

PROPOSED MANUFACTURED HOMES

AT CHEN FARM

2740 FERGUSON ROAD

GILROY, CA 95020

SANTA CLARA COUNTY

APN: 841-21-022

NO.	REVISION	DATE	BY



REID LERNER ARCHITECTS
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 7680 MONTEREY ST #105
 GILROY, CA 95020

PROPOSED MANUFACTURED HOMES
 CHEN FARM
 2740 FERGUSON ROAD
 GILROY, CA 95020 SANTA CLARA COUNTY

COVER SHEET

Drawn	MM
Checked	RL
Date	08/08/23
Scale	AS NOTED
For	PLANCHECK
Sheet	A0

MAP	PROJECT DIRECTORY	PROJECT DATA	SCOPE OF WORK	DRAWINGS INDEX
	<p>OWNER/APPLICANT: JOE CHEN CHEN FARMS 10492 GARCIA LANE GILROY, CA 95020</p> <p>ARCHITECT: REID LERNER ARCHITECTS 7680 MONTEREY STREET, SUITE 105 GILROY, CA 95020</p> <p>MEP ENGINEERING: CMEP ENGINEERS 26439 RANCHO PKWY S STE 120 LAKE FOREST, CA 92630</p> <p>SURVEY: CARNES & EKPARIAN, INC. 9505 SUGAR BABE DRIVE GILROY, CA 95020</p> <p>CIVIL ENGINEER: HANNA BRUNETTI 7651 EIGLEBERRY STREET GILROY, CA 95020</p> <p>GEOTECHNICAL ENGINEER: GEO-LOGIC ASSOCIATES 6300 SAN IGNACIO, SUITE A SAN JOSE, CA 95119</p> <p>TRAFFIC ENGINEER: JEFF WALLER CONSULTING GILROY, CA 95020</p> <p>FIRE PROTECTION DESIGN: NOR-CAL FIRE PROTECTION 16840 JOLEEN WAY SUITE A MORGAN HILL, CA 95037</p> <p>ENVIRONMENTAL HEALTH SPECIALIST: CHRISTOPHER DAY PO BOX 26 REDWOOD CITY, CA 94064</p> <p>STEEL BUILDING DESIGN & SUPPLY: EMPIRE STEEL BUILDINGS 5230 CARROLL CANYON RD SAN DIEGO, CA 92121</p> <p>FOUNDATION DESIGN: ALEXANDER TOUNIAN ENGINEERING 8945 HILLARY LANE STOCKTON, CA 95212</p>	<p>APN: 841-21-022</p> <p>OCCUPANCY GROUP: PROPOSED: S-2 (BARN), B (BUSINESS OFFICE), & R-3 (WORKER'S HOUSE)</p> <p>CONSTRUCTION TYPE: PROPOSED BARN: II-B SPRINKLERED (PRE-ENGINEERED STEEL FRAME BUILDING WITH METAL SKIN WALL AND ROOF) PROPOSED WORKER'S HOUSE: V-B (WOOD FRAME)</p> <p>SPRINKLER: PROPOSED NEW</p> <p>BUILDING HEIGHT: BARN BUILDING: 22'-0"± WORKER'S HOUSE: 11'-5"±</p> <p>ZONING: A-40ac</p> <p>FLOOD ZONE: ZONE D (BUILDINGS) & ZONE A (DRAIN FIELD)</p>	<p>1) INSTALL A 840 SQUARE FEET (56'X15') PRE-MANUFACTURED HOME (WITH A TOTAL OF 3 HOMES, EACH UNDER SEPARATE PERMIT) TO SERVE AS RESIDENT FOR THE FARM WORKERS WORKING ON THE FIELD.</p> <p>3) BUILD NEW GRAVEL DRIVEWAY FOR VEHICLE ACCESS AND LOADING AREA. BUILD 3 PARKING SPACES, INCLUDING 1 ACCESSIBLE SPACE.</p> <p>4) PROVIDE SITE GRADING AND DRAINAGE. BUILD BIORETENTION POND TO SUPPORT ON-SITE STORM WATER MANAGEMENT.</p> <p>5) BUILD DRAIN FIELD & SEPTIC TANK TO SUPPORT PROPOSED STRUCTURES.</p> <p>6) INSTALL WATER TANKS TO SUPPORT PROPOSED STRUCTURES.</p> <p>7) PROVIDE PG&E SERVICE LINES TO PROPOSED STRUCTURES.</p> <p>NOTE: ITEMS 3-7 ARE UNDER SEPARATE PERMITS.</p>	<p>ARCHITECTURAL</p> <p>A0 COVER SHEET A1 PROPOSED SITE PLAN A13 MANUFACTURED HOME TYPICAL FLOOR PLAN A14 MANUFACTURED HOME TYPICAL ROOF PLAN A15 MANUFACTURED HOME TYPICAL RCP A16 MANUFACTURED HOME TYPICAL ELEVATIONS A17 MANUFACTURED HOME TYPICAL SECTION</p> <p>MODULAR HOME</p> <p>SPEC.1 SPEC DRAWING SPEC1.1 ALTERNATE 1 SPEC DRAWING TS.1 THERMAL SPECS TS1.1 ALTERNATE 1 THERMAL SPECS FP.1 FLOOR PLAN FP1.1 ALTERNATE 1 FLOOR PLAN PLD.1 PLUMBING DRAIN PLW.1 PLUMBING WATER PLG.1 PLUMBING GAS PLG1.1 ALTERNATE 1 PLUMBING GAS SP1C.1 PIER LAYOUT 20# ROOF LOAD SP1E.1 PIER LAYOUT 30# ROOF LOAD SP1.1C.1 ALTERNATE 1 PIER LAYOUT 20# ROOF LOAD SP1.1E.1 ALTERNATE 1 PIER LAYOUT 30# ROOF LOAD CE.1 CABINET ELEVATIONS CE1.1 ALTERNATE 1 CABINET ELEVATIONS CT.1 COUNTERTOPS EE.1 EXTERIOR ELEVATIONS EE.2 EXTERIOR ELEVATIONS EE1.1 ALTERNATE 1 EXTERIOR ELEVATIONS EE1.2 ALTERNATE 1 EXTERIOR ELEVATIONS</p> <p>SEPTIC</p> <p>OWTS1 SEPTIC SYSTEM DESIGN PLAN</p> <p>SURVEY</p> <p>1 TOPOGRAPHIC MAP</p> <p>CIVIL</p> <p>1 COVER SHEET 2 SITE PLAN 3 PRELIMINARY GRADING & DRAINAGE PLAN 4 EROSION CONTROL PLAN BMP-1 BEST MANAGEMENT PRACTICES BMP-2 BEST MANAGEMENT PRACTICES</p> <p>ELECTRICAL</p> <p>E1.0 GENERAL NOTES, SYMBOLS, & SHEET INDEX E1.1 SINGLE LINE DIAGRAMS & LOAD CALCULATIONS E1.2 PANEL SCHEDULES E2.0 ELECTRICAL UNIT PLANS E3.0 ELECTRICAL SITE PLAN</p> <p>MECHANICAL</p> <p>M3.0 MECHANICAL HVAC NOTES & SYMBOLS – MANUFACTURED HOMES M3.1 HVAC EQUIPMENT SCHEDULES – BARN M3.2 HVAC EQUIPMENT DETAILS – BARN M4.0 HVAC PLANS – MANUFACTURED HOMES</p> <p>PLUMBING</p> <p>P1.0 GENERAL NOTES P1.1 DETAILS P2.0 SITE PLAN – COLD WATER & WASTE P2.2 HOMES – COLD/HOT WATER, WASTE & VENT</p>
DEFERRED SUBMITTAL	APPLICABLE CODES & REQUIREMENTS		PARKING ANALYSIS	
<p>1) FIRE SPRINKLER & FIRE ALARM PLANS SHALL BE DEFERRED SUBMITTAL UNDER A SEPARATE PERMIT.</p>	<p>1. ALL WORK SHALL COMPLY WITH APPLICABLE CODES & ORDINANCES INCLUDING: 2022 CALIFORNIA BUILDING CODE (CBC) 2022 CALIFORNIA FIRE CODE (CFC) WITH LOCAL AMENDMENTS 2022 CALIFORNIA ELECTRICAL CODE (CEC) 2022 CALIFORNIA PLUMBING CODE (CPC) 2022 CALIFORNIA MECHANICAL CODE (CMC) 2022 CALIFORNIA ENERGY CODE (CENC) 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBCS)</p> <p>2. OBTAIN PERMITS AND INSPECTIONS AS REQUIRED. 3. INSTALL EQUIPMENT AND MATERIALS IN ACCORDANCE TO MANUFACTURERS' INSTRUCTIONS AND RECOMMENDATIONS. 4. OWNER SHALL OBTAIN CLEARANCES FROM PLANNING, ENGINEERING, BUILDING & FIRE DEPARTMENTS BEFORE THE START OF CONSTRUCTION. 5. APPROVED NUMBERS & ADDRESSES SHALL BE PLACED ON ALL NEW & EXISTING BUILDINGS IN SUCH A POSITION AS TO BE PLAINLY VISIBLE & LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. SAID NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND. 6. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING, SCAFFOLDING, BRACING & BARRICADES AS REQUIRED. 7. PROPOSED COMMERCIAL SIGNAGE SHALL BE AUTHORIZED BY A SEPARATE BUILDING PERMIT APPLICATION AND SUBJECT TO REVIEW AND APPROVAL. 8. CONTRACTOR SHALL APPLY MANDATORY CALGREEN REQUIREMENTS AS LISTED ON PLANS. 9. WORK ON THE PUBLIC RIGHT OF WAY SHALL REQUIRE PERMIT FROM THE PUBLIC WORKS DEPARTMENTS.</p>		<p>VEHICLE PARKING: REQUIRED: PROPOSED: 3 (2 STANDARD + 1 ACCESSIBLE)</p> <p>ACCESSIBLE PARKING: MINIMUM REQUIRED (PER CBC TABLE 11B-208.2): 1 PROPOSED: 1 VAN ACCESSIBLE: MINIMUM REQUIRED: 1 (PER CBC 11B-208.2.4) PROPOSED: 1</p> <p>CLEAN AIR / VAN POOL / EV PARKING: MINIMUM REQUIRED (PER CGBC TABLE 5.106.5.3.1): 0 PROPOSED: 0</p> <p>ELECTRIC VEHICLE (EV) CHARGING SPACES: MINIMUM REQUIRED (PER CGBC TABLE 5.106.5.3.1): 0 PROPOSED: 0</p> <p>BICYCLE PARKING: SHORT TERM: MINIMUM REQUIRED (PER CGBC 5.106.4.1.1): 1 PROPOSED: 1 LONG TERM: MINIMUM REQUIRED (PER CGBC 5.106.4.1.2): 1 PROPOSED: 1</p>	

SHEAR WALL DATA											
WIND ZONE: 1											
LABEL	UNIT	WALL	PANEL	TYPE	ACT.LENGTH	REQ.LENGTH	NOTE	ACT.TRIB**	REQ.TRIB	JNS	SWHT
A	A	1	1SG	E	70 3/4"	26"	3 x 26 ga STRAP	16'-1 1/8"	5'-6 1/2"		90
B	A	1	2SG	S	120 3/4"		1 JOIST & 2 LAGS	42'-1 5/8"	28'-0"	3	90
C	A	1	1SG	E	148 1/2"	98"	3 x 26 ga STRAP	34'-3 1/2"	22'-5 1/2"		90

** EMPTY TRIB FIELD IS COMBINED IN NUMBER ABOVE

JNS = NUMBER OF JOISTS FOR USE WITHOUT STRAP. HEAVY FRAMING MUST USE ACT.LENGTH(S)

OPT. 1440 WINDOW IN BATH 1

SHEAR WALL DATA											
WIND ZONE: 1 OPT1											
LABEL	UNIT	WALL	PANEL	TYPE	ACT.LENGTH	REQ.LENGTH	NOTE	ACT.TRIB**	REQ.TRIB	JNS	SWHT
A	A	1	1SG	E	70 3/4"	26"	3 x 26 ga STRAP	16'-1 1/8"	5'-6 1/2"		90
B	A	1	2SG	S	120 3/4"		1 JOIST & 2 LAGS	42'-1 5/8"	28'-0"	3	90
C	A	1	1SG	E	89"	98"	3 x 26 ga STRAP	30'-5 1/8"	22'-5 1/2"		90
C	A	2	1SG	E	45"		3 x 26 ga STRAP				90

** EMPTY TRIB FIELD IS COMBINED IN NUMBER ABOVE

JNS = NUMBER OF JOISTS FOR USE WITHOUT STRAP. HEAVY FRAMING MUST USE ACT.LENGTH(S)

DOOR SCHEDULE					
SYMBOL	SIZE	DESCRIPTION	GLAZ	VENT	U VALUE
3679	36 x 79	BLANK-INSWING			0.19

WINDOW SCHEDULE					
SYMBOL	SIZE	DESCRIPTION	GLAZ	VENT	AREA
V3059SH	30 x 59	SGL HUNG WINDOW	9.48	5.08	12.47
V4659SH	46 x 59	SGL HUNG WINDOW	15.27	8.04	19.01
V3036SH	30 x 36	SGL HUNG WINDOW	5.37	2.73	7.68
V1440SH	14 x 40	SGL HUNG WINDOW	2.35	1.29	4.02

FLOOR INFO	
JOIST SIZE	2x8
JOIST MATERIAL	SPF
JOIST SPACING	16

WALL INFO	
SIDEWALL HGT.	90"
EXT WALL SIZE	2x4
EXT SIDING MATL	5/16 4X8 HARDIE

CEILING/ROOF INFO	
CEILING THICKNESS	1/2"
CEILING MATERIAL	US GYP
FRONT EAVE O'HANG	0
REAR EAVE O'HANG	0
FRONT GABLE O'HG	12"
REAR GABLE O'HG	0



RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

DRAWING TITLE
SPEC DRWG

DRAWN BY:
MARIBEL L.

DATE:
04/18/16

SHT
SPEC. 1



22CL15562X

SHEAR WALL DATA											
WIND ZONE: 1											
LABEL	UNIT	WALL	PANEL	TYPE	ACT.LENGTH	REQ.LENGTH	NOTE	ACT.TRIB**	REQ.TRIB	JNS	SWHT
A	A	1	1SG	E	70 3/4"	26"	3 x 26 ga STRAP	16'-1 1/8"	5'-6 1/2"		90
B	A	1	2SG	S	120 3/4"		1 JOIST & 2 LAGS	42'-1 5/8"	26'-0"	3	90
C	A	1	1SG	E	148 1/2"	89 3/8"	3 x 26 ga STRAP	34'-3 1/2"	20'-5 1/2"		90

** EMPTY TRIB FIELD IS COMBINED IN NUMBER ABOVE
 JNS = NUMBER OF JOISTS FOR USE WITHOUT STRAP. HEAVY FRAMING MUST USE ACT.LENGTH(S)

OPT. 1440 WINDOW IN BATH 1

SHEAR WALL DATA											
WIND ZONE: 1 OPT1											
LABEL	UNIT	WALL	PANEL	TYPE	ACT.LENGTH	REQ.LENGTH	NOTE	ACT.TRIB**	REQ.TRIB	JNS	SWHT
A	A	1	1SG	E	70 3/4"	26"	3 x 26 ga STRAP	16'-1 1/8"	5'-6 1/2"		90
B	A	1	2SG	S	120 3/4"		1 JOIST & 2 LAGS	42'-1 5/8"	26'-0"	3	90
C	A	1	1SG	E	45"	89 3/8"	3 x 26 ga STRAP	30'-5 1/8"	20'-5 1/2"		90
C	A	2	1SG	E	89"		3 x 26 ga STRAP				90

** EMPTY TRIB FIELD IS COMBINED IN NUMBER ABOVE
 JNS = NUMBER OF JOISTS FOR USE WITHOUT STRAP. HEAVY FRAMING MUST USE ACT.LENGTH(S)

FLOOR INFO	
JOIST SIZE	2x8
JOIST MATERIAL	SPF
JOIST SPACING	16

WALL INFO	
SIDEWALL HGT.	90"
EXT WALL SIZE	2x4
EXT SIDING MATL	5/16 4X8 HARDIE

CEILING/ROOF INFO	
CEILING THICKNESS	1/2"
CEILING MATERIAL	US GYP
FRONT EAVE O'HANG	0
REAR EAVE O'HANG	0
FRONT GABLE O'HG	12"
REAR GABLE O'HG	0

DOOR SCHEDULE					
SYMBOL	SIZE	DESCRIPTION	GLAZ	VENT	U VALUE
3679	36 x 79	BLANK-INSWING			0.19

WINDOW SCHEDULE					
SYMBOL	SIZE	DESCRIPTION	GLAZ	VENT	AREA
V3036SH	30 x 36	SGL HUNG WINDOW	5.37	2.73	7.68
V3059SH	30 x 59	SGL HUNG WINDOW	9.48	5.08	12.47
V4659SH	46 x 59	SGL HUNG WINDOW	15.27	8.04	19.01
V1440SH	14 x 40	SGL HUNG WINDOW	2.35	1.29	4.02



RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

DRAWING TITLE
ALTERNATE 1
SPEC DRWG

DRAWN BY:
MARIBEL L.

DATE:
04/18/16

SHT	REV
SPEC1.1	



52' PLAN #1

22CL15562Xa1

OPTIONAL DOOR EQUIVALENT GLAZING AREA			
WALL	WINDOW	DOOR	AREA
11	KINRO VINYL CLEAR (1500)	32 x 76 COTTAGE	23.06
11	KINRO VINYL CLEAR (1500)	32 x 76 COTTAGE-INSWING	8.83
11	KINRO VINYL CLEAR (1500)	32 x 77 COTTAGE	7.88
11	KINRO VINYL CLEAR (1500)	32 x 79 BLANK-INSWING	4.74
11	KINRO VINYL CLEAR (1500)	32 x 79 COTTAGE-INSWING	9.17
11	KINRO VINYL CLEAR (1500)	32 x 79 COTTAGE-INSWING	9.17
11	KINRO VINYL CLEAR (1500)	36 x 78 BLANK-OUTSWING	5.25
11	KINRO VINYL CLEAR (1500)	36 x 79 BLANK-INSWING	5.29
11	KINRO VINYL CLEAR (1500)	36 x 79 COTTAGE-INSWING	10.24
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	17.61
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	15.16
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	10.79
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	12.53
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	7.49
11	KINRO VINYL CLEAR (1500)	36 x 80 COTTAGE-INSWING	6.94
11	KINRO VINYL CLEAR (1500)	36 x 96 BLANK-INSWING	6.28
11	KINRO VINYL CLEAR (1500)	5/0 x 6/8 SGD - SAFETY	16.51
11	KINRO VINYL CLEAR (1500)	6/0 x 6/8 SGD - SAFETY	19.81
11	KINRO VINYL CLEAR (1500)	6/0 x 8/0 SGD - SAFETY	28.61
11	KINRO VINYL CLEAR (1500)	72 x 79 FRENCH - SAFETY	26.21
11	KINRO VINYL CLEAR (1500)	72 x 79 FRENCH - SAFETY-INSWIN	26.54
11	KINRO VINYL CLEAR (1500)	8/0 x 6/8 SGD - SAFETY	31.80
11	KINRO VINYL CLEAR (1500)	8/0 x 8/0 SGD - SAFETY	60.77
11	KINRO VINYL LOW-E (1500)	32 x 76 COTTAGE	35.67
11	KINRO VINYL LOW-E (1500)	32 x 76 COTTAGE-INSWING	13.66
11	KINRO VINYL LOW-E (1500)	32 x 77 COTTAGE	12.19
11	KINRO VINYL LOW-E (1500)	32 x 79 BLANK-INSWING	7.33
11	KINRO VINYL LOW-E (1500)	32 x 79 COTTAGE-INSWING	14.18
11	KINRO VINYL LOW-E (1500)	32 x 79 COTTAGE-INSWING	14.18
11	KINRO VINYL LOW-E (1500)	36 x 78 BLANK-OUTSWING	8.12
11	KINRO VINYL LOW-E (1500)	36 x 79 BLANK-INSWING	8.18
11	KINRO VINYL LOW-E (1500)	36 x 79 COTTAGE-INSWING	15.84
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	27.24
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	23.45
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	16.69
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	19.38
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	11.58
11	KINRO VINYL LOW-E (1500)	36 x 80 COTTAGE-INSWING	10.73
11	KINRO VINYL LOW-E (1500)	36 x 96 BLANK-INSWING	9.71
11	KINRO VINYL LOW-E (1500)	5/0 x 6/8 SGD - SAFETY	25.54
11	KINRO VINYL LOW-E (1500)	6/0 x 6/8 SGD - SAFETY	30.64
11	KINRO VINYL LOW-E (1500)	6/0 x 8/0 SGD - SAFETY	44.27
11	KINRO VINYL LOW-E (1500)	72 x 79 FRENCH - SAFETY	40.56
11	KINRO VINYL LOW-E (1500)	72 x 79 FRENCH - SAFETY-INSWIN	41.06
11	KINRO VINYL LOW-E (1500)	8/0 x 6/8 SGD - SAFETY	49.19
11	KINRO VINYL LOW-E (1500)	8/0 x 8/0 SGD - SAFETY	94.01
19	KINRO VINYL CLEAR (1500)	32 x 76 COTTAGE	22.74
19	KINRO VINYL CLEAR (1500)	32 x 76 COTTAGE-INSWING	9.58
19	KINRO VINYL CLEAR (1500)	32 x 77 COTTAGE	8.70
19	KINRO VINYL CLEAR (1500)	32 x 79 BLANK-INSWING	5.85
19	KINRO VINYL CLEAR (1500)	32 x 79 COTTAGE-INSWING	9.95
19	KINRO VINYL CLEAR (1500)	32 x 79 COTTAGE-INSWING	9.95
19	KINRO VINYL CLEAR (1500)	36 x 78 BLANK-OUTSWING	6.48
19	KINRO VINYL CLEAR (1500)	36 x 79 BLANK-INSWING	6.53
19	KINRO VINYL CLEAR (1500)	36 x 79 COTTAGE-INSWING	11.11
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	18.96
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	16.32
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	11.61
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	13.49
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	8.57
19	KINRO VINYL CLEAR (1500)	36 x 80 COTTAGE-INSWING	8.06
19	KINRO VINYL CLEAR (1500)	36 x 96 BLANK-INSWING	7.76
19	KINRO VINYL CLEAR (1500)	5/0 x 6/8 SGD - SAFETY	17.77
19	KINRO VINYL CLEAR (1500)	6/0 x 6/8 SGD - SAFETY	21.33
19	KINRO VINYL CLEAR (1500)	6/0 x 8/0 SGD - SAFETY	30.08
19	KINRO VINYL CLEAR (1500)	72 x 79 FRENCH - SAFETY	27.42
19	KINRO VINYL CLEAR (1500)	72 x 79 FRENCH - SAFETY-INSWIN	27.76

OPTIONAL DOOR EQUIVALENT GLAZING AREA			
WALL	WINDOW	DOOR	AREA
19	KINRO VINYL CLEAR (1500)	8/0 x 6/8 SGD - SAFETY	33.42
19	KINRO VINYL CLEAR (1500)	8/0 x 8/0 SGD - SAFETY	61.01
19	KINRO VINYL LOW-E (1500)	32 x 76 COTTAGE	33.78
19	KINRO VINYL LOW-E (1500)	32 x 76 COTTAGE-INSWING	14.24
19	KINRO VINYL LOW-E (1500)	32 x 77 COTTAGE	12.93
19	KINRO VINYL LOW-E (1500)	32 x 79 BLANK-INSWING	8.69
19	KINRO VINYL LOW-E (1500)	32 x 79 COTTAGE-INSWING	14.78
19	KINRO VINYL LOW-E (1500)	32 x 79 COTTAGE-INSWING	14.78
19	KINRO VINYL LOW-E (1500)	36 x 78 BLANK-OUTSWING	9.63
19	KINRO VINYL LOW-E (1500)	36 x 79 BLANK-INSWING	9.70
19	KINRO VINYL LOW-E (1500)	36 x 79 COTTAGE-INSWING	16.50
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	28.17
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	24.25
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	17.26
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	20.05
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	12.73
19	KINRO VINYL LOW-E (1500)	36 x 80 COTTAGE-INSWING	11.97
19	KINRO VINYL LOW-E (1500)	36 x 96 BLANK-INSWING	11.52
19	KINRO VINYL LOW-E (1500)	5/0 x 6/8 SGD - SAFETY	26.41
19	KINRO VINYL LOW-E (1500)	6/0 x 6/8 SGD - SAFETY	31.69
19	KINRO VINYL LOW-E (1500)	6/0 x 8/0 SGD - SAFETY	44.69
19	KINRO VINYL LOW-E (1500)	72 x 79 FRENCH - SAFETY	40.74
19	KINRO VINYL LOW-E (1500)	72 x 79 FRENCH - SAFETY-INSWIN	41.24
19	KINRO VINYL LOW-E (1500)	8/0 x 6/8 SGD - SAFETY	49.65
19	KINRO VINYL LOW-E (1500)	8/0 x 8/0 SGD - SAFETY	90.65

T H E R M A L C A L C U L A T I O N R E S U L T S										
TZ	CEIL	WALL	FLOOR	U	DESCRIPTION	DUCT TYPE	RESULT	MAX NOM	AVAIL.	
2	21	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	170.87	94.30	
2	21	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	264.35	187.78	
2	28	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	192.57	116.00	
2	28	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	297.92	221.35	
2	28	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	247.87	171.30	
2	28	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	383.47	306.90	
2	28	19	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	258.58	182.01	
2	28	19	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	384.20	307.63	
2	28	19	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	309.71	233.14	
2	28	19	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	460.17	383.60	
2	33	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	201.10	124.53	
2	33	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	311.12	234.55	
2	33	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	256.40	179.83	
2	33	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	396.67	320.10	
2	33	19	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	317.60	241.03	
2	33	19	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	471.89	395.32	
2	36	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	259.61	183.04	
2	36	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	401.63	325.06	
3	21	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	N/A	50.30	-26.27	
3	21	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	77.82	1.25	
3	28	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	N/A	72.00	-4.57	
3	28	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	111.39	34.82	
3	28	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	127.29	50.72	
3	28	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	196.93	120.36	
3	28	19	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	147.10	70.53	
3	28	19	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	218.56	141.99	
3	28	19	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	198.22	121.65	
3	28	19	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	294.52	217.95	
3	33	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	80.53	3.96	
3	33	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	124.58	48.01	
3	33	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	135.82	59.25	
3	33	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	210.13	133.56	
3	33	19	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	206.11	129.54	
3	33	19	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	306.24	229.67	
3	36	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	139.03	62.46	
3	36	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	215.09	138.52	
SUBTRACT 2 S.F. OF GLAZING FOR EACH S.F. OF SKYLIGHT AREA										
N/A = THIS HOME CANNOT BE BUILT FOR THIS THERMAL ZONE WITH THESE CONDITIONS										

DESIGN, CERTIFICATION & ECONOMY TEMPERATURES					
STATE	TYPE	FURNACE	DT	CT	ET
AZ	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	9	-81	-36
AZ	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	9	-111	-57
AZ	GAS	56K BTUH 80% AFUE AUTO GAS FURN	9	-51	-15
AZ	GAS	77K BTUH 80% AFUE AUTO GAS FURN	9	-97	-47
CA	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	22	-81	-36
CA	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	22	-111	-57
CA	GAS	56K BTUH 80% AFUE AUTO GAS FURN	22	-51	-15
CA	GAS	77K BTUH 80% AFUE AUTO GAS FURN	22	-97	-47
CO	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	-5	-104	-51
CO	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	-5	-138	-75
CO	GAS	56K BTUH 80% AFUE AUTO GAS FURN	-5	-69	-28
CO	GAS	77K BTUH 80% AFUE AUTO GAS FURN	-5	-122	-64
NM	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	1	-81	-36
NM	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	1	-111	-57
NM	GAS	56K BTUH 80% AFUE AUTO GAS FURN	1	-51	-15
NM	GAS	77K BTUH 80% AFUE AUTO GAS FURN	1	-97	-47
NV	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	-4	-104	-51
NV	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	-4	-138	-75
NV	GAS	56K BTUH 80% AFUE AUTO GAS FURN	-4	-69	-28
NV	GAS	77K BTUH 80% AFUE AUTO GAS FURN	-4	-122	-64
UT	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	0	-104	-51
UT	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	0	-138	-75
UT	GAS	56K BTUH 80% AFUE AUTO GAS FURN	0	-69	-28
UT	GAS	77K BTUH 80% AFUE AUTO GAS FURN	0	-122	-64

STANDARD OPENINGS						
QTY	SIZE	DESCRIPTION	TYPE	AREA	TOTAL	U VALUE
2	36 x 79	BLANK-INSWING	DOOR	21.78	43.56	0.190
1	30 x 36	SGL HUNG WINDOW	WINDOW	7.68	7.68	
4	30 x 59	SGL HUNG WINDOW	WINDOW	12.47	49.88	
1	46 x 59	SGL HUNG WINDOW	WINDOW	19.01	19.01	
TOTAL WINDOW AREA :					76.57	
SEE THERMAL CHART FOR WINDOW U VALUES						

RECOMMENDED A/C SIZES		
STATE	DESIGN TEMP	TONS
AZ	80- 99	2.0
AZ	100-105	2.5
AZ	106-110	3.0
CA	80- 99	2.0
CA	100-105	2.5
CA	106-110	3.0
CO	80-101	2.0
CO	102-106	2.5
NM	80- 99	2.0
NM	100-105	2.5
NM	106-110	3.0
NV	80-101	2.0
NV	102-106	2.5
UT	80-101	2.0
UT	102-106	2.5



PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

DRAWING TITLE
THERMAL SPECS

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT
TS.1



22CL15562X

OPTIONAL DOOR EQUIVALENT GLAZING AREA			
WALL	WINDOW	DOOR	AREA
11	KINRO VINYL CLEAR (1500)	32 x 76 COTTAGE	23.06
11	KINRO VINYL CLEAR (1500)	32 x 76 COTTAGE-INSWING	8.83
11	KINRO VINYL CLEAR (1500)	32 x 77 COTTAGE	7.88
11	KINRO VINYL CLEAR (1500)	32 x 79 BLANK-INSWING	4.74
11	KINRO VINYL CLEAR (1500)	32 x 79 COTTAGE-INSWING	9.17
11	KINRO VINYL CLEAR (1500)	32 x 79 COTTAGE-INSWING	9.17
11	KINRO VINYL CLEAR (1500)	36 x 78 BLANK-OUTSWING	5.25
11	KINRO VINYL CLEAR (1500)	36 x 79 BLANK-INSWING	5.29
11	KINRO VINYL CLEAR (1500)	36 x 79 COTTAGE-INSWING	10.24
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	17.61
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	15.16
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	10.79
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	12.53
11	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	7.49
11	KINRO VINYL CLEAR (1500)	36 x 80 COTTAGE-INSWING	6.94
11	KINRO VINYL CLEAR (1500)	36 x 96 BLANK-INSWING	6.28
11	KINRO VINYL CLEAR (1500)	5/0 x 6/8 SGD - SAFETY	16.51
11	KINRO VINYL CLEAR (1500)	6/0 x 6/8 SGD - SAFETY	19.81
11	KINRO VINYL CLEAR (1500)	6/0 x 8/0 SGD - SAFETY	28.61
11	KINRO VINYL CLEAR (1500)	72 x 79 FRENCH - SAFETY	26.21
11	KINRO VINYL CLEAR (1500)	72 x 79 FRENCH - SAFETY-INSWIN	26.54
11	KINRO VINYL CLEAR (1500)	8/0 x 6/8 SGD - SAFETY	31.80
11	KINRO VINYL CLEAR (1500)	8/0 x 8/0 SGD - SAFETY	60.77
11	KINRO VINYL LOW-E (1500)	32 x 76 COTTAGE	35.67
11	KINRO VINYL LOW-E (1500)	32 x 76 COTTAGE-INSWING	13.66
11	KINRO VINYL LOW-E (1500)	32 x 77 COTTAGE	12.19
11	KINRO VINYL LOW-E (1500)	32 x 79 BLANK-INSWING	7.33
11	KINRO VINYL LOW-E (1500)	32 x 79 COTTAGE-INSWING	14.18
11	KINRO VINYL LOW-E (1500)	32 x 79 COTTAGE-INSWING	14.18
11	KINRO VINYL LOW-E (1500)	32 x 79 COTTAGE-INSWING	14.18
11	KINRO VINYL LOW-E (1500)	36 x 78 BLANK-OUTSWING	8.12
11	KINRO VINYL LOW-E (1500)	36 x 79 BLANK-INSWING	8.18
11	KINRO VINYL LOW-E (1500)	36 x 79 COTTAGE-INSWING	15.84
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	27.24
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	23.45
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	16.69
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	19.38
11	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	11.58
11	KINRO VINYL LOW-E (1500)	36 x 80 COTTAGE-INSWING	10.73
11	KINRO VINYL LOW-E (1500)	36 x 96 BLANK-INSWING	9.71
11	KINRO VINYL LOW-E (1500)	5/0 x 6/8 SGD - SAFETY	25.54
11	KINRO VINYL LOW-E (1500)	6/0 x 6/8 SGD - SAFETY	30.64
11	KINRO VINYL LOW-E (1500)	6/0 x 8/0 SGD - SAFETY	44.27
11	KINRO VINYL LOW-E (1500)	72 x 79 FRENCH - SAFETY	40.56
11	KINRO VINYL LOW-E (1500)	72 x 79 FRENCH - SAFETY-INSWIN	41.06
11	KINRO VINYL LOW-E (1500)	8/0 x 6/8 SGD - SAFETY	49.19
11	KINRO VINYL LOW-E (1500)	8/0 x 8/0 SGD - SAFETY	94.01
19	KINRO VINYL CLEAR (1500)	32 x 76 COTTAGE	22.74
19	KINRO VINYL CLEAR (1500)	32 x 76 COTTAGE-INSWING	9.58
19	KINRO VINYL CLEAR (1500)	32 x 77 COTTAGE	8.70
19	KINRO VINYL CLEAR (1500)	32 x 79 BLANK-INSWING	5.85
19	KINRO VINYL CLEAR (1500)	32 x 79 COTTAGE-INSWING	9.95
19	KINRO VINYL CLEAR (1500)	32 x 79 COTTAGE-INSWING	9.95
19	KINRO VINYL CLEAR (1500)	36 x 78 BLANK-OUTSWING	6.48
19	KINRO VINYL CLEAR (1500)	36 x 79 BLANK-INSWING	6.53
19	KINRO VINYL CLEAR (1500)	36 x 79 COTTAGE-INSWING	11.11
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	18.96
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	16.32
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	11.61
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	13.49
19	KINRO VINYL CLEAR (1500)	36 x 79 GUNSLLOT-INSWING	8.57
19	KINRO VINYL CLEAR (1500)	36 x 80 COTTAGE-INSWING	8.06
19	KINRO VINYL CLEAR (1500)	36 x 96 BLANK-INSWING	7.76
19	KINRO VINYL CLEAR (1500)	5/0 x 6/8 SGD - SAFETY	17.77
19	KINRO VINYL CLEAR (1500)	6/0 x 6/8 SGD - SAFETY	21.33
19	KINRO VINYL CLEAR (1500)	6/0 x 8/0 SGD - SAFETY	30.08
19	KINRO VINYL CLEAR (1500)	72 x 79 FRENCH - SAFETY	27.42
19	KINRO VINYL CLEAR (1500)	72 x 79 FRENCH - SAFETY-INSWIN	27.76

THERMAL CALCULATION RESULTS										
TZ	CEIL	WALL	FLOOR	U	DESCRIPTION	DUCT TYPE	RESULT	MAX NOM	AVAIL.	
2	21	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	158.07	81.50	
2	21	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	244.55	167.98	
2	28	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	178.22	101.65	
2	28	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	275.72	199.15	
2	28	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	229.55	152.98	
2	28	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	355.13	278.56	
2	28	19	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	240.79	164.22	
2	28	19	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	357.77	281.20	
2	28	19	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	288.25	211.68	
2	28	19	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	428.28	351.71	
2	33	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	186.14	109.57	
2	33	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	287.98	211.41	
2	33	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	237.47	160.90	
2	33	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	367.38	290.81	
2	33	19	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	295.57	219.00	
2	33	19	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	439.16	362.59	
2	36	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	240.45	163.88	
2	36	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	371.99	295.42	
3	21	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	N/A	45.28	-31.29	
3	21	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	N/A	70.05	-6.52	
3	28	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	N/A	65.43	-11.13	
3	28	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	101.22	24.65	
3	28	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	116.75	40.18	
3	28	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	180.63	104.06	
3	28	19	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	136.50	59.93	
3	28	19	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	202.81	126.24	
3	28	19	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	183.96	107.39	
3	28	19	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	273.32	196.75	
3	33	11	11	0.49	KINRO VINYL CLEAR (1500)	INSULATED	N/A	73.35	-3.22	
3	33	11	11	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	113.48	36.91	
3	33	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	124.67	48.10	
3	33	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	192.88	116.31	
3	33	19	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	191.28	114.71	
3	33	19	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	284.21	207.64	
3	36	11	22	0.49	KINRO VINYL CLEAR (1500)	INSULATED	PASS	127.65	51.08	
3	36	11	22	0.35	KINRO VINYL LOW-E (1500)	INSULATED	PASS	197.49	120.92	

SUBTRACT 2 S.F. OF GLAZING FOR EACH S.F. OF SKYLIGHT AREA
N/A = THIS HOME CANNOT BE BUILT FOR THIS THERMAL ZONE WITH THESE CONDITIONS

OPTIONAL DOOR EQUIVALENT GLAZING AREA			
WALL	WINDOW	DOOR	AREA
19	KINRO VINYL CLEAR (1500)	8/0 x 6/8 SGD - SAFETY	33.42
19	KINRO VINYL CLEAR (1500)	8/0 x 8/0 SGD - SAFETY	61.01
19	KINRO VINYL LOW-E (1500)	32 x 76 COTTAGE	33.78
19	KINRO VINYL LOW-E (1500)	32 x 76 COTTAGE-INSWING	14.24
19	KINRO VINYL LOW-E (1500)	32 x 77 COTTAGE	12.93
19	KINRO VINYL LOW-E (1500)	32 x 79 BLANK-INSWING	8.69
19	KINRO VINYL LOW-E (1500)	32 x 79 COTTAGE-INSWING	14.78
19	KINRO VINYL LOW-E (1500)	32 x 79 COTTAGE-INSWING	14.78
19	KINRO VINYL LOW-E (1500)	36 x 78 BLANK-OUTSWING	9.63
19	KINRO VINYL LOW-E (1500)	36 x 79 BLANK-INSWING	9.70
19	KINRO VINYL LOW-E (1500)	36 x 79 COTTAGE-INSWING	16.50
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	28.17
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	24.25
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	17.26
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	20.05
19	KINRO VINYL LOW-E (1500)	36 x 79 GUNSLLOT-INSWING	12.73
19	KINRO VINYL LOW-E (1500)	36 x 80 COTTAGE-INSWING	11.97
19	KINRO VINYL LOW-E (1500)	36 x 96 BLANK-INSWING	11.52
19	KINRO VINYL LOW-E (1500)	5/0 x 6/8 SGD - SAFETY	26.41
19	KINRO VINYL LOW-E (1500)	6/0 x 6/8 SGD - SAFETY	31.69
19	KINRO VINYL LOW-E (1500)	6/0 x 8/0 SGD - SAFETY	44.69
19	KINRO VINYL LOW-E (1500)	72 x 79 FRENCH - SAFETY	40.74
19	KINRO VINYL LOW-E (1500)	72 x 79 FRENCH - SAFETY-INSWIN	41.24
19	KINRO VINYL LOW-E (1500)	8/0 x 6/8 SGD - SAFETY	49.65
19	KINRO VINYL LOW-E (1500)	8/0 x 8/0 SGD - SAFETY	90.65

