CITY OF MORRO BAY

WATER RECLAMATION FACILITY PROJECT
LIFT STATIONS AND OFFSITE PIPELINES

90% SUBMITTAL
VOLUME 3 - DRAWINGS

VICINITY MAP
NTS

LOCATION MAP
NTS

FEBRUARY 2020

WATERWORKS
ENGINEERS

FOR INFORMATION REGARDING
THIS PROJECT CONTACT:

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CITY OF MORRO BAY
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GENERAL
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ABBREVIATIONS

A	AIR
@	AT
AB	ANCHOR BOLT, AGGREGATE BASE
AC	ASPHALTIC CONCRETE, ASBESTOS CEMENT
ACI	AMERICAN CONCRETE INSTITUTE
ACU	AIR CONDITIONING UNIT
ADD	ADDITIONAL
ADH AB	ADHESIVE ANCHOR BOLT
ADJ	ADJACENT, ADJUSTABLE
AE	ANALYZER ELEMENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AHP	AIR: HIGH PRESSURE
AIR	COMPRESSED AIR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AIT	ANALYZER INDICATOR/TRANSMITTER
AL, ALUM	ALUMINUM
ALP	AIR LOW PRESSURE
ALTN	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
APVD	APPROVED
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AR	AERATION
ARCH, A	ARCHITECTURAL
ARV	AIR RELEASE VALVE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	AIR/VACUUM ASSEMBLY
AVE	AVENUE
AWG	AMERICAN WIRE GAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
AX	
B	BORING
BAV	BALL VALVE
BC	BEGIN CURVE, BOTTOM OF CURB
BD	BLOW DOWN
BF	BLIND FLANGE, BOTTOM FACE
BFD	BUTTERFLY VALVE DAMPER
BFV	BUTTERFLY VALVE
BLDG	BUILDING
BLK	BLACK
BLM	BUREAU OF LAND MANAGEMENT
BM	BENCH MARK, BEAM
BO	BLOW OFF
BOC	BACK OF CURB
BOG	BACK OF GUTTER
BOO	BOTTOM OF OPENING
BOT	BOTTOM
BRG	BEARING
BVC	BEGINNING OF VERTICAL CURVE
BWD	BACKWASH DISPOSAL
BWI	BACKWASH IN
BWO	BACKWASH OUT
BYP	BYPASS
C to C, CC	CENTER TO CENTER
C	CHANNEL (BEAM)
CAA/ARV	COMBINATION AIR ADMISSION/
CARV	AIR RELEASE VALVE
CATH	COMBINATION AIR RELEASE VALVE CATHODIC PROTECTION
CATV	CABLE TELEVISION
CB	CATCH BASIN
CCP	CONCRETE CYLINDER PIPE
CCS	CENTRAL CONTROL SYSTEM
CE	CONDENSATE
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHEM	CHEMICAL
CI	CAST IRON
CIGC	CAST IRON GROOVED COUPLING
CIMJ	CAST IRON MECHANICAL JOINT
CIP	CAST IRON PIPE
CIRJ	CAST IRON RESTRAINED JOINT
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT, CONTRACTION JOINT
CL	CENTERLINE
CL2	CHLORINE
CLDIP	CEMENT-LINED DUCTILE IRON PIPE
CLG	CEILING
CLR	CLEAR, CLEARANCE
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CML, CSP	CONCRETE MORTAR LINED AND COATED STEEL PIPE
CMLSP	CEMENT MORTAR LINED STEEL PIPE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COM	COMMUNICATION
COMB	COMBINED
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS, CONTINUATION
COORD	COORDINATE
CPLG	COUPLING
CTRD, CTD	CENTERED
CTR	CENTER
CU	COPPER
CU FT	CUBIC FOOT
CU IN	CUBIC INCH
CU YD	CUBIC YARD
CULV	CULVERT
CWTP	CIRCULATING WATER
CWTP	CHAPARRAL WATER TREATMENT PLANT
CV	CHECK VALVE
°C	CELSIUS
d	PENNY
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DEC	DECANT
DET	DETAIL
DF	DOUGLAS FIR/LARCH
DI	DROP INLET, DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIL	DILUTE
DIM	DIMENSION
DIMJ	DUCTILE IRON MECHANICAL JOINT
DIP	DUCTILE IRON PIPE
DIPPL	DUCTILE IRON PIPE, POLYETHYLENE LINED
DIR	DIRECTION
DIST	DISTANCE
DN	DOWN
DR	DRAIN
do	DITTO
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
DWG	DRAWING
E	EAST, ELECTRIC, ELECTRICAL
EA	EACH
EC	END CURVE
ECC	ECCENTRIC
EE	ELECTRICAL
EF	EACH FACE, EXHAUST FAN
EFL	EFFLUENT
EG	EXISTING GRADE
EJ	EXPANSION JOINT
EL	ELEVATION
ELB, ELL	ELBOW
ELC	ELECTRICAL LOAD CENTER
ELEC	ELECTRIC, ELECTRICAL
EM	EMISSION MEASUREMENT
EMR	EMERGENCY
ENGR	ENGINEER
EO	EMERGENCY OVERFLOW
EP	EDGE OF PAVEMENT
EQ	EQUALIZATION
EQL SP	EQUALLY SPACED
EQPT	EQUIPMENT
ERW	EFFLUENT REUSE WATER
ESC	EROSION SEDIMENT CONTROL
ESA	ENVIRONMENTALLY SENSITIVE AREA
EVC	END OF VERTICAL CURVE
EVMWD	ELSINORE VALLEY MWD
EW	EACH WAY
EWEF	EACH WAY, EACH FACE
EXC	EXCAVATE
EXP	EXPOSED, EXPANSION
EXP JT	EXPANSION JOINT
EXST	EXISTING
FB	FLAT BAR
FBE	FUSION BONDE EPOXY
FC	FLEXIBLE COUPLING
FCA	FLANGED COUPLING ADAPTER
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FDA	FLOOR DRAIN W/INTEGRAL TRAP
FDN	FOUNDATION
FES	FLARED END SECTION
FEXT	FIRE EXTINGUISHER
FF	FINISH FLOOR
FG	FINISH GRADE, FUEL GAS
FHY	FIRE HYDRANT
FI	FLOW INDICATOR
FIG	FIGURE
FIL	FILTRATE
FL	FLOOR, FLOW LINE
FLG	FLANGE
FLH	FLAT HEAD
FLL	FLOW LINE
FLTR	FILTER
FM	FLOW METER
FNSH	FINISH
FO	FUEL OIL
FOC	FACE OF CONCRETE
FOE	FLANGED ONE END
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FINISHED SURFACE, FLOW SWITCH
FT	FOOT OR FEET
FTG	FOOTING
FWD	FORWARD
°F	DEGREE FAHRENHEIT
G	GAS
GA	GAGE
GAC	GRANULAR ACTIVATED CARBON
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
GC	GROOVED COUPLING
GCO	GRADE CLEAN OUT
GCF	GROOVED COUPLING FITTING
GD	GENERAL DRAINAGE
GE	GROOVED END
GL	GLASS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRTG	GRATING
GSP	GALVANIZED STEEL PIPE
GT	GAS TURBINE
GV	GATE VALVE
GVL	GRAVEL
GW	GROUND WATER
HD	HUB DRAIN
HDG	HOT-DIP GALVANIZING
HDPE	HIGH DENSITY POLYETHLENE PIPE
HDR	HEADER
HDW	HARDWARE
HF	HIGH PRESSURE FEEDWATER
HGL	HYDRAULIC GRADE LINE
HGT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPT	HIGH POINT
HR	HANDRAIL
HSS	HIGH PRESSURE STREAM, HOLLOW STRUCTURE STEEL
HV	HOSE VALVE
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRANT
IA	INSTRUMENT AIR
I&C	INSTRUMENTATION & CONTROL
ID	INSIDE DIAMETER
IF	INSIDE FACE, INTERMEDIATE PRESSURE FEEDWATER
IMLR	INTERNAL MIXED LIQUOR RETURN
IN	INCH
INFL	INFLUENT
INSTM	INSTRUMENTATION
INSUL	INSULATE, INSULATION
INV	INVERT
IP	IRON PIPE
IR	IRON ROD
IRR	IRRIGATION
IS	INTERMEDIATE PRESSURE STREAM
IW	INJECTION WATER
JT	JOINT
KIP	THOUSAND POUNDS
KW	KILOWATT
L	LEFT, ANGLE, LENGTH
LAB	LABORATORY
LAT'L	LATERAL
LB	POUNDS
LB/CU FT	POUNDS PER CUBIC FOOT
LE	LEVEL ELEMENT
LF	LINEAR FEET
LG	LONG
LIT	LEVEL INDICATOR/TRANSMITTER
LONG	LONGITUDINAL
LP	LOW POINT
LR	LONG RADIUS
LS	LOW PRESSURE STREAM
LT	LEVEL TRANSMITTER
LSH	LEVEL SWITCH HIGH
LSL	LEVEL SWITCH LOW
LWL	LOW WATER LEVEL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM, MINUTE
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MPH	MILES PER HOUR
MSNRY	MASONRY
MSP	MILL STEEL PIPE, MANUAL OF STANDARD PRACTICE
MTL	MATERIAL
MW	MAKE UP WATER
MWS	MAXIMUM WATER SURFACE
N	NORTH
NC	NORMALLY CLOSED
NE	NORTHEAST
NH	AMMONIA
NIC	NOT IN CONTRACT
NO	NUMBER, NUMBERING
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OD	OUTSIDE DIAMETER, OVERFLOW DRAIN
OF	OUTSIDE FACE, OVERFLOW
OFR	OVERFLOW RETURN
OG	ORIGINAL GROUND
OHE	OVERHEAD ELECTRIC
OMRF	ORDINARY MOMENT RESISTING FRAME
O TO O	OUT TO OUT
OPNG	OPENING
OPP	OPPOSITE
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMIN.
OZ	OUNCE
PA	PROCESS AIR
PC	POINT OF CURVE
PE	PLAIN END, POLYETHYLENE, PERMANENT EASEMENT
PENT	PENETRATION
PI	POINT OF INTERSECTION
PJF	PREMOLDED JOINT FILLER
PL	PLATE, PROPERTY LINE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLYWD	PLYWOOD
PNL	PANEL
POB	POINT OF BEGINNING
POC	POINT OF CONNECTION
POE	POINT OF ENDING, PLAIN ONE END
PP, P&P	PLAN AND PROFILE, POWER POLE
PPM	PARTS PER MILLION
PRC	POINT OF REVERSE CURVE
PRCST	PRECAST
PREFAB	PREFABRICATED
PRESS	PRESSURE
PRC	POINT OF REVERSE CURVE
PRI	PRIMARY
PROP	PROPERTY
PRV	PRESSURE RELEASE VALVE
PR	PRESSATE
PS	PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH, GAUGE
PT	POINT OF TANGENCY
P.U.E.	PUBLIC UTILITY EASEMENT
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE PLASTIC, POINT OF VERTICAL CURVE
PVCGS	POLYVINYL CHLORIDE PLASTIC-GRAVITY SEWER TYPE
PVCW	POLYVINYL CHLORIDE PLASTIC-WATER DISTRIBUTION SERVICE TYPE
PVMT	PAVEMENT
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY, PRIVATE
PW	POTABLE WATER, PROCESS WATER
R, RAD	RADIUS
RBW	RECLAIMED BACKWASH
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD, ROOF DRAIN
RDCR	REDUCER
REF	REFER, REFERENCE
REINF	REINFORCED, REINFORCING, REINFORCE
REQD	REQUIRED
RJ	RESTRAINED JOINT
RLS	RUBBER LINED STEEL
RM	ROOM
RFCA	RESTRAINED FLANGED COUPLING ADAPTER
RMJ	RESTRAINED MECHANICAL JOINT
RO	ROUGH OPENING, REVERSE OSMOSIS
RP	RADIUS POINT
R/R	REMOVE AND REPLACE
RST	REINFORCING STEEL
RT	RIGHT
RTN	RETURN WATER
RV	ROOF VENT
RW	RAW WATER
R/W	RIGHT-OF-WAY
S	I-BEAM, SOUTH, SLOPE
S =	SLOPE EQUALS
SA	SERVICE AIR
SAT	SUSPENDED ACOUSTIC TILE
SC	SCUM
SCFH	STANDARD CUBIC FEET PER HOUR
SCFM	STANDARD CUBIC FEET PER MINUTE
SCH	SCHEDULE
SD	STORM DRAIN
SDS	SECONDARY DIGESTED SLUDGE
SE	SOUTHEAST
SEC	SECONDARY
SECT	SECTION
SHC	SODIUM HYPOCHLORITE
SH	SHEET
SIM	SIMILAR
SL	SLUDGE
SLG	SLUDGE
SLMH	SLUDGE MANHOLE
SLP	SLOPE
SMP	SAMPLE
SOLN	SOLUTION
SOW	SLIP ON WELD
SP	SPACE OR SPACES
SPD	SUMP PUMP DRAIN
SPEC	SPECIFICATIONS
SPLY	SUPPLY
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SS	SANITARY SEWER
SSH	SAFETY SHOWER
SSMH	SANITARY SEWER MANHOLE
ST	SAMPLE TAP, STEAM TURBINE
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STIF	STIFFENER
STL	STEEL, STEEL PIPE
STLS	STEEL PIPE (SPECIAL)
STR	STRAIGHT
STRL	STRUCTURAL
STRUCT	STRUCTURE
SUBFL	SUBFLOOR
SUP	SUPERNATANT, SUPPLY
SUSP	SUSPEND
SW	SOUTHWEST, SERVICE WATER
SYMM	SYMMETRICAL
T	TANGENT, TELEPHONE LINE, TOP
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
t, T	THICKNESS
TBG	TUBING
TCE	TEMPORARY CONST EASEMENT
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERATURE
TF	TOP FACE
THD	THREAD
THK	THICK
TNK	TANK
TOC	TOP OF CURB, TOP OF CONCRETE
TOW	TOP OF WALL
TOF	TOP OF FOOTING
TP	TURNING POINT, TEST PIT
TRANS	TRANSITION
TRANSV	TRANSVERSE
TS	TUBE STEEL
TST	TOP OF STEEL
TT	THRUST TIE
TURB	TURBIDITY
TW	TREATED GROUND WATER
TWS	TRACER WIRE STATION
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UD	UNDERDRAIN
UG	UNDERGROUND
UH	UNIT HEATER
UNK	UNKNOWN
UNO	UNLESS NOTED OTHERWISE
V	VENT, VOLT, VALVE
VAC	VACUUM
VAR	VENT ACID RESISTANT
VC	VERTICAL CURVE
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VPI	VERTICAL POINT OF INTERSECTION
VPS	VENEER PLASTER SYSTEM
VTR	VENT THRU ROOF
W/	WITH
W	WIDE FLANGE (BEAM), WEST, WATER
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER
WM	WATER METER
WR	WATER RESISTANT
WS	WATER SURFACE, WATER STOP
W SH ST	WEATHERING SHEET STEEL
WSE	WATER SURFACE ELEVATION
WSP	WELDED STEEL PIPE
WT	WATER TIGHT
WTR	WATER
WW	WASH WATER, WASTEWATER
WWF	WELDED WIRE FABRIC
XMFR	TRANSFORMER
YD	YARD

NOTES:

1. FOR ELECTRICAL AND INSTRUMENTATION ABBREVIATIONS, SEE ELECTRICAL AND INSTRUMENTATION DRAWINGS.
2. CONTACT THE ENGINEER FOR ABBREVIATIONS NOT LISTED.
3. THIS IS A STANDARD LEGEND SHEET, THEREFORE, SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

WATERWORKS ENGINEERS
1485 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

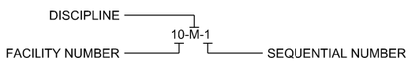
GENERAL
ABBREVIATIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-3
SHEET NUMBER 3

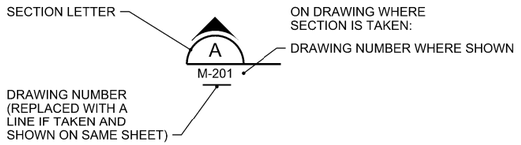
DISCIPLINE

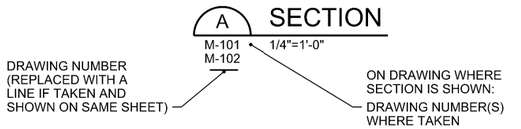
LETTER	DISCIPLINE
A	ARCHITECTURAL
C	SITE CIVIL
CD	CIVIL DETAILS
D	DEMOLITION
E	ELECTRICAL
G	GENERAL
H	HEATING, VENTILATION AND COOLING
I	INSTRUMENTATION
M	MECHANICAL
P	PLUMBING
PP	PIPELINE PLAN AND PROFILE
S	STRUCTURAL
Y	YARD PIPING

DRAWING NUMBER

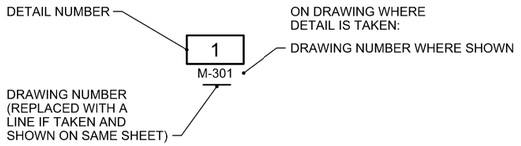


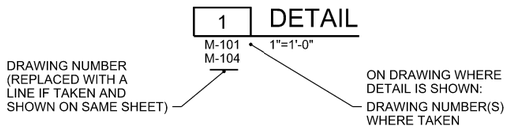
SECTION



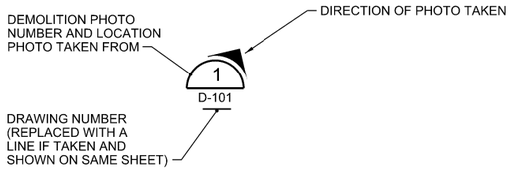


DETAIL

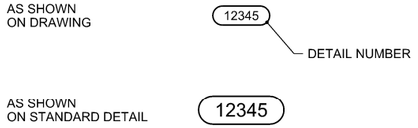




DEMOLITION PHOTO



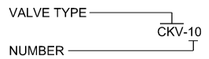
STANDARD DETAIL



NOTES:

1. STANDARD DETAIL CALLOUTS ARE SHOWN TO INDICATE DETAIL REQUIRED AT SPECIFIC LOCATIONS. DETAILS ARE NOT CALLED OUT AT ALL LOCATIONS. WHERE A STANDARD DETAIL CALLOUT IS NOT SHOWN, THE CONTRACTOR SHALL USE THE STANDARD DETAIL MOST APPLICABLE AND CONSISTENT WITH OTHER WORK UNDER THIS CONTRACT.

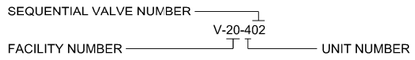
STANDARD VALVE AND OPERATOR



NOTES:

1. SEE SPECIFICATION SECTION 15200.

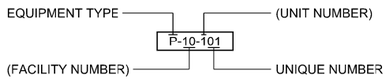
UNIQUE VALVE AND OPERATOR



NOTES:

1. SEE SPECIFICATION SECTION 15200 FOR VALVE SCHEDULE.

EQUIPMENT DESIGNATION



LINE TYPE APPEARANCE

———	BLACK	NEW 'ON' DISCIPLINE
———	LIGHT OR MEDIUM GRAY OR SCREENED	EXISTING 'ON' OR 'OFF' DISCIPLINE
———	DARK GRAY	NEW 'OFF' DISCIPLINE

GENERAL SYMBOLOGY

	STRUCTURE OR EQUIPMENT TO BE SALVAGED OR DEMOLISHED
	PIPE TO BE SALVAGED OR DEMOLISHED
*	EQUIPMENT COMPONENTS OR PANELS SHOWN WITH A SINGLE ASTERISK (*) ARE TO BE PROVIDED AS PART OF A PACKAGE SYSTEM.

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED ENGINEER
DRAWN J MARTIN
CHECKED CHECKED-BY
APPROVED M FISHER

WATERWORKS ENGINEERS
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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

GENERAL
GENERAL DESIGNATIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-4
SHEET NUMBER 4

CIVIL LEGEND

EL 158.5 — EL 158.5	SPOT ELEVATION
155	CONTOUR LINE
4:1	CUT SLOPE (HORIZ:VERT)
4:1	EMBANKMENT - FILL SLOPE (HORIZ:VERT)
	DRAINAGEWAY OR DITCH
	DIRECTION OF FLOW
	CENTER LINE, BUILDING, ROAD
	PROPERTY LINE
	RIGHT OF WAY, EASEMENT OR SETBACK
	STAGING OR WORK AREA LIMITS
N 1000.00 E 1000.00	STRUCTURE, BUILDING OR FACILITY LOCATION POINT COORDINATES
OR	STRUCTURE, BUILDING OR FACILITY
	RETAINING WALL
	CONCRETE CURB
	ARCHITECTURAL FENCE
	GUARD RAIL/BARRICADE
OX	CHAIN LINK FENCE WITH 3 STRAND BARBED WIRE TOPPING
	ARCHITECTURAL FENCE
	CHAIN LINK FENCE
X X	BARBED WIRE
X X	SINGLE SWING GATE
	DOUBLE SWING GATE
	SLIDING GATE
	CULVERT
	FIRE HYDRANT
	WALL
	BRUSH/TREE LINE
	TREE
OR OR	DEMOLITION
	ABANDON IN PLACE
	AUTOMATIC AIR RELEASE VALVE
	MANUAL AIR RELEASE VALVE
	WATER SURFACE
GB	GRADE BREAK

CIVIL LEGEND (CONTINUED)

	BEDROCK
	ROCKS OR RIPRAP
	SAND
	AGGREGATE BASE
	NATURAL SOIL
	COMPACTED SOIL
	CONCRETE
	GROUT
	CONTROLLED LOW STRENGTH MATERIAL (CLSM)
	PAVEMENT
	GRATING

MAPPING LEGEND

	AIR RELEASE VALVE
	ASPHALT PAVEMENT
	BOLLARD
CT	CABLE TELEVISION
	CATCH BASIN
EM	ELECTRIC METER
EP	ELECTRIC PULLBOX
ER	ELECTRIC RISER
ES	ELECTRIC SWITCHBOX
ET	ELECTRIC TRANSFORMER
	FIRE HYDRANT
	GAS VALVE
	GRAY PVC CONDUIT PIPES
	GUARD POST
	GUY WIRE
IB	IRRIGATION BOX
	IRRIGATION VALVE
	LIGHT POLE WITH NO ARM
	LIGHT POLE WITH ARM ATTACHED TO UTILITY POLE
	REBAR
R/W	RIGHT-OF-WAY
	SEWER CLEANOUT
S	SEWER MANHOLE
	SOLAR PANEL
	STORM DRAIN MANHOLE
	STREET SIGN
	SURVEY CONTROL POINT OR POINT OF INTERSECTION
	TELEPHONE BOX
	TRAFFIC CONTROL BOX
	TRAFFIC SIGNAL BOX
	TRAFFIC SIGNAL WITH ARM
	TRAFFIC SIGNAL WITH NO ARM
	TRAFFIC WALK SWITCH
	UTILITY POLE
	WATER VALVE
W	WATER MANHOLE
WM	WATER METER
	WELL

SITE UTILITIES IDENTIFICATION

Aband	ABANDON
TV	CABLE TELEVISON - OVERHEAD
T-BUR	CABLE TELEVISION - BURIED
UGE UGE	BURIED POWER
OHW OHW	OVERHEAD POWER
F/O	FIBER OPTIC
GAS GAS	NATURAL GAS
GS	NATURAL GAS SERVICE
O	PETROLEUM
SD	STORM DRAIN
SS SS	SANITARY SEWER
T-OVH	TELEPHONE - OVERHEAD
T-BUR	TELEPHONE - BURIED
W	WATER
IPR	INDIRECT POTABLE REUSE
BR	BRINE
FM1	SMALL FORCEMAIN
FM2	LARGE FORCEMAIN

NOTES:

1. EXISTING PIPING, EQUIPMENT, AND TOPOGRAPHY IS SHOWN SCREENEDAND/OR LIGHT-LINED. NEW PIPING, EQUIPMENT, STRUCTURE, AND FINISHED GRADE IS SHOWN HEAVY-LINED.
2. THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PLANS.

DESIGNED ENGINEER
DRAWN J.MARTIN
CHECKED CHECKED-BY
APPROVED M.FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

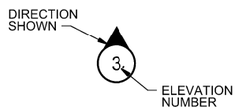
GENERAL
CIVIL LEGEND

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-5
SHEET NUMBER 5

PRELIMINARY NOT FOR CONSTRUCTION

ARCHITECTURAL LEGEND

INDICATES PAIR OF DOORS



EXTERIOR OR INTERIOR WALL ELEVATION

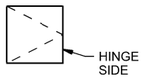
ROOM DESIGNATION

DOOR DESIGNATION

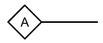
LOUVER DESIGNATION

WINDOW DESIGNATION

FIRE EXTINGUISHER



DOOR, HATCH, OR WINDOW HINGE LOCATION



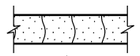
WALL TYPE DESIGNATION

NFPA SIGN

SIGN DESIGNATION

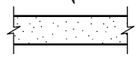
MATERIAL SYMBOLS

CONCRETE

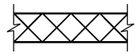


CMU PLAN

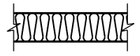
CMU SECTION



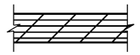
GYPSUM WALLBOARD



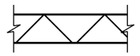
RIGID INSULATION



BATT INSULATION

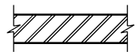


PLYWOOD



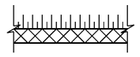
METAL STUD WALL

WOOD SECTION



STEEL

ACOUSTICAL TILE



CARPET

DOOR SCHEDULE						
DOOR NUMBER	DOOR DIMENSIONS	SILL DETAIL	EXIT DEVICE	WALL	CLOSURE	LOCK
1	3'-0" X 7'-2"	8110, TYPE B	NR	CMU	R	R
2	3'-0" X 7'-2"	8110, TYPE B	NR	CMU	R	R
3	3'-8" X 7'-10"	8110, TYPE B	NR	CMU	R	R
4	5'-8" X 7'-10" DBL	8110, TYPE B	NR	CMU	R	R
5	5'-8" X 7'-10" DBL	8110, TYPE B	NR	CMU	R	R

Notes:
1. INSTALL DOORS AND FRAMES IN ACCORDANCE WITH THE STEEL DOOR INSTITUTE'S RECOMMENDATIONS. PROVIDE TRIM AND JOINT SEALANT AROUND FRAMES TO INSURE A WEATHER
2. SEE SPEC SECTION 09700 - DOOR HARDWARE FOR ALL DOOR HARDWARE INCLUDING EXIT DEVICES AND PRIVACY LATCHES.
3. R= REQUIRED; NR= NOT REQUIRED

GENERAL ARCHITECTURAL NOTES:

1. UNLESS OTHERWISE NOTED, PLAN DIMENSIONS ARE TO NOMINAL SURFACE OF MASONRY, FACE OF STUDS AND FACE OF CONCRETE WALLS.
2. REPETITIVE FEATURES ARE NOT DRAWN IN THEIR ENTIRETY AND SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL.
3. VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT PROVIDED IN THIS CONTRACT, OR BY OTHERS.
4. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER CATEGORIES OF DRAWINGS FOR ADDITIONAL NOTES.
5. VERIFY SIZE AND LOCATION OF, AND PROVIDE: ALL OPENINGS THROUGH FLOORS AND WALLS, ACCESS DOORS, FURRING, CURBS, ANCHORS AND INSERTS. PROVIDE ALL BASES, BLOCKING REQUIRED FOR ACCESSORIES, MECHANICAL, ELECTRICAL AND OTHER EQUIPMENT.

2016 CALGREEN NON-RESIDENTIAL NOTES:

1. THE NON-RESIDENTIAL PROVISIONS OF THE 2016 CALGREEN CODE OUTLINE PLANNING, DESIGN AND DEVELOPMENT METHODS THAT INCLUDE ENVIRONMENTAL RESPONSIBLE SITE SELECTION, BUILDING DESIGN, BUILDING SITTING AND DEVELOPMENT TO PROTECT, RESTORE AND ENHANCE THE ENVIRONMENTAL QUALITY OF THE SITE AND RESPECT THE INTEGRITY OF ADJACENT PROPERTIES; ESTABLISHES THE MEANS OF CONSERVING WATER USED INDOORS, OUTDOORS AND IN WASTEWATER CONVEYANCE; OUTLINES MEANS OF ACHIEVING MATERIAL CONSERVATION AND RESOURCE EFFICIENCY; AND OUTLINES MEANS OF REDUCING THE QUANTITY OF AIR CONTAMINANTS.
2. SWPPP: DEVELOP A SWPPP COMPLIANT WITH STATE STORM WATER NPDES CONSTRUCTION PERMIT OR LOCAL ORDINANCE, WHICHEVER IS STRICTER PER CALGREEN 5.106.1.
3. GRADING AND PAVING: SITE GRADING AND DRAINAGE SYSTEM SHALL SLOPE AWAY FROM THE BUILDING PER THE CONSTRUCTION DRAWINGS AND CALGREEN 5.106.10.
4. WEATHER PROTECTION: PROVIDE A WEATHER-RESISTANT EXTERIOR WALL AND FOUNDATION ENVELOPE AS SHOWN IN THE CONSTRUCTION DRAWINGS AND AS REQUIRED BY CALIFORNIA BUILDING CODE SECTION 1403.2 AND CALIFORNIA ENERGY CODE SECTION 150, MANUFACTURER'S INSTALLATION INSTRUCTIONS OR LOCAL ORDINANCE, WHICHEVER IS MORE STRINGENT PER CALGREEN 5.407.1.
5. CONSTRUCTION WASTE MANAGEMENT: RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF NONHAZARDOUS CONSTRUCTION AND DEMOLITION DEBRIS OR MEET LOCAL ORDINANCE, WHICHEVER IS MORE STRINGENT PER CALGREEN 5.408.1.
6. CONSTRUCTION WASTE MANAGEMENT PLAN: WHERE A LOCAL JURISDICTION DOES NOT HAVE A CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE THAT IS MORE STRINGENT, SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN PER CALGREEN 5.408.1.1.
7. WASTE MANAGEMENT COMPANY: UTILIZE A WASTE MANAGEMENT COMPANY THAT CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH THE CONSTRUCTION WASTE MANAGEMENT. THE OWNER OR CONTRACTOR SHALL MAKE THE DETERMINATION IF THE CONSTRUCTION AND DEMOLITION WASTE MATERIAL WILL BE DIVERTED BY A WASTE MANAGEMENT COMPANY PER CALGREEN 5.408.1.2.
8. DOCUMENTATION: PROVIDE TO THE ENFORCING AGENCY WHICH DEMONSTRATES COMPLIANCE WITH CALGREEN SECTION 5.408.1.1 THROUGH 5.408.1.3. THE WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE ACCESSIBLE DURING CONSTRUCTION FOR EXAMINATION BY THE ENFORCING AGENCY PER CALGREEN 5.408.1.4.
9. EXCAVATED SOIL AND LAND CLEARING DEBRIS: 100 PERCENT OF TREES, STUMPS, ROCKS AND ASSOCIATED VEGETATION AND SOILS FROM LAND CLEARING SHALL BE REUSED OR RECYCLED PER CALGREEN 5.408.3.
10. TESTING AND ADJUSTING: TESTING AND ADJUSTING OF SYSTEMS SHALL BE REQUIRED FOR NEW BUILDINGS LESS THAN 10,000 SQUARE FEET OR NEW SYSTEMS TO SERVE AN ADDITION OR ALTERATION SUBJECT TO CALGREEN SECTION 303.1 PER CALGREEN SECTION 5.410.4.
11. SYSTEMS: DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS. SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE, AS APPLICABLE TO THE PROJECT HVAC AND LIGHTING AND CONTROLS PER CALGREEN 5.410.4.2.
12. PROCEDURES: PERFORM TESTING AND ADJUSTING PROCESS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, MANUFACTURER'S SPECIFICATIONS AND CALGREEN 5.410.4.3.
13. REPORTING: AFTER COMPLETION OF TESTING, ADJUSTING, AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THE SERVICES PER CALGREEN 5.410.4.4.
14. O & M MANUAL: PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O & M INSTRUCTIONS SHALL BE CONSISTENT WITH THE PROJECT SPECIFICATIONS, OSHA REQUIREMENTS IN CCR, TITLE 8 SECTION 5142, AND CALGREEN 5.410.4.5. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.

2016 CALGREEN NON-RESIDENTIAL NOTES (CONTINUED):

15. COVERING OF DUCT OPENING AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION: AT THE TIME OF ROUGH INSTALLATION OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM PER CALGREEN 5.504.3.
16. ADHESIVES, SEALANTS, CAULKS: ADHESIVES AND SEALANTS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS PER CALGREEN 5.504.4.1:
    a. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS, AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE, OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN CALGREEN TABLES 5.504.4.1 AND 5.504.4.2.
    b. AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN ONE POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.
17. PAINTS AND COATINGS: ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH CALGREEN TABLE 5.504.4.2 UNLESS MORE STRINGENT LOCAL LIMITS APPLY PER CALGREEN 5.504.4.3.
18. AEROSOL PAINTS AND COATINGS: AEROSOL PAINTS AND COATINGS SHALL MEET THE PWMIR LIMITS FOR ROC IN SECTION 94522(A)(3) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES IN SECTIONS 94522(C)(2) AND (D)(2) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520 PER CALGREEN 5.504.4.3.1.
19. VERIFICATION: VERIFICATION OF POLLUTANT CONTROL SHALL BE PROVIDED AT THE REQUEST OF THE ENFORCING AGENCY. DOCUMENTATION MAY INCLUDE, BUT IS NOT LIMITED TO, THE MANUFACTURER'S PRODUCT SPECIFICATION OR FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS PER CALGREEN 5.504.4.3.2.
20. INDOOR MOISTURE CONTROL: BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF CBC, CCR, TITLE 24, PART 2, SECTIONS 1203 (VENTILATION) AND CHAPTER 14 (EXTERIOR WALLS) PER CALGREEN 5.505.1.
21. OUTSIDE AIR DELIVERY: FOR MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS, MEET THE MINIMUM REQUIREMENTS OF SECTION 120.1 OF THE 2013 CEC, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8 PER CALGREEN 5.506.1.
22. CFCS: INSTALL HVAC AND REFRIGERATION EQUIPMENT THAT DOES NOT CONTAIN CFCS PER CALGREEN 5.508.1.1.

Pump Station A Flood Design Data

Flood Design Data (2016 CBC §1603.1.7 and §1612.5)

Flood Design Class = 3 (ASCE 24-14 Table 1-1)

FEMA Flood Zone = AE (FIRM Panel 813 dated May 16, 2017)

Base Flood Elevation (BFE) = 19.97ft

Electrical Building Finished Floor Elevation = 23.00 ft

Wet Well Lowest Floor Elevation = -9.50 ft

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED CHECKED-BY
APPROVED M FISHER

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1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

GENERAL
ARCHITECTURAL LEGEND AND MATERIAL SYMBOLS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-6
SHEET NUMBER 6

STRUCTURAL NOTES

DEFERRED SUBMITTALS:

1. PER 2016 CBC 107.3.4.1 THE FOLLOWING ITEMS, DRAWINGS AND CALCULATIONS, SHALL BE STAMPED BY AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT. ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW AND APPROVAL. FOLLOWING APPROVAL BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, THE CONTRACTOR SHALL SUBMIT THE ITEMS TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE STRUCTURE. THE CONTRACTOR SHALL NOT START FABRICATION OR ERECTION PRIOR TO REVIEW AND APPROVAL BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL TIME AND EFFORT REQUIRED TO OBTAIN A BUILDING OFFICIAL REVIEW/PERMIT FOR THE FOLLOWING PREFABRICATED STRUCTURAL COMPONENTS:
   - PRECAST CONCRETE ELEMENTS
   - HANDRAIL AND GUARDRAIL
   - PIPE SUPPORT SYSTEM
   - ANCHORAGE OF EQUIPMENT OVER 400 POUNDS
   - WOOD TRUSSES
   - PRE-ENGINEERED PIPE BRIDGE

DESIGN CRITERIA:

1. APPLICABLE CODE: 2016 CALIFORNIA BUILDING CODE (2015 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE STATE OF CALIFORNIA).

2. REFER TO THE SPECIFICATIONS FOR ADDITIONAL AND SPECIFIC STRUCTURAL LOADINGS AND REQUIREMENTS.

3. LIVE LOADS:
   - ROOF LIVE LOAD — 20 psf
   - WET WELL ROOF LIVE LOAD — 250 psf

4. WIND LOAD:
   - BASIC WIND SPEED (ASCE 7-10) — 115 mph
   - EXPOSURE CATEGORY — C
   - DESIGN METHOD — DIRECTIONAL PRCCEDURE

5. SEISMIC LOAD:
   - FACILITY 07 PIPE BRIDGE
     - RISK CATEGORY — III
     - IMPORTANCE FACTOR, I_e — 1.25
     - S_S: 1.152 — S_{DS}: 0.798
     - S_1: 0.426 — S_{D1}: 0.447
     - SITE CLASS — D
     - SEISMIC DESIGN CATEGORY — D
   - FACILITY 10 PUMP STATION A
     - RISK CATEGORY — III
     - IMPORTANCE FACTOR, I_e — 1.25
     - S_S: 1.158 — S_{DS}: 0.800
     - S_1: 0.427 — S_{D1}: 0.448
     - SITE CLASS — D
     - SEISMIC DESIGN CATEGORY — D
     -
   - FACILITY 20 PUMP STATION B
     - RISK CATEGORY — III
     - IMPORTANCE FACTOR, I_e — 1.25
     - S_S: 1.152 — S_{DS}: 0.798
     - S_1: 0.426 — S_{D1}: 0.447
     - SITE CLASS — D
     - SEISMIC DESIGN CATEGORY — D

6. LATERAL FORCE RESISTING SYSTEM:
   - FACILITY 10 & 20 ELECTRICAL BUILDING
     - SPECIAL REINFORCED MASONRY SHEAR WALLS
     - $V = C_sW$
     - $C_s = 0.200$
     - R = 5
     - ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE
   - FACILITY 10 & 20 WET WELLS
     - SPECIAL REINFORCED CONCRETE SHEAR WALLS
     - $V = C_sW$
     - $C_s = 0.200$
     - R = 5
     - ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE

GENERAL INFORMATION:

1. ALL CONSTRUCTION SHALL CONFORM TO THE 2016 EDITION OF THE BUILDING CODE.

2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO ALL SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE KEYED IN EACH LOCATION. CONSULT THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

3. VERIFY ALL OPENING DIMENSIONS IN WALLS, SLABS. AND DECKS WITH THE ARCHITECTURAL, MECHANICAL, HVAC AND ELECTRICAL DRAWINGS.

4. FOR NUMBER, TYPE, SIZE, ARRANGEMENT, AND/OR LOCATION OF EQUIPMENT PADS AND OPENINGS SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, HVAC AND PLUMBING DRAWINGS. COORDINATE ALL OPENINGS AND EQUIPMENT PADS WITH OTHER DISCIPLINES AND EQUIPMENT SUPPLIERS PRIOR TO PLACING SLABS, WALLS AND FOUNDATIONS.

5. NO STRUCTURAL MEMBER SHALL BE CUT FOR PIPES, DUCTS, ETC UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.

FOUNDATIONS:

1. IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT #217-053 BY YEH AND ASSOCIATES, INC., FOUNDATIONS HAVE BEEN DESIGNED FOR THE FOLLOWING VALUES:
   - ALLOWABLE BEARING, DEAD + LIVE LOADS — 2,000 psf
   - MINIMUM FOOTING EMBEDMENT — 18 INCHES
   - LATERAL EARTH PRESSURES (DRAINED)
     - ACTIVE — 35 pcf
     - AT-REST — 55 pcf
     - PASSIVE — 300 pcf
   - LATERAL EARTH PRESSURE (UNDRAINED)
     - ACTIVE — 80 pcf
     - AT-REST — 91 pcf
     - PASSIVE — 300 pcf
   - SLIDING FRICTION COEFFICIENT — 0.4
   - SURCHARGE, FINISH GRAED TO A DEPTH OF 10FT — 72 psf

2. NO BACKFILL SHALL BE PLACED BEHIND CANTILEVERED, FREE TOP WALLS UNTIL THE CONCRETE HAS ATTAINED 100% OF ITS SPECIFIED COMPRESSIVE STRENGTH.

3. NO BACKFILL SHALL BE PLACED BEHIND WALLS THAT ARE CONNECTED TO ELEVATED FLOOR OR ROOF SLABS OR DECKS UNTIL THE FLOOR OR ROOF SLAB HAS ATTAINED 100% OF ITS SPECIFIED COMPRESSIVE STRENGTH AND ALL ROOF AND FLOOR DECKING IS IN PLACE AND WELDED, SCREWED, OR NAILED AS APPROPRIATE.

4. GRADE TO DRAIN AWAY FROM STRUCTURES A MINIMUM GRADE OF 5% FOR A MINIMUM OF 10'-0" FROM STRUCTURE PERIMETER.

5. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AT LEAST 48 BUSINESS HOURS NOTICE FOLLOWING EXCAVATION FOR FOUNDATIONS AND PRIOR TO THE PLACEMENT OF FORMWORK, REINFORCING STEEL AND CONCRETE.

FORMWORK, SHORING AND BRACING:

1. THE STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. THE DESIGN SHOWN DOES NOT INCLUDE THE NECESSARY COMPONENTS OR EQUIPMENT FOR THE STABILITY CF THE STRUCTURE DURING CONSTRUCTION. THE CONTACTOR IS RESPONSIBLE FOR ALL WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM THE WORK SHOWN. CONSTRUCTION OF SHORING AND BRACING OF FORMWORK SHALL BE IN ACCORDANCE WITH ACI 347 "GUIDE TO FORMWORK FOR CONCRETE".

PIPE BRIDGE:

1. THE PRE-ENGINEERED PIPE BRIDGE FOUNDATION IS ONLY PRELIMINARY FOR BIDDING PURPOSES. THE CONTRACTOR IS TO SUBMIT BRIDGE DRAWINGS AND STRUCTURAL CALCULATIONS, BASED ON THE LAYOUT SHOWN, DESIGNED AND SIGNED BY A CIVIL OR STRUCTURAL ENGINEER LICENSED IN CALIFORNIA. ONCE THE BRIDGE DRAWINGS AND CALCULATIONS HAVE BEEN REVIEWED AND APPROVED BY THE ENGINEER, THE BRIDGE FOUNDATION MAY BE REDESIGNED AND REISSUED TO THE CONTRACTOR FOR CONSTRUCTION.

2. SHOULD THE CONTRACTOR REQUEST REVISIONS TO THE LAYOUT TO FACILITATE THEIR OPERATION OF THE BRIDGE MANUFACTURER, THE CONTRACTOR SHALL COMPENSATE THE OWNER FOR SUCH ADDITIONAL REVISIONS.

CONCRETE:

1. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND A SLUMP AS SPECIFIED IN SECTION 03300 - CAST-IN-PLACE CONCRETE.

2. THE CONTRACTOR SHALL SUBMIT THE CONCRETE MIX DESIGNS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO USE.

3. HORIZONTAL CONSTRUCTION JOINTS SHALL BE PREPARED TO EXPOSE CLEAN, SOLIDLY EMBEDDED AGGREGATE OVER THE ENTIRE JOINT INTERFACE.

4. PLACEMENT OF PIPES, CONDUITS OR OTHER EMBEDDED ITEMS IN THE CONCRETE SHALL BE IN ACCORDANCE WITH THESE DRAWINGS OR SHALL BE APPROVED BY THE ENGINEER.

5. NO ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.

6. CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.

7. THE REQUIREMENTS FCR CONCRETE MIXES, PLACING, TESTING AND CURING ARE CONTAINED IN THE PROJECT SPECIFICATIONS.

8. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE II, AGGREGATE SHALL CONFORM TO ASTM C33.

9. CONTINUOUS WATERSTOP, AS SPECIFIED, SHALL BE INSTALLED IN ALL EXPANSION, CONTRACTION, CONTROL AND CONSTRUCTION JOINTS IN WALLS AND SLABS OF CONTAINMENT STRUCTURES, WATER HOLDING BASINS, CHANNELS, AND BELOW GRADE STRUCTURES, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

10. THE CONCRETE JOINTS IN SLABS AND WALLS, AS SHOWN, ARE MINIMUM REQUIREMENTS. CONTRACTOR MAY SUBMIT ALTERNATE CONSTRUCTION JOINT LAYOUT DRAWINGS, SUBJECT TO SPECIFIED REQUIREMENTS, TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

11. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AT LEAST 48 BUSINESS HOURS NOTICE PRIOR TO THE PLACEMENT OF CONCRETE TO ALLOW SUFFICIENT TIME FOR INSPECTIONS AND SCHEDULING OF TESTING SERVICES.

CONCRETE REINFORCING:

1. CLEARANCE FOR REINFORCEMENT BARS, UNLESS SHOWN OTHERWISE, SHALL BE: CAST AGAINST EARTH = 3", SURFACES OF PRIMARY AND SECONDARY LIQUID CONTAINING STRUCTURES = 2", ALL OTHER CONCRETE SURFACES: #5 BAR OR SMALLER = 1 1/2", #6 BAR OR LARGER = 2".

2. REFER TO WALL CORNER AND WALL INTERSECTION REINFORCING DETAIL 3303. WALL CORNER REINFORCING SIZES AND SPACINGS SHALL BE AS SHOWN ON THE DRAWINGS AND REFERENCED TO THIS DETAIL. TYPICAL HORIZONTAL WALL REINFORCING SHALL LAP WITH THE CORNER HORIZONTAL REINFORCING.

3. PROVIDE A MINIMUM OF TWO VERTICAL WALL BARS WITH MATCHING DOWELS AT WALL ENDS, CORNERS AND INTERSECTIONS WITH SIZE TO MATCH TYPICAL VERTICAL REINFORCING STEEL AS SHOWN. VERTICAL WALL BARS SHALL BE LAPPED WITH DOWELS FROM BASE SLABS AND EXTENDED INTO THE TOP FACE OF ROOF SLABS AND LAPPED WITH TOP SLAB REINFORCEMENT.

4. ALL BENDS, UNLESS OTHERWISE SHOWN, SHALL BE 90 DEGREE ACI 318 STANDARD HOOKS.

5. ALL REINFORCING BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

CONCRETE DESIGN STRENGTH = 4,000 PSI #		GRADE 60 REINFORCED STEEL						
BAR SIZE		#4	#5	#6	#7	#8	#9	#10
LAP SPLICE LENGTH								
SPACING <6"	TOP BAR *	2'-8"	3-'4"	4'-0"	5'-10"	6'-8"	8'-6"	10'-10"
	OTHER BAR	2'-1"	2'-7"	3'-1"	4'-6"	5'-2"	6'-7"	8'-4"
SPACING ≥6"	TOP BAR *	1'-8"	2'-0"	2'-5"	3'-6"	4'-0"	5'-0"	6'-2"
	OTHER BAR	1'-4"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"

* TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.

\# WHERE 3,000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16%

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED ENGINEER
DRAWN J MARTIN
CHECKED CHECKED-BY
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

GENERAL
STRUCTURAL NOTES

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-7
SHEET NUMBER 7

STRUCTURAL NOTES

MASONRY:

1. SOLID GROUT ALL CELLS UNLESS INDICATED OTHERWISE.
2. MORTAR SHALL CONFORM TO ASTM C270, TYPE S, HYDRATED AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 1,900 PSI.
3. GROUT SHALL CONFORM TO ASTM C476 AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI CONTAINING NO MASONRY CEMENT.
4. CONCRETE BLOCK UNITS SHALL BE MEDIUM WEIGHT AND CONFORM TO ASTM C90 AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 1,900 PSI. LINEAR SHRINKAGE SHALL NOT EXCEED 0.065 PERCENT.
5. PLACE COURSES IN RUNNING BOND PATTERN, UNLESS SPECIFICALLY INDICATED OTHERWISE.
6. REINFORCING STEEL FOR MASONRY SHALL CONFORM TO ASTM A615, GRADE 60 FOR DEFORMED BARS. LAP VERTICAL REINFORCING 48 BAR DIAMETERS. LAP VERTICAL REINFORCING IN CANTILEVER WALLS 72 BAR DIAMETERS. LAP HORIZONTAL REINFORCING 48 BAR DIAMETERS. STAGGER ADJACENT LAP SPLICES BY 24 INCHES, WHEN SEPARATED BY 3 INCHES OR LESS. REFERENCE STANDARD DETAIL 4002 - REINFORCED CMU WALL.
7. HORIZONTAL REINFORCING BARS SHALL BE CONTINUOUS AROUND WALL CORNERS AND THROUGH WALL INTERSECTIONS AND HOOKED AT WALL ENDS AS SHOWN IN THE DETAILS.
8. VERTICAL REINFORCING SHALL BE PLACED AT CORNERS, EACH SIDE OF OPENINGS, END WALLS (INCLUDING EACH SIDE OF CONTROL JOINTS), AT A MAXIMUM SPACING INDICATED IN THE DRAWINGS, AND CONTINUOUS FROM FOUNDATION TO TOP OF WALL.
9. CMU REINFORCING AT WALL INTERSECTIONS AND CORNERS SHALL BE AS INDICATED IN STANDARD DETAIL 4001 - CMU WALL CORNERS, UNLESS INDICATED OTHERWISE.
10. CMU REINFORCING AT ALL WALL ENDS, JAMBS AND DOOR OPENINGS, WINDOW LINTELS, LOUVERS AND PENETRATIONS SHALL BE INDICATED IN STANDARD DETAIL 4004 - CMU OPENINGS GREATER THAN 3'-0" OR STANDARD DETAIL 4003 - CMU OPENINGS LESS THAN 3'-0", UNO.
11. CMU WALL CONTROL JOINTS SHALL BE LOCATED WHERE SHOWN ON THE DRAWINGS AND SHALL RUN CONTINUOUS FROM THE TOP OF FOUNDATION TO TOP OF WALL. ALL HORIZONTAL NON-STRUCTURAL BARS SHALL BE TERMINATED IN A STANDARD HOOK EACH SIDE OF JOINT. STRUCTURAL BARS SHALL BE CONTINUOUS THROUGH CONTROL JOINTS.

WOOD NAILING:

1. NAILS SHALL BE "COMMON" WIRE NAILS, UNLESS OTHERWISE SPECIFIED. NAILS SHALL BE PREDRILLED, IF REQUIRED, TO AVOID SPLITTING THE MEMBER. NAILS SHALL BE THE FOLLOWING SIZES:
   - 10d COMMON = 0.148"φx 3"
   - 16d COMMON = 0.162"φ x 3 1/2"
2. THE EDGE DISTANCE FOR NAILING IN MEMBERS WHERE PLYWOOD PANELS ARE TO ABUT SHALL BE 3/4" FOR 3X OR WIDER AND 3/8" FOR 2X NOMINAL MEMBERS.
3. FASTENERS FOR PRESERVATIVE-TREATED AND FIRE RETARDANT-TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATING. FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153.
4. NAILS IN STRUCTURAL WOOD PANELS SHALL BE DRIVEN SO THAT THEIR HEADS ARE FLUSH WITH THE PANEL SURFACE.
5. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION AND ENGINEER'S APPROVAL. APPROVAL IS SUBJECT TO SATISFACTORY PERFORMANCE. IF NAIL HEADS PENETRATE THE FACE PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER, OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.
6. SHEATHING PANELS SHALL BUTT AT CENTERLINE OF A SINGLE SUPPORTING MEMBER WITH EDGE NAILING FROM EACH PANEL INTO THAT MEMBER.
7. ALL TOP PLATES, SILLS AND STUDS SHALL HAVE EDGE NAILING AT THE CENTERLINE OF MEMBER.
8. PIECES OF WALL, ROOF OR FLOOR SHEATHING SHALL BE NO LESS THAN 12" IN LEAST DIMENSION. PIECES LESS THAN 24" SHALL HAVE 3X4 FLAT MIN BLKG @ UNSUPPORTED PANEL EDGES.
9. UNLESS NOTED ON DRAWINGS, FASTENING SHALL BE AS SPECIFIED BELOW:

BLOCKING BETWEEN JOISTS, RAFTERS OR TRUSSES:	
TO JOIST, RAFTER OR TRUSS EACH END	2-16d EN OR 4-10d TN
BLOCKING BETWEEN STUDS:	
EACH SIDE TO NAILS	2-10d
OR END NAILS	2-16d
SILL PLATE TO JOIST OR BLOCKING, FACE NAIL	16d @16" OC
TOP PLATE TO STUD, END NAIL	2-16d
STUD TO SILL PLATE	3-16d EN or 4-8d TN
DOUBLED STUDS OR JOISTS, FACE NAIL	16d @12" OC

ROUGH CARPENTRY:

1. DIMENSIONS ARE TYPICALLY SHOWN TO FACE OF STUD FOR EXTERIOR WALLS, CENTERLINE OF STUD AT INTERIOR WALLS AND TO CENTERLINE OF OPENINGS.
2. STRUCTURAL FRAMINGS SHALL BE DOUGLAS FIR (DF) OF THE GRADES INDICATED OR BETTER (WWPA GRADING RULES) WITH 19% MAXIMUM MOISTURE CONTENT:
   BEAMS AND STRINGERS:
   - 4x — NO. 1
   - 6x — NO. 1
   - JOISTS, RAFTERS & LEDGERS, 2x AND 4x — NO. 1
   - POSTS AND TIMBERS — NO. 1
   - STUDS, SILL & PLATES: 2x4 — STUD
   - 2x6 — NO. 1
   - 2x8 AND LARGER — NO. 1
   - MISC. FRAMING LUMBER NOT NOTED — NO. 2
3. SILLS ON CONCRETE SLAB ON GRADE SHALL BE APPROVED PRESSURE TREATED DF. EACH PIECE SHALL BEAR THE AWPA STAMP. CUTS AND BORED HOLES OF TREATED DF SHALL BE TREATED WITH COPPER GREEN.
4. FASTENERS FOR PRESERVATIVE-TREATED AND FIRE RETARDANT-TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, OR STAINLESS STEEL. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153. HARDWARE SHALL BE COATED PER SIMPSON STRONG TIE 'CORROSION INFORMATION'.
5. WOOD STRUCTURAL MEMBERS SHALL NOT BE DRILLED OR NOTCHED EXCEPT AS SHOWN OR AS APPROVED BY THE ENGINEER.
6. FRAMING HARDWARE NOTED IS SIMPSON STRONG-TIE AND SHALL BE INSTALLED WITH CONNECTORS SPECIFIED FOR EACH SPECIFIC DEVICE BY THE MANUFACTURER'S CURRENT CATALOG. EQUIVALENT DEVICES APPROVED BY THE ENGINEER MAY BE SUBSTITUTED. SINKERS SHALL NOT BE USED.
7. WALL TOP PLATES SHALL HAVE JOINTS AT A STUD CENTERLINE. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 4'-0".
8. BOLT HOLES IN WOOD AND/OR STEEL SHALL BE 1/16" LARGER THAN BOLTS. STANDARD CUT WASHERS SHALL BE PROVIDED UNDER THE HEADS AND NUTS OF ALL BOLTS BEARING ON WOOD. 3" X 3"X ¼" PLATE WASHERS SHALL BE USED UNDER ALL ANCHOR BOLTS.
9. ALL NUTS SHALL BE TIGHTENED WHEN PLACED AND RETIGHTENED PRIOR TO APPLICATION OF FINISH OR AT COMPLETION OF JOB.
10. BLOCKING 2X WIDTH OF STUD, SHALL BE PROVIDED AT FLOOR, CEILING AND ROOF LINES AND SO THAT UNBRACED LENGTH OF STUD DOES NOT EXCEED 10'-0".
11. ALL JOISTS AND RAFTERS SHALL HAVE FULL DEPTH SOLID BLOCKING (2X MIN) OR CONTINUOUS RIM JOIST AT ALL SUPPORTS.
12. EXCEPT WHERE NOTED OTHERWISE, STUD WALLS SHALL BE 2X6 @ 16" OC MAXIMUM SPACING.
13. LAG BOLTS AND WOOD SCREWS SHALL BE SCREWED, NOT DRIVEN, INTO PLACE. LEAD HOLES SHALL BE PREBORED PER NDS CHAPTER 11.

EXPANSION ANCHORS:

1. EXPANSION ANCHORS SHALL BE STAINLESS STEEL HILTI KWIK BOLT TZ OR SIMPSON STRONG-BOLT 2, UNLESS NOTED OTHERWISE. INSTALL ANCHORS IN CONFORMANCE WITH THE MANUFACTURER'S REQUIREMENTS AND ICC REPORT.
2. SPECIAL INSPECTION IS REQUIRED PER CBC SECTION 1705 AND THE REQUIREMENTS OF THE ICC REPORT.
3. CONTRACTOR SHALL VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESSES ARE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS PRIOR TO INSTALLING ANCHORS.
4. WHEN DRILLING HOLES IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR.
5. THE SPECIAL INSPECTOR MUST BE PRESENT ON THE JOB SITE DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE, ANCHOR SPACING, AND CONCRETE THICKNESS.

ADHESIVE ANCHORS:

1. THE ADHESIVE ANCHOR SYSTEM USED FOR POST-INSTALLED ANCHORAGE TO CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY PUBLISHED ACI 355.4, ACCEPTANCE CRITERIA FOR QUALIFICATION OF POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE AND COMMENTARY. THE ANCHOR SYSTEM SHALL BE ONE OF THE FOLLOWING:
   - HILTI HIT-HY 200.
   - SIMPSON SET-3G.
2. ADHESIVE ANCHORS SHALL BE SUPPLIED AS AN ENTIRE SYSTEM INCLUDING, BUT NOT LIMITED TO, THE NEW ADHESIVE CARTRIDGE, A CLEAN MIXING NOZZLE, EXTENSION TUBE, A DISPENSING GUN, AND ALL MANUFACTURER RECOMMENDED SUPPLIES FOR PROPERLY CLEANING THE DRILLED HOLE.
3. ALL-THREAD ROD TO BE USED IN ADHESIVE ANCHOR ASSEMBLIES SHALL CONFORM TO ASTM A36, A193 (GR B7), A307, OR F1554. STAINLESS STEEL ANCHOR RODS SHALL BE TYPE 316. NUTS, WASHERS, AND OTHER HARDWARE USED WITH AN ALL-THREAD SHALL HAVE A MATERIAL OR ALLOY DESIGNATION THAT MATCHES THE ALL-THREAD MATERIAL / ALLOY.
4. REINFORCING BARS SHALL BE ASTM A615 OR A706.
5. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT THE TIME OF ADHESIVE ANCHOR INSTALLATION. CONCRETE SHALL HAVE A MINIMUM AGE OF 21 DAYS AT THE TIME OF ADHESIVE ANCHOR INSTALLATION.
6. CONCRETE TEMPERATURE AT THE TIME OF ADHESIVE ANCHOR INSTALLATION SHALL BE AT LEAST 50ºF.
7. EMBEDMENT DEPTH AND ANCHOR PROJECTION FROM THE CONCRETE SURFACE SHALL BE AS SHOWN ON THE DRAWINGS FOR THE PARTICULAR ANCHOR OR GROUP OF ANCHORS BEING INSTALLED. ABSENT ANY INFORMATION, THE MINIMUM EMBEDMENT DEPTH SHALL BE 12d WHERE "d" IS THE ANCHOR DIAMETER.
8. ADHESIVE ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL TRAINED TO INSTALL ADHESIVE ANCHORS IN ACCORDANCE WITH THE SPECIFICATIONS. POST-INSTALLED ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
9. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM. THESE ANCHORS ARE DESIGNATED WITH A (CERT) AFTER THE ANCHOR CALL-OUT.
10. THE INSTALLER'S QUALIFICATIONS SHALL BE SUBMITTED AND APPROVED IN ACCORDANCE WITH SECTION 05051 OF THE SPECIFICATIONS.
11. WHEN DRILLING HOLES IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR.
12. SPECIAL INSPECTION IS REQUIRED PER CBC SECTION 1705 AND THE REQUIREMENTS OF THE ICC REPORT. THE SPECIAL INSPECTOR MUST BE PERIODICALLY ON THE JOBSITE DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE, ANCHOR SPACING, AND CONCRETE THICKNESS.
13. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY AN INSPECTOR SPECIALLY APPROVED FOR THAT PURPOSE BY THE BUILDING OFFICIAL.

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

GENERAL
STRUCTURAL NOTES CONTINUED

PRELIMINARY NOT FOR CONSTRUCTION

DATE: OCTOBER 2019
PROJECT NUMBER: 17-082
DRAWING NUMBER: G-8
SHEET NUMBER: 8

STRUCTURAL NOTES

STRUCTURAL OBSERVATION:

1. STRUCTURAL OBSERVATION SHALL BE IN ACCORDANCE WITH THE 2015 CBC SECTION 1704.6 TOGETHER WITH LOCAL AND STATE AMENDMENTS.

2. THE OWNER SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR ANY REQUIRED SPECIAL INSPECTIONS OR INSPECTIONS BY THE BUILDING OFFICIAL.

3. ONSITE STRUCTURAL OBSERVATION SHALL BE PERFORMED AT LEAST ONCE A MONTH, PLUS AT COMPLETION, FOR EACH SEISMIC FORCE OR WIND FORCE RESISTING SYSTEM IDENTIFIED, INCLUDING FOUNDATIONS AND CONNECTIONS.

4. AT THE CONCLUSION OF CONSTRUCTION, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

5. STRUCTURAL OBSERVATION SHALL INCLUDE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM FOR EACH STRUCTURE CONTAINED IN THE WORK. THE CONTRACTOR SHALL SCHEDULE AND FACILITATE STRUCTURAL OBSERVATION INCLUDING THE FOLLOWING:
   - FOUNDATION REINFORCING STEEL, WATERSTOPS, EMBEDS, AND SIMILAR ITEMS PRIOR TO CONCRETE PLACEMENT.
   - WALL TO FOUNDATION CONNECTIONS PRIOR TO FORM CLOSURE FOR ALL MATERIALS.
   - CONCRETE WALLS PRIOR TO CONCRETE PLACEMENT.
   - ELEVATED CONCRETE SLABS AND BEAMS PRIOR TO CONCRETE PLACEMENT.
   - MASONRY WALL REINFORCING STEEL PRIOR TO GROUTING AND PRIOR TO CLOSING OF CLEANOUTS.
   - SYSTEM CONNECTION EMBEDS PRIOR TO GROUT OR CONCRETE PLACEMENTS.
   - ALL OTHER WALL ANCHORAGE CONNECTIONS FOR MATERIALS NOT SPECIFICALLY IDENTIFIED ABOVE.

STATEMENT OF SPECIAL INSPECTIONS:

1. SPECIAL INSPECTION IS IN ADDITION TO THE INSPECTIONS REQUIRED BY SECTION 110 OF THE CBC. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION ON THE TYPES OF WORK INDICATED BELOW.

2. SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT QUALIFIED PERSON WHO IS ACCEPTABLE TO THE ENGINEER AND BUILDING DEPARTMENT. THE INSPECTORS FOR EACH SYSTEM AND MATERIAL WILL BE ICC CERTIFIED OR OTHERWISE APPROVED BY THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONTRACT DOCUMENTS AND SUBMIT RECORDS OF INSPECTION.

3. INSPECTION RECORDS AND TESTING REPORTS SHALL BE SUBMITTED TO THE ENGINEER, OWNER, AND BUILDING OFFICIAL WITHIN ONE WEEK OF INSPECTION OR WITHIN ONE WEEK OF TEST COMPLETION.

4. AT THE CONCLUSION OF CONSTRUCTION, A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF DISCREPANCIES SHALL BE SUBMITTED.

5. PERIODIC SPECIAL INSPECTION IS DEFINED AS SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.

6. SPECIAL INSPECTION IS REQUIRED PER CHAPTER 17 OF THE CBC FOR THE FOLLOWING ITEMS:
   - SOILS (BY CONTRACTOR PER SPECIFICATION SECTION 02300)
   - CONCRETE CONSTRUCTION
   - MASONRY CONSTRUCTION

REQUIRED VERIFICATION AND SPECIAL INSPECTION OF SOILS

VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	REFERENCED STANDARD	2015 CBC REFERENCE
1.	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	X	SECTION 02300 - EARTHWORK	1705.6, 1804
2.	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	-	X	SECTION 02300 - EARTHWORK	1705.6
3.	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	-	X	SECTION 02300 - EARTHWORK	1705.6
4.	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	-	SECTION 02300 - EARTHWORK	1705.6
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	-	X	SECTION 02300 - EARTHWORK	1705.6

REQUIRED SPECIAL INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	REFERENCED STANDARD	2015 CBC REFERENCE
1.	INSPECTION OF REINF STEEL AND PLACEMENT	-	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
3.	INSPECTION OF ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	-
4.a.	INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X	-	ACI 318: 17.8.2.4	-
4.b.	INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	-	X	ACI 318: 17.8.2	-
5.	VERIFYING USE OF REQUIRED DESIGN MIX	-	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM: C172, C31 ACI318: 26.4, 26.12	1908.10
7.	INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X	ACI 318: 26.5.3-26.5.5	1908.9
11.	VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	-	X	ACI 318: 26.11.2	-
12.	INSPECTION FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	X	ACI 318: 26.11.1.2(b)	-

REQUIRED SPECIAL INSPECTION OF MASONRY CONSTRUCTION, LEVEL B, RISK CATEGORY II & III

INSPECTION TASK		CONTINUOUS	PERIODIC	REFERENCE STANDARD: TMS 402/602	REFERENCE STANDARD: TMS 402/602
1.	VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	-	X	-	Art. 1.5
2.	AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
2a.	PROPORTIONS OF SITE-PREPARED MORTAR AND GROUT	-	x	-	Art. 2.1, 2.6 A
2b.	CONSTRUCTION OF MORTAR JOINTS	-	X	-	Art. 3.3 B
2d.	LOCATION OF REINF AND CONNECTORS	-	X	-	Art. 3.4, 3.6 A
3.	PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:				
3a.	GROUT SPACE	-	X	-	Art. 3.2 D, 3.2 F
3b.	GRADE, TYPE, AND SIZE OF REINF AND ANCHOR BOLTS	-	X	Sec. 1.16	Art. 2.4, 3.4
3c.	PLACEMENT OF REINF AND CONNECTORS	-	X	Sec. 1.16	Art. 3.2 E, 3.4, 3.6 A
3d.	PROPORTIONS OF SITE-PREPARED GROUT	-	X	-	Art. 2.6 B, 2.4 G.1.b
3e.	CONSTRUCTION OF MORTAR JOINTS	-	X	-	Art. 3.3 B
4.	VERIFY DURING CONSTRUCTION:				
4a.	SIZE AND LOCATION OF STRUCTURAL ELEMENTS	-	X	-	Art. 3.3 F
4b.	TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	-	X	Sec. 1.16.4.3, 1.17.1	-
4d.	PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER OR HOT WEATHER	-	X	-	Art. 1.8 C, 1.8 D
4f.	PLACEMENT OF GROUT	X	-	-	Art. 3.5
5.	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	-	X	-	Art. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4
REQUIRED MINIMUM TESTS:					
1.	VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT	-	X	-	Art, 1.5 B.1.b.3
2.	VERIFICATION OF f'm PRIOR TO CONSTRUCTION	-	X	-	Art. 1.4 B

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

GENERAL
STRUCTURAL INSPECTIONS

PRELIMINARY NOT FOR CONSTRUCTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-9
SHEET NUMBER 9

PIPING SYMBOLS

SYMBOL	SINGLE LINE	DESCRIPTION
		EXISTING PIPE (SCREENED)
		NEW PIPE
		EXISTING PIPE TO BE ABANDONED
		EXISTING PIPE TO BE DEMOLISHED OR REMOVED AND SALVAGED

VALVES

SYMBOL	VALVE TYPE
	BALL VALVE
V	VENTED BALL VALVE
	CORPORATION STOP VALVE
	BUTTERFLY VALVE
	DIAPHRAGM VALVE
	GATE VALVE
K	KNIFE GATE
	GLOBE VALVE
	MUD VALVE
	MULTIPORT VALVE
	NEEDLE VALVE
	PINCH VALVE
	PLUG VALVE
	PLUG VALVE (ECCENTRIC)
	BALL CHECK VALVE
	DOUBLE DISK SWING CHECK VALVE
	DUCKBILL CHECK
	SILENT CHECK VALVE
	SWING CHECK VALVE
	TELESCOPING VALVE
	AIR RELIEF VALVE
	AIR VACUUM VALVE
	COMBINATION AIR RELIEF AIR VACUUM VALVE
	PRESSURE REGULATING VALVE
	PRESSURE RELIEF VALVE
	HOSE BIBB OR FLUSHING CONNECTION
	BACKFLOW PREVENTER VALVE

PUMPS

SYMBOL	PUMP TYPE
	CENTRIFUGAL PUMP
	SUBMERSIBLE PUMP
	VERTICAL TURBINE PUMP (PLAN)
	VERTICAL TURBINE PUMP (SECTION)
	DIAPHRAGM METERING PUMP
	PERISTALIC PUMP
	PROGRESSIVE CAVITY PUMP
M	AXIAL FLOW PUMP

BLOWERS

SYMBOL	BLOWER TYPE
	CENTRIFUGAL BLOWER
	BLOWER FAN

FLOWMETERS

SYMBOL	FLOWMETER TYPE
	MAGNETIC FLOWMETER
	PROPELLER FLOWMETER

FILTERS AND STRAINERS

SYMBOL	FILTER TYPE
	FILTER
	CARTRIDGE FILTER (SMALL)
	CARTRIDGE FILTER (LARGE)
	BASKET STRAINER

MIXERS

SYMBOL	MIXER TYPE
M	MIXER
	STATIC MIXER
	WAFER STATIC MIXER

ACTUATORS

SYMBOL	ACTUATOR TYPE
M	MOTOR ACTUATOR
P	PNEUMATIC ACTUATOR
S	SOLENOID ACTUATOR

GATES / WEIR

SYMBOL	GATE / WEIR TYPE
	SLIDE GATE
	STOP LOG
	WEIR

MISC EQUIPMENT

SYMBOL	TYPE
WM	WATER METER
	AIR DIFFUSER
	SPRAY BAR OR DIFFUSER
	EMERGENCY EYEWASH AND SHOWER

MISC FITTING SYMBOLS

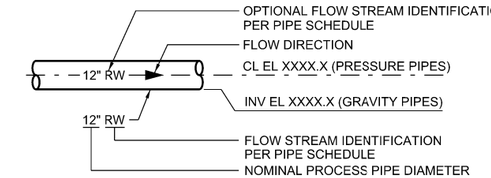
SYMBOL	EQUIPMENT TYPE
	Y STRAINER
	PULSATION DAMPER
	GAUGE
	DIAPHRAGM SEAL
	RUPTURE DISK (PRESSURE)
	RUPTURE DISK (VACUUM)
	ORIFICE
	BLIND FLANGE OR TANK NOZZLE
	EXPANSION COUPLING
	FLEXIBLE COUPLING
	UNION
	CONCENTRIC REDUCER
	ECENTRICE REDUCER
	CAP
	FEMALE QUICK CONNECT
	MALE QUICK CONNECT
	QUICK CONNECT WITH CAP
	QUICK CONNECT COUPLING
	DRAIN
	DRAIN
	SIGHT GLASS
	CALIBRATION COLUMN
FI	ROTAMETER
FI	ROTAMETER WITH NEEDLE VALVE

MISC SYMBOLS

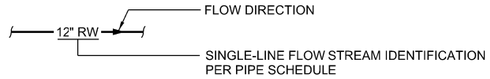
SYMBOL	DESCRIPTION
S	SAMPLE
	WATER SURFACE
	EQUIPMENT TAG

PIPING DESIGNATIONS

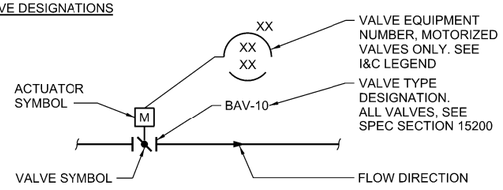
DOUBLE LINE PIPES



SINGLE LINE PIPES



VALVE DESIGNATIONS



NOTES:

1. MOTORIZED VALVE SHOWN, MANUAL VALVE SIMILAR.

NOTES:

1. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS AND THE PIPING SCHEDULE.
2. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.

GENERAL PIPING NOTES:

1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS. MINIMUM COVER SHALL BE 36 INCHES UNLESS OTHERWISE SHOWN.
2. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. FINAL SUPPORT REQUIREMENTS SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. MAXIMUM SPACING SHALL BE AS SPECIFIED.
4. APPROPRIATE STANDARD WALL PIPE DETAIL SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
5. ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST TIES, BLOCKS, OR ANCHORS, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
6. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. ALL OF THE VARIOUS APPLICATIONS ARE NOT NECESSARILY USED IN THE PROJECT.
7. ALL PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, GROOVED END, OR SCREWED PIPING, SHALL BE PROVIDED WITH TRUST PROTECTION AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED. SEE THRUST DETAILS AND NOTES ON DRAWINGS.
8. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS ARE ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
9. THE CONTRACTOR FOR THIS PROJECT IS RESPONSIBLE FOR COORDINATING AND PERFORMING THE CONNECTION OF THE PIPING AND ASSOCIATED APPURTENANCES INSTALLED UNDER THIS CONTRACT TO BOTH THE EXISTING PIPING AND FACILITIES.
10. PRIOR TO SUBMITTING PIPING DRAWINGS FOR ANY NEW PIPE THAT IS TO CONNECT TO OR CROSS AN EXISTING PIPE OR STRUCTURE, THE CONTRACTOR SHALL EXPOSE THE EXISTING PIPE OR STRUCTURE TO VERIFY ITS EXACT LOCATION, SIZE, MATERIALS, AND INVERT ELEVATIONS.
11. COMPONENTS SHOWN WITH A DOUBLE ASTERISK (**) ARE PART OF A PACKAGE SYSTEM. SEE EQUIPMENT SPECIFICATIONS.

PRELIMINARY NOT FOR CONSTRUCTION

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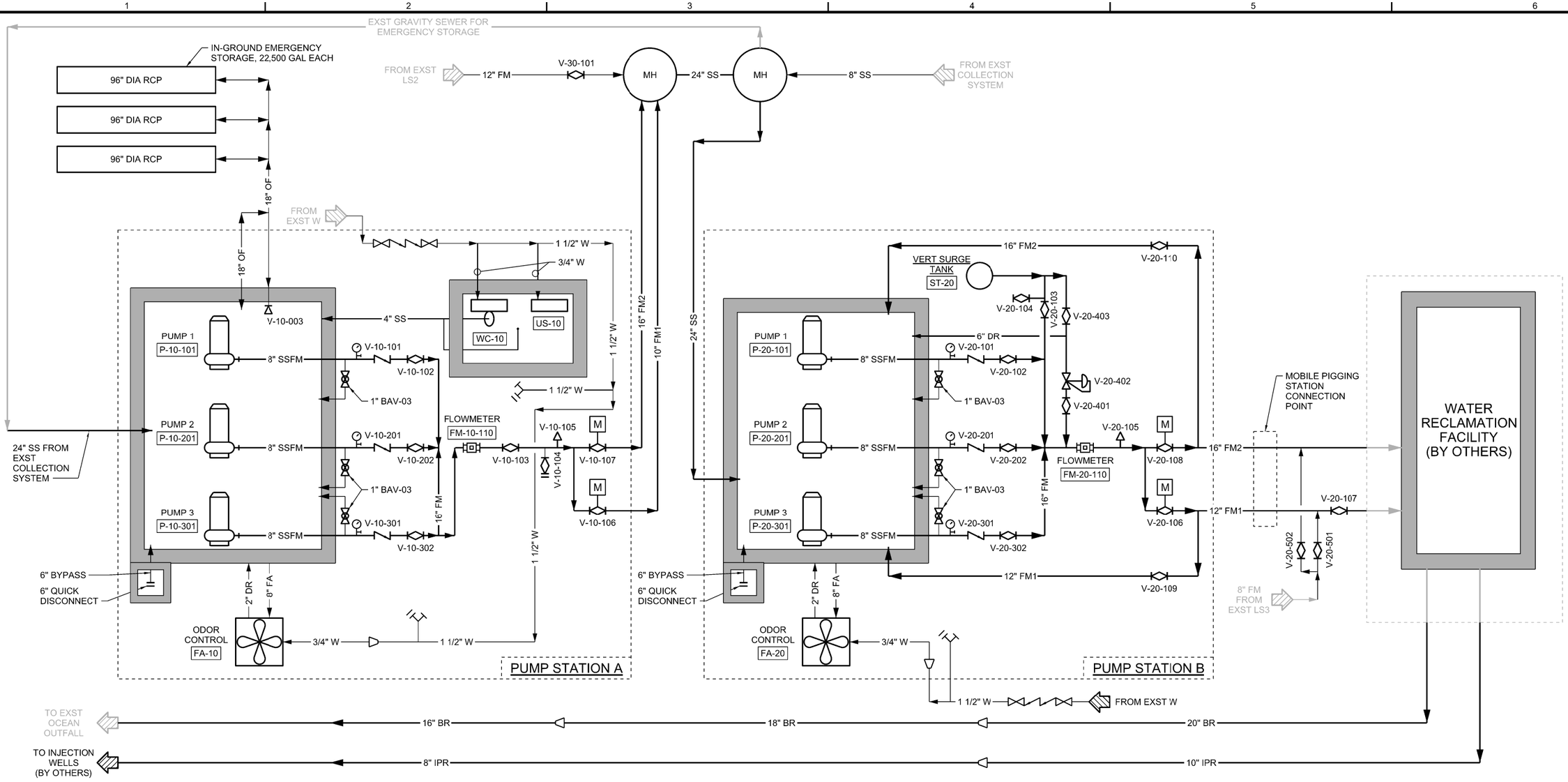
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

GENERAL
MECHANICAL LEGEND

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-10
SHEET NUMBER 10



FLOWSTREAM IDENTIFICATION	
BR	BRINE
BYP	BYPASS
DR	DRAIN
FA	FOUL AIR
FM	LS-2 OR LS-3 FORCEMAIN
FM1	SMALL FORCEMAIN
FM2	LARGE FORCEMAIN
IPR	INDIRECT POTABLE REUSE
OF	OVERFLOW
SS	SANITARY SEWER (GRAVITY)
SSFM	SANITARY SEWER FORCEMAIN
V	VENT
W1	POTABLE WATER
W2	UTILITY WATER

NOTES:

1. OFFSITE PIPELINE DIAMETERS DEPICTED HEREIN ARE NOMINAL. ACTUAL INNER DIAMETERS VARY. REFERENCE PLAN AND PROFILES FOR MATERIAL TYPES, CLASS AND SIZE.

PUMP STATION A (PS-A)

60 HP PUMPS (VFDs)	2 DUTY	1 STANDBY
AVERAGE ANNUAL FLOW	422	GPM
PEAK WET WEATHER FLOW	4,034	GPM
FF ELEVATION	21	FT
DIESEL GENERATOR	555	GALLON
ODOR CONTROL	6	AIR CHANGES PER HOUR

PUMP STATION B (PS-B)

250 HP PUMPS (VFDs)	2 DUTY	1 STANDBY
AVERAGE ANNUAL FLOW	666	GPM
PEAK WET WEATHER FLOW	5,540	GPM
FF ELEVATION	32.5	FT
DIESEL GENERATOR	1749	GALLON
ODOR CONTROL	6	AIR CHANGES PER HOUR

LIFT STATION 2 (LS2)

AVERAGE ANNUAL FLOW	189	GPM
PEAK WET WEATHER FLOW	895	GPM

LIFT STATION 3 (LS3)

AVERAGE ANNUAL FLOW	29	GPM
PEAK WET WEATHER FLOW	110	GPM

DESIGNED J RIESS
DRAWN F CAVE
CHECKED K ALACON
APPROVED M FISHER

WATERWORKS ENGINEERS
1485 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

GENERAL
PROCESS FLOW DIAGRAM AND DESIGN CRITERIA

PRELIMINARY NOT FOR CONSTRUCTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-11
SHEET NUMBER 11

FILENAME: 1782D-G014.dgn PLOT DATE: 2/10/2020 5:08:19 PM

HGL [FT]

313.0'	(12" MAX, 3.7 MGD)
275.2'	(16" MAX, 6.6 MGD)
245.5'	(12" & 16" MAX, 8.5 MGD)
160.5'	(12" AVG, 1 MGD)
149.4'	(12" MIN, 0.5 MGD)

FLOW SCENARIO LEGEND

- SMALLER FM ONLY; 2 PUMPS @ 100% SPEED
- LARGER FM ONLY; 2 PUMPS @ 100% SPEED
- BOTH FMs; 2 PUMPS @ 100% SPEED
- SMALLER FM ONLY; 1 PUMP @ 1 MGD
- SMALLER FM ONLY; 1 PUMP @ 0.5 MGD

175.2'	(12" MAX, 3.7 MGD)
167.5'	(16" MAX, 6.6 MGD)
164.8'	(12" & 16" MAX, 8.5 MGD)
147.7'	(12" AVG, 1 MGD)
145.7'	(12" MIN, 0.5 MGD)

85.5'	(10" MAX, 2.4 MGD)
59.0'	(16" MAX, 5.6 MGD)
50.5'	(10" & 16" MAX, 6.5 MGD)
38.3'	(10" AVG, 1 MGD)
33.3'	(10" MIN, 0.5 MGD)

REFERENCE PLAN AND PROFILES FOR MATERIAL TYPES, CLASSES, AND SIZES

REFERENCE WRF ON-SITE PLAN & PROFILE

FORCE MAIN

EG

STA: 15+23.6± - (E) PS-A CONNECTION

STA: 33+30 3" CARV

STA: 59+00 PS-B CONNECTION WSE = 20.7 FT REDUCER

STA: 94+30 3" ARV

STA: 114+00 3" CARV

STA: 114+00 REDUCER

STA: 161+75 WRF ON-SITE CONNECTION POINT

STA: 181+46.5± - (E) WRF HEADWORKS MAX WSE = 145.0'

STATION

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-G012.DWG

DESIGN M KARBAKHSH
DRAWN M TRUITT
CHECKED T LEWIS
APPROVED M FISHER

PRELIMINARY - NOT FOR CONSTRUCTION

GENERAL

FORCE MAIN HYDRAULIC GRADE LINE (FPVC DR25)

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

WATERWORKS ENGINEERS
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DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-12
SHEET NUMBER 12

JOB NUMBER: 17-082 FILENAME: 1782D-G012.DWG PLOT DATE: 02/10/20 PLOT TIME: 17:07:15

HGL [FT]

306.8' (16" MAX, 4.2 MGD)
273.5' (20" MAX, 6.8 MGD)
238.8' (16" & 20" MAX, 8.8 MGD)
157.0' (16" AVG, 1 MGD)
148.3' (16" MIN, 0.5 MGD)

FLOW SCENARIO LEGEND

- SMALLER FM ONLY; 2 PUMPS @ 100% SPEED
- LARGER FM ONLY; 2 PUMPS @ 100% SPEED
- BOTH FMs; 2 PUMPS @ 100% SPEED
- SMALLER FM ONLY; 1 PUMP @ 1 MGD
- SMALLER FM ONLY; 1 PUMP @ 0.5 MGD

176.8' (16" MAX, 4.2 MGD)
167.5' (20" MAX, 6.8 MGD)
163.7' (16" & 20" MAX, 8.8 MGD)
147.2' (16" AVG, 1 MGD)
145.6' (16" MIN, 0.5 MGD)

81.5' (12" MAX, 2.9 MGD)
59.8' (18" MAX, 5.5 MGD)
49.3' (12" & 18" MAX, 6.6 MGD)
36.2' (12" AVG, 1 MGD)
32.8' (12" MIN, 0.5 MGD)

REFERENCE WRF ON-SITE PLAN & PROFILE

FORCE MAIN

EG

STA: 15+23.6± - (E) PS-A CONNECTION

STA: 33+30 3" CARV

STA: 58+00 PS-B CONNECTION WSE = 20.7 FT REDUCER

STA: 94+30 3" ARV

STA: 114+00 3" CARV

STA: 114+00 REDUCER

STA: 161+75 WRF ON-SITE CONNECTION POINT

STA: 181+46.5± - (E) WRF HEADWORKS MAX WSE = 145.0'

REFERENCE PLAN AND PROFILES FOR MATERIAL TYPES, CLASSES, AND SIZES

STATION

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-G013.DWG

DESIGN M KARBAKHSH
DRAWN M TRUITT
CHECKED T LEWIS
APPROVED M FISHER

PRELIMINARY - NOT FOR CONSTRUCTION

GENERAL

FORCE MAIN HYDRAULIC GRADE LINE (HDPE DR11)

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-13
SHEET NUMBER 13

JOB NUMBER: 17-082 FILENAME: 1782D-G013.DWG PLOT DATE: 02/10/20 PLOT TIME: 17:08:25

FLOW SCENARIO LEGEND

- HIGH FLOW: 8.14 MGD
- AVG FLOW: 1 MGD
- LOW FLOW: 0.3 MGD

HGL [FT]

HIGH	99.4' (FPVC)
FLOW	88.7' (HDPE)
AVG	32.7' (FPVC)
FLOW	32.3' (HDPE)
LOW	31.6' (FPVC)
FLOW	31.6' (HDPE)

HIGH	147.6' (FPVC)
FLOW	146.0' (HDPE)
AVG	146.0' (FPVC)
FLOW	146.0' (HDPE)
LOW	146.0' (FPVC)
FLOW	146.0' (HDPE)

HIGH	173.7' (HDPE)
FLOW	172.8' (FPVC)
AVG	146.6' (HDPE)
FLOW	146.5' (FPVC)
LOW	146.1' (HDPE)
FLOW	146.1' (FPVC)

HIGH	180.0' (HDPE)
FLOW	180.0' (FPVC)
AVG	147.0' (HDPE)
FLOW	146.6' (FPVC)
LOW	146.1' (HDPE)
FLOW	146.1' (FPVC)

STA: 10+00
OPEN DISCHARGE AIR RELIEF STRUCTURE

STA: 33+30
3" CARV

STA: 58+00
REDUCER

STA: 94+30
3" ARV

STA: 114+00
3" CARV

STA: 114+00
REDUCER

BRINE PROFILE

EG

REFERENCE WRF ON-SITE PLAN & PROFILE

STA: 161+75
WRF ON-SITE CONNECTION POINT

STA: 174+75±
WRF BRINE PS

REFERENCE PLAN AND PROFILES FOR MATERIAL TYPES, CLASSES, AND SIZES

STATION

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DESIGN M KARBAKHSH
DRAWN M TRUITT
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
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PRELIMINARY - NOT FOR CONSTRUCTION

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

GENERAL
BRINE HYDRAULIC GRADE LINE

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-14
SHEET NUMBER 14

JOB NUMBER: 17-082 FILENAME: 1782D-G014.DWG PLOT DATE: 02/7/20 PLOT TIME: 09:47:43

FLOW SCENARIO LEGEND

HIGH FLOW: 1.0 MGD

LOW FLOW: 0.3 MGD

HGL [FT]

HIGH	146.0' (FPVC)
FLOW	146.0' (HDPE)
LOW	146.0' (FPVC)
FLOW	146.0' (HDPE)

HIGH	158.9' (FPVC)
FLOW	158.1' (HDPE)
LOW	147.4' (FPVC)
FLOW	147.3' (HDPE)

HIGH	162.0' (FPVC)
FLOW	161.5' (HDPE)
LOW	147.7' (FPVC)
FLOW	147.6' (HDPE)

STA: 41+57.4± - (E)
IPR DISCHARGE TBD

STA: 94+30
3" ARV

STA: 114+00
3" CARV

STA: 114+00
REDUCER

IPR PROFILE

EG

REFERENCE
WRF ON-SITE
PLAN & PROFILE

STA: 161+75
WRF ON-SITE
CONNECTION POINT

STA: 173+90
WRF IPR PS

REFERENCE PLAN AND PROFILES FOR
MATERIAL TYPES, CLASSES, AND SIZES

STATION

10+00 20+00 30+00 40+00 50+00 60+00 70+00 80+00 90+00 100+00 110+00 120+00 130+00 140+00 150+00 160+00 170+00 180+00 185+00

300 290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10 -20

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-G015.DWG

DESIGN M KARBAKHSH
DRAWN M TRUITT
CHECKED T LEWIS
APPROVED M FISHER

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PRELIMINARY - NOT FOR CONSTRUCTION

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

GENERAL
FORCE MAIN HYDRAULIC GRADE LINE
(FPVC DR18)

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
G-15
SHEET NUMBER 15

JOB NUMBER: 17-082 FILENAME: 1782D-G015.DWG PLOT DATE: 02/7/20 PLOT TIME: 09:58:18

GENERAL NOTES

1. CONTRACTOR RESPONSIBILITY: ALL CONSTRUCTION WORK AND INSTALLATIONS SHALL CONFORM TO THE CITY OF MORRO BAY (OWNER) STANDARDS AND SPECIFICATIONS ARE SUBJECT TO APPROVAL FROM THE CITY ENGINEER (OWNER). IN ADDITION, ALL WORK SHALL CONFORM WITH THE CONTRACT DOCUMENTS AND COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES. ALL NECESSARY LICENCES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

2. WORK DEVIATION: DEVIATION FROM THESE PLANS WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE. MINOR CHANGES IN THE HORIZONTAL AND VERTICAL ALIGNMENT OF MAIN PIPELINES & YARD PIPING MAY BE PROPOSED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL TO FACILITATE CONSTRUCTION AND AVOID FIELD CONFLICTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.

3. CONTRACT DOCUMENT PRECEDENCE: ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS AND OTHER PROVISIONS ARE LISTED IN 01130-1.2

4. EXISTING CONDITIONS: EXISTING OR ORIGINAL CONDITION IS DEFINED AS A PRE-CONSTRUCTION CONDITION. IF PROVIDED, AERIAL ORTHO-RECTIFIED PHOTO IMAGERY IN THE BACKGROUND OF A DRAWING IS INTENDED TO CLARIFY THE WORK SITE AT THE TIME OF THE DESIGN. EXISTING CONDITIONS MAY VARY FROM THE CONDITIONS DEPICTED IN THE ORTHO IMAGERY. CONTRACTOR SHALL VERIFY EXISTING SURFACE CONDITIONS WHEN FEASIBLE PRIOR TO BIDDING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.

5. REFERENCE ALIGNMENT & CONSTRUCTION SURVEY: ALL ALIGNMENT LENGTHS AND DISTANCES BETWEEN STRUCTURES ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE ALONG A HORIZONTAL PLANE. ALL EXISTING OR FINISHED GRADE ELEVATIONS DEPICTED IN PROFILE VIEW ARE ELEVATIONS ALONG THE CENTER LINE OF THE REFERENCE ALIGNMENT UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER TO ANY DISCREPENCIES. A POSITIVE OFFSET STATION IS THE PERPENDICULAR OFFSET DISTANCE TO THE RIGHT OF AN ALIGNMENT IN THE DIRECTION OF THE INCREASING STATION. THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING.

6. TYPICAL DETAILS: TYPICAL DETAILS AND SCHEDULES INDICATED MAY NOT BE SPECIFICALLY REFERENCED ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHERE EACH TYPICAL DETAIL OR SCHEDULE APPLIES. THE ENGINEER SHALL BE NOTIFIED IF LOCATIONS ARE FOUND WHERE NO TYPICAL DETAIL, SCHEDULE, OR SPECIFIC DETAIL APPLIES.

7. PRESERVATION OF PROPERTY: PRIVATE AND PUBLIC PROPERTY SHALL BE PROTECTED DURING CONSTRUCTION AND IF DAMAGED DURING EXECUTION OF WORK SHALL BE REPLACED AND/OR RESTORED TO MATCH EXISTING CONDITIONS OR UPDATED STANDARDS IF REQUIRED BY THE OWNER.

8. CONCRETE FLATWORK REPLACEMENT: ALL TRAFFIC ISLANDS, CURBS, CONCRETE DRIVEWAYS AND SIDEWALKS EXCAVATED OR DAMAGED DURING EXECUTION OF WORK SHALL BE REPLACED TO THE FIRST EXPANSION JOINT BEYOND THE TRENCH AND TO THE FULL WIDTH AND SHALL MATCH EXISTING CONDITIONS OR UPDATED STANDARDS IF REQUIRED BY THE OWNER. UNLESS OTHERWISE DIRECTED, ADA-ACCESSIBILITY CURB RAMPS SHALL BE REPLACED IN FULL TO THEIR FUNCTIONAL LIMITS AND MODIFIED TO COMPLY WITH OWNER STANDARD DETAILS.

9. MONUMENT CONSERVATION: PRIOR TO COMMENCEMENT OF WORK, ALL SURVEY MONUMENTS IN THE PROJECT AREA SHALL BE LOCATED AND TIED OUT. ALL CENTERLINE MONUMENTS OR TIES LOST OR DESTROYED BY THIS WORK SHALL BE REPLACED EITHER BY A LICENSED SURVEYOR OR A CIVIL ENGINEER REGISTERED PRIOR TO JANUARY 1, 1982 AND NEW TIE SHEETS PROVIDED. METHOD OF ESTABLISHMENT SHALL BE STATED ON THE TIE SHEET.

10. SALVAGING OWNER EQUIPMENT & DEBRIS DISPOSAL: SALVAGED OWNER EQUIPMENT SUCH AS METERS, VALVES, AND HYDRANTS SHALL BE RETURNED TO THE OWNER AT THE PROJECT CONCLUSION OR UPON REQUEST. NO SALVAGED ITEMS SHALL BE RE-INCORPORATED INTO THE NEW WORK, UNLESS OTHERWISE DIRECTED. ALL CONSTRUCTION DEBRIS, UNSUITABLE AND SURPLUS MATERIAL, AND CLEARED/GRUBBED VEGETATIVE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE UNLESS OTHERWISE DIRECTED BY THE OWNER.

11. PIPELINE PROTECTION FROM DEBRIS: THE CONTRACTOR SHALL PREVENT ACCUMULATION OF DEBRIS OR SOILS WITHIN NEW PIPELINES DURING INSTALLATION AND SHALL PLUG THE ENDS OF PIPELINES WITH APPROVED PLUGS AT THE END OF THE DAY. USE OF A PIPELINE DURING CONSTRUCTION TO STORE OR CONVEY SCREENED DEWATERED GROUNDWATER OR ACCUMULATED STORM RUNOFF IS ONLY PERMISSIBLE FOR PIPELINES INTENDED FOR RAW WASTEWATER WITH PRIOR APPROVAL FROM ENGINEER. AFTER FINAL ACCEPTANCE, USE OF ANY PIPELINE FOR PURPOSES OTHER THAN START-UP AND OPERATION ARE RESTRICTED UNLESS APPROVED BY THE OWNER.

12. EXISTING UTILITIES: THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON AVAILABLE RECORDS, ARE APPROXIMATE, AND ARE DEPICTED FOR THE CONTRACTOR'S CONVENIENCE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND ACCURACY OF UTILITIES SHOWN. THE CONTRACTOR SHALL NOTE THAT SMALL-DIAMETER IRRIGATION PIPELINES ARE NOT DEPICTED HEREIN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE SIZE, DEPTH, ORIENTATION, MATERIAL, AND LOCATION OF ALL EXISTING UNDERGROUND UTILITIES WITHIN WORK AREAS PRIOR TO CONSTRUCTION AND SUBMIT THIS INFORMATION TO THE ENGINEER IF IT DEVIATES FROM THE PROJECT PLANS. THE CONTRACTOR SHALL PROVIDE FOR THE PROTECTION OF EXISTING UTILITIES AND REPAIR OR REPLACE UTILITIES THAT ARE DAMAGED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER. THE CONTRACTOR SHALL MAKE SUCH REPAIRS OR REPLACEMENTS TO A SATISFACTORY CONDITION THAT MEETS THE CURRENT UTILITY COMPANY STANDARD. THE CONTRACTOR SHALL COORDINATE WORK WITH CONFLICTING UTILITY OWNERS AND PROVIDE FOR REMOVAL, RELOCATION, AND REPLACEMENT AS NECESSARY FOR INSTALLATION OF THE PROPOSED FACILITIES AT NO EXPENSE TO THE OWNER

13. UTILITY LOCATING REQUIREMENTS: THE CONTRACTOR IS REQUIRED TO CONTACT UNDERGROUND SERVICE ALERT TWO (2) DAYS PRIOR AT A MINIMUM TO FOURTEEN (14) DAYS MAXIMUM BEFORE BEGINNING ANY EXCAVATION. CONTRACTOR SHALL DEVELOP AND SUBMIT TO THE ENGINEER FOR APPROVAL A POTHOLE VERIFICATION PLAN THREE (3) WEEKS PRIOR TO EXCAVATION. THE POTHOLE PLAN SHALL VERIFY THE ELEVATION, NORTHING, AND EASTING OF ALL UTILITIES MARKED BY THE LOCATING COMPANY AND SHOWN IN CONFORMED DRAWINGS.

14. OWNER UTILITY SHUTDOWNS: CONTRACTOR SHALL NOT CAUSE ANY SERVICE INTERRUPTIONS TO RESIDENTS AND SHALL MAKE EVERY EFFORT TO MINIMIZE LENGTH OF ANY NECESSARY WATER SERVICE OR SEWER SERVICE INTERRUPTION. EACH DISRUPTION SHALL BE INDIVIDUALLY PLANNED AND SCHEDULED AT LEAST ONE (1) WEEK IN ADVANCE AND IN COORDINATION WITH THE OWNER. THE CONTRACTOR SHALL PERFORM EACH SHUTDOWN DURING TIME AND DAY (DAY, NIGHT, OR WEEKEND) WHEN IT CAUSES LEAST INCONVENIENCE AND INTERRUPTION TO RESIDENTS, BUSINESSES, AND CUSTOMERS.

15. PROJECT BACKGROUND DOCUMENTATION: THE PROJECT SPECIFIC GEOTECHNICAL INVESTIGATION AND LOG OF BORINGS IS PROVIDED IN APPENDIX A. THE PROJECT SPECIFIC ENVIRONMENTAL REPORT IS PROVIDED IN APPENDIX B.

CONSTRUCTION WORK PLANS

1. THE CONTRACTOR SHALL DEVELOP, SUBMIT TO ENGINEER FOR APPROVAL, AND IMPLEMENT THE FOLLOWING WORK PLANS WHICH ARE REQUIRED BY THE PROJECT SPECIAL CONDITIONS AND SPECIFICATIONS AT NO ADDITIONAL COST TO THE OWNER.

	CONSTRUCTION WORK PLAN	SPECIFICATION REFERENCE
1.	CONSTRUCTION NOISE REDUCTION PLAN	OWNER SHALL DEVELOP PRIOR TO NTP
2.	PROJECT PUBLIC COMMUNICATION PLAN	
3.	TRAFFIC CONTROL PLAN	01130
4.	WORK PLAN, SHUTDOWNS, & SEQUENCE OF WORK DOCUMENTATION	01130
5.	SITE ACCESS, STAGING, SAFETY & SECURITY PLAN	01500
6.	SHEETING & SHORING PLAN	01130
7	POTHOLE & UTILITY LOCATING PLAN	
8.	SEWER BYPASSING PLAN	01130
9.	POTABLE WATER BYPASSING PLAN	01130
10.	SANITARY SEWER OVERFLOW AND EMERGENCY RESPONSE PLAN (SSOERP)	01130
11.	SOIL TESTING QUALITY CONTROL PLAN	02300
12.	GRAVITY AND PRESSURE NON-POTABLE PIPELINE TESTING & INSPECTION PLAN	01725
13.	POTABLE WATER DISINFECTION, TESTING, AND INSPECTION PLAN	15995 & 15990
14.	START-UP PLAN & PROCEDURES FOR PUMP STATION(S) AND PIPELINE(S)	

DESIGNED T LEWIS
DRAWN B TROTTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

GENERAL
CIVIL GENERAL NOTES

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER G-16
SHEET NUMBER 16

REGULATORY PERMIT COMPLIANCE

1. AT A MINIMUM THE CONTRACTOR SHALL SECURE THE PERMITS LISTED IN THE FOLLOWING TABLE.

PERMITTING ENTITY	PERMIT TITLE	RESPONSIBLE PARTY
CITY OF MORRO BAY	ENCROACHMENT PERMIT	CONTRACTOR SHALL SECURE AND COMPLY WITH PROVISIONS.
	BUSINESS PERMIT	
CAL/OSHA DIR	*(ALL APPLICABLE PERMITS)*	
SLO CO. APCD	FUGITIVE DUST CONTROL	
	ASBESTOS DEMOLITION & DISPOSAL	
RWQCB R3	CONSTRUCTION STORM WATER GENERAL PERMIT - SWPPP	
	LOW THREAT DISCHARGE PERMIT & MRP	
CALTRANS D5	ENCROACHMENT PERMIT	
RWQCB DDW D6	POTABLE WATER VERTICAL & HORIZONTAL SEPARATION REQUIREMENTS AND PROJECT SPECIFIC WAIVERS	OWNER SHALL SECURE PRIOR TO NTP. CONTRACTOR SHALL COMPLY WITH PROVISIONS.
CDFW	1602 STREAMBED ALTERATION AGREEMENT	
USACE	404 CWA	
RWQCB	401 CWA	
CCC	COASTAL DEVELOPMENT PERMIT	

ENVIRONMENTAL MITIGATION MEASURES

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS TO COMPLY WITH APPLICABLE PROVISIONS LISTED IN THE CEQA ENVIRONMENTAL IMPACT REPORT (EIR) ADOPTED FOR THIS PROJECT (APPENDIX B). THE OWNER WILL RETAIN A QUALIFIED BIRD SPECIALIST, BIOLOGIST, ARCHAEOLOGIST, AND NATIVE AMERICAN MONITOR AS NEEDED TO ASSIST IN CONDUCTING ENVIRONMENTAL SURVEYS AND FIELD MONITORING. MITIGATION MEASURES ARE LISTED IN DETAIL IN APPENDIX B OF THE CONTRACT DOCUMENTS, AND ARE SUMMARIZED IN THE TABLE BELOW:

TITLE	MITIGATION MEASURE SUMMARY
CUL-6	CONSTRUCTION WORKER CULTURAL RESOURCES SENSITIVITY TRAINING
CUL-7	ALL PROJECT RELATED GROUND DISTURBANCE SHALL BE MONITORED BY AN ARCHAEOLOGICAL MONITOR WHO SHALL HAVE THE AUTHORITY TO HALT CONSTRUCTION ACTIVITIES IN CLOSE PROXIMITY IN THE EVENT OF A DISCOVERY
CUL-8	ALL PROJECT RELATED GROUND DISTURBANCE SHALL BE MONITORED BY A NATIVE AMERICAN MONITOR WHO SHALL HAVE THE AUTHORITY TO HALT CONSTRUCTION ACTIVITIES IN CLOSE PROXIMITY IN THE EVENT OF A DISCOVERY
CUL-9	IN THE EVENT ARCHEAOLOGICAL RESOURCES ARE ENCOUNTERED DURING CONSTRUCTION, ALL ACTIVITY IN THE VICINITY OF THE FIND SHALL CEASE WITHIN 100 FEET AND THE PROJECT CRMPP SHALL BE IMPLEMENTED.
CUL-14	IN THE EVENT HUMAN REMAINS ARE ENCOUNTERED DURING CONSTRUCTION, THEN WORK SHALL BE HALTED WITHIN 100-FT OF THE DISCOVERY AND THE CONTRACTOR SHALL CONTACT THE COUNTY SHERRIFF-CORONER AT (805) 781-4540, PROJECT ARCHAEOLOGIST, AND OWNER. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE SITE IN THE IMMEDIATE VICINITY OF THE DISCOVERY BASED ON RECOMMENDATIONS FROM THE ARCHEOLOGIST.
AES-1	LIGHTING SHALL BE SHIELDED AND POINTED AWAY FROM LIGHT SENSITIVE LAND USES DURING NIGHTIME
AQ-1A	IMPLEMENT FUGITIVE DUST CONTROL MEASURES IN ACCORDANCE WITH SLO APCD PERMIT
AQ-1B	IMPLEMENT STANDARD MITIGATION MEASURES FOR REDUCING EMISSIONS FROM CONSTRUCTION EQUIPMENT
AQ-1C	IMPLEMENT BEST AVAILABLE CONTROL TECHNOLOGY (BACT) FOR DIESEL-FUELED CONSTRUCTION EQUIPMENT
BIO-01	CONSTRUCTION WORKER ENVIRONMENTAL AWARENESS TRAINING AND EDUCATION PROGRAM BY PROJECT BIOLOGIST
BIO-02	THE CONTRACTOR SHALL IMPLEMENT BIOLOGICAL RESOURCES GENERAL AVOIDANCE AND PROTECTIVE MEASURES
BIO-03	THE PROJECT BIOLOGIST WILL DELINEATE MORRO SHOULDERBAND SNAIL (MSS) SENSITIVE HABITATS IN THE FIELD PRIOR TO CONSTRUCTION AND THE CONTRACTOR SHALL INSTALL SILT FENCING ALONG THE BOUNDARY DELINEATED. ADDITIONAL ENVIRONMENTAL TRAINING FROM THE PROJECT BIOLOGIST WILL BE REQUIRED FOR CONSTRUCTION WORKERS ADJACENT TO MSS HABITAT AREAS.
BIO-05	IMPLEMENT MITIGATION MEASURES RECOMMENDED TO AVOID OR MINIMIZE IMPACTS TO NESTING BIRD SPECIES
BIO-06	THE PROJECT BIOLOGIST WILL DELINEATE RIPARIAN HABITATS PRIOR TO CONSTRUCTION AND THE CONTRACTOR SHALL INSTALL A 3-FT CONSTRUCTION ACCESS BUFFER SAFETY FENCE ALONG THE PERIMETER DELINEATED.
BIO-08	THE CONTRACTOR SHALL IMPLEMENT AQUATIC HABITAT AVOIDANCE MEASURES IN CONJUNCTION WITH THE PROJECT SWPPP AND DEVELOP AN EROSION CONTROL PLAN AND SPILL PREVENTION PLAN
BIO-10	TREES NOT MARKED FOR REMOVAL OR TRIMMING AND IN CLOSE PROXIMITY TO CONSTRUCTION ACTIVITY LIMITS SHALL BE PROTECTED
CUL-11	THE PROJECT PALEONTOLOGIST SHALL CONDUCT PRE-CONSTRUCTION PALEONTOLOGICAL RESOURCES WORKER SENSITIVITY TRAINING
CUL-12	ALL GROUND DISTURBANCE IN EXCESS OF 5 FEET WITHIN SENSITIVE AREAS SHALL BE MONITORED ON A FULL TIME BASIS DURING THE EXCAVATION BY THE PROJECT PALEONTOLOGIST
CUL-13	IN THE EVENT PALEONTOLOGICAL RESOURCES SUCH AS FOSSILS ARE ENCOUNTERED DURING CONSTRUCTION, ALL ACTIVITY IN THE VICINITY OF THE FIND SHALL CEASE WITHIN 50 FEET AND THE PROJECT PALEONTOLOGIST SHALL BE CONTACTED. CONSTRUCTION MAY RESUME AFTER THE DISCOVERY IS EVALUATED AND RECOMMENDATIONS ARE IMPLEMENTED BY THE PROJECT PAELEONTOLOGIST
GEO-2	EROSION CONTROL: ALL SITES DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE MANAGED TO CONTROL EROSION AND HYDROSEEDED PURSUANT TO THE PROJECT SWPPP
NOISE-1	NOISE REDUCTION PLAN: THE CONTRACTOR SHALL IMPLEMENT THE CITY-PREPARED CONSTRUCTION NOISE REDUCTION PLAN

DESIGNED T LEWIS
DRAWN B TROTTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1485 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

GENERAL
CIVIL GENERAL NOTES

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
G-17
SHEET NUMBER 17

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HORIZSCALE 1"=200'

200 0 200 400 FEET

NOTES:
1. NOTES

PRELIMINARY - NOT FOR CONSTRUCTION

CIVIL PROJECT OVER VIEW AND KEY MAP 1	CITY OF MORRO BAY WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES	WATERWORKS ENGINEERS 1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113	DESIGN P WEBSTER DRAWN P WEBSTER CHECKED T LEWIS APPROVED M FISHER	

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-C-1
SHEET NUMBER ---

JOB NUMBER: 17-082
FILENAME: 1782D-05C101.DWG
PLOT DATE: 02/8/20
PLOT TIME: 16:45:30

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HORIZSCALE 1"=200'
200 0 200 400 FEET

NOTES:
1. NOTES

PRELIMINARY - NOT FOR CONSTRUCTION

JOB NUMBER: 17-082
FILENAME: 1782D-05C102.DWG
PLOT DATE: 02/8/20
PLOT TIME: 16:46:04

SHEET NUMBER	---
DRAWING NUMBER	05-C-2
PROJECT NUMBER	17-082
DATE	FEBRUARY 2020

CIVIL

PROJECT OVERVIEW AND KEY MAP 2

CITY OF MORRO BAY

WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

NORTH

NOTES:

1. NOTES

DWG NO 05-PP-26
DWG NO 05-PP-27
DWG NO 05-PP-28
DWG NO 05-PP-29
DWG NO 05-PP-30
DWG NO 05-PP-31
DWG NO 05-PP-32
DWG NO 05-PP-33
DWG NO 05-PP-34
DWG NO 05-PP-35
DWG NO 05-PP-36
DWG NO 05-PP-37
DWG NO 05-PP-38
DWG NO 05-PP-39

115+00
120+00
125+00
130+00
135+00
140+00
145+00
150+00
155+00
160+00
163+92

QUINTANA RD
TERESA RD
HWY-1
LA LOMA AVE
S BAY BLVD

MATCH LINE
SEE SHEET 05-C-2

200 0 200 400 FEET
HORIZSCALE 1"=200'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A ■ Redding, CA 96003 ■ 530•243•4113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PROJECT OVERVIEW AND KEY MAP 3

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-C-3
SHEET NUMBER	----

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JOB NUMBER: 17-082 FILENAME: 1782D-05C103.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:46:27

CONTROL POINT LISTING

HORZ: CCS83 ZONE 5, CSRS EPOCH 2017.50 U.S. SURVEY FEET
VERT: NAVD88, U.S. SURVEY FEET

POINT	NORTHING	EASTING	ELEVATION	NOTES
P067	2400480.6413	5668473.9994	466.2	CSRS–CGPS
P523	2309260.6568	5708341.8829	252.7	CSRS–CGPS
P525	2352963.5604	5725124.1289	1005.4	CSRS–CGPS
USLO	2310304.7127	5767821.1155	556.6	CSRS–CGPS
2	2337580.2452	5708954.0743	17.93	MAG NAIL & PAINTED TARGET
3	2337709.2821	5710736.3614	70.53	MAG NAIL & PAINTED TARGET
13	2330099.9168	5719451.3161	25.54	MAG NAIL & PAINTED TARGET
14	2331349.6124	5720139.4048	71.71	1" I.P. WITH CAP "PRAXIS CONTROL"
15	2328654.9669	5711650.3489	11.23	1" I.P. WITH CAP "PRAXIS CONTROL"
16	2333213.9272	5707678.6646	15.88	1" I.P. WITH CAP "PRAXIS CONTROL"
1	2335632.260	5708644.543	19.89	MAG NAIL & PAINTED TARGET
4	2335990.088	5710886.979	28.79	MAG NAIL & PAINTED TARGET
5	2336241.418	5709882.010	20.50	MAG NAIL & PAINTED TARGET
6	2334941.073	5711010.008	20.85	MAG NAIL ON BIKE LANE STRIPE
7	2333124.056	5710475.809	15.17	MAG NAIL & PAINTED TARGET
8	2333764.028	5712066.537	39.65	MAG NAIL & PAINTED TARGET
9	2333939.395	5713409.568	145.95	MAG NAIL & PAINTED TARGET
10	2332331.739	5713337.597	115.08	MAG NAIL & PAINTED TARGET
11	2333170.002	5715521.133	177.63	SPIKE & PLASTIC TARGET
12	2331196.514	5716204.563	165.16	MAG NAIL & PAINTED TARGET

STATEMENT OF PURPOSE

THIS SURVEY WAS PERFORMED IN CONNECTION WITH THE WATER RECLAMATION FACILITY (WRF) OFFSITE PIPELINE PROJECT TO:

- ESTABLISH PRIMARY CONTROL FOR THE PROJECT
- ESTABLISH AERIAL MAPPING GROUND CONTROL (TARGETS)

ADDITIONAL SURVEYS FOR SECONDARY SURVEY CONTROL (USED AS THE BASIS FOR BOUNDARY AND RIGHT OF WAY LINES AND ENGINEERING DESIGN SURVEYS ALONG THE PIPELINE ROUTE) ARE NOT DOCUMENTED ON THIS MAP. THE SECONDARY SURVEY CONTROL WAS ESTABLISHED WITH A COMBINATION OF CONVENTIONAL (TOTAL STATION) AND HIGH PRODUCTION GNSS (RTK) EQUIPMENT AND METHODS.

SUMMARY OF SURVEY

1. PRIMARY CONTROL NETWORK SURVEY WAS PERFORMED USING STATIC GNSS TO ESTABLISH SIX PRIMARY CONTROL STATIONS AT THE EXTENTS OF THE PROJECT AREA RELATED TO THE CALIFORNIA SPATIAL REFERENCE SYSTEM (CSRS). FOUR OF THESE STATIONS ALSO SERVED AS AERIAL MAPPING GROUND CONTROL TARGETS.

2. AERIAL MAPPING GROUND CONTROL SURVEY WAS PERFORMED USING RTK GNSS TO ESTABLISH TEN ADDITIONAL AERIAL MAPPING GROUND CONTROL TARGETS.

3. THE PRIMARY CONTROL NETWORK WAS PLANNED, AND THE DATA PROCESSED IN THE OFFICE BY GUIDA SURVEYING AS A SUBCONSULTANT TO PRAXIS LAND SURVEYING. THE AERIAL MAPPING GROUND CONTROL WAS PLANNED, AND THE DATA PROCESSED IN THE OFFICE BY PRAXIS. PRAXIS PERFORMED ALL FIELD SURVEYS FOR BOTH THE PRIMARY CONTROL NETWORK AND THE AERIAL MAPPING GROUND CONTROL. ALL ADDITIONAL SURVEYS FOR SECONDARY SURVEY CONTROL WERE ALSO PERFORMED BY PRAXIS.

BASIS OF CONTROL AND DATUM NOTES

1. COORDINATES ARE REFERENCED TO THE CALIFORNIA COORDINATE SYSTEM (CCS83) ZONE 5 GRID, CSRS EPOCH 2017.50 [NAD83 (2011), EPOCH 2017.50], DEFINED LOCALLY BY CSRS STATIONS "P067", "P523", "P525", AND "USLO", THE LATITUDE AND LONGITUDE OF WHICH WERE HELD FIXED IN A SEPARATE LEAST SQUARES ADJUSTMENT TO DETERMINE HORIZONTAL POSITIONS OF PRIMARY CONTROL. COORDINATES ARE EXPRESSED IN U.S. SURVEY FEET. HTTP://SOPAC-CSRC.UCSD.EDU/INDEX.PHP/EPOCH2017/

2. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) DEFINED LOCALLY BY BENCHMARK "J693 RESET" (NGS PID FV1098), THE TRANSFERRED ELEVATION OF WHICH WAS HELD FIXED IN A SEPARATE LEAST SQUARES ADJUSTMENT TO DETERMINE ELEVATIONS OF PRIMARY CONTROL. (A LEVELING SURVEY WAS RUN BETWEEN J693 AND PRIMARY CONTROL STATION 13.) THE ELEVATIONS OF THE OTHER FIVE PRIMARY CONTROL STATIONS WERE DETERMINED USING GEOID HEIGHTS INTERPOLATED FROM THE NGS GEOID12B GEOID MODEL. ELEVATIONS ARE EXPRESSED IN U.S. SURVEY FEET.

   a. THE PUBLISHED ELEVATION OF J693 RESET IS GIVEN AS 151.79 FEET ON THE CURRENT NGS DATASHEET.

   b. TO CHECK THE NAVD88 CONNECTION, A LEVELING SURVEY WAS RUN BETWEEN BENCHMARK "P1314" (NGS PID FV1102) AND AERIAL MAPPING GROUND CONTROL STATION 8 AND ALSO BETWEEN BENCHMARK "Q1314" (NGS PID FV1103) AND PRIMARY CONTROL STATION 3.

   c. THE NAD88 LEAST SQUARES ADJUSTMENT INCLUDES THE LEVELED ELEVATION OF STATION 3, AS WELL AS THE PUBLISHED NAVD88 ELEVATION OF USLO IN THE DAT FILE, ALONG WITH THE LEVELED ELEVATION OF STATION 13. THE LST FILE SHOWS THAT ELEVATIONS AT 3 AND USLO CHANGE BY −0.35 FEET AND −0.41 FEET, RESPECTIVELY. THE ELEVATION AT STATION 8 DETERMINED BY RTK CHANGES BY −0.31 FEET. HOLDING THE ELEVATION AT STATION 13 (LEVELED FROM J693) CAUSES THREE OTHER NAVD88 ELEVATIONS TO SHIFT BY ABOUT 0.35 FEET. THE PROJECT IS ONLY NOMINALLY REFERENCED TO THE NAVD88 DATUM.

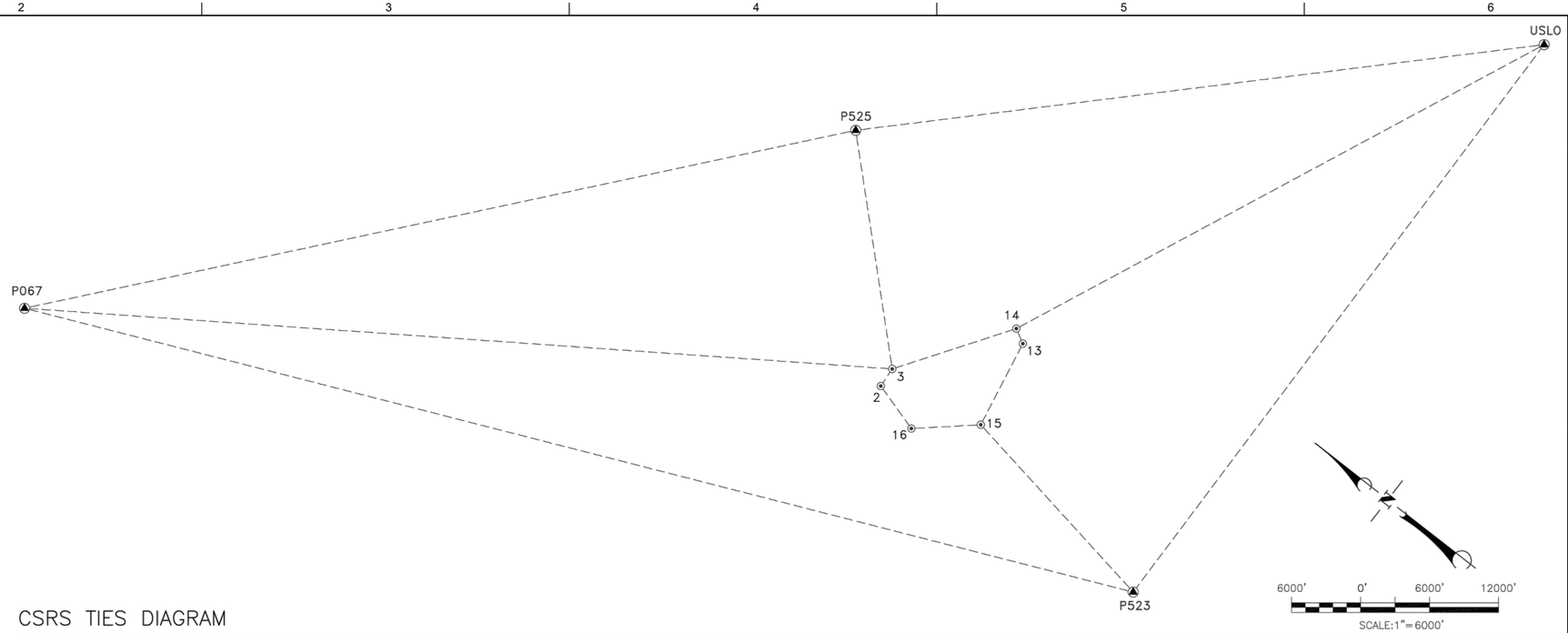
   d. THE ELEVATION OF J693 WAS HELD BECAUSE IT WAS USED AS THE BASIS OF ELEVATIONS FOR TOPOGRAPHIC MAPPING OF WRF SITE. THE DESIGN TEAMS FOR THE WRF SITE AND THE OFFSITE PIPELINE MUTUALLY AGREED THAT IT MADE SENSE TO AVOID INCONSISTENT ELEVATIONS BETWEEN THE ONSITE AND OFFSITE COMPONENTS OF THE OVERALL WRF PROJECT.

ACCURACY STATEMENT

1. THE PRIMARY CONTROL NETWORK SURVEY WAS NOT PERFORMED ACCORDING TO ANY PUBLISHED SPECIFICATIONS. THE CONTROL STATIONS TO WHICH THIS SURVEY IS REFERENCED MEET THE REQUIREMENTS FOR INCLUSION IN THE CSRS AS DEFINED IN THE PUBLIC RESOURCES CODE.

2. THE PRIMARY CONTROL NETWORK SURVEY WAS PERFORMED USING STATIC GNSS EQUIPMENT AND METHODS (TRIMBLE R8). GNSS OBSERVATION DATA WAS PROCESSED USING TRIMBLE BUSINESS CENTER V4 SOFTWARE AND ADJUSTED BY THE LEAST SQUARES METHOD USING STAR*NET V8.2 SOFTWARE. THE POSITIONS AND ELEVATIONS HELD FIXED IN THE FINAL CONSTRAINED ADJUSTMENT ARE AS LISTED IN THE BASIS OF CONTROL AND DATUM NOTES. THE RESULTANT CCS83 ZONE 3 COORDINATES ACHIEVE A 0.5 CM LOCAL ACCURACY AT THE 95% CONFIDENCE LEVEL. THE RESULTANT NAVD88 ELEVATIONS ACHIEVE A 1CM LOCAL ACCURACY AT THE 95% CONFIDENCE LEVEL.

3. THE AERIAL MAPPING GROUND CONTROL SURVEY WAS PERFORMED USING RTK GNSS (BASE AND ROVER WITH RADIO) EQUIPMENT AND METHODS (TRIMBLE R8). THE RTK SURVEY BEGAN WITH CHECKING INTO FIVE OF THE SIX PRIMARY CONTROL STATIONS (STATION 13 WAS NOT INCLUDED BECAUSE OF RADIO INTERFERENCE) AND COMPARING THE RTK COORDINATES AND ELEVATIONS AGAINST THE STAR*NET ADJUSTED COORDINATES AND ELEVATIONS. EACH TARGET WAS THEN OCCUPIED TWICE, SEPARATED BY 6 HOURS. RESULTANT COORDINATES AND ELEVATIONS OF THE TWO OCCUPATIONS VARIED BY 0.01 TO 0.06 FEET WHICH WERE AVERAGED FOR FINAL POSITION.



CSRS TIES DIAGRAM

LEGEND

- CSRS CONTINUOUS GPS STATION
- PRIMARY PROJECT CONTROL
- AERIAL MAPPING GROUND CONTROL
- NGS BENCHMARK

PROJECT AREA DIAGRAM

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
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CITY OF MORRO BAY

WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL

HORIZONTAL CONTROL PLAN

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-C-4
SHEET NUMBER	----

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FM2 ALIGNMENT LINE TABLE

LINE	LENGTH	DIRECTION	START (N,E)	END (N,E)	START (STA)	END (STA)
L1	130.87	N6° 49' 42.69"W	5708858.90,2336561.65	5708843.34,2336691.59	9+50.00	10+80.87
L2	15.36	N38° 10' 17.31"E	5708843.34,2336691.59	5708852.83,2336703.67	10+80.87	10+96.23
L3	531.54	N82° 48' 52.95"E	5708852.83,2336703.67	5709380.20,2336770.15	10+96.23	16+27.77
L4	18.59	N37° 16' 17.31"E	5709380.20,2336770.15	5709391.45,2336784.94	16+27.77	16+46.36
L5	104.00	N82° 03' 18.29"E	5709391.45,2336784.94	5709494.45,2336799.32	16+46.36	17+50.36
L6	24.75	N37° 33' 03.75"E	5709494.45,2336799.32	5709509.54,2336818.94	17+50.36	17+75.10
L7	15.32	N82° 57' 07.63"E	5709509.54,2336818.94	5709524.75,2336820.82	17+75.10	17+90.43
L8	10.98	N85° 10' 17.31"E	5709544.01,2336822.82	5709554.94,2336823.74	18+09.79	18+20.77
L9	201.24	S84° 04' 42.69"E	5709554.94,2336823.74	5709755.11,2336802.98	18+20.77	20+22.01
L10	78.48	S61° 04' 42.69"E	5709755.11,2336802.98	5709823.80,2336765.03	20+22.01	21+00.48
L11	54.88	S83° 03' 04.83"E	5709823.80,2336765.03	5709878.28,2336758.39	21+00.48	21+55.37
L12	132.47	S82° 55' 27.98"E	5709967.65,2336743.26	5710099.11,2336726.94	22+46.04	23+78.51
L13	123.35	S80° 48' 57.05"E	5710281.26,2336700.92	5710403.03,2336681.24	25+62.52	26+85.88
L14	7.57	S57° 48' 57.05"E	5710403.03,2336681.24	5710409.44,2336677.20	26+85.88	26+93.45
L15	74.83	S12° 24' 25.18"E	5710409.44,2336677.20	5710425.52,2336604.12	26+93.45	27+68.27
L16	139.62	S15° 49' 16.07"E	5710467.87,2336445.97	5710505.94,2336311.64	29+32.08	30+71.69
L17	133.65	S5° 17' 20.36"E	5710522.75,2336221.41	5710535.07,2336088.33	31+63.60	32+97.25
L18	246.43	S17° 17' 21.48"E	5710535.07,2336088.33	5710608.31,2335853.03	32+97.25	35+43.68
L19	77.43	S22° 54' 22.12"E	5710625.14,2335807.02	5710655.28,2335735.70	35+92.70	36+70.13
L20	152.29	S18° 24' 22.12"E	5710669.13,2335698.96	5710717.22,2335554.47	37+09.40	38+61.69
L21	116.59	S21° 37' 42.35"E	5710726.84,2335528.05	5710769.81,2335419.67	38+89.81	40+06.40
L22	77.49	S44° 07' 42.35"E	5710769.81,2335419.67	5710823.76,2335364.05	40+06.40	40+83.88
L23	45.46	S21° 37' 42.35"E	5710823.76,2335364.05	5710840.52,2335321.79	40+83.88	41+29.34
L24	63.81	S27° 24' 53.22"E	5710861.47,2335275.87	5710890.85,2335219.23	41+79.83	42+43.64
L25	33.61	S19° 51' 19.72"E	5710917.27,2335158.84	5710928.69,2335127.22	43+09.61	43+43.22
L26	14.46	S31° 06' 19.72"E	5710928.69,2335127.22	5710936.16,2335114.84	43+43.22	43+57.68
L27	34.89	S42° 21' 19.72"E	5710936.16,2335114.84	5710959.67,2335089.06	43+57.68	43+92.57
L28	47.73	S30° 45' 59.41"E	5710959.67,2335089.06	5710984.08,2335048.04	43+92.57	44+40.31
L29	73.19	S8° 15' 59.41"E	5710984.08,2335048.04	5710994.61,2334975.61	44+40.31	45+13.50
L30	199.44	S30° 36' 18.83"E	5710994.61,2334975.61	5711096.14,2334803.96	45+13.50	47+12.93
L31	208.34	S25° 28' 17.06"E	5711117.20,2334764.43	5711206.80,2334576.34	47+57.74	49+66.08
L32	168.70	S34° 12' 34.05"E	5711244.70,2334510.26	5711339.55,2334370.75	50+42.33	52+11.03
L33	27.28	S45° 57' 34.05"E	5711339.55,2334370.75	5711359.16,2334351.78	52+11.03	52+38.31
L34	353.85	S43° 57' 41.27"E	5711438.50,2334280.20	5711684.13,2334025.49	53+45.23	56+99.08
L35	137.32	S36° 46' 22.71"E	5711724.74,2333977.73	5711806.94,2333867.73	57+61.81	58+99.13
L36	23.91	S81° 46' 22.71"E	5711806.94,2333867.73	5711830.61,2333864.31	58+99.13	59+23.05
L37	91.57	S36° 46' 22.71"E	5711830.61,2333864.31	5711885.43,2333790.96	59+23.05	60+14.62
L38	242.59	S49° 01' 05.38"E	5712008.26,2333671.96	5712191.40,2333512.87	61+86.24	64+28.83
L39	654.40	S71° 24' 38.05"E	5712191.40,2333512.87	5712811.66,2333304.25	64+28.83	70+83.24
L40	474.93	S60° 50' 33.70"E	5712980.08,2333229.71	5713394.83,2332998.32	72+67.68	77+42.61
L41	600.09	S53° 13' 49.59"E	5713506.22,2332926.09	5713986.92,2332566.88	78+75.47	84+75.56
L42	163.83	S50° 00' 09.56"E	5714031.08,2332531.90	5714156.58,2332426.60	85+31.89	86+95.72
L43	48.12	S27° 30' 09.56"E	5714156.58,2332426.60	5714178.80,2332383.92	86+95.72	87+43.84
L44	193.67	S18° 39' 23.38"E	5714209.03,2332312.97	5714270.99,2332129.48	88+21.04	90+14.71
L45	48.27	S29° 54' 23.38"E	5714270.99,2332129.48	5714295.06,2332087.63	90+14.71	90+62.98
L46	5.71	S41° 09' 23.38"E	5714295.06,2332087.63	5714298.81,2332083.33	90+62.98	90+68.69
L47	232.93	S47° 29' 46.85"E	5714337.45,2332043.77	5714509.18,2331886.40	91+24.02	93+56.95
L48	89.94	S70° 29' 46.85"E	5714509.18,2331886.40	5714593.95,2331856.37	93+56.95	94+46.88
L49	129.13	S48° 38' 52.30"E	5714593.95,2331856.37	5714690.89,2331771.06	94+46.88	95+76.02
L50	372.78	S60° 14' 05.75"E	5714690.89,2331771.06	5715014.48,2331585.99	95+76.02	99+48.79
L51	33.92	N74° 45' 54.25"E	5715014.48,2331585.99	5715047.21,2331594.90	99+48.79	99+82.71
L52	50.20	N29° 15' 54.25"E	5715047.21,2331594.90	5715071.75,2331638.70	99+82.71	100+32.92
L53	12.76	N51° 15' 54.25"E	5715071.75,2331638.70	5715081.70,2331646.68	100+32.92	100+45.67
L54	484.27	S84° 01' 53.25"E	5715081.70,2331646.68	5715563.35,2331596.33	100+45.67	105+29.95
L55	153.34	S82° 12' 57.27"E	5715594.81,2331592.53	5715746.73,2331571.77	105+61.63	107+14.97
L56	1024.00	S75° 46' 40.97"E	5715856.97,2331550.33	5716849.59,2331298.75	108+27.33	118+51.34
L57	265.14	S76° 22' 57.64"E	5716849.59,2331298.75	5717107.28,2331236.33	118+51.34	121+16.48
L58	378.41	S75° 48' 24.26"E	5717107.28,2331236.33	5717474.14,2331143.55	121+16.48	124+94.89
L59	372.51	S78° 46' 44.98"E	5717654.28,2331102.93	5718019.67,2331030.44	126+79.58	130+52.08
L60	578.82	S72° 59' 36.50"E	5718068.61,2331018.13	5718622.13,2330848.84	131+02.57	136+81.39

FM2 ALIGNMENT LINE TABLE

LINE	LENGTH	DIRECTION	START (N,E)	END (N,E)	START (STA)	END (STA)
L61	408.72	S51° 32' 56.45"E	5718786.81,2330762.27	5719106.89,2330508.11	138+68.53	142+77.25
L62	149.33	S35° 50' 12.25"E	5719201.31,2330409.28	5719288.74,2330288.22	144+14.37	145+63.70
L63	261.71	S50° 52' 49.79"E	5719378.62,2330193.04	5719581.66,2330027.92	146+94.98	149+56.69
L64	39.91	S62° 18' 05.26"E	5719581.66,2330027.92	5719617.00,2330009.37	149+56.69	149+96.61
L65	52.07	S84° 48' 05.26"E	5719617.00,2330009.37	5719668.86,2330004.65	149+96.61	150+48.68
L66	48.73	N50° 11' 54.74"E	5719668.86,2330004.65	5719706.30,2330035.84	150+48.68	150+97.41
L67	284.92	N27° 41' 54.74"E	5719706.30,2330035.84	5719838.74,2330288.11	150+97.41	153+82.33
L68	337.55	N12° 54' 02.15"E	5719883.41,2330408.89	5719958.78,2330737.93	155+11.47	158+49.02
L69	52.39	N14° 41' 00.34"E	5719966.19,2330768.14	5719979.47,2330818.83	158+80.14	159+32.53
L70	64.51	N5° 47' 32.05"E	5719993.25,2330895.11	5719999.76,2330959.28	160+10.12	160+74.63
L71	42.16	N26° 47' 34.14"E	5719999.76,2330959.28	5720018.77,2330996.92	160+74.63	161+16.80
L72	55.38	N15° 01' 12.01"E	5720018.77,2330996.92	5720033.12,2331050.41	161+16.80	161+72.18

FM2 ALIGNMENT CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIRECTION	START (N,E)	END (N,E)	START (STA)	END (STA)
C1	500.0	19.37	N84° 03' 42.47"E	5709524.75,2336820.82	5709544.01,2336822.82	17+90.43	18+09.79
C2	500.0	45.89	S80° 25' 19.23"E	5709878.28,2336758.39	5709923.51,2336750.76	21+55.37	22+01.26
C3	500.0	44.78	S80° 21' 30.80"E	5709923.51,2336750.76	5709967.65,2336743.26	22+01.26	22+46.04
C4	5000.0	184.01	S81° 52' 12.51"E	5710099.11,2336726.94	5710281.26,2336700.92	23+78.51	25+62.52
C5	750.0	76.62	S15° 20' 00.91"E	5710425.52,2336604.12	5710445.77,2336530.26	27+68.27	28+44.89
C6	500.0	54.23	S15° 09' 10.17"E	5710445.77,2336530.26	5710459.94,2336477.94	28+44.89	28+99.13
C7	500.0	32.95	S13° 55' 59.88"E	5710459.94,2336477.94	5710467.87,2336445.97	28+99.13	29+32.08
C8	500.0	91.91	S10° 33' 18.21"E	5710505.94,2336311.64	5710522.75,2336221.41	30+71.69	31+63.60
C9	500.0	49.02	S20° 05' 51.80"E	5710608.31,2335853.03	5710625.14,2335807.02	35+43.68	35+92.70
C10	500.0	39.27	S20° 39' 22.12"E	5710655.28,2335735.70	5710669.13,2335698.96	36+70.13	37+09.40
C11	500.0	28.12	S20° 01' 02.24"E	5710717.22,2335554.47	5710726.84,2335528.05	38+61.69	38+89.81
C12	500.0	50.50	S24° 31' 17.79"E	5710840.52,2335321.79	5710861.47,2335275.87	41+29.34	41+79.83
C13	500.0	65.97	S23° 38' 06.47"E	5710890.85,2335219.23	5710917.27,2335158.84	42+43.64	43+09.61
C14	500.0	44.80	S28° 02' 17.95"E	5711096.14,2334803.96	5711117.20,2334764.43	47+12.93	47+57.74
C15	500.0	76.25	S29° 50' 25.55"E	5711206.80,2334576.34	5711244.70,2334510.26	49+66.08	50+42.33
C16	500.0	44.74	S48° 31' 22.85"E	5711359.16,2334351.78	5711392.67,2334322.16	52+38.31	52+83.05
C17	500.0	62.18	S47° 31' 26.45"E	5711392.67,2334322.16	5711438.50,2334280.20	52+83.05	53+45.23
C18	500.0	62.73	S40° 22' 01.99"E	5711684.13,2334025.49	5711724.74,2333977.73	56+99.08	57+61.81
C19	500.0	139.24	S44° 45' 03.54"E	5711885.43,2333790.96	5711983.14,2333692.39	60+14.62	61+53.86
C20	500.0	32.38	S50° 52' 24.87"E	5711983.14,2333692.39	5712008.26,2333671.96	61+53.86	61+86.24
C21	1000.0	184.44	S66° 07' 35.88"E	5712811.66,2333304.25	5712980.08,2333229.71	70+83.24	72+67.68
C22	1000.0	132.86	S57° 02' 11.65"E	5713394.83,2332998.32	5713506.22,2332926.09	77+42.61	78+75.47
C23	1000.0	56.34	S51° 36' 59.57"E	5713986.92,2332566.88	5714031.08,2332531.90	84+75.56	85+31.89
C24	500.0	77.20	S23° 04' 46.47"E	5714178.80,2332383.92	5714209.03,2332312.97	87+43.84	88+21.04
C25	500.0	55.33	S44° 19' 35.12"E	5714298.81,2332083.33	5714337.45,2332043.77	90+68.69	91+24.02
C26	1000.0	31.69	S83° 07' 25.26"E	5715563.35,2331596.33	5715594.81,2331592.53	105+29.95	105+61.63
C27	1000.0	112.36	S78° 59' 49.12"E	5715746.73,2331571.77	5715856.97,2331550.33	107+14.97	108+27.33
C28	3560.0	184.69	S77° 17' 34.62"E	5717474.14,2331143.55	5717654.28,2331102.93	124+94.89	126+79.58
C29	500.0	50.49	S75° 53' 10.74"E	5718019.67,2331030.44	5718068.61,2331018.13	130+52.08	131+02.57
C30	500.0	187.14	S62° 16' 16.48"E	5718622.13,2330848.84	5718786.81,2330762.27	136+81.39	138+68.53
C31	500.0	137.12	S43° 41' 34.35"E	5719106.89,2330508.11	5719201.31,2330409.28	142+77.25	144+14.37
C32	500.0	131.28	S43° 21' 31.02"E	5719288.74,2330288.22	5719378.62,2330193.04	145+63.70	146+94.98
C33	500.0	129.14	N20° 17' 58.44"E	5719838.74,2330288.11	5719883.41,2330408.89	153+82.33	155+11.47
C34	1000.0	31.12	N13° 47' 31.24"E	5719958.78,2330737.93	5719966.19,2330768.14	158+49.02	158+80.14
C35	500.0	77.59	N10° 14' 16.20"E	5719979.47,2330818.83	5719993.25,2330895.11	159+32.53	160+10.12

PRELIMINARY - NOT FOR CONSTRUCTION

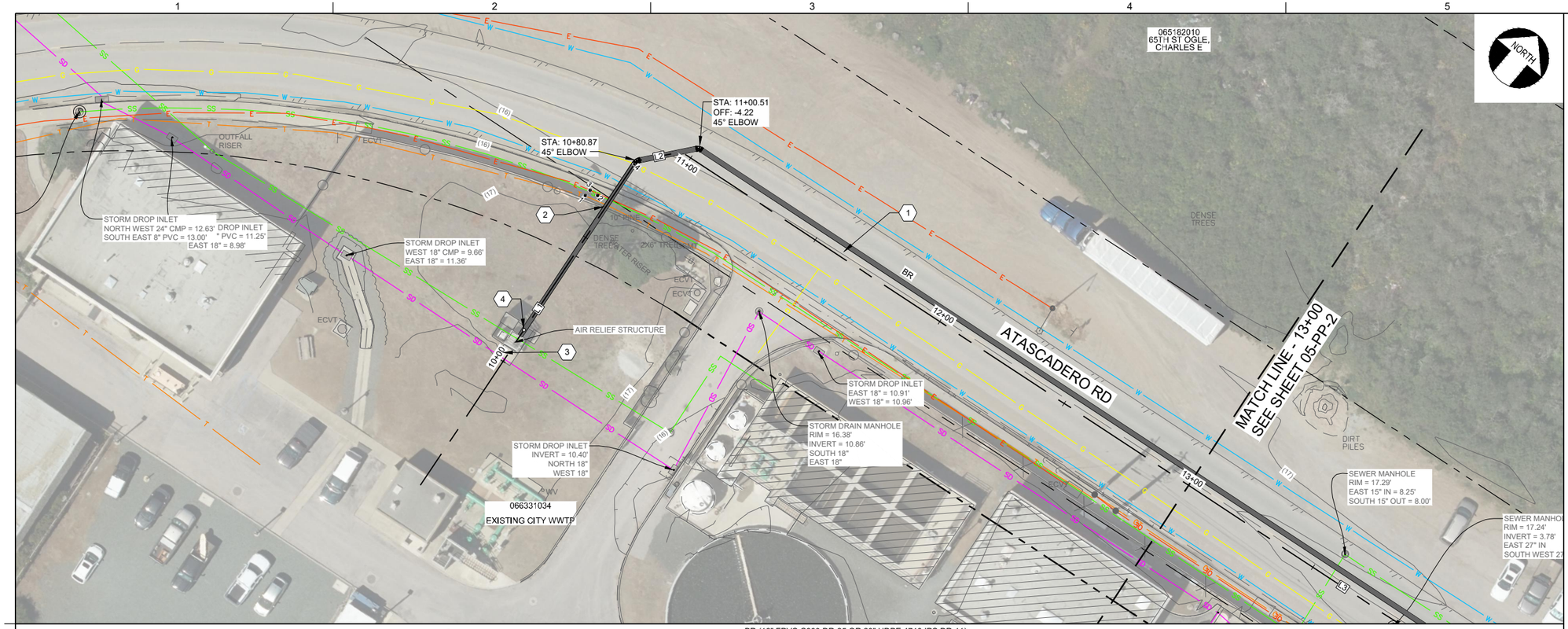
DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A ▪ Redding, CA 96003 ▪ 530•243•4113

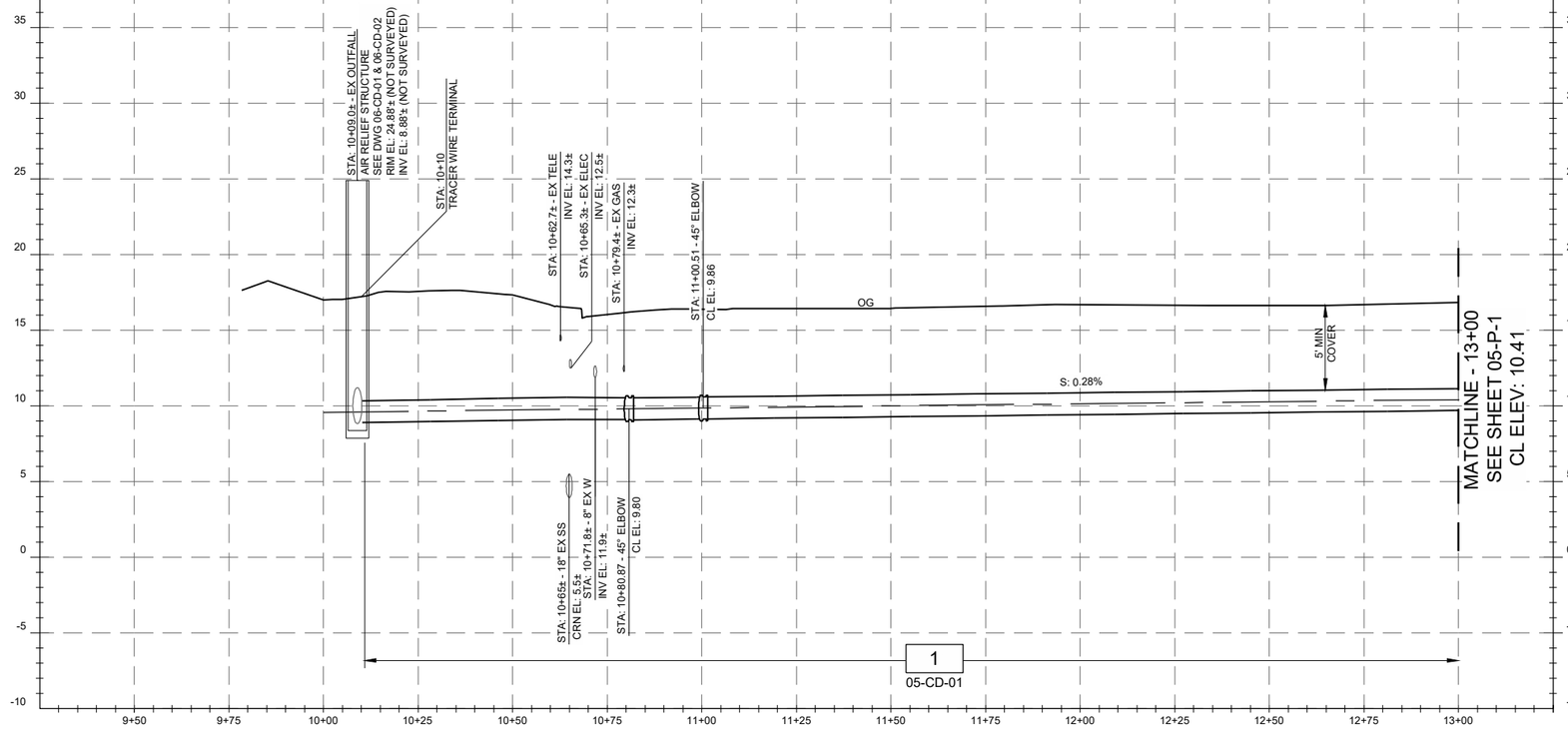
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
ALIGNMENT TABLES

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-C-5
SHEET NUMBER ----



BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. REUSE EX CHAIN LINK FENCE AND PRIVACY SLATS, REPLACE BARBED WIRE AND POSTS AS NEEDED AND MATCH EX.
3. CONNECT WITH AND MODIFY EX AIR RELIEF STRUCTURE PER DWGS DWG 06-CD-01 & 06-CD-02.
4. INSTALL TRACER WIRE TERMINAL (2060) AND GROUND ROD (16410)

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

1. 4" CONC PVMNT, 22" CVR, 24" DEEP, TELEPHONE.
2. 5" CONC PVMNT, EST. 11' CVR, SEWER.
3. 5" CONC PVMNT, 41" CVR, 46" DEEP, ELEC CONDUIT.
4. 4" AC PVMNT, 42" CVR, 44" DEEP, SCG GAS.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN M TRUITT
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530•243•4113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
BEG TO STA 13+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-1
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP101.DWG

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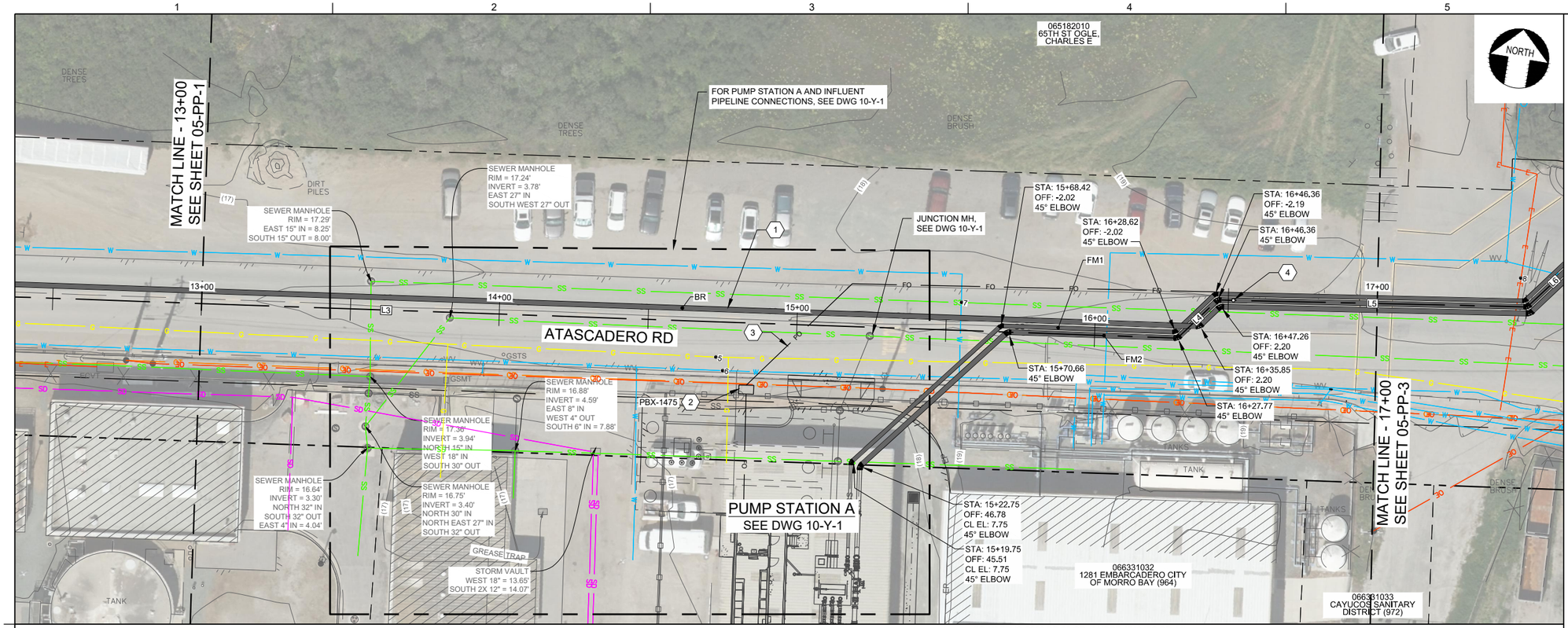
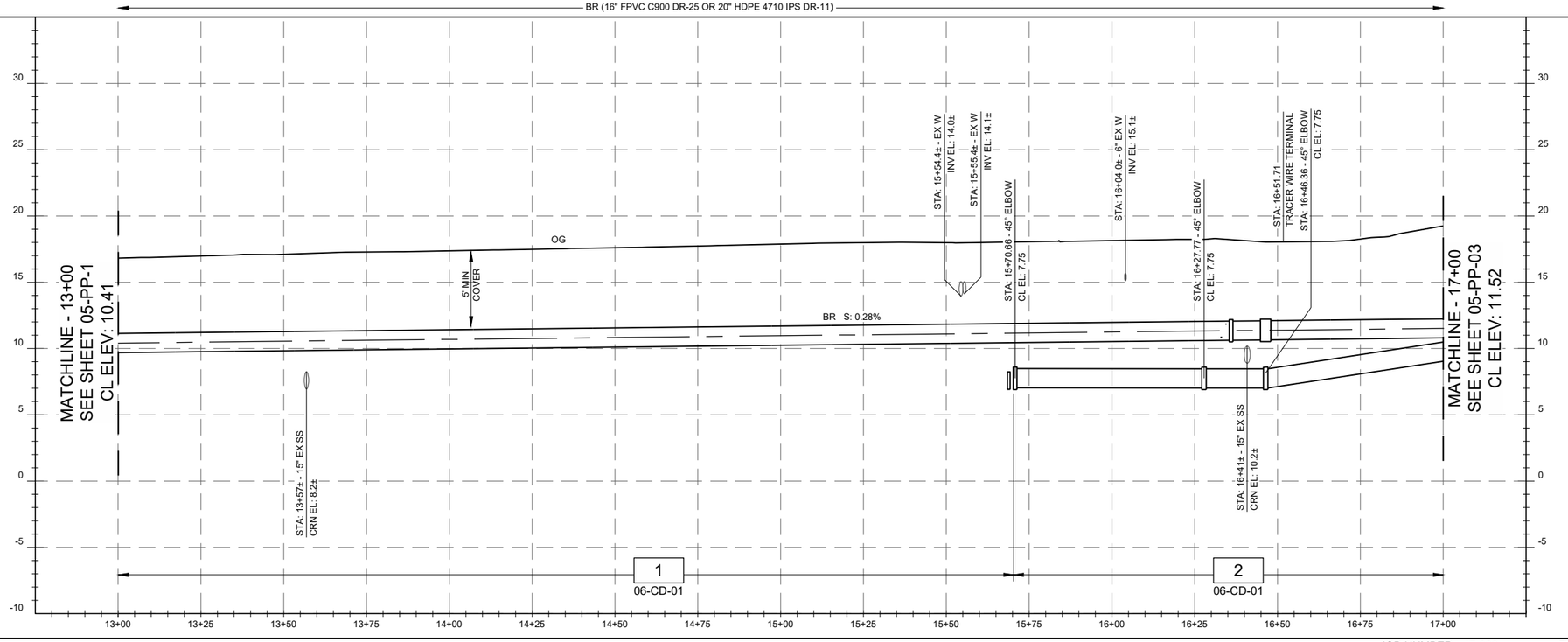




NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. 3'Lx'5W'x'4V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. TRACER WIRE TERMINAL. LOCATE OVER CL FM2. 2060

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

5. 6" A.C. PVMNT, 36" CVR, 42" DEEP, SCG GAS.
6. 6" A.C. PVMNT, 23" CVR 29" DEEP 10"W, 45° DEEP TO ADDTL 10"W.
7. 7" A.C. PVMNT, 35" CVR, 47" DEEP 12"W, 45° DEEP TO ADDTL 10"W

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

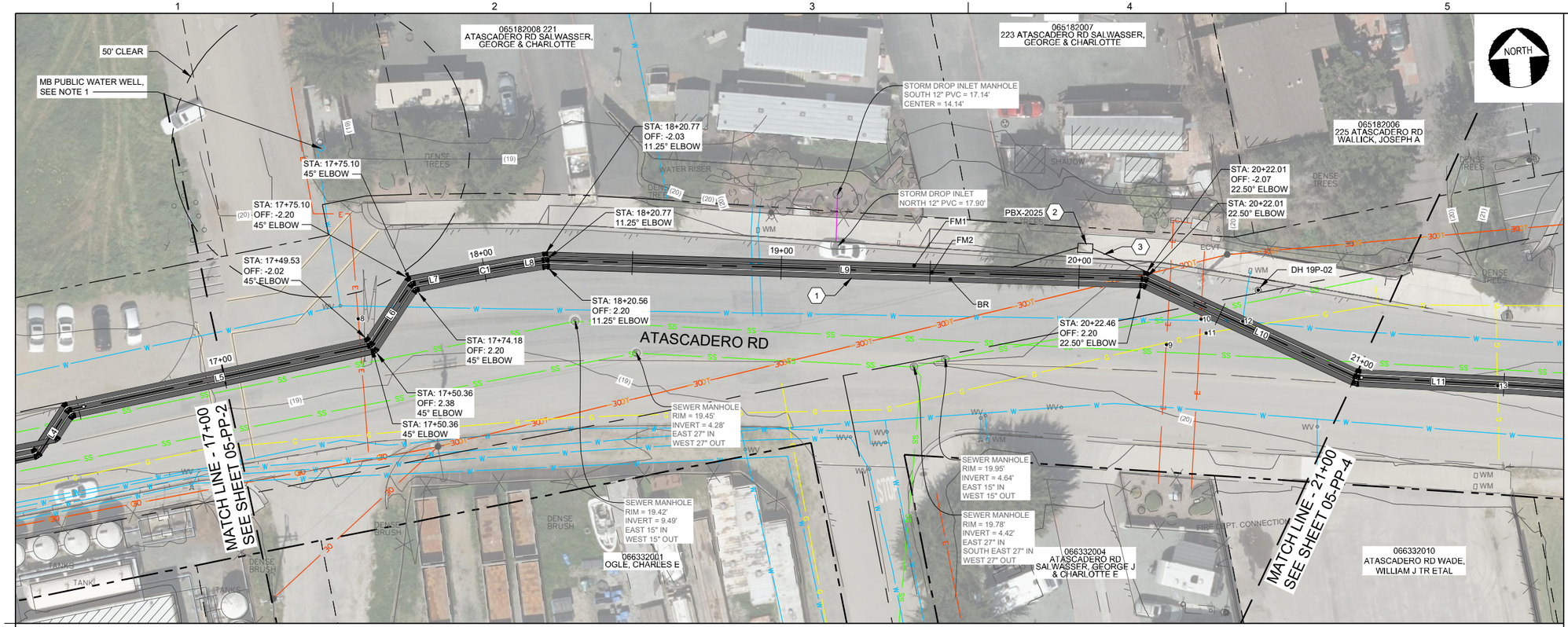
CITY OF MORRO BAY

WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

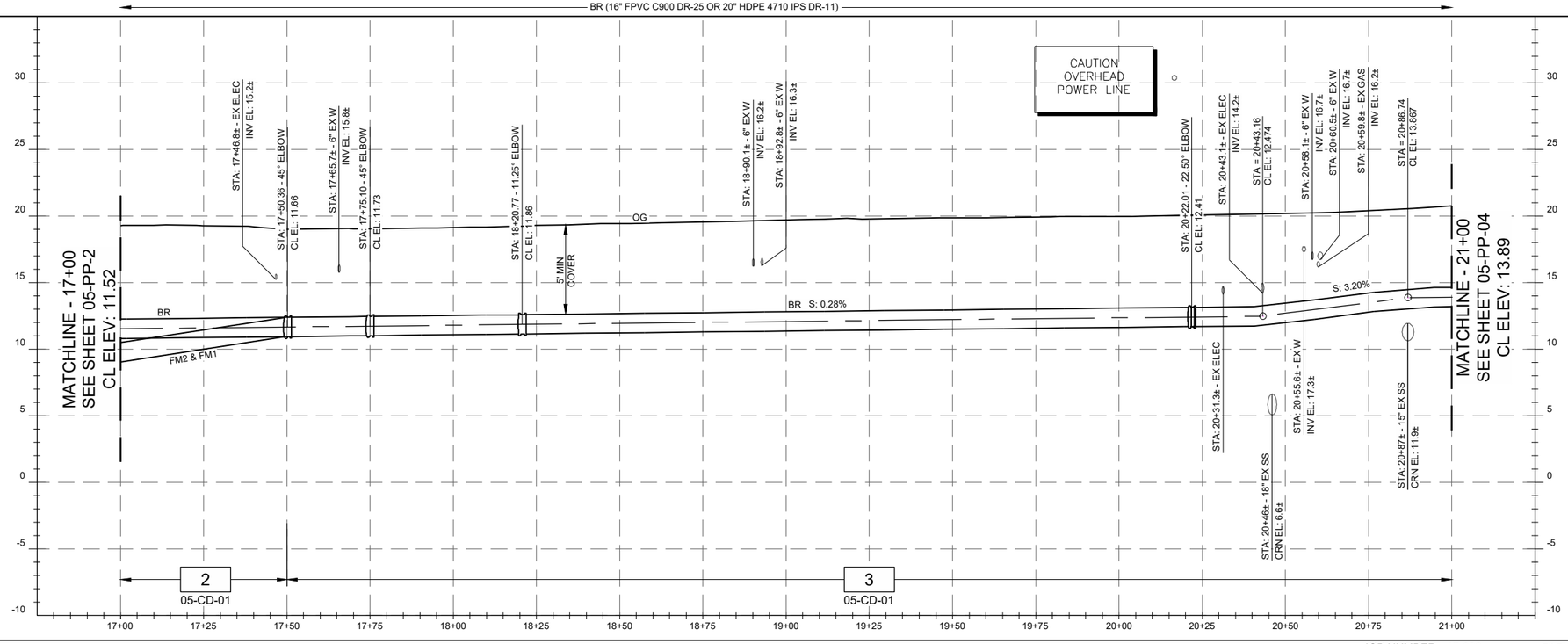
PLAN AND PROFILE

FORCE MAIN PLAN AND PROFILE
STA 13+00 TO STA 17+00

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-2
SHEET NUMBER	----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
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3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.
4. PURSUANT TO DDW REGULATIONS, NO NON-POTABLE WATER UTILITIES SHALL BE INSTALLED WITHIN 50' OF A PUBLIC WATER WELL.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. 3'Lx'5Wx'4V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

8. 6" A.C. PVMNT, 32" CVR, 36" DEEP, ELECTRICAL CONDUIT.
9. 4" A.C. PVMNT, 70" CVR, 75" DEEP, ELECTRICAL CONDUIT.
10. 9" A.C. PVMNT, 67" CVR, 74" DEEP, ELECTRICAL CONDUIT.
11. 4" A.C. PVMNT, 44" CVR, 46" DEEP, SCG GAS.
12. 6" A.C. PVMNT, 30" CVR, 31" DEEP, WATER.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

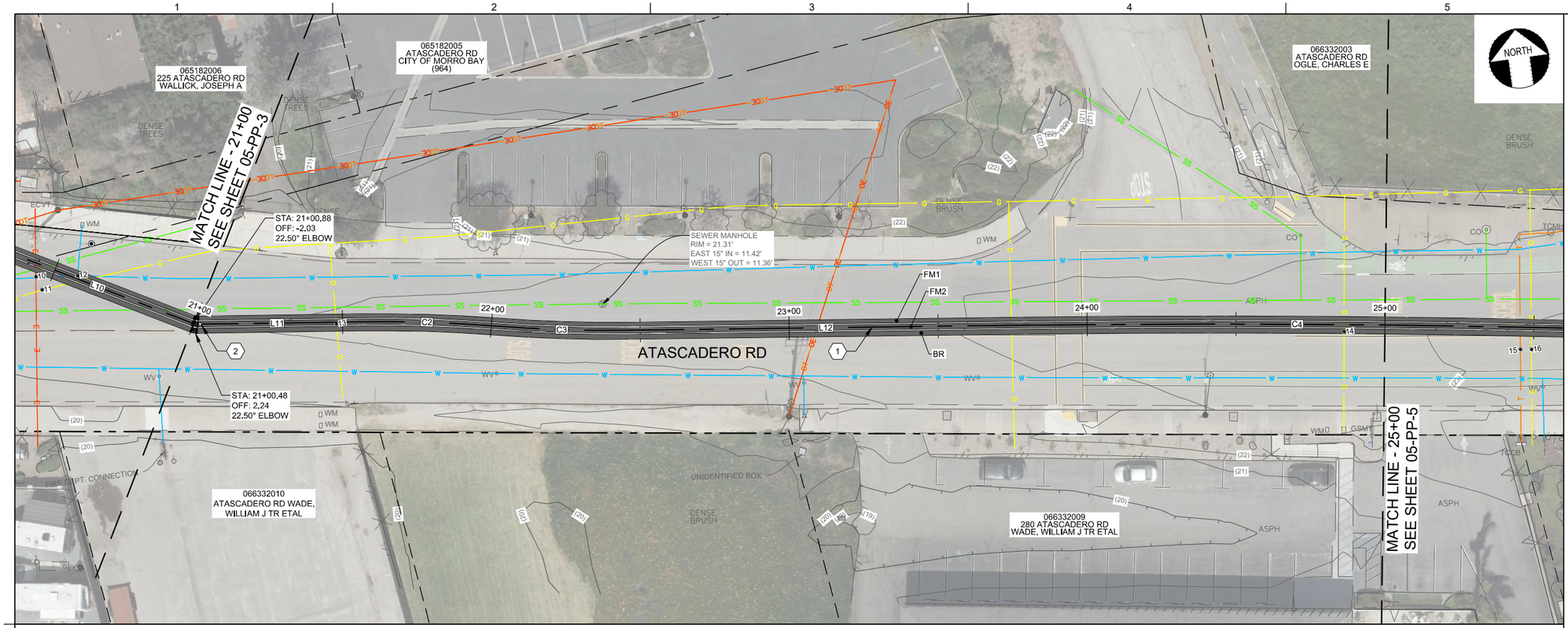
DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

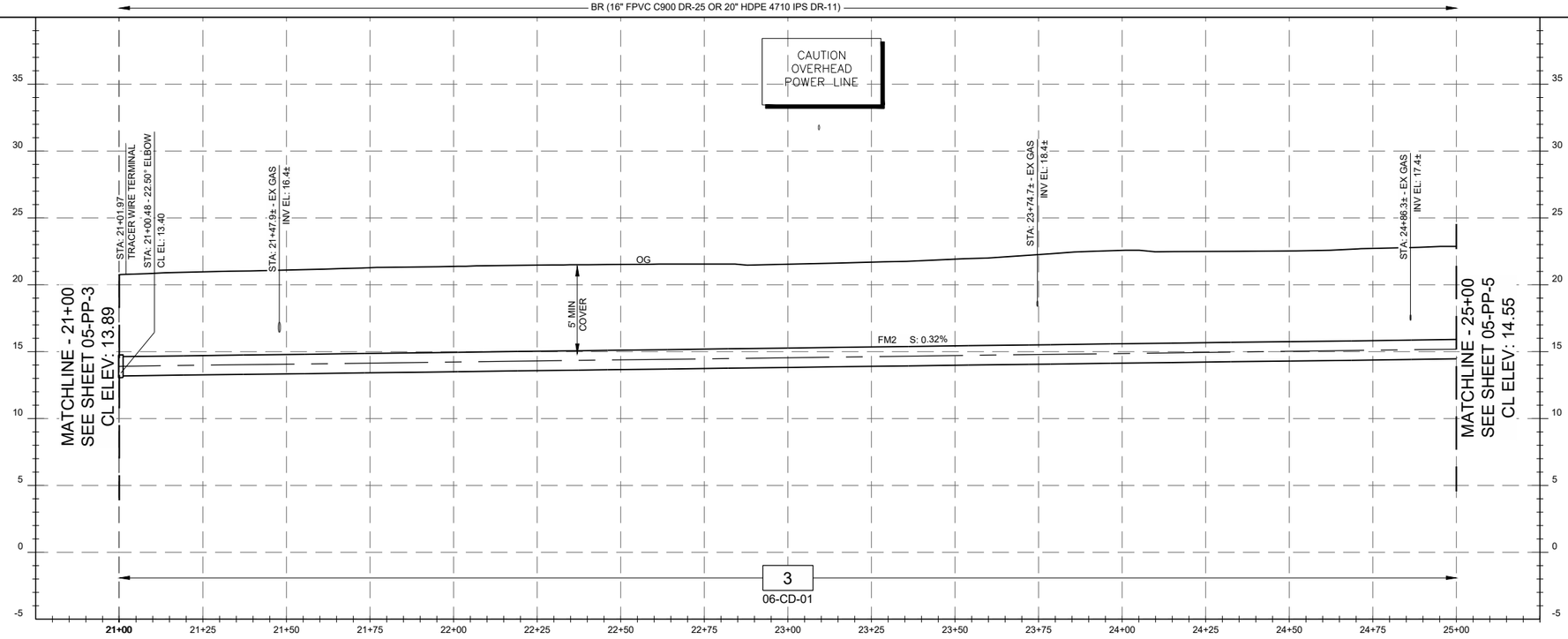
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE STA 17+00 TO STA 21+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-3
SHEET NUMBER ----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)



3
06-CD-01

NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
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CONSTRUCTION KEY NOTES:

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2. TRACER WIRE TERMINAL. LOCATE OVER CL FM2 (2060)

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19.

