18)	**1.12** (0.880-1.39)	**1.32** (1.01-1.67)	**1.57** (1.17-2.00)	**1.97** (1.40-2.58)	**2.34** (1.60-3.14)
3-hr	**0.450** (0.381-0.541)	**0.565** (0.480-0.681)	**0.718** (0.603-0.864)	**0.840** (0.700-1.02)	**1.02** (0.835-1.23)	**1.17** (0.945-1.43)	**1.37** (1.08-1.69)	**1.61** (1.24-2.01)	**2.00** (1.50-2.61)	**2.36** (1.72-3.17)
6-hr	**0.556** (0.473-0.660)	**0.697** (0.594-0.835)	**0.883** (0.750-1.07)	**1.03** (0.867-1.24)	**1.23** (1.02-1.48)	**1.37** (1.12-1.66)	**1.53** (1.24-1.87)	**1.76** (1.39-2.18)	**2.12** (1.64-2.66)	**2.44** (1.85-3.20)
12-hr	**0.646** (0.558-0.752)	**0.819** (0.706-0.958)	**1.05** (0.906-1.23)	**1.23** (1.06-1.44)	**1.47** (1.25-1.73)	**1.66** (1.39-1.97)	**1.85** (1.53-2.22)	**2.05** (1.66-2.48)	**2.31** (1.82-2.86)	**2.59** (1.99-3.26)
24-hr	**0.775** (0.687-0.875)	**0.980** (0.870-1.11)	**1.26** (1.12-1.42)	**1.48** (1.31-1.67)	**1.79** (1.57-2.02)	**2.04** (1.77-2.30)	**2.29** (1.98-2.59)	**2.56** (2.19-2.90)	**2.92** (2.48-3.34)	**3.22** (2.69-3.70)
2-day	**0.860** (0.758-0.972)	**1.09** (0.957-1.23)	**1.40** (1.24-1.58)	**1.65** (1.44-1.85)	**1.99** (1.74-2.24)	**2.26** (1.97-2.56)	**2.55** (2.20-2.89)	**2.85** (2.43-3.24)	**3.26** (2.74-3.74)	**3.58** (2.98-4.14)
3-day	**0.923** (0.819-1.04)	**1.17** (1.03-1.32)	**1.51** (1.34-1.70)	**1.78** (1.57-2.00)	**2.15** (1.89-2.42)	**2.45** (2.13-2.76)	**2.76** (2.39-3.13)	**3.09** (2.64-3.51)	**3.54** (2.98-4.05)	**3.90** (3.24-4.50)
4-day	**0.986** (0.879-1.12)	**1.25** (1.11-1.41)	**1.61** (1.43-1.82)	**1.91** (1.69-2.15)	**2.31** (2.04-2.60)	**2.63** (2.30-2.96)	**2.98** (2.58-3.36)	**3.33** (2.86-3.77)	**3.83** (3.22-4.37)	**4.22** (3.50-4.86)
7-day	**1.13** (1.00-1.29)	**1.43** (1.26-1.63)	**1.85** (1.63-2.11)	**2.18** (1.92-2.48)	**2.64** (2.30-3.01)	**3.01** (2.60-3.43)	**3.39** (2.92-3.88)	**3.79** (3.23-4.35)	**4.34** (3.64-5.03)	**4.79** (3.96-5.58)
10-day	**1.26** (1.10-1.45)	**1.60** (1.40-1.83)	**2.07** (1.81-2.38)	**2.44** (2.13-2.81)	**2.94** (2.55-3.39)	**3.34** (2.87-3.84)	**3.75** (3.20-4.32)	**4.17** (3.53-4.84)	**4.74** (3.96-5.55)	**5.18** (4.27-6.12)
20-day	**1.48** (1.31-1.69)	**1.89** (1.66-2.16)	**2.43** (2.14-2.77)	**2.84** (2.50-3.24)	**3.39** (2.96-3.87)	**3.81** (3.31-4.35)	**4.23** (3.64-4.84)	**4.65** (3.98-5.34)	**5.21** (4.41-6.04)	**5.63** (4.72-6.56)
30-day	**1.65** (1.46-1.88)	**2.09** (1.85-2.38)	**2.69** (2.37-3.07)	**3.14** (2.76-3.57)	**3.73** (3.26-4.25)	**4.18** (3.64-4.77)	**4.64** (4.01-5.31)	**5.09** (4.37-5.85)	**5.68** (4.83-6.57)	**6.12** (5.16-7.13)
45-day	**1.91** (1.69-2.16)	**2.43** (2.14-2.74)	**3.12** (2.74-3.51)	**3.63** (3.18-4.08)	**4.29** (3.75-4.83)	**4.78** (4.16-5.39)	**5.26** (4.56-5.95)	**5.72** (4.93-6.50)	**6.31** (5.40-7.21)	**6.73** (5.72-7.72)
60-day	**2.17** (1.92-2.44)	**2.76** (2.44-3.11)	**3.54** (3.13-3.98)	**4.10** (3.62-4.59)	**4.80** (4.22-5.38)	**5.30** (4.65-5.97)	**5.78** (5.06-6.52)	**6.24** (5.44-7.06)	**6.79** (5.88-7.70)	**7.17** (6.19-8.18)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical

NOAA Atlas 14, Volume 1, Version 5
Location name: Fernley, Nevada, USA*
Latitude: 39.5982°, Longitude: -119.2096°
Elevation: 4136.3 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

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NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**1.21** (0.996-1.45)	**1.52** (1.24-1.85)	**2.04** (1.68-2.48)	**2.52** (2.04-3.07)	**3.29** (2.60-4.04)	**4.00** (3.07-4.96)	**4.82** (3.60-6.04)	**5.81** (4.16-7.43)	**7.37** (5.00-9.77)	**8.80** (5.69-11.9)
10-min	**0.918** (0.756-1.11)	**1.16** (0.942-1.40)	**1.55** (1.27-1.90)	**1.91** (1.55-2.33)	**2.50** (1.98-3.08)	**3.04** (2.34-3.77)	**3.67** (2.74-4.59)	**4.42** (3.17-5.65)	**5.61** (3.81-7.43)	**6.70** (4.33-9.04)
15-min	**0.760** (0.624-0.916)	**0.956** (0.780-1.16)	**1.28** (1.05-1.56)	**1.58** (1.29-1.93)	**2.07** (1.64-2.55)	**2.52** (1.94-3.12)	**3.04** (2.26-3.80)	**3.65** (2.62-4.67)	**4.64** (3.15-6.14)	**5.53** (3.58-7.48)
30-min	**0.514** (0.420-0.618)	**0.644** (0.526-0.782)	**0.866** (0.710-1.05)	**1.07** (0.866-1.30)	**1.39** (1.10-1.72)	**1.69** (1.30-2.10)	**2.04** (1.52-2.56)	**2.46** (1.76-3.14)	**3.12** (2.12-4.14)	**3.73** (2.41-5.03)
60-min	**0.318** (0.260-0.382)	**0.398** (0.326-0.483)	**0.536** (0.439-0.653)	**0.659** (0.536-0.804)	**0.862** (0.681-1.06)	**1.05** (0.806-1.30)	**1.26** (0.942-1.58)	**1.52** (1.09-1.95)	**1.93** (1.31-2.56)	**2.31** (1.49-3.11)
2-hr	**0.198** (0.166-0.241)	**0.248** (0.209-0.301)	**0.320** (0.268-0.392)	**0.383** (0.316-0.468)	**0.478** (0.383-0.588)	**0.560** (0.440-0.696)	**0.662** (0.506-0.832)	**0.784** (0.583-0.999)	**0.986** (0.700-1.29)	**1.17** (0.802-1.57)
3-hr	**0.150** (0.127-0.180)	**0.188** (0.160-0.227)	**0.239** (0.201-0.288)	**0.280** (0.233-0.339)	**0.339** (0.278-0.409)	**0.391** (0.315-0.477)	**0.456** (0.360-0.562)	**0.536** (0.414-0.670)	**0.667** (0.500-0.869)	**0.785** (0.573-1.06)
6-hr	**0.093** (0.079-0.110)	**0.116** (0.099-0.139)	**0.147** (0.125-0.178)	**0.172** (0.145-0.206)	**0.205** (0.170-0.246)	**0.229** (0.188-0.278)	**0.256** (0.206-0.312)	**0.294** (0.232-0.364)	**0.354** (0.274-0.445)	**0.408** (0.308-0.535)
12-hr	**0.054** (0.046-0.062)	**0.068** (0.059-0.080)	**0.087** (0.075-0.102)	**0.102** (0.088-0.120)	**0.122** (0.104-0.144)	**0.138** (0.115-0.164)	**0.154** (0.127-0.184)	**0.170** (0.137-0.206)	**0.192** (0.151-0.237)	**0.215** (0.165-0.270)
24-hr	**0.032** (0.029-0.036)	**0.041** (0.036-0.046)	**0.052** (0.047-0.059)	**0.062** (0.055-0.070)	**0.075** (0.065-0.084)	**0.085** (0.074-0.096)	**0.096** (0.083-0.108)	**0.107** (0.091-0.121)	**0.122** (0.103-0.139)	**0.134** (0.112-0.154)
2-day	**0.018** (0.016-0.020)	**0.023** (0.020-0.026)	**0.029** (0.026-0.033)	**0.034** (0.030-0.039)	**0.042** (0.036-0.047)	**0.047** (0.041-0.053)	**0.053** (0.046-0.060)	**0.059** (0.051-0.067)	**0.068** (0.057-0.078)	**0.075** (0.062-0.086)
3-day	**0.013** (0.011-0.014)	**0.016** (0.014-0.018)	**0.021** (0.019-0.024)	**0.025** (0.022-0.028)	**0.030** (0.026-0.034)	**0.034** (0.030-0.038)	**0.038** (0.033-0.043)	**0.043** (0.037-0.049)	**0.049** (0.041-0.056)	**0.054** (0.045-0.063)
4-day	**0.010** (0.009-0.012)	**0.013** (0.012-0.015)	**0.017** (0.015-0.019)	**0.020** (0.018-0.022)	**0.024** (0.021-0.027)	**0.027** (0.024-0.031)	**0.031** (0.027-0.035)	**0.035** (0.030-0.039)	**0.040** (0.034-0.046)	**0.044** (0.036-0.051)
7-day	**0.007** (0.006-0.008)	**0.009** (0.008-0.010)	**0.011** (0.010-0.013)	**0.013** (0.011-0.015)	**0.016** (0.014-0.018)	**0.018** (0.015-0.020)	**0.020** (0.017-0.023)	**0.023** (0.019-0.026)	**0.026** (0.022-0.030)	**0.028** (0.024-0.033)
10-day	**0.005** (0.005-0.006)	**0.007** (0.006-0.008)	**0.009** (0.008-0.010)	**0.010** (0.009-0.012)	**0.012** (0.011-0.014)	**0.014** (0.012-0.016)	**0.016** (0.013-0.018)	**0.017** (0.015-0.020)	**0.020** (0.016-0.023)	**0.022** (0.018-0.025)
20-day	**0.003** (0.003-0.004)	**0.004** (0.003-0.004)	**0.005** (0.004-0.006)	**0.006** (0.005-0.007)	**0.007** (0.006-0.008)	**0.008** (0.007-0.009)	**0.009** (0.008-0.010)	**0.010** (0.008-0.011)	**0.011** (0.009-0.013)	**0.012** (0.010-0.014)
30-day	**0.002** (0.002-0.003)	**0.003** (0.003-0.003)	**0.004** (0.003-0.004)	**0.004** (0.004-0.005)	**0.005** (0.005-0.006)	**0.006** (0.005-0.007)	**0.006** (0.006-0.007)	**0.007** (0.006-0.008)	**0.008** (0.007-0.009)	**0.008** (0.007-0.010)
45-day	**0.002** (0.002-0.002)	**0.002** (0.002-0.003)	**0.003** (0.003-0.003)	**0.003** (0.003-0.004)	**0.004** (0.003-0.004)	**0.004** (0.004-0.005)	**0.005** (0.004-0.006)	**0.005** (0.005-0.006)	**0.006** (0.005-0.007)	**0.006** (0.005-0.007)
60-day	**0.002** (0.001-0.002)	**0.002** (0.002-0.002)	**0.002** (0.002-0.003)	**0.003** (0.003-0.003)	**0.003** (0.003-0.004)	**0.004** (0.003-0.004)	**0.004** (0.004-0.005)	**0.004** (0.004-0.005)	**0.005** (0.004-0.005)	**0.005** (0.004-0.006)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical

RATIONAL FORMULA METHOD
RUNOFF COEFFICIENTS

Land Use or Surface Characteristics	Aver. % Impervious Area	Runoff Coefficients 5-Year (C_5)	Runoff Coefficients 100-Year (C_{100})
Business/Commercial:			
Downtown Areas	85	.82	.85
Neighborhood Areas	70	.65	.80
Residential:			
(Average Lot Size)			
⅛ Acre or Less (Multi-Unit)	65	.60	.78
¼ Acre	38	.50	.65
⅛ Acre	30	.45	.60
½ Acre	25	.40	.55
1 Acre	20	.35	.50
Industrial:	72	.68	.82
Open Space:			
(Lawns, Parks, Golf Courses)	5	.05	.30
Undeveloped Areas:			
Range	0	.20	.50
Forest	0	.05	.30
Streets/Roads:			
Paved	100	.88	.93
Gravel	20	.25	.50
Drives/Walks:	95	.87	.90
Roof:	90	.85	.87

Notes:

1. Composite runoff coefficients shown for Residential, Industrial, and Business/Commercial Areas assume irrigated grass landscaping for all pervious areas. For development with landscaping other than irrigated grass, the designer must develop project specific composite runoff coefficients from the surface characteristics presented in this table.

VERSION: April 30, 2009	REFERENCE:	TABLE
WRC ENGINEERING, INC.	USDCM, DROCOG, 1969 (with modifications)	701

RUNOFF CURVE NUMBERS FOR URBAN AREAS[1]

Cover Type and Hydrologic Condition	Aver. % Impervious Area[2]	Runoff Curve Numbers: Soil Comp A	Soil Comp B	Soil Comp C	Soil Comp D
Fully developed urban area (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.)[3]					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50 to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only)[4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious only, no vegetation)[5]		77	86	91	94
Idle lands (CNs are determined using cover types similar to those Table 702 - 3 of 4)					

[1]Average runoff condition, and $I_a = 0.2S$

[2]The average percent impervious area shown was used to develop the composite CNs. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CNs for other combinations of conditions may be computed using figure 2-3 or 2-4 in TR-55 (SCS, 1986).

[3]CNs shown are equivalent to those of pasture. Composite CNs may be computed for other combinations of open space cover type.

[4]Composite CNs for natural desert landscaping should be computed using figure 2-3 or 2-4 in TR-55 (SCS, 1986) based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CNs are assumed equivalent to desert shrub in poor hydrologic condition.

[5]Composite CNs to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 in TR-55 (SCS, 1986) based on the degree of development (impervious area percentage) and the CNs for the newly graded pervious areas.

Appendix A Hydrologic Soil Groups

Soils are classified into hydrologic soil groups (HSG's) to indicate the minimum rate of infiltration obtained for bare soil after prolonged wetting. The HSG's, which are A, B, C, and D, are one element used in determining runoff curve numbers (see chapter 2). For the convenience of TR-55 users, exhibit A-1 lists the HSG classification of United States soils.

The infiltration rate is the rate at which water enters the soil at the soil surface. It is controlled by surface conditions. HSG also indicates the transmission rate—the rate at which the water moves within the soil. This rate is controlled by the soil profile. Approximate numerical ranges for transmission rates shown in the HSG definitions were first published by Musgrave (USDA 1955). The four groups are defined by SCS soil scientists as follows:

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sand or gravel and have a high rate of water transmission (greater than 0.30 in/hr).

Group B soils have moderate infiltration rates when thoroughly wetted and consist chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission (0.15-0.30 in/hr).

Group C soils have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine texture. These soils have a low rate of water transmission (0.05-0.15 in/hr).

Group D soils have high runoff potential. They have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very low rate of water transmission (0-0.05 in/hr).

In exhibit A-1, some of the listed soils have an added modifier; for example, "Abrazo, gravelly." This refers to a gravelly phase of the Abrazo series that is found in SCS soil map legends.

Disturbed soil profiles

As a result of urbanization, the soil profile may be considerably altered and the listed group classification may no longer apply. In these circumstances, use the following to determine HSG according to the texture of the new surface soil, provided that significant compaction has not occurred (Brakensiek and Rawls 1983).

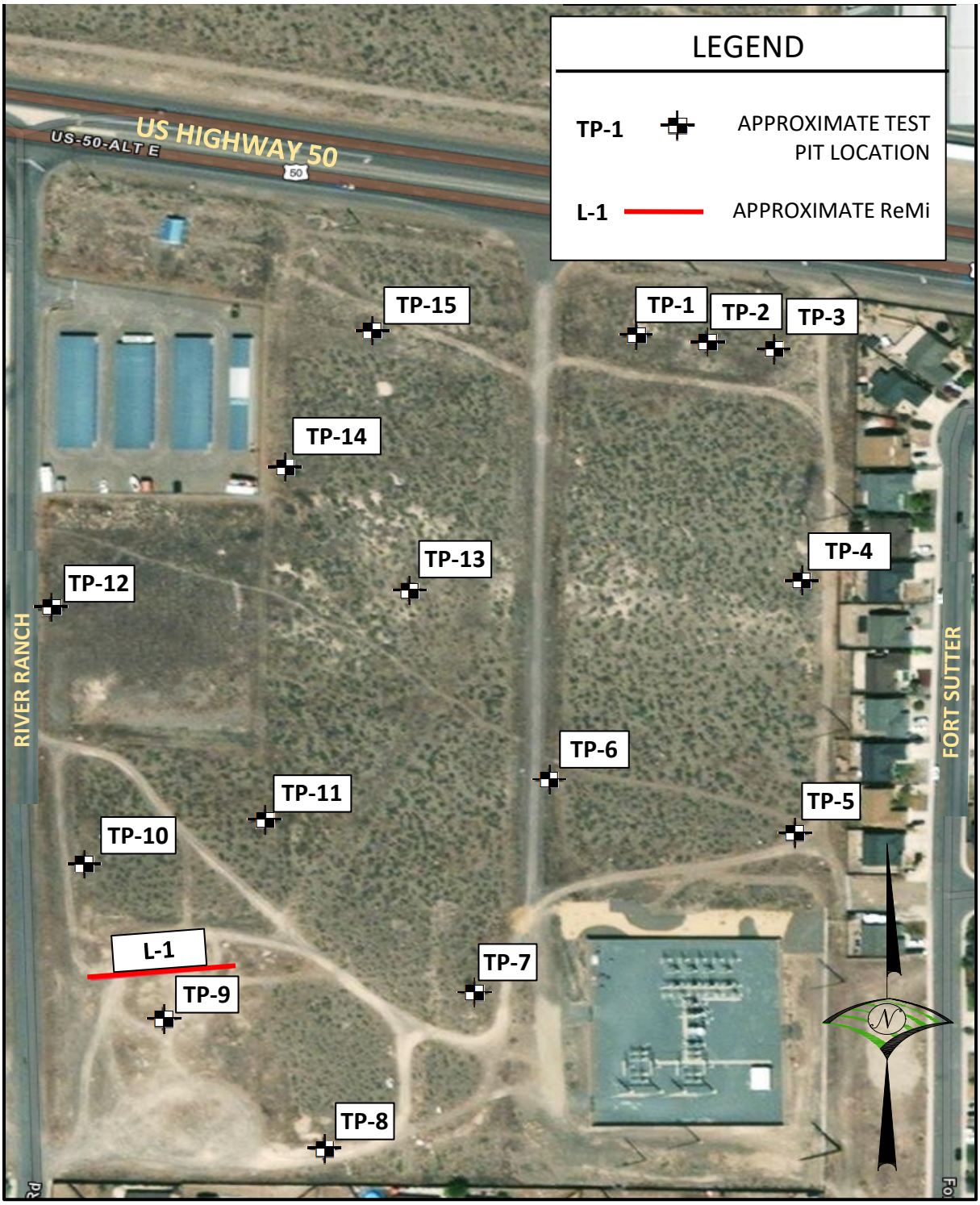
HSG	*Soil textures*
A	Sand, loamy sand, or sandy loam
B	Silt loam or loam
C	Sandy clay loam
D	Clay loam, silty clay loam, sandy clay, silty clay, or clay

Drainage and group D soils

Some soils in the list are in group D because of a high water table that creates a drainage problem. Once these soils are effectively drained, they are placed in a different group. For example, Ackerman soil is classified as A/D. This indicates that the drained Ackerman soil is in group A and the undrained soil is in group D.

APPENDIX C

TEST PIT LOGS & PERCOLATION TEST RESULTS



RIVER RANCH APARTMENTS	SITE PLAN & APPROXIMATE EXPLORATION LOCATIONS	FIGURE 3

TEST PIT NUMBER TP-1

Wood Rodgers

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments

PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada

DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4127 ft **TEST PIT SIZE** 24 inches

EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**

EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59946, -119.2092 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 1A									
		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 1B									
5		Medium dense	GB 1C									
		Silt seams	GB 1D									
		PERCOLATION TEST, sloughing	GB 1E					2.6				5.3
10												

Bottom of Test Pit at 10.0 Feet.

Soil Percolation Recorded Measurements

1.Depth to test : 8 ft

2.Time of 1st saturation to 12" 9:50 *Date :* 7/13/2022

If 12" of water drains from hole in 10 mins or less, refill to 12".

3.Time of 2nd saturation : 10:00

4.If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.

5.If either filling exceeds 10 mins to drain from hole,begin a 4-hr pre-soak.

Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022

Hole # : TP-1 *Diameter :* 8 in *Depth :* 12 in *Soil Type :* SP-SM

Reading	Time		Water Level (in)		Elapsed	Water
	Start	Finish	Start	Finish	Time min	Fall (in)
1	10:06	10:16	6	8 1/16	10	2 1/16
2	10:16	10:26	6	7 5/8	10	1 5/8
3	10:26	10:36	6	7 5/8	10	1 5/8
4	10:36	10:46	6	7 3/8	10	1 3/8
5	10:46	10:56	6	7 5/16	10	1 5/16
6	10:56	11:06	6	7 5/16	10	1 5/16

Stabilized Rate : 7.6 Min/inch *Tested by:* SB

Checked by : LL

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TEST PIT NUMBER TP-2

Wood Rodgers

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments

PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada

DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4129 ft **TEST PIT SIZE** 24 inches

EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**

EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59944, -119.2089 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		SANDY FAT CLAY, (CH) stiff, dry, yellowish brown, high plasticity										
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic	GB 2A									
		SILT, (ML) very stiff, slightly moist, olive yellow, low plasticity	GB 2B					21.7				94.1
5		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 2C									
		Medium dense	GB 2D									
		Loose, sloughing, PERCOLATION TEST										

Bottom of Test Pit at 9.5 Feet.

Soil Percolation Recorded Measurements

1.Depth to test : 8 ft

2.Time of 1st saturation to 12" 10:50 *Date :* 7/13/2022

If 12" of water drains from hole in 10 mins or less, refill to 12".

3.Time of 2nd saturation : 11:00

4.If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.

5.If either filling exceeds 10 mins to drain from hole,begin a 4-hr pre-soak.

Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022

Hole # : TP-2 *Diameter :* 8 in *Depth :* 12 in *Soil Type :* SP-SM

Reading	Time		Water Level		Elapsed	Water
	Start	Finish	Start	Finish	Time min	Fall (in)
1	10:10	10:20	6	8 7/16	10	2 7/16
2	10:20	10:30	6	8 1/4	10	2 1/4
3	10:30	10:40	6	8 1/8	10	2 1/8
4	10:40	10:50	6	8 1/8	10	2 1/8
5	10:50	11:00	6	8 1/16	10	2 1/16

Stabilized Rate : 4.8 Min/inch *Tested by:* SB

Checked by : LL

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TEST PIT NUMBER TP-3

Wood Rodgers

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments

PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada

DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4128 ft **TEST PIT SIZE** 24 inches

EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**

EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED

NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.2086 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		SANDY FAT CLAY, (CH) stiff, dry, yellowish brown, high plasticity	GB 3A									
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic										
		SILT, (ML) stiff, slightly moist, yellowish brown, low plasticity										
		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 3B									
5		Sloughing	GB 3C									

Bottom of Test Pit at 7.5 Feet.

Soil Percolation Recorded Measurements

1.Depth to test : *8 ft*

2.Time of 1st saturation to 12" *11:45* *Date :* *7/13/2022*

If 12" of water drains from hole in 10 mins or less, refill to 12".

3.Time of 2nd saturation : *11:55*

4.If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.

5.If either filling exceeds 10 mins to drain from hole,begin a 4-hr pre-soak.

Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022

Hole # : *TP-3* *Diameter :* *8 in* *Depth :* *12 in* *Soil Type :* SP-SM

Reading	Time		Water Level		Elapsed	Water
	Start	Finish	Start	Finish	Time min	Fall (in)
1			6	9 9/16	5	
2			6	9 7/16	5	
3			6	9 3/8	5	
4			6	9 5/16	5	
5			6	9 5/16	5	
6			6	9 1/4	5	
7			6	9 1/4	5	
8			6	9 1/4	5	
9			6	9 1/4	5	

Stabilized Rate : 1.5 Min/inch*

***Rate may be due to test performed in sloughed soils**

Tested by: SB

Checked by : LL

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Wood Rodgers

TEST PIT NUMBER TP-4

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4133 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59857, -119.2085 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic	GB 4A			70			NP	NP	NP	
2.5			GB 4B									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 4C									
7.5		SILT, (ML) very stiff, dry, olive yellow, low plasticity										
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-5

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4142 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.2086 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		CLAYEY GRAVEL WITH SAND, (GC) medium dense, dry, yellowish brown, medium plasticity	GB 5A									
2.5		Dense, slightly moist	GB 5B					10.7	51	26	25	12.8
5.0			GB 5C									
7.5			GB 5D									
10.0		Bottom of Test Pit at 10.0 Feet.										

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\06 GINT\RIVER RANCH APARTMENTS.GPJ

Wood Rodgers

TEST PIT NUMBER TP-6

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4144 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59784, -119.2095 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FAT CLAY WITH SAND, (CH) stiff, dry, olive brown, high plasticity	GB 6A									
2.5		CLAYEY SAND WITH GRAVEL, (SC) dense, slightly moist, yellowish brown, high plasticity Rootlets	GB 6B									
5.0			GB 6C					13.2	51	22	29	25.7
7.5												
10.0			GB 6D									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\06 GINT\RIVER RANCH APARTMENTS.GPJ

Wood Rodgers

TEST PIT NUMBER TP-7

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4160 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59706, -119.2098 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FAT CLAY WITH SAND, (CH) stiff, dry, olive brown, high plasticity, rootlets	GB 7A									
		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity										
2.5			GB 7B									
5.0		Slightly moist	GB 7C					14.7	41	26	15	79.8
7.5		CLAYEY SAND WITH GRAVEL, (SC) dense, dry, yellowish brown, high plasticity	GB 7D									
		SILT WITH GRAVEL, (ML) stiff, dry, yellowish brown, low plasticity	GB 7E									
10.0		Bottom of Test Pit at 10.0 Feet.										

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\06 GINT\RIVER RANCH APARTMENTS.GPJ

Wood Rodgers

TEST PIT NUMBER TP-8

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22
GROUND ELEVATION 4161 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.2086 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity	GB 8A									
2.5			GB 8B					6.3	23	13	10	31.1
		SILT WITH SAND, (ML) stiff, dry, olive yellow, low plasticity										
5.0		Yellowish brown	GB 8C									
7.5		POORLY GRADED SAND WITH SILT, (SP-SM) dense, dry, light brownish gray, non plastic	GB 8D									
10.0		Bottom of Test Pit at 10.0 Feet.										

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\06 GINT\RIVER RANCH APARTMENTS.GPJ

Wood Rodgers

TEST PIT NUMBER TP-9

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4162 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59696, -119.2111 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity, construction debris	GB 9A									
2.5		SILTY SAND, (SM) medium dense, dry, yellowish brown, low plasticity, rootlets	GB 9B									
5.0		Dense, olive yellow	GB 9C									
7.5		Slightly moist	GB 9D					15.4	31	24	7	38.0
10.0			GB 9E									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GEOTECH\06 GINT\RIVER RANCH APARTMENTS.GPJ

Wood Rodgers

TEST PIT NUMBER TP-10

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4153 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59753, -119.2114 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity, construction debris	GB 10A									
2.5		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 10B									
5.0		Very stiff	GB 10C									
7.5		SILT WITH GRAVEL, (ML) very stiff, slightly moist, olive yellow, non plastic	GB 10D									
10.0		Bottom of Test Pit at 10.0 Feet.										

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\06 GINT\RIVER RANCH APARTMENTS.GPJ

Wood Rodgers

TEST PIT NUMBER TP-11

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4149 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59769, -119.2106 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) loose, dry, yellowish brown, non plastic	GB 11A									
2.5		Silt seam										
		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 11B									
5.0			GB 11C									
7.5		POORLY GRADED SAND WITH GRAVEL, (SP) medium dense, dry, light brownish gray to olive brown, non plastic	GB 11D									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-12

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4135 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59845, -119.2115 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILT WITH GRAVEL, (ML) stiff, dry, yellowish brown, medium plasticity	GB 12A									
		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 12B									
2.5		SILTY SAND, (SM) medium dense, dry, yellowish brown, low plasticity	GB 12C									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 12D									
7.5		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 12E									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-13

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4135 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59853, -119.2104 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 13A									
2.5		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 13B									
5.0		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 13C									
7.5		Slightly moist	GB 13D									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-14

CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4133 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59899, -119.2106 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) medium dense, dry, yellowish brown, non plastic	GB 14A									
2.5		Low plasticity, silt seam	GB 14B									
5.0		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 14C									
7.5		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 14D									
10.0		Bottom of Test Pit at 10.0 Feet.										

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Wood Rodgers

TEST PIT NUMBER TP-15

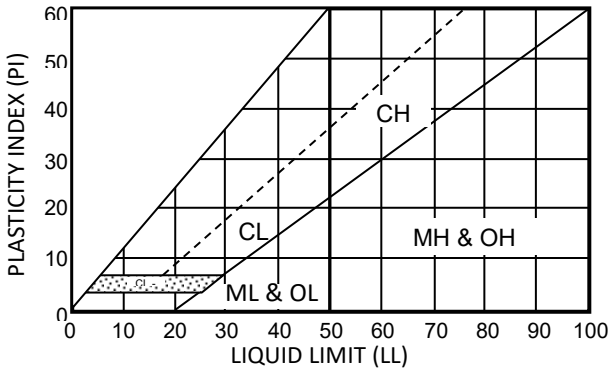
CLIENT ERGS, Inc.
PROJECT NAME River Ranch Apartments
PROJECT NUMBER 3034059
PROJECT LOCATION Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22
GROUND ELEVATION 4131 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction
GROUND WATER LEVELS:
EXCAVATION METHOD Backhoe
AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal
AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59949, -119.2102 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 15A									
2.5		SILT WITH SAND, (ML) very stiff, dry, yellowish brown, medium plasticity	GB 15B									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 15C									
		Sloughing										

Bottom of Test Pit at 7.0 Feet.

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MAJOR DIVISION				TYPICAL NAMES	
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	**GRAVEL** MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES		GW	WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
				GP	POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 12% FINES		GM	SILTY GRAVELS, SILTY GRAVELS WITH SAND
				GC	CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SAND MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES		SW	WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
				SP	POORLY GRADED SAND WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES		SM	SILTY SANDS WITH OR WITHOUT GRAVEL
				SC	CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	**SILT AND CLAY** LIQUID LIMIT 50% OR LESS			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
				OL	ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILT AND CLAY LIQUID LIMIT GREATER THAN 50%			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOLID, ELASTIC SILTS
				CH	INORGANIC CLAYS OR HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC SILTS OR CLAYS MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT AND OTHER HIGHLY ORGANIC SOILS



CONSISTENCY		RELATIVE DENSITY	
SILTS & CLAYS	SPT BLOW* COUNTS (N)	SANDS & GRAVELS	SPT BLOW* COUNTS (N)
VERY SOFT	0 - 2	VERY LOOSE	0 - 4
SOFT	3 - 4	LOOSE	5 - 10
MEDIUM STIFF	5 - 8	MD DENSE	11 - 30
STIFF	9 - 15	DENSE	31 - 50
VERY STIFF	16 - 30	VERY DENSE	50 +
HARD	30 +		

* The Standard Penetration Resistance (N) In blows per foot is obtained by the ASTM D1585 procedure using 2" O.D., 1 3/8" I.D. samplers.

PLASTICITY DESCRIPTIONS			
DESCRIPTION	RANGE	DESCRIPTION	RANGE
NONPLASTIC	<5	MEDIUM	10-20
LOW	< 10	MEDIUM-HIGH	15 - 25
LOW-MEDIUM	5 - 15	HIGH	>25

DESCRIPTION OF ESTIMATED PERCENTAGES OF GRAVEL, SAND, AND FINES	
TRACE	Particles are present but est. < 5%
FEW	5% - 10%
LITTLE	15% - 20%
SOME	30% - 45%
MOSTLY	50% - 100%

DEFINITIONS OF SOIL FRACTIONS	
SOIL COMPONENT	PARTICLE SIZE RANGE
BOULDERS	> 12 INCHES
COBBLES	3 to 12 Inches
GRAVEL	3 IN. TO NO. 4 SIEVE
COARSE GRAVEL	3 IN. TO 3/4 IN.
FINE GRAVEL	3/4 IN. TO NO. 4 SIEVE
SAND	NO. 4 TO NO. 200
COARSE SAND	NO. 4 TO NO. 10
MEDIUM SAND	NO. 10 TO NO. 40
FINE SAND	NO. 40 TO NO. 200
FINES (SILT OR CLAY)	MINUS NO. 200 SIEVE

NOTE: Percentages are presented within soil description for soil horizon with laboratory tested soil samples.

RIVER RANCH APARTMENTS	UNIFIED SOIL CLASSIFICATION AND KEY TO SOIL DESCRIPTIONS	B-2

PRELIMINARY SANITARY SEWER REPORT

FOR THE

RIVER RANCH APARTMENTS
CONDITIONAL USE PERMIT

FERNLEY, NEVADA

Prepared for:

ERGS, INC.
9345 Lemmon Drive
Reno, Nevada 89506
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SEPTEMBER 13, 2022

Prepared by:

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Evan Nikirk, P.E.
Associate



WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME

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APPENDIX A – EXHIBITS

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1 INTRODUCTION

This report describes existing sanitary sewer conditions and provides an estimate of sewage flows anticipated from the proposed River Ranch apartment complex in Fernley, Nevada. The report has been prepared in support of the Conditional Use Permit and proposed site development, which will consist of 320 apartments in 40 buildings on a network of 26-foot-wide drive aisles with curb, gutter, sidewalk, utility infrastructure, and a storm water retention pond.

The following sections summarize the design criteria, general flow analysis, and preliminary design of sewer facilities proposed to serve the multi-family residences, which will connect to existing City infrastructure at the TMAI Lift Station on Inglewood Drive. The proposed sewer system, as described below, is consistent with Chapter 8 of the *City of Fernley Department of Public Works Design Standards and Review Guidelines for Streets, Potable Water, Sewer, Storm Drains & Alternative Water (Design Standards)*, dated May 2008 (Fernley, 2008a).

The proposed project is located within the City's Rolling Meadows Contributory Area, as delineated in Figure 14 from the unpublished 2009 Sewer Master Plan Update (TRC, 2009). Domestic sewage from the River Ranch apartment complex will be collected by newly-constructed sewer laterals and gravity mains, which will extend off-site under Frontage Road adjacent to U.S. Highway 50A for connection to the existing TMAI Lift Station on Inglewood Drive. The recently-constructed lift station routes flows via force main up Inglewood Drive, then west for discharge to a gravity manhole in Wagon Wheel Lane. Sewage flows within the Rolling Meadows Contributory Area gravity drain to the Rolling Meadows Lift Station, which pumps to the Farm District Road Lift Station for discharge into the South Fernley Interceptor and East Lift Station for treatment at the East Wastewater Treatment Plant.

2 PROJECT BACKGROUND

The River Ranch apartment project will be a multi-family residential complex created from two existing parcels, which will be modified by two boundary line adjustments (BLAs), in central Fernley, as shown on the Vicinity Map enclosed in Appendix A. The existing parcels, designated by Lyon County as Assessor's Parcel Numbers (APNs) 021-281-03 and -10, are undeveloped.

2.1 Site Location

The project parcels are located at 501 River Ranch Road (APN 021-281-03) and 1855 U.S. Highway 50A (APN 021-281-10). The site is bounded by River Ranch Road to the west, U.S. Highway 50A to the north, single-family residences in the Donner Trails Estates subdivision on its eastern border, and single-family residences in the River Ranch subdivision on its southern boundary. A NV Energy substation is located on a parcel (APN 021-281-09) at the southeast corner of the project, and an existing self-storage warehouse business is located on a parcel (APN 021-281-04) at the northwest corner of the site. According to the

Public Land Survey System, the site is situated within the southeast quarter of Section 18, Township 20 North, Range 25 East, Mount Diablo Meridian (SE1/4, Sec. 18, T.20 N., R.25 E., M.D.M.). The centroid of the site is approximately located at latitude 39.5982°N, longitude -119.2096°W.

2.2 Existing Conditions

The combined adjusted parcels comprise a net project area (i.e., less proposed River Ranch Road right-of-way) of 20.104 acres, as shown in the "Parcel Areas" exhibit included in Appendix A. The project site is currently undeveloped. High-voltage power poles and backyard wood fencing from the adjacent Donner Trails Estates subdivision border the eastern boundary, and backyard wood fencing and a segmental block retaining wall on lots in the adjacent River Ranch subdivision border the south boundary. The project site is bisected by a 50-foot-wide north-south access easement with gravel road from U.S. Highway 50A to the NV Energy substation. Existing terrain slopes from south to north at an overall average rate of 2.5 percent, with relatively flat areas in the southern and northern thirds of the site separated by a 6.0 percent slope in the middle third. Elevations range from highs between 4156 feet to 4164 feet along the south property line to lows between 4127 feet and 4132 feet at the highway right-of-way on the north boundary.

A public gravity sewer system is not available adjacent to the project in River Ranch Road, though there is a dedicated sewer force main from the Pioneer Crossing Casino. The point of connection to the City's sanitary sewer system will be off-site at an existing manhole in Inglewood Drive adjacent to the TMAI Lift Station. This manhole represents the closest point of the City's gravity sewer system to the project's low point. The TMAI Lift Station is part of a network that ultimately drains to the South Fernley Interceptor west of the project site, with flows ultimately reaching the East Lift Station and East Wastewater Treatment Plant. The TMAI sewershed serves development in the vicinity of The Meadows at Inglewood (TMAI) commercial complex, including the proposed River Ranch apartment complex, as shown in the modified Summit Engineering exhibit (Summit, 2018) included in Appendix A. This sewershed is a sub-unit of the larger Rolling Meadows Contributory Area, shown in Figure 14 from the City's unpublished Sewer Master Plan Update (TRC, 2008).

3 PROJECT DESCRIPTION

The owner proposes to construct a network of paved drive aisles with parking, curb and gutter, sidewalk, and utility infrastructure for 40 apartment buildings comprising 320 dwelling units. The complex will also include an office / clubhouse, a maintenance building, amenities, landscaped areas, and a storm water retention pond at the northeast corner of the site. There will be four styles of apartment buildings, each of which contains eight units, with sizes ranging from one-bedroom to three-bedroom floor plans. The general layout of the development and its sewer infrastructure is shown on the "Preliminary Sanitary Sewer Exhibit," enclosed in Appendix A. Four-inch-diameter PVC SDR35 sewer laterals will be installed to serve each building; the laterals will connect to a new 8-inch-diameter sewer main constructed in the drive aisles. The gravity mains will sewer to the north, then connect to the City's TMAI Lift Station west of

the project. The off-site sewer extension will be constructed within the U.S. Highway50A right-of-way by permit from the State of Nevada Department of Transportation.

Site infrastructure will include 26-foot-wide paved drive aisles with curb, gutter, sidewalk, pedestrian ramps, storm drain facilities, water and sewer systems extended from the City's existing networks, and dry utilities (i.e., power, telephone, cable television). The site entrance will connect with River Ranch Road directly across from the unnamed connector street currently being constructed as part of The Meadows at Inglewood development. Emergency access connections will be made at two locations: River Ranch Road at the southwest corner of the site and Ellice Way on the eastern boundary adjacent to the NV Energy substation. In general, on-site sewage will gravity flow north to the low end of the site adjacent to U.S. Highway 50A, then west to the TMAI Lift Station, and ultimately to the South Fernley Interceptor, East Lift Station, and East Wastewater Treatment Plant. A preliminary analysis and model of apartment complex flows was completed in a discovery performed by Shaw Engineering (Shaw, 2022) on behalf of the City of Fernley. The discovery indicates the City's system has the capacity to serve the project, but the TMAI Lift Station will require upgrades. A copy of the discovery letter with pre- and post-development model results is enclosed in Appendix B of this report.

4 TRIBUTARY AREAS

The project is located within the City's Rolling Meadows Contributory Area, at the northeast corner of the sewershed, with no tributary flows upstream from the site. The project area is shown within the sewershed in modified figures included in Appendix A. As noted above, the point of connection represents the manhole nearest to the project's low point. Residential and commercial development within the TMAI Sewershed and Rolling Meadows Contributary Area currently flow to the South Fernley Interceptor, which is ultimately processed by the East Wastewater Treatment Plant. This facility takes wastewater flows from several interceptors and lift stations throughout the City.

Per the *City of Fernley Public Works Design Standards,* the downstream tributary areas were analyzed to verify adequate sewer pipe capacities within the City's existing sewer network. The discovery by Shaw Engineering (Shaw, 2022) includes figures and pre- and post-development model flows routed through the City's network, with sewer main identification, diameter, slope, and flow for each segment. The discovery includes an analysis of downstream flows and project impact on the sewershed as a result of the proposed apartment complex. A copy of the discovery is attached as Appendix B.

A copy of Figure 14 from the City's unpublished Sewer Master Plan Update (TRC, 2009) is enclosed in Appendix A to show sewershed boundaries; the figure has been modified to indicate the proposed project area. The figure identifies existing parcels and sewer main sizes, as well as the total residential and commercial Equivalent Residential Connections (ERCs) anticipated within the contributary area at full build-out (i.e., 915 residential ERCs, 113 commercial ERCs). However, these estimates are out of date.

5 PROPOSED CONDITIONS

On-site sewer laterals, mains, and manholes will be privately-owned and maintained by the apartment complex owner. Off-site sewer mains and manholes will be dedicated to the City of Fernley. Wastewater generated by apartment complex residents will be collected by 8-inch-diameter sewer mains, which will gravity-drain to the north project boundary, as described above. The proposed project layout and associated sewer network are shown on the exhibit, "Preliminary Sanitary Sewer Exhibit," in Appendix A.

The proposed on-site and off-site sanitary sewer system constructed for the River Ranch Apartment complex will conform with design standards specified in Chapter 8 of the *City of Fernley Department of Public Works Design Standards and Review Guidelines* (Fernley, 2008a) and with the *City of Fernley Standard Details for Public Works Construction* (Fernley, 2008b). Gravity sewer mains will be 8-inch-diameter PVC SDR35 sewer pipe installed under drive aisles. At the upper end of a given sewer trunk, two apartment buildings comprising a total of 16 dwelling units will connect to the adjacent main set at a 1.00 percent slope. Downstream mains may be set as flat as 0.40 percent to 0.60 percent, depending on how many units contribute to it. These flowline slopes are consistent with minimums specified in Table 8.1 of the *Design Standards* for an 8-inch-diameter main serving up to 10 dwelling units (1.0 percent), between 10 to 20 dwelling units (0.6 percent), and more than 20 units (0.40 percent). Each building will drain via 4-inch-diameter PVC SDR35 sewer lateral connected to the adjacent sewer main. Minimum clearances will be maintained over the sewer mains and over the laterals at the curb. No non-domestic waste will be introduced into the City's sanitary sewer system from the proposed project.

As specified in Chapter 8 of the *Design Standards*, the on-site sewer system will be designed to satisfy the minimum flow velocity of 2 feet per second (fps) at half-full capacity, and a maximum velocity of 10 fps, with a Manning's roughness coefficient ("n") of 0.012 used for pipe hydraulic calculations. Further, all sanitary sewer mains within the proposed development are designed to carry the calculated peak flow at no more than three-quarters full (0.75D).

5 HYDRAULIC ANALYSIS

This report evaluates the predicted sewage contribution from the River Ranch Apartment complex to the City's existing sewer system. The average daily flows expected for the project are calculated using a sewage generation rate of 345 gallons per dwelling unit per day, as specified by the *Design Standards* for an 8-inch-diameter main. This results in an average flow rate of **110,400 gallons per day (gpd)**. For the Peak Hourly Flow, a peaking factor of 3.0 is applied. The estimated peak flow rate collected by the subdivision's single 8-inch-diameter gravity sewer main is calculated as:

Peak Flow Rate = (3.0 peaking factor) x (320 residences) x (345 gal. / residence / day) = **331,200 GPD**

The shallowest pipe slope within the on-site network could be 0.4 percent for an 8-inch-diameter PVC SDR35 sewer main. Hydraulic calculations were performed using the computer software FlowMaster® V8i by Bentley Systems (Watertown, CT) to determine flow characteristics at pipe capacity (0.75D) and, by extension, this information was used to evaluate compliance within the sewer system. At three-quarters full an 8-inch pipe set at 0.4 percent slope has a flow rate of 487,939 gpd, which far exceeds the anticipated peak flow from the project. By definition, the capacities of an 8-inch pipe set at slopes steeper than 0.4 percent will have greater capacity. Hydraulic calculations were also performed for a half-full 8-inch pipe set at 0.4 percent to verify compliance with the minimum velocity of 2.0 fps; this condition will result in a flow velocity of 2.4 fps; mains set at slopes over 0.4 percent will exceed this velocity. Detailed calculations are provided in Appendix C.

6 CONCLUSIONS

The proposed sanitary sewer system described in this report has been designed to meet the City's design criteria and adequately serve the residents of the River Ranch apartment complex. Exhibits showing the site location, existing conditions, the general site layout, and the proposed sewer system for the project are included in Appendix A. The project's gravity mains will discharge into an existing sanitary sewer manhole on Inglewood Drive adjacent to the TMAI Lift Station, which ultimately drains to the South Fernley Interceptor located west of the project. Based on data presented in unpublished 2009 Sewer Master Plan Update (TRC, 2009), the interceptor was designed to have sufficient capacity to manage the additional flows, which ultimately discharge into the City's East Wastewater Treatment Plant.

7 REFERENCES

Fernley, 2008a. *City of Fernley Department of Public Works Design Standards and Review Guidelines for Streets, Potable Water, Sewer, Storm Drains & Alternative Water*, published by the City of Fernley Department of Public Works, Fernley, Nevada, May 2008. http://www.cityoffernley.org/DocumentCenter/Index/279.

Fernley, 2008b. *City of Fernley Standard Details for Public Works Construction*, published by the City of Fernley Department of Public Works, Fernley, Nevada, July 15, 2008. http://www.cityoffernley.org/DocumentCenter/View/2009.

Shaw, 2022. *501 River Ranch Road Sewer Discovery*, unpublished letter report prepared by Shaw Engineering, Inc. for the City of Fernley Engineering Department, Shaw Engineering, Inc., Reno, Nevada, September 13, 2022.

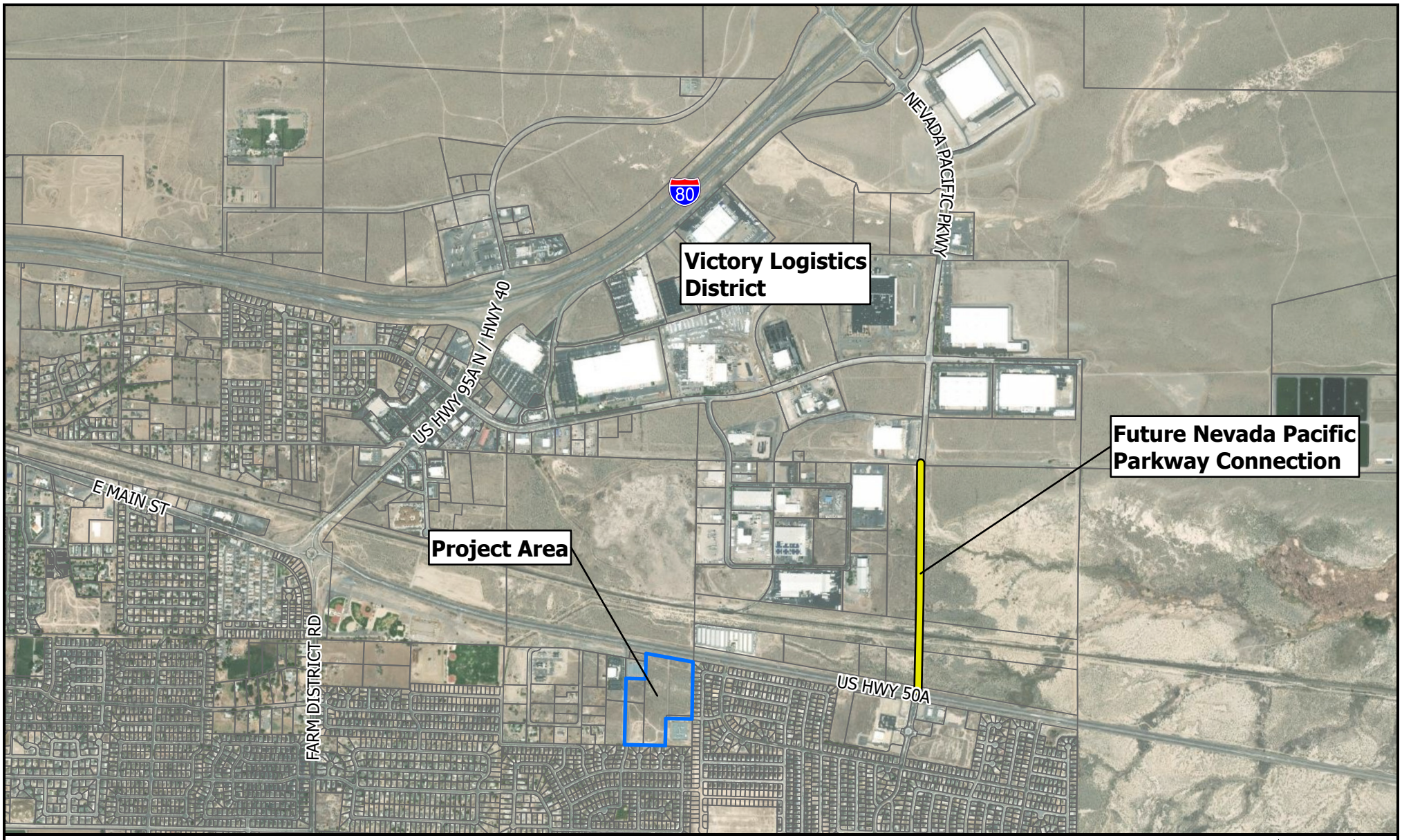
Summit, 2018. *Sanitary Sewer Report for TMAI Phase 1*, unpublished report prepared by Summit Engineering Corp. for the City of Fernley Engineering Department, Summit Engineering Corp., Reno, Nevada, April, 2018.

TRC, 2009. *Sewer Master Plan Update*, unpublished report prepared by TRC Engineers for the City of Fernley Department of Public Works, TRC Engineers, Inc., Reno, Nevada, February 2009.

APPENDIX A

EXHIBITS

- VICINITY MAP
- AERIAL MAP
- SEWERSHED (FIGURE 14, 2009 SEWER MASTER PLAN)
- TMAI LIFT STATON SEWERSHED
- PROJECT PARCELS
- EXISTING CONDITIONS
- PRELIMINARY SANITARY SEWER EXHIBIT



VICINITY MAP

RIVER RANCH APARTMENTS

FERNLEY, NV

SEPTEMBER 2022

Future Nevada Pacific Parkway

BLA_Project_Boundary

0 500 1,000 2,000

Feet

NORTH

WOOD RODGERS

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Aerial Map

River Ranch Apartments ZMA/CUP

September 2022

0 180 360
FEET

WOOD RODGERS
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1361 Corporate Boulevard
Reno, NV 89502
Tel: 775.823.4068
Fax: 775.823.4066

CITY OF FERNLEY

ROLLING MEADOWS CONTRIBUTORY AREA

FIGURE 14

OUT OF TOWN PARK (FAIRGROUNDS)

US HWY 50 ALT

SOUTHERN PACIFIC

TMAI LIFT STA.

ROLLING MEADOWS CONTRIBUTORY AREA
915 ERC RES., 158 AC.
113 ERC COM., 28 AC.

QUIGLEY
223 UNITS

MH 850
FARM DISTRICT LIFT STATION

MH 955
ROLLING MEADOWS LIFT

MEADOWS AVENUE

ROUND UP RD

RIVER RANCH PARK

REESE RIVER RD

BRANDING CT

CLOVERLAND PARK

COUNTRY VIEW CT

ERICA LN

ANDY WY

CHANTEL CT

VISTA MOON CT

HENSON LN

CLOVER LN N

JIMMYS PEAK CT

EMERSON CIR

GRAPHIC SCALE
250 0 250 500
(IN FEET)
1 inch = 500 ft.

LEGEND

- AREA LIMITS
- IDENTIFIED DEVELOPMENT
- 4" SEWER LINE
- 6" SANITARY SEWER LINE
- 8" SANITARY SEWER LINE
- 10" SANITARY SEWER LINE
- 12" SANITARY SEWER LINE
- 14" SANITARY SEWER LINE
- 16" SANITARY SEWER LINE
- 18" SANITARY SEWER LINE
- SANITARY SEWER FORCE MAIN

NOTE:
ERC AND ACREAGE SHOWN ARE FOR ULTIMATE BUILD OUT CONDITIONS

TRC
4875 LONGLEY LANE, SUITE 100 • RENO, NEVADA 89502 • (775) 322-3064

PROPOSED SS LIFT STATION
PROPOSED SS FORCE MAIN
TMAI PROJECT
FRONTAGE RD.
CONCEPTUAL FUTURE GRAVITY SEWER
SEWER SHED BOUNDARY
N
1" = 200'
APN 20-342-20
4.03 ACRES
ZONE: C2
Q(P)=9,430 GPD
APN 20-341-10
7.54 ACRES
ZONE: C2
Q(P)=17,644 GPD
APN 20-342-10
2.35 ACRES
ZONE: C2
Q(P)=5,499 GPD
APN 20-342-11
1.27 ACRES
ZONE: C2
Q(P)=2,972 GPD
APN 21-281-11
0.63 ACRES
ZONE: ME
Q(P)=1,474 GPD
SEWER SHED BOUNDARY
CONCEPTUAL FUTURE GRAVITY SEWER
APN 21-281-01
3.67 ACRES
ZONE: C2
Q(P)=8,588 GPD
RIVER RANCH RD
APN 21-281-04
3.67 ACRES
ZONE: C2
Q(P)=8,588 GPD
APN 21-281-10
14.68 ACRES
ZONE: M1
Q(P)=34,351 GPD
FORT SUTTER BLVD
APN 20-342-02
2 ACRES
ZONE: RR2
Q(P)=1,035 GPD
PROPOSED SS FORCE MAIN
APN 20-341-06
1.00 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-341-05
2.00 ACRES
ZONE: RR2
Q(P)=1,035 GPD
APN 20-341-07
1.00 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-342-09
2.00 ACRES
ZONE: RR2
Q(P)=1,035 GPD
COUNTRY HOLLOW DR.
INGLEWOOD DR.
CONNECTION TO EX. PUBLIC GRAVITY SEWER
WAGON WHEEL LN.
PROPOSED SS FORCE MAIN
APN 20-342-03
1.98 ACRES
ZONE: RR2
Q(P)=1,035 GPD
APN 20-341-04
2.00 ACRES
ZONE: RR2
Q(P)=1,035 GPD
APN 20-341-08
1.00 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-341-09
1.00 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-342-19
1.00 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-342-18
1.00 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 21-281-02
3.67 ACRES
ZONE: ME
Q(P)=8,588 GPD
CONCEPTUAL FUTURE GRAVITY SEWER
SEWER SHED BOUNDARY
APN 21-281-03
3.67 ACRES
ZONE: C2
Q(P)=8,588 GPD
APN 21-281-09
3.55 ACRES
ZONE: M1
Q(P)=8,307 GPD
ELLICE WAY
APN 20-342-04
2.02 ACRES
ZONE: RR2
Q(P)=1,035 GPD
APN 20-342-12
1.04 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-342-13
1.04 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-342-14
1.03 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-342-15
1.03 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-342-16
1.00 ACRES
ZONE: RR1
Q(P)=1,035 GPD
APN 20-342-17
1.03 ACRES
ZONE: RR1
Q(P)=1,035 GPD
WRANGLER LN.

SUMMIT ENGINEERING CORPORATION™
5405 MAE ANNE AVENUE, RENO, NV, 89523 PHONE: (775) 747-8550 FAX: (775) 747-8559

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TMAI PHASE 1
SANITARY SEWER REPORT
SEWERSHED

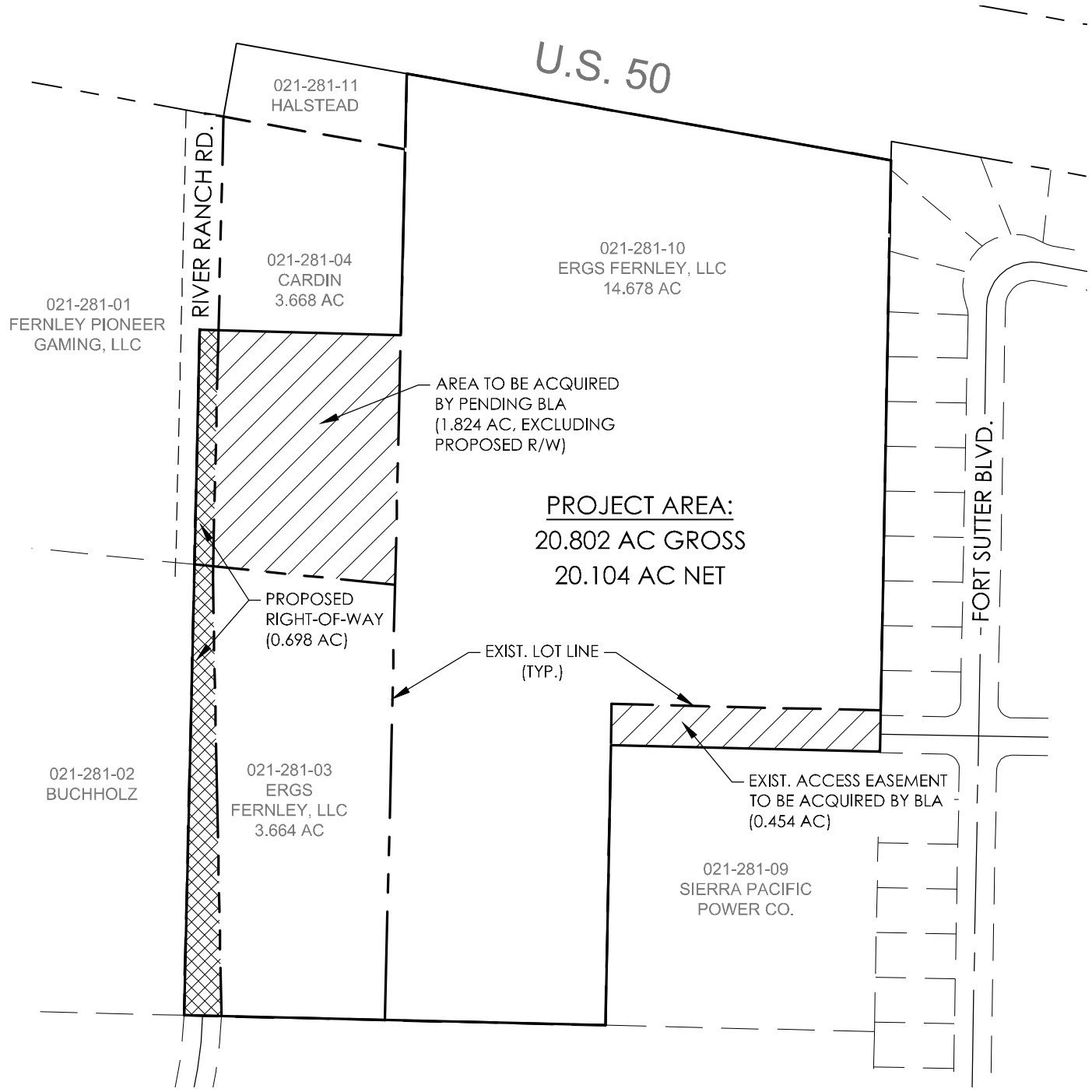
SHEET 1 OF 1

ZMA / CUP FOR RIVER RANCH APARTMENTS

PARCEL AREAS

FERNLEY, NEVADA

SEPTEMBER 2022



NORTH

SCALE: 1"=200'

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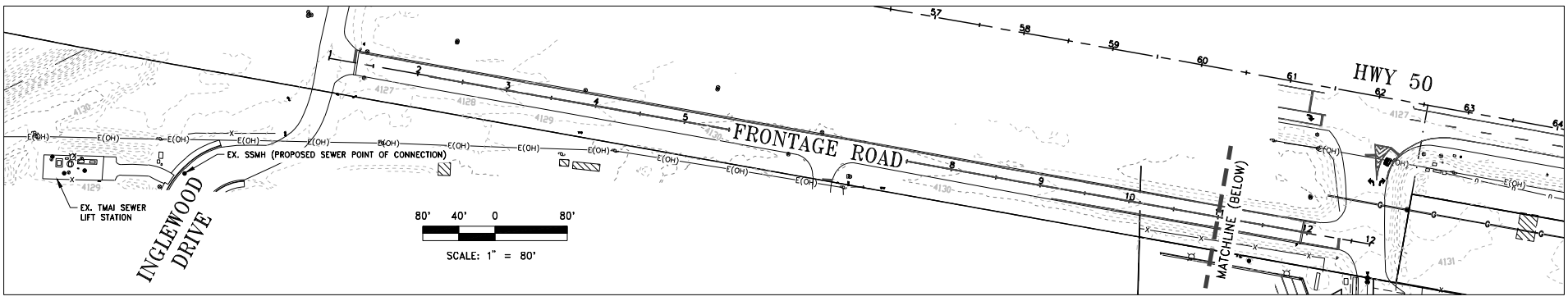
RIVER RANCH APARTMENTS

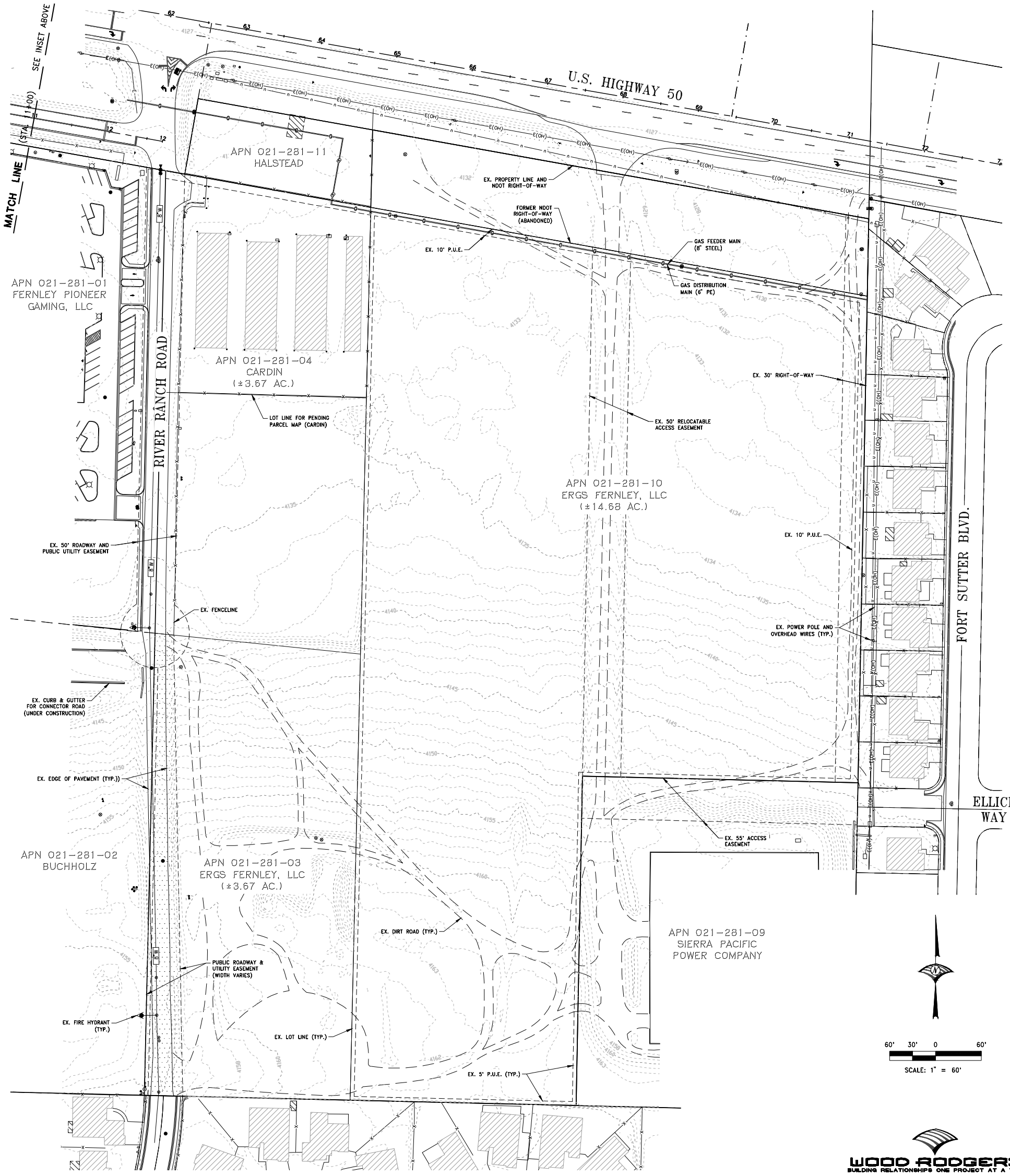
EXISTING CONDITIONS

ERGS, INC.

FERNLEY **NEVADA**

AUGUST 29, 2022



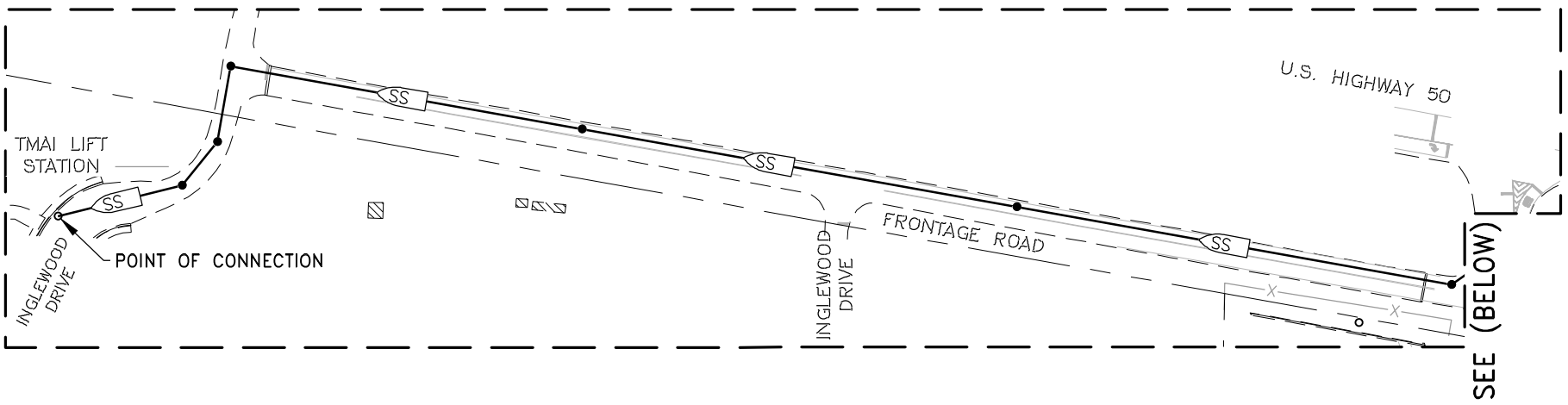


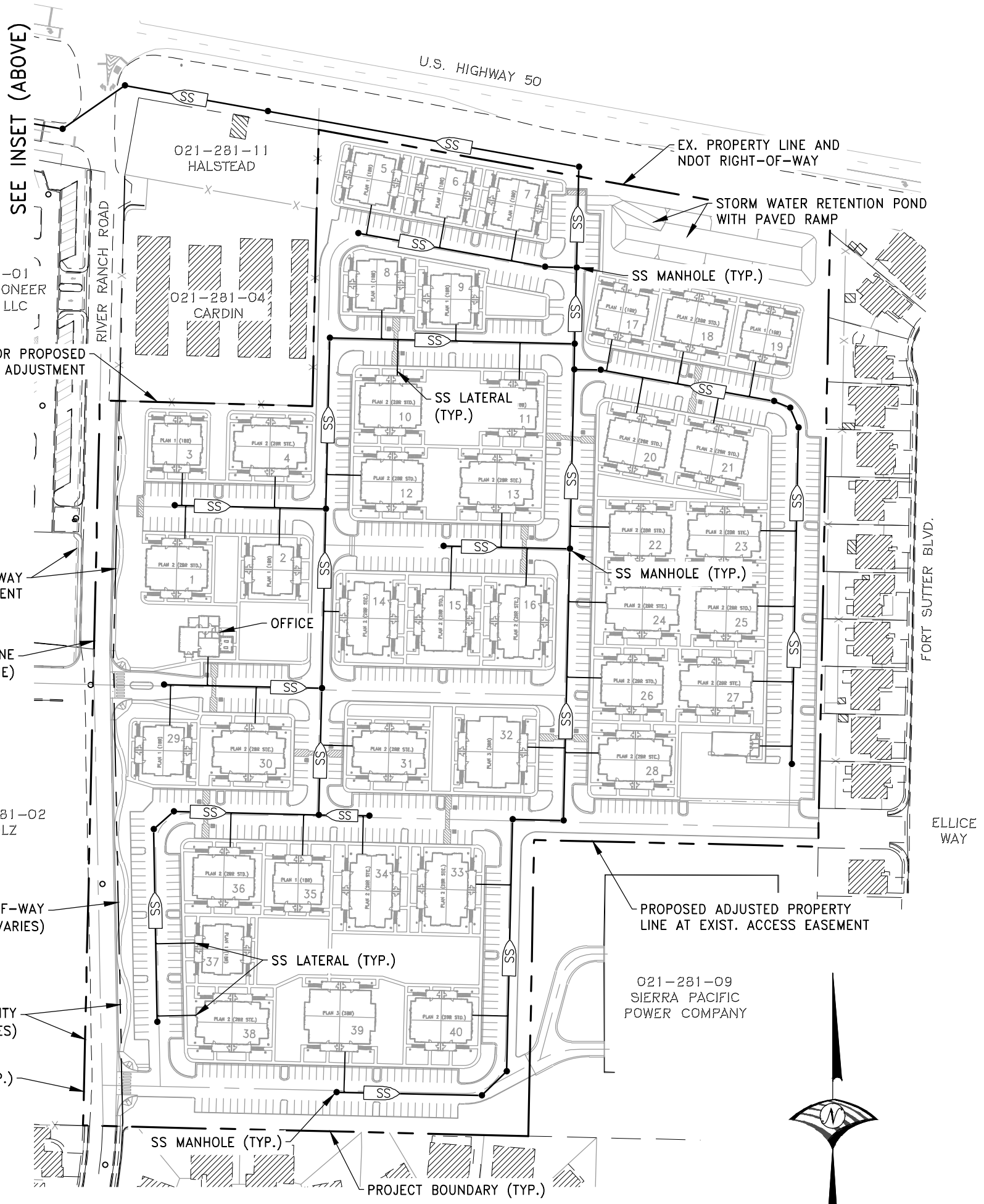
NOTE: BASE SURVEY AND TOPOGRAPHY PREPARED BY WOOD RODGERS, INC. (RENO). DATE OF PHOTOGRAPHY: JUNE 30, 2022.

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Reno, NV 89502 Fax 775.823.4066

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PRELIMINARY SANITARY SEWER EXHIBIT
RIVER RANCH APARTMENTS
ERGS FERNLEY, LLC
FERNLEY, NEVADA
SEPTEMBER, 2022





150' 75' 0 150'

SCALE: 1" = 150'

WOOD RODGERS
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Tel 775.823.4068 Fax 775.823.4066

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APPENDIX B

SEWER DISCOVERY FOR RIVER RANCH APARTMENTS

SHAW ENGINEERING

TO: Derek Starkey, P.E. **DATE:** September 13, 2022

FROM: Cody Black, P.E.

RE: **501 River Ranch Road Sewer Discovery CoF W&S2022.06.24**

Summary:

The applicant has proposed the residential development and construction of 8 multi-family residential buildings composed of 320 units on 3 parcels. The existing City of Fernley sewer system is capable of serving the project; however, offsite extensions and upgrades are required. Wood Rodgers, Inc. is the consulting engineer for the 501 River Ranch Road Development and Shaw Engineering has been retained to provide an analysis of the development's impacts on the City of Fernley's sewer system.

Purpose:

The purpose of this discovery is to identify the offsite required sewer facility improvements to serve the project.

The Project is comprised of 3 parcels totaling 22.02± acres. The project is located within the City of Fernley's retail service territory south of Highway 50 and straddled by River Ranch Road and the Donner Trails Subdivision.

Discussion:

Project parcels are listed in Table 1 and are shown in Figure 1. Sewer capacity is available on a first-come, first-serve basis. The existing system is deemed to have sufficient capacity for the referenced project provided offsite facilities are constructed and permitted.

Table 1: Proposed Parcel Information

APN	Proposed Parcel-Use	Acreage±
021-281-03	Parcel 1 – Vacant - Commercial	3.67
021-281-04	Parcel 2 – General Industrial	3.67
021-281-10	Parcel 3 – Vacant – Industrial	14.68
	Total Acres =	**22.02**

20 Vine Street
Reno, Nevada
89503

Telephone:
775.
329.5559

Facsimile:
775.
329.5406

Email:
mail@
shawengineering
.com

Project Sewage Peak Hour Flows:

Based on a similar project recently permitted in the City, the anticipated sewer flows for the 501 River Ranch Road development are estimated to be 317.83 ERC's for a total average day flow of 79,458 gpd (55.18 gpm) for a total average day flow of and peak hour flow of 238,374 gpd (165.54 gpm) with a peak hour factor (PHF) of 3. Per the 2009 Sewer Master Plan, 1 ERC equals 250 gpd. Table 2 lists the estimated project flows based on master planning criteria.

Table 2: 501 River Ranch Road Project Flows

Phase	Site Total ERC's	ADF (GPM/GPD)	PHF (GPM/GPD)
501 River Ranch Road	317.83	55.18/79,458	165.54/238,374

Conclusions

Based on topography and previous planning efforts by neighboring developments, the project will need to extend offsite sewer mains from The Meadows at Inglewood (TMAI) development. In addition, the City's TMAI Lift Station will need to be upgraded to serve the project. Further analysis of the sewer shed and lift station will need to be performed during final design and permitting. Sewer flows from the TMAI Lift Station will flow through the Rolling Meadows, Farm District Road, and East Lift Stations (Figure 1).

Table 2: Infrastructure Capacity Analysis

Lift Station	Current Flow	Future Flow	Capacity
TMAI Lift Station	6.5 gpm	171 gpm	34 gpm
Rolling Meadows Lift Station	228 gpm	393 gpm	605 gpm
Farm District Road Lift Station	315 gpm	480 gpm	1,134* gpm
East Lift Station	1,963 gpm	2,128 gpm	4,765 gpm
East Wastewater Treatment Plant	1.67 MGD	1.91 MGD	3.05 MGD

*Estimated capacity after Phase II improvements, Fall 2022

Preliminary analysis determined nearby downstream infrastructure upgrades are required and other gravity mains, lift station(s), force main(s), and the East Wastewater Treatment Plant downstream of the TMAI Lift Station have sufficient capacity to serve the development.

The TMAI Lift Station was installed with a 2" Force Main and Grinder Pumps for Phase 1 operation. Due to the anticipated growth within the sewer shed, a 4" force main was installed to accommodate future flows up to 212 gpm with the replacement of the current grinder pumps with larger solids passing submersible pumps. The pipe report after development included represents the lift station operating with the 4" force main and upgraded pumps.

System capacity is available on a first-come, first-serve basis, and is secured once will-serve documents have been issued to the owner. Additional modeling will need to be performed again before will-serves are issued and NDEP approval is organized.

Permitting

The offsite gravity main extension will require NDOT permitting and possibly additional easement(s) from neighboring property owners. We highly recommend significant due diligence be pursued prior to moving forward with this project.

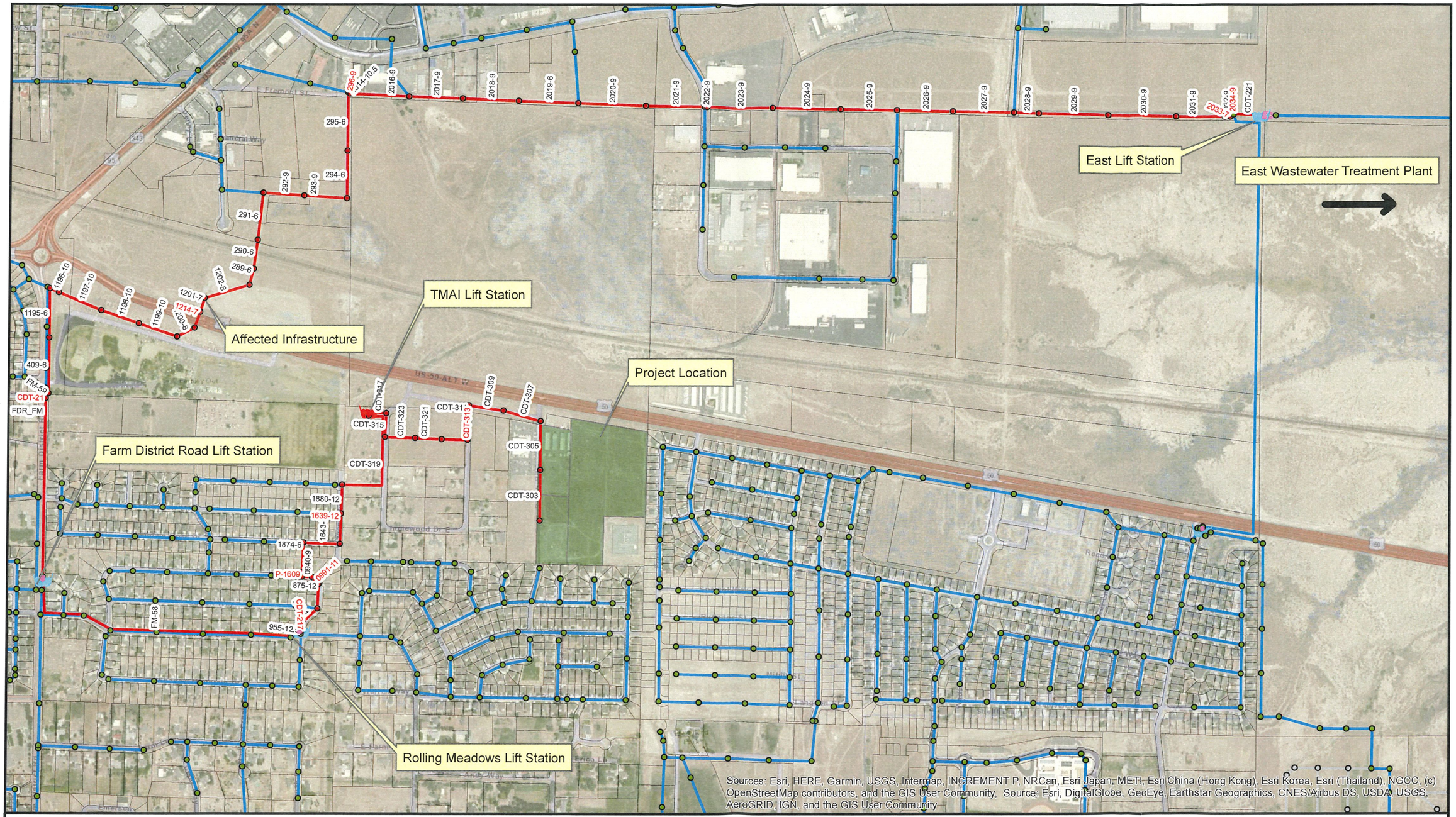
Assumptions and Final Design Guidance:

1. The applicant shall be responsible for all application, review, inspection, connection, permit, easements, and other fees pertinent to the project as adopted by the City of Fernley at the time of application.
2. Future development may alter the conclusions of this discovery. Capacity in the City of Fernley's system is available on a first-come, first-served basis, and commitment to providing service is not established until a contract for service is executed and all fees are paid.
3. All manholes are to be designed with only one outlet pipe.

4. Portions of the project will require gravity sewer lines to remain private. Final improvement plans shall delineate public vs. private infrastructure.
5. All sewer mains, existing and proposed, must not have depth to diameter ratios (d/D) exceeding 0.75.
6. Separation between manholes shall be no greater than 400 feet.
7. Manholes shall have a 0.10-feet drop from the entrance pipe to the outlet.
8. All new collection mains must be tested to determine the degree of leak potential.
9. All new manholes must be vacuum tested.
10. All residential lateral connections must be installed with tracer wire at no less than 2% slope and 4-Inches in diameter.
11. Cleanouts shall be placed at the property line or easement line for every connection.
12. All new mains must be inspected using sewer cameras to verify all laterals meet specifications following installation.
13. All new mains must be inspected for vertical and horizontal alignment to be compared with designed plans.
14. Pipe reports attached are created under the assumption that all downstream lift stations have capacity and only provide information on capacity of the collection system itself.

Attachments:

Figure 1: City of Fernley Sewer System



Maps are for graphical purposes only. They do not represent legal survey. Shaw Engineering cannot assume liability for any damages caused by any errors or omissions in the data and makes no warranty, expressed or implied, nor does the fact of distribution constitute such a warranty.

N

1 "=800 '

Figure 1: 501 River Ranch Road Sewer Infrastructure Impact

SHAW ENGINEERING
Water Wastewater Civil Geotechnical

501 River Ranch Road - Peak Hour Pipe Report - Before Development						
ID	Full Depth (ft)	Length (ft)	Percent Slope (%)	Maximum Flow (gpm)	Maximum Velocity (ft/s)	Max.Depth/ Full Depth
0940-9	8	86	0.5	70.6	1.9	0.29
0991-11	8	86	0.4	71.2	2.0	0.28
1195-6	12	425	0.7	472.3	3.5	0.41
1196-10	24	83	0.3	875.6	1.2	0.51
1197-10	24	399	0.4	853.0	3.2	0.24
1198-10	24	349	0.4	809.5	3.2	0.24
1199-10	24	351	0.4	771.3	3.1	0.23
1200-8	24	172	0.3	768.8	3.0	0.24
1201-7	24	127	0.3	767.6	3.0	0.24
1202-8	24	401	0.4	750.6	3.2	0.22
1214-7	24	142	0.6	768.4	3.2	0.23
1639-12	15	262	0.1	30.3	0.9	0.12
1643-9	15	318	0.1	31.6	0.9	0.11
1874-6	8	260	0.2	35.7	1.1	0.26
1880-12	10	250	0.2	30.0	1.2	0.16
2014-10.5	42	11	0.5	773.8	3.0	0.11
2016-9	42	511	0.2	773.2	1.6	0.17
2017-9	42	465	0.1	1341.5	2.1	0.20
2018-9	42	487	0.1	1341.0	2.0	0.22
2019-6	42	515	0.1	1340.5	2.0	0.21
2020-9	42	589	0.1	1350.9	2.1	0.21
2021-9	42	509	0.1	1350.2	2.3	0.19
2022-9	42	20	1.2	1362.3	2.5	0.19
2023-9	42	573	0.1	1573.6	2.0	0.24
2024-9	42	587	0.1	1573.5	2.0	0.24
2025-9	42	493	0.1	1573.5	2.3	0.22
2026-9	42	486	0.1	1635.3	2.5	0.21
2027-9	42	528	0.1	1635.3	2.4	0.21
2028-9	42	216	0.1	1705.4	2.4	0.22
2029-9	42	598	0.1	1705.2	2.0	0.26
2030-9	42	598	0.1	1705.1	2.1	0.24
2031-9	42	416	0.1	1705.0	2.3	0.23
2032-9	42	47	0.1	1705.0	3.2	0.18
2033-7	42	29	0.4	1705.0	5.4	0.13
2034-9	42	15	6.7	1705.0	6.2	0.12
289-6	18	142	0.6	751.0	3.5	0.32
290-6	18	254	0.6	748.0	2.7	0.39
291-6	18	410	0.2	735.3	2.4	0.43
292-9	18	357	0.2	727.1	2.5	0.41
293-9	18	373	0.2	723.0	2.5	0.40
294-6	18	412	0.3	720.6	2.6	0.39
295-6	18	502	0.2	717.6	2.7	0.38
296-9	21	10	9.3	773.9	9.5	0.13
409-6	12	481	0.4	612.2	3.1	0.56

501 River Ranch Road - Peak Hour Pipe Report - Before Development						
ID	Full Depth (ft)	Length (ft)	Percent Slope (%)	Maximum Flow (gpm)	Maximum Velocity (ft/s)	Max.Depth/ Full Depth
874-1	8	176	0.3	81.7	1.9	0.32
875-12	8	212	0.9	71.5	2.2	0.26
955-12.5	8	81	1.6	82.5	3.0	0.23
CDT-21	12	11	22.6	891.8	4.0	0.61
CDT-217	12	4	26.8	222.4	12.3	0.10
CDT-221	44	239	0.9	1939.8	4.7	0.24
CDT-313	8	223	0.3	6.5	0.8	0.10
CDT-315	8	207	0.4	6.5	0.9	0.09
CDT-317	8	151	0.9	6.5	1.1	0.08
CDT-319	4	1064	0.2	210.4	7.2	0.73
CDT-321	8	228	0.6	6.5	1.0	0.09
CDT-323	8	262	0.5	6.5	1.0	0.09
P-1609	15	34	8.1	35.7	1.2	0.10

501 River Ranch Road - Peak Hour Pipe Report - After Development/LS Upgrade						
ID	Full Depth (ft)	Length (ft)	Percent Slope (%)	Maximum Flow (gpm)	Maximum Velocity (ft/s)	Max.Depth/ Full Depth
0940-9	8	86	0.5	260.8	2.8	0.58
0991-11	8	86	0.4	261.4	2.9	0.56
1195-6	12	425	0.7	471.6	3.5	0.41
1196-10	24	83	0.3	874.6	1.2	0.51
1197-10	24	399	0.4	852.1	3.2	0.24
1198-10	24	349	0.4	808.7	3.2	0.24
1199-10	24	351	0.4	770.6	3.1	0.23
1200-8	24	172	0.3	768.0	3.0	0.24
1201-7	24	127	0.3	766.8	3.0	0.24
1202-8	24	401	0.4	749.9	3.2	0.22
1214-7	24	142	0.6	767.7	3.2	0.23
1639-12	15	262	0.1	225.8	1.7	0.29
1643-9	15	318	0.1	226.7	1.4	0.36
1874-6	8	260	0.2	230.2	1.9	0.72
1880-12	10	250	0.2	231.0	2.1	0.47
2014-10.5	42	11	0.5	773.5	3.0	0.11
2016-9	42	511	0.2	772.9	1.6	0.17
2017-9	42	465	0.1	1341.5	2.1	0.20
2018-9	42	487	0.1	1341.0	2.0	0.22
2019-6	42	515	0.1	1340.4	2.0	0.21
2020-9	42	589	0.1	1350.7	2.1	0.21
2021-9	42	509	0.1	1349.7	2.3	0.19
2022-9	42	20	1.2	1361.8	2.5	0.19
2023-9	42	573	0.1	1573.1	2.0	0.24
2024-9	42	587	0.1	1573.0	2.0	0.24
2025-9	42	493	0.1	1572.9	2.3	0.22
2026-9	42	486	0.1	1634.7	2.5	0.21
2027-9	42	528	0.1	1634.7	2.4	0.21
2028-9	42	216	0.1	1704.7	2.4	0.22
2029-9	42	598	0.1	1704.5	2.0	0.26
2030-9	42	598	0.1	1704.5	2.1	0.24
2031-9	42	416	0.1	1704.3	2.3	0.23
2032-9	42	47	0.1	1704.3	3.2	0.18
2033-7	42	29	0.4	1704.3	5.4	0.13
2034-9	42	15	6.7	1704.3	6.1	0.12
289-6	18	142	0.6	750.4	3.5	0.32
290-6	18	254	0.6	747.3	2.7	0.39
291-6	18	410	0.2	734.7	2.3	0.43
292-9	18	357	0.2	726.6	2.5	0.41
293-9	18	373	0.2	722.5	2.5	0.40
294-6	18	412	0.3	720.1	2.6	0.39
295-6	18	502	0.2	717.2	2.7	0.38
296-9	21	10	9.3	773.5	9.5	0.13
409-6	12	481	0.4	611.5	3.1	0.55

501 River Ranch Road - Peak Hour Pipe Report - After Development/LS Upgrade						
ID	Full Depth (ft)	Length (ft)	Percent Slope (%)	Maximum Flow (gpm)	Maximum Velocity (ft/s)	Max.Depth/ Full Depth
874-1	8	176	0.3	270.8	2.5	0.65
875-12	8	212	0.9	261.8	2.7	0.61
955-12.5	8	81	1.6	271.6	4.2	0.43
CDT-21	12	11	22.6	892.5	4.0	0.61
CDT-217	12	4	26.8	415.4	14.7	0.14
CDT-221	44	239	0.9	1939.5	4.7	0.24
CDT-313	8	223	0.3	172.0	2.0	0.53
CDT-315	8	207	0.4	172.0	2.3	0.48
CDT-317	8	151	0.9	172.0	2.8	0.42
CDT-319	4	1064	0.2	279.3	7.2	0.43
CDT-321	8	228	0.6	172.0	2.5	0.45
CDT-323	8	262	0.5	172.0	2.4	0.46
P-1609	15	34	8.1	230.2	2.5	0.22
CDT-303	8	439	0.8	165.5	2.6	0.43
CDT-305	8	422	0.7	165.5	2.6	0.43
CDT-307	8	337	0.8	165.5	2.6	0.43
CDT-309	8	302	0.8	165.5	2.6	0.43
CDT-311	8	301	0.7	165.5	2.5	0.45

APPENDIX C

HYDRAULIC CALCULATIONS

8" SDR35 PVC Main at 0.4% and 0.75D (River Ranch Apts)

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.012	
Channel Slope	0.004	ft/ft
Normal Depth	6.0	in
Diameter	8.0	in

Results		
Discharge	487,939	gal/day
Flow Area	0.3	ft²
Wetted Perimeter	1.4	ft
Hydraulic Radius	2.4	in
Top Width	0.58	ft
Critical Depth	4.9	in
Percent Full	75.0	%
Critical Slope	0.007	ft/ft
Velocity	2.69	ft/s
Velocity Head	0.11	ft
Specific Energy	0.61	ft
Froude Number	0.680	
Maximum Discharge	575,603	gal/day
Discharge Full	535,093	gal/day
Slope Full	0.003	ft/ft
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.0	in
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	in
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	50.0	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	6.0	in
Critical Depth	4.9	in
Channel Slope	0.004	ft/ft
Critical Slope	0.007	ft/ft

8" SDR35 PVC Main at 0.4% and 0.5D (River Ranch Apartments)

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.012	
Channel Slope	0.004	ft/ft
Normal Depth	4.0	in
Diameter	8.0	in

Results		
Discharge	267,546	gal/day
Flow Area	0.2	ft²
Wetted Perimeter	1.0	ft
Hydraulic Radius	2.0	in
Top Width	0.67	ft
Critical Depth	3.6	in
Percent Full	50.0	%
Critical Slope	0.006	ft/ft
Velocity	2.37	ft/s
Velocity Head	0.09	ft
Specific Energy	0.42	ft
Froude Number	0.817	
Maximum Discharge	575,603	gal/day
Discharge Full	535,093	gal/day
Slope Full	0.001	ft/ft
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.0	in
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	in
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	50.0	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	4.0	in
Critical Depth	3.6	in
Channel Slope	0.004	ft/ft
Critical Slope	0.006	ft/ft

TRAFFIC IMPACT STUDY

FOR

River Ranch Apartments

September 12, 2022

PREPARED FOR:

Wood Rogers, Inc

PREPARED BY:

HEADWAY TRANSPORTATION



Headway Transportation, LLC
5482 Longley Lane, Suite B, Reno, Nevada 89511
775.322.4300
www.HeadwayTransportation.com

YOUR QUESTIONS ANSWERED QUICKLY

Why did you perform this study?

This Traffic Impact Study evaluates the potential traffic impacts associated with the proposed River Ranch Apartments multifamily residential project in Fernley, Nevada. This study of potential transportation impacts was undertaken for planning purposes and to assist in determining what traffic controls or mitigations may be needed to reduce potential impacts, if any are found.

What does the project consist of?

The project consists of 320 multifamily housing units in the southeast quadrant of the US 50 / River Ranch Road intersection in Fernley, NV. The project location is shown in **Figure 1** and the preliminary site plan is shown in **Figure 2**.

How much traffic will the project generate?

The project is anticipated to generate approximately 2,157 Daily, 128 AM peak hour, and 163 PM peak hour trips to the external roadway network.

How will project traffic affect the roadway network?

Under Existing Plus Project and Future Year Plus Project conditions, the study intersections are expected to operate within policy level of service thresholds. The addition of project traffic does not have any significant impact on the studied intersections which would require mitigation.

Are any improvements recommended?

No improvements are recommended at the study intersections based on the addition of project traffic. The project should construct half street improvements and sidewalk along the property frontage of River Ranch Road.

LIST OF FIGURES

1. Project Location
2. Preliminary Site Plan
3. Existing Traffic Volumes, Lane Configurations, and Controls
4. Project Trip Distribution and Assignment
5. Existing Plus Project Traffic Volumes, Lane Configurations, and Controls
6. Future Year Traffic Volumes, Lane Configurations, and Controls
7. Future Year Plus Project Traffic Volumes, Lane Configurations, and Controls

LIST OF APPENDICES

A. NDOT Crash Data History
B. Existing Conditions LOS Calculations
C. Existing Plus Project Conditions LOS Calculations
D. Future Year Conditions LOS Calculations
E. Future Year Plus Project Conditions LOS Calculations

INTRODUCTION

This Traffic Impact Study evaluates the potential traffic impacts associated with the proposed River Ranch multifamily residential project in Fernley, Nevada. This study of potential transportation impacts was undertaken for planning purposes and to assist in determining what traffic controls or mitigations may be needed to reduce potential impacts, if any are found. The location of the project is shown on **Figure 1** and the preliminary project site plan is shown on **Figure 2**.

Study Area and Evaluated Scenarios

The project consists of 320 multifamily housing units in the southeast quadrant of the US 50 / River Ranch Road intersection in Fernley, NV. The following intersections shown on **Figure 1** are included in this study:

1. US 50 / River Ranch Road
2. River Ranch Road / Project Access / Future Connector Road

This study includes analysis of both the weekday AM and PM peak hours as these are the periods of time in which peak traffic is anticipated to occur. The evaluated development scenarios are:

- Existing Conditions
- Existing Plus Project Conditions
- Future Year Conditions (20-year horizon)
- Future Year Plus Project Conditions

ANALYSIS METHODOLOGY

Level of service (LOS) is a term commonly used by transportation practitioners to measure and describe the operational characteristics of intersections, roadway segments, and other facilities. This term equates seconds of delay per vehicle at intersections to letter grades “A” through “F”, with “A” representing optimum conditions and “F” representing breakdown or over capacity flows.

Intersections

The complete methodology for intersection level of service analysis is established in *the Highway Capacity Manual (HCM), 6th Edition* published by the Transportation Research Board (TRB). **Table 1** presents the delay thresholds for each level of service grade at signalized and unsignalized intersections.

Table 1: Level of Service Definition for Intersections

Level of Service	Brief Description	Average Delay (seconds per vehicle)	
		Signalized Intersections	Unsignalized Intersections
A	Free flow conditions.	< 10	< 10
B	Stable conditions with some affect from other vehicles.	10 to 20	10 to 15
C	Stable conditions with significant affect from other vehicles.	20 to 35	15 to 25
D	High density traffic conditions still with stable flow.	35 to 55	25 to 35
E	At or near capacity flows.	55 to 80	35 to 50
F	Over capacity conditions.	> 80	> 50

Source: *Highway Capacity Manual, 6th Edition*

Level of service calculations were performed for the study intersections using the Synchro 11 software package with analysis and results reported in accordance with *HCM 6th Edition* methodology.

Level of Service Policy

The *City of Fernley Comprehensive Master Plan* indicates that "the minimum Level of Service on all city-maintained roadways shall be LOS D." This is consistent with Nevada Department of Transportation (NDOT) policies, which indicate that *"Level of Service "C" will be the design objective for capacity and under no circumstances will less than Level of Service "D" be accepted for site and non-site traffic."*

Therefore, LOS D was used as the threshold for evaluating this project. Where intersections are currently experiencing LOS beyond the thresholds, conditions should not be exacerbated.

The level of service policies are not specific to minor side street approaches, but rather focus on maintaining quality operations on the mainline corridors. LOS "E" or "F" on a side street approach does not constitute an exceedance of the level of service policy as this is understood to be a common and manageable condition in the urban environment, particularly during peak hours. Overall intersection operation is the measure to which the level of service policy applies.

EXISTING CONDITIONS

Roadway Facilities

A brief description of the key roadways in the study area is provided below:

US 50 is classified by NDOT as an Other Principal Arterial in the project vicinity. The roadway has 4 through lanes, two in each direction of travel. The posted speed limit is 65 mph.



River Ranch Road is classified by NDOT as a Local Road. The roadway has 2 lanes, one in each direction of travel. The posted speed limit is 25 mph.

The intersection of US 50 / River Ranch Road is signalized for all movements except for the westbound through movement. This movement is unsignalized and is a free movement. The configuration is a signalized High – T.

Bicycle & Pedestrian Facilities

No bicycle lanes or sidewalks exist on US 50. No bicycle lanes exist on River Ranch Road, but a sidewalk exists south of Inglewood Drive for approximately 600 feet on the west side of River Ranch Road.

Transit Facilities

Transit services in Lyon County are offered to and from senior centers with advanced scheduling. Park-and-ride transit facilities are planned in the future.

Crash History

Vehicle crash data for the intersection of US 50 and River Ranch Road was provided by NDOT and includes information for the five-year period between 2016 and 2020 (the most current data available). Fifteen (15) crashes occurred during this time, six of which were property damage only, while nine crash resulted in an injury. The crash data is provided in **Appendix A**. The intersection was recently signalized to address former operational and safety concerns.

Traffic Volumes

AM and PM peak hour traffic volumes were collected at the intersection of US 50 / River Ranch Road on June 29 and June 30, 2022. The intersection counts were collected from 7:00 to 9:00 AM and 4:00 to 6:00 PM which are the typical commuter periods. The peak hours were identified as 7:15 to 8:15 AM and 4:30 to 5:30 PM. The traffic volumes used in this analysis include the existing truck percentage and peak hour factor. **Figure 3** shows the existing peak hour traffic volumes, lane configurations, and controls at the study intersections.

<u>Comparison to Recent Counts</u>

The collected AM and PM peak hour intersection turning movement volumes were compared to the following recent data sources:

- Hourly traffic volume data (2021) from the Nevada Department of Transportation (NDOT) Traffic Record Information Access (TRINA) database.

- Baseline Conditions on US 50 for the Nevada Pacific Boulevard Development Traffic Impact Study (Headway January 2022). That proposed development is off US 50 less than a mile to the east of River Ranch Road.

The volume data collected was higher than both sources; therefore, the counts were not adjusted.

Intersection Level of Service Analysis

Existing AM and PM peak hour intersection level of service analysis was performed for the study intersections using Synchro 11 analysis software. Signal timings were derived from the data collection videos of the intersection during the peak hours. **Table 2** shows the existing conditions level of service results, and the technical calculations are provided in **Appendix B**.

Table 2: Existing Intersection Level of Service

ID	Intersection	Intersection Control	AM Peak		PM Peak	
			LOS	Delay[1]	LOS	Delay[1]
1	US 50 / River Ranch Road	Signalized				
	Overall		A	6.2	A	7.0

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized and all way stop controlled intersections, and for the worst approach/movement for side street stop-controlled intersections.

As shown in the table, the study intersection operates at LOS "A" which is within policy level of service thresholds for the existing conditions AM and PM peak hours.

PROJECT CONDITIONS

Trip Generation

Trip generation rates from the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE) were used to develop trip generation estimates for the proposed project based on the Multifamily Housing (ITE Code 220) for 320 dwelling units. **Table 3** shows the Daily, AM peak hour, and PM peak hour trip generation estimates.

Table 3: Trip Generation Estimates

Land Use (ITE Code)	Size[1]	Trips[2]				
		Daily	AM In/Out	AM	PM In/Out	PM
Multifamily Housing (220)	320 du	2,157	31 / 97	128	103 / 60	163

Notes: 1. du = dwelling units

2. Trips were calculated based on the following rates per du: Daily – 6.74; AM – 0.40 (24% in / 76% out); PM – 0.51 (63% in / 37% out)

Source: Headway Transportation, 2022

As shown in the table, the project is expected to generate 2,157 Daily, 128 AM peak hour, and 163 PM peak hour trips to the external roadway network.

Trip Distribution

Project trips were distributed to the adjacent roadway network based on existing traffic volumes, the locations of complimentary land uses, and anticipated travel patterns. Project trips were distributed based on the following:

- 65% to/from west via US 50
- 30% to/from the east via US 50
- 5% to/from the south via River Ranch Road

Figure 4 shows the project trip distribution and assignment.

Project Access

Project access is proposed on River Ranch Road, opposite a future planned roadway connecting to Inglewood Drive, shown on **Figure 1**. Two emergency vehicle access points are proposed, one on the southwest corner of the project site and the other connecting to Fort Sutter Boulevard on the east side of the project site. The proposed emergency vehicle access points are shown on **Figure 2**.

EXISTING PLUS PROJECT CONDITIONS

Traffic Volumes

Project trips (**Figure 4**) were added to the existing traffic volumes (**Figure 3**) to develop the Existing Plus Project conditions traffic volumes, shown on **Figure 5**.

Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections based on the Existing Plus Project traffic volumes, and the lane configurations and controls shown on **Figure 5**. **Table 4** shows the level of service results, and the technical calculations are provided in **Appendix C**.

Table 4: Existing Plus Project Intersection Level of Service

ID	Intersection Name	Intersection Control	Existing				Existing Plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]
1	US 50 / River Ranch Rd	Signalized								
	Overall		A	6.2	A	7.0	A	7.8	A	8.6
2	River Ranch Road / Project Access	Side Street Stop								
	Overall		N/A				A	4.5	A	3.5
	Southbound Left		N/A				A	7.4	A	7.7
	Westbound Approach		N/A				A	9.2	A	9.5

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized and all way stop controlled intersections, and for the worst approach/movement for side street stop-controlled intersections.

As shown in the table, the addition of project traffic will have minimal impact on the study intersections. All the study intersections continue to operate within LOS policy.

FUTURE YEAR CONDITIONS

Roadway Facilities

The *City of Fernley Transportation Master Plan* includes the Nevada Pacific Parkway Extension project, less than a mile to the east on US 50. The project is to "extend the existing Nevada Pacific Parkway south across the UPRR railroad to existing US 50A to provide additional north/south and I-80 connectivity."

A road connection is planned to be built opposite the Project access and connect to Inglewood Drive, as shown on **Figure 1**. This future roadway is part of the Meadows at Inglewood project, a business/ retail park currently under construction.

Traffic Volume Forecasts

Future Year (20-year horizon) traffic volumes were developed considering regional growth rates, planned roadway projects such as the Nevada Pacific Parkway connection, and planned development in the area, including the *Nevada Pacific Boulevard Development Traffic Impact Study* (Headway January 2022). A



growth rate of 2% per year was applied to the existing traffic volumes, consistent with the annual growth rate used in the *Comprehensive Master Plan*, the *Transportation Master Plan,* and previous approved traffic impact studies. Project trips from the proposed Nevada Pacific Boulevard Development were added on top of the background growth. A road connection is planned to be built opposite the Project Access. Volumes for this connection were estimated using trip generation rates from the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE) and added to future year volume forecasts. **Figure 6** shows the Future (20-year horizon) traffic volumes at the study intersections.

Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections using Synchro 11 analysis software. **Table 5** shows the Future Year conditions level of service results, and the technical calculations are provided in **Appendix D**.

Table 5: Future Year Intersection Level of Service

ID	Intersection	Intersection Control	AM Peak		PM Peak	
			LOS	Delay[1]	LOS	Delay[1]
1	US 50 / River Ranch Road	Signalized				
	Overall		A	6.6	A	8.2
2	River Ranch Road / Future Connector	Side Street Stop				
	Overall		A	0.1	A	0.3
	Northbound Left		A	7.4	A	0.0
	Eastbound Approach		A	9.6	B	10.1

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized and all way stop controlled intersections, and for the worst approach/movement for side street stop-controlled intersections.

As shown in the table, all intersections are expected to operate within level of service policy in the Future Year conditions.

FUTURE YEAR PLUS PROJECT CONDITIONS

Traffic Volumes

Project trips (**Figure 4**) were added to the Future Year traffic volumes (**Figure 6**) to develop the Future Year Plus Project conditions traffic volumes, shown on **Figure 7**.

Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections based on the Future Year Plus Project traffic volumes. **Table 6** shows the level of service results, and the technical calculations are provided in **Appendix E**.



Table 6: Future Year Plus Project Intersection Level of Service

ID	Intersection Name	Intersection Control	Future				Future Plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]
1	US 50 / River Ranch Rd	Signalized								
	Overall		A	6.6	A	8.2	A	8.3	B	10.4
2	River Ranch Road / Project Access / Future Connector	Side Street Stop								
	Overall		A	0.1	A	0.3	A	3.8	A	3.1
	Northbound Left		A	7.4	A	0.0	A	7.4	A	0
	Southbound Left		N/A				A	7.5	A	7.8
	Eastbound Approach		A	9.6	B	10.1	B	11.5	B	14.0
	Westbound Approach		N/A				A	9.5	A	9.9

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized and all way stop controlled intersections, and for the worst approach/movement for side street stop-controlled intersections.

As shown in the table, all intersections are expected to operate within level of service policy in the Future Year Plus Project conditions.

CONCLUSIONS

The following is a list of our key findings and recommendations:

- The proposed project consists of 320 multifamily housing units and is anticipated to generate approximately 2,157 Daily, 128 AM peak hour, and 163 PM peak hour trips to the external roadway network.
- Under all conditions, all study intersections will operate within the level of service policy. The addition of project traffic does not have any significant impact on the studied intersection operations which would require mitigation.
- No improvements are recommended at the study intersections based on the addition of project traffic.
- The project should construct half street improvements and sidewalk along the property frontage of River Ranch Road.



HEADWAY TRANSPORTATION

NO SCALE

- Study Intersection
- Project Site
- Future Roadway

Figure 1
River Ranch Apartments
Traffic Impact Study
Project Location

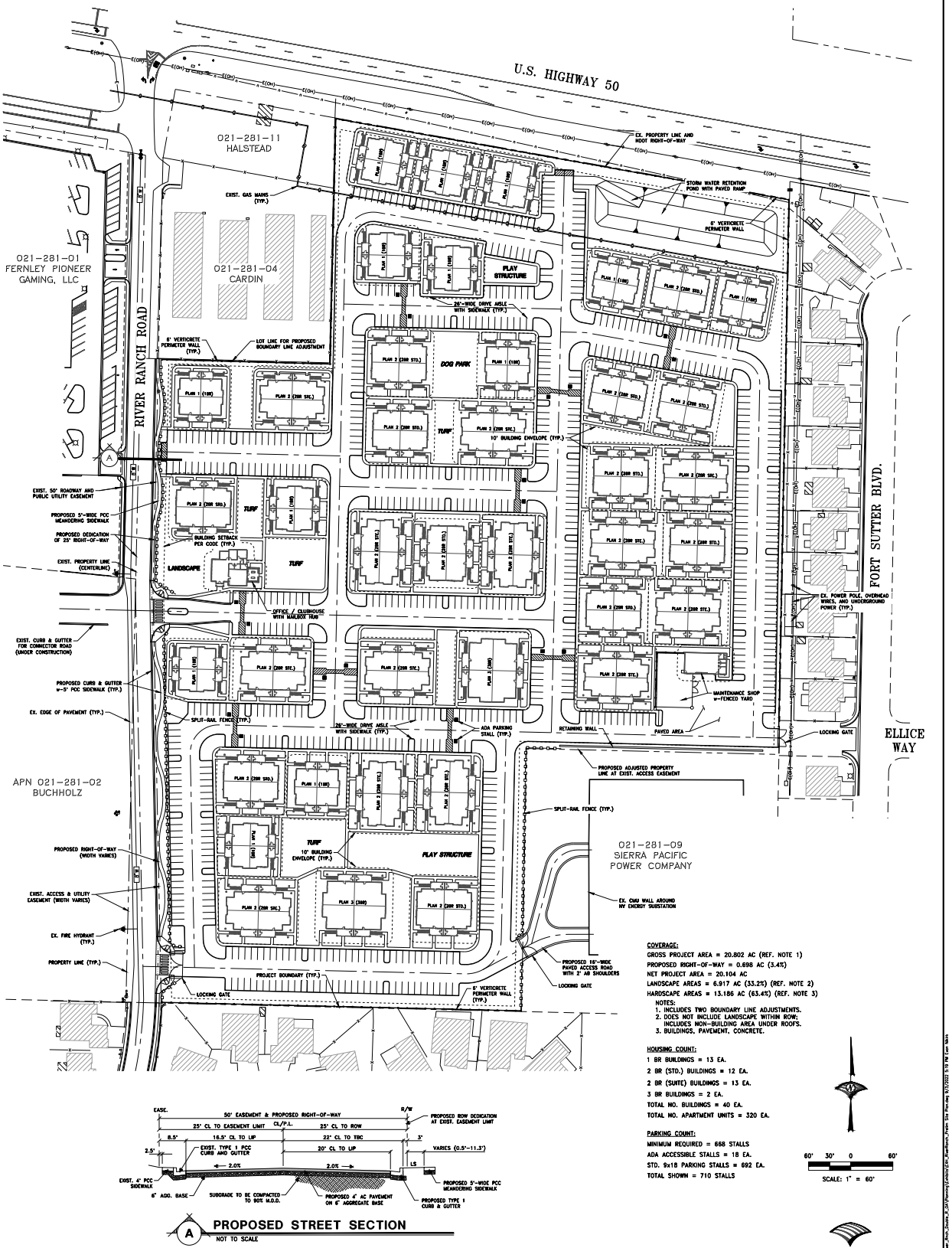
RIVER RANCH APARTMENTS

PRELIMINARY SITE PLAN

ERGS, INC.

FERNLEY NEVADA

SEPTEMBER 3, 2022



EASE. 50' EASEMENT & PROPOSED RIGHT-OF-WAY R/W
25' CL TO EASEMENT LIMIT CL/P.L. 25' CL TO ROW
PROPOSED ROW DEDICATION AT EXIST. EASEMENT LIMIT
8.5' 16.5' CL TO LIP 22' CL TO TBC 3'
2.5' EXIST. TYPE 1 PCC CURB AND GUTTER 20' CL TO LIP VARIES (0.5'-11.3')
2.0% 2.0% LS
EXIST. 4' PCC SIDEWALK
6" AGG. BASE
SUBGRADE TO BE COMPACTED TO 90% M.D.D.
PROPOSED 4" AC PAVEMENT ON 6" AGGREGATE BASE
PROPOSED TYPE I CURB & GUTTER
PROPOSED 5'-WIDE PCC MEANDERING SIDEWALK

A PROPOSED STREET SECTION
NOT TO SCALE

COVERAGE:
GROSS PROJECT AREA = 20.802 AC (REF. NOTE 1)
PROPOSED RIGHT-OF-WAY = 0.698 AC (3.4%)
NET PROJECT AREA = 20.104 AC
LANDSCAPE AREAS = 6.917 AC (33.2%) (REF. NOTE 2)
HARDSCAPE AREAS = 13.186 AC (63.4%) (REF. NOTE 3)

NOTES:
1. INCLUDES TWO BOUNDARY LINE ADJUSTMENTS.
2. DOES NOT INCLUDE LANDSCAPE WITHIN ROW; INCLUDES NON-BUILDING AREA UNDER ROOFS.
3. BUILDINGS, PAVEMENT, CONCRETE.

HOUSING COUNT:
1 BR BUILDINGS = 13 EA.
2 BR (STD.) BUILDINGS = 12 EA.
2 BR (SUITE) BUILDINGS = 13 EA.
3 BR BUILDINGS = 2 EA.
TOTAL NO. BUILDINGS = 40 EA.
TOTAL NO. APARTMENT UNITS = 320 EA.

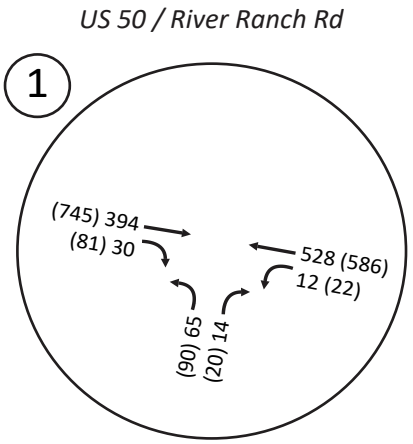
PARKING COUNT:
MINIMUM REQUIRED = 668 STALLS
ADA ACCESSIBLE STALLS = 18 EA.
STD. 9x18 PARKING STALLS = 692 EA.
TOTAL SHOWN = 710 STALLS

60' 30' 0 60'
SCALE: 1" = 60'

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard Tel 775.823.4068
Reno, NV 89502 Fax 775.823.4066

RIVER RANCH APTS





HEADWAY TRANSPORTATION

NO SCALE

AM Peak Hour Volume (PM Peak Hour Volume)

(#) - Study Intersection - Signal

Figure 3

River Ranch Apartments

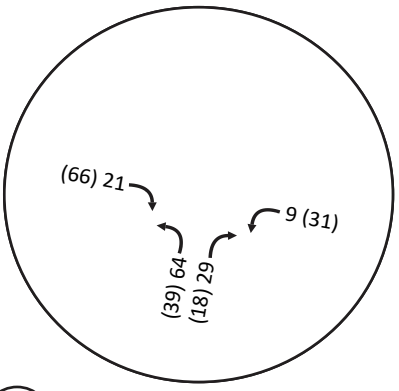
Traffic Impact Study

Existing Traffic Volumes, Lane Configurations, and Controls



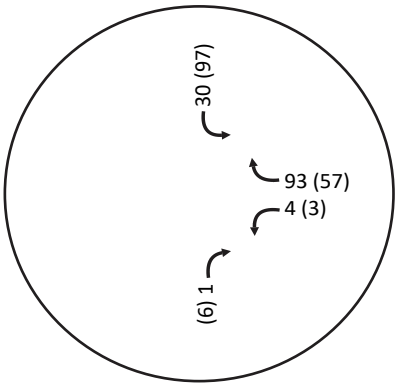
1

US 50 / River Ranch Rd



2

River Ranch Rd / Future Rd / Project Access



HEADWAY TRANSPORTATION

NO SCALE

AM Peak Hour Volume (PM Peak Hour Volume)

■ - Project Site (#) - Study Intersection XX% - Trip Distribution

Figure 4

River Ranch Apartments

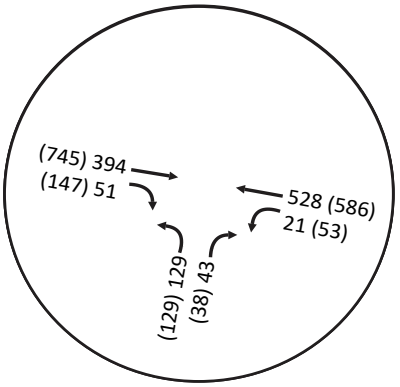
Traffic Impact Study

Project Trip Distribution and Assignment



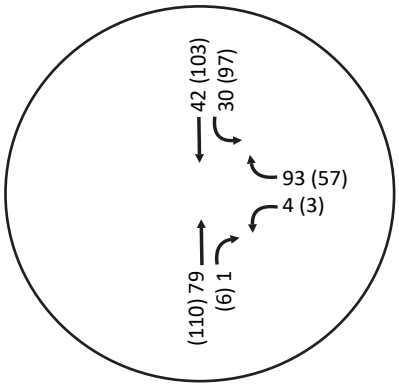
1

US 50 / River Ranch Rd



2

River Ranch Rd / Project Access



HEADWAY TRANSPORTATION

NO SCALE

AM Peak Hour Volume (PM Peak Hour Volume)

- Project Site
- # - Study Intersection
- Stop
- Signal

Figure 5

River Ranch Apartments

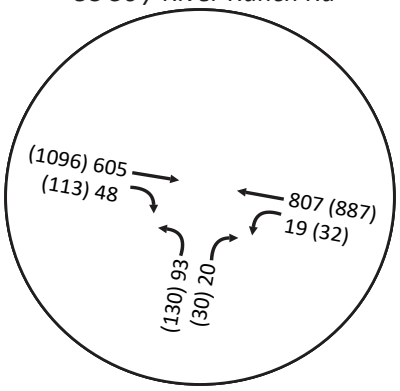
Traffic Impact Study

Existing Plus Project Traffic Volumes, Lane Configurations, and Controls



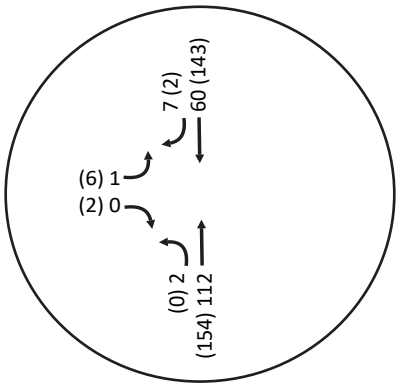
1

US 50 / River Ranch Rd



2

River Ranch Rd / Future Rd



AM Peak Hour Volume (PM Peak Hour Volume)

(#) - Study Intersection STOP - Stop - Signal

NO SCALE

Figure 6

River Ranch Apartments

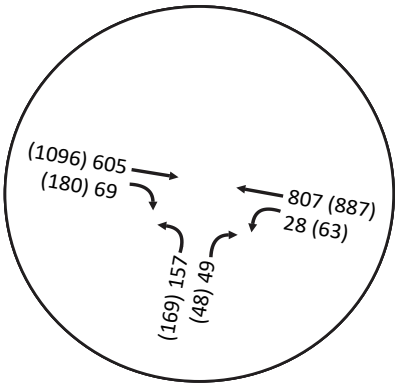
Traffic Impact Study

Future Year Traffic Volumes, Lane Configurations, and Controls



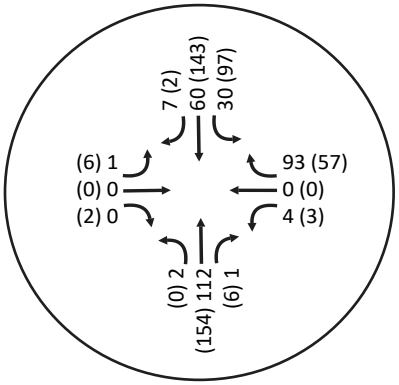
1

US 50 / River Ranch Rd



2

River Ranch Rd / Future Rd / Project Access



AM Peak Hour Volume (PM Peak Hour Volume)

- Project Site
- # - Study Intersection
- Stop
- Signal

NO SCAL

Figure 7

River Ranch Apartments

Traffic Impact Study

Future Year Plus Project Traffic Volumes, Lane Configurations, and Controls

Appendix A
NDOT Crash Data

Crash Severity	Crash Date	Crash Year	Crash Time	Primary Street	Distance	Dir	Secondary Street	Weather	Fatalities	Injured	Property Damage Only	Injury Type	Crash Type	Total Vehicles
INJURY ACCIDENT	23-Nov-2016	2016	12:00 PM	US50A		AT INT	RIVER RANCH RD	CLOUDY		3		C	ANGLE	2
INJURY ACCIDENT	18-Mar-2016	2016	08:34 PM	RIVER RANCH RD		AT INT	US50A	CLEAR		1		A	ANGLE	2
PROPERTY DAMAGE ONLY	11-Apr-2016	2016	03:40 PM	RIVER RANCH RD		AT INT	US50A	CLEAR			PDO		ANGLE	2
INJURY ACCIDENT	20-Oct-2016	2016	02:00 PM	RIVER RANCH RD		AT INT	US50A	CLEAR		1		A	ANGLE	2
INJURY ACCIDENT	29-Apr-2017	2017	12:10 PM	US50A		AT INT	RIVER RANCH RD	CLEAR		3		A	ANGLE	2
INJURY ACCIDENT	7-Aug-2017	2017	04:17 PM	RIVER RANCH RD		AT INT	US50A	CLEAR		3		B	ANGLE	2
PROPERTY DAMAGE ONLY	4-Dec-2018	2018	06:01 PM	US50A	528	E	RIVER RANCH RD	FOG, SMOG, SMOKE			PDO		NON-COLLISION	1
PROPERTY DAMAGE ONLY	5-Jan-2018	2018	11:26 AM	US50A		AT INT	RIVER RANCH RD	CLEAR			PDO		ANGLE	2
PROPERTY DAMAGE ONLY	28-Oct-2018	2018	08:17 PM	US50A		AT INT	RIVER RANCH RD	CLEAR			PDO		ANGLE	2
INJURY ACCIDENT	23-May-2018	2018	06:17 PM	US50A		AT INT	RIVER RANCH RD	CLEAR		2		C	ANGLE	2
INJURY ACCIDENT	22-Jan-2018	2018	11:45 AM	RIVER RANCH RD		AT INT	US50A	CLEAR		2		C	ANGLE	2
PROPERTY DAMAGE ONLY	20-Feb-2018	2018	06:20 PM	RIVER RANCH RD		AT INT	US50A	CLOUDY			PDO		ANGLE	2
INJURY ACCIDENT	13-Apr-2018	2018	01:05 PM	RIVER RANCH RD		AT INT	US50A	CLEAR		3		A	ANGLE	2
INJURY ACCIDENT	2-Sep-2019	2019	04:31 PM	US50A	300	E	RIVER RANCH RD	CLOUDY		2		C	ANGLE	2
PROPERTY DAMAGE ONLY	22-Aug-2018	2018	09:50 AM	RIVER RANCH RD	150	S	INGLEWOOD DR	CLEAR			PDO		ANGLE	2
									Sum: 0	Sum: 20	Count: 6			
									Count: 0	Count: 9				
									Total:	15				

V1 Type	V1 Dir	V1 Driver Age	V1 Lane Num	V1 Action	V1 Driver Factors	V1 Driver Distracted	V1 Vehicle Factors	V1 Most Harmful Event	V1 All Events
SEDAN	N	77		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
SEDAN, 4 DOOR	N	18		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
SEDAN, 4 DOOR	N	32		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
SEDAN	N	31		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
PICKUP	W	74		TURNING LEFT	PHYSICAL IMPAIRMENT: FELL ASLEEP, FAINTED, FATIGUED, ETC.: OTHER IMPROPER DRIVING		FAILED TO YIELD RIGHT OF WAY		
SEDAN, 4 DOOR	N	17		GOING STRAIGHT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
CARRY-ALL	W	60	2	GOING STRAIGHT	DRUG INVOLVEMENT		DRIVING TOO FAST FOR CONDITIONS	OVERTURN/ROLLOVER	RAN OFF ROAD RIGHT: OVERTURN/ROLLOVER
SEDAN	E	68		GOING STRAIGHT	OTHER IMPROPER DRIVING		OTHER IMPROPER DRIVING		SLOW/STOPPED VEHICLE
PICKUP	N	70	L1	TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY	MOTOR VEHICLE IN TRANSPORT	
CARRY-ALL	N	79	2	TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY	MOTOR VEHICLE IN TRANSPORT	
HATCHBACK, 4 DOOR	N	74		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
PICKUP	N	71		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
SEDAN, 4 DOOR	N	70	2	TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		NOT REPORTED
SEDAN	W	70	L1	TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY	MOTOR VEHICLE IN TRANSPORT	
PICKUP	E			TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY	MOTOR VEHICLE IN TRANSPORT	

V2 Type	V2 Dir	V2 Driver Age	V2 Lane Num	V2 Action	V2 Driver Factors	V2 Driver Distracted	V2 Vehicle Factors	V2 Most Harmful Event	V2 All Events	First Harmful Event	Nonmotorist Factors	Factors Roadway	Lighting	HWY Factors	Agency	Accident Rec Num
PICKUP	E	62		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DAYLIGHT	NONE	NHP	2340877
PICKUP	E	51		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DARK - SPOT LIGHTING	NONE	NHP	2235145
HATCHBACK, 4 DOOR	E	42		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DAYLIGHT	NONE	NHP	2236481
CARRY-ALL	E	39		GOING STRAIGHT	APPARENTLY NORMAL		UNKNOWN					DRY	DAYLIGHT	NONE	NHP	2338887
UTILITY	E	42		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DAYLIGHT	NONE	NHP	2380640
SEDAN, 4 DOOR	E	21		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DAYLIGHT	OTHER HIGHWAY	NHP	2395523
										RAN OFF ROAD RIGHT		SNOW	DARK - SPOT LIGHTING	WET, ICY, SNOW, SLUSH	NHP	3112819
UTILITY	N	46		STOPPED	APPARENTLY NORMAL							DRY	DAYLIGHT	NONE	NHP	2418531
SEDAN	W	19	L1	TURNING LEFT	APPARENTLY NORMAL			MOTOR VEHICLE IN TRANSPORT		MOTOR VEHICLE IN TRANSPORT		DRY	DARK - SPOT LIGHTING	NONE	NHP	3107221
SEDAN, 4 DOOR	E	55	2	GOING STRAIGHT	APPARENTLY NORMAL			MOTOR VEHICLE IN TRANSPORT		MOTOR VEHICLE IN TRANSPORT		DRY	DAYLIGHT	NONE	NHP	3083380
SEDAN, 4 DOOR	E	30		GOING STRAIGHT	APPARENTLY NORMAL		UNKNOWN					DRY	DAYLIGHT	NONE	NHP	2419549
PICKUP	E	29		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DARK - SPOT LIGHTING	NONE	NHP	2421201
VAN	E	88	2	GOING STRAIGHT	APPARENTLY NORMAL				NOT REPORTED			DRY	DAYLIGHT	NONE	NHP	2522878
SEDAN	E	35	1	GOING STRAIGHT	APPARENTLY NORMAL			SLOW/STOPPED VEHICLE	SLOW/STOPPED VEHICLE	SLOW/STOPPED VEHICLE		DRY	DAYLIGHT	NONE	NHP	3150699
PICKUP	S			GOING STRAIGHT	APPARENTLY NORMAL										LYSO	3096496

Appendix B
Existing Conditions
LOS Calculations



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	394	30	12	528	65	14
Future Volume (veh/h)	394	30	12	528	65	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	402	31	12	539	66	14
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7
Cap, veh/h	944	421	27	1705	118	25
Arrive On Green	0.28	0.28	0.02	0.50	0.09	0.09
Sat Flow, veh/h	3503	1522	1711	3503	1366	290
Grp Volume(v), veh/h	402	31	12	539	81	0
Grp Sat Flow(s),veh/h/ln	1706	1522	1711	1706	1676	0
Q Serve(g_s), s	2.3	0.4	0.2	2.3	1.1	0.0
Cycle Q Clear(g_c), s	2.3	0.4	0.2	2.3	1.1	0.0
Prop In Lane		1.00	1.00		0.81	0.17
Lane Grp Cap(c), veh/h	944	421	27	1705	145	0
V/C Ratio(X)	0.43	0.07	0.44	0.32	0.56	0.00
Avail Cap(c_a), veh/h	4236	1889	708	6354	1387	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.2	6.5	11.8	3.6	10.6	0.0
Incr Delay (d2), s/veh	0.3	0.1	10.6	0.1	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.0	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.5	6.5	22.4	3.7	13.9	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	433			551	81	
Approach Delay, s/veh	7.4			4.1	13.9	
Approach LOS	A			A	B	

Timer - Assigned Phs	2	3	4	8
Phs Duration (G+Y+Rc), s	7.1	5.4	11.7	17.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	20.0	10.0	30.0	45.0
Max Q Clear Time (g_c+I1), s	3.1	2.2	4.3	4.3
Green Ext Time (p_c), s	0.2	0.0	2.4	3.3

Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	745	81	22	586	90	20
Future Volume (veh/h)	745	81	22	586	90	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	793	86	23	623	96	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1402	625	51	2058	143	31
Arrive On Green	0.40	0.40	0.03	0.58	0.10	0.10
Sat Flow, veh/h	3618	1572	1767	3618	1407	308
Grp Volume(v), veh/h	793	86	23	623	118	0
Grp Sat Flow(s),veh/h/ln	1763	1572	1767	1763	1730	0
Q Serve(g_s), s	5.6	1.1	0.4	2.8	2.1	0.0
Cycle Q Clear(g_c), s	5.6	1.1	0.4	2.8	2.1	0.0
Prop In Lane		1.00	1.00		0.81	0.18
Lane Grp Cap(c), veh/h	1402	625	51	2058	176	0
V/C Ratio(X)	0.57	0.14	0.45	0.30	0.67	0.00
Avail Cap(c_a), veh/h	3325	1483	556	4988	1088	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.4	6.1	15.2	3.3	13.8	0.0
Incr Delay (d2), s/veh	0.4	0.1	6.1	0.1	4.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.2	0.0	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.8	6.2	21.3	3.4	18.1	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	879			646	118	
Approach Delay, s/veh	7.6			4.1	18.1	
Approach LOS	A			A	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		8.2	5.9	17.7		23.6
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		4.1	2.4	7.6		4.8
Green Ext Time (p_c), s		0.3	0.0	5.1		3.9

Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A

Appendix C
Existing Plus Project Conditions
LOS Calculations



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	394	51	21	528	129	43
Future Volume (veh/h)	394	51	21	528	129	43
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	402	52	21	539	132	44
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7
Cap, veh/h	904	403	46	1641	175	58
Arrive On Green	0.26	0.26	0.03	0.48	0.14	0.14
Sat Flow, veh/h	3503	1522	1711	3503	1238	413
Grp Volume(v), veh/h	402	52	21	539	177	0
Grp Sat Flow(s),veh/h/ln	1706	1522	1711	1706	1660	0
Q Serve(g_s), s	2.6	0.7	0.3	2.6	2.7	0.0
Cycle Q Clear(g_c), s	2.6	0.7	0.3	2.6	2.7	0.0
Prop In Lane		1.00	1.00		0.75	0.25
Lane Grp Cap(c), veh/h	904	403	46	1641	235	0
V/C Ratio(X)	0.44	0.13	0.45	0.33	0.75	0.00
Avail Cap(c_a), veh/h	3867	1725	646	5801	1254	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.1	7.4	12.7	4.2	10.9	0.0
Incr Delay (d2), s/veh	0.3	0.1	6.8	0.1	4.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.2	0.0	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.5	7.5	19.5	4.4	15.8	0.0
LnGrp LOS	A	A	B	A	B	A
Approach Vol, veh/h	454			560	177	
Approach Delay, s/veh	8.3			4.9	15.8	
Approach LOS	A			A	B	

Timer - Assigned Phs	2	3	4	8
Phs Duration (G+Y+Rc), s	8.7	5.7	12.0	17.7
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	20.0	10.0	30.0	45.0
Max Q Clear Time (g_c+I1), s	4.7	2.3	4.6	4.6
Green Ext Time (p_c), s	0.4	0.0	2.4	3.3

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	4.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	93	79	1	30	42
Future Vol, veh/h	4	93	79	1	30	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	103	88	1	33	47

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	202	89	0	0	89	0
Stage 1	89	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	787	969	-	-	1506	-
Stage 1	934	-	-	-	-	-
Stage 2	912	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	770	969	-	-	1506	-
Mov Cap-2 Maneuver	770	-	-	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	892	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	3.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	959	1506	-
HCM Lane V/C Ratio	-	-	0.112	0.022	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	745	147	53	586	129	38
Future Volume (veh/h)	745	147	53	586	129	38
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	793	156	56	623	137	40
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1349	602	105	2052	183	54
Arrive On Green	0.38	0.38	0.06	0.58	0.14	0.14
Sat Flow, veh/h	3618	1572	1767	3618	1324	386
Grp Volume(v), veh/h	793	156	56	623	178	0
Grp Sat Flow(s),veh/h/ln	1763	1572	1767	1763	1720	0
Q Serve(g_s), s	6.4	2.4	1.1	3.2	3.6	0.0
Cycle Q Clear(g_c), s	6.4	2.4	1.1	3.2	3.6	0.0
Prop In Lane		1.00	1.00		0.77	0.22
Lane Grp Cap(c), veh/h	1349	602	105	2052	238	0
V/C Ratio(X)	0.59	0.26	0.53	0.30	0.75	0.00
Avail Cap(c_a), veh/h	2955	1318	494	4432	961	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.8	7.6	16.3	3.8	14.8	0.0
Incr Delay (d2), s/veh	0.4	0.2	4.1	0.1	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.4	0.4	0.1	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.2	7.8	20.4	3.9	19.4	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	949			679	178	
Approach Delay, s/veh	9.0			5.2	19.4	
Approach LOS	A			A	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		10.0	7.1	18.7		25.8
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		5.6	3.1	8.4		5.2
Green Ext Time (p_c), s		0.4	0.0	5.3		3.9

Intersection Summary	
HCM 6th Ctrl Delay	8.6
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	57	110	6	97	103
Future Vol, veh/h	3	57	110	6	97	103
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	67	129	7	114	121

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	482	133	0	0	136	0
Stage 1	133	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	543	916	-	-	1448	-
Stage 1	893	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	497	916	-	-	1448	-
Mov Cap-2 Maneuver	497	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	654	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	879	1448	-
HCM Lane V/C Ratio	-	-	0.08	0.079	-
HCM Control Delay (s)	-	-	9.5	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.3	-

Appendix D
Future Year Conditions
LOS Calculations



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	605	48	19	807	93	20
Future Volume (veh/h)	605	48	19	807	93	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	617	49	19	823	95	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7
Cap, veh/h	1183	528	42	1862	144	30
Arrive On Green	0.35	0.35	0.02	0.55	0.11	0.11
Sat Flow, veh/h	3503	1522	1711	3503	1372	289
Grp Volume(v), veh/h	617	49	19	823	116	0
Grp Sat Flow(s),veh/h/ln	1706	1522	1711	1706	1676	0
Q Serve(g_s), s	4.1	0.6	0.3	4.1	1.9	0.0
Cycle Q Clear(g_c), s	4.1	0.6	0.3	4.1	1.9	0.0
Prop In Lane		1.00	1.00		0.82	0.17
Lane Grp Cap(c), veh/h	1183	528	42	1862	176	0
V/C Ratio(X)	0.52	0.09	0.45	0.44	0.66	0.00
Avail Cap(c_a), veh/h	3575	1595	597	5363	1170	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.5	6.3	13.8	3.9	12.3	0.0
Incr Delay (d2), s/veh	0.4	0.1	7.5	0.2	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.2	0.0	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.8	6.4	21.3	4.1	16.5	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	666			842	116	
Approach Delay, s/veh	7.7			4.4	16.5	
Approach LOS	A			A	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		8.0	5.7	14.9		20.6
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		3.9	2.3	6.1		6.1
Green Ext Time (p_c), s		0.3	0.0	3.8		5.6

Intersection Summary	
HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	2	112	60	7
Future Vol, veh/h	1	0	2	112	60	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	2	124	67	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	199	71	75	0	-	0
Stage 1	71	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	790	991	1524	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	789	991	1524	-	-	-
Mov Cap-2 Maneuver	789	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1524	-	789	-	-
HCM Lane V/C Ratio	0.001	-	0.001	-	-
HCM Control Delay (s)	7.4	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1096	113	32	887	130	30
Future Volume (veh/h)	1096	113	32	887	130	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1166	120	34	944	138	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1679	749	69	2232	183	43
Arrive On Green	0.48	0.48	0.04	0.63	0.13	0.13
Sat Flow, veh/h	3618	1572	1767	3618	1394	323
Grp Volume(v), veh/h	1166	120	34	944	171	0
Grp Sat Flow(s),veh/h/ln	1763	1572	1767	1763	1728	0
Q Serve(g_s), s	11.0	1.8	0.8	5.7	4.1	0.0
Cycle Q Clear(g_c), s	11.0	1.8	0.8	5.7	4.1	0.0
Prop In Lane		1.00	1.00		0.81	0.19
Lane Grp Cap(c), veh/h	1679	749	69	2232	227	0
V/C Ratio(X)	0.69	0.16	0.49	0.42	0.75	0.00
Avail Cap(c_a), veh/h	2491	1111	416	3736	814	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.7	6.3	20.0	3.9	17.8	0.0
Incr Delay (d2), s/veh	0.5	0.1	5.4	0.1	5.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.3	0.4	0.2	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.2	6.4	25.4	4.0	22.8	0.0
LnGrp LOS	A	A	C	A	C	A
Approach Vol, veh/h	1286			978	171	
Approach Delay, s/veh	9.0			4.8	22.8	
Approach LOS	A			A	C	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		10.6	6.7	25.2		31.9
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		6.1	2.8	13.0		7.7
Green Ext Time (p_c), s		0.4	0.0	7.2		6.7

Intersection Summary	
HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	2	0	154	143	2
Future Vol, veh/h	6	2	0	154	143	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	2	0	167	155	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	323	156	157	0	-	0
Stage 1	156	-	-	-	-	-
Stage 2	167	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	671	890	1423	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	671	890	1423	-	-	-
Mov Cap-2 Maneuver	671	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	863	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1423	-	715	-	-
HCM Lane V/C Ratio	-	-	0.012	-	-
HCM Control Delay (s)	0	-	10.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Appendix E
Future Year Plus Project
LOS Calculations



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	605	69	28	807	157	49
Future Volume (veh/h)	605	69	28	807	157	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	617	70	29	823	160	50
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7
Cap, veh/h	1124	502	61	1776	213	67
Arrive On Green	0.33	0.33	0.04	0.52	0.17	0.17
Sat Flow, veh/h	3503	1522	1711	3503	1261	394
Grp Volume(v), veh/h	617	70	29	823	211	0
Grp Sat Flow(s),veh/h/ln	1706	1522	1711	1706	1662	0
Q Serve(g_s), s	4.8	1.0	0.5	4.9	3.9	0.0
Cycle Q Clear(g_c), s	4.8	1.0	0.5	4.9	3.9	0.0
Prop In Lane		1.00	1.00		0.76	0.24
Lane Grp Cap(c), veh/h	1124	502	61	1776	281	0
V/C Ratio(X)	0.55	0.14	0.48	0.46	0.75	0.00
Avail Cap(c_a), veh/h	3181	1419	532	4772	1033	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.8	7.6	15.2	4.9	12.7	0.0
Incr Delay (d2), s/veh	0.4	0.1	5.7	0.2	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.2	0.2	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.3	7.7	21.0	5.1	16.8	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	687			852	211	
Approach Delay, s/veh	9.1			5.6	16.8	
Approach LOS	A			A	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		10.4	6.1	15.6		21.7
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		5.9	2.5	6.8		6.9
Green Ext Time (p_c), s		0.5	0.0	3.8		5.6

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	0	0	4	0	93	2	112	1	30	60	7
Future Vol, veh/h	1	0	0	4	0	93	2	112	1	30	60	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	4	0	103	2	124	1	33	67	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	317	266	71	266	270	125	75	0	0	125	0	0
Stage 1	137	137	-	129	129	-	-	-	-	-	-	-
Stage 2	180	129	-	137	141	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	636	640	991	687	636	926	1524	-	-	1462	-	-
Stage 1	866	783	-	875	789	-	-	-	-	-	-	-
Stage 2	822	789	-	866	780	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	554	624	991	674	620	926	1524	-	-	1462	-	-
Mov Cap-2 Maneuver	554	624	-	674	620	-	-	-	-	-	-	-
Stage 1	865	764	-	874	788	-	-	-	-	-	-	-
Stage 2	730	788	-	845	761	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	9.5	0.1	2.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1524	-	-	554	912	1462	-	-
HCM Lane V/C Ratio	0.001	-	-	0.002	0.118	0.023	-	-
HCM Control Delay (s)	7.4	0	-	11.5	9.5	7.5	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0.1	-	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1096	180	63	887	169	48
Future Volume (veh/h)	1096	180	63	887	169	48
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1166	191	67	944	180	51
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1604	716	108	2185	231	66
Arrive On Green	0.46	0.46	0.06	0.62	0.17	0.17
Sat Flow, veh/h	3618	1572	1767	3618	1335	378
Grp Volume(v), veh/h	1166	191	67	944	232	0
Grp Sat Flow(s),veh/h/ln	1763	1572	1767	1763	1721	0
Q Serve(g_s), s	13.0	3.6	1.8	6.7	6.2	0.0
Cycle Q Clear(g_c), s	13.0	3.6	1.8	6.7	6.2	0.0
Prop In Lane		1.00	1.00		0.78	0.22
Lane Grp Cap(c), veh/h	1604	716	108	2185	298	0
V/C Ratio(X)	0.73	0.27	0.62	0.43	0.78	0.00
Avail Cap(c_a), veh/h	2188	976	366	3282	712	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.7	8.2	22.1	4.8	19.1	0.0
Incr Delay (d2), s/veh	0.8	0.2	5.6	0.1	4.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.8	0.8	0.7	2.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.5	8.4	27.7	4.9	23.5	0.0
LnGrp LOS	B	A	C	A	C	A
Approach Vol, veh/h	1357			1011	232	
Approach Delay, s/veh	11.1			6.4	23.5	
Approach LOS	B			A	C	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		13.4	8.0	27.0		35.0
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		8.2	3.8	15.0		8.7
Green Ext Time (p_c), s		0.5	0.0	7.0		6.6

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	6	0	2	3	0	57	0	154	6	97	143	2
Future Vol, veh/h	6	0	2	3	0	57	0	154	6	97	143	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	2	4	0	67	0	181	7	114	168	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	615	585	169	583	583	185	170	0	0	188	0	0
Stage 1	397	397	-	185	185	-	-	-	-	-	-	-
Stage 2	218	188	-	398	398	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	403	423	875	424	424	857	1407	-	-	1386	-	-
Stage 1	629	603	-	817	747	-	-	-	-	-	-	-
Stage 2	784	745	-	628	603	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	346	385	875	393	385	857	1407	-	-	1386	-	-
Mov Cap-2 Maneuver	346	385	-	393	385	-	-	-	-	-	-	-
Stage 1	629	548	-	817	747	-	-	-	-	-	-	-
Stage 2	723	745	-	569	548	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14	9.9	0	3.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1407	-	-	408	809	1386	-	-
HCM Lane V/C Ratio	-	-	-	0.023	0.087	0.082	-	-
HCM Control Delay (s)	0	-	-	14	9.9	7.8	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.3	-	-

River Ranch Apartments

Water Calculations

	ERC	# of bldgs	ERC*	AF	AF
1 bedroom/1 bath	1.9	12	22.8	2.1	25.2
2 bedroom/2 bath	3.4	26	88.4	3.8	98.8
3 bedroom/2 bath	3.4	2	6.8	3.8	7.6
Office/Clubhouse	0.36	1	0.36	0.24	0.24
Maintenance	0.21	1	0.21	0.4	0.4
Landscape**				5.35	5.35
TOTALS			118.57		137.59

*ERC and AF based on Fremont Apartment building/calculations

** Landscape AF is actual from landscape architect

L.A. StudioNevada
the landscape architecture studio



PRELIMINARY ESTIMATE OF PROBABLE LANDSCAPE WATER DEMAND

Project: River Ranch Apartments
L.A. Studio Nevada Job No: 632-504-08-22
Prepared for: ERGS, Inc.
Prepared by: L.A. Studio Nevada/Kevin Kirk
Date: September 13, 2022
This water demand is preliminary and based on the landscape plan for "River Ranch Apartments" prepared by L.A. Studio Nevada. This demand utilizes Fernley Public Works ERC calculations.

Required Landscape Area:	135,918	min.
Required Min. Trees:	341	
Required Min. Shrubs:	2,718	

Fernely Public Works, ERC Calculation

	Qty	Size	# emitters	GPH	load	run time (hr)	x week	Season	Totals
Evergreen tree	190	15 gal	3	2	1140	1	3	32	109,440
Decidius tree	151	5 ft. ht.	4	2	1208	1	3	32	115,968
Shrub, large	2,718	#5	2	1	5436	1	3	32	521,856
Shrub, small	0	#1	1	1	0	1	3	32	-
Groundcover/perennials	0	flats	1	0.5	0	1	3	32	-
lawn	-	Roll	spray*		(see below)				--
								drip, Gal/Yr:	747,264
					2.29	AFY			
*Turf Spray:	39,000	Sq. Ft.	x	3.41	= 3.05	AFY		spray, Gal/Yr:	994,836
			43,560					**Total use, Gal/Yr:**	**1,742,100**
								AFY:	**5.35**

SECTION 5 – FULL SIZE PLANS

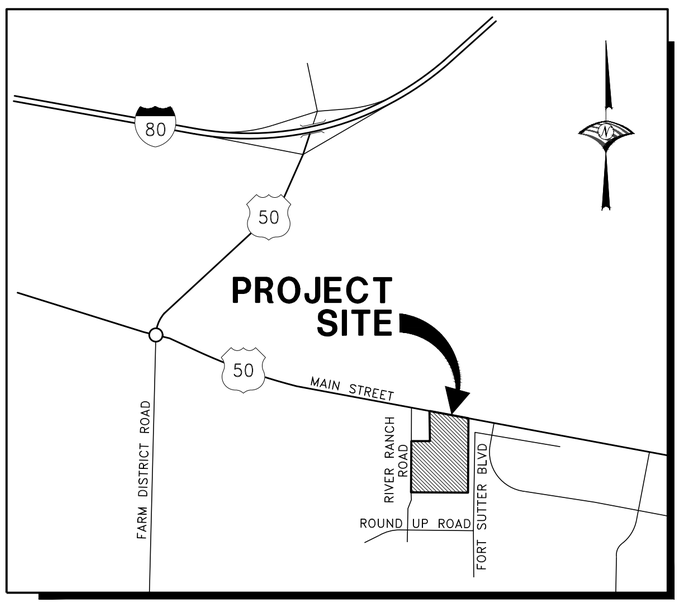
TITLE SHEET

RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC

FERNLEY **NEVADA**

SEPTEMBER, 2022



VICINITY MAP

NOT TO SCALE

OWNER/DEVELOPER:

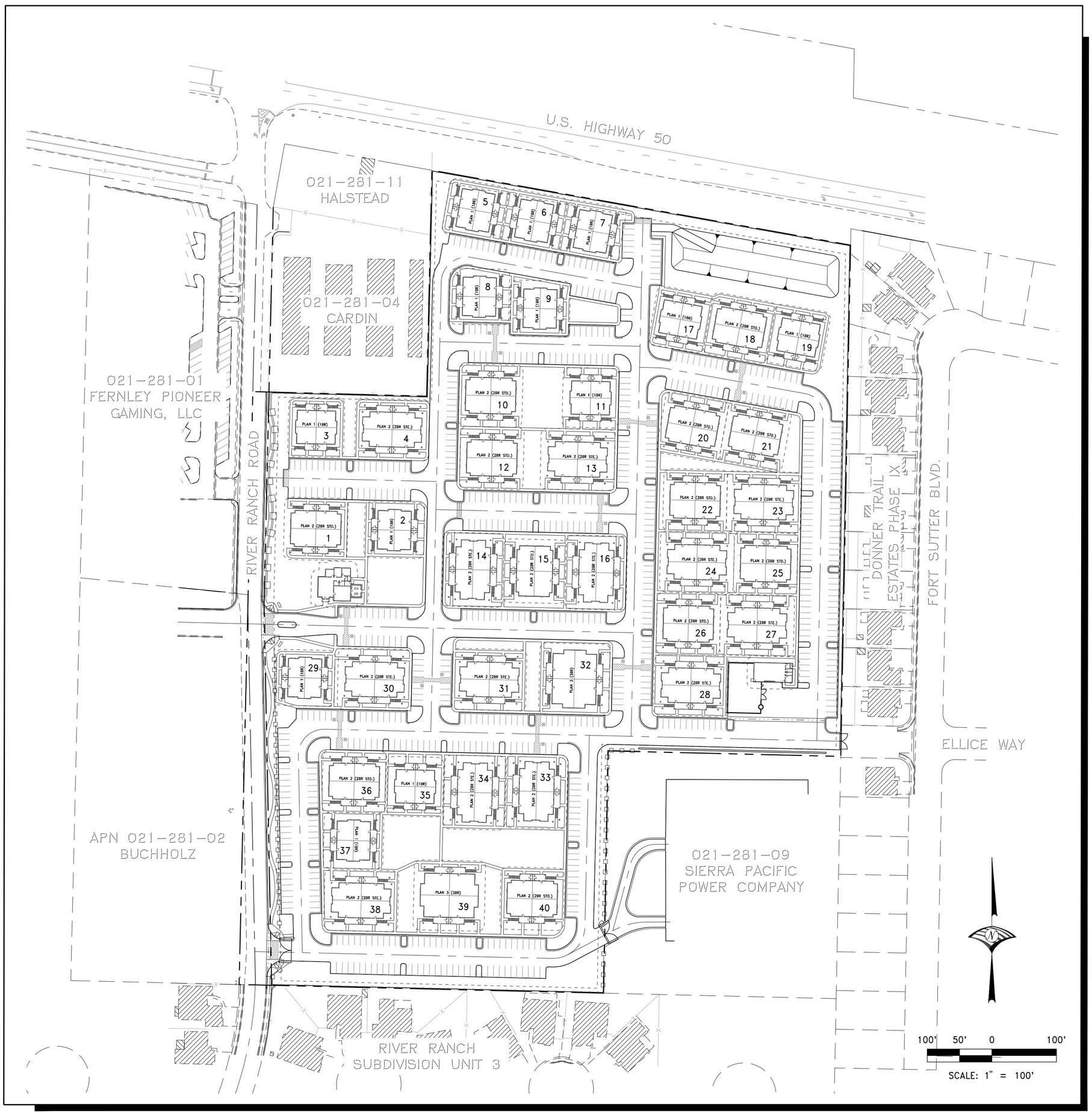
ERGS FERNLEY, LLC
9345 LEMMON DRIVE
RENO, NV 89506
775.972.0213

BASIS OF BEARINGS

NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983/1994, HIGH ACCURACY REFERENCE NETWORK (NAD 83/94–HARN), AS DETERMINED USING REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS. THE BEARING BETWEEN NDOT MONUMENT 1528013 AND 1528011 (LPN 1528) IS TAKEN AS NORTH 76°59'40" WEST. ALL DIMENSIONS SHOWN ARE GROUND DISTANCES. GRID TO GROUND COMBINED FACTOR = 1.0002694480

BASIS OF ELEVATIONS

BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AS TAKEN FROM NDOT BENCHMARK 1528013 (LPN 1528), WITH A PUBLISHED ELEVATION OF 4104.87 FEET. BENCHMARK 1528013 IS DESCRIBED AS BEING A 2.5" ALUMINUM CAP IN FENO POLYROC STAMPED "1528013M 2017". THE MONUMENT IS LOCATED AT US–50A MILEPOST LYON 14.5, 25–FEET SOUTH OF THE EDGE OF OIL AND 30–FEET EAST OF CINDER BLOCK FENCE END.



SITE PLAN

PROFESSIONAL ENGINEER – STATE OF NEVADA
C. EVAN NIKIRK
EXP: 12.31.23
CIVIL
No. 11466
09.13.2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard Tel 775.823.4068
Reno, NV 89502 Fax 775.823.4066

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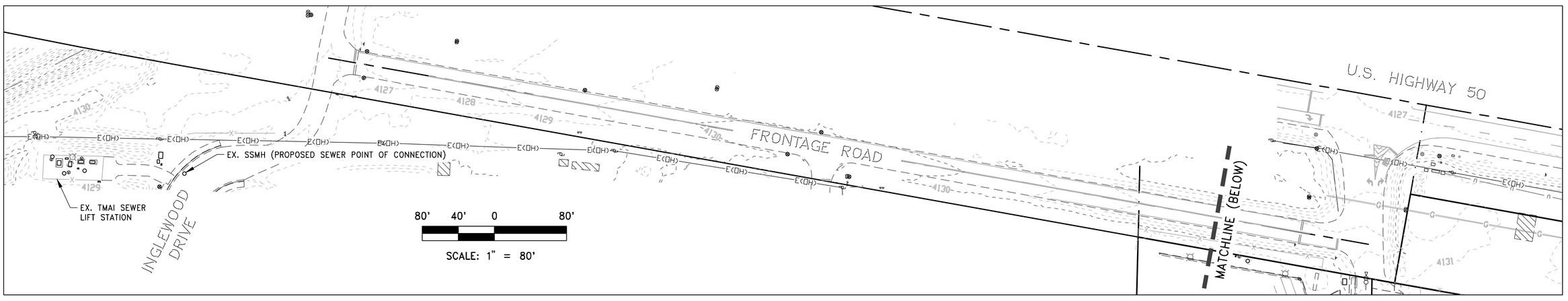
EXISTING CONDITIONS

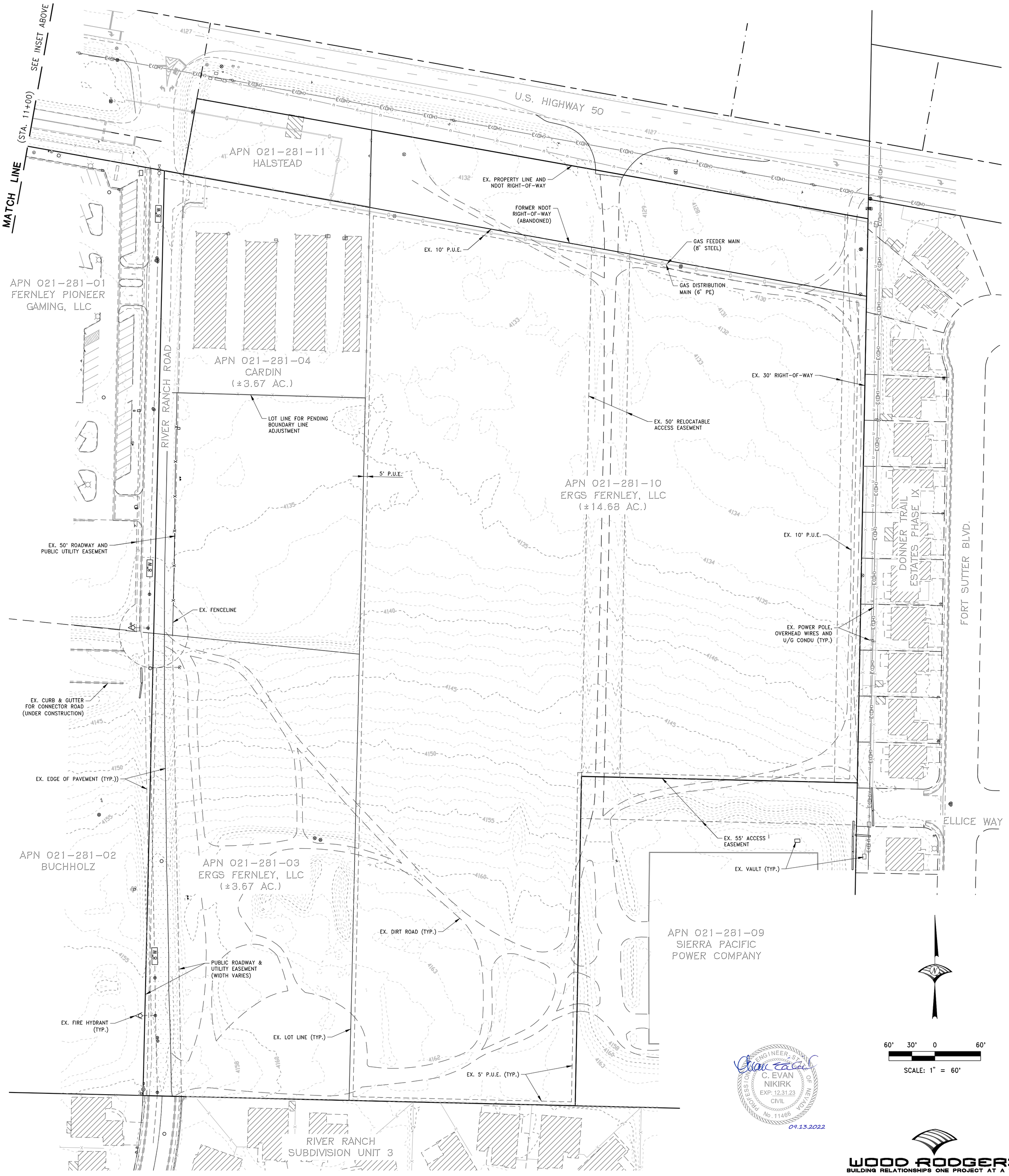
RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC

FERNLEY **NEVADA**

SEPTEMBER, 2022





NOTE: BASE SURVEY AND TOPOGRAPHY PREPARED BY WOOD RODGERS, INC. (RENO). DATE OF PHOTOGRAPHY: JUNE 30, 2022.

PROFESSIONAL ENGINEER STATE OF NEVADA
C. EVAN NIKIRK
EXP: 12.31.23
CIVIL
No. 11466
09.13.2022

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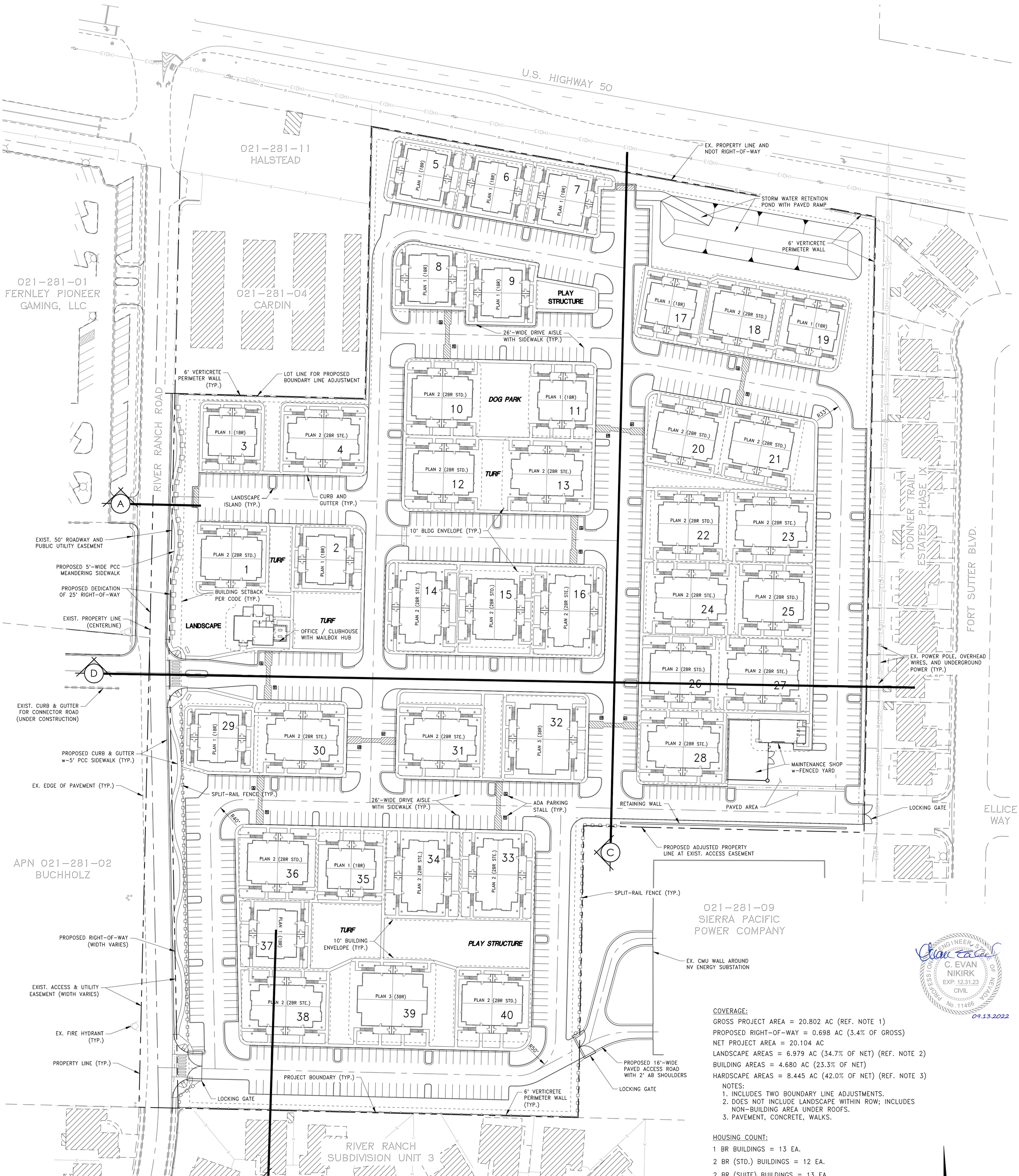
PRELIMINARY SITE PLAN

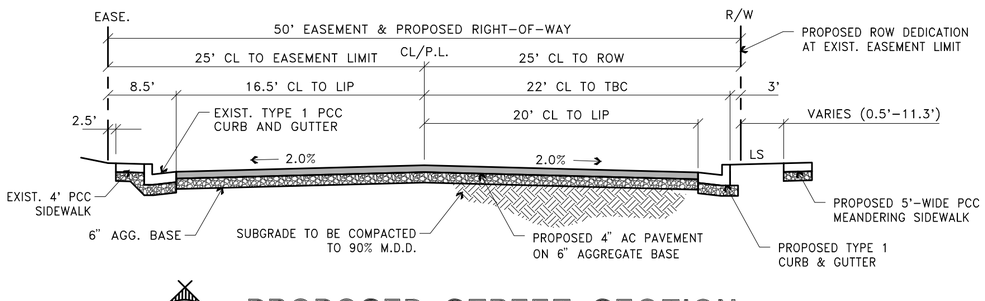
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SEPTEMBER, 2022





A **PROPOSED STREET SECTION**

NOT TO SCALE

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CIVIL
No. 11466
PROFESSIONAL ENGINEER STATE OF NEVADA

09.13.2022

COVERAGE:

GROSS PROJECT AREA = 20.802 AC (REF. NOTE 1)
PROPOSED RIGHT-OF-WAY = 0.698 AC (3.4% OF GROSS)
NET PROJECT AREA = 20.104 AC
LANDSCAPE AREAS = 6.979 AC (34.7% OF NET) (REF. NOTE 2)
BUILDING AREAS = 4.680 AC (23.3% OF NET)
HARDSCAPE AREAS = 8.445 AC (42.0% OF NET) (REF. NOTE 3)

NOTES:
1. INCLUDES TWO BOUNDARY LINE ADJUSTMENTS.
2. DOES NOT INCLUDE LANDSCAPE WITHIN ROW; INCLUDES NON-BUILDING AREA UNDER ROOFS.
3. PAVEMENT, CONCRETE, WALKS.

HOUSING COUNT:

1 BR BUILDINGS = 13 EA.
2 BR (STD.) BUILDINGS = 12 EA.
2 BR (SUITE) BUILDINGS = 13 EA.
3 BR BUILDINGS = 2 EA.
TOTAL NO. APT. BUILDINGS = 40 EA.
TOTAL NO. APARTMENT UNITS = 320 EA.

BUILDING COUNT:

APARTMENT BUILDINGS = 40 EA.
OFFICE / CLUBHOUSE = 1 EA.
MAINTENANCE BUILDING = 1 EA.
TOTAL BUILDINGS = 42 EA.

PARKING COUNT:

MINIMUM REQUIRED = 668 STALLS
MIN. ADA STALLS REQUIRED = 14 EA.
ADA STALLS PROVIDED = 18 EA.
STD. 9x18 PARKING STALLS = 680 EA.
TOTAL SHOWN = 698 STALLS

60' 30' 0 60'

SCALE: 1" = 60'

WOOD RODGERS
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PRELIMINARY GRADING PLAN

RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC

FERNLEY **NEVADA**

SEPTEMBER, 2022



PROFESSIONAL ENGINEER
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EXP: 12.31.23
CIVIL
No. 11466
STATE OF NEVADA
09.13.2022

60' 30' 0 60'

SCALE: 1" = 60'

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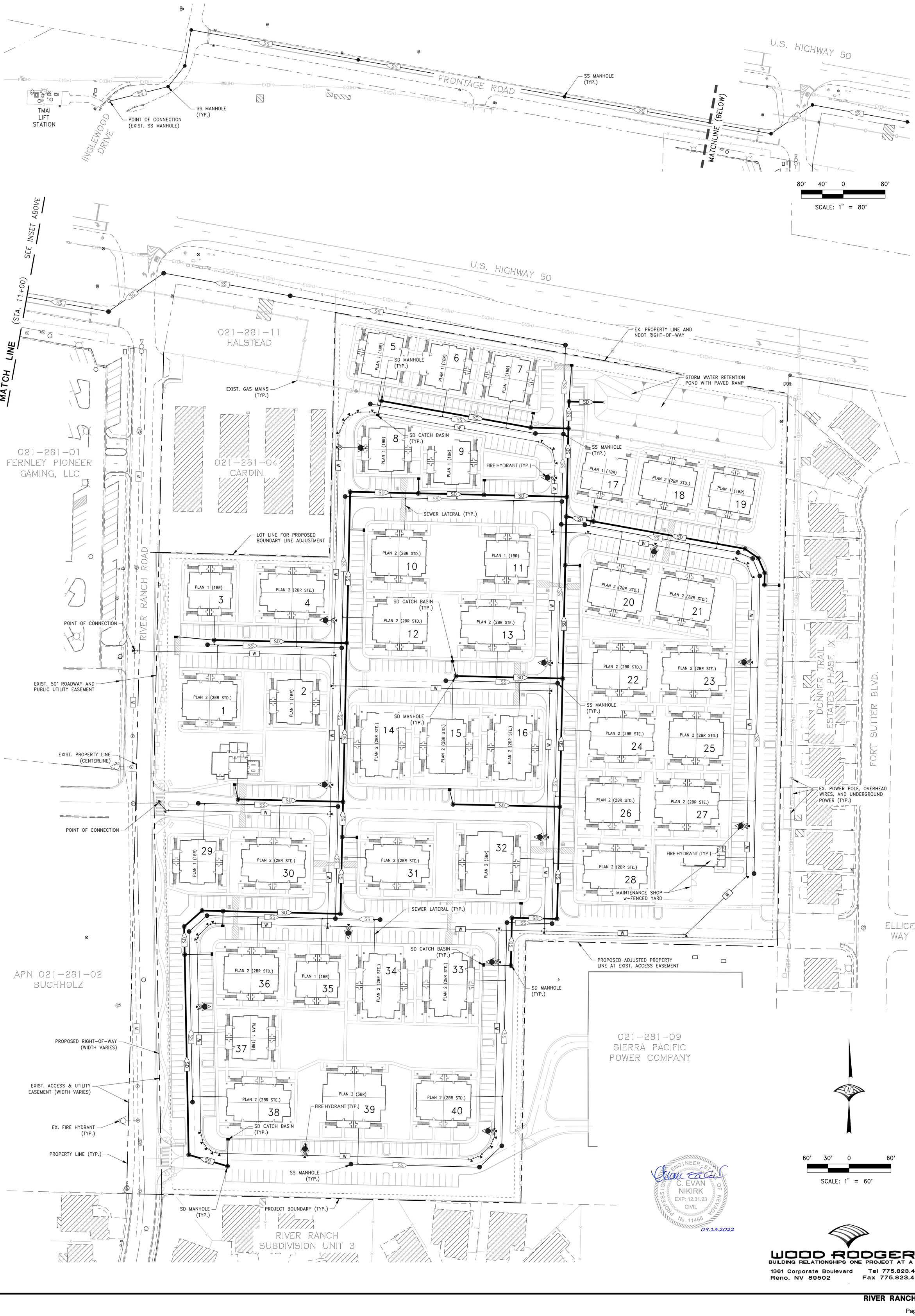
PRELIMINARY UTILITY PLAN

RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC

FERNLEY **NEVADA**

SEPTEMBER, 2022



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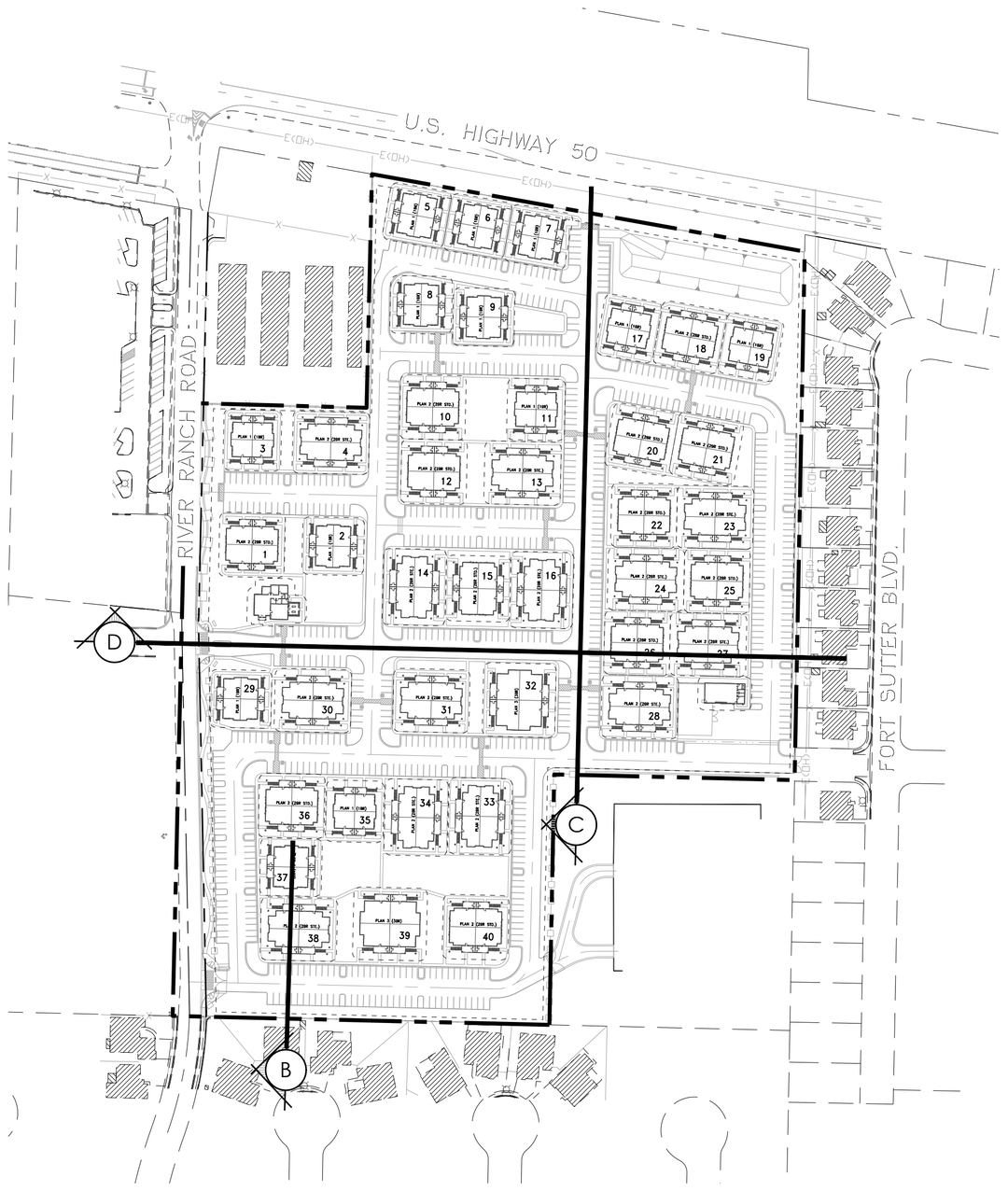
PRELIMINARY CROSS SECTIONS

RIVER RANCH APARTMENTS

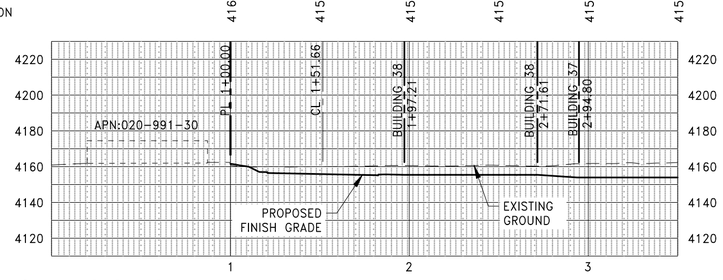
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SEPTEMBER, 2022



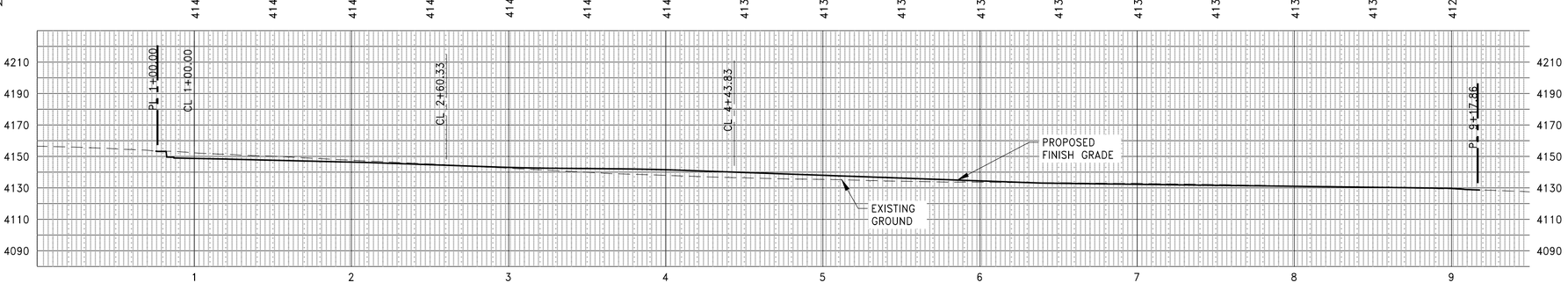
EXISTING GROUND ELEVATION	4160.9	4161.6	4160.0	4160.6	4160.7	4161.7	4162.3
PROPOSED FINISH GRADE ELEVATION		4161.59	4155.86	4155.43	4155.43	4153.95	4153.95



CROSS SECTION B

SCALE:
HORIZ: 1"=60'
VERT: 1"=60'

EXISTING GROUND ELEVATION	4156.5	4154.8	4152.3	4150.1	4147.6	4145.2	4142.5	4139.9	4137.9	4136.4	4135.4	4134.2	4133.6	4133.2	4132.9	4132.2	4131.1	4130.3	4129.3	4127.4
PROPOSED FINISH GRADE ELEVATION			4148.72	4147.57	4146.37	4144.73	4143.01	4142.27	4141.52	4139.78	4138.00	4136.22	4134.44	4132.88	4132.25	4131.62	4130.99	4130.36	4129.73	

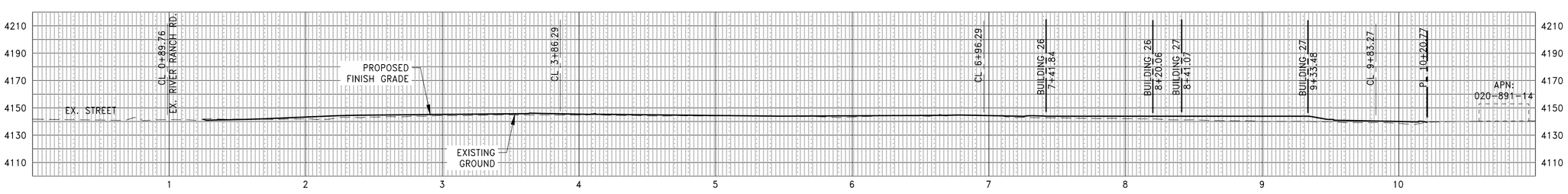


CROSS SECTION C

SCALE:
HORIZ: 1"=60'
VERT: 1"=60'

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EXISTING GROUND ELEVATION	4141.7	4141.1	4141.3	4141.8	4141.9	4143.2	4144.3	4144.8	4144.7	4144.1	4144.1	4143.8	4143.3	4144.0	4144.3	4142.7	4142.0	4141.2	4139.9	4139.8	4138.6	4140.4
PROPOSED FINISH GRADE ELEVATION				4141.38	4143.25	4144.71	4145.16	4145.61	4145.35	4144.90	4144.38	4143.90	4144.15	4144.40	4144.30	4143.85	4143.85	4143.85	4143.85	4141.47	4139.98	



CROSS SECTION D

SCALE:
HORIZ: 1"=60'
VERT: 1"=60'

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PLANT LEGEND

- ORNAMENTAL TREES
- DECIDUOUS SHADE TREES
- EVERGREEN TREES
- BUFFER TREES ALONG SOUTH AND EAST BOUNDARIES
- LANDSCAPE AREA
- LAWN AREA
- AMENITIES

LANDSCAPE DATA

SITE AREA: 906,119 SQ FT (21 ACRES)
JURISDICTION: FERNLEY
ZONING: MIXED USE

REQUIRED LANDSCAPE AREA = 135,918 SQ FT
- (15% OF TOTAL SITE AREA)

PROVIDED LANDSCAPE AREA = 135,918 SQ FT MIN.

REQUIRED TREES = 341 MIN.
- (1) TREE PER 500 SQ FT OF REQUIRED LANDSCAPE AREA = 272
- (1) TREE PER 10 PARKING SPACES (692 PARKING SPACES) = 69

REQUIRED SHRUBS =2,718 MIN.
- (6 SHRUBS PER REQUIRED TREE)

GENERAL NOTES

1) ALL PLANTING AND IRRIGATION SHALL BE INSTALLED PER LOCAL GOVERNING CODES.

2) TREES
- DECIDUOUS TREES SHALL HAVE A MINIMUM CALIPER OF 2 INCHES.
- EVERGREEN TREES SHALL HAVE A MINIMUM HEIGHT OF 6 FEET.
- ADDITIONAL TREES, BEYOND THOSE REQUIRED BY CODE, MAY BE REDUCED IN SIZE AT INSTALLATION.
- BUFFER TREES PROVIDED ALONG SOUTH AND EAST BOUNDARIES

3) FINAL PLANT SELECTION AND LAYOUT WILL BE BASED ON SOUND HORTICULTURAL PRACTICES RELATING TO MICRO-CLIMATE, SOIL, AND WATER REGIMES. ALL TREES WILL BE STAKED SO AS TO REMAIN UPRIGHT AND PLUMB FOLLOWING INSTALLATION. PLANT SIZE AND QUALITY AT TIME OF PLANTING WILL BE PER THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-1990).

4) ALL SHRUB BEDS WILL RECEIVE 4" DEPTH MULCH WITH WEED CONTROL.

5) ALL LANDSCAPING WILL BE AUTOMATICALLY IRRIGATED. CONTAINER PLANTINGS WILL BE DRIP IRRIGATED BASED ON THE SPECIFIC HORTICULTURAL REQUIREMENTS OF EACH SPECIES. A REDUCED-PRESSURE-TYPE BACKFLOW PREVENTER WILL BE PROVIDED ON THE IRRIGATION SYSTEM AS REQUIRED PER CODE.

6) PLAN IS CONCEPTUAL. PLANT QUANTITIES INDICATED ARE PER CITY OF FERNLEY REQUIREMENTS. PLANT LOCATIONS, FINAL SPECIES SELECTION, AND SIZE AT PLANTING SHALL BE DETERMINED DURING DEVELOPMENT OF THE FINAL CONSTRUCTION DOCUMENTS.



0' 60' 120' 180'

Scale in Feet

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L.A. Studio Nevada
the landscape architecture studio
1552 C Street Sparks, NV 89431 (775) 323-2223 NV RLA #440
www.lastudionevada.com

REGISTERED LANDSCAPE ARCHITECT
RYAN HANSEN
440
Expires: 6/30/
STATE OF NEVADA

Nevada

Preliminary Landscape Plan
River Ranch Apartments
ERGS Properties
Lyon Co.

Fernley

No.	Revision Date

LA No: 632-504-08-22
Designed: RMH
Drawn: AMH
Checked: RMH
Date: 9/13/2022

Sheet L1 of 1

Frame
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4090 S. McCarran Boulevard #E
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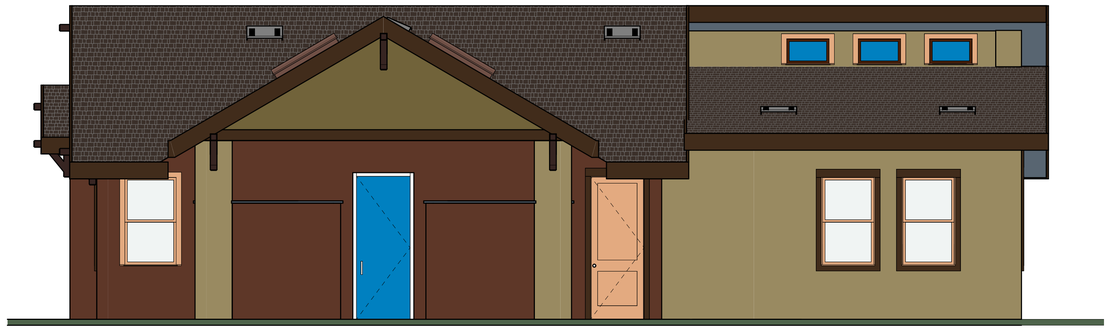
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Clubhouse

22-35 - River Ranch Apt. Clubhouse

09.13.2022

SD 1.1



1 East -presentation
1/4" = 1'-0"



2 ENTRY - SOUTH-presentation
1/4" = 1'-0"

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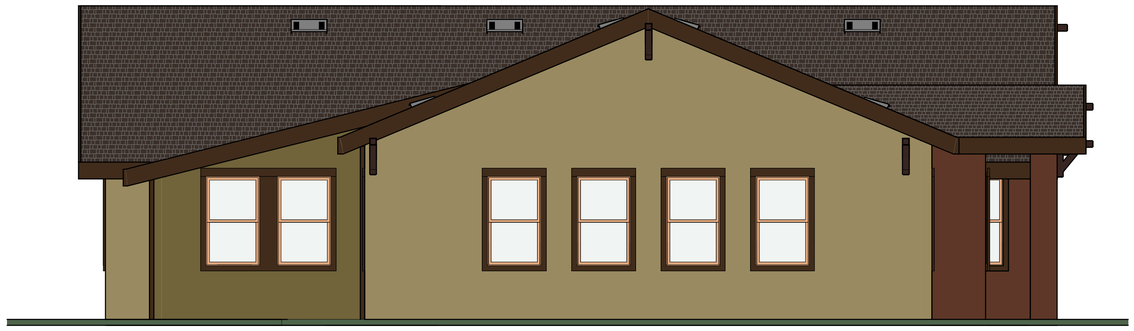
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Clubhouse Elevations

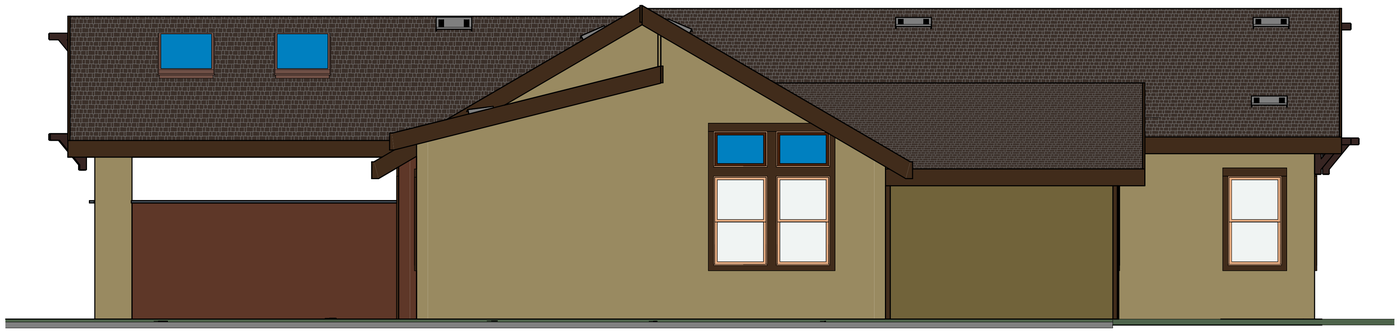
22-35 - River Ranch Apt. Clubhouse

09.13.2022

SD 1.2



2 West-Presentation
1/4" = 1'-0"



1 North-Presentation
1/4" = 1'-0"

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4090 S. McCarran Boulevard #E
Reno, NV 89502 (775) 827-9927

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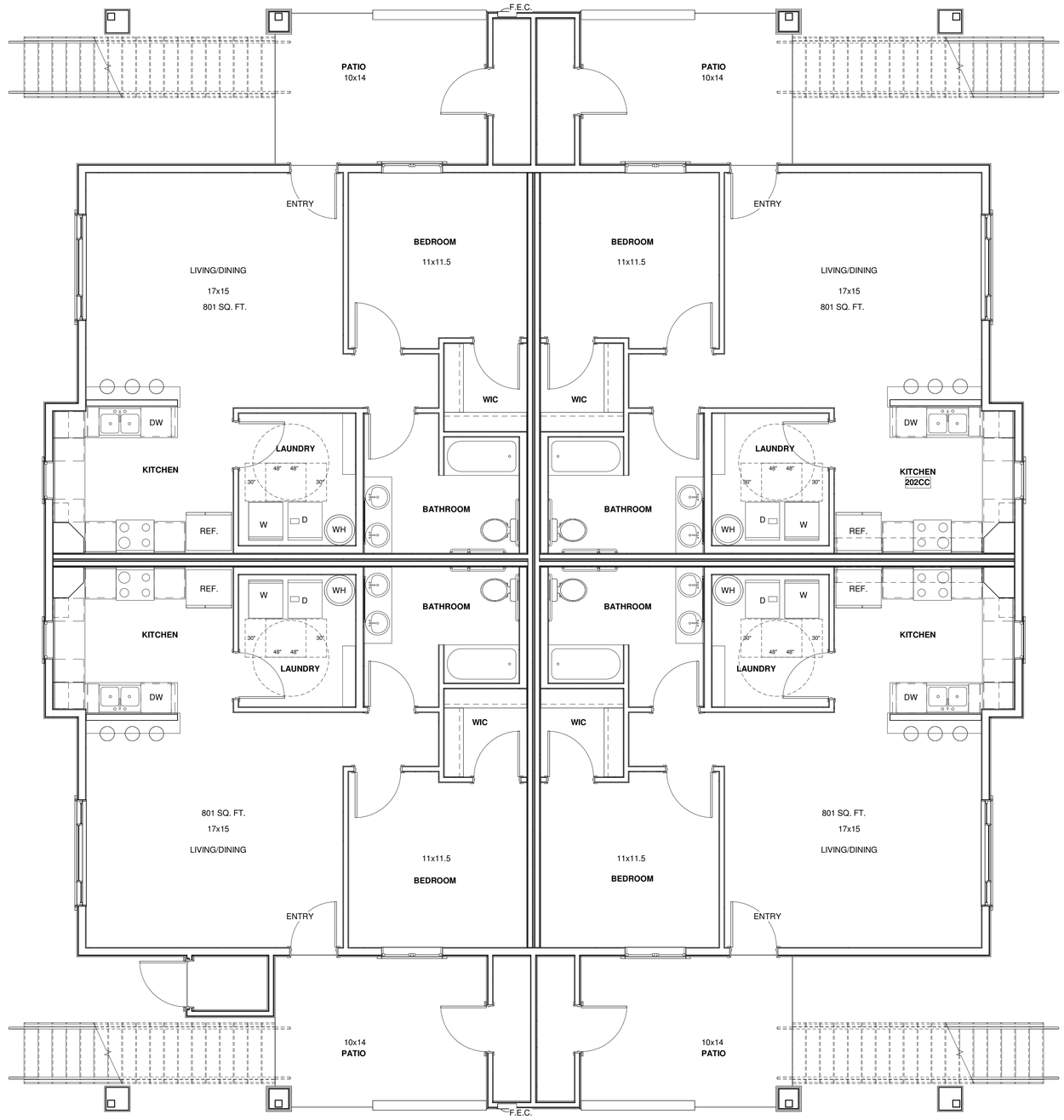
Clubhouse Elevations

22-35 - River Ranch Apt. Clubhouse

09.13.2022

SD 1.3

Frame
ARCHITECTURE, INC
4090 S. McCarran Boulevard #E
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1 THE ONE - GROUND FLOOR PLAN (1 BEDROOM)
1/4" = 1'-0"

Frame
ARCHITECTURE, INC
4090 S. McCarran Boulevard #E
Reno, NV 89502 (775) 827-9927

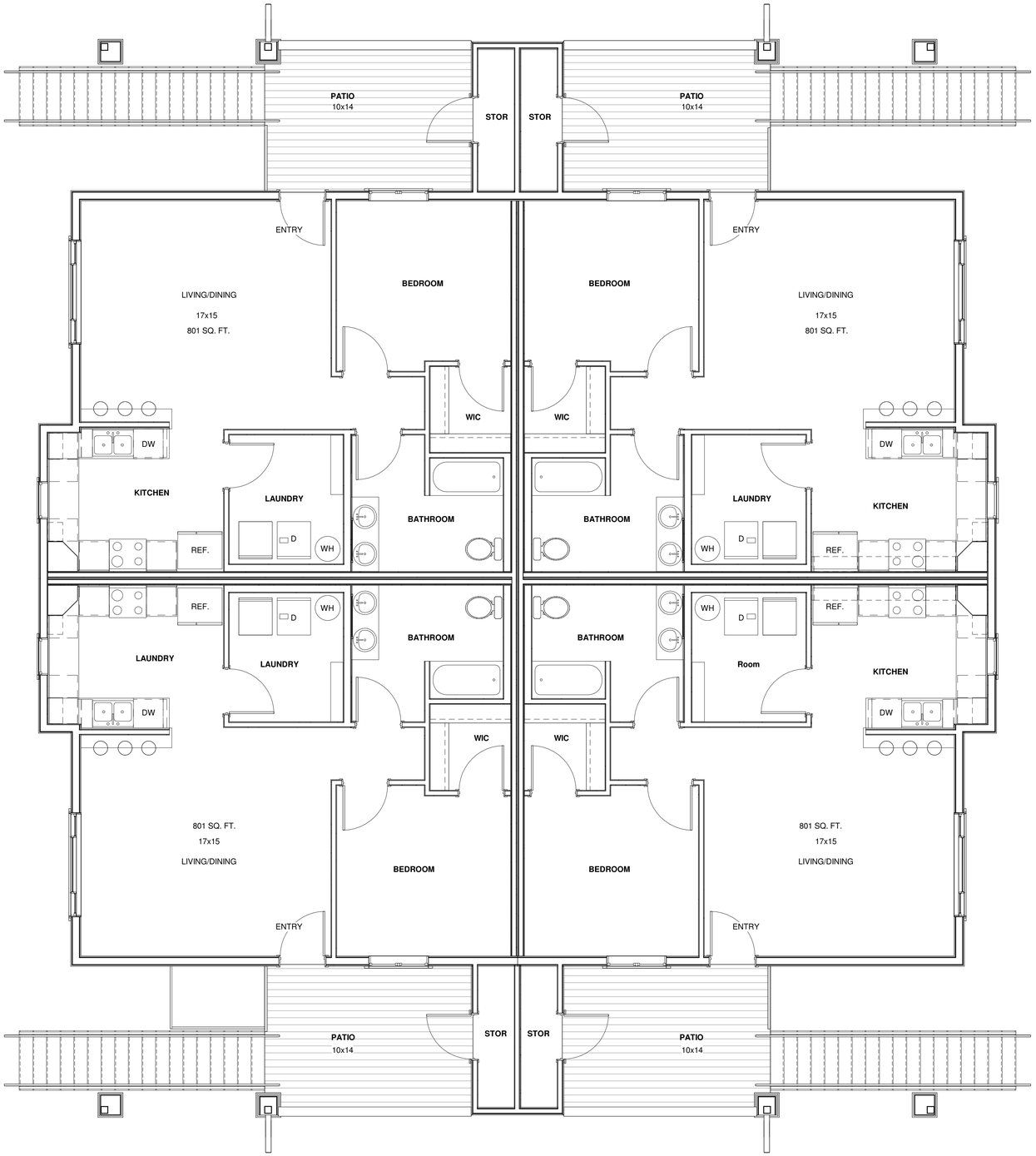
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First Floor Plan - The One

22-34 - River Ranch Apartments - The One

09.13.2022

SD 1.1



1 A-5.0 SD 1.2 THE ONE - SECOND FLOOR PLAN (1 BEDROOM)

1/4" = 1'-0"

Frame
ARCHITECTURE, INC
4090 S. McCarran Boulevard #E
Reno, NV 89502 (775) 827-9927

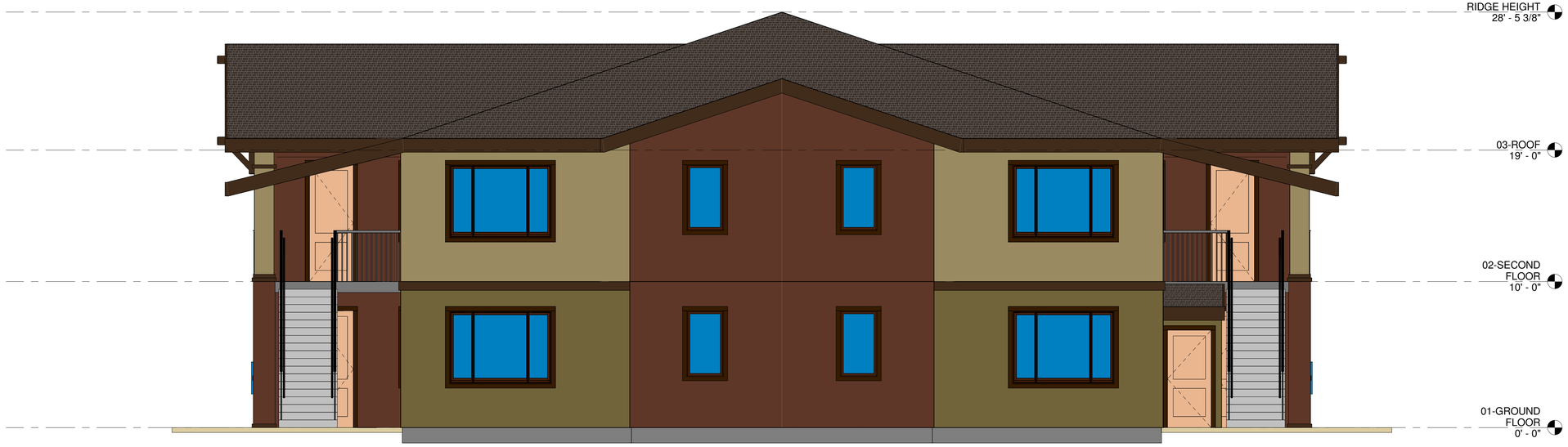
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Second Floor Plan - The One

22-34 - River Ranch Apartments - The One

09.13.2022

SD 1.2



1 East Elevation
1/4" = 1'-0"



2 North Elevations
1/4" = 1'-0"

Frame
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Reno, NV 89502 (775) 827-9927

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Exterior Elevations

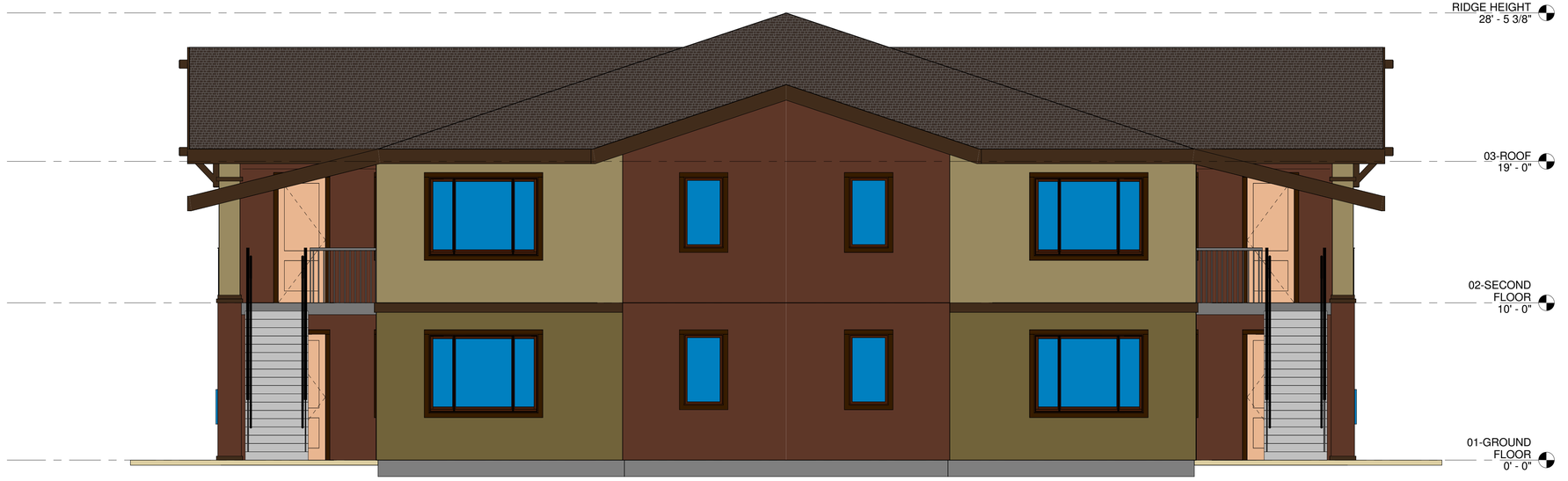
22-34 - River Ranch Apartments - The One

09.13.2022

SD 1.3



1 South Elevation.
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2 West Elevation
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Frame
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Reno, NV 89502 (775) 827-9927

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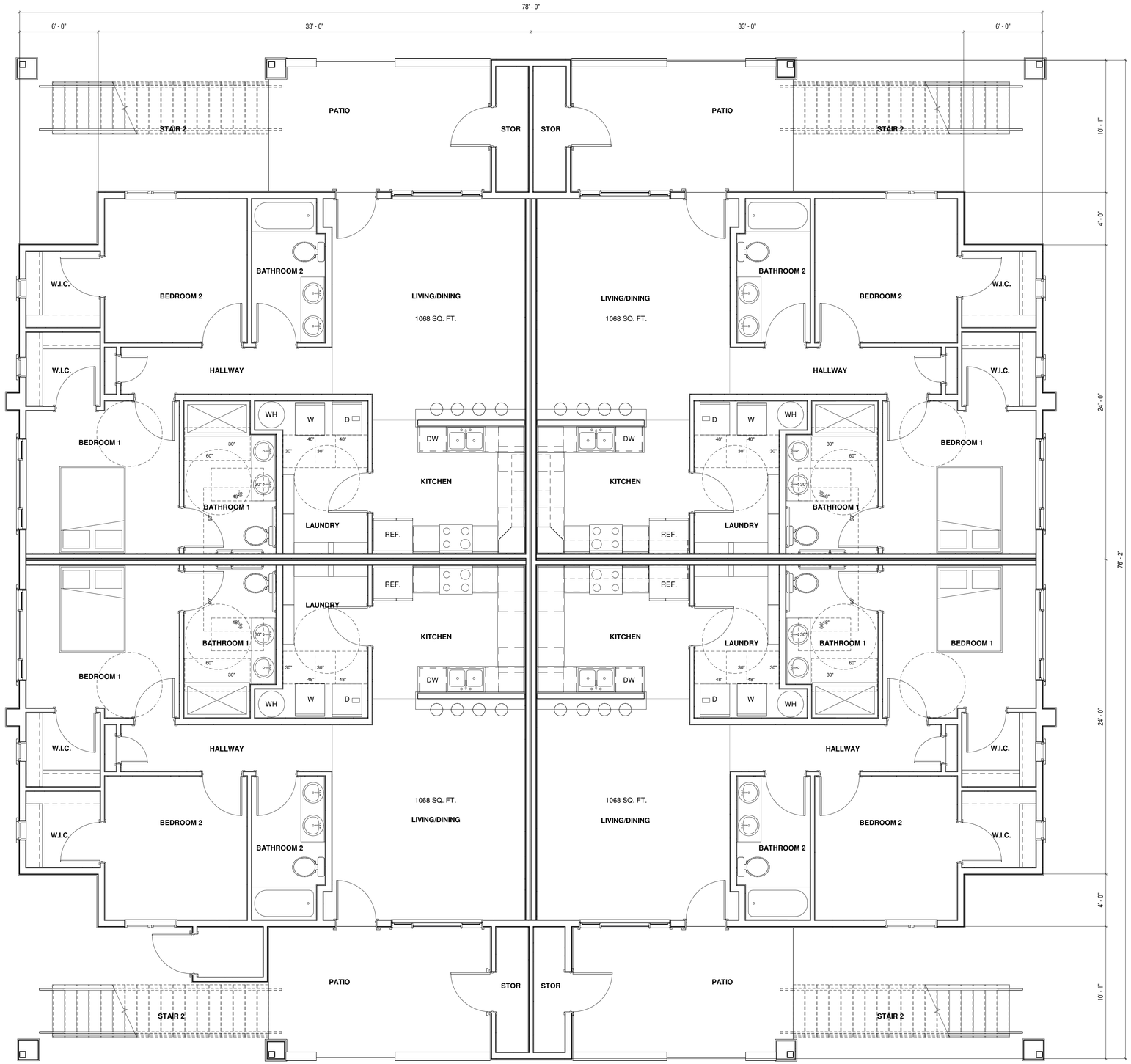
Exterior Elevations

22-34 - River Ranch Apartments - The One

09.13.2022

SD 1.4

Frame
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1 THE STANDARD - GROUND FLOOR PLAN (2 Bedroom)
1/4" = 1'-0"

Frame
ARCHITECTURE, INC
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Reno, NV 89502 (775) 827-9927

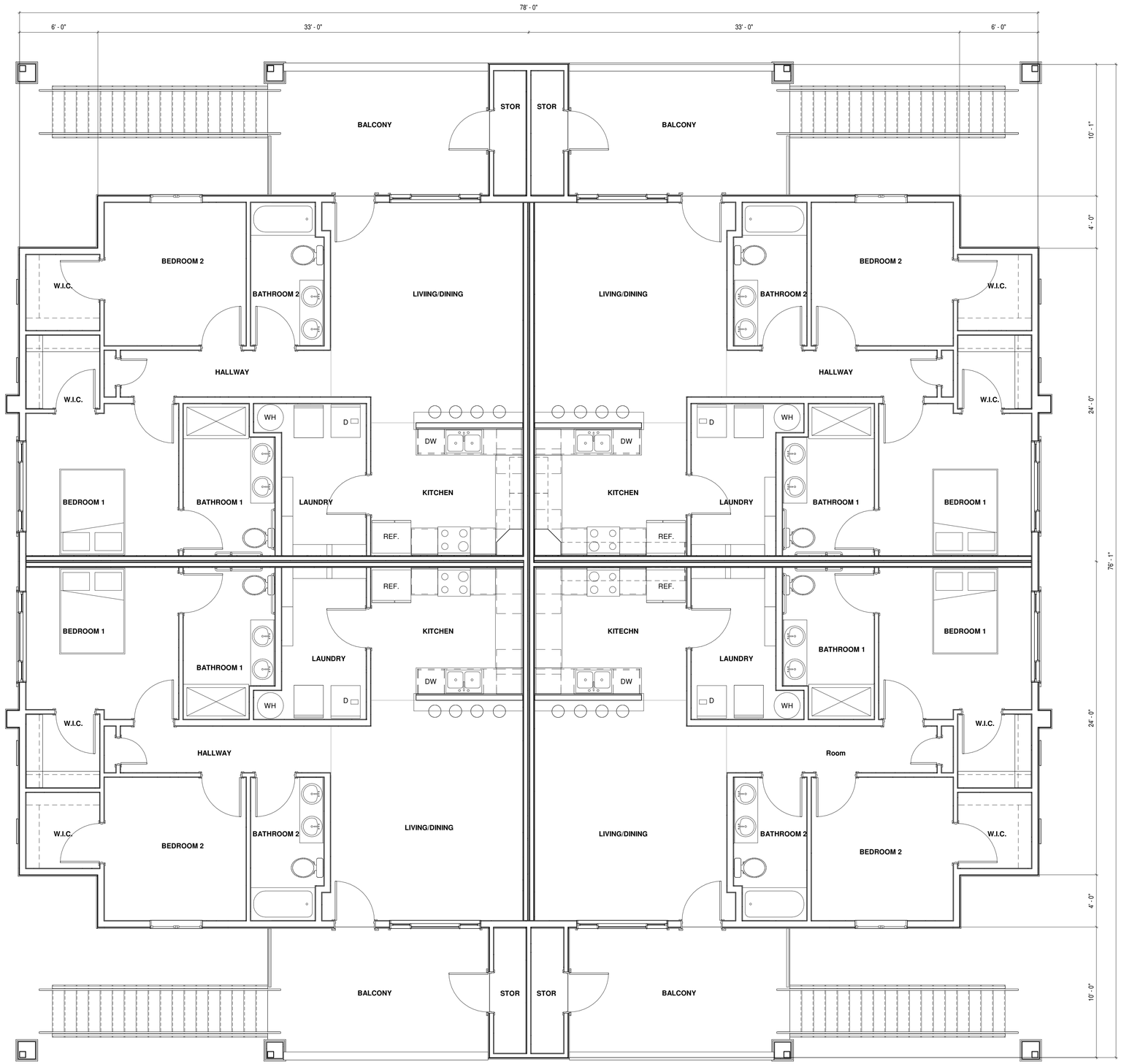
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The Standard - Two Bedroom Apartments -
First Floor

22-35 - River Ranch Apartments - The Standard

09.13.2022

SD 1.2



1 SECOND FLOOR PLAN
1/4" = 1'-0"

Frame
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The Standard - Two Bedroom Apartments -
Second Floor

22-35 - River Ranch Apartments - The Standard

09.13.2022

SD 1.3



1 EAST ELEVATION
1/4" = 1'-0"



2 NORTH ELEVATION
1/4" = 1'-0"

Frame
ARCHITECTURE, INC
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The Standard - Two Bedroom Elevations

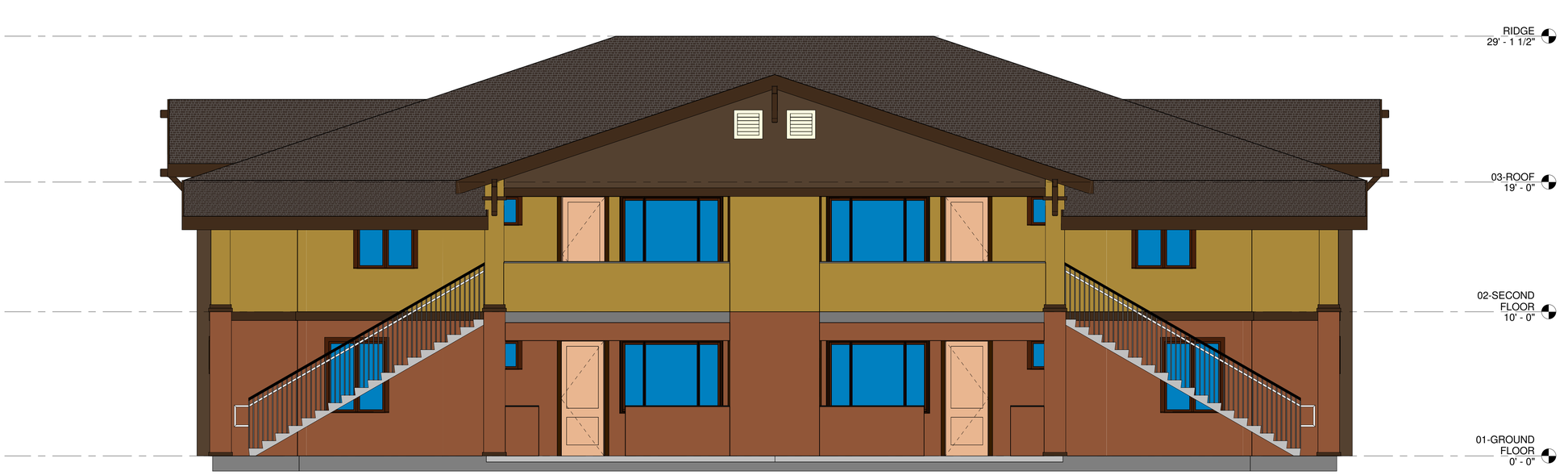
22-35 - River Ranch Apartments - The Standard

09.13.2022

SD 1.4



1 SOUTH ELEVATION
1/4" = 1'-0"



2 WEST ELEVATION
1/4" = 1'-0"

Frame
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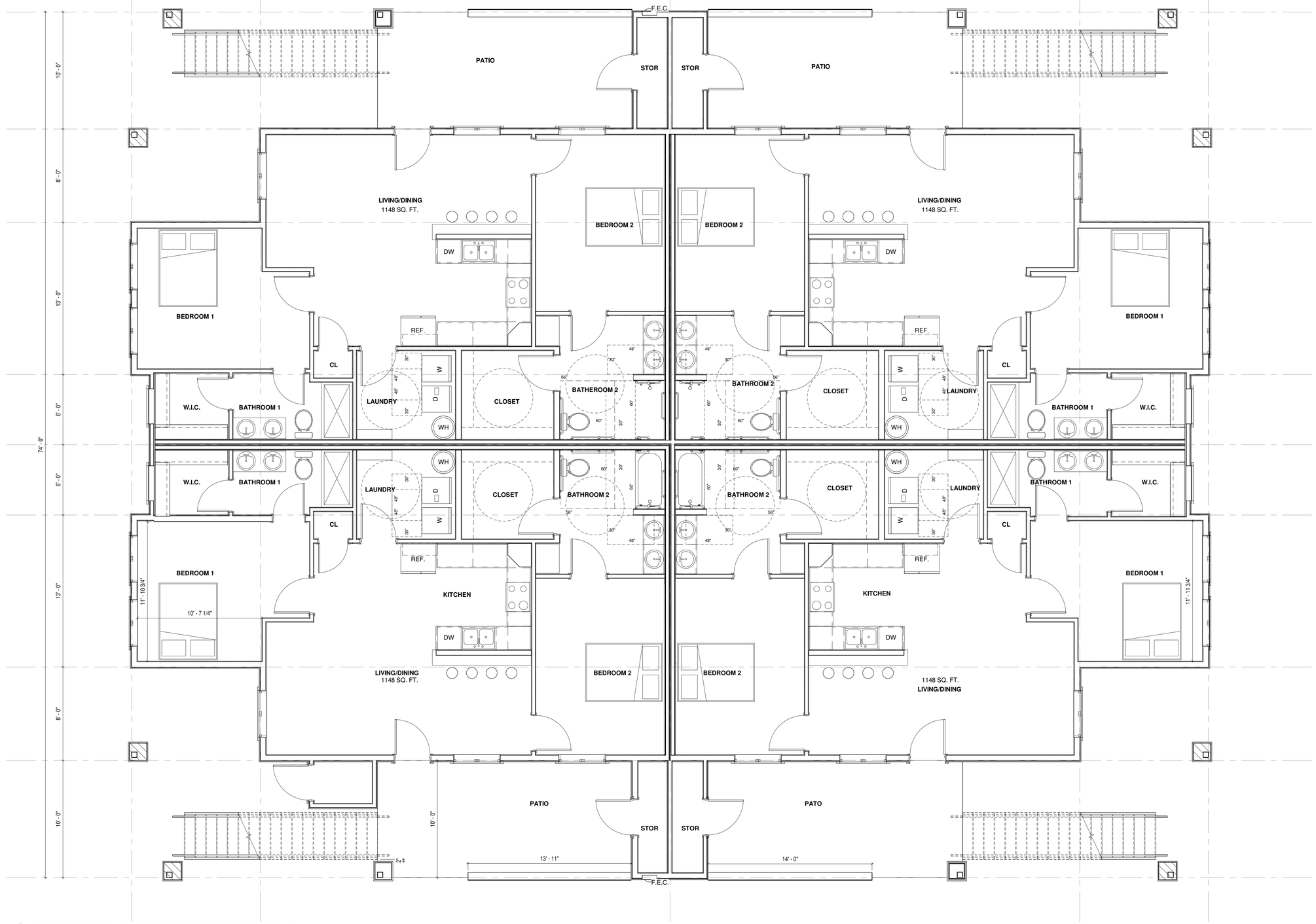
The Standard - Two Bedroom Elevations

22-35 - River Ranch Apartments - The Standard

09.13.2022

SD 1.5

Frame
ARCHITECTURE, INC
4090 S. McCarran Boulevard #E
Reno, NV 89502 (775) 827-9927



1 THE SUITES - GROUND FLOOR PLAN (2 Bedroom)
1/4" = 1'-0"

Frame
ARCHITECTURE, INC
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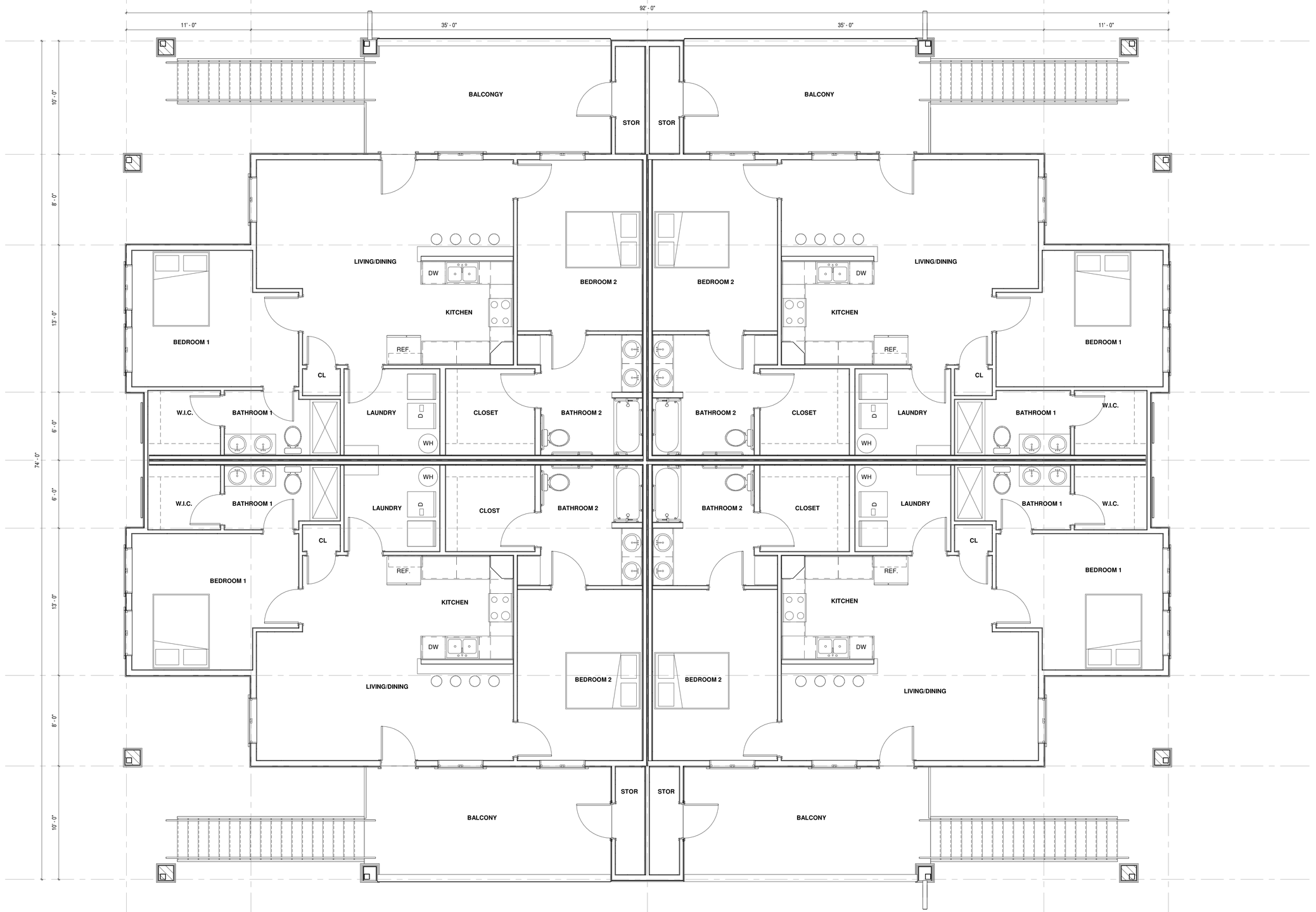
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9/13/2022 9:15:12 AM

The Suites - Two Bedroom Apartments -
First Floor

23-35 - River Ranch Apartments - The Suites

09.13.2022

SD 1.1



1 SECOND FLOOR PLAN
1/4" = 1'-0"

Frame
ARCHITECTURE, INC
4090 S. McCarran Boulevard #E
Reno, NV 89502 (775) 827-9927

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The Suites - Two Bedroom Apartments -
Second Floor

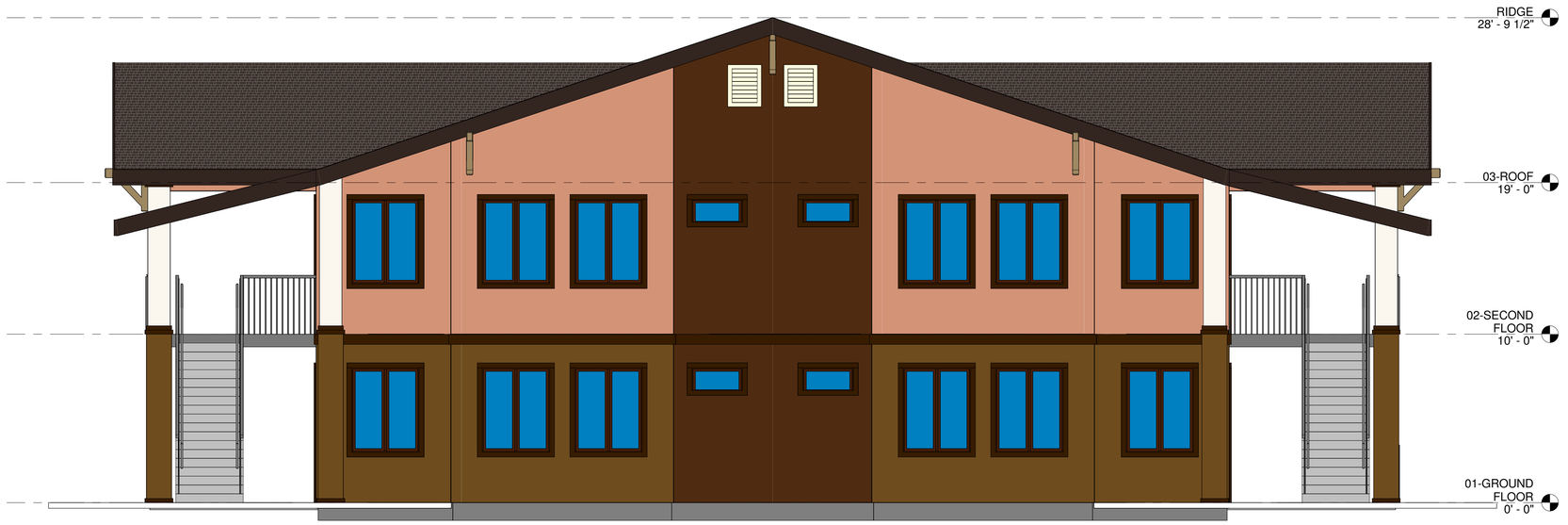
23-35 - River Ranch Apartments - The Suites

09.13.2022

SD 1.2



1 Elevation 2 - a1
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2 Elevation 1 - a1
1/4" = 1'-0"

Frame
ARCHITECTURE, INC
4090 S. McCarran Boulevard #E
Reno, NV 89502 (775) 827-9927

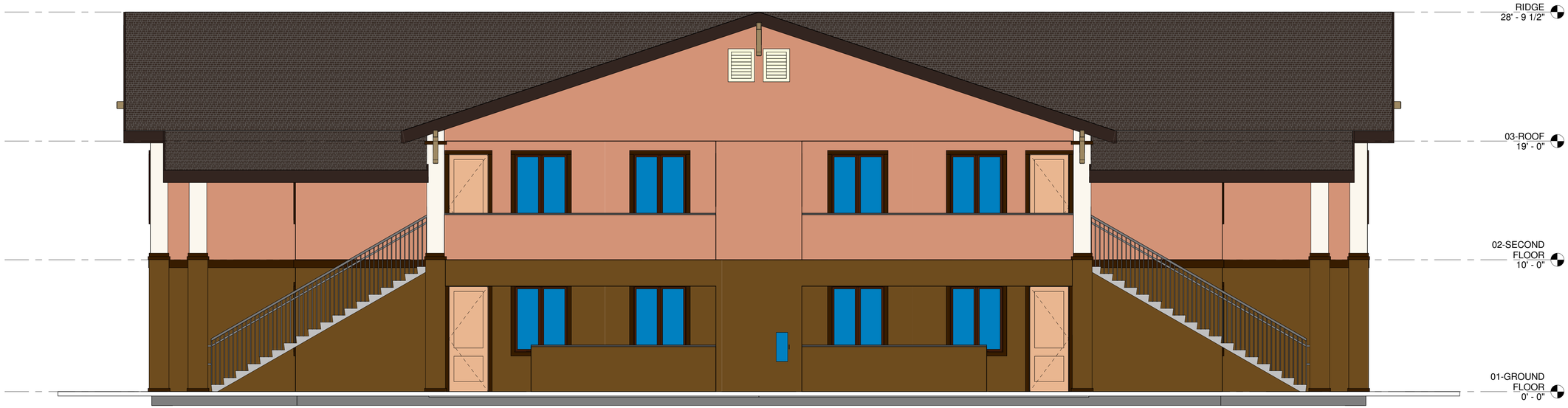
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The Suites - Two Bedroom Apartments -
Exterior Elevations

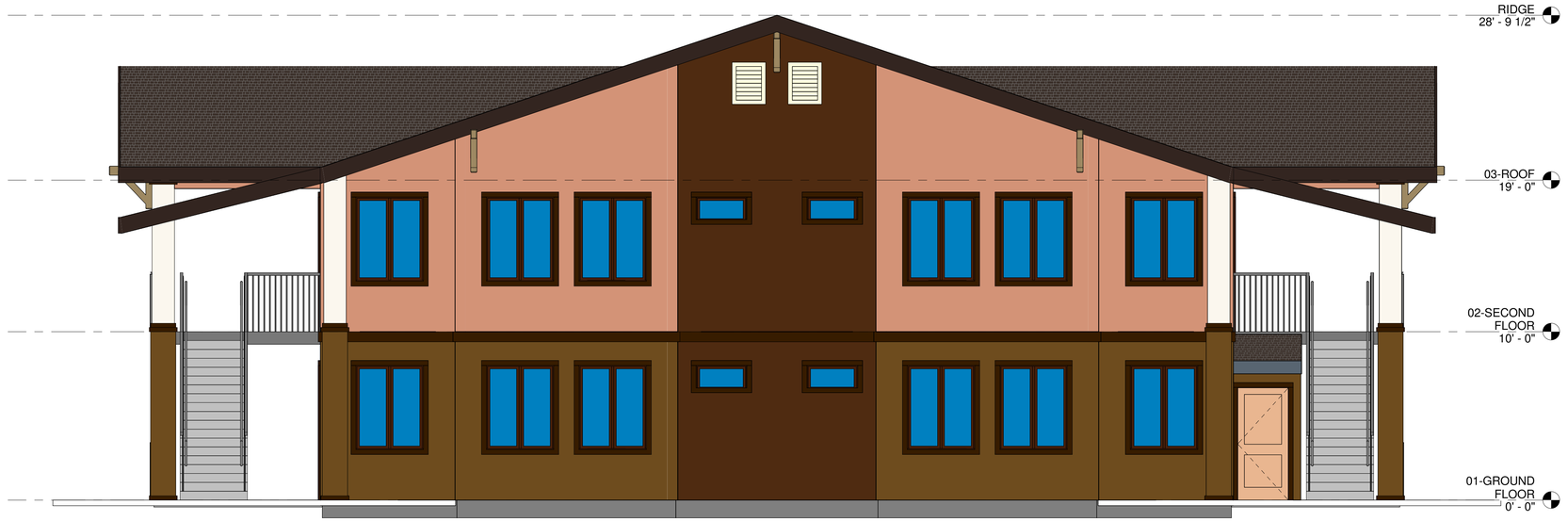
23-35 - River Ranch Apartments - The Suites

09.13.2022

SD 1.3



1 Elevation 2 - a
1/4" = 1'-0"



2 Elevation 1 - a
1/4" = 1'-0"

Frame
ARCHITECTURE, INC
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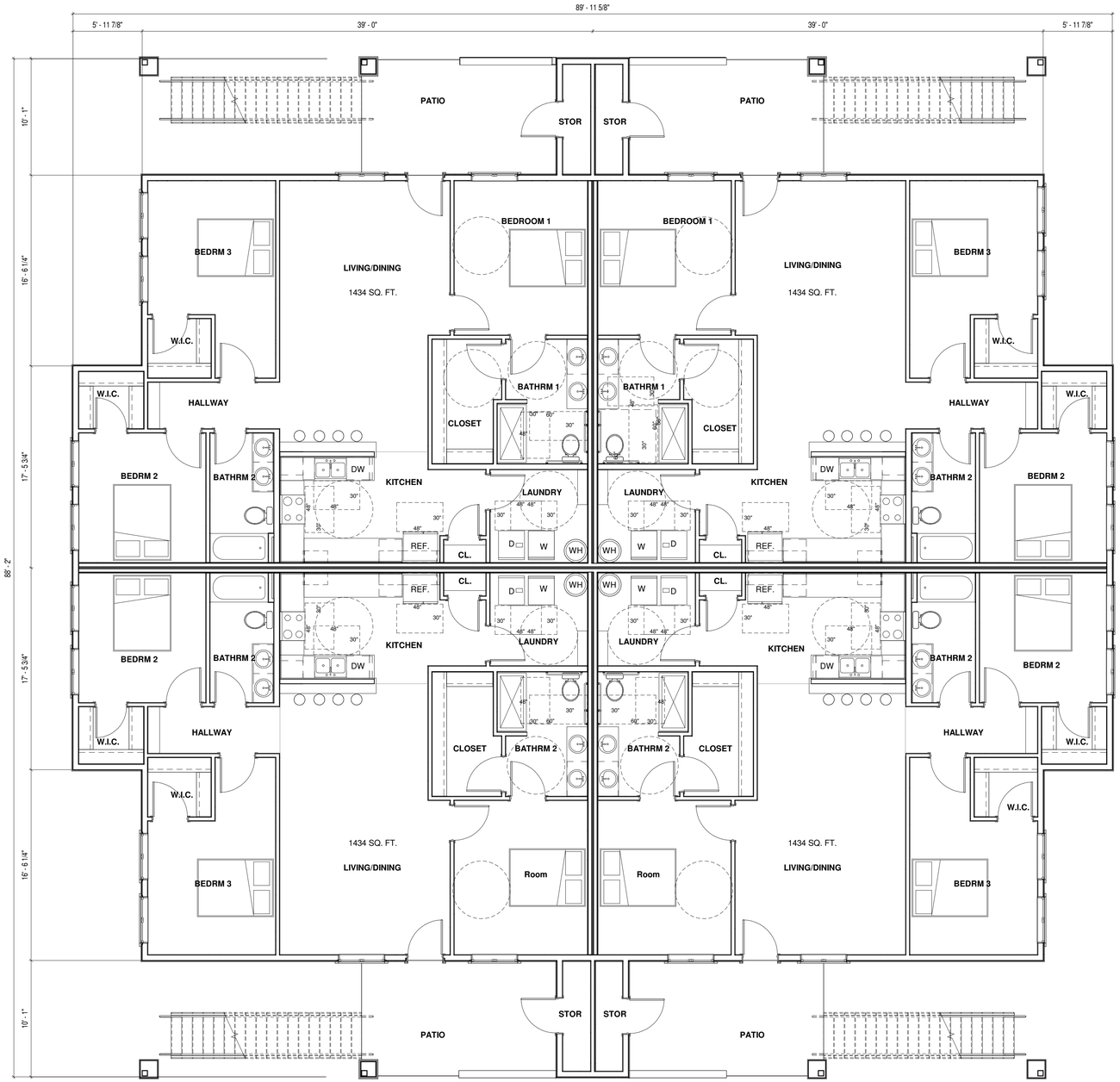
The Suites - Two Bedroom Apartments -
Exterior Elevations

23-35 - River Ranch Apartments - The Suites

09.13.2022

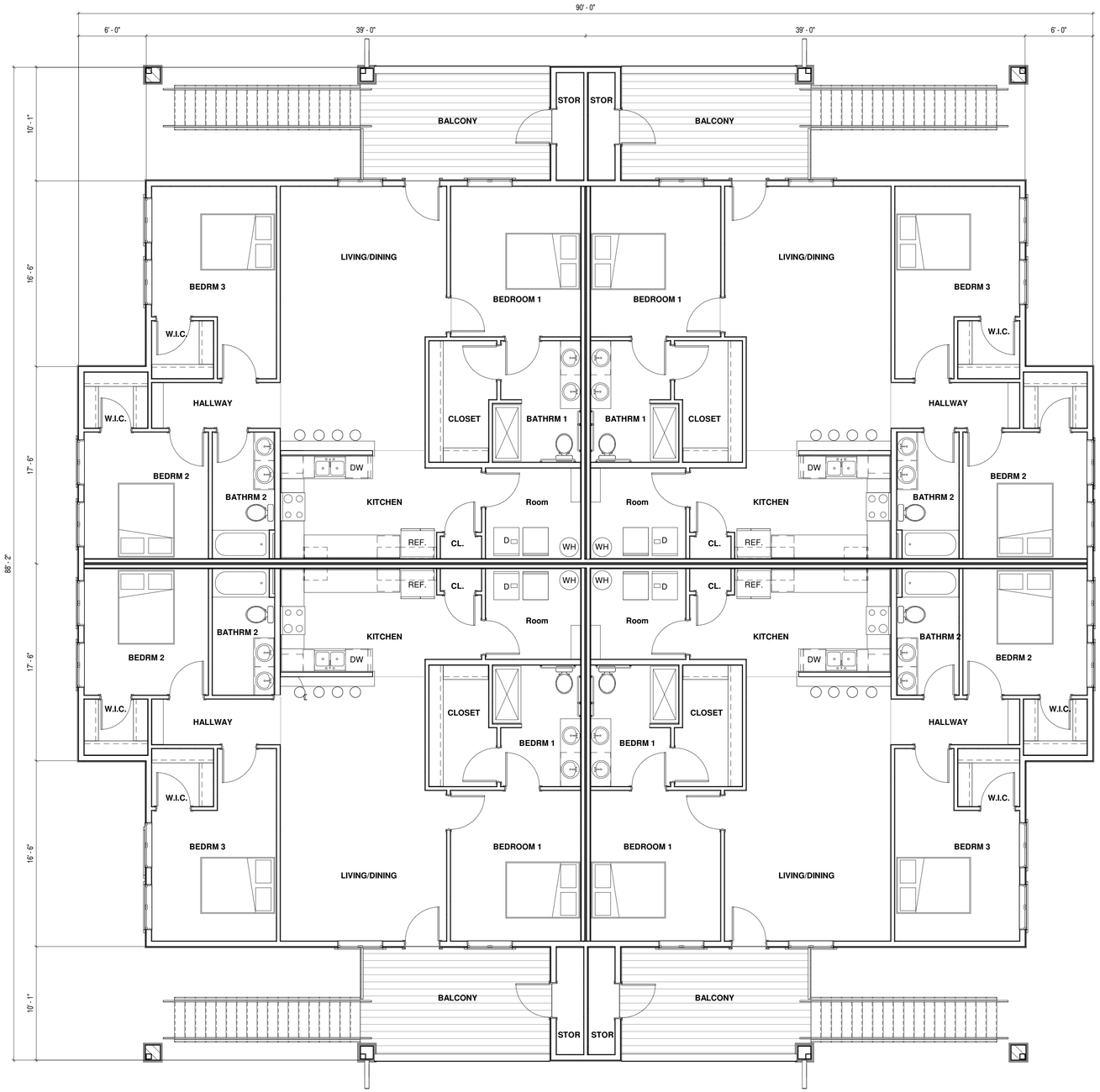
SD 1.4

Frame
ARCHITECTURE, INC
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Reno, NV 89502 (775) 827-9927



1 THE TRIO- GROUND FLOOR PLAN (3 Bedroom)
3/16" = 1'-0"

Frame
ARCHITECTURE, INC
4090 S. McCarran Boulevard #E
Reno, NV 89502 (775) 827-9927



1 SECOND FLOOR PLAN
3/16" = 1'-0"

Frame
ARCHITECTURE, INC
4090 S. McCarran Boulevard #E
Reno, NV 89502 (775) 827-9927

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The Trio - Three Bedroom Apartments -
Second Floor

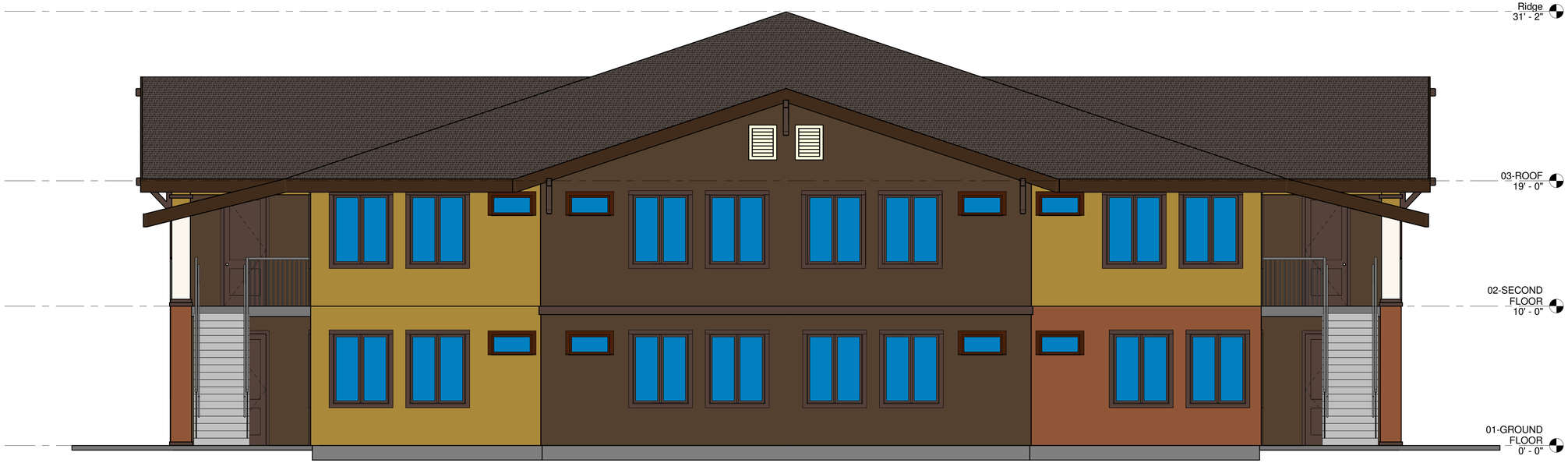
23-35 - River Ranch Apartments - The Trio

09.13.2022

SD 1.2



1 SOUTH ELEVATION
1/4" = 1'-0"



2 EAST ELEVATION
1/4" = 1'-0"

Frame
ARCHITECTURE, INC
4090 S. McCarran Boulevard #E
Reno, NV 89502 (775) 827-9927

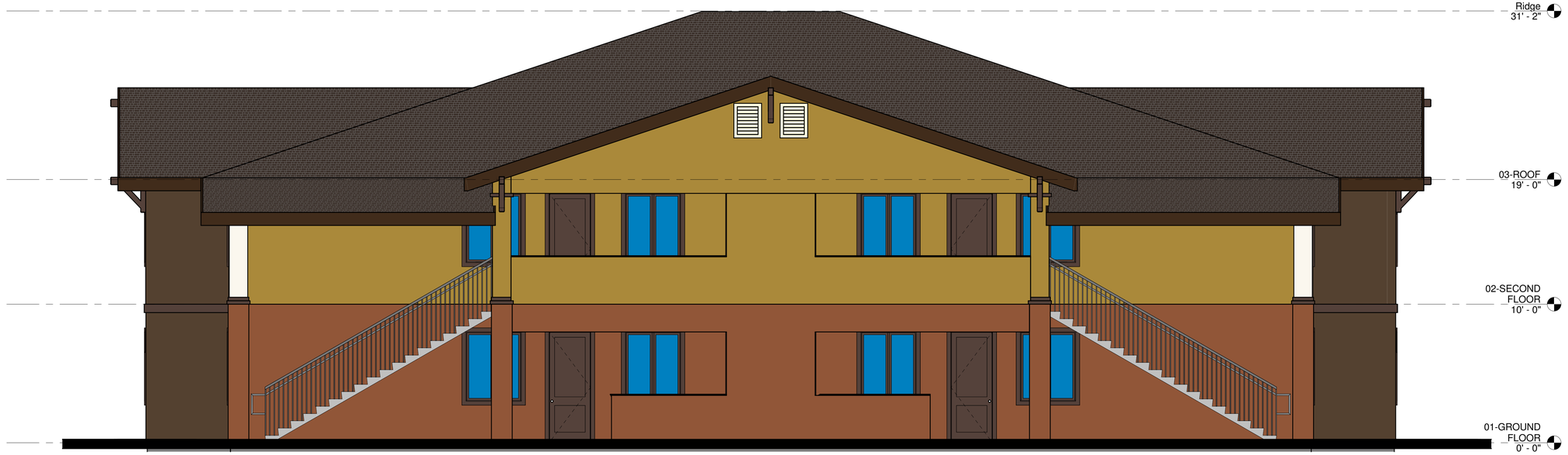
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The Trio - Three Bedroom Elevations

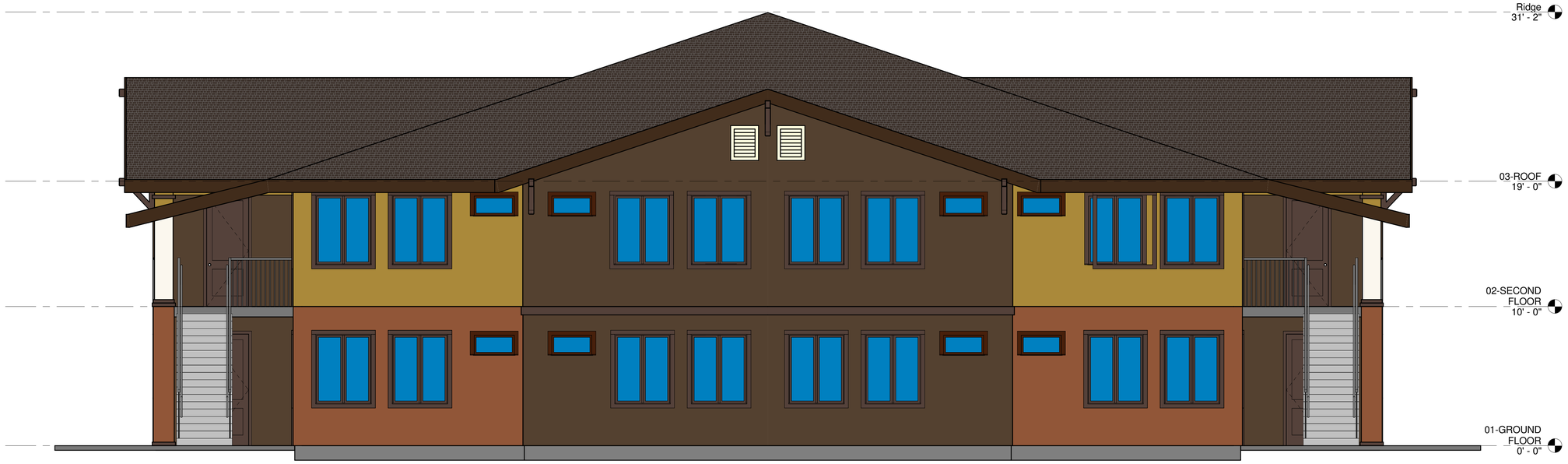
23-35 - River Ranch Apartments - The Trio

09.13.2022

SD 1.3



1 NORTH ELEVATION
1/4" = 1'-0"



2 WEST ELEVATION
1/4" = 1'-0"

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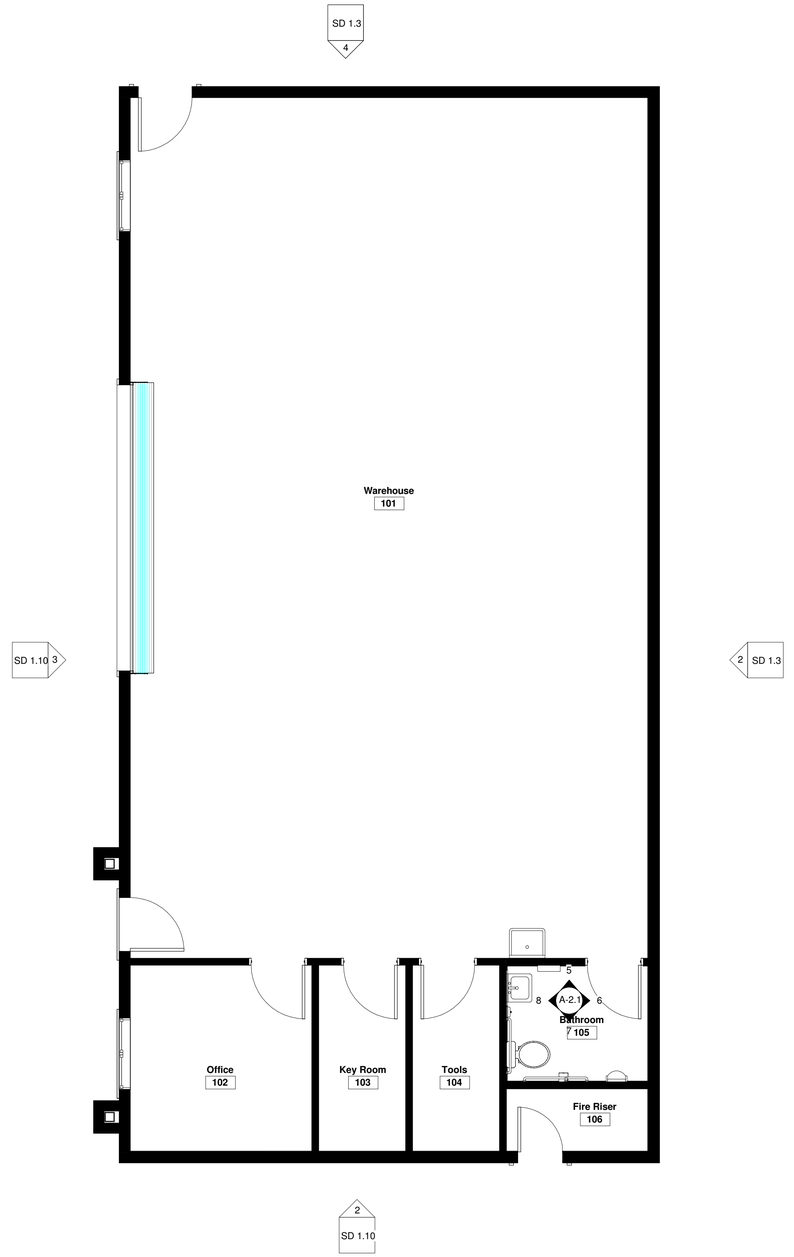
The Trio - Three Bedroom Elevations

23-35 - River Ranch Apartments - The Trio

09.13.2022

SD 1.4

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Frame
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Reno, NV 89502 (775) 827-9927

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Maintenance Building

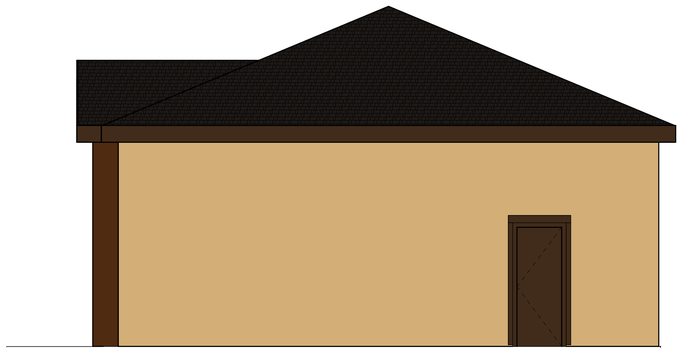
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09.13.2022

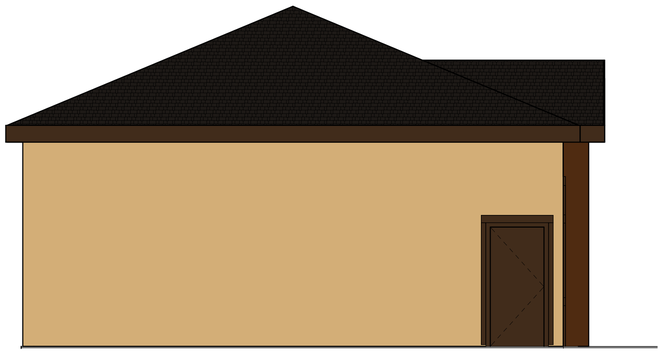
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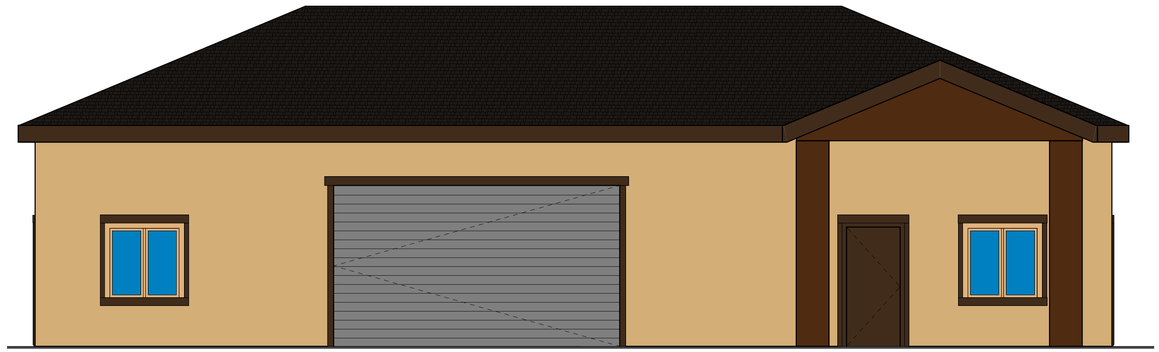
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1/4" = 1'-0"



1 EAST PRESENTATION
1/4" = 1'-0"



4 WEST PRESENTATION
1/4" = 1'-0"



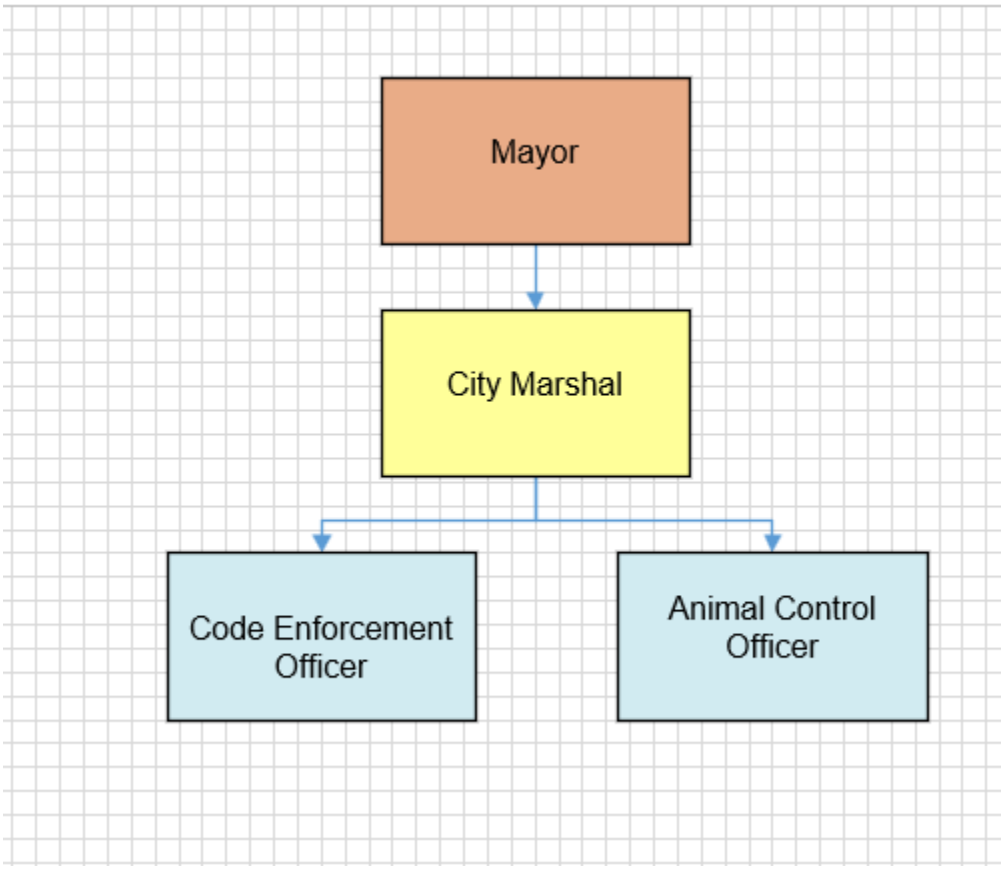
3 SOUTH PRESENTATION
1/4" = 1'-0"

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Maintenance Elevations
22-35 - River Ranch Apartments - Maintenance Building
09.13.2022

SD 1.3


Mayor
City Marshal
Code Enforcement Officer
Animal Control Officer

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Trisha Conner, Assistant to the City Manager**

FINANCIAL IMPACT:	CURRENTLY BUDGETED:	FUND/ACCOUNT:
No.	N/A	N/A

ACTION REQUESTED: Motion

AGENDA ITEM: (For Possible Action):

Possible Action to Receive and Approve the Five-year Comprehensive Economic Development Strategy for the City of Fernley.