DESIGN, CERTIFICATION & ECONOMY TEMPERATURES					
STATE	TYPE	FURNACE	DT	CT	ET
AZ	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	9	-91	-43
AZ	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	9	-123	-65
AZ	GAS	56K BTUH 80% AFUE AUTO GAS FURN	9	-60	-21
AZ	GAS	77K BTUH 80% AFUE AUTO GAS FURN	9	-108	-55
CA	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	22	-91	-43
CA	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	22	-123	-65
CA	GAS	56K BTUH 80% AFUE AUTO GAS FURN	22	-60	-21
CA	GAS	77K BTUH 80% AFUE AUTO GAS FURN	22	-108	-55
CO	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	-5	-115	-59
CO	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	-5	-151	-85
CO	GAS	56K BTUH 80% AFUE AUTO GAS FURN	-5	-79	-34
CO	GAS	77K BTUH 80% AFUE AUTO GAS FURN	-5	-135	-73
NM	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	1	-91	-43
NM	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	1	-123	-65
NM	GAS	56K BTUH 80% AFUE AUTO GAS FURN	1	-60	-21
NM	GAS	77K BTUH 80% AFUE AUTO GAS FURN	1	-108	-55
NV	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	-4	-115	-59
NV	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	-4	-151	-85
NV	GAS	56K BTUH 80% AFUE AUTO GAS FURN	-4	-79	-34
NV	GAS	77K BTUH 80% AFUE AUTO GAS FURN	-4	-135	-73
UT	ELEC	17 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	0	-115	-59
UT	ELEC	20 KW ELECTRIC FURN-A/C READY UP TO 4 TONS	0	-151	-85
UT	GAS	56K BTUH 80% AFUE AUTO GAS FURN	0	-79	-34
UT	GAS	77K BTUH 80% AFUE AUTO GAS FURN	0	-135	-73

STANDARD OPENINGS						
QTY	SIZE	DESCRIPTION	TYPE	AREA	TOTAL	U VALUE
2	36 x 79	BLANK-INSWING	DOOR	21.78	43.56	0.190
1	30 x 36	SGL HUNG WINDOW	WINDOW	7.68	7.68	
4	30 x 59	SGL HUNG WINDOW	WINDOW	12.47	49.88	
1	46 x 59	SGL HUNG WINDOW	WINDOW	19.01	19.01	
TOTAL WINDOW AREA :					76.57	

SEE THERMAL CHART FOR WINDOW U VALUES

RECOMMENDED A/C SIZES		
STATE	DESIGN TEMP	TONS
AZ	80-99	2.0
AZ	100-105	2.5
AZ	106-110	3.0
CA	80-99	2.0
CA	100-105	2.5
CA	106-110	3.0
CO	80-101	2.0
CO	102-106	2.5
NM	80-99	2.0
NM	100-105	2.5
NM	106-110	3.0
NV	80-101	2.0
NV	102-106	2.5
UT	80-101	2.0
UT	102-106	2.5



RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

DRAWING TITLE
ALTERNATE 1
THERMAL SPECS

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT
TS1.1



52' PLAN #1

22CL15562Xa1

SA, CO &/OR COMBO SA/CO

L E G E N D

- RECEPTACLE
- ⌘ SWITCH
- ⊖ THERMOSTAT
- ⊠ SMOKE ALARM
- ⬢ SMOKE ALARM W/ HUSH BUTTON
- LIGHT FIXTURE
- FLUORESCENT LIGHT
- RECESSED LIGHT
- ⊗ EXHAUST FAN
- ▭ PANEL BOX
- ⊙ SOLAR TUBE
- ⊙ AIR SUPPLY FAN
- ⊙ 14" RETURN AIR W/ LIGHT
- ⊙ RETURN AIR GRILLE
- ⊠ OVERHEAD REGISTER
- ▭ FLOOR REGISTER
- ▭ WALL-MOUNTED REGISTER
- CROSS-OVER LOCATION
- ⊙ SUPPORT POST
- ▲ SHEARWALL

- Ⓐ 180 x 56'-0"
- Ⓑ x
- Ⓒ x



RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

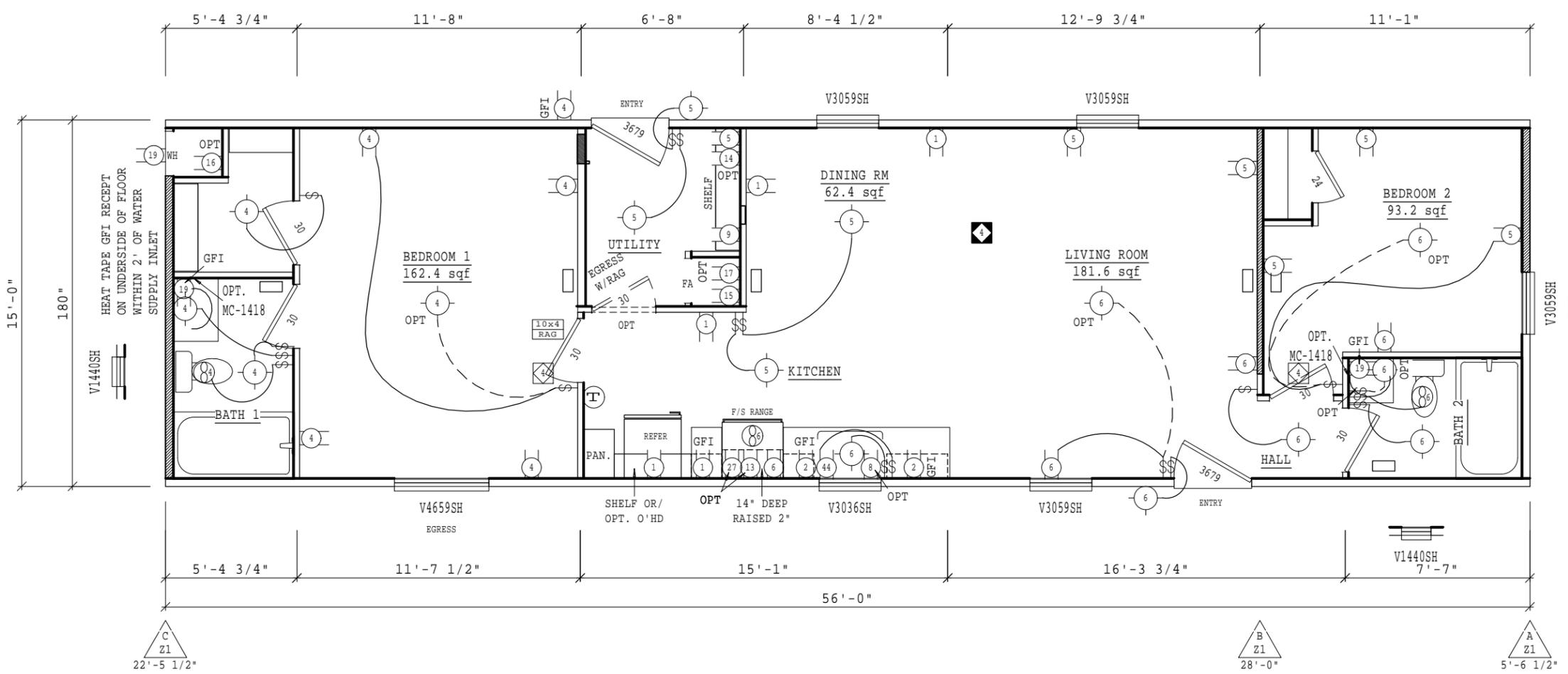
MODEL NO.
15562X

DRAWING TITLE
FLOOR PLAN

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT	REV
FP.1	



NOTES:

1. RECEPT SHALL NOT BE INSTALLED WITHIN 30" OF TUB/SHOWER SPACE.
2. ELECTRICAL WALL PLATES SHALL NOT BE INSTALLED WITHIN 6" OF A RANGE OR COOKTOP.

THIS FLOOR PLAN AND ATTACHED OPTION DETAILS (IF APPLICABLE) IS DESIGNED TO MEET THE FOLLOWING STRUCTURAL REQUIREMENTS:
WIND ZONE(S) 1 ROOF LOAD(S) 20, 30 LBS.

PERIMETER PIERING REQUIRED WHEN ROOF LIVE LOAD > 20 psf



SA, CO &/OR COMBO SA/CO

LEGEND

- RECEPTACLE
- ⌘ SWITCH
- ⊖ THERMOSTAT
- ⊠ SMOKE ALARM
- ⬠ SMOKE ALARM W/ HUSH BUTTON
- LIGHT FIXTURE
- FLUORESCENT LIGHT
- RECESSED LIGHT
- ⊗ EXHAUST FAN
- ⊠ PANEL BOX
- ⊙ SOLAR TUBE
- ⊙ AIR SUPPLY
- ⊙ 14" RETURN AIR
- ⊙ RETURN AIR GRILLE
- ⊠ OVERHEAD REGISTER
- ⊠ FLOOR REGISTER
- ⊠ WALL-MOUNTED REGISTER
- CROSS-OVER LOCATION
- ⊙ SUPPORT POST
- △ SHEARWALL

- ⊙ 180 x 52'-0"
- ⊙ x
- ⊙ x

FLEETWOOD HOMES
RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

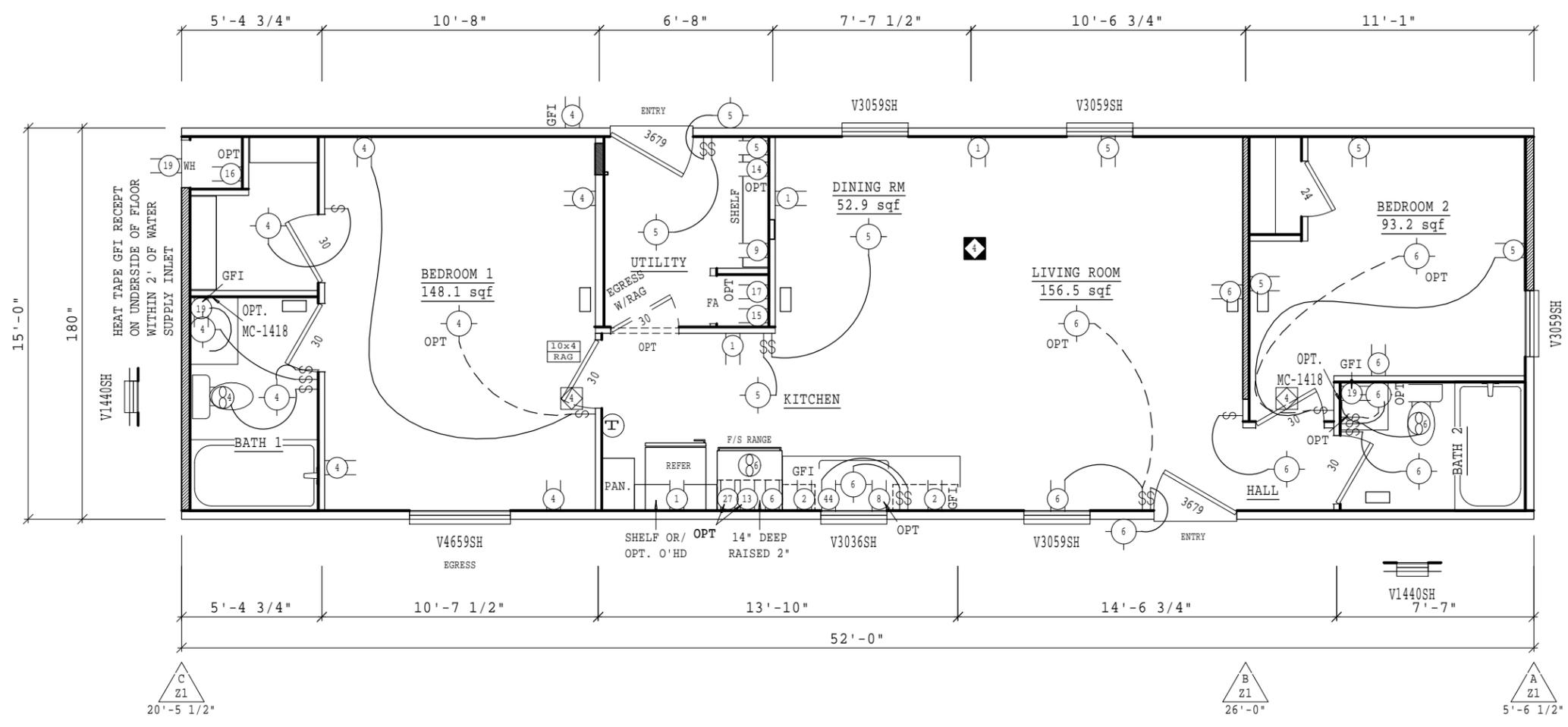
MODEL NO.
15562X

DRAWING TITLE
ALTERNATE 1
FLOOR PLAN

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT F01.1 REV

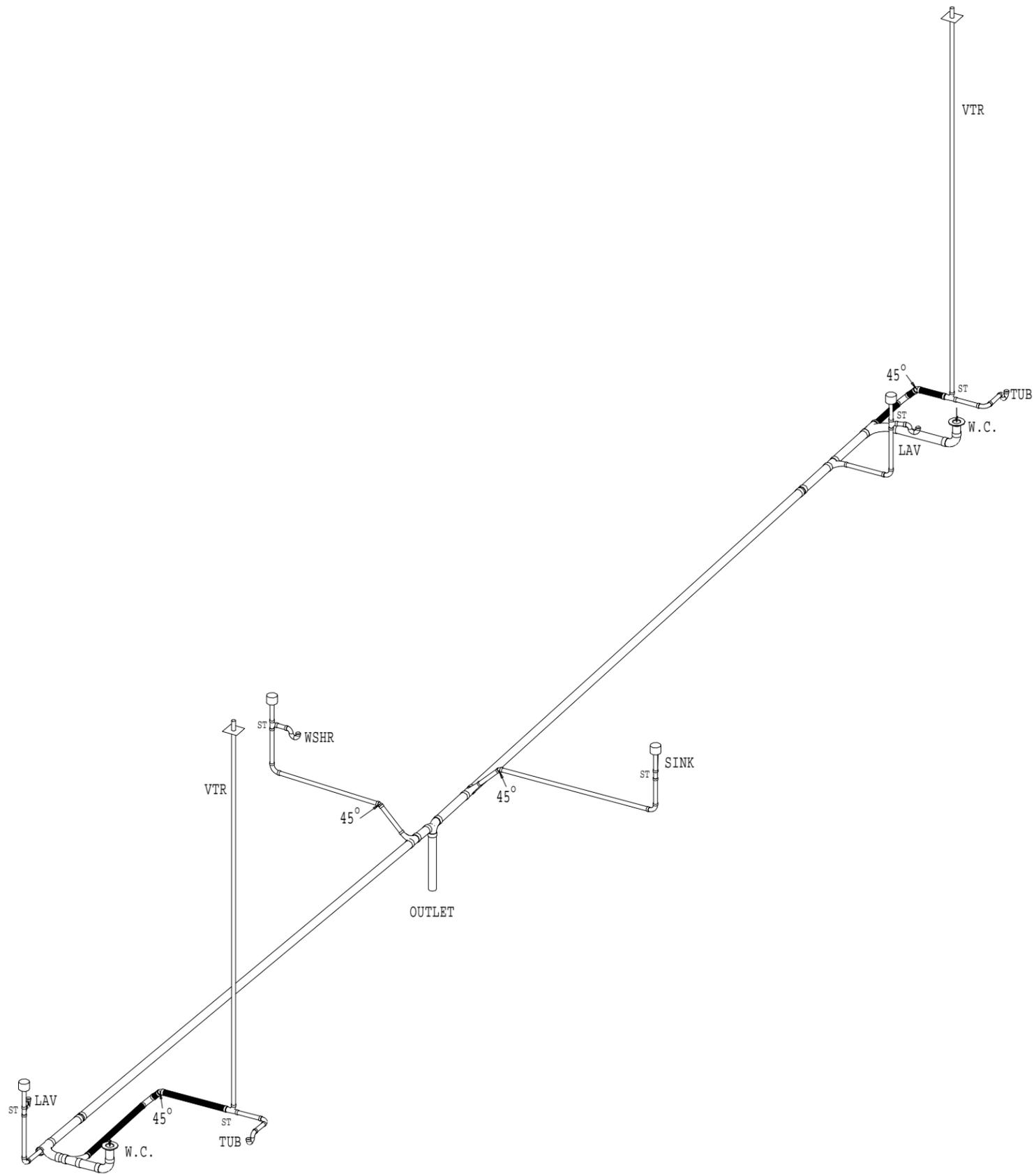


NOTES:

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THIS FLOOR PLAN AND ATTACHED OPTION DETAILS (IF APPLICABLE) IS DESIGNED TO MEET THE FOLLOWING STRUCTURAL REQUIREMENTS:
WIND ZONE(S) 1 ROOF LOAD(S) 20, 30 LBS.

PERIMETER PIERING REQUIRED WHEN ROOF LIVE LOAD > 20 psf



L E G E N D

-  3 WAY ELL
-  LTTY
-  45° WYE
-  AUTO VENT
-  SAN TEE
-  90° ELL
-  1 1/2" PIPING
-  2" PIPING
-  3" PIPING

* INDICATES OPTIONAL SHIP LOOSE PIPE AND ATTACHED FITTINGS.



RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

DRAWING TITLE
PLUMBING DRAIN

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

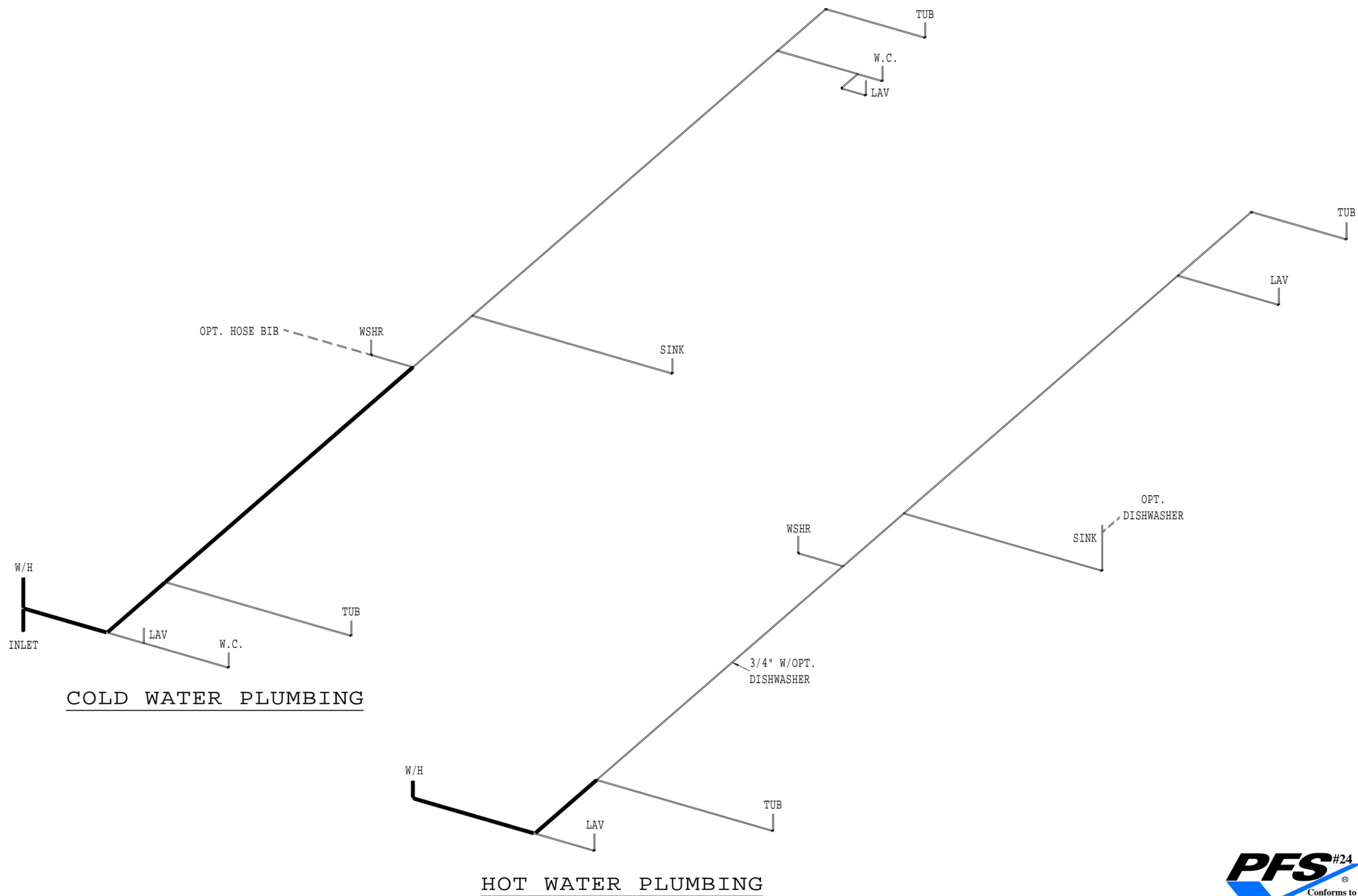
SHT	REV
PLD.1	



22CL15562X



FOR PEX PIPING, SEE
ENG. PG. 35-01-0003



COLD WATER PLUMBING

HOT WATER PLUMBING

**FLEETWOOD
HOMES**
RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

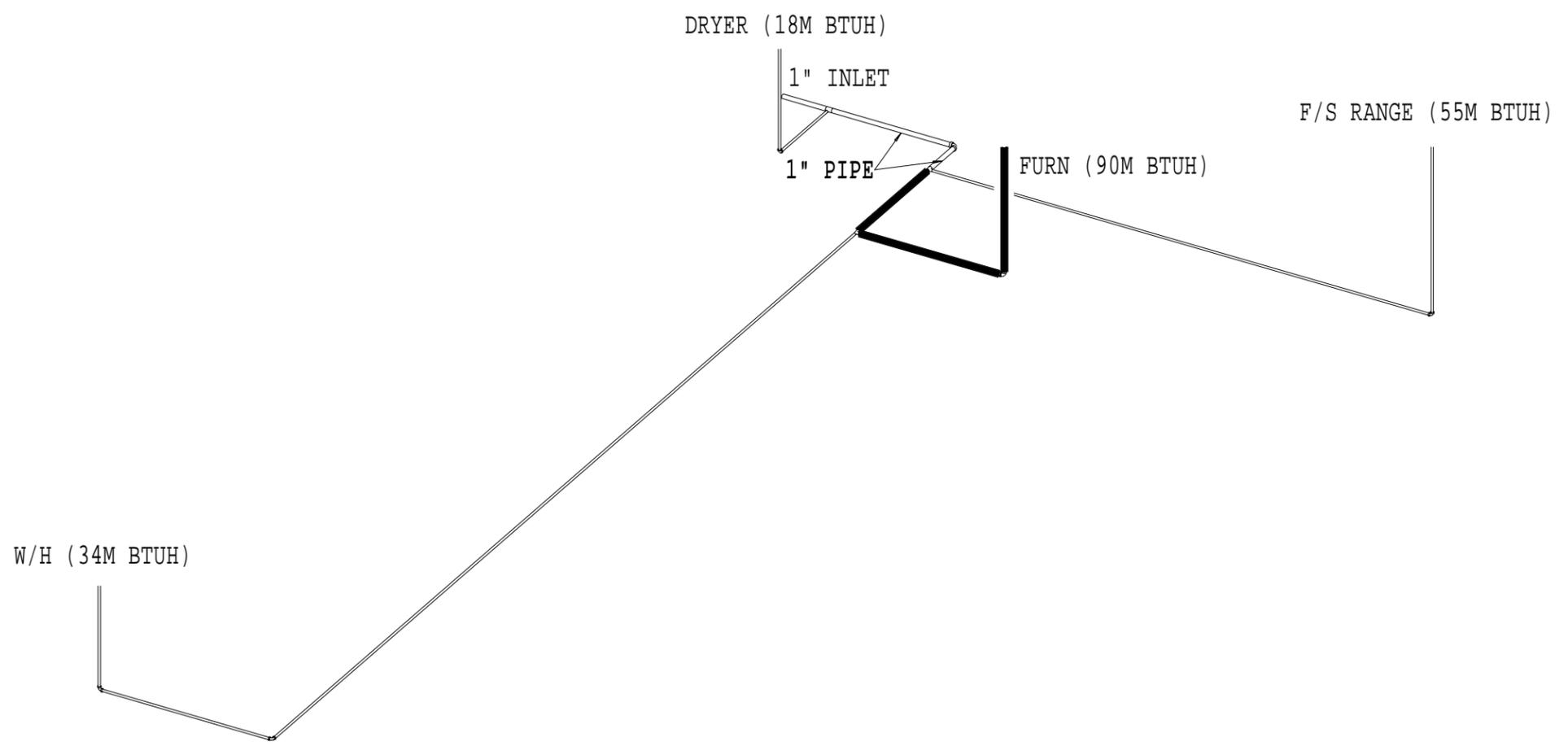
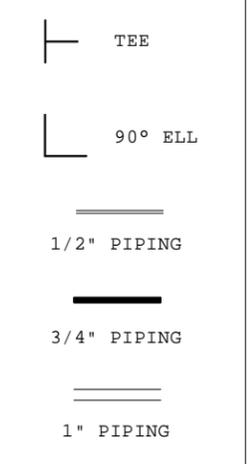
DRAWING TITLE
PLUMBING WATER

DRAWN BY:
Sandra R.

DATE:
06/21/16

SHT	REV
PLW.1	A





40' COLUMN LENGTH FOR ENTIRE SYSTEM



RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

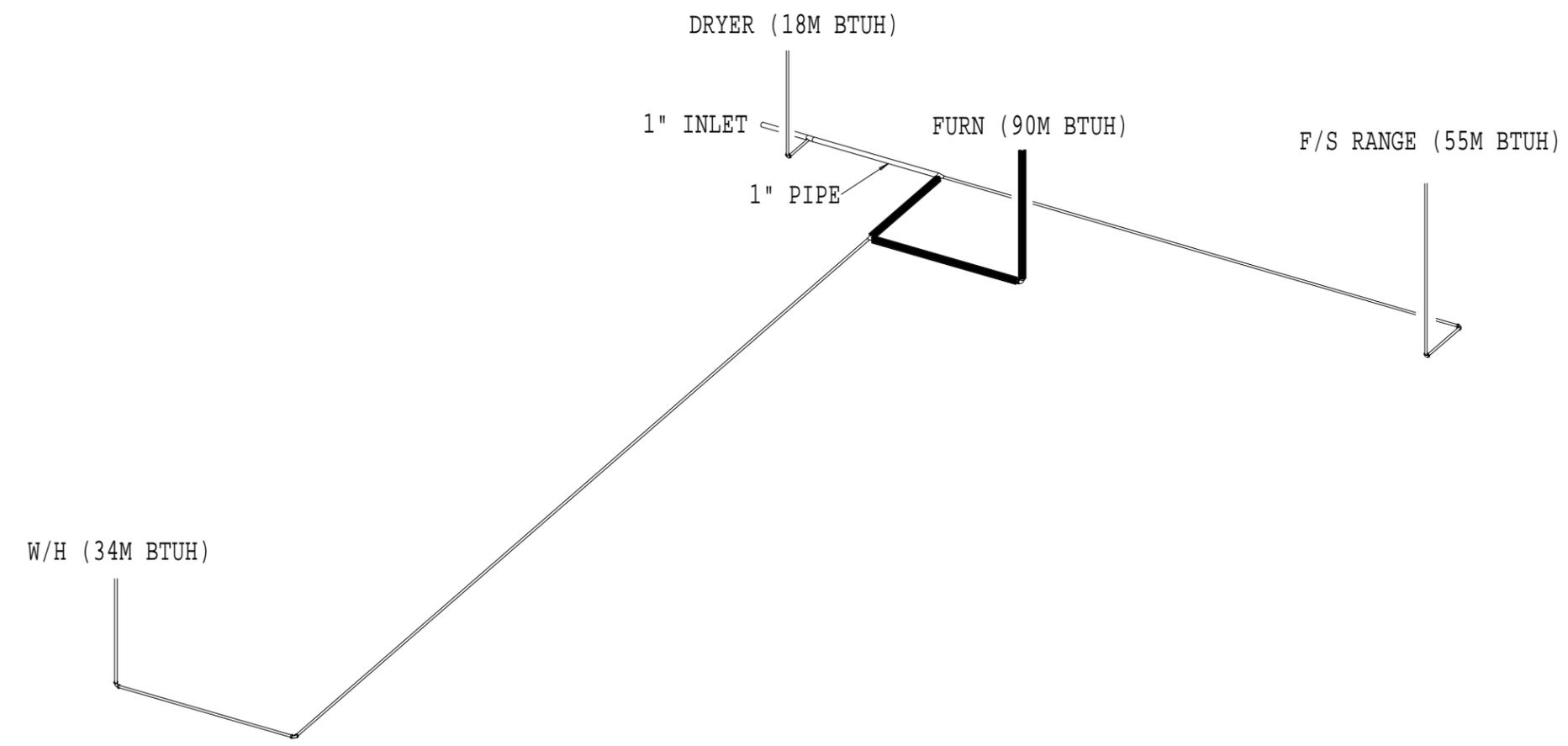
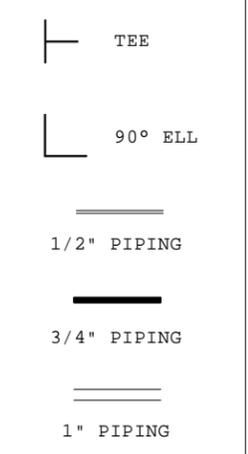
DRAWING TITLE
PLUMBING GAS

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT	REV
PLG.1	





40' COLUMN LENGTH FOR ENTIRE SYSTEM



RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

DRAWING TITLE
ALTERNATE 1
PLUMBING GAS

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT	REV
PLG1.1	



52' PLAN #1

22CL15562Xa1

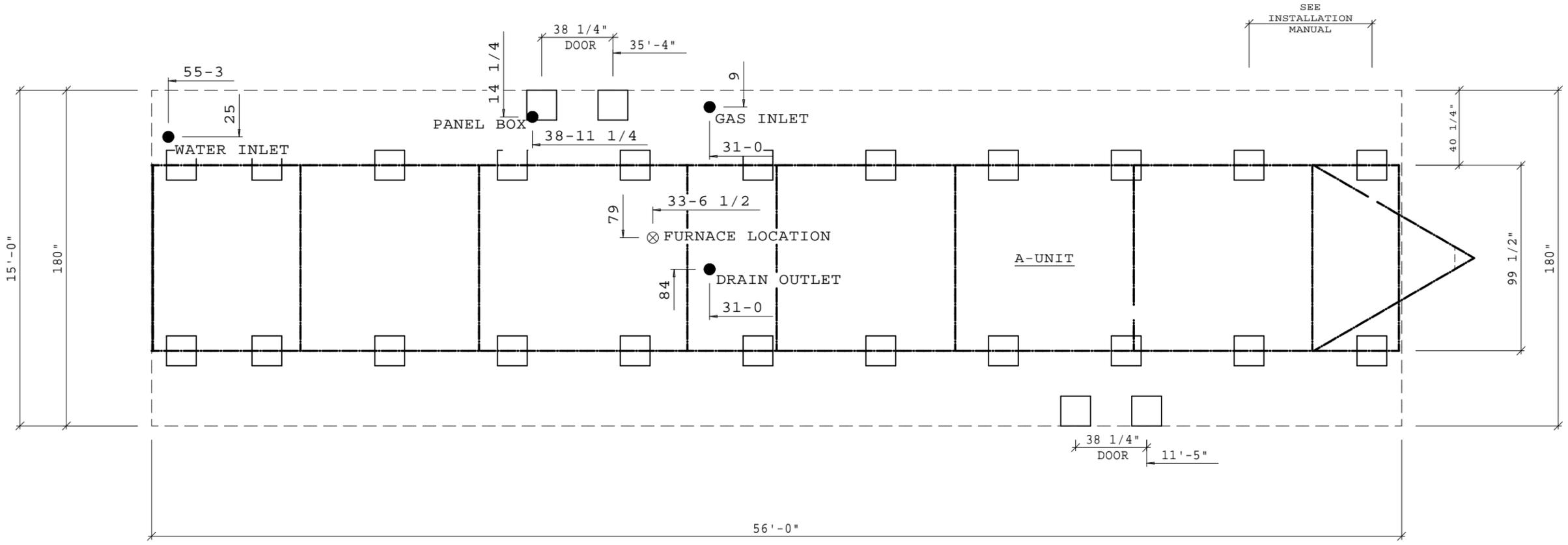
L E G E N D

□ STANDARD FOOTING

NOTES:
 1. THIS DRAWING IS DESIGNED FOR THE STANDARD WIND ZONE AND IS TO BE USED IN CONJUNCTION WITH THE INSTALLATION MANUAL AND ITS SUPPLEMENTS.

2. FOOTINGS ARE SHOWN FOR EXAMPLE ONLY. QUANTITY AND SPACING MAY VARY BASED ON PAD TYPE, SOIL CONDITION, ETC.

3. FOOTING PADS & PIERS ARE REQUIRED AT SUPPORT POSTS. SEE INSTALLATION MANUAL FOR REQUIREMENTS.



SEE INSTALLATION MANUAL



RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

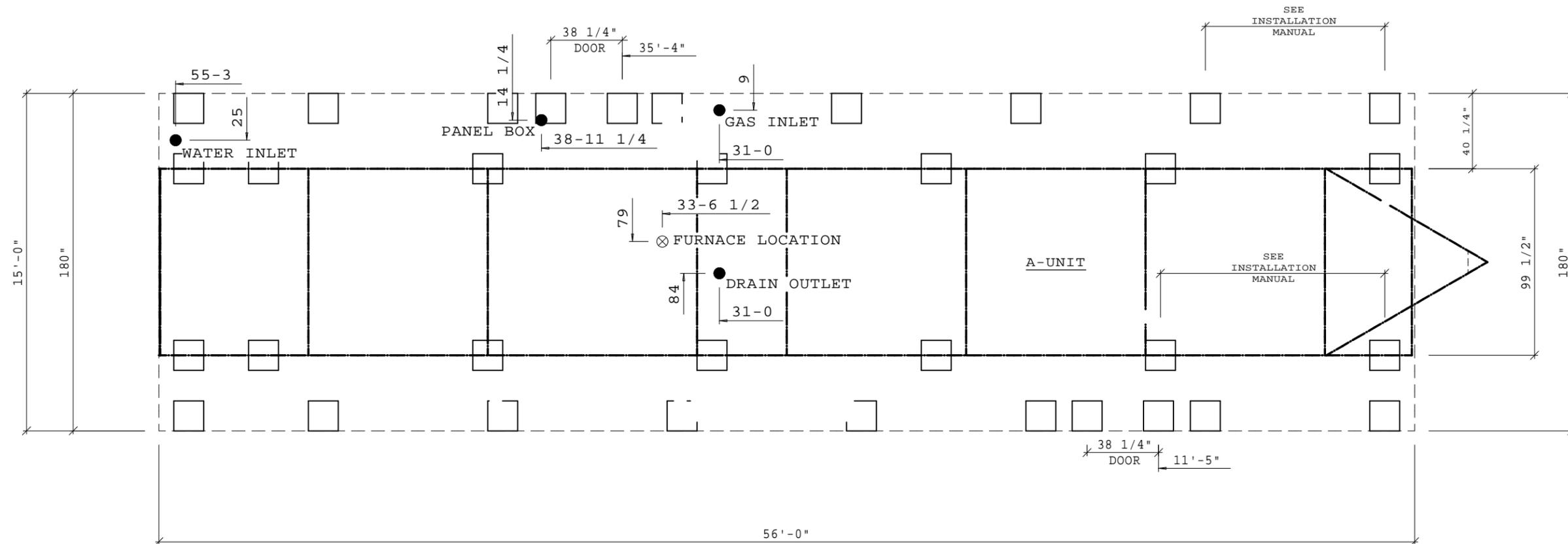
MODEL NO.
15562X

DRAWING TITLE
PIER LAYOUT
20# ROOF LOAD

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT	REV
SP.1C.1	



L E G E N D

□ STANDARD FOOTING

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RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

DRAWING TITLE
PIER LAYOUT
30# ROOF LOAD

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT	REV
SP.1E.1	



NOTES:
 1. THIS DRAWING IS DESIGNED FOR THE STANDARD WIND ZONE AND IS TO BE USED IN CONJUNCTION WITH THE INSTALLATION MANUAL AND ITS SUPPLEMENTS.