13. 8" A.C. PVMNT, 38" CVR, 45" DEEP, SCG GAS.
14. 4" A.C. PVMNT, 54" CVR, 56" DEEP, SCG GAS.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

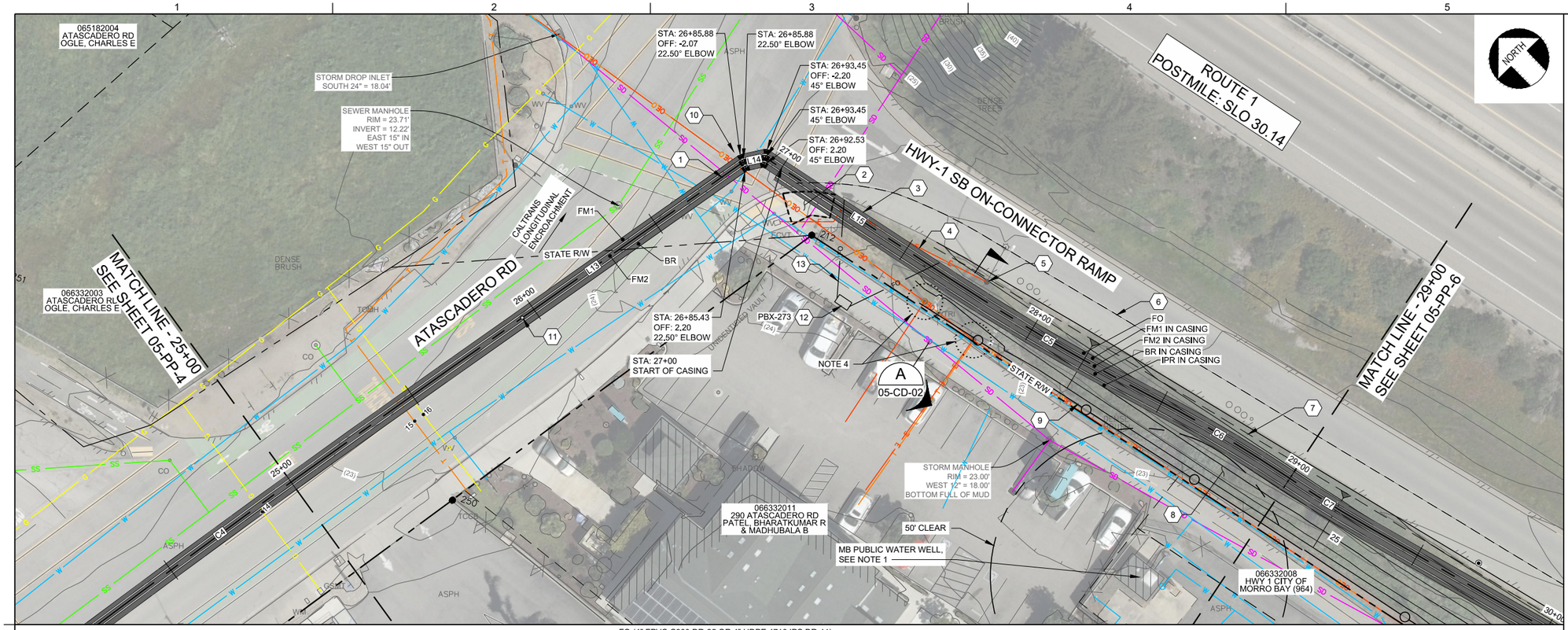
DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

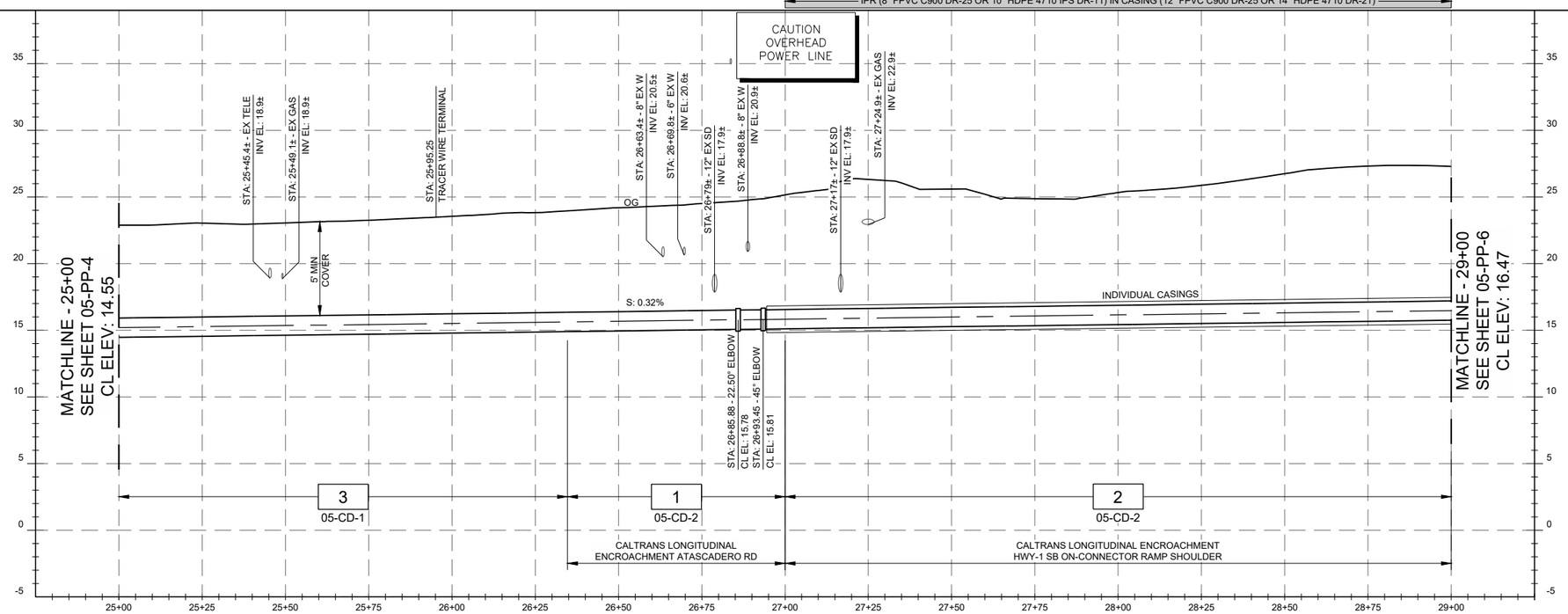
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 21+00 TO STA 25+00

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-4
SHEET NUMBER	----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11) — FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11) IN CASING (14" FPVC C900 DR-25 OR 16" HDPE 4710 IPS DR-21)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11) — FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11) IN CASING (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-21)
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11) — BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11) IN CASING (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) — IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PURSUANT TO DDW REGULATIONS, NO NON-POTABLE WATER UTILITIES SHALL BE INSTALLED WITHIN 50' OF A PUBLIC WATER WELL.
4. EXCAVATION WITHIN 6' OF PP SHALL BE COORDINATED WITH PGE AND MAY REQUIRE CONSTRUCTION PHASE SUPPORT.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. PROTECT RAMP, REPLACE SIDEWALK, CURB, & GUTTER UP TO EDGE OF RAMP PER CALTRANS STANDARD PLAN A87A.
3. TEMPORARILY RELOCATE FREEWAY ENTRANCE SIGN POST IN CONJUNCTION WITH APPROVED TEMPORARY TRAFFIC CONTROL PLAN.
4. COORDINATE WITH PGE AND CALTRANS TO SHUT DOWN POWER TO EX STREET LIGHTING POLE PRIOR TO EXCAVATION. PROTECT IN PLACE EX CONDUIT AND PULLBOX.
5. PROTECT IN PLACE EX CALTRANS STREET LIGHTING POLE, SIGN POST, AND REFLECTIVE DELINEATOR.
6. PAVEMENT REPLACEMENT PER DET 4/05-CD-02.
7. SET HINGE POINT PER DET 4/05-CD-02.
8. GRADING PER DET 4/05-CD-02.
9. REPLACE 135-LF 6'-0" CHAIN LINK FENCE PER CALTRANS STD PLAN A85.
10. CAP END OF IPR WITH BLIND FLANGE.
11. TRACER WIRE TERMINAL. LOCATE OVER CL FM2. (2060)
12. 3'Lx'5Wx'4V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
13. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19.

15. 4" A.C. PVMNT, 36" CVR, 44" DEEP, TELEPHONE CONDUIT
16. 4" A.C. PVMNT, 43" CVR, 45" DEEP, SCG GAS

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

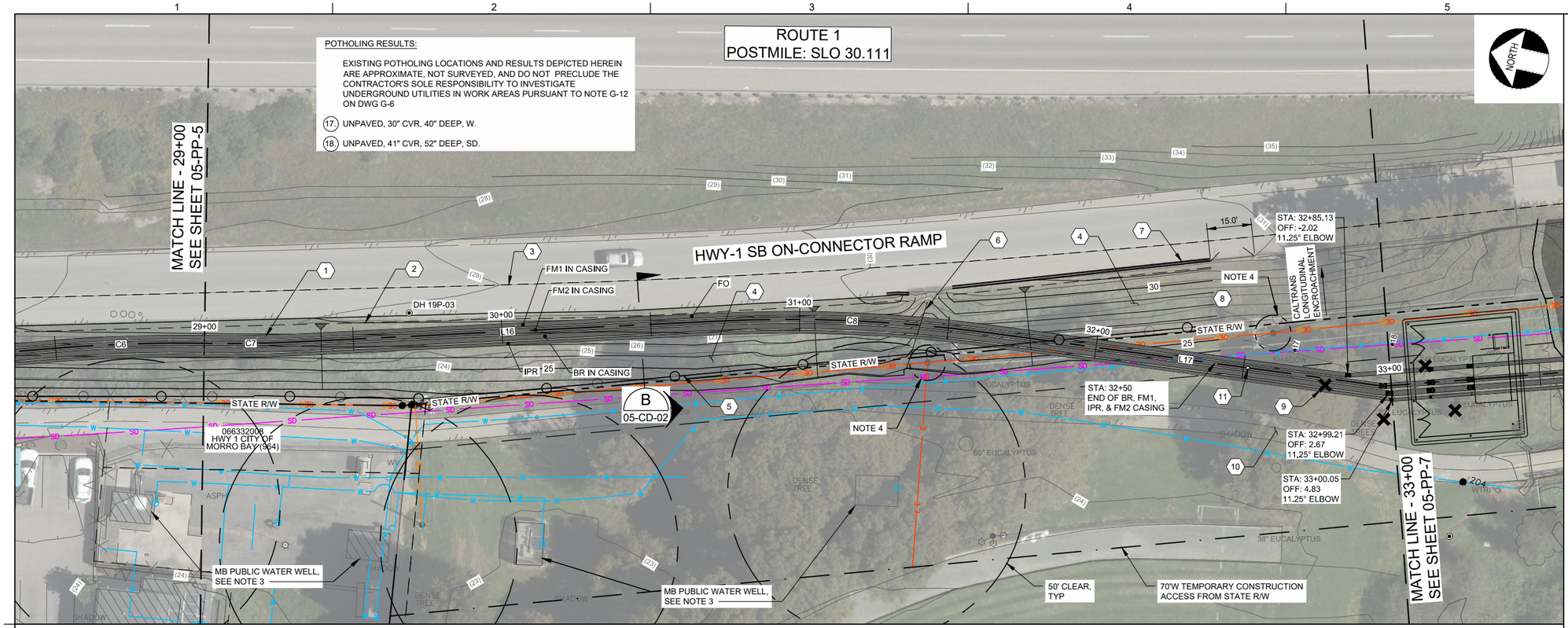
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 25+00 TO STA 29+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-5
SHEET NUMBER ----

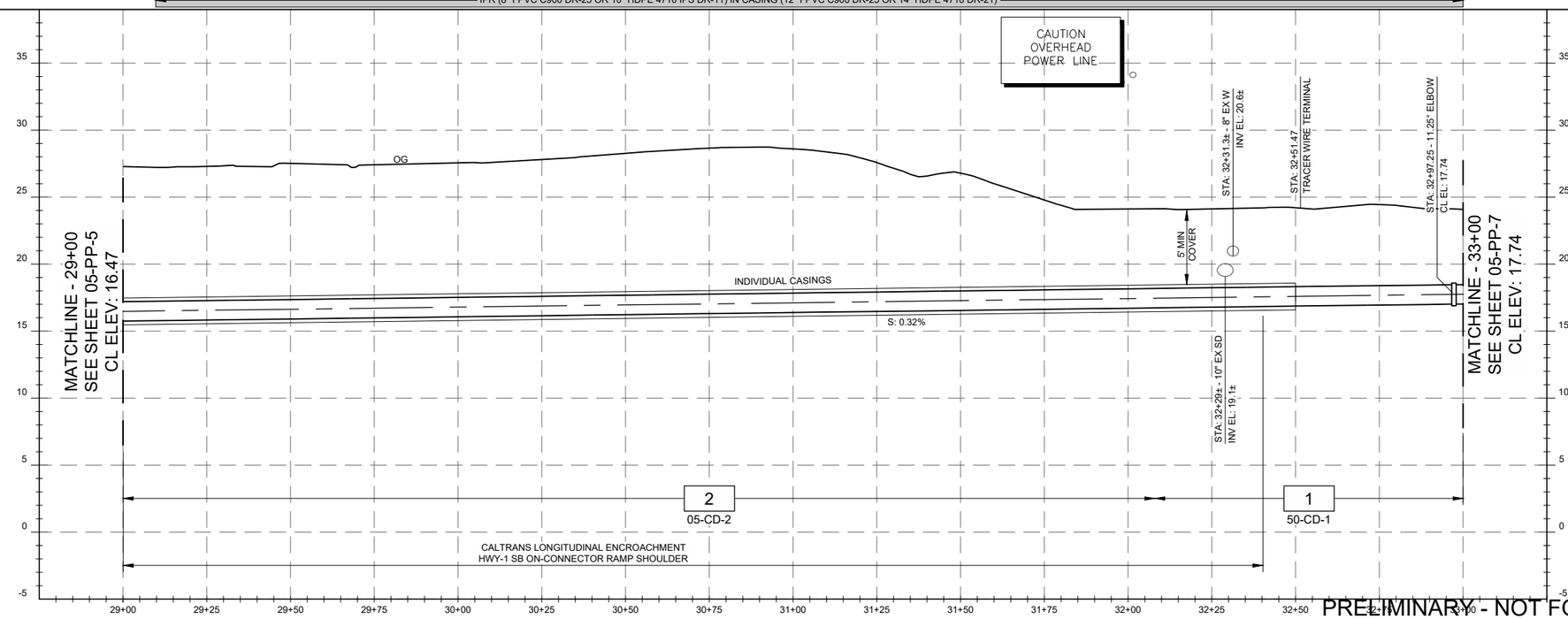
L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP105.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP105.DWG PLOT DATE: 02/10/20 PLOT TIME: 04:34:08



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11) IN CASING (14" FPVC C900 DR-25 OR 16" HDPE 4710 IPS DR-21)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11) IN CASING (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-21)
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11) IN CASING (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 DR-21)

FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)



SHEET NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PURSUANT TO DDW REGULATIONS, NO NON-POTABLE WATER UTILITIES SHALL BE INSTALLED WITHIN 50' OF A PUBLIC WATER WELL.
4. EXCAVATION WITHIN 6' OF PP SHALL BE COORDINATED WITH PGE AND MAY REQUIRE CONSTRUCTION PHASE SUPPORT
5. TREES NOT MARKED FOR REMOVAL WITHIN THE TEMPORARY CONTRUCTION EASEMENT LIMITS AND OVER 6" DBH SHALL BE PROTECTED IN PLACE AND MAY BE TRIMMED PER THE PROJECT ARBORISTS RECOMMENDATIONS. TREES SMALLER THAN 6" DBH MAY BE REMOVED BY THE CONTRACTOR AS PART OF CLEARING AND GRUBBING OPERATIONS WITHIN TEMPORARY CONSTRUCTION ACCESS LIMITS IN COORDINATION WITH PROJECT BIOLOGIST AND ARBORIST.

KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ORDER AND PLACEMENT SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL. SIZE AND CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED ABOVE PROFILE.
2. PAVEMENT REPLACEMENT PER DET 4/05-CD-02.
3. SET HINGE POINT PER DET 4/05-CD-02.
4. GRADING PER DET 4/05-CD-02.
5. REPLACE 340-LF 6' HIGH CHAIN LINK FENCE PER CALTRANS STD PLAN A85.
6. REPLACE HMA DIKE OUTLET AND MATCH EXISTING.
7. REPLACE 100-LF HMA DIKE PER CALTRANS STANDARD PLAN A87B CASE "R".
8. LONGITUDINAL LIMIT OF SLOPE MODIFICATION. CONFORM TO EX GRADE.
9. TREE REMOVAL, TYP OF 2.
10. PROTECT EXISTING BIKE PATH IN PLACE.
11. INSTALL TRACER WIRE TERMINAL (2060) AND GROUND ROD (16410)

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

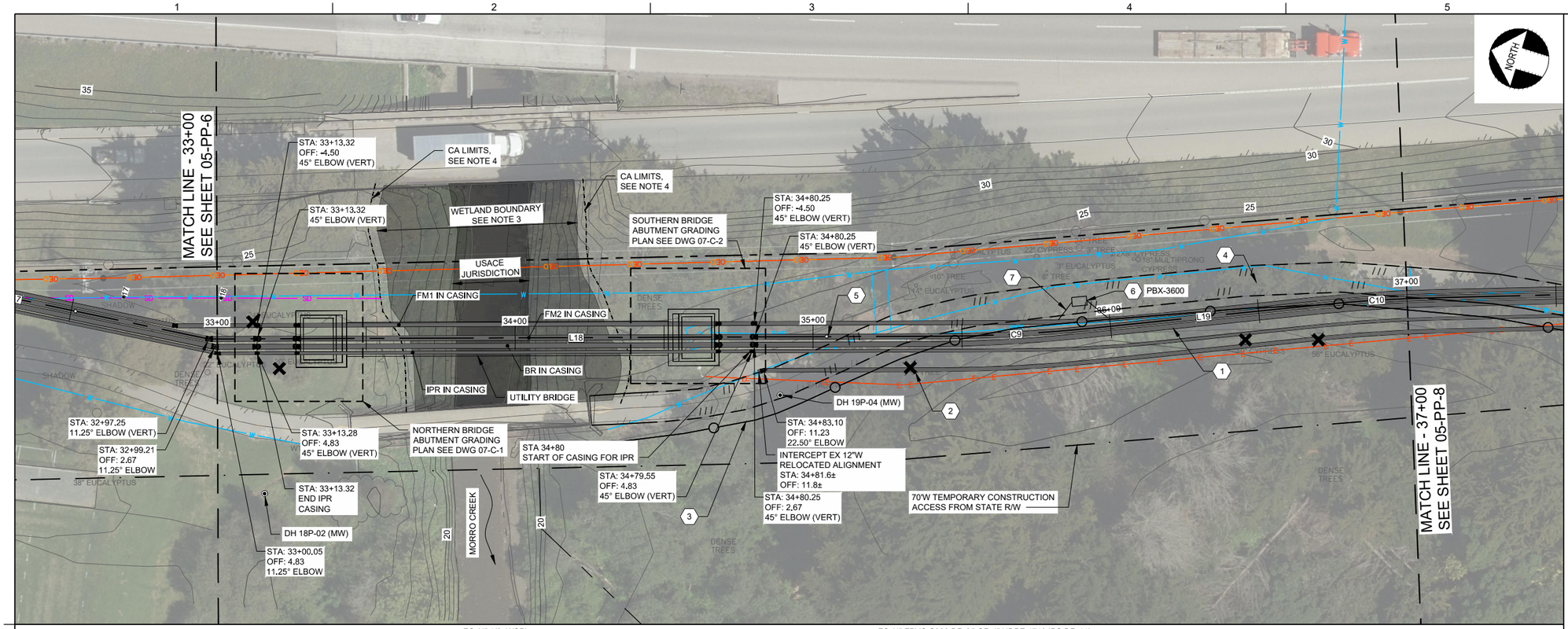
PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE STA 29+00 TO STA 33+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-6
SHEET NUMBER ----

PRELIMINARY - NOT FOR CONSTRUCTION

JOB NUMBER: 17-082 FILENAME: 1782D-05PP106.DWG PLOT DATE: 02/10/20 PLOT TIME: 09:06:01

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP106.DWG



NOTES:

1. CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. WETLAND BOUNDARY IS REPRESENTATIVE OF CDFW/RWQCB/CCC JURISDICTION AS DELINEATED IN THE PROJECT BIOLOGICAL RESOURCES ASSESSMENT (KMA 2019).
4. CONSTRUCTION ACTIVITY (CA) LIMITS OFFSET 3' FROM EDGE OF WETLAND BOUNDARY. GROUND DISTURBING ACTIVITIES SHALL NOT EXTEND PAST CA LIMITS. SWPPP BMPS SHALL BE INSTALLED PER APPROVED SWPPP PLAN AT A MINIMUM ALONG CA LIMITS.
5. EXCAVATION WITHIN 6' OF PP SHALL BE COORDINATED WITH PGE AND MAY REQUIRE CONSTRUCTION PHASE SUPPORT.
6. CONTRACTOR SHALL PREPARE, SUBMIT FOR REVIEW, AND IMPLEMENT A SITE SECURITY PLAN WHEREBY THE VISTRA PRIVATE PROPERTY SHALL BE SECURED AT ALL TIMES VIA TEMPORARY FENCING AT THE LIMITS OF THE TEMPORARY CONSTRUCTION EASEMENT.
7. TREES NOT MARKED FOR REMOVAL WITHIN THE TEMPORARY CONTRUCTION EASEMENT LIMITS AND OVER 6" DBH SHALL BE PROTECTED IN PLACE AND MAY BE TRIMMED PER THE PROJECT ARBORISTS RECOMMENDATIONS. TREES SMALLER THAN 6" DBH MAY BE REMOVED BY THE CONTRACTOR AS PART OF CLEARING AND GRUBBING OPERATIONS WITHIN TEMPORARY CONSTRUCTION ACCESS LIMITS IN COORDINATION WITH PROJECT BIOLOGIST AND ARBORIST. IF DELINEATED, ENVIRONMENTALLY SENSITIVE AREAS SHALL BE CORDONED OFF PER BIOLOGIST'S RECOMMENDATIONS.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. TREE REMOVAL, TYP OF 5.
3. REPLACE 271-LF 6'-0" CHAIN LINK FENCE WITH BARBED WIRE 45-DEG ARM PER (2800) REUSE AND REINSTALL EX VISTRA ACCESS GATES WHERE PRESENT.
4. REPLACE 260-LF EX BIKE PATH PER DWG 05-CD-10.
5. INSTALL TRACER WIRE TERMINAL (2060) AND GROUND ROD. (16410)
6. 3'Lx'5Wx'4V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
7. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

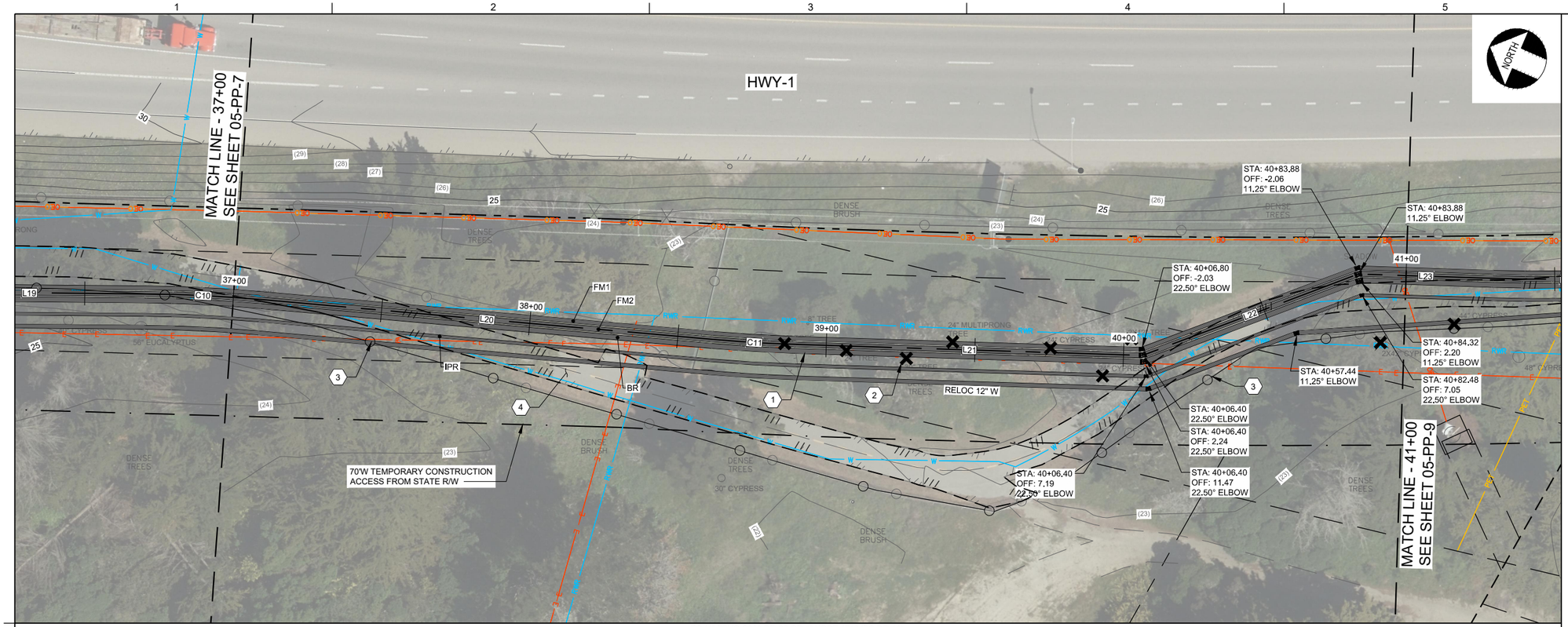
DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-242-2113

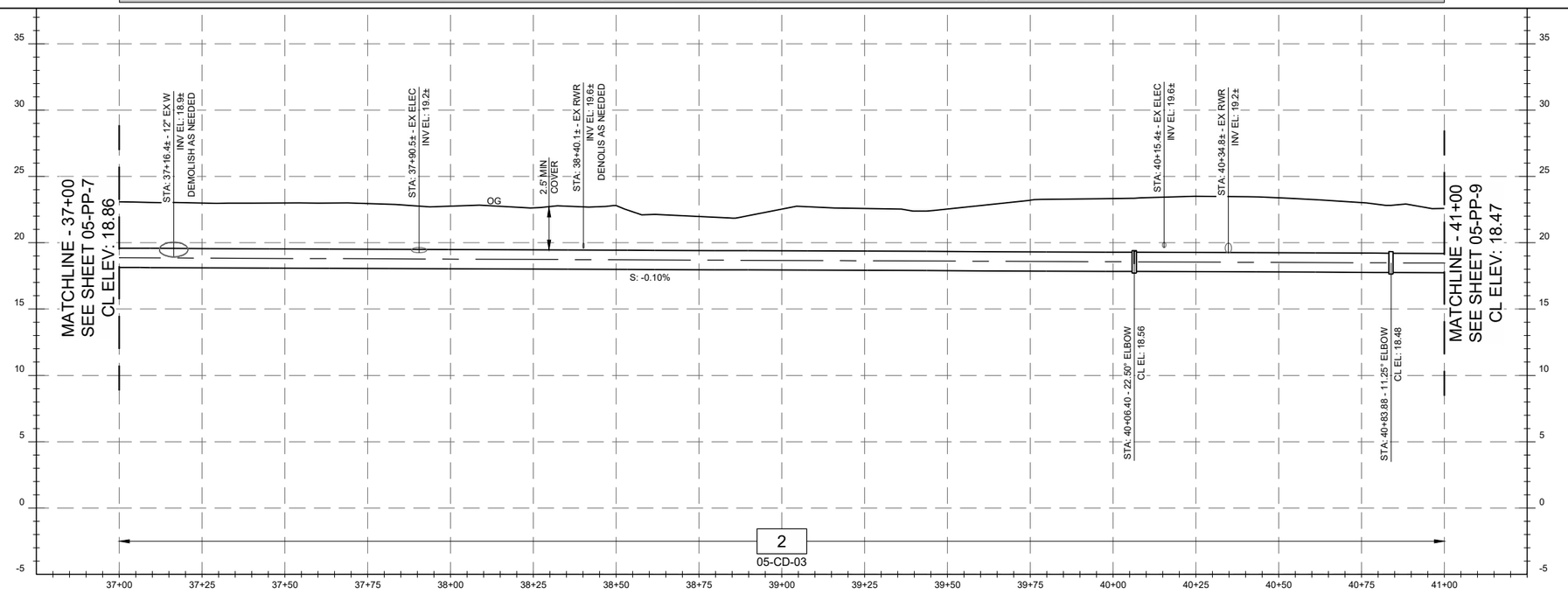
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 33+00 TO STA 37+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-7
SHEET NUMBER ----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)
12"W (12" FPVC C900 DR-25) IN CASING (16" FPVC C900 DR-25 OR 18" HDPE 4710 IPS DR-21)



2
05-CD-03

NOTES:

1. CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
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3. EXCAVATION WITHIN 6' OF PP SHALL BE COORDINATED WITH PGE AND MAY REQUIRE CONSTRUCTION PHASE SUPPORT.
4. CONTRACTOR SHALL PREPARE, SUBMIT FOR REVIEW, AND IMPLEMENT A SITE SECURITY PLAN WHEREBY THE VISTRA PRIVATE PROPERTY SHALL BE SECURED AT ALL TIMES VIA TEMPORARY FENCING AT THE LIMITS OF THE TEMPORARY CONSTRUCTION EASEMENT.
5. TREES NOT MARKED FOR REMOVAL WITHIN THE TEMPORARY CONTRUCTION EASEMENT LIMITS AND OVER 6" DBH SHALL BE PROTECTED IN PLACE AND MAY BE TRIMMED PER THE PROJECT ARBORISTS RECOMMENDATIONS. TREES SMALLER THAN 6" DBH MAY BE REMOVED BY THE CONTRACTOR AS PART OF CLEARING AND GRUBBING OPERATIONS WITHIN TEMPORARY CONSTRUCTION ACCESS LIMITS IN COORDINATION WITH PROJECT BIOLOGIST AND ARBORIST. IF DELINEATED, ENVIRONMENTALLY SENSITIVE AREAS SHALL BE CORDONED OFF PER BIOLOGIST'S RECOMMENDATIONS.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. TREE REMOVAL, TYP OF 10.
3. REPLACE 200-LF 6'-0" CHAIN LINK FENCE WITH BARBED WIRE 45-DEG ARM PER 2800 REUSE AND REINSTALL EX VISTRA ACCESS GATES WHERE PRESENT.
4. REPLACE 415-LF EX BIKE PATH PER DWG 05-CD-10

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

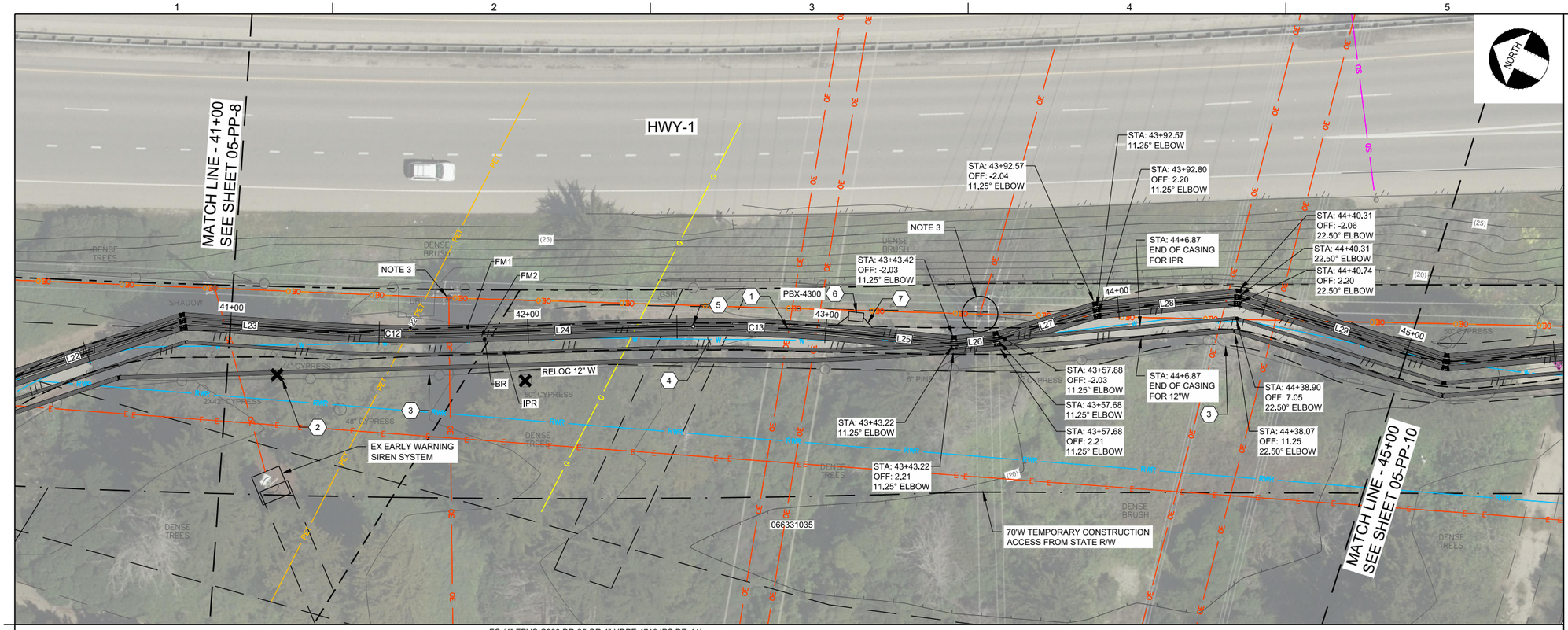
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 37+00 TO STA 41+00

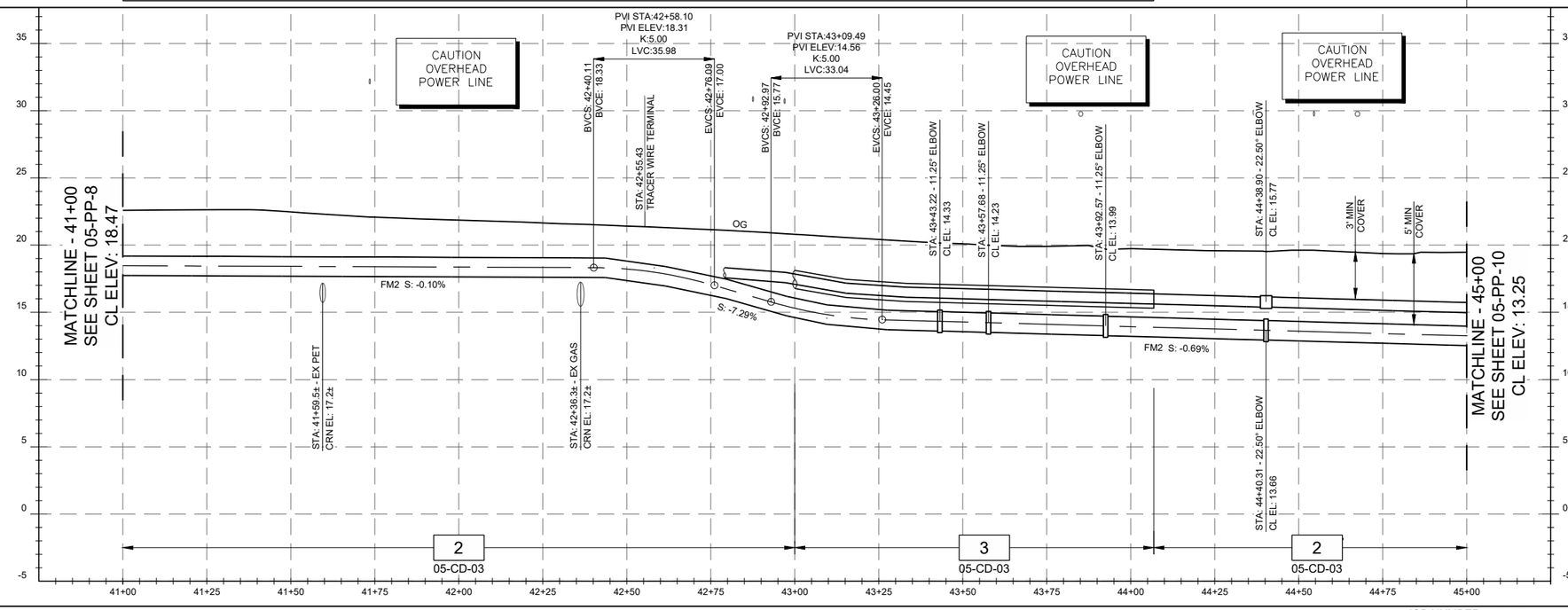
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-8
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP108.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP108.DWG PLOT DATE: 02/10/20 PLOT TIME: 15:23:59



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)
12"W (12" FPVC C900 DR-25) IN CASING (16" FPVC C900 DR-25 OR 18" HDPE 4710 IPS DR-21)
12"W (12" FPVC C900 DR-25)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. EXCAVATION WITHIN 6' OF PP SHALL BE COORDINATED WITH PGE AND MAY REQUIRE CONSTRUCTION PHASE SUPPORT.
4. CONTRACTOR SHALL PREPARE, SUBMIT FOR REVIEW, AND IMPLEMENT A SITE SECURITY PLAN WHEREBY THE PGE PRIVATE PROPERTY SHALL BE SECURED AT ALL TIMES VIA TEMPORARY FENCING AT THE LIMITS OF THE TEMPORARY CONSTRUCTION EASEMENT.
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CONSTRUCTION KEY NOTES:

(1) INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.

(2) TREE REMOVAL, TYP OF 2.

(3) REPLACE 405-LF 6'-0" CHAIN LINK FENCE WITH BARBED WIRE 45-DEG ARM PER (2800) REUSE AND REINSTALL EX VISTRA ACCESS GATES WHERE PRESENT.

(4) REPLACE 405-LF EX BIKE PATH PER DWG 05-CD-10

(5) INSTALL TERMINAL TRACER WIRE (2060) LOCATED ON CL OF FM2.

(6) 3'Lx'5Wx'4V TRAFFIC RATED FO UPB PER DWG UPB/E-2.

(7) .WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-6.

(22) UNPAVED, 60" CVR, 76" DEEP, PET

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

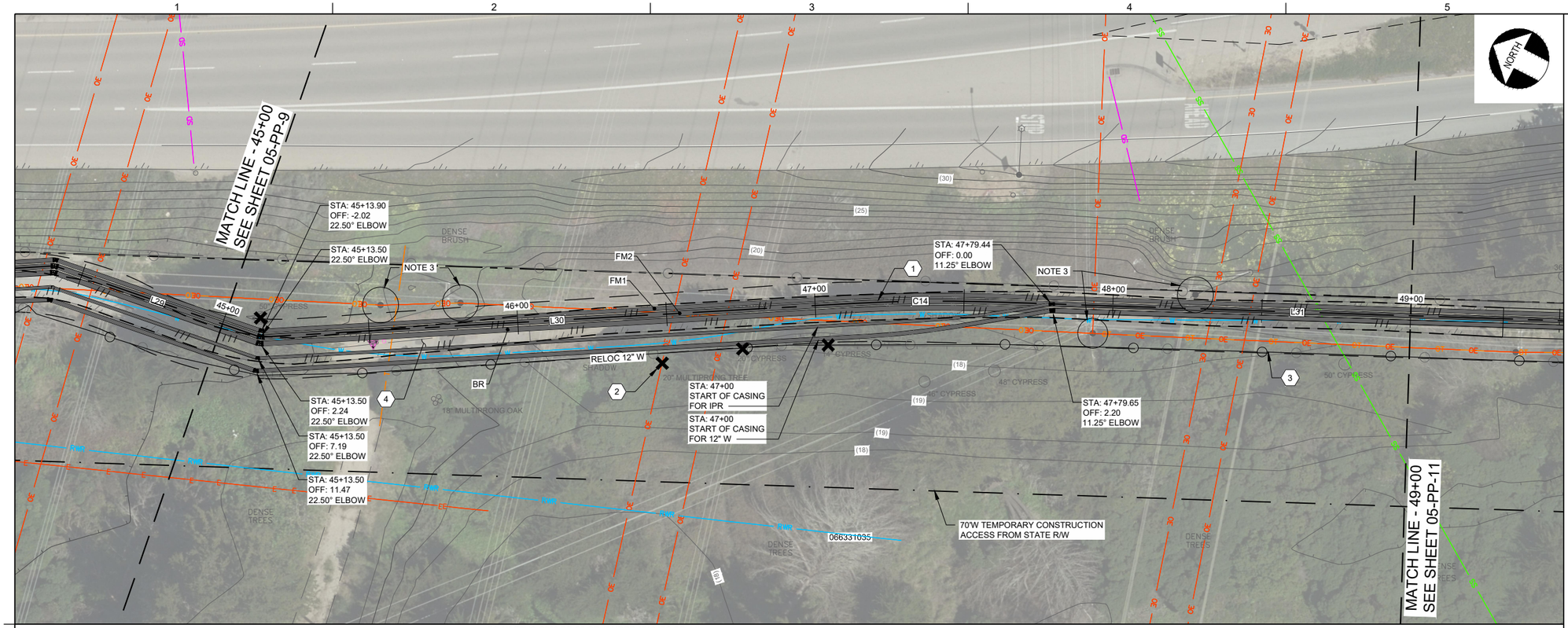
DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 41+00 TO STA 45+00

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-9
SHEET NUMBER	----



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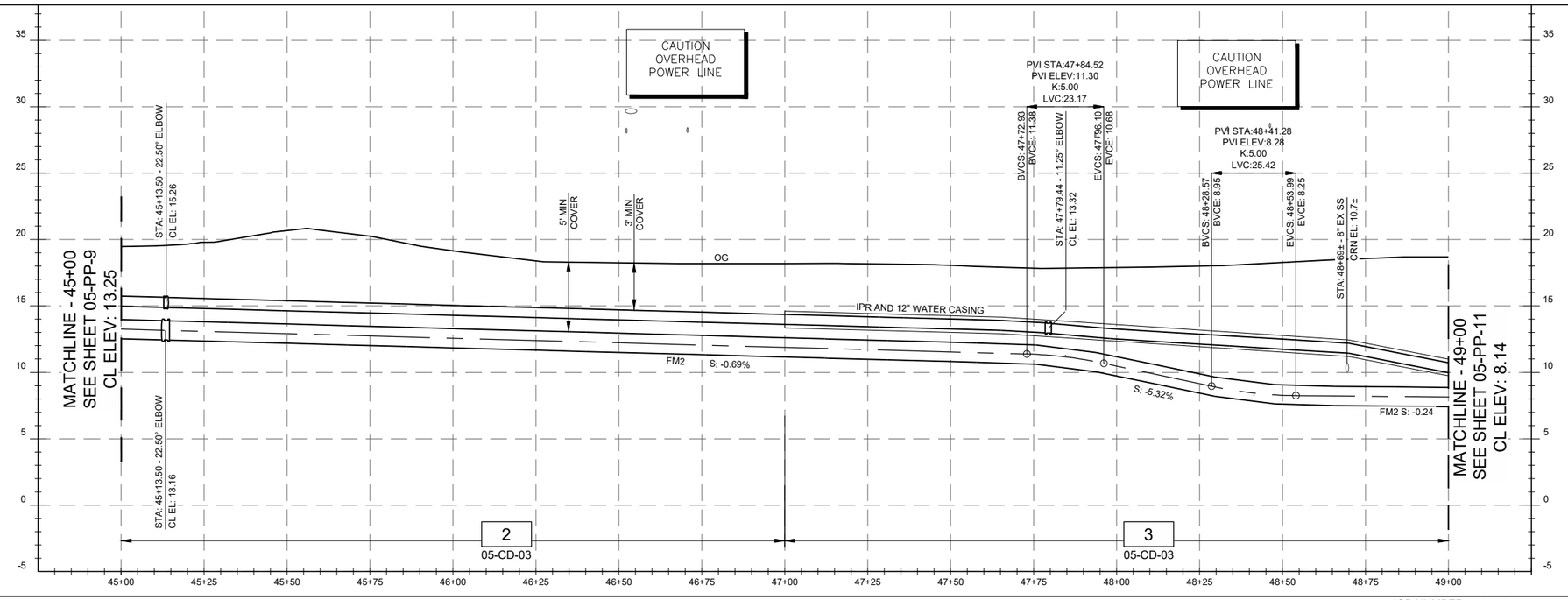
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) — IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)
12"W (12" FPVC C900 DR-25) — 12"W (12" FPVC C900 DR-25) IN CASING (16" FPVC C900 DR-25 OR 18" HDPE 4710 IPS DR-21)



20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. EXCAVATION WITHIN 6' OF PP SHALL BE COORDINATED WITH PGE AND MAY REQUIRE CONSTRUCTION PHASE SUPPORT.
4. CONTRACTOR SHALL PREPARE, SUBMIT FOR REVIEW, AND IMPLEMENT A SITE SECURITY PLAN WHEREBY THE PGE PRIVATE PROPERTY SHALL BE SECURED AT ALL TIMES VIA TEMPORARY FENCING AT THE LIMITS OF THE TEMPORARY CONSTRUCTION EASEMENT.
5. TREES NOT MARKED FOR REMOVAL WITHIN THE TEMPORARY CONTRUCTION EASEMENT LIMITS AND OVER 6" DBH SHALL BE PROTECTED IN PLACE AND MAY BE TRIMMED PER THE PROJECT ARBORISTS RECOMMENDATIONS. TREES SMALLER THAN 6" DBH MAY BE REMOVED BY THE CONTRACTOR AS PART OF CLEARING AND GRUBBING OPERATIONS WITHIN TEMPORARY CONSTRUCTION ACCESS LIMITS IN COORDINATION WITH PROJECT BIOLOGIST AND ARBORIST. IF DELINEATED, ENVIRONMENTALLY SENSITIVE AREAS SHALL BE CORDONED OFF PER BIOLOGIST'S RECOMMENDATIONS.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. TREE REMOVAL, TYP OF 4.
3. REPLACE 405-LF 6'-0" CHAIN LINK FENCE WITH BARBED WIRE 45-DEG ARM PER (2800) REUSE AND REINSTALL EX VISTRA ACCESS GATES WHERE PRESENT.
4. REPLACE 405-LF EX BIKE PATH PER DWG 05-CD-10

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

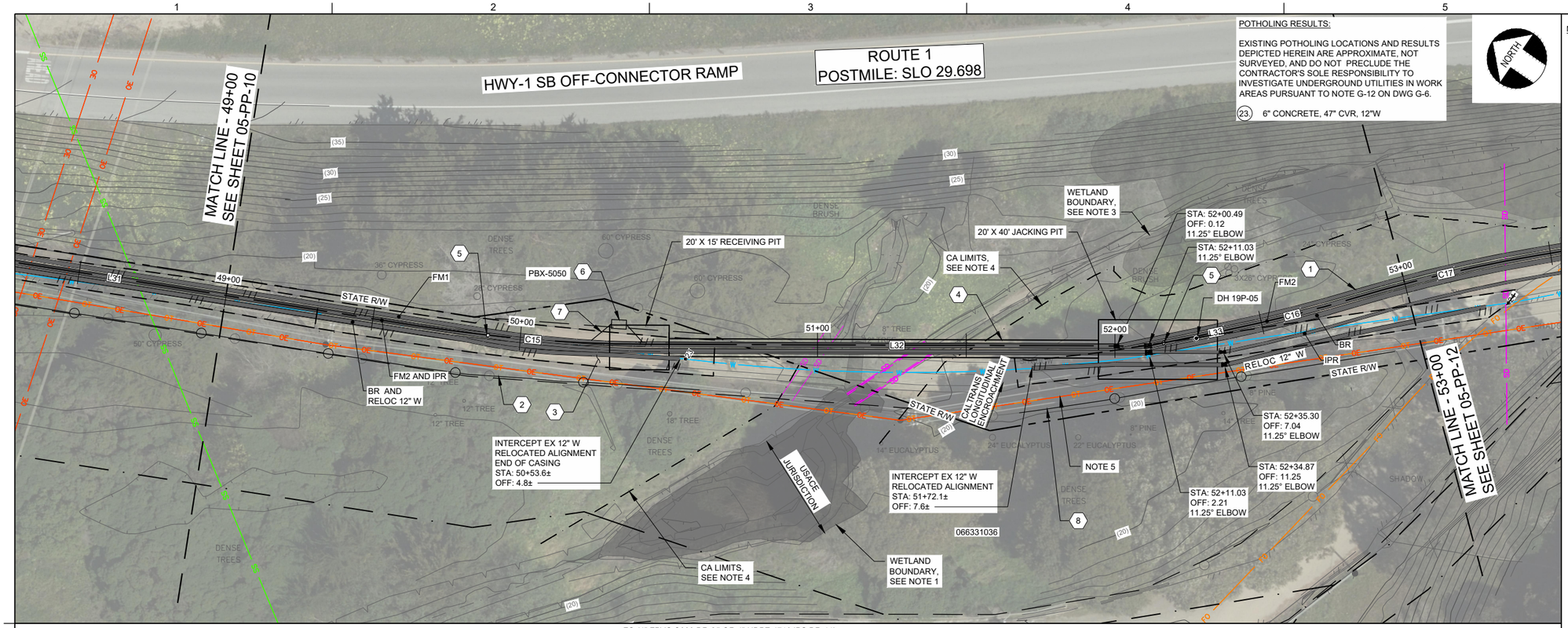
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 45+00 TO STA 49+00

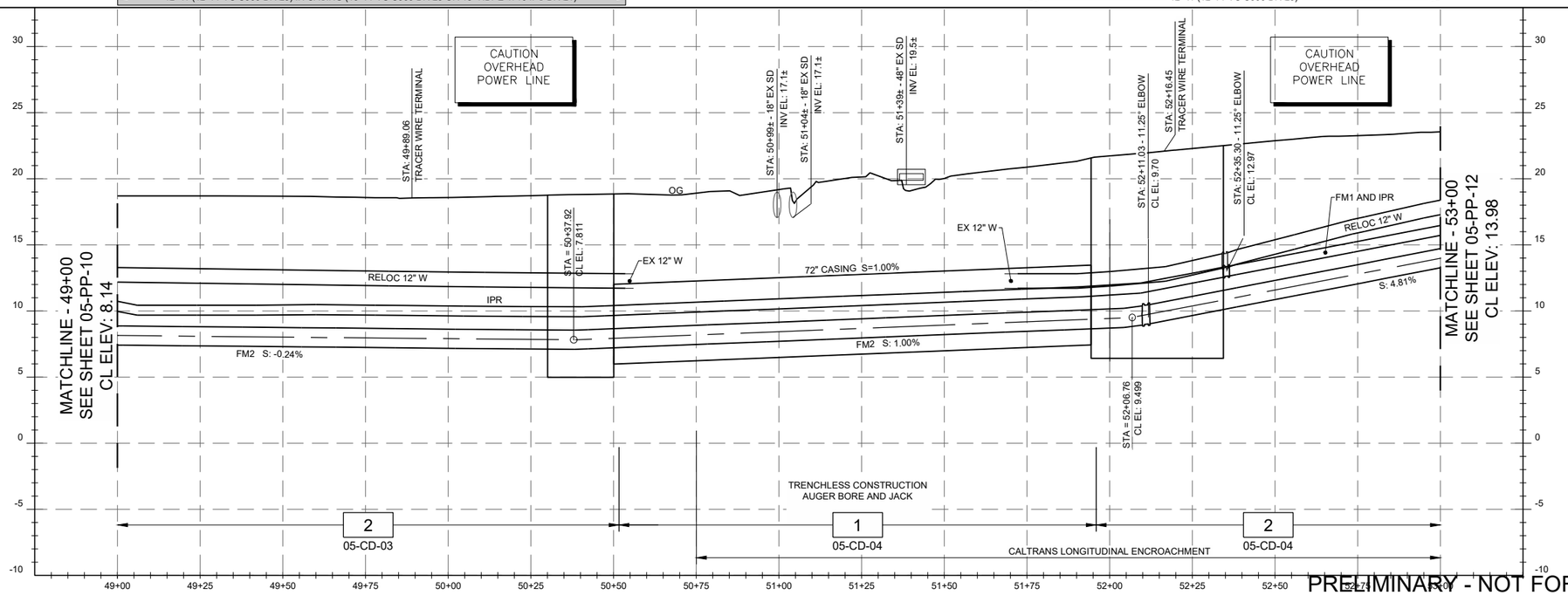
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-10
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP110.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP110.DWG PLOT DATE: 02/10/20 PLOT TIME: 16:29:41



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)
12" W (12" FPVC C900 DR-25) IN CASING (16" FPVC C900 DR-25 OR 18" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)
12" W (12" FPVC C900 DR-25)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. WETLAND BOUNDARY IS REPRESENTATIVE OF CDFW/RWQCB/CCC JURISDICTION AS DELINEATED IN THE PROJECT BIOLOGICAL RESOURCES ASSESSMENT (KMA 2019).
4. CONSTRUCTION ACTIVITY (CA) LIMITS OFFSET 3' FROM EDGE OF WETLAND BOUNDARY. GROUND DISTURBING ACTIVITIES SHALL NOT EXTEND PAST CA LIMITS. SWPPP BMPS SHALL BE INSTALLED PER APPROVED SWPPP PLAN AT A MINIMUM ALONG CA LIMITS.
5. CONTRACTOR SHALL COORDINATE WITH PGE THE POTENTIAL SHUTDOWN OF OVERHEAD ELECTRIC TO FACILITATE SAFE MOB/DEMOB FOR LARGE EQUIPMENT SUCH AS A CRANE, IF UTILIZED.
6. CONTRACTOR SHALL PREPARE, SUBMIT FOR REVIEW, AND IMPLEMENT A SITE SECURITY PLAN WHEREBY THE PG&E PRIVATE PROPERTY SHALL BE SECURED AT ALL TIMES VIA TEMPORARY FENCING AT THE LIMITS OF THE TEMPORARY CONSTRUCTION EASEMENT.
7. TREES NOT MARKED FOR REMOVAL WITHIN THE TEMPORARY CONSTRUCTION EASEMENT LIMITS AND OVER 6" DBH SHALL BE PROTECTED IN PLACE AND MAY BE TRIMMED PER THE PROJECT ARBORISTS RECOMMENDATIONS. TREES SMALLER THAN 6" DBH MAY BE REMOVED BY THE CONTRACTOR AS PART OF CLEARING AND GRUBBING OPERATIONS WITHIN TEMPORARY CONSTRUCTION ACCESS LIMITS IN COORDINATION WITH PROJECT BIOLOGIST AND ARBORIST. IF DELINEATED, ENVIRONMENTALLY SENSITIVE AREAS SHALL BE CORDONED OFF PER BIOLOGIST'S RECOMMENDATIONS.
8. JACKING AND RECEIVING PITS SHALL CONFORM TO CALTRANS ENCROACHMENT PERMITS MANUAL, SECTION 623.1B AND ADEQUATELY SHORED TO ENSURE AGAINST GROUND MOVEMENT AND TO SAFEGUARD EX SURFACE IMPROVEMENTS AND SUBSTRUCTURES.
9. ALL PITS SHALL BE FENCED AND/OR TYPE-K BARRIER PLACED FOR PROTECTION OR AS OTHERWISE DIRECTED BY A CALTRANS REPRESENTATIVE. PITS LEFT OPEN OVERNIGHT SHALL HAVE A 6-FT HIGH FENCE WITH PANEL SECTIONS SECURELY FASTENED TOGETHER FOR PEDESTRIAN SAFETY. REFLECTORS SHALL BE SECURED TO SIDES OF FENCE THAT FACE TRAFFIC.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. REPLACE 200-LF 6'-0" CHAIN LINK FENCE WITH BARBED WIRE 45-DEG ARM PER (2060) REUSE AND REINSTALL EX PGE ACCESS GATES WHERE PRESENT.
3. REPLACE 310-LF EX BIKE PATH PER DWG 05-CD-09
4. INSTALL 72"DIA 0.75"T STEEL CASING AND ASSOCIATED CARRIER PIPES VIA AUGER BORE AND JACK TRENCHLESS CONSTRUCTION. PIT LIMITS SHOWN HEREIN ARE FOR REFERENCE ONLY. CONTRACTOR RESPONSIBLE FOR SIZE AND CONFIGURATION OF PITS TO MEET SELECTED MEANS AND METHODS.
5. INSTALL TRACER WIRE TERMINAL (2060) AND GROUND ROD (16410)
6. 3'Lx'5Wx'4V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
7. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09
8. REPLACE 100-LF 6'-0" CHAIN LINK FENCE PER CALTRANS STD PLAN A85.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

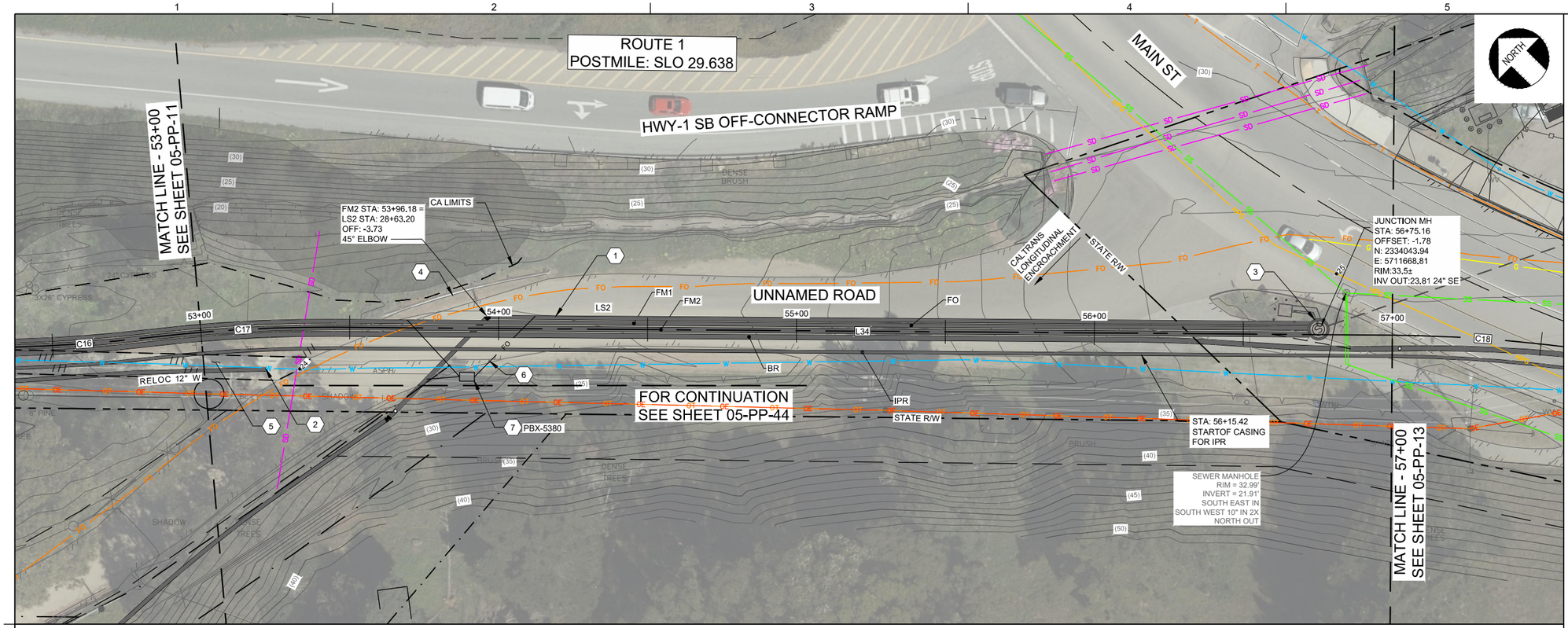
WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE STA 49+00 TO STA 53+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-11
SHEET NUMBER ----

PRELIMINARY - NOT FOR CONSTRUCTION



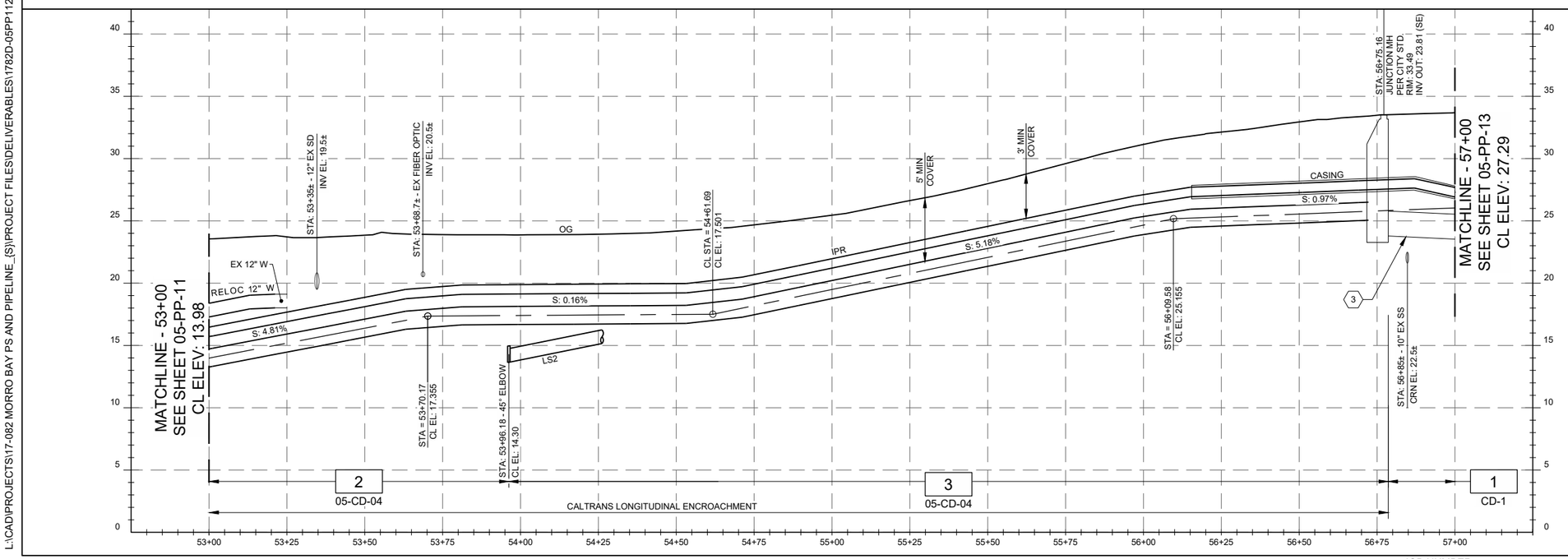
NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. WETLAND BOUNDARY IS REPRESENTATIVE OF CDFW/RWQCB/CCC JURISDICTION AS DELINEATED IN THE PROJECT BIOLOGICAL RESOURCES ASSESSMENT (KMA 2019).
4. CONSTRUCTION ACTIVITY (CA) LIMITS OFFSET 3' FROM EDGE OF WETLAND BOUNDARY. GROUND DISTURBING ACTIVITIES SHALL NOT EXTEND PAST CA LIMITS. SWPPP BMPS SHALL BE INSTALLED PER APPROVED SWPPP PLAN AT A MINIMUM ALONG CA LIMITS.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. CONNECT RELOC 12"W TO EX 12"W PVC C900.
3. GRAVITY SEWER TO PS-B CONNECTION PER DWG 05-PP-45.
4. PROTECT GUARD RAIL IN PLACE.
5. REPLACE 35-LF EX BIKE PATH PER DWG 05-CD-09.
6. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09
7. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E

FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
LS2 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
FM1 (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)



20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

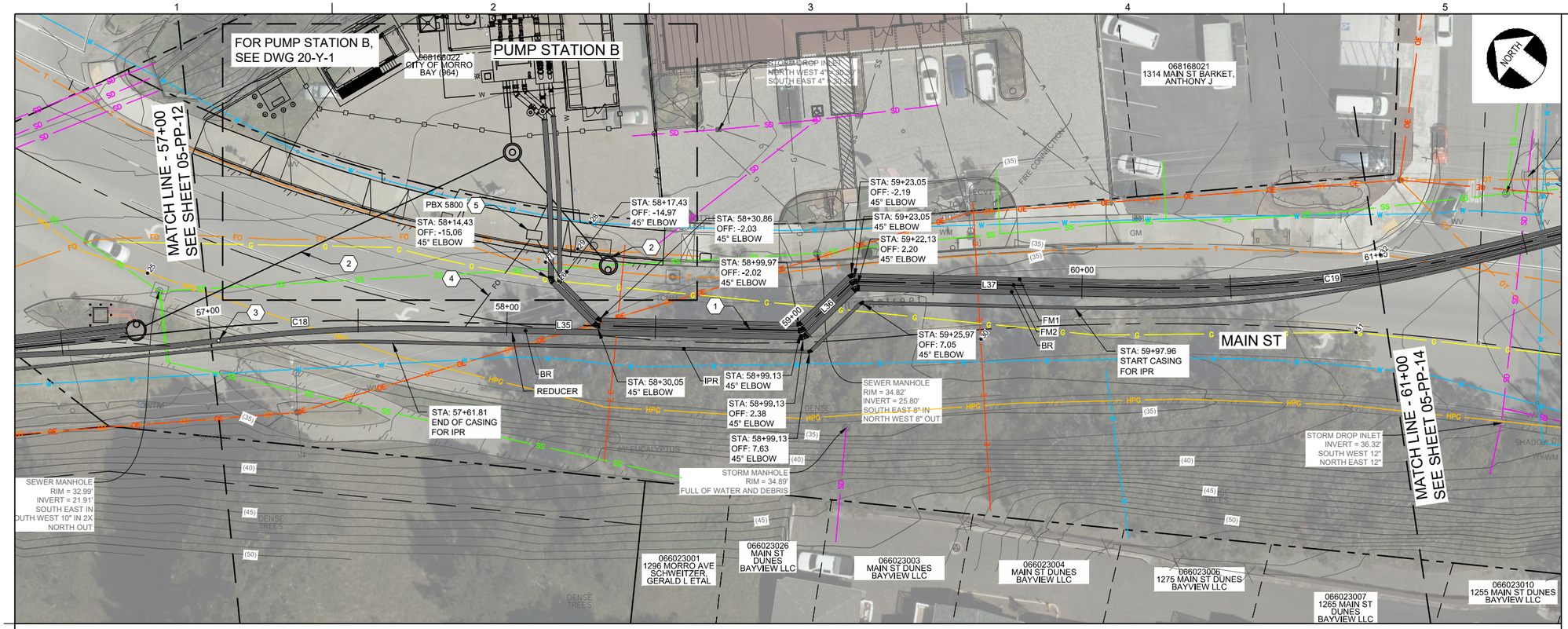
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 53+00 TO STA 57+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-12
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP112.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP112.DWG PLOT DATE: 02/10/20 PLOT TIME: 09:27:02



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)

FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)

FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)

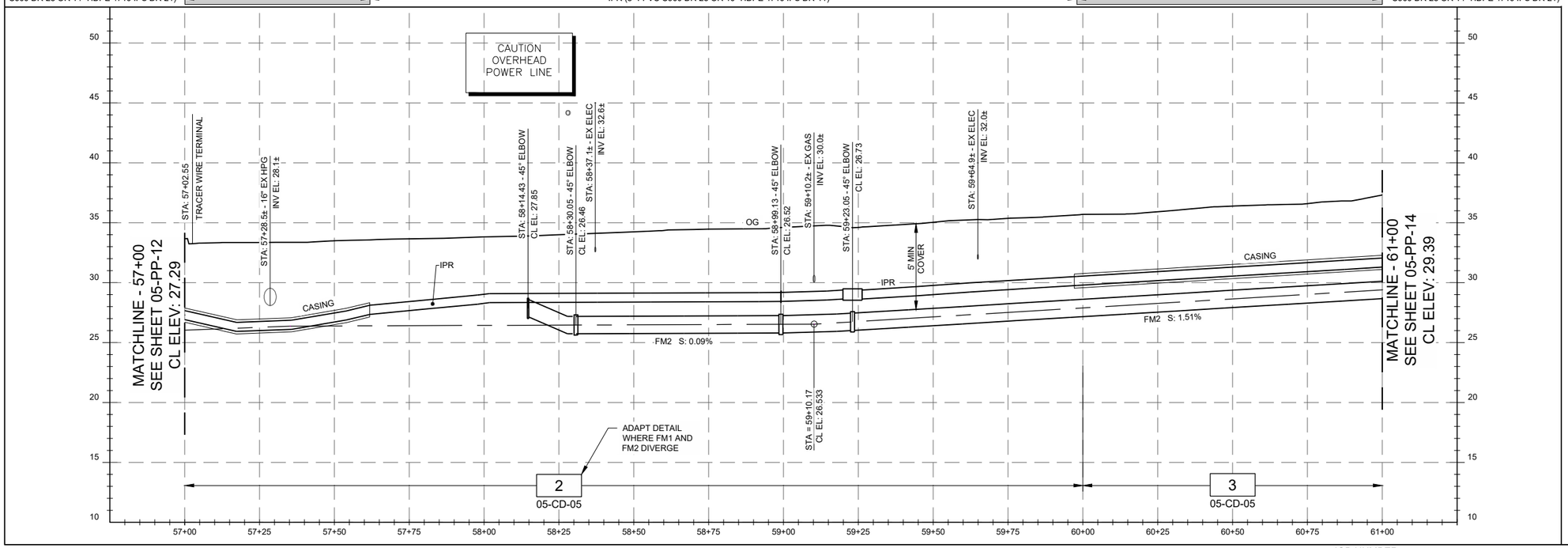
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)

BR (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)

BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)

IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)

IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. GRAVITY SEWER TO PS-B CONNECTION PER DWG 05-PP-45.
3. INSTALL TRACER WIRE TRMINAL (2060) LOCATE ON CL BR.
4. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
5. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19.

25. 7"AC PVMNT, 46"CVR TO 16"STL HPG.
26. 9"AC PVMNT, 50"CVR TO 6"STL GAS.
27. 32" CVR, 49" DEEP, CONC ENCASE TELEPHONE.
28. 6" CONC, 30" CVR, 42" DEEP, WATER.
29. UNPAVED, 80" CVR, 85" DEEP, FO CONDUIT.
30. 7"AC PVMNT, 35" CVR, 46" DEEP, E CONDUIT 3X.
31. 7"AC PVMNT, 73"CVR TO 6"STL GAS.
32. 7"AC PVMNT, 28"CVR, 48"DEEP, 20"W CONC ENCASE TELEPHONE.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY

WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

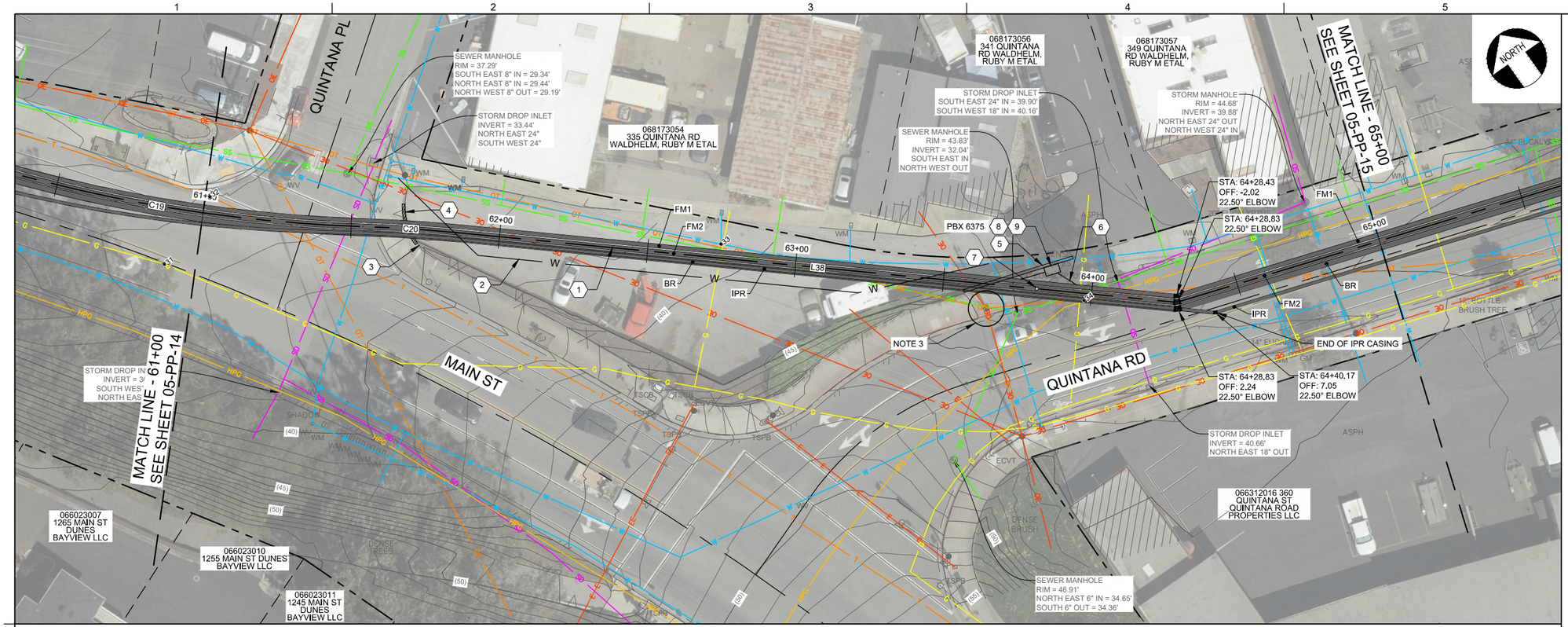
PLAN AND PROFILE

FORCE MAIN PLAN AND PROFILE STA 57+00 TO STA 61+00

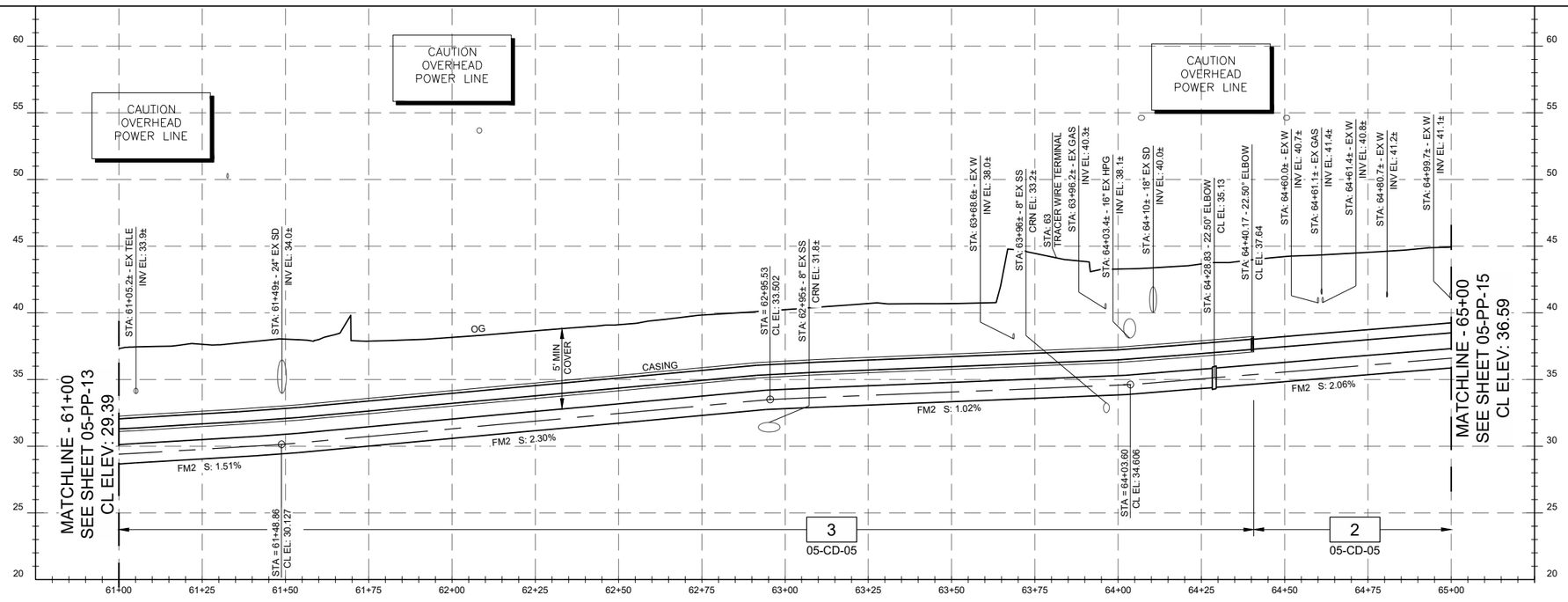
DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-13
SHEET NUMBER	----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP113.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP113.DWG PLOT DATE: 02/10/20 PLOT TIME: 06:38:42



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. 6. EXCAVATION WITHIN 6' OF TELE POLE SHALL BE COORDINATED WITH OWNER AND MAY REQUIRE CONSTRUCTION PHASE SUPPORT.
4. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. REPLACE 240-LF 8"ACP WATER WITH 16" DR25 C900 FPVC IN 20"
3. PROTECT EX CMU RETAINING WALL IN PLACE
4. REPLACE EX CMU CURB ALONG BACK OF WALK WITH MONOLOTHIC CONCRETE TYPE "C" CURB PER CITY STD DETAIL B-2.
5. REPLACE 39-LF CMU RETAINING WALL. SEE 1/06-CD-01
6. REMOVE 24" EUCALYPTUS TREE.
7. INSTALL TRACER WIRE TERMINAL (2060) LOCATE ON CL BR.
8. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09
9. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/G

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19.

(33.) 3" A.C. PVMNT, 45° CVR FOR 12"W, 26°CVR TO 2"G, 20°CVR TO 2"W SERVICE LINE

(34.) 7" A.C. PVMNT, 45° CVR FOR 16"HPG

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

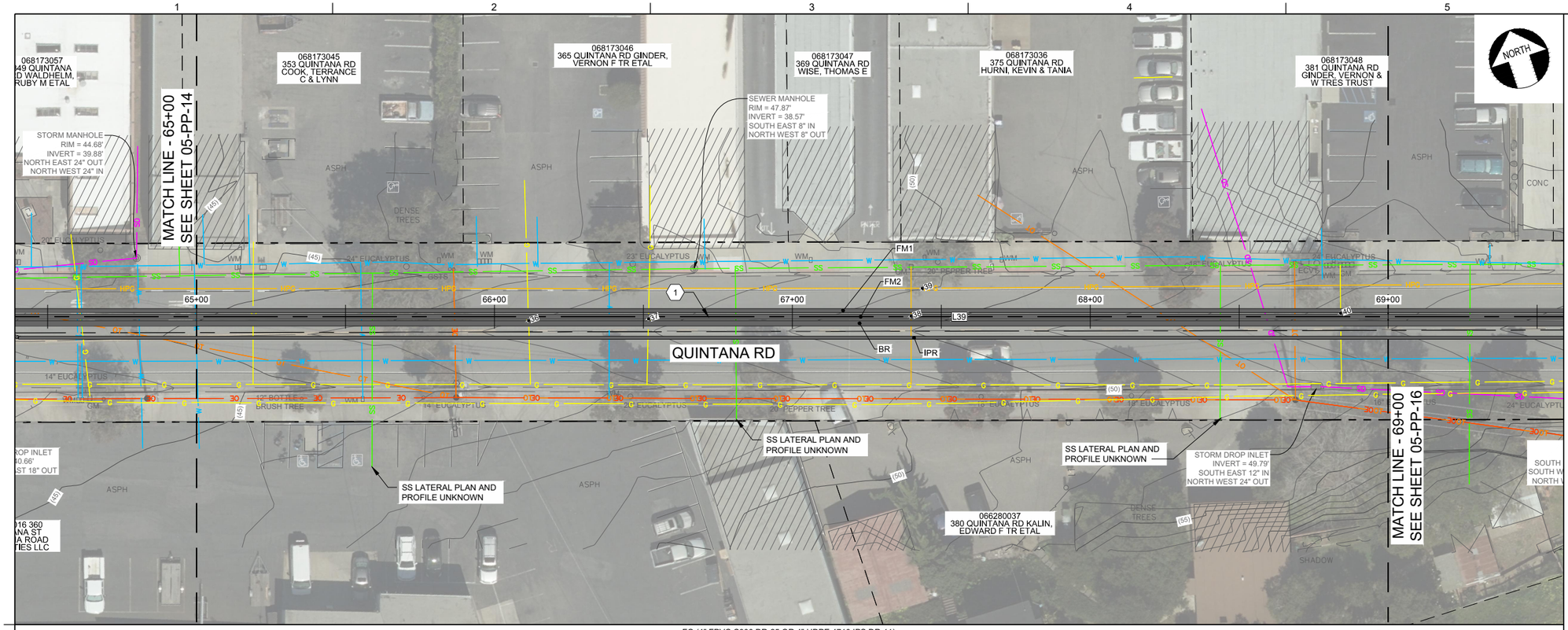
DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

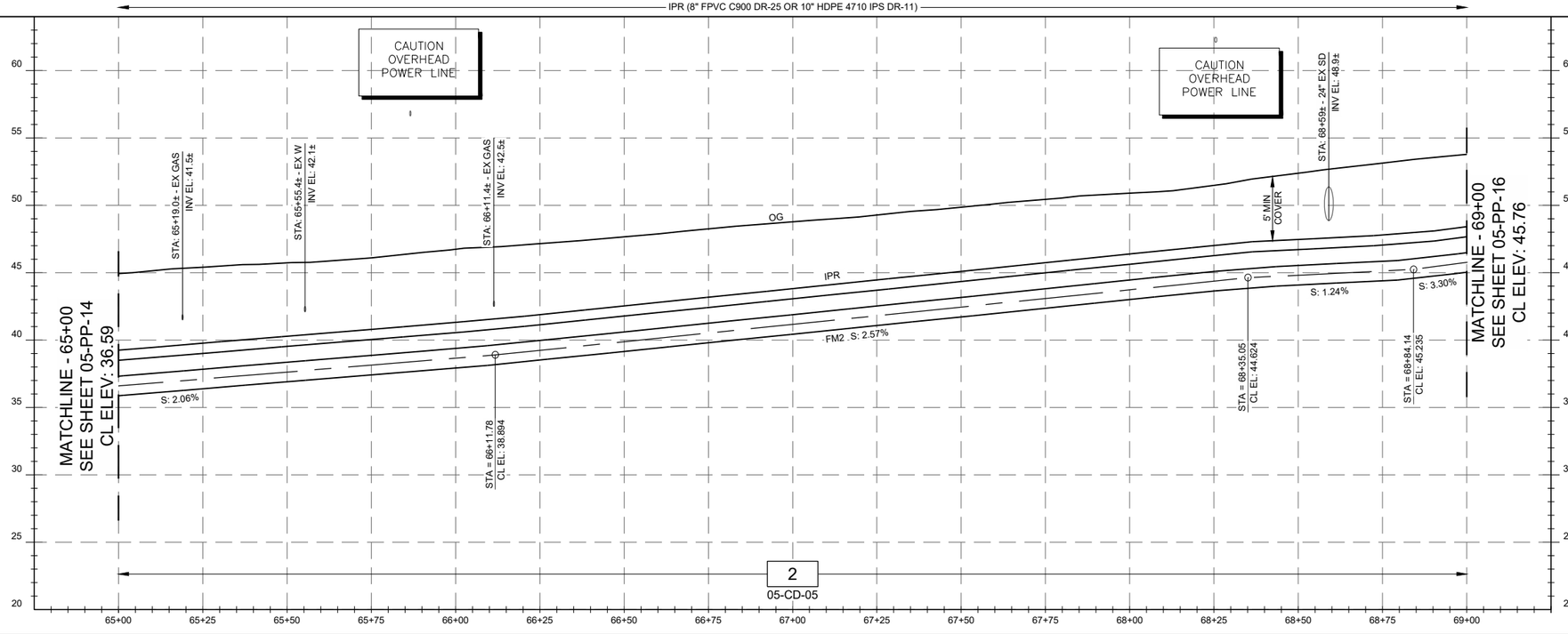
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE STA 61+00 TO STA 65+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-14
SHEET NUMBER ----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



2
05-CD-05

NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-6.

36. 6" A.C. PVMNT, 39" CVR, 41" DEPTH, GAS.
37. 6" A.C. PVMNT, 34" CVR, 36" DEEP, GAS.
38. 6" A.C. PVMNT, 36" CVR, 37" DEEP, GAS.
39. 6" A.C. PVMNT, 47" CVR, 16" HPG.
40. 6" A.C. PVMNT, 38" CVR, 39" DEEP, GAS.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

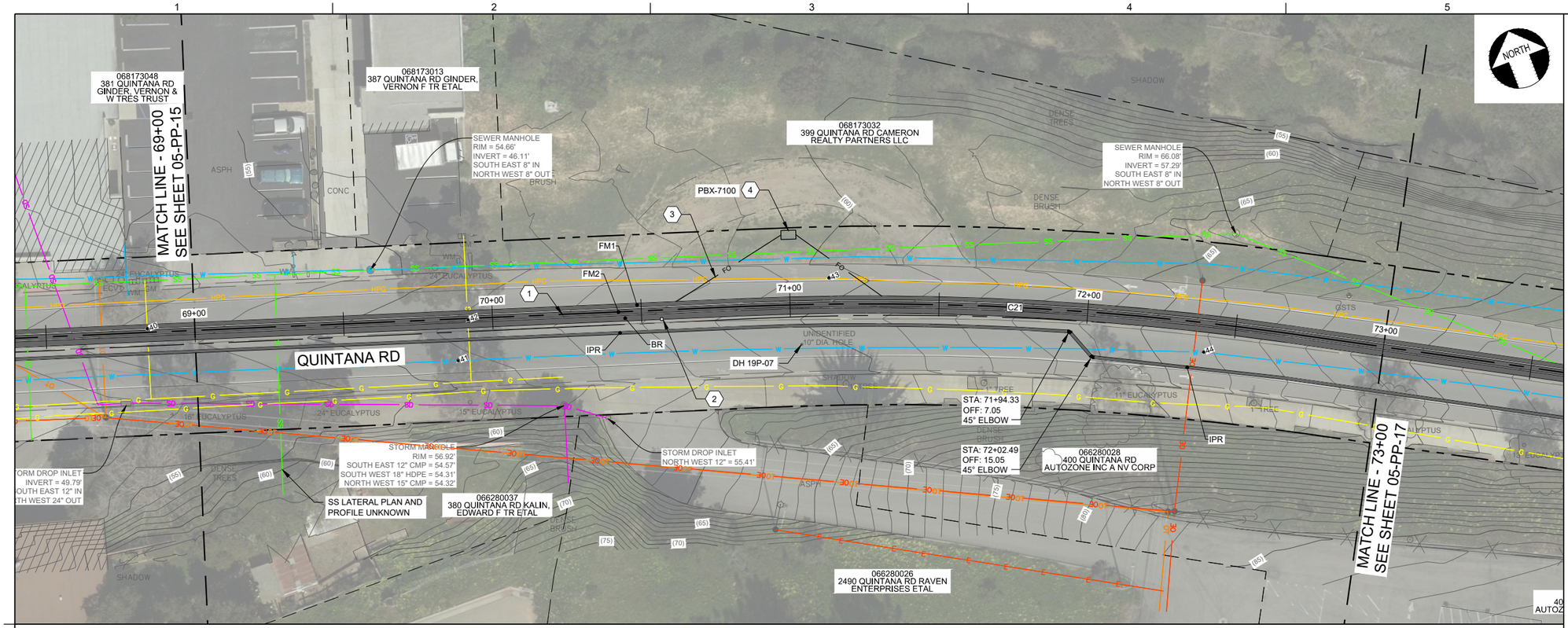
DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

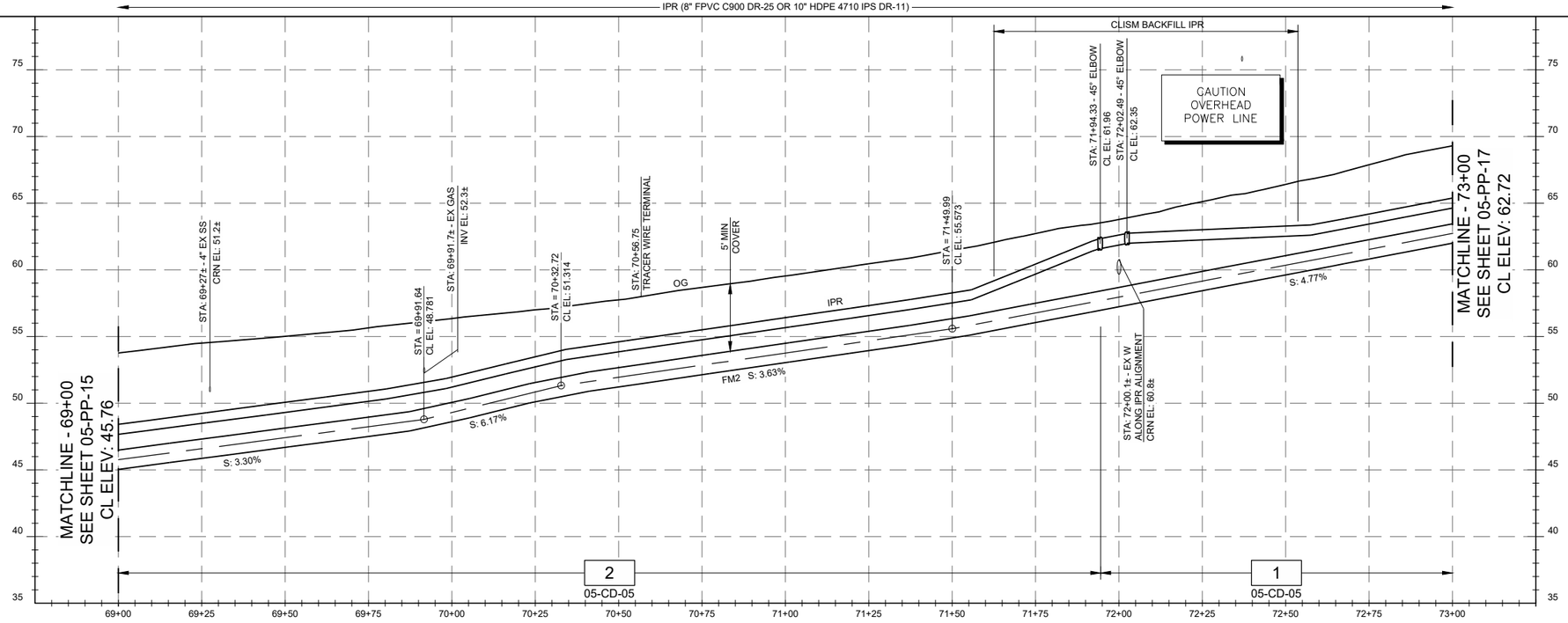
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 65+00 TO STA 69+00

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-15
SHEET NUMBER	----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) LOCATE OFF-3.0' FROM CL FM2 ADJACENT TO ROAD CL.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-6.

41. 7" A.C. PVMNT, 41" CVR, 12"W.
42. 6" A.C. PVMNT, 39" CVR, 40" DEEP, GAS.
43. 12"A.C. PVMNT, 47" CVR, 16"HPG.
44. 7"A.C. PVMNT, 48" CVR, 12"W.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

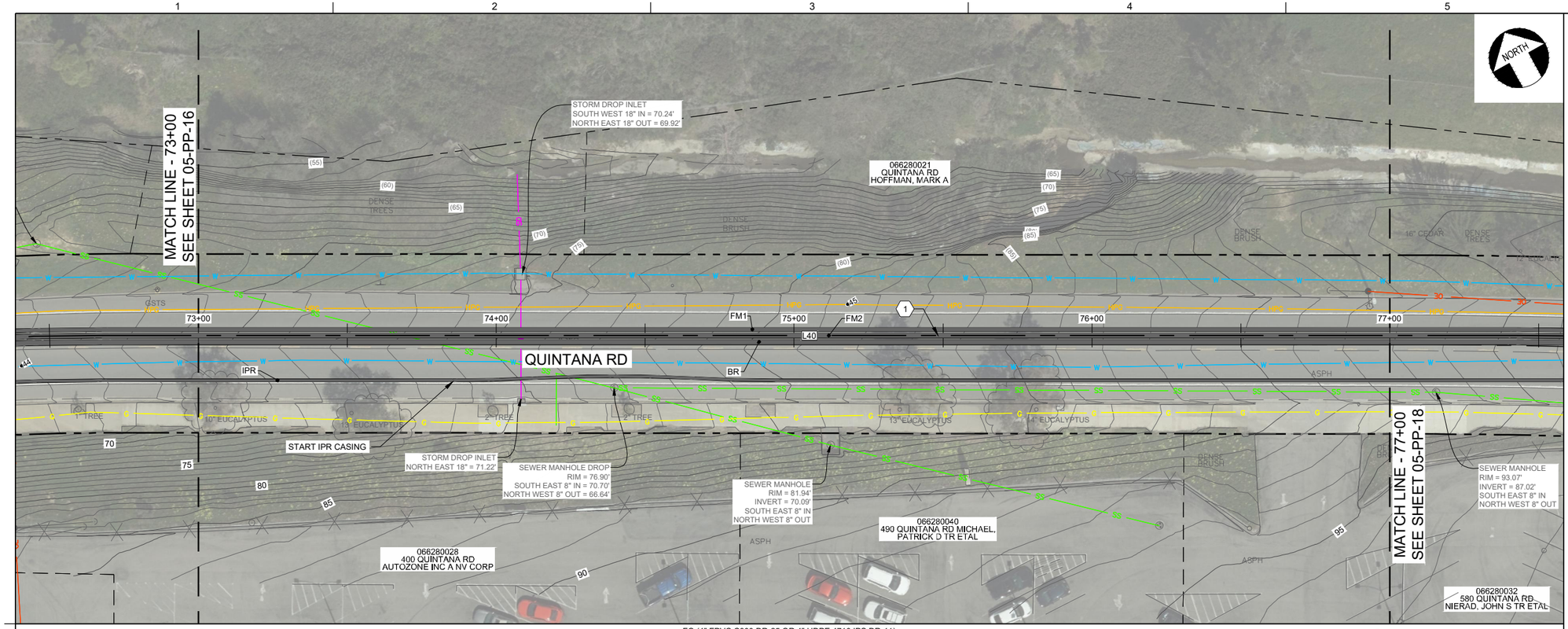
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 69+00 TO STA 73+00

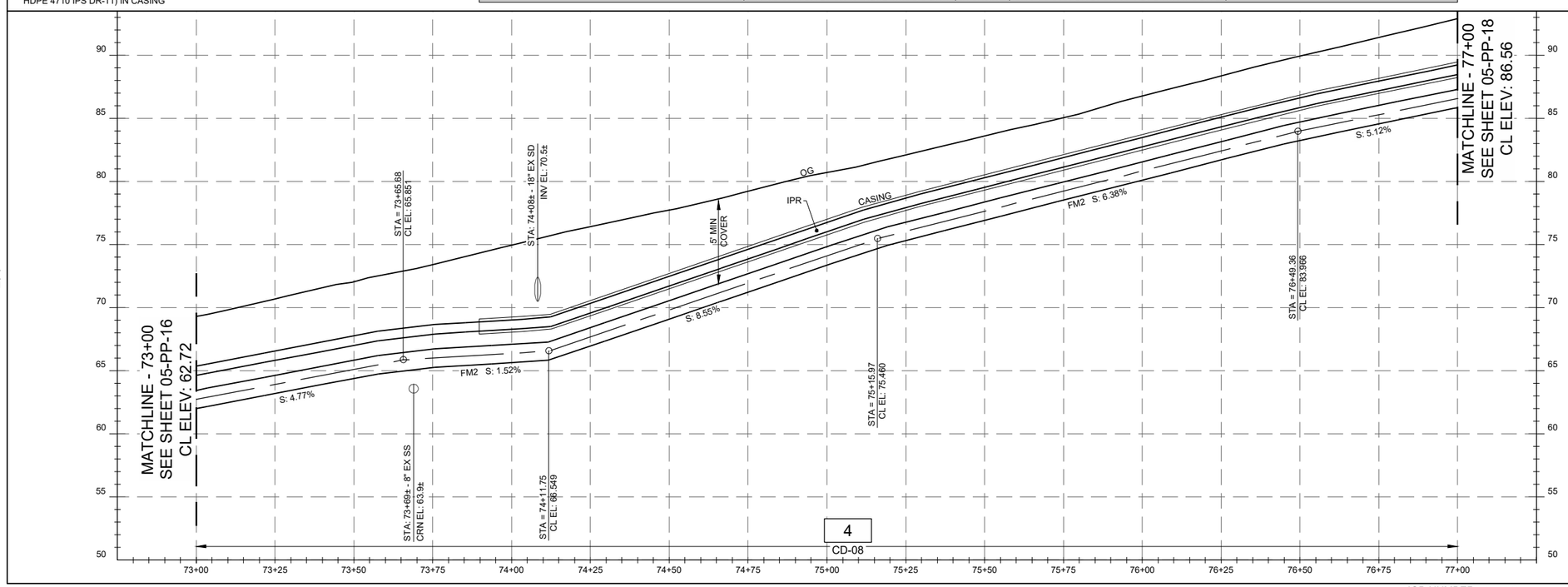
DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-16
SHEET NUMBER	----

JOB NUMBER: 17-082 FILENAME: 1782D-05PP116.DWG PLOT DATE: 02/10/20 PLOT TIME: 11:12:54

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP116.DWG



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

(1.) INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-6.

(45.) 9" A.C. PVMNT, 47" CVR, 16"HPG.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

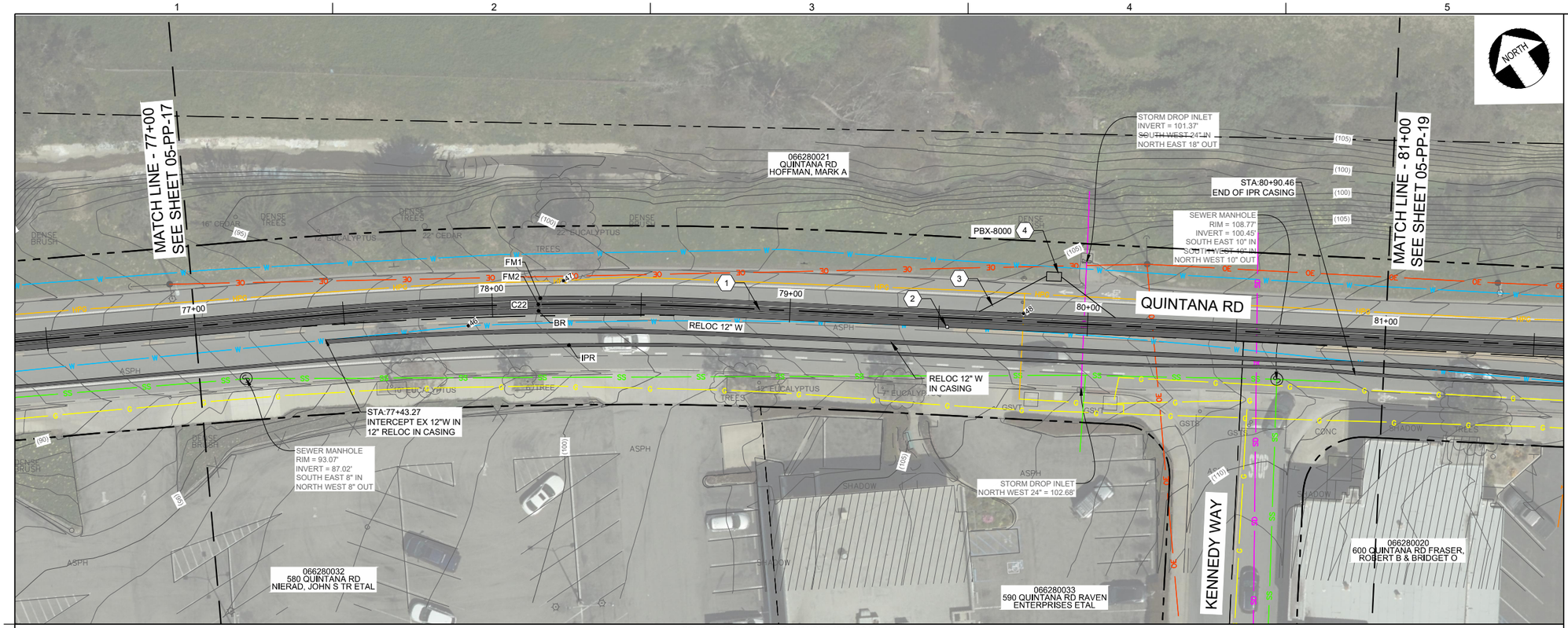
DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A ● Redding, CA 96003 ● 530-243-2113

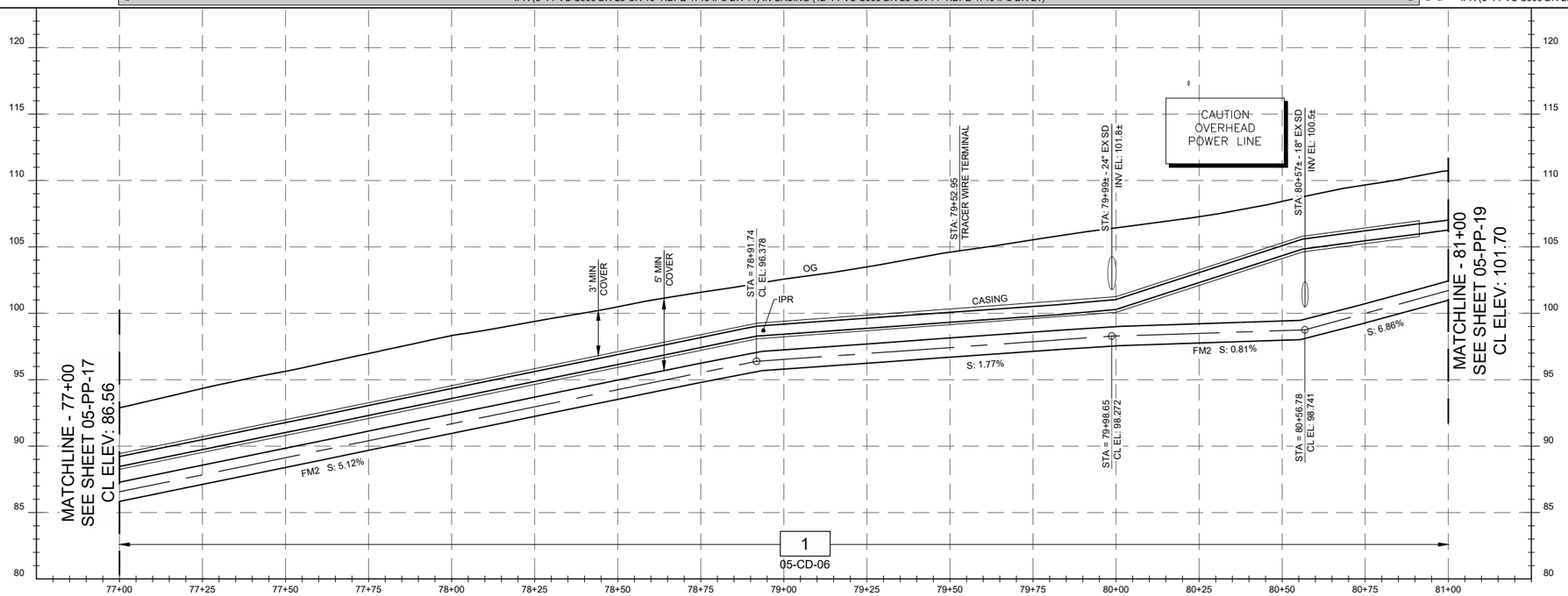
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 73+00 TO STA 77+00

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-17
SHEET NUMBER	----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
12"W (12" FPVC C900 DR-25) IN CASING (16" FPVC C900 DR-25 OR 18" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) LOCATE OFF-3.0' FROM CL FM2 ADJACENT TO ROAD CL.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-6.

46. 8" A.C. PVMNT, 46" CVR, 12"W.
47. 9" A.C. PVMNT, 45 CVR, 16"HPG.
48. 5" A.C. PVMNT, 42 CVR, 2"HPG.

HORIZ SCALE 1"=20'
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

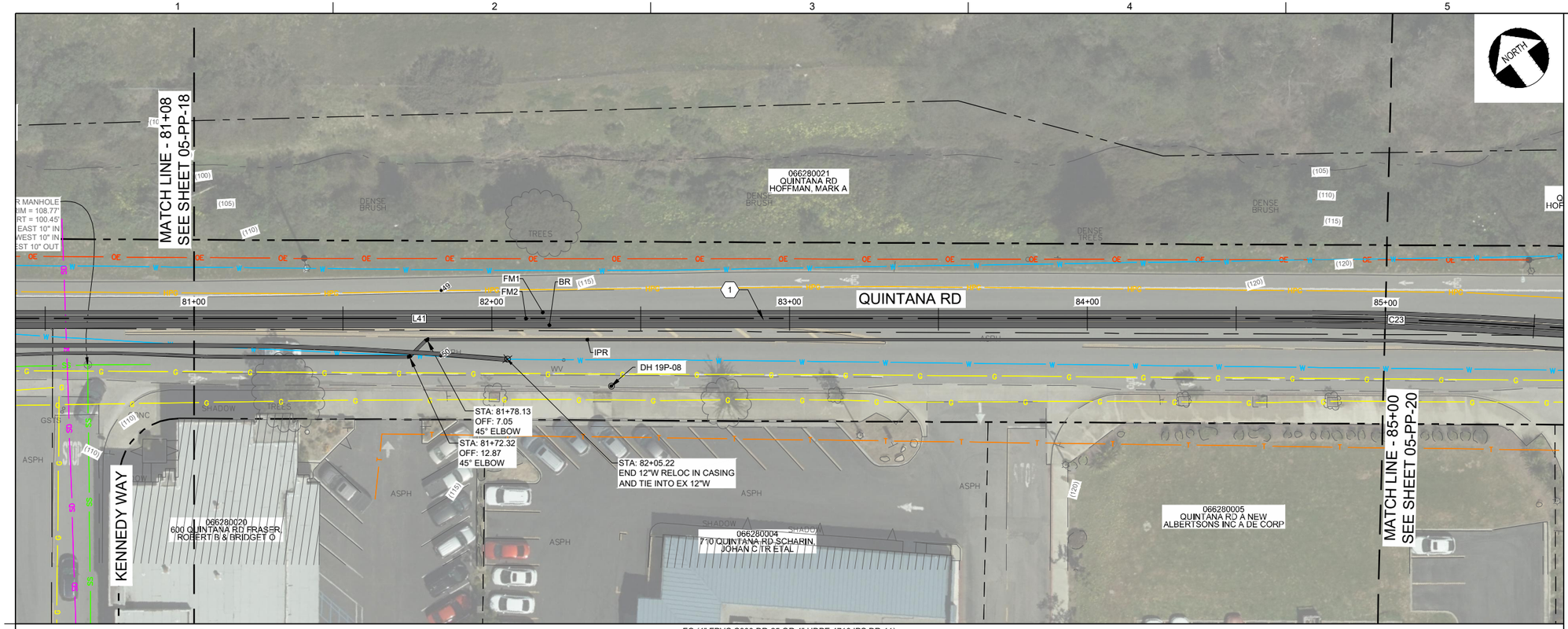
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 77+00 TO STA 81+00

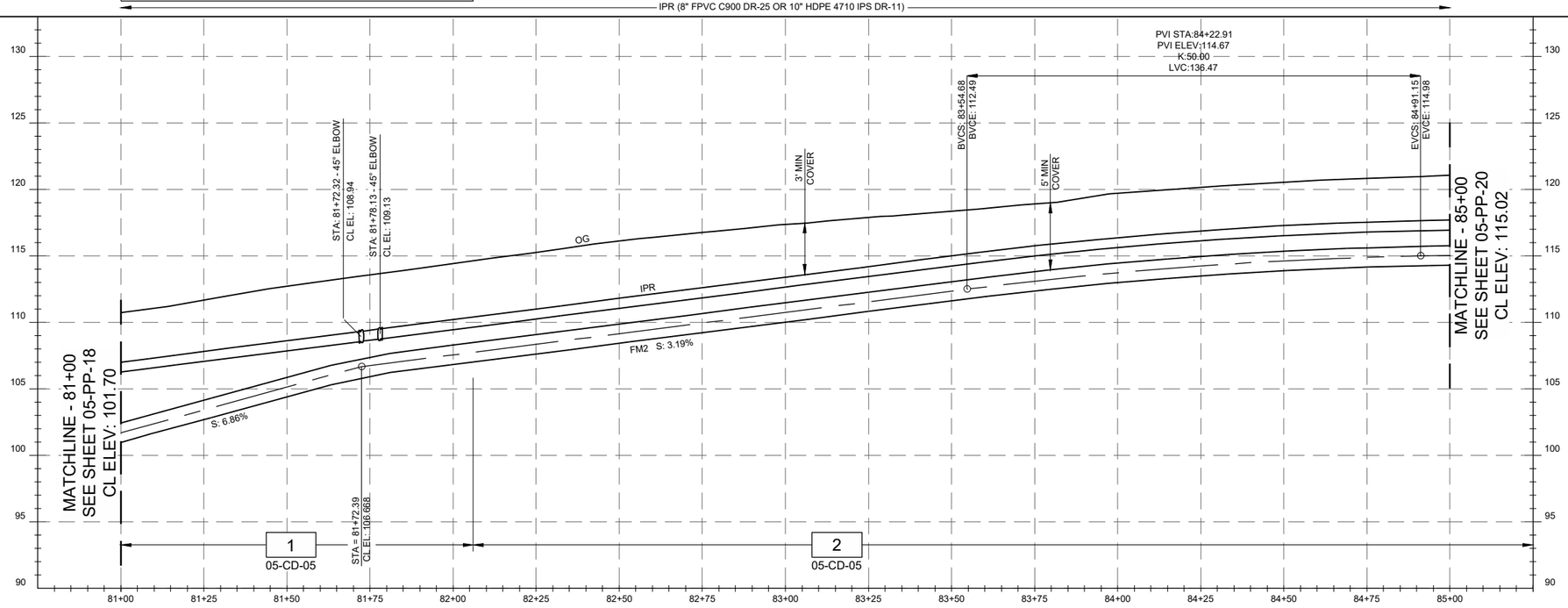
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-18
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP118.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP118.DWG PLOT DATE: 02/10/20 PLOT TIME: 07:51:59



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
12"W (12" FPVC C900 DR-25) IN CASING (16" FPVC C900 DR-25 OR 18" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

(1.) INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.

POTHOLING RESULTS:

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(49.) 9" A.C. PVMNT, 48" CVR, 16"HPG.
(50.) 8" A.C. PVMNT, 50" CVR, 12"W

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

PRELIMINARY - NOT FOR CONSTRUCTION

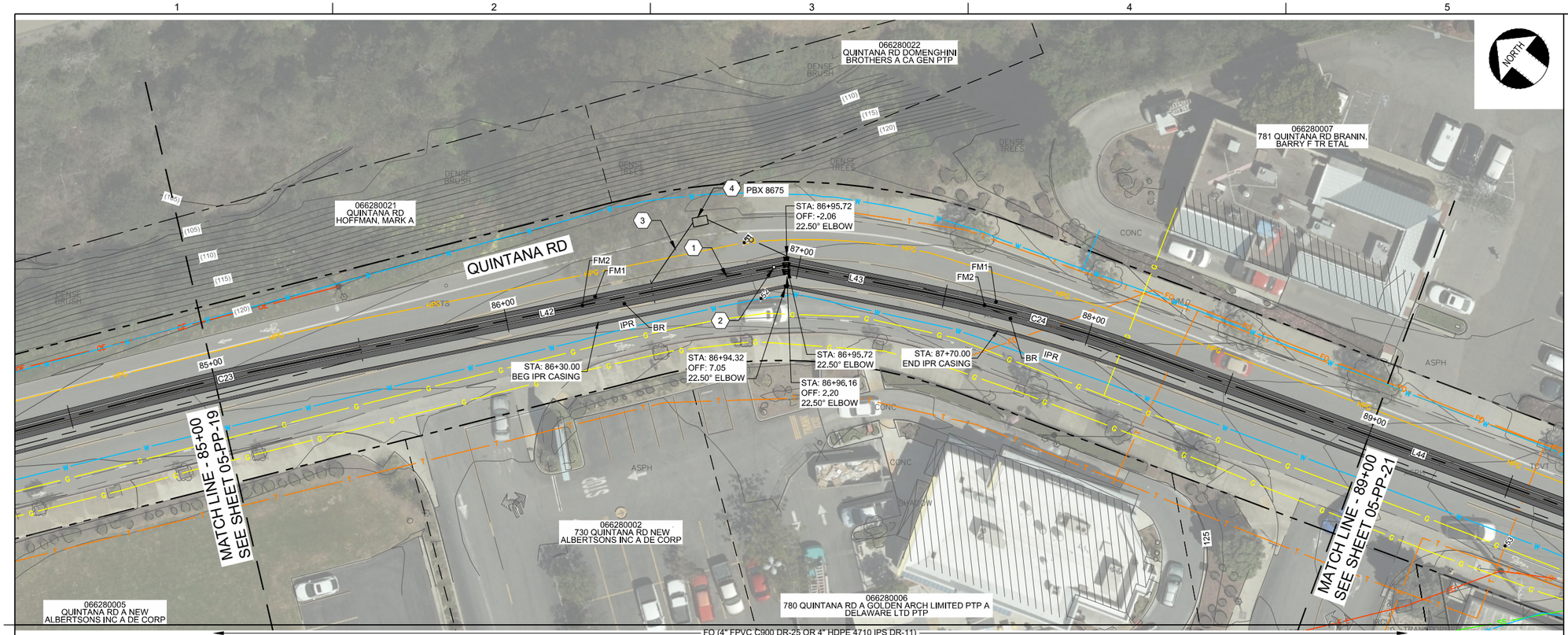
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 81+00 TO STA 85+00

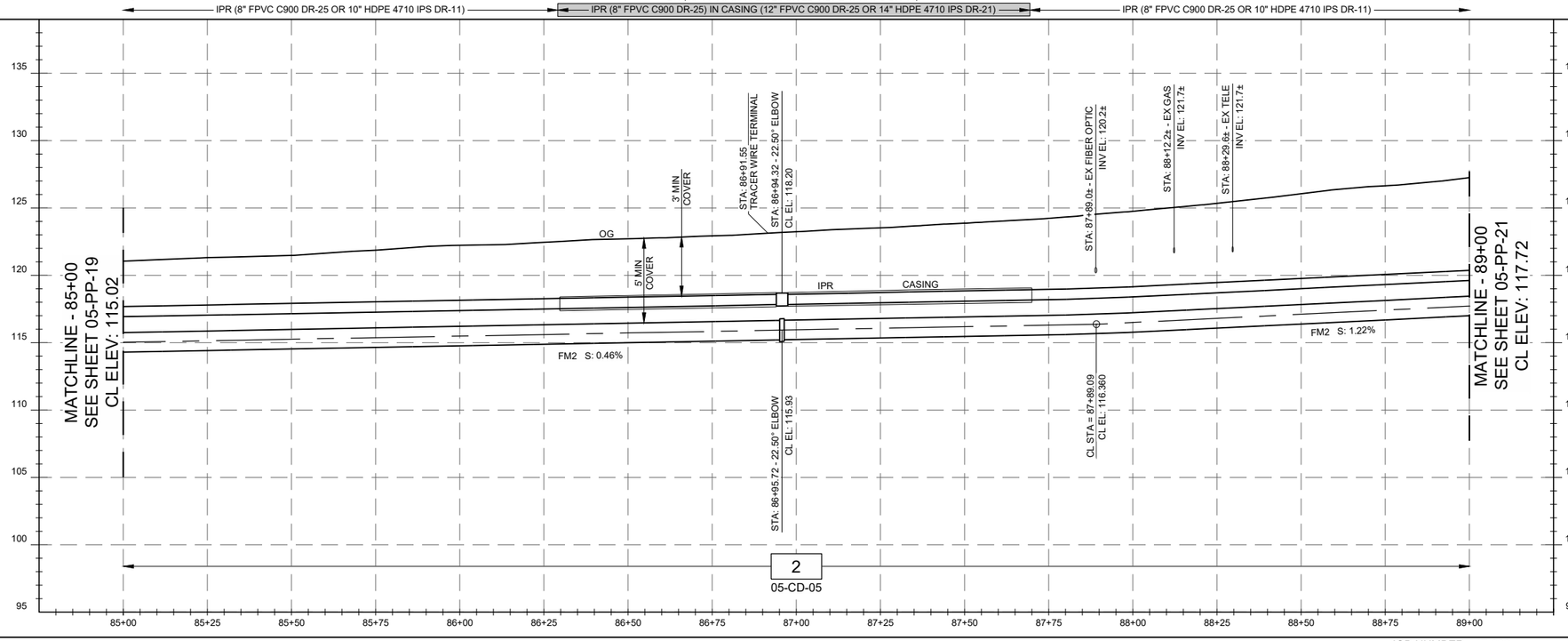
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-19
SHEET NUMBER ----

JOB NUMBER: 17-082 FILENAME: 1782D-05PP119.DWG PLOT DATE: 02/9/20 PLOT TIME: 17:58:56

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP119.DWG



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) — IPR (8" FPVC C900 DR-25) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21) — IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



2
05-CD-05

NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) LOCATE ON CL OF FM2
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-6.

51. 7" A.C. PVMNT, 48" CVR, 16"HPG.
52. 8" A.C. PVMNT, 43" CVR, 12"W.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

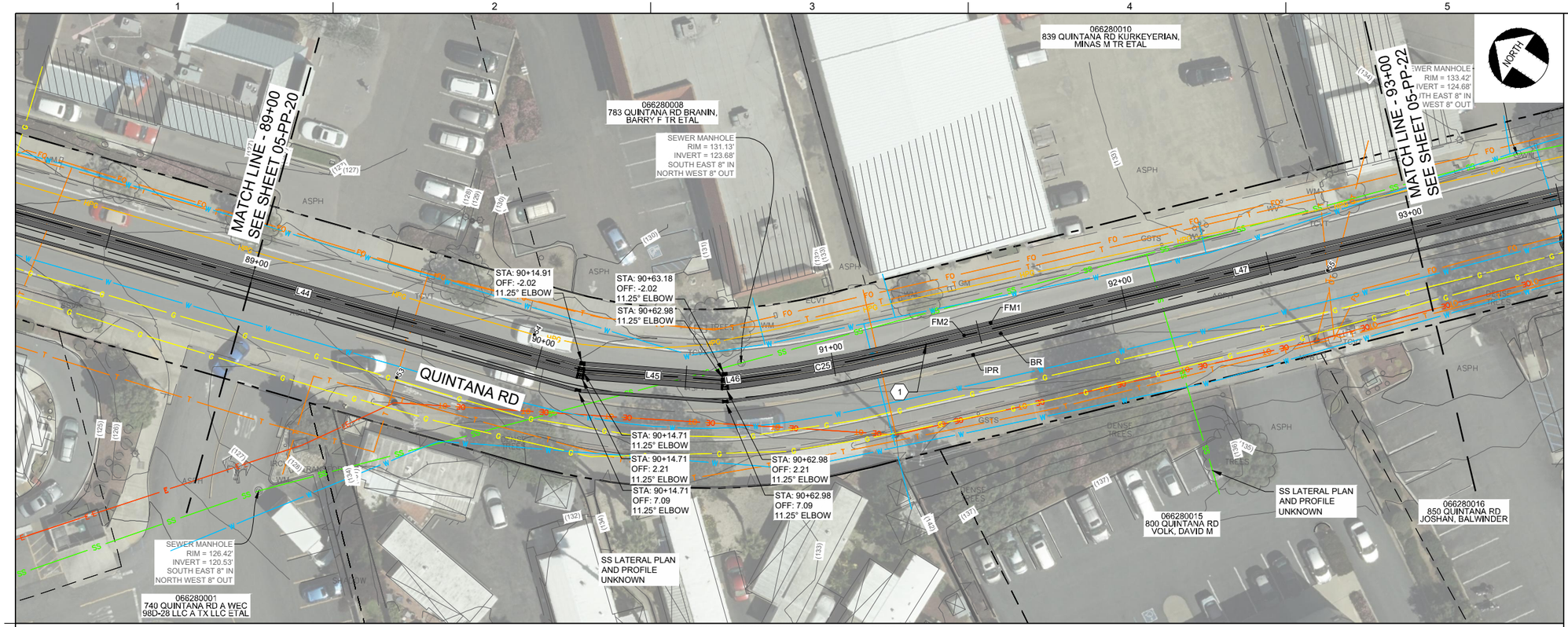
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 85+00 TO STA 89+00

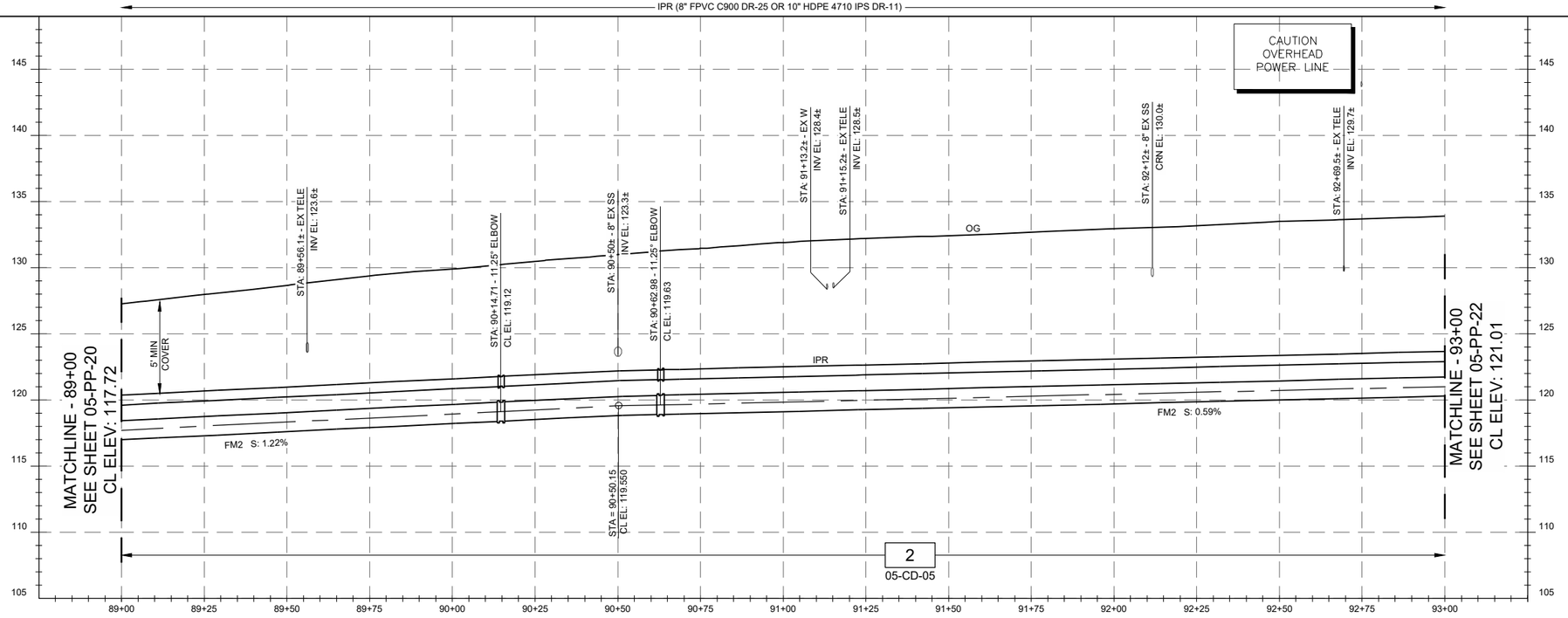
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-20
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP120.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP120.DWG PLOT DATE: 02/10/20 PLOT TIME: 08:07:01



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & 17
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

(1.) INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-6.

(53.) 5" A.C. PVMNT, 57" CVR, 65"DEPTH, TELE CONDUIT.
(54.) 7"A.C. PVMNT, 50" CVR, 16" HPG.
(55.) 8" A.C. PVMNT, 43" CVR, 53" DEPTH, TELE CONDUIT.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A ■ Redding, CA 96003 ■ 530-243-2113

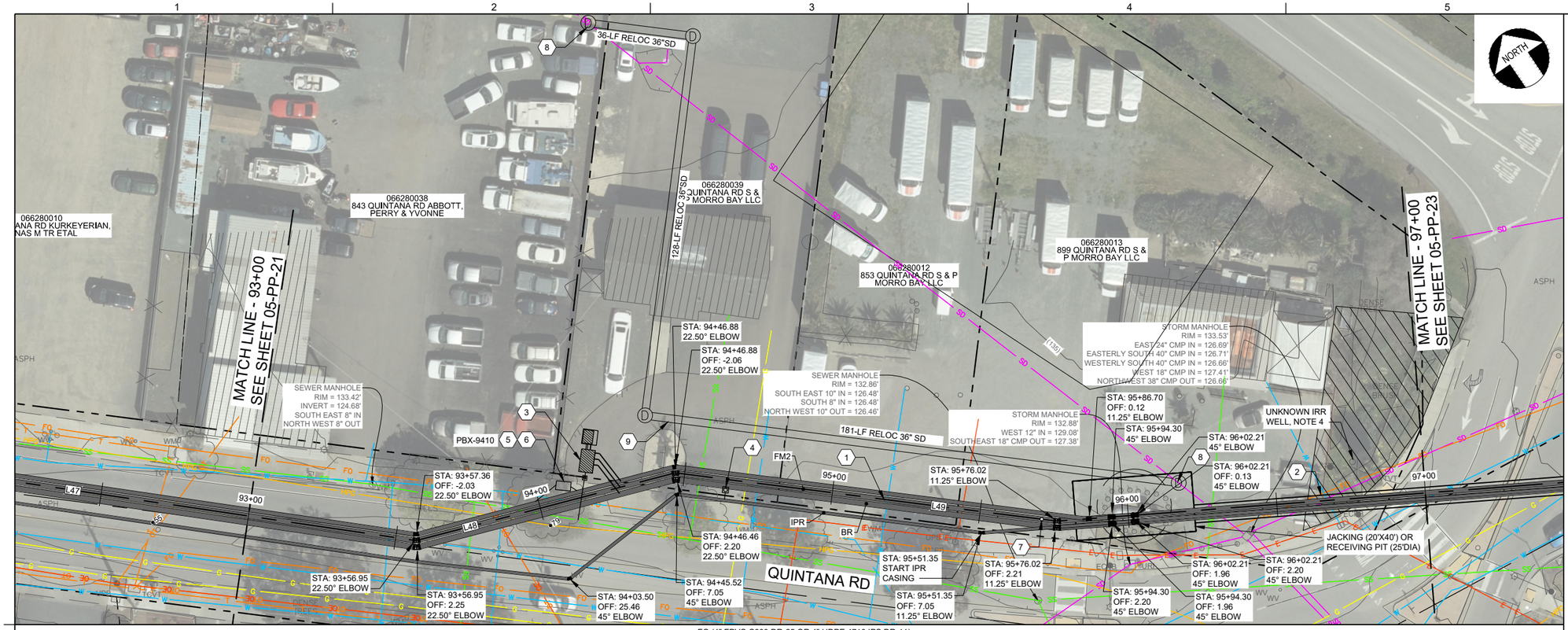
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 89+00 TO STA 93+00

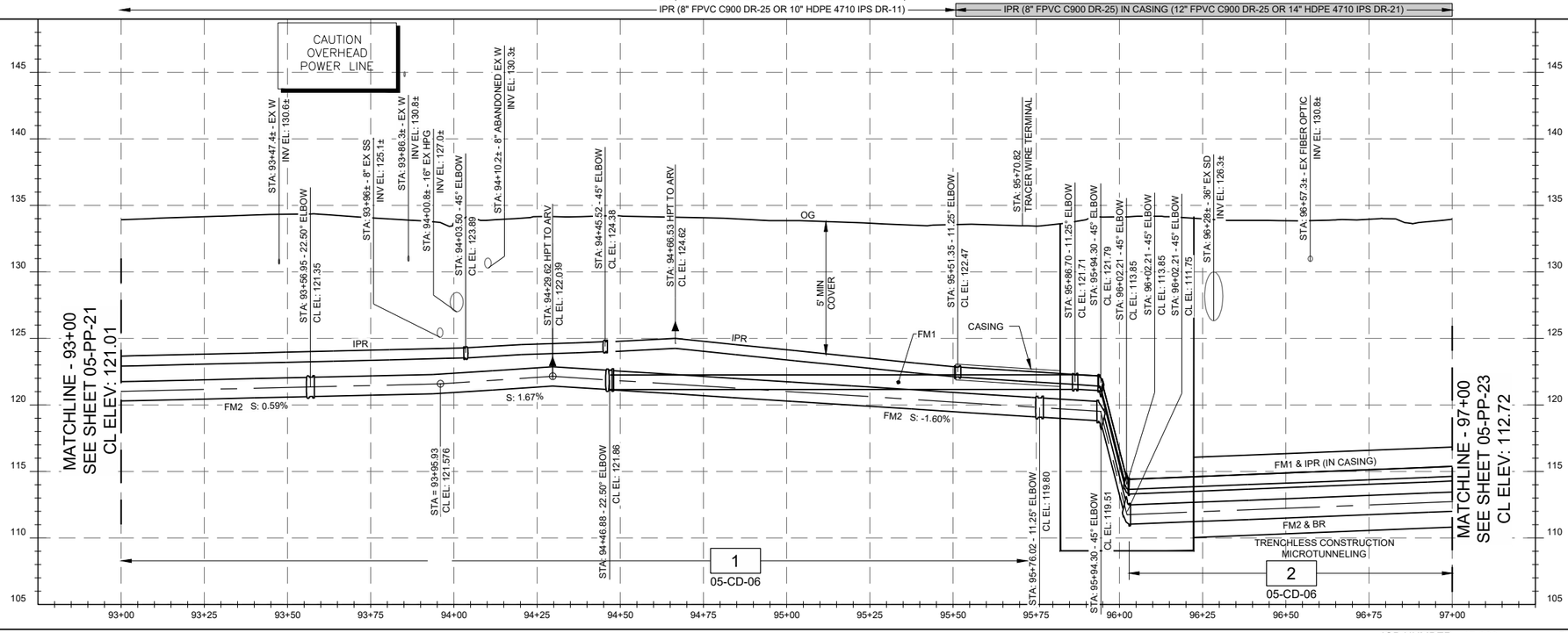
DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-21
SHEET NUMBER	----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP121.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP121.DWG PLOT DATE: 02/9/20 PLOT TIME: 17:59:40



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.
4. DECOMMISSIONED 108-FT DEEP 13"DIA STEEL CASED IRRIGATION WATER WELL KNOWN TO EXIST IN VICINITY OF SOUTHEAST LIMITS OF PROPERTY APN# 066280013. LOCATION OF WELL COULD NOT BE CONFIRMED FROM PROPERTY RECORDS OR NON-INVASIVE INVESTIGATIONS AND MAY BE PARTIALLY BURIED. CONTRACTOR SHALL CONDUCT FIELD INVESTIGATION TO POSITIVELY IDENTIFY AND DOCUMENT SAID UTILITY. IF REQUESTED, CONTRACTOR SHALL EXCAVATE AND EXPOSE THE UTILITY UP TO 5' DEEP FOR CONFIRMATION.

CONSTRUCTION KEY NOTES:

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2. INSTALL 72"DIA 0.75"T STEEL CASING AND ASSOCIATED CARRIER PIPES VIA MICROTUNNELING TRENCHLESS CONSTRUCTION. PIT LIMITS SHOWN HEREIN ARE FOR REFERENCE ONLY. CONTRACTOR RESPONSIBLE FOR SIZE AND CONFIGURATION OF PITS TO MEET SELECTED MEANS AND METHODS.
3. ARV VAULT AND ODOR CONTROL PER DWG 06-CD-03
4. IPR ARV ENCLOSURE PER DWG DET 1/06-CD-5.
5. 3'Lx'5W'x'4V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
6. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
7. INSTALL TRACER WIRE TERMINAL (2060) AND GROUND ROD (16410)
8. EXPOSE EX SD, SURVEY PIPE AND INVERTS.
9. CUT INTO EX SD AND CONNECT W/345-LF RELOC 36" CORRUGATED HDPE SD IN 3x SD JUNCTION BOXES PER CITY DET C-9. MATCH UPSTREAM AND DOWNSTREAM INVERTS OF EX SD AND LAY RELOCATED SD AT CONSTANT SLOPE.

POTHOLING RESULTS:

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(53) 7" A.C. PVMNT, 44" CVR, 16"HPG.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

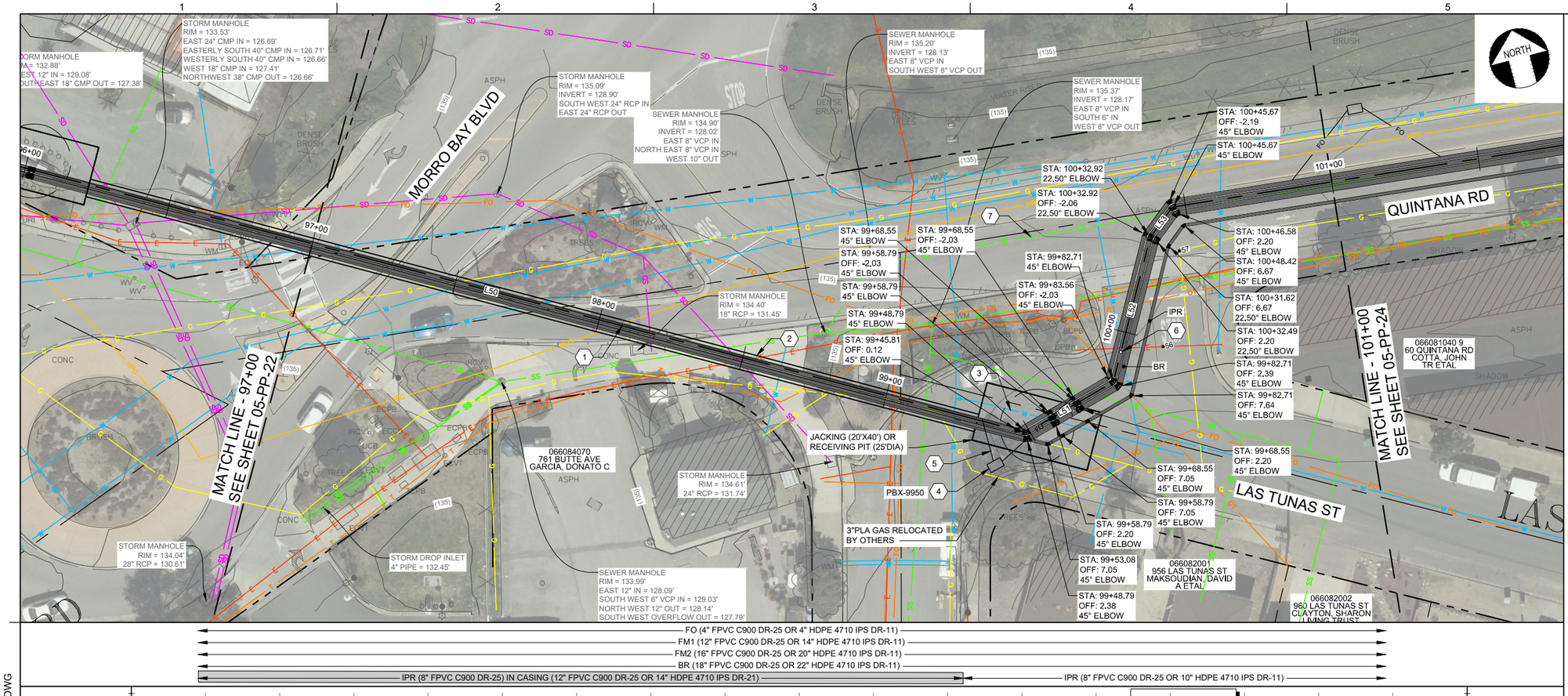
DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 93+00 TO STA 97+00

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
05-PP-22
SHEET NUMBER ----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
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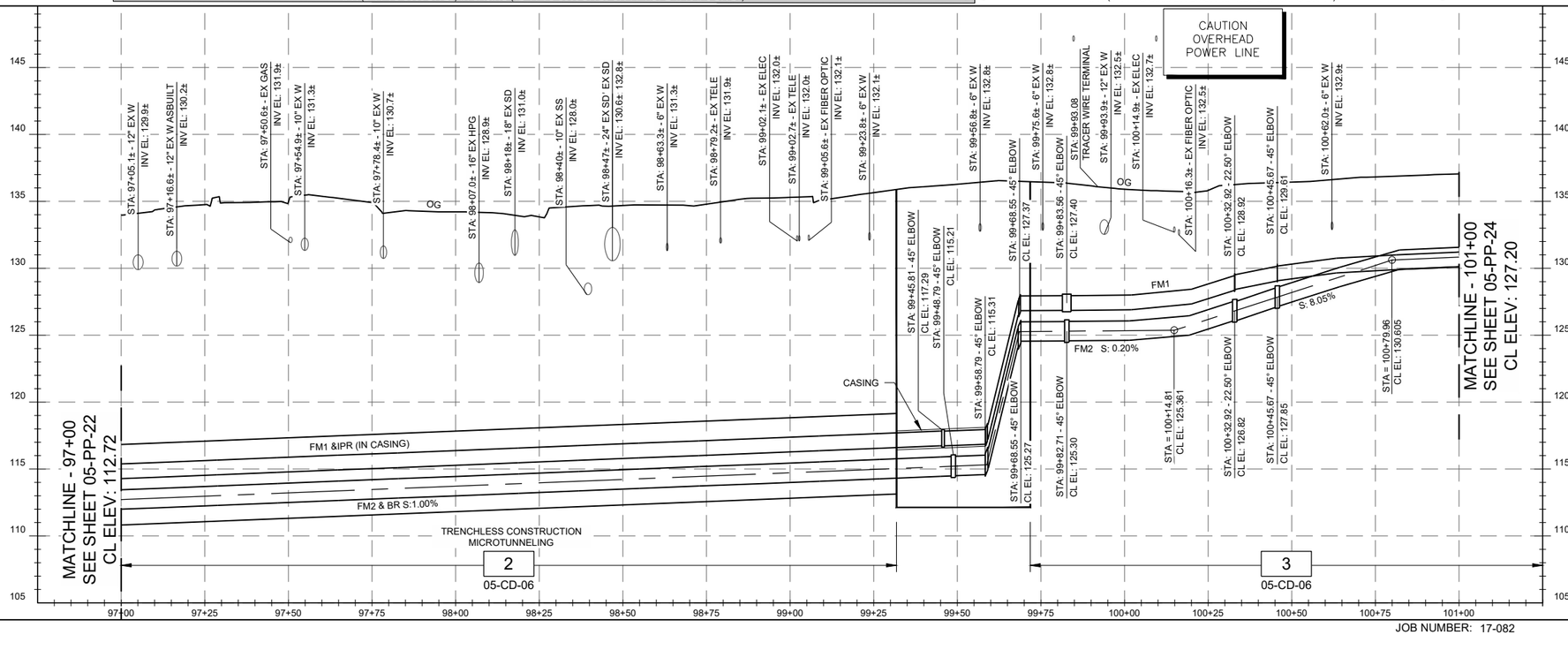
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25) IN CASING (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-21)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



NOTES:

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2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
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CONSTRUCTION KEY NOTES:

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3. DEMOLISH, BYPASS, AND REPLACE 55-LF 6"W W/ 6" C900 DR-25 PVC (PVC2).
4. 3'Lx'5Wx'4V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
5. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09
6. INSTALL TRACER WIRE TERMINAL (2060) AND GROUND WIRE (16410)
7. 8"SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN CONJUNCTION WITH APPROVED LS-3 BYPASS PLAN.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-6.

(56) 4" A.C. PVMNT, 25" CVR, 27" DEPTH, ELEC CONDUIT
(57) 6" A.C. PVMNT, 29" CVR, 33" DEPTH, GAS

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

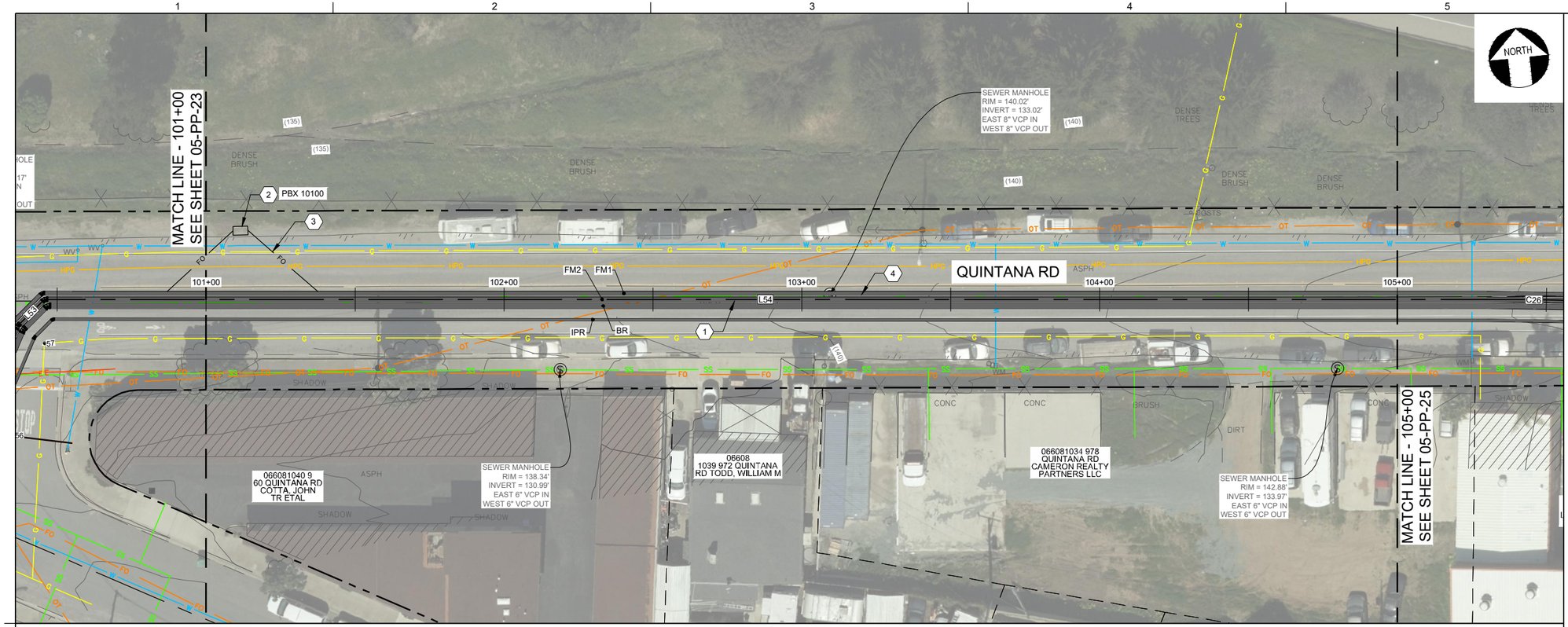
DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 97+00 TO STA 101+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-23
SHEET NUMBER ----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
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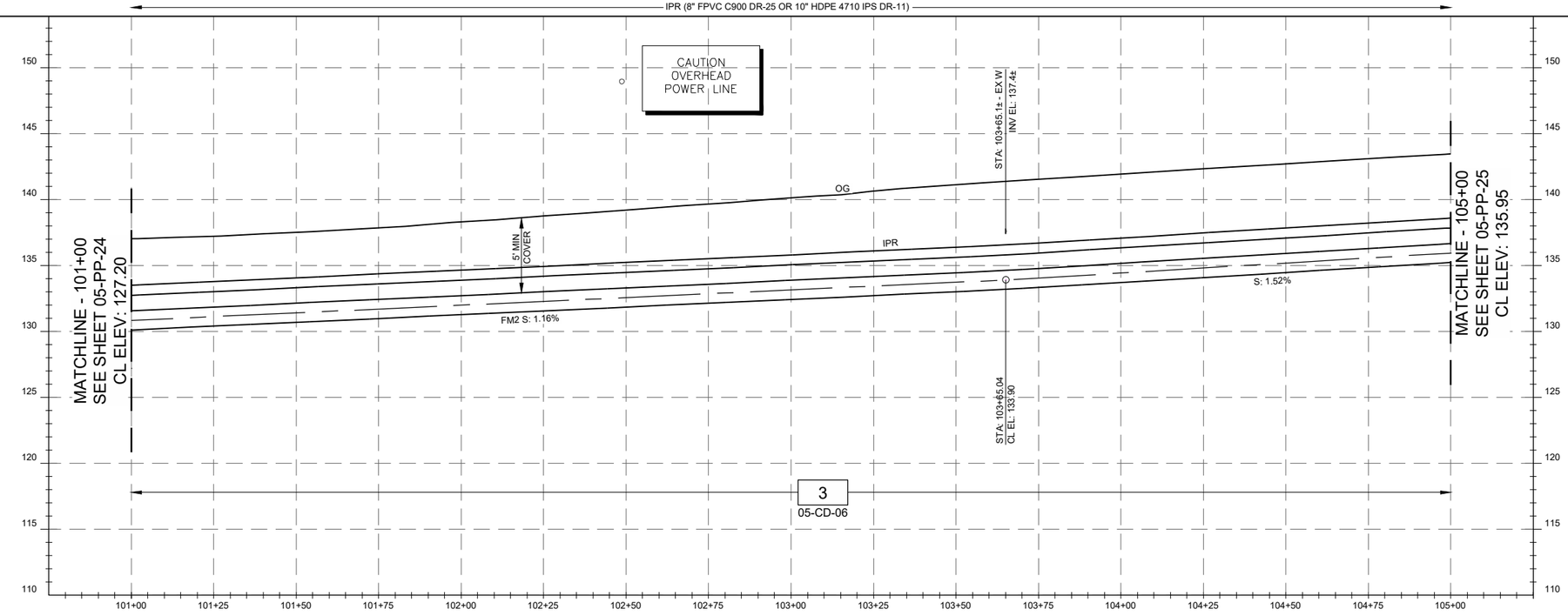

NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

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2. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. 8"SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN JUNCTION WITH APPROVED LS-3 BYPASS PLAN.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

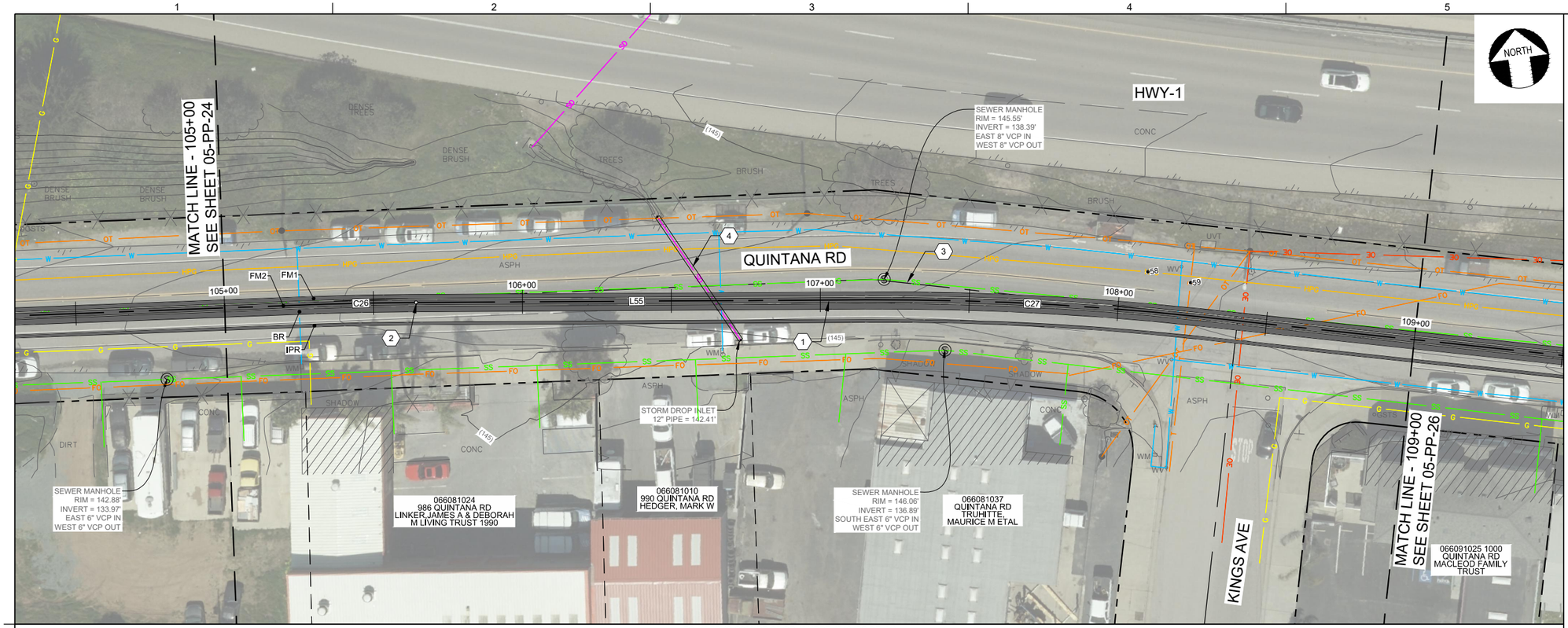
WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 101+00 TO STA 105+00

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-24
SHEET NUMBER	----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP124.DWG



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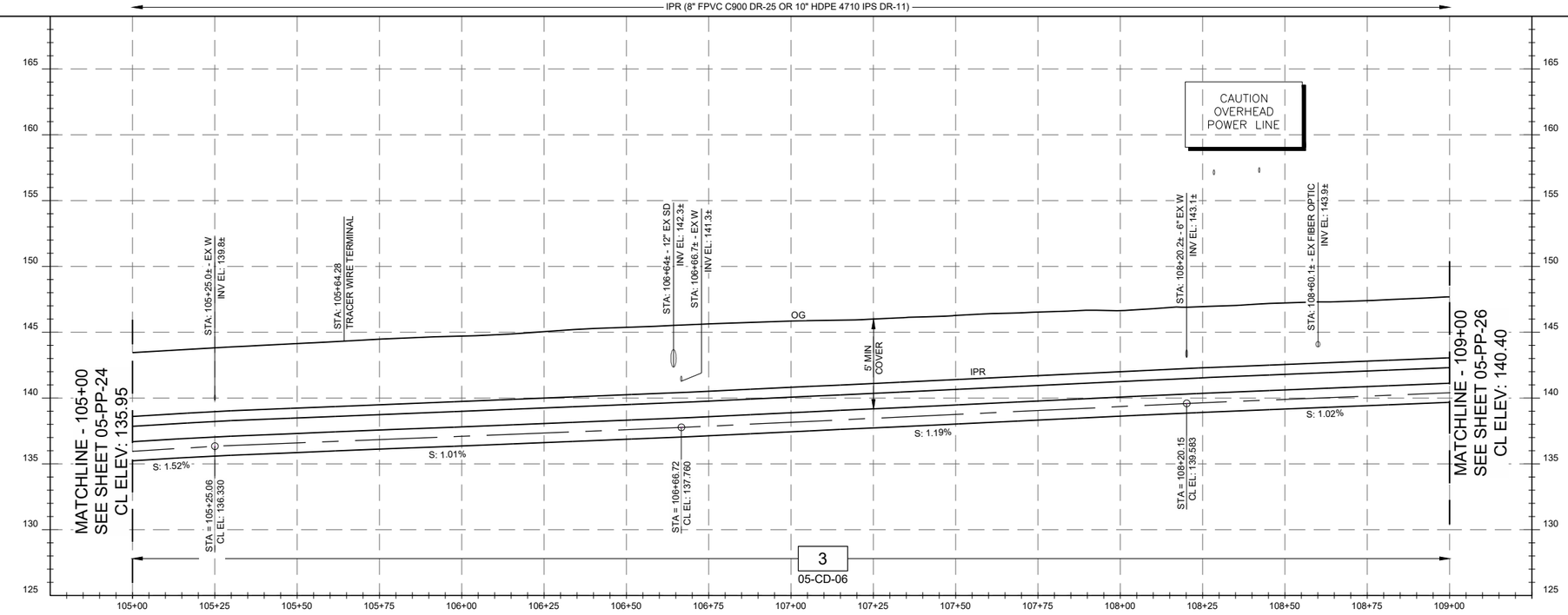

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3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

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2. INSTALL TRACER WIRE TERMINAL (2060) LOCATE ON CL FM2.
3. 8" SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN CONJUNCTION WITH APPROVED LS-3 BYPASS PLAN.
4. AS DIRECTED BY CITY ENGINEER, REMOVE 50-LF EX CMP STORM DRAIN AND INSTALL 18" DIA CORRUGATED HDPE PIPE. MODIFY EX STORM DRAIN INLET/MH. GROUT NEW HDPE INTO EX DRAIN STRUCTURE.

POTHOLING RESULTS:

(58) 8" A.C. PVMNT, 48" CVR, 16"HPG

(59) 6"A.C. PVMNT, 39"CVR, 43"DEPTH, TELE CONDUIT

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

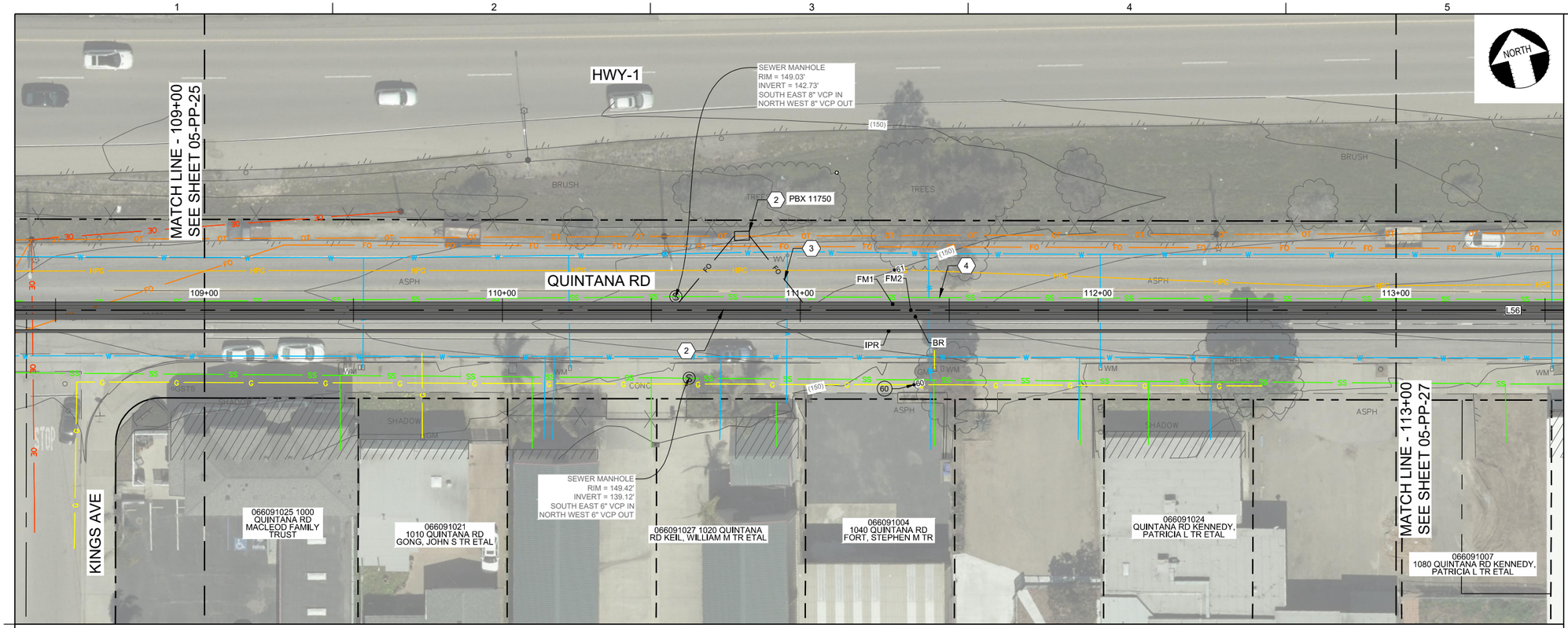
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 105+00 TO STA 109+00

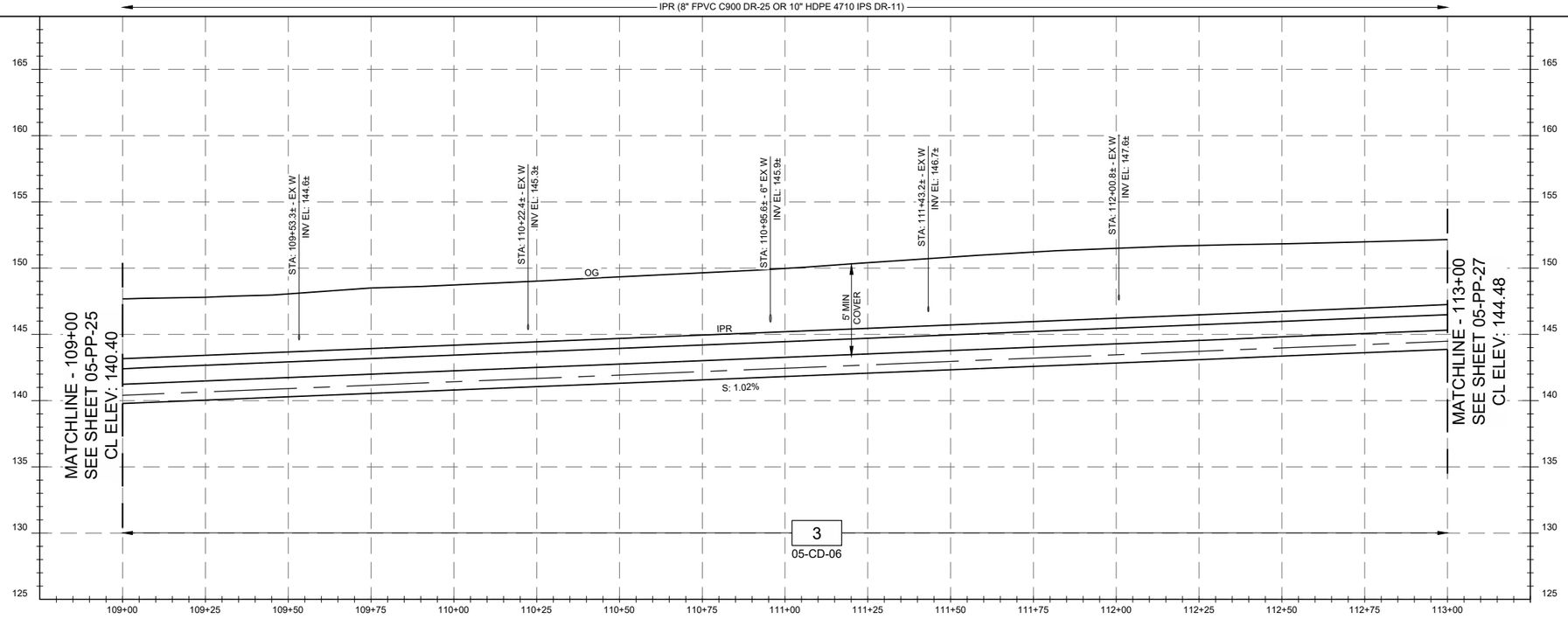
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-25
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP125.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP125.DWG PLOT DATE: 02/10/20 PLOT TIME: 11:44:51



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. 8"SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN JUNCTION WITH APPROVED LS-3 BYPASS PLAN.