AGENDA ITEM BRIEF:

The proposed five-year Comprehensive Economic Development Strategy (CEDS) for the City of Fernley meets the Goal/Strategy 5.7 of the City's 2021-2026 Strategic Plan. The Fernley CEDS focuses on four primary areas: Small Business and Entrepreneurial-Based Development, Tourism Development, Workforce Development, Housing Development, and Related Infrastructure Development. The economic strategy also focuses on specific action items within Fernley's main street corridor and its goals, which were developed and adopted by the City of Fernley in their 2014 Downtown Fernley Revitalization Planning Study.

RECOMMENDED MOTION:

"I move to receive and approve the Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's Main Street, 2023 through 2028."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

City Council may make changes to the document or decide not to receive and/or approve the document.

BACKGROUND:

The Purpose of the City of Fernley Comprehensive Economic Development Strategy

The primary purpose of developing the new five-year Comprehensive Economic Development Strategy for the City of Fernley is two-fold. First, the new five-year Comprehensive Economic Development Strategy will contain a list of specific programs and projects that the City of Fernley will develop, implement, and complete over this five-year strategic planning horizon that will be designed to achieve the specific goals and the specific objectives outlined within the existing five-year organizational strategic plan. Second, the new five-year Comprehensive Economic Development Strategy will contain a comprehensive action plan for implementation for each of the specific economic development programs, including the Main Street Program, and projects developed as part of the new five-year Comprehensive Economic Development Strategy.

The City of Fernley has partnered with the Fernley Chamber of Commerce to develop the Fernley Main Street Program. The proposed City of Fernley CEDS will help establish the Fernley Main Street programs goals and action items that are consistent and incorporate with the City of Fernley's 2014 Downtown Fernley Revitalization Planning Study. The Downtown Revitalization Planning Study identified the main street corridor that includes the historic urban center of the community extending from the Union Pacific Railroad underpass along U.S. Highway 50A or Main Street to the existing roundabout. The existing project goals and priorities for this area are outlined in the City of Fernley's Downtown Fernley Revitalization Planning Study and include:

- Enhance the character of Downtown through thematic streetscape and building façade improvements.
- Coordinate wider sidewalks with appropriate landscape and lighting treatments to create an attractive environment.
- Provide safe and attractive pedestrian connectivity.
- Improve traffic operations of the Main Street and Highway US 95A intersection.

In addition to developing specific actionable items for each of these four primary goals and priority areas developed by the Downtown Fernley Revitalization Planning Study, specific actionable items are outlined, as part of the five-year CEDS for the City of Fernley and the Fernley Main Street program, for five local and regional community and economic development capacity areas, including:

1. small business and entrepreneurial-based development
2. tourism-based development
3. workforce development
4. housing development
5. related infrastructure

The new five-year Comprehensive Economic Development Strategy includes the following elements for each of the ten technical requirements of a Comprehensive Economic Development Strategy as outlined in Part 303 Section 303.7 of Title 13 of the U.S. Code of Federal Regulations:

- Background of the community's and/or region's economic development situation.
- Economic and community development problems and opportunities.
- Community and/or regional goals and objectives.
- Community and private-sector participation.
- Suggested priority projects and estimated jobs created.

- Identification and prioritization of vital projects.
- Identification of community and regional economic clusters.
- An action-plan.

City of Fernley 2021-2026 Strategic Plan & Action Plan
In February 2020 City Council approved and adopted the 2021-2026 City of Fernley Strategic Plan Implementation Action Plan that identified and scheduled specific actions that will be taken over the life of the Strategic Plan to work towards achieving the plan's goals. The Comprehensive Economic Development Strategy for the City of Fernley meets Goal 5.7 – Maintain strong partnerships with public agencies and community organizations. One of the Strategies of Goal 5.7 is to Work with the Fernley Chamber of Commerce, in conjunction with Economic Development Authority of Western Nevada, Northern Nevada Development Authority, and Western Nevada Development District to develop an economic development strategy.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

Title 13 US CFR 303.7

FINANCIAL IMPLICATIONS:

There are no financial implications of receiving the document; however, there will be financial implications implementing the objectives outlined in the document.

ATTACHMENTS:
1. A Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's Main Street 2023 through 2028 - UCED Technical Report xxxx-xx-
2. A Five-Year CEDS for the City of Fernley 2023 through 2028 (City Council Presentation 021523)

TECHNICAL REPORT
UCED xxxx/xx-xx

A COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY FOR THE CITY OF FERNLEY AND FOR FERNLEY'S MAIN STREET, 2023 THROUGH 2028



UNIVERSITY OF NEVADA, RENO

A COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY FOR THE CITY OF FERNLEY AND FOR FERNLEY'S MAIN STREET, 2023 THROUGH 2028

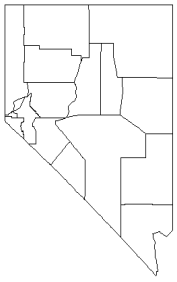
Frederick A. Steinmann

Frederick Steinmann is the Director of the University Center for Economic Development, College of Business at the University of Nevada, Reno.

November 2022

This publication, *A Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's Main Street, 2023 through 2028*, was published by the University Center for Economic Development in the College of Business at the University of Nevada, Reno. This publication's statements, findings, conclusions, recommendations, and/or data represent solely the findings and views of the authors and do not necessarily represent the views of the City of Fernley, the University of Nevada, Reno, or any reference sources used or quoted by this study. Reference to research projects, programs, books, magazines, or newspaper articles does not imply an endorsement or recommendation by the authors unless otherwise stated. Correspondence regarding this document should be sent to:

Frederick A. Steinmann, DPPD
University Center for Economic Development
University of Nevada, Reno
The College of Business
Mail Stop 0024
Reno, Nevada 89557
Phone: 775.784.1655



UCED
University of Nevada, Reno
University Center for Economic Development
The College of Business

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A COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY FOR THE CITY OF FERNLEY AND FOR FERNLEY'S MAIN STREET, 2023 THROUGH 2028

Received by the City Council of the City of Fernley on xxxx xx, xxxx

Members of the City Council of the City of Fernley:

Neal E. McIntyre, Mayor

Ryan Hanan, Ward One
Felicity Zoberski, Ward Two
Stan Lau, Ward Three
Albert Torres, Ward Four
Fran McKay, Ward Five

A Comprehensive Economic Development Strategy for the City of Fernley and Fernley's Main Street, 2023 through 2028

Priority Action Items for the Main Street Project Goals and Priority Areas

Project Goal and Priority Area No. 1: Enhance the Character of Downtown Fernley through Thematic Streetscape and Building Façade Improvements

Priority Action Item No. 1, Goal and Priority Area No. 1: Complete the necessary steps to have the existing Fernley main street corridor approved as a 'Main Street America' program recognized main street through both Main Street America and through the Nevada Governor's Office of Economic Development.

Priority Action Item No. 2, Goal and Priority Area No. 1: Development and eventual implementation of a 'virtual tour' of Fernley's main street corridor.

Priority Action Item No. 3, Goal and Priority Area No. 1: Planning, construction, and completion of a new Fernley Main Street Amphitheater.

Priority Action Item No. 4, Goal and Priority Area No. 1: Develop and implement a comprehensive façade improvement program for residential and commercial properties located within the existing Fernley main street corridor.

A Comprehensive Economic Development Strategy for the City of Fernley and Fernley's Main Street, 2023 through 2028

Priority Action Items for the Main Street Project Goals and Priority Areas

Project Goal and Priority Area No. 2: Coordinate Wider Sidewalks with Appropriate Landscape and Lighting Treatments to Create an Attractive Environment

Priority Action Item No. 1, Goal and Priority Area No. 2: Work collaboratively with the Nevada Department of Transportation to explore sidewalk improvements along the U.S. Highway 50 Alternate corridor that comprises the existing Fernley main street area.

Priority Action Item No. 2, Goal and Priority Area No. 2: Work collaboratively with the Nevada Department of Transportation and Union Pacific to identify opportunities to mitigate surface and railroad traffic impacts on the main street corridor.

Priority Action Item No. 3, Goal and Priority Area No. 2: Complete the design of needed sidewalk improvements on the north side of Main Street (U.S. Highway 50 Alternate) between Silver Lace Boulevard and the intersection of Main Street (U.S. Highway 50 Alternate) and Farm District Road.

Priority Action Item No. 4, Goal and Priority Area No. 2: Replace the remaining unaltered street lights along Main Street within the existing main street corridor using the existing street light design guidelines outlined in the Downtown Fernley Revitalization Planning Study.

Priority Action Item No. 5, Goal and Priority Area No. 2: Develop and implement a corresponding streetscaping and beautification program to support the other priority action items including the development of a comprehensive sidewalk improvement program and existing lighting replacement program.

A Comprehensive Economic Development Strategy for the City of Fernley and Fernley's Main Street, 2023 through 2028

Priority Action Items for the Main Street Project Goals and Priority Areas

Project Goal and Priority Area No. 3: Provide Safe and Attractive Pedestrian Connectivity

Priority Action Item No. 1, Goal and Priority Area No. 3: Develop and complete additional lighted and signaled pedestrian surface street crossings throughout the existing main street corridor including high pedestrian crossing areas along U.S. Highway 50 Alternate and U.S. Highway 95 Alternate.

Priority Action Item No. 2, Goal and Priority Area No. 3: Develop and complete additional pedestrian surface street crossings throughout the existing main street corridor including pedestrian crossing areas on auxiliary and feeder streets within and adjacent to the corridor.

Priority Action Item No. 3, Goal and Priority Area No. 3: Develop and complete a comprehensive pedestrian safety improvement program for the portion of U.S. Highway 95 Alternate that connects the existing main street corridor to Fernley High School.

A Comprehensive Economic Development Strategy for the City of Fernley and Fernley's Main Street, 2023 through 2028

Priority Action Items for the Main Street Project Goals and Priority Areas

Project Goal and Priority Area No. 4: Improve Traffic Operations and of the Main Street/US Highway 95 Alternate Intersection

Priority Action Item No. 1, Goal and Priority Area No. 4: Develop a plan to improve traffic flow at the intersection of Main Street (U.S. Highway 50 Alternate) and U.S. Highway 95 Alternate including an assessment of traffic mitigation needs.

Priority Action Item No. 2, Goal and Priority Area No. 4: Complete the development of the Nevada Pacific Parkway extension connecting U.S. Interstate 80 and U.S. Highway 50 through Fernley's existing industrial area.

Priority Action Item No. 3, Goal and Priority Area No. 4: Explore the possibility of designing and developing a bypass road along the western edge of the City of Fernley that would redirect traffic from U.S. Interstate 80 Exit 46 (western most exit in Fernley) to neighborhoods located south of Main Street.

Priority Action Item No. 4, Goal and Priority Area No. 4: Develop a comprehensive traffic and multi-modal transportation connectivity plan for auxiliary, connector, and feeder streets within the existing main street corridor and between surrounding neighborhoods and the existing main street corridor.

Priority Action Item No. 5, Goal and Priority Area No. 4: The City of Fernley, the eventual Fernley Main Street Board, and the Fernley Chamber of Commerce will work collaboratively to identify and begin addressing specific transportation infrastructure concerns and needs.

A Comprehensive Economic Development Strategy for the City of Fernley and Fernley's Main Street, 2023 through 2028

Priority Action Items for the Local and Regional Community and Economic Development Capacity Areas

Capacity Area No. 1: Small Business and Entrepreneurial-Based Development

Priority Action Item No. 1, Community and Economic Development Capacity Area No. 1: The Fernley Chamber of Commerce will participate in the Adams Hub of Northern Nevada joint business support program with the Northern Nevada Development Authority.

Priority Action Item No. 2, Community and Economic Development Capacity Area No. 1: The Fernley Chamber of Commerce will participate in the Shop Made in Nevada program.

Priority Action Item No. 3, Community and Economic Development Capacity Area No. 1: Develop and open a new business incubator location located within the existing Fernley main street corridor.

Priority Action Item No. 4, Community and Economic Development Capacity Area No. 1: The City of Fernley will establish a 'Business Assistance Office' with the goals of completing the official establishment of a Main Street America and Nevada Main Street program recognized Fernley main street program, providing new business creation incentives, and providing entrepreneurial-based start-up assistance.

Priority Action Item No. 5, Community and Economic Development Capacity Area No. 1: Develop and host annual business fairs and 'Pitch Days' to support new business creation efforts and entrepreneurial-based start-ups.

A Comprehensive Economic Development Strategy for the City of Fernley and Fernley's Main Street, 2023 through 2028

Priority Action Items for the Local and Regional Community and Economic Development Capacity Areas

Capacity Area No. 2: Tourism-Based Development

Priority Action Item No. 1, Community and Economic Development Capacity Area No. 2: Seek out and attract regional athletic events and tournaments to Fernley using existing athletic facilities currently owned and operated by either the City of Fernley, Lyon County, the Lyon County School District, by other public sector agencies, private sector firms, or by various community-based and non-profit organizations.

Priority Action Item No. 2, Community and Economic Development Capacity Area No. 2: Partner with other local and regional tourism authorities and organizations in order to promote Fernley as a destination location for regional tourism-related activities and events.

Priority Action Item No. 3, Community and Economic Development Capacity Area No. 2: Develop a comprehensive tourism-based marketing strategy as a way of promoting Fernley as a regional destination for tourism-based activities and events.

Priority Action Item No. 4, Community and Economic Development Capacity Area No. 2: Develop formal partnerships between the Fernley Convention & Tourism Authority and other regional tourism authorities and boards to cross-promote Fernley with other communities as a tourism destination location.

Priority Action Item No. 5, Community and Economic Development Capacity Area No. 2: Complete the development of a comprehensive map of existing Off-Highway Vehicle (OHV) trails located within and around Fernley and develop and implement a comprehensive marketing campaign designed to promote OHV opportunities throughout and around the community.

Priority Action Item No. 6, Community and Economic Development Capacity Area No. 2: Identify and complete needed improvements and upgrades to local athletic and special event facilities.

A Comprehensive Economic Development Strategy for the City of Fernley and Fernley's Main Street, 2023 through 2028

Priority Action Items for the Local and Regional Community and Economic Development Capacity Areas

Capacity Area No. 3: Workforce Development

Priority Action Item No. 1, Community and Economic Development Capacity Area No. 3: Increase overall utilization of job training and workforce development resources and services provided by the Nevada Department of Employment, Training and Rehabilitation to identify and train new employees in Fernley.

Priority Action Item No. 2, Community and Economic Development Capacity Area No. 3: Increase the number and reach of various job training, workforce development, and even Career and Technical Education programs offered in Fernley to area high school students and existing members of Fernley's civilian workforce.

Priority Action Item No. 3, Community and Economic Development Capacity Area No. 3: Develop and implement a new community advertising program for Fernley in order to attract and retain new workers.

Priority Action Item No. 4, Community and Economic Development Capacity Area No. 3: Create a network of community-based and non-profit organizations to regularly identify business workforce needs and existing community-wide workforce conditions and characteristics.

A Comprehensive Economic Development Strategy for the City of Fernley and Fernley's Main Street, 2023 through 2028

Priority Action Items for the Local and Regional Community and Economic Development Capacity Areas

Capacity Area No. 4: Housing Development

Priority Action Item No. 1, Community and Economic Development Capacity Area No. 4: Develop specific 'area plans' focused on encouraging residential and mixed-use in-fill development for the existing Fernley main street corridor and other adjacent neighborhoods.

Priority Action Item No. 2, Community and Economic Development Capacity Area No. 4: Pursue the development of 'Tiny House' in-fill development strategies for the existing residential neighborhoods within the existing Fernley main street corridor and for other adjacent neighborhoods.

Priority Action Item No. 3, Community and Economic Development Capacity Area No. 4: The City of Fernley and the Nevada Housing Division of the Nevada Department of Business and Industry will develop and complete one new viable affordable and/or workforce housing project for Fernley and for the Fernley main street corridor.

Priority Action Item No. 4, Community and Economic Development Capacity Area No. 4: The City of Fernley will identify property that the City currently owns or could potentially purchase (and subsequently remediate and prepare for development) within the existing Fernley main street corridor and then provide the property via trade, donation, or sale to support an affordable and/or workforce housing project.

Priority Action Item No. 5, Community and Economic Development Capacity Area No. 4: Create new incentives to support new mixed-use and multifamily housing development throughout the existing Fernley main street corridor.

A Comprehensive Economic Development Strategy for the City of Fernley and Fernley's Main Street, 2023 through 2028

Priority Action Items for the Local and Regional Community and Economic Development Capacity Areas

Capacity Area No. 5: Related Infrastructure

Priority Action Item No. 1, Community and Economic Development Capacity Area No. 5: Increase the City of Fernley's overall sewer treatment capacity in order to support projected future residential, commercial, and industrial growth.

Priority Action Item No. 2, Community and Economic Development Capacity Area No. 5: Identify and create new industrial district and commercial truck routes throughout the City of Fernley in order to take advantage of the new $25 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant that the City of Fernley received in August 2022.

Priority Action Item No. 3, Community and Economic Development Capacity Area No. 5: Explore, and potentially develop and implement as is practical and feasible, a new impact fee schedule in order to fund various new infrastructure projects that will be needed to support new residential, commercial, and industrial development throughout the community.

Priority Action Item No. 4, Community and Economic Development Capacity Area No. 5: Identify, estimate cost, and begin completion of associated public infrastructure assets needed to support new residential, commercial, and industrial development throughout the community.

1.0 Executive Summary

In 2022, representatives from the City of Fernley contracted with the University Center for Economic Development, part of the College of Business at the University of Nevada, Reno, to assist in the development of a new five-year Comprehensive Economic Development (CEDS) specifically focused on the City's existing main street corridor. This main street corridor generally consists of a two and a half mile stretch of U.S. Highway 50 Alternate running east to west between the intersection of U.S. Interstate 80 and U.S. Highway 50 Alternate on the western most edge of the corridor to the intersection of U.S. Highway 50 Alternate, Farm District Road, and U.S. Highway 95 Alternate on the eastern most edge of the corridor. This area also includes a section of U.S. Highway 95 Alternate beginning at the intersection of U.S. Highway 50 Alternate south to the intersection of U.S. Highway 95 Alternate and Shadow Lane.

Prior to the development of this new five-year Comprehensive Economic Development Strategy, the City of Fernley developed and adopted a *Downtown Fernley Revitalization Planning Study*, received by the City of Fernley City Council in 2014. The 2014 Downtown Fernley Revitalization Planning Study identified and developed four primary goals and priority areas for the City's downtown main street corridor, including: (1) enhance the character of downtown through thematic streetscape and building façade improvements, (2) coordinate wider sidewalks with appropriate landscape and lighting treatments to create an attractive environment, (3) provide safe and attractive pedestrian connectivity, and (4) improve traffic operations at the intersection of U.S. Highway 50 Alternate and U.S. Highway 95 Alternate within the City's downtown main street area. In addition to developing specific actionable items for each of these four primary goals and priority areas developed as part of the 2014 Downtown Fernley Revitalization Planning Study, specific actionable items are outlined, as part of this five-year Comprehensive Economic Development Strategy for the City of Fernley, for five local and regional community and economic development capacity areas, including: (1) small business and entrepreneurial-based development, (2) tourism-based development, (3) workforce development, (4) housing development, and (5) related infrastructure.

In addition to assessing local and regional employment trends in major industry sectors, faculty and staff from the University Center for Economic Development completed a comprehensive assessment of the level of economic distress in the City of Fernley as defined in Title 13 of the U.S. Code of Federal Regulations, Section 301.3 Part 301 Subpart C:

- An unemployment rate that is, for the most recent twenty-four (24) month period for which data is available, at least one (1) percentage point greater than the national average unemployment rate;

- Per capita income that is, for the most recent period for which data are available, eighty (80) percent or less of the national average per capita income; or

- A Special Need, as determined by the U.S. Economic Development Administration.

Table ES.1 presents a comparison of the most recent twenty-four (24) month period for which unemployment data is available for both the City of Fernley, located in Lyon County in the state of Nevada, and for the United States as well as per capita income for both the City of Fernley and for the United States in 2019 and 2020. Data on the estimated civilian labor force unemployment rate and per capita income levels for the City of Fernley was not available for 2020 or for 2021 at the time of publication of this University Center for Economic Development technical report.

Table ES.1 – Comparison of Unemployment and Per Capita Income City of Fernley and United States 2019 and 2020

	2019	2020	2019 and 2020 Average
Civilian Unemployment Rate			
City of Fernley	**6.5%**	**6.4%**	**6.5%**
Difference Between City of Fernley and National Estimates	**1.2%**	**1.0%**	**1.1%**
United States National	5.3%	5.4%	5.4%
Per Capita Income			
City of Fernley	**$23,475**	**$29,276**	**$26,376**
City of Fernley Percentage of United States National Estimate	**68.8%**	**82.7%**	**75.9%**
United States National	$34,103	$35,384	$34,744
Percentage of U.S. National Estimate	100.0%	100.0%	100.0%

Source: U.S. Census Bureau; American Community Survey, 5-Year Estimates; 2019 and 2020

Estimated monthly unemployment rate data for the City of Fernley was not available but estimated annual unemployment rates for the City of Fernley for both 2019 and 2020 were available. In order to estimate the twenty-four (24) month unemployment rate, the unemployment rates for both the City of Fernley and for the United States for both 2019 and 2020 were averaged and compared.

Over the 2019 and 2020 period, the estimated average civilian unemployment rate for the City of Fernley was an estimated 6.5 percent. Nationally, the estimated average civilian unemployment rate of the entire United States was an estimated 5.4 percent. Over the past twenty-four (24) months of available data, the estimated civilian unemployment rate for the City of Fernley was an estimated ***1.1 percent greater than the national estimated average***. In 2019 alone, the civilian unemployment rate for the City of Fernley was a net estimated 1.2 percent greater than the national estimate (6.5 percent for the City of Fernley compared to 5.3 percent for the United States) and was a net estimated 1.0 percent greater than the national estimate in 2020 (6.4 percent for the City of Fernley compared to 5.4 percent for the United States). Based upon this twenty-four (24) month estimate, the City of Fernley ***qualifies*** as an economically distressed community under the unemployment rate definition outlined in Title 13 of the U.S. Code of Federal Regulations, Section 301.3 Part 301 Subpart C.

Over the two-year 2019 and 2020 period, the estimated average per capita income for the City of Fernley was an estimated $26,376. Nationally, the estimated average per capita income for the entire United States was an estimated $34,744. Over the past twenty-four (24) months of available data, the estimated per capita income for the City of Fernley was an estimated ***75.9 percent of the national average***. In 2019 alone, per capita income for the City of Fernley was an estimated 68.8 percent of the national estimate ($23,475 for the City of Fernley compared to $34,103 for the United States) and was an estimated 82.7 percent of the national estimate in 2020 ($29,276 for the City of Fernley compared to $35,384 for the United States). Based upon the twenty-four (24) month estimate of per capita income for both the City of Fernley and for the United States, the City of Fernley ***qualifies*** as an economically distressed community under the per capita income definition outlined in Title 13 of the U.S. Code of Federal Regulations, Section 301.3 Part 301 Subpart C.

In addition to these unemployment rate and per capita income estimates, several 'special needs', as outlined in Title 13 of the U.S. Code of Federal Regulations, Section 301.3 Part 301 Subpart C, have been identified and incorporated into this new five-year Comprehensive Economic Development Strategy for the City of Fernley. These 'special needs' were identified by various representatives from the City of Fernley and from other public sector agencies, by various private-sector firms and industry representatives, property owners, and even by community-based and non-profit organization representatives who participated in a series of facilitated community stakeholder meetings held between March 2022 and May 2022 and during an organizational and community strategic economic development workshop held on July 19, 2022. These 'special needs' are generally shorted into the five local and regional community and economic development capacity areas outlined above, including: (1) small business and entrepreneurial-based development, (2) tourism-based development, (3) workforce development, (4) housing development, and (5) related infrastructure.

Section 2.0 of this University Center for Economic Development technical report, which contains the required elements of this new five-year Comprehensive Economic Development Strategy for the City of Fernley beginning in 2023 and ending in 2028, includes a general introductory discussion regarding the Comprehensive Economic Development Strategy and a general overview of the City of Fernley's current Downtown Fernley Revitalization Planning Study. Section 3.0 provides a general overview of relevant state and federal law considerations including an overview of existing and relevant regional Comprehensive Economic Development Strategies. Section 4.0 provides a summary of existing local and regional community and economic development efforts and Section 5.0 presents a summary of relevant employment trends for the City of Fernley and for other parts of the northwestern Nevada region. Section 6.0 of this University Center for Economic Development technical report contains the specific goals and actionable items developed as part of this new five-year Comprehensive Economic Development Strategy for the City of Fernley.

The City of Fernley will initially serve as the Comprehensive Economic Development Strategy Committee for this new five-year Comprehensive Economic Development Strategy until the successful establishment of a Fernley Main Street Board through the Fernley Chamber of Commerce is established. Once the Fernley Main Street Board is established and the existing Fernley main street corridor is established as an official Main Street America and Nevada Main Street recognized program, the Fernley Main Street Board will serve as the Comprehensive Economic Development Strategy Committee for this new five-year Comprehensive Economic Development Strategy. Both the City of Fernley and the eventual Fernley Main Street Board will ensure that public sector, private sector, and community-based non-profit organization representation will be maintained during the annual evaluations and assessments of this new five-year Comprehensive Economic Development Strategy. The University Center for Economic Development, as a U.S. Economic Development Administration recognized and funded University Center, will provide direct technical assistance in further implementing elements of this new five-year Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's main street corridor and will also provide additional direct technical assistance in completing the required annual evaluations, assessments, and updates.

2.0 Introduction

2.1 Overview

What is strategy? According to John E. Gamble, Margaret A. Peteraf, and Arthur A. Thompson, in their 2015 book, *Essentials of Strategic Management: The Quest for Competitive Advantage*, "A strategy is a way of describing ***how*** you are going to get things done. It is less specific than an action plan (which tells the who-what-when); instead, it tries to broadly answer the question, 'How do we get there from here?' Do we want to take the train? Fly? Walk?" In short, a strategic plan provides an organization with a fundamental affirmation of the organization's core values, strategic mission, and strategic vision while outlining the goals, objectives, and implementation measures the organization will attempt to achieve and implement over the strategic planning horizon.

Typically, a strategic plan includes three basic elements. First, the strategic plan is a recognition of the existing barriers an organization faces and the resources the organization has at its disposal to achieve strategic objectives. Second, the strategic plan is generally tied to an overall vision, mission, and a set of clearly defined objectives. And, third, the strategic plan provides direction to the organization for the organization's future planned initiatives focusing on providing information, enhancing support, removing barriers, and providing resources to different parts of the organization and key stakeholders who have an interest in the achievement of the strategic plan.

When evaluating and developing a strategic plan, five basic questions must be answered, including:

- Does the strategic plan give overall direction to the organization? The strategic plan should point out the overall path without dictating a particular narrow approach.

- Does the strategic plan realistically fit available resources with identified opportunities? The strategic plan should take advantage of current resources and assets while embracing new opportunities for growth and success.

- Does the strategic plan minimize existing and future resistance and barriers the organization currently confronts and may have to address in the future? The strategic plan should keep in mind that opposition and resistance to implementation of the strategic plan is inevitable. Good strategic plans should attract allies and deter opponents.

- Does the strategic plan reach those that may be affected, positively and negatively, by implementing the strategic plan? The strategic plan should connect the intervention with those who it should benefit while minimizing potential negative impacts to those impacted by the plan.

- Does the strategic plan advance the strategic mission of the organization? The strategy should make a difference on the mission of the organization while enabling the organization to achieve stated goals and objectives.

Unlike strategic plans for private sector firms, a Comprehensive Economic Development Strategy, as outlined in Title 13 Part 303 of the U.S. Code of Federal Regulations, must focus on how a public sector economic development organization and authority will bring together the public and private sectors through the creation of an economic roadmap designed to diversify and strengthen regional and local economies. The inherent public sector nature of the Comprehensive Economic Development Strategy requires consideration of both economic and community development goals and objectives in order to support and facilitate an environment of growth, investment, and job creation.

This new five-year Comprehensive Economic Development Strategy for the City of Fernley, covering the five years between 2023 and 2028, was developed specifically to develop actionable items and priority projects for the City of Fernley's existing main street corridor and to develop specific actionable items related to relevant regional economic development initiatives that the City of Fernley could potentially pursue in order to better link local community level economic development initiatives with larger regional economic development goals and initiatives already being pursued. As part of this effort, faculty from the University Center for Economic Development, part of the College of Business at the University of Nevada, Reno, facilitated a series of community stakeholder meetings and planning sessions between March 2022 and May 2022, including:

- Fernley Community Foundation; Tuesday, March 29, 2022
- Rotary Club of Fernley; Thursday, March 31, 2022
- Fernley Chamber of Commerce; April 12, 2022
- "Coffee with the Mayor" Community Town Hall; April 12, 2022
- Fernley Builders Association; May 4, 2022

Approximately 300 community members, property owners, business owners, and representatives of various community-based non-profit organizations attended and participated in these community stakeholder meetings and planning sessions. During each community stakeholder meeting and planning session, meeting participants were asked to identify specific new business creation and attraction issues, existing business retention and expansion issues, and general issues and community needs specific to the City of Fernley's main street corridor and, more generally, present throughout the entire community. The results of these community stakeholder meetings and planning sessions were used to develop and identify the 'special needs' that would eventually be used to develop specific actionable items and priority projects for the five local and regional community and economic development capacity areas, including: (1) small business

and entrepreneurial-based development, (2) tourism-based development, (3) workforce development, (4) housing development, and (5) related infrastructure.

In addition to the five community stakeholder meetings and planning sessions, faculty from the University Center for Economic Development facilitated a full day strategic economic development planning workshop on July 19, 2022. Approximately 50 individuals, representing the City of Fernley and other various public sector agencies, the private sector and specific industry sectors, and various community-based non-profit organizations, participated in this full day strategic economic development planning workshop. In addition to developing specific actionable items and priority projects for the five local and regional community and economic development capacity areas, workshop participants also developed a series of specific actionable items and priority projects for each of the four primary goals and priority areas developed as part of the City of Fernley's 2014 Downtown Fernley Revitalization Planning Study, including: (1) enhance the character of downtown through thematic streetscape and building façade improvements, (2) coordinate wider sidewalks with appropriate landscape and lighting treatments to create an attractive environment, (3) provide safe and attractive pedestrian connectivity, and (4) improve traffic operations at the intersection of U.S. Highway 50 Alternate and U.S. Highway 95 Alternate within the City's downtown main street area.

Faculty from the University Center for Economic Development employed the use of the Stronger Economies Together (SET) curriculum developed by the U.S. Department of Agriculture Rural Development, Purdue University Center for Regional Development, and the Southern Regional Development Center to structure each individual community stakeholder meeting and planning session and the July 19, 2022 strategic economic development planning workshop. The Stronger Economies Together strategic economic development planning curriculum is designed to enable communities and counties in, primarily rural, America to work together in developing and implementing an economic development blueprint for their community and region that strategically builds on the current and emerging economic strengths of that region. The Stronger Economies Together strategic economic development planning curriculum is divided into eight separate modules:

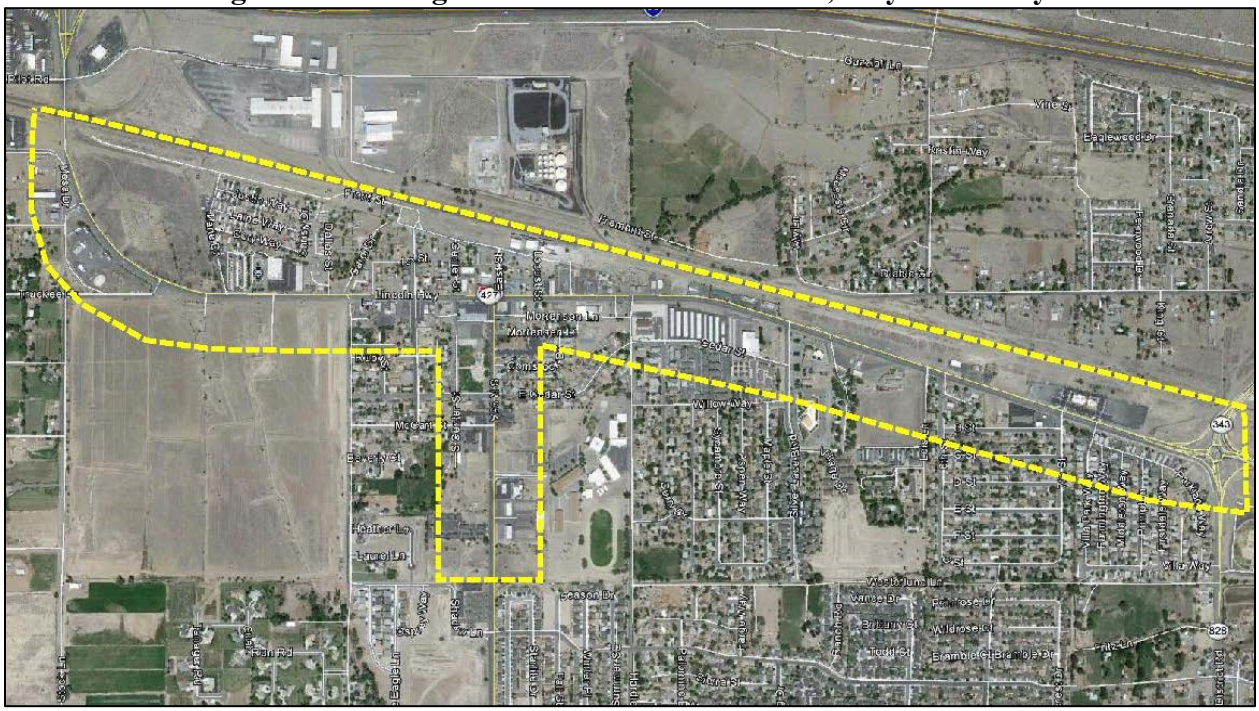
- Module 1, Launching SET and Building a Strong Regional Team
- Module 2, Exploring Your Region's Demographics
- Module 3, Identifying the Region's Comparative Advantage
- Module 4, Exploring Potential Regional Strategies
- Module 5, Defining Your Regional Vision and Goals
- Module 6, Discovering Assets and Barriers
- Module 7, Planning for Success
- Module 8, Measuring for Success

This University Center for Economic Development technical report presents the results from the individual community stakeholder meetings and planning sessions and from the July 19, 2022 strategic economic development planning workshop held on behalf of the City of Fernley. Each of these community stakeholder meetings and planning sessions and the July 19, 2022 strategic economic development planning workshop covered the development of several individual parts of this new five-year Comprehensive Economic Development Strategy for the City of Fernley. Unless otherwise indicated, the City of Fernley, in partnership with the Northern Nevada Development Authority, the Western Nevada Development District, the Fernley Chamber of Commerce, and with other relevant local and regional economic development partners, will serve as the Comprehensive Economic Development Strategy Committee for the purposes of implementation and annual evaluation of this new 2023 through 2028 Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's main street corridor.

2.2 Elements of the City of Fernley's 2014 Downtown Fernley Revitalization Planning Study and Integration with the Nevada Main Street Program

In 2014, the City of Fernley completed and approved the *Downtown Fernley Revitalization Planning Study*. The purpose of the Downtown Fernley Revitalization Planning Study was to identify and evaluate potential streetscape, transportation and urban design improvements for the City of Fernley's existing and designated main street corridor and to encourage revitalization of Fernley's downtown area. Figure 2.1 presents a map of the existing and designated main street corridor initially developed in 2014.

Figure 2.1 – Designated Main Street Corridor, City of Fernley


Farm Rd
Truckee
Lincoln Hwy
Main St
Maine St
Center St
Cleveland
Willow Way
Eagle Ln
Season Dr
Wildrose
Bridle Path Dr
Fleet St
Newlands
Vine St
Eaglewood Dr
Kestrel Way
Pioneer
Rainbow
Cedar St
Elm St
Alder
Ash
Birch
Dogwood
Fir
Hemlock
Juniper
Locust
Maple
Oak
Pine
Poplar
Redwood
Spruce
Walnut
Willow
Wild Way
Woodhaven Ln
Primrose Dr
Brittany Ct
Trotter Ct
Bramble Bush Dr
Pitzer Ln
Eagle Ln
Main Rd
Mountain Ln
Meadow Ln
Tamarack Ln
Sky Way
Sky Ln
Sierra Ln
Sierra Vista Dr
Sierra Vista Ln
Sierra Vista Way
Sierra Vista Cir
Sierra Vista Ct
Sierra Vista Pl
Sierra Vista Terr
Sierra Vista Trl
Sierra Vista Pkwy
Sierra Vista Blvd
Sierra Vista Loop
Sierra Vista Ave
Sierra Vista St
Sierra Vista Rd

As has already been outlined in this University Center for Economic Development technical report, the 2014 Downtown Fernley Revitalization Planning Study outlined four specific project goals and priority areas including: (1) enhance the character of downtown through thematic streetscape and building façade improvements, (2) coordinate wider sidewalks with appropriate landscape and lighting treatments to create an attractive environment, (3) provide safe and attractive pedestrian connectivity, and (4) improve traffic operations at the intersection of U.S. Highway 50 Alternate and U.S. Highway 95 Alternate within the City's downtown main street area. The Downtown Fernley Revitalization Planning Study also identified several community desired 'characteristics' that the City of Fernley would attempt to realize and create throughout the designated main street corridor. During the 2014 Downtown Fernley Revitalization Planning Study planning process, community residents, property owners, and business owners noted a general desire to develop this main street corridor as the 'community's front door' and a general desire to enhance and revitalize this 'traditional epicenter' of Fernley business, social, and civic activities. Improved accessibility between the main street corridor and adjacent residential neighborhoods, increased mix of land uses and community-residential activity with buildings oriented toward the street, and improved pedestrian friendly infrastructure improvements including wider sidewalks, on-street parking, plazas, and public meeting places were other identified desired characteristics initially identified in 2014.

Over the past two years, the City of Fernley has worked collaboratively with the Nevada Governor's Office of Economic Development to become a recognized main street program as part of the Nevada Main Street program. As of the date of publication of this University Center for Economic Development technical report, the Fernley main street initiative is classified as 'exploring' by the Nevada Governor's Office of Economic Development as opposed to other local main street programs classified as either 'affiliate' or 'designated/accredited'. The Nevada Main Street program, administered by the Nevada Governor's Office of Economic Development, is a holistic approach to downtown revitalization that includes historic preservation, community development, beautification, and economic vitality. The Nevada Main Street program further supports business creation and retention to create and sustain healthy and economically vibrant communities with a primary focus on improving the quality of life for area residents and offers community-based initiatives with a practical and adaptable framework to adjust for each unique local main street program and community. In addition to being administered by the Nevada Governor's Office of Economic Development, the Nevada Main Street program has several local, state, and federal partners including the Nevada Department of Tourism and Cultural Affairs (Travel Nevada), the Nevada Division of Outdoor Recreation, the State Historic Preservation Office, the Nevada Small Business Development Center, the U.S. Department of Agriculture Rural Development, the University Center for Economic Development, the Nevada Department of Business and Industry, the Rural Nevada Development Corporation, the Nevada Arts Council, Nevada State Parks, and representatives from members of Nevada's federal Congressional delegation. Begun in 2017, the Nevada Main Street program currently works with an estimated 19 local community main street programs across the state.

In addition to better integrating the City of Fernley's own community and economic development efforts into the efforts of various regional economic development authorities and districts, the specific actionable items and priority projects outlined in this new five-year

Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's main street corridor will enable the City of Fernley and its various community and economic development partners to better focus various financial and non-financial resources on achieving the desired goals and priority areas outlined in the 2014 Downtown Fernley Revitalization Planning Study. The specific actionable items and priority projects outlined in this new five-year Comprehensive Economic Development Strategy are also designed to integrate the City of Fernley's main street program activities with the efforts of the Nevada Main Street program and broader economic development initiatives currently administered by the Nevada Governor's Office of Economic Development.

3.0 State Law and Federal Considerations

This section presents a general overview of relevant state law and federal considerations as it pertains to the development, implementation and administration of a new five-year Comprehensive Economic Development Strategy for the City of Fernley and, specifically, for Fernley's main street corridor.

3.1 Local, Regional, and State Considerations

Nevada Revised Statute, Chapter 278 *Planning and Zoning*, in Section 02521 Legislative Intent, paragraph one states, "The Legislature recognizes the need for innovative strategies of planning and development that: (a) address the anticipated needs and demands of continued urbanization and corresponding need to protect environmentally sensitive areas; and (b) will allow the development of less populous regions of this State if such regions: (1) seek increased economic development; and (2) have sufficient resources of land and water to accommodate development in a manner that is environmentally sound."

Authority to create and adopt this Comprehensive Economic Development Strategy is found in Nevada Revised Statute, Chapter 278 Planning and Zoning, Section 160 Elements of Master Plan. NRS 278.160 lists the eight individual elements required in a master plan, including:

- A Conservation Element
- A Historic Preservation Element
- A Housing Element
- A Land Use Element
- A Public Facilities and Services Element
- A Recreation and Open Space Element
- A Safety Element
- A Transportation Element

Although no economic development element is required as part of NRS 278.160, paragraph two in NRS 278.160 states, "The commission may prepare and adopt, as part of the master plan, other and additional plans and reports dealing with such other elements as may in its judgment relate to the physical development of the city, county or region, and nothing contained in NRS 278.010 to 278.630, inclusive, prohibits the preparation and adoption of any such element as part of the master plan." Although this Comprehensive Economic Development Strategy is not a required element of the master plan, the City of Fernley has prepared one in order to consolidate and codify a growing body of policy concerning the economic and fiscal viability of Fernley and, specifically, for Fernley's existing main street corridor.

The Nevada Governor's Office of Economic Development was created during the 2011 Legislative Session of the Nevada State Legislature and is codified in Nevada Revised Statute Chapter 231 *Economic Development, Tourism and Cultural Affairs*. The Governor's Office of Economic Development was created in response to the Great Recession and the need to consolidate, coordinate and reorganize the various statewide economic development efforts and initiatives in Nevada. The mission of the Governor's Office of Economic Development is to create high-quality jobs in Nevada and its vision is to create a vibrant, innovative, and sustainable economy with high-paying jobs for Nevadans. The objectives of the Governor's Office of Economic Development, established in the state's first statewide economic development plan created in 2012, *Moving Nevada Forward: A Plan for Excellence in Economic Development 2012-2014*, are to establish a cohesive economic development operating system in the state, to increase opportunity through local education and workforce development, to catalyze innovation in core and emerging industries, to advance targeted sectors and opportunities, and to expand global engagement.

In response to the COVID-19 global pandemic, the Nevada Governor's Office of Economic Development has recently developed and published *Nevada's Plan for Recovery & Resiliency*, a roadmap that has been developed in order to guide the state's efforts to drive recovery of the state's economy and revitalize key industry and occupation sectors that were negatively impacted by the spread of the COVID-19 virus and its related economic impacts. *Nevada's Plan for Recovery & Resiliency* has been designed and will replace the original 2012 state economic development plan, *Moving Nevada Forward: A Plan for Excellence in Economic Development 2012-2014*. The new *Nevada's Plan for Recovery & Resiliency* plan has five priority areas for immediate intervention that are spread across five specific goal areas, including (1) Resources for People and Businesses, (2) Business Support and Expansion, (3) Workforce for the Next Economy, (4) New Technology Businesses, and (5) Data and Integrated Planning for Decision-Making. The five specific goal areas outlined in the new *Nevada's Plan for Recovery & Resiliency* plan include: (1) Regionally Designed Industrial Clusters, (2) Statewide Integration and Connectivity, (3) Technology Driven Development, (4) Responsible and Sustainable Growth, and (5) Comprehensive Placemaking. A series of individual actionable items have been developed for each of these five specific goal areas. Although requiring future legislative action, the new *Nevada's Plan for Recovery & Resiliency* plan outlines a series of capabilities and future actionable items including funding of the State Infrastructure Bank, establishing a Sovereign Wealth Fund and the Nevada Innovation Fund, establishing an office for Micro, Small, and Medium-Sized Enterprises, growing Nevada's Community Banking Network, modernizing Public Policy and Governance, and reinventing Nevada's Workforce Institutions.

The City of Fernley is also part of the Northern Nevada Development Authority and the Western Nevada Development District. The Northern Nevada Development is one of eight regional economic development authorities established and recognized by the Nevada Governor's Office of Economic Development and is the state-designed regional economic development authority for the 'Sierra Region', consisting of Carson City, Douglas County, Lyon County, Mineral County, and Storey County. The current vision of the Northern Nevada Development Authority is to create a prosperous, resilient and sustainable economy for northern Nevada. Currently, the Northern Nevada Development Authority's strategic focus is concentrated on six core functions, including: (1) ecosystem, (2) workforce, (3) infrastructure, (4) funding, (5) employers and jobs,

and (6) place. In addition to spearheading regional new business creation and attraction efforts and existing business retention and expansion strategies, the Northern Nevada Development Authority works with local communities, such as the City of Fernley, on a wide array of different community and economic development initiatives in each of the Northern Nevada Development Authority's six core functions.

The Western Nevada Development District is a U.S. Economic Development Administration recognized Economic Development District that includes seven individual municipalities (City of Fallon, City of Fernley, City of Lovelock, City of Reno, City of Sparks, and the City of Winnemucca), six Nevada counties (Churchill County, Douglas County, Humboldt County, Mineral County, Pershing County, Storey County, and Washoe County), and one consolidated municipality (Carson City). The current mission of the Western Nevada Development District is to create an environment within which business and industry can be recruited within the region in order to promote a vibrant and sustainable economy. The current five-year 2020 through 2025 Comprehensive Economic Development Strategy for the Western Nevada Development District, recently updated in 2022, outlines seven priority economic development areas, including (1) equity, (2) recovery and resiliency, (3) workforce development, (4) manufacturing, (5) technology-based economic development, (6) environmentally sustainable development, and (7) exports and foreign direct investment.

As part of the 2022 update to the Western Nevada Development District's existing five-year Comprehensive Economic Development Strategy, six pressing regional economic issues were identified, including: (1) inadequate broadband connectivity, (2) workforce limitations such as inadequate training, low wages, and a lack of childcare facilities, (3) reduced access to routine medical care resulting in inadequate health and wellness services, (4) an inadequate supply of affordable housing paired with sharply increased real estate prices, (5) siloed governmental agencies with disconnected systems making it difficult, inefficient, and arduous to navigate resources, and (6) the pandemic hampered the limited efforts to diversify the Nevada economy and small business owners lacked a safety net to keep them afloat during the emergency. Currently, the Western Nevada Development District is working with its various member municipalities and counties, including the City of Fernley and the Fernley main street program, to develop and implement specific projects, programs, and initiatives designed to address each of the seven existing priority economic areas and each of the six pressing regional economic issues outlined in the 2022 annual update of the Western Nevada Development District's current five-year Comprehensive Economic Development Strategy.

In addition to representatives from the Nevada Governor's Office of Economic Development, from the Northern Nevada Development Authority, and from the Western Nevada Development District participating in the City of Fernley's strategic economic development planning workshop held on July 19, 2022, representatives from the Economic Development Authority of Western Nevada also participated. The Economic Development Authority of Western Nevada, like the Northern Nevada Regional Development Authority, one of eight regional economic development authorities established and recognized by the Nevada Governor's Office of Economic Development focused on supporting economic development and diversification efforts specifically in the greater Reno-Sparks metropolitan statistical area in Washoe County. The Reno-Sparks metropolitan statistical area is the largest population and economic center in

northwestern Nevada and is located approximately 35 miles west of the City of Fernley along the U.S. Interstate 80 corridor. The mission of the Economic Development Authority of Western Nevada is to add quality jobs to the region by recruiting new companies, supporting the success of existing companies, and assisting newly formed companies in order to diversify the region's economy and to have a positive impact on quality of life throughout the greater Reno-Sparks area. The Economic Development Authority of Western Nevada currently focuses its various economic development activities and initiatives on five primary areas, including: (1) attracting companies from outside the region, (2) start-ups and entrepreneurial growth in new companies, (3) retaining and expanding existing companies and jobs, (4) workforce development, and (5) being an advocate for improvements that enhance the community and the region.

The integrated nature of the larger northwestern Nevada region's economy and economic base often results in the City of Fernley working collaboratively with the Nevada Governor's Office of Economic Development, the Northern Nevada Development Authority, the Western Nevada Development District, and with the Economic Development Authority of Western Nevada to develop and implement a wide variety of new business creation and attraction strategies and in pursuing a wide variety of existing business retention and expansion efforts. The continued economic growth and diversification of the region's economy has further driven individual communities, such as the City of Fernley, to work collaboratively with various regional economic development organizations and with a variety of state and even federal government agencies. The various elements outlined in this new five-year Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's main street corridor, for the five year planning horizon spanning 2023 through 2028, with further support this broader regional economic integration through the joint pursuit and completion of targeted new business creation and attraction strategies and existing business retention and expansion efforts designed to revitalize the City of Fernley's main street and existing downtown corridor.

In addition to the existing local efforts by the City of Fernley and its various other public sector, private sector, and community-based and non-profit partners and stakeholders to revitalize the existing main street corridor and to support broader community and economic development efforts, and in addition to the various efforts of the Economic Development Authority of Western Nevada, the Northern Nevada Development Authority, and the Western Nevada Development District, the Nevada Governor's Office of Economic Development is a central stakeholder and partner in future community and economic development efforts in Fernley. The Nevada Main Street program, specifically, is currently administered by the Nevada Governor's Office of Economic Development. The Nevada Main Street program is a holistic approach to targeted downtown revitalization that includes historic preservation, community development, beautification, and economic vitality and is designed to support business creation and retention in order to create and sustain healthy and economically vibrant communities with a primary focus on improving the quality of life of area residents and visitors. The program offers a wide variety of community-based initiatives with a practical and adaptable framework to adjust for each unique community that participates in the Nevada Main Street program. The Nevada Governor's Office of Economic Development, through the Nevada Main Street program, has several local, state, and federal partners including, at the time of publication of this University Center for Economic Development technical report, the Nevada Department of Tourism and Cultural Affairs, the Nevada Division of Outdoor Recreation, the State Historic Preservation Office, the

Nevada Small Business Development Center, the Nevada state office of the U.S. Department of Agriculture Rural Development, representatives from members of Nevada's Congressional Delegation, the University Center for Economic Development, the Nevada Department of Business & Industry, the Rural Nevada Development Corporation, the Nevada Arts Council, and Nevada State Parks.

3.2 Federal Considerations

This new five-year Comprehensive Economic Development Strategy for 2023 through 2028 for the City of Fernley and for Fernley's main street corridor is also designed to meet the requirements of a Comprehensive Economic Development Strategy (CEDS) document as outlined in Title 13 (Business Credit and Analysis), Part 303 (Planning Investments and Comprehensive Economic Development Strategies) of the U.S. Department of Commerce, U.S. Economic Development Administration (EDA). Authority for Title 13 Part 303 stems from 42 U.S.C. 3143, 42 U.S.C. 3162, 42 U.S.C. 3174, 42 U.S.C. 3211, and U.S. Department of Commerce Organization Order 10-4.

According to Title 13, Part 303, Section 303.1 (Purpose and Scope):

> "The purpose of EDA Planning Investments is to provide support to Planning Organizations for the development, implementation, revision or replacement of Comprehensive Economic Development Strategies, and for related short-term Planning Investments and State plans designed to create and retain higher-skill, higher-wage jobs, particularly for the unemployed and underemployed in the nation's most economically distressed Regions. EDA's Planning Investments support partnerships within District Organizations, Indian Tribes, community development corporations, non-profit regional planning organizations and other Eligible Recipients. Planning activities supported by these Investments must be part of a continuous process involving the active participation of Private Sector Representatives, public officials and private citizens, and include:
>
> (a) Analyzing local economies;
>
> (b) Defining economic development goals;
>
> (c) Determining Project opportunities; and
>
> (d) Formulating and implementing an economic development program that includes systemic efforts to reduce unemployment and increase incomes."

According to Title 13, Part 303, Section 303.7 (Requirements for Comprehensive Economic Development Strategies):

> "CEDS are designed to bring together the public and private sectors in the creation of an economic roadmap to diversify and strengthen regional economies.

> The CEDS should analyze the regional economy and serve as a guide for establishing regional goals and objectives, developing and implementing a regional plan of action, and identifying investment priorities and funding sources."

According to Title 13, Part 303, Section 303.7 (Requirements for Comprehensive Economic Development Strategies), a proper Comprehensive Economic Development Strategy must include the following ten technical requirements:

- Background of the region's economic development situation.
- Economic and community development problems and opportunities.
- Regional goals and objectives.
- Community and private sector participation.
- Suggested projects and jobs created.
- Identifying and prioritizing vital projects.
- Regional economic clusters.
- A plan of action.
- Performance measures.
- Methodology for tying the CEDS to with any existing state plan.

The remaining sections of this University Center for Economic Development technical report, in addition to elements of the City of Fernley's 2014 Downtown Fernley Revitalization Planning Study and other regional and statewide economic development plans and strategies, provides the content for each of these ten technical requirements and comprise the new Comprehensive Economic Development Strategy for the City of Fernley for 2023 through 2028. While the various elements of this new five-year Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's main street corridor are designed primarily to develop specific actionable items in support of achieving each of the four existing primary goals and priority areas outlined in the 2014 Downtown Fernley Revitalization Planning Study, the specific actionable items outlined and developed specifically for each of the five local and regional community and economic development capacity areas are designed to better integrate the City of Fernley's community and economic development efforts with regional and statewide community and economic development priorities.

4.0 Analysis: Overview of Current Economic Development Efforts and Positions

This section presents a detailed overview of current economic development efforts and positions for the City of Fernley and for Fernley's main street corridor as identified by participants of the community stakeholder meetings and planning sessions held between March 2022 and April 2022 and by participants of the strategic economic development planning workshop held on July 19, 2022. Elements of Stronger Economies Together Module 1, *Launching Stronger Economies Together and Building a Strong Regional Team*, and parts of Module 2, *Exploring Your Region's Economic and Demographic Foundation*, Module 3, *Identifying the Region's Competitive Advantage*, and Module 4, *Exploring Potential Regional Strategies*, were used to develop the results of the strategic economic development planning process outlined in this section.

4.1 Identifying Existing Creation, Attraction, Retention, and Expansion Economic Development Efforts in the City of Fernley

Economic development efforts can be organized into four general areas, including: (1) creation activities, (2) attraction activities, (3) retention activities, and (4) expansion activities. Creation economic development activities include the strategies and initiatives designed to encourage the formation of new private sector firms within a community and throughout a region. Attraction economic development activities include the efforts to recruit existing business and industry to a specific community or region. Retention economic development activities include the strategies for maintaining and strengthening the community's and region's existing firms and expansion economic development activities include the various initiatives to encourage the growth of existing firms already operating within a community and region. Workshop participants representing the City of Fernley, local business and property owners, regional and state level economic development agencies and organizations, and several community-based non-profit organizations, who participated in the July 19, 2022 strategic economic development planning workshop held in Fernley, Nevada were asked to identify specific business creation, attraction, retention, and expansion efforts that the City of Fernley and/or its various community and economic development partners are currently pursuing.

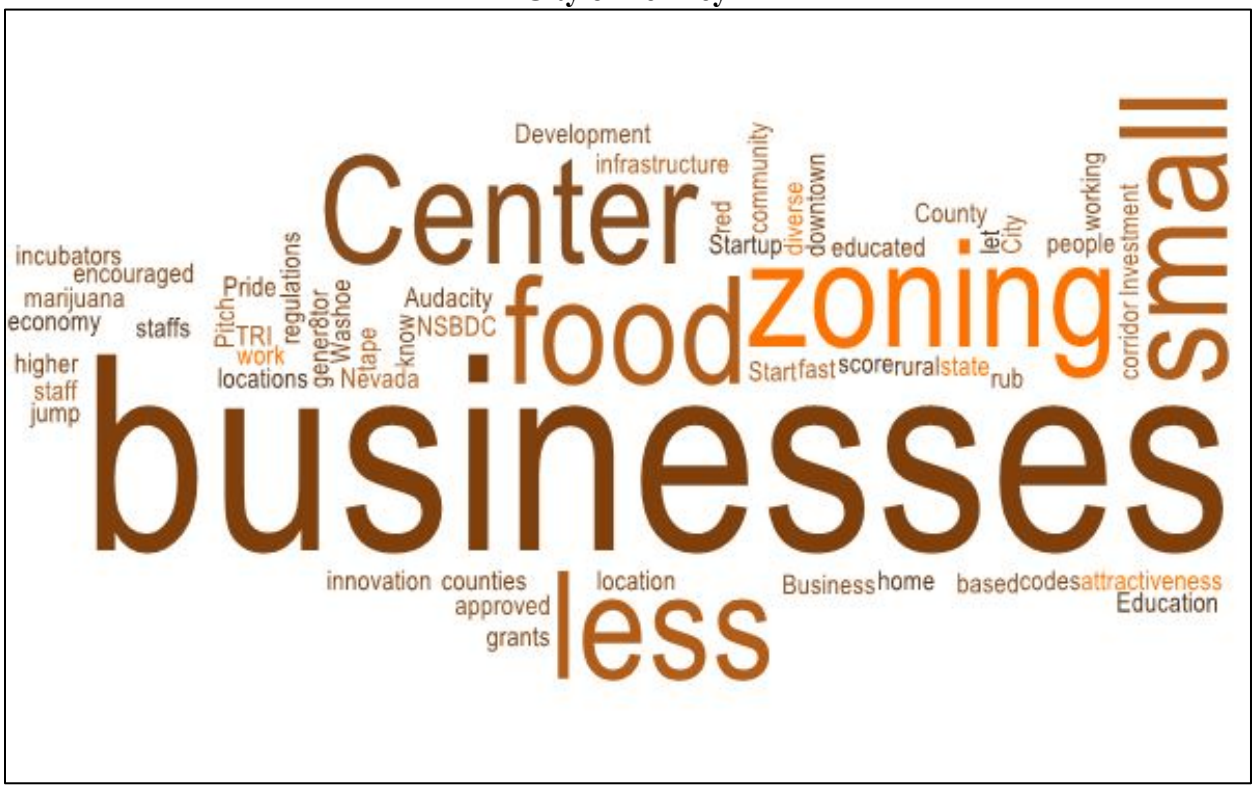
4.1.a Existing Creation Economic Development Initiatives

Figure 4.1 presents a word cloud summarizing the various new business creation economic development initiatives that have been initiated and that are currently being pursued as part of the ongoing revitalization of the City of Fernley's existing main street corridor and for the entire community.

Several workshop participants noted that the City of Fernley, as part of its ongoing revitalization efforts of the existing main street corridor and as part of its existing collection of new business

creation economic development initiatives, has significantly expanded its small business development and entrepreneurial-based development activities. Organizations such as the Nevada Small Business Development Center, the Service Core of Retired Executives, and the Office of Small Business Advocacy within the Nevada Lieutenant Governor's Office have each focused on encouraging the formation of new small businesses and entrepreneurial-based start-ups by serving as an advocate for small business owners, by providing various business assistance resources and services, by offering information and guidance in understanding and complying with applicable local and state regulations, and by providing technical and direct financial assistance.

Figure 4.1 – Existing New Business Creation Economic Development Initiatives
City of Fernley



The City of Fernley has also completed a comprehensive update to existing Comprehensive Master Plan and applicable zoning codes and ordinances. The current Comprehensive Master Plan, recently updated in 2018, and the applicable zoning codes and ordinances have made it easier for new businesses in a variety of industry and occupation sectors to successfully start a new business within the City of Fernley's main street corridor and in other parts of the jurisdiction. The City of Fernley, both independently and with various other public sector agencies focused on economic development and new business creation, actively encourages the formation of home based businesses and the City of Fernley has also completed several significant community infrastructure projects that have significantly improved the overall viability of new small businesses and various entrepreneurial-based start-ups. Recent efforts by the City of Fernley to reduce the amount of 'red tape' that individual business and

entrepreneurial-based start-ups face and efforts to keep municipal business licensing fees relatively low contribute to the overall success of the City's new business creation efforts.

More broadly, the City of Fernley's geographic location and the strong sense of community that exists throughout Fernley significantly supports the overall success of small businesses and various entrepreneurial-based starts-ups in a wide variety of industry and occupation sectors. The City of Fernley is located approximately 15 miles along U.S. Interstate 80 from the northern entrance of the Tahoe Reno Industrial Center, located approximately 28 miles from the City of Fallon along U.S. Highway 50, and is just approximately 30 miles from Lahontan State Recreational Area along U.S. Highway 95 Alternate. High traffic volumes through the City of Fernley and through Fernley's existing main street provides new businesses with direct access to a large out-of-town market. The success of new businesses is also supported by the continued population growth of the community. The continued growth of the City of Fernley's residential population, coupled with continued growth in estimates of median household income, median family income, and per capita income, provide new businesses with a growing customer base and to a customer base whose income levels have increased significantly over the past several years. According to the U.S. Census Bureau, the City of Fernley's total population has increased between 2014 and 2020 by a net 884 total individuals or by 4.6 percent while median household income increased by an estimated 16.5 percent, median family income increased by an estimated 29.3 percent, and per capita income increased by an estimated 18.8 percent.

4.1.b Existing Attraction Economic Development Initiatives

Figure 4.2 presents a word cloud summarizing the various new business attraction economic development initiatives that have been initiated and that are currently being pursued as part of the ongoing revitalization of the City of Fernley's existing main street corridor and for the entire community.

Many of the City of Fernley's existing new business attraction economic development initiatives, according to workshop participants, are very similar to the City's existing new business creation economic development initiatives. The City of Fernley's strategic geographic location, continued population growth of the community and continued growth of community-wide measures of median household income, median family income, and per capita income continue to make Fernley a desirable and attractive destination for a variety of new businesses of various sizes in a variety of industry and occupation sectors. In addition to the general appeal that the community has to various new businesses in a variety of industry and occupation sectors, the City of Fernley's ongoing infrastructure investments have facilitated the continued attraction of new firms in several industry and occupation sectors including the Manufacturing industry sector and the Transportation and Warehousing, and Utilities industry sector. For example, in August 2020, it was announced that the City of Fernley was awarded a $25 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant that will complete the Nevada Pacific Parkway project, successfully linking U.S. Interstate 80 with U.S. Highway 50 through the existing industry park area. This significant new infrastructure project will further increase the overall attractiveness of the City of Fernley to various firms in both the Manufacturing industry sector and the Transportation and Warehousing, and Utilities industry sector and will further support continued population growth and continued growth of

community-wide measures of median household income, median family income, and per capita income.

Figure 4.2 – Existing New Business Attraction Economic Development Initiatives
City of Fernley



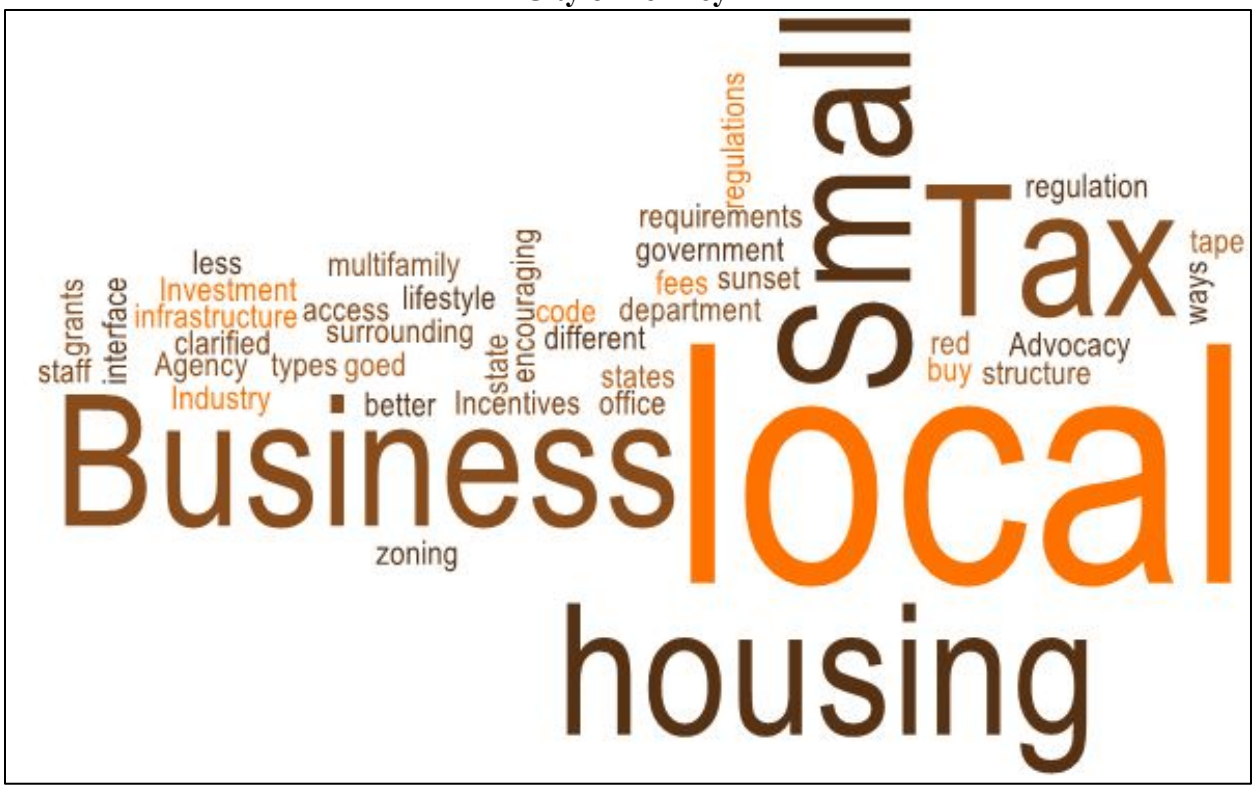
Workshop participants also noted the continued efforts to market the City of Fernley to perspective new businesses by both the Economic Development Authority of Western Nevada and the Northern Nevada Development Authority and by the Western Nevada Development District. Both the Economic Development Authority of Western Nevada and the Northern Nevada Development Authority, as regional development authorities, are able to provide new businesses with select tax incentives through the Nevada Governor's Office of Economic Development. The Western Nevada Development District, as a U.S. Economic Development Administration recognized Economic Development District, continues to market the City of Fernley as a destination location for new businesses and assists the City of Fernley on a variety of new business attraction efforts. Through both the Nevada Governor's Office of Economic and through the Western Nevada Development District, the City of Fernley continues to explore potential federal grant funding opportunities to support the continued attraction of new businesses as part of the City's efforts to revitalize the existing main street corridor and to continue to grow and diversify eh community's existing economic base.

4.1.c Existing Retention Economic Development Initiatives

Figure 4.3 presents a word cloud summarizing the various existing business retention economic development initiatives that have been initiated and that are currently being pursued as part of

the ongoing revitalization of the City of Fernley's existing main street corridor and for the entire community.

Figure 4.3 – Existing Business Retention Economic Development Initiatives
City of Fernley



Regionally and across northwestern Nevada, existing businesses have found it increasingly difficult to retain and recruit a workforce needed to support ongoing business operations. Throughout the Reno-Sparks metropolitan statistical area in neighboring Washoe County and throughout Carson City, high housing costs have inhibited further growth of the local workforce. In Fernley, however, housing still remains relatively achievable for middle income and higher income groups. Workshop participants noted that the continued relative affordability of housing throughout the City of Fernley has made it possible to successfully recruit and retain a robust workforce that, in-tern, supports existing businesses already operating throughout the community. The continued efforts of the City of Fernley to maintain relatively affordable housing throughout the community has positively contributed to the community's ability to retain existing businesses. Workshop participants further noted that City of Fernley elected and appointed staff and municipal staff are, for the most part, easy to approach and very accessible. This enables existing businesses to express and have their concerns addressed before the individual business could potentially decide to leave the community.

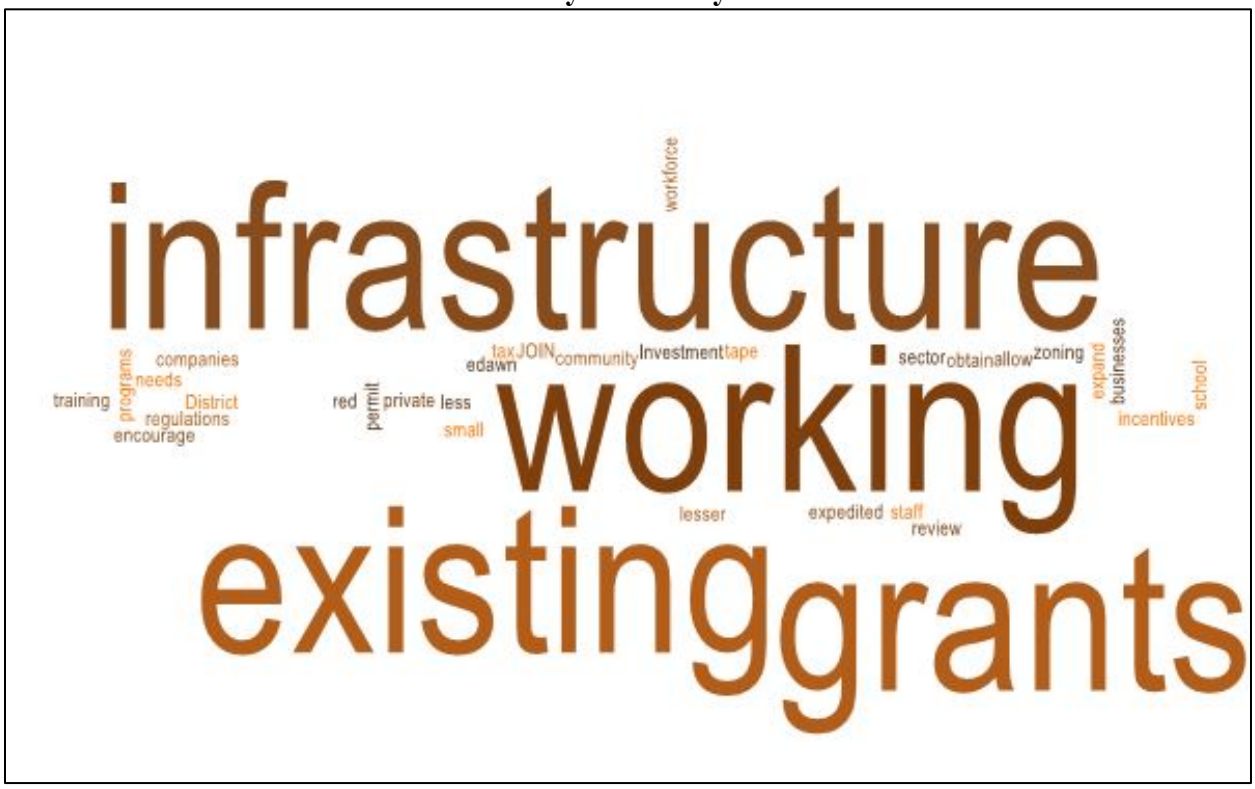
The City of Fernley, as part of its August 2018 update to its Comprehensive Master Plan and related zoning codes and ordinances, has encouraged the development of more housing across a wider variety of housing types while still maintaining the community's unique culture and identity. In order to ensure that the City of Fernley continues to remain successful in retaining

existing businesses, workshop participants noted that it will be important to continue to strike this 'balance' between supporting additional housing development while maintaining the community's unique culture and identity. Many businesses have chosen and will continue to choose Fernley because of the community's unique characteristics coupled with the continued growth of Fernley's total population and available workforce. These efforts to retain existing businesses through the support of continued yet sustainable population and workforce growth have been supported by the City of Fernley's continued investment in critical infrastructure and in the continued revitalization of Fernley's existing main street corridor. Over the past several years, the City of Fernley has pursued an aggressive beautification strategy of the existing main street corridor that has included the completion of new curb, gutter, sidewalk, and surface roadway improvements along with new streetscaping that has improved the overall attractiveness of the main street corridor to existing businesses, to existing area residents, and to perspective customers needed to sustain existing private sector activities.

4.1.d Existing Expansion Economic Development Initiatives

Figure 4.4 presents a word cloud summarizing the various existing business expansion economic development initiatives that have been initiated and that are currently being pursued as part of the ongoing revitalization of the City of Fernley's existing main street corridor and for the entire community.

Figure 4.4 – Existing Business Expansion Economic Development Initiatives
City of Fernley



Continued community investment in critical infrastructure, continued investment in various workforce development programs and initiatives, and ensuring that existing businesses receive ongoing technical and even financial assistance were a few of the many ways in which the City of Fernley and its various community and economic development partners continued to support existing business expansion efforts. The same infrastructure investments that the City of Fernley has made to support new business creation and attraction efforts and to encourage existing business retention continue to support the ongoing expansion of existing businesses within the main street corridor and throughout the community. Specific to the main street corridor, improvements in surface roadway infrastructure, improved sidewalks, curbs, and gutters, and general streetscaping beautification efforts have facilitated the expansion of several existing businesses. Recently announced new infrastructure projects, including the $25 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant that will complete the Nevada Pacific Parkway project and will directly connect U.S. Interstate 80 with U.S. Highway 50 through the existing industrial park, with further facilitate the expansion of existing businesses throughout the community.

Several workshop participants noted that a key barrier to ongoing existing business retention efforts has been the growing lack of available workers across almost all industry and occupation sectors. Existing businesses located throughout the existing main street corridor and throughout the community are facing increased pressures to attract and retain workers due to the continued regional workforce and labor shortage that exists throughout northwestern Nevada. The Lyon County School District has and continues to develop its various Career Technical Education and work-based learning programs in order to accelerate the development of the area's workforce. Lyon County School District's work-based learning program is an educational strategy that has been developed by the School District and implemented throughout the public schools located in Fernley, including Fernley High School, which offers students the opportunity to connect classroom learning to authentic business and industry experiences. Work-based learning is a continuum of experiences that help prepare students for postsecondary education and careers across a variety of industry and occupation sectors. The goal of the Lyon County School District's work-based learning program is to assist students to be 'college and career ready' through authentic connections to business and industry in a field that is related to the student's own career interests. In addition to these efforts, the efforts of organizations such as the Fernley Chamber of Commerce and even the Lyon County Library System continue to provide job training, job placement, and various workforce development services that are designed to provide existing businesses access to the workforce and labor needed to support continued expansion and growth.

The City of Fernley itself strives to provide direct technical assistance to existing businesses through a streamlined permitting process which enables existing businesses to reduce the time and costs associated with complying with municipal building and zoning requirements and regulations. Regional economic development organizations, such as the Economic Development Authority of Western Nevada, the Northern Nevada Development Authority, and the Western Nevada Development District provide a wide variety of existing business expansion services including, but not limited to, assistance in seeking out and gaining access to broader regional, national, and even international markets. Organizations such as the Nevada Small Business Development Center provide additional business counseling and technical assistance services

that includes assistance in identifying and securing the funding needed to support the financial needs of existing businesses seeking to expand their operations.

4.2 Results of Stakeholder Assessments and Identified Priority Community and Economic Development Needs

Between March 2022 and May 2022, faculty from the University Center for Economic Development facilitated several community stakeholder meetings and planning sessions. Approximately 300 community members, property owners, business owners, and representatives of various community-based non-profit organizations attended and participated in these community stakeholder meetings and planning sessions. During each of these community stakeholder meetings and planning sessions, participants were asked to identify specific new business creation and attraction needs and issues, existing business retention and expansion needs and issues, and other general issues and needs inhibiting overall development and growth of Fernley's main street corridor and of the City of Fernley's overall economic base.

4.2.a Identification of New Business Creation and Attraction Needs and Issues

Figure 4.5 presents a word cloud of the various new business creation and attraction needs and issues identified by community stakeholders who participated in the community stakeholder meetings and planning sessions held between March 2022 and May 2022.

A number of specific new business creation and attraction needs and issues were identified by community stakeholder participants, specific to the existing main street corridor and more broadly to the entire community, ranging from the need for additional parking and additional commercial space within the corridor itself to the need for infrastructure that would mitigate surface vehicle congestion along U.S. Highway 50 Alternate to more existential concerns regarding Fernley's geographic proximity to two major metropolitan areas including the Reno-Sparks metropolitan statistical area and the Carson City metropolitan statistical area. A number of community stakeholder participants noted that it is difficult for individual businesses, especially small businesses and entrepreneurial start-ups in the retail industry sector to be successful in Fernley as local area residents tend to spend their retail dollars with businesses located in either Reno, Nevada or Sparks, Nevada or in Carson City, Nevada. Several community stakeholder participants did note that the City of Fernley and its various community and economic development partners, namely the Fernley Chamber of Commerce, have and continue to strive to encourage local area residents to support local area businesses through 'buy local' campaigns. However, a significant amount of local dollars continue to 'leak' out of the community and flow to the larger more urban population centers of the Reno-Sparks metropolitan statistical area and the Carson City metropolitan statistical area where there is greater variety in retail options.

While continued 'buy local' campaigns are necessary, several community stakeholder participants noted that Fernley's existing residential population is simply not large enough to support additional new business creation and attraction efforts either throughout the main street corridor or throughout the community. Especially in the retail industry sector, where 'retail

follows rooftops', continued but sustainable growth of the community's residential population will be needed to support additional new business creation and attraction efforts. Not only will new businesses to main street corridor and to the community need this increased population to support overall growth in economic activity, continued but sustainable growth, and growth that is consistent with the community's existing identity and culture, in Fernley's residential population will also be needed to support long-term growth of the local workforce. This workforce will be needed to support new businesses that are either created as a new business start-up or attracted and recruited from another community. Additional housing and increased healthcare and educational services will also be needed to support future population and workforce growth.

Figure 4.5 – New Business Creation and Attraction Needs and Issues
City of Fernley and Fernley Main Street Corridor



While community stakeholder participants highlighted the City of Fernley's ongoing and recent significant investments made into the main street corridor's and entire community's existing set of public infrastructure and public services assets, community stakeholder participants noted a number of additional infrastructure improvements that are needed to support future new business creation and attraction efforts. The existing main street corridor that comprises much of the portion of U.S. Highway 50 Alternate that runs through Fernley suffers from high traffic congestion. This stretch of U.S. Highway 50 Alternate is used as a primary commuter route that area residents use to travel to and from their home and gain access to U.S. Interstate 80. Currently, the City of Fernley has only two primary access points to U.S. Interstate 80, one located on the western edge of the community accessible using West Main Street (or U.S. Highway 50 Alternate) and one located in the general center of the community accessible using the roundabout located at the intersection of U.S. Highway 50 Alternate (West Main Street),

Farm District Road, and U.S. Highway 50 (East Main Street). These two points represent the far western and far eastern edges of the existing main street corridor and routinely high traffic congestion levels often prohibits new business creation and attraction efforts within the main street corridor itself. The recently announced $25 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant that will complete the Nevada Pacific Parkway project and will directly connect U.S. Interstate 80 with U.S. Highway 50 through the existing industrial park will alleviate this concern in the future but other traffic mitigation efforts are needed now in order to support a broader range of new business creation and attraction efforts throughout the main street corridor.

Additional infrastructure issues identified by community stakeholder participants in the various community stakeholder meetings and planning sessions included additional surface parking and, possibly, the need for structured and centrally located parking within the main street corridor. Widening existing sidewalks, the development of additional street beautification and streetscaping efforts including the development of public spaces and shared public gathering areas, improved street lighting and street crossing markers, and needed repairs to aging curbs and gutters were a few of the visible infrastructure issues that inhibit additional new business creation and attraction efforts throughout the main street corridor. Other but less visible infrastructure improvements include improved sewer, water, and even broadband and telecommunication assets. The existing main street corridor is one of the oldest parts of the City of Fernley and improvements to the underground infrastructure resources will be needed to support new business creation and attraction efforts.

While parking and improved traffic mitigation are primary infrastructure needs, community stakeholder participants and representatives also noted that the existing main street corridor suffers from a lack of available commercial space and commercial space that is modern and meets the needs of new businesses in a variety of industry and occupation sectors. Like many communities, new businesses find it more attractive and more cost effective to continue to develop new commercial space with modern amenities and characteristics outside and further from an established urban core such as the existing main street corridor. The Fernley main street corridor suffers from this same limitation as there is little to no remaining additional commercial space for new businesses in a variety of industry and occupation sectors that might choose Fernley and the main street corridor as an ideal location for their new operation. The existing main street corridor is comprised of relatively small parcels with no unified ownership patterns which makes it difficult for private sector developers to assemble the land needed to build modern commercial space that new businesses need to be successful. Other parcels of land located throughout the main street corridor are either underutilized, underdeveloped, or vacant and a collection of various competing and often incompatible uses further suppresses the ability of private sector developers to assemble property that be used to provide additional commercial space. Several community stakeholder participants and representatives suggested that the City of Fernley, its various community and economic development partners, and relevant private sector interests, including existing property owners, should work collaboratively to develop a comprehensive strategy designed to increase the amount of new commercial space available to new business businesses within the main street corridor and to modernize, improvement, and expand existing commercial spaces to meet the expectations that new businesses might have.

4.2.b Identification of Existing Business Retention and Expansion Needs and Issues

Figure 4.6 presents a word cloud of the various existing business creation and attraction needs and issues identified by community stakeholders who participated in the community stakeholder meetings and planning sessions held between March 2022 and May 2022.

Figure 4.6 – Existing Business Retention and Expansion Needs and Issues
City of Fernley and Fernley Main Street Corridor



Community stakeholders, consisting of existing residents, business owners, and property owners, noted that needed infrastructure improvements, increased support of area businesses by area residents, and improved local workforce conditions were the three most important existing business retention and expansion needs and issues. Specifically, a number of the community stakeholder meeting and planning session participants noted that needed sewer treatment capacity, water availability concerns, and general infrastructure needs ranging from improved surface traffic mitigation and calming infrastructure to improved streetscaping and beautification infrastructure throughout the existing main street corridor were each inhibiting existing business retention and expansion efforts. Related to infrastructure was the availability of improved commercial space availability throughout the existing main street corridor and throughout the community. While a number of community stakeholder meeting and planning session participants expressed their desire to expand their existing operation, they also noted that that the general lack of available space within the community and, specifically, within the existing main street corridor is preventing them from physically growing their existing operation. In some cases, several community stakeholder meeting and planning session participants noted that they are considering relocating their existing operation to another community within the northwestern

Nevada region largely due to a lack of new commercial space that could support their larger expansion efforts.

In addition to lacking the necessary infrastructure and necessary space to support increased existing business expansion efforts, community stakeholder meeting and planning session participants also noted that retention and expansion efforts will only occur if local community residents increase their patronage of existing businesses located throughout Fernley and within the existing Fernley main street corridor. Several community stakeholder meeting and planning session participants pointed out that local area residents tend to spend their income with businesses located in other parts of the northwestern Nevada region, specifically within the Reno-Sparks metropolitan statistical area or the Carson City metropolitan statistical area. In other cases, a number of local area businesses complete their business-to-business transactions with suppliers located in this larger more urban population centers resulting in fewer dollars available locally to support existing businesses across a wide variety of industry and occupation sectors. While the northwestern Nevada boasts a strong tourism and hospitality sector, area and regional tourists and visitors also spend a significant portion of their consumption dollars across a wide variety of industry and occupation sectors in other communities located in other parts of the northwestern Nevada region, often overlooking Fernley. Encouraging more 'buy local' efforts among local area residents and even among other local area businesses along with increased marketing of Fernley to annual tourists and visitors were suggested strategies to increase the overall support and patronage of local area businesses.

A major and growing concern that several local area businesses expressed during the community stakeholder meeting and planning sessions held between March 2022 and May 2022 was the continued growing lack of available workers with the necessary training, skills, and experience that area businesses need in order to support existing operations and to support broader expansion efforts. Continued growth of the local area economic base coupled with continued regional economic growth has dramatically increased the local and regional demand for qualified and experienced workers across a variety of occupation sectors. Existing open positions continue to remain vacant for long periods of time and local area businesses are unable to expand their existing operations due to the inability of the business to fill new vacant positions that are created as a result of the expansion effort. A significant barrier to growing the community's availability of workers, according to several community stakeholder meeting and planning participants, is the lack of affordable housing in the community and throughout the region. There is a significant 'gap' in the availability of different types of housing, including multi-family housing, throughout Fernley and individuals unable to afford and purchase a typical single family detached home are often forced to live and work in other communities with a more balanced inventory of different housing types at multiple price points. While the City of Fernley has made significant changes to its existing Comprehensive Master Plan that does support additional types of housing development at different price points, additional housing that would support growth of the community's workforce is desperately needed to support broader community-wide existing business retention and expansion efforts. Community stakeholder meeting and planning session participants did note, however, that the effort to broaden Fernley's housing stock should be done by taking into consideration the community's existing culture and identity and additional workforce and housing development efforts should be pursued in a sustainable and complimentary fashion.

4.2.c Identification of General Community and Economic Development Issues and Needs

Figure 4.7 presents a word cloud of the various general community and economic development issues and needs identified by community stakeholders who participated in the community stakeholder meetings and planning sessions held between March 2022 and May 2022.

Figure 4.7 – General Community and Economic Development Issues and Needs
City of Fernley and Fernley Main Street Corridor



In addition to the various new business creation and attraction and existing business retention and expansion issues and needs identified and outlined by community stakeholder meeting and planning session participants, community stakeholder meeting and planning session participants identified a number of general community and economic development issues and needs that they would like to see the City of Fernley and its various community and economic development partners address as part of the new five-year Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's existing main street corridor. Several meeting and planning participants noted, specifically for the existing main street corridor, that they would like to see the City of Fernley aggressively implement the existing goals and priority areas outlined in the *Downtown Fernley Revitalization Planning Study*, the development priorities outlined in the City of Fernley's recently revised Comprehensive Master Plan and Capital Improvement Plan, and in other related planning documents. Improving the general aesthetics of the existing main street corridor, by developing and completed needed surface and pedestrian traffic mitigation and safety infrastructure and already identified streetscaping and beautification efforts are central to the community's desire of creating a functioning downtown commercial core that supports new

business creation and attraction and existing business retention and expansion efforts, creates a functioning pedestrian-centered neighborhood, and positively contributes to the community's economic, cultural, and even social growth and prosperity.

Central to the desired efforts of creating a functioning downtown commercial core was the stated desire by several community stakeholder meeting and planning sessions participants to pursue multi-use developments, address the growing number of vacant or underutilized parcels located throughout the existing main street corridor, develop additional commercial space that can support new businesses and existing businesses, rapidly increase the availability of workers in a variety of occupation sectors, and substantially increase local area resident support of local area businesses through increased patronage. To accomplish these efforts, the City of Fernley will need to work closely with key local, regional, state, and even federal partners and stakeholders to pursue new projects, new policies, and to secure the funding needed to support these efforts. Developing a series of specific actionable items and priority projects for the next year designed to achieve the stated existing goals and priority areas outlined in the Downtown Fernley Revitalization Planning Study is a critical first step in accomplishing these efforts and the City of Fernley will need to work collaboratively with organizations such as the Fernley Builders Association, the Fernley Chamber of Commerce, the Economic Development Authority of Western Nevada, the Northern Nevada Development Authority, the Western Nevada Development District, the Nevada Governor's Office of Economic Development, and other partners to generate and leverage the resources needed to implement elements of the Downtown Fernley Revitalization Planning Study.

The City of Fernley should also consider better integrating the local area economic base and local area economic activity with broader regional employment and new business creation and attraction efforts. Recent initiatives to significantly improve the City of Fernley's existing infrastructure, including a new $25 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant that will complete the Nevada Pacific Parkway project, and continued interest in Fernley's existing industrial area and park could potentially grow Fernley to become a critical regional hub for transportation and logistical operations and new advanced manufacturing. Community stakeholder meeting and planning participants also noted that the City of Fernley's unique geographic location, located at the intersection of U.S. Interstate 80, U.S. Highway 50 and U.S. Highway 50 Alternate, and U.S. Highway 95 Alternate, gives the community the opportunity to be a central hub of regional tourism in the outdoor recreation sector. While significant improvements to the local area's surface transportation infrastructure will be needed to take advantage of this opportunity, the community and the existing main street corridor is strategically placed to support new business creation and attraction and existing business retention and expansion efforts across a wide variety of critical industry and occupation sectors.

5.0 Analysis: Existing Community and Regional Employment Conditions and Trends

This section presents a comprehensive overview of the results from Stronger Economies Together Module 2, *Exploring Your Region's Demographics*, Stronger Economies Together Module 3, *Identifying the Region's Comparative Advantage*, and Stronger Economies Together Module 4, *Exploring Potential Regional Strategies*, used to develop this new five-year Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's main street corridor.

As the continued revitalization of Fernley's main street corridor has and will remain tied to new business creation and attraction strategies and to efforts of the City of Fernley to retain and expand existing businesses, this section presents a detailed overview of local community and regional employment conditions and trends in major industry sectors. By understanding these trends, specific actionable items can be developed and pursued to support new business creation and attraction and existing business retention and expansion strategies at the local community level and at the larger regional level. New business creation and attraction and existing business retention and expansion efforts are also central to the current efforts of the Nevada Governor's Office of Economic Development and the Nevada Main Street program. These efforts are also central to the ongoing economic development efforts of the Northern Nevada Development Authority, to the Western Nevada Development District, and to the Economic Development Authority of Western Nevada.

5.1 Local and Regional Employment by Major Industry Sector

Total employment by major industry sector between 2015 and 2020 for the City of Fernley, for Lyon County, Carson City, Douglas County, Storey County, and Washoe County is presented in this sub-section. Total employment by major industry for both the state of Nevada and for the entire United States between 2015 and 2020 is also presented in this sub-section.

5.1.a Total Employment by Major Industry Sector for the City of Fernley

Table 5.1 presents total employment for the City of Fernley by major industry sector in both 2015 and 2020. The four major industry sectors with the largest percentage change in total employment between 2015 and 2020 for the City of Fernley are highlighted.

Between 2015 and 2020, total employment for the City of Fernley, across all major industry sectors, increased from an estimated 7,657 total individuals in 2015 to an estimated 9,263 total individuals in 2020, a net increase of 1,606 total individuals employed or by 21.0 percent. The four largest sectors, in-terms of percentage change and growth in total employment between

2015 and 2020 for the City of Fernley included Wholesale Trade, Manufacturing, Public Administration, and Transportation and Warehousing, and Utilities. Total employment in the Wholesale Trade industry sector increased from an estimated 209 total individuals in 2015 to an estimated 607 total individuals in 2020, a net increase of 398 total individuals employed or by 190.4 percent. Total employment in the Manufacturing industry sector for the City of Fernley increased from an estimated 541 total individuals in 2015 to an estimated 1,357 total individuals in 2020, a net increase of 816 total individuals employed or by 150.8 percent.

Table 5.1 – Total Employment by Major Industry Sector
City of Fernley, 2015 and 2020

Actual Employment

Major Industry Sector	2015	2020	2015 to 2020 Actual Change	2015 to 2020 Percent Change
Agriculture, Forestry, Fishing and Hunting, and Mining	298	69	-229	-76.8%
Construction	782	783	1	0.1%
Manufacturing	541	1,357	816	150.8%
Wholesale Trade	209	607	398	190.4%
Retail Trade	1,262	1,222	-40	-3.2%
Transportation and Warehousing, and Utilities	547	1,032	485	88.7%
Information	166	11	-155	-93.4%
Finance and Insurance, and Real Estate and Rental and Leasing	386	289	-97	-25.1%
Professional, Scientific, and Management, and Administrative and Waste Management Services	760	646	-114	-15.0%
Educational Services, and Health Care and Social Assistance	1,361	1,171	-190	-14.0%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	751	1,003	252	33.6%
Other Services, Except Public Administration	333	489	156	46.8%
Public Administration	261	584	323	123.8%
Total	**7,657**	**9,263**	**1,606**	**21.0%**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

For the Public Administration industry sector, total employment increased from an estimated 261 total individuals in 2015 to an estimated 584 total individuals in 2020, a net increase of 323 total individuals employed or by 123.8 percent. Between 2015 and 2020, total employment in the

Transportation and Warehousing, and Utilities industry sector for the City of Fernley increased from an estimated 547 total individuals in 2015 to an estimated 1,032 total individuals in 2020, a net increase of 485 total individuals employed or by 88.7 percent. Between 2015 and 2020, these four major industry sectors created an estimated 2,022 total new jobs in the City of Fernley.

Table 5.2 presents the percentage of total employment captured by each individual major industry sector for both 2015 and 2020 for the City of Fernley. The four major industry sectors with the largest percentage change in the percentage of total employment for each individual industry sector between 2015 and 2020 for the City of Fernley are highlighted.

Table 5.2 – Total Employment by Major Industry Sector
City of Fernley, 2015 and 2020

Percent of Total Employment

Major Industry Sector	2015	2020	2015 to 2020 Actual Change	2015 to 2020 Percent Change
Agriculture, Forestry, Fishing and Hunting, and Mining	3.9%	0.7%	-3.1%	-80.9%
Construction	10.2%	8.5%	-1.8%	-17.2%
Manufacturing	7.1%	14.6%	7.6%	107.3%
Wholesale Trade	2.7%	6.6%	3.8%	140.1%
Retail Trade	16.5%	13.2%	-3.3%	-20.0%
Transportation and Warehousing, and Utilities	7.1%	11.1%	4.0%	56.0%
Information	2.2%	0.1%	-2.0%	-94.5%
Finance and Insurance, and Real Estate and Rental and Leasing	5.0%	3.1%	-1.9%	-38.1%
Professional, Scientific, and Management, and Administrative and Waste Management Services	9.9%	7.0%	-3.0%	-29.7%
Educational Services, and Health Care and Social Assistance	17.8%	12.6%	-5.1%	-28.9%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	9.8%	10.8%	1.0%	10.4%
Other Services, Except Public Administration	4.3%	5.3%	0.9%	21.4%
Public Administration	3.4%	6.3%	2.9%	85.0%
Total	**100.0%**	**100.0%**	**-**	**-**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

The four major industry sectors with the largest percentage change in the percentage of total employment that each major industry sector captured between 2015 and 2020 for the City of Fernley included the Wholesale Trade industry sector, the Manufacturing industry sector, the Public Administration industry sector, and the Transportation and Warehousing industry sector. Between 2015 and 2020, the percentage of total employment in the Wholesale Trade industry sector for the City of Fernley increased from an estimated 2.7 percent in 2015 to an estimated 6.6 percent in 2020, a net increase of 3.8 percent or by a percentage increase of 140.1 percent. For the Manufacturing industry sector, the percentage of total employment increased from an estimated 7.1 percent in 2015 to an estimated 14.6 percent in 2020, a net increase of 7.6 percent or by a percentage increase of 107.3 percent and, for the Public Administration industry sector, the percentage of total employment increased from an estimated 3.4 percent in 2015 to an estimated 6.3 percent in 2020, a net increase of 2.9 percent or by a percentage increase of 85.0 percent. Between 2015 and 2020, the percentage of total employment in the Transportation and Warehousing, and Utilities industry sector increased from an estimated 7.1 percent in 2015 to an estimated 11.1 percent in 2020, a net increase of 4.0 percent or by a percentage increase of 56.0 percent.

5.1.b Total Employment by Major Industry Sector for Lyon County

Table 5.3 presents total employment for Lyon County by major industry sector in both 2015 and 2020. The four major industry sectors with the largest percentage change in total employment between 2015 and 2020 for all of Lyon County are highlighted.

Between 2015 and 2020, total employment across all major industry sectors for all of Lyon County increased, increasing from an estimated 19,958 total individuals in 2015 to an estimated 23,278 total individuals in 2020, a net increase of 3,320 total individuals employed or by 16.6 percent. The major industry sectors with the largest percentage growth in-terms of total employment between 2015 and 2020 included the Wholesale Trade industry sector, the Manufacturing industry sector, the Other Services, Except Public Administration industry sector, and the Transportation and Warehousing, and Utilities industry sector.

For the Wholesale Trade industry sector for all of Lyon County, total employment increased from an estimated 369 total individuals in 2015 to an estimated 998 total individuals in 2020, a net increase of 629 total individuals employed or by 170.5 percent. Between 2015 and 2020, total employment countywide in the Manufacturing industry sector increased from an estimated 1,724 total individuals in 2015 to an estimated 2,966 total individuals in 2020, a net increase of 1,242 total individuals employed or by 72.0 percent. Total employment in the Other Services, Except Public Administration industry sector countywide increased from an estimated 810 total individuals in 2015 to an estimated 1,193 total individuals in 2020, a net increase of 383 total individuals employed or by 47.3 percent. Between 2015 and 2020, total employment across Lyon County in the Transportation and Warehousing, and Utilities industry sector increased from an estimated 1,276 total individuals in 2015 to an estimated 1,836 total individuals in 2020, a net increase of 560 total individuals employed or by 43.9 percent. Combined, these four major industry sectors employed an additional 2,814 total individuals across Lyon County between 2015 and 2020.

Table 5.3 – Total Employment by Major Industry Sector Lyon County, 2015 and 2020				
Actual Employment				
Major Industry Sector	**2015**	**2020**	**2015 to 2020 Actual Change**	**2015 to 2020 Percent Change**
Agriculture, Forestry, Fishing and Hunting, and Mining	981	530	-451	-46.0%
Construction	1,863	1,918	55	3.0%
Manufacturing	1,724	2,966	1,242	72.0%
Wholesale Trade	369	998	629	170.5%
Retail Trade	2,866	3,239	373	13.0%
Transportation and Warehousing, and Utilities	1,276	1,836	560	43.9%
Information	376	204	-172	-45.7%
Finance and Insurance, and Real Estate and Rental and Leasing	842	748	-94	-11.2%
Professional, Scientific, and Management, and Administrative and Waste Management Services	1,860	1,735	-125	-6.7%
Educational Services, and Health Care and Social Assistance	3,387	3,383	-4	-0.1%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	2,223	2,707	484	21.8%
Other Services, Except Public Administration	810	1,193	383	47.3%
Public Administration	1,381	1,821	440	31.9%
Total	**19,958**	**23,278**	**3,320**	**16.6%**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

Table 5.4 presents the percentage of total employment captured by each individual major industry sector for both 2015 and 2020 for all of Lyon County. The four major industry sectors with the largest percentage change in the percentage of total employment for each individual industry sector between 2015 and 2020 for Lyon County are highlighted.

The four major industry sectors with the greatest percentage increase in the percent of total employment that each individual industry sector was responsible for between 2015 and 2020 for all of Lyon County included the Wholesale Trade industry sector, the Manufacturing industry sector, the Other Services, Except Public Administration industry sector, and the Transportation and Warehousing, and Utilities industry sector. Between 2015 and 2020, the percentage of total employment in the Wholesale Trade industry sector for all of Lyon County increased from an

estimated 1.8 percent in 2015 to an estimated 4.3 percent in 2020, a net increase of 2.4 percent or by a percentage increase of 131.9 percent.

Table 5.4 – Total Employment by Major Industry Sector Lyon County, 2015 and 2020				
Percent of Total Employment				
Major Industry Sector	**2015**	**2020**	**2015 to 2020 Actual Change**	**2015 to 2020 Percent Change**
Agriculture, Forestry, Fishing and Hunting, and Mining	4.9%	2.3%	-2.6%	-53.7%
Construction	9.3%	8.2%	-1.1%	-11.7%
Manufacturing	8.6%	12.7%	4.1%	47.5%
Wholesale Trade	1.8%	4.3%	2.4%	131.9%
Retail Trade	14.4%	13.9%	-0.4%	-3.1%
Transportation and Warehousing, and Utilities	6.4%	7.9%	1.5%	23.4%
Information	1.9%	0.9%	-1.0%	-53.5%
Finance and Insurance, and Real Estate and Rental and Leasing	4.2%	3.2%	-1.0%	-23.8%
Professional, Scientific, and Management, and Administrative and Waste Management Services	9.3%	7.5%	-1.9%	-20.0%
Educational Services, and Health Care and Social Assistance	17.0%	14.5%	-2.4%	-14.4%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	11.1%	11.6%	0.5%	4.4%
Other Services, Except Public Administration	4.1%	5.1%	1.1%	26.3%
Public Administration	6.9%	7.8%	0.9%	13.1%
Total	**100.0%**	**100.0%**	**-**	**-**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

For the Manufacturing industry sector, the percentage of total employment increased from an estimated 8.6 percent in 2015 to an estimated 12.7 percent in 2020, a net increase of 4.1 percent or by a percentage increase of 47.5 percent and, for the Other Services, Except Public Administration industry sector, the percentage of total employment increased from an estimated 4.1 percent in 2015 to an estimated 5.1 percent in 2020, a net increase of 1.1 percent or by a percentage increase of 26.3 percent. Between 2015 and 2020, the percentage of total employment in the Transportation and Warehousing, and Utilities industry sector countywide for

all of Lyon County increased from an estimated 6.4 percent in 2015 to an estimated 7.9 percent in 2020, a net increase of 1.5 percent or by a percentage increase of 23.4 percent.

5.1.c Total Employment by Major Industry Sector for Carson City

Table 5.5 presents total employment for Carson City by major industry sector in both 2015 and 2020. The four major industry sectors with the largest percentage change in total employment between 2015 and 2020 for all of Carson City are highlighted.

Table 5.5 – Total Employment by Major Industry Sector
Carson City, 2015 and 2020

Actual Employment

Major Industry Sector	2015	2020	2015 to 2020 Actual Change	2015 to 2020 Percent Change
Agriculture, Forestry, Fishing and Hunting, and Mining	156	190	34	21.8%
Construction	1,047	2,360	1,313	125.4%
Manufacturing	2,545	2,433	-112	-4.4%
Wholesale Trade	394	568	174	44.2%
Retail Trade	3,085	3,059	-26	-0.8%
Transportation and Warehousing, and Utilities	772	874	102	13.2%
Information	249	443	194	77.9%
Finance and Insurance, and Real Estate and Rental and Leasing	853	958	105	12.3%
Professional, Scientific, and Management, and Administrative and Waste Management Services	2,053	2,435	382	18.6%
Educational Services, and Health Care and Social Assistance	3,903	4,609	706	18.1%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	3,841	3,742	-99	-2.6%
Other Services, Except Public Administration	1,272	1,159	-113	-8.9%
Public Administration	3,433	3,168	-265	-7.7%
Total	**23,603**	**25,998**	**2,395**	**10.1%**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

Between 2015 and 2020, total employment across all major industry sectors for Carson City increased from an estimated 23,603 total individuals to an estimated 25,998 total individuals in

2020, a net increase of 2,396 total individuals employed or by 10.1 percent. The major industry sectors with the largest percentage growth in-terms of total employment between 2015 and 2020 included the Construction industry sector, the Information industry sector, the Wholesale Trade industry sector, and the Agriculture, Forestry, Fishing and Hunting, and Mining industry sector.

For the Construction industry sector, total employment increased from an estimated 1,047 total individuals in 2014 to an estimated 2,360 total individuals in 2020, a net increase of 1,313 total individuals employed or by 125.4 percent. Total Employment in the Information industry sector increased from an estimated 249 total individuals in 2015 to an estimated 443 total individuals in 2020, a net increase of 194 total individuals employed or by 77.9 percent and, for the Wholesale Trade industry sector, total employment increased from an estimated 394 total individuals in 2015 to an estimated 568 total individuals, a net increase of 174 total individuals employed or by 44.2 percent. For the Agriculture, Forestry, Fishing and Hunting, and Mining industry sector, total employment increased from an estimated 156 total individuals in 2015 to an estimated 190 total individuals in 2020, a net increase of 34 total individuals or by 21.8 percent. Combined, the Construction industry sector, the Information industry sector, the Wholesale Trade industry sector, and the Agriculture, Forestry, Fishing and Hunting, and Mining industry sector employed an estimated 3,561 total individuals in Carson City in 2020.

Table 5.6 presents the percentage of total employment captured by each individual major industry sector for both 2015 and 2020 for Carson City. The four major industry sectors with the largest percentage change in the percentage of total employment for each individual industry sector between 2015 and 2020 for Carson City are highlighted.

The four major industry sectors with the greatest percentage increase in the percent of total employment that each individual industry sector was responsible for between 2015 and 2020 for Carson City included the Construction industry sector, the Information industry sector, the Wholesale Trade industry sector, and the Agriculture, Forestry, Fishing and Hunting, and Mining industry sector. Between 2015 and 2020, the percentage of total employment in the Construction industry sector for Carson City increased from an estimated 4.4 percent in 2015 to an estimated 9.1 percent in 2020, a net increase of 4.6 percent or by a percentage increase of 104.6 percent. For the Information industry sector, the percentage of total employment that this industry sector captured between 2015 and 2020 increased from an estimated 1.1 percent in 2015 to an estimated 1.7 percent in 2020, a net increase of 0.6 percent or by 61.5 percent.

For the Wholesale Trade industry sector, the percentage of total employment that this industry sector captured between 2015 and 2020 increased from an estimated 1.7 percent in 2015 to an estimated 2.2 percent in 2020, a net increase of 0.5 percent or by a percentage increase of 30.9 percent. Between 2015 and 2020, the percentage of total employment captured by the Agriculture, Forestry, Fishing and Hunting, and Mining industry sector increased from an estimated 0.7 percent in 2015 to an estimated 0.8 percent in 2020, a net increase of 0.1 percent or by a percentage increase of 10.6 percent. Combined, the Construction industry sector, the Information industry sector, the Wholesale Trade industry sector, and the Agriculture, Forestry, Fishing and Hunting, and Mining industry sector accounted for an estimated 13.7 percent of total employment in Carson City in 2020.

Table 5.6 – Total Employment by Major Industry Sector Carson City, 2015 and 2020				
Percent of Total Employment				
Major Industry Sector	**2015**	**2020**	**2015 to 2020 Actual Change**	**2015 to 2020 Percent Change**
Agriculture, Forestry, Fishing and Hunting, and Mining	0.7%	0.8%	0.1%	10.6%
Construction	4.4%	9.1%	4.6%	104.6%
Manufacturing	10.8%	9.4%	-1.4%	-13.2%
Wholesale Trade	1.7%	2.2%	0.5%	30.9%
Retail Trade	13.1%	11.8%	-1.3%	-10.0%
Transportation and Warehousing, and Utilities	3.3%	3.4%	0.1%	2.8%
Information	1.1%	1.7%	0.6%	61.5%
Finance and Insurance, and Real Estate and Rental and Leasing	3.6%	3.7%	0.1%	2.0%
Professional, Scientific, and Management, and Administrative and Waste Management Services	8.7%	9.4%	0.7%	7.7%
Educational Services, and Health Care and Social Assistance	16.5%	17.7%	1.2%	7.2%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	16.3%	14.4%	-1.9%	-11.6%
Other Services, Except Public Administration	5.4%	4.5%	-0.9%	-17.3%
Public Administration	14.5%	12.2%	-2.4%	-16.2%
Total	**100.0%**	**100.0%**	**-**	**-**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

5.1.d Total Employment by Major Industry Sector for Douglas County

Table 5.7 presents total employment for all of Douglas County by major industry sector in both 2015 and 2020. The four major industry sectors with the largest percentage change in total employment between 2015 and 2020 for all of Douglas County are highlighted.

Between 2015 and 2020, total employment across all major industry sectors for all of Douglas County increased, increasing from an estimated 20,371 total individuals in 2015 to an estimated 21,579 total individuals in 2020, a net increase of 1,208 total individuals employed or by an estimated 5.9 percent. The major industry sectors with the largest percentage growth in-terms of total employment between 2015 and 2020 for Douglas County included the Information industry

sector, the Public Administration industry sector, the Educational Services, and Health Care and Social Assistance industry sector, and the Manufacturing industry sector.

Table 5.7 – Total Employment by Major Industry Sector Douglas County, 2015 and 2020				
Actual Employment				
Major Industry Sector	**2015**	**2020**	**2015 to 2020 Actual Change**	**2015 to 2020 Percent Change**
Agriculture, Forestry, Fishing and Hunting, and Mining	380	375	-5	-1.3%
Construction	1,648	1,821	173	10.5%
Manufacturing	1,609	1,830	221	13.7%
Wholesale Trade	364	196	-168	-46.2%
Retail Trade	2,181	2,179	-2	-0.1%
Transportation and Warehousing, and Utilities	768	862	94	12.2%
Information	224	305	81	36.2%
Finance and Insurance, and Real Estate and Rental and Leasing	1,243	1,378	135	10.9%
Professional, Scientific, and Management, and Administrative and Waste Management Services	2,085	1,936	-149	-7.1%
Educational Services, and Health Care and Social Assistance	3,396	3,960	564	16.6%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	3,405	3,290	-115	-3.4%
Other Services, Except Public Administration	1,285	1,123	-162	-12.6%
Public Administration	1,783	2,324	541	30.3%
Total	**20,371**	**21,579**	**1,208**	**5.9%**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

For the Information industry sector, total employment increased from an estimated 224 total individuals in 2015 to an estimated 305 total individuals in 2020, a net increase of 81 total individuals employed or by 36.2 percent. Between 2015 and 2020, total employment in the Public Administration industry sector increased from an estimated 1,783 total individuals in 2015 to an estimated 2,324 total individuals in 2020, a net increase of 541 total individuals employed or by 30.3 percent and, for the Educational Services, and Health Care and Social Assistance industry sector, total employment increased from an estimated 3,396 total individuals in 2015 to an estimated 3,960 total individuals in 2020, a net increase of 564 total individuals

employed or by 16.6 percent. Total employment in the Manufacturing industry sector increased from an estimated 1,609 total individuals in 2015 to an estimated 1,830 total individuals in 2020, a net increase of 221 total individuals or by 13.7 percent.

Table 5.8 presents the percentage of total employment captured by each individual major industry sector for both 2015 and 2020 for Douglas County. The four major industry sectors with the largest percentage change in the percentage of total employment for each individual industry sector between 2015 and 2020 for all of Douglas County are highlighted.

Table 5.8 – Total Employment by Major Industry Sector
Douglas County, 2015 and 2020

Percent of Total Employment

Major Industry Sector	2015	2020	2015 to 2020 Actual Change	2015 to 2020 Percent Change
Agriculture, Forestry, Fishing and Hunting, and Mining	1.9%	1.7%	-0.1%	-6.8%
Construction	8.1%	8.4%	0.3%	4.3%
Manufacturing	7.9%	8.5%	0.6%	7.4%
Wholesale Trade	1.8%	0.9%	-0.9%	-49.2%
Retail Trade	10.7%	10.1%	-0.6%	-5.7%
Transportation and Warehousing, and Utilities	3.8%	4.0%	0.2%	6.0%
Information	1.1%	1.4%	0.3%	28.5%
Finance and Insurance, and Real Estate and Rental and Leasing	6.1%	6.4%	0.3%	4.7%
Professional, Scientific, and Management, and Administrative and Waste Management Services	10.2%	9.0%	-1.3%	-12.3%
Educational Services, and Health Care and Social Assistance	16.7%	18.4%	1.7%	10.1%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	16.7%	15.2%	-1.5%	-8.8%
Other Services, Except Public Administration	6.3%	5.2%	-1.1%	-17.5%
Public Administration	8.8%	10.8%	2.0%	23.0%
Total	**100.0%**	**100.0%**	**-**	**-**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

The four major industry sectors with the greatest percentage increase in the percent of total employment that each individual industry sector was responsible for between 2015 and 2020 for

all of Douglas County included the Information industry, the Public Administration industry sector, the Educational Services, and Health Care and Social Assistance industry sector, and the Manufacturing industry sector. Between 2015 and 2020, the percentage of total employment in the Information industry sector that this industry sector was responsible for increased from an estimated 1.1 percent in 2015 to an estimated 1.4 percent in 2020, a net increase of 0.3 percent or by a percentage increase of 28.5 percent.

For the Public Administration industry sector, the percentage of total employment that this industry sector captured between 2015 and 2020 increased from an estimated 8.8 percent in 2015 to an estimated 10.8 percent in 2020, a net increase of 2.0 percent or by a percentage increase of 23.0 percent. Between 2015 and 2020, the percentage of total employment for the Educational Services, and Health Care and Social Assistance industry sector for Douglas County increased from an estimated 16.7 percent in 2015 to an estimated 18.4 percent in 2020, a net increase of 1.7 percent or by a percentage increase of 10.1 percent. For the Manufacturing industry sector, the percentage of total employment that his industry sector captured between 2015 and 2020 increased from an estimated 7.9 percent in 2015 to an estimated 8.5 percent in 2020, a net increase of 0.6 percent or by a percentage increase of 7.4 percent.

5.1.e Total Employment by Major Industry Sector for Storey County

Table 5.9 presents total employment for all of Storey County by major industry sector in both 2015 and 2020. The four major industry sectors with the largest percentage change in total employment between 2015 and 2020 for all of Storey County are highlighted.

Between 2015 and 2020, total employment across all major industry sectors for all of Storey County decreased from an estimated 1,777 total individuals in 2015 to an estimated 1,500 total individuals in 2020, a net decrease of 277 total individuals employed or by an estimated -15.6 percent. The major industry sectors with the largest percentage growth in-terms of total employment between 2015 and 2020 included the Information industry sector, the Finance and Insurance, and Real Estate and Rental and Leasing industry sector, the Other Services, Except Public Administration industry sector, and the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector.

For the Information industry sector, total employment increased from an estimated 21 total individuals in 2015 to an estimated 60 total individuals in 2020, a net increase of 39 total individuals employed or by 185.7 percent. Between 2015 and 2020, total employment in the Finance and Insurance, and Real Estate and Rental and Leasing industry sector for all of Storey County increased from an estimated 77 total individuals in 2015 to an estimated 120 total individuals in 2020, a net increase of 43 total individuals employed or by 55.8 percent. Total employment in the Other Services, Except Public Administration industry sector increased from an estimated 69 total individuals in 2015 to an estimated 103 total individuals in 2020, a net increase of 34 total individuals employed or by 49.3 percent, and, total employment in the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector increased from an estimated 142 total individuals in 2015 to an estimated 211 total individuals in 2020, a net increase of 69 total individuals employed or by 48.6 percent.

Table 5.9 – Total Employment by Major Industry Sector Storey County, 2015 and 2020				
Actual Employment				
Major Industry Sector	**2015**	**2020**	**2015 to 2020 Actual Change**	**2015 to 2020 Percent Change**
Agriculture, Forestry, Fishing and Hunting, and Mining	34	9	-25	-73.5%
Construction	177	114	-63	-35.6%
Manufacturing	154	112	-42	-27.3%
Wholesale Trade	37	47	10	27.0%
Retail Trade	215	135	-80	-37.2%
Transportation and Warehousing, and Utilities	212	80	-132	-62.3%
Information	21	60	39	185.7%
Finance and Insurance, and Real Estate and Rental and Leasing	77	120	43	55.8%
Professional, Scientific, and Management, and Administrative and Waste Management Services	142	211	69	48.6%
Educational Services, and Health Care and Social Assistance	246	162	-84	-34.1%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	278	261	-17	-6.1%
Other Services, Except Public Administration	69	103	34	49.3%
Public Administration	115	86	-29	-25.2%
Total	**1,777**	**1,500**	**-277**	**-15.6%**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

Table 5.10 presents the percentage of total employment captured by each individual major industry sector for both 2015 and 2020 for Storey County. The four major industry sectors with the largest percentage change in the percentage of total employment for each individual industry sector between 2015 and 2020 for all of Storey County are highlighted.

The four major industry sectors with the greatest percentage increase in the percent of total employment that each individual industry sector was responsible for between 2015 and 2020 for all of Storey County included the Information industry sector, the Finance and Insurance, and Real Estate and Rental and Leasing industry sector, the Other Services, Except Public Administration industry sector, and the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector. Between 2015 and 2020, the

percentage of total employment captured by the Information industry sector increased from an estimated 1.2 percent in 2015 to an estimated 4.0 percent in 2020, a net increase of 2.8 percent or by a percentage increase of 238.5 percent.

Table 5.10 – Total Employment by Major Industry Sector
Storey County, 2015 and 2020

Percent of Total Employment

Major Industry Sector	2015	2020	2015 to 2020 Actual Change	2015 to 2020 Percent Change
Agriculture, Forestry, Fishing and Hunting, and Mining	1.9%	0.6%	-1.3%	-68.6%
Construction	10.0%	7.6%	-2.4%	-23.7%
Manufacturing	8.7%	7.5%	-1.2%	-13.8%
Wholesale Trade	2.1%	3.1%	1.1%	50.5%
Retail Trade	12.1%	9.0%	-3.1%	-25.6%
Transportation and Warehousing, and Utilities	11.9%	5.3%	-6.6%	-55.3%
Information	1.2%	4.0%	2.8%	238.5%
Finance and Insurance, and Real Estate and Rental and Leasing	4.3%	8.0%	3.7%	84.6%
Professional, Scientific, and Management, and Administrative and Waste Management Services	8.0%	14.1%	6.1%	76.0%
Educational Services, and Health Care and Social Assistance	13.8%	10.8%	-3.0%	-22.0%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	15.6%	17.4%	1.8%	11.2%
Other Services, Except Public Administration	3.9%	6.9%	3.0%	76.8%
Public Administration	6.5%	5.7%	-0.7%	-11.4%
Total	**100.0%**	**100.0%**	**-**	**-**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

Between 2015 and 2020, the percentage of total employment captured by the Finance and Insurance, and Real Estate and Rental and Leasing industry sector for all of Storey County increased from an estimated 4.3 percent in 2015 to an estimated 8.0 percent in 2020, a net increase of 3.7 percent or by a percentage increase of 84.6 percent. For the Other Services, Except Public Administration industry sector, the percentage of total employment capture by this industry sector increased from an estimated 3.9 percent in 2015 to an estimated 6.9 percent in 2020, a net increase of 3.0 percent or by a percentage increase of 76.8 percent, and, for the

Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector, the percentage of total employment captured by this industry sector increased from an estimated 8.0 percent in 2015 to an estimated 14.1 percent in 2020, a net increase of 6.1 percent or by a percentage increase of 76.0 percent.

5.1.f Total Employment by Major Industry Sector for Washoe County

Table 5.11 presents total employment for all of Washoe County by major industry sector in both 2015 and 2020. The four major industry sectors with the largest percentage change in total employment between 2015 and 2020 for all of Washoe County are highlighted.

Table 5.11 – Total Employment by Major Industry Sector Washoe County, 2015 and 2020

Actual Employment

Major Industry Sector	2015	2020	2015 to 2020 Actual Change	2015 to 2020 Percent Change
Agriculture, Forestry, Fishing and Hunting, and Mining	2,240	1,957	-283	-12.6%
Construction	13,660	18,593	4,933	36.1%
Manufacturing	14,902	19,728	4,826	32.4%
Wholesale Trade	6,988	7,519	531	7.6%
Retail Trade	24,162	26,950	2,788	11.5%
Transportation and Warehousing, and Utilities	11,271	14,579	3,308	29.3%
Information	3,745	3,431	-314	-8.4%
Finance and Insurance, and Real Estate and Rental and Leasing	12,110	13,251	1,141	9.4%
Professional, Scientific, and Management, and Administrative and Waste Management Services	23,469	27,486	4,017	17.1%
Educational Services, and Health Care and Social Assistance	40,232	45,608	5,376	13.4%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	33,951	35,481	1,530	4.5%
Other Services, Except Public Administration	10,345	10,175	-170	-1.6%
Public Administration	10,229	11,139	910	8.9%
Total	**207,304**	**235,897**	**28,593**	**13.8%**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

Between 2015 and 2020, total employment across all major industry sectors for all of Washoe County increased, increasing from an estimated 207,304 total individuals in 2015 to an estimated 235,897 total individuals in 2020, a net increase of 28,593 total individuals employed or by 13.8 percent. The major industry sectors with the largest percentage growth in-terms of total employment between 2015 and 2020 included the Construction industry sector, the Manufacturing industry sector, the Transportation and Warehousing, and Utilities industry sector, and the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector.

For the Construction industry sector, total employment increased from an estimated 13,660 total individuals in 2015 to an estimated 18,593 total individuals in 2020, a net increase of 4,933 total individuals employed or by 36.1 percent. Between 2015 and 2020, total employment in the Manufacturing industry sector increased from an estimated 14,902 total individuals in 2015 to an estimated 19,728 total individuals in 2020, a net increase of 4,826 total individuals employed or by 32.4 percent and, for the Transportation and Warehousing, and Utilities industry sector, total employment increased from an estimated 11,271 total individuals in 2015 to an estimated 14,579 total individuals in 2020, a net increase of 3,308 total individuals employed or by 29.3 percent. For the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector, total employment increased from an estimated 23,469 total individuals in 2015 to an estimated 27,486 total individuals in 2020, a net increase of 4,017 total individuals or by 17.1 percent. Combined, total employment across all four of these industry sectors for all of Washoe County increased from an estimated 63,302 total individuals in 2015 to an estimated 80,386 total individuals, a net increase of 17,084 total individuals employed or by 27.0 percent.

Table 5.12 presents the percentage of total employment captured by each individual major industry sector for both 2015 and 2020 for Washoe County. The four major industry sectors with the largest percentage change in the percentage of total employment for each individual industry sector between 2015 and 2020 for all of Washoe County are highlighted.

The four major industry sectors with the greatest percentage increase in the percent of total employment that each individual industry sector was responsible for between 2015 and 2020 for all of Washoe County included the Construction industry sector, the Manufacturing industry sector, the Transportation and Warehousing, and Utilities industry sector, and the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector. Between 2015 and 2020, the percentage total employment in the Construction industry sector for all of Washoe County that this industry sector was responsible for increased from an estimated 6.6 percent in 2015 to an estimated 7.9 percent in 2020, a net increase of 1.3 percent or by a percentage increase of 19.6 percent. The percentage of total employment captured by the Manufacturing industry sector increased from an estimated 7.2 percent in 2015 to an estimated 8.4 percent in 2020, a net increase of 1.2 percent or by a percentage increase of 16.3 percent.

For the Transportation and Warehousing, and Utilities industry sector, the percentage of total employment captured by this industry sector increased from an estimated 5.4 percent in 2015 to an estimated 6.2 percent in 2020, a net increase of 0.7 percent or by a percentage increase of 13.7 percent. Between 2015 and 2020, the percentage of total employment captured by the Professional, Scientific, and Management, and Administrative and Waste Management Services

industry sector for all of Washoe County increased from an estimated 11.3 percent in 2015 to an estimated 11.7 percent in 2020, a net increase of 0.3 percent or by a percentage increase of 2.9 percent.

Table 5.12 – Total Employment by Major Industry Sector
Washoe County, 2015 and 2020

Percent of Total Employment

Major Industry Sector	2015	2020	2015 to 2020 Actual Change	2015 to 2020 Percent Change
Agriculture, Forestry, Fishing and Hunting, and Mining	1.1%	0.8%	-0.3%	-23.2%
Construction	6.6%	7.9%	1.3%	19.6%
Manufacturing	7.2%	8.4%	1.2%	16.3%
Wholesale Trade	3.4%	3.2%	-0.2%	-5.4%
Retail Trade	11.7%	11.4%	-0.2%	-2.0%
Transportation and Warehousing, and Utilities	5.4%	6.2%	0.7%	13.7%
Information	1.8%	1.5%	-0.4%	-19.5%
Finance and Insurance, and Real Estate and Rental and Leasing	5.8%	5.6%	-0.2%	-3.8%
Professional, Scientific, and Management, and Administrative and Waste Management Services	11.3%	11.7%	0.3%	2.9%
Educational Services, and Health Care and Social Assistance	19.4%	19.3%	-0.1%	-0.4%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	16.4%	15.0%	-1.3%	-8.2%
Other Services, Except Public Administration	5.0%	4.3%	-0.7%	-13.6%
Public Administration	4.9%	4.7%	-0.2%	-4.3%
Total	**100.0%**	**100.0%**	**-**	**-**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

5.1.g Total Employment by Major Industry Sector for the State of Nevada

Table 5.13 presents total employment for the entire state of Nevada by major industry sector in both 2015 and 2020. The four major industry sectors with the largest percentage change in total employment between 2015 and 2020 for the entire state of Nevada are highlighted.

Table 5.13 – Total Employment by Major Industry Sector State of Nevada, 2015 and 2020				
Actual Employment				
Major Industry Sector	**2015**	**2020**	**2015 to 2020 Actual Change**	**2015 to 2020 Percent Change**
Agriculture, Forestry, Fishing and Hunting, and Mining	21,817	19,815	-2,002	-9.2%
Construction	76,664	103,255	26,591	34.7%
Manufacturing	52,723	68,651	15,928	30.2%
Wholesale Trade	26,001	29,963	3,962	15.2%
Retail Trade	151,987	164,356	12,369	8.1%
Transportation and Warehousing, and Utilities	64,333	87,835	23,502	36.5%
Information	20,940	21,929	989	4.7%
Finance and Insurance, and Real Estate and Rental and Leasing	72,784	79,205	6,421	8.8%
Professional, Scientific, and Management, and Administrative and Waste Management Services	138,342	163,316	24,974	18.1%
Educational Services, and Health Care and Social Assistance	195,743	232,486	36,743	18.8%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	328,665	328,529	-136	0.0%
Other Services, Except Public Administration	58,360	66,182	7,822	13.4%
Public Administration	58,953	59,518	565	1.0%
Total	**1,267,312**	**1,425,040**	**157,728**	**12.4%**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

Between 2015 and 2020, total employment across all major industry sectors for the entire state of Nevada increased from an estimated 1.27 million total individuals in 2015 to an estimated 1.43 million total individuals in 2020, a net increase of 157,728 total individuals employed or by 12.4 percent. The major industry sectors with the largest percentage growth in-terms of total employment between 2015 and 2020 included the Transportation and Warehousing, and Utilities industry sector, the Construction industry sector, the Manufacturing industry sector, and the Educational Services, and Health Care and Social Assistance industry sector.

For the Transportation and Warehousing, and Utilities industry sector for the entire state of Nevada, total employment increased from an estimated 64,333 total individuals in 2015 to an estimated 87,835 total individuals in 2020, a net increase of 23,502 total individuals employed or

by 36.5 percent. Between 2015 and 2020, total employment in the Construction industry sector statewide increased from an estimated 76,664 total individuals in 2015 to an estimated 103,255 total individuals in 2020, a net increase of 26,591 total individuals employed or by 34.7 percent, and total employment in the Manufacturing industry sector increased from an estimated 52,723 total individuals in 2015 to an estimated 68,651 total individuals in 2020, a net increase of 15,928 total individuals employed or by 30.2 percent. Total employment in the Educational Services, and Health Care and Social Assistance industry sector increased from an estimated 195,743 total individuals in 2015 to an estimated 232,486 total individuals in 2020, a net increase of 36,743 total individuals employed or by 18.8 percent.

Table 5.14 – Total Employment by Major Industry Sector
State of Nevada, 2015 and 2020

Percent of Total Employment

Major Industry Sector	2015	2020	2015 to 2020 Actual Change	2015 to 2020 Percent Change
Agriculture, Forestry, Fishing and Hunting, and Mining	1.7%	1.4%	-0.3%	-19.2%
Construction	6.0%	7.2%	1.2%	19.8%
Manufacturing	4.2%	4.8%	0.7%	15.8%
Wholesale Trade	2.1%	2.1%	0.1%	2.5%
Retail Trade	12.0%	11.5%	-0.5%	-3.8%
Transportation and Warehousing, and Utilities	5.1%	6.2%	1.1%	21.4%
Information	1.7%	1.5%	-0.1%	-6.9%
Finance and Insurance, and Real Estate and Rental and Leasing	5.7%	5.6%	-0.2%	-3.2%
Professional, Scientific, and Management, and Administrative and Waste Management Services	10.9%	11.5%	0.5%	5.0%
Educational Services, and Health Care and Social Assistance	15.4%	16.3%	0.9%	5.6%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	25.9%	23.1%	-2.9%	-11.1%
Other Services, Except Public Administration	4.6%	4.6%	0.0%	0.9%
Public Administration	4.7%	4.2%	-0.5%	-10.2%
Total	**100.0%**	**100.0%**	**-**	**-**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

Table 5.14 above presents the percentage of total employment captured by each individual major industry sector for both 2015 and 2020 for the entire state of Nevada. The four major industry sectors with the largest percentage change in the percentage of total employment for each individual industry sector between 2015 and 2020 for the entire state of Nevada are highlighted.

The four major industry sectors with the greatest percentage increase in the percent of total employment that each individual industry sector was responsible for between 2015 and 2020 for the entire state of Nevada included the Transportation and Warehousing, and Utilities industry sector, the Construction industry sector, the Manufacturing industry sector, and the Educational Services, and Health Care and Social Assistance industry sector. Combined, the percentage of total employment statewide that each of these four industry sectors were responsible for between 2015 and 2020 increased from an estimated 30.7 percent in 2015 to an estimated 34.5 percent in 2020, a net increase of 3.8 percent or by a percentage increase of 12.4 percent.

For the Transportation and Warehousing, and Utilities industry sector, the percentage of total employment that this industry sector captured statewide for the entire state of Nevada increased from an estimated 5.1 percent in 2015 to an estimated 6.2 percent in 2020, a net increase of 1.1 percent or by a percentage increase of 21.4 percent. Between 2015 and 2020, the percentage of total employment that the Construction industry sector was responsible for increased from an estimated 6.0 percent in 2015 to an estimated 7.2 percent in 2020, a net increase of 1.2 percent or by a percentage increase of 19.8 percent. The percentage of total employment that the Manufacturing industry sector was responsible for increased from an estimated 4.2 percent in 2015 to an estimated 4.8 percent in 2020, a net increase of 0.7 percent or by a percentage increase of 15.8 percent. For the Educational Services, and Health Care and Social Assistance industry sector, the percentage of total employment that this industry sector captured statewide for the entire state of Nevada increased from an estimated 15.4 percent in 2015 to an estimated 16.3 percent in 2020, a net increase of 0.9 percent or by a percentage increase of 5.6 percent.

5.1.h Total Employment by Major Industry Sector for the United States

Table 5.15 presents total employment for the entire United States by major industry sector in both 2015 and 2020. The four major industry sectors with the largest percentage change in total employment between 2015 and 2020 for the entire United States are highlighted.

Between 2015 and 2020, total employment across all major industry sectors for the entire United States increased, increasing from an estimated 145.75 million total individuals in 2015 to an estimated 155.89 million total individuals in 2020, a net increase of approximately 10.14 million total individuals employed or by 7.0 percent. The major industry sectors with the largest percentage growth in-terms of total employment for the entire United States between 2015 and 2020 included the Transportation and Warehousing, and Utilities industry sector, the Construction industry sector, the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sectors, and the Finance and Insurance, and Real Estate and Rental and Leasing industry sector. Combined, total employment for the entire United States in these four industry sectors increased from an estimated 41.91 million total individuals in 2015 to an estimated 47.62 million total individuals, a net increase of

approximately 5.72 million total individuals employed or by a percentage increase of 13.65 percent.

Table 5.15 – Total Employment by Major Industry Sector United States, 2015 and 2020				
Actual Employment				
Major Industry Sector	**2015**	**2020**	**2015 to 2020 Actual Change**	**2015 to 2020 Percent Change**
Agriculture, Forestry, Fishing and Hunting, and Mining	2,852,402	2,658,413	-193,989	-6.8%
Construction	9,027,391	10,416,196	1,388,805	15.4%
Manufacturing	15,171,260	15,617,461	446,201	2.9%
Wholesale Trade	3,968,627	3,971,773	3,146	0.1%
Retail Trade	16,835,942	17,195,083	359,141	2.1%
Transportation and Warehousing, and Utilities	7,226,063	8,576,862	1,350,799	18.7%
Information	3,094,143	3,066,743	-27,400	-0.9%
Finance and Insurance, and Real Estate and Rental and Leasing	9,578,175	10,319,201	741,026	7.7%
Professional, Scientific, and Management, and Administrative and Waste Management Services	16,074,502	18,312,454	2,237,952	13.9%
Educational Services, and Health Care and Social Assistance	33,739,126	36,315,080	2,575,954	7.6%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	13,984,957	14,651,909	666,952	4.8%
Other Services, Except Public Administration	7,198,201	7,516,616	318,415	4.4%
Public Administration	6,996,990	7,271,189	274,199	3.9%
Total	**145,747,779**	**155,888,980**	**10,141,201**	**7.0%**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

For the Transportation and Warehousing, and Utilities industry sector, total employment nationwide for the entire United States increased from an estimated 7.23 million total individuals in 2015 to an estimated 8.58 million total individuals in 2020, a net increase of approximately 1.35 million total individuals employed or by 18.7 percent. Between 2015 and 2020, total employment in the Construction industry sector increased from an estimated 9.03 million total individuals in 2015 to an estimated 10.42 million total individuals in 2020, a net increase of approximately 1.39 million total individuals or by 15.4 percent, and total employment in the Professional, Scientific, and Management, and Administrative and Waste Management Services

industry sector increased from an estimated 16.08 million total individuals in 2015 to an estimated 18.31 million total individuals in 2020, a net increase of approximately 2.34 million total individuals or by 13.9 percent. Total employment in the Finance and Insurance, and Real Estate and Rental and Leasing industry sector nationwide increased from an estimated 9.58 million total individuals in 2015 to an estimated 10.32 million total individuals in 2020, a net increase of approximately 741,026 total individuals employed or by 7.7 percent.

Table 5.16 presents the percentage of total employment captured by each individual major industry sector for both 2015 and 2020 for the entire United States. The four major industry sectors with the largest percentage change in the percentage of total employment for each individual industry sector between 2015 and 2020 for the entire United States are highlighted.

Table 5.16 – Total Employment by Major Industry Sector
United States, 2015 and 2020

Percent of Total Employment

Major Industry Sector	2015	2020	2015 to 2020 Actual Change	2015 to 2020 Percent Change
Agriculture, Forestry, Fishing and Hunting, and Mining	2.0%	1.7%	-0.3%	-12.9%
Construction	6.2%	6.7%	0.5%	7.9%
Manufacturing	10.4%	10.0%	-0.4%	-3.8%
Wholesale Trade	2.7%	2.5%	-0.2%	-6.4%
Retail Trade	11.6%	11.0%	-0.5%	-4.5%
Transportation and Warehousing, and Utilities	5.0%	5.5%	0.5%	11.0%
Information	2.1%	2.0%	-0.2%	-7.3%
Finance and Insurance, and Real Estate and Rental and Leasing	6.6%	6.6%	0.0%	0.7%
Professional, Scientific, and Management, and Administrative and Waste Management Services	11.0%	11.7%	0.7%	6.5%
Educational Services, and Health Care and Social Assistance	23.1%	23.3%	0.1%	0.6%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	9.6%	9.4%	-0.2%	-2.0%
Other Services, Except Public Administration	4.9%	4.8%	-0.1%	-2.4%
Public Administration	4.8%	4.7%	-0.1%	-2.8%
Total	**100.0%**	**100.0%**	**-**	**-**

Source: U.S. Census Bureau, American Community Survey, 2015 and 2020

The four major industry sectors with the greatest percentage increase in the percent of total employment that each individual industry sector was responsible for nationwide for the entire United States between 2015 and 2020 included the Transportation and Warehousing, and Utilities industry sector, the Construction industry sector, the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector, and the Finance and Insurance, and Real Estate and Rental and Leasing industry sector. Combined, the percentage of total employment that these four individual industry sectors captured between 2015 and 2020 increased, increasing from an estimated 28.8 percent in 2015 to an estimated 30.5 percent in 2020, a net increase of 1.7 percent or by a percentage increase of 5.9 percent.

Between 2015 and 2020, the percentage of total employment captured by the Transportation and Warehousing, and Utilities sector nationwide for the entire United States increased from an estimated 5.0 percent in 2015 to an estimated 5.5 percent in 2020, a net increase of 0.5 percent or by a percentage increase of 11.0 percent. The percentage of total employment captured by the Construction industry sector increased from an estimated 6.2 percent in 2015 to an estimated 6.7 percent in 2020, a net increase of 0.5 percent or by a percentage increase of 7.9 percent, and the percentage of total employment captured by the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector increased from an estimated 11.0 percent in 2015 to an estimated 11.7 percent in 2020, a net increase of 0.7 percent or by a percentage increase of 6.5 percent. For the Finance and Insurance, and Real Estate and Rental and Leasing industry sector, the percentage of total employment captured by this industry sector remained relatively unchanged with an estimated 6.6 percent in both 2015 and 2020, growing by a net 0.0 percent or by a negligible 0.7 percent.

6.0 Goals, Actionable Items, and Priority Projects

This section presents an overview of the results for Stronger Economies Together Module 5, *Defining Your Regional Vision and Goals*, and parts from Module 6, *Discovering Assets and Barriers*, Module 7, *Planning for Success*, and Module 8, *Measuring for Success*. During the strategic economic development planning workshop held on July 19, 2022, workshop participants were asked to develop a series of specific strategies, actionable items, and priority projects for the existing goals and priority areas outlined in the *Downtown Fernley Revitalization Planning Study* and for five critical community and economic development capacity areas developed during the community stakeholder meetings and planning sessions held between March 2022 and May 2022.

The *Downtown Fernley Revitalization Planning Study* outlines an existing vision for the Fernley main street corridor and for the City of Fernley's broader community and economic development strategies. This existing vision, which will also serve as the vision for this new five-year Comprehensive Economic Development Strategy for the City of Fernley states that the existing main street corridor will serve as the 'front door' to the community and will continue to serve as the traditional epicenter of the community for business, social, and civic activities. This vision emphasizes the importance of creating access to the main street corridor from adjacent residential neighborhoods and that the City of Fernley should pursue development that supports a mix of uses with buildings oriented to the street, provide a pedestrian friendly environment with wide sidewalks, on-street parking, and plazas, meeting spaces, and other areas that encourage and support social and economic gatherings and activity.

In addition to the vision for the Fernley main street corridor and for the larger community outlined in the Downtown Fernley Revitalization Planning Study, the visions of the Economic Development Authority of Western Nevada and the Northern Nevada Development Authority, the two regional economic development authorities that provide regional economic development support and guidance for the City of Fernley, and the vision statement outlined in the Western Nevada Development District's existing five-year Comprehensive Economic Development Strategy, were incorporated into the further development of specific strategies, actionable items, and priority projects for both the existing goals and priority areas and for the five community and economic development capacity building areas. The focus, or vision, of the Economic Development Authority of Western Nevada is:

Our efforts to strengthen and improve the region's economic vitality are focused on making a positive impact in the areas of attracting companies from outside the region, start-ups and entrepreneurial growth in new companies, retain and expand existing companies and jobs, support workforce development, and advocate for improvements that enhance our community.

The existing vision statement for the Northern Nevada Development Authority, a state-designated regional development authority for the Sierra Region of Nevada that consists of Carson City, Douglas County, Lyon County, Mineral County, and Storey County, is:

A prosperous, resilient and sustainable economy for Northern Nevada.

For the Western Nevada Development District, a U.S. Economic Development Administration recognized Economic Development District that encompasses Carson City, Churchill County, Douglas County, Mineral County, Pershing County, Storey County, and Washoe County and the cities of Fallon, Fernley, Lovelock, Reno, and Sparks, the existing vision statement is:

The Western Nevada Development District region and its communities enjoy a vibrant, resilient and sustainable economy as a result of coordinated planning and a shared commitment for a high quality of life.

Representatives from the Economic Development Authority, the Northern Nevada Development Authority, and the Western Nevada Development District each participated in the July 19, 2022 strategic economic development planning workshop held in Fernley, Nevada in order to ensure that the specific strategies, actionable items, and priority projects outlined in this five-year Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's main street corridor were and will be consistent with each organization's existing areas of focus and existing vision statements. Further consistency in regional and statewide community and economic development planning efforts was ensured by the active participation of representatives from the Nevada Governor's Office of Economic Development and from other state agencies.

6.1 Development of Specific Strategies, Actionable Items, and Priority Projects for the Existing Goals and Priority Areas for the Downtown Fernley Revitalization Planning Study

The four existing goals and priority areas outlined in the Downtown Fernley Revitalization Planning Study are:

- ***Goal and Priority Area No. 1***: Enhance the character of the downtown (the Fernley main street corridor) through thematic streetscape and building façade improvements.

- ***Goal and Priority Area No. 2***: Coordinate wider sidewalks with appropriate landscape and lighting treatments to create an attractive environment.

- ***Goal and Priority Area No. 3***: Provide safe and attractive pedestrian connectivity.

- ***Goal and Priority Area No. 4***: Improve traffic operations of the Main Street (U.S. Highway 50 Alternate)/U.S. Highway 95 Alternate intersection.

Workshop participants during the July 19, 2022 strategic economic development planning workshop were asked to develop a series of specific strategies, actionable items, and priority projects for each individual existing goal and priority area. For each strategy developed for each individual existing goal and priority area, workshop participants were also asked to develop at least one specific actionable item, assign at least one individual, agency, or organization that will be responsible for implementing and completing the actionable item, and for developing a realistic timeline and regular checkpoints for implementation and measurement of progress in completing the specific actionable item or priority project.

6.1.a Goal and Priority Area No. 1: Enhance the Character of the Downtown through Thematic Streetscape and Building Façade Improvements

Four separate specific actionable items and priority projects were developed by workshop participants for *Goal and Priority Area No. 1* as outlined in the Downtown Fernley Revitalization Planning Study.

- ***Priority Action Item No. 1, Goal and Priority Area No. 1***: Complete the necessary steps to have the existing Fernley main street corridor approved as a 'Main Street America' program recognized main street through both Main Street America and through the Nevada Governor's Office of Economic Development.

  In partnership with the City of Fernley and with the Nevada Governor's Office of Economic Development, the Fernley Chamber of Commerce will be primarily responsible for completing the application process of establishing Fernley's existing main street corridor as a 'Main Street America' program recognized main street. This application and acknowledgement process is expected to be completed within three years or by the end of the 2025. Every six months, the Fernley Chamber of Commerce will engage area businesses, property owners, and residents in a broad public input process. The Fernley Chamber of Commerce will also initiate the process of creating a 'Fernley Main Street Board' to oversee the application process and to guide further implementation of the various priority action items outlined in this new five-year Comprehensive Economic Development Strategy. This effort will also include further developing design and development standards for the existing main street corridor in order to expand upon the existing design and development standards outlined in the Downtown Fernley Revitalization Planning Standard and will also work with the City of Fernley on addressing needed budgetary resources.

- ***Priority Action Item No. 2, Goal and Priority Area No. 1***: Development and eventual implementation of a 'virtual tour' of Fernley's main street corridor.

  Once the 'Fernley Main Street Board' is established by the Fernley Chamber of Commerce, in partnership with the City of Fernley and with the Nevada Governor's Office of Economic Development (specifically through the Nevada Main Street program that is administered by the Governor's office of Economic Development), a 'virtual tour' will be developed, implemented and administered by the Fernley Main Street Board and by the Fernley Chamber of Commerce. This effort is expected to be completed within

one year of completing the Main Street America program application process and will be used to market the Fernley main street corridor to perspective new businesses and to assist existing businesses in their marketing efforts.

Regular progress on development of the virtual tour effort will measured and assessed by the eventual Fernley Main Street Board and by the Fernley Chamber of Commerce. Once completed, the Fernley Main Street Board and the Fernley Chamber of Commerce will work with the Governor's Office of Economic Development and the Office's program partners through the Nevada Main Street program to expand awareness and increase usage of the virtual tour. Critical Nevada Main Street program partners in this effort will include, but are not necessarily limited to, the Nevada Department of Tourism and Cultural Affairs, the Nevada Division of Outdoor Recreation, the State Historic Preservation Office, the Nevada Small Business Development Center, the Nevada Office of the U.S. Department of Agriculture Rural Development, the Nevada Arts Council, and the University Center for Economic Development.

- ***Priority Action Item No. 3, Goal and Priority Area No. 1***: Planning, construction, and completion of a new Fernley Main Street Amphitheater.

  The promotion of local and regional arts and culture is an essential part of enhancing the character of Fernley's existing downtown and existing main street corridor. The City of Fernley, the Fernley Community Foundation, and the Fernley Aces will work collaboratively to plan, building, and open a new Fernley Main Street Amphitheater within the existing main street corridor. This facility will be able to host performances, cultural events, and civic activities as a way of showcasing local and regional arts and culture and as a way of stimulating increased economic activity through special events and activities. The Fernley Community Foundation's mission to build Fernley's future through improved community facilities, arts and culture, recreation, education, and social interaction for residents of all ages. The mission of the Fernley Aces, as a local group of Fernley residents dedicated to the promotion of arts, plays, music events, parades, and shows within the community, is to bring people in the area out of their homes, to get together, and to be entertained in one form or another.

  Both the Fernley Community Foundation and the Fernley Aces, in partnership with the City of Fernley and with the eventual Fernley Main Street Board will work to complete the design phase of this project and priority action item within two years by the end of 2025. City of Fernley staff are expected to assist the Fernley Community Foundation and the Fernley Aces in developing and implementing a Request for Qualifications (RFQ) and Request for Proposals (RFP) process, to provide information on the permitting and construction process, and to provide additional technical assistance as needed. Construction of the new Fernley Main Street Amphitheater is expected to be completed, with a successful grand opening, within the next four years by the end of 2027.

- ***Priority Action Item No. 4, Goal and Priority Area No. 1***: Develop and implement a comprehensive façade improvement program for residential and commercial properties located within the existing Fernley main street corridor.

The eventual Fernley Main Street Board and the Fernley Chamber of Commerce will work with the City of Fernley to establish and implement a comprehensive façade program for properties located throughout the existing main street corridor within one year of officially establishing the main street program through Main Street American and the Nevada Main Street program. The City of Fernley will also designate a primary 'Façade Improvement Program' representative to coordinate efforts between the City of Fernley, the Fernley Main Street Board, and the Fernley Chamber of Commerce. The Fernley Main Street Board and the Fernley Chamber of Commerce will work with the City of Fernley to explore the potential use of redevelopment and tax increment financing to fund the façade improvement program. The Fernley Main Street Board and the Fernley Chamber of Commerce will also seek out grants, loans, and develop and host fundraising events to further fund the comprehensive façade improvement program.

In addition to assessing and evaluating general achievement of this existing goal and priority area, *Enhance the character of the downtown (the Fernley main street corridor) through thematic streetscape and building façade improvements*, an annual assessment and evaluation of each of the four stated priority action items will be completed. As necessary, revisions to each priority action item and to the larger existing goal and priority area will be made on an annual basis and new priority action items may also be developed and pursued in order to support overall achievement of this specific existing goal and priority action area.

6.1.b Goal and Priority Area No. 2: Coordinate Wider Sidewalks with Appropriate Landscape and Lighting Treatments to Create an Attractive Environment

Five separate specific actionable items and priority projects were developed by workshop participants for *Goal and Priority Area No. 2* as outlined in the Downtown Fernley Revitalization Planning Study.

- ***Priority Action Item No. 1, Goal and Priority Area No. 2***: Work collaboratively with the Nevada Department of Transportation to explore sidewalk improvements along the U.S. Highway 50 Alternate corridor that comprises the existing Fernley main street area.

  The City of Fernley will work with the Nevada Department of Transportation to develop and implement a comprehensive sidewalk improvement program for the stretch of U.S. Highway 50 Alternate that runs throughout the existing Fernley main street area. This sidewalk improvement program may also include options to improve on-street parking options, traffic mitigation efforts, and pedestrian safety improvements in order to support increased pedestrian access of new and existing businesses throughout the main street corridor. Development of the comprehensive sidewalk improvement program will be completed within five years by the end of 2028 with successful implementation and ultimate completion of the objectives outlined in the comprehensive sidewalk improvement program for the main street corridor set for 2029. An annual assessment of progress in developing the comprehensive sidewalk improvement program will be completed by the City of Fernley and by the eventual Fernley Main Street Board. The City of Fernley and the Fernley Main Street Board will work with the Nevada

Department of Transportation to identify possible local, state, and federal funds to support development and implementation of the program and ongoing maintenance of completed future improvements.

- ***Priority Action Item No. 2, Goal and Priority Area No. 2***: Work collaboratively with the Nevada Department of Transportation and Union Pacific to identify opportunities to mitigate surface and railroad traffic impacts on the main street corridor.

  Currently, the Union Pacific primarily operates a railroad line that runs parallel to U.S. Interstate 80 along the northern edge of the existing Fernley main street corridor. The City of Fernley, in partnership with the eventual Fernley Main Street Board and the Fernley Chamber of Commerce, will work with representatives from Union Pacific, the Nevada Department of Transportation, and the Nevada Lieutenant Governor's Office to explore opportunities and options for mitigating the impacts that existing surface and railroad traffic has on the environment of the existing main street corridor and on ongoing and future new business creation and attraction strategies and on existing and future efforts to retain and expand existing area businesses. This effort will be initiated within the first six months of 2023 with a strategy for addressing surface and railroad traffic impacts on the main street corridor developed by the first half of 2024. Eventual implementation of this strategy, along with period three to six month evaluation cycles, will begin during the second half of 2024 and into 2025.

- ***Priority Action Item No. 3, Goal and Priority Area No. 2***: Complete the design of needed sidewalk improvements on the north side of Main Street (U.S. Highway 50 Alternate) between Silver Lace Boulevard and the intersection of Main Street (U.S. Highway 50 Alternate) and Farm District Road.

  The City of Fernley has already completed a number of targeted sidewalk improvements along the north side of Main Street (U.S. Highway 50 Alternate) between the western border of the existing main street corridor up to Silver Lace Boulevard. Additional sidewalk improvement design guidelines are still needed for the remaining stretch of Main Street to Farm District Road. The City of Fernley, working with the Nevada Department of Transportation, will complete these targeted sidewalk and accompanying streetscaping and beautification improvement guidelines within the next five years by the end of 2028. Two meetings per year each year beginning in 2023 will be held between the City of Fernley and the Nevada Department of Transportation to complete this planning process.

- ***Priority Action Item No. 4, Goal and Priority Area No. 2***: Replace the remaining unaltered street lights along Main Street within the existing main street corridor using the existing street light design guidelines outlined in the Downtown Fernley Revitalization Planning Study.

  The City of Fernley will work with the Nevada Department of Transportation to complete the replacement of existing unaltered street lings along Main Street between the western border of the existing main street corridor and up to the intersection of Main Street and

Farm District Road. This effort will also include the development of a general financing plan with needed funding identified. The City of Fernley will explore the potential use of using future redevelopment and tax increment financing and the use of grants to fund the initial replacement effort and subsequent future maintenance costs. Funding sources will be identified and secured within one to two years between the end of 2023 and the end of 2024 with the replacement effort beginning in early 2025. Full completion of all remaining unaltered street lights along Main Street will be completed by the end of 2025 or by the beginning of 2026.

- ***Priority Action Item No. 5, Goal and Priority Area No. 2***: Develop and implement a corresponding streetscaping and beautification program to support the other priority action items including the development of a comprehensive sidewalk improvement program and existing lighting replacement program.

  The City of Fernley will work with the Nevada Department of Transportation to develop and implement a corresponding streetscaping and beautification program for Fernley's existing main street corridor. This effort and planning effort will include, but is not necessarily limited to, additional sidewalk programs on auxiliary and feeder streets within the existing main street corridor, additional bike lanes, general landscape improvements including the planting and maintenance of native plants, bushes, and trees, new public spaces, and improved streetscaping including benches, public trash receptacles, and pedestrian safety improvements. Both the City of Fernley and the Nevada Department of Transportation will explore the potential use of the Nevada Department of Transportation's Transportation Alternative Program, a program that provides funds for community-based projects that expand travel choices and enhance the transportation experience by integrating modes and improving the cultural, historic, and environmental aspects of critical transportation infrastructure. The Transportation Alternative Program has an annual funding cycle with funding request applications generally due in April. The City of Fernley, working with the eventual Fernley Main Street Board and the Fernley Chamber of Commerce, will work annually to submit Transportation Alternative Program applications to the Nevada Department of Transportation until approved.

In addition to assessing and evaluating general achievement of this existing goal and priority area, *Coordinate wider sidewalks with appropriate landscape and lighting treatments to create an attractive environment*, an annual assessment and evaluation of each of the five stated priority action items will be completed. As necessary, revisions to each priority action item and to the larger existing goal and priority area will be made on an annual basis and new priority action items may also be developed and pursued in order to support overall achievement of this specific existing goal and priority action area.

6.1.c Goal and Priority Area No. 3: Provide Safe and Pedestrian Connectivity

Three separate specific actionable items and priority projects were developed by workshop participants for *Goal and Priority Area No. 3* as outlined in the Downtown Fernley Revitalization Planning Study.

- ***Priority Action Item No. 1, Goal and Priority Area No. 3***: Develop and complete additional lighted and signaled pedestrian surface street crossings throughout the existing main street corridor including high pedestrian crossing areas along U.S. Highway 50 Alternate and U.S. Highway 95 Alternate.

  The City of Fernley will work with the Nevada Department of Transportation to identify, design, and plan targeted new pedestrian surface street crossing locations along U.S. Highway 50 Alternate and U.S. Highway 95 Alternate within one year or by the end of 2023. Once the specific locations for these targeted new lighted and signaled pedestrian surface street crossing have been identified, designed, and planned, it is anticipated that construction of the new crossings can be completed by the end of 2024. The City of Fernley will also work with key stakeholders to identify potential funding sources for the design and construction phases and to identify potential funding needed to support long-term maintenance of the new crossings once they are in place.

- ***Priority Action Item No. 2, Goal and Priority Area No. 3***: Develop and complete additional pedestrian surface street crossings throughout the existing main street corridor including pedestrian crossing areas on auxiliary and feeder streets within and adjacent to the corridor.

  Similar to *Priority Action Item No. 1* for this existing goal and priority area, the City of Fernley will work with the Nevada Department of Transportation to identify, design, and plan targeted new pedestrian surface street crossing locations within the existing main street corridor for the corridor's existing collection of auxiliary and feeder streets within one year or by the end of 2023. Once the specific locations for these targeted new pedestrian surface street crossing have been identified, designed, and planned, it is anticipated that construction of the new crossings can be completed by the end of 2024. The City of Fernley will also work with key stakeholders to identify potential funding sources for the design and construction phases and to identify potential funding needed to support long-term maintenance of the new crossings once they are in place. While some of these auxiliary and feeder street pedestrian crossings may include additional lighting and singling devices, the inclusion of these additional assets will be incorporated as necessary and as appropriate as to not negatively impact surrounding and adjacent residential and secondary commercial neighborhoods and areas.

- ***Priority Action Item No. 3, Goal and Priority Area No. 3***: Develop and complete a comprehensive pedestrian safety improvement program for the portion of U.S. Highway 95 Alternate that connects the existing main street corridor to Fernley High School.

  The portion of U.S. Highway 95 Alternate from the intersection of Main Street (U.S. Highway 50 Alternate) and U.S. Highway 95 Alternate and extends south through and beyond the existing main street corridor is high pedestrian area, especially for children that are enrolled in and attend Fernley Intermediate School (located at 320 U.S. Highway 95 Alternate) and Fernley High School (located at 1300 U.S. Highway 95 Alternate). From Fernley, U.S. Highway 95 Alternate is also a primary transportation corridor that links the community's downtown core and commercial core to several growing

residential neighborhoods and is also used as a primary transportation corridor between the communities of Fernley, Silver Springs, and Yerington. In order to improve overall surface traffic and, especially, pedestrian safety, the City of Fernley will work with the Nevada Department of Transportation to complete a comprehensive Road Safety Audit (RSA) of this specific corridor. The Road Safety Audit is the formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team and qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in overall safety. The Federal Highway Administration works with state and local jurisdictions, such as the City of Fernley and the Nevada Department of Transportation, to integrate the results of a Road Safety Audit into specific development processes for new roads and intersections.

Once a Road Safety Audit for this identified portion of U.S. Highway 95 Alternate is completed, the City of Fernley and the Nevada Department of Transportation will work on developing a comprehensive improvement project with emphasis on improving surface traffic and pedestrian safety. Funding to support project development, construction, and completion will be pursued through the Nevada Department of Transportation's Safe Routes to School Program, a program that provides resources and expertise in providing an appealing, safe environment to enable school age children, grades Kindergarten through 8th Grade, to walk or bicycle to school. It is anticipated that development and completion of a comprehensive improvement project with emphasis on improving surface traffic and pedestrian safety along the U.S. Highway 95 Alternate corridor between the intersection of Main Street and U.S. Highway 95 Alternate up to Fernley High School will require the entirety of the five-year planning horizon between 2023 and 2028 as outlined in this new Comprehensive Economic Development Strategy for the City of Fernley and for the Fernley main street corridor.

In addition to assessing and evaluating general achievement of this existing goal and priority area, *Provide safe and attractive pedestrian connectivity*, an annual assessment and evaluation of each of the three stated priority action items will be completed. As necessary, revisions to each priority action item and to the larger existing goal and priority area will be made on an annual basis and new priority action items may also be developed and pursued in order to support overall achievement of this specific existing goal and priority action area.

6.1.d Goal and Priority Area No. 4: Improve Traffic Operations of the Main Street (U.S. Highway 50 Alternate)/U.S. Highway 95 Alternate Intersection

Five separate specific actionable items and priority projects were developed by workshop participants for *Goal and Priority Area No. 4* as outlined in the Downtown Fernley Revitalization Planning Study.

- ***Priority Action Item No. 1, Goal and Priority Area No. 4***: Develop a plan to improve traffic flow at the intersection of Main Street (U.S. Highway 50 Alternate) and U.S. Highway 95 Alternate including an assessment of traffic mitigation needs.

The Fernley Chamber of Commerce will work with the City of Fernley and the Nevada Department of Transportation to assess existing business and property owner needs and concerns regarding traffic flow issues at the intersection of Main Street and U.S. Highway 95 Alternate. This assessment will be completed within two years by the end of 2025 and the eventual Fernley Main Street Board and the Fernley Chamber of Commerce will produce quarterly reports on the progress made in identifying existing business and property owner needs and concerns and in the development of a traffic mitigation and improvement plan that addresses those needs and concerns.

- ***Priority Action Item No. 2, Goal and Priority Area No. 4***: Complete the development of the Nevada Pacific Parkway extension connecting U.S. Interstate 80 and U.S. Highway 50 through Fernley's existing industrial area.

  As already outlined in this new five-year Comprehensive Economic Development Strategy, the City of Fernley was recently awarded a $25 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant that will complete the Nevada Pacific Parkway project, successfully linking U.S. Interstate 80 with U.S. Highway 50 through the existing industry park area and industrial area. The City of Fernley, in partnership with the Nevada Department of Transportation and in consultation with Mark IV Development Projects, will work to complete the Nevada Pacific Parkway extension within five years or by the end of the 2028.

- ***Priority Action Item No. 3, Goal and Priority Area No. 4***: Explore the possibility of designing and developing a bypass road along the western edge of the City of Fernley that would redirect traffic from U.S. Interstate 80 Exit 46 (western most exit in Fernley) to neighborhoods located south of Main Street.

  Within six months, or by mid-2023, the City of Fernley will identify key local, regional, state, and even federal stakeholders that may be impacted or may be able to assist in the design and potential development of a new bypass road along the western edge of the City of Fernley. By the end of 2025, the City of Fernley will have made a decision as to whether or not the development of a bypass road along the western edge of the community is feasible, needed, and practical and begin working with identified local, regional, state, and even federal stakeholders to begin the design-build phase if the bypass road is proven to be feasible, needed, and practical. Periodic reports on the progress of determining the degree of feasibility, need, and practicality will be produced by City of Fernley staff and presented at regular public meetings of both the City of Fernley City Council and the City of Fernley Planning Commission as well as to various stakeholder groups.

- ***Priority Action Item No. 4, Goal and Priority Area No. 4***: Develop a comprehensive traffic and multi-modal transportation connectivity plan for auxiliary, connector, and feeder streets within the existing main street corridor and between surrounding neighborhoods and the existing main street corridor.

The City of Fernley will work with the Nevada Department of Transportation and various local and regional stakeholders, including existing residents, business owners, and property owners to identify other points of surface traffic congestion and potential points of pedestrian safety concern within and around the existing main street corridor. The development and eventual implementation of a comprehensive traffic and multi-modal transportation connectivity plan for existing main street corridor will be completed within five years or by the end of 2028. Within six months, or by mid-2023, a comprehensive needs assessment of additional traffic and multi-modal transportation connectivity issues will be completed. Final design and engineering plans will be completed by the end of 2025 with individual project construction beginning by the early part of 2026.

- ***Priority Action Item No. 5, Goal and Priority Area No. 4***: The City of Fernley, the eventual Fernley Main Street Board, and the Fernley Chamber of Commerce will work collaboratively to identify and begin addressing specific transportation infrastructure concerns and needs.

  The City of Fernley, in partnership with the eventual Fernley Main Street Board and the Fernley Chamber of Commerce, will first begin this process of identifying and addressing specific transportation infrastructure concerns and needs by building a coalition of impacted stakeholders and by documenting the concerns that individual stakeholders have for specific transportation infrastructure concerns and needs. By the end of the five-year planning horizon outlined in this new five-year Comprehensive Economic Development Strategy, the specific transportation infrastructure concerns and needs that require immediate attention include addressing property owner impacts and pedestrian safety concerns associated with the Union Pacific railroad, increasing traffic capacity and pedestrian safety of the roundabout located at the intersection of Main Street and Farm District Road, completion of the Nevada Pacific Parkway extension project, and addressing the 'chokepoint' between U.S. Interstate 80 Exit 46 and Main Street at the Union Pacific railroad line referred to as the 'mouse hole'.

In addition to assessing and evaluating general achievement of this existing goal and priority area, *Improve traffic operations of the Main Street (U.S. Highway 50 Alternate)/U.S. Highway 95 Alternate Intersection*, an annual assessment and evaluation of each of the five stated priority action items will be completed. As necessary, revisions to each priority action item and to the larger existing goal and priority area will be made on an annual basis and new priority action items may also be developed and pursued in order to support overall achievement of this specific existing goal and priority action area.

6.2 Development of Specific Strategies, Actionable Items, and Priority Projects based on Priority Issues and Needs Developed by Community Stakeholders

In addition to developing specific strategies, actionable items, and priority projects based on the four existing goals and priority areas outlined in the Downtown Fernley Revitalization Planning Study, workshop participants who participated in the July 19, 2022 strategic economic

development planning workshop were asked to develop specific strategies, actionable items, and priority projects for five local and regional community and economic development capacity areas. These five local and regional community and economic development capacity areas were identified during the community stakeholder meetings and planning sessions held between March 2022 and May 2022 and are consistent with statewide community and economic development priorities outlined by the Nevada Governor's Office of Economic Development and the Office's Nevada Main Street program and with the existing focus, goals, and strategies of the Economic Development Authority of Western Nevada, the Northern Nevada Development Authority, and of the Western Nevada Development District. The five local and regional community and economic development capacity areas for the City of Fernley for the next five years as part of this five-year Comprehensive Economic Development Strategy include:

- ***Community and Economic Development Capacity Area No. 1***: Small Business and Entrepreneurial-Based Development
- ***Community and Economic Development Capacity Area No. 2***: Tourism-Based Development
- ***Community and Economic Development Capacity Area No. 3***: Workforce Development
- ***Community and Economic Development Capacity Area No. 4***: Housing Development
- ***Community and Economic Development Capacity Area No. 5***: Related Infrastructure

Workshop participants during the July 19, 2022 strategic economic development planning workshop were asked to develop a series of specific strategies, actionable items, and priority projects for each individual community and economic development capacity area. For each strategy developed for each individual community and economic development capacity area, workshop participants were also asked to develop at least one specific actionable item, assign at least one individual, agency, or organization that will be responsible for implementing and completing the actionable item, and for developing a realistic timeline and regular checkpoints for implementation and measurement of progress in completing the specific actionable item or priority project.

6.2.a Community and Economic Development Capacity Area No. 1: Small Business and Entrepreneurial-Based Development

Five separate specific actionable items and priority projects were developed by workshop participants for *Community and Economic Development Capacity Area No. 1* as determined by community stakeholders during the March 2022 through May 2022 community stakeholder meetings and planning workshops.

- ***Priority Action Item No. 1, Community and Economic Development Capacity Area No. 1***: The Fernley Chamber of Commerce will participate in the Adams Hub of Northern

Nevada joint business support program with the Northern Nevada Development Authority.

The Fernley Chamber of Commerce, in order to support new business creation and existing business growth and expansion needs, will participate in the Adams Hub of Northern Nevada joint business support program with the Northern Nevada Development Authority. The establishment of joint business support program resources and services will be developed over the next three years and fully implemented by the end of 2026. The eventual Fernley Main Street Board and the Fernley Chamber of Commerce will perform regular evaluations of the program development and implementation efforts every six months with periodic reviews completed every year after 2026.

- ***Priority Action Item No. 2, Community and Economic Development Capacity Area No. 1***: The Fernley Chamber of Commerce will participate in the Shop Made in Nevada program.

  The Fernley Chamber of Commerce will collaborate with the Nevada Department of Agriculture and the Nevada Small Business Development Center to establish a Shop Made in Nevada program outlet for new and existing small businesses operating within the existing Fernley main street corridor and in other parts of the community. Made in Nevada acts as a strong, focused, unified voice focused on expanding opportunities for new and existing small businesses. A Shop Made in Nevada program outlet for new and existing small businesses in Fernley will be developed over the next two years and fully implemented by the end of 2025. The eventual Fernley Main Street Board and the Fernley Chamber of Commerce will perform regular evaluations of the program development and implementation efforts quarter with quarterly reviews completed every year after 2025.

- ***Priority Action Item No. 3, Community and Economic Development Capacity Area No. 1***: Develop and open a new business incubator location located within the existing Fernley main street corridor.

  The eventual Fernley Main Street Board, the Fernley Chamber of Commerce, the City of Fernley, and the Nevada Small Business Development Center will work collaboratively to develop, design, construct, and open a new business incubator located within the existing Fernley main street corridor over the next five years with successful opening of the new business incubator to be completed by the end of 2028. This new business incubator will be focused primarily on assisting new small businesses and new entrepreneurial-based start-ups in industry and occupation sectors with regional high income and high growth potential.

- ***Priority Action Item No. 4, Community and Economic Development Capacity Area No. 1***: The City of Fernley will establish a 'Business Assistance Office' with the goals of completing the official establishment of a Main Street America and Nevada Main Street program recognized Fernley main street program, providing new business creation incentives, and providing entrepreneurial-based start-up assistance.

The City of Fernley will work with the Fernley Chamber of Commerce to establish a new 'Business Assistance Office' within the City's existing administrative and municipal government framework. This new office will work with the Fernley Chamber of Commerce and with other identified stakeholders and partners to complete the official establishment of a Main Street America and Nevada Main Street program recognized Fernley main street program. This new office will also work to develop new incentives to support new business creation efforts including further streamlining of business permitting processes and will also provide direct assistance to new entrepreneurial-based start-ups. Establishment of the new 'Business Assistance Office' will occur within six months to a year between mid-2023 and the beginning of 2024 with the official establishment of a Fernley main street program completed by the beginning of 2024 and with new business creation and entrepreneurial-based start-up incentives and technical assistance services established by mid-2024.

- ***Priority Action Item No. 5, Community and Economic Development Capacity Area No. 1***: Develop and host annual business fairs and 'Pitch Days' to support new business creation efforts and entrepreneurial-based start-ups.

  The Fernley Chamber of Commerce and the City Manager's Office of the City of Fernley will work collaboratively to develop and host a series of annual business fairs and 'Pitch Days' designed to support new business creation efforts and new entrepreneurial-based starts-up within the existing Fernley main street corridor and throughout the community. The eventual 'Pitch Days' will be tied to the development of a new local business incubator space and successful participants of the 'Pitch Days' will be awarded with free to low rent of space in the incubator, free to reduced cost utilities including Internet service, a waiver of required business license fees, and other incentive packages. The first annual business fair and Pitch Day will be held within one year by the end of 2023 with six month evaluations on the progress on developing the first annual business fair and Pitch Day and subsequent six month evaluations to assess the overall success of businesses that participated in the annual business fair and resulting Pitch Day.

In addition to assessing and evaluating general progress in improving overall capacity in this community and economic development capacity area, *Small Business and Entrepreneurial-Based Development*, an annual assessment and evaluation of each of the five stated priority action items will be completed. As necessary, revisions to each priority action item and to the larger community and economic development capacity area will be made on an annual basis and new priority action items may also be developed and pursued in order to support overall improvement in this community and economic development capacity area.

6.2.b Community and Economic Development Capacity Area No. 2: Tourism-Based Development

Six separate specific actionable items and priority projects were developed by workshop participants for *Community and Economic Development Capacity Area No. 2* as determined by

community stakeholders during the March 2022 through May 2022 community stakeholder meetings and planning workshops.

- ***Priority Action Item No. 1, Community and Economic Development Capacity Area No. 2***: Seek out and attract regional athletic events and tournaments to Fernley using existing athletic facilities currently owned and operated by either the City of Fernley, Lyon County, the Lyon County School District, by other public sector agencies, private sector firms, or by various community-based and non-profit organizations.

  The Fernley Convention & Tourism Authority, in partnership with the City of Fernley and other local and regional public-sector agencies, private sector firms, and community-based and non-profit organizations, will seek out and attract regional athletic events and tournaments to the community using existing athletic facilities already operating throughout the community. The Fernley Convention & Tourism Authority will successfully seek and attract the first regional athletic event and tournament within two years or by the end of 2025 and quarterly reports will be developed to evaluate the progress that the Fernley Convention & Tourism Authority has made in attracting these events and tournaments. Future quarterly reports will contain a summary of the estimated economic impact that these events and tournaments have had on the local economy.

- ***Priority Action Item No. 2, Community and Economic Development Capacity Area No. 2***: Partner with other local and regional tourism authorities and organizations in order to promote Fernley as a destination location for regional tourism-related activities and events.

  The Fernley Convention & Tourism Authority, the City of Fernley, and the Fernley Chamber of Commerce will work with regional tourism authorities and organizations, such as Pony Express Nevada, and with the Nevada Department of Tourism and Cultural Affairs to promote Fernley's existing tourism-based assets over the next five years with the target of hosting new regional tourism-related activities and events in Fernley. Working with the eventual Fernley Main Street Board, the Fernley Convention & Tourism Authority, the City of Fernley, and the Fernley Chamber of Commerce will target regional tourism-related activities and events that can benefit from the existing assets already present within the existing Fernley main street corridor and other assets located throughout the community.

- ***Priority Action Item No. 3, Community and Economic Development Capacity Area No. 2***: Develop a comprehensive tourism-based marketing strategy as a way of promoting Fernley as a regional destination for tourism-based activities and events.

  The Fernley Convention & Tourism Authority and the City of Fernley will work collaboratively with the eventual Fernley Main Street Board and the Fernley Chamber of Commerce to develop a new comprehensive tourism-based marketing strategy in order to promote the community as a regional destination for tourism-based activities and events. The new comprehensive tourism-based marketing strategy will be developed within one year by the end of 2023 or by the beginning of 2024 and bi-annual reports regarding

implementation of the new comprehensive tourism-based marketing strategy will be prepared and presented to the Fernley Convention & Tourism Authority Board and to the eventual Fernley Main Street Board every two years.

- ***Priority Action Item No. 4, Community and Economic Development Capacity Area No. 2***: Develop formal partnerships between the Fernley Convention & Tourism Authority and other regional tourism authorities and boards to cross-promote Fernley with other communities as a tourism destination location.

  The Fernley Convention & Tourism Authority will work with other regional tourism authorities and boards located and operating throughout northwestern Nevada in order to develop a series of new formal partnerships designed to cross-promote Fernley with other communities located throughout the region as a tourism destination location. The first of these new proposed partnerships will be established within one year by the end of 2023 or by the beginning of 2024 and bi-annual reports regarding the results of these partnerships, including estimated economic impacts associated with increased tourism, will be produced and presented to the Fernley Convention & Tourism Authority Board and to the eventual Fernley Main Street Board every two years.

- ***Priority Action Item No. 5, Community and Economic Development Capacity Area No. 2***: Complete the development of a comprehensive map of existing Off-Highway Vehicle (OHV) trails located within and around Fernley and develop and implement a comprehensive marketing campaign designed to promote OHV opportunities throughout and around the community.

  The Fernley Convention & Tourism Authority and the City of Fernley will work with identified stakeholders, including but not limited to the Nevada Department of Tourism and Cultural Affairs, the Nevada Department of Conservation and Natural Resources, and the Nevada Off-Highway Vehicles Program, to first complete the development of a comprehensive map of existing Off-Highway Vehicle trails located within and around Fernley within one year or by the end of 2023 or by the beginning of 2024. Once the comprehensive map of existing Off-Highway Vehicle trails has been completed, the Fernley Convention & Tourism Authority and the City of Fernley will work with the Fernley Chamber of Commerce and other identified stakeholders to develop a comprehensive marketing campaign designed to promote Fernley as an 'OHV destination location' in northwestern Nevada. Development of this comprehensive marketing campaign will be completed within two years or by the end of 2024 or by the beginning of 2025.

- ***Priority Action Item No. 6, Community and Economic Development Capacity Area No. 2***: Identify and complete needed improvements and upgrades to local athletic and special event facilities.

  The City of Fernley and the City's Park and General Services Division will work with identified stakeholders, including but not limited to Lyon County and the Lyon County School District, to identify needed improvements and upgrades for all local athletic and

special event facilities for the purpose of attracting and hosting regional athletic tournaments and related special events to Fernley. The City of Fernley will work with stakeholders and partners to identify and secure the funding needed to complete identified and selected improvements and upgrades including the potential use of room tax allocations and other public sources. Identification of needed improvements and upgrades will be completed within one year or by the end of 2023 or by the beginning of 2024 with implementation of construction and needed improvements and upgrades beginning by mid-2024 and extending throughout the remainder of the five-year strategic planning horizon outlined in this new five-year Comprehensive Economic Development Strategy.

In addition to assessing and evaluating general progress in improving overall capacity in this community and economic development capacity area, *Tourism-Based Development*, an annual assessment and evaluation of each of the six stated priority action items will be completed. As necessary, revisions to each priority action item and to the larger community and economic development capacity area will be made on an annual basis and new priority action items may also be developed and pursued in order to support overall improvement in this community and economic development capacity area.

6.2.c Community and Economic Development Capacity Area No. 3: Workforce Development

Four separate specific actionable items and priority projects were developed by workshop participants for *Community and Economic Development Capacity Area No. 3* as determined by community stakeholders during the March 2022 through May 2022 community stakeholder meetings and planning workshops.

- ***Priority Action Item No. 1, Community and Economic Development Capacity Area No. 3***: Increase overall utilization of job training and workforce development resources and services provided by the Nevada Department of Employment, Training and Rehabilitation to identify and train new employees in Fernley.

  The Fernley Chamber of Commerce will work with Western Nevada College and other Nevada System of Higher Education institutions and the Nevada Department of Employment, Training and Rehabilitation to increase the overall utilization of job training and workforce development resources and services in order to increase Fernley's overall civilian workforce. A strategy for which resources and services will be used will be developed within one year by the end of 2023 or by the beginning of 2024 and monthly reports will be produced and published by the Fernley Chamber of Commerce on the overall effectiveness of this initiative.

- ***Priority Action Item No. 2, Community and Economic Development Capacity Area No. 3***: Increase the number and reach of various job training, workforce development, and even Career and Technical Education programs offered in Fernley to area high school students and existing members of Fernley's civilian workforce.

The Fernley Chamber of Commerce will work to increase the number and reach of various job training, workforce development, and even Career and Technical Education programs in order to increase the overall size and capability of the community's existing and future civilian workforce in order to support broader new business creation and attraction strategies and efforts to retain and expand existing businesses. This effort may include but is not limited to direct engagement and partnership with Truckee Meadows Community College, Western Nevada College or other Nevada System of Higher Education institutions, the establishment of a new community college in Fernley focused on job training and workforce development in targeted industry and occupation sectors, engagement with the Lyon County School District in order to expand existing Career and Technical Education programs and course offerings, and potential expansion of dual-credit course offerings at Fernley High School. Identification of key partners and targeted job training and workforce development programs, resources, and services will be completed within one year or by the end of 2023 or by the beginning of 2024. Full implementation of these efforts will begin by the beginning of 2024. The possible development and initial construction of a new community college located in Fernley, if it is determined that this initiative is feasible and practical, may begin by the end of this five-year strategic planning horizon or by the end of 2028.

- ***Priority Action Item No. 3, Community and Economic Development Capacity Area No. 3***: Develop and implement a new community advertising program for Fernley in order to attract and retain new workers.

  The Fernley Chamber of Commerce and the Fernley Convention & Tourism Authority will, within six months or by mid-2023, begin development of a new community advertising program for Fernley as a way of demonstrating the positive reasons why individuals should live and work in Fernley and as a way of increasing the size of the community's civilian workforce. Full implementation of the new community advertising program for Fernley will begin within one year or by the end of 2023 or by the beginning of 2024.

- ***Priority Action Item No. 4, Community and Economic Development Capacity Area No. 3***: Create a network of community-based and non-profit organizations to regularly identify business workforce needs and existing community-wide workforce conditions and characteristics.

  The Fernley Chamber of Commerce will work to build a network of community-based and non-profit organizations, including but not limited to professional organizations and services organizations like the Rotary Club of Fernley, Fernley Boys & Girls Club of Truckee Meadows, the Fernley Community Foundation, the Fernley Moose Lodge 2468, and other similar organizations, to identify ongoing workforce needs of area businesses and to identify existing and changing workforce conditions and characteristics. This effort to build a network of community-based and non-profit organizations will be completed within one year by the end of 2023 and regular annual reports on area workforce needs and existing workforce conditions and characteristics will be produced annually.

In addition to assessing and evaluating general progress in improving overall capacity in this community and economic development capacity area, *Workforce Development*, an annual assessment and evaluation of each of the four stated priority action items will be completed. As necessary, revisions to each priority action item and to the larger community and economic development capacity area will be made on an annual basis and new priority action items may also be developed and pursued in order to support overall improvement in this community and economic development capacity area.

6.2.d Community and Economic Development Capacity Area No. 4: Housing Development

Five separate specific actionable items and priority projects were developed by workshop participants for *Community and Economic Development Capacity Area No. 4* as determined by community stakeholders during the March 2022 through May 2022 community stakeholder meetings and planning workshops.

- ***Priority Action Item No. 1, Community and Economic Development Capacity Area No. 4***: Develop specific 'area plans' focused on encouraging residential and mixed-use in-fill development for the existing Fernley main street corridor and other adjacent neighborhoods.

  Over the next five years, the City of Fernley will work with local and regional stakeholders, including existing business owners and property owners in and around the existing main street corridor, to develop a series of 'area plans' focused on encouraging new residential and mixed-use in-fill development as appropriate. In addition to developing density and architectural development in these area plans, the City of Fernley will also work with identified stakeholders to estimate costs associated with supporting in-fill development and identify potential funding sources. The City of Fernley will produce and publish a report on the progress made in developing these area plans and on the progress in implementing them every six months.

- ***Priority Action Item No. 2, Community and Economic Development Capacity Area No. 4***: Pursue the development of 'Tiny House' in-fill development strategies for the existing residential neighborhoods within the existing Fernley main street corridor and for other adjacent neighborhoods.

  Over the next three years, the Fernley Builders Association will work collaboratively with the City of Fernley, the Fernley Chamber of Commerce, and the eventual Fernley Main Street Board to examine the feasibility of pursuing 'Tiny House' in-fill development strategies for the existing residential neighborhoods located within the existing Fernley main street corridor and for other adjacent neighborhoods. The purpose of this strategy will be to add additional affordable housing stock to the community in order to support broader workforce development efforts. The Fernley Builders Association will develop a comprehensive strategy aimed at encouraging and incentivizing 'Tiny House' in-fill development over the next three years with implementation of the strategy set to begin in early 2026.

- ***Priority Action Item No. 3, Community and Economic Development Capacity Area No. 4***: The City of Fernley and the Nevada Housing Division of the Nevada Department of Business and Industry will develop and complete one new viable affordable and/or workforce housing project for Fernley and for the Fernley main street corridor.

  Over the next year and by the end of 2023 or by the beginning of 2024, the City of Fernley and the Nevada Housing Division of the Nevada Department of Business and Industry will develop and begin construction on at least one new viable affordable and/or workforce housing project to be located within the existing Fernley main street corridor. Construction on this new affordable and/or workforce housing project will begin no later than early 2024 with completion of the project achieved by the end of 2024. Quarterly evaluations of the progress that the City of Fernley and the Nevada Housing Division in developing this new affordable and/or workforce housing project will be completed throughout 2023.

- ***Priority Action Item No. 4, Community and Economic Development Capacity Area No. 4***: The City of Fernley will identify property that the City currently owns or could potentially purchase (and subsequently remediate and prepare for development) within the existing Fernley main street corridor and then provide the property via trade, donation, or sale to support an affordable and/or workforce housing project.

  Within the next six months or by mid-2023, the City of Fernley will identify property that the City currently owns or could potentially purchase and then remediate and prepare for development in order to support at least one new viable affordable and/or workforce housing project to be located within the existing Fernley main street corridor. Development of this project and successful completion of the associated construction and opening will be completed within two years or by the end of 2024 or by the beginning of 2025.

- ***Priority Action Item No. 5, Community and Economic Development Capacity Area No. 4***: Create new incentives to support new mixed-use and multifamily housing development throughout the existing Fernley main street corridor.

  Over the next five years between 2023 and 2028, the City of Fernley, working with local, regional, state, and even federal partners, will work to develop a series of new incentives and development practices designed to support new mixed-use and multifamily housing development throughout the existing Fernley main street corridor. These efforts may include, but are not limited, the successful establishment of the existing Fernley main street corridor as a Main Street America and Nevada Main Street program recognized main street program (including the establishment of a Fernley Main Street Board in conjunction with the Fernley Chamber of Commerce) and the potential establishment of a Business Improvement District as outlined in Nevada Revised Statute Chapter 271 (NRS 271.333 Neighborhood Improvement Projects). This effort may also include revisiting the use of redevelopment as outlined in Nevada Revised Statute Chapter 279 (Redevelopment of Communities) and the use of tax increment financing or other

assessment financing tools to mitigate in-fill development costs and finance the development of needed to new infrastructure.

In addition to assessing and evaluating general progress in improving overall capacity in this community and economic development capacity area, *Housing Development*, an annual assessment and evaluation of each of the five stated priority action items will be completed. As necessary, revisions to each priority action item and to the larger community and economic development capacity area will be made on an annual basis and new priority action items may also be developed and pursued in order to support overall improvement in this community and economic development capacity area.

6.2.e Community and Economic Development Capacity Area No. 5: Related Infrastructure

Four separate specific actionable items and priority projects were developed by workshop participants for *Community and Economic Development Capacity Area No. 5* as determined by community stakeholders during the March 2022 through May 2022 community stakeholder meetings and planning workshops.

- ***Priority Action Item No. 1, Community and Economic Development Capacity Area No. 5***: Increase the City of Fernley's overall sewer treatment capacity in order to support projected future residential, commercial, and industrial growth.

  The City of Fernley will work with local public sector and private sector partners, along with key regional, state, and federal partners, to identify future sewer treatment capacity needs in order to support projected future residential, commercial, and industrial growth. This effort will likely extend beyond the current five-year strategic planning horizon of the City of Fernley's new five-year Comprehensive Economic Development Strategy and will require external funding in order to complete. Over the next five years, the City of Fernley will explore potential funding opportunities with the U.S. Economic Development Administration, the U.S. Department of Agriculture Rural Development, and other potential federal funding sources. The City of Fernley will produce and publish six-month reports each year over the next five years outlining projected future residential, commercial, and industrial growth and projected future sewer treatment capacity needs.

- ***Priority Action Item No. 2, Community and Economic Development Capacity Area No. 5***: Identify and create new industrial district and commercial truck routes throughout the City of Fernley in order to take advantage of the new $25 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant that the City of Fernley received in August 2022.

  In August 2022, the City of Fernley received a new $25 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant that will complete the Nevada Pacific Parkway project, successfully linking U.S. Interstate 80 with U.S. Highway 50 through the existing industry park area. In order to address potential surface traffic congestion and broader community safety concerns, the City of Fernley will work with local, regional, state, and federal partners to identify, design, and create

new industrial district and commercial truck routes throughout the community. This effort will likely extend beyond the current five-year strategic planning horizon of the City of Fernley's new five-year Comprehensive Economic Development Strategy and will require external funding in order to complete. Over the next five years, the City of Fernley will explore potential funding opportunities for the design and construction of new industrial district and commercial truck routes with the U.S. Economic Development Administration, the U.S. Department of Agriculture Rural Development, and other potential federal funding sources. The City of Fernley will produce and publish six-month reports each year over the next five years outlining the progress made in developing and completing these new industrial district and commercial truck routes.

- ***Priority Action Item No. 3, Community and Economic Development Capacity Area No. 5***: Explore, and potentially develop and implement as is practical and feasible, a new impact fee schedule in order to fund various new infrastructure projects that will be needed to support new residential, commercial, and industrial development throughout the community.

  Within one year and by the end of 2023, the City of Fernley will complete a comprehensive assessment of the practicality and feasibility of establishing a new impact fee schedule in order to generate the funds necessary to support the development and long-term maintenance of new infrastructure needed to support new residential, commercial, and industrial development throughout the community. If the development of a new impact fee schedule is proven to be practical and feasible, the City of Fernley will begin development and implementation of the new impact fee schedule throughout 2024. This effort may require amendments to the City of Fernley's existing Comprehensive Master Plan, existing Capital Improvement Plan, and other related planning and administrative documents.

- ***Priority Action Item No. 4, Community and Economic Development Capacity Area No. 5***: Identify, estimate cost, and begin completion of associated public infrastructure assets needed to support new residential, commercial, and industrial development throughout the community.

  In addition to the specific infrastructure priority action items outlined in this sub-section, workshop participants identified a number of other specific possible infrastructure projects that may be needed to support new residential, commercial, and industrial development throughout the community. Creating a possible loop road linking Nevada Pacific Parkway (U.S. Interstate 80 Exit 50) and Wadsworth (U.S. Interstate 80 Exist 43) located north of U.S. Interstate 80, expanding the capacity of existing water lines and sewer lines along U.S. Highway 50 east of the roundabout intersection of Main Street and Farm District Road and along U.S. Highway 95 Alternate south of the intersection of Main Street and U.S. Highway 95 Alternate, adding an additional on-off ramp U.S. Interstate 80 at Vine Street with an accompanying frontage road, and even developing a new passenger rail station along Union Pacific's existing railroad corridor were a few of the specific infrastructure projects identified as critical in supporting future residential,

commercial, and industrial development. Completing the development and widening of sidewalks throughout the existing Fernley main street corridor, adding additional bike lanes and bike paths throughout the community, developing a comprehensive public transportation service for Fernley that would link Fernley to surrounding communities in the northwestern Nevada region, planning and completing needed improvements and expansion efforts at the Fernley Airport, and even investing of alternative transportation options including the use of electric scooters were additional specific infrastructure projects identified by workshop participants during the July 19, 2022 strategic economic development planning workshop. Over the next five years, the City of Fernley will work with local, regional, state, and even federal partners to prioritize these projects, identify and secure needed funding, and begin construction and completion of projects as is practical and feasible.

In addition to assessing and evaluating general progress in improving overall capacity in this community and economic development capacity area, *Related Infrastructure*, an annual assessment and evaluation of each of the four stated priority action items will be completed. As necessary, revisions to each priority action item and to the larger community and economic development capacity area will be made on an annual basis and new priority action items may also be developed and pursued in order to support overall improvement in this community and economic development capacity area.