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RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

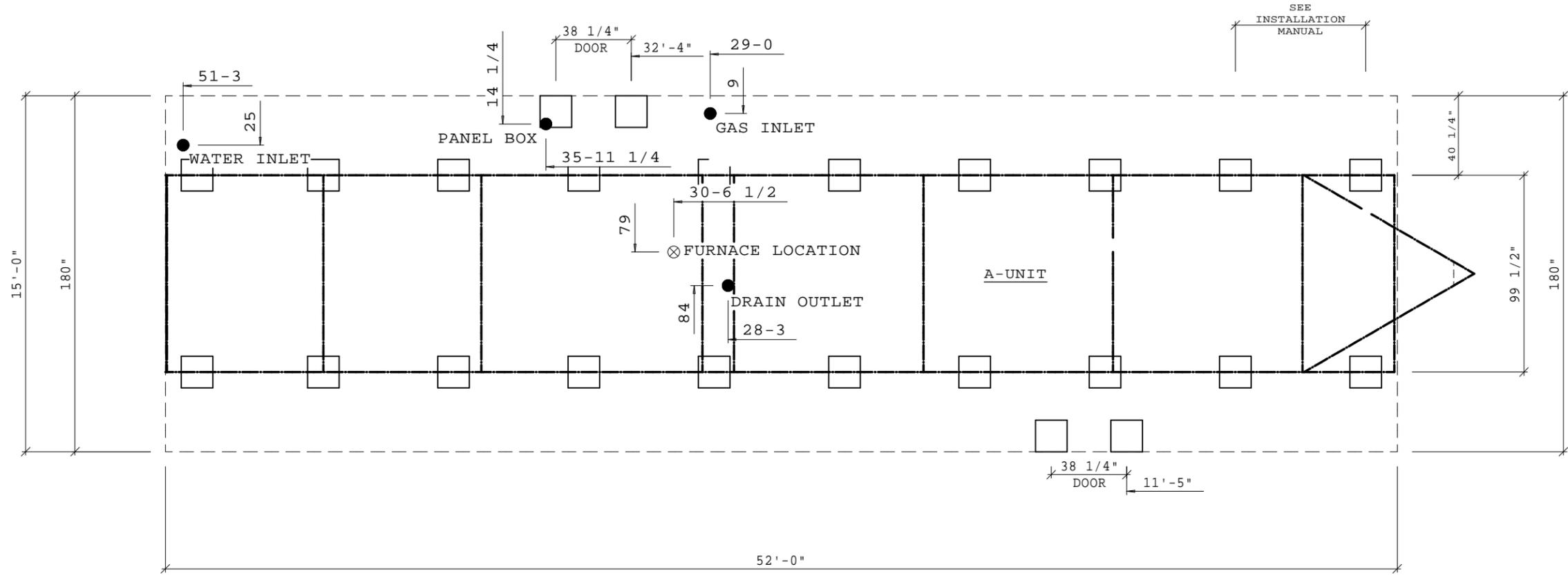
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15562X

DRAWING TITLE
ALTERNATE 1
PIER LAYOUT
20# ROOF LOAD

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT	REV
SP1.1C.1	





NOTES:
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RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

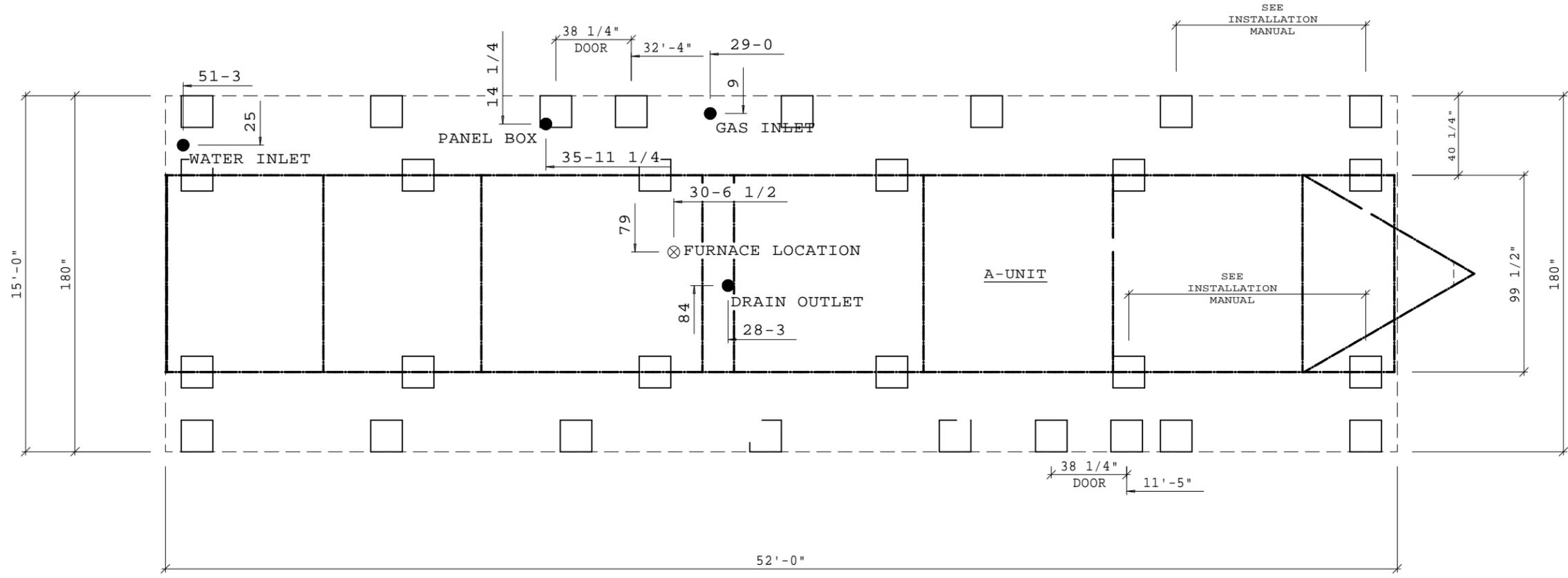
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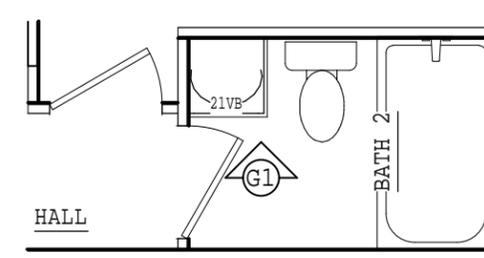
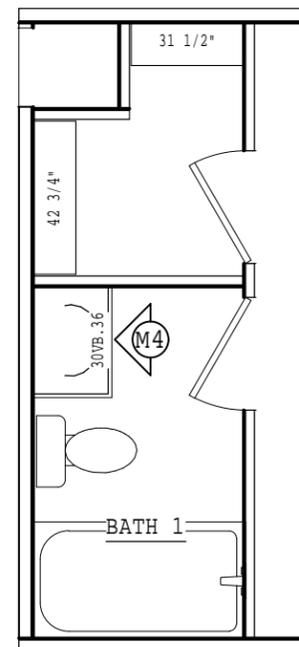
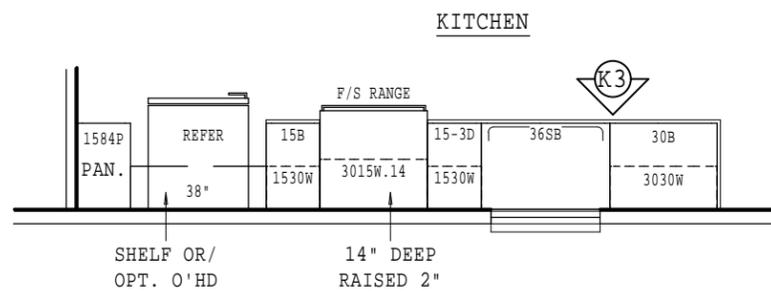
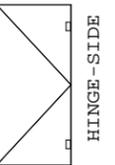
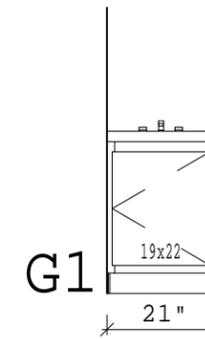
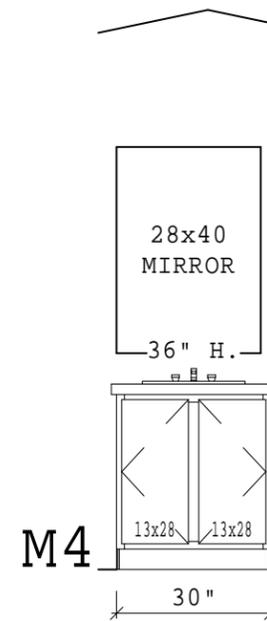
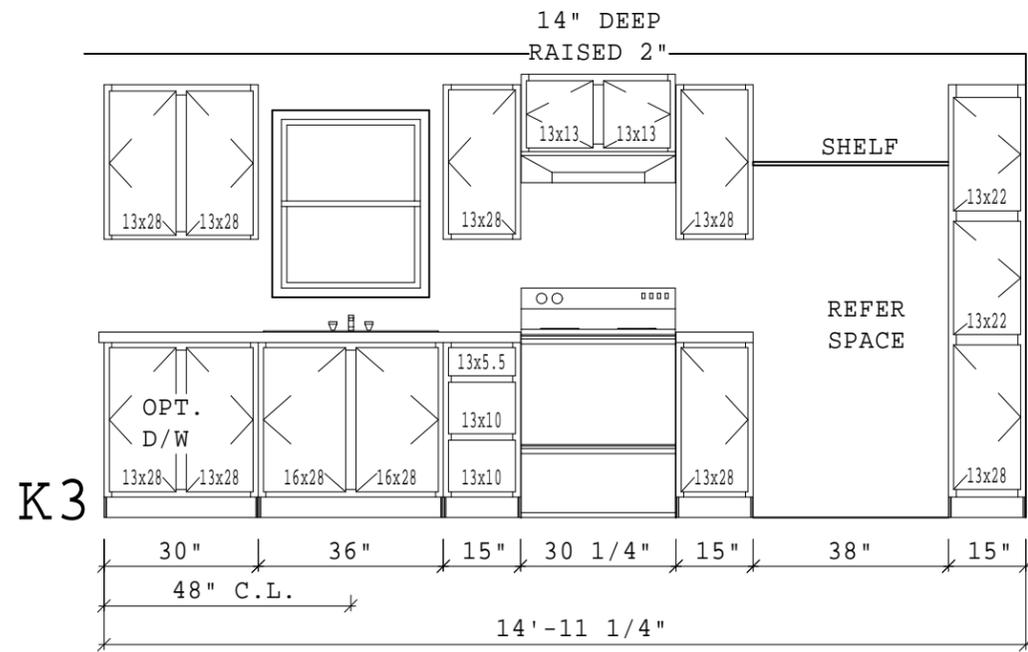
DRAWING TITLE
ALTERNATE 1
PIER LAYOUT
30# ROOF LOAD

DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT	REV
SP1.1E.1	





FLEETWOOD HOMES

RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

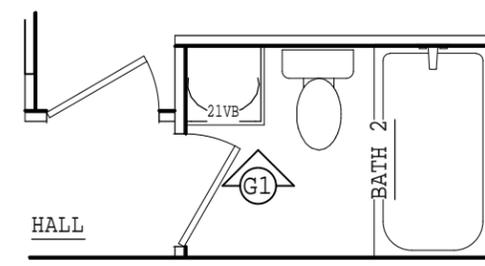
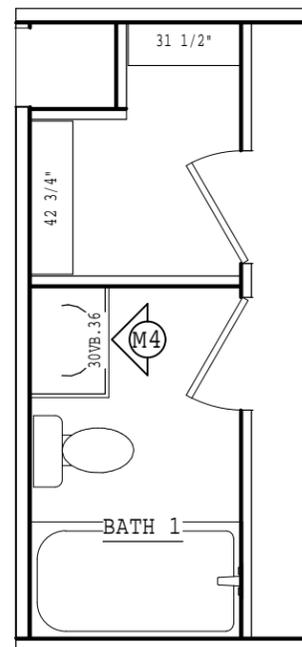
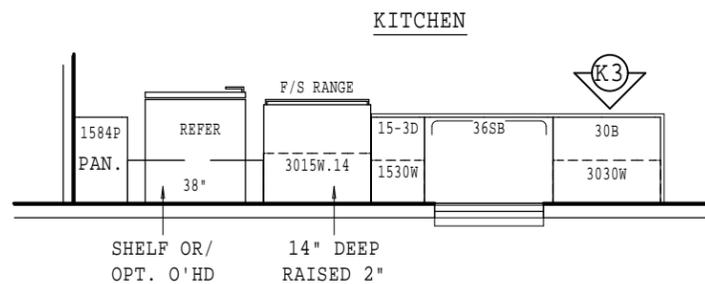
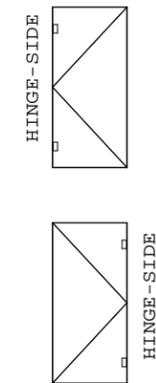
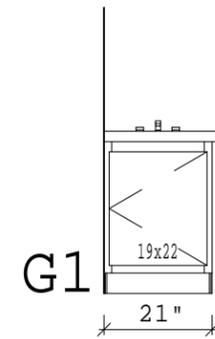
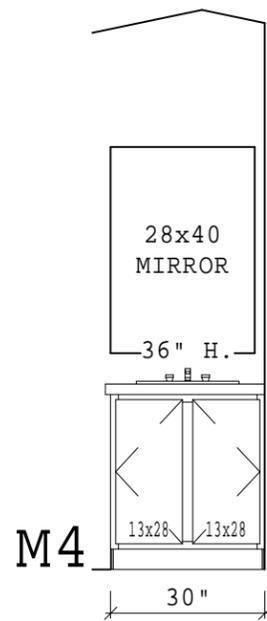
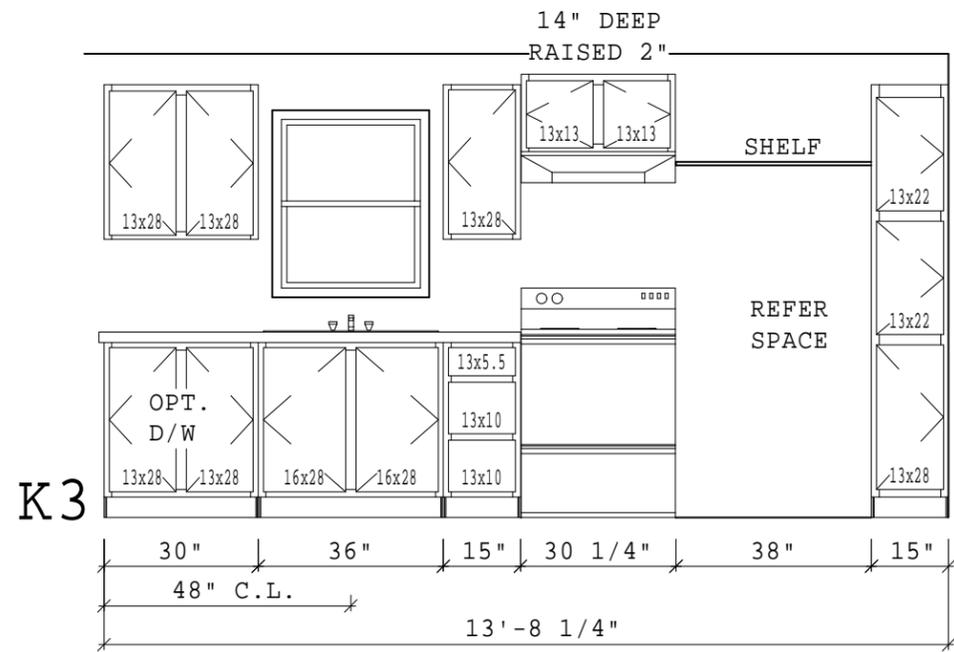
MODEL NO.
15562X

DRAWING TITLE
CABINET
ELEVATIONS

DRAWN BY:
Sandra R.

DATE:
05/11/16

SHT	REV
CE.1	A



**FLEETWOOD
HOMES**

RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

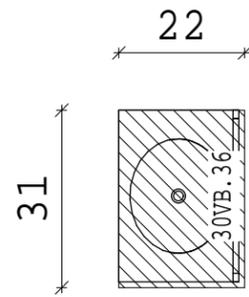
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DRAWING TITLE
ALTERNATE 1
CABINET
ELEVATIONS

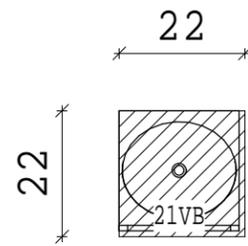
DRAWN BY:
Sandra R.

DATE:
05/11/16

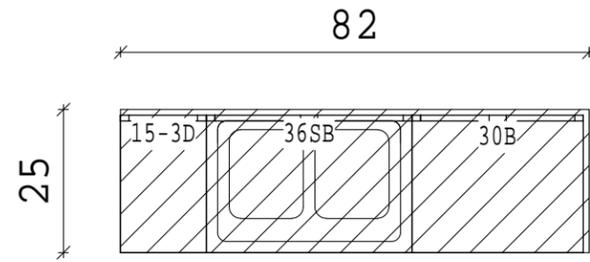
SHT	REV
CE1.1	A



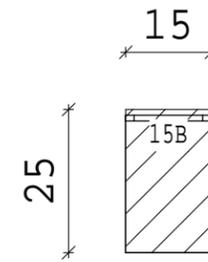
BATH 1
4.74 s.f.



BATH 2
3.36 s.f.



KITCHEN
14.24 s.f.



KITCHEN
2.60 s.f.

**FLEETWOOD
HOMES**

RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

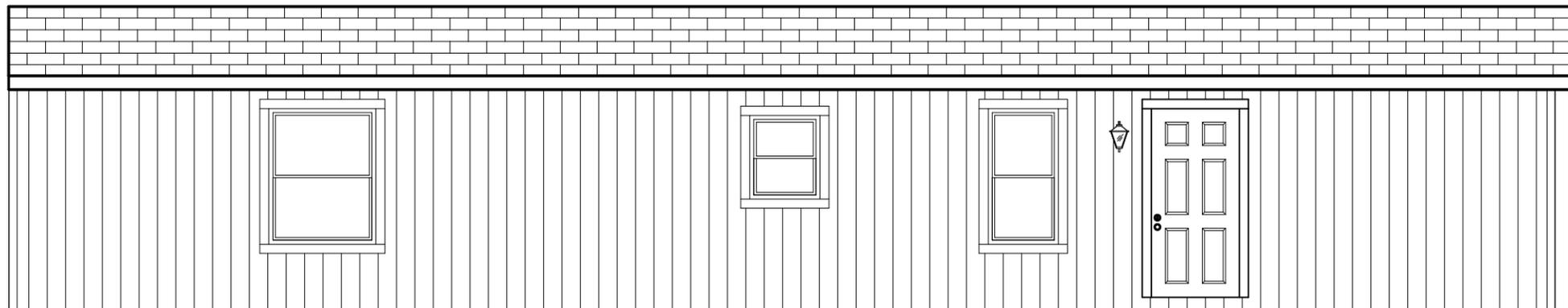
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DRAWING TITLE
COUNTERTOPS

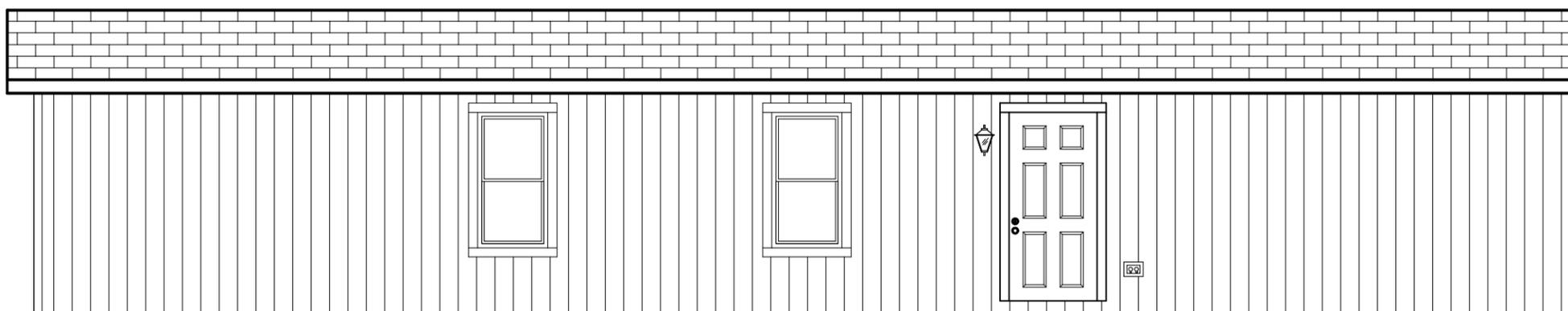
DRAWN BY:
MARIBEL L.

DATE: 04/18/16

SHT	REV
CT.1	



FRONT VIEW



REAR VIEW



RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

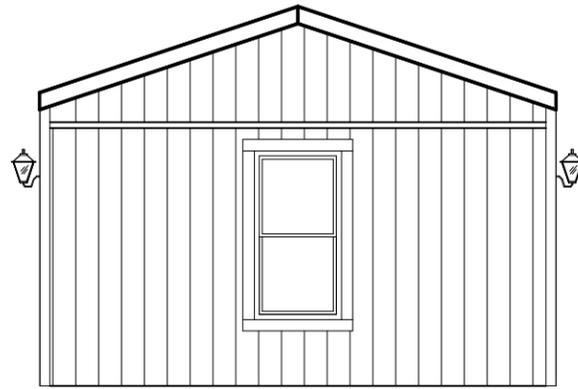
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15562X

DRAWING TITLE
EXTERIOR
ELEVATIONS

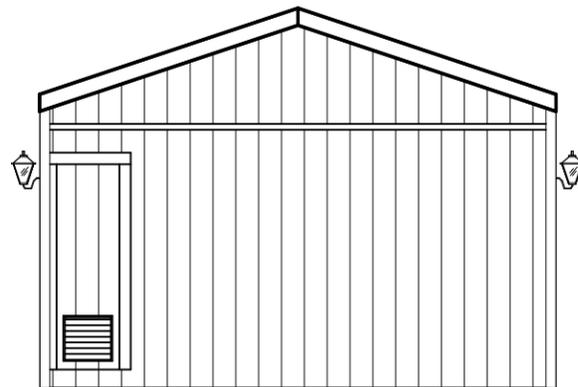
DRAWN BY:
Sandra R.

DATE:
05/11/16

SHT	REV
EE.1	A



RIGHT VIEW



LEFT VIEW

**FLEETWOOD
HOMES**

RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

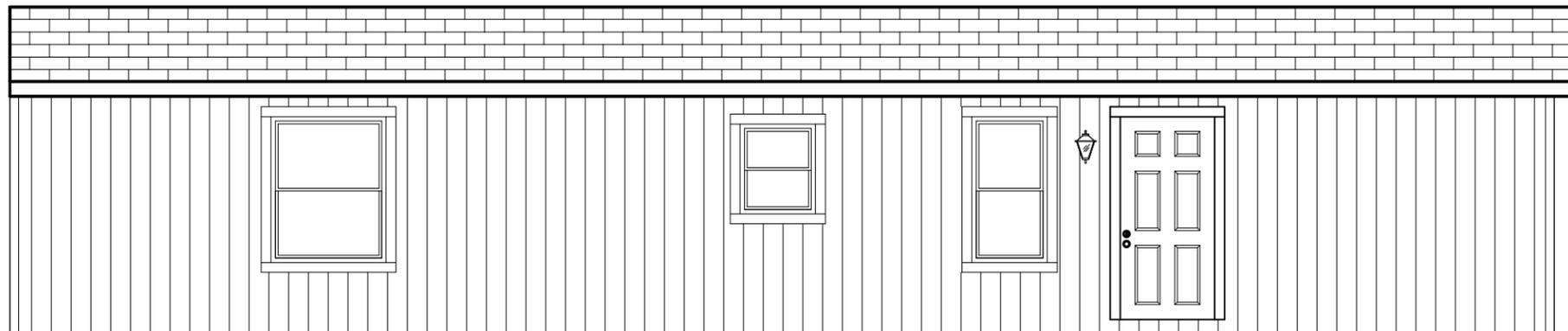
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EXTERIOR
ELEVATIONS

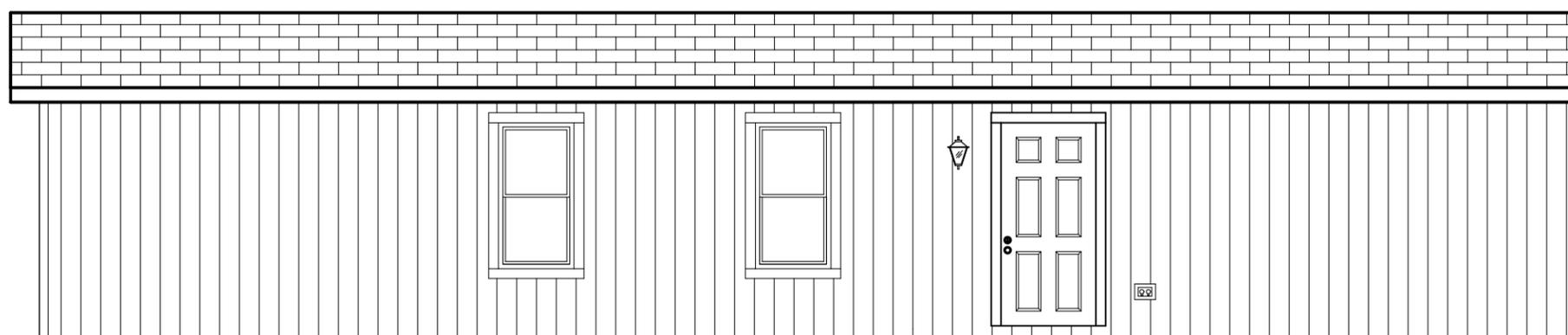
DRAWN BY: Sandra R.

DATE: 05/11/16

SHT	REV
EE.2	A



FRONT VIEW



REAR VIEW

**FLEETWOOD
HOMES**

RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

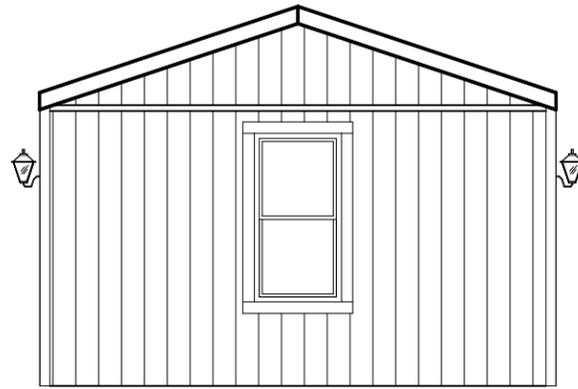
MODEL NO.
15562X

DRAWING TITLE
ALTERNATE 1
EXTERIOR
ELEVATIONS

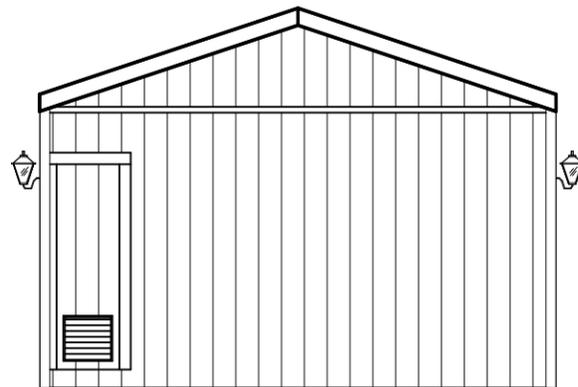
DRAWN BY:
Sandra R.

DATE:
05/11/16

SHT	REV
EE1.1	A



RIGHT VIEW



LEFT VIEW

**FLEETWOOD
HOMES**

RIVERSIDE
220

PRODUCT NAME
CANYON LAKE

MODEL NO.
15562X

DRAWING TITLE
ALTERNATE 1
EXTERIOR
ELEVATIONS

DRAWN BY:
Sandra R.

DATE:
05/11/16

SHT	REV
EE1.2	A

PROJECT SCOPE & RATIONALE:

This project is to construct 3 x 2BR farm labor housing units & barn office w/ 2 full time workers.

A conventional septic system is proposed. Percolation testing done at 3 ft depth resulted in an average of 29 MPI. The required separation to groundwater from 3 ft trench bottoms is 8 ft.

Wet weather testing found groundwater at 14 ft below grade. This indicates that the separation of proposed trench bottom to this highest groundwater level is acceptable at 11 ft

The peak sewage flow for this 9.6 acres property is less than 1,500 gpd, thus cumulative impact assessment of groundwater mounding and nitrate are not required.

County of Santa Clara - Department of Environmental Health
SOIL PERCOLATION TEST RECORDED MEASUREMENTS (Electronic Version by Chris Day, R.E.H.S.) **P-16**
REVISED DATA SHEET

OWNER/APPLICANT: Joe Chen, SR #: 867308, PLN FILE #: P 1 of 1
LOCATION: 2740 Ferguson Rd., Gilroy, CA APN 841-21-022, REHS: Peter Estes
CONTACT PERSON: CHRIS DAY, R.E.H.S., PHONE: 650-293-1045, DATE: 11/24/2021

HOLE #1	DEPTH: 3 ft					
TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	
3:54	4:24	24 1/2	22 1/4	30	2 1/4	13
4:25	4:55	24 7/8	22	30	2 7/8	10
4:57	5:27	24 7/8	22 3/8	30	2 1/2	12
5:28	5:58	24 7/8	22 1/2	30	2 3/8	13
5:59	6:29	24 7/8	22 3/8	30	2 1/2	12

HOLE #2	DEPTH: 3 ft					
TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	
3:58	4:29	24	21 1/4	31	2 3/4	11
4:30	5:00	24 3/4	24 1/8	30	5/8	48
5:03	5:33	24 1/2	24 1/4	30	1 1/4	20
5:32	6:02	25 1/8	24 1/4	30	7/8	34
6:03	6:33	25 1/8	24 1/4	30	7/8	34
6:34	7:04	25 1/8	24 3/8	30	3/4	40

HOLE #3	DEPTH: 3 ft					
TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	
4:01	4:31	25 3/8	23 5/8	30	1 3/4	17
4:32	5:02	25 1/2	23 3/4	30	2 3/4	11
5:03	5:33	25 1/2	23	30	2 1/2	12
5:34	6:04	25 1/2	23 1/4	30	2 1/4	13

HOLE #4	DEPTH: 3 ft					
TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	
4:05	4:35	24 1/2	21 1/4	30	3 1/4	9
4:37	5:07	24 1/2	23 1/2	30	1	30
5:08	5:38	24 1/2	23 1/2	30	1	30
5:39	6:09	24 1/2	23 1/2	30	1	30

HOLE #5	DEPTH: 3 ft					
TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	
4:07	4:37	24 1/2	22 3/4	30	2 35/82	12
4:39	5:09	25 1/8	23 1/2	30	1 5/8	18
5:10	5:40	25 1/8	23 5/8	30	1 1/2	20
5:41	6:11	25 1/4	23 5/8	30	1 5/8	18

HOLE #6	DEPTH: 3 ft					
TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	
4:12	4:42	25	22 3/8	30	2 82/85	10
4:43	5:13	25	22 5/8	30	2 3/8	13
5:14	5:44	25 1/2	23 3/8	30	2 1/8	14
5:45	6:15	25 1/4	23 1/2	30	1 3/4	17
6:17	6:47	25 3/8	23 1/2	30	1 7/8	16
6:47	7:17	25 1/4	23 1/2	30	1 3/4	17

HOLE	STABILIZED MPI	ADJUSTED STABILIZED MPI	AVERAGE ADJUSTED STABILIZED MPI	# BEDROOMS
1	R	12	36	12
2	R	17	50	17
3	R	17	42	17
4	R	17	42	17
5	R	17	42	17
6	R	17	42	17

FOR OFFICE USE ONLY

$R_1 = R \times 1.4$

$R_2 = (\sum R_i) / \# \text{ Holes}$

Tank Size (Gal) Leach Line (ft)

INFILTRATIVE AREA CALCULATIONS & SPECIFICATIONS

TYPE OF SEPTIC SYSTEM: Conventional Gravity Flow with Infiltration Chambers

DESIGN CALCULATIONS:	DRAINFIELD TRENCH SPECIFICATIONS:
Average Percolation Rate: 29 MPI (HOLES 1-6)	Drainfield Dimensions: 3 ft width x 3 ft depth
Design Application Rate: 0.57 gal/sq. ft./day	High Cap Chamber Height: 1.5 ft
Peak Wastewater Flow: 930 gpd (3x2BR + 2 empl. office)	Slope in Drainfield Area: 9% (flat)
Required Infiltrative Area: 1,632 ft² (930 gpd/0.57 gpd/ft ²)	Horizontal Drainfield Spacing: 6 ft o.c. (minimum)
Infiltrative Area per Linear Ft Trench: 4 sq. ft.	Depth to GW Below Trenches: pending
Trench Length (each side DV): 408 ft (1,632 ft ² /4 ft/ft ²)	Required Depth to GW: 8 ft
Reduced length for chambers: 286 ft (408 - 0.3x408)	

DV=Diverter Valve

GRAVITY FLOW CALCULATIONS:
(flat topography at 100 ft is assumed for conservative calculation)

Chamber Inlet invert elevation (furthest drainfield) = 97.7 ft
Pipe run length tank to drainfield: 75 ft
Septic tank outlet invert elevation: 98.3 ft
Slope of pipe run to furthest chamber inlet: 1.3%

Septic tank burial depth is 6" below grade
Additional soil cover to be added for 12" cover over tank.

PUMPED SEWAGE LINES TO BE APPROVED UNDER BUILDING PERMIT

SOIL PROFILE RESULTS
CONVENTIONAL SYSTEMS

SR #: 867308 DATE OF INSPECTION: 11/17/21
APN #: 841-21-022 OWNER: APPLICANT: CHECKED BY: Peter Estes
SITE ADDRESS: 2740 Ferguson Rd. Gilroy CONDUCTED BY: Chris Day

HOLE #: SP3 HOLE #:

Soil profile Log

observed water contains from side wall

end of dig groundwater observed at 16'

wet weather open

SOIL PROFILE RESULTS **SP1, 2**

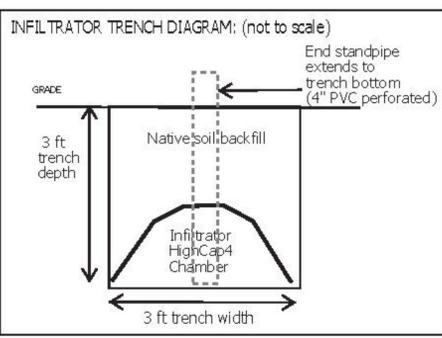
SR #: 867308 DATE OF INSPECTION: 11/17/21
APN #: 841-21-022 OWNER: APPLICANT: CHECKED BY: Peter Estes
SITE ADDRESS: 2740 Ferguson Rd. Gilroy CONDUCTED BY: Chris Day

HOLE #1: SP1 HOLE #2: SP2

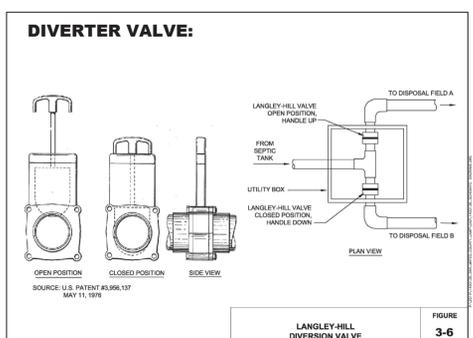
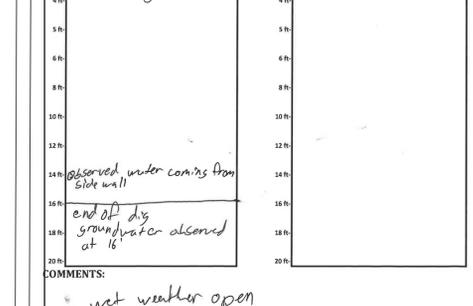
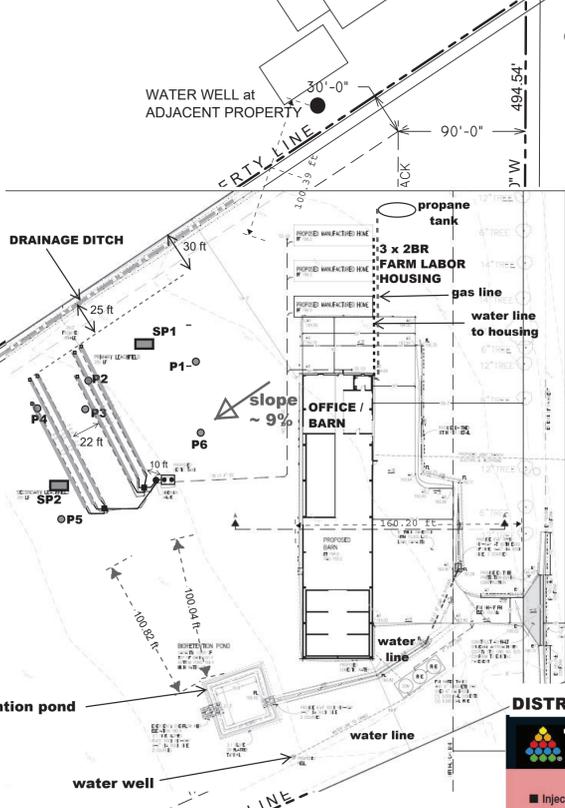
1. Back Clay, slightly base dry
2. Brown/Dark Brown Clay Slightly sandy
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
20.

1 1/2 - mottling

COMMENTS:



SEPTIC PLAN IS OVERLAI W/ CURRENT DRAINAGE PLAN.



CHAMBERS:

Quick4 Plus™ Series
Quick4 Plus High Capacity Chamber

Quick4 Plus All-in-One 12 Endcap

Quick4 Plus All-in-One Periscope

INFILTRATOR WATER TECHNOLOGIES STANDARD LIMITED WARRANTY

(a) The structural integrity of each chamber, endcap and other accessory manufactured by Infiltrator ("Units"), when installed and operated in a leachfield of an on-site septic system in accordance with Infiltrator's instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one year from the date that the septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required by applicable law, the warranty period will begin upon the date that installation of the septic system commences. To exercise its warranty rights, Holder must notify Infiltrator in writing at its Corporate Headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for Units determined by Infiltrator to be covered by the Limited Warranty. Infiltrator's liability specifically excludes: the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

(c) The Limited Warranty shall be void if any part of the chamber system is manufactured by anyone other than Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units, the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground cover set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper siting, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in the Limited Warranty. Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all conditions required by state and local codes; all other applicable laws; and Infiltrator's installation instructions.

(d) No representative of Infiltrator has the authority to charge or extend this Limited Warranty. No warranty applies to any party other than the original Holder.

The above represents the Standard Limited Warranty offered by Infiltrator. A limited number of states and countries have different warranty requirements. Any purchaser of Units should contact Infiltrator's Corporate Headquarters in Old Saybrook, Connecticut, prior to such purchase to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.

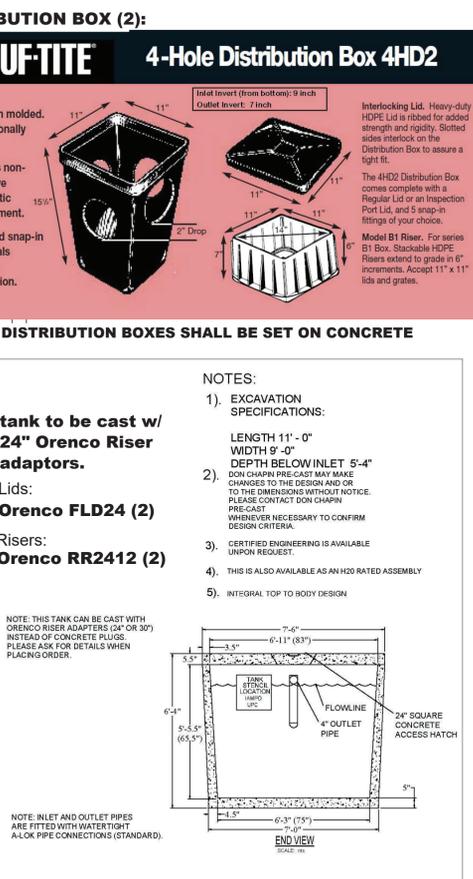
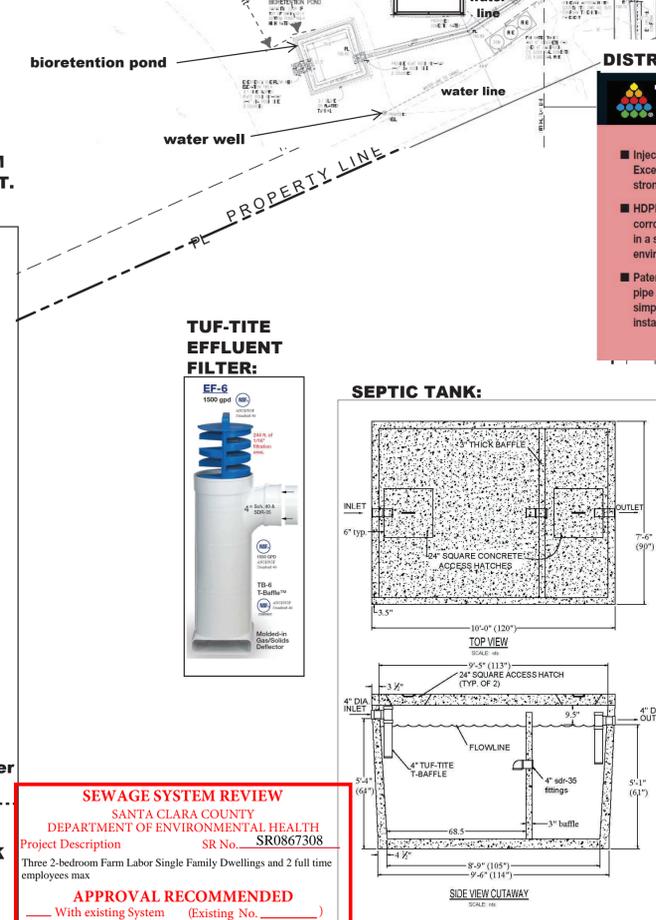
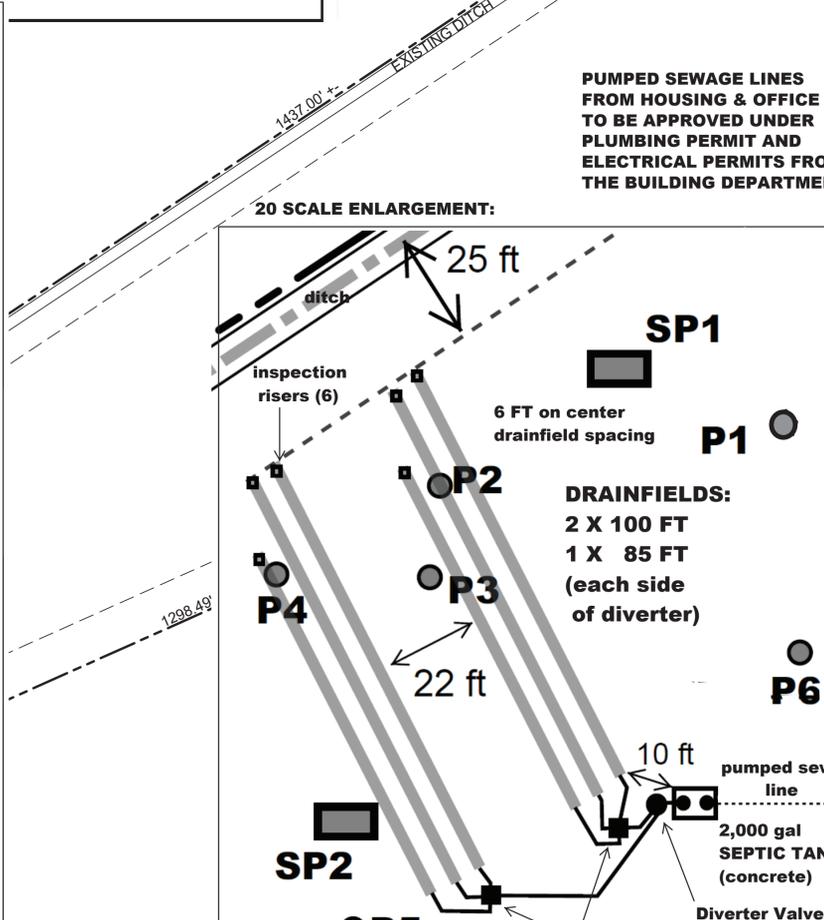
No warranty applies to any party other than the original Holder.