POTHOLING RESULTS:

60 5" CONC, 48" CVR, 51"DEEP, GAS

61 7" A.C., PVMNT, 43" CVR, 16"HPG

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

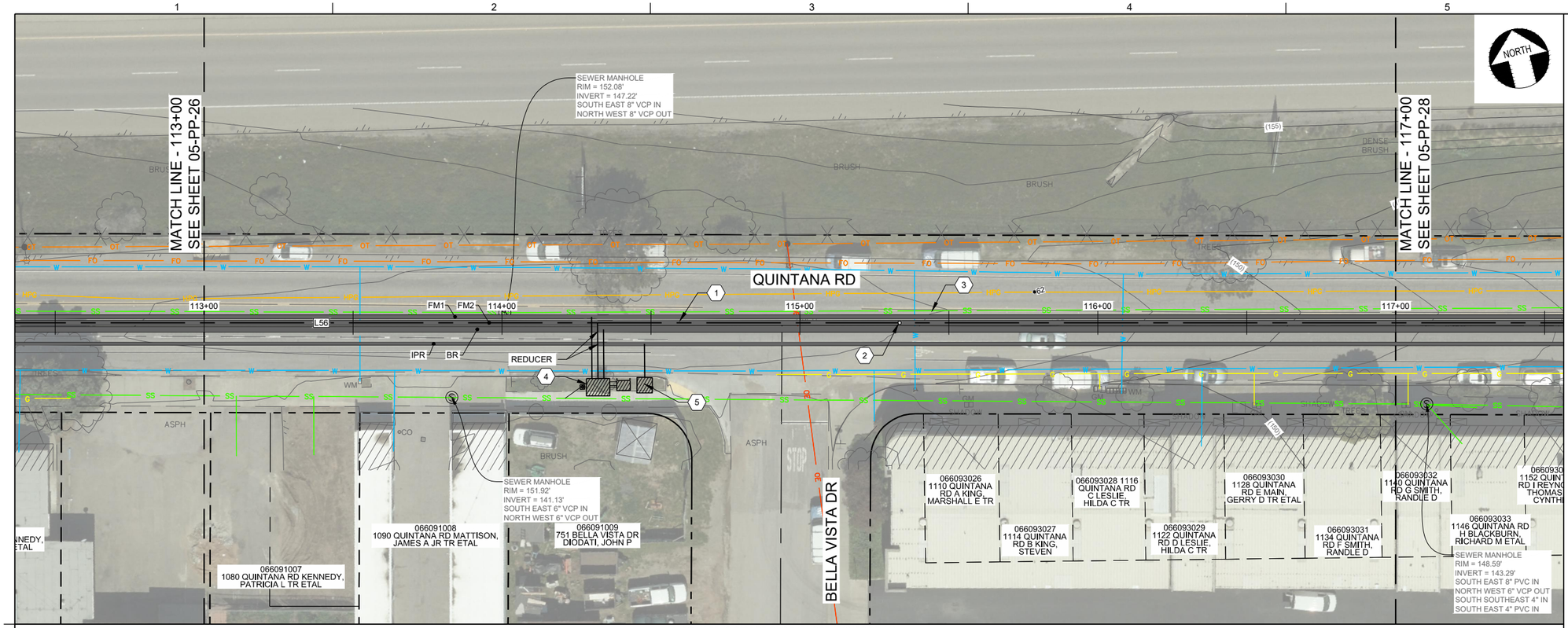
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 109+00 TO STA 113+00

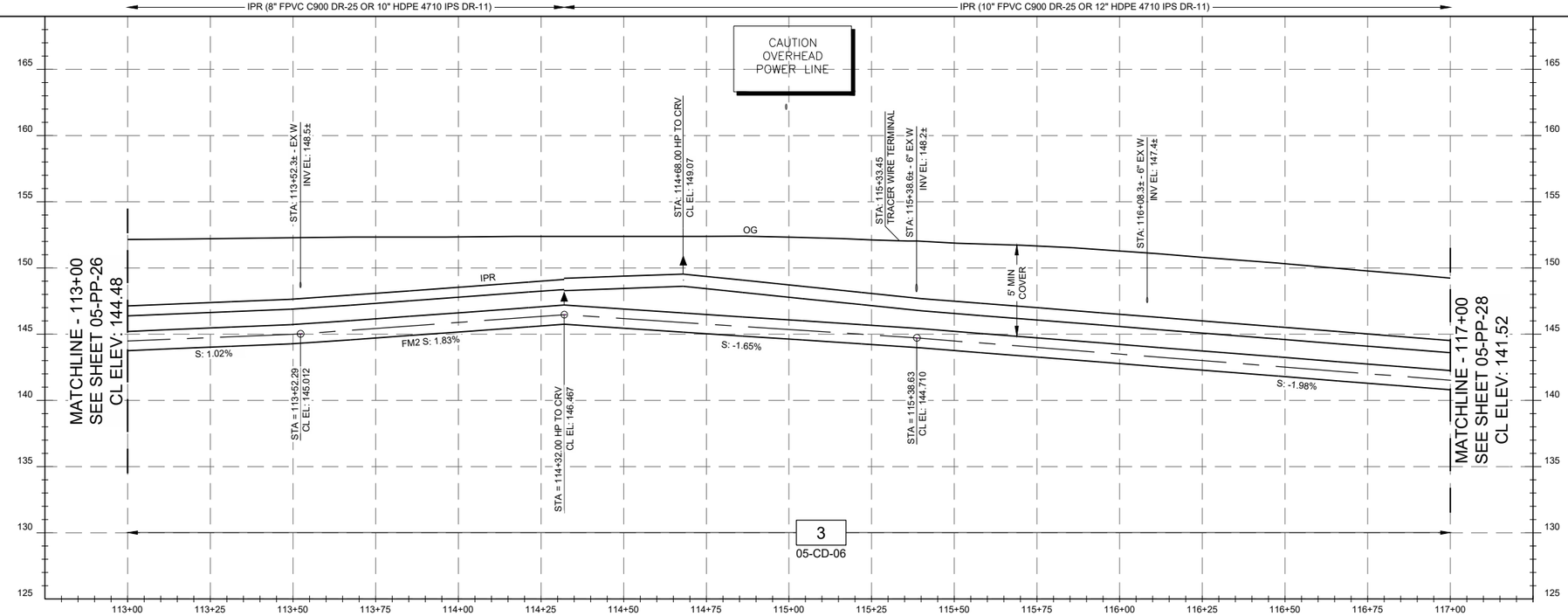
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-26
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP126.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP126.DWG PLOT DATE: 02/10/20 PLOT TIME: 11:49:10



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (18" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11) — BR (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-11)
IPR (8" FPVC C900 DR-25 OR 10" HDPE 4710 IPS DR-11) — IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) LOCATE ON CL FM2.
3. 8" SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN CONJUNCTION WITH APPROVED LS-3 BYPASS PLAN.
4. CARV VAULT AND ODOR CONTROL PER DWG 06-CD-04.
5. IPR CARV MH PER DET 2/06-CD-05.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

(62) 7" A.C. PVMNT, 51"MNT, 51" CVR, 16"HPG

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

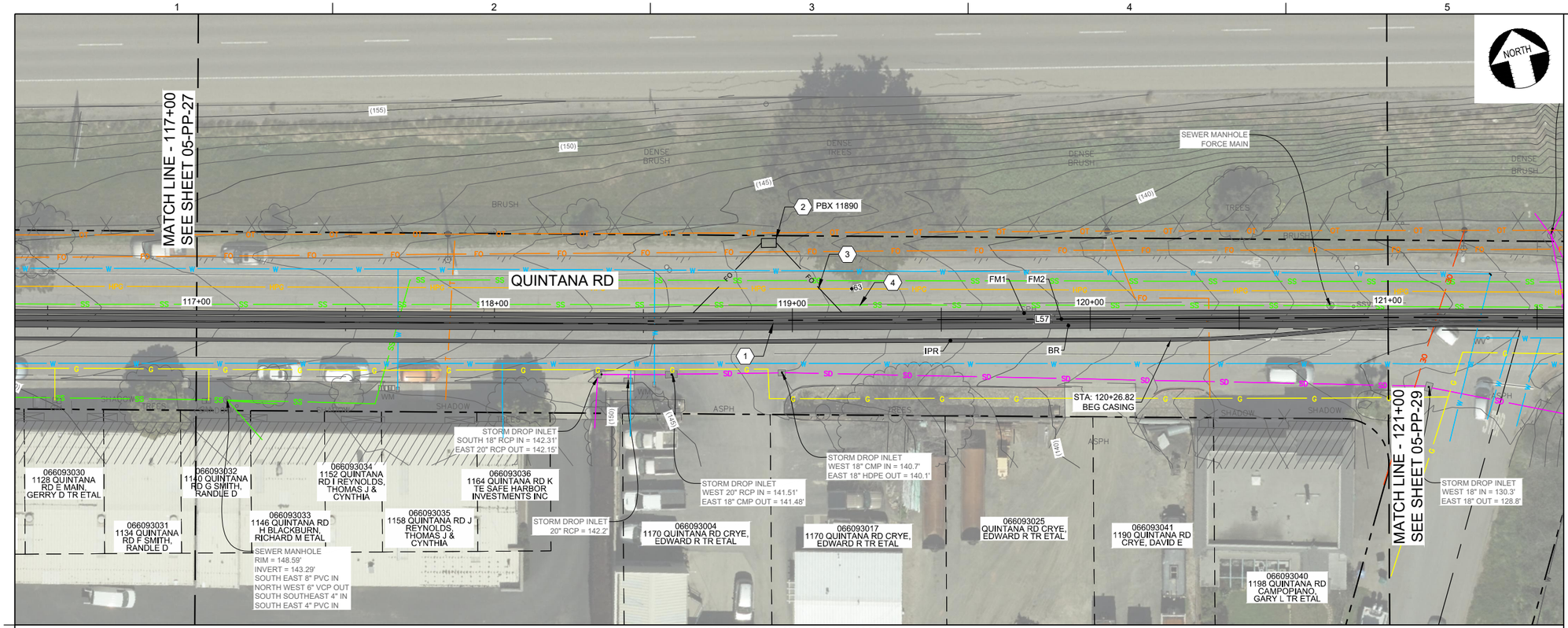
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

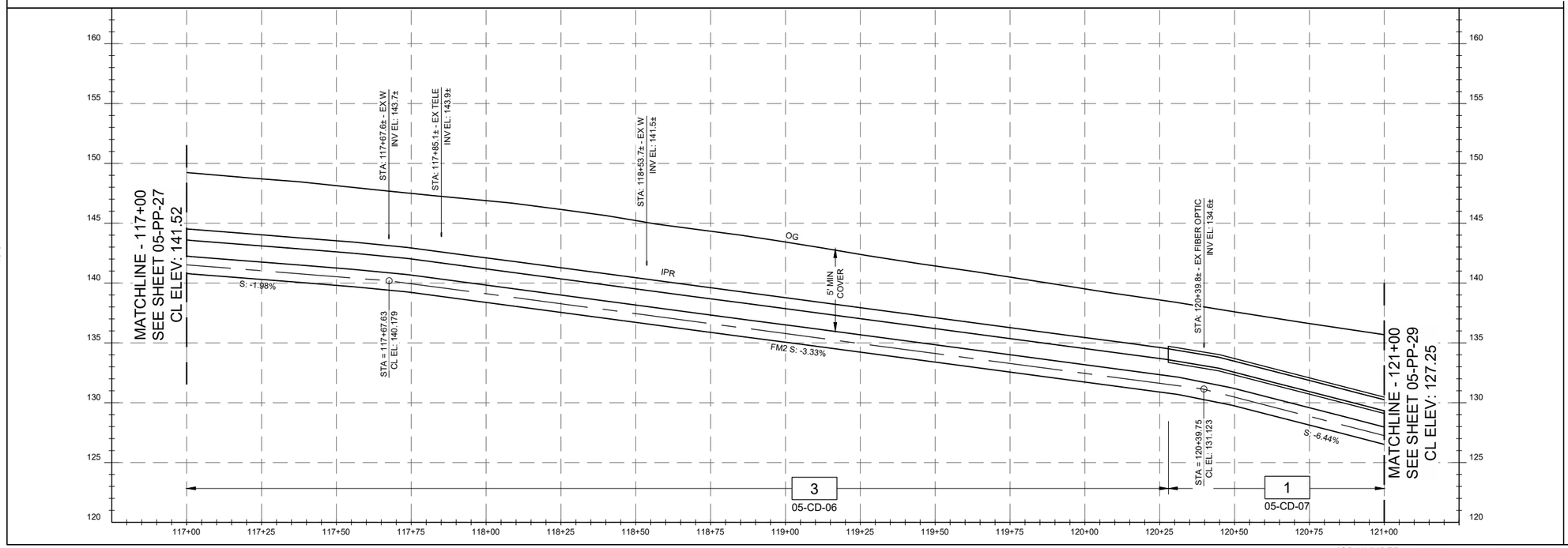
PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 113+00 TO STA 117+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-27
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP127.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP127.DWG PLOT DATE: 02/10/20 PLOT TIME: 15:59:09





NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

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2. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. 8"SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN JUNCTION WITH APPROVED LS-3 BYPASS PLAN.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

(63) 11" A.C. PVMNT, 48" CVR, 16"HPG

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

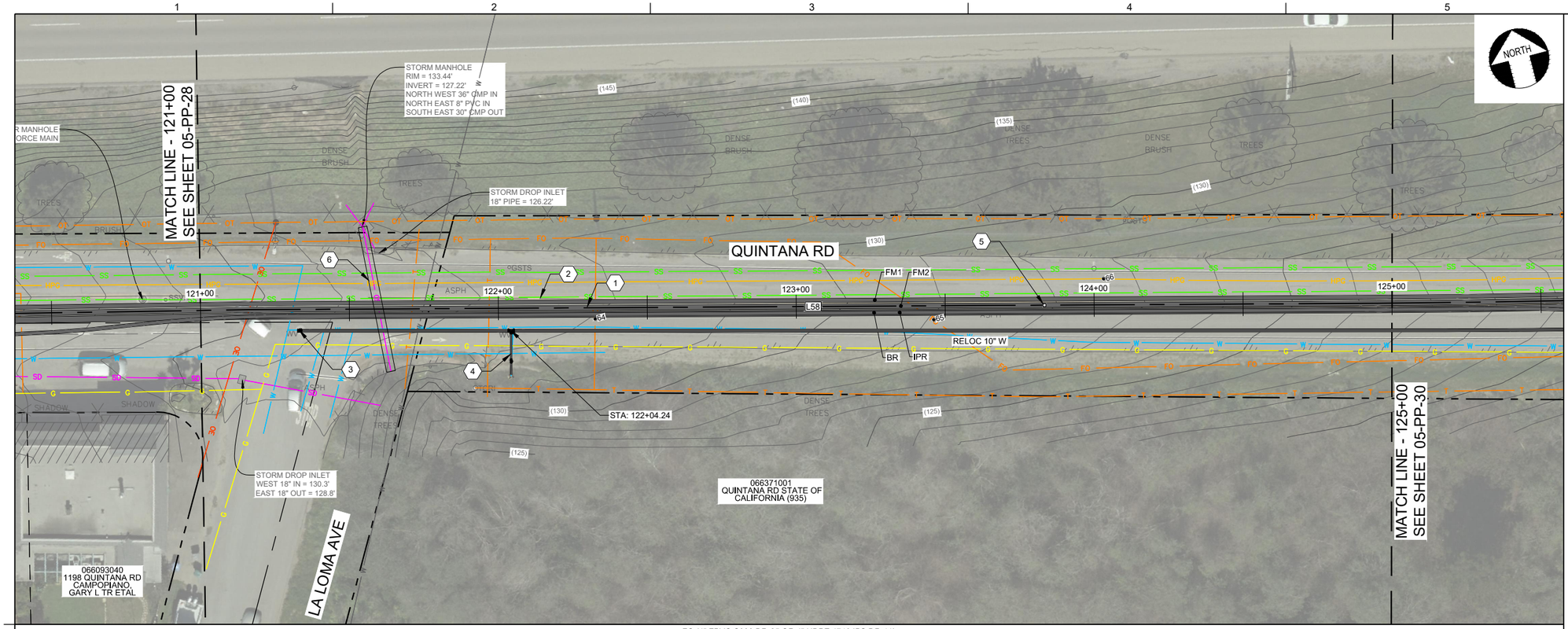
DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

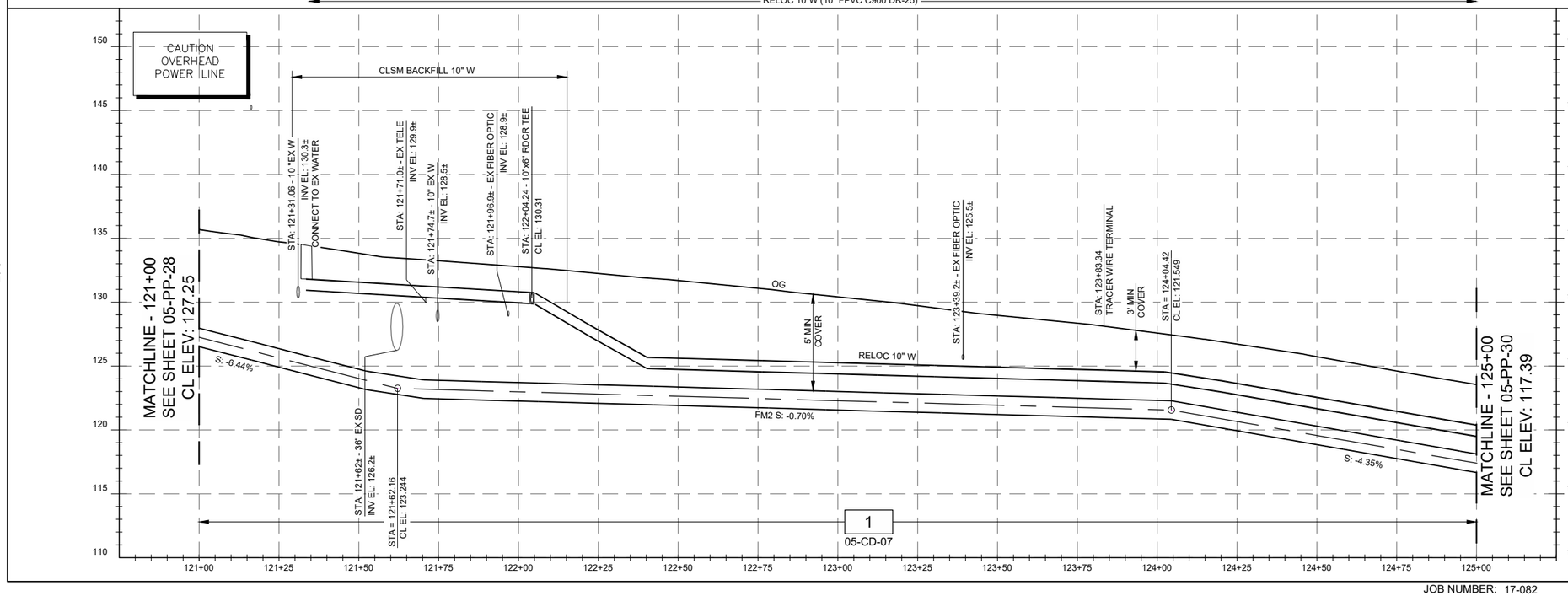
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 117+00 TO STA 121+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-28
SHEET NUMBER ----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-11)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 DR-11) IN CASING (14" FPVC C900 DR-25 OR 16" HDPE 4710 IPS DR-21)
RELOC 10"W (10" FPVC C900 DR-25)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. 8" SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN CONJUNCTION WITH APPROVED LS-3 BYPASS PLAN.
3. EXPOSE EX 6"W AND VERIFY CONNECTION LOCATION. INITIATE BYPASS PLAN. INSTALL THRUST BLOCK ON EAST SIDE OF EX GATE VALVE. CONNECT EX 6"PVC TO RELOC 10"W WITH 6"x10" MJ RDCR.
4. INSTALL 10"x6" MJ RDCNG TEE. REPLACE HYDRANT CONNECTION PIPING AND 6" V-S-101 UP TO EX HYDRANT PER (2200) USING (2203) VALVE BOX. REUSE EX HYDRANT AS DIRECTED BY CITY ENGINEER.
5. INSTALL TRACER WIRE TERMINAL (2060) LOCATE ON CL FM2.
6. AS DIRECTED BY CITY ENGINEER, REMOVE 45-LF EX CMP STORM DRAIN AND INSTALL EQUIVALENT SIZE CORRUGATED HDPE PIPE FROM EX NORTH DRAIN INLET TO SOUTHERN EDGE OF PAVEMENT. GROUT NEW HDPE IN EX DRAIN STRUCTURE TO REMAIN. USE APPROPRIATE REPAIR COUPLING AND/OR CONCRETE COLLAR AND CONNECT TO EDGE OF PIPE THAT DISCHARGES SOUTH INTO ENVIRONMENTALLY SENSITIVE AREA.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

(64) 4" A.C. PVMNT, 5" CONC (OLD HIGHWAY REMNANT), 1' CVR, 43"DEPTH, TELE CONDUIT
(65) 5" A.C. PVMNT, 4" CONC (OLD HIGHWAY REMNANT), 1' CVR, 5"DEPTH, TELE CONDUIT
(66) 8" A.C. PVMNT, 51" CVR, 16"HPG

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

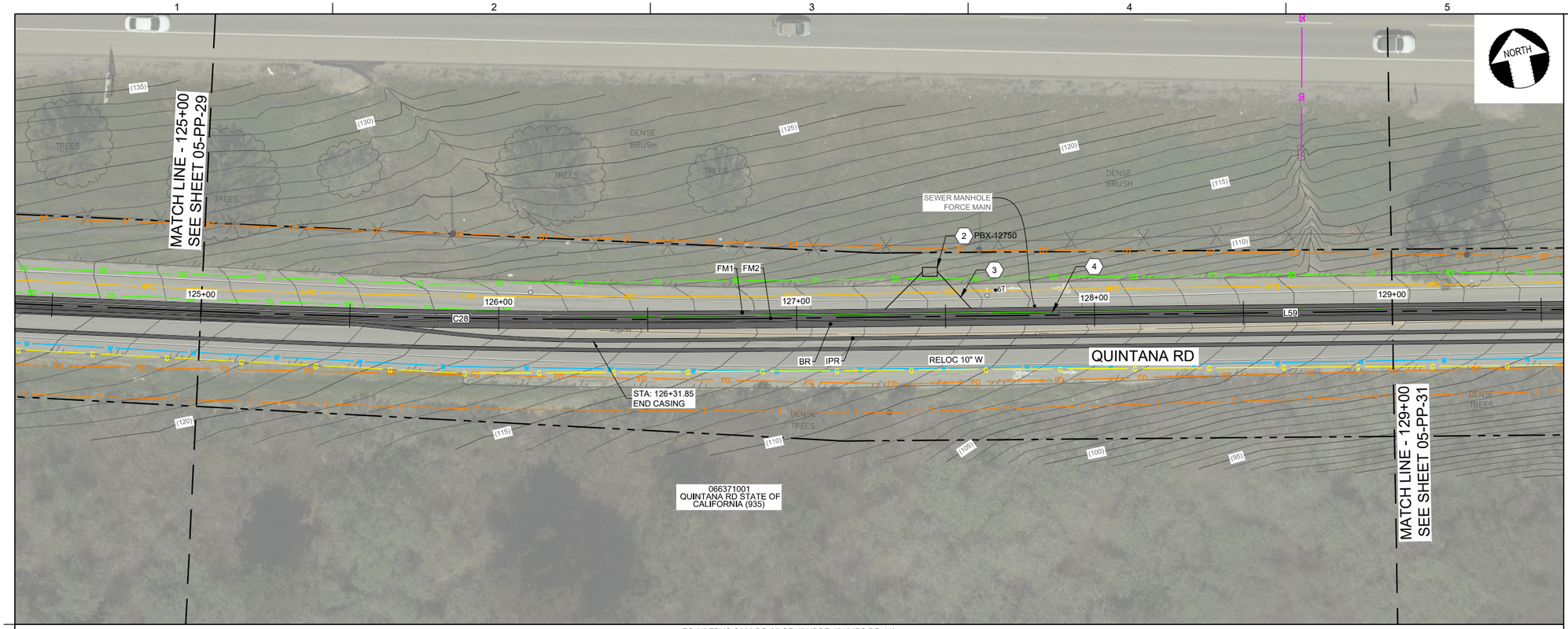
WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

PRELIMINARY- NOT FOR CONSTRUCTION

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 121+00 TO STA 125+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-29
SHEET NUMBER ----



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FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
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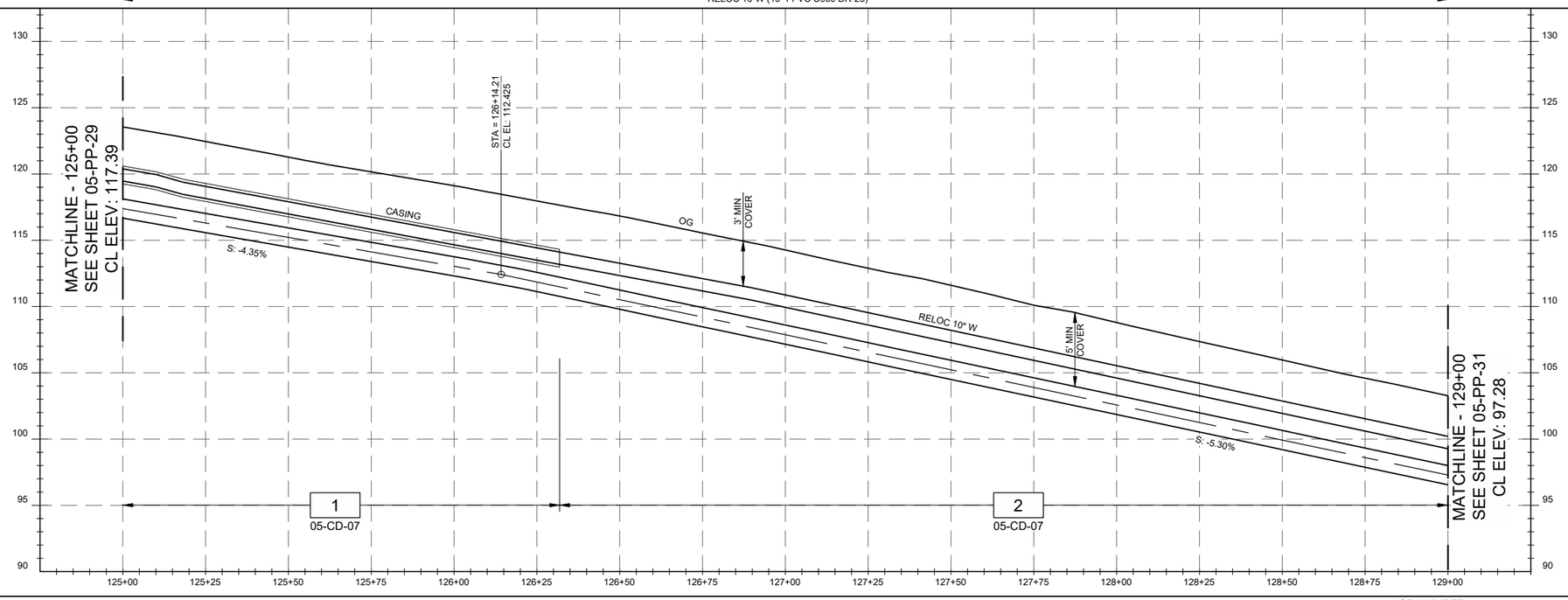
BR (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-11)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 DR-11) IN CASING (14" FPVC C900 DR-25 OR 16" HDPE 4710 IPS DR-21)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
RELOC 10"W (10" FPVC C900 DR-25)



NOTES:

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CONSTRUCTION KEY NOTES:

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2. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. 8"SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN JUNCTION WITH APPROVED LS-3 BYPASS PLAN.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

67 4" A.C. PVMNT, 49" CVR, 16"HPG

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

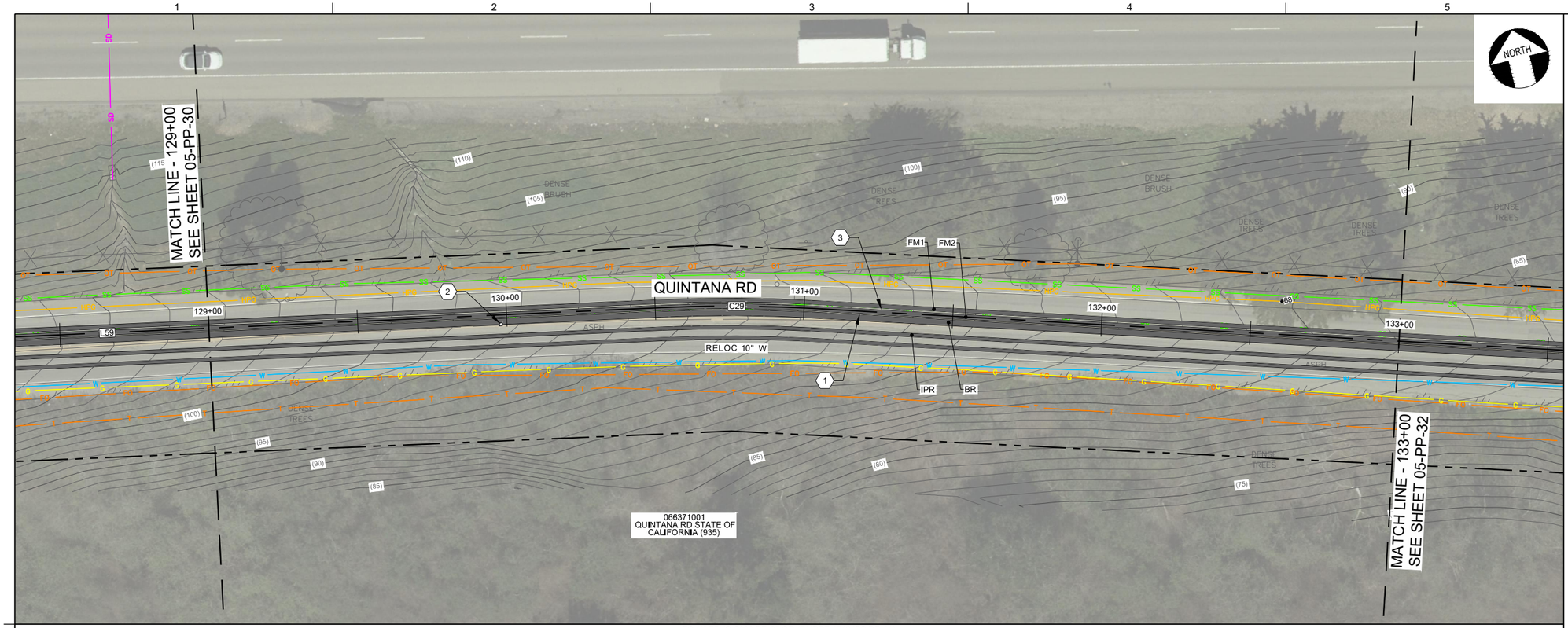
DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 125+00 TO STA 129+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-30
SHEET NUMBER ----



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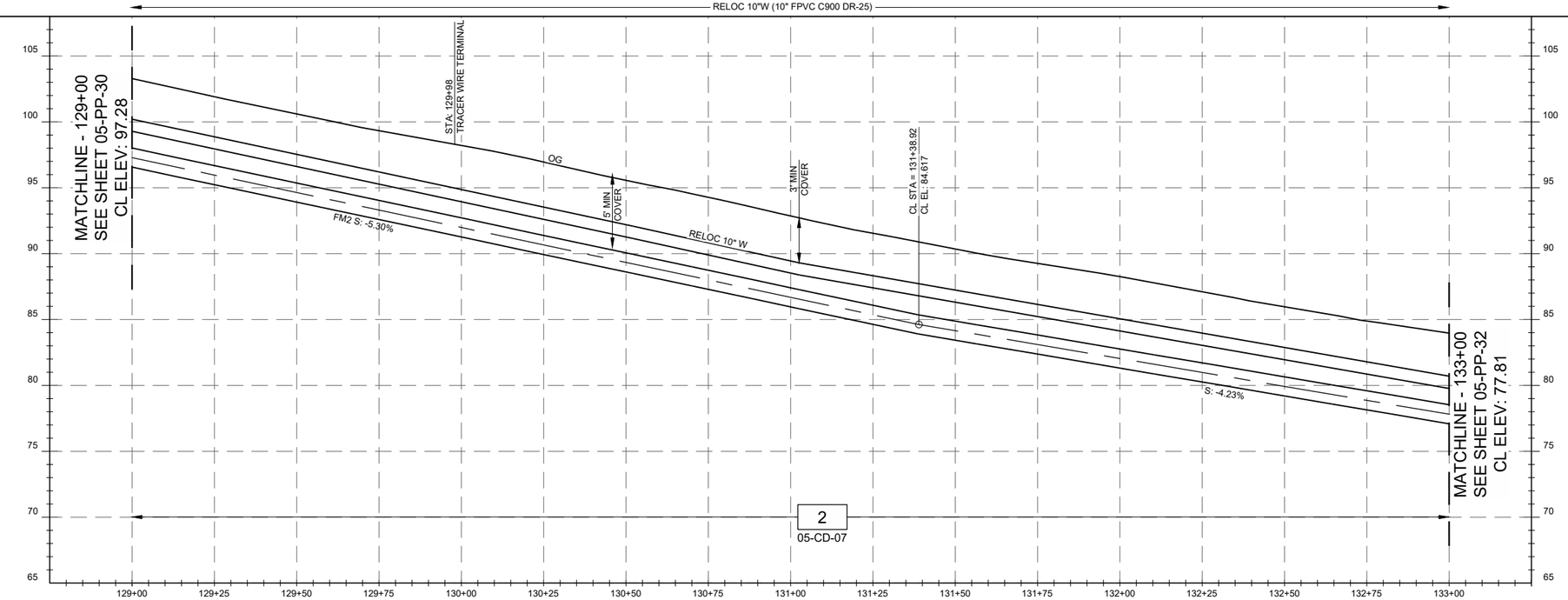
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
RELOC 10"W (10" FPVC C900 DR-25)



2
05-CD-07

NOTES:

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3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) LOCATE OFF =3.0' FROM CL FM2.
3. 8" SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN CONJUNCTION WITH APPROVED LS-3 BYPASS PLAN.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

(68) 4" A.C. PVMNT, 49" CVR, 16"HPG

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 129+00 TO STA 133+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-31
SHEET NUMBER ----

JOB NUMBER: 17-082 FILENAME: 1782D-05PP131.DWG PLOT DATE: 02/10/20 PLOT TIME: 12:58:03

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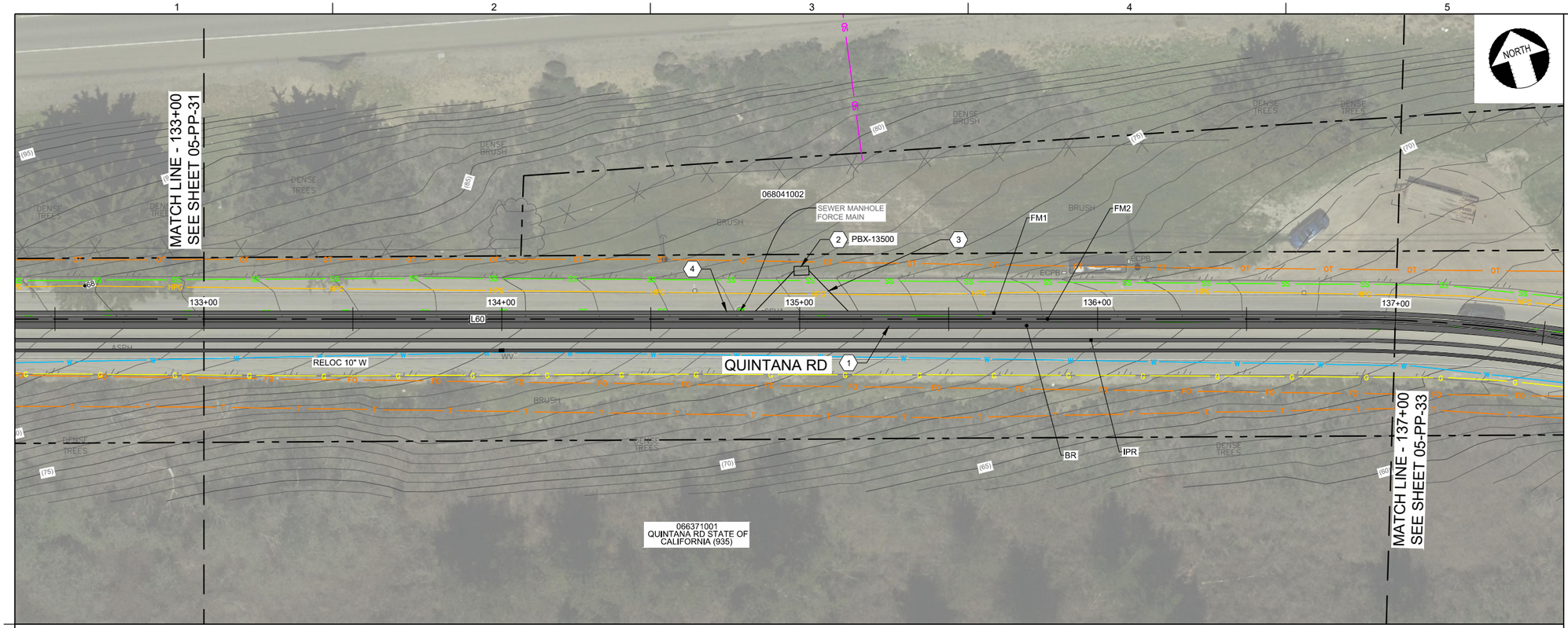
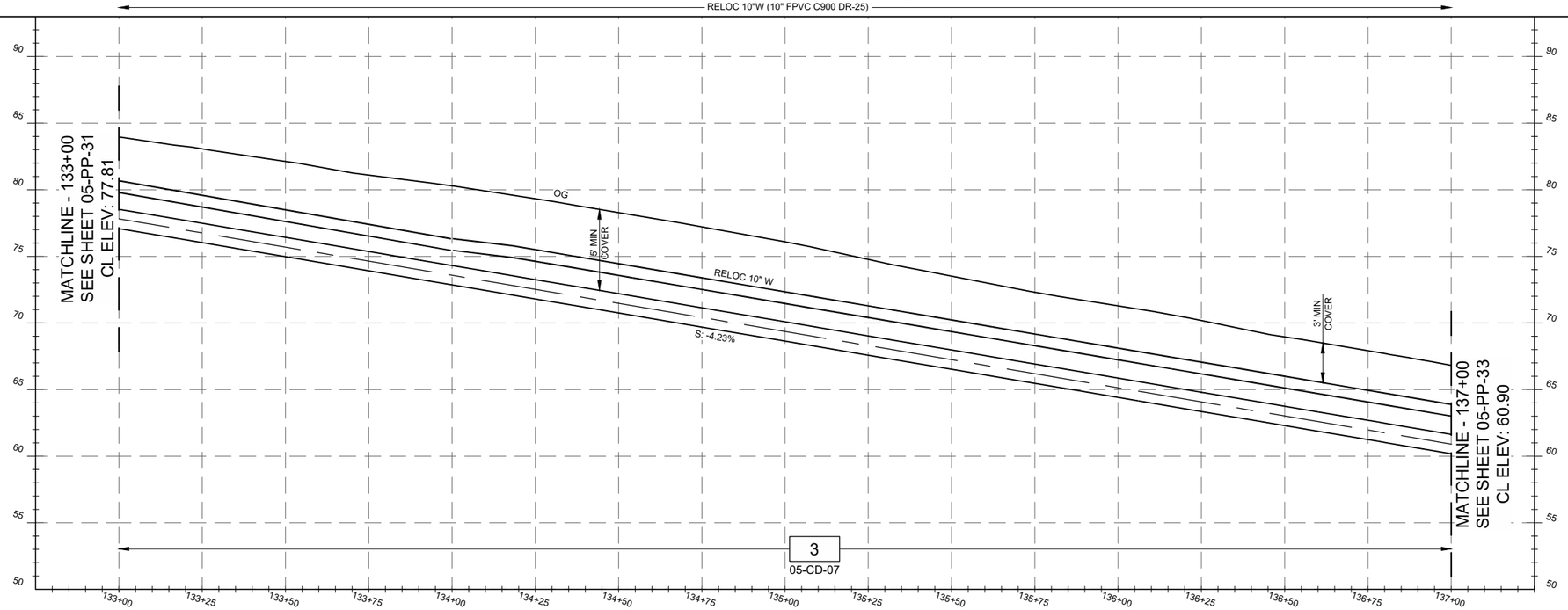


FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-11)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
RELOC 10"W (10" FPVC C900 DR-25)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. 8"SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN JUNCTION WITH APPROVED LS-3 BYPASS PLAN.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

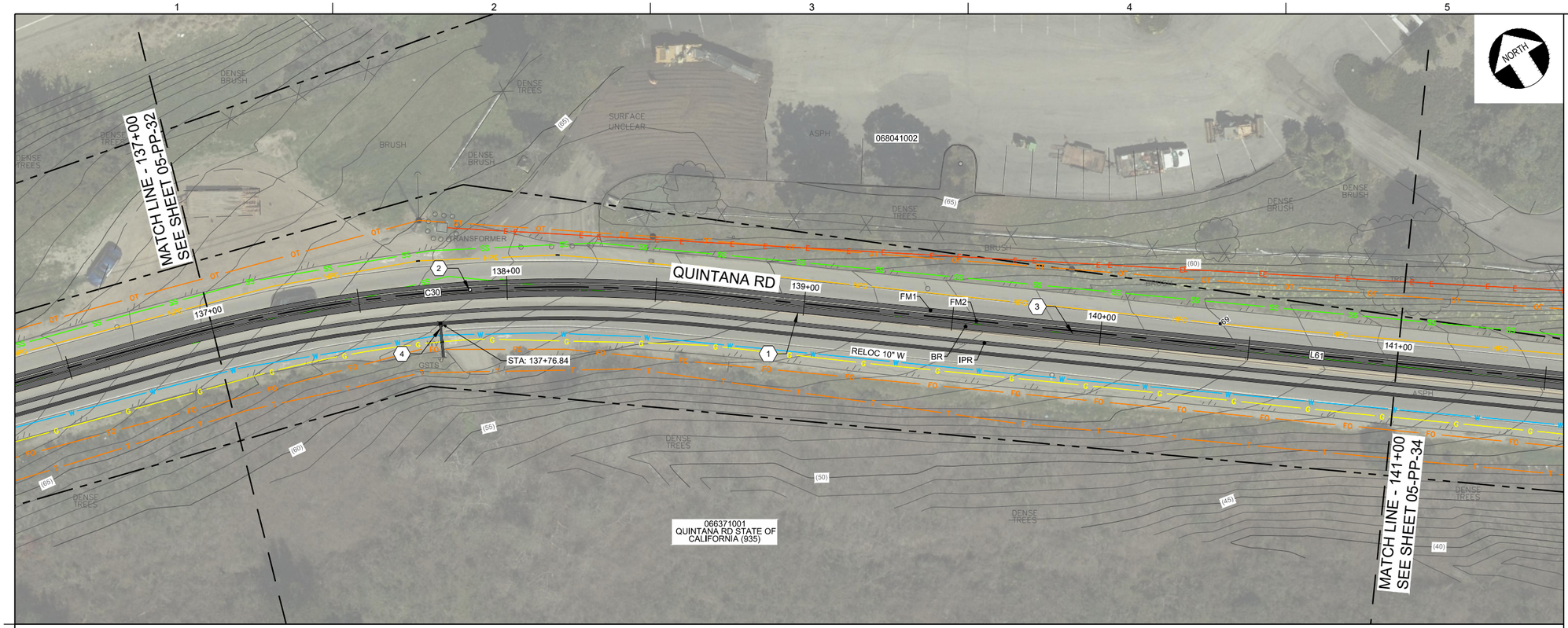
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 133+00 TO STA 137+00

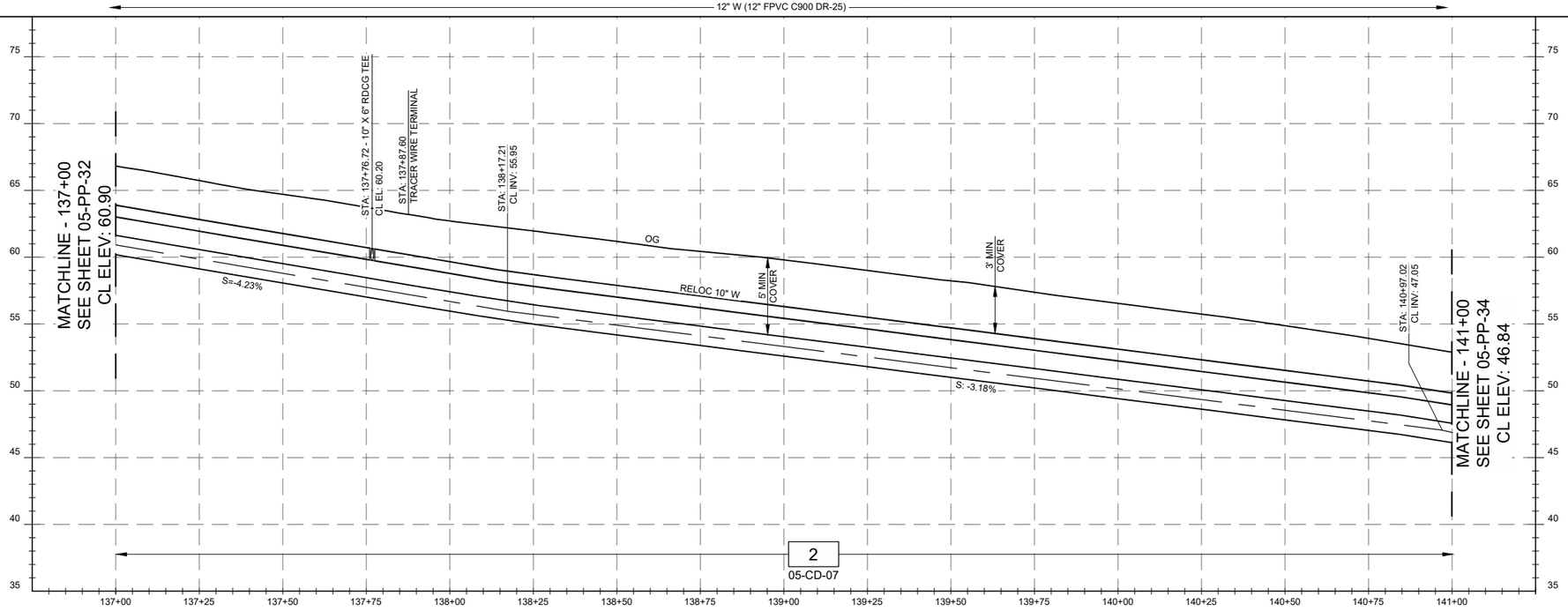
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-32
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP132.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP132.DWG PLOT DATE: 02/10/20 PLOT TIME: 13:04:00



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-11)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
12" W (12" FPVC C900 DR-25)



2
05-CD-07

NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) LOCATE OFF =3.0' FROM CL FM2.
3. 8" SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN CONJUNCTION WITH APPROVED LS-3 BYPASS PLAN.
4. INSTALL 10"X6" MJ RDCNG TEE. REPLACE HYDRANT CONNECTION PIPING AND 6" V-5-102 UP TO EX HYDRANT PER (2200) USING (2203) VALVE BOX. REUSE EX HYDRANT AS DIRECTED BY CITY ENGINEER.

POTHOLING RESULTS:

(69) 9" A.C. PVMNT, 50" CVR, 16"HPG

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 137+00 TO STA 141+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-33
SHEET NUMBER ----

JOB NUMBER: 17-082 FILENAME: 1782D-05PP133.DWG PLOT DATE: 02/10/20 PLOT TIME: 13:31:07

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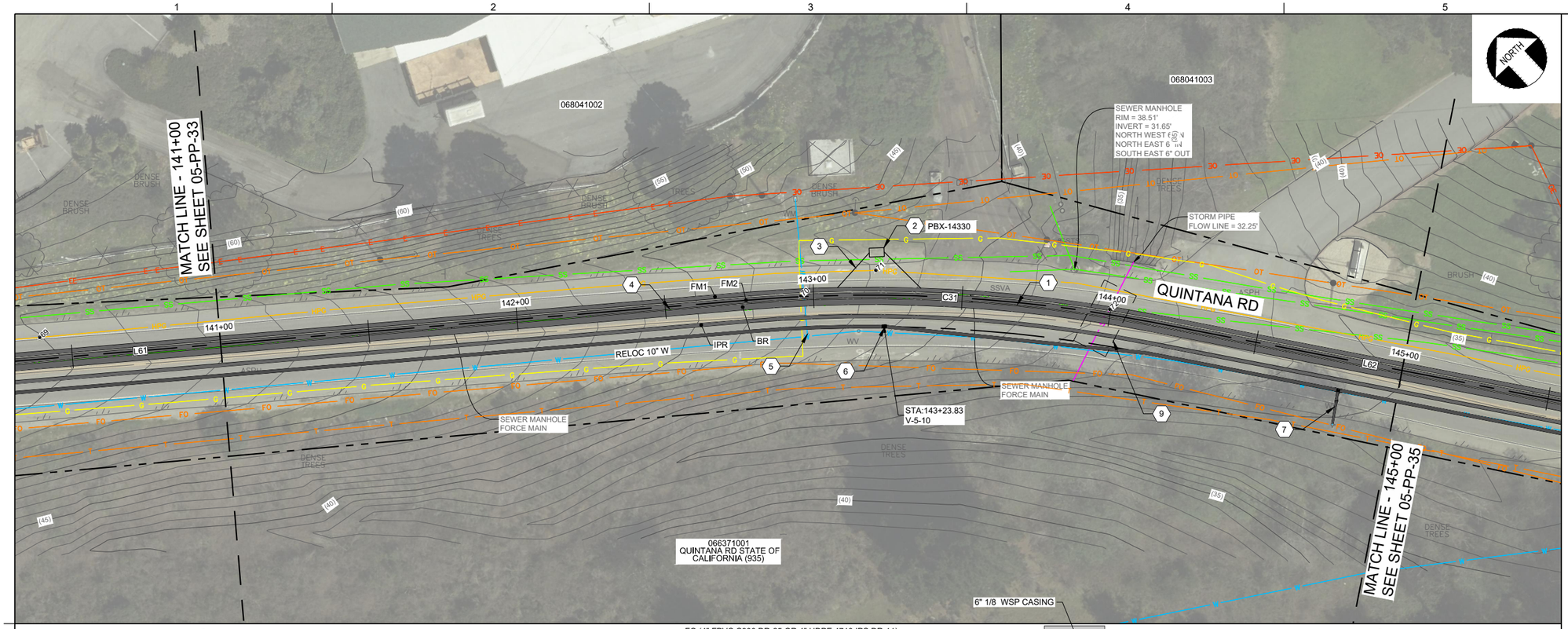
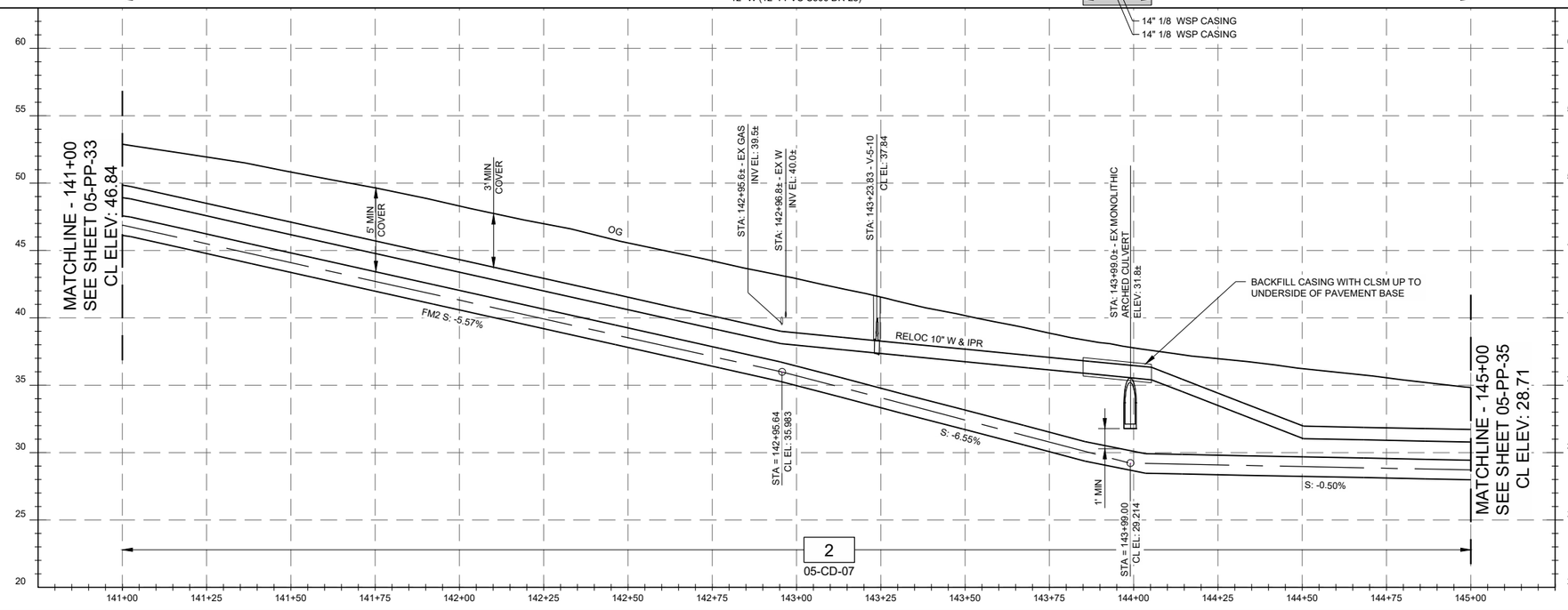


FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-11)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
12" W (12" FPVC C900 DR-25)
14" 1/8 WSP CASING
14" 1/8 WSP CASING



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. 8"SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN CONJUNCTION WITH APPROVED LS-3 BYPASS PLAN.
5. CUT EX WATER SERVICVE LINE, INSTALL NEW CORP STOP AND SERVICE SADDLE AND REINSTATE WATER SERVICE LINE PER CITY STD DET W-3.
6. INSTALL V-5-103 (2203)
7. INSTALL 10"X6" MJ RDCNG TEE. REPLACE HYDRANT CONNECTION PIPING AND V-5-104 UP TO EX HYDRANT PER (2200) USING (2203) VALVE BOX. REUSE EX HYDRANT AS DIRECTED BY CITY ENGINEER.
8. CUT EX WATER SERVICE LINE, INSTALL NEW CORP STOP AND SERVICE SADDLE AND REINSTATE WATER SERVICE LINE PER CITY STD DET W-3.
9. CONTRACTOR TO SUBMIT FOR APPROVAL OPEN CUT CONSTRUCTION CULVERT CROSSING AND CULVERT PROTECTION PLAN. CONTRACTOR MAY SUBMIT FOR APPROVAL A TRENCHLESS CONSTRUCTION ALTERNATIVE.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

70 7" A.C. PVMNT, 39" CVR, 42" DEPTH, GAS
71 8" A.C. PVMNT, 48" CVR, 16"HPG
72 6" A.C. PVMNT, 27" CVR, 72" DEPTH, MONOLITHIC ARCHED CONCRETE CULVERT

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

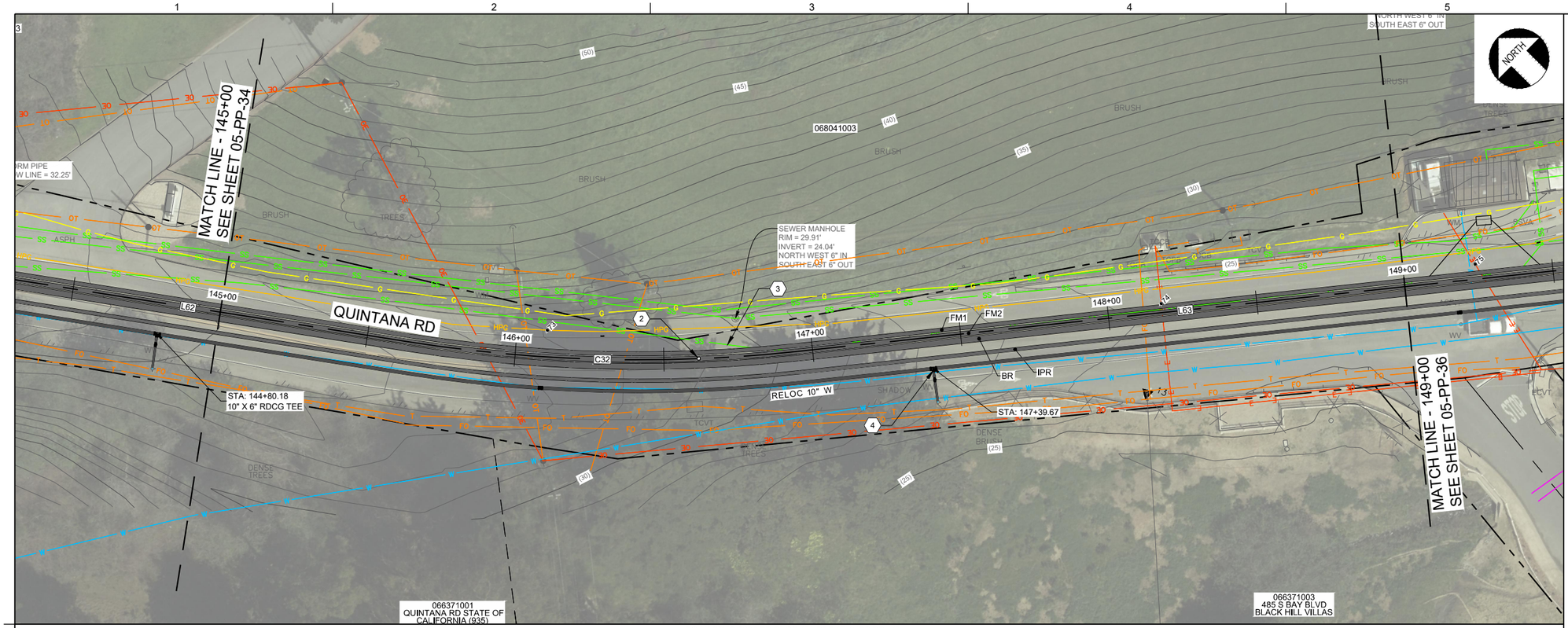
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 141+00 TO STA 145+00

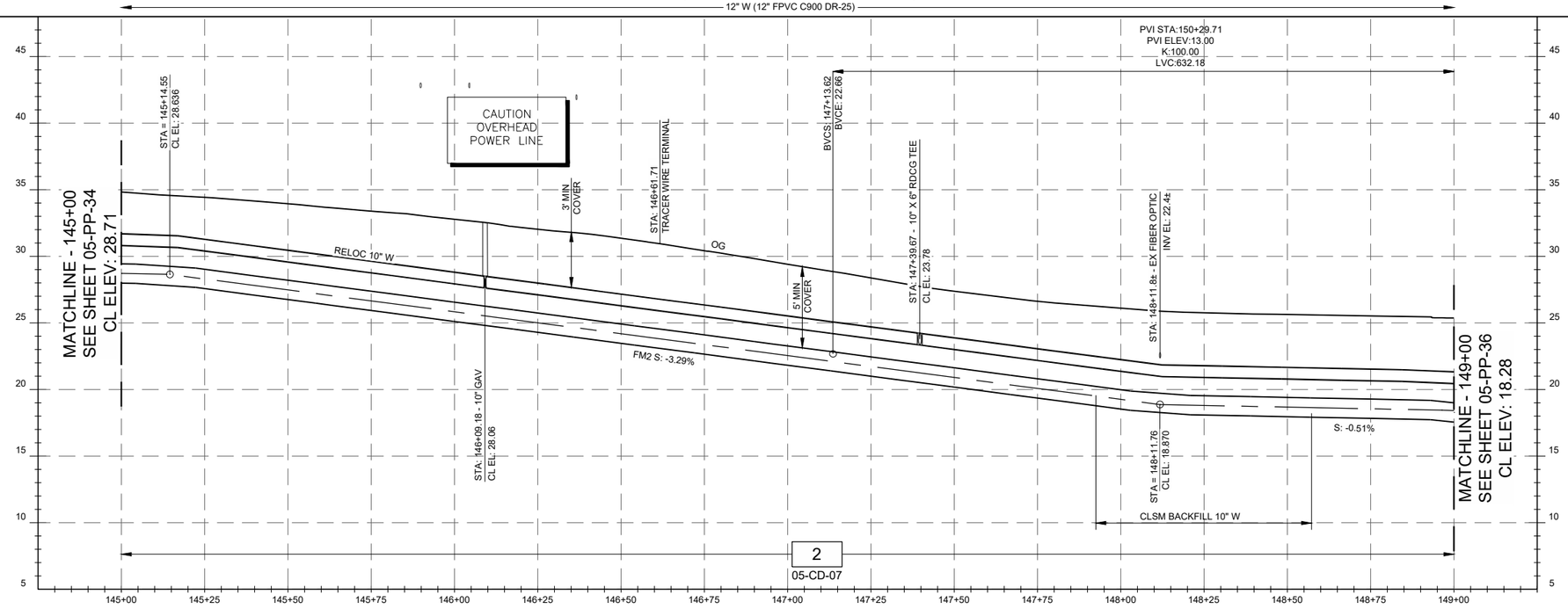
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-34
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP134.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP134.DWG PLOT DATE: 02/10/20 PLOT TIME: 14:50:27



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-11)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
12" W (12" FPVC C900 DR-25)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) LOCATE ON CL FM2.
3. 8" SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN CONJUNCTION WITH APPROVED LS-3 BYPASS PLAN.
4. INSTALL 10"X6" MJ RDCNG TEE. REPLACE HYDRANT CONNECTION PIPING AND v-5-105 UP TO HYDRANT PER (2200) USING (2203) VALVE BOX. REUSE EX HYDRANT AS DIRECTED BY CITY ENGINEER.

POTHOLING RESULTS:

(73) 9" A.C. PVMNT, 47" CVR, 16"HPG

(74) 4" A.C. PVMNT, 33" CVR, 36" DEEP, ELEC CONDUIT

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

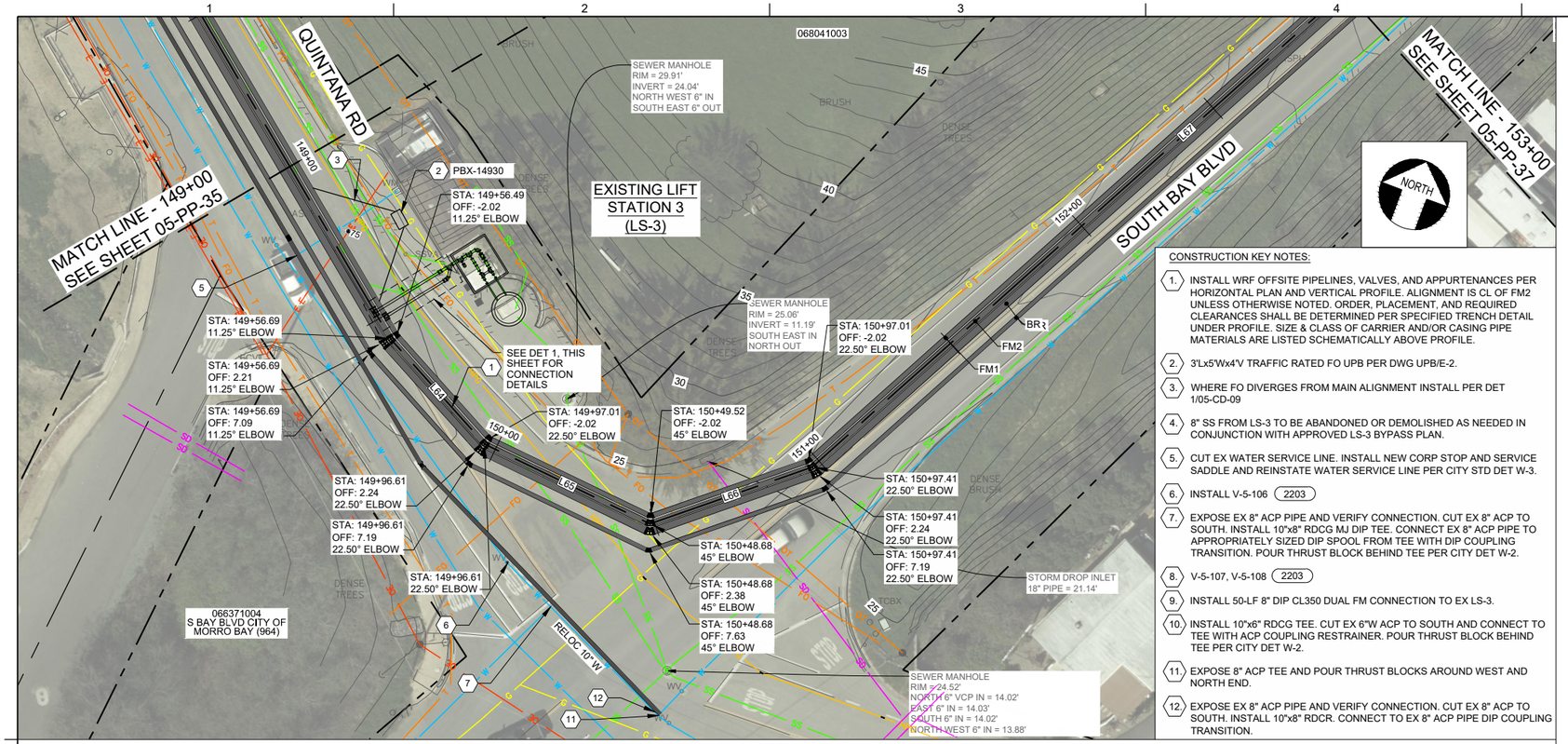
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 145+00 TO STA 149+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-35
SHEET NUMBER ----

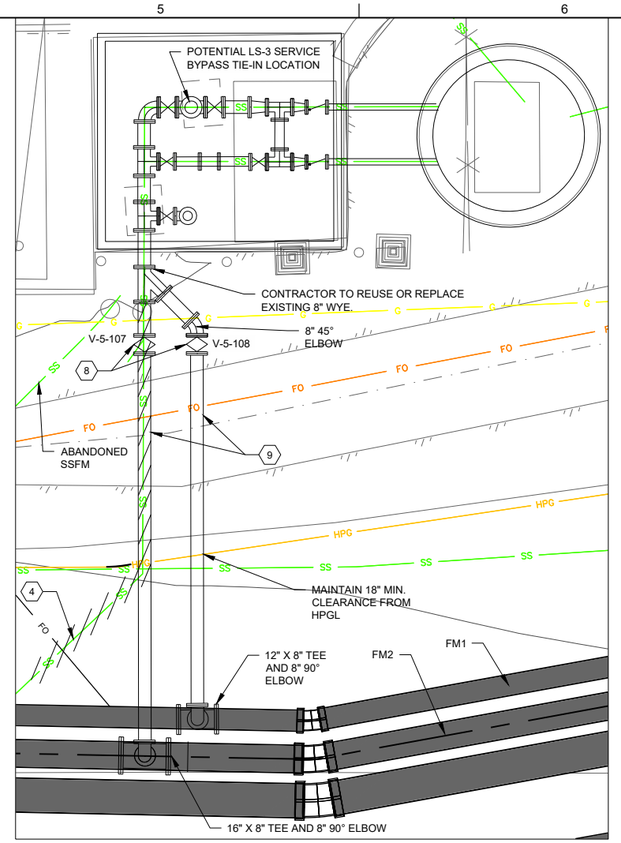
L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP135.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP135.DWG PLOT DATE: 02/10/20 PLOT TIME: 13:55:28



CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09
4. 8" SS FROM LS-3 TO BE ABANDONED OR DEMOLISHED AS NEEDED IN CONJUNCTION WITH APPROVED LS-3 BYPASS PLAN.
5. CUT EX WATER SERVICE LINE. INSTALL NEW CORP STOP AND SERVICE SADDLE AND REINSTATE WATER SERVICE LINE PER CITY STD DET W-3.
6. INSTALL V-5-106 (2203)
7. EXPOSE EX 8" ACP PIPE AND VERIFY CONNECTION. CUT EX 8" ACP TO SOUTH. INSTALL 10"x8" RDCG MJ DIP TEE. CONNECT EX 8" ACP PIPE TO APPROPRIATELY SIZED DIP SPOOL FROM TEE WITH DIP COUPLING TRANSITION. POUR THRUST BLOCK BEHIND TEE PER CITY DET W-2.
8. V-5-107, V-5-108 (2203)
9. INSTALL 50-LF 8" DIP CL350 DUAL FM CONNECTION TO EX LS-3.
10. INSTALL 10"x6" RDCG TEE. CUT EX 6"W ACP TO SOUTH AND CONNECT TO TEE WITH ACP COUPLING RESTRAINER. POUR THRUST BLOCK BEHIND TEE PER CITY DET W-2.
11. EXPOSE 8" ACP TEE AND POUR THRUST BLOCKS AROUND WEST AND NORTH END.
12. EXPOSE EX 8" ACP PIPE AND VERIFY CONNECTION. CUT EX 8" ACP TO SOUTH. INSTALL 10"x8" RDCR. CONNECT TO EX 8" ACP PIPE DIP COUPLING TRANSITION.



1 CONNECTION DETAIL

- 1" = 4'

NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
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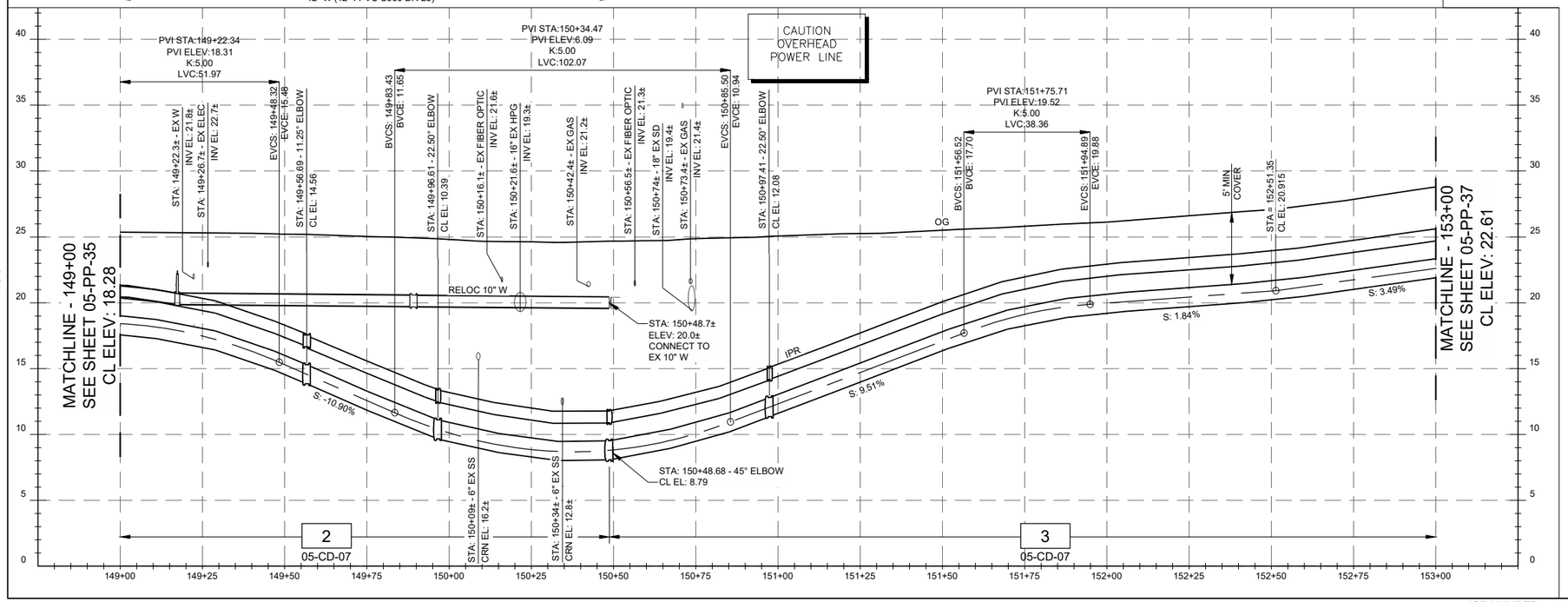
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.
4. CONTRACTOR SHALL EXPOSE AND VERIFY CONNECTION LOCATIONS AT LS-3.

FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-11)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)
12" W (12" FPVC C900 DR-25)



20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

PRELIMINARY - NOT FOR CONSTRUCTION

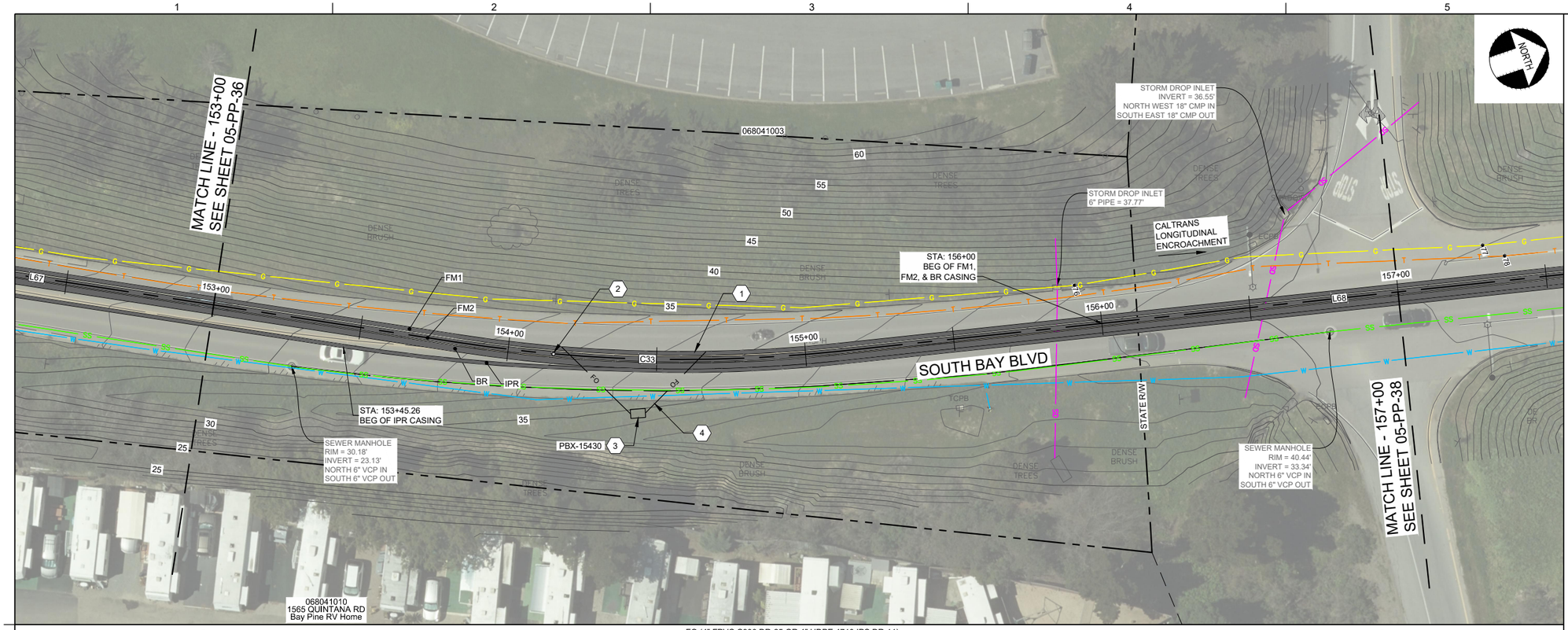
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 149+00 TO STA 153+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-36
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP136.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP136.DWG PLOT DATE: 02/10/20 PLOT TIME: 15:27:23



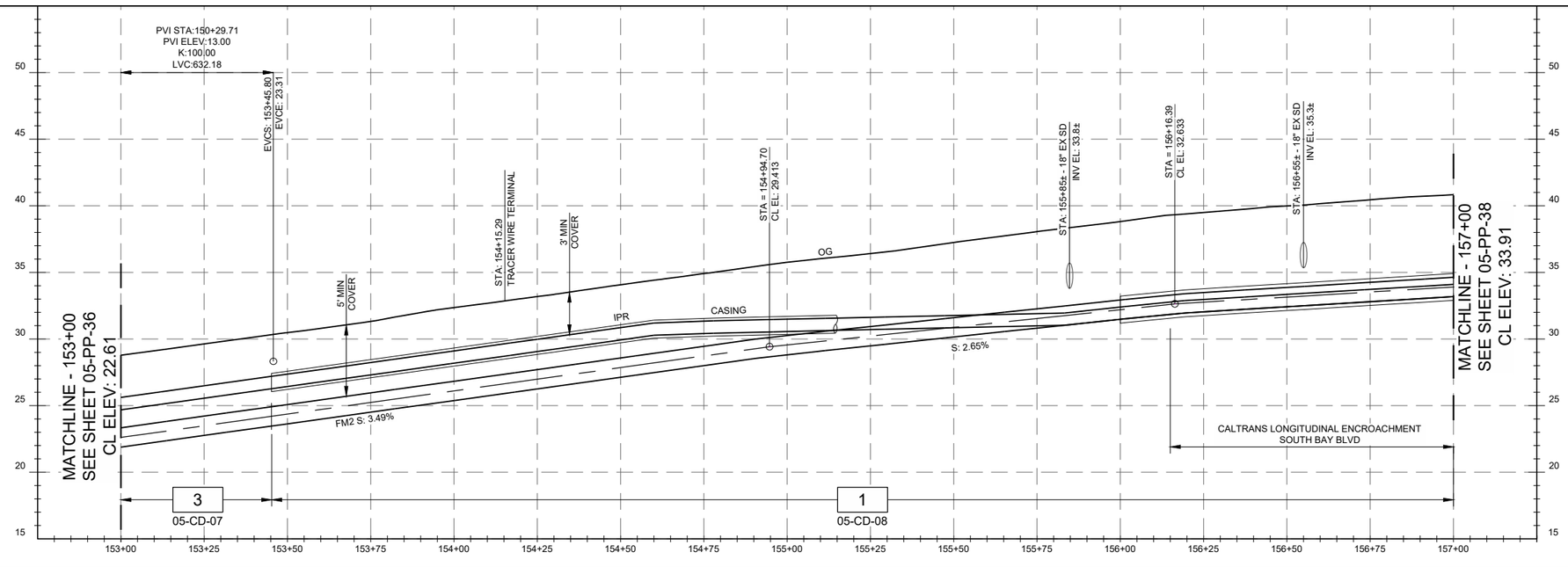
FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)

FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11) → FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11) IN CASING (16" FPVC C900 DR-25 OR 18" HDPE 4710 IPS DR-21)

FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11) → FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11) IN CASING (24" FPVC C900 DR-25 OR 26" HDPE 4710 IPS DR-21)

BR (20" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11) → BR (20" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11) IN CASING (24" FPVC C900 DR-25 OR 26" HDPE 4710 IPS DR-21)

IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 DR-11) → IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 DR-11) IN CASING (14" FPVC C900 DR-25 OR 16" HDPE 4710 IPS DR-21)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. PER SO CAL GAS REQUIREMENTS, ANY EXCAVATION WITHIN 10-FT OF A SO CAL GAS HIGH PRESSURE NATURAL GAS PIPELINE MUST BE COORDINATED THROUGH UNDERGROUND SERVICES ALERT (811) WITH A SO CAL GAS CO. STANDBY EMPLOYEE. IN ADDITION, ANY EXCAVATION, SUBGRADE REMOVAL, OR COMPACTION PERFORMED WITH 2' OF THE EDGE OF A SO CAL GAS PIPELINE BUT BE DONE UTILIZING HAND OPERATED TOOLS. ALL HIGH-PRESSURE GAS LINE EXCAVATIONS MUST HAVE A SOCAL GAS EMPLOYEE ON SITE.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) LOCATE ON CL FM2.
3. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
4. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19

(76) UNPAVED, 30" CVR, 34" DEPTH, GAS

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

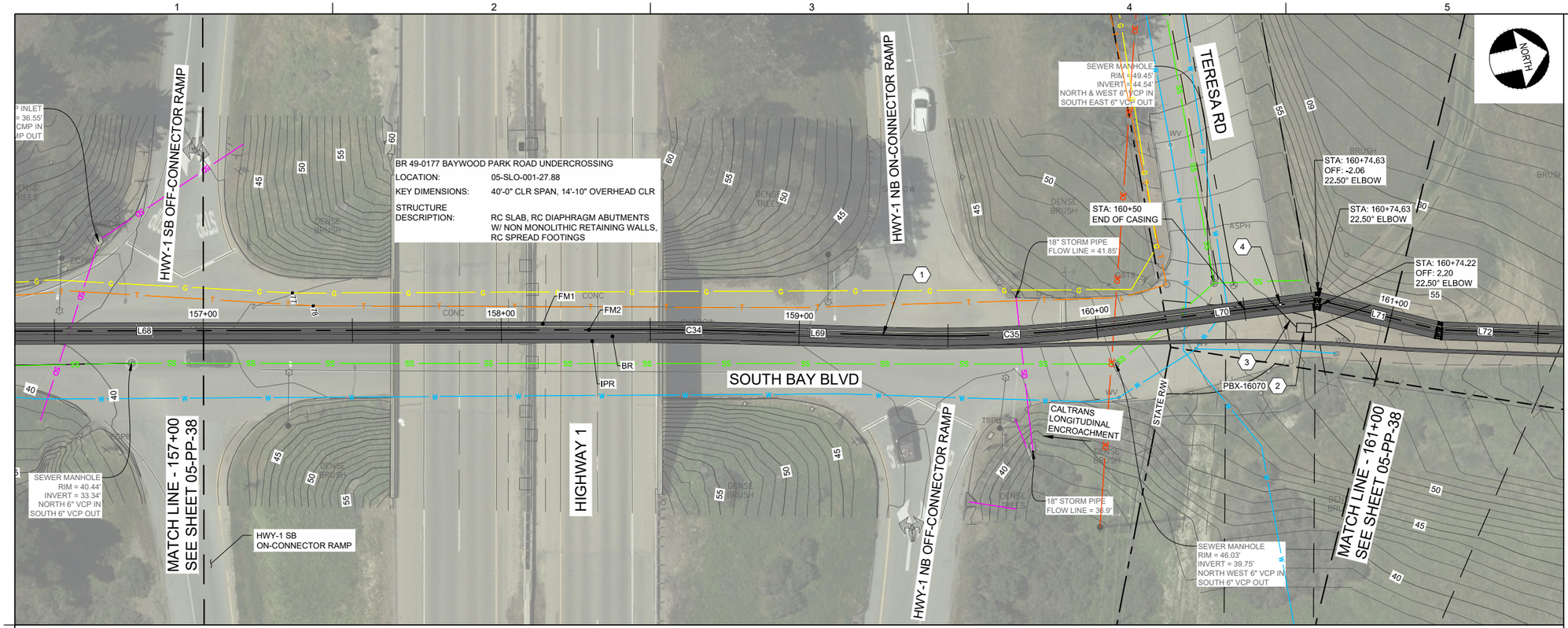
CITY OF MORRO BAY

WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE

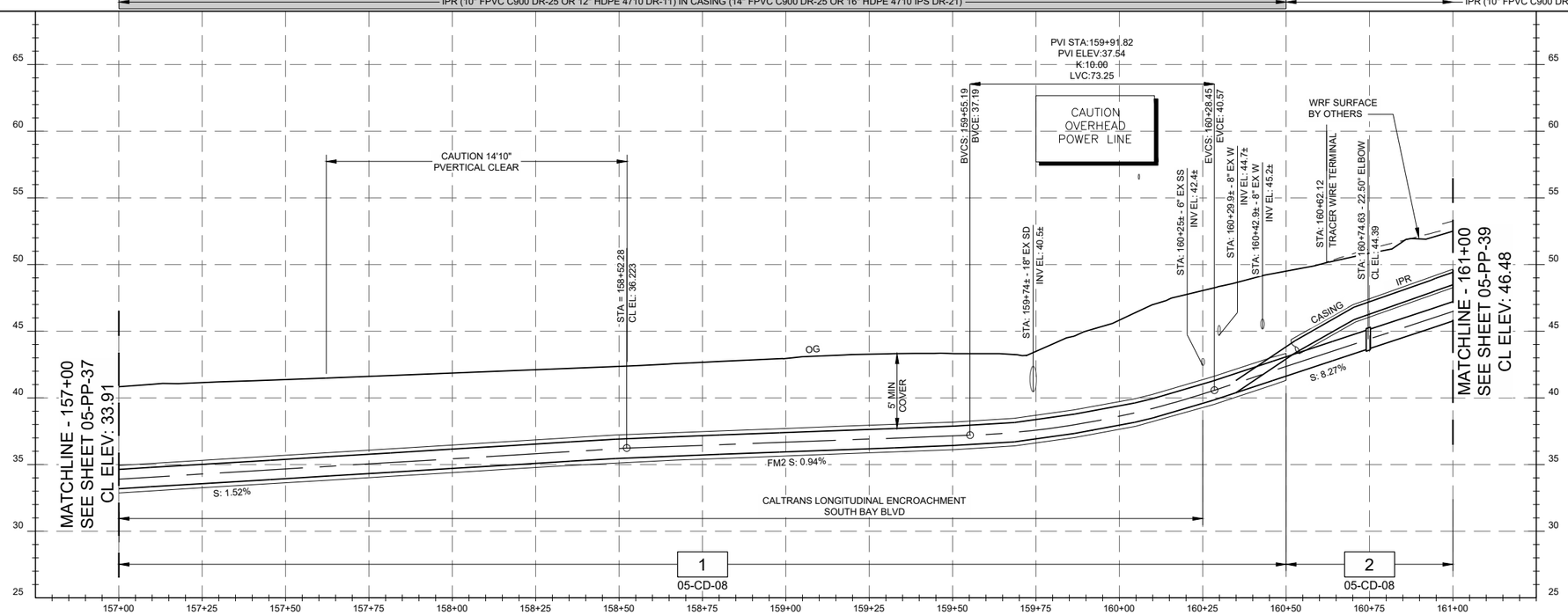
FORCE MAIN PLAN AND PROFILE
STA 153+00 TO STA 157+00

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-37
SHEET NUMBER	----



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11) IN CASING (16" FPVC C900 DR-25 OR 18" HDPE 4710 IPS DR-21)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11) IN CASING (24" FPVC C900 DR-25 OR 26" HDPE 4710 IPS DR-21)
BR (20" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11) IN CASING (24" FPVC C900 DR-25 OR 26" HDPE 4710 IPS DR-21)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11) IN CASING (14" FPVC C900 DR-25 OR 16" HDPE 4710 IPS DR-21)

FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (20" FPVC C900 DR-25 OR 22" HDPE 4710 IPS DR-11)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
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CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.
2. 3'Lx5'Wx4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2.
3. WHERE FO DIVERGES FROM MAIN ALIGNMENT INSTALL PER DET 1/05-CD-09.
4. INSTALL TRACER WIRE TERMINAL (2060) AND GROUND ROD (16410)

POTHOLING RESULTS:

EXISTING POTHOLING LOCATIONS AND RESULTS DEPICTED HEREIN ARE APPROXIMATE, NOT SURVEYED, AND DO NOT PRECLUDE THE CONTRACTOR'S SOLE RESPONSIBILITY TO INVESTIGATE UNDERGROUND UTILITIES IN WORK AREAS PURSUANT TO NOTE G-12 ON DWG G-19.

(77) 7" A.C. PVMNT, 33" CVR, 37" DEPTH, GAS

(78) 8" A.C. PVMNT, 37" CVR, 45" DEPTH, TELE CONDUIT

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

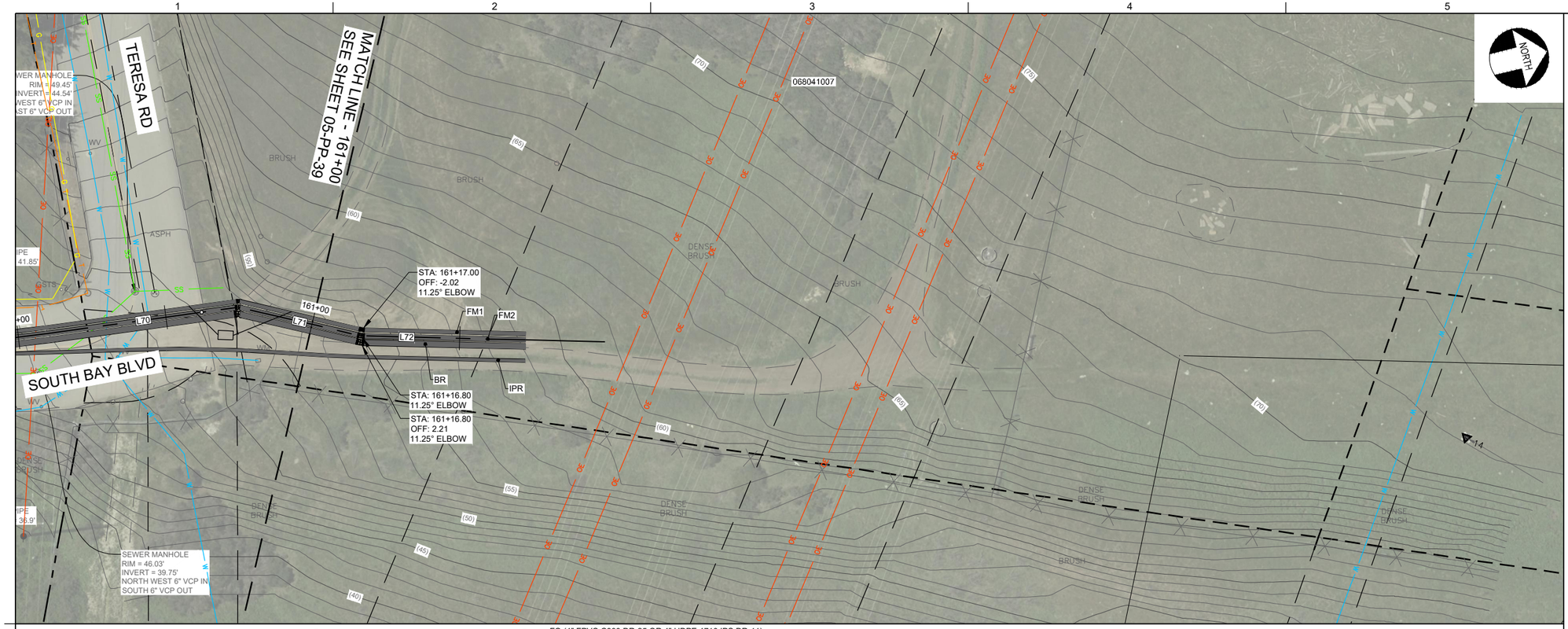
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 157+00 TO STA 161+00

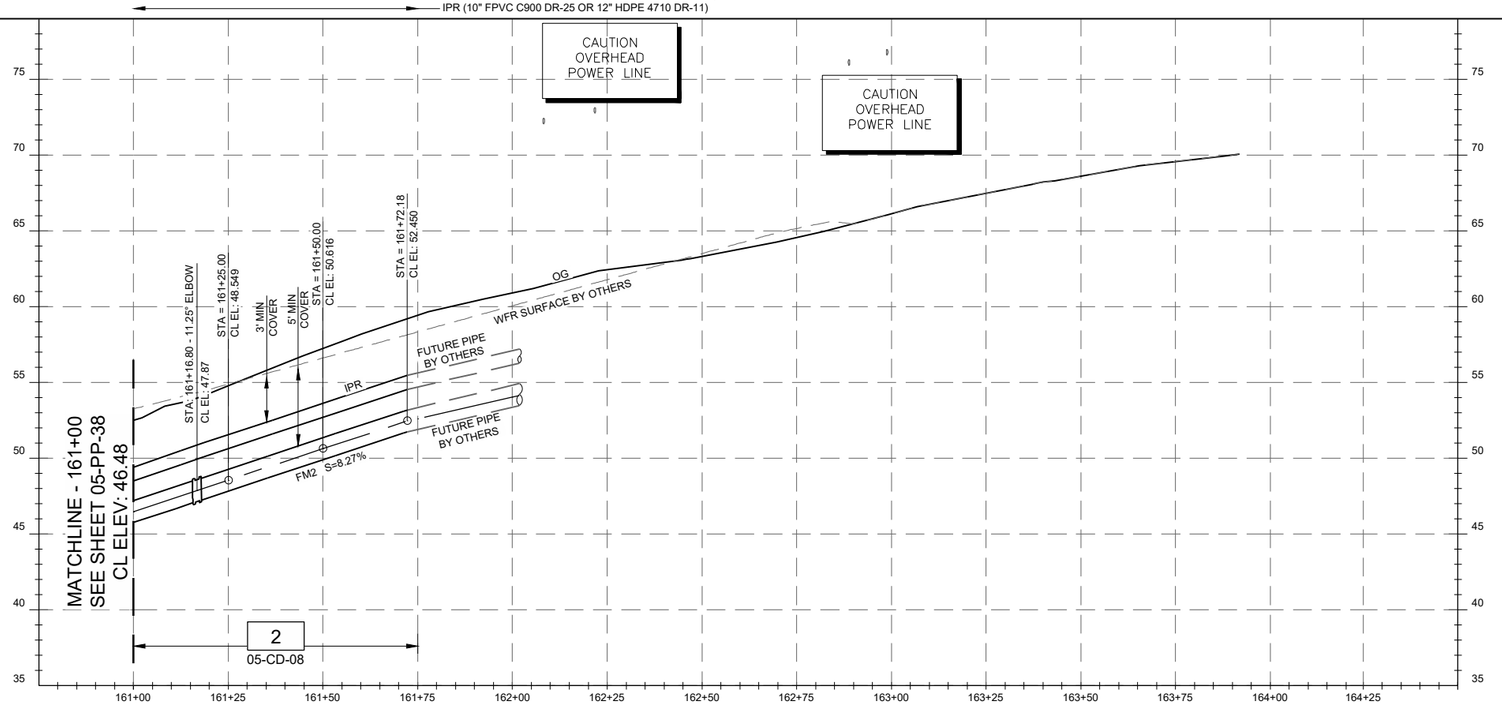
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-38
SHEET NUMBER ----

JOB NUMBER: 17-082 FILENAME: 1782D-05PP138.DWG PLOT DATE: 02/10/20 PLOT TIME: 15:05:23

L:\CADPROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP138.DWG



FO (4" FPVC C900 DR-25 OR 4" HDPE 4710 IPS DR-11)
FM1 (12" FPVC C900 DR-25 OR 14" HDPE 4710 IPS DR-11)
FM2 (16" FPVC C900 DR-25 OR 20" HDPE 4710 IPS DR-11)
BR (20" FPVC C900 DR-25 OR 24" HDPE 4710 IPS DR-11)
IPR (10" FPVC C900 DR-25 OR 12" HDPE 4710 DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-19.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.

CONSTRUCTION KEY NOTES:

1. INSTALL WRF OFFSITE PIPELINES, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF FM2 UNLESS OTHERWISE NOTED. ORDER, PLACEMENT, AND REQUIRED CLEARANCES SHALL BE DETERMINED PER SPECIFIED TRENCH DETAIL UNDER PROFILE. SIZE & CLASS OF CARRIER AND/OR CASING PIPE MATERIALS ARE LISTED SCHEMATICALLY ABOVE PROFILE.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-4113

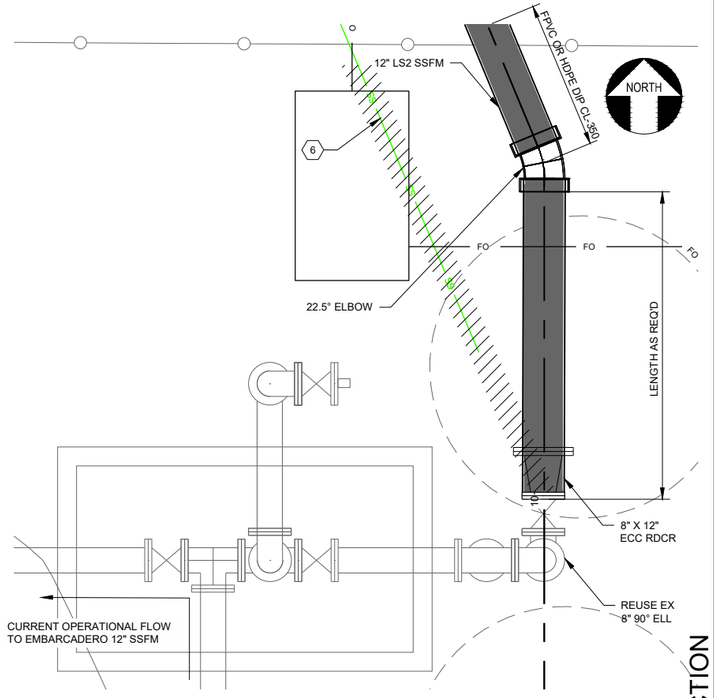
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
FORCE MAIN PLAN AND PROFILE
STA 161+00 TO END

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-39
SHEET NUMBER	----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP139.DWG

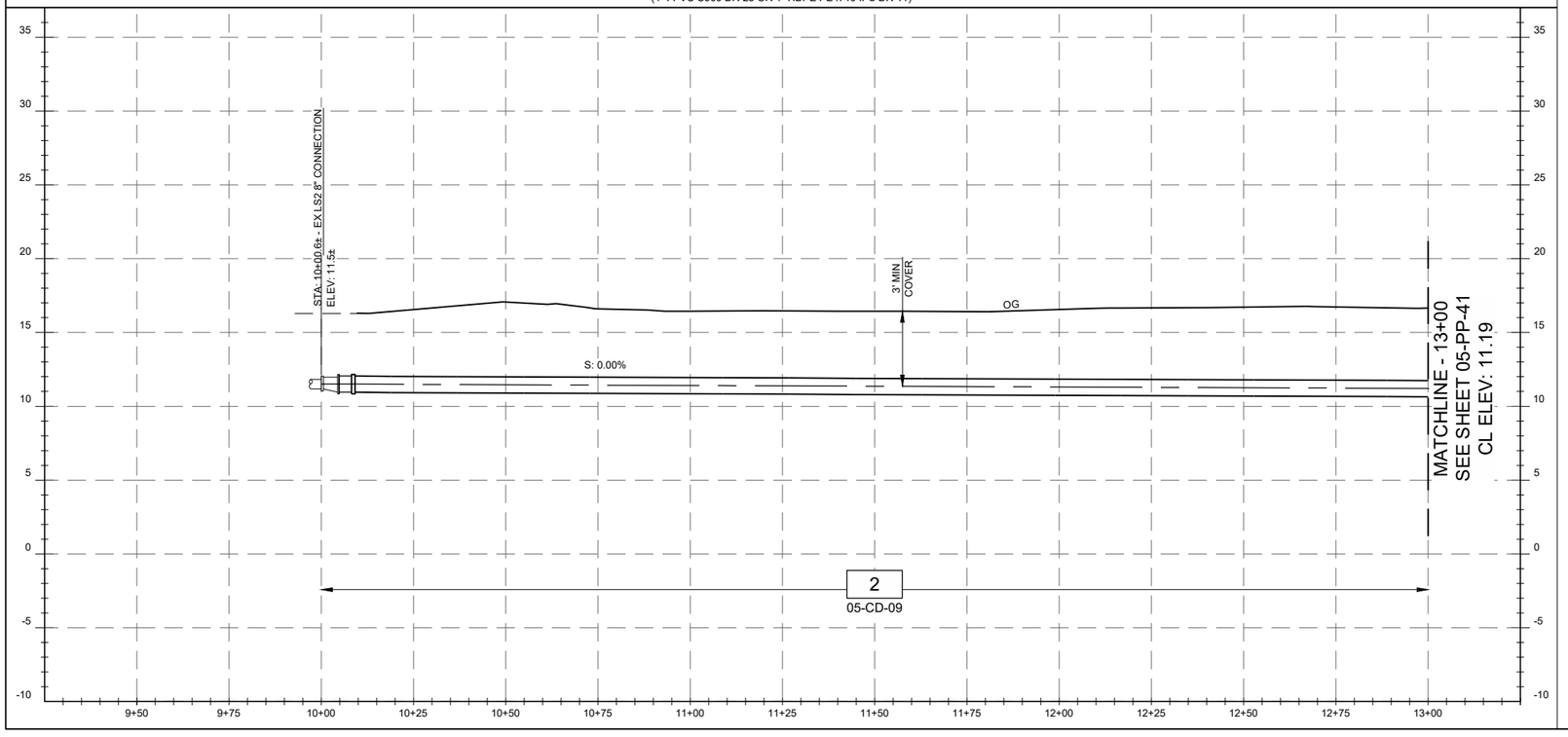
JOB NUMBER: 17-082 FILENAME: 1782D-05PP139.DWG PLOT DATE: 02/8/20 PLOT TIME: 15:52:23



1 CONNECTION DETAIL

\- 1" = 2'

LS2 (12" C900 DR25 FPVC OR 14" DR-21 PE4710 HDPE & FO (4" FPVC C900 DR-25 OR 4" HDPE PE4710 IPS DR-11)



2 05-CD-09

NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
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3. CONTRACTOR SHALL PREPARE, SUBMIT FOR REVIEW, AND IMPLEMENT A SITE SECURITY PLAN WHEREBY THE VISTRA PRIVATE PROPERTY SHALL BE SECURED AT ALL TIMES VIA TEMPORARY FENCING AT THE LIMITS OF THE TEMPORARY CONSTRUCTION EASEMENT.
4. CONTRACTOR SHALL EXPOSE, SURVEY, AND VERIFY CONNECTION LOCATION AT LS-2 PRIOR TO INSTALLING LS2 SSFM. CONTRACTOR SHALL EXERCISE CAUTION AND UTILIZE HAND EXCAVATON NEAR EX FACILITIES IN LS-2 YARD WHEN LAYING FO.

CONSTRUCTION KEY NOTES:

1. NSTALL LS2 SSFM, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF LS2 UNLESS OTHERWISE NOTED. TRENCH DETAIL IS SPECIFICED UNDER PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) AND GROUND ROD (16410)
3. 3'LX5'WX4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2
4. INSTALL FO PER 1/05-CD-09. UTILIZE CLOSE PROXIMITY UTILITY CROSSING MITIGATION (2210) (2055) WHERE REQ'D. RESTORE PAVEMENT W/ 4" CONC.
5. REMOVE TREE
6. EX 8" ACP SSFM TO BE ABANDONED OR DEMOLISHED AS NEEDED.
7. TEMPORARILY STOW AND REUSE CHAIN LINK FENCE.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
LS-2 FORCE MAIN PLAN AND PROFILE
BEG TO STA 13+00

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-40
SHEET NUMBER	----

JOB NUMBER: 17-082 FILENAME: 1782D-05PP140.DWG PLOT DATE: 02/10/20 PLOT TIME: 15:49:04

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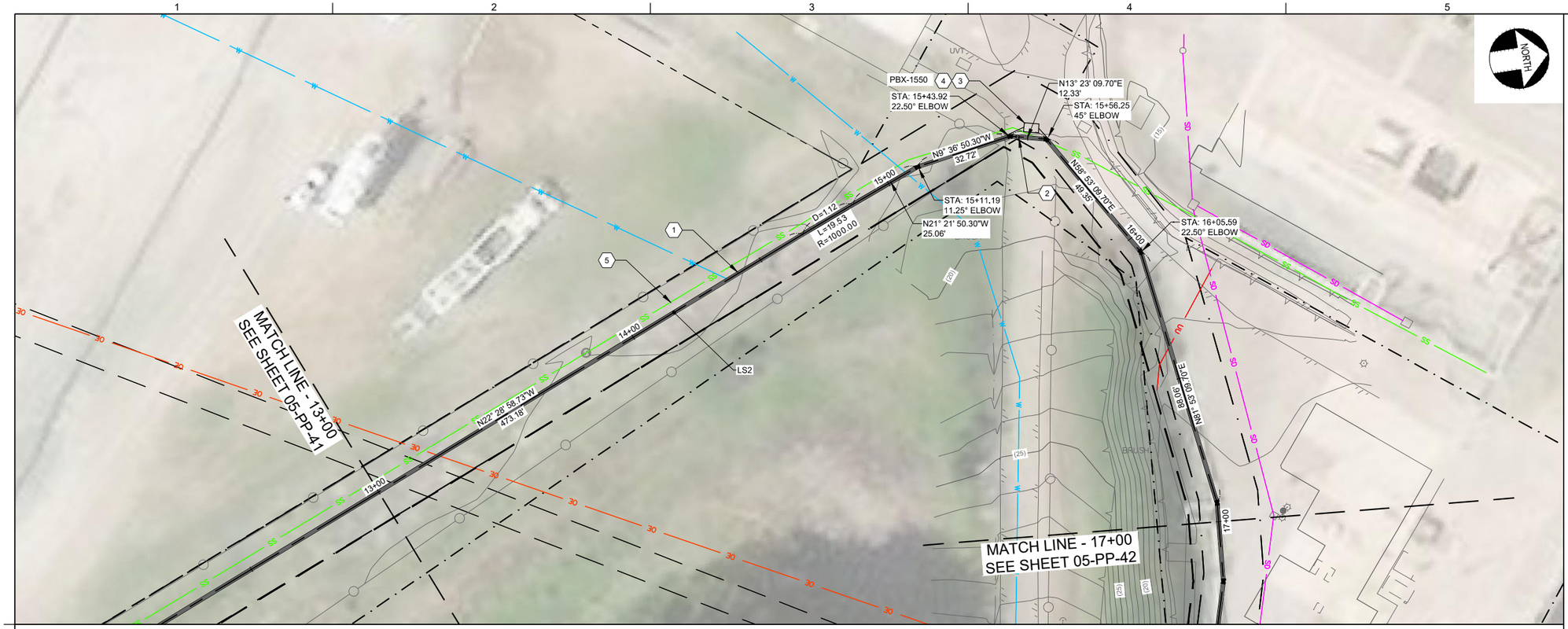

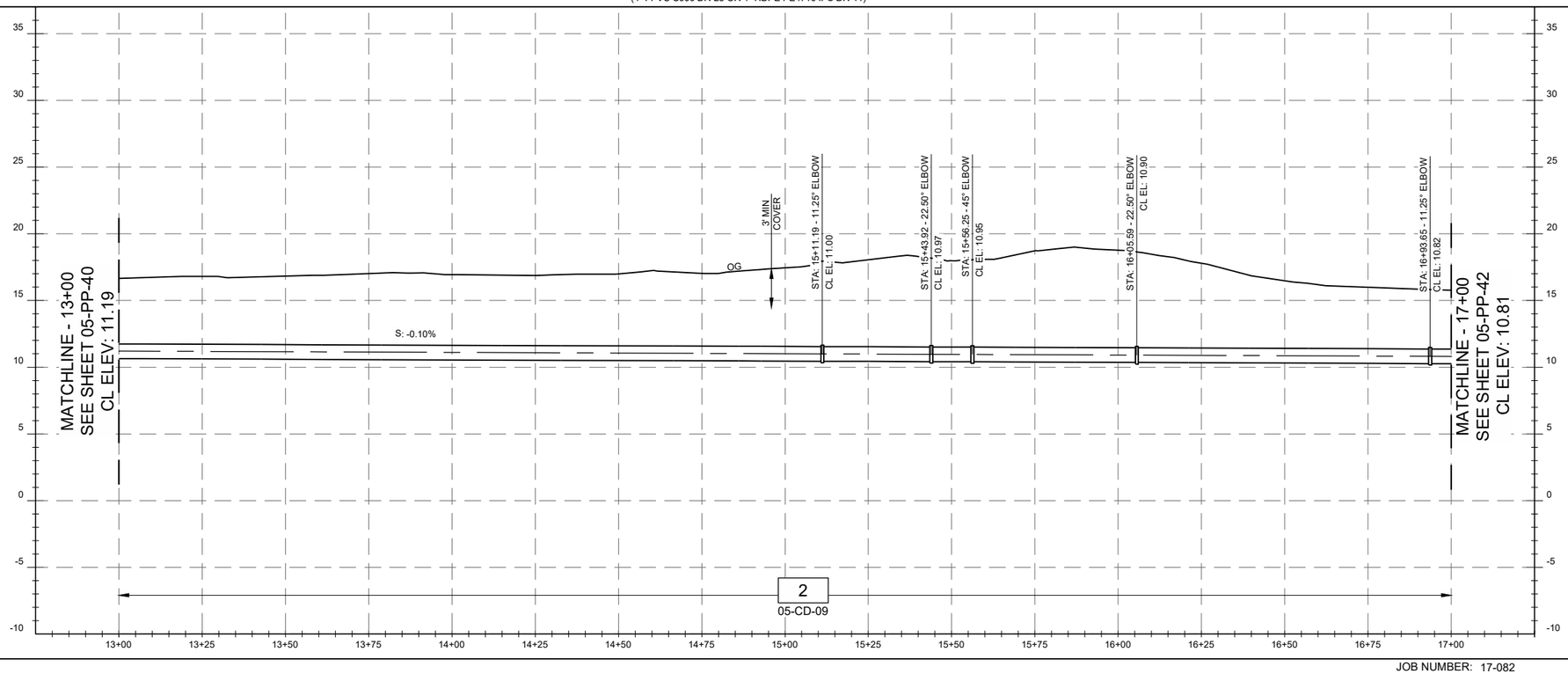

NOTES:

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4. CONTRACTOR SHALL EXPOSE, SURVEY, AND VERIFY CONNECTION LOCATION AT LS-2 PRIOR TO INSTALLING LS2 SSFM. CONTRACTOR SHALL EXERCISE CAUTION AND UTILIZE HAND EXCAVATON NEAR EX FACILITIES IN LS-2 YARD WHEN LAYING FO.
5. UNMARKED PRIVATE UTILITIES ARE LOCATED ON THE VISTRA PROPERTY AND MAY CROSS THE ALIGNMENT. THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER TO IDENTIFY THESE UTILITIES.

CONSTRUCTION KEY NOTES:

1. INSTALL LS2 SSFM, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF LS2 UNLESS OTHERWISE NOTED. TRENCH DETAIL IS SPECIFICED UNDER PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060)
3. 3'LX5'WX4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2
4. INSTALL FO PER 1/05-CD-09.
5. EX 8" ACP SSFM TO BE ABANDONED OR DEMOLISHED AS NEEDED.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

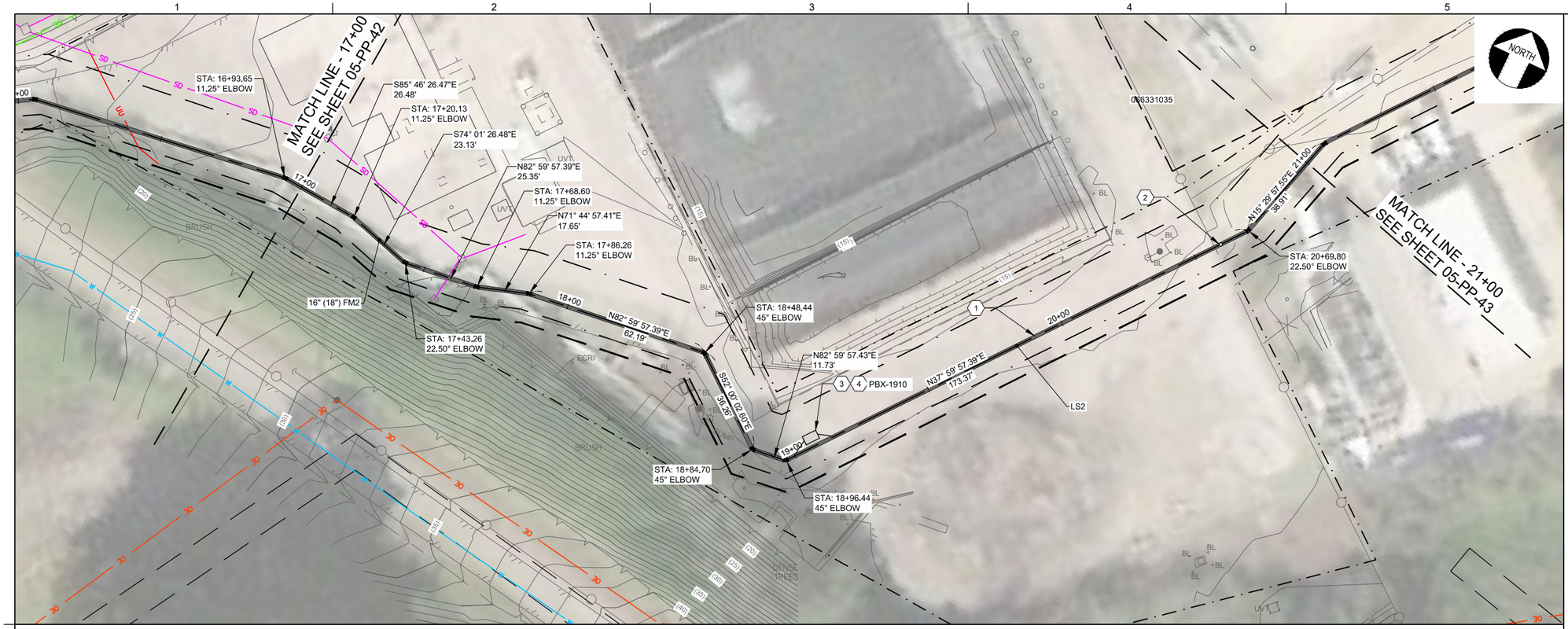
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
LS-2 FORCE MAIN PLAN AND PROFILE
STA 13+00 TO STA 17+00

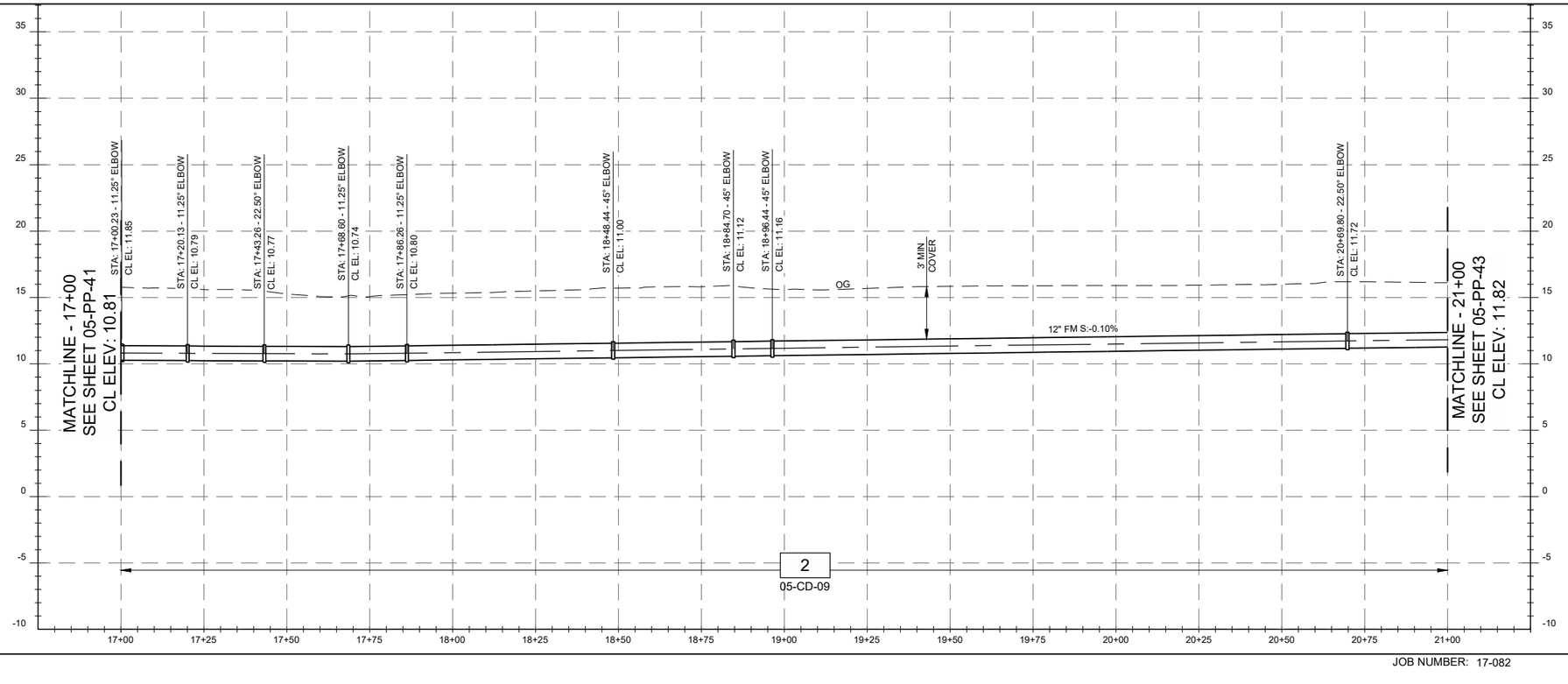
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-41
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP141.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP141.DWG PLOT DATE: 02/10/20 PLOT TIME: 12:46:36



LS2 (12" C900 DR25 FPVC OR 14" DR-21 PE4710 HDPE & FO
(4" FPVC C900 DR-25 OR 4" HDPE PE4710 IPS DR-11)



NOTES:

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2. INSTALL TRACER WIRE TERMINAL (2060)
3. 3'LX5'WX4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2
4. INSTALL FO PER 1/05-CD-09.

20 0 20 40 FEET
HORIZ SCALE 1"=20'
5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

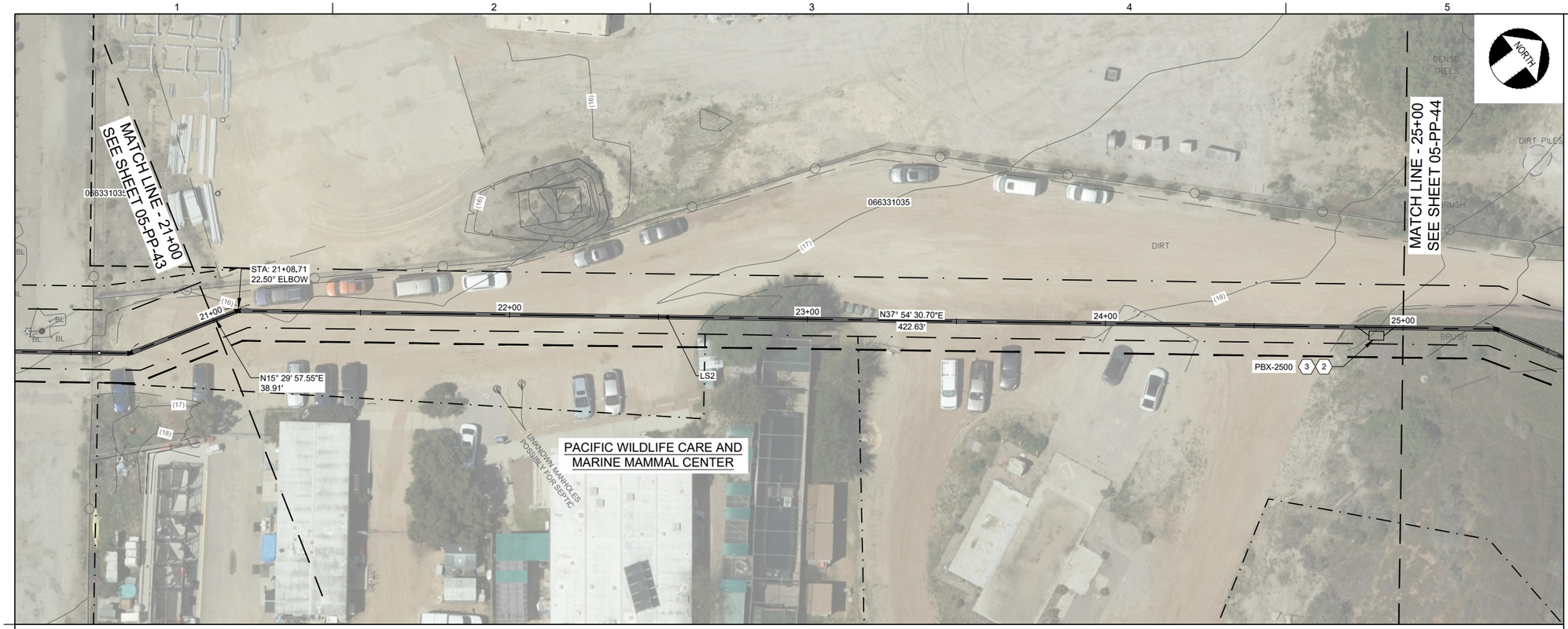
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
LS-2 FORCE MAIN PLAN AND PROFILE
STA 17+00 TO STA 21+00

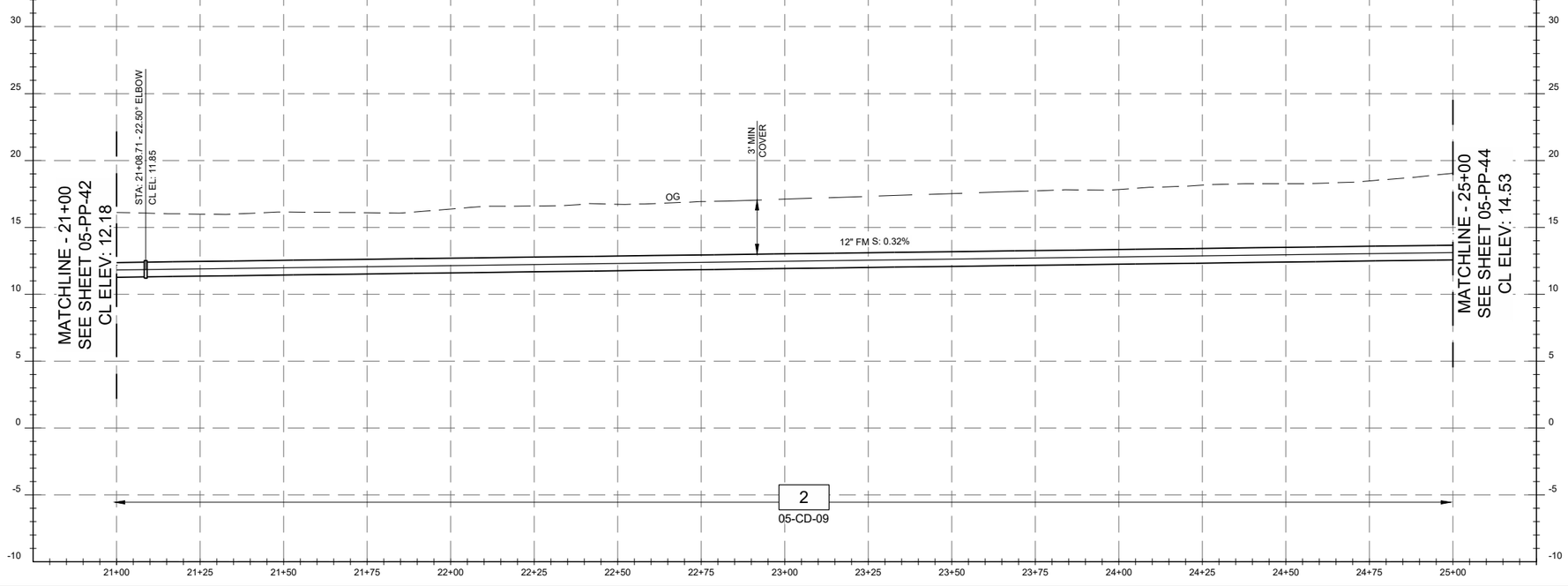
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-42
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP142.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP142.DWG PLOT DATE: 02/10/20 PLOT TIME: 12:58:46



LS2 (12" C900 DR25 FPVC OR 14" DR-21 PE4710 HDPE & FO
(4" FPVC C900 DR-25 OR 4" HDPE PE4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. CONTRACTOR SHALL PREPARE, SUBMIT FOR REVIEW, AND IMPLEMENT A SITE SECURITY PLAN WHEREBY THE VISTRA PRIVATE PROPERTY SHALL BE SECURED AT ALL TIMES VIA TEMPORARY FENCING AT THE LIMITS OF THE TEMPORARY CONSTRUCTION EASEMENT.
4. CONTRACTOR SHALL EXPOSE, SURVEY, AND VERIFY CONNECTION LOCATION AT LS-2 PRIOR TO INSTALLING LS2 SSFM. CONTRACTOR SHALL EXERCISE CAUTION AND UTILIZE HAND EXCAVATON NEAR EX FACILITIES IN LS-2 YARD WHEN LAYING FO.
5. UNMARKED PRIVATE UTILITIES ARE LOCATED ON THE VISTRA PROPERTY AND MAY CROSS THE ALIGNMENT. THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER TO IDENTIFY THESE UTILITIES.

CONSTRUCTION KEY NOTES:

1. INSTALL LS2 SSFM, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF LS2 UNLESS OTHERWISE NOTED. TRENCH DETAIL IS SPECIFICED UNDER PROFILE.
2. 3'LX5'WX4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2
3. INSTALL FO PER 1/05-CD-09.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

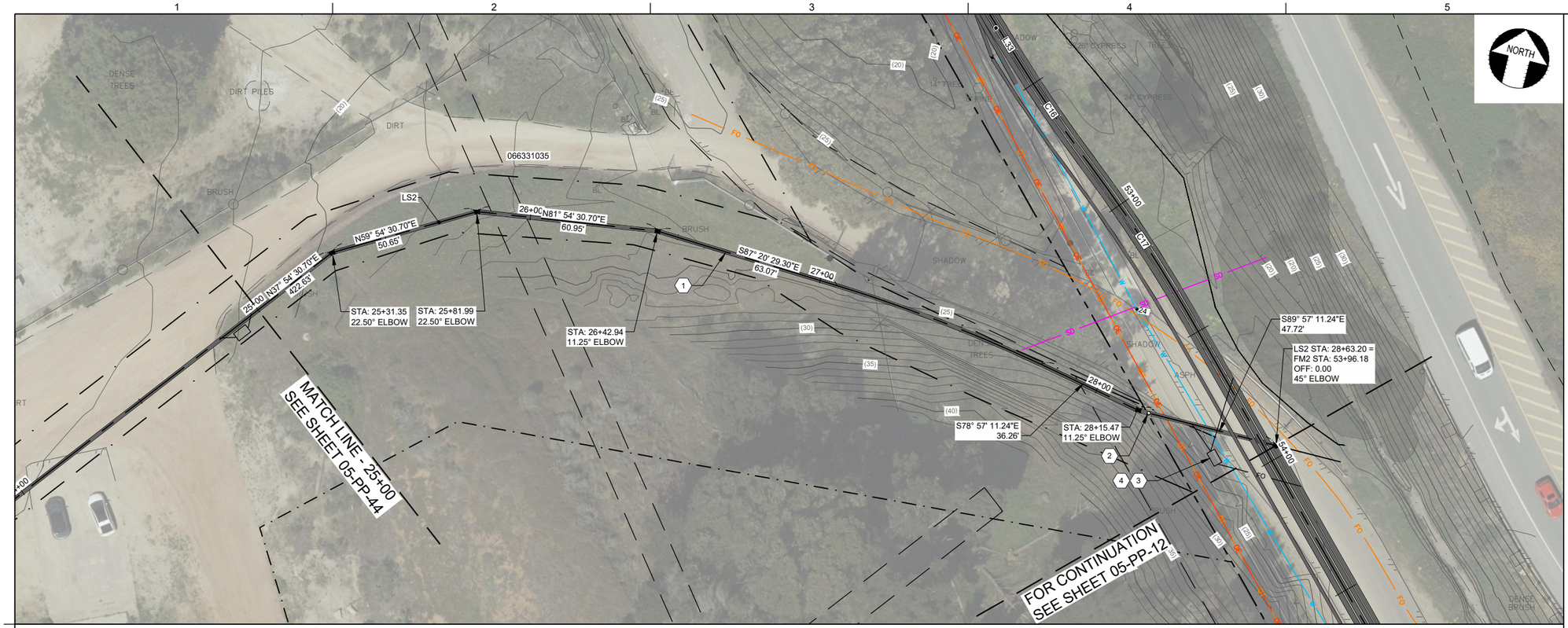
DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

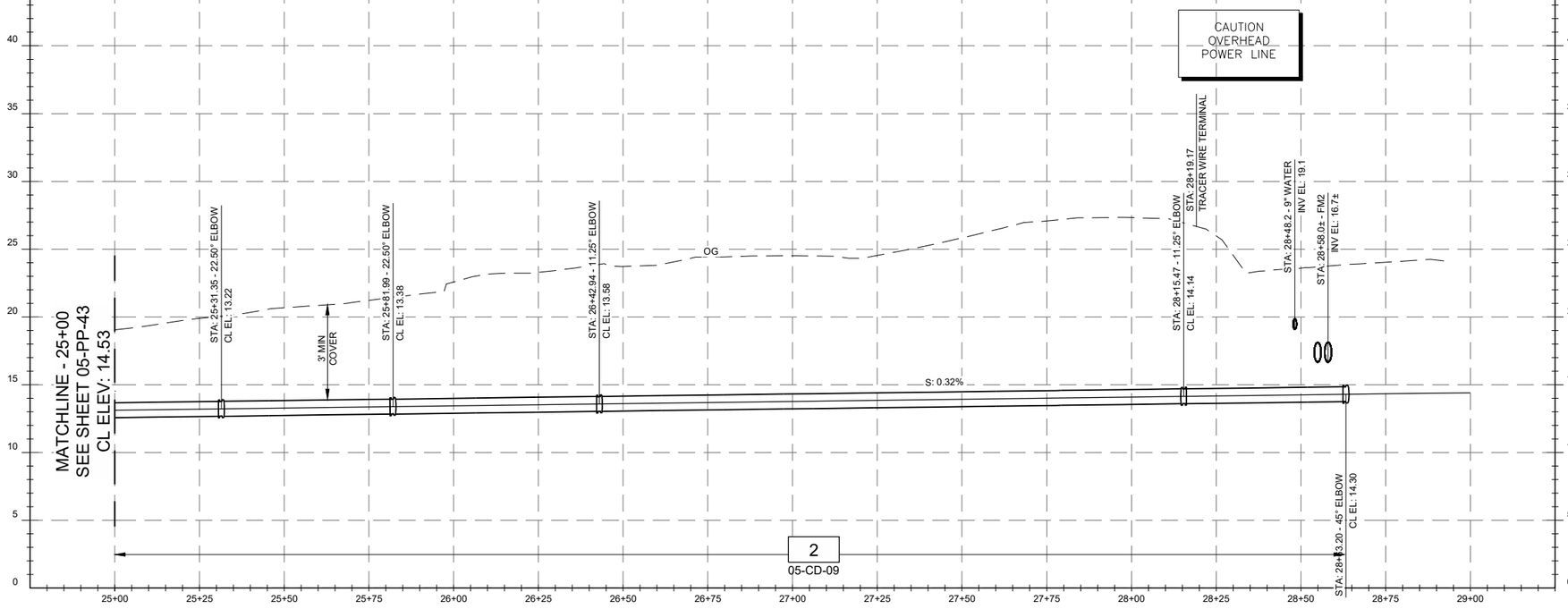
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
LS-2 FORCE MAIN PLAN AND PROFILE
STA 21+00 TO STA 25+00

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-43
SHEET NUMBER	----



LS2 (12" C900 DR25 FPVC OR 14" DR-21 PE4710 HDPE & FO
(4" FPVC C900 DR-25 OR 4" HDPE PE4710 IPS DR-11)



NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL NOTES, CONSTRUCTION WORK PLANS, REGULATORY PERMITS, AND ENVIRONMENTAL MITIGATION MEASURES LISTED ON DWG G-16 & G-17.
2. HORIZONTAL ALIGNMENT AND PROFILE VERTICAL CURVES HEREIN ARE DESIGNED WITH THE MIN BENDING RADIUS OF THE LARGEST PIPELINE ASSUMING FPVC IS SELECTED. SMALLER BEND RADII MAY BE FEASIBLE DEPENDING ON THE PIPELINE MATERIAL AND LOCATION. THE CONTRACTOR MAY SUBMIT FOR APPROVAL MINOR HORIZONTAL ALIGNMENT CHANGES AND PROFILE VERTICAL CHANGES SO AS IT REDUCES FIELD CONFLICTS, REDUCES FITTINGS WHERE POSSIBLE, IS NOT ZERO SLOPED, AND DOES NOT RESULT IN A HIGH-SPOT.
3. CONTRACTOR SHALL PREPARE, SUBMIT FOR REVIEW, AND IMPLEMENT A SITE SECURITY PLAN WHEREBY THE VISTRA PRIVATE PROPERTY SHALL BE SECURED AT ALL TIMES VIA TEMPORARY FENCING AT THE LIMITS OF THE TEMPORARY CONSTRUCTION EASEMENT.
4. CONTRACTOR SHALL EXPOSE, SURVEY, AND VERIFY CONNECTION LOCATION AT LS-2 PRIOR TO INSTALLING LS2 SSFM. CONTRACTOR SHALL EXERCISE CAUTION AND UTILIZE HAND EXCAVATON NEAR EX FACILITIES IN LS-2 YARD WHEN LAYING FO.
5. UNMARKED PRIVATE UTILITIES ARE LOCATED ON THE VISTRA PROPERTY AND MAY CROSS THE ALIGNMENT. THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER TO IDENTIFY THESE UTILITIES.

CONSTRUCTION KEY NOTES:

1. NSTALL LS2 SSFM, VALVES, AND APPURTENANCES PER HORIZONTAL PLAN AND VERTICAL PROFILE. ALIGNMENT IS CL OF LS2 UNLESS OTHERWISE NOTED. TRENCH DETAIL IS SPECIFICED UNDER PROFILE.
2. INSTALL TRACER WIRE TERMINAL (2060) AND GROUND ROD (16410)
3. 3'LX5'WX4'V TRAFFIC RATED FO UPB PER DWG UPB/E-2
4. INSTALL FO PER 1/05-CD-09.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

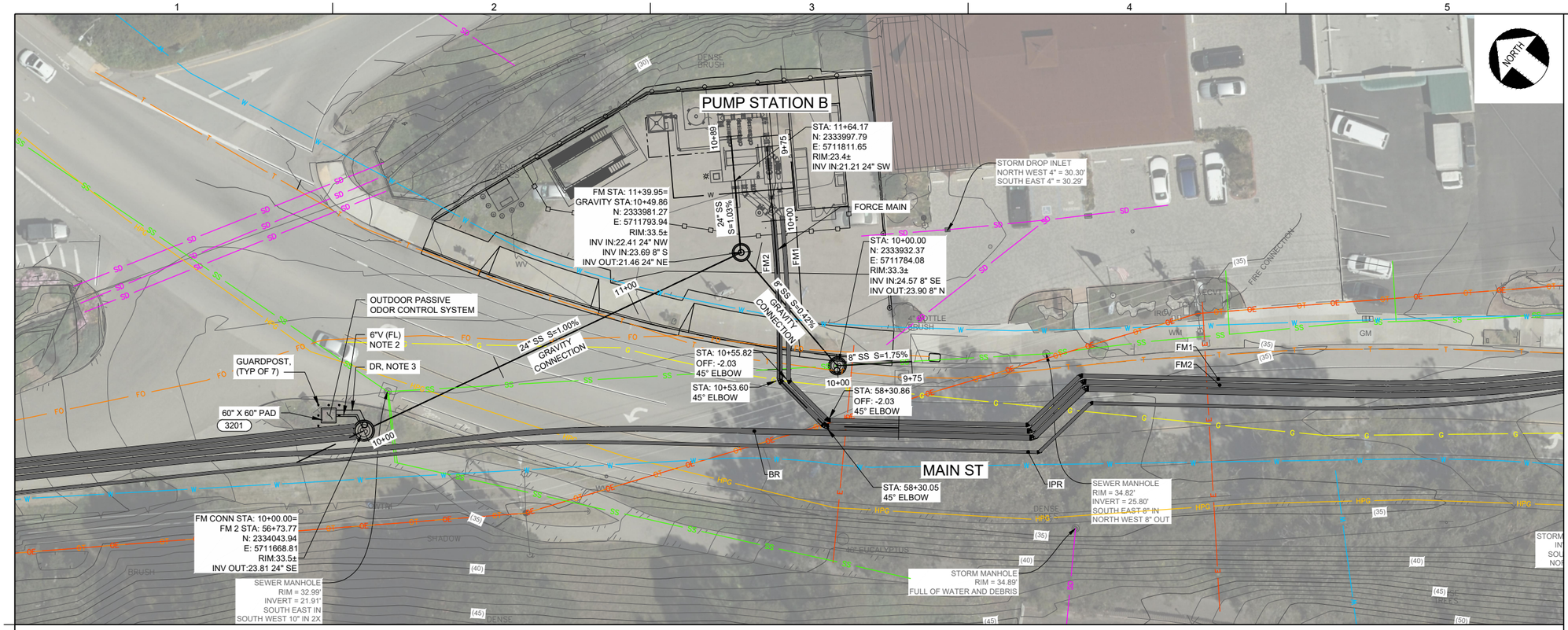
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
LS-2 FORCE MAIN PLAN AND PROFILE
STA 25+00 TO END

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-44
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP144.DWG

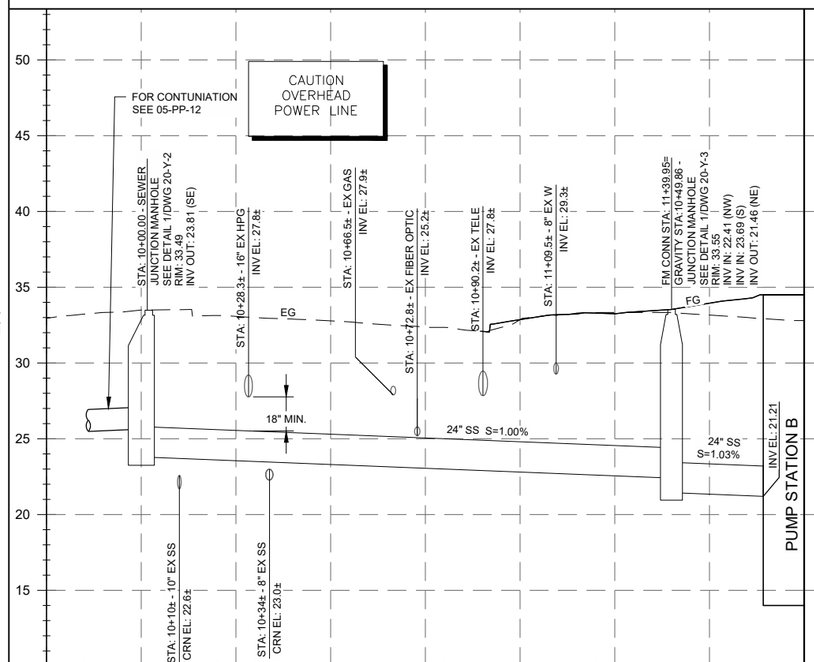
JOB NUMBER: 17-082 FILENAME: 1782D-05PP144.DWG PLOT DATE: 02/10/20 PLOT TIME: 15:43:01



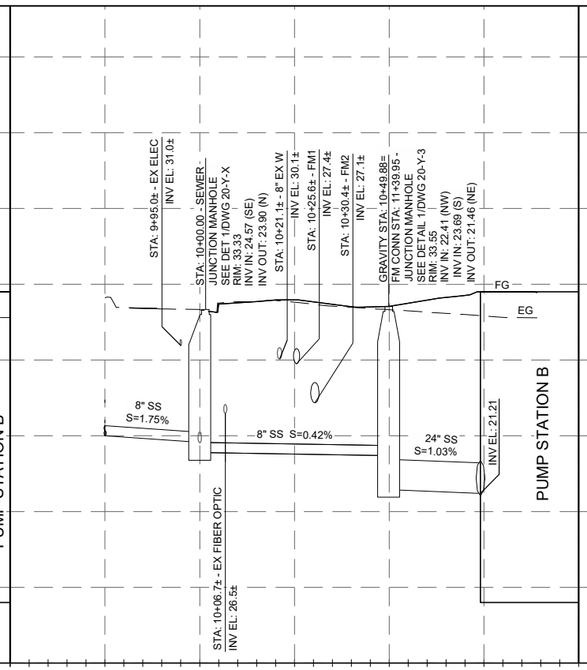
NOTES:

1. SEE DWG 20-Y-1 FOR PUMP STATION B YARD PIPING PLAN AND DETAILS.
2. CONTRACTOR TO CONNECT 6"V (FL) TO OUTDOOR PASSIVE ODOR CONTROL SYSTEM PER MANUFACTURER'S RECOMMENDATION.
3. CONTRACTOR TO INSTALL SMALL DIAMETER DRAIN FROM OUTDOOR PASSIVE ODOR CONTROL SYSTEM PER MANUFACTURER'S RECOMMENDATION.