A New Five-Year Comprehensive Economic Development Strategy for the City of Fernley, 2023 through 2028 (Fernley Main Street Corridor)

City of Fernley City Council Meeting
Wednesday, February 15, 2023

US EDA and The Comprehensive Economic Development Strategy (CEDS)

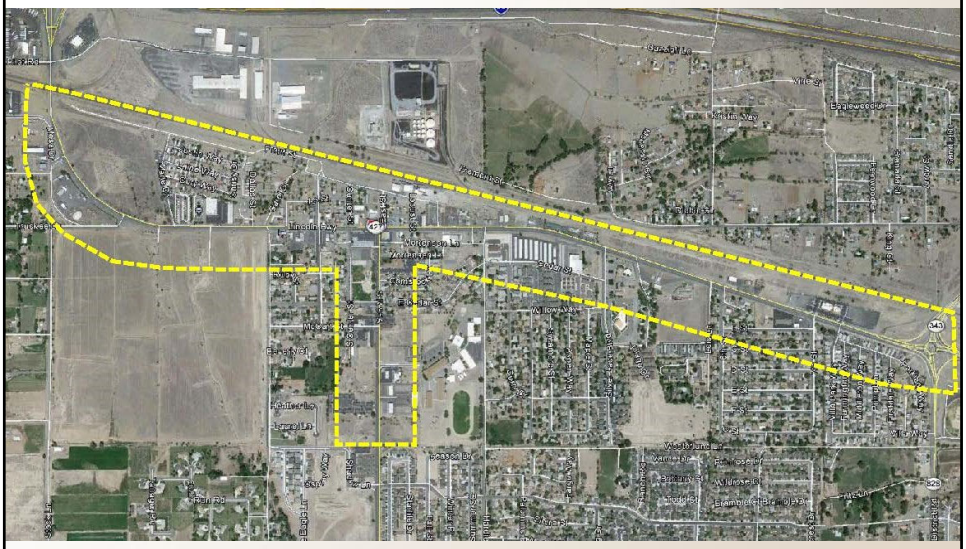
"CEDS are designed to ***bring together the public and private sectors*** in the creation of an economic roadmap to diversify and strengthen Regional economies. The CEDS should analyze the Regional economy and serve as a guide for establishing Regional goals and objectives, developing and implementing a Regional plan of action, and identifying investment priorities and funding sources".

- *Section 303.7 Requirements for Comprehensive Economic Development Strategies.*

The Strategic Planning Process

- Begun in Early 2022
- Six Community Meetings with Individual Stakeholder Meetings
  - Fernley Community Foundation, March 29, 2022
  - Fernley Rotary, March 31, 2022
  - Coffee with the Mayor, April 12, 2022
  - Fernley Chamber of Commerce, April 12, 2022
  - Fernley Chamber of Commerce Executive Board, April 28, 2022
  - Fernley Realtors Association, May 4, 2022
- Strategic Economic Development Workshop, July 19, 2022
  - Community, Property Owner, Business Owner Representatives
  - City of Fernley Staff
  - Representatives from the Economic Development Authority of Western Nevada, Northern Nevada Development Authority, Western Nevada Development District
  - State Government Agency Representatives including the Nevada Governor's Office of Economic Development
- Publication of a draft UCED Technical Report, ***A Comprehensive Economic Development Strategy for the City of Fernley and for Fernley's Main Street, 2023 through 2028***

City of Fernley – Designated Main Street Corridor



Elements of the New Five-Year CEDS

Priority Action Items Tied directly to the 2014 Downtown Fernley Revitalization Planning Study:

- **Project Goal and Priority Area No. 1**: Enhance the Character of Downtown Fernley through Thematic Streetscape and Building Façade Improvements (4 Priority Action Items)
- **Project Goal and Priority Area No. 2**: Coordinate Wider Sidewalks with Appropriate Landscape and Lighting Treatments to Create an Attractive Environment (5 Priority Action Items)
- **Project Goal and Priority Area No. 3**: Provide Safe and Attractive Pedestrian Connectivity (3 Priority Action Items)
- **Project Goal and Priority Area No. 4**: Improve Traffic Operations of the Main Street/US Highway 95 Alternate Intersection (5 Priority Action Items)

Elements of the New Five-Year CEDS

Priority Action Items Tied to Local and Regional Community and Economic Development Capacity Areas:

- **Capacity Area No. 1**: Small Business and Entrepreneurial-Based Development (5 Priority Action Items)
- **Capacity Area No. 2**: Tourism-Based Development (6 Priority Action Items)
- **Capacity Area No. 3**: Workforce Development (4 Priority Action Items)
- **Capacity Area No. 4**: Housing Development (5 Priority Action Items)
- **Capacity Area No. 5**: Related Infrastructure (4 Priority Action Items)

Next Steps

Post-Approval of the New Five-Year CEDS for the City of Fernley:

- Submission of the Completed City of Fernley Five-Years CEDS to the US Economic Development Administration.
- Completion of a Main Street Program application with the Governor's Office of Economic Development (City of Fernley and Fernley Chamber of Commerce…Fernley Main Street Board).
- Begin implementation in partnership with relevant state agencies, private-sector stakeholders, and with regional economic development agencies (EDAWN, NNDA, WNDD).
- Annual Updates and Evaluation of Progress.

A New Five-Year Comprehensive Economic Development Strategy for the City of Fernley, 2023 through 2028 (Fernley Main Street Corridor)

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Trisha Conner, Assistant to the City Manager**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes: X	No:	Yes: X	No:	220-480-810

ACTION REQUESTED: Motion

AGENDA ITEM: (For Possible Action):

Possible Action to approve the Community Response & Resource Center project Design Development Submittal.

AGENDA ITEM BRIEF:

On November 2, 2022, City Council approved the Community Response & Resource Center schematic re-design, re-scope and cost estimate. Since then, project consultants, partners, and staff have been working on Design Development.

RECOMMENDED MOTION:

"I motion to approve the Community Response & Resource Center Design Development Submittal."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

Council may request more information.

BACKGROUND:

PRIOR CITY COUNCIL ACTION

- On December 21, 2022, City Council approved the contact with Headway Transportation LLC to conduct a traffic study for the Community Response & Resource Center in the amount of $22,000.00.
- On November 2, 2022, City Council approved the revised rescoping, floor, plan, schematic plan, and cost estimate of the Community Response & Resource Center.
- On October 5, 2022, City Council tabled the decision regarding the revised schematic design and cost estimates of the Community Response & Resource Center. Council directed staff to report back on November 2, 2022, and inform council about why the workgroup decisions were made regarding the revised schematic design. The council also appointed two council members to the CRRC workgroup to discuss layout options.
- On October 5, 2022, City Council approved a contract between the City of Fernley and Resource Concepts, Inc. for environmental consulting services for the project in the amount of $25,000.00.
- On July 7, 2022, City Council approved the schematic design and cost estimate of the Community Response & Resource Center. The CRRC, as presented on July 7th, was a single story 56,000 gsf facility that consisted of two separate structures at a total base bid construction cost including breakout of $38,491.547.00.
- On July 7, 2022, City Council approved the Owner-Construction Manager At Risk Pre-Constructrion agreement between the City of Fernley and Core Construction in the amount of $94,500.00.
- On June 15, 2022, City Council approved the Lyon County and City of Fernley Subrecipient ARPA Agreement in the amount of $300,000 for the construction of the Community Response & Resource Center. On April 14, 2022, at the Lyon County Board of Commissioners meeting, the CRRC Workgroup presented the project and requested ARPA funding. The Lyon County Board of Commissioners graciously awarded ARPA funds to the City of Fernley in the amount of $350,000 for the CRRC project. On May 23, 2021, the Lyon County Board of Commissioners revisited their ARPA allocations and reduced the amount to $300,000 for the CRRC project. The City is currently in the process of approving the funding agreement.
- On June 15, 2022, City Council approved the Letter of Intent to a lease agreement between the Boys & Girls Club of Truckee Meadows to operate and maintain sections of the Community Response & Resource Center once constructed. This is in part due to the leadership, and the Boys & Girls Club experience of operating and maintaining facilities and programs, including five Boys & Girls Club afterschool and summer programs, thirteen school sites, four early learning centers, and seven teen centers. Under this agreement, the Boys and Girls Club would operate the day-care, afterschool programming, kitchen, cafeteria, gym, and meeting rooms. The letter of intent is critical to a funding source, the Nevada ARPA Child Care Extension Grant for the construction of the Community Response & Resource Center.
- On February 16, 2022, City Council approved the contract for the Owners Representative Construction Manager as Agent contract with Cumming Management Group. This contract is to ensure there is a person/company who represents the City and focuses on evaluating the project from the City's perspective beginning at the earliest stages of planning and continuing through occupancy. At the same meeting, the Council also approved staff to enter into contract negotiations with the selected CMAR for reconstruction services for the CRRC.
- City Council approved the programming and services that will be in the CRRC on January 19, 2022. The programming and services in the CRRC must be ARPA eligible because the City is using ARPA monies to fund the project. Staff identified the following ARPA eligible services and programs needed in our community in response to the public health crisis that will be in the Community Response & Resource Center: COVID-19 testing and vaccination site, workforce development services/programming, education assistance services, afterschool programming, and early childhood education.
- On October 20, 2021, City Council approved the contract with TSK Architects for the architectural engineering services of the Community Response & Resource Center. The scope of work, among other items, included the Pre-Design Services/Concepts Update to determine the programming and services

that will be housed in the CRRC and the completion of the final schematic design.

- On August 4, 2021, Fernley City Council approved the American Rescue Plan Act spending plan which included $12,000,000 for the development of a Community Response & Resource Center.

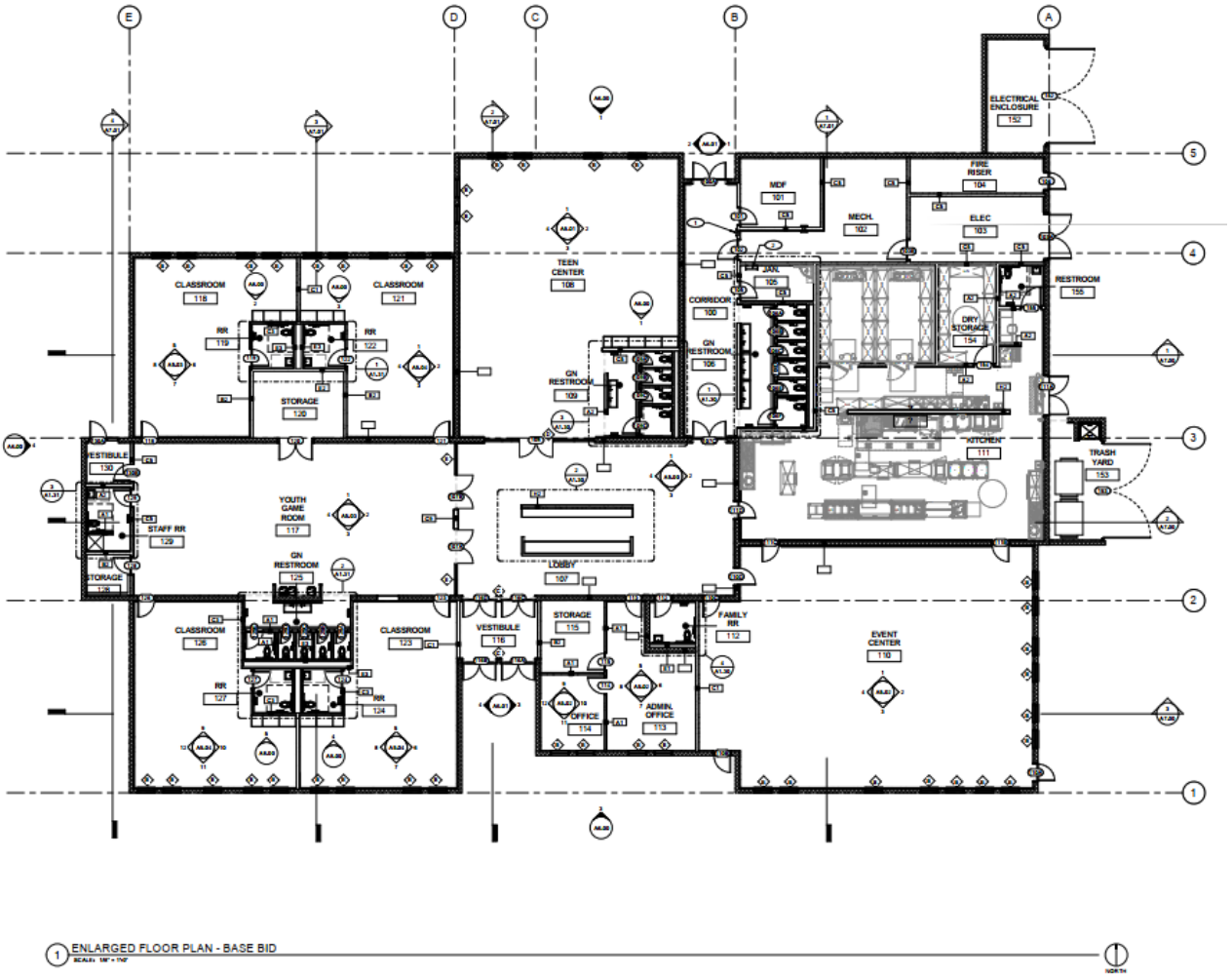
DESIGN DEVELOPMENT OF THE COMMUNITY RESPONSE & RESOURCE CENTER

In design development, the schematic plans and elevations are reviewed, revised and expanded to incorporate all the details and specifications required for construction. Whereas the schematic design generally describes "what" is being built, the design development phase explores and determines "how" it is being built and how it will operate, with design features of the project more fully developed. The main goal of this phase is to define and develop the important aspects of the project. The exterior, interior layouts, room sizes, and materials are more fully designed. The engineers have further developed the HVAC, plumbing and electrical systems. Project components are looked at to the smallest detail and include interior and exterior building materials and finishes. The main purpose of the design development phase is to define and develop the important aspects of the project including the exterior and interior of the building, layouts, room sizes and the materials needed.

TSK began the design development phase once the schematic design was approved by City Council on November 2, 2022. Based upon the City's approval of the schematic design documents and authorization to proceed, TSK further developed the design with detail and refinement. In the design development phase, drawings are to include further development of the architectural and mechanical, electrical, and plumbing systems, with floor/reflected ceiling and civil plans. Site development of parking area and community space have also progressed during this phase. Further development of the structural grid and integration of structural system in to the building model, developed supporting plans, enlarged plans, reflected ceiling plans, door/window schedule, further development of civil/landscape drawings. Core will prepare the first formal pre-construction deliverable for the project and will include, but not be limited to the Project Schedule Risk Identification and Mitigation Report.

Base Bid Floor Plan

Below is the Enlarged Floor Plan for the Base Bid. The space dedicated to the expansion of the afterschool programming is 17,230 GSF of space that includes four classrooms, a youth game room, a teen center, two administrative offices, a commercial size kitchen (2,300 SF), event space (2,498 SF) with elevated ceiling, storage rooms, restrooms, and has a secured entry way. The event space has an occupant load of 167.

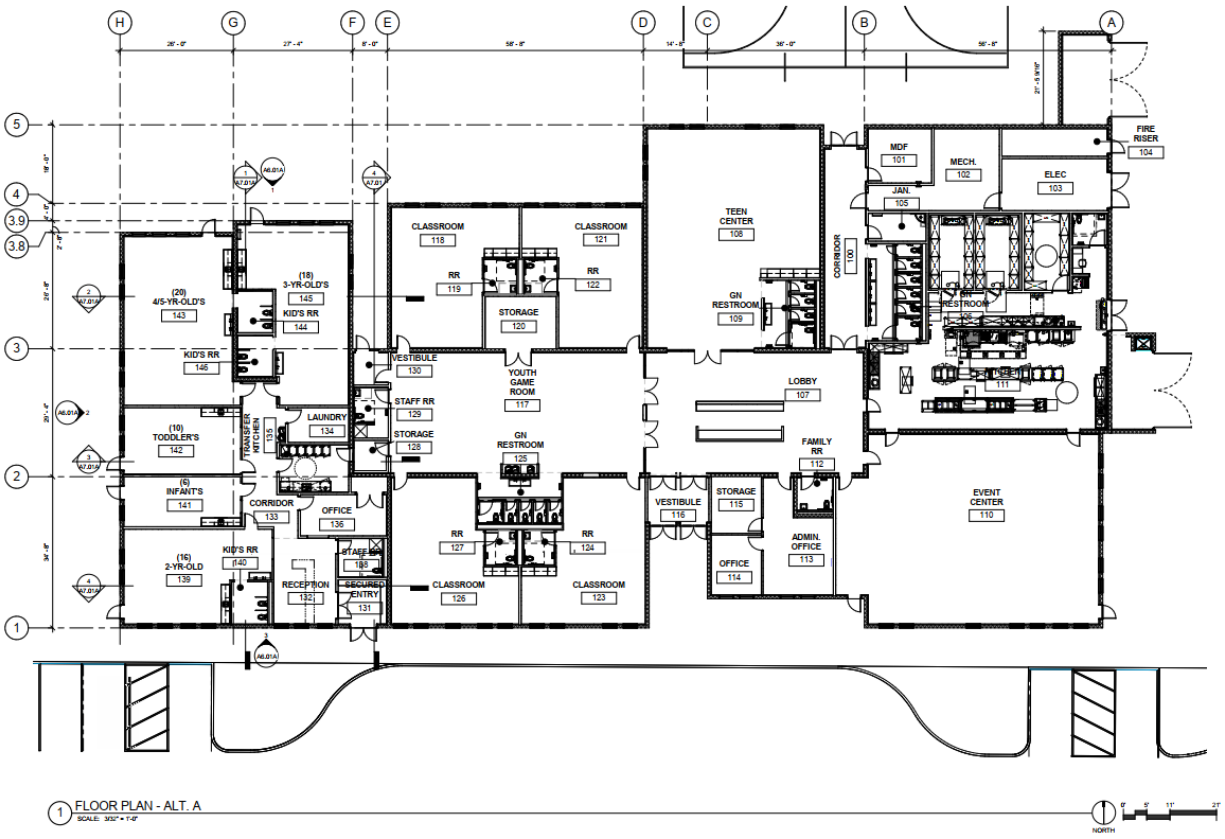


1 ENLARGED FLOOR PLAN - BASE BID

NORTH

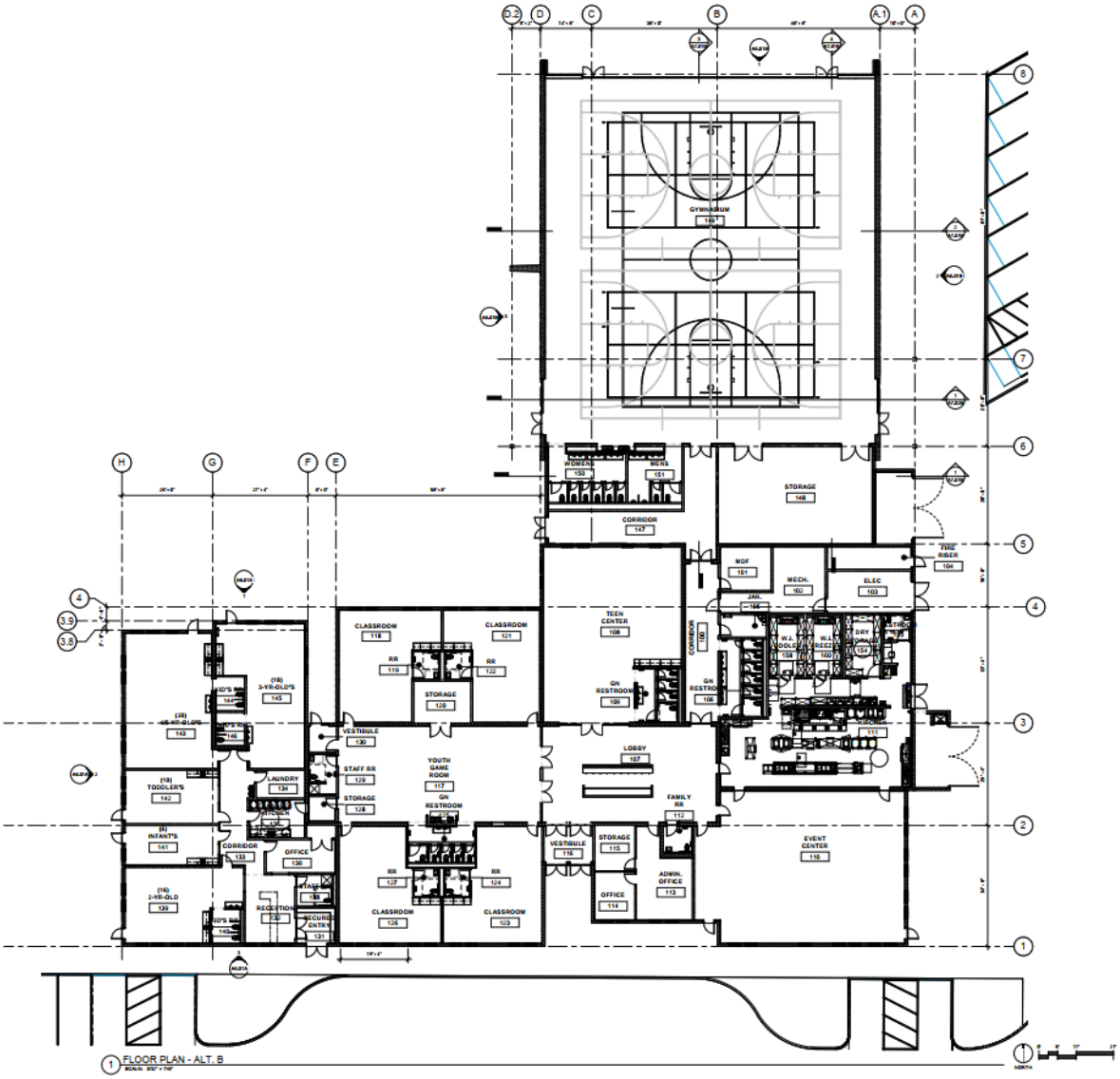
Alt. A Floor Plan

Floor Plan - Alt. A, below, adds the Early Learning Center (ELC) to the building. The early learning center will provide 5,062 GSF of dedicated space with a secured entry way and includes five classrooms serving 0–5-year-olds, children restrooms, an administrative office, a reception area, laundry room, kitchen room and a staff restroom. The ELC will provide open spots for six infants, 10 toddlers, 16 two-year olds, 18 three-year olds, and twenty 4/5-year old children; for a total of 70 children.



Alt. B Floor Plan

The gymnasium/events center, pictured below, includes programming that incorporates multi-use space that would provide the community with essential services such as emergency shelter or health services, youth and adult recreation programs and services, and events/meeting space. The gym is 9,942 SF with an occupant load of 498.



Schematic design sets up the general idea for a project and the design development focuses and refines it - the construction documents fill in all of the project details. Upon Council approval of the project Design Development and cost estimates, the project team will work on the Construction Documents. The detailed cost estimate and reconciliation will come during the CD phase in which TSK is getting started and the construction details are developed, pricing will further be defined. Core is engaging subcontractors for pricing input. Staff anticipates the completion of 50% Construction Documents in April and to be presented for approval to Fernley City Council on April 19, 2023. The final set of drawings will specify every element of the project, from the structure to the paint colors. Further project team discussion whether to continue into the construction documents phase for all three phases or not, based on the funding the City of Fernley can afford.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

2 CFR Part 200, Section 601 and 602 of the Social Security Act
NRS Chapter 338

FINANCIAL IMPLICATIONS:

The City of Fernley must comply with Department of Treasury 2 CFR part 200 and Section 601 and 602 of the Social Security Act. Amerian Rescue Act funds may be used to cover eligible costs incurred during the period that begins March 3, 2021, and ends on December 31, 2024, as long as the award funds for the obligations incurred by December 31, 2024 are expended by December 31, 2026. Any funds not expended by December 31, 2026 to cover such obligation must be returned.

ATTACHMENTS:

1. 230119 Fernley CRRC Base Bid
2. 230119 Fernley CRRC DD Set Alt A
3. 230119 Fernley CRRC DD Set Alt B

CITY OF FERNLEY CRRC

DESIGN DEVELOPMENT

JANUARY 19, 2023

PROJECT ADDRESS:



CLIENT:

CITY OF FERNLEY

595 SILVER LACE BLVD.
FERNLEY, NEVADA 89408

tsk

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phone: 775.857.2949
fax: 775.857.2403
www.tska.com

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Consultant

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F.775.826.9030

FOOD SERVICE DESIGN

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LAS VEGAS, NEVADA 89134
P.619-285-1189
rdieli@dmhfoodservicedesign.com

PLEASE RECYCLE

Project

CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

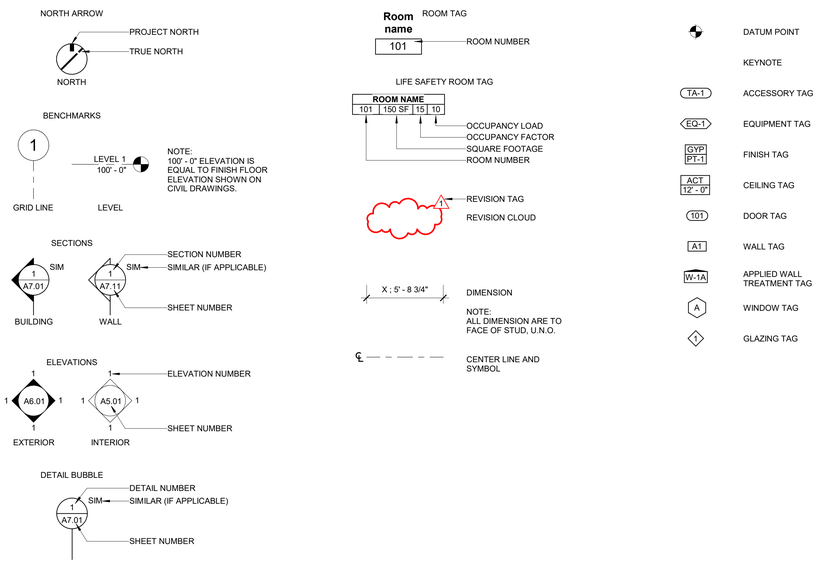
DESIGN DEVELOPMENT JANUARY 19, 2023

ABBREVIATIONS

A		D		G		O	
A.D.	Area Drain	D.F.	Drinking Fountain	G.B.	Grab Bar	O.A.	Overall
A.V.	Audio/Visual	D.O.	Door Opening	G.F.R.C.	Glass Fiber Reinforced Concrete	O.C.	On Center
ACC.	Accessible	D.S.	Dry Standpipe	GA.	Guage	O.D.	Outside Diameter (Dim.)
ACOUS.	Acoustical	D.S.P.	Downspout	GALV.	Galvanized	O.F.C.I.	Owner Furnished Contractor Installed
ADJ.	Adjustible	DBL.	Double	GL.	Glass	O.F.O.I.	Owner Furnished Owner Installed
AGGR.	Aggregate	DEPT.	Department	GND.	Ground	O.H.	Opposite Hand
AL.	Aluminum	DET.	Detail	GR.	Grade	O.R.D.	Overflow Roof Drain
APPROX.	Approximate	DIA.	Diameter	GYP.	Gypsum	OBS.	Obscure
ARCH	Architectural	DIM.	Dimension			OFF.	Office
ASPH.	Asphalt	DISP.	Dispenser	H		OPNG.	Opening
		DN.	Down	H.B.	Hose Bibb	OPP.	Opposite
B		DR.	Door	H.M.	Hollow Metal		
B.O.F.	Bottom of Fixture	DS.	Downspout	HDWD.	Hardwood	P	
BD.	Board	DWG.	Drawing	HDWE.	Hardware	P.LAM.	Plastic Laminate
BITUM.	Bituminous	DWR.	Drawer	HGT.	Height	P.T.D.	Paper Towel Dispenser
BLDG.	Building			HORIZ.	Horizontal	P.T.D./R.	Combination Paper Towel Dispencer and Receptacle
BLK.	Block	E		HR.	Hour	P.T.R.	Paper Towel Receptacle
BLKG.	Blocking	(E)	Existing			PL.	Plate
BM.	Beam	E.	East	I		PLAS.	Plaster
BOT.	Bottom	E.I.F.S.	Exterior Insulation Finish System	I.D.	Inside Diameter (Dim.)	PLYWD	Plywood
		E.J.	Expansion Joint	INSUL.	Insulation	PR.	Pair
C		E.P.	Electrical Panelboard	INT.	Interior	PRCST.	Pre-cast
C.B.	Catch Basin	E.P.D.M.	Single Ply Roof Membrane			PT.	Point
C.F.C.I.	Contractor Furnished Contractor Installed	E.W.C.	Electric Water Cooler	J		PTN.	Partition
C.F.O.I.	Contractor Furnished Owner Installed	EA.	Each	JAN.	Janitor		
C.G.	Corner Guard	ELEC.	Electrical	JT.	Joint	Q	
C.I.	Cast Iron	ELEV.	Elevation			Q.T.	Quarry Tile
C.J.	Control Joint	EMER.	Emergency	K			
C.M.U.	Concrete Masonry Unit	ENCL.	Enclosure	KIT.	Kitchen	R	
CAB.	Cabinet	EQ.	Equal			R.	Riser
CEM.	Cement	EQUIP.	Equipment	L		R.D.	Roof Drain
CER.	Ceramic	EXIST.	Existing Exposed	LAB.	Laboratory	R.O.	Rough Opening
CLG.	Ceiling	EXP.	Expansion	LAM.	Laminate	R.W.L.	Rain Water Leader
CLKG.	Caulking	EXT.	Exterior	LAV.	Lavatory	RAD.	Radius
CLO.	Closet			LKR.	Locker	REF.	Reference
CLR.	Clear	F		LT.	Light	REFR.	Refrigerator
CNTR.	Counter	F.A.	Fire Alarm			REINF.	Reinforce
COL.	Column	F.B.	Flat Bar	M		REQD	Required
CONC.	Concrete	F.D.	Floor Drain	M.C.	Medicine Cabinet	RESIL.	Resilient
CONN.	Connection	F.E.	Fire Extinguisher	M.O.	Masonry Opening	RGTR.	Register
CONST.	Construction	F.E.C.	Fire Extinguisher Cabinet	MAX.	Maximum	RM.	Room
CONT.	Continuous	F.H.C.	Fire Hose Cabinet	MECH.	Mechanical	RRM	Restroom
CORR.	Corridor	F.O.C.	Face of Concrete	MEMB.	Membrane	RWD	Redwood
CPT.	Carpet	F.O.F.	Face of Finish	MFGR.	Manufacturer		
CT.	Ceramic Tile	F.O.S.	Face of Stud	MH.	Manhole	S	
CTR.	Center	F.S.	Full Size	MIN.	Minimum	S.	South
CTSK.	Countersunk	FDN.	Fountain	MIR.	Mirror	S.C.	Solid Core
		FIN.	Finish	MISC.	Miscellaneous	S.C.D.	Seat Cover Dispenser
		FLASH.	Flashing	MTD.	Mounted	S.D.	Soap Dispenser
		FLOUR.	Flourescent	MTL.	Metal	S.N.D.	Sanitary Napkin Dispensr
		FLR.	Floor	MUL.	Mullion	S.SK.	Service Sink
		FPRF.	Fireproof			SCHED.	Schedule
		FT.	Foot or Feet	N		SECT.	Section
		FTG.	Footing	N.	North	SH.	Shelf
		FURR.	Furring	N.I.C.	Not in Contract	SHR.	Shower
		FUT.	Future	N.T.S.	Not to Scale	SHT.	Sheet
				NO. OR #	Number	SIM.	Similar
				NOM.	Nominal	SPEC.	Specification
						SQ.	Square
						SST.	Stainless Steel

STA.	Station		
STD.	Standard		
STL.	Steel		
STO.	Storage		
STRL.	Structural		
SUSP.	Suspended		
SYM.	Symmetrical		
T			
T.&G.	Tongue and Groove		
T.B.	Towel Bar		
T.C.	Top of Curb		
T.O.W.	Top of Wall		
T.P.	Top of Pavement		
T.P.D.	Toilet Paper Dispenser		
T.V.	Television		
TEL.	Telephone		
TER.	Terazzo		
THK.	Thick		
TRD.	Tread		
TYP.	Typical		
U			
U.N.O.	Unless Noted Otherwise		
UNIF.	Unfinished		
UR.	Urinal		
V			
V.B.	Vapor Barriers		
V.C.G.	Vinyl Corner Guard		
V.T.	Vinyl Tile		
VAR.	Varies		
VERT.	Vertical		
VEST.	Vestibule		
W			
W.	West		
W.C.	Water Closet		
W/	With		
W/O	Without		
WD.	Wood		
WK.P.	Working Point		
WP.	Waterproof		
WSCT.	Wainscot		
WT.	Weight		

SYMBOL LEGEND



MATERIALS LEGEND

- EARTH
- CONCRETE
- MASONRY
- METAL
- PLYWOOD
- FINISH WOOD
- ROUGH WOOD
- BLOCKING
- RIGID INSULATION
- THERMAL INSULATION
- ACOUSTIC INSULATION

VICINITY MAP

CODE ANALYSIS

RELATED CODE SECTION

OCCUPANCY CLASSIFICATION METHOD

NON-SEPARATED — 508.3

OCCUPANCY

A-3	303.4
A-2	303.3
B	304
E	305
S-1	311.2

ANALYSIS BASED ON MOST RESTRICTIVE A-3 OCCUPANCY

SPRINKLERED

FIRE SPRINKLER PROVIDED — YES

CONSTRUCTION TYPE

TYPE II B — TABLE 601 / 602

HEIGHT

ALLOWED = 75 FT — TABLE 504.3
ACTUAL = 40 FT

NUMBER OF STORIES

ALLOWED = 3 STORIES — TABLE 504.4
ACTUAL = 1 STORY

AREA

TYPE II B (A-3) — TABLE 506.2
ALLOWED - 38,000 SF
ACTUAL = 35,212 SF

FIRE-RESISTANCE RATINGS

TYPE II B	TABLE 601
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS - EXTERIOR	0
BEARING WALLS - INTERIOR	0
NON BEARING WALLS - EXTERIOR	0
NON BEARING WALLS - INTERIOR	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION	0

DRAWING INDEX

#	SHEET NAME	100% SD (DATE)
0.0	COVER SHEET	■
G0.00	GENERAL SHEET	■
G0.01	GENERAL ACCESSIBILITY DETAILS	■
G1.01	LIFE SAFETY PLAN - OVERALL PLANS	■
G1.02	LIFE SAFETY PLAN - BASE BID	■
C1.00	NOTES	■
C1.01	EXISTING CONDITIONS & DEMO	■
C2.00	SITE LAYOUT BASE BID	■
C3.00	UTILITY PLAN	■
C4.00	GRADING PLAN	■
C5.00	DETAILS	■
C5.01	DETAILS	■
C5.02	DETAILS	■
C5.03	DETAILS	■
L1.00	IRRIGATION LEGEND	
L1.01	IRRIGATION PLAN BASE BID	■
L2.00	LANDSCAPE LEGEND AND NOTES	■
L2.01	LANDSCAPE PLAN BASE BID	■
AS1.01	SITE PLAN - BASE BID	■
AS1.11	ENLARGED SITE PLANS AND DETAILS	■
A1.01	OVERALL FLOOR PLAN - BASE BID	■
A1.11	ENLARGED FLOOR PLAN - BASE BID	■
A1.21	DIMENSION & PARTITION PLAN - BASE BID	■
A1.22	DIMENSION HIGH WALL - BASE BID	■
A1.30	ENLARGED RESTROOM PLANS & INTERIOR ELEVATION - BASE BID	■
A1.31	ENLARGED RESTROOM PLANS & INTERIOR ELEVATIONS	■
A2.00	MATERIAL FINISH SCHEDULE	■
A2.10	DOOR SCHEDULE	■
A2.20	DOOR DETAILS	■
A2.21	DOOR DETAILS	■
A2.30	PARTITION TYPES	■
A2.31	PARTITION TYPES	■
A2.32	PARTITION TYPES	■
A2.33	PARTITION TYPES	■
A3.01	REFLECTED CEILING PLAN - BASE BID	■
A3.30	CEILING DETAILS	■
A4.01	ROOF PLAN - BASE BID	■
A5.00	INTERIOR ELEVATIONS	■
A5.01	INTERIOR ELEVATIONS	■
A5.02	INTERIOR ELEVATIONS	■
A5.03	INTERIOR ELEVATIONS	■
A5.04	INTERIOR ELEVATIONS	■
A6.00	EXTERIOR ELEVATIONS - BASE BID	■
A6.01	EXTERIOR ELEVATIONS - BASE BID	■
A7.00	BUILDING SECTIONS - BASE BID	■
A7.01	BUILDING SECTIONS - BASE BID	■
A7.10	WALL SECTION	■
A7.11	WALL SECTION	■
A7.12	WALL SECTION	■
A7.13	WALL SECTION	■
A7.14	WALL SECTION	■
A8.00	CASEWORK PLANS AND ELEVATIONS - BASE BID	■
S0	STRUCTURAL GENERAL NOTES	■
S0.1	SPECIAL INSPECTIONS & QUALITY ASSURANCE	■
S0.2	TYP. CONC. & FOUNDATION DETAILS	■
S0.3	TYP. CONC. & CMU DETAILS	■
S0.4	TYP. MASONRY DETAILS	■
S0.5	TYP. STEEL DETAILS	■
S0.6	TYP. ROOF FRAMING DETAILS	■
S0.7	TYP. ROOF FRAMING DETAILS	■
S0.8	TYP. ROOF FRAMING DETAILS	■
S0.9	TYP. INTERIOR COLD-FORMED STEEL DETAILS	■
S0.10	TYP. INTERIOR COLD-FORMED STEEL DETAILS	■
S0.11	TYP. SITE DETAILS	■
S1.01	OVERALL FOUNDATION PLAN - BASE BID	■
S1.11	ENLARGED FOUNDATION PLAN - BASE BID	■
S4.01	LOW ROOF FRAMING PLAN - BASE BID	■
S4.02	HIGH ROOF FRAMING PLAN - BASE BID	■
S5.01	WALL ELEVATIONS - BASE BID	■
S5.02	WALL ELEVATIONS - BASE BID	■
S7.01	STRUCTURAL SECTIONS - BASE BID	■
S7.02	STRUCTURAL SECTIONS - BASE BID	■
FS0.1.0	FOODSERVICE EQUIPMENT FLOOR PLAN	■
FS0.2.0	FOODSERVICE EQUIPMENT SCHEDULE	■
FS0.3.0	FOODSERVICE EQUIPMENT PLUMBING PLAN	■
FS0.4.0	FOODSERVICE EQUIPMENT ELECTRICAL PLAN	■
FS0.5.0	FOODSERVICE EQUIPMENT BUILDING WORK PLAN	■
FS0.6.0	FOODSERVICE EQUIPMENT REFRIGERATION PLAN	■
FS0.8.0	FOODSERVICE EQUIPMENT DETAILS	■
FS0.8.1	FOODSERVICE EQUIPMENT DETAILS	■
FS0.9.0	FOODSERVICE EQUIPMENT ATTACHMENT DETAILS	■
FS0.9.1	FOODSERVICE EQUIPMENT ATTACHMENT DETAILS	■
FP0.00	FIRE PROTECTION SCHEDULES, LEGEND, & NOTES	■
FP1.01	FIRE PROTECTION OVERALL FLOOR PLAN	■
M0.00	MECHANICAL LEGEND, NOTES, & AIR DISTRIBUTION	■
M0.01	MECHANICAL EQUIP SCHEDULES	■
M1.01	MECHANICAL OVERALL FLOOR PLAN	■
M1.11	MECHANICAL PARTIAL FLOOR PLAN - BASE BID	■
M2.1	MECHANICAL PARTIAL ZONING PLAN - BASE BID	■
M4.01	MECHANICAL PARTIAL ROOF PLAN - BASE BID	■
M5.01	CAPTIVEAIRE PLANS	■
M5.02	CAPTIVEAIRE PLANS	■
M5.03	CAPTIVEAIRE PLANS	■
M5.04	CAPTIVEAIRE PLANS	■
M6.01	MECHANICAL DETAILS	■
P0.00	PLUMBING SCHEDULES, LEGEND, NOTES, & SHEET INDEX	■
P1.01	PLUMBING OVERALL FLOOR PLAN	■
P1.11	PLUMBING PARTIAL FLOOR PLAN - BASE BID	■
P2.11	PLUMBING ENLARGED FLOOR PLANS - BASE BID	■
P2.12	PLUMBING ENLARGED FLOOR PLANS - BASE BID	■
P4.01	PLUMBING PARTIAL ROOF PLAN - BASE BID	■
P6.01	PLUMBING DETAILS	
PS1.01	PLUMBING SITE PLAN	■
E0.00	ELECTRICAL	■
E0.01	LEGENDS, FA ONLINE DIAGRAM & DRAWING SCHEDULE	■
E0.02	FIXTURE SCHEDULE AND IECC CALCULATIONS	■
E0.03	ONLINE DIAGRAM AND LOAD CALCULATIONS	■
E0.06	DETAILS	■
E0.07	DETAILS	■
E1.01	DEMOLITION SITE PLAN	■
E1.02	NEW WORK SITE PLAN	■
E2.01	LIGHTING PLAN - BASE BID	■
E3.01	POWER PLAN - BASE BID	■
E4.01	MECHANICAL POWER PLAN - BASE BID	■
E5.01	FIRE ALARM PLAN - BASE BID	■
T0.01	TELECOM GENERAL NOTES, LEGEND, AND DRAWING SCHEDULE	■
T0.02	TELECOM DETAILS	■
T0.03	TELECOM ONELINE DIAGRAMS	■
T0.04	ENLARGED TELECOM ROOM PLANS	■
T0.05	SECURITY INTRUSION DETECTION SYSTEM DETAILS	■
T0.06	SECURITY VIDEO SURVEILANCE CAMERA DETAILS	■
T1.01	TELECOM SITE PLAN	■
T2.01	TELECOM PLAN - BASE BID	■

#	SHEET NAME	100% SD (DATE)
G1.02A	LIFE SAFETY PLAN - ALT. A	■
C2.00A	SITE LAYOUT ALTERNATIVE A	■
L1.01A	IRRIGATION PLAN ALTERNATE A	■
L2.01A	LANDSCAPE PLAN ALTERNATE A	■
AS1.01A	SITE PLAN - ALT. A	■
AS1.11A	ENLARGED SITE PLAN - ALT. A	■
A1.01A	OVERALL FLOOR PLAN - ALT. A	■
A1.11A	ENLARGED FLOOR PLAN - ALT. A	■
A1.21A	DIMENSION & PARTITION PLAN - ALT. A	■
A1.30A	ENLARGED RESTROOM PLANS & INTERIOR ELEVATIONS - ALT. A	■
A3.01A	REFLECTED CEILING PLAN - ALT. A	■
A2.10A	DOOR SCHEDULE - ALT. A	■
A4.01A	ROOF PLAN - ALT. A	■
A5.01A	INTERIOR ELEVATIONS - ALT. A	■
A5.02A	INTERIOR ELEVATIONS - ALT. A	■
A6.01A	EXTERIOR ELEVATION - ALT. A	■
A7.01A	BUILDING SECTIONS - ALT. A	■
A7.10A	WALL SECTION - ALT. A	■
A8.01A	CASEWORK PLANS AND ELEVATIONS - ALT. A	■
S1.01A	OVERALL FOUNDATION PLAN - ALT. A	■
S1.11A	ENLARGED FOUNDATION PLAN - ALT. A	■
S4.01A	ROOF FRAMING PLAN - ALT. A	■
S5.01A	WALL ELEVATIONS - ALT. A	■
S7.01A	STRUCTURAL SECTIONS - ALT. A	■
M1.11A	MECHANICAL PARTIAL FLOOR PLAN - ALT. A	■
M2.2	MECHANICAL PARTIAL ZONING PLAN - ALT. A	■
M4.01A	MECHANICAL PARTIAL ROOF PLAN - ALT. A	■
P1.11A	PLUMBING PARTIAL FLOOR PLAN - ALT. A	■
P2.11A	PLUMBING ENLARGED FLOOR PLANS - ALT. A	■
P4.01A	PLUMBING PARTIAL ROOF PLAN - ALT. A	■
E2.01A	LIGHTING PLAN - ALT. A	■
E3.01A	POWER PLAN - ALT. A	■
E4.01A	MECHANICAL POWER PLAN - ALT. A	■
E5.01A	FIRE ALARM PLAN - ALT. A	■
T2.01A	TELECOM PLAN - EARLY LEARNING	■

#	SHEET NAME	100% SD (DATE)
G1.02B	LIFE SAFETY PLAN - ALT. B	■
C2.00B	SITE LAYOUT ALTERNATIVE B	■
L1.01B	IRRIGATION PLAN ALTERNATE B	■
L2.01B	LANDSCAPE PLAN ALTERNATE B	■
AS1.01B	SITE PLAN - ALT. B	■
AS1.11B	SITE PLAN - ALT. B	■
A1.01B	OVERALL FLOOR PLAN - ALT. B	■
A1.30B	ENLARGED RESTROOM PLANS & INTERIOR ELEVATIONS - ALT. B	■
A1.21B	DIMENSION & PARTITION PLAN - ALT. B	■
A1.11B	ENLARGED FLOOR PLAN - ALT. B	■
A3.01B	REFLECTED CEILING PLAN - ALT. B	■
A4.01B	ROOF PLAN - ALT. B	■
A2.10B	DOOR SCHEDULE - ALT. B	■
A5.01B	INTERIOR ELEVATIONS - ALT. B	■
A5.02B	INTERIOR ELEVATIONS - ALT. B	■
A6.01B	EXTERIOR ELEVATIONS - ALT. B	■
A7.01B	BUILDING SECTIONS - ALT. B	■
A7.02B	BUILDING SECTIONS - ALT. B	■
A7.10B	WALL SECTION - ALT. B	■
A7.11B	WALL SECTION - ALT. B	■
A7.12B	WALL SECTION - ALT. B	■
S1.01B	OVERALL FOUNDATION PLAN - ALT. B	■
S1.11B	ENLARGED FOUNDATION PLAN - ALT. B	■
S4.01B	ROOF FRAMING PLAN - ALT. B	■
S5.01B	WALL ELEVATIONS - ALT. B	■
S7.01B	STRUCTURAL SECTIONS - ALT. B	■
M1.11B	MECHANICAL PARTIAL FLOOR PLAN - ALT. B	■
M2.3	MECHANICAL PARTIAL ZONING PLAN - ALT. B	■
M4.01B	MECHANICAL PARTIAL ROOF PLAN - ALT. B	■
P1.11B	PLUMBING PARTIAL FLOOR PLAN - ALT. B	■
P2.11B	PLUMBING ENLARGED FLOOR PLANS - ALT. B	■
P4.01B	PLUMBING PARTIAL ROOF PLAN - ALT. B	■
E2.01B	LIGHTING PLAN - ALT. B	■
E3.01B	POWER PLAN - ALT. B	■
E4.01B	MECHANICAL POWER PLAN - ALT. B	■
E5.01B	FIRE ALARM PLAN - ALT. B	■
T2.01B	TELECOM PLAN - GYMNASIUM	■

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DESIGN DEVELOPMENT

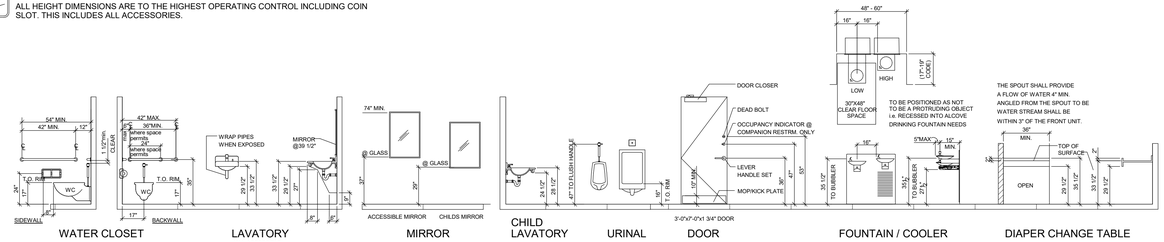
REVISIONS		
REV	DATE	DESCRIPTION

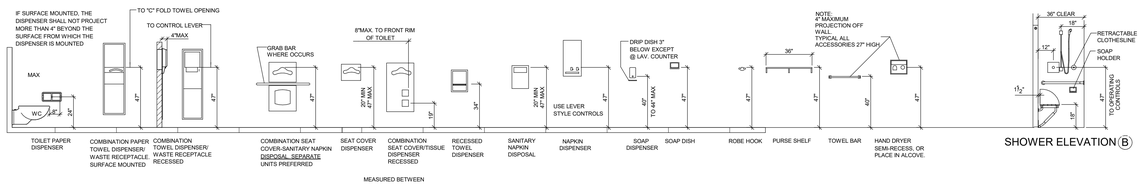
Sheet Title
GENERAL SHEET

Date: JANUARY 19, 2023
Sheet No:
G0.00

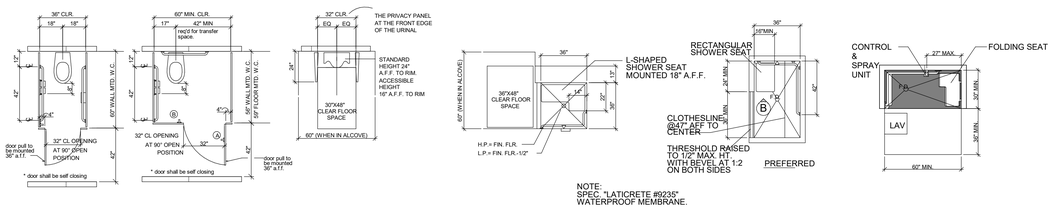
DESIGN CRITERIA FOR ACCESSIBLE RESTROOMS

NOTE:
ALL HEIGHT DIMENSIONS ARE TO THE HIGHEST OPERATING CONTROL INCLUDING COIN SLOT. THIS INCLUDES ALL ACCESSORIES.





MEASURED BETWEEN

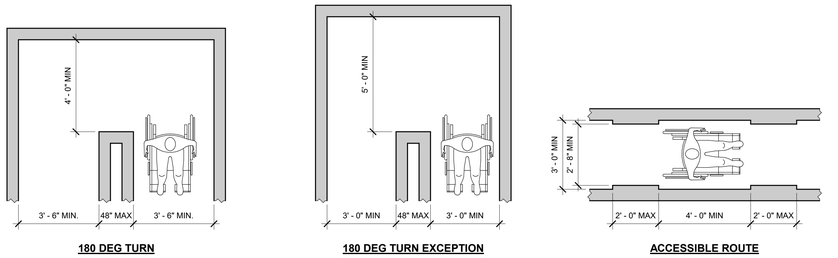


AMBULATORY STALL | ACCESSIBLE STALL | URINAL

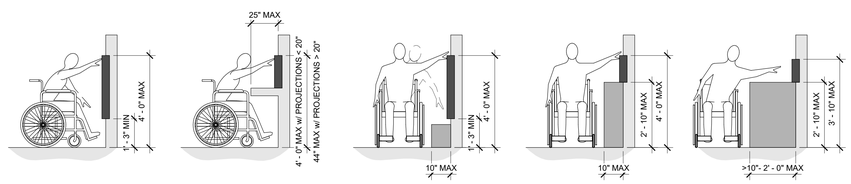
NOTE:
SPEC. "LATICRETE #9235" WATERPROOF MEMBRANE.

ACCESSIBLE ROLL-IN SHOWERS

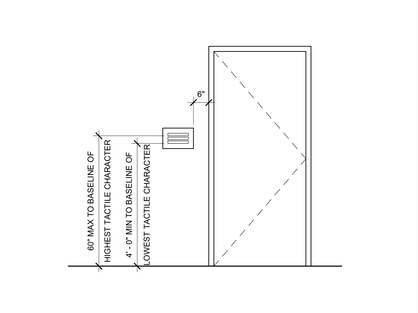
19 ADA_TYPICAL FIXTURE ELEVATIONS
SCALE: 1/4" = 1'-0"



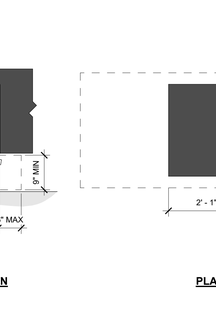
18 ADA_CLEAR WIDTH
SCALE: 3/8" = 1'-0"



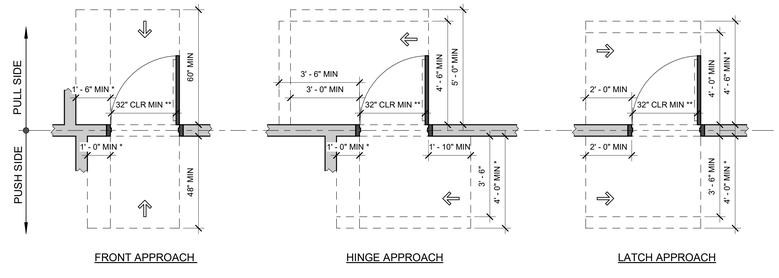
17 ADA_REACH RANGE
SCALE: 3/8" = 1'-0"



4 ADA_PROTRUDING OBJECTS
SCALE: 1/2" = 1'-0"

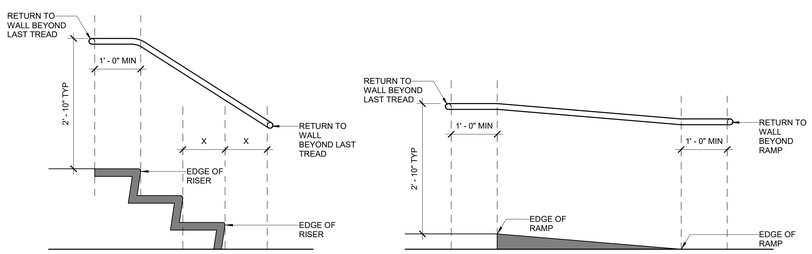


3 ADA_VERTICAL CHANGE IN LEVEL
SCALE: 12" = 1'-0"



NOTES:
* IF BOTH LATCH AND CLOSER ARE PROVIDED
** CLEAR WIDTH SHALL COMPLY WITH LOCAL CODE AMENDMENT REQUIREMENTS

10 ADA_DOOR SWING CLEARANCES
SCALE: 3/8" = 1'-0"



9 ADA_HANDRAIL EXTENSIONS AT STAIRS AND RAMPS
SCALE: 3/4" = 1'-0"

2 ADA_SIGNAGE PLACEMENT
SCALE: 1/2" = 1'-0"

1 ADA_KNEE AND TOE CLEARANCE
SCALE: 3/4" = 1'-0"

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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
GENERAL ACCESSIBILITY DETAILS

Date: JANUARY 19, 2023
Sheet No:
G0.01

BOYS AND GIRLS CLUB

BOYS AND GIRLS CLUB	ADMIN OFFICE	471 SF
BOYS AND GIRLS CLUB	BUILDING SUPPORT	2227 SF
BOYS AND GIRLS CLUB	CAFETERIA	2068 SF
BOYS AND GIRLS CLUB	CLASSROOM	777 SF
BOYS AND GIRLS CLUB	CLASSROOM	779 SF
BOYS AND GIRLS CLUB	CLASSROOM	777 SF
BOYS AND GIRLS CLUB	CLASSROOM	802 SF
BOYS AND GIRLS CLUB	CORRIDOR	1835 SF
BOYS AND GIRLS CLUB	KITCHEN	2484 SF
BOYS AND GIRLS CLUB	LOBBY	1900 SF
BOYS AND GIRLS CLUB	OFFICE	180 SF
BOYS AND GIRLS CLUB	OFFICE	215 SF
BOYS AND GIRLS CLUB	RECEPTION	182 SF
BOYS AND GIRLS CLUB	RR	73 SF
BOYS AND GIRLS CLUB	RR	75 SF
BOYS AND GIRLS CLUB	RR	73 SF
BOYS AND GIRLS CLUB	RR	75 SF
BOYS AND GIRLS CLUB	RR	123 SF
BOYS AND GIRLS CLUB	RR	230 SF
BOYS AND GIRLS CLUB	SECURED ENTRY	286 SF
BOYS AND GIRLS CLUB	STORAGE	245 SF
BOYS AND GIRLS CLUB	STORAGE	152 SF
BOYS AND GIRLS CLUB	TEEN CENTER	1927 SF
BOYS AND GIRLS CLUB	YOUTH GAME ROOM	1401 SF
		19358 SF

EARLY LEARNING CENTER

EARLY LEARNING CENTER	(18) 2-YR-OLD'S	731 SF
EARLY LEARNING CENTER	(24) 3-YR-OLD'S	942 SF
EARLY LEARNING CENTER	CORRIDOR	1068 SF
EARLY LEARNING CENTER	INFANT	365 SF
EARLY LEARNING CENTER	OFFICE	253 SF
EARLY LEARNING CENTER	RR	121 SF
EARLY LEARNING CENTER	SECURED ENTRY	182 SF
EARLY LEARNING CENTER	STORAGE	221 SF
EARLY LEARNING CENTER	TODLER	519 SF
		4401 SF

GYMNASIUM

GYMNASIUM	GYMNASIUM	9685 SF
GYMNASIUM	RR	650 SF
GYMNASIUM	STORAGE	1044 SF
		11379 SF
		35139 SF



1 LIFE SAFETY PLAN - OVERALL PLANS
SCALE: 3/32" = 1'-0"

GENERAL NOTES

1 PER 2019 CBC SECTION 703.7: FIRE WALLS, FIRE BARRIERS, AND SMOKE PARTITIONS OR ANY OTHER WAL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL: (1) BE LOCATED WITHIN 15' OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30' MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION; AND (3) INCLUDE LETTERING NOT LESS THAN 3" IN HEIGHT WITH A MINIMUM 3/8" STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORKING: "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER WORDING.

KEYNOTES

1 FIRE EXTINGUISHER

LEGEND

ROOM NAME
ROOM 101 | 500 SF | 100 | 5
OCCUPANT LOAD
OCCUPANT LOAD FACTOR
AREA
ROOM NUMBER
1 HR FIRE PARTITION
2 HR FIRE PARTITION
SMOKE RESISTIVE PARTITION
PATH OF EGRESS TO EXIT DISCHARGE
0 EXIT DIRECTION AND NUMBER OF OCCUPANTS
MOST REMOTE POINT FOR TRAVEL DISTANCE
F.E.C. FIRE EXTINGUISHER CABINET - FINAL LOCATION TO BE FINALIZED BY CONTRACTOR AND LOCAL FIRE DEPARTMENT
EXIT SIGN, SEE ELECTRICAL DRAWINGS

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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
LIFE SAFETY PLAN - OVERALL PLANS

Date: JANUARY 19, 2023
Sheet No:
G1.01



1 LIFE SAFETY PLAN - BASE PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1 PER 2019 CBC SECTION 703.7: FIRE WALLS, FIRE BARRIERS, AND SMOKE PARTITIONS OR ANY OTHER WAL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL: (1) BE LOCATED WITHIN 15' OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30' MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION; AND (3) INCLUDE LETTERING NOT LESS THAN 3" IN HEIGHT WITH A MINIMUM 3/8" STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORKING: "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER WORDING.

KEYNOTES

1 FIRE EXTINGUISHER

LEGEND

ROOM NAME
ROOM 101 | 500 SF | 100 | 5
OCCUPANT LOAD
OCCUPANT LOAD FACTOR
AREA
ROOM NUMBER
1 HR FIRE PARTITION
2 HR FIRE PARTITION
SMOKE RESISTIVE PARTITION
PATH OF EGRESS TO EXIT DISCHARGE
0 EXIT DIRECTION AND NUMBER OF OCCUPANTS
MOST REMOTE POINT FOR TRAVEL DISTANCE
F.E.C. FIRE EXTINGUISHER CABINET - FINAL LOCATION TO BE FINALIZED BY CONTRACTOR AND LOCAL FIRE DEPARTMENT
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
LIFE SAFETY PLAN - BASE BID

Date: JANUARY 19, 2023
Sheet No:
G1.02

LEGEND

EXISTING		PROPOSED
4174	CONTOUR LINE	4174
+ 4163.1	GROUND ELEVATION	+ 4163.1
	TREE	
	ROCK	
	EDGE OF PAVEMENT	
	AC PAVING TO BE REMOVED	
	CURB & GUTTER	
	CONCRETE	
	UTILITY POLE	
	LIGHT	
	GUY WIRE	
ET	ELECTRIC TRANSFORMER	ET
EV	ELECTRIC VAULT	EV
EP	ELECTRIC PANEL	EP
EC	ELECTRIC CABINET	EC
EB	ELECTRIC BOX	EB
EM	ELECTRIC METER	EM
EG	ELECTRIC GENERATOR	EG
E	ELECTRIC MANHOLE	E
AC	AIR CONDITIONER	AC
	ELECTRIC OUTLET	
	BOLLARD	
SD	STORM DRAIN MANHOLE / DROP INLET	SD
	CATCH BASIN	
WV	WATER VALVE	WV
ICV	IRRIGATION CONTROL VALVE WATER	ICV
WM	METER	WM
WS	WATER SPIGOT / HOSE BIB WATER	WS
W	MANHOLE	W
WV	WATER VAULT	WV
	FIRE HYDRANT	
GV	GAS VALVE	GV
GM	GAS METER	GM
T	TELEPHONE MANHOLE	T
TB	TELEPHONE BOX	TB
TV	TELEPHONE VAULT	TV
S	SEWER MANHOLE	S
SSCO	SEWER CLEANOUT	SSCO
	SURVEY MONUMENT	
	CONTROL POINT	
	BARRICADE	
	SIGN	
	RETAINING WALL	
	FENCE	X
	GRADE BREAK	
	FLOW LINE	
	SOIL TEST PIT	
	DETAIL CALLOUT	X / CX.X
	COMM LINE	COMM
	GAS LINE	6"G
	ELECTRIC LINE	ELEC
	SEWER LINE	12" PVC SS
	WATER LINE	12" C900 W
	AIR LINE	
	STORM DRAIN	12" RCP SD
REC WL	RECLAIMED WATER LINE	REC WL

ABBREVIATIONS

AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
AGG	AGGREGATE
BC	BEGIN CURVE (HORIZONTAL)
BOW	BOTTOM OF WALL
BF, BOF	BOTTOM OF FOOTING
BV	BUTTERFLY VALVE
BVC	BEGIN VERTICAL CURVE
BW	BACK OF WALK
CB	CATCH BASIN
cfs	CUBIC FEET PER SECOND
CF	CUBIC FEET
C&G	CURB AND GUTTER
℄	CENTER LINE
CL	CLASS / CENTER LINE
CMP	CORRUGATED METAL PIPE
COMP	COMPACTION
CONC	CONCRETE
CONTR	CONTRACTOR
CP	CONCRETE PAD
CTV	CABLE TELEVISION
DI	DROP INLET
DIA	DIAMETER
DWY	DRIVEWAY
E	EAST
EA	EACH
EC	END CURVE (HORIZONTAL)
ELL	ELBOW
ELEC	ELECTRICAL
ELEV	ELEVATION
EVC	END VERTICAL CURVE
EX, (E)	EXISTING
EXT	EXTERIOR
FCA	FLANGE COUPLING ADAPTER
FE	FINISH ELEVATION
FES	FLARED END SECTION
FF	FINISH FLOOR
FFC	FRONT FACE OF CURB
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FLG	FLANGE
fps	FEET PER SECOND
FTG	FOOTING
G	GAS
GALV	GALVANIZED
GB	GRADE BREAK
GDW	GRAVEL DRIVEWAY
GD	GROUND
GV	GATE VALVE
H	HANDICAPPED
HGL	HYDRAULIC GRADE LINE
HORIZ	HORIZONTAL
HP	HIGH POINT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INT	INTERSECTION
IRR	IRRIGATION
LAT	LATERAL
LF	LINEAR FEET
LP	LOW POINT
LT	LEFT
MAX	MAXIMUM
MDD	MAXIMUM DRY DENSITY
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MMD	MAXIMUM MARSHALL DENSITY
MUTCD	MANUAL FOR TRAFFIC CONTROL DEVICES
N	NORTH
NAP	NOT A PART
NIP	NOT IN PROJECT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
(P)	PROPOSED
PCC	PORTLAND CEMENT CONCRETE
PG	PAD GRADE
PI	POINT OF INTERSECTION
PIVC	POINT OF INTERSECTION VERTICAL CURVE
PL	PROPERTY LINE
POCC	POINT OF COMPOUND CURVATURE
POT	POINT OF TANGENCY
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PRVC	POINT OF REVERSE VERTICAL CURVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
Q 5	5 YEAR PEAK FLOW
Q 100	100 YEAR PEAK FLOW
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REF	REFERENCE
RET	CURB RETURN
RP	RADIUS POINT
RT	RIGHT
R/W, ROW	RIGHT-OF-WAY
S=	SLOPE
S	SOUTH
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SL	STREET LIGHT
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
SSPWC	STANDARD SPEC. FOR PUBLIC WORKS CONSTRUCTION
STA	STATION
SW	SIDEWALK
TELE	TELEPHONE
TBO	TEMPORARY BLOW OFF VALVE
TC	TOP OF CURB, TOP OF CONC
TG	TO GRADE
TOB	TOP OF BERM
TF, TOF	TOP OF FOOTING
TOW	TOP OF WALL
TS	TRAFFIC SIGNAL
TSCB	TRAFFIC CONTROL SIGNAL BOX
TR	TOP OF RAIL
TRANS	TRANSITION
TYP	TYPICAL
UG/P	UNDER GROUND POWER
UNO	UNLESS NOTED OTHERWISE
V5	VELOCITY AT 5 YEAR PEAK
VC	VERTICAL CURVE
VEL	VELOCITY
VERT	VERTICAL
VG	VALLEY GUTTER
W	WEST
W/G	WATER AND GAS
WL	WATER LINE
WM	WATER METER
WS	WATER SURFACE
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
YR	YEAR

811 Know what's below. Call before you dig.

BASIS OF BEARING

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE NAD83(94), AS DETERMINED FROM REAL TIME KINEMATIC GPS OBSERVATIONS, OBSERVED MARCH 25, 2022 USING A SURVEY GRADE DUAL FREQUENCY GPS RECEIVER WITH TRIMBLE VRS CORRECTIONS FROM CONTINUOUSLY OPERATING REFERENCE STATION (CORS) "FERNLEY" MODIFIED BY A COMBINED FACTOR OF 1.000245, SCALED FROM 0.00N ,0.00E AND CONVERTED TO U.S. SURVEY FEET. ALL DIMENSIONS ON THIS MAP ARE GROUND DISTANCES.

BASIS OF ELEVATION

DATUM: NAVD 88
PROJECT BENCHMARK = CORS) FERNLEY
HAVING AN ELEVATION OF 4188.84

NOTES:

GENERAL

1. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (ORANGE BOOK), LATEST EDITION.
2. THE CONTRACTOR SHALL REFER TO THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, AS ADOPTED BY THE PERMITTING ENTITY, FOR ALL DETAILING NOT SHOWN ON THESE PLANS.
3. CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND CURRENT CITY OF FERNLEY AND NDOT STANDARD PLANS/SPECIFICATIONS (STANDARD SPECIFICATIONS) AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING A PRE-CONSTRUCTION JOB SITE CONFERENCE WITH GOVERNING AGENCIES INCLUDING THE CITY OF FERNLEY, ALL UTILITY COMPANIES, OWNER'S REPRESENTATIVES, AND THE PROJECT ENGINEER PRIOR TO COMMENCING WORK. THIS MEETING SHALL BE HELD AT LEAST FORTY-EIGHT (48) HOURS, OR TWO (2) BUSINESS DAYS, PRIOR TO THE START OF CONSTRUCTION AND SHALL COMMUNICATE SCHEDULES, CONTRACTORS MEAN AND METHODS, MATERIALS TO BE USED, AND OTHER RELEVANT MATTERS ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT.
5. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A FINAL WALK-THROUGH INSPECTION WITH THE PROJECT ENGINEER AND THE CITY OF FERNLEY. ALL CONSTRUCTION WILL BE SUBJECT TO FINAL APPROVAL BY THE PROJECT ENGINEER AND CITY OF FERNLEY. AT THE DISCRETION OF THE PROJECT ENGINEER, ALL IMPROVED AREAS SHALL BE SUBJECT TO A FLOW TEST TO ENSURE CONSTRUCTED GRADES MEET THE INTENT OF THE PLANS. IMPROVED AREAS DEVIATING FROM THESE PLANS THAT DO NOT ADEQUATELY DRAIN WILL BE REMOVED AND RECONSTRUCTED AT THE CONTRACTOR'S EXPENSE.
6. ALL WORK EITHER DIRECTLY OR INDIRECTLY RELATED TO THE PROJECT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY SYSTEM MANAGER.
7. THE CONTRACTOR SHALL MAINTAIN AN ONSITE RECORD COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA, CHANGE ORDERS, WORK CHANGE DIRECTIVES, FIELD ORDERS, FIELD CHANGES, AND WRITTEN INTERPRETATIONS AND CLARIFICATIONS. RECORDS SHALL BE IN GOOD ORDER AND ANNOTATED TO SHOW CHANGES MADE DURING CONSTRUCTION.
8. CONTRACTOR SHALL PROVIDE MATERIALS AND EQUIPMENT SUBMITTALS AND/OR SHOP DRAWINGS TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO ORDERING OR INSTALLATION. A SIGNED SET OF REVIEWED SUBMITTALS MUST ALWAYS BE AVAILABLE ONSITE DURING CONSTRUCTION.
9. DETAILS NOT SHOWN ON THESE PLANS ARE PER ORANGE BOOK AND CITY OF FERNLEY STANDARDS.
10. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT AT 1-800-642-2444 TO PROVIDE FIELD LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
11. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS OF POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING CONSTRUCTION. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLAN.
12. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROCURE ALL NECESSARY PERMITS, LICENSES, INSURANCE POLICIES, ETC. AS MAY BE NECESSARY TO COMPLY WITH LOCAL, COUNTY, STATE, AND FEDERAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK; UNLESS OTHERWISE OBTAINED BY THE OWNER.
13. THE CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN AND PROVIDE, PLACE, AND MAINTAIN ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, PILOT CAR, OR OTHER DEVICES NECESSARY TO CONTROL TRAFFIC THROUGH THE CONSTRUCTION AREA AND FOR PUBLIC SAFETY. ALL TRAFFIC CONTROL OPERATIONS SHALL COMPLY WITH THE LATEST MUTCD AND CONFORM TO THE NEVADA WORK ZONE TRAFFIC CONTROL HANDBOOK AND CITY OF FERNLEY REQUIREMENTS. AT NO TIME WILL OBSTRUCTIONS BE LEFT IN THE ROADWAY DURING NIGHT HOURS. ALL TRAFFIC CONTROL PLANS SHALL BE PREPARED BY A REGISTERED CIVIL ENGINEER OR ATTSA CERTIFIED PERSONNEL.
14. THE CONTRACTOR AGREES TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTROL AND THE STANDARD SPECIFICATIONS.
15. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618.
16. THE CONTRACTOR SHALL PURSUE THE WORK IN A CONTINUOUS AND DILIGENT MANNER, CONFORMING TO ALL THE PERTINENT SAFETY REGULATIONS TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
17. THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY DAY. THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.
18. TEMPORARY CONSTRUCTION FENCING SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT IN AREAS AS DELINEATED ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER. THE TEMPORARY FENCING SHALL PREVENT CHILDREN AND PETS FROM ENTERING THE CONSTRUCTION AREA, CREATE A VISUAL BARRIER OF THE CONSTRUCTION ACTIVITIES FROM THE ADJACENT RESIDENCE AND YARDS, AND PROTECT VEGETATION FROM CONSTRUCTION EQUIPMENT.
19. THE CONTRACTOR SHALL USE ONLY AUTHORIZED SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AND OBTAIN PROPER APPROVALS FROM THE LAND OWNER AND LOCAL GOVERNING AUTHORITY TO DO SO. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. IN THE EVENT A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL HAVE THE MONUMENT REPLACED, AT HIS OWN EXPENSE, BY A LICENSED SURVEYOR IN THE STATE OF THE PROJECT SITE.
21. CONSTRUCTION HOURS SHALL BE WEEKDAYS BETWEEN 7:00 AM AND 6:00 PM UNLESS OTHERWISE DICTATED BY LOCAL ORDINANCE. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE PROJECT ENGINEER TO MODIFY WORK HOURS.
22. ALL FIELD CHANGES MUST BE PRE-APPROVED BY THE PROJECT ENGINEER.
23. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
24. ALL SALVAGED MATERIALS ARE THE PROPERTY OF THE OWNER AND SHALL BE PALLETIZED ONSITE UNLESS OTHERWISE ARRANGED WITH THE OWNER AND/OR PROJECT ENGINEER.
25. ALL WORK SHALL BE COORDINATED WITH THE PROJECT ENGINEER AND CITY OF FERNLEY. NO ADDITIONAL PAYMENTS FOR EXTRA WORK WILL BE MADE TO THE CONTRACTOR WITHOUT PRIOR WRITTEN AUTHORIZATION BY THE PROJECT ENGINEER OR CITY OF FERNLEY.
26. THE OWNER IS RESPONSIBLE FOR FURNISHING QUALIFIED SITE INSPECTIONS AS REQUIRED TO COMPLY WITH LOCAL ORDINANCES.
27. A GEOTECHNICAL INVESTIGATION WAS PERFORMED ON THIS PROJECT. ALL RECOMMENDATIONS INCLUDED IN THE REPORT ARE HEREBY MADE A PART OF THE CONSTRUCTION DOCUMENTS UNLESS MODIFIED WITHIN THESE PLANS. INSPECTION AND TESTING DURING CONSTRUCTION SHALL BE REQUIRED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED WITHIN THE REPORT.
    TITLE: GEOTECHNCIAL INVESTIGATION REPORT, FERNLEY COMMUNITY CENTER COMPLEX, APRIL, 2022 BY LUMOS & ASSOCIATES

UNDERGROUND UTILITIES

28. THE CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATIONS NEAR OR WITHIN THE CONSTRUCTION LIMITS WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR THE NECESSARY RELOCATION OF ANY UTILITY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING WORK.
29. NO OTHER UTILITIES MAY BE PLACED IN A WATER OR SEWER TRENCH.
30. ALL VALVE BOXES, MANHOLE STRUCTURES, AND CLEAN OUTS SHALL BE MARKED AND ACCESSIBLE AT ALL TIMES.
31. CONTRACTOR SHALL SUPPORT TRENCH SIDEWALLS IN ACCORDANCE WITH ALL APPLICABLE LAWS AND GOVERNING SAFETY REGULATIONS. SHEETING OR SHORING SHALL CONFORM TO LOCAL REGULATIONS AND OSHA STANDARDS.
32. ENDS OF UNFINISHED PIPE SHALL BE SEALED AT THE END OF EACH DAY.
33. PIPE SHALL BE LAID IN THE UPHILL DIRECTION, WITH BELL ENDS UPHILL.
34. THE CONTRACTOR SHALL COORDINATE ALL WATER MAIN SHUT DOWNS AND TIE-INS WITH THE WATER UTILITY A MINIMUM OF FORTY-EIGHT (48) HOURS OR TWO (2) BUSINESS DAYS IN ADVANCE.
35. ALL UNDERGROUND VALVES, TEES, FITTINGS, ETC. LARGER THAN 2" SHALL BE COATED TO PROTECT AGAINST CORROSION.
36. ALL WATER PROJECT MATERIAL (PIPES, VALVES, LATERALS AND APPURTENANCES) SHALL BE LEAD FREE AND MEET THE MINIMUM REQUIREMENTS OF THE NEVADA ADMINISTRATIVE CODE AND NSF/ANSI 61.
37. ALL THRUST BLOCKS SHALL BE INSPECTED PRIOR TO BACK-FILL.
38. ALL BOLTS AT THRUST BLOCKS AND VALVE SADDLES SHALL BE COVERED WITH VISQUEEN AND TAPED PRIOR TO CONCRETE PLACEMENT.
39. THE WATER MAINS SHALL NOT BE PLACED INTO SERVICE UNTIL:
    a. THE WATER MAIN HAS BEEN DISINFECTED IN ACCORDANCE WITH AWWA, NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION (NDEP), THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTIONS STANDARDS.
    b. THE DISPOSAL OF ANY SPENT CHLORINE SOLUTIONS MUST BE COORDINATED WITH NDEP'S BUREAU OF WATER POLLUTION CONTROL.
    c. ANALYSIS OF THE WATER MAIN WHICH INDICATE THAT THE WATER MEETS PRIMARY DRINKING WATER STANDARDS FOR COLIFORM BACTERIA (ABSENT FOR COLIFORM BACTERIA) HAVE BEEN OBTAINED AND REPORTED TO NDEP'S BUREAU OF SAFE DRINKING WATER. SAMPLING SHALL BE IN ACCORDANCE WITH NDEP REGULATIONS.
37. PVC PIPE SHALL BE TESTED PER AWWA C605 AND DUCTILE IRON PIPE SHALL BE TESTED FOR AWWA C600. OTHER MATERIALS SHALL BE TESTED PER REQUIREMENTS IN THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION SECTION 336.
38. CONTRACTOR SHALL CONDUCT PIPING TESTS BEFORE JOINTS ARE COVERED AND AFTER THRUST BLOCKS HAVE HARDENED SUFFICIENTLY. FILL PIPELINE 24 HOURS BEFORE TESTING AND APPLY TEST PRESSURE TO STABILIZE SYSTEM. USE ONLY POTABLE WATER.
39. CONTRACTOR SHALL PERFORM PLASTIC PIPE BALL AND MANDREL TEST ON NEWLY INSTALLED SEWER PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
40. CONTRACTOR SHALL PERFORM AIR PRESSURE TESTING ON NEWLY INSTALLED SEWER PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTIONS.

GRADING, EXCAVATION & SURFACE IMPROVEMENTS

41. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING THEIR OWN QUANTITY TAKE-OFF AND SHALL BUDGET THE PROJECT ACCORDINGLY. ALL EXCESS GRADING MATERIALS SHALL BE DISPOSED OF OFFSITE.
42. ALL EARTHWORK ACTIVITIES SHALL BE IN ACCORDANCE WITH THE PROJECT'S GEOTECHNICAL REPORT.
43. THE SOILS ENGINEER SHALL APPROVE ALL EARTHWORK AND GRADING TO CONFIRM COMPACTION REQUIREMENTS ARE MET.
44. CONTRACTOR SHALL PROTECT EXISTING PAVING, CONCRETE, LANDSCAPING, FENCING, MAILBOXES, SIGNS AND ANY OTHER IMPROVEMENTS NOT SPECIFICALLY CALLED OUT FOR REPLACEMENT. CONTRACTOR SHALL REPAIR/REPLACE ANYTHING DAMAGED BY FORCES UNDER THEIR EMPLOY OR CONTRACT.
45. ALL ASPHALT CONCRETE SURFACES SHALL BE SAWCUT THREE FEET MINIMUM INSIDE THE EDGE OF PAVEMENT TO A NEAT, STRAIGHT LINE AND REMOVED. THE EXPOSED PAVEMENT TIE-IN EDGES SHALL BE METICULOUSLY CLEANED OF ALL LOOSE MATERIAL AND THEN TREATED WITH BITUMINOUS EMULSION PRIOR TO PAVING. THE EXPOSED BASE MATERIALS SHALL BE GRADED AND RECOMPACTED PRIOR TO PAVING.

ENVIRONMENTAL

46. ALL CONSTRUCTION SHALL BE PERFORMED IN COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES). CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AND MAINTAINING A SWPPP.
47. INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF EROSION AND SILTATION FROM ENTERING THE STORM DRAIN SYSTEM, NATURAL DRAINAGE COURSES, AND/OR INTRUDING UPON ADJACENT ROADWAYS AND PROPERTIES. EROSION CONTROL MEASURES SHOWN ON THESE PLANS ARE INTENDED AS A GUIDE. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED IN THE FIELD. THIS RESPONSIBILITY SHALL APPLY THROUGHOUT THE COURSE OF CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BECOME STABILIZED AND SHALL NOT BE LIMITED TO WET WEATHER PERIODS. THE CONTRACTOR IS RESPONSIBLE FOR SWPPP UPDATES.
48. THE CONTRACTOR SHALL MAINTAIN AN ON-GOING DUST CONTROL PROGRAM INCLUDING WATERING OF OPEN AREAS, TO CONFORM WITH THE LATEST FEDERAL, STATE, AND COUNTY AIR POLLUTION REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND UPDATING DUST CONTROL PERMITS FOR THE PROJECT.
49. ALL AREAS DISTURBED AND LEFT UNDEVELOPED FOR A PERIOD OF MORE THAN 30 DAYS SHALL BE STABILIZED BY THE APPLICATION OF AN APPROVED DUST PALLIATIVE OR HYDROMULCH.
50. THE CONTRACTOR SHALL IDENTIFY A STANDBY CREW FOR EMERGENCY WORK AND THEY SHALL BE AVAILABLE AT ALL TIMES. MATERIAL NECESSARY TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR DAMAGED EROSION CONTROL MEASURES SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT APPROVED LOCATIONS.
51. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING CONSTRUCTION OF IMPROVEMENTS.
52. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING FACILITIES. GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING THE RAINSTORM SHALL ALSO BE REPAIRED.
53. FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE END OF EACH WORKING DAY.
54. ALL DISTURBED AREAS ARE REQUIRED TO HAVE A PALLIATIVE APPLIED FOR DUST CONTROL. ALL GRADING SHALL COMPLY WITH STATE AND COUNTY REGULATIONS.
55. A SIX-FOOT HIGH PERIMETER FENCE OR A 24-HOUR GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN A FACILITY EXCEEDS 18".
56. ALL AREAS DISTURBED BECAUSE OF THE WORK SHALL BE REVEGETATED IN ACCORDANCE WITH INDUSTRY BEST MANAGEMENT PRACTICES.
57. NO CONSTRUCTION MATERIALS SHALL BE STORED IN A STREAM ENVIRONMENT ZONES (SEZ) AT ANY TIME.
58. IF GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY, PREPARE A DEWATERING PLAN, AND OBTAIN APPROVAL FROM THE PROJECT ENGINEER BEFORE PROCEEDING WITH WORK. DEWATERING ACTIVITIES MAY REQUIRE THE CONTRACTOR TO OBTAIN A DISCHARGE/PUMPING PERMIT FROM THE STATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SUCH PERMITS.
59. ALL STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY GRADING OPERATIONS.

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PLEASE RECYCLE

Project

CITY OF FERNLEY
CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

DESIGN DEVELOPMENT

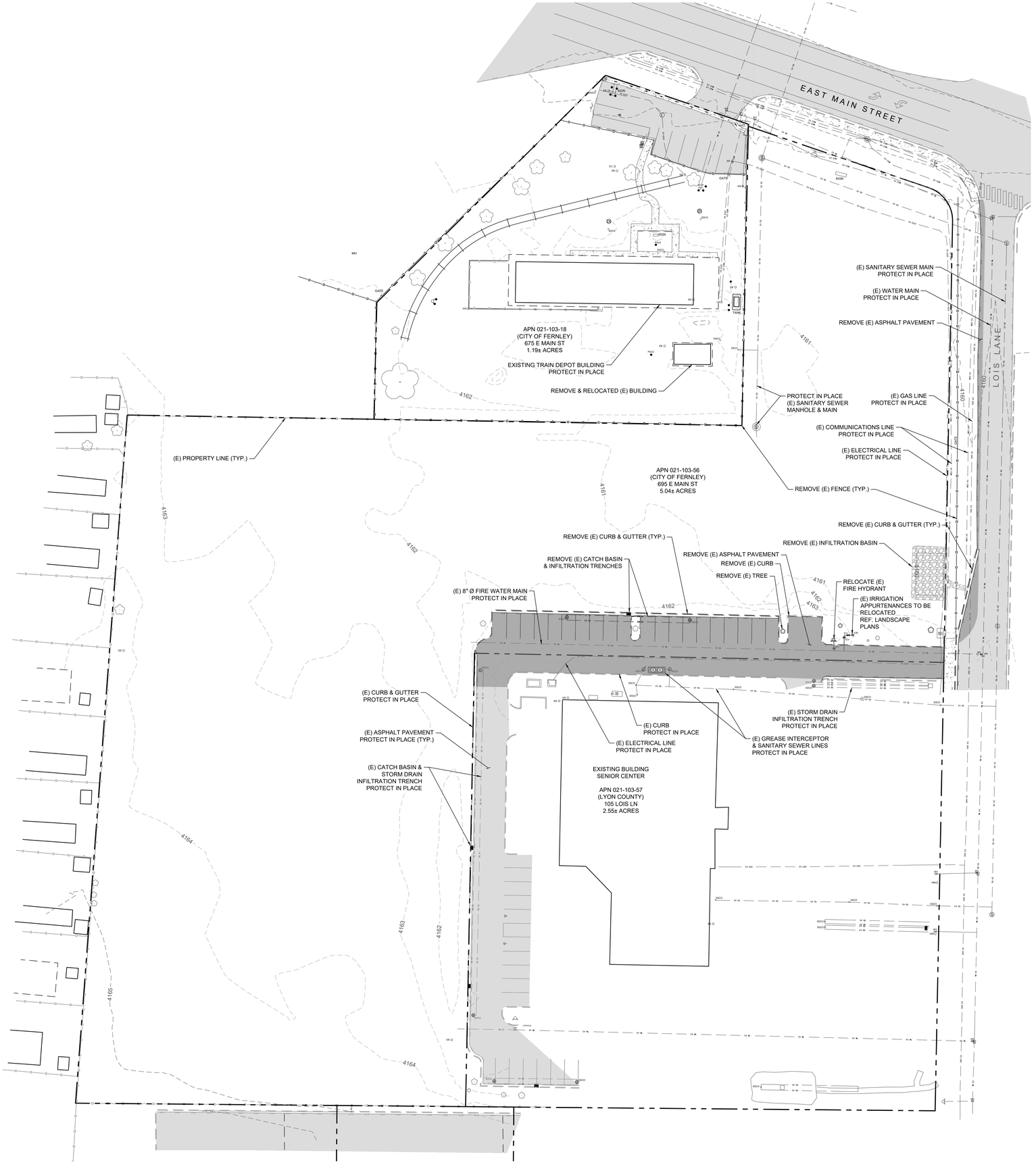
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REV	DATE	DESCRIPTION

Sheet Title

NOTES

Date: JANUARY 19, 2023
Sheet No:

C1.00



N

0 30' 60'

SCALE: 1" = 30'

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REV	DATE	DESCRIPTION

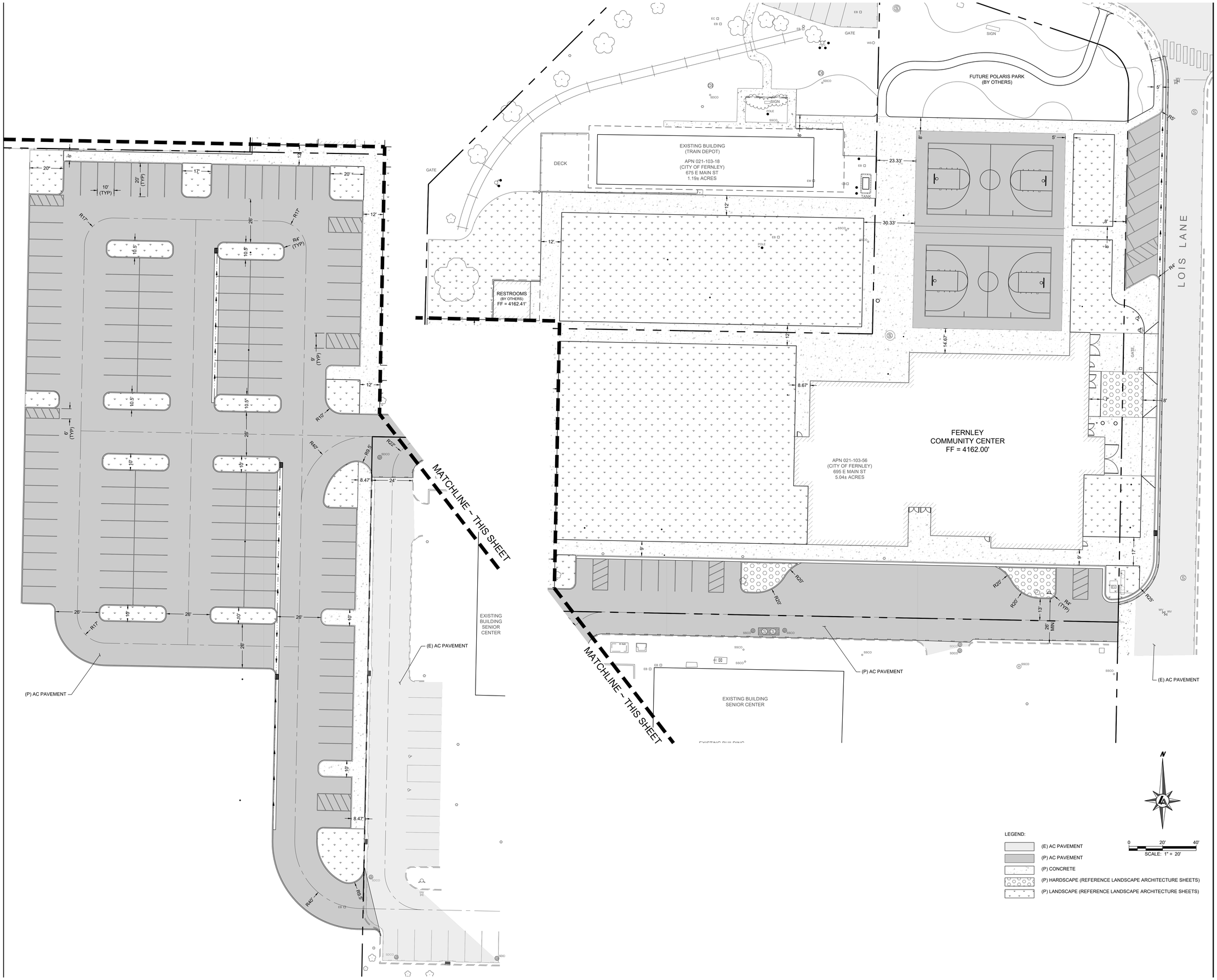
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EXISTING CONDITIONS & DEMO PLAN

Date: JANUARY 19, 2023

Sheet No:

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Job No: 21-058.00

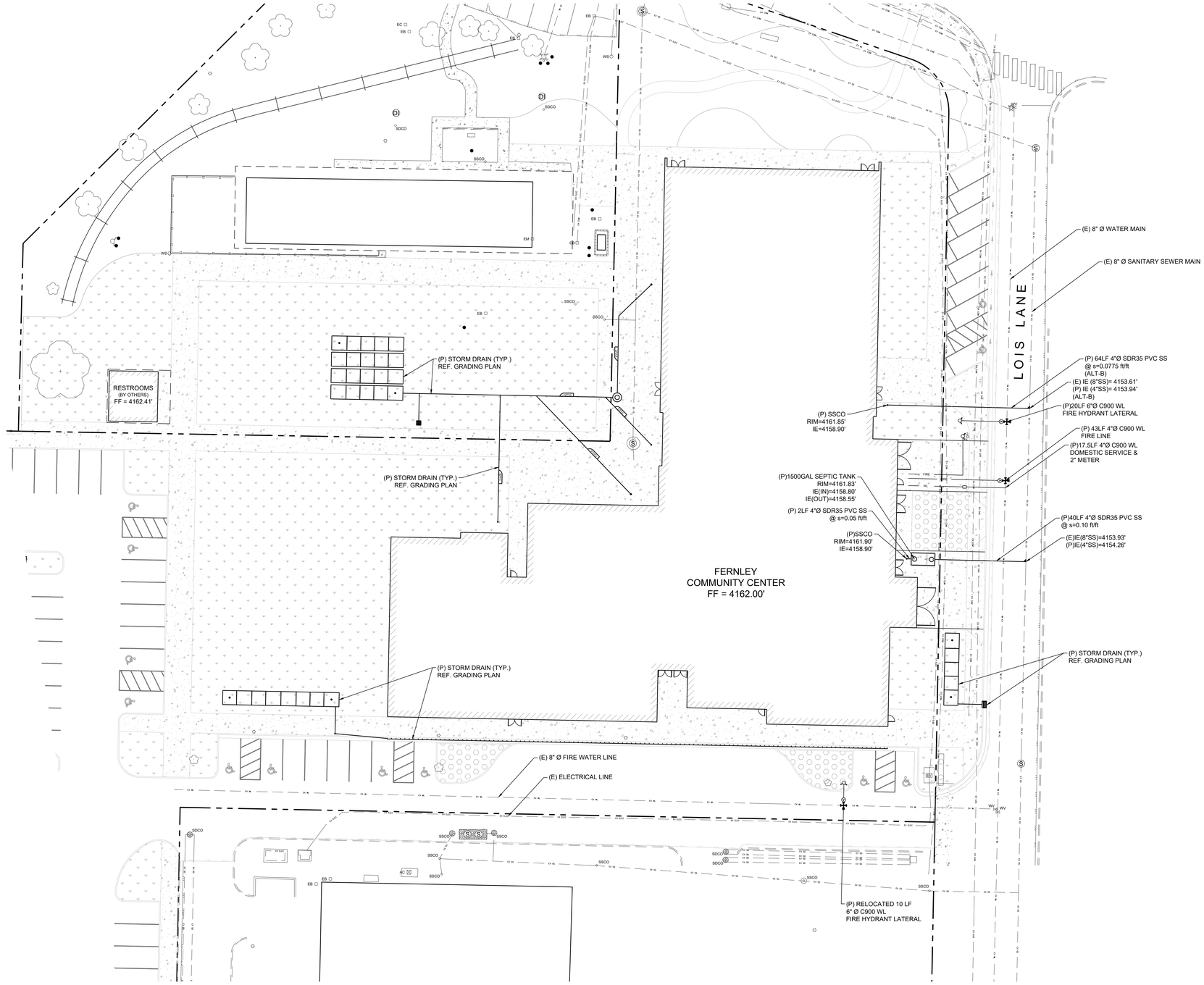
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REV	DATE	DESCRIPTION

Sheet Title
SITE PLAN
BASE BID

Date: JANUARY 19, 2023
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C2.00





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Job No: 21-058.00

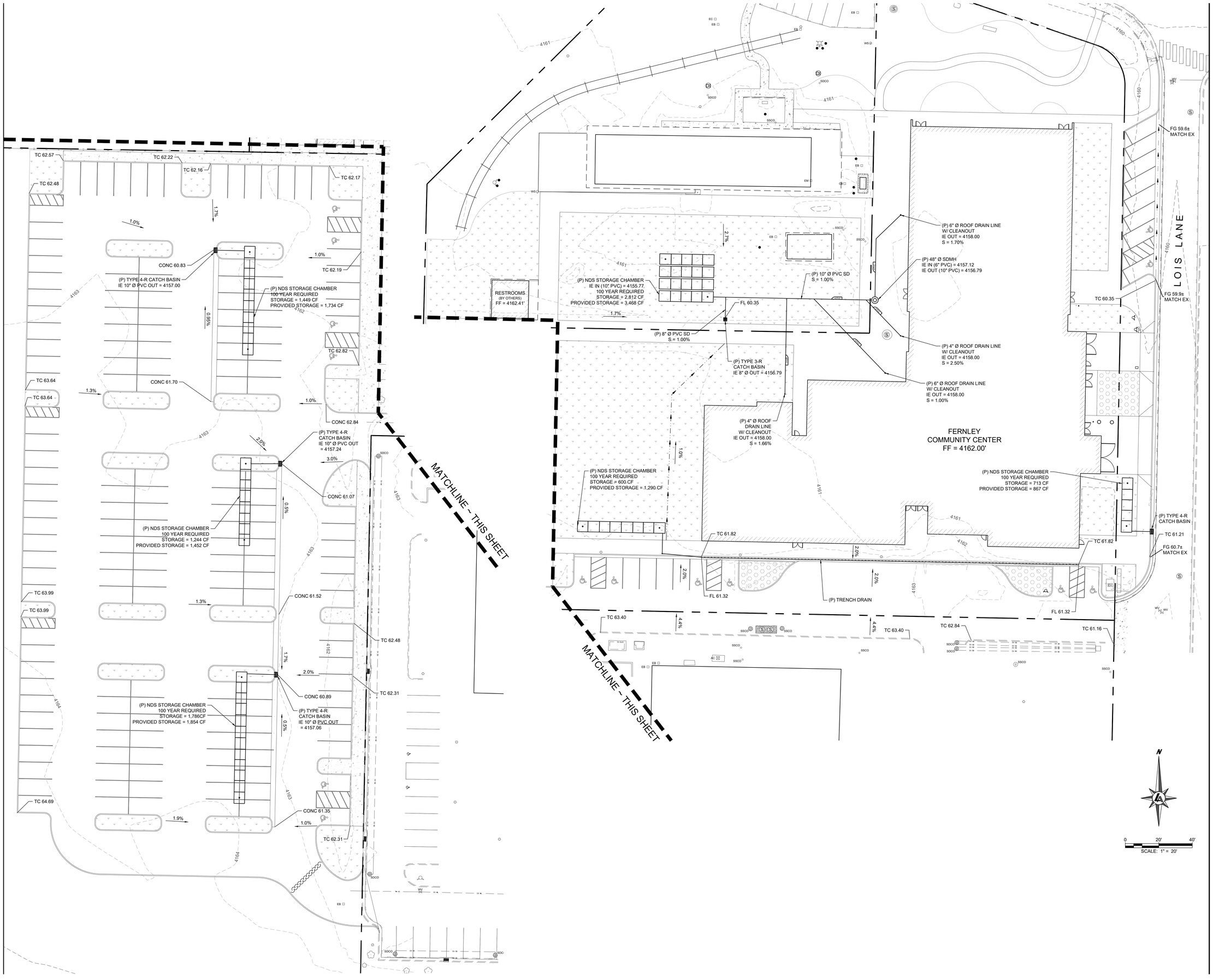
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REV	DATE	DESCRIPTION

Sheet Title
UTILITY PLAN

Date: JANUARY 19, 2023
Sheet No:
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Job No: 21-058.00

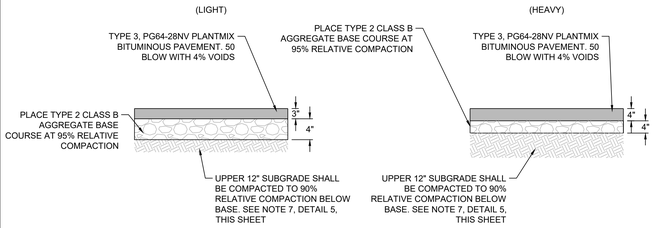
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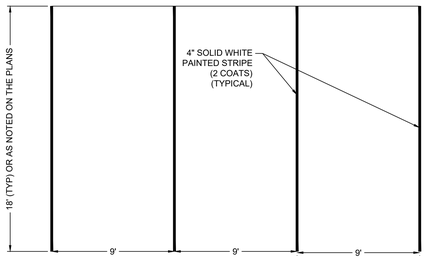
Sheet Title
GRADING PLAN

Date: JANUARY 19, 2023
Sheet No:
C4.00



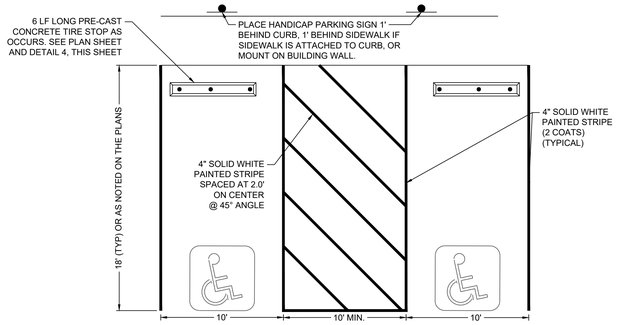
NOTE:
REFERENCE GEOTECHNICAL INVESTIGATION BY LUMOS & ASSOCIATES

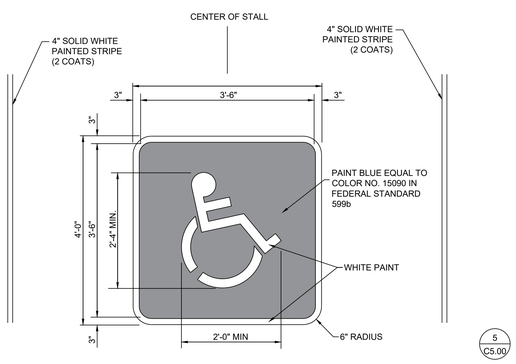
1 C5.00 PAVEMENT SECTION
SCALE: NTS



NOTE:
ALL PRIVATE PAVEMENT MARKING AND STRIPING SHALL MEET THE STANDARDS FOR TRAFFIC PAINT AND BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS 214.00 AND 324.00 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).

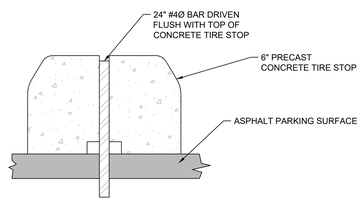
2 C5.00 STANDARD PARKING DETAIL
SCALE: NTS





*SYMBOL AND BORDER TO HAVE 3" WIDE STROKE

3 C5.00 ADA PARKING DETAIL
SCALE: NTS

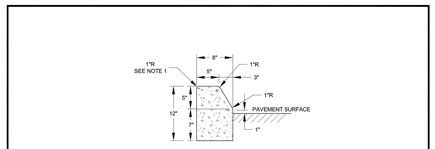


4 C5.00 PRECAST P.C.C. WHEEL STOP
SCALE: NTS

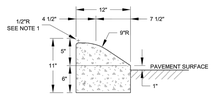
NOTES:

1. ALL BITUMINOUS PLANTMIX PAVEMENT SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), LATEST EDITION.
2. BITUMINOUS PLANTMIX SHALL BE COMPACTED TO 92% THEORETICAL MAXIMUM RICE SPECIFIC GRAVITY (MINIMUM) IN ALL PLACEMENT LOCATIONS.
3. AGGREGATE BASE MATERIAL SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200. AGGREGATE BASE SHALL BE COMPACTED BY A MINIMUM OF FIVE PASSES WITH A MINIMUM 10-TON DRUM ROLLER.
4. NO PAVING OPERATIONS SHALL OCCUR UNTIL A TEMPERATURE OF 40 DEGREES FAHRENHEIT AND RISING IS OBTAINED. NO PAVING OPERATIONS SHALL OCCUR ON FROZEN SUBGRADE.
5. MISCELLANEOUS PAVEMENT AREAS INCLUDING UTILITY ACCESS ROADS MAY BE 50 BLOW TYPE 2 OR TYPE 3 ASPHALT WITH 3% AIR VOIDS.
6. ASPHALT AND BASE THICKNESS SHALL BE THICKENED FOR PAVEMENT CUTS IN PUBLIC RIGHT-OF-WAY PURSUANT TO CITY STANDARDS.
7. THE UPPER 12" OF SUBGRADE BELOW ALL ASPHALT PAVING AND CONCRETE FLATWORK SHALL BE SUITABLE STRUCTURAL GRADE MATERIAL OR IT SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL OR CLASS E MATERIAL MEETING STRUCTURAL FILL REQUIREMENTS PURSUANT TO THE GEOTECHNICAL REPORT.
8. A TACK COAT OF SS-1h ASPHALT EMULSION, DILUTED WITH 50-50 WATER, SHALL BE APPLIED TO ALL VERTICAL ASPHALT OR CONCRETE JOINT SURFACES PRIOR TO PLACEMENT OF PLANTMIX BITUMINOUS PAVEMENT. THE APPLICATION RATE SHALL BE 0.10 TO 0.15 GALLONS PER SQUARE YARD.
9. WHEN MORE THAN ONE COURSE OF ASPHALT CONCRETE IS PLACED, THE SURFACE OF THE FIRST COURSE SHALL BE TREATED WITH A TACK COAT OF SS-1h ASPHALT EMULSION, DILUTED 50-50 WITH WATER, APPLIED AT THE RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD.
10. A FOG SEAL COAT OF SS-1h ASPHALT EMULSION, DILUTED 50-50 WITH WATER SHALL BE APPLIED TO ALL COMPLETED ASPHALT SURFACES IN ACCORDANCE WITH SSPWC 317.03.05. THE FOG SEAL SHALL BE APPLIED AT THE RATE OF 0.07-0.12 GALLONS PER SQUARE YARD. APPLICATION SHALL NOT COMMENCE UNTIL AT LEAST TWENTY-FOUR (24) HOURS AFTER FINAL ROLLING. THE PAVEMENT TEMPERATURE SHALL BE AT LEAST 65 DEGREES FAHRENHEIT AT THE TIME OF APPLICATION, AND THE AMBIENT TEMPERATURE SHALL BE AT LEAST 50 DEGREES FAHRENHEIT.
11. USE OF RECYCLED AGGREGATE BASE ON PRIVATE IMPROVEMENTS SHALL BE SUBJECT TO THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND MAY BE SUBJECT TO ADDITIONAL TESTING REQUIREMENTS.

ROAD SECTION NOTES
SCALE: NTS



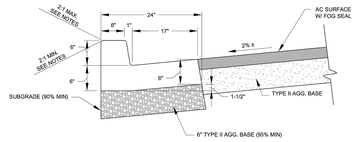
TYPE 1 P.C.C. MEDIAN CURB



TYPE 3 P.C.C. MEDIAN CURB

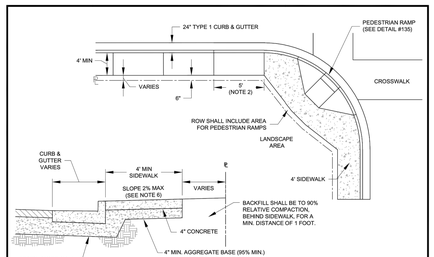
NOTES:
1. RADIUS TO BE 1/2 INCH, OMIT ROUNDING IF CURBS ARE BACK TO BACK.
2. SEE CONCRETE WORK GENERAL NOTE 2.

MEDIAN CURB	Detail No. 140 STREETS	DATE	REVISIONS	BY
		06/07	DETAIL ADDED	EB



NOTES:
1. SEE CONCRETE WORK GENERAL NOTE 2.
2. ALL CONCRETE CURB, GUTTER, AND SIDEWALK SHALL HAVE 1/2" EXPANSION JOINTS AT ALL CURB RETURNS AND SHALL HAVE WEAKENED PLANE JOINTS EVERY 10 FEET.
3. AGGREGATE BASE MATERIAL SHALL CONFORM TO THE SPECIFICATIONS FOR TYPE 2 CLASS B AGGREGATE BASE AND BE COMP. TO A MIN. 95% MAX. DRY DENSITY.
4. ALL MATERIALS SHALL CONFORM TO SSPWC CURRENT EDITION.
5. FOR SLOPE STABILIZATION REFER TO SECTION 3.4.9 OF CURRENT CITY OF FERNLEY DESIGN STANDARDS.

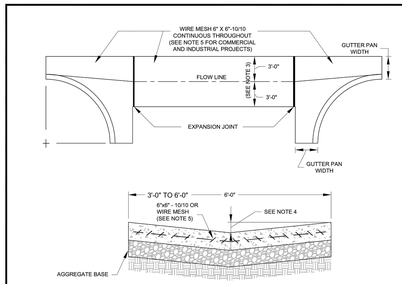
TYPE I CURB & GUTTER	Detail No. 138 STREETS	DATE	REVISIONS	BY
		N/15/02	REINF. MESH NOTE	MJ
		12/04	ADD FIBER REINFORCED / NOTE 1	RRB
		12/04	DEL. 5F EXCEPTION, NOTE 2	RRB
		06/07	ADD SLOPE STABILIZATION NOTE	EB



DETAIL 'A'

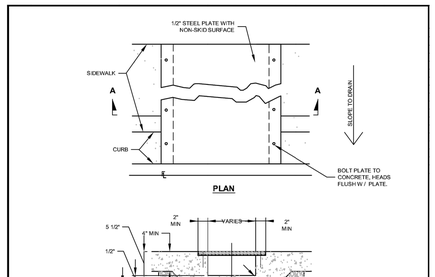
NOTE:
1. MIN. CURB RETURN RADIUS SHALL BE 20 FEET UNLESS OTHER SPECIFIED
   a. TRANSVERSE EXPANSION JOINTS 1/2" WIDE SHALL BE CONSTRUCTED AT ALL SIDEWALK RETURNS. OPPOSITE EXPANSION JOINTS INADJACENT CURB. ISOLATION JOINTS SHALL BE INSTALLED AROUND ALL STRUCTURES.EXPANSION & ISOLATION JOINTS SHALL BE FILED W/ JOINT FILLER STRIPS 1/2" THICK. JOINT MATERIAL SHALL CONFORM TO SEC.202.10.
2. ALL AGGREGATE BASE SHALL BE TYPE 2, CLASS B.
3. ON SIDEWALKS WIDER THAN 5, JOINTING PATTERN SHALL BE .5- 1/2 TIMES THE WIDTH OF THE SIDEWALK.
4. SEE CONCRETE WORK GENERAL NOTE 2.
5. **OBSTRUCTIONS WILL NOT BE PERMITTED WITHIN A 3' MIN. WIDTH IN ANY SIDEWALK. ANY PORTION OF SIDEWALK THAT EXCEEDS 2% MAX. CROSS-SLOPE SHALL BE REMOVED AND REPLACED. SLOPES MUST BE VERIFIED WITH A SMART LEVEL BY INSPECTOR.**

TYPICAL SIDEWALK	Detail No. 136 STREETS	DATE	REVISIONS	BY
		01/02	ADD FIBER REINFORCED / NOTE 5	RRB
		12/04	ADD 4" MIN	RRB
		12/04	REMOVE 5E" TO ROLLED CURB	RRB
			UPD PED RAMP, TEXT EDITS	
		06/07	GEN EDITS	EB



NOTES:
1. AGGREGATE BASE SHALL BE TYPE 2, CLASS B AND BE COMPACTED TO A MIN. 95% OF MAX. DENSITY.
2. PORTLAND CEMENT CONCRETE SHALL BE FIBER-REINFORCED AND MEET 4,000 PSI MIN. AT 28 DAYS, 6% ±1.5% ENTRAINED AIR. ALL MATERIAL SHALL CONFORM TO SSPWC, CURRENT EDITION.
3. GUTTER PAN WIDTH SHALL BE 3'-0" TOTAL WIDTH OR 1'-6" HALF WIDTH ON PRIVATE PROPERTY.
4. FLOW LINE VARIES TO MATCH GUTTER 1'-7".
5. CITY OF FERNLEY ENGINEER SHALL REQUIRE #4 BARS AT 12" EACH DIRECTION IN VALLEY GUTTERS WITHIN ROADWAY IN INDUSTRIAL AND COMMERCIAL PROJECTS.

P.C.C. VALLEY GUTTER	Detail No. 137 STREETS	DATE	REVISIONS	BY
		06/15	CLARIFY DIM ON NOTE 4	RRB
		12/04	ADD FIBER REINF. / NOTE 2	RRB
		12/04	CHG NOTE 5 TO REQUIREMENT IN COMMERCIAL AND INDUSTRIAL AREAS	RRB



SIDEWALK CROSS-DRAIN	Detail No. 181 STORM DRAIN	DATE	REVISIONS	BY
		12/04	REVISIONS, TEXT EDITS	RRB

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PLEASE RECYCLE

Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

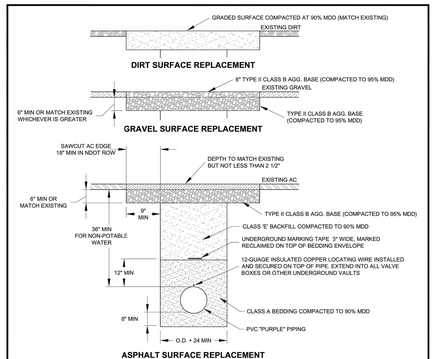
Owner
CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
CIVIL DETAILS

Date: JANUARY 19, 2023
Sheet No:
C5.00

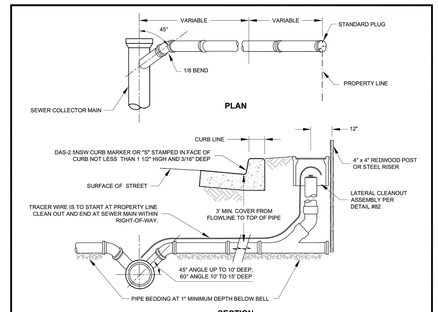


NOTES:
1. CHIP SEAL ROADS SHALL BE PATCHED WITH 2.5" AC ON 6" MIN. TYPE 2 AGG. BASE.
2. SAWCUT EXISTING AC AND TACK COAT ALL JOINTS PRIOR TO PAVING.

TYPICAL IMPROVED ROAD TRENCH SECTION

Detail No. 60 — NP WATER

DATE	REVISIONS	BY
07/07	RENUMBERED	RB

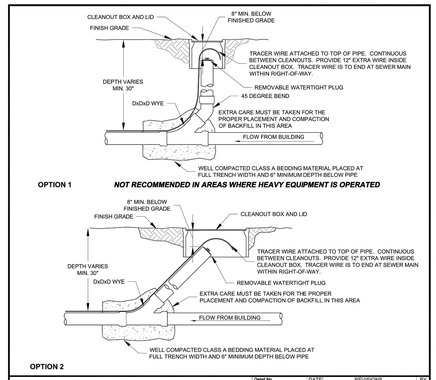


NOTES:
1. IN NO CASE SHALL A LATERAL CONNECT TO THE SEWER MAIN DIRECTLY ON TOP OF THE PIPE.
2. SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 2%.
3. ALL JOINTS ON SEWER LATERAL PIPE SHALL BE COMPRESSION TYPE OR APPROVED SOLVENT WELD.
4. LATERAL SHALL EXTEND TO PROPERTY LINE UNLESS OTHERWISE SHOWN ON PLANS.
5. ON EXISTING INTERCEPTORS, SADDLE WYES AND SADDLE TEES SHALL BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
6. ON ALL NEW INTERCEPTORS W / LATERALS, STANDARD WYES OR TEES WILL BE SLIP-GASKETED SEWER FITTINGS.
7. THERE SHALL BE 12" MINIMUM CLEARANCE WHEN SEWER LATERAL CROSSES WATER MAIN.

SEWER LATERAL CONNECTION

Detail No. 80 — SEWER

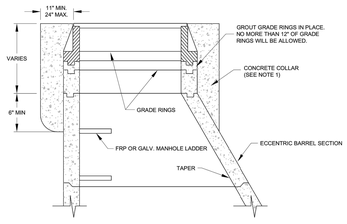
DATE	REVISIONS	BY
05/07	ADD LATERAL DETAIL	MJ
12-04	CHG PLAN & SECTION VIEWS	MJ
	TEXT EDITS	
06/07	GENERAL EDITS, ADD MIN LATERAL NOTE	EB



LATERAL CLEANOUT ASSEMBLY

Detail No. 82 — SEWER

DATE	REVISIONS	BY
12/03	ADD LATERAL CLEANOUT DETAIL	MJ

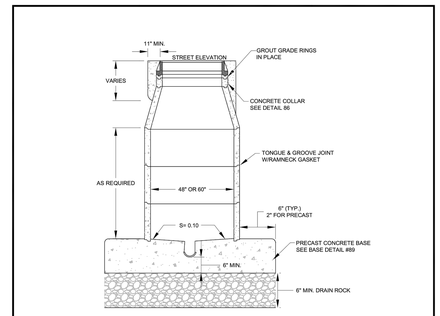


NOTES:
1. CONCRETE COLLAR SHALL BE PER WATER/SEWER GENERAL NOTE # 5.
2. HEIGHT OF COLLAR SHALL BE CONSISTENT ALL AROUND MANHOLE.
3. ALL MANHOLES SHALL INCLUDE DAL SUPPLY A-1024 FRAME AND COVER ASSEMBLY, OR EQUAL, WITH THE LETTERS ***"SANITARY SEWER"*** CLEARLY DISPLAYED ON THE COVER.
4. CONCRETE COLLAR SHALL BE FLUSH WITH ADJACENT PAVEMENT (0.00" TO 0.02").
5. CONSTRUCT AFTER PAVING IS COMPLETE.
6. CASTING AND COLLAR SHALL BE 12" TO 18" ABOVE GRADE IN UNIMPROVED AREAS.

TYPE 1A MANHOLE COLLAR & LADDER

Detail No. 86 — SEWER

DATE	REVISIONS	BY
10/04	ADD 2' GRADE RING RESTRICTION	MJ
12-04	RENUMBER DETAIL	MJ
	ADD "COLLAR" TO NOTE 1	
06/07	GEN EDITS, ADD COLLAR NOTE #7	EB

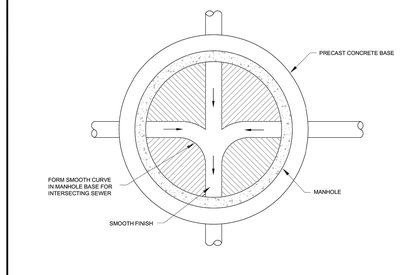


NOTES:
1. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE MANHOLE SECTION.
2. MANHOLES 5' DEEP OR MORE REQUIRE LADDERS (SEE DETAIL #86).
3. MANHOLES SHALL BE VACUUM TESTED PER ASTM C1244-93 OR HYDROSTATIC TESTED.
4. MANHOLES 5' OR LESS IN HEIGHT MAY BE CONCENTRIC

TYPE I STANDARD MANHOLE

Detail No. 87 — SEWER

DATE	REVISIONS	BY
12-04	ADD DETAIL	MJ

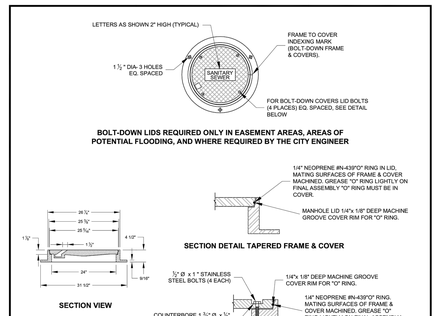


NOTES:
1. ALL MANHOLE BASE MATERIALS (DRAIN ROCK) SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
2. CAP ANY UNUSED STUB-OUTS UNLESS WAIVED BY THE UTILITY.
3. 4 WAY MANHOLES ARE TO BE INSTALLED ONLY WHERE REQUIRED.

TYPICAL BASE

Detail No. 89 — SEWER

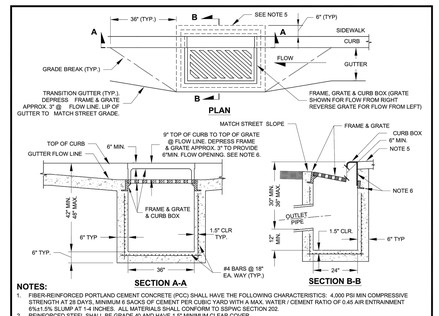
DATE	REVISIONS	BY
12-04	RENUMBER DETAIL	MJ
	ADD "DRAIN ROCK" TO NOTE 1	



MANHOLE FRAME AND COVER

Detail No. 90 — SEWER

DATE	REVISIONS	BY
12/03	ADD MANHOLE FRAME AND COVER	MJ
12-04	RENUMBER	MJ

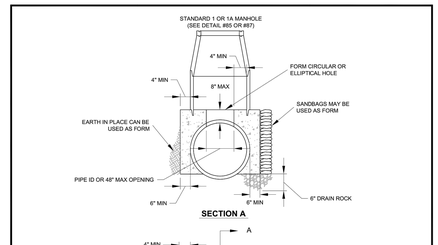


NOTES:
1. FIBER-REINFORCED PORTLAND CEMENT CONCRETE (PCC) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4,000 PSI MIN COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER / CEMENT RATIO OF 0.45 AIR ENTRAINMENT 4%+1.5% SLUMP AT 1-4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
2. REINFORCED STEEL SHALL BE GRADE 40 AND HAVE 1.5" MINIMUM CLEAR COVER.
3. CONCRETE STRUCTURE MAY BE A PRE-CAST CONCRETE UNIT UPON APPROVAL OF THE COUNTY ENGINEER. BASE OF PRE-CAST CONCRETE UNIT SHALL BE PLACED ON 6" COMPACTED DRAIN ROCK.
4. FRAME, GRATE & CURB BOX SHALL BE NEENAH R-3067 OR APPROVED EQUAL (WITH EQUAL FLOW CAPACITY AND WEIGHT.)
5. CONCRETE SHALL BE PLACED AS SHOWN WHEN NOT LOCATED IN A SIDEWALK.
6. TILT FRAME & GRATE AS REQUIRED TO ATTAIN 6" MIN FLOW OPENING & SHIM BETWEEN CURB BOX & FRAME AS REQUIRED TO MATCH CURB BOX TO TOP OFF CURB AND FACE OF CURB (SEE SECTION B-B.)
7. CATCH BASINS SHALL ONLY BE CONNECTED TO MANHOLES OR CONNECTED TO STORM DRAIN MAINS BY LATERALS.
8. INSTALL "SUR-TRAP" GREASE TRAP PER DETAIL #188.

TYPE 4R CATCH BASIN

Detail No. 180 — STORM DRAIN

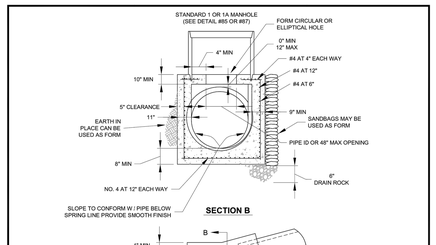
DATE	REVISIONS	BY
12/04	RENUMBER, ADD NOTE 7	RRB



MANHOLE TYPE IV (TANGENT)

Detail No. 182 — STORM DRAIN

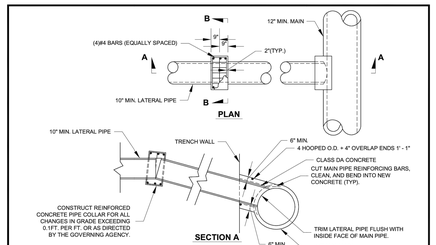
DATE	REVISIONS	BY
12/04	RENUMBER, ADD NOTES	RRB
06/07	GEN EDITS	EB



MANHOLE TYPE IV (ANGLE POINT)

Detail No. 183 — STORM DRAIN

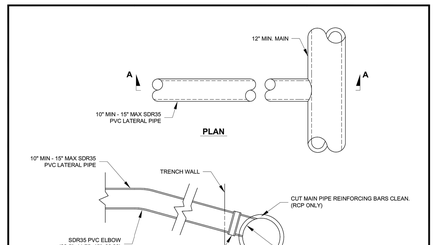
DATE	REVISIONS	BY
12/04	RENUMBER, ADD NOTE	RRB



CATCH BASIN LATERAL TO RCP MAIN

Detail No. 186 — STORM DRAIN

DATE	REVISIONS	BY
12/04	ADD DETAIL	RRB
06/07	GEN EDITS	EB



NOTE:
CONNECTION OF THE NEW SERVICE LATERAL TO THE MAINLINE SHALL BE ACCOMPLISHED BY MEANS OF A COMPRESSION-FIT SERVICE CONNECTION. THE SERVICE CONNECTION SHALL BE SPECIFICALLY DESIGNED FOR CONNECTION TO THE STORM DRAIN MAIN BEING INSTALLED, AND SHALL BE INSERTA TEE AS MANUFACTURED BY FOWLER MANUFACTURING CO., HILLSBORO, OREGON. TELEPHONE (503) 357-2110; FAX (503) 359-5417, OR APPROVED EQUAL. INSTALL USING PROCEDURES AND EQUIPMENT AS REFERENCED IN MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

CATCH BASIN PVC LATERAL TO MAIN

Detail No. 187 — STORM DRAIN

DATE	REVISIONS	BY
12/04	ADD DETAIL	RRB

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PLEASE RECYCLE

Project

CITY OF FERNLEY
CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

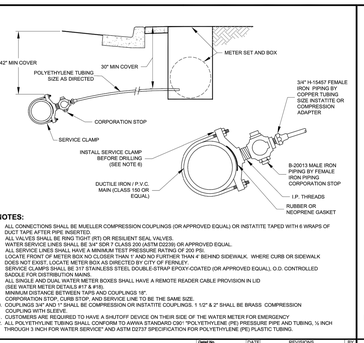
Sheet Title

CIVIL DETAILS

Date: JANUARY 19, 2023

Sheet No:

C5.01

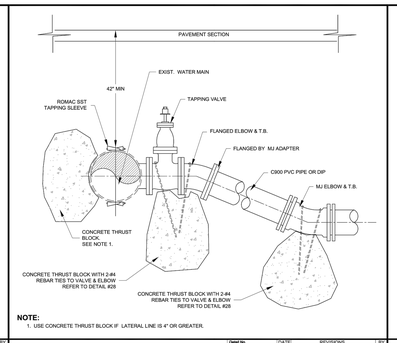


NOTES:

1. ALL CONNECTIONS SHALL BE MUELLER COMPRESSION COUPLINGS (OR APPROVED EQUAL) OR INSTATITE TAPED WITH 6 WRAPS OF GUILT TAPE AFTER PIPE INSERTED.
2. ALL VALVES SHALL BE RING TIGHT (RT) OR RESILIENT SEAL VALVES.
3. WATER SERVICE LINES SHALL BE 3/4" SDR 7 CLASS 200 (ASTM D2239) OR APPROVED EQUAL.
4. ALL SERVICE LINES SHALL HAVE A MINIMUM TEST PRESSURE RATING OF 200 PSI.
5. LOCATE FRONT OF METER BOX NO CLOSER THAN 1' AND NO FURTHER THAN 4' BEHIND SIDEWALK. WHERE CURB OR SIDEWALK DOES NOT EXIST, LOCATE METER BOX AS DIRECTED BY CITY OF FERNLEY.
6. SERVICE CLAMPS SHALL BE 316 STAINLESS STEEL DOUBLE-STRAP EPOXY-COATED (OR APPROVED EQUAL), O.D. CONTROLLED RADIUS FORGED DISTRIBUTION SADDLE.
7. ALL SERVICES AND DUAL METER BOXES SHALL HAVE A REMOTE READER CABLE PROVISION IN LID (SEE WATER METER DETAILS #17 & #18).
8. MINIMUM DISTANCE BETWEEN TAPS AND COUPLINGS 18".
9. CORPORATION STOP, CURB STOP, AND SERVICE LINE TO BE THE SAME SIZE.
10. COUPLINGS 3/4" AND 1" SHALL BE COMPRESSION OR INSTATITE COUPLINGS. 1 1/2" & 2" SHALL BE BRASS COMPRESSION COUPLING WITH SLEEVE.
11. CUSTOMERS ARE REQUIRED TO HAVE A SHUTOFF DEVICE ON THEIR SIDE OF THE WATER METER FOR EMERGENCY
12. ALL POLYETHYLENE TUBING SHALL CONFORM TO AWWA STANDARD C901 "POLYETHYLENE (PE) PRESSURE PIPE AND TUBING, ¾ INCH THROUGH 3 INCH FOR WATER SERVICE" AND ASTM D2737 SPECIFICATION FOR POLYETHYLENE (PE) PLASTIC TUBING.

DATE	REVISIONS	BY
10/04	REMOVE CURB MARKER TEXT	MJ
06/07	ADD NOTE 12	MJ
11/07	ADDED EDIT NOTE 12 ADDED	EB
03/08	TEXT EDITS	LP

WATER SERVICE CONNECTION — Detail No. 20 — WATER

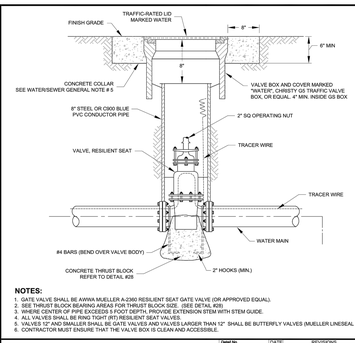


NOTE:

1. USE CONCRETE THRUST BLOCK IF LATERAL LINE IS 4" OR GREATER.

DATE	REVISIONS	BY
11/01	ADD TAPPING DETAIL	MJ
06/07	ADD THRUST BLOCK REF 1206-10	EB

TAPPING DETAIL — Detail No. 22 — WATER

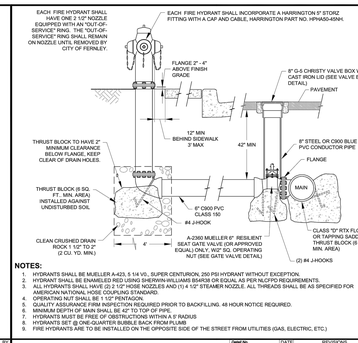


NOTES:

1. GATE VALVE SHALL BE AWWA MUELLER A-2360 RESILIENT SEAT GATE VALVE (OR APPROVED EQUAL)
2. SEE THRUST BLOCK BEARING AREAS FOR THRUST BLOCK SIZE. (SEE DETAIL #28)
3. WHERE CENTER OF PIPE EXCEEDS 5 FOOT DEPTH, PROVIDE EXTENSION STEM WITH STEM GUIDE.
4. ALL VALVES SHALL BE RING TIGHT (RT) RESILIENT SEAT VALVES.
5. VALVES 12" AND SMALLER SHALL BE GATE VALVES AND VALVES LARGER THAN 12" SHALL BE BUTTERFLY VALVES (MUELLER LINESEAL III).
6. CONTRACTOR MUST ENSURE THAT THE VALVE BOX IS CLEAN AND ACCESSIBLE.

DATE	REVISIONS	BY
10/04	TRACER WIRE ADDED	MJ
12/04	NOTE TRAFFIC RATED LID	MJ
06/07	CHG CONC TO 6", ADD TRACER WIRE	EB

VALVE & VALVE BOX — Detail No. 24 — WATER

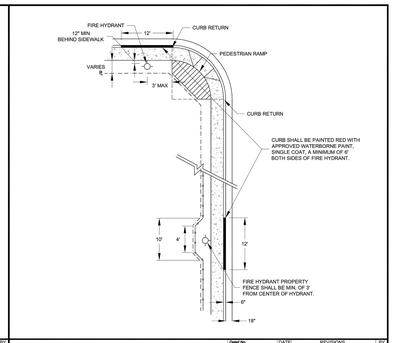


NOTES:

1. HYDRANTS SHALL BE MUELLER A-423, 5 1/4 VO., SUPER CENTURION, 250 PSI HYDRANT WITHOUT EXCEPTION.
2. HYDRANT SHALL BE ENAMELED RED USING SHERWIN-WILLIAMS B54R36 OR EQUAL AS PER NLCFPD REQUIREMENTS.
3. ALL HYDRANTS SHALL HAVE (2) 2 1/2" HOSE NOZZLES AND (1) 4 1/2" STEAMER NOZZLE. ALL THREADS SHALL BE AS SPECIFIED FOR AMERICAN NATIONAL HOSE COUPLING STANDARD.
4. OPERATING NUT SHALL BE 1 1/2" PENTAGON.
5. QUALITY ASSURANCE FIRM INSPECTION REQUIRED PRIOR TO BACKFILLING. 48 HOUR NOTICE REQUIRED.
6. MINIMUM DEPTH OF MAIN SHALL BE 42" TO TOP OF PIPE.
7. HYDRANTS MUST BE FREE OF OBSTRUCTIONS WITHIN A 3' RADIUS
8. HYDRANTS SET @ ONE-QUARTER BUBBLE BACK FROM FLOW LINE
9. FIRE HYDRANTS ARE TO BE INSTALLED ON THE OPPOSITE SIDE OF THE STREET FROM UTILITIES (GAS, ELECTRIC, ETC.)

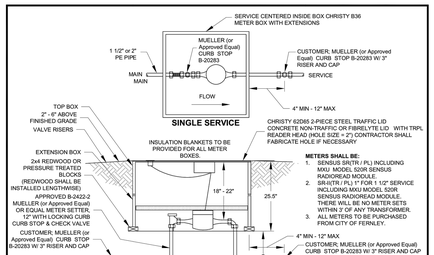
DATE	REVISIONS	BY
06/99	FIRE HYDRANT VALVE SPACING	WRC
10/04	FIRE HYDRANT SPACING	MJ
11/04	CURB SPACING EDIT	SC
12/04	TEXT EDITS	SC
06/07	GENERAL EDITS	EB

FIRE HYDRANT — Detail No. 29 — WATER



DATE	REVISIONS	BY
10/04	ADD PEDESTRIAN RAMP	MJ
12/04	ADD "CURB RETURN" NOTE	MJ
06/07	ADD PAINT NOTE	EB

FIRE HYDRANT LOCATIONS — Detail No. 30 — WATER



NOTES:

1. THERE SHALL BE NO OBSTRUCTIONS WITHIN 3' OF METER BOX.
2. CITY OF FERNLEY SHALL SET METER IN YOKE AND LOCK OUT AFTER SUCCESSFUL BACTERIOLOGICAL TEST. 48 HOURS ADVANCE NOTIFICATION IS REQUIRED.
3. FENCING SHALL IN NO WAY PREVENT ACCESS BY CITY PERSONNEL FOR READING AND FOR MAINTENANCE. METER BOXES SHALL NOT BE INSTALLED IN DRIVEWAYS OR SIDEWALKS AND THE FRONT OFMETER BOX SHALL BE INSTALLED NO CLOSER THAN 1' AND NO FURTHER THAN 4' BEHIND BACK OF WALK.
4. ALL PIPE AND FITTINGS SHALL BE 200 PSI PRESSURE RATED.
5. H-20 CONCRETE BOXES & LID ASSEMBLIES SHALL BE USED IN ALL HEAVY TRAFFIC AREAS.
6. METER SIZES LARGER THAN 2" SHALL BE DESIGNED BY AN ENGINEER AND APPROVED BY CITY OF FERNLEY.
7. METER SIZES LARGER THAN 2" SHALL INCLUDE A BYPASS LINE TO BE DESIGNED BY AN ENGINEER.
8. CITY OF FERNLEY REQUIRES SENSUS TR / PL METER INCLUDING MXU MODEL 520R SENSUS RADIO READ MODULE.

DATE	REVISIONS	BY
12/06	WATER METER BYPASS NOTE	MJ
06/07	ADD NOTE ON TRANSFORMER	MJ
09/07	MOVE METER LOC. TO ROADWAYS	MJ
10/04	ADD FIBERGLYTE OPTION, EDIT NOTES 1 & 3, MISC. TEXT EDITS	MJ
06/07	COMPREHENSIVE UPDATE	EB
03/08	MISC TEXT EDITS	LP

1 1/2" - 2" WATER METER — Detail No. 18 — WATER

1 C5.02 STORM WATER INFILTRATION CHAMBER

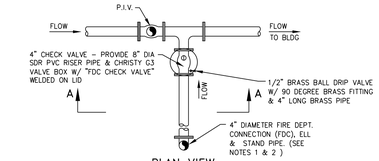
SCALE: NTS

SECTION A-A

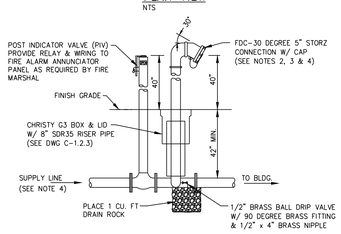
NOTES:

1. FIBER-REINFORCED PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC.
2. REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5" CLEAR COVER.
3. CONCRETE STRUCTURE MAY BE A PRE-CAST CONCRETE UNIT. BASE OF PRE-CAST CONCRETE UNIT SHALL BE PLACED ON 6" COMPACTED DRAIN ROCK.
4. FRAME & GRATE SHALL BE D&L I-9226 OR APPROVED EQUAL.
5. CATCH BASIN SHALL BE TRAFFIC-RATED AND USED ONLY AT LOW POINTS IN ALLEYS OR PARKING AREAS.
6. ALL CATCH BASINS, PUBLIC OR PRIVATE, SHALL BE PROVIDED WITH A "SUR-TRAP" OIL/WATER SEPARATOR OR APPROVED EQUAL.

2 C5.02 TYPE 3 CATCH BASIN



PLAN VIEW
NTS



SECTION A-A
NTS

NOTES:

1. NORTH LYON COUNTY FIRE MARSHAL SHALL SPECIFY LOCATION OF FIRE DEPARTMENT CONNECTION (FDC). CLEARANCE AROUND FDC SHALL BE 3 FEET RIGHT, LEFT, REAR, AND 20 FEET IN FRONT.
2. A METAL SIGN WITH RAISED LETTERS AT LEAST 1 INCH IN SIZE SHALL BE MOUNTED ON ALL FIRE DEPARTMENT CONNECTIONS SERVICING AUTO SPRINKLERS, STANDPIPES OR FIRE PUMPS. SUCH SIGNS SHALL READ "AUTO SPRINKLER", "STANDPIPE", OR "TEST CONNECTION" AS APPLICABLE. WHERE THE FDC DOES NOT SERVE THE ENTIRE BUILDING A SIGN SHALL BE PROVIDED INDICATING THE PORTIONS OF THE BUILDING TO BE SERVED.
3. FIRE PROTECTION FACILITIES ARE OWNED AND MAINTAINED BY THE CUSTOMER.
4. ASSEMBLIES AND PIPING ON FIRE LINES SHALL BE FM/UL AND CONFORM TO THE APPLICABLE NFPA. THRUST BLOCKING AND/OR MECHANICAL RESTRAINTS SHALL BE PROVIDED AS NECESSARY.

3 C5.02 FIRE DEPARTMENT CONNECTION (FDC)

SCALE: NTS

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Project

CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title

CIVIL DETAILS

Date: JANUARY 19, 2023

Sheet No:

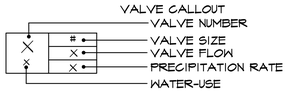
C5.02

IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION	PRECIP	PSI
	AREA TO RECEIVE DRIP EMITTERS: RAIN BIRD XBCV-PC SINGLE OUTLET, PRESSURE COMPENSATING DRIP EMITTERS WITH CHECK VALVE. ASSIGN 1, 1.0 GPH EMITTER TO EACH 1 GAL PLANT, ASSIGN 2, 1.0 GPH EMITTER TO EACH 5 GAL PLANT.	0.15 in/h	25
	TURF ROTORY: RAINBIRD R-VAN 1806-SAM-P45, 17'-24', WITH 1800 TURF SPRAY BODY ON 6.0" POP-UP WITH CHECK VALVE AND PRESSURE REGULATOR.	0.9 in/h	50

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
	TREE BUBBLER: RAIN BIRD 1806-5 SERIES STREAM 5CST-B STREAM BUBBLER 6.0" POPUP. EACH SYMBOL REPRESENTS TWO BUBBLERS PER TREE	20

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	REMOTE CONTROL VALVE: RAIN BIRD PEB-PRS-D PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY. GLOBE CONFIGURATION. WITH PRESSURE REGULATOR MODULE. SIZE PER PLANS
	QUICK COUPLER: RAIN BIRD 44-LRC
	GATE VALVE: NIBCO T-113 CLASS 125 BRONZE GATE SHUT OFF VALVE WITH WHEEL HANDLE, SAME SIZE AS MAINLINE PIPE DIAMETER AT VALVE LOCATION.
MV	MASTER VALVE: BUCKNER-SUPERIOR 3100 1-1/2" NORMALLY OPEN BRASS MASTER VALVE THAT PROVIDES DIRTY WATER PROTECTION.
BF	BACKFLOW PREVENTOR: FEBCO 765, 2" SIZE, PER CIVIL PLANS
C	RAIN BIRD ESP-LXD-LXMMSS-LXMMSSPED 50 STATION, 2-WIRE DECODER BASED CONTROLLER IN STAINLESS STEEL, CABINET W/ PEDESTAL.
FS	FLOW SENSOR: RAIN BIRD FS-150-P
M	WATER METER 2", PER CIVIL PLANS
————	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
— — — —	IRRIGATION MAINLINE: FOR IRRIGATION MAINLINE 2" OR SMALLER USE PVC SCHEDULE 40, FOR IRRIGATION MAINLINE LARGER THEN 2" USE PVC 315 SDR 13.5, SIZE PER PLANS
========	PIPE SLEEVE: PVC SCHEDULE 40, SEE NOTE 6



IRRIGATION NOTES

1. SPECIFICATIONS: SEE IRRIGATION SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. VERIFICATION: SYSTEM DESIGN IS BASED ON (85) P.S.I. AND (80) G.P.M. AVAILABLE AT DISCHARGE OUTLET OF METER OR OTHER POINT OF CONNECTION. CONTRACTOR SHALL VERIFY SAME AND NOTIFY LANDSCAPE ARCHITECT IF SUCH DATA ADVERSELY AFFECTS THE OPERATION OF THE SYSTEM. SUCH NOTICE SHALL BE MADE IN WRITING AND PRIOR TO COMMENCING ANY IRRIGATION WORK.
3. UTILITIES: CONTRACTOR SHALL VERIFY LOCATION OF ALL ON-SITE UTILITIES. RESTORATION OF DAMAGED UTILITIES SHALL BE MADE AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
4. SCHEMATIC: SYSTEM FEATURES ARE SHOWN SCHEMATICALLY FOR GRAPHIC CLARITY. INSTALL ALL PIPING AND VALVES IN COMMON TRENCHES WHERE FEASIBLE AND INSIDE PLANTING AREAS WHENEVER POSSIBLE. ALL VALVES SHALL BE LOCATED IN GROUNDCOVER OR SHRUB AREAS WHENEVER POSSIBLE.
5. CODES: IRRIGATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODES AND MANUFACTURER'S SPECIFICATIONS. NOTIFY LANDSCAPE ARCHITECT BY TELEPHONE AND IN WRITING OF ANY CONFLICTS PRIOR TO INSTALLATION.
6. SLEEVING: CONTRACTOR SHALL SIZE ALL SLEEVES TO BE A MINIMUM TWO TIMES THE SIZE OF THE INTERIOR PIPE. SLEEVES SHALL BE INSTALLED AT THE NECESSARY DEPTHS PRIOR TO PAVEMENT CONSTRUCTION. SLEEVING SHALL EXTEND 1'-0" FROM EDGE OF PAVEMENT INTO LAWN OR PLANTING AREA, AND SHALL HAVE ENDS CLEARLY MARKED ABOVE GRADE.
7. BACKFLOW DEVICES: LOCATE BACKFLOW DEVICES AS SHOWN ON PLAN. LOCATION SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION BY THE CONTRACTOR.
8. QUICK COUPLING VALVES: INSTALL ON TRIPLE SWING JOINT. LOCATE 12" AWAY FROM EDGE OF WALKS, WALLS, CURBS, AND HEADERBOARDS WITHIN PLANTING AREAS. PROVIDE OWNER WITH ONE OPERATING KEY, TWO SETS OF LOCKING COVER KEYS, AND ONE SWIVEL HOSE ELL.
9. HEAD ALLOWANCE: CONTRACTOR SHALL ALLOW IN BID PRICE AN AMOUNT SUFFICIENT TO PROVIDE AND INSTALL AN ADDITIONAL (5%) OF DRIPLINE AND SPRINKLER HEADS OF EACH TYPE SPECIFIED ON PLAN TO ACCOMMODATE FIELD CHANGES. THESE HEADS SHALL BE LOCATED AS DIRECTED BY THE LANDSCAPE ARCHITECT. CONTRACTOR SHALL DELIVER TO THE OWNER ANY UN-USED ADDITIONAL HEADS AND DRIPLINE AT THE END OF THE MAINTENANCE PERIOD.
10. CONTROLLER: ALL ABOVE-GRADE CONDUIT EITHER 24V, OR 110V, SHALL BE RIGID STEEL AND SECURELY FASTENED TO STRUCTURE AND TO CONTROLLER.
11. CHECK VALVES: INSTALL PLASTIC CHECK VALVE AT BASE OF HEADS ON LOW ENDS OF SYSTEMS AS REQUIRED TO MINIMIZE LINE DRAINAGE. CONTRACTOR SHALL ALLOW IN BID PRICE AN AMOUNT SUFFICIENT TO PROVIDE AND INSTALL AN ADDITIONAL (5) CHECK VALVES TO ACCOMMODATE ANY NECESSARY FIELD CHANGES.
12. PRESSURE REDUCER: TO BE PLACED UPSTREAM AND ADJACENT TO BACKFLOW DEVICE.

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Project

CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

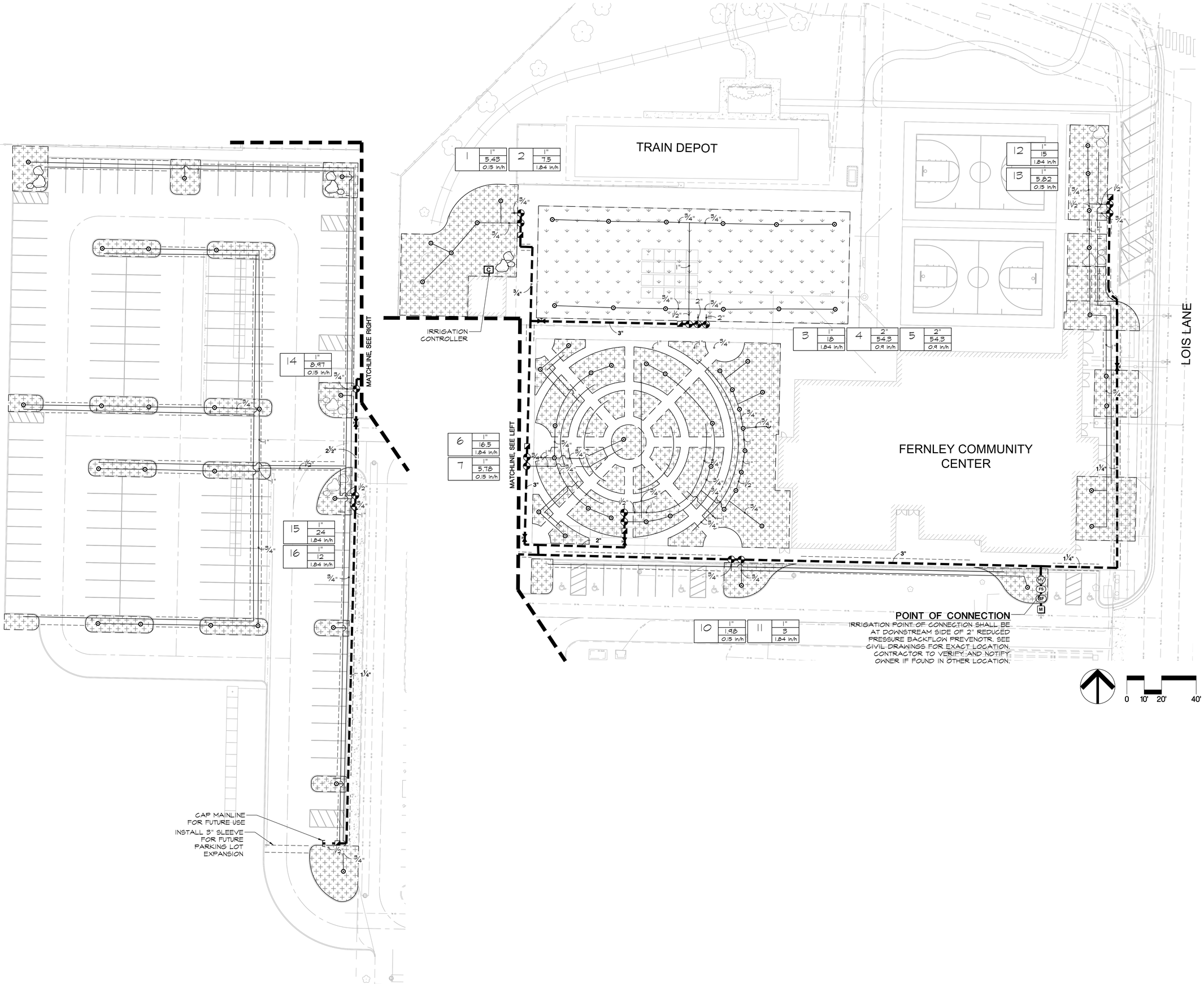
Sheet Title

IRRIGATION LEGEND

Date: JANUARY 19, 2023

Sheet No:

L1.00



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DESIGN DEVELOPMENT

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REV	DATE	DESCRIPTION

Sheet Title
IRRIGAITON PLAN
BASE BID

Date: JANUARY 19, 2023
Sheet No:

L1.01

PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	SIZE
ACE TRU	ACER TRUNCATUM X PLATANOIDES 'WARRENRED' / PACIFIC SUNSET® MAPLE	15 GAL
CAR FST	CARPINUS BETULUS 'FASTIGIATA' / PYRAMIDAL EUROPEAN HORNBEAN	15 GAL
GLE TRI	GLEDITSIA TRIACANTHOS INERMIS / THORNLESS HONEY LOCUST	15 GAL
MAG ANN	MAGNOLIA X 'ANN' / ANN MAGNOLIA	3" CAL
MAL FRA	MALUS X 'PRAIRIFIRE' / PRAIRIFIRE CRABAPPLE	3" CAL
PIN LIM	PINUS FLEXILIS / LIMBER PINE	8' MIN. HT.
TIL COR	TILIA CORDATA 'GREENSPIRE' / GREENSPIRE LITTLELEAF LINDEN	15 GAL

CONCEPT PLANT SCHEDULE

PARKING LOT	SIZE	SPACING
JUNIPERUS SABINA 'CALGARY CARPET' / CALGARY CARPET JUNIPER	5 GAL	8'-0"
PANICUM VIRGATUM / SWITCH GRASS	1 GAL	3'-0"
SALVIA NEMOROSA 'HAEUMANARC' / MARCUS® MEADOW SAGE	5GAL	1'-0"
YUCCA FILAMENTOSA 'COLOR GUARD' / COLOR GUARD ADAM'S NEEDLE	1 GAL	3'-0"

SURFACING FOR ALL PARKING LOT AREAS SHALL BE NON-STABILIZED DECOMPOSED GRANITE

STREETSCAPE	SIZE	SPACING
AGAPANTHUS AFRICANUS 'PETER PAN' / PETER PAN AFRICAN LILY	1 GAL	1'-0"
BOUTELOUA GRACILIS / BLUE GRAMA GRASS	1 GAL	2'-0"
HEMEROCALLIS X 'STELLA DE ORO' / STELLA DE ORO DAYLILY	1 GAL	1'-0"
HESPERALOE PARVIFLORA / RED YUCCA	1 GAL	5'-0"
JUNIPERUS SABINA 'CALGARY CARPET' / CALGARY CARPET JUNIPER	5 GAL	8'-0"
PRUNUS LAUROCERASUS 'NANA' / NANA ENGLISH LAUREL	5 GAL	8'-0"

SURFACING FOR ALL STREETSCAPE AREAS SHALL BE 40% NON-STABILIZED DECOMPOSED GRANITE AND 60% ROCK MULCH

SENSORY GARDEN	SIZE	SPACING
ASCLEPIAS PURPURASCENS / PURPLE MILKWEED	1 GAL	2'-0"
CORNUS SERICEA / RED TWIG DOGWOOD	5 GAL	8'-0"
ECHINACEA PURPUREA / CONEFLOWER	1 GAL	1'-6"
NEPETA RACEMOSA 'WALKER LOW' / CATMINT	1 GAL	3'-0"
PANICUM VIRGATUM / SWITCH GRASS	1 GAL	3'-0"
PENNISETUM SETACEUM / FOUNTAIN GRASS	1 GAL	3'-0"
PLATYCODON GRANDIFLORUS / BALLOON FLOWER	1 GAL	1'-0"
SEDUM X 'AUTUMN JOY' / AUTUMN JOY SEDUM	5 GAL	2'-0"
STACHYS BYZANTINA / LAMB'S EAR	1 GAL	1'-0"
THYMUS SERPYLLUM / CREEPING THYME	1 GAL	1'-0"

SURFACING FOR ALL SENSORY GARDEN AREAS SHALL BE ROCK MULCH, UNLESS OTHER WISE NOTED ON PLANS

SITE PLANTING	SIZE	SPACING
AGAPANTHUS AFRICANUS 'PETER PAN' / PETER PAN AFRICAN LILY	1 GAL	1'-0"
CORNUS SERICEA / RED TWIG DOGWOOD	5 GAL	8'-0"
COTONEASTER DAMMERI 'CORAL BEAUTY' / CORAL BEAUTY COTONEASTER	5 GAL	6'-0"
FORSYTHIA X INTERMEDIA 'NIMBUS' / SHOW OFF® SUGAR BABY® DWARF FORSYTHIA	5 GAL	10'-0"
PANICUM VIRGATUM / SWITCH GRASS	1 GAL	3'-0"
POTENTILLA FRUTICOSA / BUSH CINQUEFOIL	5 GAL	5'-0"

SURFACING FOR SITE PLANTING AREAS SHALL BE ROCK MULCH

TURF FROM SOD

PLANT LEGEND

ROOT BARRIER

LANDSCAPE BOULDERS
SMALL, 2' OR SMALLER
MEDIUM, 2'-4' IN SIZE
LARGE, 4'-5' IN SIZE

STABILIZED DECOMPOSED GRANITE, PER SPECS

HDR — SENSORY GARDEN HEADER, SHALL BE REDWOOD HEADER OR RAILROAD TIES

PLANTING NOTES

1. **MULCH:** INSTALL A UNIFORM COVERING OF MULCH IN ALL PLANTING AREAS, PER CONCEPT PLANT SCHEDULE.
2. **GROUNDCOVER:** PROVIDE GROUNDCOVER AT INDICATED ON-CENTER SPACING THROUGHOUT ALL AREAS TO BE PLANTED. GROUNDCOVER SHALL BE PROVIDED UP TO THE WATERING BASIN OF ALL TREES AND SHRUBS.
3. **QUANTITIES:** THE QUANTITIES SHOWN ON THE LABELS ARE NOT TO BE CONSTRUED AS THE COMPLETE AND ACCURATE LIMITS OF THE CONTRACT. FURNISH AND INSTALL ALL PLANTS SHOWN SCHEMATICALLY ON THE DRAWINGS.
4. **TOPSOIL:** ALL PLANTING AREAS TO RECEIVE A SIX INCH LAYER OF NATIVE TOPSOIL PER SPECIFICATIONS.

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Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner
CITY OF FERNLEY

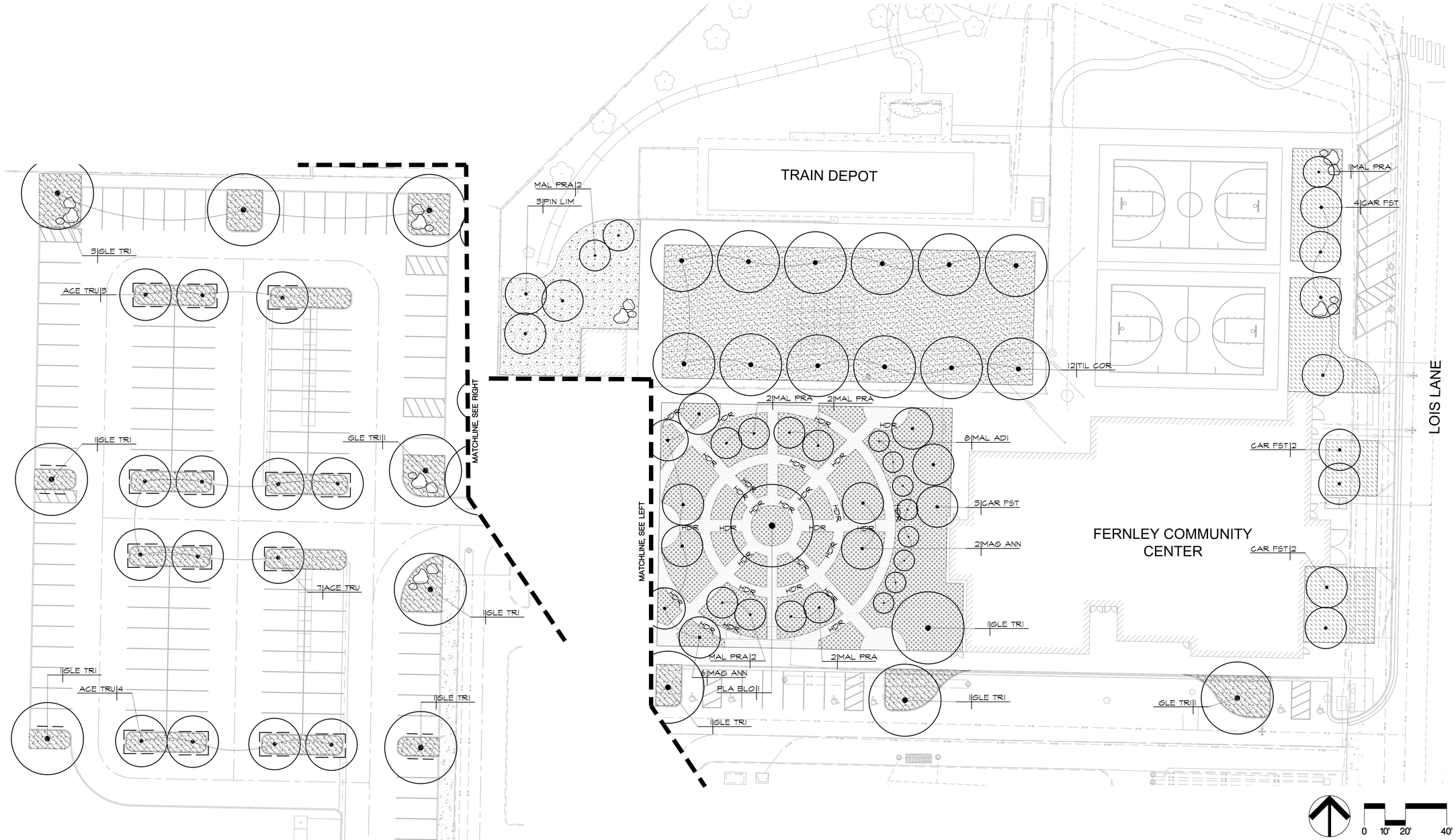
DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
LANDSCAPE LEGEND AND NOTES

Date: JANUARY 19, 2023

Sheet No:
L2.00



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CITY OF FERNLEY
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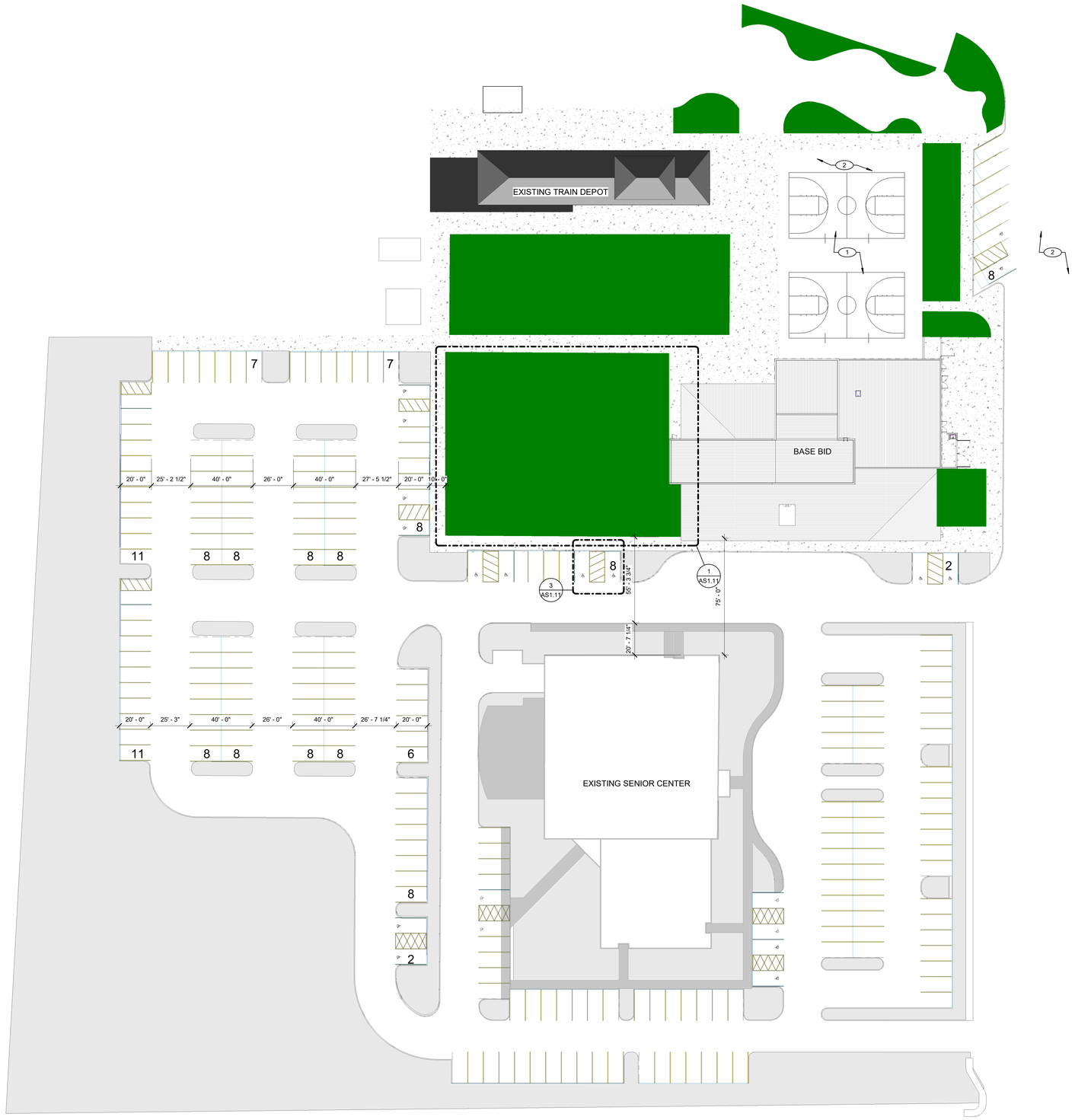
DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
LANDSCAPE PLAN BASE BID

Date: JANUARY 19, 2023
Sheet No:

L2.01



PARKING COUNTS:
ADA STALLS = 12
PARKING STALLS = 108
TOTAL PARKING = 120

1 OVERALL SITE PLAN - BASE BID
SCALE: 1" = 30'-0"

NORTH 0' 30' 60' 120'

GENERAL NOTES

1. CONTRACTOR TO VERIFY DIMENSIONS IN FIELD PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. DO NOT SCALE DRAWINGS.
2. REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE INFORMATION.
3. REFER TO CIVIL DRAWINGS FOR CURB DIMENSIONS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR PARKING DIMENSIONS, AND STREET DIMENSIONS.
5. SEE ENLARGED SITE PLANS FOR ALL SITE PLAN KEYNOES.

KEYNOTES

1. FIRE EXTINGUISHER
2. ROOF ACCESS LADDER, SEE ROOF DETAILS

LEGEND

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Job No: 21-058.00

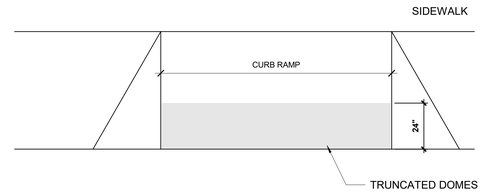
Owner
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DESIGN DEVELOPMENT

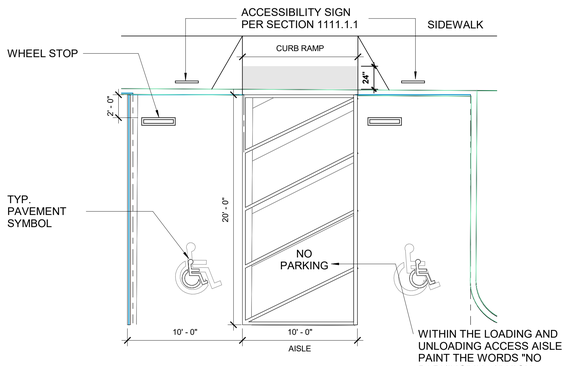
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
SITE PLAN - BASE BID

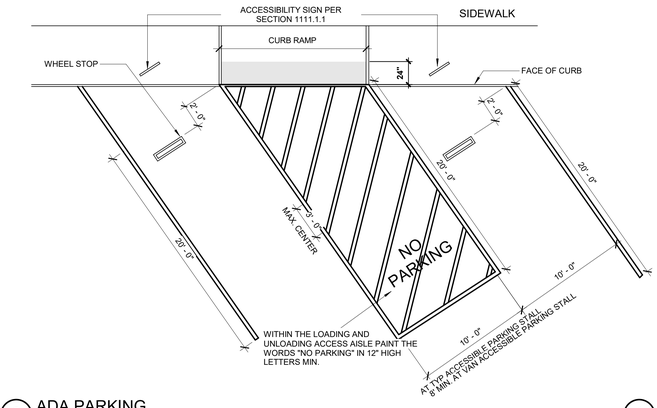
Date: JANUARY 19, 2023
Sheet No:
AS1.01



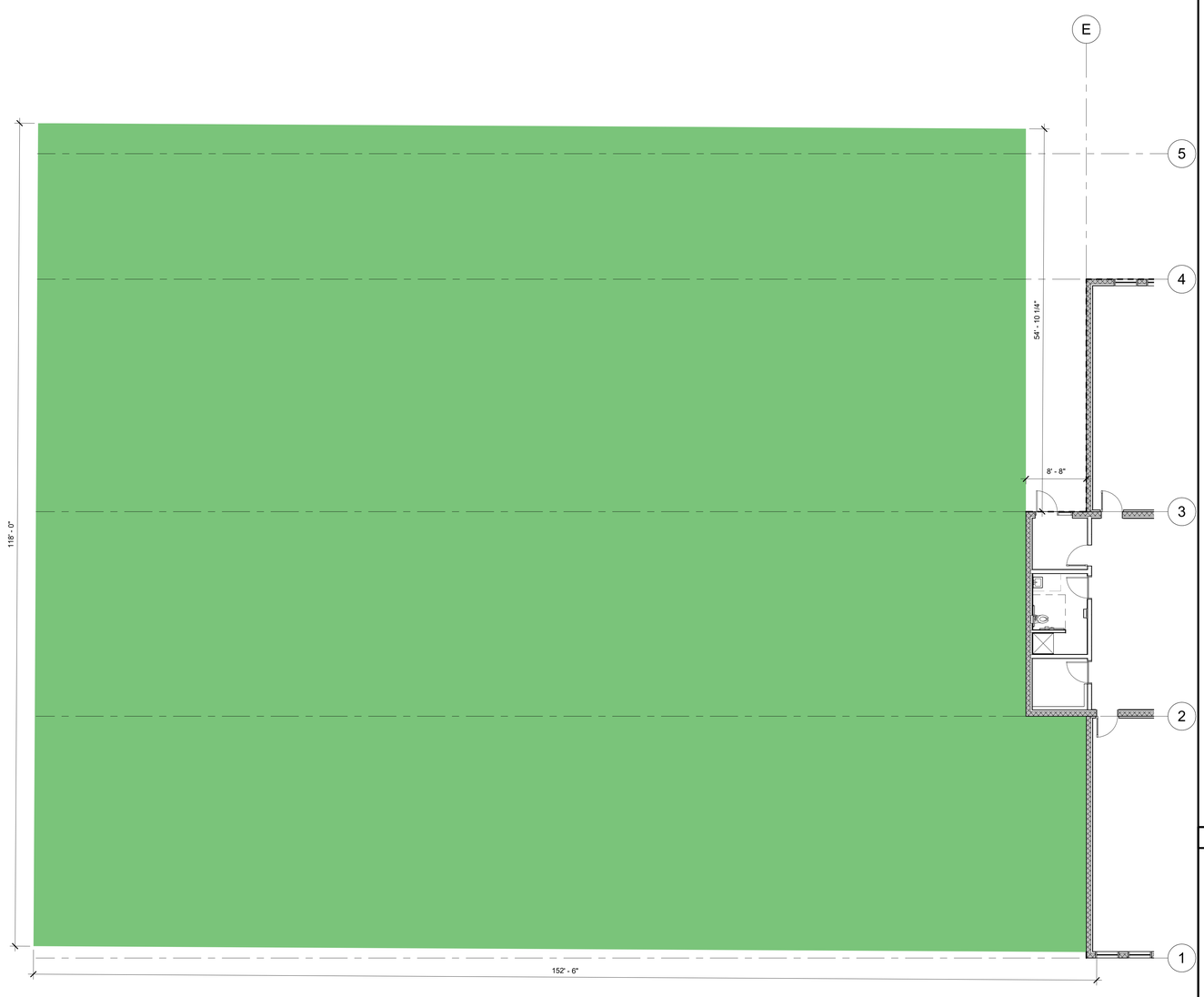
4 CURB RAMP
SCALE: 3/8" = 1'-0"



3 ADA PARKING DETAIL
SCALE: 3/16" = 1'-0"



2 ADA PARKING
SCALE: 3/16" = 1'-0"



1 ENLARGED SITE PLAN - BASE BID
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. CONTRACTOR TO VERIFY DIMENSIONS IN FIELD PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. DO NOT SCALE DRAWINGS.
2. REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE INFORMATION.
3. REFER TO CIVIL DRAWINGS FOR CURB DIMENSIONS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR PARKING DIMENSIONS, AND STREET DIMENSIONS.
5. SEE ENLARGED SITE PLANS FOR ALL SITE PLAN KEYNOES.

KEYNOTES

LEGEND

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CITY OF FERNLEY CRRC

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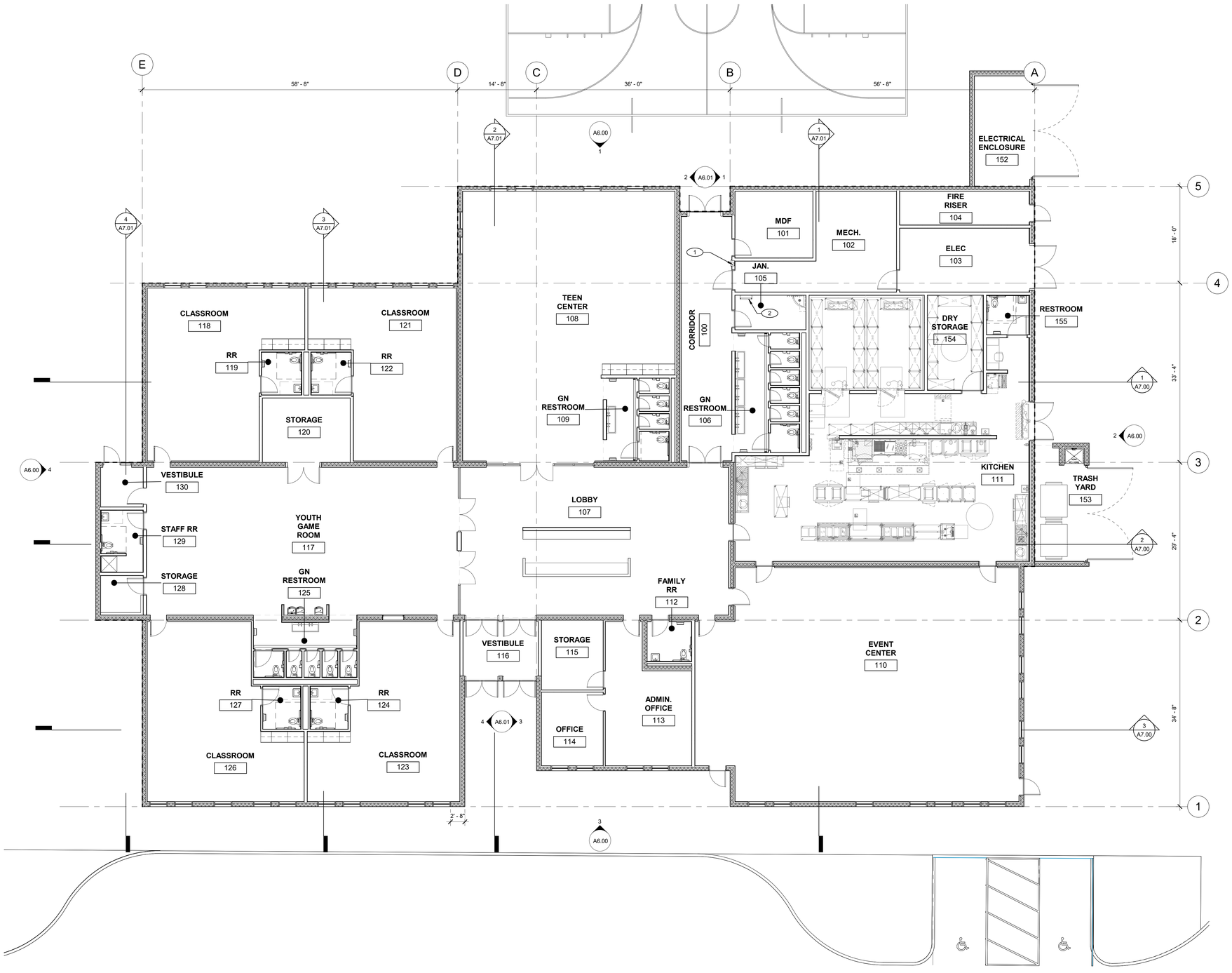
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REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
ENLARGED SITE PLANS AND DETAILS

Date: JANUARY 19, 2023

Sheet No:
AS1.11



1 FLOOR PLAN - BASE BID
SCALE: 1/8" = 1'-0"

NORTH 0' 4' 8' 16'

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK NOT SHOWN ON THIS DRAWING.
3. SEE ELECTRICAL DRAWINGS FOR INFORMATION ON ELECTRICAL/TELECOM ROOMS.
4. ALL EQUIPMENT (O.F.O.I AND C.F.C.I.), SHALL COMPLY WITH ACCESSIBILITY REQUIREMENTS.

KEYNOTES

1. <varies>
2. <varies>
3. <varies>

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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
OVERALL FLOOR PLAN - BASE BID

Date: JANUARY 19, 2023
Sheet No:
A1.01

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK NOT SHOWN ON THIS DRAWING.
3. SEE ELECTRICAL DRAWINGS FOR INFORMATION ON ELECTRICAL/TELECOM ROOMS.
4. ALL EQUIPMENT (O.F.O.I AND C.F.C.I.), SHALL COMPLY WITH ACCESSIBILITY REQUIREMENTS.

KEYNOTES

1. FIRE EXTINGUISHER
2. ROOF ACCESS LADDER, SEE ROOF DETAILS

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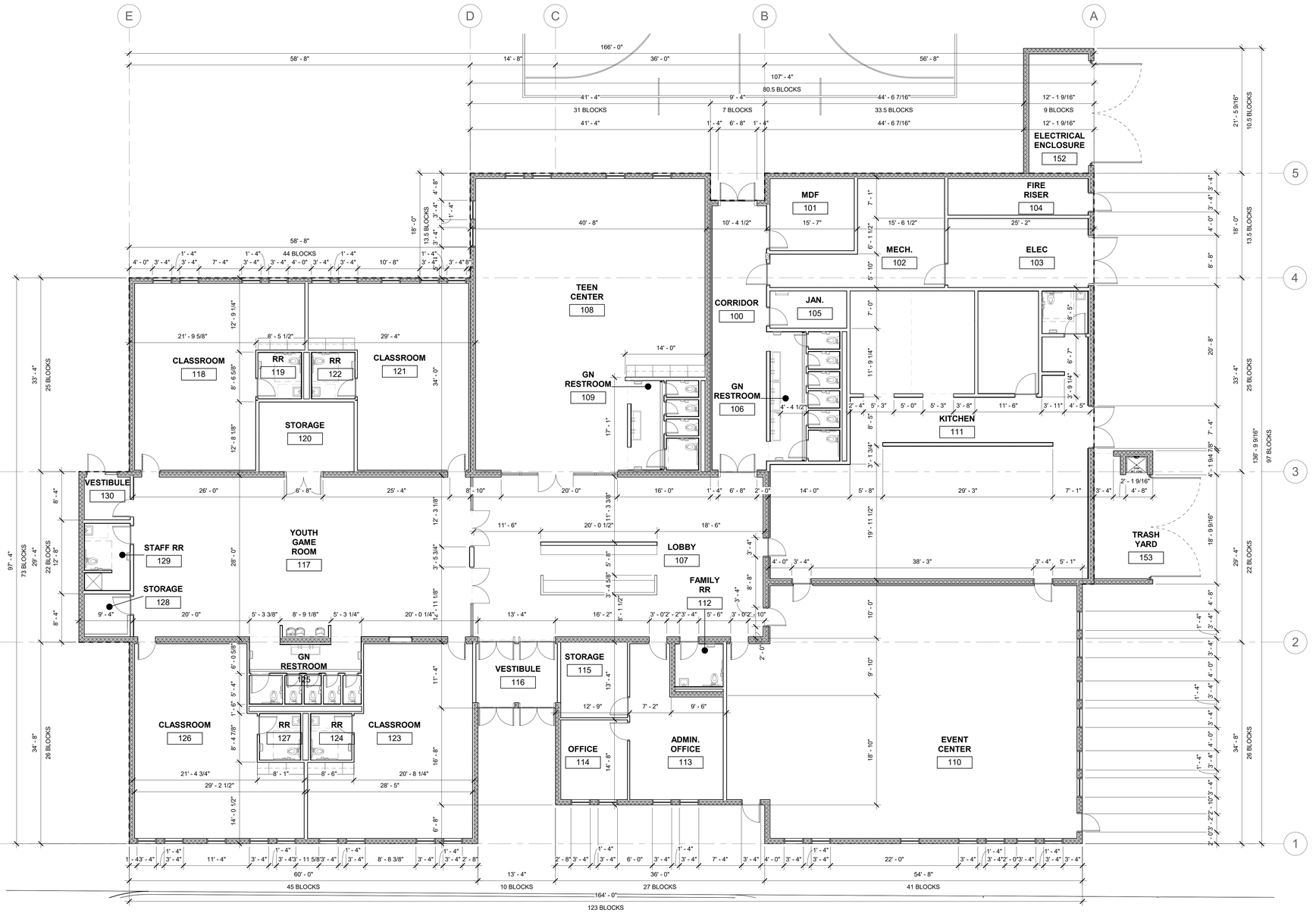
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
ENLARGED FLOOR PLAN - BASE BID

Date: JANUARY 19, 2023
Sheet No:
A1.11

1 ENLARGED FLOOR PLAN - BASE BID
SCALE: 1/8" = 1'-0"

NORTH



1 DIMENSION PLAN - BASE BID
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE OVERALL FLOOR PLANS FOR EQUIPMENT SCHEDULE, MARKERBOARD AND TACKBOARD SCHEDULE, AND KEYNOTE ITEMS NOT LABELED IN DIMENSION PLANS.

KEYNOTES

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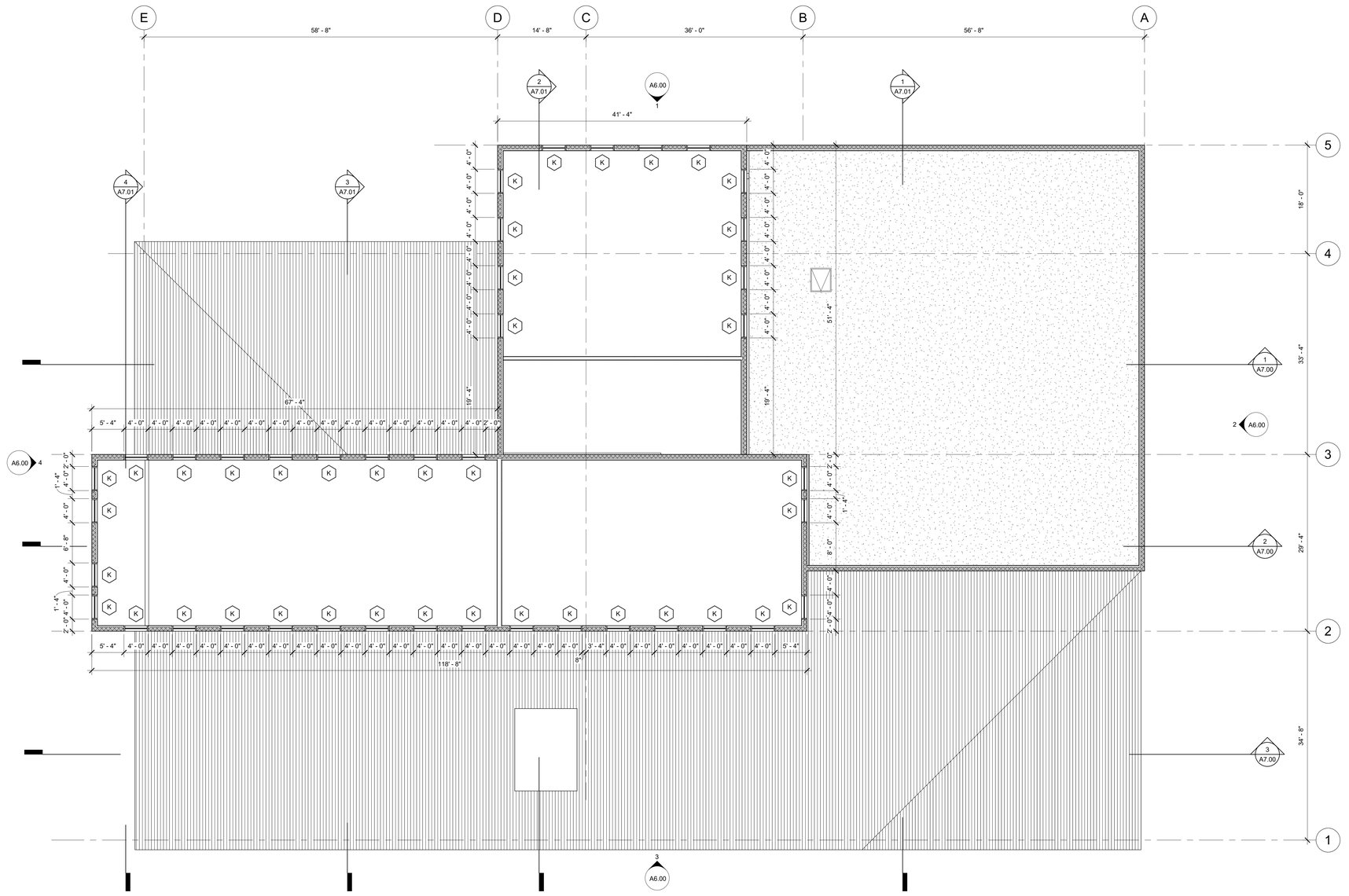
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
DIMENSION & PARTITION PLAN - BASE BID

Date: JANUARY 19, 2023
Sheet No:
A1.21



1 FLOOR PLAN HIGH WALLS - BASE BID
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE OVERALL FLOOR PLANS FOR EQUIPMENT SCHEDULE, MARKERBOARD AND TACKBOARD SCHEDULE, AND KEYNOTE ITEMS NOT LABELED IN DIMENSION PLANS.

KEYNOTES

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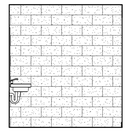
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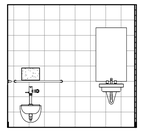
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REV	DATE	DESCRIPTION

Sheet Title
DIMENSION HIGH WALL - BASE BID

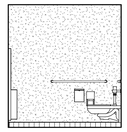
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Sheet No:
A1.22



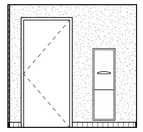
25 FAMILY RR 112 WEST
SCALE: 1/4" = 1'-0"



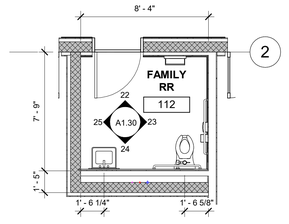
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SCALE: 1/4" = 1'-0"



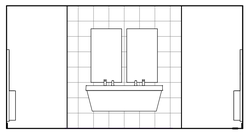
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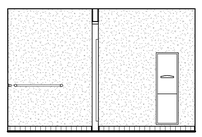
22 FAMILY RR 112 NORTH
SCALE: 1/4" = 1'-0"



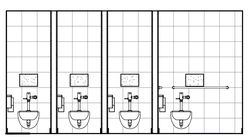
4 FAMILY RESTROOM 112
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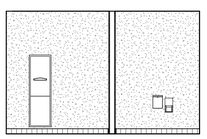
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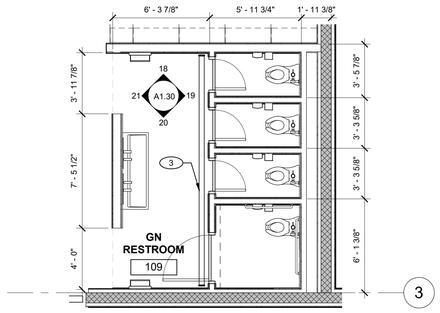
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SCALE: 1/4" = 1'-0"



19 GN RR 109 EAST
SCALE: 1/4" = 1'-0"



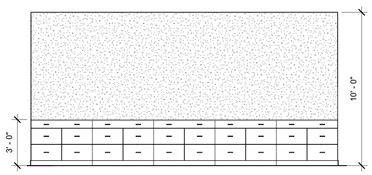
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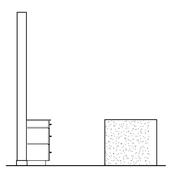
3 GENDER NEUTURAL 109
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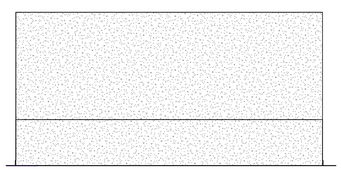
17 LOBBY 107 SOUTH
SCALE: 1/4" = 1'-0"



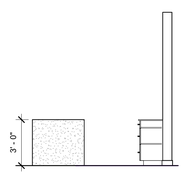
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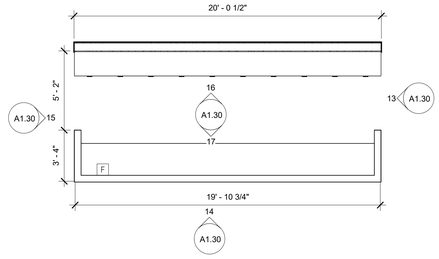
15 LOBBY 107 WEST
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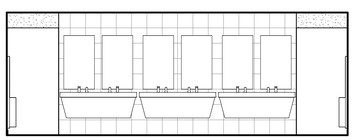
14 LOBBY 107 NORTH
SCALE: 1/4" = 1'-0"



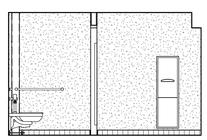
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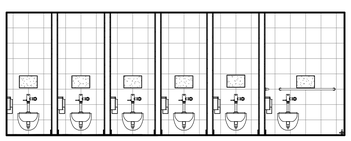
2 LOBBY 107
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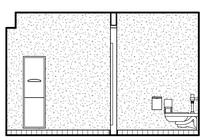
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SCALE: 1/4" = 1'-0"



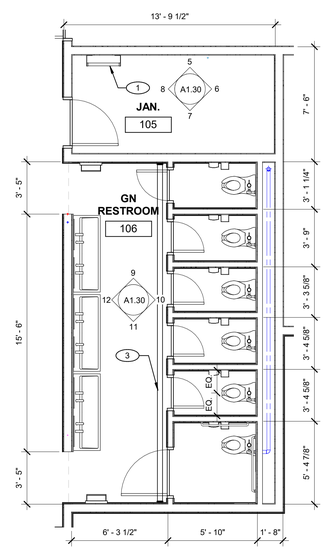
11 GN RR 106 SOUTH
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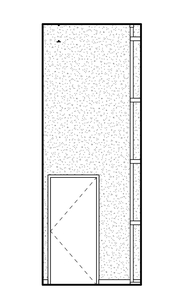
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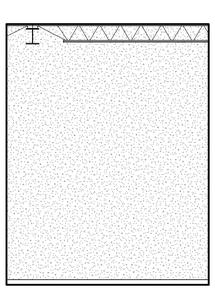
9 GN RR 106 NORTH
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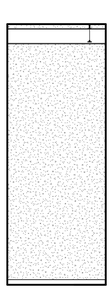
1 JANITOR 105 & GENDER NEUTRAL 106
SCALE: 1/4" = 1'-0"



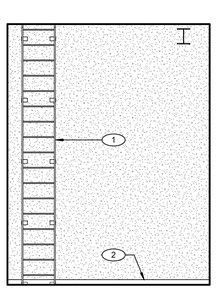
8 JAN 105 WEST
SCALE: 1/4" = 1'-0"



7 JAN 105 SOUTH
SCALE: 1/4" = 1'-0"



6 JAN 105 EAST
SCALE: 1/4" = 1'-0"



5 JAN 105 NORTH
SCALE: 1/4" = 1'-0"

GENERAL NOTES

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KEYNOTES

1. FIRE EXTINGUISHER
2. ROOF ACCESS LADDER, SEE ROOF DETAILS
3. TRENCH DRAIN. SEE PLUMBING FOR MORE INFORMATION

LEGEND

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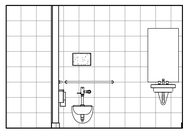
Job No: 21-058.00
Owner
CITY OF FERNLEY

DESIGN DEVELOPMENT

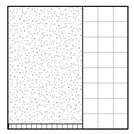
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
ENLARGED RESTROOM PLANS & INTERIOR ELEVATION - BASE BID

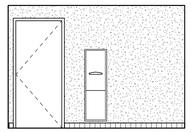
Date: JANUARY 19, 2023
Sheet No:
A1.30



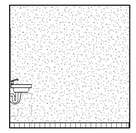
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SCALE: 1/4" = 1'-0"



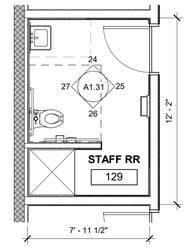
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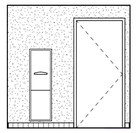
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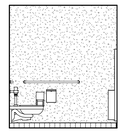
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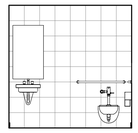
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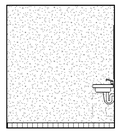
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SCALE: 1/4" = 1'-0"



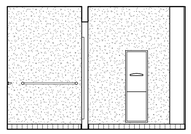
22 RR 127 SOUTH
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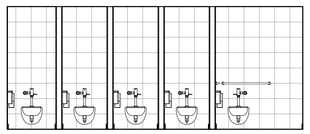
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SCALE: 1/4" = 1'-0"



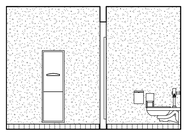
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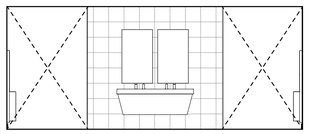
19 GN RR 125 WEST
SCALE: 1/4" = 1'-0"



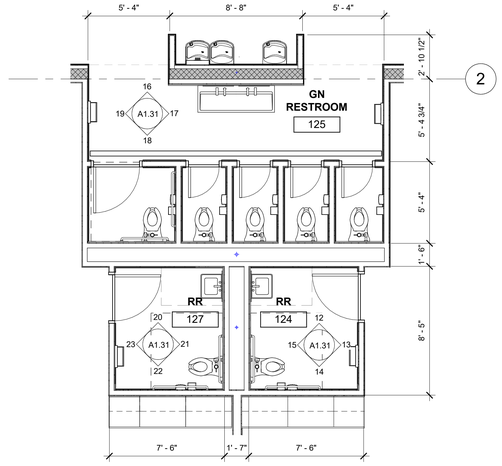
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SCALE: 1/4" = 1'-0"



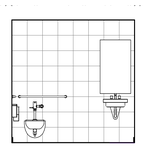
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SCALE: 1/4" = 1'-0"



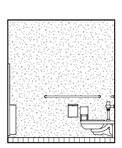
16 GN RR 125 NORTH
SCALE: 1/4" = 1'-0"



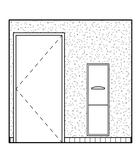
2 RR 124, 125 & 127
SCALE: 1/4" = 1'-0"



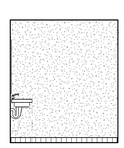
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SCALE: 1/4" = 1'-0"



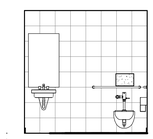
14 RR 124 SOUTH
SCALE: 1/4" = 1'-0"



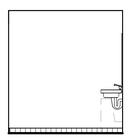
13 RR 124 EAST
SCALE: 1/4" = 1'-0"



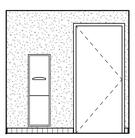
12 RR 124 NORTH
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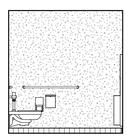
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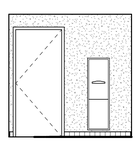
10 RR 122 SOUTH
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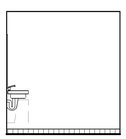
9 RR 122 EAST
SCALE: 1/4" = 1'-0"



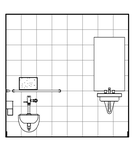
8 RR 122 NORTH
SCALE: 1/4" = 1'-0"



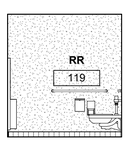
7 RR 119 WEST
SCALE: 1/4" = 1'-0"



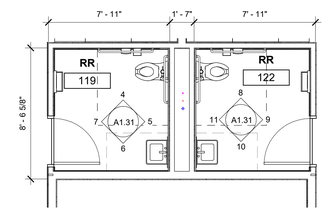
6 RR 119 SOUTH
SCALE: 1/4" = 1'-0"



5 RR 119 EAST
SCALE: 1/4" = 1'-0"



4 RR 119 NORTH
SCALE: 1/4" = 1'-0"



1 RR 119 & 122
SCALE: 1/4" = 1'-0"

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KEYNOTES

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3. TRENCH DRAIN. SEE PLUMBING FOR MORE INFORMATION

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Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner
CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
ENLARGED RESTROOM PLANS & INTERIOR ELEVATIONS

Date: JANUARY 19, 2023

Sheet No:

A1.31

ROOM FINISH SCHEDULE

ROOM NO	ROOM NAME	FLOORING		CEILING	WALL				COMMENTS
		MAT'L	BASE	MAT'L	NORTH MAT'L	WEST MAT'L	SOUTH MAT'L	EAST MAT'L	
LEVEL 1									
100	CORRIDOR			C-1					
101	MDF			C-3					
102	MECH.			C-3					
103	ELEC			C-3					
104	FIRE RISER			C-3					
105	JAN.			C-3					
106	GN RESTROOM			C-2					
107	LOBBY			C-3					
108	TEEN CENTER			C-3					
109	GN RESTROOM			C-2					
110	EVENT CENTER			C-1					
111	KITCHEN			C-2					
112	FAMILY RR			C-2					
113	ADMIN. OFFICE			C-1					
114	OFFICE			C-1					
115	STORAGE			C-3					
116	VESTIBULE			C-1					
117	YOUTH GAME ROOM			C-3					
118	CLASSROOM			C-1					
119	RR			C-2					
120	STORAGE			C-3					
121	CLASSROOM			C-1					
122	RR			C-2					
123	CLASSROOM			C-1					
124	RR			C-2					
125	GN RESTROOM			C-2					
126	CLASSROOM			C-1					
127	RR			C-2					
128	STORAGE			C-2					
129	STAFF RR			C-2					
130	VESTIBULE			C-2					
152	ELECTRICAL ENCLOSURE			-					
153	TRASH YARD			-					
154	DRY STORAGE			C-3					
155	RESTROOM			C-3					
158	W.I. COOLER								
160	W.I. FREEZER								

MATERIAL SCHEDULE

KEY	DESCRIPTION	MANUFACTURER (BASIS OF DESIGN)	MODEL NUMBER	COLOR	REMARKS
FLOORING					SEE FLOOR FINISH PLANS
F-1					
BASE					
B-1					
B-2					
CEILING					
C-1	ACOUSTIC CEILING TILE	USG	TYPICAL 2X2, MARS HIGH CAC; #86186	WHITE TILE/WHITE GRID	GRID USG DX/DXL
C-2	ACOUSTIC CEILING TILE	USG	KITCHEN LAY-IN PANEL CLIMAPLUS PERFORMANCE; #3410	WHITE TILE/WHITE GRID	GRID USG DX/DXL
C-3	PAINTED GYPSUM BOARD				SEE PAINT COLOR SCHEDULE
C-4	EXPOSED STRUCTURE				SEE PAINT COLOR SCHEDULE
C--W1	WOOD CEILING				
WALLS					
W-1					
W-2					
W-3					
CMU					
CMU-1	EXTERIOR CMU				SEE EXTERIOR ELEVATION

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Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

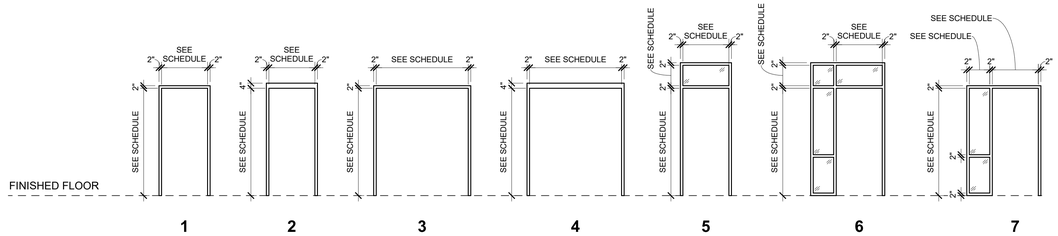
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DESIGN DEVELOPMENT

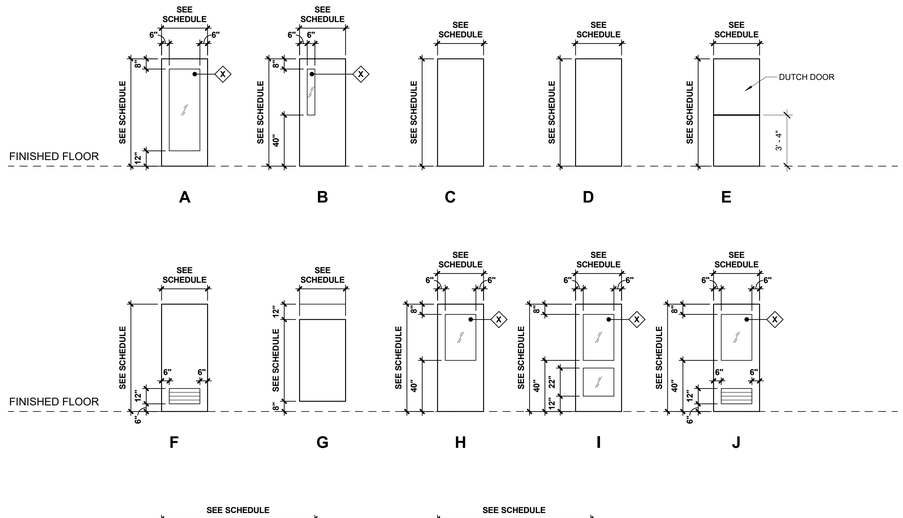
REVISIONS		
REV	DATE	DESCRIPTION

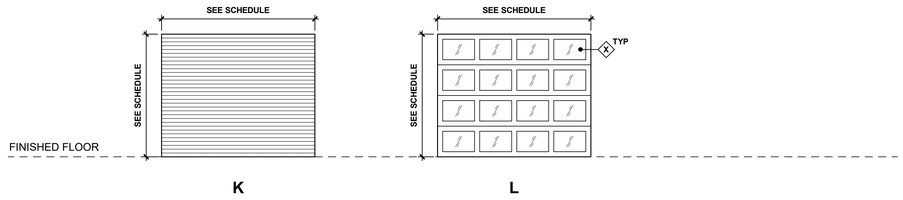
Sheet Title
MATERIAL FINISH SCHEDULE

Date: JANUARY 19, 2023
Sheet No:
A2.00



DOOR FRAME TYPES
SCALE: 1/4" = 1'-0"





DOOR PANEL TYPES
SCALE: 1/4" = 1'-0"

DOOR SCHEDULE																	
			PANEL					FRAME									
			SIZE														
DR. NO.	RM. NO.	PR	W	H	T	TYPE	MAT'L	TYPE	MAT'L	HEAD DTL	SILL DTL	JAMB DTL LATCH	JAMB DTL HINGE	HDWR	LABEL	REMARKS
100A	100		6' - 0"	7' - 0"	0"	AA										
101	101		3' - 0"	7' - 0"	1 3/4"	A										
102	102		3' - 6"	7' - 0"	1 3/4"	C										
103A	103	PR	4' - 0"	7' - 0"	1 3/4"	CC										
103B	103		3' - 6"	7' - 0"	1 3/4"	C										
104	104		3' - 0"	7' - 0"	1 3/4"	A										
105	105		3' - 0"	7' - 0"	1 3/4"	A										
106A	106		2' - 0"	7' - 0"	1 3/4"	D										
106B	106		2' - 0"	7' - 0"	1 3/4"	D										
106C	106		2' - 0"	7' - 0"	1 3/4"	D										
106D	106		2' - 0"	7' - 0"	1 3/4"	D										
106E	106		2' - 0"	7' - 0"	1 3/4"	D										
106F	106		3' - 0"	7' - 0"	1 3/4"	D										
107A	107		6' - 0"	5' - 10 3/4"		AA										
107B	117		6' - 0"	5' - 10 3/4"		AA										
107C	107		6' - 0"	7' - 0"	0"	AA										
108	108		6' - 0"	5' - 10 3/4"		AA										
109A	109		2' - 0"	7' - 0"	1 3/4"	D										
109B	109		2' - 0"	7' - 0"	1 3/4"	D										
109C	109		2' - 0"	7' - 0"	1 3/4"	D										
109D	109		3' - 0"	7' - 0"	1 3/4"	D										
110A	110		3' - 0"	7' - 0"	1 3/4"	C										
110B	110		3' - 0"	7' - 0"	1 3/4"	A		5								
110C	110		3' - 0"	7' - 0"	2"	A										
110D	110		3' - 0"	7' - 0"	1 3/4"	A										
111A	111	PR	3' - 6"	7' - 0"	1 3/4"	CC										
111B	111		3' - 0"	7' - 0"	1 3/4"	C										
111C	111		3' - 0"	7' - 0"	1 3/4"	C										
111D	111		3' - 0"	7' - 0"	1 3/4"	C										
112	112		3' - 0"	7' - 0"	1 3/4"	A										
113	113		3' - 0"	7' - 0"	2"	A										
114	114		3' - 0"	7' - 0"	1 3/4"	A										
115	115		3' - 0"	7' - 0"	1 3/4"	A										
116A	116		6' - 0"	7' - 0"	0"	AA										
116B	116		6' - 0"	7' - 0"	0"	AA										
116C	116		6' - 0"	7' - 0"	0"	AA										
116D	116		6' - 0"	7' - 0"	0"	AA										
118	118		3' - 0"	7' - 0"	2"	A										
119	118		3' - 0"	7' - 0"	1 3/4"	A										
120	120	PR	3' - 0"	7' - 0"	1 3/4"	EC										
121	121		3' - 0"	7' - 0"	2"	A										
122	122		3' - 0"	7' - 0"	1 3/4"	A										
123	123		3' - 0"	7' - 0"	2"	A										
124	123		3' - 0"	7' - 0"	1 3/4"	A										
125A	125		2' - 0"	7' - 0"	1 3/4"	D										
125B	125		2' - 0"	7' - 0"	1 3/4"	D										
125C	125		2' - 0"	7' - 0"	1 3/4"	D										
125D	125		2' - 0"	7' - 0"	1 3/4"	D										
125E	125		3' - 0"	7' - 0"	1 3/4"	D										
126	126		3' - 0"	7' - 0"	2"	A										
127	126		3' - 0"	7' - 0"	1 3/4"	A										
128	128		3' - 0"	7' - 0"	1 3/4"	A										
129	129		3' - 0"	7' - 0"	1 3/4"	A										
130A	130		3' - 0"	7' - 0"	1 3/4"	A		6								
130B	130		3' - 0"	7' - 0"	2"	A										
152	152		17' - 1"	6' - 0"	2"	GATE										
153	153		17' - 1"	8' - 0"	2"	GATE										
154	154		3' - 6"	7' - 0"	1 3/4"	A										
155	155		3' - 6"	7' - 0"	1 3/4"	A										

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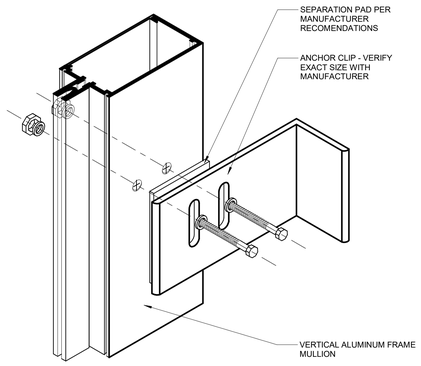
Owner
CITY OF FERNLEY

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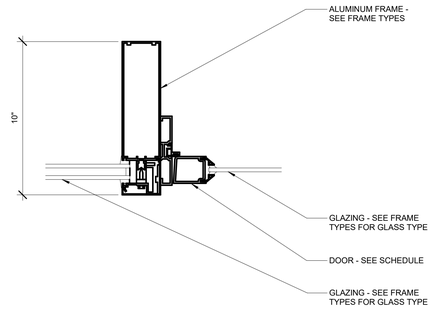
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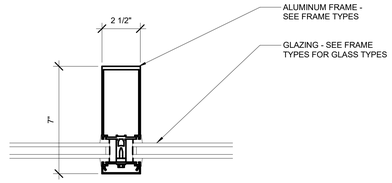
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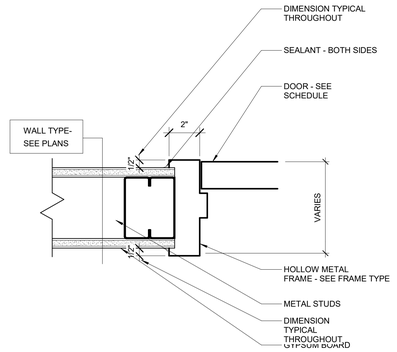
16 ISOMETRIC VIEW @ ANCHOR CLIP
SCALE: 3" = 1'-0"



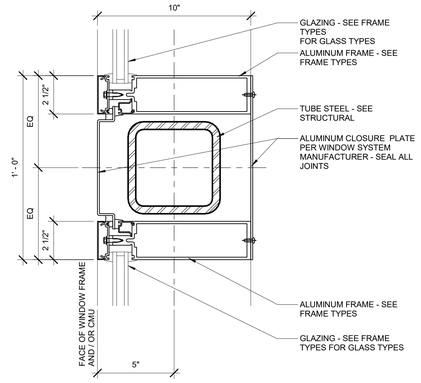
12 INTERMEDIATE MULLION DETAIL
SCALE: 3" = 1'-0"



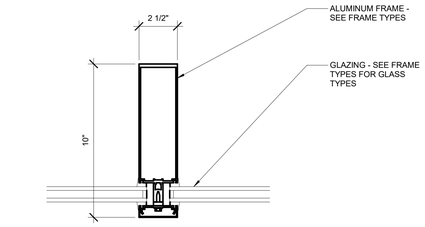
8 INTERMEDIATE MULLION DETAIL
SCALE: 3" = 1'-0"



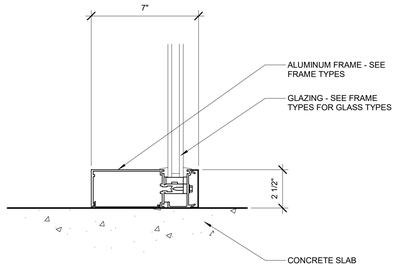
4 JAMB
SCALE: 3" = 1'-0"



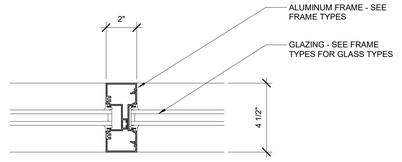
15 INTERMEDIATE MULLION @ TUBE STEEL
SCALE: 3" = 1'-0"



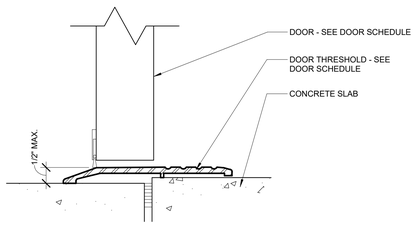
11 INTERMEDIATE MULLION DETAIL
SCALE: 3" = 1'-0"



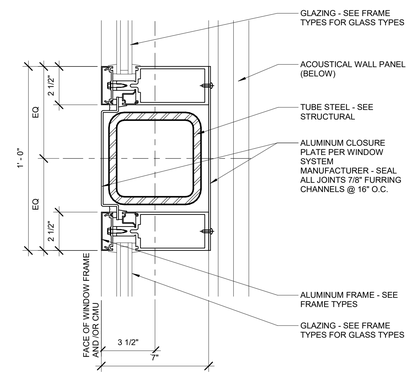
7 SILL
SCALE: 3" = 1'-0"



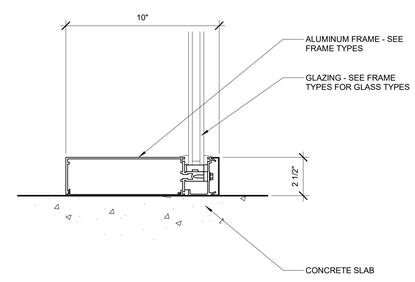
3 INTERMEDIATE MULLION DETAIL
SCALE: 3" = 1'-0"



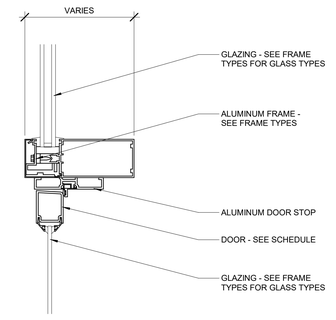
18 DOOR THRESHOLD
SCALE: 6" = 1'-0"



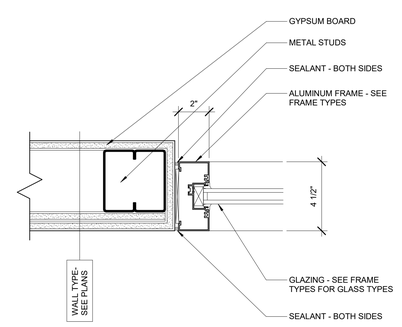
14 INTERMEDIATE MULLION @ TUBE STEEL
SCALE: 3" = 1'-0"



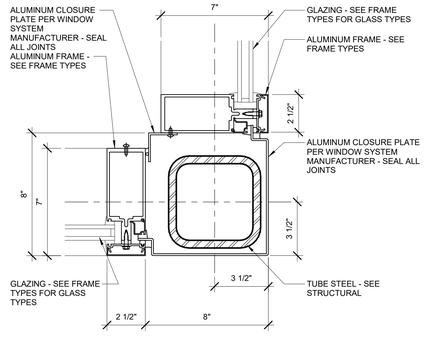
10 SILL
SCALE: 3" = 1'-0"



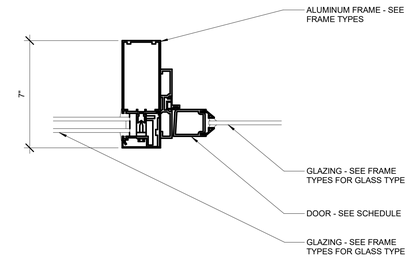
6 HEAD
SCALE: 3" = 1'-0"



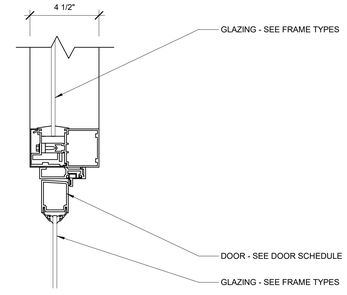
2 SILL / JAMB (SIM.)
SCALE: 3" = 1'-0"



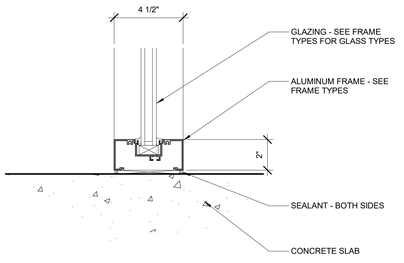
13 OUTSIDE JAMB @ TUBE STEEL
SCALE: 3" = 1'-0"



9 INTERMEDIATE MULLION DETAIL
SCALE: 3" = 1'-0"



5 DOOR HEAD
SCALE: 3" = 1'-0"



1 SILL
SCALE: 3" = 1'-0"

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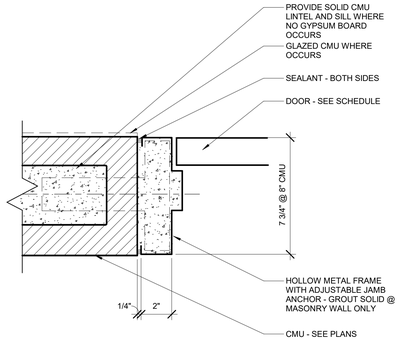
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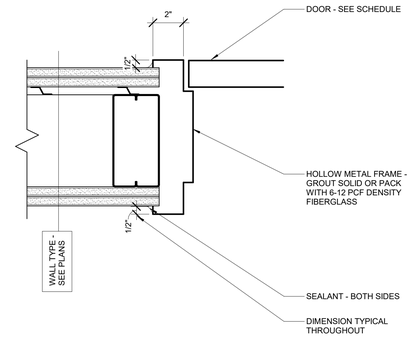
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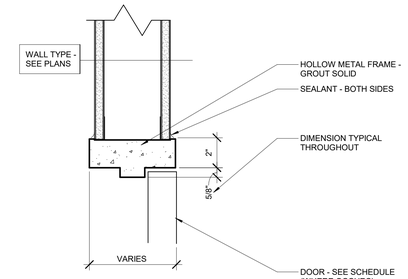
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Sheet No:
A2.20



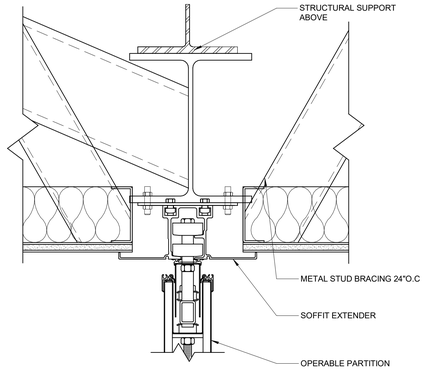
12 JAMB / HEAD (SIM.)
SCALE: 3" = 1'-0"



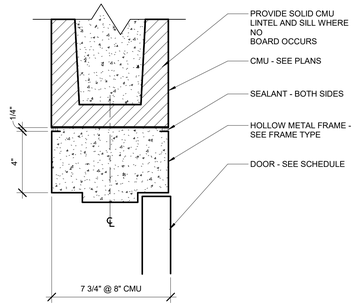
8 JAMB / HEAD AT SOUND DOOR (SIM.)
SCALE: 3" = 1'-0"



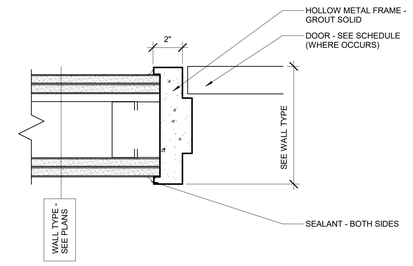
4 HEAD
SCALE: 3" = 1'-0"



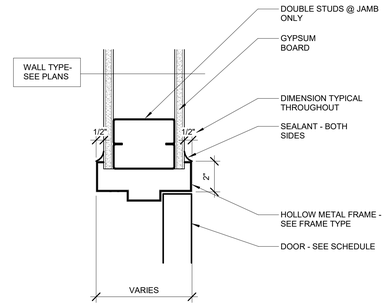
15 SOFFIT @ OPERABLE PARTITION TRACK
SCALE: 3" = 1'-0"



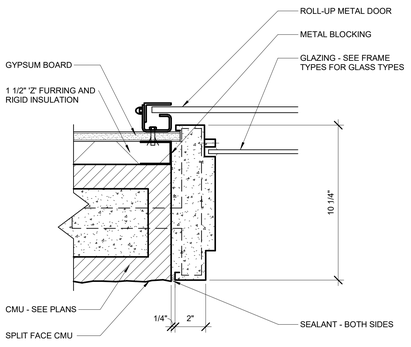
11 HEAD
SCALE: 3" = 1'-0"



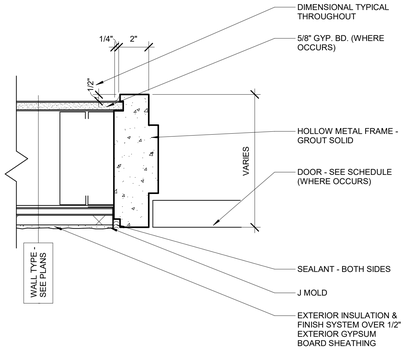
7 JAMB
SCALE: 3" = 1'-0"



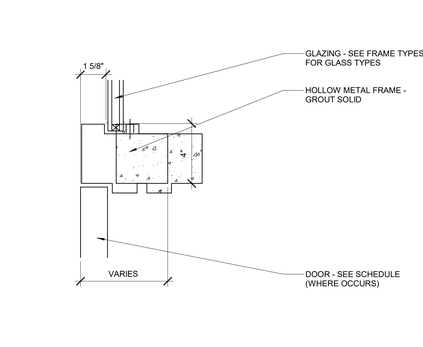
3 HEAD
SCALE: 3" = 1'-0"



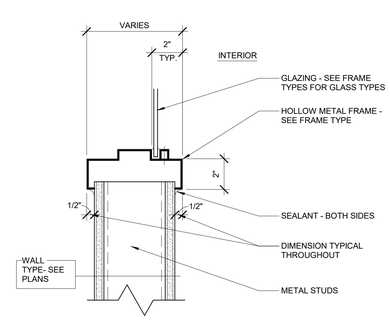
14 JAMB
SCALE: 3" = 1'-0"



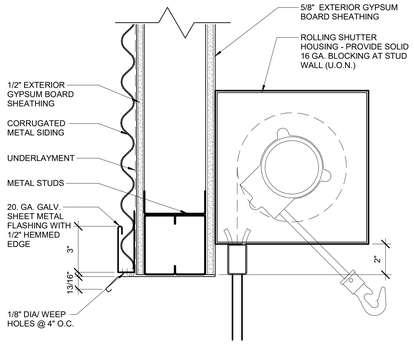
10 JAMB/HEAD SIM.
SCALE: 3" = 1'-0"



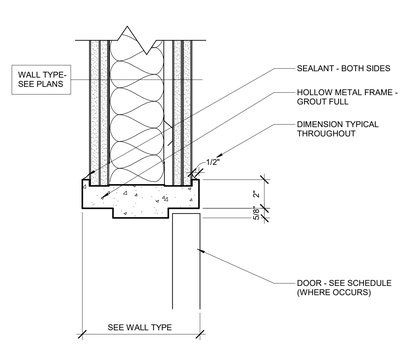
6 HEAD
SCALE: 3" = 1'-0"



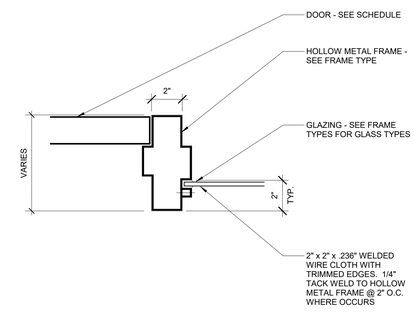
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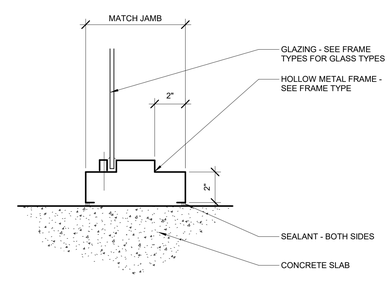
13 HEAD DETAIL
SCALE: 3" = 1'-0"



9 HEAD
SCALE: 3" = 1'-0"



5 SILL / JAMB (SIM.)
SCALE: 3" = 1'-0"



1 SILL
SCALE: 3" = 1'-0"

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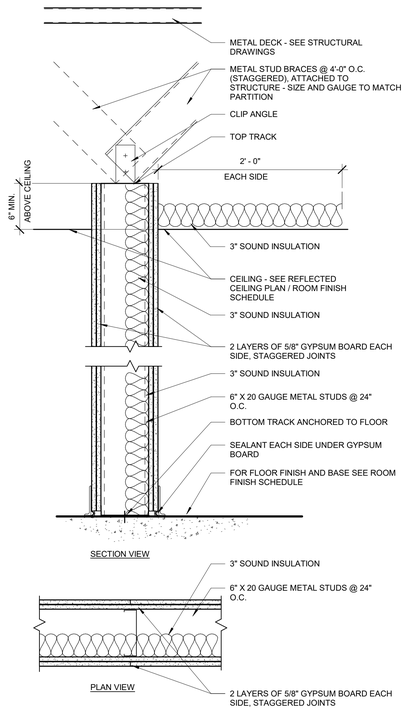
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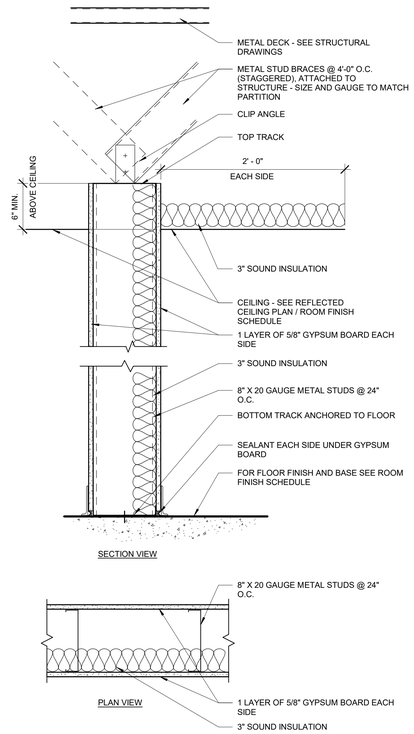
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A2.21