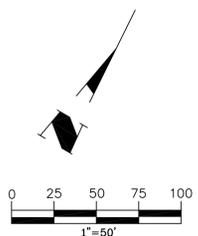
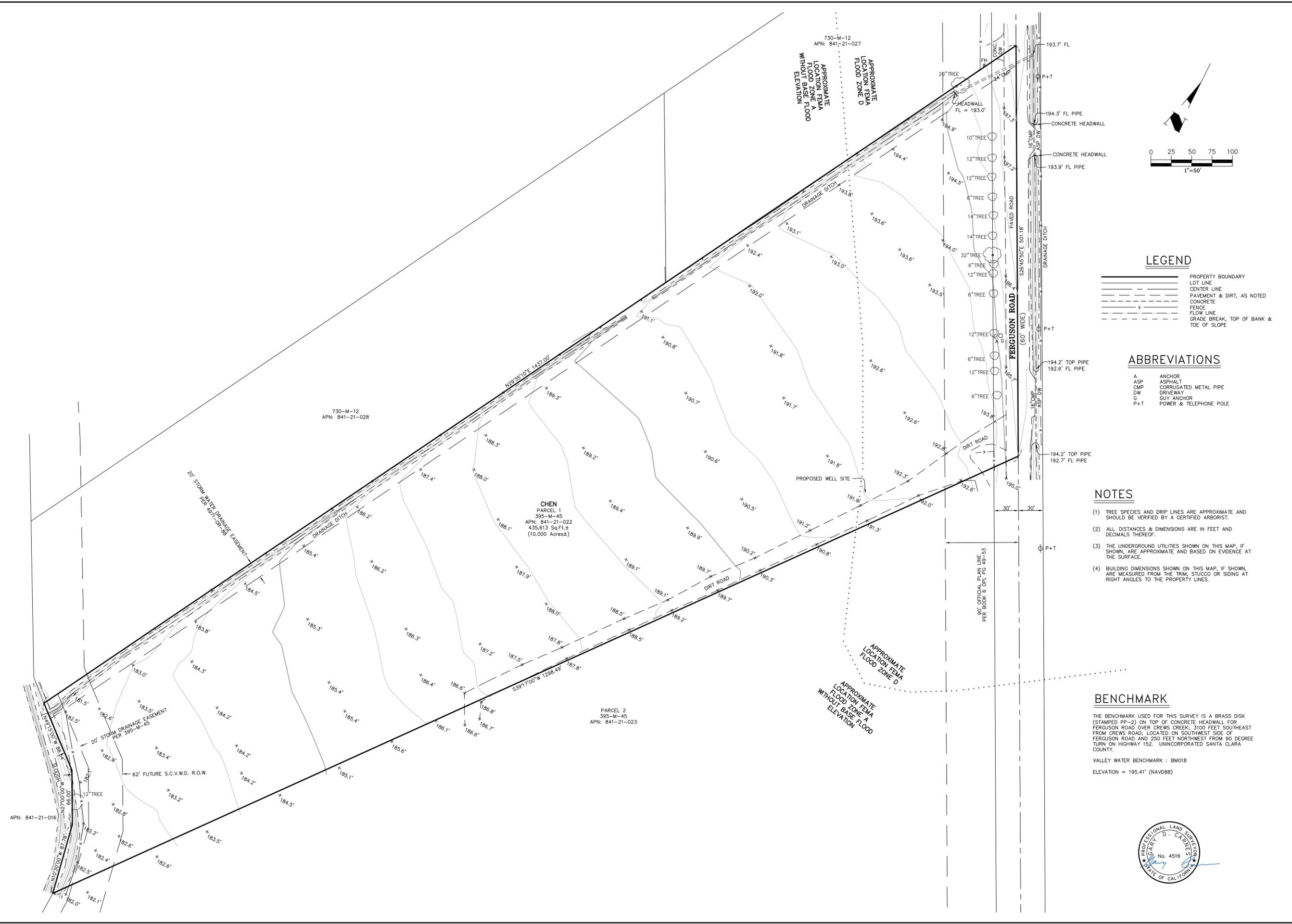
4 Business Park Road
P.O. Box 798
Old Saybrook, CT 06475
603-572-0700 • Fax: 603-572-7001
1-800-221-4436
www.infiltratorwater.com

U.S. Patents: 4,729,041; 5,017,041; 5,156,486; 5,330,017; 5,401,116; 5,491,459; 5,511,003; 5,716,161; 5,240,776; 5,359,844 Canadian Patents: 1,329,909; 2,894,264 Other patents pending.

Infiltrator, Infiltrator, Quick4 Plus, All-in-One are registered trademarks of Infiltrator Water Technologies. Infiltrator Water Technologies is a registered trademark in Mexico, Central America, Caribbean, Polynesia, Chamber, Diverter, MultiPort, PoolLock, Quick4 Plus, Quick4 Plus, Quick4 Plus, Quick4 Plus, Quick4 Plus are trademarks of Infiltrator Water Technologies. Infiltrator Water Technologies, LLC All rights reserved. Product of U.S.A. PLU510 0713

Contact Infiltrator Water Technologies' Technical Services Department for assistance at 1-800-221-4436





LEGEND

---	PROPERTY BOUNDARY
---	LOT LINE
---	CENTER LINE
---	PAVEMENT & DIRT, AS NOTED
---	CONCRETE
---	FENCE
---	FLOW LINE
---	GRADE BREAK, TOP OF BANK & TOE OF SLOPE

ABBREVIATIONS

A	ANCHOR
ASP	ASPHALT
OMP	CORRUGATED METAL PIPE
DW	DRIVEWAY
G	GUY ANCHOR
P+T	POWER & TELEPHONE POLE

- NOTES**
- (1) TREE SPECIES AND DRIP LINES ARE APPROXIMATE AND SHOULD BE VERIFIED BY A CERTIFIED ARBORIST.
 - (2) ALL DISTANCES & DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.
 - (3) THE UNDERGROUND UTILITIES SHOWN ON THIS MAP, IF SHOWN, ARE APPROXIMATE AND BASED ON EVIDENCE AT THE SURFACE.
 - (4) BUILDING DIMENSIONS SHOWN ON THIS MAP, IF SHOWN, ARE MEASURED FROM THE TRIM, STUCCO OR SIDING AT RIGHT ANGLES TO THE PROPERTY LINES.

BENCHMARK

THE BENCHMARK USED FOR THIS SURVEY IS A BRASS DISK (STAMPED PP-2) ON TOP OF CONCRETE HEADWALL FOR FERGUSON ROAD OVER CREWS CREEK; 3100 FEET SOUTHEAST FROM CREWS ROAD; LOCATED ON SOUTHWEST SIDE OF FERGUSON ROAD AND 250 FEET NORTHWEST FROM 90 DEGREE TURN ON HIGHWAY 152. UNINCORPORATED SANTA CLARA COUNTY.

VALLEY WATER BENCHMARK : BM018
ELEVATION = 195.41' (NAVD88)



Carnes & Ekparian, Inc.
 LAND SURVEYORS
 9505 SUGAR BABE DRIVE GILROY, CA 95020
 T: (408) 847-2013 F: (408) 846-7248
 EMAIL: OFFICE@CE-PLS.COM



No.	DATE	REVISION
1.	11/09/21	ADDED EASEMENTS PER TITLE REPORT DATED 7/17/2018

**TOPOGRAPHIC MAP
 FOR JOE CHEN
 2740 FERGUSON ROAD
 COUNTY OF SANTA CLARA, CA.**

SHEET	DATE :	11/02/2021
1	SCALE :	1" = 50'
OF	DRAWN BY :	J.H.
1	PROJ. MANAGER :	G.C.
Job No. 21151		
DWG: CHEN TP		

COUNTY OF SANTA CLARA

General Construction Specifications

GENERAL CONDITIONS

- 1. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS AND/OR GEOTECHNICAL REPORT PREPARED BY... AND DATED... THIS REPORT IS SUPPLEMENTED BY: 1) THESE PLANS AND SPECIFICATIONS, 2) THE COUNTY OF SANTA CLARA STANDARD DETAILS, 3) THE COUNTY OF SANTA CLARA STANDARD SPECS, 4) STATE OF CALIFORNIA STANDARD DETAILS, 5) STATE OF CALIFORNIA STANDARD SPECIFICATIONS...

CONSTRUCTION STAKING

- 1. THE DEVELOPER'S ENGINEER IS RESPONSIBLE FOR THE INITIAL PLACEMENT AND REPLACEMENT OF CONSTRUCTION GRADE STAKES. THE STAKES ARE TO BE ADEQUATELY IDENTIFIED, LOCATED, STABILIZED, ETC. FOR THE CONVENIENCE OF CONTRACTORS. LATERAL OFFSET OF STAKES SET FOR CURBS AND GUTTERS SHALL NOT EXCEED 2 1/2 FEET FROM BACK OF CURB...

CONSTRUCTION INSPECTION

- 1. CONTRACTOR SHALL NOTIFY PERMIT INSPECTION UNIT, SANTA CLARA COUNTY PRIOR TO COMMENCING WORK AND FOR FINAL INSPECTION OF WORK AND SITE. 2. THE COUNTY REQUIRES A MINIMUM OF 24 HOURS ADVANCE NOTICE FOR GENERAL INSPECTION, 48 HOURS FOR ASPHALT CONCRETE INSPECTION...

SITE PREPARATION (CLEARING AND GRUBBING)

- 1. EXISTING TREES AUTHORIZED FOR REMOVAL, ROOTS, AND FOREIGN MATERIAL IN AREAS TO BE IMPROVED WILL BE REMOVED TO AN AUTHORIZED DISPOSAL SITE AS FOLLOWS: A) TO A MINIMUM DEPTH OF TWO FEET BELOW THE FINISHED GRADE OF PROPOSED ROADWAYS (EITHER PRIVATE OR TO BE DEDICATED TO PUBLIC USE)...

UTILITY LOCATION, TRENCHING & BACKFILL

- 1. CONTRACTOR SHALL NOTIFY USA (UNDERGROUND SERVICE ALERT) AT 1-800-277-2600 A MINIMUM OF 24 HOURS BEFORE BEGINNING UNDERGROUND WORK FOR VERIFICATION OF THE LOCATION OF UNDERGROUND UTILITIES. 2. ACCURATE VERIFICATION AS TO SIZE, LOCATION, AND DEPTH OF EXISTING UNDERGROUND CONDUITS OR FACILITIES SHALL BE THE INDIVIDUAL CONTRACTORS RESPONSIBILITY...

RETAINING WALLS

- 1. REINFORCED CONCRETE AND CONCRETE MASONRY UNIT RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING INSPECTOR AND ENGINEER OF RECORD PRIOR TO POURING THE FOUNDATION AND FORMING THE WALL. SEGMENTAL BLOCK RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING INSPECTOR.

GRADING

- 1. EXCAVATED MATERIAL SHALL BE PLACED IN THE FILL AREAS DESIGNATED OR SHALL BE HAULED AWAY FROM THE SITE TO A COUNTY APPROVED DISPOSAL SITE. WHERE FILL MATERIAL IS TO BE PLACED ON NATURAL GROUND, IT SHALL BE STRIPPED OF ALL VEGETATION. TO ACHIEVE A PROPER BOND WITH THE FILL MATERIAL, THE SURFACE OF THE GROUND SHALL BE SCARIFIED TO DEPTH OF 6" BEFORE FILL IS PLACED...

Table with 4 columns: LOCATION, CUT (C.Y.), FILL (C.Y.), VERT. DEPTH. Rows include RESIDENCE, DRIVEWAY, POND, and TOTAL.

- NOTE: FILL VOLUMES INCLUDE 10% SHRINKAGE. EXCESS MATERIAL SHALL BE OFF HAULED TO A COUNTY APPROVED DUMP SITE. 7. NOTIFY SOILS ENGINEER TWO (2) DAYS PRIOR TO COMMENCEMENT OF ANY GRADING WORK TO COORDINATE THE WORK IN THE FIELD...

TREE PROTECTION

- 1. FOR ALL TREES TO BE RETAINED WITH A CANOPY IN THE DEVELOPMENT AREA OR INTERFACES WITH THE LIMITS OF GRADING FOR ALL PROPOSED DEVELOPMENT ON SITE, THE TREES SHALL BE PROTECTED BY THE PLACEMENT OF RIGID TREE PROTECTIVE FENCING, CONSISTENT WITH THE COUNTY INTEGRATED LANDSCAPE GUIDELINES, AND INCLUDE THE FOLLOWING: A. FENCING SHOULD BE PLACED ALONG THE OUTSIDE EDGE OF THE DRUPLINE OF THE TREE OR GROVE OF TREES...

ACCESS ROADS AND DRIVEWAYS

- 1. DRIVEWAY LOCATIONS SHALL BE AS SHOWN ON THE IMPROVEMENT PLANS WITH CENTERLINE STATIONING. THE MINIMUM CONCRETE THICKNESS SHALL BE 6 INCHES THROUGHOUT (WITH A MAXIMUM APPROACH SLOPE OF 1 1/4 INCHES PER FOOT). 2. ALL DRIVEWAY OR COMMON ACCESS ROAD SECTIONS IN EXCESS OF 15 LONGITUDINAL SLOPE MUST BE PAVED WITH A MINIMUM 2-INCH ASPHALT LIFT OR FULL DEPTH CONCRETE LIFT PRIOR TO ANY COMBUSTIBLE FRAMING...

STREET LIGHTING

- 1. PACIFIC GAS & ELECTRIC ELECTROLIER SERVICE FEE SHALL BE PAID BY THE DEVELOPER AND/OR HIS AUTHORIZED REPRESENTATIVE.

SANITARY SEWER

- 1. THE SANITARY SEWER AND WATER UTILITIES SHOWN ON THESE PLANS ARE NOT PART OF THIS GRADING PERMIT AND ARE SHOWN FOR REFERENCE ONLY. 2. ALL MATERIALS AND METHODS OF CONSTRUCTION OF SANITARY SEWERS SHALL CONFORM TO THE SPECIFICATIONS OF THE JURISDICTION INVOLVED. INSPECTION OF SANITARY SEWER WORK SHALL BE DONE BY SAID JURISDICTION.

PORTLAND CEMENT CONCRETE

- 1. CONCRETE USED FOR STRUCTURAL PURPOSES SHALL BE CLASS "A" (6 SACK PER CUBIC YARD) AS SPECIFIED IN THE STATE STANDARD SPECIFICATIONS. CONCRETE PLACED MUST DEVELOP A MINIMUM STRENGTH FACTOR OF 2800 PSI IN A SEVEN-DAY PERIOD. THE CONCRETE MIX DESIGN SHALL BE UNDER THE CONTINUAL CONTROL OF THE COUNTY INSPECTOR.

AIR QUALITY, LANDSCAPING AND EROSION CONTROL

- 1. WATER ALL ACTIVE CONSTRUCTION AREAS AT LEAST TWICE DAILY. 2. COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST TWO FEET OF FREEBOARD. 3. PAVE, APPLY WATER THREE TIMES DAILY, OR APPLY (NON-TOXIC) SOIL STABILIZERS ON ALL UNPAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES. 4. SWEEP DAILY (WITH WATER SWEEPERS) ALL PAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES. THE USE OF DRY POWDER SWEEPING IS PROHIBITED...

STORM DRAINAGE AND STORMWATER MANAGEMENT

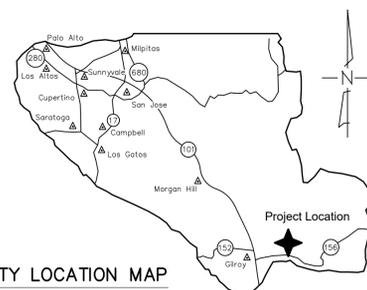
- 1. DEVELOPER IS RESPONSIBLE FOR ALL NECESSARY DRAINAGE FACILITIES WHETHER SHOWN ON THESE PLANS OR NOT. THE DEVELOPER OR HIS SUCCESSOR PROPERTY OWNERS ARE RESPONSIBLE FOR THE ADEQUACY AND CONTINUED MAINTENANCE OF THESE FACILITIES IN A MANNER WHICH WILL PRECLUDE ANY HAZARD TO LIFE, HEALTH, OR DAMAGE TO ADJOINING PROPERTY. 2. DROP INLETS SHALL BE COUNTY STANDARD TYPE 5 UNLESS OTHERWISE NOTED ON THE PLANS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR THE PROPER LOCATION OF DROP INLETS...

AS-BUILT PLANS STATEMENT

THIS IS A TRUE COPY OF THE AS-BUILT PLANS. THERE () WERE () WERE NOT) MINOR FIELD CHANGES - MARKED WITH THE SYMBOL (*). THERE () WERE () WERE NOT) PLAN REVISIONS INDICATING SIGNIFICANT CHANGES REVIEWED BY THE COUNTY ENGINEER AND MARKED WITH THE SYMBOL Δ.

GEOTECHNICAL ENGINEER OBSERVATION

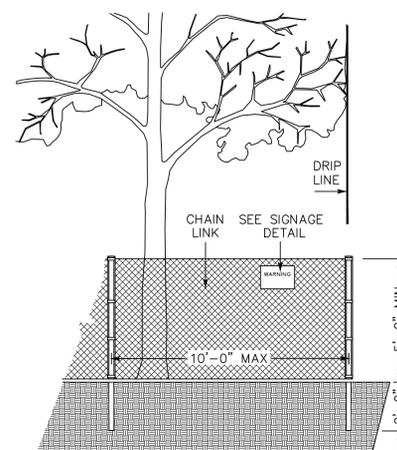
- 1. A CONSTRUCTION OBSERVATION LETTER FROM THE RESPONSIBLE GEOTECHNICAL ENGINEER AND ENGINEERING GEOLOGIST DETAILING CONSTRUCTION OBSERVATIONS AND CERTIFYING THAT THE WORK WAS DONE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL AND GEOLOGIC REPORTS SHALL BE SUBMITTED PRIOR TO THE GRADING COMPLETION AND RELEASE OF THE BOND.



COUNTY LOCATION MAP

SURVEY MONUMENT PRESERVATION

- 1. THE LANDOWNER/CONTRACTOR MUST PROTECT AND ENSURE THE PERPETUATION OF SURVEY MONUMENTS AFFECTED BY CONSTRUCTION ACTIVITIES. 2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL LOCATE, STAKE, AND FLAG ALL PERMANENT SURVEY MONUMENTS OF RECORD AND ANY UNRECORDED MONUMENTS THAT ARE DISCOVERED THAT ARE WITHIN 50 FEET OF THE CONSTRUCTION ACTIVITY. 3. THE LANDOWNER, CONTRACTOR AND/OR ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES THAT WILL OR MAY DISTURB AN EXISTING MONUMENT, CORNER STAKE, OR ANY OTHER PERMANENT SURVEYED MONUMENT SHALL CAUSE TO HAVE A LICENSED LAND SURVEYOR OR CIVIL ENGINEER, AUTHORIZED TO PRACTICE SURVEYING, ENSURE THAT A CORNER RECORD AND/OR RECORD OF SURVEY ARE FILED WITH THE COUNTY SURVEYOR'S OFFICE...



EXISTING TREE PROTECTION DETAILS

- 1. PRIOR TO THE COMMENCEMENT OF ANY GRADING, TREE PROTECTIVE FENCING SHALL BE IN PLACE IN ACCORDANCE WITH THE TREE PRESERVATION PLAN AND INSPECTED BY A CERTIFIED ARBORIST. THE ARBORIST SHALL MONITOR CONSTRUCTION ACTIVITY TO ENSURE THAT THE TREE PROTECTION MEASURES ARE IMPLEMENTED AND ADHERED TO DURING CONSTRUCTION. THIS CONDITION SHALL BE INCORPORATED INTO THE GRADING PLANS. 2. FENCE SHALL BE MINIMUM 5 FEET TALL CONSTRUCTED OF STURDY MATERIAL (CHAIN-LINK OR EQUIVALENT STRENGTH/ DURABILITY)...

COUNTY OF SANTA CLARA DEPT. OF ROADS AND AIRPORTS ISSUED BY: DATE: ENCROACHMENT PERMIT NO. COUNTY OF SANTA CLARA LAND DEVELOPMENT ENGINEERING & SURVEYING GRADING/DRAINAGE PERMIT NO. ISSUED BY: DATE:

NO WORK SHALL BE DONE IN THE COUNTY'S RIGHT-OF-WAY WITHOUT AN ENCROACHMENT PERMIT, INCLUDING THE STAGING OF CONSTRUCTION MATERIAL AND THE PLACEMENT OF PORTABLE TOILETS.

ENGINEER'S STATEMENT

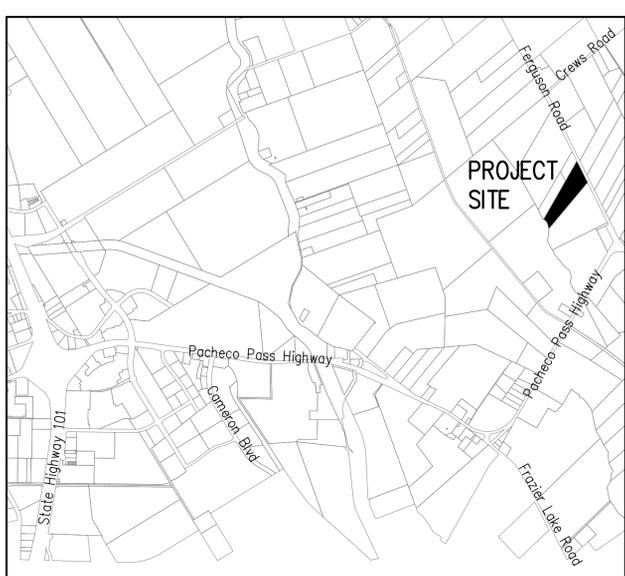
I HEREBY STATE THAT THESE PLANS ARE IN COMPLIANCE WITH ADOPTED COUNTY STANDARDS, THE APPROVED TENTATIVE MAP (OR PLAN) AND CONDITIONS OF APPROVAL PERTAINING THERETO DATED FILE(S) NO.

DATE 6/27/28 R.C.E. NO. DARRELL K.H. WONG

COUNTY ENGINEER'S NOTE

ISSUANCE OF A PERMIT AUTHORIZING CONSTRUCTION DOES NOT RELEASE THE DEVELOPER, PERMITEE OF ENGINEER FROM RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS CONTAINED IN THE PLANS. IF, DURING THE COURSE OF CONSTRUCTION, THE PUBLIC INTEREST REQUIRES A MODIFICATION OF (OR DEPARTURE FROM) THE SPECIFICATIONS OF THE PLANS, THE COUNTY SHALL HAVE THE AUTHORITY TO REQUIRE THE SUSPENSION OF WORK, AND THE NECESSARY MODIFICATION OR DEPARTURE AND TO SPECIFY THE MANNER IN WHICH THE SAME IS TO BE MADE.

DATE DARRELL K.H. WONG R.C.E. NO. 63958 EXPIRES 9/30/22



PROJECT SITE

VICINITY MAP NO SCALE

SCOPE OF WORK

- 1. THE DEVELOPER IS RESPONSIBLE FOR THE INSTALLATION OF THE WORK PROPOSED ON THE EROSION CONTROL PLAN. THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE DESIGN OF THE EROSION CONTROL PLANS AND ANY MODIFICATIONS OF THE EROSION CONTROL PLANS TO PREVENT ILLICIT DISCHARGES FROM THE SITE DURING CONSTRUCTION. 2. A CONSTRUCTION OBSERVATION LETTER FROM THE RESPONSIBLE GEOTECHNICAL ENGINEER AND CERTIFIED ENGINEERING GEOLOGIST DETAILING CONSTRUCTION OBSERVATIONS AND CERTIFYING THAT THE WORK WAS DONE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL AND GEOLOGICAL REPORTS SHALL BE SUBMITTED PRIOR TO GRADING COMPLETION AND RELEASE OF BOND. 3. CLEAR AND GRUB BUILDING PAD AND DRIVEWAY. 4. BUILDING PAD AND DRIVEWAY GRADING. 5. CONSTRUCT DRIVEWAY 6. CONSTRUCT BIORETENTION POND

- SEPARATE PERMIT: 7. INSTALL SEPTIC TANK AND LEACHFIELD 8. WATER SYSTEM 9. INSTALL WHARF FIRE HYDRANT

SHEET INDEX

Table with 2 columns: Sheet Number, Sheet Description. Rows include COVER SHEET, SITE PLAN, PRELIMINARY GRADING & DRAINAGE PLAN, EROSION CONTROL PLAN, BEST MANAGEMENT PRACTICES.

ENGINEER'S NAME: HANNA & BRUNETTI ADDRESS: 7651 EGGLEBERRY STREET, GILROY CA 95020 PHONE NO. 408 842-2173 FAX NO. 408 842-3662

PRELIMINARY IMPROVEMENT PLANS

FOR THE ASSESSOR BUILDING ON THE LANDS OF CHEN 2740 FERGUSON ROAD, GILROY PARCEL 1 AS SHOWN UPON THAT CERTAIN PARCEL MAP FILED MAY 10, 1977 IN BOOK 395 OF MAPS. AT PAGE 45 SANTA CLARA COUNTY, CALIFORNIA A.P.N.: 841-21-022

Table with 4 columns: Revision, Date, File Name, Sheet Number. Rows include APRIL 2022, Revision 1, Revision 2, Revision 3.

THE USE OF THESE PLANS AND SPECIFICATIONS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED AND PUBLICATION THEREOF IS EXPRESSLY LIMITED TO SUCH USE. REPRODUCTION OR PUBLICATION BY ANY METHOD, IN WHOLE OR PART, IS PROHIBITED. TITLE TO THE PLANS AND SPECIFICATIONS REMAINS IN THE ENGINEER WITHOUT PREJUDICE. VISUAL CONTACT WITH THESE PLANS AND SPECIFICATIONS SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

ABBREVIATIONS

AC ASPHALT CONCRETE	EP EDGE OF PAVEMENT	P.S.E. PUBLIC SERVICE EASEMENT
AB AGGREGATE BASE	ER END OF RETURN	P.S.D.E. PRIVATE STORM DRAIN EASEMENT
AD AREA DRAIN	ESMT EASEMENT	P.S.S.E. PRIVATE SANITARY SEWER EASEMENT
AGG AGGREGATE	(E) EXISTING	P.U.E. PUBLIC UTILITY EASEMENT
BC BEGINNING OF CURVE	EX. EXISTING	PVI POINT OF VERTICAL INTERSECTION
BPD BACKFLOW PREVENTER DEVICE	FF FINISH FLOOR	PVC POLYVINYL CHLORIDE PIPE
BLDG BUILDING	FG FINISH GRADE	R RADIUS
BOC BACK OF CURB	FD FIRE HYDRANT	RCP REINFORCED CONCRETE PIPE
BO BLDW OFF	FLOWLINE	R/W RIGHT OF WAY
BOT BOTTOM	FOC FACE OF CURB	RWL RAINWATER LEADER
BOW BACK OF WALK	GL GAS LINE	S SLOPE
BW BOTTOM OF WALL	GM GAS METER	SD STORM DRAIN PIPE
BWF BARBWARE FENCE	GB GRADE BREAK	SS SANITARY SEWER PIPE
CATV CABLE TELEVISION	CUY GUY WIRE FOR POLE	STM STORM DRAIN MANHOLE
CB CATCH BASIN	GV GATE VALVE	SS MH SANITARY SEWER MANHOLE
C&G CURB & GUTTER	HDPE HIGH DENSITY POLYETHYLENE	SP SERVICE POLE
CI CURB INLET	HMA HOT MIX ASPHALT	STD STANDARD
CL CENTERLINE	HP HIGH POINT	SQ SQUARE
CMU CORRUGATED METAL PIPE	INV INVERT OF PIPE	SW SIDEWALK
CO CONCRETE MASONRY UNIT	IP IRON PIPE	T TELEPHONE LINE
CO CLEAN OUT	JP JOINT POLE	TBM TEMPORARY BENCHMARK
CONC CONCRETE	JT JOINT TRENCH	TC TOP OF CURB
CONST CONSTRUCTION	LF LINEAR FEET	TCM TREATMENT CONTROL MEASURES
DDCV DOUBLE DETECTOR CHECK VALVE ASSEMBLY	LP LOW POINT	TTC TOP FACE OF CURB
DI DROP INLET	MAX MAXIMUM	TC TOP OF CRATE
DIP DUCTILE IRON PIPE	MIN MINIMUM	TOB TOP OF BANK
DMA DRAINAGE MANAGEMENT AREA	N.I.C. NOT IN CONTRACT	TOE TOP OF BANK
DS DOWNSPOUT	(N) NEW	TW TOP OF WALL
DWY DRIVEWAY	OHU OVERHEAD UTILITY	TYP TYPICAL
E ELECTRIC LINE	(P) PROPOSED	W WATER LINE
EC END OF CURVE	PB PULL BOX	WM WATER METER
EG EXISTING GRADE	PCC PORTLAND CONCRETE CEMENT	WV WATER VALVE
ELEV ELEVATION	PL PROPERTY LINE	
	PRC POINT REVERSE CURVE	

LEGEND

EXISTING	PROPOSED	CONTOUR ELEVATION
		—
		—
		—
		—
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		—
		—
		—

BENCHMARK:

BENCHMARK ID: BM018
 ELEVATION: 195.41 FEET (NAVD88)
 ORGANIZATION: VALLEY WATER

DESCRIPTION:
 BRASS DISK (STAMPED PP-2) ON TOP OF CONCRETE HEADWALL FOR FERGUSON ROAD OVER CREWS CREEK; 3100 FEET SOUTHEAST FROM CREWS ROAD; LOCATED ON SOUTHWEST SIDE OF FERGUSON ROAD AND 250 FEET NORTHWEST FROM 90 DEGREE TURN ON HIGHWAY 152. UNINCORPORATED SANTA CLARA COUNTY.

BASIS OF BEARINGS:

THE BEARINGS SHOWN ON THIS MAP ARE BASED ON THE PARCEL MAP FILED ON MAY 10th, 1977 IN BOOK 395 OF MAPS AT PAGE 45. RECORDER OF SANTA CLARA COUNTY.

FLOOD ZONE STATEMENT:

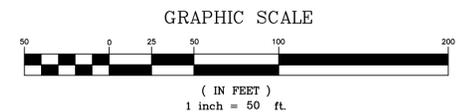
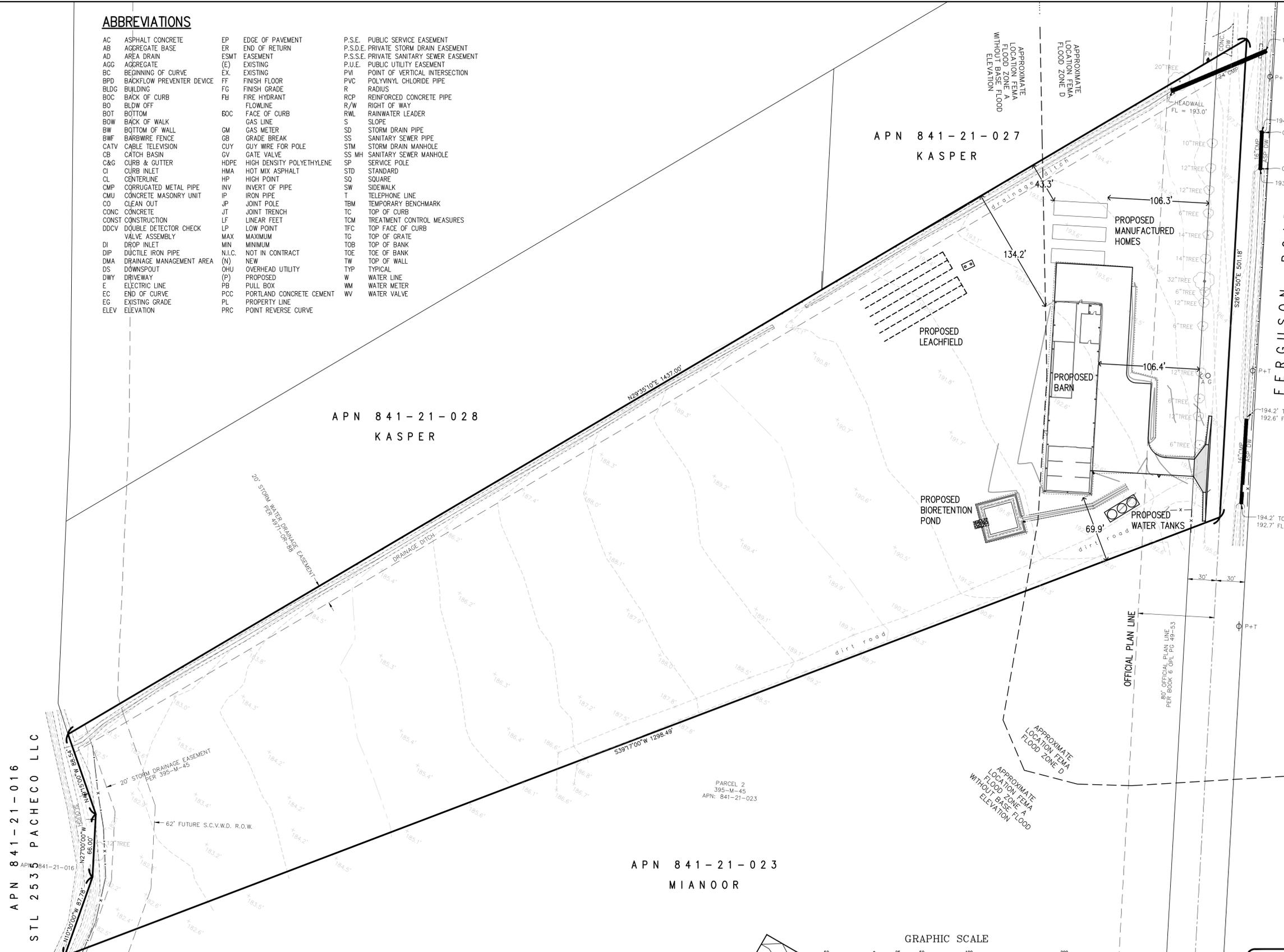
FLOOD INSURANCE RATE MAP
 COMMUNITY PANEL NUMBER: 060337 06085C0645H
 MAP REVISED: MAY 18, 2009
 COMMUNITY NAME: SANTA CLARA COUNTY

PROJECT LOCATED IN ZONE A AND D
 BUILDING SITE IN ZONE D
 AREAS OF UNDETERMINED, BUT POSSIBLE FLOOD HAZARDS

ZONE A
 AN AREA INUNDAED BY 100-YEAR FLOODING

**PRELIMINARY PLANS
 NOT FOR CONSTRUCTION**

APPROVED FOR ISSUANCE
 REFER TO ENCROACHMENT AND/OR
 CONSTRUCTION PERMIT AND PLAN
 COVER SHEET FOR SPECIAL
 CONDITIONS AND PERMIT NUMBERS



PLAN # _____ OF _____ SHEET

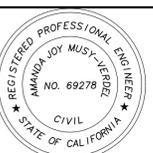
REVISIONS:

DATE	DESCRIPTION	BY:

HANNA-BRUNETTI
 CIVIL ENGINEERS - LAND SURVEYORS
 CONSTRUCTION MANAGERS
 7651 EAGLEBERRY STREET - GILROY - 95020 - CALIFORNIA
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 EMAIL: ENGINEERING@HANNABRUNETTI.COM

DATE: APRIL 2022
 HORIZ. SCALE: 1"=50'
 VERT. SCALE: NONE
 DESIGNED BY: AM
 CHECKED BY: _____
 DRAWN BY: TM

date: _____
 Hanna - Brunetti
 Amanda Joy Musy-Verdel
 R.C.E. # 69278



REFERENCES

UNINCORPORATED
 APRIL 2022

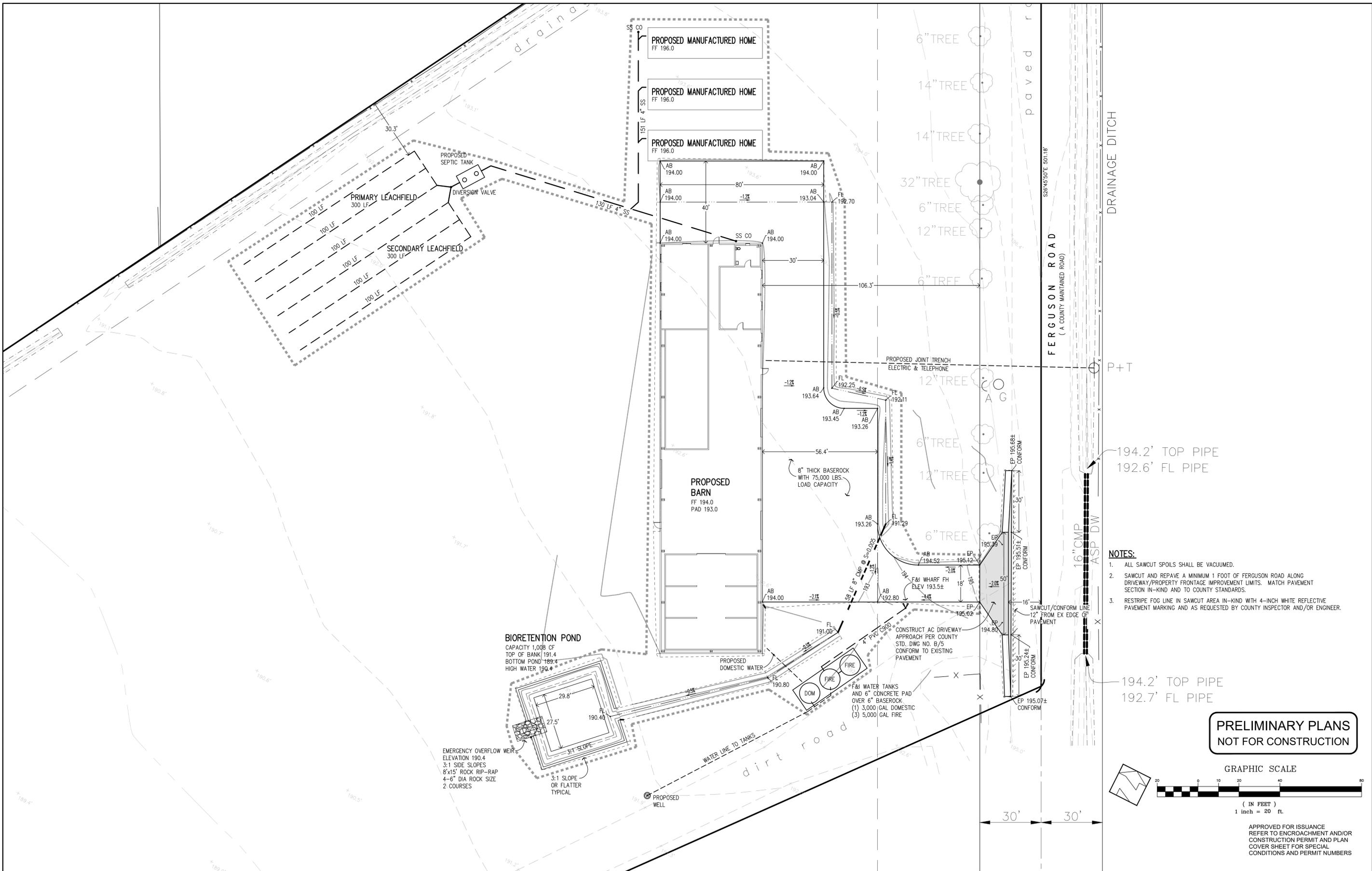
Site Plan

Lands of Chen - 2740 Ferguson Road - apn 841-21-022

SANTA CLARA COUNTY
 CALIFORNIA

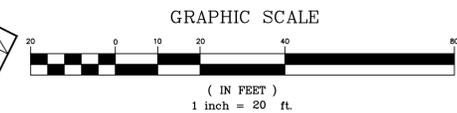
SHEET
2
 OF 6
 JOB NO. 22025

THE USE OF THESE PLANS AND SPECIFICATIONS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED AND PUBLICATION THEREOF IS EXPRESSLY LIMITED TO SUCH USE. REPRODUCTION OR PUBLICATION BY ANY METHOD, IN WHOLE OR PART, IS PROHIBITED. TITLE TO THE PLANS AND SPECIFICATIONS REMAINS IN THE ENGINEER WITHOUT PREJUDICE. VISUAL CONTACT WITH THESE PLANS AND SPECIFICATIONS SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF THESE RESTRICTIONS.