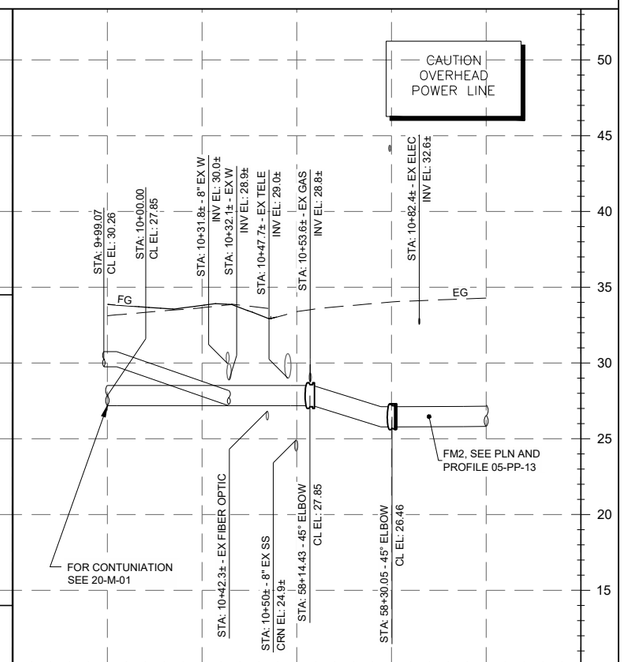
24" GRAVITY CONNECTION



8" GRAVITY CONNECTION



FORCE MAIN



20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

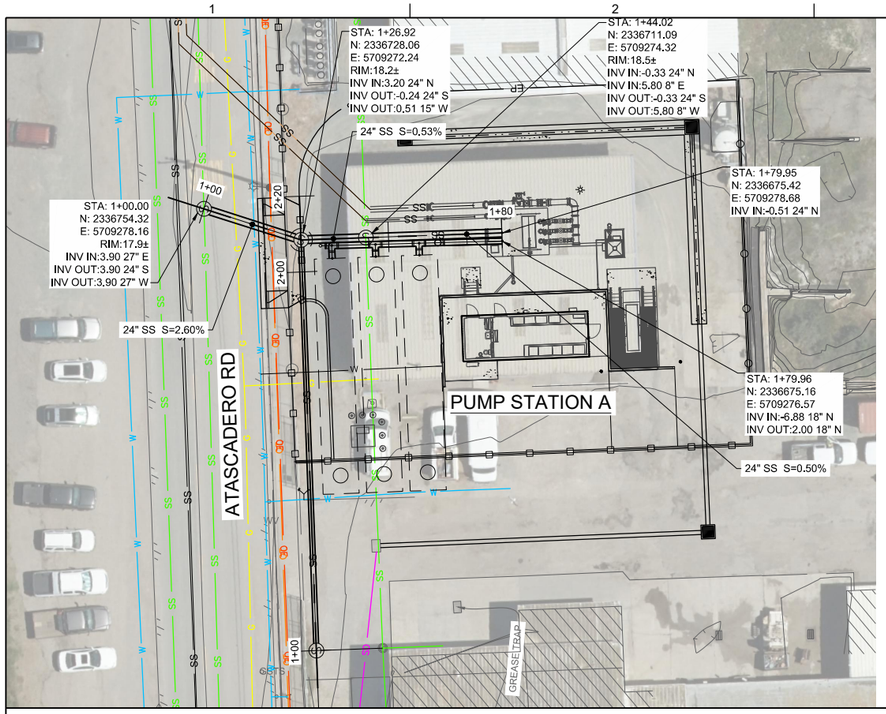
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

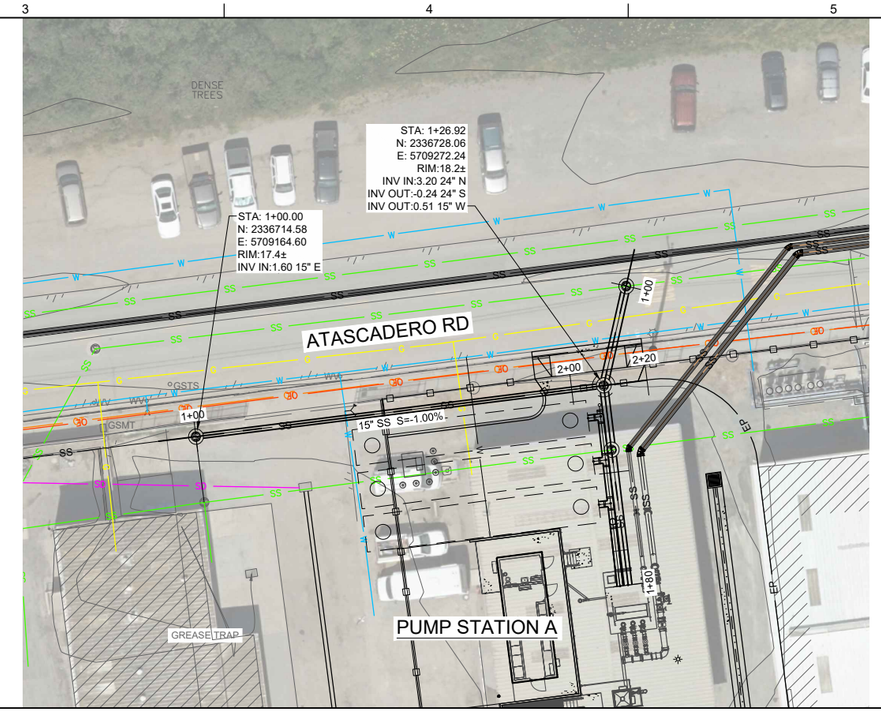
PLAN AND PROFILE
PS-B SANITARY SEWER

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-PP-45
SHEET NUMBER ----

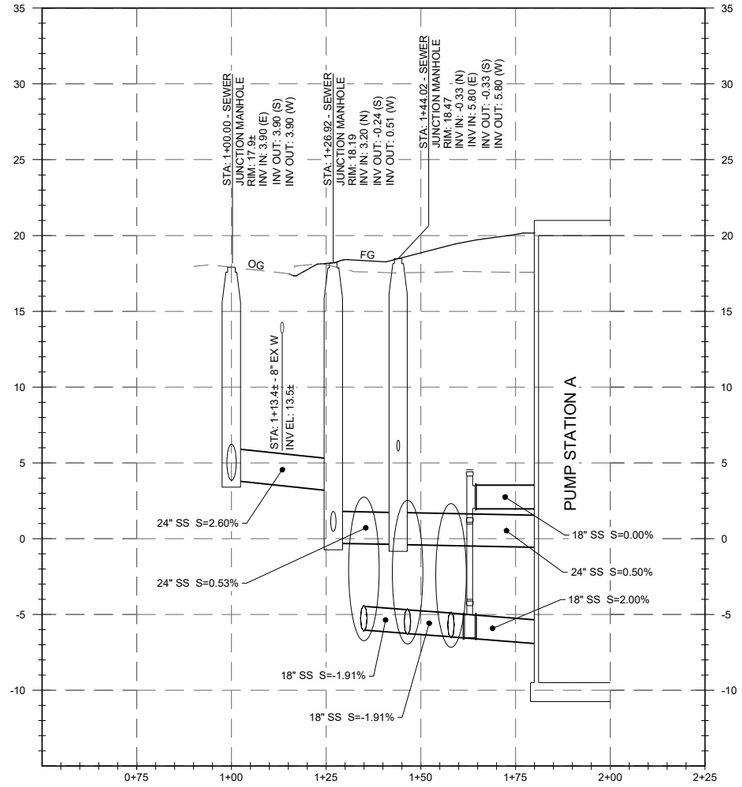
L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05PP145.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05PP145.DWG PLOT DATE: 02/9/20 PLOT TIME: 16:13:39

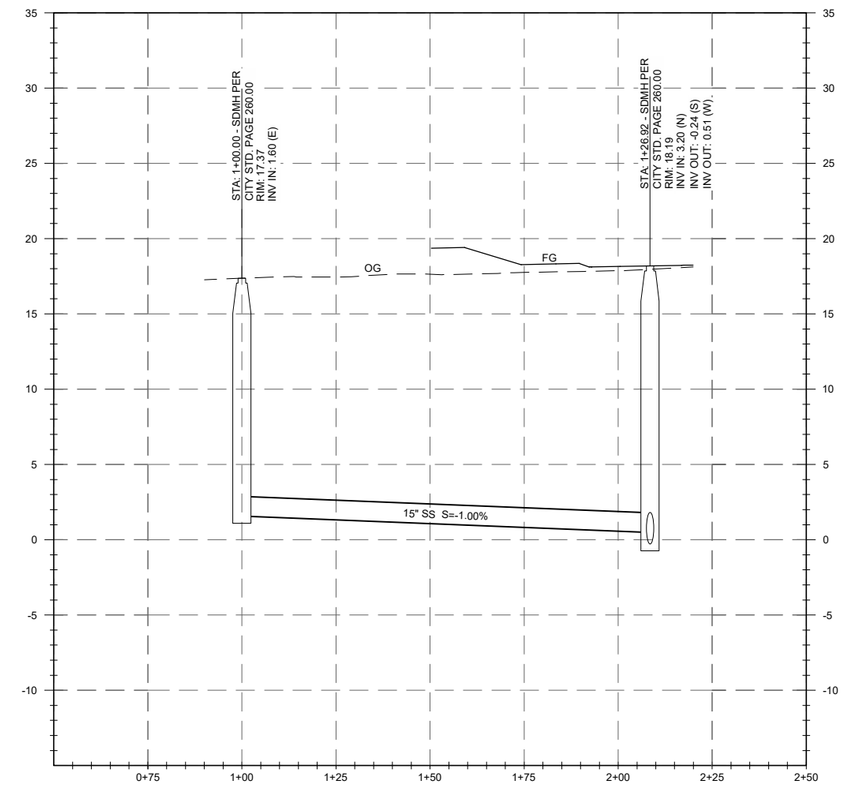




24" GRAVITY CONNECTION



15" GRAVITY CONNECTION



NOTES:

1. SEE DWG 10-Y-1 FOR PUMP STATION B YARD PIPING PLAN AND DETAILS.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

5 0 5 10 FEET
VERT SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

PLAN AND PROFILE
PS-A SANITARY SEWER

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-PP-46
SHEET NUMBER	----

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HORIZSCALE 1"=200'

200 0 200 400 FEET

PRELIMINARY - NOT FOR CONSTRUCTION

TRAFFIC CONTROL

PROJECT OVERVIEW AND KEY MAP 1

CITY OF MORRO BAY

WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-TC-1
SHEET NUMBER	---

JOB NUMBER: 17-082
FILENAME: 1782D-05TC100.DWG
PLOT DATE: 02/8/20
PLOT TIME: 11:38:02

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HORIZSCALE 1"=200'
200 0 200 400 FEET

PRELIMINARY - NOT FOR CONSTRUCTION

JOB NUMBER: 17-082
FILENAME: 1782D-05TC101.DWG
PLOT DATE: 02/8/20
PLOT TIME: 11:40:03

SHEET NUMBER	---
DRAWING NUMBER	05-TC-2
PROJECT NUMBER	17-082
DATE	FEBRUARY 2020

TRAFFIC CONTROL

PROJECT OVERVIEW AND KEY MAP 2

CITY OF MORRO BAY

WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

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HORIZSCALE 1"=200'
200 0 200 400 FEET

PRELIMINARY - NOT FOR CONSTRUCTION

JOB NUMBER: 17-082
FILENAME: 1782D-05TC102.DWG
PLOT DATE: 02/8/20
PLOT TIME: 11:41:11

SHEET NUMBER	---
DRAWING NUMBER	05-TC-3
PROJECT NUMBER	17-082
DATE	FEBRUARY 2020

TRAFFIC CONTROL

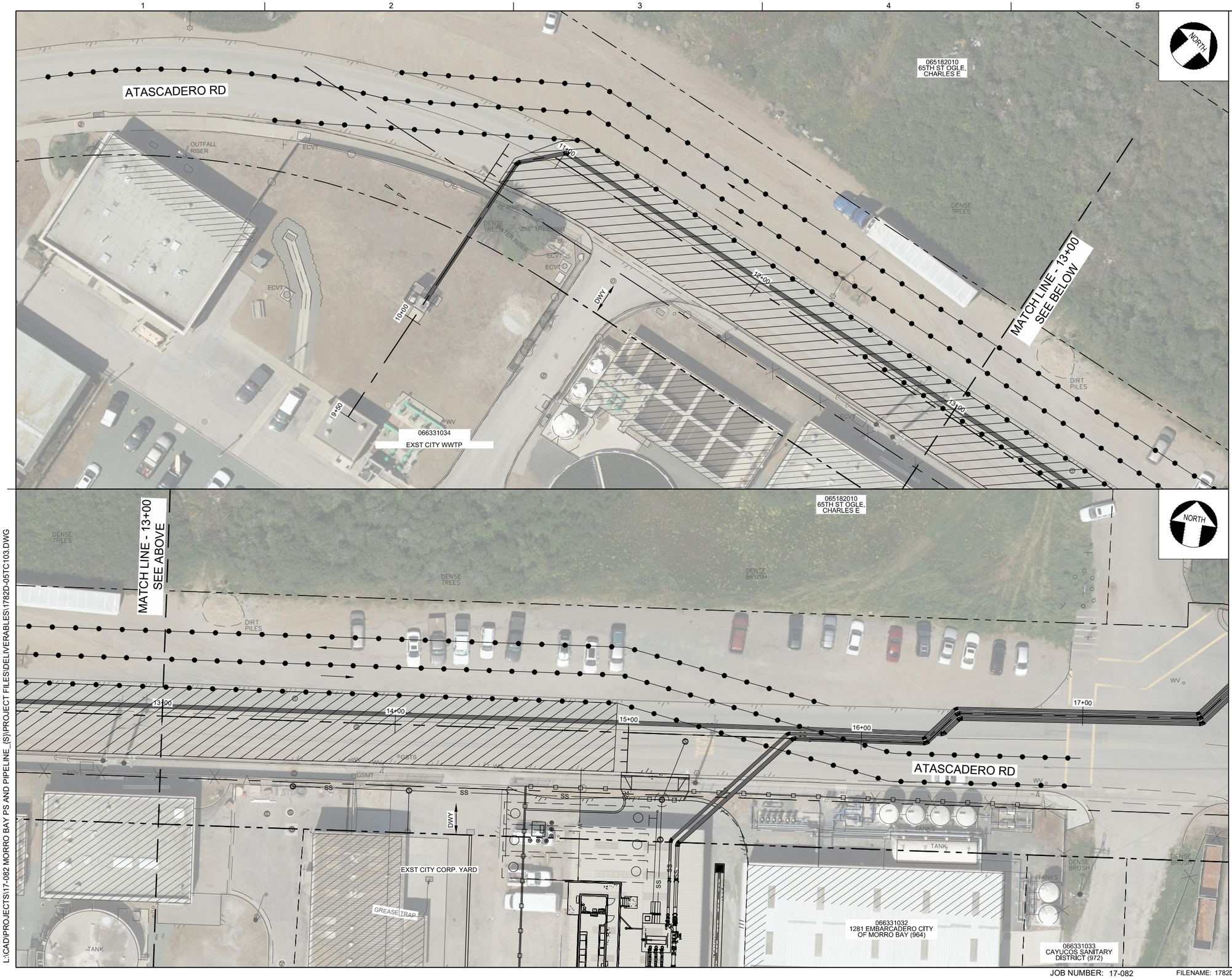
PROJECT OVERVIEW AND KEY MAP 3

CITY OF MORRO BAY

WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER



NOTES:

1. THESE DRAWINGS ARE INTENDED FOR PUBLIC OUTREACH OR COORDINATION EFFORTS. THE FOOTPRINT OF THE TRAFFIC CONTROL COMPONENTS AND WORK ZONES DELINEATED HEREIN ARE APPROXIMATE, MAY BE INCOMPLETE, AND MAY EXTEND OFF PAGE.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACQUIRE AND IMPLEMENT APPROVED ENCROACHMENT PERMITS (EP) AND TRAFFIC CONTROL PLANS (TCP) IN CITY AND STATE R/W THAT CONFORM WITH CA MUTCD 2014 ED STANDARDS AT A MINIMUM.
3. PROVIDE ACCESS AT ALL TIMES TO EMERGENCY SERVICES SUCH AS BUT NOT LIMITED TO PARAMEDICS, FIRE DEPARTMENT SERVICES, AND LAW ENFORCEMENT.
4. COORDINATE WITH RESIDENTS, BUSINESS OWNERS, AND PROPERTY OWNERS ALONG THE PROJECT CORRIDOR A MINIMUM OF 14 DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES VIA THE PROGRAM OUTREACH TEAM. ACCOMMODATE PUBLIC SERVICES SUCH AS GARBAGE DISPOSAL, MAIL/PARCEL DELIVERY, AND PUBLIC TRANSPORTATION IN COORDINATION WITH THE PROGRAM OUTREACH TEAM.
5. PROVIDE A MINIMUM OF ONE CONTINUOUS INGRESS/EGRESS TO ACCOMMODATE BUSINESS OPERATIONS. PROVIDE ALTERNATIVE MEANS OF INGRESS/EGRESS TO FACILITATE PROPERTY ACCESS IF A DRIVEWAY IS TEMPORARILY IMPEDED DURING CONSTRUCTION.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 1

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-4
SHEET NUMBER ----

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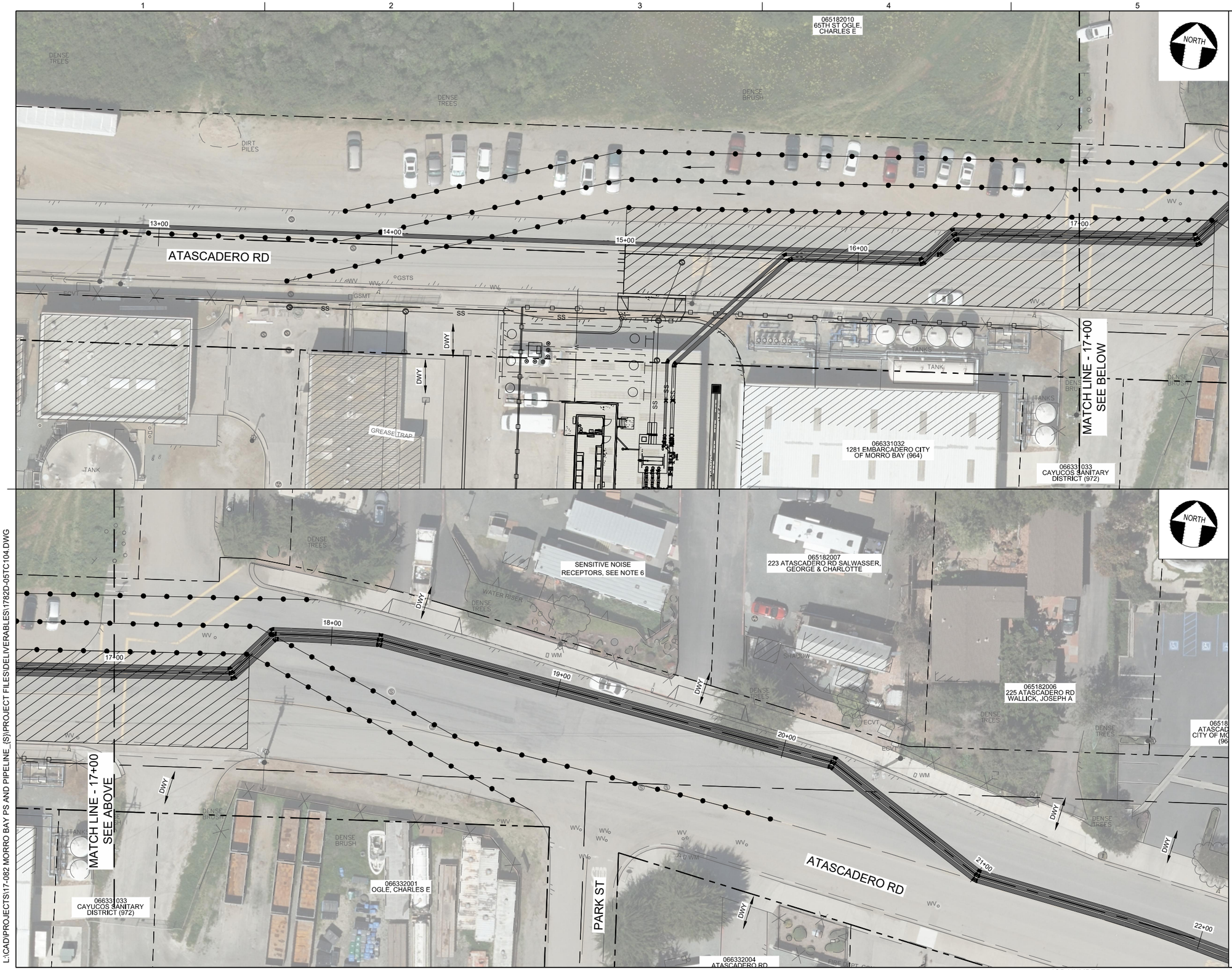
JOB NUMBER: 17-082 FILENAME: 1782D-05TC103.DWG PLOT DATE: 02/8/20 PLOT TIME: 11:45:59



NOTES:

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3. PROVIDE ACCESS AT ALL TIMES TO EMERGENCY SERVICES SUCH AS BUT NOT LIMITED TO PARAMEDICS, FIRE DEPARTMENT SERVICES, AND LAW ENFORCEMENT.
4. COORDINATE WITH RESIDENTS, BUSINESS OWNERS, AND PROPERTY OWNERS ALONG THE PROJECT CORRIDOR A MINIMUM OF 14 DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES VIA THE PROGRAM OUTREACH TEAM. ACCOMMODATE PUBLIC SERVICES SUCH AS GARBAGE DISPOSAL, MAIL/PARCEL DELIVERY, AND PUBLIC TRANSPORTATION IN COORDINATION WITH THE PROGRAM OUTREACH TEAM.
5. PROVIDE A MINIMUM OF ONE CONTINUOUS INGRESS/EGRESS TO ACCOMMODATE BUSINESS OPERATIONS. PROVIDE ALTERNATIVE MEANS OF INGRESS/EGRESS TO FACILITATE PROPERTY ACCESS IF A DRIVEWAY IS TEMPORARILY IMPEDED DURING CONSTRUCTION.
6. SENSITIVE NOISE RECEPTORS SUCH AS MOBILE HOMES, PERMANENT RESIDENCES, HOTELS, AND PLACES OF WORSHIP MAY BE PRESENT ALONG THE WORK CORRIDOR. THE CONTRACTOR SHALL COORDINATE WITH THE PROGRAM TEAM AND IMPLEMENT CONSTRUCTION NOISE REDUCTION MEASURES/PLAN. CONSTRUCTION WORK WITHIN A CERTAIN MINIMUM DISTANCE FROM SENSITIVE NOISE RECEPTORS MAY BE RESTRICTED DURING OFF-WORK-HOURS.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

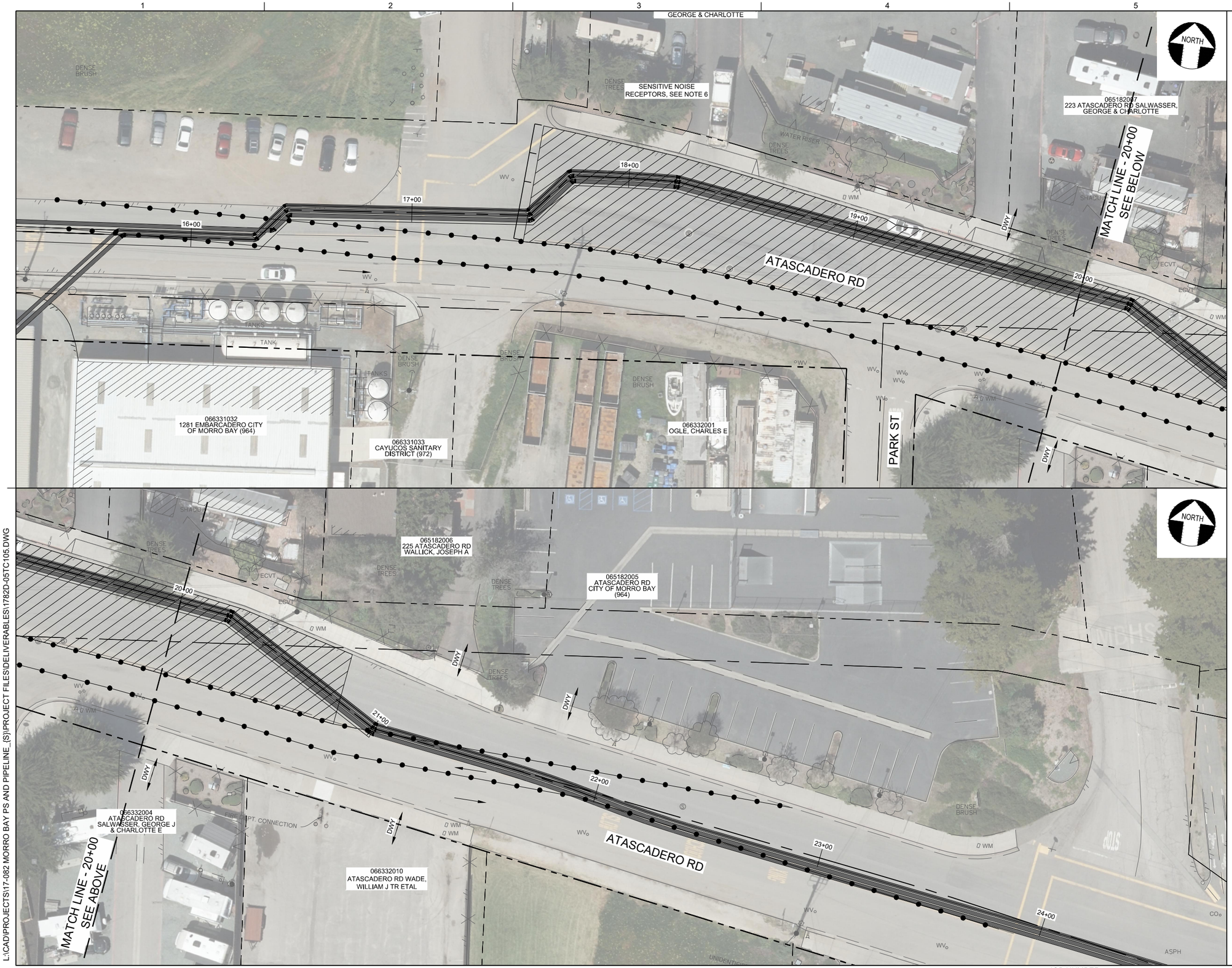
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 2

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-5
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC104.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC104.DWG PLOT DATE: 02/8/20 PLOT TIME: 11:48:39



NOTES:

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2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACQUIRE AND IMPLEMENT APPROVED ENCROACHMENT PERMITS (EP) AND TRAFFIC CONTROL PLANS (TCP) IN CITY AND STATE R/W THAT CONFORM WITH CA MUTCD 2014 ED STANDARDS AT A MINIMUM.
3. PROVIDE ACCESS AT ALL TIMES TO EMERGENCY SERVICES SUCH AS BUT NOT LIMITED TO PARAMEDICS, FIRE DEPARTMENT SERVICES, AND LAW ENFORCEMENT.
4. COORDINATE WITH RESIDENTS, BUSINESS OWNERS, AND PROPERTY OWNERS ALONG THE PROJECT CORRIDOR A MINIMUM OF 14 DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES VIA THE PROGRAM OUTREACH TEAM. ACCOMMODATE PUBLIC SERVICES SUCH AS GARBAGE DISPOSAL, MAIL/PARCEL DELIVERY, AND PUBLIC TRANSPORTATION IN COORDINATION WITH THE PROGRAM OUTREACH TEAM.
5. PROVIDE A MINIMUM OF ONE CONTINUOUS INGRESS/EGRESS TO ACCOMMODATE BUSINESS OPERATIONS. PROVIDE ALTERNATIVE MEANS OF INGRESS/EGRESS TO FACILITATE PROPERTY ACCESS IF A DRIVEWAY IS TEMPORARILY IMPEDED DURING CONSTRUCTION.
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LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

PRELIMINARY - NOT FOR CONSTRUCTION

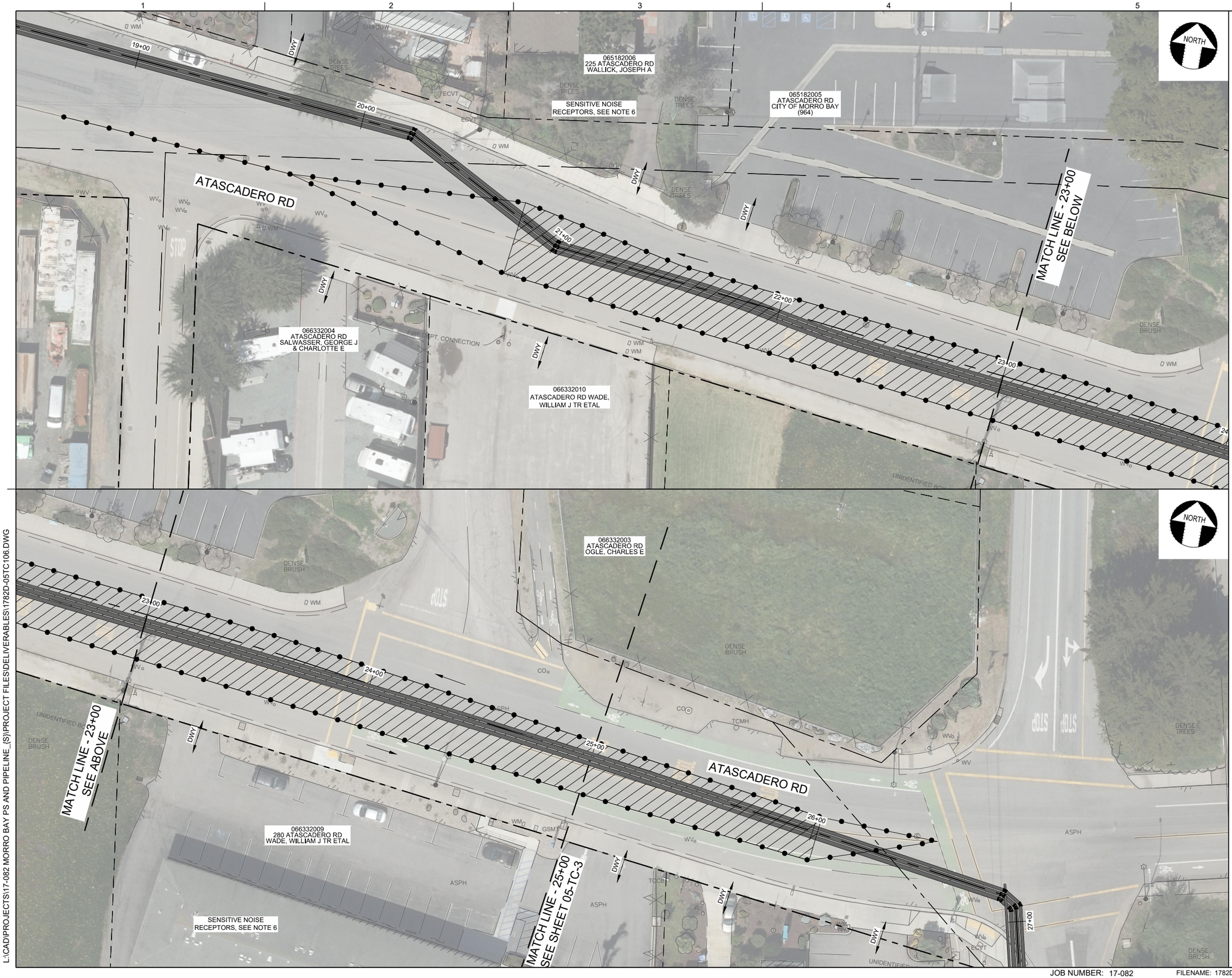
DESIGN	DESIGNER
DRAWN	DRAFTER
CHECKED	CHECKER
APPROVED	ENGINEER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 3

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-TC-6
SHEET NUMBER	----



NOTES:

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3. PROVIDE ACCESS AT ALL TIMES TO EMERGENCY SERVICES SUCH AS BUT NOT LIMITED TO PARAMEDICS, FIRE DEPARTMENT SERVICES, AND LAW ENFORCEMENT.
4. COORDINATE WITH RESIDENTS, BUSINESS OWNERS, AND PROPERTY OWNERS ALONG THE PROJECT CORRIDOR A MINIMUM OF 14 DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES VIA THE PROGRAM OUTREACH TEAM. ACCOMMODATE PUBLIC SERVICES SUCH AS GARBAGE DISPOSAL, MAIL/PARCEL DELIVERY, AND PUBLIC TRANSPORTATION IN COORDINATION WITH THE PROGRAM OUTREACH TEAM.
5. PROVIDE A MINIMUM OF ONE CONTINUOUS INGRESS/EGRESS TO ACCOMMODATE BUSINESS OPERATIONS. PROVIDE ALTERNATIVE MEANS OF INGRESS/EGRESS TO FACILITATE PROPERTY ACCESS IF A DRIVEWAY IS TEMPORARILY IMPEDED DURING CONSTRUCTION.
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LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

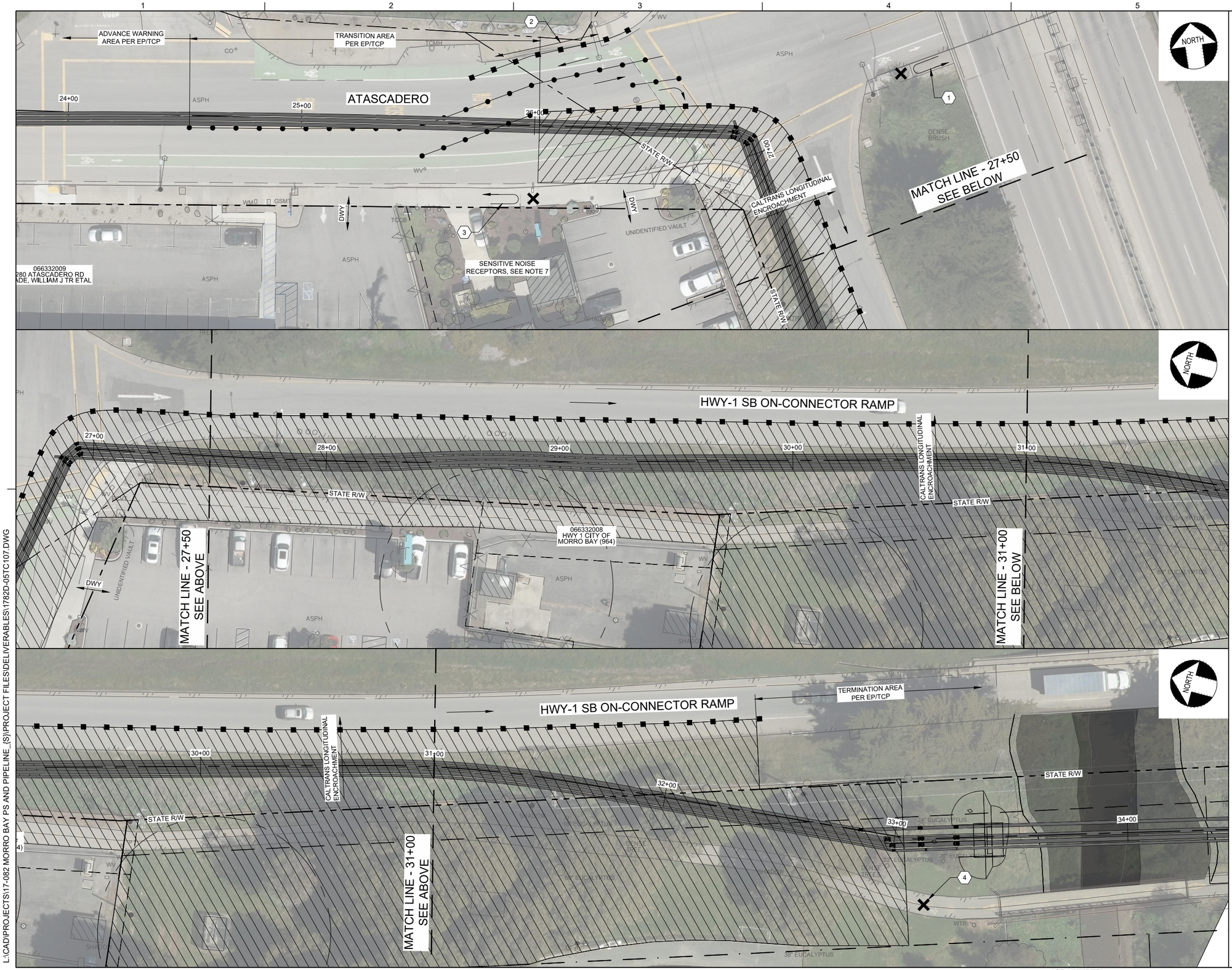
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 4

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-7
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC106.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC106.DWG PLOT DATE: 02/8/20 PLOT TIME: 11:56:44



NOTES:

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4. PROVIDE ACCESS AT ALL TIMES TO EMERGENCY SERVICES SUCH AS BUT NOT LIMITED TO PARAMEDICS, FIRE DEPARTMENT SERVICES, AND LAW ENFORCEMENT.
5. COORDINATE WITH RESIDENTS, BUSINESS OWNERS, AND PROPERTY OWNERS ALONG THE PROJECT CORRIDOR A MINIMUM OF 14 DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES VIA THE PROGRAM OUTREACH TEAM. ACCOMMODATE PUBLIC SERVICES SUCH AS GARBAGE DISPOSAL, MAIL/PARCEL DELIVERY, AND PUBLIC TRANSPORTATION IN COORDINATION WITH THE PROGRAM OUTREACH TEAM.
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KEY NOTES:

1. PEDESTRIAN AND BICYCLE TRAFFIC TO BE DIVERTED AROUND WORK ZONE TO NORTH SIDE OF ATASCADERO PER CALTRANS EP/TCP.
2. ACCOMMODATE PEDESTRIANS AND BICYCLE TRAFFIC PER CA MUTCD 2014 ED SECTION 6D.01 AND INSTALL/MAINTAIN A 60"W SMOOTH, CONTINUOUS HARD SURFACE.
3. PEDESTRIAN AND BICYCLE TRAFFIC TO BE DIVERTED AROUND WORK ZONE TO NORTH SIDE OF ATASCADERO PER CITY EP/TCP.
4. 4. SHUT DOWN BIKE PATH AND INSTALL DIVERSION SIGNEAGE IN COORDINATION WITH PROGRAM OUTREACH TEAM.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

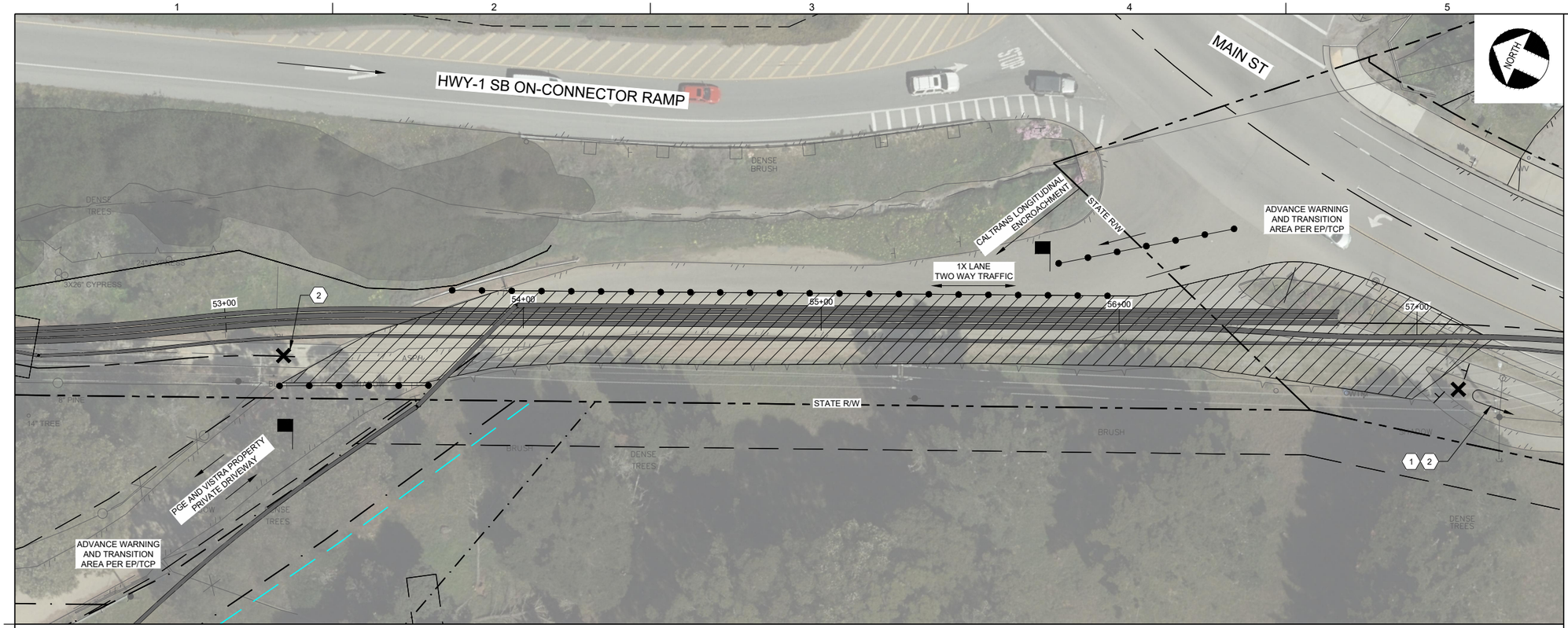
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 5

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-8
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC107.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC107.DWG PLOT DATE: 02/8/20 PLOT TIME: 11:59:03



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KEY NOTES:

1. PEDESTRIAN AND BICYCLE TRAFFIC TO BE DIVERTED AROUND WORK ZONE TO EAST SIDE OF MAIN ST PER EP/TCP.
2. SHUT DOWN BIKE PATH AND INSTALL DIVERSION SIGNEAGE IN COORDINATION WITH PROGRAM OUTREACH TEAM.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 6

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-9
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC108.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC108.DWG PLOT DATE: 02/8/20 PLOT TIME: 12:46:17

NOTES:

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LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	DESIGNER
DRAWN	DRAFTER
CHECKED	CHECKER
APPROVED	ENGINEER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 7

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-TC-10
SHEET NUMBER	----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC109.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC109.DWG PLOT DATE: 02/8/20 PLOT TIME: 13:31:13

NOTES:

1. THESE DRAWINGS ARE INTENDED FOR PUBLIC OUTREACH OR COORDINATION EFFORTS. THE FOOTPRINT OF THE TRAFFIC CONTROL COMPONENTS AND WORK ZONES DELINEATED HEREIN ARE APPROXIMATE, MAY BE INCOMPLETE, AND MAY EXTEND OFF PAGE.
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KEY NOTES:

1. CONTRACTOR TO DEVELOP QUINTANA PL ACCESS PLAN IN COORDINATION WITH PROGRAM OUTREACH TEAM.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 7

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-11
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC110.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC110.DWG PLOT DATE: 02/8/20 PLOT TIME: 12:43:28

NOTES:

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LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 8

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-12
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC111.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC111.DWG PLOT DATE: 02/10/20 PLOT TIME: 10:16:30

NOTES:

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KEY NOTES:

1. QUINTANA ROAD CLOSURE.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530•243•2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 9

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-13
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC112.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC112.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:06:32

NOTES:

1. THESE DRAWINGS ARE INTENDED FOR PUBLIC OUTREACH OR COORDINATION EFFORTS. THE FOOTPRINT OF THE TRAFFIC CONTROL COMPONENTS AND WORK ZONES DELINEATED HEREIN ARE APPROXIMATE, MAY BE INCOMPLETE, AND MAY EXTEND OFF PAGE.
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KEY NOTES:

1. QUINTANA ROAD CLOSURE.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530•243•2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 9

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-14
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC113.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC113.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:08:54

NOTES:

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KEY NOTES:

1. QUINTANA LANE CLOSURE.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

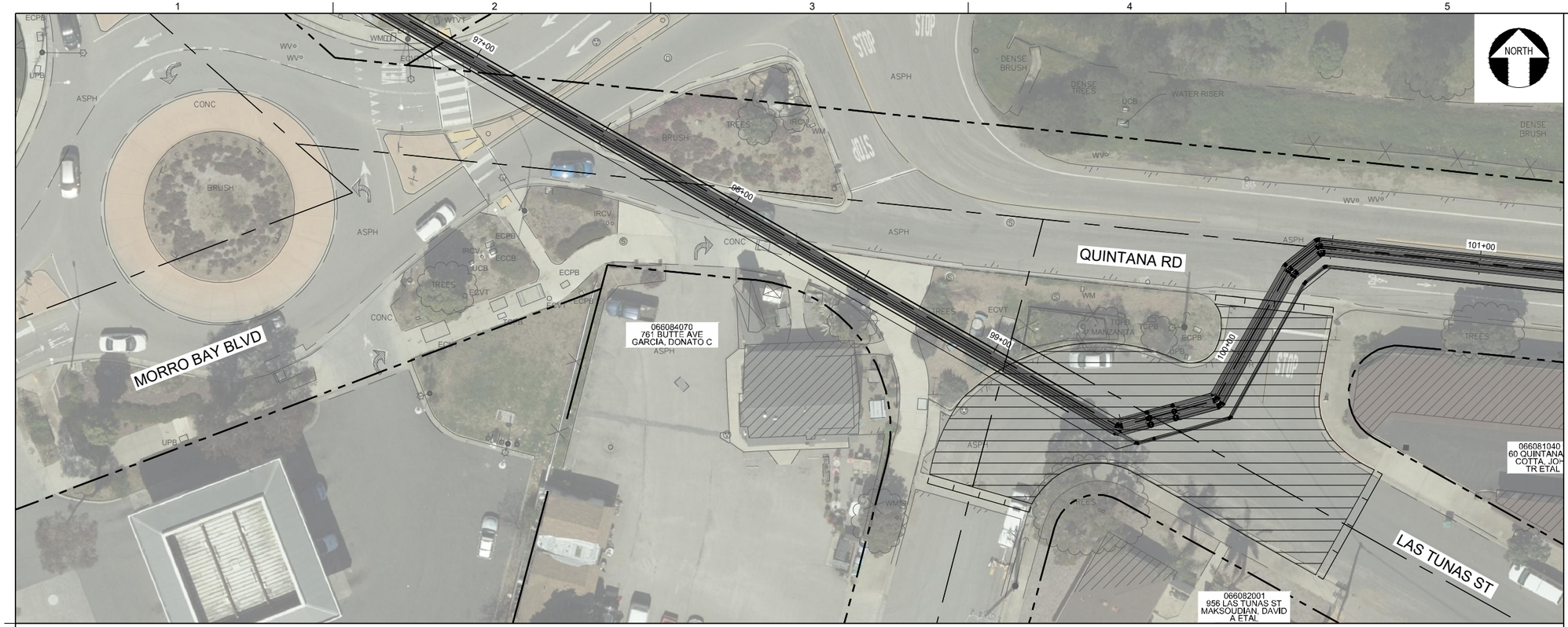
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 10

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-15
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC114.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC114.DWG PLOT DATE: 02/10/20 PLOT TIME: 09:50:38



NOTES:

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5. PROVIDE A MINIMUM OF ONE CONTINUOUS INGRESS/EGRESS TO ACCOMMODATE BUSINESS OPERATIONS. PROVIDE ALTERNATIVE MEANS OF INGRESS/EGRESS TO FACILITATE PROPERTY ACCESS IF A DRIVEWAY IS TEMPORARILY IMPEDED DURING CONSTRUCTION.
6. SENSITIVE NOISE RECEPTORS SUCH AS MOBILE HOMES, PERMANENT RESIDENCES, HOTELS, AND PLACES OF WORSHIP MAY BE PRESENT ALONG THE WORK CORRIDOR. THE CONTRACTOR SHALL COORDINATE WITH THE PROGRAM TEAM AND IMPLEMENT CONSTRUCTION NOISE REDUCTION MEASURES/PLAN. CONSTRUCTION WORK WITHIN A CERTAIN MINIMUM DISTANCE FROM SENSITIVE NOISE RECEPTORS MAY BE RESTRICTED DURING OFF-WORK-HOURS.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A ▪ Redding, CA 96003 ▪ 530-243-4113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE
PIPELINES

TRAFFIC CONTROL
STAGE 11

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
05-TC-16
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC115.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC115.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:10:17

NOTES:

1. THESE DRAWINGS ARE INTENDED FOR PUBLIC OUTREACH OR COORDINATION EFFORTS. THE FOOTPRINT OF THE TRAFFIC CONTROL COMPONENTS AND WORK ZONES DELINEATED HEREIN ARE APPROXIMATE, MAY BE INCOMPLETE, AND MAY EXTEND OFF PAGE.
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LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 12

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-17
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC116.DWG

25.1000

JOB NUMBER: 17-082 FILENAME: 1782D-05TC116.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:13:35

NOTES:

1. THESE DRAWINGS ARE INTENDED FOR PUBLIC OUTREACH OR COORDINATION EFFORTS. THE FOOTPRINT OF THE TRAFFIC CONTROL COMPONENTS AND WORK ZONES DELINEATED HEREIN ARE APPROXIMATE, MAY BE INCOMPLETE, AND MAY EXTEND OFF PAGE.
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LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	DESIGNER
DRAWN	DRAFTER
CHECKED	CHECKER
APPROVED	ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 12

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-TC-18
SHEET NUMBER	----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC117.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC117.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:41:17

NOTES:

1. THESE DRAWINGS ARE INTENDED FOR PUBLIC OUTREACH OR COORDINATION EFFORTS. THE FOOTPRINT OF THE TRAFFIC CONTROL COMPONENTS AND WORK ZONES DELINEATED HEREIN ARE APPROXIMATE, MAY BE INCOMPLETE, AND MAY EXTEND OFF PAGE.
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KEY NOTES:

1. QUINTANA ROAD CLOSURE.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	DESIGNER
DRAWN	DRAFTER
CHECKED	CHECKER
APPROVED	ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 13

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	05-TC-19
SHEET NUMBER	----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC118.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC118.DWG PLOT DATE: 02/10/20 PLOT TIME: 10:03:54

NOTES:

1. THESE DRAWINGS ARE INTENDED FOR PUBLIC OUTREACH OR COORDINATION EFFORTS. THE FOOTPRINT OF THE TRAFFIC CONTROL COMPONENTS AND WORK ZONES DELINEATED HEREIN ARE APPROXIMATE, MAY BE INCOMPLETE, AND MAY EXTEND OFF PAGE.
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KEY NOTES:

1. QUINTANA ROAD CLOSURE.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 13

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
05-TC-20
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC119.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC119.DWG PLOT DATE: 02/10/20 PLOT TIME: 16:49:14

NOTES:

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KEY NOTES:

1. QUINTANA ROAD CLOSURE.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 14

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-21
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC120.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC120.DWG PLOT DATE: 02/10/20 PLOT TIME: 10:42:38

NOTES:

1. THESE DRAWINGS ARE INTENDED FOR PUBLIC OUTREACH OR COORDINATION EFFORTS. THE FOOTPRINT OF THE TRAFFIC CONTROL COMPONENTS AND WORK ZONES DELINEATED HEREIN ARE APPROXIMATE, MAY BE INCOMPLETE, AND MAY EXTEND OFF PAGE.
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KEY NOTES:

1. QUINTANA ROAD CLOSURE.

LEGEND:

- DELINEATOR/CONES
- WORK ZONE
- BARRICADE
- DIRECTION OF TRAFFIC
- FLAGGER
- BARRIER

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

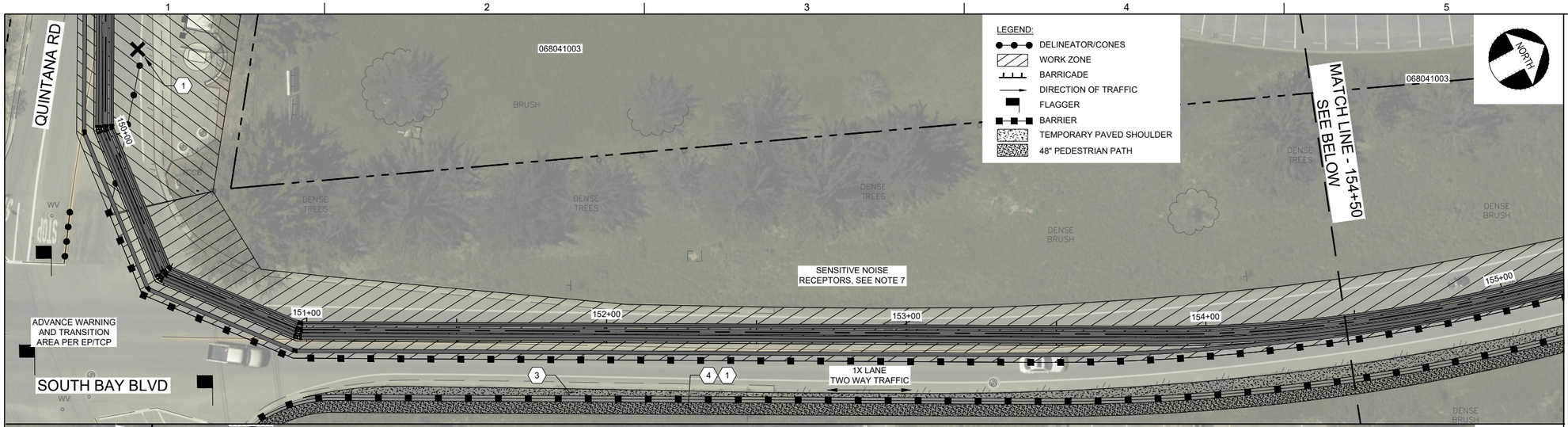
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 14

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-22
SHEET NUMBER ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC121.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC121.DWG PLOT DATE: 02/10/20 PLOT TIME: 10:53:47



NOTES:

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7. THE CONTRACTOR SHALL BE AWARE OF AMBULATORY SERVICES THAT FREQUENTLY ACCESS THE ASSISTED LIVING FACILITY AND NURSING HOME ON TERESA RD. THE CONTRACTOR SHALL COORDINATE WITH THE PROGRAM OUTREACH TEAM TO ACCOMMODATE TRAFFIC TO THESE FACILITIES.

KEY NOTES:

1. PEDESTRIAN AND BICYCLE TRAFFIC TO BE DIVERTED AROUND WORK ZONE TO SOUTH SIDE OF QUINTANA AND EAST SIDE OF SOUTH BAY BLVD PER EP/TCP.
2. PEDESTRIAN AND BICYCLE TRAFFIC TO BE DIVERTED AROUND WORK ZONE TO SOUTH SIDE OF SOUTH BAY BLVD PER EP/TCP.
3. INSTALL A TEMPORARY PAVED SHOULDER IF NECESSARY TO PROVIDE THE MINIMUM LANE WIDTH REQUIRED BY THE EP/TCP. THE CONTRACTOR SHALL NOTE THE PRESENCE OF CONCRETE CURB AND GUTTER FOR A PORTION OF SOUTH BAY BLVD CLOSE TO QUINTANA.
4. ACCOMMODATE PEDESTRIANS AND BICYCLE TRAFFIC PER CA MUTCD 2014 ED SECTION 6D.01 AND INSTALL/MAINTAIN A 48"W SMOOTH, CONTINUOUS HARD SURFACE AT A MAXIMUM 2% CROSS SLOPE. INSTALL 60" x 60" PASSING SPACES EVERY 200-LF.
5. THE CONTRACTOR SHALL BE AWARE THAT TEMPORARY OFF-CONNECTOR RAMP CLOSURES OR TURN LANE CLOSURES MAY BE REQUIRED PER CALTRANS EP/TCP.
6. THE CONTRACTOR SHALL BE AWARE THAT LONGITUDINAL OPEN EXCAVATION LIMITS, TEMPORARY PLATING, AND/OR NIGHT WORK MAY BE REQUIRED PER CALTRANS EP/TCP.

20 0 20 40 FEET
HORIZ SCALE 1"=20'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN DESIGNER
DRAWN DRAFTER
CHECKED CHECKER
APPROVED ENGINEER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

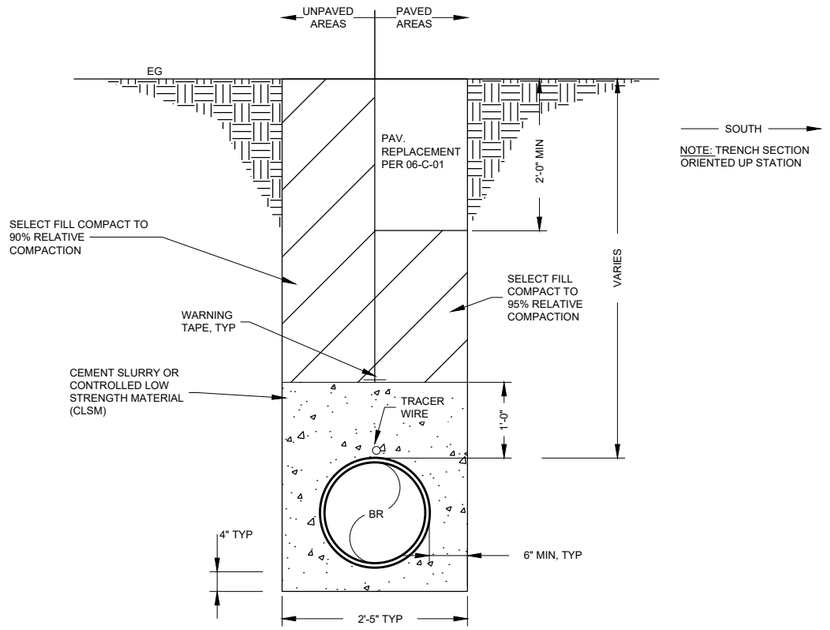
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

TRAFFIC CONTROL
STAGE 15

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-TC-23
SHEET NUMBER ----

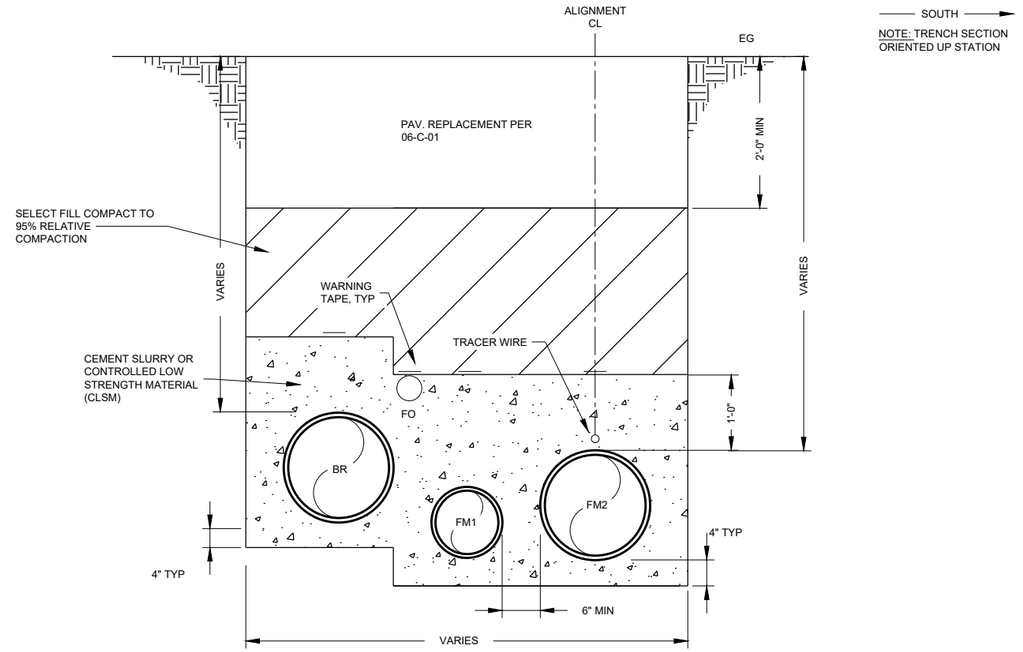
L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-05TC122.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-05TC122.DWG PLOT DATE: 02/10/20 PLOT TIME: 11:32:55



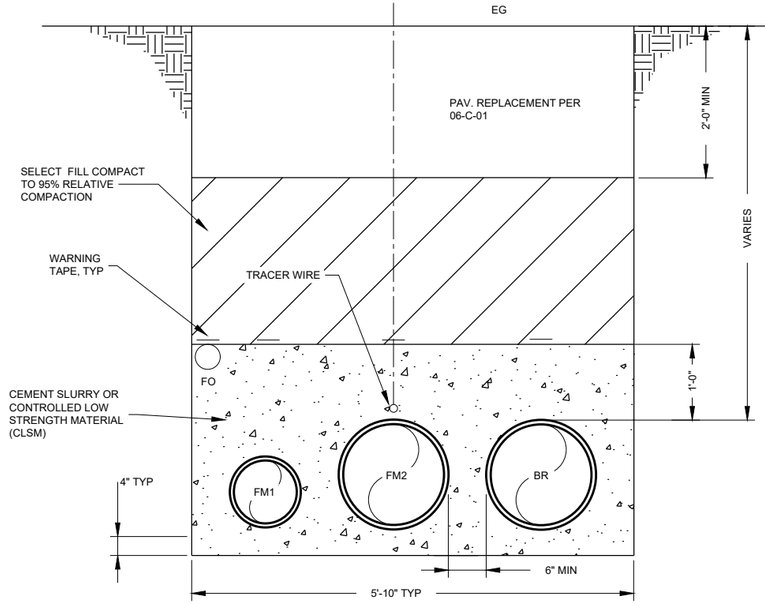
1 TYP PAVED TRENCH DETAIL: STA 10+00 TO STA 15+70

PP-01-02 NTS



2 TYP PAVED TRENCH DETAIL: STA 15+70 TO STA 17+50

PP-02-03 NTS



3 TYP PAVED TRENCH DETAIL: STA 17+50 TO STA 26+30

PP-03-05 NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAILS

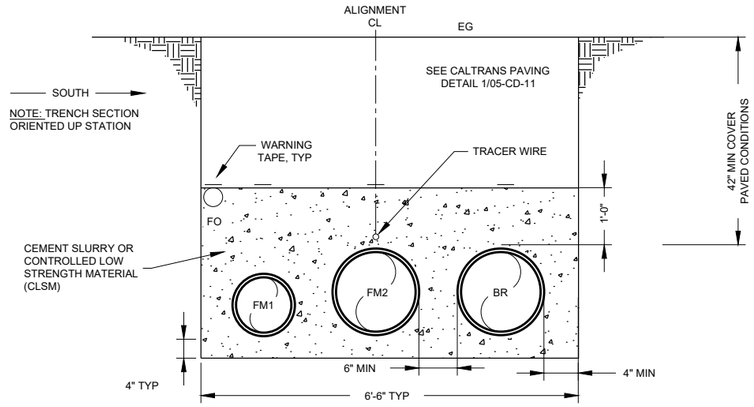
TRENCH SECTIONS AND SURFACE RESTORATION
STA 10+00 TO STA 26+30

DATE
FEBRUARY 2020

PROJECT NUMBER
17-082

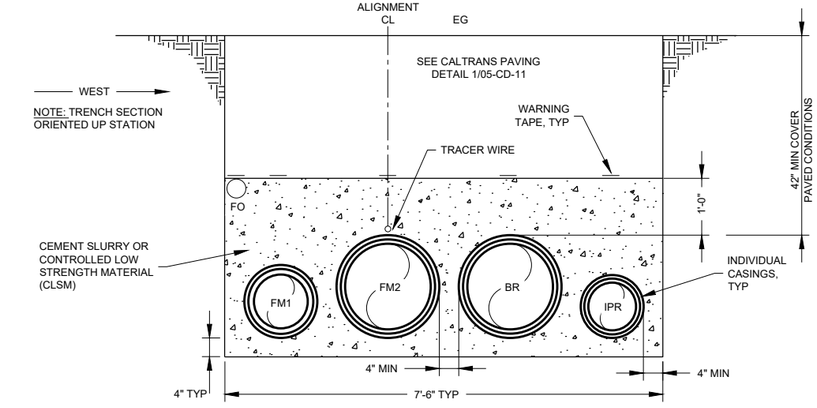
DRAWING NUMBER
05-CD-01

SHEET NUMBER



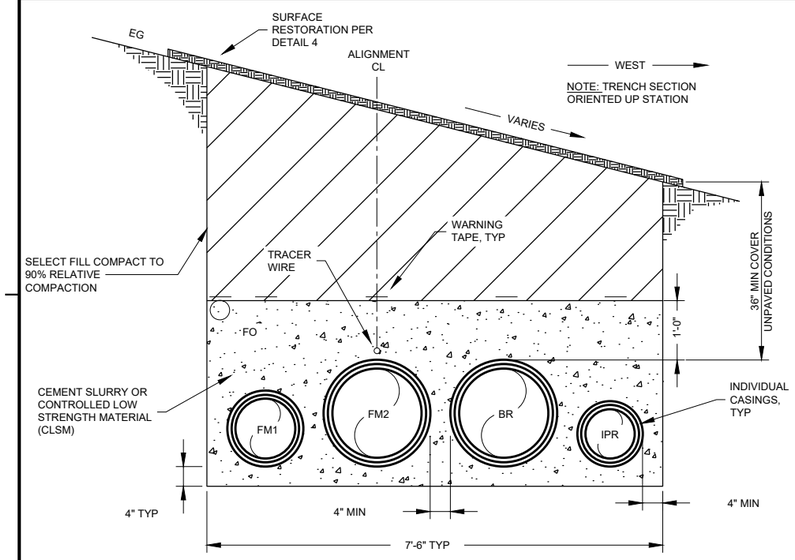
1 TYP PAVED TRENCH DETAIL STA: 26+30 TO STA 27+00

PP-05 NTS



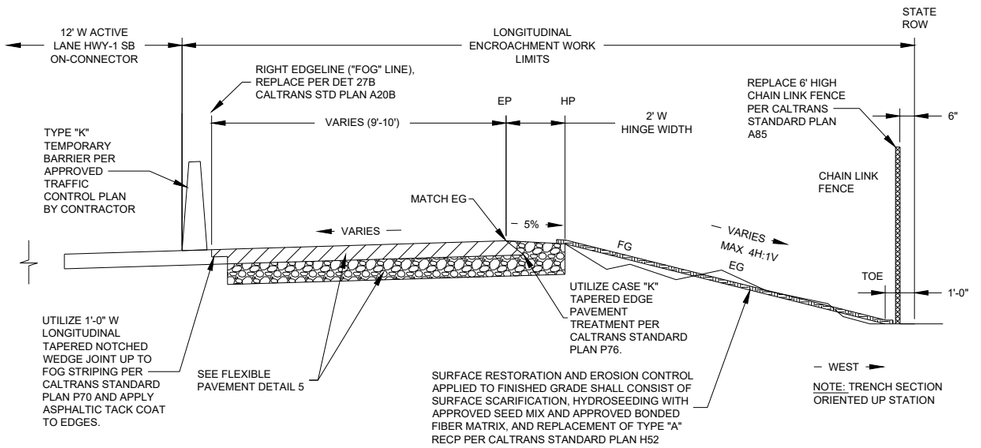
2 TYP PAVED TRENCH DETAIL W/ CASINGS STA: 27+00 TO STA 27+25

PP-05 NTS



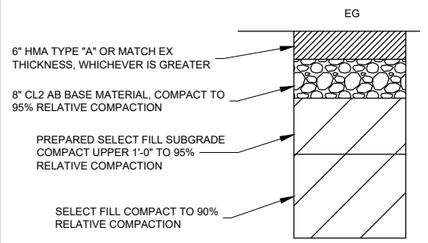
3 TYP UNPAVED TRENCH DETAIL W/ CASINGS STA:27+25 TO STA 32+00

PP-05&06 NTS



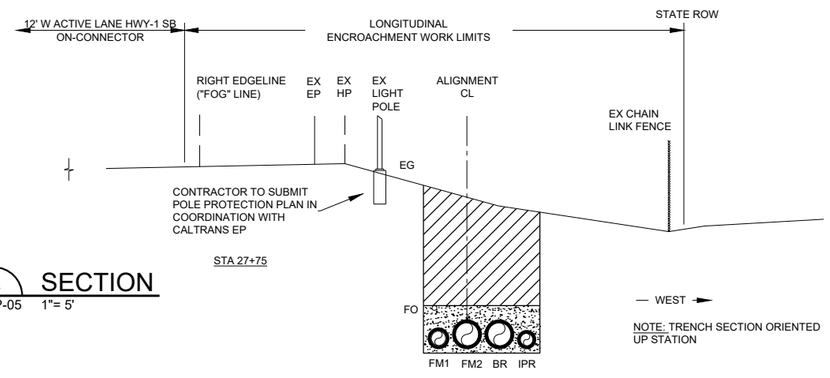
GRADING & PAVING DETAIL HW-1 SB ON-CONNECTOR RAMP SHOULDER STA:27+25 TO STA 32+00

4 PP-05&06 NTS



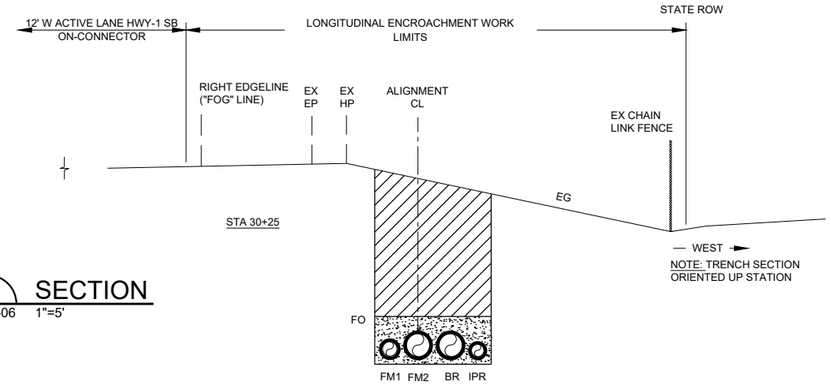
5 FLEXIBLE PAVEMENT DETAIL

- NTS



A SECTION

05-PP-05 1"= 5'



B SECTION

05-PP-06 1"=5'

PRELIMINARY NOT FOR CONSTRUCTION

DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

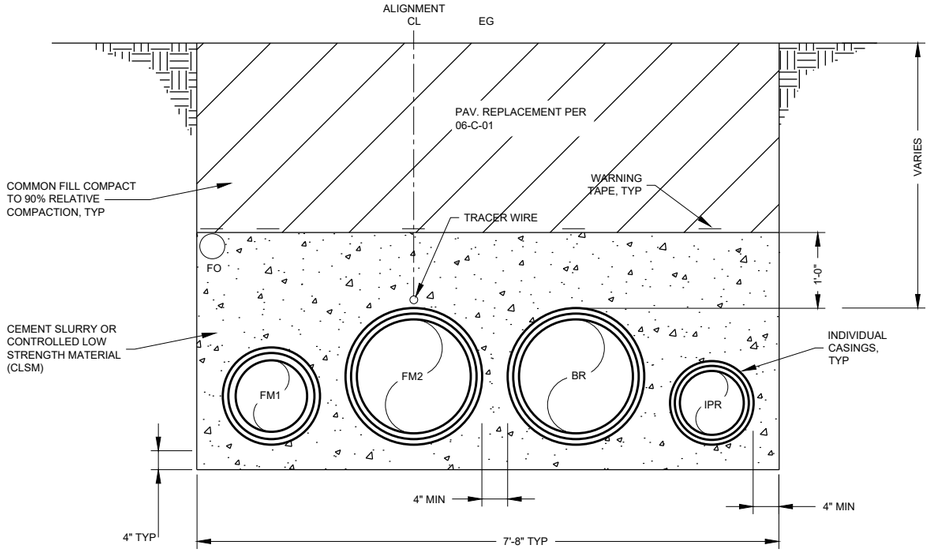
CIVIL DETAILS

TRENCH SECTIONS AND SURFACE RESTORATION
STA 26+30 TO STA 32+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-CD-02
SHEET NUMBER

WEST

NOTE: TRENCH SECTION
ORIENTED UP STATION

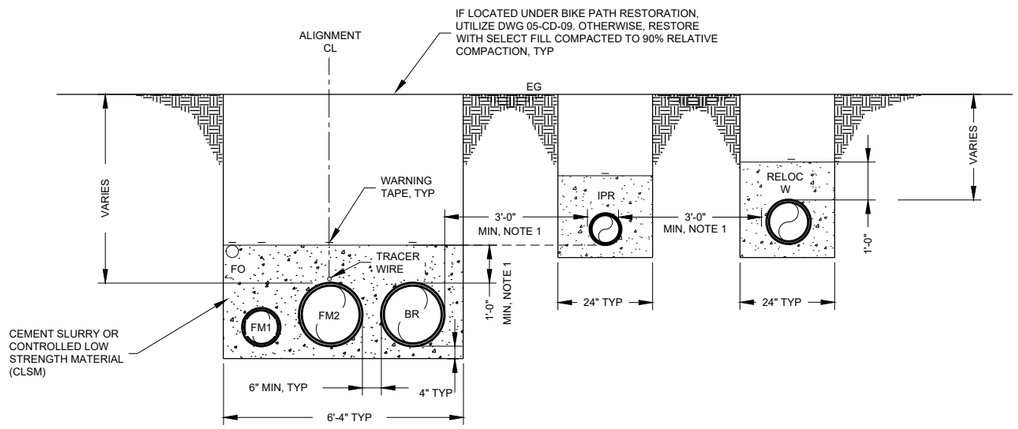


1 TYP TRENCH DETAIL W/ CASINGS STA: 32+00 TO STA 33+20

PP-06-07 NTS

WEST

NOTE: TRENCH SECTION
ORIENTED UP STATION



NOTES:

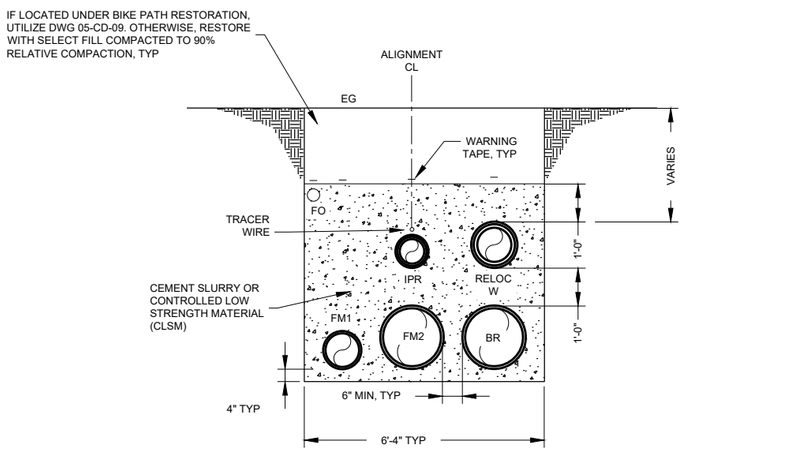
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

2 TYP PAVED TRENCH DETAIL: STA 34+85 TO STA 47+90

PP-07-10 NTS

WEST

NOTE: TRENCH SECTION
ORIENTED UP STATION



3 TYP PAVED TRENCH DETAIL: STA 47+90 TO STA 50+50

PP-10-11 NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE
PIPELINES

CIVIL DETAILS

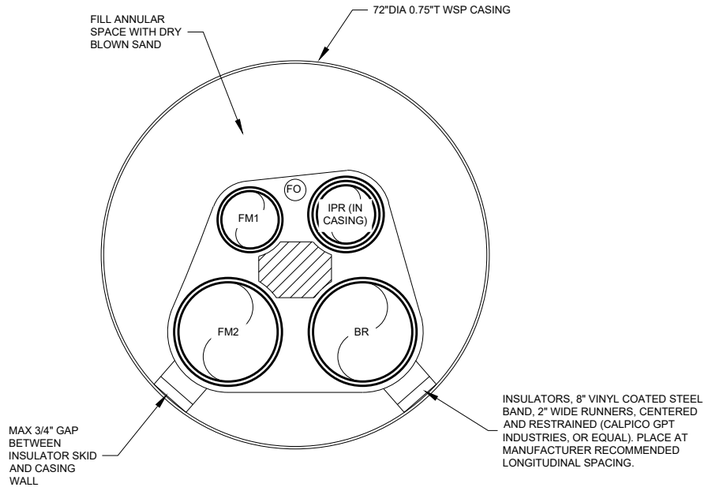
TRENCH SECTIONS AND SURFACE
RESTORATION
STA 32+00 TO STA 50+50

DATE
FEBRUARY 2020

PROJECT NUMBER
17-082

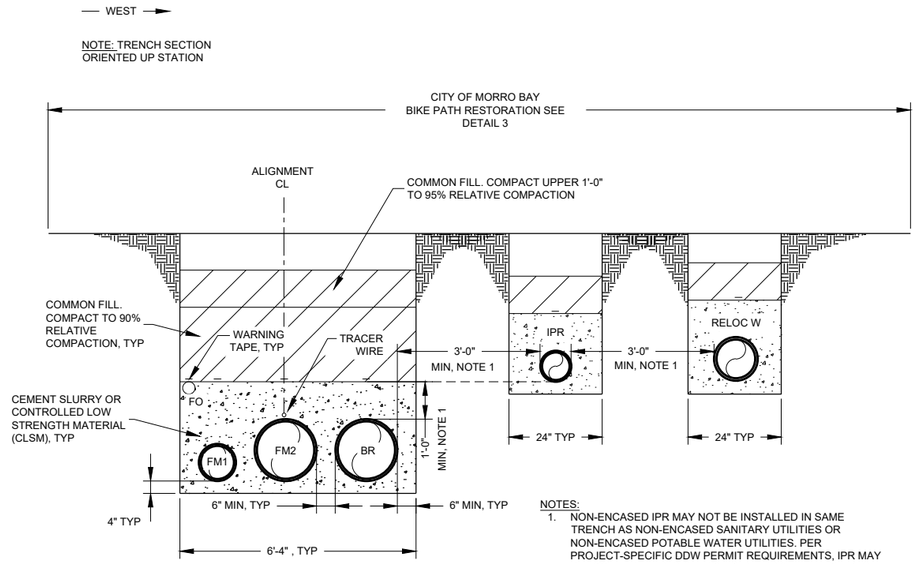
DRAWING NUMBER
05-CD-03

SHEET NUMBER



1 72" BORE AND JACK CASING DETAIL

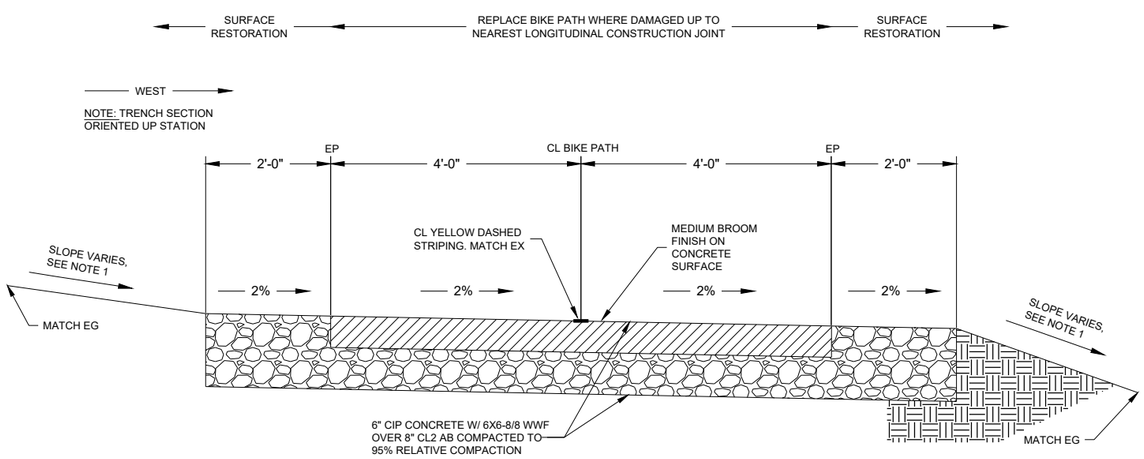
PP-11 NTS



NOTES:
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

2 TYP PAVED TRENCH DETAIL STA: 51+90 TO STA 53+70

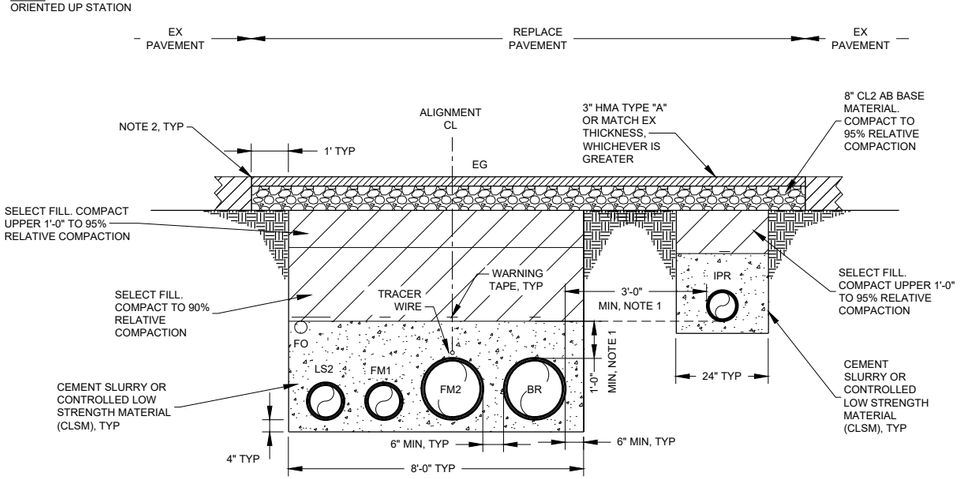
PP-11&12 NTS



NOTES:
1. SURFACE RESTORATION AND EROSION CONTROL APPLIED TO FINISHED GRADE SHALL CONSIST OF SURFACE SCARIFICATION, HYDROSEEDING WITH APPROVED SEED MIX AND APPROVED BONDED FIBER MATRIX, AND APPROVED SWPPP EROSION CONTROL BMP

3 BIKE PATH PAVEMENT RESTORATION STA: 51+90 TO STA 53+70

PP-11&12 NTS



NOTES:
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.
2. CUT EX ROADWAY TO PROVIDE VERTICAL SURFACES. CUT EDGES TO BE STRAIGHT AND NEAT IN APPEARANCE. APPLY TACK COAT TO CUT EDGES. APPLY SEAL COAT TO FINISHED SURFACE ALONG LONGITUDINAL JOINT PER SPEC 02770.

4 TYP PAVED TRENCH DETAIL STA: 53+70 TO STA 56+40

PP-12 NTS

PRELIMINARY NOT FOR CONSTRUCTION

DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

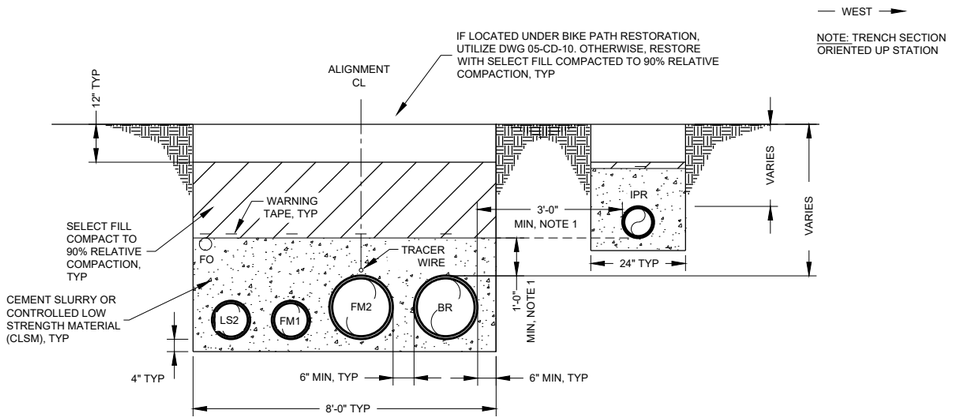
WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAILS

TRENCH SECTIONS AND SURFACE RESTORATION
STA 50+52 TO STA 56+40

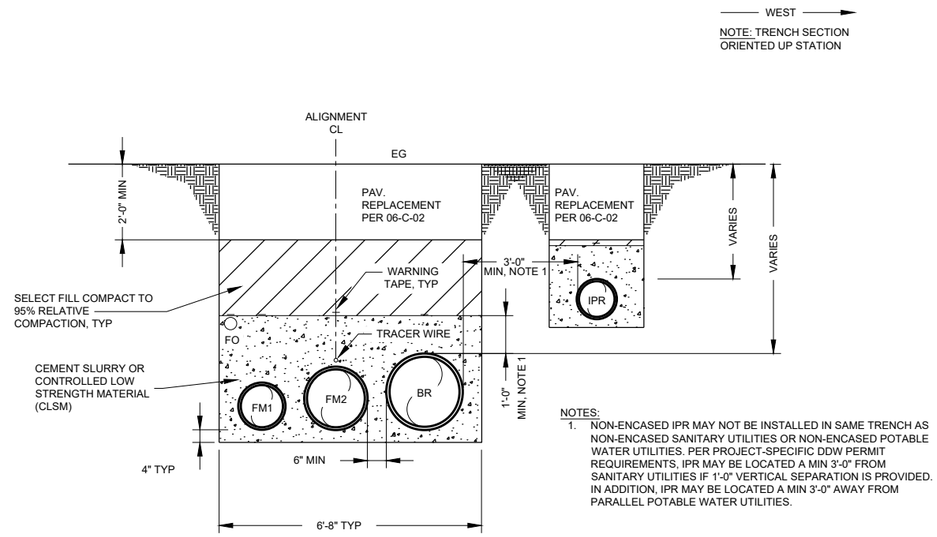
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-CD-04
SHEET NUMBER



NOTES:
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

1 TYP PAVED TRENCH DETAIL: STA 56+40 TO STA 57+00

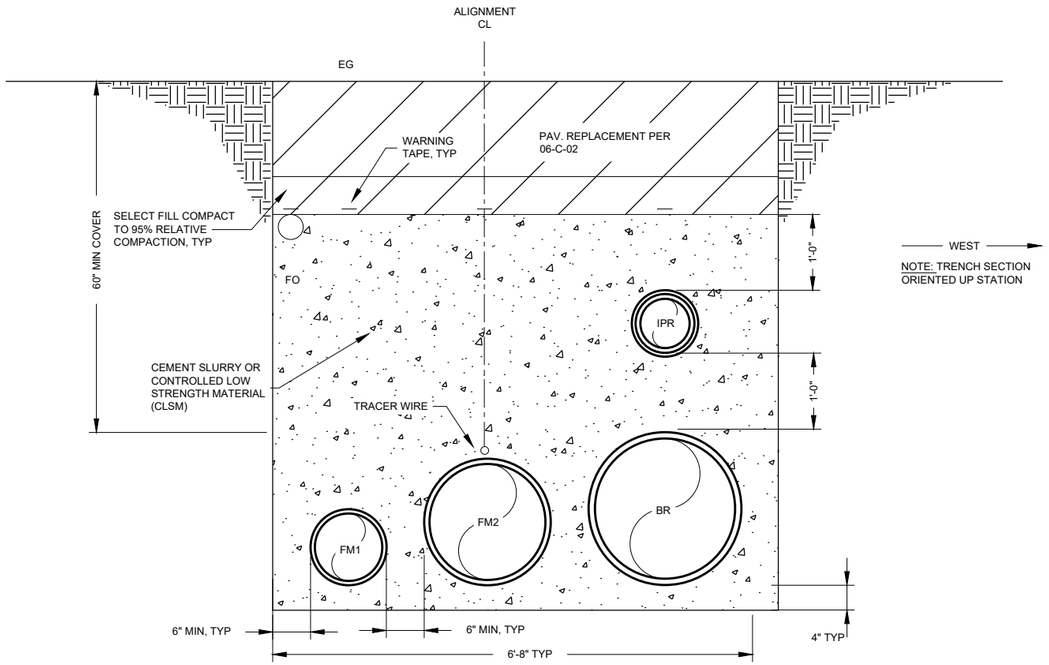
PP-12 NTS



NOTES:
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

2 TYP PAVED TRENCH DETAIL: STA 57+00 TO STA 61+00 AND STA 65+00 TO STA 72+20

PP-13-16 NTS



3 TYP PAVED TRENCH DETAIL: STA 61+00 TO STA 65+00

PP-14 NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

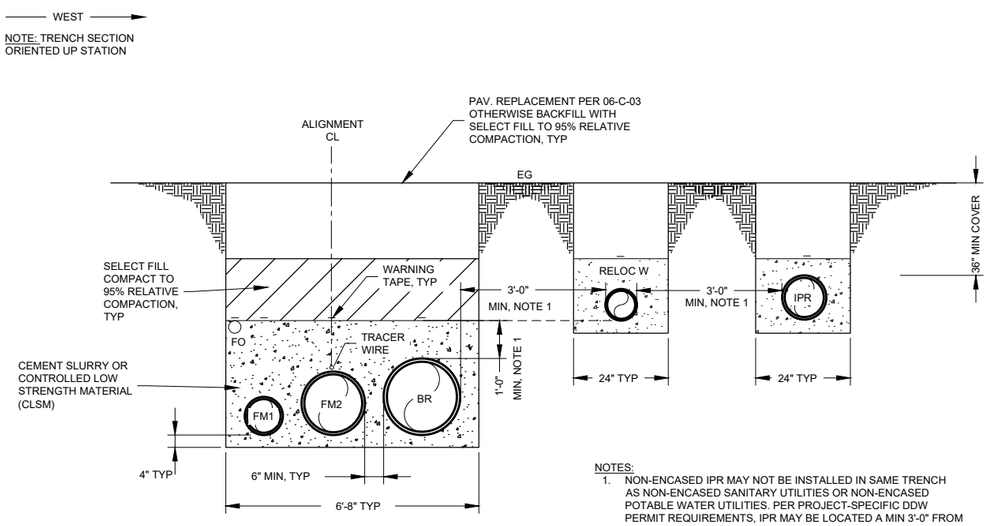
DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAILS
TRENCH SECTIONS AND SURFACE RESTORATION
STA 56+40 TO STA 72+20

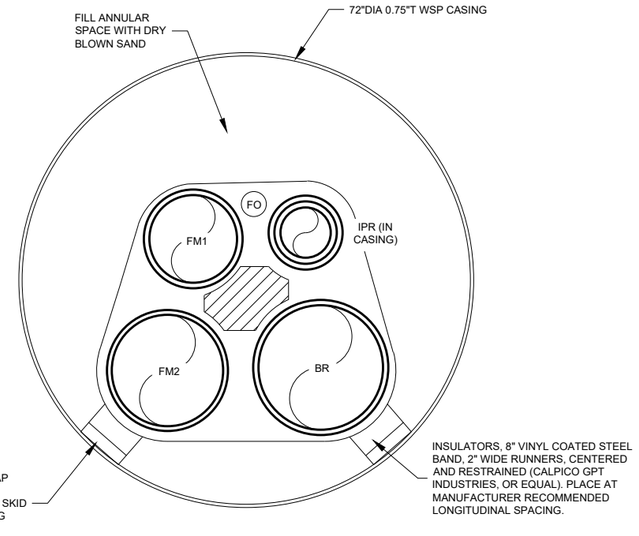
DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
05-CD-05
SHEET NUMBER



NOTES:
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

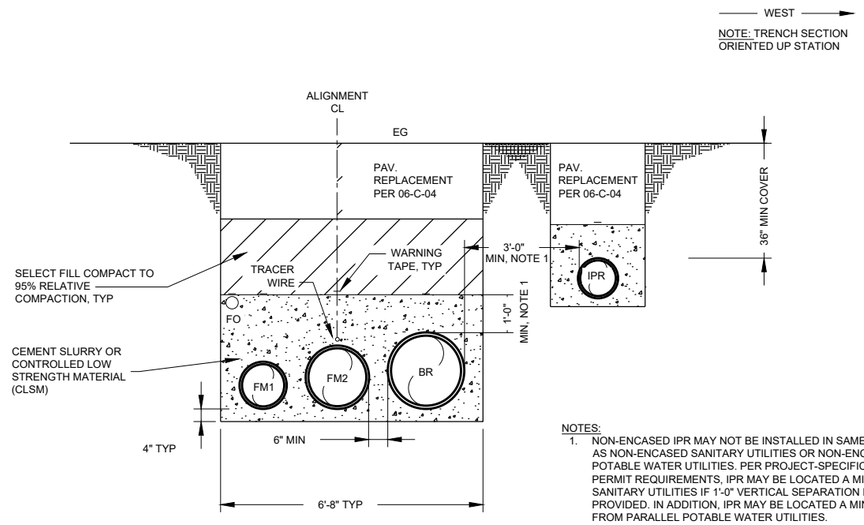
1 TYP PAVED TRENCH DETAIL: STA 72+20 TO STA 96+30

PP-16-22 NTS



2 TRENCHLESS CONSTRUCTION MICROTUNNELING

PP-22-23 NTS



NOTES:
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

3 TYP PAVED TRENCH DETAIL: STA 99+82 TO STA 121+00

PP-23-28 NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

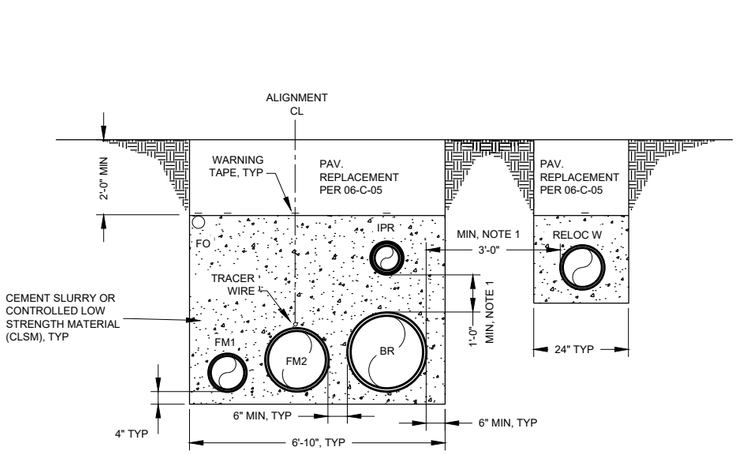
DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

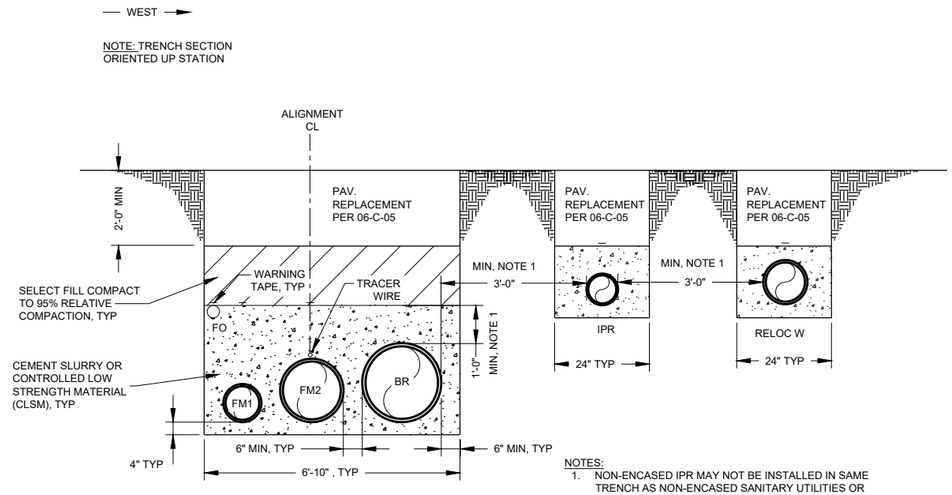
CIVIL DETAILS
TRENCH SECTIONS AND SURFACE RESTORATION
STA 72+20 TO STA 121+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-CD-06
SHEET NUMBER



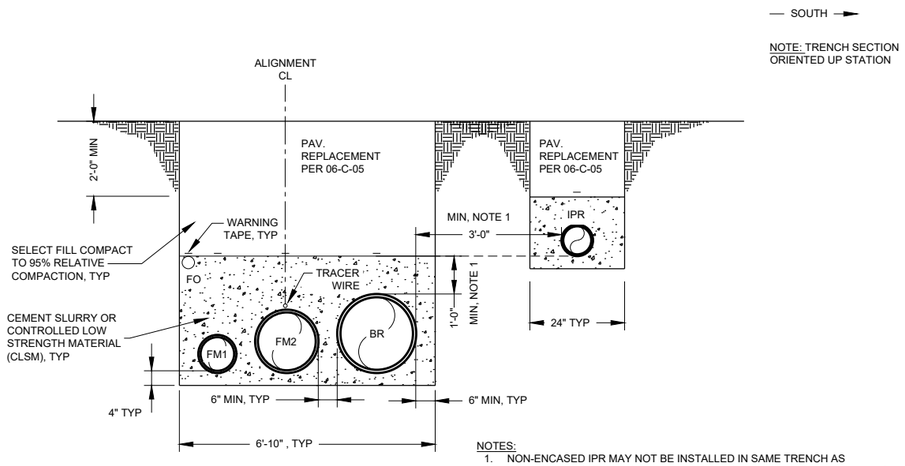
NOTES:
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

1 TYP PAVED TRENCH DETAIL: STA 121+00 TO STA 125+00
PP-29 NTS



NOTES:
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

2 TYP PAVED TRENCH DETAIL: STA 125+00 TO STA 150+50
PP-32-36 NTS



NOTES:
1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

3 TYP PAVED TRENCH DETAIL: STA 150+50 TO STA 155+80
PP-36-39 NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

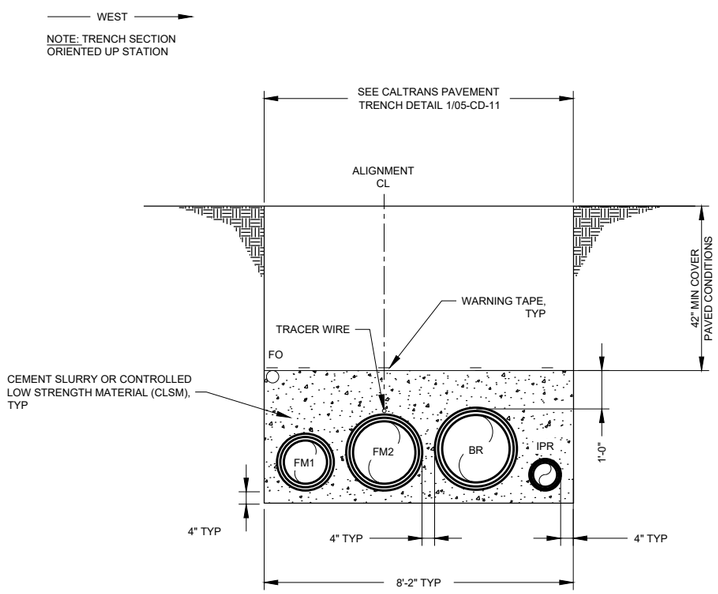
DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

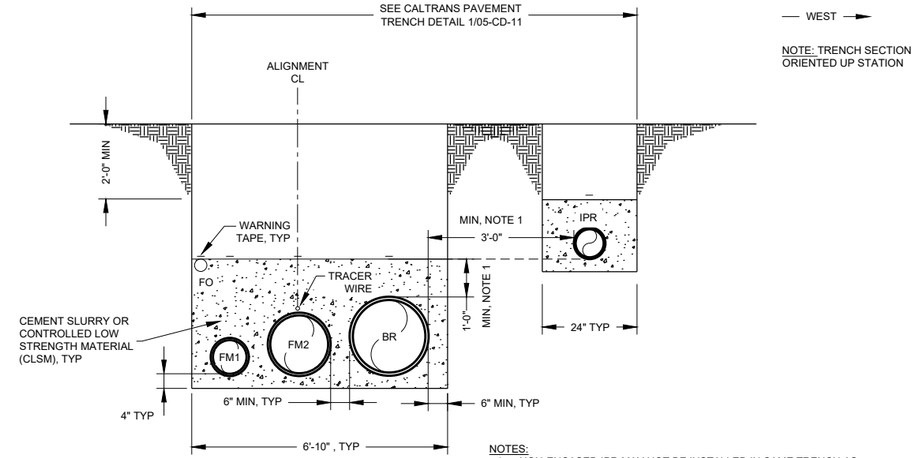
CIVIL DETAILS
TRENCH SECTIONS AND SURFACE RESTORATION
STA 121+00 TO STA 155+80

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-CD-07
SHEET NUMBER



1 TYP PAVED TRENCH DETAIL W/ CASINGS STA: 155+80 TO STA 160+50

PP-38-39 NTS

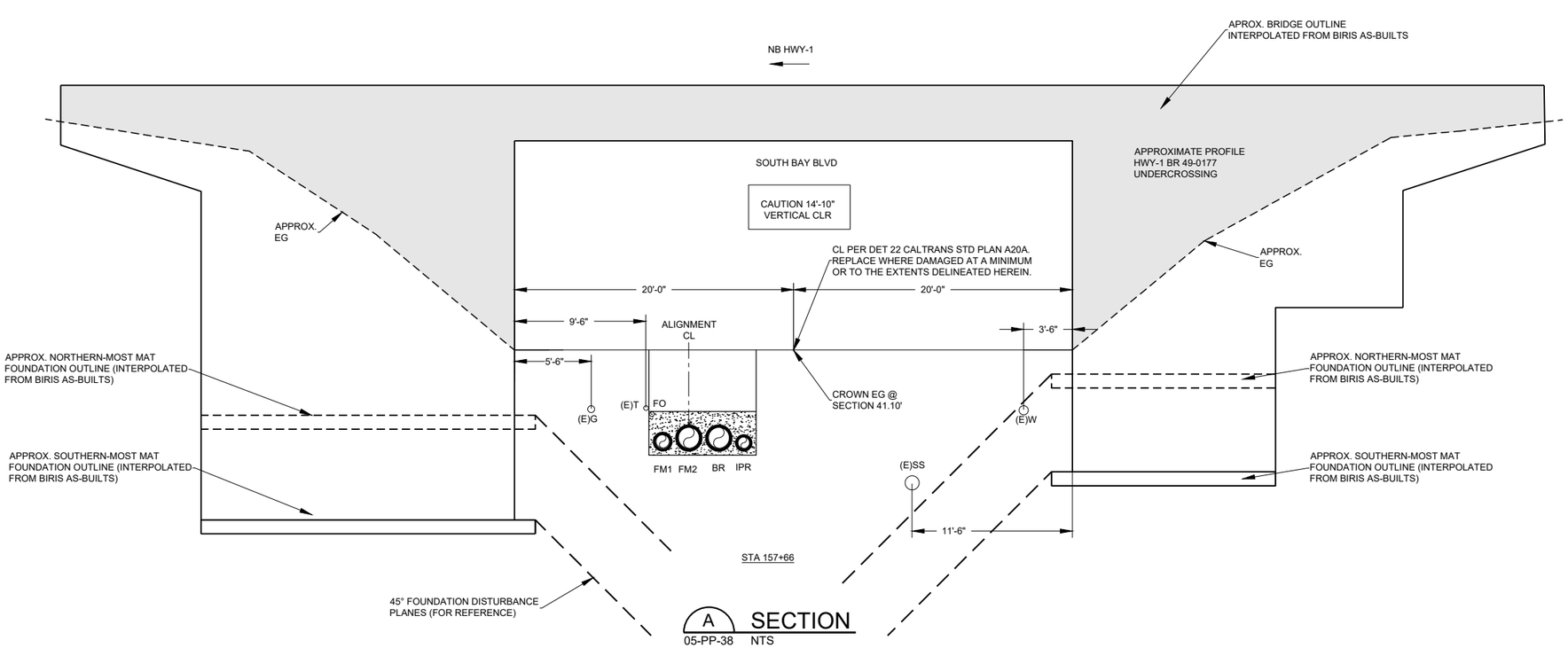


NOTES:

1. NON-ENCASED IPR MAY NOT BE INSTALLED IN SAME TRENCH AS NON-ENCASED SANITARY UTILITIES OR NON-ENCASED POTABLE WATER UTILITIES. PER PROJECT-SPECIFIC DDW PERMIT REQUIREMENTS, IPR MAY BE LOCATED A MIN 3'-0" FROM SANITARY UTILITIES IF 1'-0" VERTICAL SEPARATION IS PROVIDED. IN ADDITION, IPR MAY BE LOCATED A MIN 3'-0" AWAY FROM PARALLEL POTABLE WATER UTILITIES.

2 TYP PAVED TRENCH DETAIL: STA 160+50 TO END

PP-39 NTS



A SECTION

05-PP-38 NTS

PRELIMINARY
NOT FOR CONSTRUCTION

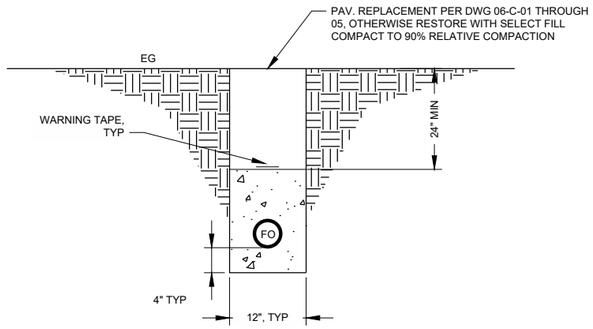
DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

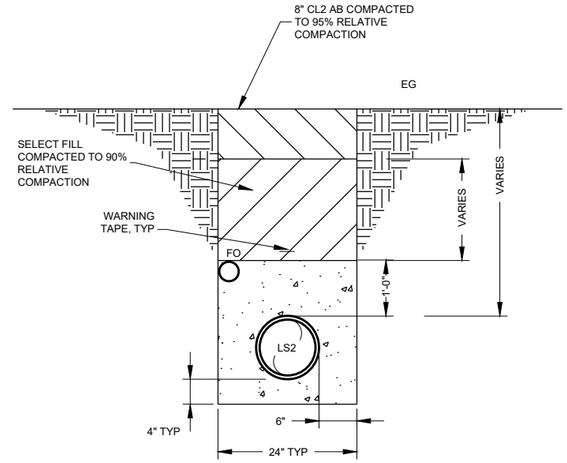
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAILS
TRENCH SECTIONS AND SURFACE RESTORATION
STA 155+80 TO END

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-CD-08
SHEET NUMBER



1 FO CONDUIT SINGLE TRENCH DETAIL
- NTS



2 LS2 TYPICAL UNPAVED TRENCH DETAIL
PP-40-44 NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

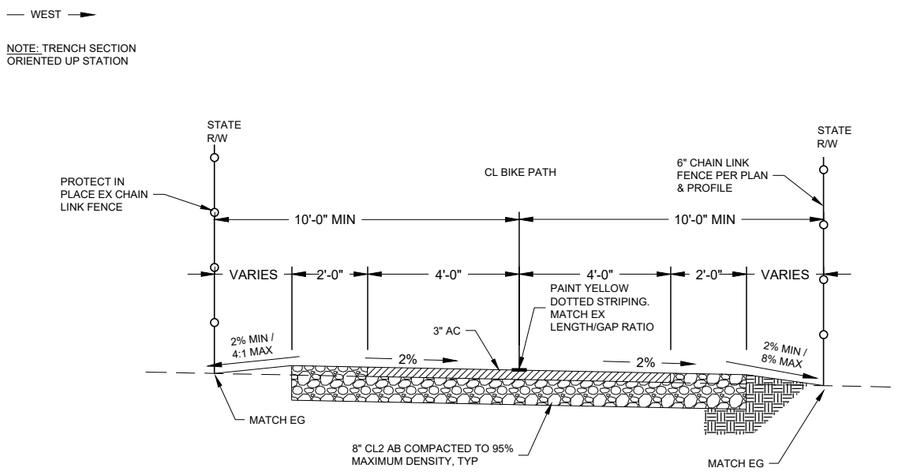
DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

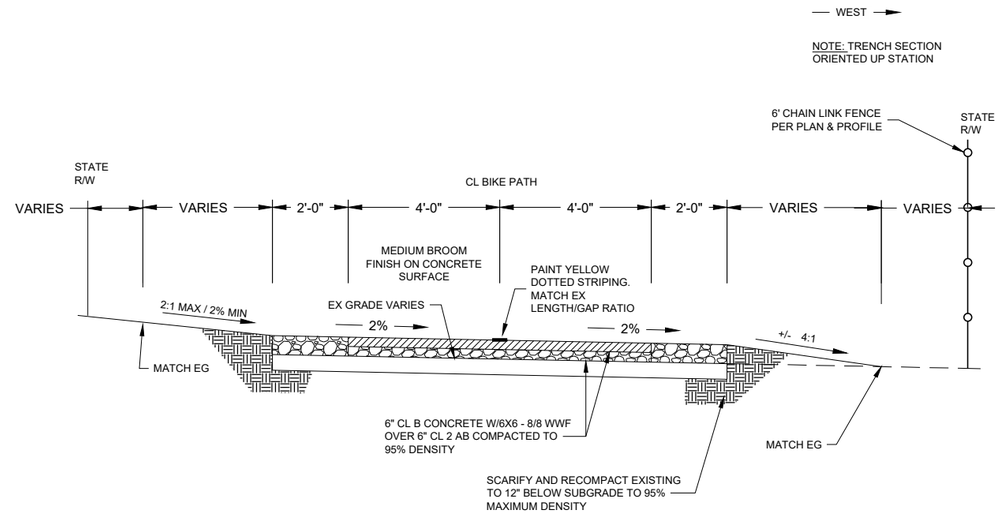
CIVIL DETAILS
MISC TRENCH SECTIONS AND SURFACE RESTORATION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
05-CD-09
SHEET NUMBER



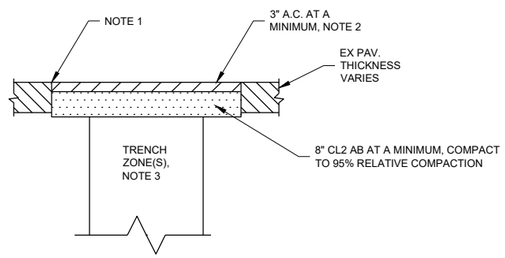
1 TYP PAVED TRENCH DETAIL: STA 121+25 TO STA 150+50

PP-07-11 NTS



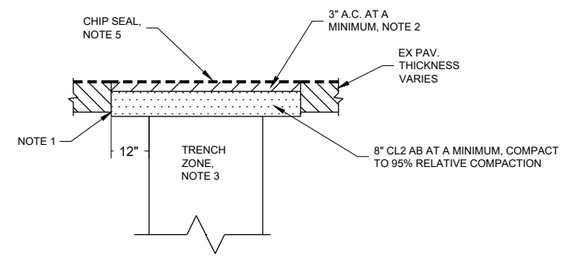
2 BIKE PATH PAVEMENT REPLACEMENT (STA 49+75 TO STA 50+75)

PP-11 NTS



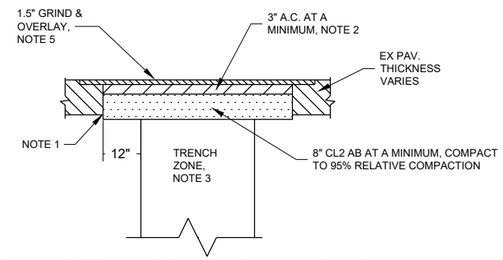
3 PAV. REPLACEMENT (NO PAV. REHAB)

NOTES
1. CUT EX ROADWAY TO PROVIDE VERTICAL SURFACES. CUT EDGES TO BE STRAIGHT AND NEAT IN APPEARANCE. APPLY TACK COAT TO CUT EDGES. APPLY SEAL COAT TO FINISHED SURFACE ALONG LONGITUDINAL JOINT PER SPEC 02770.
2. HOT MIX AC PER SPEC 02770. PAVEMENT DEPTH SPECIFIC TO PAVEMENT ZONE AND MAY EXTEND OVER MULTIPLE TRENCHES AS LISTED ON DWGS 06-C-01 THROUGH 03.
3. SEE DWG 05-CD-01 THROUGH 09 FOR TRENCH SIZES, CLEARANCES, AND BACKFILL REQUIREMENTS.
4. CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY PAVEMENT FOR 2 WEEKS PRIOR TO INSTALLATION OF PERMANENT HOT-MIX PAVEMENT.



4 PAV. REPLACEMENT W/ GRIND & OVERLAY PAV. REHAB

NOTES
1. CUT EX ROADWAY TO PROVIDE VERTICAL SURFACES. CUT EDGES TO BE STRAIGHT AND NEAT IN APPEARANCE. APPLY TACK COAT TO CUT EDGES. APPLY SEAL COAT TO FINISHED SURFACE ALONG LONGITUDINAL JOINT PER SPEC 02770.
2. HOT MIX AC PER SPEC 02770. PAVEMENT DEPTH SPECIFIC TO PAVEMENT ZONE AND MAY EXTEND OVER MULTIPLE TRENCHES AS LISTED ON DWGS 06-C-01 THROUGH 03.
3. SEE DWG 05-CD-01 THROUGH 09 FOR TRENCH SIZES, CLEARANCES, AND BACKFILL REQUIREMENTS.
4. CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY PAVEMENT FOR 2 WEEKS PRIOR TO INSTALLATION OF PERMANENT HOT-MIX PAVEMENT.
5. CHIP SEAL PAVEMENT REHABILITATION PER SPEC 02770.



5 PAV. REPLACEMENT W/ GRIND & OVERLAY PAV. REHAB

NOTES
1. CUT EX ROADWAY TO PROVIDE VERTICAL SURFACES. CUT EDGES TO BE STRAIGHT AND NEAT IN APPEARANCE. APPLY TACK COAT TO CUT EDGES. APPLY SEAL COAT TO FINISHED SURFACE ALONG LONGITUDINAL JOINT PER SPEC 02770.
2. HOT MIX AC PER SPEC 02770. PAVEMENT DEPTH SPECIFIC TO PAVEMENT ZONE AND MAY EXTEND OVER MULTIPLE TRENCHES AS LISTED ON DWGS 06-C-01 THROUGH 03.
3. SEE DWG 05-CD-01 THROUGH 09 FOR TRENCH SIZES, CLEARANCES, AND BACKFILL REQUIREMENTS.
4. CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY PAVEMENT FOR 2 WEEKS PRIOR TO INSTALLATION OF PERMANENT HOT-MIX PAVEMENT.
5. GRIND TO DEPTH, PREPARE SURFACE, APPLY SEAL COAT, AND INSTALL A.C. OVERLAY PER SPEC 2770.

PRELIMINARY NOT FOR CONSTRUCTION

DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

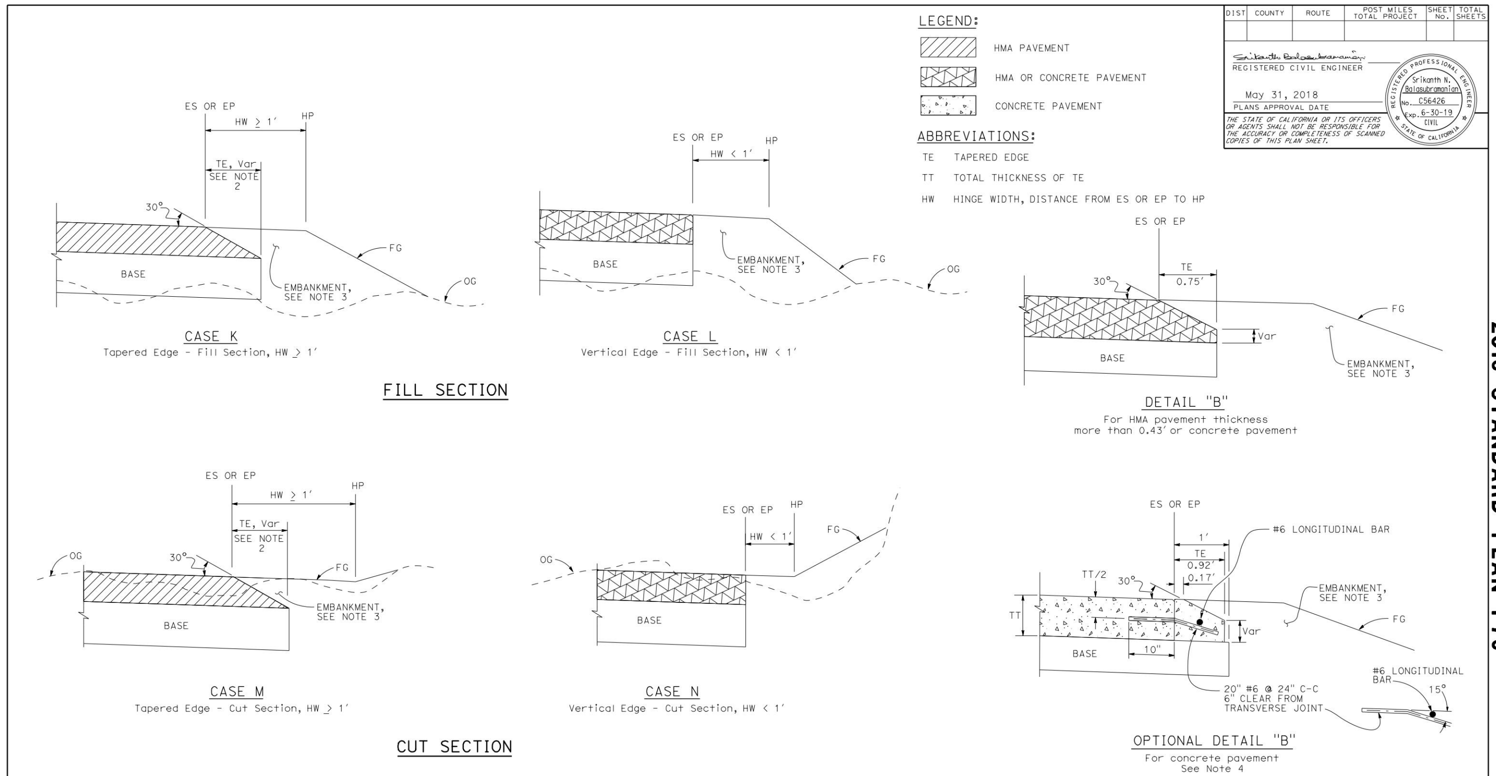
CIVIL DETAILS

PAVEMENT REPLACEMENT AND REHABILITATION DETAILS IN CITY R/W

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-CD-10
SHEET NUMBER

PAVEMENT EDGE TREATMENTS- NEW CONSTRUCTION

2018 STANDARD PLAN P76



NOTES:

1. For limits of tapered edge and vertical edge treatments, see Standard Plan P74
2. Details shown for HMA pavement thickness less than 0.43'. See Detail "B" for HMA pavement thickness more than 0.43' or concrete pavement.
3. For locations and limits of embankment see project plans.
4. Tapered edge transverse joint must match pavement transverse joint. End of #6 longitudinal bar must be 2" ±1/2" clear from transverse joint.
5. Tapered edge is not needed in the area of MGS, barrier, right turn lane and acceleration lane. See Standard Plan P74.

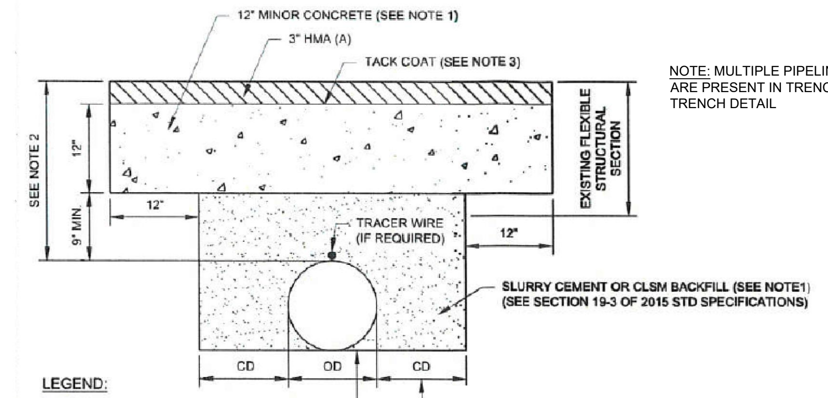
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE TREATMENTS- NEW CONSTRUCTION

NO SCALE

P76

CASE 1: FOR TRAFFIC INDEX (TI) LESS THAN OR EQUAL TO 12



NOTE: MULTIPLE PIPELINES ARE PRESENT IN TRENCH PER TRENCH DETAIL

SEE TRENCH DETAIL

SEE TRENCH DETAIL

LEGEND:

- MINOR CONCRETE
- HOT MIX ASPHAL (HMA)
- SLURRY CEMENT OR CLSM BACKFILL

NOTES:

1. CONCRETE CAP MAY BE RAPID STRENGTH CONCRETE (RSC) IF RSC IS USED, REPLACE THE SLURRY CEMENT OR CLSM BACKFILL WITH LEAN CONCRETE BACKFILL OR RSC DEPENDING UPON THE PROJECT'S TIME CONSTRAINTS.
2. FOR NEW INSTALLATIONS, MINIMUM DEPTH OF COVER REQUIREMENTS ARE TO FALLOW GUIDELINES IN THE ENCROACHMENT PERMITS MANUAL OR HIGHWAY DESIGN MANUAL. WHEN COVER OVER A REPLACEMENT PIPE/ENCASEMENT PIPE IS LESS THAN 24", A SPECIAL DESIGN IS NECESSARY (FOR IN-HOUSE PROJECTS, REFER TO HQ DRAINAGE DETAIL LIBRARY).
3. TACK COAT (ASPHALTIC EMULSION) SHALL BE APPLIED PRIOR TO PLACING HMA(A).
4. ALL TRENCH WORK SUBJECT TO STATE REGULATIONS AND INSPECTION.
5. ALL MATERIALS, WORKMANSHIP, TESTING, AND INSPECTIONS SHALL COMPLY WITH CALTRANS STANDARD SPECIFICATIONS AND PROJECT - SPECIFIC PROVISIONS.
6. USE OF THIS DETAIL IS APPLICABLE IF HIGH GROUNDWATER CONDITIONS DO NOT EXIST WITHIN THE TRENCH.

ABBREVIATIONS:

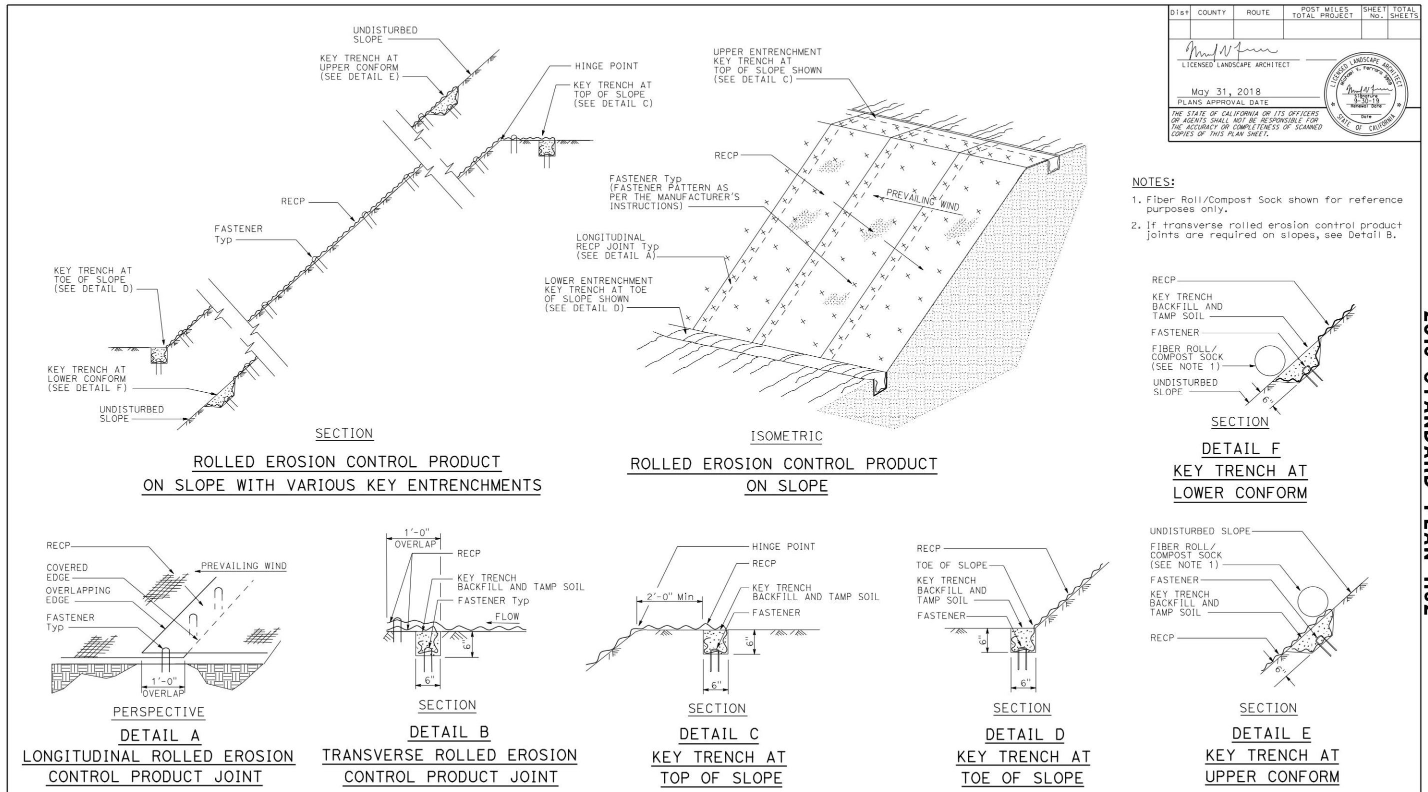
CD = CLEAR DISTANCE
HMA(A) = HOT MIX ASPHALT TYPE A
OD = OUTSIDE DIAMETER OF UTILITY OR CULVERT
CLSM = CONTROLLED LOW-STRENGTH MATERIAL

1 TYPICAL CALTRANS PAVING DETAIL STA 26+30 TO STA 27+00

NTS

ROLLED EROSION CONTROL PRODUCT

2018 STANDARD PLAN H52



NOTES:

1. Fiber Roll/Compost Sock shown for reference purposes only.
2. If transverse rolled erosion control product joints are required on slopes, see Detail B.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

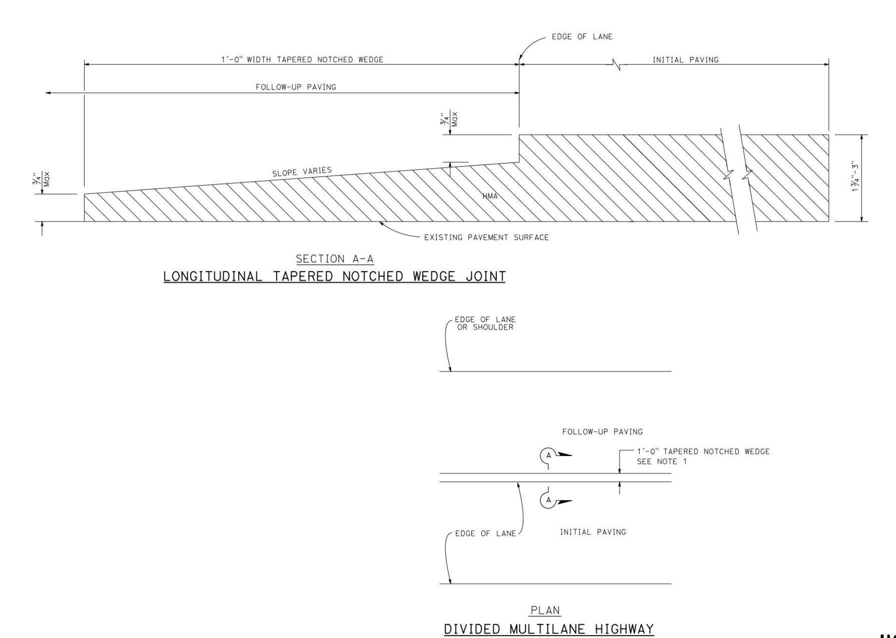
ROLLED EROSION CONTROL PRODUCT

NO SCALE

H52

HOT MIX ASPHALT PAVING (LONGITUDINAL TAPERED NOTCHED WEDGE JOINT)

2018 STANDARD PLAN P70



NOTE:

1. Tapered notch wedge shall extend 1'-0" into adjacent lane or shoulder to receive follow-up paving.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT PAVING (LONGITUDINAL TAPERED NOTCHED WEDGE JOINT)

NO SCALE

P70

PRELIMINARY NOT FOR CONSTRUCTION

DESIGN	T LEWIS
DRAWN	M KARBAKHSH
CHECKED	T LEWIS
APPROVED	M FISHER

WATERWORKS ENGINEERS
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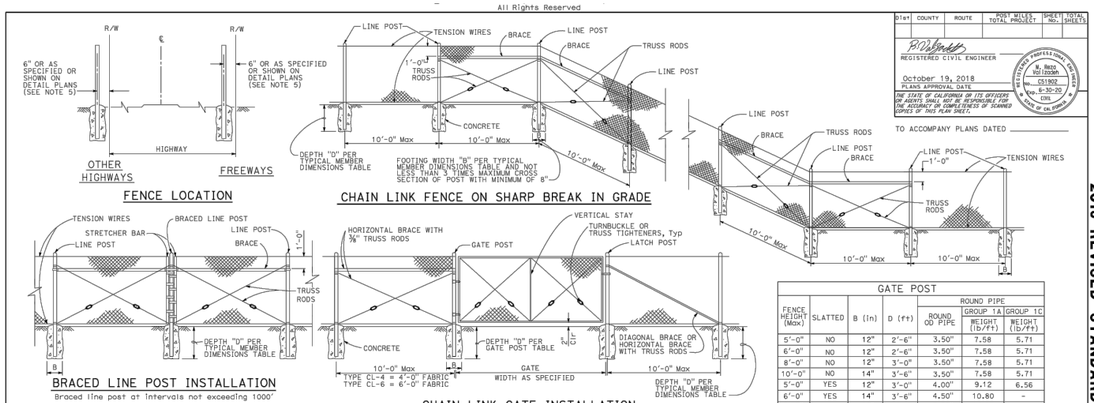
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAILS
CALTRANS STANDARD PLANS

DATE: FEBRUARY 2020
PROJECT NUMBER: 17-082
DRAWING NUMBER: 05-CD-11
SHEET NUMBER



GATE POST						
FENCE HEIGHT (Max)	SLATTED	B (in)	D (ft)	ROUND PIPE		
				ROUND OD PIPE	GROUP 1A WEIGHT (lb/ft)	GROUP 1C WEIGHT (lb/ft)
5'-0"	NO	12"	2'-6"	3.50"	7.58	5.71
6'-0"	NO	12"	2'-6"	3.50"	7.58	5.71
8'-0"	NO	12"	3'-0"	3.50"	7.58	5.71
10'-0"	NO	14"	3'-6"	3.50"	7.58	5.71
5'-0"	YES	12"	3'-0"	4.00"	9.12	6.56
6'-0"	YES	14"	3'-6"	4.50"	10.80	-
8'-0"	YES	18"	3'-6"	5.56"	14.60	-
10'-0"	YES	20"	4'-0"	6.63"	19.00	-

Above post dimensions and weights are minimums. Larger sizes may be used upon approval.

TYPICAL MEMBER DIMENSIONS (See Notes)												
FENCE HEIGHT (Max)	SLATTED	B (in)	D (ft)	LINE POSTS					BRACES			
				ROUND PIPE			ROLL FORMED		ROUND PIPE		ROLL FORMED	
				ROUND OD PIPE	GROUP 1A WEIGHT (lb/ft)	GROUP 1C WEIGHT (lb/ft)	SECTION	WEIGHT (lb/ft)	ROUND OD PIPE	GROUP 1A WEIGHT (lb/ft)	GROUP 1C WEIGHT (lb/ft)	SECTION	WEIGHT (lb/ft)
5'-0"	NO	8"	2'-6"	1.90"	2.72	2.28	1.875" x 1.625"	1.85	1.90"	2.72	2.28	1.625" x 1.250"	1.35
6'-0"	NO	10"	2'-6"	2.38"	3.66	3.12	1.875" x 1.625"	2.40	2.38"	3.66	3.12	1.625" x 1.250"	1.35
8'-0"	NO	12"	3'-0"	2.88"	5.80	4.64	3.250" x 2.500"	4.50	2.38"	3.66	3.12	1.625" x 1.250"	1.35
10'-0"	NO	14"	3'-6"	3.50"	7.58	5.71	3.250" x 2.500"	4.50	2.88"	5.80	4.64	1.625" x 1.250"	1.35
5'-0"	YES	12"	3'-0"	4.00"	9.12	6.56	N/A	-	2.38"	3.66	3.12	N/A	-
6'-0"	YES	14"	3'-0"	4.50"	10.80	-	N/A	-	2.38"	3.66	3.12	N/A	-
8'-0"	YES	18"	3'-6"	5.56"	14.60	-	N/A	-	2.38"	3.66	3.12	N/A	-
10'-0"	YES	20"	4'-0"	6.63"	19.00	-	N/A	-	2.88"	5.80	4.64	N/A	-

NOTES:

1. The table to the right shows minimum sized posts and braces complying with the specifications. Larger or heavier post and brace sizes may be used upon approval.
2. Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
3. Other sections which comply with the strength requirements and other provisions of the specifications may be used upon approval.
4. Options exercised shall be uniform on any one project.
5. Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.
6. See Standard Plan A85B for Brace, Stretcher Bar, and Truss Tightener Details.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
October 19, 2018
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
TO ACCOMPANY PLANS DATED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE

NO SCALE

RSP A85 DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN A85 DATED MAY 31, 2018 - PAGE 140 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP A85

2018 REVISED STANDARD PLAN RSP A85

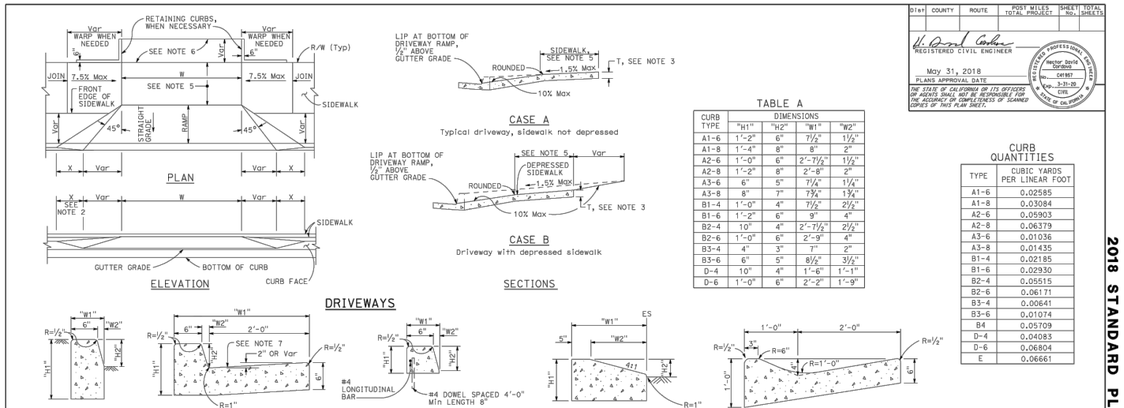


TABLE A				
CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7½"	1½"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7½"	1½"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	6"	7¼"	1¼"
A3-8	8"	7"	7¾"	1¾"
B1-4	1'-0"	4"	7½"	2½"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7½"	2½"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8½"	3½"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-9"

CURB QUANTITIES	
TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

NOTES:

1. Case A driveway section typically applies.
2. X=3'-0" except for curb heights over 10" where 4¼ slopes shall be used on curb slope.
3. Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
4. Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
5. Minimum width of clear passageway for sidewalk shall be 4'-2".
6. Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6'.
7. Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
May 31, 2018
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

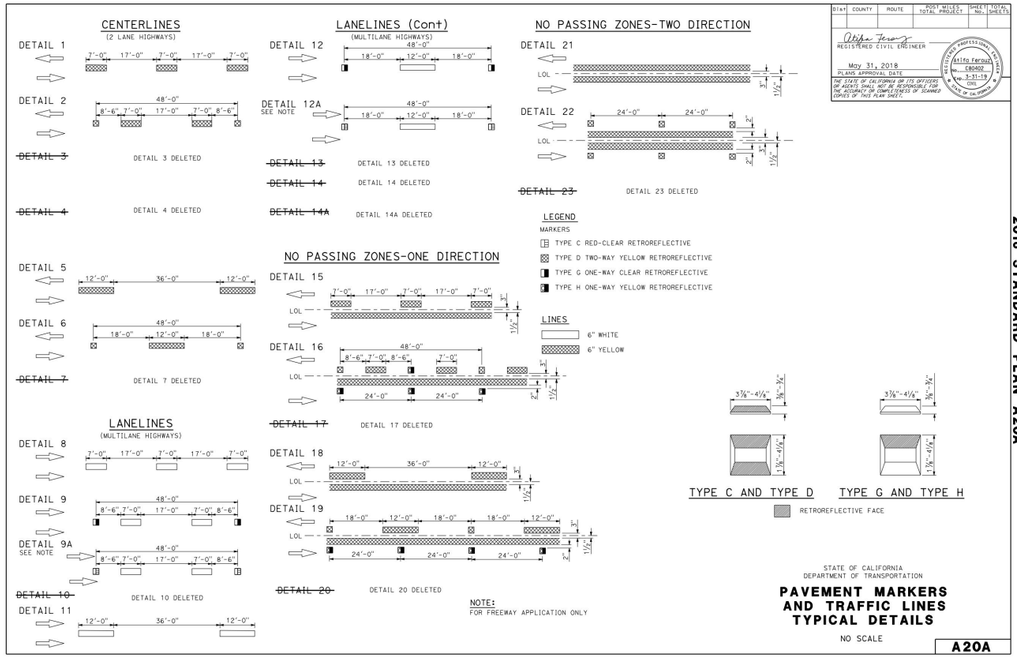
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURBS AND DRIVEWAYS

NO SCALE

A87A

2018 STANDARD PLAN A87A



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
May 31, 2018
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

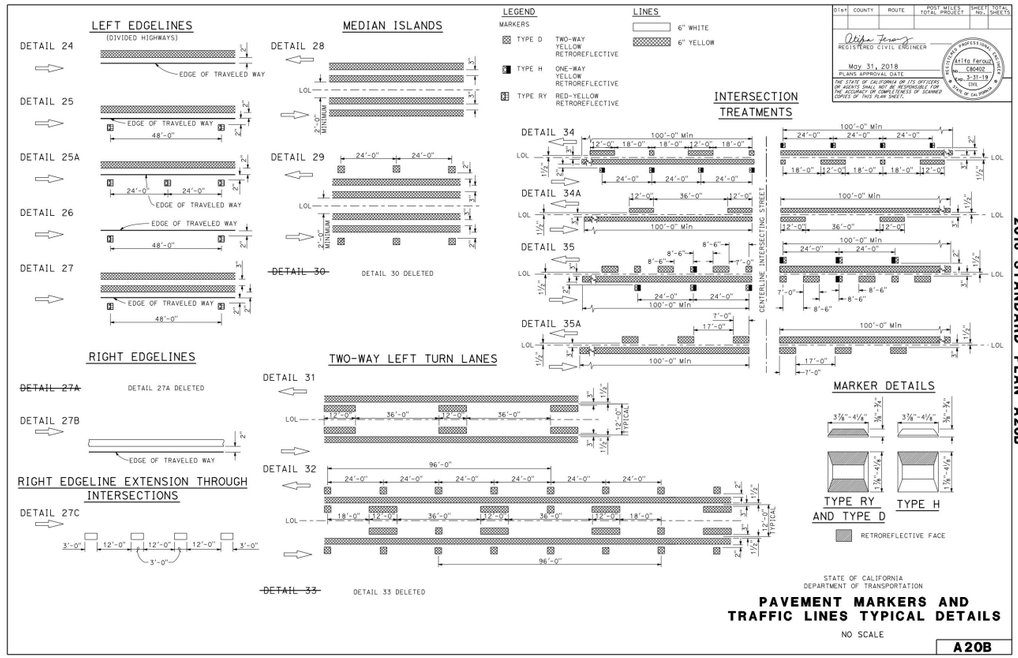
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

A20A

2018 STANDARD PLAN A20A



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

A20B

2018 STANDARD PLAN A20B

PRELIMINARY
NOT FOR CONSTRUCTION

DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

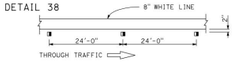
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAILS
CALTRANS STANDARD PLANS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 05-CD-12
SHEET NUMBER

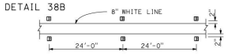
CHANNELIZING LINE

DETAIL 38



DETAIL 38A

DETAIL 38B



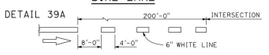
~~DETAIL 38C~~ DETAIL 38C DELETED

BIKE LANE LINE

DETAIL 39

INTERSECTION LINE
BIKE LANE

DETAIL 39A



LANE LINE EXTENSIONS THROUGH INTERSECTIONS

DETAIL 40

~~DETAIL 40A~~ DETAIL 40A DELETED

CENTER LINE EXTENSIONS THROUGH INTERSECTIONS

DETAIL 41

~~DETAIL 41A~~ DETAIL 41A DELETED

LEGEND

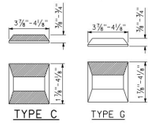
MARKERS

TYPE C RED-CLEAR RETROREFLECTIVE

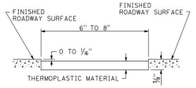
TYPE G ONE-WAY CLEAR RETROREFLECTIVE

6" YELLOW LINE

MARKER DETAILS



RETROREFLECTIVE FACE



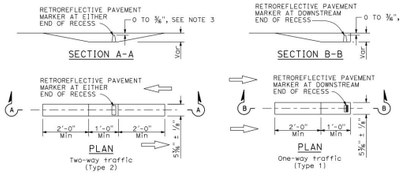
DETAIL FOR RECESSED THERMOPLASTIC TRAFFIC STRIPE

See Notes A and B.

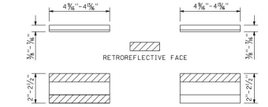
RECESSED THERMOPLASTIC NOTES

A. See typical traffic line details for pavement marking patterns.

B. The top of the thermoplastic installed in recessed pavement shall be 0 to ⅛" below the pavement surface.



RECESS DETAIL FOR RETROREFLECTIVE PAVEMENT MARKER



TYPE C AND TYPE D TYPE G AND TYPE H

See Notes 1 and 2.

RETROREFLECTIVE PAVEMENT MARKER FOR RECESSED INSTALLATION

RECESSED MARKER NOTES:

1. See typical traffic line details for marker patterns to be used with recessed pavement markers. Detail 14A requires a Type 2 recess.
2. The retroreflective pavement markers shown for recessed installations are not to be used for non-recessed installations.
3. The top of pavement markers installed in recesses shall be 0 to ⅛" below the pavement surface.

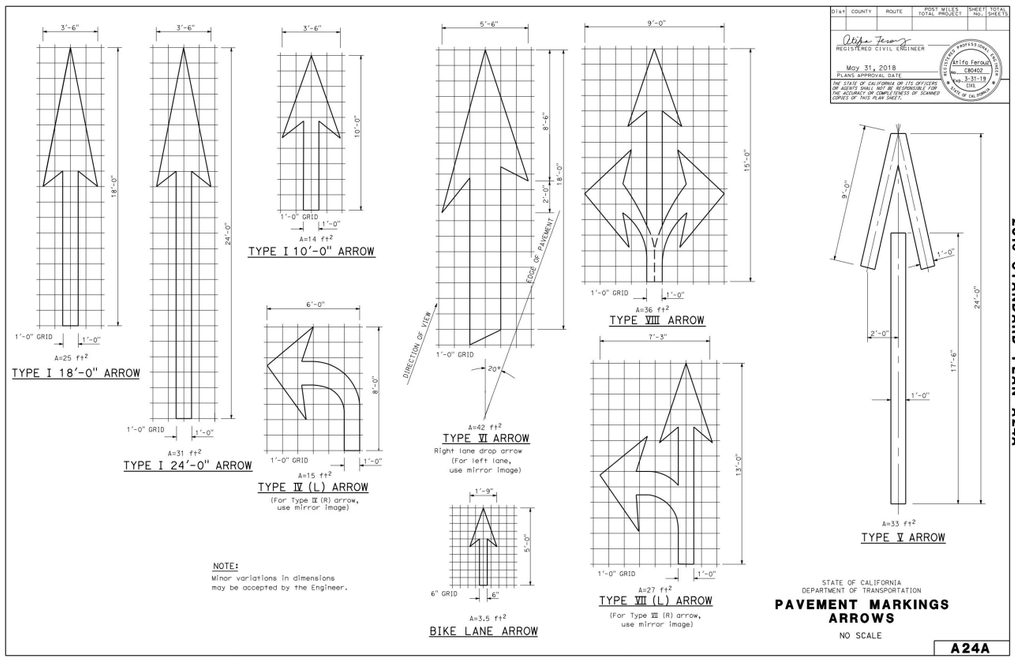
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

A20D

2018 STANDARD PLAN A20D



NOTE:
Minor variations in dimensions may be accepted by the Engineer.

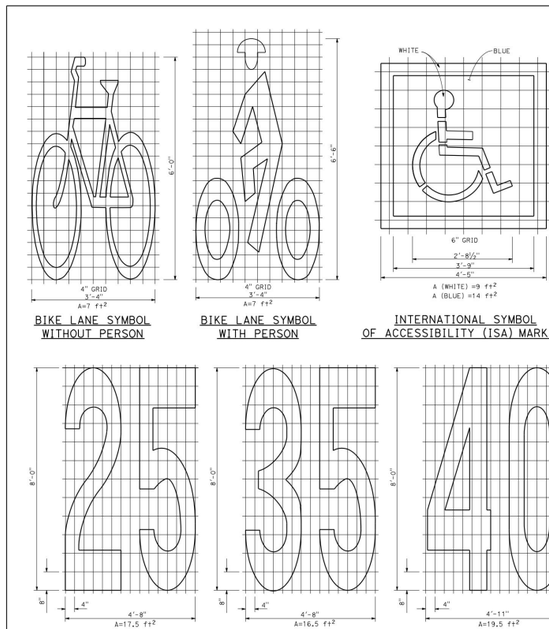
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS ARROWS

NO SCALE

A24A

2018 STANDARD PLAN A24A



NOTE:
Minor variations in dimensions may be accepted by the Engineer.

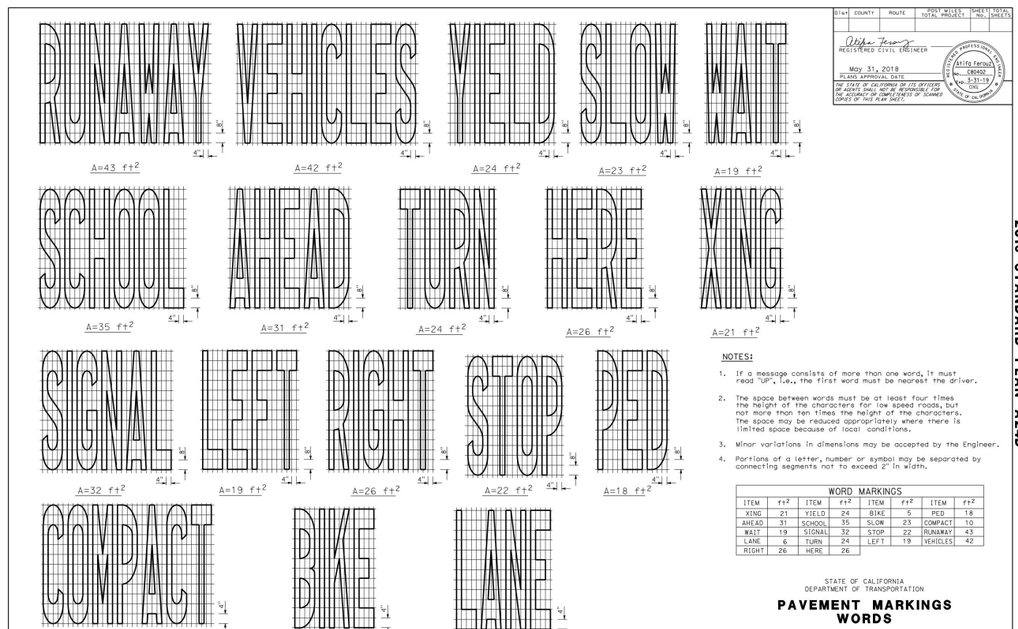
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

A24C

2018 STANDARD PLAN A24C



NOTES:

1. If a message consists of more than one word, it must read "UP", i.e., the first word must be nearest the driver.
2. The space between words must be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.

WORD MARKINGS							
ITEM	ft²	ITEM	ft²	ITEM	ft²	ITEM	ft²
XING	21	YIELD	24	BIKE	5	PED	18
AHEAD	31	SCHOOL	35	SLOW	23	COMPACT	10
WAIT	19	SIGNAL	32	STOP	22	RUNAWAY	43
LANE	6	TURN	24	LEFT	19	VEHICLES	42
RIGHT	26	HERE	26				

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS WORDS

NO SCALE

A24D

2018 STANDARD PLAN A24D

PRELIMINARY
NOT FOR CONSTRUCTION

DESIGN T LEWIS
DRAWN M KARBAKHSH
CHECKED T LEWIS
APPROVED M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAILS
CALTRANS STANDARD PLANS

DATE
FEBRUARY 2020

PROJECT NUMBER
17-082

DRAWING NUMBER
05-CD-13

SHEET NUMBER

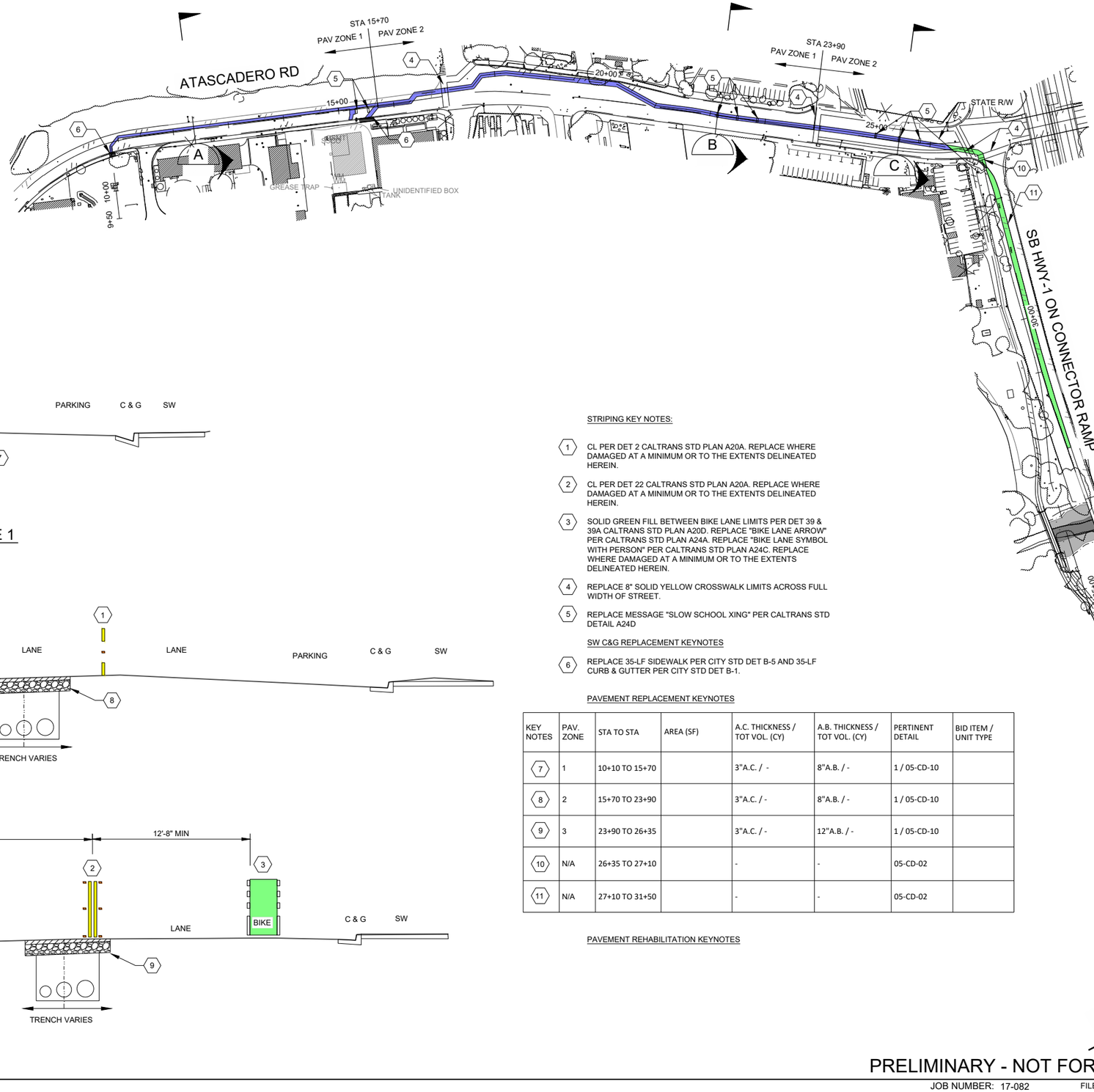
NORTH

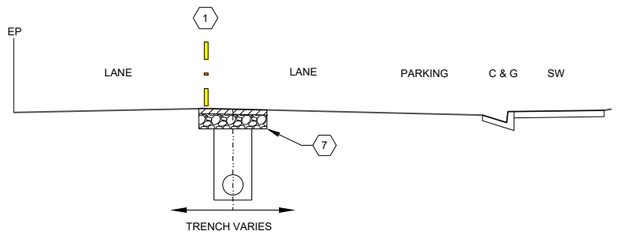
100 0 100 200 FEET

HORIZSCALE 1"=100'

SHEET NOTES

1. SECTIONS ARE APPROXIMATE AND INTENDED TO DEPICT TYPICAL CONDITIONS. TRENCH OUTLINE IS INTENDED TO DEPICT GENERAL EXCAVATION DISTURBANCES AND ORDER OF PIPELINES ONLY. REFERENCE PLAN AND PROFILES FOR EXACT SIZE, DEPTH, AND CLASS OF PIPE.





A PAV. ZONE 1
NTS

B PAV. ZONE 2
NTS

C PAV. ZONE 3
NTS

STRIPING KEY NOTES:

1. CL PER DET 2 CALTRANS STD PLAN A20A. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
2. CL PER DET 22 CALTRANS STD PLAN A20A. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
3. SOLID GREEN FILL BETWEEN BIKE LANE LIMITS PER DET 39 & 39A CALTRANS STD PLAN A20D. REPLACE "BIKE LANE ARROW" PER CALTRANS STD PLAN A24A. REPLACE "BIKE LANE SYMBOL WITH PERSON" PER CALTRANS STD PLAN A24C. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
4. REPLACE 8" SOLID YELLOW CROSSWALK LIMITS ACROSS FULL WIDTH OF STREET.
5. REPLACE MESSAGE "SLOW SCHOOL XING" PER CALTRANS STD DETAIL A24D

SW C&G REPLACEMENT KEYNOTES

6. REPLACE 35-LF SIDEWALK PER CITY STD DET B-5 AND 35-LF CURB & GUTTER PER CITY STD DET B-1.

PAVEMENT REPLACEMENT KEYNOTES

KEY NOTES	PAV. ZONE	STA TO STA	AREA (SF)	A.C. THICKNESS / TOT VOL. (CY)	A.B. THICKNESS / TOT VOL. (CY)	PERTINENT DETAIL	BID ITEM / UNIT TYPE
7	1	10+10 TO 15+70		3"A.C. / -	8"A.B. / -	1 / 05-CD-10	
8	2	15+70 TO 23+90		3"A.C. / -	8"A.B. / -	1 / 05-CD-10	
9	3	23+90 TO 26+35		3"A.C. / -	12"A.B. / -	1 / 05-CD-10	
10	N/A	26+35 TO 27+10		-	-	05-CD-02	
11	N/A	27+10 TO 31+50		-	-	05-CD-02	

PAVEMENT REHABILITATION KEYNOTES

PRELIMINARY - NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

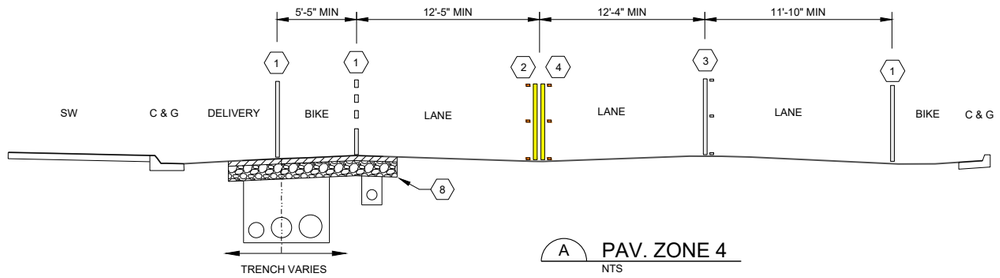
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PAVEMENT REPLACEMENT AND REHABILITATION PLAN
STA 10+00 TO STA 42+50

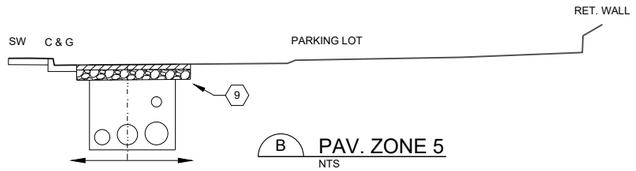
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 06-C-1
SHEET NUMBER ----

PRELIMINARY - NOT FOR CONSTRUCTION

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-06C101.DWG



A PAV. ZONE 4
NTS



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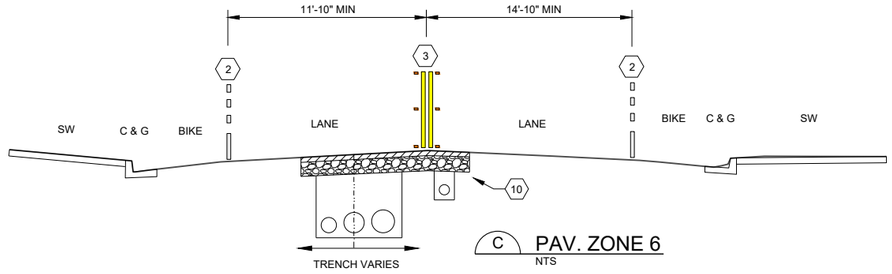

C PAV. ZONE 6
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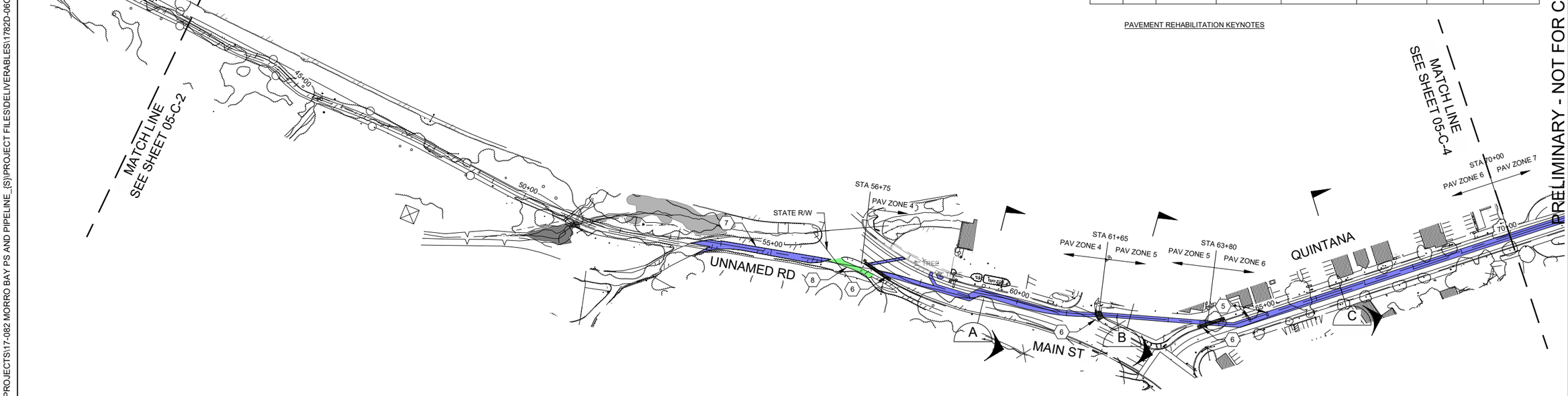


100 0 100 200 FEET
HORIZSCALE 1"=100'

NORTH

SHEET NOTES

1. SECTIONS ARE APPROXIMATE AND INTENDED TO DEPICT TYPICAL CONDITIONS. TRENCH OUTLINE IS INTENDED TO DEPICT GENERAL EXCAVATION DISTURBANCES AND ORDER OF PIPELINES ONLY. REFERENCE PLAN AND PROFILES FOR EXACT SIZE, DEPTH, AND CLASS OF PIPE.

STRIPING KEYNOTES:

1. BIKE LANE LIMITS PER DETAILS 39/39A CALTRANS STD PLAN A20D, "BIKE LANE ARROW" PER CALTRANS STD PLAN A24A, "BIKE LANE SYMBOL WITH PERSON" PER CALTRANS STD PLAN A24C. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
2. CL PER DET 22 CALTRANS STD PLAN A20A. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
3. DET 38 CALTRANS STD PLAN A20D. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
4. REPLACE AND MATCH DIRECTIONAL ARROWS PER CALTRANS STD PLAN A24A IF DAMAGED
5. REPLACE MESSAGE "SIGNAL AHEAD" PER CALTRANS STD DETAIL A24D

SW, C&G, RAMP REPLACEMENT KEYNOTES

6. REPLACE 135-LF SIDEWALK PER CITY STD DET B-5 AND 35-LF CURB & GUTTER PER CITY STD DET B-1. REPLACE SINGLE WHEELCHAIR RAMP PER CITY STD DETAIL B-4.

PAVEMENT REPLACEMENT KEYNOTES

KEY NOTES	PAV. ZONE	STA TO STA	AREA (SF)	A.C. THICKNESS / TOT VOL. (CY)	A.B. THICKNESS / TOT VOL. (CY)	PERTINENT DETAIL	BID ITEM / UNIT TYPE
7	N/A	53+50 TO 56+00		3"A.C. / -	8"A.B. / -	05-CD-04	
8	4	56+00 TO 61+65		3"A.C. / -	12"A.B. / -	1 / 05-CD-10	
9	5	61+65 TO 63+80		3"A.C. / -	8"A.B. / -	1 / 05-CD-10	
10	6	63+80 TO 70+00		-	-	05-CD-02	
11	N/A	N/A		-	-	05-CD-02	

PAVEMENT REHABILITATION KEYNOTES

NO.	DATE	REVISION	BY	APVD

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

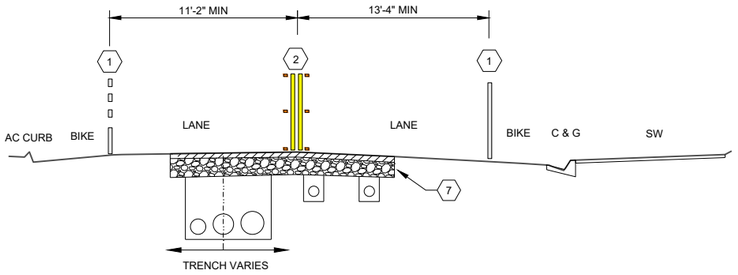
CIVIL
PAVEMENT REPLACEMENT AND REHABILITATION PLAN
STA 42+50 TO STA 70+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 06-C-2
SHEET NUMBER ----

PRELIMINARY - NOT FOR CONSTRUCTION

PRELIMINARY - NOT FOR CONSTRUCTION

100 0 100 200 FEET
HORIZSCALE 1"=100'



A PAV. ZONE 7
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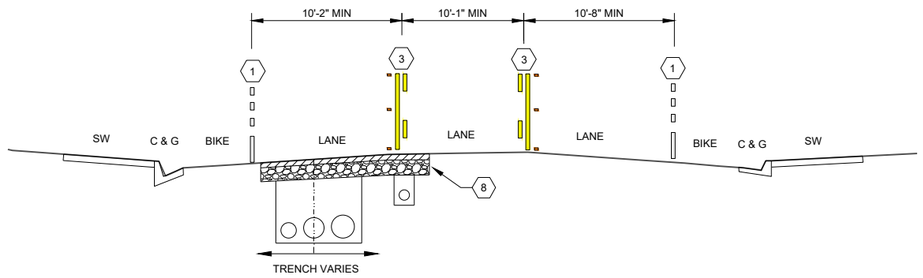

B PAV. ZONE 8
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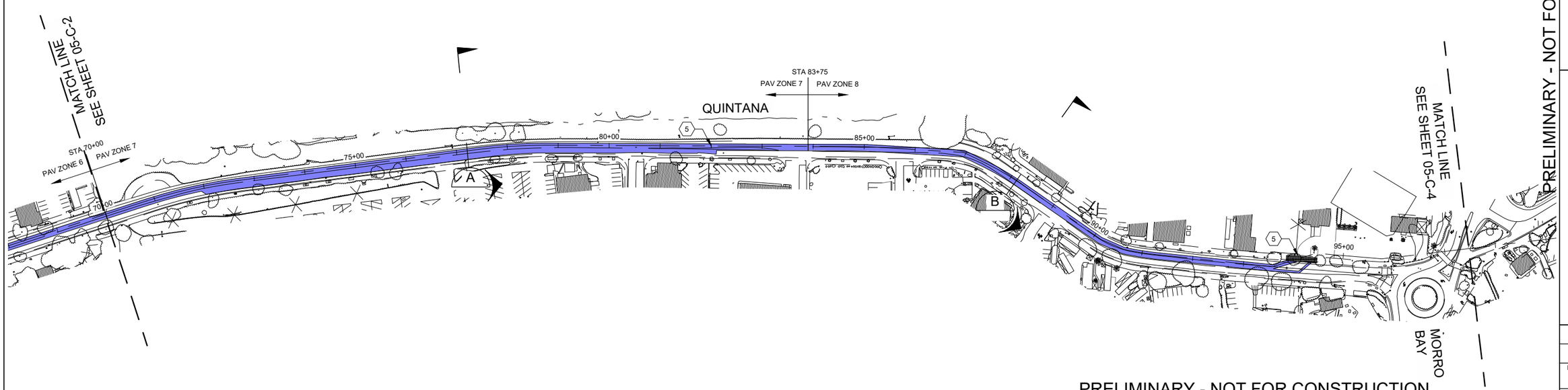

SHEET NOTES

1. SECTIONS ARE APPROXIMATE AND INTENDED TO DEPICT TYPICAL CONDITIONS. TRENCH OUTLINE IS INTENDED TO DEPICT GENERAL EXCAVATION DISTURBANCES AND ORDER OF PIPELINES ONLY. REFERENCE PLAN AND PROFILES FOR EXACT SIZE, DEPTH, AND CLASS OF PIPE.

STRIPING KEYNOTES:

1. BIKE LANE LIMITS PER DETAILS 39/39A CALTRANS STD PLAN A20D, "BIKE LANE ARROW" PER CALTRANS STD PLAN A24A, "BIKE LANE SYMBOL WITH PERSON" PER CALTRANS STD PLAN A24C. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
2. CL PER DET 22 CALTRANS STD PLAN A20A. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
3. TWO WAY LEFT TURN PER DET 32 CALTRANS STD PLAN A20D. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
4. REPLACE MEDIAN ISLAND WITH DIAGONAL FILL PER DET 29 CALTRANS STD PLAN A20B

SW, C&G, RAMP REPLACEMENT KEYNOTES

5. REPLACE 60-LF SIDEWALK PER CITY STD DET B-5 AND 35-LF CURB & GUTTER PER CITY STD DET B-1. REPLACE SINGLE WHEELCHAIR RAMP PER CITY STD DETAIL B-4.

PAVEMENT REPLACEMENT KEYNOTES

KEY NOTES	PAV. ZONE	STA TO STA	AREA (SF)	A.C. THICKNESS / TOT VOL. (CY)	A.B. THICKNESS / TOT VOL. (CY)	PERTINENT DETAIL	BID ITEM / UNIT TYPE
6	7	70+00 TO 83+75		4"A.C. / -	12"A.B. / -	1 / 05-CD-10	
7	8	83+75 TO 94+00		4"A.C. / -	12"A.B. / -	1 / 05-CD-10	

PAVEMENT REHABILITATION KEYNOTES

NO.	DATE	REVISION	BY	APVD

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PAVEMENT REPLACEMENT AND REHABILITATION PLAN
STA 70+00 TO STA 97+50

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 06-C-3
SHEET NUMBER ----

PRELIMINARY - NOT FOR CONSTRUCTION

PRELIMINARY - NOT FOR CONSTRUCTION

JOB NUMBER: 17-082 FILENAME: 1782D-06C101.DWG PLOT DATE: 02/10/20 PLOT TIME: 15:16:03

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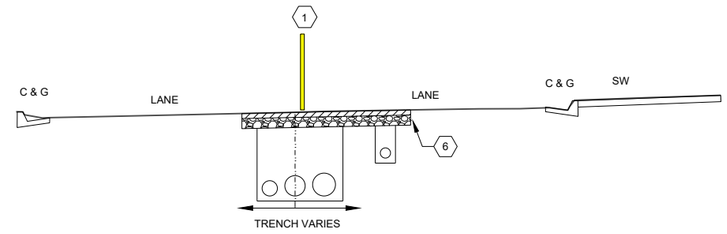
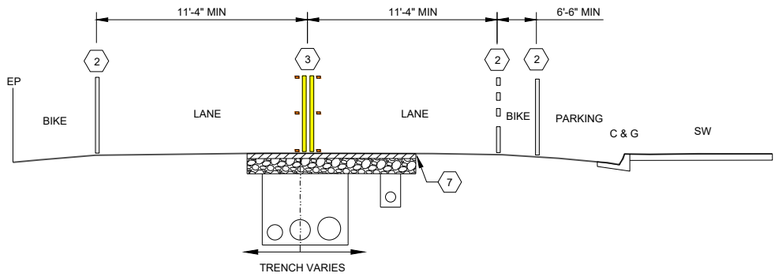


A PAV. ZONE 9
NTS



B PAV. ZONE 10
NTS

SHEET NOTES

1. SECTIONS ARE APPROXIMATE AND INTENDED TO DEPICT TYPICAL CONDITIONS. TRENCH OUTLINE IS INTENDED TO DEPICT GENERAL EXCAVATION DISTURBANCES AND ORDER OF PIPELINES ONLY. REFERENCE PLAN AND PROFILES FOR EXACT SIZE, DEPTH, AND CLASS OF PIPE.

STRIPING KEYNOTES:

1. SOLID YELLOW CL. REPLACE WERE DAMAGED AT A MINIMUM OR TO THE EXTENS DELINEATED HEREIN.
2. BIKE LANE LIMITS PER DETAILS 39/39A CALTRANS STD PLAN A20D, "BIKE LANE ARROW" PER CALTRANS STD PLAN A24A, "BIKE LANE SYMBOL WITH PERSON" PER CALTRANS STD PLAN A24C. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
3. CL PER DET 22 CALTRANS STD PLAN A20A. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
4. REPLACE MESSAGE "STOP" PER CALTRANS STD DETAIL A24D AND SOLID WHITE STOP LINE TO IT'S FULL EXTENT

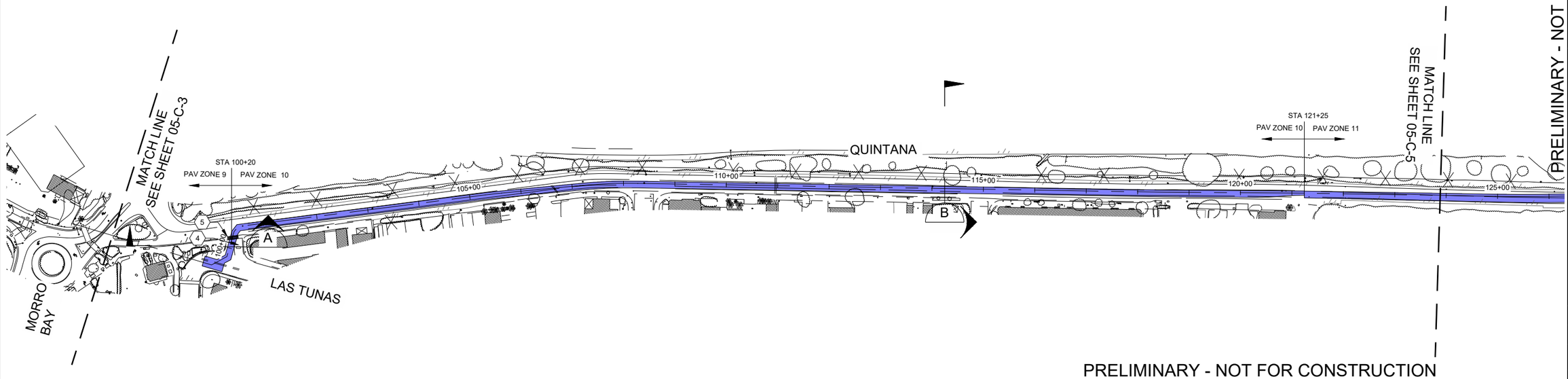
SW, C&G, RAMP REPLACEMENT KEYNOTES

5. REPLACE 20-LF CONCRETE VALLEY GUTTER PER CITY STD DET B-3.

PAVEMENT REPLACEMENT KEYNOTES

KEY NOTES	PAV. ZONE	STA TO STA	AREA (SF)	A.C. THICKNESS / TOT VOL. (CY)	A.B. THICKNESS / TOT VOL. (CY)	PERTINENT DETAIL	BID ITEM / UNIT TYPE
6	9	99+40 TO 100+35		4"A.C. / XYZ	12"A.B. / XYZ	1 / 05-CD-10	
7	10	100+20 TO 121+25		4"A.C. / XYZ	12"A.B. / XYZ	1 / 05-CD-10	

PAVEMENT REHABILITATION KEYNOTES



PRELIMINARY - NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PAVEMENT REPLACEMENT AND REHABILITATION PLAN
STA 97+50 TO STA 125+00

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 06-C-4
SHEET NUMBER ----

PRELIMINARY - NOT FOR CONSTRUCTION

JOB NUMBER: 17-082 FILENAME: 1782D-06C101.DWG PLOT DATE: 02/5/20 PLOT TIME: 20:19:44

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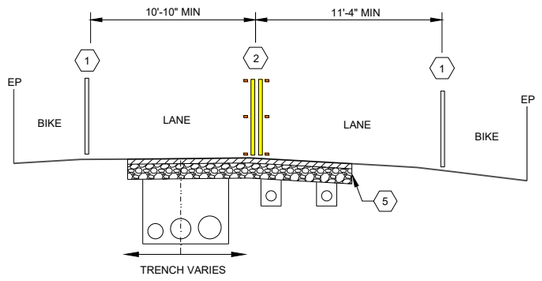

A PAV. ZONE 11
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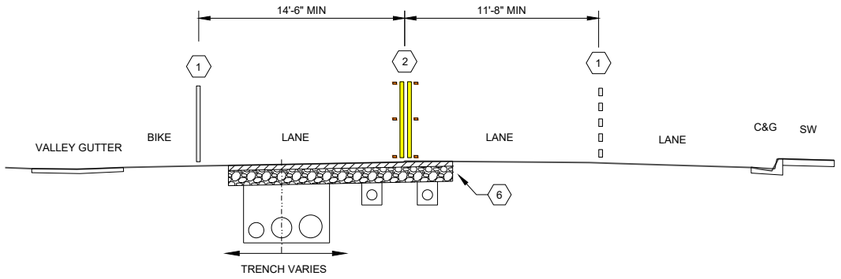

B PAV. ZONE 12
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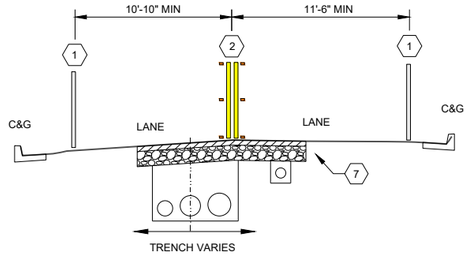

C PAV. ZONE 13
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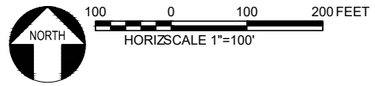


SHEET NOTES

1. SECTIONS ARE APPROXIMATE AND INTENDED TO DEPICT TYPICAL CONDITIONS. TRENCH OUTLINE IS INTENDED TO DEPICT GENERAL EXCAVATION DISTURBANCES AND ORDER OF PIPELINES ONLY. REFERENCE PLAN AND PROFILES FOR EXACT SIZE, DEPTH, AND CLASS OF PIPE.

STRIPING KEYNOTES:

1. BIKE LANE LIMITS PER DETAILS 39/39A CALTRANS STD PLAN A20D, "BIKE LANE ARROW" PER CALTRANS STD PLAN A24A, "BIKE LANE SYMBOL WITH PERSON" PER CALTRANS STD PLAN A24C. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
2. CL PER DET 22 CALTRANS STD PLAN A20A. REPLACE WHERE DAMAGED AT A MINIMUM OR TO THE EXTENTS DELINEATED HEREIN.
3. REPLACE MESSAGE "STOP" PER CALTRANS STD DETAIL A24D AND SOLID WHITE STOP LINE TO IT'S FULL EXTENT

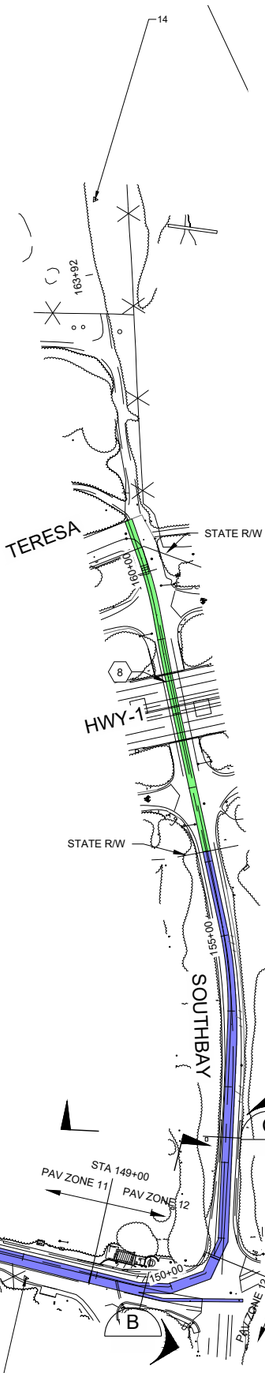
SW, C&G, AND RAMP REPLACEMENT KEYNOTES

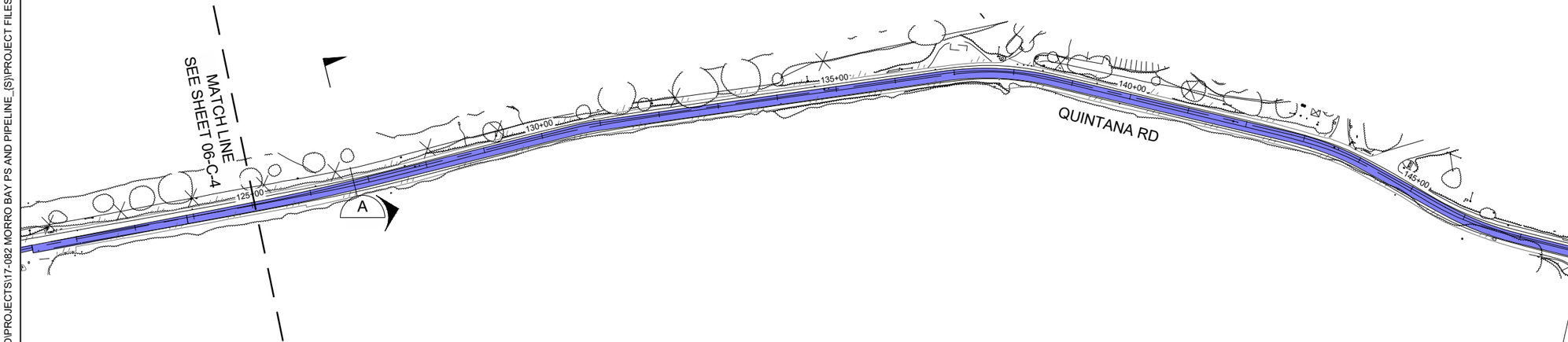
4. REPLACE 20-LF CONCERETE VALLEY GUTTER PER CITY STD DET B-3.