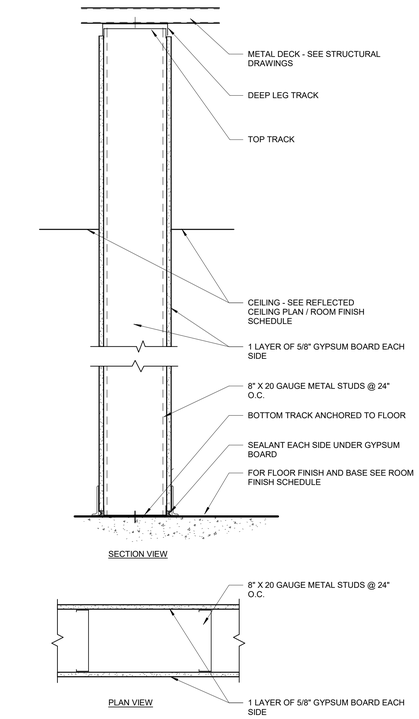
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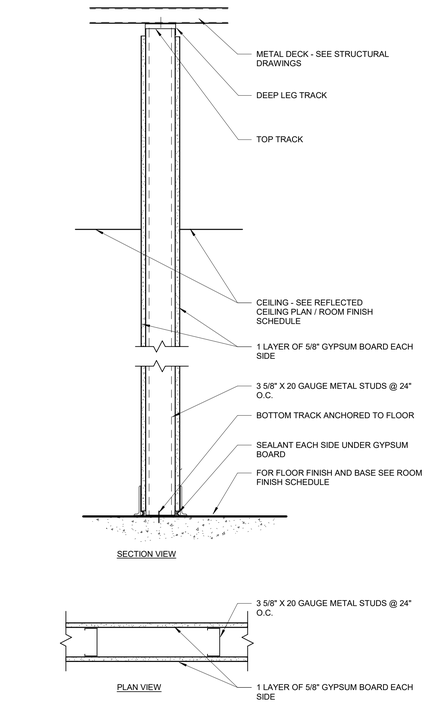
PARTITION TYPE — ACOUSTICAL PARTITION — C2

SCALE : 1 1/2" = 1'-0"



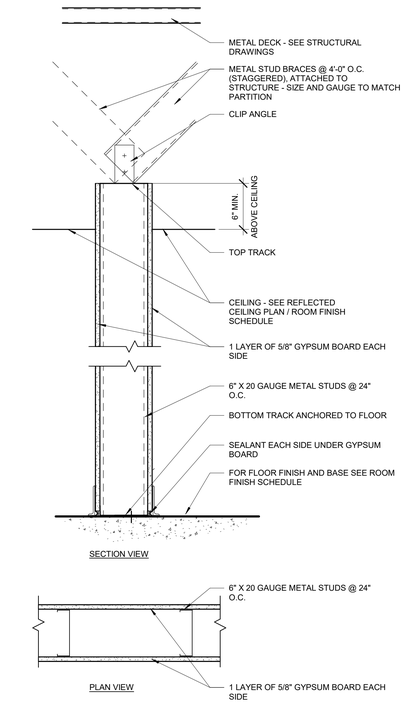
PARTITION TYPE — B3

SCALE : 1 1/2" = 1'-0"



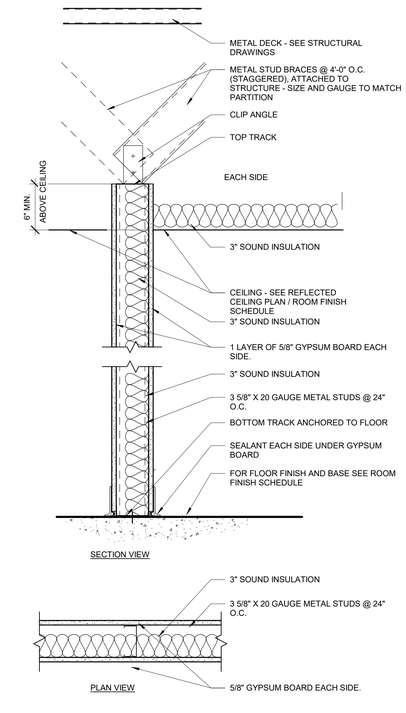
PARTITION TYPE — B1

SCALE : 1 1/2" = 1'-0"



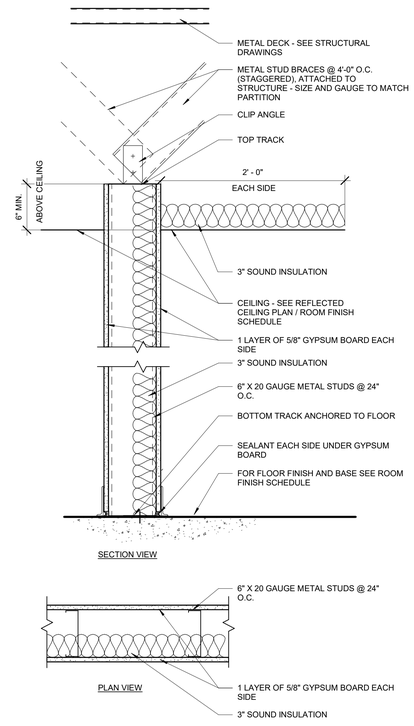
PARTITION TYPE — A2

SCALE : 1 1/2" = 1'-0"



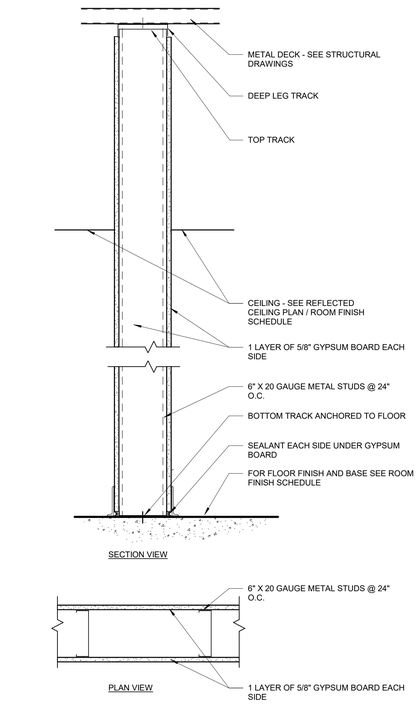
PARTITION TYPE — ACOUSTICAL PARTITION — C3

SCALE : 1 1/2" = 1'-0"



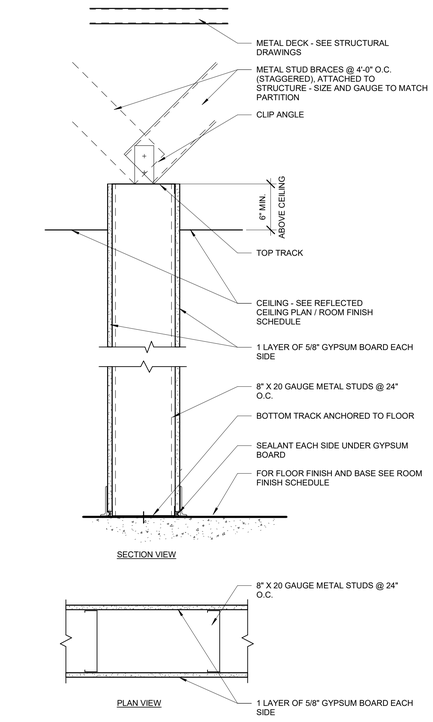
PARTITION TYPE — ACOUSTICAL PARTITION — C1

SCALE : 1 1/2" = 1'-0"



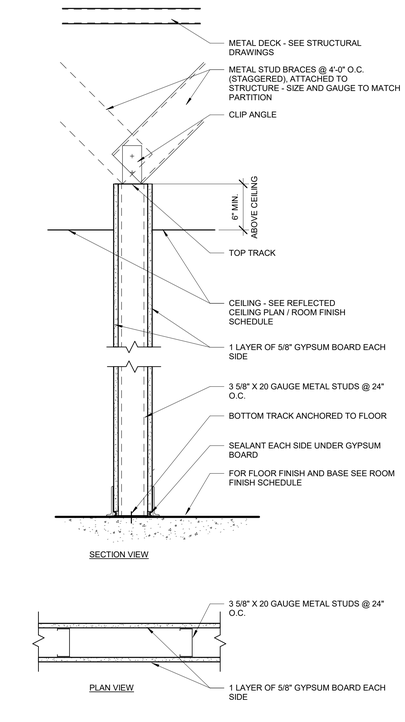
PARTITION TYPE — B2

SCALE : 1 1/2" = 1'-0"



PARTITION TYPE — A3

SCALE : 1 1/2" = 1'-0"



PARTITION TYPE — A1

SCALE : 1 1/2" = 1'-0"

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Job No: 21-058.00

Owner

CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

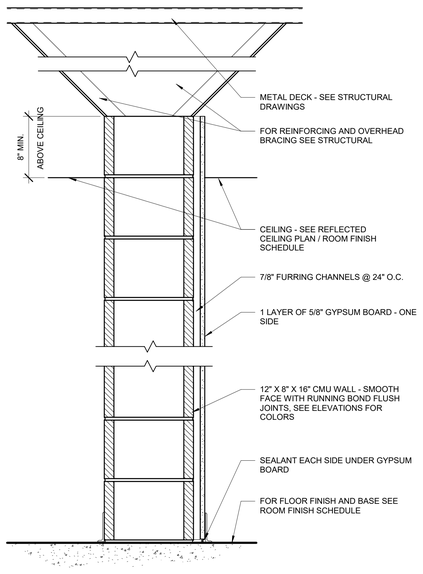
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PARTITION TYPES

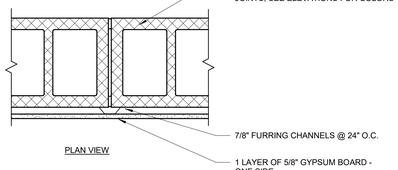
Date: JANUARY 19, 2023

Sheet No:

A2.30



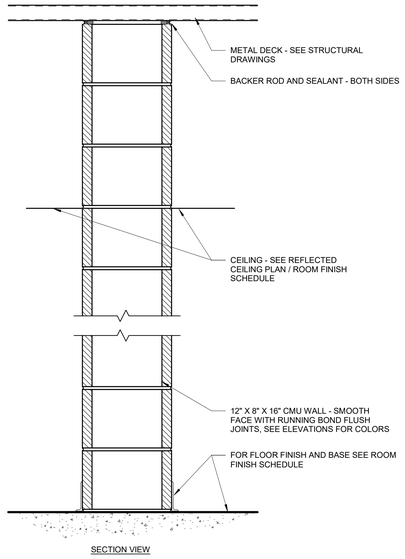
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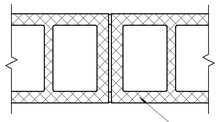
PLAN VIEW

PARTITION TYPE D6

SCALE : 1 1/2" = 1'-0"



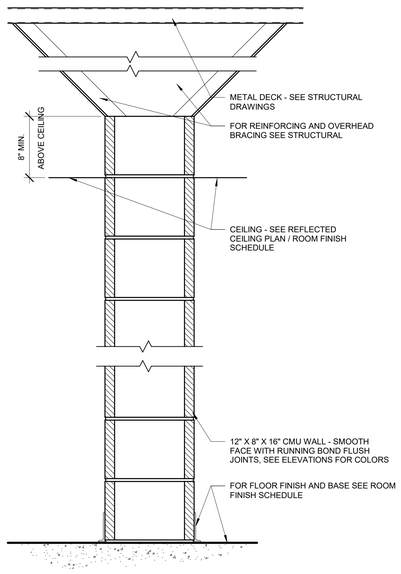
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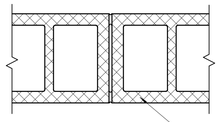
PLAN VIEW

PARTITION TYPE D4

SCALE : 1 1/2" = 1'-0"



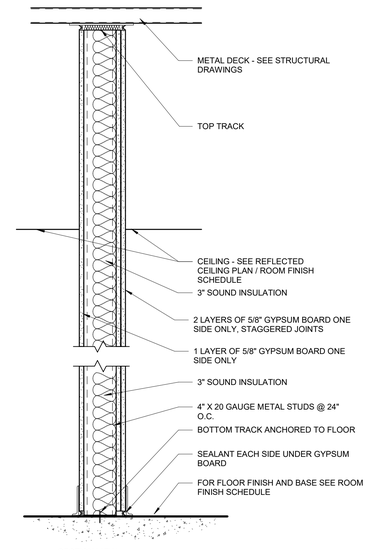
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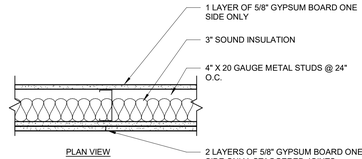
PLAN VIEW

PARTITION TYPE D2

SCALE : 1 1/2" = 1'-0"



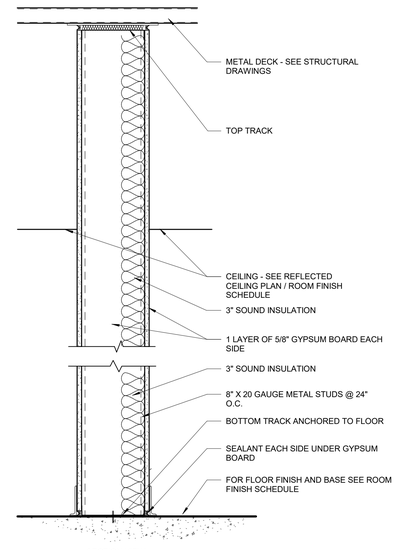
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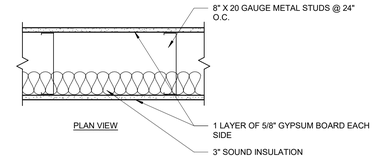
PLAN VIEW

PARTITION TYPE C8 ACOUSTICAL PARTITION

SCALE : 1 1/2" = 1'-0"



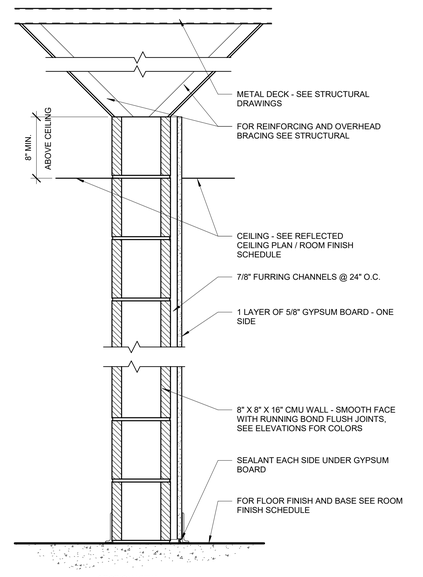
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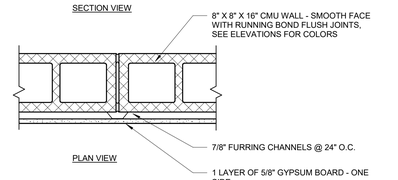
PLAN VIEW

PARTITION TYPE C6 ACOUSTICAL PARTITION

SCALE : 1 1/2" = 1'-0"



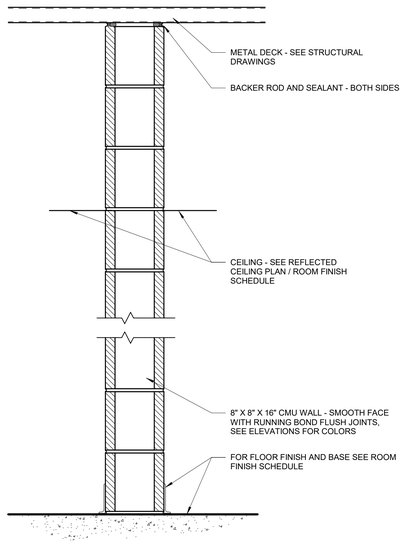
SECTION VIEW



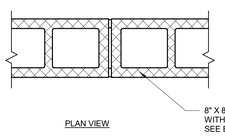
PLAN VIEW

PARTITION TYPE D5

SCALE : 1 1/2" = 1'-0"



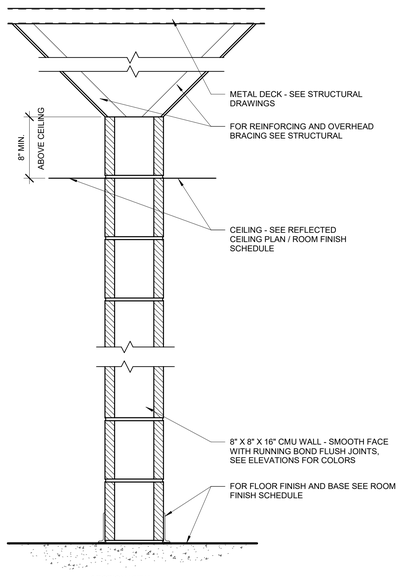
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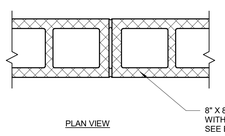
PLAN VIEW

PARTITION TYPE D3

SCALE : 1 1/2" = 1'-0"



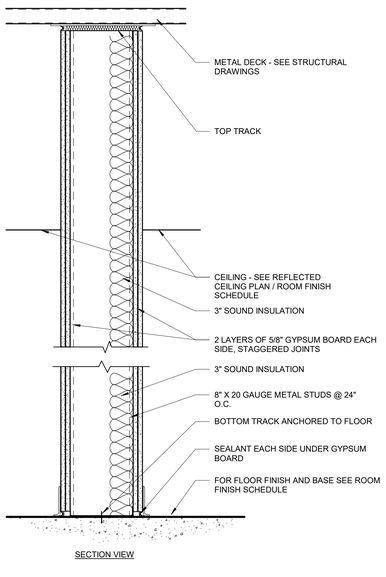
SECTION VIEW



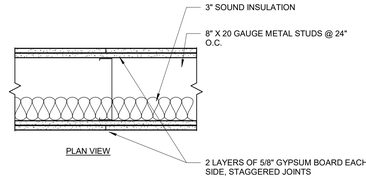
PLAN VIEW

PARTITION TYPE D1

SCALE : 1 1/2" = 1'-0"



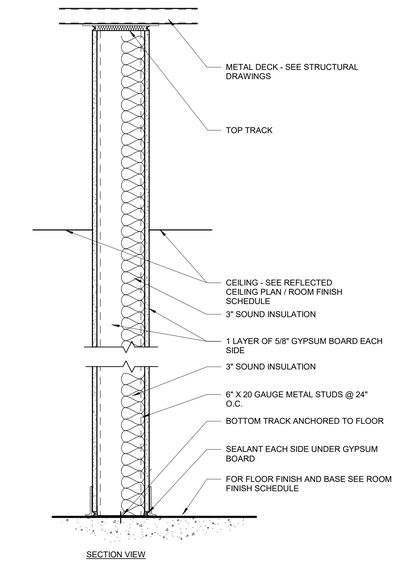
SECTION VIEW



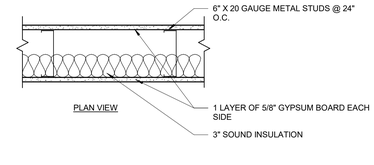
PLAN VIEW

PARTITION TYPE C7 ACOUSTICAL PARTITION

SCALE : 1 1/2" = 1'-0"



SECTION VIEW



PLAN VIEW

PARTITION TYPE C5 ACOUSTICAL PARTITION

SCALE : 1 1/2" = 1'-0"

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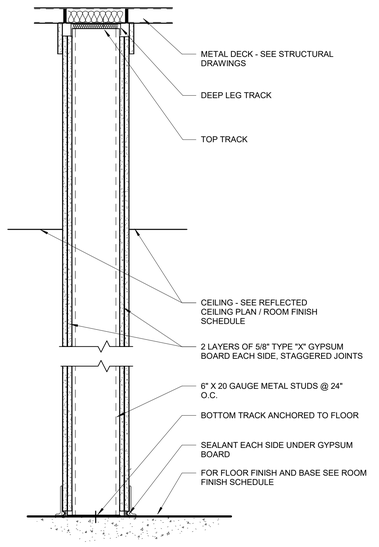
DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

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PARTITION TYPES

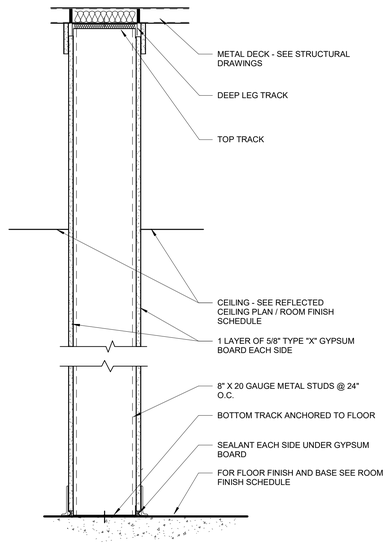
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A2.31



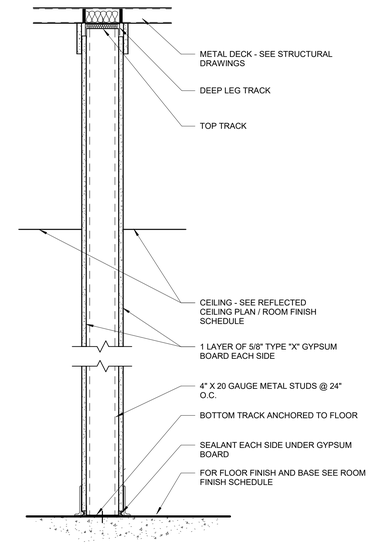
PARTITION TYPE — UL NO. U425 2 HOUR RATED PARTITION — F5

SCALE : 1 1/2" = 1'-0"



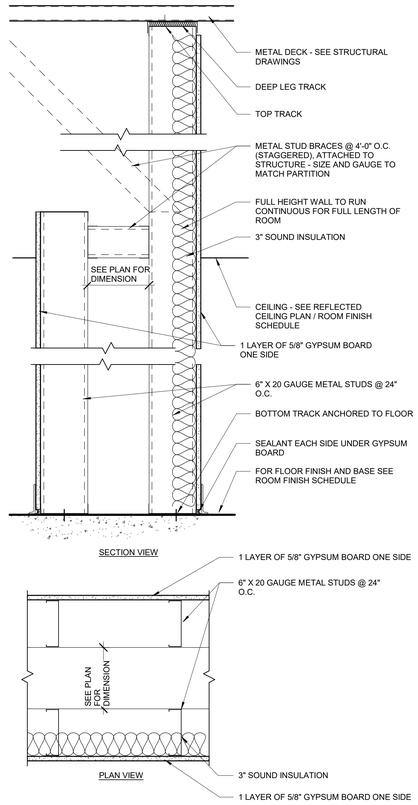
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SCALE : 1 1/2" = 1'-0"



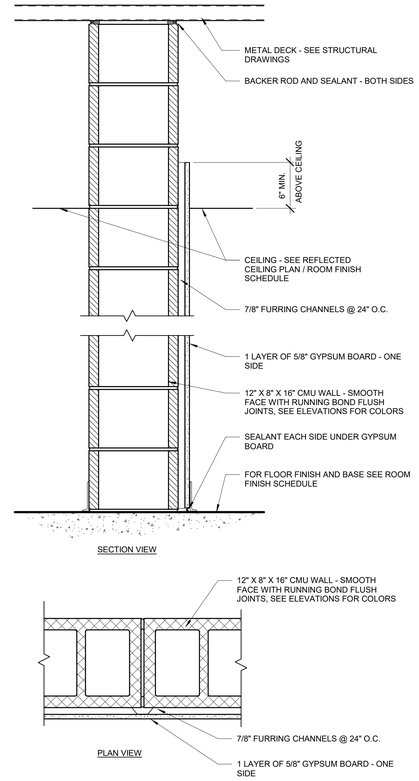
PARTITION TYPE — UL NO. U425 1 HOUR RATED PARTITION — F1

SCALE : 1 1/2" = 1'-0"



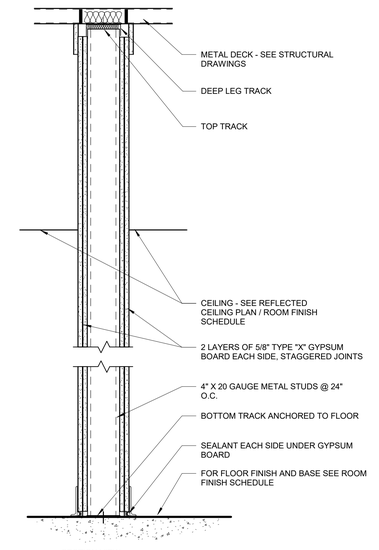
PARTITION TYPE — E2

SCALE : 1 1/2" = 1'-0"



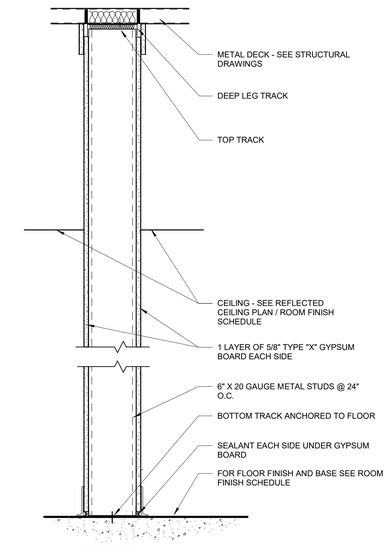
PARTITION TYPE — D8

SCALE : 1 1/2" = 1'-0"



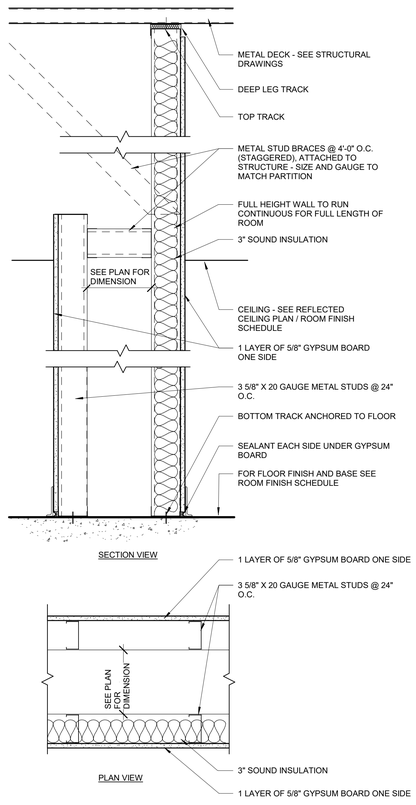
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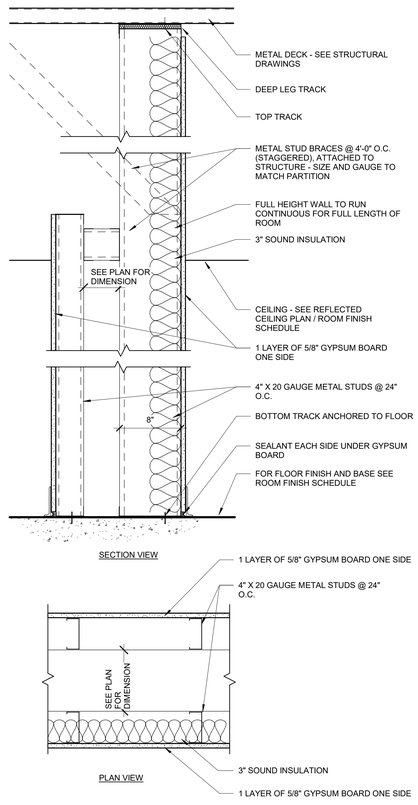
PARTITION TYPE — UL NO. U425 1 HOUR RATED PARTITION — F2

SCALE : 1 1/2" = 1'-0"



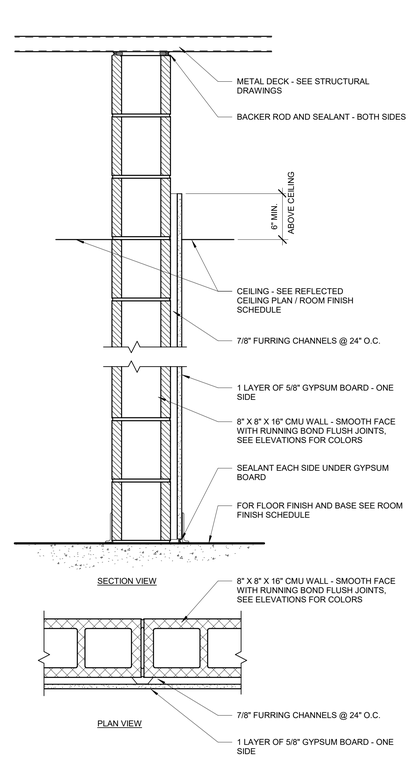
PARTITION TYPE — E3

SCALE : 1 1/2" = 1'-0"



PARTITION TYPE — E1

SCALE : 1 1/2" = 1'-0"



PARTITION TYPE — D7

SCALE : 1 1/2" = 1'-0"

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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

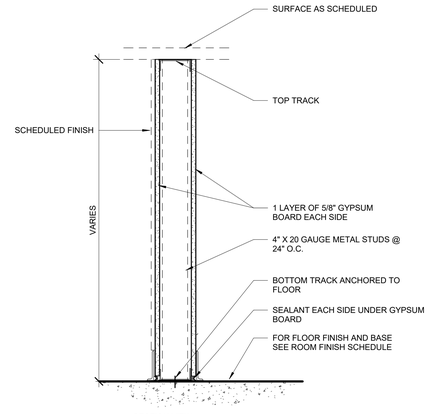
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PARTITION TYPES

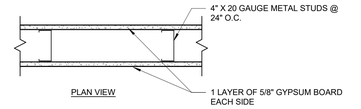
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A2.32



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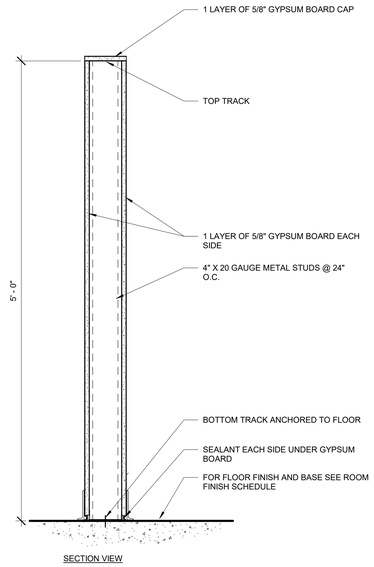


PLAN VIEW

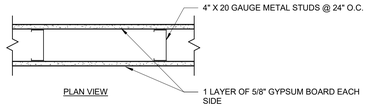
PARTITION TYPE

SCALE : 1 1/2" = 1'-0"

H3



SECTION VIEW



PLAN VIEW

PARTITION TYPE

SCALE : 1 1/2" = 1'-0"

H2

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REV	DATE	DESCRIPTION

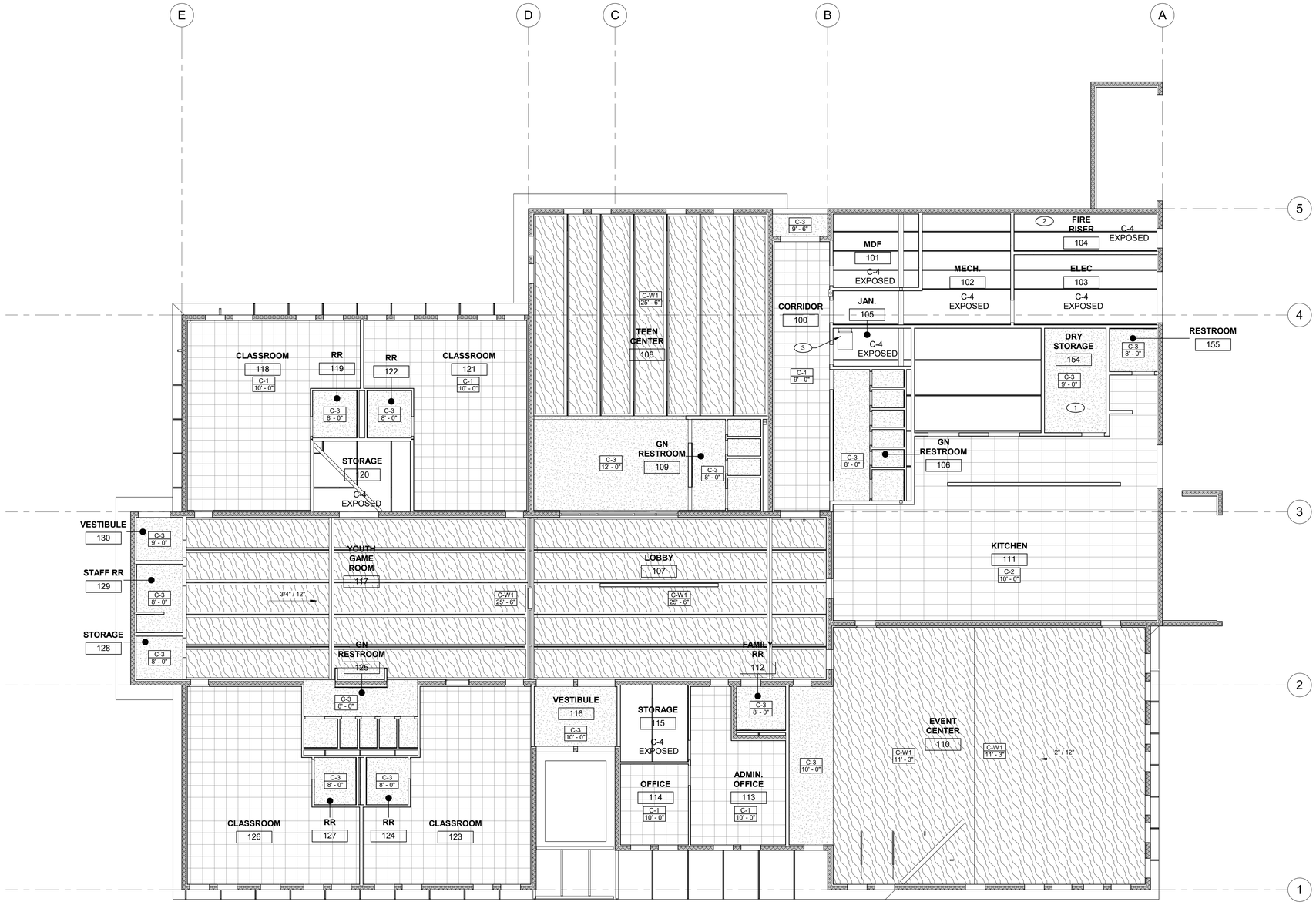
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PARTITION TYPES

Date: JANUARY 19, 2023

Sheet No:

A2.33



1 REFLECTED CEILING PLAN - BASE BID
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1. SEE FINISH SCHEDULE FOR CEILING HEIGHTS AND FINISHES NOT SHOWN ON PLAN.
2. SPRINKLER HEADS TO BE CENTERED IN ALL CORRIDORS AND IN CEILING TILES WHERE TILES OCCUR.
3. MAINTAIN MINIMUM 3" CLEAR BETWEEN LIGHTS, DIFFUSERS, SPEAKERS, ETC.
4. CEILING/SOFFITS ELEVATIONS ARE BASED FROM FINISH FLOOR ELEVATIONS.
5. SEE FINISH SCHEDULE FOR EXPOSED STRUCTURE TO BE PAINTED.

KEYNOTES

1. PAINTED GYP. BD. CEILNG, SEE FINISH SCHEDULE
2. PAINTED EXPOSED CEILING, SEE FINISH SCHEDULE.
3. ROOF ACCESS HATCH.

LEGEND

- GYP — FINISH TAG
- ACT 12' - 0" — CEILING TAG
- 24" x 24" ACOUSTIC CEILING TILE
- 24" x 48" ACOUSTIC CEILING TILE
- WOOD CEILING
- FRAMED GYPSUM BOARD CEILING, SEE FINISH SCHEDULE
- EXPOSED STRUCTURE. SEE STRUCTURAL DETAILS.

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Job No: 21-058.00

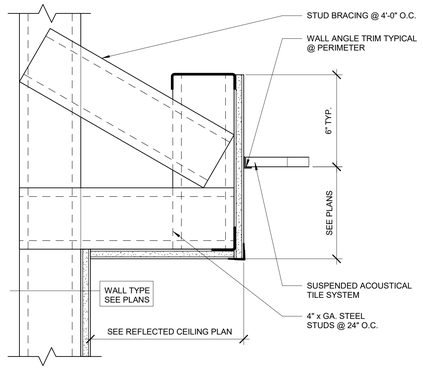
Owner
CITY OF FERNLEY

DESIGN DEVELOPMENT

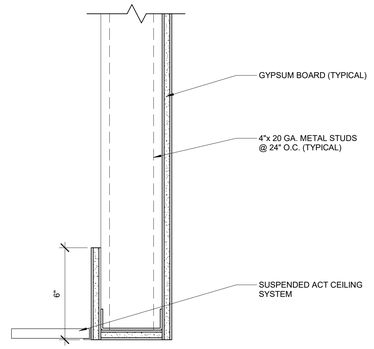
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
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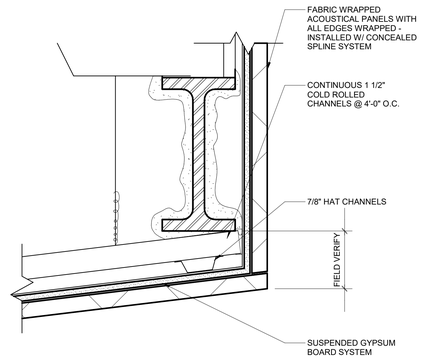
Date: JANUARY 19, 2023
Sheet No:
A3.01



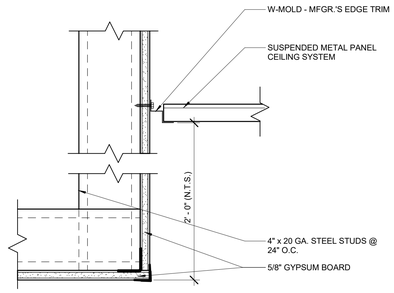
11 GYPSUM BOARD SOFFIT
SCALE: 3" = 1'-0"



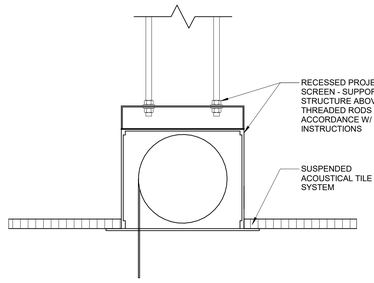
7 ACT CEILING TRANSITION
SCALE: 3" = 1'-0"



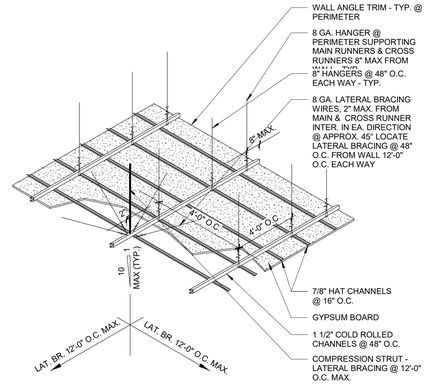
3 ACOUSTIC PANEL DETAIL
SCALE: 3" = 1'-0"



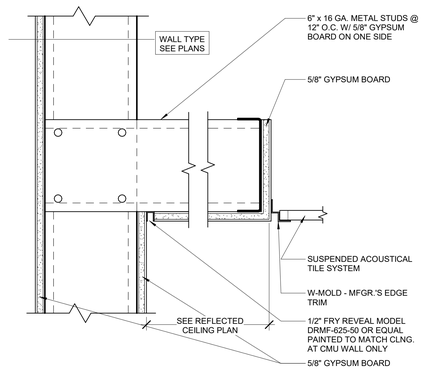
10 MTL. PANEL CEILING @ GYP. BD. SOFFIT
SCALE: 3" = 1'-0"



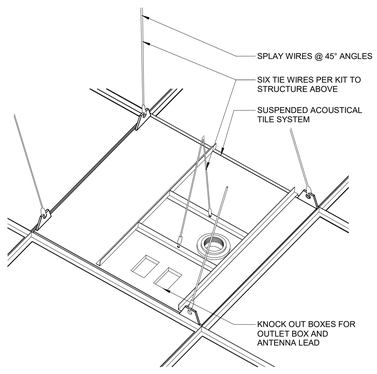
6 RECESSED PROJECTION SCREEN
SCALE: 3" = 1'-0"



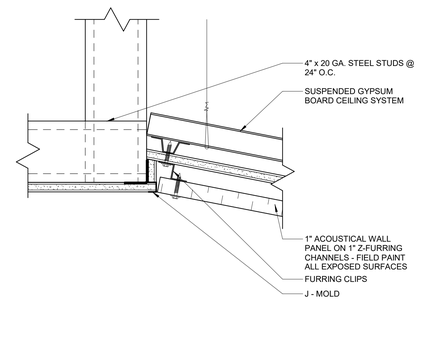
2a SUSPENDED GYPSUM BOARD CEILING
SCALE: 3" = 1'-0"



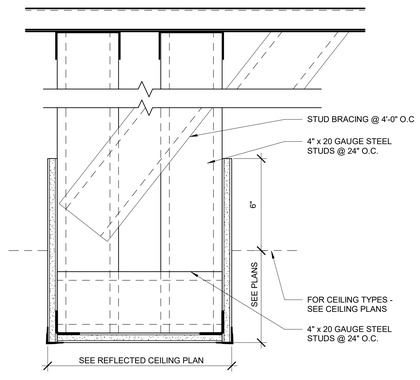
13 SOFFIT DETAIL
SCALE: 3" = 1'-0"



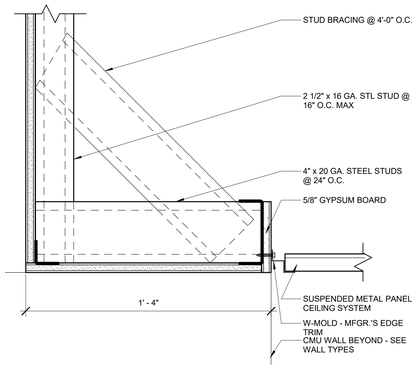
5 PROJECTION MOUNTING KIT
SCALE: 3" = 1'-0"



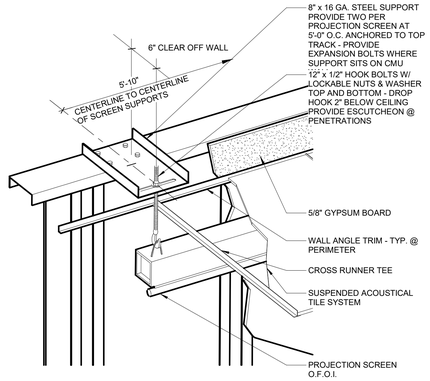
2 ACOUSTICAL PANEL CEILING DETAIL
SCALE: 3" = 1'-0"



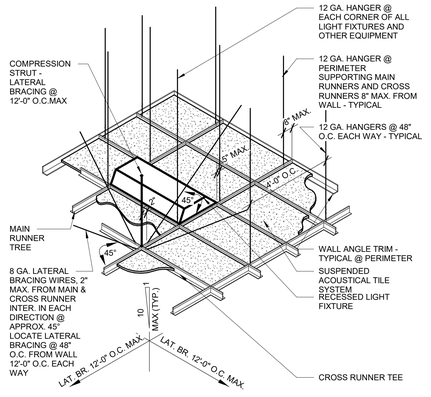
12 GYPSUM BOARD SOFFIT
SCALE: 3" = 1'-0"



9 MTL. PANEL CEILING @ GYP. BD. SOFFIT
SCALE: 3" = 1'-0"



4 PROJECTION SCREEN MOUNT
SCALE: 3" = 1'-0"



1 ACOUSTICAL TILE CEILING SYSTEM
SCALE: 3" = 1'-0"

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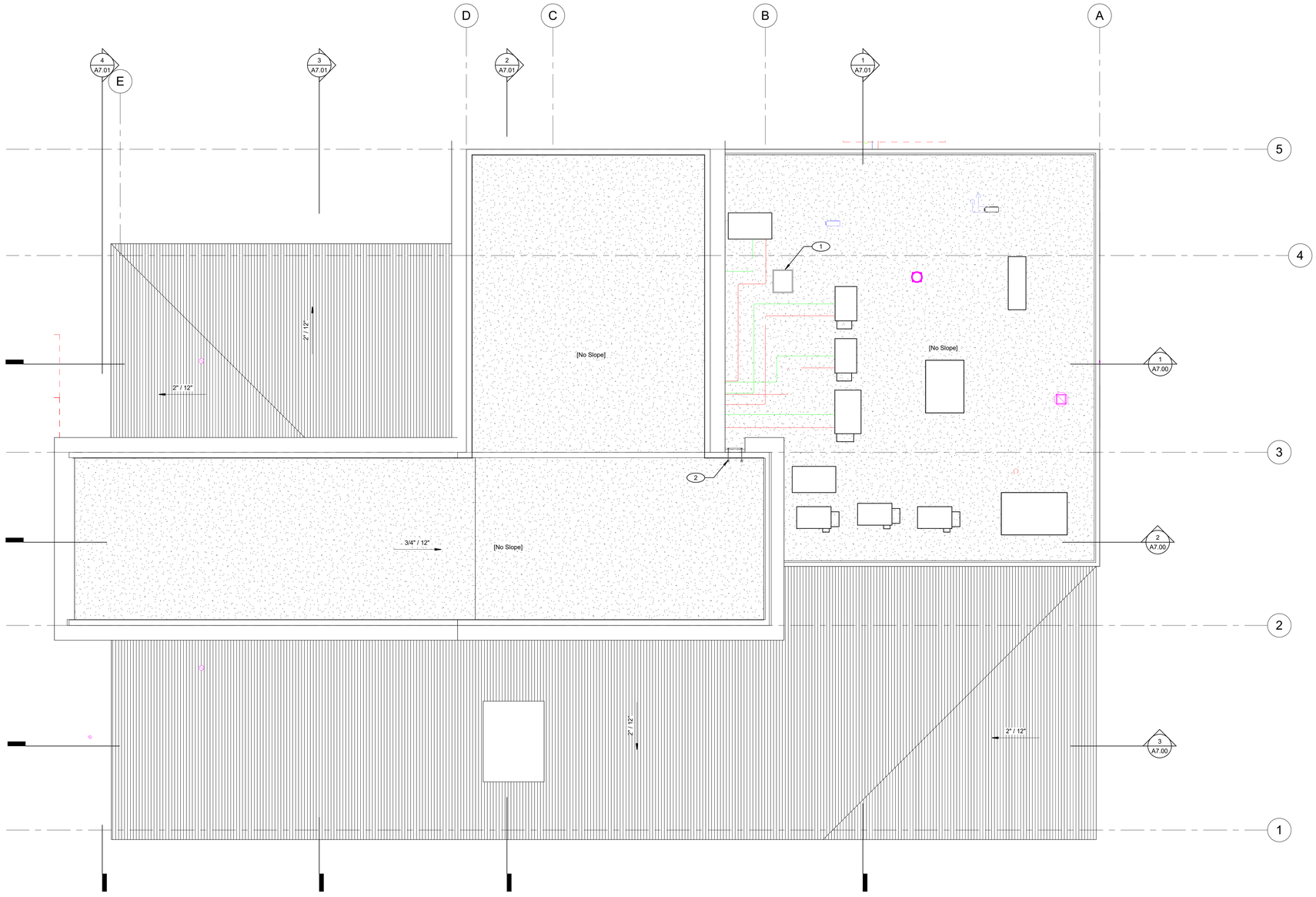
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DESIGN DEVELOPMENT

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REV	DATE	DESCRIPTION

Sheet Title
CEILING DETAILS

Date: JANUARY 19, 2023
Sheet No:
A3.30



1 ROOF PLAN - BASE BID
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

KEYNOTES

1 ROOF ACCESS HATCH.
2 ROOF ACCESS LADDER, SEE ROOF DETAILS

LEGEND

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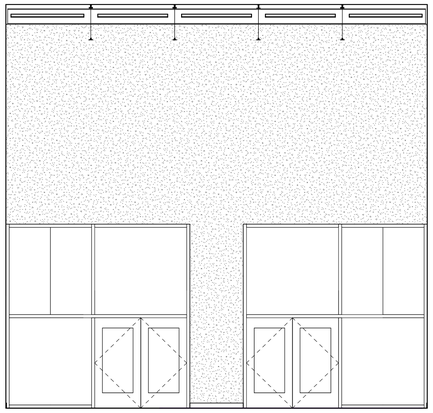
Owner
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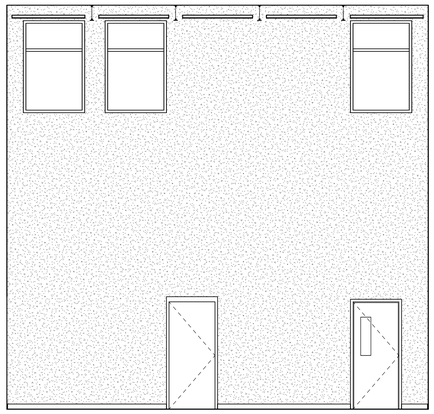
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ROOF PLAN - BASE BID

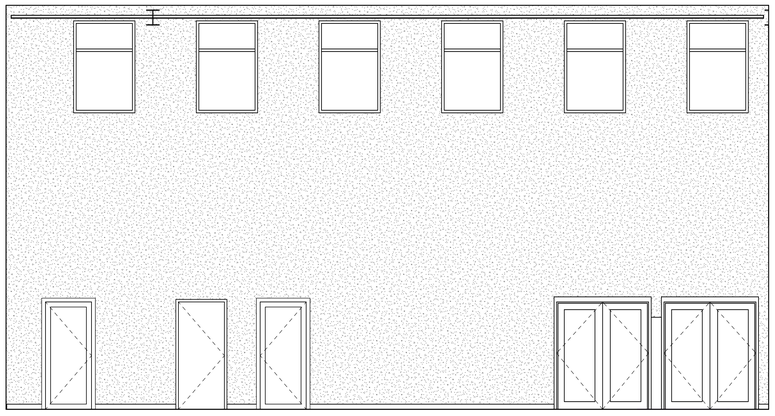
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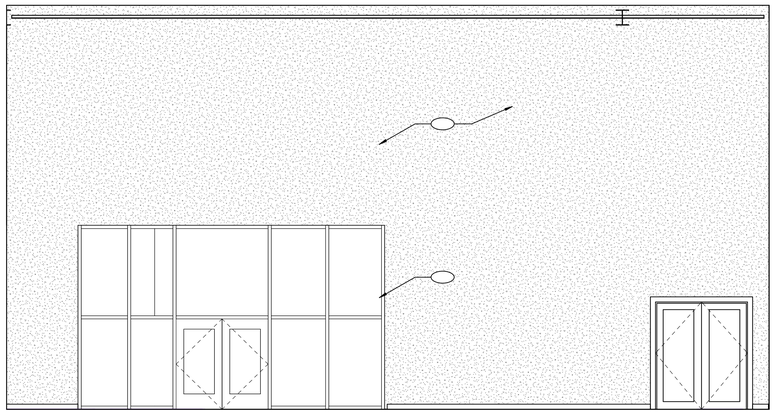
4 MAIN LOBBY 107 WEST
SCALE: 1/4" = 1'-0"



2 MAIN LOBBY 107 EAST
SCALE: 1/4" = 1'-0"



3 MAIN LOBBY 107 SOUTH
SCALE: 1/4" = 1'-0"



1 MAIN LOBBY 107 NORTH
SCALE: 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

1 FIRE EXTINGUISHER
2 ROOF ACCESS LADDER, SEE ROOF DETAILS

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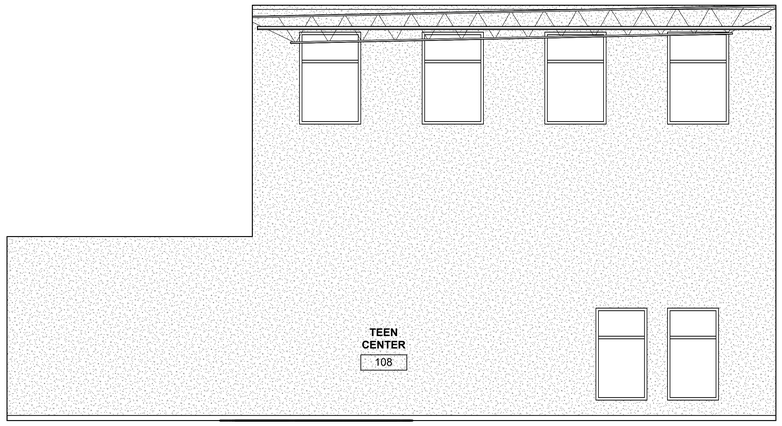
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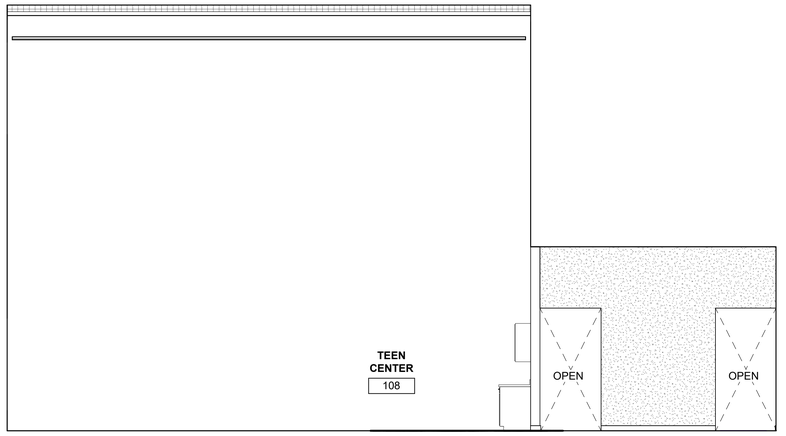
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INTERIOR ELEVATIONS

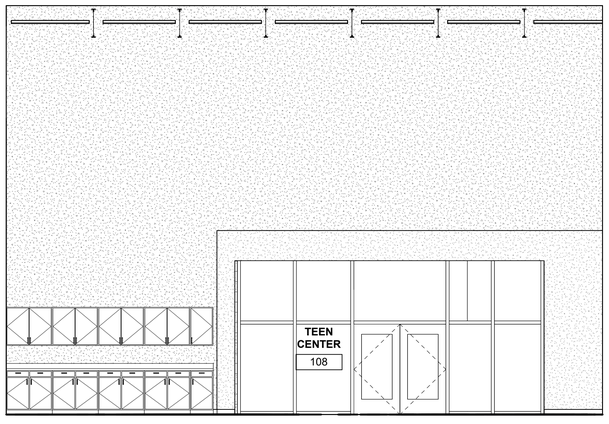
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A5.00



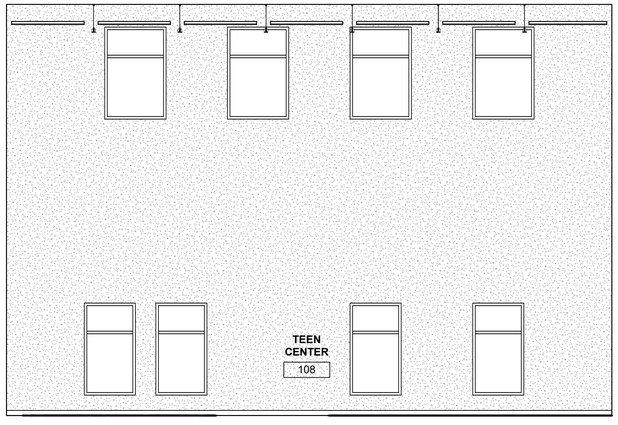
4 TEEN CENTER 108 WEST
SCALE: 1/4" = 1'-0"



2 TEEN CENTER 108 EAST
SCALE: 1/4" = 1'-0"



3 TEEN CENTER 108 SOUTH
SCALE: 1/4" = 1'-0"



1 TEEN CENTER 108 NORTH
SCALE: 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

1 FIRE EXTINGUISHER
2 ROOF ACCESS LADDER, SEE ROOF DETAILS

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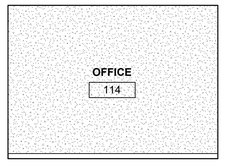
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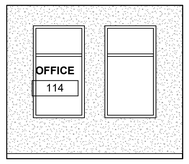
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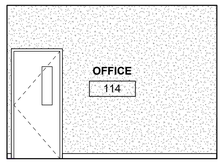
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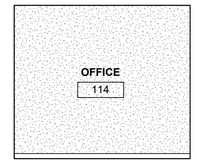
12 OFFICE 114 WEST
SCALE: 1/4" = 1'-0"



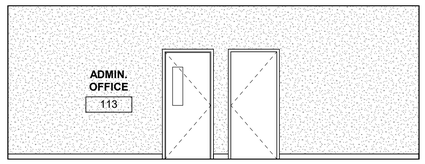
11 OFFICE 114 SOUTH
SCALE: 1/4" = 1'-0"



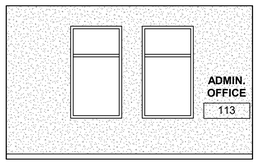
10 OFFICE 114 EAST
SCALE: 1/4" = 1'-0"



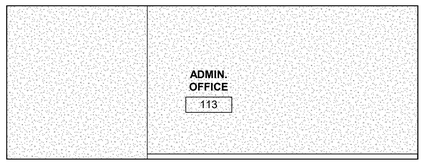
9 OFFICE 114 NORTH
SCALE: 1/4" = 1'-0"



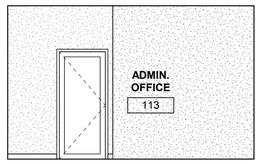
8 ADMIN OFFICE 113 WEST
SCALE: 1/4" = 1'-0"



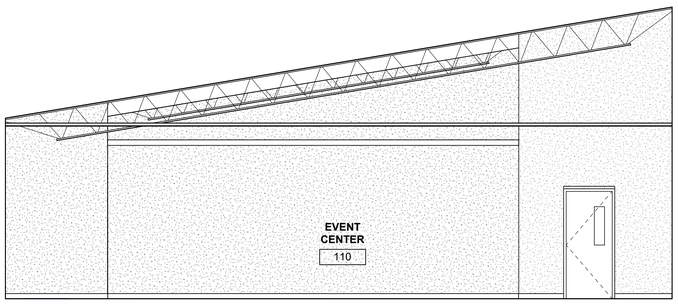
7 ADMIN OFFICE 113 SOUTH
SCALE: 1/4" = 1'-0"



6 ADMIN OFFICE 113 EAST
SCALE: 1/4" = 1'-0"

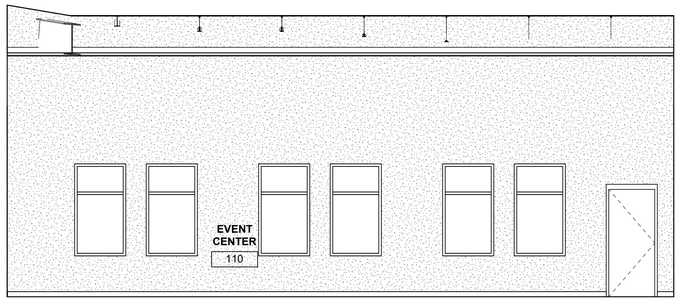


5 ADMIN OFFICE 113 NORTH
SCALE: 1/4" = 1'-0"

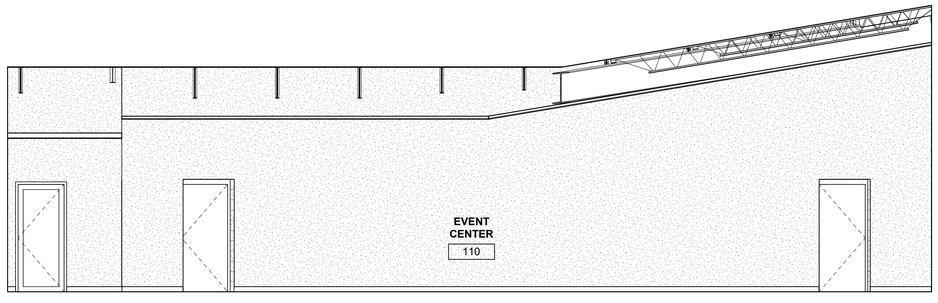


4 CAFETERIA 110 WEST
SCALE: 1/4" = 1'-0"

3 CAFETERIA 110 SOUTH
SCALE: 1/4" = 1'-0"



2 CAFETERIA 110 EAST
SCALE: 1/4" = 1'-0"



1 CAFETERIA 110 NORTH
SCALE: 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

1 FIRE EXTINGUISHER
2 ROOF ACCESS LADDER, SEE ROOF DETAILS

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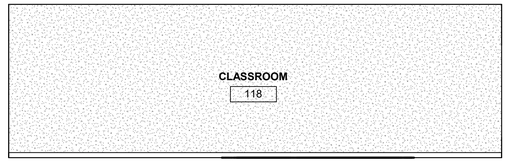
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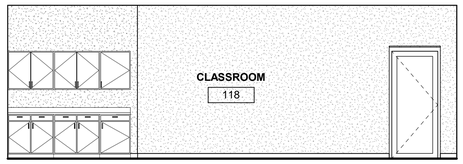
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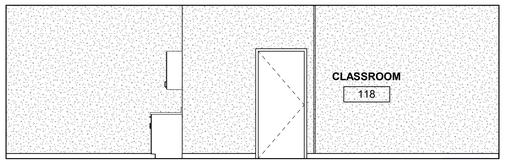
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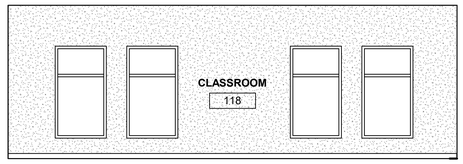
8 CLASSROOM 118 WEST
SCALE: 1/4" = 1'-0"



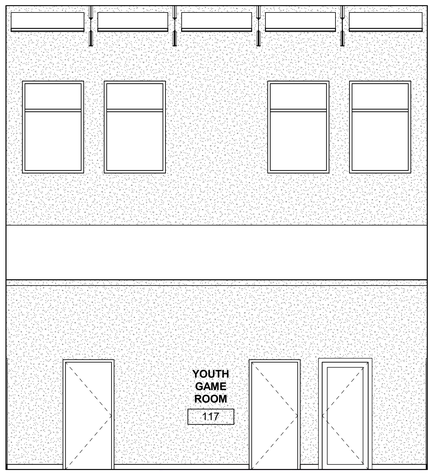
7 CLASSROOM 118 SOUTH
SCALE: 1/4" = 1'-0"



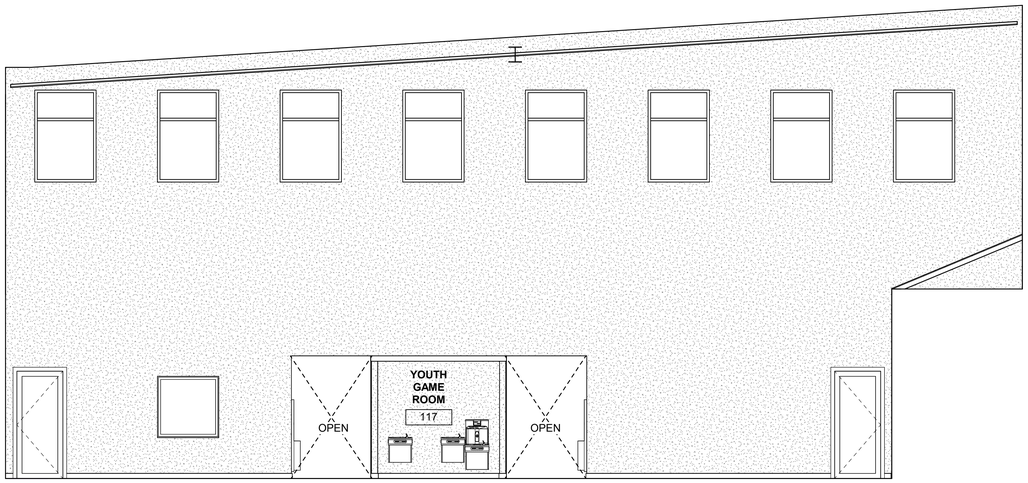
6 CLASSROOM 118 EAST
SCALE: 1/4" = 1'-0"



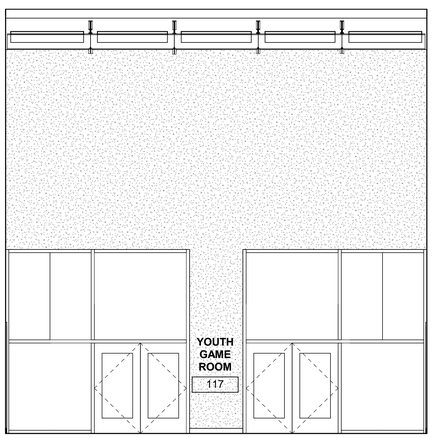
5 CLASSROOM 118 NORTH
SCALE: 1/4" = 1'-0"



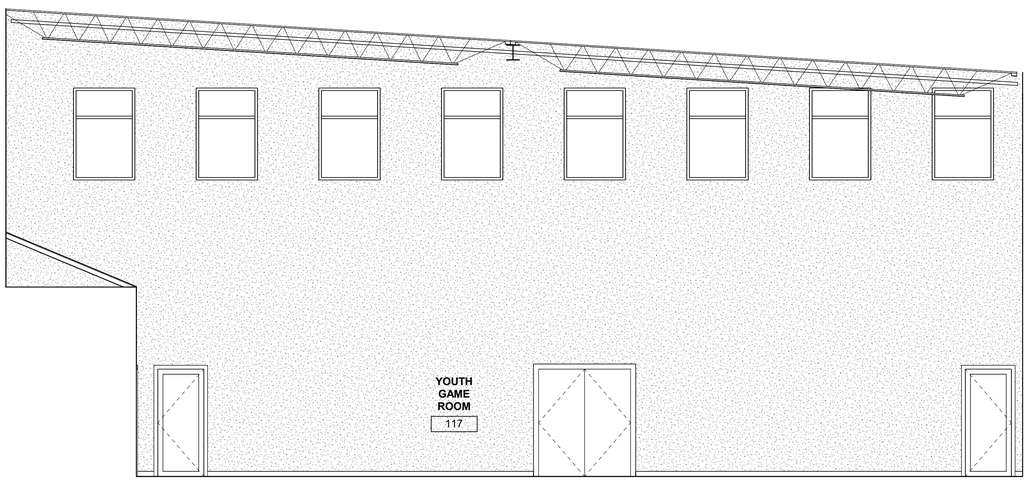
4 YOUTH GR 117 WEST
SCALE: 1/4" = 1'-0"



3 YOUTH GR 117 SOUTH
SCALE: 1/4" = 1'-0"



2 YOUTH GR 117 EAST
SCALE: 1/4" = 1'-0"



1 YOUTH GR 117 NORTH
SCALE: 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

1 FIRE EXTINGUISHER
2 ROOF ACCESS LADDER, SEE ROOF DETAILS

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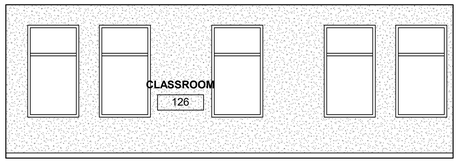
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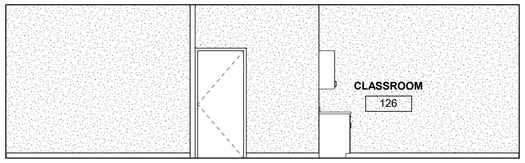
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Sheet Title
INTERIOR ELEVATIONS

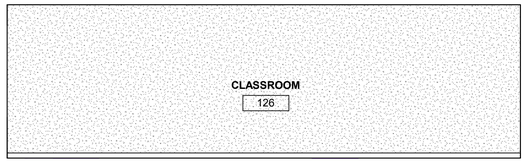
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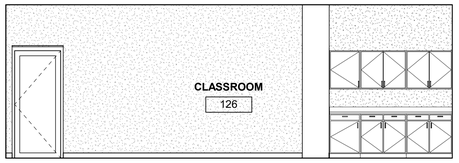
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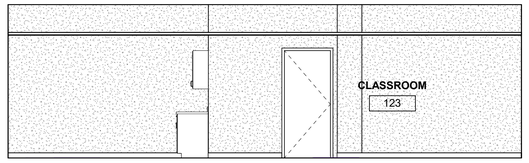
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SCALE: 1/4" = 1'-0"



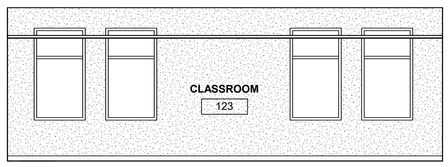
12 CLASSROOM 126 WEST
SCALE: 1/4" = 1'-0"



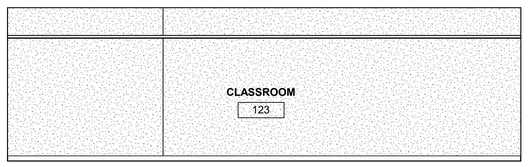
9 CLASSROOM 126 NORTH
SCALE: 1/4" = 1'-0"



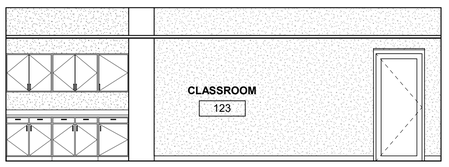
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SCALE: 1/4" = 1'-0"



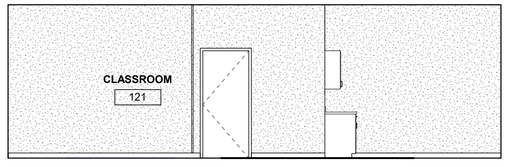
7 CLASSROOM 123 SOUTH
SCALE: 1/4" = 1'-0"



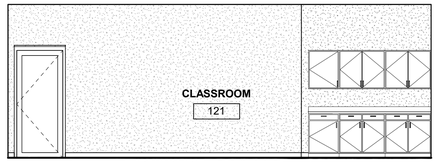
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SCALE: 1/4" = 1'-0"



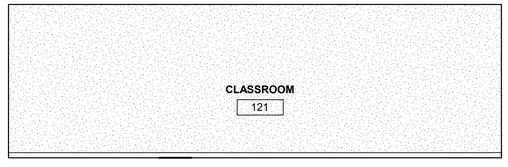
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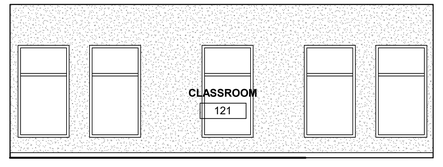
4 CLASSROOM 121 WEST
SCALE: 1/4" = 1'-0"



3 CLASSROOM 121 SOUTH
SCALE: 1/4" = 1'-0"



2 CLASSROOM 121 EAST
SCALE: 1/4" = 1'-0"



1 CLASSROOM 121 NORTH
SCALE: 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

1 FIRE EXTINGUISHER
2 ROOF ACCESS LADDER, SEE ROOF DETAILS

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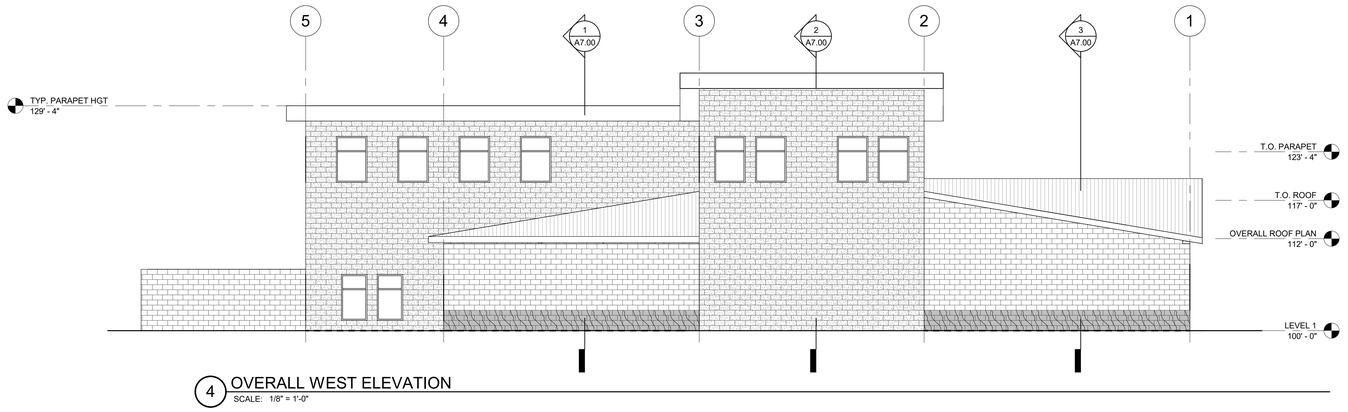
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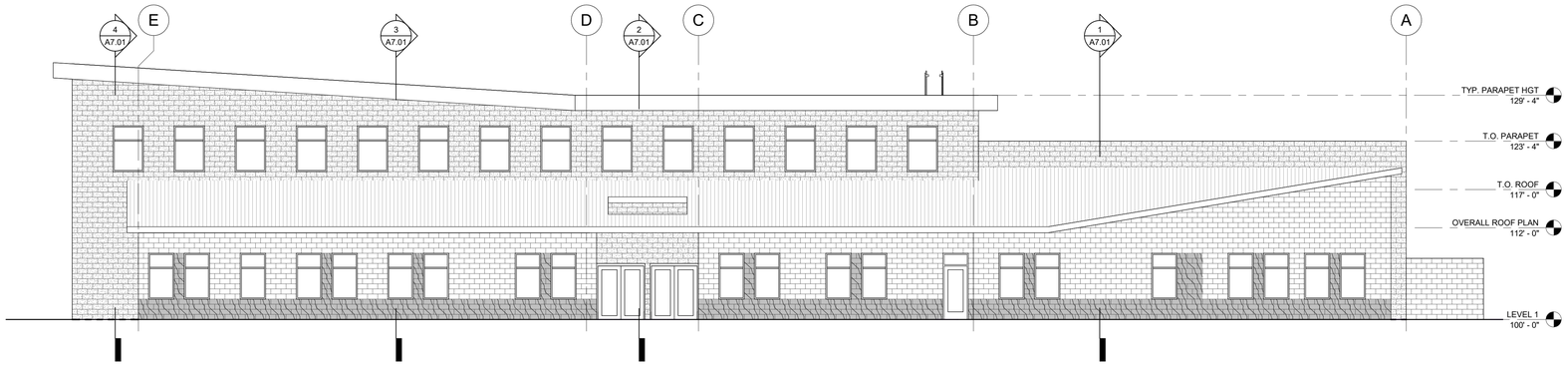
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REV	DATE	DESCRIPTION

Sheet Title
INTERIOR ELEVATIONS

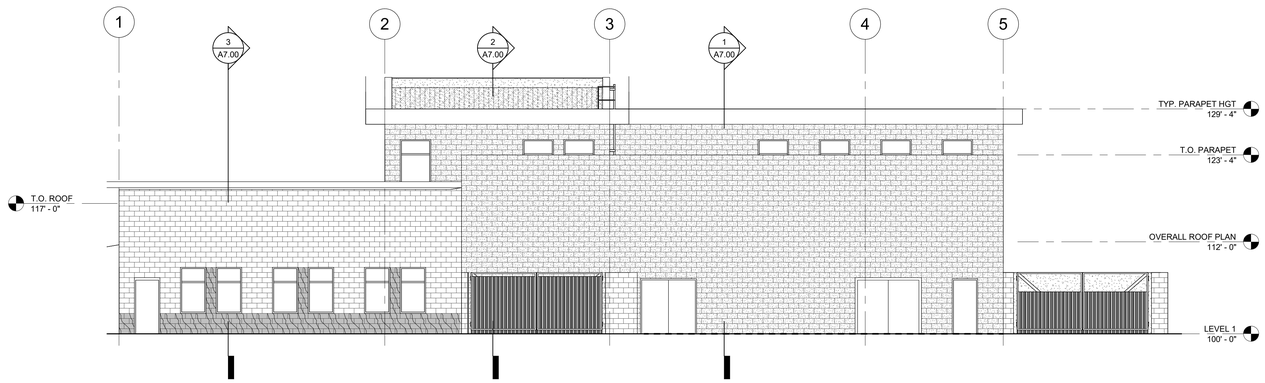
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Sheet No:
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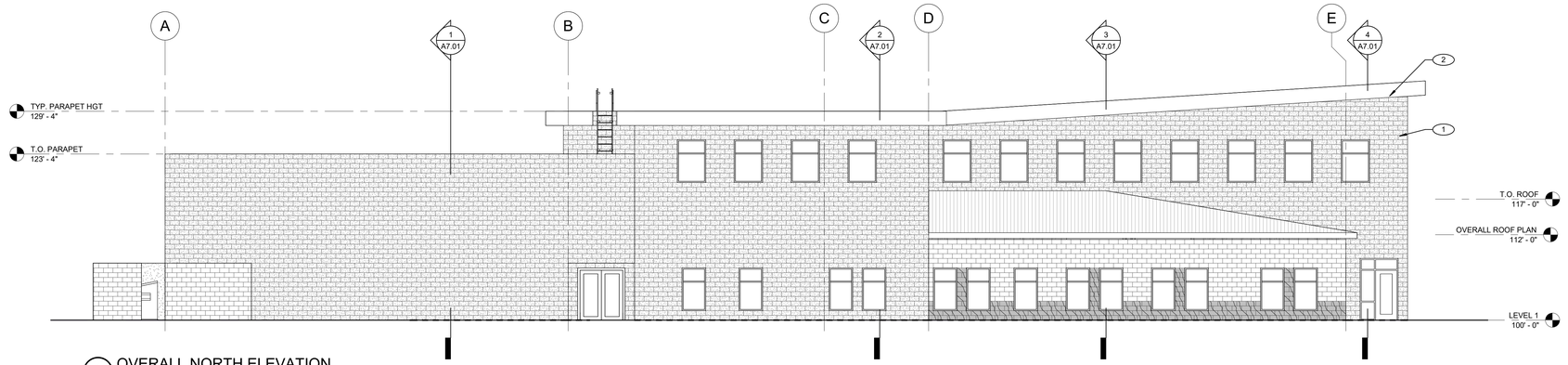
4 OVERALL WEST ELEVATION
SCALE: 1/8" = 1'-0"



3 OVERALL SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



2 OVERALL EAST ELEVATION
SCALE: 1/8" = 1'-0"



1 OVERALL NORTH ELEVATION
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
2. ALL EXPOSED MASONRY TO RECEIVE GRAFFITI COATING, INCLUDING ALL SITE WALLS.
3. SEE SHEET AX.XX FOR MATERIAL FINISH INFORMATION.
4. SEE ARCHITECTURAL SITE SHEETS FOR RETAINING WALLS, SITE STAIRS, AND SITE PLANTERS.

KEYNOTES

1. CMU 2
2. METAL PANEL

LEGEND

- GLAZING
- METAL PANELING
- WOOD RAIN SCREEN
- CMU 1
- CMU 2
- CMU 3
- CMU VENEER

KEYPLAN

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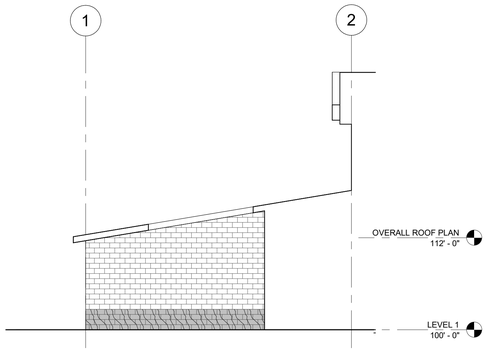
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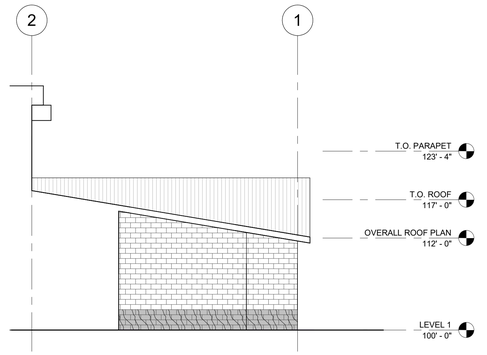
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Sheet Title
EXTERIOR ELEVATIONS - BASE BID

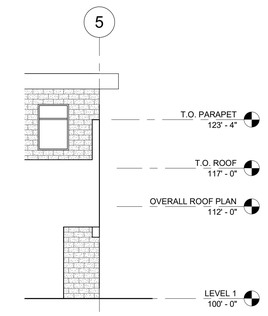
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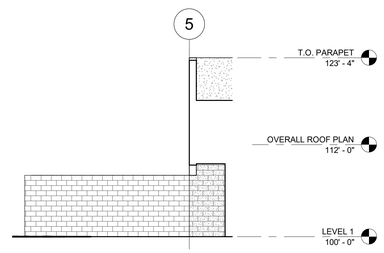
4 PARTIAL ELEV - WEST 119
SCALE: 1/8" = 1'-0"



3 PARTIAL ELEV - EAST 119
SCALE: 1/8" = 1'-0"



2 PARTIAL ELEV - WEST 101
SCALE: 1/8" = 1'-0"



1 PARTIAL ELEV - EAST 101
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
2. ALL EXPOSED MASONRY TO RECEIVE GRAFFITI COATING, INCLUDING ALL SITE WALLS.
3. SEE SHEET AX.XX FOR MATERIAL FINISH INFORMATION.
4. SEE ARCHITECTURAL SITE SHEETS FOR RETAINING WALLS, SITE STAIRS, AND SITE PLANTERS.

KEYNOTES

1. CMU 2
2. METAL PANEL

LEGEND

- GLAZING
- METAL PANELING
- WOOD RAIN SCREEN
- CMU 1
- CMU 2
- CMU 3
- CMU VENEER

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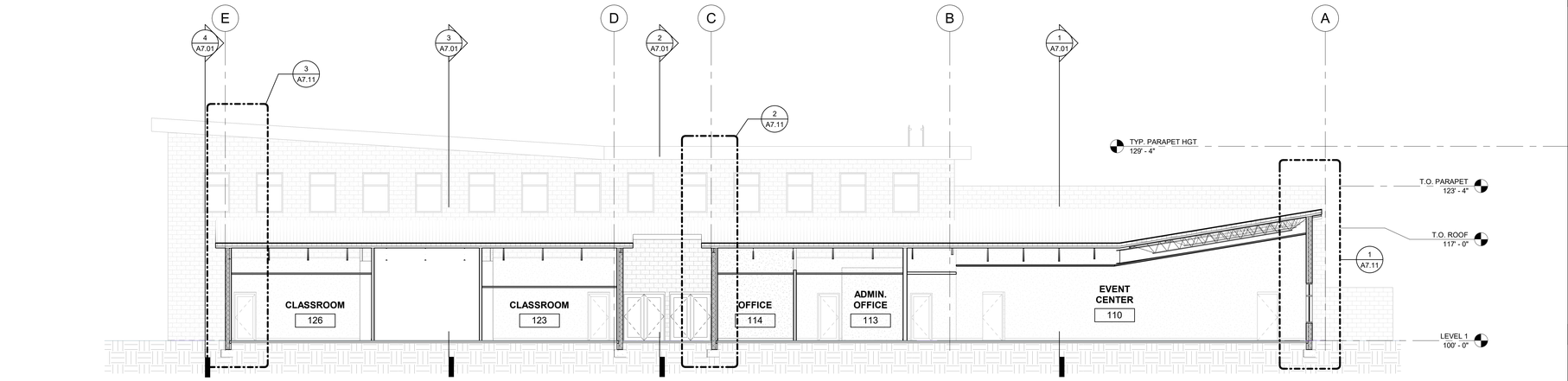
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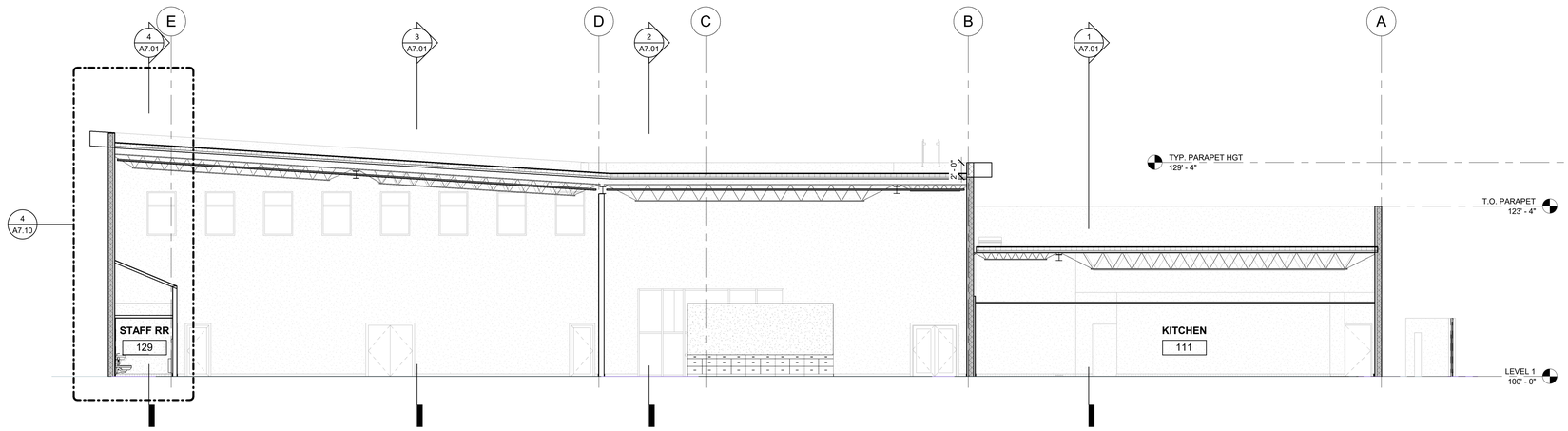
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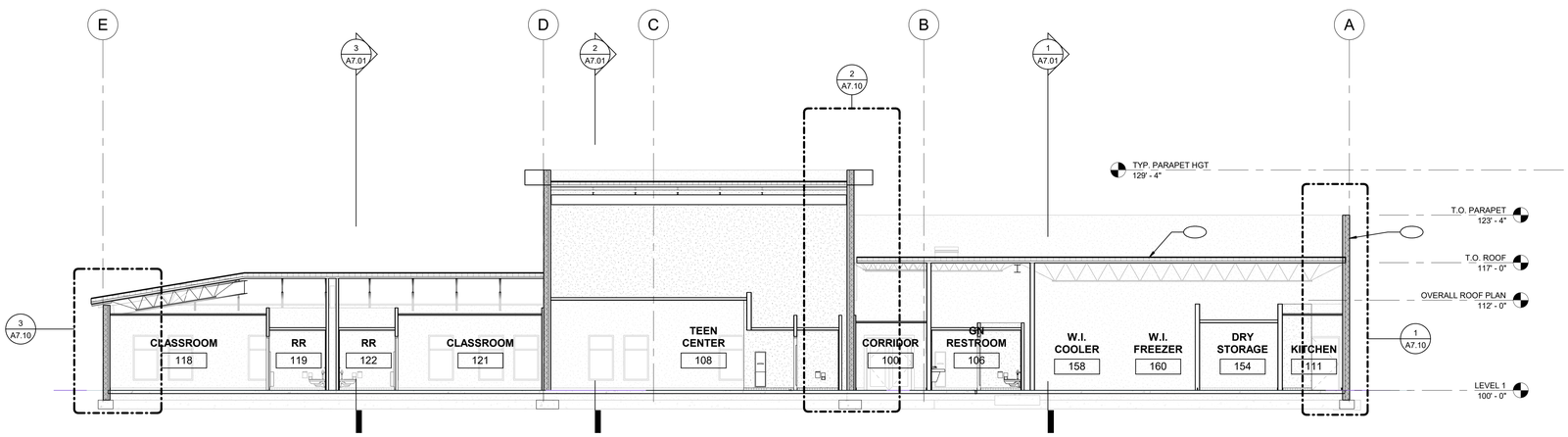
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Sheet No:
A6.01



3 Section 3
SCALE: 1/8" = 1'-0"



2 Section 2
SCALE: 1/8" = 1'-0"



1 Section 1
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
8. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

KEYNOTES

1. FIRE EXTINGUISHER
2. ROOF ACCESS LADDER, SEE ROOF DETAILS

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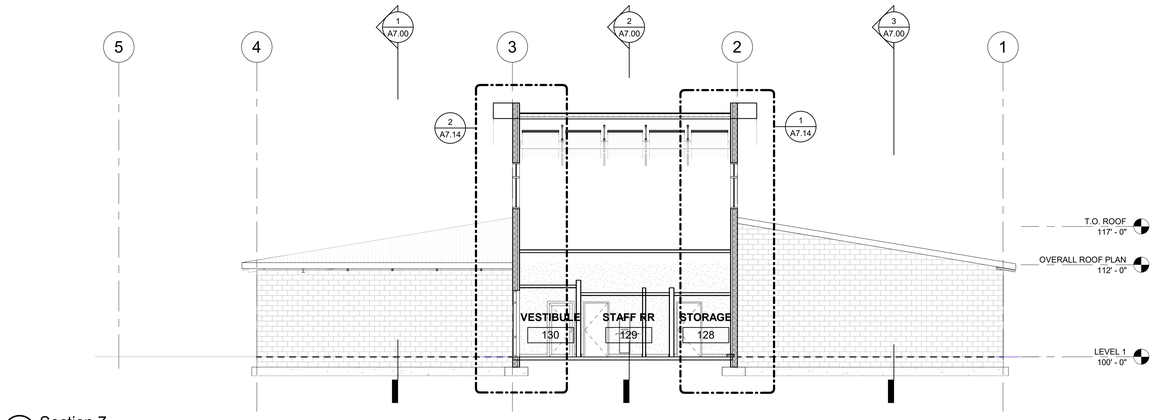
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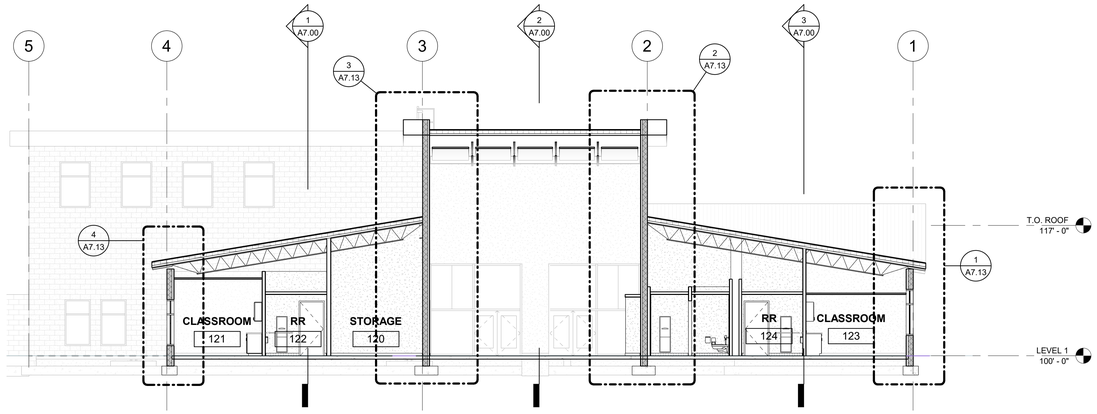
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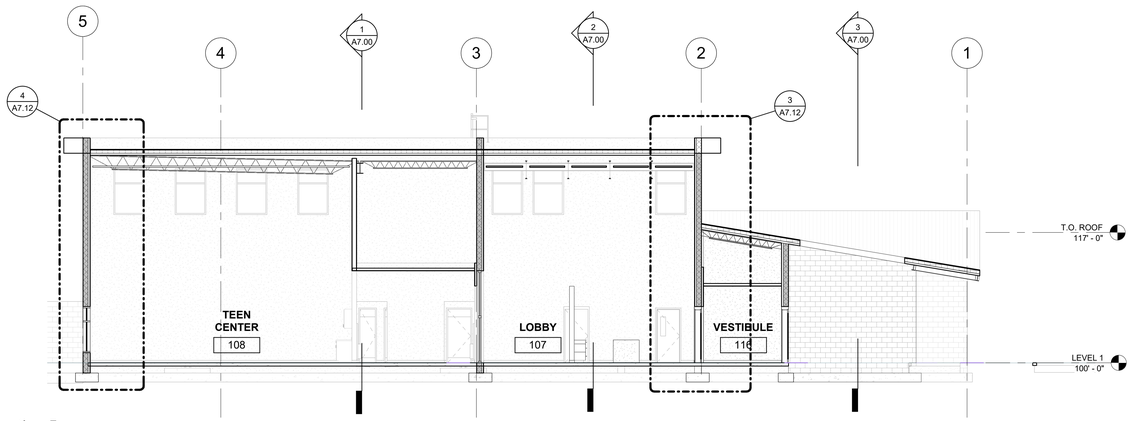
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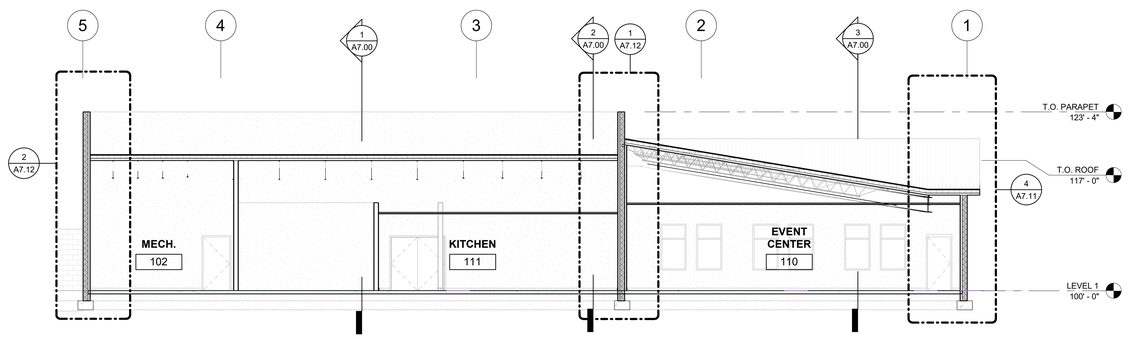
4 Section 7
SCALE: 1/8" = 1'-0"



3 Section 6
SCALE: 1/8" = 1'-0"



2 Section 5
SCALE: 1/8" = 1'-0"



1 Section 4
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
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9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

KEYNOTES

1. FIRE EXTINGUISHER
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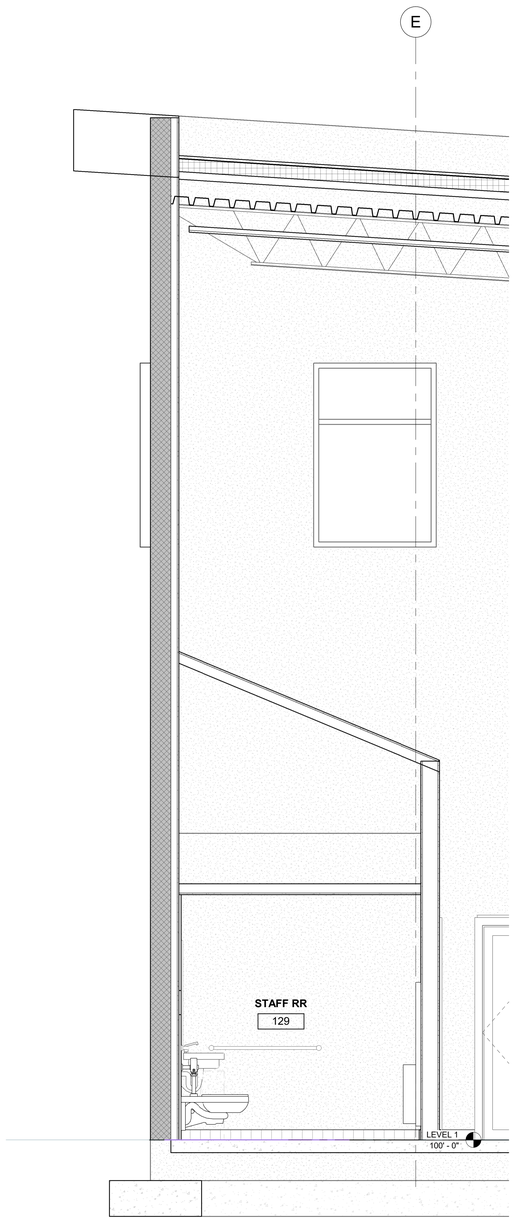
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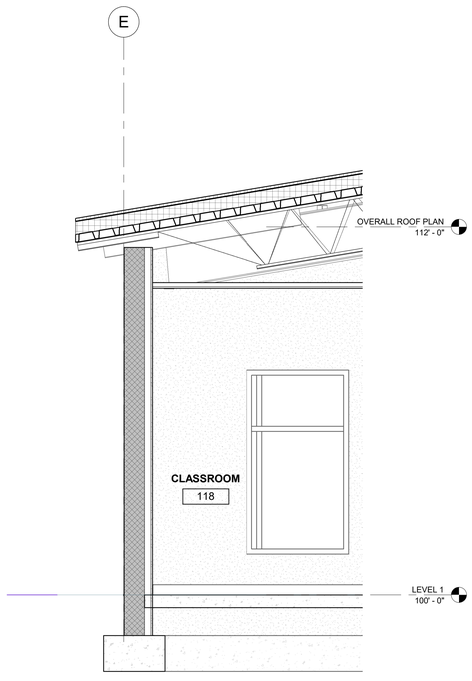
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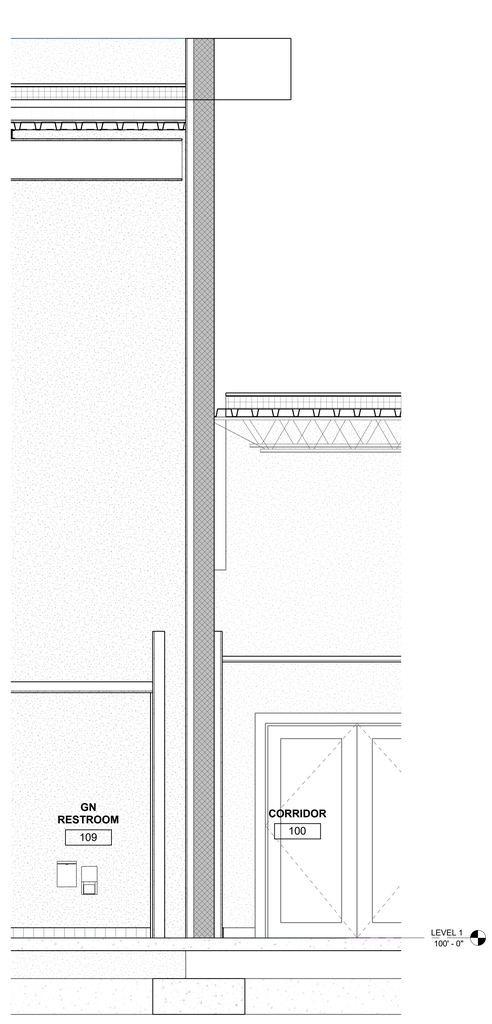
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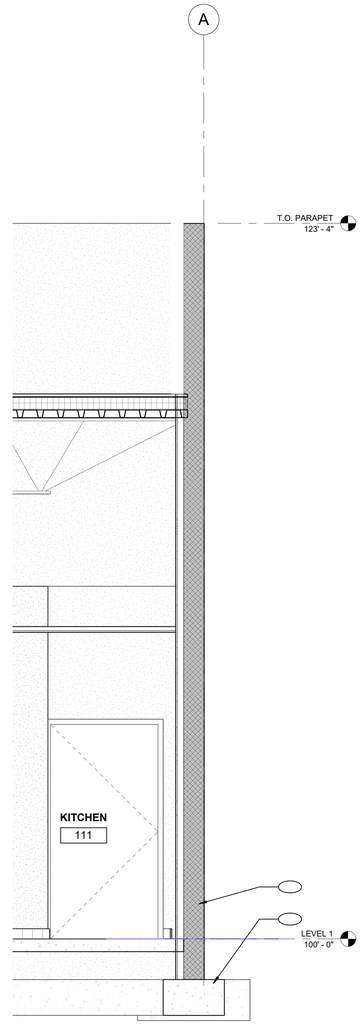
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3 WALL SECTION 3
SCALE: 1/2" = 1'-0"



2 WALL SECTION 2
SCALE: 1/2" = 1'-0"



1 WALL SECTION 1
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
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KEYNOTES

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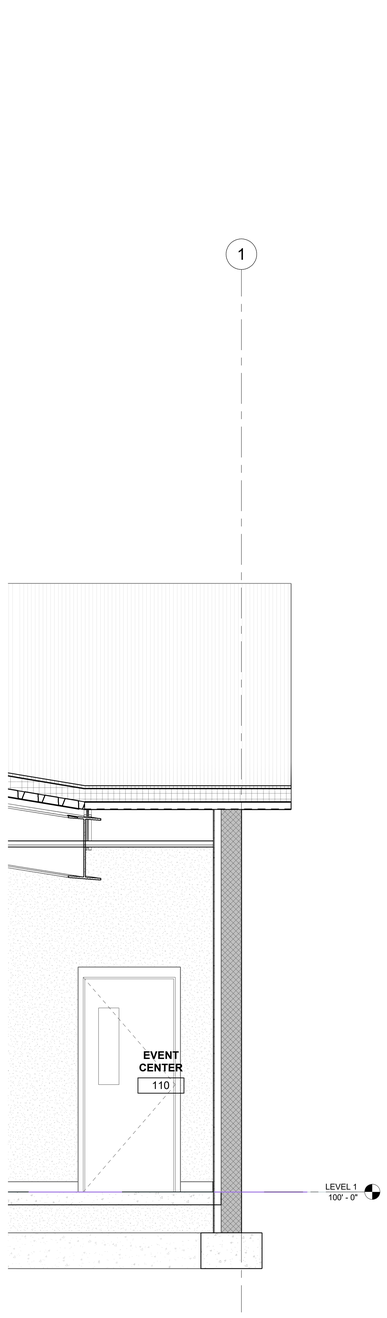
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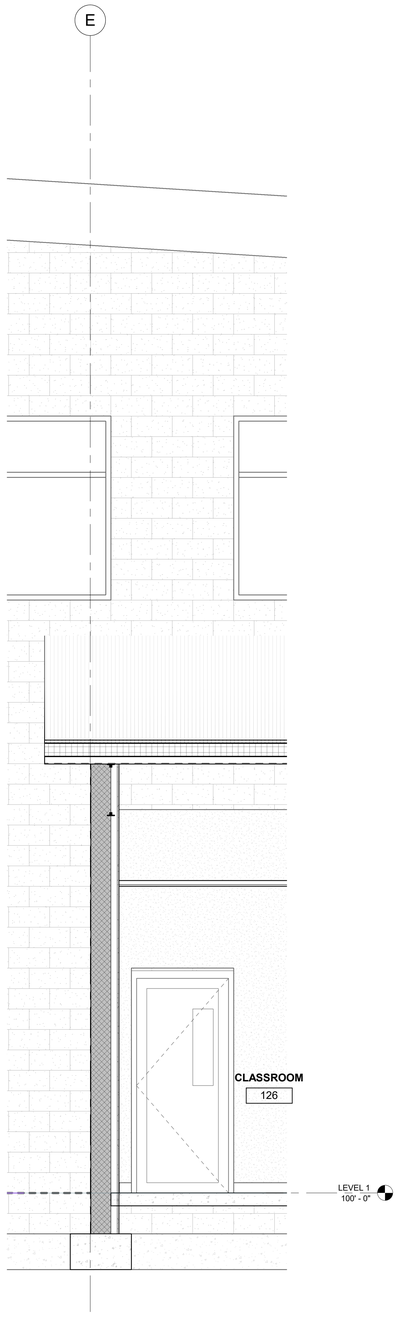
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WALL SECTION

Date: JANUARY 19, 2023

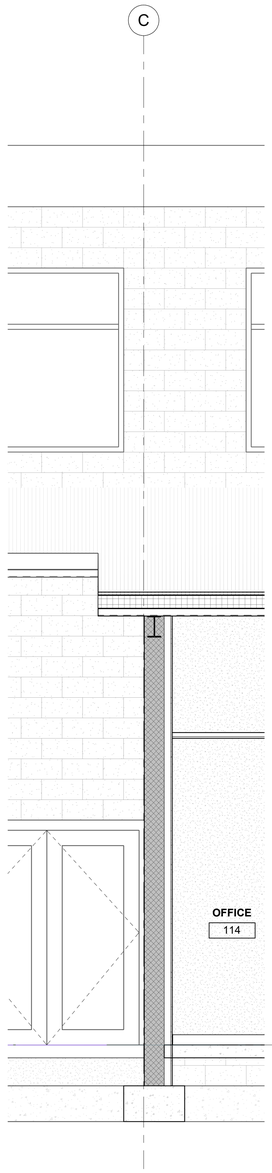
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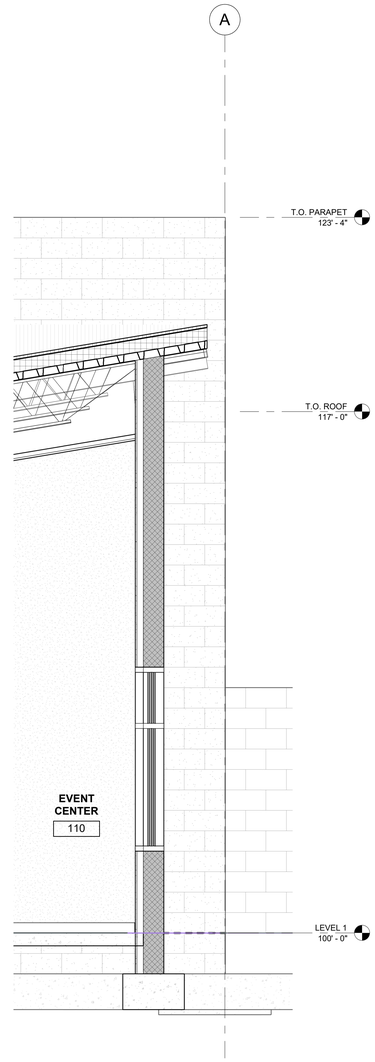
4 WALL SECTION 8
SCALE: 1/2" = 1'-0"



3 WALL SECTION 7
SCALE: 1/2" = 1'-0"



2 WALL SECTION 6
SCALE: 1/2" = 1'-0"



1 WALL SECTION 5
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
8. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

KEYNOTES

1. FIRE EXTINGUISHER
2. ROOF ACCESS LADDER, SEE ROOF DETAILS

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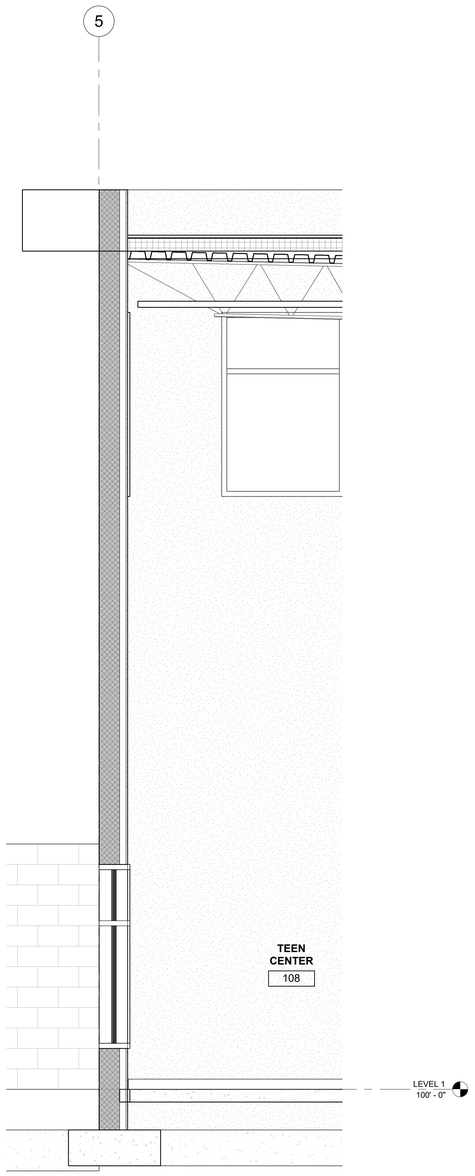
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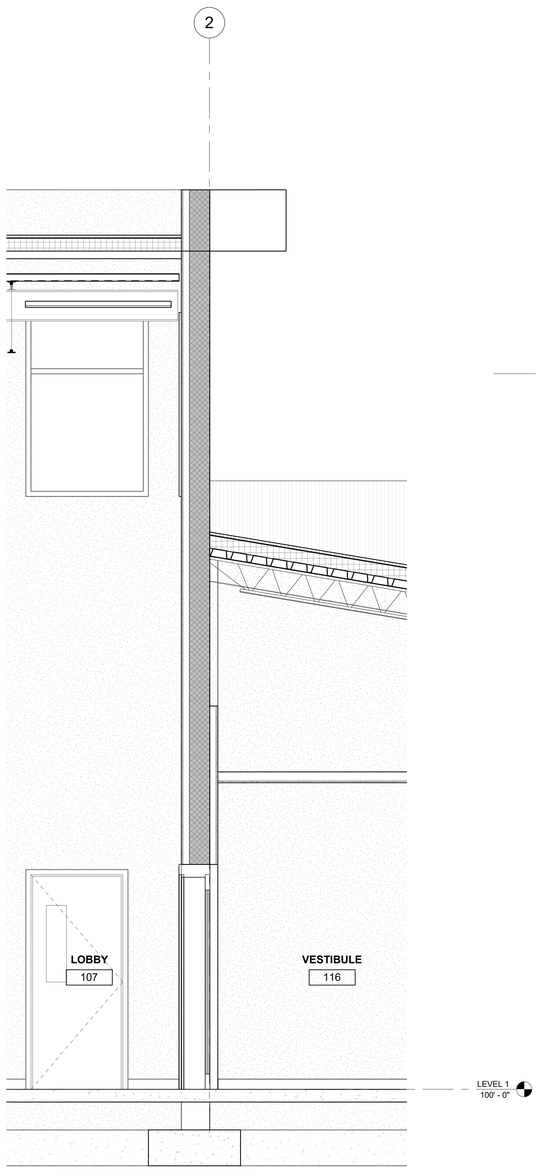
REVISIONS		
REV	DATE	DESCRIPTION

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WALL SECTION

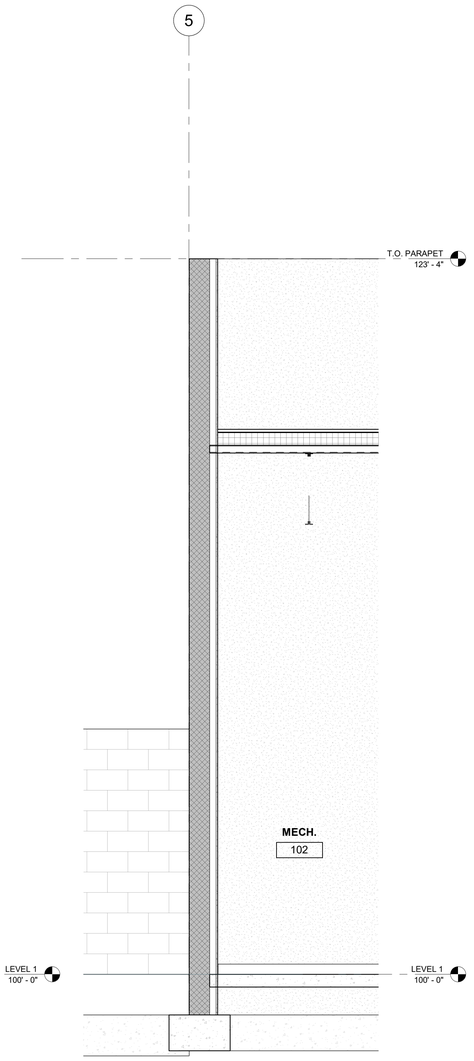
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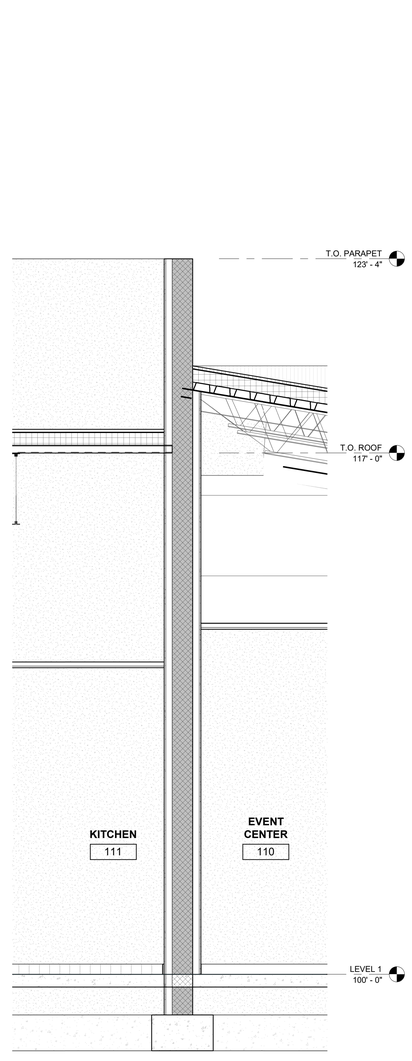
4 WALL SECTION 12
SCALE: 1/2" = 1'-0"



3 WALL SECTION 11
SCALE: 1/2" = 1'-0"



2 WALL SECTION 10
SCALE: 1/2" = 1'-0"



1 WALL SECTION 9
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
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9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

KEYNOTES

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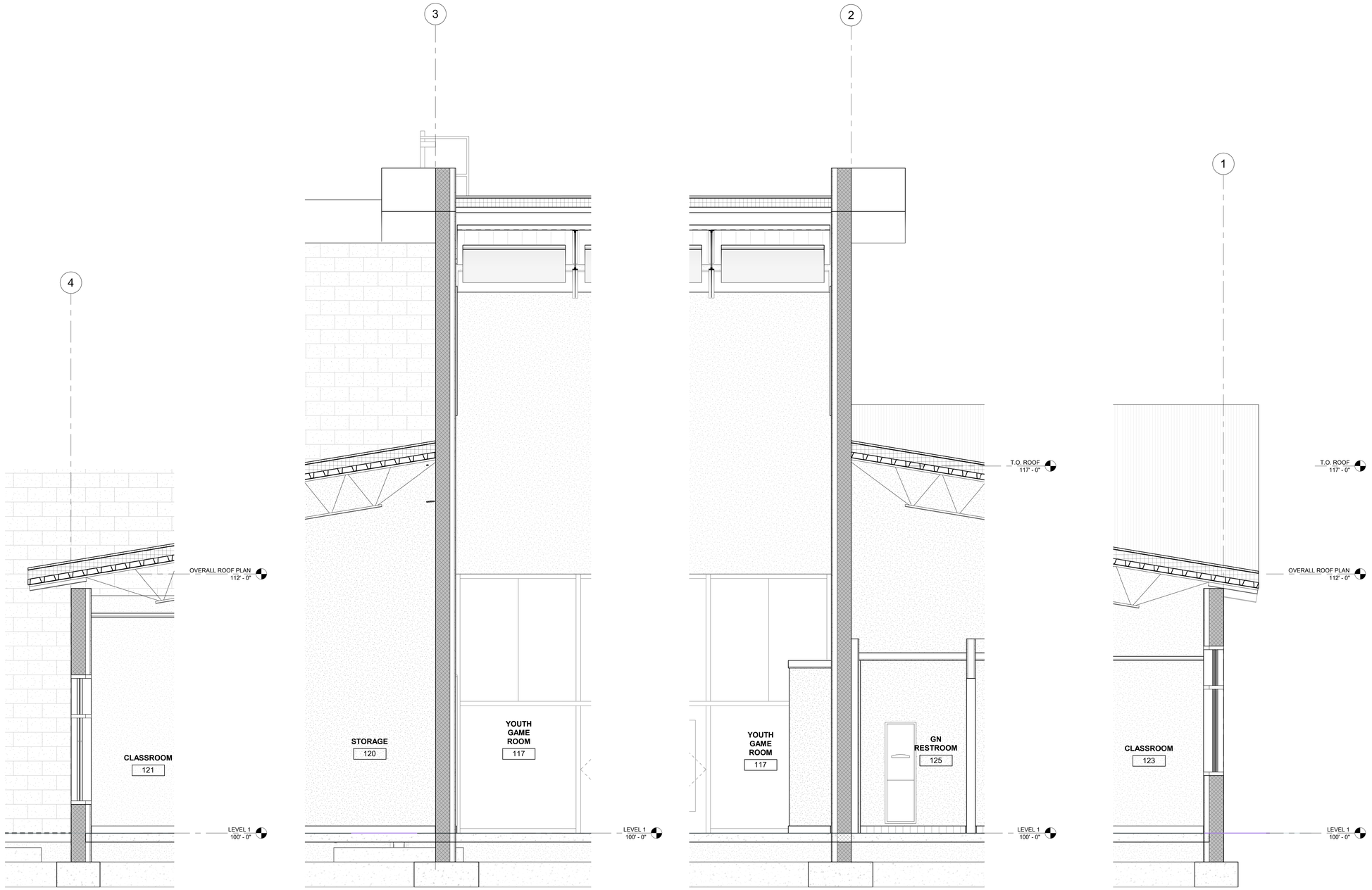
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REV	DATE	DESCRIPTION

Sheet Title
WALL SECTION

Date: JANUARY 19, 2023
Sheet No:
A7.12



4 WALL SECTION 17
SCALE: 1/2" = 1'-0"

3 WALL SECTION 16
SCALE: 1/2" = 1'-0"

2 WALL SECTION 15
SCALE: 1/2" = 1'-0"

1 WALL SECTION 13
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
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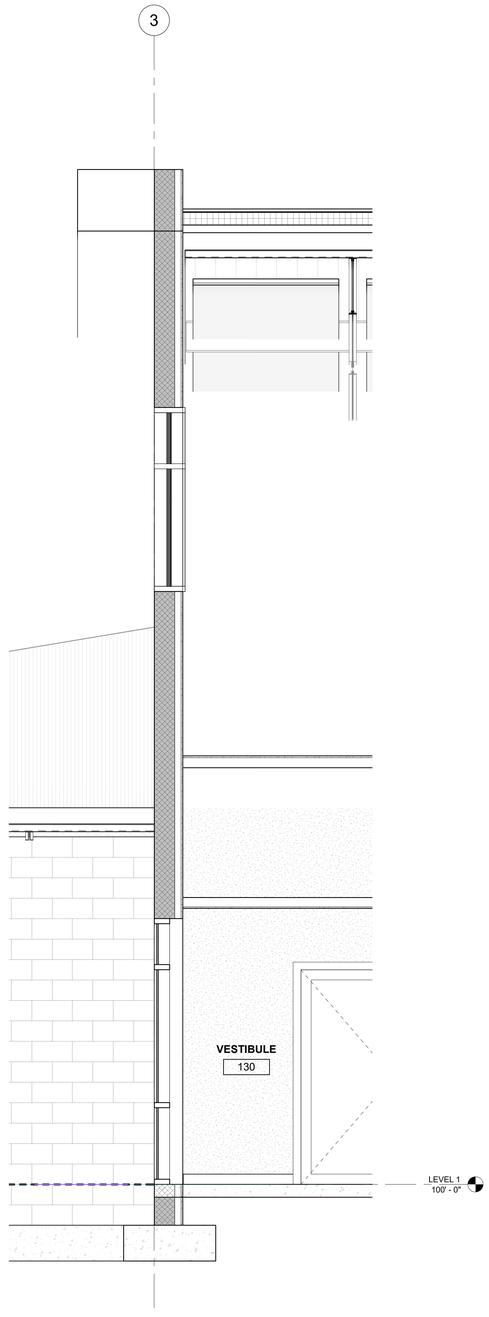
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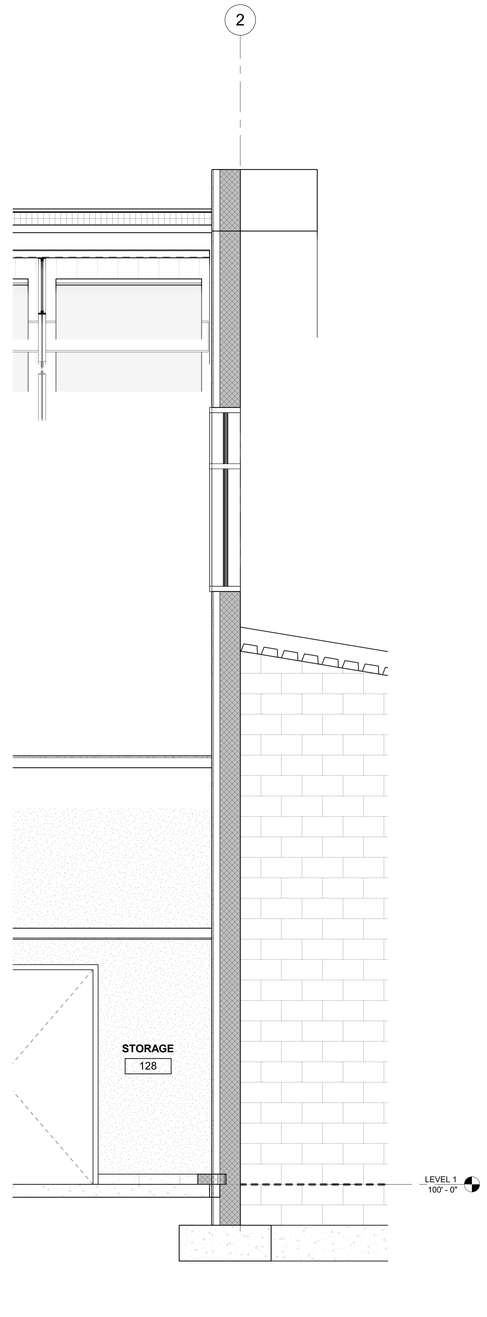
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
WALL SECTION

Date: JANUARY 19, 2023
Sheet No:
A7.13



2 WALL SECTION 19
SCALE: 1/2" = 1'-0"



1 WALL SECTION 18
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
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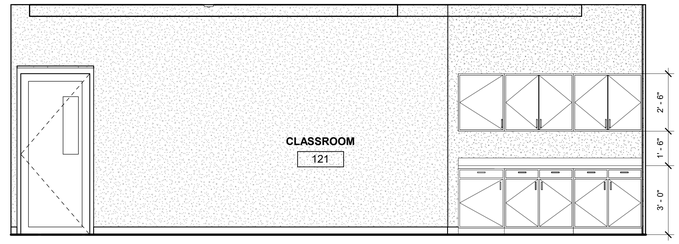
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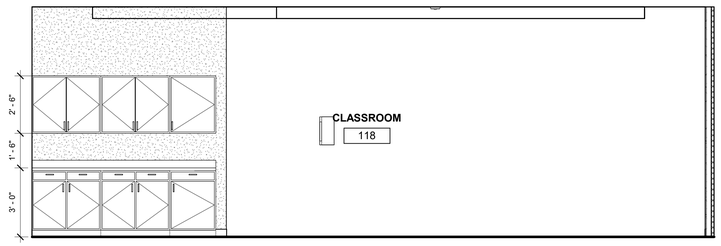
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
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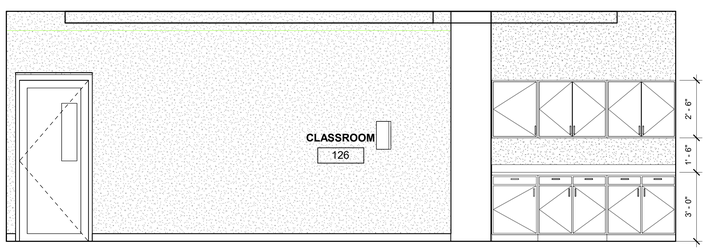
Date: JANUARY 19, 2023
Sheet No:
A7.14



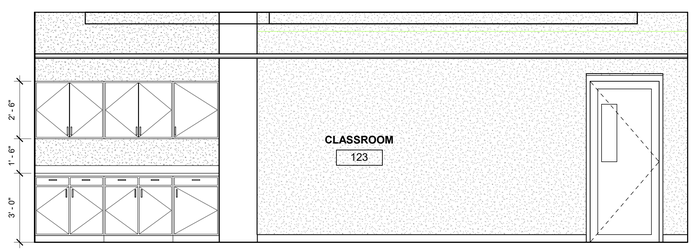
3 CASEWORK AT CLASSROOM 121 SOUTH
SCALE: 3/8" = 1'-0"



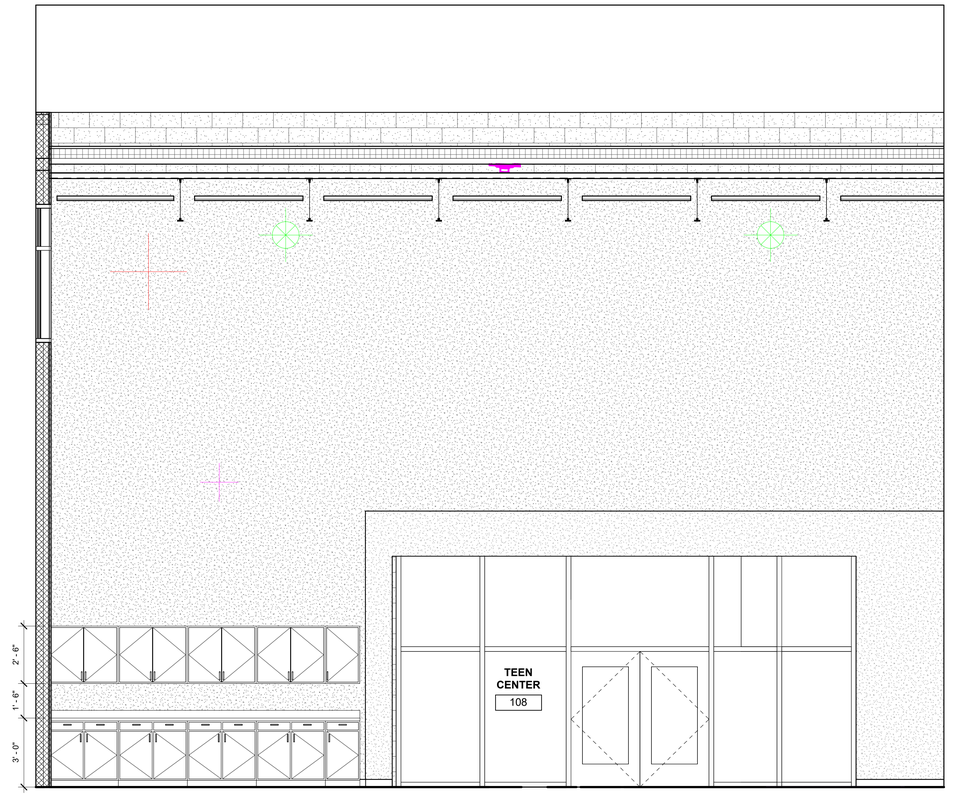
2 CASEWORK AT CLASSROOM 118 SOUTH
SCALE: 3/8" = 1'-0"



5 CASEWORK AT CLASSROOM 126 NORTH
SCALE: 3/8" = 1'-0"



4 CASEWORK AT CLASSROOM 123 NORTH
SCALE: 3/8" = 1'-0"



1 CASEWORK AT TEENCENTER 108 SOUTH
SCALE: 3/8" = 1'-0"

GENERAL NOTES

KEYNOTES

LEGEND

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Sheet Title
CASEWORK PLANS AND ELEVATIONS - BASE BID

Date: JANUARY 19, 2023

Sheet No:
A8.00

ABBREVIATIONS	
AB	ANCHOR BOLT
ABV	ABOVE
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGGR	AGGREGATE
ALT	ALTERNATE
APPROX	APPROXIMATELY
ARCH'L	ARCHITECTURAL
BD	BOARD
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
BLK'G	BLOCKING
BLW	BELOW
BM	BEAM
BN	BOUNDARY NAIL
BO. B.O.	BOTTOM OF
BOTT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
CAM	CAMBER
CANT'L	CANTILEVER
CTR	CENTER
C., CL	CENTERLINE
CLR	CLEAR
CMU	CONC MASONRY UNIT
CFS	COLD-FORMED STEEL
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
ø	PENNY
D, DIA	DIAMETER
DBL	DOUBLE
DFL	DOUGLAS FIR LARCH
DIAG	DIAGONAL
DTL	DETAIL
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
ELEV	ELEVATION
ELEC	ELECTRICAL
EN	EDGE NAILING
ENCL	ENCLOSE
EOD	EDGE OF DECK
EOR	ENGINEER OF RECORD
EPS	EXPANDED POLYSTYREN
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST. (E)	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
EXTD	EXTENDED
FND, FDN	FOUNDATION
FF	FINISH FLOOR
FG	FINISH GRADE
FIN	FINISH
FLR	FLOOR
FRMG	FRAMING
FS	FAR SIDE
FT	FEET OR FOOT
FTG	FOOTING
FURR	FURRING
GA	GAUGE
GN	GENERAL NOTES
GLB	GLUE LAMINATED BEAM
GRND	GROUND
GT	GIRDER TRUSS
GYP	GYPSUM WALLBOARD
HDG	HOT DIP GALVANIZED
HDR	HEADER
HGR	HANGER
HGT	HEIGHT
HORIZ	HORIZONTAL
HT	HIP TRUSS
INSUL	INSULATION
INT	INTERIOR
JT	JOINT
KS	KING STUD
LAM	LAMINATE
LAT	LATERAL
LBS, #	POUNDS
LLV	LONG LEG VERTICAL
LSL	LAM STRAND LUMBER
LT	LIGHT
LVL	LAM VENEER LUMBER
MAS	MASONRY
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MFRD	MANUFACTURED
MIN	MINIMUM
MISC	MISCELLANEOUS
(N)	NEW
N	COMMON NAIL
NO	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
o/	OVER
OC	ON CENTER
OH	OPPOSITE HAND
OPNG	OPENING
OWJ	OPEN WEB JOIST
PFA	POST FROM ABOVE
PSL	PARALLEL STRAND LUMBER
P., PL	PLATE
PLYWD	PLYWOOD
PNL	PANEL
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
PREFAB	PREFABRICATED
r, RAD	RADIUS
REF	REFERENCE
REINF	REINFORCING
REQ'D	REQUIRED
S	SINKER NAIL
SCHED	SCHEDULE
SF	SQUARE FEET
SECT	SECTION
SEIS	SEISMIC
SHTH'G	SHEATHING
SIM	SIMILAR
SPEC	SPECIFICATIONS
SQ	SQUARE
STD	STANDARD
STG'D	STAGGERED
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
SWL	SHEAR WALL
T&G	TONGUE AND GROOVE
T&B	TOP AND BOTTOM
THK	THICK
TO, T.O.	TOP OF
TRIM	TRIMMER
TR	TRUSS
TS	TUBE STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
w/	WITH
W/O	WITHOUT
WP	WORKING POINT
WS	WOOD SCREW
WT	WEIGHT

A. GENERAL

1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODE: THE INTERNATIONAL BUILDING CODE, 2018 EDITION. OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
2. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE ABOVE ITEMS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
4. DIMENSIONS SHALL TAKE PRECEDENCE OVER THE SCALE SHOWN ON DRAWINGS.
5. NOTES AND DETAILS ON PLANS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
6. SEE ARCHITECTURAL PLANS FOR THE FOLLOWING:
   - A. SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED.
   - B. SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS.
   - C. SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGES IN LEVEL, CHAMFER, GROOVES, INSERTS, ETC.
   - D. SIZE AND LOCATION OF FLOOR AND ROOF OPENINGS, (EXCEPT AS SHOWN).
   - E. FLOOR AND ROOF FINISHES.
   - F. STAIR FRAMING AND DETAILS, (EXCEPT AS SHOWN).
   - G. DIMENSIONS NOT SHOWN ON STRUCTURAL PLANS.
7. COORDINATE OR VERIFY WITH MECHANICAL PLANS, PLUMBING, AND ELECTRICAL PLANS FOR THE FOLLOWING:
   - A. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., (EXCEPT AS SHOWN OR NOTED).
   - B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
   - C. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL, OR PLUMBING FIXTURES.
   - D. SIZE AND LOCATION OF MACHINE EQUIPMENT BASES, OR ANCHOR BOLTS FOR MOUNTS.
   - E. SIZE AND LOCATION OF ALL MECHANICAL UNITS.
8. OPENINGS, POCKETS, ETC. LARGER THAN 6 INCHES SHALL NOT BE PLACED IN SLABS, DECKS, BEAMS, JOISTS, COLUMNS, WALLS, ETC., UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL PLANS. CONTRACTOR TO SHOW ALL 6" OR GREATER OPENINGS ON STRUCTURAL MASONRY ELEVATION SHEETS TO SUBMIT TO ENGINEER FOR APPROVAL. CONTACT THE STRUCTURAL ENGINEER IF ANY STRUCTURAL ELEMENTS REQUIRE OPENINGS NOT SHOWN ON THESE PLANS AND ARE LARGER THAN 6" PRIOR TO MAKING MODIFICATIONS.
9. ASTM SPECIFICATIONS NOTED SHALL BE THE LATEST REVISION.
10. THE CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
11. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FLOORS OR ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
12. WHERE THE LONGEST HORIZONTAL CEILING DIMENSION IS EQUAL TO OR GREATER THAN 20'-0", IT IS RECOMMENDED THAT RESILIENT CHANNEL BE USED TO HELP LIMIT DRYWALL CRACKING.
13. THE FOLLOWING ITEMS ARE CONSIDERED TO BE DEFERRED SUBMITTALS PER SECTION 107.3.4.1 OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION AND SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTIFICATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
   - A. OPEN WEB STEEL JOISTS

B. DESIGN CRITERIA

GRAVITY LOAD	LIVE LOAD	DEAD LOAD
ROOF LOAD	20 PSF	20 PSF
ROOF SNOW LOAD	8 PSF	

* SEE FRAMING NOTES FOR SPECIAL LOADING CONDITIONS

WIND	
BASIC WIND SPEED	135 MPH
WIND RISK CATEGORY	IV
WIND EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT	+/-0.18
COMPONENT & CLADDING	
ROOF	SEE ROOF UPLIFT DIAGRAMS
WALL	+43.0 PSF OR -47.0 PSF

* HIGHER LOADING USED AT CORNERS AND EDGES

SEISMIC	
SEISMIC RISK CATEGORY	IV
SEISMIC IMPORTANCE, I_E	1.5
MAPPED SPECTRAL RESPONSE ACCELERATIONS	S_S=1.539 & S_1=0.522
SPECTRAL RESPONSE COEFFICIENTS	S_{DS}=1.076 & S_{D1}=0.592
SITE CLASS	D
LATERAL FORCE RESISTING SYSTEM, NORTH/SOUTH	SPECIAL REINFORCED MASONRY SHEAR WALLS, R=5
LATERAL FORCE RESISTING SYSTEM, EAST/WEST	SPECIAL REINFORCED MASONRY SHEAR WALLS, R=5
SEISMIC RESPONSE COEFFICIENT, C_S	0.323
LATERAL FORCE RESISTING SYSTEM, NORTH/SOUTH (GYMNASIUM)	SPECIAL REINFORCED MASONRY SHEAR WALLS, R=5
SEISMIC RESPONSE COEFFICIENT, C_S	0.323
LATERAL FORCE RESISTING SYSTEM, EAST/WEST (GYMNASIUM)	STEEL SPECIAL MOMENT FRAMES, R=8
SEISMIC RESPONSE COEFFICIENT, C_S	0.202
DESIGN BASE SHEAR	C_S x DEAD WEIGHT (W)
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
SEISMIC DESIGN CATEGORY	D

C. FOUNDATION

1. THE FOUNDATION DEPICTED HEREIN HAS BEEN DESIGNED IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRACTICE FOR SOIL CONDITIONS AS CLASSIFIED BY THE PROJECT GEOTECHNICAL REPORT. (THE GEOTECHNICAL REPORT):
   - CONSULTANT: LUMOS & ASSOCIATES, INC.
   - FILE: 10683.000
   - DATED: APRIL 2022
2. FOOTINGS ARE DESIGNED BASED ON AN ALLOWABLE SOIL PRESSURE OF 1500 PSF PER THE GEOTECHNICAL REPORT. ALLOWABLE SOIL PRESSURE MAY BE INCREASED BY 1/3 FOR TOTAL LOADS INCLUDING WIND OR SEISMIC. FRICTION COEFFICIENT = 0.35. AT REST AND PASSIVE EQUIVALENT FLUID PRESSURES = 45 AND 300 PCF, RESPECTIVELY.
3. SITE PREPARATION SHALL CONFORM TO THE REQUIREMENTS IN THE GEOTECHNICAL REPORT.
4. SOILS PREPARATION AND FOUNDATION CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE GEOTECHNICAL REPORT. ALL FOUNDATIONS SHALL BE PLACED ON A MINIMUM OF 24 INCHES OF PROPERLY MOISTURE CONDITIONED AND COMPACTED SUITABLE NATIVE SOILS OR PROPERLY PREPARED STRUCTURAL FILL. ALL INTERIOR SLABS ON GRADE SHALL BE PLACED ON A MINIMUM TYPE II, CLASS B AGGREGATE BASE COMPACTED TO A MINIMUM OF 95% AND PLACED ON 24 INCHES OF PROPERLY MOISTURE CONDITIONED AND COMPACTED SUITABLE NATIVE SOILS OR PROPERLY PREPARED STRUCTURAL FILL.
5. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT LOCATION OF BULKHEADS AND OPENINGS, ETC. ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT LOCATION OF BULKHEADS AND OPENINGS, ETC.
6. THE CONTRACTOR SHALL PROVIDE FOR PROPER DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, SEEPAGE, ETC. (FOOTINGS SHALL NOT BE PLACED UNDER WATER).
7. FOOTINGS SHALL BE PLACED ACCORDING TO DEPTHS SHOWN ON THE STRUCTURAL PLANS. ALL ABANDONED FOOTINGS, UTILITIES, ETC. THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
8. CONCRETE PLACEMENT SHALL BE IN ONE CONTINUOUS OPERATION UNLESS OTHERWISE SPECIFIED AND SLAB SURFACE SHALL BE CURED WITH HUNTS COMPOUND OR EQUAL.
9. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE PER THE REQUIREMENTS OF THE GEOTECHNICAL REPORT. FLOODING WILL NOT BE PERMITTED.
10. STOOPS, PORCHES, OR OTHER ATTACHMENT SHALL BE CAST INDEPENDENT OF THE CONCRETE FOUNDATION SLAB, UNO. PROVIDE CONSTRUCTION JOINTS WHERE SHOWN ON THE DRAWINGS.

D. CONCRETE

1. ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318 LATEST ADOPTED EDITION). WITH MODIFICATIONS AS NOTED IN THE DRAWINGS AND SPECIFICATIONS.
2. REINFORCED CONCRETE DESIGN IS BY THE "ULTIMATE STRENGTH DESIGN METHOD", ACI 318-14. SCHEDULE OF STRUCTURAL CONCRETE 28-DAY COMPRESSIVE STRENGTH AND TYPES:

LOCATION IN STRUCTURE	STRENGTH	AGGREGATE	ENTRAINED AIR %
SLAB ON GRADE	3500 PSI	3/4" STONE	NONE
SLAB ON METAL DECK	3500 PSI	3/4" STONE	NONE
FOOTINGS*	3500 PSI	3/4" STONE	5% +/- 1 1/2%
FOUNDATION WALLS	4500 PSI	3/4" STONE	6% +/- 1 1/2%
EXTERIOR CONCRETE**	4500 PSI	3/4" STONE*	6% +/- 1 1/2%

* FOUNDATION WALLS CONCRETE MIXTURE CAN BE USED FOR FOOTINGS AT CONTRACTOR'S OPTION
**INCLUDE 1.5 LB/CY OF FIBERMESH 150 POLYPROPYLENE FIBERS OR APPROVED EQUAL.
***ADD XYPEX C1000 AT 12 LBS/CUBIC YD TO CONCRETE AT ELEVATOR PIT FLOOR AND WALLS

4. A MINIMUM OF THREE (3) CYLINDERS FOR EVERY 100 YARDS OF CONCRETE SHALL BE TAKEN TO DETERMINE CONCRETE STRENGTH.
5. CONCRETE MIX DESIGN SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL WITH THE FOLLOWING REQUIREMENTS:
   - A. COMPRESSIVE STRENGTH AT AGE 28 DAYS AS SPECIFIED ABOVE.
   - B. AGGREGATE SUBMITTAL: 3/4" MAXIMUM SIZE CONFORMING TO ASTM C-33.
   - C. CEMENT: ASTM C-150, TYPE II PORTLAND CEMENT.
   - D. MAXIMUM SLUMP: 3 INCHES, ADDITIONAL WORKABILITY MAY BE ACHIEVED WITH AN APPROVED ADMIXTURE THAT DOES NOT PROMOTE SHRINKAGE OF THE CONCRETE.
   - E. NO ADDITIONAL ADMIXTURES, EXCEPT FOR ENTRAINED AIR, OR AS SPECIFIED OR APPROVED BY THE STRUCTURAL ENGINEER.
     - a. FOR SLAB ON METAL DECK ONLY, ADMIXTURE OF 3/4 GALLON PER CY SHRINKAGE COMPENSATING ADMIXTURE (SUCH AS ECLIPSE FLOOR 200) SHALL BE USED.
   - F. MAXIMUM WATER/CEMENT RATIO SHALL BE 0.45, U.N.O.
     - a. FOR SLAB ON GRADE AND SLAB ON METAL DECK ONLY, MAXIMUM WATER/CEMENT RATIO SHALL BE 0.50.
   - G. CONCRETE SHALL BE 142 +/- 7 LBS/CU. FT.
     - a. FOR SLAB ON METAL DECK ONLY, CONCRETE SHALL BE 130 LBS/CU. FT MAXIMUM.
6. CONCRETE MIXING OPERATIONS, ETC, SHALL CONFORM TO ASTM C-94.
7. PLACEMENT OF CONCRETE SHALL CONFORM TO ACI STANDARD 614.
8. CLEAR COVERAGE OF CONCRETE OVER OUTER REINFORCING BARS SHALL BE AS FOLLOWS, UNO:
   - A. CONCRETE POURED DIRECTLY AGAINST EARTH: 3 INCHES CLEAR
   - B. STRUCTURAL SLABS: 3/4 INCHES CLEAR (TOP AND BOTTOM)
   - C. FORMED CONCRETE WITH EARTH BACKFILL: 2 INCHES CLEAR
9. ALL REINFORCING BARS, HOLD DOWN BOLTS AND STRAPS, AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
10. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS.
11. CONDUIT OR PIPE SIZE (O.D.) SHALL NOT EXCEED 30% OF SLAB THICKNESS AND SHALL BE PLACED UNDER CONCRETE, UNLESS SPECIFICALLY DETAILED OTHERWISE. CONCENTRATIONS OF CONDUITS OR PIPES SHALL BE AVOIDED EXCEPT WHERE DETAILED OPENINGS ARE PROVIDED.
12. MODULUS OF ELASTICITY OF CONCRETE, WHEN TESTED IN ACCORDANCE WITH ASTM C-460, SHALL BE AT LEAST THE VALUE GIVEN BY THE EQUATIONS IN SECTION 19.2.2.1 OF ACI 318 FOR THE SPECIFIED 28-DAY STRENGTH.
13. ALL CONCRETE SLABS SHALL USE VC-5 CURING COMPOUND MANUFACTURED BY SINAK, BLANKET CURED WITH MOISTURE-RETAINING SHEET, OR AN APPROVED EQUAL.
14. SPECIAL INSPECTOR TO VERIFY AND SIGN ALL BATCH TICKETS AND PRODUCE A POUR MAP INDICATING PLACEMENT OF EACH BATCH FOR SLAB ON GRADE AND SLAB ON METAL DECK PRIOR TO PLACEMENT.

E. REINFORCING STEEL

1. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615 GRADE 60.
2. WELDED REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-706 GRADE 60.
3. ALL REINFORCING BARS SHALL BE MADE COLD.
4. MINIMUM LAP OF THE WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE AND ONE HALF SQUARES WHICHEVER IS GREATER.
5. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
6. REBAR SPLICES ARE TO BE CLASS "B" (UNO), MAINTAIN 2 BAR DIA CLEAR SPACE BETWEEN ADJACENT SPLICES

REBAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10
MINIMUM LAP LENGTH, INCHES, CONCRETE	22	29	36	43	68	78	88	98
MINIMUM LAP LENGTH, INCHES, MASONRY	13	22	35	64	87	131	NA	NA
STD. HOOK LENGTH, INCHES	4 1/2	6	7 1/2	9	10 1/2	12	13 1/2	15 1/2



7. REINFORCING SPLICES SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS.
8. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY.

F. CONCRETE MASONRY (CONCRETE BLOCK)

1. MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS, 2000 PSI, CONFORMING TO THE LATEST ASTM DESIGNATION C-90 AND THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION OF CALIFORNIA AND NEVADA.
2. DESIGN STRENGTH SHALL BE f'm = 2000 PSI.
3. MASONRY UNITS SHALL BE CONSTRUCTED USING TYPE II CEMENT.
4. PORTLAND CEMENT SHALL CONFORM TO ASTM DESIGNATION C-150 AND BE AS SPECIFIED FOR CONCRETE.
5. MORTAR SHALL CONFORM TO THE REQUIREMENTS OF TMS-602 TABLE SC-1. TYPE M. OR S.
6. GROUT SHALL CONFORM TO REQUIREMENTS OF ASTM C476 FOR COARSE GROUT. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL VOIDS OF THE MASONRY WITHOUT SEGREGATION. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS AND NOT LESS THAN SPECIFIED MASONRY STRENGTH f'm PER ITEM 1 (ONE) ABOVE.
7. PROVIDE A MINIMUM OF 1/2" GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS. MORTAR FIN PROJECTIONS LARGER THAN 1/4" FROM INTERIOR FACE OF CMU BLOCK TO BE KNOCKED OFF PRIOR TO GROUTING.
8. LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 5'-4" U.N.O.
9. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.
10. REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE.
11. PROVIDE LEVEL 2 SPECIAL INSPECTION IN ACCORDANCE WITH TMS 402-16 SECTION 3.1.2ze.
12. MASONRY LAP SPLICES SHALL BE A MINIMUM OF 48 BAR DIAMETERS OR THE VALUE SHOWN IN SECTION D, WHICHEVER IS LARGER.
13. ONE SET OF THREE MASONRY PRISMS TO BE BUILT AND TESTED PER ASTM C131, STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF MASONRY PRISMS, FOR EACH VARIETY OF MASONRY BLOCK (8816,12816, SHOT BLAST, PRECISION, ETC) PRIOR TO CONSTRUCTION.

G. STRUCTURAL STEEL

1. HOT-ROLLED STRUCTURAL STEEL SHAPES SHALL BE PER ASTM A992, EXCEPT ANGLES AND CHANNELS SHALL BE PER ASTM A36, UNO.
2. STRUCTURAL PIPE SHALL BE PER ASTM A53 GRADE B, UNO.
3. STRUCTURAL HSS SHAPES SHALL BE PER ASTM A500 GRADE C, UNO.
4. STRUCTURAL PLATE STEEL SHALL BE PER ASTM A36, UNO.
5. NUTS AND BOLTS IN STRUCTURAL STEEL CONNECTIONS SHALL BE PER ASTM F1852 (DESIGNATED AS A325N OR HIGH STRENGTH BOLT ON THE DRAWINGS). WITH HARDENED WASHERS UNO. DESIGN IS BASED UPON BEARING TYPE CONNECTIONS WITH THREADS NOT EXCLUDED. PERIODIC SPECIAL INSPECTION REQUIRED. UNO, CONTACT FACES OF STEEL AT CONNECTIONS WHERE HIGH-STRENGTH BOLTS ARE USED SHALL NOT BE PAINTED. HIGH STRENGTH BOLTS SHALL BE TENSION CONTROL TO ENSURE PROPER INSTALLATION. UNO.
6. ANCHOR BOLTS SHALL BE PER ASTM F1554 GR. 36, UNO.
7. HEADED STUDS SHALL BE NELSON STUD ANCHORS (NSA) BY TRW OR APPROVED EQUAL, UNO, AND SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
8. WELDS SHALL BE BY E70XX, LOW HYDROGEN ELECTRODES. ALL WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY'S SPECIFICATIONS FOR THE MATERIAL BEING WELDED AND ALL WELDING TO BE PERFORMED BY ONLY AWS CERTIFIED WELDERS.
9. WELDS DESIGNATED AS DEMAND CRITICAL SHALL BE MADE WITH FILLER METALS MEETING THE REQUIREMENTS OF AWS D1.8/D1.8M CLAUSES 6.1, 6.2, AND 6.3. FILLER METAL FOR DEMAND CRITICAL WELDS SHALL HAVE A MINIMUM CHARPY V-NOTCH (CVN) TOUGHNESS OF 40 FT-LBS AT 70° F OR LOWER.
10. ALL FIELD WELDS SHALL HAVE SPECIAL INSPECTION.
11. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH IBC 1705.2.1.
12. ALL STRUCTURAL STEEL WORK SHALL BE SHOP PAINTED AND TOUCHED UP IN THE FIELD AFTER ERECTION EXCEPT WHERE STEEL IS TO BE EMBEDDED IN CONCRETE, FIREPROOFED, OR WHERE REQUIRED FOR SPECIAL CONNECTIONS. PROVIDE 3" MINIMUM CONCRETE COVER FOR ALL STEEL EXPOSED TO EARTH.

H. METAL DECKING

1. METAL DECK SHALL CONFORM TO THE REQUIREMENTS OF THE STEEL DECK INSTITUTE.
2. TYPE AND GAUGE OF METAL DECK SHALL BE PER THE FRAMING PLANS AND NOTES. METAL DECK FINISH PER ARCHITECTURAL DRAWINGS.
3. DECKING SHALL BE ATTACHED TO STEEL SUPPORTS AND HAVE SIDE LAP ATTACHMENTS AS SHOWN ON THESE DRAWINGS.
4. DECK WELDING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY'S SPECIFICATIONS AND SHALL BE PERFORMED BY WELDERS EXPERIENCED IN METAL DECK WELDING.
5. DECKING SHALL BEAR NO LESS THAN 2" ON STEEL SUPPORTS AND SHALL SPAN CONTINUOUSLY OVER NO LESS THAN TWO CONSECUTIVE SPANS.
6. ITEMS SUSPENDED FROM FLOOR AND ROOF DECK SYSTEMS SHALL CONFORM TO THE APPROPRIATE TYPICAL DETAILS. IF ALTERNATE SUPPORT SYSTEMS FOR SUSPENDED ITEMS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL. ALTERNATE SUPPORT FRAMING SHALL CONNECT TO APPROPRIATE STEEL FRAMING AND SHALL NOT CONNECT TO METAL DECK.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SHORING AS REQUIRED TO ENSURE THAT CONSTRUCTION LOADS PLACED ON PLAIN OR COMPOSITE METAL DECK DO NOT EXCEED THE DECK LOAD BEARING CAPACITY.
8. HEAVY MOVING CONSTRUCTION LOADS, SUCH AS THOSE EXERTED BY MECHANICAL LIFT, ON COMPOSITE METAL DECK WITH CONCRETE FILL SHALL BE A MAXIMUM OF 3000 LBS AND PREVENTED FROM OVERLOADING ANY OPEN BAY AREAS. IF ANY LIFTS ARE USED BY THE CONTRACTOR ON THE SLAB ON METAL DECK, THE CONTRACTOR MUST PROVE TO THE OWNER THAT ANY CRACKING IN THE SLAB ON METAL DECK WAS NOT CREATED BY THE USE OF THE LIFT.
9. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO ANY FABRICATION.
10. VENTED DECK SHALL NOT BE ALLOWED ON THIS PROJECT.

I. COLD-FORMED STEEL

1. COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE REQUIREMENTS OF THE 2016 EDITION OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS (AISI), THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA STANDARDS), AND REQUIREMENTS AS STATED IN THE FRAMING NOTES.
2. COLD-FORMED STEEL STUDS AND JOISTS SHALL BE STRUCTURAL GRADE PER ASTM A653 AND THE FOLLOWING YIELD STRENGTHS:
   - A. ALL MATERIALS USED IN INTERIOR APPLICATIONS SHALL BE 33 KSI, U.N.O.
   - B. ALL MATERIALS USED IN EXTERIOR APPLICATIONS SHALL BE 50 KSI.
3. SELF-DRILLING SCREWS TO BE HILTI KWIK-PRO OR KWIK-FLEX SCREWS OR APPROVED EQUAL. #6 SCREWS MINIMUM TO BE USED WHERE NOT SPECIFICALLY NOTED ON THESE PLANS. PLACE IN ACCORDANCE WITH ESR-2196. TYPICAL FASTENER SIZES NOTED IN THE DRAWINGS:
   - A. #6 SCREWS = 0.138" DIA. x 1 1/4" MINIMUM LENGTH
   - B. #8 SCREWS = 0.164" DIA. x 1 1/4" MINIMUM LENGTH
4. SHOT PINS SHALL BE HILTI X-U, 0.157" MINIMUM DIA., OR EQUAL TO BE APPROVED BY THE EOR. INSTALL PER MANUFACTURER AND ESR-2269 OR AS OTHERWISE INDICATED IN THE DETAILS.
5. WALL TRACK SHALL BE UNPUNCHED WITH GAUGE TO MATCH STUD FRAMING (UNO). MINIMUM SIZE TO BE 362T125-33.
6. UTILITY PUNCHOUT HOLES IN STUDS SHALL BE LOCATED AWAY FROM CONNECTIONS UNLESS SPECIFICALLY DETAILED.
7. OPENINGS IN STUD WEBS OTHER THAN STANDARD HOLES PUNCHED BY THE MANUFACTURER ARE PROHIBITED UNLESS SPECIFICALLY DETAILED.

J. OPEN WEB STEEL JOISTS

1. ALL OPEN WEB STEEL JOISTS SHALL CONFIRM TO THE STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE.
2. ALL OPEN WEB JOISTS SHALL HAVE BRIDGING AS SHOWN ON THE DRAWINGS AND AS RECOMMENDED BY THE STEEL JOIST INSTITUTE.
3. ALL OPEN WEB JOISTS SHALL BE WELDED OR BOLTED TO SUPPORTS AS DETAILED ON THE DRAWINGS AND DESIGNED FOR LOADING TO THE CONNECTION WHERE INDICATED ON PLANS AND DETAILS.
4. ALL OPEN WEB JOISTS SHALL BE SHOP PAINTED AND TOUCHED UP IN THE FIELD AFTER ERECTION, EXCEPT AT LOCATIONS TO RECEIVE FIREPROOFING.
5. ALL OPEN WEB JOISTS ARE TO BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE DESIGN LOADS PROVIDED ON THESE DRAWINGS. THE CONTRACTOR SHALL COORDINATE LOADS AND DIMENSIONS AS NECESSARY.
6. SHOP DRAWINGS AND STAMPED ENGINEERING CALCULATIONS OF ALL OPEN WEB JOISTS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO ANY FABRICATION.

M. SHOP DRAWINGS

1. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS.
2. THE CONTRACTOR SHALL REVIEW ALL

2018 IBC TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	--	--	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM 706; B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND C. INSPECT ALL OTHER WELDS.	-- X	X X X	AWS D1.4 ACI 318: 26.6.4	--
3. INSPECT ANCHORS CAST IN CONCRETE.	--	X	ACI 318: 17.8.2	--
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	X	 X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	--
5. VERIFY USE OF REQUIRED DESIGN MIX	--	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	--	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	--	X	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	--	X	ACI 318:26.5.3-26.5.5	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES; AND B. GROUTING OF BONDED PRESTRESSING TENDONS.	X X	-- --	ACI 318: 26.10	--
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	--	X	ACI 318: 26.9	--
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF THE SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	--	X	ACI 318: 26.11.2	--
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	--	X	ACI 318: 26.11.2 (b)	--

2018 IBC TABLE 1705.6
REQUIRED SPECIAL INSPECTIONS AND TEST OF SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	--	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	--	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	--	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	--
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	--	X

2018 IBC TABLE 1705.2.3
REQUIRED SPECIAL INSPECTIONS OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD
1. INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS.			
A. END CONNECTIONS - WELDING AND BOLTED.	--	X	SJI SPECIFICATIONS LISTED IN SECTION 2207.1.
B. BRIDGING - HORIZONTAL OR DIAGONAL	--	--	--
1. STANDARD BRIDGING	--	X	SJI SPECIFICATIONS LISTED IN SECTION 2207.1.
2. BRIDGING THAT DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1.	--	X	--

TMS 402/602-16 TABLE 3
MINIMUM VERIFICATION REQUIREMENTS

MINIMUM VERIFICATION	REQUIRED FOR QUALITY ASSURANCE			REFERENCE FOR CRITERIA
	LEVEL 1	**LEVEL 2**	LEVEL 3	TMS 602
1. PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS.	R	**R**	R	ART. 1.5
2. PRIOR TO CONSTRUCTION, VERIFICATION OF f'_m AND f'_{AAC}, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE.	NR	**R**	R	ART. 1.4 B
3. DURING CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE.	NR	**R**	R	ART. 1.5 & 1.6.3
4. DURING CONSTRUCTION, VERIFICATION OF f'_m AND f'_{AAC} FOR EVERY 5,000 SQ. FT. (465 SQ. M.)	NR	**NR**	R	ART. 1.4 B
5. DURING CONSTRUCTION, VERIFICATION OF PROPORTIONS OF MATERIALS AS DELIVERED TO THE PROJECT SITE FOR PREMIXED OR PREBLENDED MORTOR, PRESTRESSING GROUT, AND GROUT OTHER THAN SELF-CONSOLIDATING GROUT.	NR	**NR**	R	ART. 1.4 B

TABLE 4 - MINIMUM SPECIAL INSPECTION

INSPECTION TASK	FREQUENCY[a]			REFERENCE FOR CRITERIA	
	LEVEL 1	**LEVEL 2**	LEVEL 3	TMS 402	TMS 602
1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
A. PROPORTION OF THE SITE-PREPARED MORTAR	NR	**P**	P		ART. 2.1, 2.6 A. & 2.6 C
B. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	NR	**P**	P		ART. 2.4 B. & 2.4 H
C. GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	NR	**P**	P		ART. 3.4 & 3.6A
D. PRESTRESSING TECHNIQUE	NR	**P**	P		ART. 3.6B
E. PROPERTIES OF THIN BED MORTAR FOR AAC MASONRY	NR	**C[b],P[c]**	C		ART. 2.1 C.1
F. SAMPLE PANEL CONSTRUCTION	NR	**P**	C		ART. 1.6 D
2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
A. GROUT SPACE	NR	**P**	C		ART. 3.2 D & 3.2 F
B. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	NR	**P**	P	SEC. 10.8 & 10.9	ART. 2.4 & 3.6
C. PLACEMENT OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS	NR	**P**	C	SEC. 6.1, 6.3.1, 6.3.6, & 6.3.7	ART. 3.2 E & 3.4
D. PROPORTIONS OF SITE -PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	NR	**P**	P		ART. 2.6 E & 2.4 G.1.B
3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION.					
A. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	NR	**P**	P		ART. 1.5
B. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	NR	**P**	P		ART. 3.3 B
C. SIZE AND LOCATION OF STRUCTURAL MEMBERS	NR	**P**	P		ART. 3.3 F
D. GRADE, TYPE AND SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	NR	**P**	C	SEC. 1.2.1(E), 6.2.1, & 6.3.1	
E. WELDING OF REINFORCEMENT	NR	**C**	C	SEC. 6.1.6.1.2	
F. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))	NR	**P**	P		ART. 1.8 C, 1B.D
G. APPLICATION AND MEASUREMENT OF THE PRESTRESSING FORCE	NR	**C**	C		ART. 3.6 B
H. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	NR	**C**	C		ART. 3.5 & 3.6 C
I. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THE THIN-BED MORTAR JOINTS.	NR	**C[b],P[c]**	C		ART. 3.3.B.9 & 3.3 F.1.B
4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS.	NR	**P**	C		ART. 1.4 B.2.A.3, 1.4B 2.B.3, 1.4.B 2.C.3 1.4. B.3, & 1.4 B.4

a. FREQUENCY REFERS TO THE FREQUENCE OF INSPECTION. WHICH MAY BE CONTINUOUS DURING THE LISTED TASK OR PERIODICALLY DURING THE LISTED TASK, AS DEFINED IN THE TABLE. R=REQUIRED, NR=NOT REQUIRED, P=PERIODIC, C=CONTINUOUS
b. REQUIRED FOR THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.
c. REQUIRE AFTER THE FRIST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.

AISC 360 CHAPTER N AND 2018 IBC CHAPTER 17
REQUIRED VERIFICATION AND SPECIAL INSPECTION OF STEEL CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:			AISC 360 CHAPTER N	
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	--	X	APPLICABLE ASTM MATERIAL SPECIFICATIONS; AISC 360, SECTION A3.3	--
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	--	X	--	--
2. INSPECTION OF HIGH-STRENGTH BOLTING:			AISC 360 CHAPTER N	
A. BEARING-TYPE CONNECTIONS.	--	X	AISC 360, SECTION M2.5	--
B. SLIP-CRITICAL CONNECTIONS.	X	--		
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL:			AISC 360 CHAPTER N	
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	--	--	ASTM A 6 or ASTM A 568	--
B. MANUFACTURER'S CERTIFIED MILL TEST REPORTS.	--	--	ASTM A 6 or ASTM A 568	
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:			AISC 360 CHAPTER N	
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	--	--	AISC 360, SECTION A3.5	--
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	--	--	--	--
5. INSPECTION OF WELDING:			AISC 360 CHAPTER N	
A. STRUCTURAL STEEL:	--	--		
1. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS.	X	--	AWS D1.1	--
2. MULTIPASS FILLET WELDS.	X	--		
3. SINGLE-PASS FILLET WELDS > 5/16"	X	--		
4. SINGLE-PASS FILLETS WELDS ≤5/16"	--	X		
5. FLOOR AND ROOF DECK WELDS.	--	X	AWS D1.3	1705.2.2
B. REINFORCING STEEL:	--	--		
1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706.	--	X	AWS D1.4 ACI 318: 3.5.2	1705.2.2
2. REINFORCING STEEL-RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED MASONRY SHEAR WALLS AND SHEAR REINFORCEMENT.	X	--		
3. SHEAR REINFORCEMENT.	X	--		
4. OTHER REINFORCING STEEL.	--	X		
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:			--	--
A. DETAILS SUCH AS BRACING AND STIFFENING.	--	X		
B. MEMBER LOCATIONS.	--	X		
C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	--	X		

QUALITY ASSURANCE

I. QUALITY ASSURANCE PLAN

A. B. THE INTENT OF THIS QUALITY ASSURANCE PLAN IS TO IDENTIFY STRUCTURAL SYSTEMS OR ELEMENTS THAT ARE CRITICALLY IMPORTANT TO THE STRUCTURE'S ABILITY TO SAFELY RESIST CODE REQUIRED LOADS. QUALITY ASSURANCE FOR THE ITEMS LISTED BELOW WILL BE ACCOMPLISHED THROUGH THE USE OF SPECIAL INSPECTION & MATERIALS TESTING AND STRUCTURAL OBSERVATION. IN ADDITION, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER IN ACCORDANCE WITH THE 2018 IBC SECTION 1704.4.

B. LATERAL FORCE RESISTING SYSTEM(S): SPECIAL REINFORCED MASONRY SHEAR WALLS.

C. COMPONENTS & ELEMENTS: MASONRY WALLS AND THEIR ANCHORAGE.

II. SPECIAL INSPECTION AND MATERIAL TESTING

A. SPECIAL INSPECTION AND ASSOCIATED MATERIALS TESTING SHALL BE PERFORMED FOR THE PROCESSES AND MATERIALS REQUIRED FOR CONSTRUCTION. THE TYPE AND FREQUENCY OF SPECIAL INSPECTIONS AND MATERIALS TESTING AS WELL AS THE FREQUENCY AND DISTRIBUTION OF RELATED REPORTS SHALL BE AS INDICATED IN THE CONSTRUCTION DOCUMENTS AND AS REQUIRED BY ALL APPLICABLE CODES.

B. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE ARCHITECT, OWNER AND BUILDING OFFICIAL. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE ARCHITECT, OWNER AND BUILDING OFFICIAL. AT THE CONCLUSION OF WORK, THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT TO THE ARCHITECT, OWNER AND BUILDING OFFICIAL INDICATING THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.

C. SPECIAL INSPECTIONS IN ACCORDANCE WITH 2018 IBC CHAPTER 17 SHALL BE REQUIRED FOR THE FOLLOWING STRUCTURAL ITEMS:

1. STEEL CONSTRUCTION IN ACCORDANCE WITH AISC 360 CHAPTER FOR STRUCTURAL STEEL AND 2018 IBC TABLE 1705.2.3 FOR OTHER STEEL.
2. CONCRETE CONSTRUCTION IN ACCORDANCE WITH 2018 IBC TABLE 1705.3.
3. MASONRY CONSTRUCTION IN ACCORDANCE WITH TMS 402/602-16 TABLE 3 AND 4.
4. SOILS IN ACCORDANCE WITH 2018 IBC TABLE 1705.6.
5. POST INSTALLED ANCHORS IN ACCORDANCE WITH EVALUATION REPORTS AND MANUFACTURER RECOMMENDATIONS.

D. IN ADDITION TO THE SPECIAL INSPECTIONS LISTED ABOVE, SPECIAL INSPECTION FOR SEISMIC RESISTANCE IN ACCORDANCE WITH 2018 IBC SECTIONS 1705.12 1705.13 SHALL REQUIRED FOR THE FOLLOWING STRUCTURAL ITEMS:

1. STEEL CONSTRUCTION INSPECTION AND NON-DESTRUCTIVE TESTING IN ACCORDANCE AISC CHAPTER 341 CHAPTER J FOR THE ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM.
2. EXTERIOR LIGHT GAUGE WALLS AND MASONRY VENEER PERIODIC SPECIAL INSPECTION IN ACCORDANCE WITH 2018 IBC SECTION 1705.12.5.

E. THE SPECIAL INSPECTIONS LISTED ABOVE ARE NOT INTENDED TO BE ALL INCLUSIVE AND ONLY REPRESENT SPECIAL INSPECTIONS FOR STRUCTURAL PORTIONS OF THE WORK. ADDITIONAL SPECIAL INSPECTIONS OF ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING OR OTHER SYSTEMS MAY BE REQUIRED. REFER TO THE APPROPRIATE DESIGN DISCIPLINES FOR ADDITIONAL INFORMATION.

F. WHERE PERIODICAL INSPECTIONS ARE REQUIRED, THE FIRST INSPECTION SHALL OCCUR AT THE START OF THE CONSTRUCTION TASK BEING INSPECTED.

III. STRUCTURAL OBSERVATION

A. THE CONTRACTOR SHALL PROVIDE THE ARCHITECT WITH WRITTEN NOTICE 48 HOURS PRIOR TO THE FOLLOWING CONSTRUCTION ACTIVITIES SO THAT APPROPRIATE STRUCTURAL OBSERVATION MAY BE PERFORMED: CONCRETE PLACEMENT, STEEL ERECTION, DIAPHRAGM NAILING/WELDING, AND GROUTING OF MASONRY. DEFICIENCIES WILL BE REPORTED IN WRITING. AT THE CONCLUSION OF WORK, THE STRUCTURAL ENGINEER WILL REVIEW THE PROJECT FOR GENERAL CONFORMANCE WITH PROJECT REQUIREMENTS. IF, IN THE OPINION OF THE STRUCTURAL ENGINEER, THE PROJECT STILL CONTAINS REPORTED DEFICIENCIES THAT HAVE NOT BEEN ADDRESSED BY THE CONTRACTOR, A WRITTEN STATEMENT WILL BE ISSUED INDICATING THAT SITE VISITS HAVE BEEN MADE AND THAT CERTAIN DEFICIENCIES REMAIN UNRESOLVED.

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Project
CITY OF FERNLEY
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Job No: 20-22

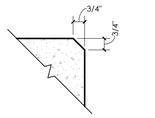
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REVISIONS		
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Sheet Title
SPECIAL INSPECTIONS & QUALITY ASSURANCE

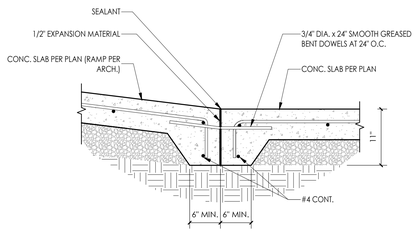
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Sheet No:
S0.1

Owner
CITY OF FERNLEY



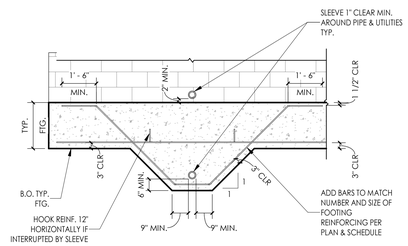
NOTES:
CHAMFER ALL EXPOSED CORNERS OF CONCRETE WALLS, COLUMNS, BEAMS, ETC., EXCEPT WHERE DETAILS OTHERWISE.

13 TYP. CONCRETE CHAMFER
3" = 1'-0"

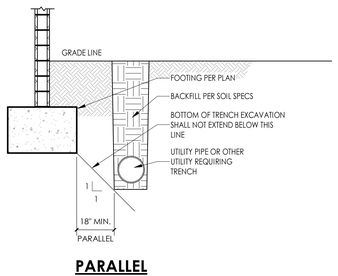


14 RAMP TOP & BOT. SECTION
1" = 1'-0"

NOTES:
1. THE CONTRACTOR SHALL COORDINATE ALL EXCAVATION OPERATIONS WITH BUILDING FOUNDATION REQUIREMENTS.
2. WHEN TOP OF PIPE IS 24" OR MORE BELOW BOTTOM OF FOOTING, CONC. ENCASEMENT AND ADDITIONAL REINF. ARE NOT REQUIRED. INSTALLATION OF PIPES AND UTILITIES IS NOT PERMITTED UNDER FOUNDATIONS AFTER FOUNDATIONS HAVE BEEN PLACED.



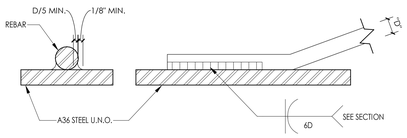
PERPENDICULAR ELEVATION



PARALLEL

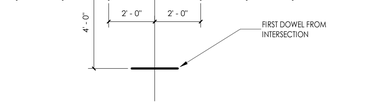
15 FND UTILITIES PARALLEL AND PERP.
3/8" = 1'-0"

16 TYP. BUILDING FOUNDATION PREP.
1/2" = 1'-0"



NOTES:
1. REBAR TO BE WELDED SHALL BE ASTM A706.
2. ALL PREHEATING AND WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.4.
3. ALL REBAR WELDING SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED LABORATORY.

9 REINFORCING WELDING DETAIL
3" = 1'-0"

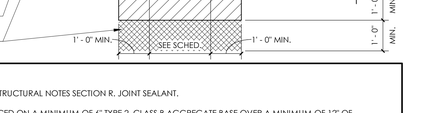


90 DEG. BEND **180 DEG. BEND**

1.	R=3D FOR #3 THROUGH #8
2.	R=4D FOR #9 THROUGH #11
3.	R=5D FOR #14 THROUGH #18

10 REINF. TYP. HOOKS AND BENDS
1" = 1'-0"

NOTES:
PUT CROSSTIE w/ EA. STIRRUP, ALT. 135 DEG. BENDS



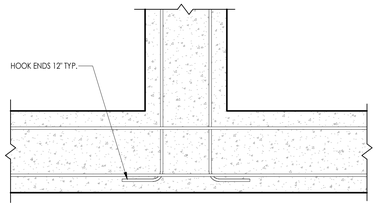
TYP. CROSSTIE

TYP. TIE **TYP. STIRRUP**

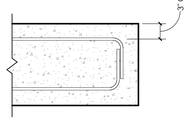
11 REINFORCING HOOKS & BENDS FOR TIES
1" = 1'-0"

12 SLAB DOWELED JOINT INTERSECTION
3/8" = 1'-0"

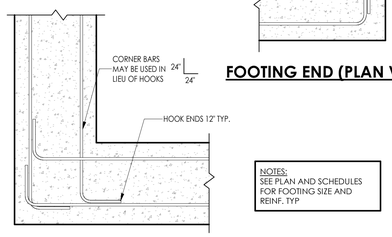
NOTES:
1. SEE CIVIL FOR FINAL GRADES AND EXTERIOR IMPROVEMENTS.
2. THE INTERIOR FLOOR SLAB - BUILDING WALL JOINT SHALL BE CAULKED WITH SIKAFLEX-2c NS OR APPROVED EQUAL. SEE STRUCTURAL NOTES SECTION R, JOINT SEALANT.
3. SEE GENERAL NOTES SECTION C AND PROJECT SPECIFICATIONS FOR SOILS PREPARATION.
4. FOUNDATIONS SHALL BE PLACED ON A MINIMUM OF 12" OF STRUCTURAL FILL. INTERIOR SLABS ON GRADE SHALL BE PLACED ON A MINIMUM OF 6" TYPE 2, CLASS B AGGREGATE BASE OVER A MINIMUM OF 12" OF STRUCTURAL FILL PER GEOTECHNICAL. STRUCTURAL FILL SHALL BE AS INDICATED IN THE GENERAL NOTES AND PROJECT SPECIFICATIONS. REFER TO GENERAL NOTES SECTION C AND THE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
5. EXTERIOR SLABS ON GRADE AND FLATWORK SHALL BE PLACED ON A MINIMUM OF 6" TYPE 2, CLASS B AGGREGATE BASE OVER A MINIMUM OF 12" OF STRUCTURAL FILL PER GEOTECHNICAL. STRUCTURAL FILL SHALL BE AS INDICATED IN THE GENERAL NOTES AND PROJECT SPECIFICATIONS, REFER TO GENERAL NOTES SECTION C AND THE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
6. SCARIFY AND RECOMPACT NATIVE SOILS, PROVIDED THE MATERIALS ARE SUITABLE, TO A DEPTH OF 12", VERIFY NATIVE SOIL SUITABILITY WITH GEOTECHNICAL ENGINEER.



FOOTING INTERSECTION (PLAN VIEW)



FOOTING END (PLAN VIEW)

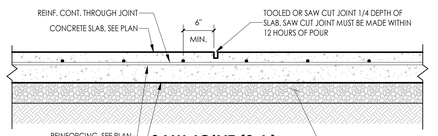


NOTES:
SEE PLAN AND SCHEDULES FOR FOOTING SIZE AND REINF. TYP

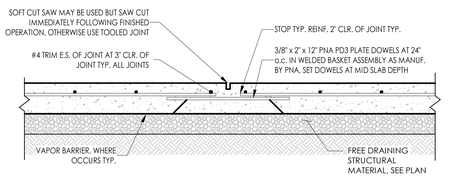
FOOTING CORNER (PLAN VIEW)

6 CONC. FTG. TYP. REINF. LAP
1" = 1'-0"

NOTES:
1. USE JOINT PROTECTORS AT ALL SLAB JOINT INTERSECTIONS WHEN SAWCUTTING.
2. SEE DETAIL 1 / S0.3 FOR TYP. CONSTRUCTION JOINT (C.J.).
3. ALTERNATE S.J. AND D.J. AT SLAB CONTROL JOINTS

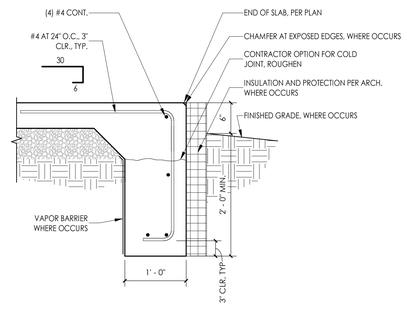


SAW JOINT (S.J.)

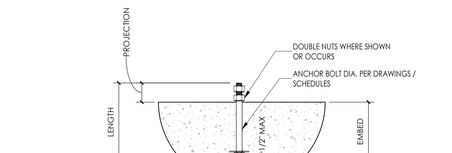


DOWELED JOINT (D.J.)

7 CONCRETE SLAB ON GRADE CONTROL JOINTS
1" = 1'-0"

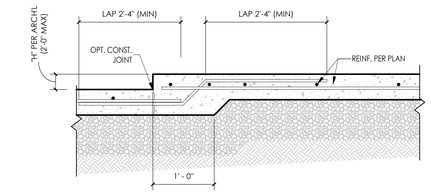


8 TURN DOWN SLAB EDGE
1" = 1'-0"



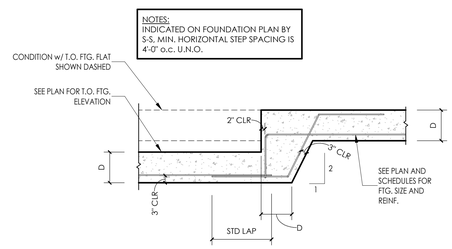
NOTES:
1. ANCHOR BOLTS TO BE ASTM F1554 GRADE 36 U.N.O.
2. PROJECTION TO BE THICKNESS OF BOLTED MATERIAL PLUS DRY PACK OR GROUT PLUS 2 1/2" U.N.O.
3. BENT BAR ANCHOR BOLTS MUST BE REQUESTED BY CONTRACTOR

1 CONCRETE ANCHOR BOLT TYPICAL
1 1/2" = 1'-0"

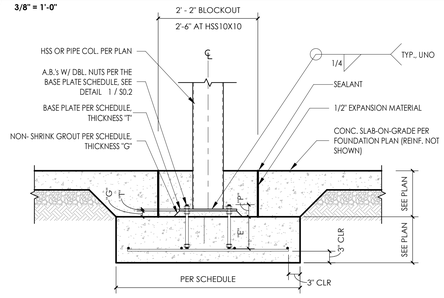


2 STEP IN SLAB
1" = 1'-0"

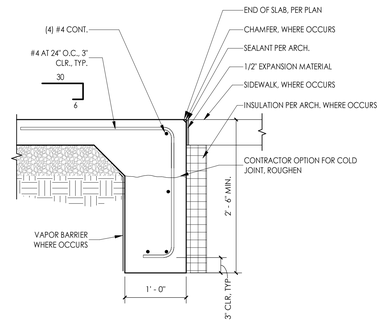
NOTES:
INDICATED ON FOUNDATION PLAN BY S-S, MIN. HORIZONTAL STEP SPACING IS 4'-0" o.c. U.N.O.



3 FOUNDATION TYP. STEP
3/8" = 1'-0"



4 TYP. INTERIOR HSS COLUMN FOOTING
3/4" = 1'-0"



5 TURN DOWN SLAB EDGE
1" = 1'-0"

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CITY OF FERNLEY
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Job No: 21-058.00
Owner
CITY OF FERNLEY

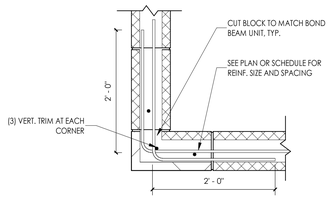
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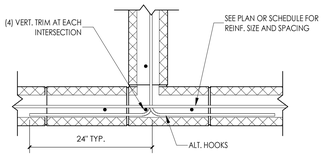
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Sheet Title
TYP. CONC. & FOUNDATION DETAILS

Date: JANUARY 19, 2023
Sheet No:
S0.2



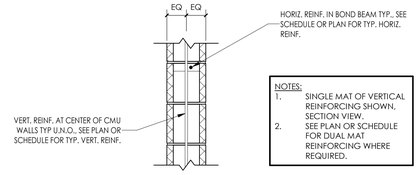
CORNER



INTERSECTION

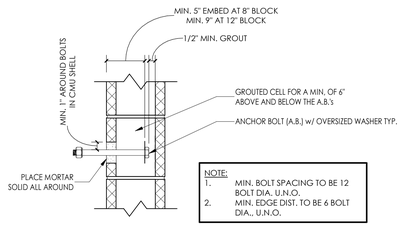
NOTES:
1. ALL TRIM REINF. TO MATCH SIZE OF WALL REINF., U.N.O. LAP ALL SPLICES PER GENERAL NOTES LAP SPLICE SCHEDULE.
2. COND. SIMILAR AT BLOCK WALLS w/ (2) LAYERS REINF.
3. MAY USE 24" x 24" CORNER BARS IN LIEU OF HORIZ. HOOKED BARS.

9 CMU TYP. CORNER AND JAMB REINF.
1" = 1'-0"



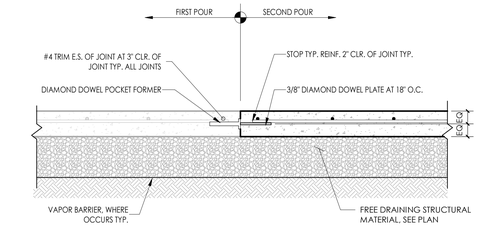
NOTES:
1. SINGLE MAT OF VERTICAL REINFORCING SHOWN, SECTION VIEW. SEE PLAN OR SCHEDULE FOR DUAL MAT REINFORCING WHERE REQUIRED.

6 CMU TYP. PLACEMENT OF REINF.
1" = 1'-0"



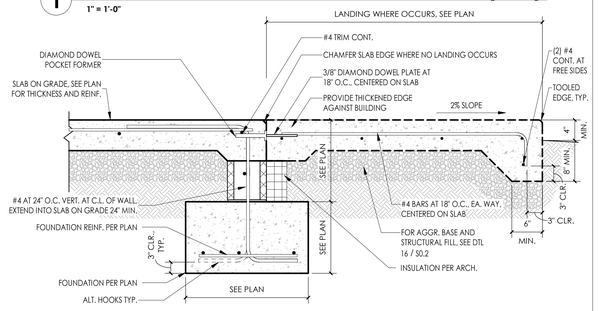
NOTE:
1. MIN. BOLT SPACING TO BE 12 BOLT DIA. U.N.O.
2. MIN. EDGE DIST. TO BE 6 BOLT DIA., U.N.O.

7 CMU ANCHOR BOLT TYPICAL
1 1/2" = 1'-0"

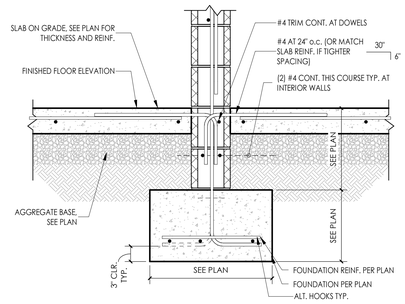


CONSTRUCTION JOINT (C.J.)

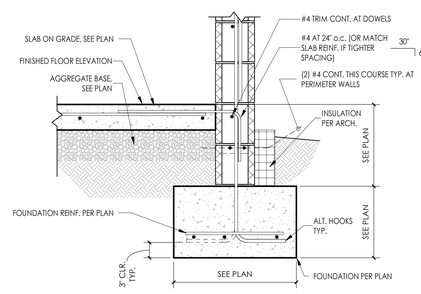
1 SLAB ON GRADE CONSTRUCTION JOINT (C.J.)
1" = 1'-0"



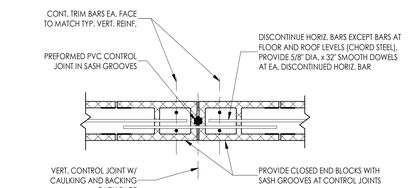
2 CMU WALL AT DOOR
1" = 1'-0"



3 CMU TYPICAL INT. WALL SECTION
1" = 1'-0"

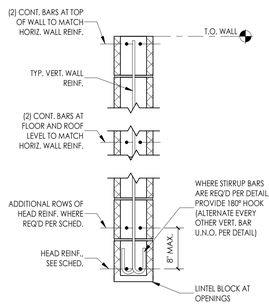


4 CMU TYPICAL WALL SECTION
1" = 1'-0"

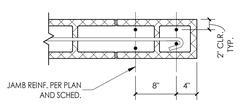


NOTES:
1. PROVIDE CONTROL JOINTS AT 40' - 0" MAX. AT ALL INTERIOR, EXTERIOR, AND SITE WALLS WHERE NOT OTHERWISE SHOWN ON PLANS.
2. COORDINATE EXACT JOINT LOCATIONS TO WORK WITH JOINTS IN ARCHITECTURAL FINISHES. CONTRACTOR SHALL PROVIDE A PROPOSED CMU JOINT LAYOUT TO ARCHITECT AND ENGINEER FOR REVIEW AND APPPROVAL PRIOR TO START OF WALL LAYUP.

5 CMU TYP. WALL CONTROL JOINT
1" = 1'-0"

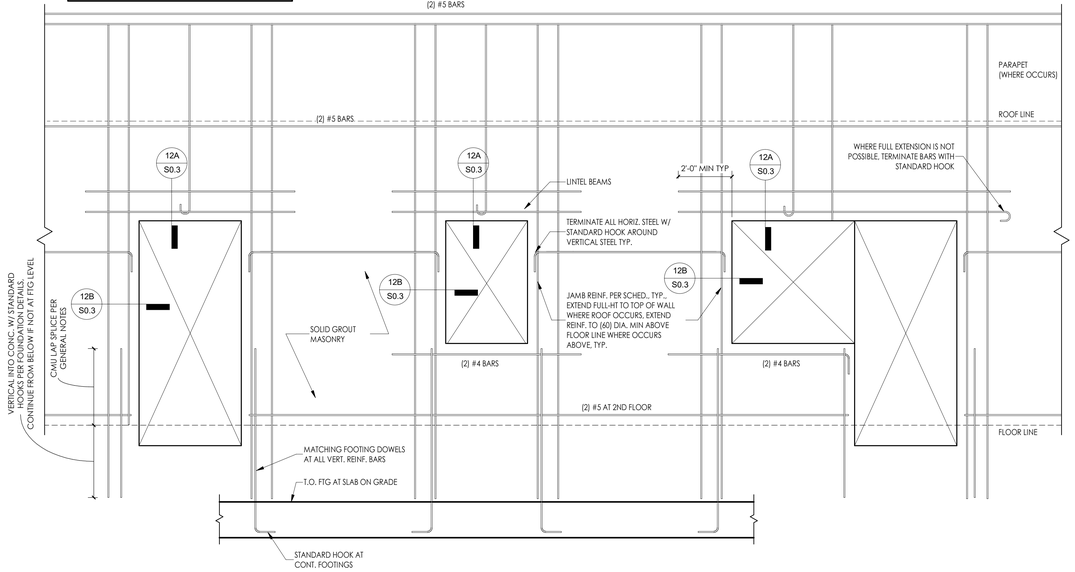


12A CMU HEAD DETAIL
1" = 1'-0"



12B CMU JAMB DETAIL
1" = 1'-0"

NOTE:
SEE PLAN, ELEVATIONS, LINTEL SCHEDULE, AND JAMB SCHEDULE FOR SIZE AND REINFORCING REQUIRED.



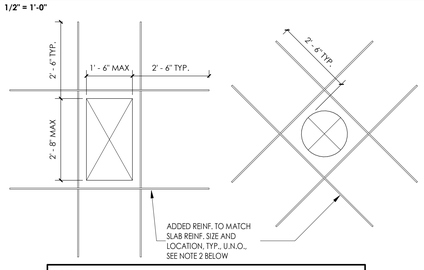
TYP. CMU LINTEL REINFORCING SCHEDULE				
CMU SIZE	WIDTH	HEAD	STIRRUPS	h
8"	11' - 4" MAX.	(2) #5 HORIZ.	N/A	N/A
8"	16' - 0" MAX.	(4) #5 HORIZ. IN TWO ROWS	N/A	N/A
12"	11' - 4" MAX.	(2) #5 HORIZ.	N/A	N/A
12"	24' - 0" MAX.	(4) #5 HORIZ. IN TWO ROWS	N/A	N/A

NOTES:
1. SEE PLAN, WALL ELEVATIONS AND SPECIFIC DETAILS FOR ADDITIONAL REINFORCEMENT INFORMATION.
2. EXTEND BARS FROM FLOOR TO FLOOR OR FLOOR TO ROOF WHERE OPENING WIDTH EXCEEDS 2' - 0".

CMU JAMB REINFORCING SCHEDULE			
CMU SIZE	TOTAL BARS	BAR PLACEMENT	NOTES
8"	(2) #5 VERT.	#5 E.F. IN ONE CELL	TYP. AT ALL OPENINGS, U.N.O.
12"	(2) #6 VERT.	#6 E.F. IN ONE CELL	TYP. AT ALL OPENINGS, U.N.O.

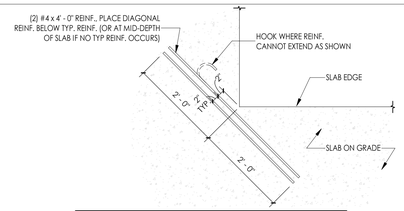
NOTES:
1. SEE WALL ELEVATIONS FOR ADDITIONAL REQUIRED JAMB REINF.

12 CMU LINTEL DETAIL
1/2" = 1'-0"



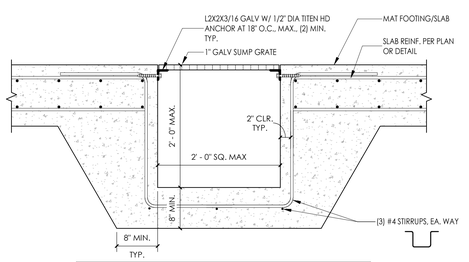
NOTES:
1. ADDED TRIM BARS ARE NOT REQUIRED IF THE HOLE DIAMETER IS LESS THAN 10" AND THE TYPICAL SLAB REINFORCING IS NOT INTERRUPTED.
2. REINFORCING STEEL EXTENSION SHALL BE 1.3 LD MIN. FOR #5 AND LARGER BARS.

13 SLAB OPENING TRIM REINFORCEMENT
1/2" = 1'-0"



NOTES:
1. RE-ENTRANT 90 DEG. CORNER SUCH AS:
   A. OPENING IN SLAB
   B. AT WALL OR GRADE BEAM CORNERS
   C. ISOLATED EQUIPMENT BASE
2. REINFORCING PER THIS DETAIL SHALL BE INSTALLED AT ALL RE-ENTRANT CORNERS IN SLABS ON GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
3. REINFORCING PER THIS DETAIL DOES NOT OCCUR AT LOCATIONS WHERE SLAB JOINTS DIE INTO THE RE-ENTRANT CORNER.

10 REINF. AT RE-ENTRANT SLAB CORNERS
3/4" = 1'-0"



NOTES:
1. CONTRACTOR TO COORDINATE SUMP PIT LOCATION AND SIZE.
2. FOR CORNER REINFORCING AT SUMP CORNERS, SEE 10 / S0.3.

8 SUMP SECTION
1" = 1'-0"

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Job No: 21-058.00

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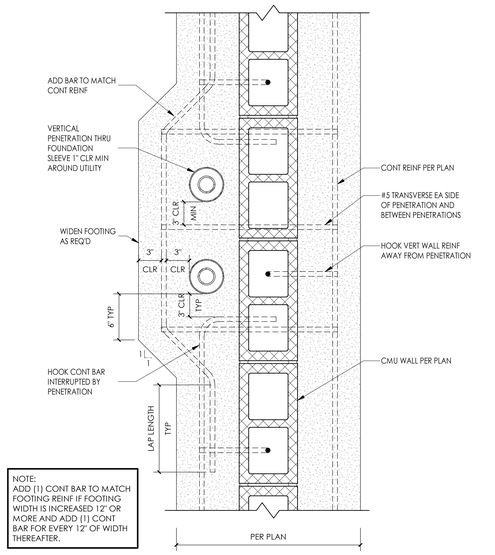
Job No: 20-22

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
TYP. CONC. & CMU DETAILS

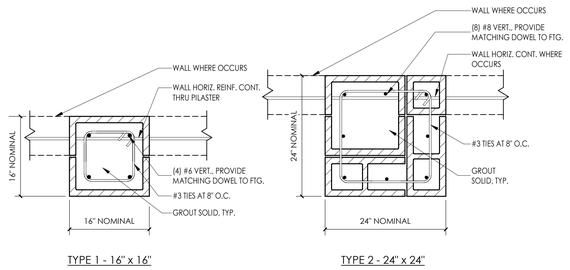
Date: JANUARY 19, 2023
Sheet No:
S0.3



NOTE:
ADD (1) CONT BAR TO MATCH FOOTING REINF IF FOOTING WIDTH IS INCREASED 12" OR MORE AND ADD (1) CONT BAR FOR EVERY 12" OF WIDTH THEREAFTER.

10 TYP. VERT. PENETRATION AT WALL FOOTING

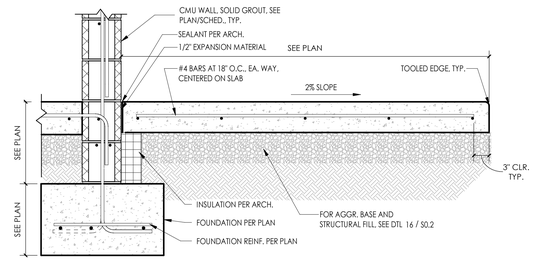
1 1/2" = 1'-0"



TYPE 1 - 16" x 16" TYPE 2 - 24" x 24"

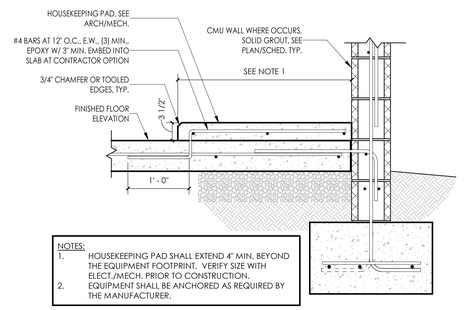
9 CMU TYP. PILASTERS

1" = 1'-0"



5 EXT. CONC. AT CMU WALL

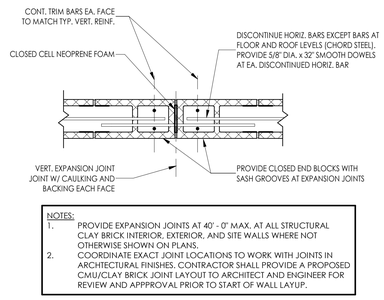
1" = 1'-0"



NOTES:
1. HOUSEKEEPING PAD SHALL EXTEND 4" MIN. BEYOND THE EQUIPMENT FOOTPRINT. VERIFY SIZE WITH ELECT./MECH. PRIOR TO CONSTRUCTION.
2. EQUIPMENT SHALL BE ANCHORED AS REQUIRED BY THE MANUFACTURER.

6 TYP. HOUSEKEEPING PAD

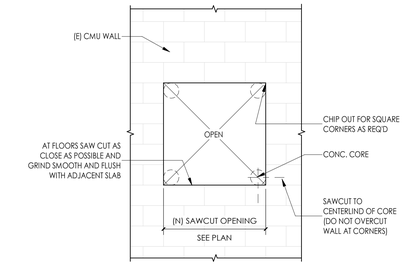
1" = 1'-0"



NOTES:
1. PROVIDE EXPANSION JOINTS AT 40' - 0" MAX. AT ALL STRUCTURAL CLAY BRICK INTERIOR, EXTERIOR, AND SITE WALLS WHERE NOT OTHERWISE SHOWN ON PLANS.
2. COORDINATE EXACT JOINT LOCATIONS TO WORK WITH JOINTS IN ARCHTECTURAL FINISHES. CONTRACTOR SHALL PROVIDE A PROPOSED CMU/CLAY BRICK JOINT LAYOUT TO ARCHITECT AND ENGINEER FOR REVIEW AND APPPROVAL PRIOR TO START OF WALL LAYUP.

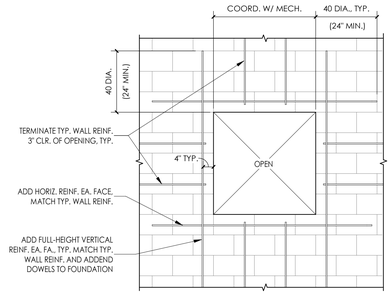
7 CLAY BRICK TYP. EXPANSION JOINT (E.J.)

1" = 1'-0"



1 CMU TYP. SAW CUT OPENING

1/2" = 1'-0"



2 CMU LOUVER OPENING REINF.

1/2" = 1'-0"

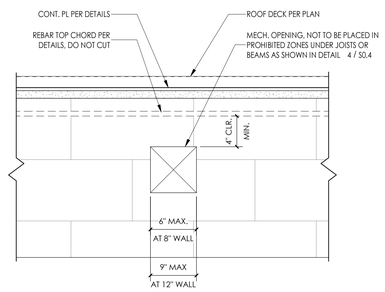
IN ALL CASES, THE WALL REINFORCEMENT MUST TAKE PRECEDENCE OVER THE LOCATION OF THE CONDUITS, AND ADEQUATE ROOM IN THE CMU CELLS NEED TO BE MAINTAINED TO ALLOW FOR THE GROUT TO FLOW PROPERLY.

IN GENERAL, THE FOLLOWING NOTES NEED TO BE FOLLOWED:

1. NO VERTICAL ELECTRICAL CONDUIT IS TO BE PLACED IN THE FIRST 8" OF WALL JAMB AT THE WALL OPENINGS, WHICH SHALL BE RESERVED FOR JAMB REINFORCEMENT ONLY. PLACE VERT. CONDUIT IN NEXT ADJACENT CELL.
2. WHERE POSSIBLE, VERT. CONDUIT WILL BE PLACED IN NON-REINFORCED CELLS.
3. NO MORE THAN ONE 3/4" DIA. VERT. CONDUIT WILL BE PLACED IN A REINFORCED CELL AND:
   - A. THE CONDUIT IS TO BE LOCATED SUCH THAT GROUT WILL BE ABLE TO FLOW COMPLETELY AROUND THE REINFORCING BARS.
   - B. NO MORE THAN TWO 3/4" DIA. VERT. CONDUITS WILL BE PLACED IN A NON-REINFORCED CELL, UNLESS OTHER STRUCTURAL PROVISIONS ARE MADE.
4. IN HORIZONTAL BOND BEAMS, THE REBAR IS TO TAKE PRECEDENCE WHEREVER POSSIBLE. THE MASON SHALL PROVIDE ADDITIONAL ROWS OF BOND BEAM UNITS FOR HORIZONTAL CONDUITS TO RUN. IN NO CASE SHALL HORIZONTAL CONDUIT BE PLACED IN A BOND BEAM HAVING TWO HORIZ. BARS. ONLY IN CASES WHERE NO ALTERNATIVE IS AVAILABLE SHALL ONE CONDUIT BE PLACED IN THE SAME BOND BEAM AS ONE HORIZ. REBAR. NO MORE THAN TWO 3/4" DIA. MAX. SIZE CONDUITS BE PLACED IN A SINGLE BOND BEAM, PROVIDED THAT THERE IS NO HORIZ. REBAR IN BOND BEAM.

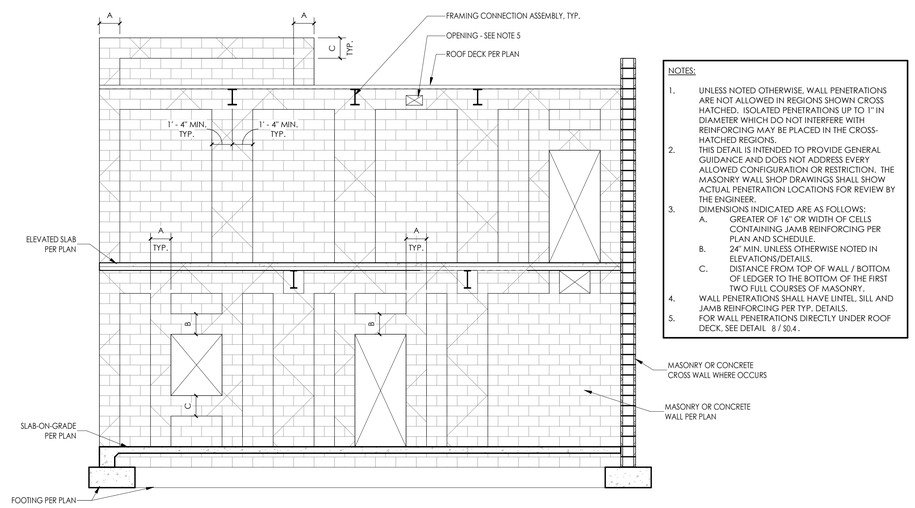
3 CONDUIT IN CMU

1" = 1'-0"



8 TYP. PENETRATION DIRECTLY UNDER ROOF DECK

1 1/2" = 1'-0"



NOTES:
1. UNLESS NOTED OTHERWISE, WALL PENETRATIONS ARE NOT ALLOWED IN REGIONS SHOWN CROSS HATCHED. ISOLATED PENETRATIONS UP TO 1" IN DIAMETER WHICH DO NOT INTERFERE WITH REINFORCING MAY BE PLACED IN THE CROSS-HATCHED REGIONS.
2. THIS DETAIL IS INTENDED TO PROVIDE GENERAL GUIDANCE AND DOES NOT ADDRESS EVERY ALLOWED CONFIGURATION OR RESTRICTION. THE MASONRY WALL SHOP DRAWINGS SHALL SHOW ACTUAL PENETRATION LOCATIONS FOR REVIEW BY THE ENGINEER.
3. DIMENSIONS INDICATED ARE AS FOLLOWS:
   - A. GREATER OF 16" OR WIDTH OF CELLS CONTAINING JAMB REINFORCING PER PLAN AND SCHEDULE.
   - B. 24" MIN. UNLESS OTHERWISE NOTED IN ELEVATIONS/DETAILS.
   - C. DISTANCE FROM TOP OF WALL / BOTTOM OF LEDGER TO THE BOTTOM OF THE FIRST TWO FULL COURSES OF MASONRY.
4. WALL PENETRATIONS SHALL HAVE LINTEL, SILL AND JAMB REINFORCING PER TYP. DETAILS.
5. FOR WALL PENETRATIONS DIRECTLY UNDER ROOF DECK, SEE DETAIL 8 / S0.4 .

4 TYP. PROHIBITED MASONRY AND CONC. WALL PENETRATION LOCATIONS

1/4" = 1'-0"

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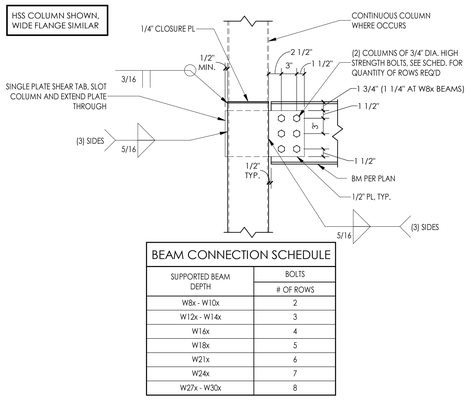
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

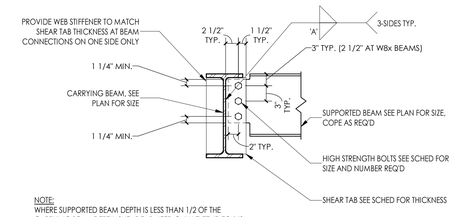
Sheet Title
TYP. MASONRY DETAILS

Date: JANUARY 19, 2023
Sheet No:
S0.4



BEAM CONNECTION SCHEDULE	
SUPPORTED BEAM DEPTH	BOLTS
	# OF ROWS
W8x - W10x	2
W12x - W14x	3
W16x	4
W18x	5
W21x	6
W24x	7
W27x - W30x	8

4 COLLECTOR BEAM TO COL. CONNECTION
1" = 1'-0"

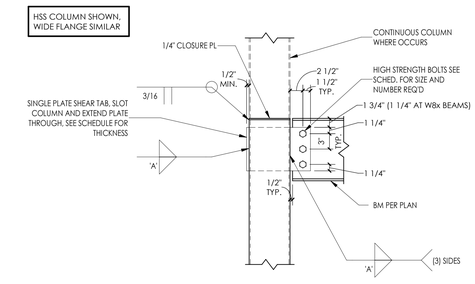


NOTE:
WHERE SUPPORTED BEAM DEPTH IS LESS THAN 1/2 OF THE CARRYING BEAM DEPTH, SHEAR TAB NEED ONLY EXTEND TO 1/2 THE DEPTH OF THE CARRYING BEAM. FULL HEIGHT WEB STIFFENER STILL REQUIRED AT CONNECTIONS ON ONE SIDE ONLY.

BEAM CONNECTION SCHEDULE								
SHEAR PL. CONNECTION								
SUPPORTED BEAM DEPTH	BOLTS			PL. THK.	WELD SIZE 'A'	CAPACITY		
	#	DIA	TYPE			ASD (KIPS)	LRFD (KIPS)	t_w MIN [1]
W8x - W10x	2	3/4"	A325N	1/4"	3/16"	16.3	24.5	3/8"
W12x - W14x	3	3/4"	A325N	1/4"	3/16"	25.6	38.3	5/16"
W16x	4	3/4"	A325N	1/4"	3/16"	34.8	52.2	5/16"
W18x	5	3/4"	A325N	3/8"	5/16"	54.5	82.0	3/8"
W21x	6	3/4"	A325N	3/8"	5/16"	66.8	100	-
W24x	7	3/4"	A325N	3/8"	5/16"	78.8	119	-
W27x - W30x	8	3/4"	A325N	3/8"	5/16"	90.9	137	-
W33x	9	3/4"	A325N	3/8"	5/16"	103	155	-
W36x	10	3/4"	A325N	3/8"	5/16"	115	172	-
W40x	11	3/4"	A325N	3/8"	5/16"	137	206	-
W44x	12	3/4"	A325N	3/8"	5/16"	138	208	-

1. LISTED CONNECTION CAPACITY APPLIES TO BEAMS WITH A WEB THICKNESS EQUAL TO OR GREATER THAN THE MININUM WEB THICKNESS (t_w) LISTED IN SCHEDULE.

1 STEEL TYP. BEAM TO BEAM SHEAR TAB
1" = 1'-0"

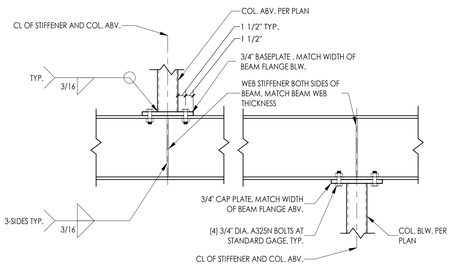


NOTE:
WHERE BEAMS FRAME PERPENDICULAR, SLOT AND EXTEND THROUGH HEAVIEST LOADED TAB.

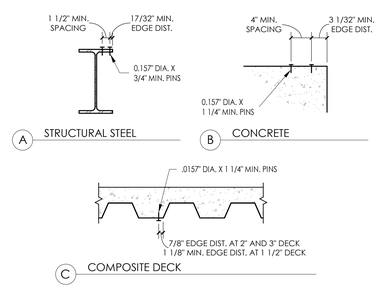
BEAM CONNECTION SCHEDULE								
SHEAR PL. CONNECTION								
SUPPORTED BEAM DEPTH	BOLTS			PL. THK.	WELD SIZE 'A'	CAPACITY		
	#	DIA	TYPE			ASD (KIPS)	LRFD (KIPS)	t_w MIN [1]
W8x - W10x	2	3/4"	A325N	1/4"	3/16"	16.3	24.5	3/8"
W12x - W14x	3	3/4"	A325N	1/4"	3/16"	25.6	38.3	5/16"
W16x	4	3/4"	A325N	1/4"	3/16"	34.8	52.2	5/16"
W18x	5	3/4"	A325N	3/8"	5/16"	54.5	82.0	3/8"
W21x	6	3/4"	A325N	3/8"	5/16"	66.8	100	-
W24x	7	3/4"	A325N	3/8"	5/16"	78.8	119	-
W27x - W30x	8	3/4"	A325N	3/8"	5/16"	90.9	137	-
W33x	9	3/4"	A325N	3/8"	5/16"	103	155	-
W36x	10	3/4"	A325N	3/8"	5/16"	115	172	-
W40x	11	3/4"	A325N	3/8"	5/16"	137	206	-
W44x	12	3/4"	A325N	3/8"	5/16"	138	208	-

1. LISTED CONNECTION CAPACITY APPLIES TO BEAMS WITH A WEB THICKNESS EQUAL TO OR GREATER THAN THE MININUM WEB THICKNESS (t_w) LISTED IN SCHEDULE.

2 STEEL TYP. BEAM TO COL CONNECTION
1" = 1'-0"



5 STEEL COL ABV. / BLW.
1" = 1'-0"



3 TYP. SHOT PINS
1" = 1'-0"

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Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner
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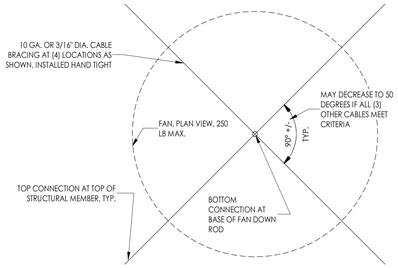
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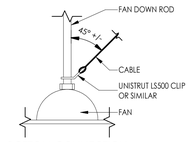
DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

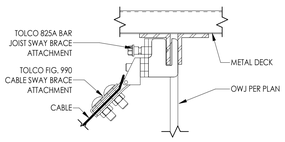
Sheet Title
TYP. STEEL DETAILS

Date: JANUARY 19, 2023
Sheet No:
S0.5



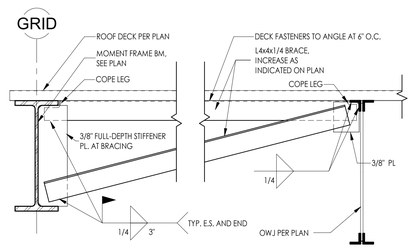


BOTTOM CONNECTION



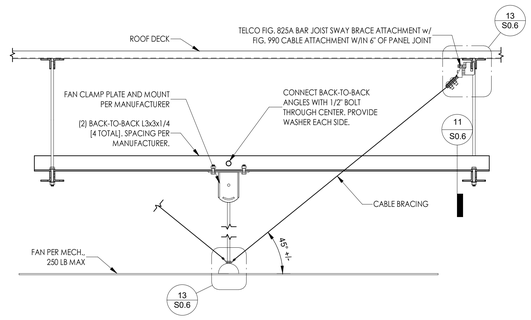
TOP CONNECTION

13 SUSPENDED FAN BRACING
1" = 1'-0"

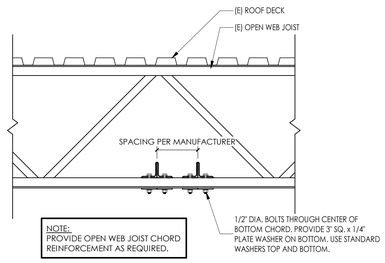


NOTE:
1. SEE JOIST LOADING PLAN FOR ADDITIONAL JOIST LOADS AT BRACES.
2. INCREASE THE ANGLES BRACES TO L4x4x3/8 AT AREA A WHERE NOTED.

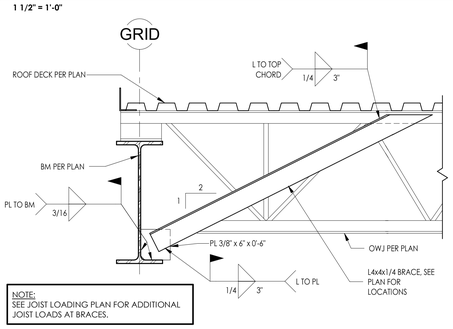
14 FRAME BM BRACE AT PARALLEL JOIST
1" = 1'-0"



10 FAN MOUNT AT OWJ
1" = 1'-0"

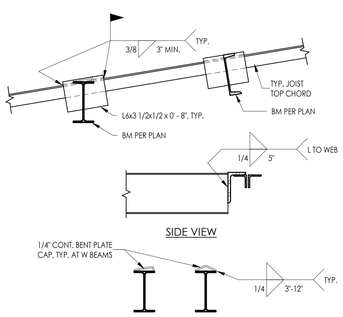


15 TYP. HSS TO ROOF JOIST
1 1/2" = 1'-0"



NOTE:
SEE JOIST LOADING PLAN FOR ADDITIONAL JOIST LOADS AT BRACES.

16 FRAME BEAM BRACE AT PERP. JOIST
1" = 1'-0"

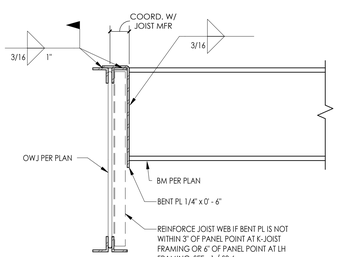


17 CROSS PIECE
1" = 1'-0"

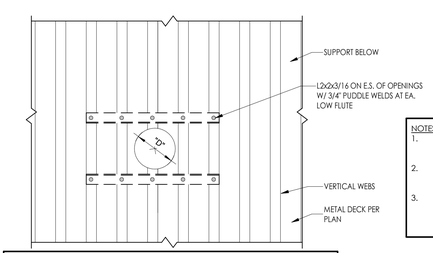
NOTE:
PROVIDE OPEN WEB JOIST CHORD REINFORCEMENT AS REQUIRED.

1/2" DIA. BOLTS THROUGH CENTER OF BOTTOM CHORD. PROVIDE 3" SQ. x 1/4" PLATE WASHER ON BOTTOM. USE STANDARD WASHERS TOP AND BOTTOM.

11 FAN MOUNT ANGLES TO CHORD CONN.
1" = 1'-0"



12 TYP. RAISED WF TO OWJ
1 1/2" = 1'-0"

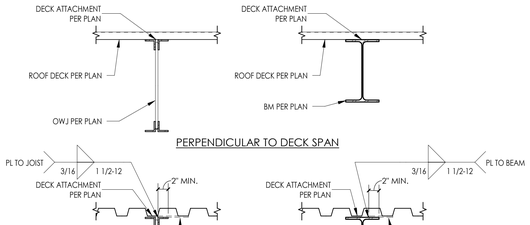


ALTERNATE: PLACE ANGLE ABOVE DECKING AND USE 1 1/2" LONG FILLET WELDS E.S. OF EA. HIGH FLUTE. COORDINATE AS REQ'D W/ ROOFING AND ARCH. DETAILS

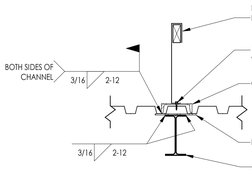
NOTES:
1. NO REINFORCEMENT REQUIRED FOR OPENINGS NOT CUTTING WEB OF FLUTE.
2. FOR OPENINGS CUTTING TWO WEBS OF FLUTE, REINF. AS SHOWN ON THE LEFT.
3. FOR OPENINGS CUTTING MORE THAN TWO WEBS PROVIDE FRAMING AS SHOWN ON THE RIGHT.

SMALL OPENINGS

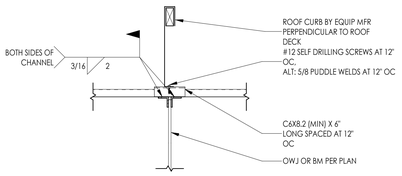
9 TYP. ROOF DECK PENETRATION REINFORCING
1" = 1'-0"



6 DECK TO BEAM DETAIL
1" = 1'-0"

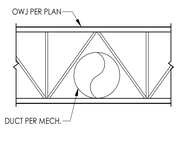


PERPENDICULAR TO JOIST



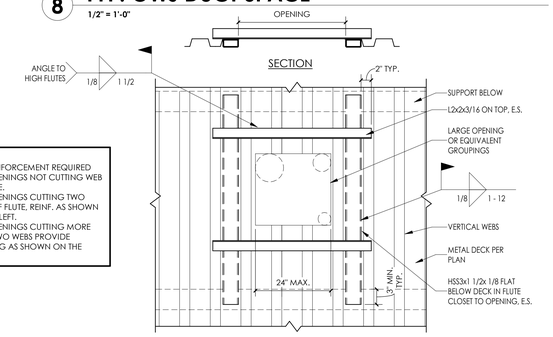
PARALLEL TO JOIST

APPROXIMATE DUCT OPENING SIZES FOR "K" SERIES JOISTS			
JOIST DEPTH	DUCT PENETRATION		
	ROUND	SQUARE	RECTANGLE
10"	5"	4" x 4"	3" x 7"
12"	7"	5" x 5"	3" x 8"
14"	8"	6" x 6"	5" x 9"
16"	8"	6" x 6"	5" x 9"
18"	9"	7" x 7"	6" x 11"
20"	10"	8" x 8"	7" x 11"
22"	10"	9" x 9"	7" x 11"
24"	12"	10" x 10"	7" x 13"
26"	15"	12" x 12"	9" x 18"
28"	16"	13" x 13"	9" x 18"
30"	17"	14" x 14"	10" x 18"



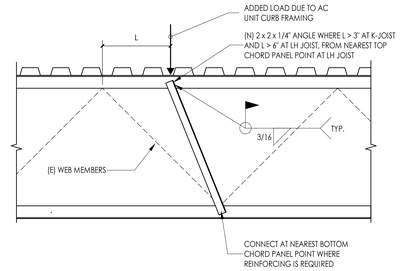
NOTES:
1. WHERE DUCTS RUN THROUGH OWJS PROVIDE SPACE TO ACCOMODATE THE DUCT.
2. SEE MECH. FOR EXACT SIZE AND LOCATION OF DUCTS RUNNING THROUGH OWJS.
3. SHOP DRAWINGS SHALL SHOW SIZE OF DUCTS RUNNING THOUGH OWJS.