- NOTES:**
- ALL SAWCUT SPOILS SHALL BE VACUUMED.
 - SAWCUT AND REPAVE A MINIMUM 1 FOOT OF FERGUSON ROAD ALONG DRIVEWAY/PROPERTY FRONTAGE IMPROVEMENT LIMITS. MATCH PAVEMENT SECTION IN-KIND AND TO COUNTY STANDARDS.
 - RESTRIPE FOG LINE IN SAWCUT AREA IN-KIND WITH 4-INCH WHITE REFLECTIVE PAVEMENT MARKING AND AS REQUESTED BY COUNTY INSPECTOR AND/OR ENGINEER.

**PRELIMINARY PLANS
NOT FOR CONSTRUCTION**



APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR
CONSTRUCTION PERMIT AND PLAN
COVER SHEET FOR SPECIAL
CONDITIONS AND PERMIT NUMBERS

PLAN # _____ OF _____ SHEET

REVISIONS:		
DATE	DESCRIPTION	BY:

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DATE: APRIL 2022
HORIZ. SCALE: 1"=20'
VERT. SCALE: NONE
DESIGNED BY: AM
CHECKED BY: _____
DRAWN BY: TM

date: _____
Hanna - Brunetti
Amanda Joy Musy-Verdel
R.C.E. # 69278

REFERENCES

Preliminary Grading & Drainage Plan

Lands of Chen - 2740 Ferguson Road - apr 841-21-022

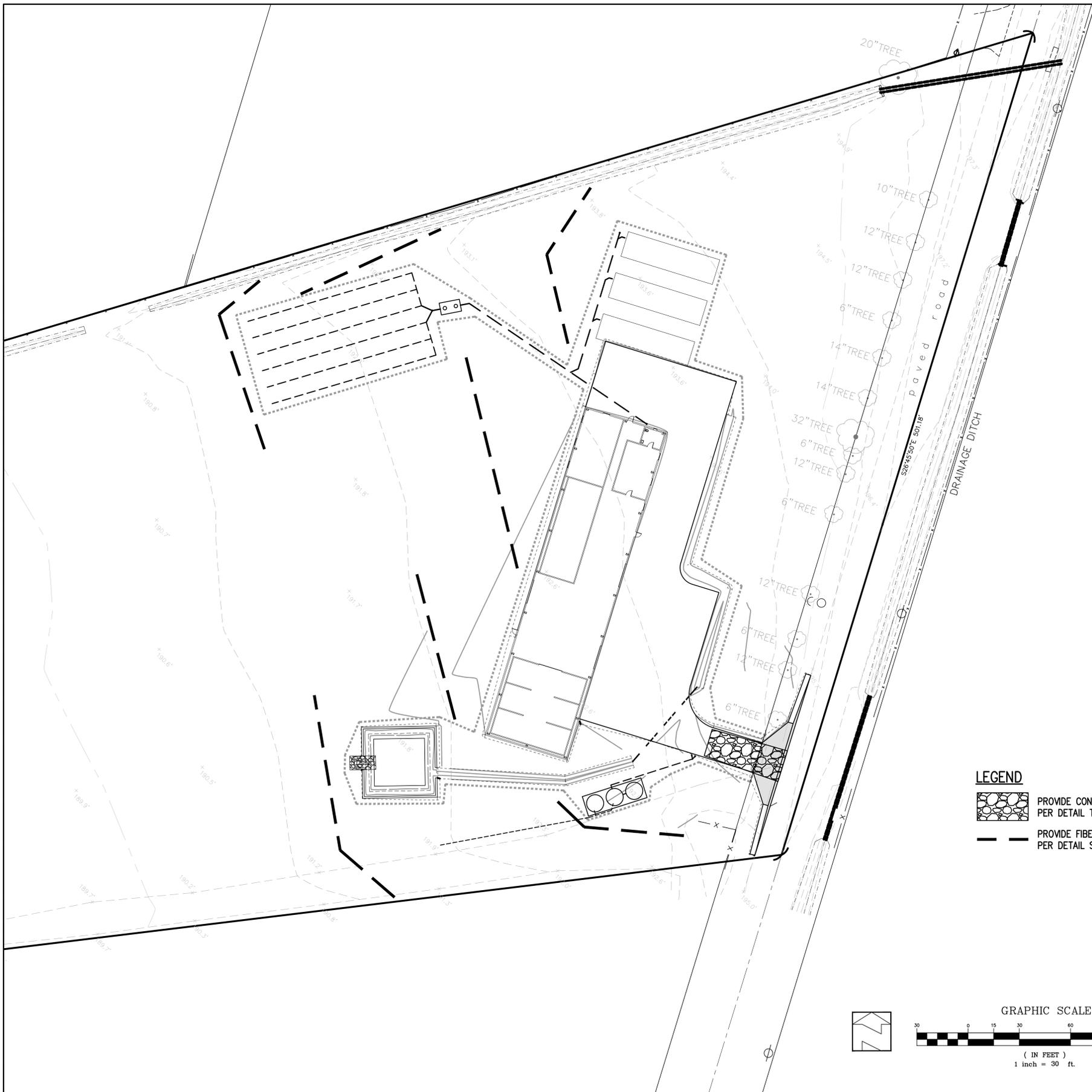
UNINCORPORATED
APRIL 2022

SANTA CLARA COUNTY
CALIFORNIA

SHEET **3** OF 6
JOB NO. 22025

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PLAN # _____ OF _____ SHEET



LEGEND

-  PROVIDE CONSTRUCTION ENTRANCE/EXIT PER DETAIL TC-1
-  PROVIDE FIBER ROLL SLOPE PROTECTION PER DETAIL SE-5

EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES SHALL BE EFFECTIVE FOR CONSTRUCTION DURING THE RAINY SEASON; OCTOBER 15 THROUGH APRIL 15.
2. NO STORM WATER RUNOFF SHALL BE ALLOWED TO DRAIN INTO THE EXISTING AND/OR PROPOSED UNDERGROUND STORM SYSTEM UNTIL SUITABLE EROSION CONTROL MEASURES ARE FULLY IMPLEMENTED. NO STORM WATER RUNOFF SHALL BE ALLOWED TO ENTER THE STORM DRAIN SYSTEM THAT IS NOT CLEAR, AND FREE OF SILTS.
3. A FIBER ROLL BARRIER PER "DETAIL SE-5" SHALL BE INSTALL ALONG THE PERIMETER OF THE PROJECT SITE. THE LOCATION OF THE FIBER ROLL ALONG THE PERIMETER SHALL BE ADJUSTED TO ELIMINATE SEDIMENT LADEN RUNOFF FROM LEAVING THE SITE. A FIBER ROLL SHALL ALSO BE REQUIRED AROUND THE PERIMETER OF ANY STOCKPILE OR OTHER SITE OF BARE, LOOSE EARTH.
4. ALL STORM DRAIN MANHOLES, CATCH BASINS, AND/OR DROP INLETS THAT ARE TO ACCEPT STORM WATER SHALL HAVE INLET PROTECTION MEASURES PER DETAIL SE-10. STORM WATER RUNOFF SHALL BE DIRECTED TO THESE INLETS ONLY. STORM DRAIN CATCH BASINS THAT ARE NOT COMPLETE, SHALL BE BLOCKED OFF COMPLETELY.
5. THE NAME, ADDRESS, AND 24 HOUR TELEPHONE NUMBER OF THE PERSON RESPONSIBLE FOR THE IMPLEMENTATION OF THE EROSION CONTROL PLAN SHALL BE PROVIDED TO THE COUNTY.
6. PRIOR TO GRADING, AN ENTRANCE SHALL BE CONSTRUCTED, CONSISTING OF A MINIMUM OF 50 LF OF DRAIN ROCK, 3" IN DIAMETER, PLACED OVER MIRAFI 500X (OR EQUAL) PER DETAIL TC-1. THE ENTRANCE SHALL CONFORM TO "CONSTRUCTION ENTRANCE DETAIL TC-1". THERE SHALL BE ONLY ONE ENTRANCE/EXIT POINT TO THE SITE DURING THE RAINY SEASON. THE LOCATION SHALL BE AS SHOWN ON THESE PLANS, OR AT A LOCATION APPROVED BY THE COUNTY.
7. ALL AREAS OF BARE, TURNED OR DISTURBED EARTH SHALL BE STABILIZED BY USE OF HYDROSEED PER THE TABLE BELOW. ALL STOCKPILES, AND/OR BORROW AREAS SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES SUCH AS A PERIMETER SILT FENCE, AND OTHER METHODS TO PREVENT ANY EROSION OR SILTS MIGRATION. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THE EROSION CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS, BUT ONLY WITH THE APPROVAL OF, OR AT THE DIRECTION OF THE COUNTY INSPECTOR. THE STORM DRAIN SYSTEM SHALL MAINTAIN A FORM OF DRAIN INLET PROTECTION UNTIL COUNTY ACCEPTS THE FINAL STREET IMPROVEMENTS. THE DRAIN INLET PROTECTION SHALL BE MAINTAINED, EFFECTIVE AND SUBJECT TO COUNTY INSPECTOR'S APPROVAL.
8. ALL PAVED STREET, AND AREAS ADJACENT TO THE SITE SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO ELIMINATE SEDIMENT LADEN RUNOFF FROM ENTERING THE STORM DRAIN SYSTEM.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT AND REPAIR ALL EROSION CONTROL FACILITIES AT THE END OF EACH DAY DURING THE RAINY SEASON. ANY DAMAGED STRUCTURAL MEASURES ARE TO BE REPAIRED BY END OF THE DAY. TRAPPED SEDIMENT IN "SD INLETS" (AND OTHER EROSION CONTROL MEASURES) SHALL BE REMOVED TO MAINTAIN TRAP EFFICIENCY. REMOVED SEDIMENT SHALL BE DISPOSED BY SPREADING ON SITE, WHERE IT WILL NOT MIGRATE.
10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREVENT THE FORMATION OF AIRBORNE DUST NUISANCE AND SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM A FAILURE TO DO SO.
11. ALL DRAIN SWALES SHALL BE PER DETAIL EC-9.
12. INCOMPLETE GRADING SHALL NOT BE ALLOWED. CONTRATOR SHALL MAINATIN A DRAIN PATH AS SHOWN ON THIS PLAN. SAID DRAIN PATH SHALL BE MAINTAINED LINED DRAIN SWALES, AND INLET PROTECTION AT A MINIMUM. IF PONDING DOES OCCUR ON THE SITE AFTER GRADING, THE WATER MUST BE FREE AND CLEAR OF SEDIMENT PRIOR TO DISCHARGE TO THE STORM DRAIN SYSTEM. THIS REQUIREMENT MAY NECESSITATE THE USE OF NATURAL AND/OR MECHANICAL DESILTING METHODS, SUBJECT TO APPROVAL BY THE COUNTY INSPECTOR.
13. F THESE EROSION CONTROL MEASURE PROVE INADEQUATE, STRAW MULCH, TACKIFIER, AND ADDITIONAL HYDROSEEDING MAY BE REQUIRED.

HYDROSEED TABLE

ITEM	LBS/ACRE
COMMON BARLEY	45
ANNUAL RYEGRASS	45
CRIMSON CLOVER	10
FERTILIZER 7-2-3	400
FIBER MULCH	2000
TACKIFIER	100

14. ALL GRADING WORK BETWEEN OCTOBER 15th AND APRIL 15th IS AT THE DISCRETION OF THE SANTA CLARA COUNTY BUILDING OFFICIAL.
15. PROVIDE SHRUBS AND/OR TREES REQUIRED ON SLOPES GREATER THAN 15 FEET IN VERTICAL HEIGHT.
16. THE OWNER/OWNER'S CONTRACTOR, AGENT, AND/OR ENGINEER SHALL INSTALL AND MAINTAIN THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL THE ESTABLISHMENT OF PERMANENT STABILIZATION AND SEDIMENT CONTROL WITHIN THE SANTA CLARA COUNTY MAINTAINED ROAD RIGHT OF WAY AND ANY PORTION OF THE SITE WHERE STORM WATER RUN-OFF IS DIRECTLY FLOWING INTO THE SANTA CLARA COUNTY MAINTAINED ROAD RIGHT OF WAY BEST MANAGEMENT PRACTICES (BMP'S) TO PREVENT CONSTRUCTION MATERIALS, EXCAVATED MATERIALS, WASTE MATERIALS, AND SEDIMENT CAUSED BY EROSION FROM CONSTRUCTION ACTIVITIES ENTERING THE STORM DRAIN SYSTEM, WATERWAYS, AND ROADWAY INFRASTRUCTURE. BMP'S SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING PRACTICES APPLICABLE TO THE PUBLIC ROAD AND EXPRESSWAY FACILITIES:
 - A) REDUCTION OF POLLUTANTS IN STORM WATER DISCHARGES FROM THE CONSTRUCTION SITE AND THE CONTRACTOR'S MATERIAL AND EQUIPMENT LAYDOWN/STAGING AREAS.
 - B) PREVENTION OF TRACKING OF MUD, DIRT AND CONSTRUCTION MATERIALS ONTO PUBLIC ROAD RIGHT OF WAY.
 - C) PREVENTION OF DISCHARGE OF WATER RUNOFF DURING DRY AND WET WEATHER CONDITIONS ONTO PUBLIC ROAD RIGHT OF WAY
17. THE OWNER/OWNER'S CONTRACTOR, AGENT, AND/OR ENGINEER SHALL ENSURE THAT ALL TEMPORARY CONSTRUCTION FACILITIES, INCLUDING BUT NOT LIMITED TO CONSTRUCTION MATERIALS, DELIVERIES, HAZARDOUS AND NON-HAZARDOUS MATERIAL STORAGE, EQUIPMENT, TOOLS, PORTABLE TOILETS, CONCRETE WASHOUT, GARBAGE CONTAINERS, LAYDOWN YARDS, SECONDARY CONTAINMENT AREAS, ETC. ARE LOCATED OUTSIDE THE SANTA CLARA COUNTY MAINTAINED ROAD RIGHT OF WAY AND ANY PORTION OF THE SITE WHERE STORM WATER RUN-OFF IS DIRECTLY FLOWING INTO THE SANTA CLARA COUNTY MAINTAINED ROAD RIGHT OF WAY SHALL HAVE SEASONALLY APPROPRIATE BMP'S INSTALLED AND MAINTAINED AT ALL TIMES.

APPROVED FOR ISSUANCE REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

REVISIONS:		
DATE	DESCRIPTION	BY:

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DATE: APRIL 2022
HORIZ. SCALE: 1"=30'
VERT. SCALE: NONE
DESIGNED BY: AM
CHECKED BY: _____
DRAWN BY: TM

date: _____
Hanna - Brunetti

Amanda Joy Musy-Verdel
R.C.E. # 69278



REFERENCES

UNINCORPORATED
APRIL 2022

Erosion Control Plan

Lands of Chen - 2740 Ferguson Road - apn 841-21-022

APPLICANT: CHEN

ROAD: 2740 FERGUSON ROAD

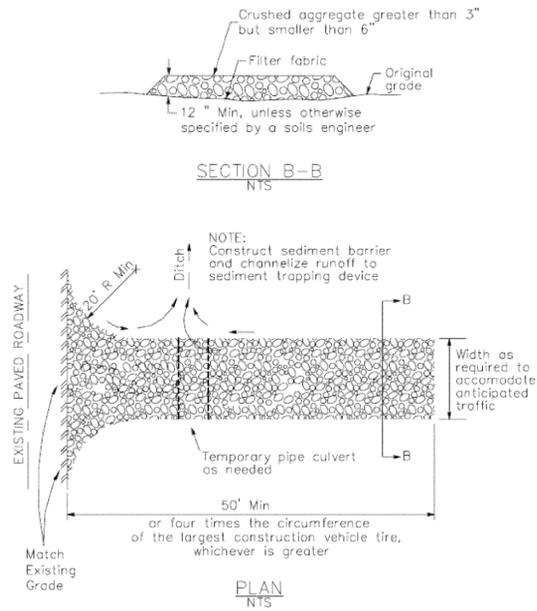
COUNTY FILE NO.:

SHEET 4 OF 6
JOB NO. 22025
SANTA CLARA COUNTY CALIFORNIA

JOB NO. 22025

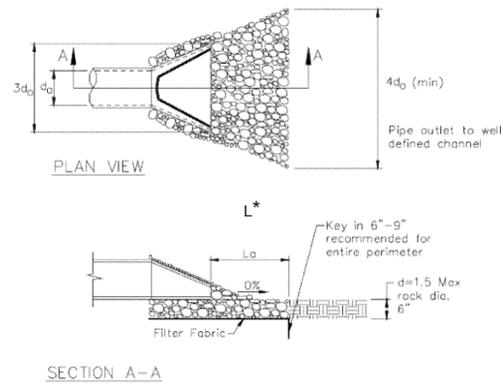
3 Stabilized Construction Entrance/Exit

CASQA Detail TC-1



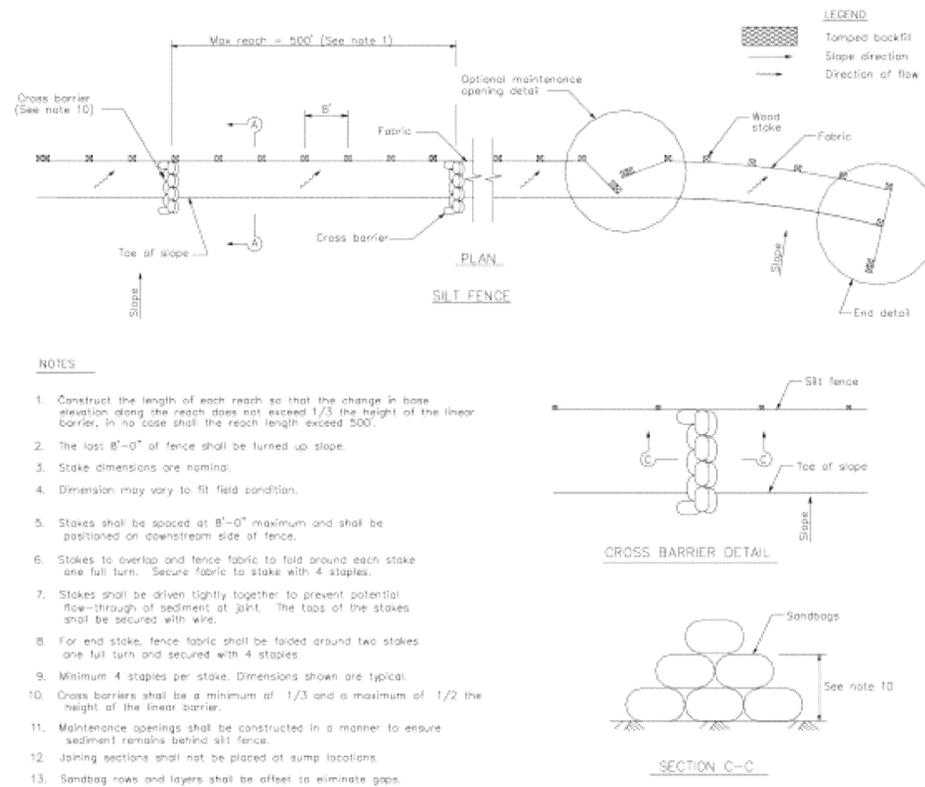
4 Velocity Dissipation Devices

CASQA Detail EC-10



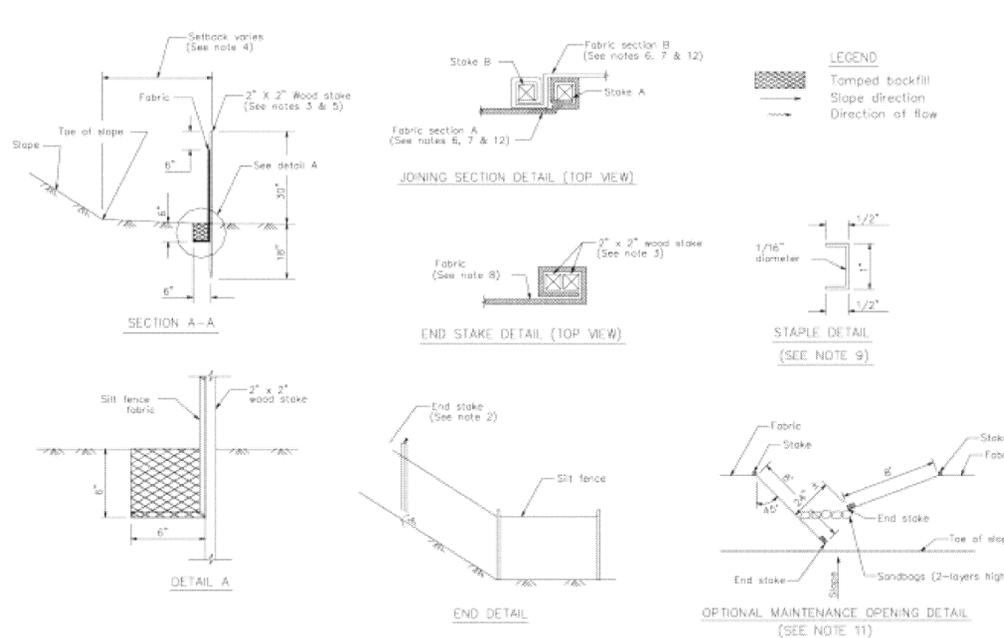
1 Silt Fence

CASQA Detail SE-1



2 Silt Fence

CASQA Detail SE-1



STANDARD BEST MANAGEMENT PRACTICE NOTES

- Solid and Demolition Waste Management:** Provide designated waste collection areas and containers on site away from streets, gutters, storm drains, and waterways, and arrange for regular disposal. Waste containers must be watertight and covered at all times except when waste is deposited. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C3) or latest.
- Hazardous Waste Management:** Provide proper handling and disposal of hazardous wastes by a licensed hazardous waste material hauler. Hazardous wastes shall be stored and properly labeled in sealed containers constructed of suitable materials. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-5 to C-6) or latest.
- Spill Prevention and Control:** Provide proper storage areas for liquid and solid materials, including chemicals and hazardous substances, away from streets, gutters, storm drains, and waterways. Spill control materials must be kept on site where readily accessible. Spills must be cleaned up immediately and contaminated soil disposed properly. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-7 to C-8, C-13 to C-14) or latest.
- Vehicle and Construction Equipment Service and Storage:** An area shall be designated for the maintenance, where on-site maintenance is required, and storage of equipment that is protected from stormwater run-on and runoff. Measures shall be provided to capture any waste oils, lubricants, or other potential pollutants and these wastes shall be properly disposed of off site. Fueling and major maintenance/repair, and washing shall be conducted off-site whenever feasible. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C9) or latest.
- Material Delivery, Handling and Storage:** In general, materials should not be stockpiled on site. Where temporary stockpiles are necessary and approved by the County, they shall be covered with secured plastic sheeting or tarp and located in designated areas near construction entrances and away from drainage paths and waterways. Barriers shall be provided around storage areas where materials are potentially in contact with runoff. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-11 to C-12) or latest.
- Handling and Disposal of Concrete and Cement:** When concrete trucks and equipment are washed on-site, concrete wastewater shall be contained in designated containers or in a temporary lined and watertight pit where wasted concrete can harden for later removal. If possible have concrete contractor remove concrete wash water from site. In no case shall fresh concrete be washed into the road right-of-way. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-15 to C-16) or latest.
- Pavement Construction Management:** Prevent or reduce the discharge of pollutants from paving operations, using measures to prevent run-on and runoff pollution and properly disposing of wastes. Avoid paving in the wet season and reschedule paving when rain is in the forecast. Residue from saw-cutting shall be vacuumed for proper disposal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-17 to C-18) or latest.
- Contaminated Soil and Water Management:** Inspections to identify contaminated soils should occur prior to construction and at regular intervals during construction. Remediating contaminated soil should occur promptly after identification and be specific to the contaminant identified, which may include hazardous waste removal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-19 to C-20) or latest.
- Sanitary/Septic Water Management:** Temporary sanitary facilities should be located away from drainage paths, waterways, and traffic areas. Only licensed sanitary and septic waste haulers should be used. Secondary containment should be provided for all sanitary facilities. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C-21) or latest.
- Inspection & Maintenance:** Areas of material and equipment storage sites and temporary sanitary facilities must be inspected weekly. Problem areas shall be identified and appropriate additional and/or alternative control measures implemented immediately, within 24 hours of the problem being identified.

STANDARD EROSION CONTROL NOTES

- Sediment Control Management:**
 - Tracking Prevention & Clean Up:** Activities shall be organized and measures taken as needed to prevent or minimize tracking of soil onto the public street system. A gravel or proprietary device construction entrance/exit is required for all sites. Clean up of tracked material shall be provided by means of a street sweeper prior to an approaching rain event, or at least once at the end of each workday that material is tracked, or, more frequently as determined by the County Inspector. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-31 to B-33) or latest.
 - Storm Drain Inlet and Catch Basin Inlet Protection:** All inlets within the vicinity of the project and within the project limits shall be protected with gravel bags placed around inlets or other inlet protection. At locations where exposed soils are present, staked fiber rolls or staked silt fences can be used. Inlet filters are not allowed due to clogging and subsequent flooding. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-49 to B-51) or latest.
 - Storm Water Runoff:** No storm water runoff shall be allowed to drain in to the existing and/or proposed underground storm drain system or other above ground watercourses until appropriate erosion control measures are fully installed.
 - Dust Control:** The contractor shall provide dust control in graded areas as required by providing wet suppression or chemical stabilization of exposed soils, providing for rapid clean up of sediments deposited on paved roads, furnishing construction road entrances and vehicle wash down areas, and limiting the amount of areas disturbed by clearing and earth moving operations by scheduling these activities in phases.
 - Stockpiling:** Excavated soils shall not be placed in streets or on paved areas. Borrow and temporary stockpiles shall be protected with appropriate erosion control measures (tarps, straw bales, silt fences, etc.) to ensure silt does not leave the site or enter the storm drain system or neighboring watercourse.
- Erosion Control:** During the rainy season, all disturbed areas must include an effective combination of erosion and sediment control. It is required that temporary erosion control measures are applied to all disturbed soil areas prior to a rain event. During the non-rainy season, erosion control measures must be applied sufficient to control wind erosion at the site.
- Inspection & Maintenance:** Disturbed areas of the Project's site, locations where vehicles enter or exit the site, and all erosion and sediment controls that are identified as part of the Erosion Control Plans must be inspected by the Contractor before, during, and after storm events, and at least weekly during seasonal wet periods. Problem areas shall be identified and appropriate additional and/or alternative control measures implemented immediately, within 24 hours of the problem being identified.
- Project Completion:** Prior to project completion and signoff by the County Inspector, all disturbed areas shall be reseeded, planted, or landscaped to minimize the potential for erosion on the subject site.
- It shall be the Owner's/Contractor's responsibility to maintain control of the entire construction operation and to keep the entire site in compliance with the erosion control plan.
- Erosion and sediment control best management practices shall be operable year round or until vegetation is fully established on landscaped surfaces.

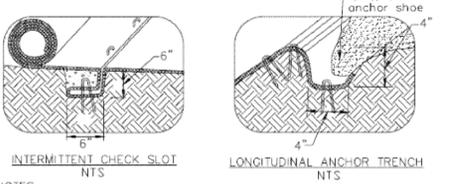
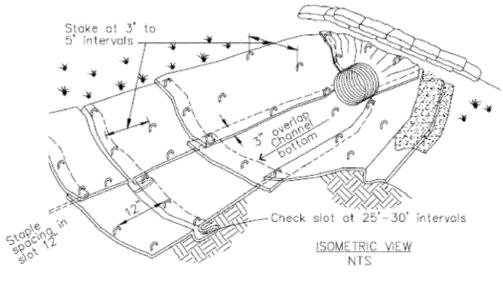
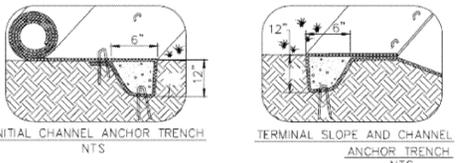
Source for Graphics: California Stormwater BMP Handbook, California Stormwater Quality Association, January 2003. Available from www.cabmphandbooks.com.



7

Geotextiles and Mats

CASQA Detail EC-7



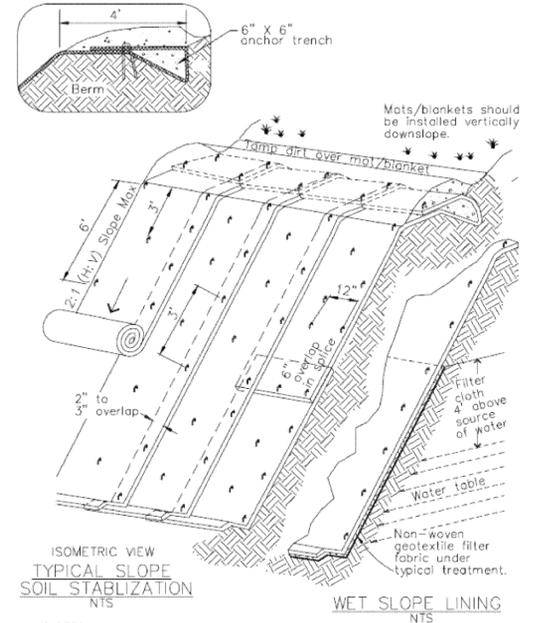
- NOTES:
1. Check slots to be constructed per manufacturer's specifications.
 2. Staking or stapling layout per manufacturer's specifications.
 3. Install per manufacturer's recommendations.

TYPICAL INSTALLATION DETAIL

5

Geotextiles and Mats

CASQA Detail EC-7



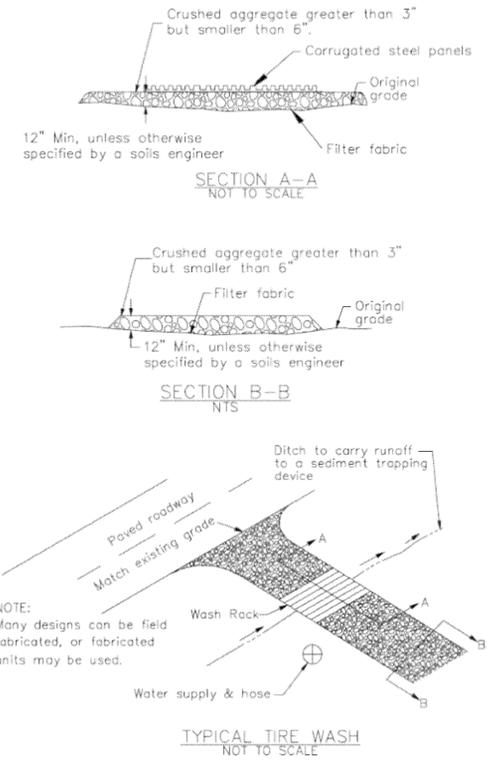
- NOTES:
1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
 2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
 3. Install per manufacturer's recommendations.

TYPICAL INSTALLATION DETAIL

3

Entrance/Outlet Tire Wash

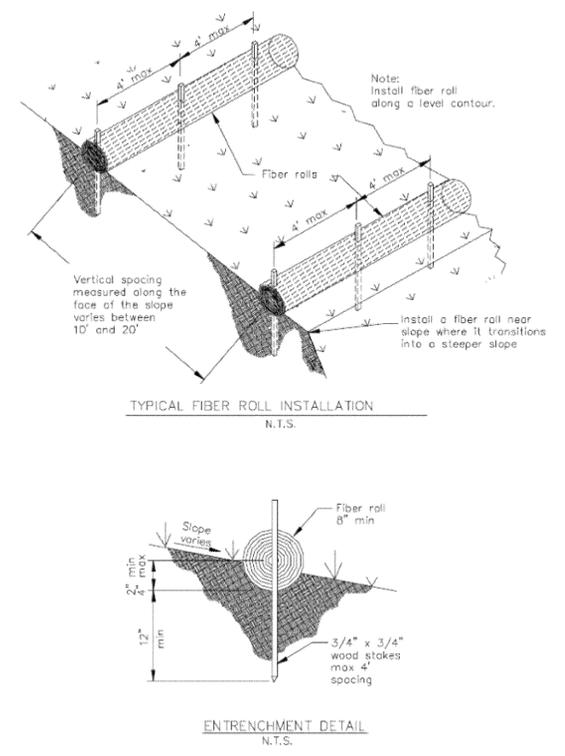
CASQA Detail TC-3



1

Fiber Rolls

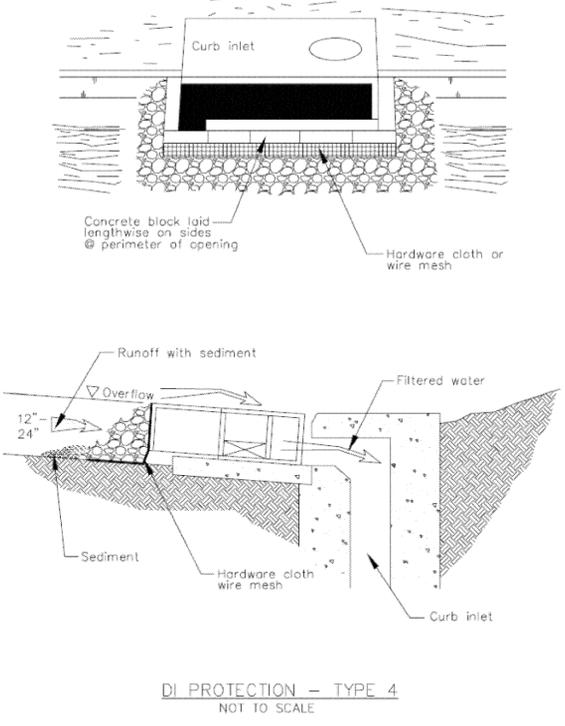
CASQA Detail SE-5



8

Storm Drain Inlet Protection

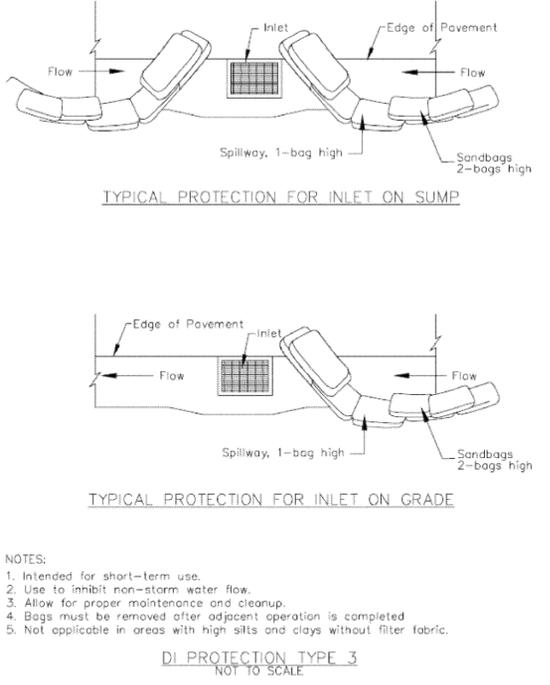
CASQA Detail SE-10



6

Storm Drain Inlet Protection

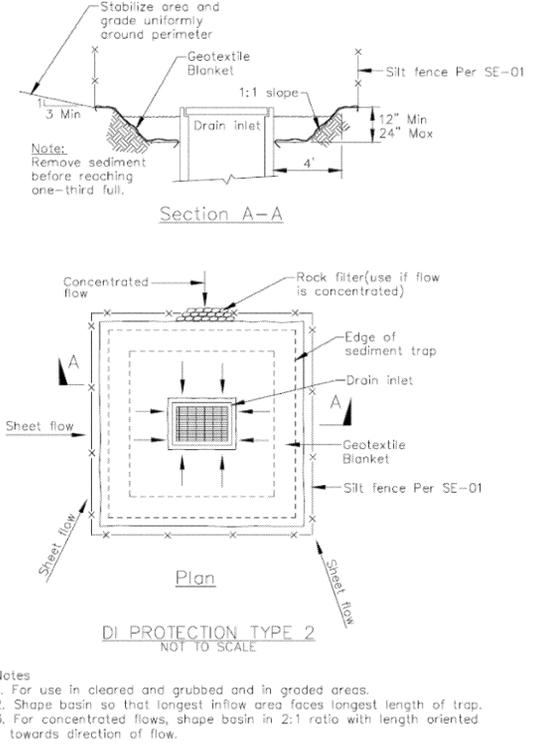
CASQA Detail SE-10



4

Storm Drain Inlet Protection

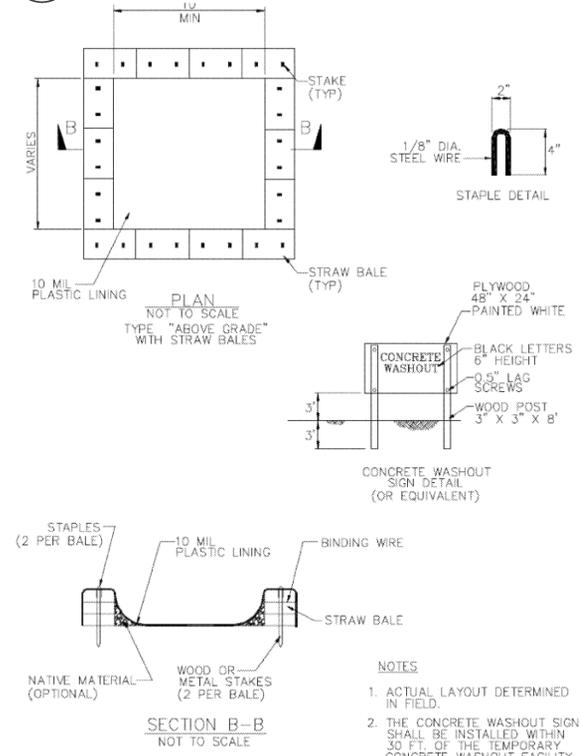
CASQA Detail SE-10



2

Concrete Waste Management

CASQA Detail WM-8



Source for Graphics: California Stormwater BMP Handbook, California Stormwater Quality Association, January 2003. Available from www.cabmphandbooks.com.