PAVEMENT REPLACEMENT KEYNOTES

KEY NOTES	PAV. ZONE	STA TO STA	AREA (SF)	A.C. THICKNESS / TOT VOL. (CY)	A.B. THICKNESS / TOT VOL. (CY)	PERTINENT DETAIL	BID ITEM / UNIT TYPE
5	11	125+00 TO 149+00		4"A.C. / -	12"A.B. / -	1 / 05-CD-10	
6	12	149+00 TO 150+50		4"A.C. / -	12"A.B. / -	1 / 05-CD-10	
7	13	150+50 TO 156+15		4"A.C. / -	12"A.B. / -	1 / 05-CD-10	
8	N/A	156+15 TO END	-	-	-	05-CD-08	

PAVEMENT REHABILITATION KEYNOTES





PRELIMINARY - NOT FOR CONSTRUCTION

PRELIMINARY - NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DESIGN P WEBSTER
DRAWN P WEBSTER
CHECKED T LEWIS
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PAVEMENT REPLACEMENT AND REHABILITATION PLAN
STA 125+00 TO END

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 06-C-5
SHEET NUMBER ----

L:\CADPROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-06C101.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-06C101.DWG PLOT DATE: 02/5/20 PLOT TIME: 20:20:01

DEMO THE FOLLOWING ITEMS PER SPEC 02220; EX GUARDRAIL, GRATING, HANDRAIL, FENCING, HAND WASHING SINK, PLATFORM, LADDER, LIGHT POLE, ATTACHMENTS, AND PEDESTALS. CUT AND CAP DRAINS, WATERLINES, POWER AND CONDUITS TO EG. SALVAGE EQUIPMENT AND RETURN TO OWNER

1 PHOTO
NTS
06-CD-02

DESIGNED A LINDEMAN
DRAWN B TROTTER
CHECKED A LINDEMAN
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

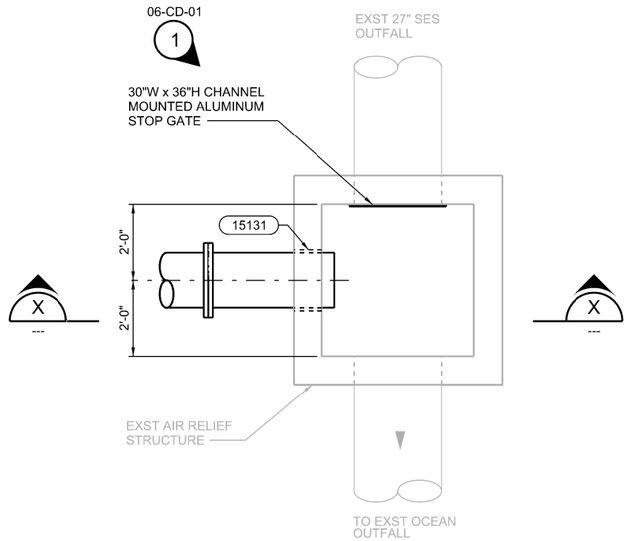
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

CIVIL DETAILS
AIR RELIEF STRUCTURE
DEMOLITION PHOTO

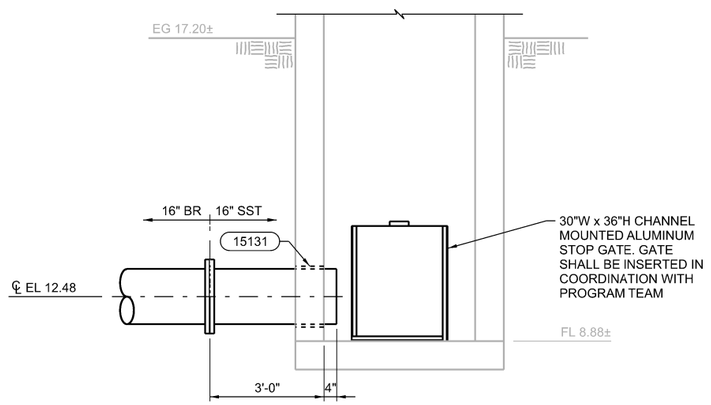
PRELIMINARY
NOT FOR
CONSTRUCTION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
06-CD-1
SHEET NUMBER X

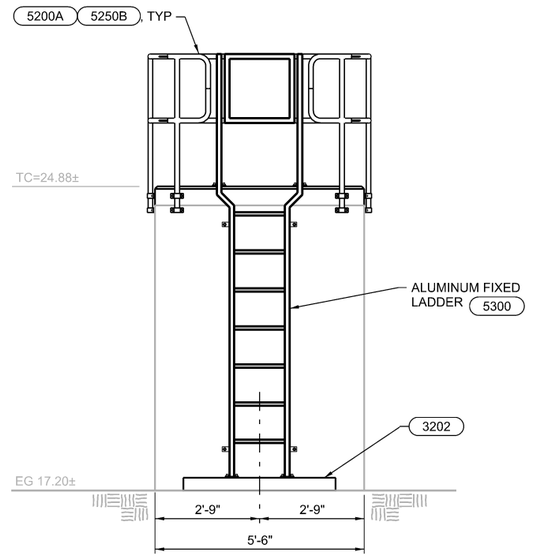
FILENAME: 1782D-06D101.DGN PLOT DATE: 2/10/2020 4:58:04 PM



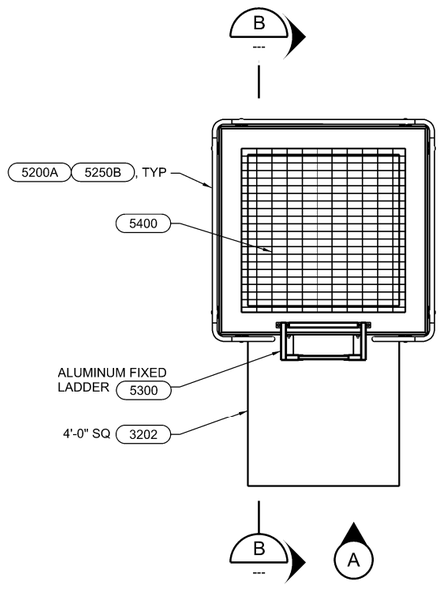
FOUNDATION PLAN
1/2" = 1'-0"



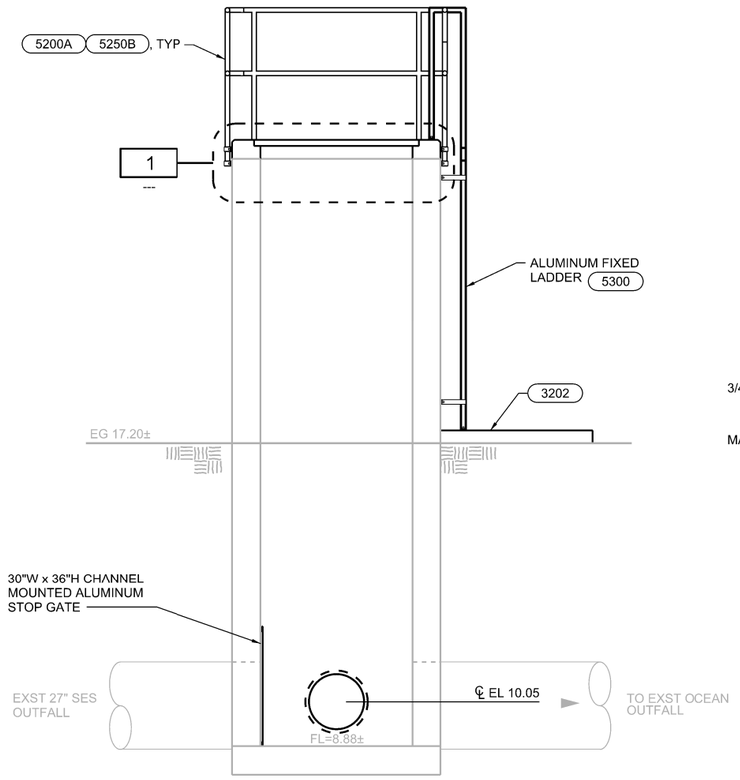
A SECTION
1/2" = 1'-0"



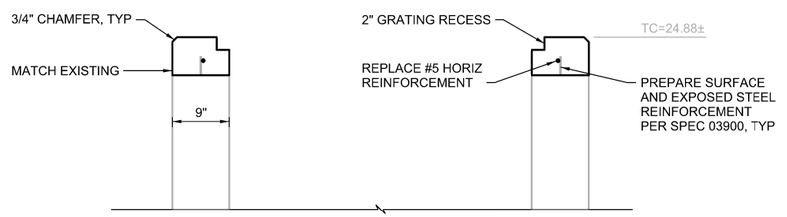
A ELEVATION
1/2" = 1'-0"



TOP PLAN
1/2" = 1'-0"



B SECTION
1/2" = 1'-0"



1 DETAIL
1" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

1 0 1 2 FEET
SCALE 1"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

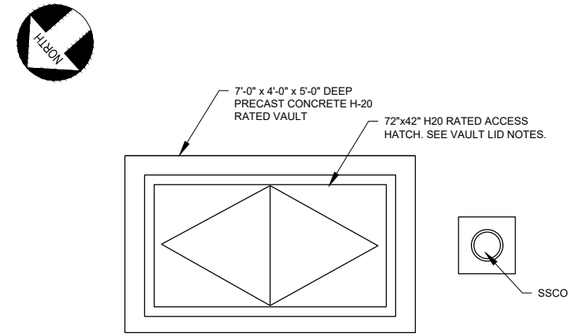
DESIGNED A LINGEMAN
DRAWN B TROTTER
CHECKED A LINDEMAN
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

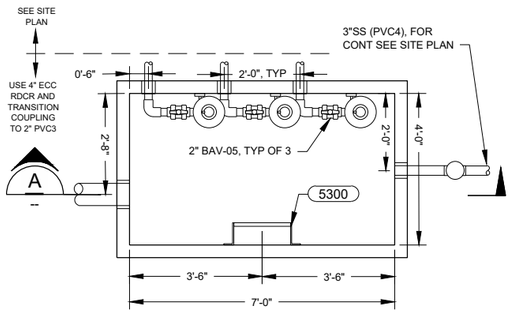
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAILS
AIR RELIEF STRUCTURE REHABILITATION PLAN

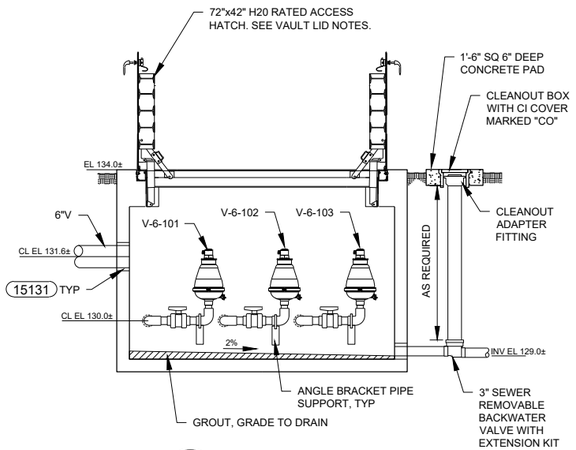
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 06-CD-02
SHEET NUMBER X



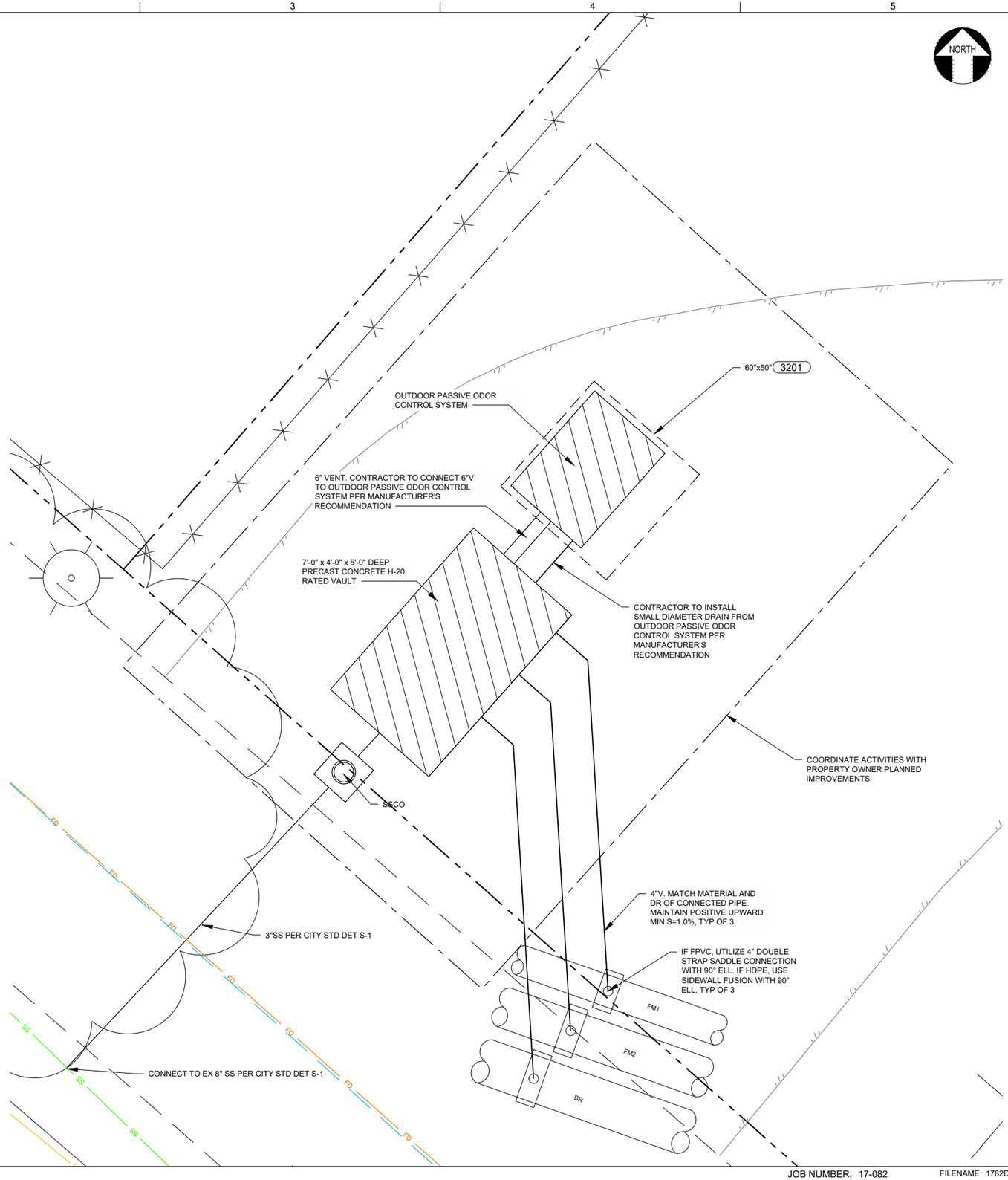
TOP PLAN
1/2"=1'-0"



PLAN
1/2"=1'-0"



A SECTION
-
1/2"=1'-0"



VAULT LID NOTES

1. HEAVY DUTY AL COVER AND FRAME, NON-SLIP SURFACE, STANDARD H-20 WHEEL LOAD IN OFF STREET LOCATION
2. CHANNEL FRAME ALL FOUR SIDES, W/ A 1-1/2" DR COUPLING, INSTALL PVC DRAIN PIPE TO DAYLIGHT
3. #316 SS HEAVY DUTY HINGES AND PINS. #316 SS HEAVY DUTY FLUSH-WITH-TOP LIFT HANDLE
4. LIFT ASSISTANCE SHALL BE #316 SS HEAVY DUTY COMPRESSION SPRING ENCLOSED IN TELESCOPIC TUBE. UPPER TUBE SHALL BE THE OUTER TUBE.
5. #316 SS AUTOMATIC HOLD OPEN ARM W/ RELEASE HANDLE
6. #316 SS HEAVY DUTY SLAM LOCK W/ FIXED INTERIOR HANDLE AND REMOVABLE EXTERIOR HANDLE AND FLUSH-WITH-TOP SS PLUG
7. RECESSED UNDER PANEL PADLOCK CLIP
8. ALL COVER HARDWARE SHALL BE #316 SS THROUGH

DESIGN T. LEWIS
DRAWN T. LEWIS
CHECKED M. FISHER
APPROVED M. FISHER

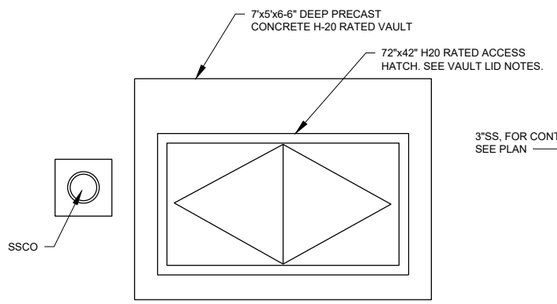
PRELIMINARY - NOT FOR CONSTRUCTION

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

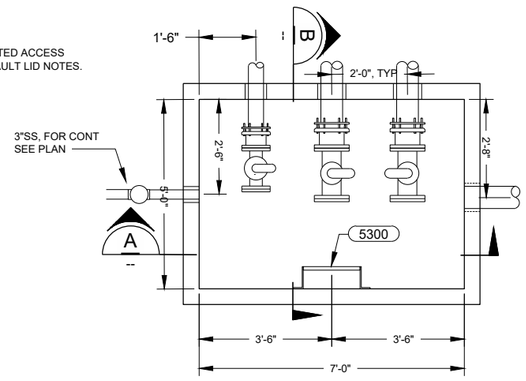
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAIL
ROUNDABOUT ARV VAULT AND ODOR CONTROL PLAN

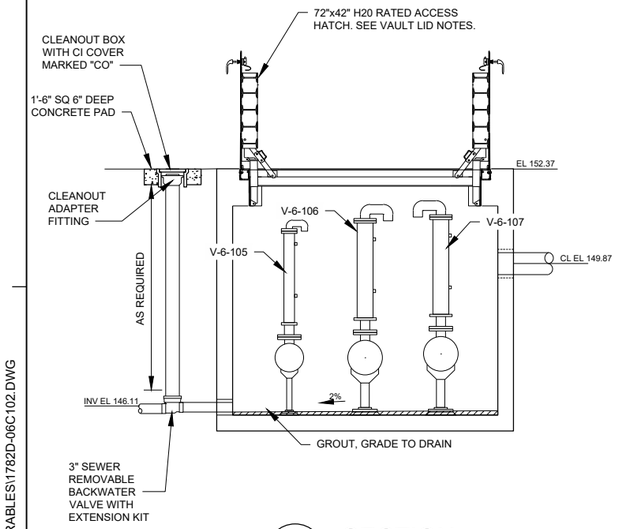
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 06-CD-03
SHEET NUMBER



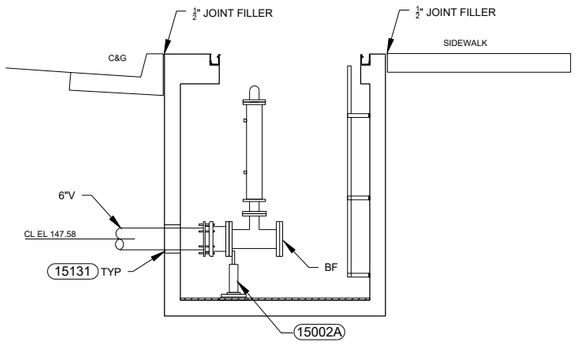
TOP PLAN
1/2"=1'-0"



PLAN
1/2"=1'-0"



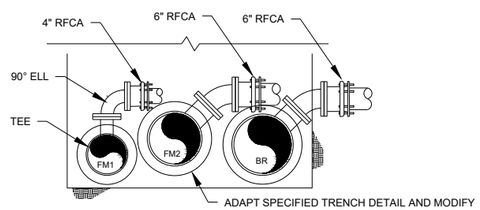
A SECTION
1/2"=1'-0"



B SECTION
1/2"=1'-0"

VAULT LID NOTES

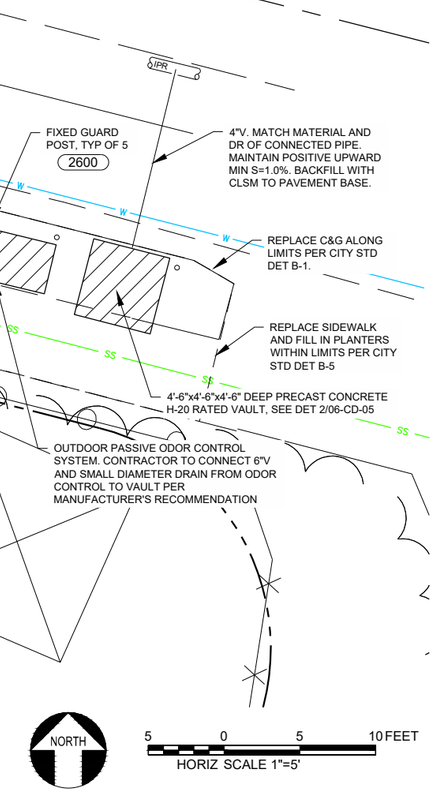
1. HEAVY DUTY AL COVER AND FRAME, NON-SLIP SURFACE, STANDARD H-20 WHEEL LOAD IN OFF STREET LOCATION
2. CHANNEL FRAME ALL FOUR SIDES, W/ A 1-1/2" DR COUPLING, INSTALL PVC DRAIN PIPE TO DAYLIGHT
3. #316 SS HEAVY DUTY HINGES AND PINS. #316 SS HEAVY DUTY FLUSH-WITH-TOP LIFT HANDLE
4. LIFT ASSISTANCE SHALL BE #316 SS HEAVY DUTY COMPRESSION SPRING ENCLOSED IN TELESCOPIC TUBE. UPPER TUBE SHALL BE THE OUTER TUBE.
5. #316 SS AUTOMATIC HOLD OPEN ARM W/ RELEASE HANDLE
6. #316 SS HEAVY DUTY SLAM LOCK W/ FIXED INTERIOR HANDLE AND REMOVABLE EXTERIOR HANDLE AND FLUSH-WITH-TOP SS PLUG
7. RECESSED UNDER PANEL PADLOCK CLIP
8. ALL COVER HARDWARE SHALL BE #316 SS THROUGH



NOTES

1. THIS DETAIL ASSUME FPVC IS SELECTED. FOR HDPE, UTILIZE SIDEWALL FUSION AND INSTALL THE ELBOWS DEPICTED.

C SECTION
1/2"=1'-0"



NORTH
5 0 5 10 FEET
HORIZ SCALE 1"=5'

NORTH
2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	T. LEWIS
DRAWN	T. LEWIS
CHECKED	M. FISHER
APPROVED	M. FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL DETAIL

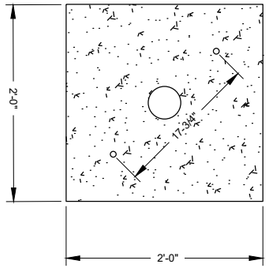
QUINTANA HIGH POINT CARV VAULT AND ODOR CONTROL PLAN

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	06-CD-04
SHEET NUMBER	

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-06C102.DWG

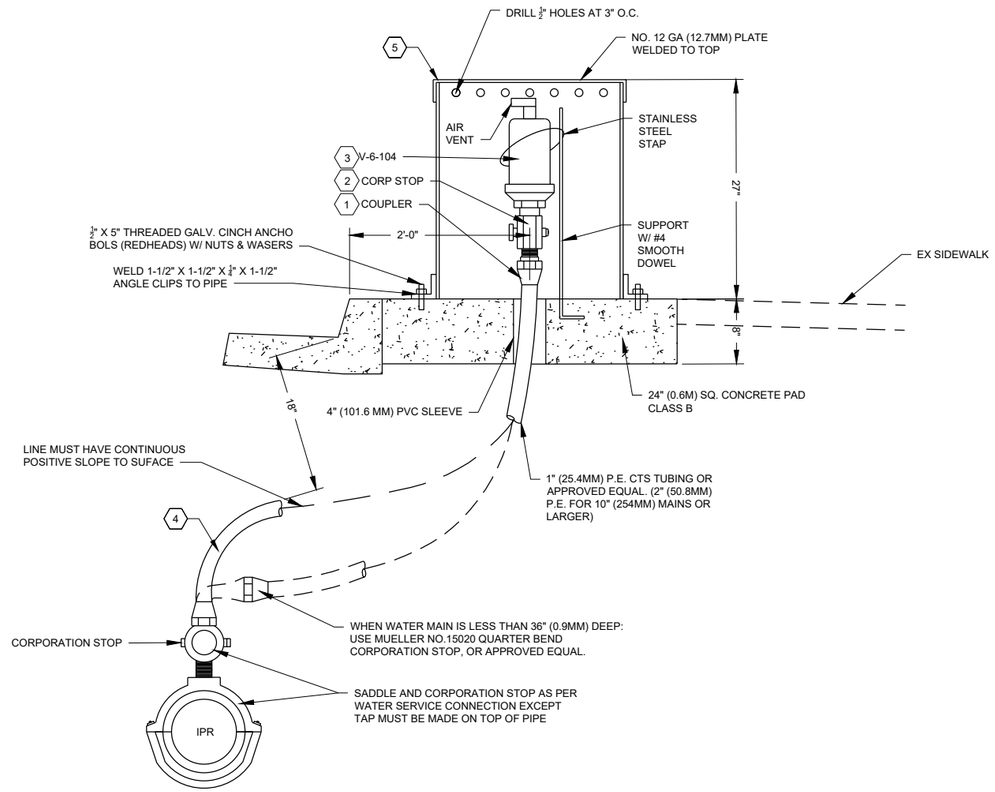
JOB NUMBER: 17-082 FILENAME: 1782D-06C102.DWG PLOT DATE: 02/10/20 PLOT TIME: 15:53:50

PLAN
NTS

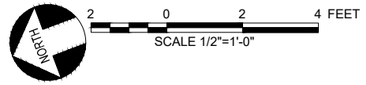


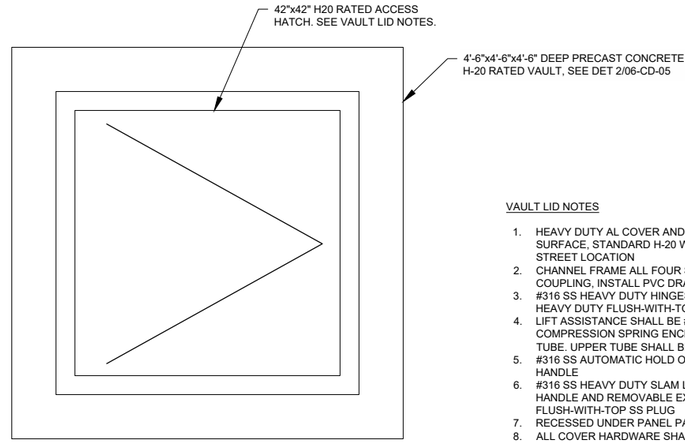
KEY NOTES

1. JONES 2605 1" X ¾" COUPLER OR APPROVED EQUAL (COMP. ADAPTER)
2. CRP-01 1" CURB STOP BALL VALVE OR APPROVED EQUAL
3. V-6-104
4. RISE MUST BE MINIMUM 18" BELOW GUTTER FLOW LINE
5. FABRICATE LID FROM 10 GA. GALVANIZED STEEL WITH PIN HINGE AND PADLOCK LUGS, LOOSE FIT OVER BARREL FABRICATE BARREL FROM SCH 10, GALVANIZED 20" STEEL PIPE. DRILL 20-1/2" HOLES 3" FROM TOP OF BARREL. PRIME COAT AND PAINT WITH 2 COATS OF EPOXY ENAMEL.



2 ABOVE GRADE IPR ARV
05-PP-21 NTS

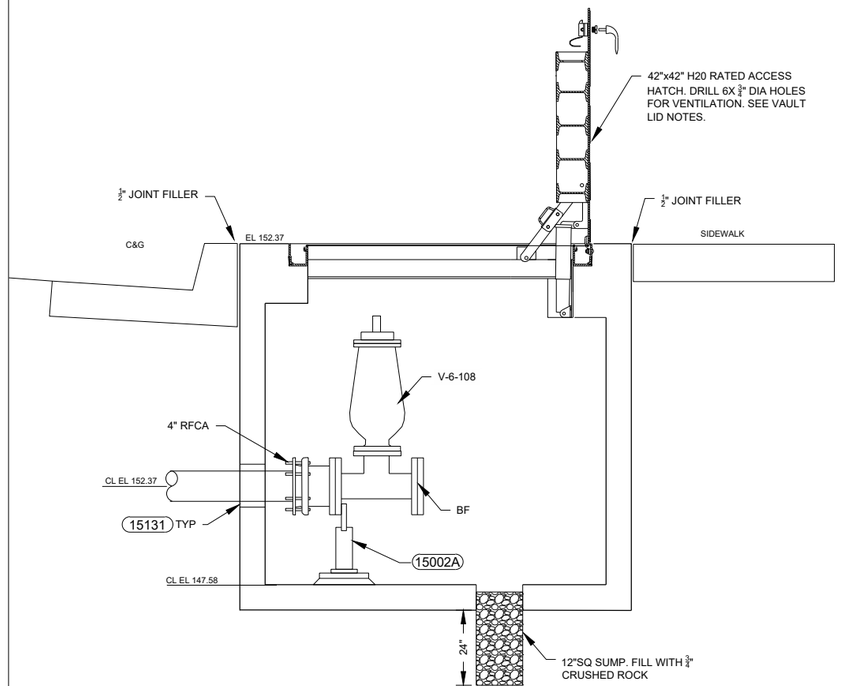




TOP PLAN
1/2"=1'-0"

VAULT LID NOTES

1. HEAVY DUTY AL COVER AND FRAME, NON-SLIP SURFACE, STANDARD H-20 WHEEL LOAD IN OFF STREET LOCATION
2. CHANNEL FRAME ALL FOUR SIDES. W/ A 1-1/2" DR COUPLING, INSTALL PVC DRAIN PIPE TO DAYLIGHT
3. #316 SS HEAVY DUTY HINGES AND PINS. #316 SS HEAVY DUTY FLUSH-WITH-TOP LIFT HANDLE
4. LIFT ASSISTANCE SHALL BE #316 SS HEAVY DUTY COMPRESSION SPRING ENCLOSED IN TELESCOPIC TUBE. UPPER TUBE SHALL BE THE OUTER TUBE.
5. #316 SS AUTOMATIC HOLD OPEN ARM W/ RELEASE HANDLE
6. #316 SS HEAVY DUTY SLAM LOCK W/ FIXED INTERIOR HANDLE AND REMOVABLE EXTERIOR HANDLE AND FLUSH-WITH-TOP SS PLUG
7. RECESSED UNDER PANEL PADLOCK CLIP
8. ALL COVER HARDWARE SHALL BE #316 SS THROUGH



2 IPR CARV
06-CD-04 1'=1'-0"

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	T. LEWIS
DRAWN	T. LEWIS
CHECKED	M. FISHER
APPROVED	M. FISHER

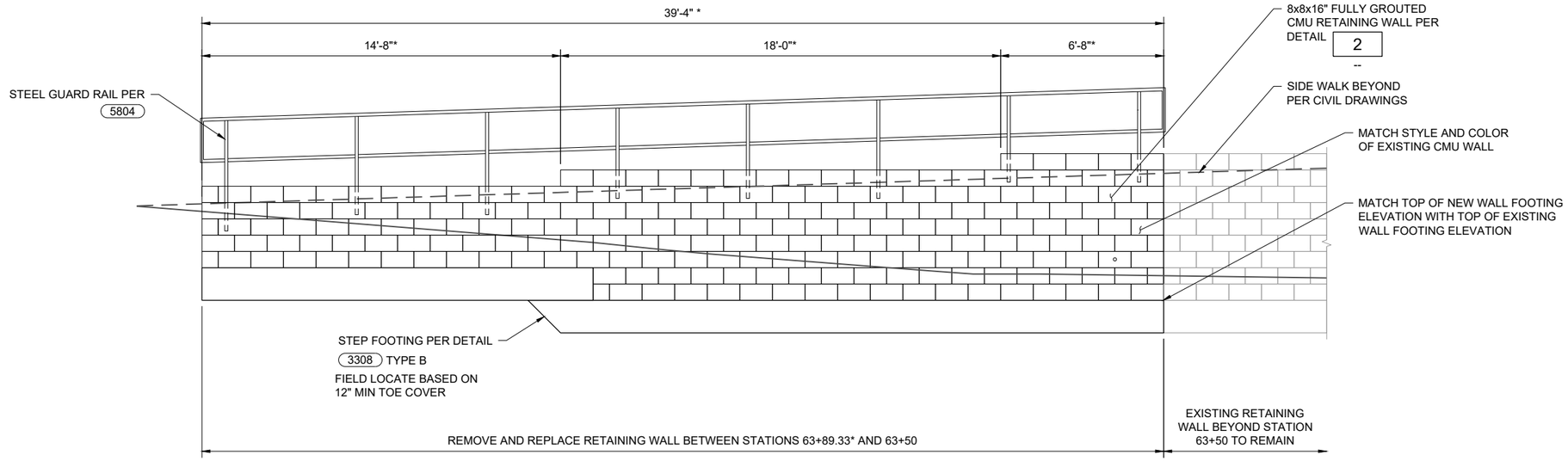
WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

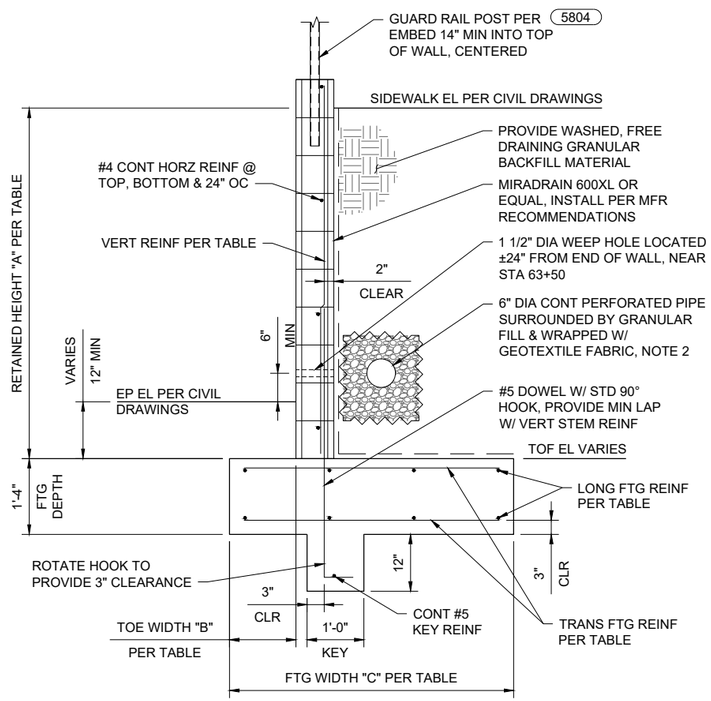
CIVIL DETAIL
IPR ARV & CARV DETAILS

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	06-CD-05
SHEET NUMBER	

* = FIELD VERIFY WALL EXTENTS PRIOR TO DEMOLITION AND CONSTRUCTION



1 WALL ELEVATION
05-PP-14 3/8" = 1'-0"



2 MAIN ST RETAINING WALL DETAIL
-- 3/4" = 1'-0"

RETAINING WALL NOTES:

1. PROVIDE PENETRATION THRU MIRADRAIN FABRIC.

2. PROVIDE 12" MIN WIDTH x 18" HIGH OF GRANULAR FILL W/ 6" MIN COVER ABOVE PERFORATED PIPE.

3. PIPE AND DRAIN NOT REQUIRED FOR RETAINED HEIGHTS LESS THAN 2'

RETAINING WALL TABLE

RETAINED HEIGHT "A"	TOE WIDTH "B"	FOOTING WIDTH "C"	KEY DEPTH "D"	VERT WALL REINF	TRANS FTG REINF[1]	LONG FTG REINF[1,2]
0' < A < 2'-0"	6"	2'-0"	1'-0"	#5 @ 24" OC	#4 @ 12" OC	(2) #4 CONT
2'-0' < A < 4'-0"	1'-0"	3'-0"	1'-0"	#5 @ 24" OC	#4 @ 12" OC	(3) #4 CONT
4'-0' < A < 6'-0"	1'-0"	4'-3"	1'-0"	#5 @ 16" OC	#5 @ 16" OC	(4) #4 CONT

NOTES: 1) TRANS AND LONG REINF SHOWN IS TYPICAL FOR TOP & BOT MATS
2) EQUALLY SPACE CONT LONG REINF ACROSS FTG WIDTH

DESIGN A LINDEMAN
DRAWN L CHAPMAN
CHECKED M FISHER
APPROVED M FISHER

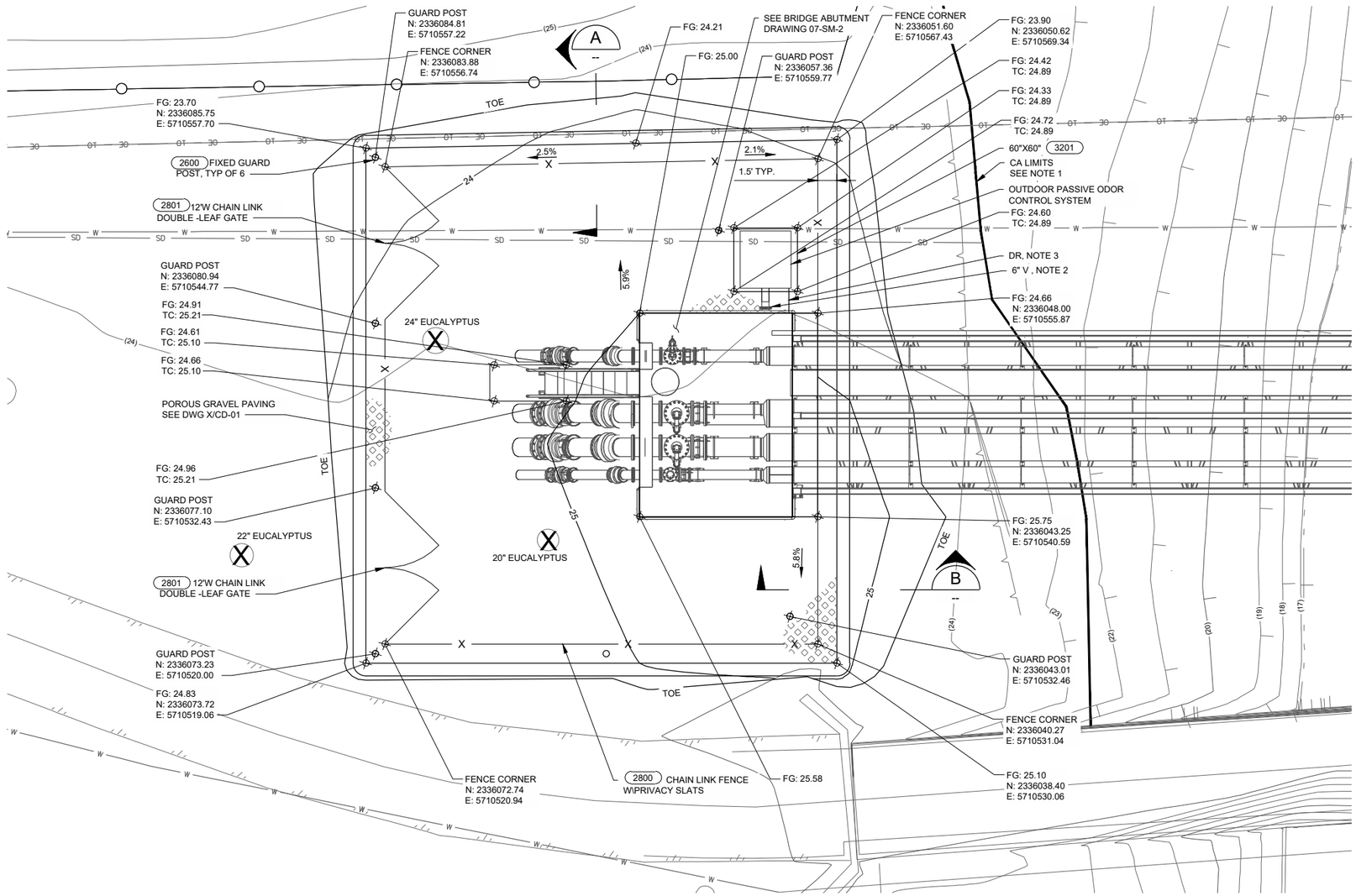
PRELIMINARY - NOT FOR CONSTRUCTION

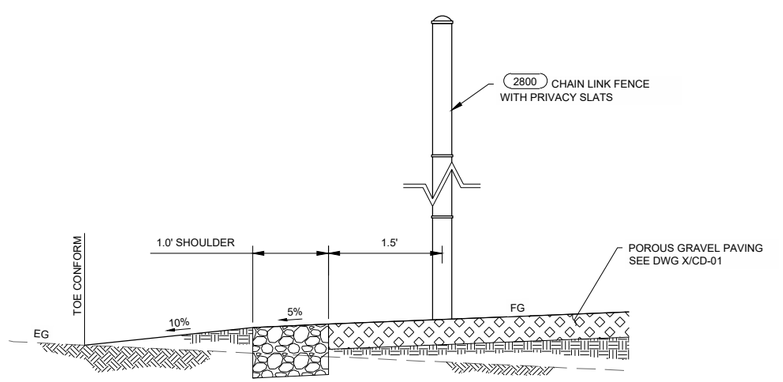
WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

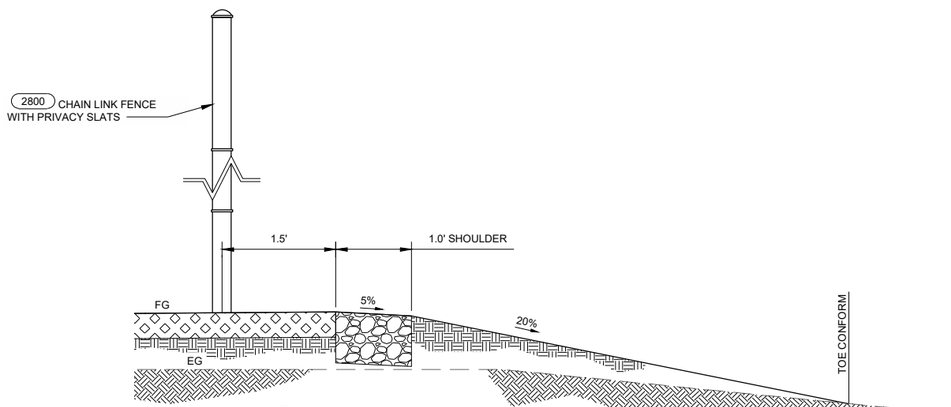
CIVIL DETAILS
MAIN STREET
RETAINING WALL DETAIL

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 06-CD-6
SHEET NUMBER XX





A SECTION
-- 1"= 1'



B SECTION
-- 1"= 1'

NOTES:

1. CONSTRUCTION ACTIVITY (CA) LIMITS OFFSET 3' FROM EDGE OF WETLAND BOUNDARY. GROUND DISTURBING ACTIVITIES SHALL NOT EXTEND PAST CA LIMITS. SWPPP BMPS SHALL BE INSTALLED PER APPROVED SWPPP PLAN AT A MINIMUM ALONG CA LIMITS.
2. CONTRACTOR TO CONNECT 6"V (FL) TO OUTDOOR PASSIVE ODOR CONTROL SYSTEM PER MANUFACTURER'S RECOMMENDATION.
3. CONTRACTOR TO INSTALL SMALL DIAMETER DRAIN FROM OUTDOOR PASSIVE ODOR CONTROL SYSTEM PER MANUFACTURER'S RECOMMENDATION.

LEGEND:

X DEMOLISH EXISTING TREES PER 05-PP-06 AND 05-PP-07

1 0 1 2 FEET
SCALE 1"=1'

5 0 5 10 FEET
SCALE 1"=5'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN: P WEBSTER
DRAWN: P WEBSTER
CHECKED: T LEWIS
APPROVED: M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

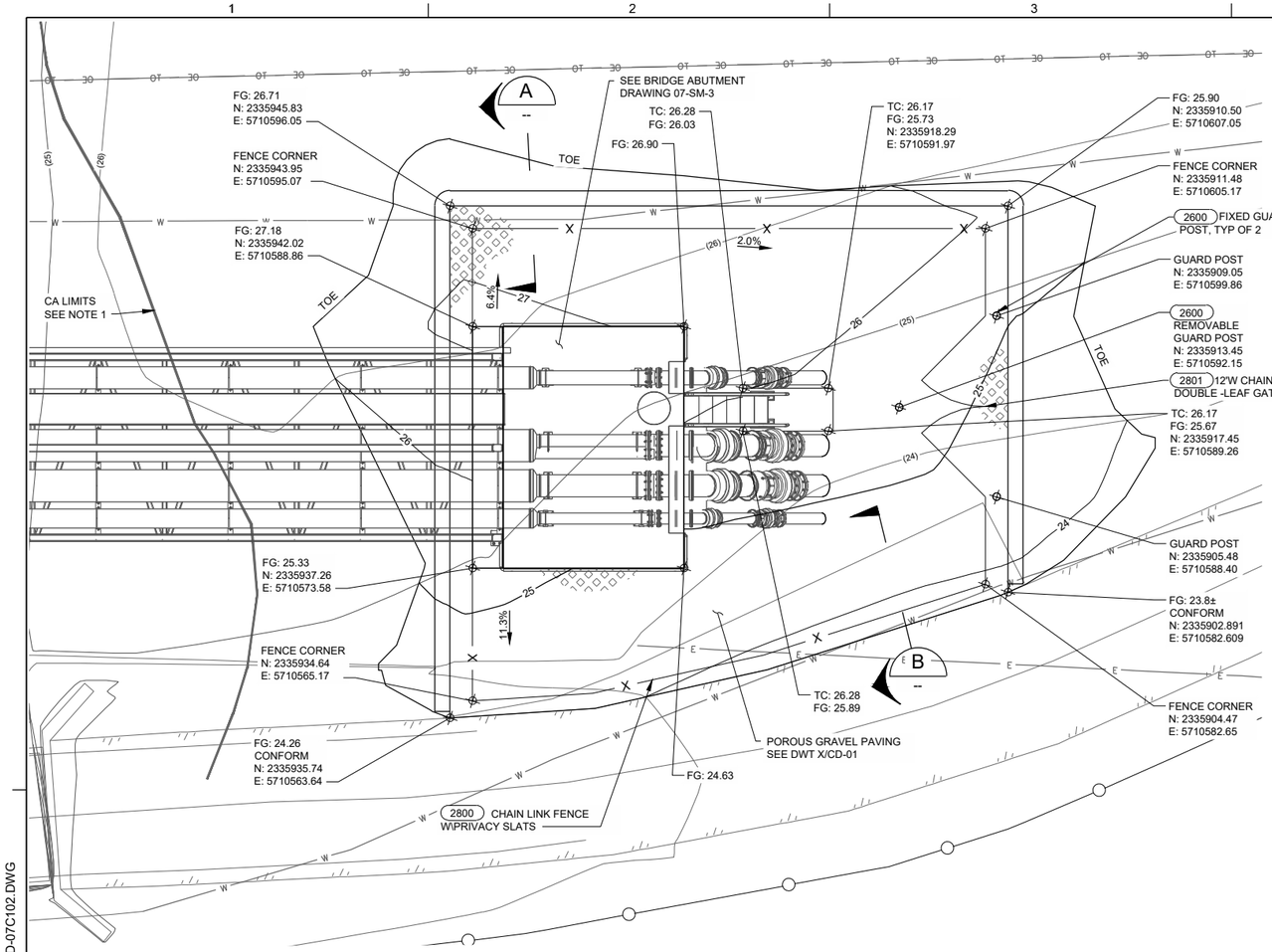
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

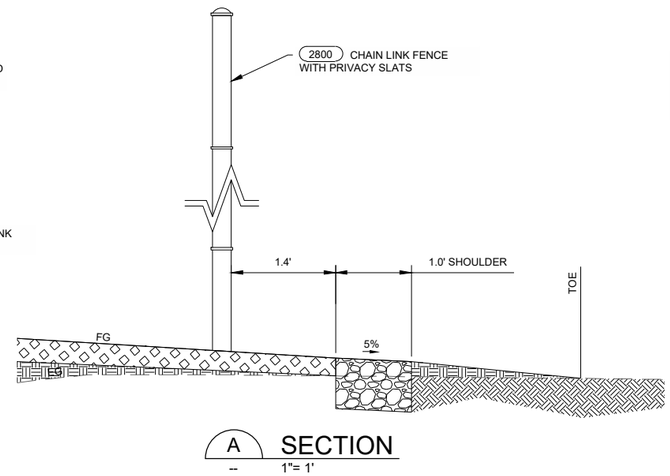
CIVIL
NORTHERN BRIDGE ABUTMENT GRADING PLAN

DATE: FEBRUARY 2020
PROJECT NUMBER: 17-082
DRAWING NUMBER: 07-C-1
SHEET NUMBER: ----

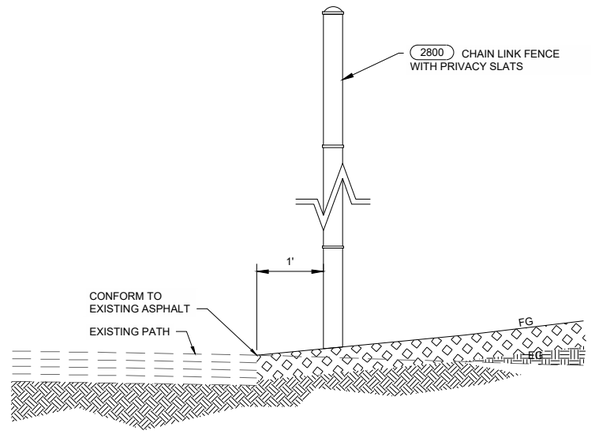
L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-07C101.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-07C101.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:51:14

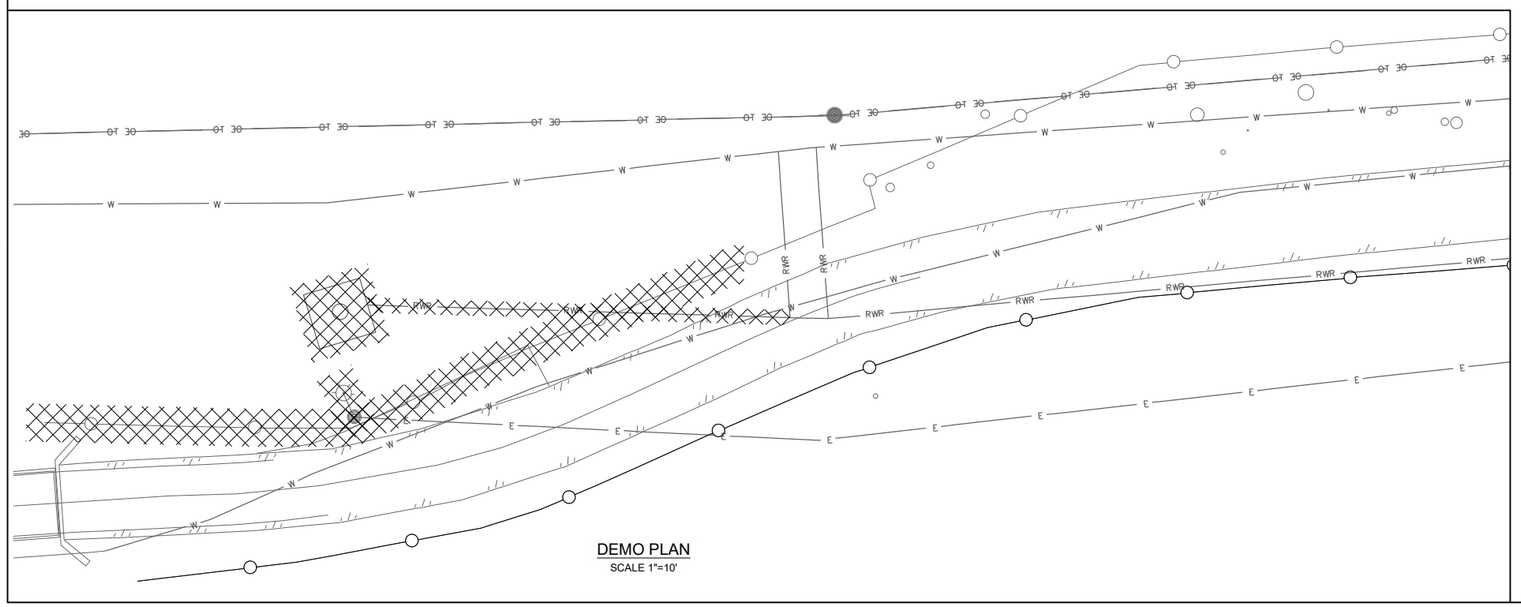




A SECTION
-- 1"= 1'



B SECTION
-- 1"=1'



DEMO PLAN
SCALE 1"=10'

NOTES:

1. CONSTRUCTION ACTIVITY (CA) LIMITS OFFSET 3' FROM EDGE OF WETLAND BOUNDARY. GROUND DISTURBING ACTIVITIES SHALL NOT EXTEND PAST CA LIMITS. SWPPP BMPS SHALL BE INSTALLED PER APPROVED SWPPP PLAN AT A MINIMUM ALONG CA LIMITS.

LEGEND:

DEMO EXISTING POLE, YARD LIGHT, WELL, AND FENCE

1 0 1 2 FEET
SCALE 1"=1'

5 0 5 10 FEET
SCALE 1"=5'

10 0 10 20 FEET
SCALE 1"=10'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN: P. WEBSTER
DRAWN: P. WEBSTER
CHECKED: T. LEWIS
APPROVED: M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

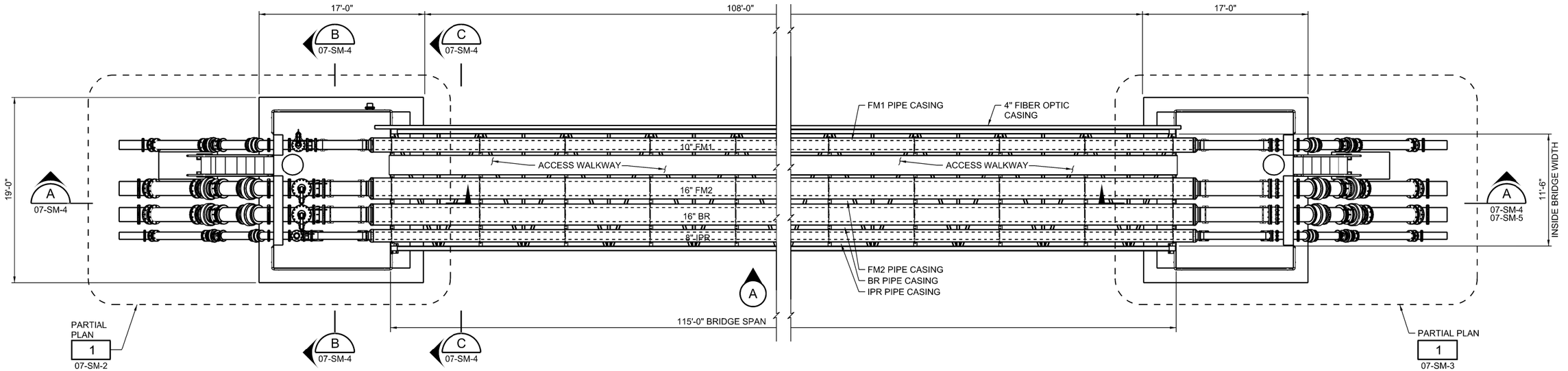
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
SOUTHERN BRIDGE ABUTMENT GRADING PLAN

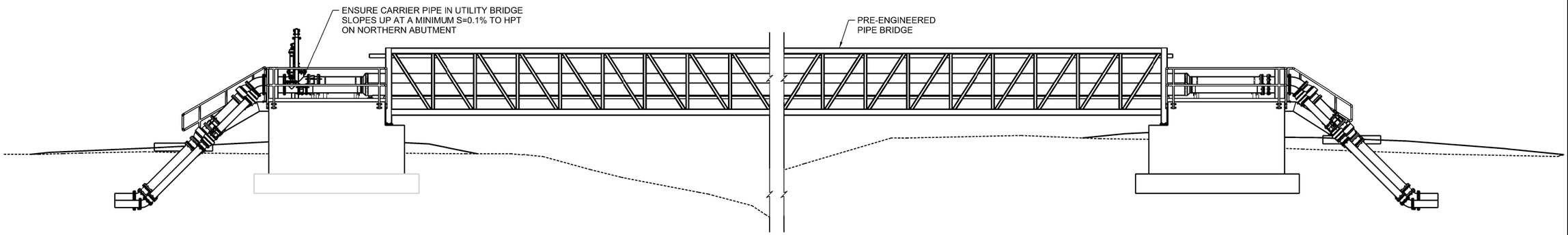
DATE: FEBRUARY 2020
PROJECT NUMBER: 17-082
DRAWING NUMBER: 07-C-2
SHEET NUMBER: ----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-07C102.DWG

JOB NUMBER: 17-082 FILENAME: 1782D-07C102.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:51:57



PLAN
3/16" = 1'-0"



A WEST ELEVATION
3/16" = 1'-0"

4 0 4 8 FEET
SCALE 3/16"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED JK/AL/TL
DRAWN C WORRALL
CHECKED JR/MP
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

STRUCTURAL / MECHANICAL

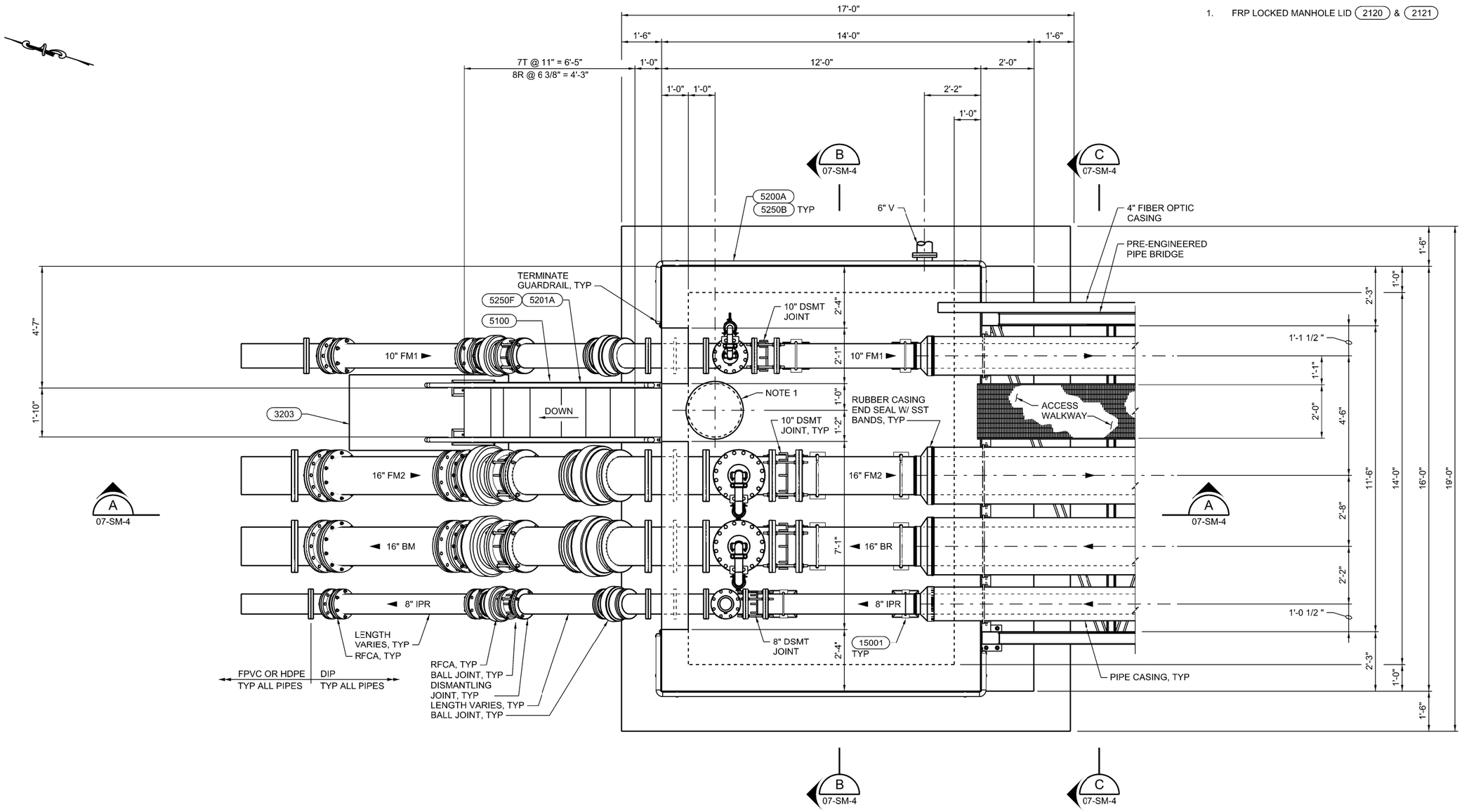
UTILITY BRIDGE PLAN AND ELEVATION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
07-SM-1
SHEET NUMBER X

FILENAME: 1782D-07SM101.DGN PLOT DATE: 1/13/2020 4:18:08 PM

NOTES:

1. FRP LOCKED MANHOLE LID (2120) & (2121)



1 PARTIAL PLAN

07-SM-1 1/2" = 1'-0"

2 0 2 4 FEET

SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED JK/AL/TL
DRAWN C WORRALL
CHECKED JR/MP
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

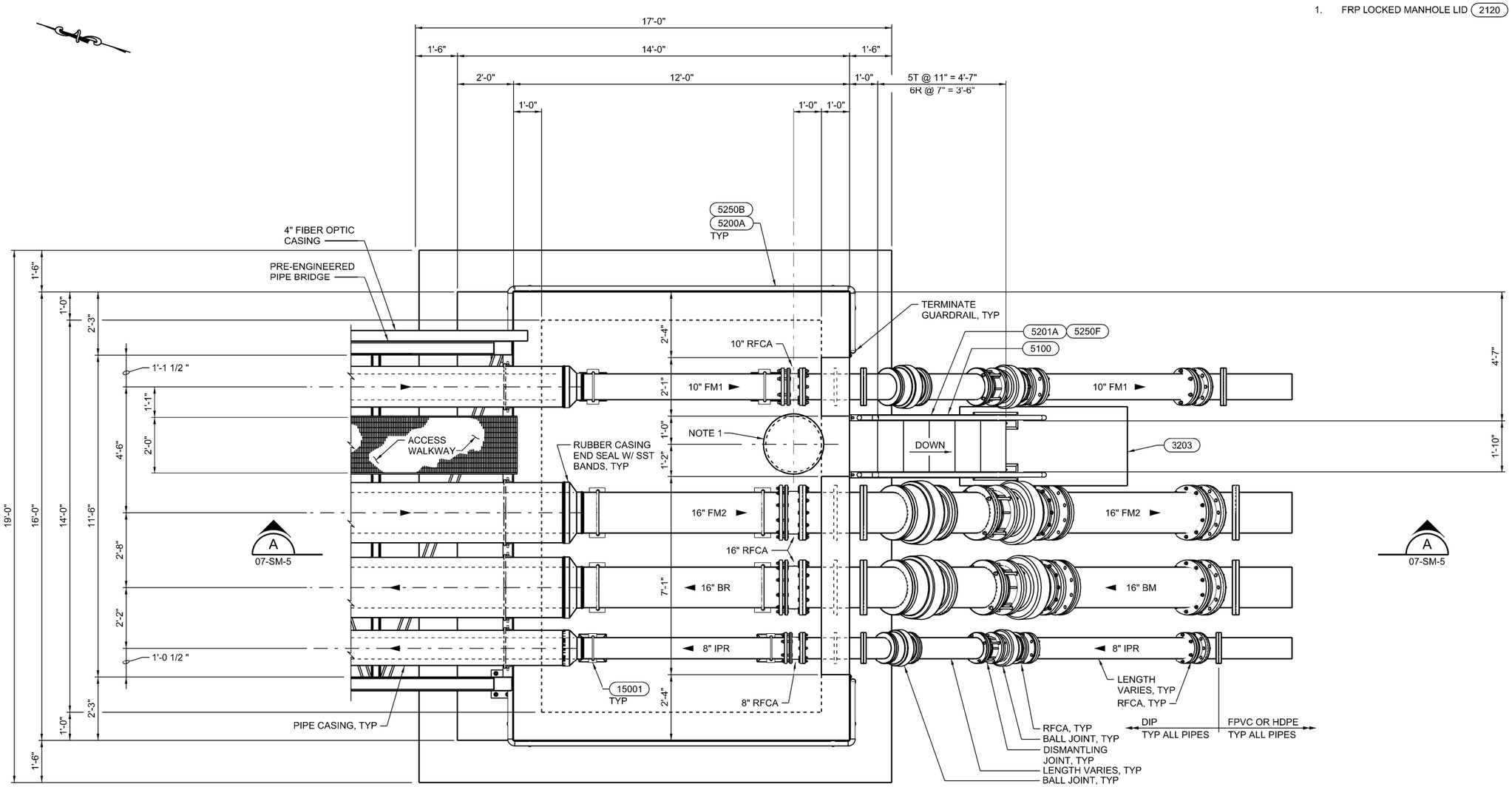
STRUCTURAL / MECHANICAL

UTILITY BRIDGE NORTH ABUTMENT PARTIAL PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 07-SM-2
SHEET NUMBER X

NOTES:

1. FRP LOCKED MANHOLE LID (2120) & (2121)



1 PARTIAL PLAN

07-SM-1 1/2" = 1'-0"

2 0 2 4 FEET

SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED JK/AL/TL
DRAWN C WORRALL
CHECKED JR/MP
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

STRUCTURAL / MECHANICAL

UTILITY BRIDGE
SOUTH ABUTMENT
PARTIAL PLAN

DATE
FEBRUARY 2020

PROJECT NUMBER
17-082

DRAWING NUMBER
07-SM-3

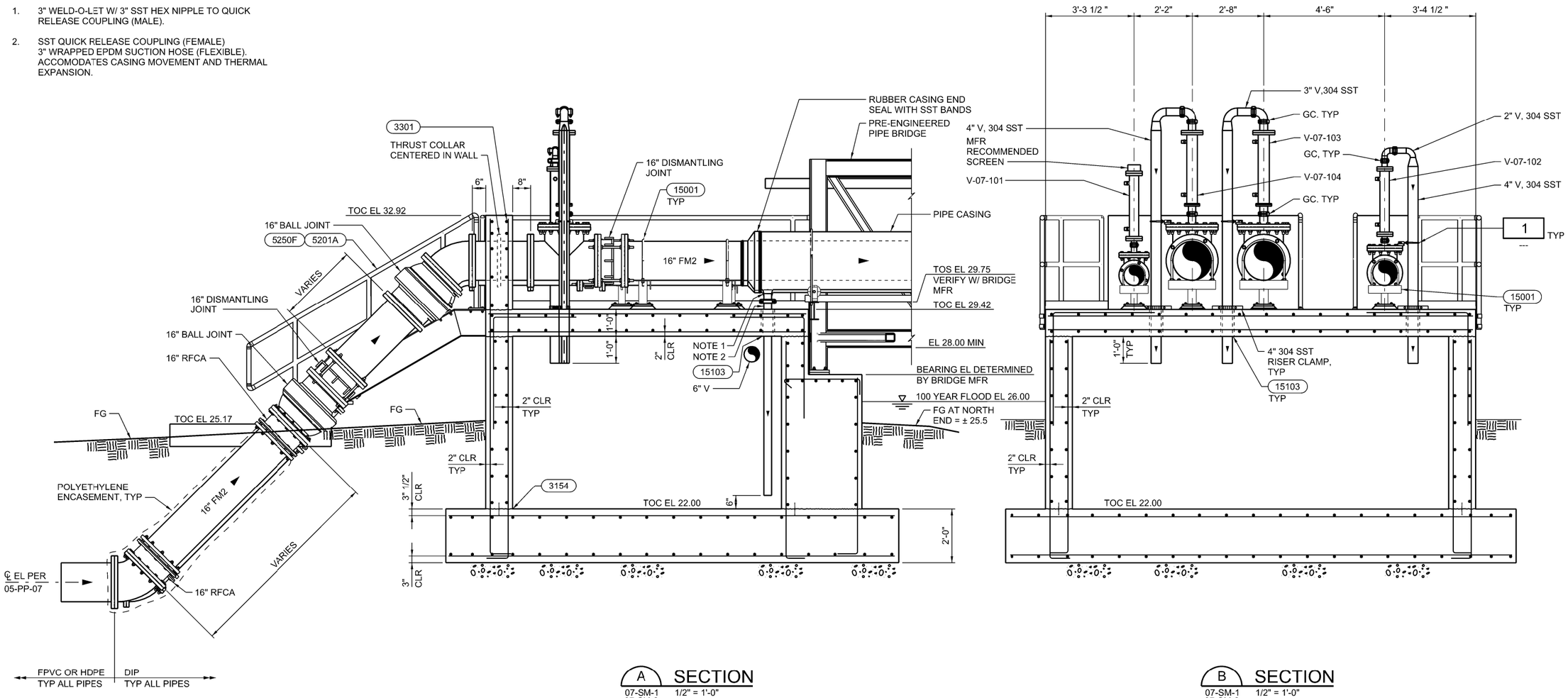
SHEET NUMBER X

FILENAME: 1782D-07SM103.DGN PLOT DATE: 2/10/2020 7:42:02 AM

NOTES:

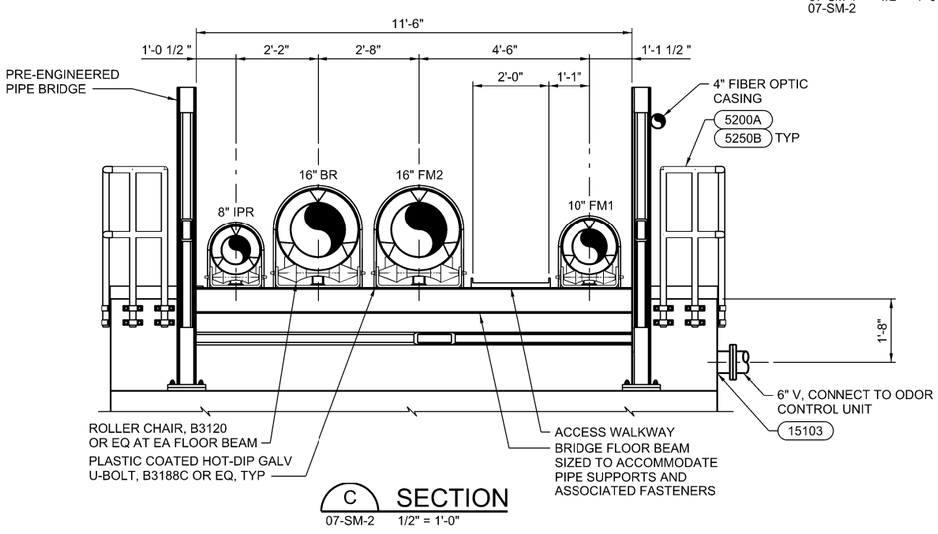
1. 3" WELD-O-LET W/ 3" SST HEX NIPPLE TO QUICK RELEASE COUPLING (MALE).

2. SST QUICK RELEASE COUPLING (FEMALE) 3" WRAPPED EPDM SUCTION HOSE (FLEXIBLE). ACCOMODATES CASING MOVEMENT AND THERMAL EXPANSION.

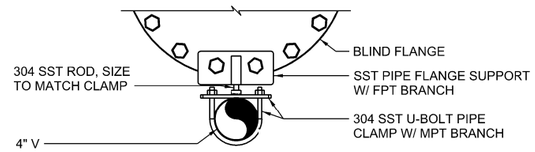


A SECTION
07-SM-1 1/2" = 1'-0"
07-SM-2

B SECTION
07-SM-1 1/2" = 1'-0"
07-SM-2



C SECTION
07-SM-2 1/2" = 1'-0"



PLAN

1 DETAIL
--- 1 1/2" = 1'-0"

6" 0 6" 1 FEET
SCALE 1 1/2"=1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED JK/AL/TL
DRAWN C WORRALL
CHECKED JR/MP
APPROVED M FISHER

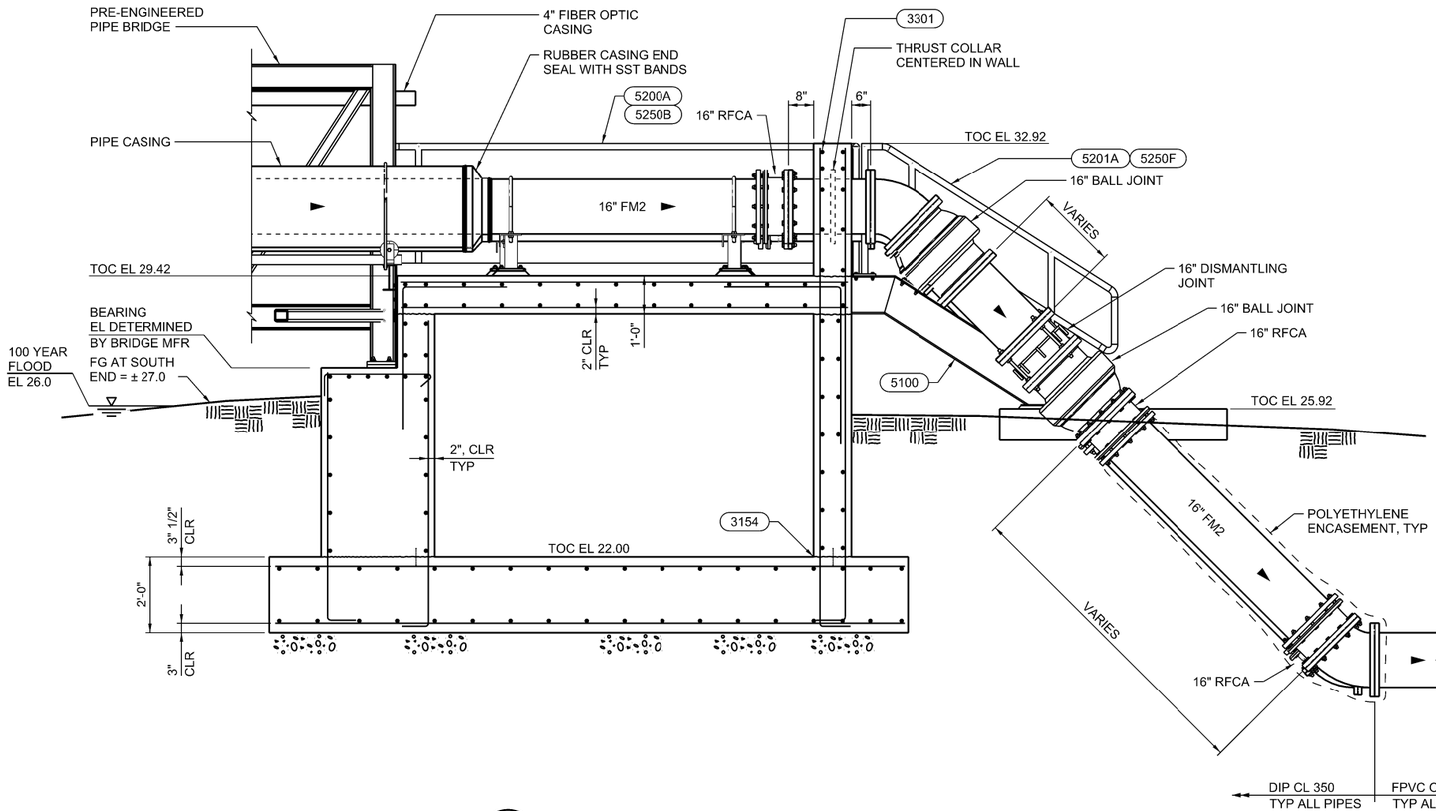
WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

STRUCTURAL / MECHANICAL
UTILITY BRIDGE
NORTH ABUTMENT
SECTIONS AND DETAIL

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 07-SM-4
SHEET NUMBER X

FILENAME: 1782D-07SM201.DGN PLOT DATE: 2/10/2020 8:51:48 AM



A SECTION
07-SM-1
07-SM-3
1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED JK/AL/TL
DRAWN C WORRALL
CHECKED JR/MP
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

STRUCTURAL / MECHANICAL
UTILITY BRIDGE
SOUTH ABUTMENT
SECTION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
07-SM-5
SHEET NUMBER X

FILENAME: 1782D-07SM202.DGN PLOT DATE: 2/10/2020 9:06:00 AM

ATASCADERO RD

CONTRACTOR TO SAWCUT AND REPAIR ROADWAY, SIDEWALK, CURB AND GUTTER PER CITY OF MORRO BAY STANDARD DETAILS

EXTENT OF SAW CUT
N: 2336745.15
E: 5709293.51

EXTENT OF SAWCUT
N: 2336741.65
E: 5709264.65

DEMO AS NEEDED FOR INCOMING 10" FM1 AND 16" FM2

REMOVE EXISTING FENCING (REUSE IF POSSIBLE)

EXTENT OF AC DEMO
N: 2336725.32
E: 5709201.41

EXTENT OF AC DEMO
N: 2336740.07
E: 5709320.90

MOVE GAS METER

DEMO SS STRUCTURE AND PIPING

CONTRACTOR REMOVE EXISTING SS PIPING AS NECESSARY AND TO PLUG AND ABANDON PER 1/--

DEMO FUEL TANK STRUCTURE

EXISTING WATER TO REMAIN

CONTRACTOR TO DEMOLISH EXISTING CONSOLIDATED MAINTENANCE BUILDING. COORDINATE WITH THE CITY REGARDING SALVAGING, RECYCLING AND DISPOSAL

CONTRACTOR TO REMOVE EXISTING SD PIPING AND REPLACE PER DWG 10-Y-1

RELOCATE EXISTING WATER METERS

DEMO CONCRETE WASH BAY PAD, DRAINS

DEMO

EXTENT OF AC DEMO
N: 2336621.32
E: 5709335.85

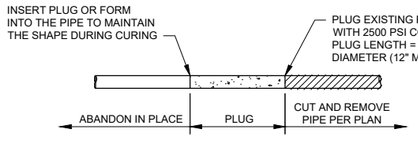
EXTENT OF AC DEMO
N: 2336606.19
E: 5709216.28

UNIDENTIFIED BOX

TANK

NORTH

10 0 10 20 FEET
SCALE 1"=10'



1 -- PIPE PLUG AND ABANDONMENT DETAIL
NTS

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN K. ALACON
DRAWN L. CHAPMAN
CHECKED K. ALACON
APPROVED M. FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A ▪ Redding, CA 96003 ▪ 530-243-4113

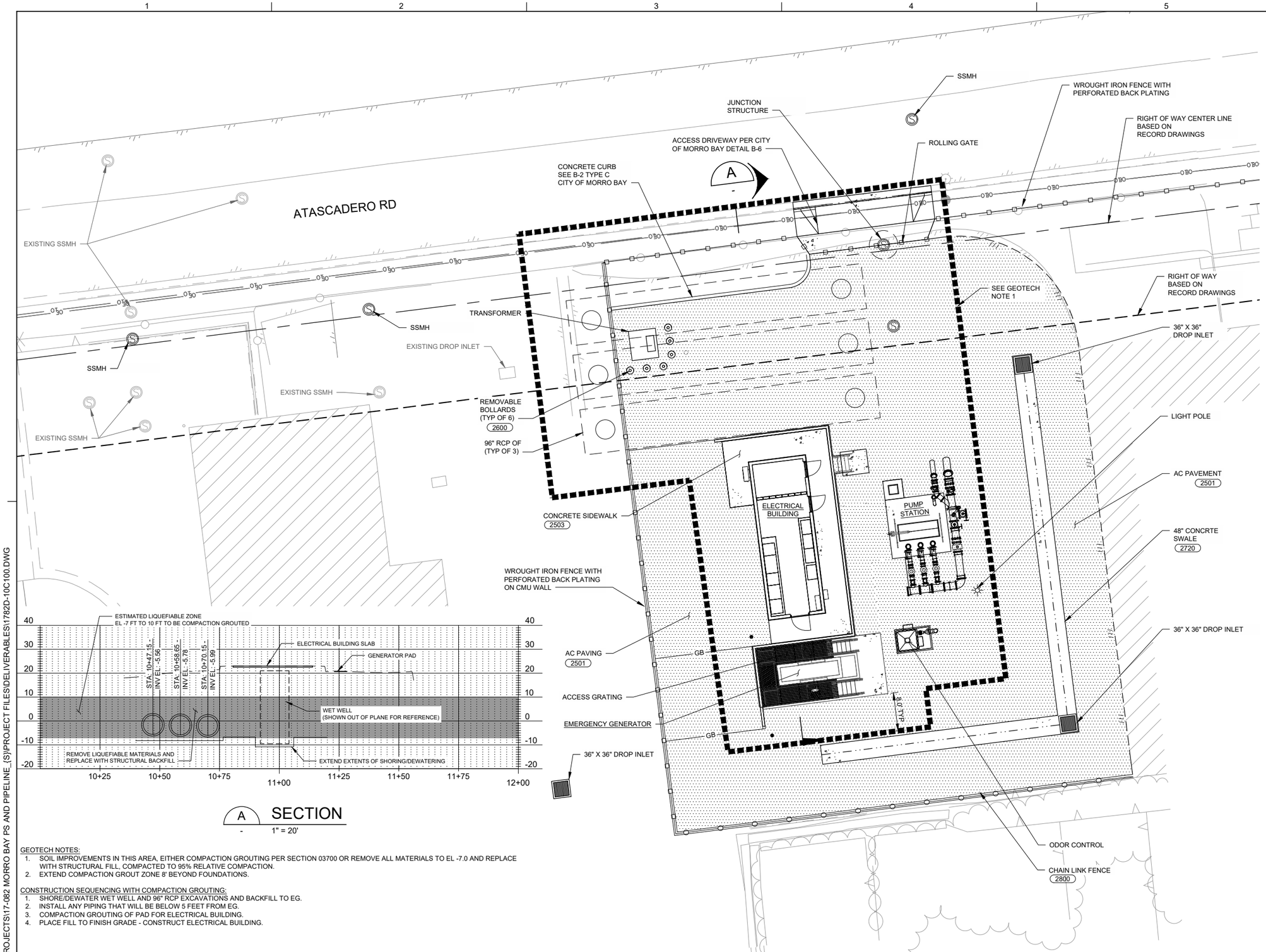
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PUMP STATION A DEMOLITION PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-D-1
SHEET NUMBER 7

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-10D100.DWG

JOB NUMBER: 00-000 FILENAME: 1782D-10D100.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:48:09



A SECTION
- 1" = 20'

10 0 10 20 FEET
SCALE 1"=10'

GEOTECH NOTES:
1. SOIL IMPROVEMENTS IN THIS AREA, EITHER COMPACTION GROUTING PER SECTION 03700 OR REMOVE ALL MATERIALS TO EL -7.0 AND REPLACE WITH STRUCTURAL FILL, COMPACTED TO 95% RELATIVE COMPACTION.
2. EXTEND COMPACTION GROUT ZONE 8' BEYOND FOUNDATIONS.

CONSTRUCTION SEQUENCING WITH COMPACTION GROUTING:
1. SHORE/DEWATER WET WELL AND 96" RCP EXCAVATIONS AND BACKFILL TO EG.
2. INSTALL ANY PIPING THAT WILL BE BELOW 5 FEET FROM EG.
3. COMPACTION GROUTING OF PAD FOR ELECTRICAL BUILDING.
4. PLACE FILL TO FINISH GRADE - CONSTRUCT ELECTRICAL BUILDING.

DESIGN K. ALACON
DRAWN L. CHAPMAN
CHECKED K. ALACON
APPROVED M. FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

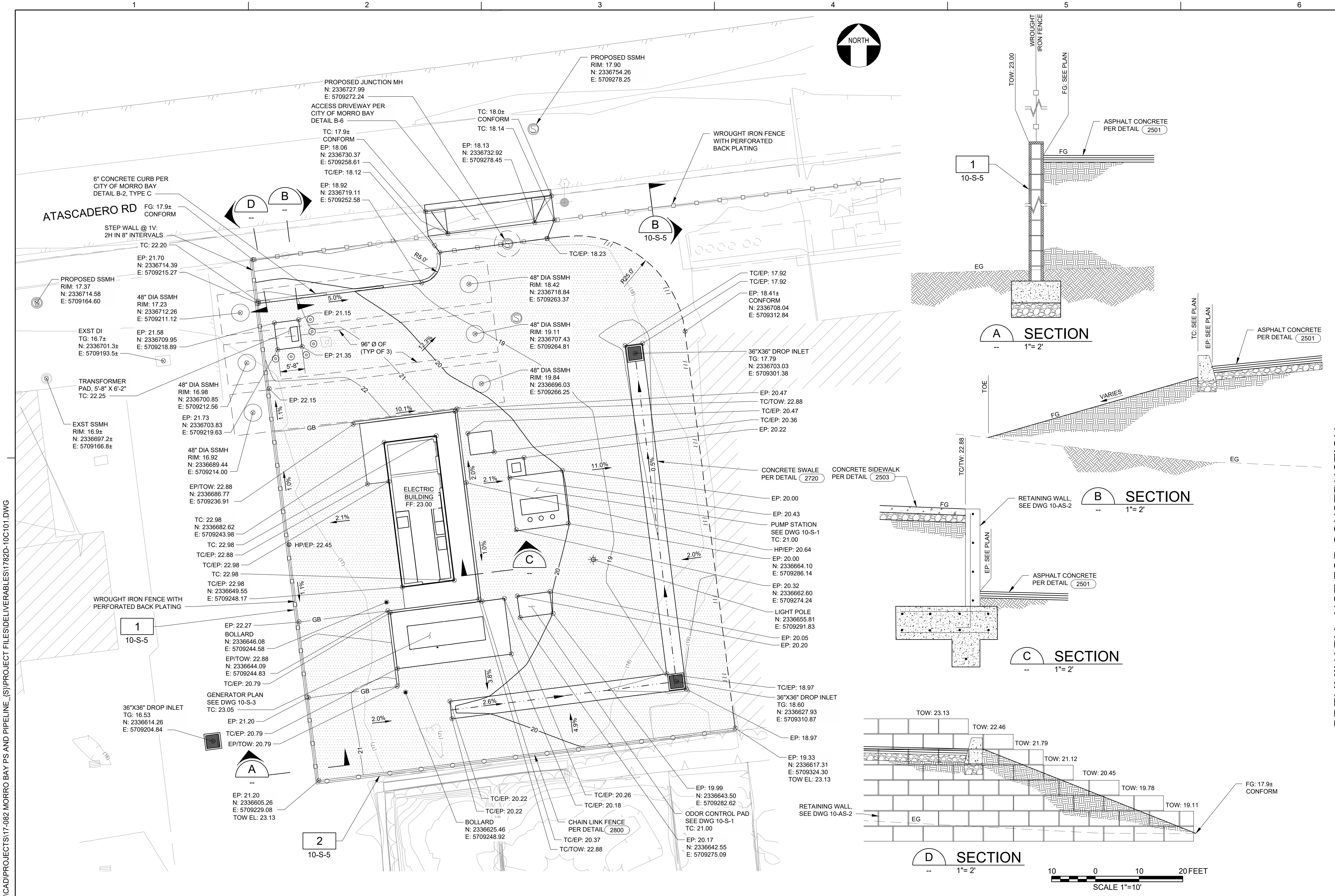
CIVIL
PUMP STATION A OVERALL PLAN

PRELIMINARY - NOT FOR CONSTRUCTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-C-1
SHEET NUMBER 5

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-10C100.DWG

JOB NUMBER: 00-000 FILENAME: 1782D-10C100.DWG PLOT DATE: 02/10/20 PLOT TIME: 13:17:49


NORTH
ATASCADERO RD
PROPOSED SSMH
RIM: 17.90
N: 2336754.26
E: 5709278.25
PROPOSED JUNCTION MH
N: 2336727.99
E: 5709272.24
ACCESS DRIVEWAY PER
CITY OF MORRO BAY
DETAIL B-6
TC: 18.0±
CONFORM
TC: 18.14
TC: 17.9±
CONFORM
EP: 18.06
N: 2336730.37
E: 5709258.61
TC/EP: 18.12
EP: 18.13
N: 2336732.92
E: 5709278.45
EP: 18.92
N: 2336719.11
E: 5709252.58
WROUGHT IRON FENCE
WITH PERFORATED
BACK PLATING
6" CONCRETE CURB PER
CITY OF MORRO BAY
DETAIL B-2, TYPE C
FG: 17.9±
CONFORM
STEP WALL @ 1V:
2H IN 8" INTERVALS
TC: 22.20
EP: 21.70
N: 2336714.39
E: 5709215.27
PROPOSED SSMH
RIM: 17.37
N: 2336714.58
E: 5709164.60
48" DIA SSMH
RIM: 17.23
N: 2336712.26
E: 5709211.12
EXST DI
TG: 16.7±
N: 2336701.3±
E: 5709193.5±
EP: 21.58
N: 2336709.95
E: 5709218.89
TRANSFORMER
PAD, 5'-8" X 6'-2"
TC: 22.25
48" DIA SSMH
RIM: 16.98
N: 2336700.85
E: 5709212.56
EXST SSMH
RIM: 16.9±
N: 2336697.2±
E: 5709166.8±
EP: 21.73
N: 2336703.83
E: 5709219.63
48" DIA SSMH
RIM: 16.92
N: 2336689.44
E: 5709214.00
EP/TOW: 22.88
N: 2336686.77
E: 5709236.91
TC: 22.98
N: 2336682.62
E: 5709243.98
TC: 22.98
TC/EP: 22.88
TC/EP: 22.98
TC: 22.98
TC/EP: 22.98
N: 2336649.55
E: 5709248.17
WROUGHT IRON FENCE WITH
PERFORATED BACK PLATING
EP: 22.27
BOLLARD
N: 2336646.08
E: 5709244.58
EP/TOW: 22.88
N: 2336644.09
E: 5709244.83
TC/EP: 20.79
GENERATOR PLAN
SEE DWG 10-S-3
TC: 23.05
EP: 21.20
TC/EP: 20.79
EP/TOW: 20.79
36"X36" DROP INLET
TG: 16.53
N: 2336614.26
E: 5709204.84
EP: 21.20
N: 2336605.26
E: 5709229.08
TOW EL: 23.13
TC/EP: 18.23
48" DIA SSMH
RIM: 18.42
N: 2336718.84
E: 5709263.37
48" DIA SSMH
RIM: 19.11
N: 2336707.43
E: 5709264.81
48" DIA SSMH
RIM: 19.84
N: 2336696.03
E: 5709266.25
EP: 21.15
EP: 21.35
96" Ø OF
(TYP OF 3)
EP: 22.15
HP/EP: 22.45
ELECTRIC
BUILDING
FF: 23.00
TC/EP: 17.92
TC/EP: 17.92
EP: 18.41±
CONFORM
N: 2336708.04
E: 5709312.84
36"X36" DROP INLET
TG: 17.79
N: 2336703.03
E: 5709301.38
EP: 20.47
TC/TOW: 22.88
TC/EP: 20.47
TC/EP: 20.36
EP: 20.22
CONCRETE SWALE
PER DETAIL 2720
EP: 20.00
EP: 20.43
PUMP STATION
SEE DWG 10-S-1
TC: 21.00
HP/EP: 20.64
EP: 20.00
N: 2336664.10
E: 5709286.14
EP: 20.32
N: 2336662.60
E: 5709274.24
LIGHT POLE
N: 2336655.81
E: 5709291.83
EP: 20.05
EP: 20.20
TC/EP: 18.97
36"X36" DROP INLET
TG: 18.60
N: 2336627.93
E: 5709310.87
EP: 18.97
EP: 19.33
N: 2336617.31
E: 5709324.30
TOW EL: 23.13
EP: 19.99
N: 2336643.50
E: 5709282.62
TC/EP: 20.26
TC/EP: 20.18
ODOR CONTROL PAD
SEE DWG 10-S-1
TC: 21.00
EP: 20.17
N: 2336642.55
E: 5709275.09
CHAIN LINK FENCE
PER DETAIL 2800
TC/EP: 20.37
TC/TOW: 22.88
TC/EP: 20.22
TC/EP: 20.22
BOLLARD
N: 2336625.46
E: 5709248.92
1 10-S-5
2 10-S-5
B 10-S-5
TOW: 23.00
WROUGHT IRON FENCE
FG: SEE PLAN
ASPHALT CONCRETE PER DETAIL 2501
FG
EG
A SECTION 1"= 2'
TC: SEE PLAN
EP: SEE PLAN
ASPHALT CONCRETE PER DETAIL 2501
TOE
VARIES
FG
EG
B SECTION 1"= 2'
CONCRETE SIDEWALK PER DETAIL 2503
TC/TW: 22.88
FG
RETAINING WALL, SEE DWG 10-AS-2
EP: SEE PLAN
ASPHALT CONCRETE PER DETAIL 2501
C SECTION 1"= 2'
TOW: 23.13
TOW: 22.46
TOW: 21.79
TOW: 21.12
TOW: 20.45
TOW: 19.78
TOW: 19.11
FG: 17.9± CONFORM
RETAINING WALL, SEE DWG 10-AS-2
EG
D SECTION 1"= 2'
10 0 10 20 FEET
SCALE 1"=10'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN K. ALACON
DRAWN L. CHAPMAN
CHECKED K. ALACON
APPROVED M. FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

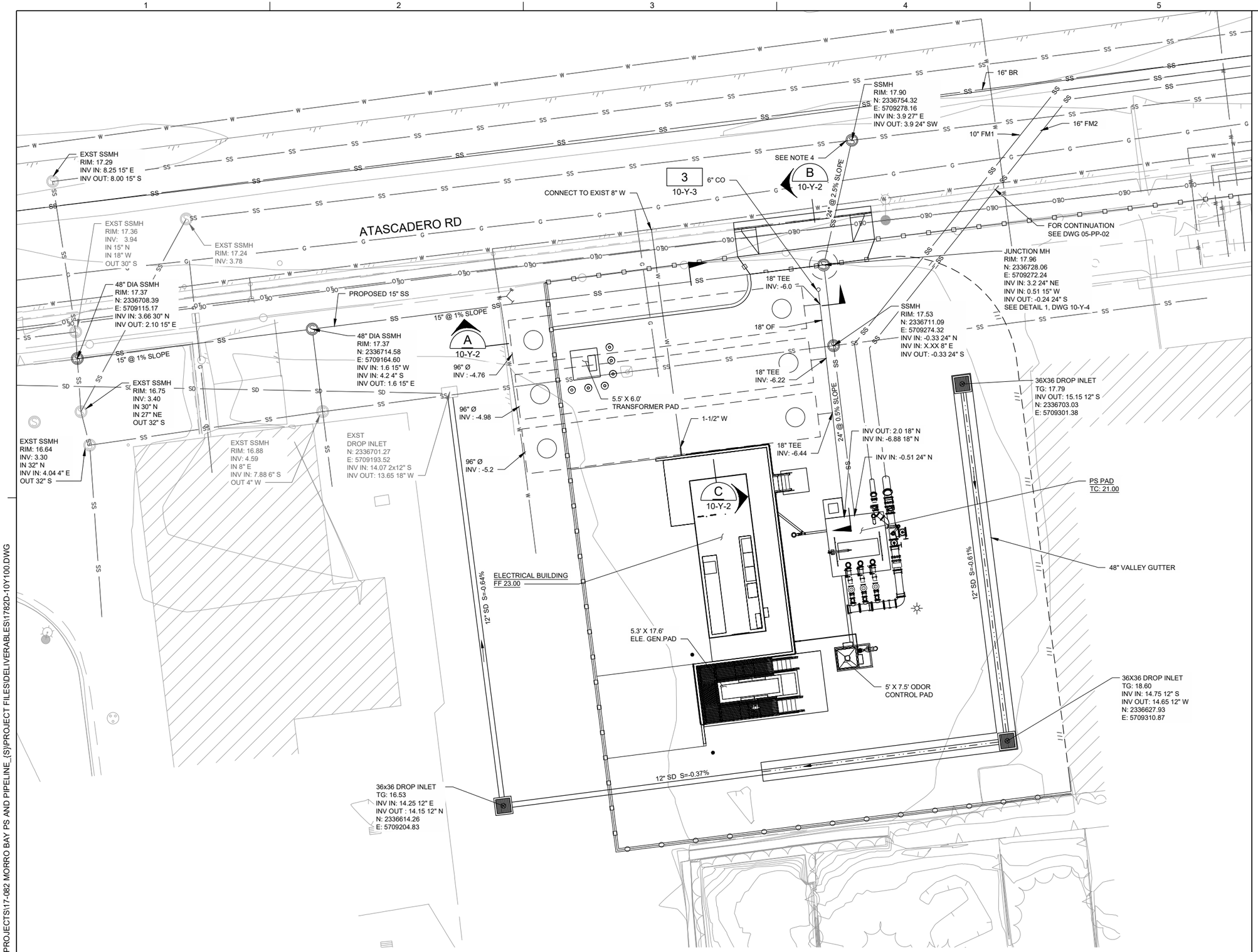
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PUMP STATION A GRADING PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-C-2
SHEET NUMBER 6

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-10C101.DWG

JOB NUMBER: 00-000 FILENAME: 1782D-10C101.DWG PLOT DATE: 02/8/20 PLOT TIME: 16:47:46



NORTH

NOTES:

1. SEWER MANHOLES SHALL BE PER CITY OF MORRO BAY STANDARD DETAIL S-3 UNLESS OTHERWISE NOTED.
2. SEWER MANHOLE FRAME AND COVER SHALL BE PINKERTON NO. A-107, WEIGHT 264 LBS, OR APPROVED EQUAL. COVER SHALL BE MARKED WITH "SEWER" IN THE CENTER.
3. PIPE BEDDING FOR SEWER AND WATER MAINS AND SERVICES AND STORM DRAIN PIPING SHALL BE PER CITY OF MORRO BAY STANDARD DETAIL W-6.
4. 27" SS TO BE CAP AND ABANDONED AFTER PUMP STATION A IS ONLINE.

10 0 10 20 FEET
SCALE 1"=10'

DESIGN K. ALACON
DRAWN L. CHAPMAN
CHECKED K. ALACON
APPROVED M. FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

PRELIMINARY - NOT FOR CONSTRUCTION

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

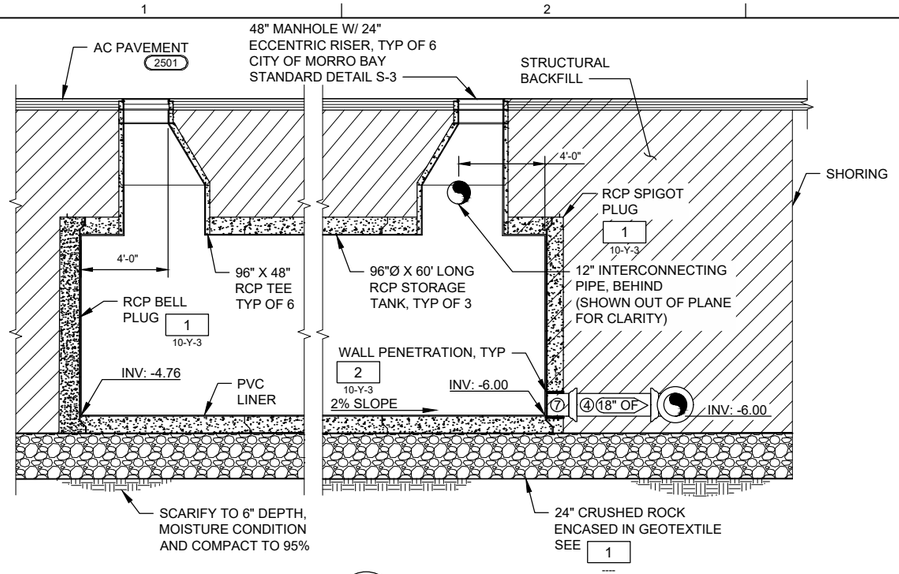
CIVIL

PUMPP STATION A YARD PIPING PLAN

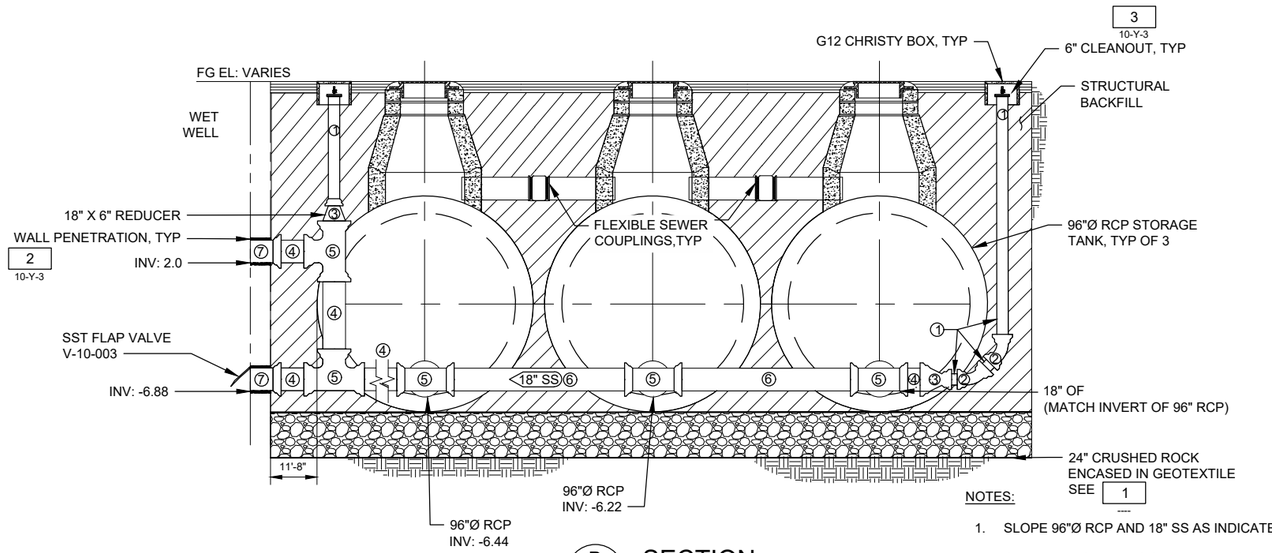
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-Y-1
SHEET NUMBER 8

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-10Y100.DWG

JOB NUMBER: 00-000 FILENAME: 1782D-10Y100.DWG PLOT DATE: 02/10/20 PLOT TIME: 12:24:56



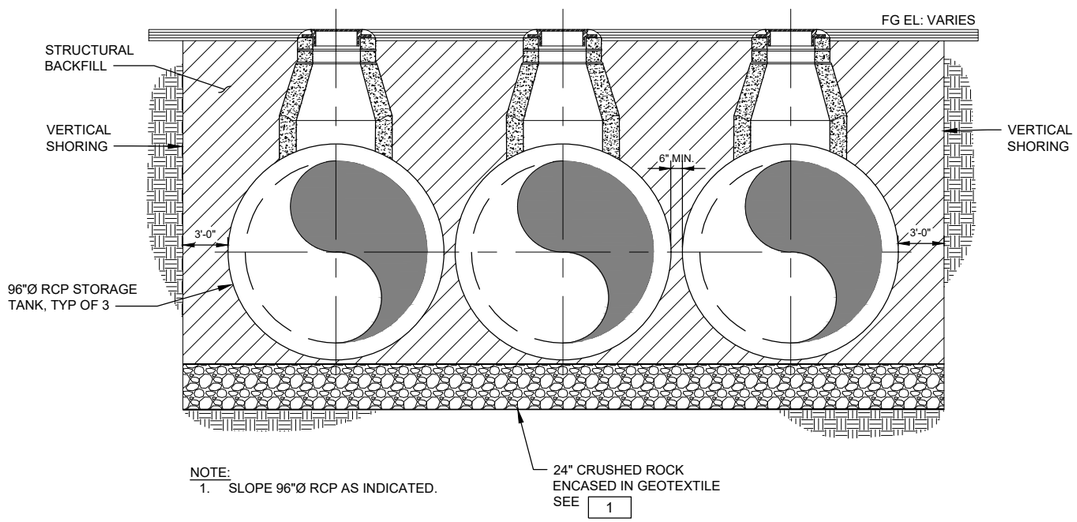
A SECTION
10-Y-1 NTS



B SECTION
10-Y-1 NTS

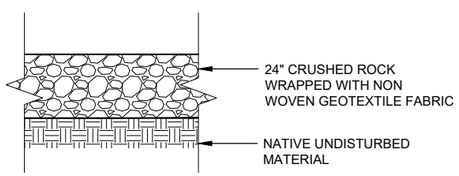
NOTES:

1. SLOPE 96"Ø RCP AND 18" SS AS INDICATED.
2. GRAVITY FLOW PIPES SHALL BE PVC SDR 26 UNLESS NOTED OTHERWISE.



NOTE:
1. SLOPE 96"Ø RCP AS INDICATED.

C SECTION
10-Y-1 NTS



NOTE:
USE BASE STABILIZATION WHERE DIRECTED BY THE ENGINEER

1 BASE STABILIZATION DETAIL
--- NTS

KEY NOTES:

1. 6" SDR-26 PIPE, PE X PE
2. 6" SDR 26 45° ELBOW, BELL
3. 6" X 18" SDR 26 CONCENTRIC REDUCER, BELL
4. 18" SDR 26 PIPE, PE X PE
5. 18" SDR 26 TEE, BELL
6. 18" SDR 26 PIPE, PE X FLG
7. 18" SDR 26 PIPE, PE X BELL

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN K ALACON
DRAWN P WEBSTER
CHECKED M FISHER
APPROVED M FISHER

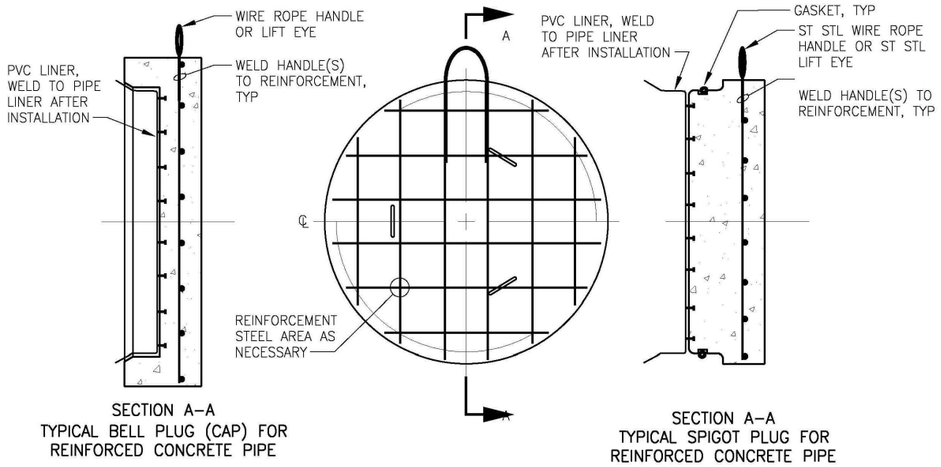
WATERWORKS ENGINEERS
1400 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
EMERGENCY STORAGE PIPING

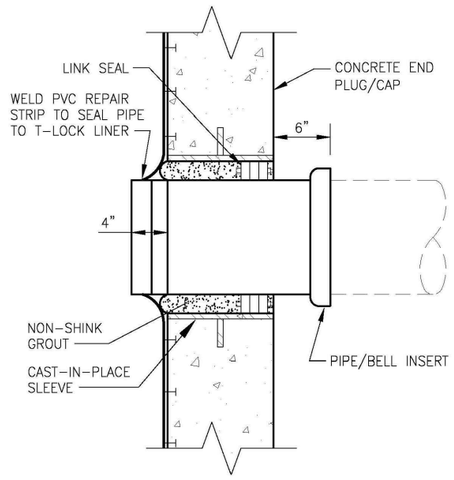
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-Y-2
SHEET NUMBER 33

JOB NUMBER: 14-010 FILENAME: 1782D-10Y200.DWG PLOT DATE: 05-Feb-20 PLOT TIME: 14:29:22
L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-10Y200.DWG

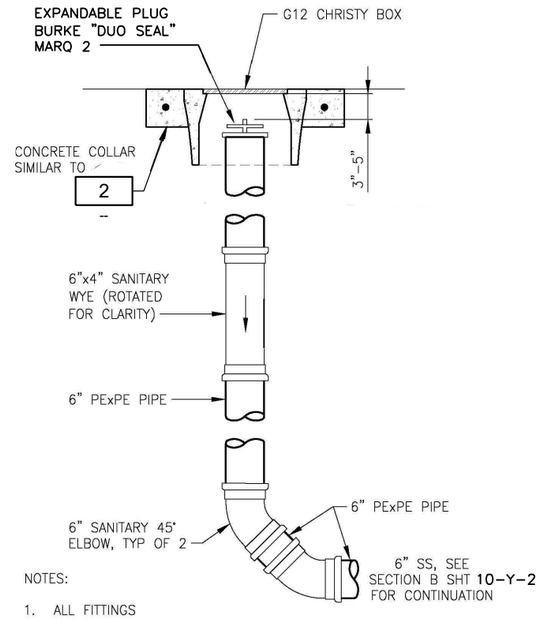


NOTES:
1. PLUG DESIGNED BY PIPE MANUFACTURER FOR WATER TIGHTNESS ONLY. FORCES RESULTING FROM INTERNAL PRESSURE TO BE RESISTED BY EXTERNAL CLSM AND BACKFILL UNIFORMLY DISTRIBUTED TO PREVENT MOVEMENT OR DISTORTION OF PLUG.
2. DESIGN PLUG FOR CLSM BEDDING
3. ALL STORAGE TANK PIPE JOINTS SHALL BE GASKETED

1 CONCRETE PIPE PLUGS DETAIL
10-Y-2 NTS

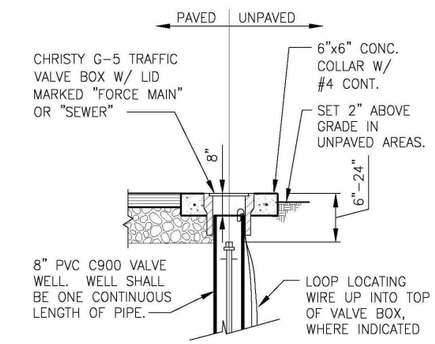


2 WALL PENETRATION DETAIL
10-Y-2 NTS



NOTES:
1. ALL FITTINGS ARE SDR 26 PVC.

3 6" FLUSHING CONNECTION DETAIL
10-Y-2 NTS



4 BURIED VALVE BOX DETAIL
10-Y-2 NTS

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN K ALACON
DRAWN M TUTT
CHECKED M FISHER
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

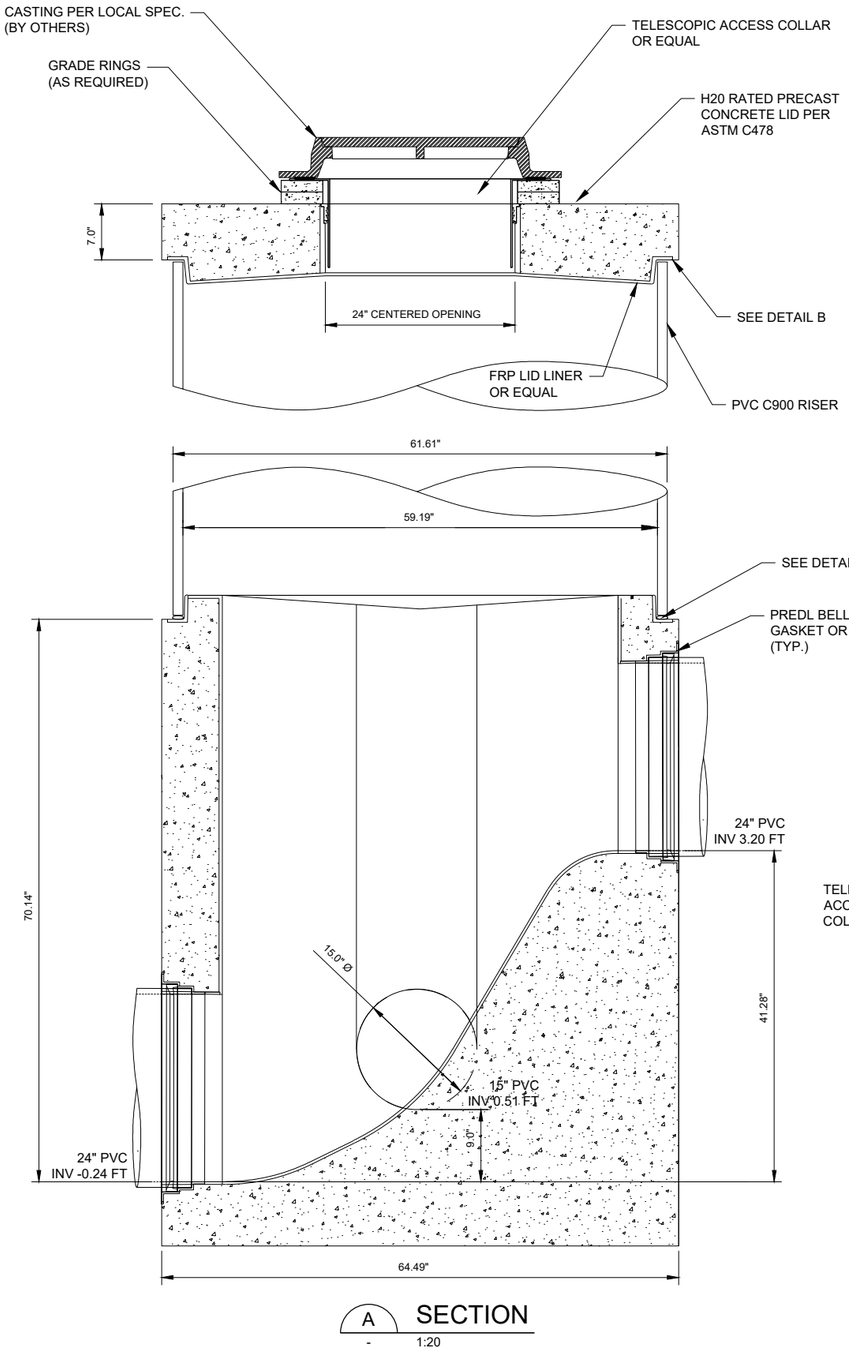
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
EMERGENCY STORAGE PIPING DETAILS

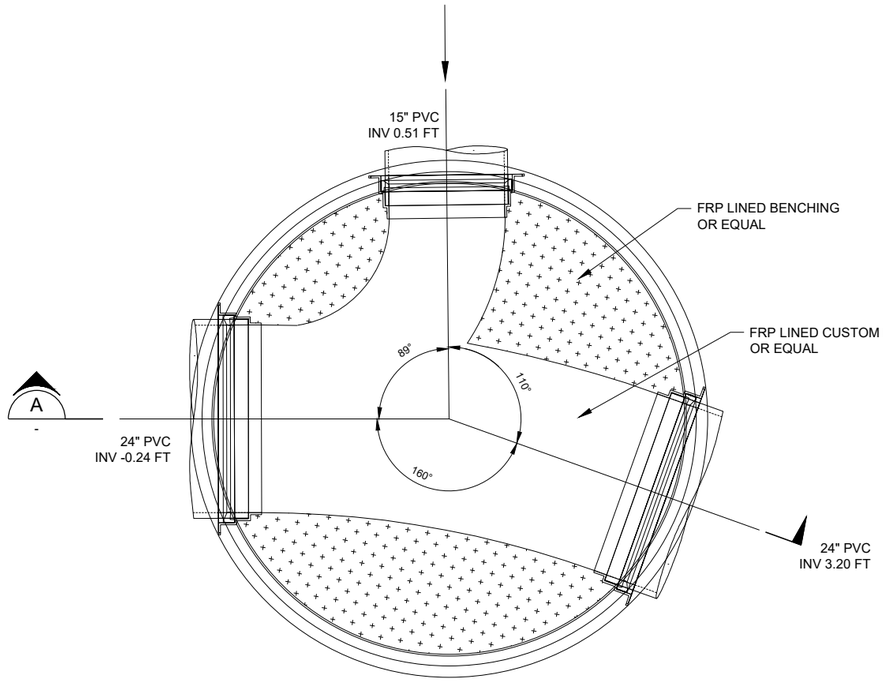
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-Y-3
SHEET NUMBER 34

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-10Y201.DWG

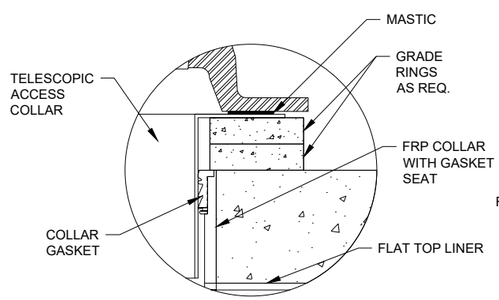
JOB NUMBER: 14-010 FILENAME: 1782D-10Y201.DWG PLOT DATE: 03-Feb-20 PLOT TIME: 12:43:14



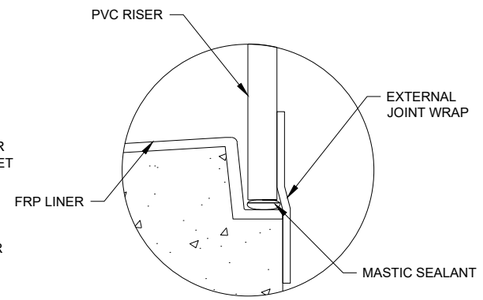
A SECTION
- 1:20



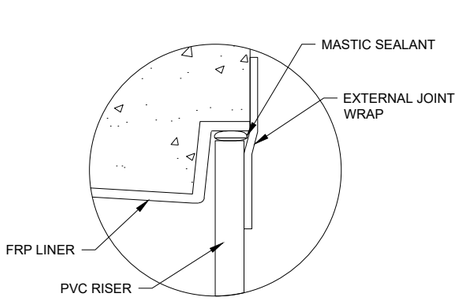
PLAN VIEW
1:20



TELESCOPIC ACCESS COLLAR DETAIL
NOT TO SCALE



JOINT DETAIL A
NOT TO SCALE



JOINT DETAIL B
NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	K ALACON
DRAWN	K ALACON
CHECKED	M FISHER
APPROVED	M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PS-A JUNCTION MANHOLE DETAILS

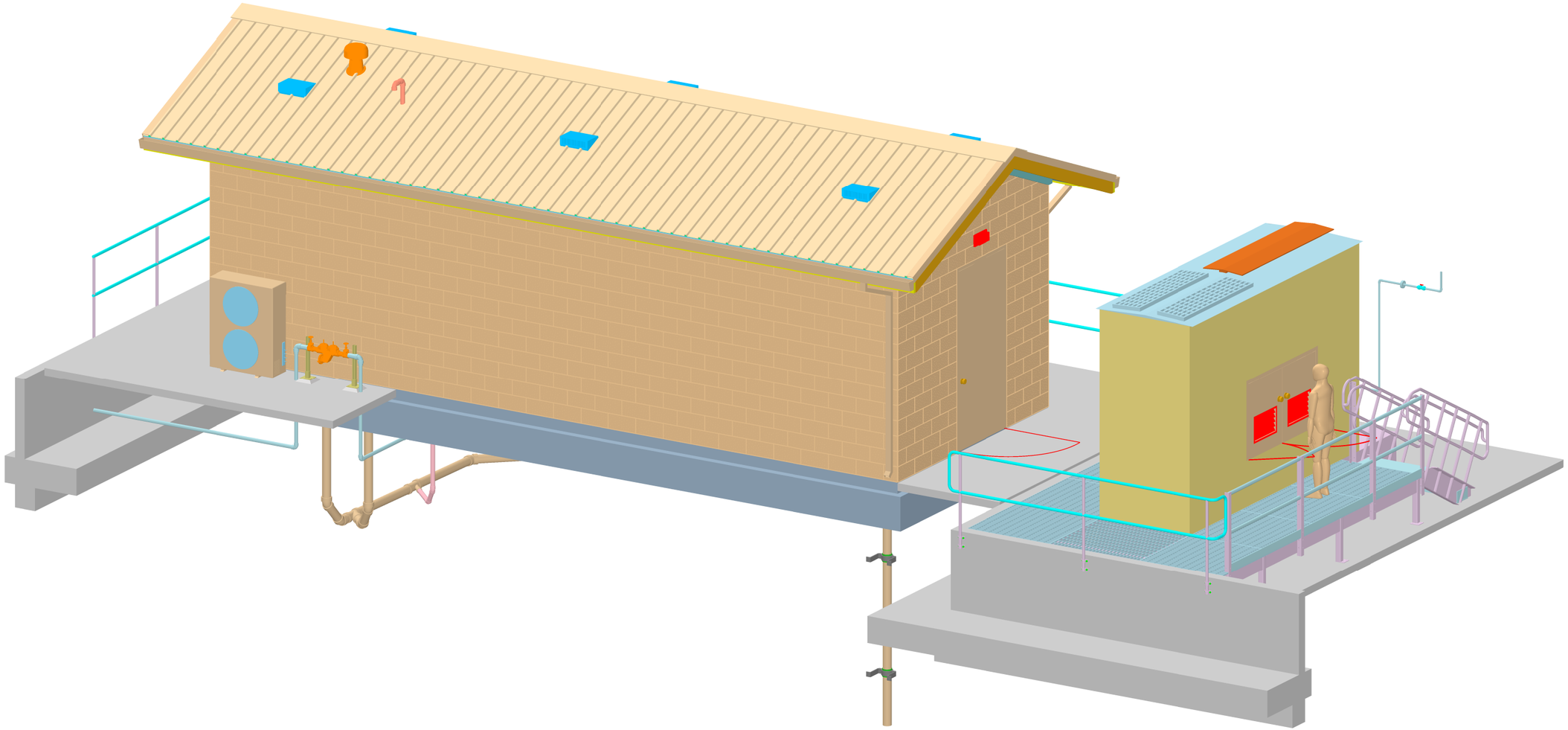
DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	10-Y-4
SHEET NUMBER	XX

JOB NUMBER: 14-010 FILENAME: 1782D-10Y400.DWG PLOT DATE: 30-Jan-20 PLOT TIME: 15:16:31

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-10Y400.DWG

NOTES:

1. RENDERING IS FOR INFORMATIONAL PURPOSES ONLY. NOT FOR CONSTRUCTION.



RENDERING
NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

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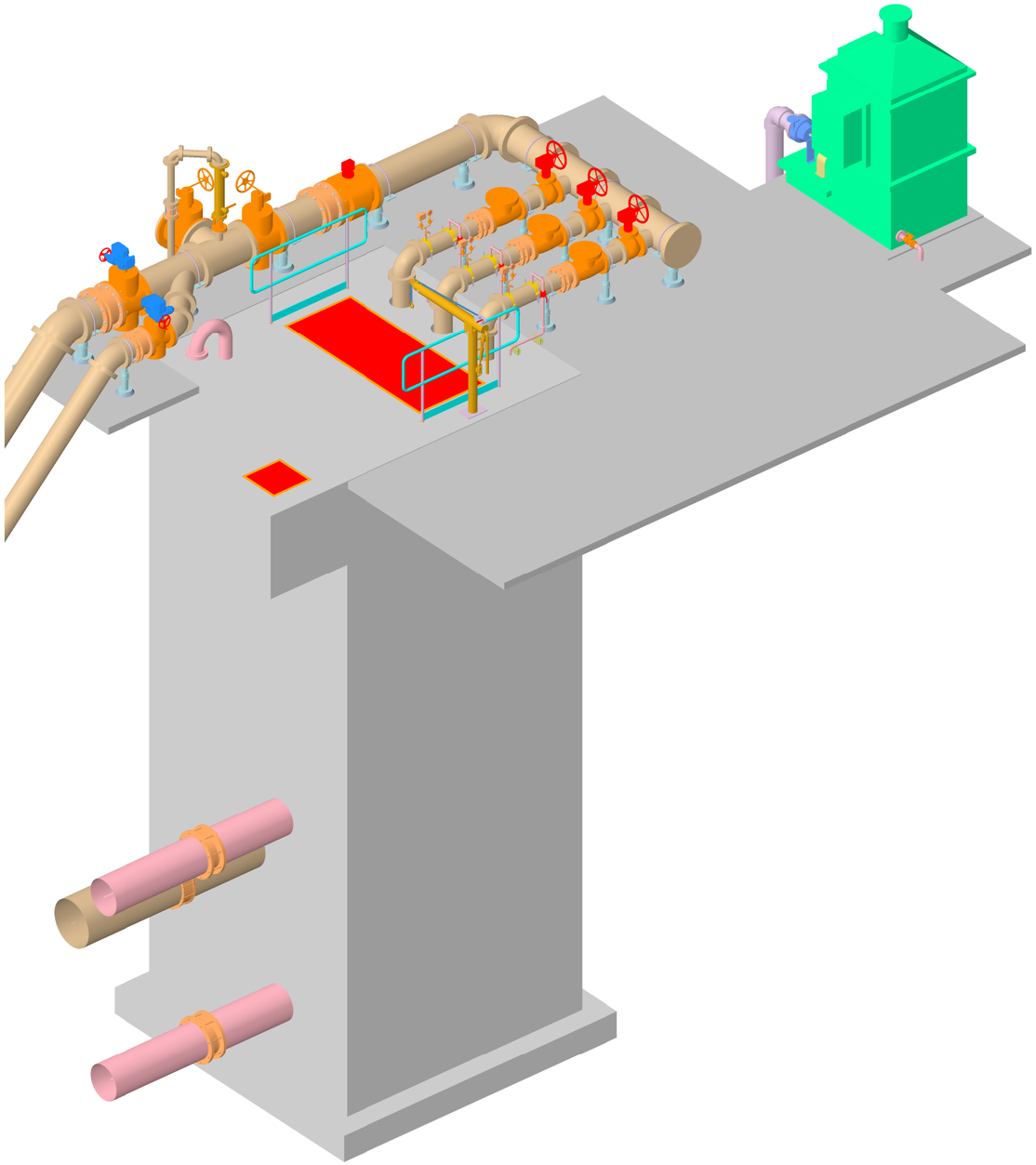
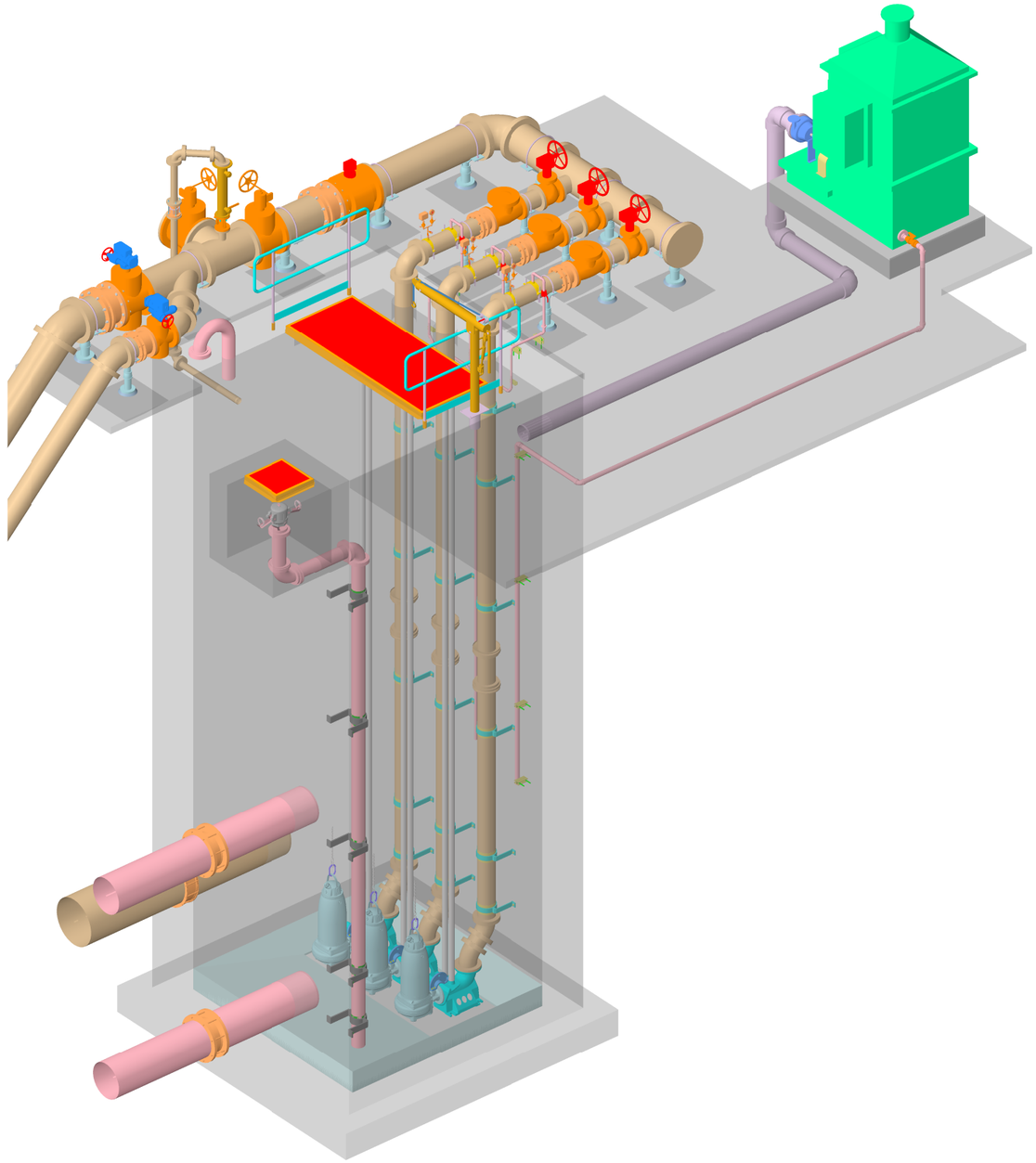
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

RENDERING
ELECTRICAL BUILDING
RENDERING

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-R-1
SHEET NUMBER X





NOTES:

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RENDERINGS
NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

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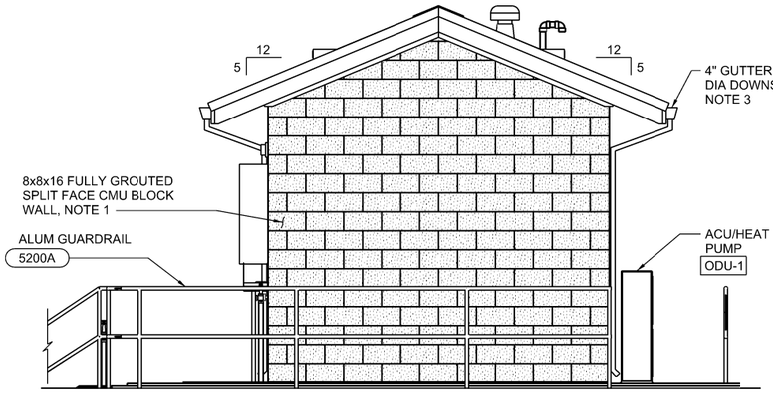
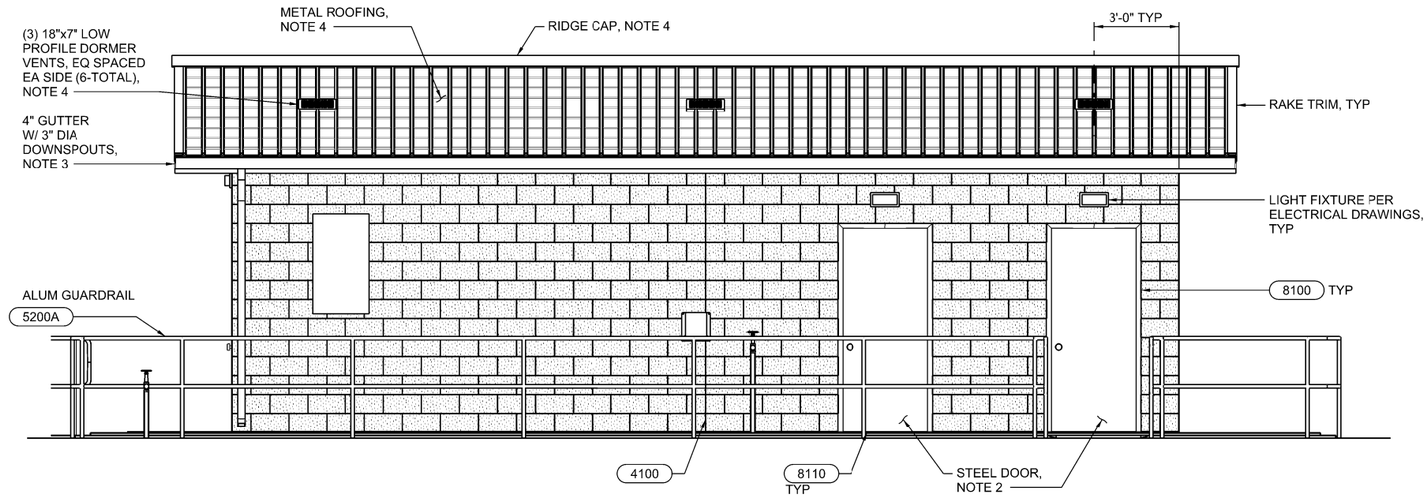
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

RENDERING
PUMP STATION
RENDERINGS

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-R-2
SHEET NUMBER X



A NORTH ELEVATION
3/8" = 1'-0"
10-AS-2

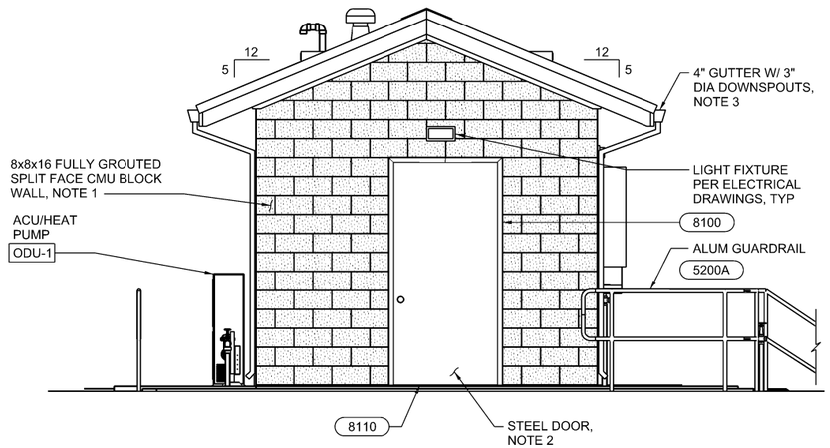


B EAST ELEVATION
3/8" = 1'-0"
10-AS-2

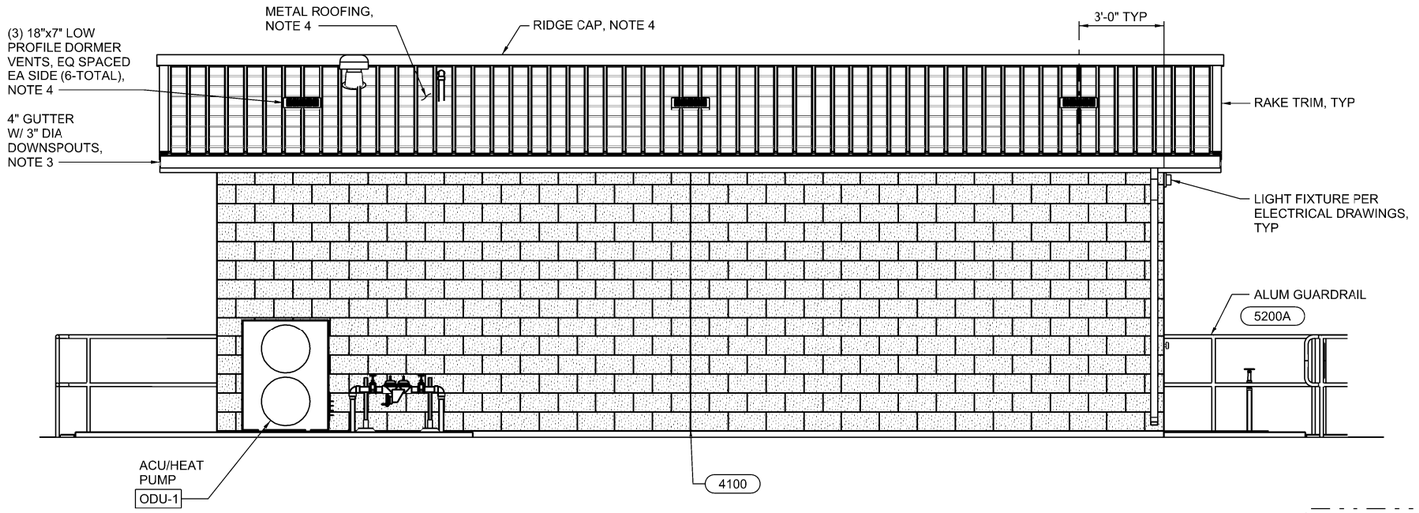
NOTES:

1. COLOR TO MATCH EXISTING FACILITIES, ANGELUS "HARVEST" SPLIT FACE CMU BLOCK, OR EQUAL. SUBMIT COLOR SAMPLE TO OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
2. STEEL DOOR COLOR TO MATCH EXISTING FACILITIES, DARK BROWN. SUBMIT COLOR SAMPLE TO OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
3. PAINT GUTTERS AND DOWNSPOUTS DARK BROWN TO MATCH STEEL DOORS AND METAL ROOFING.
4. METAL ROOFING, RIDGE CAP, FLASHING, ETC TO MATCH EXISTING FACILITIES, DARK BROWN. SUBMIT COLOR SAMPLE TO OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.

BUILDING CODE DATA	
BUILDING CODE	2016 CBC
OCCUPANCY CLASSIFICATION	F-1
HAZARDOUS MATERIALS	NONE
TYPE OF CONSTRUCTION	V-B
FIRE SUPRESSION	FIRE EXTINGUISHERS
NUMBER OF STORIES ABOVE GRADE	1 ACTUAL 1 ALLOWABLE (F-1 OCCUPANCY)
BUILDING HEIGHT ABOVE GRADE	13'-2" ACTUAL 40'-0" ALLOWABLE
BUILDING AREAS	341 SQFT
OCCUPANT LOAD FACTOR	100 SQFT/PERSON
OCCUPANT LOAD	3 PERSONS
TRAVEL DISTANCE	16'-8" MAX ACTUAL 175'-0" ALLOWABLE



C SOUTH ELEVATION
3/8" = 1'-0"
10-AS-2



D WEST ELEVATION
3/8" = 1'-0"
10-AS-2

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

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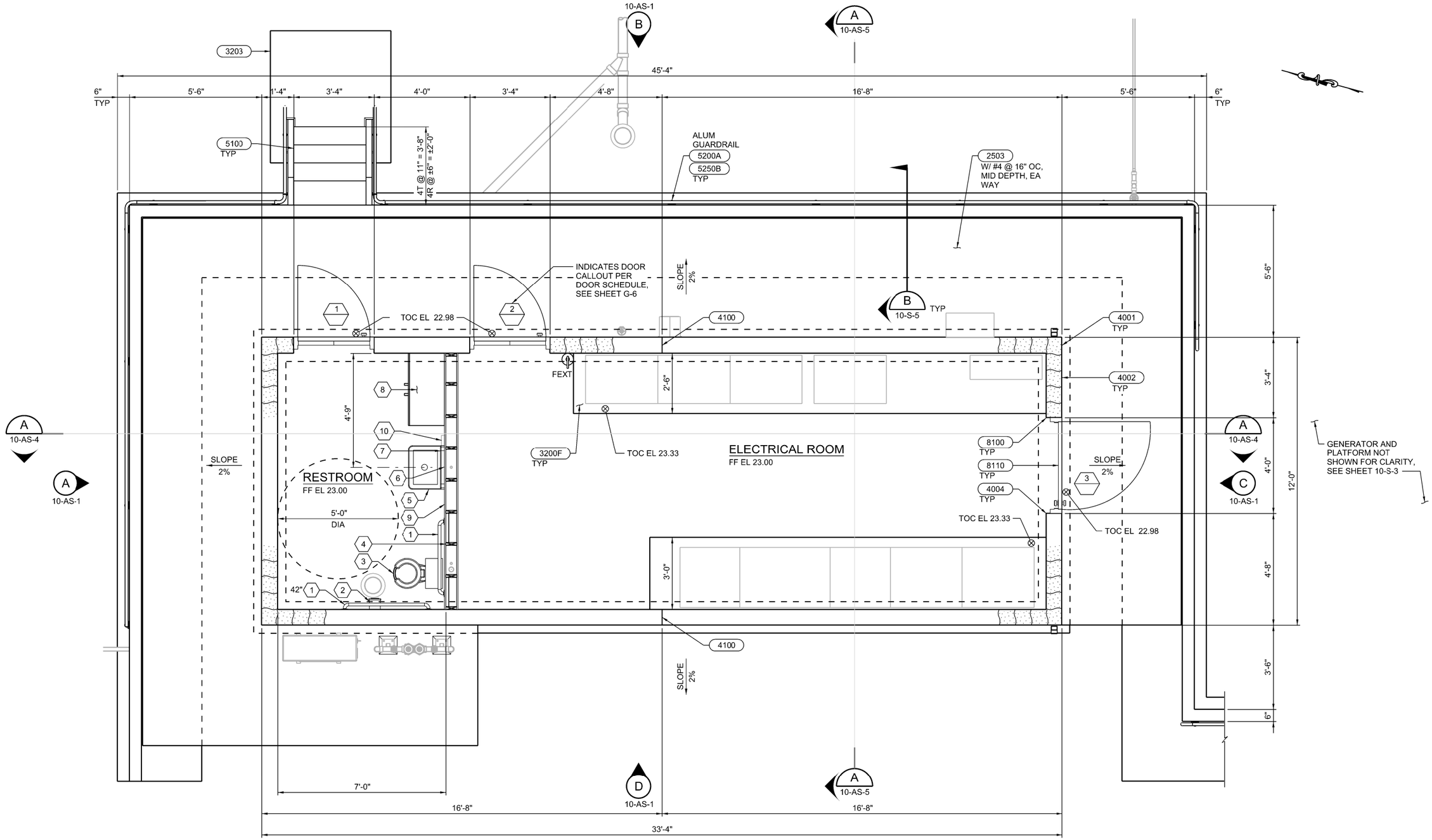
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ARCHITECTURAL / STRUCTURAL
PUMP STATION A
ELECTRICAL BUILDING ELEVATIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-AS-1
SHEET NUMBER X



FURNISHINGS SCHEDULE

1	GRAB BAR, PROVIDE BLOCKING IN WOOD FRAMING WALL	4	SEAT COVER DISPENSER	7	PAPER TOWEL DISPENSER RA-01	10	INSTANT WATER HEATER IHW-01
2	TOILET PAPER DISPENSER RA-02	5	UTILITY SINK US-01	8	STORAGE CABINET SC-01	NOTES:	
3	FLOOR MOUNTED WATER CLOSET WC-01	6	MIRROR, 24"x36"	9	SOAP DISPENSER RA-03	FOR ADDITIONAL FURNISHING REQUIREMENTS, SEE DETAIL 10100.	

PUMP STATION A ELECTRICAL BUILDING FLOOR PLAN

1/2" = 1'-0"

2 0 2 4 FEET

SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

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WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

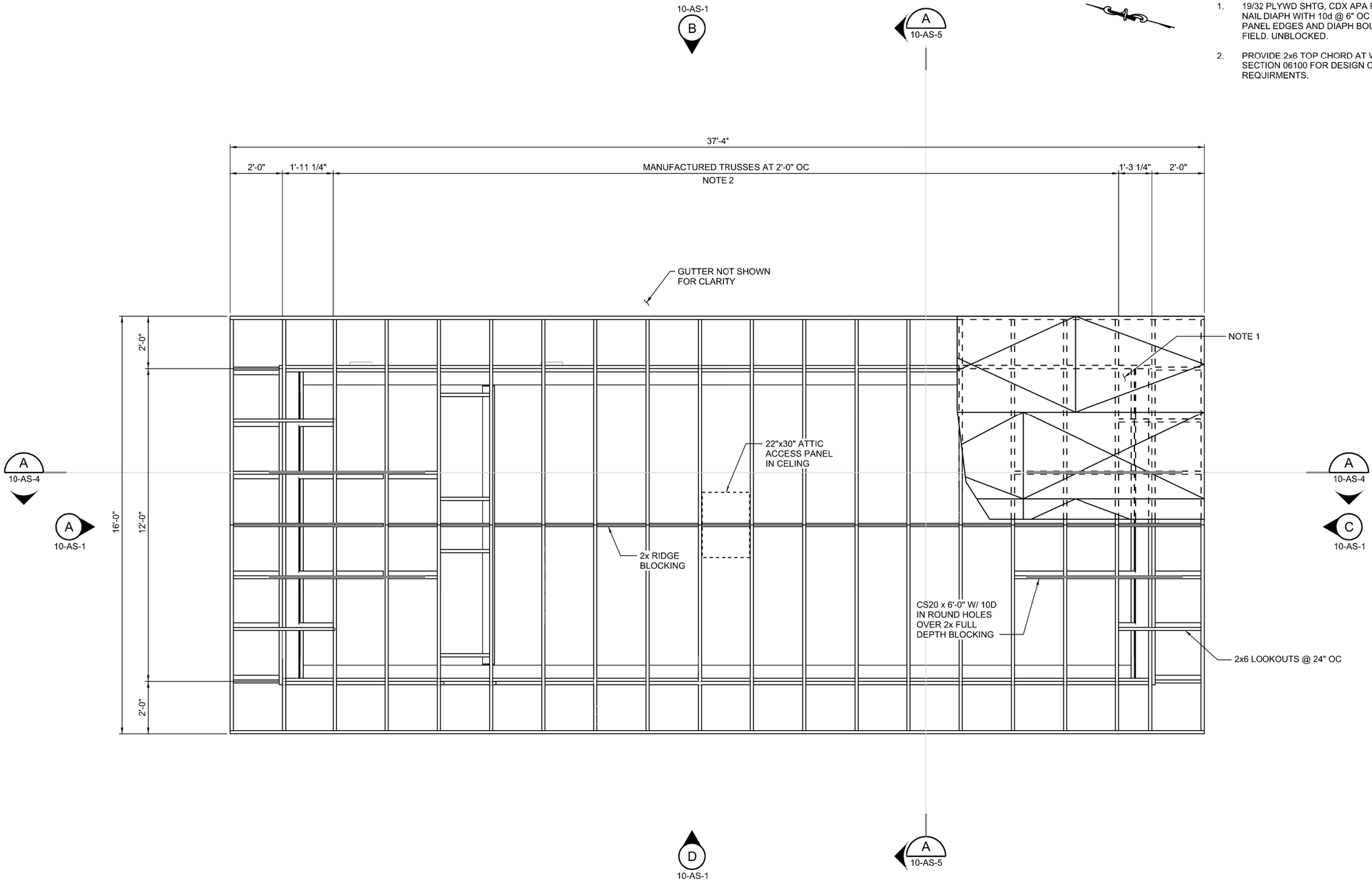
ARCHITECTURAL / STRUCTURAL
PUMP STATION A ELECTRICAL BUILDING PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-AS-2
SHEET NUMBER X

FILENAME: 1782D-10AS101.DGN PLOT DATE: 2/7/2020 4:37:08 PM

NOTES:

1. 19/32 PLYWD SHTG, CDX APA RATED EXPOSURE 1. NAIL DIAPH WITH 10d @ 6" OC AT ALL SUPPORTED PANEL EDGES AND DIAPH BOUNDARY, 12" OC IN FIELD. UNBLOCKED.
2. PROVIDE 2x6 TOP CHORD AT WOOD TRUSSES. SEE SECTION 06100 FOR DESIGN CRITERIA AND SUBMITTAL REQUIRMENTS.



ROOF FRAMING PLAN

1/2" = 1'-0"

2 0 2 4 FEET

SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
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APPROVED M FISHER

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WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

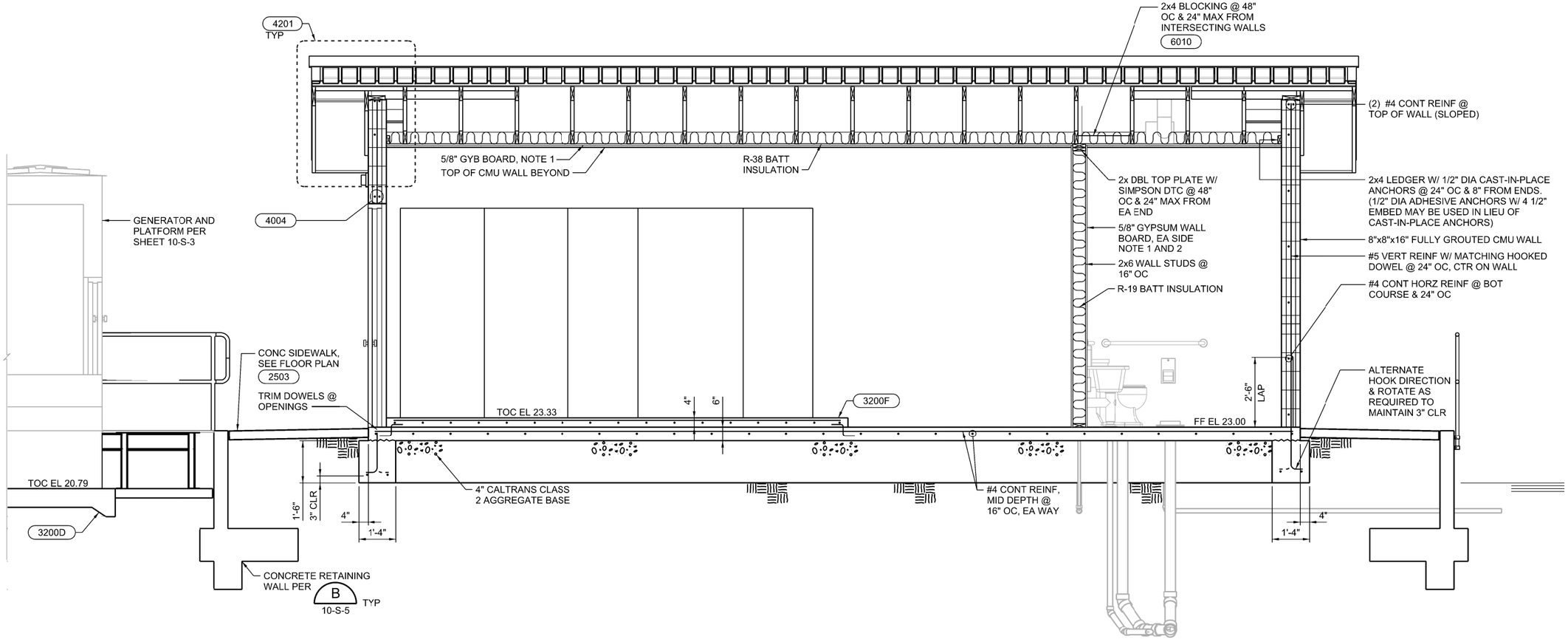
ARCHITECTURAL / STRUCTURAL
PUMP STATION A
ELECTRICAL BUILDING
ROOF FRAMING PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-AS-3
SHEET NUMBER X

FILENAME: 1782D-10AS102.DGN PLOT DATE: 2/7/2020 4:36:21 PM

NOTES:

1. INSTALL EDGE TRIM WHERE GYPSUM WALL BOARD ABUTS ANOTHER MATERIAL AT WALLS AND CEILING. PROVIDE JOINT SEALANT BETWEEN TRIM AND OTHER MATERIAL PRIOR TO PAINTING.
2. FASTEN GYPSUM WALL BOARD TO 2x STUDS W/ NO. 6x1 1/4" TYPE S OR W DRYWALL SCREWS @ 12" OC @ PANEL EDGES & 16" OC IN FIELD, UNBLOCKED.



A SECTION
10-AS-2 1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
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APPROVED M FISHER

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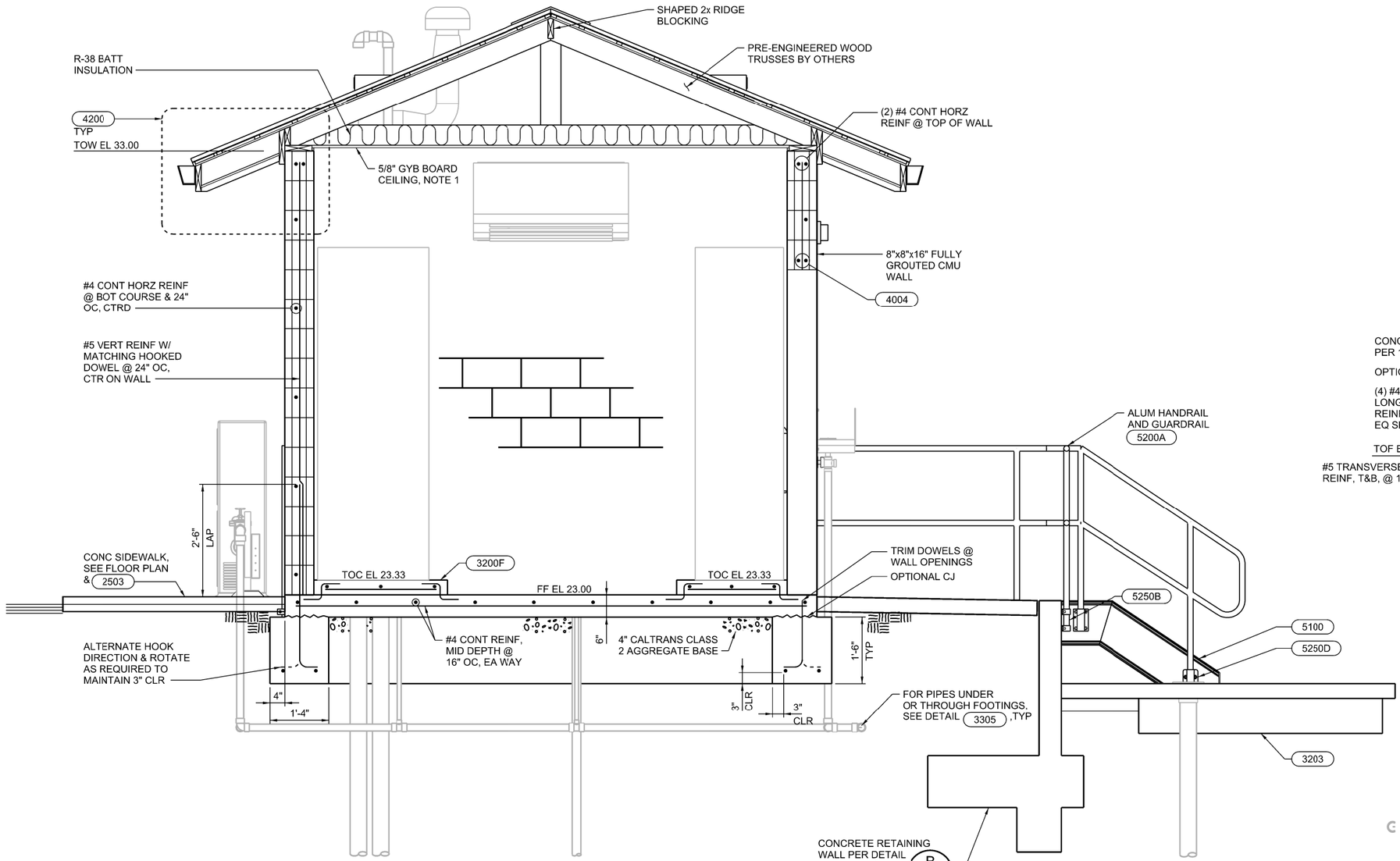
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ARCHITECTURAL / STRUCTURAL
PUMP STATION A
ELECTRICAL BUILDING
SECTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-AS-4
SHEET NUMBER X

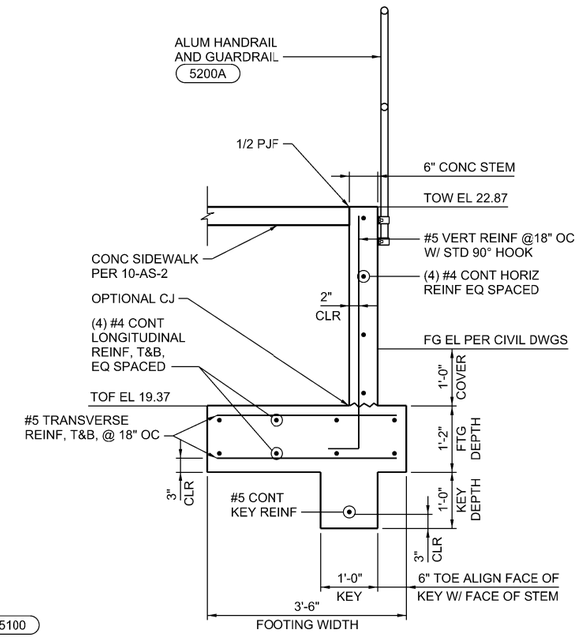
FILENAME: 1782D-10AS201.DGN PLOT DATE: 2/7/2020 4:34:48 PM



A SECTION
10-AS-2 3/4" = 1'-0"

NOTES:

1. INSTALL EDGE TRIM WHERE GYPSUM WALL BOARD ABUTS ANOTHER MATERIAL AT WALLS AND CELING. PROVIDE JOINT SEALANT BETWEEN TRIM AND OTHER MATERIAL PRIOR TO PAINTING.