8 TYP. OWJ DUCT SPACE
1/2" = 1'-0"

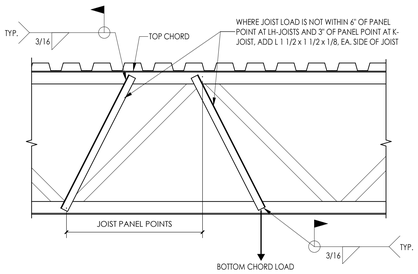


LARGE OPENINGS

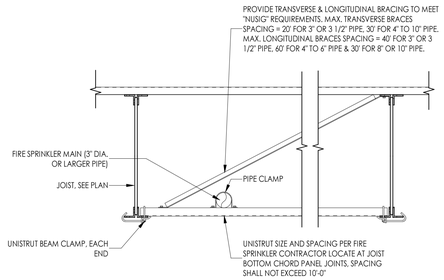
7 CURB TO ROOF DETAIL
1" = 1'-0"



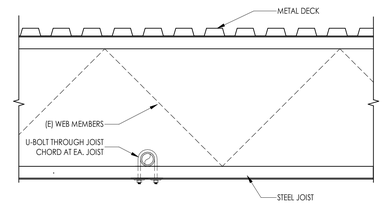
1 JOIST REINFORCING - TOP CHORD LOAD
1" = 1'-0"



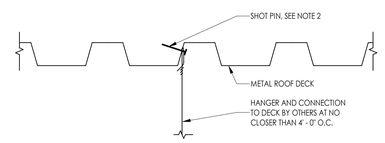
2 JOIST REINFORCING - BOT. CHORD LOAD
1" = 1'-0"



3 FIRE LINE SUPPORT - PARALLEL
1" = 1'-0"



4 FIRE LINE SUPPORT - PERP. TO JOISTS
1" = 1'-0"



ACOUSTICAL TILE CEILING OR LIGHT FIXTURE < 56 LBS SUPPORT

NOTES:
1. ONLY ACOUSTICAL TILE CEILINGS OR LIGHT FIXTURES < 56 LBS. MAY BE SUSPENDED DIRECTLY FROM METAL ROOF DECK. IF ALTERNATE SUPPORT SYSTEMS FOR SUSPENDED ITEMS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL. ALTERNATE SUPPORT SYSTEMS SHALL UTILIZE STEEL FRAMING AND SHALL NOT RELY ON METAL DECK FOR SUPPORT.
2. HILTI X-U 19, 0.157" DIA. x 3/4", SHOT PINS MAY BE USED WHERE MAX. LOAD IS 20 LBS PER SHOT PIN. A MINIMUM OF (4) SHOT PINS ARE REQ'D. TO SUPPORT A 56 LBS FIXTURE.

5 TYP. SUSPENSION FROM METAL ROOF DECK
3" = 1'-0"

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Job No: 21-058.00

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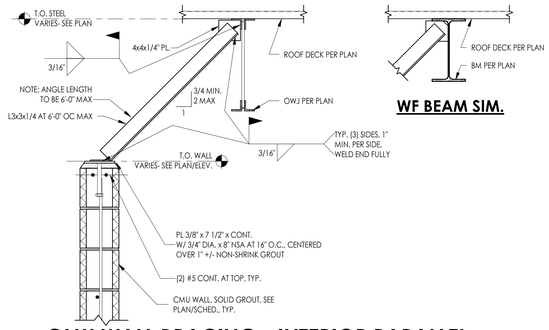
Job No: 20-22

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
TYP. ROOF FRAMING DETAILS

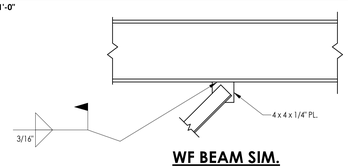
Date: JANUARY 19, 2023
Sheet No:
S0.6



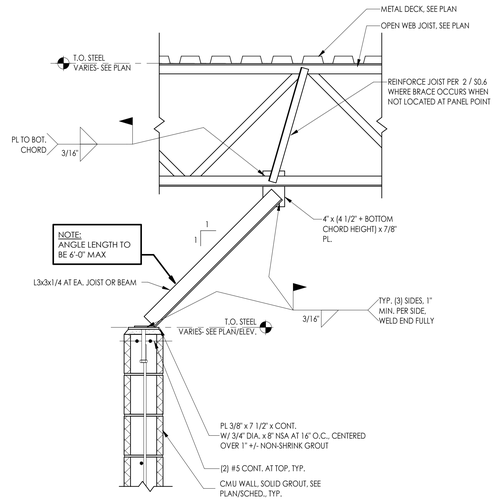
WF BEAM SIM.

15 CMU WALL BRACING - INTERIOR PARALLEL

1" = 1'-0"

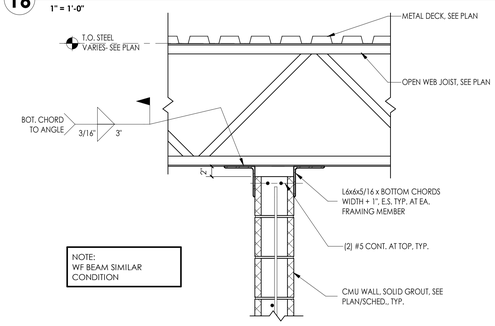


WF BEAM SIM.



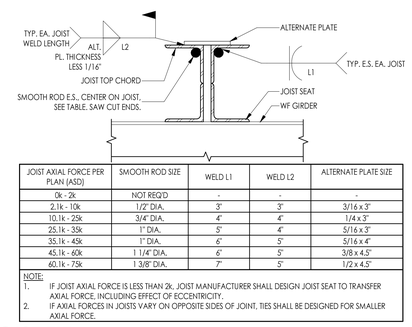
16 CMU WALL BRACING - INTERIOR PERP.

1" = 1'-0"



17 CMU WALL BRACING - INTERIOR PERP. HIGH

1" = 1'-0"

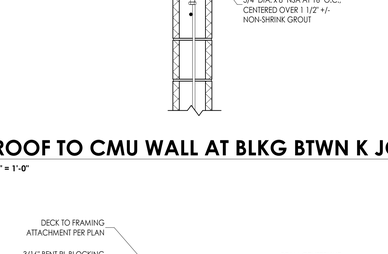


JOIST AXIAL FORCE PER PLAN (ASD)	SMOOTH ROD SIZE	WELD L1	WELD L2	ALTERNATE PLATE SIZE
0k - 2k	NOT REQ'D	-	-	-
2.1k - 10k	1/2" DIA.	3"	3"	3/16 x 3"
10.1k - 25k	3/4" DIA.	4"	4"	1/4 x 3"
25.1k - 35k	1" DIA.	5"	4"	5/16 x 3"
35.1k - 45k	1" DIA.	6"	5"	5/16 x 4"
45.1k - 60k	1 1/4" DIA.	6"	5"	3/8 x 4.5"
60.1k - 75k	1 3/8" DIA.	7"	5"	1/2 x 4.5"

NOTE:
1. IF JOIST AXIAL FORCE IS LESS THAN 2k, JOIST MANUFACTURER SHALL DESIGN JOIST SEAT TO TRANSFER AXIAL FORCE, INCLUDING EFFECT OF ECCENTRICITY.
2. IF AXIAL FORCES IN JOISTS VARY ON OPPOSITE SIDES OF JOINT, TIES SHALL BE DESIGNED FOR SMALLER AXIAL FORCE.

10 JOIST TIE

3" = 1'-0"

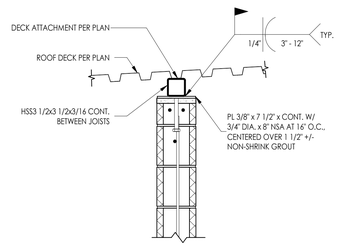


11 WF BEAM SEATED CONN. AT CMU

1" = 1'-0"

12 ROOF DECK CONN. TO INT. CMU WALL

1" = 1'-0"

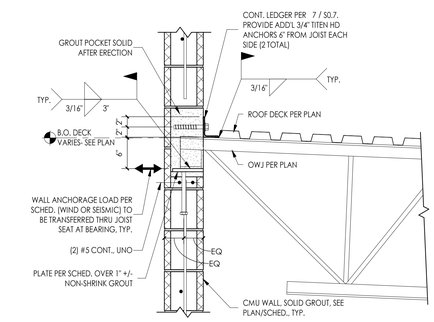


13 ROOF TO CMU WALL AT BLKG BTWN K JOIST

1" = 1'-0"

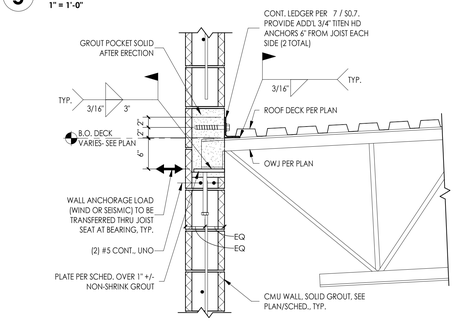
14 ROOF LH JOIST AT GIRDER

1" = 1'-0"



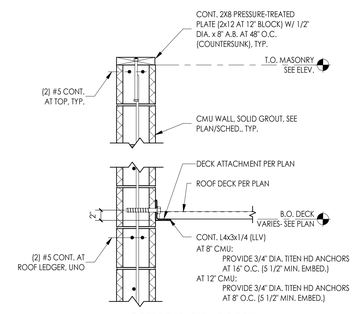
5 TYP. POCKETED JOIST IN CMU (6" SEAT, HIGH)

1" = 1'-0"



6 TYP. POCKETED JOIST IN CMU (6" SEAT, LOW)

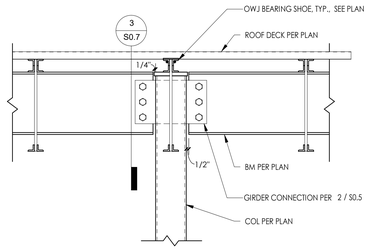
1" = 1'-0"



AT PERPENDICULAR DECK

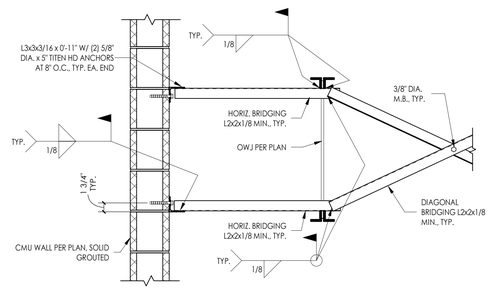
7 CMU EXTERIOR WALL ROOF LEDGER CONN.

1" = 1'-0"



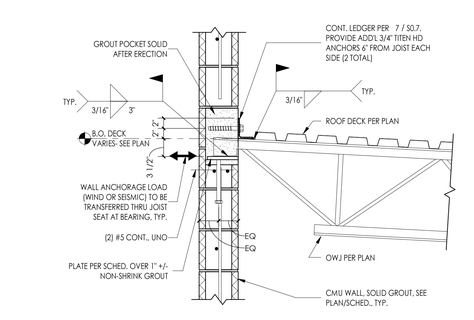
8 OWJ AT HSS COL DETAIL

1" = 1'-0"



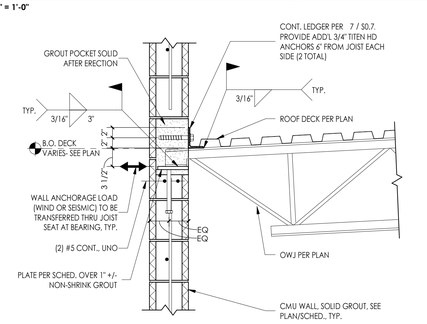
9 TYP. OWJ DIAGONAL BRIDGING

1" = 1'-0"



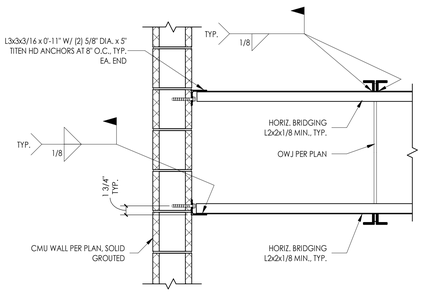
1 TYP. POCKETED JOIST IN CMU (HIGH SIDE)

1" = 1'-0"



2 TYP. POCKETED JOIST IN CMU (LOW SIDE)

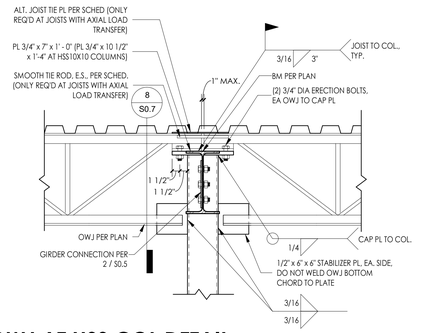
1" = 1'-0"



AT PARALLEL DECK

3 OWJ AT HSS COL DETAIL

1" = 1'-0"



4 TYP. OWJ HORIZ BRIDGING

1" = 1'-0"

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CITY OF FERNLEY

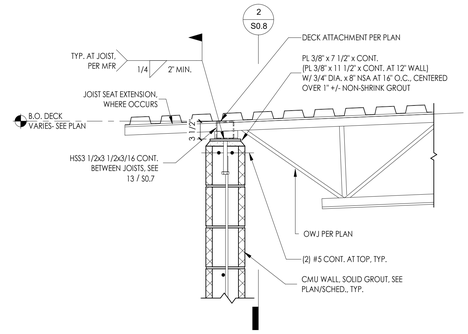
Job No: 20-22

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

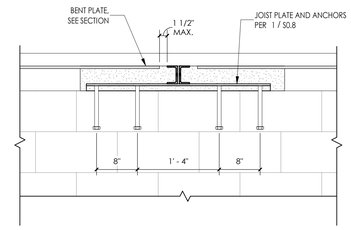
Sheet Title
TYP. ROOF FRAMING DETAILS

Date: JANUARY 19, 2023
Sheet No:
S0.7



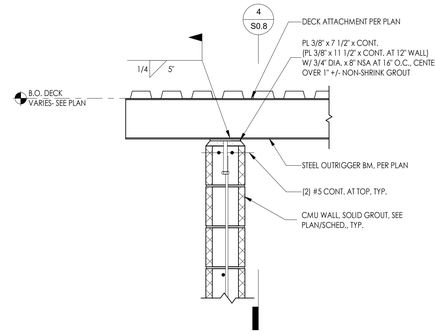
1 TYP. JOIST TO TOP OF WALL (3.5" SEAT)

1" = 1'-0"



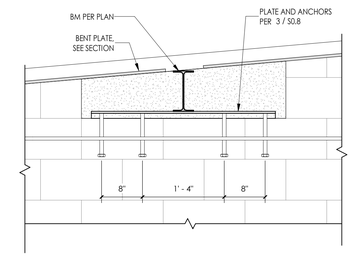
2 JOIST TO T.O. WALL ELEV.

1" = 1'-0"



3 OUTRIGGER AT CMU WALL

1" = 1'-0"



4 CMU - OURTIGGER TO T.O. WALL ELEV.

1" = 1'-0"

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Job No: 21-058.00

Owner
CITY OF FERNLEY

Job No: 20-22

DESIGN DEVELOPMENT

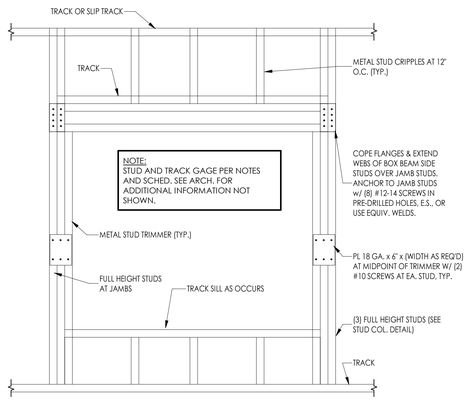
REVISIONS		
REV	DATE	DESCRIPTION

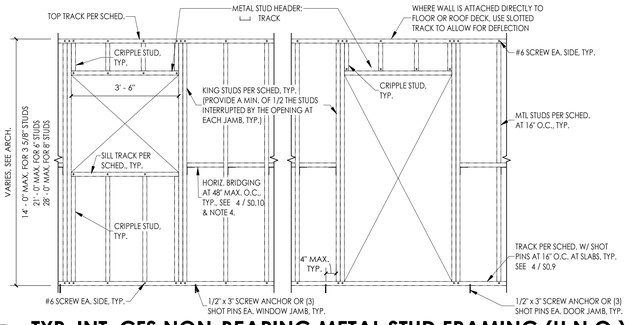
Sheet Title
TYP. ROOF FRAMING DETAILS

Date: JANUARY 19, 2023

Sheet No:

S0.8





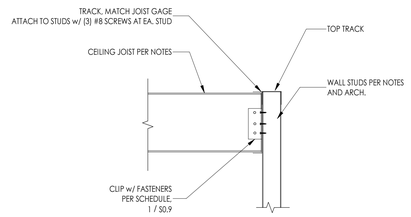
NOTES:
1. NON-STRUCTURAL STEEL PARTITION FRAMING SHALL BE PER ASTM C645 AND ASTM C754. AT CONTRACTORS OPTION STEEL FRAMING CONNECTIONS MAY BE MADE WITH SCREWS OR MATERIALS MAY BE UPSIZED TO 16 GA. MINIMUM TO ACCOMMODATE WELDS. CONTRACTOR IS TO PROVIDE SHOP DRAWINGS FOR OF ALL CONNECTIONS FOR APPROVAL BY THE STRUCTURAL ENGINEER BEFORE CONSTRUCTION.
2. SEE SHEET GENERAL NOTES AND SHEET S0.9 FOR ADDITIONAL CFS FRAMING INFORMATION AND DETAILS.
3. NON-BEARING, INTERIOR CFS WALL LOCATIONS AND HEIGHTS PER ARCH.
4. HORIZONTAL BRIDGING NOT REQUIRED WHEN WALL IS SHEATHED ON EACH SIDE.

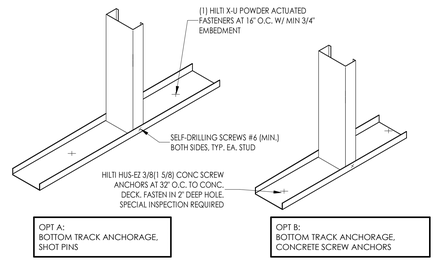
METAL STUD WALL SCHEDULE

MARK	STUD SIZES			TRACK SIZES		
	TYPICAL[1]	KING[2]	CRIPPLE	BASE[3]	TOP	SILL/HDR
3 5/8"	3625137-33	(2) 3625137-33	3625137-33	3621125-33	3621125-33	3621125-33
6"	6005162-33	(2) 6005162-33	6005162-33	6001150-33	6001150-33	6001150-33
8"	8005162-43	(2) 8005162-43	8005162-43	8001150-43	8001150-43	8001150-43

NOTES:
1. SIZES SHOWN ARE TYPICAL, U.N.O.
2. TYPICAL STUD SPACING SHALL BE 16" O.C., MAX.
3. PROVIDE A MINIMUM OF 1/2 OF THE STUDS INTERRUPTED BY THE OPENINGS AT EACH JAMB, TYP.
4. PROVIDE 1/2" x 3" SCREW ANCHORS AT 32" O.C., TYP. AND WITHIN 4" OF ENDS, CORNERS AND JAMBS OR HILTI X-U POWDER ACTUATED FASTENERS AT 16" O.C. W/ MIN. 3/4" EMBED, TYP. AND (3) WITHIN 4" OF ENDS, CORNERS AND JAMBS.
5. SEE 3 / S0.9 & 10 / S0.9 FOR ADDITIONAL INFORMATION ON NON-BEARING DOOR AND WINDOW FRAMING.

7 TYP. INT. CFS NON-BEARING METAL STUD FRAMING (U.N.O.)
1/2" = 1'-0"





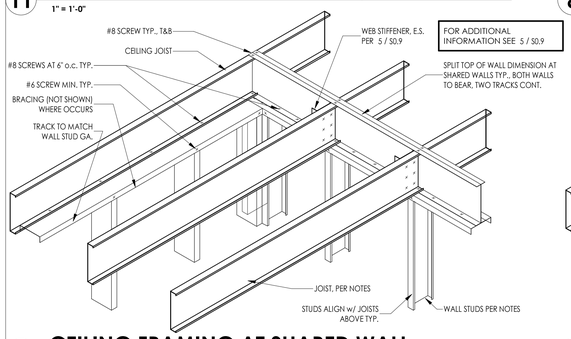
COLD-FORMED STEEL FRAMING NOTES

1. ALL INTERIOR CFS WALL STUD WIDTHS AND FINISHES PER ARCHITECTURAL. SEE GENERAL NOTES, SECTION I, FOR ADDITIONAL CFS REQUIREMENTS.
2. BEARING WALL FRAMING TO BE MINIMUM 362 S 162-33 METAL STUDS AT 16" o.c. CONNECT 5/8" GYPSUM WALL BOARD TO EACH SIDE OF STUDS w/ #6 SCREWS AT 4" o.c. AT PANEL EDGES AND 12" o.c. IN THE FIELD.
3. BRACING (WHERE OCCURS) TO BE STUD OR TRACK. SPLICE BRACING AND TERMINATE ALL BRACING WITH END CONNECTION PER DETAILS.
4. STRUCTURAL FRAMING (JOISTS, BEARING WALLS, BRACING, CONNECTIONS ETC.) SHALL BE IN ACCORDANCE WITH THE GENERAL NOTES, SECTION I.
5. SEE 2 / S0.9, FOR STANDARD STUD DESIGNATIONS. 600 S162-43 FOR EXAMPLE IS A 6" DEEP, 1 5/8" FLANGE, 18 GA STUD.
6. CLIPS TO BE PER CEILING JOIST CLIP SCHEDULE BELOW.
7. CONTRACTOR TO SUSPEND CEILING EVENLY LOADED TO STUDS SPACED AT 24" o.c. WHERE APPLIES.
8. TYP. INTERIOR, NON-BEARING WALL FRAMING PER 7 / S0.9
9. TYPICAL DOOR FRAMING PER 3 / S0.9 OR 6 / S0.9 AT BEARING CONDITION.
10. TYPICAL WINDOW FRAMING PER 10 / S0.9 OR 13 / S0.9 AT BEARING CONDITION.
11. TYPICAL BOTTOM TRACK ANCHORAGE PER 4 / S0.9 TYP.
12. TYPICAL CEILING FRAMING PER 5 / S0.9 OR 9 / S0.9 .

CEILING JOIST CLIP SCHEDULE

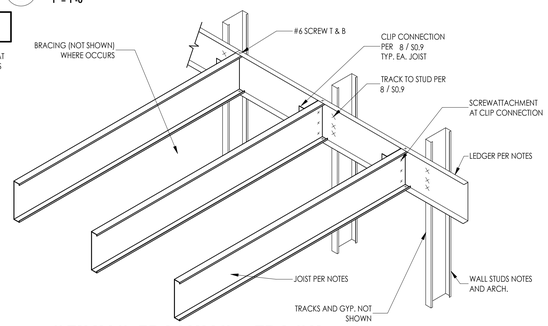
STUD SIZE	CLIP GA.	SCREW TYPE	SCREW # TO STUD AND TRACK
800S	16	#8	2
1000S	14	#8	3
1200S	14	#8	4
1400S	14	#8	5

11 STUD FRAMED OPENING DETAIL, L > 6'-0"
1" = 1'-0"

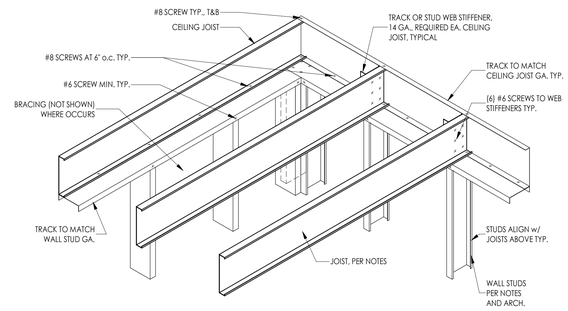


FOR ADDITIONAL INFORMATION SEE 5 / S0.9

8 CEILING FRAMING - TRACK
1" = 1'-0"



4 BOTTOM TRACK ANCHORAGE
1" = 1'-0"



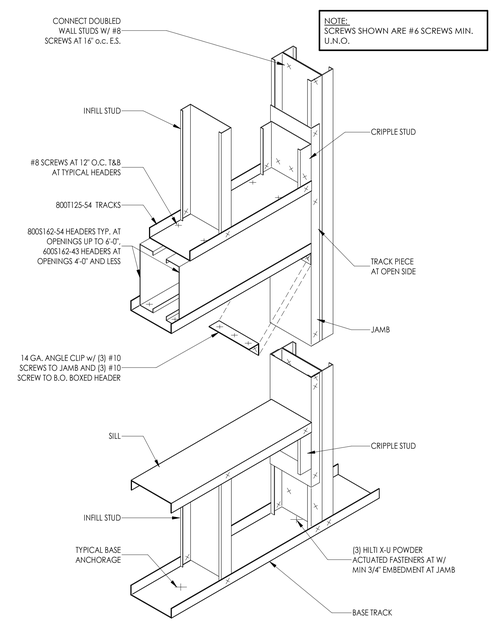
1 COLD-FORMED STEEL FRAMING NOTES
12" = 1'-0"

EXAMPLE: **800S162-54**
SIZE — THICKNESS
SHAPE — FLANGE WIDTH

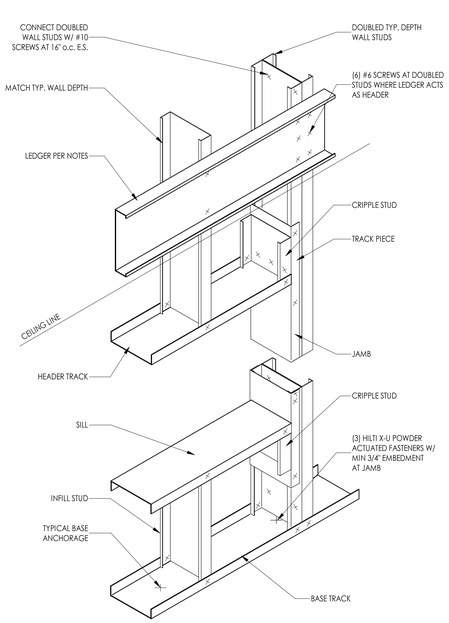
SIZE	SHAPE	FLANGE WIDTH	THICKNESS	REMARKS
162 = 1 5/8"	S	125 = 1 1/4"	18 = 25 GA.	
162 = 1 5/8"	T	137 = 1 3/8"	27 = 22 GA.	
162 = 1 5/8"	U	162 = 1 5/8"	30 = 20 GA.	DRYWALL
162 = 1 5/8"	F	200 = 2"	33 = 20 GA.	STRUCTURAL
162 = 1 5/8"			43 = 18 GA.	
162 = 1 5/8"			54 = 16 GA.	
162 = 1 5/8"			68 = 14 GA.	
162 = 1 5/8"			97 = 12 GA.	
162 = 1 5/8"				
162 = 1 5/8"				

NOTES:
1. SEE GENERAL NOTES, SECTION I FOR ADDITIONAL COLD-FORMED STEEL INFORMATION.
2. SECTION PROPERTIES OF ALL MEMBERS SHALL MEET OR EXCEED THOSE OF PRODUCTS MANUFACTURED IN ACCORDANCE WITH SSMA STANDARDS.

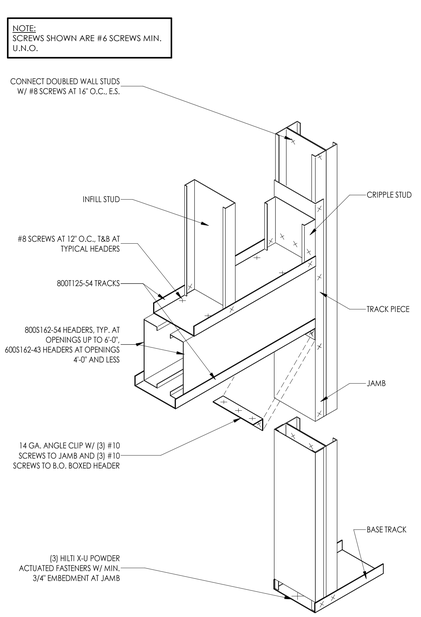
12 CEILING FRAMING AT SHARED WALL
1 1/2" = 1'-0"



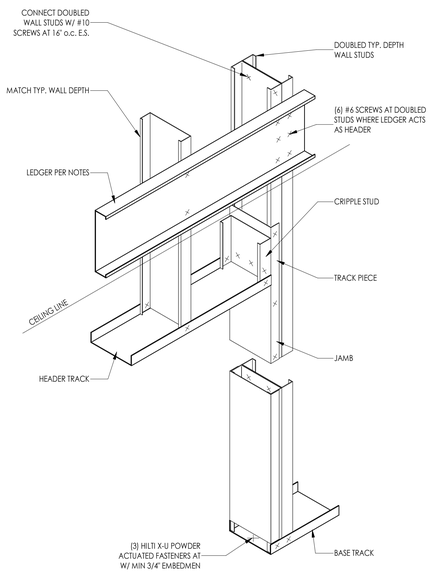
9 CEILING FRAMING - TRACK
1 1/2" = 1'-0"



5 TYP. CEILING FRAMING
1 1/2" = 1'-0"



2 CFS - TYP. STEEL STUD FRAMING DESIGNATIONS
1/2" = 1'-0"



13 WINDOW HEADER - BEARING
1 1/2" = 1'-0"

10 WINDOW HEADER - NON-BEARING
1 1/2" = 1'-0"

6 DOOR HEADER - BEARING
1 1/2" = 1'-0"

3 DOOR HEADER - NON-BEARING
1 1/2" = 1'-0"

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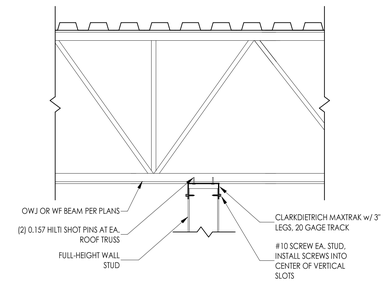
Job No: 20-22

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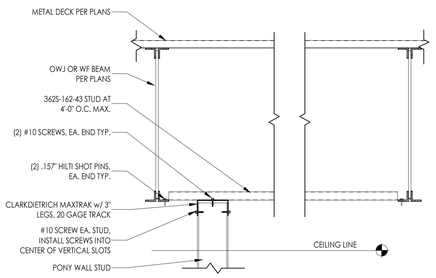
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REV	DATE	DESCRIPTION

Sheet Title
TYP. INTERIOR COLD-FORMED STEEL DETAILS

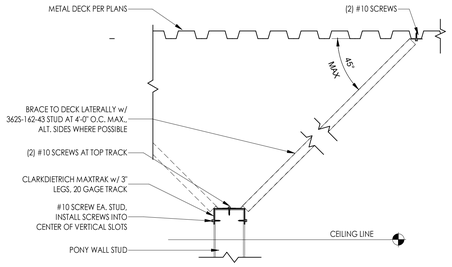
Date: JANUARY 19, 2023
Sheet No:
S0.9



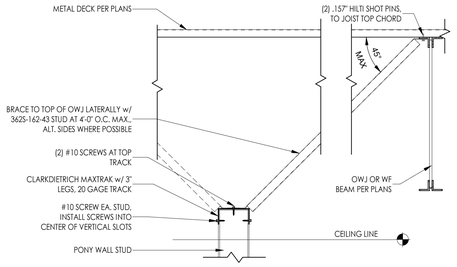
PERPENDICULAR TO JOISTS (OPTION 2)



PARALLEL, BETWEEN JOISTS (OPTION 2)



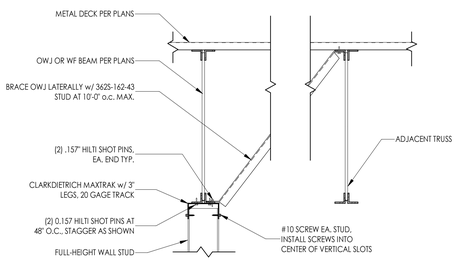
PERPENDICULAR TO JOISTS (OPTION 1)



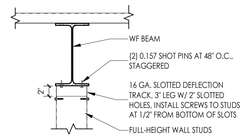
PARALLEL, BETWEEN JOISTS (OPTION 1)

5 INTERIOR PONY WALL BRACING TO ROOF

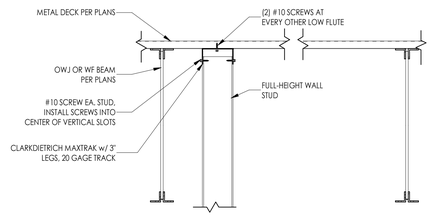
1" = 1'-0"



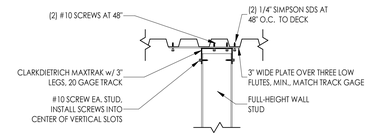
PARALLEL TO BOT. OF JOIST



PARALLEL TO BOT. OF BEAM



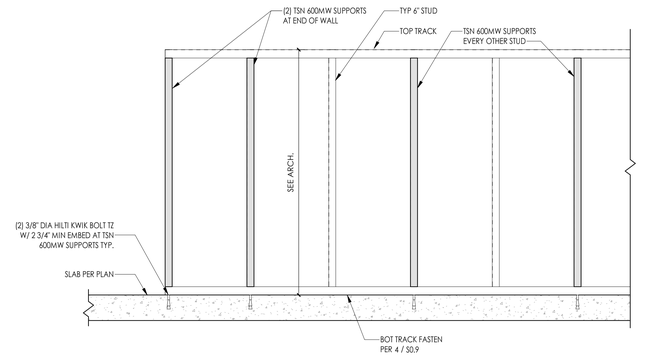
PARALLEL, BETWEEN JOISTS



PERPENDICULAR TO JOISTS

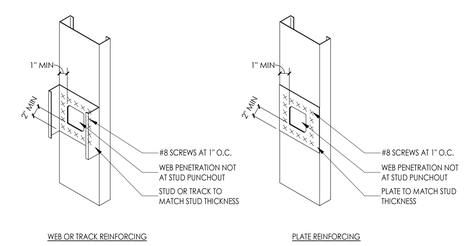
1 INTERIOR FULL-HEIGHT WALL CONNECTION TO ROOF STRUCTURE

1" = 1'-0"



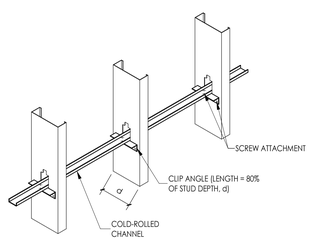
2 PONY WALL DETAIL

1" = 1'-0"



3 METAL STUD WEB REINFORCING

1 1/2" = 1'-0"



4 MID-WALL BRACING

1" = 1'-0"

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Job No: 20-22

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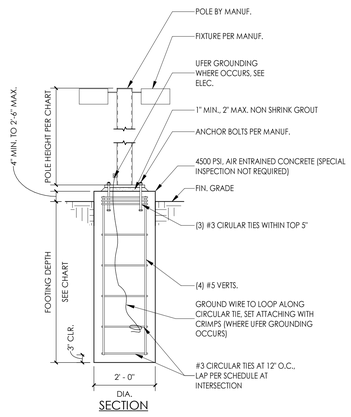
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Sheet Title
TYP. INTERIOR COLD-FORMED STEEL DETAILS

Date: JANUARY 19, 2023
Sheet No:
S0.10

DESIGN CRITERIA:
LIGHT FIXTURE EPA MAXIMUM PER CHART (TOTAL EPA)
130 MPH BASIC WIND SPEED
EXPOSURE C
5" MAX. POST WIDTH
40 LB. FIXTURE WEIGHT MAX.
385 LB POST WEIGHT MAX

CONTACT STRUCTURAL ENGINEER IF ALTERNATE CONDITIONS EXIST

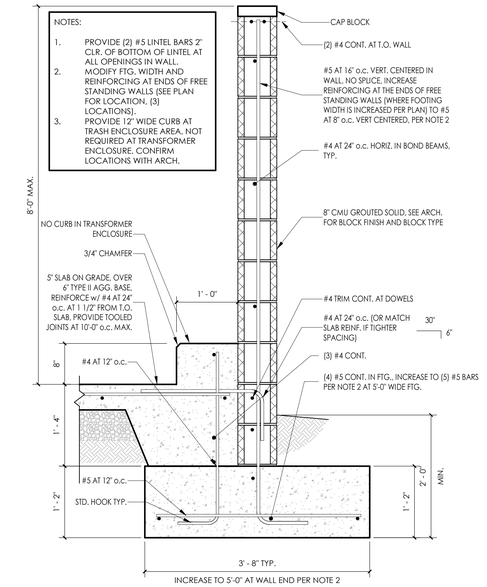


SECTION

LIGHT POLE FOOTING DEPTH CHART		
LIGHT POLE HEIGHT	2 SQ. FT. EPA MAX.	4 SQ. FT. EPA MAX.
	FOOTING DEPTH	FOOTING DEPTH
15'-0" MAX.	3' - 6"	4' - 0"
25'-0" MAX.	4' - 9"	5' - 0"
30'-0" MAX.	5' - 0"	5' - 6"

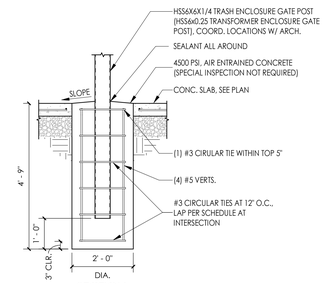
4 CONCRETE LIGHT POLE FOUNDATION

1/2" = 1'-0"



1 CMU FREE-STANDING WALL DETAIL

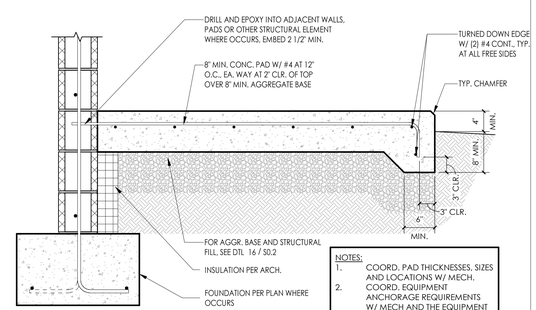
1" = 1'-0"



SECTION

2 TRASH ENCLOSURE GATE POST FOUNDATION

1/2" = 1'-0"



3 CONC. TYP. EXTERIOR EQUIPMENT PAD

1" = 1'-0"

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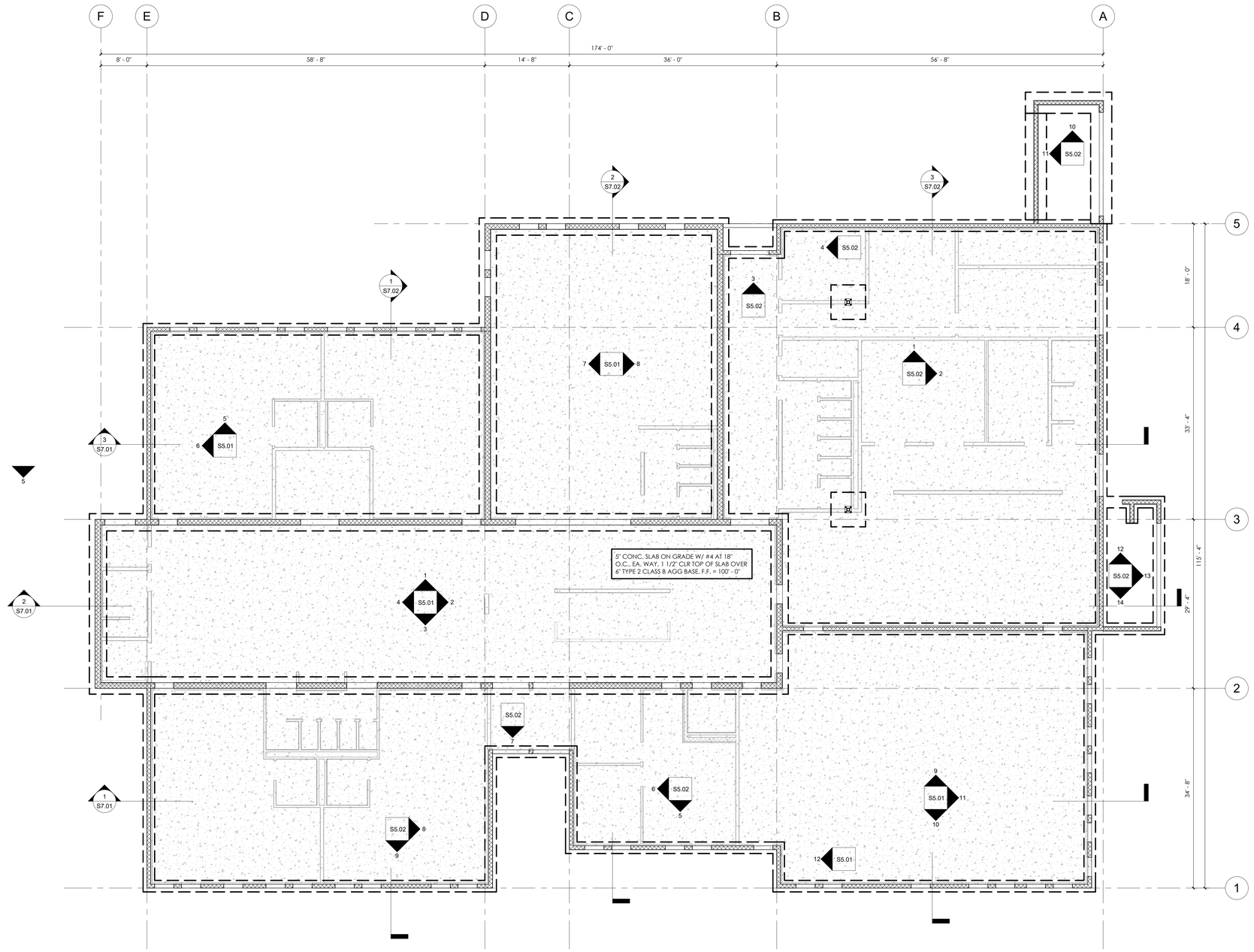
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Sheet Title
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Date: JANUARY 19, 2023
Sheet No:
S0.11



1 OVERALL FOUNDATION PLAN - BASE BID

1/8" = 1'-0"

GENERAL NOTES

KEYNOTES

LEGEND

KEYPLAN

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Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner
CITY OF FERNLEY

Job No: 20-22

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
OVERALL FOUNDATION PLAN - BASE BID

Date: JANUARY 19, 2023
Sheet No:

S1.01

BASE BID FOUNDATION PLAN NOTES:

1. T.O. EXTERIOR FOOTINGS = 98' - 8" TYP., U.N.O.
2. T.O. INTERIOR FOOTINGS = 98' - 8" TYP., U.N.O.
3. CENTER ALL COLUMN SPOT FOOTINGS BELOW COLUMNS TYP.
4. NO CONDUIT SHALL BE PLACED IN THE SLAB ON GRADE.
5. SEE 15 / S0.2 WHERE UTILITIES ENTER BUILDING OR ARE ADJACENT TO COLUMN FOOTINGS.
6. SEE 16 / S0.2 & GENERAL NOTES FOR ENGINEERING FILL REQUIREMENTS AND SUBGRADE PREPARATION REQUIREMENTS.
7. SEE ARCHITECTURAL AND/OR MECHANICAL/PLUMBING DRAWINGS FOR ANY FLOOR DRAINS OR SINKS, CONTRACTOR TO COORDINATE.
8. SEE 7 / S0.2 FOR TYPICAL SLAB ON GRADE JOINTS. JOINTS TO BE PLACED AT 10'-0" MAX. O.C. AND LOCATED AT ALL RE-ENTRANT SLAB CORNERS, INTERIOR COLUMN LOCATIONS, OR ANY OTHER SLAB ON GRADE DISCONTINUITIES. SEE 12 / S0.2 FOR SLAB ON GRADE DOWELED JOINT INTERSECTIONS.
9. SEE 6 / S0.2 FOR TYPICAL FOUNDATION REINFORCING LAPS AT CORNERS, ENDS, AND INTERSECTIONS.
10. SEE 10 / S0.2 & 11 / S0.2 FOR TYPICAL REINFORCING HOOKS, BENDS AND HOOKS & BENDS FOR TIES.
11. PLACE 15 MIL VAPOR BARRIER BENEATH CONCRETE SLAB (OVER AGGREGATE BASE) AT LOCATIONS WITH TILE FLOORING (OR OTHER FLOORING SENSITIVE TO MOISTURE). SEAL ALL SEAMS AND SEAL AROUND ALL PENETRATIONS PER VAPOR BARRIER MANUFACTURER RECOMMENDATIONS.
12. SEE 5 / S0.3 FOR TYPICAL CMU CONTROL JOINT. SEE 7 / S0.4 FOR TYPICAL CLAY BRICK EXPANSION JOINTS.
13. CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND CONDITIONS WITH ARCH. PRIOR TO FABRICATION OR ERECTION.
14. SEE SHEETS S0.9 & S0.10 FOR TYPICAL INTERIOR WALL DETAILS.

BASE BID CMU WALL SCHEDULE

MARK	TYPE	WIDTH	REINFORCEMENT		FOOTING DOWELS	REMARKS
			VERT.	HORIZ.		
W1	CMU	8"	#5 AT 24" O.C., CENTERED	#4 AT 32" O.C.	TO MATCH VERTS.	(2) #5 (HORIZ) CONT. BARS AT T.O. WALL AND/OR ROOF & FLOOR LINE, SEE DETAILS
W2	CMU	12"	#6 AT 24" O.C., EA. FACE	#5 AT 24" O.C.	TO MATCH VERTS.	(2) #5 (HORIZ) CONT. BARS AT T.O. WALL AND/OR ROOF & FLOOR LINE, SEE DETAILS

NOTES:

1. **SEE WALL ELEVATIONS FOR ADDITIONAL REINFORCING WHERE REQUIRED.**
2. ALL CMU WALLS TO BE FULLY GROUTED.
3. MASONRY SHALL BE CONSTRUCTED OF HOLLOW OPEN END UNITS WHEREVER POSSIBLE AND SHALL BE LAID IN A RUNNING BOND PATTERN.
4. FOLLOW DETAIL 9 / S0.3 FOR MIN. CMU CORNER AND 12B / S0.3 FOR JAMB REINFORCEMENT.
5. JAMB STEEL BARS IN SHORT SHEAR PIERS ARE NOT ADDITIVE TO WALL SCHEDULE STEEL, PLACE THE MORE RESTRICTIVE REINFORCING.
6. PROVIDE HORIZONTAL CORNER BARS AT ALL CORNERS AND INTERSECTING WALLS PER 9 / S0.3.
7. PROVIDE (2) #5 CONT. HORIZONTAL CHORD STEEL AT ALL ROOF AND FLOOR LINE LEVELS PER DETAILS, U.N.O.
8. PROVIDE CONT. HORIZ. #5 BAR OR BARS AT JOIST WALL ANCHORS PER DETAILS (WHERE OCCURS).
9. ALL HORIZONTAL BARS SHALL BE ANCHORED AROUND END VERTICAL REINFORCING BARS AT JAMBS WITH A STANDARD HOOK.
10. PROVIDE CMU REINFORCEMENT LAP SPLICES PER GENERAL NOTES.
11. BARS E.F. SHALL BE PLACED 1/2" CLEAR OF THE INSIDE FACE OF THE CMU SHELL. INCLUDING AT JAMBS.
12. BARS CENTERED SHALL BE CENTERED IN THE CMU WALL, HORIZ. STEEL TO BE PLACED ALONG SIDE.

BASE BID CONTINUOUS FOOTINGS SCHEDULE

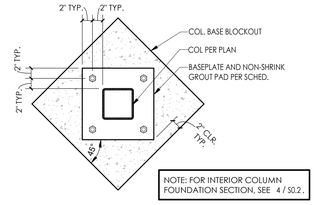
MARK	WIDTH	THICK.	REINFORCING CROSSWISE			REINFORCING LENGTHWISE				TOTAL LENGTH	REMARKS
			SIZE	LENGTH	SPACING (O.C.)	NO.	SIZE	LENGTH	SPACING (O.C.)		
CF2.0	2' - 0"	14"	#4	1' - 6"	24"	3	#5	CONT.	8 11/16"	629' - 0"	CROSSWISE REINF. TO BE CENTERED BETWEEN VERT. WALL REINF.
CF3.0	3' - 0"	14"	#5	2' - 6"	12"	4	#5	CONT.	9 13/16"	436' - 1 9/16"	

BASE BID FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK.	REINFORCING CROSSWISE				REINFORCING LENGTHWISE				QUANTITY	REMARKS
				NO.	SIZE	LENGTH	SPACING (O.C.)	NO.	SIZE	LENGTH	SPACING (O.C.)		
F6.0	6' - 0"	6' - 0"	16"	7	#5	5' - 6"	10 7/8"	7	#5	5' - 6"	10 7/8"	2	

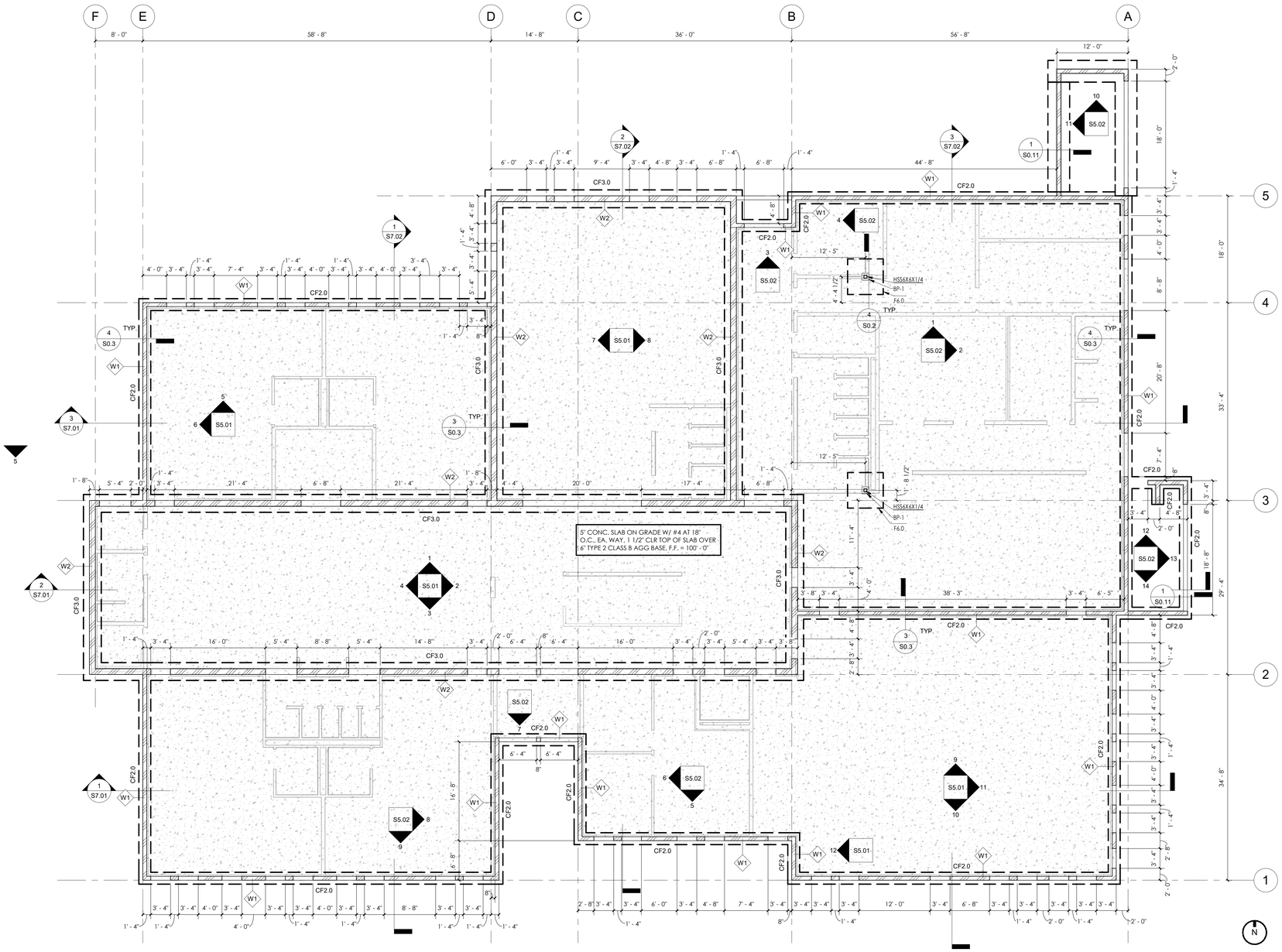
BASE BID BASE PLATE / ANCHOR BOLT SCHEDULE

TYPE	QUANTITY	PLATE THICKNESS "T"	GROUT THICKNESS "G"	NUMBER OF ANCHORS	ANCHOR DIAMETER	ANCHOR EMBEDMENT "E"	ANCHOR PROJECTION "P"	CAST-IN OR EPOXY
BP-1	2	3/4"	1 1/2"	4	3/4"	13"	4 1/4"	CAST-IN



NOTE: FOR INTERIOR COLUMN FOUNDATION SECTION, SEE 4 / S0.2 .

BASE BID - TYP. BASEPLATES



1 **FOUNDATION PLAN - BASE BID**
1/8" = 1'-0"

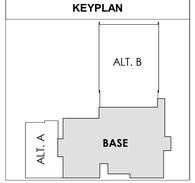
GENERAL NOTES

1. SEE WALL ELEVATIONS FOR MORE RESTRICTIVE WALL REINFORCEMENT. VERTICAL WALL REINFORCING SHALL BE EMBEDDED IN FOUNDATIONS TO MATCH VERTICAL AND TYPICAL REINFORCING IN ELEVATIONS.
2. CONTRACTOR SHALL PROVIDE CONSTRUCTION JOINTS (C.J.) AND CONTROL JOINTS (ALTERNATE S.J. AND D.J.) FOR ALL SLABS ON GRADE IN ACCORDANCE WITH DETAILS 1 / S0.3 & 7 / S0.2, RESPECTIVELY. A DRAWING SHOWING THE PROPOSED LAYOUT OF ALL SLAB JOINTS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL.

KEYNOTES

LEGEND

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Job No: 20-22

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Sheet Title
ENLARGED FOUNDATION PLAN - BASE BID

Date: JANUARY 19, 2023
Sheet No:
S1.11

BASE BID ROOF FRAMING PLAN NOTES:

1. B.O. DECK= TOP OF FRAMING (BOTTOM OF DECK) ELEVATION ABOVE THE FINISHED FIRST FLOOR.
2. T.O.S.= TOP OF WIDE FLANGE GIRDER ELEVATION ABOVE FINISHED FIRST FLOOR.
3. SEE FOR STEEL JOIST AND JOIST GIRDER DESIGN CRITERIA.
4. SEE 3 / S0.6 & 4 / S0.6 FOR ROOF HUNG PIPING SUPPORTS.
5. FIRE SPRINKLER CONTRACTOR SHALL LAY OUT FIRE SPRINKLER LINES SO THAT NO LINE PASSES UNDER SKYLIGHT/SMOKEVENTS OR FUTURE MECHANICAL UNITS (WHERE THESE ITEMS OCCUR).
6. FOR ROOF HATCH WITH LADDER ACCESS, SEE ARCHITECTURAL.
7. STEEL JOIST AND JOIST GIRDER SUPPLIER SHALL SUBMIT STRUCTURAL CALCULATIONS, SHOP, AND ERECTION DRAWINGS SEALED AND SIGNED BY A NEVADA REGISTERED CIVIL OR STRUCTURAL ENGINEER TO THE ENGINEER OF RECORD WHO AGREES TO REVIEW THESE DOCUMENTS FOR ACCEPTANCE PRIOR TO FABRICATION. STRUCTURAL CALCULATIONS, SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR ACCEPTANCE AFTER THE ENGINEER OF RECORD HAS NOTED HIS/HER ACCEPTANCE.
8. JOIST AND JOIST GIRDER DRAWINGS SHALL SHOW COMPLIANCE WITH THE STANDARD SPECIFICATIONS FOR STEEL JOISTS, K-SERIES, LH-SERIES, DLH-SERIES AND JOIST GIRDERS, 44TH EDITION, PUBLISHED BY THE STEEL JOIST INSTITUTE.
9. JOIST AND JOIST GIRDERS SHALL BE IDENTIFIED AS TO TYPE, SIZE, AND MANUFACTURER BY TAGGING OR OTHER SUITABLE MEANS AT THE TIME OF MANUFACTURE OR FABRICATION. SUCH IDENTIFICATION SHALL BE MAINTAINED CONTINUOUSLY TO THE POINT OF THEIR INSTALLATION IN A STRUCTURE.

BASE BID METAL DECK SCHEDULE

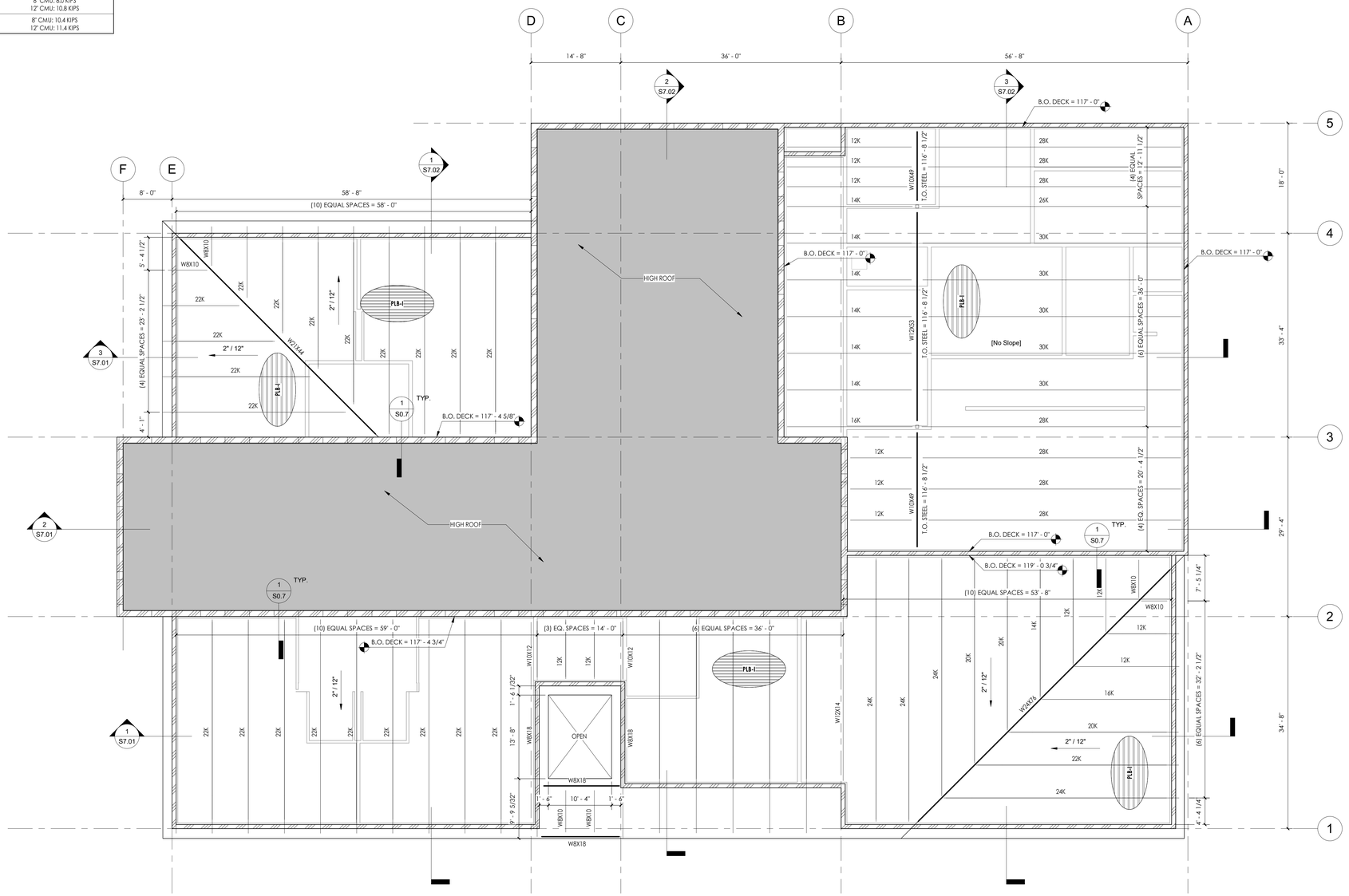
MARK	DECK TYPE (SEE NOTE 1)	DECK SIZE	DECK ATTACHMENT ZONE	DIAPHRAGM CONNECTIONS (SEE NOTES 2, 3 AND 6)			APPROX. TOTAL AREA
				LOW FLUTES		SIDE SEAMS	
				PERPENDICULAR TO SUPPORT	PARALLEL TO SUPPORT		
PLB-I	PLB-36	1 1/2" x 18 GA	1	FASTENERS AT 36/4 PATTERN	FASTENERS AT 12" O.C. MAX	VSC2 AT 24" O.C. MAX	18289 SF

NOTES:

1. METAL DECK SHALL BE AS SPECIFIED BY ASC, VERCO, VULCRAFT, EPIC OR APPROVED EQUAL.
2. CONNECTIONS SHALL BE PLACED IN ACCORDANCE WITH THE DECK MANUFACTURERS STANDARD PATTERN AND REQUIREMENTS.
3. PW = 3/4" PUDDLE WELD, VSC2 = VERCO PUNCHLOK II SIDELAP CONNECTION.
4. DECK SHALL BE PLACED IN EITHER A 2-SPAN OR 3-SPAN CONDITION. SINGLE DECK SPANS WILL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED.
5. REFER TO DECK ATTACHMENT DIAGRAM FOR DECK ATTACHMENT ZONE.
6. FASTENERS SHALL BE #12 SCREWS FOR SUPPORT STEEL THICKNESS LESS THAN 1/8". FASTENERS SHALL BE HILTI HSN-24 FOR SUPPORT STEEL THICKNESS 1/8" TO 3/8". FASTENERS SHALL BE HILTI X-ENP-19 FOR SUPPORT STEEL THICKNESS GREATER THAN 1/4". FOR SUPPORT STEEL THICKNESS BETWEEN 1/4" AND 3/8" (INCLUSIVE), HILTI HSN-24 OR X-ENP-19 FASTENERS MAY BE USED AT CONTRACTOR'S OPTION.

BASE BID JOIST BEARING PLATE SCHEDULE

MARK	PLATE	ANCHOR	WALL ANCHORAGE LOAD (0.6W OR 0.7E)
P4	8" CMU: 3/4" x 5 1/2" x 1' - 3" 12" CMU: 3/4" x 9" x 1' - 3"	(4) 3/4" x 6" NSA AT 4' O.C.	8" CMU: 8.0 KIPS 12" CMU: 10.8 KIPS
P6	8" CMU: 3/4" x 5 1/2" x 1' - 11" 12" CMU: 3/4" x 9" x 1' - 11"	(6) 3/4" x 6" NSA AT 4' O.C.	8" CMU: 10.4 KIPS 12" CMU: 11.4 KIPS



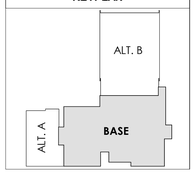
1 BASE BID - LOW ROOF FRAMING PLAN
1/8" = 1'-0"

GENERAL NOTES

KEYNOTES

LEGEND

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Job No: 21-058.00

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CITY OF FERNLEY

Job No: 20-22

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Sheet Title
LOW ROOF FRAMING PLAN - BASE BID

Date: JANUARY 19, 2023
Sheet No:
S4.01

BASE BID ROOF FRAMING PLAN NOTES:

1. B.O. DECK= TOP OF FRAMING (BOTTOM OF DECK) ELEVATION ABOVE THE FINISHED FIRST FLOOR.
2. T.O.S.= TOP OF WIDE FLANGE GIRDER ELEVATION ABOVE FINISHED FIRST FLOOR.
3. SEE FOR STEEL JOIST AND JOIST GIRDER DESIGN CRITERIA.
4. SEE 3 / S0.6 & 4 / S0.6 FOR ROOF HUNG PIPING SUPPORTS.
5. FIRE SPRINKLER CONTRACTOR SHALL LAY OUT FIRE SPRINKLER LINES SO THAT NO LINE PASSES UNDER SKYLIGHT/SMOKEVENTS OR FUTURE MECHANICAL UNITS (WHERE THESE ITEMS OCCUR).
6. FOR ROOF HATCH WITH LADDER ACCESS, SEE ARCHITECTURAL.
7. STEEL JOIST AND JOIST GIRDER SUPPLIER SHALL SUBMIT STRUCTURAL CALCULATIONS, SHOP, AND ERECTION DRAWINGS SEALED AND SIGNED BY A NEVADA REGISTERED CIVIL OR STRUCTURAL ENGINEER TO THE ENGINEER OF RECORD WHO AGREES TO REVIEW THESE DOCUMENTS FOR ACCEPTANCE PRIOR TO FABRICATION. STRUCTURAL CALCULATIONS, SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR ACCEPTANCE AFTER THE ENGINEER OF RECORD HAS NOTED HIS/HER ACCEPTANCE.
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BASE BID METAL DECK SCHEDULE

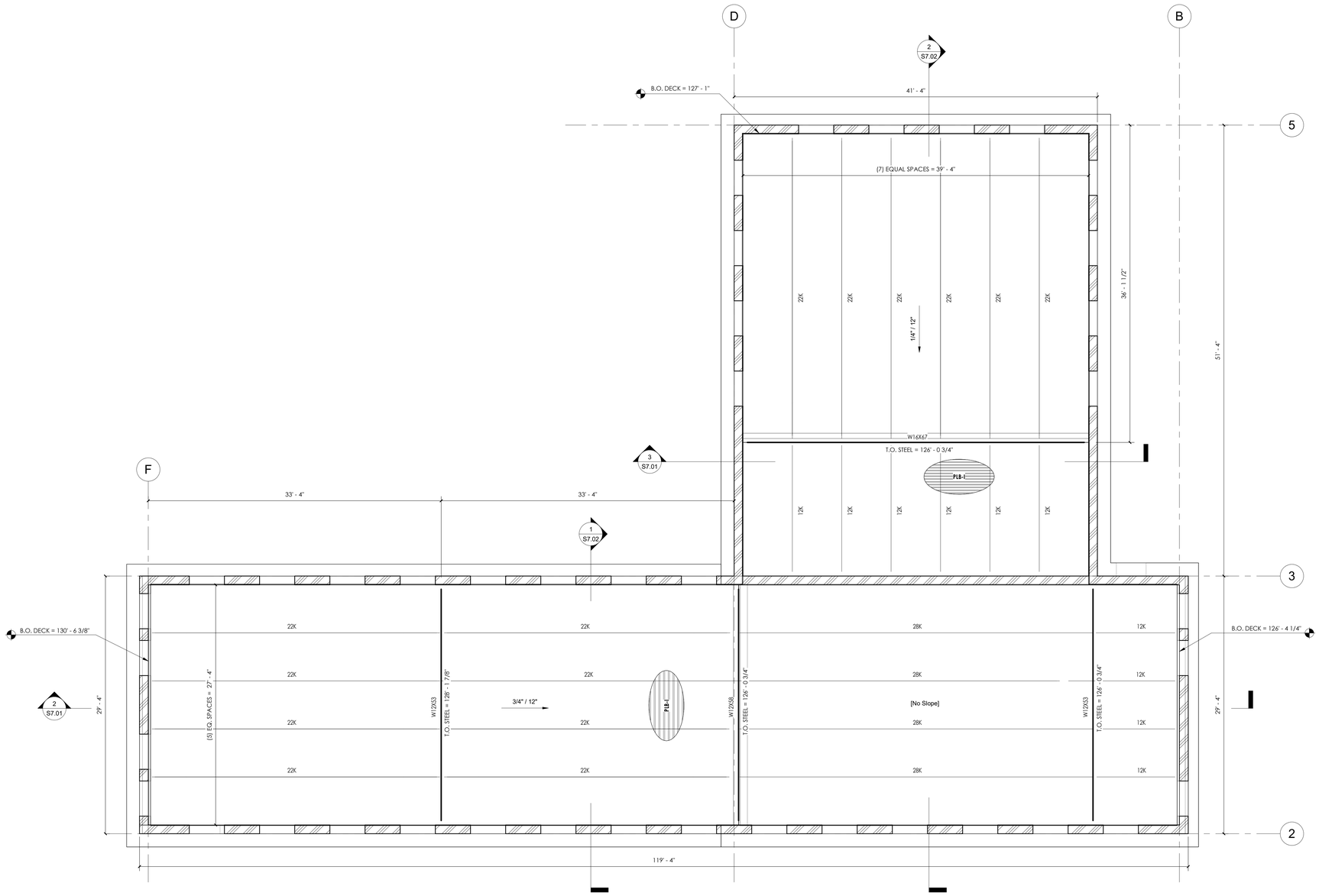
MARK	DECK TYPE (SEE NOTE 1)	DECK SIZE	DECK ATTACHMENT ZONE	DIAPHRAGM CONNECTIONS (SEE NOTES 2, 3 AND 6)			APPROX. TOTAL AREA
				LOW FLUTES		SIDE SEAMS	
				PERPENDICULAR TO SUPPORT	PARALLEL TO SUPPORT		
PLB-I	PLB-36	1 1/2" x 18 GA	1	FASTENERS AT 36/4 PATTERN	FASTENERS AT 12" O.C. MAX	VSC2 AT 24" O.C. MAX	18289 SF

NOTES:

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5. REFER TO DECK ATTACHMENT DIAGRAM FOR DECK ATTACHMENT ZONE.
6. FASTENERS SHALL BE #12 SCREWS FOR SUPPORT STEEL THICKNESS LESS THAN 1/8". FASTENERS SHALL BE HILTI HSN-24 FOR SUPPORT STEEL THICKNESS 1/8" TO 3/8". FASTENERS SHALL BE HILTI X-ENP-19 FOR SUPPORT STEEL THICKNESS GREATER THAN 1/4". FOR SUPPORT STEEL THICKNESS BETWEEN 1/4" AND 3/8" (INCLUSIVE), HILTI HSN-24 OR X-ENP-19 FASTENERS MAY BE USED AT CONTRACTOR'S OPTION.

BASE BID JOIST BEARING PLATE SCHEDULE

MARK	PLATE	ANCHOR	WALL ANCHORAGE LOAD (0.6W OR 0.7E)
P4	8" CMU: 3/4" x 5 1/2" x 1' - 3" 12" CMU: 3/4" x 9" x 1' - 3"	(4) 3/4" x 6" NSA AT 4" O.C.	8" CMU: 8.0 KIPS 12" CMU: 10.8 KIPS
P6	8" CMU: 3/4" x 5 1/2" x 1' - 11" 12" CMU: 3/4" x 9" x 1' - 11"	(6) 3/4" x 6" NSA AT 4" O.C.	8" CMU: 10.4 KIPS 12" CMU: 11.4 KIPS



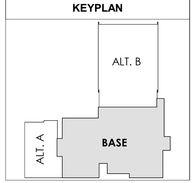
1 **BASE BID - HIGH ROOF FRAMING PLAN**
3/16" = 1'-0"

GENERAL NOTES

KEYNOTES

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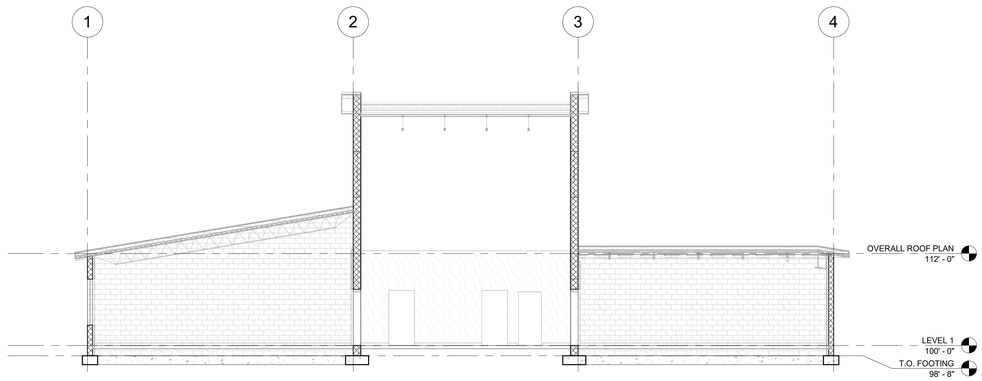
Job No: 20-22

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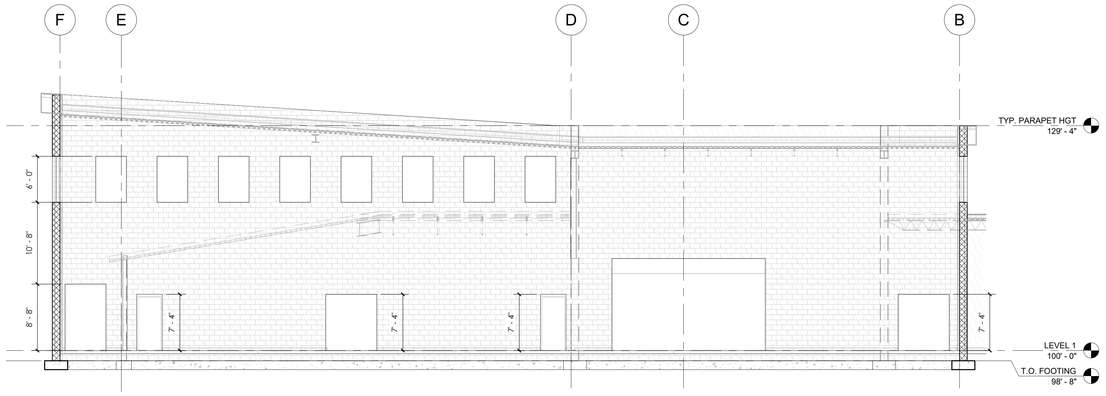
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Sheet Title
HIGH ROOF FRAMING PLAN - BASE BID

Date: JANUARY 19, 2023
Sheet No:
S4.02



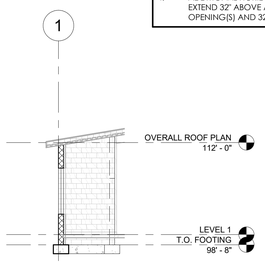
6 WALL ELEVATIONS - GRID E (LOOKING WEST)
1/8" = 1'-0"



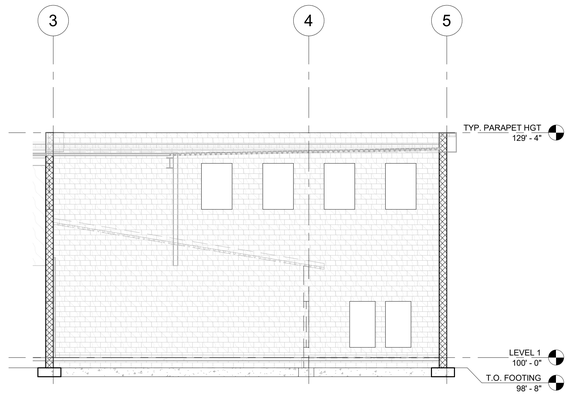
1 WALL ELEVATION - GRID 3 (LOOKING NORTH)
1/8" = 1'-0"

NOTE:

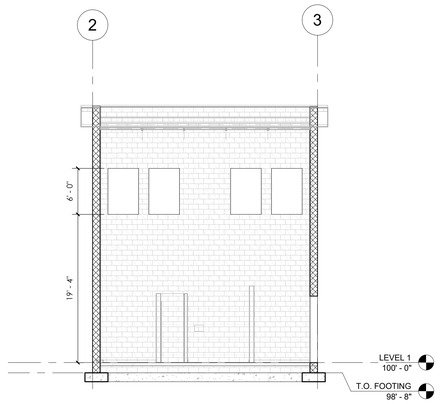
1. WALL OPENINGS LESS THAN 12" IN WIDTH AND/OR HEIGHT NEED NO SPECIAL REINFORCING AND THEREFORE ARE NOT SHOWN FOR CLARITY.
2. COORDINATE ALL MECH./PLUMBING OPENINGS WITH MECH.
3. CONTRACTOR SHALL PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS IN ACCORDANCE WITH DETAIL 5 / S0.3 OR DETAIL 7 / S0.4 AT CLAY BRICK. CONTRACTOR TO SUBMIT A CMU CONTROL JOINT LOCATION PLAN TO THE ARCHITECT/STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. CONTROL JOINTS STARTING IN CMU SHALL RUN CONTINUOUS THROUGH CLAY BRICK AND THE JOINT SHALL CHANGE TYPE AT THE MATERIAL CHANGE.
4. ADDITIONAL HORIZONTAL REINFORCEMENT AT CMU PIERS TO EXTEND 32" ABOVE AND BELOW THE ADJACENT WINDOW OPENING(S) AND 32" ABOVE THE ADJACENT DOOR OPENINGS.



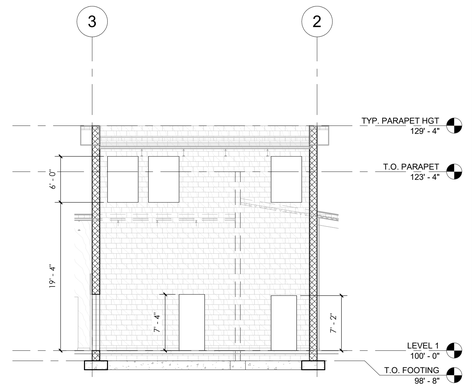
12 WALL ELEV. - CAFETERIA (LOOKING WEST)
1/8" = 1'-0"



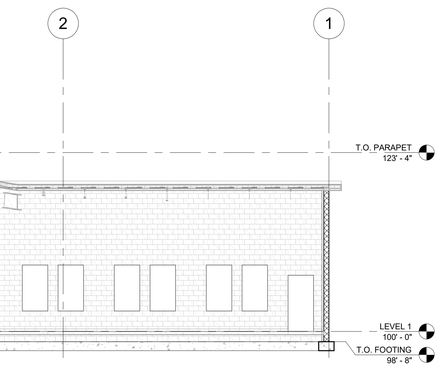
7 WALL ELEV. - TEEN CENTER (LOOKING WEST)
1/8" = 1'-0"



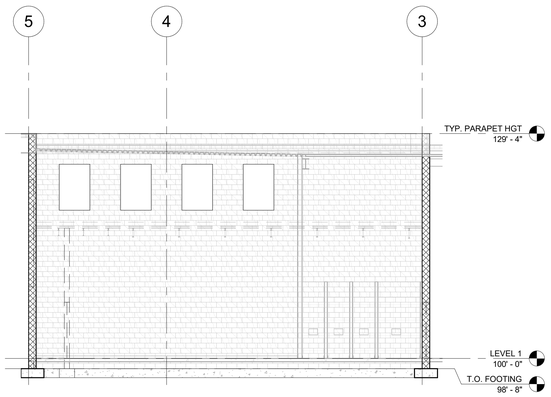
4 WALL ELEVATION - GRID F (LOOKING WEST)
1/8" = 1'-0"



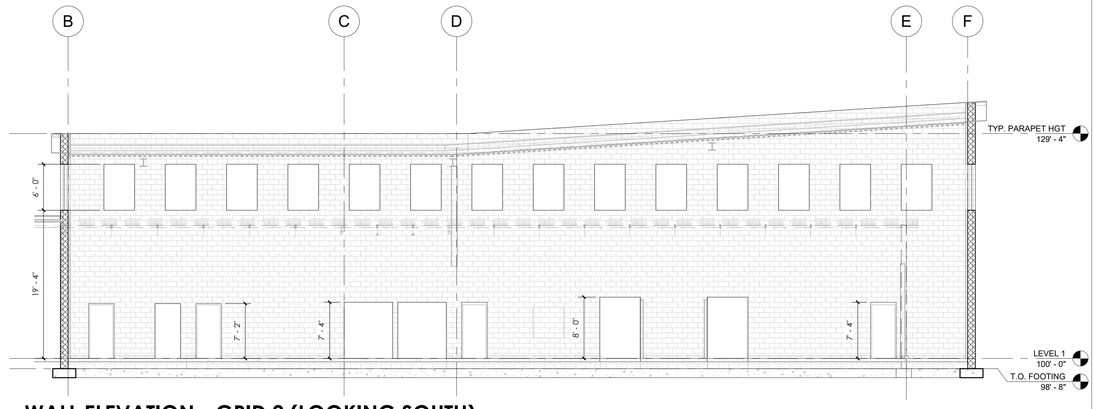
2 WALL ELEVATION - GRID B (LOOKING EAST)
1/8" = 1'-0"



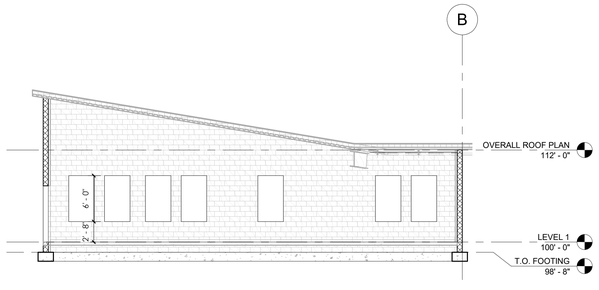
11 WALL ELEVATION - CAFETERIA (LOOKING EAST)
1/8" = 1'-0"



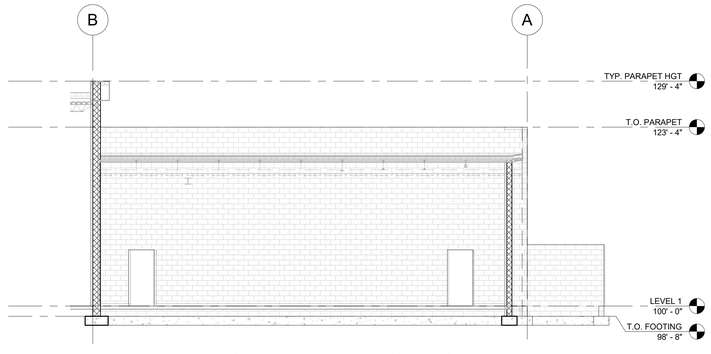
8 WALL ELEV. - TEEN CENTER (LOOKING EAST)
1/8" = 1'-0"



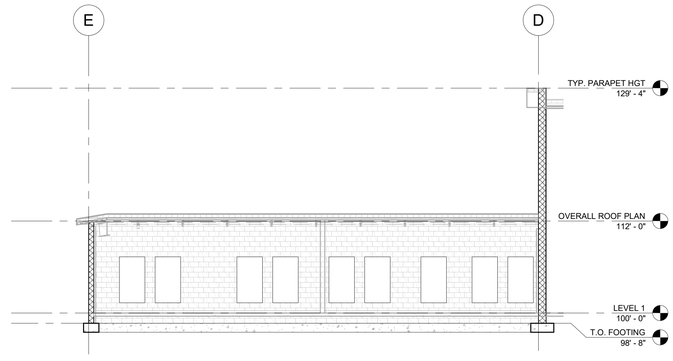
3 WALL ELEVATION - GRID 2 (LOOKING SOUTH)
1/8" = 1'-0"



10 WALL ELEV. - CAFETERIA (LOOKING SOUTH)
1/8" = 1'-0"



9 WALL ELEV. - CAFETERIA (LOOKING NORTH)
1/8" = 1'-0"



5 WALL ELEVATION - GRID 4 (LOOKING NORTH)
1/8" = 1'-0"

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Job No: 21-058.00

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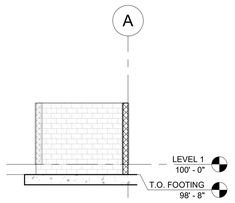
Job No: 20-22

DESIGN DEVELOPMENT

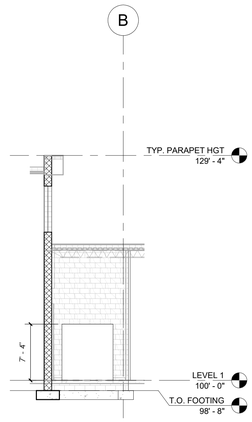
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
WALL ELEVATIONS - BASE BID

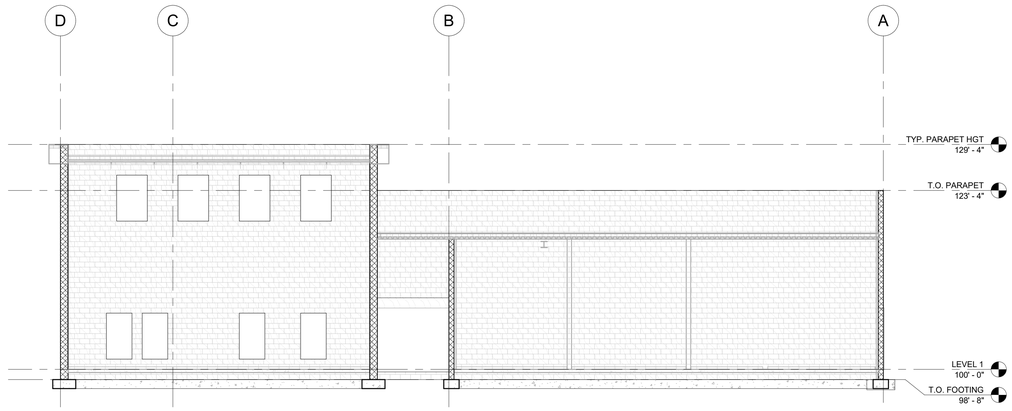
Date: JANUARY 19, 2023
Sheet No:
S5.01



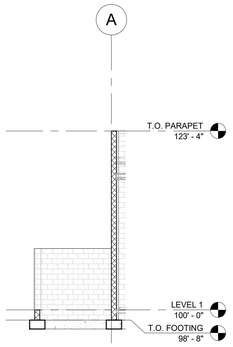
10 WALL ELEV. - TRASH (NORTH)
1/8" = 1'-0"



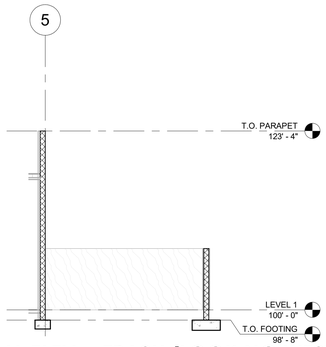
3 WALL ELEV. - KITCHEN ENTRY (NORTH)
1/8" = 1'-0"



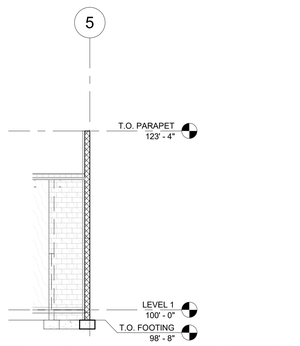
1 WALL ELEVATION - GRID 5 (LOOKING NORTH)
1/8" = 1'-0"



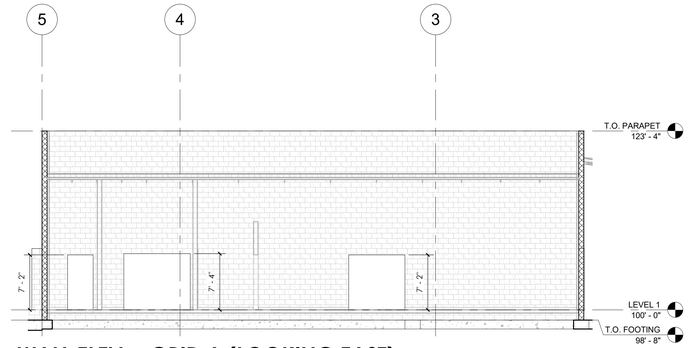
14 WALL ELEV. - ENCLOSURE (SOUTH)
1/8" = 1'-0"



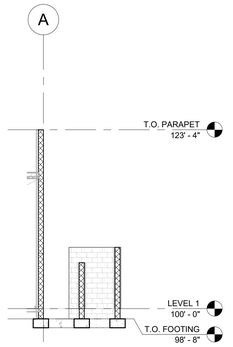
11 WALL ELEV. - TRASH (LOOKING WEST)
1/8" = 1'-0"



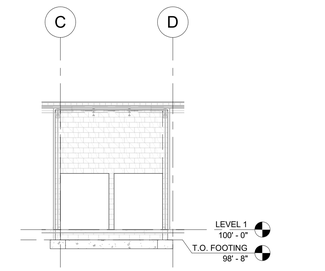
4 WALL ELEV. - KITCHEN ENTRY (WEST)
1/8" = 1'-0"



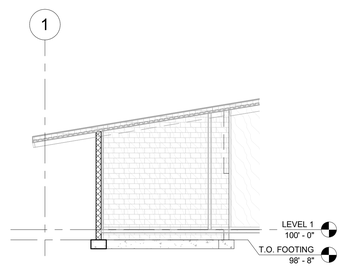
2 WALL ELEV. - GRID A (LOOKING EAST)
1/8" = 1'-0"



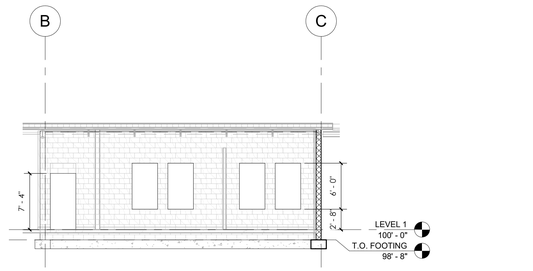
12 WALL ELEV. - ENCLOSURE (NORTH)
1/8" = 1'-0"



7 WALL ELEV. - ENTRY (LOOKING SOUTH)
1/8" = 1'-0"



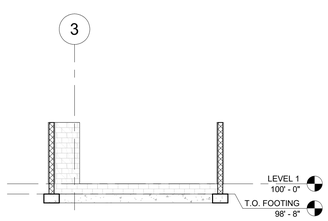
6 WALL ELEV. - ADMIN (WEST)
1/8" = 1'-0"



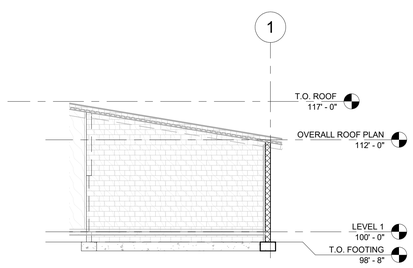
5 WALL ELEV. - ADMIN (SOUTH)
1/8" = 1'-0"

NOTE:

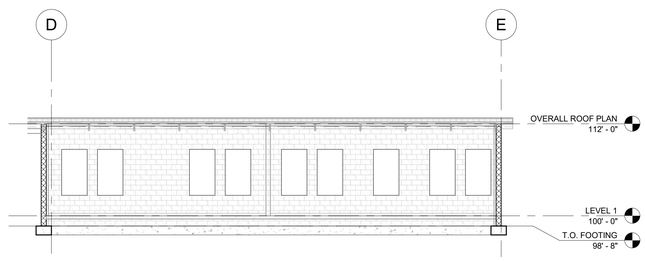
1. WALL OPENINGS LESS THAN 12" IN WIDTH AND/OR HEIGHT NEED NO SPECIAL REINFORCING AND THEREFORE ARE NOT SHOWN FOR CLARITY.
2. COORDINATE ALL MECH./PLUMBING OPENINGS WITH MECH.
3. CONTRACTOR SHALL PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS IN ACCORDANCE WITH DETAIL 5 / S0.3 OR DETAIL 7 / S0.4 AT CLAY BRICK. CONTRACTOR TO SUBMIT A CMU CONTROL JOINT LOCATION PLAN TO THE ARCHITECT/STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. CONTROL JOINTS STARTING IN CMU SHALL RUN CONTINUOUS THROUGH CLAY BRICK AND THE JOINT SHALL CHANGE TYPE AT THE MATERIAL CHANGE.
4. ADDITIONAL HORIZONTAL REINFORCEMENT AT CMU PIERS TO EXTEND 32" ABOVE AND BELOW THE ADJACENT WINDOW OPENING(S) AND 32" ABOVE THE ADJACENT DOOR OPENINGS.



13 WALL ELEV. - ENCLOSURE (EAST)
1/8" = 1'-0"



8 WALL ELEV. - SOUTH CLASS (EAST)
1/8" = 1'-0"



9 WALL ELEV. - SOUTH CLASS (SOUTH)
1/8" = 1'-0"

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Job No: 20-22

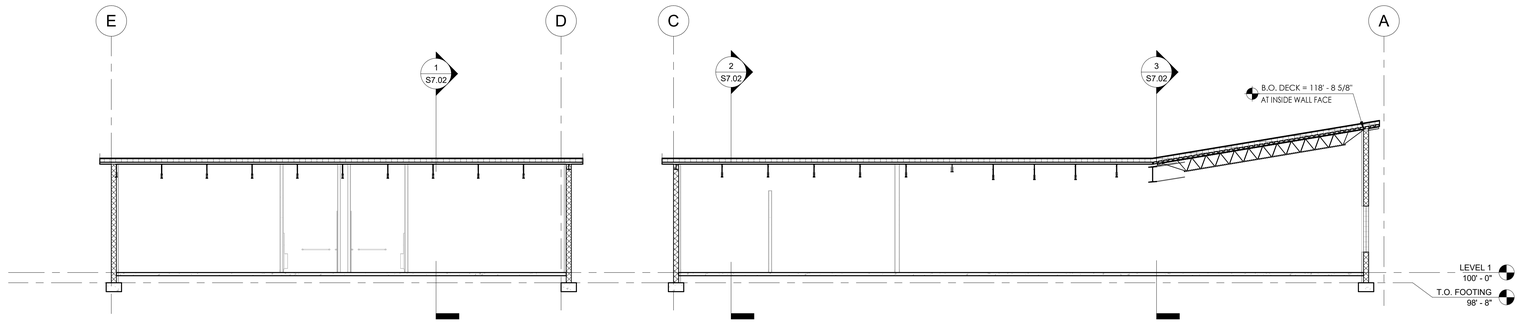
DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
WALL ELEVATIONS - BASE BID

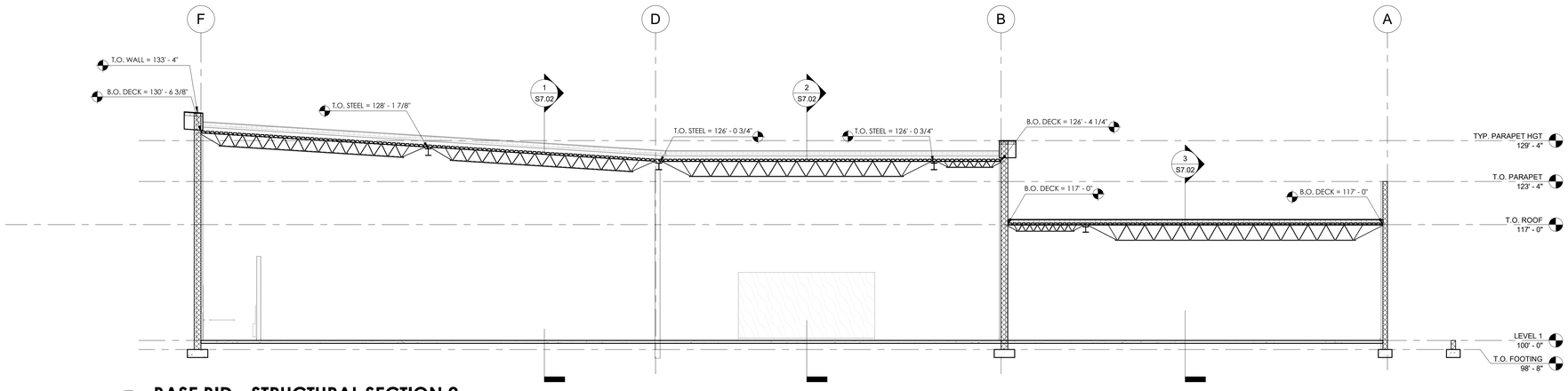
Date: JANUARY 19, 2023
Sheet No:

S5.02



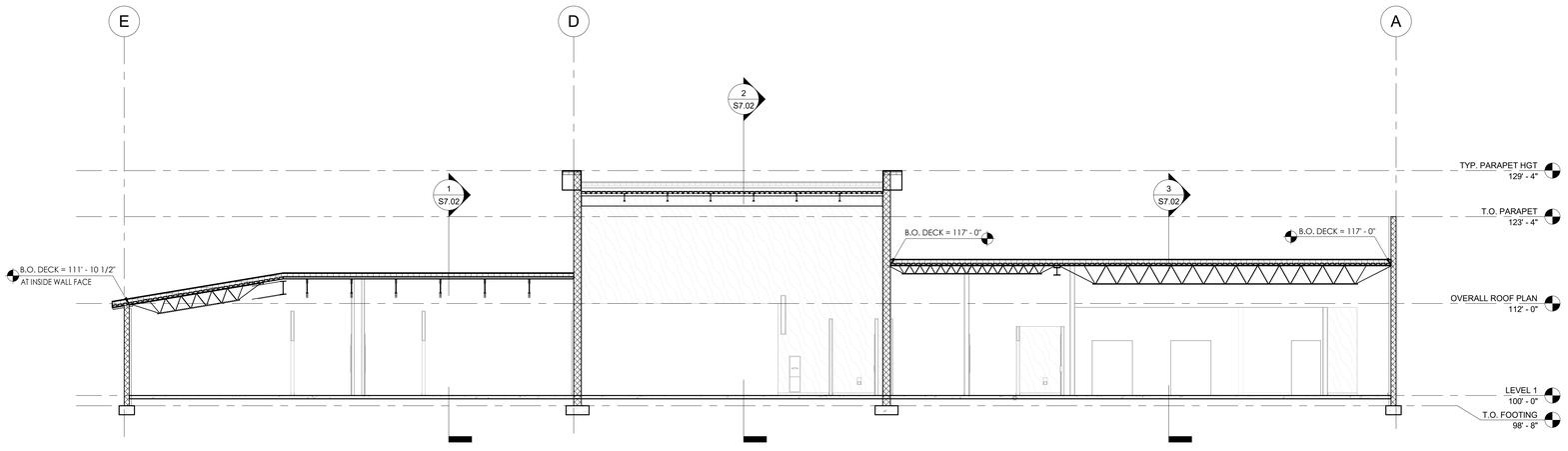
1 BASE BID - STRUCTURAL SECTION 1

1/8" = 1'-0"



2 BASE BID - STRUCTURAL SECTION 2

1/8" = 1'-0"



3 BASE BID - STRUCTURAL SECTION 3

1/8" = 1'-0"

GENERAL NOTES

KEYNOTES

LEGEND

KEYPLAN

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CITY OF FERNLEY CRRC

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Job No: 20-22

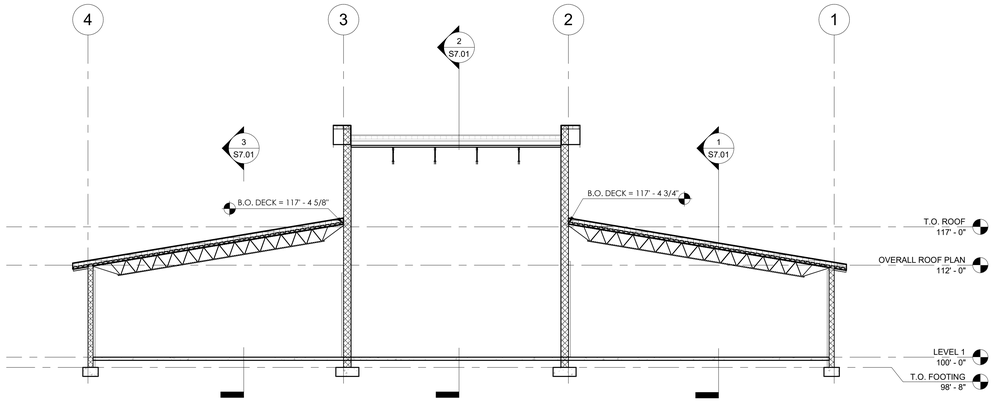
DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
STRUCTURAL SECTIONS - BASE BID

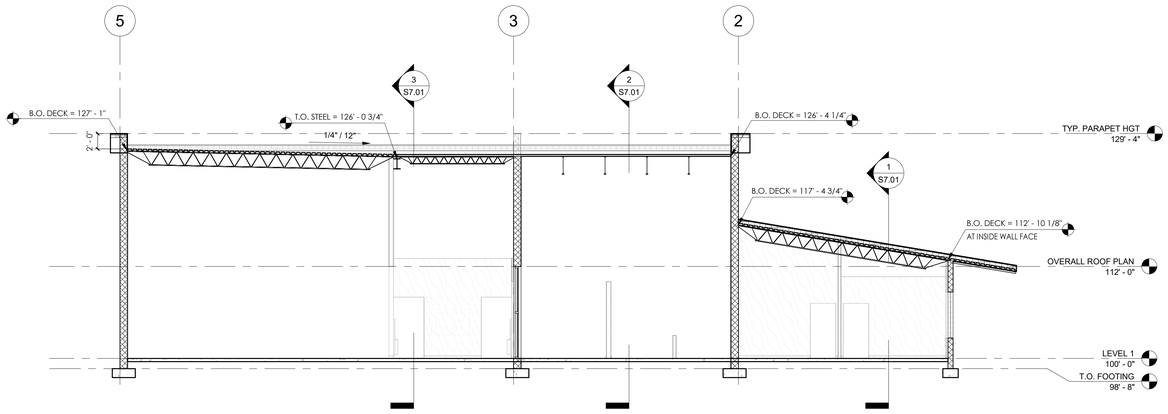
Date: JANUARY 19, 2023
Sheet No:

S7.01



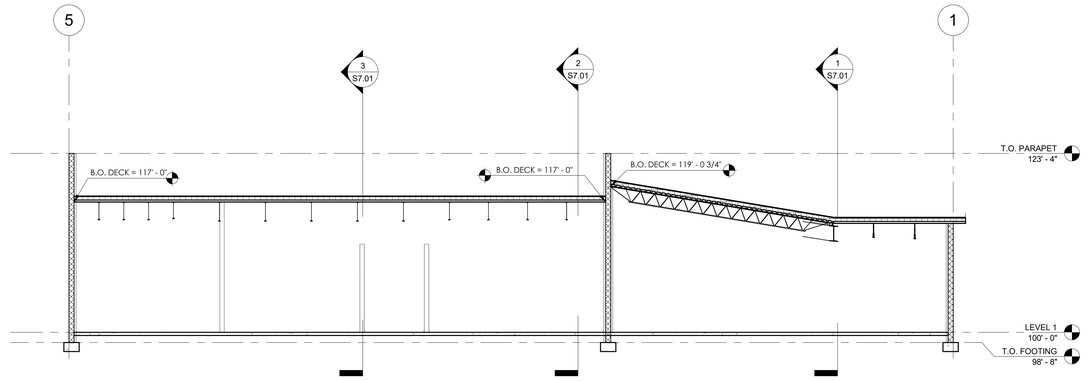
1 BASE BID - STRUCTURAL SECTION 4

1/8" = 1'-0"



2 BASE BID - STRUCTURAL SECTION 5

1/8" = 1'-0"



3 BASE BID - STRUCTURAL SECTION 6

1/8" = 1'-0"

GENERAL NOTES

KEYNOTES

LEGEND

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Job No: 20-22

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
STRUCTURAL SECTIONS - BASE BID

Date: JANUARY 19, 2023
Sheet No:

S7.02

FLOOR PLAN LEGEND

- BUILDING WALLS (SEE ARCH DWGs)
- 123 — ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- KITCHEN — ROOM/ AREA NAME AND ROOM NUMBER
- ACCESSIBLE CLEARANCES AND SYMBOL
- 123 (E) — EXISTING FOODSERVICE EQUIPMENT
- 123 — OWNER PROVIDED EQUIPMENT
- C — COLUMN GRIDS WITH COLUMN INDICATORS
- R, F, H — EQUIPMENT LABELS (Refrigerator, Freezer, Heated)
- OUTLINE OF FOOD SERVICE EQUIPMENT
- 2442, 1848 — STORAGE SHELVING SIZES (Width x Length)
- FOOD SERVICE EQUIPMENT BELOW EQUIPMENT TOP
- 34 (F) — FUTURE FOOD SERVICE EQUIPMENT
- FOOD SERVICE EQUIPMENT ABOVE EQUIPMENT TOP
- E.P. (ELECTRICAL PANEL, SEE ELECT ENG DWGs)
- MOBILE FOOD SERVICE EQUIPMENT
- F.E.C. (TYPE "K" FIRE EXTINGUISHER & CABINET)
- FS0.1.0 — SHEET NUMBER
- W.H. — WATER HEATER (SEE PLUMBING ENG DWGs)
- WALK-IN COOLER/FREEZER INSULATED WALLS
- 1 FS0.7.0 2 — ELEVATION INDICATOR SYMBOL

KITCHEN FINISH SCHEDULE

ROOM/AREA	FLOOR	BASE	WALLS	CEILING
INTERIOR WALK-IN COOLERS	EPOXY FLOOR NOTE #5	6" H. EPOXY WITH 3/8" RADIUS COVED	22 GA. S/S STAINLESS STEEL	WHITE STUCCO EMBOSSED ALUMINUM
ALL OTHERS ROOMS/AREAS	SEE SHEET A2.00 FOR FINISHES			

NOTE #5: ALL FLOORS WILL HAVE A SMOOTH SURFACE UNDER ALL EQUIPMENT, AND ALL WALKWAYS WILL HAVE A LIGHT TEXTURE ONLY

FOOD SERVICE EQUIP. KEYNOTE

01 — FOOD SERVICE EQUIPMENT IDENTIFIER / ITEM NUMBER

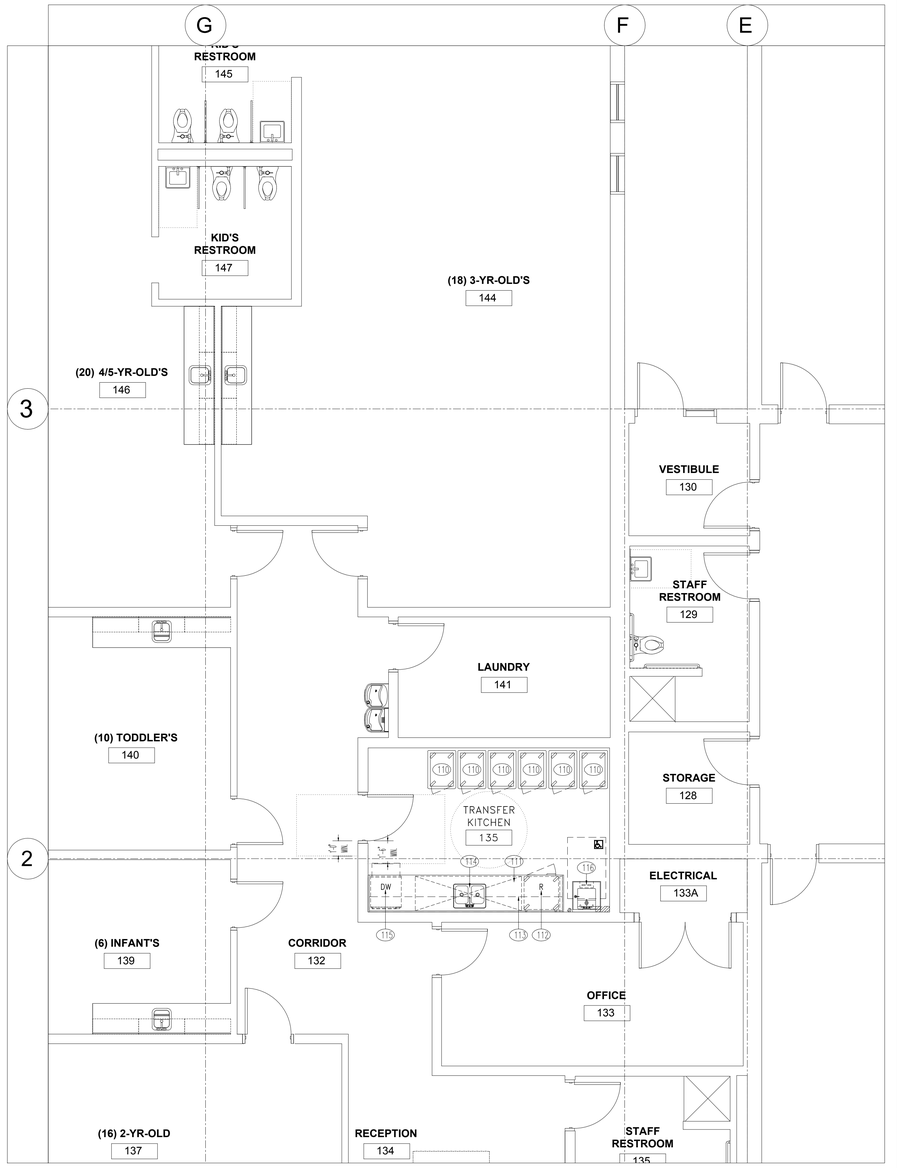
SEE EQUIPMENT SCHEDULE ON FS0.2.0

FOOD SERVICE SHEET LIST

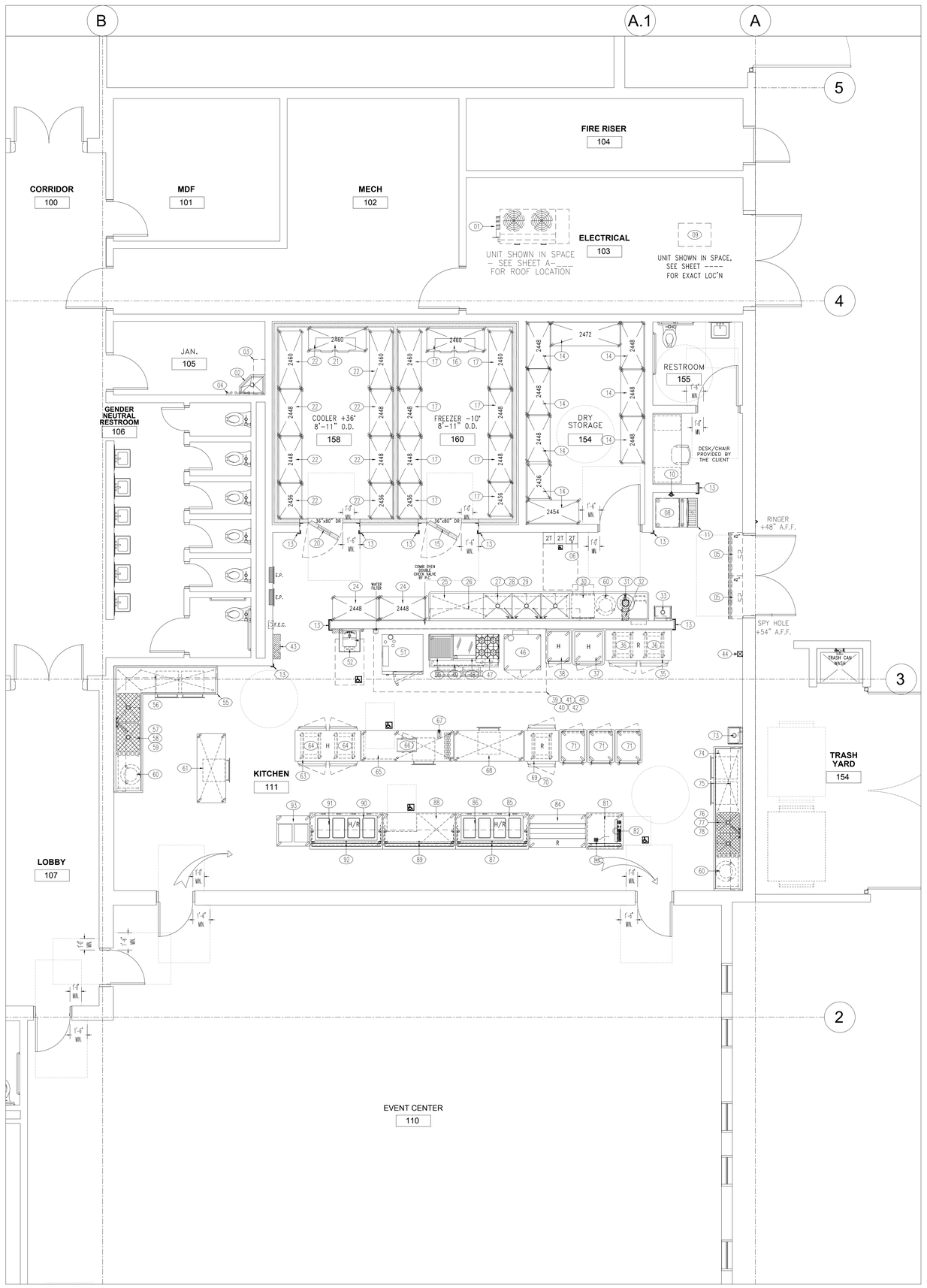
FS0.1.0 FOOD SERVICE EQUIPMENT FLOOR PLAN
FS0.2.0 FOOD SERVICE EQUIPMENT SCHEDULE
FS0.3.0 FOOD SERVICE EQUIPMENT PLUMBING PLAN
FS0.4.0 FOOD SERVICE EQUIPMENT ELECTRICAL PLAN
FS0.5.0 FOOD SERVICE EQUIPMENT BUILDING WORK PLAN (*)
FS0.6.0 FOOD SERVICE EQUIPMENT REFRIGERATION PLAN
FS0.8.0 FOOD SERVICE EQUIPMENT DETAILS
FS0.8.1 FOOD SERVICE EQUIPMENT DETAILS
FS0.9.0 FOOD SERVICE EQUIPMENT ATTACHMENT DETAILS
FS0.9.1 FOOD SERVICE EQUIPMENT ATTACHMENT DETAILS

NOTE:

SEE SHEET FS0.0.0 FOR FOOD FACILITY REQUIREMENT & OTHER APPLICABLE NOTES



BID ALT "A" - TRANSFER KITCHEN RM 131 FOODSERVICE FLOOR PLAN 1/4" = 1'-0"



BASE BID - MAIN KITCHEN ROOM 111 FOODSERVICE EQUIPMENT FLOOR PLAN 1/4" = 1'-0"

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Phone: 619.602.4107
Design By:
RICHARD DIELI

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Project

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Job No: 21-058.00

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CITY OF FERNLEY

RESCOPING PLAN

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title

FOODSERVICE EQUIPMENT FLOOR PLAN

Date: SEPTEMBER 06, 2022

Sheet No:

FS0.1.0

FERNLEY COMMUNIUTY CENTER FIXTURE AND EQUIPMENT SCHEDULE AND MECHANICAL REQUIREMENTS

NOTE: SEE SHEETS FS0.9.0, FS0.9.1 FOR ATTACHMENT DET.

NOTE: SEE SHEETS FS0.9.0, FS0.9.1 FOR ATTACHMENT DET.

BASE BID – MAIN KITCHEN

ITEM	DESCRIPTION	REMARKS	QTY	ATTACH	EQUIPMENT WEIGHT	VOLTS	LOAD HP	LOAD KW	LOAD AMPS	PHASE	CONN.	ELECTRICAL REMARKS	HOT WATER HOT	HOT WATER GPH	HOT WATER TEMP	COLD WATER	WASTE	GAS	BTU 1000	PLUMBING/MECHANICAL REMARKS
1.	AIR COOLED ROOF MTD REFRIG RACK	COLDZONE MPL-2C2 SEE SHEET FS0.6.1	1	H FS0.6.1	635	208			50.0	3	D.	FUSE SIZE = 50.0 AMPS; CONNECTED LOAD = 34.1 AMPS; MINIMUM AMPACITY = 38.4 AMPS								RACK SIZE = 72" LONG x 36" WIDE x 37" HIGH PLATFORM SIZE = 80" LONG x 47" WIDE x 6" HIGH
2.	FLOOR MOUNTED MOP SINK W/FAUCET	SPEC'D BY THE PLUMB. ENG. PROVIDED BY THE P.C.	1 EA.		25								1/2"	19	120°	1/2"	1 1/2"			DIRECT WASTE; VERIFY PLUMBING REQUIREMENTS W/ BACK FLOW PREVENTION DEVICE
3.	WALL MOUNTED SHELF	ADVANCE/TABCO K-245	1	A-17 FS0.9.0	15															
4.	WALL MOUNTED MOP RACK	INC-TEDDY MK3 NOT SHOWN ON PLANS	1		5															
5.	SPARE No.		–																	
6.	42" WALL MOUNTED AIR CURTAINS	BERNER SHD07-2072A	2	A-6a FS0.9.0	–	120			15.0	1	D.	PROVIDE (2) MICRO-SWITCHES FOR ON/OFF DOOR OPERATION								
7.	CURB MOUNTED LOCKERS	FENCO 6231R (1) ACCESSIBLE UNIT	LOT	A-36 FS0.9.1	300															
8.	500 LB. ICE MAKER W/BIN	MANITOWOC IDF-0500N/D-570	1	A-11 FS0.9.0	285	208			10.0	1	D.	FUSE SIZE = 15 AMPS					1"			C.W. FROM WATER FILTER; INDIRECT WASTE TO FLOOR SINK W/2" MIN AIR GAP; FILTERED WATER REQUIRED
9.	REMOTE CONDENSER FOR ITEM 8	MANITOWOC JCF0500	1	E FS0.6.1	130	120			1.82	1	D.	SEE ARCHITECT'S SHEETS FOR EXACT LOCATION 15 AMP CIRCUIT REQUIRED								CONNECT TO ITEMS 47, 48 & 50
10.	WATER FILTERING SYSTEM	MANITOWOC AR-10000	1		25											1/2"				P.C. TO INTERCONNECT COLD WATER TO ICE MAKER
11.	FLOOR TROUGH W/GRATE	CUSTOM STAINLESS STEEL	1														3"			DIRECT WASTE TO A RECESSED FLOOR WASTE
12.	SPARE No.		–																	
13.	CORNER GUARDS & END CAPS	CUSTOM STAINLESS STEEL	LOT		5															
14.	MOBILE DRY STORAGE SHELVING	METRO NC 5-TIER	9		95															
15.	WALK-IN FREEZER W/TRIM (–10°)	THERMALRITE CUSTOM	1	A-20 FS0.9.1	840	120		0.65		1	D.	(3) 44W x 48"L.E.D. & (1)11W. L.E.D. FIXTURES, 250W DR HEATER; SWITCHING BY THE ELECTRICAL CONTRACTOR								
16.	EVAP COIL – PART OF REFRIG. SYSTEM	FOR ITEM 15 SEE SHEET FS0.6.1	1	B FS0.6.1	85	208			2.0	1	D.	SEE DETAIL K/FS0.8.0					3/4"			INSULATED INDIRECT WASTE FROM EVAP COIL TO FLOOR SINK W/1 1/2" MIN AIR GAP
17.	MOBILE 4–TIER STORAGE SHELVING	METRO NK3 4–TIER	9	MOBILE	85															
18.	SPARE No.		–																	
19.	SPARE No.		–																	
20.	WALK-IN COOLER W/TRIM (+36°)	THERMALRITE CUSTOM	1	A-20 FS0.9.0	672	120		0.3		1	D.	(3) 44W x 48"L.E.D. & (1)11W. L.E.D. FIXTURES, SWITCHING BY THE ELECTRICAL CONTRACTOR								
21.	EVAP COIL – PART OF REFRIG. SYSTEM	FOR ITEM 20 SEE SHEET FS0.6.1	1	B FS0.6.1	58	120			3.2	1	D.	SEE DETAIL K/FS0.8.0					3/4"			INSULATED INDIRECT WASTE FROM EVAP COIL TO FLOOR SINK W/1 1/2" MIN AIR GAP
22.	MOBILE STORAGE SHELVING	METRO NK3 4–TIER	9	MOBILE	85															
23.	SPARE No.		–																	
24.	DRYING RACKS W/SOLID BOTTOM SHELF	METRO PR48VX3 4–TIER	2	MOBILE	124															
25.	3–COMPARTMENT POT & PAN SINK	CUSTOM STAINLESS STEEL	1	A-2 FS0.9.0	720															
26.	WALL SHELF	CUSTOM STAINLESS STEEL	1	A-17 FS0.9.0	60															
27.	3–COMPARTMENT SINKS	PART OF ITEM 25 CUSTOM STAINLESS STEEL	2																	
28.	TWIST WASTES W/OVERFLOWS	T&S BRASS B–3952–01	3														2"			INDIRECT WASTE LINE TO A MIN. 3" TRAPPED 12"x12"x10" FLOOR SINK W/4" MIN. AIR GAP
29.	SPLASH MOUNTED FAUCETS	T&S BRASS B–0290–4	2		5								(2)3/4"	75	120°	(2)3/4"				
30.	UNDERCOUNTER DISHWASHER	CHAMPION UL–130	1		215	120			12.0	1	C.O.	NEMA 5–15P; DEDICATED CIRCUIT – 15 AMPS BREAKER	3/4"	32	120°		5/8"			I.W. TO A 3" MIN. TRAPPED F.S. W/1.25" MIN AIR GAP (32 G.P.H. WATER CONSUMPTION)
31.	DISPOSER W/18" CONE/MANUAL SWITCH	IN–SINK–ERATOR SS–200–7/MS	1 EA.		120	208			7.7	1	D.	E.C. TO INTERCONNECT ON–OFF SWITCH TO SOLENOID					2"			DIRECT WASTE; P.C. TO INTERCONNECT SOLENOID TO VACUUM BREAKER
32.	HOSE REEL W/WALL MOUNTED CABINET	T&S BRASS B–2339	1 EA.	A-16 FS0.9.0	35								1/2"	45	120°	1/2"				P.C. TO PLUMB HOT & COLD WATER THRU A PRESSURE "VAB"
33.	HAND SINK W/FAUCET W/R&L SPLASH	W/SOAP & PAPER DISPENSERS ADVANCE TABCO 7–PS–80	1 EA.	A-28 FS0.9.1	35								1/2"	5	105°	1/2"	1 1/2"			DIRECT WASTE
34.	SPARE No.		–																	
35.	2–SECTION ROLL–IN REFRIGERATOR	TRAULSEN RRI–232–U1T–FHS SELF CONTAINED	1	A–9 FS0.9.0	700	120			11.4	1	C.O.	NEMA 5–15P								SELF CONTAINED CONDENSATE EVAPORATOR
36.	ROLL–IN CARTS	FOOD WARMING EQUIP CFR–FUA–03–18	2		92															
37.	MOBILE HEATED WARMING CABINET	CRES–COR H–137–UA–12–8	1	MOBILE	255	120			16.0	1	C.O.	NEMA 5–15P								
38.	MOBILE HEATED CABINET	CRES–COR H–138–PS–1834D	1	MOBILE	317	120			16.0	1	C.O.	NEMA 5–20P								
39.	TYPE ONE EXHAUST HOOD	S.A. FN–B–MB–2W(D)–115/5.25 SEE SHEET FS0.10.0	1	A-13 FS0.9.0	1378	120		0.1			D.	(5) 17W L.E.D. LIGHT FIXTURES SWITCHING BY THE ELECTRICAL CONTRACTOR								(1) 17"x 10" EXH DUCT @ 1479 CFM @ 0.464 S.P. EA. (2) 32"x 8" MUA DUCTS @ 629 CFM @ 0.20 S.P. (EA.)
40.	EXHAUST SYSTEM	SPEC'D BY THE MECH. ENG. PROVIDED BY H.V.A.C. CONTR.	1									BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
41.	MAKE–UP AIR SYSTEM	SPEC'D BY THE MECH. ENG. PROVIDED BY H.V.A.C. CONTR.	1									BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
42.	FIRE SUPPRESSION SYSTEM PIPING SYSTEM	ANSUL R–102 (UL 300 LISTED) SEE DETAIL H/FS0.10.0	1																	P.C. TO INSTALL EXCT. 4" ANSUL GAS S.O.V.; VALVE BY F.S.E.C. (VERIFY W/PLUMBING ENGINEER)
43.	FIRE SUPPRESSION SYS. CONTROL AUTOMAN	ANSUL R–102 PART OF ITEM 42	1	A–6 FS0.9.0	75	120			13.0	1	D.	20 AMP DEDICATED CIRCUIT								
44.	FIRE SUPPRESSION SYSTEM MANUAL PULL	ANSUL R–102 PART OF ITEM 42	1																	
45.	S/S WALL FLASHING W/HOOD TRIM	CUSTOM STAINLESS STEEL	LOT																	
46.	MOBILE DOUBLE CONVECTION OVEN	BLODGETT DFG–100–ES DBL W/QUICK DISCONNECT	1	A-40 FS0.9.1	1095	(2)120			(2)8.0	(2)1	(2)C.O.	NEMA 5–15P					3/4"	90		(1) REAR NATURAL GAS CONNECTION (F.S.E.C. TO PROVIDE QUICK DISCONNECT AND RESTRAINING DEVICE)
47.	24" 4–OPEN BURNER	VULCAN VCRH24 6" HIGH FLUE RISER	1	A–18 FS0.9.0	207							BATTERY SPARK IGNITION					3/4"	100		1" REAR NATURAL GAS CONNECTION @ 300,000 BTU's CONNECT TO ITEMS 47, 48 & 50
48.	24" GRIDDLE	VULCAN VCRG24–7 6" HIGH FLUE RISER & Q.D.	1	A–18 FS0.9.0	243												3/4"	50		FRONT MANIFOLD GAS CONNECTION FROM ITEM 47 CONNECT TO ITEMS 47, 48 & 50
49.	MOBILE 72" REFRIGERATED BASE	VULCAN ARS72 SELF CONTAINED	1	MOBILE	555	120			6.7	1	C.O.	NEMA 5–15P								SELF CONTAINED CONDENSATE EVAPORATOR
50.	24" CHAR–BROILER	VULCAN VCRB–25 6" HIGH FLUE RISER	1	A–18 FS0.9.0	290												3/4"	58		FRONT MANIFOLD GAS CONNECTION FROM ITEM 47 CONNECT TO ITEMS 47, 48 & 50
51.	FULL SIZE GAS COMBI OVEN W/(2) RACKS	RATIONAL ICP 20–FULL SIZE G W/WATER FILTER & Q.D.s	1	A–11 FS0.9.0	835	208			15.0	1	D.					2)1/2"	2"	1"	304	I.W. TO F.S. W/4" AIR GAP, CONNECT DRAIN W/HIGH TEMP PIPING; (1) REAR NATURAL GAS CONNECTION
52.	ACCESSIBLE HAND SINK W/FAUCET	JOHN BOOS PBHS–ADA–P–STD W/SOAP & P.T. DISPENSER	1 EA.	A–28 FS0.9.1	35								1/2"	5	105°	1/2"	1 1/2"			DIRECT WASTE
53.	SPARE No.		–																	
54.	SPARE No.		–																	
55.	L–SHAPED PREP TABLE W/2–COMP'T SINKS	W/DRAWERS & SINK COVERS CUSTOM STAINLESS STEEL	1	A–2 FS0.9.0	520	120			15.0	1	C.O.	(3) CONVENIENCE OUTLETS								
56.	L–SHAPED WALL SHELF	CUSTOM STAINLESS STEEL	1	A–17 FS0.9.0	100															
57.	2–COMPARTMENT SINKS	PART OF ITEM 55 CUSTOM STAINLESS STEEL	2																	
58.	TWIST WASTES W/OVERFLOW	T&S BRASS B–3952–01	4														2"			INDIRECT WASTE LINE TO A MIN. 3" TRAPPED 12"x12"x10" FLOOR SINK W/1" MIN. AIR GAP
59.	SPLASH MOUNTED FAUCETS	T&S BRASS B–0231–MH4	2		5								1/2"	10	120°	1/2"				
60.	TRASH CANS W/DOLLY AND LID	RUBBERMAID FG26–2000–GRAY	3 EA.	MOBILE																
61.	MOBILE WORK TABLE W/DRAWER	CUSTOM STAINLESS STEEL	1	MOBILE	150	120			15.0	1	C.O.	(2) CONVENIENCE OUTLETS (NEMA 5–15P) DROP–CORD STUB–DOWN FROM CEILING								
62.	SPARE No.		–																	
63.	2–SECTION ROLL–THRU HEATED CABINET	TRAULSEN RHG232P–FHS	1	A–9 FS0.9.0	630	120/208			10.14	1	D.	STUB–DOWN FROM CEILING								
64.	ROLL–IN CARTS	FOOD WARMING EQUIP CFR–FUA–03–18	2		92															
65.	MOBILE TABLE W/ACCESSIBLE STATION	W/SHEET PAN STORAGE CUSTOM STAINLESS STEEL	1	MOBILE	280	120			15.0	1	C.O.	(2) CONVENIENCE OUTLETS (DROP–CORD & PLUG) STUB–DOWN FROM CEILING								
66.	MICROWAVE OVEN	PANASONIC NE–1064F	1		34	120			13.4	1	C.O.	NEMA 5–15P								
67.	TABLE MOUNTED CAN OPENER	EDLUND S–11L	1																	
68.	MOBILE WORK TABLE W/(1) DRAWER	CUSTOM STAINLESS STEEL	1	MOBILE	240	120			15.0	1	C.O.	(2) CONVENIENCE OUTLETS (DROP–CORD & PLUG) STUB–DOWN FROM CEILING								
69.	1–SECTION ROLL–THRU REFRIGERATOR	TRAULSEN RRI132LPUT–FHS SELF CONTAINED	1	A–9 FS0.9.0	490	120			11.6	1	C.O.	STUB–DOWN FROM CEILING NEMA 5–15P								SELF CONTAINED CONDENSATE EVAPORATOR
70.	ROLL–IN CART	FOOD WARMING EQUIP CFR–FUA–03–18	1		92															
71.	MOBILE HEATED CABINETS	CRES–COR H–138–PS–1834D	3	MOBILE	317	120			16.0	1	C.O.	NEMA 5–20P								
72.	SPARE No.		–																	
73.	HAND SINK W/FAUCET W/R&L SPLASH	W/SOAP & PAPER TOWEL DISPENSERS	1 EA.	A–28 FS0.9.1	35							ADVANCE–TABCO 7–PS–80 SINK T&S BRASS B–1146–04	1/2"	5	105°	1/2"	1 1/2"			DIRECT WASTE
74.	PREP TABLE W/2–COMP'T SINKS	W/DRAWERS & SINK COVERS CUSTOM STAINLESS STEEL	1	A–2 FS0.9.0	520	120			15.0	1	C.O.	(3) CONVENIENCE OUTLETS								
75.	WALL SHELF	CUSTOM STAINLESS STEEL	1	A–17 FS0.9.0	100															

BASE BID – MAIN KITCHEN

ITEM	DESCRIPTION	REMARKS	QTY	ATTACH	EQUIPMENT WEIGHT	VOLTS	LOAD HP	LOAD KW	LOAD AMPS	PHASE	CONN.	ELECTRICAL REMARKS	HOT WATER HOT	HOT WATER GPH	HOT WATER TEMP	COLD WATER	WASTE	GAS	BTU 1000	PLUMBING/MECHANICAL REMARKS
76.	2–COMPARTMENT SINK	PART OF ITEM 74 CUSTOM STAINLESS STEEL	1																	
77.	TWIST WASTES W/OVERFLOW	T&S BRASS B–3952–01	2														2"			INDIRECT WASTE LINE TO A MIN. 3" TRAPPED 12"x12"x10" FLOOR SINK W/4" MIN. AIR GAP
78.	SPLASH MOUNTED FAUCET	T&S BRASS B–0231–MH4	1		5								1/2"	10	120°	1/2"				
79.	SPARE No.		–																	
80.	SPARE No.		–																	
81.	MOBILE CASHIER STAND (34" H.)	GA SYSTEMS SSADA	1	MOBILE	200															
82.	POINT–OF–SALE SYSTEM	PROVIDED BY OWNER INSTALLED BY THE G.C.	1		15	120			5.0	1	C.O.	DEDICATED CIRCUIT W/DATA LINES TO SERVER FLOOR MTD OUTLET; VERIFY ELECTRICAL REQUIREMENTS								
83.	CARD READERS	PROVIDED BY OWNER INSTALLED BY THE G.C.	1		5	120			5.0	1	C.O.	DEDICATED CIRCUIT W/DATA LINES TO SERVER FLOOR MTD OUTLET; VERIFY ELECTRICAL REQUIREMENTS								
84.	MOBILE MILK COOLER	BEV–AIRE 13FSMC–1–S SELF–CONTAINED	1	MOBILE	498	120			8.3	1	C.O.	NEMA 5–15P STUB–UP FROM FLOOR								
85.	STUDENT'S HOT/COLD SERVING COUNTER	THERMADOR T055–72 STAINLESS STEEL	1	MOBILE	400															
86.	DROP–IN 4–PAN HOT/COLD FOOD UNIT	DUKE HCF–4 DRY OPERATIONS	1		175	120/208			16.0	1	C.O.	NEMA 14–20P STUB–UP FROM FLOOR								SELF CONTAINED
87.	SNEEZE GUARD W/END GLASS	W/S/S PASS SHELF ENGLISH MFG AMA–101A	LOT		20															
88.	SERVING COUNTER W/ACCESSIBLE STATION	THERMADOR T055–72 STAINLESS STEEL	1	MOBILE	400	120			8.3	1	C.O.	NEMA 5–15P STUB–UP FROM FLOOR								
89.	SNEEZE GUARD W/END GLASS	W/S/S PASS SHELF ENGLISH MFG AMA–101A	LOT		20															
90.	STUDENT'S HOT/COLD SERVING COUNTER	THERMADOR T055–72 STAINLESS STEEL	1	MOBILE	400															
91.	DROP–IN 4–PAN HOT/COLD FOOD UNIT	DUKE HCF–4 DRY OPERATIONS	1		175	120/208			16.0	1	C.O.	NEMA 14–20P STUB–UP FROM FLOOR								SELF CONTAINED
92.	SNEEZE GUARD W/END GLASS	W/S/S PASS SHELF ENGLISH MFG AMA–101A	LOT		20															
93.	MOBILE TRAY DISPENSER	CADDY CORP CM–1814–2C	1	MOBILE	155															
94.	SPARE No.		–																	
95.	SPARE No.		–																	
96.	SPARE No.		–																	
97.	SPARE No.		–																	
98.	SPARE No.		–																	
99.	SPARE No.		–																	
100.	SPARE No.		–																	
101.	SPARE No.		–																	
102.	SPARE No.		–																	
103.	SPARE No.		–																	
104.	SPARE No.		–																	
105.	SPARE No.		–																	

BID ALT "A" – TRANSFER KITCHEN

ITEM	DESCRIPTION	REMARKS	QTY	ATTACH	EQUIPMENT WEIGHT	VOLTS	LOAD HP	LOAD KW	LOAD AMPS	PHASE	CONN.	ELECTRICAL REMARKS	HOT WATER HOT	HOT WATER GPH	HOT WATER TEMP	COLD WATER	WASTE	GAS	BTU 1000	PLUMBING/MECHANICAL REMARKS
110.	MOBILE INSULATED TRANSPORT CABINETS	CRES–COR 109–184D	6	MOBILE	150															
111.	WORK COUNTER	CUSTOM STAINLESS STEEL	1	A–6 FS0.9.0	550	120			15.0	1	C.O.	(2) CONVENIENCE OUTLETS								
112.	U/C REFRIGERATOR W/3" CASTERS	BEVERAGE AIR WTR27HC–FLT SELF CONTAINED	1	MOBILE	192	120			2.0	1	C.O.	NEMA 5–15P								SELF CONTAINED CONDENSATE EVAPORATOR
113.	WALL SHELF	CUSTOM STAINLESS STEEL	1	A–17 FS0.9.0	60															
114.	DROP–IN 2–COMPARTMENT SINK W/FAUCET	ADVANCE TABCO DI–2–10 ADVANCE TABCO FAUCET	1 EA.		35								1/2"	5	105°	1/2"	1 1/2"			I.W. TO A 3" MIN. TRAPPED F.S. W/3" MIN AIR GAP (32 G.P.H. WATER CONSUMPTION)
115.	UNDERCOUNTER DISHWASHER	CHAMPION UL–130	1		215	120			12.0	1	C.O.	NEMA 5–15P; DEDICATED CIRCUIT – 15 AMPS BREAKER	3/4"	32	120°		5/8"			I.W. TO A 3" MIN. TRAPPED F.S. W/1.25" MIN AIR GAP (32 G.P.H. WATER CONSUMPTION)
116.	ACCESSIBLE HAND SINK W/FAUCET	JOHN BOOS PBHS–ADA–P–STD W/SOAP & P.T. DISPENSER	1 EA.	A–28 FS0.9.1	35								1/2"	5	105°	1/2"	1 1/2"			DIRECT WASTE
117.	SPARE No.		–																	
118.	SPARE No.		–																	
119.	WALL BACKING	PROVIDED BY F.S.E.C. SEE KEYNOTE 1/SHEET FS.05.0	LOT	A–24 FS0.9.1																

ABBREVIATIONS

A.C.C.	APPLICABLE CATEGORY CONTRACTOR	CW	COLD WATER	FLUOR	FLUORESCENT	MECH	MECHANICAL	RPPD	REDUCED PRESSURE PRINCIPLE DEVICE
A.F.F.	ABOVE FINISHED FLOOR	D.	DIRECT	FPM	FOOT POUNDS PER MINUTE	MFR	MANUFACTURER	S.O.V.	SHUT–OFF VALVE
A.P.	AIR PRESSURE	DW	DISH MACHINE	FRP	FIBERGLAS REINFORCED PLASTIC	MIN.	MINIMUM	SP	STATIC PRESSURE
ACR	AIR CONDITIONING REFRIGERATION	DBL	DOUBLE	F.S.S.	FIRE SUPPRESSION SYSTEM	MTD.	MOUNTED	S/C	SELF CONTAINED
ADA	AMERICAN DISABILITY ACT	DEPT	DEPARTMENT	FT	FOOT or FEET	MUA	MAKE–UP AIR	S/S	STAINLESS STEEL
ADDT'L	ADDITIONAL	DET.	DETAIL			MULL	MULLION	SCHED	SCHEDULE
ADJ.	ADJUSTABLE	DIA	DIAMETER	G.C.	GENERAL CONTRACTOR			SECT	SECTION
ALT.	ALTERNATE	DIAG	DIAGONAL	G.M.	GAS METER			SHT	SHEET
ALUM.	ALUMINUM	DIM.	DIMENSION	GA.	GAUGE	N.A.	NOT AVAILABLE	SIM	SIMILAR
AMPS.	AMPERES	DISP.	DISPENSER	GAL.	GALLON	NSF	NATIONAL SANITATION FOUNDATION	SL/SF	SOLID SURFACE
APPROX.	APPROXIMATE	DIV.	DIVISION	GALV	GALVANIZED	N.T.S.	NOT TO SCALE	SMACNA	SHEET METAL AIR CONDITIONING NAT. ASSOC.
ARCH.	ARCHITECT	DMH	DIELI MURAWKA HOWE	GPH	GALLONS PER HOUR	N/A	NOT APPLICABLE	SNZ GD	SNEEZE GUARD
ASS'Y	ASSEMBLY	DN	DOWN	GPM	GALLONS PER MINUTE	NAT	NATURAL	SPEC	SPECIFICATIONS
ATTACH.	ATTACHMENT	DP	DEEP			No.	NUMBER	SQ FT	SQUARE FEET
		DPDT	DOUBLE PULL, DOUBLE THROW	H&C	HOT AND COLD WATER			STMR	STEAMER
B.F.C.	BELOW FINISHED CEILING	DSA	DIVISION OF THE STATE ARCHITECT	H.	HEIGHT	OB	OPEN BURNER	SW	SWITCH
B/C	BLOWER COIL	DTA	DIAMOND TREAD ALUMINUM	H.I.D.	HIGH INTENSITY DISCHARGE	O.C.	ON CENTER	SYM	SYMBOL
BLDG	BUILDING	DWG	DRAWING	H.V.A.C.	HEATING/VENTILATING AND AIR CONDITIONING	O.D.	OUTSIDE DIAMETER	SYS	SYSTEM
BLK	BLOCKING	DWR	DRAWER	HACCP	HAZARD ANALYSIS CRITICAL CONTROL POINT	OPNG	OPENING		
BPD	BACKFLOW PREVENTION DEVICE	E.	EXISTING	HCAI	HEALTH CARE & ACCESS INFORMATION	OZ	OUNCE	T.B.D.	TO BE DETERMINED
BRKT	BRACKET	E.C.	ELECTRICAL CONTRACTOR	HP	HORSE POWER	P.B.	PULL BOX	T.C.	TRASH CAN
BTU	BRITISH THERMAL UNITS PER HOUR	E.F.	EXHAUST FAN	HTR	HEATER	P.C.	PLUMBING CONTRACTOR	TEL CO	TELEPHONE COMPANY
BWP	BUILDING WORKS PLAN	E.G.	FOR EXAMPLE	HW	HOT WATER	PERF.	PERFORATED	TEMP.	TEMPERATURE
		EMT	ELECTRICAL METALLIC TUBING			PG	PAGE	TYP	TYPICAL
C.O.	CONVENIENCE OUTLET	E.P.	ELECTRICAL PANEL	I.D.	INSIDE DIMENSION	PH	PHASE	URC	UNIFORM BUILDING CODE
C.T.	CERAMIC TILE	EA	EACH	I.E.	THEREFORE	PL	PLATE	UDS	UTILITY DISTRIBUTION SYSTEM
C/E	CONDENSATE EVAPORATOR	ELEV	ELEVATION	I.W.	INDIRECT WASTE	PREP	PREPARATION	UL	UNDERWRITERS LABORATORY
C/L	CENTER LINE			IN.	INCHES	PREV	PREVIOUS	UMC	UNIFORM MECHANICAL CODE
C/T	COUNTER TOP	EPH	ENVIRONMENTAL HEALTH PROTECTION	INFO	INFORMATION	PSF	POUNDS PER SQUARE FOOT	UPC	UNIFORM PLUMBING CODE
C/W	COMES WITH	EQ.	EQUAL	INSUL	INSULATION	PSI	POUNDS PER SQUARE INCH	UV	ULTRA VIOLET
CAB.	CABINET	EQUIP	EQUIPMENT	INT	INTERIOR	PT	POINT	U/C	UNDER COUNTER
CANT.	CANTILEVER	ETC	ET CETERA	IPS	INTERNAL PIPE SIZE	PVC	POLY VINYL CHLORIDE		
CCD	CONSTRUCTION CHANGE DIRECTIVE	EVAP	EVAPORATOR					VAV	VARIABLE AIR VOLUME
CEIL.	CEILING	EXH	EXHAUST	J–BOX	JUNCTION BOX	Q.D.	QUICK DISCONNECT	VCT	VINYL COMPOSITION TILE
CFM	CUBIC FEET PER MINUTE	EXT	EXTERIOR	KW	KILOWATTS	QT.	QUARRY TILE	VS	VERSUS
CLR	CLEAR	E.M.S.	ENERGY MANAGEMENT SYSTEM			QT	QUART	VFD	VARIABLE FREQUENCY DRIVE
CMU	CONCRETE MASONRY UNIT	F.D.	FLOOR DRAIN	L.	LENGTH	QTY	QUANTITY		
CO2	CARBON DIOXIDE	F.J.	FIELD JOINT	L/P	LAMINATED PLASTIC			W.	WIDTH
COL	COLUMN	F.S.	FLOOR SINK	LBS	POUNDS	RAD	RADIUS	W.G.	WATER GAUGE
COMP'R	COMPRESSOR	F.S.E.C.	FOODSERVICE EQUIPMENT CONTRACTOR	LIN	LINEAR	REC'M'D	RECOMMENDED	W.H.	WATER HEATER
COMP'T	COMPARTMENT	F.T.	FLOOR TROUGH	LOCN	LOCATION	REFRIG	REFRIGERATOR	W.I.	WALK IN
CONC	CONCRETE	F.T.D.	FAHRENHEIT TEMPERATURE DIFFERENCE	LTS	LIGHTS	REMOV	REMOVABLE	W.I.C.	WIDTH IN CLEAR
CONN.	CONNECTION	FEWD	FOOD ESTABLISHMENT WASTEWATER DISCHARGE			REQD	REQUIRED	W/	WITH
CONT.	CONTINUOUS	FIN.	FINISH	MACH	MACHINE	RLA	RUNNING LOAD AMPS	WGT	WEIGHT
CONTR.	CONTRACTOR	FIXT	FIXTURE	MAT.	MATERIAL	RM	ROOM	W.P.	WATER PRESSURE
CUST.	CUSTOM	FLR	FLOOR	MAX.	MAXIMUM	RND	ROUND	X–BRC	CROSS–BRACING

HOOD EXHAUST DATA

HOOD ITEM	HOOD MODEL	HOOD SIZE L	HOOD SIZE W	EXHAUST AIR FLOW REQUIREMENTS TOTAL EXHAUST	STATIC PRESSURE	EXHAUST COLLAR QTY	LENGTH	WIDTH	GREASE EXTRACTOR QTY	SIZE L	SIZE W	FILTER TYPE	MAX. RATING	HOOD + PLENUM CONSTRUCTION	WEIGHT
39	FN–B–MB	180"	60"	2805 CFM	0.63" W.C.	1	27"	10"	6	20"	25"	CARTRIDGE	500 CFM/LF	ALL 18GA. 304 S.S.	825 lbs

HOOD SUPPLY DATA

MB FRONT	MB FRONT	MJ GRILL	MJ GRILL	SUPPLY AIR FLOW REQUIREMENTS TOTAL SUPPLY AIR	TOTAL STATIC PRESSURE	SUPPLY COLLAR QTY	LENGTH	WIDTH
41"	33"	33"	22"					
2	2	5	0	2670 CFM	0.2" W.C	2	34"	8"

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PLUMBING LEGEND

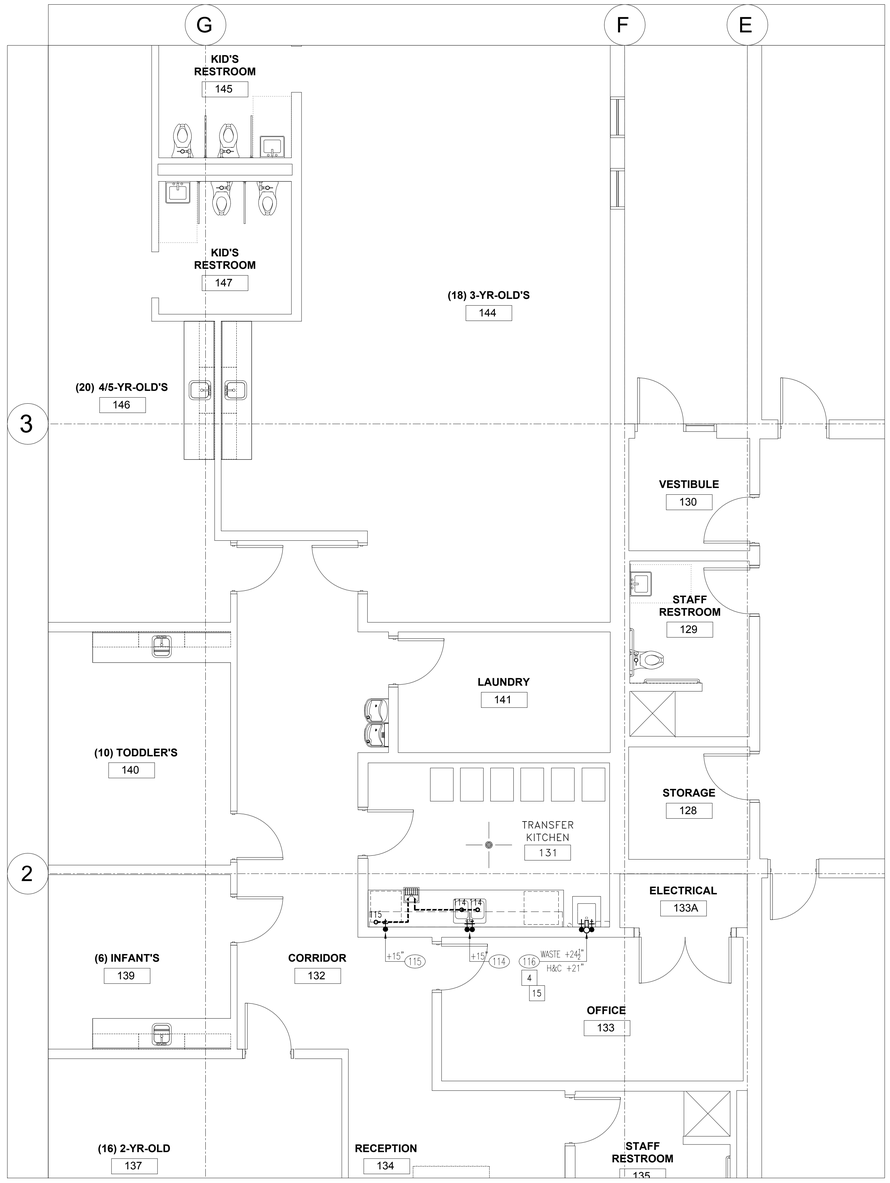
- COLD WATER STUB
- COLD WATER STUB (FILTERED WATER)
- HOT WATER STUB
- DIRECT WASTE
- INDIRECT DRAIN LINE TO FLOOR SINK
- GAS STUB (NATURAL GAS SUPPLY)
- FLOOR DRAIN (WITH SLOPE PER CODE)
- (1) ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- [1] KEYNOTE SYMBOL (SEE KEYNOTES BELOW)
- ANSUL GAS SHUT-OFF VALVE
- FLOOR SINK
- FLOOR SINK (WITH 1/2 GRATE) WITH 1/2" MAX. GRATE SPACING ALL DIRECTIONS
- FLOOR SINK (WITH 3/4 GRATE) 1/2" MAX. GRATE SPACING ALL DIRECTIONS

NOTE:
REFERENCE TO PLUMBING ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION

NOTE:
SEE SHEET FS0.0.0 FOR PLUMBING NOTES AND OTHER APPLICABLE NOTES

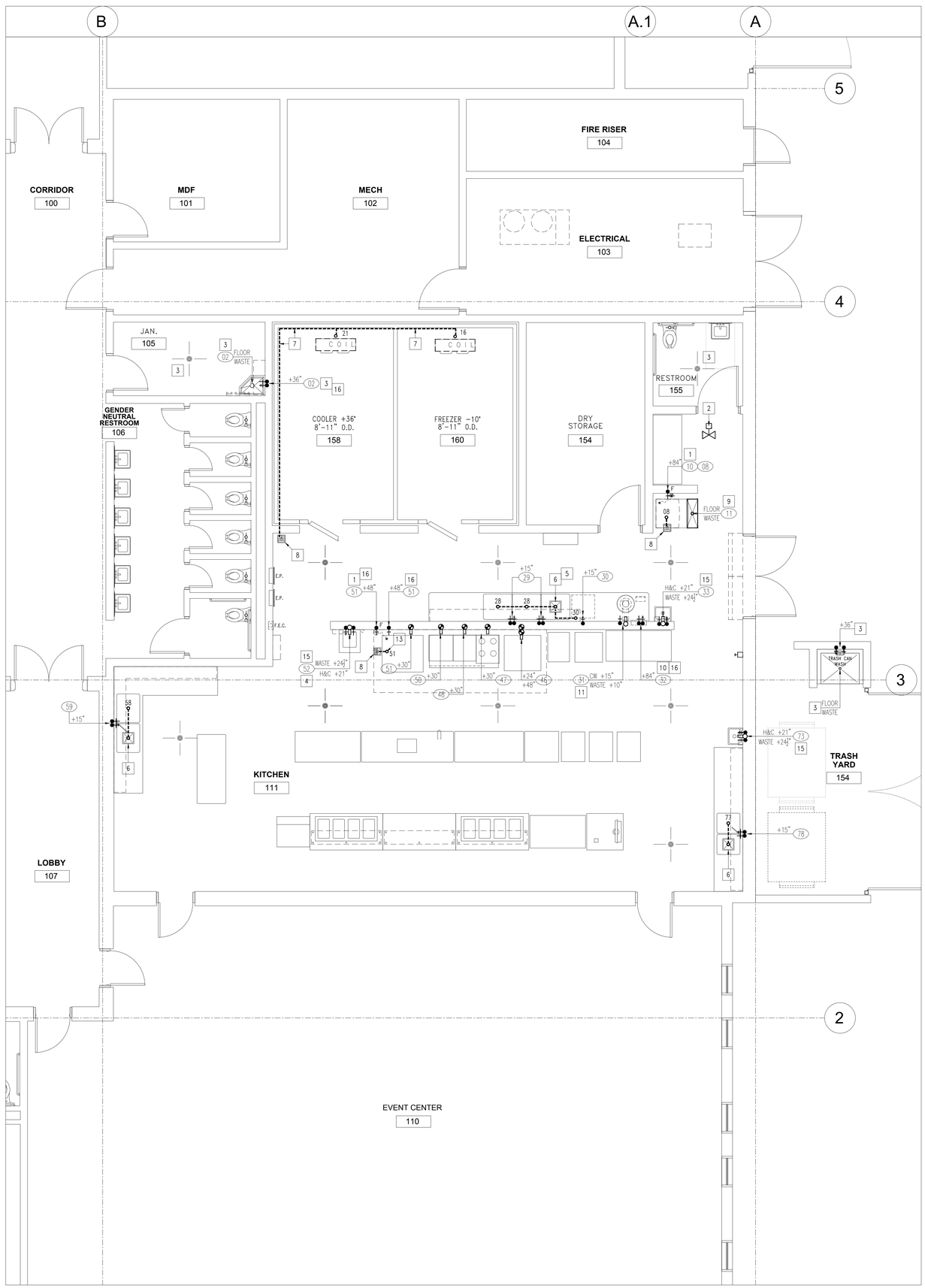
PLUMBING KEYNOTES

1. FILTERED WATER REQUIRED. VERIFY REQUIREMENTS WITH THE VENDOR
2. xx" GAS SHUT-OFF VALVE – VERIFY SIZE, QUANTITY & LOCATION W/PLUMBING ENGINEER
3. PLUMBING REQUIREMENTS FOR THESE AREAS TO BE VERIFIED WITH THE ARCHITECT AND/OR PLUMBING ENGINEER
4. ACCESSIBLE HAND SINK – SEE DETAIL A/FS0.8.0
5. 3-COMPARTMENT POT SINK TO GREASE INTERCEPTOR – SEE DETAIL E/FS0.8.0
6. FLOOR SINKS IN THE WARE WASHING AREA SHALL BE 12" x12" x10" DEEP FLOOR SINK, MINIMUM 3" TRAPPED
7. DRAIN LINE FROM EVAP COIL TO FLOOR SINK SEE DETAIL E/FS0.6.1
8. 8" x 8" x 6" DEEP FLOOR SINK
9. FLOOR TROUGH WITH SUBWAY GRATE – SEE DETAIL W/FS0.8.1
10. WALL MOUNTED HOSE REEL – SEE DETAIL F/FS0.8.0
11. DISPOSER WITH CONTROL PANEL – SEE DETAIL D/FS0.8.0
12. HOT & COLD WATER STUB-UP AT +10" A.F.F., TEE-OFF AND CONNECT AS REQUIRED
13. P.C. TO INTER-CONNECT INDIRECT WASTE TO DRAIN COOLING KIT TO FLOOR SINK
14. NOT USED
15. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL TEMPERING VALVES AND HOSE BIB
16. MOP SINK FAUCET, FILLER HOSES, PRE-RINSE FAUCETS, CARBONATORS, COMBI-OVENS, AND COUNTERTOP EQUIPMENT W/WATER CONNECTIONS TO BE PROVIDED WITH AN APPROVED BACKFLOW PREVENTION DEVICE WITH REDUCED PRESSURE PRINCIPLE. BACKFLOW DEVICE SHALL BE INSTALLED UPSTREAM OF ANY POTENTIAL HAZARD BETWEEN POTABLE WATER AND THE SOURCE OF CONTAMINATION.
17. NOT USED
18. NOT USED
19. NOT USED
20. SOFTEN HOT WATER FOR: DISHWASHERS, BOOSTER HEATERS, STEAMERS, AND COMBI-OVENS. FILTERED WATER FOR: COFFEE MAKERS, ICE MAKERS, DRINK DISPENSERS AND COMBI-OVENS. TREATED WATER (TOTAL DISSOLVED SOLIDS) FOR: BOILERS AND STEAMERS.



BID ALT "A" - TRANSFER KITCHEN ROOM 131 PLUMBING PLAN

1/4" = 1'-0"



BASE BID - MAIN KITCHEN ROOM 111 FOODSERVICE EQUIPMENT PLUMBING PLAN

1/4" = 1'-0"

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Project

CITY OF FERNLEY CRRC

Job No: 21-058.00

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RESCOPING PLAN

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REV	DATE	DESCRIPTION

Sheet Title

FOODSERVICE EQUIPMENT PLUMBING PLAN

Date: SEPTEMBER 06, 2022

Sheet No:

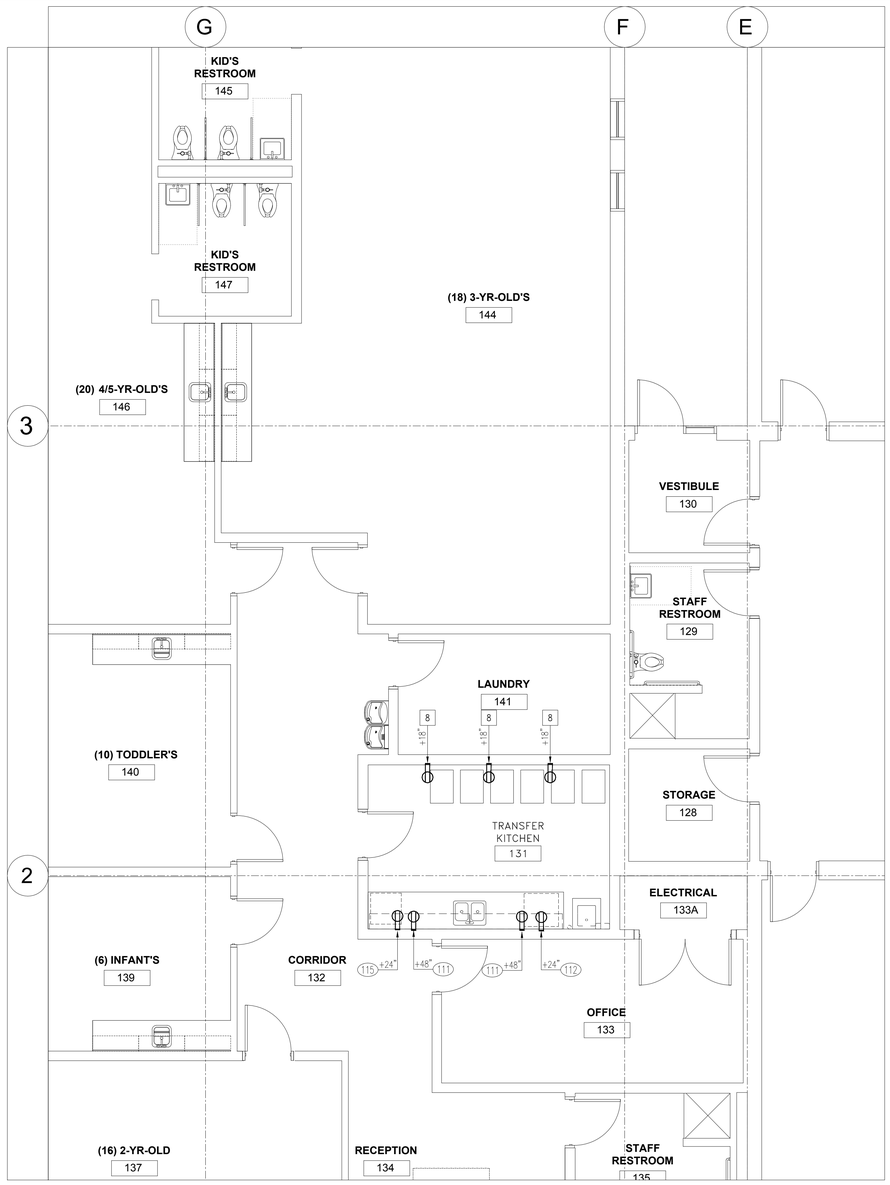
FS0.3.0

ELECTRICAL LEGEND

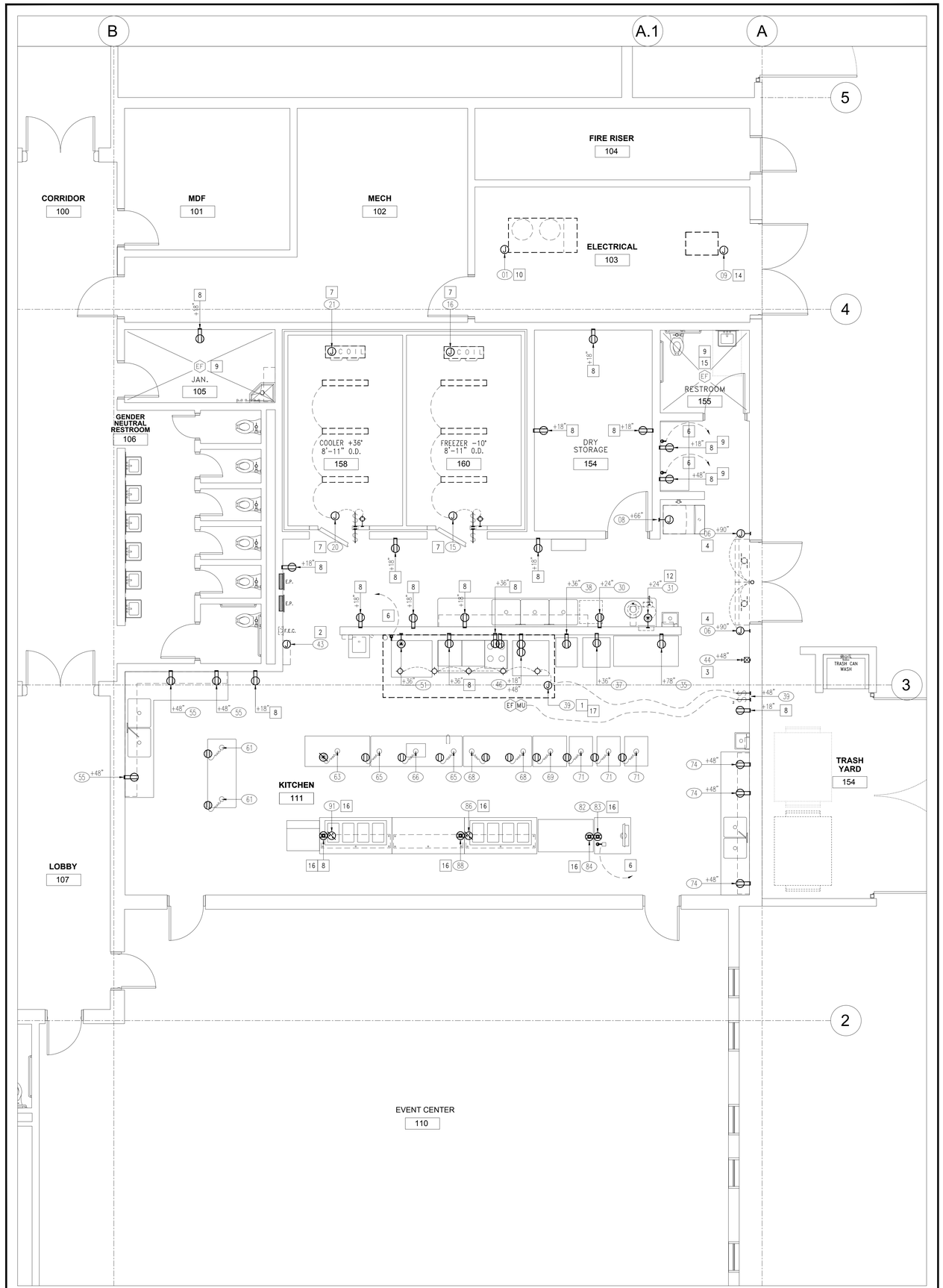
- 120 VOLT 1ø CONVENIENCE OUTLET (C.O.)
- 120 VOLT 1ø DIRECT FLEXIBLE CONNECTION
- 120 VOLT 1ø 8W LED LIGHT FIXTURE
- 120V/1ø DROP CORD DOWN FROM BUSBAR @ 60" A.F.F.
- 208V/1ø DROP CORD DOWN FROM BUSBAR @ 60" A.F.F.
- 208 VOLT 1ø OR 3ø CONVENIENCE OUTLET (C.O.)
- 120/208 VOLT 1ø CONVENIENCE OUTLET (C.O.)
- 208 VOLT 1ø OR 3ø DIRECT FLEXIBLE CONNECTION
- 120/208 VOLT 1ø DIRECT FLEXIBLE CONNECTION
- 480 VOLT 3ø DIRECT FLEXIBLE CONNECTION
- JUNCTION BOX
- SWITCH
- SWITCH FOR HOOD LIGHTS
- INTERLOCK EXHAUST & M.U.A. FANS
- EF — EXHAUST FAN
- MU — MAKE-UP AIR FAN
- FIRE PULL-BOX (+48" A.F.F.)
- 120 VOLT 1ø 36W LED HOOD OR W.I. LIGHT FIXTURE
- DATA LINE (VERIFY W/ELECTRICAL CONTRACTOR)
- +48" — UTILITY MOUNTING HEIGHT ABOVE FINISHED FLOOR
- (1) — ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- 123 — ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- FIXTURE MOUNTED OUTLET
- [1] — KEYNOTE SYMBOL (SEE KEYNOTES AT BOTTOM)

ELECTRICAL KEYNOTES

1. J-BOX STUB-DOWN FROM ABOVE AND CONNECT TO HOOD LIGHTS
2. J-BOX LOCATED 12" ABOVE CEILING LINE FOR FIRE SUPPRESSION SYSTEM AUTOMAN (SEE DETAIL J/FS0.8.0)
3. OCTAGON PULL BOX FOR FIRE SUPPRESSION SYSTEM – SEE DETAIL J/FS0.8.0
4. WALL MOUNTED AIR CURTAIN'S MICRO SWITCH – SEE DETAIL G/FS0.8.0
5. NOT USED
6. DATA LINE TO SERVER VERIFY LOCATION WITH ELECTRICAL ENGINEER
7. TYPICAL WALK-IN BOX WIRING – SEE DETAIL K/FS0.8.0
8. CONVENIENCE OUTLETS – 120 VOLT 1ø 20 AMP; VERIFY ADDITIONAL LOCATIONS W/ELECTRICAL ENGINEER
9. ADDITIONAL CONVENIENCE OUTLETS, DATA & TELEPHONE LINES (IF APPLICABLE) TO BE VERIFIED W/ELECT ENGINEER
10. REFRIGERATION RACK LOCATED ON ROOF SEE SHEET A4.01 FOR EXACT LOCATION
11. J-BOX STUB-UP +10" AND CONNECT TO EQUIPMENT – SEE DETAIL H/FS0.8.0
12. DISPOSER W/CONTROL PANEL SEE DETAIL D/FS0.8.0
13. NOT USED
14. CONDENSING RACK LOCATED ON ROOF SEE SHEET A4.01 FOR EXACT LOCATION
15. EXHAUST FAN AND LIGHT TO BE INTERLOCKED IN EMPLOYEE RESTROOM
16. ALL ELECTRICAL TO STUB INTO FLOOR BOXES "BUMPED UP" 3/8" MAX. AT 2 TO 1 SLOPE TO PROTECT FROM WATER
17. EXHAUST & M.U.A. FAN MUST BE INTERLOCKED SWITCH
18. CONDUIT WITH ELECTRICAL WIRING TO STUB-UP A.F.F., FLEX AND CONNECT TO EQUIPMENT AND/OR CO'S AS REQUIRED (MOUNT CO'S IN FIXTURE). ELECTRICAL WIRING TO BE SIZED FOR ALL INCOMING SERVICE BY THE ELECTRICAL ENGINEER. E.C. TO MAKE FINAL HOOK-UPS TO ALL APPLICABLE EQUIPMENT AND TO PROVIDE AND INSTALL CONTRACTOR TO MAKE FINAL HOOK-UPS TO ALL SWITCHES BREAKERS, STARTERS, CONDUIT, JUNCTION BOXES AND OUTLETS IN FIXTURE. FIXTURE FABRICATOR TO LOCATE ALL OUTLETS AND SWITCHES WHEN PART OF FIXTURE. INTERNAL WIRING TO BE PROVIDED AND INSTALLED BY THE E.C. IN ACCORDANCE WITH ALL LOCAL CODES. E.C. SHALL SEAL ALL ELECTRICAL PENETRATIONS THROUGH FLOORS, WATER-TIGHT AND VERMIN-PROOF. A MINIMUM OF 3 WIRES REQUIRED ON ALL 208 VOLT OR LARGER CIRCUITS. SEE FOOD SERVICE EQUIPMENT SCHEDULE FOR LOADED SCHEDULE; ELEVATIONS FOR CO'S LOCATIONS; AND ELECTRICAL NOTES FOR ADDITIONAL REQUIREMENTS. (DETAIL H/FS0.8.0)
19. NOT USED



BID ALT "A" - TRANSFER KITCHEN ROOM 131 ELECTRICAL PLAN 1/4" = 1'-0"



BASE BID - MAIN KITCHEN ROOM 111 FOODSERVICE EQUIPMENT ELECTRICAL PLAN 1/4" = 1'-0"

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Sheet Title

FOODSERVICE EQUIPMENT ELECTRICAL PLAN

Date: SEPTEMBER 06, 2022

Sheet No:

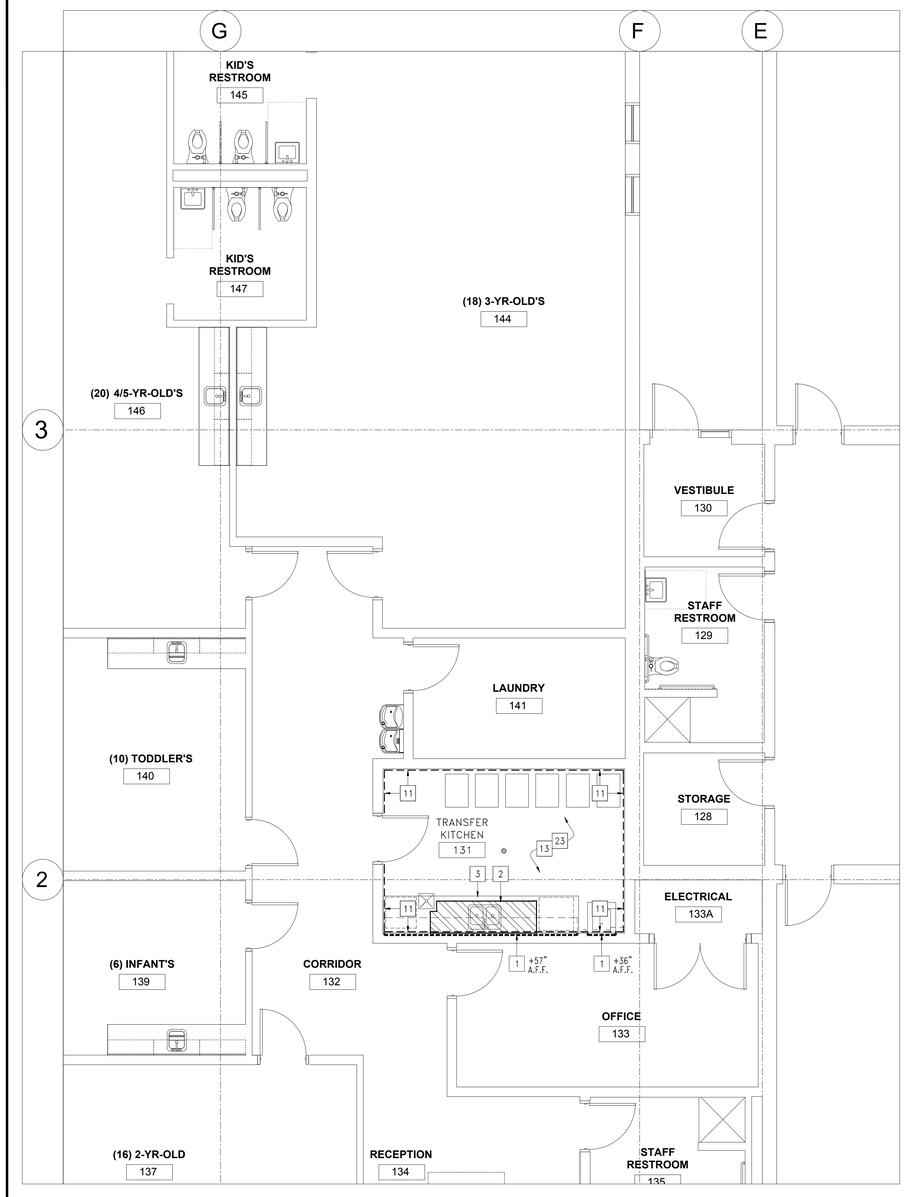
FS0.4.0

BUILDING WORK LEGEND

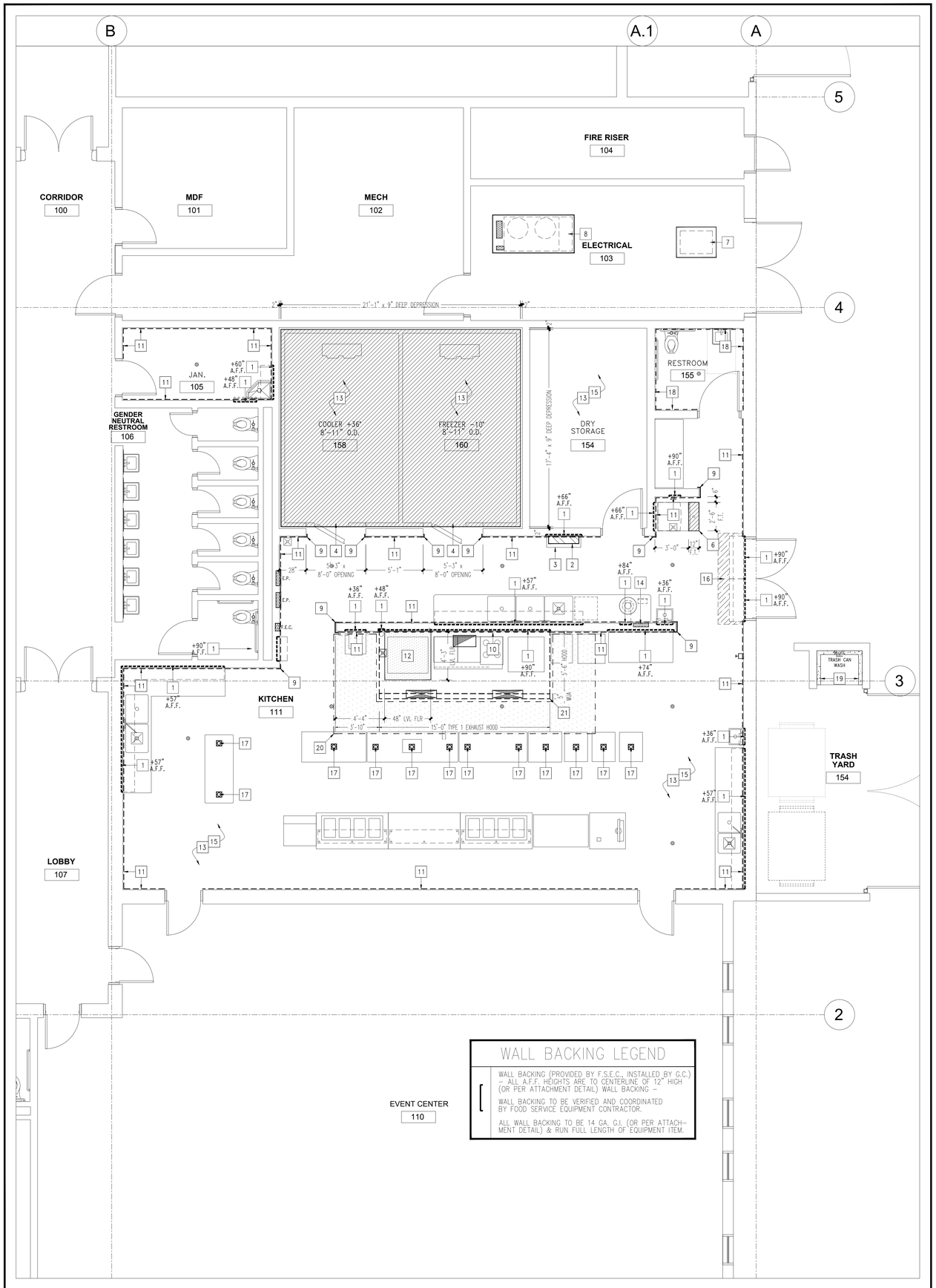
- WALL BACKING (14 GA. G.I.)
- S/S WALL FLASHING
- EXHAUST DUCT CONNECTION
- MAKE-UP AIR DUCT CONNECTION
- EXHAUST HOOD OUTLINE
- DROP CORD SET, DOWN FROM CEILING
- SMOOTH AND LEVELED FLOOR AREA
- WALL OPENING (SLEEVE)
- WALL or WINDOW OPENING
- FLOOR DEPRESSION
- FIBERGLASS REINFORCED PLASTIC (F.R.P.)
- WALL RECESS FOR CONTROL CABINETS
- WALK-IN COOLER (SLAB-ON-GRADE)
- FLOOR DRAIN
- STEEL KICKBASE OUTLINE
- FLOOR SINK AT STEEL KICKBASE OUTLINE
- 1 KEYNOTE SYMBOL (SEE KEYNOTES AT LEFT)

BUILDING WORK KEYNOTES

1. WALL BACKING – HEIGHT AS INDICATED SEE DETAIL C/FS0.8.0
2. GALV CURB OUTLINE SEE DETAIL B/FS0.8.0
3. COUNTERTOP LINE AND/OR EQUIPMENT SEE ELEVATION SHEETS FS0.7.0 AND FS0.7.1
4. 9" FLOOR DEPRESSION @ INTERIOR WALK-IN BOX SEE DETAIL L/FS0.8.0
5. NOT USED
6. 6" FLOOR DEPRESSION @ FLOOR TROUGH SEE DETAIL W/FS0.8.1
7. CONDENSER'S RACK PLATFORM OUTLINE; SEE DETAIL _/FS.06.1 FOR SUGGESTED SIZE; SEE SHEET A4.01 FOR EXACT LOCATION
8. REFRIG. RACK'S PLATFORM ON ROOF (SEE SHEET FS.06.1) SEE SHEET A4.01 FOR EXACT LOCATION
9. STAINLESS STEEL END CAP, CORNER GUARD, AND WALL CAPS – SEE DETAIL N/FS0.8.1
10. S/S WALL FLASHING (FLOOR TO UNDERSIDE OF HOOD & UNDER-SIDE OF FINISHED CEILING WHERE NO HOOD; DETAIL P/FS0.8.0
11. F.R.P. (FIBERGLASS REINFORCED PANELS) FROM TOP OF COVE BASE TO FINISHED CEILING (SEE ARCH SPECS/DWGS)
12. FLOOR TO BE LEVEL AND SMOOTH FOR ROLL-IN UNITS
13. EPOXY FLOOR TO HAVE SMOOTH SURFACE UNDER ALL EQUIP, AND ALL WALKWAYS TO HAVE A LIGHT TEXTURE ONLY.
14. HOSE REEL CONTROL PANEL WALL RECESS SEE MANUFACTURER SPEC. SHEET
15. 10'-0" T-BAR CEILING HEIGHT TO BE PROVIDED IN THE MAIN KITCHEN – SEE ARCHITECT'S SHEET A3.01
16. PROVIDE A CEILING POCKET @ 104" HIGH FOR DELIVERY DOOR AIR CURTAIN
17. DROP CORD DOWN FROM CEILING
18. CERAMIC WALL TILE SEE INTERIORS/ARCHITECTURAL DRAWINGS
19. 6" x 6" RETAINING CURB FOR CAN WASH SEE ARCHITECTURAL / PLUMBING DRAWINGS
20. CEILING DIFFUSERS TO BE 4'-0" FROM ALL SIDES OF THE EXHAUST HOOD; SEE SHEET FS.10.0
21. TYPE 1 HOOD (ITEM 39) SEE SHEET FS.10.0 (1) 17"x10" EXH DUCT @ 2098 CFM @ 0.61 S.P. (2) 32"x 8" MUA DUCTS @ 629 CFM @ 0.20 S.P. (EA.)
22. NOT USED
23. 9'-0" T-BAR CEILING HEIGHT TO BE PROVIDED IN THE TRANSFER KITCHEN – SEE ARCH. SHEET A3.10A



BID ALT "A" – TRANSFER KITCHEN ROOM 131 BUILDING WORK PLAN 1/4" = 1'-0"



WALL BACKING LEGEND

WALL BACKING (PROVIDED BY F.S.E.C., INSTALLED BY G.C.) – ALL A.F.F. HEIGHTS ARE TO CENTERLINE OF 12" HIGH (OR PER ATTACHMENT DETAIL) WALL BACKING –

WALL BACKING TO BE VERIFIED AND COORDINATED BY FOOD SERVICE EQUIPMENT CONTRACTOR.

ALL WALL BACKING TO BE 14 GA. G.I. (OR PER ATTACHMENT DETAIL) & RUN FULL LENGTH OF EQUIPMENT ITEM.

BASE BID – MAIN KITCHEN ROOM 111 FOODSERVICE EQUIPMENT BUILDING WORK PLAN 1/4" = 1'-0"

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Sheet Title

FOODSERVICE EQUIPMENT BUILDING WORK PLAN

Date: SEPTEMBER 06, 2022

Sheet No:

FS0.5.0

REFRIGERATION LEGEND

- CONDUIT FOR REFRIGERATION LINES (RUN UNDER FLOOR)
- REMOTE COMPRESSOR (ON REFRIGERATION RACK)
- A — REFRIGERATION SYSTEM (SEE SCHEDULE ON SHEET FS.06.1)
- REFRIGERATION LINE (RUN FROM REFRIGERATION RACK)
- REMOTE REFRIGERATED BASE AND/OR EQUIPMENT
- S/C — SELF-CONTAINED REFRIGERATED BASE AND/OR EQUIPMENT
- ACCESS PULL-BOX FOR REFRIG. LINES PROVIDED BY E.C. (IN THE WALL)
- 1 — ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- 1 — KEYNOTE SYMBOL (SEE KEYNOTES AT LEFT)

REFRIG PLAN KEYNOTES

1. REFRIGERATED EQUIPMENT AND/OR SYSTEM FOR ADDITIONAL INFO. SEE SHEET FS.06.1
2. PULL-BOX FOR REFRIGERATION LINES THRU WALL - SEE DETAIL M/FS0.8.0
3. REFRIGERATION LINES STUB-DOWN FROM CEILING THRU TO EVAP COIL - SEE DETAIL E/FS0.6.1
4. REFRIGERATION RACK FOR REMOTE COMPRESSORS LOCATED ON THE ROOF (SEE SHEET FS0.6.1)
5. OUTLINE OF ICE MAKER'S CONDENSER'S RACK; SEE SHEET A4.01 FOR EXACT LOCATION
6. REFRIGERATION RACK FOR REMOTE COMPRESSORS LOCATED ON THE ROOF (SEE SHEET FS.06.1) SEE SHEET A4.01 FOR EXACT LOCATION
7. REFRIGERATION LINES RUN ABOVE CEILING LINE (UNISTRUT TRAPEZE OR SIMILAR), EXTEND FROM REFRIGERATION RACK LOCATION ON ROOF TO DROP-DOWN POINT AT WALL.

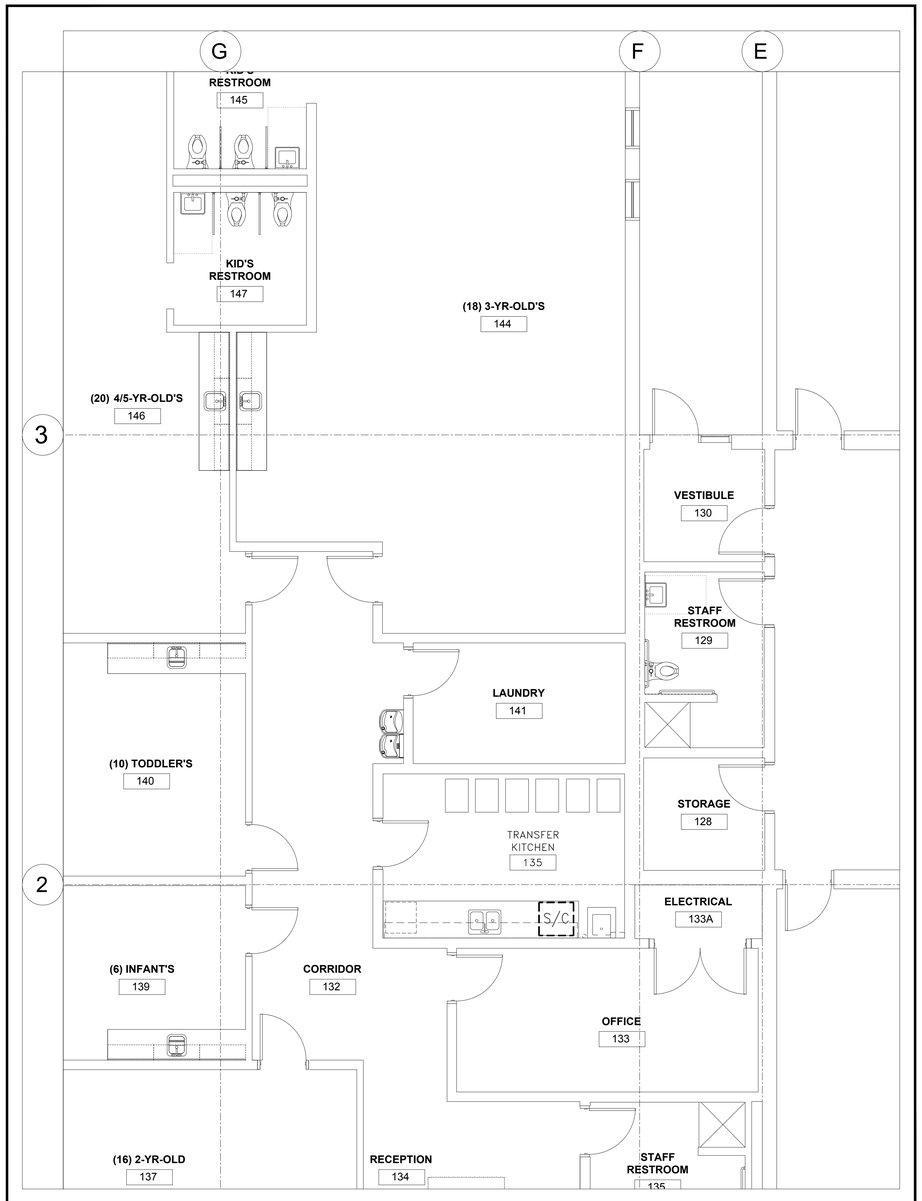
NOTE: REFRIGERATION LINES ARE FOR GRAPHIC PURPOSES ONLY. IT IS NOT MEANT TO SHOW ROUTING.

NOTE:
SUCTION LINE TO SLOPE 1/2" PER 10'-0" MINIMUM TOWARDS COMPRESSOR ON HORIZONTAL RUNS.

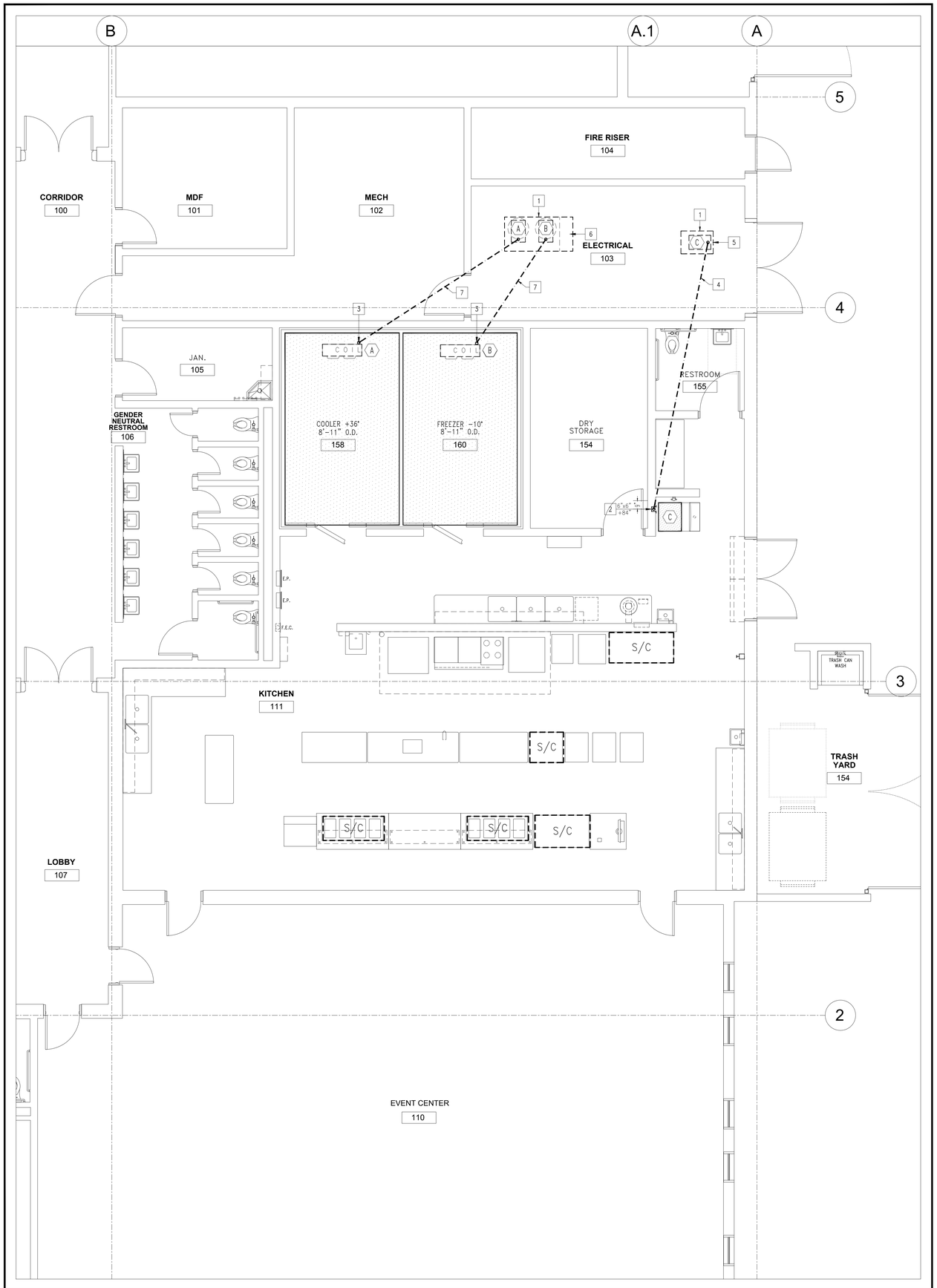
NOTE:
SEE SHEET FS0.0.0 FOR REFRIGERATION NOTES AND OTHER APPLICABLE NOTES

NOTE:
ALL CONDUIT AND PULL BOXES WITH S/S COVERS TO BE SUPPLIED AND INSTALLED BY ELECT. CONTRACTOR & COORDINATED BY FOOD SERVICE EQUIPMENT CONTRACTOR

NOTE:
SEALED & PRESSURIZED WITH 350 LBS. OF NITROGEN FOR 48 HOUR PERIOD. REFRIG. CONTRACTOR TO USE GAUGE TO VERIFY.



BID ALT "A" - TRANSFER KITCHEN ROOM 131 REFRIGERATION PLAN 1/4" = 1'-0"



BASE BID - MAIN KITCHEN ROOM 111 FOODSERVICE EQUIPMENT REFRIGERATION PLAN 1/4" = 1'-0"

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FOODSERVICE EQUIPMENT REFRIGERATION PLAN

Date: SEPTEMBER 06, 2022

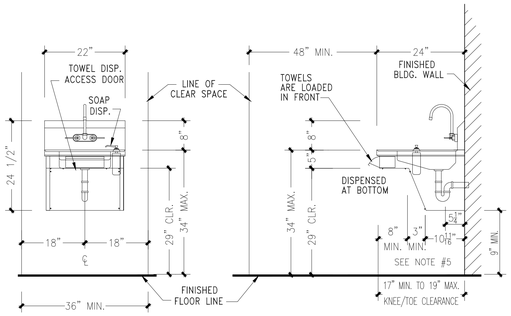
Sheet No:

FS0.6.0

A | ACCESSIBLE HAND SINK DETAILS — NTS

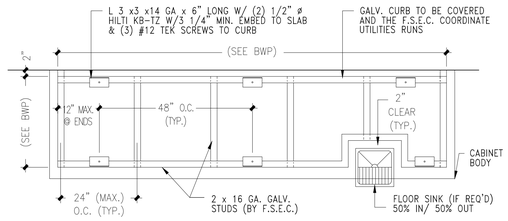
ACCESSIBLE HAND SINK REQUIREMENT NOTES

1. WATER AND DRAIN PIPES UNDER ACCESSIBLE HAND SINKS SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE OBJECTS OR SURFACES UNDER HAND SINKS.
2. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF. LEVER-OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.
3. WHERE TOWEL, SANITARY NAPKINS, WASTE RECEPTACLES, SOAP DISPENSER AND OTHER SIMILAR DISPENSING AND DISPOSAL FIXTURES ARE PROVIDED, AT LEAST ONE OF EACH TYPE SHALL BE LOCATED WITH ALL OPERABLE PARTS WITHIN 40 INCHES FROM THE FINISHED FLOOR.
4. ALL DIMENSIONS SHOWN ARE MINIMUM CLEARANCES, UNLESS NOTED.
5. AREA BELOW HAND SINKS SHALL BE ACCESSIBLE AND CLEAR.

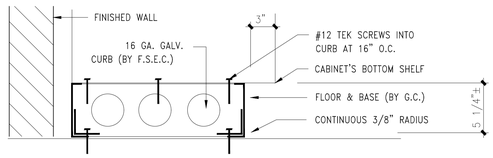


FRONT VIEW SIDE VIEW

B | GALVANIZED CURB FOR COUNTER DETAIL — NTS



PLAN VIEW



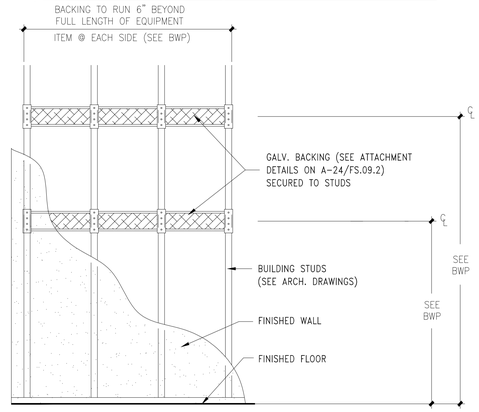
NOTE #2: INSTALL BORIC ACID PER LOCAL CODES.

SECTION

NOTE #1: ON ALL FRAMED PLATFORMS IN FOODSERVICE AREAS, THE F.S.E.C. TO PROVIDE MIN. 1/2" OF BORIC ACID IN AIR SPACES TO PREVENT INSECT NESTING.

C | WALL BACKING DETAIL — NTS

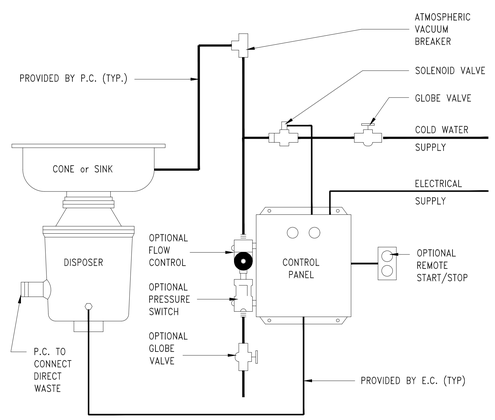
NOTE: NOTATIONS WITH: SEE PLAN, SEE ELECT. PLAN, SEE BWP, SEE ELEV., REFERENCE TO THESE FOODSERVICE EQUIPMENT TO THESE FOODSERVICE EQUIPMENT DRAWINGS ONLY. (SEE LIST ON FS0.0.0)



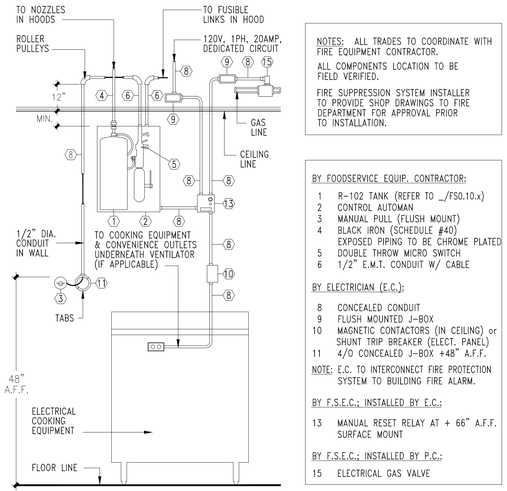
NOTE: WALL-BACKING TO BE VERIFIED AND COORDINATED BY THE F.S.E.C.

D | DISPOSER INSTALLATION DETAIL — NTS

NOTE: DETAILS SHOWN ON SHEETS FS0.8.0 AND FS0.8.1 ARE THE RESPONSIBILITY OF THE SHEET-METAL FABRICATOR AND INDICATE TYPICAL FABRICATION INFORMATION ONLY. FOR RESTRAINT ANCHORAGE INFO, SEE DETAILS ON SHEETS FS0.9.0 AND FS0.9.1



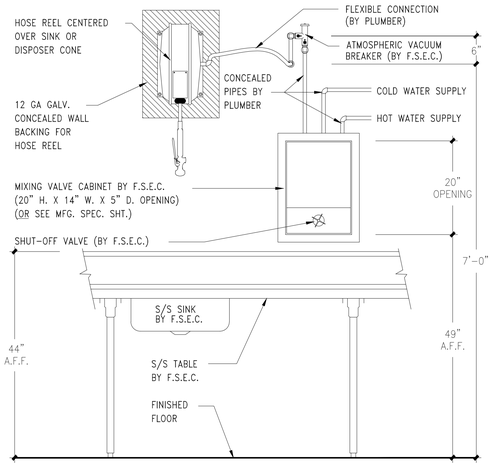
E | POT SINK/GREASE INTERCEPTOR DETAIL — NTS



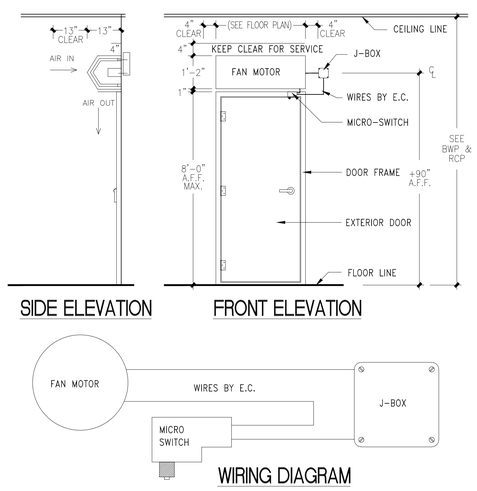
GREASE INTERCEPTOR INSTALLED BELOW FLOOR SURFACE

NOTE:
ALL PIPES MUST BE MIN. 6 INCHES OFF THE FLOOR IF GREASE TRAP UNIT IS LOCATED ABOVE THE FLOOR THEN THE UNIT MUST BE 6 INCHES MIN. AWAY FROM ALL WALLS.
(SEE SHEET FS0.0.0, FOOD FACILITY REQUIREMENTS NOTES, PLUMBING NOTES #24 & #31)

F | WALL MOUNTED HOSE REEL DETAIL — NTS

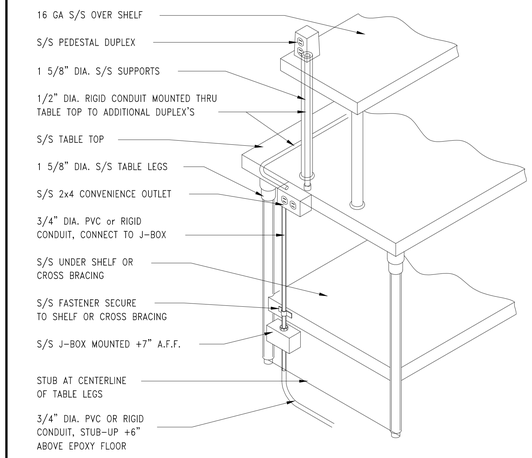


G | WALL MTD AIR CURTAIN'S MICRO-SWITCH DET. — NTS



WIRING DIAGRAM

H | ELECTRICAL CONDUIT STUB-UP DETAIL — NTS



J | FIRE SUPPRESSION SYSTEM (ELECT) DETAIL — NTS

NOTES: ALL TRADES TO COORDINATE WITH FIRE EQUIPMENT CONTRACTOR.
ALL COMPONENTS LOCATION TO BE FIELD VERIFIED.
FIRE SUPPRESSION SYSTEM INSTALLER TO PROVIDE SHOP DRAWINGS TO FIRE DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION.

BY FOODSERVICE EQUIP. CONTRACTOR:

1 R-102 TANK (REFER TO _/FS0.10.x)
2 CONTROL AUTOMAN
3 MANUAL PULL (FLUSH MOUNT)
4 BLACK IRON (SCHEDULE #40) EXPOSED PIPING TO BE CHROME PLATED
5 DOUBLE THROW MICRO SWITCH
6 1/2" E.M.T. CONDUIT W/ CABLE

BY ELECTRICIAN (E.C.):

8 CONCEALED CONDUIT
9 FLUSH MOUNTED J-BOX
10 MAGNETIC CONTACTORS (IN CEILING) or SHUNT TRIP BREAKER (ELECT. PANEL)
11 4/0 CONCEALED J-BOX +48" A.F.F.

NOTE: E.C. TO INTERCONNECT FIRE PROTECTION SYSTEM TO BUILDING FIRE ALARM.

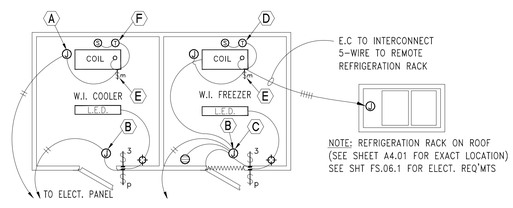
BY F.S.E.C.; INSTALLED BY E.C.:

13 MANUAL RESET RELAY AT + 66" A.F.F. SURFACE MOUNT

BY F.S.E.C.; INSTALLED BY P.C.:

15 ELECTRICAL GAS VALVE

K | TYPICAL INTERIOR W.I. BOX WIRING DETAIL — NTS



NOTE: REFRIGERATION RACK ON ROOF (SEE SHEET A4.01 FOR EXACT LOCATION) SEE SHT FS.06.1 FOR ELECT. REQ'MTS

NOTE: ELECTRICAL CONTRACTOR (E.C.) TO WIRE FROM ROUGH-IN POINTS A, B, C, D, E & F TO ALL COMPONENTS OF WALK-IN ASSEMBLIES, INCLUDING COMPRESSORS, TO MAKE A COMPLETE & OPERABLE REFRIGERATION SYSTEM, E.C. TO MAKE PENETRATIONS FROM ROUGH-IN LOCATIONS TO INTERIOR WALK-IN BOX AND PROVIDE PROPER SEALING OF SAME PENETRATIONS (VERIFY SPECIFIC REQUIREMENTS WITH GENERAL CONTRACTOR). SEAL CONDUIT AFTER ALL WIRES ARE PULLED.

ELECTRICAL CONTRACTOR TO PROVIDE:

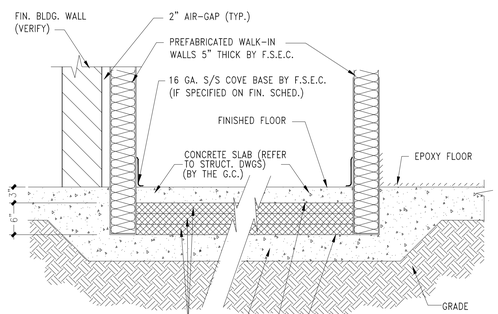
- (A) 120 VOLT/1 PHASE FOR COIL, SOLENOID AND THERMOSTAT.
- (B) 120 VOLT/1 PHASE FOR LIGHTS THRU SWITCHES-MOUNT LIGHTS IF SHIPPED LOOSE.
- (C) 120 VOLT/1 PHASE FOR FREEZER DOOR HEATER, CONDENSATE LINE HEAT TRACE AND HEATED VACUUM VENT.
- (D) 208 VOLT/1 PH FOR COIL, COIL HEATER, SOLENOID, AND THERMOSTAT. ALSO, 5-WIRE TO DEFROST TIMER AT REMOTE COMPRESSOR.
- (E) MOTOR RATED DISCONNECT BY E.C. (AS REQUIRED BY LOCAL CODES).
- (F) E.C. TO PROVIDE 120 VOLT/1 PHASE FOR SOLENOID AND THERMOSTAT.

NOTE: NO EXPOSED ELECTRICAL CONDUIT RUNS INSIDE WALK-IN BOX.

NOTE: E.C. TO WIRE THRU TO ALL THREE AND FOUR WAY SWITCHES PER ELECTRICAL ENGINEER'S PLANS AND SPECIFICATIONS.

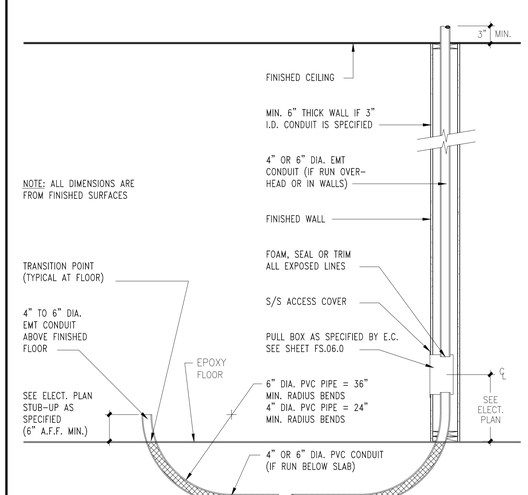
L | WALK-IN FLOOR 9" DEEP DEPRESSION DET. — NTS

NOTE: SEE SHEET FS0.8.1 FOR REFERENCE DETAILS APPLICABLE TO DETAILS ON THIS SHEET



NOTE: THE WALK-IN COOLER MUST HAVE A FLOOR THAT IS GRADED, SO THAT IT DRAINS TO THE OUTSIDE THROUGH A WASTE PIPE OR DOORWAY.

M | REFRIGERATION CONDUIT / PULL BOX DETAIL — NTS



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Project

CITY OF FERNLEY
CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

RESCOPING PLAN

REVISIONS		
REV	DATE	DESCRIPTION

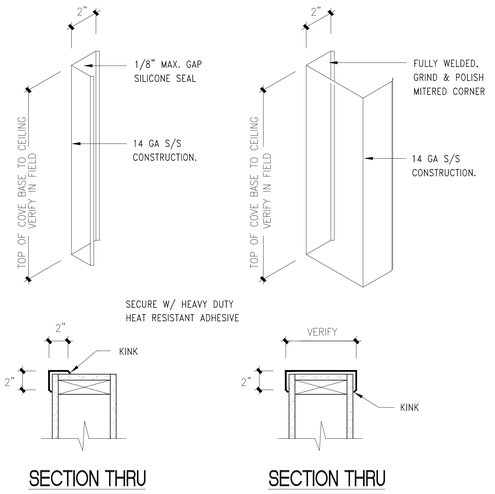
Sheet Title

FOODSERVICE EQUIPMENT DETAILS

Date: SEPTEMBER 06, 2022

Sheet No:

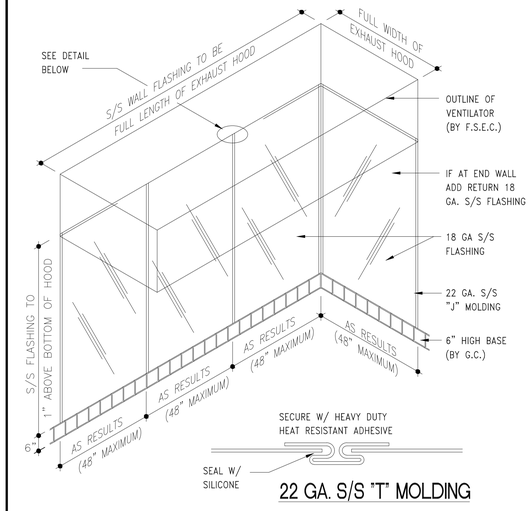
FS0.8.0



SECTION THRU
CORNER GUARD

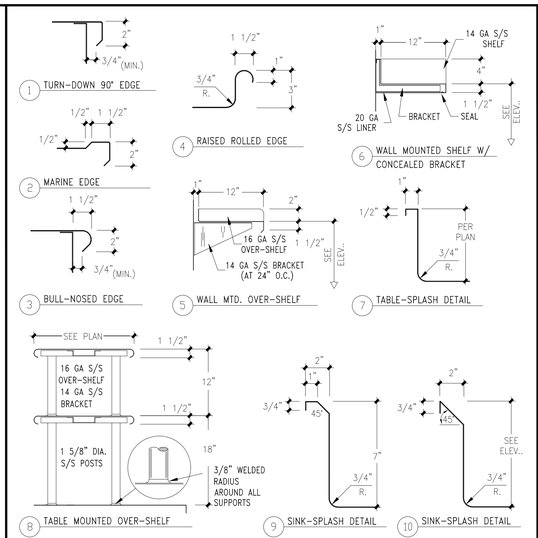
SECTION THRU
END/WALL CAP

N | S/S CORNER GUARD/END CAP/WALL CAP NTS



22 GA. S/S "T" MOLDING

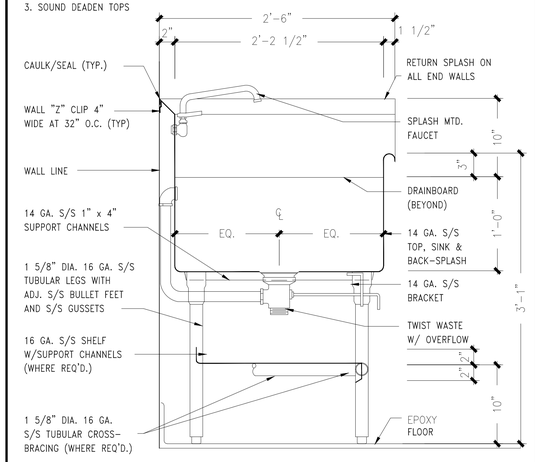
P | 18 GA. S/S WALL FLASHING DETAIL NTS



Q | EDGE / SPLASH / OVER-SHELF DETAILS NTS

NOTES:
1. BUILD TO NSF STANDARDS
2. NO TRIM ALLOWED, 1/8" MAX. TOLERANCE
3. SOUND DEADEN TOPS

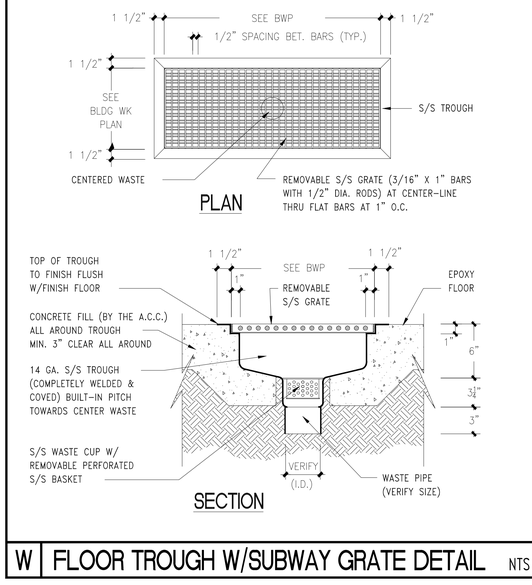
NOTE: PITCH DRAIN-BOARD TO 1/8" PER LIN. FT.



R | SINK W/RAISED ROLLED EDGE SECTION 1 1/2"=1'-0"

NOTES:
1. BUILD TO NSF STANDARDS
2. NO TRIM ALLOWED, 1/8" MAX. TOLERANCE
3. SOUND DEADEN TOPS

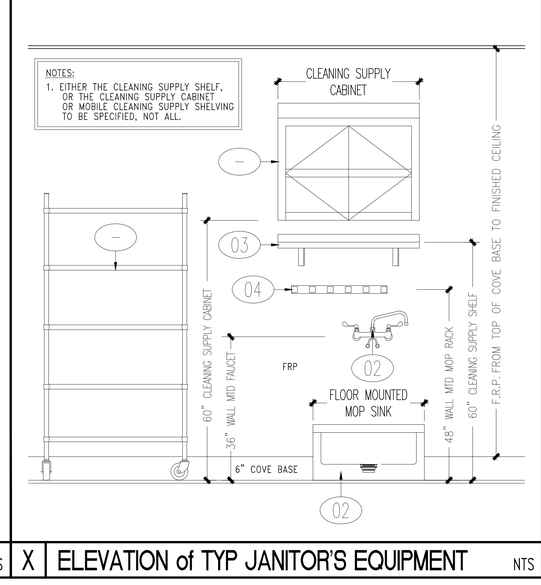
NOTE: PITCH DRAIN-BOARD TO 1/8" PER LIN. FT.



S | CLEAN DISH-TABLE SECTION 1 1/2"=1'-0"

NOTES:
1. BUILD TO NSF STANDARDS
2. NO TRIM ALLOWED, 1/8" MAX. TOLERANCE
3. SOUND DEADEN TOPS

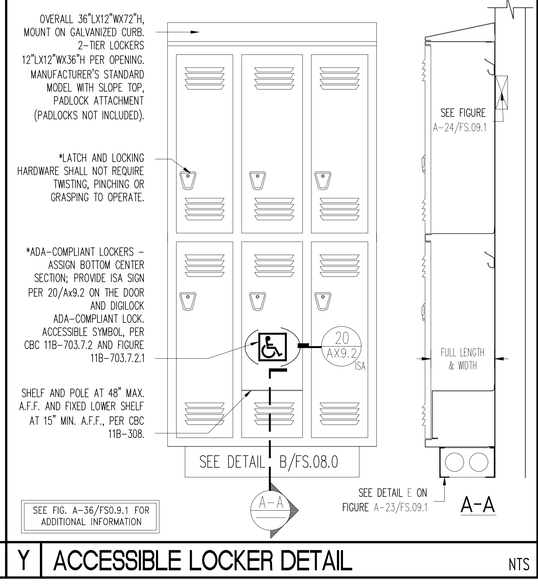
NOTE: PITCH DRAIN-BOARD TO 1/8" PER LIN. FT.



T | PREP SINK W/MARINE EDGE SECTION 1 1/2"=1'-0"

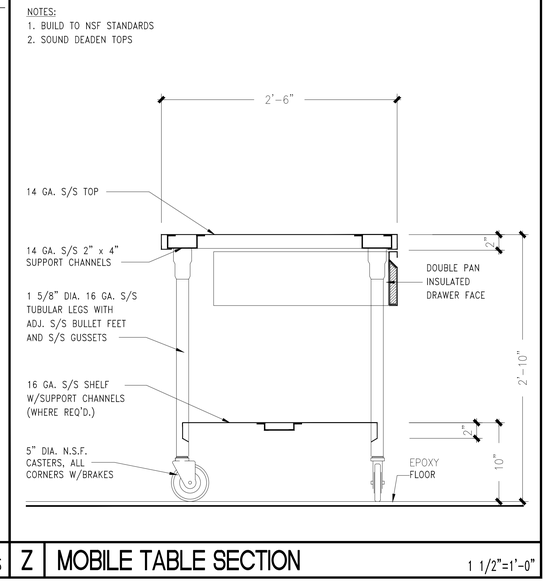
NOTES:
1. BUILD TO NSF STANDARDS
2. NO TRIM ALLOWED, 1/8" MAX. TOLERANCE
3. SOUND DEADEN TOPS

NOTE: PITCH DRAIN-BOARD TO 1/8" PER LIN. FT.



U | PREP TABLE W/MARINE EDGE SECTION 1 1/2"=1'-0"

NOTES:
1. BUILD TO NSF STANDARDS
2. SOUND DEADEN TOPS



V | MOBILE ACCESSIBLE TABLE SECTION 1 1/2"=1'-0"

PLAN

SECTION

W | FLOOR TROUGH W/SUBWAY GRATE DETAIL NTS

NOTES:
1. EITHER THE CLEANING SUPPLY SHELF, OR THE CLEANING SUPPLY CABINET OR MOBILE CLEANING SUPPLY SHELVING TO BE SPECIFIED, NOT ALL.

X | ELEVATION of TYP JANITOR'S EQUIPMENT NTS

Y | ACCESSIBLE LOCKER DETAIL NTS

NOTES:
1. BUILD TO NSF STANDARDS
2. SOUND DEADEN TOPS

Z | MOBILE TABLE SECTION 1 1/2"=1'-0"

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RICHARD DIELI

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Project
CITY OF FERNLEY
CRRC

Job No: 21-058.00

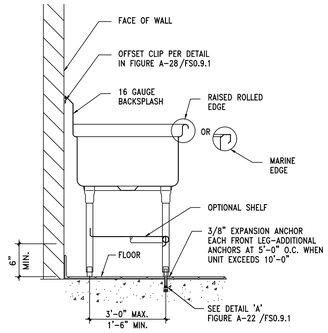
Owner
CITY OF FERNLEY

RESCOPING PLAN

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
FOODSERVICE EQUIPMENT DETAILS

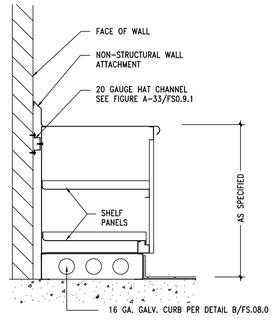
Date: SEPTEMBER 06, 2022
Sheet No:
FS0.8.1



MAXIMUM WEIGHT = 250 lbs. PER LIN. FT.

NOTE: THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS.

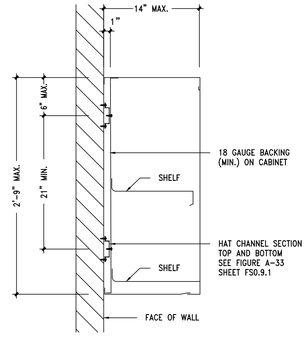
A-2 | WALL ATTACHED SINK, TABLE w/WALL CLIP | NTS



MAXIMUM WEIGHT = 250 lbs. PER LIN. FT.

NOTE: THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS.

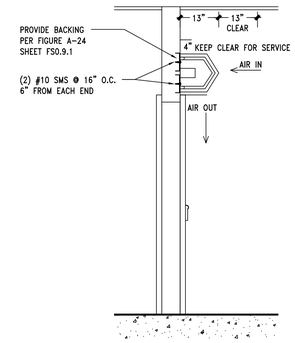
A-4 | ENCLOSED CABINET | NTS



MAXIMUM WEIGHT = 100 lbs. PER LIN. FT.

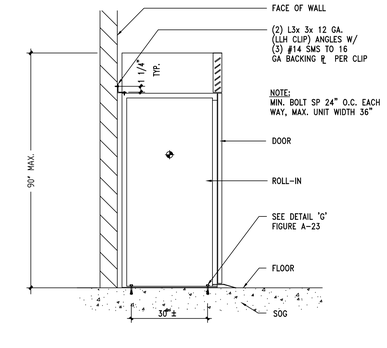
NOTE: THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS.

A-6 | WALL MOUNTED CABINET | NTS



CONNECTIONS TO STEEL

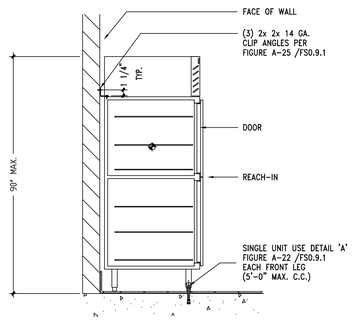
A-6a | WALL MOUNTED AIR CURTAIN | NTS



MAXIMUM WEIGHT = 700 lbs.

NOTE: THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS.

A-9 | ROLL-IN FLOOR MOUNTED APPLIANCES | NTS

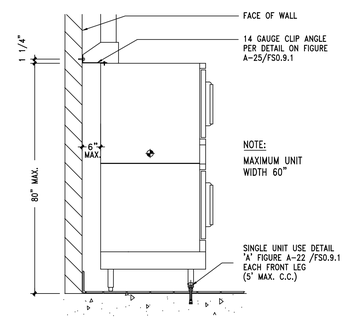


LEG MOUNTED UNIT

MAXIMUM WEIGHT = 500 lbs. PER LIN. FT. (INCL. CONTENTS)

NOTE: THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS.