Project Information

ELECTRICAL FEEDER SCHEDULE-AL		
OVERCURRENT DEVICE SETTINGS	THREE WIRE + GROUND	
	FEEDER IDENTIFIER	ALUMINUM INSULATION PER SPECIFICATIONS
20	3WG20	(3#10 + 1#10G) 3/4"C.
30	3WG30	(3#8 + 1#8G) 3/4"C.
40	3WG40	(3#6 + 1#6G) 3/4"C.
50	3WG50	(3#4 + 1#6G) 1"C.
65	3WG65	(3#3 + 1#6G) 1-1/4"C.
75	3WG75	(3#2 + 1#6G) 1-1/4"C.
90	3WG90	(3#2 + 1#6G) 1-1/4"C.
100	3WG100	(3#1/0 + 1#6G) 1-1/2"C.
120	3WG120	(3#1/0 + 1#4G) 1-1/2"C.
125	3WG125	(3#2/0 + 1#4G) 2"C.
150	3WG150	(3#3/0 + 1#4G) 2"C.
175	3WG175	(3#4/0 + 1#4G) 2"C.
200	3WG200	(3#250KCML + 1#2G) 2-1/2"C.
250	3WG250	(3#350KCML + 1#2G) 3"C.
300	3WG300	(3#500KCML + 1#1G) 3"C.
350	3WG350	2[(3#4/0 + 1#1G) 2"C.]
400	3WG400	2[(3#250KCML + 1#1/0G) 2-1/2"C.]

SINGLE-LINE DIAGRAM KEY NOTES

- VERIFY WITH SERVICE PLANNER FOR AIC RATINGS AND ELECTRICAL INFORMATION BEFORE ISSUING ANY BID. NOTIFY ENGINEER IMMEDIATELY IF ANY MAJOR DISCREPANCIES OCCUR.
- PROVIDE SURGE PROTECTIVE DEVICE.
- THE FUTURE ESS SYSTEM IS COMPOSED OF AN 3KW INVERTER AND BATTERY, WHICH MUST SUPPORT 90 MINUTES AT MINIMUM.
- DENOTES 200AS/125AF/3P DISCONNECT FOR CONNECTION TO WALK-IN COOLER.

SINGLE-LINE DIAGRAM GENERAL NOTES

- NOT USED.
- ALL NEW CIRCUIT BREAKERS, FUSIBLE SWITCHES IN MAINSWITCHBOARD OR PANEL BOARDS SHALL BE SERIES RATED TO MATCH EXISTING AIC RATING OR APPROVED EQUAL OR 65KAIC, UNLESS NOTED OTHERWISE.
- MOTOR CIRCUIT PROTECTORS SHALL NOT BE A PART OF A SERIES COMBINATION INTERRUPTING RATING.
- SERIES COMBINATION AIC RATING SHALL NOT BE USED WHEN THE SECONDARY EQUIPMENT IN THE SERIES IS SUBJECT TO A TOTAL CONNECTED FULL LOAD MOTOR CURRENT OF MORE THAN 1% OF ITS AIC RATING.
- EQUIPMENT ENCLOSURES SHALL BE CLEARLY MARKED "CAUTION-SERIES RATED SYSTEM - ____KAMPS AVAILABLE. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED", IN COMPLIANCE WITH 2022 CEC (2020 NEC) SECTION 110-22. END USE EQUIPMENT SHALL ALSO BE MARKED WITH THE HIGHER SERIES COMBINATION INTERRUPTING RATINGS AS PER 2022 CEC SECTION 240-83(C). NO EXCEPTION.
- FUSES SHALL BE PROVIDED WITH REJECTION TYPE FUSE HOLDERS.
- ELECTRICAL EQUIPMENT SHALL BE LISTED BY THE CITY, WHERE THE PROJECT IS LOCATED, RECOGNIZED ELECTRICAL TESTING LABORATORY OR APPROVED BY THE DEPARTMENT.
- NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT.

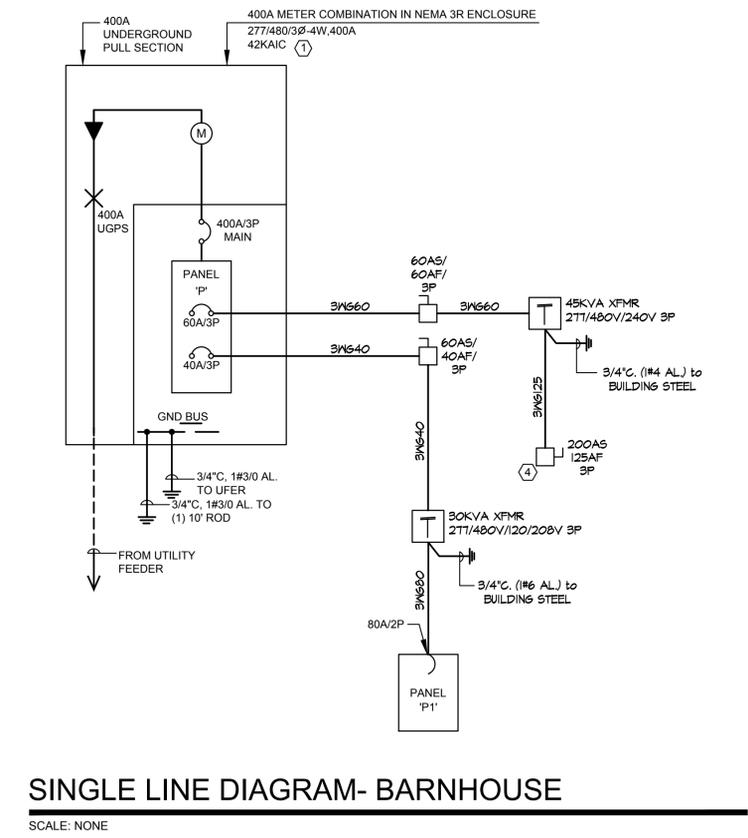
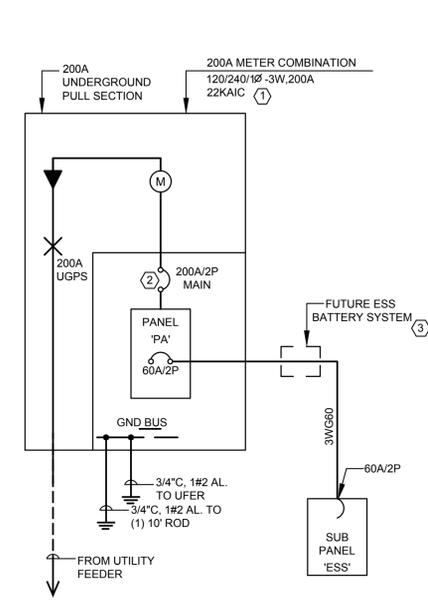
ENERGY STORAGE SYSTEM (ESS) READY NOTES

ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS SHALL MEET THE FOLLOWING. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE:

- AT LEAST ONE OF THE FOLLOWING SHALL BE PROVIDED:
 - ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, OR
 - A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN SECTION 150.0(5)(2). ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL BE NOT LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKEDUP LOAD CIRCUITS."
- A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.
- THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225 AMPS.
- SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

TYPICAL SINGLE LINE DIAGRAM- ADU

SCALE: NONE



LOAD SUMMARY- BARNHOUSE

BUILDING SQUARE FOOTAGE = 6785(BARN) + 770(OFFICE)		WATTAGE = (W/SFT)xSQUARE FEET
1.	BARN GENERAL POWER (2 WATTS/SQUARE FOOT)	13570 VA
2.	OFFICE GENERAL POWER (3 WATTS/SQUARE FOOT)	2310 VA
3.	OFFICE HVAC (~1.5 TONS)	3120 VA
4.	WALK-IN COOLER (90A @ 3P 240V)	37412 VA
SUBTOTAL		56.4 KVA
POWER FACTOR(80%)		SUBTOTALx1.2 = 67.7 KVA
SAFETY FACTOR		67.7x1.2 = 81.2 KVA
10-YEAR GROWTH FACTOR (10%)		81.2x1.1 = 89.3 KVA
AMPERAGE @277/480V 3 PHASE 4 WIRE		108 AMPS
SERVICE @277/480V 3 PHASE 4 WIRE		400 AMPS

SERVICE LOAD CALCULATION-ADU

Dwelling Information:	794SFT
Floor Area:	Electricity
Heater Type:	Electricity
Dryer:	Electricity
Oven:	Electricity
Cooktop:	N/A
General Load:	
General Lighting (Floor Area X 3VA/SFT):	2382VA
Small Appliance (3-20ACK By CEC 210.11):	3000VA
Laundry(1-20ACKT By CEC210.11):	1500VA
Bathroom(1-20ACKT By CEC210.11):	0VA
Dishwasher:	1200VA
Microwave Oven:	1500VA
Garbage Disposal:	1200VA
Bathroom Fans:	400VA
Dryer:	5000VA
Oven:	8000VA
Refrigerator:	1000VA
Water Heater:	5000VA
Total General Load:	30182VA
First 10 KVA at 100%:	10000VA
Remainder at 40% (20182VA X 0.4):	8072.8VA
Subtotal General Load:	18072.8VA
Air Conditioning KVA Calculation:	
Outdoor Condensing Unit:	2454VA
Indoor Fan Coil Unit:	540VA
Total AC Load:	2994VA
Calculated Load For Service: (18072.8VA+2994VA)/240V=88A(Service Rating)	
Provided Service Rating:	200A

REVISIONS		
NO.	DATE	DESCRIPTION

SEAL: REGISTERED PROFESSIONAL ENGINEER, GANGLI ZHOU, No. 018959, Exp. 12-31-2025, STATE OF CALIFORNIA

GMEP ENGINEERS

28439 Rancho Pkwy. S., Ste 120
Lake Forest, CA 92650
Tel: 949-287-9095

PROJECT NAME: **CHEN FARM**
2740 FERGUSON ROAD, GILROY, CA 95020

SHEET TITLE: ELECTRICAL SINGLE LINE DIAGRAMS & LOAD CALCULATIONS

DRAWN: GMEP, CHECKED: GMEP, DATE: 08/04/23, SCALE: AS NOTED, JOB NO.: 23-598, SHEET: **E-1.1**

REVISIONS		
NO.	DATE	DESCRIPTION



PROJECT NAME: CHEN FARM
2740 FERGUSON ROAD
GILROY, CA 95020

SHEET TITLE: ELECTRICAL PANEL SCHEDULES

DRAWN: GMEP
CHECKED: GMEP
DATE: 08/04/23
SCALE:
AS NOTED
JOB NO.: 23-598
SHEET

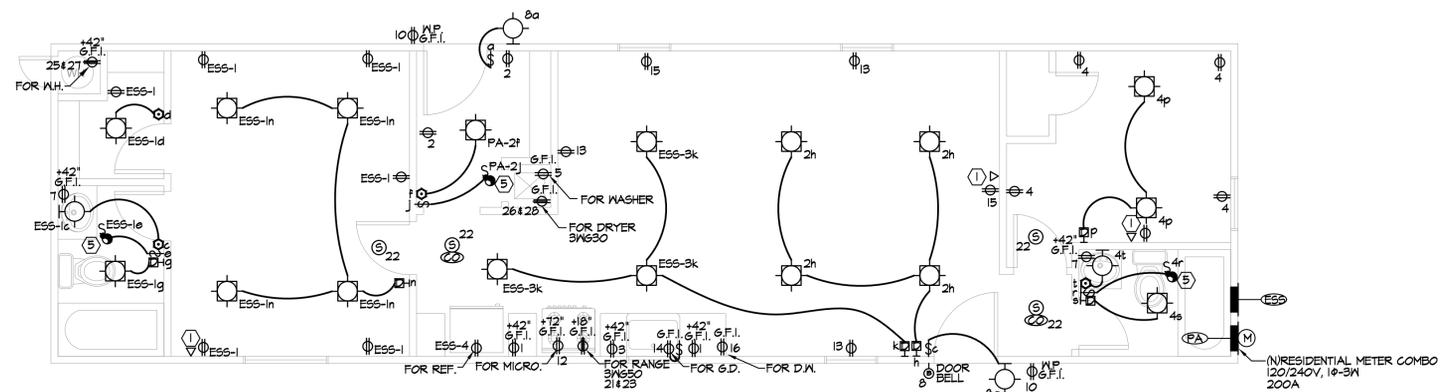
E-1.2

PANEL 'P'		LOCATION EXTERIOR		BUS RATING 400A		277/480 V 3 Ø 4 W											
		MAIN (AMP) 400A				MOUNTING: NEMA 3R											
DESCRIPTION	VOLTAMPS			L T G	R I S	M I S	CKT NO	BKR	BUS ØA ØB ØC	BKR	CKT NO	M I S	L T G	VOLTAMPS			DESCRIPTION
	ØA	ØB	ØC											ØA	ØB	ØC	
WALK-IN COOLER	12470						1	60			2			3798			SUBPANEL 'P1'
---		12470					3				4						---
---			12470				5	3			6					180	---
*SPARE							7				8						SPACE.
*SPARE							9				10						SPACE.
*SPARE							11				12						SPACE.
*SPARE							13				14						SPACE.
*SPACE.							15				16						SPACE.
*SPACE.							17				18						SPACE.
*SPACE.							19				20						SPACE.
*SPACE.							21				22						SPACE.
*SPACE.							23				24						SPACE.
SUB-TOTAL	ØA= 16268 VA			ØB= 13750 VA			ØC= 12650 VA										
TOTAL CONNECTED VA	= 42668			NOTES: (1) 42KAIC OR VERIFY W/ SERVICE PLANNER													
LCL @ 125 %	= 0																
TOTAL OTHER LOAD	= 0																
PANEL LOAD	= 42.7KVA																
FEEDER AMPS	= 58.7A																

PANEL 'P1'		LOCATION ELECTRICAL ROOM		BUS RATING 80A		120/208 V 3 Ø 4 W											
		MAIN (AMP) 80A				MOUNTING: SURFACE											
DESCRIPTION	VOLTAMPS			L T G	R I S	M I S	CKT NO	BKR	BUS ØA ØB ØC	BKR	CKT NO	M I S	L T G	VOLTAMPS			DESCRIPTION
	ØA	ØB	ØC											ØA	ØB	ØC	
BARN LIGHTING	1341						1	20-1			2			1001			OFFICE LTG
BARN FLOOR REC		540					3	20-1			4			1260			OFFICE REC
BARN WALL REC			1260				5	20-1			6			180			BATH REC
*SPARE							7	20-1			8			1456			HP-18
*SPARE							9	20-1			10			1456			---
*SPARE							11	20-1			12			104			FC-18
*SPARE							13	20-1			14			104			---
*SPACE.							15				16						SPACE.
*SPACE.							17				18						SPACE.
*SPACE.							19				20						SPACE.
*SPACE.							21				22						SPACE.
*SPACE.							23				24						SPACE.
SUB-TOTAL	ØA= 3798 VA			ØB= 1800 VA			ØC= 1544 VA										
TOTAL CONNECTED VA	= 7142			NOTES: (1) 42KAIC OR VERIFY W/ SERVICE PLANNER													
LCL @ 125 %	= 0			(2) VERIFY WITH VENDER AND ALL NECESSARY TRADES FOR ELECTRICAL REQUIREMENTS													
TOTAL OTHER LOAD	= 0			(3) REFER TO MECHANICAL DRAWINGS FOR DETAILED EQUIPMENT INFORMATION BEFORE BID AND ROUGH IN.													
PANEL LOAD	= 7.1KVA																
FEEDER AMPS	= 32A																

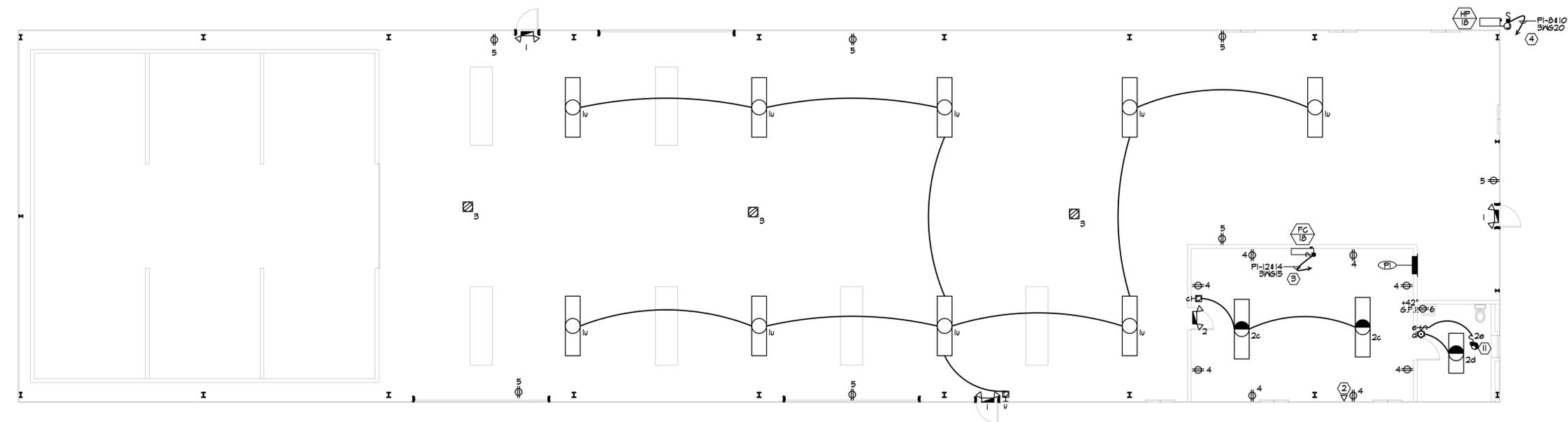
PANEL 'PA'		LOCATION EXTERIOR		BUS RATING 225 AMPS		120/240V 1 Ø 3 W											
		MAIN (AMP) M.L.O.				MOUNTING: NEMA 3R											
DESCRIPTION	VOLTAMPS			L T G	R I S	M I S	CKT NO	BKR	BUS ØA ØB ØC	BKR	CKT NO	M I S	L T G	VOLTAMPS			DESCRIPTION
	ØA	ØB	ØC											ØA	ØB	ØC	
SMALL APPS 1	1500						1	20-1			2			794			GENERAL LTG 1
SMALL APPS 2		1500					3	20-1			4			794			GENERAL LTG 2
LAUNDRY	1500						5	20-1			6			0			*SPARE
BATH REC		0					7	20-1			8			95			EXT LTG
FC-18	324						9	15			10			95			EXT REC
---			324				11	2			12			1500			MICROWAVE
LIVING REC 1		535					13	20-1			14			1200			G.D.
LIVING REC 2			535				15	20-1			16			1200			D.W.
WATER HEATER							17	20-1			18			1357			HP-18
DINING REC (AFCI)		0					20	20			20			1357			---
OVEN	4000						21	50			22			100			CO&SMOKE SENSOR
---		4000					23	2			24			0			*SPARE
HEATER	2500						25	25			26			2500			DRYER
---			2500				27	2			28			2500			---
*SPARE		0					29	15-1			30			2500			SUBPANEL 'ESS'
*SPARE			0				31	15-1			32			0			---
SUB-TOTAL	ØA= 17199 VA			ØB= 17805 VA													
TOTAL CONNECTED VA	= 21066.8			NOTES: (1) REFER TO MECHANICAL DRAWINGS FOR DETAILED EQUIPMENT INFORMATION BEFORE BID AND ROUGH IN.													
LCL @ 125 %	= 0			(2) REFER TO SINGLE LINE FOR AIC RATING.													
TOTAL OTHER LOAD	= 0			(3) REFER TO ADU SERVICE LOAD CALCULATION ON SHEET E-1.1.													
PANEL LOAD	= 21.1KVA																
FEEDER AMPS	= 88A																

PANEL 'ESS'		LOCATION EXTERIOR		BUS RATING 100 AMPS		120/240V 1 Ø 3 W											
		MAIN (AMP) 60A				MOUNTING: NEMA 3R											
DESCRIPTION	VOLTAMPS			L T G	R I S	M I S	CKT NO	BKR	BUS ØA ØB ØC	BKR	CKT NO	M I S	L T G	VOLTAMPS			DESCRIPTION
	ØA	ØB	ØC											ØA	ØB	ØC	
GENERAL LTG 1	794						1	20-1			2			0			*SPARE
ENTRY LTG		794					3	20-1			4			1000			REFRIGERATOR
*SPARE	0						5	20-1			6			0			*SPARE
*SPARE		0					7	15-1			8			0			*SPARE
*SPARE	0						9	15-1			10			0			*SPARE
*SPARE		0					11	15-1			12			0			*SPARE
SUB-TOTAL	ØA=1087 VA			ØB=2087 VA													
TOTAL CONNECTED VA	= 3174			NOTES: (1) REFER TO MECHANICAL DRAWINGS FOR DETAILED EQUIPMENT INFORMATION BEFORE BID AND ROUGH IN.													
LCL @ 125 %	= 0			(2) REFER TO SINGLE LINE FOR AIC RATING.													
TOTAL OTHER LOAD	= 0			(3) BACKFEED TYPE BREAKER RESERVED FOR FUTURE SOLAR PANEL.													
PANEL LOAD	= 3.2KVA																
FEEDER AMPS	= 17.4A																



ELECTRICAL - ADU UNIT PLAN

SCALE: 1/4"=1'-0"



ELECTRICAL - BARNHOUSE PLAN

SCALE: 1/8"=1'-0"

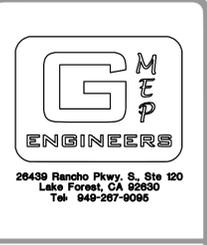
ELECTRICAL GENERAL NOTES

1. ALL FIXTURES TO BE HIGH EFFICACY PER TABLE 150.0-A. ALL OUTDOOR FIXTURES TO BE CONTROLLED BY TIME CLOCK/PHOTOCELL, MOTION SENSOR/PHOTOCELL OR ASTRONOMICAL TIME CLOCK IN ADDITION TO MANUAL ON/OFF SWITCH. MANUAL ON/OFF SWITCH SHALL NOT OVERRIDE AUTOMATIC TIME CLOCK/PHOTOCELL, TIME CLOCK/MOTION SENSOR OR ASTRONOMICAL TIME CLOCK CONTROL.
2. ALL INDOOR LIGHT FIXTURES TO BE CONTROLLED BY DIMMER SWITCH. (EXCEPTIONS: HALLWAYS AND CLOSETS LESS THAN 10SF).
3. THIS DRAWING IS FOR REFERENCE ONLY. WIRE CKT 20 ON THE PLAN TO ALL DETECTORS FOR A COMPLETE AND OPERATIONAL SYSTEM. VERIFY W/LOCAL JURISDICTION FOR ALARM DETECTOR REQUIREMENT BEFORE ROUGH-IN.
4. IN DWELLING AREA SPECIFIED IN CEC 2022 SECTION 210.52, ALL 125-VOLT, 15- AND 20- AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.
5. OUTLETS INSTALLED IN FAMILY ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, KITCHENS OR SIMILAR ROOMS OR AREAS WILL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
6. ALL NEW SMOKE ALARMS & CARBON MONOXIDE ALARM ARE 120V HARD-WIRED WITH BATTERY BACKUP AND ARE AUDIBLE IN ALL SLEEPING ROOMS.
7. ELECTRICAL CONTRACTOR MUST VERIFY MECHANICAL EQUIPMENT INFORMATION FOR MECHANICAL DRAWINGS BEFORE ISSUING ANY BID. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCY OCCUR.
8. LIGHT FIXTURES ABOVE THE BATH TUB AND ON THE EXTERIOR OF THE BUILDING SHALL BE WET OR DAMP LOCATION RATED PER 410.10(A) AND (D) OF THE CEC.

ELECTRICAL KEY NOTES

- ① PROVIDE OUTLET (1)R664(1)CAT5. RUN CABLE TO THE CATV BOX AND RUN CAT5 CABLE TO THE APPROPRIATE DESTINATION. VERIFY WITH TV SERVICE PROVIDER AND IT CONSULTANT BEFORE ROUGH-IN.
- ② PROVIDE (1)CAT5 DATA JACK AND RUN CAT5 CABLE TO THE DESTINATION SUGGESTED BY THE IT CONSULTANT.
- ③ PROVIDE 15A/2P MOTOR RATED SWITCH FOR CONNECTION TO THE FG. VERIFY EXACT LOCATION AND ADDITIONAL INFORMATION WITH MECHANICAL DRAWINGS.
- ④ PROVIDE 30A/2P FUSED DISCONNECT FOR CONNECTION TO THE HP. VERIFY EXACT LOCATION AND ADDITIONAL INFORMATION WITH MECHANICAL DRAWINGS.
- ⑤ PROVIDE 15A/1P MOTOR RATED SWITCH FOR CONNECT TO THE EXHAUST FAN. REFER TO MECHANICAL PLAN FOR DETAIL.

REVISIONS		
NO.	DATE	DESCRIPTION



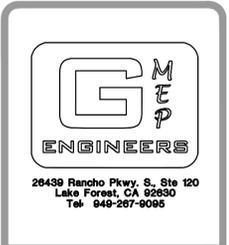
PROJECT NAME:
CHEN FARM
2740 FERGUSON ROAD
GILROY, CA 95020

SHEET TITLE:
ELECTRICAL UNIT PLANS

DRAWN	GMEP
CHECKED	GMEP
DATE	08/04/23
SCALE	AS NOTED
JOB NO.	23-598
SHEET	

E-2.0

REVISIONS		
NO.	DATE	DESCRIPTION

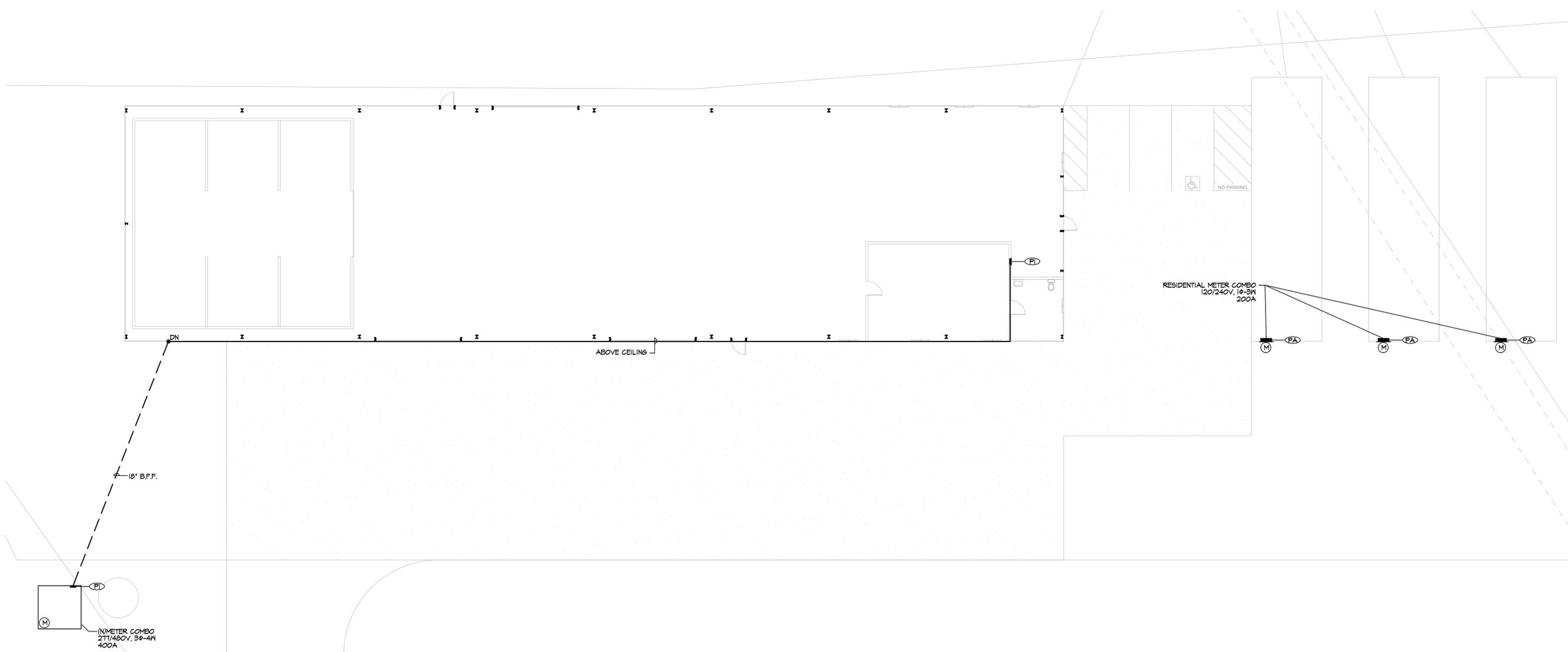


PROJECT NAME:
CHEN FARM
2740 FERGUSON ROAD
GILROY, CA 95020

SHEET TITLE
**ELECTRICAL
SITE PLAN**

DRAWN	GMEP
CHECKED	GMEP
DATE	08/04/23
SCALE	AS NOTED
JOB NO.	23-598
SHEET	

E-3.0



ELECTRICAL - ADU UNIT PLAN
SCALE: 3/32"=1'-0"

ABBREVIATIONS

GENERAL MECHANICAL NOTES

AIR SYSTEM DESIGN CRITERIA

AC	AIR CONDITIONING UNIT	(N)	NEW
AD	ACCESS DOOR	N/A	NOT APPLICABLE
AFF	ABOVE FINISHED FLOOR	NC	NORMALLY CLOSED
AHU	AIR HANDLING UNIT	NO	NORMALLY OPEN
AP	ACCESS PANEL	NO.	NUMBER
ARCH	ARCHITECTURAL	NTS	NOT TO SCALE
BDD	BACK DRAFT DAMPER	OA	OUTSIDE AIR
BFF	BELOW FINISHED FLOOR	OA)	OUTSIDE AIR INTAKE
BLDG	BUILDING	OD	OUTSIDE DIAMETER
BTU	BRITISH THERMAL UNITS PER HOUR	FTAC	PACKAGED TERMINAL AIR CONDITIONER
CD	CONDENSATE DRAIN	PSI	POUNDS PER SQUARE INCH
CFH	CUBIC FEET PER HOUR	PSIG	POUNDS PER SQUARE INCH GAUGE
CFM	CUBIC FEET PER MINUTE	RA	RETURN AIR
CP	CONDENSATE PUMP	RAG	RETURN AIR GRILLE
CU	CONDENSING UNIT	RCP	REFLECTED CEILING PLAN
DB	DRY BULB	RHC	REFLECTED CEILING PLAN
DS	DUCT SILENCER	RF	RETURN FAN
ELEC	ELECTRICAL	REQD	REQUIRED
EF	EXHAUST FAN	RFRS	REFRIGERATOR
(E)	EXISTING	RPM	REVOLUTIONS PER MINUTE
ER	EXHAUST REGISTER	RTU	ROOF TOP UNIT
F	DEGREES FAHRENHEIT	SA	SUPPLY AIR
FA	FREE AREA	SCS	SMOKE CONTROL GRILLE
FC	FAN COIL	SCH	SCHEDULE
FD	FIRE DAMPER	SD	SMOKE DAMPER
FLR	FLOOR	SEF	SMOKE EXHAUST FAN
FFM	FIRE PUMP	SF	SUPPLY FAN
FFM	FEET PER MINUTE	SP	STATIC PRESSURE
FX	FLEXIBLE CONNECTION	SQ FT	SQUARE FEET
GPH	GALLONS PER HOUR	TEMP	TEMPERATURE
GPM	GALLONS PER MINUTE	TG	TRANSFER GRILLE
HP	HEAT PUMP	THK	THICK
HV	HEATING AND VENTILATING UNIT	TYP	TYPICAL
HX	HEAT EXCHANGER	U/G	UNDERGROUND
HZ	HERTZ	UH	UNIT HEATER
ID	INSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
LAT	LEAVING AIR TEMPERATURE	VAV	VARIABLE AIR VOLUME UNIT
LNT	LEAVING WATER TEMPERATURE	V _g /HZ	VOLTS/PHASE/HERTZ
LD	LINEAR DIFFUSER	VD	VOLUME DAMPER
LF	LINEAR FEET	VEL	VELOCITY
MBH	BTU PER HOUR (X1000)	VFD	VARIABLE FREQUENCY DRIVE
MC	MECHANICAL CONTRACTOR	W	WITH
MECH	MECHANICAL	W/O	WITHOUT
MIN	MINIMUM	WB	WET BULB
MUA	MAKE-UP AIR UNIT	WH	WATER HEATER