B SECTION
10-AS-2 3/4" = 1'-0"
10-AS-4

1 0 1 2 FEET
SCALE 3/4"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
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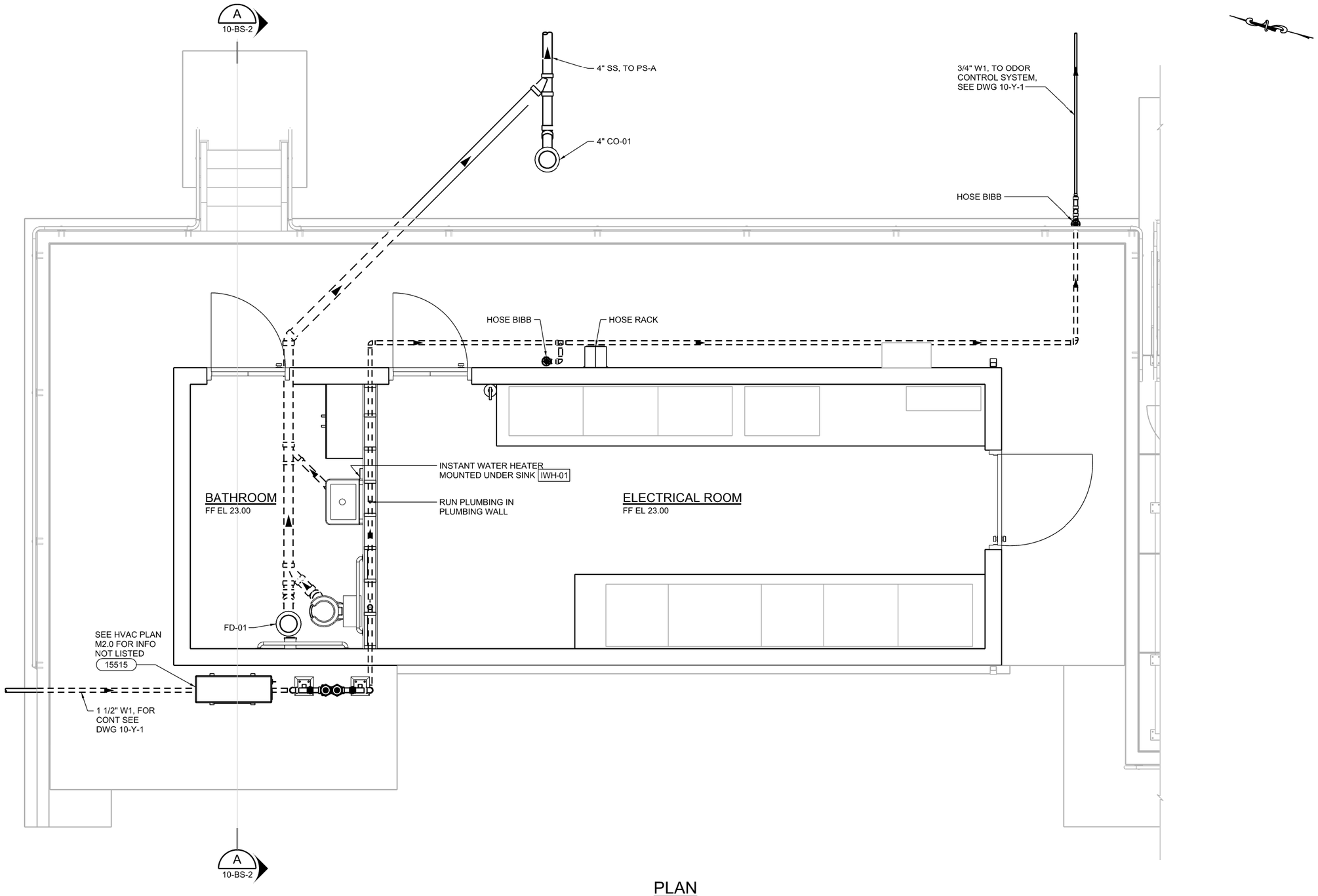
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ARCHITECTURAL / STRUCTURAL
PUMP STATION A ELECTRICAL BUILDING SECTIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-AS-5
SHEET NUMBER X



PLAN
1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

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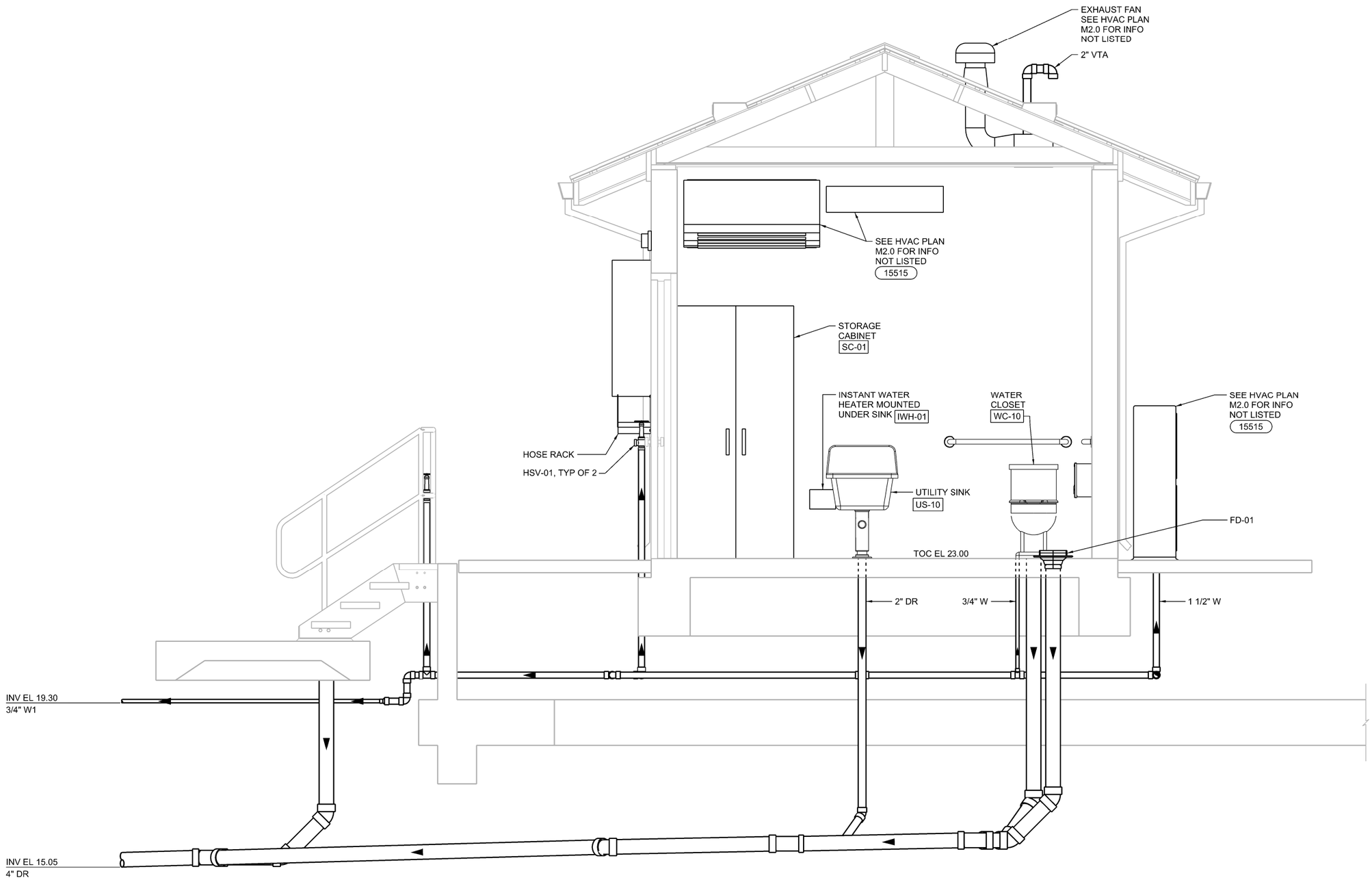
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

BUILDING SERVICES
PUMP STATION A
PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-BS-1
SHEET NUMBER X

FILENAME: 1782D-10BS101.DGN PLOT DATE: 2/6/2020 3:14:40 PM



A SECTION
10-BS-1 3/4" = 1'-0"

1 0 1 2 FEET
SCALE 3/4"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

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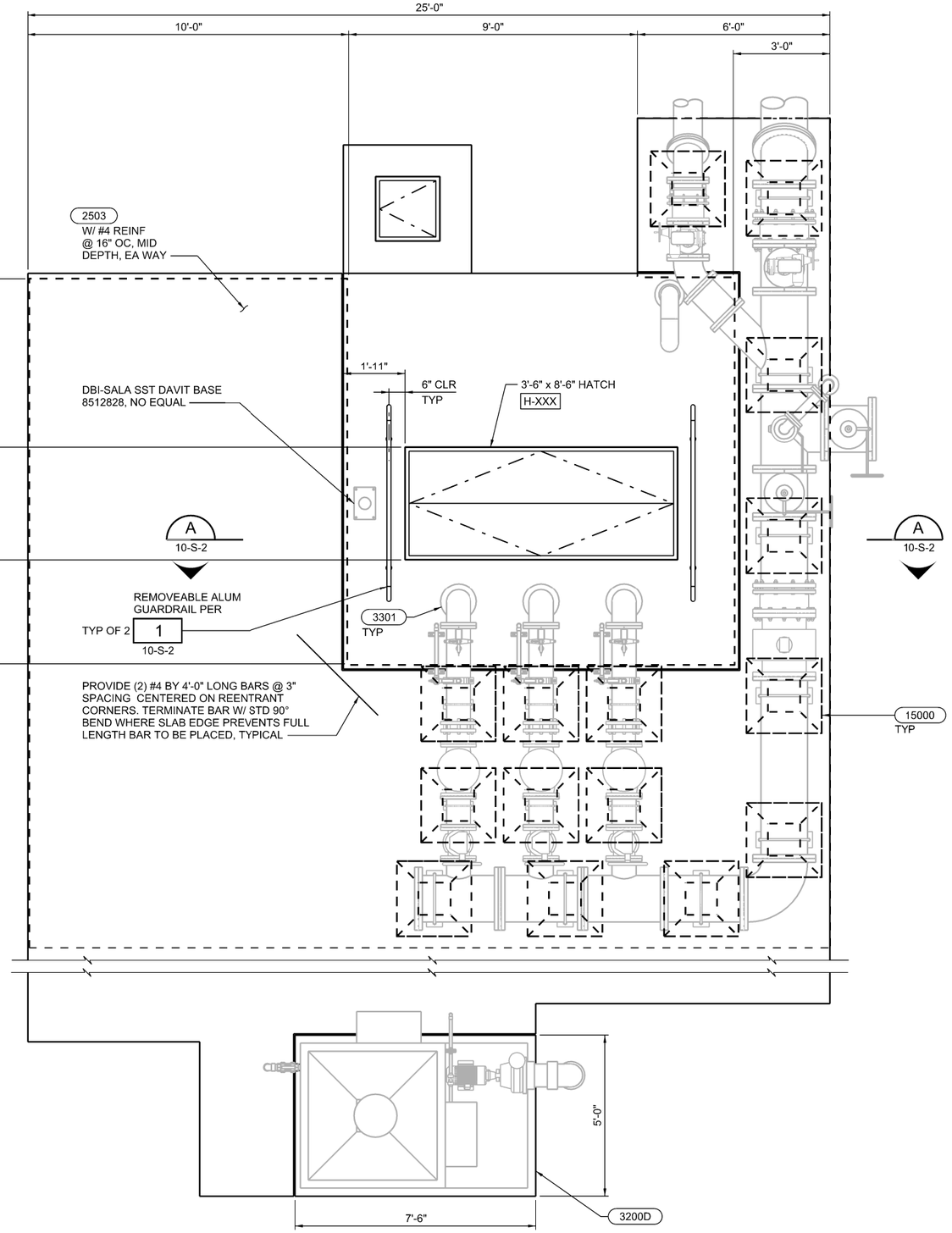
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

BUILDING SERVICES
PUMP STATION A
SECTION

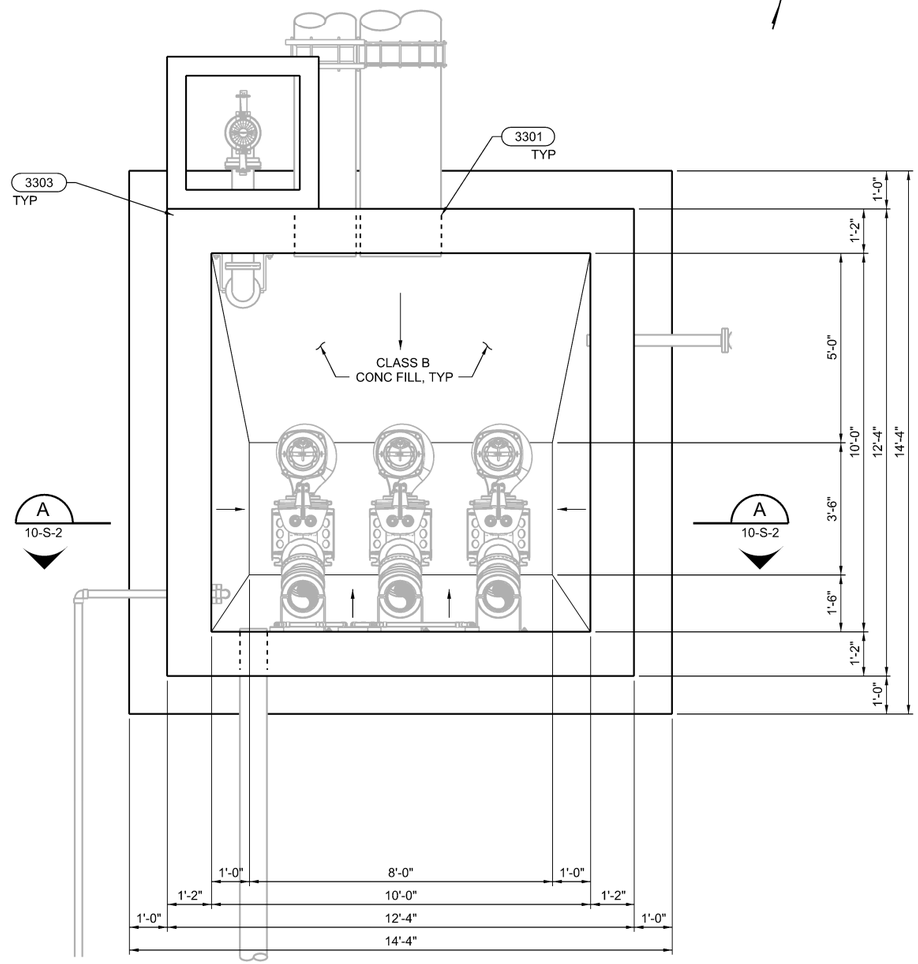
DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-BS-2
SHEET NUMBER X

FILENAME: 1782D-10BS201.DGN PLOT DATE: 2/6/2020 4:45:38 PM



TOP PLAN

1/2" = 1'-0"



LOWER PLAN

1/2" = 1'-0"

2 0 2 4 FEET

SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
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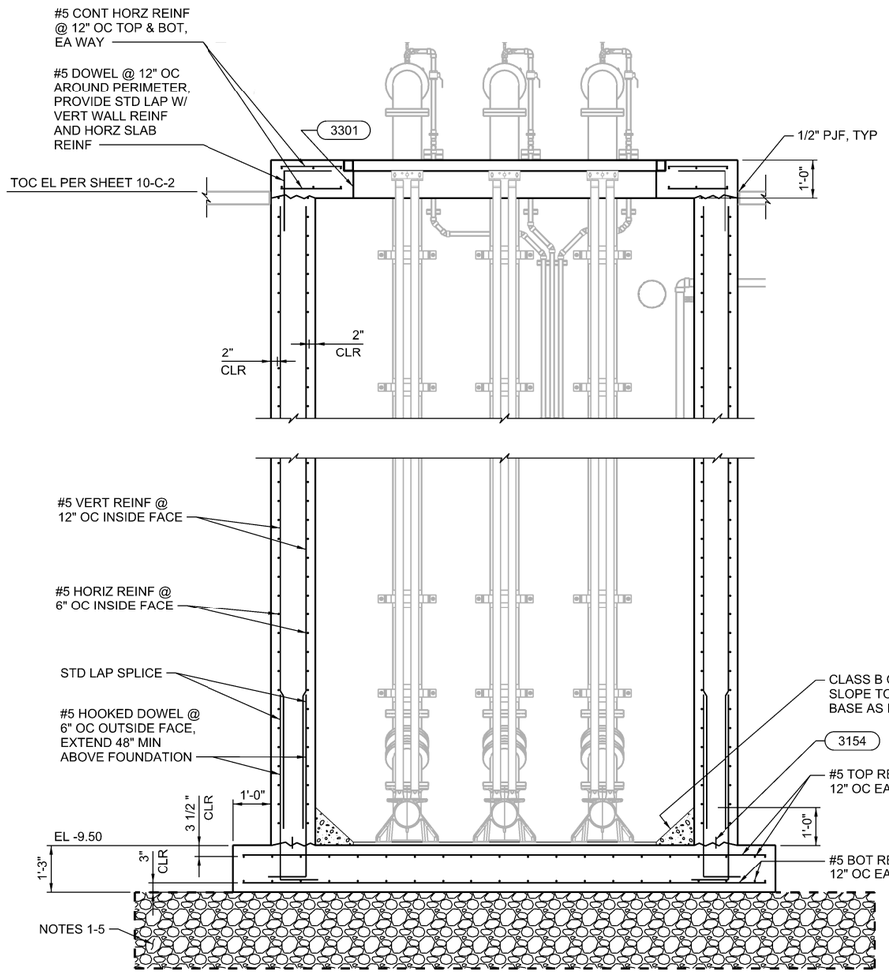
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

STRUCTURAL
PUMP STATION A
PLANS

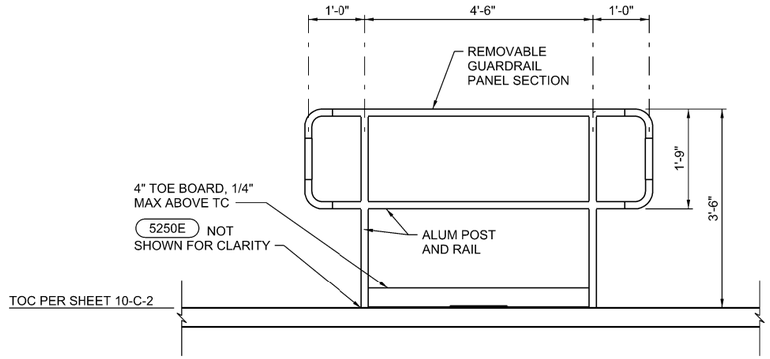
DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-S-1
SHEET NUMBER X

EXCAVATION/GRADING NOTES:

1. THE LOWER 4 FEET OF THE WET WELL EXCAVATION SHOULD BE PERFORMED WITH CAUTION, USING AN EXCAVATOR TYPE OF EQUIPMENT, AND SUCH THAT CONSTRUCTION EQUIPMENT WILL NOT TRAVERSE ACROSS THE BOTTOM OF THE EXCAVATION.
2. EXCAVATIONS FOR THE WET WELL SHOULD BE DEEPENED TO ALLOW AT LEAST 2 FEET OF CRUSHED ROCK (AGGREGATE FOR STABILIZATION) ENCASED IN A GEOTEXTILE/STABILIZATION TO BE PLACED ON THE UINDISTURBED SUBGRADE AT THE BOTTOM OF THE EXCAVATION.
3. PLACE THE AGGREGATE FOR STABILIZATION IN (2) 1 FOOT LIFTS. THE FIRST LIFT SHOULD BE PLACED WITH AN EXCAVATOR OR LIGHT EQUIPMENT SUCH AS A BOB CAT. CONSOLIDATE EACH LIFT W/ A MINIMUM OF (4) PASSES WITH A VIBRATORY PLATE OR BY TRACK WALKING WITH A WIDE-TRACKED DOZER. THE SECOND LIFT MAY BE PLACED USING A WIDE-TRACK DOZER OR SIMILAR EQUIPMENT.
4. EXTEND THE AGGREGATE FOR STABILIZATION 3 FEET MINIMUM BEYOND THE FOOTPRINT OF THE STRUCTURE & COMPLETELY ENCOMPASS WITH GEOTEXTILE FABRIC.
5. A LEVELING COURSE OF STRUCTURAL FILL MAY BE PLACED AND COMPACTED OVER THE STABILIZATION LAYER IF DESIRED.



A SECTION
10-S-1 1/2" = 1'-0"



1 DETAIL
10-S-1 3/4" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"
1 0 1 2 FEET
SCALE 3/4"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

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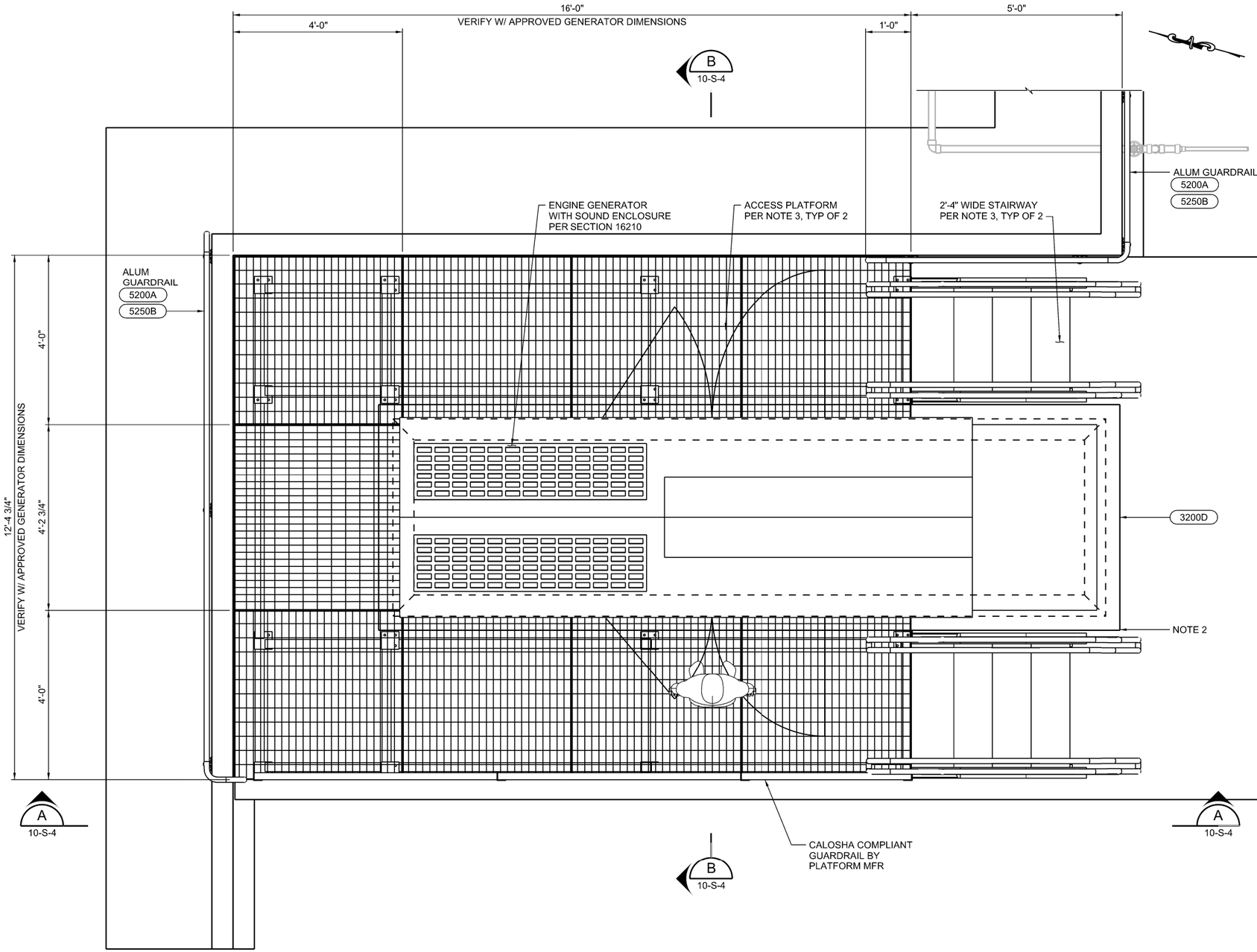
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

STRUCTURAL
PUMP STATION A SECTIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-S-2
SHEET NUMBER X



NOTES:

1. GENERATOR SHOWN BASED ON KOHLER 250REOZJE GENERATOR WITH STATE CODE FUEL TANK. ACTUAL LAYOUT TO BE BASED ON APPROVED SUBMITTAL.
2. PROVIDE (2) #4x4'-0" DIAGONAL REINF @ 3" SPACING @ EA REENTRANT CORNER (4-TOTAL). PROVIDE STD 90° BEND WHERE SLAB EDGE PREVENTS PLACEMENT OF FULL LENGTH BAR.
3. WILDECK JIFFYSTAIR MODULAR STAIR SYSTEM, OR APPROVED EQUAL. PROVIDE CAL OHSA COMPLIANT STAIR SYSTEM WITH GUARDRAIL ON THREE SIDES OF PLATFORM. COORDINATE ±28" PLATFORM HEIGHT WITH APPROVED GENERATOR. HOT DIP GALVANIZED FINISH.

PLAN
3/4" = 1'-0"

1 0 1 2 FEET
SCALE 3/4"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED A LINDEMAN
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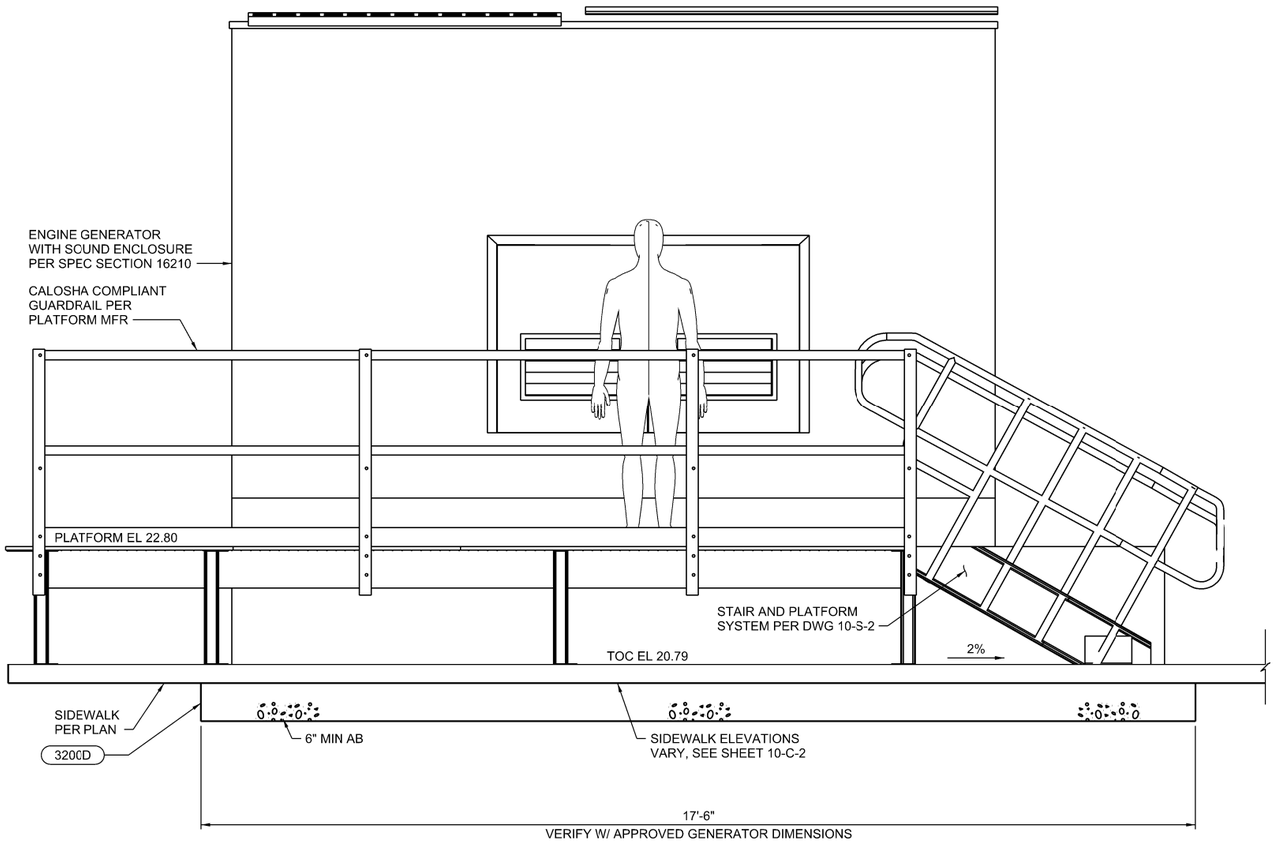
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

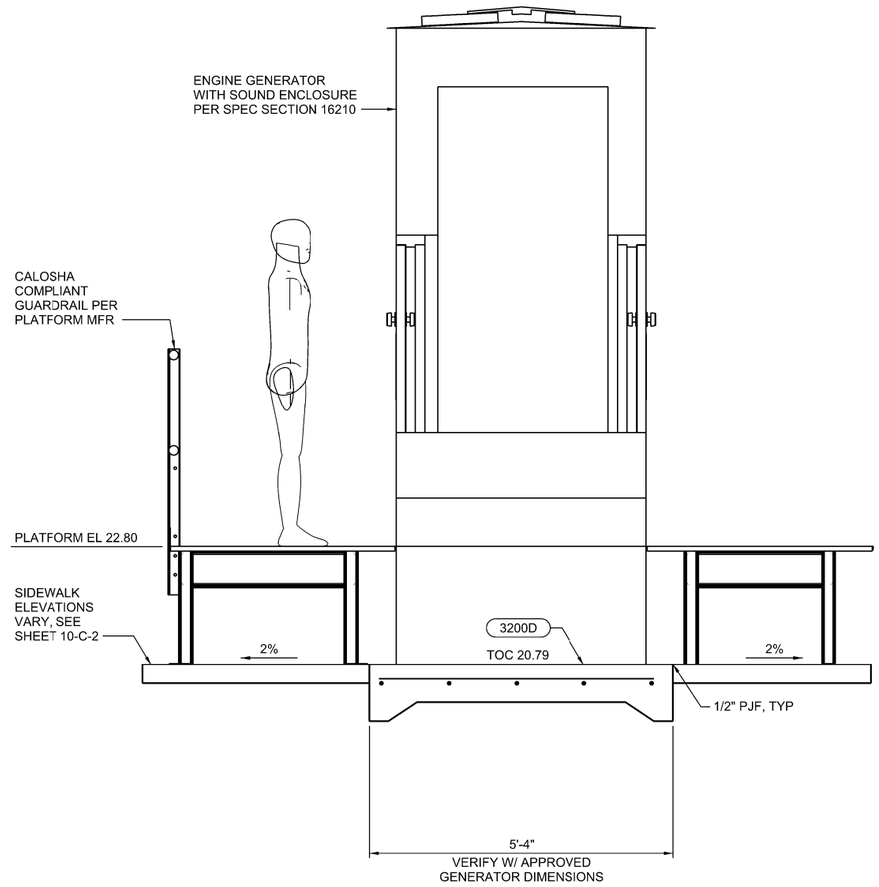
STRUCTURAL
PUMP STATION A
GENERATOR
PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-S-3
SHEET NUMBER X

FILENAME: 1782D-10S102.DGN PLOT DATE: 2/7/2020 3:25:21 PM



A SECTION
10-S-3 3/4" = 1'-0"



B SECTION
10-S-3 3/4" = 1'-0"

1 0 1 2 FEET
SCALE 3/4"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

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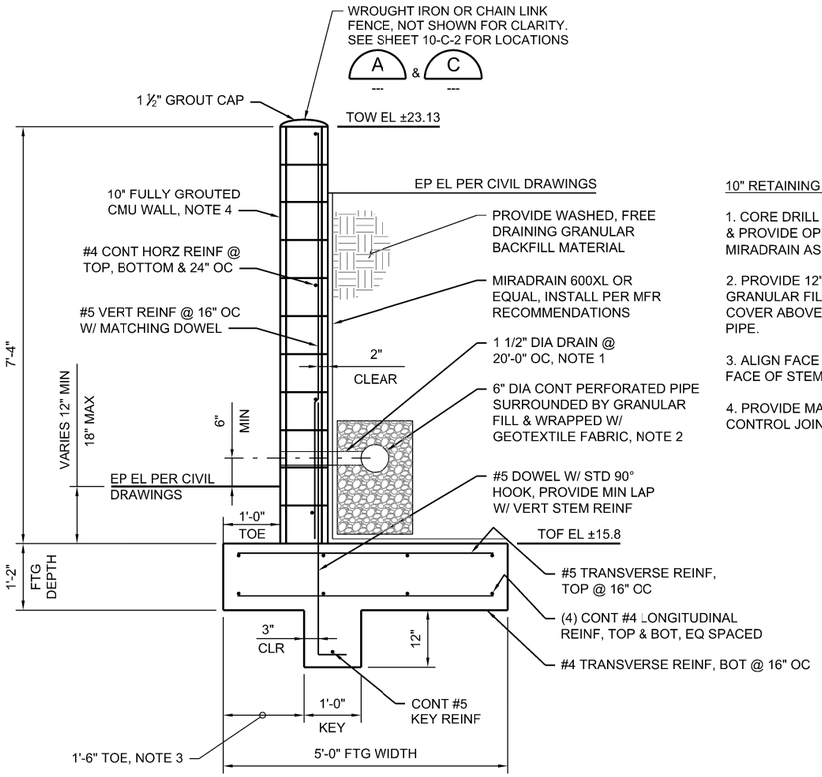
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

STRUCTURAL
PUMP STATION A GENERATOR SECTIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-S-4
SHEET NUMBER X

FILENAME: 1782D-10S202.DGN PLOT DATE: 2/7/2020 3:26:58 PM



10" RETAINING WALL NOTES:

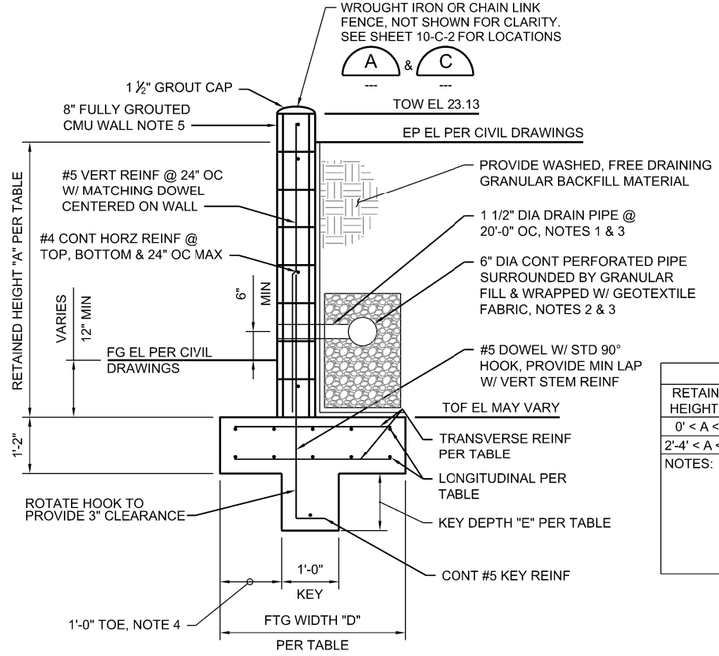
1. CORE DRILL DRAIN IN WALL & PROVIDE OPENING IN MIRADRAIN AS REQUIRED

2. PROVIDE 12" MIN WIDTH OF GRANULAR FILL W/ 6" MIN COVER ABOVE PERFORATED PIPE.

3. ALIGN FACE OF KEY WITH FACE OF STEM

4. PROVIDE MASONRY CRACK CONTROL JOINTS @ 22' OC MAX

1 DETAIL
10-C-2 3/4" = 1'-0"



8" RETAINING WALL NOTES:

1.CORE DRILL DRAIN IN WALL AND PROVIDE OPENING IN MIRADRAIN AS REQUIRED.

2. PROVIDE 12" MIN WIDTH OF GRANULAR FILL W/ 6" MIN COVER ABOVE PERFORATED PIPE.

3. PERFORATED DRAIN AND GRANULAR BACKFILL NOT REQUIRED WHERE RETAINED HEIGHT IS LESS THAN 18".

4. ALIGN FACE OF KEY WITH FACE OF STEM.

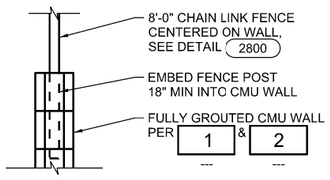
5. PROVIDE MASONRY CRACK CONTROL JOINT @ 24' OC MAX

RETAINING WALL TABLE

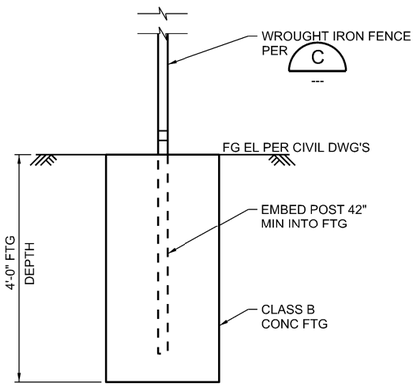
RETAINED HEIGHT "A"	TOE WIDTH "B"	FOOTING WIDTH "C"	KEY DEPTH "D"	VERT WALL REINF	TRANS FTG REINF[1]	LONG FTG REINF[1, 2]
0' < A < 2'-4"	1'-0"	2'-9"	0"	#5 @ 24" OC	#4 @ 12" OC	(2) #4 CONT
2'-4' < A < 4'-10"	1'-0"	3'-4"	1'-0"	#5 @ 16" OC	#4 @ 16" OC	(3) #4 CONT

NOTES:
1) TRANS AND LONG REINF SHOWN IS TYPICAL FOR TOP & BOT MATS
2) EQUALLY SPACE CONT LONG REINF ACROSS FTG WIDTH
3) FIELD LOCATE WALL STEP LOCATIONS CONSIDERING MINIMUM SOIL COVER OVER TOE. STEP FOOTING PER 3308 TYPE B
4) FOR WALL HEIGHTS GREATER THAN 4'-10" USE DETAIL 2 -- ALIGN EXPOSED FACES OF CMU WALL BLOCKS WITH DIFFERING WIDTHS

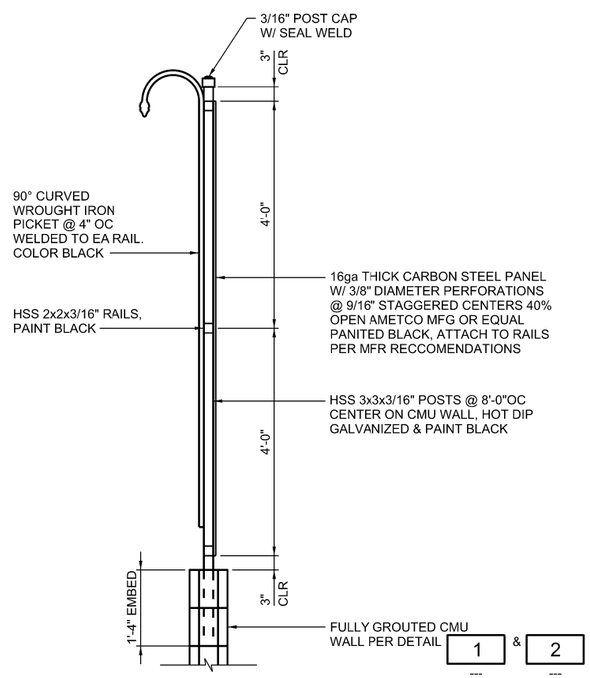
2 DETAIL
10-C-2 3/4" = 1'-0"



A SECTION
--- 3/4" = 1'-0"



B SECTION
10-C-2 3/4" = 1'-0"



C SECTION
--- 3/4" = 1'-0"

1 0 1 2 FEET
SCALE 3/4"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

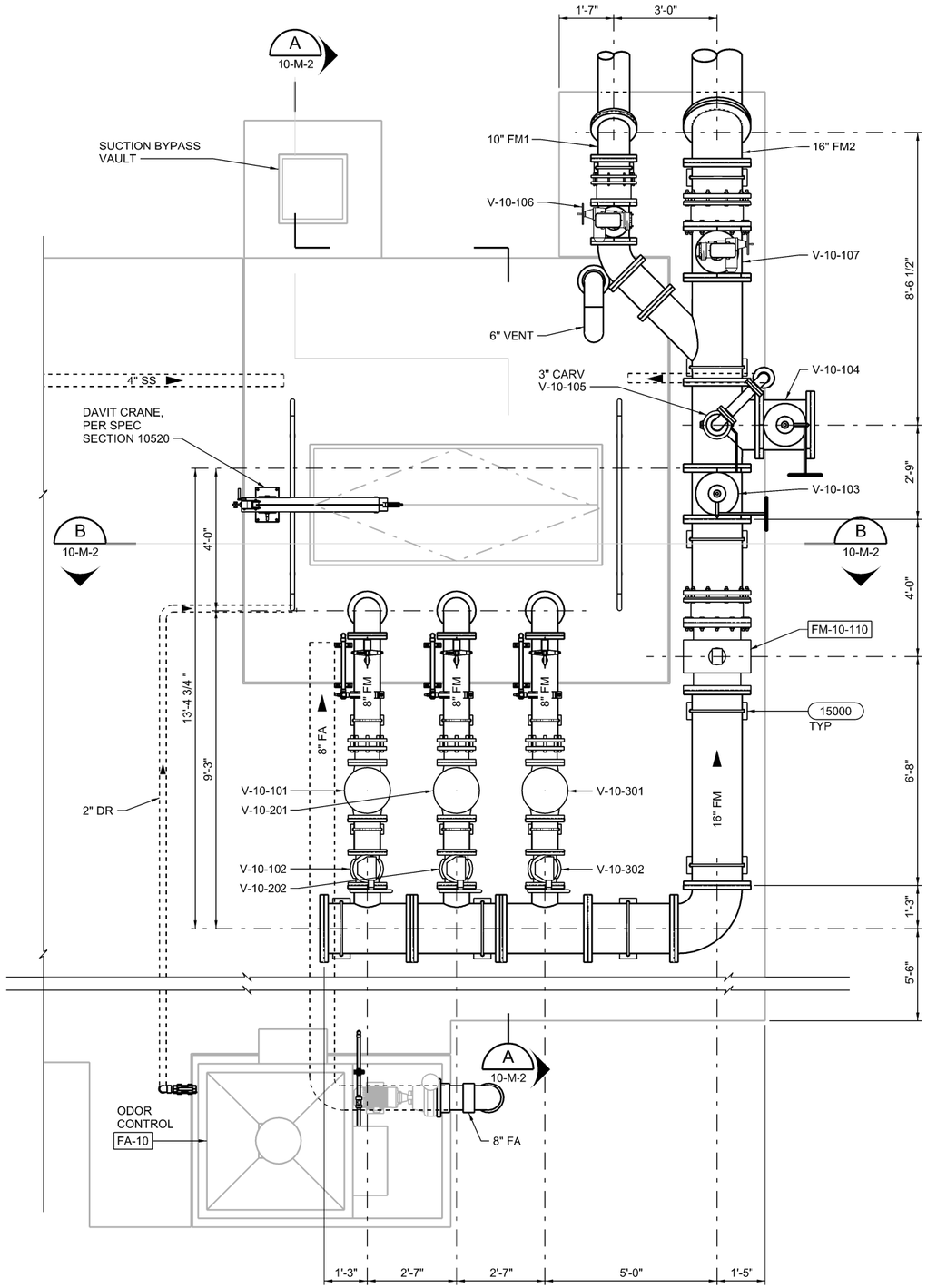
WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

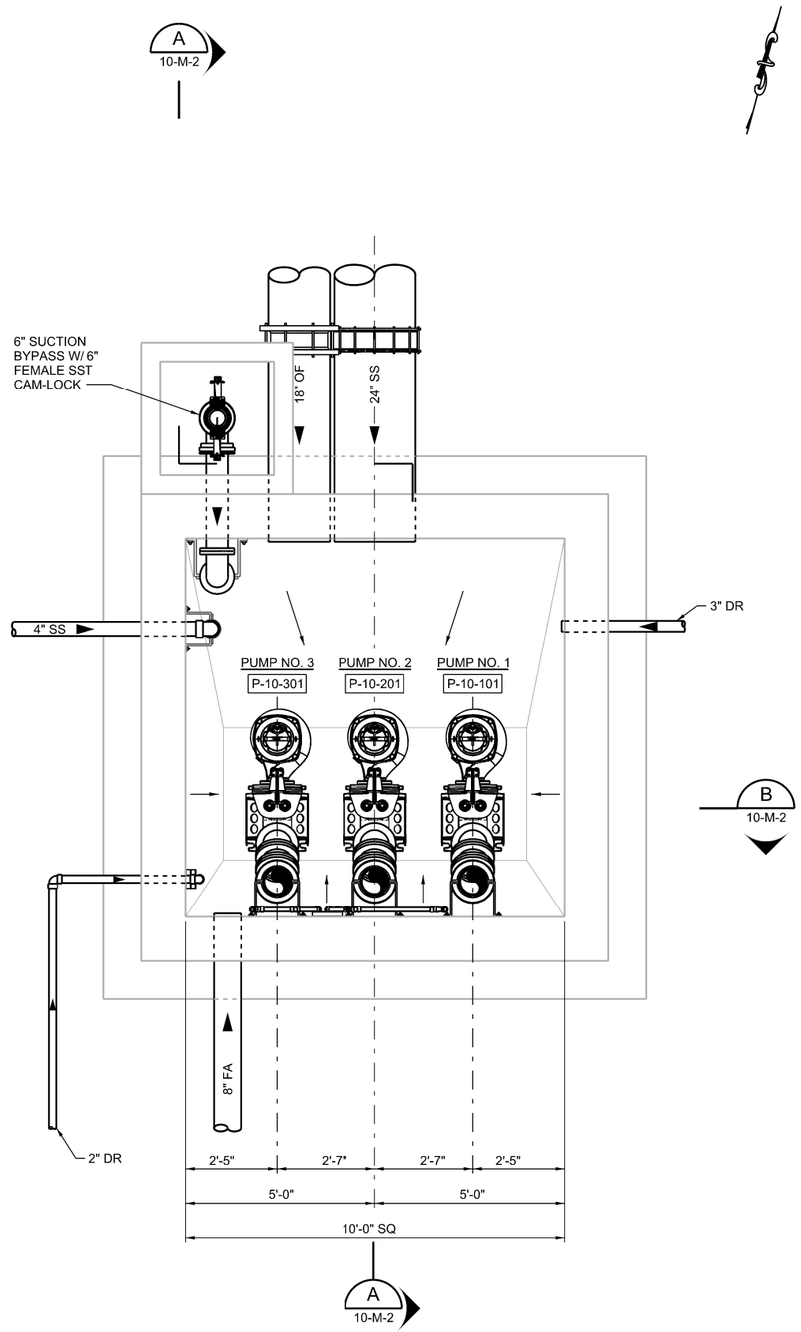
STRUCTURAL
PUMP STATION A DETALS AND SECTIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-S-5
SHEET NUMBER X

FILENAME: 1782D-10S801.DGN PLOT DATE: 2/6/2020 2:28:43 PM



TOP PLAN
1/2" = 1'-0"



LOWER PLAN
1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

WATERWORKS ENGINEERS
1485 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

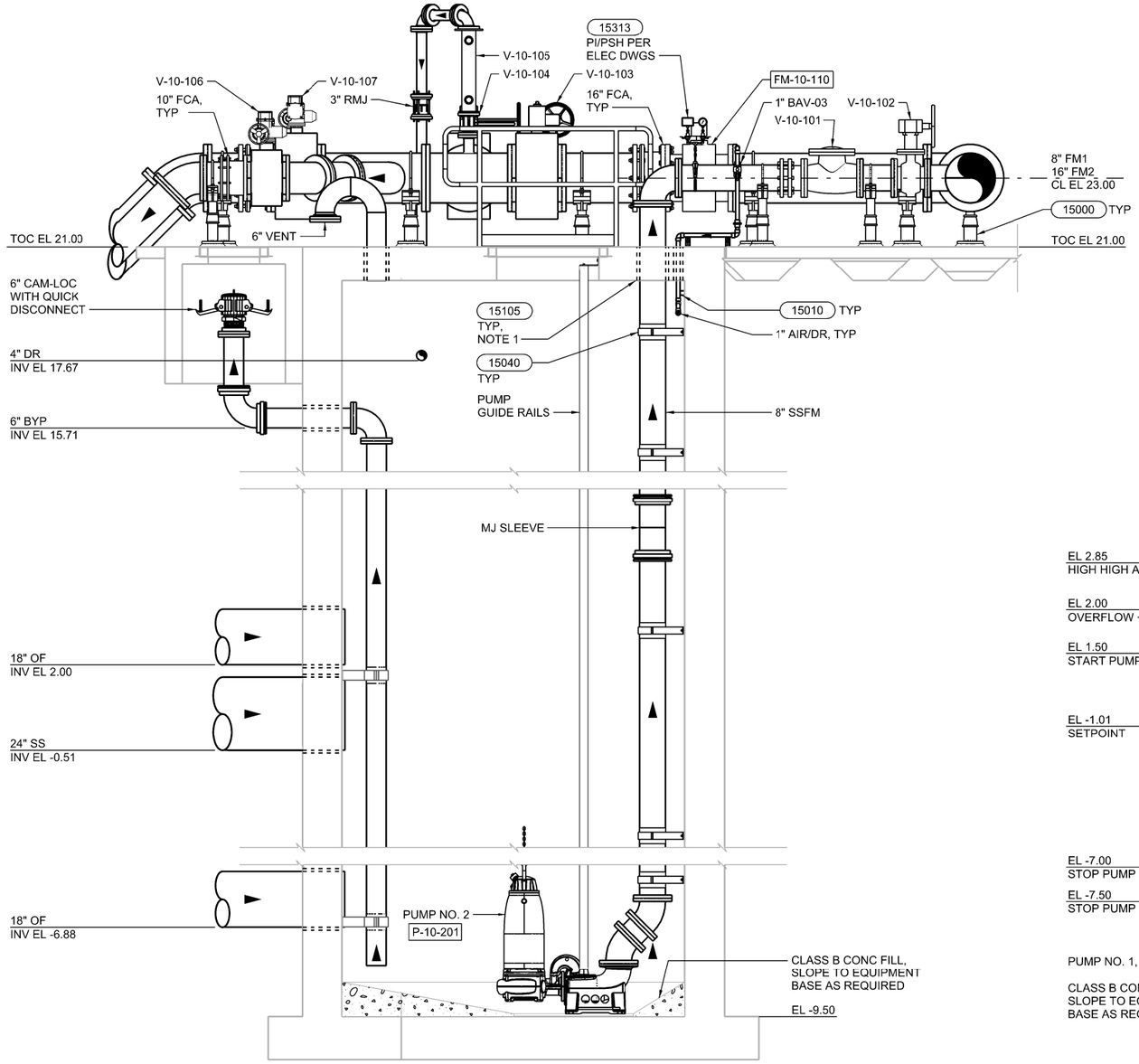
MECHANICAL
PUMP STATION PLANS

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-M-1
SHEET NUMBER X

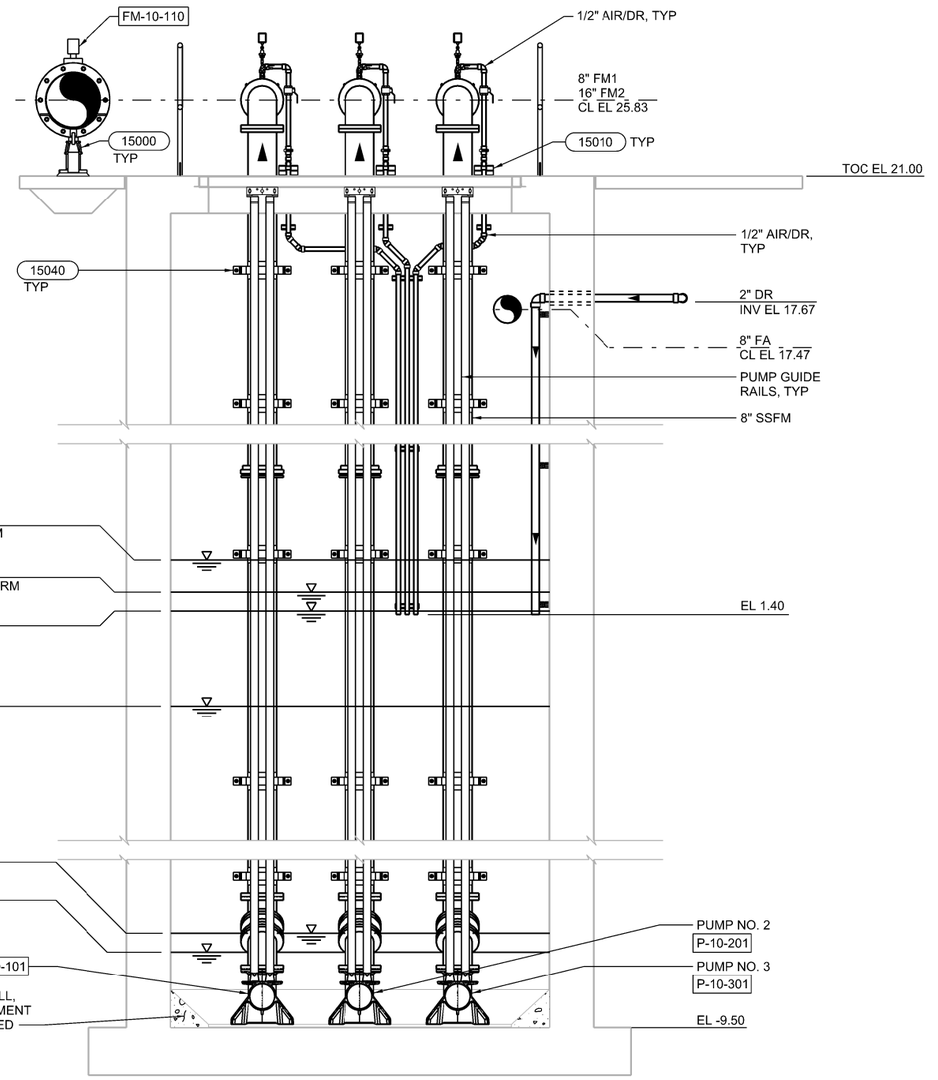
FILENAME: 1782D-10M101.DGN PLOT DATE: 2/10/2020 9:10:10 AM

NOTES:

1. FLOOR SLEEVE SHALL BE SCH 80 PVC.



A SECTION
10-M-1 1/2" = 1'-0"



B SECTION
10-M-1 1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

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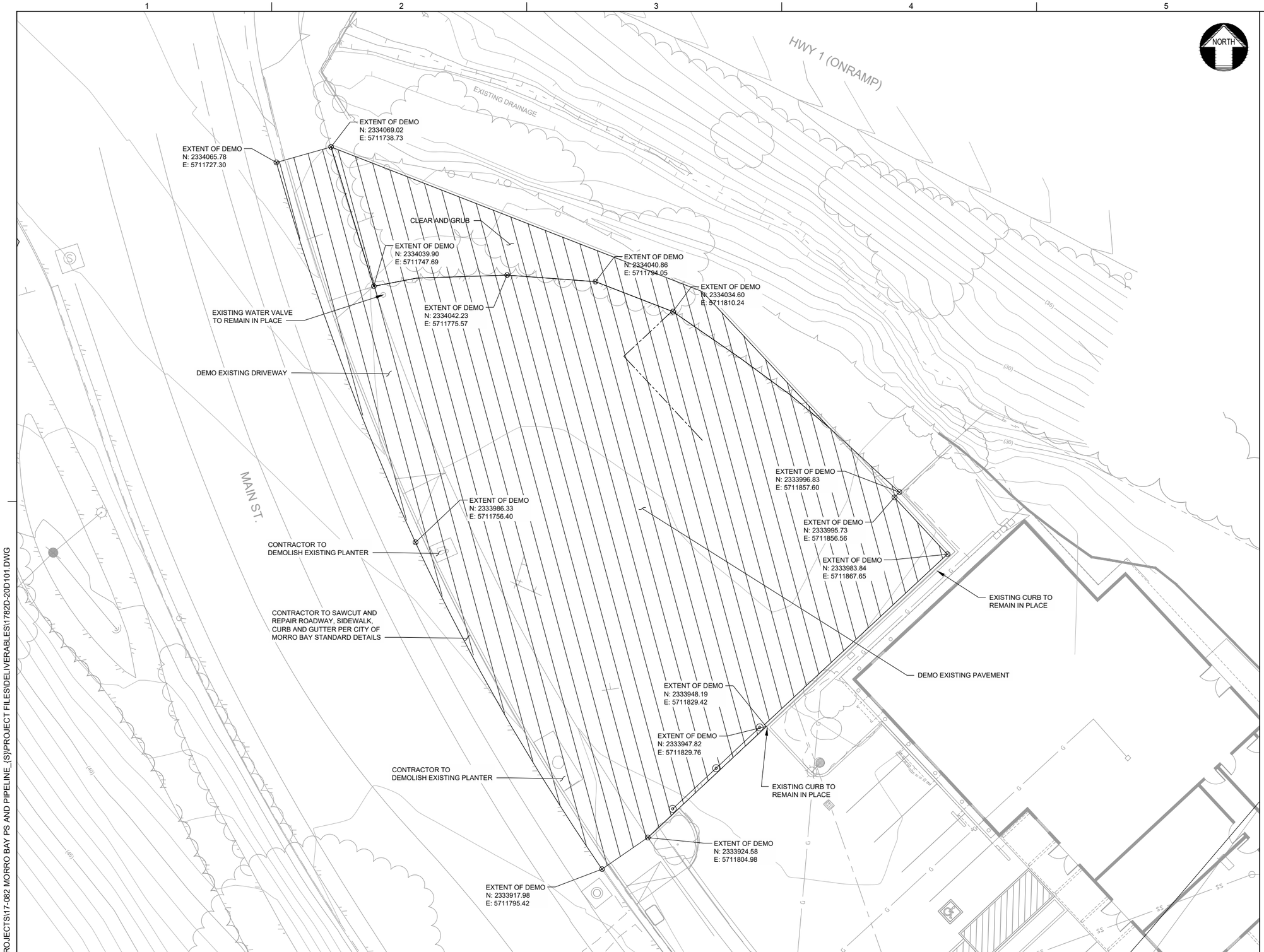
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

MECHANICAL
PUMP STATION A
SECTIONS

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-M-2
SHEET NUMBER X

FILENAME: 1782D-10M201.DGN PLOT DATE: 2/10/2020 10:59:49 AM



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DESIGN P. WEBSTER
DRAWN P. WEBSTER
CHECKED T. LEWIS
APPROVED M FISHER

PRELIMINARY - NOT FOR CONSTRUCTION

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1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

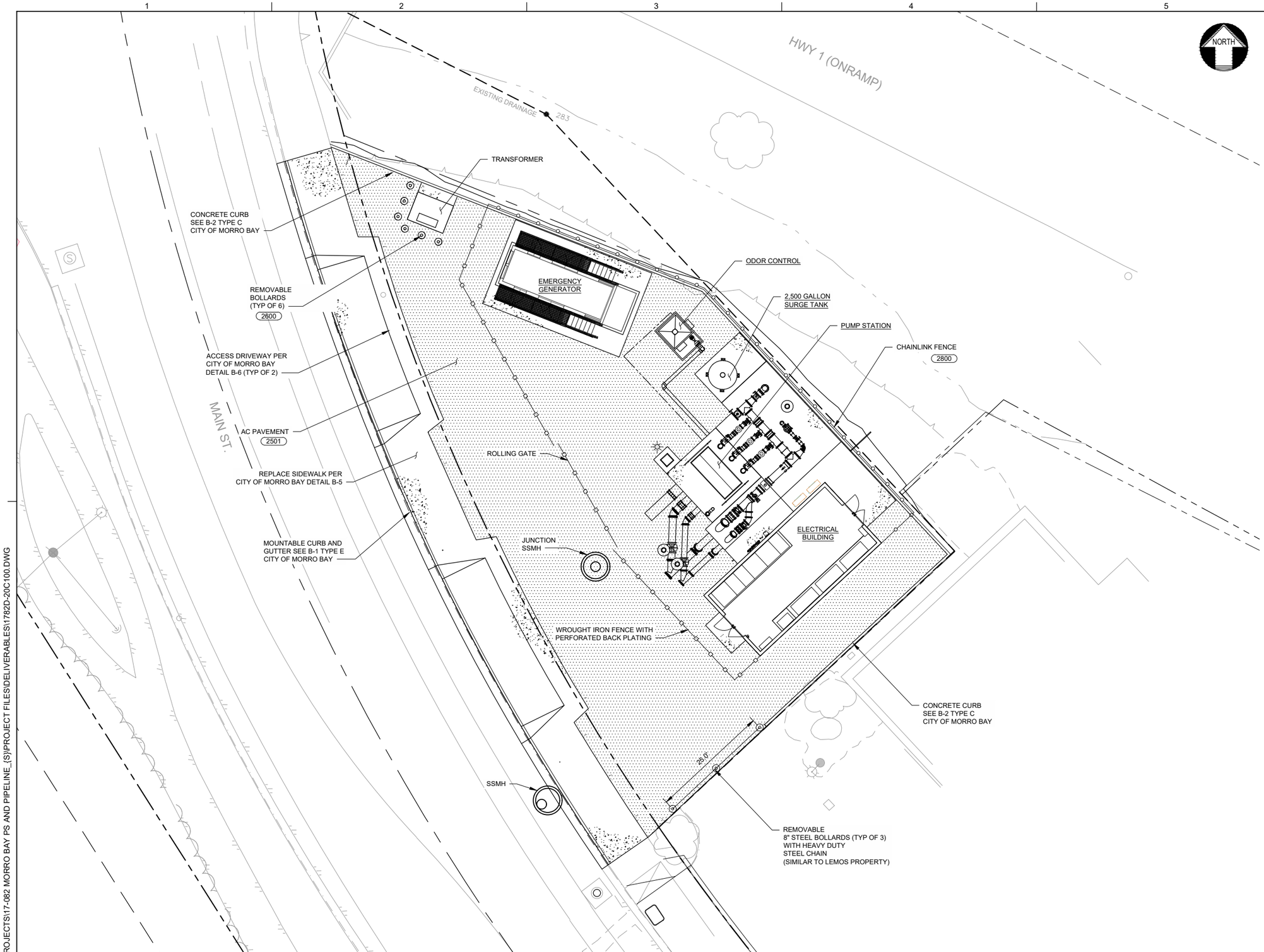
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE
PIPELINES

CIVIL

PUMP STATION B DEMOLITION PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-D-1
SHEET NUMBER ----

JOB NUMBER: 17-082 FILENAME: 1782D-20D101.DWG PLOT DATE: 02/10/20 PLOT TIME: 17:46:02



L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-20C100.DWG

DESIGN P. WEBSTER
DRAWN P. WEBSTER
CHECKED T. LEWIS
APPROVED M FISHER

PRELIMINARY - NOT FOR CONSTRUCTION

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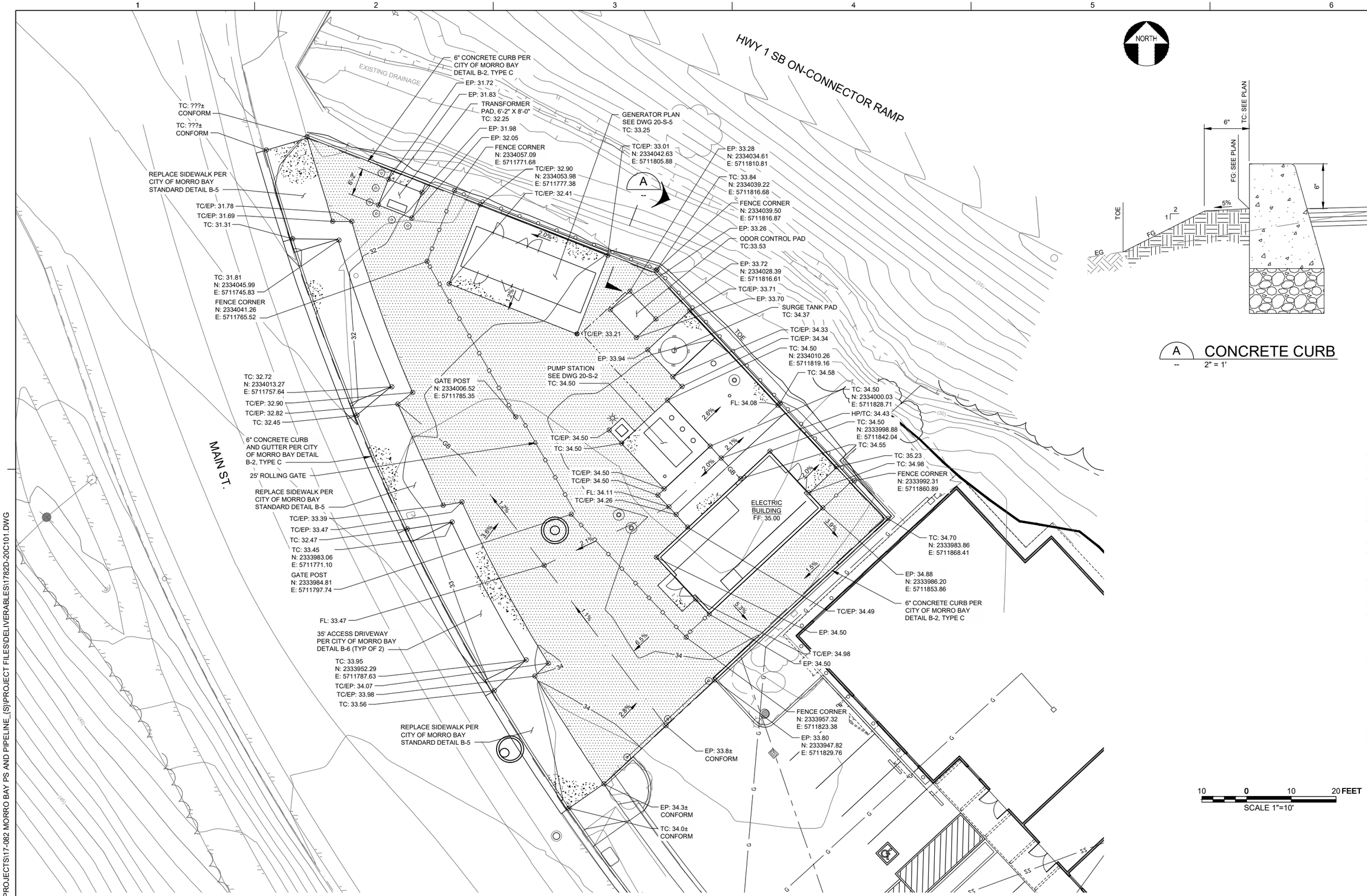
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PUMP STATION B OVERALL PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-C-1
SHEET NUMBER 4

JOB NUMBER: 17-082 FILENAME: 1782D-20C100.DWG PLOT DATE: 02/10/20 PLOT TIME: 17:44:10



A CONCRETE CURB
-- 2" = 1'

NORTH

10 0 10 20 FEET
SCALE 1"=10'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

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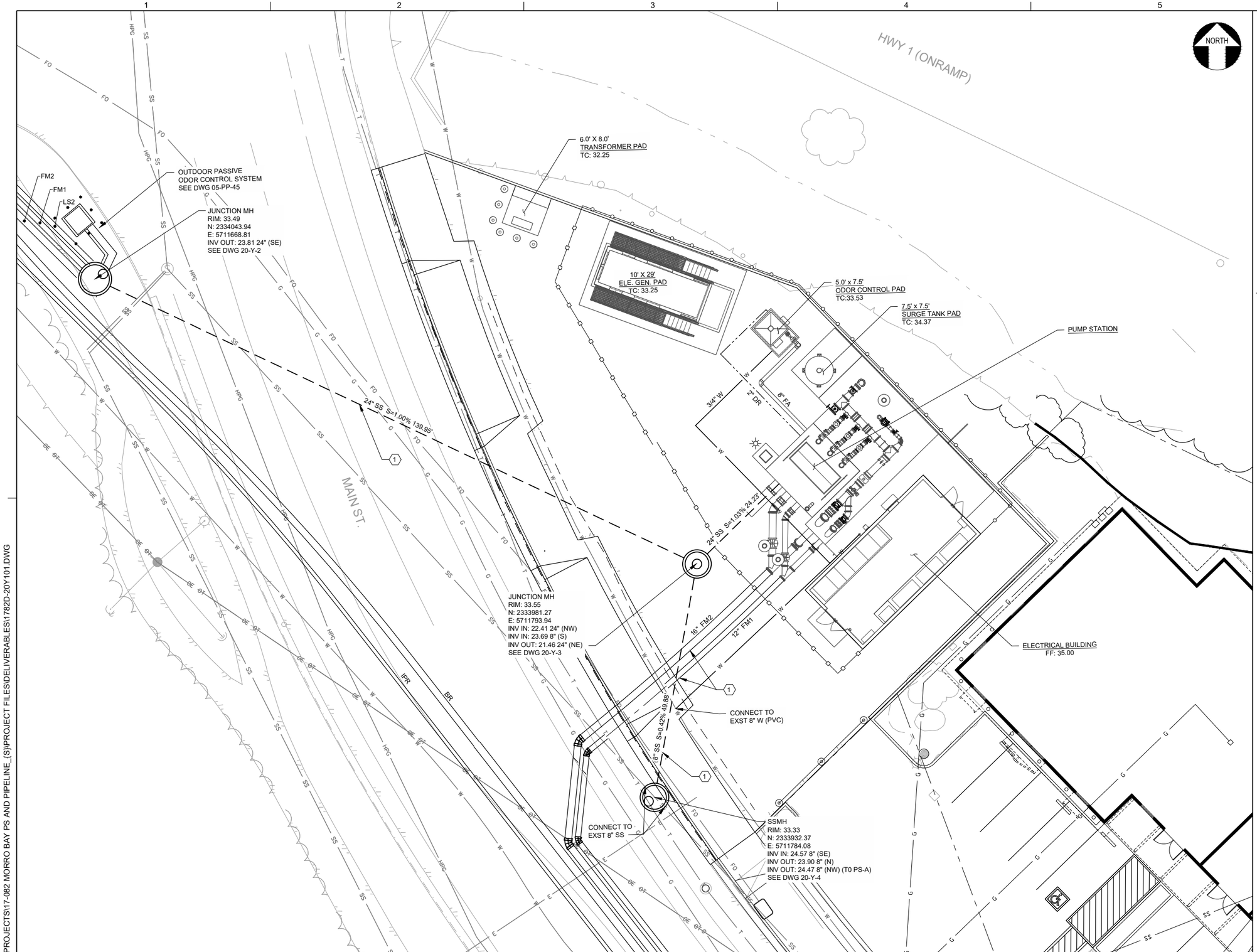
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PUMP STATION B GRADING PLAN

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	20-C-2
SHEET NUMBER	----

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-20C101.DWG



NOTES:

1. SEWER MANHOLES SHALL BE PER CITY OF MORRO BAY STANDARD DETAIL S-3 UNLESS OTHERWISE NOTED.
2. SEWER MANHOLE FRAME AND COVER SHALL BE PINKERTON NO. A-107, WEIGHT 264 LBS, OR APPROVED EQUAL. COVER SHALL BE MARKED WITH "SEWER" IN THE CENTER.
3. PIPE BEDDING FOR SEWER AND WATER MAINS AND SERVICES AND STORM DRAIN PIPING SHALL BE PER CITY OF MORRO BAY STANDARD DETAIL W-6.

CONSTRUCTION NOTES:

1. SEE DWG 05-PP-45 FOR PLAN AND PROFILE

10 0 10 20 FEET
SCALE 1"=10'

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	P WEBSTER
DRAWN	P WEBSTER
CHECKED	T LEWIS
APPROVED	M FISHER

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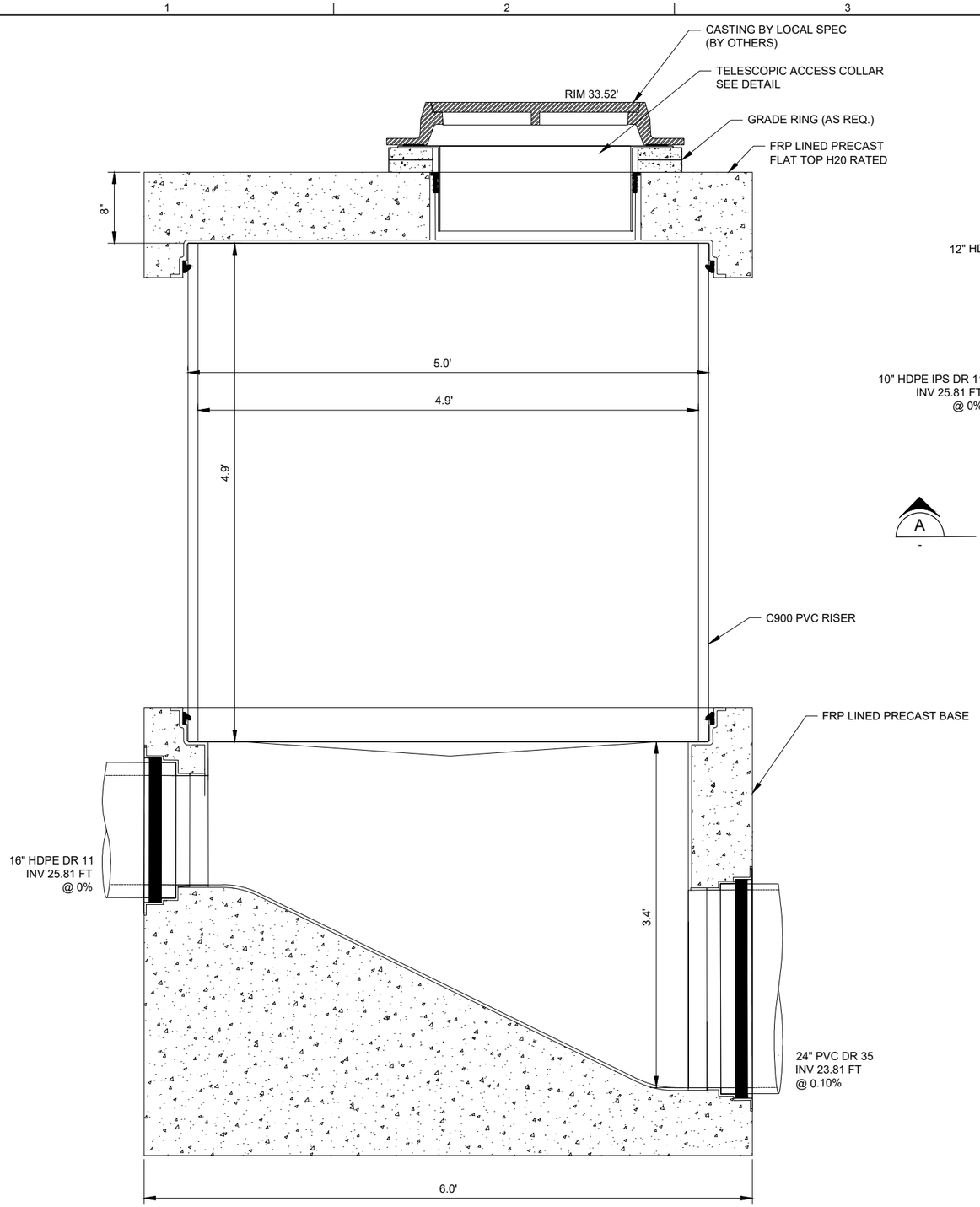
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PUMP STATION B YARD PIPING PLAN

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	20-Y-1
SHEET NUMBER	----



A
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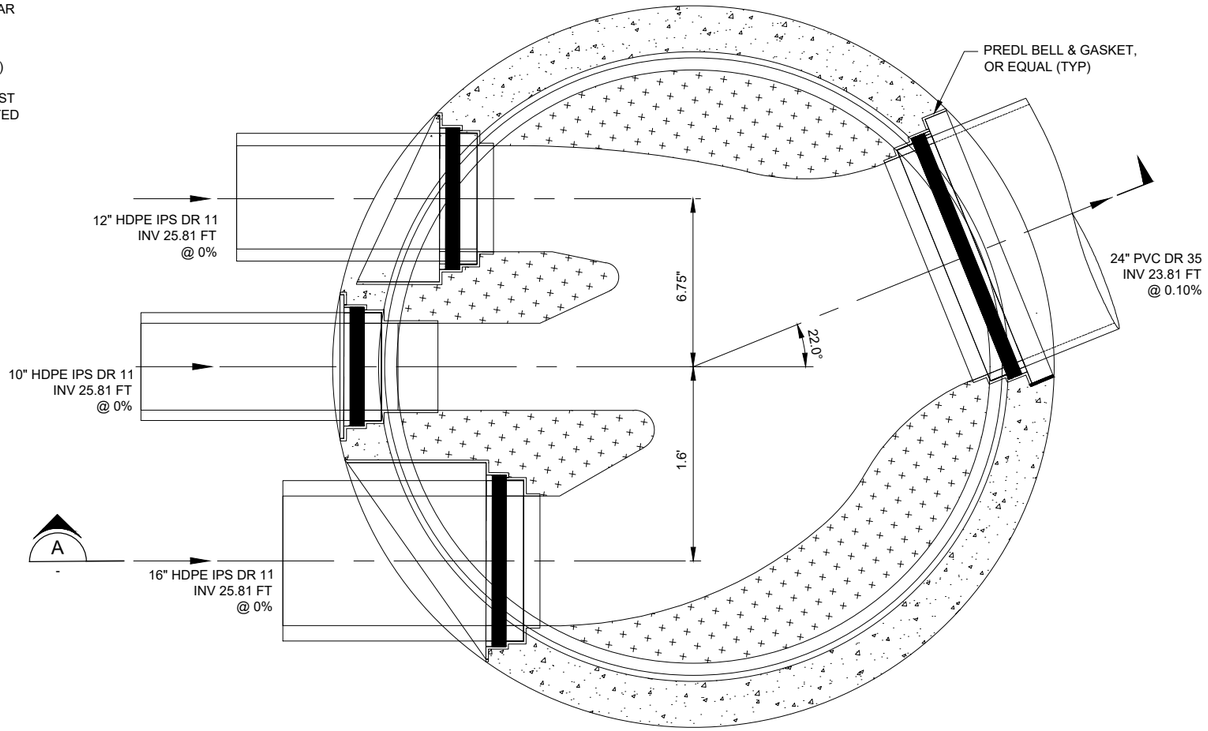
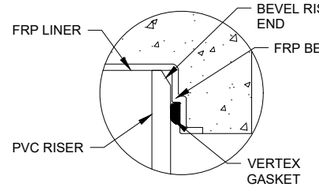
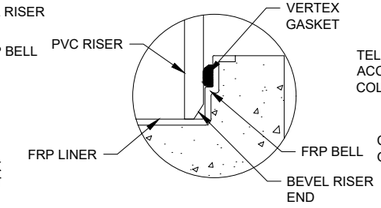
SECTION
NTS



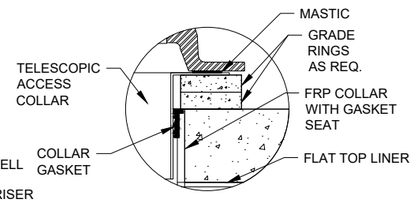
PLAN VIEW
NTS



JOINT DETAIL C
NTS



JOINT DETAIL E
NTS



TELESCOPIC ACCESS COLLAR DETAIL
NTS

PRELIMINARY - NOT FOR CONSTRUCTION

JOB NUMBER: 14-010 FILENAME: 1782D-20Y200.DWG PLOT DATE: 10-Feb-20 PLOT TIME: 17:30:13

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-20Y200.DWG

DESIGN K ALACON
DRAWN K ALACON
CHECKED M FISHER
APPROVED M FISHER

WATERWORKS ENGINEERS
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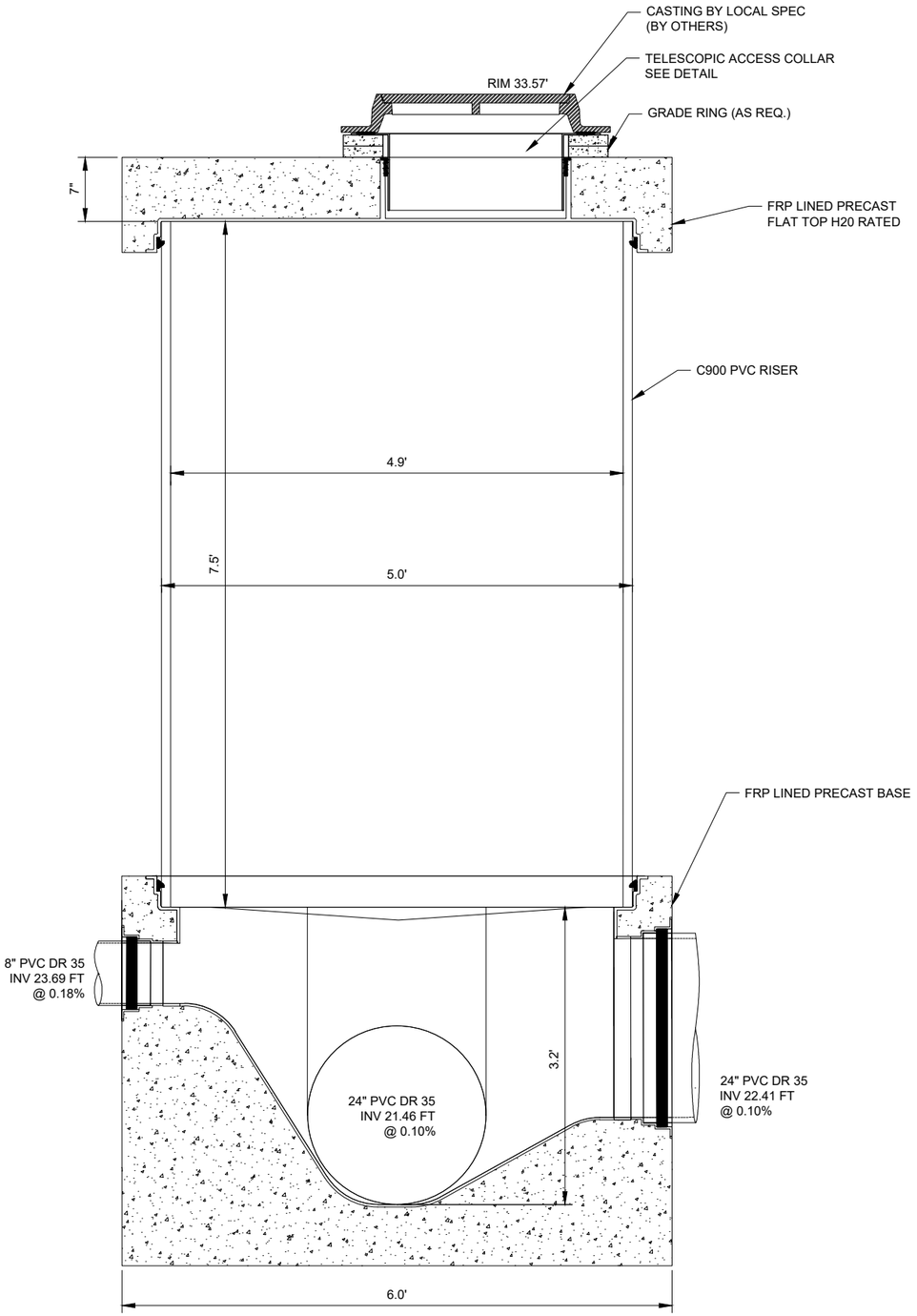
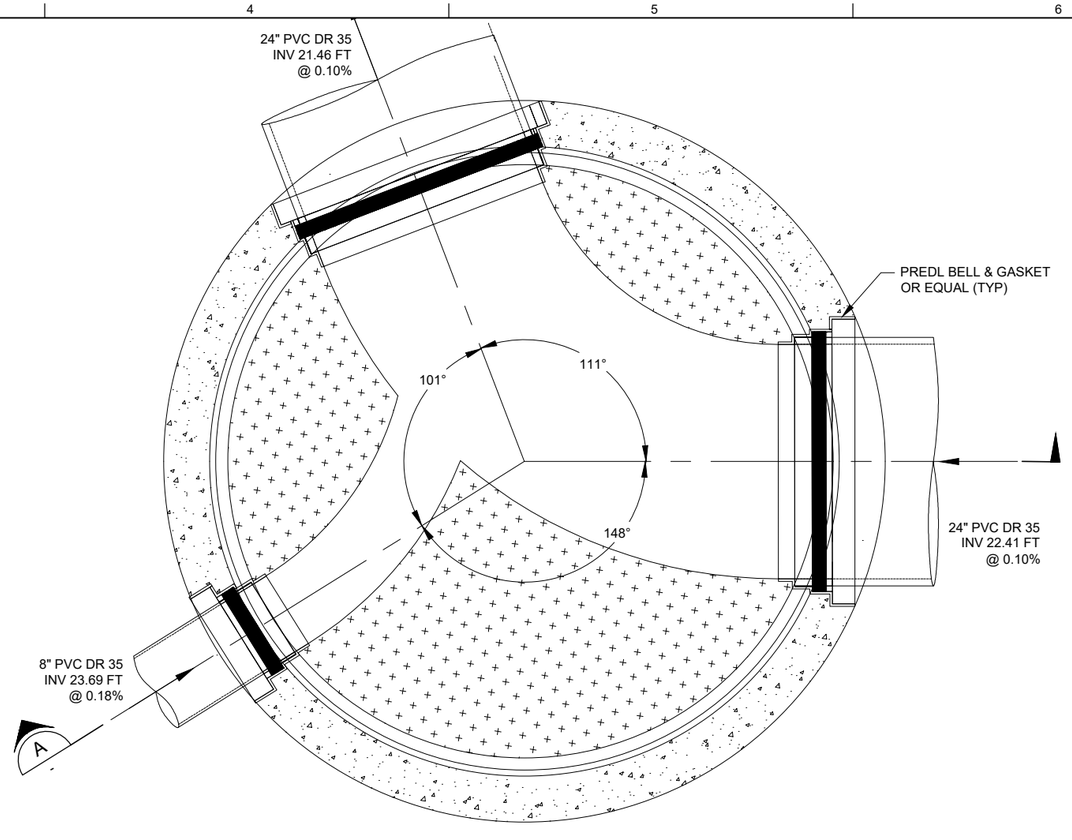
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PS-B JUNCTION MANHOLE DETAILS

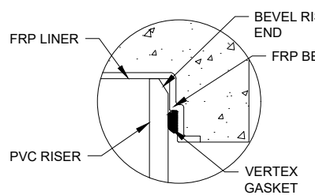
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-Y-2
SHEET NUMBER XX



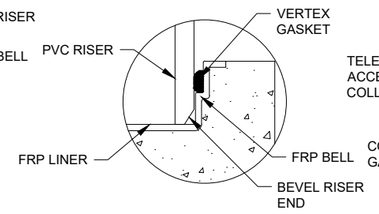
A SECTION
-- NTS



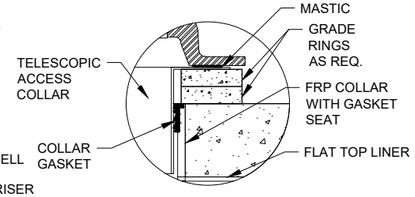
PLAN VIEW
NTS



JOINT DETAIL C
NTS



JOINT DETAIL E
NTS



TELESCOPIC ACCESS
COLLAR DETAIL
NTS

PRELIMINARY - NOT FOR CONSTRUCTION

JOB NUMBER: 14-010 FILENAME: 1782D-20Y200.DWG PLOT DATE: 10-Feb-20 PLOT TIME: 17:30:45

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-20Y200.DWG

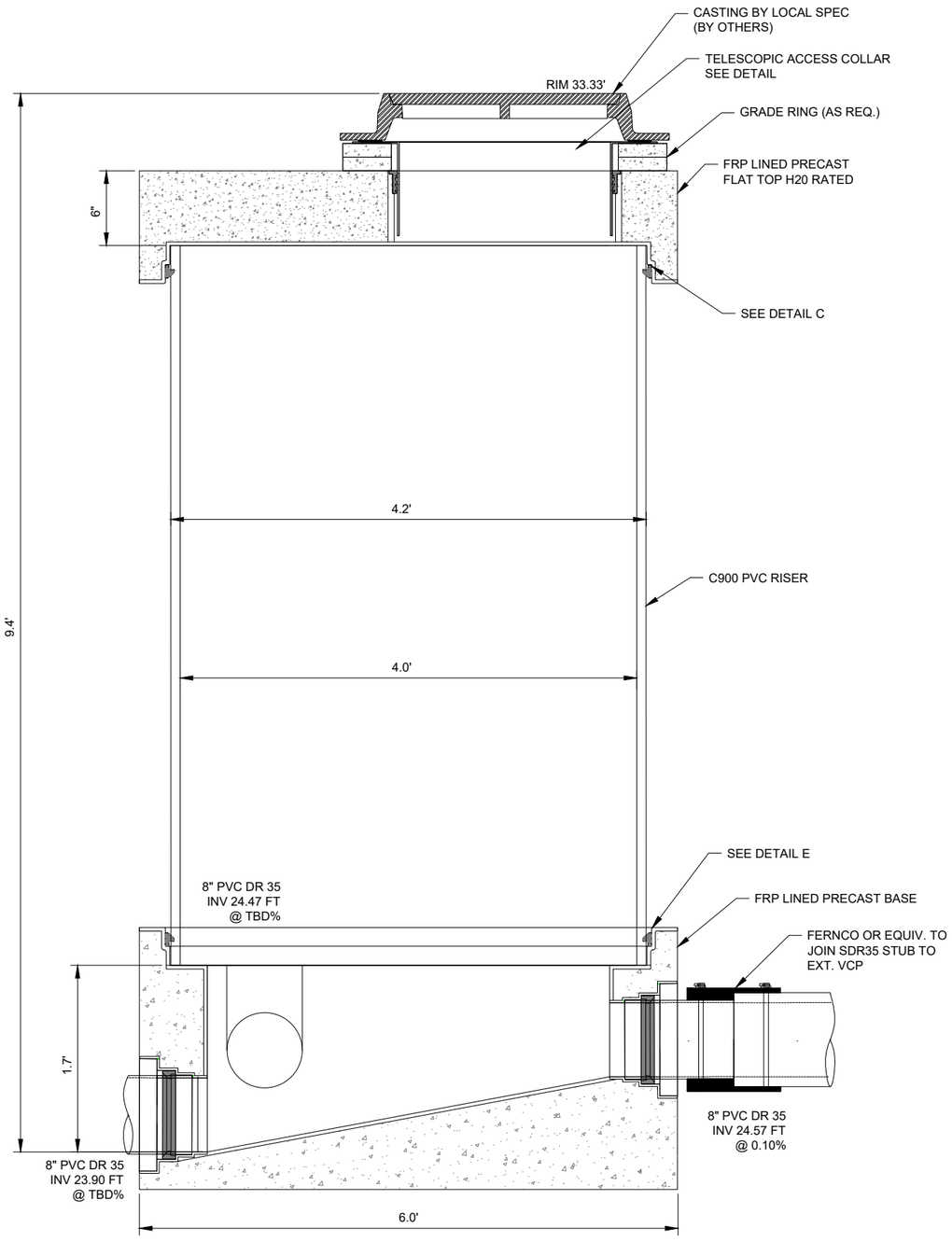
DESIGN	K ALACON
DRAWN	K ALACON
CHECKED	M FISHER
APPROVED	M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

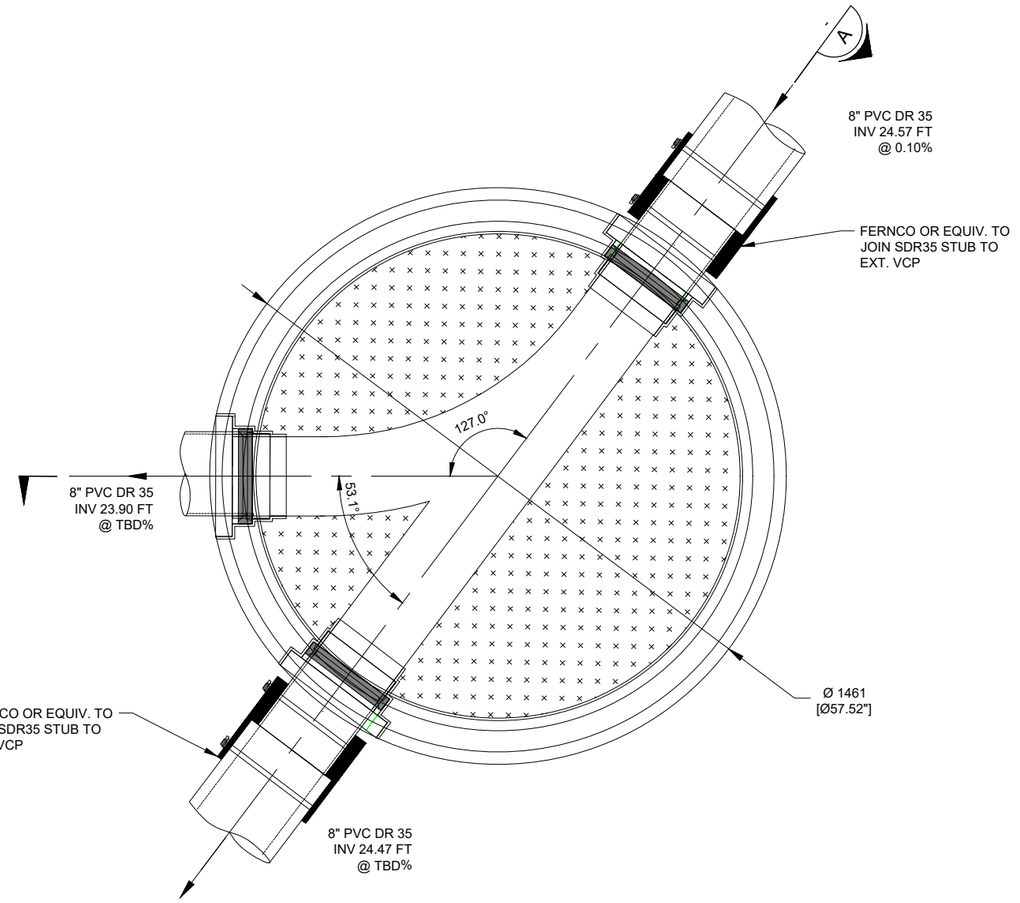
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
PS-B JUNCTION MANHOLE DETAILS

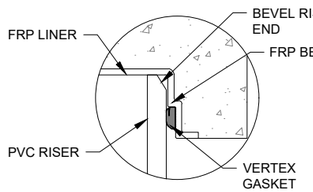
DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	20-Y-3
SHEET NUMBER	XX



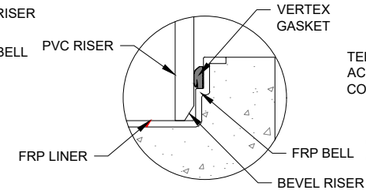
A SECTION
-- NTS



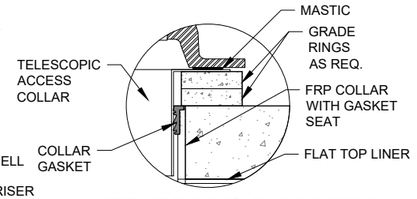
PLAN VIEW
NTS



JOINT DETAIL C
NTS



JOINT DETAIL E
NTS



TELESCOPIC ACCESS COLLAR DETAIL
NTS

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN	K ALACON
DRAWN	K ALACON
CHECKED	M FISHER
APPROVED	M FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A ■ Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

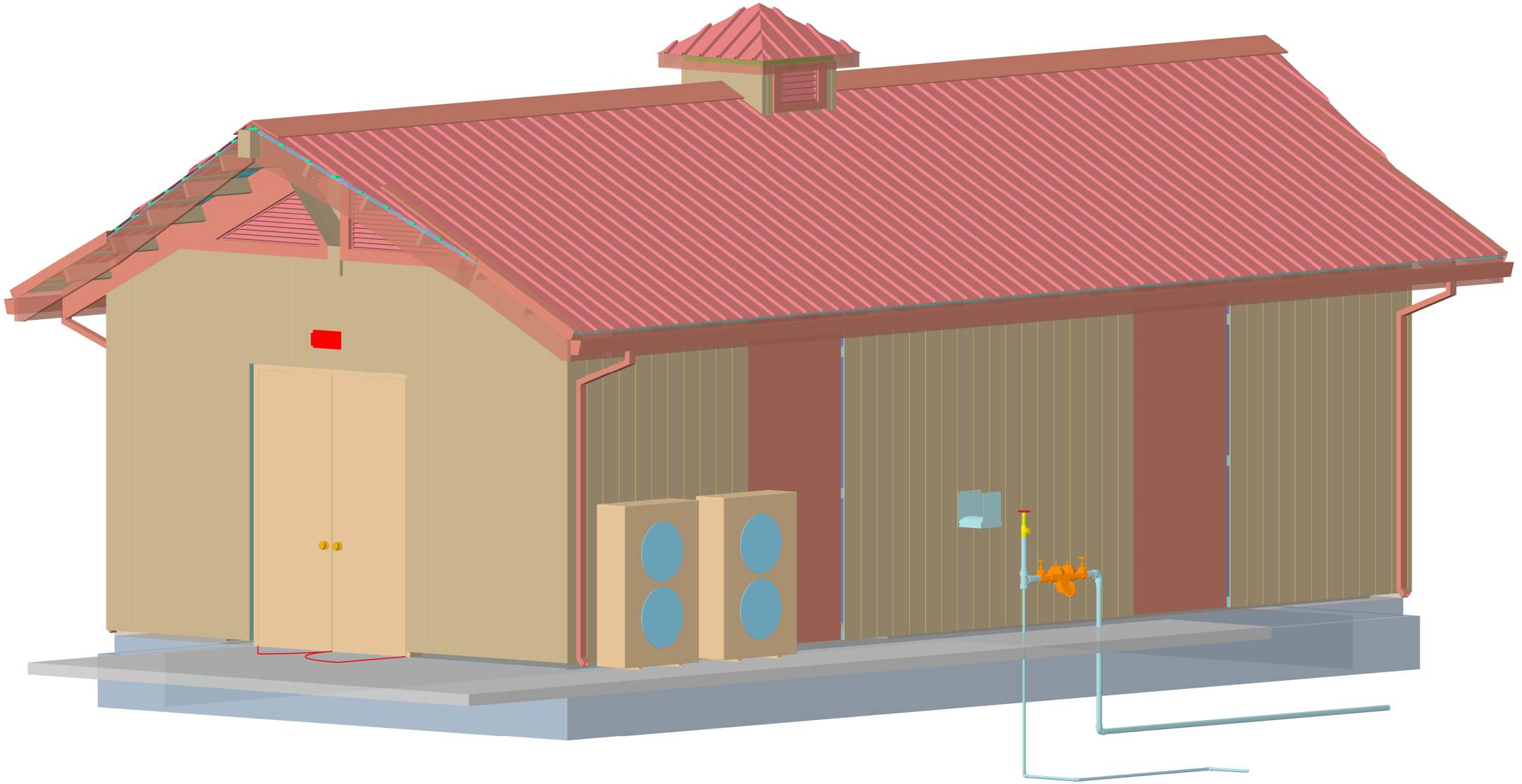
CIVIL
PS-B JUNCTION MANHOLE DETAILS

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	20-Y-4
SHEET NUMBER	XX

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-20Y200.DWG

NOTES:

1. RENDERING IS FOR INFORMATIONAL PURPOSES ONLY. NOT FOR CONSTRUCTION.



RENDERING
NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

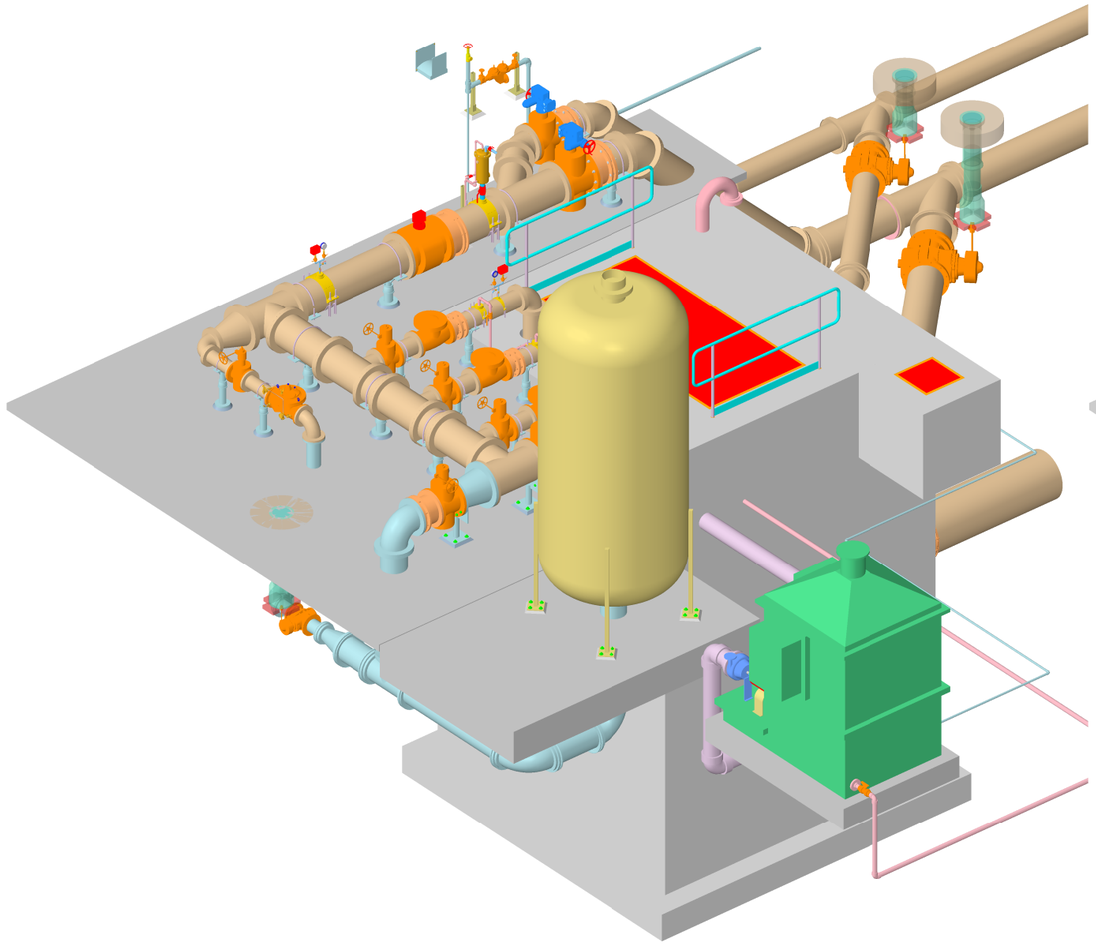
RENDERING
ELECTRICAL BUILDING
RENDERING

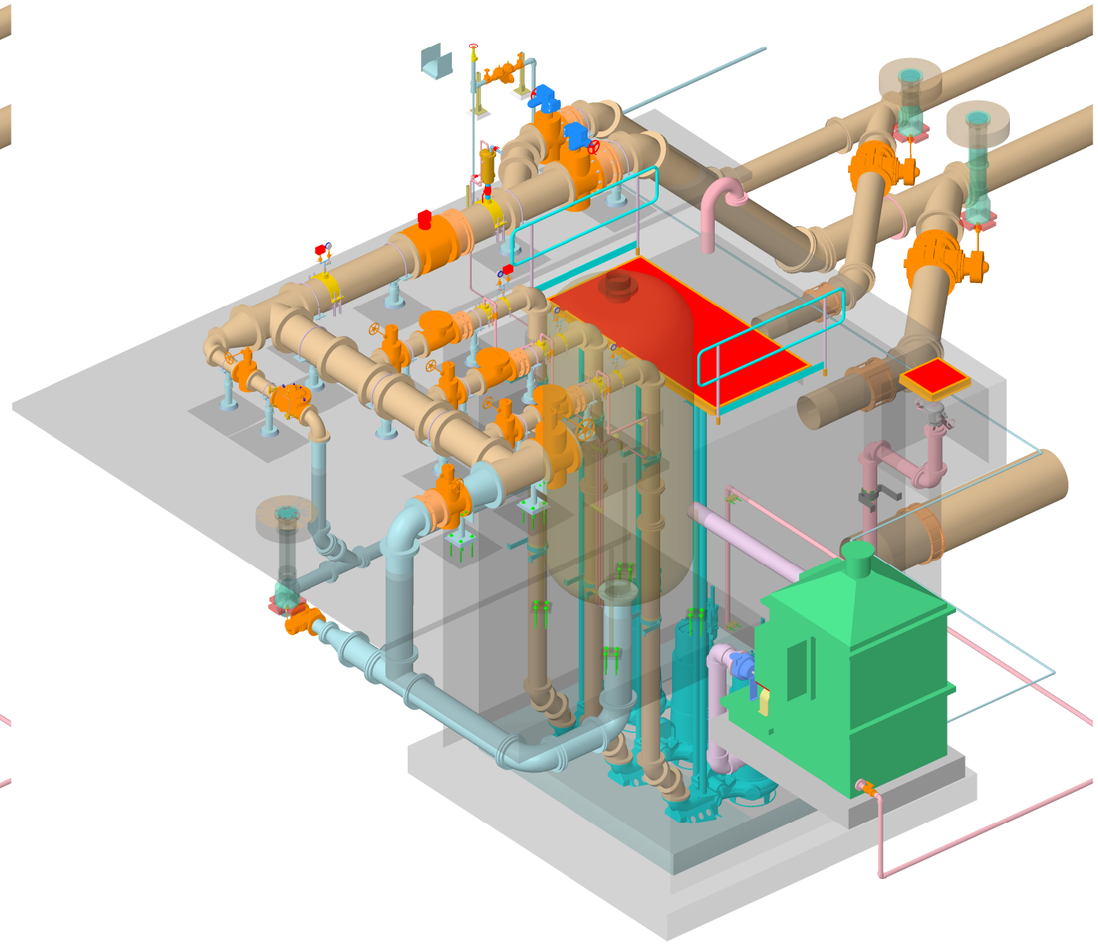
DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-R-1
SHEET NUMBER X

FILENAME: 1782D-20R801.DGN PLOT DATE: 2/7/2020 2:54:42 PM

NOTES:

1. RENDERINGS ARE FOR INFORMATIONAL PURPOSES ONLY. NOT FOR CONSTRUCTION.





RENDERINGS
NTS

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

WATERWORKS ENGINEERS
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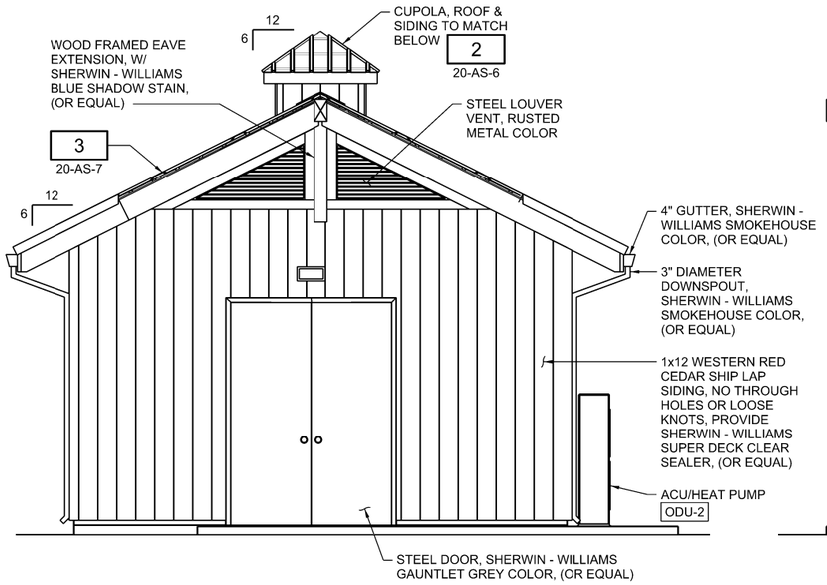
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

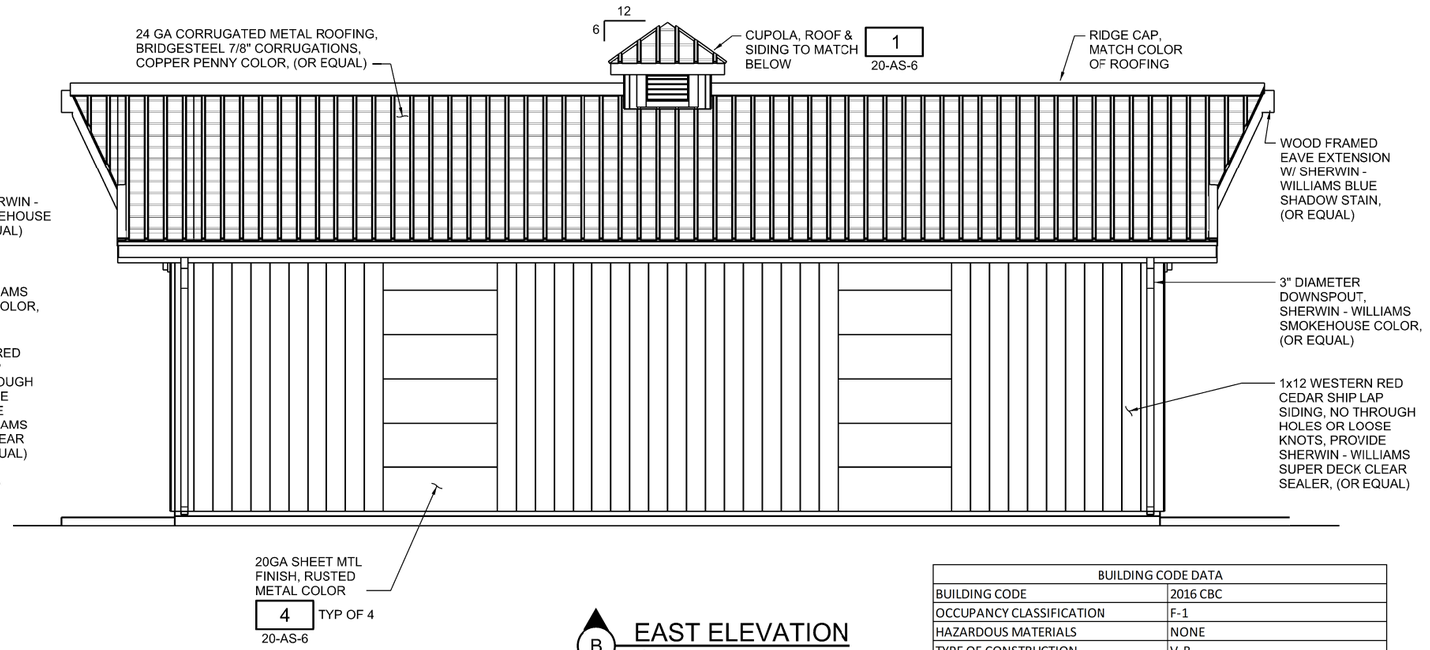
RENDERING
PUMP STATION
RENDERINGS

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-R-2
SHEET NUMBER X

FILENAME: 1782D-20R802.DGN PLOT DATE: 2/7/2020 2:55:40 PM

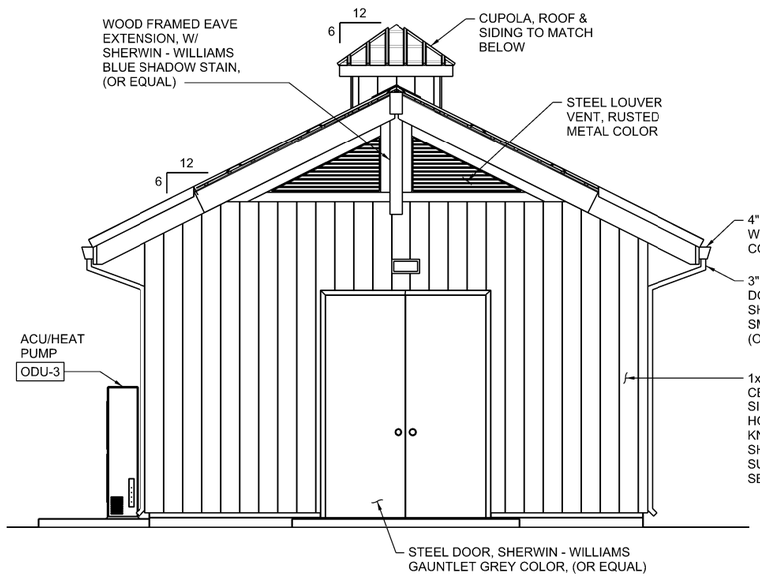


A NORTH ELEVATION
3/8" = 1'-0"
20-AS-2

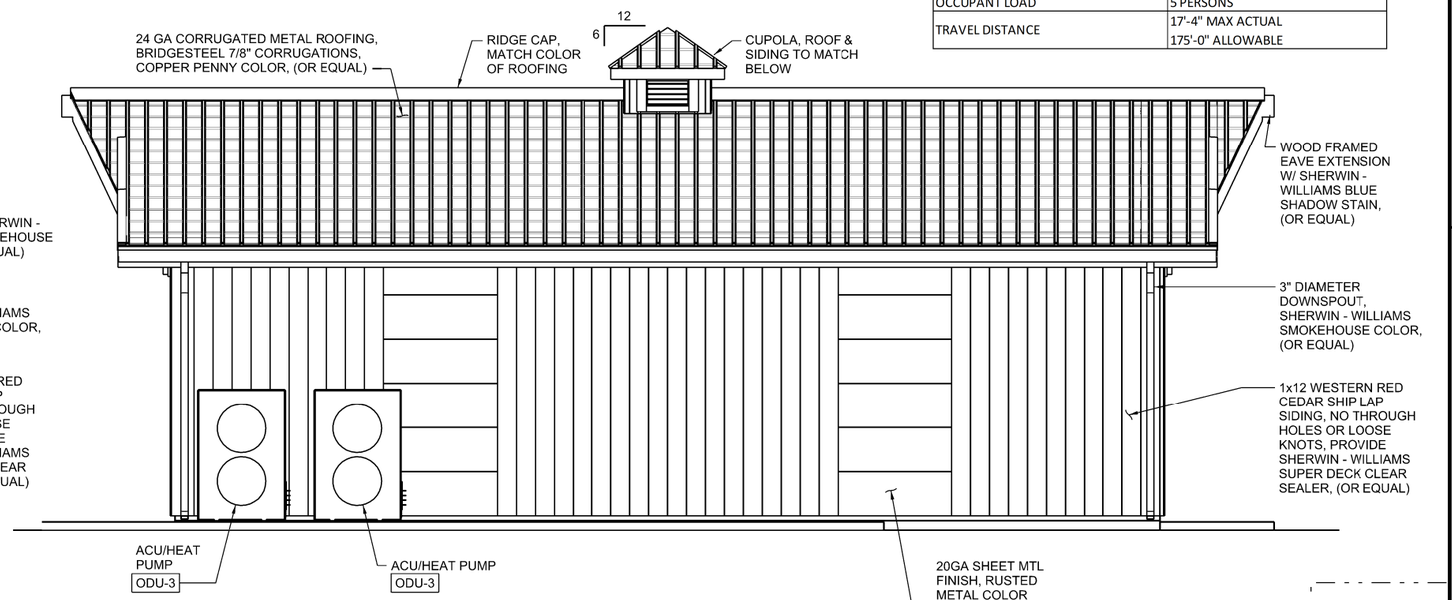


B EAST ELEVATION
3/8" = 1'-0"
20-AS-2

BUILDING CODE DATA	
BUILDING CODE	2016 CBC
OCCUPANCY CLASSIFICATION	F-1
HAZARDOUS MATERIALS	NONE
TYPE OF CONSTRUCTION	V-B
FIRE SUPRESSION	FIRE EXTINGUISHERS
NUMBER OF STORIES ABOVE GRADE	1 ACTUAL 1 ALLOWABLE (F-1 OCCUPANCY)
BUILDING HEIGHT ABOVE GRADE	17'-4" ACTUAL 40'-0" ALLOWABLE
BUILDING AREAS	533 SQFT
OCCUPANT LOAD FACTOR	100 SQFT/PERSON
OCCUPANT LOAD	5 PERSONS
TRAVEL DISTANCE	17'-4" MAX ACTUAL 175'-0" ALLOWABLE



C SOUTH ELEVATION
3/8" = 1'-0"
20-AS-2



D WEST ELEVATION
3/8" = 1'-0"
20-AS-2

2 0 2 4 FEET
SCALE 3/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

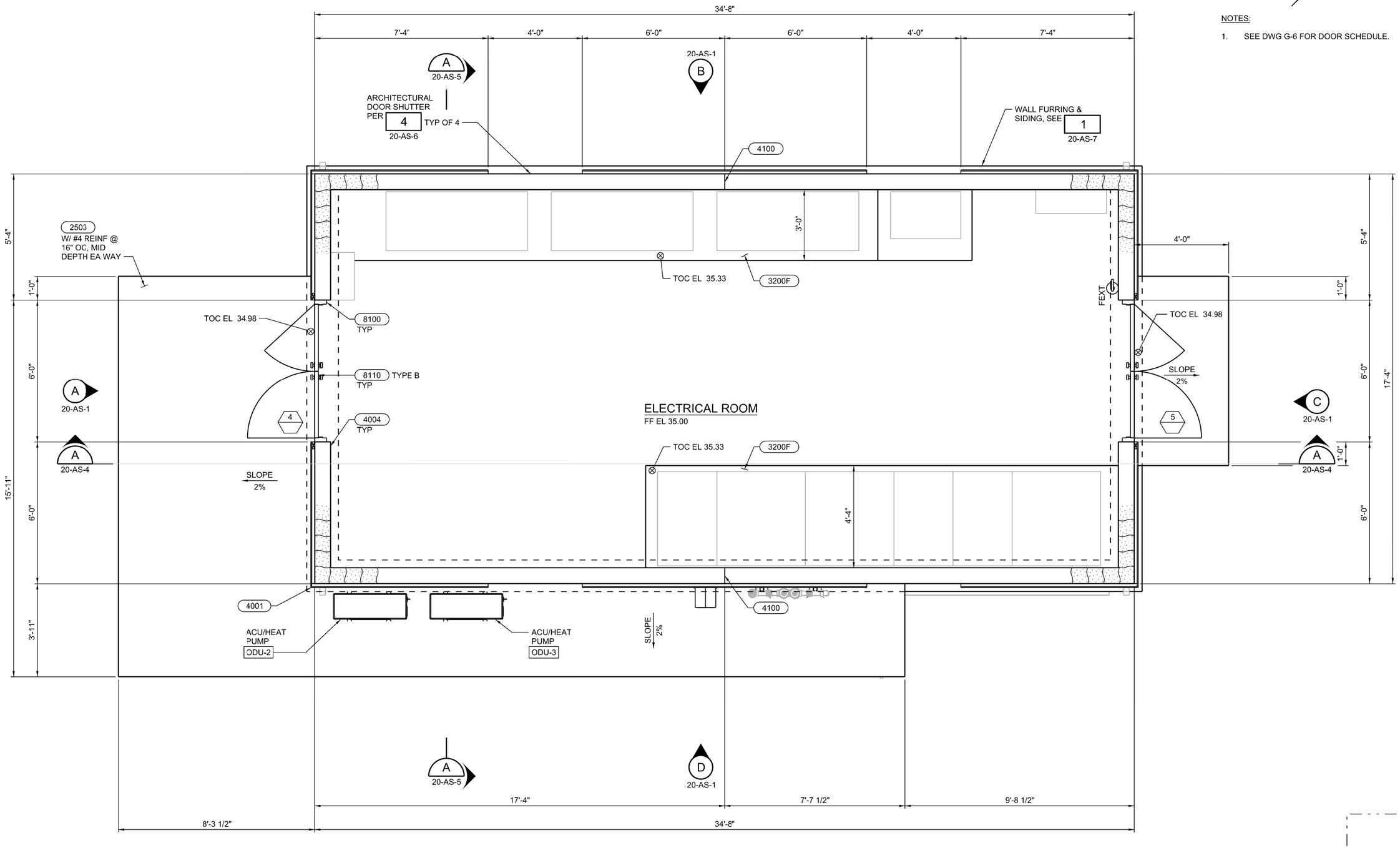
ARCHITECTURAL / STRUCTURAL
PUMP STATION B ELECTRICAL BUILDING ELEVATIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-AS-1
SHEET NUMBER X

FILENAME: 1782D-20AS401.DGN PLOT DATE: 2/7/2020 4:27:42 PM

NOTES:

1. SEE DWG G-6 FOR DOOR SCHEDULE.



PUMP STATION B FLOOR PLAN

1/2" = 1'-0"

2 0 2 4 FEET

SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED CHECKED-BY
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

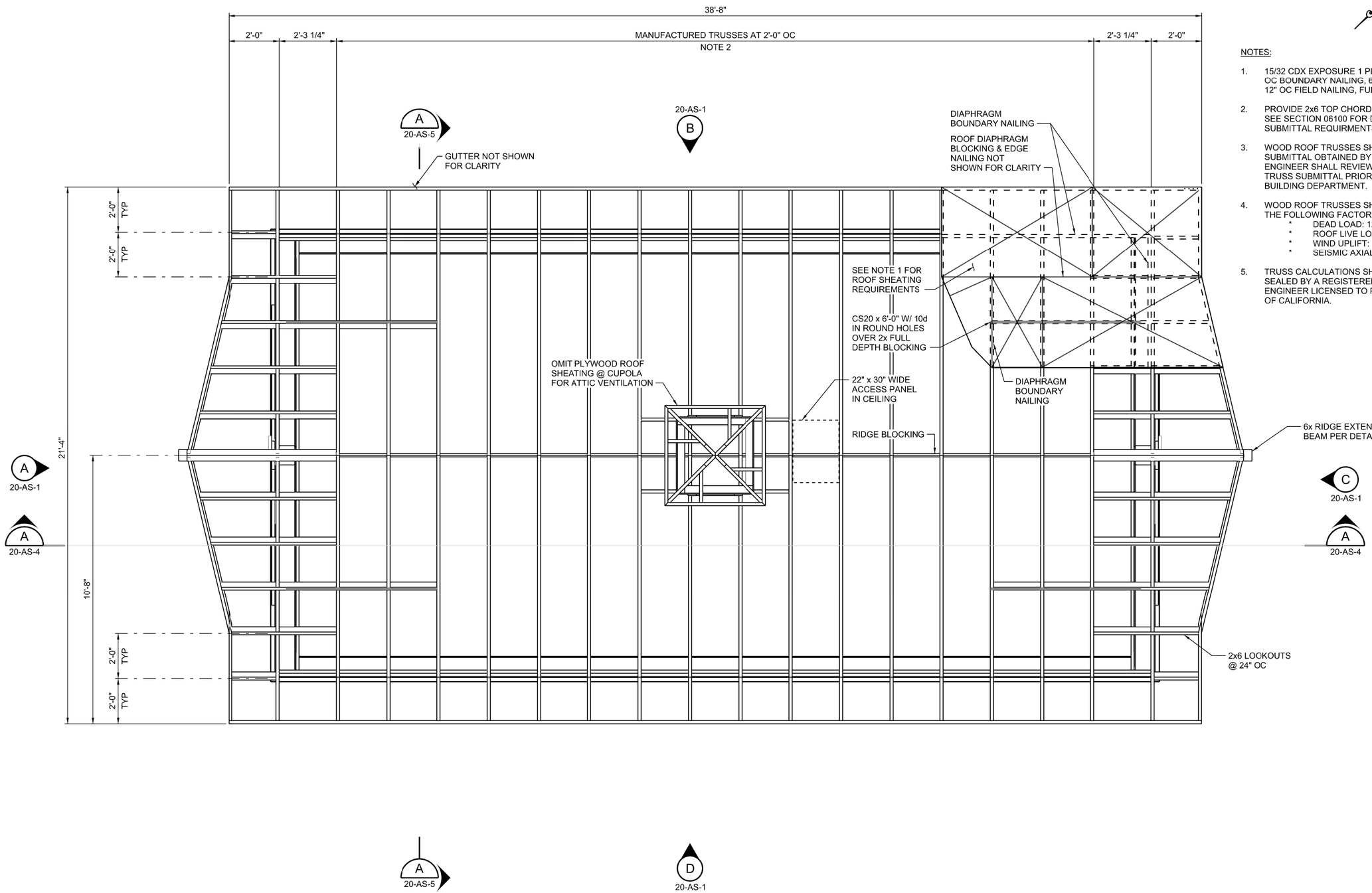
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ARCHITECTURAL / STRUCTURAL

PUMP STATION B
ELECTRICAL BUILDING
FLOOR AND FOUNDATION PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-AS-2
SHEET NUMBER X

FILENAME: 1782D-20AS101.DGN PLOT DATE: 2/7/2020 3:40:25 PM



NOTES:

1. 15/32 CDX EXPOSURE 1 PLYWOOD WITH 10d @ 4" OC BOUNDARY NAILING, 6" OC EDGE NAILING & 12" OC FIELD NAILING, FULLY BLOCKED.
2. PROVIDE 2x6 TOP CHORD AT WOOD TRUSSES. SEE SECTION 06100 FOR DESIGN CRITERIA AND SUBMITTAL REQUIRMENTS.
3. WOOD ROOF TRUSSES SHALL BE A DEFFERRED SUBMITTAL OBTAINED BY THE CONTRACTOR. ENGINEER SHALL REVIEW AND APPROVE THE TRUSS SUBMITTAL PRIOR TO SUBMITAL TO THE BUILDING DEPARTMENT.
4. WOOD ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING FACTORS ASD LOADS:
   - DEAD LOAD: 12.5 PSF
   - ROOF LIVE LOAD: 20 PSF
   - WIND UPLIFT: 19.0 PSF (GROSS UPLIFT)
   - SEISMIC AXIAL FORCE: 2.50 KIPS
5. TRUSS CALCULATIONS SHALL BE SIGNED AND SEALED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF CALIFORNIA.

PUMP STATION B ROOF FRAMING PLAN

1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

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1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

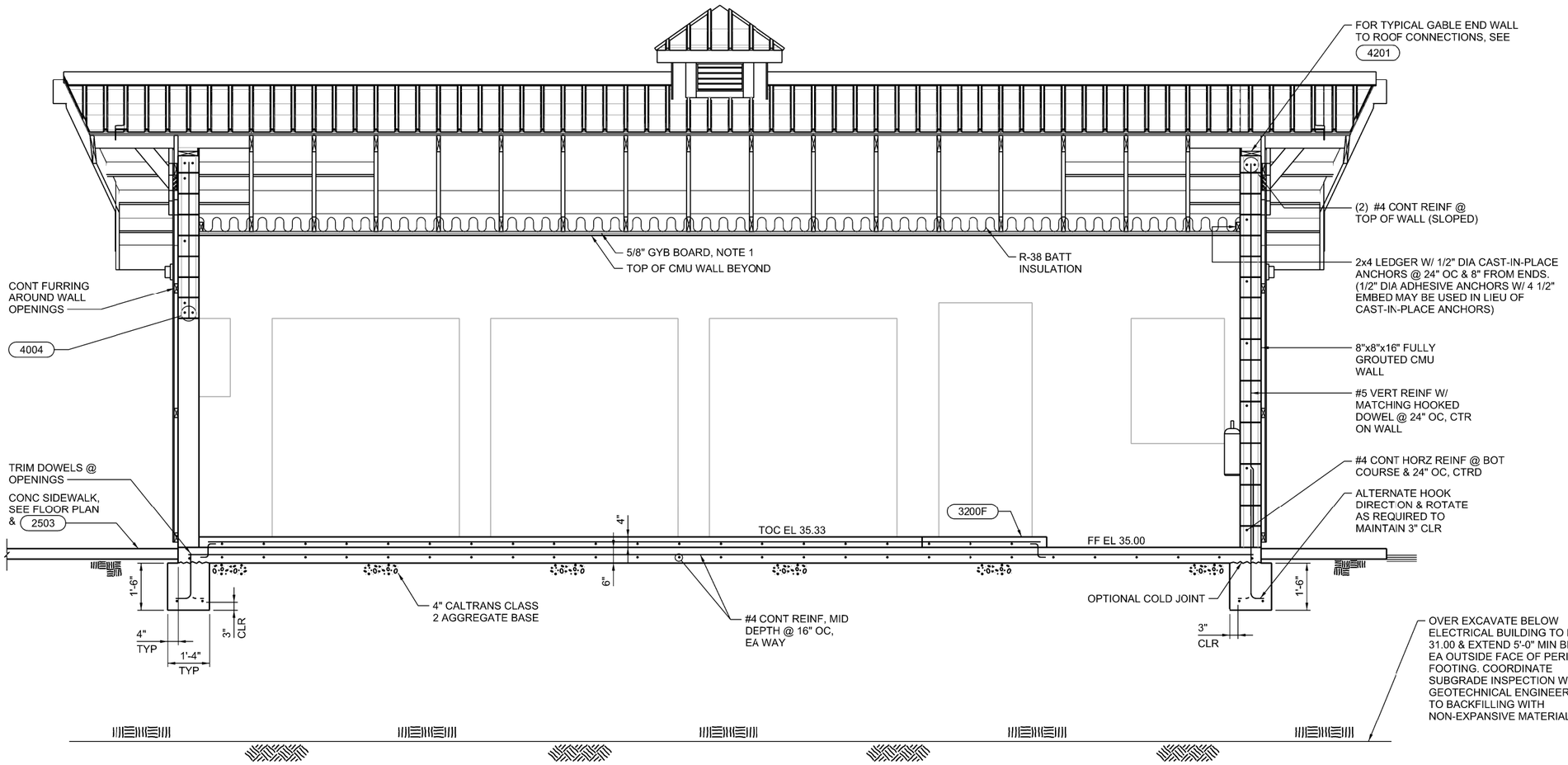
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

ARCHITECTURAL / STRUCTURAL
PUMP STATION B
ELECTRICAL BUILDING
ROOF FRAMING PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-AS-3
SHEET NUMBER X

NOTES:

1. INSTALL EDGE TRIM WHERE GYPSUM WALL BOARD ABUTS ANOTHER MATERIAL AT WALLS AND CEILING. PROVIDE JOINT SEALANT BETWEEN TRIM AND OTHER MATERIAL PRIOR TO PAINTING.



A SECTION
10-AS-2 1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED A LINDEMAN
APPROVED M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

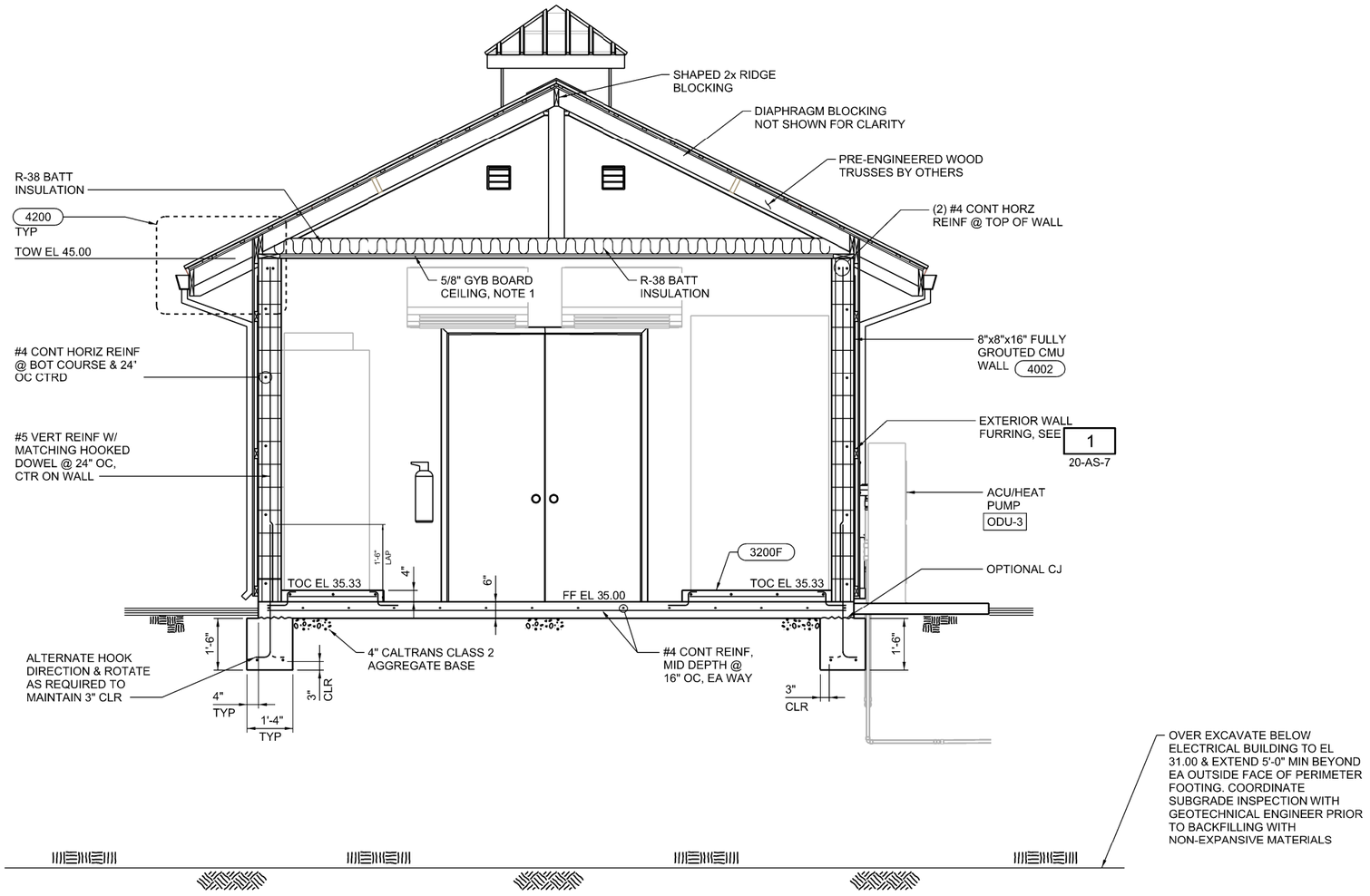
ARCHITECTURAL / STRUCTURAL
PUMP STATION B
ELECTRICAL BUILDING
SECTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-AS-4
SHEET NUMBER X

FILENAME: 1782D-20AS201.DGN PLOT DATE: 2/7/2020 3:44:09 PM

NOTES:

1. INSTALL EDGE TRIM WHERE GYPSUM WALL BOARD ABUTS ANOTHER MATERIAL AT WALLS AND CEILING. PROVIDE JOINT SEALANT BETWEEN TRIM AND OTHER MATERIAL PRIOR TO PAINTING.



A SECTION
20-AS-2 20-AS-3 1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

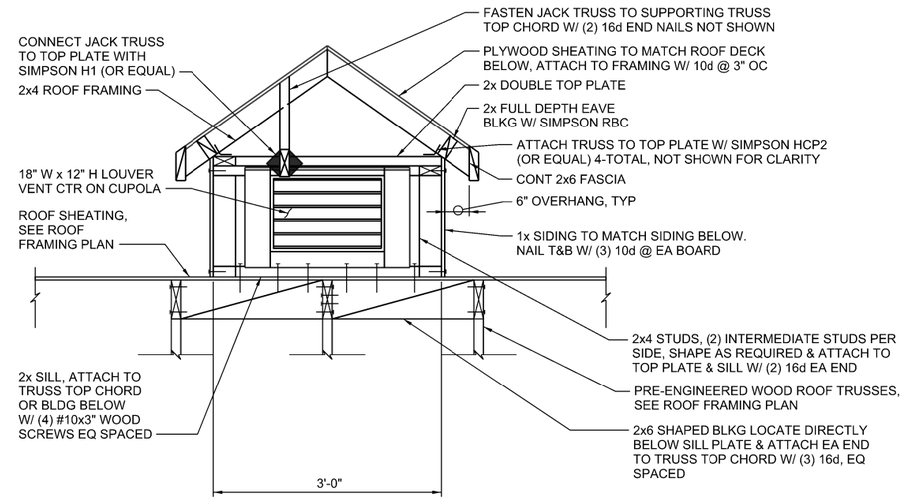
DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED CHECKED-BY
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

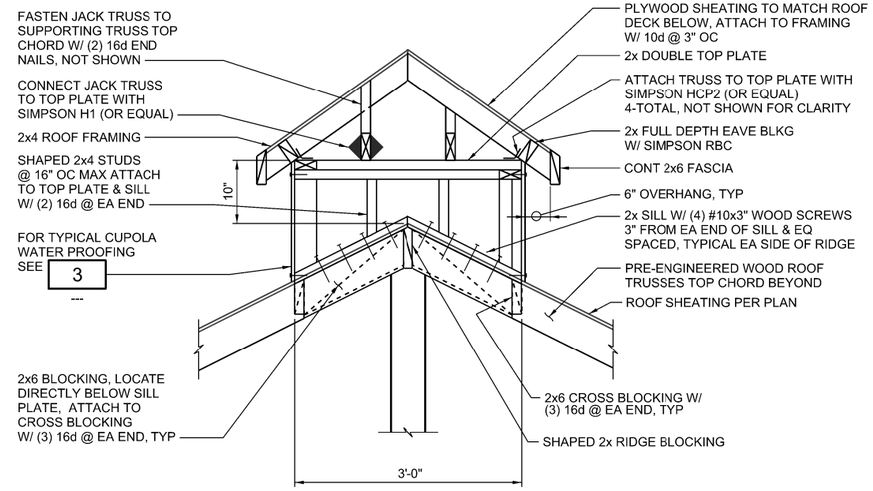
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

ARCHITECTURAL / STRUCTURAL
PUMP STATION B ELECTRICAL BUILDING SECTION

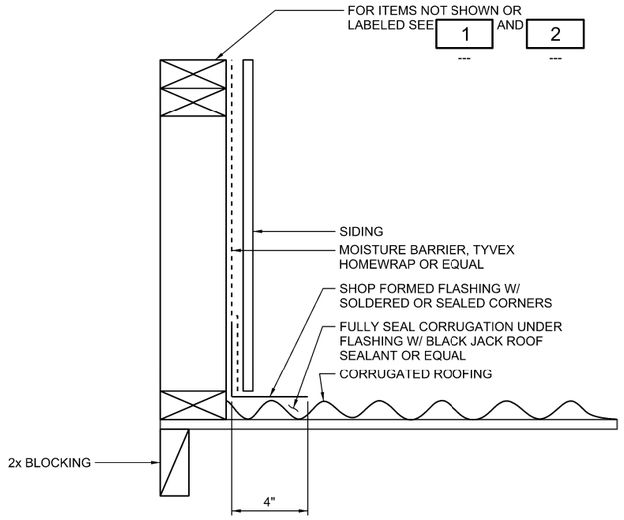
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-AS-5
SHEET NUMBER X



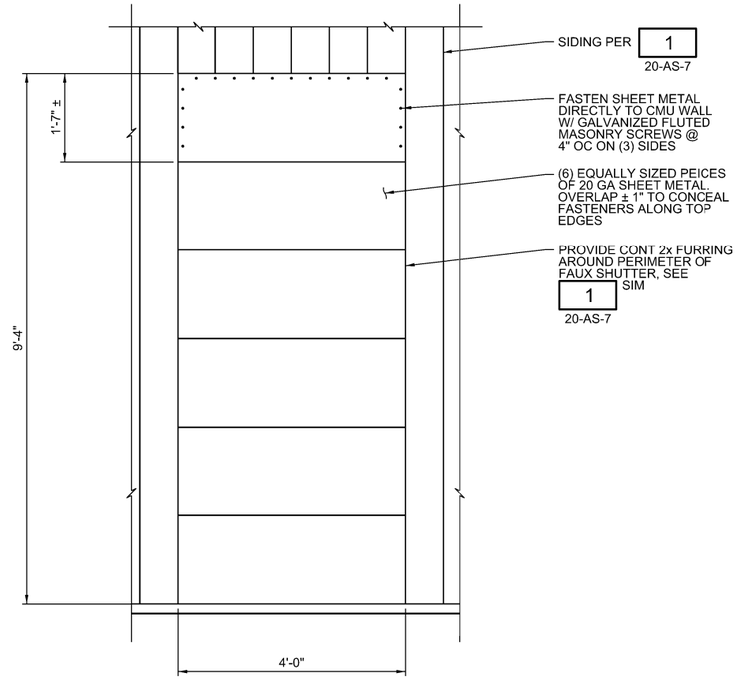
1 DETAIL
20-AS-1 1" = 1'-0"



2 DETAIL
20-AS-1 1" = 1'-0"



3 TYPICAL CUPOLA WATER PROOFING
--- 3" = 1'-0"



4 DETAIL
20-AS-1 3/4" = 1'-0"
20-AS-2

1 0 1 2 FEET
SCALE 3/4"=1'-0"
1 0 1 2 FEET
SCALE 1"=1'-0"
3" 0 3" 6" INCHES
SCALE 3"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED A LINDEMAN
APPROVED M FISHER

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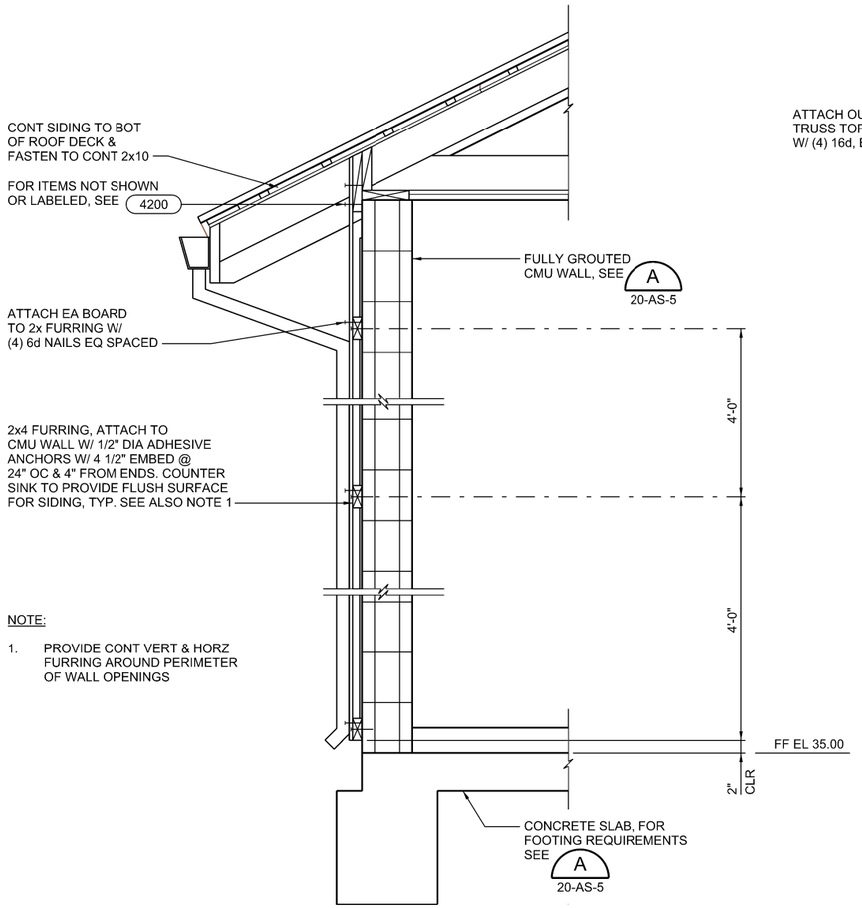
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ARCHITECTURAL / STRUCTURAL
PUMP STATION B
ELECTRICAL BUILDING
ARCHITECTURAL DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-AS-6
SHEET NUMBER X

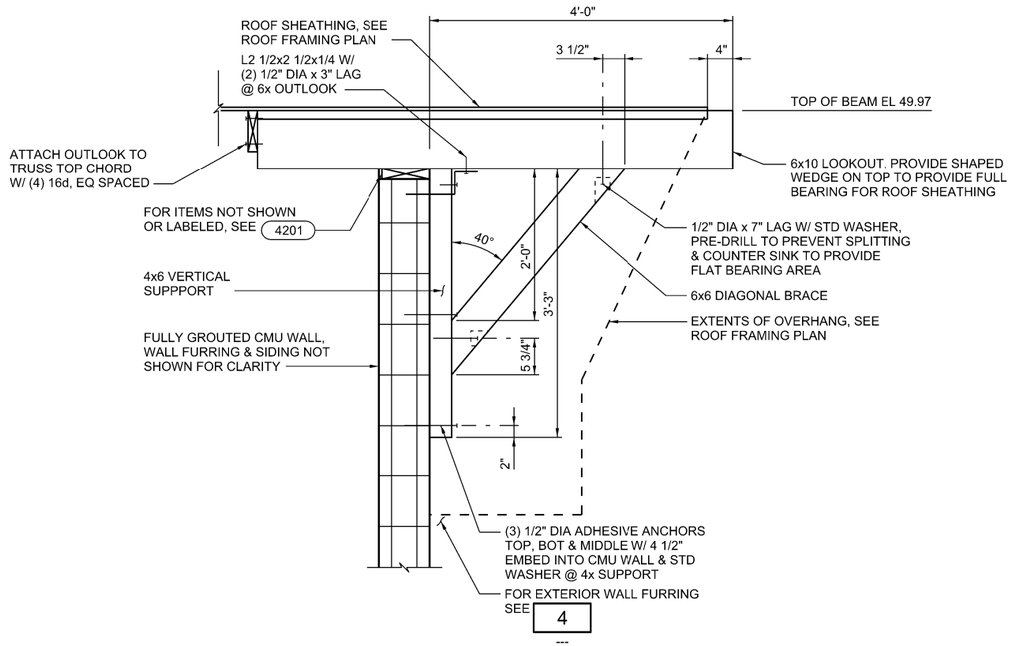
FILENAME: 1782D-20AS301.DGN PLOT DATE: 2/7/2020 3:47:09 PM



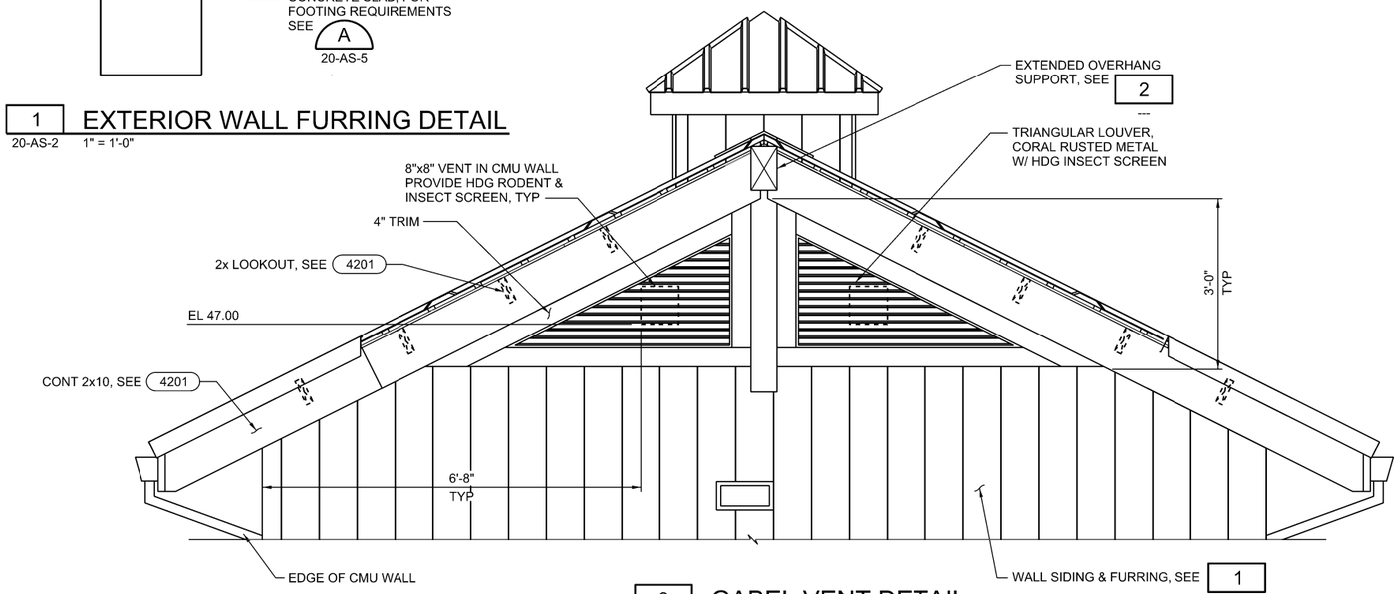
NOTE:

1. PROVIDE CONT VERT & HORZ FURRING AROUND PERIMETER OF WALL OPENINGS

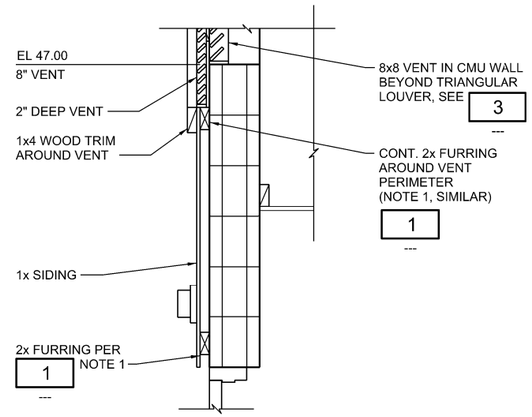
1 EXTERIOR WALL FURRING DETAIL
20-AS-2 1" = 1'-0"



2 EXTENDED OVERHANG DETAIL
20-AS-3 1" = 1'-0"



3 GABEL VENT DETAIL
20-AS-1 3/4" = 1'-0"



4 DETAIL
--- 1" = 1'-0"

1 0 1 2 FEET
SCALE 3/4"=1'-0"

1 0 1 2 FEET
SCALE 1"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED A LINDEMAN
APPROVED M FISHER

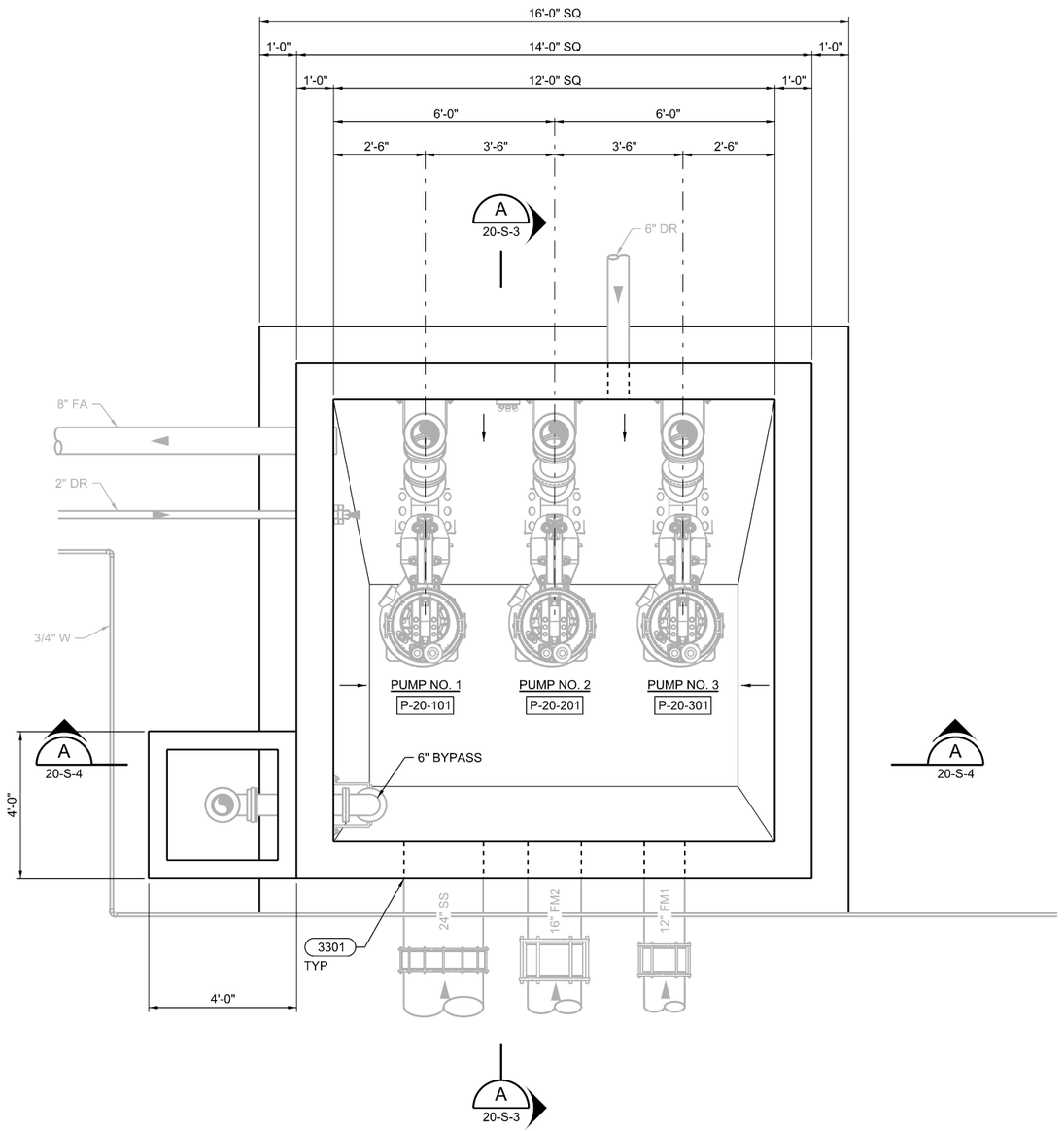
WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

ARCHITECTURAL / STRUCTURAL
PUMP STATION B
ELECTRICAL BUILDING
ARCHITECTURAL DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-AS-7
SHEET NUMBER X

FILENAME: 1782D-20AS302.DGN PLOT DATE: 2/7/2020 3:47:47 PM



LOWER PLAN

1/2" = 1'-0"

2 0 2 4 FEET

SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

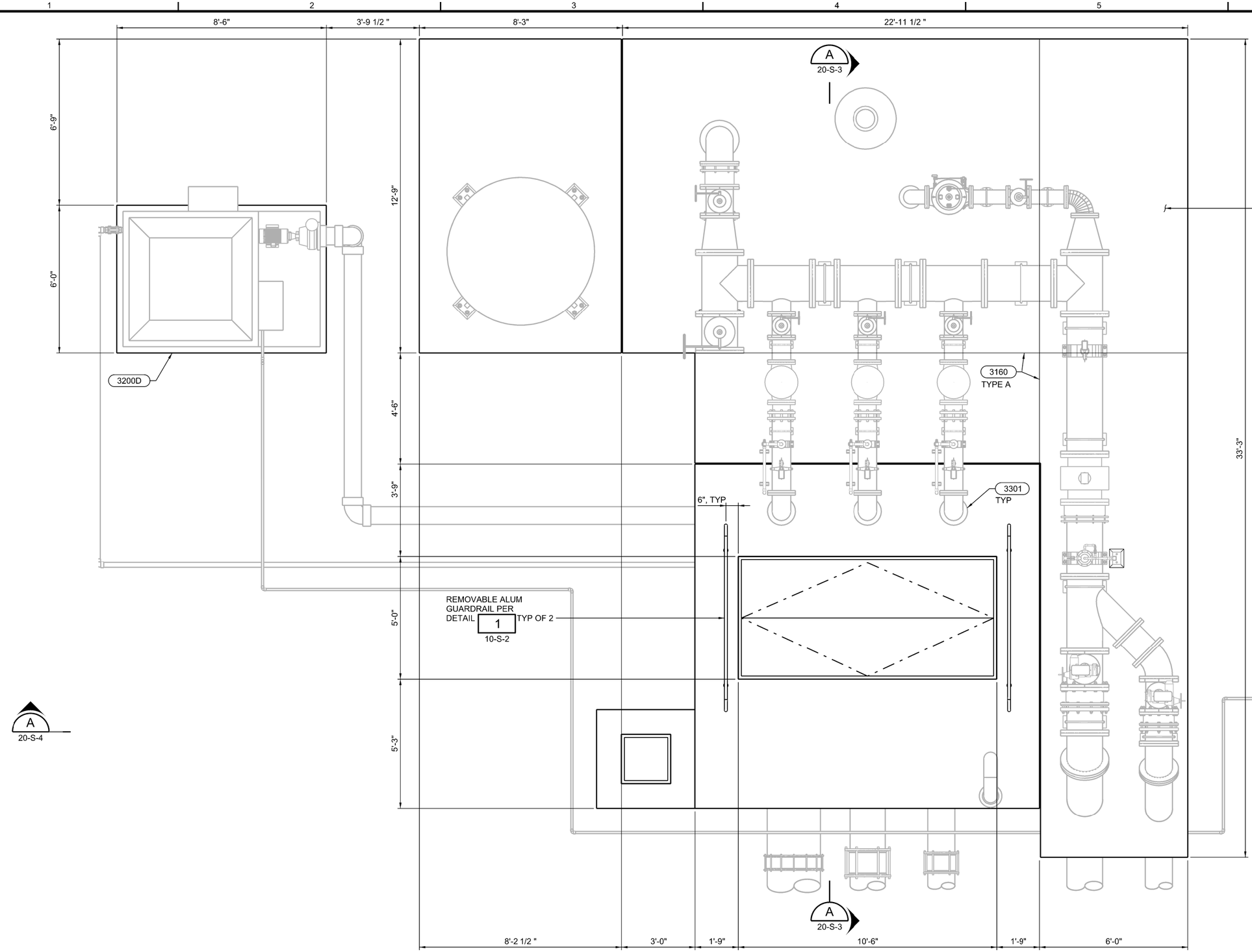
WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

STRUCTURAL
PUMP STATION
LOWER PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-S-1
SHEET NUMBER X

FILENAME: 1782D-20S100.DGN PLOT DATE: 2/7/2020 4:22:33 PM



TOP PLAN
1/2" = 1'-0"

1 0 1 2 FEET
SCALE 3/4"=1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

WATERWORKS ENGINEERS
1485 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

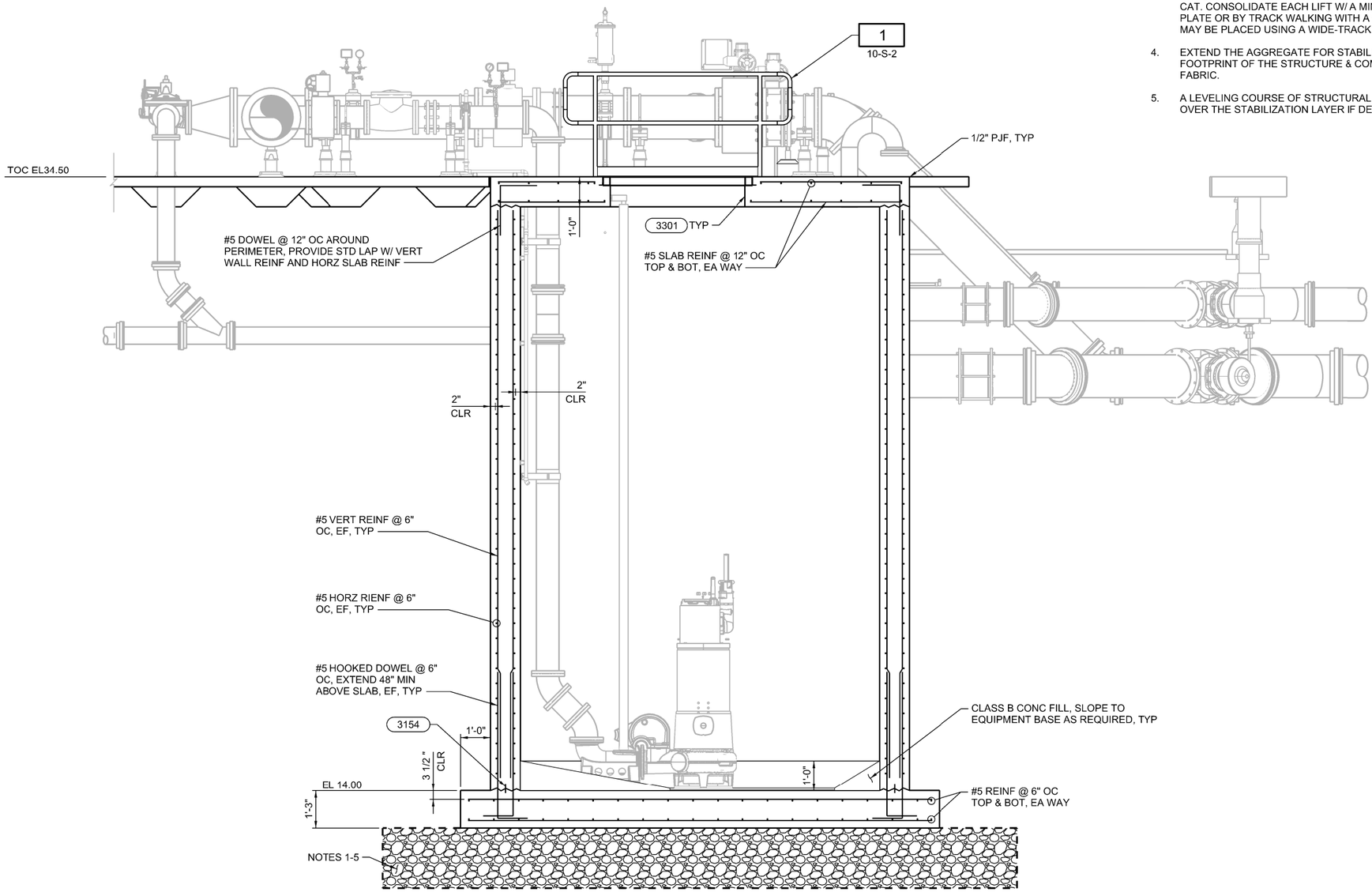
STRUCTURAL
PUMP STATION B
TOP PLAN AND DETAIL

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-S-2
SHEET NUMBER X

FILENAME: 1782D-20S101.DGN PLOT DATE: 2/7/2020 4:17:54 PM

EXCAVATION/GRADING NOTES:

1. THE LOWER 4 FEET OF THE WET WELL EXCAVATION SHOULD BE PERFORMED WITH CAUTION, USING AN EXCAVATOR TYPE OF EQUIPMENT, AND SUCH THAT CONSTRUCTION EQUIPMENT WILL NOT TRAVERSE ACROSS THE BOTTOM CF THE EXCAVATION.
2. EXCAVATIONS FOR THE WET WELL SHOULD BE DEEPENED TO ALLOW AT LEAST 2 FEET OF CRUSHED ROCK (AGGREGATE FOR STABILIZATION) ENCASED IN A GEOTEXTILE/STABILIZATION TO BE PLACED ON THE UINDISTURBED SUBGRADE AT THE BOTTOM OF THE EXCAVATION.
3. PLACE THE AGGREGATE FOR STABILIZATION IN (2) 1 FOOT LIFTS. THE FIRST LIFT SHOULD BE PLACED WITH AN EXCAVATOR OR LIGHT EQUIPMENT SUCH AS A BOB CAT. CONSOLIDATE EACH LIFT W/ A MINIMUM OF (4) PASSES WITH A VIBRATORY PLATE OR BY TRACK WALKING WITH A WIDE-TRACKED DOZER. THE SECOND LIFT MAY BE PLACED USING A WIDE-TRACK DOZER OR SIMILAR EQUIPMENT.
4. EXTEND THE AGGREGATE FOR STABILIZATION 3 FEET MINIMUM BEYOND THE FOOTPRINT OF THE STRUCTURE & COMPLETELY ENCOMPASS WITH GEOTEXTILE FABRIC.
5. A LEVELING COURSE OF STRUCTURAL FILL MAY BE PLACED AND COMPACTED OVER THE STABILIZATION LAYER IF DESIRED.



A SECTION
20-S-1 1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

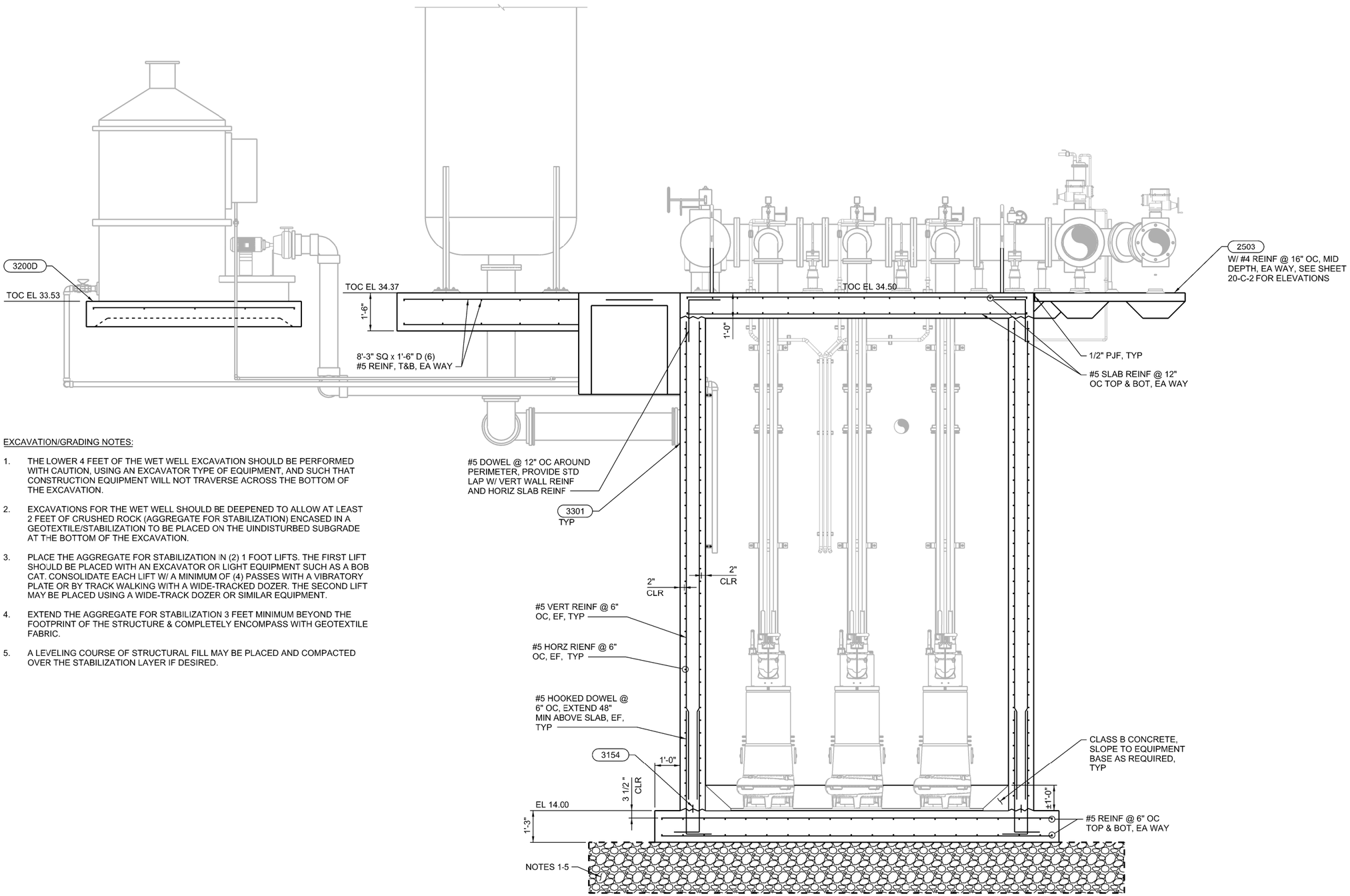
DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

STRUCTURAL
PUMP STATION SECTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-S-3
SHEET NUMBER X



A SECTION
10-S-1 1/2" = 1'-0"

EXCAVATION/GRADING NOTES:

1. THE LOWER 4 FEET OF THE WET WELL EXCAVATION SHOULD BE PERFORMED WITH CAUTION, USING AN EXCAVATOR TYPE OF EQUIPMENT, AND SUCH THAT CONSTRUCTION EQUIPMENT WILL NOT TRAVERSE ACROSS THE BOTTOM OF THE EXCAVATION.
2. EXCAVATIONS FOR THE WET WELL SHOULD BE DEEPENED TO ALLOW AT LEAST 2 FEET OF CRUSHED ROCK (AGGREGATE FOR STABILIZATION) ENCASED IN A GEOTEXTILE/STABILIZATION TO BE PLACED ON THE UINDISTURBED SUBGRADE AT THE BOTTOM OF THE EXCAVATION.
3. PLACE THE AGGREGATE FOR STABILIZATION IN (2) 1 FOOT LIFTS. THE FIRST LIFT SHOULD BE PLACED WITH AN EXCAVATOR OR LIGHT EQUIPMENT SUCH AS A BOB CAT. CONSOLIDATE EACH LIFT W/ A MINIMUM OF (4) PASSES WITH A VIBRATORY PLATE OR BY TRACK WALKING WITH A WIDE-TRACKED DOZER. THE SECOND LIFT MAY BE PLACED USING A WIDE-TRACK DOZER OR SIMILAR EQUIPMENT.
4. EXTEND THE AGGREGATE FOR STABILIZATION 3 FEET MINIMUM BEYOND THE FOOTPRINT OF THE STRUCTURE & COMPLETELY ENCOMPASS WITH GEOTEXTILE FABRIC.
5. A LEVELING COURSE OF STRUCTURAL FILL MAY BE PLACED AND COMPACTED OVER THE STABILIZATION LAYER IF DESIRED.

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

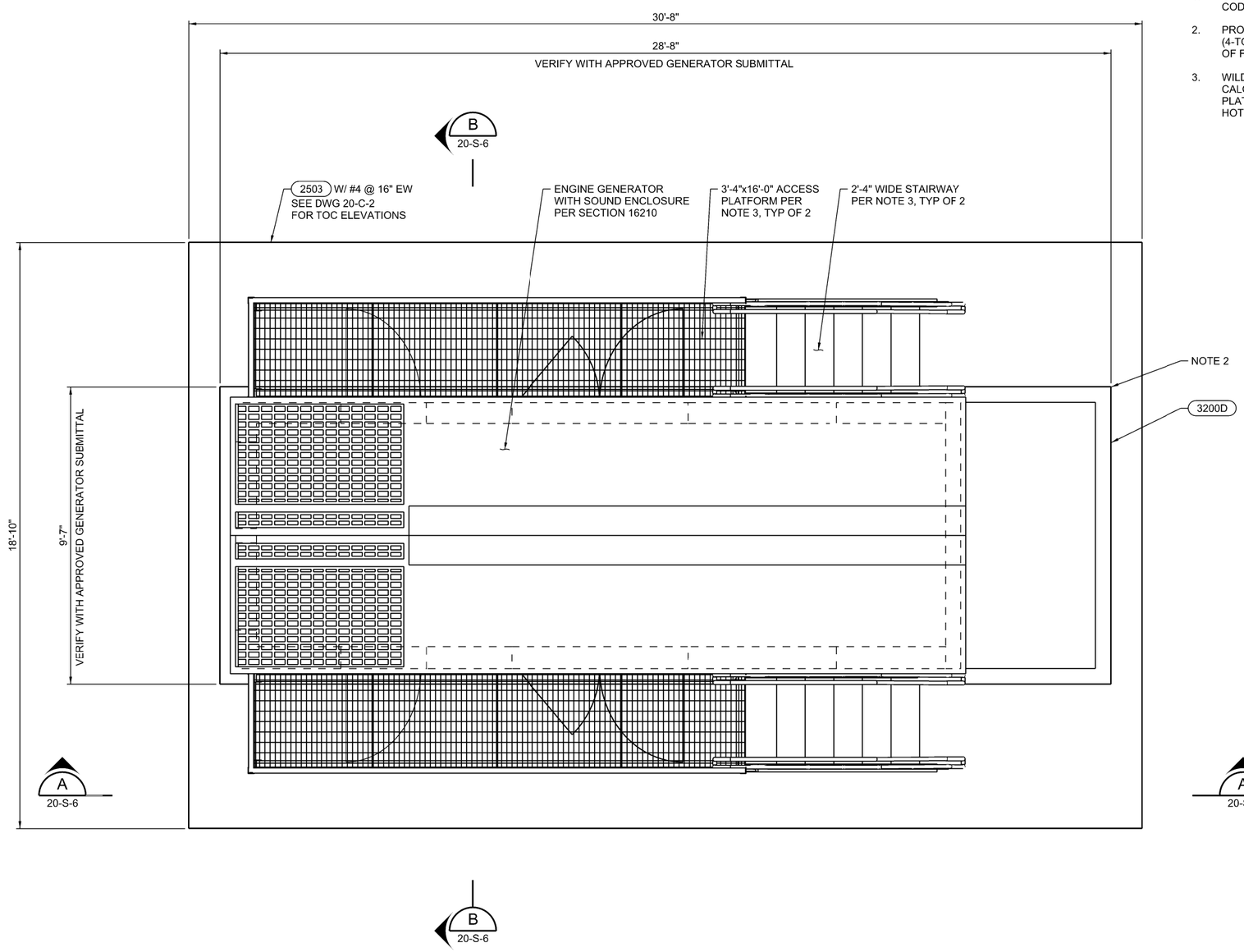
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

MECHANICAL
PUMP STATION SECTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-S-4
SHEET NUMBER X

NOTES:

1. GENERATOR SHOWN BASED CN KOHLER KD1000 SL2 GENERATOR WITH STATE CODE FUEL TANK. ACTUAL LAYOUT TO BE BASED ON APPROVED SUBMITTAL.
2. PROVIDE (2) #4 x 4'-0" DIAGONAL REINF @ 3" SPACING @ EA REENTRANT CORNER (4-TOTAL). PROVIDE STD 90° BEND WHERE SLAB EDGE PREVENTS PLACEMENT OF FULL LENGTH BAR.
3. WILDECK JIFFYSTAIR MODULAR STAIR SYSTEM, OR APPROVED EQUAL. PROVIDE CALOHSA COMPLIANT STAIR SYSTEM WITH GUARDRAIL ON TWO SIDES OF PLATFORM. COORDINATE ± 28" PLATFORM HEIGHT WITH APPROVED GENERATOR. HOT DIP GALVANIZED FINISH.