A-10 | FLOOR MOUNTED APPLIANCE AGAINST WALL | NTS

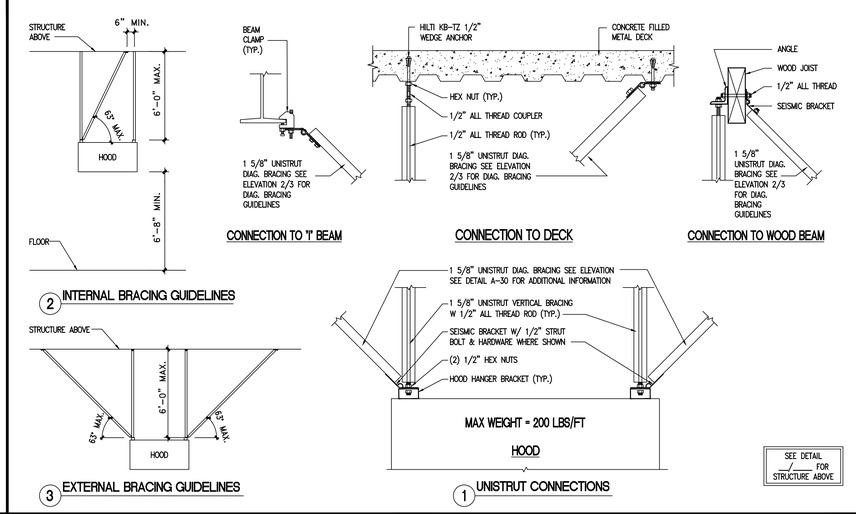


LEG MOUNTED UNIT

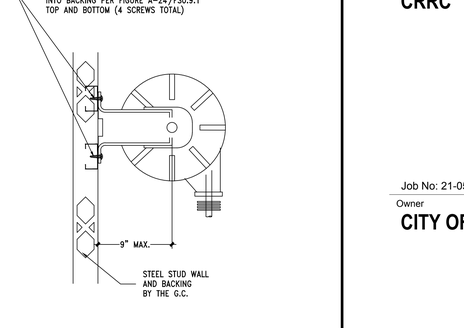
MAXIMUM WEIGHT = 500 lbs. PER LIN. FT. (INCL. CONTENTS)

NOTE: THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS.

A-11 | FLOOR MOUNTED APPLIANCE AGAINST WALL | NTS

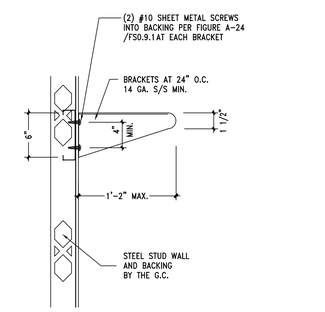


A-13 | EXHAUST HOOD BRACING - UNISTRUT CONNECTIONS | NTS



CONNECTIONS TO STEEL

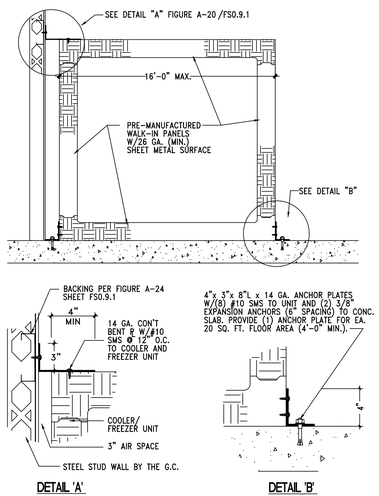
A-16 | WALL MOUNTED HOSE REEL | NTS



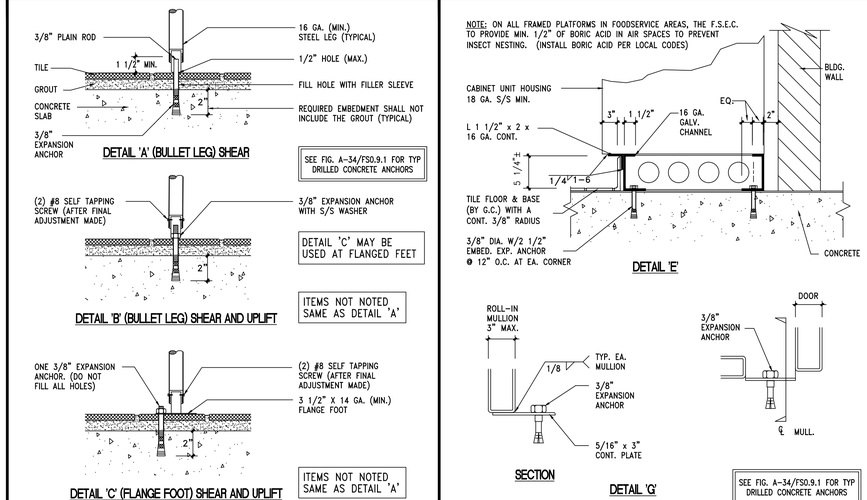
CONNECTIONS TO STEEL

MAX. WT. = 50 lbs. PER LIN. FT.

A-17 | WALL MOUNTED SHELVES | NTS



A-20 | WALK-IN BOX at METAL WALL-SLAB ON GRADE | NTS



A-22 | FOOT DETAILS | NTS

A-23 | BASE ATTACHMENTS | NTS

NOTE: SEE SHEET FS0.9.1 FOR REFERENCE DETAILS APPLICABLE TO DETAILS ON THIS SHEET

NOTE: SEE SHEET FS0.0.0 FOR ATTACHMENT RESTRAINT NOTES AND OTHER APPLICABLE NOTES

NOTE: DETAILS SHOWN ON THIS SHEET ARE FOR ATTACHMENT ONLY . . .FOR SHEETMETAL CONSTRUCTION AND INFORMATION, SEE DETAILS ON SHEETS FS0.8.0 AND FS0.8.1

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Design By:
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REVISIONS		
REV	DATE	DESCRIPTION

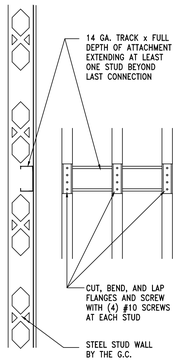
Sheet Title

FOODSERVICE EQUIPMENT ATTACHMENT DETAILS

Date: SEPTEMBER 06, 2022

Sheet No:

FS0.9.0



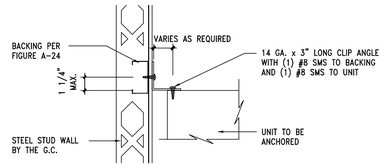
CONNECTIONS TO STEEL

A-24 | WALL SUPPORT BACKING | NTS

NOTE: SEE SHEET FS0.9.0 FOR REFERENCE DETAILS APPLICABLE TO DETAILS ON THIS SHEET

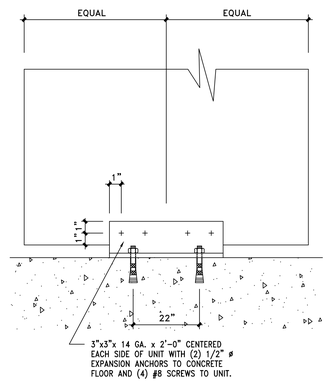
NOTE: SEE SHEET FS0.0.0 FOR ATTACHMENT RESTRAINT NOTES AND OTHER APPLICABLE NOTES

NOTE: DETAILS SHOWN ON THIS SHEET ARE FOR ATTACHMENT ONLY . . .FOR SHEETMETAL CONSTRUCTION AND INFORMATION, SEE DETAILS ON SHEETS FS0.8.0 AND FS0.8.1



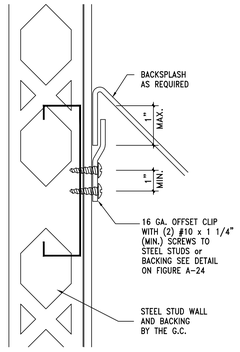
CONNECTIONS TO STEEL

A-25 | TOP ANGLE CONNECTION (STEEL WALL) | NTS



SEE FIG. A-34/FS0.9.1 FOR TYPICAL DRILLED CONCRETE ANCHORS

A-27 | ANGLE BRACKET DETAIL | NTS

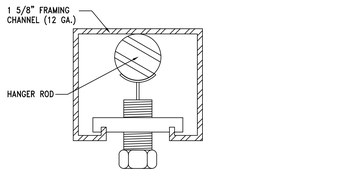


CONNECTIONS TO STEEL

A-28 | OFFSET CLIP DETAILS | NTS

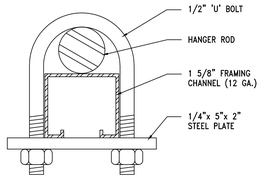
NOT USED

\- | NOT USED | NTS



DETAIL 'A'

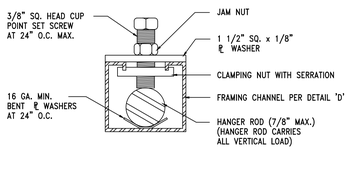
STIFFENER CONNECTION FOR 7/8" ROD AND SMALLER



DETAIL 'B'

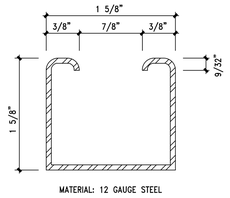
ALTERNATE STIFFENER CONNECTION

TORQUE VALUES FOR FRAMING CHANNEL BOLTS				
BOLT SIZE	1/4"	5/16"	3/8"	1/2"
FOOT POUNDS	6	11	19	50



DETAIL 'C'

CHANNEL WITH HANGER ROD

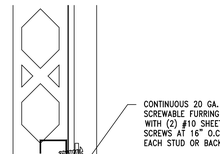


MATERIAL: 12 GAUGE STEEL

DETAIL 'D'

1 5/8" FRAMING CHANNEL SECTION

A-30 | FRAMING CHANNEL / ROD STIFFENER | NTS



CONNECTIONS TO STEEL

A-33 | FURRING CHANNEL CONNECTIONS | NTS

NOT USED

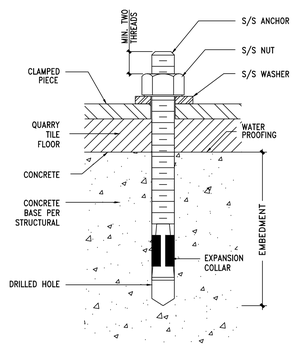
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NOT USED

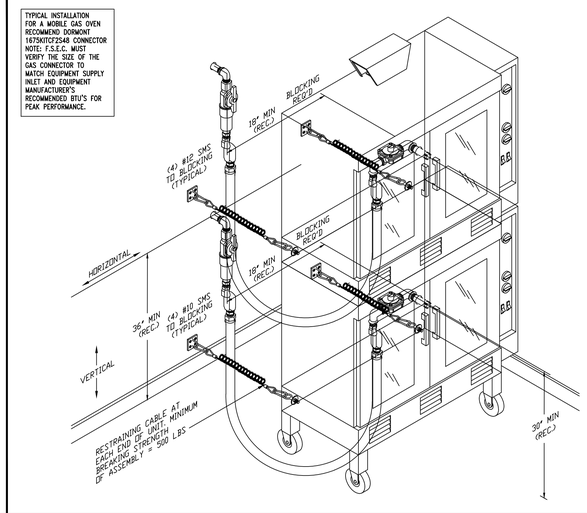
\- | NOT USED | NTS

ESR-4266 | MINIMUM EDGE DISTANCE, SPACING AND CONCRETE THICKNESS FOR KB-TZ2

Setting information	Symbol	Units	Nominal anchor dia. (in.)													
			1/4	3/8			1/2				5/8			3/4		
Effective min. embedment	h_{ef}	in.	1-1/2	1-1/2	2	2-1/2	1-1/2	2	2-1/2	3-1/4	2-3/4	3-1/4	4	3-1/4	3-3/4	4-3/4
		(mm)	(38)	(38)	(51)	(64)	(38)	(51)	(64)	(83)	(70)	(83)	(102)	(83)	(95)	(121)
Min. member thickness	h_{min}	in.	3-1/4	3-1/4	4	5	3-1/2	4	5	5-1/2	5	5-1/2	6	5-1/2	6	8
		(mm)	(83)	(83)	(102)	(127)	(89)	(102)	(127)	(140)	(127)	(140)	(152)	(140)	(152)	(203)
Stainless Steel																
Min. edge distance	c_{min}	in.	1-1/2	5	2-1/2	2-1/2		2-3/4	2-1/2	2-1/4	4	3-1/4	2-1/4	5	4	3-3/4
		(mm)	(38)	(127)	(64)	(64)		(70)	(64)	(57)	(102)	(83)	(57)	(127)	(102)	(95)
	for $s \geq$	in.	1-1/2	8	5	5		5-1/2	4-1/2	5-1/4	7	5-1/2	7	11	7-1/2	5-3/4
		(mm)	(38)	(203)	(127)	(127)		(140)	(114)	(133)	(178)	(140)	(178)	(279)	(191)	(146)
Min. anchor spacing	s_{min}	in.	1-1/2	5	2-1/4	2-1/4		2-3/4	2-1/2	2	5-1/2	2-3/4	3	5	4	4
		(mm)	(38)	(127)	(57)	(57)		(70)	(64)	(51)	(140)	(70)	(76)	(127)	(102)	(102)
	for $c \geq$	in.	1-1/2	8	4	3-1/2		4-1/8	5	4-3/4	5-1/2	4	4-1/4	8	6	5-1/4
		(mm)	(38)	(203)	(102)	(89)		(105)	(127)	(121)	(140)	(102)	(108)	(203)	(152)	(133)



A-34 | TYPICAL DRILLED CONCRETE ANCHORS | NTS



A-40 | FLEX HOSE w/RESTRAINING CABLE FOR MOBILE GAS OVEN | NTS

NOT USED

\- | NOT USED | NTS

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DIELI MURAWKA HOWE

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Las Vegas, NV 89134
Phone: 619.602.4107

Design By:
RICHARD DIELI

PLEASE RECYCLE

Project

CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

RESCOPING PLAN

REVISIONS		
REV	DATE	DESCRIPTION

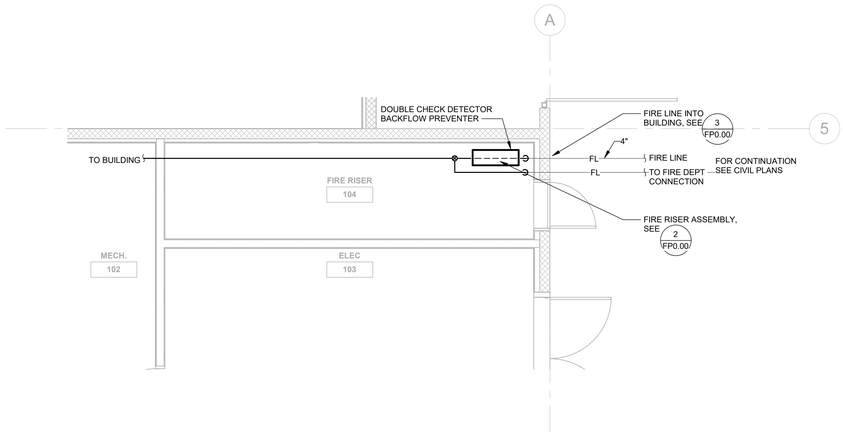
Sheet Title

FOODSERVICE EQUIPMENT ATTACHMENT DETAILS

Date: SEPTEMBER 06, 2022

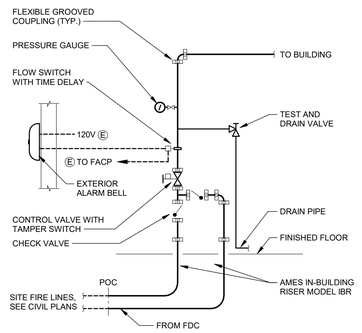
Sheet No:

FS0.9.1

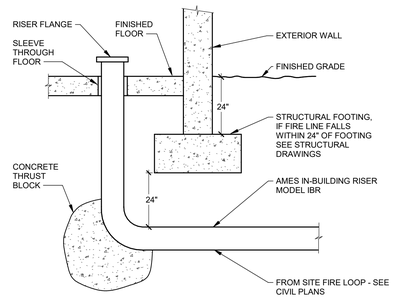


FIRE PROTECTION ENLARGED - FIRE RISER ROOM
SCALE: 1/4" = 1'-0"
1 / FP0.00

N



WET FIRE RISER
SCALE: NONE
2 / FP0.00



FIRE LINE ENTERING BUILDING
SCALE: NONE
3 / FP0.00

GENERAL NOTES

1. THIS DRAWING IS INFORMATIONAL ONLY AND IS INTENDED TO AID IN THE PREPARATION OF CONTRACTOR BIDS.
2. HATCHED REGION REPRESENTS AREA TO BE FIRE PROTECTED.
3. DESIGN OF THE FIRE SPRINKLER SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 13, LOCAL AND STATE AUTHORITIES BY A NEVADA LICENSED FIRE PROTECTION PROFESSIONAL. WORK INCLUDES INSTALLATION OF NEW PIPING AND HEADS AS REQUIRED TO ACCOMMODATE NEW FLOOR PLAN, DUCTWORK, PIPING AND CONDUITS. SEE SPECIFICATIONS AND DRAWINGS FOR PROJECT REQUIREMENTS.
4. FIRE SPRINKLER CONTRACTOR SHALL PERFORM A HYDRAULIC ANALYSIS TO VERIFY EXISTING CONDITIONS PRIOR TO PERFORMANCE OF WORK.
5. EXACT LOCATIONS OF NEW HEADS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT.
6. THE FIRE SPRINKLER CONTRACTOR/DESIGNER SHALL OBTAIN WATER SUPPLY INFORMATION FROM THE CITY OF FERNLYE FIRE DEPARTMENT.
7. CONTRACTOR SHALL PROVIDE PIPING COMPONENTS TO ALLOW FOR PIPE MOVEMENT AT SEISMIC JOINTS. REVIEW STRUCTURAL DRAWINGS FOR EXPANSION JOINT INFORMATION.
8. DO NOT ROUTE ANY PIPING DIRECTLY ABOVE ELECTRICAL EQUIPMENT OR PANELS.
9. ALL NEW PIPING IS TO BE STEEL WITH SCREWED FITTINGS FOR PIPING 2" AND SMALLER AND WELDED, GROOVED OR MECHANICAL T OUTLETS FOR PIPING 2.5" AND LARGER. PLAIN END PIPING CONNECTIONS WILL NOT BE ACCEPTABLE. PLASTIC PIPING WILL NOT BE ACCEPTABLE. ALL PIPING TO BE CONCEALED ABOVE CEILINGS UNLESS OTHERWISE NOTED PIPING IS TO BE INSTALLED TO DRAIN IN STRICT ACCORDANCE WITH NFPA 13. PIPING SHALL RUN STRAIGHT AND TRUE WITH BUILDING FEATURES.
10. SYSTEM SHALL BE HYDRAULICALLY DESIGNED. CONTRACTOR SHALL OBTAIN WATER SUPPLY INFORMATION AND DETERMINE SPRINKLER HEAD SPACING AND DESIGN DENSITIES FOR HYDRAULIC CALCULATIONS.
11. CONTRACTOR SHALL HOLD A VALID NEVADA CONTRACTORS LICENSE FOR THE TYPE OF WORK BEING PERFORMED.
12. ALL PIPING SHALL BE SUSPENDED AND BRACED IN STRICT ACCORDANCE WITH NFPA 13 AND FACTORY MUTUAL.
13. THIS IS A PERFORMANCE SPECIFICATION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL PERMITS, FEES, DESIGN, MATERIAL, FABRICATION, STORAGE, INSTALLATION, TESTING AND CLEANUP FOR A COMPLETE AND OPERABLE SYSTEM. SYSTEM SHALL MEET THE REQUIREMENTS NFPA 13, 24, NEC, LOCAL AND STATE BUILDING OFFICIALS, AND HEALTH DEPARTMENT. SCOPE OF WORK INCLUDES A COMPLETE AND OPERABLE WET FIRE SPRINKLER AND STANDPIPE SYSTEM THROUGHOUT.
    A. ALARM DEVICES WITH WIRING CONNECTIONS FOR ELECTRICAL/ALARM CONTRACTOR.
    B. SUBMIT COMPLETE SET OF DRAWINGS, CALCULATIONS AND CATALOG CUTS OF MATERIALS TO THE AUTHORITY HAVING JURISDICTION FOR APPROVAL. OBTAIN APPROVAL PRIOR TO INSTALLATION. DRAWINGS AND CALCULATIONS SHALL BE SIGNED BY A NICET CERTIFIED LEVEL III FIRE SYSTEMS TECHNICIAN.

SYMBOLS AND ABBREVIATIONS LIST

WSP	WET SPRINKLER PIPING
(E)	EXISTING
(N)	NEW
P.O.C.	POINT OF CONNECTION
S.O.G.	SLAB ON GRADE
D.I.P.	DUCTILE IRON PIPE
SSU	STANDARD SPRAY UPRIGHT
SSP	STANDARD SPRAY PENDENT
FDC	FIRE DEPARTMENT CONNECTION
PIV	POST INDICATOR VALVE
	OS & Y GATE VALVE W/ TAMPER SWITCH.
	OS & Y GATE VALVE W/ TAMPER SWITCH OR GATE VALVE.
	CHECK VALVE

DRAWING SHEET INDEX

FP0.00	FIRE PROTECTION SCHEDULES, LEGEND, & NOTES
FP1.01	FIRE PROTECTION OVERALL FLOOR PLAN

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EL DORADO HILLS, CA 95762
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JOB 2021-065

PLEASE RECYCLE

Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner
CITY OF FERNLEY

PROGRESS
NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
FIRE PROTECTION SCHEDULES, LEGEND, & NOTES

Date: JANUARY 19, 2023
Sheet No:
FP0.00

FIRE PROTECTION OVERALL FLOOR PLAN

SCALE: 3/32" = 1'-0"

1 / FP1.01

N

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Job No: 21-058.00

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NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title

FIRE PROTECTION OVERALL FLOOR PLAN

Date: JANUARY 19, 2023

Sheet No:

FP1.01

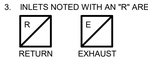
AIR DISTRIBUTION SCHEDULE

SYMBOL	SERVICE	BORDER	CFM RANGE	NECK SIZE	DESCRIPTION	BASIS OF DESIGN	NOTES
A1	SUPPLY	LAY-IN	0-125	6 RD	SQUARE CONE DIFFUSER WITH FULLY ADJUSTABLE AIRFLOW PATTERN. PROVIDE ROUND TRANSITION AS REQUIRED	PRICE MODEL #SCDA, BORDER TYPE 3 FRAME FOR 24/24 FACE SIZE	2
			130-175	8 RD			
			180-280	10 RD			
			285-450	12 RD			
			455-700	14 RD			
A2	SUPPLY	GYPBOARD	0-125	6 RD - 12/12 FACE	SQUARE CONE DIFFUSER WITH FULLY ADJUSTABLE AIRFLOW PATTERN. PROVIDE ROUND TRANSITION AS REQUIRED	PRICE MODEL #SCDA, BORDER TYPE 3 FRAME	2
			130-175	8 RD - 20/20 FACE			
			180-280	10 RD - 20/20 FACE			
			285-450	12 RD - 24/24 FACE			
			455-700	14 RD - 24/24 FACE			
A3	RETURN EXHAUST TRANSFER	LAY-IN, GYPBOARD	0-125	8x8	SQUARE EGGCRATE GRILLE WITH WHITE FINISH.	PRICE MODEL #80, BORDER TYPE TB FOR T-BAR, BORDER TYPE F FOR SURFACE MOUNT	3
			130-180	10x10			
			185-270	12x12			
			275-375	14x14			
			380-480	16x16			
			485-700	18x18			
			705-1100	20x20			
			ALL T-BAR	22x22			
B1	SUPPLY	SIDEWALL	LOCATIONS SEE PLANS FOR AIRFLOW AND SIZE		LOUVERED SUPPLY DIFFUSER, DOUBLE DEFLECTION, 3/4" BLADE SPACING	PRICE MODEL #520, BORDER TYPE FOR SURFACE MOUNT OR DUCT MOUNT WHERE REQUIRED	
B2	RETURN EXHAUST	SIDEWALL	SEE PLANS FOR AIRFLOW AND SIZE		LOUVERED RETURN GRILLE, SINGLE DEFLECTION, 3/4" BLADE SPACING	PRICE MODEL #530, BORDER TYPE FOR SURFACE MOUNT OR DUCT MOUNT WHERE REQUIRED	
C	SUPPLY	ROUND CONE	SEE PLANS FOR AIRFLOW AND SIZE		ROUND CONE DIFFUSER WITH ADJUSTABLE PATTERN AND SAFETY CHAIN	PRICE MODEL #RCD	
G1	SUPPLY	DUCT MOUNT	SEE PLANS FOR AIRFLOW AND SIZE		EXTRUDED SPIRAL DUCT MOUNTED DIFFUSER, DOUBLE DEFLECTION, 3/4" BLADE SPACING, AE1 VOLUME	PRICE MODEL #SDGE	
G2	RETURN EXHAUST	DUCT MOUNT	SEE PLANS FOR AIRFLOW AND SIZE		EXTRUDED SPIRAL DUCT MOUNTED GRILLE, PERFORATED FACE	PRICE MODEL #SDGER	
	BALANCE DAMPER	VOLUME CONTROL DAMPER (VCD)	RUSKIN MODEL #CD-50 OPPOSED BLADE DAMPER WITH LOCKING QUADRANT		SEE PLANS FOR LOCATION, APPLICATION AND DETAILS	CONTRACTOR CONSTRUCTED DAMPER NOT ALLOWED	
	BALANCE DAMPER	MANUAL BALANCE DAMPER (MBD)	RUSKIN MODEL #MDRS MANUAL BALANCING DAMPER WITH STANDOFF BRACKET		SEE PLANS FOR LOCATION, APPLICATION AND DETAILS	CONTRACTOR CONSTRUCTED DAMPER NOT ALLOWED	
	FIRE BARRIERS	FIRE DAMPER (FD)	RUSKIN MODEL #DIBD2 FIRE DAMPER HAVING A UL555 RATING. DAMPER SHALL HAVE FUSIBLE INK RATED AT 165°F		SEE PLANS FOR LOCATION, APPLICATION AND DETAILS	MANUFACTURER RESPONSIBLE TO VERIFY EXACT SIZE/MODEL/STYLE FOR EACH APPLICATION. PROVIDE ACCESS DOORS AS REQUIRED , COORDINATE ACESS DOORS WITH ARCHITECT	
	SMOKE BARRIERS	SMOKE DAMPER (SD)	RUSKIN MODEL #SD102 SMOKE DAMPER HAVING A UL555 RATING.		SEE PLANS FOR LOCATION, APPLICATION AND DETAILS	MANUFACTURER RESPONSIBLE TO VERIFY EXACT SIZE/MODEL/STYLE FOR EACH APPLICATION. PROVIDE ACCESS DOORS AS REQUIRED , COORDINATE ACESS DOORS WITH ARCHITECT	
	FIRE SMOKE BARRIERS	COMBINATION FIRE & SMOKE DAMPER (FSD)	RUSKIN MODEL #FSD-36 COMBINATION FIRE/SMOKE DAMPER HAVING A UL555 RATING. DAMPER SHALL HAVE FUSIBLE INK RATED AT 165°F		SEE PLANS FOR LOCATION, APPLICATION AND DETAILS	MANUFACTURER RESPONSIBLE TO VERIFY EXACT SIZE/MODEL/STYLE FOR EACH APPLICATION. PROVIDE ACCESS DOORS AS REQUIRED , COORDINATE ACESS DOORS WITH ARCHITECT	

NOTES:
1. PROVIDE INLET AND OUTLET SIZES ABOVE UNLESS SIZES ARE SPECIFICALLY NOTED ON PLANS.
2. DIRECTIONAL AIR THROW PATTERNS SHALL BE FIELD ADJUSTED IN ACCORDANCE WITH REPRESENTATIONS BELOW AND AS NOTED ON DRAWINGS.



3. INLETS NOTED WITH AN "R" ARE ON THE RETURN SYSTEM AND INLETS NOTED WITH AN "E" ARE ON THE EXHAUST SYSTEM.



4. AIR DISTRIBUTION SHALL BE FACTORY WHITE FINISH, UNLESS NOTED OTHERWISE.

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE IBC, UMC, UPC, NEC, NFPA, NEVADA STATE FIRE MARSHAL REGULATIONS, LOCAL AND STATE ORDINANCES, AND INDUSTRY STANDARDS.
2. THE INFORMATION REGARDING EXISTING CONDITIONS SHOWN ON THE DRAWINGS IS BELIEVED TO BE CORRECT, BUT IS NOT GUARANTEED. THE CONTRACTOR SHALL RELY ON SITE VISITS AND NECESSARY INVESTIGATION TO ENSURE THAT HIS BID IS CORRECT AND COMPLETE AS REQUIRED TO PROVIDE THE SCOPE OF WORK DESCRIBED ON THE DRAWINGS. EXTRA COST WILL NOT BE ALLOWED TO THE CONTRACTOR FOR FAILURE TO PERFORM THIS TASK.
3. SUBMIT FOR REVIEW AND APPROVAL ELECTRONIC COPIES OF SUBMITTALS FOR ALL EQUIPMENT, DUCTWORK, AIR DISTRIBUTION, PLUMBING FIXTURES, INSULATION, VALVES, AND PIPING MATERIALS.
4. AS-BUILT DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL UPON COMPLETION OF THE WORK, AND PRIOR TO FINAL PAYMENT. AS-BUILT DRAWINGS SHALL BE MAINTAINED ON SITE AS THE WORK PROGRESSES AND SHALL BE AVAILABLE FOR REVIEW BY THE OWNER AND/OR ARCHITECT/ENGINEER AT ALL TIMES.
5. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
6. THE WORK AND MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER.
7. COORDINATE THE ACTUAL LOCATION OF ROOFTOP UNITS, FANS, PIPES, VENTS, ETC. THROUGH THE ROOF WITH THE ROOF PLANS.
8. COORDINATE THE EXACT LOCATION OF EQUIPMENT AND OF PENETRATIONS THROUGH THE ROOF, FLOORS, AND WALLS WITH STRUCTURAL DRAWINGS PRIOR TO ANY ROUGH-IN.
9. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FULL EXTENT OF DEMOLITION AND NEW WORK TO BE PERFORMED.
10. SEISMIC BRACING FOR MECHANICAL SYSTEMS (EQUIPMENT, DUCTWORK, PIPING, AND CONDUIT) SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE (IBC) INCLUDING ALL APPLICABLE PROVISIONS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) MINIMUM DESIGN LOADS FOR BUILDINGS (ASCE STANDARD 7-16 SECTION 13.1.3).
11. PIPING SHALL BE INSTALLED SUCH THAT IT DOES NOT OBSTRUCT ACCESS OR REMOVAL OF MECHANICAL EQUIPMENT.
12. DASHED OUTLINES DENOTE THE REQUIRED SERVICE CLEARANCE SPACE (SEE DUCTWORK PLANS). NO PIPING, DUCTWORK, CONDUIT, AND/OR CEILING HANGERS SHALL BE INSTALLED IN THE DESIGNATED SERVICE/ACCESS CLEARANCE AREA.
13. SEE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR HOLE CORING REQUIREMENTS.
14. SEE REFLECTED CEILING PLANS FOR THE EXACT LOCATION OF ALL DIFFUSERS AND GRILLES LOCATED IN CEILINGS.
15. COORDINATE ROUTING OF DUCTWORK WITH PIPING, PLUMBING, FIRE SPRINKLER, AND ELECTRICAL TRADES PRIOR TO BEGINNING WORK.
16. ALL EQUIPMENT, PIPING, DUCTWORK, ETC. SHALL BE SUPPORTED AS REQUIRED TO PROVIDE A VIBRATION-FREE INSTALLATION.
17. ALL ROOF PENETRATIONS SHALL BE FLASHED AND COUNTER-FLASHED WATERTIGHT.
18. CONSTRUCT ALL DUCTWORK LOCATED BETWEEN AIR HANDLING UNITS AND VARIABLE AIR VOLUME BOXES FOR 4 INCH W.G. PRESSURE CLASS PER SMACNA REQUIREMENTS. CONSTRUCT ALL OTHER DUCTWORK FOR 2 INCH W.G. PRESSURE CLASS, EXCEPT WHERE NOTED OTHERWISE, PER SMACNA REQUIREMENTS.
19. ALL DUCT BRANCH SIZES TO CEILING DIFFUSERS SHALL BE CEILING DIFFUSER NECK SIZE, EXCEPT WHERE NOTED OTHERWISE.
20. PROVIDE FLEXIBLE DUCT CONNECTIONS WHEN CONNECTING DUCTWORK TO EQUIPMENT.
21. TESTING AND BALANCING SHALL BE CONDUCTED BY AN AABC CERTIFIED TEST AND BALANCE CONTRACTOR. TEST AND BALANCE ALL AIR AND WATER SYSTEMS TO ACHIEVE THE LISTED VOLUMES. SET ALL VOLUME DAMPERS AND TEST/BALANCE SYSTEMS SUCH THAT THE VOLUME INDICATED ON THE DRAWINGS IS BEING DELIVERED. PROVIDE A WRITTEN REPORT SHOWING 'KA' FACTORS, FPM, AND CFM FOR EACH DIFFUSER, REGISTER, AND GRILLE, AND THE TOTAL AIR VOLUME FOR EACH TESTED SYSTEM. THE FINALIZED REPORT SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL UPON COMPLETION OF THE TESTING AND BALANCING AND BEFORE SCHEDULING THE FINAL OBSERVATION.
22. PROVIDE MANUAL VOLUME DAMPERS AT EACH SUPPLY AND EXHAUST DUCT BRANCH. MANUAL VOLUME DAMPERS SHALL BE LOCATED AS FAR AWAY FROM THE DIFFUSER/GRILLE AS POSSIBLE.
23. FLEXIBLE DUCT LENGTHS SHALL NOT EXCEED 5'-0" (INSTALL IN CONCEALED LOCATIONS ONLY).
24. PROVIDE A MINIMUM OF 12" BELOW DUCTWORK TO CEILING FOR REMOVAL OF LIGHT FIXTURES.
25. COORDINATE THE EXACT SIZE AND LOCATION OF DUCTWORK WITH ALL OTHER TRADES.
26. VERIFY FINAL THERMOSTAT LOCATIONS WITH BUILT-IN CABINETS, DOOR SWINGS, ETC.
27. THERMOSTATS MOUNTED ON EXTERIOR WALLS SHALL HAVE AN INSULATED BASE.
28. SEE KITCHEN DRAWINGS FOR EXACT LOCATIONS AND CONNECTION SIZES OF KITCHEN HOODS.
29. ANY DRAIN LINES WHICH DAYLIGHT ABOVE APPROVED RECEPTOR SHALL BE 2 PIPE DIAMETERS ABOVE RECEPTOR'S FLOOD RIM.

MECHANICAL LEGEND

RSL	REFRIGERANT SUCTION LINE
RLL	REFRIGERANT LIQUID LINE
D	CONDENSATE DRAIN PIPE
	EXISTING ITEM TO BE REMOVED
	FLEXIBLE CONNECTION
GV	GATE VALVE
BLV	BALL VALVE
BFV	BUTTERFLY VALVE
BV	BALANCE VALVE
CKV	CHECK VALVE
LH GC	LEVER HANDLE GAS COCK
PT	PETES PLUG
Ø	THERMOMETER, PRESSURE GAUGE
	RETURN/EXHAUST AIR
	SUPPLY/OUTSIDE AIR
	OUTSIDE AIR DUCT SECTION
	RETURN OR EXHAUST AIR DUCT SECTION
	SUPPLY AIR DUCT SECTION
(E) (N)	DUCT POD/ POC
12x10	DUCT (FIRST FIGURE SIDE SHOWN SECOND FIGURE SIDE NOT SHOWN)
	TURNING VANES
	FLEXIBLE DUCTWORK
R D	MANUAL DAMPER
	RISE OR DROP IN DIRECTION OF ARROW
T	ROOM THERMOSTAT
TS	TEMPERATURE SENSOR
Ø	DIAMETER
H	HUMIDIFIER
H	HUMIDISTAT
ROOMNAME --	ROOM NAME AND NUMBER
AC	AIR CONDITIONING
AD, AP	ACCESS DOOR, ACCESS PANEL
CC	CENTER TO CENTER
CFM,f	CUBIC FEET OF AIR PER MINUTE
E	EXTRACTOR
(E), (N)	EXISTING, NEW
EAD, OAD, RAD	EXHAUST AIR, OUTSIDE AIR & RETURN AIR DAMPER
EF	EXHAUST FAN
°F	DEGREES FAHRENHEIT
FA, TB	FROM ABOVE, TO BELOW
FB, TA	FROM BELOW, TO ABOVE
FD / FSD	FIRE DAMPER / COMBINATION FIRE SMOKE DAMPER
GA.	GAUGE
GALV.	GALVANIZED
AAV. / MAV.	AUTOMATIC / MANUAL AIR VENT
MAX., MIN.	MAXIMUM, MINIMUM
M.D.	MANUAL DAMPER
P.D.	PITCH DOWN IN DIRECTION OF ARROW
POC.	POINT OF CONNECTION
POD.	POINT OF DISCONNECT
PRV.	PRESSURE REDUCING VALVE
RA, EA.	RETURN AIR, EXHAUST AIR
SA, OA.	SUPPLY AIR, OUTSIDE AIR
T.C.V.	TEMPERATURE CONTROL VALVE
T.C.P.	TEMPERATURE CONTROL PANEL
TYP.	TYPICAL
UNO	UNLESS NOTED OTHERWISE

DRAWING SHEET INDEX

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Sheet Title

MECHANICAL LEGEND, NOTES, & AIR DISTRIBUTION

Date: JANUARY 19, 2023

Sheet No:

M0.00

EXHAUST FAN SCHEDULE

SYMBOL	AREA SERVED	BID ALT	GREENHECK MODEL #	FAN FLOW (CFM)	EXTERNAL STATIC (INCH OF H_2O)	MOTOR HP & RPM	ELECTRICAL (VOLTS)	OPERATING WEIGHT (POUNDS)
EF 1	105, 106, 109	BASE BID	CUE-095-VG	550	0.5	1/6 & 1579	115/1Φ	400
EF 2	RR 129	BASE BID	SP-LP0511	50	0.1	N/A & 650	115/1Φ	30
EF 3	124, 125, 127	BASE BID	CSP-A390-VG	350	0.25	1/15 & 1581	115/1Φ	100
EF 4	119, 122	BASE BID	CSP-A125-VG	100	0.182	N/A & 980	115/1Φ	100
EF 5	KITCHEN RR	BASE BID	SP-LP0511	50	0.1	N/A & 650	115/1Φ	30
EF 6	STAFF RR 138	ALT. A	SP-LP0511	50	0.1	N/A & 650	115/1Φ	30
EF 7	KIDS RR 146	ALT. A	SP-LP0511	50	0.1	N/A & 650	115/1Φ	30
EF 8	KIDS RR 144	ALT. A	SP-LP0511	50	0.1	N/A & 650	115/1Φ	30
EF 9	105, 106, 117	ALT. A	SP-LP0511	50	0.1	N/A & 650	115/1Φ	30
EF 10	150, 151	ALT. B	CUE-095-VG	400	0.25	1/6 & 1124	115/1Φ	400

NOTE: DATA HEREIN CORRECTED FOR 4,150 FOOT ELEVATION

ACCESSORIES:
1. UL/CUL 507 LISTED
2. PITCHED SEISMIC ROOF CURB 14" ABOVE FINISHED ROOF
3. BACK DRAFT DAMPER
4. BIRDSCREEN: GALVANIZED
5. NEMA PREMIUM EFFICIENT MOTOR
6. COATED WITH PERMATECTOR
7. CURB CAP INLET BOX W/ACCESS DOOR & BACK DRAFT DAMPER
8. DRAIN CONNECTION
9. OUTLET CONNECTION
10. MOTOR COVER
11. VARI-GREEN EC MOTOR
12. NEMA-1 TOGGLE SWITCH
13. NOT USED
14. NOT USED
15. ALUMINUM WHEEL MATERIAL
16. INSULATED HOUSING - 1 IN. THINK FAN HOUSING MOTOR COVER
17. SOLID STATE SPEED CONTROL FACTORY MOUNTED AND WIRED
18. NOT USED
19. NEMA-3R TOGGLE SWITCH
20. MOTOR WITH SHAFT GROUNDING
21. GRIP NOTCH BELT(S)
22. GREASE TRAP, GALVANIZED HEAT BAFFLE
23. DUAL DRIVES
24. NOT USED
25. HINGED BASE
26. CURB EXTENSION
27. UL/CUL 762 LISTED
28. STAINLESS STEEL SHAFT AND FASTENERS

MECH. EQUIP. SCHEDULE

ACO 1 ACI 1	DUCTLESS SPLIT SYSTEM - MDF 101 - BASE BID OUTDOOR UNIT 1.5 TON HEAT PUMP OUTDOOR UNIT. FURNISH WITH WIND BAFFLES FOR LOW AMBIENT CONTROL, BASIN HEATER, & HAIL GUARD. INDOOR UNIT 1.5 TON WALL-MOUNTED INDOOR UNIT. FURNISH WITH CONDENSATE PUMP.
ACO 2 ACI 2	DUCTLESS SPLIT SYSTEM - ELECTRICAL ROOM 103 - BASE BID OUTDOOR UNIT 1.5 TON HEAT PUMP OUTDOOR UNIT. FURNISH WITH WIND BAFFLES FOR LOW AMBIENT CONTROL, BASIN HEATER, & HAIL GUARD. INDOOR UNIT 1.5 TON WALL-MOUNTED INDOOR UNIT. FURNISH WITH CONDENSATE PUMP.
ACO 3 ACI 3	DUCTLESS SPLIT SYSTEM - ELECTRICAL ROOM 137 - ALT. A OUTDOOR UNIT 1.5 TON HEAT PUMP OUTDOOR UNIT. FURNISH WITH WIND BAFFLES FOR LOW AMBIENT CONTROL, BASIN HEATER, & HAIL GUARD. INDOOR UNIT 1.5 TON WALL-MOUNTED INDOOR UNIT. FURNISH WITH CONDENSATE PUMP.
EWH 1	ELECTRIC WALL HEATER - MECHANICAL 102 - BASE BID W RADIANT ELECTRIC WALL HEATER, 120V/1PH, 1.5 KW WITH INTEGRAL THERMOSTAT.
EWH 2	ELECTRIC WALL HEATER - FIRE RISER 104 - BASE BID W RADIANT ELECTRIC WALL HEATER, 120V/1PH, 1.5 KW WITH INTEGRAL THERMOSTAT.
EWH 3	ELECTRIC WALL HEATER - ELECTRIC 103 - BASE BID W RADIANT ELECTRIC WALL HEATER, 120V/1PH, 1.5 KW WITH INTEGRAL THERMOSTAT.
DF 1	DESTRATIFICATION FAN - GYMNASIUM 149 - ALT. B BIG ASS FAN MODEL POWERFOIL X4.0 (24' DIAMETER) VARIABLE SPEED INDUSTRIAL FAN WITH WINGLETS. MAX FAN SPEED 76 RPM. INPUT POWER 208V/1PH. OPERATING WEIGHT = 500LBS, COLOR SHALL BE STANDARD SILVER. CONTROLLER TO BE WIRED AND MOUNTED IN STORAGE 148. MOUNTING TO BAR JOIST.
L 1	LOUVER - GYMNASIUM 149 - ALT. B GREENHECK MODEL "ESD-603" 6" ALUMINUM FRAME. KYNAR 70% (2 COAT). CLASSIC BRONZE (GF108). FLAT EXPANDED ALUMINUM, INTERNAL MATCH LOUVER FINISH. 56" WIDEx36"HIGH WITH 14.4 FT² FREE AREA. WEIGHT 100 LBS.
DBF 1	DRYER BOOSTER FAN - LAUNDRY 134 - ALT. A FANTECH MODEL DEDPV-705 INLINE DRYER EXHAUST FAN. MAX DUCT DISTANCE OF 106' AT 4,000 FT ELEVATION. 4" ROUND DUCT CONNECTION FOR INLET & OUTLET.

ROOF TOP UNIT SCHEDULE

SYMBOL	TRANE MODEL #	UNIT SIZE	BID ALT	COOLING PERFORMANCE (MBH)		COOLING TEMPS		HEATING PERFORMANCE (MBH)		HEATING TEMPS		MINIMUM OA (CFM)	FAN (CFM)	EXTERNAL STATIC (INCHES OF H_2O)	ELECTRICAL			MINIMUM EER	OPERATING WEIGHT (POUNDS)	OPTIONS
				T.C.	S.C.	ENTERING	LEAVING	INPUT	OUTPUT	ENTERING	LEAVING				VOLTS	MCA	MOCP			
RTU 3	YHC037E4RZA	3 TON 17 SEER	BASE BID	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 4	YHC037E4RZA	3 TON 17 SEER	BASE BID	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 5	YHC067E4RZA	5 TON 17 SEER	BASE BID	50.98	44.46	80/62	56.79/52.88	140	86.74	50	98.4	486	2000	1	460/3Φ	15	20	12.1	1300	SEE BELOW
RTU 6	YHC037E4RZA	3 TON 17 SEER	BASE BID	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 7	YHC037E4RZA	3 TON 17 SEER	BASE BID	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 8	YHC037E4RZA	3 TON 17 SEER	BASE BID	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 9	YHC037E4RZA	3 TON 17 SEER	BASE BID	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 10	YHC067E4RZA	5 TON 17 SEER	BASE BID	50.98	44.46	80/62	56.79/52.88	140	86.74	50	98.4	486	2000	1	460/3Φ	15	20	12.1	1300	SEE BELOW
RTU 11	YHC037E4RZA	3 TON 17 SEER	ALT. A	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 12	YHC037E4RZA	3 TON 17 SEER	ALT. A	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 13	YHC037E4RZA	3 TON 17 SEER	ALT. A	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 14	YHC047E4RZA	4 TON 17 SEER	ALT. A	42.92	36.81	80/62	56.01/52.39	120	80.06	50	105.7	691	1600	1	460/3Φ	14	20	12.1	1300	SEE BELOW
RTU 15	YHC037E4RZA	3 TON 17 SEER	ALT. A	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 16	YHC037E4RZA	3 TON 17 SEER	ALT. A	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 17	YHC037E4RZA	3 TON 17 SEER	ALT. B	32.04	27.81	80/62	57.04/52.89	100	66.72	50	111.9	87	1200	1	460/3Φ	12	15	12.1	1000	SEE BELOW
RTU 18	YHJ180A4SAH	15	ALT. B	155.64	138.6	80/62	59.72/55.95	333.6	270.22	50	91.7	2891	6000	1.24	460/3Φ	41	50	11.88	2500	SEE BELOW
RTU 19	YHJ180A4SAH	15	ALT. B	155.64	138.6	80/62	59.72/55.95	333.6	270.22	50	91.7	2891	6000	1.24	460/3Φ	41	50	11.88	2500	SEE BELOW

GENERAL NOTES:
1 ALL DATA DERATED FOR OPERATION AT 4,150 FT. ELEVATION.
2 COOLING CAPACITY BASED ON 100° F. AMBIENT
3 VERIFY VOLTAGES AND AMPS PRIOR TO ORDERING EQUIPMENT.
4 DRY BULB ECONOMIZER 0-100%
5 HINGED PANEL W/ 2" PLEATED FILTERS MERV8

ACCESSORIES/FEATURES:
1 STAINLESS STEEL HEAT EXCHANGER
2 DIVISION 26 TO FURNISH PRODUCTS OF COMBUSTION DETECTOR
3 GFCI FACTORY INSTALLED/FIELD WIRED
4 2" MERV 8 FILTER FACTORY INSTALLED
5 80 AMP DISCONNECT FACTORY INSTALLED

DOAS (RTU) SCHEDULE

SYMBOL	CAPTIVEAIRE MODEL #	BID ALT	COOLING PERFORMANCE (MBH)		COOLING TEMPS		HEATING PERFORMANCE (MBH)		HEATING TEMPS		MAX OA (CFM)	FAN (CFM)	EXTERNAL STATIC (INCHES OF H_2O)	ELECTRICAL			MINIMUM IEER	OPERATING WEIGHT (POUNDS)	OPTIONS
			T.C.	S.C.	ENTERING	LEAVING	INPUT	OUTPUT	ENTERING	LEAVING				VOLTS	MCA	MOCP			
RTU 1	CASRTU2-I.200-18-8T	BASE BID	102	102	86.8/61.5	51.6/46.4	155379	125857	30	70	1788	3200	1	460/3Φ	41.9	50	20.2	2500	SEE BELOW
RTU 2	CASRTU3-I.250-24-12.5T	BASE BID	143.2	139.7	83/61.6	49/49	213746	173134	30	70	1700	4500	1	460/3Φ	68.8	80	21.3	3000	SEE BELOW

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. 15 DEGREE LOW AMBIENT OPERATION
15. DOWN DISCHARGE/DOWN RETURN

KITCHEN EXHAUST FAN SCHEDULE

SYMBOL	CAPTIVEAIRE MODEL #	BID ALT	CFM	ESP	RPM	MOTOR ENCLOSURE	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
KEF 1	DU180HFA	BASE BID	3300	1.6	1446	ODP, PREMIUM	3	1.86	3	208	9.5	762 FPM	300	24.5

NOTES:
1. GREASE BOX
2. FAN BASE CERAMIC SEAL - FACTORY INSTALLED - FOR GREASE DUCTS
3. EXHAUST FAN HEAT BAFFLE
4. 2 YEAR PARTS WARRANTY

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JOB 2021-065

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CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner
CITY OF FERNLEY

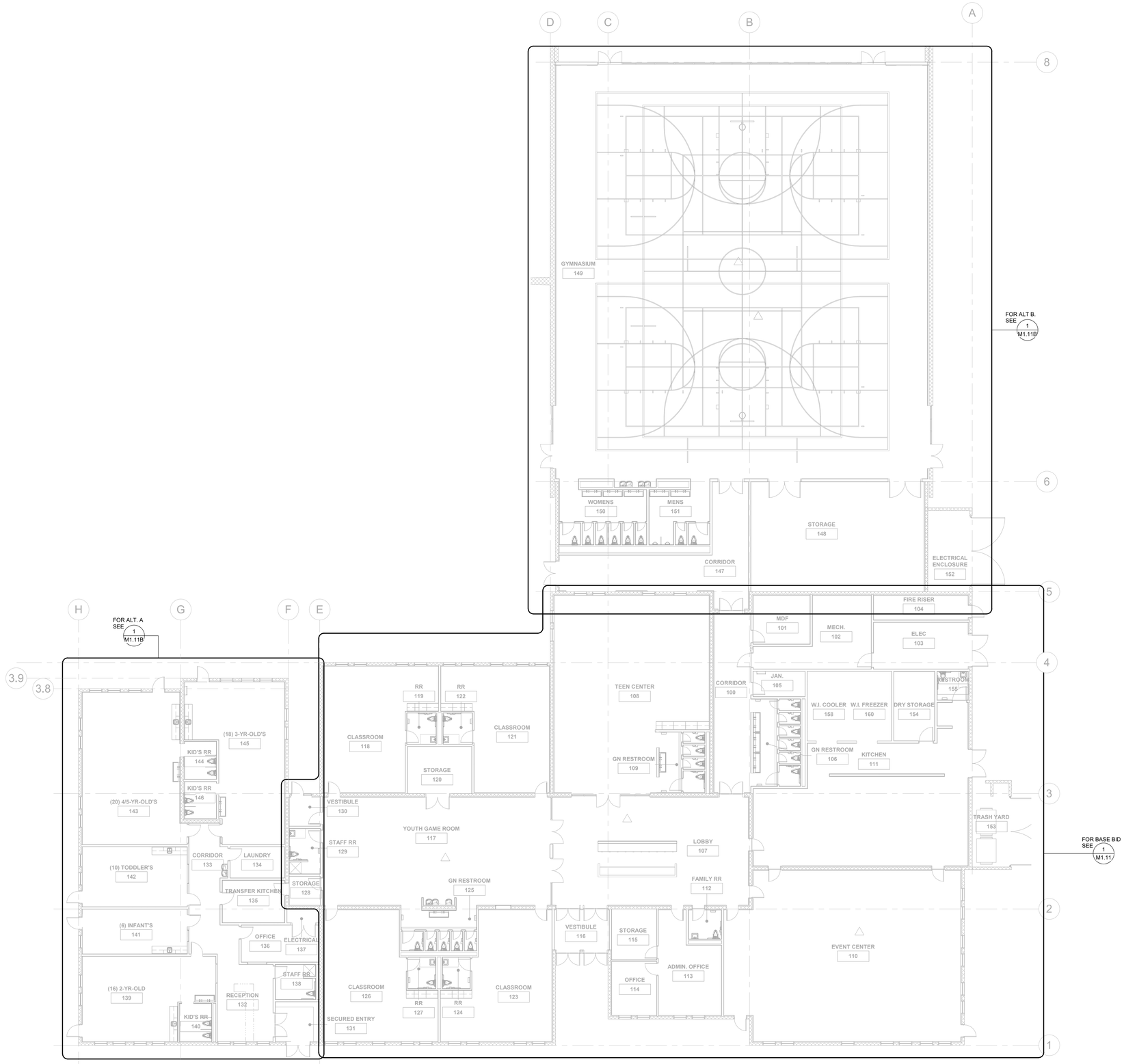
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Sheet Title
MECHANICAL EQUIP SCHEDULES

Date: JANUARY 19, 2023
Sheet No:
M0.01



MECHANICAL OVERALL FLOOR PLAN - GYMNASIUM
SCALE: 3/32" = 1'-0"

1
M1.01

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REV	DATE	DESCRIPTION

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MECHANICAL OVERALL FLOOR PLAN

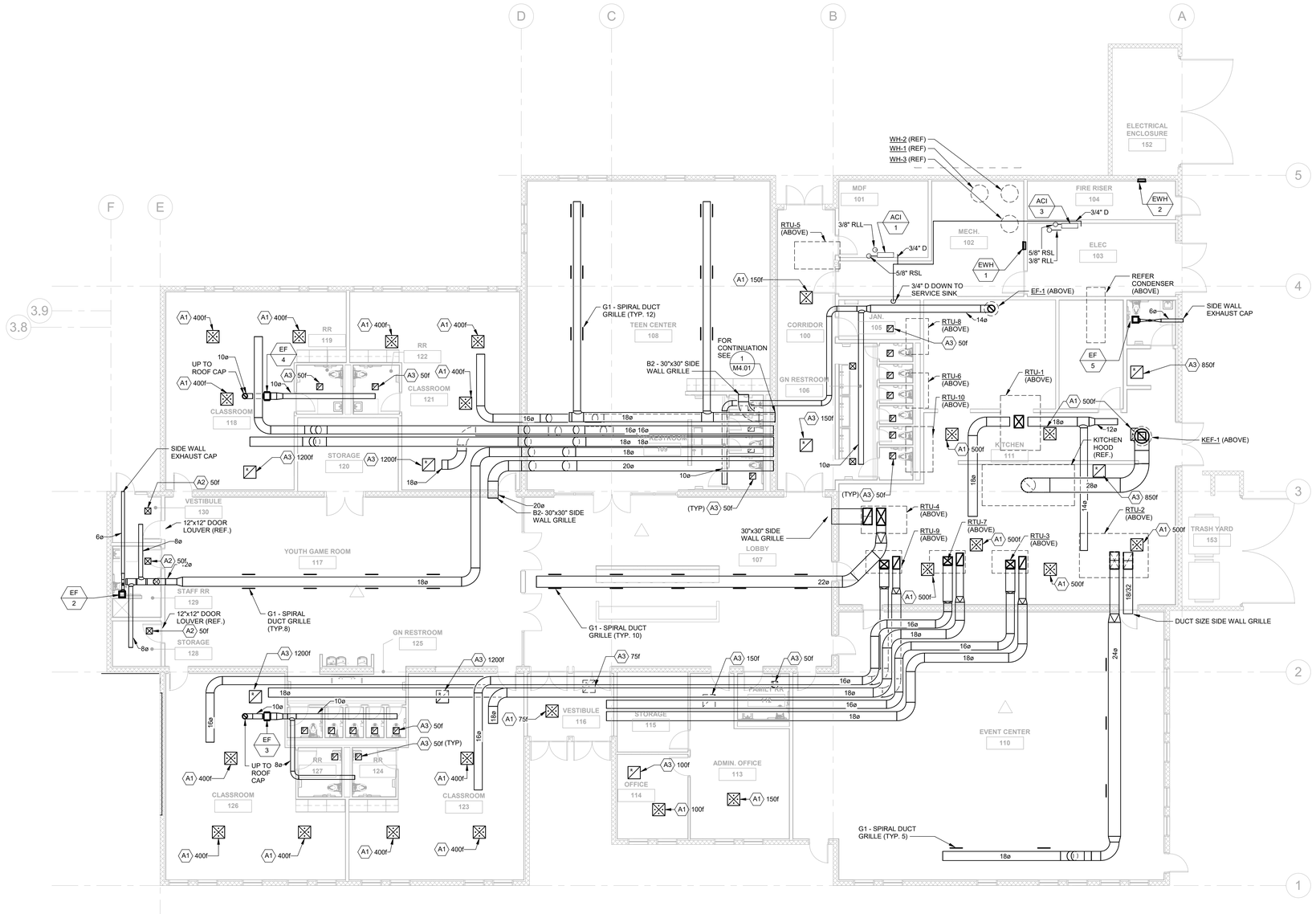
Date: JANUARY 19, 2023

Sheet No:

M1.01

DRAWING NOTES

FOR MORE INFORMATION ON THE EQUIPMENT TO SERVE HVAC NEEDS OF THE KITCHEN AND CAFETERIA SEE M5 SERIES DRAWINGS.


WH-2 (REF)
WH-1 (REF)
WH-3 (REF)
ELECTRICAL ENCLOSURE 152
MDF 101
FIRE RISER 104
MECH. 102
ELEC 103
RTU-5 (ABOVE)
3/8" RLL
3/4" D
5/8" RSL
3/8" RSL
EWH 1
EWH 2
ACI 1
ACI 3
3/4" D DOWN TO SERVICE SINK
EF-1 (ABOVE)
REFER CONDENSER (ABOVE)
SIDE WALL EXHAUST CAP
EF 5
A3 850f
G1 - SPIRAL DUCT GRILLE (TYP. 12)
TEEN CENTER 108
CORRIDOR 100
JAN. 105
GN RESTROOM 106
FOR CONTINUATION SEE 1 M4.01
B2 - 30"x30" SIDE WALL GRILLE
RTU-8 (ABOVE)
RTU-6 (ABOVE)
RTU-10 (ABOVE)
RTU-1 (ABOVE)
KITCHEN 111
KITCHEN HOOD (REF.)
KEF-1 (ABOVE)
A1 150f
A3 150f
A3 50f
A1 500f
A3 850f
RR 119
RR 122
CLASSROOM 118
CLASSROOM 121
STORAGE 120
STORAGE 109
EF 4
UP TO ROOF CAP
SIDE WALL EXHAUST CAP
A3 1200f
A2 50f
VESTIBULE 130
12"x12" DOOR LOUVER (REF.)
YOUTH GAME ROOM 117
20ø B2- 30"x30" SIDE WALL GRILLE
(TYP) A3 50f
30"x30" SIDE WALL GRILLE
LOBBY 107
RTU-4 (ABOVE)
RTU-9 (ABOVE)
RTU-7 (ABOVE)
RTU-3 (ABOVE)
RTU-2 (ABOVE)
TRASH YARD 153
EF 2
STAFF RR 129
G1 - SPIRAL DUCT GRILLE (TYP.8)
G1 - SPIRAL DUCT GRILLE (TYP. 10)
DUCT SIZE SIDE WALL GRILLE
GN RESTROOM 125
STORAGE 128
A3 75f
A3 150f
A3 50f
Janitor's Closet 112
VESTIBULE 116
STORAGE 115
EVENT CENTER 110
EF 3
UP TO ROOF CAP
RR 127
RR 124
CLASSROOM 126
CLASSROOM 123
ADMIN. OFFICE 113
OFFICE 114
A3 100f
A1 100f
A1 150f
G1 - SPIRAL DUCT GRILLE (TYP. 5)
A1 400f
A3 1200f
A3 50f (TYP)
A3 75f
A1 75f
A3 100f
A1 150f
A3 50f
A1 500f
A3 850f
A2 50f
A1 400f
A3 1200f
A3 50f (TYP)
A1 75f
A3 100f
A1 100f
A1 150



MECHANICAL PARTIAL ZONING PLAN - BASE BID

1 / M2.1

SCALE: 1/8" = 1'-0"

N

tsk

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Reno NV, 89501
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fax: 775.857.2403
www.tska.com

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4557 GREENVIEW DR.
EL DORADO HILLS, CA 95762
TEL: 916-737-6014
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JOB 2021-065

PLEASE RECYCLE

Project

CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

PROGRESS
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

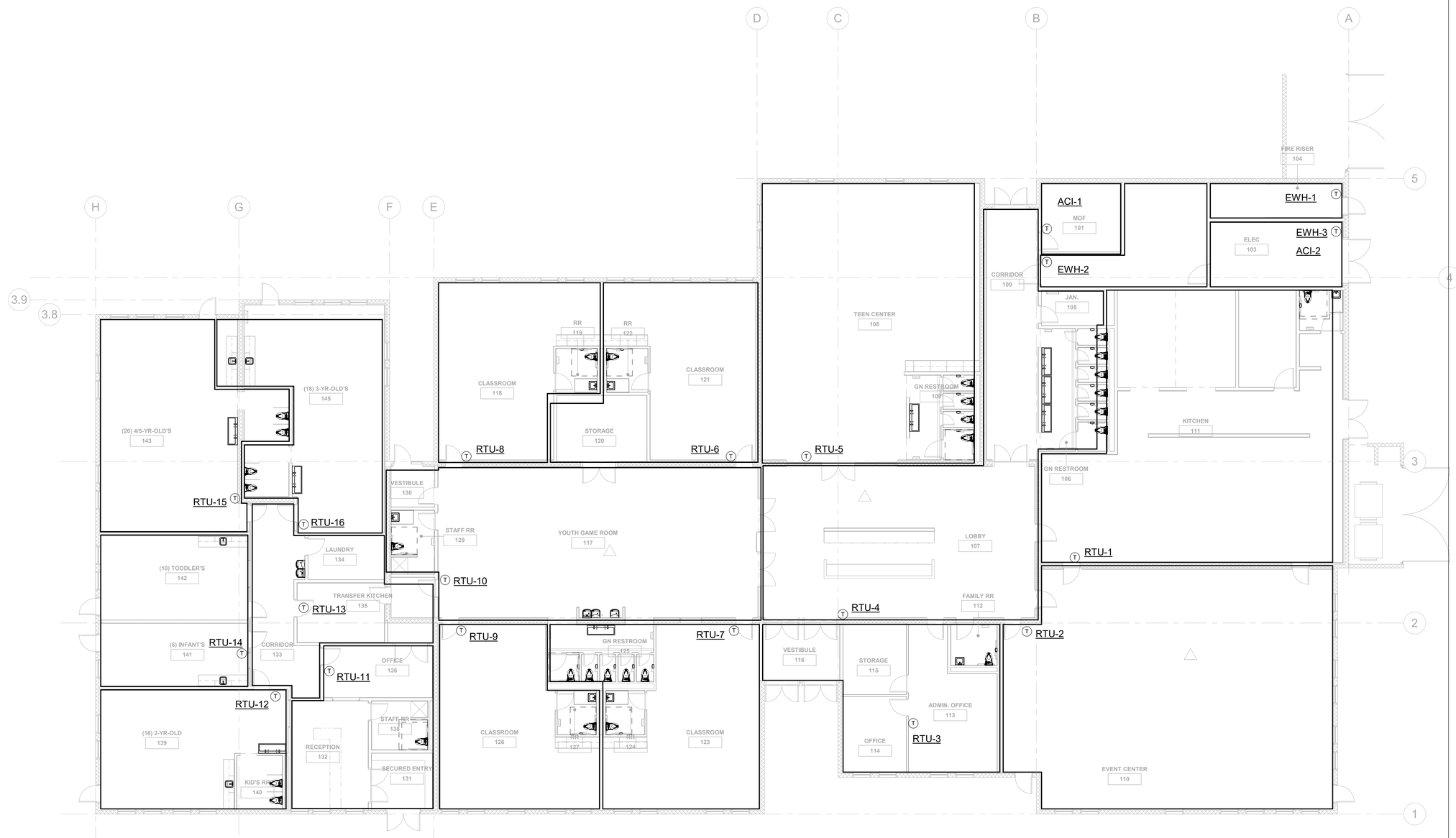
Sheet Title

MECHANICAL PARTIAL ZONING PLAN - BASE BID

Date: JANUARY 19, 2023

Sheet No:

M2.1



MECHANICAL PARTIAL ZONING PLAN - ATL. A

SCALE: 1/8" = 1'-0"

1 / M2.2

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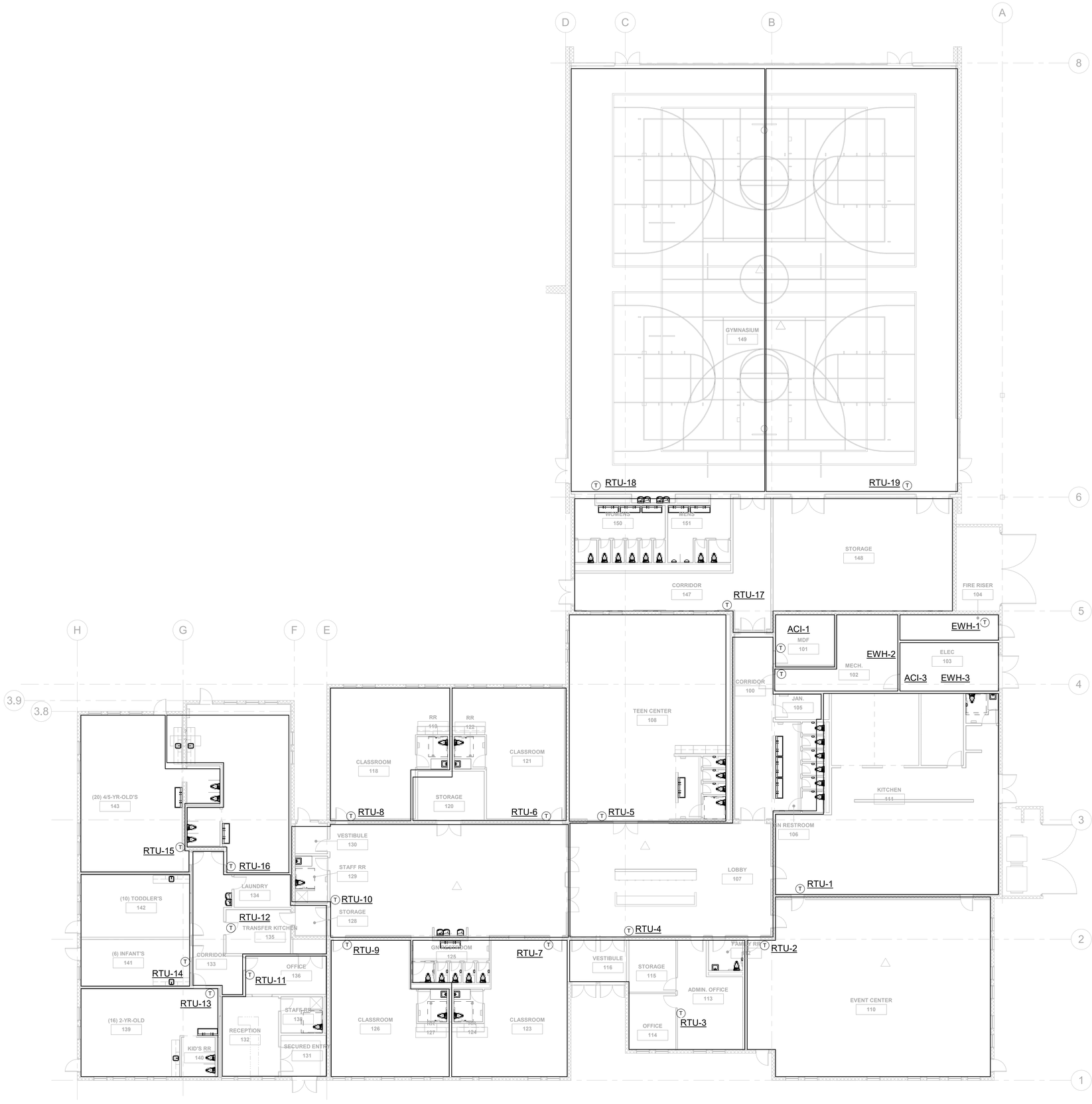
Sheet Title

MECHANICAL PARTIAL ZONING PLAN - ALT. A

Date: JANUARY 19, 2023

Sheet No:

M2.2



MECHANICAL PARTIAL ZONING PLAN - ALT. B

SCALE: 1" = 10'-0"

1 / M2.3

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REVISIONS		
REV	DATE	DESCRIPTION

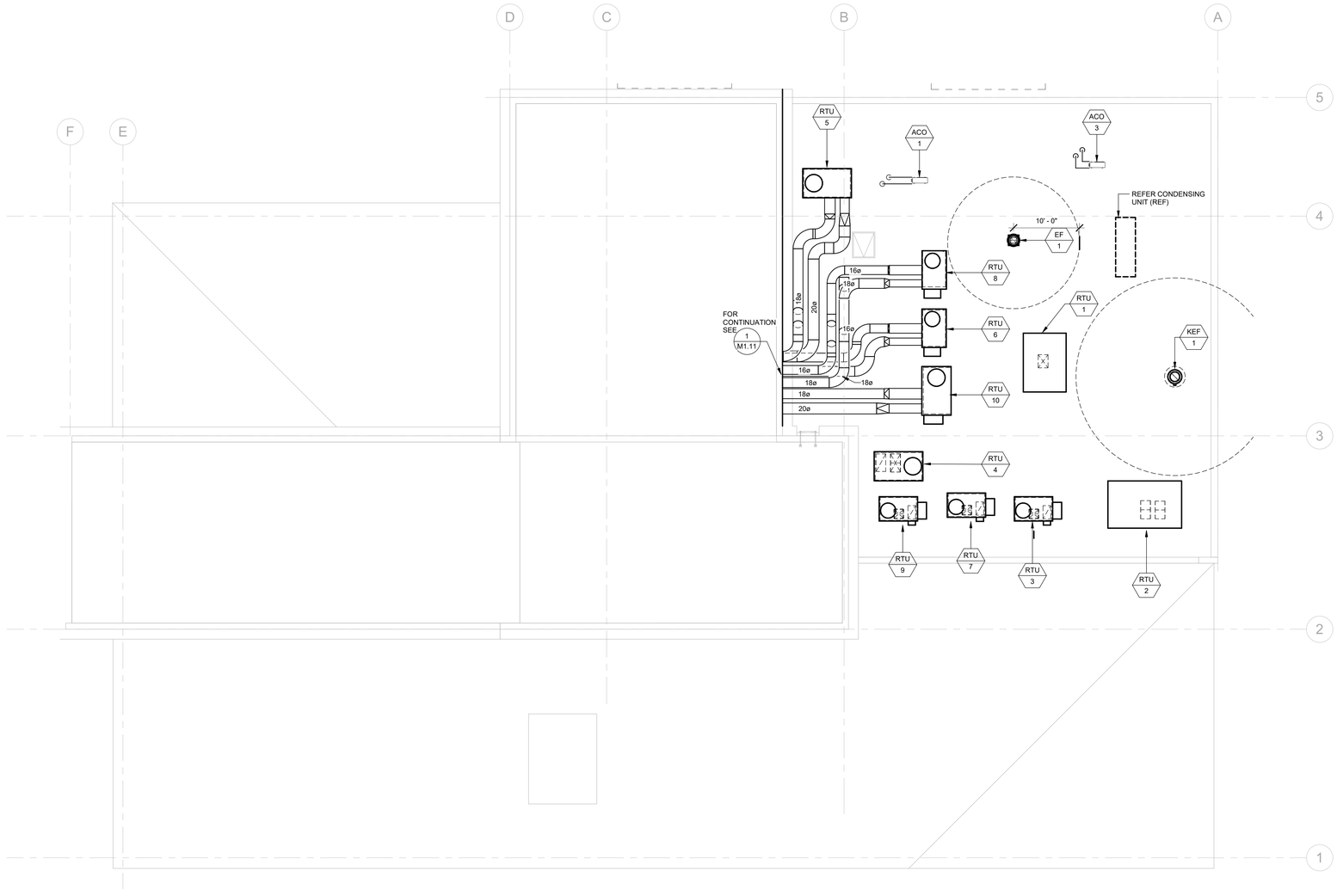
Sheet Title

MECHANICAL PARTIAL ZONING PLAN - ALT. B

Date: JANUARY 19, 2023

Sheet No:

M2.3



MECHANICAL PARTIAL ROOF PLAN - BASE BID (1 / M4.01)

SCALE: 1/8" = 1'-0"

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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title

MECHANICAL PARTIAL ROOF PLAN - BASE BID

Date: JANUARY 19, 2023

Sheet No:

M4.01

FOR QUESTIONS, CALL THE
Northern Nevada Mechanical
REGION 113
PHONE: (775) 236-5843
EMAIL: reg113@captiveaire.com

PATENT NUMBERS

EXHAUST HOODS ND-2/BD-2/SND-2 (CANADA) - CA PATENT 2520435 C.

HOOD INFORMATION - JOB#5791875

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)							HOOD CONSTRUCTION	HOOD CONFIG	
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP		END TO END	RDW
1	KH-1	6030 ND-2	CAPTIVEAIRE	14' 8"	600 DEG	I	HEAVY	225	3300			4"	14"	1650	1543	-0.651"	430 SS WHERE EXPOSED	ALONE	ALONE
												4"	14"	1650	1543	-0.651"			

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	KH-1	CAPTRATE SOLO FILTER	11	20"	16"	85% SEE FILTER SPEC	10	RECESSED ROUND	NO	LEFT	12"x60"x30"	TANK FS	4.0/4.0	SC-310110MA	1 LIGHT 1 FAN	YES	1446 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	KH-1	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 80.00" HIGH X 188.00" LONG 430 SS VERTICAL.
		BALANCE DAMPERS.
		INSULATION FOR TOP OF HOOD.
		STRUCTURAL FRONT PANEL.
		INSULATION FOR BACK OF HOOD.
		RISER SENSOR INSTALL 6IN PLEN.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.

GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12". DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

HVAC DISTRIBUTION NOTE

HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

VERIFY CEILING HEIGHT

___' - ___"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED ☐
APPROVED WITH NO EXCEPTION TAKEN ☐
REVISE AND RESUBMIT ☐
SIGNATURE _____
YOUR TITLE _____ DATE _____

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

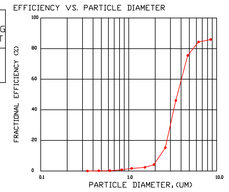
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

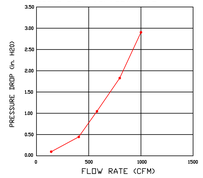
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

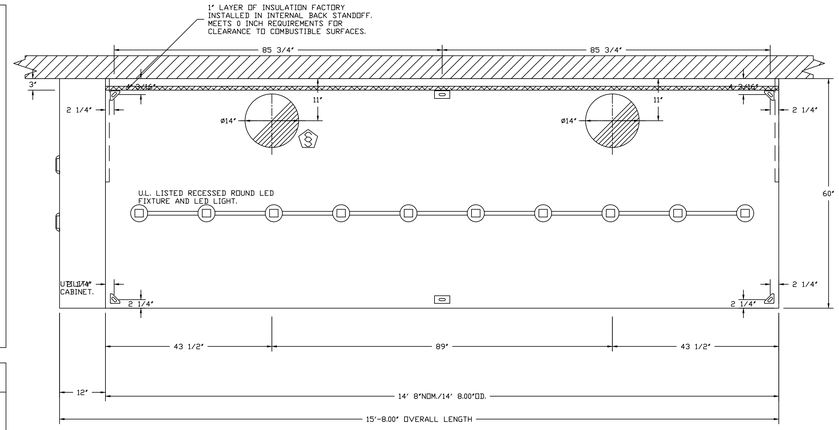
EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



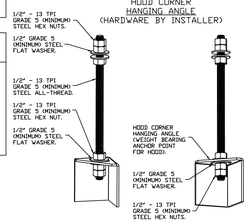
CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.



PLAN VIEW - HOOD #1 (KH-1)
14' 8.00" LONG 6030ND-2

NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

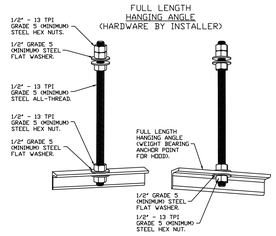
HOOD CORNER HANGING ANGLE (HARDWARE BY INSTALLER)



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

FULL LENGTH HANGING ANGLE (HARDWARE BY INSTALLER)



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

CAPTIVEAIRE
www.captiveaire.com
Northern Nevada Mechanical
P.O. Box 17489, Reno, NV. 89511 PHONE: (775) 236-5843 FAX: (619) 516-8720 EMAIL: reg113@captiveaire.com

Fernley Community Center
FERNLEY, NV, 89408

DATE: 1/13/2023
DWG.#: 5791875
DRAWN BY: Region 113
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 1

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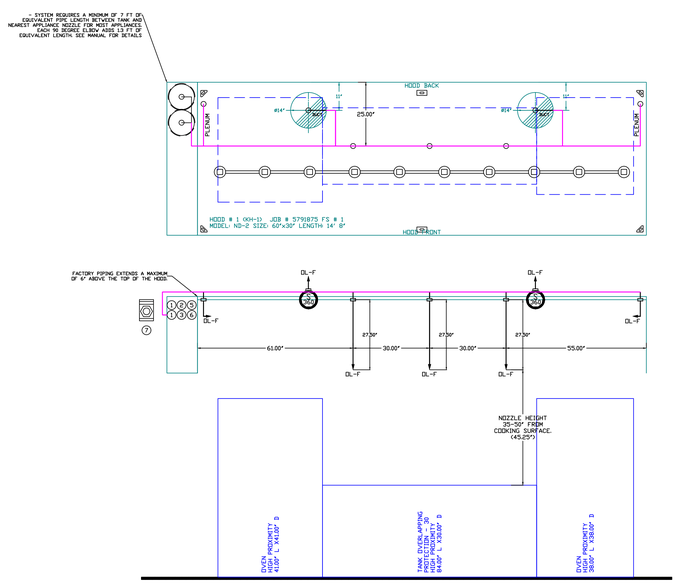
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REV	DATE	DESCRIPTION

Sheet Title
CAPTIVEAIRE PLANS

Date: JANUARY 19, 2023
Sheet No:
M5.01



NOTES
- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP- FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP- FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS.

- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

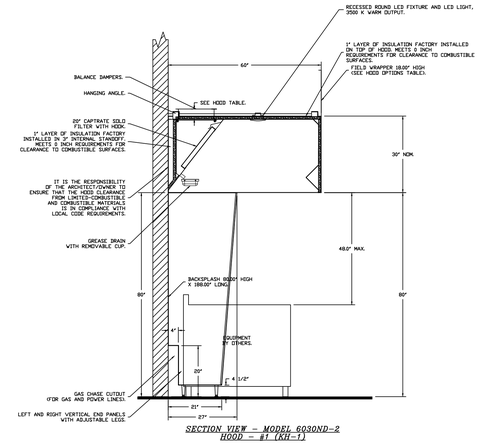
JOB #: 5791875.
JOB NAME: FERNLEY COMMUNITY CENTER.

SYSTEM SIZE: TANK-SP-2 TOTAL FP REQUIRED: 31.
HOOD # 1 14' 0.00" LONG x 60" WIDE x 30" HIGH.
RISER # 1 SIZE: 14" DIA.
RISER # 2 SIZE: 14" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

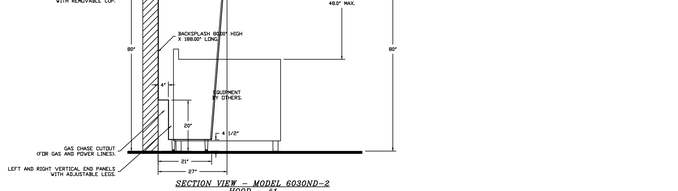
- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

LEGEND - FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.



SECTION VIEW - MODEL 6030ND-2 HOOD - #1 (KH-1)

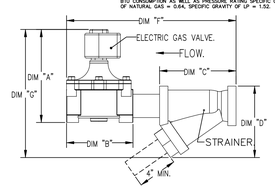


SECTION VIEW - MODEL 6030ND-2 HOOD - #1

GAS VALVES AND STRAINERS														
	GAS VALVE SIZING						GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS		
	TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP-PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "F"	DIM "G"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
GAS VALVE FOR FS#1	ELECTRICAL	2"	120 VAC	0 PSI (0 IN.W.C.)	5.7 PSI (138 IN.W.C.)	2,940,500 BTU/HR	1,938,048 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13-16"	15-5/8"	13-15/16"	HORIZONTAL/ VERTICAL	8214280	4417668	(SC)EGV42

ALL GAS VALVES/STRAINERS
PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED BELOW THE STRAINER BOWL. CHECK WITH LOCAL JURISDICTION FOR SERVICE BTU CONSUMPTION AS WELL AS PRESSURE RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

CALCULATIONS
TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP
NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP^0.5
TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY
NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)^0.



FIRE SYSTEM INFORMATION - JOB#5791875

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1	FSS-1	TANK FS	4.0/4.0	31	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1	FSS-1	SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTIION	QTY BY FACTORY	QTY BY DIST
1	FSS-1	0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-GT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F.	2	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 7952S 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 2958B 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 87-1200447-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-1200455-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5" BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-3000511-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-3000361-000 PRIMARY ACTUATOR KIT (PAK) - ACTUATION AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-3001S3-000 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	6	0
		0 - 0 - 9097209PC PRO PRESS PC611 1/2 PRESS TEE LD.	6	0
		0 - 0 - 986944115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRAIDER VALVE AND CAP, JB INDUSTRIES: 1/4" FLARE X 1/4" MPT HALF UNION, USED ON TANK SERVICE PORT.	1	0
		0 - 0 - B1145 3/8" BLACK IRON 90 ELL.	4	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATIION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 - 16 - 7921G 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	7	0
		16 - 16 - DL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE)- 4 FLOW POINTS.	7	0
		26 - 26 - SSA-3/8 QUIK SEAL - 3/8" ULL.	7	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATIION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

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Fernley Community Center
FERNLEY, NV, 89408

DATE: 1/13/2023

DWG.#: 5791875

DRAWN BY: Region 113

SCALE: 1/2" = 1'-0"

MASTER DRAWING

SHEET NO. 2

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JOB 2021-065

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Project

CITY OF FERNLEY CRRC

Job No: 21-058.00

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REV	DATE	DESCRIPTION

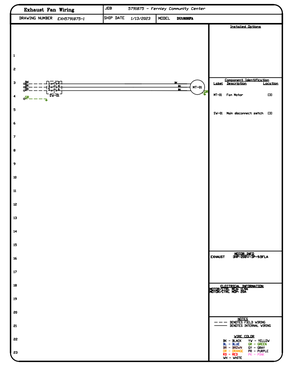
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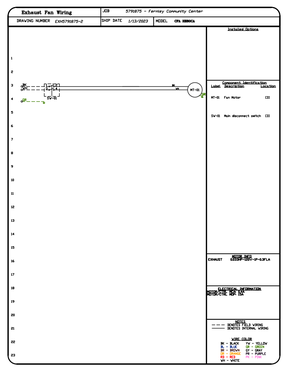
CAPTIVEAIRE PLANS

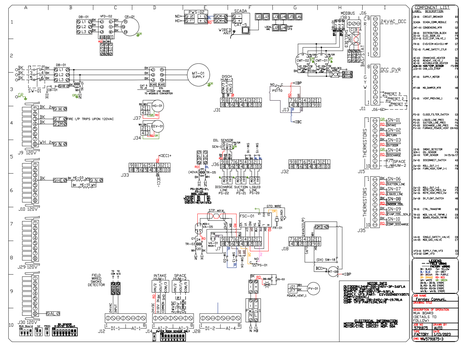
Date: JANUARY 19, 2023

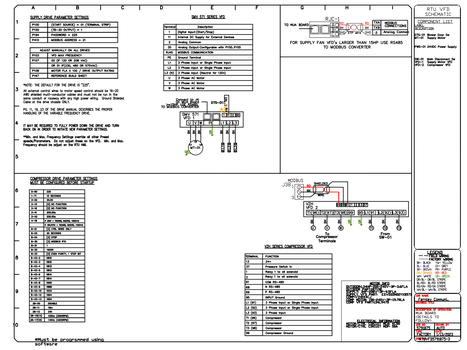
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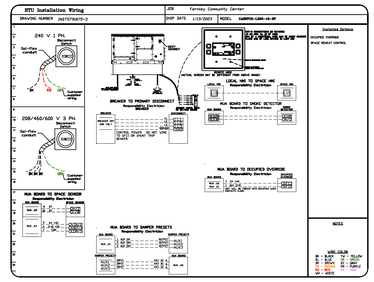
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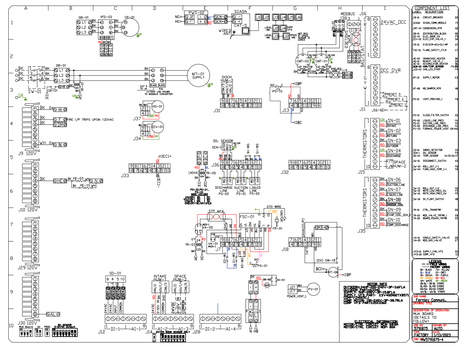


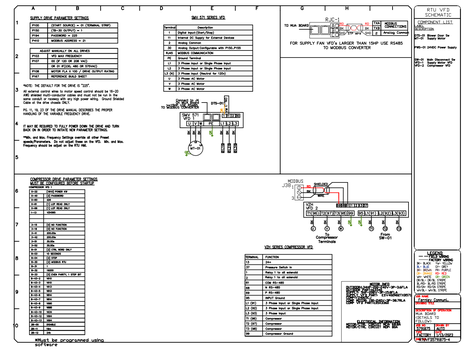


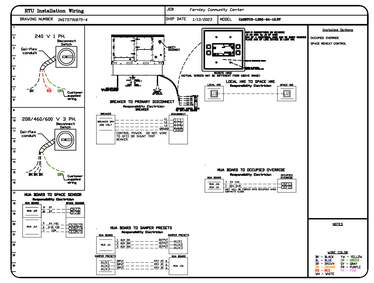












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Fernley Community Center
FERNLEY, NV, 89408

DATE: 1/13/2023

DWG.#: 5791875

DRAWN BY: Region 113

SCALE: 1/2" = 1'-0"

MASTER DRAWING

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Sheet Title

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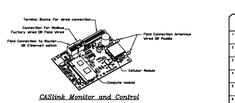
Date: JANUARY 19, 2023

Sheet No:

M5.03

ELECTRICAL PACKAGE – JOB#5791875

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED			
				LOCATION	QUANTITY		TYPE	#	HP VOLT	FLA
1	ECP-1	SC-3031109A	UTILITY CABINET LEFT	UTILITY CABINET LEFT	1 LIGHT	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	EXHAUST	3	0.25H 208	1.2
				HOOD # 1	1 FAN					



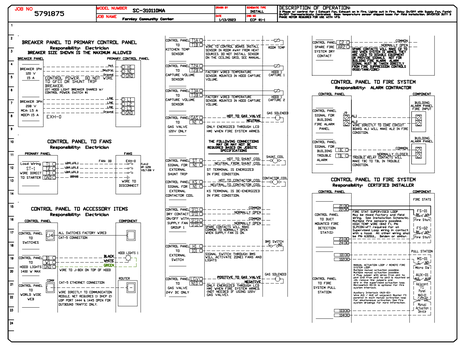
CASlink Monitor and Control

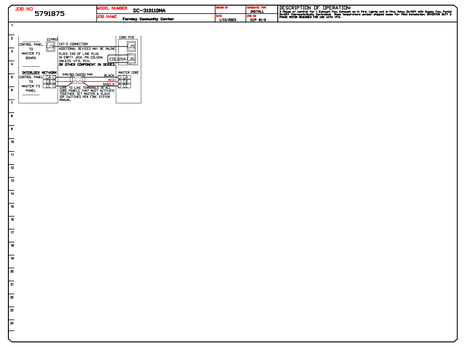
Cloud control panel to support communications to cloud-based Building Management System.
Cloud Control Panel to allow cloud-based Building Management System to monitor all points connected to the control panel for alarm and status.
Cloud Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
Cloud Control Panel to allow cloud-based Building Management System to implement SYSTEM SYNCHRONIZED control strategies for fully integrated Building Management.

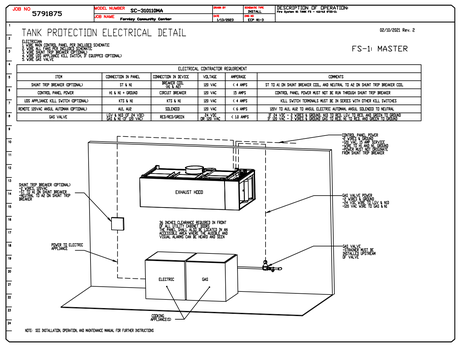
MONITORING AND CONTROL POINTS LIST

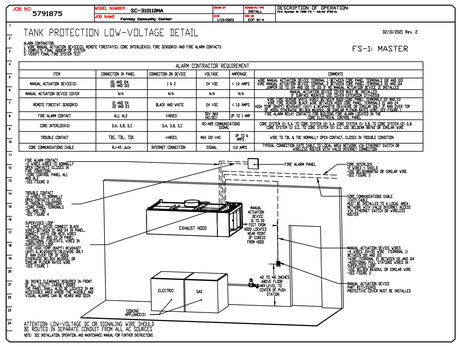
RTF Package	Function
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
RTU Discharge Temperature	MONITOR
Return RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Diagnostic	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Economizer Faults	MONITOR
Fire Faults	MONITOR
Fire Status	MONITOR
RTU Faults	MONITOR
RTU Filter Dirty Percentage	MONITOR
Fire Conditions	MONITOR
CEASE Fire System	MONITOR
Building Presence	MONITOR
Fans Activate(s)	MONITOR & CONTROL
Lights Activate(s)	MONITOR & CONTROL
Heat Activate	MONITOR & CONTROL

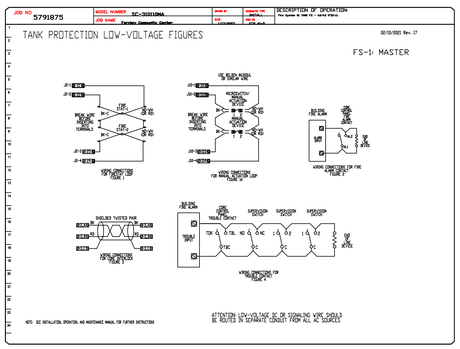
AC Package	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
RTU Discharge Temperature	MONITOR
Return RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
RTU Faults	MONITOR
RTU Filter Dirty Percentage	MONITOR
Fire Conditions	MONITOR
CEASE Fire System	MONITOR
Building Presence	MONITOR
Fans Activate(s)	MONITOR & CONTROL
Lights Activate(s)	MONITOR & CONTROL
Heat Activate	MONITOR & CONTROL

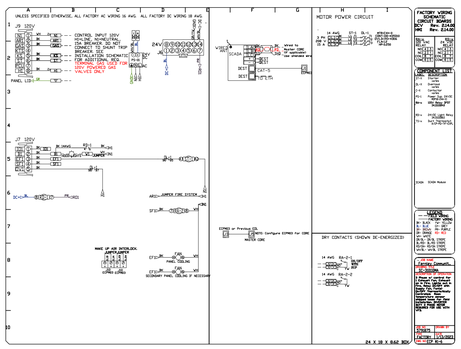


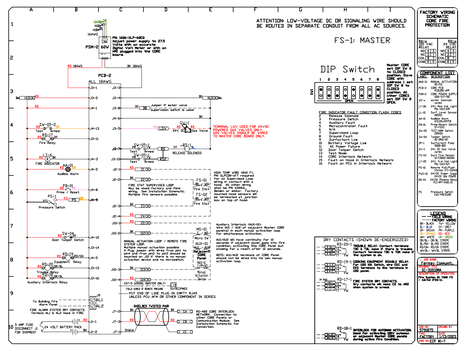












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Fernley Community Center
FERNLEY, NV, 89408

DATE: 1/13/2023

DWG.#: 5791875

DRAWN BY: Region 113

SCALE: 1/2" = 1'-0"

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Job No: 21-058.00

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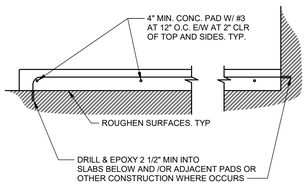
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REV	DATE	DESCRIPTION

Sheet Title
CAPTIVEAIRE PLANS

Date: JANUARY 19, 2023
Sheet No:
M5.04

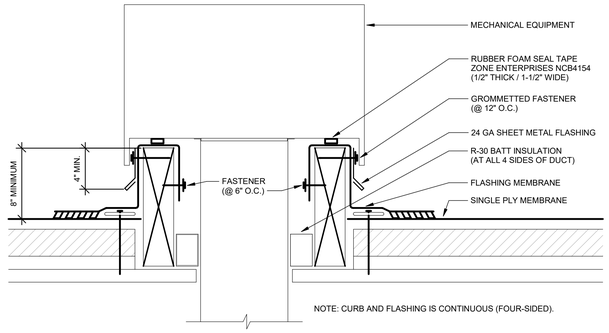
NOTE:

1. VERIFY AND COORDINATE PAD THICKNESSES, SIZES AND LOCATION WITH APPROVED MECHANICAL EQUIPMENT SIZES.



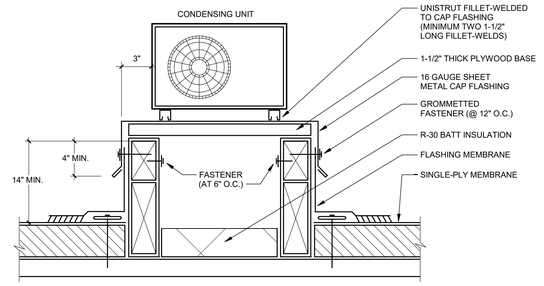
CONCRETE HOUSEKEEPING PAD (1 / M6.01)

SCALE: NONE



MECHANICAL EQUIPMENT CURB/FLASHING (2 / M6.01)

SCALE: NONE

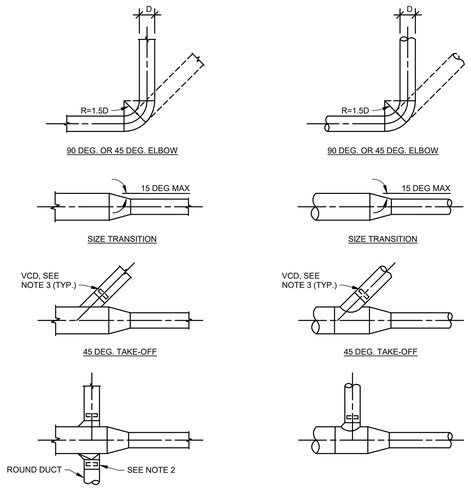


NOTES:

1. ROUTE REFRIGERANT PIPING AND CONDUIT THRU ROOF ADJACENT TO CONDENSING UNIT CURB PER PIPE/CONDUIT FLASHING DETAIL.
2. CURB AND FLASHING IS CONTINUOUS (FOUR-SIDED).
3. MOUNT CURB TO ROOF STRUCTURE - SEE STRUCTURAL.
4. COORDINATE SINGLE-PLY FLASHING WITH ARCHITECTURAL.

CONDENSING UNIT CURB (3 / M6.01)

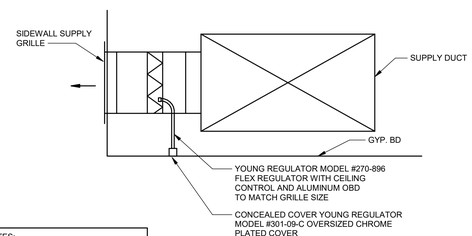
SCALE: NONE



NOTES:
1. DETAILS ARE APPLICABLE TO 2-INCH PRESSURE CLASS DUCT SYSTEMS.
2. "FLEXMASTER" STO/STOD-BO3 FITTING, PROVIDE WITH DAMPER OPTION (BO3) WHEN SERVING INDIVIDUAL INLETS AND OUTLETS.
3. PROVIDE VOLUME CONTROL DAMPER IN BRANCH DUCT WHEN BRANCH DUCT IS SERVING INDIVIDUAL INLETS AND OUTLETS.

DUCT FITTING (4 / M6.01)

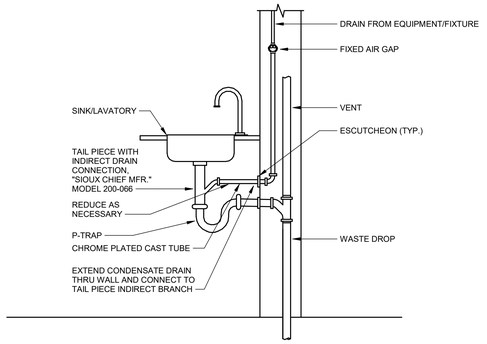
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NOTES:
1. DETAIL SIMILAR FOR CEILING DIFFUSERS EXCEPT USE ROUND DAMPERS
2. APPLIES TO GYP. BOARD CEILINGS AND WALLS

DIFFUSER GRILLE/BALANCE (5 / M6.01)

SCALE: NONE



CONDENSATE DRAIN TO TAILPIECE (6 / M6.01)

SCALE: NONE

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Sheet Title

MECHANICAL DETAILS

Date: JANUARY 19, 2023

Sheet No:

M6.01

PLUMBING FIXTURE SCHEDULE

WC-1	WATER CLOSET ADA "AMERICAN STANDARD" AFWALL MODEL 2257.101 WALL MOUNTED STANDARD HEIGHT OR ADA HEIGHT (SEE ARCHITECTURAL SHEETS) VITREOUS CHINA TOILET WITH ELONGATED BOWL. FURNISH WITH "SLOAN" ROYAL 111-1.28 FLUSH VALVE AND "OLSONITE" MODEL #10SSCT TOILET SEAT.
UR-1	URINAL "AMERICAN STANDARD" WASHBROOK MODEL 6590.001 WALL MOUNTED VITREOUS CHINA URINAL WITH ELONGATED RIM. FURNISH WITH "SLOAN" ROYAL 186-0.5 FLUSH VALVE.
L-1	LAVATORY "AMERICAN STANDARD" LUCERNE MODEL 0355.012 WALL HUNG VITREOUS CHINA LAVATORY. FURNISH WITH "CHICAGO" MODEL 420-E2805ABCP FAUCET AND GRID DRAIN. INSULATE HOT AND COLD WATER PIPING AND WASTE PIPING BELOW FIXTURE WITH "TRUE-BRO" LAV GUARD PROTECTIVE MOLDED CLOSED CELL VINYL PIPE COVERS, WITH VANDAL RESISTANT SNAP-CLIP FASTENERS. FURNISH WITH NIBCO WEBSTONE MODEL H-77201W THERMOSTATIC MIXING VALVE.
L-2	LAVATORY "BRADLEY" MODEL ELX-2 2-STATION EXPRESS LAVATORY SYSTEM WITH 4" CENTERSET DRILLING, NSD NO SOAP DISPENSER/NO DRILLING, ALP-WHT ALPINE WHITE COLOR, NBS NO BACKSPLASH, COAL ACCESS PANEL AND IW-CHROME CHROME-PLATED INDIVIDUAL WASTE ASSEMBLY. TMA THERMOSTATIC MIXING ASSEMBLY. FURNISH WITH "CHICAGO" MODEL 802-VE2805-665CP FAUCET
S-1	SINK "ELKAY" MODEL #LR1919PD SINGLE COMPARTMENT 18 GAUGE 16"X13 ½"X7 ½" DEEP BOWL SIZE STAINLESS STEEL SINK. FURNISH WITH CHICAGO MODEL #210-A317VPCABCP FAUCET WITH WRIST BLADE HANDLES, LKPD1 DRAIN STRAINER, 17 GAUGE CHROME PLATED P-TRAP, BRASSCRAFT STOPS AND RISERS.
FS-1	FLOOR SINK ZURN MODEL Z1901 CAST IRON DRAIN, 12"X12"X8" DEEP WITH ENAMELED CAST IRON WITH HALF GRATE. CAST TRAP WITH TRAP PRIMER.
HB-1	HOSE BIBB WOODFORD MODEL P-24 HOSE BIBB WITH VACUUM BREAKER AND 3/4" THREADED HOSE CONNECTION. PROVIDE WITH LOOSE TEE KEY.
HB-2	HOSE BIBB WOODFORD MODEL B65, FREEZELESS WALL HYDRANT WITH ANTI-SIPHON VACUUM BREAKER, 3/4" THREADED HOSE CONNECTION. PROVIDE WITH LOOSE TEE KEY.
RD-1	ROOF DRAIN ZURN MODEL Z165 CAST IRON BODY AND DOME WITH FLASHING COLLAR AND DOUBLE UNDERDECK CLAMP
ORD-1	OVERFLOW ROOF DRAIN ZURN MODEL Z165 CAST IRON BODY AND DOME WITH FLASHING COLLAR AND UNDERDECK CLAMP. LOCATE NOT LESS THAN 2" ABOVE ROOF SURFACE.
DS-1	DOWNSPOUT NOZZLE ZURN MODEL Z199DC NICKEL BRONZE BODY AND FLANGE.
WHA-1	WATER HAMMER ARRESTOR "SIOUX CHIEF" HYDRA-RESTER PISTON STYLE WATER HAMMER ARRESTOR, 650 SERIES, TYPE L COPPER TUBE, POLY PISTON WITH TWO EPSM O-RINGS, COPPER MIP THREAD. PDI SIZING
SGV-1	SEISMIC GAS VALVE "PACIFIC SEISMIC PRODUCTS" MODEL 316 CALIFORNIA SEISMIC VALVE WITH MONITORING SWITCH. ASCE 25-97 LISTED.
BFP-1	BACKFLOW PREVENTER WILKENS MODEL 375 LEAD-FREE REDUCED PRESSURE BACKFLOW PREVENTER, COMPLETE WITH CAST SILICON ALLOY BODY AND BALL VALVE TEST COCKS.
IMB-1	ICE MAKER BOX "GUY GRAY MANUFACTURING CO." MODEL MIB1HAAB METAL POWDER COATED ICE MAKER OUTLET BOX WITH BRASS QUARTER TURN HAMMER ARRESTER VALVE AND 1/2" SWEAT CONNECTION.
CWB-1	CLOTHES WASHER BOX "GUY GRAY MANUFACTURING CO." 85703 BRASS QUARTER TURN VALVES WITH HAMMER ARRESTORS 1/2" SWEAT CONNECTIONS.
TP-1	TRAP PRIMER PRECISION PLUMBING PRODUCTS MODEL PR-500
SHR-1	SHOWER "MOEN" MODEL #8375 SINGLE HANDLE PRESSURE BALANCING SHOWER VALVE WITH INTEGRAL STOPS, VANDAL RESISTANT SHOWER HEAD
SHR-2	SHOWER "MOEN" MODEL #8342 ADA COMPLIANT SINGLE HANDLE PRESSURE BALANCING SHOWER VALVE WITH INTEGRAL STOPS. VANDAL RESISTANT SHOWER HEAD AND HANDHELD SHOWER HEAD WITH SLIDE BAR.
MS-1	SERVICE SINK "CECO" MODEL 871 CORNER SERVICE SINK 28"X28" ENAMELED CAST IRON WITH CHROME FLAT STRAINER AND RIM GUARDS. FURNISH WITH CHICAGO MODEL 897-CP FAUCET WITH VACUUM BREAKER AND WALL SUPPORT.
EWC-1	ELECTRIC WATER COOLER "ELKAY" MODEL LZS8WSSK , WALL MOUNTED WATER COOLER WITH BOTTLE FILLING STATION, STAINLESS STEEL, SINGLE-LEVEL, PUSH-BUTTON OPERATED, VANDAL RESISTANT, BARRIER-FREE, 8 GPH, ELECTRIC WATER COOLER WITH IN WALL MOUNTING FRAME. ELECTRICAL SERVICE SHALL BE 115V, 60 HZ, 370 WATTS, 5 FLA. PROVIDE WITH CANE DETECTION SHIELD.
EWC-2	ELECTRIC WATER COOLER "ELKAY" MODEL LZSTL8WSLK , WALL MOUNTED WATER COOLER WITH BOTTLE FILLING STATION, STAINLESS STEEL, BI-LEVEL, PUSH-BUTTON OPERATED, VANDAL RESISTANT, BARRIER-FREE, 8 GPH, ELECTRIC WATER COOLER WITH IN WALL MOUNTING FRAME. ELECTRICAL SERVICE SHALL BE 115V, 60 HZ, 370 WATTS, 5 FLA. PROVIDE WITH CANE DETECTION SHIELD.
FD-1	FLOOR DRAIN ZURN MODEL Z415B, CAST IRON DRAIN BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD. STRAINER FINISH PER SPECIFICATION, CAST TRAP WITH TRAP PRIMER CONNECTION
YH-1	YARD HYDRANT ZURN MODEL Z1936, NON-FREEZE YARD HYDRANT COMPLETE WITH DURA-COATED CAST IRON HEAD AND LIFT HANDLE WITH LOCKING CAPABILITY, BRONZE INTERIOR PARTS, GALVANIZED STEEL CASING, BRONZE VALVE HOUSING, AND 3/4" FEMALE IP INLET CONNECTION. HYDRANT IS EQUIPPED WITH A TAPPED 1/8" DRAIN PORT IN THE VALVE HOUSING, AND 3/4" MALE HOSE CONNECTION.
TD-1	TRENCH DRAIN ZURN MODEL Z886-HD TRENCH RAIN. 6.75" WIDE x LENTH AS REQUIRED. PROVIDE CLASS A HPS HEEL-PROOF SLOTTED STAINLESS STEEL GRATE, LIGHT DUTY. GRATE SHALL BE CAPABLE OF LOCKING TO GRATE FRAME WITH VANDAL PROOF LOCKDOWN OPTION.

EQUIPMENT SCHEDULE

WH 1 / WH 2 / WH 3	WATER HEATER LOCHINVAR MODEL SWR285N HIGH EFFICIENCY WATER HEATER, 110 GALLON STORAGE, 285 MBH INPUT, 328 GPH RECOVERY @ 100°F RISE. FURNISH WITH PRESSURE AND TEMPERATURE RELIEF VALVE, CONCENTRIC VENT KIT, AND CONDENSATE NEUTRALIZATION KIT. 115 V, OP. WGT. = 1720 LBS.
CP 1 / CP 2	CIRCULATION PUMP TACO MODEL 009-SF5, 3.5 GPM AT 13' TDH, 1/8 HP. 115 VOLT. BRONZE BODY.
ET 1 / ET 2	EXPANSION TANK WATTS MODEL #DETA-60 DOMESTIC WATER EXPANSION TANK.
TMV 1 / TMV 2	THERMOSTATIC MIXING VALVE LEONARD PNV-125-LF DIGITAL MIXING VALVE, 40 GPM @ 5 PSI DROP. MINIMUM 0.25 GPM. 115 VOLT

MAXIMUM FIXTURE UNIT LOADING FOR WATER PIPE

NOMINAL PIPE SIZE (INCHES)	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
FIXTURE UNITS (WITHOUT FLUSH VALVES)	6	10	21	34	127	245	431	875	3150
FIXTURE UNITS (WITH ONE OR MORE FLUSH VALVES)	-	5	10	20	48	124	295	850	3150

NOTES
1. USE ABOVE DATA ONLY WHEN PIPE SIZES ARE NOT OTHERWISE SIZED ON THE DRAWINGS
2. FIXTURE UNITS ARE AS LISTED FOR PUBLIC USE IN UNIFORM PLUMBING CODE.

PLUMBING FIXTURE CONNECTION SCHEDULE

FIXTURE	SYMBOL	WASTE		VENT	COLD WATER		HOT WATER	
		BRANCH	OUTLET		BRANCH	OUTLET	BRANCH	OUTLET
WATER CLOSET (FV.)	WC	4"	4"	2"	1 1/4"	1"	-	-
URINAL	UR	2"	2"	1 1/2"	1"	3/4"	-	-
LAVATORY	L	2"	1 1/2"	1 1/2"	3/4"	1/2"	3/4"	1/2"
ELECTRIC WATER COOLER	EWC	2"	1 1/2"	1 1/2"	1/2"	1/2"	1/2"	1/2"
SERVICE SINK	SS	3"	3"	2"	1/2"	1/2"	1/2"	1/2"
FLOOR SINK	FS	2"	2"	1 1/2"	-	-	-	-
SINK	S	2"	1 1/2"	1 1/2"	1/2"	1/2"	1/2"	1/2"
FLOOR DRAIN	FD	2"	2"	1 1/2"	-	-	-	-
HOSE BIBB	HB	-	-	-	1/2"	3/4"	-	-
WASHER BOX	WB	2"	2"	1 1/2"	1/2"	1/2"	1/2"	1/2"
SHOWER	SHR	2"	1 1/2"	1 1/2"	1/2"	1/2"	1/2"	1/2"

NOTES 1. WATER BRANCH LINES WHERE LESS THAN 10'-0" LONG MAY BE SAME SIZE AS OUTLETS SCHEDULED ABOVE.

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE IBC, UMC, UPC, NEC, NFPA, NEVADA STATE FIRE MARSHAL REGULATIONS, LOCAL AND STATE ORDINANCES, AND INDUSTRY STANDARDS.
2. SUBMIT FOR REVIEW AND APPROVAL ELECTRONIC COPIES OF SUBMITTALS FOR ALL EQUIPMENT, DUCTWORK, AIR DISTRIBUTION, PLUMBING FIXTURES, INSULATION, VALVES, AND PIPING MATERIALS.
3. AS-BUILT DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL UPON COMPLETION OF THE WORK, AND PRIOR TO FINAL PAYMENT. AS-BUILT DRAWINGS SHALL BE MAINTAINED ON SITE AS THE WORK PROGRESSES AND SHALL BE AVAILABLE FOR REVIEW BY THE OWNER AND/OR ARCHITECT/ENGINEER AT ALL TIMES.
4. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
5. THE WORK AND MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER.
6. COORDINATE THE ACTUAL LOCATION OF ROOFTOP UNITS, VENTS THROUGH THE ROOF, ETC. WITH THE ROOF PLANS.
7. COORDINATE THE EXACT LOCATION OF EQUIPMENT AND OF PENETRATIONS THROUGH THE ROOF, FLOORS, AND WALLS WITH STRUCTURAL DRAWINGS PRIOR TO ANY ROUGH-IN.
8. SEISMIC BRACING FOR MECHANICAL SYSTEMS (EQUIPMENT, DUCTWORK, PIPING, AND CONDUIT) SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE (IBC) INCLUDING ALL APPLICABLE PROVISIONS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) MINIMUM DESIGN LOADS FOR BUILDINGS (ASCE STANDARD 7-16 SECTION 13.1.3).
9. PIPING SHALL BE INSTALLED SUCH THAT IT DOES NOT OBSTRUCT ACCESS OR REMOVAL OF MECHANICAL EQUIPMENT.
10. DASHED OUTLINES DENOTE THE REQUIRED SERVICE CLEARANCE SPACE (SEE DUCTWORK PLANS). NO PIPING, DUCTWORK, CONDUIT, AND/OR CEILING HANGERS SHALL BE INSTALLED IN THE DESIGNATED SERVICE/ACCESS CLEARANCE AREA.
11. SEE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR HOLE CORING REQUIREMENTS.
12. COORDINATE ROUTING OF DUCTWORK WITH PIPING, PLUMBING, FIRE SPRINKLER, AND ELECTRICAL TRADES PRIOR TO BEGINNING WORK.
13. ALL EQUIPMENT, PIPING,ETC. SHALL BE SUPPORTED AS REQUIRED TO PROVIDE A VIBRATION-FREE INSTALLATION.
14. ALL ROOF PENETRATIONS SHALL BE FLASHED AND COUNTER-FLASHED WATERTIGHT.
15. TESTING AND BALANCING SHALL BE CONDUCTED BY AN AABC CERTIFIED TEST AND BALANCE CONTRACTOR. TEST AND BALANCE ALL WATER SYSTEMS TO ACHIEVE THE LISTED VOLUMES. THE FINALIZED REPORT SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL UPON COMPLETION OF THE TESTING AND BALANCING AND BEFORE SCHEDULING THE FINAL OBSERVATION.
16. ALL PIPING WORK SHALL BE COORDINATED WITH ALL TRADES AND EXISTING CONDITIONS PRIOR TO COMMENCING WORK. OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AS REQUIRED.
17. DO NOT ROUTE ANY PIPING DIRECTLY ABOVE ELECTRICAL EQUIPMENT, SWITCHBOARDS, DISTRIBUTION PANELS, MCC'S, ETC. AS PROHIBITED BY THE 2017 NEC.
18. DO NOT FABRICATE PIPING FROM THE DRAWINGS. SPACE ALLOCATION SHALL BE DETERMINED IN THE FIELD AND COORDINATED WITH OTHER TRADES PRIOR TO FABRICATION.
19. VERIFY THE EXACT LOCATION, INVERT ELEVATION, SIZE, AND POINT OF CONNECTION OF ALL NEW AND EXISTING UTILITIES PRIOR TO ROUGH-IN OF ANY PLUMBING PIPING.
20. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF PLUMBING FIXTURES AS REQUIRED TO COMPLY WITH ADA REQUIREMENTS.
21. INSULATE DOMESTIC HOT AND COLD WATER PIPING AND WASTE PIPING BELOW ADA PLUMBING FIXTURES WITH 'TRUEBRO' LAV GUARD 2 PROTECTIVE MOLDED CLOSED-CELL VINYL PIPE COVERS WITH VANDAL-RESISTANT SNAP-CLIP FASTENERS, AND WITH AN ASTM E84-07 FLAME/SMOKE TEST RATING OF 25/50 OR LESS.
22. INSTALL A RIGID CAP ON ALL ABANDONED WATER, WASTE, AND VENT PIPING.
23. PROVIDE ALL PLUMBING FIXTURES AND EQUIPMENT WITH ACCESSIBLE STOPS.
24. SLOPE ALL SEWER, WASTE, AND RAINWATER PIPING AT A MINIMUM OF 1/4" PER FOOT.
25. SLOPE ALL CONDENSATE DRAIN PIPING AT 1/8" PER FOOT.
26. PROVIDE A 1/8" X 6" STEEL BACKING PLATE BOLTED TO A MINIMUM OF 4 STUDS FOR ALL WALL-HUNG FIXTURES. PROVIDE CONCEALED ARMS FOR LAVATORIES BOLTING TO A BACKING PLATE.
27. ADA WATER CLOSETS SHALL HAVE THE WATER ROUGH-IN LOCATED TO RESULT IN THE FLUSH HANDLE FACING THE WIDE SIDE OF THE STALL.
28. IN ADDITION TO WHERE SHOWN ON THE DRAWINGS, PROVIDE CLEANOUTS FOR ALL SINKS, URINALS, & LAVATORIES.
29. PROVIDE CLEANOUT AND ACCESS PANEL ON EVERY ROOF DRAIN LEADER BEFORE TRANSITIONING BELOW GRADE.
30. INSTALL FLOOR SINKS TO BE ACCESSIBLE FOR CLEANING AND INSPECTION.

PLUMBING FOOD SERVICE NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTION TO ALL NEW BAR AND KITCHEN EQUIPMENT. SEE FOOD SERVICE DRAWINGS FOR ADDITIONAL CONTRACTOR RESPONSIBILITIES. PROVIDE ALL REQUIRED FAUCETS, STOPS, INDIRECT DRAINS, AND INSTALL ALL TRIM FURNISHED WITH ALL EQUIPMENT. INSTALLATION SHALL BE COMPLETE AND SHALL BE OPERABLE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
2. PRIOR TO ROUGH-IN OF ANY PLUMBING FOR BAR AND KITCHEN EQUIPMENT FURNISHED BY OTHERS, REVIEW EXACT LOCATIONS OF ROUGH-INS WITH DIMENSIONED ROUGH-IN FOOD SERVICE DRAWINGS AND CUT SHEETS.
3. INTERLOCK FIRE SUPPRESSION SYSTEM WITH THE GAS SOLENOID VALVE AND THE CONTROL PANEL. ACTIVATION OF FIRE SUPPRESSION SYSTEM SHALL SHUT OFF GAS TO ALL GAS FIRED EQUIPMENT BELOW THE HOODS AND SHUT DOWN THE MAKE-UP AIR UNITS AND EXHAUST FANS.
4. ALL HORIZONTAL PIPING LINES AS EXTENDED AND CONNECTED TO EQUIPMENT SHALL BE RUN AT THE HIGHEST POSSIBLE ELEVATION AND NOT LESS THAN 6" ABOVE FINISHED FLOOR TO PROVIDE CLEARANCE FOR CLEANING. INDIRECT WASTE LINES WITHIN EQUIPMENT SHALL BE ROUTED TO CONFORM WITHIN INTERIOR SHELVES, SPACES, OR STRUCTURES.
5. ALL EXPOSED PIPING FOR KETTLES AND ANY EXPOSED PIPING ABOVE COUNTER HEIGHT SHALL BE CHROME PLATED, STAINLESS, OR FITTED WIHT CHROME PLATED SLEEVES. ALL OTHER EXPOSED/SEMI-EXPOSED PING SHALL BE PAINTED SILVER WITH "CHROMATONE" OR EQUAL.

PLUMBING LEGEND

	SOIL OR WASTE LINE BELOW GRADE
	SOIL OR WASTE LINE ABOVE GRADE
IW	INDIRECT WASTE LINE
GW	GREASE WASTE LINE
	VENT LINE
RWL	RAINWATER LEADER LINE
ORWL	OVERFLOW RAINWATER LEADER LINE
D	DRAIN LINE
	COLD WATER LINE
	HOT WATER LINE
	HOT WATER RETURN LINE
G	NATURAL GAS LINE
F	FIRE PIPE
GV	GATE VALVE
BLV	BALL VALVE
BV	BALANCE VALVE
CKV	CHECK VALVE
LH GC	LEVER HANDLE GAS COCK
	THERMOMETER
	PIPE POD/POC
	UNION
T & P	TEMPERATURE AND PRESSURE RELIEF LINE
	EXISTING ITEM TO BE REMOVED
ABC	ABOVE CEILING
UF	UNDER FLOOR
UC	UNDER COUNTER
COTF	CLEANOUT TO FLOOR
COTG	CLEANOUT TO GRADE
CO, WCO	CLEANOUT, WALL CLEANOUT
CW (D)(R)	COLD WATER (DROP) (RISER)
HW (D)(R)	HOT WATER (DROP) (RISER)
W, WD	WASTE, WASTE DROP
FA, TB	FROM ABOVE, TO BELOW
FB, TA	FROM BELOW, TO ABOVE
IE	INVERT ELEVATION
(E), (N)	EXISTING, NEW
V, VR, VTR	VENT, VENT RISER, VENT THRU ROOF
RD	ROOF DRAIN
ORD	OVERFLOW ROOF DRAIN
RWL	RAINWATER LEADER
ORWL	OVERFLOW RAINWATER LEADER
Ø	DIAMETER
TYP	TYPICAL
FD	FLOOR DRAIN
DEM	DEMAND
FU	FIXTURE UNITS
GPM	GALLONS PER MINUTE
R.I.O.	ROUGH IN ONLY
UNO	UNLESS NOTED OTHERWISE
NC	NORMALLY CLOSED
O.C.	ON CENTER
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISHED GRADE
SS	STAINLESS STEEL
ROOMNAME --	ROOM NAME AND NUMBER

DRAWING SHEET INDEX

P0.00	PLUMBING SCHEDULES, LEGEND, NOTES, & SHEET INDEX
P1.01	PLUMBING OVERALL FLOOR PLAN
P1.11	PLUMBING PARTIAL FLOOR PLAN - BASE BID
P1.11A	PLUMBING PARTIAL FLOOR PLAN - ALT. A
P1.11B	PLUMBING PARTIAL FLOOR PLAN - ALT. B
P2.11	PLUMBING ENLARGED FLOOR PLANS - BASE BID
P2.11A	PLUMBING ENLARGED FLOOR PLANS - ALT. A
P2.11B	PLUMBING ENLARGED FLOOR PLANS - ALT. B
P2.12	PLUMBING ENLARGED FLOOR PLANS - BASE BID
P4.01	PLUMBING PARTIAL ROOF PLAN - BASE BID
P4.01A	PLUMBING PARTIAL ROOF PLAN - ALT. A
P4.01B	PLUMBING PARTIAL ROOF PLAN - ALT. B
P6.01	PLUMBING DETAILS
PS1.01	PLUMBING SITE PLAN

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JOB 2021-065

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CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

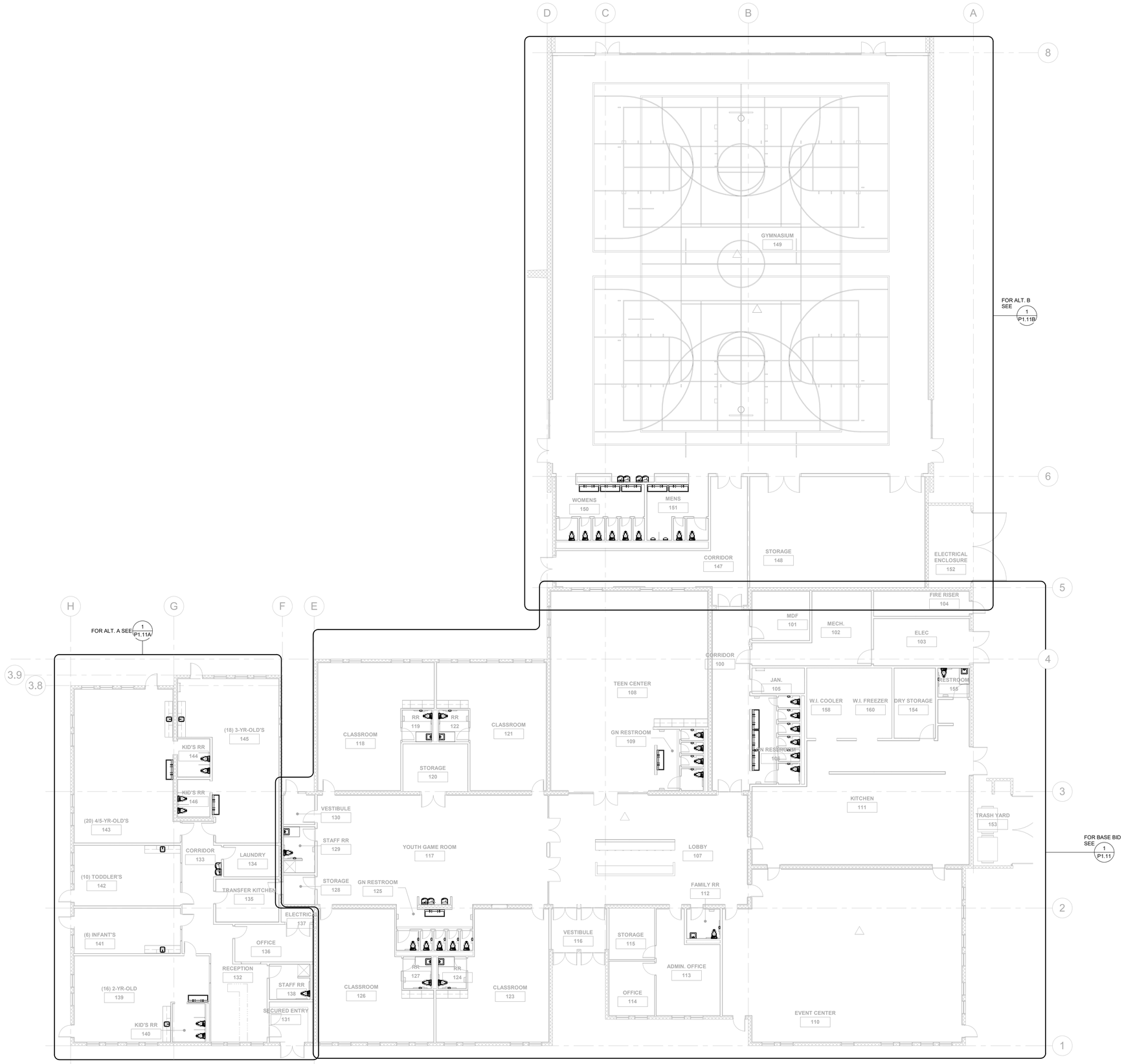
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PLUMBING SCHEDULES, LEGEND, NOTES, & SHEET INDEX

Date: JANUARY 19, 2023

Sheet No:

P0.00



PLUMBING OVERALL FLOOR PLAN - GYMNASIUM 1 P1.01

SCALE: 1" = 10'-0"

N

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REV	DATE	DESCRIPTION

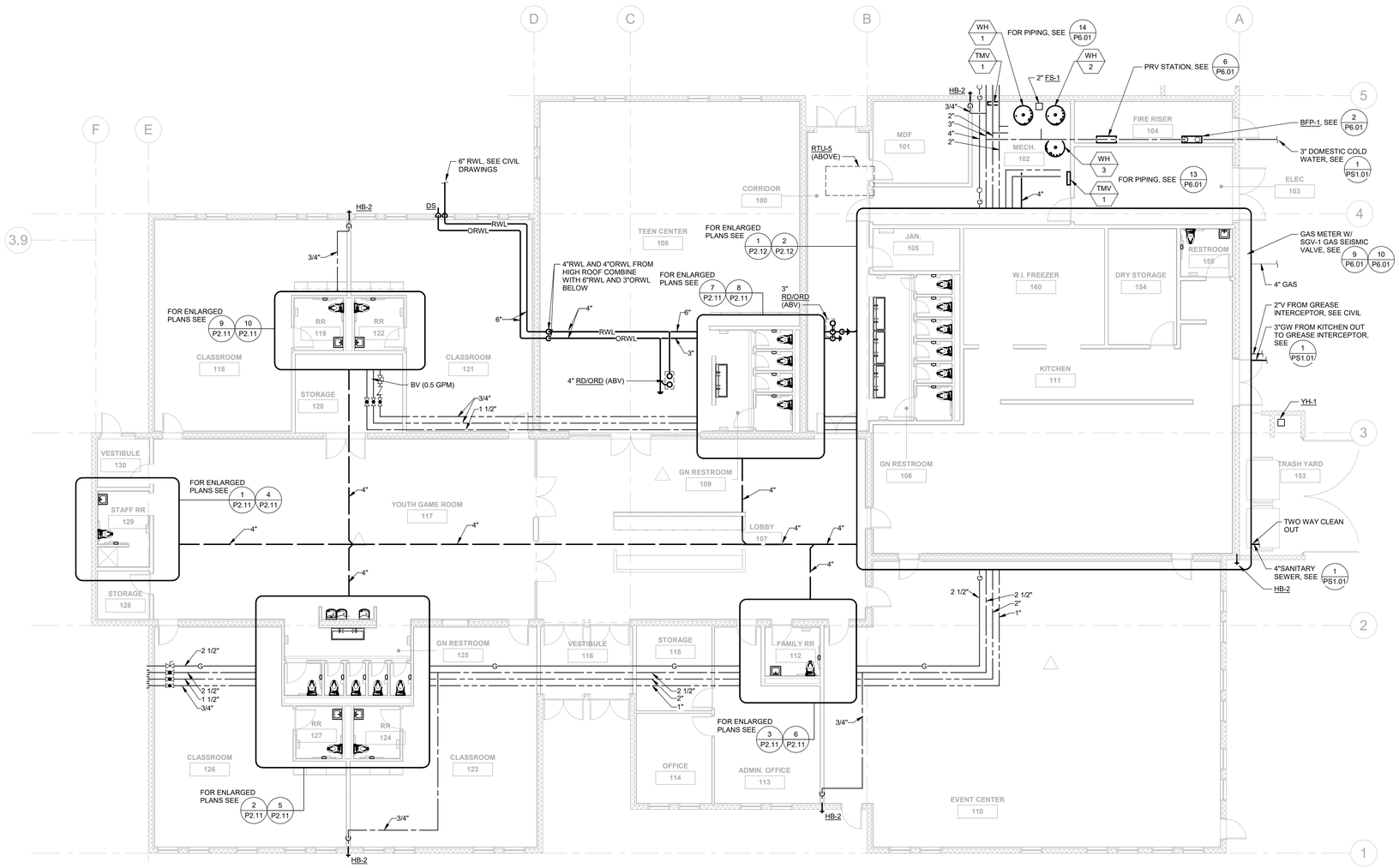
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PLUMBING OVERALL FLOOR PLAN

Date: JANUARY 19, 2023

Sheet No:

P1.01



PLUMBING PARTIAL FLOOR PLAN - BASE BID

1 / P1.11

SCALE: 1/8" = 1'-0"

N

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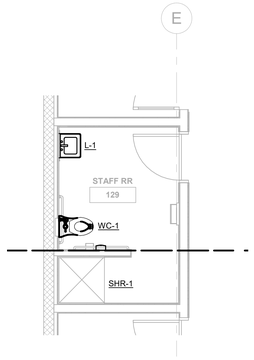
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PLUMBING PARTIAL FLOOR PLAN - BASE BID

Date: JANUARY 19, 2023

Sheet No:

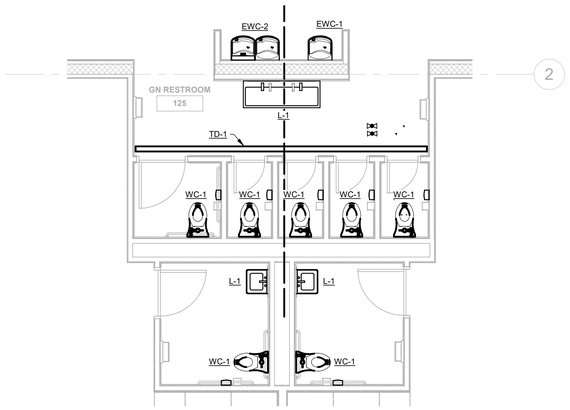
P1.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - RR 129 WASTE AND VENT

SCALE: 1/4" = 1'-0"

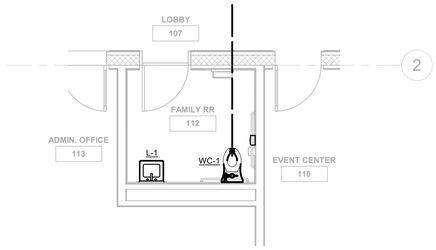
1 / P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - GN RR 125 WASTE AND VENT

SCALE: 1/4" = 1'-0"

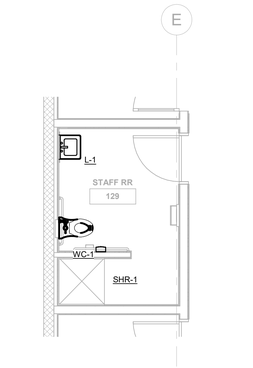
2 / P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - FAMILY RR 112 WASTE AND VENT

SCALE: 1/4" = 1'-0"

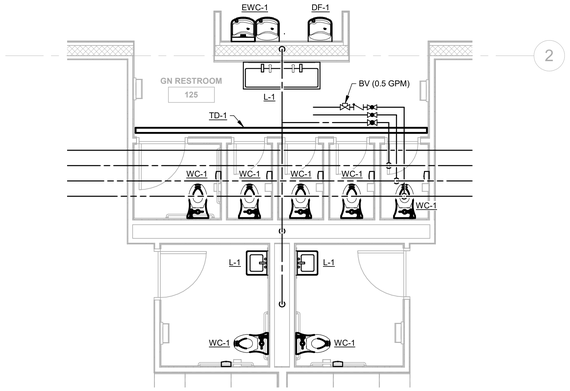
3 / P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - RR 129 WATER AND UTILITIES

SCALE: 1/4" = 1'-0"

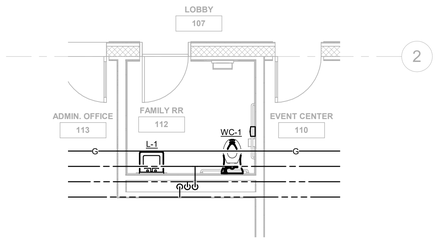
4 / P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - GN RR 125 WATER AND UTILITIES

SCALE: 1/4" = 1'-0"

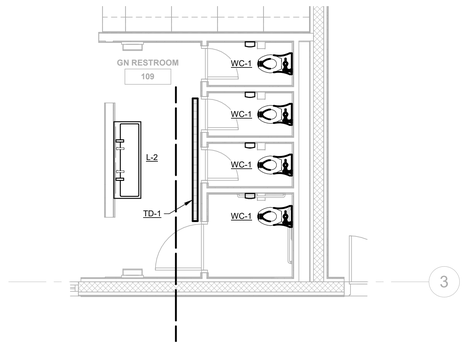
5 / P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - FAMILY RR 112 WATER AND UTILITIES

SCALE: 1/4" = 1'-0"

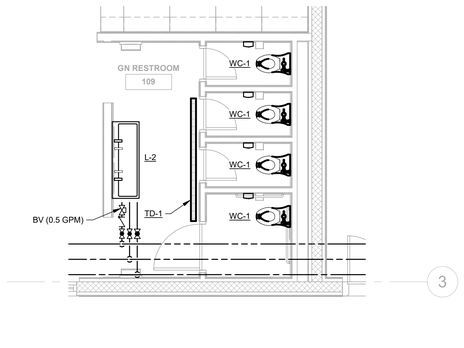
6 / P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - GN RR 109 WASTE AND VENT

SCALE: 1/4" = 1'-0"

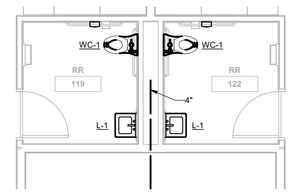
7 / P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - GN RR 109 WATER AND UTILITIES

SCALE: 1/4" = 1'-0"

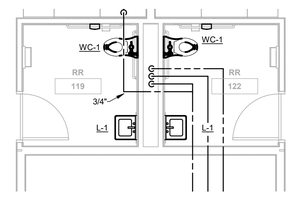
8 / P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - RR 119, 122 WASTE AND VENT

SCALE: 1/4" = 1'-0"

9 / P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - RR 119, 122 WATER AND UTILITIES

SCALE: 1/4" = 1'-0"

10 / P2.11

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Job No: 21-058.00

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DESIGN DEVELOPMENT

REVISIONS

REV	DATE	DESCRIPTION

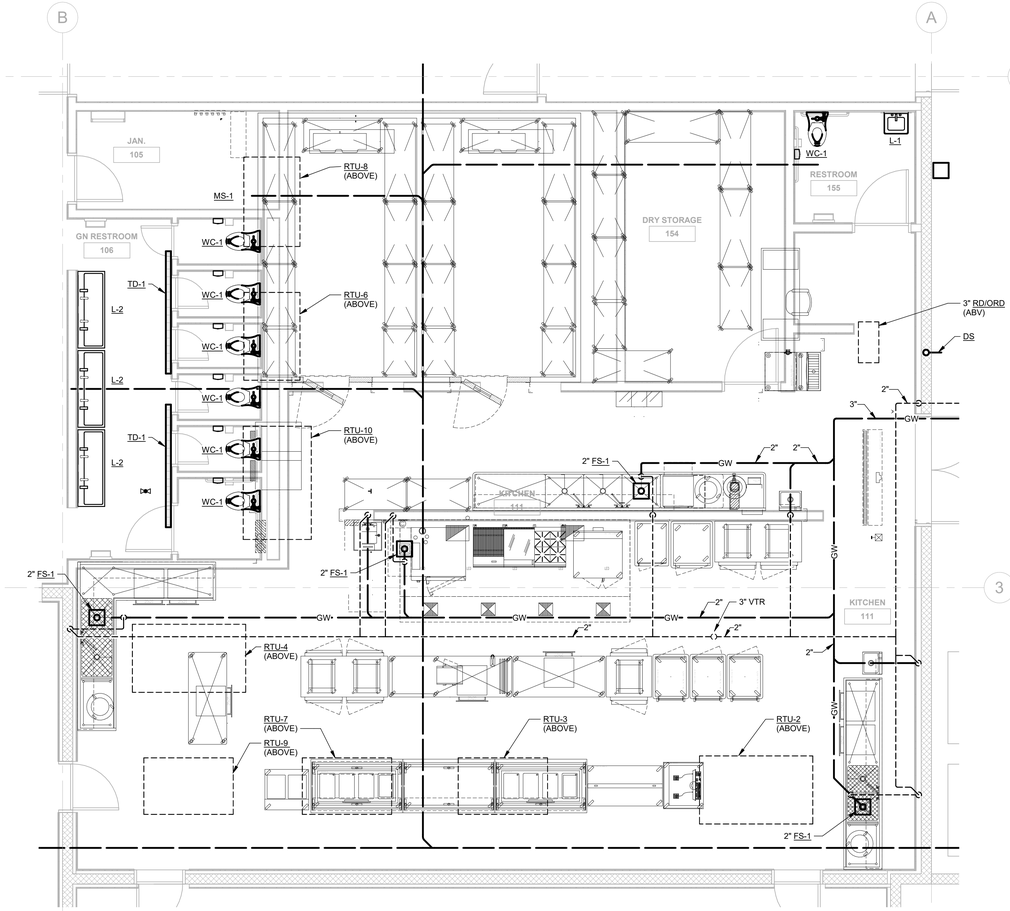
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PLUMBING ENLARGED FLOOR PLANS - BASE BID

Date: JANUARY 19, 2023

Sheet No:

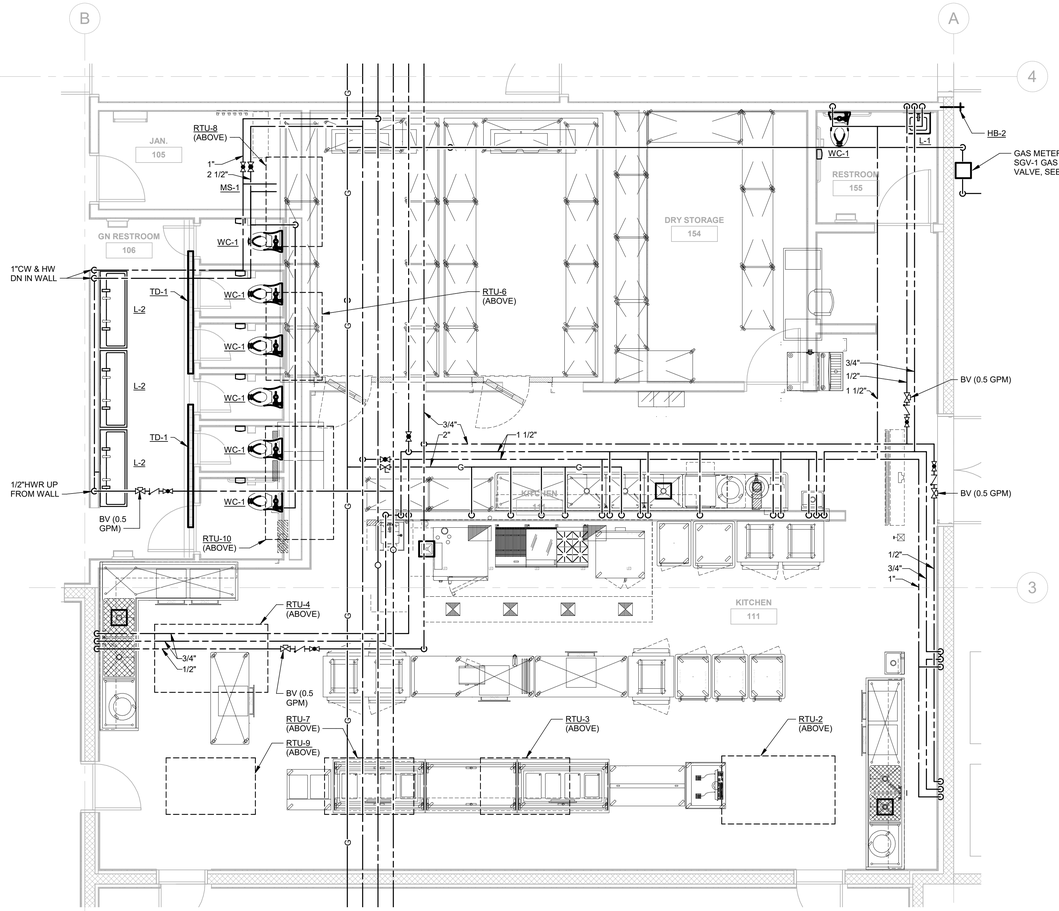
P2.11



PLUMBING ENLARGED FLOOR PLAN - BASE BID - KITCHEN & GN RR 106 WASTE AND VENT

1 / P2.12

SCALE: 1/4" = 1'-0"



PLUMBING ENLARGED FLOOR PLAN - BASE BID - KITCHEN & GN RR 106 WATER AND UTILITIES

2 / P2.12

SCALE: 1/4" = 1'-0"

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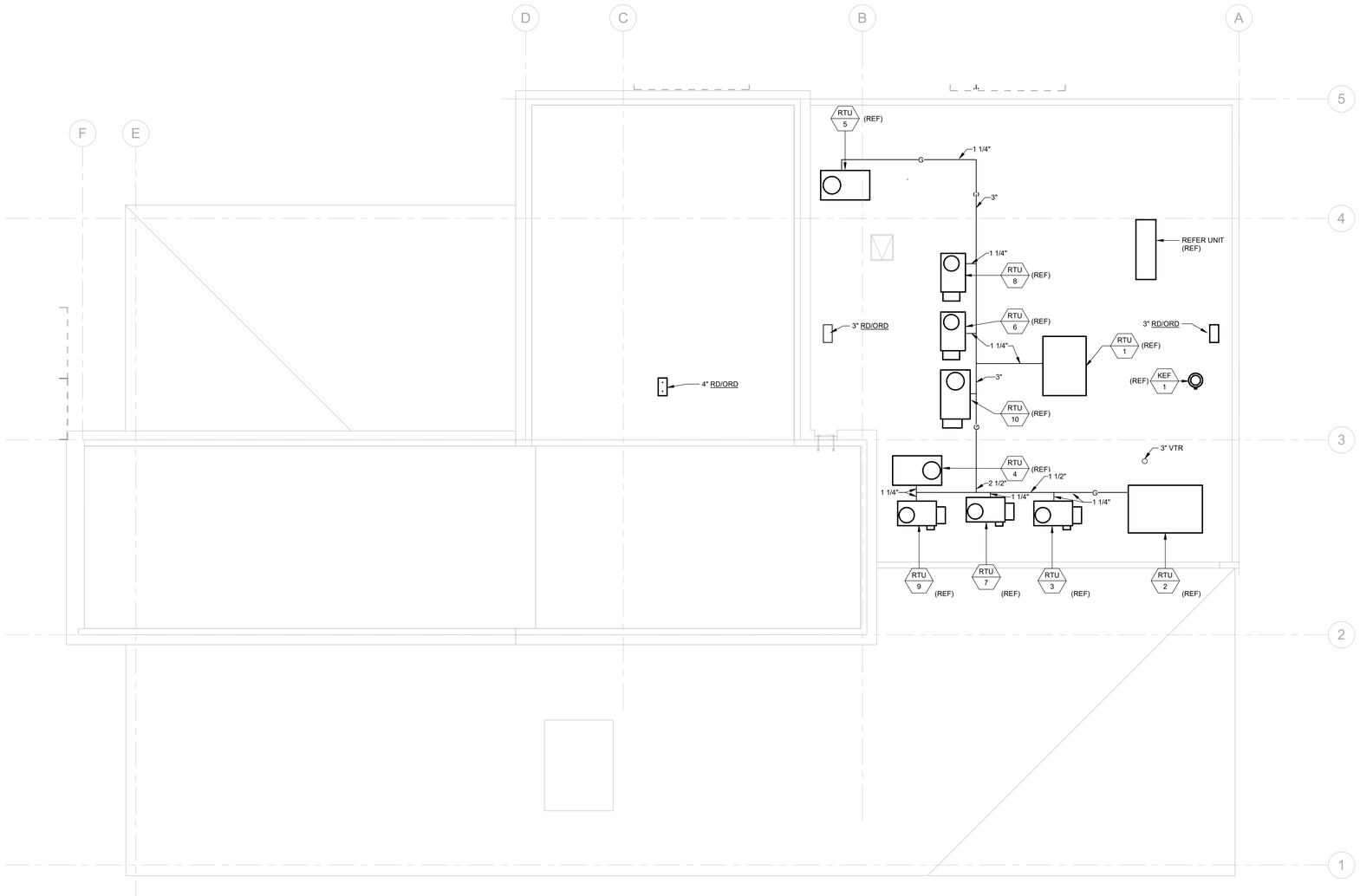
Sheet Title

PLUMBING ENLARGED FLOOR PLANS - BASE BID

Date: JANUARY 19, 2023

Sheet No:

P2.12



PLUMBING PARTIAL ROOF PLAN - BASE BID (1 / P4.01)

SCALE: 1/8" = 1'-0"

N

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REV	DATE	DESCRIPTION

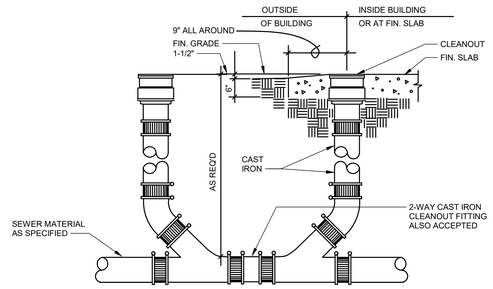
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PLUMBING PARTIAL ROOF PLAN - BASE BID

Date: JANUARY 19, 2023

Sheet No:

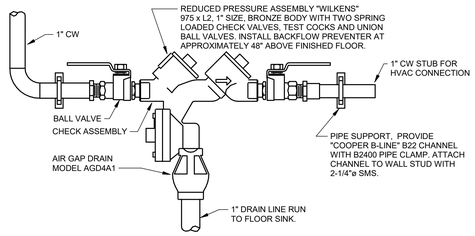
P4.01



2-WAY CLEANOUT AT GRADE

1 | P6.01

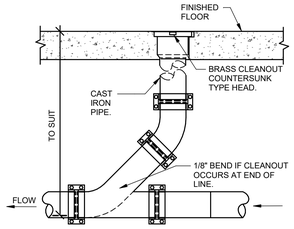
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BACKFLOW PREVENTER ASSEMBLY

2 | P6.01

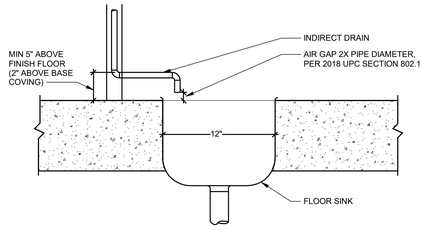
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CLEANOUT TO FLOOR DETAIL

3 | P6.01

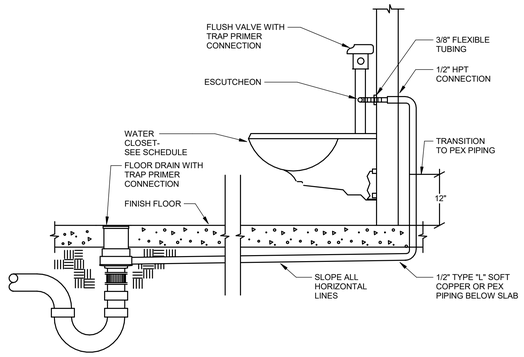
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FLOOR SINK INDIRECT DRAINS

4 | P6.01

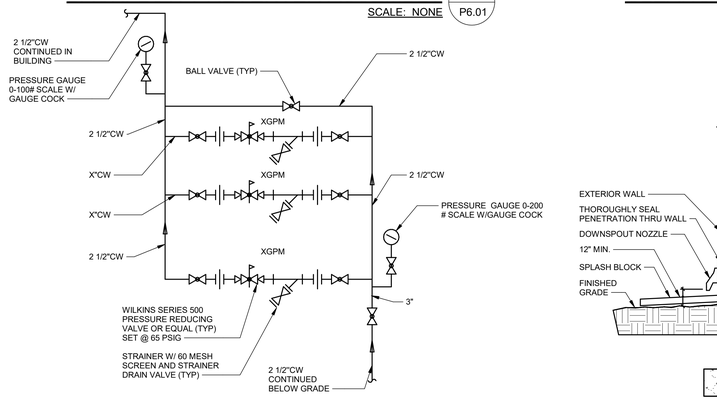
SCALE: NONE



FLUSH VALVE/TRAP PRIMER

5 | P6.01

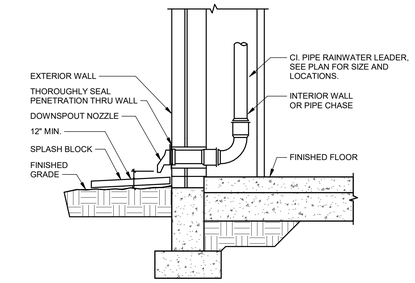
SCALE: NONE



PRESSURE REDUCING STATION

6 | P6.01

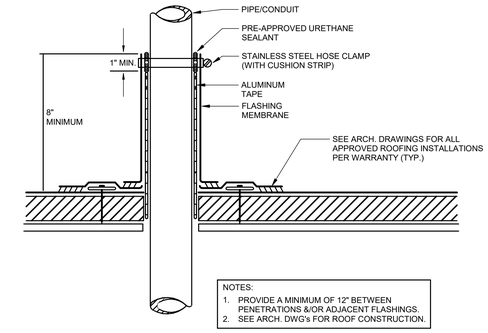
SCALE: NONE



OVERFLOW RAINWATER LEADER DOWNSPOUT

7 | P6.01

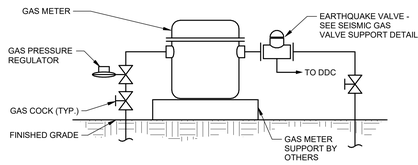
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TYPICAL VENT THRU ROOF DETAIL

8 | P6.01

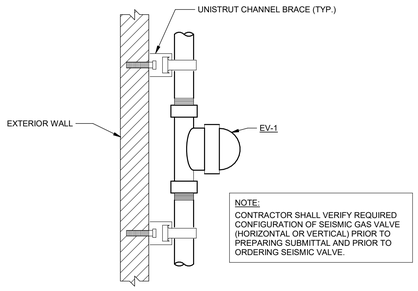
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SEISMIC GAS VALVE

9 | P6.01

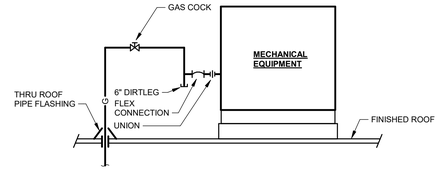
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SEISMIC GAS VALVE SUPPORT

10 | P6.01

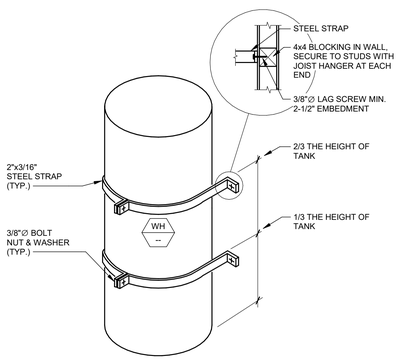
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GAS PIPING CONNECTION

11 | P6.01

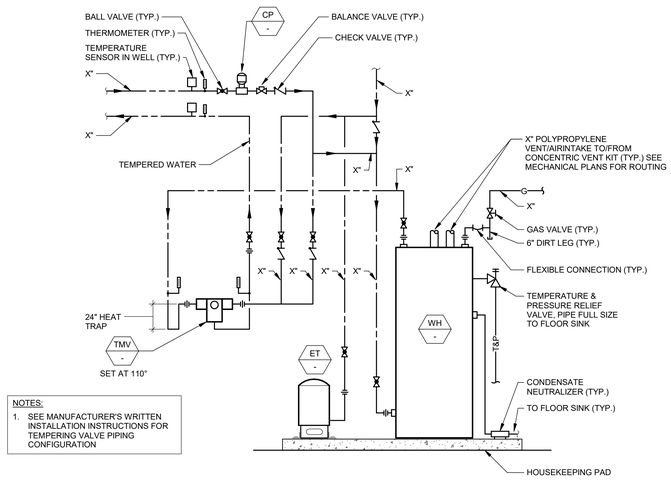
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WATER HEATER SECUREMENT

12 | P6.01

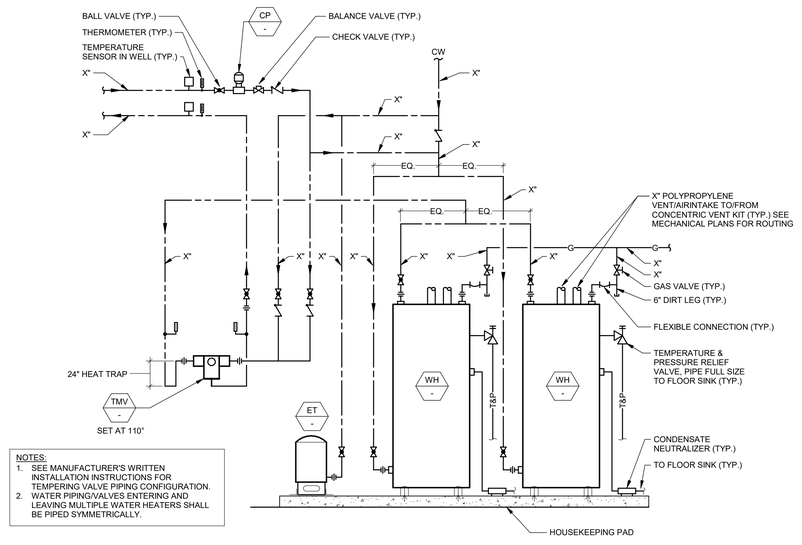
SCALE: NONE



SINGLE WATER HEATER WITH TEMPERING VALVE

13 | P6.01

SCALE: NONE



DUPLEX WATER HEATER WITH TEMPERING VALVE

14 | P6.01

SCALE: NONE

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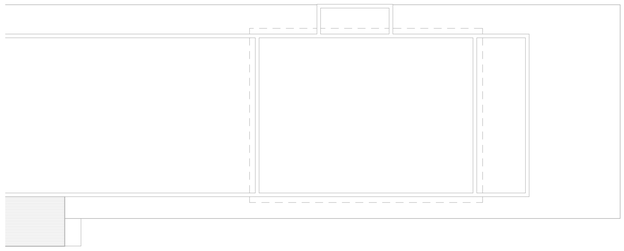
Sheet Title

PLUMBING DETAILS

Date: JANUARY 19, 2023

Sheet No:

P6.01



PLUMBING SITE PLAN (1 / PS1.01)

SCALE: 1" = 10'-0"

N

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REV	DATE	DESCRIPTION

Sheet Title

PLUMBING SITE PLAN

Date: JANUARY 19, 2023

Sheet No:

PS1.01

FIRE ALARM MASTER LEGEND & GENERAL NOTES

▬	FIRE ALARM CONTROL PANEL (FACP) OR REMOTE ANNUNCIATOR PANEL (FAAP): FLUSH MOUNTED, 60" TO CL OF LCD DISPLAY		HORN: CEILING MOUNT
▬	FIRE ALARM CONTROL PANEL (FACP) / REMOTE ANNUNCIATOR PANEL (FAAP) / VOICE EVAC PANEL (FAVP): SURFACE MOUNTED, 60" TO CL OF LCD DISPLAY.	cd	HORN/STROBE: WALL MOUNT 80" AFF TO BOTTOM OF LENS NOTE CANDELA
▭	BOOSTER POWER SUPPLY (BPS): SURFACE MOUNTED	cd	HORN/STROBE: CEILING MOUNT NOTE CANDELA
F	MANUAL PULL STATION: MOUNT AT 48" TO CENTER LINE UNO	W	SPEAKER: WALL MOUNT 90° AFF TO TOP OF DEVICE AND NOT LESS THAN 6" BELOW CEILING
S P, S I P	SMOKE DETECTOR: (P) PHOTOELECTRIC, (I) IONIZATION, (M) MULTI TECHNOLOGY, (H) HORN (LO) LOCAL-ONLY 120V W/INTEGRAL BATTERY: CEILING MOUNT / WALL MOUNT	W	SPEAKER: CEILING MOUNT
		cd W	SPEAKER/STROBE: WALL MOUNT 80" AFF TO BOTTOM OF LENS NOTE CANDELA
S H LO, S H LO	LOCAL-ONLY SMOKE DETECTOR: 120V, INTEGRAL BATTERY, WITH HORN & STROBE, CEILING MOUNT OR WALL MOUNT AT 12" BELOW CEILING.	cd W SS	SPEAKER/STROBE: CEILING MOUNT NOTE CANDELA
S BT, S BR	BEAM DETECTOR: (BT) TRANSMITTER, (BR) RECEIVER WALL MOUNT PER MANUFACTURERS SPECIFICATIONS	15cd	STROBE: WALL MOUNT 80" AFF TO BOTTOM OF LENS NOTE CANDELA
	HEAT DETECTOR: (ROR) RATE OF RISE, (F) FIXED, TEMP 135° OR 190° CEILING MOUNT / WALL MOUNT	cd	STROBE: CEILING MOUNT NOTE CANDELA
MM	MONITOR MODULE: AT OR NEAR DEVICE	F	FIRE BELL: MOUNTED PER LOCAL CODE
CR	CONTROL RELAY MODULE: AT OR NEAR DEVICE	J	FIRE ALARM JUNCTION BOX, W/RED COVER & FA CKT LABEL
IM	ISOLATOR MODULE: AT OR NEAR DEVICE	KH	HOOD FIRE SUPPRESSION SYSTEM CONNECTION
PM	MULTI-VOLTAGE RELAY: AT OR NEAR DEVICE	AL	REMOTE ALARM LAMP
SM	SINGLE INPUT MODULE: AT OR NEAR DEVICE	FS	FIRE SPRINKLER FLOW SWITCH
DM	DUAL INPUT MODULE: AT OR NEAR DEVICE	TS	FIRE SPRINKLER TAMPER SWITCH
DH	MAGNETIC DOOR HOLDER: SYSTEM POWERED AND CONTROLLED UNO, MOUNTING PER PLANS	FSD	FIRE/SMOKE DAMPER: COORDINATE INSTALLATION AND MOTOR DE-ENERGIZE PROCEDURES WITH MECHANICAL CONTRACTOR. ELECTRICQAL CONTRACTOR SHALL PROVIDE RACEWAY, POWER, AND CONTROL WIRE AS NECESSARY.
J/H	FIREMAN'S PHONE: MOUNTED AT +48" TO TOP UNO, JACK OR HANDSET		
EOLR	END OF LINE RESISTOR	S D	DUCT SMOKE DETECTOR: 1 EA AT SUPPLY (2000 CFM) 1 EA RETURN & SUPPLY (15,000 CFM)
	HORN: WALL MOUNT 90° AFF TO TOP OF DEVICE AND NOT LESS THAN 6" BELOW CEILING		

NOTES:

1. THE CONTRACTOR SHALL SERVE AS THE CITY/STATE LICENSED DESIGNER AND INSTALLER FOR THE FIRE ALARM SYSTEM. A COMPLETE TURN-KEY SYSTEM SHALL BE DESIGNED, FURNISHED, AND INSTALLED BY THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO THE CONTROL PANEL, DEVICES, MODULES, EQUIPMENT ETC. REQUIRED FOR A COMPLETE SYSTEM. INSTALL AN APPROVED MANUAL, AUTOMATIC, OR MANUAL AND AUTOMATIC FIRE ALARM SYSTEM IN ACCORDANCE WITH THE PROVISIONS OF THE IFC, IBC, NFPA-70, NFPA-72, NFPA-101, NEC 760, ADA AND LOCAL AHJ REQUIREMENTS.
2. THE CONTRACTOR'S DESIGN AND BID SHALL BE BASED ON ALL PROJECT DRAWINGS AND SPECIFICATIONS FOR ALL DISCIPLINES, INCLUDING BUT NOT LIMITED TO MECHANICAL, FIRE SPRINKLER, KITCHEN, ARCHITECTURAL, SECURITY, BUILDING AUTOMATION, AND STRUCTURAL SYSTEMS. FIRE ALARM DEVICES AS SHOWN ON PLANS ARE SHOWN DIAGRAMMATICALLY FOR BIDDING PURPOSES ONLY AND IS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS AS MINIMUM CRITERIA. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL AHJ AND COMPLY WITH APPLICABLE CODES FOR ANY ADDITIONAL DEVICES OR EQUIPMENT THAT MAY BE REQUIRED.
3. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS HAVE BEEN APPROVED BY THE LOCAL AHJ AND THE ENGINEER OF RECORD.
4. FIRE ALARM SYSTEM SHALL BE CLASS 1 CIRCUITING AS REQUIRED BY LOCAL AHJ AND NFPA-70.
5. ALL FIRE ALARM WIRING TO BE RUN IN 3/4" CONDUIT. ALL FIRE ALARM CONDUIT SHALL BE MANUFACTURED RED CONDUIT. (CONDUIT SHALL NOT BE SPRAY PAINTED).
6. BATTERY BACKUP SYSTEM SHALL BE CALCULATED TO PROVIDE A MINIMUM OF 24 HOURS OF STANDBY AND A MINIMUM OF 5 MINUTES OF ALARM OR PER AHJ REQUIREMENTS.
7. CONNECT TO THE TELEPHONE SYSTEM WITH DIAL OUT BY POINT (CITY OF RENO JURISDICTION ONLY). IF A SYSTEM IS SELECTED THAT DOES NOT HAVE DIAL OUT BY POINT, THEN THE SUB-CONTRACTOR SHALL PROVIDE A REMOTE ANNUNCIATOR AT ENTRANCE DESIGNATED BY LOCAL AHJ.
8. FIRE ALARM NOTIFICATION APPLIANCE CANDELA VALUE SHALL MEET THE REQUIREMENTS OF NFPA 72, BASED ON ROOM SIZE. IT IS THE CONTRACTORS RESPONSIBILITY TO ADD ADDITIONAL NOTIFICATION APPLIANCES AS REQUIRED TO COMPLY WITH THE REQUIREMENTS OF NFPA 72.
9. MANUAL PULL STATIONS SHALL BE MOUNTED 48" TO CENTER OF DEVICE.
10. DETECTORS ARE NOT TO BE LOCATED IN A DIRECT AIRFLOW OR CLOSER THAN 3' FROM AN AIR SUPPLY DIFFUSER OR RETURN AIR OPENING IN ACCORDANCE WITH NFPA-72 A.17.7.4.1, (2010).
11. DETECTOR LOCATION FOR DOOR HOLD ACTIVATION SHALL BE PER NFPA-72, 17.7.5.6.6.1, (1-3), (2010), WHEN REQUIRED.
12. AREA SMOKE DETECTION AND DUCT DETECTORS SHALL SHUT DOWN ALL MECHANICAL UNITS.
13. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A FINAL INSPECTION AND TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE LOCAL AHJ. A COPY OF THE RECORD OF COMPLETION AND CERTIFICATE OF OCCUPANCY SHALL BE SUBMITTED TO THE ENGINEER OF RECORD.

ELECTRICAL LEGEND

- PANELBOARD: SURFACE MOUNTED
- PANELBOARD: FLUSH MOUNTED
- SWITCHBOARD OR DISTRIBUTION PANEL
- XF TRANSFORMER
- PULLBOX / VAULT
- MOTOR STARTER
- COMBINATION MOTOR STARTER
- COMBINATION MOTOR STARTER PROVIDED BY OTHERS
- F DISCONNECT SWITCH - FUSIBLE (FUSED PER EQUIP. NAMEPLATE)
- N DISCONNECT SWITCH - NON-FUSIBLE
- DISCONNECT SWITCH PROVIDED BY OTHERS
- VARIABLE FREQUENCY DRIVE
- VARIABLE FREQUENCY DRIVE PROVIDED BY OTHERS
- CB ENCLOSED CIRCUIT BREAKER
- GROUND ROD
- SHUNT TRIP STATION OR EMERGENCY PUSHBUTTON
- M REMOTE METER

- $ SINGLE POLE SWITCH 48" AFF
- $3 THREE WAY SWITCH 48" AFF
- $4 FOUR WAY SWITCH 48" AFF
- $K KEY OPERATED SWITCH 48"
- $L SWITCH WITH LIGHTED HANDLE
- $M MANUAL MOTOR STARTER
- $P SWITCH WITH PILOT LIGHT 48" AFF
- $T TIME WALL SWITCH EQUAL TO HUBBELL DT2000W 48" AFF
- DIMMER OPERATED SWITCH 48" AFF
- OCCUPANCY SENSOR - WALL MOUNTED 48" AFF
- D 0-10V DIMMING OCCUPANCY SENSOR - WALL MOUNTED 48" AFF EQUAL TO SENSOR SWITCH WSX-D
- OS OCCUPANCY SENSOR - CEILING MOUNTED. PROVIDE WITH POWER PACK PER MFG REQUIREMENTS.
- OS OCCUPANCY SENSOR - CORNER MOUNTED. PROVIDE WITH POWER PACK PER MFG REQUIREMENTS.
- CONTROL STATION
- CONTACTOR OR RELAY
- PC PHOTOELECTRIC CELL (ON ROOF FACING NORTH UNO)
- TC TIMECLOCK

- CONDUIT/RACEWAY IN WALL OR ABOVE CEILING
- CONDUIT/RACEWAY BELOW GRADE OR BELOW FLOOR
- BREAK OR RUN CONTINUES
- —OH— OVERHEAD SERVICE
- — P — PRIMARY
- — S — SECONDARY
- — C — COMMUNICATIONS OR SIGNAL
- — T — TELEPHONE
- — TV — TELEVISION
- — • — LOW VOLTAGE AND/OR CONTROL WIRING
- — - — EMERGENCY CIRCUIT
- CONDUIT/RACEWAY STUB OUT: MARK AND CAP (SITE)
- CONDUIT/RACEWAY SLEEVE

E = EQUIPMENT
H = ELECTRIC HEAT
K = KITCHEN EQUIP
L = LIGHTING
M = MOTOR
M1 = LARGEST MOTOR
R = RECEPTACLES

- SINGLE RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF
- DUPLEX RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF
- DUPLEX RECEPTACLE: HALF SWITCHED, +18" AFF
- DUPLEX RECEPTACLE GFI TYPE - 20A, 125V, NEMA 5-20 GFI +18" AFF
- QUAD RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF
- ISOLATED GROUND TYPE RECEPTACLE (ORANGE TRIANGLE), 20A, 125V, NEMA 5-20IG, +18" AFF
- COMBO DUAL USB CHARGER / DUPLEX RECEPTACLE, 5.1A, (1) TYPE A & (1) TYPE C USB (3.1, 3.0, 2.0 AND 1.1 COMPATIBLE), 20A, 125V, NEMA 5-20R, +18AFF
- QUAD USB CHARGER, 5.1A, (2) TYPE A & (2) TYPE C USB (3.1, 3.0, 2.0 AND 1.1 COMPATIBLE), +18AFF
- SPECIAL PURPOSE RECEPTACLE: SEE DWGS FOR NEMA CONFIGURATION
- DUPLEX RECEPTACLE: FLOOR MOUNTED
- QUAD RECEPTACLE: FLOOR MOUNTED
- DUPLEX RECEPTACLE: CEILING MOUNTED
- QUAD RECEPTACLE: CEILING MOUNTED
- BLANK GFCI PROTECTIVE DEVICE IN READILY ACCESSIBLE LOCATION (LABEL PROTECTED DEVICES)
- DUPLEX "CLOCK" RECEPTACLE: 125V, NEMA 5-20R, +60" AFF
- X DEVICE MOUNTED AT NON-STANDARD HEIGHT. IF NO HEIGHT SHOWN VERIFY HEIGHT WITH ARCHITECT
- MULTI-OUTLET ASSEMBLY: SPACING PER DWGS

- DATA / VOICE OUTLET: 18" AFF - 1 VOICE, 1 DATA JACK, 2 BLANKS
- DATA / VOICE OUTLET: FLOOR MOUNTED
- MULTI-OUTLET ASSEMBLY: SPACING PER DWGS
- TELEPHONE OUTLET: 18" AFF
- DATA OUTLET: 18" AFF
- DEVICE MOUNTED AT NON-STANDARD HEIGHT. IF NO HEIGHT SHOWN VERIFY HEIGHT WITH ARCHITECT
- S SPEAKER
- TV TELEVISION OUTLET: 18" AFF (UNO)
- TELEPHONE TERMINAL BOARD (TTB)
- VC VOLUME CONTROL
- GROUNDING BAR

* FIXTURE SCHEDULE HAS PRECEDENCE *

- LENGED TROFFER
- VOLUMETRIC TROFFER
- FLANGED TROFFER
- SURFACE MOUNT TROFFER
- STRIP FIXTURE
- DOWNLIGHT
- WALL PACK
- POLE MOUNT
- EMERGENCY LIGHTING UNIT
- EXIT SIGN FIXTURE - SHADED AREA DENOTES LIGHTED FACE - ARROWS INDICATE DIRECTION
- SHADING INDICATES EGRESS FIXTURE

- T THERMOSTAT (PROVIDED BY MECH. CONTRACTOR UNO)
- J JUNCTION BOX (SIZE AS REQUIRED UNO)
- 3 SHEET NOTE DESIGNATION
- F1 FIXTURE DESIGNATION: F1=TYPE (SEE FIXTURE SCH.)
- 3 REVISION DELTA: NUMBER REPRESENTS REVISION
- 1253 FEEDER DESIGNATION
- AHU 2 EQUIPMENT CONNECTION

- GF GROUND FAULT INTERRUPTER DEVICE
- M METERING DEVICE
- RM REMOTE METER
- ST SHUNT TRIP DEVICE
- TRANSFORMER
- CT CURRENT TRANSFORMER
- G GENERATOR
- # MOTOR - # INDICATES HP
- INTERRUPTER SWITCH
- GFI GROUND FAULT RELAY W/ CT OR SENSOR
- FUSE
- CIRCUIT BREAKER
- DRAWOUT CIRCUIT BREAKER
- A 3 TRANSFER SWITCH (A=AUTOMATIC, M=MANUAL) # FOR POLES 2, 3 OR 4
- SPD SURGE PROTECTION DEVICE

- NORMALLY OPEN (NO) CONTACT
- NORMALLY CLOSED (NC) CONTACT
- C COIL - VOLTAGE PER CONTROL DIAGRAMS
- R PILOT LIGHT (LED) PUSH-TO-TEST. LETTER INDICATES COLOR (R=RED, G=GREEN, A=AMBER, Y=YELLOW)
- R PILOT LIGHT (LED) NON PUSH-TO-TEST
- THERMAL OVERLOAD
- MAGNETIC OVERLOAD
- PUSH BUTTON NORMALLY OPEN (NO)
- PUSH BUTTON NORMALLY CLOSED (NC)
- H A HAND-OFF-AUTO (HOA) SELECTOR SWITCH
- LIMIT SWITCH NORMALLY OPEN (NO)
- LIMIT SWITCH NORMALLY CLOSED (NC)
- R PUSH BUTTON ILLUMINATED (LED)

TICS = NO. OF #12 WIRES (UNO) IF MORE THAN TWO WITHIN RACEWAY. GROUNDING CONDUCTOR (NOT SHOWN) ALWAYS REQUIRED.
ISOLATED GROUNDING CONDUCTOR
NEUTRAL CONDUCTOR
PHASE CONDUCTOR(S)

BRANCH CIRCUIT (WHEN TIC MARKS ARE NOT SHOWN) = (1) PHASE, (1) NEUTRAL AND (1) GROUNDING CONDUCTOR

HOMERUN TO PANELBOARD OR DEVICE

HA-(1,3,5,3N)G HOMERUN CIRCUIT DESIGNATION
GROUNDING CONDUCTOR
NEUTRAL CONDUCTOR (N=1, 2N=2 NEUTRALS, 3N=3 NEUTRALS)
PHASE CONDUCTOR(S)
PANELBOARD DESIGNATION

HA-(1,3,5)G HOMERUN CIRCUIT DESIGNATION (3 PHASE CIRCUIT SHOWN)
GROUNDING CONDUCTOR
PHASE CONDUCTOR(S)
PANELBOARD DESIGNATION

NOTE: "(E)" IN HOMERUN INDICATES NEW HOMERUN TO EXISTING PANEL

A	AMPS
ADA	AMERICANS WITH DISABILITIES ACT
AFC	ABOVE FINISHED CEILING
AFCI	ARC-FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMP INTERRUPTING CAPACITY
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BKR	BREAKER
C	CONDUIT/RACEWAY
CEC	CALIFORNIA ENERGY COMMISSION
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT/RACEWAY ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
DB	DISTRIBUTION BOARD
DDC	DIRECT DIGITAL CONTROLLER
DPDT	DOUBLE-POLE, DOUBLE-THROW
DPST	DOUBLE-POLE, SINGLE-THROW
DWG	DRAWING
(E)	EXISTING TO REMAIN
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
(F)	FUTURE
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT (STEEL)
FPEN	FUSE PER EQUIP. NAMEPLATE
GFI	GROUND FAULT INTERRUPT
GFR	GROUND FAULT RELAY
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO SWITCH
HP	HORSEPOWER
HSKP	HOUSEKEEPING
IMC	INTERMEDIATE METAL CONDUIT
J-BOX	JUNCTION BOX
K	kcmil (300K = 300 kcmil)
KVA	KILOVOLT AMPS
KW	KILOWATT
LTG	LIGHTING
IG	ISOLATED GROUND
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MFG	MANUFACTURER
MLO	MAIN LUGS ONLY
MS	MOTOR STARTER
MSB	MAIN SWITCHBOARD
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHTLIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NVE	NV ENERGY
P	POLE
PH/Ø	PHASE
PV	PHOTOVOLTAIC
PNL	PANEL
PTC	PV USA TEST CONDITIONS
PWR	POWER
(R)	RELOCATE/RELOCATED
(RR)	REMOVE AND REPLACE
RAC	RIGID ALUMINUM CONDUIT
RFC	RIGID FIBERGLASS CONDUIT
RSC	RIGID STEEL CONDUIT
SE	SERVICE ENTRANCE
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE-POLE, DOUBLE-THROW
SPST	SINGLE-POLE, SINGLE-THROW
STC	STANDARD TEST CONDITIONS
SW	SWITCH
TE	TELECOM
TTB	TELEPHONE TERMINATION BOARD
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
UNSW	UNSWITCHED
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLTS
VA	VOLT AMPS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WP	WEATHER PROOF
(X)	EXISTING TO BE REMOVED
XFMR OR XF	TRANSFORMER

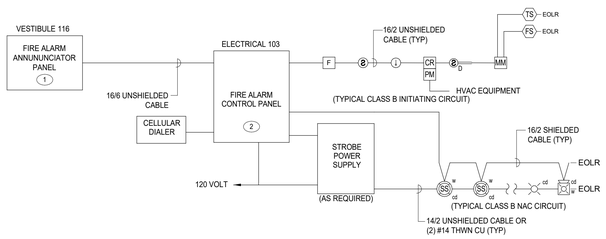
NOTE: THIS IS A MASTER SYMBOL LIST. IT MAY BE THAT NOT ALL SYMBOLS SHOWN ARE USED WITHIN THIS SET OF PLANS. HEIGHTS GIVEN ARE TO TOP OF BOX.

ONELINE DIAGRAM NOTES

1. ONELINE DIAGRAM IS FOR REFERENCE ONLY. CONTRACTOR SHALL PROVIDE A ONELINE DIAGRAM THAT SHOWS ALL DEVICES, NEW AND EXISTING, AS THEY ARE CONNECTED ON THE FLOOR PLAN.

SHEET NOTES

1. ANNUNCIATOR SHALL BE CAPABLE OF VIEWING EVENTS AND OPERATING THE FIRE ALARM SYSTEM. A KEY SHALL BE REQUIRED FOR OPERATING OR RESETTING THE SYSTEM FROM THIS LOCATION.
2. PROVIDE AMPLIFIER CABINET SIZED FOR SYSTEM LOAD.



1 / E0.01 FIRE ALARM ONELINE DIAGRAM
Not To Scale

DRAWING SCHEDULE

SHEET	DESCRIPTION	
E0.01	LEGENDS, FA ONELINE DIAGRAM & DRAWING SCHEDULE	●
E0.02	FIXTURE SCHEDULE AND IECC CALCULATIONS	●
E0.03	ONELINE DIAGRAM AND LOAD CALCULATIONS	●
E0.06	DETAILS	●
E0.07	DETAILS	●
E1.01	DEMOLITION SITE PLAN	●
E1.02	NEW WORK SITE PLAN	●
E2.01	LIGHTING PLAN - BASE BID	●
E2.01A	LIGHTING PLAN - EARLY LEARNING	●
E2.01B	LIGHTING PLAN - GYMNASIUM	●
E3.01	POWER PLAN - BASE BID	●
E3.01A	POWER PLAN - EARLY LEARNING	●
E3.01B	POWER PLAN - GYMNASIUM	●
E4.01	MECHANICAL POWER PLAN - BASE BID	●
E4.01A	MECHANICAL POWER PLAN - EARLY LEARNING	●
E4.01B	MECHANICAL POWER PLAN - GYMNASIUM	●
E5.01	FIRE ALARM PLAN - BASE BID	●
E5.01A	FIRE ALARM PLAN - EARLY LEARNING	●
E5.01B	FIRE ALARM PLAN - GYMNASIUM	●
	TOTAL SHEETS IN ISSUE:	19

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CITY OF FERNLEY
CRRC

Job No: 21-058.00

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CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
LEGENDS, FA ONELINE DIAGRAM & DRAWING SCHEDULE

Date: JANUARY 19, 2023
Sheet No:
E0.01

LIGHTING FIXTURE SCHEDULE

LIGHTING FIXTURE CATALOG NUMBERS ARE SERIES TYPE ONLY. PROVIDE TRIMS, BALLASTS, MOUNTING EQUIPMENT, FITTINGS AND LAMPS AS REQUIRED BY THE SPECIFICATIONS AND PROJECT CONDITIONS FOR A COMPLETE INSTALLATION.THIS IS NOT A STANDALONE SCHEDULE AND FIXTURES MUST INCORPORATE ALL WORK INDICATED OR IMPLIED THROUGHOUT THE DRAWINGS AND SPECIFICATIONS.

LIGHTING SYSTEM FOOTCANDLE LEVELS ARE BASED ON THE UTILIZATION OF STANDARD REFLECTANCES OF 80-50-20 (CEILING-WALL-FLOOR) PER I.E.S. (ILLUMINATED ENGINEERING SOCIETY). THE ROOM SURFACES ARE USED AS AN INTEGRAL COMPONENT OF THE LIGHTING SYSTEMS. THE REFLECTANCE OF THE SURFACE PAINT COLOR, MATERIAL, AND OTHER ROOM SURFACES DIRECTLY AFFECTS THE DELIVERY OF LIGHT TO THE WORK PLANE. A SIGNIFICANT DROP IN OVERALL LIGHTING LEVELS WILL OCCUR IF REFLECTANCES ARE LOWERED. THE ARCHITECT/OWNER SHALL NOTIFY THE ENGINEER IMMEDIATELY IF FINISHES DO NOT FALL INLINE WITH THE REFLECTANCES MENTIONED ABOVE.

SUBSTITUTION: DEFINITIONS

OR EQUAL = EQUAL OR SUPERIOR TO SPECIFIED IN ALL RESPECTS WILL BE ALLOWED. ENGINEER'S PRE-BID APPROVAL IS NOT REQUIRED. PROPOSED EQUAL FIXTURES ARE SUBJECT TO REVIEW DURING THE STANDARD SUBMITTAL PROCESS.

NO EQUAL = PROVIDE SPECIFIED FIXTURE. SUBSTITUTIONS ARE NOT ALLOWED.

SUBJECT TO REVIEW = EQUAL OR SUPERIOR TO SPECIFIED IN ALL RESPECTS MAY BE ALLOWED ONLY WITH ENGINEER'S APPROVAL. ALL SUBSTITUTIONS MUST BE SUBMITTED AS REQUIRED BY SPECIFICATIONS AND ACCOMPANIED WITH POINT BY POINT LIGHTING CALCULATIONS. DETERMINATION OF EQUAL IS ENGINEER'S SOLE DISCRETION.

L1	1 VA	LED, 2X4 RECESSED TROFFER WITH DIFFUSE MATTE ACRYLIC CENTER. SOURCE: LED, #### LUMENS, 4000K, 80 CRI VOLTAGE: 277 V MANUFACTURER: HE WILLIAMS AT3-2-2-LXX/840-D-XX SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL	L11	48 VA	LED, 9' DIAMETER PENDANT CYLINDER, MEDIOUM BEAM, CLEAR ALZAK REFLECTOR, FINISH TBD, 0-10V DIMMING, FIELD ADJUSTABLE FLEXIBLE CABLE SOURCE: LED, 5000 LUMENS, 4000K, 80 CRI VOLTAGE: 277 V MANUFACTURER: CONTECH CY92 5000LM 4000K 80 CRI MEDIUM BEAM CLEAR ALZAK MEDIUM FINISH TBD SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL
L2	20 VA	LED, 1X4 RECESSED TROFFER WITH FROSTED ACRYLIC LENS SOURCE: LED, #### LUMENS, 4000K, 80CRI VOLTAGE: 277 V MANUFACTURER: HE WILLIAMS 50G-S-1-4-L27/840-XX SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL	L12	12 VA	SUSPENDED LINEAR 4', DIRECT-INDIRECT, WIDE SPREAD OPTICS WITH TOP GLOW, FLAT END CAPS, DUAL CIRCUIT, 0-10V DIMMING TO 10%,ADJUSTABLE CABLE MOUNT. SOURCE: LED, 1362 LUMENS PER FOOT, 4000K, 80 CRI VOLTAGE: 277 V MANUFACTURER: FINELITE HP 4 P ID LENGTH PER PLANS H B 840 WSOTG F 96LG 277 DC FC-10% FA50 SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL
L3	48 VA	LED, 2X4 RECESSED TROFFER WITH FROSTED ACRYLIC LENS SOURCE: LED, #### LUMENS, 4000K, 80CRI VOLTAGE: 277 V MANUFACTURER: HE WILLIAMS 50-X-24-LXX/840-XX SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL	L13	1 VA	LED, RECESSED 4" DIRECT LINEAR, BOOSTED OUTPUT, BOTTOM GLOW LENS. SOURCE: LED, ### LUMENS/LF, 4000K, ##CRI VOLTAGE: 277 V MANUFACTURER: FINELITE HP4 P D B 840 F BG SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL
L4	23 VA	LED, SURFACE MOUNT WRAP WITH FROSTED RIBBED ACRYLIC LENS SOURCE: LED, #### LUMENS, 4000K, 80CRI VOLTAGE: 277 V MANUFACTURER: HE WILLIAMS 39-4-LXX/840-A-XX SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL	S1	0 VA	LED, 8" SQUARE SITE BOLLARD. SOURCE: LED, #### LUMENS, 4000K, ##CRI VOLTAGE: 277 V MANUFACTURER: HE WILLIAMS OSA8S-L10 SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL
L5	36 VA	LED, 4' ROUND LENS STRIP FIXTURE WITH DIFFUSE ACRYLIC LENS SOURCE: LED, #### LUMENS, 4000K, 80CRI VOLTAGE: 277 V MANUFACTURER: HE WILLIAMS 76R-4-LXX/840-XX SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL	S2	1 VA	LED. AREA LUMINAIRE SINGLE HEAD. 12'6" SQ STEEL POLE WITH VIBRATION DAMPENERS. WITH HOUSE SIDE SHIELD. SOURCE: LED, XXXX LUMENS, 4000K, XXCRI VOLTAGE: 277 V MANUFACTURER: LITHONIA RSX1 LED P2 R4 HS SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL
L6	12 VA	LED, 4.5 IN. RECESSED DOWNLIGHT SOURCE: LED, #### LUMENS, 4000K, ##CRI VOLTAGE: 277 V MANUFACTURER: Manufacturer Model SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL	S3	1 VA	LED, AREA LUMINAIRE SINGLE HEAD. 12'6" SQ STEEL POLE WITH VIBRATION DAMPENERS. SOURCE: LED, XXXX LUMENS, 4000K, XXCRI VOLTAGE: 277 V MANUFACTURER: LITHONIA RSX1 LED P2 40K R5 SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL
L7	11 VA	LED, 6 IN. RECESSED DOWNLIGHT SOURCE: LED, #### LUMENS, 4000K, ##CRI VOLTAGE: 277 V MANUFACTURER: Manufacturer Model SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL	S4	1 VA	LED, AREA LUMINAIRE SINGLE HEAD. 12'6" SQ STEEL POLE WITH VIBRATION DAMPENERS. SOURCE: LED, XXXX LUMENS, 4000K, XXCRI VOLTAGE: 277 V MANUFACTURER: LITHONIA RSX1 LED P2 R3 SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL
L8	12 VA	LED, 2' LINEAR WALL SCONCE SOURCE: LED, #### LUMENS, 4000K, ##CRI VOLTAGE: 277 V MANUFACTURER: VISA LIGHTING CV1800-LXX-MVOLT-XX SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL	S5	1 VA	LED, 4" DOWNLIGHT, WET LOCATION LISTED, FLUSH LENS. SOURCE: LED, 750 LUMENS, 4000K, ##CRI VOLTAGE: 277 V MANUFACTURER: LEDRA NULITE NU4-QD-SW-07LM-HE80 SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL
L9	29 VA	SUSPENDED LINEAR DIRECT-INDIRECT. WIDE SPREAD OPTIC DISTRIBUTION. SOURCE: LED, #### LUMENS, 4000K, ##CRI VOLTAGE: 277 V MANUFACTURER: FINELITE HP 4 P ID XX H B 840 WSO 1% SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL	S6	0 VA	LED, WALLPACK, TYPE 3 WITH SOLITE GLASS LENS SOURCE: VOLTAGE: 277 V MANUFACTURER: HE WILLIAMS VWMH L20 740 T3 SDGL SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL
L10	232 VA	LED HIGH-BAY, RECTILINEAR FORM FACTOR, WIDE DISTRIBUTION, CLEAR POLYCARBONATE LENS BRITE DIPPED ANODIZED, 0-10V DIMMING TO 1%, PENDANT AIRCRAFT CABLE 2-POINT MTG, WITH INTEGRAL DAYLIGHT AND OCCUPANCY CONTROLS. SOURCE: LED, 35,214 LUMENS, 5000K, 80 CRI VOLTAGE: 277 V MANUFACTURER: LUX DYNAMICS LUX IK10P L 3D A HO3 850 2' U1 CP2 5/10 BOT INC STND H10-20Y-GYM SUBSTITUTIONS: ○ OR EQUAL ◉ SUBJECT TO REVIEW ○ NO EQUAL			

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REV	DATE	DESCRIPTION

Sheet Title

FIXTURE SCHEDULE AND IECC CALCULATIONS

Date: JANUARY 19, 2023

Sheet No:

E0.02

FEEDER SCHEDULE (600V, 3□, 3W)

FEEDER	AMPERE	WIRE (CU)	BOND (CU)	CONDUIT
153	15	(3) 12	12	3/4"
203	20	(3) 12	12	3/4"
303	30	(3) 10	10	3/4"
403	40	(3) 8	10	3/4"
503	50	(3) 6	10	1"
603	60	(3) 4	10	1"
703	70	(3) 4	8	1 1/4"
803	80	(3) 3	8	1 1/4"
1003	100	(3) 2	8	1 1/4"
1253	125	(3) 1/0	6	1 1/2"
1503	150	(3) 1/0	6	1 1/2"
1753	175	(3) 2/0	6	2"
2003	200	(3) 3/0	6	2"
2253	225	(3) 4/0	4	2 1/2"
2503	250	(3) 250K	4	2 1/2"
3003	300	(3) 350K	3	3"
3503	350	(3) 400K	3	3"
4003	400	(3) 500K	3	4"
5003	500	(6) 250K	(2) 2	(2) 2 1/2"
6003	600	(6) 350K	(2) 1	(2) 3"
8003	800	(6) 500K	(2) 1/0	(2) 4"
10003	1000	(9) 400K	(3) 2/0	(3) 3"
12003	1200	(9) 600K	(3) 3/0	(3) 4"
16003	1600	(12) 600K	(4) 4/0	(4) 4"
20003	2000	(15) 600K	(5) 250K	(5) 4"

FEEDER SCHEDULE (600V, 3□, 4W)

FEEDER	AMPERE	WIRE (CU)	BOND (CU)	CONDUIT
154	15	(4) 12	12	3/4"
204	20	(4) 12	12	3/4"
304	30	(4) 10	10	3/4"
404	40	(4) 8	10	1"
504	50	(4) 6	10	1"
604	60	(4) 4	10	1 1/4"
704	70	(4) 4	8	1 1/4"
804	80	(4) 3	8	1 1/4"
1004	100	(4) 1	8	1 1/2"
1254	125	(4) 1/0	6	2"
1504	150	(4) 1/0	6	2"
1754	175	(4) 2/0	6	2"
2004	200	(4) 3/0	6	2"
2254	225	(4) 4/0	4	2 1/2"
2504	250	(4) 250K	4	3"
3004	300	(4) 350K	3	3"
3504	350	(4) 400K	3	3"
4004	400	(4) 500K	3	4"
5004	500	(8) 250K	(2) 2	(2) 2 1/2"
6004	600	(8) 350K	(2) 1	(2) 3"
8004	800	(8) 500K	(2) 1/0	(2) 4"
8004T	800	(8) 600K	(2) 1/0	(2) 4"
10004	1000	(12) 400K	(3) 2/0	(3) 3 1/2"
12004	1200	(12) 600K	(3) 3/0	(3) 4"
16004	1600	(16) 600K	(4) 4/0	(4) 4"

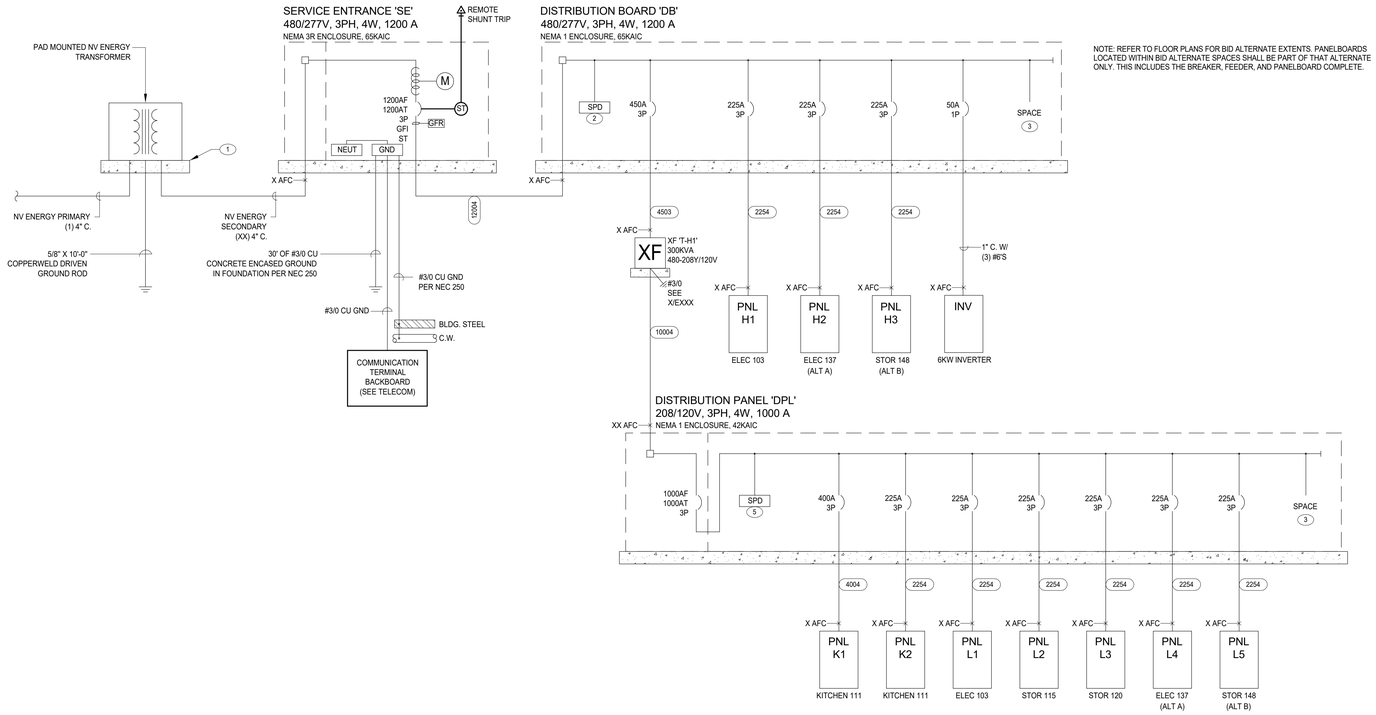
GENERAL NOTES

1. PANELBOARD AND BREAKER INTERRUPTING CAPACITIES (AIC) SHALL BE FULLY RATED AS AN ASSEMBLY. SERIES RATING OF BREAKER DEVICES AND EQUIPMENT IS NOT PERMITTED.ALL CONDUCTOR SIZES ARE BASED ON COPPER. ALUMINUM IS NOT PERMITTED.
2. INSTALL NVE TRANSFORMER PAD, CONDUIT, ETC. PER UTILITY REQUIREMENTS. SEE NVE DRAWINGS FOR ALL WORK REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, INCLUDING THAT REQUIRED BY NVE IN BID. COORDINATE WITH NVE.
3. ALL SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL BE FULLY BUSSED.
4. ALL CONTRACTOR PROVIDED EQUIPMENT SHALL COMPLY WITH NV ENERGY SPECIFICATIONS AND REQUIREMENTS.
5. DO NOT SPLICE FEEDER CONDUCTORS UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER.
6. ALL SWITCHBOARDS, DISTRIBUTION BOARDS, AND PANEL BOARDS SHALL HAVE REMAINDER OF SECTION BUSSED SPACE (TO PROVIDE MINIMUM OF 10% SPARE CAPACITY).
7. CONTRACTOR SHALL PREPARE THE SHORT CIRCUIT AND COORDINATION STUDY PRIOR TO ORDERING DISTRIBUTION EQUIPMENT TO VERIFY ALL EQUIPMENT RATINGS, BREAKER TYPES, AND SETTINGS REQUIRED. ANY CHANGES TO EQUIPMENT RATINGS OR BREAKER TYPES IN ORDER TO PROVIDE A CODE REQUIRED SELECTIVELY COORDINATED SYSTEM SHALL NOT RESULT IN ADDITIONAL COST TO THE OWNER.
8. PROVIDE ENGRAVED NAMEPLATES (SCREW ATTACHED) ON ALL PANELS, TRANSFORMERS, SWITCHBOARDS, DISTRIBUTION BOARDS, DISCONNECT SWITCHES, SIMILAR TO THE FOLLOWING. MINIMUM SIZE 1 1/2"x3".

208/120V 3PH 4W
PANEL L1A
FED FROM DIST PNL DP-1

SHEET NOTES

1. NV ENERGY TRANSFORMER PAD, PROVIDE AND INSTALL AS REQUIRED. COORDINATE ALL UTILITY WORK WITH NV ENERGY.
2. INTERNALLY MOUNTED SPD WITH DISCONNECT. 240KA/PHASE WITH STATUS INDICATOR LIGHT ON EACH PHASE, AUDIBLE ALARM, TRANSIENT COUNTER AND PUSH TO TEST. SEE SPECIFICATIONS.
3. REMAINDER OF SPACE SHALL BE FULLY BUSSED. PROVIDE SPACE FOR (2) 225A/3P BREAKERS, MINIMUM.



NOTE: REFER TO FLOOR PLANS FOR BID ALTERNATE EXTENTS. PANELBOARDS LOCATED WITHIN BID ALTERNATE SPACES SHALL BE PART OF THAT ALTERNATE ONLY. THIS INCLUDES THE BREAKER, FEEDER, AND PANELBOARD COMPLETE.

1 E0.03 ONELINE DIAGRAM
Not To Scale

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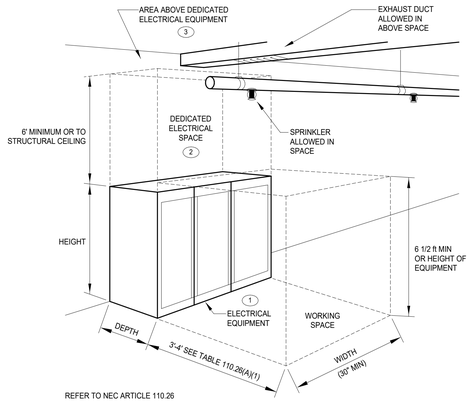
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REV	DATE	DESCRIPTION

Sheet Title
ONELINE DIAGRAM AND LOAD CALCULATIONS

Date: JANUARY 19, 2023
Sheet No:
E0.03



REFER TO NEC ARTICLE 110.26

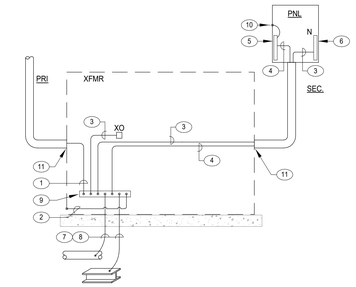
NEC-ARTICLE 110.26 WORKING SPACE & DEDICATED ELECTRICAL SPACE REQUIREMENTS

6 E0.06

SCALE: NONE

DETAIL NOTES

1. ELECTRICAL EQUIPMENT INCLUDES SWITCHGEAR, SWITCHBOARDS, DISTRIBUTION BOARDS, PANEL BOARDS, MOTOR CONTROL CENTER OR SIMILAR EQUIPMENT.
2. NO PIPING, DUCTS, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE.
3. THE AREA ABOVE THE DEDICATED SPACE REQUIRED BY 110.26(E)(1)(a) SHALL BE PERMITTED TO CONTAIN FOREIGN SYSTEMS, PROVIDED PROTECTION IS INSTALLED TO AVOID DAMAGE TO THE ELECTRICAL EQUIPMENT FROM CONDENSATION, LEAKS, OR BREAKS IN SUCH FOREIGN SYSTEM.



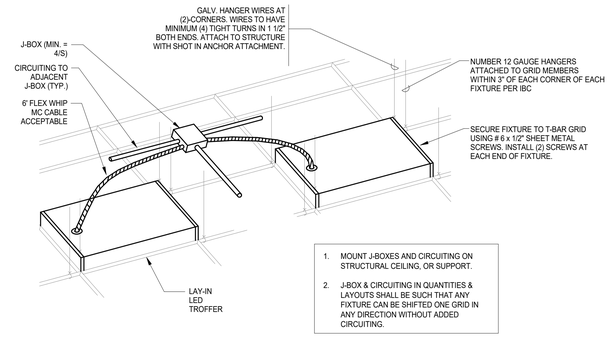
TRANSFORMER GROUNDING AND BONDING DETAIL

4 E0.06

SCALE: NONE

TRANSFORMER GROUNDING AND BONDING NOTES

1. EQUIPMENT GROUNDING CONDUCTOR (PRIMARY) - PER NEC 2017, ARTICLE 250.122 AND 250.66.
2. SYSTEM BONDING JUMPER - PER NEC 2017, ARTICLE 250.28(D)(1).
3. GROUNDED CONDUCTOR (NEUTRAL) - DO NOT BOND THE GROUNDED CONDUCTOR TO THE FIRST SYSTEM DISCONNECTING MEANS IF THE SYSTEM BONDING JUMPER IS INSTALLED IN THE TRANSFORMER ENCLOSURE. SIZE THE SYSTEM BONDING JUMPER PER NEC 2017, ARTICLE 250.28(D)(1).
4. SUPPLY SIDE BONDING JUMPER (SECONDARY) - PER NEC 2017, ARTICLE 250.66, 250.30(A)(2) AND 250.102(C)(1).
5. EQUIPMENT GROUNDING TERMINAL BAR.
6. ISOLATED NEUTRAL TERMINAL BAR.
7. GROUNDING ELECTRODE - PER NEC 2017, ARTICLE 250.30(A)(4).
8. BONDING JUMPERS - PER NEC 2017, ARTICLE 250.66 AND 250.104(D)(1)(2)(3).
9. EQUIPMENT GROUNDING TERMINAL BAR - PER NEC 2017, ARTICLE 250.30(A)(1)(5) CONNECT TO A SINGLE POINT.
10. SUPPLY SIDE BONDING JUMPER (IF REQUIRED - SEE NOTE #3). PER NEC 2017, ARTICLE 250.30(A)(2).
11. BUSHINGS - PER NEC 2017, ARTICLE 300.4(G) AND 250.92.

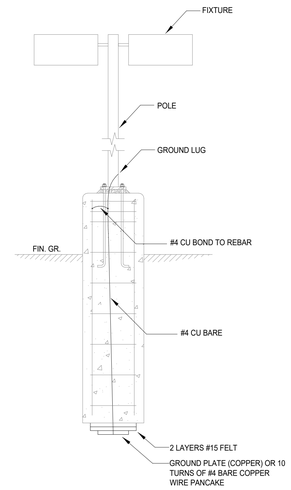


1. MOUNT J-BOXES AND CIRCUITING ON STRUCTURAL CEILING, OR SUPPORT.
2. J-BOX & CIRCUITING IN QUANTITIES & LAYOUTS SHALL BE SUCH THAT ANY FIXTURE CAN BE SHIFTED ONE GRID IN ANY DIRECTION WITHOUT ADDED CIRCUITING.

FIXTURE MOUNTING DETAIL @ T-BAR CEILING

1 E0.06

SCALE: NONE

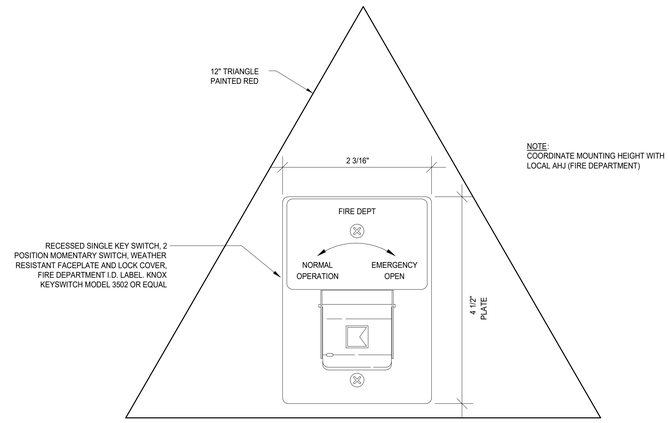


POLE BASE - PEDESTAL GROUNDING DETAIL

7 E0.06

SCALE: NONE

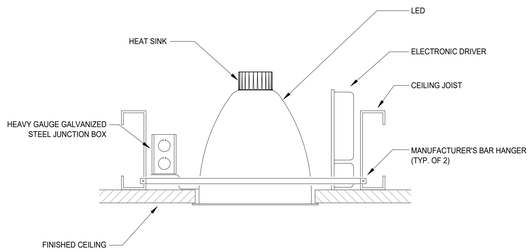
REFER TO STRUCTURAL DRAWINGS FOR POLE BASE CONSTRUCTION AND INSTALLATION REQUIREMENTS. THIS DETAIL PROVIDED FOR AUXILIARY GROUNDING ELECTRODE REQUIREMENTS. BOND WITH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR LUG IN POLE.



SERVICE ENTRANCE SHUNT TRIP STATION DETAIL

5 E0.06

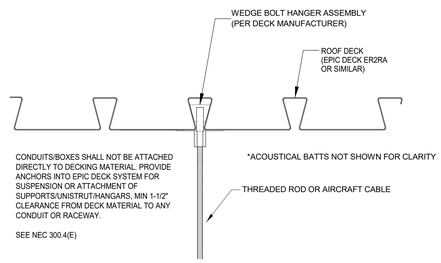
SCALE: NONE



DOWNLIGHT MOUNTING DETAIL

2 E0.06

SCALE: NONE



CONDUIT ROUTING AND ATTACHMENT IN ROOF ASSEMBLY

3 E0.06

SCALE: NONE

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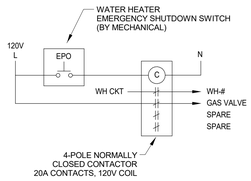
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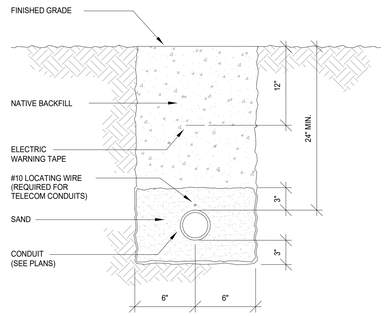
Date: JANUARY 19, 2023
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4 E0.07 WATER HEATER EMERGENCY STOP BUTTON

SCALE: NONE

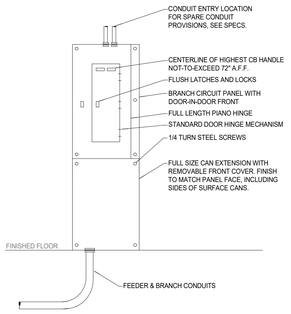
ELECTRICAL CONTRACTOR TO VERIFY ALL REQUIREMENTS AND OPERATION WITH MECHANICAL CONTROLS CONTRACTOR PRIOR TO INSTALLATION AND WIRING OF COMPONENTS.



1 E0.07 TYP 12" TRENCH DETAIL

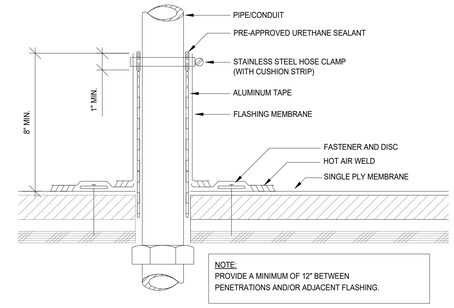
SCALE: NONE

DETAIL INDICATES ELECTRICAL REQUIREMENTS ONLY. REFER TO CIVIL PLANS FOR ADDITIONAL TRENCHING INFORMATION AND SPECIFIC REQUIREMENTS.



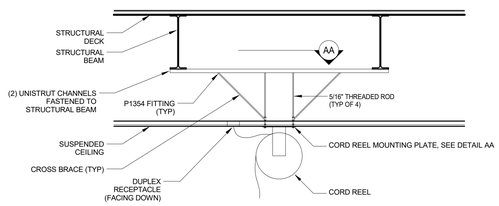
5 E0.07 SURFACE MOUNTED PANEL DETAIL

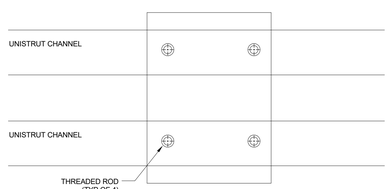
SCALE: NONE



2 E0.07 ROOF PENETRATION DETAIL

SCALE: NONE



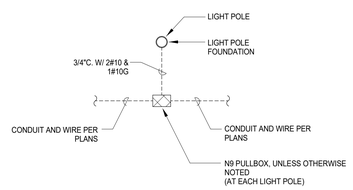


6 E0.07 CORD REEL MOUNTING

SCALE: NONE

DETAIL IS DIAGRAMMATIC - CONTRACTOR TO FIELD FABRICATE MOUNTING WITH SPECIFIC DETAILING FROM MANUFACTURER.

INSALLATION LOCATION	
LOCATION	SETBACK (TO CENTERLINE OF FOUNDATION)
SIDEWALK	18" FROM BACK OF WALK
CURB (W/ NO SIDEWALK)	30" FROM BACK OF CURB
ISLAND OR MEDIAN	CENTER BETWEEN CURBS



3 E0.07 LIGHT POLE INSTALLATION DETAIL

SCALE: NONE

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DETAILS

Date: JANUARY 19, 2023
Sheet No:
E0.07

GENERAL NOTES

1. THIS DRAWING REPRESENTS THE EXISTING LIGHTING, POWER AND COMMUNICATIONS SYSTEMS WITHIN THE EXISTING BUILDING (AREA TO BE REMODELED). THE CONTRACTOR IS RESPONSIBLE FOR REMOVING, RELOCATING AND REWIRING ALL EQUIPMENT AS INDICATED ON THE DRAWINGS, INCLUDING EQUIPMENT THAT LIES WITHIN WALLS AND CEILINGS TO BE DEMOLISHED OR REMODELED.

2. (X) AND/OR DASHED LINES INDICATE EXISTING EQUIPMENT TO BE REMOVED, (R) AND/OR DASHED LINES INDICATE EXISTING EQUIPMENT TO BE RELOCATED, (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.

3. SALVAGEABLE ITEMS REMOVED DURING DEMOLITION SHALL BE OFFERED TO OWNER PRIOR TO DISPOSAL OR REMOVAL FROM SITE.

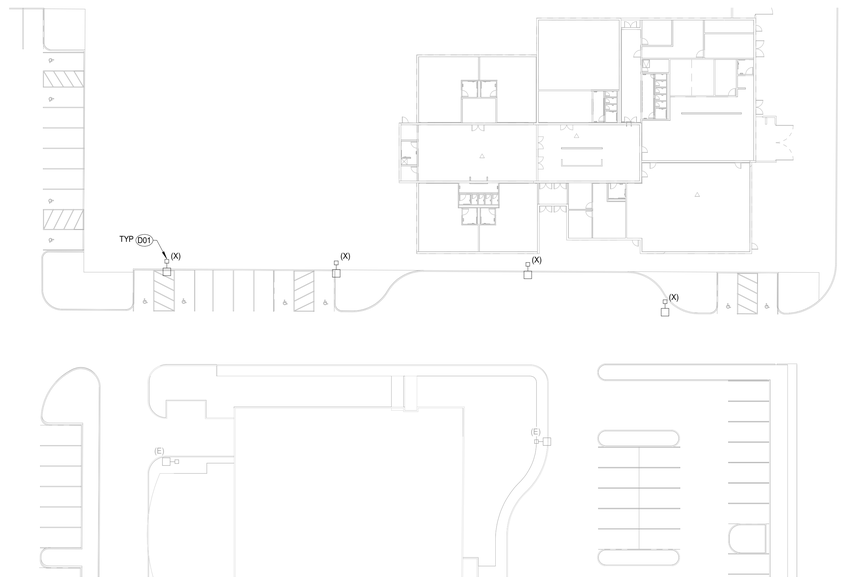
4. EXISTING CIRCUITS AS INDICATED ARE BASED ON CASUAL FIELD OBSERVATION AND INFORMATION PER RECORD DRAWINGS AND SHALL BE FIELD VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO START OF DEMOLITION WORK.

5. THE CONTRACTOR MAY SALVAGE AND REUSE EXISTING BOXES AND CONDUIT WHERE POSSIBLE. DAMAGED CONDUIT, FITTINGS BOXES, ETC. MAY NOT BE RE-USED. NEW CIRCUITING AS INDICATED ON THE DRAWINGS IS SHOWN FOR INTENT ONLY AND MAY VARY BASED ON ACTUAL FIELD CONDITIONS (NEW CIRCUITING SHALL MATCH EXISTING WHERE POSSIBLE TO UTILIZE EXISTING HOME-RUN CONDUITS, ETC.). KEEP AS-BUILT DRAWINGS CURRENT WITH ANY DEVIATION IN CIRCUITING FROM WHAT IS INDICATED WITHIN THESE PLANS.

6. THE CONTRACTOR SHALL REMOVE FROM THE JOB SITE ALL DISCARDED AND ABANDONED MATERIALS LEFT OVER FROM DEMOLITION AND INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONDUIT, FASTENERS AND BOXES. MATERIALS EMBEDDED IN GRADE AND / OR CONCRETE MAY BE ABANDONED IN PLACE. ALL ABANDONED CONDUIT SHALL BE CAPPED.

SHEET NOTES

D01 DEMOLISH EXISTING POLE LIGHT AND BASE COMPLETE. REMOVE CONDUCTORS TO NEAREST FIXTURE TO REMAIN. EXISTING POLES CIRCUITED TO ADJACENT BUILDING (SENIOR CENTER).



1 E1.01 ELECTRICAL DEMOLITION SITE PLAN

Scale: 1" = 30'-0"

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REV	DATE	DESCRIPTION

Sheet Title
DEMOLITION SITE PLAN

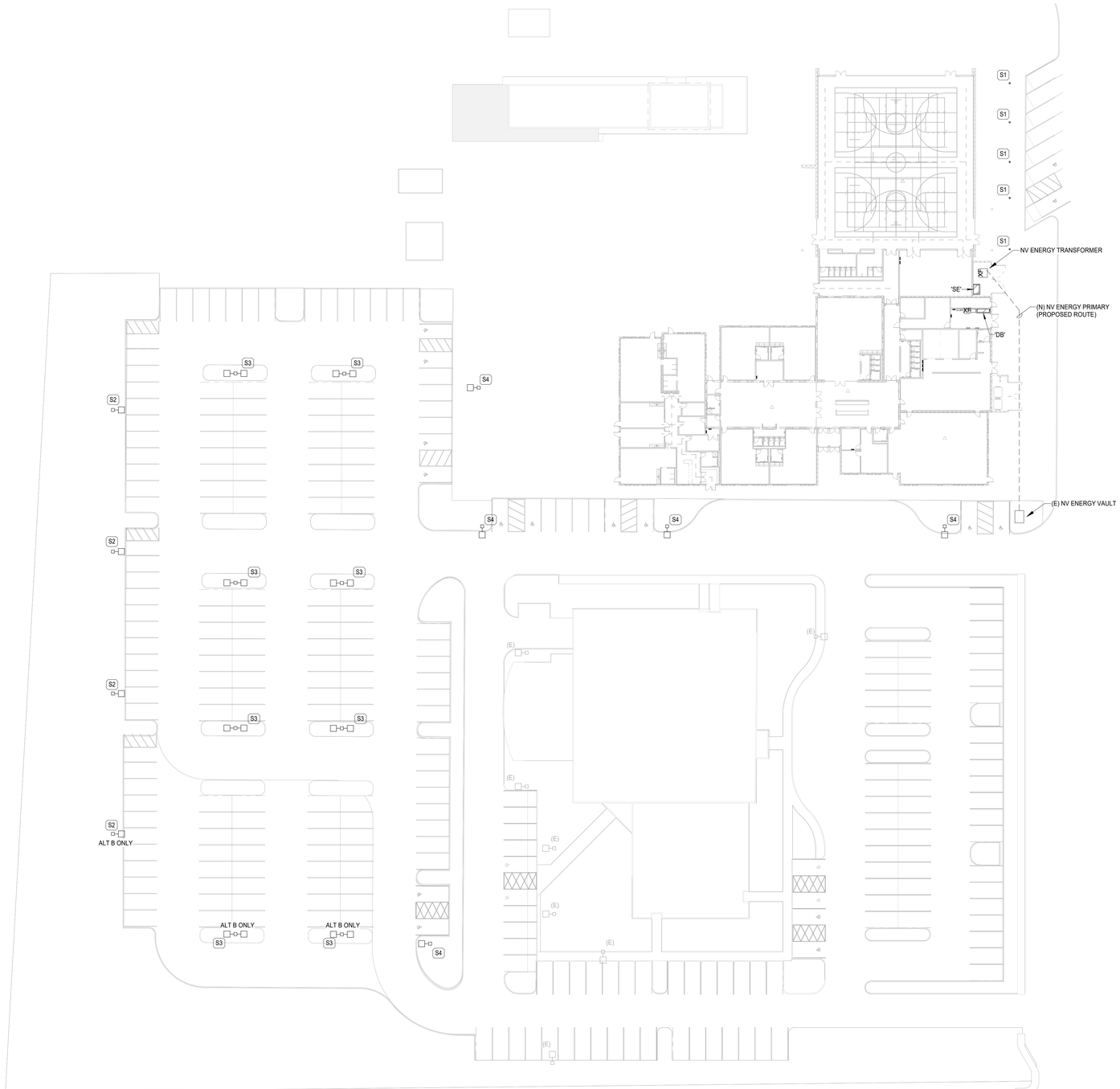
Date: JANUARY 19, 2023
Sheet No:
E1.01

GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. SEE ONELINE DIAGRAM(S) FOR CONDUIT, WIRE SIZES AND EQUIPMENT REQUIREMENTS.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPLICABLE UTILITY COMPANY'S DRAWINGS AND REPRESENTATIVES FOR DETERMINING THE EXACT RESPONSIBILITY OF EACH PARTY.
4. SEE UTILITY DRAWINGS FOR ALL UTILITY WORK WORK REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING ALL WORK REQUIRED IN BID. COORDINATE WITH EACH SITE UTILITY.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL 1-800-227-2600 FOR LOCATES PRIOR TO DIGGING. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL NON-UTILITY UNDERGROUND ITEMS.
6. THE MAXIMUM NUMBER OF CONDUIT BENDS SHOULD NOT BE GREATER THAN 270 DEGREES BETWEEN PULLING STRUCTURES. THIS INCLUDES THE AGGREGATE OF ALL HORIZONTAL AND VERTICAL CHANGES.
7. ALL CONDUIT, INNERDUCT, PULLBOXES AND VAULTS SHALL BE LABELED PER THE SPECIFICATIONS.
8. PROVIDE #10 CU CONDUCTORS IN 3/4" CONDUIT MINIMUM, UNLESS NOTED OTHERWISE, FOR ALL SITE LIGHTING AND SITE RECEPTACLE CIRCUITS.
9. ALL RECEPTACLES WITH WEATHER PROOF DESIGNATION SHALL BE PROVIDED WITH 'WHILE IN USE' COVERS.
10. ALL CONDUIT, INNERDUCT, PULLBOXES AND VAULTS SHALL BE LABELED PER THE SPECIFICATIONS.
11. EACH CONDUIT AND INNERDUCT SHALL BE PROVIDED WITH A 1250 LBS. PULL ROPE.
12. COORDINATE LOCATION OF BELOW-GRADE CONDUITS, DUCT BANKS, ETC. WITH CIVIL ENGINEER AND OTHER TRADES PRIOR TO ROUGH-IN.