- ALL MECHANICAL SYSTEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND STANDARDS, INCLUDING 2022 CALIFORNIA MECHANICAL CODE, 2022 CALIFORNIA BUILDING CODE, 2022 CALIFORNIA RESIDENTIAL CODE, 2022 CALIFORNIA PLUMBING CODE, 2022 CALIFORNIA FIRE CODE, 2022 CALIFORNIA ELECTRICAL CODE, 2022 CALIFORNIA ENERGY CODE, 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, TITLE 24 CALIFORNIA CODE OF REGULATIONS, AND VENTILATION REQUIREMENTS PER ASHRAE STD. 62.2-2022.
- PRIOR TO SUBMITTING BID, CONTRACTOR SHALL SURVEY THE ENTIRE PROJECT SITE AND BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS. THE INTENT OF WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN. BY THE ACT OF SUBMITTING A BID PROPOSAL FOR WORK, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH A STUDY AND EXAMINATION AND TO ACCEPT ALL CONDITIONS PRESENT AT SITE. NO REQUEST FOR ADDITIONAL PAYMENT SHALL BE CONSIDERED VALID, DUE TO CONTRACTOR FAILURE TO ALLOW IN COST ESTIMATE FOR CONDITIONS WHICH MAY EXIST.
- CONTRACTOR BID SHALL NOT BE LIMITED TO THE WORK SHOWN ON THE PLANS AND SPECIFICATIONS. ALL PREMIUM OVERTIME COSTS, UTILITY CHARGES, COST FOR TEMPORARY UTILITY SERVICES, ALL ALTERATION, ALL DEMOLITION AND EXTENSION WORKS, PERMITS, INSPECTION FEES, MISCELLANEOUS CONTINGENCY COST, ETC., SHALL BE INCLUDED IN BID.
- CONTRACTOR MUST VERIFY LOCATIONS OF ALL EQUIPMENT AND POINTS OF CONNECTIONS AND COORDINATE WITH CONSTRUCTION MANAGER, ARCHITECT, CIVIL ENGINEER, LANDSCAPE ARCHITECT AND UTILITY CONSULTANTS PRIOR TO START OF CONSTRUCTION. NO COMPENSATION WILL BE MADE FOR RELOCATION OF EQUIPMENT AND ASSOCIATED COST.
- CONTRACT DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR MUST FIELD VERIFY THE DRAWINGS PRIOR TO FABRICATION AND CONSTRUCTION. ALL DIMENSIONS SHOWN ON THESE PLANS ARE APPROXIMATE, AND MUST BE CONFIRMED ON SITE.
- CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE PRIOR TO SUBMITTING BID.
- ANY WORK TO BE PERFORMED MUST BE PLANNED IN ADVANCE. SCHEDULING SHALL BE DONE IN COOPERATION WITH CONSTRUCTION MANAGER. INCLUDE ALL PREMIUM TIME CHARGES IN BID TO COVER AFTER-HOURS AND WEEKEND WORK.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL TRADES. COORDINATE THE LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL CEILING PLAN, ELECTRICAL LIGHTING LAYOUT, STRUCTURAL FRAMING LAYOUT, AND ARCHITECTURAL ROOM ELEVATIONS. ALL WORK SHALL BE IN ACCORDANCE WITH BEST CONSTRUCTION PRACTICES.
- THE CONTRACTOR SHALL FURNISH ALL MATERIAL, TOOLS, LABOR, ETC. TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM AS INDICATED ON DRAWINGS.
- THE CONTRACTOR SHALL REPORT TO THE CONSTRUCTION MANAGER IMMEDIATELY ANY INTERFERENCE BETWEEN TRADES OR WITH BUILDING OBSTRUCTIONS.
- PROVIDE SHOP DRAWINGS FOR ALL EQUIPMENT, DUCTWORK, PIPING, DAMPERS, ETC. AND SUBMIT IT TO THE CONSTRUCTION MANAGER FOR APPROVAL.
- ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED, AND SEALED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF LOCAL REGULATIONS AND PROCEDURES DETAILED IN ASHRAE HANDBOOK OF FUNDAMENTALS OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION AND THE UNIFORM MECHANICAL CODE.
- FACTORY-MADE AIR DUCTS SHALL NOT BE USED FOR VERTICAL RISERS IN AIR-DUCT SYSTEMS SERVING MORE THAN TWO STORIES (UNLESS ALLOWED BY CHIEF BUILDING INSPECTOR AND THE FIELD INSPECTOR). SUCH DUCTS SHALL NOT PENETRATE CONSTRUCTION WHERE FIRE DAMPERS ARE REQUIRED (CMC SECTION 603.4).
- ALL DUCT SIZES ARE CLEAR INSIDE SIZES. OBTAIN APPROVAL FROM CONSTRUCTION MANAGER FOR SIZING OF ANY DUCTWORK, WHERE SIZES ARE NOT SHOWN ON DRAWINGS.
- MANUAL VOLUME DAMPERS SHALL BE PROVIDED IN ALL DUCT BRANCHES TO INDIVIDUAL BOXES, DIFFUSERS, GRILLES AND REGISTERS AND SHALL BE LOCKED IN THE FINAL POSITION AFTER COMPLETION OF AIR BALANCE.
- ALL DUCT SHALL BE INSTALLED WITH ACCORDANCE TO MANUFACTURERS GUIDELINES AND CHAPTER 6 OF CMC 2019.
- TRANSVERSE AND LONGITUDINAL JOINTS FOR ALL SUPPLY AIR DUCTS SHALL BE SEALED WITH APPROVED MASTIC PER SMACNA.
- COVER ALL WALLS, FLOOR, CEILING AND ROOF OPENINGS LEFT AS THE RESULT OF THE WORK. PROVISIONS SHALL BE MADE TO PROTECT PEOPLE FROM INJURY AND TO PROTECT EQUIPMENT FROM WEATHER.
- CUTTING OR PENETRATION OF STRUCTURAL MEMBERS MUST BE APPROVED BY THE STRUCTURAL ENGINEER ON RECORD.
- SEAL ALL PENETRATIONS THROUGH WALLS, CEILINGS, FLOOR, ETC. TO MAINTAIN THE FIRE RATINGS, AND BUILDING PRESSURIZATION.
- PROVIDE ANCHORAGE FOR ALL PIPING, DUCTWORK AND EQUIPMENT IN ACCORDANCE WITH THE LATEST EDITION OF GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS PER SMACNA.
- INSTALL ALL DUCT WORK AND PIPING HIGH AS POSSIBLE UNLESS NOTED ON THE PLANS.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL NECESSARY ACCESSORIES FOR COMPLETE INSTALLATION.
- CURBS, PLATFORMS, AND FLASHING FOR MECHANICAL EQUIPMENT SHALL BE AS INDICATED ON THE ARCHITECTURAL PLANS AND STRUCTURAL PLANS. COORDINATE EXACT SIZES OF REQUIRED OPENINGS AND SUPPORTS FOR FURNISHED EQUIPMENT.
- ALL DUCT WORK MUST BE INSULATED OR LINED PER SPECIFICATIONS OR NOTED IN THE DRAWINGS. THE FLEXIBLE DUCT MUST BE INSTALLED PER MANUFACTURER GUIDELINES AND SHALL ELIMINATE RESTRICTION TO AIR FLOW.
- PRE-INSULATED FLEXIBLE DUCT WORK SHALL BE SUPPORTED AND JOINED TO SHEET METAL PER SMACNA DUCT CONSTRUCTION STANDARDS AND SHALL BE USED WITH A 2" SHEET METAL SADDLE AT EACH SUPPORT HANGER.
- WHEN FLEXIBLE DUCTWORK IS INSTALLED AS A BRANCH DUCTWORK TO A POINT OF TERMINATION, THE CONTRACTOR MUST UTILIZE ADJUSTABLE SHEET METAL ELBOWS WITH AN ALUMINIZED INSULATION MATCHING THE PRE-INSULATED FLEXIBLE DUCTWORK INSULATING VALUE.
- METAL DUCTS SHALL COMPLY WITH CMC SECTION 602.6. THE METALS DUCTS SHALL BE SUPPORTED PER THE REQUIREMENTS PER CMC 603.3.
- ALL HVAC EQUIPMENT SHALL BE U.L. LISTED AND BEAR A U.L. LABELS.
- MECHANICAL EQUIPMENT, AIR DISTRIBUTION DEVICES, AIR DIFFUSERS, FANS, AND OTHER EQUIPMENT THAT MAY PROJECT SOUND SHALL BE INSTALLED PER MINIMUM REQUIREMENT, CONFORM TO INSTALLATION DETAILS AND RECOMMENDATION IN CHAPTER 52 OF ASHRAE HANDBOOK, "HVAC SYSTEMS AND APPLICATIONS."
- GUARDS SHALL BE PROVIDED WHERE APPLIANCES, EQUIPMENT, FANS ROOF HATCH OPENINGS OR OTHER COMPONENTS THAT REQUIRE SERVICE ARE LOCATED WITHIN 10 FEET OF A ROOF EDGE OR OPEN SIDE OF WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30" ABOVE THE FLOOR, ROOF OR GRADE BELOW. THE GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A SPHERE 21" IN DIAMETER. THE GUARD SHALL EXTEND NOT LESS THAN 30" BEYOND EACH END OF SUCH APPLIANCE, EQUIPMENT, FAN OR COMPONENT.
- COORDINATE THE THERMOSTATS/SENSORS LOCATIONS WITH THE ARCHITECT. ALL THE THERMOSTATS/SENSORS SHALL BE MOUNTED AT 48" ABOVE FINISHED FLOOR TO MEET ADA REQUIREMENTS.
- THE CONTRACTOR SHALL VERIFY THE INPUT VOLTAGE AND AMPERAGE (HORSEPOWER) RATINGS OF ALL EQUIPMENT PRIOR TO INSTALLATION.
- CONTRACTOR SHALL PROVIDE ALL SAFETY MATERIALS AND EQUIPMENT NOT LIMITED TO BARRIERS, SIGNS, LIGHTS, ETC.
- CONTRACTOR SHALL PROVIDE BARRICADE, SAFETY SIGNS AND OTHER DEVICES TO ISOLATE WORK AREA DURING CONSTRUCTION, UPON CONSTRUCTION MANAGER APPROVAL.
- CONTRACTOR SHALL REPAIR/PATCH AND WEATHER PROOF ANY OPENING CAUSED BY EQUIPMENT/PIPING INSTALLATION, AND SHALL PAINT WHERE NECESSARY.
- THE CONTRACTOR SHALL THOROUGHLY CLEAN THE UNITS, REMOVE ALL PACKING LABELS, STICKERS AND ANY CRATING DEBRIS, AND LEAVE ALL INSTALLATION FINISHED AND READY FOR OPERATION.
- AFTER COMPLETION, THE COMPLETE SYSTEM SHALL BE TESTED AND BALANCED. ANY ADDITIONAL BALANCING DEVICES REQUIRED FOR PROPER BALANCING SHALL BE INSTALLED. PRIOR TO BALANCING ALL FILTERS SHALL BE REPLACED WITH NEW CLEAN FILTERS PLACED IN THE RETURN GRILLES.
- UPON COMPLETION OF PROJECT AND PRIOR TO ACCEPTANCE OF THE WORK BY THE CONSTRUCTION MANAGER, CONTRACTOR SHALL FURNISH TO HIM FOUR (4) COPIES OF OPERATION AND MAINTENANCE MANUAL OF EQUIPMENT BOUND IN BOOK FORM AND INDEXED. MANUAL SHALL CONTAIN PARTS LIST, RECOMMENDED PERIODS OF INSPECTION, ETC., AND NAME, ADDRESS AND PHONE NUMBER OF ALL SUPPLIERS.
- THE CONTRACTOR SHALL PREPARE ONE (1) SET OF "RECORD DRAWINGS" PLANS AND KEEP AT JOB SITE FOR REVIEW BY THE CONSTRUCTION MANAGER. ANY CHANGES FROM THE DESIGN DRAWINGS SHALL BE NOTED WITH RED INK. UPON COMPLETION OF PROJECT THE CONTRACTOR SHALL SUBMIT THE PLANS TO THE CONSTRUCTION MANAGER.
- COMPLETE INSTALLATION SHALL BE GUARANTEED, AND CONTRACTOR SHALL PROVIDE 1 YEAR SERVICE, INCLUDING PARTS AND LABOR.
- THE CONTRACTOR SHALL FURNISH A TRAINED AND COMPETENT SERVICE ENGINEER TO INSTRUCT THE OPERATORS IN THE OPERATION AND MAINTENANCE OF THE SYSTEM.
- EACH SINGLE SYSTEM HEATING OR COOLING AIR IN EXCESS OF 2000 CUBIC FEET PER MINUTE SHALL BE EQUIPPED WITH AN AUTOMATIC SHUTOFF ACTIVATED BY SMOKE DETECTORS PER 2019 CMC SECTION 603.
- ALL DUCT SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY DIV. 16. INSTALLED BY DIV. 15. DETECTOR SAMPLING TUBES TO HAVE AN ACCESS DOOR MAKING SAMPLING TUBES READILY ACCESSIBLE.
- PROVIDE CEILING ACCESS PANELS IN ALL NON-ACCESSIBLE CEILINGS FOR VALVES, CLEANOUTS, AND DAMPERS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS.
- HVAC SYSTEM INSTALLERS SHALL BE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS AND EQUIPMENT BY A RECOGNIZED TRAINING OR CERTIFICATION PROGRAM.
- FIRE PLACES MUST BE DIRECT-VENT SEALED-COMBUSTION CHAMBER TYPE PER CGBC 4.503. NO WOOD BURNING FIREPLACE IS PERMITTED PER AQMD REGULATIONS.
- ALL NEW WINDOWS AND DOORS SHALL HAVE A LABEL INDICATING THE U-FACTOR AND SHGC.
- AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR INTAKE AND DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED.
- EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING:
 - FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
 - UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL.
 - HUMIDITY CONTROLS SHALL BE CAPABLE OF MANUAL OR AUTOMATIC ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF LESS THAN 50% TO A MAXIMUM OF 80%.
 - A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL OR BUILT-IN.
- BUILDING CONTAINS A WHOLE HOUSE EXHAUST FAN. ITS COVERS OR LOUVERS SHALL HAVE A MINIMUM OF R-4.2 INSULATION.
- AIR CONDITIONING AND HEATING FILTER SHALL BE RATED AT MERV 13 MINIMUM. THE DUCT SYSTEM MUST BE DESIGN ACCOUNTING FOR THE PRESSURE DROP ACROSS THE FILTER.
- THE INSTALLING CONTRACTOR MUST PROVIDE SEISMIC BRACING OF ALL MECHANICAL EQUIPMENT, PIPING AND DUCT WORK IN ACCORDANCE WITH REQUIREMENTS OF THE 2019 CBC FOR "SEISMIC DESIGN CATEGORY."
- WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE PLANS, THE FIELD CONTRACTOR MUST VERIFY AND GET APPROVAL FOR THE INSTALLATION FROM THE MECHANICAL ENGINEER AND THE STRUCTURAL ENGINEER.

CITY	SAN JOSE
COUNTY	SAN JOSE
CLIMATE ZONE	04
SUMMER OUTDOOR DESIGN TEMP. (DRY-BULB)	86 DEG F
SUMMER COINCIDENT WET-BULB TEMP.	68 DEG F
SUMMER DAILY RANGE	26 DEG F
WINTER OUTDOOR DESIGN TEMP. (DRY BULB)	24 DEG F
SUMMER INDOOR DESIGN TEMP. (DRY BULB)	75 DEG F
WINTER INDOOR DESIGN TEMP. (DRY BULB)	68 DEG F

MECHANICAL SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY CEILING DIFFUSER		SUPPLY CEILING DIFFUSER
	SIDE WALL SUPPLY DIFFUSER		AIR QUANTITY (CFM)
	RETURN CEILING DIFFUSER		ATTIC ACCESS PANEL
	SIDEWALL RETURN DIFFUSER		AIR HANDLER UNIT
	EXHAUST GRILL OR FAN		OUTDOOR AIR COMPRESSOR
	EXHAUST FAN DUCT UP THRU ROOF W/ CAP		SMOKE DETECTOR
	ROUND EXHAUST DUCT UP		SUPPLY DUCT UP
	THERMOSTAT		RETURN DUCT UP
	FLEXIBLE DUCTWORK		SUPPLY AND RETURN DUCT DOWN
	POINT OF CONNECTION		EXHAUST WALL CAP
	HATCH DENOTES DROPPED CEILING		OUTSIDE AIR WALL CAP
	FIRE SMOKE DAMPER OR FIRE DAMPER (FSD OR FD)		MOTORIZED ZONING DAMPER
			KEYED NOTES

REVISIONS

NO.	DATE	DESCRIPTION

SEAL

PROJECT NAME: CHEN FARM

2740 FERGLUSON ROAD
GILROY, CA 95020

SHEET TITLE: MECHANICAL HVAC NOTES, SYMBOLS & SHEET INDEX - MANUFACTURED HOMES

DRAWN: GMEP
CHECKED: GMEP
DATE: 08/04/23
SCALE: AS NOTED
JOB NO.: 23-598
SHEET

M-3.0

RECTANGULAR DUCT SIZE ESTIMATE

DESIGN CFM	DUCT HEIGHT - NET INSIDE DIMENSION IN INCHES								
	4"	CFM	6"	CFM	8"	CFM	10"	CFM	12"
60	6X4	60	4X6	90	4X8	120	4X10	150	4X12
90	8X4	110	6X6	160	6X8	215	6X10	270	6X12
120	10X4	160	8X6	230	8X8	310	8X10	400	8X12
150	12X4	215	10X6	310	10X8	430	10X10	550	10X12
180	14X4	270	12X6	400	12X8	550	12X10	680	12X12
210	16X4	320	14X6	490	14X8	670	14X10	800	14X12
240	18X4	375	16X6	580	16X8	800	16X10	950	16X12
270	20X4	430	18X6	670	18X8	930	18X10	1100	18X12
300	22X4	490	20X6	750	20X8	1060	20X10	1250	20X12
330	24X4	540	22X6	840	22X8	1200	22X10	1400	22X12
		600	24X6	930	24X8	1320	24X10	1600	24X12
		650	26X6	1020	26X8	1430	26X10	1750	26X12
		710	28X6	1100	28X8	1550	28X10	1950	28X12
		775	30X6	1200	30X8	1670	30X10	2150	30X12
40	21/2X10			1300	32X8	1800	32X10	2300	32X12
70	21/2X14			1400	34X8	1930	34X10	2450	34X12
150	21/2X30			1500	36X8	2060	36X10	2600	36X12
		100	31/2X14			2200	38X10	2750	38X12
		220	31/2X30			2350	40X10	2900	40X12
						3050	42X12		

RECTANGULAR SHEET METAL DUCT = .07" ON MOST METAL DUCT CALCULATORS

FLEXIBLE DUCT

DUCT SIZE	DESIGN SUPPLY AIRFLOW (CFM)	DESIGN RETURN AIRFLOW (CFM)
5"	60	54
6"	100	90
7"	150	135
8"	240	216
9"	300	270
10"	400	360
12"	650	585
14"	1000	900
16"	1400	1270
18"	2000	1800
20"	2500	2250

FLEX DUCT =.1" ON MOST METAL DUCT CALCULATOR

ROUND METAL PIPE

DUCT SIZE	DESIGN AIRFLOW (CFM)
5"	60
6"	100
7"	150
8"	240
9"	300
10"	400
12"	650
14"	1000
16"	1400
18"	2000
20"	2500

ROUND METAL PIPE =.1" ON METAL DUCT CALCULATORS

AIR DISTRIBUTION DEVICE SCHEDULE

TAG ON FLANS	MANUFACTURER & MODEL #	APPLICATION & TYPE	BLOWPATTERN	NECK SIZE	REMARKS
CS-2	SHOEMAKER 850 OR EQUAL	CEILING OR SIDEWALL MOUNTED	2-WAY	SEE PLANS	CEILING OR SIDEWALL STAMPED DIFFUSER W/ LEVER OPERATED OPPOSED BLADE DAMPER
CS-3	SHOEMAKER 845 OR EQUAL	SEE DWGS	3-WAY	SEE PLANS	CEILING OR SIDE WALL STAMPED DIFFUSER W/ LEVER OPERATED OPPOSED BLADE DAMPER
CS-4	SHOEMAKER 150 OR EQUAL	SEE DWGS	4-WAY	SEE PLANS	CEILING STAMPED DIFFUSER W/ LEVER OPERATED OPPOSED BLADE DAMPER
CR6	SHOEMAKER F6 OR EQUAL	SEE DWGS	-----	SEE PLANS	CEILING STAMPED FACE FILTER GRILL MINIMUM MERV 13 FILTER

NOTES:
 1. CR6 SHALL HAVE MAXIMUM FACE VELOCITY OF 450 FPM WITH A 1" FILTER NOT LESS THAN MERV 13 W/ MAX. PRESSURE DROP OF 0.2" W.C. FOR FILTER AND GRILL.
 2. CONTRACTOR TO USE OR EQUAL REGISTERS. THE THROW PATTERNS SHALL BE MATCHED PER THE PLANS. BASE THE ALTERNATE SELECTION BASE ON MAXIMUM PRESSURE DROP OF 0.04" W.C. THE VELOCITY AT THE FACE SHALL NOT EXCEED 700 FPM.

FAN SCHEDULE

EQUIPMENT NO.	SERVICE	LOCATION	CFM	STATIC PRESS. (IN W.G.)	MOTOR			MANUFACTURER & MODEL	SONES	OPTIONS-ACCESSORIES
					WATTS	HP	RPM			
EF B	BATHROOM	CEILING	84	0.25	37.0	--	--	120-1-60	AIRKING EBOSH W/ BOOST	0.7 BACK DRAFT DAMPER CONTROLLED BY BUILT IN HUMIDITY SENSOR OPER. WT. = 17.0 LBS
EF BH	BATHROOM	CEILING	60	0.25	7.3	--	--	120-1-60	AIRKING D45H	0.3 BACK DRAFT DAMPER CONTROLLED BY SWITCH (CONTINUOUS OPERATION WHILE HOUSE IS OCCUPIED) OPER. WT. = 17.0 LBS

NOTES:
 1. VERIFY WITH ARCHITECT/OWNER FOR EXACT MODEL NUMBER BEFORE ROUGH-IN.
 ALL EXHAUST FANS TO BE ENERGY STAR CERTIFIED.

SPLIT SYSTEM OUTDOOR HEAT PUMP CONDENSING UNIT

EQUIPMENT NO.	MANUFACTURER & MODEL NO.	SERVICE	HEATING CAPACITY (BTU/HR)	HSPF OR COP	COOLING CAPACITY (B.T.U./HR)	SEER2/ EER2	ELECTRICAL			OPERATING WEIGHTS (LBS)	REFRIGERANT TUBE		REMARKS
							V.-PH.-CY.	MCA	MOCF		LIQUID	VAPOR	
HP 24	CARRIER GHSSAN42400A OR EQUAL	SEE PLAN	23,200	7.8 HSPF2	23200	15.2/12.0	208/230-1-60	14.5	25	153	3/8	5/8	1.

NOTES:
 1. PROVIDE ALL REQUIRED MATERIALS & INSULATED REFRIGERANT LINES FOR COMPLETE INSTALLATION, SIZE RS/RL PIPING PER MANUFACTURERS GUIDELINES.

SPLIT SYSTEM AIR HANDLER FAN COIL UNITS SCHEDULE

EQUIPMENT NO.	MANUFACTURER & MODEL NO.	SERVICE	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	E.S.P. (IN W.G.)	ELECTRICAL		OPERATING WEIGHTS (LBS)	REMARKS
						V.-PH.-CY.	MCA		
FC 24	CARRIER FMC4Z24**AL* OR EQUAL	SEE PLAN	800	--	0.13	208/230-1-60	2.6	109	1, 2, 3, 4, 5.

NOTES:
 1. PROVIDE REQUIRED ACCESS TO INDOOR UNIT PER CMC.
 2. PROVIDE PROGRAMMABLE ROOM THERMOSTAT FOR EACH FAU/FC UNIT.
 3. PROVIDE CONTROL WIRING, CONDUIT, ETC. FOR A COMPLETE AND OPERABLE SYSTEM.
 4. PROVIDE SECONDARY CONDENSATE DRAIN PAN FOR ALL DX COILS.
 5. PROVIDE MERV 13 FILTER AT RETURN AIR PLENUM CONNECTION TO UNIT.

REVISIONS		
NO.	DATE	DESCRIPTION

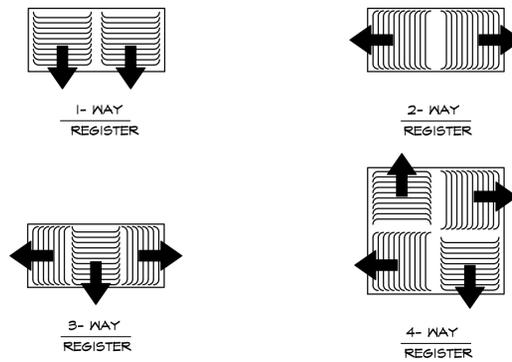


PROJECT NAME:
CHEN FARM
 2740 FERGUSON ROAD
 GILROY, CA 95020

SHEET TITLE
 MECHANICAL
 HVAC EQUIPMENT SCHEDULES -
 MANUFACTURED HOMES

DRAWN: GMEP
 CHECKED: GMEP
 DATE: 08/04/23
 SCALE: AS NOTED
 JOB NO.: 23-598
 SHEET:

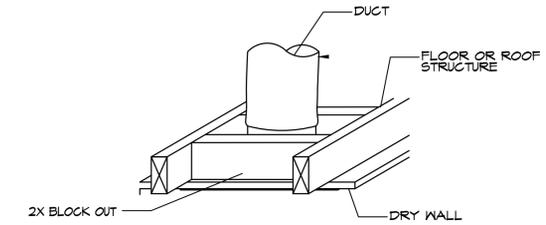
M-3.1



COMMON TYPES OF DIRECTIONAL REGISTERS

SCALE: NONE

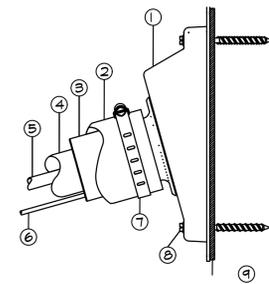
7



TYPICAL REGISTER BLOCK OUT

SCALE: NONE

6



- ① EXTERIOR WALL OR PARAPET WALL SEAL PENETRATION OUTLET WITH ELASTOMERIC LINE-SET COMPRESSION SLEEVE TYPE "TITAN 6530" BY AIREX MANUFACTURING INC.
- ② INSULATION PROTECTIVE PVC COVER TYPE "E-FLEX GUARD" BY AIREX MANUFACTURING INC.
- ③ ELASTOMERIC LINE-SET COMPRESSION & ANTI-VIBRATION SLEEVE (COMPONENT OF REFERENCE 1 "TITAN 6530")
- ④ #/8" INSULATION FOR REFRIGERATION SUCTION LINE TYPE "....."
- ⑤ #/8" REFRIGERATION SUCTION LINE TYPE "....." COPPER
- ⑥ #/8" REFRIGERATION LIQUID LINE TYPE "....." COPPER
- ⑦ MECHANICAL CONNECTION SECURED WITH STAINLESS STEEL CLAMP (COMPONENT OF REFERENCE 1 "TITAN 6530")
- ⑧ WALL FASTENERS SELF-TAPPING 3/8" HEX HEAD 1/4" DIAMETER ALL MATERIAL ANCHORS SCREWS WITH ELASTOMERIC WASHERS (COMPONENT OF REFERENCE 1 "TITAN 6530")
- ⑨ WALL SURFACE SEAL ELASTOMERIC GASKET (COMPONENT OF REFERENCE 1 "TITAN 6530")

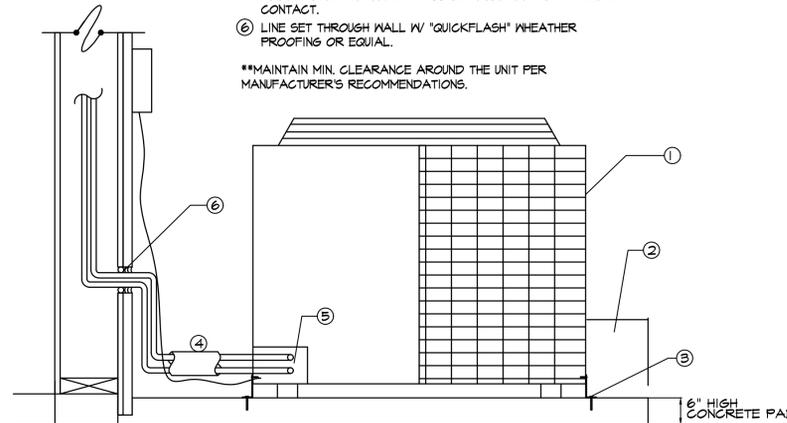
PIPE PENETRATION DETAIL

SCALE: NONE

5

- ① CONDENSING UNIT
- ② EXTEND PAD A MIN. OF 4" FROM UNIT ON ALL SIDES. COORDINATE SIZE WITH CONDENSING UNIT USED.
- ③ STRAP A/C TO CONC. SLAB WITH ANCHOR BOLD/SCREW PER A/C MANUFACTURER RECOMMENDATION AT ALL SIDES.
- ④ REFER TO "PIPE PENETRATION DETAIL"
- ⑤ LIQUID LINE AND INSULATED SUCTION LINE. SIZE PER RECOMMENDATIONS. WRAP ALL EXPOSED COPPER PIPING IN CONTACT.
- ⑥ LINE SET THROUGH WALL W/ "QUICKFLASH" WEATHER PROOFING OR EQUAL.

**MAINTAIN MIN. CLEARANCE AROUND THE UNIT PER MANUFACTURER'S RECOMMENDATIONS.

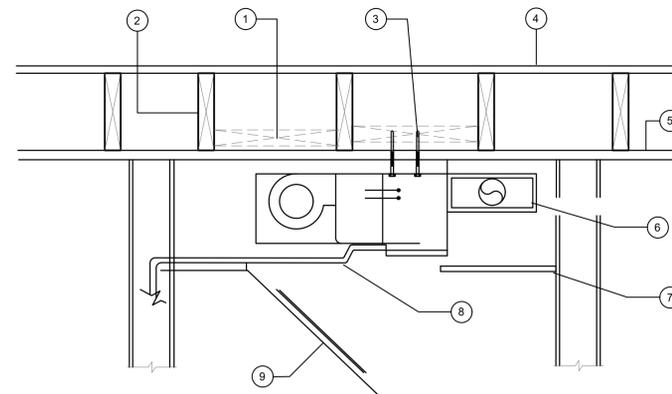


CONDENSING UNIT INSTALLATION ON GRADE

SCALE: NONE

4

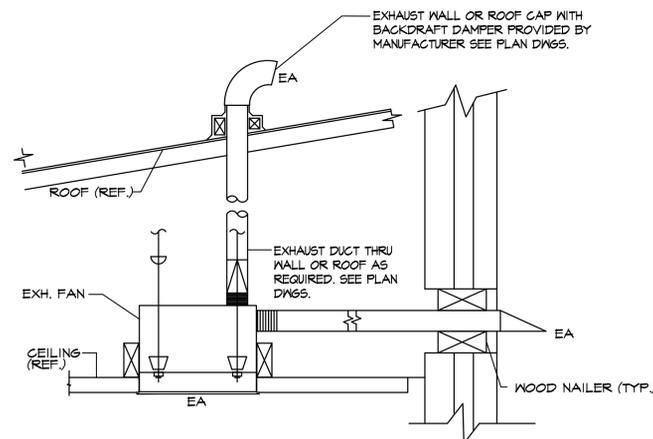
- ① 2X6 BLOCKING
- ② STRUCTURAL JOIST
- ③ 1/4" LAG SCREW W/ 2 1/2" PENETRATION
- ④ FLOOR ABOVE
- ⑤ FLOOR STRUCTURE WHERE OCCURS.
- ⑥ SEALED SUPPLY AIR PLENUM
- ⑦ NON-RATED SOFFIT
- ⑧ 3/4" CONDENSATE DRAIN W/ TRAP.
- ⑨ FACTORY SUPPLIED LOUVERED ACCESS PANEL (BUILT IN GRILL PER THE UNIT PLANS, PROVIDE MERV 13 FILTER AT THE GRILL)



CEILING FAN COIL UNIT INSTALLATION

SCALE: NONE

2



CEILING TYPE EXHAUST FAN

SCALE: NONE

3

DRYER VENT SIZING

DRYER VENT SIZE	LT	REMARK
4"	14'-0"	①
5"	34'-0"	②

CLOTHES DRYER VENT SHALL NOT EXCEED A TOTAL COMBINED HORIZ. AND VERT. LENGTH OF 14' FOR 4" AND 34' FOR 5", INCLUDING TWO 90- DEGREE ELBOWS. TWO FEET SHALL BE DEDUCTED FOR EACH 90- DEGREE ELBOW IN EXCESS OF TWO. SECTION 504.4.2.1 OF THE CMC. FLEX DUCT PORTION CANNOT BE CONCEALED WITHIN BUILDING CONSTRUCTION AS PROPOSED

NOTES:

1. FOR A 4" GALVANIZED DRYER VENT DUCT
IF: L= 8'
THEN: L2 = 14' - 0' = 6'
2. FOR AN EQUIVALENT 5" GALVANIZED DRYER VENT DUCT
IF: L= 8'
THEN: L2 = 34' - 0' = 26'

CFM = VELOCITY X AREA
CFM 4" = CFM 5"

$$V4" \times A4" = V5" \times A5"$$

$$V4" \times (3.14 \times D4")^2/4 = V5" \times (3.14 \times D5")^2/4$$

$$V4" = 5'4" \times V5" = 1.5625 V5"$$

$$\text{FRICTION } 4" = \text{FRICTION } 5" =$$

$$= (f \times L4" \times V4")^2/2g = (f \times L5" \times V5")^2/2g =$$

$$= (f \times L4" \times (1.5625 V5")^2)/2g = (f \times L5" \times V5")^2/2g$$

$$L5" = (1.5625)^2 \times L4" = 2.44 \times L4"$$

$$L4" = 14 \text{ ft}$$

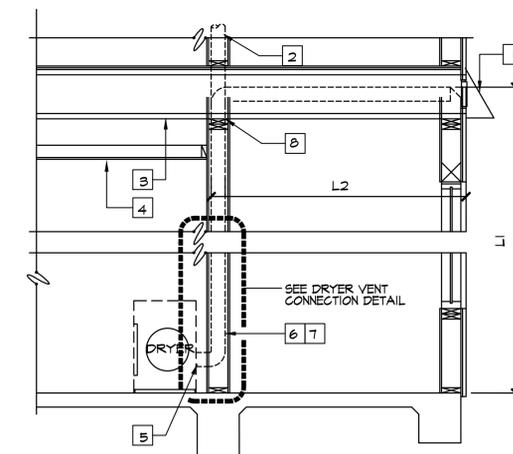
$$L5" = 2.44 \times 14' = 34 \text{ ft}$$

34 FEET OF 5" DUCTWORK IS EQUAL TO 14 FEET OF 4" DUCTWORK (WITH THE SAME AIRFLOW AND PRESSURE DROP).

SEE DRYER VENT SIZING TABLE BELOW

LEGEND

- 1 EYEBROW W/ BACKDRAFT DAMPER MAINTAIN MIN. 3" AWAY FROM OPENINGS INTO BUILDINGS. (CMC CHAPTER 5)
- 2 DRYER VENT TO ROOF WHERE SHOWN OR NOTED ON MECH. DWGS.
- 3 JOIST, SEE STRUCT. DWGS. (TYPICAL)
- 4 FLOOR - CEILING ASSEMBLY
- 5 APPROVED FLEXIBLE DUCT CONNECTORS NOT MORE THAN 6FT. IN LENGTH MAY BE USED (FLEXIBLE DUCT CONNECTORS SHALL NOT BE CONCEALED WITHIN BUILDING CONSTRUCTION)
- 6 DRYER DUCT SHALL NOT BE CONNECTED W/ SHEET METAL SCREWS OR OTHER FASTENERS WHICH WILL OBSTRUCT THE AIR FLOW. (TYPICAL)
- 7 DRYER DUCT SHALL BE OF MIN. 26 GAUGE SHEET METAL AND SHALL HAVE SMOOTH INTERIOR SURFACES (TYPICAL)
- 8 FIRE CAULK AT PLATE PENETRATION (TYPICAL)

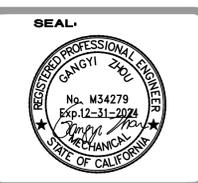


DRYER VENT W/ MAX LENGTH CALC OPTION

SCALE: NONE

1

REVISIONS		
NO.	DATE	DESCRIPTION



PROJECT NAME:
CHEN FARM
2740 FERGIJON ROAD
GILROY, CA 95020

SHEET TITLE
MECHANICAL
HVAC DETAILS - MANUFACTURED
HOMES

DRAWN
GMEP
CHECKED
GMEP
DATE
08/04/23
SCALE
AS NOTED
JOB NO.
23-598
SHEET

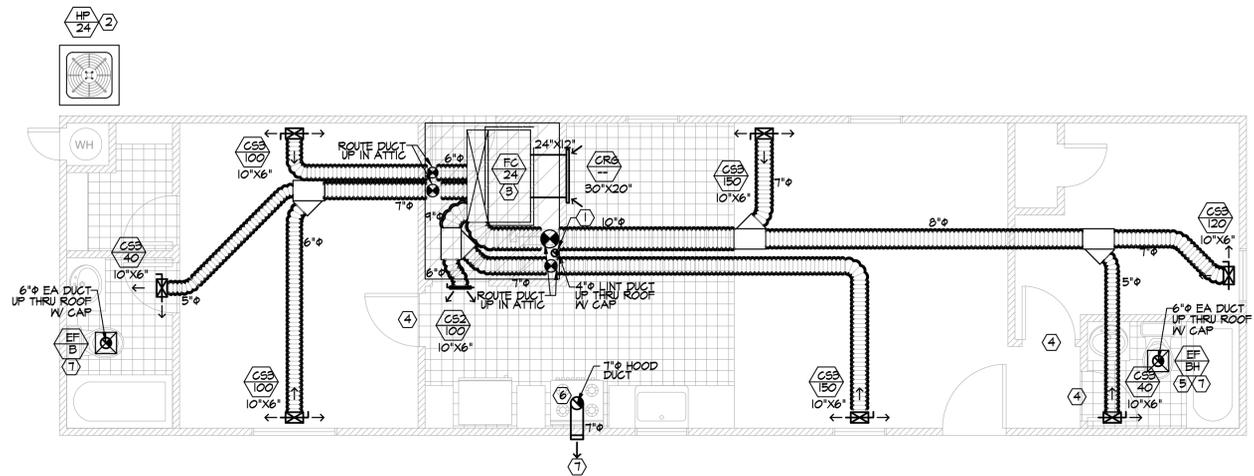
M-3.2

HVAC GENERAL NOTES

- REFER TO SHEET M-1.0 FOR LEGENDS AND GENERAL NOTES.
- REFER TO SHEET M-1.1 FOR EQUIPMENT SCHEDULES.
- REFER TO DRAWING M-1.2 FOR TYPICAL MECHANICAL DETAILS.
- THE DUCT ROUTING SHOWN ON PLANS ARE SCHEMATIC ONLY. VERIFY WITH STRUCTURAL AND ALL OTHER PARTIES REGARDING ANY DISCREPANCY AND REPORT TO THE MECHANICAL ENGINEER FOR APPROVAL.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR FINALIZED CEILING HEIGHTS.
- FIRE SEAL ALL THE PENETRATIONS AS REQUIRED PER CMG AND CBC CODE REQUIREMENTS.
- PROVIDE A MINIMUM OF 100 SQ. IN FREE AREA OPENING(S) INTO LAUNDRY ROOM FOR MAKE-UP AIR AS REQUIRED BY CODE (CMC 504.4.1).
- ALL TERMINATION OF ENVIRONMENTAL AIR DUCTS MUST BE LOCATED 3 FEET AWAY FROM ANY OPENINGS INTO THE BUILDING.
- OUTSIDE FRESH AIR INTAKES MUST BE 10 FEET FROM ANY PLUMBING VENTS AND EXHAUST VENTS.
- IF HUMIDISTAT IS REQUIRED, LOCATE IT ADJACENT TO THERMOSTAT.
- CONDENSATE PIPING FOR ALL INDOOR AIR HANDLERS SHALL FALL UNDER THE CONTRACTOR WORK SCOPE. COORDINATE WITH THE HVAC SUB ACCORDINGLY.
- THE DEDICATED WHOLE HOUSE VENTILATION FAN MUST BE OPERATING 24/7 WHILE THE HOUSE IS OCCUPIED. THE FAN MUST BE INSTALLED PER MANUFACTURER GUIDELINES WITH ON-OFF SWITCH. PROVIDE A LABEL NEXT TO THE SWITCH WITH CLEARLY WRITTEN TEXT NO SMALLER THAN 12 POINT ARIAL TYPE. "THE FAN MUST BE ON 24/7 WHILE THE HOUSE IS OCCUPIED, UNLESS THERE IS SEVERE OUTDOOR AIR CONTAMINATION."
- KITCHEN HOOD SHALL BE PROVIDED WITH MINIMUM 100 CFM OF EXHAUST AIR RATING AT 0.25" W.G.
- "REGISTERED" COPY OF THE CF-2R FORMS SHALL BE SUBMITTED PRIOR TO FINAL INSPECTION, SIGNED BY HERS RATER, FOR FIELD VERIFICATION AND DIAGNOSTIC TESTING.
- INSTALLING CONTRACTOR SHALL FILL OUT CF-3R FORMS AND SHALL HAVE IT READILY AVAILABLE TO THE INSPECTOR.
- ALL INSTALLED FIRE PLACES MUST BE SEALED COMBUSTION TYPE AND MUST BE VENTED TO THE EXTERIOR.

HVAC KEYED NOTES

- GAP SHOULD BE LISTED FOR CLOTH DRYER VENTING (DRYER JACK). DRYER DUCT TO VENT TO EXTERIOR WITH BACKDRAFT DAMPER. CONTRACTOR TO INSTALL DRYER EXHAUST DUCT PER MANUFACTURER INSTALLATION GUIDELINES.
- PROVIDE RS/RL PIPING SIZE PER MANUFACTURER'S GUIDELINES. ROUTE FROM REMOTE CONDENSATE UNIT TO THE INDOOR AIR HANDLER. VERIFY CONDENSER LOCATIONS WITH ALL RELEVANT DESIGN PARTIES BEFORE INSTALLATION.
- THE 3/4" PRIMARY CONDENSATE LINE TO THE LAVATORY TAILPIECE. SECONDARY CONDENSATE TO DRAIN TO THE EXTERIOR ABOVE A WINDOW OR PROVIDE A SENSOR TO SHUT-OFF UNIT UPON DETECTION OF WATER. COORDINATE WITH THE PLUMBER.
- PROVIDE 1/2" DOOR UNDER CUT, TOP GRILL OR JUMPER DUCT
- THIS FAN DENOTES THE WHOLE HOUSE VENTILATION FAN. THE FAN TO RUN CONTINUOUSLY WHILE THE HOUSE IS OCCUPIED. CLEARLY LABEL NEXT TO THE SWITCH.
- CONNECT KITCHEN HOOD (MIN. 100 CFM) TO 1" KITCHEN HOOD EXHAUST AIR DUCT (MIN. 6"). THE HOOD MUST VENT TO THE EXTERIOR W/ BACKDRAFT DAMPER. VERIFY W/ ARCH OR OWNER BEFORE ROUGH IN.
- EXHAUST OUTLET TERMINATES 3' AWAY FROM OPENINGS INTO THE BUILDING AND 3' AWAY FROM THE PROPERTY LINE. SEE CIVIL DRAWINGS AND ARCHITECTURAL DRAWINGS FOR PROPERTY LINE DETAILS.



HVAC PLAN - FIRST FLOOR

SCALE: 1/4"=1'-0"

PRESCRIPTIVE DUCT SIZING REQUIREMENTS (FROM ASHRAE 62.2)
IN ORDER TO COMPLY WITH THE PRESCRIPTIVE DUCT SIZING REQUIREMENTS OF ASHRAE 62.2 A VENTILATION FAN MUST BE SELECTED THAT IS RATED TO PROVIDE AT A MINIMUM THE REQUIRED VENTILATION AIRFLOW AT 0.25 IN.W.G. AND THE DUCTS MUST BE SIZED IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN IN TABLE T.1 BELOW.

TABLE T.1

Duct Type	Flex Duct				Smooth Duct			
	50	80	100	125	50	80	100	125
Fan Rating (cfm @ 0.25" w.g.)								
	Maximum Allowable Duct Length (ft)							
Diameter (in)	Flex Duct				Smooth Duct			
3	X	X	X	X	5	X	X	X
4	70	3	X	X	105	35	5	X
5	NL	70	35	20	NL	135	85	55
6	NL	NL	125	45	NL	NL	NL	145
7 and above	NL	NL	NL	NL	NL	NL	NL	NL

This table assumes no elbow. Deduct 15 ft of allowable duct length for each turn, elbow, or fitting. Interpolation and extrapolation in Table T.1 is not allowed. For fan ratings not listed, use the next higher value. This table is not applicable for fan ratings > 125cfm.
NL = no limit on duct length of this size.
X = not allowed, any length of duct of this size with assumed turns and fittings will exceed the rated pressure drop (0.25 in w.g.)
Note: water gauge(w.g.) is the same as water column(w.c.)

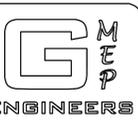
WHOLE UNIT VENTILATION CALCULATION (ASHRAE 62.2) CONTINUOUSLY

LOCATION	PLAN 1
FLOOR AREA (SQFT)	743
NO. OF BEDROOMS	2
VENTILATION RATE (CFM) = $0.09(\text{SQFT}) + 7.5(\text{BEDROOMS} + 1)$	46.3
DESIGNED VENTILATION (CFM)	60

REVISIONS

NO. DATE DESCRIPTION

SEAL



28439 Rancho Pkwy, S., Ste 120
Lake Forest, CA 92650
Tel: 949-287-9088

PROJECT NAME:

CHEN FARM

2740 FERGIJSON ROAD
GILROY, CA 95020

SHEET TITLE
MECHANICAL
HVAC PLAN - MANUFACTURED HOMES

DRAWN

CHECKED

GMEP

DATE

08/04/23

SCALE

AS NOTED

JOB NO.