PLAN
1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED CHECKED-BY
APPROVED M FISHER

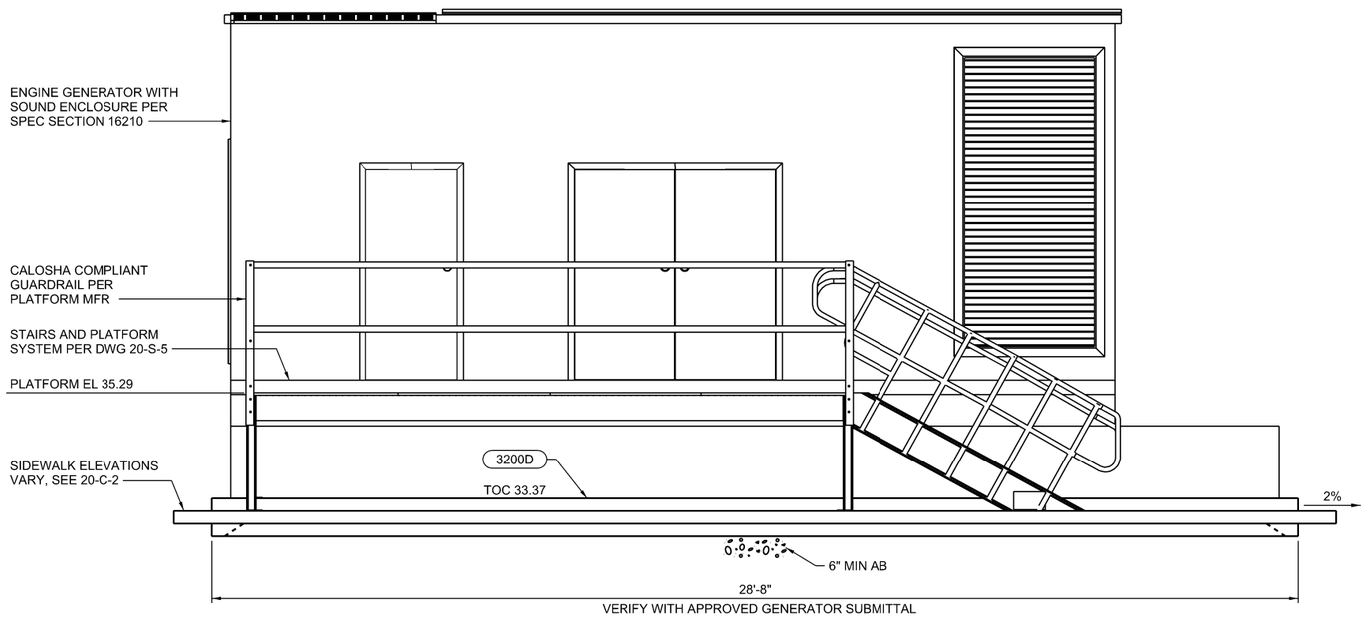
WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

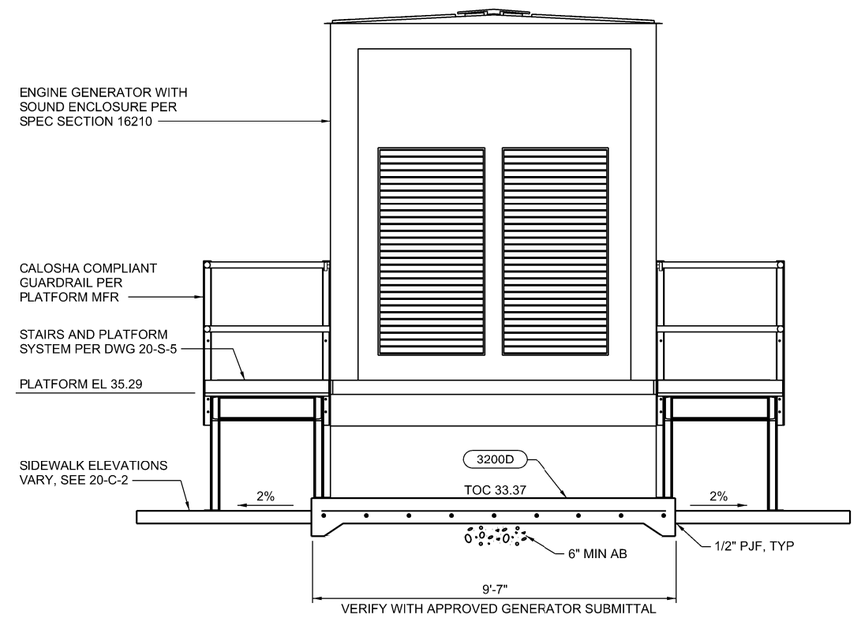
STRUCTURAL
PUMP STATION B
GENERATOR PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-S-5
SHEET NUMBER X

FILENAME: 1782D-20S102.DGN PLOT DATE: 2/7/2020 4:15:45 PM



A SECTION
20-S-5 1/2" = 1'-0"



B SECTION
20-S-5 1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED A LINDEMAN
DRAWN J MARTIN
CHECKED J KELLOGG
APPROVED M FISHER

WATERWORKS ENGINEERS
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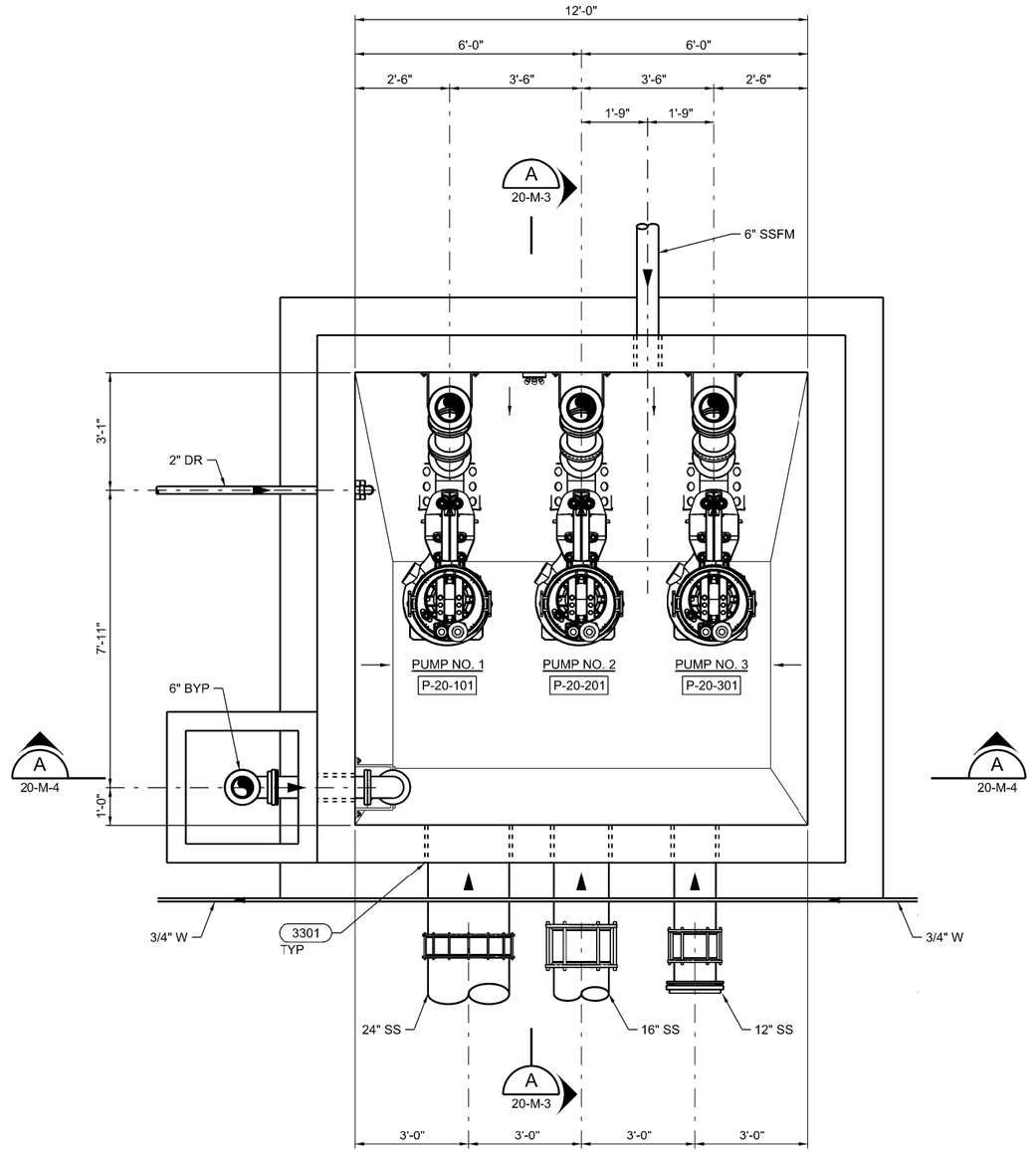
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

STRUCTURAL
PUMP STATION B
GENERATOR SECTIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-S-6
SHEET NUMBER X



LOWER PLAN

1/2" = 1'-0"

2 0 2 4 FEET

SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

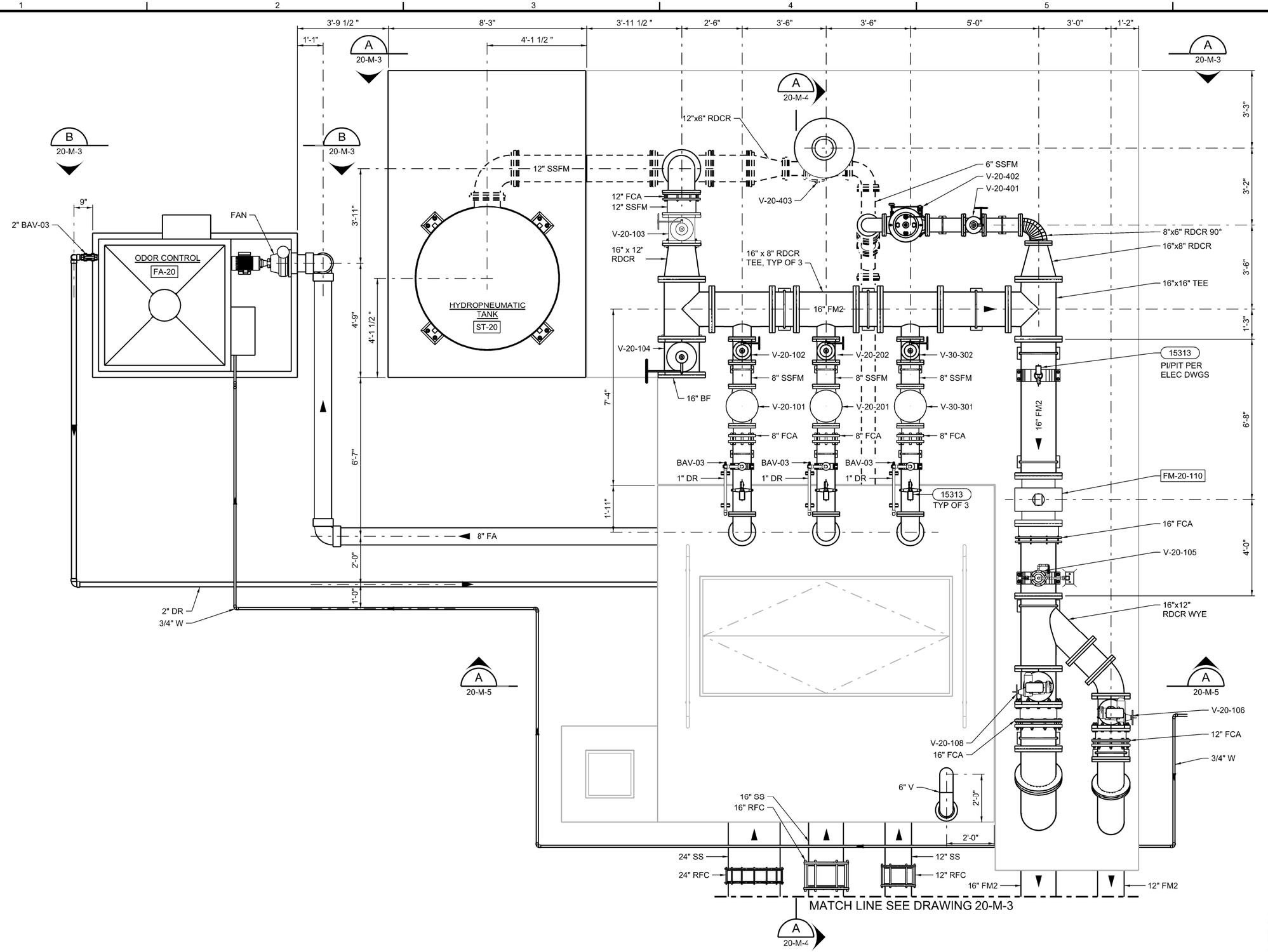
DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

MECHANICAL
PUMP STATION B
LOWER PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-M-1
SHEET NUMBER X



TOP PLAN

1/2" = 1'-0"

2 0 2 4 FEET

SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

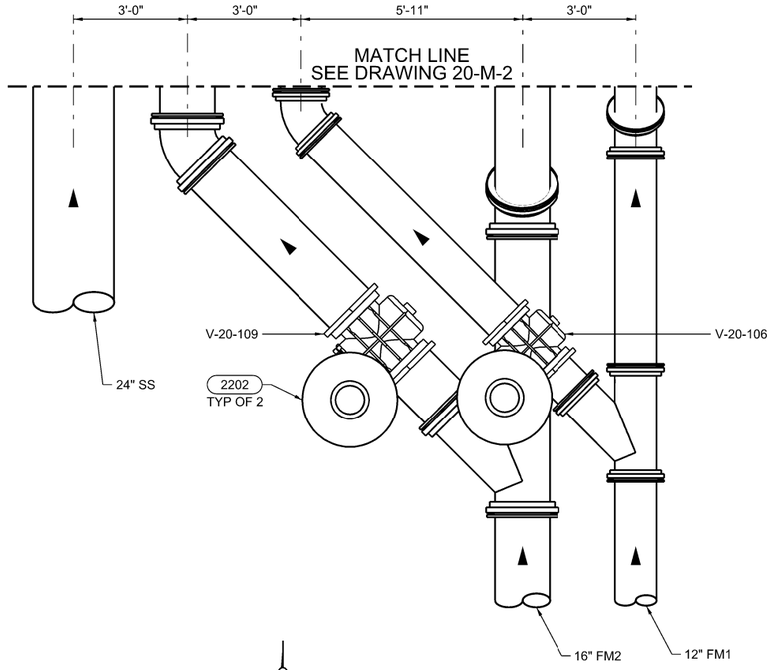
WATERWORKS ENGINEERS
1465 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

MECHANICAL
PUMP STATION B
PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-M-2
SHEET NUMBER X

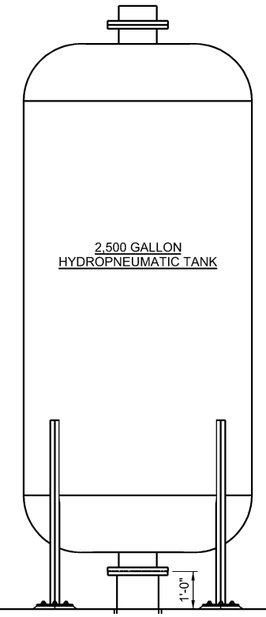
FILENAME: 1782D-20M101.DGN PLOT DATE: 2/10/2020 5:42:50 PM

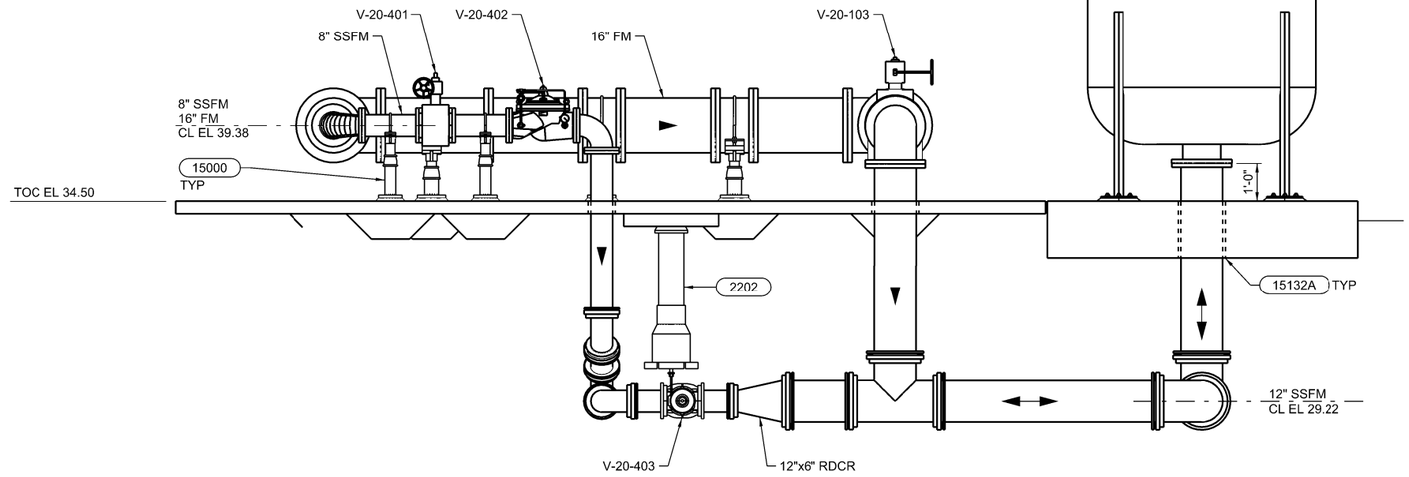


PLAN
1/2" = 1'-0"

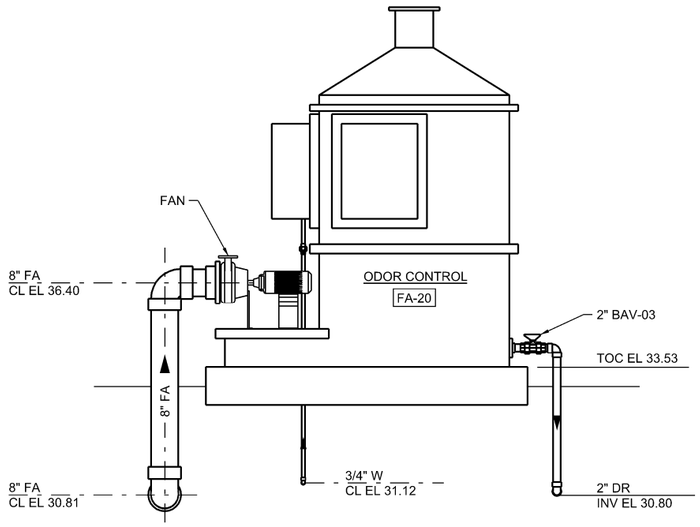
NOTES:

1. CONTRACTOR TO VERIFY ALL TANK, SUPPORT, ANCHOR AND FOUNDATION DIMENSIONS WITH TANK MANUFACTURER PRIOR TO CONSTRUCTION.
2. PROVIDE STAINLESS STEEL INSECT SCREENS FOR ALL VENTS.
3. PROVIDE PROBE ASSEMBLY SUPPORT PER TANK MANUFACTURER.
4. INSTALL 24 MESH INSECT SCREEN ON END OF 2" DR.





A SECTION
20-M-2 1/2" = 1'-0"



B SECTION
20-M-2 1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

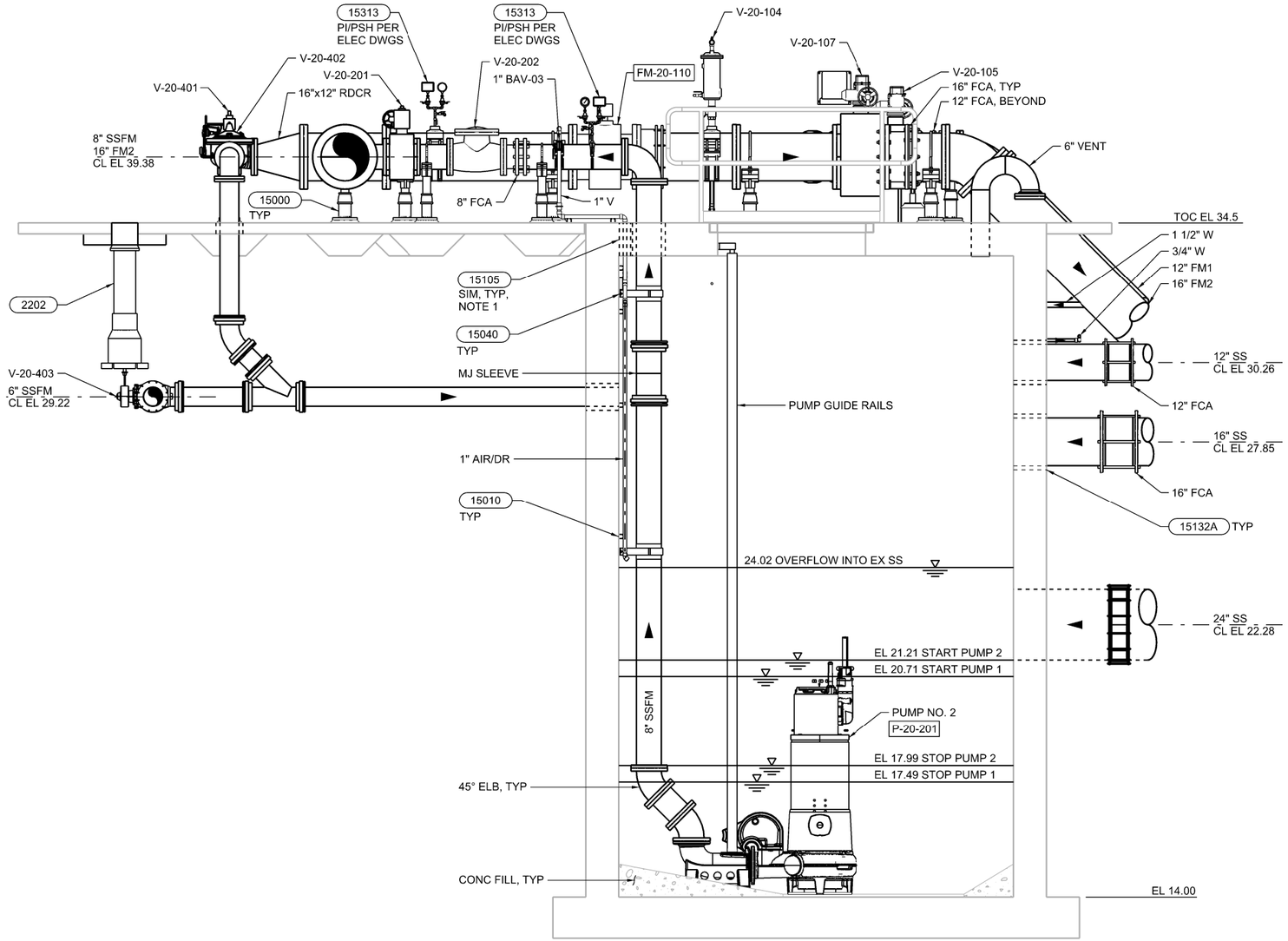
MECHANICAL
PUMP STATION B
PARTIAL PLAN AND SECTIONS

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-M-3
SHEET NUMBER X

FILENAME: 1782D-20M102.DGN PLOT DATE: 2/10/2020 5:42:05 PM

NOTES:

1. FLOOR SLEEVE SHALL BE SCH 80 PVC.



A SECTION
20-M-2 1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

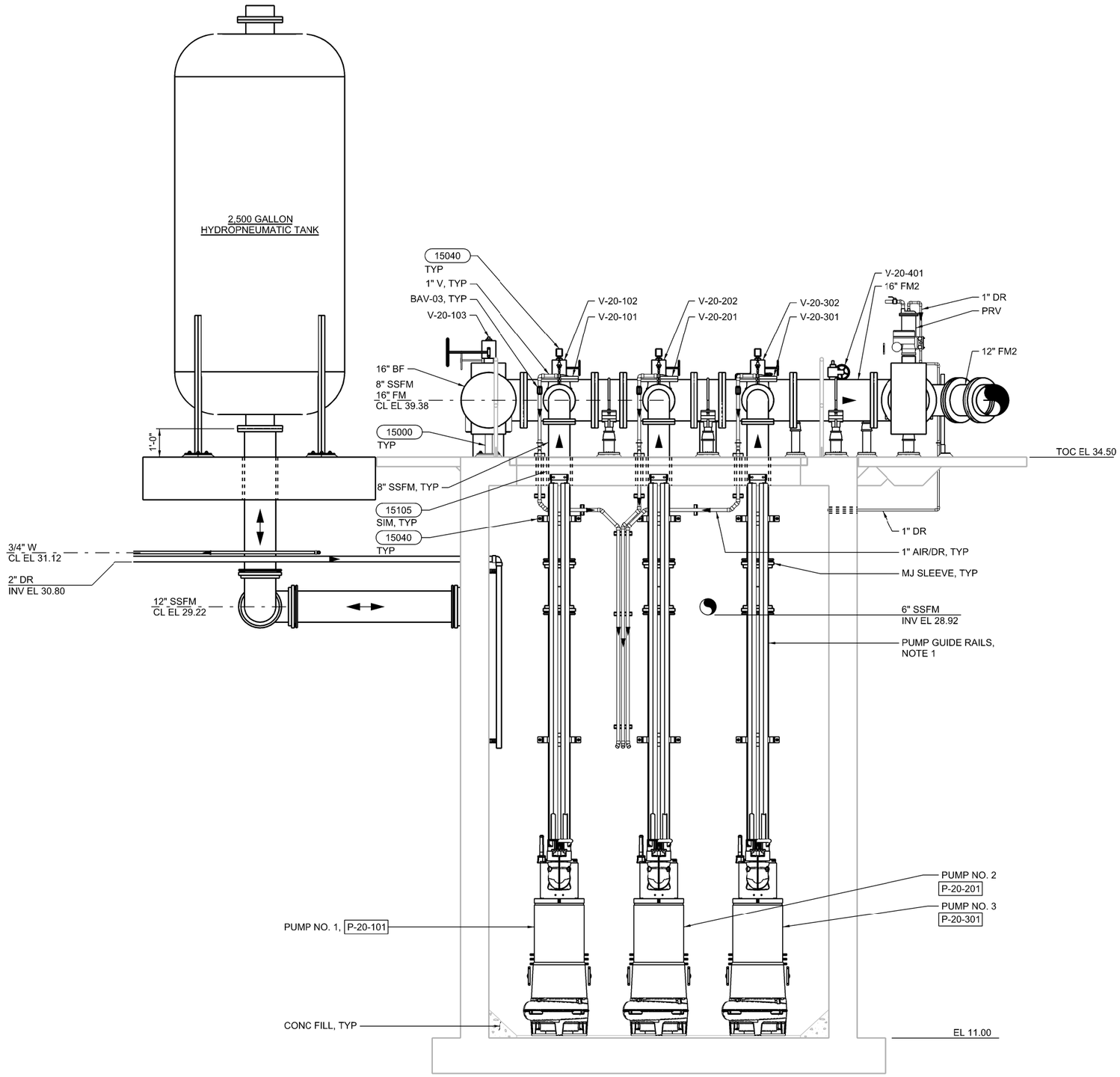
MECHANICAL
PUMP STATION B
SECTION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-M-4
SHEET NUMBER X

FILENAME: 1782D-20M201.DGN PLOT DATE: 2/7/2020 2:29:53 PM

NOTES:

1. BY PUMP MFR.



A SECTION
10-M-2 1/2" = 1'-0"

2 0 2 4 FEET
SCALE 1/2"=1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED K ALACON
DRAWN J MARTIN
CHECKED K ALACON
APPROVED M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

MECHANICAL
PUMP STATION B
SECTION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-M-5
SHEET NUMBER X

FILENAME: 1782D-20M202.DGN PLOT DATE: 2/7/2020 2:44:50 PM

HVAC LEGEND

SYMBOL	DESCRIPTION
AC 1	EQUIPMENT LABEL
CS1 — LABEL; 100 — CFM; 12x12 — SIZE	AIR INLET/OUTLET LABEL
T	THERMOSTAT (TOP OF BOX AT MAX. 48" AFF)
	POINT OF CONNECTION
C	CARBON DIOXIDE WALL SENSOR (TOP OF BOX AT MAX. 48" AFF)
S	REMOTE TEMPERATURE SENSOR
$	MANUAL WALL SWITCH
ROUND / SUPPLY / RETURN / EXHAUST	CEILING DIFFUSER/GRILLE
	WALL REGISTER/GRILLE
	DUCT UP (SECTION)
	DUCT DOWN (SECTION)
	DUCT BEYOND (SECTION)
DOUBLE-LINE / SINGLE-LINE	
WxH	RECTANGULAR DUCT (DIMENSIONS = WIDTH (VISIBLE SIDE) x HEIGHT)
Ø	ROUND DUCT (DIMENSION = DIAMETER)
12x12L	DUCT WITH INTERNAL INSULATION LINER (DIMENSIONS = NET FREE OPEN AREA)
	EXPOSED SPIRAL SEAM ROUND DUCT
	MANUAL VOLUME DAMPER
WxH, WxH	DUCT TRANSITION
WxH, Ø	RECTANGULAR TO ROUND DUCT TRANSITION
	DUCT CAP
	CUT AND REMOVE DUCT
	FLEX DUCT LINETYPE
	SUPPLY DUCT LINETYPE
	RETURN DUCT LINETYPE
	EXHAUST DUCT LINETYPE
SD	DUCT SMOKE DETECTOR
FD	FIRE DAMPER
FSD	FIRE-SMOKE DAMPER
	45° REDUCING STRAIGHT LATERAL
	45° REDUCING WYE BRANCH
	45° REDUCING LATERAL CROSS
	CONICAL BELLMOUTH TAP
	45° ENTRY TAP
	RECTANGULAR DUCT TEE WITH TURN VANES (SIZE EACH TAKOFF FOR EQUAL PRESSURE LOSS)
	RECTANGULAR DUCT ELBOW WITH TURN VANES
W, R = 1.5W	RECTANGULAR DUCT ELBOW
R = 1.5Ø	ROUND DUCT ELBOW

VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SCHEDULE

OUTDOOR UNIT: LABEL	MAKE & MODEL	TYPE	NOM. TONS	CONN. INDOOR UNIT LOAD	EFFICIENCY: EER	SEER	HSPF	ELECTRICAL: VOLTS/PH/HZ	FLA	MCA	MOCP	OPER. WT. (LBS.)
ODU 1	SAMSUNG AM036NXMDCH/AA	HEAT RECOVERY	3	120%	12.5	22.0	10.0	208 / 1 / 60	18.5	23	40	214
ODU 2	SAMSUNG AM060MXMDCH/AA	HEAT PUMP	5	106%	11.2	20.6	11.5	208 / 1 / 60	25.7	32	50	276
ODU 3	SAMSUNG AM060MXMDCH/AA	HEAT PUMP	5	106%	11.2	20.6	11.5	208 / 1 / 60	25.7	32	50	276

REFRIGERANT DISTRIBUTION UNIT: LABEL	MAKE & MODEL	PORTS	ELECTRICAL: VOLTS/PH/HZ	FLA	MCA	MOCP	OPER. WT. (LBS.)
RDU 1	SAMSUNG MCU-R4NEK0N	4	208 / 1 / 60	1.6	2.0	15	47
NOT APPLICABLE							
NOT APPLICABLE							

INDOOR UNIT: LABEL	MAKE & MODEL	TYPE	NOM. TONS	SENS. COOL MBH*	HEAT MBH**	SUPPLY FAN: CFM	ESP	ELECTRICAL: VOLTS/PH/HZ	FLA	MCA	MOCP	OPER. WT. (LBS.)	OPTIONS
IDU 1A	SAMSUNG AM009MNVDCH/AA	WALL MOUNT	0.75	6.5	10.5	200	0.0"	208 / 1 / 60	0.19	--	--	18	1, 2
IDU 1B	SAMSUNG AM036JNCDCH/AA	CEILING MOUNT	3	25.4	40.9	1035	0.0"	208 / 1 / 60	0.94	--	--	74	1, 2, 4
IDU 2A	SAMSUNG AM032MNQDCH/AA	WALL MOUNT	2.67	21.5	33.6	810	0.0"	208 / 1 / 60	0.54	--	--	41	1, 2, 3, 4
IDU 2B	SAMSUNG AM032MNQDCH/AA	WALL MOUNT	2.67	21.5	33.6	810	0.0"	208 / 1 / 60	0.54	--	--	41	1, 2, 3, 4
IDU 3A	SAMSUNG AM032MNQDCH/AA	WALL MOUNT	2.67	21.5	33.6	810	0.0"	208 / 1 / 60	0.54	--	--	41	1, 2, 3, 4
IDU 3B	SAMSUNG AM032MNQDCH/AA	WALL MOUNT	2.67	21.5	33.6	810	0.0"	208 / 1 / 60	0.54	--	--	41	1, 2, 3, 4

NOTES:

* COOLI NG CAPACITY BASED ON 82°F OAT, 66°F EWB, & 80°F EDB.
** HEATING CAPACITY BASED ON 35°F OAT & 70°F EDB.

OPTIONS:

1. SAMSUNG #MWR-WG00JN WIRED REMOTE CONTROLLER
2. SAMSUNG REFRIGERANT ISOLATION VALVES FOR EACH ZONE
3. ASPEN MINI ORANGE UNIVOLT CONDENSATE PUMP (16 WATTS POWERED BY INDOOR UNIT)
4. RECTORSEAL SLIMLINE LINESET DUCT AS REQUIRED

HVAC PIPING LEGEND

ABBREV.	DESCRIPTION	SYMBOL
CD	CONDENSATE DRAIN PIPE	CD
CDO	CONDENSATE DRAIN OVERFLOW PIPE	CDO
CO	CLEANOUT, PLUG CLEANOUT	
SOV	SHUT-OFF VALVE	
(UF), (UG), (US)	UNDER FLOOR, GROUND, SLAB	

HVAC ABBREVIATIONS

(ABC)	ABOVE CEILING
AD	ACCESS DOOR
AFF, AFG	ABOVE FINISHED FLOOR, GRADE
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
APD	AIR PRESSURE DROP
ARCH.	ARCHITECT, ARCHITECTURAL
BFF, BFG	BELOW FINISHED FLOOR, GRADE
BHP	BRAKE HORSEPOWER
BLKG	BLOCKING
BMS	BUILDING MANAGEMENT SYSTEM
BTU/HR	BRITISH THERMAL UNITS
CAV	CONSTANT AIR VOLUME
CFM	CUBIC FEET PER MINUTE
COMB.	COMBUSTION
CONN.	CONNECT, CONNECTION
CONT.	CONTINUATION, CONTINUOUS
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB
DCV	DEMAND CONTROL VENTILATION
DIA., Ø	DIAMETER
DDC	DIRECT DIGITAL CONTROLS
DN	DOWN
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
E.C.	ELECTRICAL CONTRACTOR
EER	ENERGY EFFICIENCY RATIO
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
(FA), (FB)	FROM ABOVE, FROM BELOW
F.A.C.	FIRE ALARM CONTRACTOR
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
GA.	GAUGE
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HSPF	HEATING SEASONAL PERFORMANCE FACTOR
HZ	HERTZ
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTU/HR
M.C.	MECHANICAL CONTRACTOR
MCA	MINIMUM CURRENT AMPACIITY
MFR	MANUFACTURER
MOCP	MAX. OVERCURRENT PROTECTION
(N)	NEW
NPSH	NET POSITIVE SUCTION HEAD
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DAMPER
O.C.	ON CENTER
(OH)	OVERHEAD
POC	POINT OF CONNECTION
P.C.	PLUMBING CONTRACTOR
PH	PHASE
PSI	POUNDS PER SQUARE INCH
P.T.	PRESURE-TREATED
RA	RETURN AIR
RL	REFRIGERANT LIQUID LINE
RPM	ROTATIONS PER MINUTE
RS	REFRIGERANT SUCTION LINE
SA	SUPPLY AIR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SMS	SHEET METAL SCREW
SOV	SHUTOFF VALVE
S.P.	STATIC PRESSURE
S.S.	STAINLESS STEEL
STL.	STEEL
(TA), (TB)	TO ABOVE, TO BELOW
TCP	TEMPERATURE CONTROL PANEL
TCC	TEMPERATURE CONTROLS CONTRACTOR
TDH	TOTAL DYNAMIC HEAD
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
(TYP), TYP.	TYPICAL
(UF), (US)	UNDER FLOOR, UNDER SLAB
(UG)	UNDERGROUND
U.N.O	UNLESS NOTED OTHERWISE
V	VOLTAGE
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VB	VALVE BOX
VRF	VARIABLE REFRIGERANT FLOW
WB	WET BULB
W.C. , W.G.	WATER COLUMN, WATER GAUGE
WPD	WATER PRESSURE DROP

EXHAUST FAN SCHEDULE

LABEL	MAKE & MODEL	TYPE	CFM	ESP	SONES	FAN: HP	FAN: MOTOR	ELECTRICAL: VOLTS/PH/HZ	AMPS	WATTS	BHP	OPER. WEIGHT (LBS.)	CONTROL	OPTIONS
EF 1	PANASONIC FV-1115VK2	CEILING	130	0.1"	< 0.3	--	DC ECM	120 / 1 / 60	0.24	9.2	--	12	SWITCHED W/ LIGHTS	1, 2, 3

OPTIONS:

1. HOODED ROOF EXHAUST OUTLET.
2. BACKDRAFT DAMPER.
3. VENTILATION RATE SELECTOR.

PIPE MATERIAL SCHEDULE

TYPE	INSIDE	OUTSIDE	INSULATION	REMARKS
REFRIGERANT LIQUID & SUCTION	ACR COPPER. USE ANNEALED SOFT COPPER UP TO 5/8". USE HARD DRAWN COPPER FOR 3/4" AND LARGER.	ACR COPPER. USE ANNEALED SOFT COPPER UP TO 5/8". USE HARD DRAWN COPPER FOR 3/4" AND LARGER.	PER HVAC UNIT MANUFACTURER'S INSTRUCTIONS	PROVIDE WEATHER PROTECTIVE ALUMINUM JACKETING OR GALV. SHEETMETAL ENCLOSURE OVER ALL INSULATION LOCATED OUTSIDE.
CONDENSATE DRAIN	TYPE-M COPPER	TYPE-M COPPER	--	--

DUCT MATERIAL SCHEDULE

TYPE	MATERIAL	INSULATION	REMARKS
EXHAUST AIR	GALV. SHEETMETAL GA. PER SMACNA STANDARDS	NONE	USE 5 FT MIN. UL CLASS 1 FLEX DUCT FOR TERMINAL CONNECTIONS. LIMIT ALL FLEX DUCT LENGTHS TO 5 FT MAX.

CONTRACTOR VRF TRAINING

PRIOR TO BEGINNING ANY WORK, MECHANICAL CONTRACTOR SHALL COMPLETE THE VRF SYSTEM MANUFACTURER'S FACTORY TRAINING/CERTIFICATION PROGRAM FOR THE INSTALLATION, COMMISSIONING, AND CONFIGURATION OF SPECIFIED AND/OR INSTALLED VRF SYSTEM.

PRELIMINARY - NOT FOR CONSTRUCTION

JOB NUMBER: 17-082 FILENAME: MORROBAYSPS M1.0 SCHED.DWG PLOT DATE: 12/19/19 PLOT TIME: 09:02:38

DESIGN S. TURNBULL
DRAWN -
CHECKED -
APPROVED -

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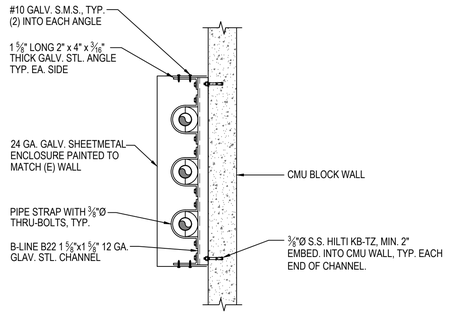
PRELIMINARY - NOT FOR CONSTRUCTION

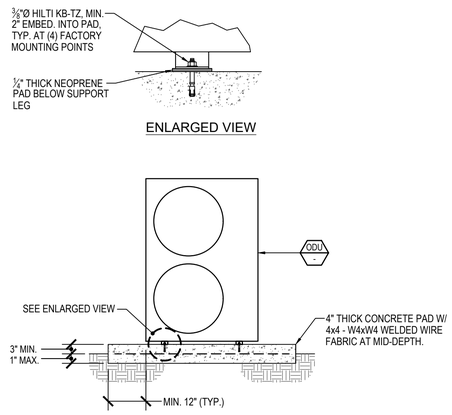
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

HVAC
HVAC SCHEDULES AND LEGEND

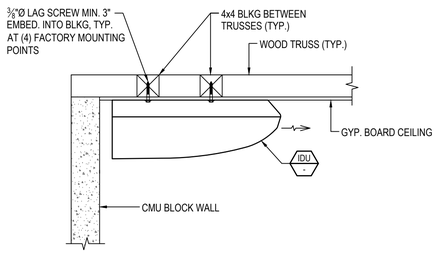
DATE SEPTEMBER 2019
PROJECT NUMBER 17-082
DRAWING NUMBER M1.0
SHEET NUMBER ####



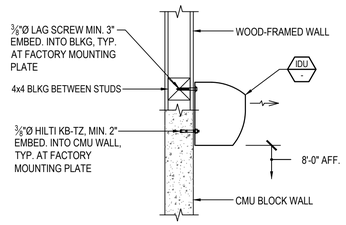
4 PIPE ENCLOSURE
SCALE: NONE



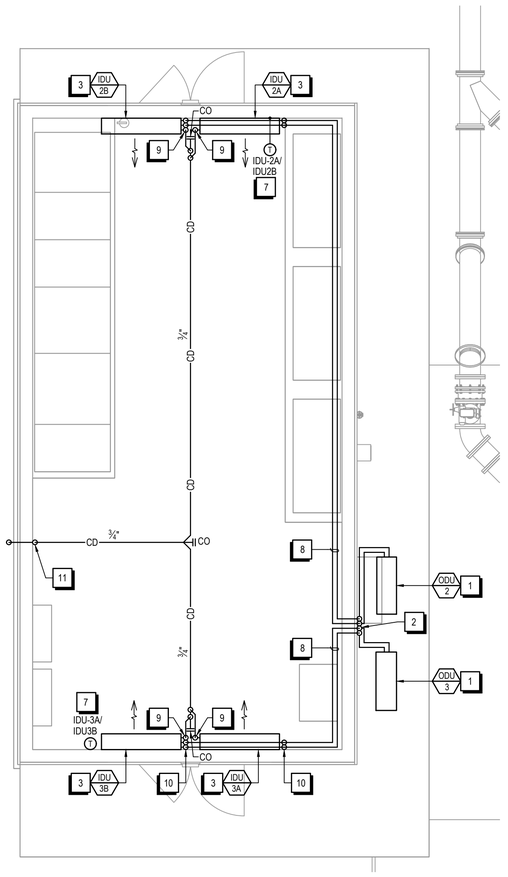
3 VRF OUTDOOR UNIT
SCALE: NONE



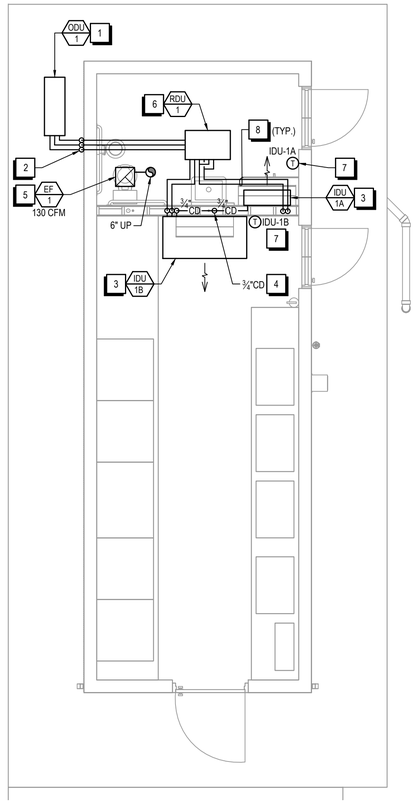
6 CEILING-MOUNT VRF INDOOR UNIT
SCALE: NONE



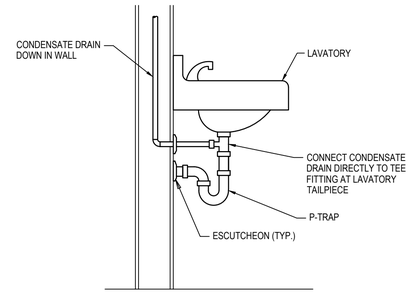
5 WALL-MOUNT VRF INDOOR UNIT
SCALE: NONE



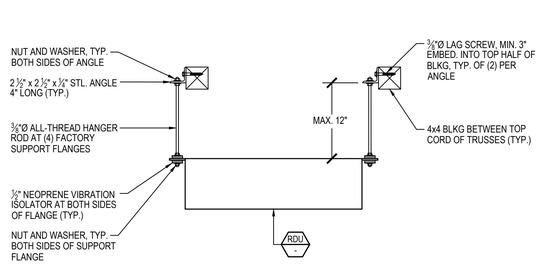
PUMP STATION PS-B - ELECTRICAL BUILDING HVAC PLAN
SCALE: 1/4" = 1'-0"



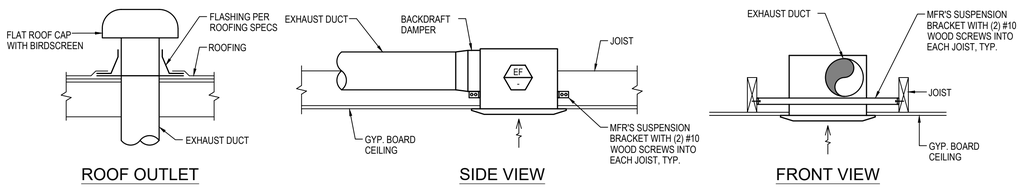
PUMP STATION PS-A - ELECTRICAL BUILDING HVAC PLAN
SCALE: 1/4" = 1'-0"



7 CD TO LAVATORY TAILPEICE
SCALE: NONE



8 REFRIGERANT DISTRIBUTION UNIT
SCALE: NONE



9 CEILING EXHAUST FAN
SCALE: NONE

KEYNOTES:

1. PROVIDE (N) VRF OUTDOOR UNIT ON (N) CONCRETE PAD. SEE 3/M2.0
2. ROUTE (N) REFRIGERANT LINES UP EXTERIOR WALL IN SHEET METAL ENCLOSURE TO (N) REFRIGERANT DISTRIBUTION UNIT IN ATTIC. SIZE REFRIGERANT LINES PER MANUFACTURER'S INSTRUCTIONS. SEE 4/M2.0
3. PROVIDE (N) VRF INDOOR UNIT AT HIGH SIDEWALL. SEE 5/M2.0
4. PROVIDE (N) VRF INDOOR UNIT AT CEILING. SEE 6/M2.0
5. PROVIDE (N) CEILING EXHAUST FAN. SEE 9/M2.0
6. PROVIDE (N) SUSPENDED VRF REFRIGERANT DISTRIBUTION UNIT IN ATTIC. SEE 8/M2.0
7. PROVIDE INSULATED BACKING FOR (N) INDOOR UNIT CONTROLLER LOCATED AT EXTERIOR WALL.
8. ROUTE (N) REFRIGERANT LINES IN ATTIC TO (N) INDOOR UNIT. SIZE PER MANUFACTURER INSTRUCTIONS.
9. PROVIDE (N) CONDENSATE AND PUMPED CD UP IN LINESET DUCT TO GRAVITY CD IN ATTIC.
10. ROUTE (N) EXPOSED REFRIGERANT LINES IN LINESET DUCT UP TO ATTIC.
11. ROUTE (N) CD DOWN FROM ATTIC TO DAYLIGHT 6" ABOVE LANDSCAPED AREA.
12. ROUTE (N) CONDENSATE DRAIN DOWN TO LAVATORY TAILPIECE. SEE 7/M2.0

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN S. TURNBULL | DRAWN - | CHECKED - | APPROVED -

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

PRELIMINARY - NOT FOR CONSTRUCTION

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

HVAC
HVAC PLAN

DATE SEPTEMBER 2019
PROJECT NUMBER 17-082
DRAWING NUMBER M2.0
SHEET NUMBER ####

PRELIMINARY - NOT FOR CONSTRUCTION

ELECTRICAL SYMBOLS AND ABBREVIATIONS

COMPONENTS

SYMBOL	DESCRIPTION
RES	RESISTOR
SV	SOLENOID COIL
HTR	HEATER
	CAPACITOR
	DIODE
	DIODE, ZENER
MOV	METAL OXIDE VARISTOR
	AUDIBLE ALARM
?	3 PHASE MOTOR ? = MOTOR HP
M	3 PHASE MOTOR
M	SINGLE PHASE MOTOR
	TRANSFORMER SIZE AND VOLTAGE AS SHOWN
M	UTILITY POWER METER
	UFER GROUND
	GROUND ROD
	CURRENT TRANSFORMER RATIO AS NOTED
	DISCONNECT SWITCH SIZED PER FEEDER
PDB	POWER DISTRIBUTION BLOCK

SWITCHES – OPERATOR

SYMBOL	DESCRIPTION
SW	TOGGLE OR DISCONNECT SWITCH
PB	PUSHBUTTON – NORMALLY OPEN, MOMENTARY ACTION
PB	PUSHBUTTON – NORMALLY CLOSED, MOMENTARY UNLESS LOS (LOCK OUT STOP) WHERE MECHANICALLY HELD
PB	PUSHBUTTON, MECHANICALLY CONNECTED, DOUBLE CIRCUIT – NORMALLY CLOSED AND NORMALLY OPEN
HAND OFF AUTO	SELECTOR SWITCH, 3 POSITION – CONTACT STATUS SHOWN EXISTS I.E. AT POSITION OF HAND, OFF, OR AUTO
	SELECTOR SWITCH, 2 POSITION – MIDDLE POSITION IS DELETED
	ALTERNATE METHOD: X00 = HAND 00X = AUTO, 0X0 = OFF
	POTENTIOMETER

SWITCHES – PROCESS

SYMBOL	DESCRIPTION
FS	FLOW SWITCH – CLOSES UPON INCREASING FLOW
FS	FLOW SWITCH – OPENS UPON INCREASING FLOW
LS	LEVEL SWITCH – CLOSES UPON INCREASING LEVEL
LS	LEVEL SWITCH – OPENS UPON INCREASING LEVEL
PS	PRESSURE SWITCH – CLOSES UPON INCREASING PRESSURE (DECREASING VACUUM)
PS	PRESSURE SWITCH – OPENS UPON INCREASING PRESSURE (DECREASING VACUUM)
TS	TEMPERATURE SWITCH – CLOSES UPON INCREASING TEMPERATURE
TS	TEMPERATURE SWITCH – OPENS UPON INCREASING TEMPERATURE
ZS	LIMIT SWITCH – CLOSES AT SET LIMIT
ZS	LIMIT SWITCH – OPENS AT SET LIMIT
WS	TORQUE SWITCH – CLOSES UPON INCREASING TORQUE
WS	TORQUE SWITCH – OPENS UPON INCREASING TORQUE

DEVICES – FRONT PANEL

SYMBOL	DESCRIPTION
X	INDICATING LIGHT, LETTER "X" INDICATES COLOR: R=RED G=GREEN, A=AMBER, W=WHITE Y=YELLOW, B=BLUE
PTT X	INDICATING LIGHT, PUSH TO TEST
ETM	ELAPSED TIME METER

DEVICES – PROTECTIVE

SYMBOL	DESCRIPTION
S	CT SHORTING TERMINAL BLOCK
PTS	FUSED POTENTIAL TRANSFORMER, 208 / 120 V SECONDARY OR AS SHOWN
PM	POWER MONITOR
SPD	SURGE PROTECTION DEVICE
PFR	POWER FAIL REPLAY

DEVICES – RELAY

SYMBOL	DESCRIPTION
M1	CONTACTOR OR STARTER M1
CR1	CONTROL RELAY CR1
TR2	TIME DELAY RELAY TR2 – ADJUSTABLE TIME DELAY RANGE & SETTING AS SHOWN
TDOE TDOD	TIME DELAY ON ENERGIZATION TIME DELAY ON DE-ENERGIZATION
107, 121	REFERENCED RELAY WITH N.O. CONTACT ON LINE 107 N.C. CONTACT ON LINE 121
CR1 (105)	NORMALLY OPEN, RELAY CONTACT – ACTUATED BY RELAY CR1 COIL LOCATED ON LINE 105
CR1	NORMALLY CLOSED, RELAY CONTACT – ACTUATED BY RELAY CR1
TR2	NORMALLY OPEN, TIME DELAY RELAY CONTACT – CONTACT CLOSES AFTER TR2 IS ENERGIZED
TR2	NORMALLY CLOSED, TIME DELAY RELAY CONTACT – CONTACT OPENS AFTER TR2 IS ENERGIZED
TR2	NORMALLY OPEN, TIME DELAY RELAY CONTACT – CONTACT OPENS AFTER TR2 IS DE-ENERGIZED
TR2	NORMALLY CLOSED, TIME DELAY RELAY CONTACT – CONTACT CLOSES AFTER TR2 IS DE-ENERGIZED
TR2	CONTACT OPENS AND CLOSES IN A TIMED REPEAT CYCLE

DEVICES – PROTECTIVE

SYMBOL	DESCRIPTION
y xA xP xT	LOW VOLTAGE MOLDED CASE, INSULATED CASE OR POWER CIRCUIT BREAKER. RATINGS AS SHOWN IN DRAWINGS AND AS DEFINED BELOW: xA: CIRCUIT BREAKER AMERAGE xAT: AMPERAGE TRIP xAF: AMPERAGE FRAME xP: NUMBER OF POLES xT: TRIP PROTECTION MCP: MOTOR CIRCUIT PROTECTION TM: THERMAL MAGNETIC L: LONG TIME DELAY S: SHORT TIME DELAY I: INSTANTANEOUS TRIP G: GROUND FAULT A: ARC FLASH PROTECTION
100%	100% DUTY RATED
	y: BREAKER FEATURES / OPTIONS
S	– SHUNT TRIP
K	– KIRK-KEY INTERLOCK
M	– MANUALLY CHARGED PUSHBUTTON OPERATION
E	– ELECTRICALLY CHARGED PUSHBUTTON OPERATION
OL	THERMAL OVERLOAD CONTACT
	THERMAL OVERLOAD ELEMENT
	FUSE MEDIUM VOLTAGE CIRCUIT BREAKER
52	TRIP FUNCTIONS PER DRAWINGS AND SPECIFICATIONS
MFR	MULTIFUNCTION RELAY PER SPECIFICATIONS

WIRING – CONNECTIONS

SYMBOL	DESCRIPTION
	PANEL OR EQUIPMENT WIRING
	FIELD WIRING
	CONDUCTORS – NOT CONNECTED
	CONDUCTORS – CONNECTED
	GROUND CONNECTION
	PLUG AND RECEPTACLE
	INCOMING LINE
123	TERMINAL BLOCKS WITH TERMINAL NUMBER AS SHOWN OR AS DETERMINED BY SUBMITTAL
123	DISCONNECTING TERMINAL BLOCK
	FUSE
SHIELD CONDUCTOR	SHIELDED CABLE

PLAN – SYMBOLS

SYMBOL	DESCRIPTION
	CONDUIT, EXPOSED
	CONDUIT, IN SLAB OR BELOW GRADE
	CONDUIT, CONCEALED IN WALL OR CEILING
	CONDUIT STUBBED OUT & CAPPED
	CONDUIT BENDS TOWARD OBSERVER
	CONDUIT BENDS AWAY FROM OBSERVER
	CONDUIT ENDS
J	FLEXIBLE CONDUIT CONNECTION FROM J-BOX TO EQUIPMENT
	CONDUIT CHANGE IN ELEVATION
G	BARE COPPER GROUND WIRE
G	GROUND CONNECTION BOLTED TYPE
G	GROUND CONNECTION EXOTHERMIC WELD TYPE
	DISCONNECT SWITCH
	FIELD MOUNTED DEVICE
	TELEPHONE/DATA RECEPTACLE 2 PORT TA568A, 2 CAT 6 CABLES
#	CONDUIT REFERENCE TO SCHEDULE
T	THERMOSTAT
E	EYS SEAL
J	JUNCTION BOX
	PULL BOX OF SIZE SHOWN (CHRISTY BOX SIZE MINIMUM)
A a #	LIGHTING FIXTURE # – CIRCUIT BREAKER NUMBER A – FIXTURE SCHEDULE REF. a – CONTROL SWITCH REFERENCE
WP #7 WP	DUPLEX RECEPTACLE # – CIRCUIT BREAKER NUMBER WP – WEATHERPROOF (IF SHOWN) GFI – GROUND FAULT TYPE
$aM	TOGGLE SWITCH a – FIXTURES CONTROLLED 3 – 3 WAY M = MOTION DETECTOR T = TIMER SWITCH
	SPECIAL RECEPTACLE AS REQUIRED FOR EQUIPMENT TO BE CONNECTED

MISCELLANEOUS ABBREVIATIONS

&	AND	N	NEUTRAL
@	AT	NC	NORMALLY CLOSED
A	AMBER, AMPERES	NHC	NORMALLY HELD CLOSED
AC	ALTERNATING CURRENT	NHO	NORMALLY HELD OPEN
ACK	ACKNOWLEDGE	NIC	NOT IN CONTRACT
AFF	ABOVE FINISHED FLOOR	NL	NIGHT LIGHT
AH	AMP HOUR	NO	NORMALLY OPEN
AI	ANALOG INPUT	NTS	NOT TO SCALE
AIC	AMP INTERRUPTING CAPACITY SYMMETRICAL	(N)	NEW
AM	AMP METER	OC	ON CENTER
AO	ANALOG OUTPUT	OI, OIT	OPERATOR INTERFACE
AWG	AMERICAN WIRE GUAGE	OL	OVERLOAD
ATS	AUTOMATIC TRANSFER SWITCH	ORP	OXIDATION REDUCTION POTENTIAL
BATT	BATTERY	P	POLE
BFC	BELOW FINISHED CEILING	PB	PUSHBUTTON
BOD	BIOCHEMICAL OXYGEN DEMAND	PBX	PULL BOX
BPF	BAND PASS FILTER	PDB	POWER DISTRIBUTION BLOCK
BYP	BYPASS	PF	POWER FACTOR
C	CONDUIT	PFR	POWER FAIL RELAY
CAP	CAPACITOR	PH	HYDROGEN ION CONCENTRATION
CB	CIRCUIT BREAKER	PLC	PROGRAMMABLE LOGIC CONTROLLER
CKT	CIRCUIT	PM	POWER MONITOR
COAX	COAXIAL CABLE	PNL	PANEL
COMM	COMMUNICATION	POT	POTENTIOMETER
CR	CONTROL RELAY	PR	PAIR, TWISTED AND SHIELDED
CT	CURRENT TRANSFORMER	PRI	PRIMARY
CS	CONSTANT SPEED	PROVIDE	FURNISH, INSTALL, AND CONNECT
CU	COPPER	PS	PRESSURE SWITCH
DC	DIRECT CURRENT	PT	POTENTIAL TRANSFORMER
DET	DETAIL	PTT	PUSH TO TEST
DI	DIGITAL INPUT	PVC	POLYVINYLCHLORIDE
DISC	DISCONNECT	PWR	POWER
DO	DIGITAL OUTPUT	REF	REFERENCE
DPDT	DOUBLE POLE DOUBLE THROW	RFI	RADIO FREQUENCY INTERFERENCE
DWG	DRAWING	RMS	ROOT MEAN SQUARE
E-DTL	ELECTRICAL DRAWING DETAIL	RTD	RESISTANCE TEMPERATURE DETECTOR
ELEV	ELEVATION	RST	RESET
ENET	ETHERNET	RVAT	REDUCE VOLTAGE AUTO TRANSFORMER
ETM	ELAPSED TIME METER	RTU	REMOTE TERMINAL UNIT
ESW	ETHERNET SWITCH	(R)	REWIRE, RELOCATE, REVISE, REUSE
(E)	EXISTING	SCH	SCHEDULE
FCS	FIELD CONTROL STATION	SEC	SECONDARY, SECOND
FLA	FULL LOAD AMPS	SECS	SECONDS
FLEX	FLEXIBLE LIQUID TIGHT CONDUIT	SEL	SELECTOR
FS	FULL SPEED	SFA	SERVICE FACTOR AMPS
FVNR	FULL VOLTAGE NON-REVERSING	SPEC	SPECIFICATION
FVR	FULL VOLTAGE REVERSING	SPD	SURGE PROTECTIVE DEVICE
FWD	FORWARD	SS	STAINLESS STEEL
(F)	FUTURE	SSRC	STAINLESS STEEL RIGID CONDUIT
GALV	GALVANIZED	SSS	SOLID STATE STARTER
GFI	GROUND FAULT INTERRUPTER	STT	START
GND	GROUND	STP	STOP
GRS	GALVANIZED RIGID STEEL CONDUIT	SV	SOLENOID VALVE
GRS-PVC	PVC COATED GRS CONDUIT	SW	SWITCH
HI	HIGH	SWBD	SWITCHBOARD
HIM	HUMAN INTERFACE MODULE	SYM	SYMMETRICAL
HOA	HAND OFF AUTO	TB	TERMINAL BLOCK
HP	HORSE POWER	TC	TIME CLOCK
HPS	HIGH PRESSURE SODIUM	TDOD	TIME DELAY ON DE-ENERGIZATION
HS	HAND SWITCH	TDOE	TIME DELAY ON ENERGIZATION
HTR	HEATER	TELCO	TELEPHONE COMPANY
HZ	HERTZ	TM	THERMAL MAGNETIC
HZD	HAZARD	TEMP	TEMPERATURE
I	INTERLOCK	TR	TIME DELAY RELAY
I/O	INPUT/OUTPUT	TRIAD	TWISTED AND SHIELDED 3 CONDUCTOR
INST	INSTANTANEOUS	TS	TEMPERATURE SWITCH
ISR	INTRINSICALLY SAFE RELAY	TSPR	TWISTED AND SHIELDED PAIR
IS	INTRINSICALLY SAFE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
J	JUNCTION BOX	TYP	TYPICAL
K	KILO, PREFIX	UG	UNDERGROUND
LA	LIGHTNING ARRESTOR	ULH	ULTRA LOW HARMONIC
LC	LIGHTING CONTACTOR	UON	UNLESS OTHERWISE NOTED
LEL	LOWER EXPLOSION LIMIT	UPS	UNINTERRUPTIBLE POWER SUPPLY
LOS	LOCK OUT STOP	V	VOLTAGE
LS	LIMIT SWITCH	VA	VOLT AMPS
M	MOTOR CONTACTOR	VAR	VOLT AMPS REACTIVE
MAG	MAGNETIC FLOWMETER	VFD	VARIABLE FREQUENCY DRIVE
MAX	MAXIMUM	VLV	VALVE
MCC	MOTOR CONTROL CENTER	VM	VOLTMETER
MCM	THOUSAND CIRCULAR MILS	VMR	VOLTAGE MONITOR RELAY
MCP	MOTOR CIRCUIT PROTECTOR	VR	VOLTAGE RELAY
MCS	MOLDED CASE SWITCH	W	WATTS
MH	MANHOLE	WP	WEATHER PROOF, NEMA 3R
MIN	MINIMUM, MINUTE	WTP	WATER TREATMENT PLANT
MODEM	MODEM	WWTP	WASTE WATER TREATMENT PLANT
MOV	MOTOR OPERATED VALVE	XFMR	TRANSFORMER
MTR	MOTOR	Z	IMPEDANCE
MUX	MULTIPLEXER	ZS	LIMIT SWITCH
MV	MERCURY VAPOR, MEDIUM VOLTAGE		

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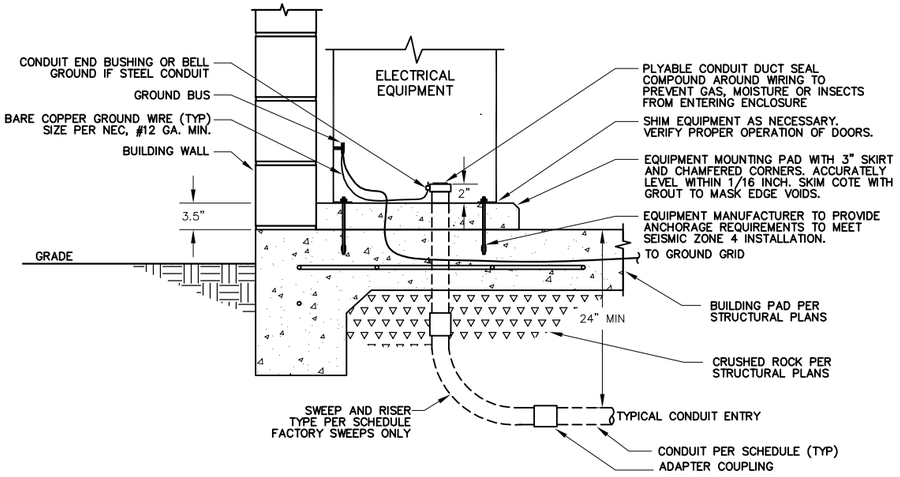
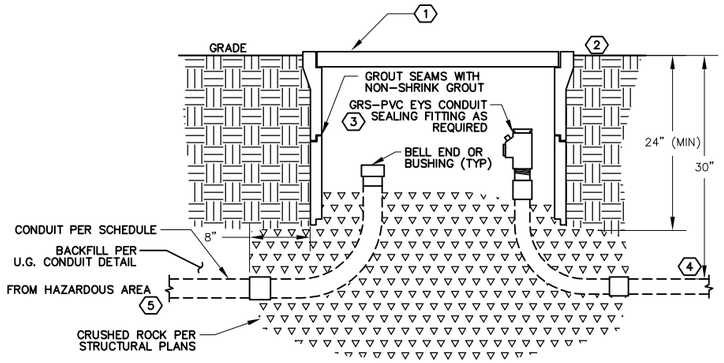
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
SYMBOLS AND ABBREVIATIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 00-E-01
SHEET NUMBER -

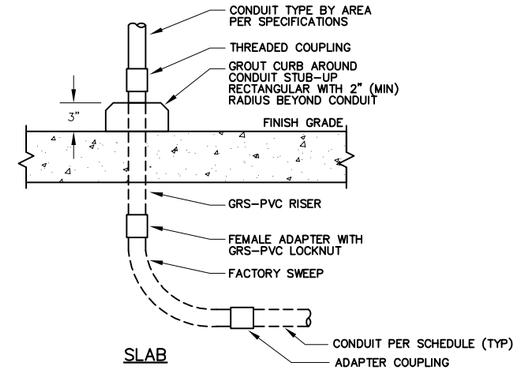


ECP — **EQUIPMENT CONCRETE PAD DETAIL**
NOT TO SCALE



UPB — **UNDERGROUND PULL BOX DETAIL**
NOT TO SCALE

NOTES:
1. PROVIDE CONCRETE LID IN NON-TRAFFIC AREAS. PROVIDE TRAFFIC RATED STEEL LID IN TRAFFIC AREAS. LABEL COVER PLATE "ELECTRICAL"
2. COLLAR TO BE 1/4" ABOVE SURROUNDING GRADE AND TOP OF PULL BOX
3. FILL EYS WITH "CHICO" OR EQUAL CONDUIT SEALING COMPOUND AFTER INSPECTION AND TESTING IS COMPLETED.
4. CONDUIT BEHIND EYS SHALL BE GRS-PVC FOR 2 FT (MIN).
5. EYS SEAL NOT REQUIRED FOR NON-HAZARDOUS LOCATIONS.



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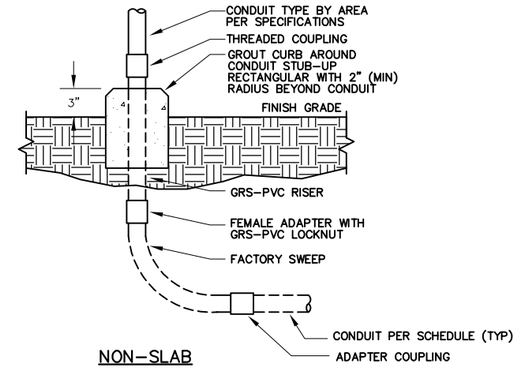
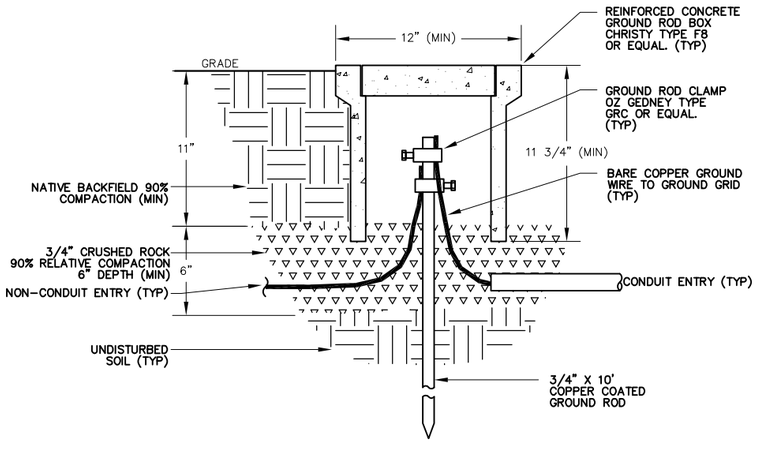
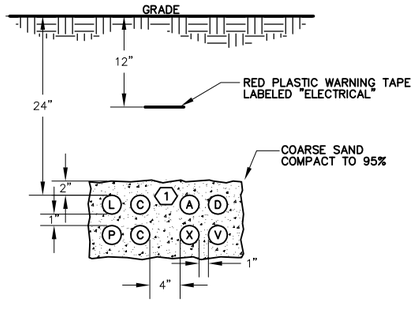


NON-SLAB

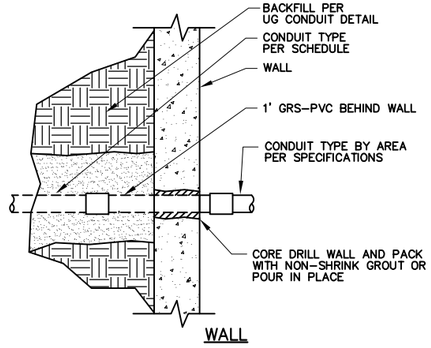


GIB — **GROUND INSPECTION BOX DETAIL**
NOT TO SCALE



LVC — **LOW VOLTAGE NON-DUCT BANK SECTION**
NOT TO SCALE

NOTES:
1. NUMBER OF CONDUITS PER PLANS AND SCHEDULE. MAXIMUM DEPTH OF TRENCH SHALL BE 42". DESIGN TRENCH DESIGN AND INSTALL TRENCH TO MAINTAIN 6" VERTICAL CLEARANCE AND 12" HORIZONTAL CLEARANCE FROM PIPES.
2. P, L, OR C DESIGNATION FOR POWER OR CONTROL CONDUITS.
3. A, D, V, OR X DESIGNATION FOR COMMUNICATION (TELEPHONE, DATA, VIDEO, OR INSTRUMENTATION) CONDUITS.
4. USE CONDUIT SPACERS TO SUPPORT CONDUITS AND MAINTAIN SPACING (3' INTERVALS)



WALL

ECT — **EXPOSED CONDUIT TRANSITION DETAIL**
NOT TO SCALE

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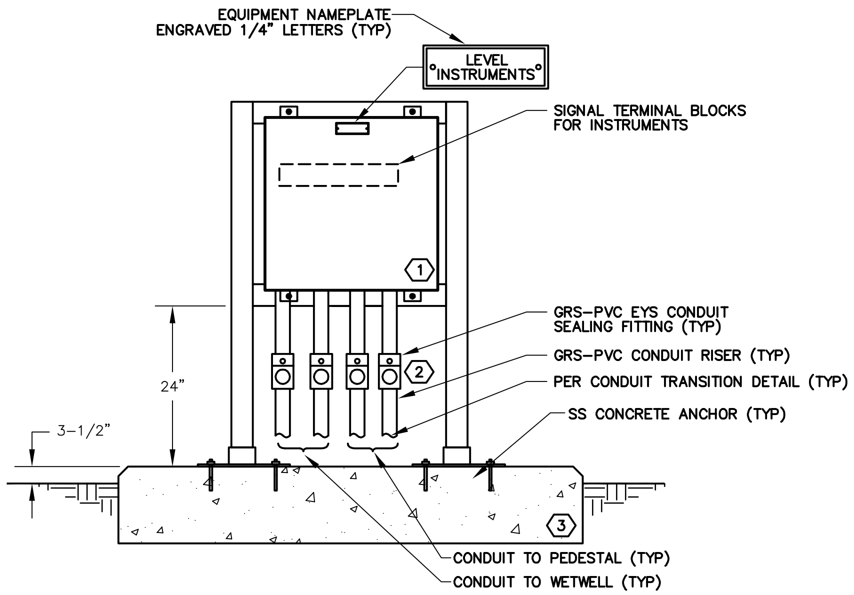
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ELECTRICAL
DETAILS 1

XXX

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
00-E-02
SHEET NUMBER -



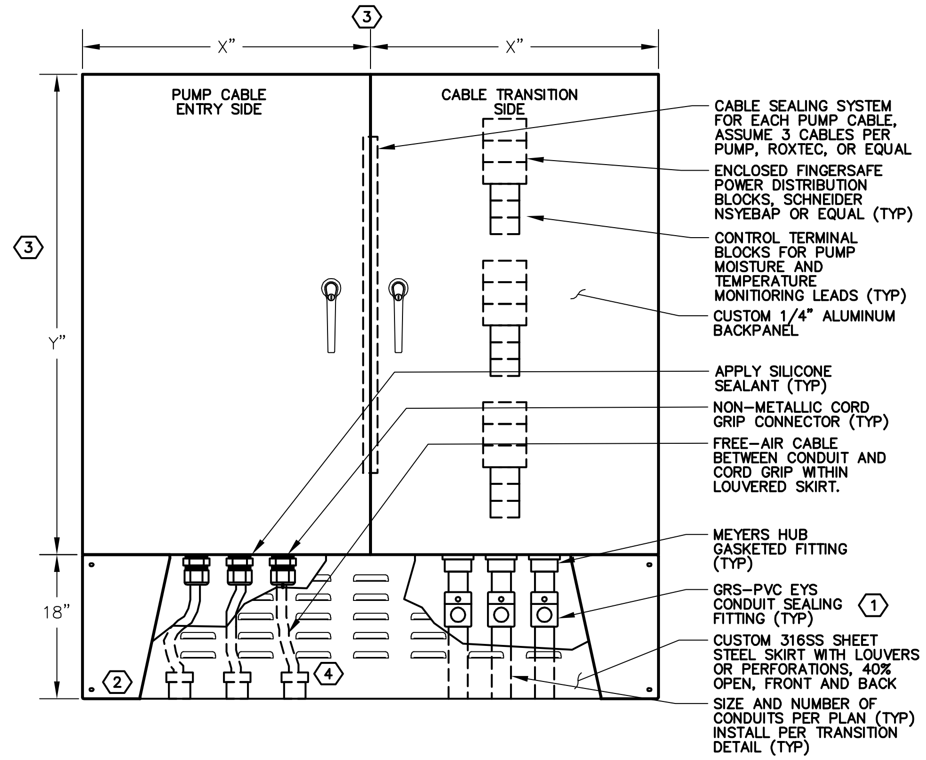
ELEVATION VIEW

DOOR OF JUNCTION BOX REMOVED FOR CLARITY

IJB INSTRUMENT JUNCTION BOX DETAIL

– NOT TO SCALE

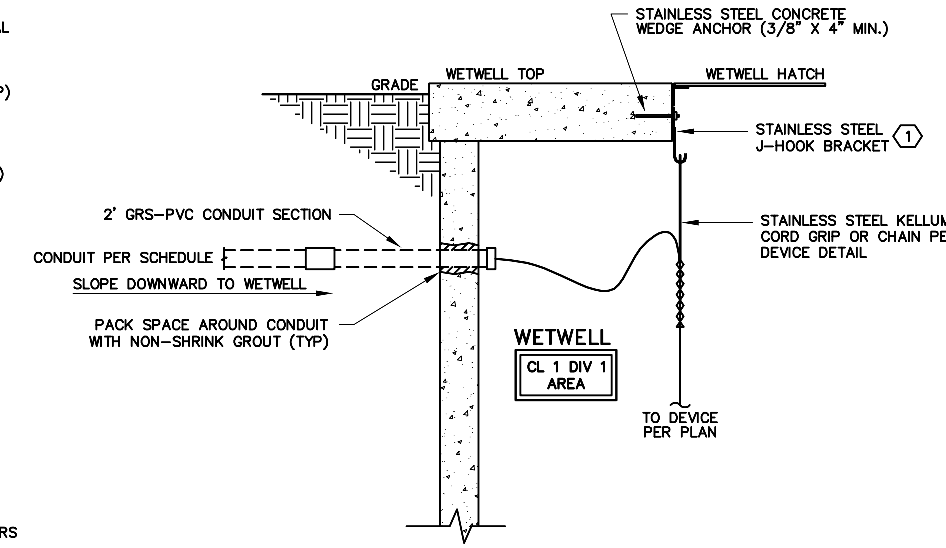
NOTES:
1. 14"H X 16"W X 8"D, NEMA 4X STAINLESS STEEL JUNCTION BOX. JUNCTION BOX SHALL BE HOFFMAN CHNFSS OR EQUAL. PROVIDE BACKPAN AND PADLOCK HASP. MOUNT BOX ON STAINLESS STEEL UNISTRUT SUPPORT. USE ALL STAINLESS STEEL HARDWARE.
2. FILL EYS WITH "CHICO" TO PEDESTAL ONLY. OTHERS SHALL BE FILLED WITH "DUCT SEAL". CONDUIT BEHIND EYS SHALL BE GRS-PVC FOR 2 FT. (MIN) WITH GRS-PVC FACTORY SWEEPS.
3. 2' X 3' X 6" CONCRETE PAD WITH CHAMFERED CORNERS.



STP SUMP TERMINATION PANEL

– NEMA 4X, 316SS, NOT TO SCALE

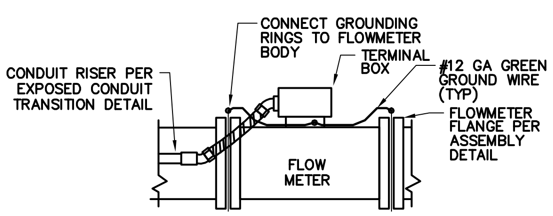
NOTES:
1. FILL EYS WITH "CHICO" OR EQUAL CONDUIT SEALING COMPOUND AFTER INSPECTION AND TESTING IS COMPLETED.
2. PANEL SHALL BE MOUNTED, SEALED, ETC. SIMILAR TO EQUIPMENT CONCRETE PAD DETAIL
3. EACH PANEL SIZE FOR PUMP STATION A SHALL BE: X=30", Y=42" WITH A DEPTH OF 10"
   EACH PANEL SIZE FOR PUMP STATION B SHALL BE: X=36", Y=60" WITH A DEPTH OF 16"
4. SEAL CONDUITS WITH DUCT SEAL



WWE WETWELL ENTRY DETAIL

– NOT TO SCALE

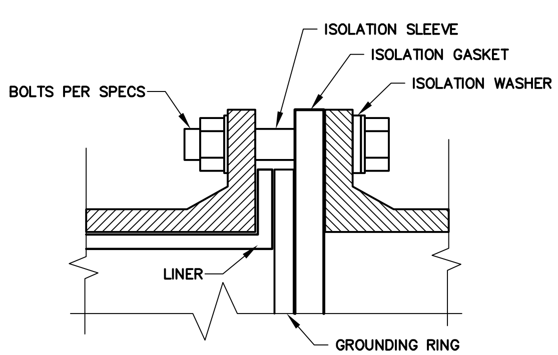
NOTES:
1. CUSTOM MANUFACTURERED J-HOOK ASSEMBLY CONSISTING OF STAINLESS STEEL PLATE WITH STAINLESS STEEL J-HOOKS WELDED TO PLATE. PROVIDE ONE HOOK PER WETWELL CABLE.



SIDE VIEW

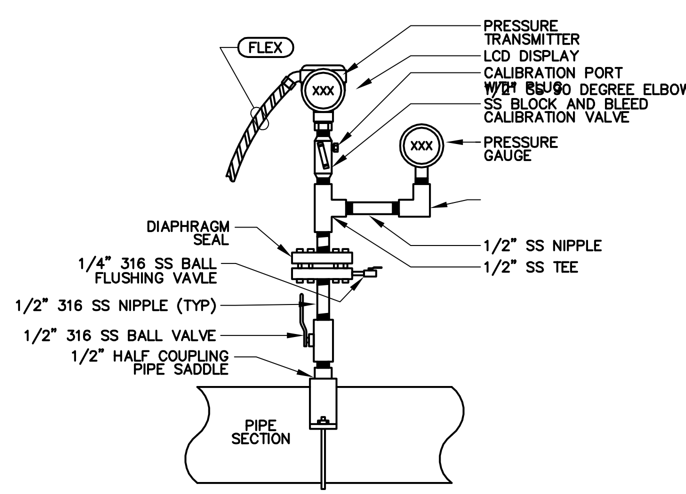
FM FLOWMETER DETAIL

– NOT TO SCALE



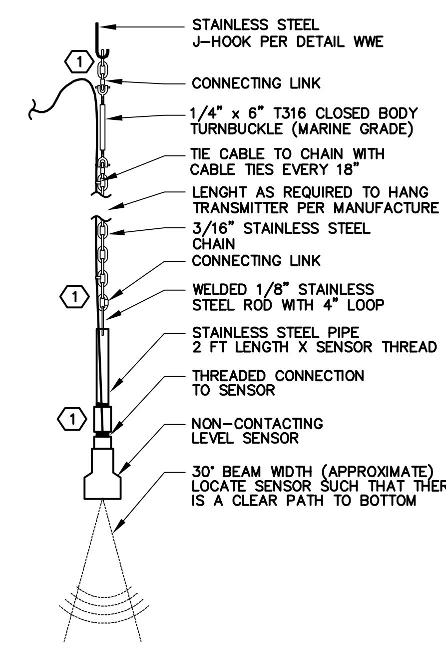
FLG FLOWMETER FLANGE ASSEMBLY

– NOT TO SCALE



PT PRESSURE TRANSMITTER DETAIL

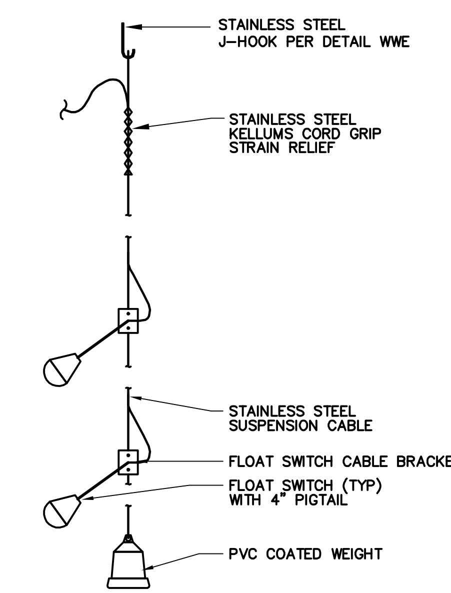
– NOT TO SCALE



ULT ULTRASONIC TRANSMITTER DETAIL

– NOT TO SCALE

NOTES:
1. ALL HARDWARE TO BE 316 STAINLESS STEEL



FLTS FLOAT SWITCH DETAIL

– NOT TO SCALE

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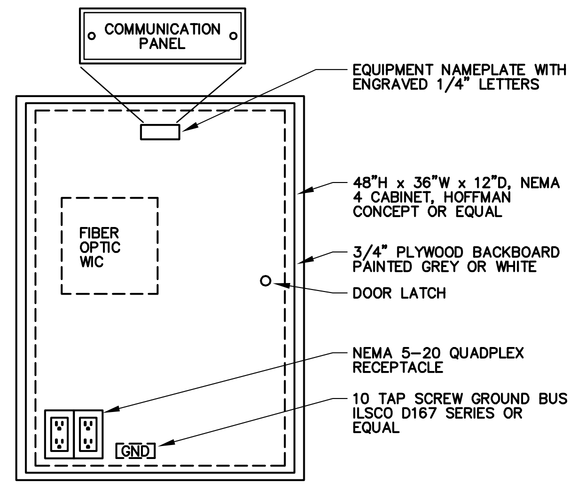
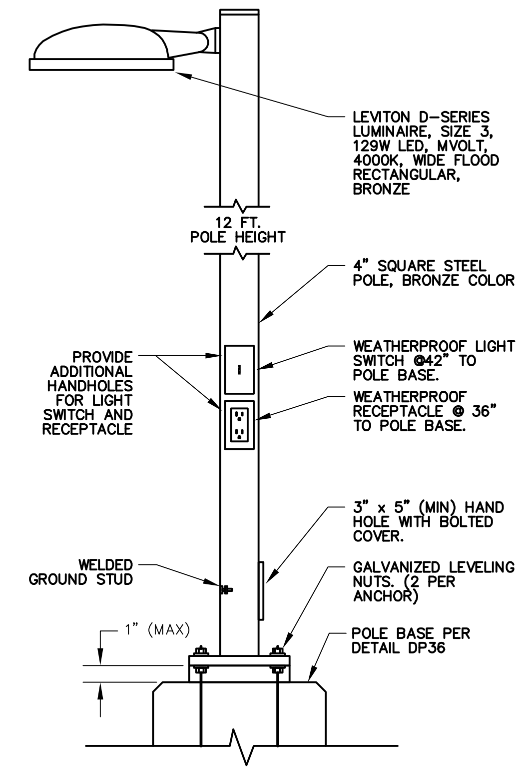
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
DETAILS 2

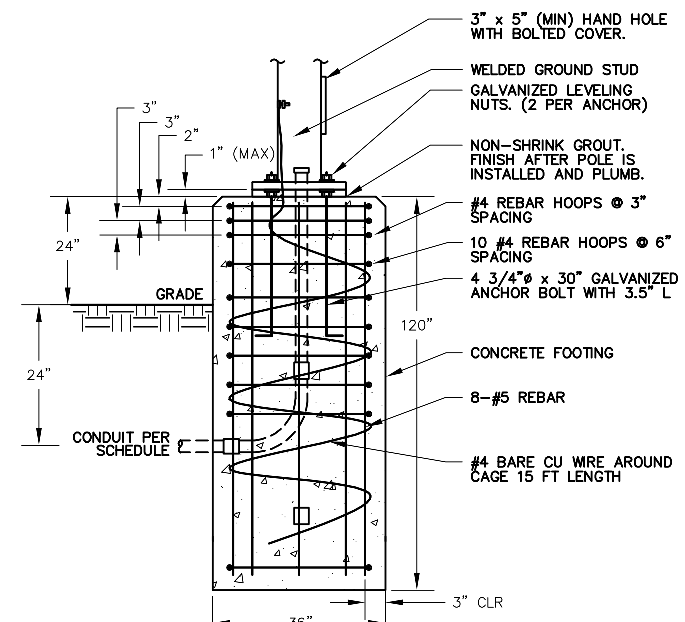
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 00-E-03
SHEET NUMBER -



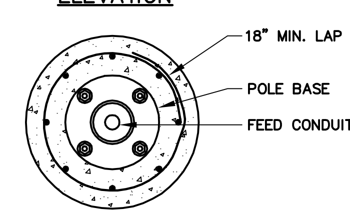
CP / – **COMMUNICATION PANEL**
NOT TO SCALE



AL / – **AREA LIGHT DETAIL**
NOT TO SCALE



ELEVATION



TOP VIEW

DP36 / – **POLE DRILLED PIER DETAIL 36**
NOT TO SCALE

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DATE: Feb 10, 2020 TIME: 4:28:58pm

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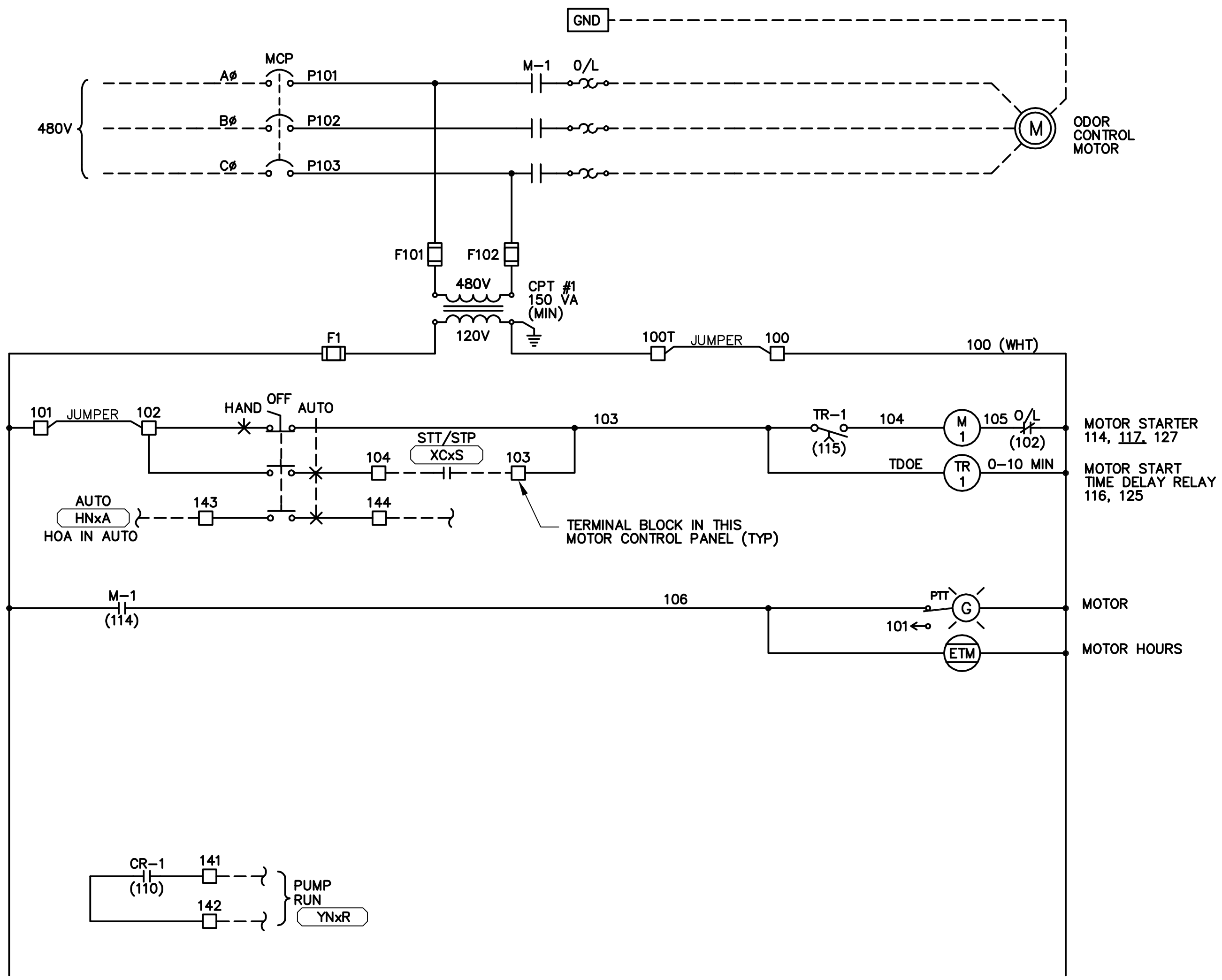
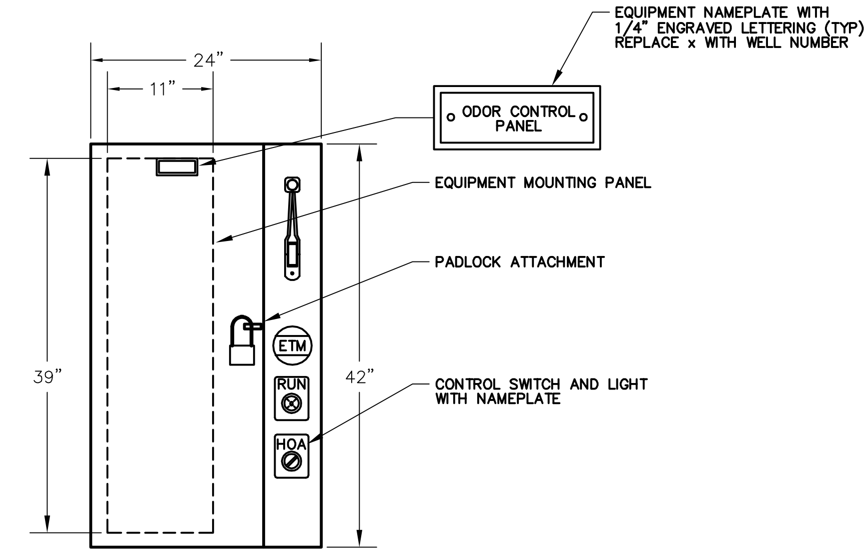
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
DETAILS 3

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 00-E-04
SHEET NUMBER -



ODOR CONTROL STARTER WIRING DIAGRAM



ODOR CONTROL
STARTER PANEL ELEVATION

NOTE: DIMENSIONS ARE MINIMUMS REQUIRED.
SIZE PANEL AS REQUIRED (OVERSIZE)
NEMA 3R, GRAY PAINTED STEEL, 14GA (MIN)
CUTLER HAMMER, SQUARE D, OR EQUAL.

ODOR CONTROL STARTER PANEL

REGISTERED PROFESSIONAL ENGINEER
THOMAS P. FRISCH
No. E15761
ELECTRICAL
STATE OF CALIFORNIA

XXX

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

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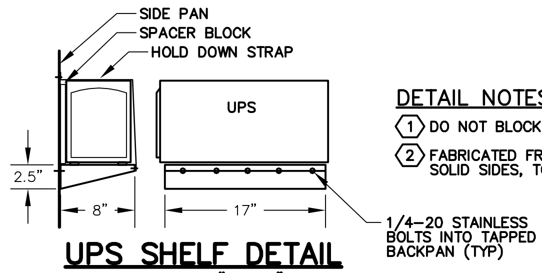
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE
PIPELINES

ELECTRICAL
ODOR CONTROL STARTER PANEL

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	00-E-05
SHEET NUMBER	-



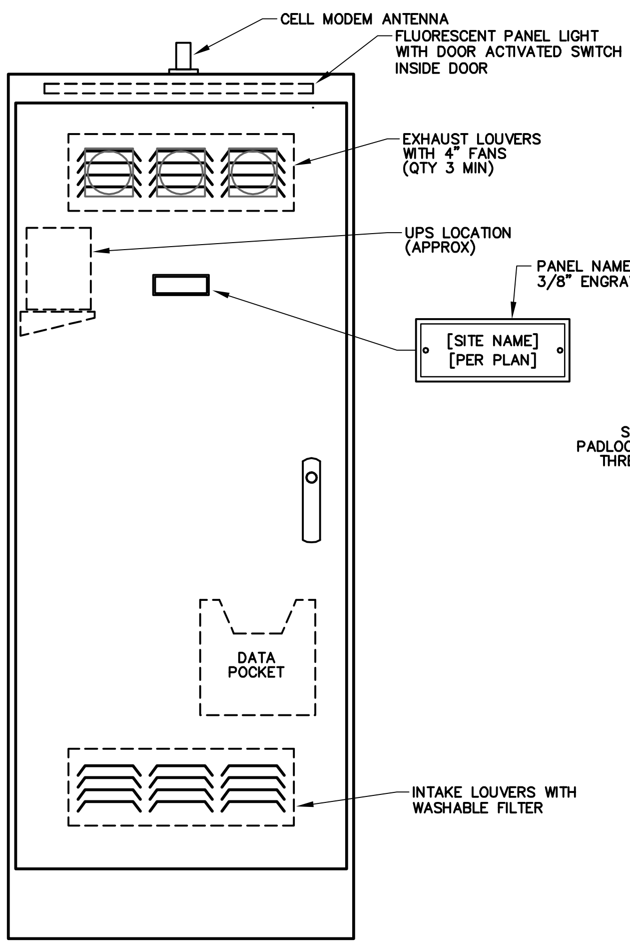
UPS SHELF DETAIL

SCALE: 1" = 10"

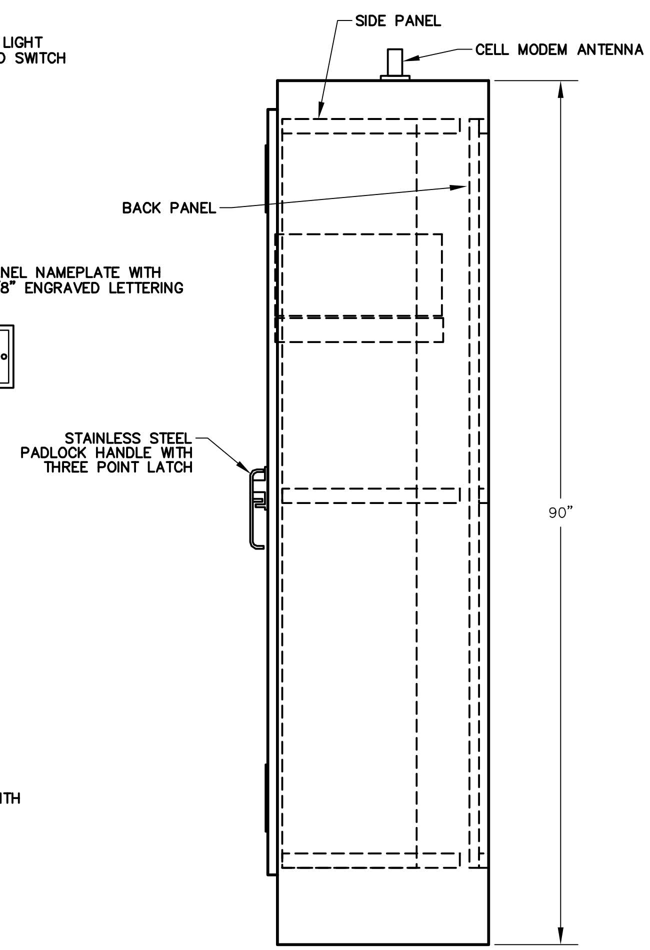
DETAIL NOTES:

(1) DO NOT BLOCK VENTS WITH SPACER BLOCK. USE TWO.

(2) FABRICATED FROM 14 GA (MIN) PAINTED GALVANEAL OR STAINLESS STEEL SOLID SIDES, TOP, BACK AND FRONT WITH CONTINUOUS WELDED SEAMS.



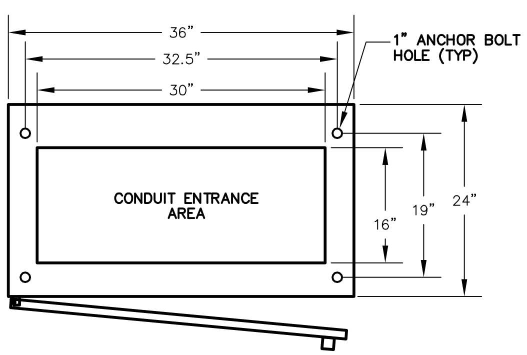
FRONT ELEVATION



SIDE ELEVATION

ELEVATION

SCALE: 1" = 10"



BASE PLAN

PANEL FABRICATION METHODS

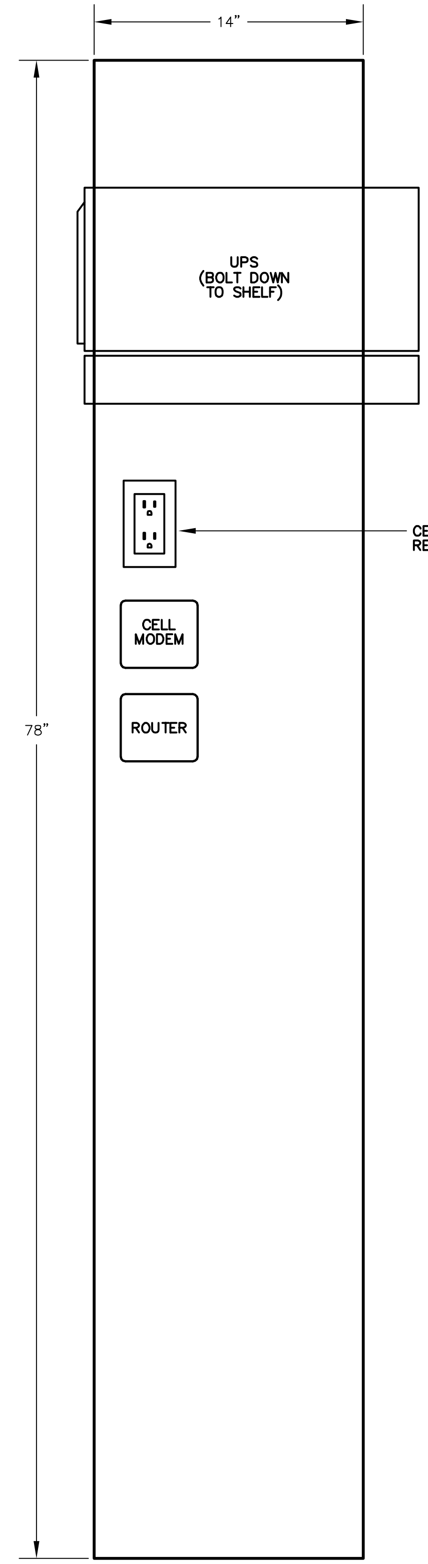
1. FREESTANDING, OPEN BOTTOM.
2. OUTER DOOR SEALED WITH RUBBERIZED FOAM GASKET.
3. PANEL SHALL BE FABRICATED FROM PAINT BOND GALVANEAL SHEET STEEL.
4. 12 GAUGE EXTERIOR AND 14 GAUGE INTERIOR.
5. ALL SEAMS SHALL HAVE CONTINUOUS WELD GROUND SMOOTH.
6. DOOR TO BE PADLOCKABLE WITH HEAVY DUTY 3 POINT LATCH.
7. DOOR HINGES AND PINS SHALL BE CONTINUOUS, HEAVY DUTY.
8. NO SCREWS, RIVETS, OR BOLTS SHALL PROTRUDE EXTERNALLY.
9. INTERNAL SCREWS, RIVETS, BOLTS, AND NUTS SHALL BE MACHINE THREAD INTO TAPPED BACKPAN.
10. EXTERIOR PANEL COLOR: ANSI 61 GRAY.
11. MOUNTING PAN AND INTERIOR DOOR COLOR: WHITE.
12. FABRICATION AND WIRING SHALL CONFORM TO U.L. AND NEMA STANDARDS.
13. ALL WIRING SHALL BE PERMANENTLY LABELED WITH WIRE MARKERS ON BOTH ENDS.
14. WIRING DIAGRAMS SHALL BE PLACED IN A PLASTIC DRAWING HOLDER PERMANENTLY ATTACHED TO THE INSIDE OF THE FRONT DOOR.
15. AS – BUILT WIRING DIAGRAMS SHALL BE SHIPPED WITH EQUIPMENT.
16. HOFFMAN TYPE 12 FREE-STANDING, OR EQUAL.

GENERAL NOTES:

1. REPRESENTATIVE OF MAJOR COMPONENTS ONLY. ACTUAL BACKPAN LAYOUT SHALL BE SIMILAR TO LAYOUT SHOWN. SUBMIT SCALED BACKPAN LAYOUT FOR REVIEW BY ENGINEER.
2. QUANTITY OF TERMINAL BLOCKS AND RELAYS SHALL BE AS DETERMINED BY P&IDS AND EXAMPLE I/O WIRING DIAGRAM

LAYOUT REFERENCED NOTES:

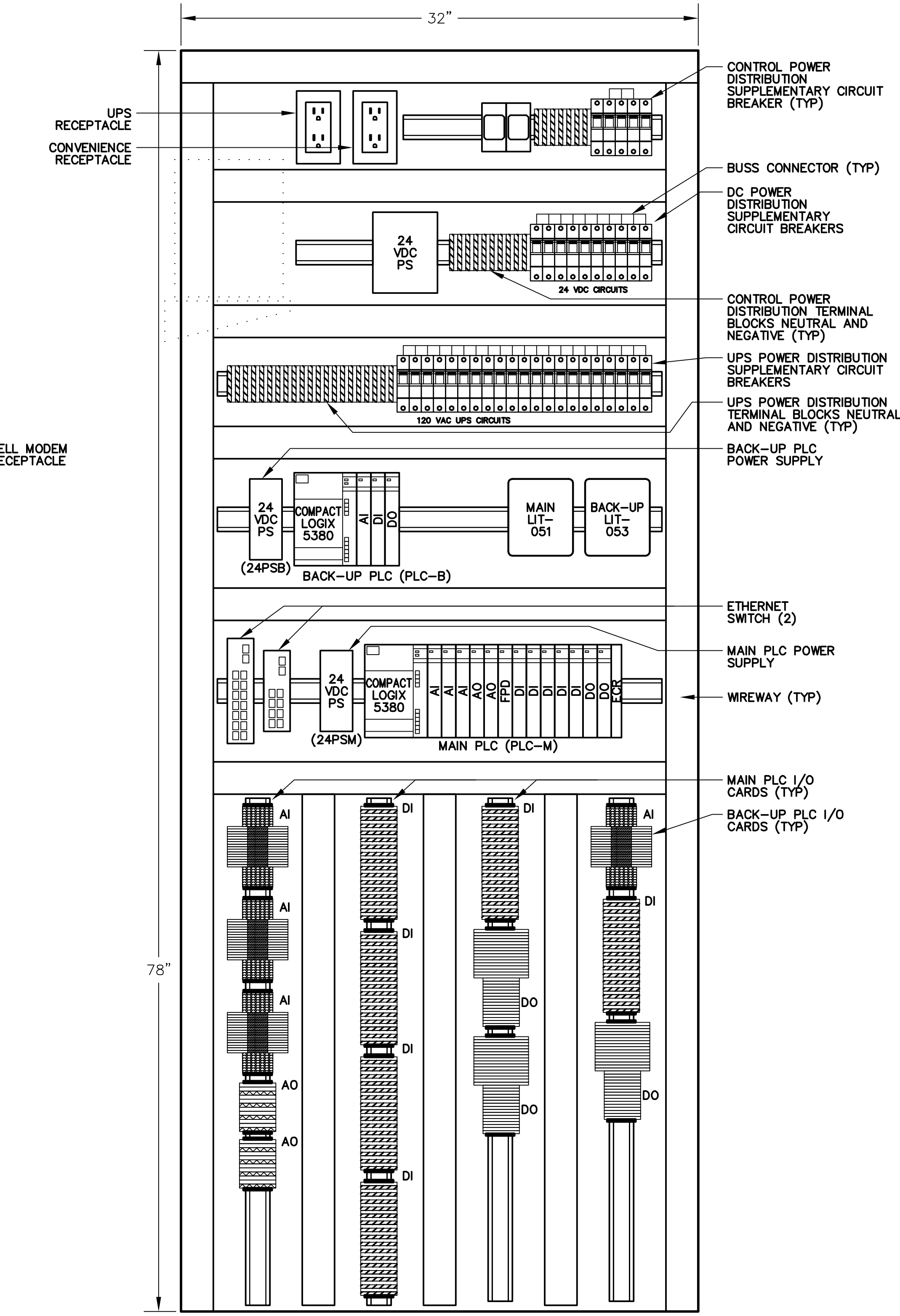
(1) WIRE I/O TO TERMINAL BLOCK PER EXAMPLE I/O WIRING DIAGRAMS.



LEFT

SIDEPAN LAYOUT

SCALE: 1" = 5"



CENTER (1)

BACKPAN LAYOUT

SCALE: 1" = 5"

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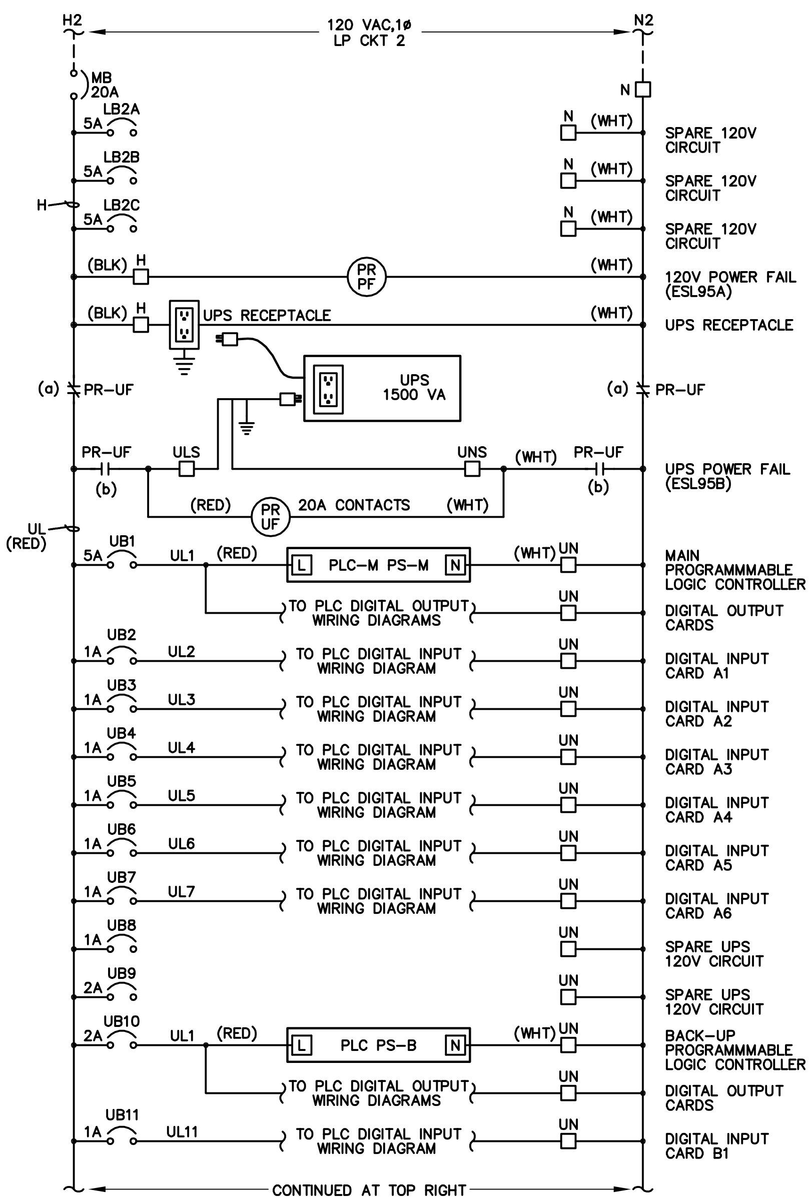
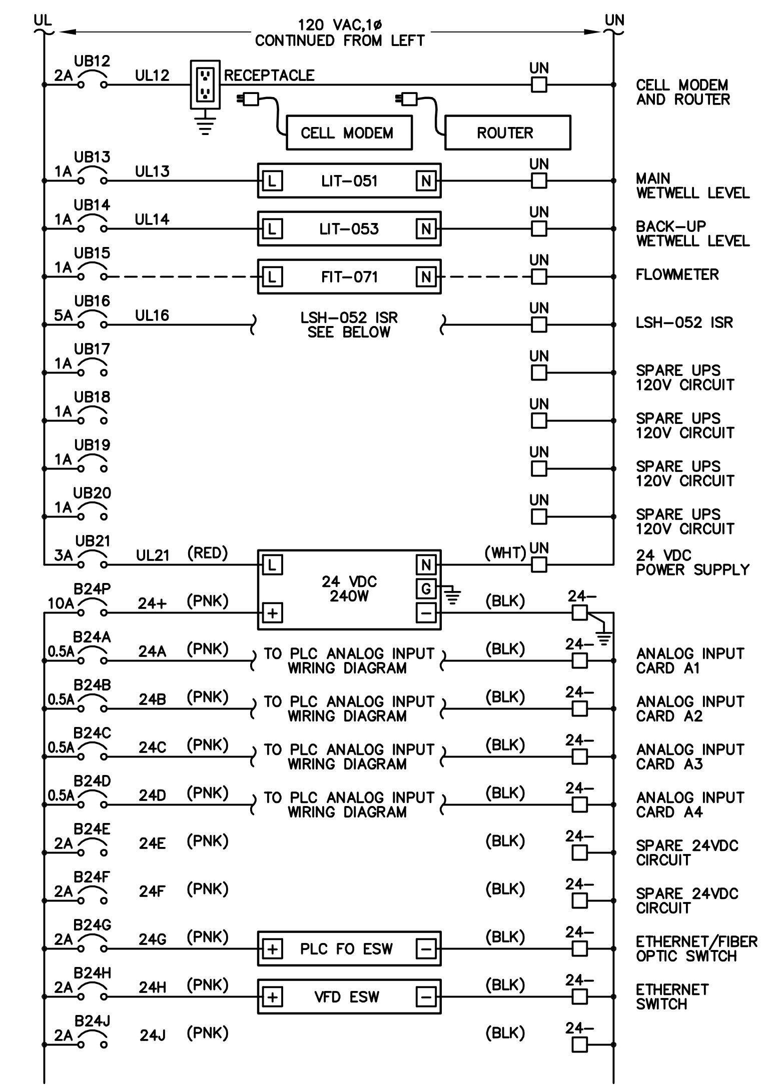
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
CONTROL PANEL ELEVATION AND BACKPAN LAYOUT

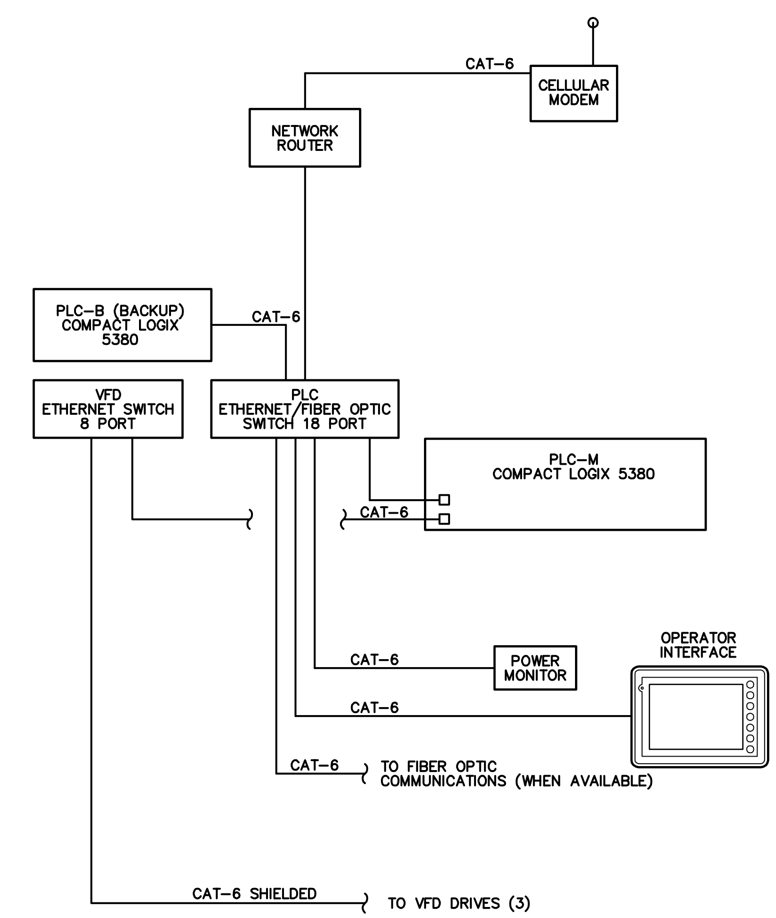
DATE: FEBRUARY 2020
PROJECT NUMBER: 17-082
DRAWING NUMBER: 00-E-06
SHEET NUMBER: -



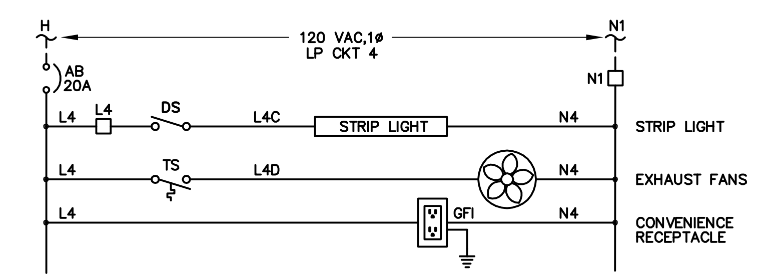
POWER DISTRIBUTION DIAGRAM



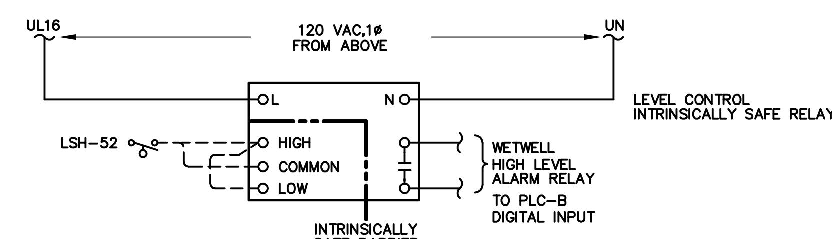
POWER DISTRIBUTION DIAGRAM – CONTINUED



COMMUNICATION BLOCK DIAGRAM



AUXILLIARY POWER DIAGRAM



ISR DIAGRAM

REGISTERED PROFESSIONAL ENGINEER
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No. E15761
ELECTRICAL
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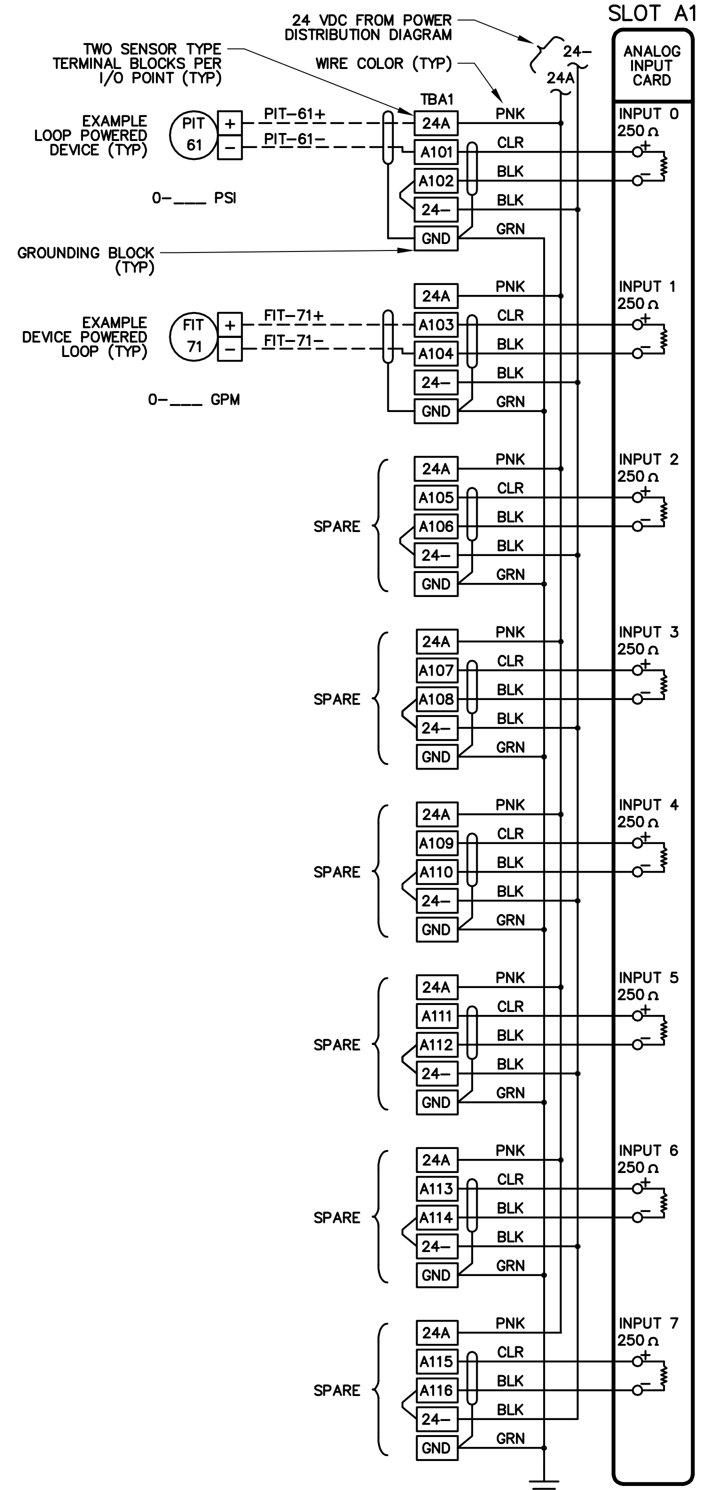
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

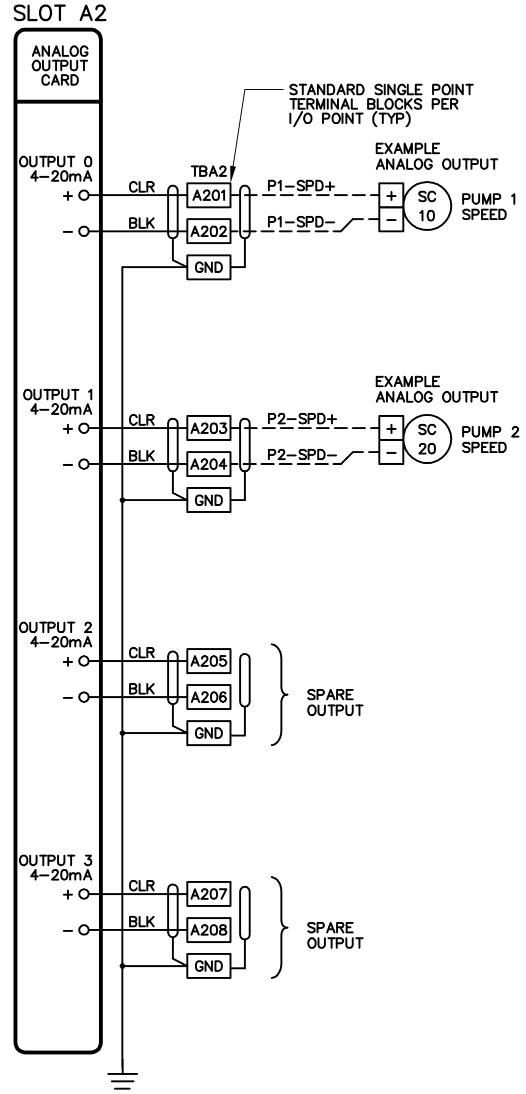
ELECTRICAL
CONTROL PANEL
POWER DISTRIBUTION DIAGRAM

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 00-E-07
SHEET NUMBER -



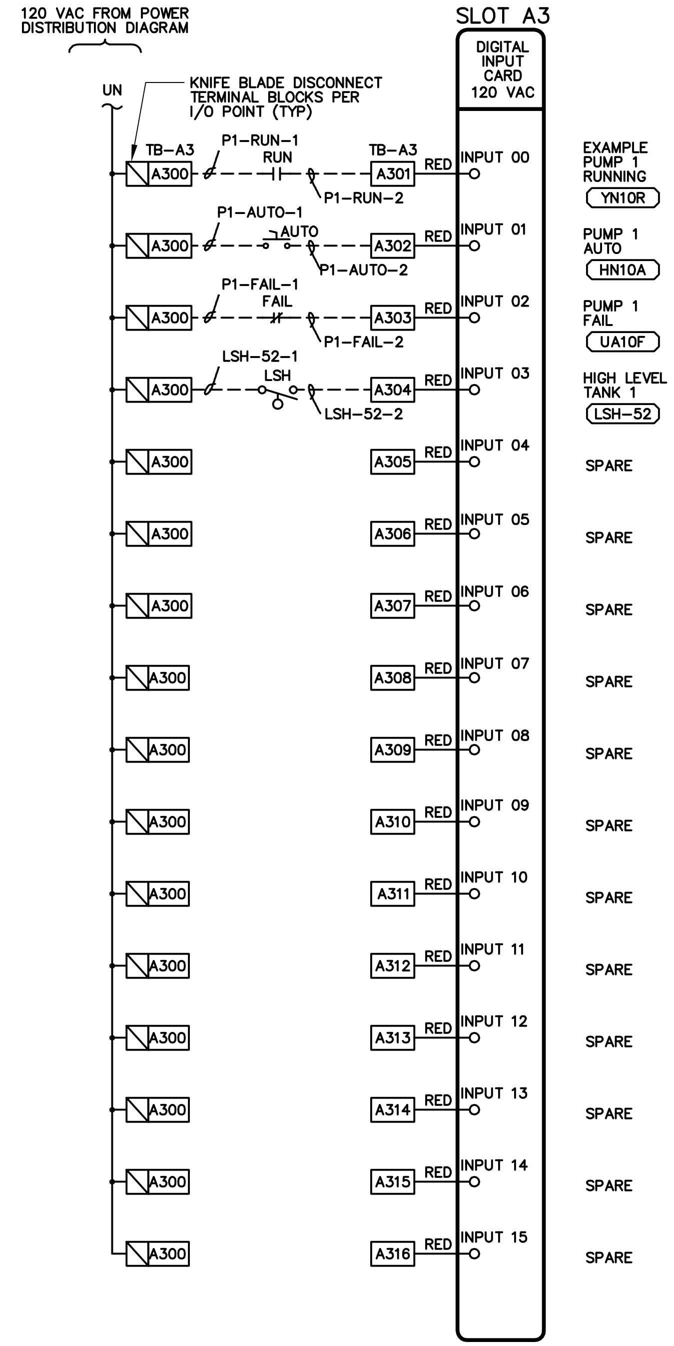
AI CARD

NOTES: 1. TWO CARDS PER DRAWING MAXIMUM.
2. USE MANUFACTURED TERMINAL BLOCK JUMPERS WHERE POSSIBLE



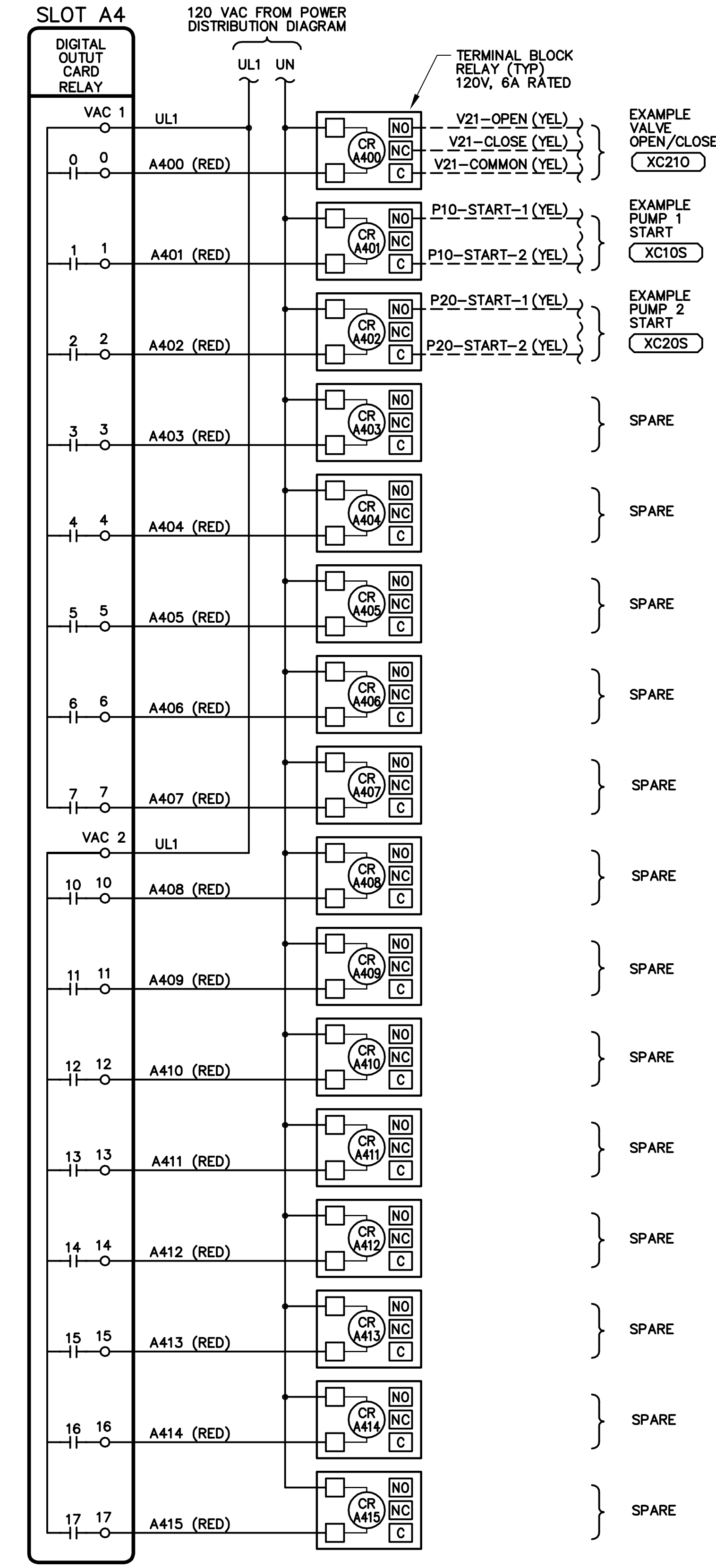
AO CARD

NOTES: 1. TWO CARDS PER DRAWING MAXIMUM.



DI CARD

NOTES: 1. TWO CARDS PER DRAWING MAXIMUM.



DO CARD

NOTES: 1. TWO CARDS PER DRAWING MAXIMUM.

EXAMPLE PLC I/O WIRING DIAGRAMS

NOTES:
1. WIRE SPARE PLC I/O POINTS TO TERMINAL BLOCKS.
2. EXAMPLE I/O POINTS SHOWN. THIS DRAWING INTENDED TO SHOW I/O WIRING ONLY.
3. I/O TYPE AND NUMBER OF POINTS AND CARDS REQUIRED IS DETERMINED BY P&ID DRAWINGS.
4. MINIMUM 20% SPARE I/O POINTS PER I/O TYPE.
5. INTERNAL PANEL PLC I/O CARD WIRE NUMBERS SHALL BE BUILT AS SHOWN IN EXAMPLE BELOW.
   A101 — RACK LETTER, SLOT NUMBER, INPUT NUMBER
6. FIELD WIRES SHALL BE LABELED WITH ACRONYM OF CONTROL PANEL ID (NOT SHOWN) AND DEVICE: SEE EXAMPLES.

REGISTERED PROFESSIONAL ENGINEER — THOMAS P. FRISCH — No. E15761 — ELECTRICAL — STATE OF CALIFORNIA

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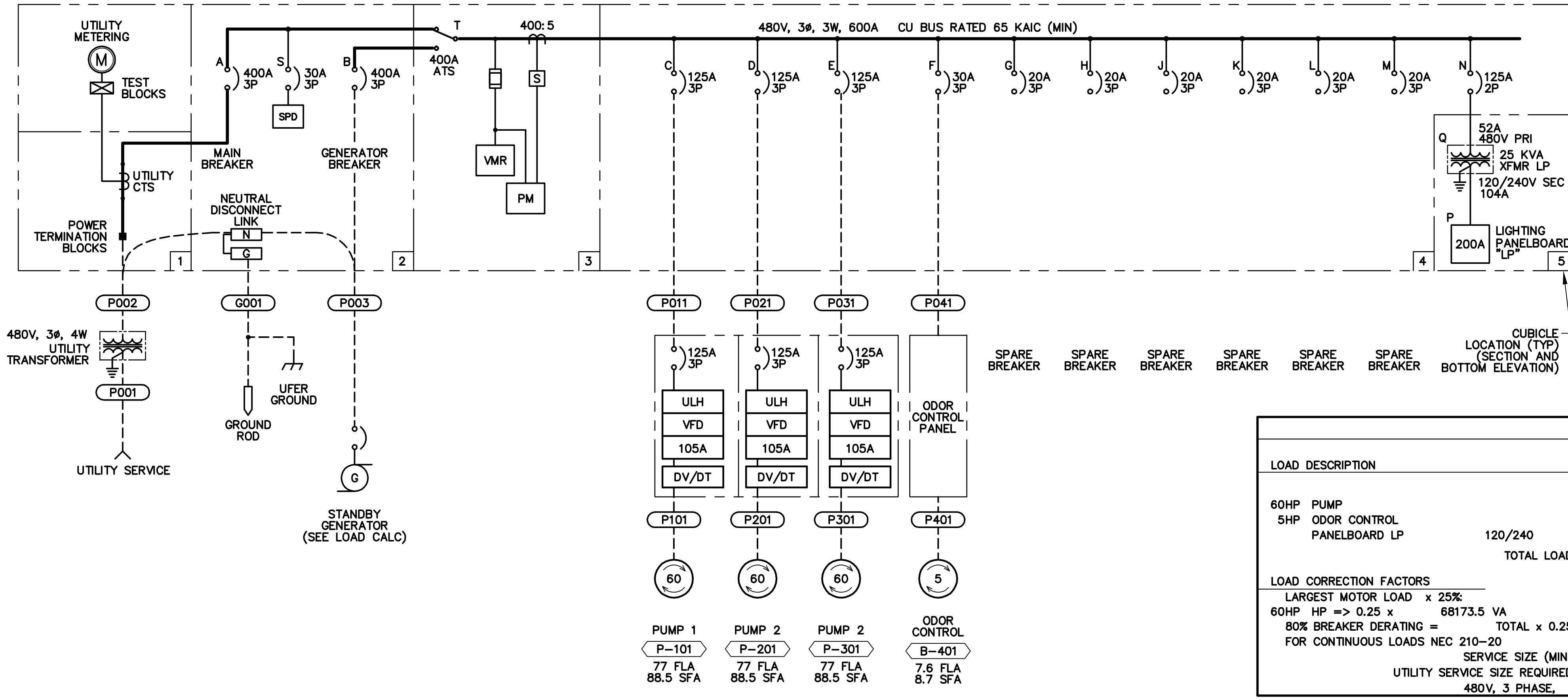
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
CONTROL PANEL
POWER DISTRIBUTION DIAGRAM

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 00-E-08
SHEET NUMBER -



ONE-LINE DIAGRAM

GENERAL NOTES:

1. REAR ACCESS SHALL NOT BE REQUIRED TO SERVICE OR REPLACE SWITCHBOARD COMPONENTS.
2. EACH BREAKER SHALL HAVE A PADLOCKABLE HASP TO LOCK BREAKER IN THE OFF POSITION.
3. ALL DIMENSIONS ARE APPROXIMATE. ACTUAL DIMENSIONS SHALL BE PER MANUFACTURER APPROVED IN SUBMITTAL.
4. FURNISH AND APPLY ENGRAVED WHITE LETTERING ON BLACK PLASTIC NAMEPLATES FOR DEVICES AND BREAKERS WHERE NOTED, AT MINIMUM, WITH A LETTERED BOX. TEXT HEIGHT SHALL BE 1/4 INCH MINIMUM. REFRENCE ONE-LINE DIAGRAM FOR LABEL.
5. FURNISH CODE REQURIED WARNING LABELS AND EQUIPMENT RATINGS LABELS.

NOTES:

ADD THE PREFIX 10 TO COMPLETE CONDUIT, INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET.

NOTES REFERENCED IN DRAWING:

(1) MOUNT PFR AND POWER MONITOR BEHIND THIS DOOR ACCESS TO DEVICES SHALL BE BEHIND DOOR.

LOAD CALCULATIONS

LOAD DESCRIPTION		CONNECTED LOAD – LOAD	QTY	TOTAL	DEMAND LOAD – LOAD	QTY	TOTAL	GENERATOR LOAD – LOAD	QTY	TOTAL
60HP PUMP		82.00 A	3	204520.6 VA	82.00 A	2	136347.0 VA	82.00 A	3	204520.6 VA
5HP ODOR CONTROL		7.60 A	1	6318.5 VA	7.60 A	1	6318.5 VA	7.60 A	1	6318.5 VA
PANELBOARD LP	120/240	21.17 A	1	17599.0 VA	16.93 A	1	14079.2 VA	16.93 A	1	14079.2 VA
	TOTAL LOAD =	279.58 A	<	232438.1 VA	193.35 A	<	160744.8 VA	275.35 A	<	228918.3 VA
LOAD CORRECTION FACTORS								GENERATOR SIZE		
LARGEST MOTOR LOAD x 25%:								NAMEPLATE = 250 KW 312.5 KVA		
60HP HP => 0.25 x 68173.5 VA	=	20.50 A		17043.4 VA	20.50 A		17043.4 VA	@ TEMP OF 100 deg F		
80% BREAKER DERATING =	TOTAL x 0.25 =	75.02 A		62370.4 VA	53.46 A		44447.0 VA	ELEVATION OF 200 FT ASL		
FOR CONTINUOUS LOADS NEC 210-20								DERATED SIZE = 244.3 KW 305.3 KVA		
	SERVICE SIZE (MIN) =	375.10 A		311851.8VA	267.31 A		222235.2VA	AMPERAGE = 367 A @ 0.8 PF		
	UTILITY SERVICE SIZE REQUIRED =	400 AMP						UTLIZATION % = 84 % @ 0.90 PF		
		480V, 3 PHASE, 4 WIRE								

PANEL "LP"

LOCATION:MSB SECTION
ENCLOSURE:NEMA 1A
AIC RATING:10 KAIC

120/ 240 VOLTS, 1 PHASE, 3 WIRE
100 AMP BUS
100 AMP MAIN BREAKER

BKR NO.	DESCRIPTION	LOAD VA	LINE	AMPS	AMPS/ POLE	BKR NO.	BKR NO.	AMPS/ POLE	LINE	AMPS	LOAD VA	DESCRIPTION	BKR NO.
1	LIGHTING ELECTRICAL ROOM	336	2.8		20/1	1	2	20/1	5.0		600	CONTROL PANEL	2
3	LIGHTING OUTDOORS	304		2.5	20/1	3	4	20/1		2.5	300	CONTROL PANEL AUXILLIARY	4
5	POLE LIGHT	600	5.0		20/1*	5	6	20/1	2.5		300	COMMUNICATION PANEL	6
7	RECEPTACLE ELECTRICAL ROOM	900		7.5	20/1	7	8	20/1		0.0	0	SPARE	8
9	RECEPTACLE ELECTRICAL ROOM	900	7.5		20/1	9	10	15/1	0.0		0	SPARE	10
11	RECEPTACLE OUTDOOR	1200		10.0	20/1	11	12	20/1		15.0	1800	GENERATOR BATTERY CHARGER	12
13	LIGHTING BATHROOM	84	0.7		20/1	13	14	20/2	10.0		1200	GENERATOR HEATER	14
15	RECEPTACLE BATHROOM	900		7.5	20/1*	15	16			10.0	1200		16
17	BATHROOM EXHAUST FAN	1200	10.0		20/1	17	18	20/1	12.5		1500	VEHICLE GATE	18
19	SPARE	0		0.0	20/1	19	20	20/1		0.0	0	SPARE	20
21	SPARE	0	0.0		20/1	21	22	30/2	17.5		2100	HVAC OUTDOOR UNIT	22
23	SPARE	0		0.0	20/1	23	24			17.5	2100		24
25	SPARE	0	0.0		20/1	25	26	15/1	0.6		75	HVAC INDOOR UNIT	26
27	SPACE	0		0.0		27	28	20/1		0.0	0	SPACE	28
29	SPACE	0	0.0			29	30		0.0		0	SPACE	30
31	SPACE	0		0.0	20/1	31	32			0.0	0	SPARE	32
33	SPACE	0	0.0			33	34		0.0		0	SPACE	34
35	SPACE	0		0.0		35	36			0.0	0	SPACE	36
37	SPACE	0	0.0			37	38		0.0		0	SPACE	38
39	SPACE	0		0.0		39	40			0.0	0	SPACE	40
41	SPACE	0	0.0			41	42		0.0		0	SPACE	42

PHASE	A	B
LEFT SIDE AMPS	26.00	27.53
LEFT SIDE KVA	3.12	3.30
TOTAL PHASE KVA	8.90	8.70
TOTAL PHASE AMPS	74	73
% OF AVERAGE	101	99

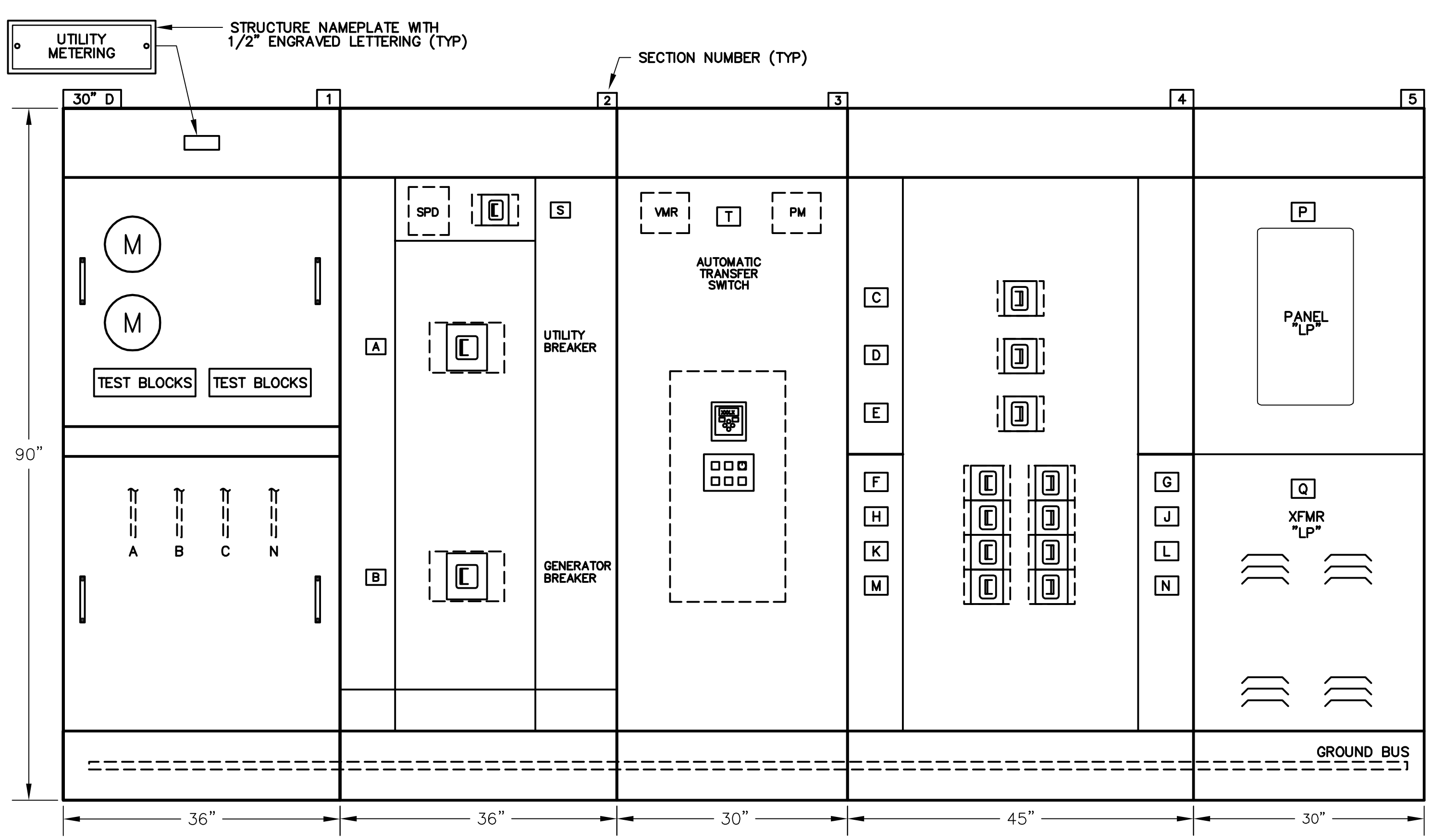
NEUTRAL

GROUND

A	B	PHASE
48.13	45.00	RIGHT SIDE AMPS
5.78	5.40	RIGHT SIDE KVA

17.60	TOTAL KVA
73.33	TOTAL AMPS @ 240V, 1P
0.80	DIVERSITY FACTOR
14.08	LOAD KVA

NOTES:
1. MEANS OF WIRE COLOR CODING SHALL BE POSTED ON PANELBOARD PER NEC 210 (4)
2. ASTERISK (*) DENOTES GFI BREAKER REQUIRED WITH 5 MA SENSITIVITY
3. TILDA (~) DENOTES GFI BREAKER REQUIRED WITH 30 MA SENSITIVITY



METER/MAIN SWITCHBOARD ELEVATION

NEMA 1, INDOOR

REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

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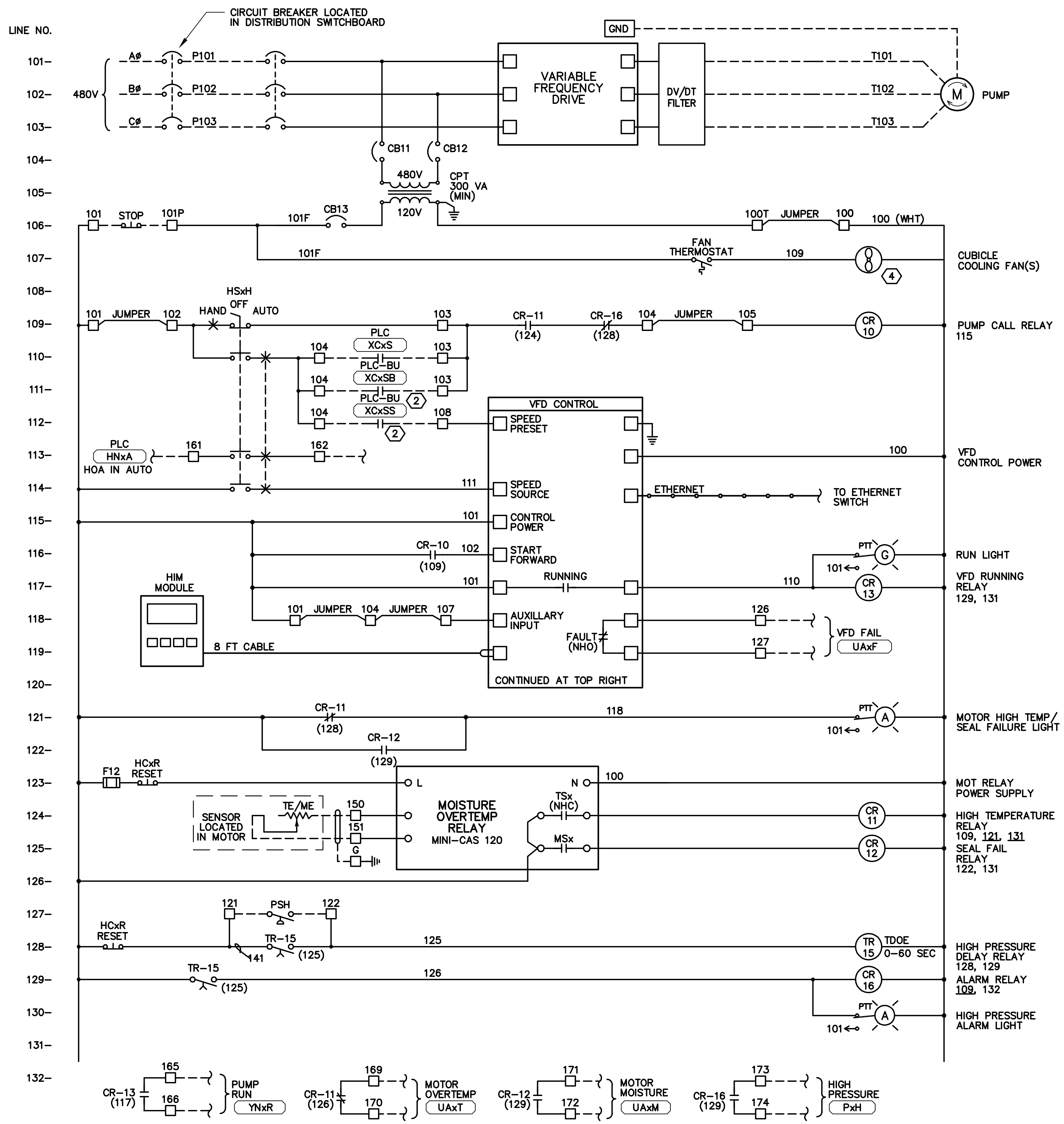
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION A
METER/MAIN ONE-LINE AND ELEVATION

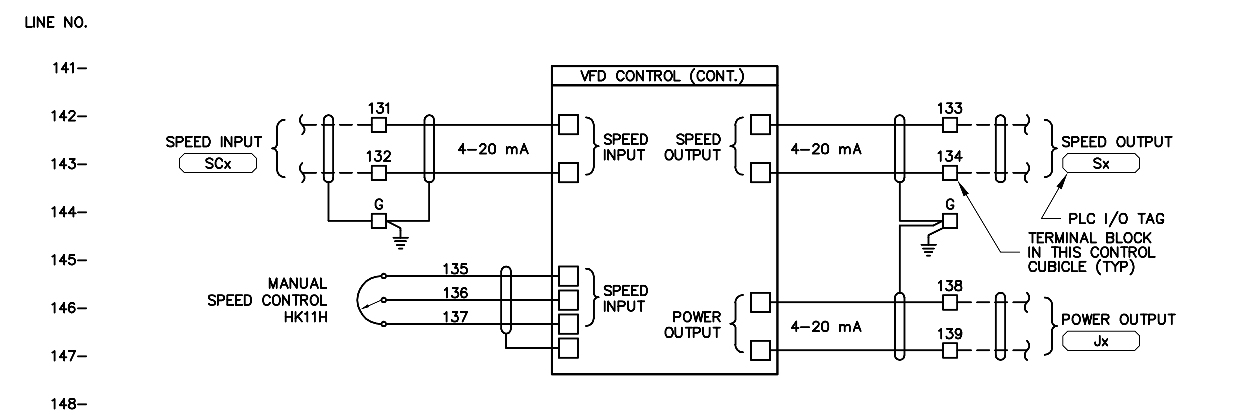
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-E-01
SHEET NUMBER -

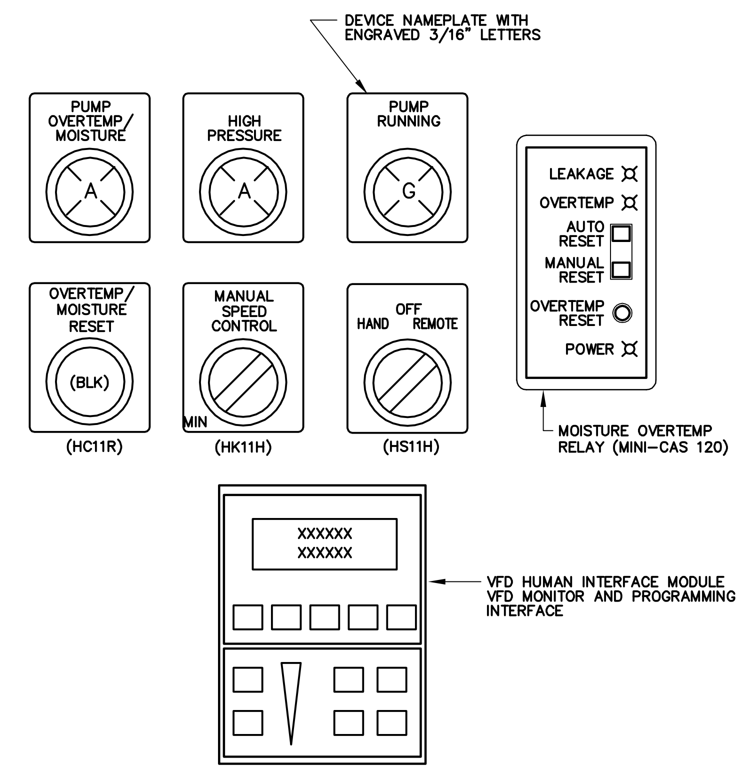


VFD ELEMENTARY DIAGRAM

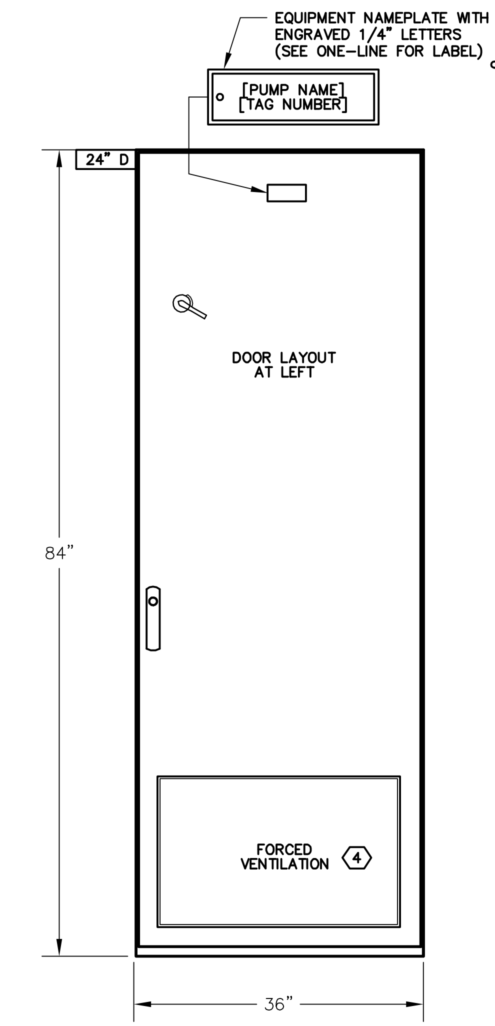
P101 P201 P301

SIMILAR DIAGRAM FOR PUMPS 10, 20, 30 – SEE NOTES





DOOR LAYOUT



CABINET BUILT VFD PANEL ELEVATION

NOT TO SCALE

NOTES REFERENCED IN DRAWING:

1. RELAY TO BE SUPPLIED BY PUMP MANUFACTURER. INSTALL AND WIRE PER MANUFACTURER'S DRAWINGS PRIOR TO FACTORY TESTING AND DELIVERY TO JOB SITE.
2. FROM BACK-UP CONTROLS. SEE CONTROL PANEL DRAWGINS DWG 00-E-06 – 00-E-08.
3. PROVIDE VFD WITH 115 VAC CONTROL CIRCUIT INTERFACE. NO EXCEPTIONS.
4. PROVIDE COOLING FANS AS REQUIRED TO REMOVE HEAT GENERATED BY INTERNAL COMPONENTS AND MAINTAIN TEMPERATURE WITHIN DRIVE MANUFACTURER RATINGS.

GENERAL NOTES:

1. SIMILAR DIAGRAM FOR PUMP NO. 1 ~ 3.
2. TERMINAL BLOCKS AND WIRES SHALL BE LABELED SAME EXCEPTION: WIRES TO PLC SHALL BE NUMBERED PER CONTROL PANEL TERMINAL BLOCK NUMBER.

REGISTERED PROFESSIONAL ENGINEER THOMAS P. FRISCH No. E15761 ELECTRICAL STATE OF CALIFORNIA

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

ELECTRICAL
VFD ELEMENTARY DIAGRAM

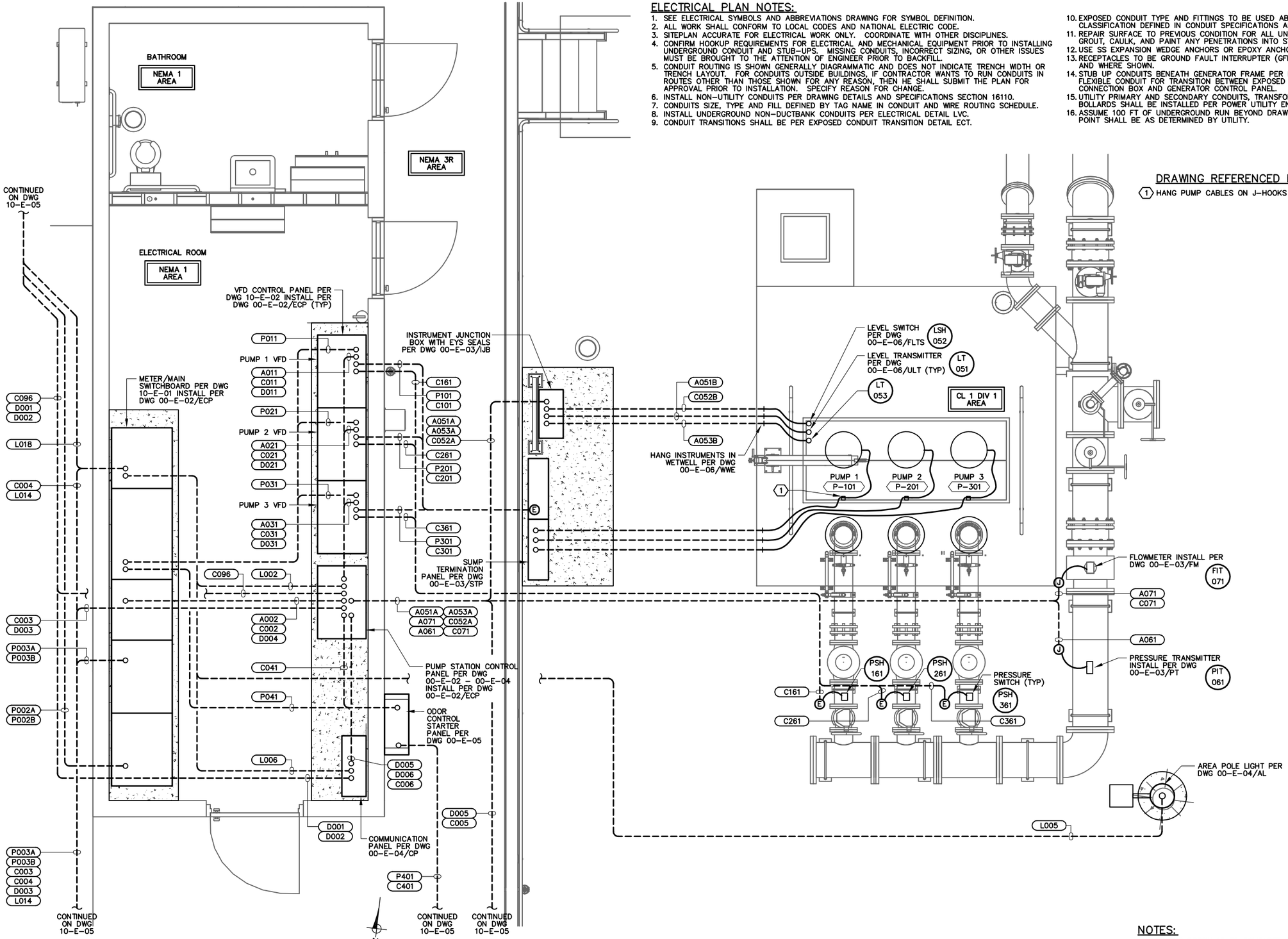
DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	10-E-02
SHEET NUMBER	-

ELECTRICAL PLAN NOTES:

1. SEE ELECTRICAL SYMBOLS AND ABBREVIATIONS DRAWING FOR SYMBOL DEFINITION.
2. ALL WORK SHALL CONFORM TO LOCAL CODES AND NATIONAL ELECTRIC CODE.
3. SITEPLAN ACCURATE FOR ELECTRICAL WORK ONLY. COORDINATE WITH OTHER DISCIPLINES.
4. CONFIRM HOOKUP REQUIREMENTS FOR ELECTRICAL AND MECHANICAL EQUIPMENT PRIOR TO INSTALLING UNDERGROUND CONDUIT AND STUB-UPS. MISSING CONDUITS, INCORRECT SIZING, OR OTHER ISSUES MUST BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO BACKFILL.
5. CONDUIT ROUTING IS SHOWN GENERALLY DIAGRAMMATIC AND DOES NOT INDICATE TRENCH WIDTH OR TRENCH LAYOUT. FOR CONDUITS OUTSIDE BUILDINGS, IF CONTRACTOR WANTS TO RUN CONDUITS IN ROUTES OTHER THAN THOSE SHOWN FOR ANY REASON, THEN HE SHALL SUBMIT THE PLAN FOR APPROVAL PRIOR TO INSTALLATION. SPECIFY REASON FOR CHANGE.
6. INSTALL NON-UTILITY CONDUITS PER DRAWING DETAILS AND SPECIFICATIONS SECTION 16110.
7. CONDUITS SIZE, TYPE AND FILL DEFINED BY TAG NAME IN CONDUIT AND WIRE ROUTING SCHEDULE.
8. INSTALL UNDERGROUND NON-DUCTBANK CONDUITS PER ELECTRICAL DETAIL LVC.
9. CONDUIT TRANSITIONS SHALL BE PER EXPOSED CONDUIT TRANSITION DETAIL ECT.
10. EXPOSED CONDUIT TYPE AND FITTINGS TO BE USED ABOVE TRANSITION SHALL BE PER AREA CLASSIFICATION DEFINED IN CONDUIT SPECIFICATIONS AND EQUIPMENT SPECIFIC DETAIL.
11. REPAIR SURFACE TO PREVIOUS CONDITION FOR ALL UNDERGROUND CONDUIT ROUTES. GROUT, CAULK, AND PAINT ANY PENETRATIONS INTO STRUCTURES FOR WATERTIGHT SEAL.
12. USE SS EXPANSION WEDGE ANCHORS OR EPOXY ANCHORS AS NECESSARY FOR EQUIPMENT MOUNTING.
13. RECEPTACLES TO BE GROUND FAULT INTERRUPTER (GFI) TYPE AND WEATHERPROOF (WP) OUTDOORS AND WHERE SHOWN.
14. STUB UP CONDUITS BENEATH GENERATOR FRAME PER MANUFACTURER RECOMMENDATIONS. USE FLEXIBLE CONDUIT FOR TRANSITION BETWEEN EXPOSED CONDUIT TRANSTION AND ELECTRICAL CONNECTION BOX AND GENERATOR CONTROL PANEL.
15. UTILITY PRIMARY AND SECONDARY CONDUITS, TRANSFORMER PAD, PULL BOXES AND REMOVABLE BOLLARDS SHALL BE INSTALLED PER POWER UTILITY ENGINEERED DRAWINGS AND STANDARDS.
16. ASSUME 100 FT OF UNDERGROUND RUN BEYOND DRAWING FOR UTILITY CONNECTIONS. CONNECTION POINT SHALL BE AS DETERMINED BY UTILITY.