SHEET NOTES

ALL WORK PART OF BASE BID UNLESS NOTED OTHERWISE



1 E1.02 ELECTRICAL SITE PLAN
Scale: 1" = 30'-0"

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Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

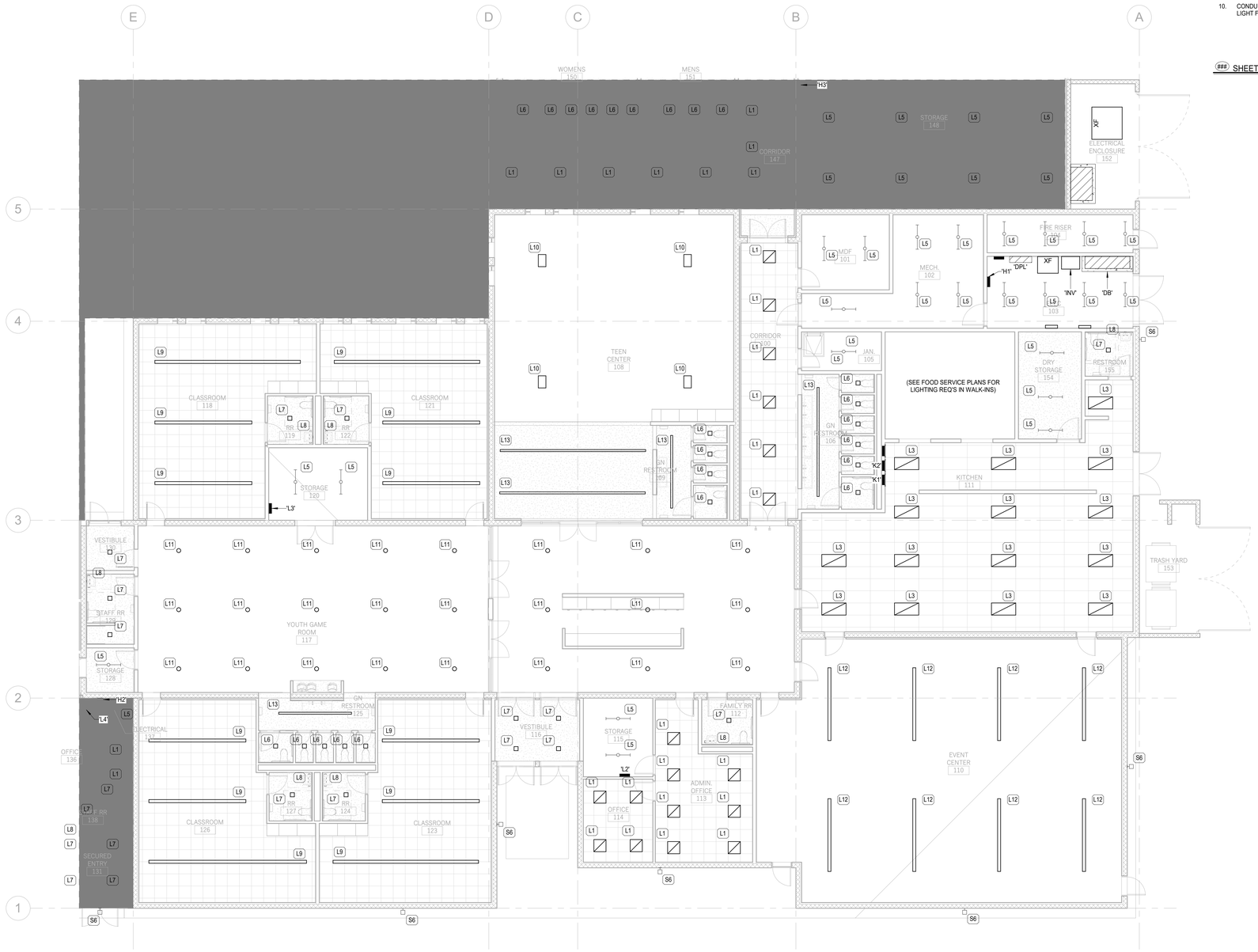
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
NEW WORK SITE PLAN

Date: JANUARY 19, 2023
Sheet No:
E1.02



1 E2.01 LIGHTING PLAN - BASE BID

Scale: 1/8" = 1'-0"

GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. LIGHTING FIXTURES DESIGNATED AS 'EMERGENCY' SHALL BE WIRED TO OPERATE WITH LOCAL SWITCHING UNDER NORMAL POWER CONDITIONS AND SHALL OPERATE VIA EMERGENCY BATTERY PACK OR INVERTER UPON LOSS OF BUILDING UTILITY POWER ONLT, UNLESS NOTED OTHERWISE.
3. EXIT SIGNS SHALL BE WIRED AHEAD OF LOCAL SWITCHING AND LIGHTING CONTROL PANEL FOR CONTINUOUS OPERATION. EXIT SIGNS SHALL BE WALL-MOUNTED ABOVE DOORS WHERE PRACTICAL. PROVIDE ADDITIONAL EXIT SIGNS AS NECESSARY FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION, PER ARCHITECT'S FINAL PATH OF EGRESS / EXITING PLAN.
4. ELECTRICAL CONDUITS SHALL BE RUN CONCEALED WHERE BUILDING CONSTRUCTION ALLOWS. ANY EXPOSED CONDUIT SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. ANY EXPOSED CONDUIT, FITTING, SUPPORTS, ETC SHALL BE PAINTED TO MATCH THE SURFACE ON WHICH THEY ARE INSTALLED.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, SECTIONS, ELEVATIONS, ETC. FOR EXACT LOCATION OF LIGHTING FIXTURES.
6. EXACT LOCATION AND MOUNTING HEIGHT OF EXTERIOR BUILDING-MOUNTED FIXTURES SHALL BE COORDINATED WITH ARCHITECT PRIOR TO ROUGH-IN.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING FINAL FIXTURE LOCATIONS, ABOVE-CEILING HOUSING CLEARANCES, ETC. WITH MECHANICAL, PLUMBING, SPRINKLER CONTRACTOR AND OTHER TRADES PRIOR TO ROUGH-IN.
8. PROVIDE MULTIPLE-GANG FACEPLATES AS NECESSARY WHERE TWO OR MORE LIGHT SWITCHES ARE INDICATED IN A COMMON LOCATION. SINGLE-GANG FACEPLATES FOR A GROUP OF LIGHT SWITCHES ARE NOT PERMITTED.
9. PROVIDE STAINLESS STEEL DEVICE PLATES IN KITCHEN AND ROUGH-SERVICE AREAS.
10. CONDUIT FOR BUILDING-MOUNTED LIGHT FIXTURES SHALL BE ROUTED THROUGH INTERIOR OF BUILDING. LIGHT FIXTURE BACKBOXES SHALL BE RECESSED.

SHEET NOTES

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Sheet Title
LIGHTING PLAN - BASE BID

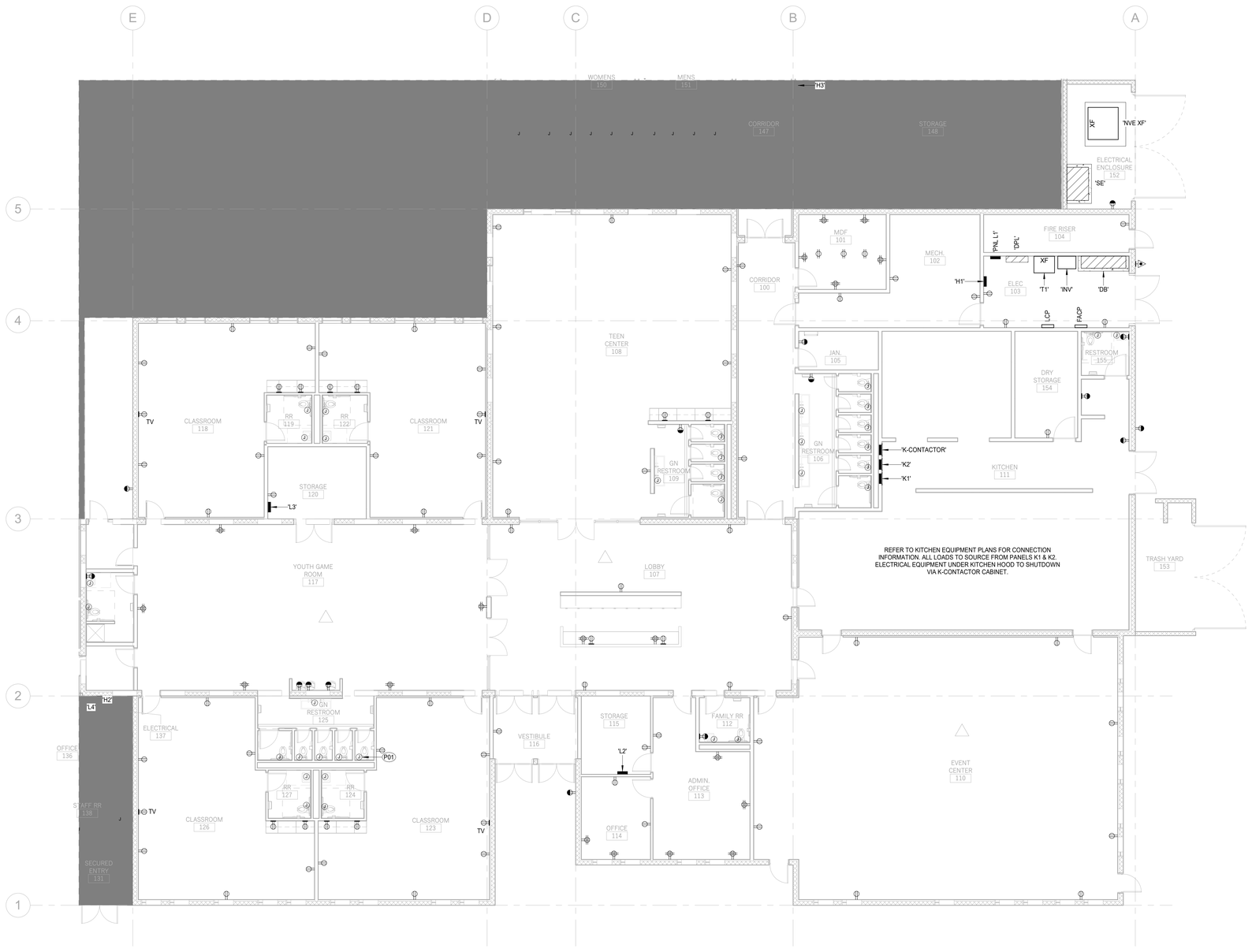
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E2.01

GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL COORDINATE FINAL RECEPTACLE LOCATIONS WITH TELECOM OUTLETS PRIOR TO ROUGH-IN. EACH TELECOM OUTLET SHALL HAVE A RECEPTACLE LOCATED WITHIN 12", MEASURED FROM CENTER OF DEVICES.
3. MODULAR FURNITURE: ELECTRICAL CONTRACTOR RESPONSIBLE FOR ON-SITE COORDINATION WITH FURNITURE SUPPLIER TO VERIFY FINAL WIRING REQUIREMENTS, CIRCUITING, J-BOX LOCATIONS, ETC. PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR TO PROVIDE ALL HARDWARE AND ACCESSORIES NECESSARY FOR A COMPLETE INSTALLATION. FURNITURE SUPPLIER TO PROVIDE POWER WHIPS. ELECTRICAL CONTRACTOR TO MAKE FINAL CONNECTIONS TO FURNITURE. DESIGN INTENT OF THESE DRAWINGS ASSUMES 3-CIRCUIT, 8-WIRE MODULAR FURNITURE SYSTEM (3H, 3N, G, DED. G). NO MORE THAN SIX (6) WORKSTATIONS PER EACH 3-CIRCUIT GROUP, UNLESS NOTED OTHERWISE.
4. COORDINATE EXACT MOUNTING HEIGHTS AND LOCATIONS OF GENERAL RECEPTACLES, SPECIAL OUTLETS AND DISCONNECT SWITCHES IN SHOP AREAS WITH OWNER AND EQUIPMENT SUPPLIERS PRIOR TO ROUGH-IN.
5. CONDUITS FOR ROOF-MOUNTED DEVICES AND EQUIPMENT SHALL BE RUN BELOW ROOF DECK/SYSTEM. ROOF MOUNTED CONDUITS WILL ONLY BE CONSIDERED AND APPROVED IN WRITING BY THE ARCHITECT/ENGINEER.
6. VERIFY EXACT ELECTRICAL REQUIREMENTS, PLUG CONFIGURATIONS, ETC., AND FINAL LOCATIONS OF OWNER-PROVIDED EQUIPMENT WITH OWNER'S REPRESENTATIVE PRIOR TO ORDERING OF MATERIALS AND ROUGH-IN.

(###) SHEET NOTES

P01 120V HARDWIRE CONNECTION TO AUTOMATIC FAUCET/VALVE. TYPICAL ALL J-BOXES AT PLUMBING FIXTURES.



1 E3.01 POWER PLAN - BASE BID
Scale: 1/8" = 1'-0"

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POWER PLAN - BASE BID

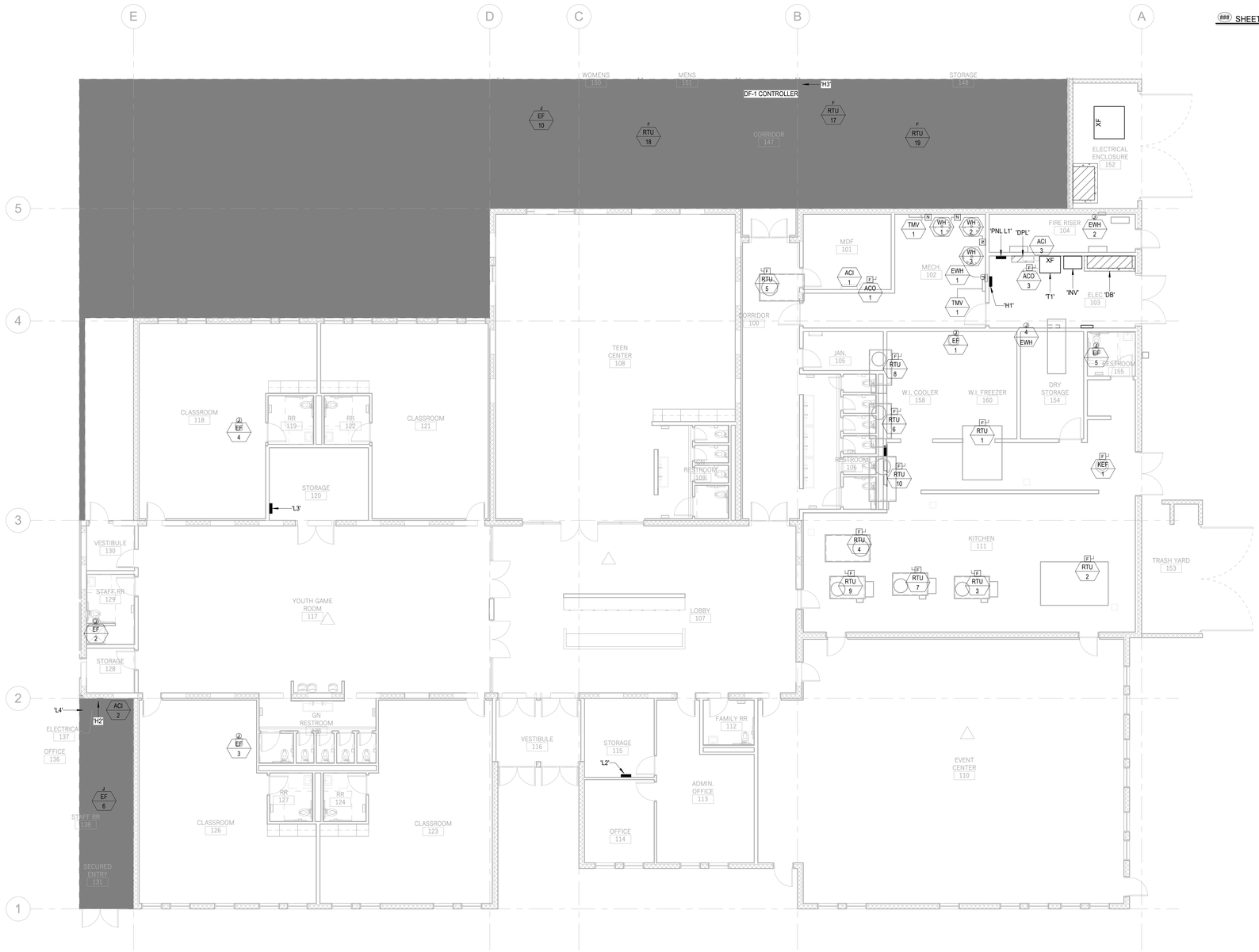
Date: JANUARY 19, 2023
Sheet No:
E3.01

Mechanical Equipment Schedule Base Bid										
EQUIPMENT ID	EQUIPMENT DESCRIPTION	VOLTAGE	POLES	WATTAGE	WIRE SIZE (#12 UNO)	DISCONNECT	NEMA RATING	FUSE SIZE	PANEL - CIRCUIT	NOTES
ACO-1	SPLIT SYSTEM	208 V	2	0 VA		30A	3R			
ACO-3	SPLIT SYSTEM	208 V	2	0 VA		30A	3R			
EF-1	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1			
EF-2	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1			
EF-3	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1		L3 - 1	
EF-4	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1		L3 - 3	
EF-5	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1			
EWH-1		120 V	1	0 VA		HARDWIRE	1			
EWH-2		120 V	1	0 VA		HARDWIRE	1			
EWH-4	WALL HEATER	120 V	1	0 VA		HARDWIRE	1			
KEF-1	KITCHEN EX. FAN	208 V	2	3800 VA		30A	3R			
RTU-1	ROOF TOP UNIT	480 V	3	34777 VA		100A	3R	50A	H1 - 1,3,5	
RTU-2	ROOF TOP UNIT	480 V	3	57200 VA		100A	3R	80A	H1 - 7,9,11	
RTU-3	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	15A		
RTU-4	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	15A		
RTU-5	ROOF TOP UNIT	480 V	3	12450 VA		30A	3R	20A		
RTU-6	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	20A		
RTU-7	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	15A	H2 - 2,4,6	
RTU-8	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	20A		
RTU-9	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	15A	H2 - 37,39,41	
RTU-10	ROOF TOP UNIT	480 V	3	12450 VA		30A	3R	20A		

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2. THE CONTRACTOR SHALL OBTAIN ALL WIRING DIAGRAMS ASSOCIATED WITH THE MECHANICAL EQUIPMENT CONTROLS FROM THE MECHANICAL/CONTROLS CONTRACTOR. CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY CONTROLS CONTRACTOR. ANY CONDUIT REQUIRED FOR CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR AND SHALL BE COMPLETED UNDER THE SUPERVISION OF THE MECHANICAL/CONTROLS CONTRACTOR.
3. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL UNIT MODEL NUMBERS AND SPECIFIC ELECTRICAL REQUIREMENTS, OPTIONS AND ACCESSORIES.
4. INFORMATION ON ARCHITECTURAL AND MECHANICAL DRAWINGS SUPERSEDE INFORMATION SHOWN ON ELECTRICAL DRAWINGS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS PRIOR TO ROUGH-IN.
5. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING ELECTRICAL REQUIREMENTS FOR FINAL MECHANICAL EQUIPMENT INSTALLED. SHOULD THERE BE ANY DISCREPANCY BETWEEN ACTUAL EQUIPMENT INSTALLED AND ELECTRICAL OR MECHANICAL DRAWINGS, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY FOR CLARIFICATION AND FURTHER DIRECTION.
6. LOCATE ALL DISCONNECTS, STARTERS AND DRIVES WHERE ACCESSIBLE. PROVIDE ACCESS AND CLEARANCE AS REQUIRED PER NEC. PROVIDE ACCESS HATCH IF LOCATED ABOVE HARD LID CEILING.
7. DISCONNECT SWITCHES, STARTERS OR DRIVES PROVIDED BY MECHANICAL AND SHIPPED LOOSE ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO INSTALL.
8. PIPING AND / OR DUCTWORK SHALL NOT BE ROUTED IN THE DEDICATED ELECTRICAL EQUIPMENT SPACE AT OR ABOVE ELECTRICAL SWITCHBOARDS, DISTRIBUTION BOARDS, PANELBOARDS, ETC. (PER 2011 NEC 110.26E). PROVIDE DEPTH AND WIDTH OF WORKING SPACE FOR ELECTRICAL EQUIPMENT AS REQUIRED PER 2011 NEC 110.26.

(###) SHEET NOTES



1 E4.01 MECHANICAL POWER PLAN - BASE BID

Scale: 1/8" = 1'-0"

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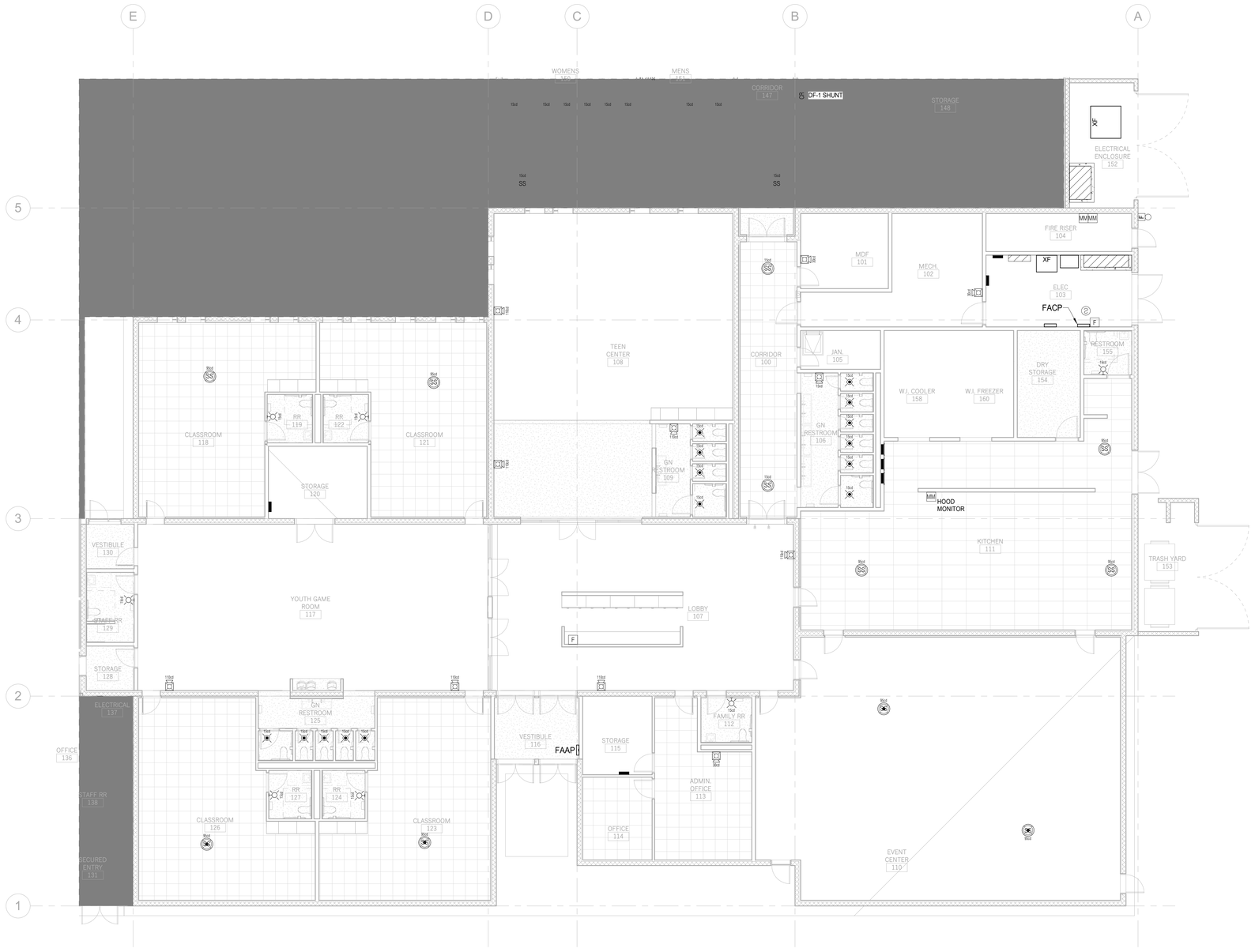
Sheet Title
MECHANICAL POWER PLAN - BASE BID

Date: JANUARY 19, 2023
Sheet No:
E4.01

GENERAL NOTES

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2. COORDINATE DEVICE PLACEMENT IN CEILING WITH OTHER TRADES, SUCH AS LIGHTING, TELECOM, MECHANICAL, ETC. ALL FIRE ALARM DEVICES LOCATED IN CEILING TILES SHALL BE LOCATED IN THE CENTER OF THE CEILING TILE UNLESS SPECIFICALLY NOTED OR APPROVED TO DO OTHERWISE.
3. INFORMATION ON ARCHITECTURAL AND MECHANICAL DRAWINGS SUPERSEDE INFORMATION SHOWN ON ELECTRICAL DRAWINGS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS PRIOR TO ROUGH-IN.

SHEET NOTES



1 E5.01 FIRE ALARM PLAN - BASE BID
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Sheet Title
FIRE ALARM PLAN - BASE BID

Date: JANUARY 19, 2023
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E5.01

DRAWING SCHEDULE

SHEET	DESCRIPTION	
T0.01	TELECOM GENERAL NOTES, LEGEND, AND DRAWING SCHEDULE	●
T0.02	TELECOM DETAILS	●
T0.03	TELECOM ONELINE DIAGRAMS	●
T0.04	ENLARGED TELECOM ROOM PLANS	●
T0.05	SECURITY INTRUSION DETECTION SYSTEM DETAILS	●
T0.06	SECURITY VIDEO SURVEILLANCE CAMERA DETAILS	●
T1.01	TELECOM SITE PLAN	●
T2.01	TELECOM PLAN - BASE BID	●
T2.01A	TELECOM PLAN - EARLY LEARNING	●
T2.01B	TELECOM PLAN - GYMNASIUM	●
	TOTAL SHEETS IN ISSUE:	10

TELECOM GENERAL NOTES

ITEM	DESCRIPTION
27.1	STANDARDS AND CODES: ALL TELECOMMUNICATIONS (TELECOM), AUDIO-VISUAL (AV) AND ELECTRONIC SAFETY AND SECURITY (ESS) WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC), ANSI/TIA STANDARDS AND ANSI/INFOCOMM STANDARDS REFERENCED IN THE DIVISION 27 AND DIVISION 28 SPECIFICATIONS.
27.2	GENERAL REQUIREMENTS: INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, STORAGE COSTS, EXCAVATION, TRAINING, INSURANCE, TEMPORARY PROTECTION, PERMITS, INSPECTIONS, TAXES AND ALL NECESSARY AND RELATED ITEMS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL TELECOM SYSTEM, AUDIO/VISUAL SYSTEM AND SECURITY SYSTEM AS SHOWN ON THE CONTRACT DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS. THE DIVISION 26 ELECTRICAL CONTRACTOR, DIVISION 27 TELECOM CONTRACTOR AND DIVISION 28 SECURITY CONTRACTOR ARE RESPONSIBLE FOR THE WORK SHOWN ON THE TELECOM DRAWINGS AND DESCRIBED IN THE DIVISION 27 & 28 SPECIFICATIONS. INFORMATION SHOWN ON THE TELECOM DRAWINGS IS DIAGRAMMATIC. FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND LAYOUT. REVIEW ALL ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL AND SPECIALTY SYSTEMS DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS OR CONDITIONS SHOWN THEREON. DO NOT SCALE THE TELECOM PLANS FOR RACEWAY, OUTLET, RACK OR EQUIPMENT LOCATIONS.
27.3	RACEWAY: THE DIVISION 26 ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION, SUPPORT AND SEISMIC BRACING OF ALL RACEWAY SHOWN ON THE TELECOM DRAWINGS AND DESCRIBED IN THE DIVISION 27 & 28 SPECIFICATIONS. THIS INCLUDES BUT IS NOT LIMITED TO ALL WIRE BASKET TRAY, CONDUIT, OUTLET BOXES, PULL BOXES, PULL STRING, SLEEVES. WHERE RACEWAY IS SHOWN ON THE TELECOM DRAWINGS BUT NOT SPECIFIED IN THE DIVISION 27 AND 28 SPECIFICATIONS, THE RACEWAY WILL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE DIVISION 26 SPECIFICATIONS. THE DIVISION 26 ELECTRICAL CONTRACTOR SHALL INSTALL WALL OR CEILING MOUNTED OUTLET BOXES AT ALL TELECOM OUTLETS AND WILL INSTALL AN 1" EMT CONDUIT (UON) FROM THE OUTLET BOX TO AN ACCESSIBLE CEILING SPACE. THE DIVISION 27 CONTRACTOR SHALL INSTALL J-HOOKS FROM THIS POINT TO THE TELECOM ROOM. WHERE NO ACCESSIBLE CEILING SPACE EXISTS OR IN AREAS WITHOUT CEILINGS, THE ELECTRICAL CONTRACTOR SHALL INSTALL CONDUIT FROM THE OUTLET BOX TO THE TELECOM ROOM NO EXPOSED TELECOM OR A/V CABLING IS PERMITTED WITH THE EXCEPTION OF CABLING ROUTED WITHIN THE TELECOM ROOM. ALL CABLING MUST BE CONCEALED ABOVE ACCESSIBLE CEILINGS OR ROUTED IN CONDUIT. THE DIVISION 26 ELECTRICAL CONTRACTOR SHALL INSTALL CONDUIT FOR ROUTING OF HORIZONTAL TELECOM CABLING ROUTED IN INACCESSIBLE CEILING OR WALL SPACES. CONDUIT SHALL BE SIZED SO AS NOT TO EXCEED 40% FILL RATE. ALL RACEWAY SHALL BE RUN PERPENDICULAR TO BUILDING GRID LINES. TELECOM RACEWAY SHALL BE INSTALLED SO THAT THE FOLLOWING MINIMUM CLEAR DISTANCES ARE MAINTAINED FROM SOURCES OF ELECTRO-MAGNETIC INTERFERENCE (EMI). 6" CLEAR FROM POWER CABLES, 12" CLEAR FROM FLUORESCENT LIGHTING AND 36" CLEAR FROM TRANSFORMERS AND MOTORS. THE DIVISION 26 ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL ACCESS DOORS REQUIRED TO PROVIDE REASONABLE ACCESS FOR THE INSTALLATION OF TELECOM CABLING.
27.4	FIRESTOPPING: ALL PENETRATIONS THROUGH FIRE RATED OR ACOUSTICAL WALLS MUST BE FIRE STOPPED WITH A UL LISTED FIRE STOP ASSEMBLY. ALL FIRE STOPPING ASSEMBLIES SHALL SHALL MEET OR EXCEED THE RATING OF THE WALL OR FLOOR BEING PENETRATED. THE DIVISION 26 ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF FIRESTOPPING BETWEEN ALL TELECOM RACEWAYS AND THE BUILDING STRUCTURE. THE DIVISION 27 TELECOM CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF FIRESTOPPING BETWEEN THE TELECOM CABLING AND THE TELECOM RACEWAY.
27.5	STRUCTURED CABLING: THE DIVISION 27 TELECOM CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL REMAINING WORK SHOWN ON THE TELECOM DRAWINGS OR DESCRIBED IN THE DIVISION 27 SPECIFICATIONS. THIS INCLUDES BUT IS NOT LIMITED TO HORIZONTAL VOICE & DATA CABLING, TELECOM OUTLET FACEPLATES, TELECOM OUTLET JACKS, DATA PATCH PANELS, VOICE TERMINATION BLOCKS, RACKS, RACK MOUNTED CABLE MANAGEMENT DEVICES, VELCRO CABLE TIES, D-RINGS, PATCH CORDS, STATION CORDS, CROSS CONNECT WIRE, LABELING, CABLE TESTING AND CERTIFICATION, ETC.
27.6	CABLING AND TERMINATIONS: ALL PREMISE HORIZONTAL DATA AND VOICE CABLING, PATCH CORDS AND WORKSTATION CORDS SHALL BE CATEGORY 6 UNSHIELDED TWISTED PAIR. ALL PATCH PANELS AND OUTLET JACKS SHALL BE CATEGORY 6. HORIZONTAL CAT 6 DATA AND VOICE CABLING SHALL HAVE A PLENUM RATED (CMP) JACKET (JACKET COLOR BLUE). NO SPLICES WILL BE PERMITTED IN ANY TELECOM CABLING UNLESS EXPLICITLY SHOWN ON THE DRAWINGS. THE MAXIMUM CABLE LENGTH BETWEEN THE WORK AREA OUTLET AND THE TERMINATION IN THE TELECOM ROOM SHALL BE 295 FEET. NOTIFY THE ENGINEER OF HORIZONTAL CABLES LONGER THAN 295 FEET PRIOR TO INSTALLATION. PROVIDE SLACK IN CABLES AT ENTRANCES AND EXITS OF CONDUIT SLEEVES AND AT TRANSITIONS FROM HORIZONTAL TO VERTICAL CABLE LADDERS AND CABLE TRAYS. PROVIDE A MINIMUM 10'-0" MAINTENANCE LOOP IN THE TELECOM ROOMS FOR ALL HORIZONTAL CABLING TO ALLOW MINOR RELOCATION OF THE TELECOM RACKS. TELECOM CABLING SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. ALL CABLES SHALL BE NEATLY BUNDLED AND DRESSED IN THE TELECOM ROOMS. LOOSELY BUNDLE HORIZONTAL CABLE WITH VELCRO TIE WRAPS AT 1'-0" CENTERS INSIDE THE TELECOM ROOMS AND AT 2'-0" CENTERS OUTSIDE THE TELECOM ROOM. DO NOT EXCEED QTY (24) CABLES PER BUNDLE.
27.7	TESTING AND CERTIFICATION: ALL DATA, VOICE AND A/V CABLING SHALL BE TESTED AND CERTIFIED IN ACCORDANCE WITH THE DIVISION 27 SPECIFICATIONS. CERTIFIED TEST REPORTS SHALL BE SUBMITTED FOR APPROVAL AT THE COMPLETION OF THE PROJECT.
27.8	SUPERVISION: ALL WORK SHALL BE SUPERVISED ON A DAILY BASIS BY A BICSI CERTIFIED SUPERVISOR HAVING A MINIMUM OF THREE (3) YEARS EXPERIENCE IN THE INSTALLATION OF STRUCTURED CABLING AND TELECOMMUNICATION SYSTEMS.
27.9	AS-BUILT DRAWINGS: PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL PROVIDE ONE SET OF AS-BUILT TELECOM DRAWINGS IN PDF FORMAT INDICATING THE FOLLOWING ADDITIONAL INFORMATION: EXACT ROUTING OF J-HOOKS AND ALL RACEWAY LARGER THAN 2". QTY AND LAYOUT OF ALL TELECOM OUTLETS. QUANTITY OF TELECOM DROPS AT EACH OUTLET. CONTRACTORS NAME. ADDRESS AND TELEPHONE PHONE NUMBER. RECORD NOTATIONS SHALL BE CLEARLY DRAWN WITH A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS.
27.10	EXAMINATION OF SITE: BEFORE SUBMITTING A PROPOSAL, THE CONTRACTOR SHALL EXAMINE THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT THE WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.
27.11	GUARANTEE: THE CATEGORY 6 STRUCTURED CABLING SYSTEM INCLUDING HORIZONTAL CABLING, PATCH PANELS, PATCH CORDS AND TELECOM OUTLET JACKS SHALL CARRY A MINIMUM TWENTY (20) YEAR MANUFACTURER WARRANTY FROM BELDEN/CDT. THE COMPLETE TELECOM SYSTEM AND ALL PORTIONS THEREOF, SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A MINIMUM PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. PROMPTLY REMEDY SUCH DEFECTS AND ANY SUBSEQUENT DAMAGE CAUSED BY THE DEFECTS OR REPAIR THEREOF AT NO EXPENSE TO THE OWNER. SEE THE DIVISION 27 SPECS FOR ADDITIONAL WARRANTY AND/OR EXTENDED WARRANTY REQUIREMENTS.
27.12	SUBSTANTIAL COMPLETION: THE FOLLOWING ARE PREREQUISITES FOR SUBSTANTIAL COMPLETION OF THE TELECOM SYSTEM: ALL WORK COMPLETED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, PUNCH LIST ITEMS COMPLETED AND SIGNED OFF. CERTIFIED CABLE TEST REPORTS SUBMITTED AND APPROVED, AS-BUILT DRWGS AND TERMINATION SCHEDULES SUBMITTED AND APPROVED, MFG'S WARRANTY AND CONTRACTOR'S GUARANTEE SUBMITTED, EXTRA STOCK ITEMS TURNED OVER TO THE OWNER.

RACEWAY LEGEND

SYMBOL	DESCRIPTION
	CONDUIT. SIZE AS INDICATED ON DRAWINGS
	CONDUIT UNDERGROUND OR IN SLAB
	CONDUIT STUB OUT WITH BUSHING.
	HORIZONTAL OR VERTICAL SLEEVE WITH BUSHINGS.
	CONDUIT UP OR DOWN.
J J	J-HOOKS (WHERE SPECIFIC ROUTING REQUIRED)
	CABLE TRAY OR LADDER RACK. SIZE INDICATED ON DWGS
	WIRE BASKET TRAY. SIZE INDICATED ON DRWGS. SEE 5/T0.2.
	VERTICAL LADDER RACK.
	CONDUIT OR SLEEVE STUB UP.

EQUIPMENT & CABLING LEGEND

SYMBOL	DESCRIPTION
	TELECOM 4-POST EQUIP RACK W/ VERTICAL CABLE MANAGERS.
	RACK, WIRING BLOCK OR EQUIPMENT GROUND.
PBB	2" X 12" X 1/4" TELECOM PRIMARY BONDING BUSBAR (SEE 4/T0.2).
RING	24" DIAMETER STEEL WALL MOUNTED CABLE SLACK STORAGE RING WITH RECLOSEABLE VELCRO FASTENERS.

TELECOM LEGEND

SYMBOL	DESCRIPTION
2D	DATA OUTLET: 4 11/16" X 4 11/16" X 2 1/8" DEEP BOX +18" AFF (UON) WITH SINGLE GANG RING AND 1" CONDUIT TO TELECOM CABINET. PROVIDE 4-PORT FACEPLATE WITH QTY (2) PLENUM RATED CAT 6 DATA DROP (JACKET COLOR WHITE) TERMINATED ON CAT 6 JACKS (JACK COLOR WHITE). SEE PLANS FOR QUANTITY OF DATA DROPS AT EACH OUTLET. SEE 1,2/T0.02 FOR ADDITIONAL REQUIREMENTS.
1D WAP	WALL MOUNTED DATA OUTLET FOR WIRELESS ACCESS POINT: 4 11/16" X 4 11/16" X 2 1/8" DEEP BOX WITH SINGLE GANG RING AND 1" CONDUIT TO TELECOM CABINET (SEE PLANS FOR MOUNTING HEIGHT). PROVIDE 1-PORT FACEPLATE WITH QTY (1) PLENUM RATED CAT 6 DATA DROP (JACKET COLOR WHITE) TERMINATED ON CAT 6 JACK (JACK COLOR WHITE).
1D WAP	CEILING MOUNTED DATA OUTLET FOR WIRELESS ACCESS POINT: 4 11/16" X 4 11/16" X 2 1/8" DEEP BOX SECURED TO CEILING WITH SINGLE GANG RING AND 1" CONDUIT TO TELECOM CABINET. PROVIDE 1-PORT FACEPLATE WITH QTY (1) PLENUM RATED CAT 6 DATA DROP (JACKET COLOR WHITE) TERMINATED ON CAT 6 JACK (JACK COLOR WHITE).

ACCESS CONTROL SYSTEM LEGEND

SYMBOL	DESCRIPTION
ACP	ACCESS CONTROL PANEL AND POWER SUPPLY CABINET WALL MOUNTED IN MDF ROOM (SEE T0.05).
CR	CONTACTLESS SMART CARD READER.
ES	ELECTRIC STRIKE (SEE ARCHITECTURAL DOOR HARDWARE SCHED).
RX	REQUEST TO EXIT MOTION DETECTOR.
C	MAGNETIC DOOR POSITION CONTACTS.
PS	120VAC TO 24VDC POWER SUPPLY (SEE ARCHITECTURAL DOOR HARDWARE SCHED).
PT	POWER TRANSFER HINGE (SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE).
LA	PANIC BAR WITH LOCAL ALARM.
ML	MAGNETIC LOCK.
PB	PUSH BUTTON DOOR RELEASE.
DS	VIDEO INTERCOM DOOR STATION.
VI	VIDEO INTERCOM MASTER STATION.

INTRUSION DETECTION LEGEND

SYMBOL	DESCRIPTION
IDCP	INTRUSION DETECTION CONTROL PANEL WITH ADDRESSABLE EXPANSION MODULE. RELAY OUTPUT MODULE. LOCKABLE ENCLOSURE, DIALER, POWER SUPPLIES, BATTERIES AND BATTERY CHARGERS TO ACCOMMODATE ALL DEVICES AND ZONES SHOWN ON THE DRAWINGS (SEE 1/T-0.7). PROVIDE QTY (2) CAT 6 DROPS TO PANEL.
KP	ALPHA KEYPAD / ANNUNCIATOR.
C	MAGNETIC DOOR POSITION CONTACT WITH ADDRESSABLE MODULE. NOTE - CONTACTS ON DOORS WITH ACCESS CONTROL PROVIDED AND INSTALLED BY ACCESS CONTROL CONTRACTOR AND CONNECTED TO INTRUSION SYSTEM BY INTRUSION DETECTION SYSTEM CONTRACTOR VIA ADDRESSABLE MODULE.
MD	PIR MOTION DETECTION SENSOR WITH ADDRESSABLE MODULE.

GYM SOUND SYSTEM LEGEND

SYMBOL	DESCRIPTION
S_6	2-WAY 10-INCH 200 WATT 70V LOUDSPEAKER.
M	WALL MOUNTED DUAL XLR MICROPHONE INPUT PLATE. PROVIDE SINGLE GANG STAINLESS STEEL DECORA COVER PLATE.
AV	35RU WALL MOUNTED LOCKABLE SOUND SYSTEM EQUIPMENT CABINET WITH PERFORATED FRONT DOOR. SEE AV0.2 FOR RACK MOUNTED EQUIPMENT REQUIREMENTS.
TP	7" DIAGONAL WIRELESS TOUCH SCREEN CONTROLLER.
DSP	8-INPUT X 8-OUTPUT X 8-FLEX I/O DIGITAL SIGNAL PROCESSOR.
AMP	4-CHANNEL 4 x 400 WATT AMPLIFIER.
WR	2-CHANNEL UHF WIRELESS RECEIVER.
MP	MEDIA PLAYER.
ALS	ASSISTED LISTENING SYSTEM.

ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
AV	AUDIO / VISUAL
AWG	AMERICAN WIRE GAUGE
CATV	CABLE TV
COAX	COAXIAL CABLE
DEMARC	DEMARCATION POINT
DIA	DIAMETER
FBO	FURNISHED BY OTHERS
(E)	EXISTING
EA	EACH
EMT	ELECTRICAL METALLIC TUBING
EQ	EQUAL
FBO	FURNISHED BY OTHERS
FPD	FLAT PANEL DISPLAY
GND	GROUND
HC	HORIZONTAL CROSS-CONNECT
IC	INTERMEDIATE CROSS-CONNECT
ID	INSIDE DIAMETER
IDC	INSULATION DISPLACEMENT CONNECTOR
IDF	INTERMEDIATE DISTRIBUTION FRAME
LAN	LOCAL AREA NETWORK
MC	MAIN CROSS-CONNECT
MDF	MAIN DISTRIBUTION FRAME
MM	MULTIMODE FIBER OPTIC CABLE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFE	OWNER FURNISHED EQUIPMENT
OSP	OUTSIDE PLANT
PVC	POLYVINYLCHLORIDE
SM	SINGLEMODE FIBER OPTIC CABLE
TBB	TELCOMMUNICATIONS BONDING BACKBONE
TR	TELECOMMUNICATIONS ROOM
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
WAP	WIRELESS ACCESS POINT
WG	WIRE GUARD
WP	WALL PHONE

VIDEO SURVEILLANCE LEGEND

SYMBOL	DESCRIPTION
#	FIXED CCTV CAMERA: INSTALL QTY (1) PLENUM CAT 6 DROP TERMINATED ON "REVCONNECT" FIELD MOUNT PLUG (SEE T0.06 FOR CAMERA AND CABLING REQUIREMENTS).
#	MULTI-SENSOR CCTV CAMERA: INSTALL QTY (1) PLENUM CAT 6 DROP TERMINATED ON "REVCONNECT" FIELD MOUNT PLUG (SEE T0.06 FOR CAMERA AND CABLING REQUIREMENTS).
NVR	NETWORK VIDEO RECORDER RACK MOUNTED IN TELECOM ROOM.

PUBLIC ADDRESS SYSTEM LEGEND

SYMBOL	DESCRIPTION
S_1	FLUSH CEILING MOUNTED 2-WAY 30 WATT 70V PA SPEAKER. PROVIDE 16/2 SPEAKER CABLE ROUTED IN CONDUIT BETWEEN SPEAKERS AND HOMERUN TO AMPLIFIER.
S_2	FLUSH CEILING MOUNTED 2-WAY 60 WATT 70V PA SPEAKER. PROVIDE 16/2 SPEAKER CABLE ROUTED IN CONDUIT BETWEEN SPEAKERS AND HOMERUN TO AMPLIFIER.
S_3	FLUSH GYPBOARD CEILING MOUNTED 5 WATT 70V PA SPEAKER WITH WHITE GRILLE AND VOLUME CONTROL. PROVIDE 16/2 SPEAKER CABLE ROUTED IN CONDUIT BETWEEN SPEAKERS AND HOMERUN TO AMPLIFIER.
AMP	4-CHANNEL 100 WATT PER CHANNEL 70V PUBLIC ADDRESS AMPLIFIER. INTERFACE AMPLIFIER WITH FIRE ALARM SYSTEM TO MUTE SPEAKERS WHEN FIRE ALARM ACTIVATED.

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Job No: 21-058.00

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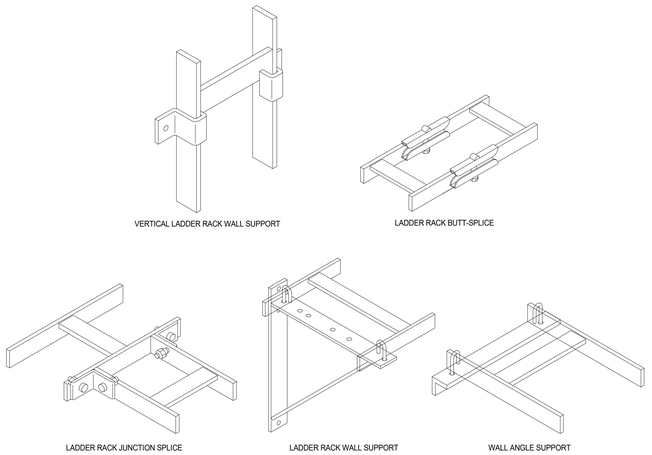
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TELECOM GENERAL NOTES, LEGEND, AND DRAWING SCHEDULE

Date: JANUARY 19, 2023

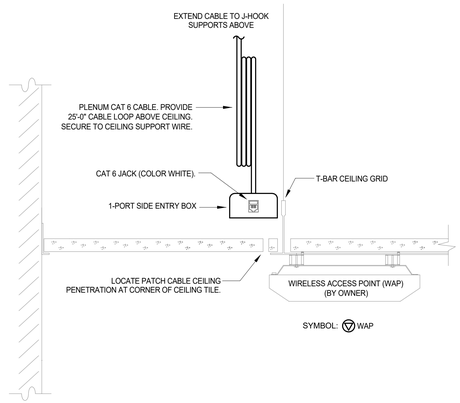
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T0.01



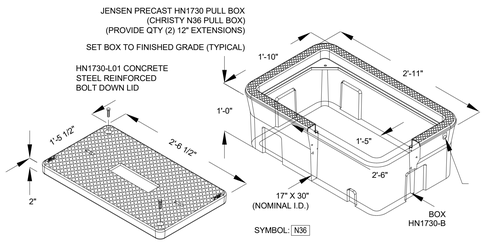
8 T0.02 TELECOM ROOM LADDER RACK DETAILS

SCALE: NONE



7 T0.02 CEILING MOUNTED WIRELESS ACCESS POINT (WAP)

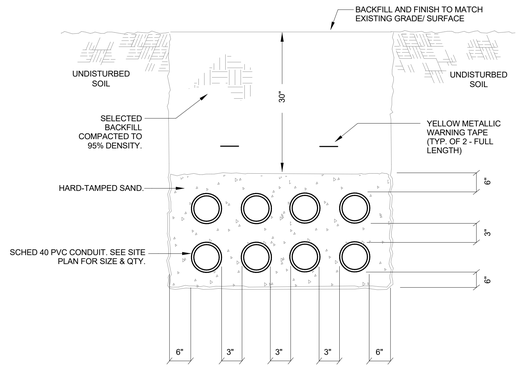
SCALE: NONE



PART NO.	PRODUCT	DESCRIPTION	QTY	WEIGHT
HN1730-B	BOX	17"x30"x12" Reinforced Concrete Non-Traffic Box	1	175
HN1730-E	EXTENSION	17"x30"x12" Reinforced Concrete Extension	2	180
HN1730-L01	LID	Concrete Steel Reinforced Bolt Down Lid	1	86

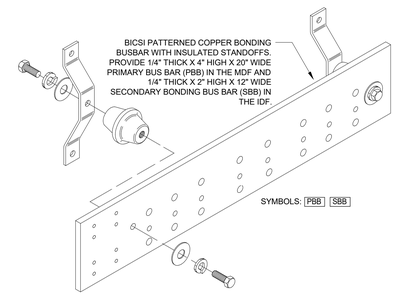
6 T0.02 (17" W X 30" L) TELECOM PULLBOX

SCALE: NONE



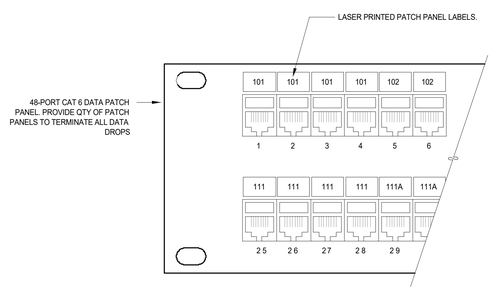
5 T0.02 TELECOM DUCT BANK DETAILS

SCALE: NONE



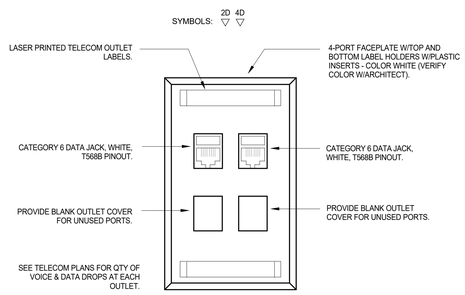
4 T0.02 TELECOM ROOM GROUNDING BAR

SCALE: NONE



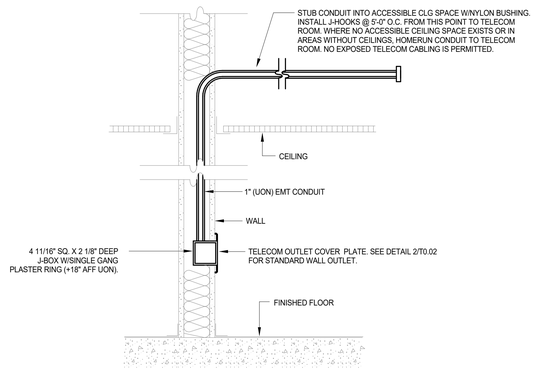
3 T0.02 48 PORT CAT 6 PATCH PANEL

SCALE: NONE



2 T0.02 TELECOM OUTLET

SCALE: NONE



1 T0.02 TELECOM OUTLET BOX ROUGHIN

SCALE: NONE

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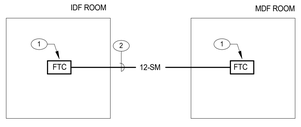
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TELECOM DETAILS

Date: JANUARY 19, 2023

Sheet No:
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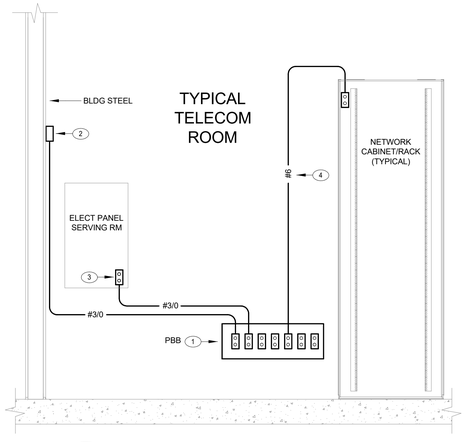
FIBER ONELINE SHEET NOTES

1. 1RU FIBER TERMINATION CABINET WITH 12-FIBER FUSION SPLICE CASSETTE WITH DUPLEX LC CONNECTORS.
2. 12-STRAND SINGLEMODE FIBER ROUTED IN 2" CONDUIT FROM MDF ROOM TO IDF ROOM.



2 T0.03 FIBER ONELINE DIAGRAM

SCALE: NONE



1 T0.03 TELECOM ROOM GROUNDING DIAGRAM

SCALE: NONE

TELECOM GROUNDING GENERAL NOTES

1. ALL BONDING AND GROUNDING WORK TO COMPLY WITH THE REQUIREMENTS OF ANSI/TIA-607-D (COMMERCIAL BUILDING GROUNDING (EARTHING) AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS).
2. ATTACH GROUNDING CONDUCTORS TO TELECOM BUS BARS WITH 2 HOLE LONG BARREL COMPRESSION LUGS.

TELECOM GROUNDING SHEET NOTES

1. UL LISTED BICSI PATTERNED COPPER TELECOM ROOM GROUND BAR W/INSULATED STAND OFFS (SEE 4/T0.2).
2. #3/0 AWG GREEN INSULATED GROUND CONDUCTOR IN 3/4" CONDUIT. CAD WELD TO STRUCT STEEL.
3. #3/0 AWG IN 3/4" CONDUIT TO BLDG GROUND IN ELECTRICAL PANEL SERVING TELECOM ROOM. BOND CONDUIT TO GROUND AT BOTH ENDS.
4. #6 GREEN INSULATED GROUND CONDUCTOR TO NETWORK EQUIPMENT RACK. INSTALL SEPARATE GROUND CONDUCTORS FOR EACH RACK (DO NOT DAISY CHAIN GROUND CONDUCTORS).

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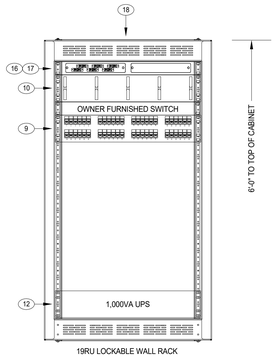
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TELECOM ONELINE DIAGRAMS

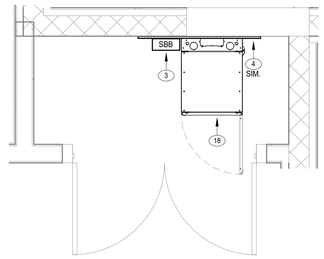
Date: JANUARY 19, 2023

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4 T0.04 IDF ROOM WALL MOUNTED TELECOM CABINET

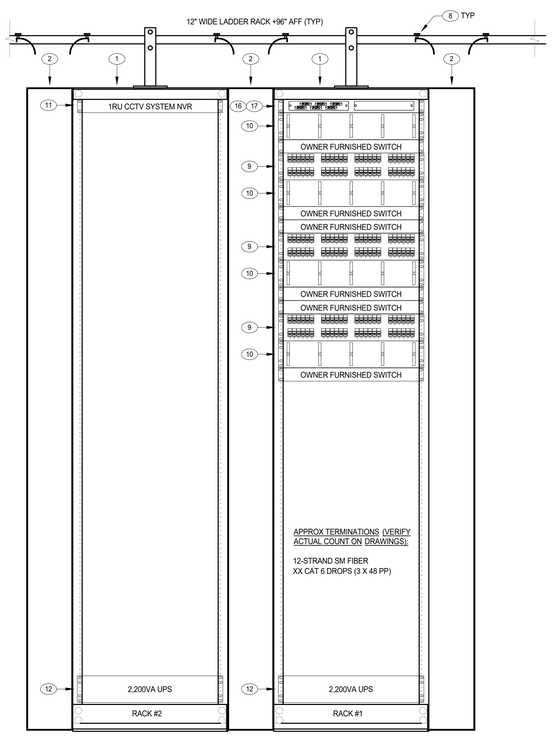


3 T0.04 ENLARGED IDF ROOM PLAN

SCALE: 1/2" = 1'-0"

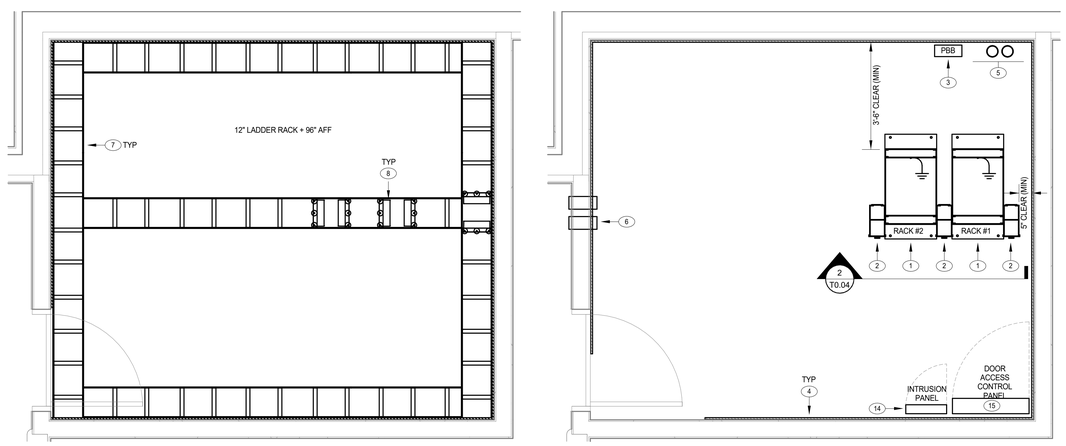
TELECOM ROOM AND RACK SHEET NOTES

1. UL LISTED 4-POST RACK WITH SQUARE PUNCHED EQUIPMENT MOUNTING ANGLES. BOLT RACKS TO CONCRETE WITH (4) 1/2" DIAMETER CONCRETE EXPANSION ANCHORS WITH MINIMUM 3" EMBEDMENT DEPTH. SECURE TOP OF RACKS TO OVERHEAD LADDER RACK WITH 12" HIGH CABLE RUNWAY ELEVATION KIT. INSTALL #6 GROUND WIRE FROM RACK TO GROUND BAR (PROVIDE A SEPARATE DEDICATED GROUND CONDUCTOR FOR EACH RACK - DO NO DAISY CHAIN GROUND CONDUCTORS). PROVIDE MANUFACTURER RACK GROUNDING KIT TO ENABLE GROUND LUG ATTACHMENT TO RACK. PROVIDE BASE DUST COVER WITH EACH RACK. PROVIDE QTY (50) CAGE NUTS WITH EACH RACK TO ALLOW DEVICES WITH STANDARD MOUNTING HOLES TO MOUNT IN SQUARE PUNCHED RAILS.
2. 7'-0" HIGH X 6" WIDE VERTICAL CABLE MANAGER WITH HINGED COVERS.
3. BICSI PATTERNED COPPER BONDING BUSBAR WITH INSULATED STANDOFFS. PROVIDE 1/4" THICK X 4" HIGH X 20" WIDE PRIMARY BUS BAR (PBB) IN THE MDF AND 1/4" THICK X 2" HIGH X 12" WIDE SECONDARY BONDING BUS BAR (SBB) IN THE IDF.
4. 3/4" FIRE TREATED AC PLYWOOD (TYPICAL ALL 4 WALLS). RUN PLYWOOD SHEETS VERTICALLY FROM 6" AFF TO 8'-6". PAINT PLYWOOD WITH 2 COATS OF WHITE PAINT. MASK FIRE TREATMENT LABELS ON PLYWOOD PRIOR TO PAINTING.
5. 4" CONDUITS FOR AT&T AND CHARTER. INSTALL CONDUITS FROM MDF ROOM TO POINT OF CONNECTION ON SITE PLAN. FIELD VERIFY EXACT POINT OF CONNECTION. CONDUIT STUB UPS IN THE BUILDING SHALL BE VINYL COATED RIGID STEEL.
6. 4" SLEEVES THROUGH WALL FOR ROUTING OF HORIZONTAL CAT 6 CABLING. INSTALL QTY OF SLEEVES TO ACCOMMODATE ALL CABLING. DO NOT EXCEED 40% FILL.
7. 12" WIDE HORIZONTAL LADDER RACK AT 96" AFF. SECURE LADDER RACK TO WALL WITH MFG'S TRIANGULAR SUPPORT BRACKETS AT 4'-0" O.C. WHERE PLYWOOD DOES NOT EXIST, INSTALL SUPPORT BRACKET FASTENERS INTO METAL STUD FRAMING. SUPPORT LADDER RACK WITH THREADED ROD WHERE SPANS EXCEED 4'-0". BOND ALL SECTIONS OF LADDER RACK TOGETHER WITH BONDING JUMPERS AND BOND TO GROUND BAR W/#6 CONDUCTOR. INSTALL BUTT SPLICES BETWEEN ENDS OF HORIZONTAL LADDER RACK. USE MFG'S CORNER CLAMPS AT PERPENDICULAR INTERSECTION OF LADDER RACK. SEE B/T002 FOR ADDITIONAL DETAILS.
8. PROVIDE QTY (2) CABLE RUNWAY RADIUS DROPS ABOVE EACH VERTICAL CABLE MANAGER TO MAINTAIN CABLE BEND RADIUS. COORDINATE LAYOUT OF OVERHEAD LADDER RACK CROSS MEMBERS SO THAT RADIUS DROPS ARE LOCATED DIRECTLY ABOVE VERTICAL CABLE MANAGERS. WHERE CROSS MEMBERS CONFLICT WITH THE VERTICAL CABLE MANAGERS, CUT AND REMOVE CROSS MEMBERS AND REPLACE WITH REMOVABLE CROSS MEMBERS. WHERE RADIUS DROPS ARE CONNECTED TO REMOVABLE CROSS MEMBERS, INSTALL CUSTOM RADIUS DROPS.
9. 48-PORT CAT 6 PATCH PANEL.
10. 2RU CABLE MANAGER WITH HINGED COVER.
11. 1RU VIDEO SURVEILLANCE CAMERA NVR.
12. 2RU UPS WITH IP MANAGEMENT MODULE.
13. NOT USED.
14. INTRUSION DETECTION SYSTEM CONTROL PANEL.
15. DOOR ACCESS CONTROL SYSTEM PANEL.
16. 1RU FIBER TERMINATION CABINET (CORNING CCH-01U).
17. INSTALL 12-STRAND TIGHT BUFFERED RISER RATED SINGLEMODE FIBER OPTIC CABLE FROM MDF ROOM TO IDF ROOM (CORNING MIC RISER P/N 012E81-33131-24). TERMINATE FIBER AT BOTH ENDS IN 12-FIBER SINGLEMODE FUSION SPLICE CASSETTE WITH DUPLEX LC CONNECTORS (CORNING P/N CCH-CS12-A9-P00RE).
18. 4'-0" HIGH X 2'-0" WIDE X 2'-6" DEEP UL LISTED LOCKABLE WALL CABINET WITH FRONT AND REAR L-SHAPED MOUNTING BRACKETS. SECURE CABINET TO WALL WITH MINIMUM QTY (4) LAG BOLTS. INSTALL #6 GROUND WIRE FROM CABINET TO GROUND BAR. PROVIDE MANUFACTURER CABINET GROUNDING KIT TO ENABLE GROUND LUG ATTACHMENT TO RACK. PROVIDE QTY (50) EQUIPMENT MOUNTING SCREWS.



2 T0.04 MDF ROOM RACK ELEVATIONS

SCALE: 1/2" = 1'-0"



1 T0.04 ENLARGED MDF ROOM PLAN

SCALE: 1/2" = 1'-0"

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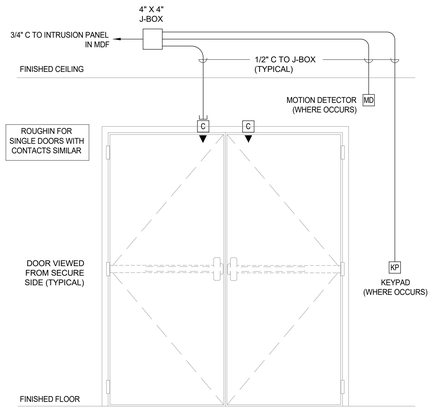
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REV	DATE	DESCRIPTION

Sheet Title
ENLARGED TELECOM ROOM PLANS

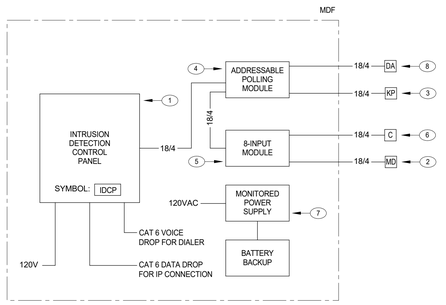
Date: JANUARY 19, 2023

Sheet No:
T0.04



5 T0.05 DOUBLE DOOR WITH CONTACTS

SCALE: N.T.S.



4 T0.05 INTRUSION DETECTION SYSTEM ONELINE DIAGRAM

SCALE: NONE

INTRUSION DETECTION SYSTEM CONTRACTOR QUALIFICATIONS

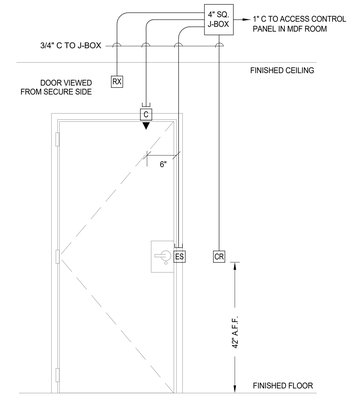
1. CONTRACTOR INSTALLING THE INTRUSION DETECTION SYSTEM SHALL BE A FIRM NORMALLY ENGAGED IN THE INSTALLATION, MAINTENANCE AND SUPPORT OF INTRUSION DETECTION AND/OR DOOR ACCESS CONTROL SYSTEMS. THE CONTRACTOR MUST HAVE A MINIMUM OF 5-YEARS EXPERIENCE INSTALLING SECURITY SYSTEMS OF SIMILAR SIZE AND SCOPE.
2. CONTRACTOR INSTALLING THE SYSTEM MUST BE A BOSCH AUTHORIZED INTRUSION ALARM SYSTEM INSTALLER.
3. THE CONTRACTOR SHALL HAVE SERVICE FACILITIES NEAR THE PROJECT SITE AND SHALL RESPOND TO SERVICE CALLS WITHIN A FOUR (4) HOUR PERIOD AFTER RECEIPT OF A SERVICE CALL. THIS INCLUDES WEEKENDS AND HOLIDAYS. AT THE TIME OF SERVICE, THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIAL AND PERSONNEL NECESSARY TO PERFORM ALL REPAIRS.

INTRUSION DETECTION SYSTEM GENERAL NOTES

1. FURNISH AND INSTALL A COMPLETE AND OPERATIONAL INTRUSION DETECTION SYSTEM. FURNISH AND INSTALL ALL ANCILLARY DEVICES, EQUIPMENT AND CABLING FOR A COMPLETE SYSTEM. INSTALL ALL WORK IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:
   A. ANSI/NFPA-70
   B. UL 1076 (BURGLAR ALARM AND SYSTEMS)
   C. AMERICAN WITH DISABILITIES ACT (ADA).
2. AT A MINIMUM, THE SYSTEM SHALL CONSIST OF THE FOLLOWING COMPONENTS:
   A. ADDRESSABLE MAGNETIC DOOR POSITION CONTACTS AT ALL EXTERIOR DOORS.
   B. ADDRESSABLE MOTION DETECTORS AT ALL PERIMETER ENTRY DOORS.
   C. KEYPADS FOR ARMING AND DISARMING THE SYSTEM AT ALL MAIN ENTRANCE DOORS.
   D. ZONED INTRUSION DETECTION PANEL WITH CAPACITY FOR ALL DEVICES SHOWN ON THE DRAWINGS PLUS 25% FUTURE EXPANSION. PROVIDE ZONE EXPANDERS, RELAY OUTPUTS, ETC. AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
   E. AUTO DIALER.
   F. POWER SUPPLIES TO POWER THE PANEL AND ALL DEVICES.
   G. BATTERIES AND BATTERY CHARGERS. SUBMIT BATTERY CALCULATIONS FOR APPROVAL. BATTERIES SHALL BACKUP THE ENTIRE SYSTEM FOR A MINIMUM OF 4 HOURS.
3. ALL SECURITY DEVICES INCLUDING DOOR POSITION CONTACTS AND MOTION SENSORS SHALL BE ADDRESSABLE. WHEN A DEVICE IS IN ALARM THE SYSTEM SHALL IDENTIFY AND REPORT THE LOCATION OF THE DEVICE.
4. ALL INTRUSION DETECTION CABLING TO BE ROUTED IN CONDUIT FROM THE DEVICE TO THE PANEL LOCATED IN THE TELECOM ROOM. NO EXPOSED CABLING IS PERMITTED. PROVIDE RECESSED SINGLE GANG AND/OR DOUBLE GANG BACK BOXES AS REQUIRED AT EACH DEVICE. CABLING ROUTED IN UNDERGROUND CONDUIT SHALL BE RATED FOR OUTDOOR WET LOCATIONS.
5. NOT ALL DEVICES AND CABLING ARE SHOWN ON THE PLAN. SUBMIT SHOP DRAWINGS FOR APPROVAL INCLUDING POINT-TO-POINT WIRING AND PANEL BLOCK DIAGRAMS SHOWING ALL DEVICES AND REQUIRED CABLING.
6. SUBMIT CUT SHEETS FOR APPROVAL OF ALL SECURITY DEVICES, PANELS, ZONE EXPANDERS, RELAY BOARDS, AUTO DIALER, POWER SUPPLIES, BATTERIES, BATTERY CHARGERS AND CABLING.
7. AT THE COMPLETION OF THE PROJECT, TEST AND COMMISSION THE ENTIRE SYSTEM. PROGRAM THE SYSTEM IN ACCORDANCE WITH OWNER REQUIREMENTS.
8. COORDINATE DIAL-OUT AND CENTRAL STATION MONITORING WITH THE OWNER.
9. PROGRAM ZONES, SCHEDULES AND ACCESS CODES AS DIRECTED BY THE OWNER.
10. PROVIDE 1-HOUR TRAINING TO THE OWNER AT THE COMPLETION OF THE PROJECT. PROVIDE 2 SETS OF O&M MANUALS.
11. THE ENTIRE INTRUSION DETECTION SYSTEM SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR 1-YEAR FROM THE DATE OF FINAL ACCEPTANCE. CONTRACTOR WILL PROMPTLY REMEDY SUCH DEFECTS AND ANY SUBSEQUENT DAMAGE CAUSED BY THE DEFECTS OR REPAIR AT NO EXPENSE TO THE OWNER.

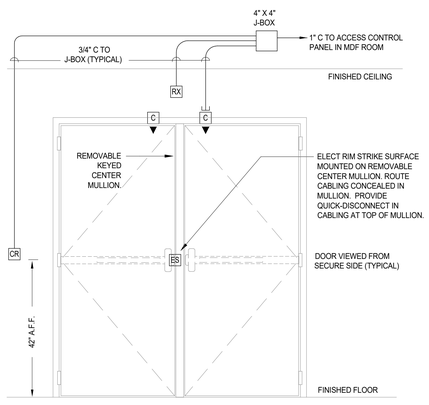
INTRUSION DETECTION SYSTEM SHEET NOTES

1. MAIN INTRUSION DETECTION PANEL (BOSCH P/N'S B9512G, B430, B8103, D101, D110, D164O, B520, D1218).
2. PIR MOTION DETECTOR WITH ANTI-MASK PROTECTION AND MOUNTING BRACKET (BOSCH P/N'S ISC-PPR1-WA16G, B328).
3. TOUCH SCREEN KEYPAD (BOSCH B942W).
4. ADDRESSABLE POLLING MODULE (BOSCH B299). WHERE FIELD DEVICES ARE DAISY CHAINED OFF OF POLLING MODULE, PROVIDE POPIT MODULES AS REQUIRED (BOSCH D9127U).
5. ADDRESSABLE 8-INPUT MODULE (BOSCH B208).
6. DOUBLE POLE, DOUBLE THROW DOOR CONTACTS PROVIDED ON DOORS WITH ACCESS CONTROL (GE 1076D OR EQUAL).
7. MONITORED POWER SUPPLY WITH BATTERY BACKUP (BOSCH P/N'S B520, D1218).
8. LATCHING DURESS ALARM PUSH BUTTON.



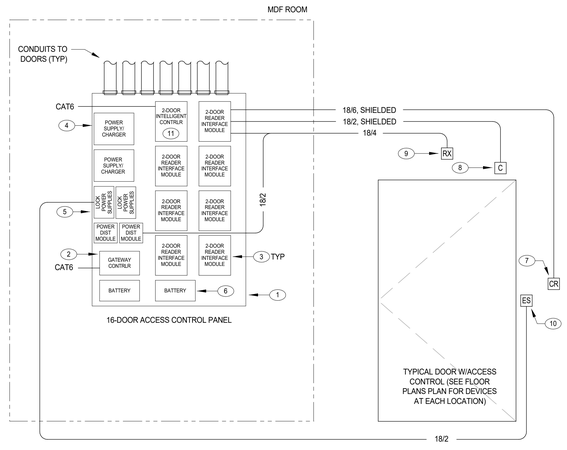
3 T0.05 CONDUIT ROUGHIN: SINGLE DOOR CARD READER IN W/ELECT STRIKE

SCALE: N.T.S.



2 T0.05 CONDUIT ROUGHIN: DOUBLE DOOR CARD READER IN W/ELECT RIM STRIKE

SCALE: N.T.S.



1 T0.05 ACCESS CONTROL SYSTEM ONELINE DIAGRAM

SCALE: NONE

ACCESS CONTROL SYSTEM GENERAL NOTES

1. THE CONTRACTOR MUST BE A GENETEC CERTIFIED PARTNER AND HAVE THE NECESSARY CERTIFICATIONS TO PURCHASE, INSTALL AND CONFIGURE THE SPECIFIED GENETEC EQUIPMENT AND SOFTWARE. THE SYSTEM PROGRAMMER SHALL HAVE ATTENDED MANUFACTURER TRAINING AND OBTAINED CERTIFICATION IN GENETEC™ SECURITY CENTER - SYNERGIS™ TECHNICAL CERTIFICATION.
2. SEE FLOOR PLANS FOR ACCESS CONTROL FIELD DEVICES AT EACH DOOR.
3. NOT ALL DEVICES AND CABLING ARE SHOWN IN THE SINGLE LINE DIAGRAM. SUBMIT SHOP DRAWINGS FOR APPROVAL INCLUDING POINT-TO-POINT WIRING AND PANEL BLOCK DIAGRAMS SHOWING ALL DEVICES AND REQUIRED CABLING.
4. SUBMIT SHOP DRAWINGS FOR APPROVAL SHOWING THE LAYOUT OF THE EQUIPMENT MOUNTED IN THE ACCESS CONTROL ENCLOSURE(S) INCLUDING GATEWAYS, INTELLIGENT CONTROLLERS, CARD READER BOARDS, I/O BOARDS, ADD-IN BOARDS, POWER SUPPLIES, BATTERY CHARGERS, FUSES, RELAYS, BATTERIES, NETWORK OUTLETS, ELECTRICAL OUTLETS, CABLE MANAGEMENT WIREWAYS, FANS, ETC.
5. SUBMIT MANUFACTURER PRODUCT DATA SHEETS FOR APPROVAL OF ALL ACCESS CONTROL EQUIPMENT INCLUDING BUT NOT LIMITED TO EQUIPMENT ENCLOSURES, CONTROLLERS, ADD-IN BOARDS, RELAYS, POWER SUPPLIES, BATTERIES, CABLING, REQUEST TO EXITS, DOOR CONTACTS, CARD READERS, ELECTRIC STRIKES, ELECTRIC LOCKS, LOCAL ALARMS, PUSH BUTTONS, WIRELESS RECEIVERS, ETC.
6. SUBMIT BATTERY CALCULATIONS FOR APPROVAL. BATTERIES SHALL BACKUP THE ENTIRE SYSTEM FOR A MINIMUM OF 4 HOURS.
7. ALL ACCESS CONTROL CABLING IS TO BE ROUTED IN CONDUIT FROM THE ACCESS CONTROL FIELD DEVICES AT EACH DOOR TO THE ACCESS CONTROL PANEL.
8. WHERE CABLING IS ROUTED IN UNDERGROUND CONDUIT, PROVIDE OUTDOOR RATED CABLE SUITABLE FOR WET UNDERGROUND DUCT INSTALLATION.

ACCESS CONTROL SYSTEM SHEET NOTES

1. 36" HIGH X 30" WIDE X 6 1/2" DEEP DOOR ACCESS CONTROL PANEL INCLUDING GATEWAY CONTROLLER, INTELLIGENT CONTROLLER, CARD READER INTERFACE MODULES, I/O MODULES, POWER SUPPLIES, BATTERY CHARGERS, POWER DISTRIBUTION MODULES, BATTERIES, ETC. MOUNT COMPONENTS IN LOCKABLE ENCLOSURE WITH TAMPER SWITCH AND FAN/FILTER KIT. LABEL OUTSIDE OF CABINET WITH ENGRAVED PLATE.
2. ACCESS CONTROL GATEWAY CONTROLLER WITH CAT 6 NETWORK DROP. CONTRACTOR TO CONFIGURE CONTROLLER TO COMMUNICATE WITH ACCESS CONTROL SERVER.
3. 2-DOOR CARD READER INTERFACE MODULES.
4. POWER SUPPLY / BATTERY CHARGER.
5. DISTRIBUTION AND LOCK POWER SUPPLIES.
6. 12V 12AH BATTERIES TO BACKUP DEVICES FOR MINIMUM OF 2 HOURS.
7. CONTACTLESS SMART CARD READER AT ACCESS CONTROL DOORS.
8. DOUBLE POLE DOUBLE THROW MAGNETIC DOOR POSITION CONTACTS.
9. REQUEST-TO-EXIT (REX) MOTION DETECTOR.
10. ELECTRIC STRIKE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE.
11. 2-DOOR INTELLIGENT SYSTEM CONTROLLER WITH CAT 6 NETWORK DROP.

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Sheet Title
SECURITY INTRUSION DETECTION SYSTEM DETAILS

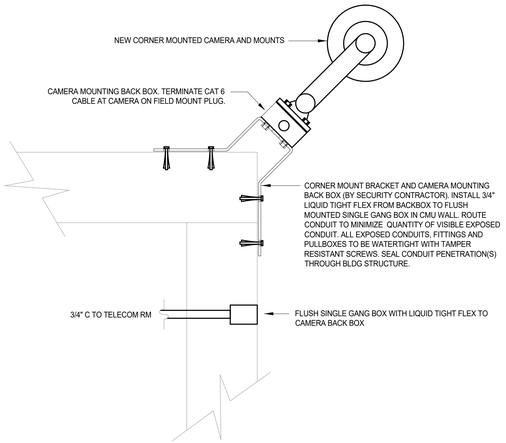
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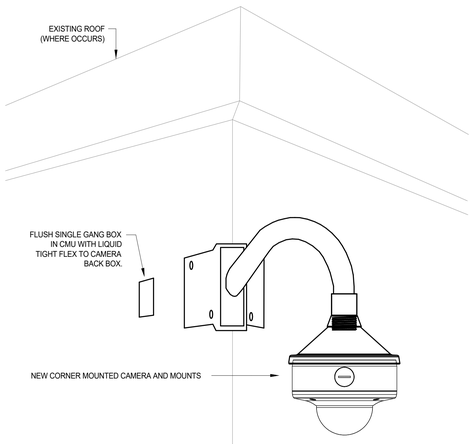
5 T0.06 CAMERA AND MOUNT SCHEDULE

SCALE: NONE



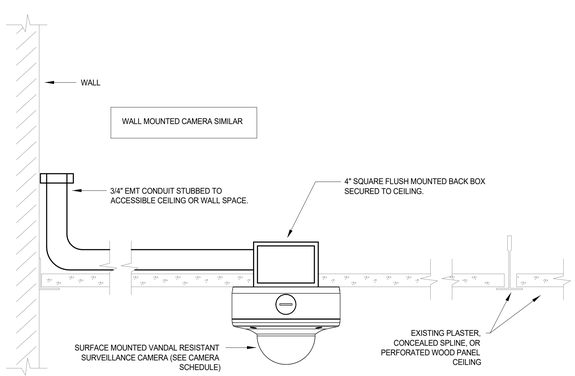
4 T0.06 CORNER MTD CAMERA (PLAN)

SCALE: NONE



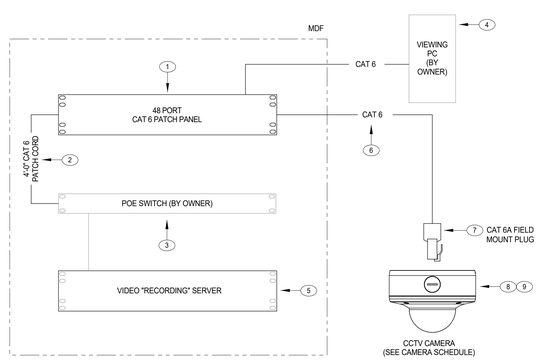
3 T0.06 CORNER MTD CAMERA (ELEV)

SCALE: NONE



2 T0.06 SURFACE WALL/CEILING MOUNTED CAMERA

SCALE: NONE



1 T0.06 VIDEO SURVEILLANCE CAMERA ONELINE DIAGRAM

SCALE: NONE

VIDEO SURVEILLANCE CAMERA ONELINE SHEET NOTES

1. 48-PORT CAT 6 PATCH PANEL IN TELECOM ROOM RACK.
2. 4'-0" CAT 6 PATCH CORD TO CROSS CONNECT CAMERAS TO OWNER FURNISHED POE SWITCHES. FURNISH QTY (1) 4'-0" PATCH COLOR FOR EACH CAMERA.
3. POE SWITCH (BY OWNER).
4. VIDEO VIEWING COMPUTER (BY OWNER). FURNISH, INSTALL AND CONFIGURE VMS CLIENT VIEWING SOFTWARE ON QTY (3) COMPUTERS AS DIRECTED BY OWNER.
5. RECORDING SERVER. SIZE SERVER TO ACCOMMODATE 30 DAYS OF RECORDED VIDEO AT FULL CAMERA RESOLUTION. INSTALL AND CONFIGURE "RECORDING" SERVER SOFTWARE ON SERVER. UPDATE THE SOFTWARE TO THE MOST CURRENT VERSION AT THE COMPLETION OF THE PROJECT.
6. FURNISH, INSTALL AND TERMINATE PLENUM RATED CAT 6 CABLE TO EACH CAMERA LOCATION. CABLES TO BE INSTALLED AND TESTED IN ACCORDANCE WITH THE DIVISION 27 SPECIFICATIONS.
7. TERMINATE CAT 6 CABLE AT CAMERA ON CAT 6A FIELD MOUNT PLUG AND CONNECT DIRECTLY TO CAMERA.
8. FURNISH AND INSTALL IP VIDEO SURVEILLANCE CAMERA AND ASSOCIATED MOUNTS/RACEWAY (SEE CAMERA SCHEDULE FOR CAMERA AND MOUNT REQUIREMENTS).
9. DOWNLOAD AND INSTALL THE LATEST FIRMWARE FROM THE MANUFACTURER'S WEBSITE ON ALL CAMERAS AT THE COMPLETION OF THE PROJECT.

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SECURITY VIDEO SURVEILLANCE CAMERA DETAILS

Date: JANUARY 19, 2023
Sheet No:
T0.06



1 T1.01 TELECOM SITE PLAN
Scale: 1/16" = 1'-0"

GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. SEE ONELINE DIAGRAM(S) FOR CONDUIT, WIRE SIZES AND EQUIPMENT REQUIREMENTS.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPLICABLE UTILITY COMPANY'S DRAWINGS AND REPRESENTATIVES FOR DETERMINING THE EXACT RESPONSIBILITY OF EACH PARTY.
4. SEE UTILITY DRAWINGS FOR ALL UTILITY WORK WORK REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING ALL WORK REQUIRED IN BID. COORDINATE WITH EACH SITE UTILITY.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL 1-800-227-2600 FOR LOCATES PRIOR TO DIGGING. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL NON-UTILITY UNDERGROUND ITEMS.
6. THE MAXIMUM NUMBER OF CONDUIT BENDS SHOULD NOT BE GREATER THAN 270 DEGREES BETWEEN PULLING STRUCTURES. THIS INCLUDES THE AGGREGATE OF ALL HORIZONTAL AND VERTICAL CHANGES.
7. ALL CONDUIT, INNERDUCT, PULLBOXES AND VAULTS SHALL BE LABELED PER THE SPECIFICATIONS.
8. PROVIDE #10 CU CONDUCTORS IN 3/4" CONDUIT MINIMUM, UNLESS NOTED OTHERWISE, FOR ALL SITE LIGHTING AND SITE RECEPTACLE CIRCUITS.
9. ALL RECEPTACLES WITH WEATHER PROOF DESIGNATION SHALL BE PROVIDED WITH 'WHILE IN USE' COVERS.
10. ALL CONDUIT, INNERDUCT, PULLBOXES AND VAULTS SHALL BE LABELED PER THE SPECIFICATIONS.
11. EACH CONDUIT AND INNERDUCT SHALL BE PROVIDED WITH A 1250 LBS. PULL ROPE.
12. COORDINATE LOCATION OF BELOW-GRADE CONDUITS, DUCT BANKS, ETC. WITH CIVIL ENGINEER AND OTHER TRADES PRIOR TO ROUGH-IN.

SHEET NOTES

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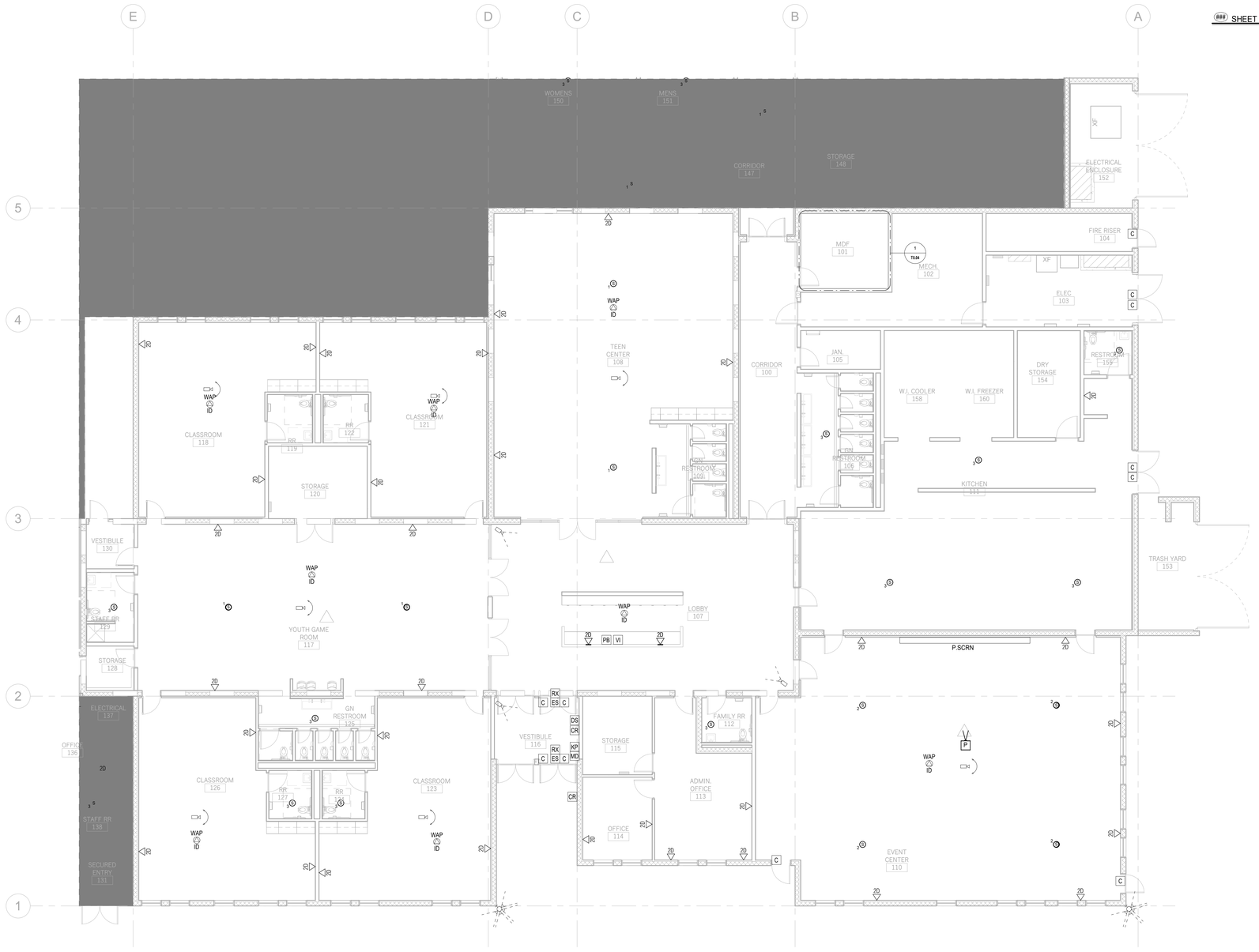
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Sheet Title
TELECOM SITE PLAN

Date: JANUARY 19, 2023
Sheet No:
T1.01

GENERAL NOTES

SHEET NOTES



1 / T2.01 TELECOM PLAN - BASE BID

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Sheet Title
TELECOM PLAN - BASE BID

Date: JANUARY 19, 2023

Sheet No:
T2.01



1 LIFE SAFETY PLAN - EARLY LEARNING
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1 PER 2019 CBC SECTION 703.7: FIRE WALLS, FIRE BARRIERS, AND SMOKE PARTITIONS OR ANY OTHER WAL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL: (1) BE LOCATED WITHIN 15' OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30' MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION; AND (3) INCLUDE LETTERING NOT LESS THAN 3" IN HEIGHT WITH A MINIMUM 3/8" STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORKING: "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER WORDING.

KEYNOTES

LEGEND

KEYPLAN

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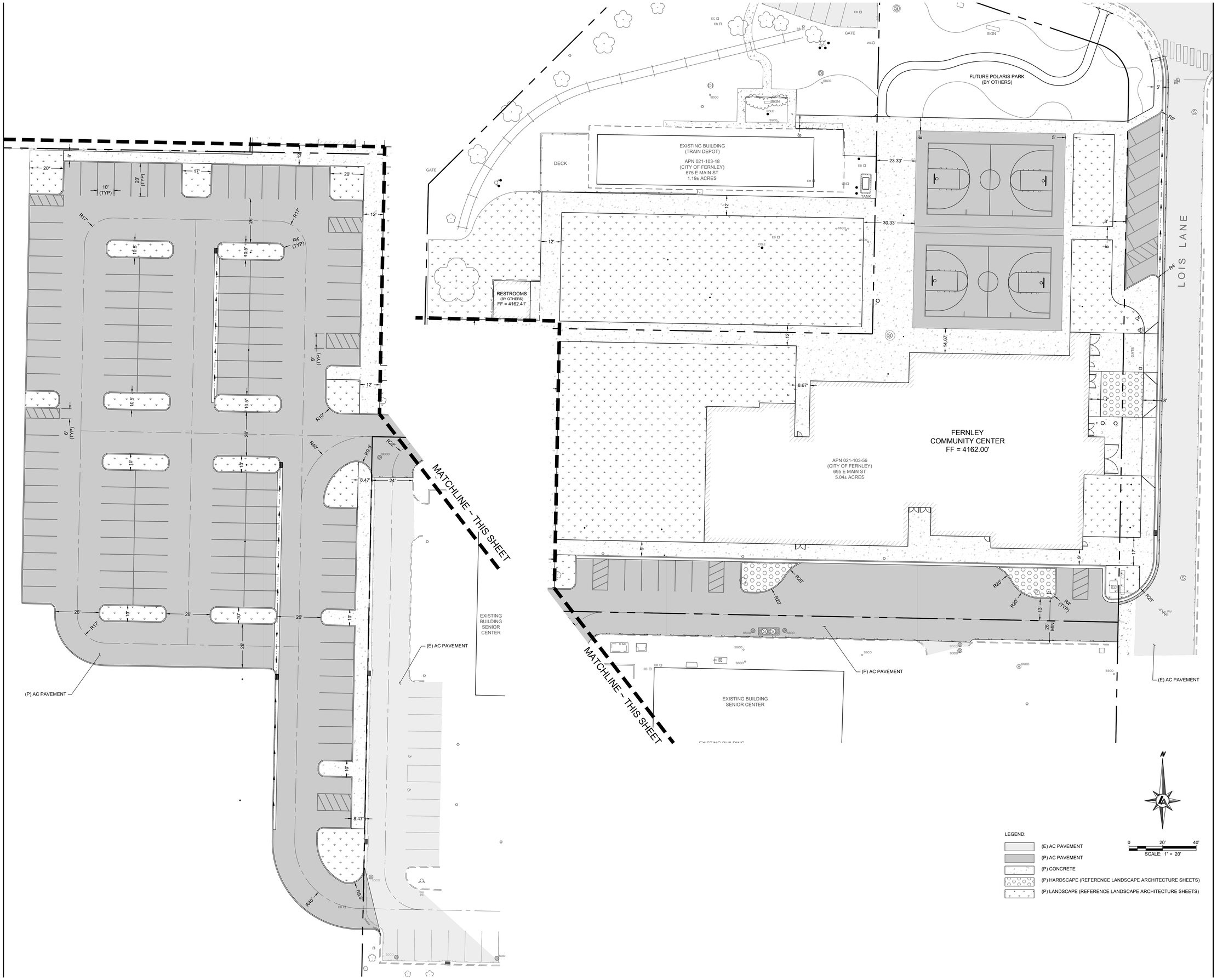
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Sheet Title
LIFE SAFETY PLAN - ALT. A

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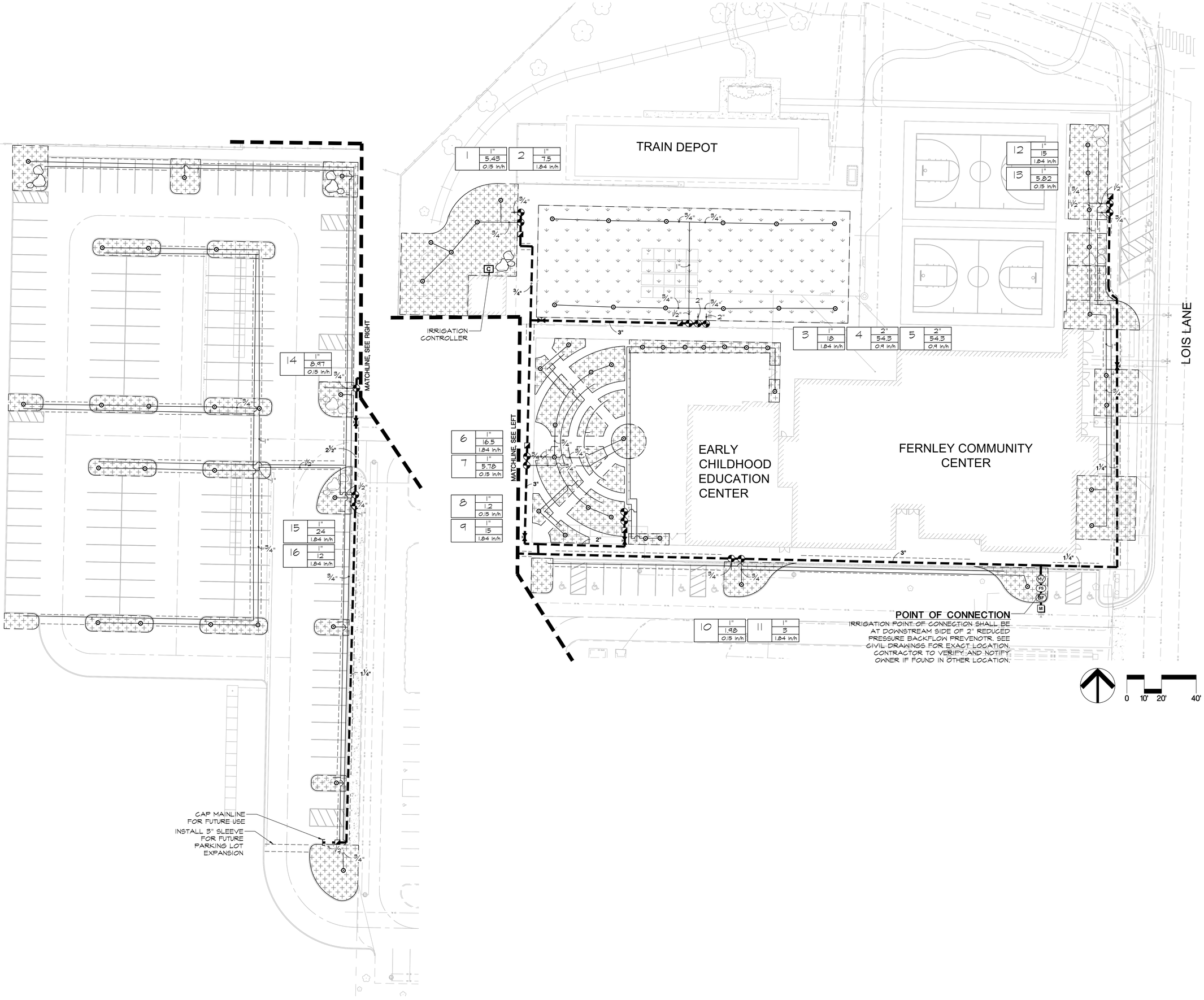
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Sheet Title
SITE PLAN
ALTERNATE A

Date: JANUARY 19, 2023
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C2.00A



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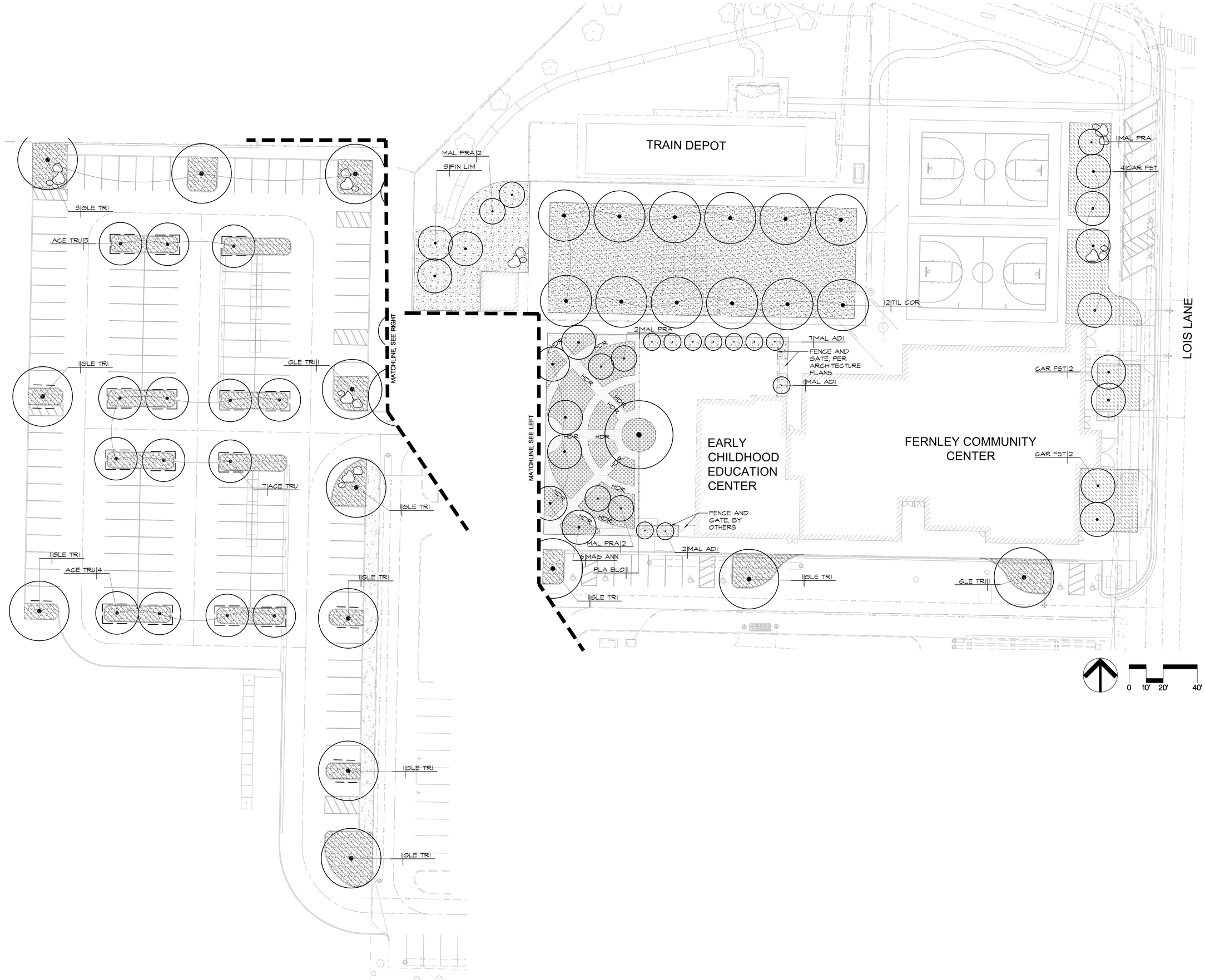
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DESIGN DEVELOPMENT

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Sheet Title
IRRIGATION PLAN ALTERNATE A

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L1.01A



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Project
CITY OF FERNLEY
CRRC

Job No: 21-058.00

Owner
CITY OF FERNLEY

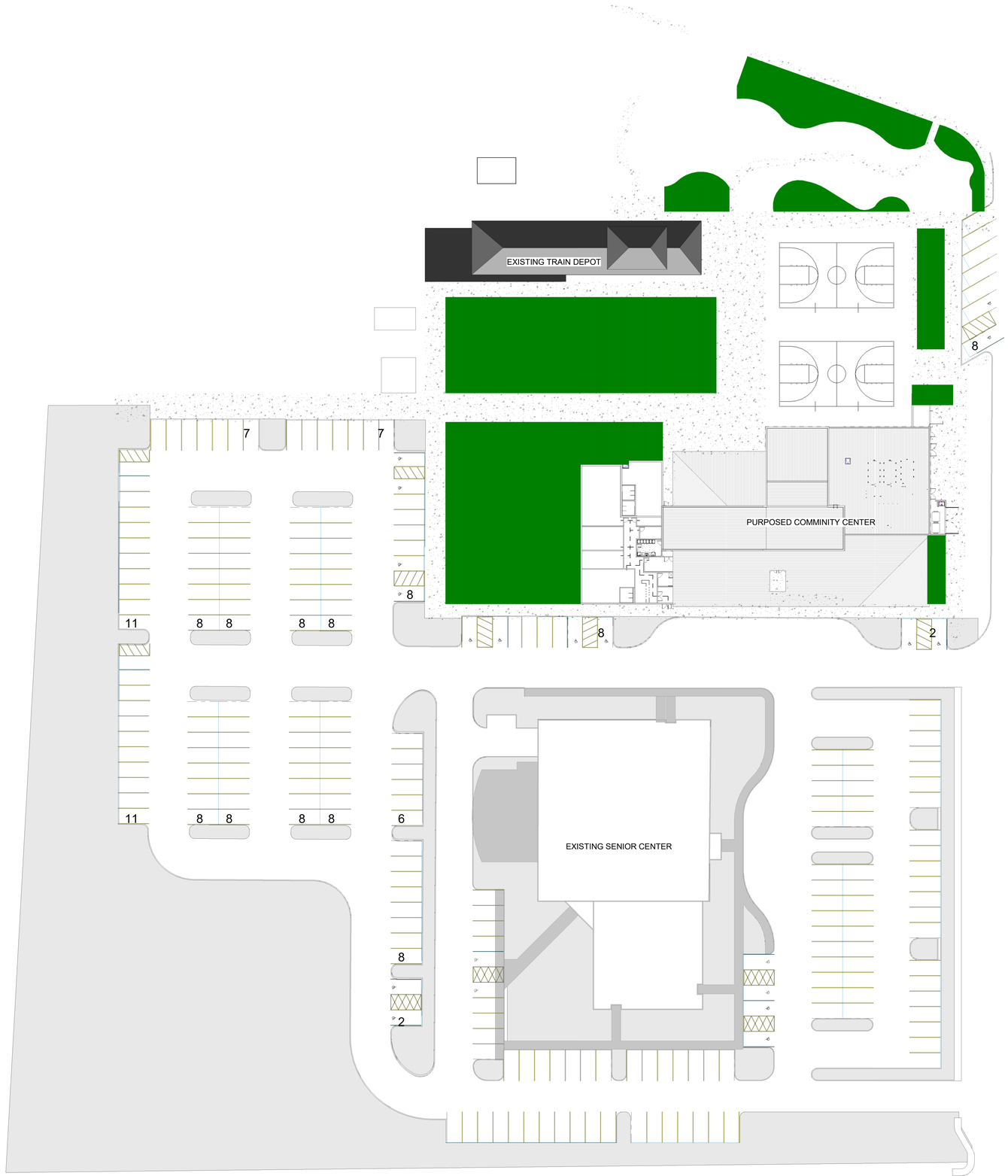
DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
LANDSCAPE PLAN ALTERNATE A

Date: JANUARY 19, 2023
Sheet No:

L2.01A



PARKING COUNTS:
ADA STALLS = 12
PARKING STALLS = 108
TOTAL PARKING = 120

1 OVERALL SITE PLAN - EARLY LEARNING
SCALE: 1" = 30'-0"

NORTH 0' 30' 60' 120'

GENERAL NOTES

1. CONTRACTOR TO VERIFY DIMENSIONS IN FIELD PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. DO NOT SCALE DRAWINGS.
2. REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE INFORMATION.
3. REFER TO CIVIL DRAWINGS FOR CURB DIMENSIONS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR PARKING DIMENSIONS, AND STREET DIMENSIONS.
5. SEE ENLARGED SITE PLANS FOR ALL SITE PLAN KEYNOES.

KEYNOTES

LEGEND

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Job No: 21-058.00

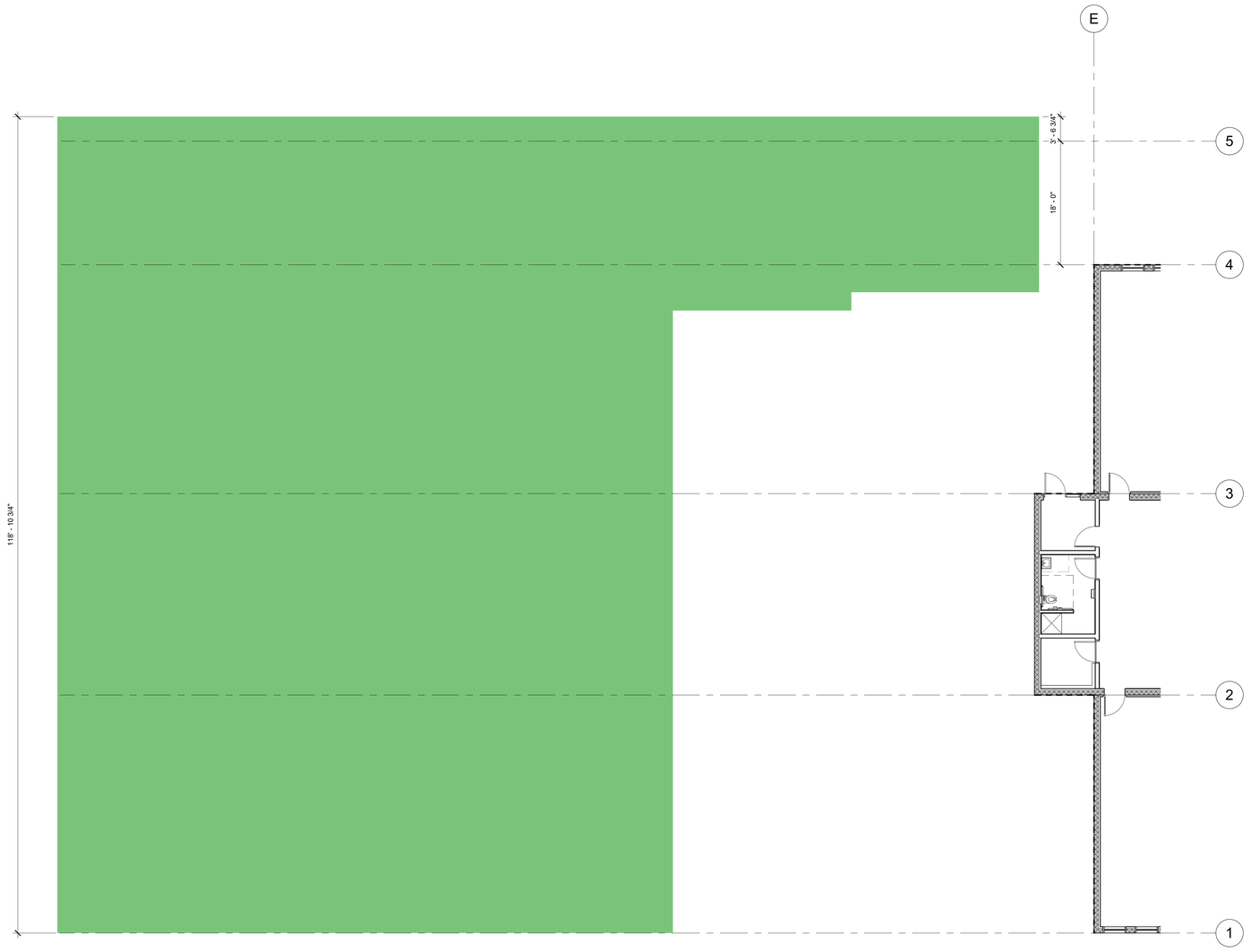
Owner
CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
SITE PLAN - ALT. A

Date: JANUARY 19, 2023
Sheet No:
AS1.01A



1 ENLARGED SITE PLAN - ALT. A
SCALE: 1/8" = 1'-0"

NORTH 0' 30' 60' 120'

GENERAL NOTES

1. CONTRACTOR TO VERIFY DIMENSIONS IN FIELD PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. DO NOT SCALE DRAWINGS.
2. REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE INFORMATION.
3. REFER TO CIVIL DRAWINGS FOR CURB DIMENSIONS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR PARKING DIMENSIONS, AND STREET DIMENSIONS.
5. SEE ENLARGED SITE PLANS FOR ALL SITE PLAN KEYNOES.

KEYNOTES

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Job No: 21-058.00

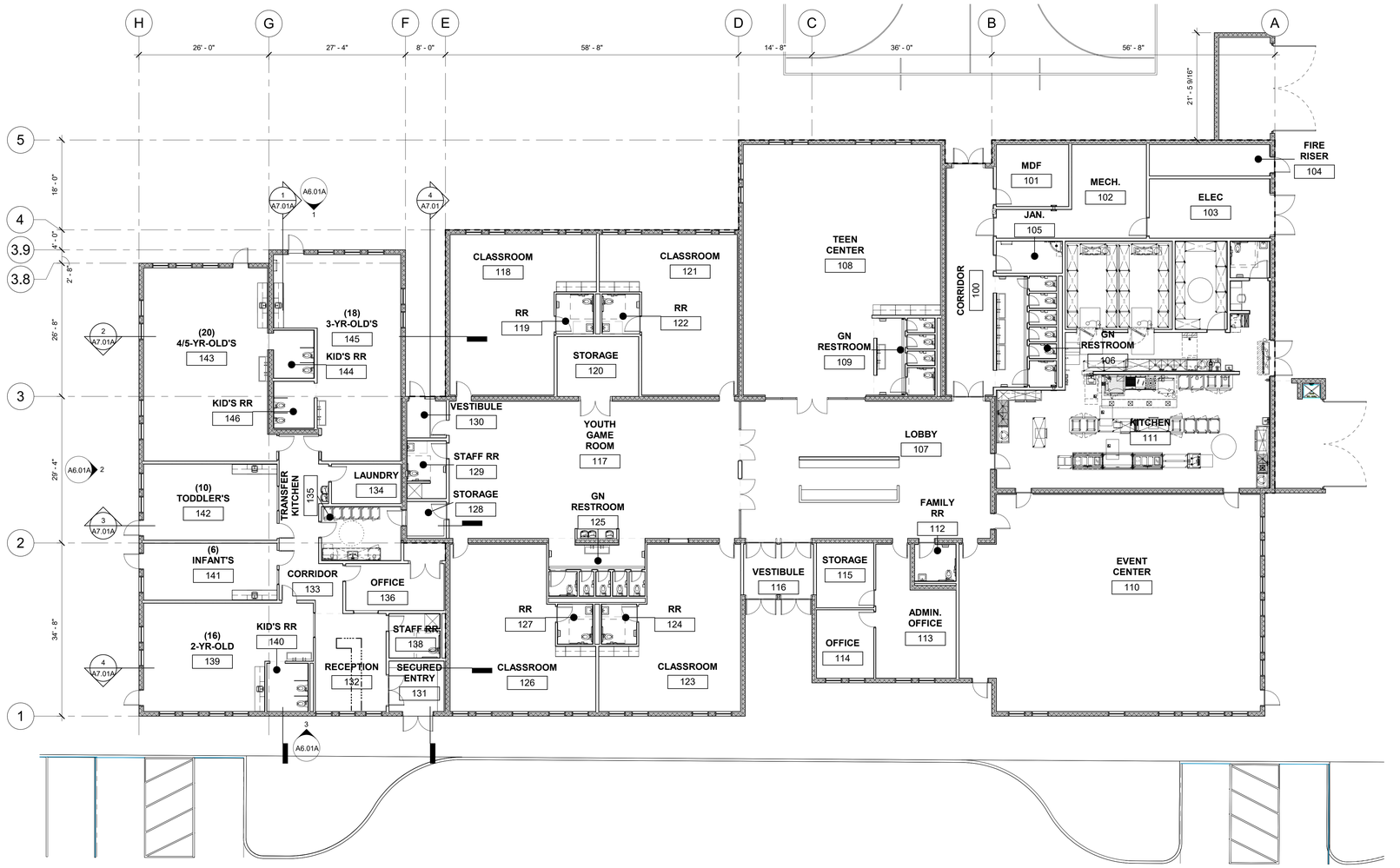
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CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
ENLARGED SITE PLAN - ALT. A

Date: JANUARY 19, 2023
Sheet No:
AS1.11A



1 FLOOR PLAN - ALT. A
SCALE: 3/32" = 1'-0"

NORTH 0' 5' 11' 21'

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK NOT SHOWN ON THIS DRAWING.
3. SEE ELECTRICAL DRAWINGS FOR INFORMATION ON ELECTRICAL/TELECOM ROOMS.
4. ALL EQUIPMENT (O.F.O.I AND C.F.C.I.), SHALL COMPLY WITH ACCESSIBILITY REQUIREMENTS.

KEYNOTES

LEGEND

KEYPLAN

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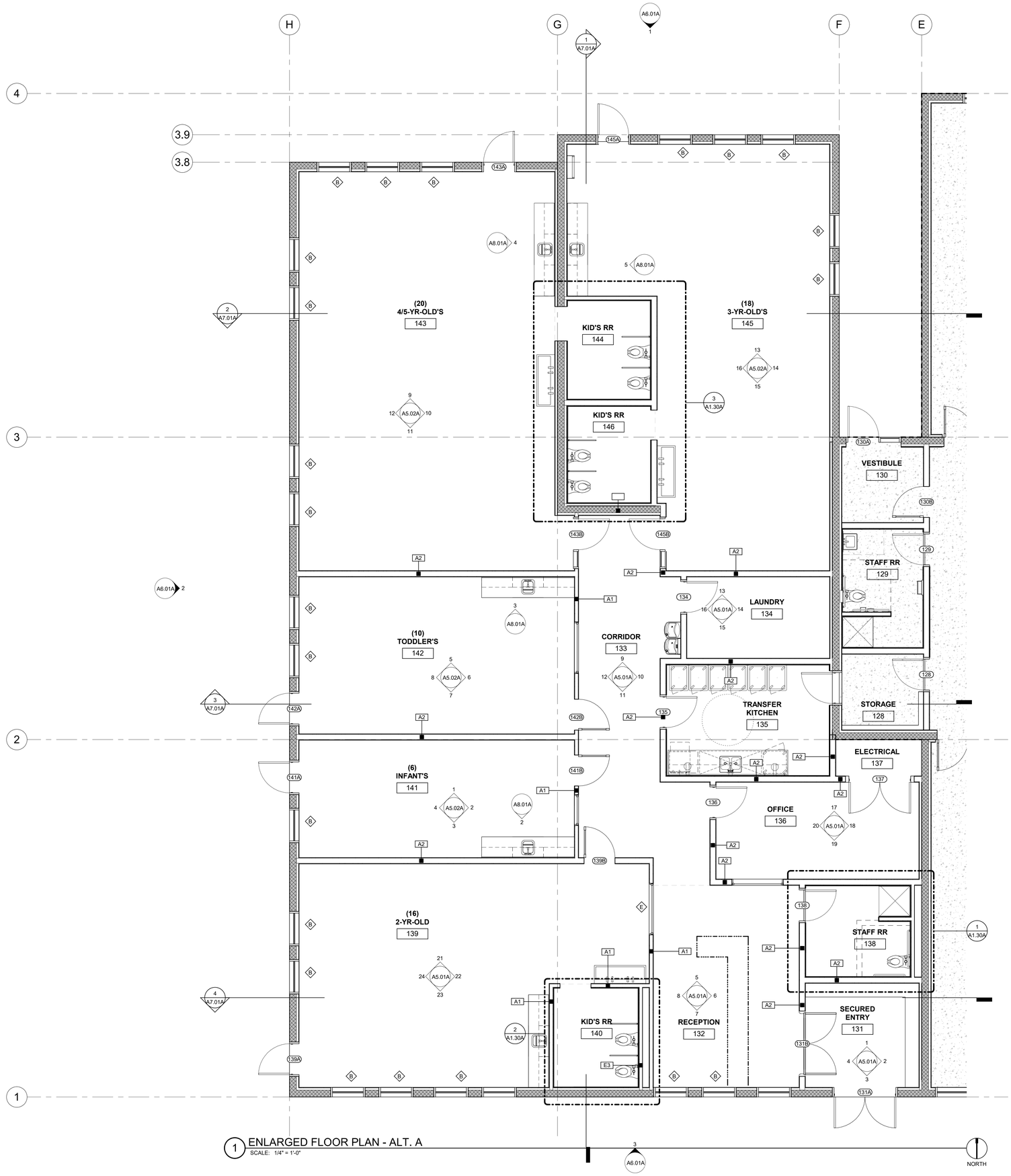
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REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
OVERALL FLOOR PLAN - ALT. A

Date: JANUARY 19, 2023
Sheet No:
A1.01A



GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK NOT SHOWN ON THIS DRAWING.
3. SEE ELECTRICAL DRAWINGS FOR INFORMATION ON ELECTRICAL/TELECOM ROOMS.
4. ALL EQUIPMENT (O.F.O.I AND C.F.C.I.), SHALL COMPLY WITH ACCESSIBILITY REQUIREMENTS.

KEYNOTES

1. FIRE EXTINGUISHER
2. ROOF ACCESS LADDER, SEE ROOF DETAILS

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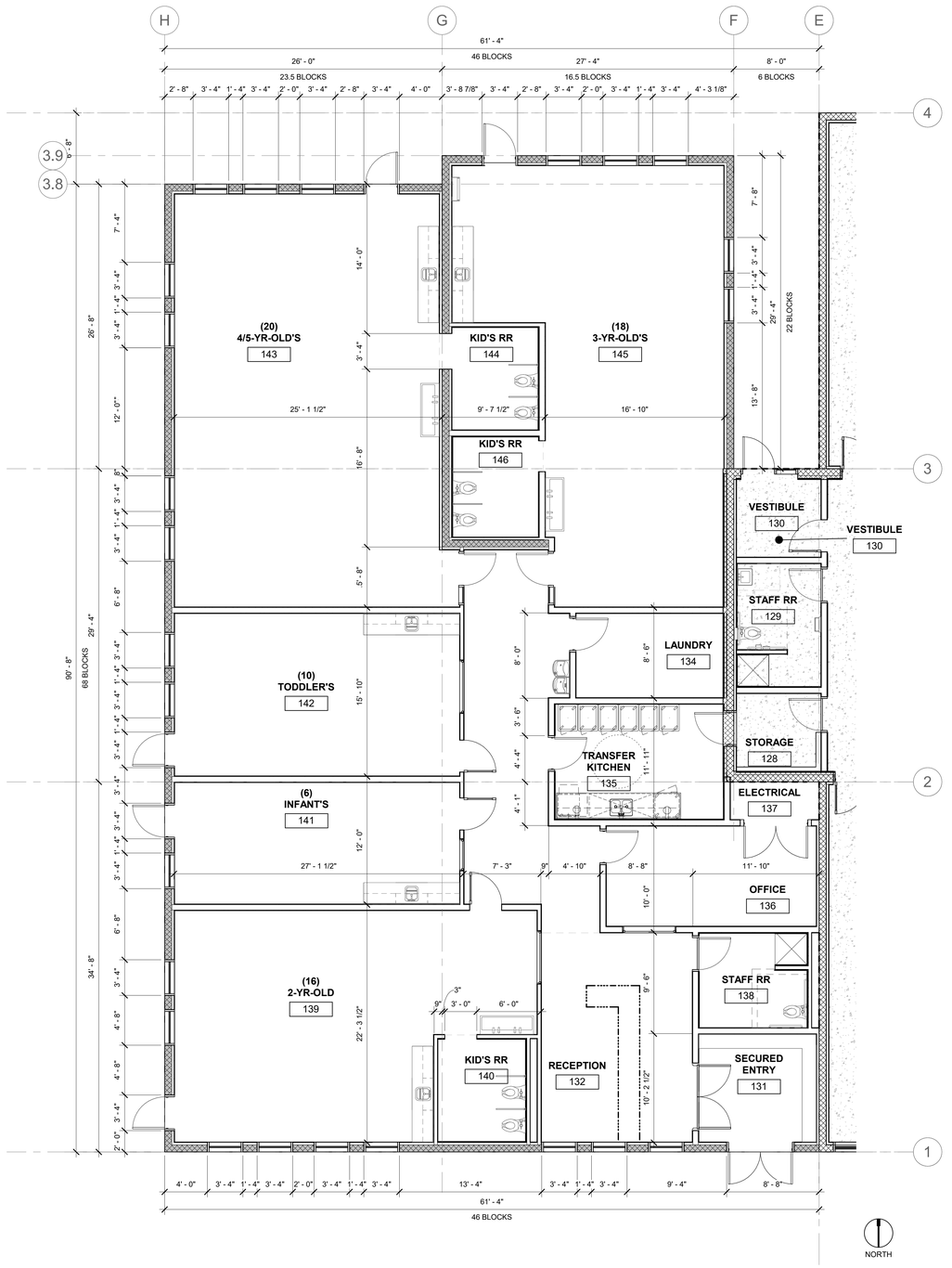
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REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
ENLARGED FLOOR PLAN - ALT. A

Date: JANUARY 19, 2023

Sheet No:
A1.11A



1 DIMENSION PLAN - ALT. A
SCALE: 3/16" = 1'-0"

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE OVERALL FLOOR PLANS FOR EQUIPMENT SCHEDULE, MARKERBOARD AND TACKBOARD SCHEDULE, AND KEYNOTE ITEMS NOT LABELED IN DIMENSION PLANS.

KEYNOTES

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Job No: 21-058.00

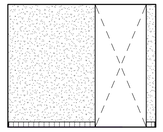
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
DIMENSION & PARTITION PLAN - ALT. A

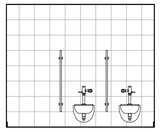
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Sheet No:
A1.21A



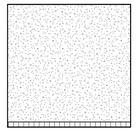
19 KIDS RR 147 WEST
SCALE: 1/4" = 1'-0"



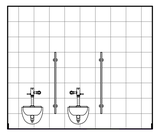
18 KIDS RR 147 SOUTH
SCALE: 1/4" = 1'-0"



17 KIDS RR 147 EAST
SCALE: 1/4" = 1'-0"



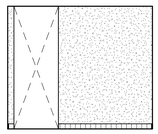
16 KIDS RR 147 NORTH
SCALE: 1/4" = 1'-0"



15 KIDS RR 145 WEST
SCALE: 1/4" = 1'-0"



14 KIDS RR 145 SOUTH
SCALE: 1/4" = 1'-0"



13 KIDS RR 145 EAST
SCALE: 1/4" = 1'-0"



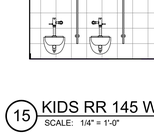
12 KIDS RR 145 NORTH
SCALE: 1/4" = 1'-0"

11 KIDS RR 140 WEST
SCALE: 1/4" = 1'-0"

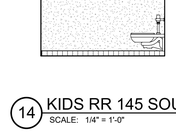
10 KIDS RR 140 SOUTH
SCALE: 1/4" = 1'-0"

9 KIDS RR 140 EAST
SCALE: 1/4" = 1'-0"

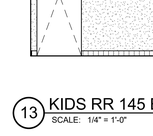
8 KIDS RR 140 NORTH
SCALE: 1/4" = 1'-0"



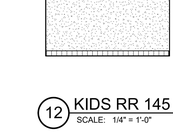
7 STAFF RR 135 WEST
SCALE: 1/4" = 1'-0"



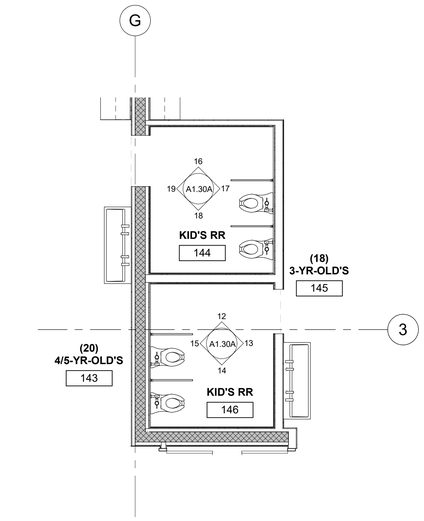
6 STAFF RR 135 SOUTH
SCALE: 1/4" = 1'-0"



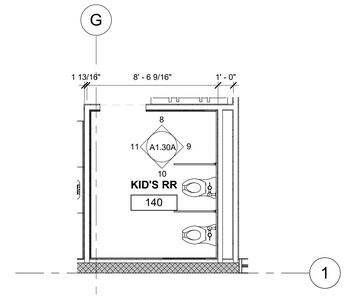
5 STAFF RR 135 EAST
SCALE: 1/4" = 1'-0"



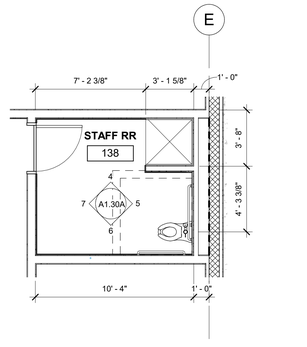
4 STAFF RR 135 NORTH
SCALE: 1/4" = 1'-0"



3 EARLY LEARNING - KIDS RR 145 & 147
SCALE: 1/4" = 1'-0"



2 EARLY LEARNING - KIDS RR 138
SCALE: 1/4" = 1'-0"



1 EARLY LEARNING - STAFF RR 135
SCALE: 1/4" = 1'-0"

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KEYNOTES

1. FIRE EXTINGUISHER
2. ROOF ACCESS LADDER, SEE ROOF DETAILS
3. TRENCH DRAIN. SEE PLUMBING FOR MORE INFORMATION

LEGEND

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Project
CITY OF FERNLEY CRRC

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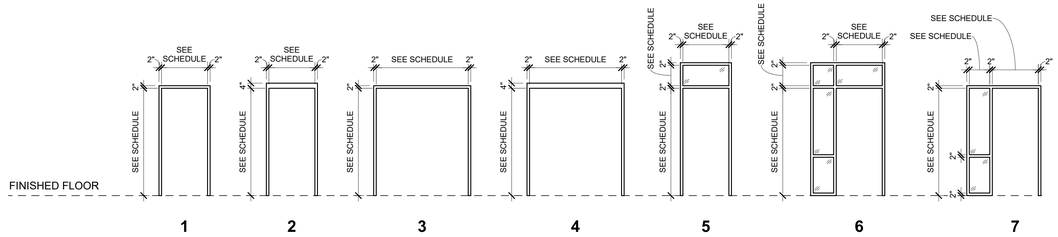
DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
ENLARGED RESTROOM PLANS & INTERIOR ELEVATIONS - ALT. A

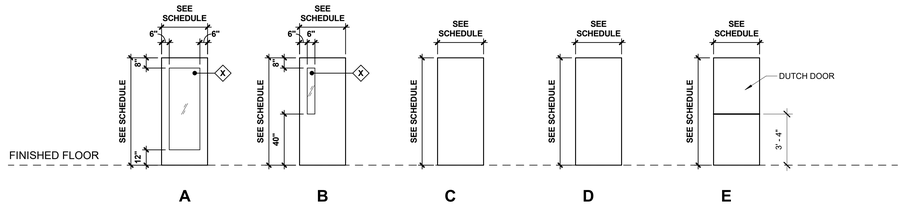
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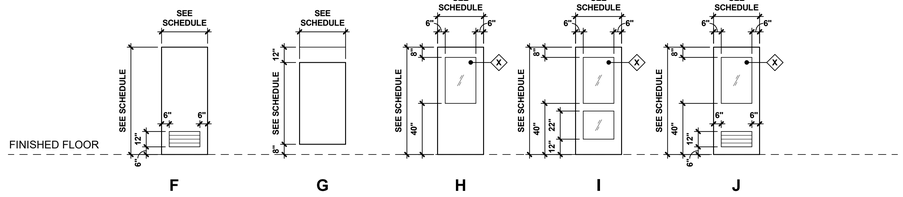
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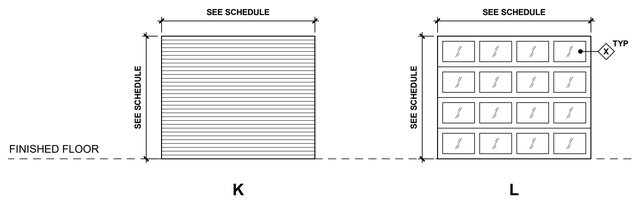


DOOR FRAME TYPES

SCALE: 1/4" = 1'-0"







DOOR PANEL TYPES

SCALE: 1/4" = 1'-0"

DOOR SCHEDULE - ALT. A

DR. NO.	RM. NO.	PR	PANEL SIZE W	PANEL SIZE H	PANEL T	PANEL TYPE	PANEL MAT'L		FRAME TYPE	FRAME MAT'L	HEAD DTL	SILL DTL	JAMB DTL LATCH	JAMB DTL HINGE	HDWR	LABEL	REMARKS
100A	100		6' - 0"	7' - 0"	0"	AA											
101	101		3' - 0"	7' - 0"	1 3/4"	A											
102	102		3' - 6"	7' - 0"	1 3/4"	C											
103A	103	PR	4' - 0"	7' - 0"	1 3/4"	CC											
103B	103		3' - 6"	7' - 0"	1 3/4"	C											
104	104		3' - 0"	7' - 0"	1 3/4"	A											
105	105		3' - 0"	7' - 0"	1 3/4"	A											
106A	106		2' - 0"	7' - 0"	1 3/4"	D											
106B	106		2' - 0"	7' - 0"	1 3/4"	D											
106C	106		2' - 0"	7' - 0"	1 3/4"	D											
106D	106		2' - 0"	7' - 0"	1 3/4"	D											
106E	106		2' - 0"	7' - 0"	1 3/4"	D											
106F	106		3' - 0"	7' - 0"	1 3/4"	D											
107A	107		6' - 0"	5' - 10 3/4"		AA											
107B	117		6' - 0"	5' - 10 3/4"		AA											
107C	107		6' - 0"	7' - 0"	0"	AA											
108	108		6' - 0"	5' - 10 3/4"		AA											
109A	109		2' - 0"	7' - 0"	1 3/4"	D											
109B	109		2' - 0"	7' - 0"	1 3/4"	D											
109C	109		2' - 0"	7' - 0"	1 3/4"	D											
109D	109		3' - 0"	7' - 0"	1 3/4"	D											
110A	110		3' - 0"	7' - 0"	1 3/4"	C											
110B	110		3' - 0"	7' - 0"	1 3/4"	A			5								
110C	110		3' - 0"	7' - 0"	2"	A											
110D	110		3' - 0"	7' - 0"	1 3/4"	A											
111A	111	PR	3' - 6"	7' - 0"	1 3/4"	CC											
111B	111		3' - 0"	7' - 0"	1 3/4"	C											
111C	111		3' - 0"	7' - 0"	1 3/4"	C											
111D	111		3' - 0"	7' - 0"	1 3/4"	C											
112	112		3' - 0"	7' - 0"	1 3/4"	A											
113	113		3' - 0"	7' - 0"	2"	A											
114	114		3' - 0"	7' - 0"	1 3/4"	A											
115	115		3' - 0"	7' - 0"	1 3/4"	A											
116A	116		6' - 0"	7' - 0"	0"	AA											
116B	116		6' - 0"	7' - 0"	0"	AA											
116C	116		6' - 0"	7' - 0"	0"	AA											
116D	116		6' - 0"	7' - 0"	0"	AA											
118	118		3' - 0"	7' - 0"	2"	A											
119	118		3' - 0"	7' - 0"	1 3/4"	A											
120	120	PR	3' - 0"	7' - 0"	1 3/4"	EC											
121	121		3' - 0"	7' - 0"	2"	A											
122	122		3' - 0"	7' - 0"	1 3/4"	A											
123	123		3' - 0"	7' - 0"	2"	A											
124	123		3' - 0"	7' - 0"	1 3/4"	A											
125A	125		2' - 0"	7' - 0"	1 3/4"	D											
125B	125		2' - 0"	7' - 0"	1 3/4"	D											
125C	125		2' - 0"	7' - 0"	1 3/4"	D											
125D	125		2' - 0"	7' - 0"	1 3/4"	D											
125E	125		3' - 0"	7' - 0"	1 3/4"	D											
126	126		3' - 0"	7' - 0"	2"	A											
127	126		3' - 0"	7' - 0"	1 3/4"	A											
128	128		3' - 0"	7' - 0"	1 3/4"	A											
129	129		3' - 0"	7' - 0"	1 3/4"	A											
130A	130		3' - 0"	7' - 0"	1 3/4"	A			6								
130B	130		3' - 0"	7' - 0"	2"	A											
131A			3' - 0"	7' - 0"	1 3/4"	AA			5								
131B	131		6' - 0"	7' - 0"	0"	AA											
134	134		3' - 0"	7' - 0"	1 3/4"	A											
135	135		3' - 0"	7' - 0"	1 3/4"	A											
136	136		3' - 0"	7' - 0"	1 3/4"	A											
137	136	PR	3' - 0"	7' - 0"	1 3/4"	MM											
138	138		3' - 0"	7' - 0"	1 3/4"	A											
139A			3' - 0"	7' - 0"	1 3/4"	A			5								
139B	139		3' - 0"	7' - 0"	2"	A											
141A			3' - 0"	7' - 0"	1 3/4"	A			5								
141B	141		3' - 0"	7' - 0"	2"	A											
142A			3' - 0"	7' - 0"	1 3/4"	A			5								
142B	142		3' - 0"	7' - 0"	2"	A											
142E	135		3' - 0"	7' - 0"	1 3/4"	A											
143A			3' - 0"	7' - 0"	1 3/4"	A			5								
143B	143		3' - 0"	7' - 0"	1 3/4"	A			6								
145A			3' - 0"	7' - 0"	1 3/4"	A			5								
145B	145		3' - 0"	7' - 0"	1 3/4"	A			6								
152	152		17' - 1"	6' - 0"	2"	GATE											
153	153		17' - 1"	8' - 0"	2"	GATE											
154	154		3' - 6"	7' - 0"	1 3/4"	A											
155	155		3' - 6"	7' - 0"	1 3/4"	A											

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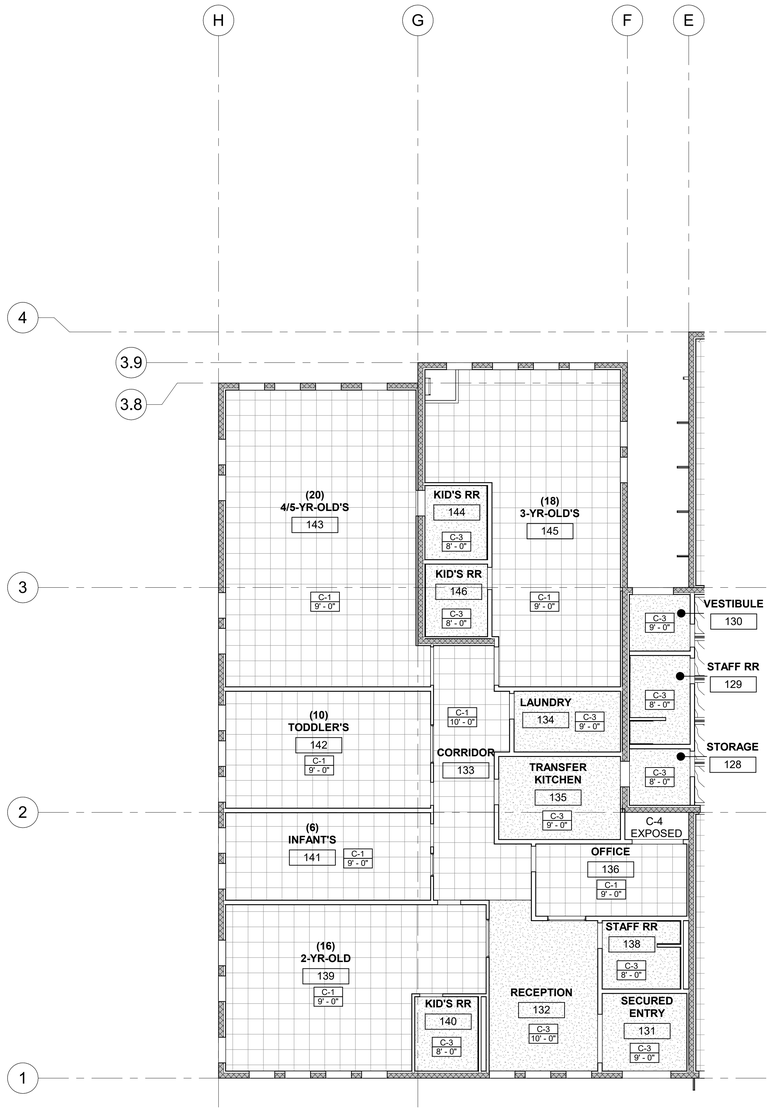
Owner
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
DOOR SCHEDULE - ALT. A

Date: JANUARY 19, 2023
Sheet No:
A2.10A



1 REFLECTED CEILING PLAN - ALT. A
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1. SEE FINISH SCHEDULE FOR CEILING HEIGHTS AND FINISHES NOT SHOWN ON PLAN.
2. SPRINKLER HEADS TO BE CENTERED IN ALL CORRIDORS AND IN CEILING TILES WHERE TILES OCCUR.
3. MAINTAIN MINIMUM 3" CLEAR BETWEEN LIGHTS, DIFFUSERS, SPEAKERS, ETC.
4. CEILING/SOFFITS ELEVATIONS ARE BASED FROM FINISH FLOOR ELEVATIONS.
5. SEE FINISH SCHEDULE FOR EXPOSED STRUCTURE TO BE PAINTED.

KEYNOTES

1. PAINTED GYP. BD. CEILNG, SEE FINISH SCHEDULE
2. PAINTED EXPOSED CEILING, SEE FINISH SCHEDULE.
3. ROOF ACCESS HATCH.

LEGEND

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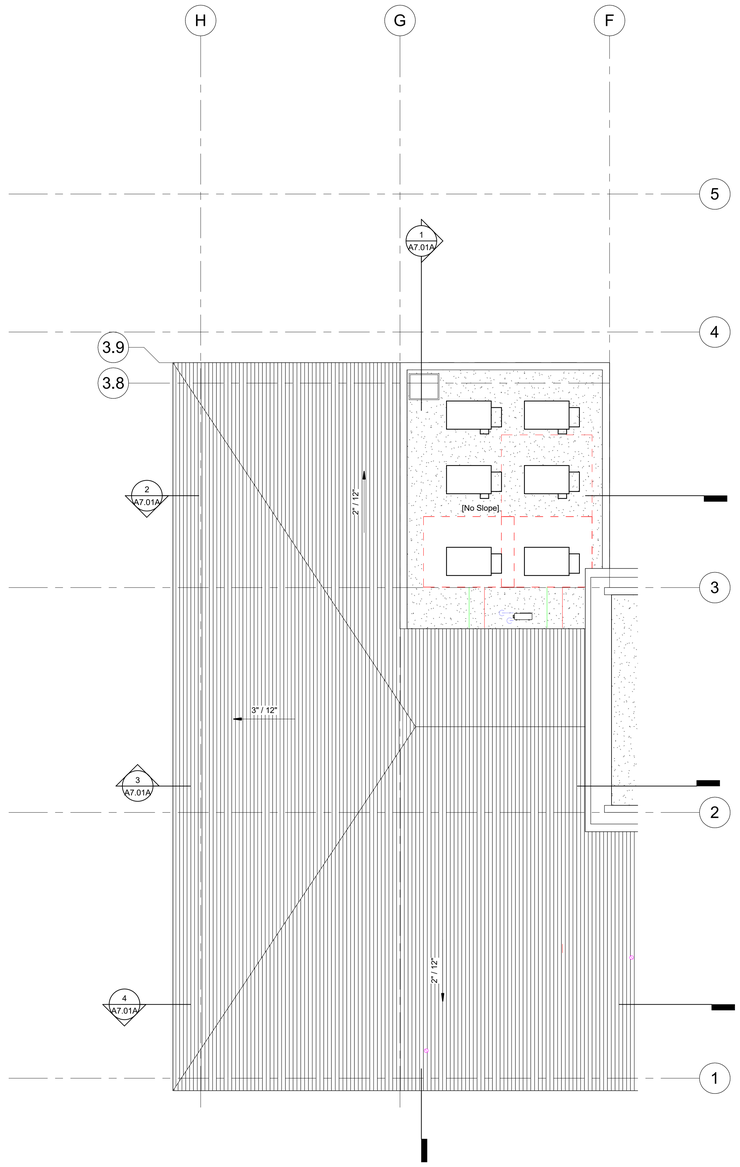
Owner
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
REFLECTED CEILING PLAN - ALT. A

Date: JANUARY 19, 2023
Sheet No:
A3.01A



1 ROOF PLAN - ALT. A
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1. REFER TO MECH. DWGS FOR ROOF TOP MECH EQUIPMENTS.
2. SEE EXTERIOR ELEVATIONS FOR TOP OF WALL ELEVATIONS.
3. ALL ROOF DRAINS SHALL BE A MIN. OF 2'-0" CLEAR FROM ALL PARAPETS OR WALLS.
4. DIRECTIONAL ARROW ON ROOF PLAN INDICATE DIRECTION OF ROOF SLOPE TO ROOF DRAIN.
5. ALL MAIN ROOF DRAINS SHALL BE LOCATED AT THE LOWEST POSSIBLE ROOF ELEVATIONS. NOTIFY THE ARCHITECT OF ANY CONFLICTS PRIOR TO ROOF DRAIN AND PIPING INSTALLATION.
6. CRICKETS ALL ROOF MECHANICAL UNITS, HATCHES, ETC.. SLOPE MIN. 1/2" PER FOOT.
7. THERE ARE TO BE NO FLAT SPOTS ON THE ROOF. ALL AREAS SHALL BE SLOPED.
8. PROVIDED 3'-0" X 3'-0" TRAFFIC PAD AT TOP AND BOTTOM OF EACH ROOF LADDER.
9. TYPICAL PIPE PENETRATIONS, SEE DETAIL XX/AX.XX

KEYNOTES

1. ROOF ACCESS HATCH.
2. ROOF ACCESS LADDER, SEE ROOF DETAILS

LEGEND

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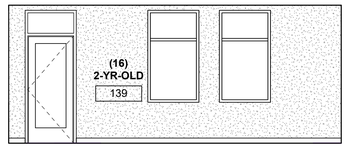
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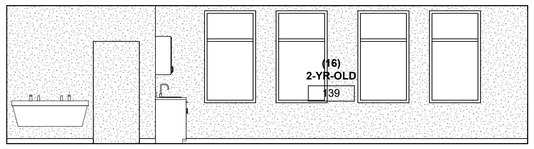
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REV	DATE	DESCRIPTION

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ROOF PLAN - ALT. A

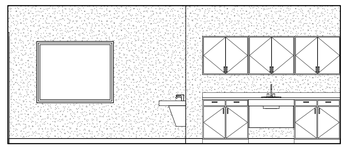
Date: JANUARY 19, 2023
Sheet No:
A4.01A



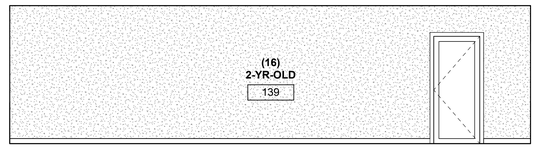
24 2 YR OLD 139 WEST
SCALE: 1/4" = 1'-0"



23 2 YR OLD 139 SOUTH
SCALE: 1/4" = 1'-0"



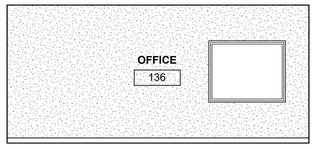
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SCALE: 1/4" = 1'-0"



21 2 YR OLD 139 NORTH
SCALE: 1/4" = 1'-0"



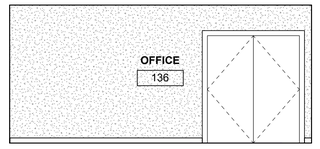
20 OFFICE 136 WEST
SCALE: 1/4" = 1'-0"



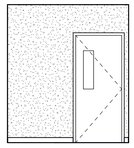
19 OFFICE 136 SOUTH
SCALE: 1/4" = 1'-0"



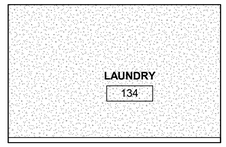
18 OFFICE 136 EAST
SCALE: 1/4" = 1'-0"



17 OFFICE 136 NORTH
SCALE: 1/4" = 1'-0"



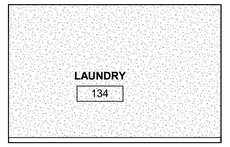
16 LAUNDRY 134 WEST
SCALE: 1/4" = 1'-0"



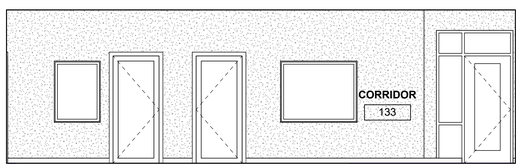
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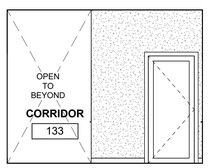
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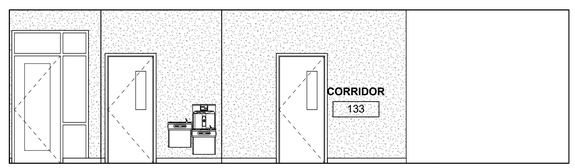
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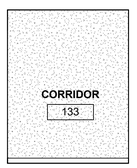
12 CORRIDOR 133 WEST
SCALE: 1/4" = 1'-0"



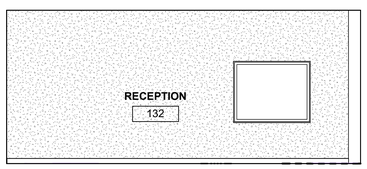
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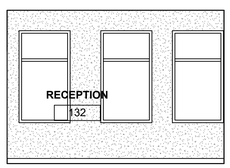
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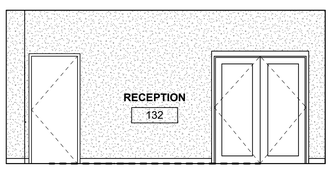
9 CORRIDOR 133 NORTH
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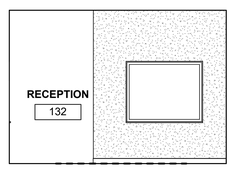
8 RECEPTION 132 WEST
SCALE: 1/4" = 1'-0"



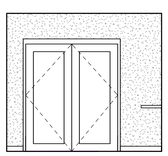
7 RECEPTION 132 SOUTH
SCALE: 1/4" = 1'-0"



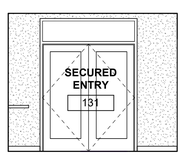
6 RECEPTION 132 EAST
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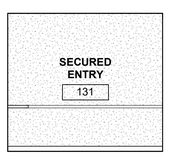
5 RECEPTION 132 NORTH
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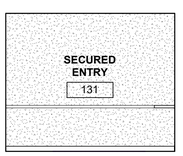
4 SECURED ENTRY 131 WEST
SCALE: 1/4" = 1'-0"



3 SECURED ENTRY 131 SOUTH
SCALE: 1/4" = 1'-0"



2 SECURED ENTRY 131 EAST
SCALE: 1/4" = 1'-0"



1 SECURED ENTRY 131 NORTH
SCALE: 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

1 FIRE EXTINGUISHER
2 ROOF ACCESS LADDER, SEE ROOF DETAILS

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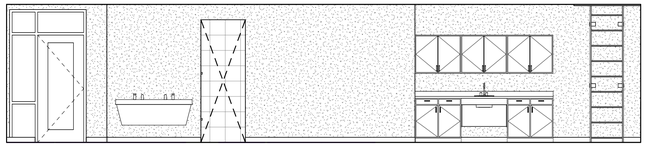
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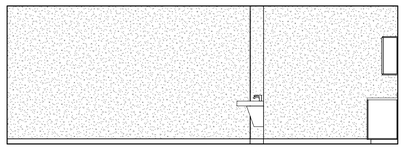
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REV	DATE	DESCRIPTION

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INTERIOR ELEVATIONS - ALT. A

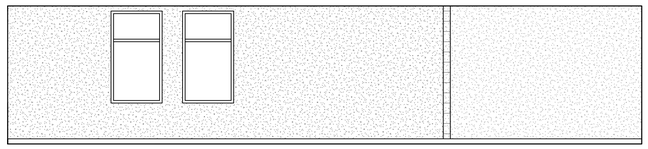
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A5.01A



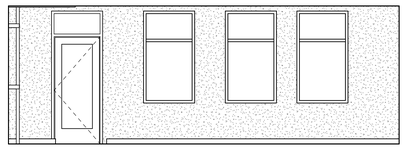
16 3 YR OLD 145 WEST
SCALE: 1/4" = 1'-0"



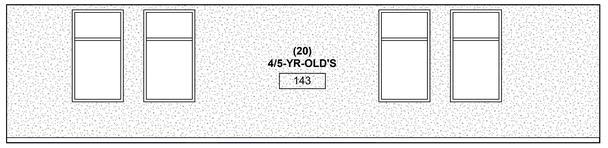
15 3 YR OLD 145 SOUTH
SCALE: 1/4" = 1'-0"



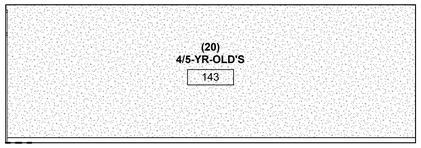
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SCALE: 1/4" = 1'-0"



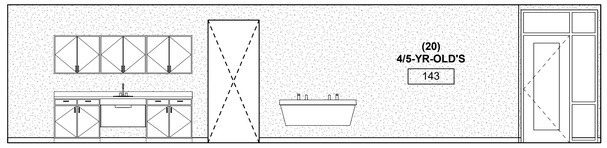
13 3 YR OLD 145 NORTH
SCALE: 1/4" = 1'-0"



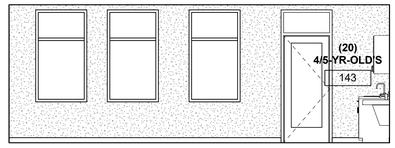
12 4/5 YR OLD 143 WEST
SCALE: 1/4" = 1'-0"



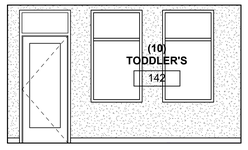
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SCALE: 1/4" = 1'-0"



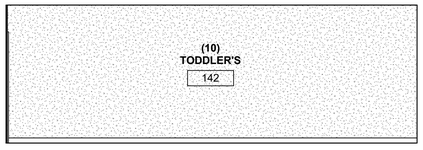
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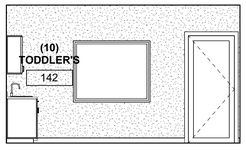
9 4/5 YEAR OLD 143 NORTH
SCALE: 1/4" = 1'-0"



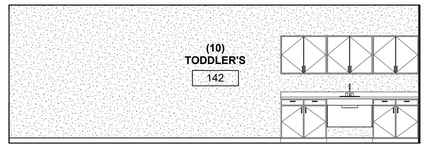
8 TODDLERS 142 WEST
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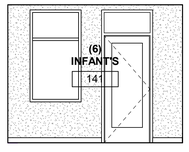
7 TODDLERS 142 SOUTH
SCALE: 1/4" = 1'-0"



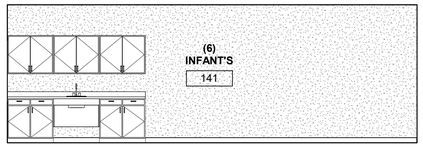
6 TODDLERS 142 EAST
SCALE: 1/4" = 1'-0"



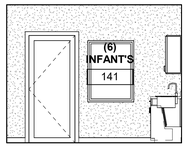
5 TODDLERS 142 NORTH
SCALE: 1/4" = 1'-0"



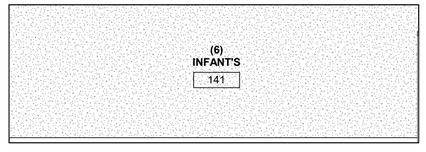
4 INFANTS 141 WEST
SCALE: 1/4" = 1'-0"



3 INFANTS 141 SOUTH
SCALE: 1/4" = 1'-0"



2 INFANTS 141 EAST
SCALE: 1/4" = 1'-0"



1 INFANTS 141 NORTH
SCALE: 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

1 FIRE EXTINGUISHER
2 ROOF ACCESS LADDER, SEE ROOF DETAILS

LEGEND

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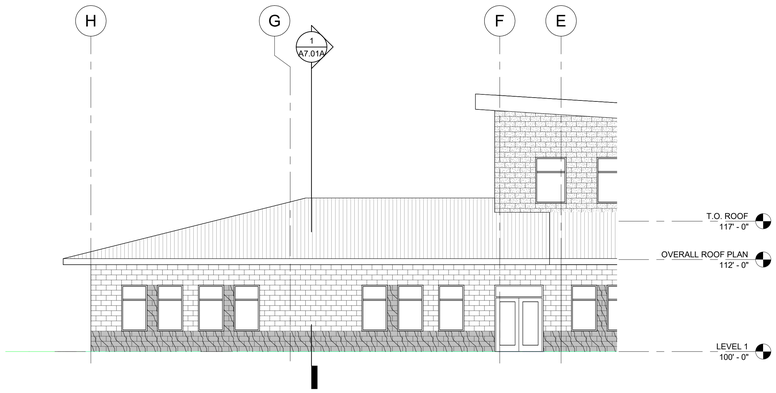
Owner
CITY OF FERNLEY

DESIGN DEVELOPMENT

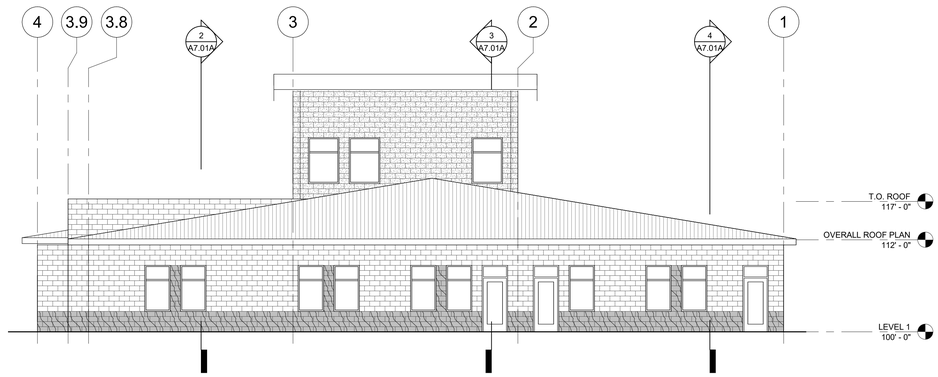
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REV	DATE	DESCRIPTION

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INTERIOR ELEVATIONS - ALT. A

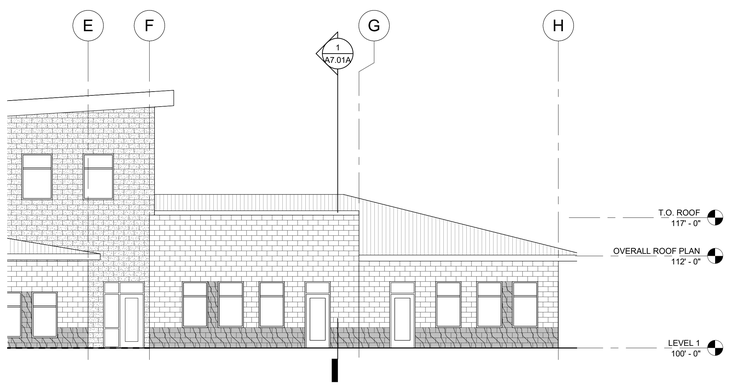
Date: JANUARY 19, 2023
Sheet No:
A5.02A



3 EXTERIOR SOUTH EARLY LEARNING
SCALE: 1/8" = 1'-0"



2 EXTERIOR WEST EARLY LEARNING
SCALE: 1/8" = 1'-0"



1 EXTERIOR NORTH EARLY LEARNING
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
2. ALL EXPOSED MASONRY TO RECEIVE GRAFFITI COATING, INCLUDING ALL SITE WALLS.
3. SEE SHEET AX.XX FOR MATERIAL FINISH INFORMATION.
4. SEE ARCHITECTURAL SITE SHEETS FOR RETAINING WALLS, SITE STAIRS, AND SITE PLANTERS.

KEYNOTES

1. CMU 2
2. METAL PANEL

LEGEND

- GLAZING
- METAL PANELING
- WOOD RAIN SCREEN
- CMU 1
- CMU 2
- CMU 3
- CMU VENEER

KEYPLAN

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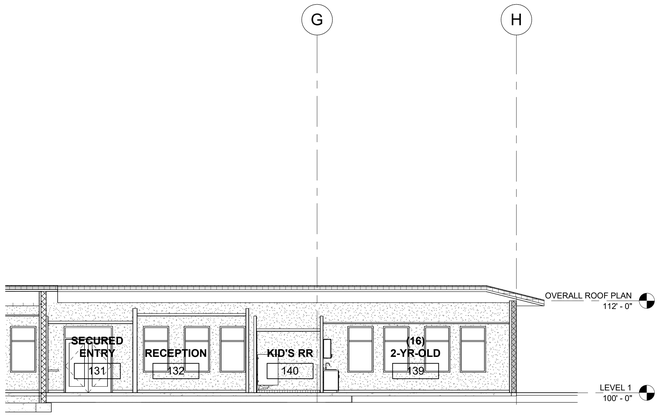
Owner
CITY OF FERNLEY

DESIGN DEVELOPMENT

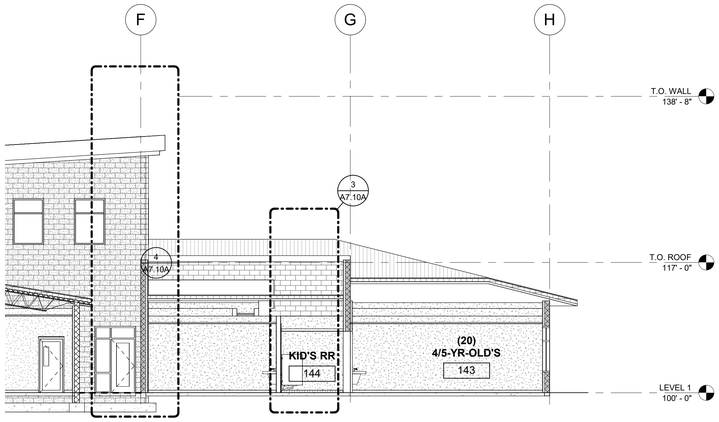
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REV	DATE	DESCRIPTION

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EXTERIOR ELEVATION - ALT. A

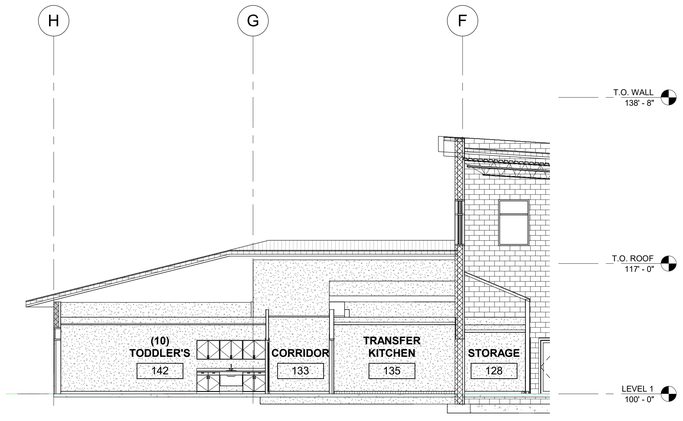
Date: JANUARY 19, 2023
Sheet No:
A6.01A



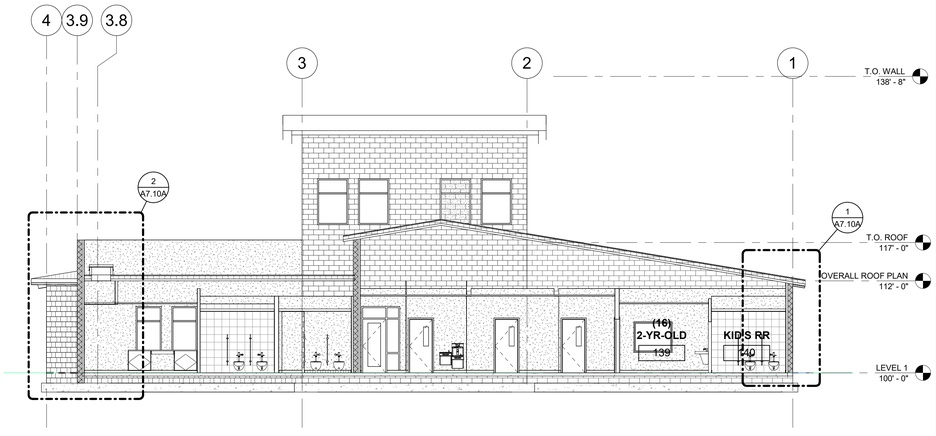
4 Section 11
SCALE: 1/8" = 1'-0"



2 Section 9
SCALE: 1/8" = 1'-0"



3 Section 10
SCALE: 1/8" = 1'-0"



1 Section 8
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
8. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

KEYNOTES

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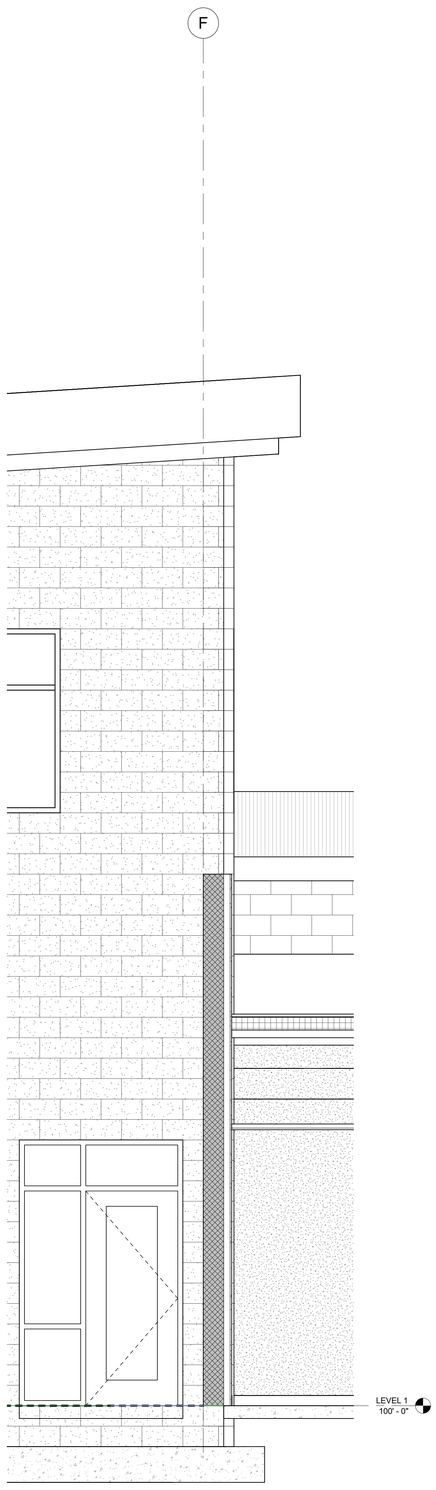
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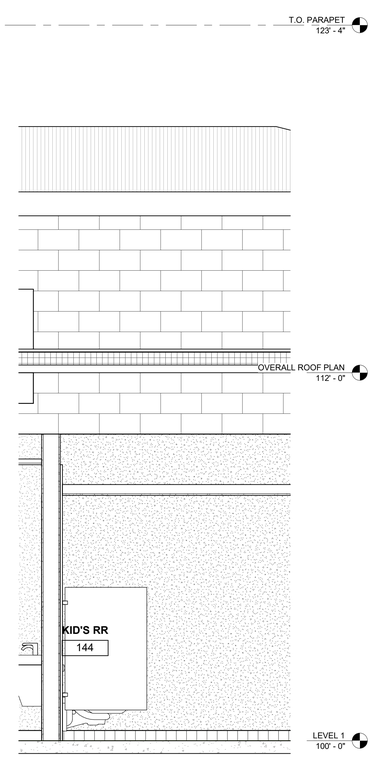
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
BUILDING SECTIONS - ALT. A

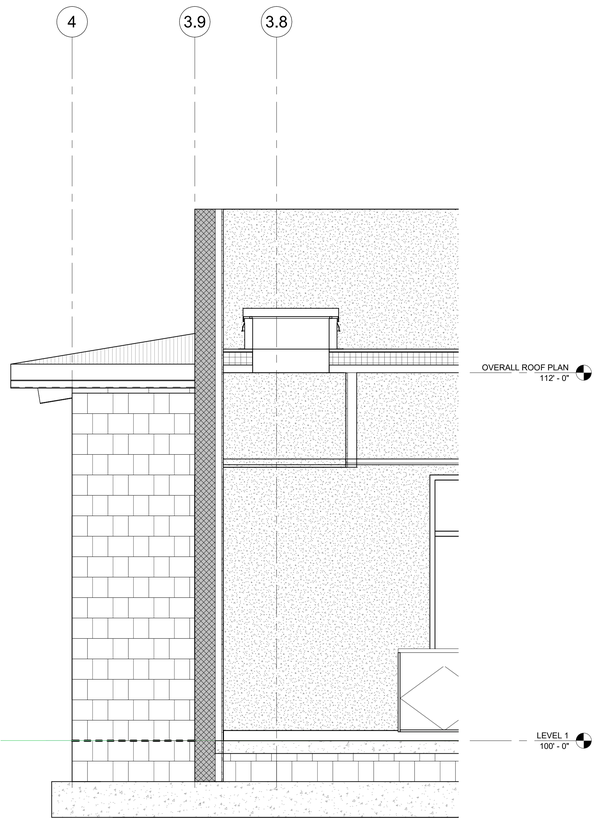
Date: JANUARY 19, 2023
Sheet No:
A7.01A



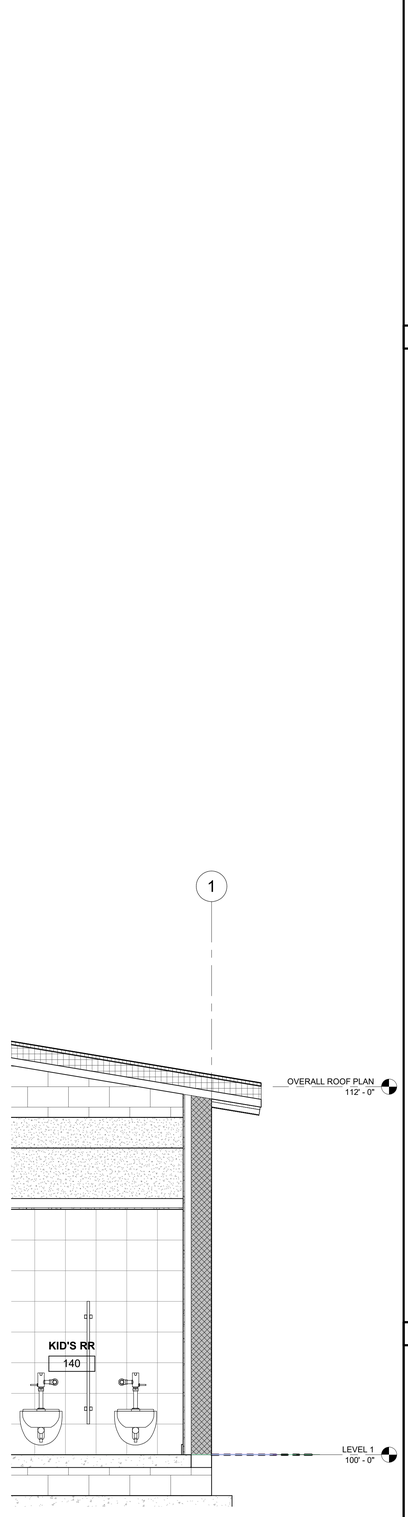
4 WALL SECTION 23 - EL
SCALE: 1/2" = 1'-0"



3 WALL SECTION 22 - EL
SCALE: 1/2" = 1'-0"



2 WALL SECTION 21 - EARLY LEARNING
SCALE: 1/2" = 1'-0"



1 WALL SECTION 20 - EARLY LEARNING
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
8. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

KEYNOTES

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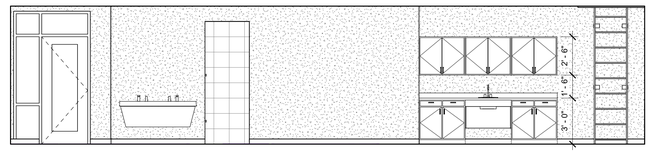
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Owner
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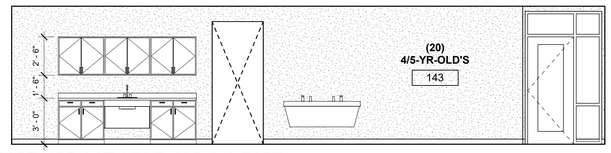
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REV	DATE	DESCRIPTION

Sheet Title
WALL SECTION - ALT. A

Date: JANUARY 19, 2023
Sheet No:
A7.10A



5 CASEWORK AT 3 YR OLD 145 WEST
SCALE: 1/4" = 1'-0"



4 CASEWORK AT 4/5 YR OLD 143 EAST
SCALE: 1/4" = 1'-0"

3 CASEWORK AT TODDLERS 142 NORTH
SCALE: 3/8" = 1'-0"

2 CASEWORK AT INFANTS 141 SOUTH
SCALE: 3/8" = 1'-0"

GENERAL NOTES

KEYNOTES

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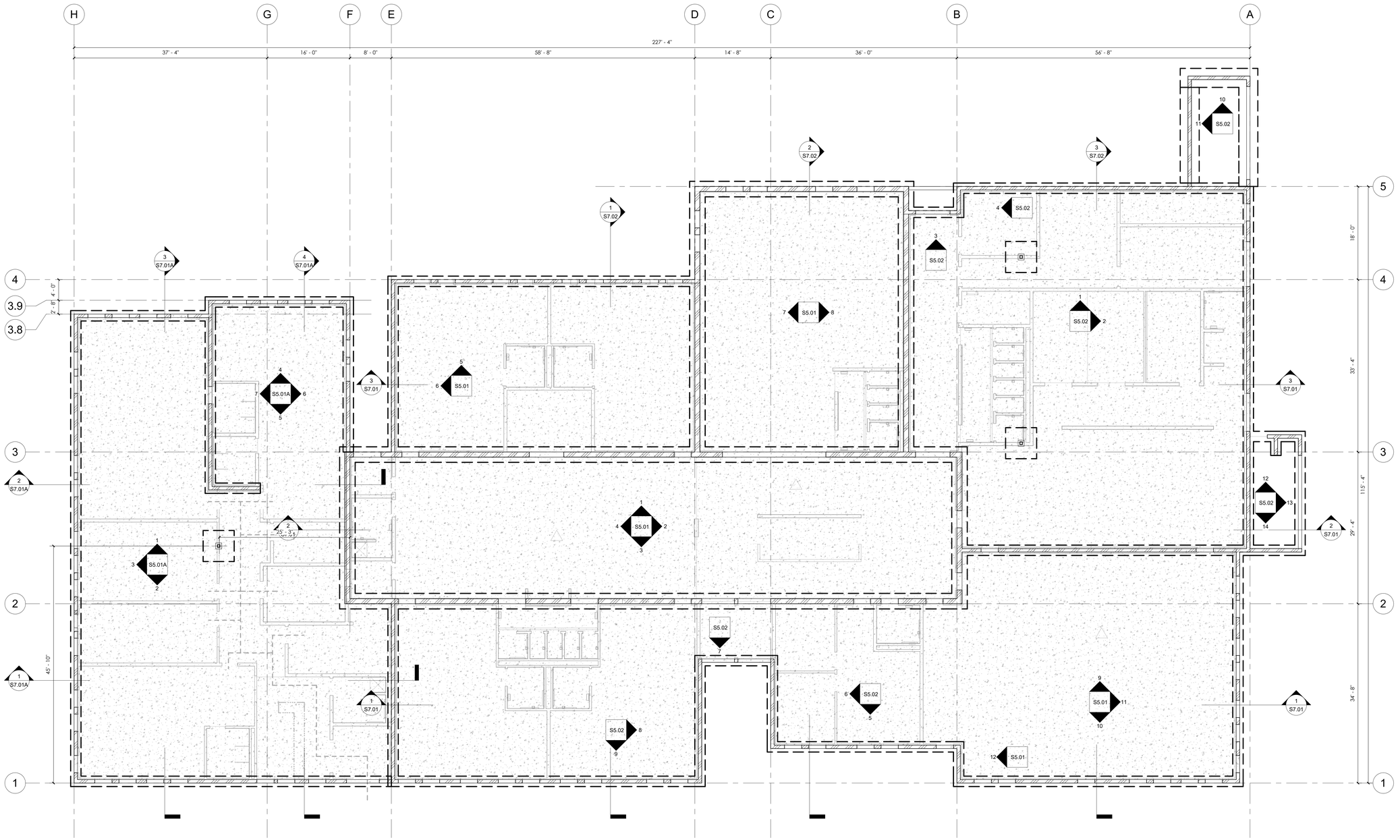
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
CASEWORK PLANS AND ELEVATIONS - ALT. A

Date: JANUARY 19, 2023
Sheet No:
A8.01A



1 OVERALL FOUNDATION PLAN - EARLY LEARNING

1/8" = 1'-0"

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STRUCTURAL ENGINEERS
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CITY OF FERNLEY

Job No: 20-22

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
OVERALL FOUNDATION PLAN - ALT. A

Date: JANUARY 19, 2023

Sheet No:
S1.01A

EARLY LEARNING FOUNDATION PLAN NOTES:

1. T.O. EXTERIOR FOOTINGS = 98' - 8" TYP., U.N.O.
2. T.O. INTERIOR FOOTINGS = 98' - 8" TYP., U.N.O.
3. CENTER ALL COLUMN SPOT FOOTINGS BELOW COLUMNS TYP.
4. NO CONDUIT SHALL BE PLACED IN THE SLAB ON GRADE.
5. SEE 15 / S0.2 WHERE UTILITIES ENTER BUILDING OR ARE ADJACENT TO COLUMN FOOTINGS.
6. SEE 16 / S0.2 & GENERAL NOTES FOR ENGINEERING FILL REQUIREMENTS AND SUBGRADE PREPARATION REQUIREMENTS.
7. SEE ARCHITECTURAL AND/OR MECHANICAL/PLUMBING DRAWINGS FOR ANY FLOOR DRAINS OR SINKS. CONTRACTOR TO COORDINATE.
8. SEE 7 / S0.2 FOR TYPICAL SLAB ON GRADE JOINTS. JOINTS TO BE PLACED AT 10'-0" MAX. O.C. AND LOCATED AT ALL RE-ENTRANT SLAB CORNERS, INTERIOR COLUMN LOCATIONS, OR ANY OTHER SLAB ON GRADE DISCONTINUITIES. SEE 12 / S0.2 FOR SLAB ON GRADE DOWELED JOINT INTERSECTIONS.
9. SEE 6 / S0.2 FOR TYPICAL FOUNDATION REINFORCING LAPS AT CORNERS, ENDS, AND INTERSECTIONS.
10. SEE 10 / S0.2 & 11 / S0.2 FOR TYPICAL REINFORCING HOOKS, BENDS AND HOOKS & BENDS FOR TIES.
11. PLACE 15 MIL VAPOR BARRIER BENEATH CONCRETE SLAB (OVER AGGREGATE BASE) AT LOCATIONS WITH TILE FLOORING (OR OTHER FLOORING SENSITIVE TO MOISTURE). SEAL ALL SEAMS AND SEAL AROUND ALL PENETRATIONS PER VAPOR BARRIER MANUFACTURER RECOMMENDATIONS.
12. SEE 5 / S0.3 FOR TYPICAL CMU CONTROL JOINT. SEE 7 / S0.4 FOR TYPICAL CLAY BRICK EXPANSION JOINTS.
13. CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND CONDITIONS WITH ARCH. PRIOR TO FABRICATION OR ERECTION.
14. SEE SHEETS S0.9 & S0.10 FOR TYPICAL INTERIOR WALL DETAILS.

EARLY LEARNING CONTINUOUS FOOTINGS SCHEDULE

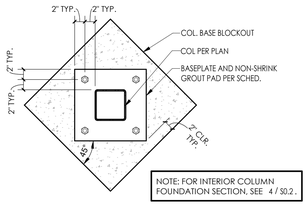
MARK	WIDTH	THICK.	REINFORCING CROSSWISE			REINFORCING LENGTHWISE				TOTAL LENGTH	REMARKS
			SIZE	LENGTH	SPACING (O.C.)	NO.	SIZE	LENGTH	SPACING (O.C.)		
CF2.0	2' - 0"	14"	#4	1' - 6"	24"	3	#5	CONT.	8 11/16"	90'' - 0"	CROSSWISE REINF. TO BE CENTERED BETWEEN VERT. WALL REINF.
CF3.0	3' - 0"	14"	#5	2' - 6"	12"	4	#5	CONT.	9 13/16"	436' - 1 9/16"	

EARLY LEARNING FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK.	REINFORCING CROSSWISE				REINFORCING LENGTHWISE				QUANTITY	REMARKS
				NO.	SIZE	LENGTH	SPACING (O.C.)	NO.	SIZE	LENGTH	SPACING (O.C.)		
F6.0	6' - 0"	6' - 0"	16"	7	#5	5' - 6"	10 7/8"	7	#5	5' - 6"	10 7/8"	3	

EARLY LEARNING BASE PLATE / ANCHOR BOLT SCHEDULE

TYPE	QUANTITY	PLATE THICKNESS "T"	GROUT THICKNESS "G"	NUMBER OF ANCHORS	ANCHOR DIAMETER	ANCHOR EMBEDMENT "E"	ANCHOR PROJECTION "P"	CAST-IN OR EPOXY
BP-1	3	3/4"	1 1/2"	4	3/4"	13"	4 1/4"	CAST-IN



NOTE: FOR INTERIOR COLUMN FOUNDATION SECTION, SEE 4 / S0.2 .

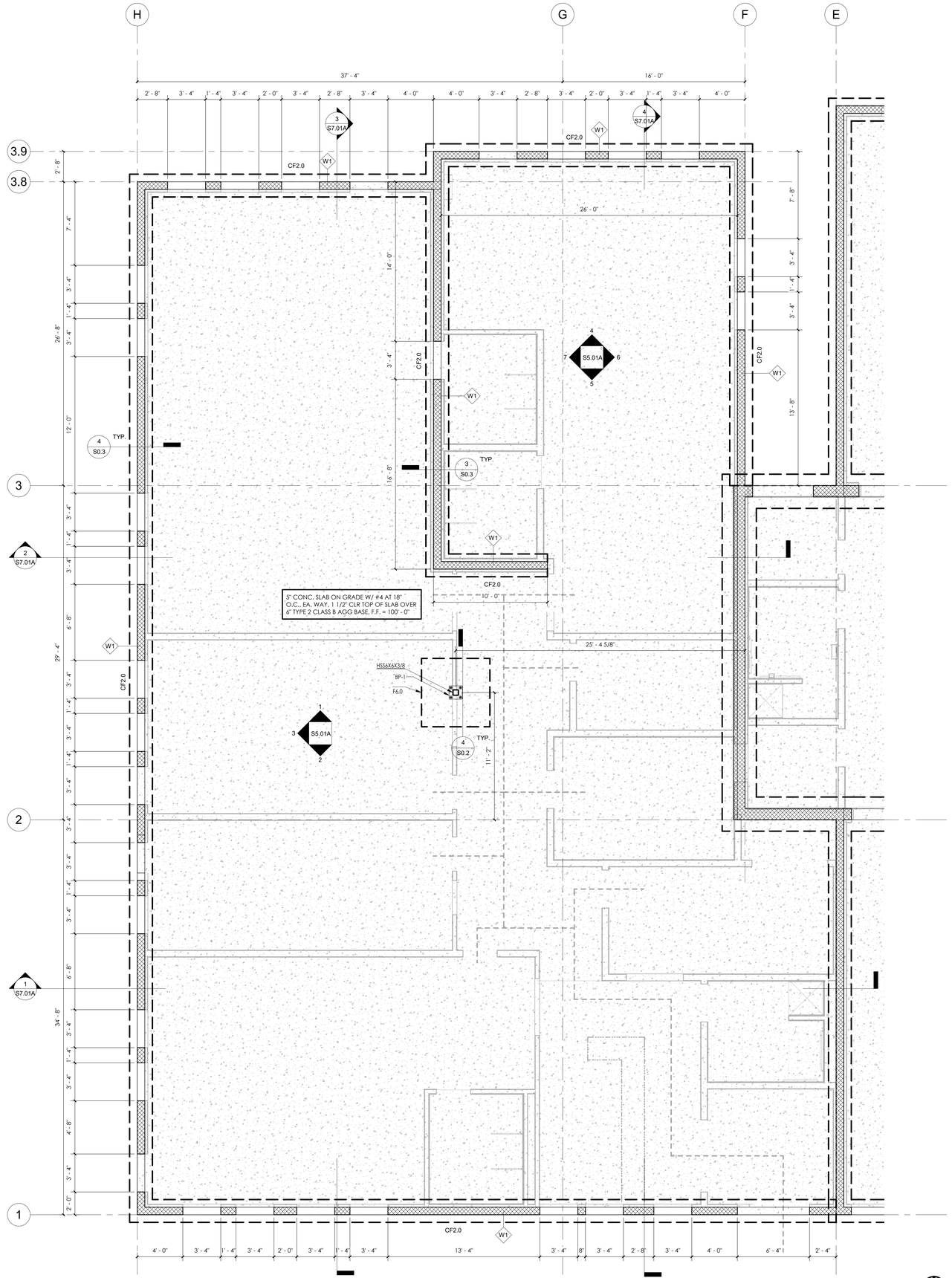
EARLY LEARNING - BASEPLATES

EARLY LEARNING CMU WALL SCHEDULE

MARK	TYPE	WIDTH	REINFORCEMENT		FOOTING DOWELS	REMARKS
			VERT.	HORIZ.		
W1	CMU	8"	#5 AT 24" O.C., CENTERED	#4 AT 32" O.C.	TO MATCH VERTS.	(2) #5 (HORIZ) CONT. BARS AT T.O. WALL AND/OR ROOF & FLOOR LINE, SEE DETAILS

NOTES:

1. **SEE WALL ELEVATIONS FOR ADDITIONAL REINFORCING WHERE REQUIRED.**
2. ALL CMU WALLS TO BE FULLY GROUTED.
3. MASONRY SHALL BE CONSTRUCTED OF HOLLOW OPEN END UNITS WHEREVER POSSIBLE AND SHALL BE LAID IN A RUNNING BOND PATTERN.
4. FOLLOW DETAIL 9 / S0.3 FOR MIN. CMU CORNER AND 12B / S0.3 FOR JAMB REINFORCEMENT.
5. JAMB STEEL BARS IN SHORT SHEAR PIERS ARE NOT ADDITIVE TO WALL SCHEDULE STEEL. PLACE THE MORE RESTRICTIVE REINFORCING.
6. PROVIDE HORIZONTAL CORNER BARS AT ALL CORNERS AND INTERSECTING WALLS PER 9 / S0.3.
7. PROVIDE (2) #5 CONT. HORIZONTAL CHORD STEEL AT ALL ROOF AND FLOOR LINE LEVELS PER DETAILS, U.N.O.
8. PROVIDE CONT. HORIZ. #5 BAR OR BARS AT JOIST WALL ANCHORS PER DETAILS (WHERE OCCURS).
9. ALL HORIZONTAL BARS SHALL BE ANCHORED AROUND END VERTICAL REINFORCING BARS AT JAMBS WITH A STANDARD HOOK.
10. PROVIDE CMU REINFORCEMENT LAP SPLICES PER GENERAL NOTES.
11. BARS E.F. SHALL BE PLACED 1/2" CLEAR OF THE INSIDE FACE OF THE CMU SHELL. INCLUDING AT JAMBS.
12. BARS CENTERED SHALL BE CENTERED IN THE CMU WALL, HORIZ. STEEL TO BE PLACED ALONG SIDE.



1 **FOUNDATION PLAN - EARLY LEARNING**
1/4" = 1'-0"

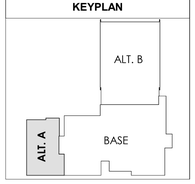
GENERAL NOTES

1. SEE WALL ELEVATIONS FOR MORE RESTRICTIVE WALL REINFORCEMENT. VERTICAL WALL REINFORCING SHALL BE EMBEDDED IN FOUNDATIONS TO MATCH VERTICAL AND TYPICAL REINFORCING IN ELEVATIONS.
2. CONTRACTOR SHALL PROVIDE CONSTRUCTION JOINTS (C.J.) AND CONTROL JOINTS (ALTERNATE S.J. AND D.J.) FOR ALL SLABS ON GRADE IN ACCORDANCE WITH DETAILS 1 / S0.3 & 7 / S0.2, RESPECTIVELY. A DRAWING SHOWING THE PROPOSED LAYOUT OF ALL SLAB JOINTS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL.

KEYNOTES

LEGEND

KEYPLAN



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Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner
CITY OF FERNLEY

Job No: 20-22

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
ENLARGED FOUNDATION PLAN - ALT. A

Date: JANUARY 19, 2023
Sheet No:
S1.11A

ROOF FRAMING PLAN NOTES:

1. B.O. DECK= TOP OF FRAMING (BOTTOM OF DECK) ELEVATION ABOVE THE FINISHED FIRST FLOOR.
2. SEE FOR STEEL JOIST AND JOIST GIRDER DESIGN CRITERIA.
3. SEE 3 / S0.6 & 4 / S0.6 FOR ROOF HUNG PIPING SUPPORTS.
4. FIRE SPRINKLER CONTRACTOR SHALL LAY OUT FIRE SPRINKLER LINES SO THAT NO LINE PASSES UNDER SKYLIGHT/SMOKEVENTS OR FUTURE MECHANICAL UNITS (WHERE THESE ITEMS OCCUR).
5. FOR ROOF HATCH WITH LADDER ACCESS, SEE ARCHITECTURAL.
6. STEEL JOIST AND JOIST GIRDER SUPPLIER SHALL SUBMIT STRUCTURAL CALCULATIONS, SHOP, AND ERECTION DRAWINGS SEALED AND SIGNED BY A NEVADA REGISTERED CIVIL OR STRUCTURAL ENGINEER TO THE ENGINEER OF RECORD WHO AGREES TO REVIEW THESE DOCUMENTS FOR ACCEPTANCE PRIOR TO FABRICATION. STRUCTURAL CALCULATIONS, SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR ACCEPTANCE AFTER THE ENGINEER OF RECORD HAS NOTED HIS/HER ACCEPTANCE.
7. JOIST AND JOIST GIRDER DRAWINGS SHALL SHOW COMPLIANCE WITH THE STANDARD SPECIFICATIONS FOR STEEL JOISTS, K-SERIES, LH-SERIES, DLH-SERIES AND JOIST GIRDERS, 44TH EDITION, PUBLISHED BY THE STEEL JOIST INSTITUTE.
8. JOIST AND JOIST GIRDERS SHALL BE IDENTIFIED AS TO TYPE, SIZE, AND MANUFACTURER BY TAGGING OR OTHER SUITABLE MEANS AT THE TIME OF MANUFACTURE OR FABRICATION. SUCH IDENTIFICATION SHALL BE MAINTAINED CONTINUOUSLY TO THE POINT OF THEIR INSTALLATION IN A STRUCTURE.

EARLY LEARNING METAL DECK SCHEDULE

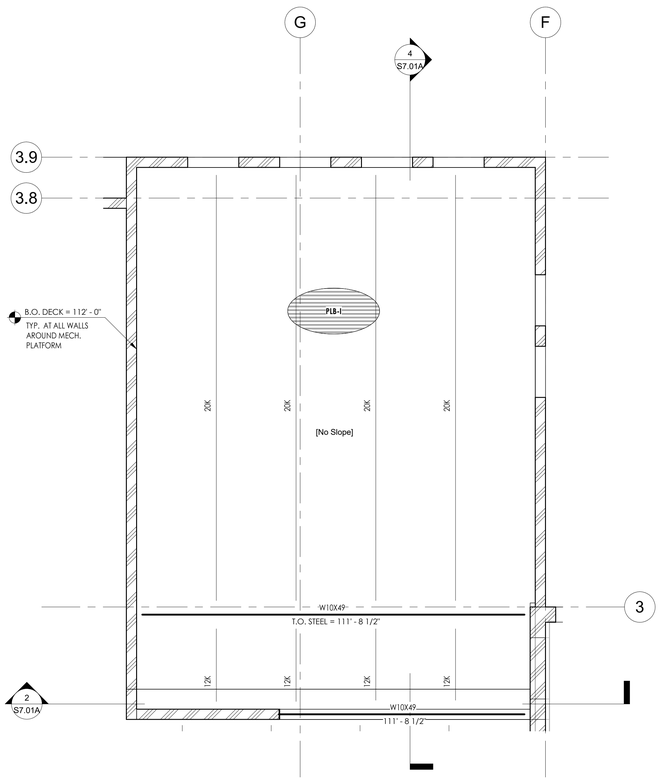
MARK	DECK TYPE (SEE NOTE 1)	DECK SIZE	DECK ATTACHMENT ZONE	DIAPHRAGM CONNECTIONS (SEE NOTES 2, 3 AND 6)			APPROX. TOTAL AREA
				LOW FLUTES		SIDE SEAMS	
				PERPENDICULAR TO SUPPORT	PARALLEL TO SUPPORT		
PLB-I	PLB-36	1 1/2" x 18 GA	I	FASTENERS AT 36/4 PATTERN	FASTENERS AT 12" O.C. MAX	VSC2 AT 24" O.C. MAX	24036 SF

NOTES:

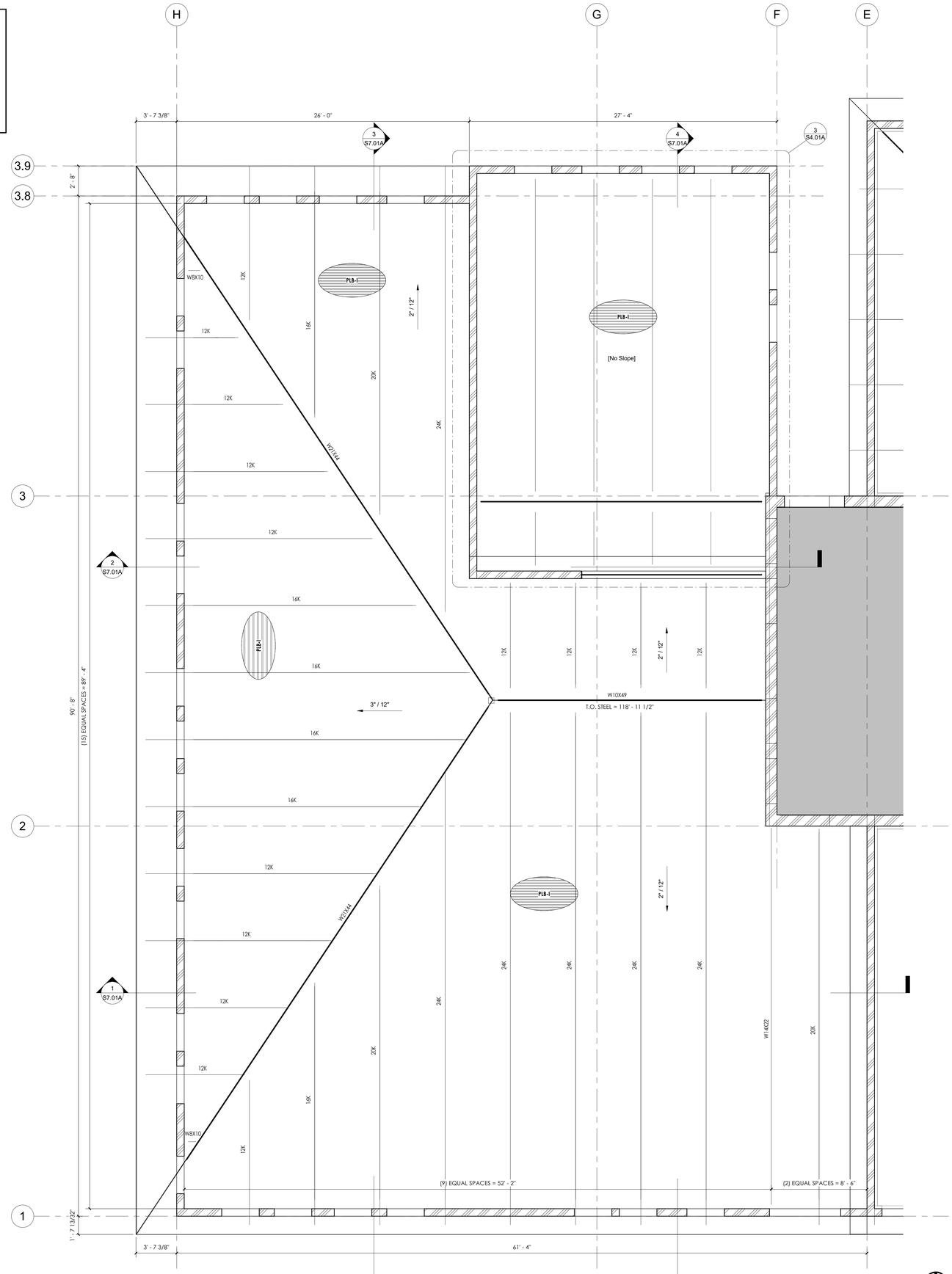
1. METAL DECK SHALL BE AS SPECIFIED BY ASC, VERCO, VULCRAFT, EPIC OR APPROVED EQUAL.
2. CONNECTIONS SHALL BE PLACED IN ACCORDANCE WITH THE DECK MANUFACTURERS STANDARD PATTERN AND REQUIREMENTS.
3. PW = 3/4" PUDDLE WELD, VSC2 = VERCO PUNCHLOK II SIDELAP CONNECTION.
4. DECK SHALL BE PLACED IN EITHER A 2-SPAN OR 3-SPAN CONDITION. SINGLE DECK SPANS WILL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED.
5. REFER TO DECK ATTACHMENT DIAGRAM FOR DECK ATTACHMENT ZONE.
6. FASTENERS SHALL BE #12 SCREWS FOR SUPPORT STEEL THICKNESS LESS THAN 1/8". FASTENERS SHALL BE HILTI HSN-24 FOR SUPPORT STEEL THICKNESS 1/8" TO 3/8". FASTENERS SHALL BE HILTI X-ENP-19 FOR SUPPORT STEEL THICKNESS GREATER THAN 1/4". FOR SUPPORT STEEL THICKNESS BETWEEN 1/4" AND 3/8" (INCLUSIVE), HILTI HSN-24 OR X-ENP-19 FASTENERS MAY BE USED AT CONTRACTOR'S OPTION.

EARLY LEARNING JOIST BEARING PLATE SCHEDULE

MARK	PLATE	ANCHOR	WALL ANCHORAGE LOAD (0.6W OR 0.7E)
P4	8" CMU: 3/4" x 5 1/2" x 1' - 3" 12" CMU: 3/4" x 9" x 1' - 3"	(4) 3/4" x 6" NSA AT 4" O.C.	8" CMU: 8.0 KIPS 12" CMU: 10.8 KIPS
P6	8" CMU: 3/4" x 5 1/2" x 1' - 11" 12" CMU: 3/4" x 9" x 1' - 11"	(6) 3/4" x 6" NSA AT 4" O.C.	8" CMU: 10.4 KIPS 12" CMU: 11.4 KIPS



3 EARLY LEARNING -MECHANICAL ROOF FRAMING PLAN
1/4" = 1'-0"



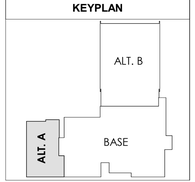
1 EARLY LEARNING - ROOF FRAMING PLAN
1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

LEGEND

KEYPLAN



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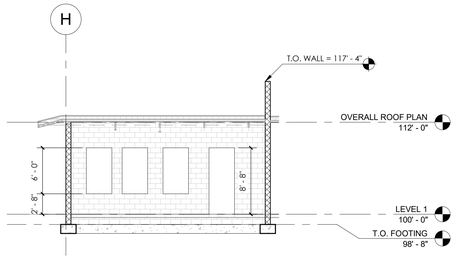
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REV	DATE	DESCRIPTION

Sheet Title
ROOF FRAMING PLAN - ALT. A

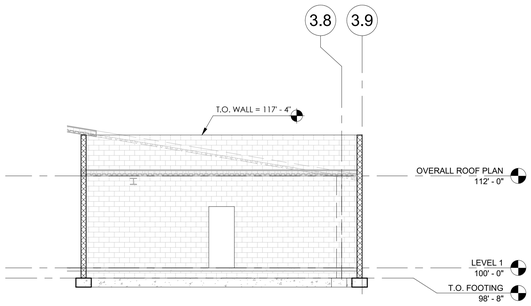
Date: JANUARY 19, 2023
Sheet No:
S4.01A

NOTE:

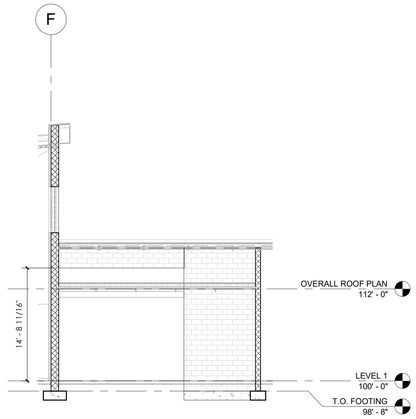
1. WALL OPENINGS LESS THAN 12" IN WIDTH AND/OR HEIGHT NEED NO SPECIAL REINFORCING AND THEREFORE ARE NOT SHOWN FOR CLARITY.
2. COORDINATE ALL MECH./PLUMBING OPENINGS WITH MECH.
3. CONTRACTOR SHALL PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS IN ACCORDANCE WITH DETAIL 5 / S0.3 OR DETAIL 7 / S0.4 AT CLAY BRICK. CONTRACTOR TO SUBMIT A CMU CONTROL JOINT LOCATION PLAN TO THE ARCHITECT/STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. CONTROL JOINTS STARTING IN CMU SHALL RUN CONTINUOUS THROUGH CLAY BRICK AND THE JOINT SHALL CHANGE TYPE AT THE MATERIAL CHANGE.
4. ADDITIONAL HORIZONTAL REINFORCEMENT AT CMU PIERS TO EXTEND 32" ABOVE AND BELOW THE ADJACENT WINDOW OPENING(S) AND 32" ABOVE THE ADJACENT DOOR OPENINGS.



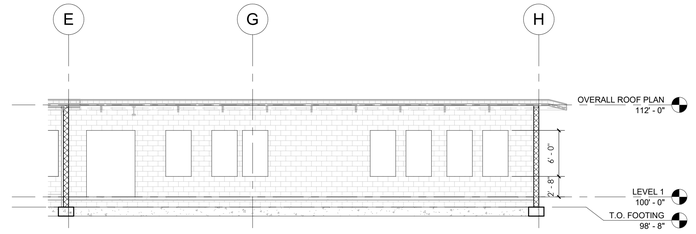
1 WALL ELEVATION - GRID 3.8 (LOOKING NORTH)
1/8" = 1'-0"



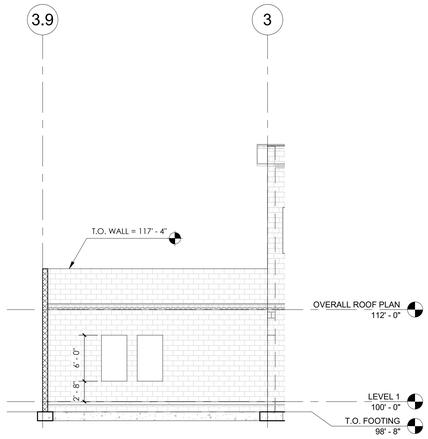
7 WALL ELEV. - (LOOKING WEST)
1/8" = 1'-0"



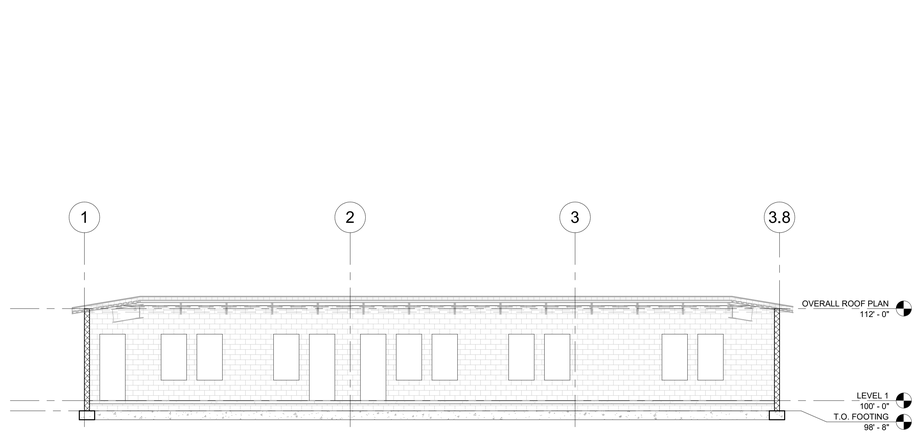
5 WALL ELEV. (LOOKING SOUTH)
1/8" = 1'-0"



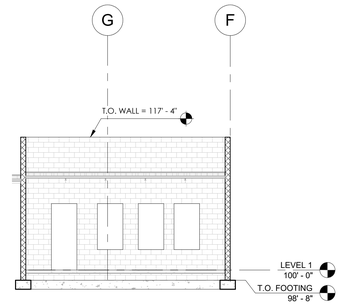
2 WALL ELEVATION - GRID 1 (LOOKING SOUTH)
1/8" = 1'-0"



6 WALL ELEV. - GRID F (LOOKING EAST)
1/8" = 1'-0"



3 WALL ELEVATION - GRID H (LOOKING
1/8" = 1'-0"



4 WALL ELEV. - GRID 3.9 (LOOKING NORTH)
1/8" = 1'-0"

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Job No: 20-22

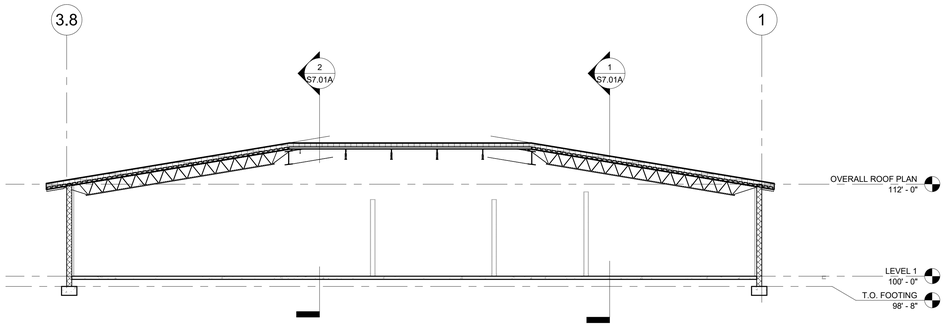
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REV	DATE	DESCRIPTION

Sheet Title
WALL ELEVATIONS - ALT. A

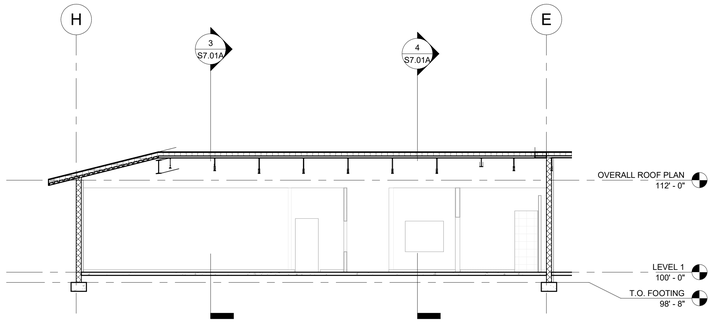
Date: JANUARY 19, 2023
Sheet No:

S5.01A



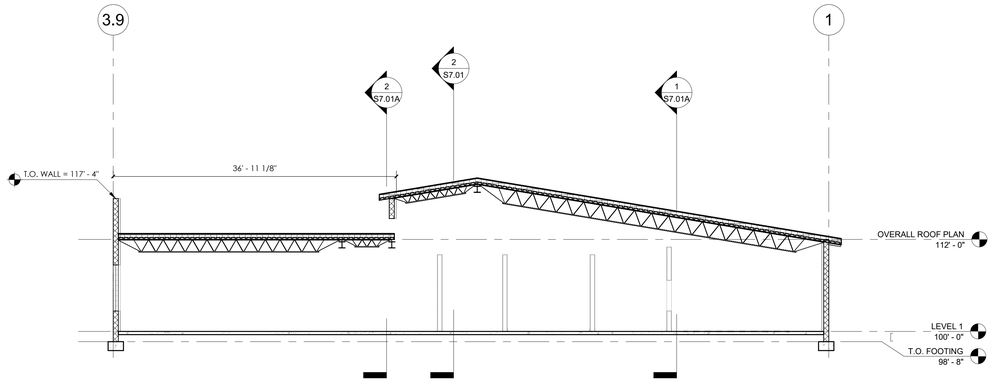
3 EARLY LEARNING - STRUCTURAL SECTION 3

1/8" = 1'-0"



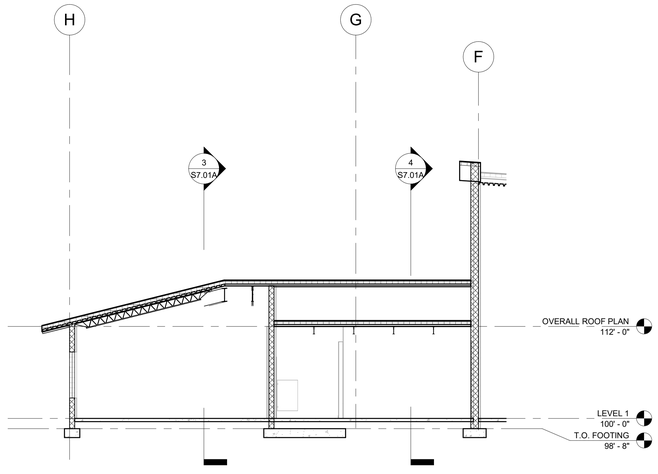
1 EARLY LEARNING - STRUCTURAL SECTION 1

1/8" = 1'-0"



4 EARLY LEARNING - STRUCTURAL SECTION 4

1/8" = 1'-0"



2 EARLY LEARNING - STRUCTURAL SECTION 2

1/8" = 1'-0"

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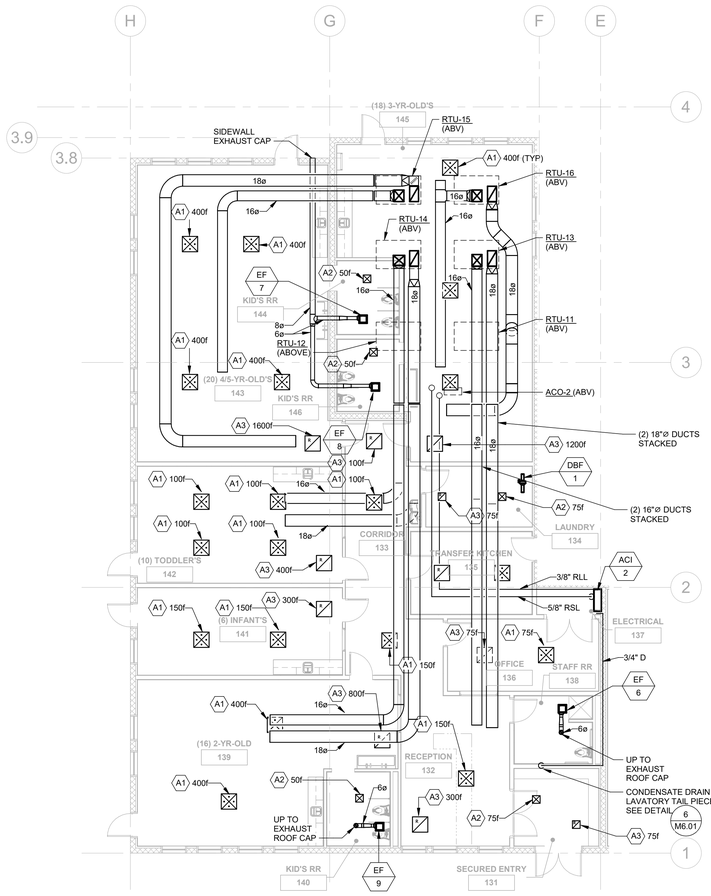
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Sheet Title
STRUCTURAL SECTIONS - ALT. A

Date: JANUARY 19, 2023

Sheet No:

S7.01A



MECHANICAL PARTIAL FLOOR PLAN - ALT. A

1 M1.11A

SCALE: 1/8" = 1'-0"

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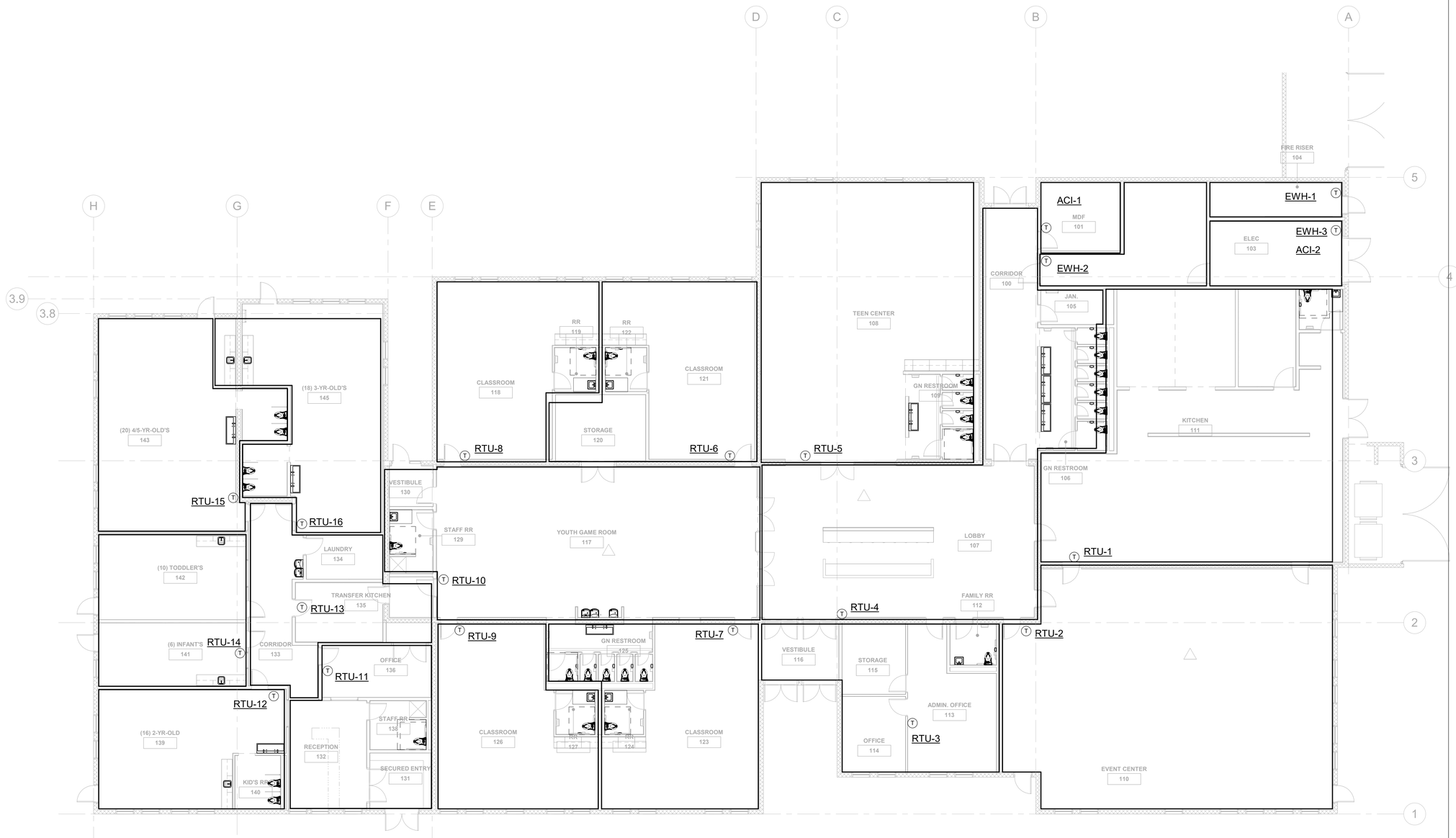
Sheet Title

MECHANICAL PARTIAL FLOOR PLAN - ALT. A

Date: JANUARY 19, 2023

Sheet No:

M1.11A



MECHANICAL PARTIAL ZONING PLAN - ATL. A

SCALE: 1/8" = 1'-0"

1 / M2.2

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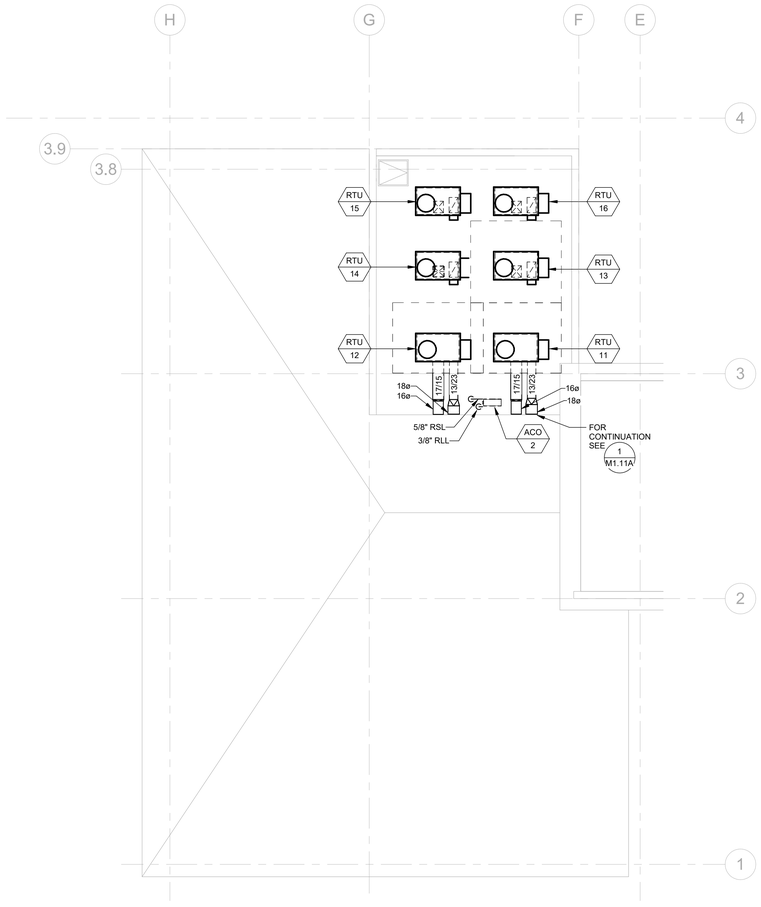
Sheet Title

MECHANICAL PARTIAL ZONING PLAN - ALT. A

Date: JANUARY 19, 2023

Sheet No:

M2.2



MECHANICAL PARTIAL ROOF PLAN - ALT. A

SCALE: 1/8" = 1'-0"

1 M4.01A

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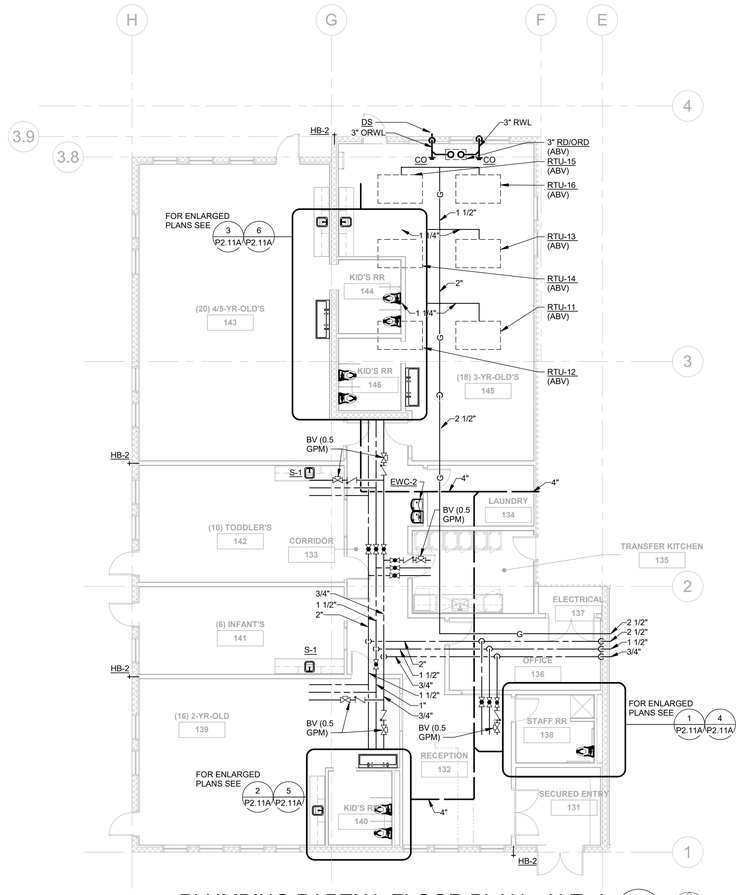
Sheet Title

MECHANICAL PARTIAL ROOF PLAN - ALT. A

Date: JANUARY 19, 2023

Sheet No:

M4.01A



PLUMBING PARTIAL FLOOR PLAN - ALT. A

SCALE: 1/8" = 1'-0"

1 / P1.11A

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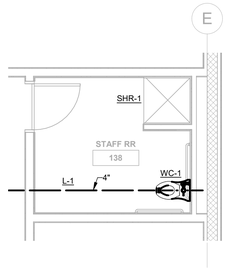
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PLUMBING PARTIAL FLOOR PLAN - ALT. A

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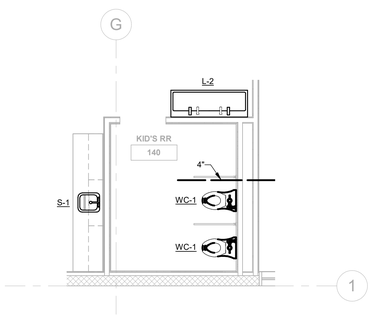
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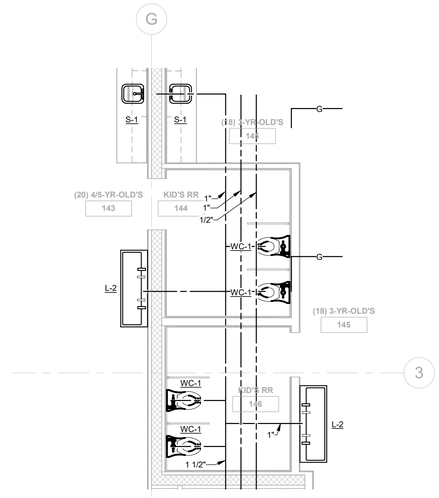
PLUMBING ENLARGED FLOOR PLAN - ALT. A - STAFF RR 138 WASTE AND VENT

SCALE: 1/4" = 1'-0"



PLUMBING ENLARGED FLOOR PLAN - ALT. A - KIDS RR 140 WASTE AND VENT

SCALE: 1/4" = 1'-0"



PLUMBING ENLARGED FLOOR PLAN - ALT. A - KIDS RR 144, 146 WATER AND UTILITIES

SCALE: 1/4" = 1'-0"

PLUMBING ENLARGED FLOOR PLAN - ALT. A - STAFF RR 138 WATER AND UTILITIES

SCALE: 1/4" = 1'-0"

PLUMBING ENLARGED FLOOR PLAN - ALT. A - KIDS RR 140 WATER AND UTILITIES

SCALE: 1/4" = 1'-0"

PLUMBING ENLARGED FLOOR PLAN - ALT. A - KIDS RR 144, 146 WASTE AND VENT

SCALE: 1/4" = 1'-0"

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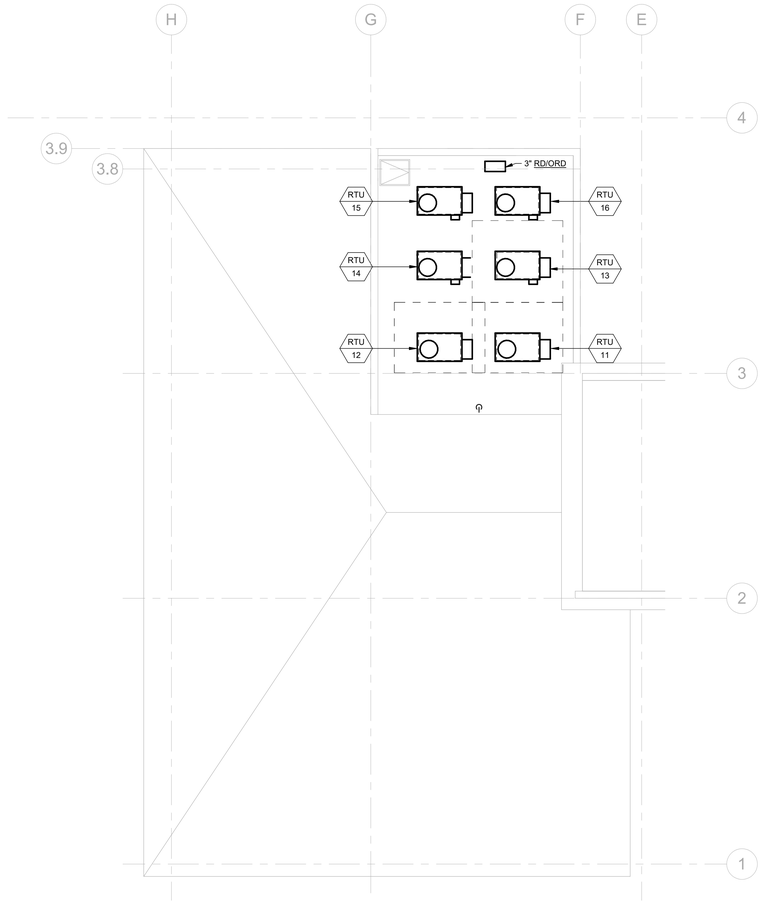
Sheet Title

PLUMBING ENLARGED FLOOR PLANS - ALT. A

Date: JANUARY 19, 2023

Sheet No:

P2.11A



PLUMBING PARTIAL ROOF PLAN - ALT. A (1 / P4.01A)

SCALE: 1/8" = 1'-0"

N

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Sheet Title

PLUMBING PARTIAL ROOF PLAN - ALT. A

Date: JANUARY 19, 2023

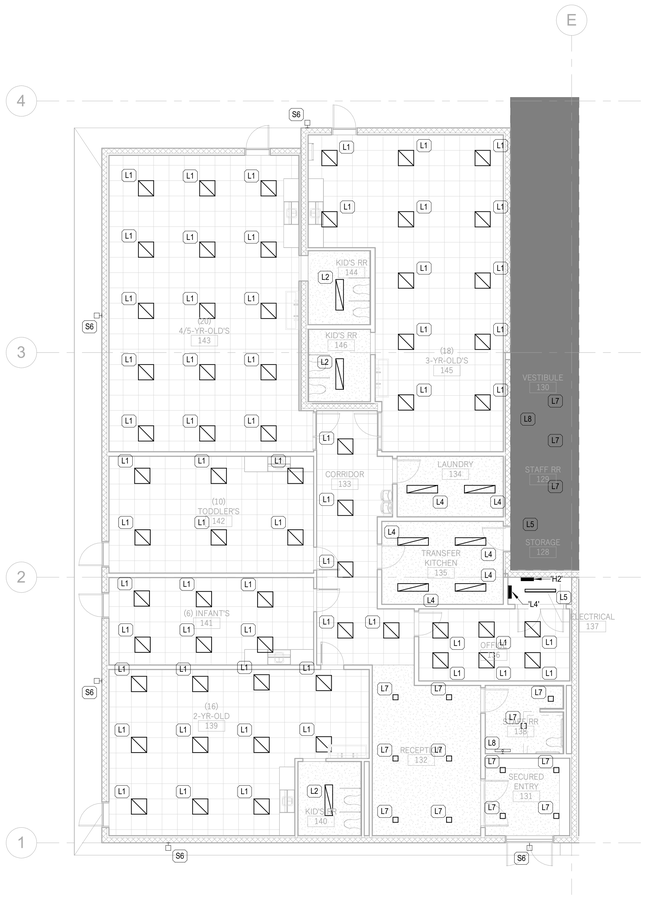
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P4.01A

GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. LIGHTING FIXTURES DESIGNATED AS 'EMERGENCY' SHALL BE WIRED TO OPERATE WITH LOCAL SWITCHING UNDER NORMAL POWER CONDITIONS AND SHALL OPERATE VIA EMERGENCY BATTERY PACK OR INVERTER UPON LOSS OF BUILDING UTILITY POWER ONLT, UNLESS NOTED OTHERWISE.
3. EXIT SIGNS SHALL BE WIRED AHEAD OF LOCAL SWITCHING AND LIGHTING CONTROL PANEL FOR CONTINUOUS OPERATION. EXIT SIGNS SHALL BE WALL-MOUNTED ABOVE DOORS WHERE PRACTICAL. PROVIDE ADDITIONAL EXIT SIGNS AS NECESSARY FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION, PER ARCHITECT'S FINAL PATH OF EGRESS / EXITING PLAN.
4. ELECTRICAL CONDUITS SHALL BE RUN CONCEALED WHERE BUILDING CONSTRUCTION ALLOWS. ANY EXPOSED CONDUIT SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. ANY EXPOSED CONDUIT, FITTING, SUPPORTS, ETC SHALL BE PAINTED TO MATCH THE SURFACE ON WHICH THEY ARE INSTALLED.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, SECTIONS, ELEVATIONS, ETC. FOR EXACT LOCATION OF LIGHTING FIXTURES.
6. EXACT LOCATION AND MOUNTING HEIGHT OF EXTERIOR BUILDING-MOUNTED FIXTURES SHALL BE COORDINATED WITH ARCHITECT PRIOR TO ROUGH-IN.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING FINAL FIXTURE LOCATIONS, ABOVE-CEILING HOUSING CLEARANCES, ETC. WITH MECHANICAL, PLUMBING, SPRINKLER CONTRACTOR AND OTHER TRADES PRIOR TO ROUGH-IN.
8. PROVIDE MULTIPLE-GANG FACEPLATES AS NECESSARY WHERE TWO OR MORE LIGHT SWITCHES ARE INDICATED IN A COMMON LOCATION. SINGLE-GANG FACEPLATES FOR A GROUP OF LIGHT SWITCHES ARE NOT PERMITTED.
9. PROVIDE STAINLESS STEEL DEVICE PLATES IN KITCHEN AND ROUGH-SERVICE AREAS.
10. CONDUIT FOR BUILDING-MOUNTED LIGHT FIXTURES SHALL BE ROUTED THROUGH INTERIOR OF BUILDING. LIGHT FIXTURE BACKBOXES SHALL BE RECESSED.