23-598

SHEET

M-4.0

SCOPE OF WORK

NEW HOUSING WITH NEW PLUMBING, AND NEW BARN WITH NEW RESTROOM AND SUPPORTING PLUMBING.

NOTE: CONTRACTOR IS TO VERIFY EXISTING CONDITIONS BEFORE BID.



KEY PLAN

SCALE: NONE

FIXTURE SCHEDULE

ITEM	DESCRIPTION	MAKE/MODEL	TRAP	WASTE	VENT	COLD WATER	HOT WATER	REMARKS
WC-1	WATER CLOSET, TANK TYPE	KOHLER OR EQUAL	--	3"	2"	1/2"	-	1.25 GPM. VERIFY W/ OWNER OR ARCHITECT FOR EXACT FIXTURE SPECIFICATION BEFORE PURCHASING FIXTURE
WC-2	WATER CLOSET, TANK TYPE	KOHLER OR EQUAL	--	3"	2"	1/2"	-	1.25 GPM. VERIFY W/ OWNER OR ARCHITECT FOR EXACT FIXTURE SPECIFICATION BEFORE PURCHASING FIXTURE
L-1	LAVATORY	KOHLER OR EQUAL	1-1/2"	2"	1-1/2"	1/2"	1/2"	1.2 GPM FAUCET. VERIFY SELECTION W/ ARCH & OWNER.
L-2	LAVATORY	KOHLER OR EQUAL	1-1/2"	2"	1-1/2"	1/2"	1/2"	1.2 GPM FAUCET. VERIFY SELECTION W/ ARCH & OWNER.
S-1	KITCHEN SINK	TBD	1-1/2"	2"	1-1/2"	1/2"	1/2"	1.8 GPM FAUCET. SELECTION TBD BY OWNER.
TUB-1	BATH TUB	TBD	1-1/2"	2"	1-1/2"	1/2"	1/2"	VERIFY W/ OWNER OR ARCHITECT FOR EXACT FIXTURE SPECIFICATION BEFORE PURCHASING FIXTURE
WD-1	WASHER/DRYER	TBD	2"	2"	1-1/2"	1/2"	1/2"	SELECTION TBD BY OWNER.
DW-1	DISHWASHER	TBD	-	-	-	-	1/2"	SELECTION TBD BY OWNER.
HBB-1	HOSE BIBB	TBD	-	-	-	3/4"	-	SELECTION TBD BY OWNER. PROVIDE ANTI-SIPHON DEVICE.
IWH-1	INSTA-HOT WATER HEATER	CHRONOMITE SR20L OR EQUAL	-	-	-	3/4"	3/4"	CHRONOMITE SR20L 120V 2400W 1 PHASE OR EQUAL. VERIFY W/ OWNER OR ARCHITECT FOR EXACT FIXTURE SPECIFICATION BEFORE PURCHASING FIXTURE

*PLUMBING FIXTURES MUST COMPLY WITH GREEN BUILDING STANDARDS

HYBRID WATER HEATER SCHEDULE

ITEM NO.	MANUFACTURER	MAKE/MODEL	CAPACITY	ENERGY FACTOR (EFFICIENCY)	ELEG DATA	UEF 1ST HOUR RATINGS (GPH)	SET POINT TEMPERATURE	DIMENSIONS	REMARKS
IWH-1	RHEEM OR EQUAL	PRO H40 T2 RH10BM	36 GALLONS	3.5	4.5 kWh 208/240V 1PHASE 30AMP	60	120° F	62.5"H (78.9"H W/DUCT) X 20.25"W	REFER TO WATER HEATER DETAIL.

TYPICAL WATER CALCULATIONS

STREET PRESSURE*: 65 MIN. / 75 MAX.

DESCRIPTION	UNIT	VALUE
3. 10 FT STATIC LOSS	PSI	4.3
4. MIN. PRESSURE REQUIRED	PSI	20.0
TOTAL LOSSES	PSI	24.3
5. MIN. STREET PRESSURE	PSI	65.0
7. PRESSURE AVAILABLE FOR FRICTION	PSI	40.7
8. ACTUAL LENGTH OF SYSTEM	FT	458
9. DEVELOPED LENGTH (130% OF ITEM 8)	FT	595.4
10. AVERAGE PRESSURE DROP	PSI/100FT	6.8

PEX PIPE SIZING CHART

FOR VELOCITY OF 1.0FPS (CW) AND 0.8FPS (HW); PRESSURE LOSS PER 100FT IN PSI=7.0

PIPE SIZE	COLD WATER		HOT WATER	
	TANK FU	GPM	TANK FU	GPM
1/2"	1	2.0	1	2.2
3/4"	6	5.1	6	5.1
1"	13	10.3	15	11.2
1-1/4"	25	17.6	28	19.3
1-1/2"	48	27.6	54	30.3
2"	160	51.1	134	51.9

BASED ON UPONOR AQUAPEX PRESSURE LOSS TABLES IN CH 4 OF THE PLUMBING DESIGN ASSISTANCE MANUAL

COPPER TYPE L PIPE SIZING CHART

FOR VELOCITY OF 0.8FPS (CW) AND 0.5FPS (HW); PRESSURE LOSS PER 100FT IN PSI=7.0

PIPE SIZE	COLD WATER			HOT WATER	
	TANK FU	F.V. FU	GPM	TANK FU	GPM
1/2"	2	-	2.5	2	2.5
3/4"	8	-	7	8	7
1"	21	-	15	16	12
1 1/4"	46	10	27	28	19
1 1/2"	99	33	43	46	27
2"	254	132	76	119	48
2 1/2"	455	329	115	245	74
3"	719	666	165	406	105
3 1/2"	1091	1091	220	585	140
4"	1668	1668	290	840	185

BASED ON CHART A 105.1(1) OF APPENDIX A IN THE CALIFORNIA PLUMBING CODE(CPC2022)

GENERAL PLUMBING NOTES

- EXISTING CONDITIONS ARE BASED ON LIMITED FIELD VERIFICATION. CONTRACTOR SHALL ADJUST TO ACTUAL FIELD CONDITIONS AT NO ADDITIONAL EXPENSE TO THE TENANT.
- ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS. PLUMBING CONTRACTOR SHOULD COORDINATE HIS WORK WITH ALL OTHER TRADES. THIS INCLUDES COORDINATING THE LOCATION AND SIZE OF ALL OPENINGS, LOCATIONS OF EQUIPMENT PAD, AND CHANGES OF ELEVATIONS.
- CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH DEMOLITION RESPONSIBLE TO BIDDING AND START OF WORK. CONTRACTOR IS RESPONSIBLE ALL EXISTING AS REQUIRED FOR INSTALLATION/CONSTRUCTION OF NEW WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. VERIFY LOCATION, ELEVATIONS, AND SIZES OF ALL EXISTING PLUMBING AND INFORM THE ARCHITECT OF ANY DISCREPANCIES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR ANY EXTRAS DUE TO CONTRACTOR'S FAILURE TO VISIT THE JOBSITE AND/OR PREDETERMINE ALL EXISTING CONDITIONS BEFORE SUBMITTING HIS BID. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT FOR RESOLUTION. NO EXCEPTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL UTILITY RUNS, UNDERGROUND AND ABOVE GROUND PIPING AND/OR OTHER IMPROVEMENTS LOCATED ON THE PREMISES. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COSTS RELATING TO THE RELOCATION OF, DAMAGE TO, REPAIR OF ANY EXISTING UTILITY RUNS AND/OR IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF WORK IN OR AROUND THE PREMISES.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SPECIFICATIONS, LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES. NO EXCEPTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREPARE ACCURATE AS-BUILT DRAWINGS DURING CONSTRUCTION AND SUBMIT FOR APPROVAL UPON COMPLETION OF INSTALLATION.
- CONTRACTOR SHALL FINISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES REQUIRED FOR COMPLETING THE WORK. ALL MATERIALS AND WORK SHALL COMPLY WITH APPLICABLE CODES AND REGULATIONS AND MEET THE APPROVAL OF STATE & LOCAL JURISDICTION.
- WATER HEATER SHALL BE CERTIFIED BY THE MANUFACTURER AND MUST COMPLY WITH THE EFFICIENCY STANDARDS OF THE CALIFORNIA ENERGY COMMISSION, 2019 EDITION.
- ALL HOT WATER PIPING SHALL BE INSULATED WITH ARMSTRONG 'ARMAFLEX' INSULATION PER SECTION 609.12 OF THE 2022 PLUMBING CODE AND TABLE 120.3-A, SECTION 120.3 OF THE 2022 CALIFORNIA ENERGY CODE.
- CONTRACTOR SHALL VERIFY WATER PRESSURE CONDITIONS AT THE PROJECT SITE. CONTRACTOR SHALL PROVIDE INSTALL A PRESSURE REGULATOR WHERE THE SUPPLY PRESSURE EXCEEDS 80 PSI.
- ALL PIPING SHALL BE SUPPORTED AT INTERVAL NOT TO EXCEED THOSE SHOWN IN CPC TABLE 313.3
- ALL POTABLE WATER OUTLETS WITH HOSE ATTACHMENTS, SUCH AS HOSE BIBBS, AND MOP SINKS ARE TO BE PROVIDED WITH A BACKFLOW/ANTI-SIPHON DEVICE.
- ALL CONCEALED PIPING SHALL BE INSTALLED PER CALIFORNIA PLUMBING CODE 2022. NO EXCEPTION.
- LAVATORIES IN PUBLIC RESTROOMS SHALL BE LIMITED TO 0.56GPM
- ALL FAUCETS SHALL COMPLY WITH CALIFORNIA PROPOSITION 65 AND SHALL BE CERTIFIED TO NSF STANDARD 61 SECTION 4 FOR DRINKING WATER COMPONENTS.
- ALL REQUIRED CLEANOUTS SHALL BE INSTALLED AS PER SEC. 707.0 & 714.0 OF THE 2022 CALIFORNIA PLUMBING CODE.
- FLOOR DRAINS OR SIMILAR TRAPS DIRECTLY CONNECTED TO THE DRAINAGE SYSTEM AND SUBJECT TO INFREQUENT USE SHALL BE PROVIDED WITH AN APPROVED AUTOMATIC MEANS OF MAINTAINING THEIR WATER SEALS.
- NEW WATER CLOSET AND ASSOCIATED FLUSHMETER VALVES SHALL BE NO MORE THAN 1.25 GALLONS PER FLUSH AND SHALL MEET THE AMERICAN STANDARDS INSTITUTE STANDARD A11.21.2 H45 CODE, SECTION 119.21.3(B).
- NEW URINALS AND ASSOCIATED FLUSHMETER VALVES SHALL BE NO MORE THAN 0.125 GALLONS PER FLUSH AND SHALL MEET THE AMERICAN STANDARDS INSTITUTE STANDARD A11.21.2 H45 CODE, SECTION 119.21.3(B).
- ALL PLUMBING VENTS SHALL TERMINATE NOT LESS THAN TEN(10) FEET FROM OR AT LEAST THREE (3) FEET ABOVE ANY DOOR, OPENING, FRESH AIR INTAKE OR VENT SHAFT.
- SLOPE ALL CONDENSATE DRAIN LINES AT 1% AND SLOPE ALL SEWER PIPING MINIMUM OF 2%.
- WASTE & VENT PIPING MATERIAL: SHALL BE ABS/PVC OR AB#1 SERVICE WEIGHT CAST IRON NO-HUB SOIL PIPE AND FITTINGS WITH NO-HUB CLAMPS. MUST CONFORM TO CISPI STANDARD 301.04g & 310.04 AND CLEARLY MARKED WITH THE CAST IRON SOIL PIPE INSTITUTE TRADEMARK. MANUFACTURER'S NAME AND COUNTRY OF ORIGIN. ABS/PVC CAN BE USED IF ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.
- WRAP ALL IRON AND COPPER PIPE AND FITTINGS BELOW SLAB OR GRADE WITH 8 MIL POLYETHYLENE WRAP AND 6" MINIMUM ENVELOPE OF CLEAN SAND. ALL ROUND PIPE IN ACCORDANCE WITH NSF/ANWA STANDARD G105/A21.5-82.
- WATER PIPE SHALL BE TYPE "L" ABOVE GRADE, HARD DRAWN COPPER TUBING, WITH WROUGHT COPPER FITTINGS, SOLDER ALL JOINTS WITH LEAD-FREE SOLDER.
- CONDENSATE DRAIN PIPE SHALL BE TYPE "DWN" HARD DRAWN COPPER TUBING WITH WROUGHT COPPER FITTINGS, 50-50 SOLDERED JOINTS. INSULATE ALL CONDENSATE DRAIN PIPING WITHIN BUILDING INTERIOR.
- NEW OR REPAIRED PORTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE ACCORDING TO THE METHODS IN CPC 2022 609.10. NO EXCEPTION.
- CONTRACTOR TO PROVIDE THERMOSTATIC MIXING VALVES FOR PUBLIC-USE LAVATORIES TO LIMIT TEMPERATURE TO A MAXIMUM OF 120 DEGREES FAHRENHEIT (2022 CPC 407.3).
- THIS DOCUMENT IS NOT FOR BID OR CONSTRUCTION UNTIL THE PLAN HAS BEEN REVIEWED AND APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND THE PERMIT IS OBTAINED. NO COMPENSATION WILL BE MADE FOR ADDITIONAL WORK DUE TO THE VIOLATION OF THIS REQUIREMENT.
- THIS PROJECT MUST COMPLY WITH THE CALIFORNIA PLUMBING CODE 2022.

PIPING SYMBOLS

SYMBOL	MEANING	SYMBOL	MEANING
---	DOMESTIC COLD WATER	⊠	FLOOR SINK
----	DOMESTIC HOT WATER	⊕	FLOOR CLEANOUT
----	DOMESTIC H.V. CIRCULATING	⊖	WALL CLEANOUT
----	SANITARY SEWER	⊙	FLOOR DRAIN
----	VENT PIPING	⊠	GAS COCK
----	STORM DRAIN PIPING	TUB-1	PLUMBING FIXTURE
----	GREASE WASTE	⊗	CONNECT TO EXISTING
---	GAS	⊗	SHUT-OFF VALVE
---	CONDENSATE DRAIN	⊗	RECIRCULATION PUMP
		⊥	PIPE CAP
		⊥	PIPE ELBOW DOWN
		⊥	PIPE ELBOW UP

FIXTURE UNIT CALCULATIONS FOR BARN

FIXTURE TYPE	QTY	DOMESTIC WATER			DRAINAGE		
		FIXTURE DEMAND	HOT DEMAND	TOTAL WATER DEMAND (WDFU)	TOTAL HOT WATER DEMAND	DFU	TOTAL
WATER CLOSET, FLUSH TANK	1	3.0	0.0	3.0	0.0	4	4
LAVATORY	1	1.0	1.0	1.0	1.0	1	1
HOSE BIBB	1	2.5	0.0	2.5	0.0	1	1
TOTAL FIXTURE UNITS		6.5	1.0				6
EQUIVALENT WATER DEMAND IN GPM		4	2				
REQUIRED MINIMUM PIPE SIZE		3/4"	1/2"				2"

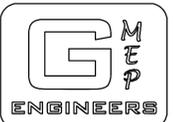
FIXTURE UNIT CALCULATIONS FOR MANUFACTURED HOUSES (3)

FIXTURE TYPE	QTY	DOMESTIC WATER					DRAINAGE			
		COLD WATER FIXTURE UNITS (CWFU)	HOT WATER FIXTURE UNITS (HWFU)	75% COLD WATER DEMAND	75% HOT WATER DEMAND	TOTAL COLD WATER DEMAND (CWFU)	75% TOTAL COLD WATER DEMAND (CWFU)	75% TOTAL HOT WATER DEMAND (HWFU)	DRAINAGE FIXTURE UNITS (DFU)	TOTAL (DFU)
WATER CLOSET, TANK TYPE	2	2.5	0.0	-	0.0	5.0	5.0	0.0	3	6
BATH TUB	2	4.0	4.0	3.0	3.0	8.0	6.0	6.0	2	4
LAVATORY	2	1.0	1.0	0.75	0.75	2.0	1.5	1.5	1	2
DISHWASHER	1	1.5	1.5	-	1.5	1.5	0.0	1.5	0	0
CLOTHES WASHER	1	4.0	4.0	3.0	3.0	4.0	3.0	3.0	3	3
KITCHEN SINK	1	1.5	1.5	1.125	1.125	1.5	1.125	1.125	2	2
HOSE BIBB	1	2.5	0.0	-	0.0	2.5	2.5	0.0	0	0
HOSE BIBB (EACH ADDITIONAL)	2	1.0	0.0	-	0.0	2.0	2.0	0.0	0	0
TOTAL FIXTURE UNITS		24.5	14.25	13.125	13.125					17
EQUIVALENT WATER DEMAND IN GPM		18	14	11						
REQUIRED MINIMUM PIPE SIZE		1-1/4"	1-1/4"	1"						3"

REVISIONS

NO.	DATE	DESCRIPTION

SEAL



28439 Rancho Pkwy. S. Ste 120
Lake Forest, CA 92650
Tel 949-287-6088

PROJECT NAME:

CHEN FARM

2740 FERGUSON ROAD
GILROY, CA 95020

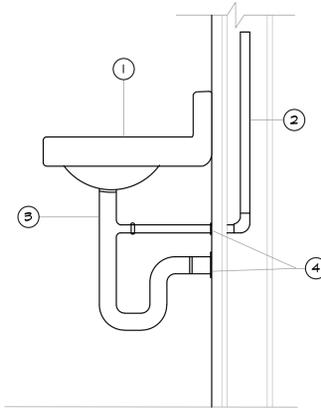
SHEET TITLE

PLUMBING
GENERAL NOTES

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P-1.0

PRIMARY CONDENSATE TERMINATION DETAIL



- KEYED NOTES:**
- ① LAVATORY OR SINK
 - ② 3/4" CONDENSATE PIPE
 - ③ TAILPIECE
 - ④ ESCUTCHEON PLATE
- NOTE:**
SEE ARCHITECT'S DRAWING FOR ACCESSIBLE REQUIREMENTS

SCALE: NONE

1

TYPICAL CONDENSATE PIPE DETAIL

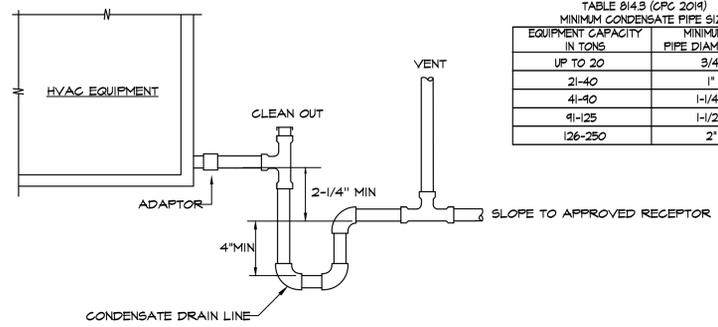


TABLE 814.3 (GPC 2019)
MINIMUM CONDENSATE PIPE SIZE

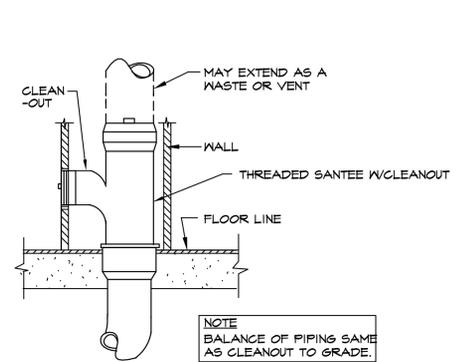
EQUIPMENT CAPACITY IN TONS	MINIMUM PIPE DIAMETER
UP TO 20	3/4"
21-40	1"
41-80	1-1/4"
81-125	1-1/2"
126-250	2"

- NOTES:**
1. ALL INTERIOR CONDENSATE DRAIN PIPING SHALL BE INSULATED
 2. SLOPE ALL CONDENSATE DRAIN LINES AT 1%.
 3. ROUTE CONDENSATE DRAIN TO TAILPIECE OF NEAREST LAVATORY OR OTHER APPROVED LOCATION
 4. ROUTE SECONDARY CONDENSATE DRAIN TO EXTERIOR OR PROVIDE A SHUT-OFF FLOAT SWITCH

SCALE: NONE

2

TYPICAL WALL CLEANOUT

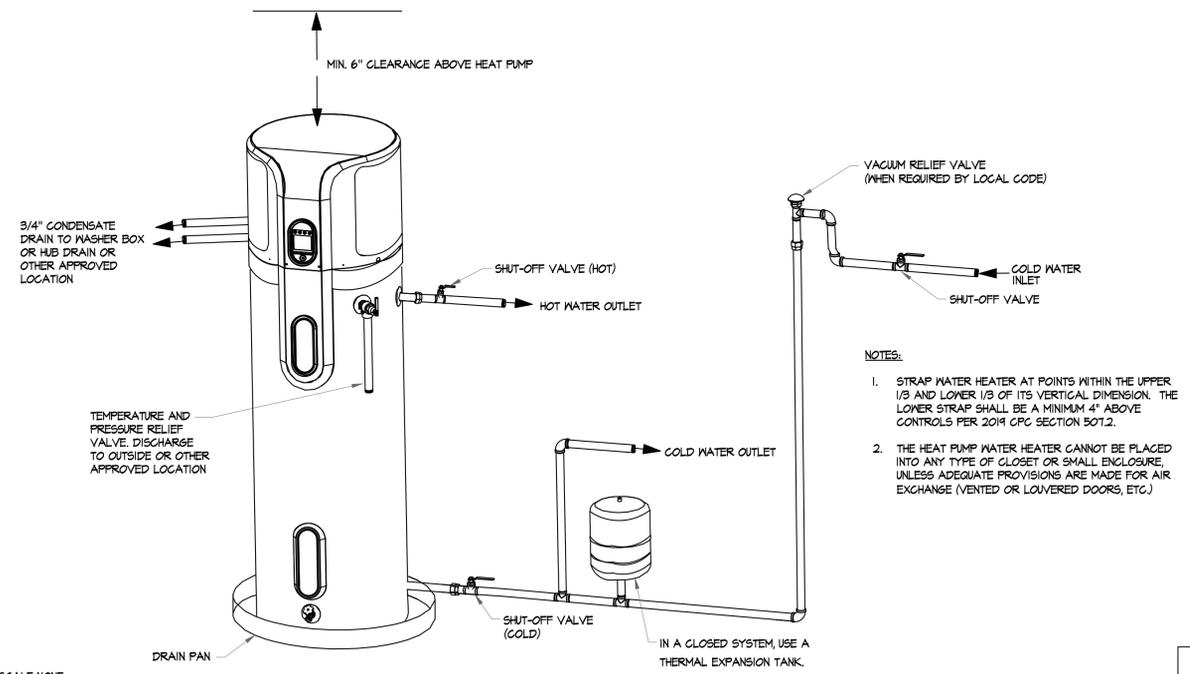


NOTE:
BALANCE OF PIPING SAME AS CLEANOUT TO GRADE.

SCALE: NONE

3

HEAT PUMP WATER HEATER DETAIL

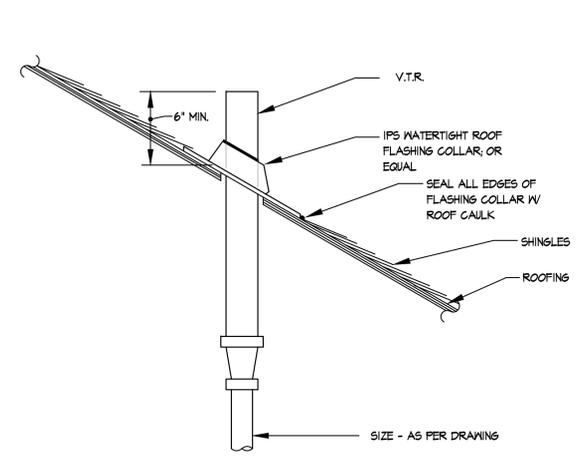


- NOTES:**
1. STRAP WATER HEATER AT POINTS WITHIN THE UPPER 1/3 AND LOWER 1/3 OF ITS VERTICAL DIMENSION. THE LOWER STRAP SHALL BE A MINIMUM 4" ABOVE CONTROLS PER 2019 GPC SECTION 501.2.
 2. THE HEAT PUMP WATER HEATER CANNOT BE PLACED INTO ANY TYPE OF CLOSET OR SMALL ENCLOSURE, UNLESS ADEQUATE PROVISIONS ARE MADE FOR AIR EXCHANGE (VENTED OR LOUVERED DOORS, ETC.)

SCALE: NONE

4

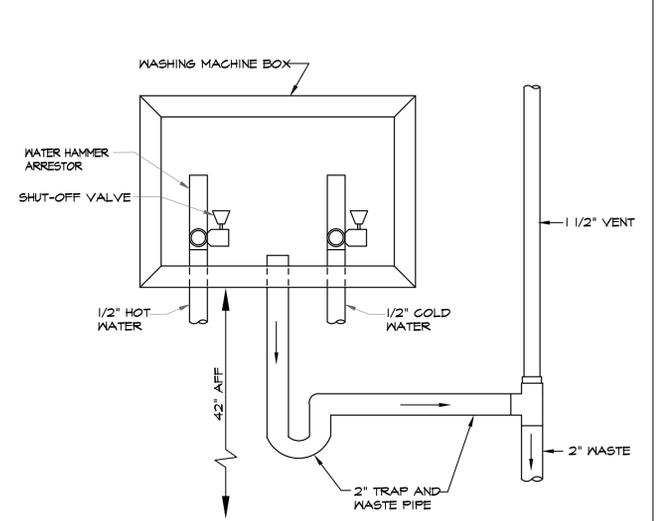
PLUMBING VENT THROUGH ROOF



SCALE: NONE

5

TYPICAL WASHING MACHINE BOX



SCALE: NONE

6

REVISIONS

NO.	DATE	DESCRIPTION



GMEP ENGINEERS

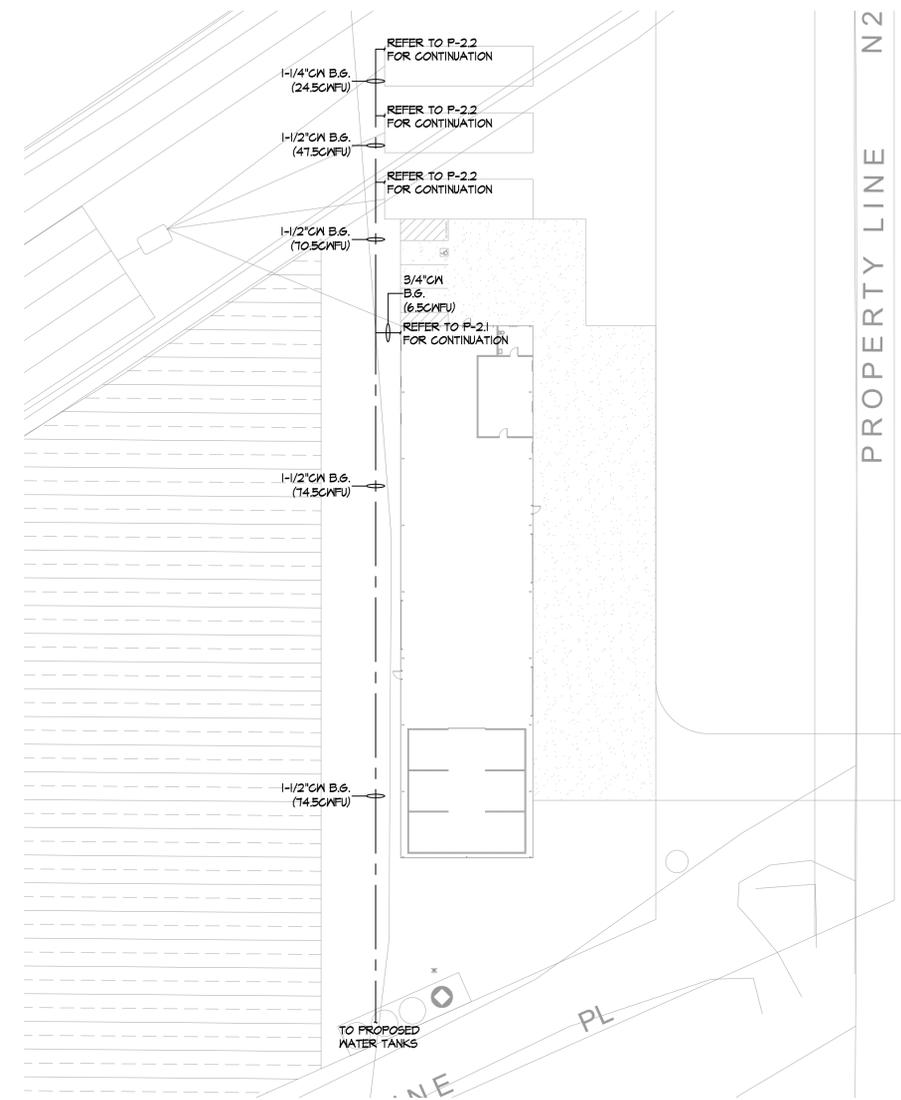
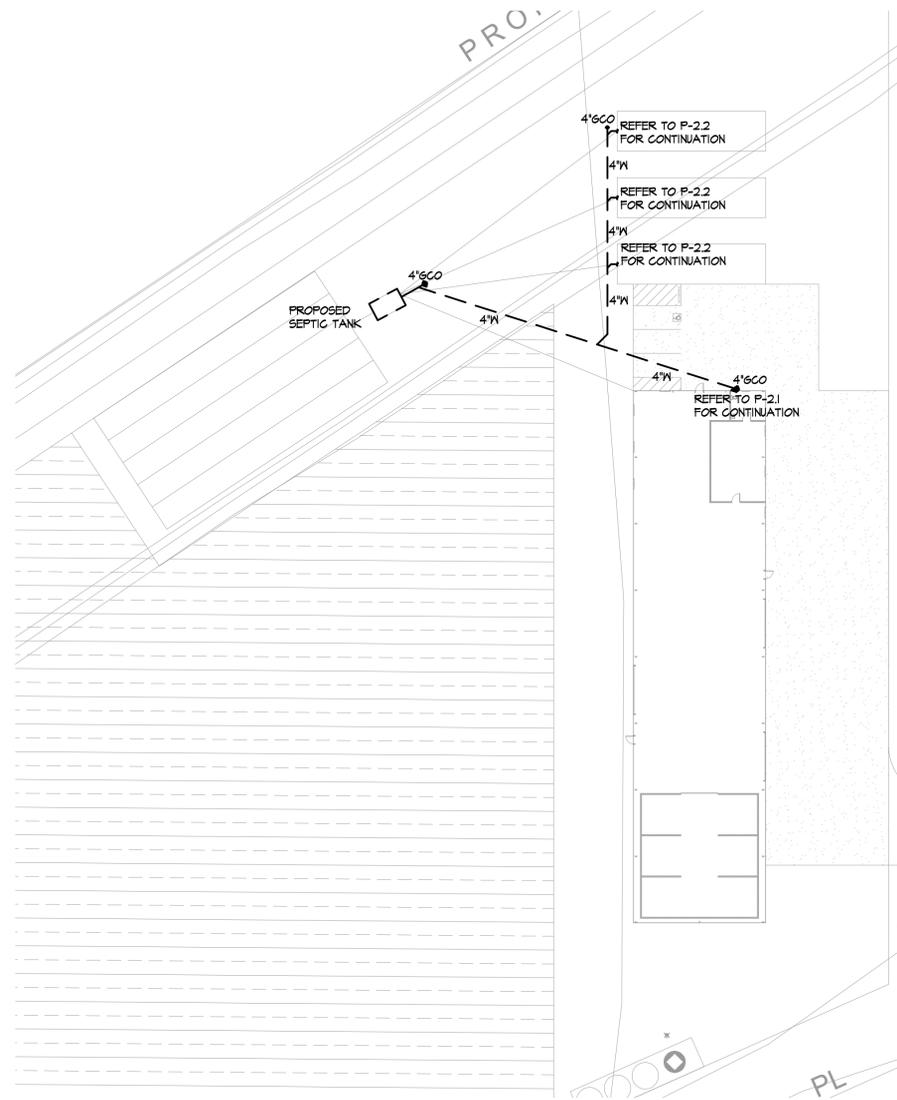
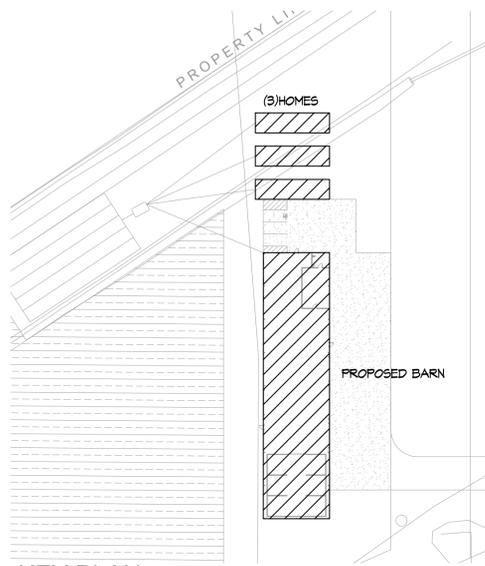
28439 Rancho Pkwy. S., Ste 120
Lake Forest, CA 92650
Tel: 949-267-6086

PROJECT NAME:
CHEN FARM
2740 FERGUSON ROAD
GILROY, CA 95020

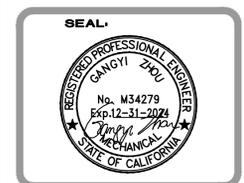
SHEET TITLE:
PLUMBING DETAILS

DRAWN: GMEP
CHECKED: GMEP
DATE: 08/04/23
SCALE: AS NOTED
JOB NO.: 23-598
SHEET:

P-1.1



REVISIONS		
NO.	DATE	DESCRIPTION

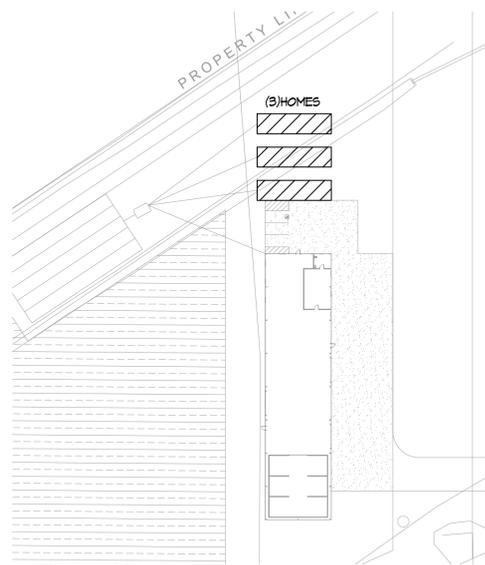


PROJECT NAME:
CHEN FARM
2740 FERGUSON ROAD
GILROY, CA 95020

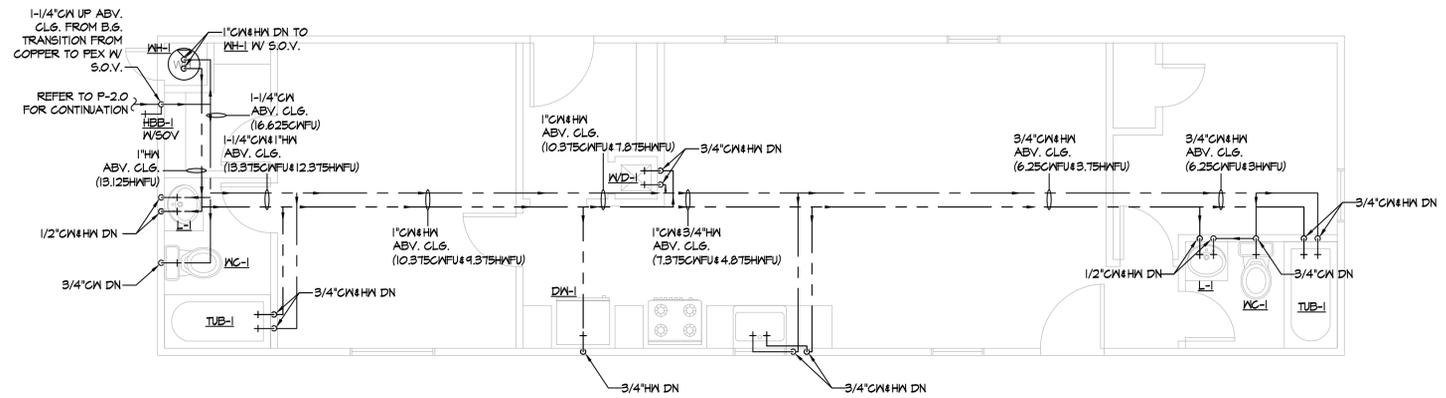
SHEET TITLE
**PLUMBING - SITE PLAN
COLD WATER
WASTE**

DRAWN: GMEP
CHECKED: GMEP
DATE: 08/04/23
SCALE: AS NOTED
JOB NO.: 23-598
SHEET:

P-2.0

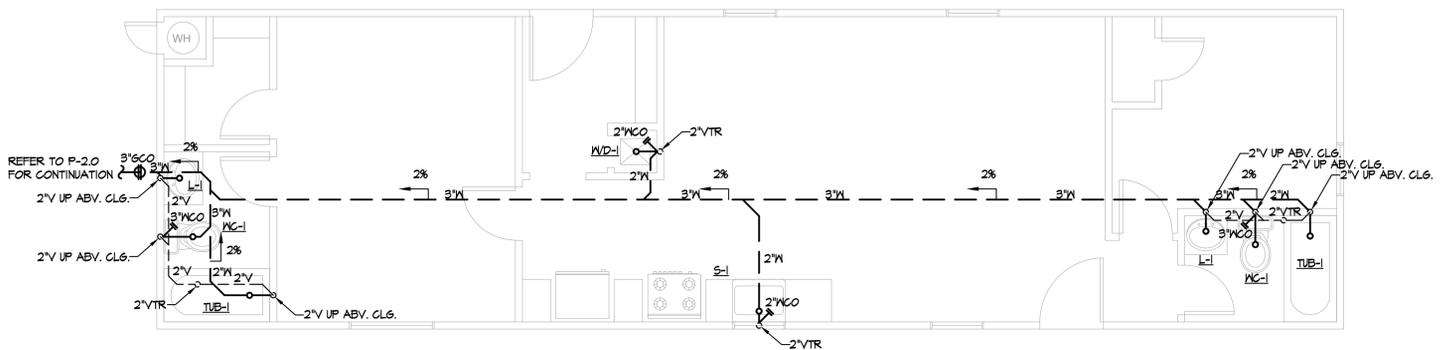


KEY PLAN
SCALE: NONE



PLUMBING - MANUFACTURED HOME (3) - COLD/HOT WATER

SCALE: 1/4"=1'-0"



PLUMBING - MANUFACTURED HOME (3) - WASTE & VENT

SCALE: 1/4"=1'-0"

REVISIONS		
NO.	DATE	DESCRIPTION



PROJECT NAME:

CHEN FARM
2740 FERGUSON ROAD
GILROY, CA 95020

SHEET TITLE

**PLUMBING - HOMES
COLD/HOT WATER
WASTE & VENT**

DRAWN	GMEP
CHECKED	GMEP
DATE	08/04/23
SCALE	AS NOTED
JOB NO.	23-598
SHEET	

P-2.2