SHEET NOTES



1 E2.01A LIGHTING PLAN - EARLY LEARNING

Scale: 1/8" = 1'-0"

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LIGHTING PLAN - EARLY LEARNING

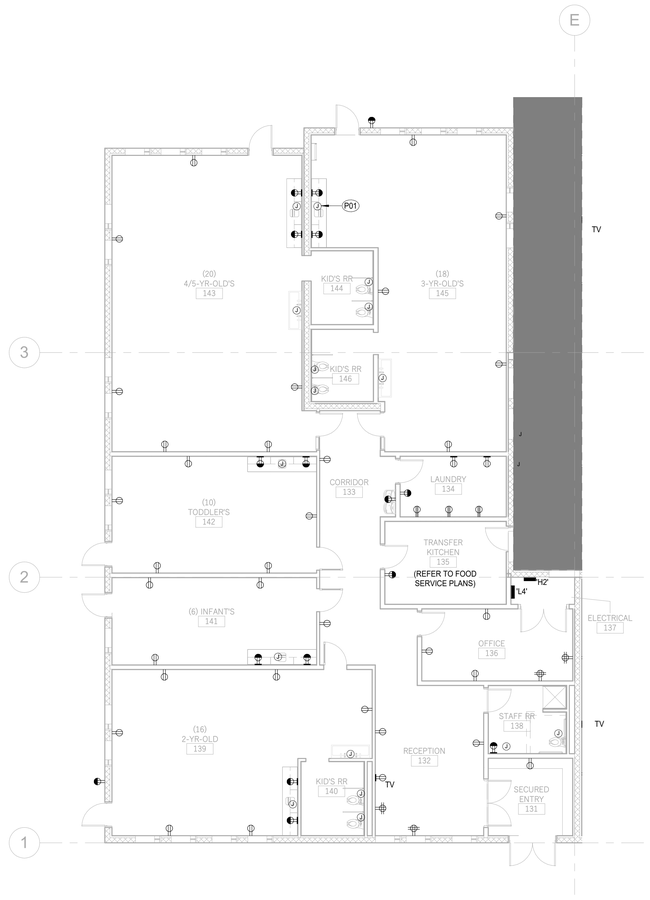
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E2.01A

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2. CONTRACTOR SHALL COORDINATE FINAL RECEPTACLE LOCATIONS WITH TELECOM OUTLETS PRIOR TO ROUGH-IN. EACH TELECOM OUTLET SHALL HAVE A RECEPTACLE LOCATED WITHIN 12", MEASURED FROM CENTER OF DEVICES.
3. MODULAR FURNITURE: ELECTRICAL CONTRACTOR RESPONSIBLE FOR ON-SITE COORDINATION WITH FURNITURE SUPPLIER TO VERIFY FINAL WIRING REQUIREMENTS, CIRCUITING, J-BOX LOCATIONS, ETC. PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR TO PROVIDE ALL HARDWARE AND ACCESSORIES NECESSARY FOR A COMPLETE INSTALLATION. FURNITURE SUPPLIER TO PROVIDE POWER WHIPS, ELECTRICAL CONTRACTOR TO MAKE FINAL CONNECTIONS TO FURNITURE. DESIGN INTENT OF THESE DRAWINGS ASSUMES 3-CIRCUIT, 8-WIRE MODULAR FURNITURE SYSTEM (3H, 3N, G, DED. G). NO MORE THAN SIX (6) WORKSTATIONS PER EACH 3-CIRCUIT GROUP, UNLESS NOTED OTHERWISE.
4. COORDINATE EXACT MOUNTING HEIGHTS AND LOCATIONS OF GENERAL RECEPTACLES, SPECIAL OUTLETS AND DISCONNECT SWITCHES IN SHOP AREAS WITH OWNER AND EQUIPMENT SUPPLIERS PRIOR TO ROUGH-IN.
5. CONDUITS FOR ROOF-MOUNTED DEVICES AND EQUIPMENT SHALL BE RUN BELOW ROOF DECK/SYSTEM. ROOF MOUNTED CONDUITS WILL ONLY BE CONSIDERED AND APPROVED IN WRITING BY THE ARCHITECT/ENGINEER.
6. VERIFY EXACT ELECTRICAL REQUIREMENTS, PLUG CONFIGURATIONS, ETC., AND FINAL LOCATIONS OF OWNER-PROVIDED EQUIPMENT WITH OWNER'S REPRESENTATIVE PRIOR TO ORDERING OF MATERIALS AND ROUGH-IN.

(###) SHEET NOTES

P01 120V HARDWIRE CONNECTION TO AUTOMATIC FAUCET/VALVE. TYPICAL ALL J-BOXES AT PLUMBING FIXTURES.



1 E3.01A POWER PLAN - EARLY LEARNING
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POWER PLAN - EARLY LEARNING

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E3.01A

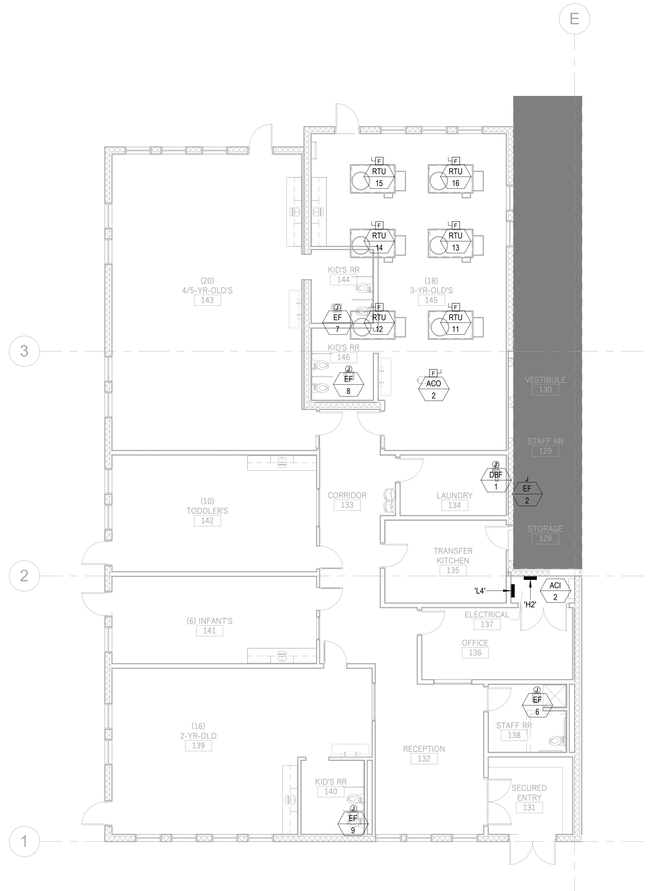
Mechanical Equipment Schedule Early Learning

EQUIPMENT ID	EQUIPMENT DESCRIPTION	VOLTAGE	POLES	WATTAGE	WIRE SIZE (#12 UNO)	DISCONNECT	NEMA RATING	FUSE SIZE	PANEL - CIRCUIT	NOTES
ACO-2	SPLIT SYSTEM	208 V	2	0 VA		30A	3R		L4 - 7,9	
DBF-1	DRYER BOOSTER FAN	120 V	1	70 VA		HARDWIRE	1		L4 - 13	CORD & PLUG
EF-6	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1		L4 - 11	
EF-7	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1		L4 - 1	
EF-8	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1		L4 - 3	
EF-9	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1		L4 - 5	
RTU-11	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	15A	H2 - 25,27,29	
RTU-12	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	15A	H2 - 31,33,35	
RTU-13	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	15A	H2 - 19,21,23	
RTU-14	ROOF TOP UNIT	480 V	3	11620 VA		30A	3R	20A	H2 - 13,15,17	
RTU-15	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	15A	H2 - 7,9,11	
RTU-16	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	15A	H2 - 1,3,5	

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2. THE CONTRACTOR SHALL OBTAIN ALL WIRING DIAGRAMS ASSOCIATED WITH THE MECHANICAL EQUIPMENT CONTROLS FROM THE MECHANICAL/CONTROLS CONTRACTOR. CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY CONTROLS CONTRACTOR. ANY CONDUIT REQUIRED FOR CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR AND SHALL BE COMPLETED UNDER THE SUPERVISION OF THE MECHANICAL/CONTROLS CONTRACTOR.
3. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL UNIT MODEL NUMBERS AND SPECIFIC ELECTRICAL REQUIREMENTS, OPTIONS AND ACCESSORIES.
4. INFORMATION ON ARCHITECTURAL AND MECHANICAL DRAWINGS SUPERSEDE INFORMATION SHOWN ON ELECTRICAL DRAWINGS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS PRIOR TO ROUGH-IN.
5. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING ELECTRICAL REQUIREMENTS FOR FINAL MECHANICAL EQUIPMENT INSTALLED. SHOULD THERE BE ANY DISCREPANCY BETWEEN ACTUAL EQUIPMENT INSTALLED AND ELECTRICAL OR MECHANICAL DRAWINGS, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY FOR CLARIFICATION AND FURTHER DIRECTION.
6. LOCATE ALL DISCONNECTS, STARTERS AND DRIVES WHERE ACCESSIBLE. PROVIDE ACCESS AND CLEARANCE AS REQUIRED PER NEC. PROVIDE ACCESS HATCH IF LOCATED ABOVE HARD LID CEILING.
7. DISCONNECT SWITCHES, STARTERS OR DRIVES PROVIDED BY MECHANICAL AND SHIPPED LOOSE ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO INSTALL.
8. PIPING AND / OR DUCTWORK SHALL NOT BE ROUTED IN THE DEDICATED ELECTRICAL EQUIPMENT SPACE AT OR ABOVE ELECTRICAL SWITCHBOARDS, DISTRIBUTION BOARDS, PANELBOARDS, ETC. (PER 2011 NEC 110.26E). PROVIDE DEPTH AND WIDTH OF WORKING SPACE FOR ELECTRICAL EQUIPMENT AS REQUIRED PER 2011 NEC 110.26.

(###) SHEET NOTES



1 E4.01A MECHANICAL POWER PLAN - EARLY LEARNING

Scale: 1/8" = 1'-0"

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MECHANICAL POWER PLAN - EARLY LEARNING

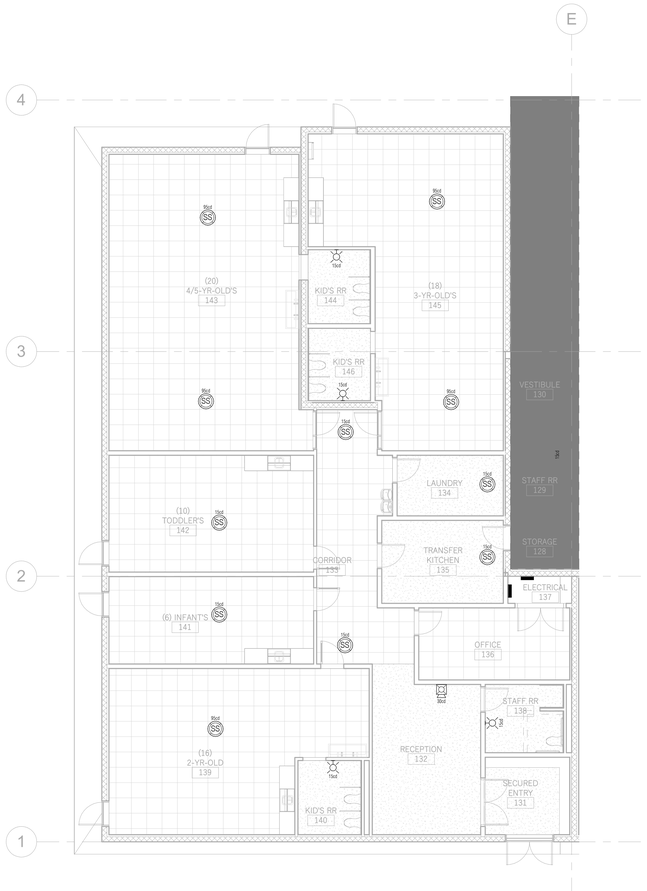
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E4.01A

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2. COORDINATE DEVICE PLACEMENT IN CEILING WITH OTHER TRADES, SUCH AS LIGHTING, TELECOM, MECHANICAL, ETC. ALL FIRE ALARM DEVICES LOCATED IN CEILING TILES SHALL BE LOCATED IN THE CENTER OF THE CEILING TILE UNLESS SPECIFICALLY NOTED OR APPROVED TO DO OTHERWISE.
3. INFORMATION ON ARCHITECTURAL AND MECHANICAL DRAWINGS SUPERSEDE INFORMATION SHOWN ON ELECTRICAL DRAWINGS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS PRIOR TO ROUGH-IN.

SHEET NOTES



1 E5.01A FIRE ALARM PLAN - EARLY LEARNING

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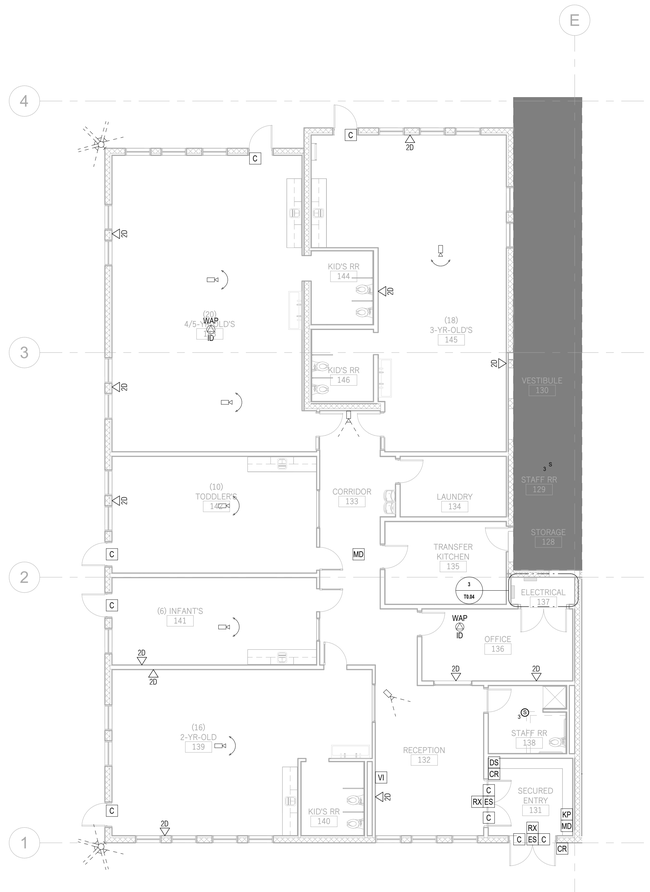
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Sheet Title
FIRE ALARM PLAN - EARLY LEARNING

Date: JANUARY 19, 2023
Sheet No:
E5.01A

GENERAL NOTES

SHEET NOTES



1 T2.01A TELECOM PLAN - EARLY LEARNING

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Sheet Title
TELECOM PLAN - EARLY LEARNING

Date: JANUARY 19, 2023

Sheet No:
T2.01A



1 LIFE SAFETY PLAN - GYMNASIUM
SCALE: 3/32" = 1'-0"

NORTH

GENERAL NOTES

1 PER 2019 CBC SECTION 703.7: FIRE WALLS. FIRE BARRIERS, AND SMOKE PARTITIONS OR ANY OTHER WAL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL: (1) BE LOCATED WITHIN 15' OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30' MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION; AND (3) INCLUDE LETTERING NOT LESS THAN 3" IN HEIGHT WITH A MINIMUM 3/8" STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORKING: "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER WORDING.

KEYNOTES

LEGEND

KEYPLAN

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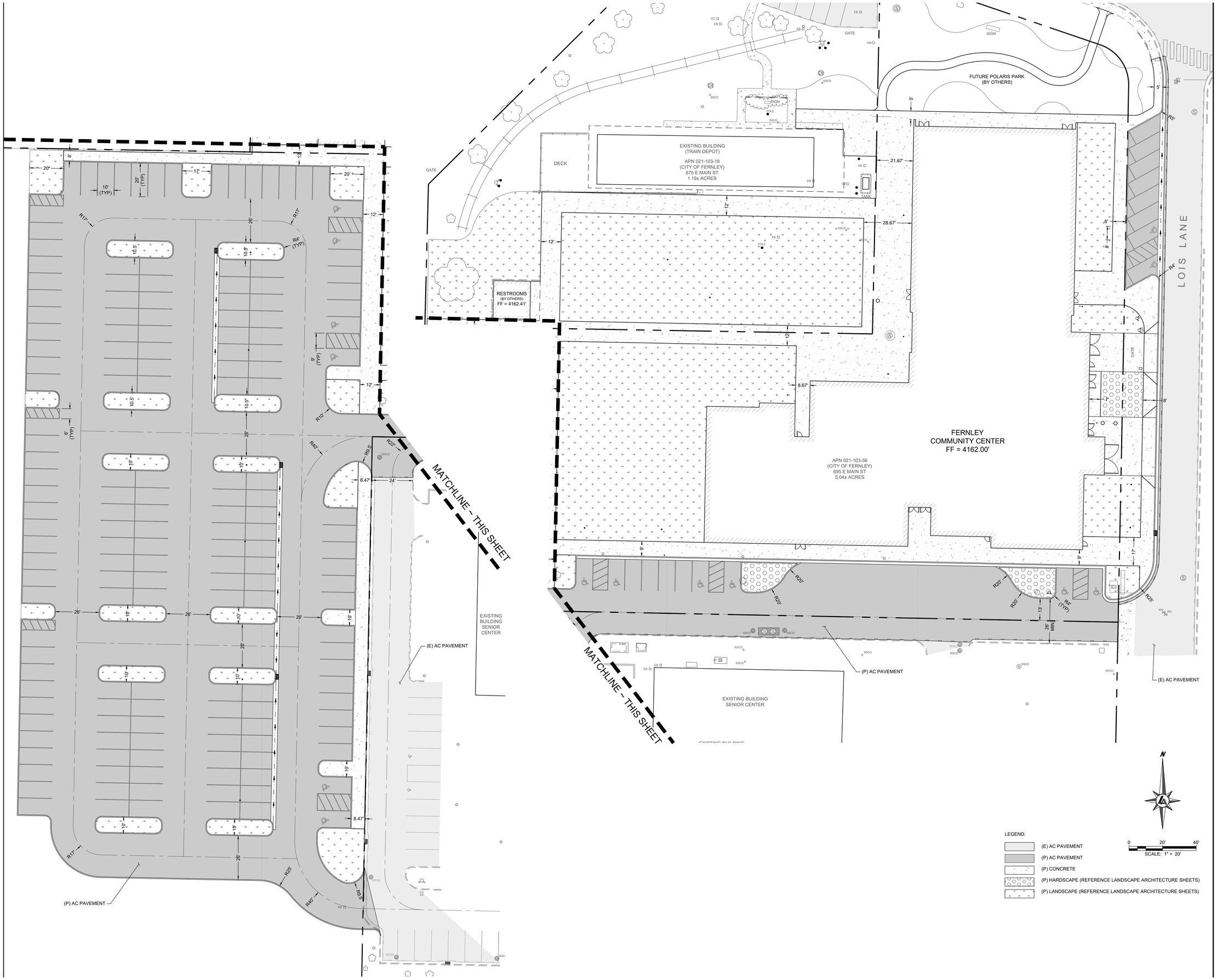
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Sheet Title
LIFE SAFETY PLAN - ALT. B

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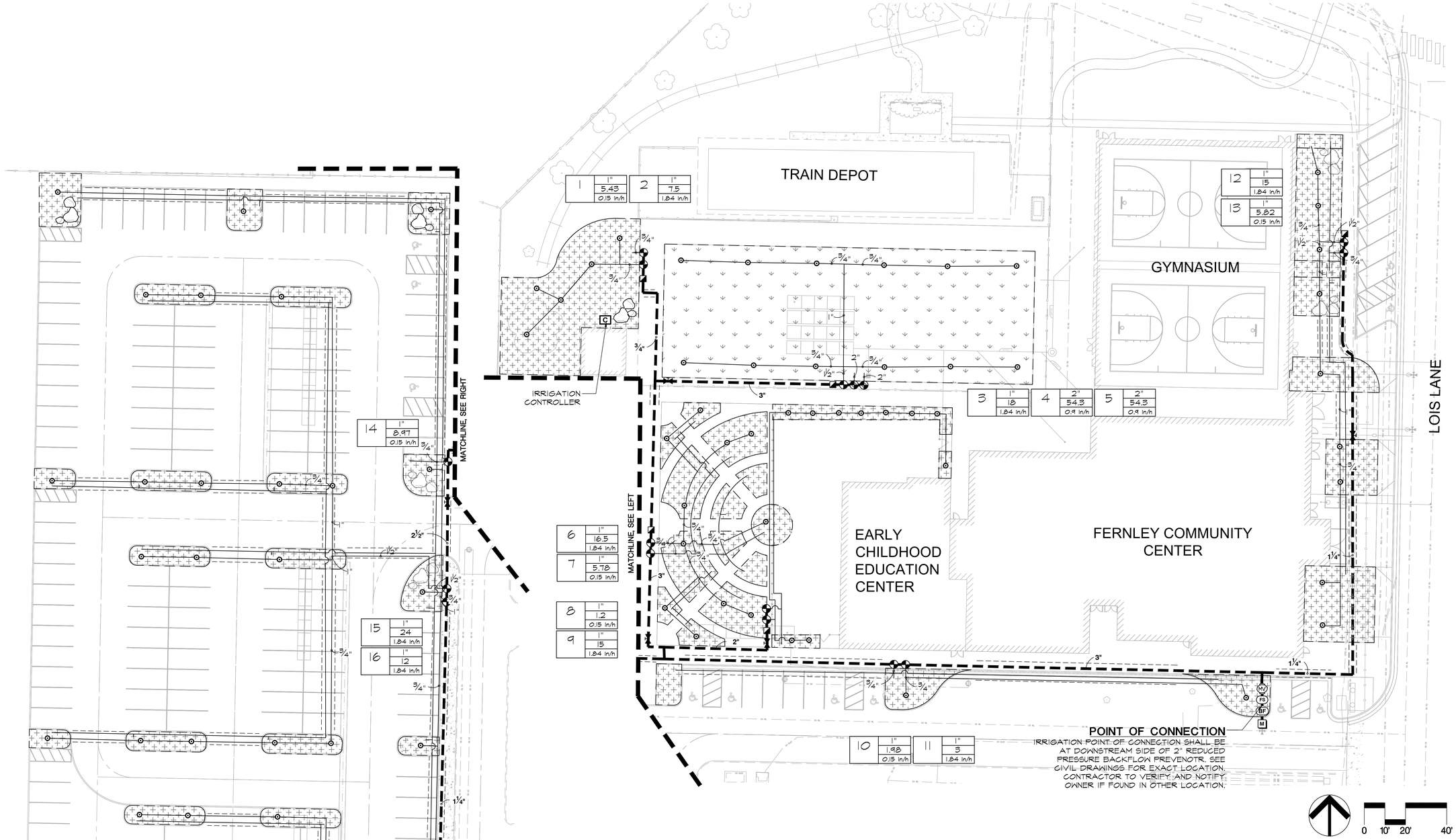
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Sheet Title
SITE PLAN
ALTERNATE B

Date: JANUARY 19, 2023
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C2.00B



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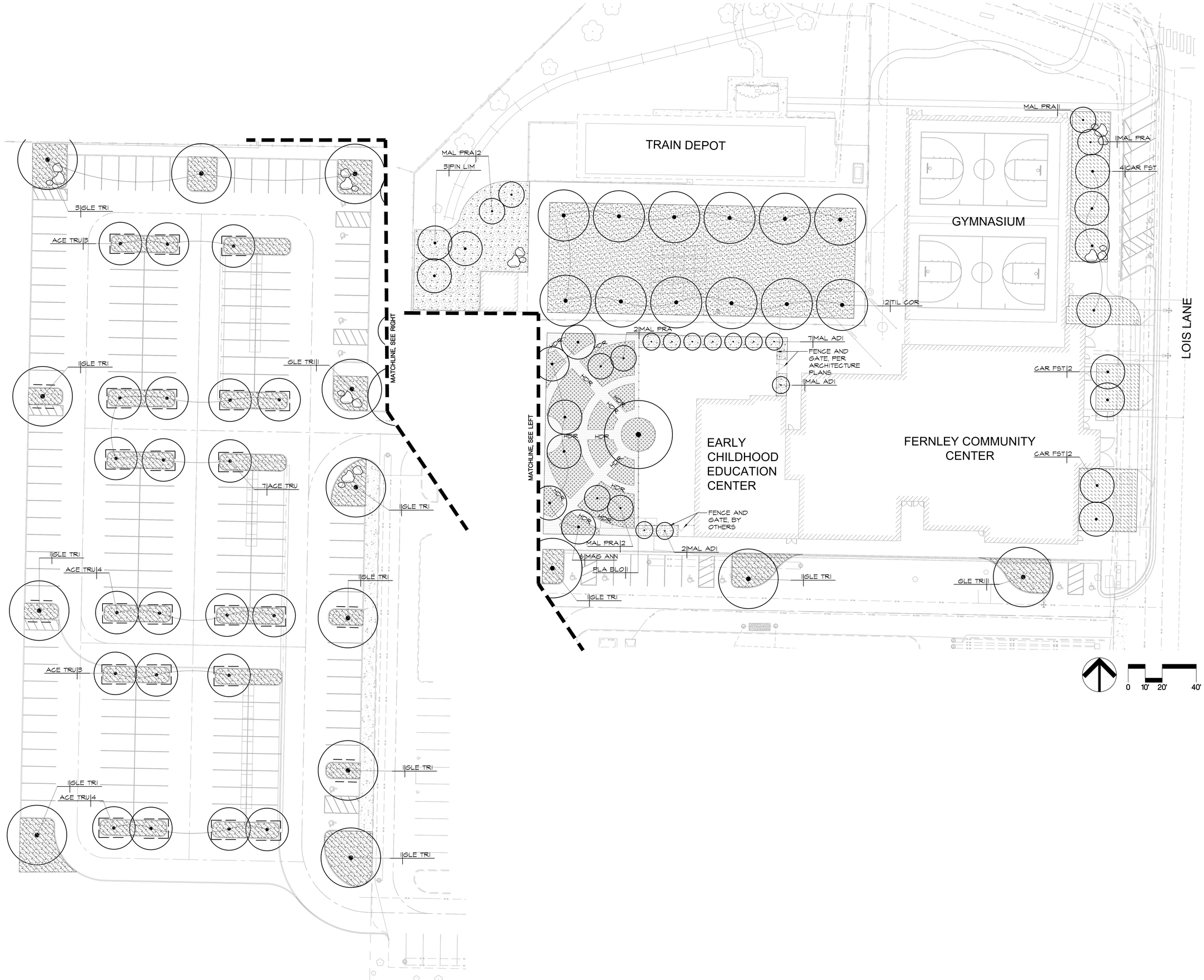
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Sheet Title
IRRIGATION PLAN ALTERNATE B

Date: JANUARY 19, 2023
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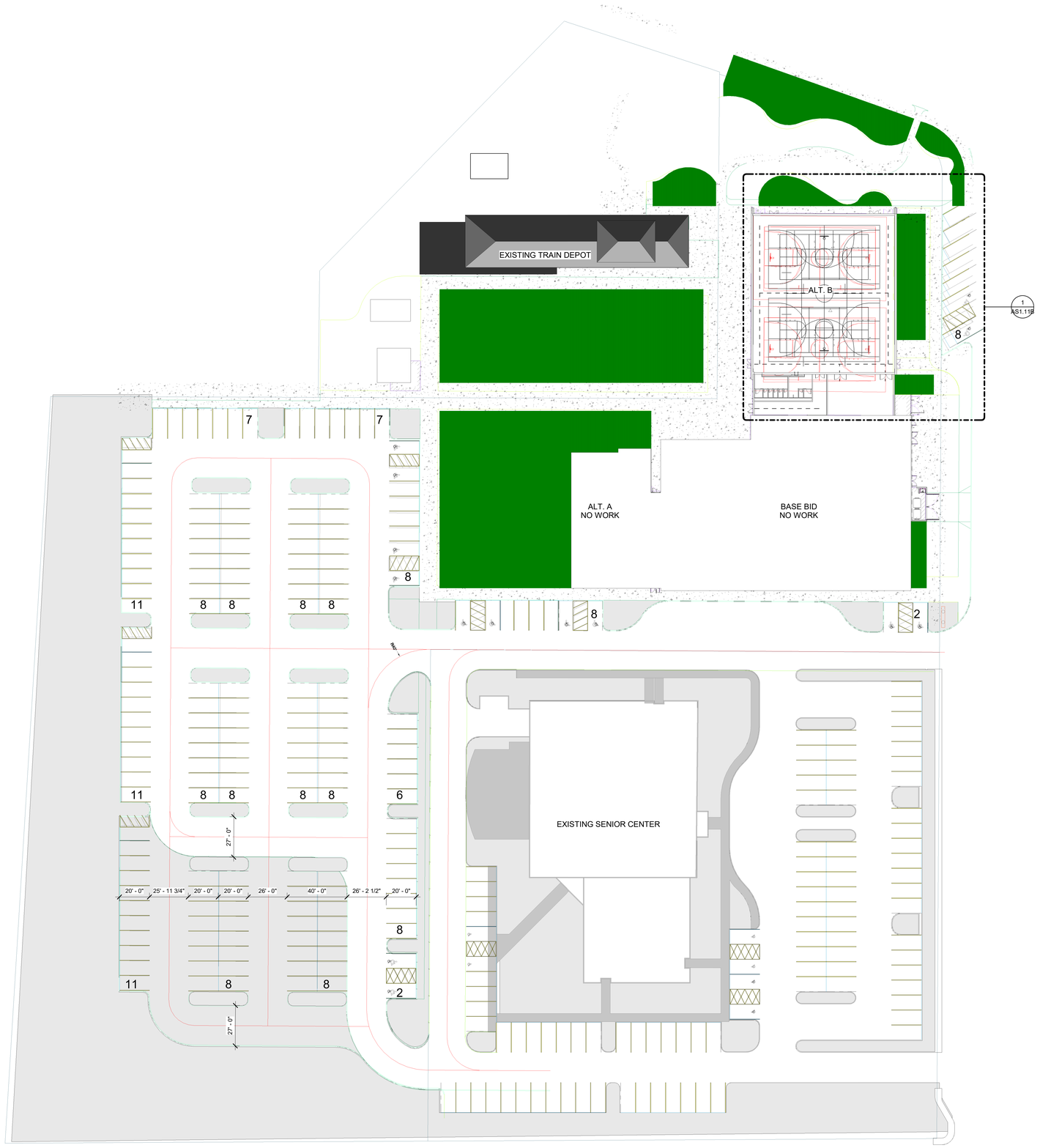
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Sheet Title
LANDSCAPE PLAN ALTERNATE B

Date: JANUARY 19, 2023
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PARKING COUNTS:
ADA STALLS = 12
PARKING STALLS = 138
TOTAL PARKING = 160

1 OVERALL SITE PLAN ALT. B
SCALE: 1" = 30'-0"

NORTH 0' 30' 60' 120'

GENERAL NOTES

1. CONTRACTOR TO VERIFY DIMENSIONS IN FIELD PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. DO NOT SCALE DRAWINGS.
2. REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE INFORMATION.
3. REFER TO CIVIL DRAWINGS FOR CURB DIMENSIONS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR PARKING DIMENSIONS, AND STREET DIMENSIONS.
5. SEE ENLARGED SITE PLANS FOR ALL SITE PLAN KEYNOES.

KEYNOTES

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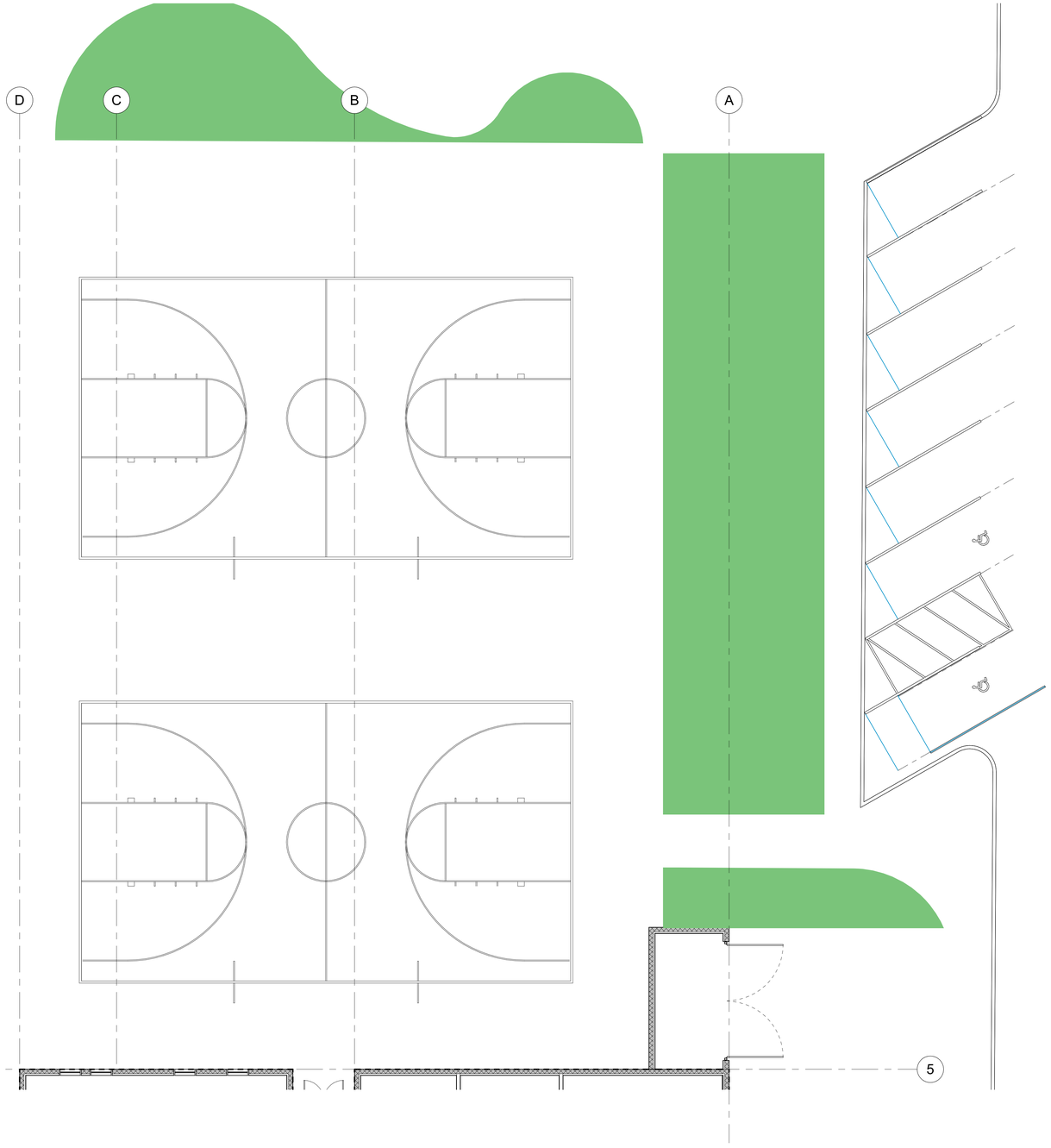
Owner
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
SITE PLAN - ALT. B

Date: JANUARY 19, 2023
Sheet No:
AS1.01B



1 ENLARGED SITE PLAN ALT. B
SCALE: 1/8" = 1'-0"

NORTH 0' 30' 60' 120'

GENERAL NOTES

1. CONTRACTOR TO VERIFY DIMENSIONS IN FIELD PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. DO NOT SCALE DRAWINGS.
2. REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE INFORMATION.
3. REFER TO CIVIL DRAWINGS FOR CURB DIMENSIONS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR PARKING DIMENSIONS, AND STREET DIMENSIONS.
5. SEE ENLARGED SITE PLANS FOR ALL SITE PLAN KEYNOES.

KEYNOTES

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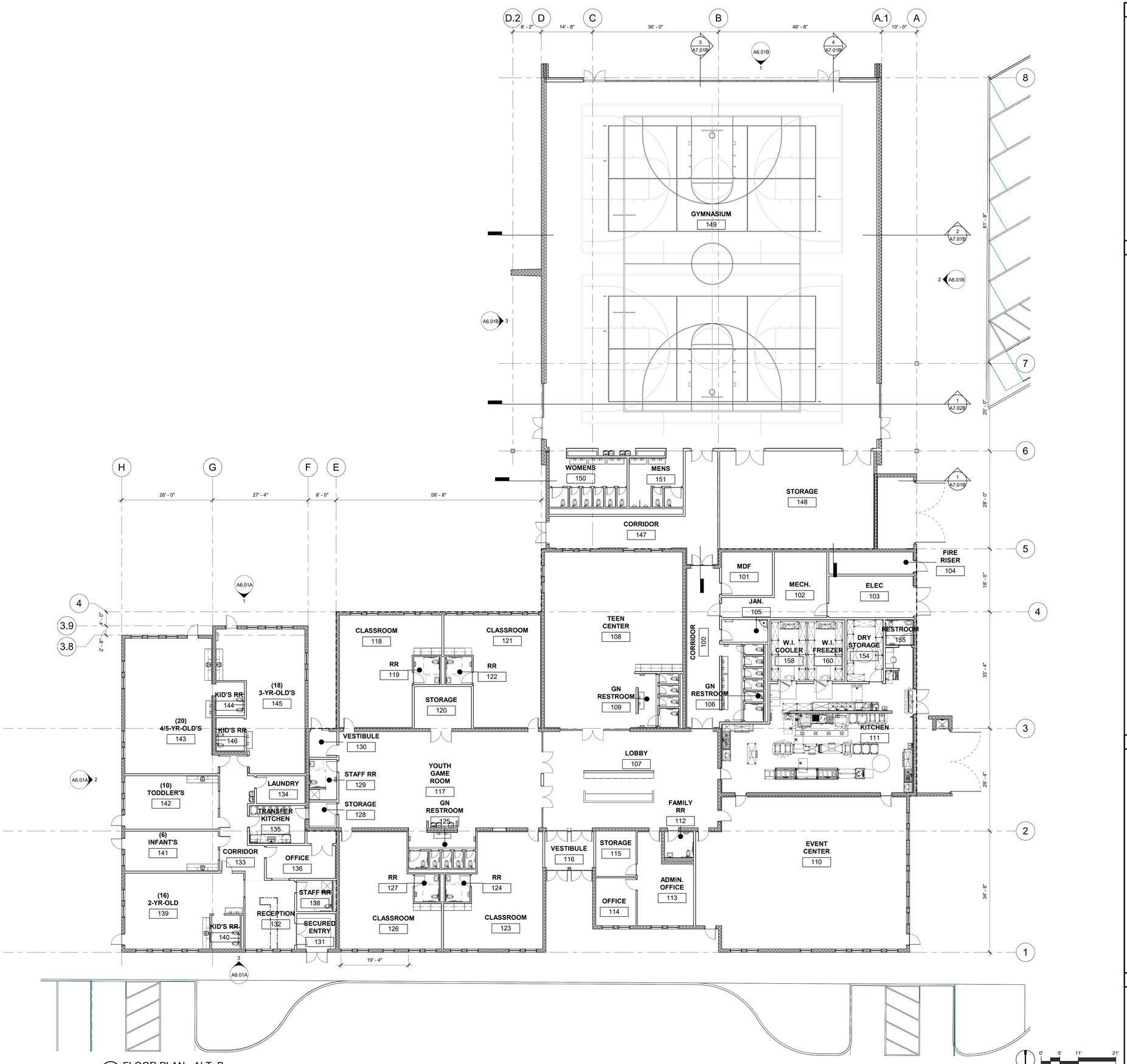
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REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
SITE PLAN - ALT. B

Date: JANUARY 19, 2023
Sheet No:
AS1.11B



1 FLOOR PLAN - ALT. B
SCALE: 3/32" = 1'-0"

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK NOT SHOWN ON THIS DRAWING.
3. SEE ELECTRICAL DRAWINGS FOR INFORMATION ON ELECTRICAL/TELECOM ROOMS.
4. ALL EQUIPMENT (O.F.O.I AND C.F.C.I.), SHALL COMPLY WITH ACCESSIBILITY REQUIREMENTS.

KEYNOTES

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KEYPLAN

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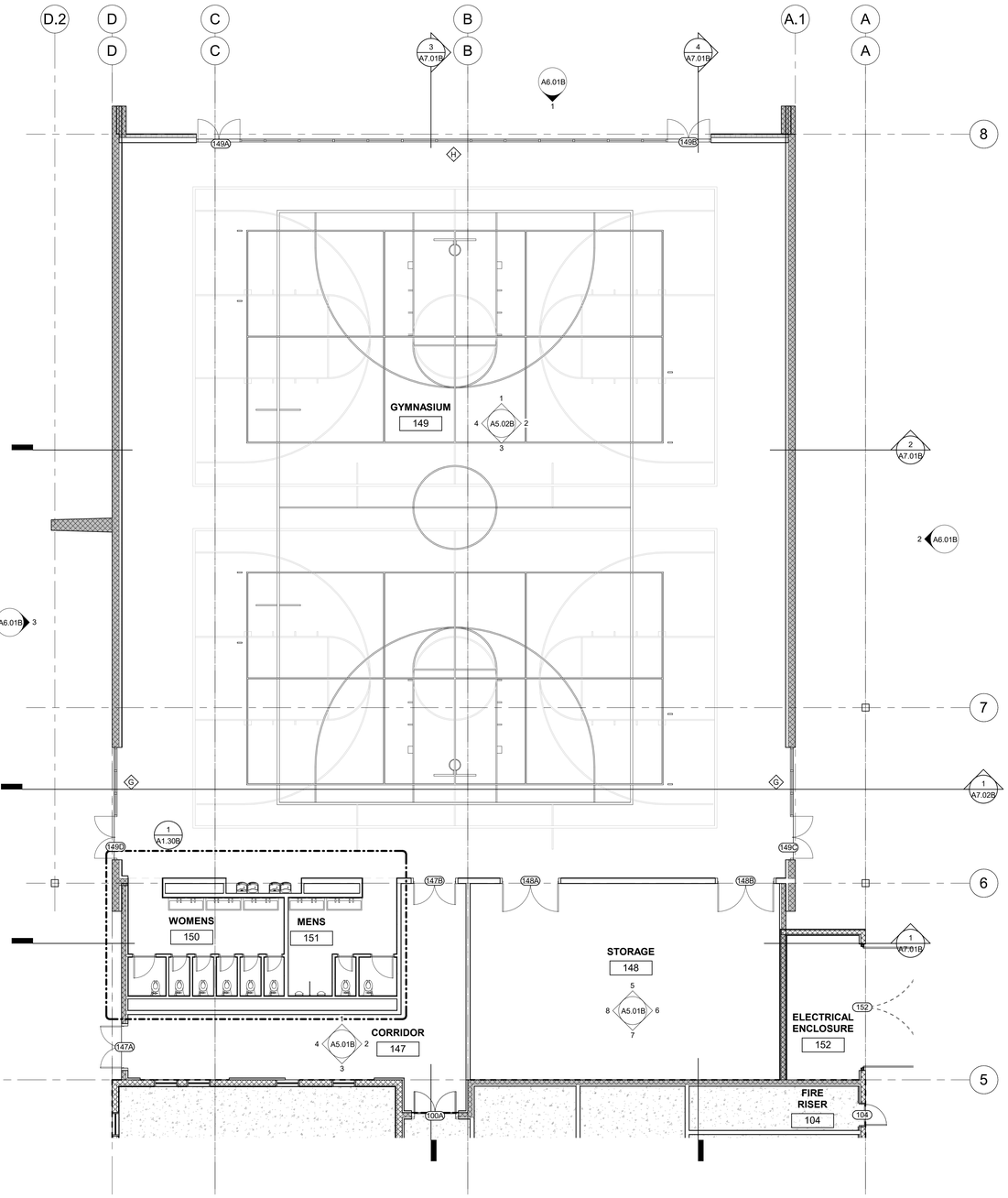
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REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
OVERALL FLOOR PLAN - ALT. B

Date: JANUARY 19, 2023
Sheet No:
A1.01B



1 ENLARGED FLOOR PLAN - ALT. B
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK NOT SHOWN ON THIS DRAWING.
3. SEE ELECTRICAL DRAWINGS FOR INFORMATION ON ELECTRICAL/TELECOM ROOMS.
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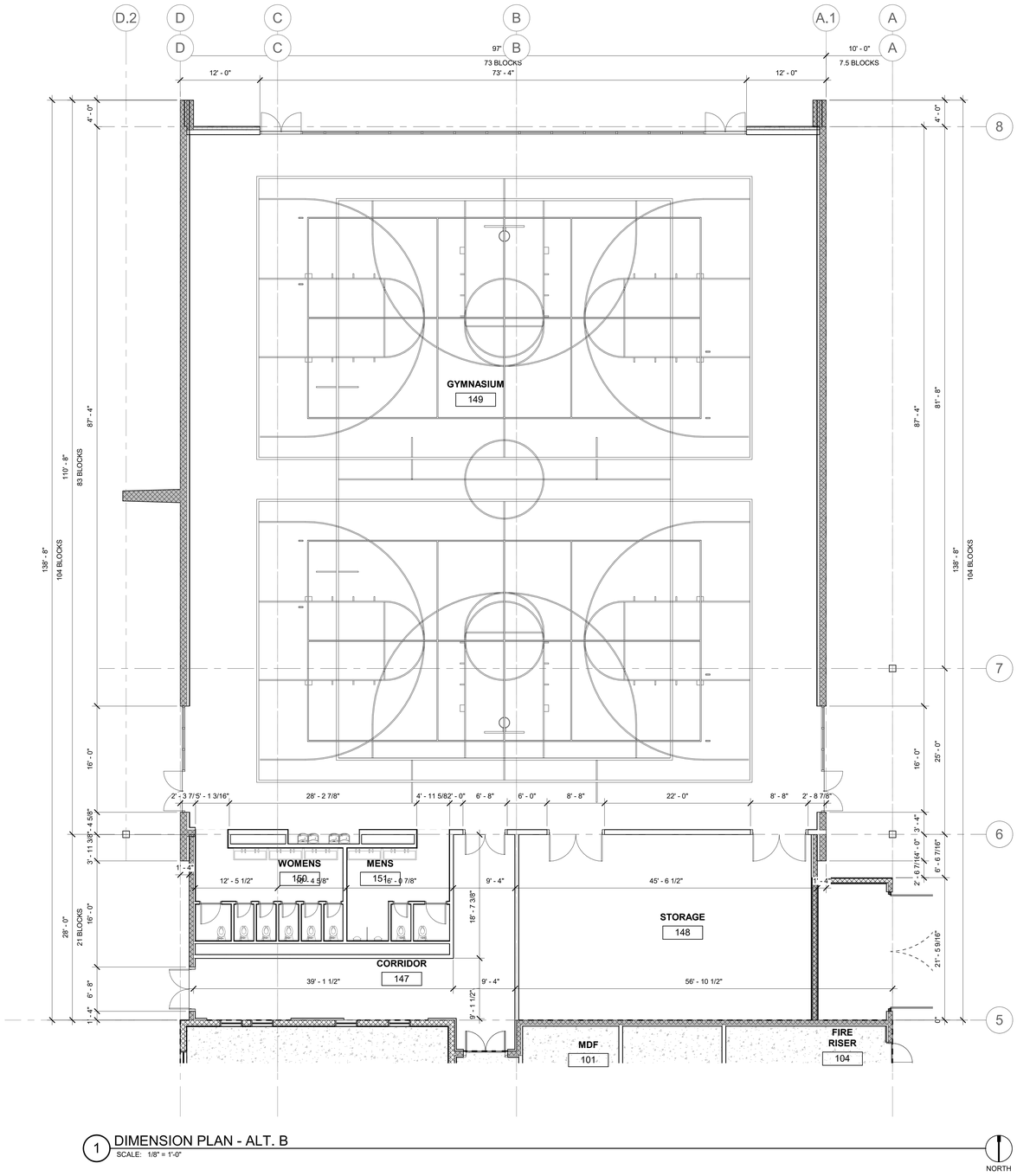
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REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
ENLARGED FLOOR PLAN - ALT. B

Date: JANUARY 19, 2023

Sheet No:
A1.11B



1 DIMENSION PLAN - ALT. B
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE OVERALL FLOOR PLANS FOR EQUIPMENT SCHEDULE, MARKERBOARD AND TACKBOARD SCHEDULE, AND KEYNOTE ITEMS NOT LABELED IN DIMENSION PLANS.

KEYNOTES

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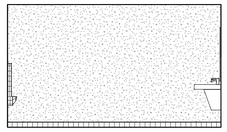
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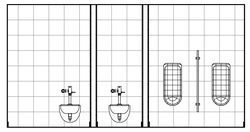
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
DIMENSION & PARTITION PLAN - ALT. B

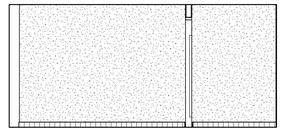
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Sheet No:
A1.21B



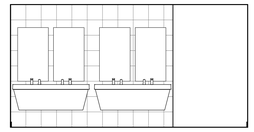
9 MENS 151 WEST
SCALE: 1/4" = 1'-0"



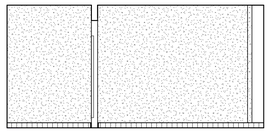
8 MENS 151 SOUTH
SCALE: 1/4" = 1'-0"



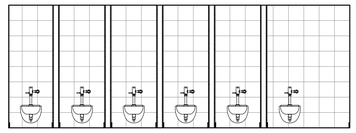
7 MENS 151 EAST
SCALE: 1/4" = 1'-0"



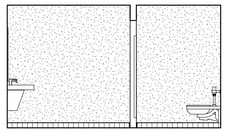
6 MENS 151 NORTH
SCALE: 1/4" = 1'-0"



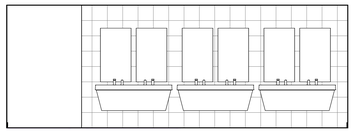
5 WOMENS 150 WEST
SCALE: 1/4" = 1'-0"



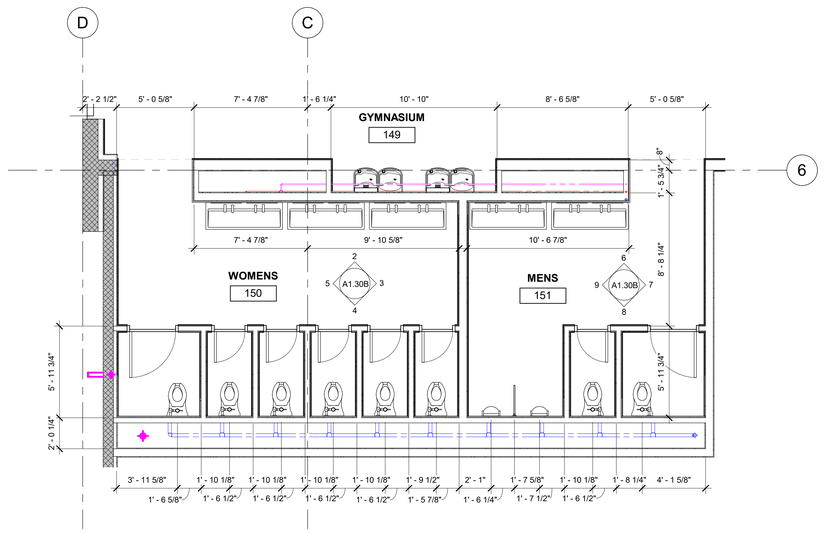
4 WOMENS 150 SOUTH
SCALE: 1/4" = 1'-0"



3 WOMENS 150 EAST
SCALE: 1/4" = 1'-0"



2 WOMENS 150 NORTH
SCALE: 1/4" = 1'-0"



1 ENLARGED FLOOR PLAN - GYMNASIUM - MEN & WOMENS RR
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. ALL DIMENSION ARE TAKEN FROM FACE OF STUD, MASONRY, OR CONCRETE U.N.O.
2. SEE EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. NOT SHOWN ON DRAWINGS.
3. ALL EQUIPMENT (O.F.O.I AND C.F.C.I.), SHALL COMPLY WITH ACCESSIBILITY REQUIREMENTS.

KEYNOTES

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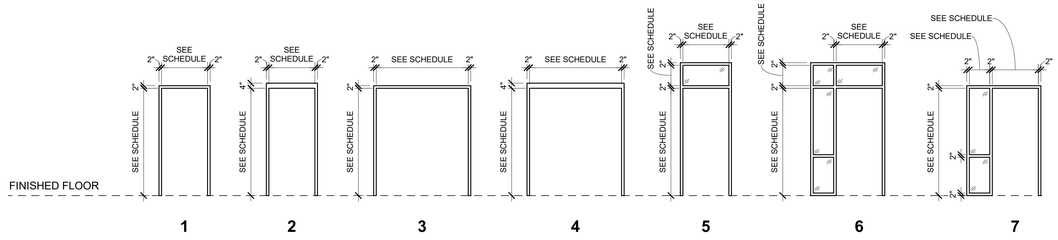
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REVISIONS		
REV	DATE	DESCRIPTION

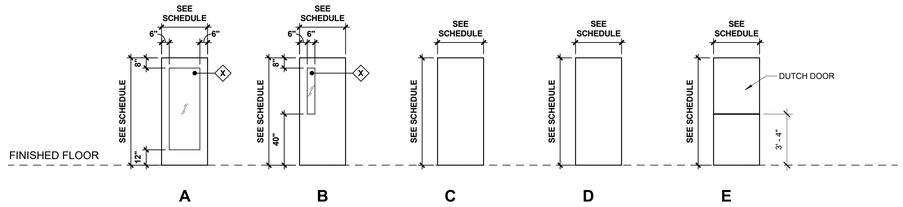
Sheet Title
ENLARGED RESTROOM PLANS & INTERIOR ELEVATIONS - ALT. B

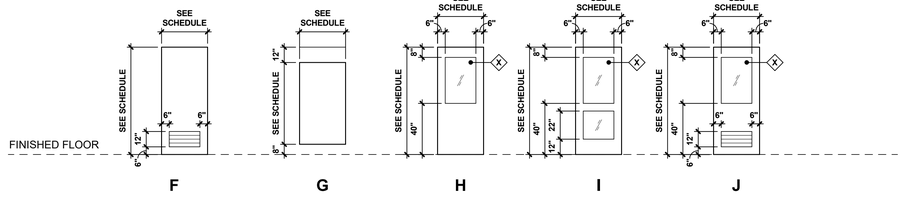
Date: JANUARY 19, 2023

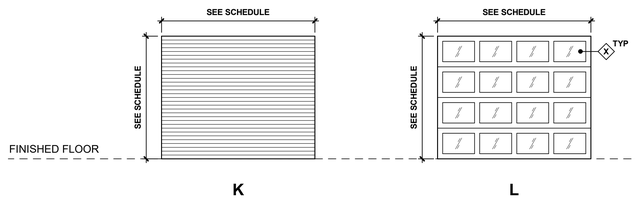
Sheet No:
A1.30B



DOOR FRAME TYPES
SCALE: 1/4" = 1'-0"







DOOR PANEL TYPES
SCALE: 1/4" = 1'-0"

DOOR SCHEDULE - ALT. B

DR. NO.	RM. NO.	PR	PANEL SIZE W	PANEL SIZE H	PANEL T	PANEL TYPE	MAT'L		FRAME TYPE	FRAME MAT'L	HEAD DTL	SILL DTL	JAMB DTL LATCH	JAMB DTL HINGE	HDWR	LABEL	REMARKS
100A	100		6' - 0"	7' - 0"	0"	AA											
101	101		3' - 0"	7' - 0"	1 3/4"	A											
102	102		3' - 6"	7' - 0"	1 3/4"	C											
103A	103	PR	4' - 0"	7' - 0"	1 3/4"	CC											
103B	103		3' - 6"	7' - 0"	1 3/4"	C											
104	104		3' - 0"	7' - 0"	1 3/4"	A											
105	105		3' - 0"	7' - 0"	1 3/4"	A											
106A	106		2' - 0"	7' - 0"	1 3/4"	D											
106B	106		2' - 0"	7' - 0"	1 3/4"	D											
106C	106		2' - 0"	7' - 0"	1 3/4"	D											
106D	106		2' - 0"	7' - 0"	1 3/4"	D											
106E	106		2' - 0"	7' - 0"	1 3/4"	D											
106F	106		3' - 0"	7' - 0"	1 3/4"	D											
107A	107		6' - 0"	5' - 10 3/4"		AA											
107B	117		6' - 0"	5' - 10 3/4"		AA											
107C	107		6' - 0"	7' - 0"	0"	AA											
108	108		6' - 0"	5' - 10 3/4"		AA											
109A	109		2' - 0"	7' - 0"	1 3/4"	D											
109B	109		2' - 0"	7' - 0"	1 3/4"	D											
109C	109		2' - 0"	7' - 0"	1 3/4"	D											
109D	109		3' - 0"	7' - 0"	1 3/4"	D											
110A	110		3' - 0"	7' - 0"	1 3/4"	C											
110B	110		3' - 0"	7' - 0"	1 3/4"	A			5								
110C	110		3' - 0"	7' - 0"	2"	A											
110D	110		3' - 0"	7' - 0"	1 3/4"	A											
111A	111	PR	3' - 6"	7' - 0"	1 3/4"	CC											
111B	111		3' - 0"	7' - 0"	1 3/4"	C											
111C	111		3' - 0"	7' - 0"	1 3/4"	C											
111D	111		3' - 0"	7' - 0"	1 3/4"	C											
112	112		3' - 0"	7' - 0"	1 3/4"	A											
113	113		3' - 0"	7' - 0"	2"	A											
114	114		3' - 0"	7' - 0"	1 3/4"	A											
115	115		3' - 0"	7' - 0"	1 3/4"	A											
116A	116		6' - 0"	7' - 0"	0"	AA											
116B	116		6' - 0"	7' - 0"	0"	AA											
116C	116		6' - 0"	7' - 0"	0"	AA											
116D	116		6' - 0"	7' - 0"	0"	AA											
118	118		3' - 0"	7' - 0"	2"	A											
119	118		3' - 0"	7' - 0"	1 3/4"	A											
120	120	PR	3' - 0"	7' - 0"	1 3/4"	EC											
121	121		3' - 0"	7' - 0"	2"	A											
122	122		3' - 0"	7' - 0"	1 3/4"	A											
123	123		3' - 0"	7' - 0"	2"	A											
124	123		3' - 0"	7' - 0"	1 3/4"	A											
125A	125		2' - 0"	7' - 0"	1 3/4"	D											
125B	125		2' - 0"	7' - 0"	1 3/4"	D											
125C	125		2' - 0"	7' - 0"	1 3/4"	D											
125D	125		2' - 0"	7' - 0"	1 3/4"	D											
125E	125		3' - 0"	7' - 0"	1 3/4"	D											
126	126		3' - 0"	7' - 0"	2"	A											
127	126		3' - 0"	7' - 0"	1 3/4"	A											
128	128		3' - 0"	7' - 0"	1 3/4"	A											
129	129		3' - 0"	7' - 0"	1 3/4"	A											
130A	130		3' - 0"	7' - 0"	1 3/4"	A			6								
130B	130		3' - 0"	7' - 0"	2"	A											
147A			3' - 0"	7' - 0"	1 3/4"	AA			5								
147B	147	PR	3' - 0"	7' - 0"	1 3/4"	MM											
148A	148	PR	4' - 0"	7' - 0"	1 3/4"	CC											
148B	148	PR	4' - 0"	7' - 0"	1 3/4"	CC											
149A			6' - 0"	6' - 8 1/4"		AA											
149B			6' - 0"	6' - 8 1/4"		AA											
149C	149		5' - 11 1/4"	5' - 10 3/4"		AA											
149D	149		5' - 11 1/4"	5' - 10 3/4"		AA											
150A	150		2' - 0"	7' - 0"	1 3/4"	D											
150B	150		2' - 0"	7' - 0"	1 3/4"	D											
150C	150		2' - 0"	7' - 0"	1 3/4"	D											
150D	150		2' - 0"	7' - 0"	1 3/4"	D											
150E	150		2' - 0"	7' - 0"	1 3/4"	D											
150F	150		3' - 0"	7' - 0"	1 3/4"	D											
151A	151		3' - 0"	7' - 0"	1 3/4"	D											
151B	151		2' - 0"	7' - 0"	1 3/4"	D											
152	152		17' - 1"	6' - 0"	2"	GATE											
153	153		17' - 1"	8' - 0"	2"	GATE											
154	154		3' - 6"	7' - 0"	1 3/4"	A											
155	155		3' - 6"	7' - 0"	1 3/4"	A											

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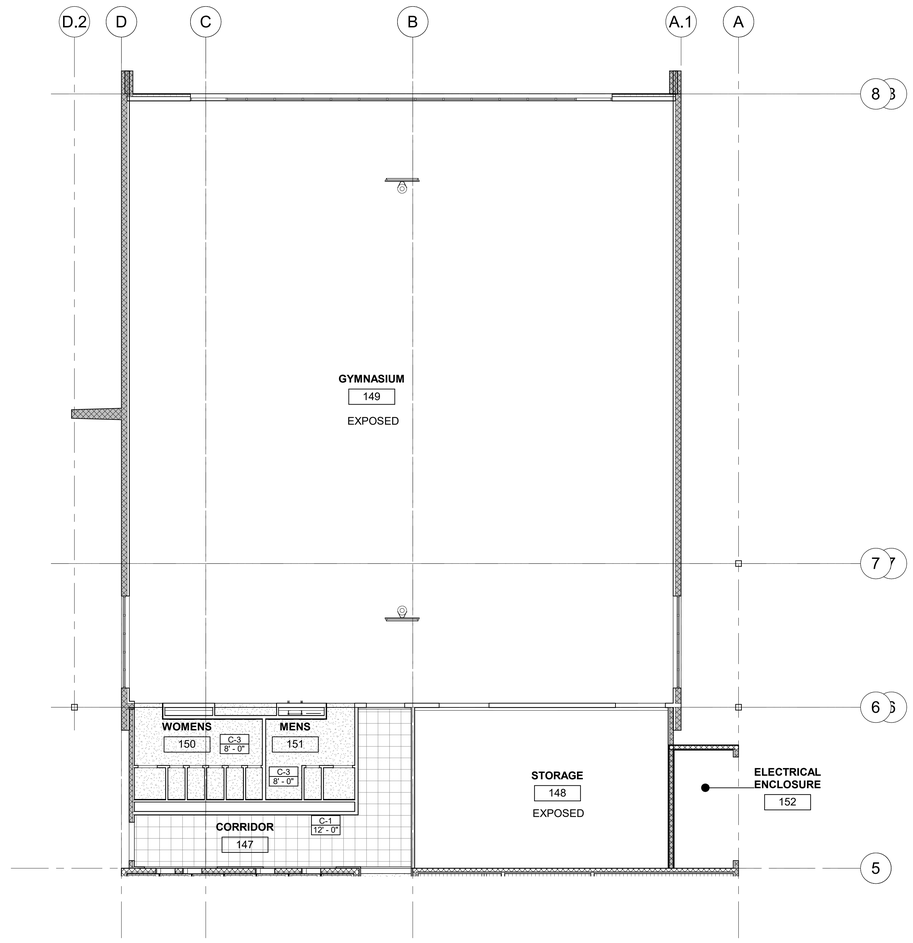
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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
DOOR SCHEDULE - ALT. B

Date: JANUARY 19, 2023
Sheet No:
A2.10B



1 REFLECTED CEILING PLAN - ALT. B
SCALE: 3/32" = 1'-0"

NORTH

GENERAL NOTES

1. SEE FINISH SCHEDULE FOR CEILING HEIGHTS AND FINISHES NOT SHOWN ON PLAN.
2. SPRINKLER HEADS TO BE CENTERED IN ALL CORRIDORS AND IN CEILING TILES WHERE TILES OCCUR.
3. MAINTAIN MINIMUM 3" CLEAR BETWEEN LIGHTS, DIFFUSERS, SPEAKERS, ETC.
4. CEILING/SOFFITS ELEVATIONS ARE BASED FROM FINISH FLOOR ELEVATIONS.
5. SEE FINISH SCHEDULE FOR EXPOSED STRUCTURE TO BE PAINTED.

KEYNOTES

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Job No: 21-058.00

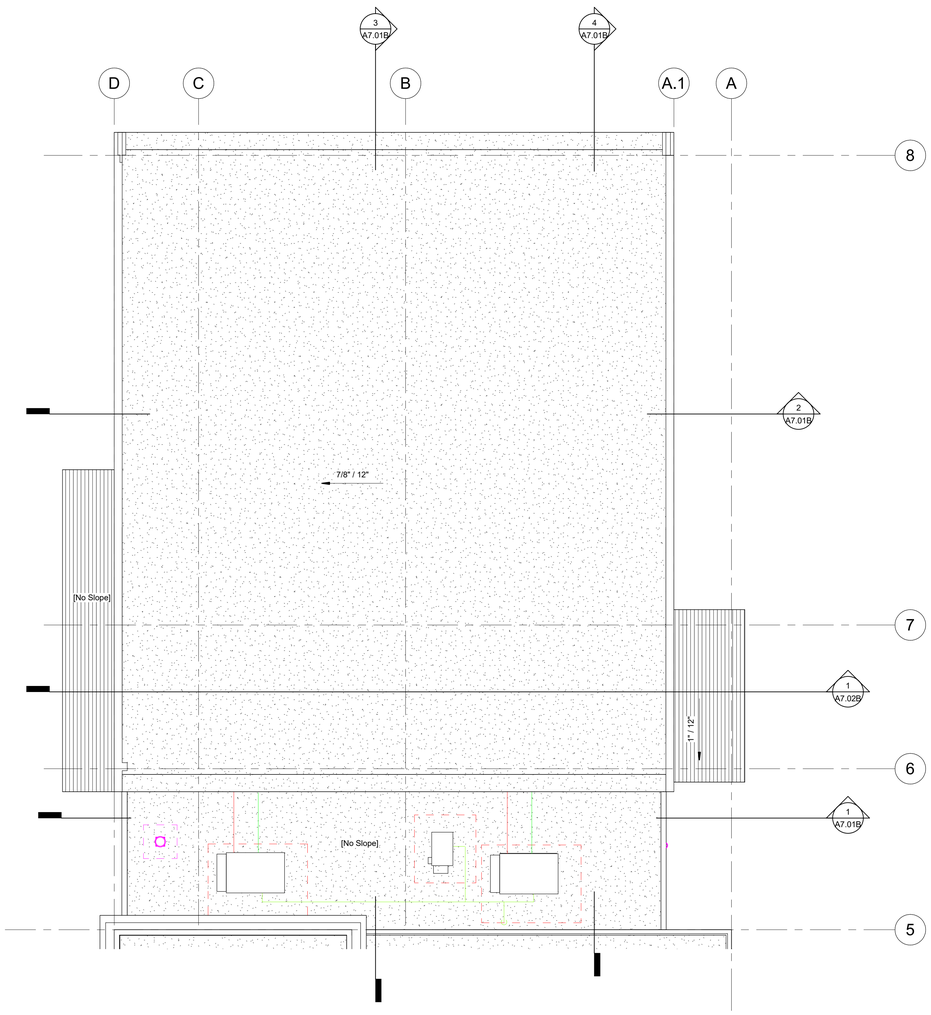
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DESIGN DEVELOPMENT

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REV	DATE	DESCRIPTION

Sheet Title
REFLECTED CEILING PLAN - ALT. B

Date: JANUARY 19, 2023
Sheet No:
A3.01B



1 ROOF PLAN - GYMNASIUM
SCALE: 3/32" = 1'-0"

NORTH

GENERAL NOTES

1. REFER TO MECH. DWGS FOR ROOF TOP MECH EQUIPMENTS.
2. SEE EXTERIOR ELEVATIONS FOR TOP OF WALL ELEVATIONS.
3. ALL ROOF DRAINS SHALL BE A MIN. OF 2'-0" CLEAR FROM ALL PARAPETS OR WALLS.
4. DIRECTIONAL ARROW ON ROOF PLAN INDICATE DIRECTION OF ROOF SLOPE TO ROOF DRAIN.
5. ALL MAIN ROOF DRAINS SHALL BE LOCATED AT THE LOWEST POSSIBLE ROOF ELEVATIONS. NOTIFY THE ARCHITECT OF ANY CONFLICTS PRIOR TO ROOF DRAIN AND PIPING INSTALLATION.
6. CRICKETS ALL ROOF MECHANICAL UNITS, HATCHES, ETC.. SLOPE MIN. 1/2" PER FOOT.
7. THERE ARE TO BE NO FLAT SPOTS ON THE ROOF. ALL AREAS SHALL BE SLOPED.
8. PROVIDED 3'-0" X 3'-0" TRAFFIC PAD AT TOP AND BOTTOM OF EACH ROOF LADDER.
9. TYPICAL PIPE PENETRATIONS, SEE DETAIL XX/AX.XX

KEYNOTES

LEGEND

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Job No: 21-058.00

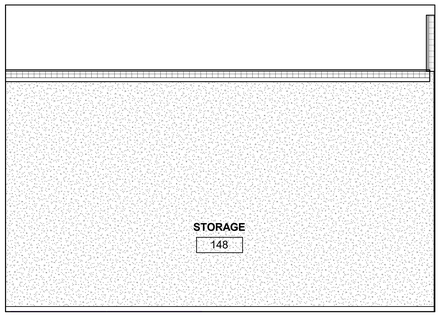
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DESIGN DEVELOPMENT

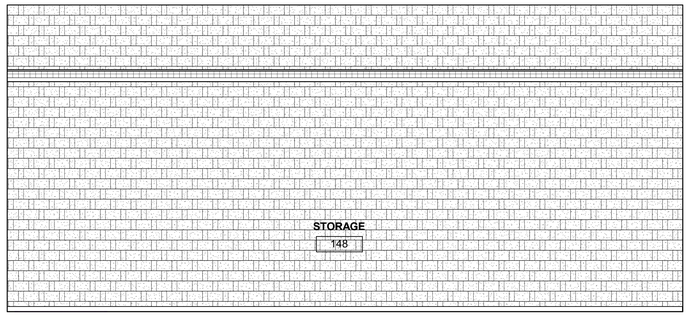
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REV	DATE	DESCRIPTION

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ROOF PLAN - ALT. B

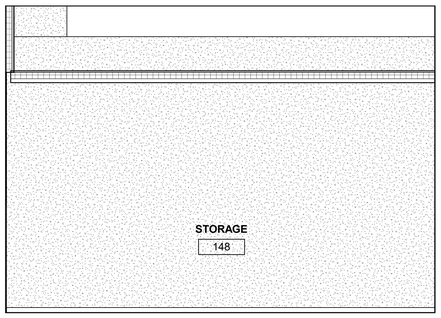
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Sheet No:
A4.01B



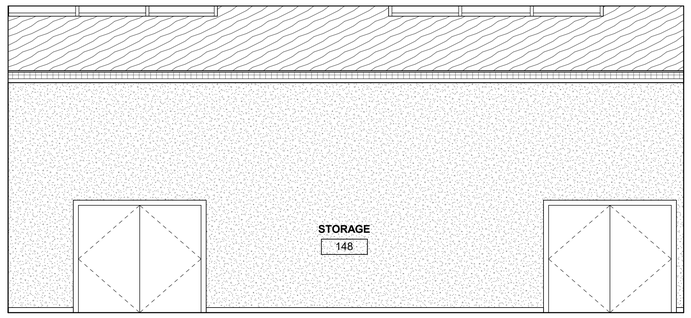
8 STORAGE 148 WEST
SCALE: 1/4" = 1'-0"



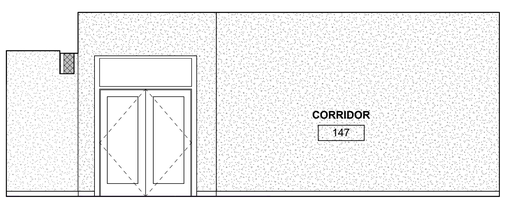
7 STORAGE 148 SOUTH
SCALE: 1/4" = 1'-0"



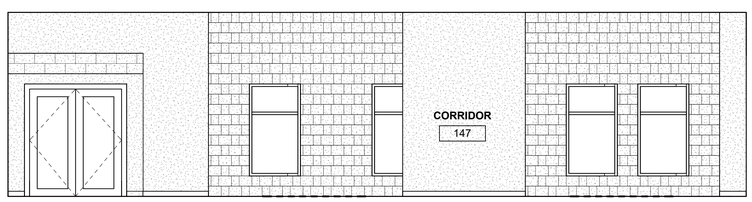
6 STORAGE 148 EAST
SCALE: 1/4" = 1'-0"



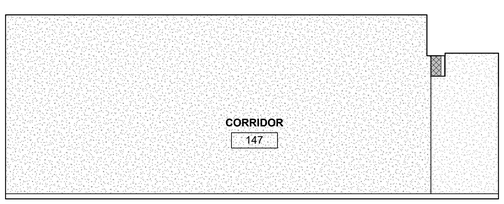
5 STORAGE 148 NORTH
SCALE: 1/4" = 1'-0"



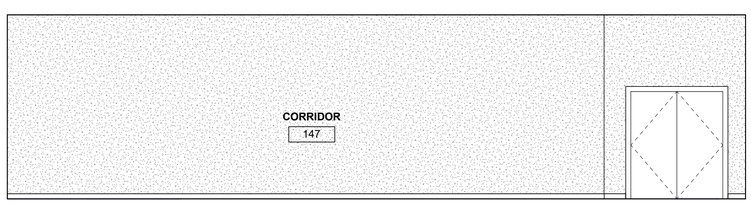
4 CORRIDOR 147 WEST
SCALE: 1/4" = 1'-0"



3 CORRIDOR 147 SOUTH
SCALE: 1/4" = 1'-0"



2 CORRIDOR 147 EAST
SCALE: 1/4" = 1'-0"



1 CORRIDOR 147 NORTH
SCALE: 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

LEGEND

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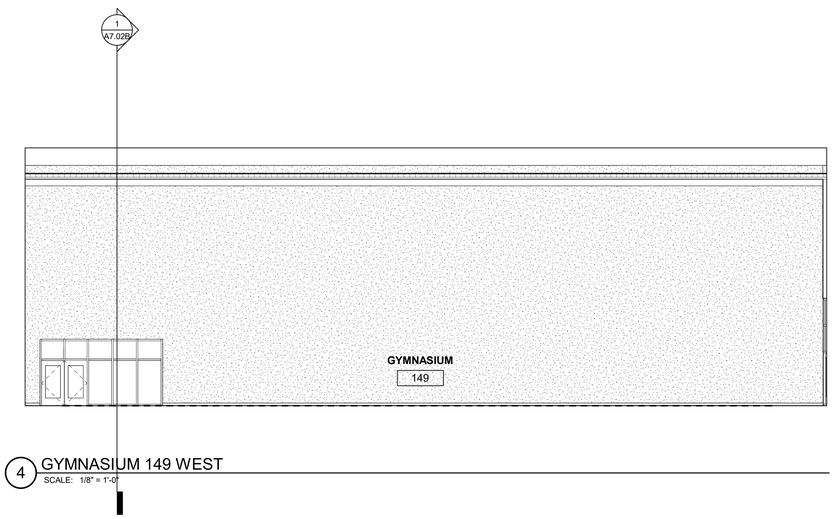
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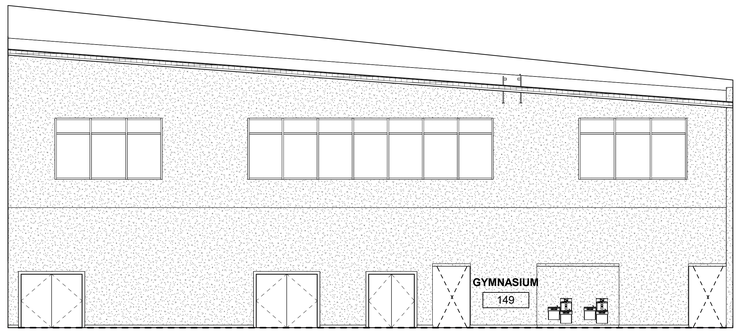
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REV	DATE	DESCRIPTION

Sheet Title
INTERIOR ELEVATIONS - ALT. B

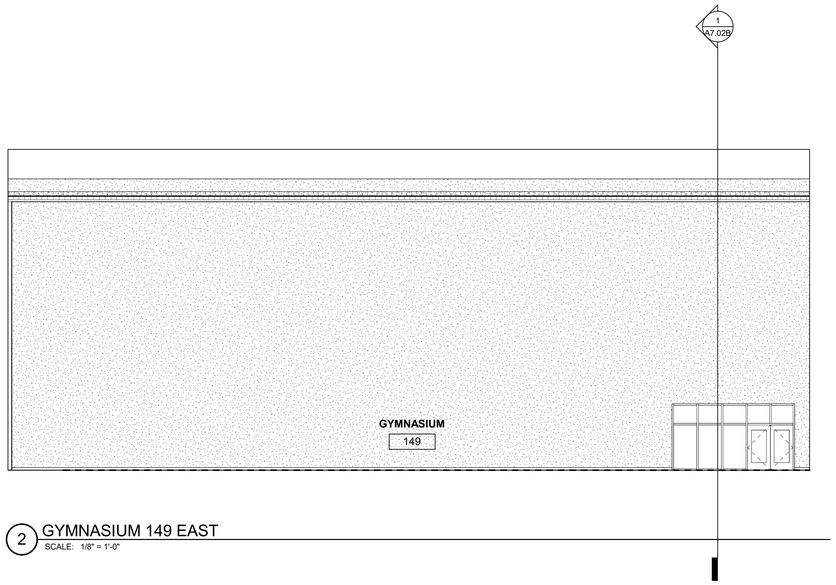
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Sheet No:
A5.01B



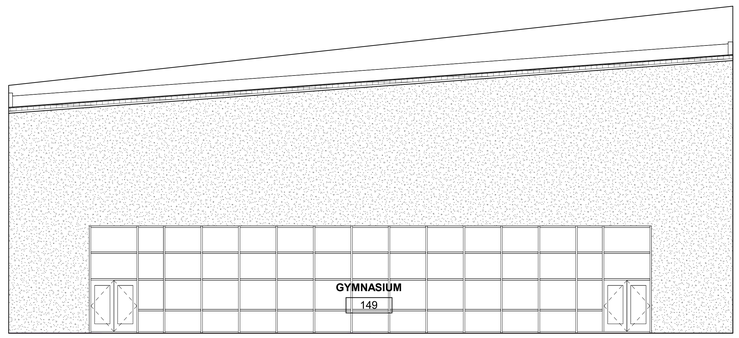
4 GYMNASIUM 149 WEST
SCALE: 1/8" = 1'-0"



3 GYMNASIUM 149 SOUTH
SCALE: 1/8" = 1'-0"



2 GYMNASIUM 149 EAST
SCALE: 1/8" = 1'-0"



1 GYMNASIUM 149 NORTH
SCALE: 1/8" = 1'-0"

GENERAL NOTES

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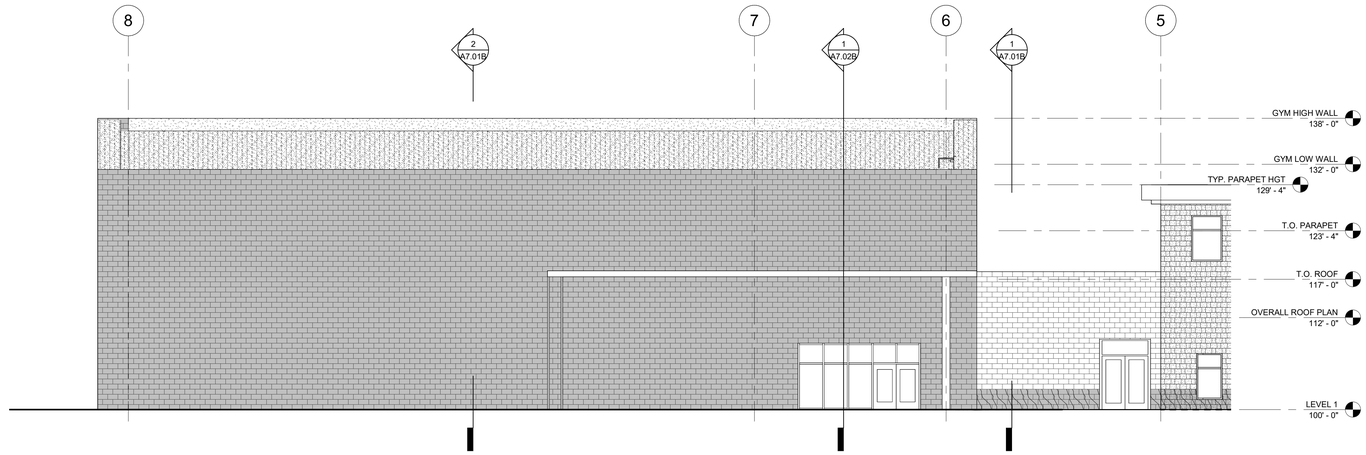
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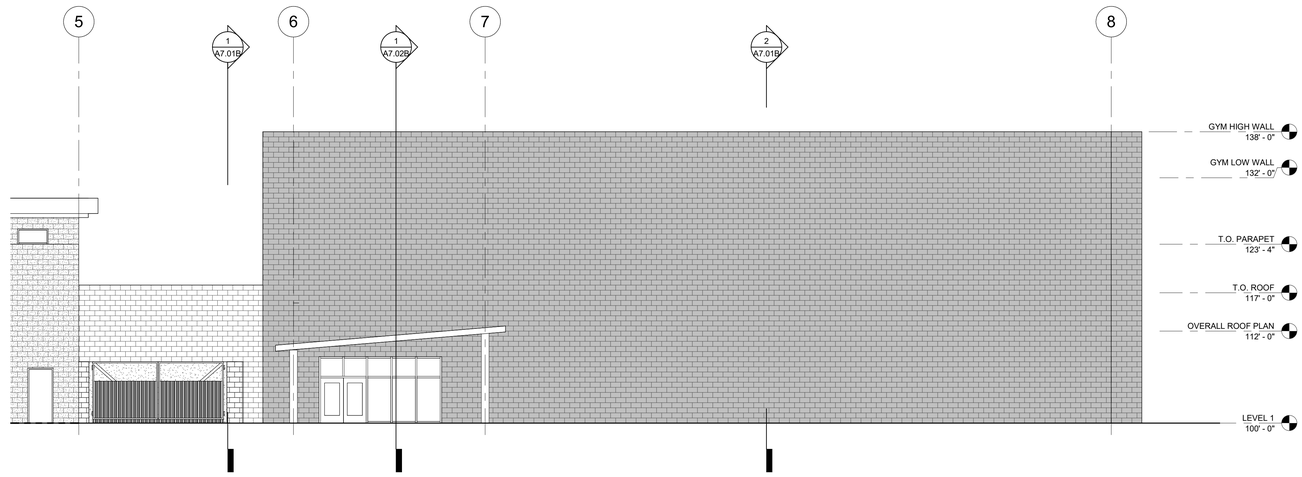
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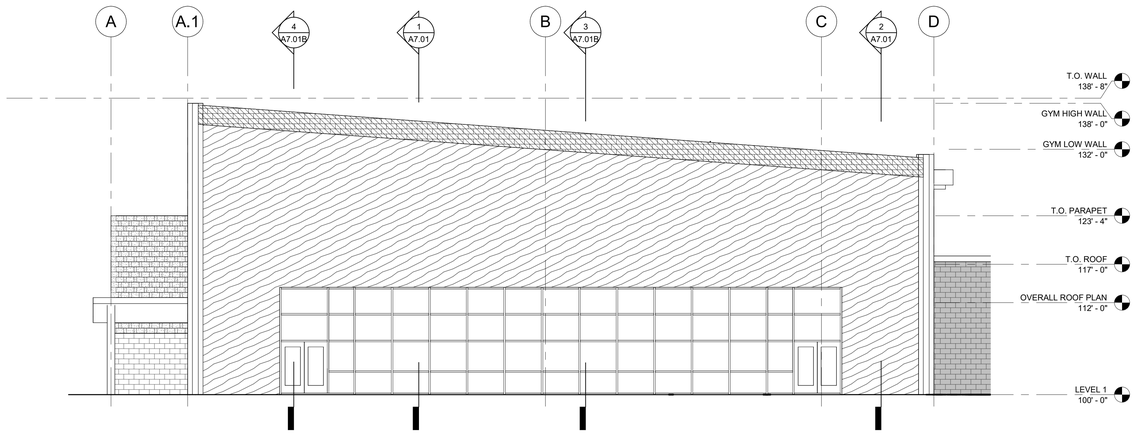
Date: JANUARY 19, 2023
Sheet No:
A5.02B



3 EXTERIOR WEST GYMNASIUM
SCALE: 1/8" = 1'-0"



2 EXTERIOR EAST GYMNASIUM
SCALE: 1/8" = 1'-0"



1 EXTERIOR NORTH GYMNASIUM
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
2. ALL EXPOSED MASONRY TO RECEIVE GRAFFITI COATING, INCLUDING ALL SITE WALLS.
3. SEE SHEET AX.XX FOR MATERIAL FINISH INFORMATION.
4. SEE ARCHITECTURAL SITE SHEETS FOR RETAINING WALLS, SITE STAIRS, AND SITE PLANTERS.

KEYNOTES

LEGEND

- GLAZING
- METAL PANELING
- WOOD RAIN SCREEN
- CMU 1
- CMU 2
- CMU 3
- CMU VENEER

KEYPLAN

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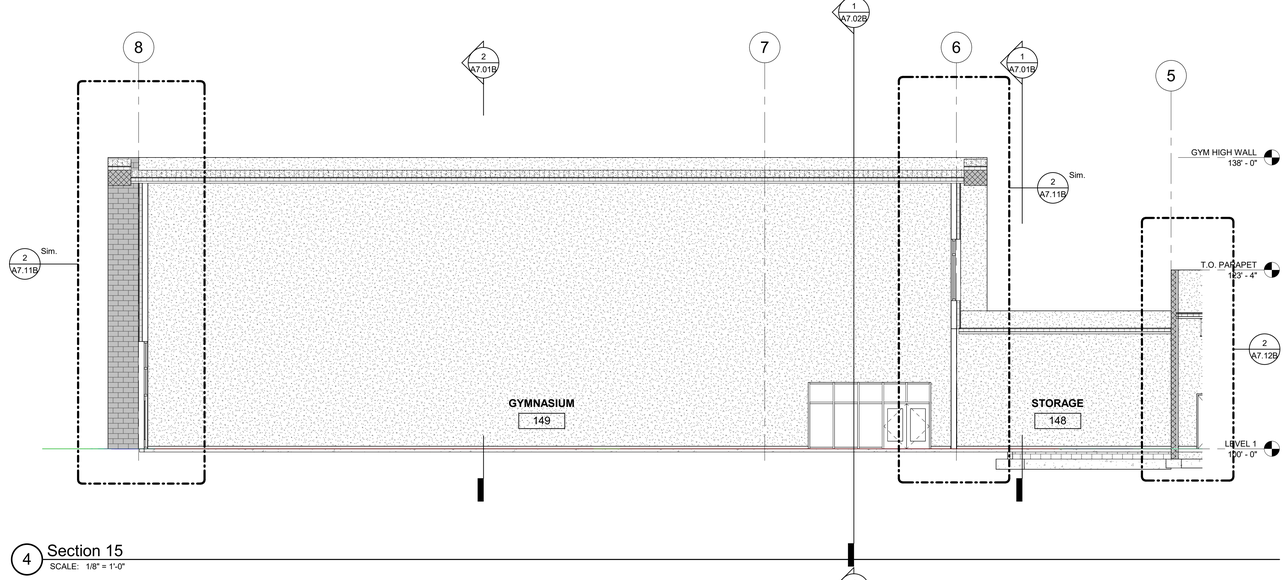
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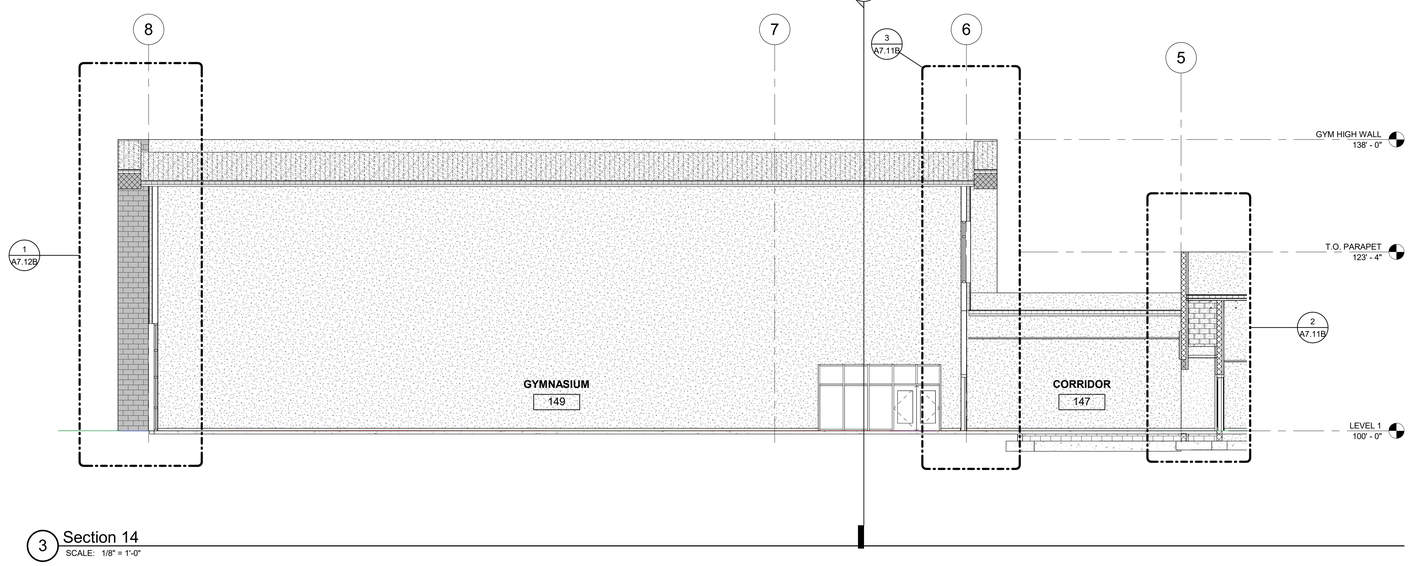
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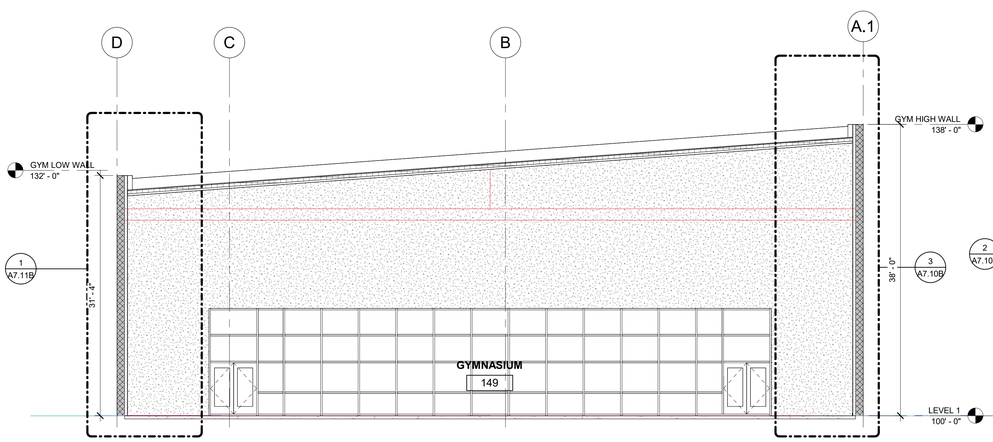
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Sheet No:
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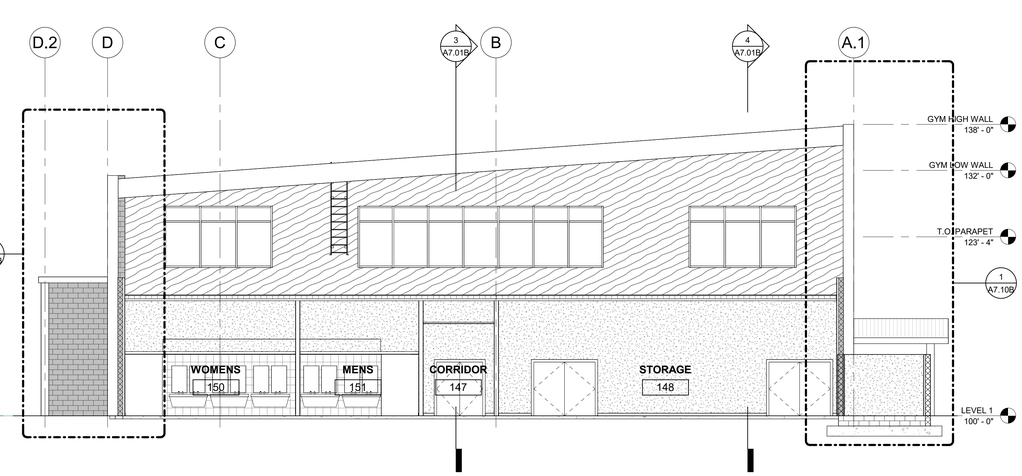
4 Section 15
SCALE: 1/8" = 1'-0"



3 Section 14
SCALE: 1/8" = 1'-0"



2 Section 13
SCALE: 1/8" = 1'-0"



1 Section 12
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
8. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

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DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
BUILDING SECTIONS - ALT. B

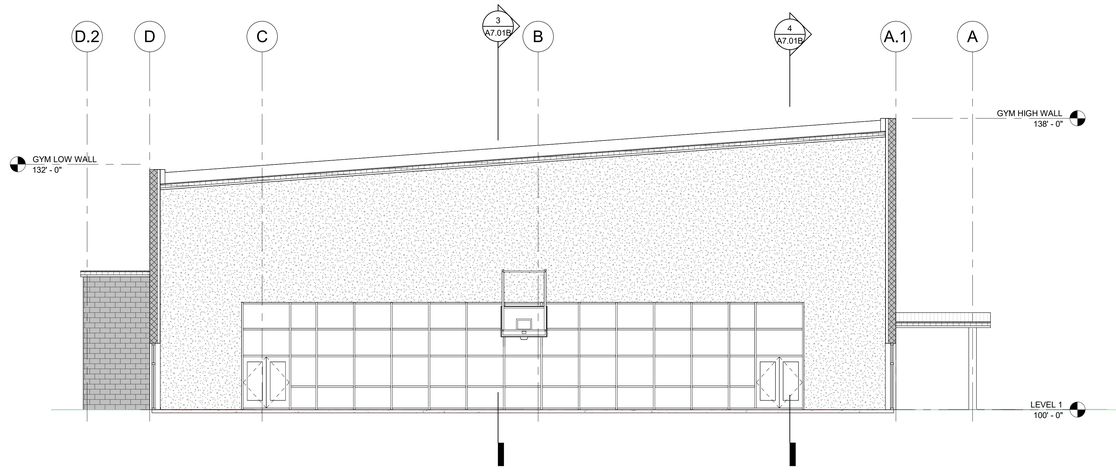
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Sheet No:
A7.01B

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
8. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

KEYNOTES

LEGEND



1 Section 16
SCALE: 1/8" = 1'-0"

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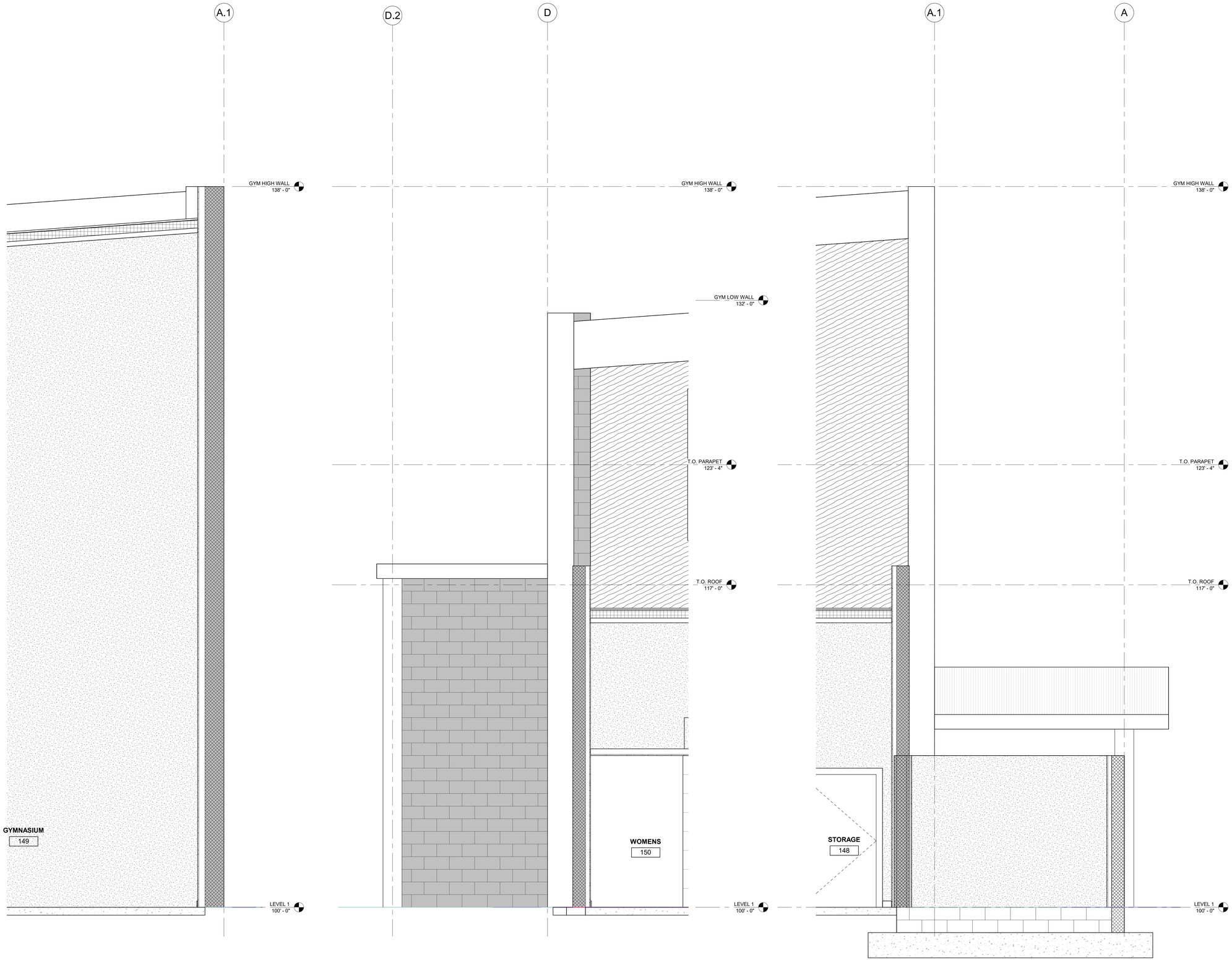
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REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
BUILDING SECTIONS - ALT. B

Date: JANUARY 19, 2023
Sheet No:
A7.02B



3 WALL SECTION 26 - GYMNASIUM
SCALE: 1/2" = 1'-0"

2 WALL SECTION 25 - GYMNASIUM
SCALE: 1/2" = 1'-0"

1 WALL SECTION 24 - GYMNASIUM
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
8. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

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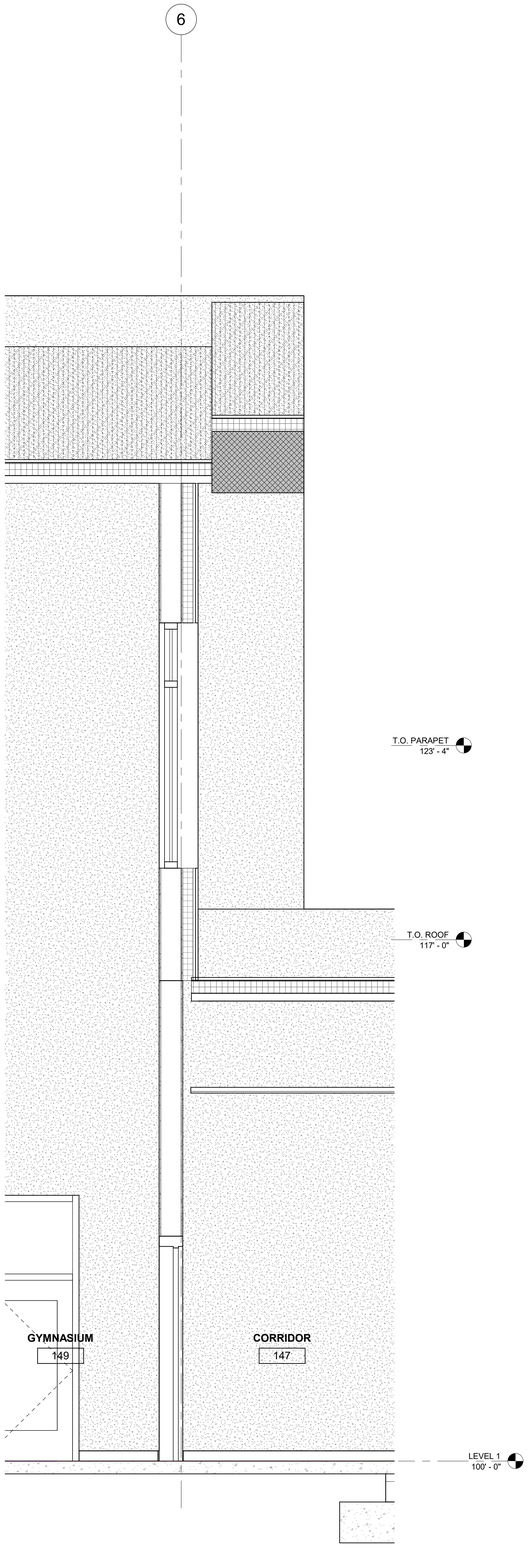
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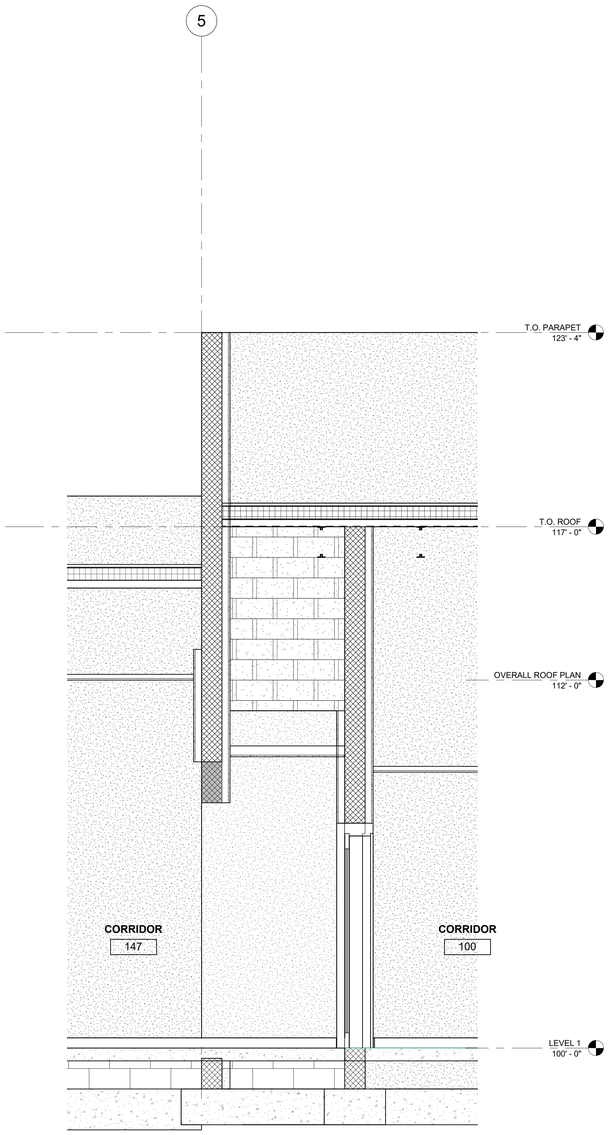
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REV	DATE	DESCRIPTION

Sheet Title
WALL SECTION - ALT. B

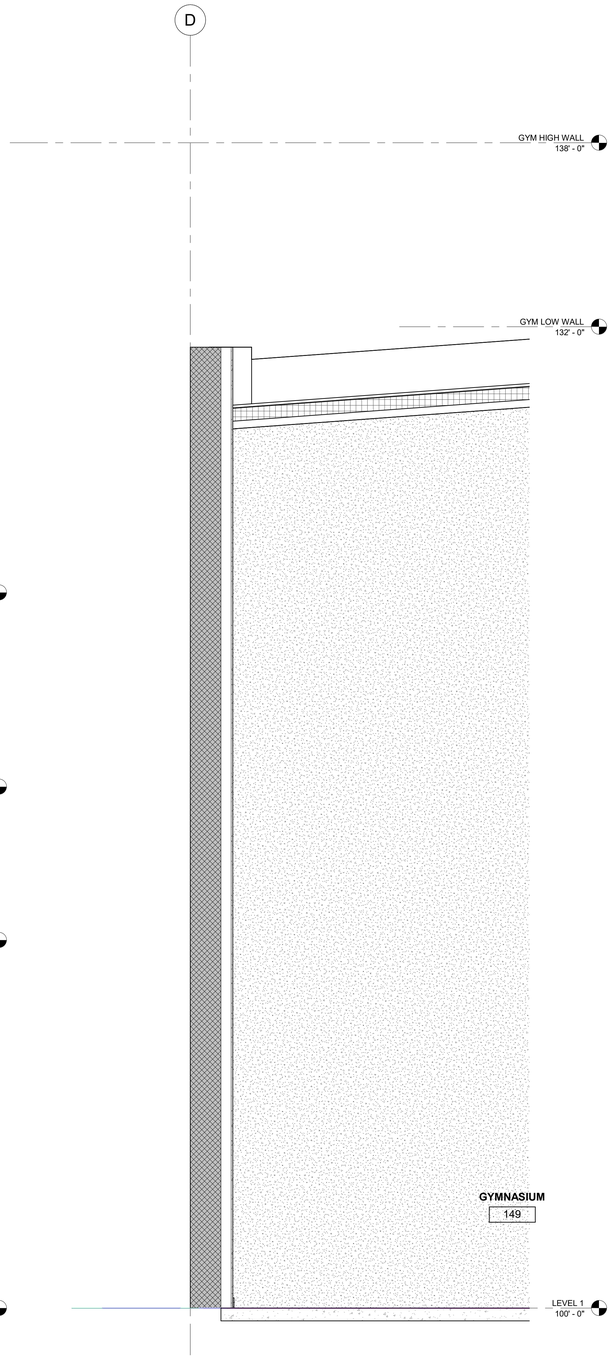
Date: JANUARY 19, 2023
Sheet No:
A7.10B



3 WALL SECTION 29 - GYMNASIUM
SCALE: 1/2" = 1'-0"



2 WALL SECTION 28 - GYMNASIUM
SCALE: 1/2" = 1'-0"



1 WALL SECTION 27 - GYMNASIUM
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
8. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

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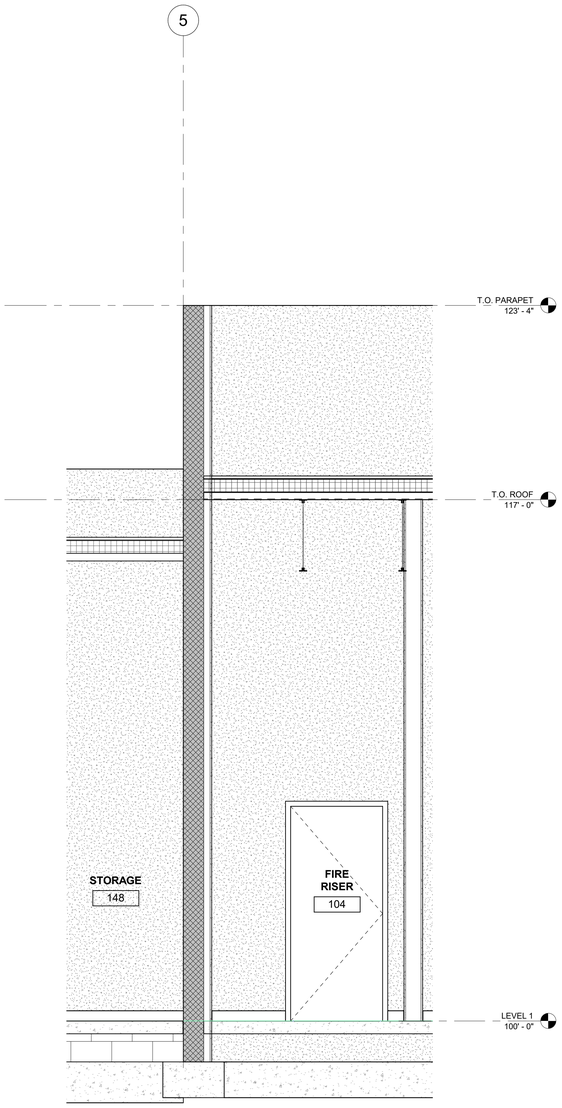
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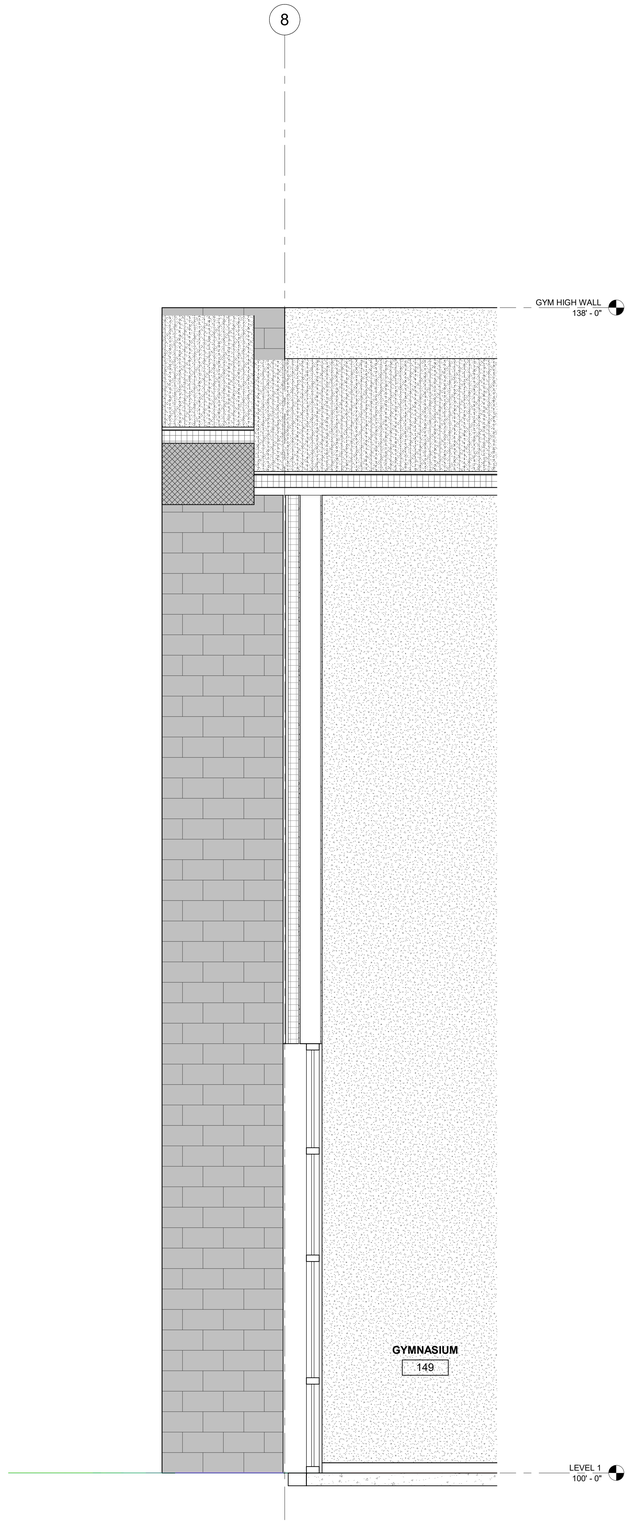
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Sheet Title
WALL SECTION - ALT. B

Date: JANUARY 19, 2023
Sheet No:
A7.11B



2 WALL SECTION 31 - GYMNASIUM
SCALE: 1/2" = 1'-0"



1 WALL SECTION 30 - GYMNASIUM
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND SLAB REQUIREMENTS.
2. SEE SHEETS A4.XX, ROOF PLAN AND ROOF DETAILS.
3. REFER TO FLOOR PLANS FOR PARTITION TYPES.
4. PAINT ALL EXPOSED INTERIOR AND EXTERIOR STRUCTURAL STEEL - SEE FINISH SCHEDULE AND ELEVATIONS.
5. REFER TO FINISH SCHEDULE FOR FLOOR, WALL, AND CEILING FINISHES.
6. SEE ELEVATIONS FOR CMU COLOR AND TEXTURE.
7. ALL PENETRATIONS THROUGH WALLS WITH SOUND INSULATION SHALL BE SEALED TIGHT WITH ACOUSTICAL INSULATION AND SEALANT.
8. ALL FLOOR AND (T.O.) PARAPET ELEVATIONS SHOWN ARE TAKEN FROM ED LEVEL WHICH IS EQUAL 100'-0". CIVIL FINISH FLOOR LEVEL XXXX.XX
9. REFER TO STRUCTURAL DETAILS FOR TYPICAL INTERIOR PARTITION CONNECTIONS.
10. FOR FINISH OF INTERIOR CMU WALLS EXPOSED, SEE FINISH SCHEDULE.

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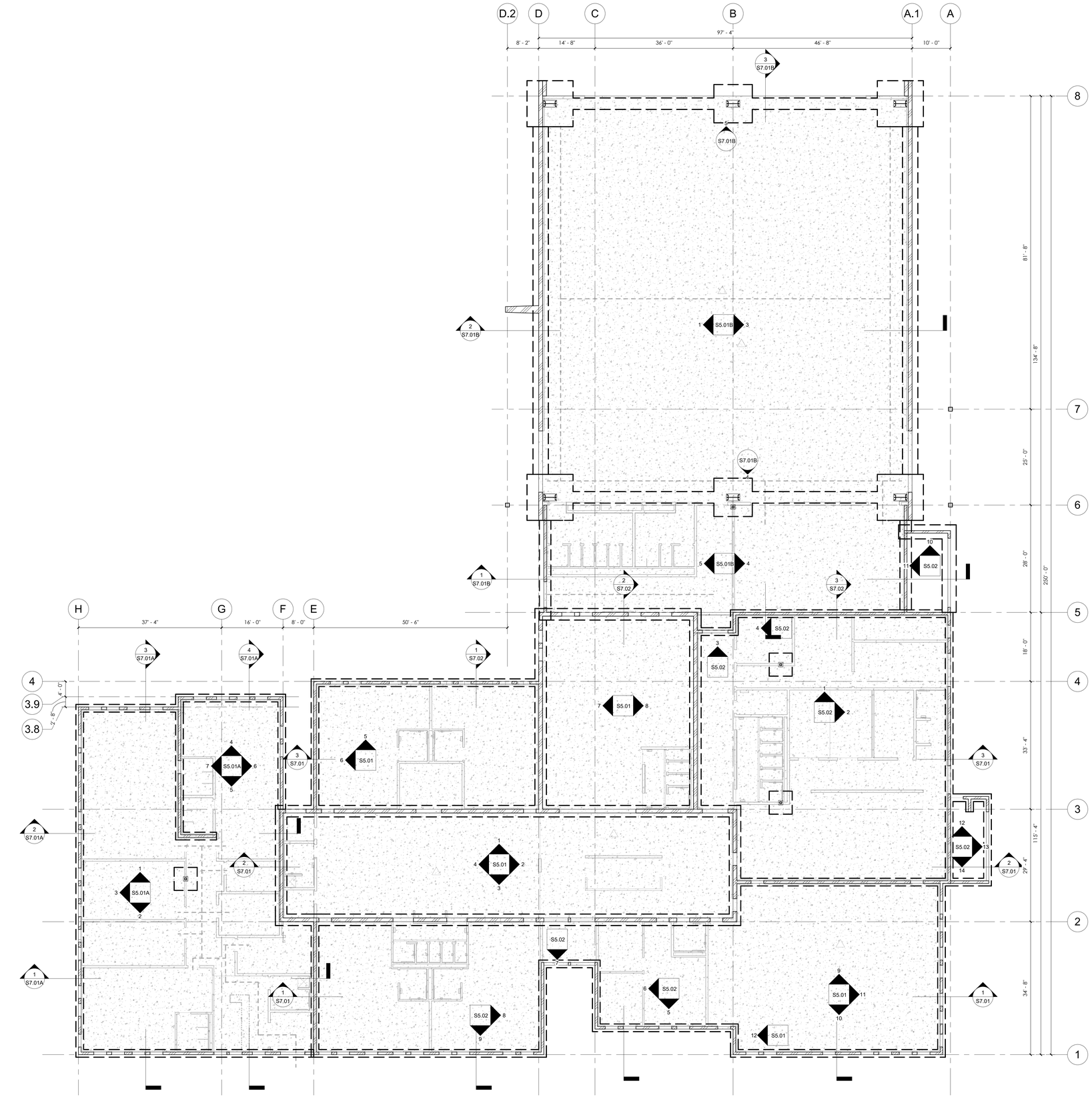
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WALL SECTION - ALT. B

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1 OVERALL FOUNDATION PLAN - GYMNASIUM

3/32" = 1'-0"

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OVERALL FOUNDATION PLAN - ALT. B

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S1.01B

GYMNASIUM FOUNDATION PLAN NOTES:

1. T.O. EXTERIOR FOOTINGS = 98' - 0" TYP., U.N.O.
2. T.O. INTERIOR FOOTINGS = 99" - 0" TYP., U.N.O.
3. CENTER ALL COLUMN SPOT FOOTINGS BELOW COLUMNS TYP.
4. NO CONDUIT SHALL BE PLACED IN THE SLAB ON GRADE.
5. SEE 15 / S0.2 WHERE UTILITIES ENTER BUILDING OR ARE ADJACENT TO COLUMN FOOTINGS.
6. SEE 16 / S0.2 & GENERAL NOTES FOR ENGINEERING FILL REQUIREMENTS AND SUBGRADE PREPARATION REQUIREMENTS.
7. SEE ARCHITECTURAL AND/OR MECHANICAL/PLUMBING DRAWINGS FOR ANY FLOOR DRAINS OR SINKS. CONTRACTOR TO COORDINATE.
8. SEE 7 / S0.2 FOR TYPICAL SLAB ON GRADE JOINTS. JOINTS TO BE PLACED AT 10'-0" MAX. O.C. AND LOCATED AT ALL RE-ENTRANT SLAB CORNERS, INTERIOR COLUMN LOCATIONS, OR ANY OTHER SLAB ON GRADE DISCONTINUITIES. SEE 12 / S0.2 FOR SLAB ON GRADE DOWELED JOINT INTERSECTIONS.
9. SEE SHEET S2 FOR FOUNDATION SCHEDULE.
10. SEE 6 / S0.2 FOR TYPICAL FOUNDATION REINFORCING LAPS AT CORNERS, ENDS, AND INTERSECTIONS.
11. SEE 10 / S0.2 & 11 / S0.2 FOR TYPICAL REINFORCING HOOKS, BENDS AND HOOKS & BENDS FOR TIES.
12. CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND CONDITIONS WITH ARCH. PRIOR TO FABRICATION OR ERECTION.
13. PLACE 15 MIL VAPOR BARRIER BENEATH CONCRETE SLAB (OVER AGGREGATE BASE) AT LOCATIONS WITH TILE FLOORING (OR OTHER FLOORING SENSITIVE TO MOISTURE). SEAL ALL SEAMS AND SEAL AROUND ALL PENETRATIONS PER VAPOR BARRIER MANUFACTURER RECOMMENDATIONS.
14. SEE SHEETS S0.9 & S0.10 FOR TYPICAL INTERIOR WALL DETAILS.

GYMNASIUM CONTINUOUS FOOTINGS SCHEDULE

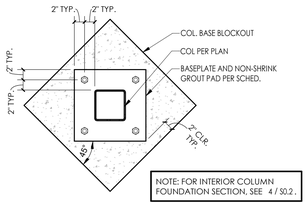
MARK	WIDTH	THICK.	REINFORCING CROSSWISE			REINFORCING LENGTHWISE				TOTAL LENGTH	REMARKS
			SIZE	LENGTH	SPACING (O.C.)	NO.	SIZE	LENGTH	SPACING (O.C.)		
CF2.0	2' - 0"	14"	#4	1' - 6"	24"	3	#5	CONT.	8 11/16"	629' - 0"	CROSSWISE REINF. TO BE CENTERED BETWEEN VERT. WALL REINF.
CF3.0	3' - 0"	14"	#5	2' - 6"	12"	4	#5	CONT.	9 13/16"	492' - 1 9/16"	
CF4.0	4' - 0"	16"				5	#5	CONT.	10 3/8"	229' - 4"	
GB36	3' - 0"	36"						CONT.		148' - 0"	REINF. CONTINUOUS THROUGH FOOTINGS

GYMNASIUM FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK.	REINFORCING CROSSWISE				REINFORCING LENGTHWISE				QUANTITY	REMARKS
				NO.	SIZE	LENGTH	SPACING (O.C.)	NO.	SIZE	LENGTH	SPACING (O.C.)		
F6.0	6' - 0"	6' - 0"	16"	7	#5	5' - 6"	10 7/8"	7	#5	5' - 6"	10 7/8"	2	
F10A	10' - 0"	10' - 0"	36"	10	#8	9' - 6"	12 9/16"			9' - 6"		2	SEE DETAIL 9/SAD1
F12A	12' - 0"	12' - 0"	36"	12	#8	11' - 6"	12 7/16"			11' - 6"		4	SEE DETAIL 10/SAD1

GYMNASIUM BASE PLATE / ANCHOR BOLT SCHEDULE

TYPE	QUANTITY	PLATE THICKNESS "T"	GROUT THICKNESS "G"	NUMBER OF ANCHORS	ANCHOR DIAMETER	ANCHOR EMBEDMENT "E"	ANCHOR PROJECTION "P"	CAST-IN OR EPOXY	Description
BP-1	4	3/4"	1 1/2"	4	3/4"	13"	4 1/4"	CAST-IN	Base Plate



NOTE: FOR INTERIOR COLUMN FOUNDATION SECTION, SEE 4 / S0.2 .

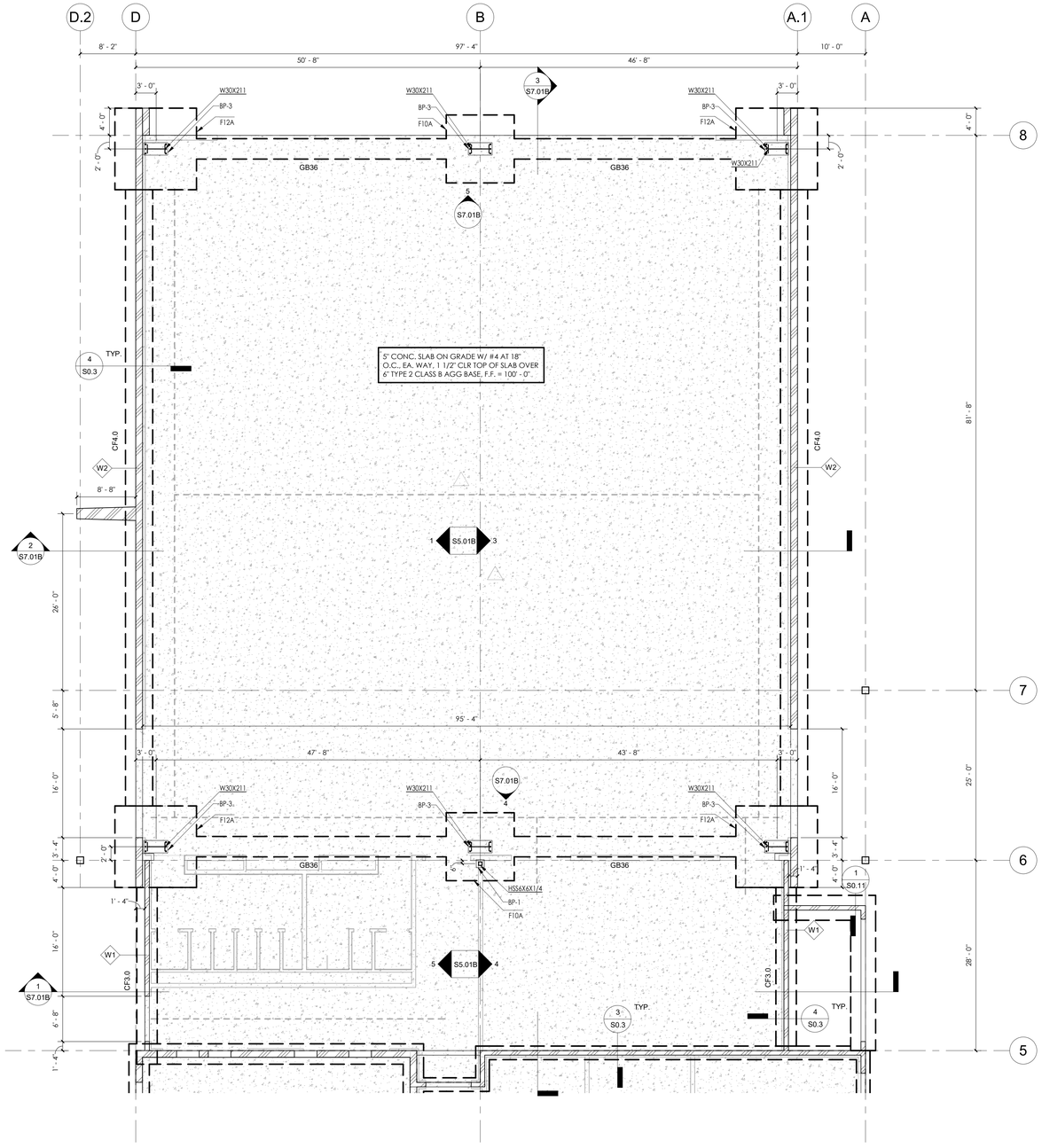
GYMNASIUM - BASEPLATES

GYMNASIUM CMU WALL SCHEDULE

MARK	TYPE	WIDTH	REINFORCEMENT		FOOTING DOWELS	REMARKS
			VERT.	HORIZ.		
W1	CMU	8"	#5 AT 24" O.C., CENTERED	#4 AT 32" O.C.	TO MATCH VERTS.	(2) #5 (HORIZ) CONT. BARS AT T.O. WALL AND/OR ROOF & FLOOR LINE, SEE DETAILS
W2	CMU	12"	#6 AT 24" O.C., AT EA. FACE	#5 AT 24" O.C.	TO MATCH VERTS.	(2) #5 (HORIZ) CONT. BARS AT T.O. WALL AND/OR ROOF & FLOOR LINE, SEE DETAILS

NOTES:

1. **SEE WALL ELEVATIONS FOR ADDITIONAL REINFORCING WHERE REQUIRED.**
2. ALL CMU WALLS TO BE FULLY GROUTED.
3. MASONRY SHALL BE CONSTRUCTED OF HOLLOW OPEN END UNITS WHEREVER POSSIBLE AND SHALL BE LAID IN A RUNNING BOND PATTERN.
4. FOLLOW DETAIL 9 / S0.3 FOR MIN. CMU CORNER AND 128 / S0.3 FOR JAMB REINFORCEMENT.
5. JAMB STEEL BARS IN SHORT SHEAR PIERS ARE NOT ADDITIVE TO WALL SCHEDULE STEEL. PLACE THE MORE RESTRICTIVE REINFORCING.
6. PROVIDE HORIZONTAL CORNER BARS AT ALL CORNERS AND INTERSECTING WALLS PER 9 / S0.3.
7. PROVIDE (2) #5 CONT. HORIZONTAL CHORD STEEL AT ALL ROOF AND FLOOR LINE LEVELS PER DETAILS, U.N.O.
8. PROVIDE CONT. HORIZ. #5 BAR OR BARS AT JOIST WALL ANCHORS PER DETAILS (WHERE OCCURS).
9. ALL HORIZONTAL BARS SHALL BE ANCHORED AROUND END VERTICAL REINFORCING BARS AT JAMBS WITH A STANDARD HOOK.
10. PROVIDE CMU REINFORCEMENT LAP SPLICES PER GENERAL NOTES.
11. BARS E.F. SHALL BE PLACED 1/2" CLEAR OF THE INSIDE FACE OF THE CMU SHELL, INCLUDING AT JAMBS.
12. BARS CENTERED SHALL BE CENTERED IN THE CMU WALL. HORIZ. STEEL TO BE PLACED ALONG SIDE.



1 **FOUNDATION PLAN - GYMNASIUM**

1/8" = 1'-0"

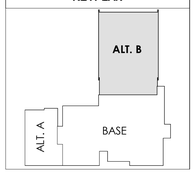
GENERAL NOTES

1. SEE WALL ELEVATIONS FOR MORE RESTRICTIVE WALL REINFORCEMENT. VERTICAL WALL REINFORCING SHALL BE EMBEDDED IN FOUNDATIONS TO MATCH VERTICAL AND TYPICAL REINFORCING IN ELEVATIONS.
2. CONTRACTOR SHALL PROVIDE CONSTRUCTION JOINTS (C.J.) AND CONTROL JOINTS (ALTERNATE S.J. AND D.J.) FOR ALL SLABS ON GRADE IN ACCORDANCE WITH DETAILS 1 / S0.3 & 7 / S0.2, RESPECTIVELY. A DRAWING SHOWING THE PROPOSED LAYOUT OF ALL SLAB JOINTS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL.

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Sheet No:
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ROOF FRAMING PLAN NOTES:

1. B.O. DECK= TOP OF FRAMING (BOTTOM OF DECK) ELEVATION ABOVE THE FINISHED FIRST FLOOR.
2. T.O.S.= TOP OF WIDE FLANGE GIRDER ELEVATION ABOVE THE FINISHED FIRST FLOOR.
3. SEE FOR STEEL JOIST AND JOIST GIRDER DESIGN CRITERIA.
4. SEE 3 / S0.6 & 4 / S0.6 FOR ROOF HUNG PIPING SUPPORTS.
5. FIRE SPRINKLER CONTRACTOR SHALL LAY OUT FIRE SPRINKLER LINES SO THAT NO LINE PASSES UNDER SKYLIGHT/SMOKEVENTS OR FUTURE MECHANICAL UNITS (WHERE THESE ITEMS OCCUR).
6. STEEL JOIST AND JOIST GIRDER SUPPLIER SHALL SUBMIT STRUCTURAL CALCULATIONS, SHOP, AND ERECTION DRAWINGS SEALED AND SIGNED BY A NEVADA REGISTERED CIVIL OR STRUCTURAL ENGINEER TO THE ENGINEER OF RECORD WHO AGREES TO REVIEW THESE DOCUMENTS FOR ACCEPTANCE PRIOR TO FABRICATION. STRUCTURAL CALCULATIONS, SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR ACCEPTANCE AFTER THE ENGINEER OF RECORD HAS NOTED HIS/HER ACCEPTANCE.
7. JOIST AND JOIST GIRDER DRAWINGS SHALL SHOW COMPLIANCE WITH THE STANDARD SPECIFICATIONS FOR STEEL JOISTS, K-SERIES, LH-SERIES, DLH-SERIES AND JOIST GIRDERS, 44TH EDITION, PUBLISHED BY THE STEEL JOIST INSTITUTE.
8. JOIST AND JOIST GIRDERS SHALL BE IDENTIFIED AS TO TYPE, SIZE, AND MANUFACTURER BY TAGGING OR OTHER SUITABLE MEANS AT THE TIME OF MANUFACTURE OR FABRICATION. SUCH IDENTIFICATION SHALL BE MAINTAINED CONTINUOUSLY TO THE POINT OF THEIR INSTALLATION IN A STRUCTURE.
9. SEE SHEETS S0.9 & S0.10 FOR TYPICAL INTERIOR WALL DETAILS.

GYMNASIUM METAL DECK SCHEDULE

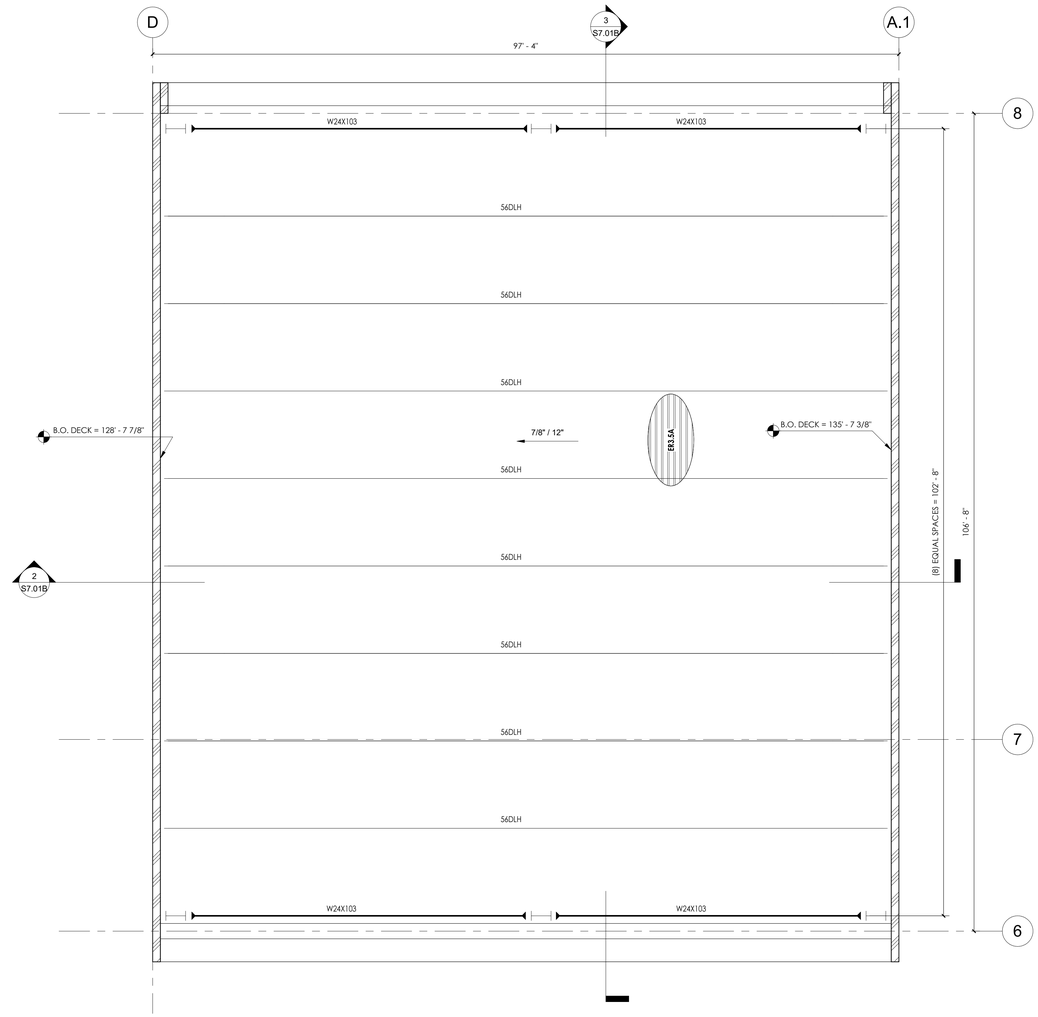
MARK	DECK TYPE (SEE NOTE 1)	DECK SIZE	DECK ATTACHMENT ZONE	DIAPHRAGM CONNECTIONS (SEE NOTES 2, 3 AND 6)			APPROX. TOTAL AREA
				LOW FLUTES		SIDE SEAMS	
				PERPENDICULAR TO SUPPORT	PARALLEL TO SUPPORT		
ER3.5A	EPICORE ER3.5A	3 1/2" x 18 GA	III	PW AT 24/6 PATTERN	PW AT 12" O.C. MAX	#12 SCREWS AT 12" O.C. MAX	10483 SF
PLB-I	PLB-36	1 1/2" x 18 GA	I	FASTENERS AT 36/4 PATTERN	FASTENERS AT 12" O.C. MAX	VSC2 AT 24" O.C. MAX	26650 SF

NOTES:

1. METAL DECK SHALL BE AS SPECIFIED BY ASC, VERCO, VULCRAFT, EPIC OR APPROVED EQUAL.
2. CONNECTIONS SHALL BE PLACED IN ACCORDANCE WITH THE DECK MANUFACTURERS STANDARD PATTERN AND REQUIREMENTS.
3. PW = 3/4" PUDDLE WELD. VSC2 = VERCO PUNCHLOK II SIDELAP CONNECTION.
4. DECK SHALL BE PLACED IN EITHER A 2-SPAN OR 3-SPAN CONDITION. SINGLE DECK SPANS WILL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED.
5. REFER TO DECK ATTACHMENT DIAGRAM FOR DECK ATTACHMENT ZONE.
6. FASTENERS SHALL BE #12 SCREWS FOR SUPPORT STEEL THICKNESS LESS THAN 1/8". FASTENERS SHALL BE HILTI HSN-24 FOR SUPPORT STEEL THICKNESS 1/8" TO 3/8". FASTENERS SHALL BE HILTI X-ENP-19 FOR SUPPORT STEEL THICKNESS GREATER THAN 1/4". FOR SUPPORT STEEL THICKNESS BETWEEN 1/4" AND 3/8" (INCLUSIVE), HILTI HSN-24 OR X-ENP-19 FASTENERS MAY BE USED AT CONTRACTOR'S OPTION.

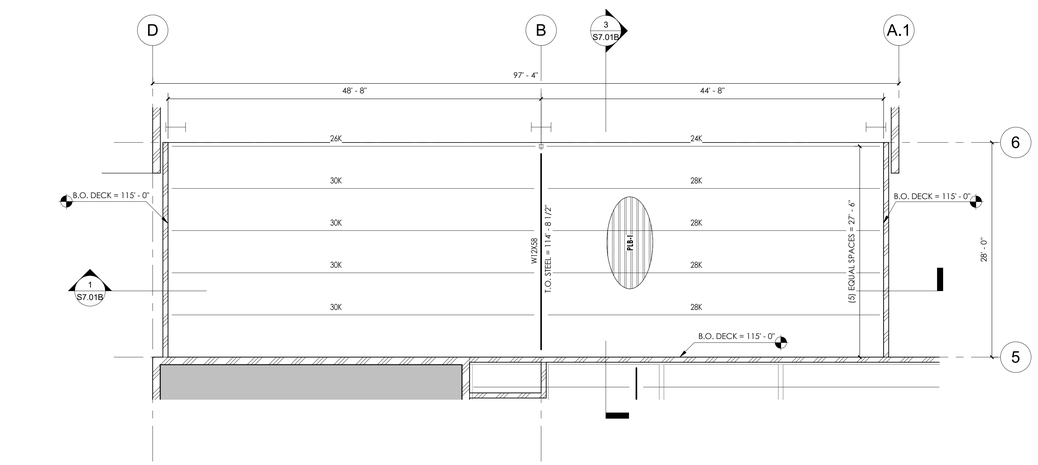
GYMNASIUM JOIST BEARING PLATE SCHEDULE

MARK	PLATE	ANCHOR	WALL ANCHORAGE LOAD (0.6W OR 0.7E)
P4	8" CMU: 3/4" x 5 1/2" x 1' - 3" 12" CMU: 3/4" x 9" x 1' - 3"	(4) 3/4" x 6" NSA AT 4" O.C.	8" CMU: 8.0 KIPS 12" CMU: 10.8 KIPS
P6	8" CMU: 3/4" x 5 1/2" x 1' - 11" 12" CMU: 3/4" x 9" x 1' - 11"	(6) 3/4" x 6" NSA AT 4" O.C.	8" CMU: 10.4 KIPS 12" CMU: 11.4 KIPS



1 GYMNASIUM - HIGH ROOF FRAMING PLAN

1/8" = 1'-0"



2 GYMNASIUM - LOW ROOF FRAMING PLAN

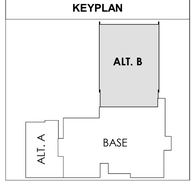
1/8" = 1'-0"

GENERAL NOTES

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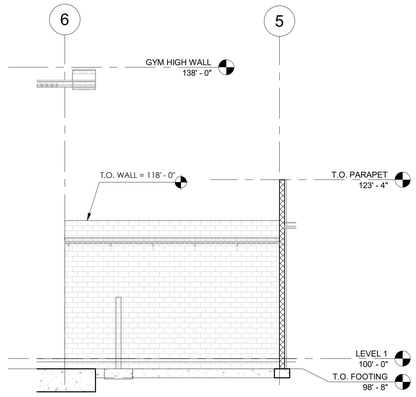
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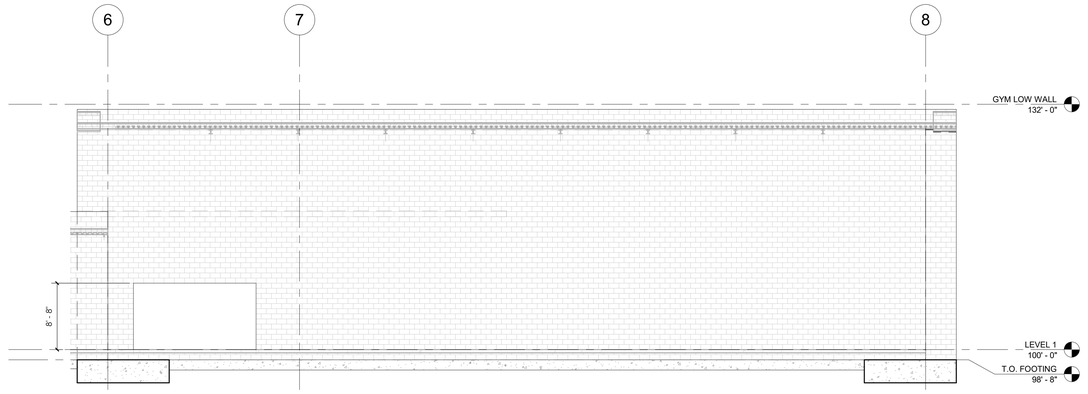
NOTE:

1. WALL OPENINGS LESS THAN 12" IN WIDTH AND/OR HEIGHT NEED NO SPECIAL REINFORCING AND THEREFORE ARE NOT SHOWN FOR CLARITY.
2. COORDINATE ALL MECH./PLUMBING OPENINGS WITH MECH.
3. CONTRACTOR SHALL PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS IN ACCORDANCE WITH DETAIL 5 / S0.3 OR DETAIL 7 / S0.4 AT CLAY BRICK. CONTRACTOR TO SUBMIT A CMU CONTROL JOINT LOCATION PLAN TO THE ARCHITECT/STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. CONTROL JOINTS STARTING IN CMU SHALL RUN CONTINUOUS THROUGH CLAY BRICK AND THE JOINT SHALL CHANGE TYPE AT THE MATERIAL CHANGE.
4. ADDITIONAL HORIZONTAL REINFORCEMENT AT CMU PIERS TO EXTEND 32" ABOVE AND BELOW THE ADJACENT WINDOW OPENING(S) AND 32" ABOVE THE ADJACENT DOOR OPENINGS.



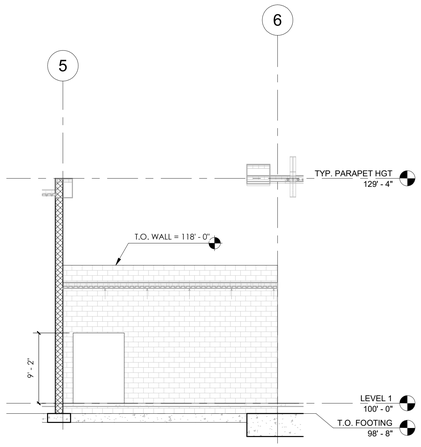
4 WALL ELEVATION - STORAGE (LOOKING EAST)

1/8" = 1'-0"



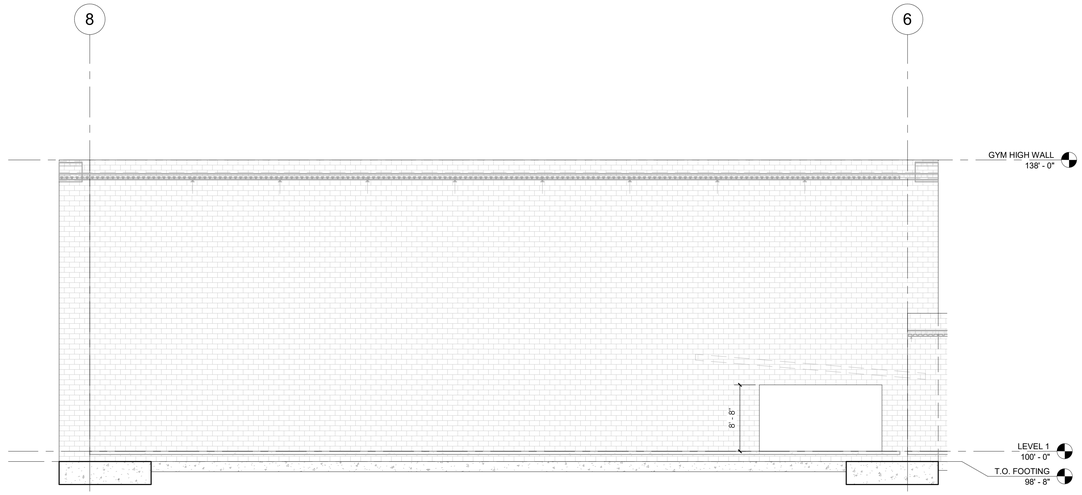
1 WALL ELEVATION - GRID D (LOOKING WEST)

1/8" = 1'-0"



5 WALL ELEVATION - STORAGE (LOOKING WEST)

1/8" = 1'-0"



3 WALL ELEVATION - GRID A.1 (LOOKING EAST)

1/8" = 1'-0"

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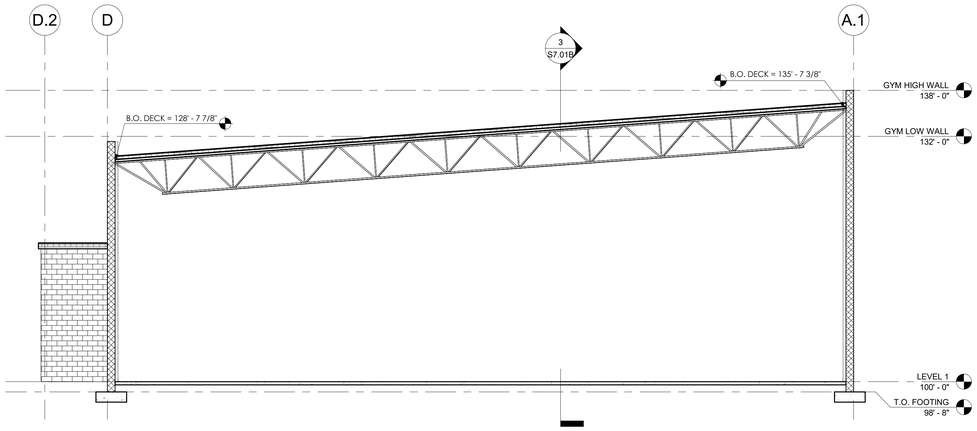
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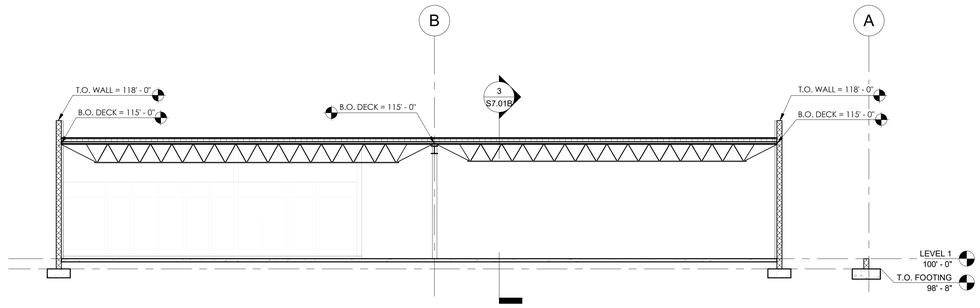
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WALL ELEVATIONS - ALT. B

Date: JANUARY 19, 2023
Sheet No:
S5.01B



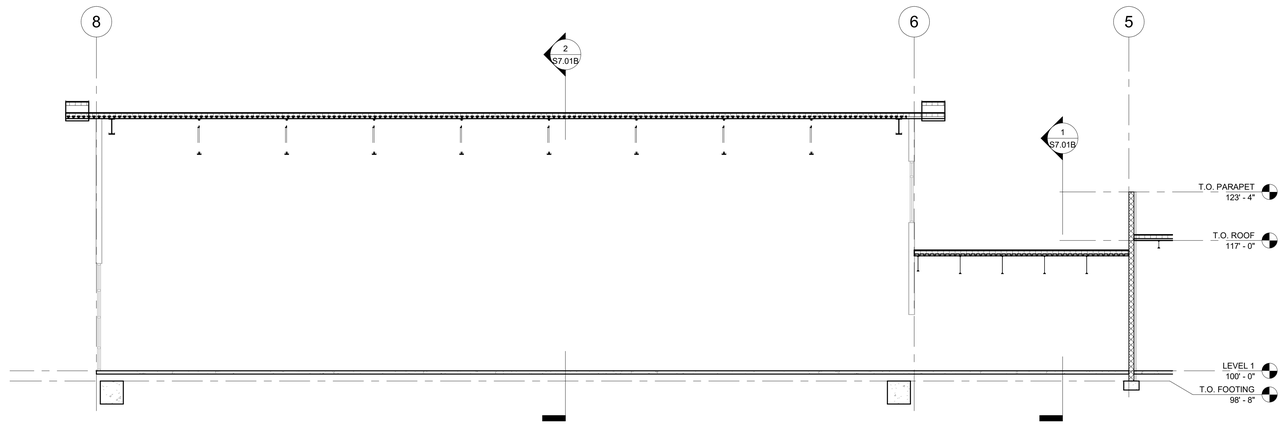
2 GYMNASIUM - STRUCTURAL SECTION 2

1/8" = 1'-0"



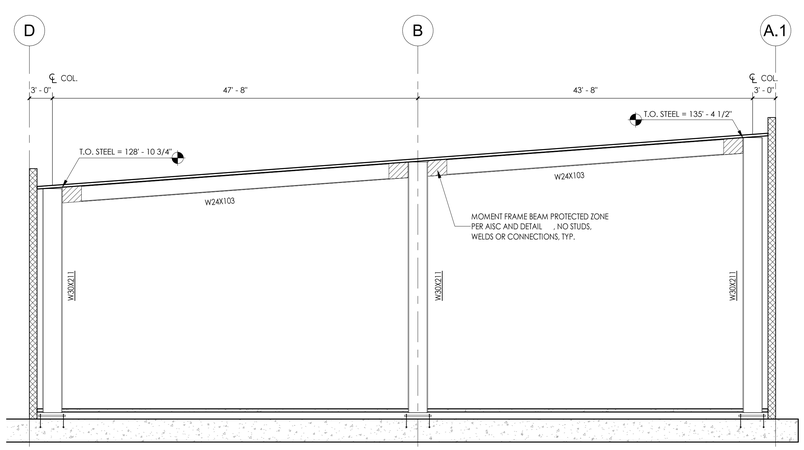
1 GYMNASIUM - STRUCTURAL SECTION 1

1/8" = 1'-0"



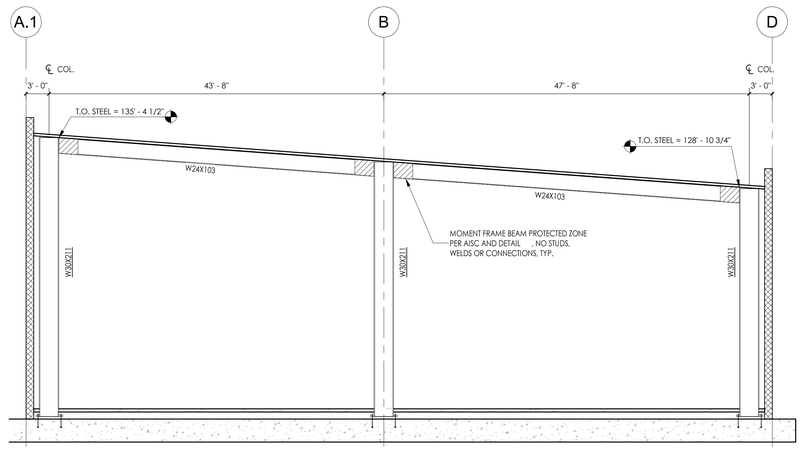
3 GYMNASIUM - STRUCTURAL SECTION 3

1/8" = 1'-0"



5 GYM FRAME ELEVATION - GRID 8

1/8" = 1'-0"



4 MOMENT FRAME ELEVATION - GRID 6

1/8" = 1'-0"

GENERAL NOTES

KEYNOTES

LEGEND

KEYPLAN

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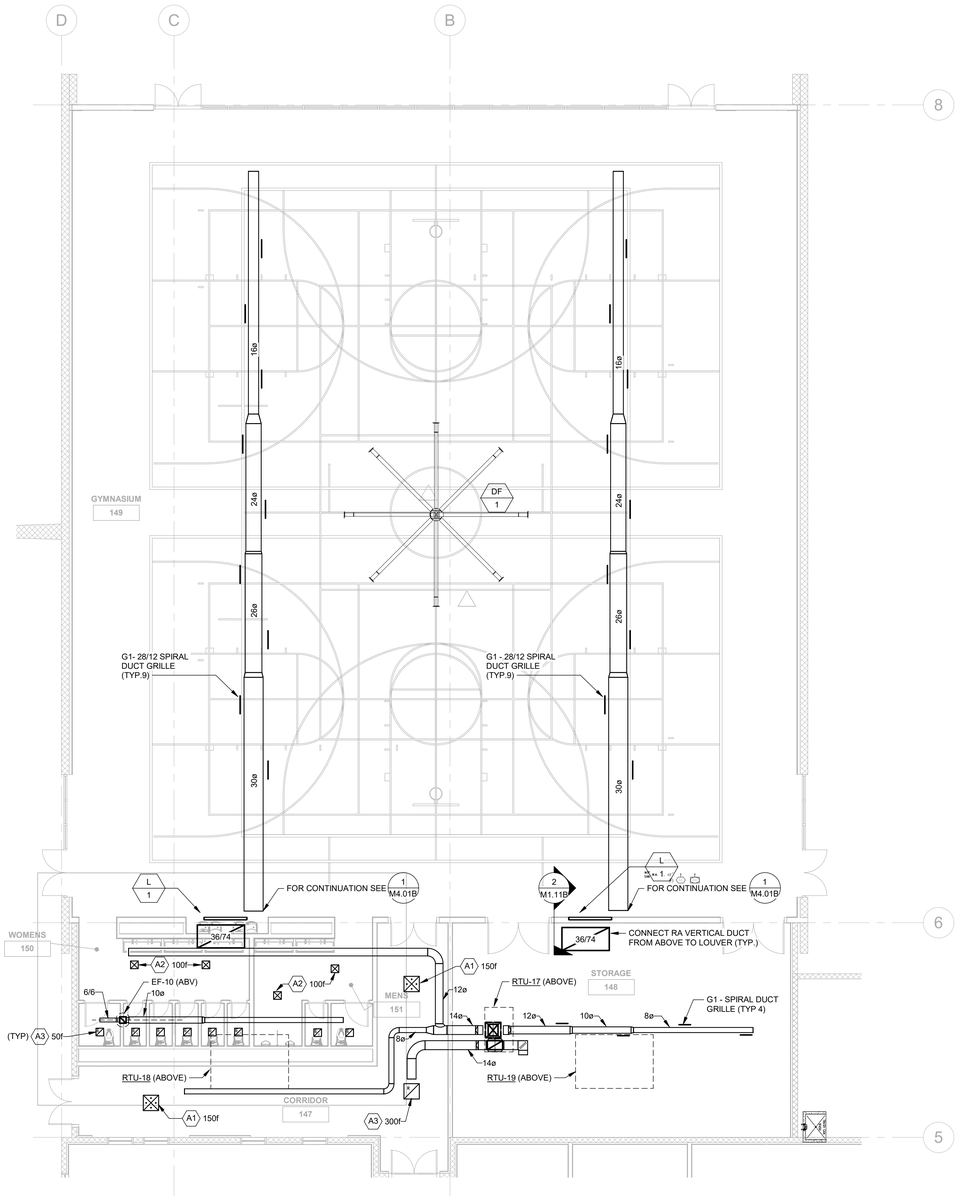
Job No: 20-22

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Sheet Title
STRUCTURAL SECTIONS - ALT. B

Date: JANUARY 19, 2023
Sheet No:
S7.01B

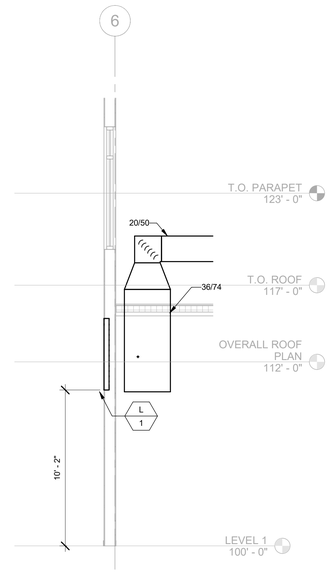


MECHANICAL PARTIAL FLOOR PLAN - ALT. B

SCALE: 1/8" = 1'-0"

1 / M1.11B

N



GYM RETURN AIR TO LOUVER SECTION

SCALE: 1/4" = 1'-0"

2 / M1.11B

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REV	DATE	DESCRIPTION

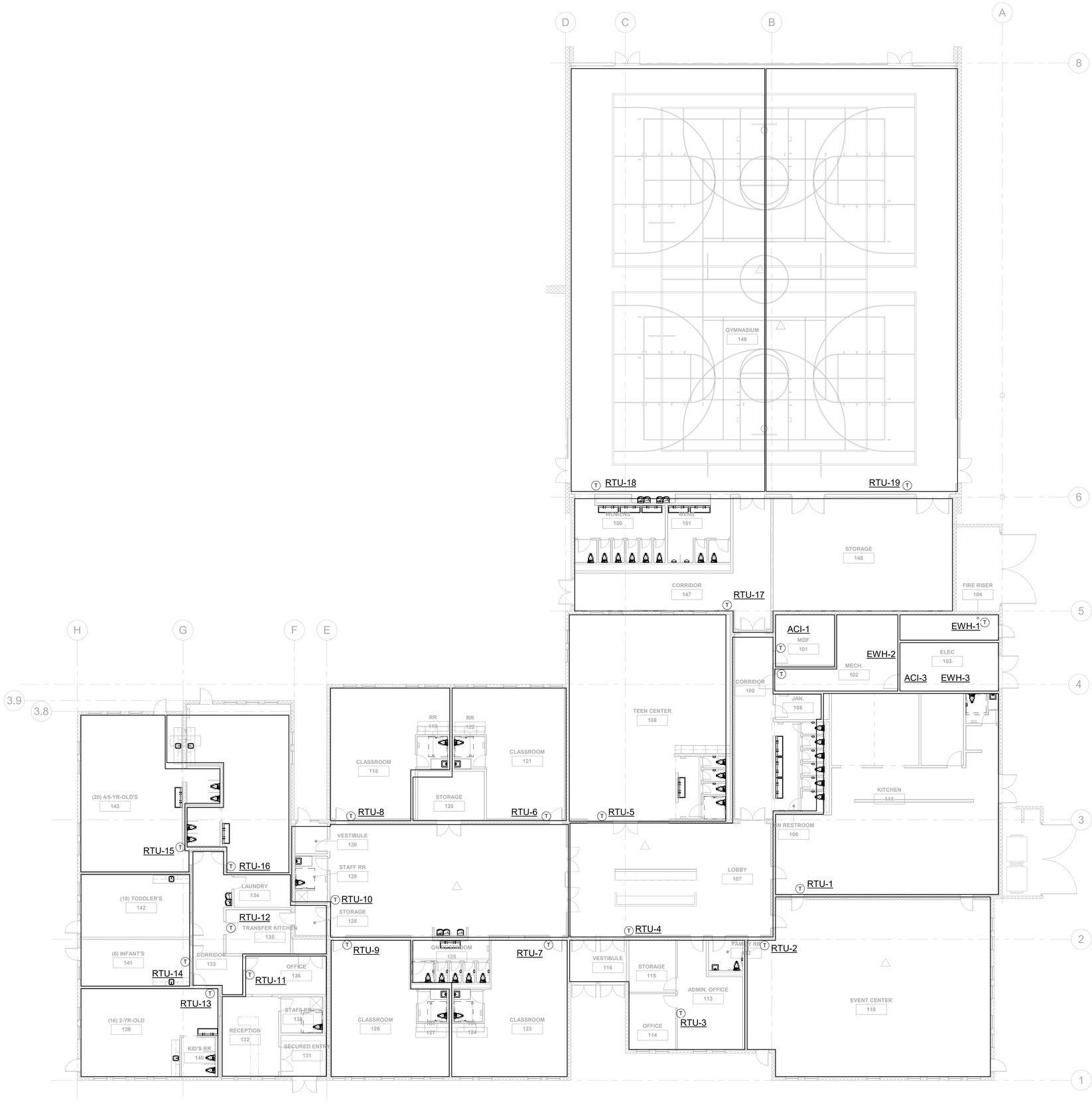
Sheet Title

MECHANICAL PARTIAL FLOOR PLAN - ALT. B

Date: JANUARY 19, 2023

Sheet No:

M1.11B



MECHANICAL PARTIAL ZONING PLAN - ALT. B

SCALE: 1" = 10'-0"

1 / M2.3

N

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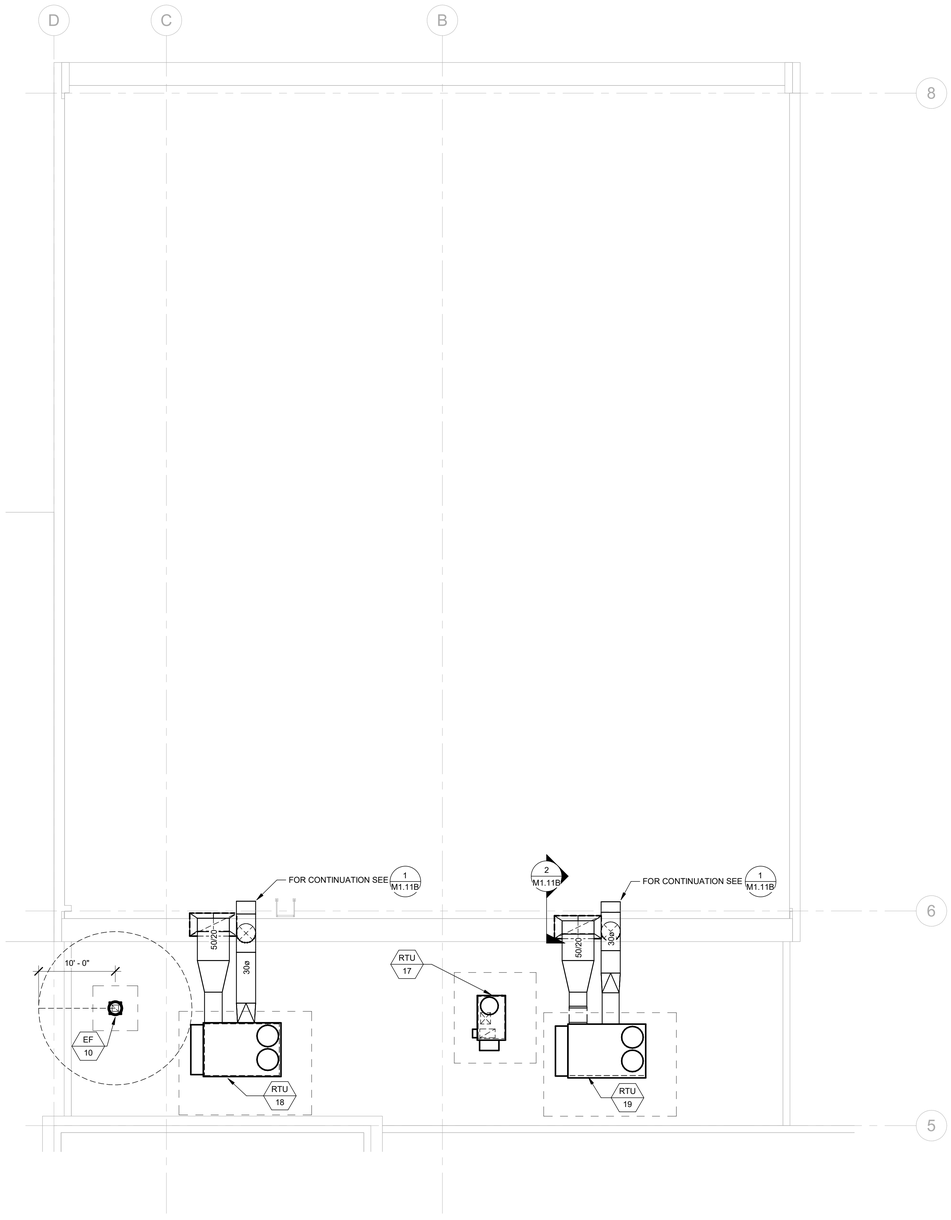
Sheet Title

MECHANICAL PARTIAL ZONING PLAN - ALT. B

Date: JANUARY 19, 2023

Sheet No:

M2.3



MECHANICAL PARTIAL ROOF PLAN - ALT. B 1 M4.01B

SCALE: 1/8" = 1'-0"

N

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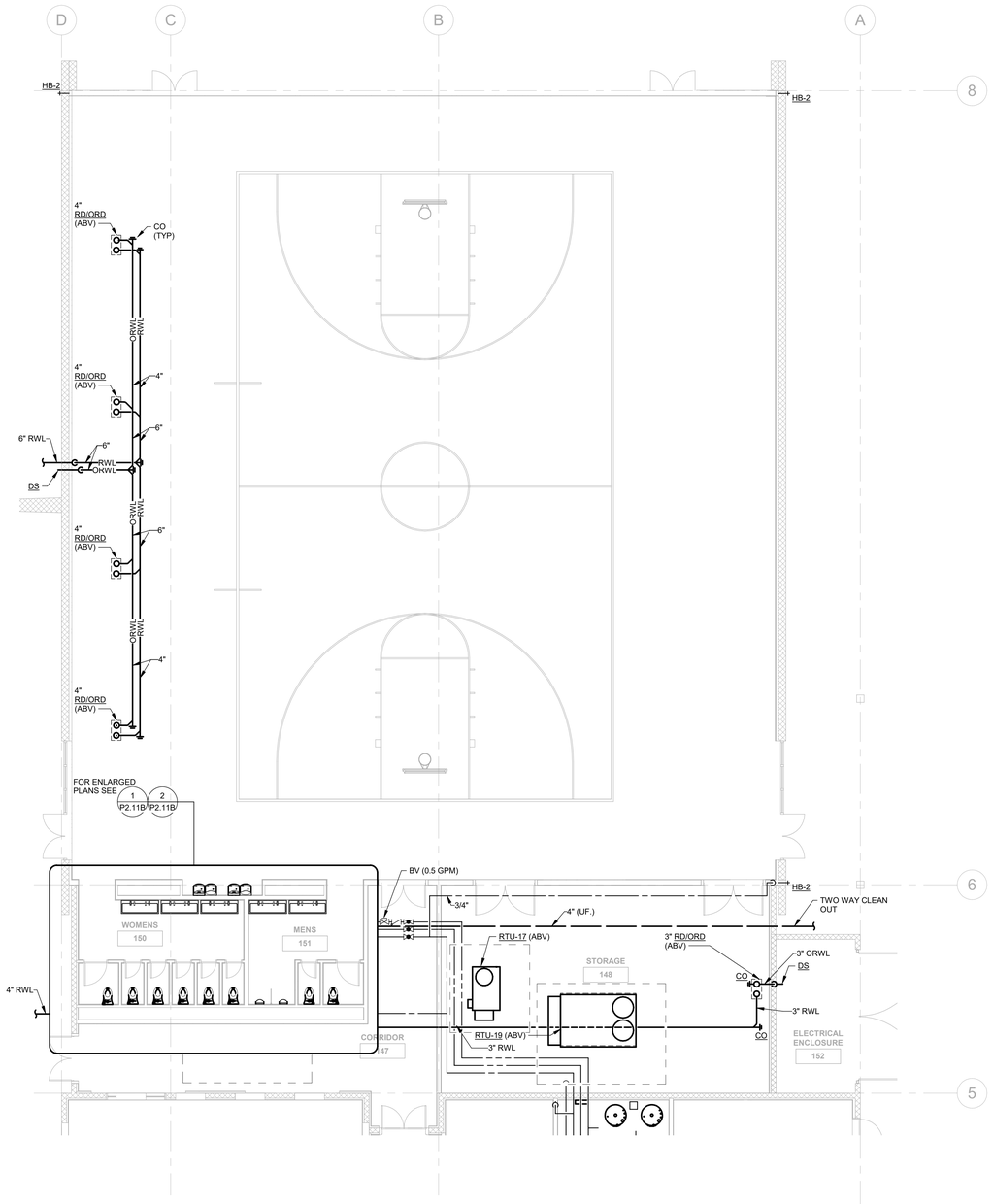
Sheet Title

MECHANICAL PARTIAL ROOF PLAN - ALT. B

Date: JANUARY 19, 2023

Sheet No:

M4.01B



PLUMBING PARTIAL FLOOR PLAN - ALT. B (1 / P1.11B)

SCALE: 1/8" = 1'-0"

N

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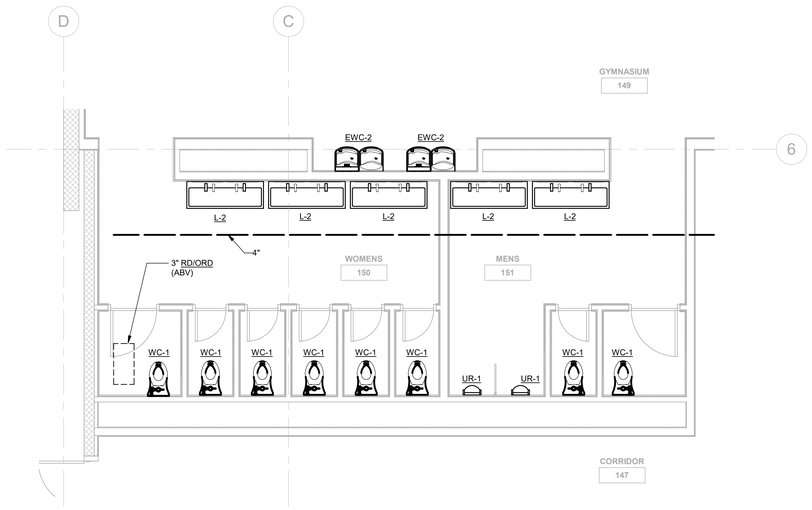
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PLUMBING PARTIAL FLOOR PLAN - ALT. B

Date: JANUARY 19, 2023

Sheet No:

P1.11B

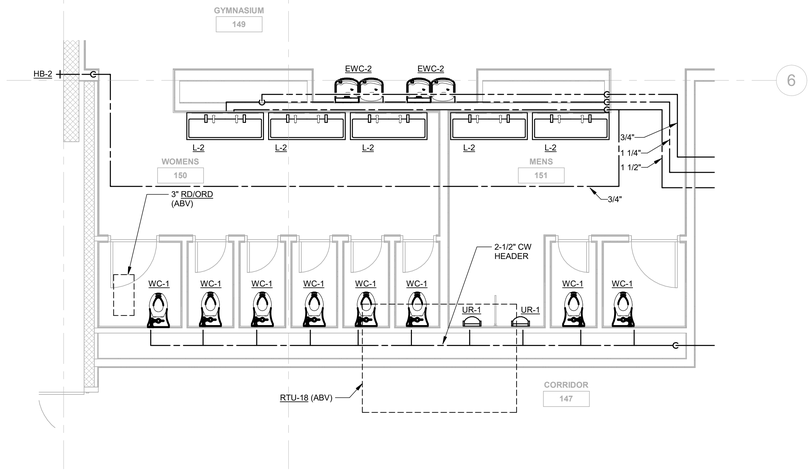


PLUMBING ENLARGED PLANS - GYM RESTROOMS
WASTE AND VENT

SCALE: 1/4" = 1'-0"

1 / P2.11B

N



PLUMBING ENLARGED PLANS - GYM RESTROOMS
WATER AND UTILITIES

SCALE: 1/4" = 1'-0"

2 / P2.11B

N

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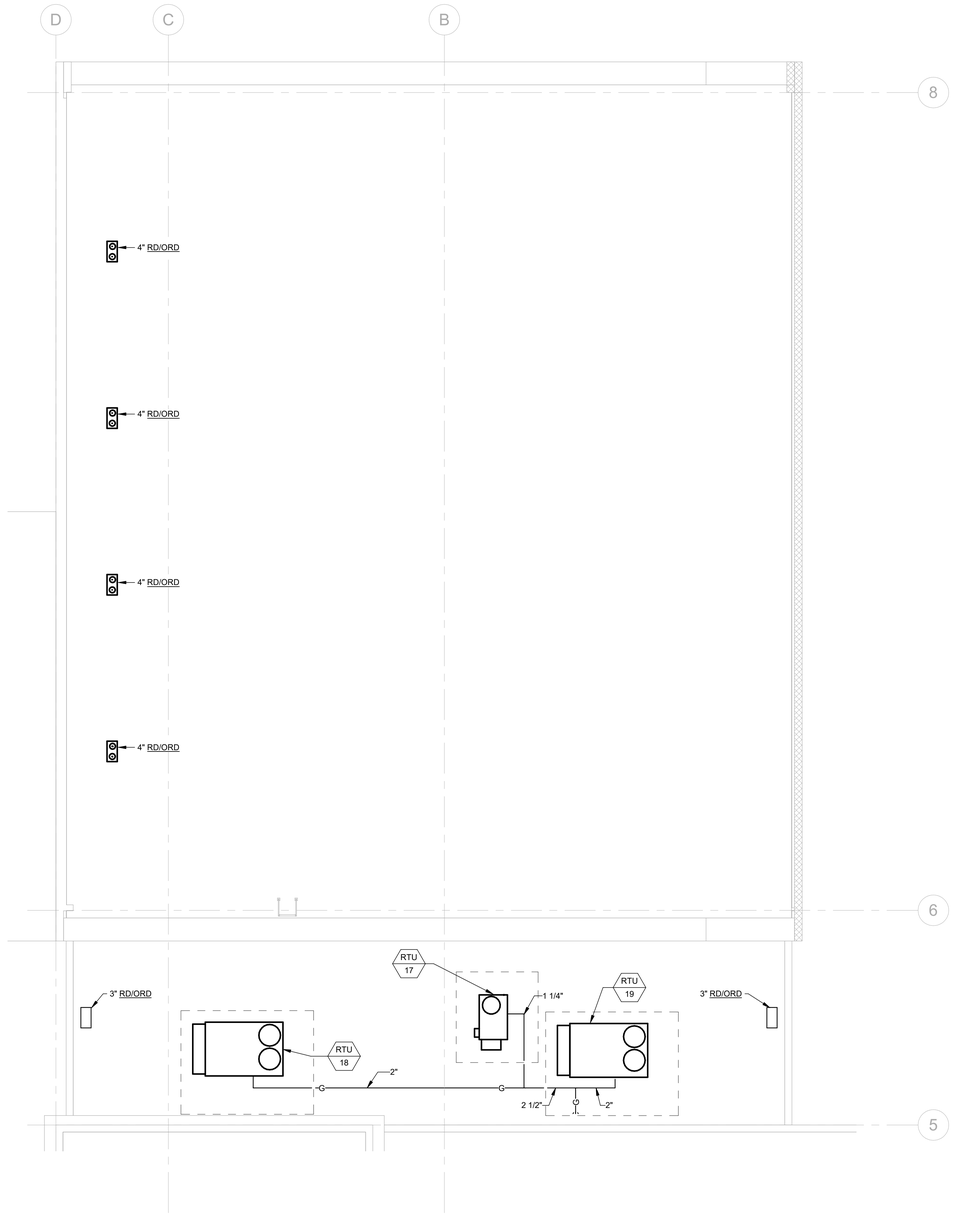
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PLUMBING ENLARGED FLOOR PLANS - ALT. B

Date: JANUARY 19, 2023

Sheet No:

P2.11B



PLUMBING PARTIAL ROOF PLAN - ALT. B (1 / P4.01B) N

SCALE: 1/8" = 1'-0"

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PLUMBING PARTIAL ROOF PLAN - ALT. B

Date: JANUARY 19, 2023

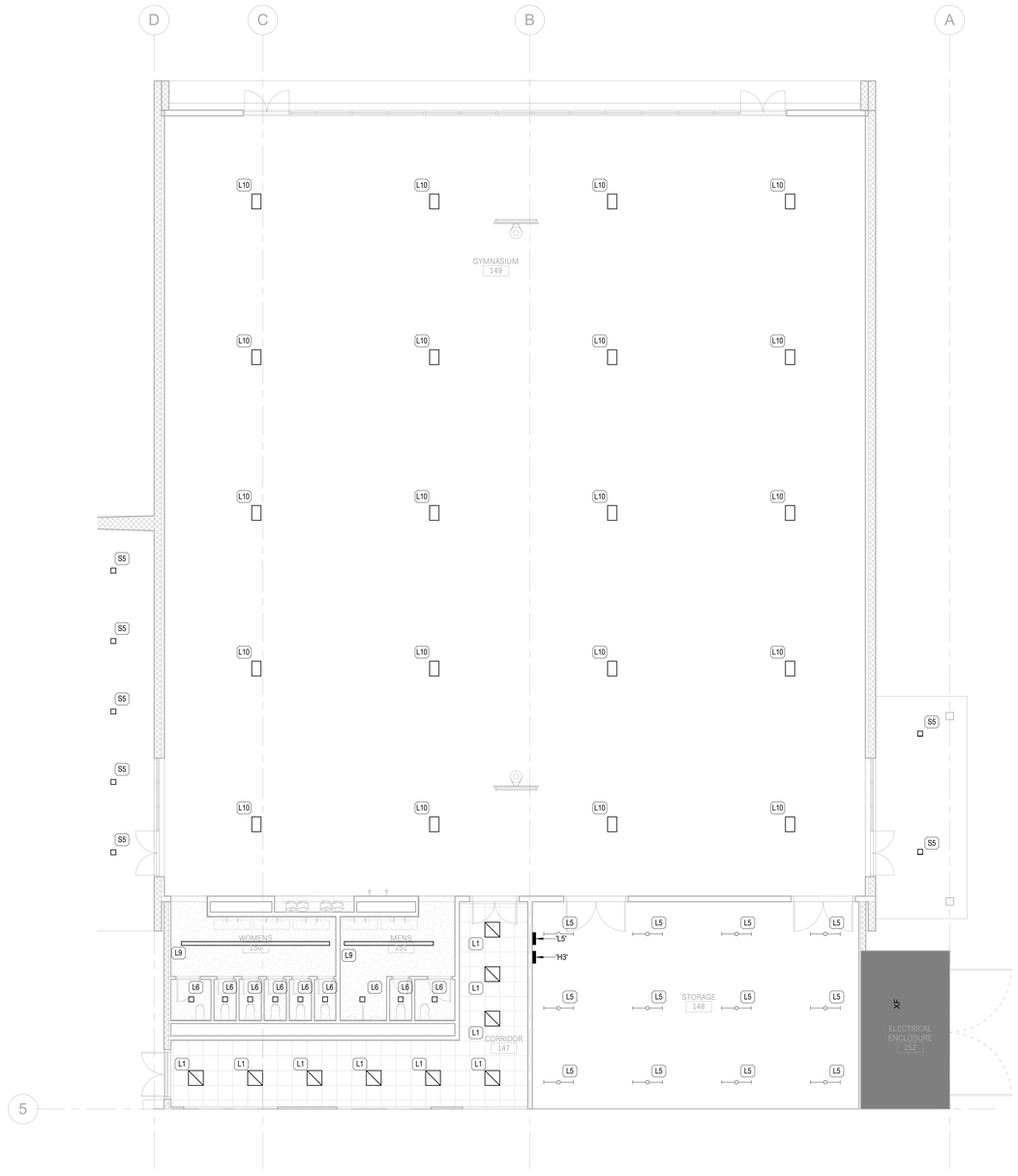
Sheet No:

P4.01B

GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. LIGHTING FIXTURES DESIGNATED AS 'EMERGENCY' SHALL BE WIRED TO OPERATE WITH LOCAL SWITCHING UNDER NORMAL POWER CONDITIONS AND SHALL OPERATE VIA EMERGENCY BATTERY PACK OR INVERTER UPON LOSS OF BUILDING UTILITY POWER ONLT, UNLESS NOTED OTHERWISE.
3. EXIT SIGNS SHALL BE WIRED AHEAD OF LOCAL SWITCHING AND LIGHTING CONTROL PANEL FOR CONTINUOUS OPERATION. EXIT SIGNS SHALL BE WALL-MOUNTED ABOVE DOORS WHERE PRACTICAL. PROVIDE ADDITIONAL EXIT SIGNS AS NECESSARY FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION, PER ARCHITECT'S FINAL PATH OF EGRESS / EXITING PLAN.
4. ELECTRICAL CONDUITS SHALL BE RUN CONCEALED WHERE BUILDING CONSTRUCTION ALLOWS. ANY EXPOSED CONDUIT SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. ANY EXPOSED CONDUIT, FITTING, SUPPORTS, ETC SHALL BE PAINTED TO MATCH THE SURFACE ON WHICH THEY ARE INSTALLED.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, SECTIONS, ELEVATIONS, ETC. FOR EXACT LOCATION OF LIGHTING FIXTURES.
6. EXACT LOCATION AND MOUNTING HEIGHT OF EXTERIOR BUILDING-MOUNTED FIXTURES SHALL BE COORDINATED WITH ARCHITECT PRIOR TO ROUGH-IN.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING FINAL FIXTURE LOCATIONS, ABOVE-CEILING HOUSING CLEARANCES, ETC. WITH MECHANICAL, PLUMBING, SPRINKLER CONTRACTOR AND OTHER TRADES PRIOR TO ROUGH-IN.
8. PROVIDE MULTIPLE-GANG FACEPLATES AS NECESSARY WHERE TWO OR MORE LIGHT SWITCHES ARE INDICATED IN A COMMON LOCATION. SINGLE-GANG FACEPLATES FOR A GROUP OF LIGHT SWITCHES ARE NOT PERMITTED.
9. PROVIDE STAINLESS STEEL DEVICE PLATES IN KITCHEN AND ROUGH-SERVICE AREAS.
10. CONDUIT FOR BUILDING-MOUNTED LIGHT FIXTURES SHALL BE ROUTED THROUGH INTERIOR OF BUILDING. LIGHT FIXTURE BACKBOXES SHALL BE RECESSED.

SHEET NOTES



1 E2.01B LIGHTING PLAN - GYMNASIUM
Scale: 1/8" = 1'-0"

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Sheet Title
LIGHTING PLAN - GYMNASIUM

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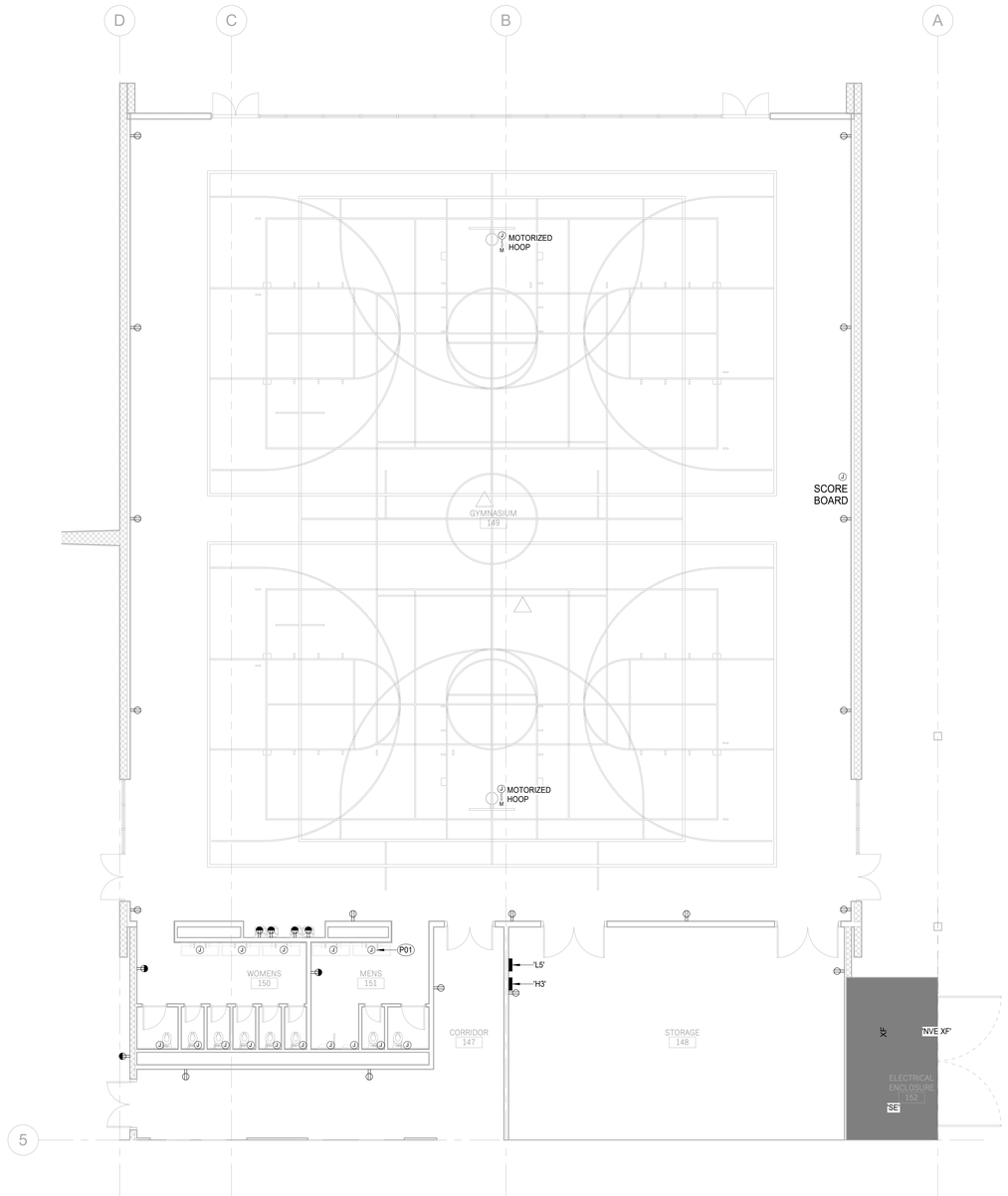
Sheet No:
E2.01B

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1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL COORDINATE FINAL RECEPTACLE LOCATIONS WITH TELECOM OUTLETS PRIOR TO ROUGH-IN. EACH TELECOM OUTLET SHALL HAVE A RECEPTACLE LOCATED WITHIN 12", MEASURED FROM CENTER OF DEVICES.
3. MODULAR FURNITURE: ELECTRICAL CONTRACTOR RESPONSIBLE FOR ON-SITE COORDINATION WITH FURNITURE SUPPLIER TO VERIFY FINAL WIRING REQUIREMENTS, CIRCUITING, J-BOX LOCATIONS, ETC. PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR TO PROVIDE ALL HARDWARE AND ACCESSORIES NECESSARY FOR A COMPLETE INSTALLATION. FURNITURE SUPPLIER TO PROVIDE POWER WHIPS, ELECTRICAL CONTRACTOR TO MAKE FINAL CONNECTIONS TO FURNITURE. DESIGN INTENT OF THESE DRAWINGS ASSUMES 3-CIRCUIT, 8-WIRE MODULAR FURNITURE SYSTEM (3H, 3N, G, DED. G). NO MORE THAN SIX (6) WORKSTATIONS PER EACH 3-CIRCUIT GROUP, UNLESS NOTED OTHERWISE.
4. COORDINATE EXACT MOUNTING HEIGHTS AND LOCATIONS OF GENERAL RECEPTACLES, SPECIAL OUTLETS AND DISCONNECT SWITCHES IN SHOP AREAS WITH OWNER AND EQUIPMENT SUPPLIERS PRIOR TO ROUGH-IN.
5. CONDUITS FOR ROOF-MOUNTED DEVICES AND EQUIPMENT SHALL BE RUN BELOW ROOF DECK/SYSTEM. ROOF MOUNTED CONDUITS WILL ONLY BE CONSIDERED AND APPROVED IN WRITING BY THE ARCHITECT/ENGINEER.
6. VERIFY EXACT ELECTRICAL REQUIREMENTS, PLUG CONFIGURATIONS, ETC., AND FINAL LOCATIONS OF OWNER-PROVIDED EQUIPMENT WITH OWNER'S REPRESENTATIVE PRIOR TO ORDERING OF MATERIALS AND ROUGH-IN.

(###) SHEET NOTES

P01 120V HARDWIRE CONNECTION TO AUTOMATIC FAUCET/VALVE. TYPICAL ALL J-BOXES AT PLUMBING FIXTURES.



1 E3.01B POWER PLAN - GYMNASIUM
Scale: 1/8" = 1'-0"

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POWER PLAN - GYMNASIUM

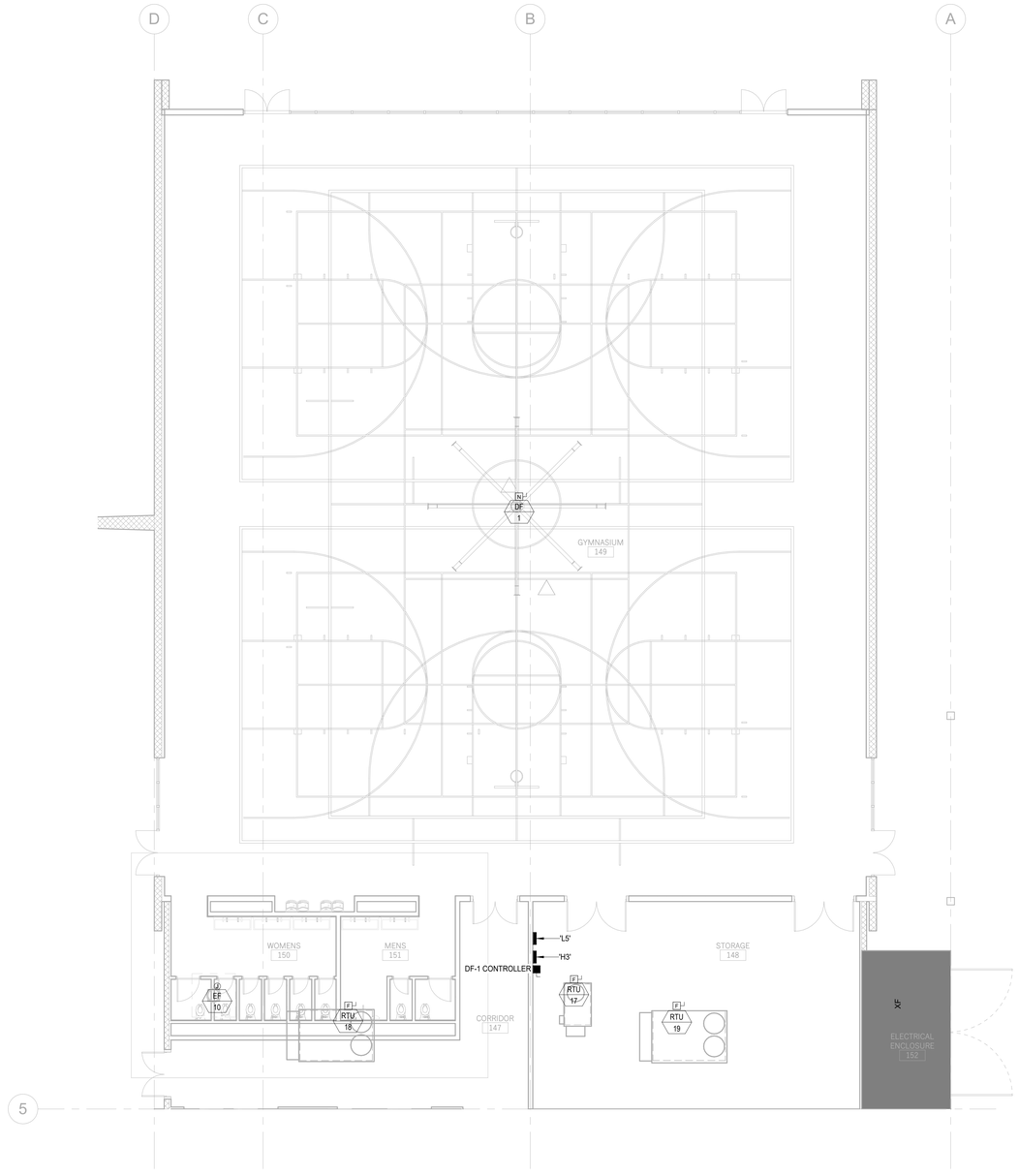
Date: JANUARY 19, 2023
Sheet No:
E3.01B

Mechanical Equipment Schedule Gymnasium										
EQUIPMENT ID	EQUIPMENT DESCRIPTION	VOLTAGE	POLES	WATTAGE	WIRE SIZE (#12 UNO)	DISCONNECT	NEMA RATING	FUSE SIZE	PANEL - CIRCUIT	NOTES
DF-1	DESTRAT. FAN	208 V	2	1850 VA		30A	1		DPL - 2	
DF-1	DF-1 CONTROLLER	208 V	2	0 VA		N/A	1			COORD. W/ MECHANICAL
EF-10	EXHAUST FAN	120 V	1	0 VA		HARDWIRE	1		L5 - 5	
RTU-17	ROOF TOP UNIT	480 V	3	9960 VA		30A	3R	20A	H3 - 1,3,5	
RTU-18	ROOF TOP UNIT	480 V	3	34030 VA		60A	3R	50A	H3 - 13,15,17	
RTU-19	ROOF TOP UNIT	480 V	3	34030 VA		60A	3R	50A	H3 - 7,9,11	

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2. THE CONTRACTOR SHALL OBTAIN ALL WIRING DIAGRAMS ASSOCIATED WITH THE MECHANICAL EQUIPMENT CONTROLS FROM THE MECHANICAL/CONTROLS CONTRACTOR. CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY CONTROLS CONTRACTOR. ANY CONDUIT REQUIRED FOR CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR AND SHALL BE COMPLETED UNDER THE SUPERVISION OF THE MECHANICAL/CONTROLS CONTRACTOR.
3. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL UNIT MODEL NUMBERS AND SPECIFIC ELECTRICAL REQUIREMENTS, OPTIONS AND ACCESSORIES.
4. INFORMATION ON ARCHITECTURAL AND MECHANICAL DRAWINGS SUPERSEDE INFORMATION SHOWN ON ELECTRICAL DRAWINGS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS PRIOR TO ROUGH-IN.
5. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING ELECTRICAL REQUIREMENTS FOR FINAL MECHANICAL EQUIPMENT INSTALLED. SHOULD THERE BE ANY DISCREPANCY BETWEEN ACTUAL EQUIPMENT INSTALLED AND ELECTRICAL OR MECHANICAL DRAWINGS, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY FOR CLARIFICATION AND FURTHER DIRECTION.
6. LOCATE ALL DISCONNECTS, STARTERS AND DRIVES WHERE ACCESSIBLE. PROVIDE ACCESS AND CLEARANCE AS REQUIRED PER NEC. PROVIDE ACCESS HATCH IF LOCATED ABOVE HARD LID CEILING.
7. DISCONNECT SWITCHES, STARTERS OR DRIVES PROVIDED BY MECHANICAL AND SHIPPED LOOSE ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO INSTALL.
8. PIPING AND / OR DUCTWORK SHALL NOT BE ROUTED IN THE DEDICATED ELECTRICAL EQUIPMENT SPACE AT OR ABOVE ELECTRICAL SWITCHBOARDS, DISTRIBUTION BOARDS, PANELBOARDS, ETC. (PER 2011 NEC 110.26E). PROVIDE DEPTH AND WIDTH OF WORKING SPACE FOR ELECTRICAL EQUIPMENT AS REQUIRED PER 2011 NEC 110.26.

SHEET NOTES



1 E4.01B MECHANICAL POWER PLAN - GYMNASIUM

Scale: 1/8" = 1'-0"

tsk

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PLEASE RECYCLE

Project

CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner

CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title

MECHANICAL POWER PLAN - GYMNASIUM

Date: JANUARY 19, 2023

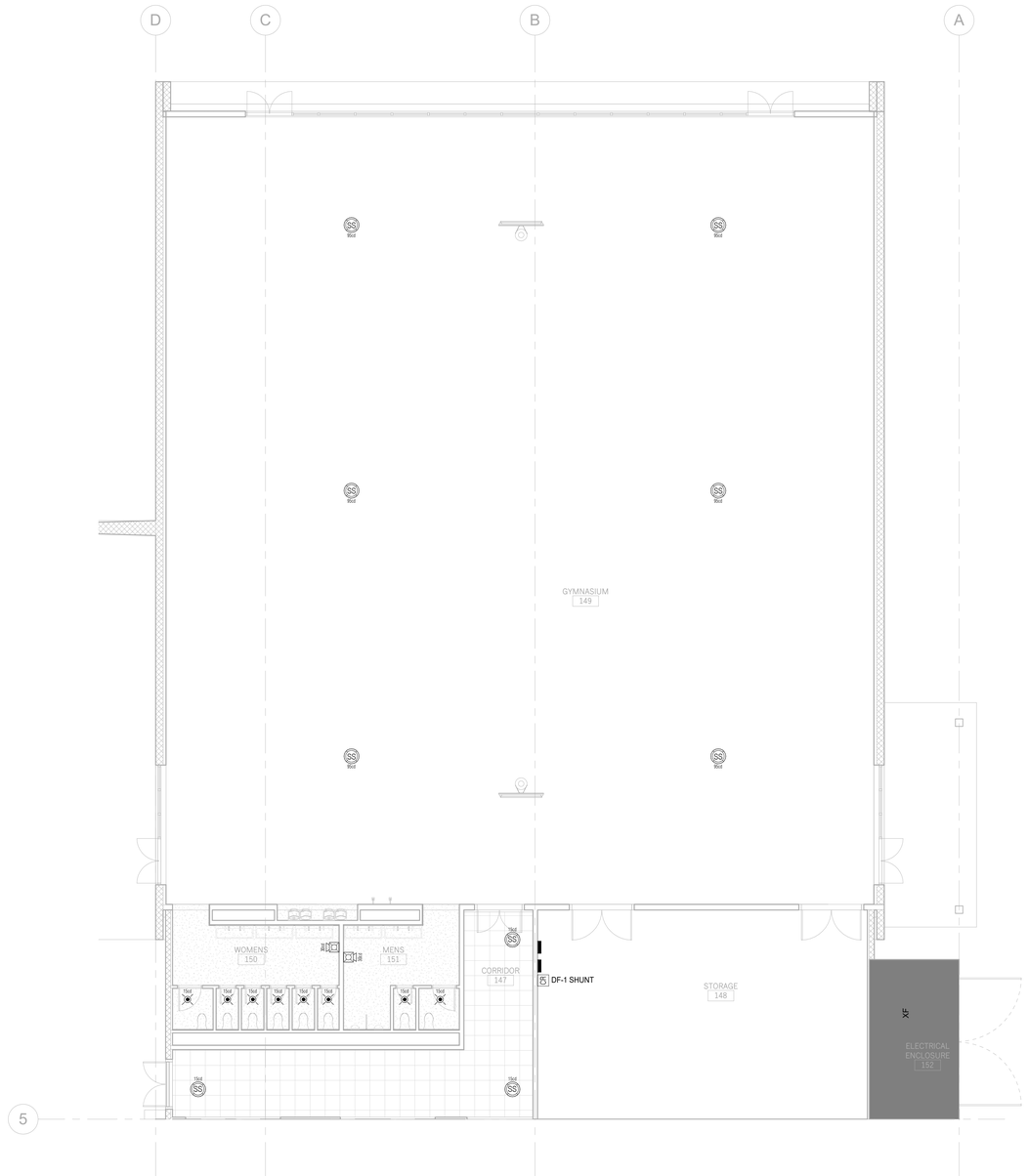
Sheet No:

E4.01B

GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. COORDINATE DEVICE PLACEMENT IN CEILING WITH OTHER TRADES, SUCH AS LIGHTING, TELECOM, MECHANICAL, ETC. ALL FIRE ALARM DEVICES LOCATED IN CEILING TILES SHALL BE LOCATED IN THE CENTER OF THE CEILING TILE UNLESS SPECIFICALLY NOTED OR APPROVED TO DO OTHERWISE.
3. INFORMATION ON ARCHITECTURAL AND MECHANICAL DRAWINGS SUPERSEDE INFORMATION SHOWN ON ELECTRICAL DRAWINGS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS PRIOR TO ROUGH-IN.

SHEET NOTES



1 E5.01B FIRE ALARM PLAN - GYMNASIUM
Scale: 1/8" = 1'-0"

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CITY OF FERNLEY CRRC

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CITY OF FERNLEY

DESIGN DEVELOPMENT

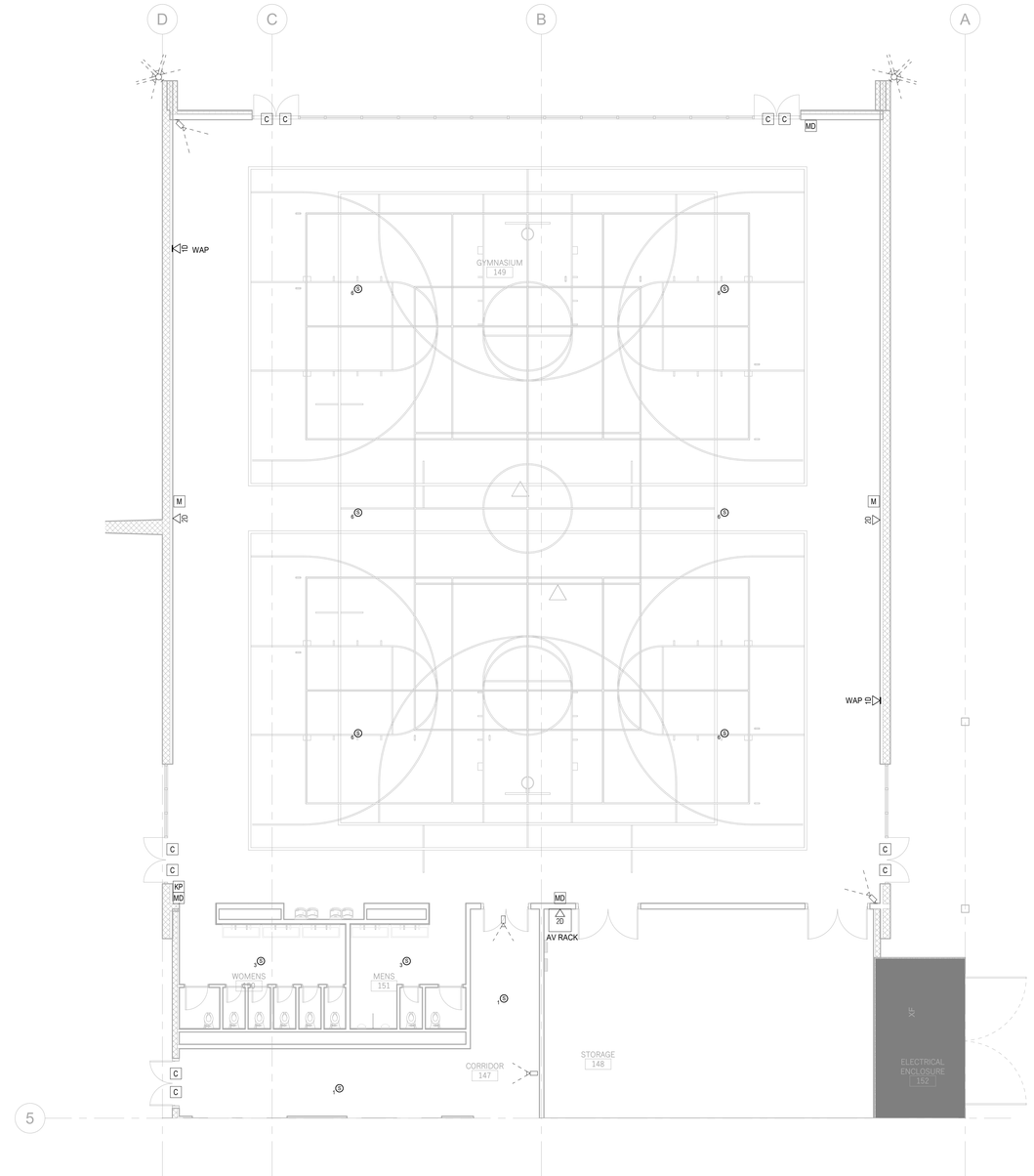
REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
FIRE ALARM PLAN - GYMNASIUM

Date: JANUARY 19, 2023
Sheet No:
E5.01B

GENERAL NOTES

SHEET NOTES



1 T2.01B TELECOM PLAN - GYMNASIUM
Scale: 1/8" = 1'-0"

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Project
CITY OF FERNLEY CRRC

Job No: 21-058.00

Owner
CITY OF FERNLEY

DESIGN DEVELOPMENT

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
TELECOM PLAN - GYMNASIUM

Date: JANUARY 19, 2023
Sheet No:
T2.01B

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Denise Lewis, Finance Director**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes:x	No:	Yes:	No: x	100.310.100

ACTION REQUESTED: Motion

AGENDA ITEM: (For Possible Action):

Discussion and Possible Action to approve the City of Fernley Maximum Allowed Operating Property Tax Rate to to Levied for Fiscal Year 2024 and for Submission to the Department of Taxation.

AGENDA ITEM BRIEF:

In February of each year, the Department of Taxation establishes the preliminary maximum allowed property tax rate for all local governments for the following fiscal year. The property tax rate that the governing body proposes to levy must be submitted to the department of taxation in writing.
Once notification is submitted to taxation, the property tax rate will then be used to create the final property tax revenue projections, which will also include abatement calculations.

RECOMMENDED MOTION:

"I move to approve the City of Fernley's maximum allowed operating property rate to be levied for Fiscal Year 2024 and for submission to the Department of Taxation."

BUSINESS IMPACT (per NRS Chapter 237):

N/A

See attached report for background, analysis, alternatives.

ALTERNATIVES:

To not increase the tax rate.

BACKGROUND:

In February of each year, the State Department of Taxation provides a maximum allowed property tax rate and the City must submit in writing the property tax rate the City proposes to levy for the upcoming fiscal year. Upon request by City Council, this information is being brought forward for Council approval prior to budget workshops. The City's current tax rate for FY 2023 is set at .6735.The City does not receive the tax rate letter from the State until February 15th, but staff must provide the State analyst with the rate Council intends to levy in writing by February 21, 2023.

There is a misconception that the City of Fernley receives all moneys included and paid for on an individual tax bill. That is not the case. The City only receives 67 cents on every $100 of assessed value. For example, with a total assessed value within the City of Fernley of $1,079B, the City would only receive $3.9M, which is less abatements of about 54%. (1,079,328,966/100=10,793,290 x .6753=7,288,709 (pre-abated amount) x54%=3.9M.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

FINANCIAL IMPLICATIONS:

ATTACHMENTS:
None

CITY OF FERNLEY

City Council
AGENDA REPORT

Meeting Date: February 15, 2023

REPORT TO:	Mayor and City Council
REPORT FROM:	**Dave Whalen, Public Works Director**

FINANCIAL IMPACT:		**CURRENTLY BUDGETED:**		**FUND/ACCOUNT:**
Yes:	No:	Yes:	No:	NA

ACTION REQUESTED: Motion

AGENDA ITEM: (For Possible Action):

Discussion and Possible Action to approve a Memorandum of Understanding (MOU) between the City of Fernley and Mark IV concerning the RAISE Grant Administration.

AGENDA ITEM BRIEF:

Discussion and Action for an MOU between the City and Mark IV Capital for RAISE Grant Administration

RECOMMENDED MOTION:

"I move to approve a Memorandum of Understanding between the City of Fernley and Mark IV Capital for the specific purpose of working collaboratively to secure the funding offered by the award of the RAISE Grant for the Victory Project."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

BACKGROUND:

Mark IV Capital purchased more than 4,300 acres of industrial-zone land in the City of Fernley and established

the Victory Logistics District with the intention to develop an industrial park.
A Memorandum of Understanding (MOU) between the City and Mark IV Capital was approved by City Council on February 21, 2021, for the specific purpose of seeking grant funding for Nevada Pacific Parkway.
On September 6, 2022, The City of Fernley received a Rebuilding American Infrastructure with Sustainability and Equity, or RAISE Grant program, award letter from the U.S. Department of Transportation for the Victory Project. The RAISE Grant funding is for $25,000,000, with an estimated total Victory Project cost of $52,410,060. The non-Federal contribution is comprised of private cash funding from Mark IV Capital in the amount of $27,410,060. The City has the authority under NRS 338.168 to enter into any contracts required to receive such assistance in connection with the RAISE Grant.
The Victory Project will complete the planning, environmental studies, engineering design and construction for the Victory Project which will complete the remaining 3,100 feet of Nevada Pacific Parkway from I-80 to Highway 50. Specifically, the Victory Project will fund the Nevada Pacific Parkway roadway and bridge component, including a new switch off the Union Pacific mainline railroad (Segment la) and the segment of lead rail from that new switch to the point of connection of the first switch (Segment lb) of three that will create a "rail switching yard".
The execution of a grant agreement will obligate RAISE grant funding, making it available to reimburse eligible expenses for the awarded Victory Project. The Department of Transportation has said that all RAISE funding be obligated by September 30, 2026 and expended by September 30, 2031.
The current MOU does not create a binding agreement between the City and Mark IV Capital, but rather an understanding between the City and Mark IV Capital to work together collaboratively to establish and complete the objectives and commitments, including studies, budgets, third-party agreements, administrative updates, and all other necessary material requested by applicable third party public and private entities required as the recipient of the RAISE Grant. The City is committed to the Victory Project, and in the interest of the City, every effort must be made, and every detail followed, so that the City does not come out of pocket.
Once a grant agreement is in place, a future binding agreement will be negotiated with Mark IV Capital with very clear terms and conditions addressing grant guidelines, and with provisions in place for reimbursement.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

NRS 338.168

FINANCIAL IMPLICATIONS:

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

ATTACHMENTS:
None