DRAWING REFERENCED NOTES:

1. HANG PUMP CABLES ON J-HOOKS IN WETWELL TO ALL PUMPS.



PUMP STATION A POWER AND CONTROL PLAN

SCALE: 1/2" = 1'

0 2 4 (Approximate Scale in Feet)

NOTES:

ADD THE PREFIX 10 TO COMPLETE INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET.
EXAMPLE: P-10101 FOR PUMP 1

REGISTERED PROFESSIONAL ENGINEER
THOMAS P. FRISCH
No. E15761
ELECTRICAL
STATE OF CALIFORNIA

XXX

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

FRISCH ENGINEERING, INC.
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FILE: 17-082-10-E-03.DWG
DATE: Feb 10, 2020 TIME: 4:56:00PM

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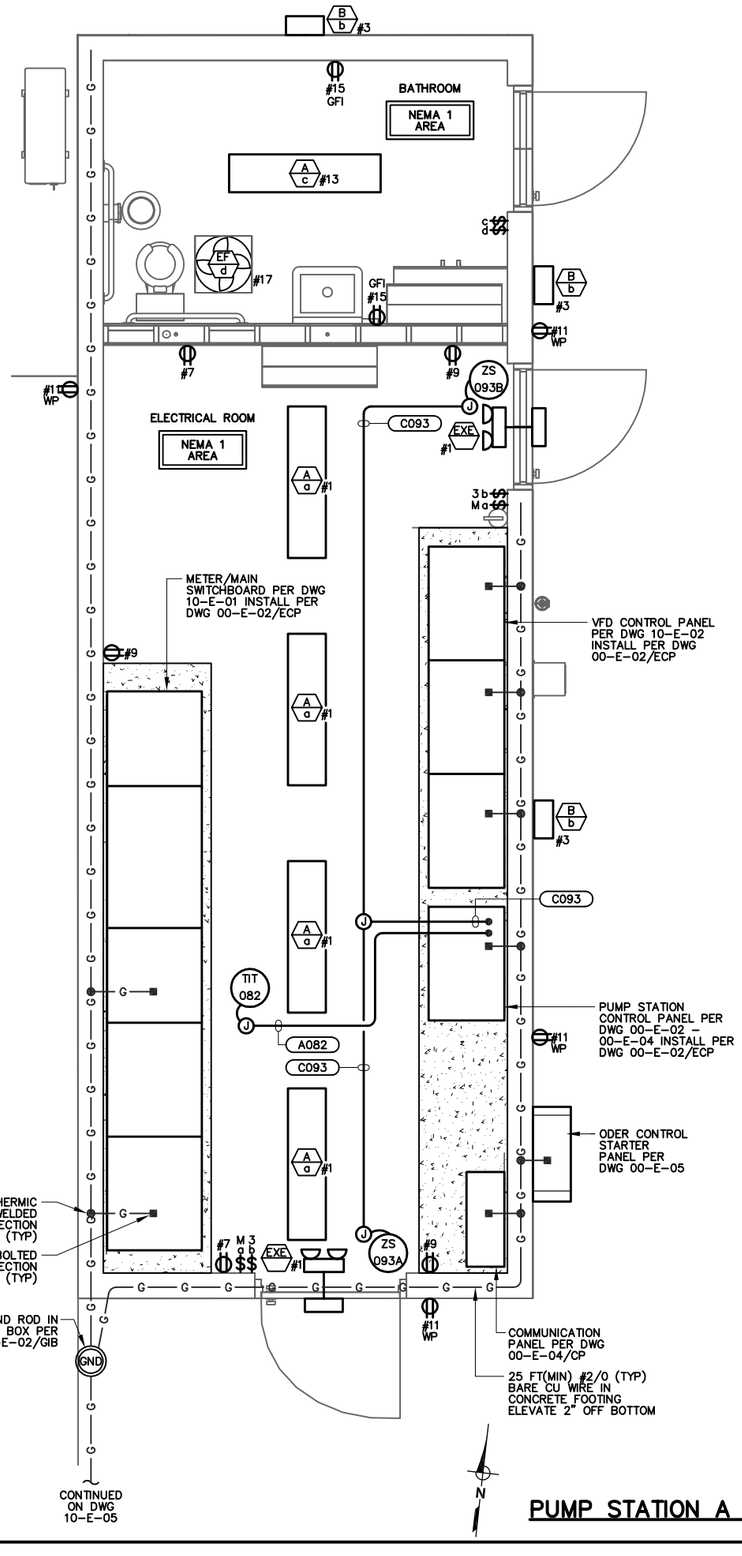
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION A
POWER AND CONTROL PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-E-03
SHEET NUMBER -



PUMP STATION A LIGHTING AND RECEPTACLE PLAN

SCALE: 1/2" = 1'

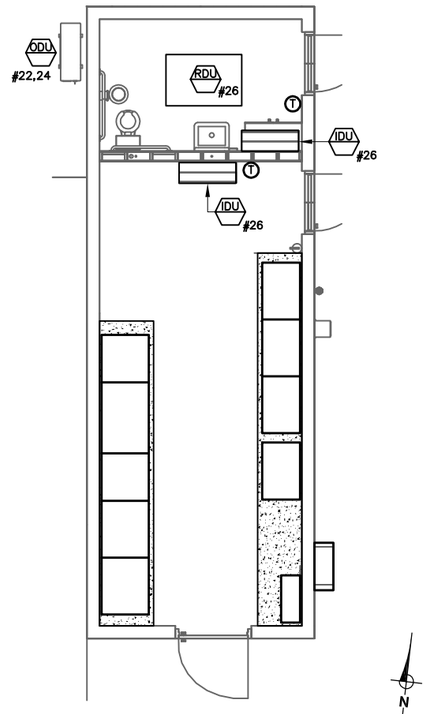
0 2 4 (Approximate Scale in Feet)

FIXTURE SCHEDULE

CODE LETTER	FIXTURE TYPE	FIXTURE LAMPS	WATTS/ FIXTURE	MANUFACTURER OR APPROVED EQUAL	MOUNTING ARRANGEMENT	NOTES
A	STRIP LUMINAIRE, 4 FT, VAPORTIGHT MOLDED POLYCARBONATE HOUSING FROSTED LENS, MEDIUM DISTRIBUTION	4000 LUMEN 3500K	120V 44W	ATLAS ILW48LED4	CEILING MOUNT FIXTURE	U.L. LISTED -20F TO 140F
B	WALL PACK LIGHT, TYPE 3 DISTRIBUTION DARK BRONZE POWDER COAT CASE ALUMINUM CASE	30C 4350LM 5000K	120V 67W 700mA	LITHONIA TWP LED	WALL MOUNT 10FT AFF	U.L. LISTED FOR WET LOCATIONS PHOTOCELL CONTROL
EXE	EXIT LIGHT PACK WITH EGRESS LAMPS AND REMOTE OUTDOOR EGRESS FIXTURE LED LAMPS WITH RED LED SIGN INTEGRAL BATTERY AND CHARGER	2 LED 3W	120V 5W	DUAL-LITE HCX-U-R-W-03L-RC12 CPRSB0603L	WALL MOUNT 9 FT AFF	WHITE INTERIOR, BROWN EXTERIOR DUAL LED LAMPS INDOORS AND OUT 12W REMOTE LIGHT CAPACITY
EF	EXHAUST FAN		120 VAC	SEE MECHANICAL		
IDU	INDOOR HVAC UNIT		120 VAC	SEE MECHANICAL		
ODU	OUTDOOR HVAC UNIT		240 VAC	SEE MECHANICAL		
RDU	REFRIDGERANT DISTRIBUITON UNIT		120 VAC	SEE MECHANICAL		

GENERAL NOTES THAT APPLY TO LIGHTING AND RECEPTACLE PLAN.

1. THESE NOTES SHALL APPLY TO ALL EQUIPMENT OR FIXTURES WITH ELECTRICAL CONNECTIONS BUT WITHOUT CONDUITS SHOWN, CONDUIT NUMBERS, OR NOT LISTED IN SCHEDULE.
2. PROVIDE AND INSTALL NECESSARY WIRES IN SURFACE MOUNT 3/4" (MINIMUM) CONDUIT FOR FOR ELECTRICAL FIXTURE ARRANGEMENT AS SHOWN. MAXIMUM 3 CIRCUITS PER CONDUIT SECTION OVER 24" IN LENGTH. CONDUITS SHALL NOT EXCEED 40% FILL.
3. CONDUITS UNDER SLAB SHALL BE PVC-40 WITH STUB-OUTS PER EXPOSED CONDUIT TRANSITION DETAIL.
4. CONDUITS ABOVE CEILING SHALL BE EMT WITH COMPRESSION STYLE FITTINGS. CONDUITS BELOW CEILING SHALL BE GRS. ACCESS TO ATTIC AREA SHALL NOT BE REQUIRED TO INSTALL CONDUCTORS.
5. DEVICE BOXES AND CONDUIT BODIES SHALL BE CAST IRON OR ALUMINUM WITH THREADED HUB.
6. CONDUCTORS SHALL BE COPPER TYPE THHN, CLASS C STRANDING, #12 AWG (MINIMUM).
7. MOUNT CONDUITS USING SINGLE BOLT GALVANIZED PIPE STRAPS AND CLAMP BACK SPACERS.
8. USE SS EXPANSION WEDGE ANCHORS OR EPOXY ANCHORS AS NECESSARY FOR EQUIPMENT MOUNTING.
9. EXPOSED CONDUIT SHALL BE PAINTED WITH WALL AND/OR CEILING AS SPECIFIED.
10. PROVIDE AND INSTALL FIXTURES PER SCHEDULE THIS PAGE, QUANTITY AS SHOWN IN DRAWINGS.
11. PROVIDE AND INSTALL ALL DEVICE BOXES, JUNCTION BOXES, RECEPTACLES, SWITCHES, AND COVERS MOUNT ALL RECEPTACLES AT 48" AFF UNLESS OTHERWISE NOTED.
12. RECEPTACLES TO BE GROUND FAULT INTERRUPTER (GFI) TYPE AND WEATHERPROOF (WP) WHERE SHOWN.
13. SEE ELECTRICAL SYMBOLS AND ABBREVIATIONS DRAWING FOR SYMBOL DEFINITION.
14. ALL WORK SHALL CONFORM TO LOCAL CODES AND NATIONAL ELECTRIC CODE.
15. SWITCH TYPE: T= TIME SWITCH, M= MOTION DETECTOR, 3= 3-WAY.



PUMP STATION A HVAC PLAN

SCALE: 1/4" = 1'

0 4 8 (Approximate Scale in Feet)

NOTES:

ADD THE PREFIX 10 TO COMPLETE INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET. EXAMPLE: P-10101 FOR PUMP 1

REGISTERED PROFESSIONAL ENGINEER THOMAS P. FRISCH No. E15761 ELECTRICAL STATE OF CALIFORNIA

XXX

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

FRISCH ENGINEERING, INC.
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FILE: 10-E-04.DWG
DATE: FEB 10, 2020 TIME: 4:55:43PM

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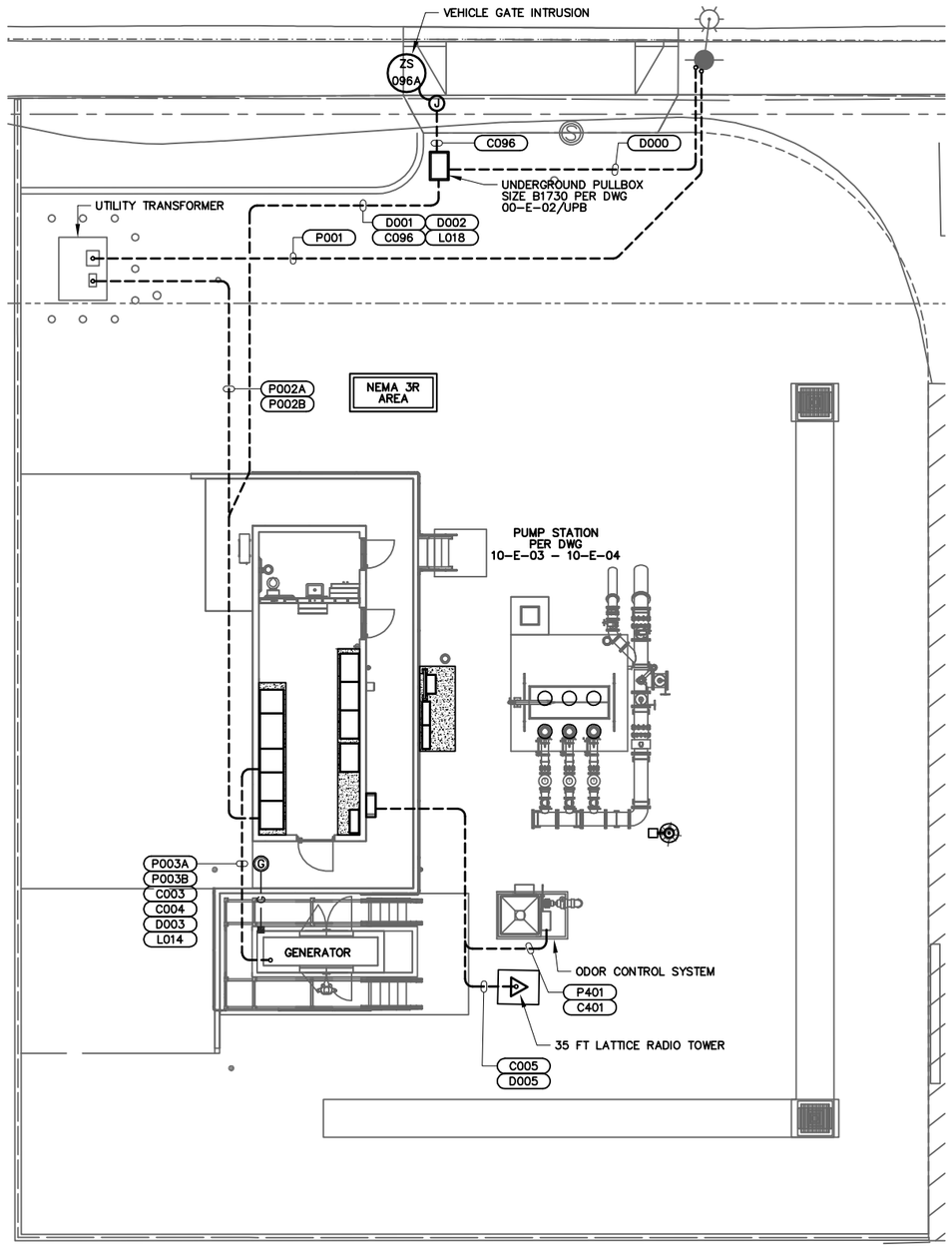
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION A
LIGHTING AND RECEPTACLE PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-E-04
SHEET NUMBER -



PUMP STATION A ELECTRICAL SITE PLAN

SCALE: 1/8" = 1'

0 8 16
(Approximate Scale In Feet)

ELECTRICAL PLAN NOTES:

1. SEE ELECTRICAL SYMBOLS AND ABBREVIATIONS DRAWING FOR SYMBOL DEFINITION.
2. ALL WORK SHALL CONFORM TO LOCAL CODES AND NATIONAL ELECTRIC CODE.
3. SITEPLAN ACCURATE FOR ELECTRICAL WORK ONLY. COORDINATE WITH OTHER DISCIPLINES.
4. CONFIRM HOOKUP REQUIREMENTS FOR ELECTRICAL AND MECHANICAL EQUIPMENT PRIOR TO INSTALLING UNDERGROUND CONDUIT AND STUB-UPS. MISSING CONDUITS, INCORRECT SIZING, OR OTHER ISSUES MUST BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO BACKFILL.
5. CONDUIT ROUTING IS SHOWN GENERALLY DIAGRAMMATIC AND DOES NOT INDICATE TRENCH WIDTH OR TRENCH LAYOUT. FOR CONDUITS OUTSIDE BUILDINGS, IF CONTRACTOR WANTS TO RUN CONDUITS IN ROUTES OTHER THAN THOSE SHOWN FOR ANY REASON, THEN HE SHALL SUBMIT THE PLAN FOR APPROVAL PRIOR TO INSTALLATION. SPECIFY REASON FOR CHANGE.
6. INSTALL NON-UTILITY CONDUITS PER DRAWING DETAILS AND SPECIFICATIONS SECTION 16110.
7. CONDUITS SIZE, TYPE AND FILL DEFINED BY TAG NAME IN CONDUIT AND WIRE ROUTING SCHEDULE.
8. INSTALL UNDERGROUND NON-DUCTBANK CONDUITS PER ELECTRICAL DETAIL LVC.
9. CONDUIT TRANSITIONS SHALL BE PER EXPOSED CONDUIT TRANSITION DETAIL ECT.
10. EXPOSED CONDUIT TYPE AND FITTINGS TO BE USED ABOVE TRANSITION SHALL BE PER AREA CLASSIFICATION DEFINED IN CONDUIT SPECIFICATIONS AND EQUIPMENT SPECIFIC DETAIL.
11. REPAIR SURFACE TO PREVIOUS CONDITION FOR ALL UNDERGROUND CONDUIT ROUTES. GROUT, CAULK, AND PAINT ANY PENETRATIONS INTO STRUCTURES FOR WATERTIGHT SEAL.
12. USE SS EXPANSION WEDGE ANCHORS OR EPOXY ANCHORS AS NECESSARY FOR EQUIPMENT MOUNTING.
13. RECEPTACLES TO BE GROUND FAULT INTERRUPTER (GFI) TYPE AND WEATHERPROOF (WP) OUTDOORS AND WHERE SHOWN.
14. STUB UP CONDUITS BENEATH GENERATOR FRAME PER MANUFACTURER RECOMMENDATIONS. USE FLEXIBLE CONDUIT FOR TRANSITION BETWEEN EXPOSED CONDUIT TRANSTION AND ELECTRICAL CONNECTION BOX AND GENERATOR CONTROL PANEL.
15. UTILITY PRIMARY AND SECONDARY CONDUITS, TRANSFORMER PAD, PULL BOXES AND REMOVABLE BOLLARDS SHALL BE INSTALLED PER POWER UTILITY ENGINEERED DRAWINGS AND STANDARDS.
16. ASSUME 100 FT OF UNDERGROUND RUN BEYOND DRAWING FOR UTILITY CONNECTIONS. CONNECTION POINT SHALL BE AS DETERMINED BY UTILITY.

NOTES:

ADD THE PREFIX 10 TO COMPLETE INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET.
EXAMPLE: P-10101 FOR PUMP 1

REGISTERED PROFESSIONAL ENGINEER
THOMAS P. FRISCH
No. E15761
ELECTRICAL
STATE OF CALIFORNIA

XXX

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CHECKED M. FRISCH
APPROVED S. KADER

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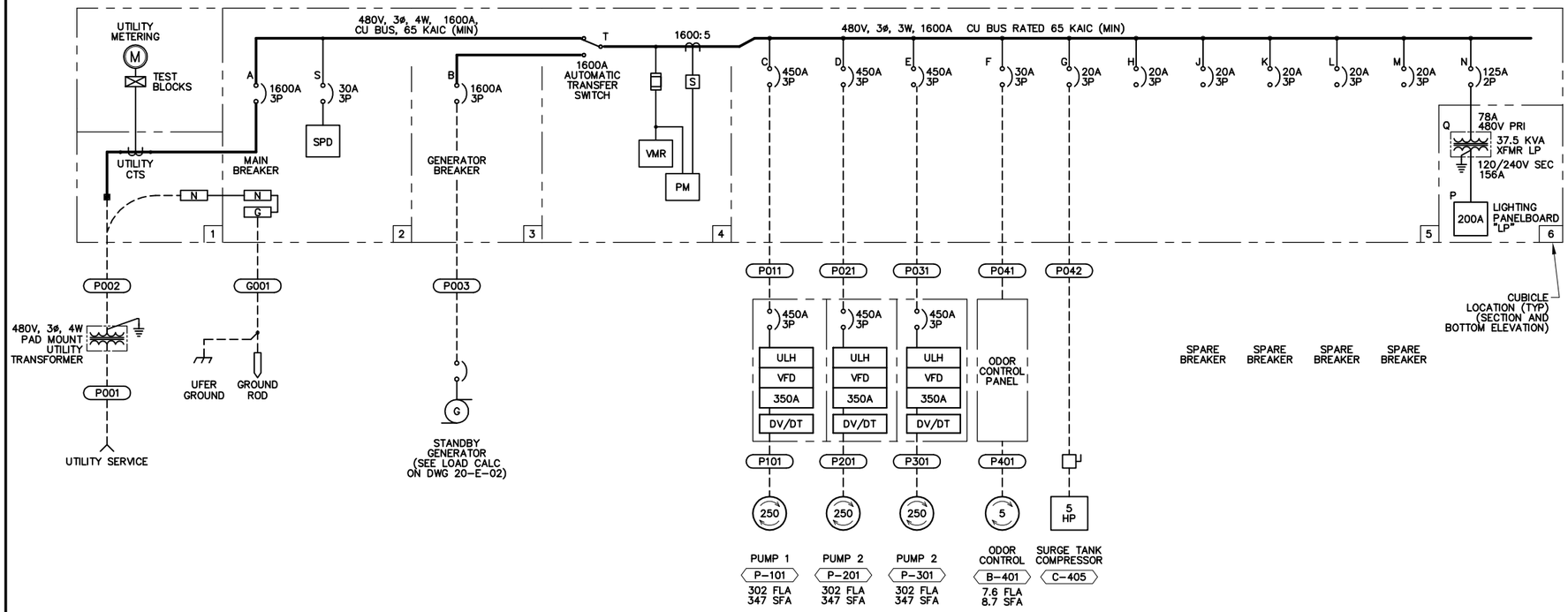
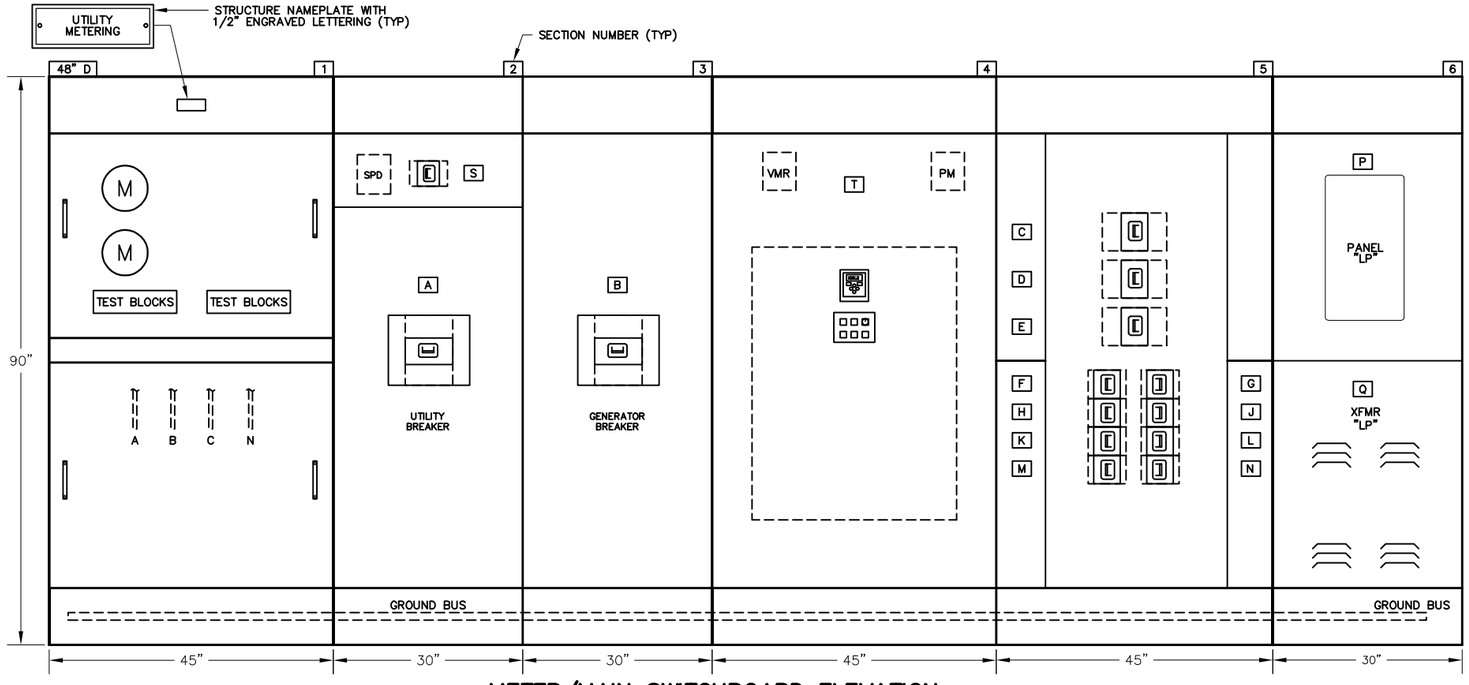
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION A
ELECTRICAL SITE PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
10-E-05
SHEET NUMBER -



ONE-LINE DIAGRAM



METER/MAIN SWITCHBOARD ELEVATION

NEMA 1, INDOOR

GENERAL NOTES:

1. REAR ACCESS SHALL NOT BE REQUIRED TO SERVICE OR REPLACE SWITCHBOARD COMPONENTS.
2. EACH BREAKER SHALL HAVE A PADLOCKABLE HASP TO LOCK BREAKER IN THE OFF POSITION.
3. ALL DIMENSIONS ARE APPROXIMATE. ACTUAL DIMENSIONS SHALL BE PER MANUFACTURER APPROVED IN SUBMITTAL.
4. FURNISH AND APPLY ENGRAVED WHITE LETTERING ON BLACK PLASTIC NAMEPLATES FOR DEVICES AND BREAKERS WHERE NOTED, AT MINIMUM, WITH A LETTERED BOX. TEXT HEIGHT SHALL BE 1/4 INCH MINIMUM. REFRENCE ONE-LINE DIAGRAM FOR LABEL.
5. FURNISH CODE REQURIED WARNING LABELS AND EQUIPMENT RATINGS LABELS.

NOTES:

ADD THE PREFIX 20 TO COMPLETE CONDUIT, INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET.

REGISTERED PROFESSIONAL ENGINEER
THOMAS P. FRISCH
No. E15761
ELECTRICAL
STATE OF CALIFORNIA

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FILE: 135 PUMP STATION B.DWG
DATE: FEB 10, 2020 TIME: 5:09:49PM

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION B
METER/MAIN ONE-LINE AND ELEVATION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-E-01
SHEET NUMBER -

PANEL "LP"

LOCATION:SWBD SECTION
ENCLOSURE:NEMA 1A
AIC RATING:10 KAIC

120/ 240 VOLTS, 1 PHASE, 3 WIRE
100 AMP BUS
100 AMP MAIN BREAKER

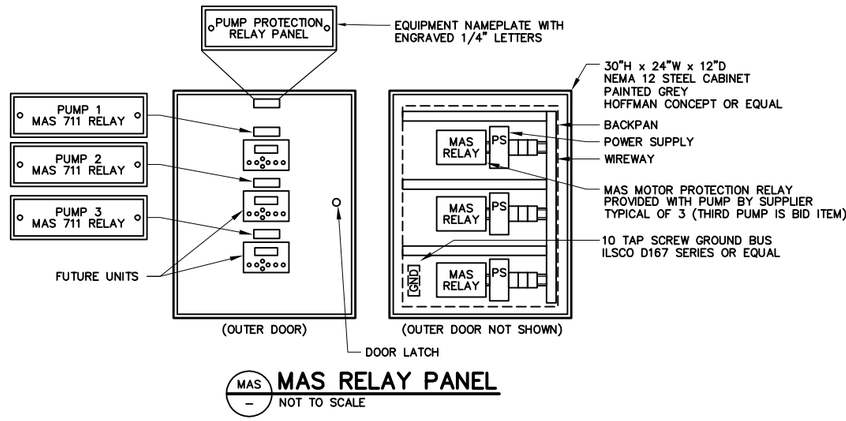
BKR NO.	DESCRIPTION	LOAD VA	LINE AMPS		AMPS/ POLE	BKR NO.	BKR NO.	AMPS/ POLE	LINE AMPS		LOAD VA	DESCRIPTION	BKR NO.
1	LIGHTING ELECTRICAL ROOM	336	2.8		20/1	1	2	20/1	5.0		600	CONTROL PANEL	2
3	LIGHTING OUTDOORS	304		2.5	20/1	3	4	20/1		2.5	300	CONTROL PANEL AUXILLIARY	4
5	POLE LIGHT	600	5.0		20/1*	5	6	20/1	2.5		300	COMMUNICATION PANEL	6
7	RECEPTACLE ELECTRICAL ROOM	900		7.5	20/1	7	8	20/1		0.0	0	SPARE	8
9	RECEPTACLE ELECTRICAL ROOM	900	7.5		20/1	9	10	15/1	2.5		300	VFD MAS RELAY PANEL	10
11	RECEPTACLE OUTDOOR	1200		10.0	20/1	11	12	20/1		15.0	1800	GENERATOR BATTERY CHARGER	12
13	SPARE	0	0.0		20/1	13	14	20/2	10.0		1200	GENERATOR HEATER	14
15	SPARE	0		0.0	20/1*	15	16			10.0	1200		16
17	SPARE	0	0.0		20/1	17	18	20/1	12.5		1500	VEHICLE GATE	18
19	SPARE	0		0.0	20/1	19	20	20/1		0.0	0	SPARE	20
21	SPARE	0	0.0		20/1	21	22	40/2	25.0		3000	HVAC UNIT 1 OUTDOOR	22
23	SPARE	0		0.0	20/1	23	24			25.0	3000		24
25	SPARE	0	0.0		20/1	25	26	15/1	0.6		75	HVAC UNIT 1 INDOOR	26
27	SPACE	0		0.0		27	28	40/2		25.0	3000	HVAC UNIT 2 OUTDOOR	28
29	SPACE	0	0.0			29	30		25.0		3000		30
31	SPACE	0		0.0		31	32	15/1		0.6	75	HVAC UNIT 2 INDOOR	32
33	SPACE	0	0.0			33	34		0.0		0	SPACE	34
35	SPACE	0		0.0		35	36			0.0	0	SPACE	36
37	SPACE	0	0.0			37	38		0.0		0	SPACE	38
39	SPACE	0		0.0		39	40			0.0	0	SPACE	40
41	SPACE	0	0.0			41	42		0.0		0	SPACE	42

PHASE	A	B		A	B	PHASE
LEFT SIDE AMPS	15.30	20.03	NEUTRAL	83.13	78.13	RIGHT SIDE AMPS
LEFT SIDE KVA	1.84	2.40		9.98	9.38	RIGHT SIDE KVA
			GROUND			
TOTAL PHASE KVA	11.81	11.78		23.59		TOTAL KVA
TOTAL PHASE AMPS	98	98		98.29		TOTAL AMPS @ 240V, 1P
% OF AVERAGE	100	100		0.80		DIVERSITY FACTOR
				18.87		LOAD KVA

NOTES:
1 MEANS OF WIRE COLOR CODING SHALL BE POSTED ON PANELBOARD PER NEC 210 (4)
2 ASTERISK (*) DENOTES GFI BREAKER REQUIRED WITH 5 MA SENSITIVITY
3 TILDA (~) DENOTES GFI BREAKER REQUIRED WITH 30 MA SENSITIVITY

LOAD CALCULATIONS

LOAD DESCRIPTION		CONNECTED LOAD LOAD	QTY	TOTAL	DEMAND LOAD LOAD	QTY	TOTAL	GENERATOR LOAD LOAD	QTY	TOTAL
250HP PUMP		325.00 A	3	810599.8 VA	325.00 A	2	540399.9 VA	325.00 A	3	810599.8 VA
5HP AIR COMPRESSOR		7.60 A	1	6318.5 VA	7.60 A	1	6318.5 VA	7.60 A	1	6318.5 VA
1HP ODOR CONTROL		2.10 A	1	1745.9 VA	2.10 A	1	1745.9 VA	2.10 A	1	1745.9 VA
PANELBOARD LP	120/240	28.37 A	1	23590.0 VA	22.70 A	1	18872.0 VA	22.70 A	1	18872.0 VA
	TOTAL LOAD =	1013.07 A	<	842254.2 VA	682.40 A	<	567336.3 VA	1007.40 A	<	837536.2 VA
LOAD CORRECTION FACTORS										
LARGEST MOTOR LOAD x 25%:								GENERATOR SIZE		
250HP HP => 0.25 x 270199.9 VA	=	81.25 A		67550.0 VA	81.25 A		67550.0 VA	NAMEPLATE = 1000 KW 1250 KVA		
80% BREAKER DERATING = TOTAL x 0.25 =		273.58 A		227451.0 VA	190.91 A		158721.6 VA	@ TEMP OF 100 deg F		
FOR CONTINUOUS LOADS NEC 210-20								ELEVATION OF 200 FT ASL		
SERVICE SIZE (MIN) =		1367.91 A		1137255.2VA	954.56 A		793607.8VA	DERATED SIZE = 977.0 KW 1221.3 KVA		
UTILITY SERVICE SIZE REQUIRED =		1600 AMP						AMPERAGE = 1469 A @ 0.8 PF		
480V, 3 PHASE, 4 WIRE								UTLIZATION % = 77 % @ 0.90 PF		



MAS – MAS RELAY PANEL
NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
THOMAS P. FRISCH
No. E15761
ELECTRICAL
STATE OF CALIFORNIA

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APPROVED S. KADER

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DATE: Feb 10, 2020 TIME: 5:11:00PM

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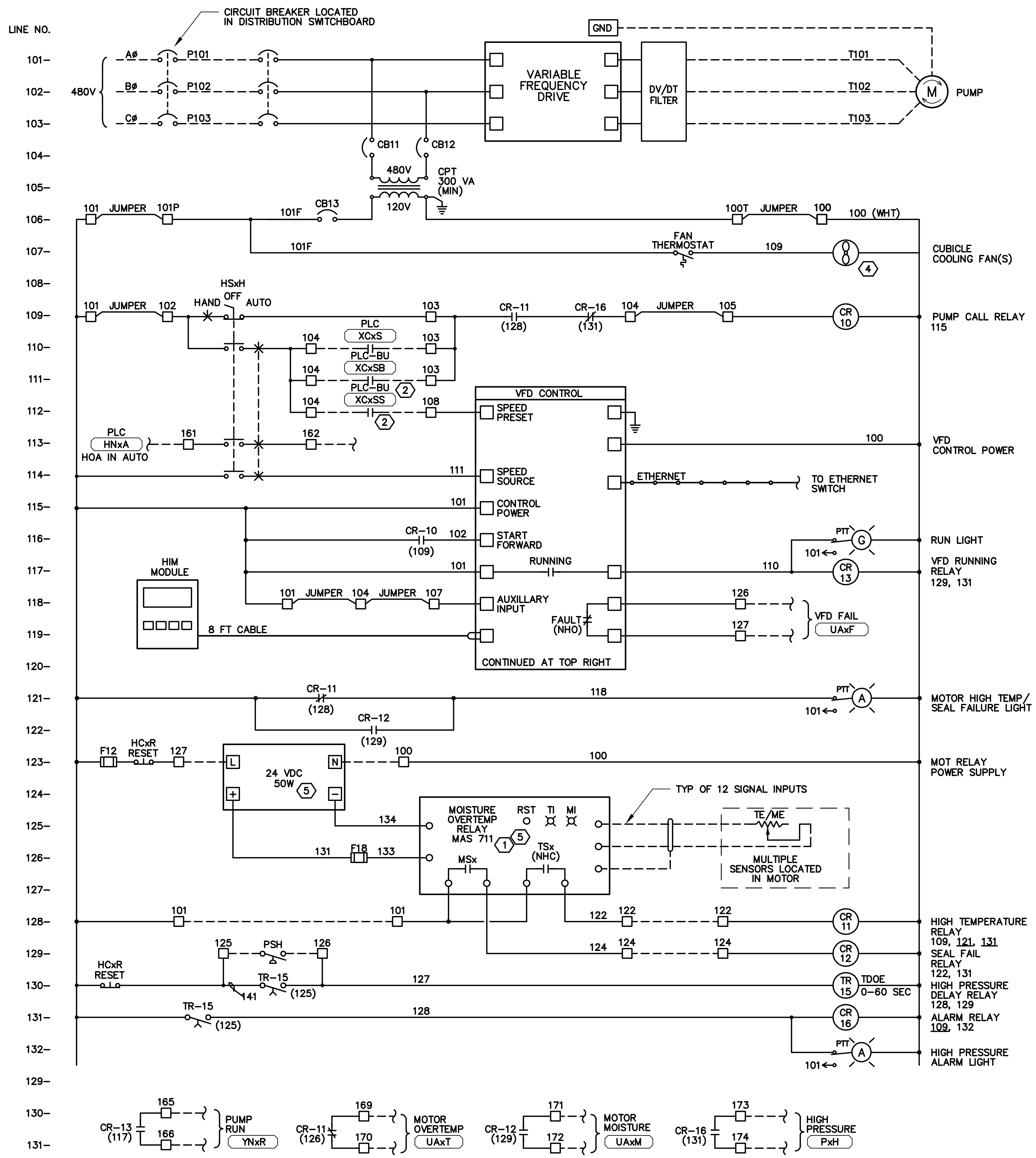
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION B
PANELBOARD SCHEDULE AND LOAC CALCULATIONS

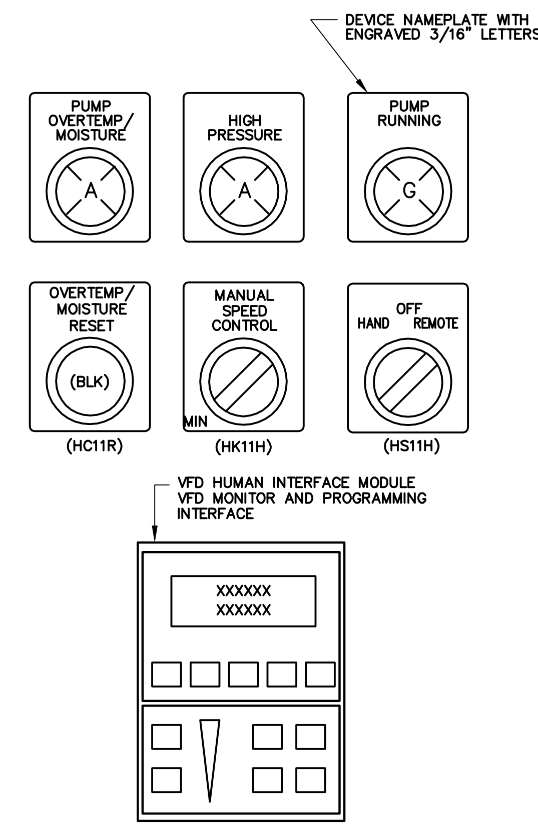
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-E-02
SHEET NUMBER -



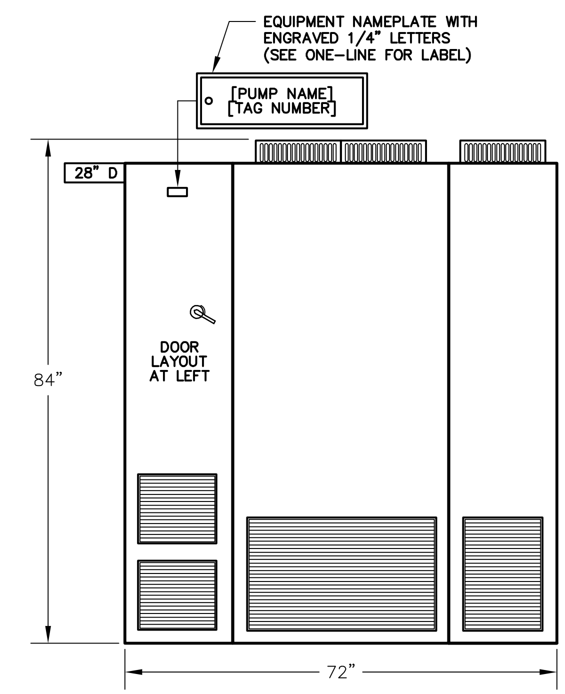
VFD ELEMENTARY DIAGRAM

SIMILAR DIAGRAM FOR PUMPS 10, 20, 30 – SEE NOTES

P101 P201 P301



DOOR LAYOUT



CABINET BUILT VFD PANEL ELEVATION

NOT TO SCALE

NOTES REFERENCED IN DRAWING:

1. RELAY TO BE SUPPLIED BY PUMP MANUFACTURER. INSTALL AND WIRE PER MANUFACTURER'S DRAWINGS PRIOR TO FACTORY TESTING AND DELIVERY TO JOB SITE.
2. FROM BACK-UP CONTROLS. SEE CONTROL PANEL DRAWGINS DWG 00-E-06 – 00-E-08.
3. PROVIDE VFD WITH 115 VAC CONTROL CIRCUIT INTERFACE. NO EXCEPTIONS.
4. PROVIDE COOLING FANS AS REQUIRED TO REMOVE HEAT GENERATED BY INTERNAL COMPONENTS AND MAINTAIN TEMPERATURE WITHIN DRIVE MANUFACTURER RATINGS.
5. RELAY AND POWER SUPPLY TO BE LOCATED IN REMOTE PANEL. SEE DETAIL MAS.

GENERAL NOTES:

1. SIMILAR DIAGRAM FOR PUMP NO. 1 ~ 3.
2. TERMINAL BLOCKS AND WIRES SHALL BE LABELED SAME EXCEPTION: WIRES TO PLC SHALL BE NUMBERED PER CONTROL PANEL TERMINAL BLOCK NUMBER.

REGISTERED PROFESSIONAL ENGINEER THOMAS P. FRISCH No. E15761 ELECTRICAL STATE OF CALIFORNIA

XXX

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DRAWN N. CONANT
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APPROVED S. KADER

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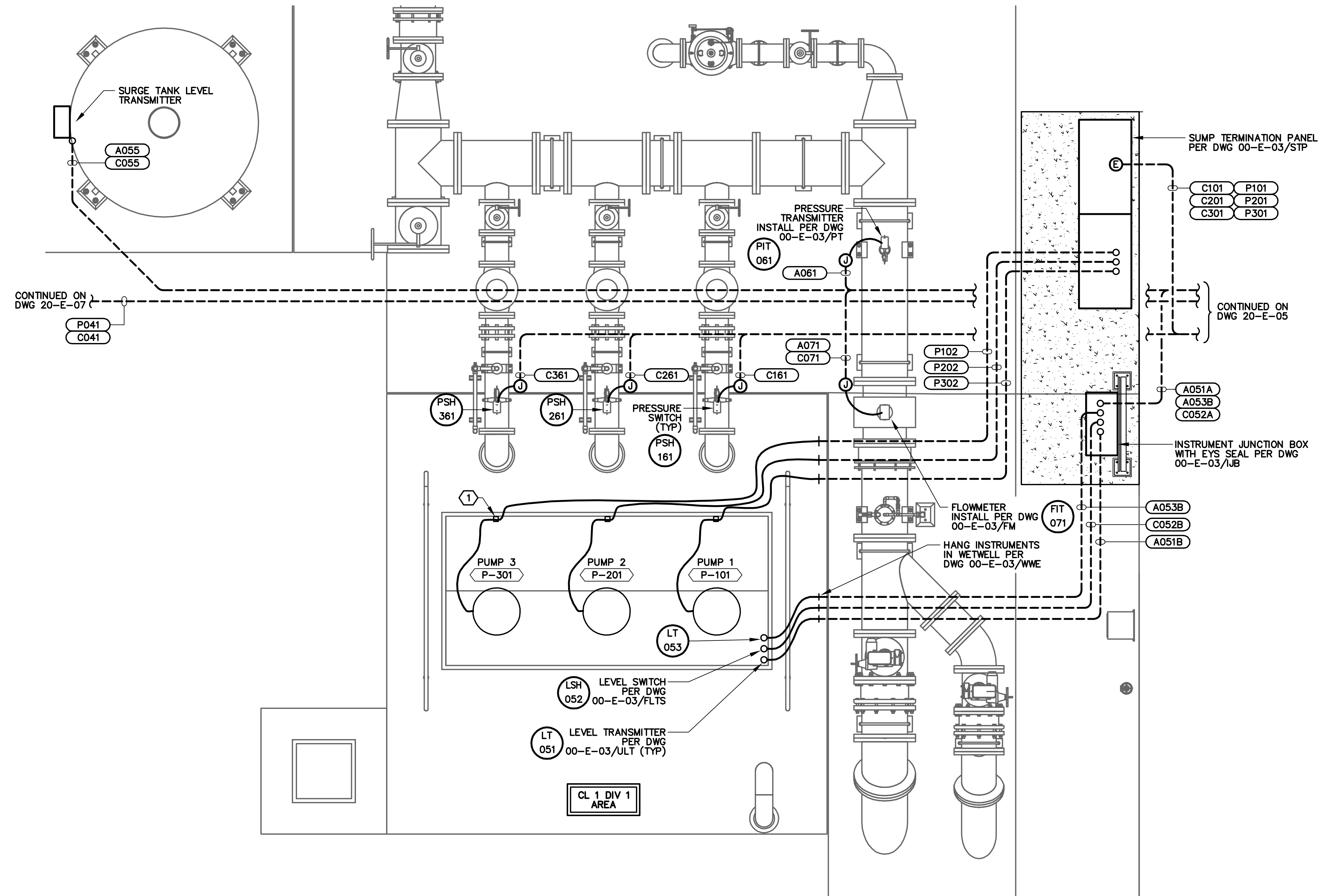
WATERWORKS ENGINEERS

CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
VFD ELEMENTARY DIAGRAM

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-E-03
SHEET NUMBER -



ELECTRICAL PLAN NOTES:

1. SEE ELECTRICAL SYMBOLS AND ABBREVIATIONS DRAWING FOR SYMBOL DEFINITION.
2. ALL WORK SHALL CONFORM TO LOCAL CODES AND NATIONAL ELECTRIC CODE.
3. SITEPLAN ACCURATE FOR ELECTRICAL WORK ONLY. COORDINATE WITH OTHER DISCIPLINES.
4. CONFIRM HOOKUP REQUIREMENTS FOR ELECTRICAL AND MECHANICAL EQUIPMENT PRIOR TO INSTALLING UNDERGROUND CONDUIT AND STUB-UPS. MISSING CONDUITS, INCORRECT SIZING, OR OTHER ISSUES MUST BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO BACKFILL.
5. CONDUIT ROUTING IS SHOWN GENERALLY DIAGRAMMATIC AND DOES NOT INDICATE TRENCH WIDTH OR TRENCH LAYOUT. FOR CONDUITS OUTSIDE BUILDINGS, IF CONTRACTOR WANTS TO RUN CONDUITS IN ROUTES OTHER THAN THOSE SHOWN FOR ANY REASON, THEN HE SHALL SUBMIT THE PLAN FOR APPROVAL PRIOR TO INSTALLATION. SPECIFY REASON FOR CHANGE.
6. INSTALL NON-UTILITY CONDUITS PER DRAWING DETAILS AND SPECIFICATIONS SECTION 16110.
7. CONDUITS SIZE, TYPE AND FILL DEFINED BY TAG NAME IN CONDUIT AND WIRE ROUTING SCHEDULE.
8. INSTALL UNDERGROUND NON-DUCTBANK CONDUITS PER ELECTRICAL DETAIL LVC.
9. CONDUIT TRANSITIONS SHALL BE PER EXPOSED CONDUIT TRANSITION DETAIL ECT.
10. EXPOSED CONDUIT TYPE AND FITTINGS TO BE USED ABOVE TRANSITION SHALL BE PER AREA CLASSIFICATION DEFINED IN CONDUIT SPECIFICATIONS AND EQUIPMENT SPECIFIC DETAIL.
11. REPAIR SURFACE TO PREVIOUS CONDITION FOR ALL UNDERGROUND CONDUIT ROUTES. GROUT, CAULK, AND PAINT ANY PENETRATIONS INTO STRUCTURES FOR WATERTIGHT SEAL.
12. USE SS EXPANSION WEDGE ANCHORS OR EPOXY ANCHORS AS NECESSARY FOR EQUIPMENT MOUNTING.
13. RECEPTACLES TO BE GROUND FAULT INTERRUPTER (GFI) TYPE AND WEATHERPROOF (WP) OUTDOORS AND WHERE SHOWN.
14. STUB UP CONDUITS BENEATH GENERATOR FRAME PER MANUFACTURER RECOMMENDATIONS. USE FLEXIBLE CONDUIT FOR TRANSITION BETWEEN EXPOSED CONDUIT TRANSTION AND ELECTRICAL CONNECTION BOX AND GENERATOR CONTROL PANEL.
15. UTILITY PRIMARY AND SECONDARY CONDUITS, TRANSFORMER PAD, PULL BOXES AND REMOVABLE BOLLARDS SHALL BE INSTALLED PER POWER UTILITY ENGINEERED DRAWINGS AND STANDARDS.
16. ASSUME 100 FT OF UNDERGROUND RUN BEYOND DRAWING FOR UTILITY CONNECTIONS. CONNECTION POINT SHALL BE AS DETERMINED BY UTILITY.

DRAWING REFERENCED NOTES:

(1) HANG PUMP CABLES ON J-HOOKS IN WETWELL TO ALL PUMPS.

NOTES:

ADD THE PREFIX 20 TO COMPLETE INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET.
EXAMPLE: P-20101 FOR PUMP 1

PUMP STATION B POWER AND CONTROL PLAN

SCALE: 1/2" = 1'

0 2 4 (Approximate Scale in Feet)

REGISTERED PROFESSIONAL ENGINEER THOMAS P. FRISCH No. E15761 ELECTRICAL STATE OF CALIFORNIA

XXX

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

FRISCH ENGINEERING, INC.
CONSULTING ELECTRICAL ENGINEERS
FILE: 1805H-20E04.DWG
DATE: Feb 10, 2020 TIME: 4:58:45PM

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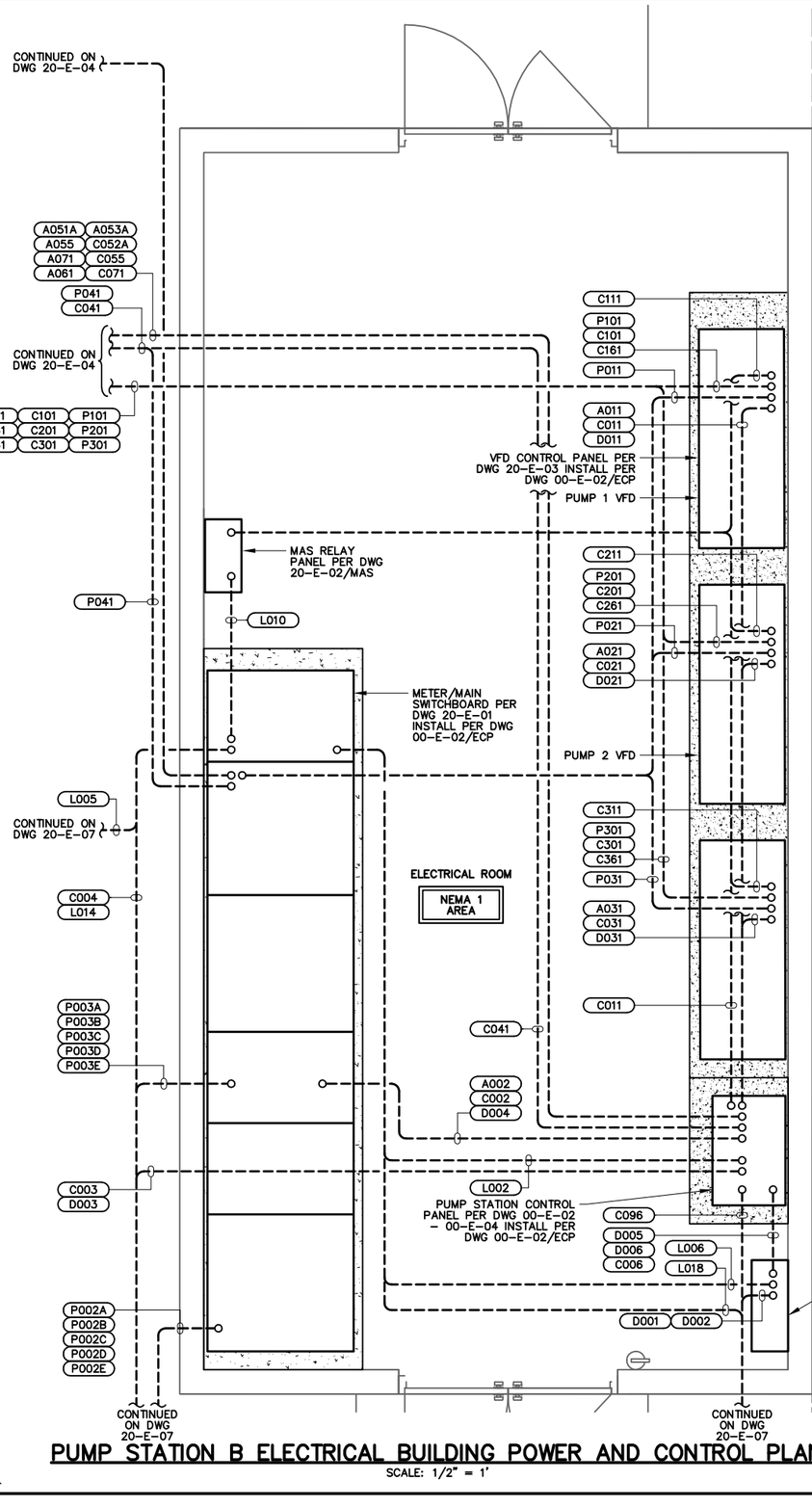
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION B
POWER AND CONTROL PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-E-04
SHEET NUMBER -



PUMP STATION B ELECTRICAL BUILDING POWER AND CONTROL PLAN

SCALE: 1/2" = 1'

ELECTRICAL PLAN NOTES:

1. SEE ELECTRICAL SYMBOLS AND ABBREVIATIONS DRAWING FOR SYMBOL DEFINITION.
2. ALL WORK SHALL CONFORM TO LOCAL CODES AND NATIONAL ELECTRIC CODE.
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6. INSTALL NON-UTILITY CONDUITS PER DRAWING DETAILS AND SPECIFICATIONS SECTION 16110.
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FILE: 1251_SHEET 2014.DWG
DATE: Feb 10, 2020 TIME: 4:59:06PM

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION B
ELECTRICAL BUILDING
POWER AND CONTROL PLAN

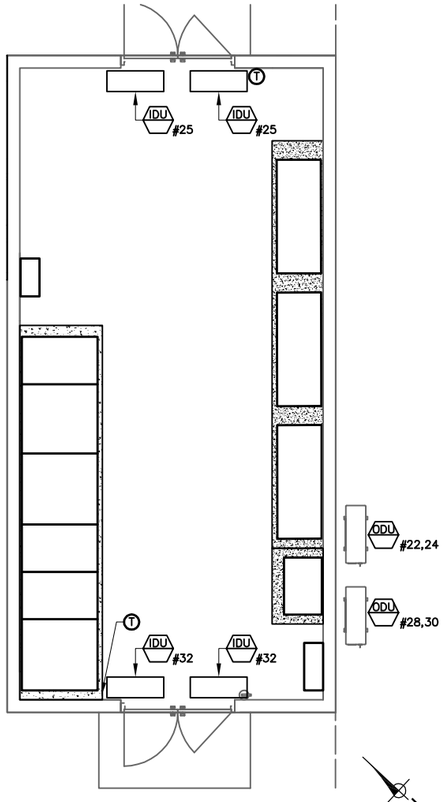
REGISTERED PROFESSIONAL ENGINEER
THOMAS P. FRISCH
No. E15761
ELECTRICAL
STATE OF CALIFORNIA

XXX

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-E-05
SHEET NUMBER -

FIXTURE SCHEDULE

CODE LETTER	FIXTURE TYPE	FIXTURE LAMPS	WATTS/ FIXTURE	MANUFACTURER OR APPROVED EQUAL	MOUNTING ARRANGEMENT	NOTES
A	STRIP LUMINAIRE, 4 FT, VAPORTIGHT MOLDED POLYCARBONATE HOUSING FROSTED LENS, MEDIUM DISTRIBUTION	4000 LUMEN 3500K	120V 44W	ATLAS ILW48LED4	CEILING MOUNT FIXTURE	U.L. LISTED -20F TO 140F
B	WALL PACK LIGHT, TYPE 3 DISTRIBUTION DARK BRONZE POWDER COAT CASE ALUMINUM CASE	30C 4350LM 5000K	120V 67W 700mA	LITHONIA TWP LED	WALL MOUNT 10FT AFF	U.L. LISTED FOR WET LOCATIONS PHOTOCELL CONTROL
EXE	EXIT LIGHT PACK WITH EGRESS LAMPS AND REMOTE OUTDOOR EGRESS FIXTURE LED LAMPS WITH RED LED SIGN INTEGRAL BATTERY AND CHARGER	2 LED 3W	120V 5W	DUAL-LITE HCX-U-R-W-03L-RC12 CPRSB0603L	WALL MOUNT 9 FT AFF	WHITE INTERIOR, BROWN EXTERIOR DUAL LED LAMPS INDOORS AND OUT 12W REMOTE LIGHT CAPACITY
EF	EXHAUST FAN		120 VAC	SEE MECHANICAL		
IDU	INDOOR HVAC UNIT		120 VAC	SEE MECHANICAL		
ODU	OUTDOOR HVAC UNIT		240 VAC	SEE MECHANICAL		
RDU	REFRIDGERANT DISTRIBUITON UNIT		120 VAC	SEE MECHANICAL		

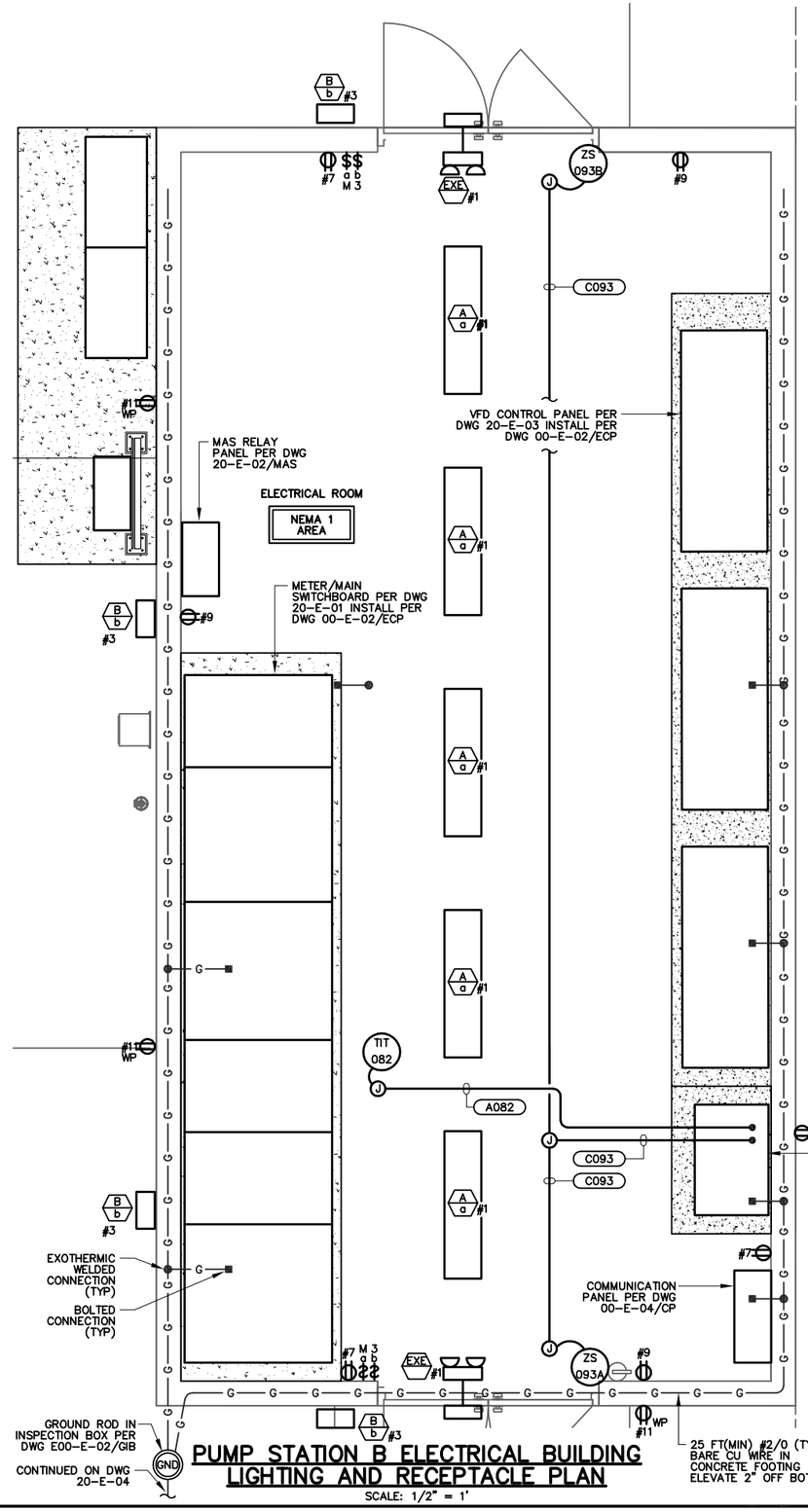


PUMP STATION B HVAC PLAN

SCALE: 1/4" = 1'

0 4 8

(Approximate Scale in Feet)



PUMP STATION B ELECTRICAL BUILDING LIGHTING AND RECEPTACLE PLAN

SCALE: 1/2" = 1'

0 2 4

(Approximate Scale in Feet)

REGISTERED PROFESSIONAL ENGINEER
THOMAS P. FRISCH
No. E15761
ELECTRICAL
STATE OF CALIFORNIA

XXX

GENERAL NOTES THAT APPLY TO LIGHTING AND RECEPTACLE PLAN.

1. THESE NOTES SHALL APPLY TO ALL EQUIPMENT OR FIXTURES WITH ELECTRICAL CONNECTIONS BUT WITHOUT CONDUITS SHOWN, CONDUIT NUMBERS, OR NOT LISTED IN SCHEDULE.
2. PROVIDE AND INSTALL NECESSARY WIRES IN SURFACE MOUNT 3/4" (MINIMUM) CONDUIT FOR FOR ELECTRICAL FIXTURE ARRANGEMENT AS SHOWN. MAXIMUM 3 CIRCUITS PER CONDUIT SECTION OVER 24" IN LENGTH. CONDUITS SHALL NOT EXCEED 40% FILL.
3. CONDUITS UNDER SLAB SHALL BE PVC-40 WITH STUB-OUTS PER EXPOSED CONDUIT TRANSITION DETAIL.
4. CONDUITS ABOVE CEILING SHALL BE EMT WITH COMPRESSION STYLE FITTINGS. CONDUITS BELOW CEILING SHALL BE GRS. ACCESS TO ATTIC AREA SHALL NOT BE REQUIRED TO INSTALL CONDUCTORS.
5. DEVICE BOXES AND CONDUIT BODIES SHALL BE CAST IRON OR ALUMINUM WITH THREADED HUB.
6. CONDUCTORS SHALL BE COPPER TYPE THHN, CLASS C STRANDING, #12 AWG (MINIMUM).
7. MOUNT CONDUITS USING SINGLE BOLT GALVANIZED PIPE STRAPS AND CLAMP BACK SPACERS.
8. USE SS EXPANSION WEDGE ANCHORS OR EPOXY ANCHORS AS NECESSARY FOR EQUIPMENT MOUNTING.
9. EXPOSED CONDUIT SHALL BE PAINTED WITH WALL AND/OR CEILING AS SPECIFIED.
10. PROVIDE AND INSTALL FIXTURES PER SCHEDULE THIS PAGE, QUANTITY AS SHOWN IN DRAWINGS.
11. PROVIDE AND INSTALL ALL DEVICE BOXES, JUNCTION BOXES, RECEPTACLES, SWITCHES, AND COVERS MOUNT ALL RECEPTACLES AT 48" AFF UNLESS OTHERWISE NOTED.
12. RECEPTACLES TO BE GROUND FAULT INTERRUPTER (GFI) TYPE AND WEATHERPROOF (WP) WHERE SHOWN.
13. SEE ELECTRICAL SYMBOLS AND ABBREVIATIONS DRAWING FOR SYMBOL DEFINITION.
14. ALL WORK SHALL CONFORM TO LOCAL CODES AND NATIONAL ELECTRIC CODE.
15. SWITCH TYPE: T= TIME SWITCH, M= MOTION DETECTOR, 3= 3-WAY.

NOTES:

ADD THE PREFIX 20 TO COMPLETE INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET.
EXAMPLE: P-20101 FOR PUMP 1

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

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FILE: 17-082-ELEC-20-E-04.DWG
DATE: Feb 10, 2020 TIME: 5:00:46PM

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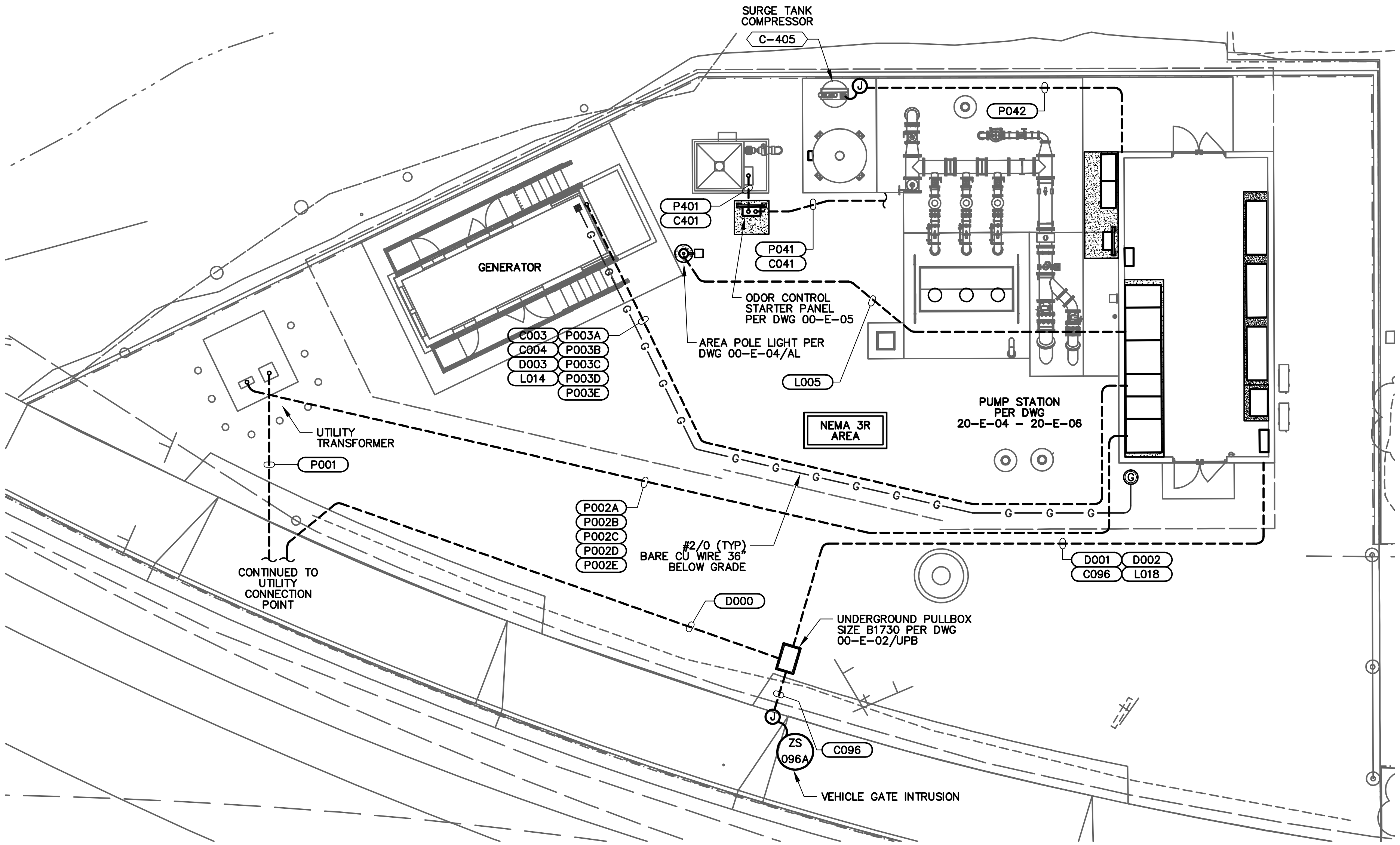
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION B
ELECTRICAL BUILDING
LIGHTING AND RECEPTACLE PLAN

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
20-E-06
SHEET NUMBER -



PUMP STATION B ELECTRICAL SITE PLAN

SCALE: 1/8" = 1'

0 8 16
(Approximate Scale in Feet)

ELECTRICAL PLAN NOTES:

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NOTES:

ADD THE PREFIX 20 TO COMPLETE INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET. EXAMPLE: P-20101 FOR PUMP 1

REGISTERED PROFESSIONAL ENGINEER THOMAS P. FRISCH No. E15761 ELECTRICAL STATE OF CALIFORNIA

XXX

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DRAWN N. CONANT
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DATE: FEB 10, 2020 TIME: 5:01:01 PM

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

ELECTRICAL
PUMP STATION B
ELECTRICAL SITE PLAN

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-E-07
SHEET NUMBER -

P&ID SYMBOLS

ISA SYMBOLS

SYMBOL	DESCRIPTION
XXX XXX	FIELD MOUNTED INSTRUMENT
XXX XXX	INSTRUMENT MOUNTED ON DOOR OF LOCAL PANEL, OPERATOR ACCESSIBLE
XXX XXX	INSTRUMENT MOUNTED ON DOOR OF FIELD PANEL, OPERATOR ACCESSIBLE
XXX XXX	INSTRUMENT MOUNTED WITHIN PANEL, OPERATOR INACCESSIBLE
XXX XXX	INSTRUMENT MOUNTED WITHIN FIELD PANEL, OPERATOR INACCESSIBLE
I	OPERATION PERFORMED WITH LOGIC OR HARDWIRED DEVICES
MCE-XX	ASSOCIATED MOTOR CONTROL ELEMENTARY IF APPLICABLE
UNIT XXX XXX	VISUAL DISPLAY OF PLC ANALOG REGISTER SCALE TO UNITS AS SHOWN
XXX XXX	VISUAL DISPLAY OF PLC ANALOG ALARM REGISTER
XXX XXX	VISUAL DISPLAY OF PLC DIGITAL REGISTER
XXX XXX	VISUAL DISPLAY OF PLC DIGITAL ALARM REGISTER
X X	TAG DESCRIPTION
XXXX	PLC I/O TAG
	PLC DIGITAL INPUT
	PLC DIGITAL OUTPUT
	ANALOG INPUT
	ANALOG OUTPUT
	AUDIBLE ALARM (BUZZER OR HORN)
X	LAMP INDICATION COLOR DENOTED BY "X" RED, BLU, GRN, WHT, AMBER
a XXXX / XXXX a	CONTINUATION TAG FROM ONE AREA TO ANOTHER AREA OF DIFFERENT DRAWINGS "a" TAG IDENTIFIER TO POINT ON DRAWING NUMBER XXXX.
I-X / I-X	CONTINUED ON DWG I-X

LINE TYPES

- PRIMARY PROCESS LINE
- SECONDARY PROCESS LINE
- ELECTRICAL SIGNAL LINE (DIGITAL OR ANALOG)
- SOFTWARE OR DATA LINK
- BOUNDARY OF EQUIPMENT PACKAGE SYSTEM
- COMMUNICATION CONNECTION

VALVES

- GATE VALVE
- CHECK VALVE
- PLUG VALVE
- BALL VALVE
- BALL CHECK VALVE
- BUTTERFLY VALVE
- ANGLE VALVE
- NEEDLE VALVE
- RELIEF VALVE
- DIAPHRAGM VALVE
- 3-WAY VALVE
- FLOW CONTROL VALVE
- PINCH VALVE
- CONE VALVE
- ANTISIPHON/BACKPRESSURE VALVE
- SOLENOID VALVE (2-WAY) (S→M FOR MOTORIZED VALVE)
- SOLENOID VALVE (3-WAY) (S→M FOR MOTORIZED VALVE)
- SOLENOID VALVE (4-WAY) (S→M FOR MOTORIZED VALVE)
- PNEUMATIC DIAPHRAGM CONTROL VALVE
- PRESSURE SUSTAINING VALVE
- PRESSURE REGULATING VALVE
- MULTIFUNCTION VALVE
- SLUICE GATE (SG) OR SLIDE GATE (SLG)
- AIR RELIEF VALVE (ARV)
- FLOAT VALVE
- STRAINER
- BACKFLOW PREVENTER
- CV — CALIBRATION VALVE
- CALIBRATION COLUMN
- ROTAMETER
- UNION

ACTUATORS

- M — MOTORIZED
- S — SOLENOID
- PNEUMATIC OPERATOR S– SOLENOID – OPEN/CLOSE A– POSITIONER – MODULATING

PUMPS

- CENTRIFUGAL PUMP OR BLOWER
- SUBMERSIBLE SEWAGE PUMP
- VERTICAL TURBINE PUMP OR WELL PUMP
- SUBMERSIBLE WELL PUMP
- GEAR PUMP
- POSITIVE DISPLACEMENT PUMP OR BLOWER
- DIAPHRAGM PUMP
- PERISTALTIC PUMP
- M — MOTOR

SENSORS

- ORIFICE PLATE
- LIT XXX — ULTRASONIC LEVEL TRANSMITTER (FLOW IF OVER FLUME OR WEIR)
- LE XXX — CONDUCTANCE TYPE LEVEL ELEMENTS
- LIT XXX — RADAR TYPE LEVEL TRANSMITTER
- GUIDED OPTION
- LIT XXX — CAPACITANCE TYPE LEVEL TRANSMITTER

SENSORS

- MAG — MAGNETIC FLOWMETER
- % — DENSITY METER
- ~ — ULTRASONIC FLOWMETER
- TURBINE OR PROPELLER METER
- VENTURI TUBE
- THERMAL DISPERSION FLOWMETER OR SWITCH
- PADDLE WHEEL FLOWMETER
- C — CORIOLIS FLOWMETER

MISCELLANEOUS MECHANICAL ITEMS

- PIPE REDUCER
- RUPTURE DISC
- PRESSURE OR VACUUM RELIEF VALVE
- DIAPHRAGM SEAL
- ANNUALAR SEAL
- DRAIN TO WASTE
- M — MIXER
- F OR F — FILTER
- VENT W/CAP OR SCREEN
- FLEXIBLE HOSE OR TUBING
- SPRAY NOZZLE SYSTEM
- EXPANSION JOINT
- STATIC MIXER
- EJECTOR / EDUCTOR
- HOSE COUPLING
- PULSATION DAMPENER
- OMNI ANTENNA NON-DIRECTIONAL
- YAGI ANTENNA DIRECTIONAL

P&ID ABBREVIATIONS

INSTRUMENTATION SYBMOLS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROLLER	
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW	RATIO			
G	GENERAL		GLASS VIEWING DEVICE		
H	HAND				HIGH, OPENED
I	CURRENT		INDICATING, INDICATOR		
J	POWER	SCAN			
K	TIME, TIME SCHEDULED	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW, CLOSED
M	MOISTURE	MOMENTARY			MIDDLE
N	STATUS		STATUS	USER'S CHOICE	USER'S CHOICE
O	OPERTOR		ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RESET		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMITTER	TEST
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION			VAVE, DAMPER, LOUVER	
W	WEIGHT		WELL		
X	SWITCH	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OF PRESENCE	Y AXIS		RELAY, COMPUTER, CONVERTER	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

P&ID ABBREVIATIONS

SWITCH IDENTIFIER

F/R	FORWARD/REVERSE	OPN	OPEN
HOA	HAND-OFF-AUTO	CLS	CLOSE
HOR	HAND-OFF-REMOTE	SEL	SELECTOR
LOS	LOCK OUT STOP	S/S	START / STOP
L/R	LOCAL / REMOTE	%	PERCENT ADJUSTMENT
MOA	MANUAL-OFF-AUTO		
OCA	OPEN-CLOSE-AUTO		
O/C	OPEN / CLOSE		
O/O	ON / OFF		

REGISTERED PROFESSIONAL ENGINEER THOMAS P. FRISCH No. E15761 ELECTRICAL STATE OF CALIFORNIA

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DATE: FEB 10, 2020 TIME: 4:58:08PM

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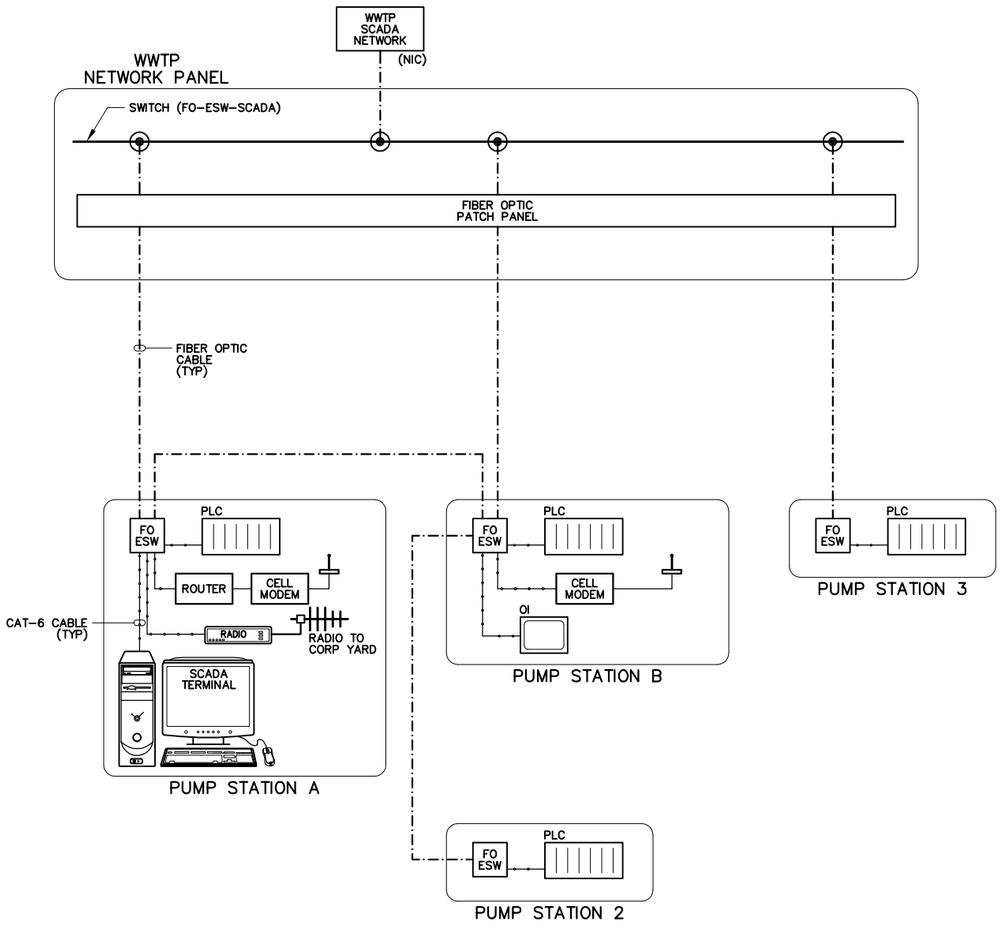
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATON AND OFFSITE PIPELINES

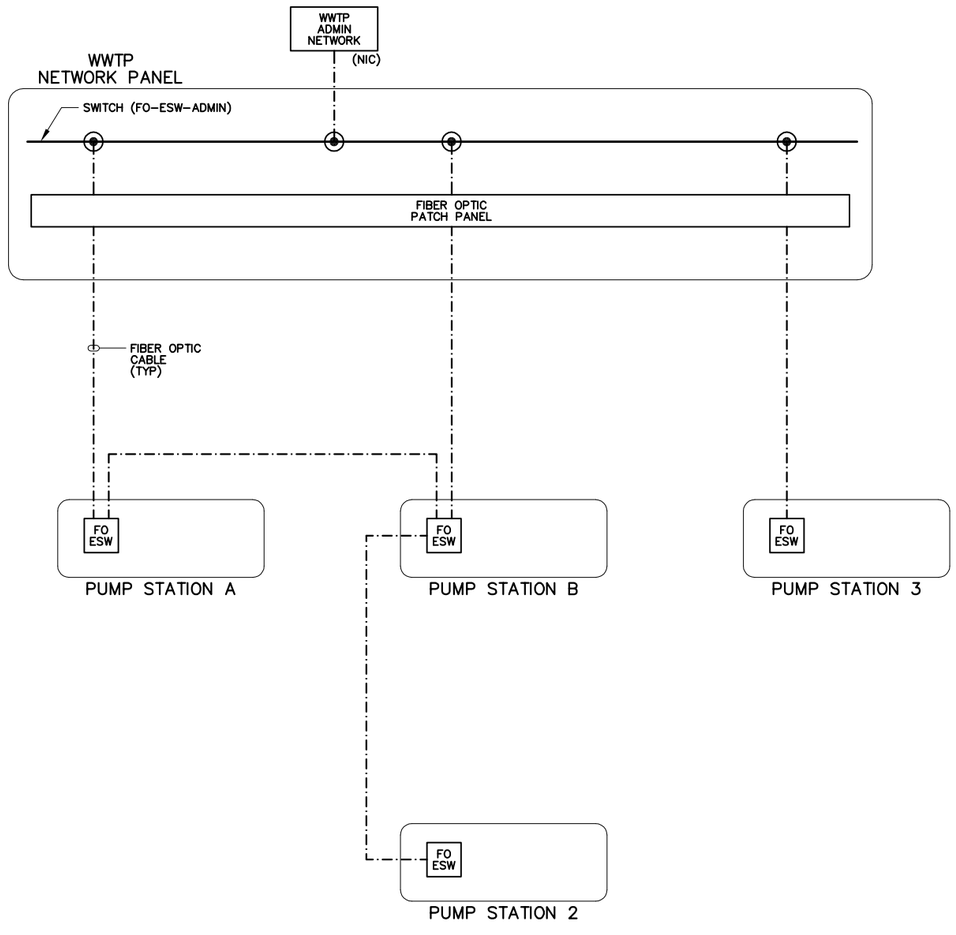
INSTRUMENTATION
SYMBOLS AND ABBREVIATIONS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 00-I-01
SHEET NUMBER -

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
PLC	COMPACT LOGIX PLC IN CONTROL PANEL (TCP)		FIBER OPTIC GIGABIT CONNECTION
OI	LOCAL SCADA TERMINAL		RJ-45 ETHERNET (CAT6) GIGABIT CONNECTION
ESW	ETHERNET SWITCH		FAST ETHERNET (CAT6) 10/100 CONNECTION
FO ESW	FIBER OPTIC ETHERNET SWITCH	RADIO	RADIO



SCADA NETWORK TOPOLOGY



ADMIN NETWORK TOPOLOGY

XXX

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

FRISCH ENGINEERING, INC.
CONSULTING ELECTRICAL ENGINEERS
3305 FOLSOM BLVD, UNIT 600
FOLSOM, CA 95630
PH 916 353 1025
WWW.FRISCHENGINEERING.COM

FILE: 17-082 TITLE.DWG
DATE: Feb 10, 2020 TIME: 5:07:18PM

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATON AND OFFSITE PIPELINES

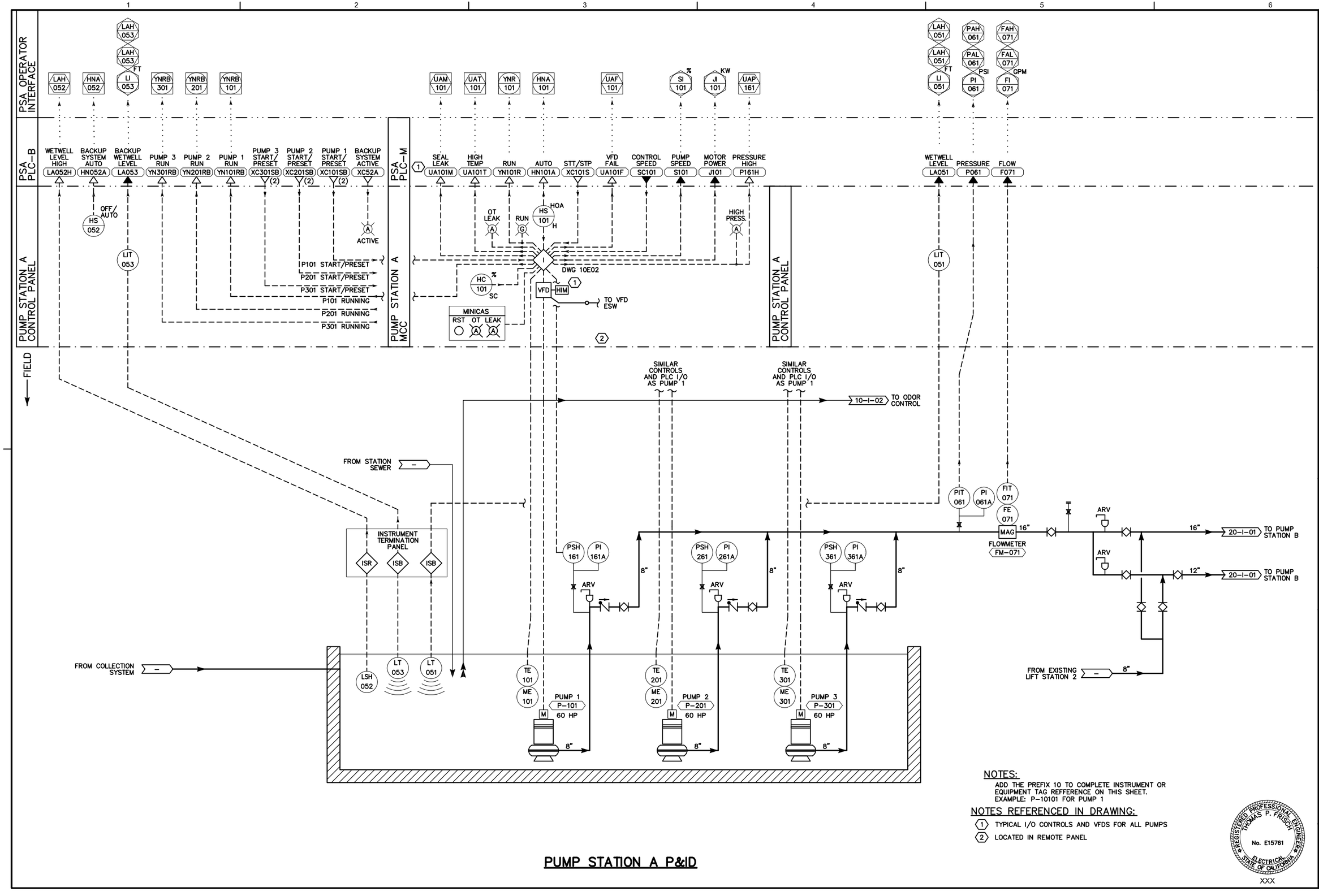
INSTRUMENTATION
NETWORK TOPOLOGY

DATE
FEBRUARY 2020

PROJECT NUMBER
17-082

DRAWING NUMBER
00-I-02

SHEET NUMBER -



NOTES:

ADD THE PREFIX 10 TO COMPLETE INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET.
EXAMPLE: P–10101 FOR PUMP 1

NOTES REFERENCED IN DRAWING:

1. TYPICAL I/O CONTROLS AND VFDS FOR ALL PUMPS
2. LOCATED IN REMOTE PANEL

PUMP STATION A P&ID

REGISTERED PROFESSIONAL ENGINEER
THOMAS P. FRISCH
No. E15761
ELECTRICAL
STATE OF CALIFORNIA

XXX

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

FRISCH ENGINEERING, INC.
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FILE: 10-I-01.DWG
DATE: FEB 10, 2020 TIME: 4:58:51 PM

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

INSTRUMENTATION
PUMP STATION A
P&ID

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-I-01
SHEET NUMBER -

PSA OPERATOR INTERFACE

PSA PLC

PUMP STATION A CONTROL PANEL

FIELD

YNR 401 — RUN YN401R

HNA 401 — AUTO HN401A

STT/STP XC401S

HS 401 HOA RUN H

FVNR

ZAY 096 — VEHICLE GATE INTRUSION ZA096A

ZS 096A — VEHICLE GATE 1

ZAY 093 — BUILDING INTRUSION ZA093A

ZS 093A, ZS 093B — ELECTRICAL ROOM

EAL 095A — 120 V POWER FAIL EA095AL

ESL 095A — CR–PF

EAL 095B — UPS POWER FAIL EA095BL

ESL 095B — CR–UF

SAA 098 — SMOKE ALARM SA098A

SMOKE SS 098A

ETHERNET PORT

TO VFD DRIVES (3)

VFD ESW

ETHERNET PORT

PLC FO–ESW

CELL MODEM

FIBER OPTIC TO ADJACENT PUMP STATION AND SCADA

POWER DISTRIBUTION PANEL

EAL 99 — 480V POWER FAIL EA99L

ESL 99 — VMR

POWER MONITOR

LAL 03 — LOW FUEL LA03L

UAA 03 — GEN. ALARM UA03A

YNR 03 — GEN. RUN YN03R

YNR 01 — EMERG POSITION YN01E

YNN 01 — NORMAL POSITION YN01N

ENR 01 — EMERG SOURCE AVAIL EN01E

ENN 01 — NORMAL SOURCE AVAIL EN01N

AUTOMATIC TRANSFER SWITCH

START

STANDBY GENERATOR GEN03

FROM WETWELL 10–I–02

M

ODOR CONTROL BLOWER B–401

BIO FILTER

INTRUSION ALARM P&ID

COMMUNICATIONS P&ID

BACK–UP POWER P&ID

ODOR CONTROL SYSTEM P&ID

NOTES:

ADD THE PREFIX 10 TO COMPLETE INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET.
EXAMPLE: P–10401 FOR ODOR CONTROL

REGISTERED PROFESSIONAL ENGINEER — THOMAS P. FRISCH — No. E15761 — ELECTRICAL — STATE OF CALIFORNIA

XXX

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

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FILE: 10-I-02.dwg
DATE: Feb 10, 2020 TIME: 4:58:58PM

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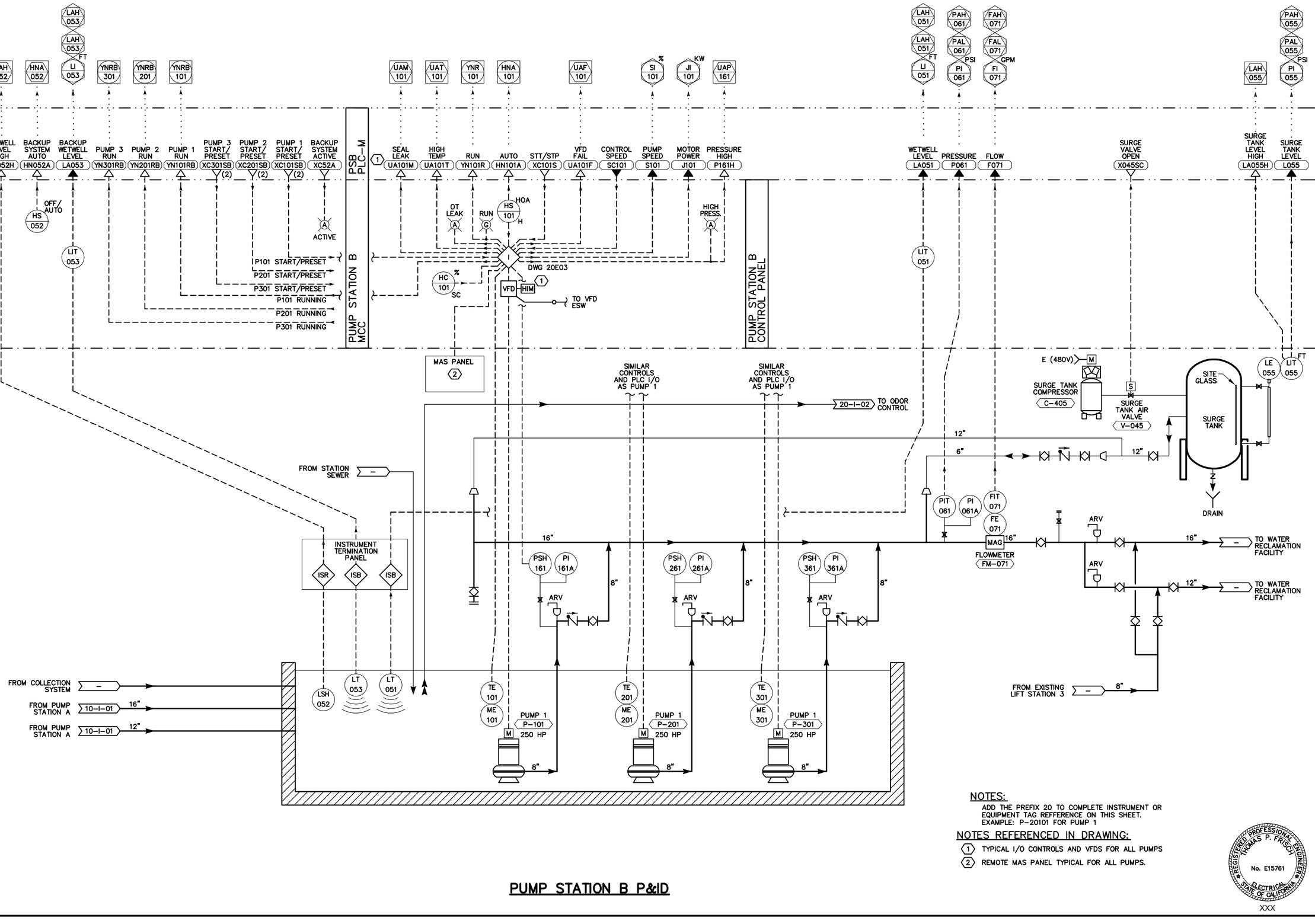
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

INSTRUMENTATION
PUMP STATION A MISCELLANEOUS P&ID

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 10-I-02
SHEET NUMBER -



PUMP STATION B P&ID

FRISCH ENGINEERING, INC.
CONSULTING ELECTRICAL ENGINEERS
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FILE: 135-Pump Station B-01.dwg
DATE: Feb 10, 2020 TIME: 4:59:38PM

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

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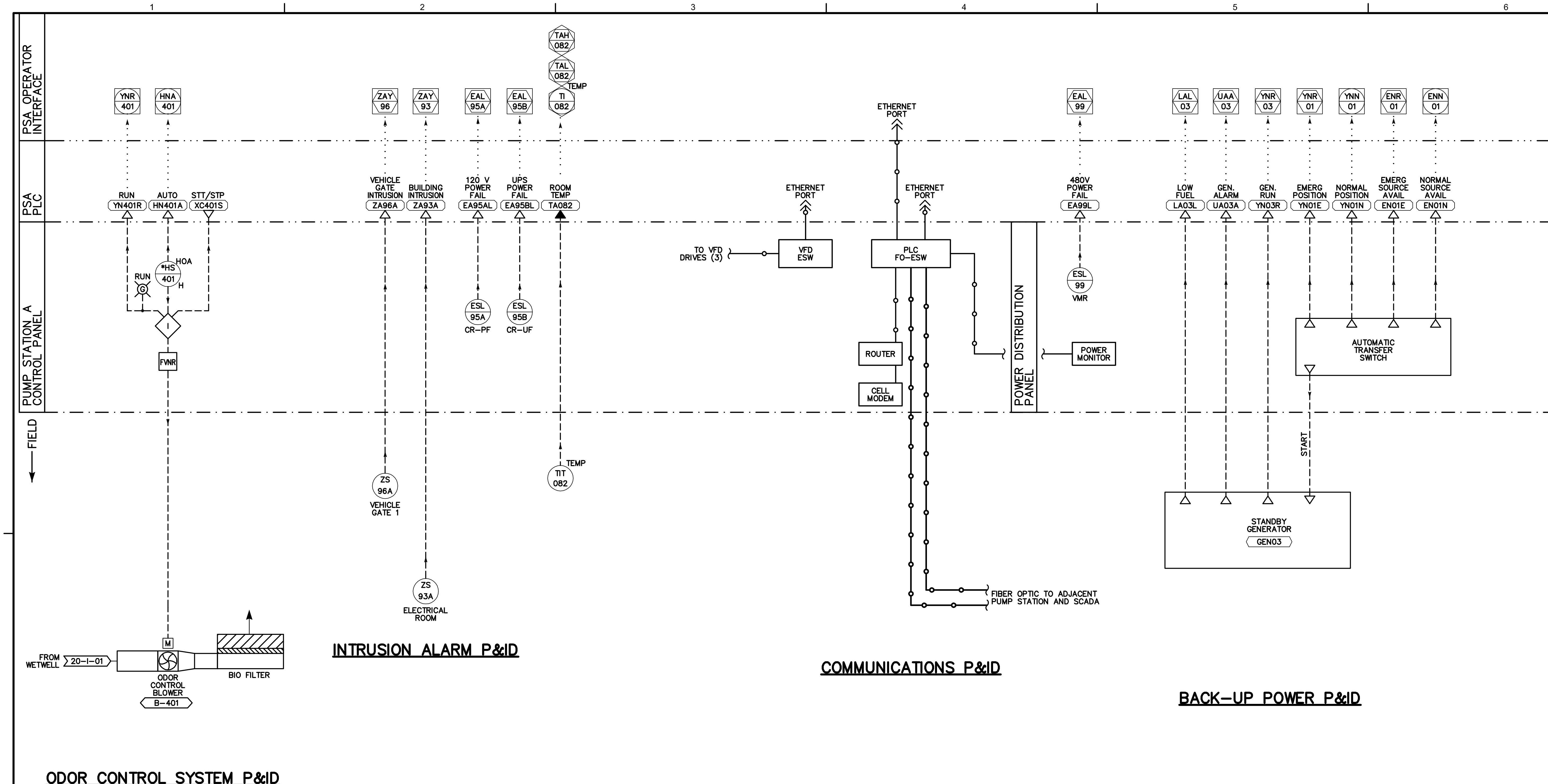
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

INSTRUMENTATION
PUMP STATION B P&ID

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-I-01
SHEET NUMBER -



NOTES:

ADD THE PREFIX 20 TO COMPLETE INSTRUMENT OR EQUIPMENT TAG REFFERENCE ON THIS SHEET.
EXAMPLE: P-20401 FOR ODOR CONTROL

NOTES REFERENCED IN DRAWING:

(1) TYPICAL I/O CONTROLS FOR ALL HVAC UNITS

REGISTERED PROFESSIONAL ENGINEER THOMAS P. FRISCH No. E15761 ELECTRICAL STATE OF CALIFORNIA

XXX

DESIGN T. FRISCH
DRAWN N. CONANT
CHECKED M. FRISCH
APPROVED S. KADER

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CONSULTING ELECTRICAL ENGINEERS
FILE: 1805HI20102.DWG
DATE: Feb 10, 2020 TIME: 4:59:45PM

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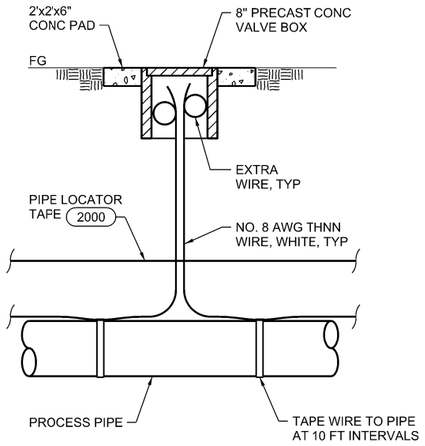
LIFT STATON AND OFFSITE PIPELINES

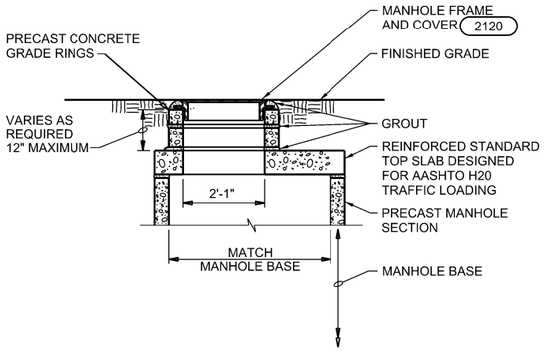
INSTRUMENTATION
PUMP STATION B
MISCELLANEOUS P&ID

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER 20-I-02
SHEET NUMBER -



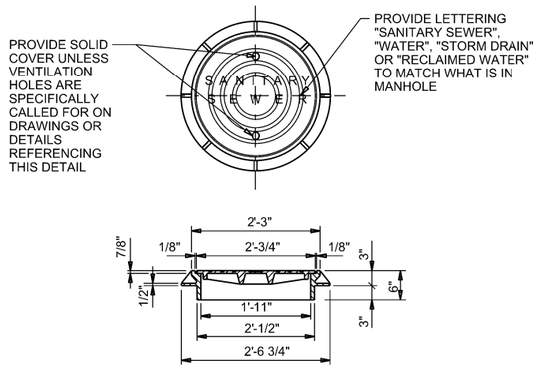
TRACER WIRE WITH TEST STATION
NTS

2060



FLAT TOP MANHOLE
NTS

2112

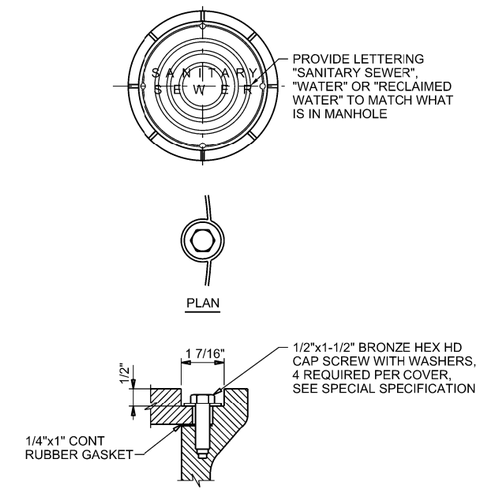


NOTES:

1. FRAME AND COVER SHALL BE CAST IRON.
2. FRAME AND COVER SHALL BE RATED FOR AASHTO H-20 TRAFFIC LOADS.

STANDARD MANHOLE FRAME AND COVER
NTS

2120

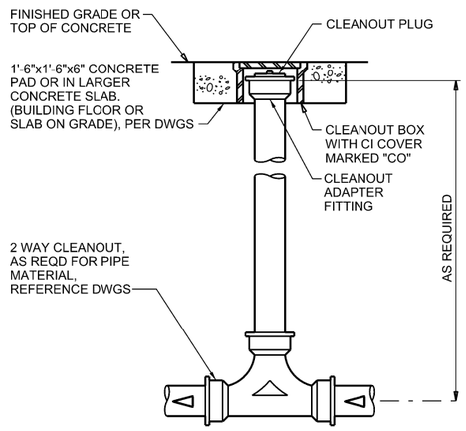


NOTES:

1. WATERTIGHT MANHOLE FRAME AND COVER SIMILAR TO STANDARD MANHOLE FRAME AND COVER (2120), EXCEPT AS SHOWN.
2. NO HOLES SHALL BE ALLOWED IN WATERTIGHT MANHOLE COVER.

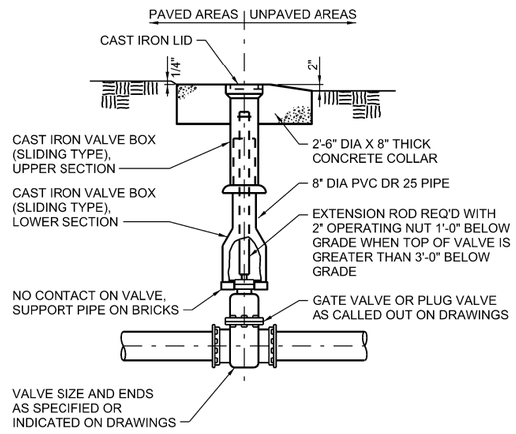
WATER TIGHT MANHOLE FRAME AND COVER
NTS

2121



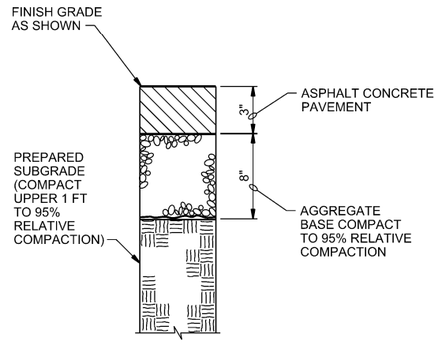
TWO WAY DRAIN LINE CLEANOUT
NTS

2132



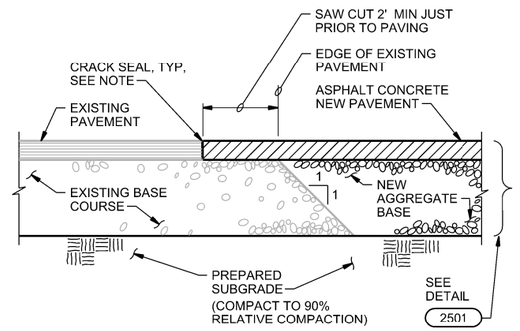
BURIED GATE OR PLUG VALVE BOX, TYPE 1
NTS

2202



ASPHALT CONCRETE PAVEMENT
NTS

2501



NOTES:

1. PAINT EDGE OF EXISTING ASPHALT WITH TACK COAT PRIOR TO PAVING. CRACK SEAL JOINT AFTER PAVING OPERATION HAS BEEN COMPLETED.

PAVEMENT CONNECTION
NTS

2502

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED K ALACOM
DRAWN B TROTTER
CHECKED K ALACOM
APPROVED M FISHER

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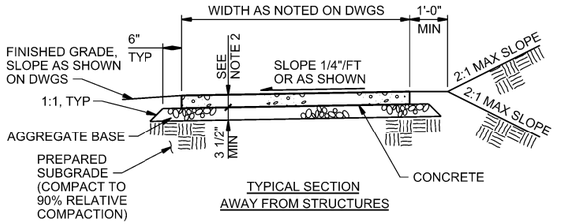
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

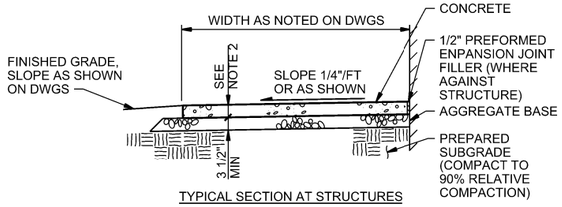
STANDARD DETAILS

STANDARD DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-1
SHEET NUMBER 70



TYPICAL SECTION
AWAY FROM STRUCTURES



TYPICAL SECTION AT STRUCTURES

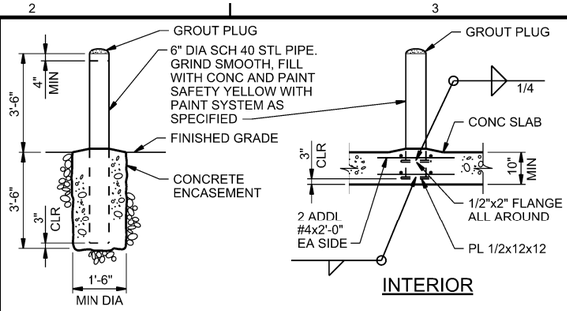
NOTES:

1. SIDEWALKS 8 FEET AND WIDER SHALL HAVE A LONGITUDINAL CONTRACTION JOINT AT THE MIDPOINT. PROVIDE LATERAL CONTRACTION JOINTS AT EQUAL SPACING, NO MORE THAN 5'-0" BETWEEN JOINTS.
2. CONCRETE DEPTH FOR STANDARD SIDEWALKS SHALL BE NOMINAL 3 1/2" MINIMUM, THICKNESS IN DRIVEWAY SHALL BE 5 1/2" MINIMUM.

CONCRETE SIDEWALK

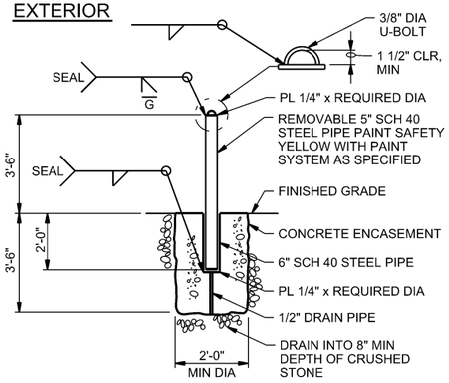
NTS

2503



EXTERIOR

INTERIOR

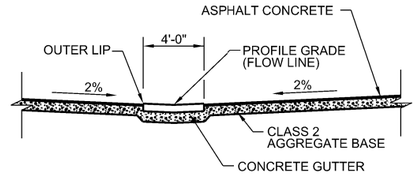


REMOVABLE

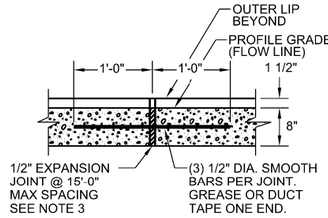
GUARD POST

NTS

2600



TYP. CROSS SECTION



EXPANSION JOINT DETAIL

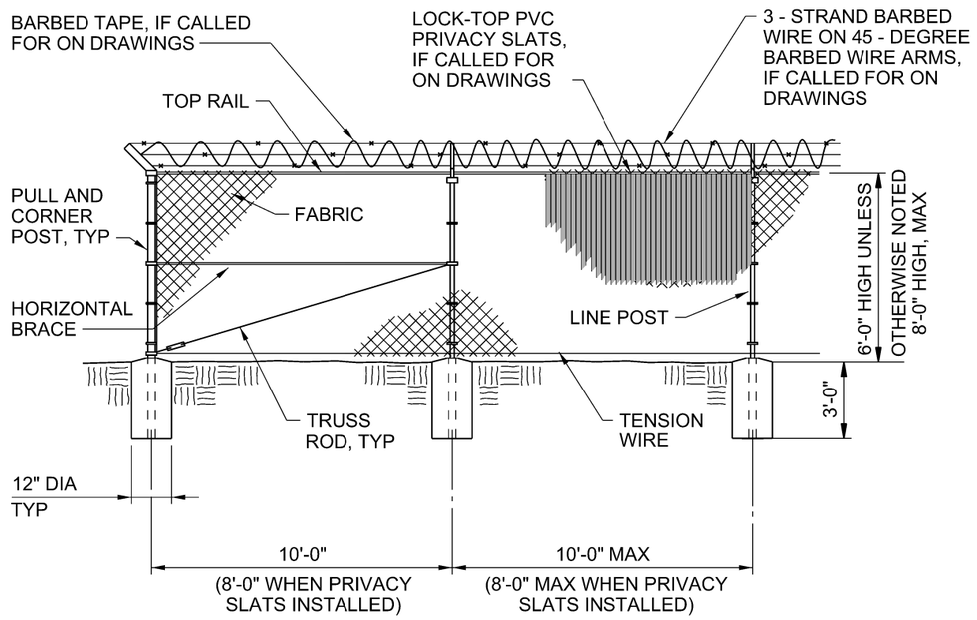
NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
2. SURFACING AND BASE THICKNESS SHALL BE DETERMINED IN ACCORDANCE WITH PROJECT SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
3. 1/2-INCH, PRE-MOLDED EXPANSION JOINT MATERIAL SHALL BE HELD FIRMLY IN PLACE PRIOR TO PLACING CONCRETE.

TYPICAL CONCRETE SWALE

NTS

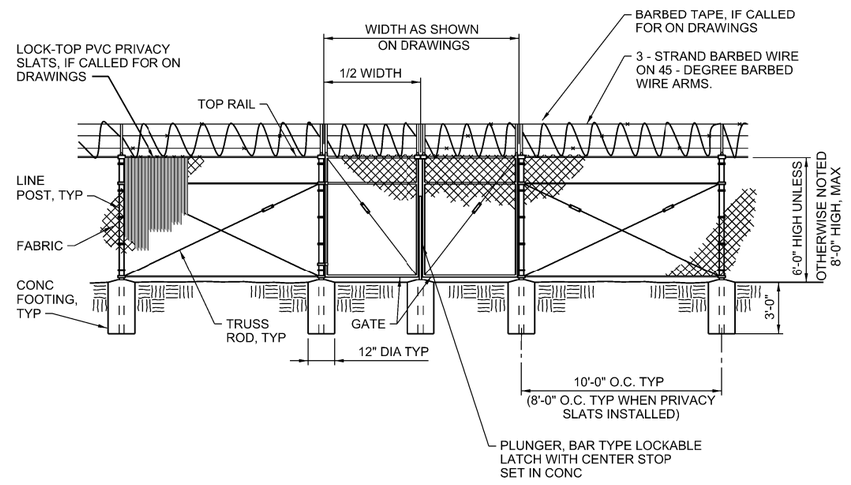
2720



CHAINLINK FENCE

NTS

2800



CHAINLINK DOUBLE-LEAF GATE

NTS

2801

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED K ALACOM
DRAWN B TROTTER
CHECKED K ALACOM
APPROVED M FISHER

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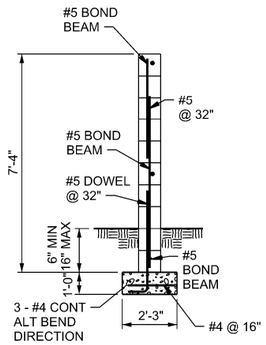
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

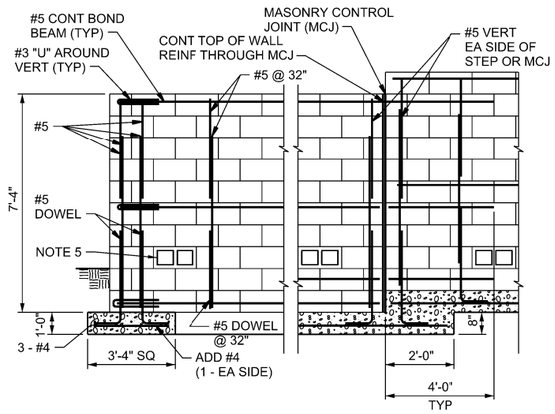
STANDARD DETAILS

STANDARD DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-2
SHEET NUMBER 70



TYPICAL SECTION



DETAIL AT GATE JAMBS

DETAIL AT STEPS AND MCJ

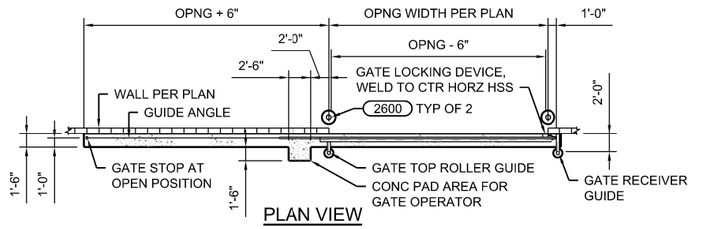
NOTES:

1. FILL SOLID ALL BLOCK BELOW GRADE, AND CELLS WITH REINFORCING.
2. PROVIDE 9 GAUGE LADDER REINF CONTINUOUS EVERY OTHER COURSE.
3. PROVIDE MASONRY CONTROL JOINT (MCJ) AT 30' - 0" OC MAXIMUM.
4. PROVIDE STEPS AS REQUIRED TO MAINTAIN 6' - 0" MINIMUM WALL HEIGHT AND 8" MINIMUM DEPTH OF BURY FOR FOOTER.
5. INSTALL DRAIN BLOCK AT 64" OC AT GRADE.

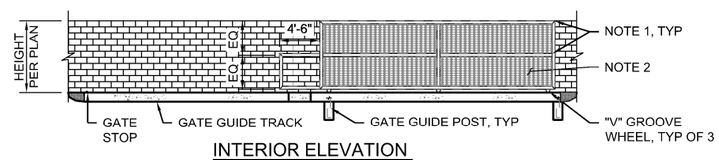
8 - INCH MASONRY WALL

NTS

2810



PLAN VIEW



INTERIOR ELEVATION

NOTES:

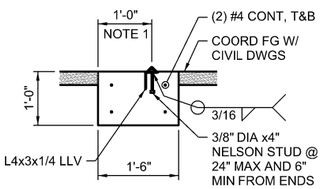
1. HSS2x4x1/4 FRAME, MITER CORNERS AND FULLY WELD ALL JOINTS. COORDINATE GATE WIDTH WITH HARDWARE TO PROPERLY FIT IN THE ROUGH OPENING. GRIND SMOOTH ALL SHARP CORNERS.
2. 1 1/2" DEEP 18 GAUGE PERFORATED / CORRUGATED METAL PANEL WITH 1/4" DIAMETER PERFORATIONS AT 1/2" CENTERS. WELD TO SUPPORTING FRAME AS SHOWN IN THE DETAILS.
3. PAINT ENTIRE GATE ASSEMBLY AFTER FABRICATION USING SYSTEM 300, COLOR SELECTED BY OWNER.
4. FOR ADDITIONAL CONNECTION DETAILS SEE (2819).

STEEL ROLLING GATE

NTS

1 OF 3

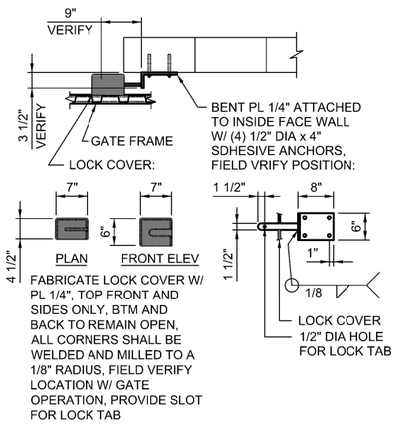
2815



NOTES:

1. COORDINATE WHEEL TRACK LOCATION W/ GATE MFR FOR PRECISE ASSEMBLY. CONSTRUCT TRACK W/ L1 1/2x1 1/2x1/4 ANGLE WELDED TO L4x3, BUTT WELD AND GRIND SMOOTH ALL JOINTS.

GATE GUIDE TRACK



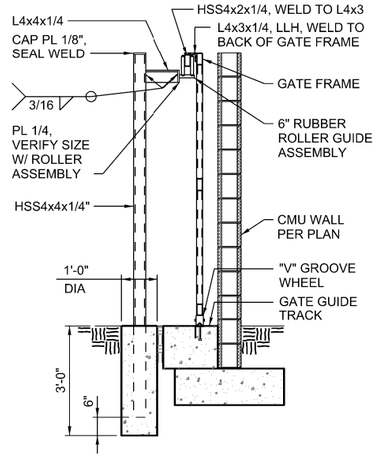
GATE LOCKING DEVICE

STEEL ROLLING GATE

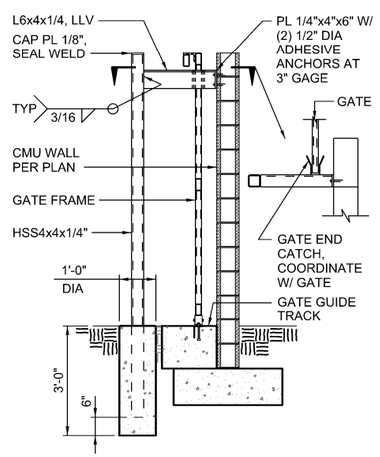
NTS

2 OF 3

2815



GATE TOP ROLLER GUIDE



GATE RECEIVER GUIDE

STEEL ROLLING GATE

NTS

3 OF 3

2815

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED K ALACOM
DRAWN B TROTTER
CHECKED K ALACOM
APPROVED M FISHER

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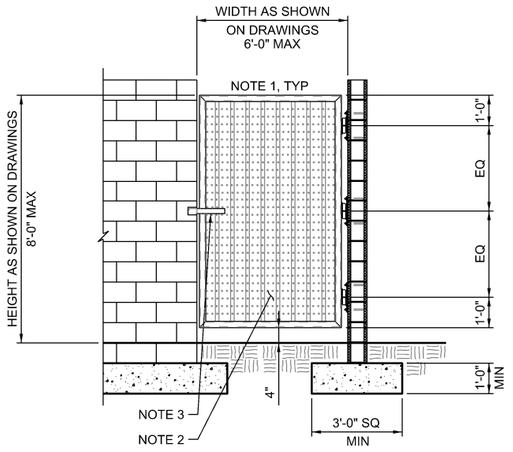
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

STANDARD DETAILS

STANDARD DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-3
SHEET NUMBER 70

FILENAME: 1782D-SD801.dgn PLOT DATE: 2/6/2020 12:53:56 PM



ELEVATION

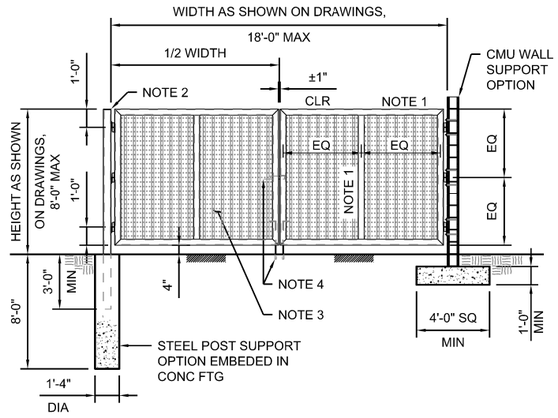
NOTES:

1. HSS2 1/2x2 1/2x3/16 FRAME, MITER CORNERS AND FULLY WELD ALL JOINTS. COORDINATE GATE WIDTH WITH HARDWARE TO PROPERLY FIT IN THE ROUGH OPENING. GRIND SMOOTH ALL SHARP CORNERS.
2. 1 1/2" DEEP 18 GAUGE PERFORATED / CORRUGATED METAL PANEL WITH 1/4" DIAMETER PERFORATIONS AT 1/2" CENTERS. WELD TO SUPPORTING FRAME AS SHOWN IN THE DETAILS.
3. SLIDE BOLT, LOCATE INSIDE OR OUTSIDE GATE AS DIRECTED BY OWNER.
4. PAINT ENTIRE GATE ASSEMBLY AFTER FABRICATION USING SYSTEM 300, COLOR SELECTED BY OWNER.
5. FOR ADDITIONAL CONNECTION DETAILS SEE (2819) .

STEEL SINGLE-LEAF GATE

NTS

2817



ELEVATION

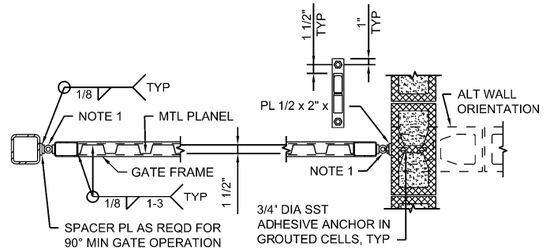
NOTES:

1. HSS2 1/2x2 1/2x3/16 FRAME, MITER CORNERS AND FULLY WELD ALL JOINTS. COORDINATE GATE WIDTH WITH HARDWARE TO PROPERLY FIT IN THE ROUGH OPENING. GRIND SMOOTH ALL SHARP CORNERS.
2. 1 1/2" DEEP 18 GAUGE PERFORATED / CORRUGATED METAL PANEL WITH 1/4" DIAMETER PERFORATIONS AT 1/2" CENTERS. WELD TO SUPPORTING FRAME AS SHOWN IN THE DETAILS.
3. SLIDE BOLT, LOCATE INSIDE OR OUTSIDE GATE AS DIRECTED BY OWNER.
4. PAINT ENTIRE GATE ASSEMBLY AFTER FABRICATION USING SYSTEM 300, COLOR SELECTED BY OWNER.
5. FOR ADDITIONAL CONNECTION DETAILS SEE (2819) .

STEEL DOUBLE-LEAF GATE

NTS

2818

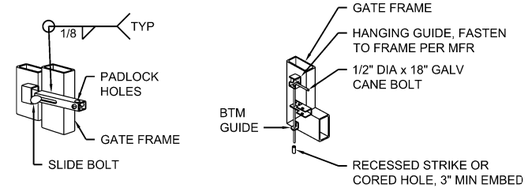


STEEL POST SUPPORT OPTION

CMU WALL SUPPORT OPTION

NOTES:

1. PROVIDE WELD-ON BARREL GATE HINGE W/ 3/4" DIA SST HINGE PIN WHICH PIVOTS ON A BALL BEARING AND FEATURES A "ZERC" TYPE GREASE FITTING. WELDABLE PLATES SHALL BE A MINIMUM OF 3/8"x1 1/2"x3".



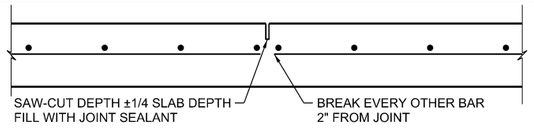
SLIDE BOLT

CANE BOLT

STEEL GATE DETAILS

NTS

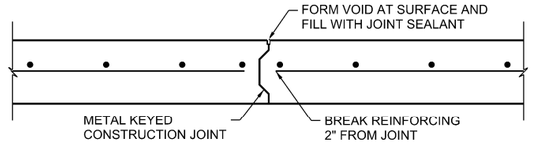
2819



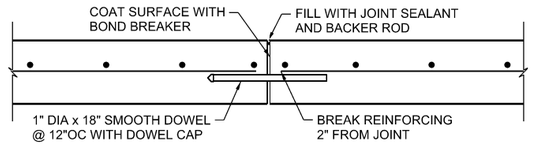
NOTES:

1. SAW-CUT SAME DAY AS POUR AS SOON AS SPALLING WILL NOT OCCUR.
2. CONTRACTOR SHALL USE STRING LINE OR OTHER POSITIVE MEANS TO PLACE REINFORCING AND LOCATE SAWCUT.
3. BREAK REINF AND ADD SPLICE BARS SIMILAR AT DOUBLE MAT.
4. 3/8" TOOLED JOINT MAY BE USED IN PLACE OF SAWN JOINT.

SLAB ON GRADE SAWN JOINT, TYPE A



SLAB ON GRADE CONSTRUCTION JOINT, TYPE B

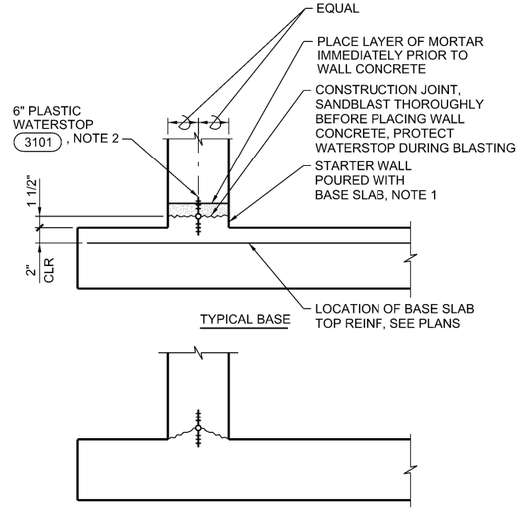


SLAB ON GRADE CONSTRUCTION JOINT, TYPE C

CONC SLAB ON GRADE JOINTS

NTS

3160



TYPICAL BASE

UNACCEPTABLE BASE

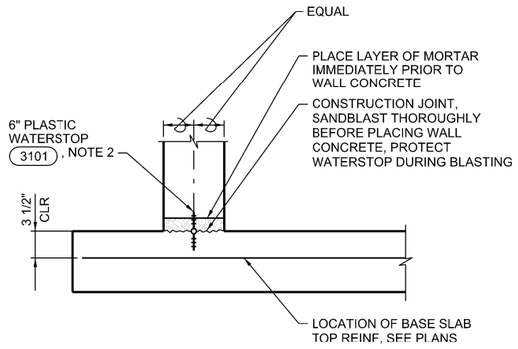
NOTES:

1. STARTER WALL REQUIRED FOR ALL CONSTRUCTION JOINTS WITH WATERSTOPS, UNLESS SPECIFICALLY INDICATED OTHERWISE.
2. FOR WALLS W/SINGLE MAT OF REINFORCING LOCATE WATERSTOP ON LIQUID FACE, 1" CLEAR OF REINFORCING.
3. SECURE WATERSTOP IN-PLACE AS SPECIFIED.

WALL BASE CONSTRUCTION JOINT

NTS

3153



NOTES:

1. FOR WALLS WITH SINGLE MAT OF REINFORCING LOCATE WATERSTOP ON LIQUID FACE, 1" CLEAR OF REINFORCEMENT.
2. SECURE WATERSTOP IN-PLACE AS SPECIFIED.

WALL BASE CONSTRUCTION JOINT

NTS

3154

DESIGNED K ALACOM
DRAWN B TROTTER
CHECKED K ALACOM
APPROVED M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

STANDARD DETAILS

STANDARD DETAILS

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
SD-4
SHEET NUMBER 70

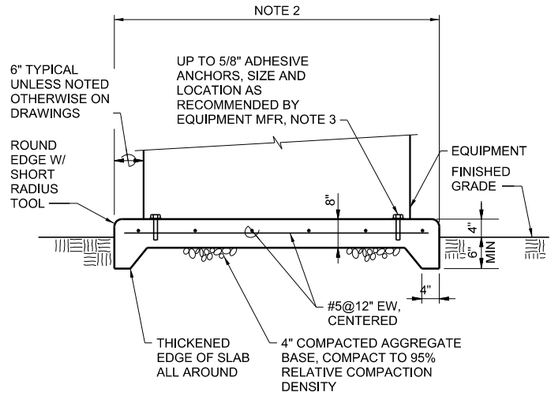
NOTES:

1. PAD SIZE SHALL BE MINIMUM INDICATED OR AS SHOWN ON THE DRAWINGS OR AS INDICATED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER, AND SHALL BE AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A ONE PIECE TEMPLATE, MATCHING THE BASE PLATE, WHILE PAD IS BEING POURED.
3. ANCHOR BOLT SLEEVES SHALL BE USED TO PROVIDE THE ANCHOR BOLT A MINIMUM MOVEMENT OF 1/2" IN ALL DIRECTIONS. THE MINIMUM SLEEVE LENGTH SHALL BE 8 TIMES THE BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT.
4. ANCHOR BOLT SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER THAN BOLT DIAMETER AND A MAXIMUM INTERNAL DIAMETER 3" GREATER THAN ANCHOR BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT.
5. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE.
6. TYPE "D" DETAIL SHALL BE USED ONLY FOR SLABS ON GRADE AND AT GRADE. THE SURROUNDING FLOOR SLAB SHALL NOT BE PLACED UNTIL THE EXACT SIZE AND LOCATION OF THE PAD IS KNOWN.
7. WEDGES OR SHIMS SHALL BE USED TO SUPPORT THE BASE WHILE THE NON-SHRINK GROUT IS PLACED. TEMPORARY LEVELING NUTS SHALL BE BACKED OFF. IF LEFT IN, THE WEDGES OR SHIMS SHALL NOT BE EXPOSED TO VIEW.
8. HEIGHT OF PADS SHALL BE MINIMUM REQUIRED FOR ANCHOR BOLT CLEARANCE TO KEEP ANCHOR BOLT OUT OF SLAB (SEE TABLE BELOW). WHERE EQUIPMENT OR PIPING ELEVATION REQUIRE A PAD HEIGHT LESS THAN THE MINIMUM SHOWN, USE TYPE B WITH BLOCKOUT.

AB DIA (IN.)	1/2	5/8	3/4	7/8	1	1 1/4	1 3/8	1 1/2	1 3/4	2
MIN PAD HT (IN.)	7	8 1/2	10	11	12 1/2	15	16 1/2	18	21	24

9. TYPE "F" PADS MAY BE SUBSTITUTED FOR TYPE "A" PADS FOR LOCATIONS APPROVED IN WRITING BY THE ENGINEER.

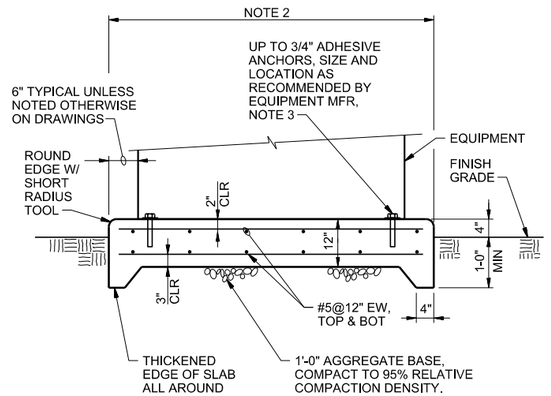
EQUIPMENT PAD NOTES — 3200
NTS



NOTES:

1. SEE (3200) FOR GENERAL EQUIPMENT PAD NOTES.
2. EQUIPMENT PAD SIZE PER DRAWINGS. WHERE PAD SIZE IS NOT SHOWN, SIZE TO FIT EQUIPMENT.
3. IF ANCHOR BOLTS ARE CALLED OUT FOR ON DRAWINGS, PROVIDE ANCHOR BOLTS PER (3210) IN LIEU OF ADHESIVE ANCHORS.

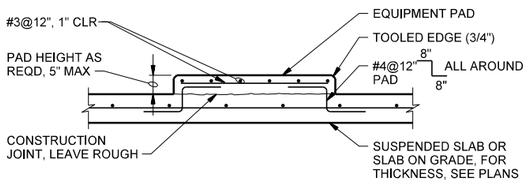
EQUIPMENT PAD-TYPE D — 3200D
NTS



NOTES:

1. SEE (3200) FOR GENERAL EQUIPMENT PAD NOTES.
2. EQUIPMENT PAD SIZE PER DRAWINGS. WHERE PAD SIZE IS NOT SHOWN, SIZE TO FIT EQUIPMENT.
3. ANCHOR BOLT LOCATION SHALL BE WITH IN 4-INCH OF THE FINAL LOCATION REQUIRED FOR EQUIPMENT MOUNTING OR EQUIPMENT PAD SHALL BE DEMOLISHED AND RE-CONSTRUCTED.

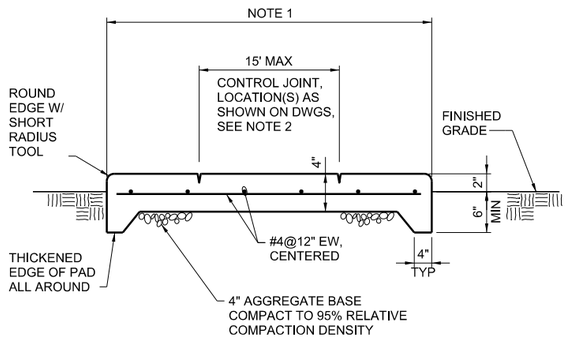
EQUIPMENT PAD-TYPE E — 3200E
NTS



NOTES:

1. SEE (3200) FOR GENERAL EQUIPMENT PAD NOTES.

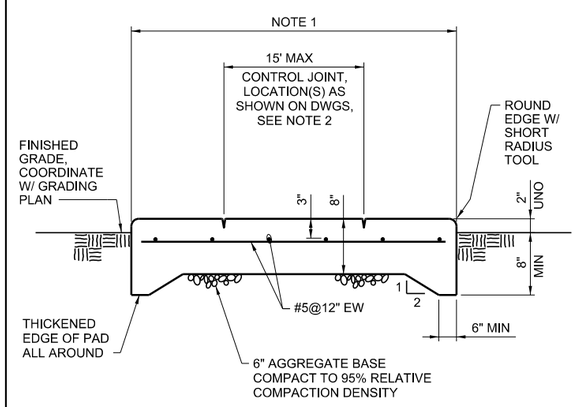
EQUIPMENT PAD-TYPE F — 3200F
NTS



NOTE:

1. CONCRETE PAD, SIZED PER DRAWINGS.
2. CONTROL JOINT SHALL BE FORMED IN FRESH CONCRETE BY HAND TOOLING OR SAW CUTTING. CONTROL JOINTS SHALL BE FORMED TO A DEPTH OF 1 1/2"

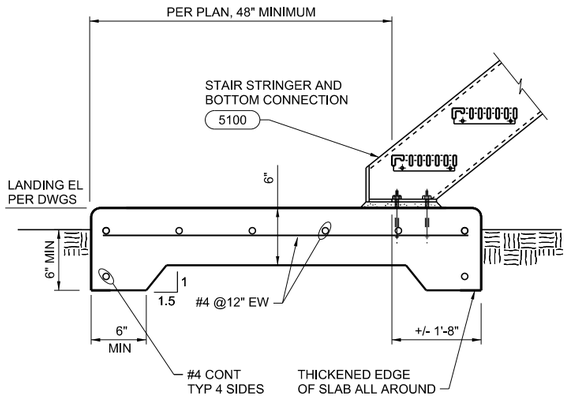
CONCRETE HOUSEKEEPING PAD — 3201
NTS



NOTE:

1. CONCRETE PAD, SIZED PER DRAWINGS.
2. CONTROL JOINT SHALL BE FORMED IN FRESH CONCRETE BY HAND TOOLING OR SAW CUTTING. PROVIDE (3160) TYPE A CONTROL JOINTS, UNLESS OTHERWISE NOTED.

CONCRETE SLAB ON GRADE — 3202
NTS



NOTE:

LANDING WIDTH MINIMUM OF CLEAR STAIR WIDTH PLUS 1'-0".

CONCRETE STAIR LANDING — 3203
NTS

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED K ALACOM
DRAWN B TROTTER
CHECKED K ALACOM
APPROVED M FISHER

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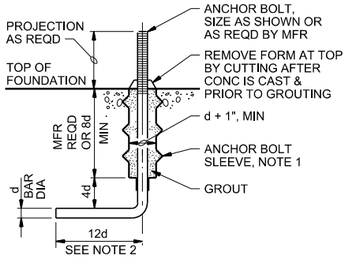
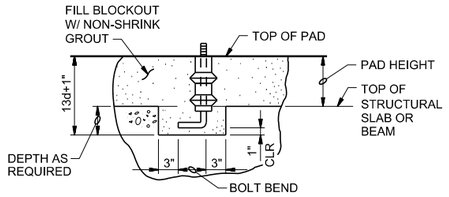
STANDARD DETAILS
STANDARD DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-5
SHEET NUMBER 70



MACHINERY ANCHOR BOLT DETAIL



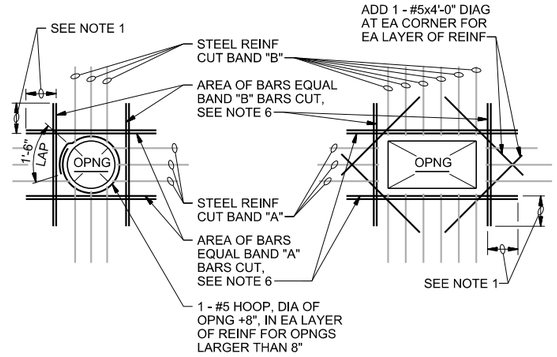
ANCHOR BOLT BLOCKOUT

NOTES:

1. ANCHOR BOLT SLEEVE BY THE ANCHOR BOLT SLEEVE COMPANY, SHELTON, CT, OR EQUAL.
2. 3d WHERE MANUFACTURER VERIFIES NO BOLT PULLOUT RESISTANCE REQUIRED.

ANCHOR BOLT DETAILS 3210

NTS

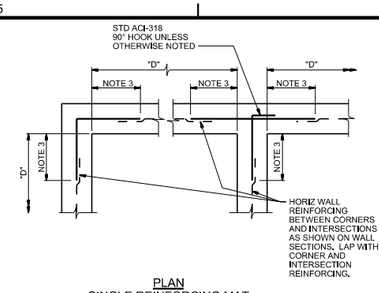


NOTES:

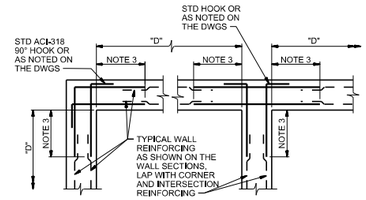
1. PROVIDE MINIMUM LAP, SEE GENERAL STRUCTURAL NOTES. WHERE FULL LAP LENGTH CANNOT BE ACHIEVED DUE TO SLAB OR WALL EDGE, TERMINATE BARS WITH A STANDARD 90 DEGREE BEND 2 INCHES CLEAR OF SLAB OR WALL EDGE. ROTATE HOOKS AS REQUIRED TO MAINTAIN CONCRETE COVER.
2. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS OF BELOW GRADE AND HYDRAULIC STRUCTURES AND ALL STRUCTURAL CONCRETE SLABS UNLESS INDICATED OTHERWISE ON PLANS.
3. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
4. PROVIDE A MINIMUM OF 2 "A" BARS AND 2 "B" BARS EACH SIDE OF OPENING (1 EACH FACE).
5. FOR OPENINGS LARGER THAN 8'-0", REINFORCE SAME AS FOR 8'-0" OPENINGS.
6. SPACE AT 3 BAR DIAMETERS (OR 3" MINIMUM) ON CENTER.

OPENING REINFORCING 3301

NTS



PLAN
SINGLE REINFORCING MAT



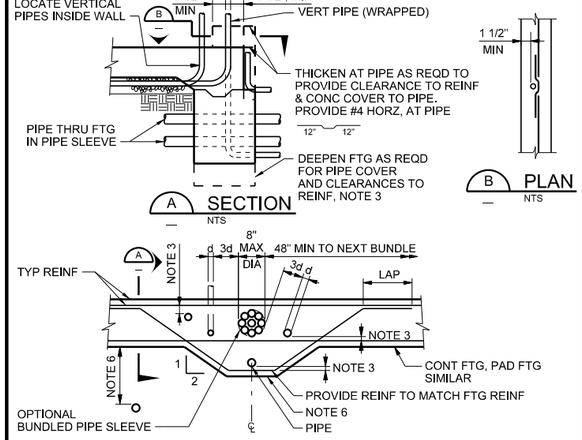
PLAN
DOUBLE REINFORCING MAT

NOTES:

1. TYPICAL HORIZONTAL WALL CORNER AND INTERSECTION REINFORCING LAYOUT IS SHOWN, FOR SIZE AND SPACING, SEE PLANS.
2. WHERE THE CORNER OR INTERSECTION REINFORCING SIZE AND SPACING IS NOT SHOWN, NOTED OR TABULATED ON THE PLANS, THE SIZE AND SPACING SHALL BE THE SAME AS THE WALL HORIZONTAL REINFORCING SHOWN ON THE WALL SECTIONS OR AS NOTED FOR THE REINFORCING BETWEEN THE CORNERS OR INTERSECTIONS.
3. EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS, THE LENGTH INDICATED AS "NOTE 3" SHALL BE THE LESSER OF D/4, 8 FEET, OR 1.0 TIMES THE HEIGHT OF THE WALL, EXCEPT THAT IN NO CASE SHALL IT BE LESS THAN 2.0 FEET.
4. D = LENGTH OF WALL PARALLEL TO THE BAR LENGTH IN QUESTION.
5. USE THE LAP LENGTH AS REQUIRED FOR THE SMALLER OF THE TWO REINFORCING BARS BEING SPLICED. SEE CONCRETE REINFORCING NOTES.

TYPICAL WALL CORNER AND INTERSECTION REINFORCING 3303

NTS

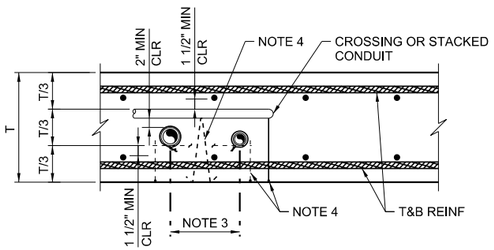


NOTES:

1. PIPE = ANY PENETRATION THRU OR EMBEDDED IN FOUNDATION.
2. ALL PIPES THROUGH FOOTINGS TO BE WRAPPED OR SLEEVED AS FOLLOWS:
   a. SLEEVES: PROVIDE 1" MIN CLR ALL AROUND O.D. PIPE TO I.D. SLEEVE, UNO.
   b. WRAPPED VERTICAL PIPES: PROVIDE 1/8" NOMINAL SHEET FOAM WITH (3) WRAPS MINIMUM,UNO.
   c. WRAPPED HORIZONTAL PIPES: PROVIDE 1/8" NOMINAL SHEET FOAM WITH (8) WRAPS MINIMUM,UNO.
   d. UNDERGROUND FIRE LINES 4" AND LARGER:
      a. SLEEVES: PROVIDE 2" MIN CLEAR ALL AROUND O.D. PIPE TO I.D. SLEEVE
      b. WRAPPED: PROVIDE 1/8" NOMINAL SHEET FOAM WITH (16) WRAPS MIN. WRAPPED & SLEEVED PIPES SHALL HAVE 1 1/2" MIN CLEAR TO REINF STEEL. MIN CONC COVER AT PIPES TO BE 3".
3. CLEARANCE BETWEEN PIPES TO BE 3d MIN TYP. WITH A MAXIMUM OF (8) PIPES PER 48". GROUPS OF PIPES MAY BE BUNDLED AS SHOWN, EXCEPT IN PAD FOOTINGS.
4. NO PIPE TO RUN PARALLEL IN FOOTINGS, STEM OR CURB. PVC CONDUIT (PIPE) EMBEDDED IN CURB/STEM MAY BE WIRED TIED TO HORIZ REINF.
5. NO HORIZONTAL PIPES ALLOWED THROUGH FOOTING WITH 2'-0" EACH SIDE OF HOLD-DOWNS OR STEEL COLUMNS. NO VERTICAL PIPES ALLOWED IN FOOTINGS AT BRACED FRAMES.
6. PROVIDE 18" MIN OF COMPACTED FILL ABOVE PIPES UP TO 12" DIA. FOR LARGER PIPES INCREASE COMPACTED FILL DEPTH 1'-0" FOR EACH 6" INCREASE IN PIPE DIAMETER. OTHERWISE DEEPEN THE FOOTING AS SHOWN.

PIPES THRU FOOTINGS 3305

NTS



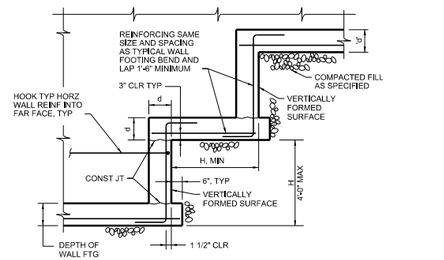
ELEVATED SLAB OR WALL SECTION

NOTES:

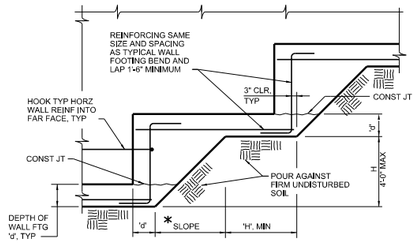
1. ONLY PLACE CONDUITS WITHIN MIDDLE THIRD OF SLAB OR WALL THICKNESS.
2. AT EXIT OR ENTRY INTO SLAB OR WALL, REINFORCE OPENINGS CREATED BY MULTIPLE CONDUITS PER (3301).
3. MINIMUM ON CENTER HORIZONTAL SPACING OF PARALLEL CONDUITS = 3X OUTSIDE DIAMETER OF LARGER CONDUIT.
4. SUPPORT CONDUITS ON ADDED REINFORCEMENT CHAIRS OR BOLSTERS. TIE CONDUITS TO SUPPORTS AND ANCHOR TO PREVENT FLOATATION. SUPPORT CONDUITS AT CROSSING TO PREVENT SAG AND MAINTAIN CLEARANCES SHOWN.
5. FOR SECTIONS OF ELEMENTS NOT SHOWN, SUCH AS COLUMNS, PLACE CONDUITS AS DIRECTED BY ENGINEER.

CONDUIT IN STRUCTURAL CONCRETE 3307

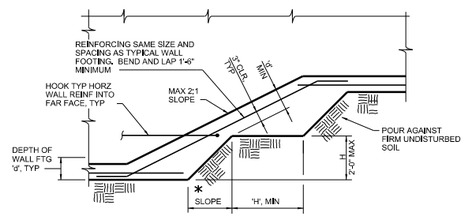
NTS



TYPE A



TYPE B



TYPE C

NOTE:

* WALL FOOTING SHOWN, MAT FOUNDATION SIMILAR. PROVIDE TOP AND BOTTOM REBAR MATS WHERE PRESENT

STEPPED FOOTING 3308

NTS

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED J KELLOGG
DRAWN B TROTTER
CHECKED J KELLOGG
APPROVED M FISHER

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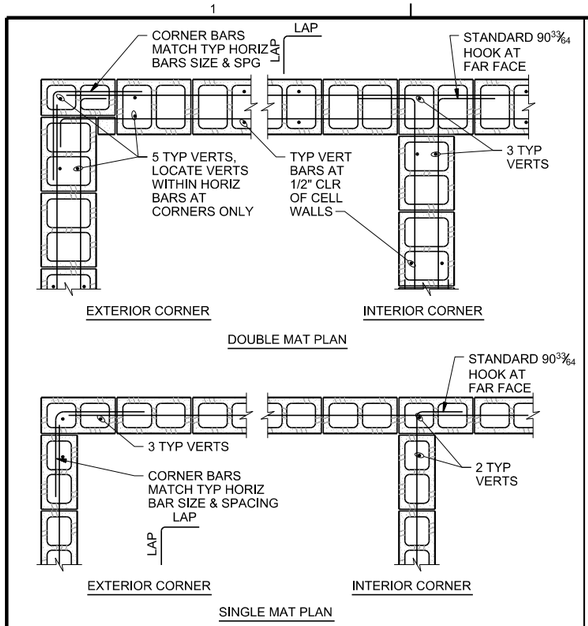
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

STANDARD DETAILS

STANDARD DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-6
SHEET NUMBER 70

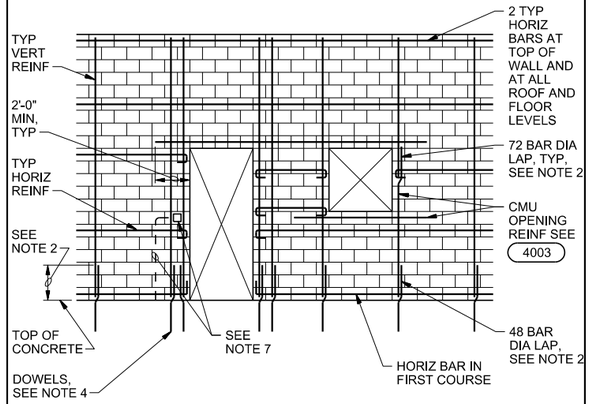


NOTES:

1. LAP=48 BAR DIAMETERS OR 2'-0" MINIMUM UNLESS OTHERWISE NOTED.
2. PROVIDE A STANDARD 90°3/64 HOOK EACH END ON ANY HORIZONTAL BAR BETWEEN OPENINGS, CONTROL JOINTS, OR CORNERS LESS THAN 6'-0" IN LENGTH.

CMU WALL CORNERS 4001

NTS



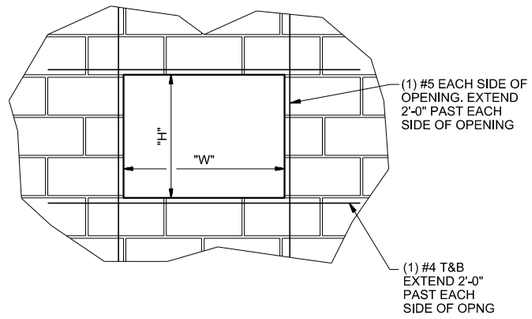
ELEVATION

NOTES:

1. FOR TYPICAL WALL REINFORCING, SEE WALL SECTIONS AND DETAILS FOR EACH FACILITY.
2. LAP VERTICAL REINFORCING WITH WALL DOWELS 48 BAR DIAMETERS (2'-0" MIN), LAP ALL OTHER VERTICAL BARS 72 BAR DIAMETERS.
3. STAGGER SPLICES IN ADJACENT HORIZONTAL BARS IN THE SAME COURSE BY 2'-0".
4. PROVIDE DOWEL BARS IN FOUNDATION TO MATCH ALL VERTICAL REINFORCING.
5. FOR ADDED REINFORCING AT WALL INTERSECTIONS AND CORNERS, SEE 4001
6. SOLID GROUT ALL CMU WALLS UNLESS NOTED OTHERWISE.
7. DO NOT PLACE VERTICAL CONDUIT IN THE SAME CELL AS VERTICAL REINFORCING.

REINFORCED CMU WALL 4002

NTS

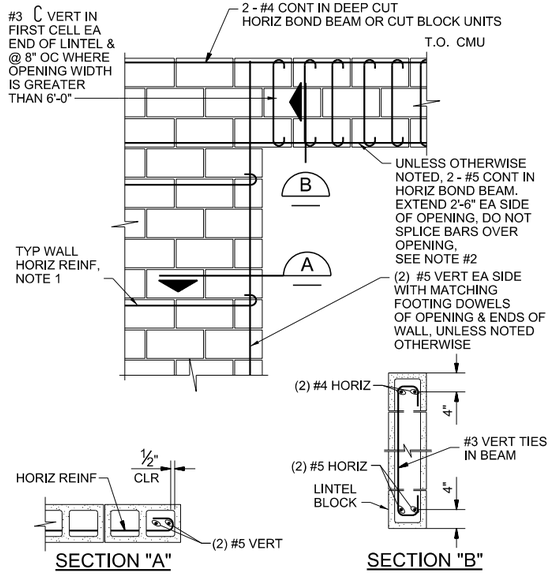


NOTES:

1. THIS DETAIL APPLICABLE WHERE OPNG LESS THEN 3'-0" IN ANY DIMENSION. SEE DETAIL 4004 FOR LARGER OPENINGS.
2. TERMINATE HORZ REINF WITH 180° HOOK AT WALL ENDS AND CMU CONTROL JOINTS PER DETAIL.

CMU OPENINGS LESS THAN 3'-0" 4003

NTS

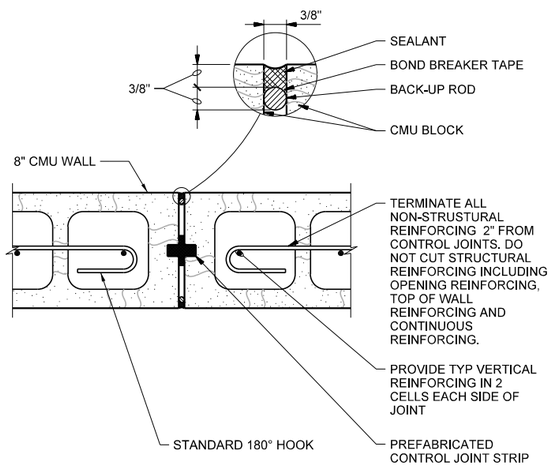


NOTES:

1. TERMINATE HORIZ REINF WITH 180° HOOK AT WALL ENDS , JAMB OPENINGS AND CMU CONTROL JOINTS.
2. PLACE (2) #5 HORIZ AT WINDOW SILLS , SIM TO TOP OF OPENING.

CMU OPENINGS GREATER THAN 3'-0" 4004

NTS

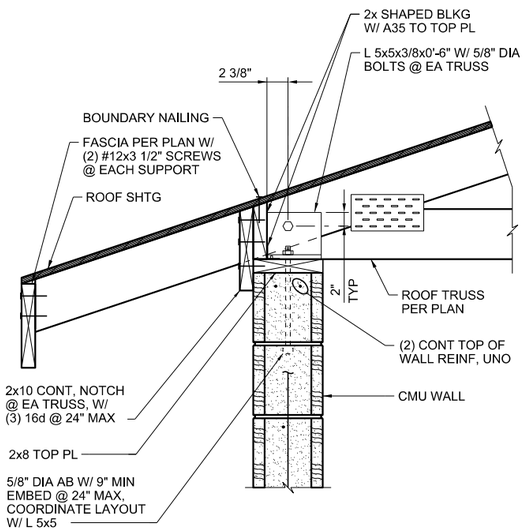


NOTE:

12" CMU WALL WITH 2 LAYERS OF REINFORCING IS SIMILAR.

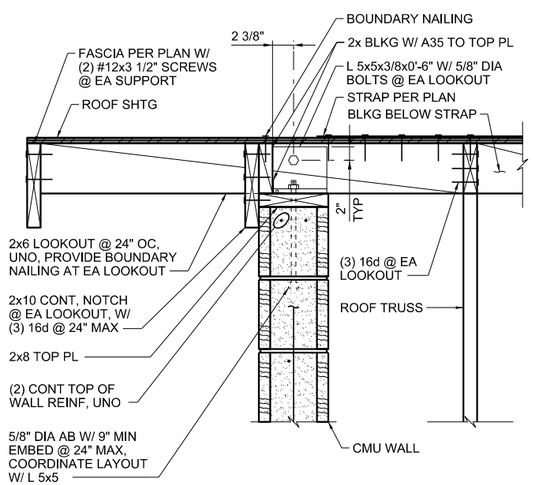
CMU CONTROL JOINT 4100

NTS



TOP OF WALL SECTION 4200

NTS



GABLE END WALL SECTION 4201

NTS

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED J KELLOGG
DRAWN B TROTTER
CHECKED J KELLOGG
APPROVED M FISHER

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

STANDARD DETAILS

STANDARD DETAILS

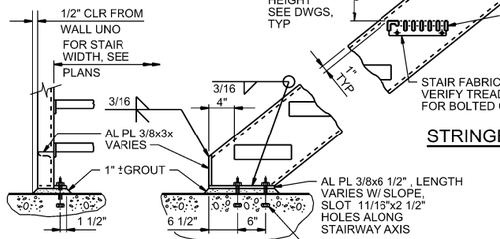
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-7
SHEET NUMBER 70

FILENAME: 1782D-SD801.dgn PLOT DATE: 2/10/2020 10:49:47 AM

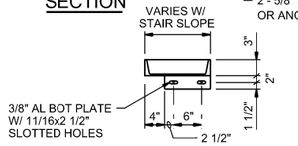
STAIRWAY WIDTH	BEARING BARS ALUMINUM TREAD
2'-3" OR LESS	1"x3/16"
2'-9" OR LESS	1 1/4"x3/16"
3'-5" OR LESS	1 1/2"x3/16"
4'-2" OR LESS	1 3/4"x3/16"

NOTES:

1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE AS SPECIFIED.
2. GRIND EXPOSED FACES ONLY.
3. STAIR HANDRAIL NOT SHOWN FOR CLARITY. PROVIDE STAIR HANDRAIL BOTH SIDES.
4. FABRICATOR TO COORDINATE BOLTED TREADS AND RAIL POST CONNECTIONS



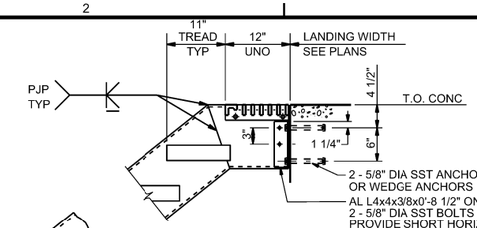
SECTION



PLAN BOTTOM

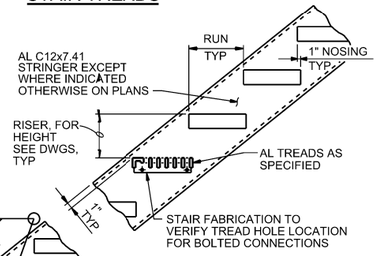
ALUMINUM STAIRS

NTS



STAIR TREADS

TOP CONNECTION CONCRETE



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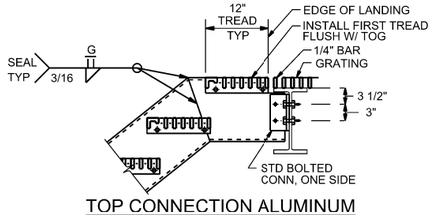
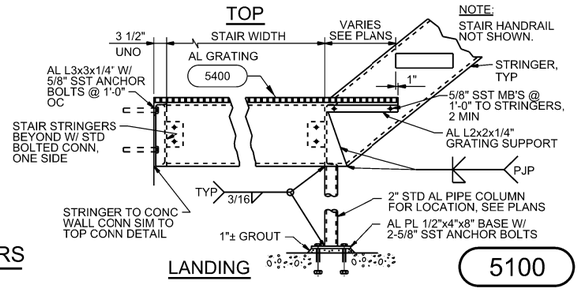


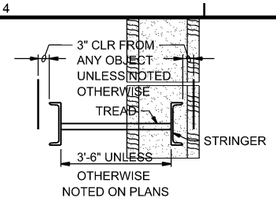
TOP CONNECTION ALUMINUM



LANDING

5100

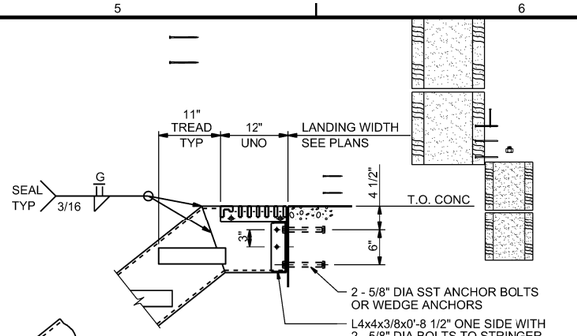
STAIRWAY WIDTH	TREAD DEPTH
3'-0" OR LESS	1 1/2"
4'-0" OR LESS	2"



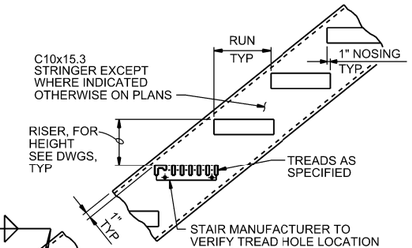
STAIR TREADS

NOTES:

1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE AS SPECIFIED.
2. GRIND EXPOSED FACES ONLY.
3. STAIR HANDRAIL NOT SHOWN FOR CLARITY. PROVIDE STAIR HANDRAIL BOTH SIDES PER PLAN.



TOP



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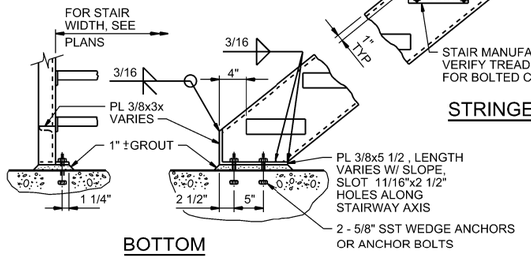
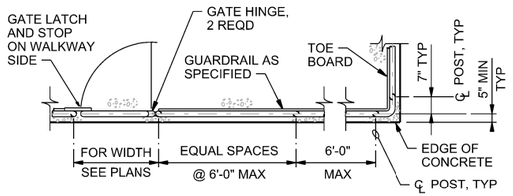


BOTTOM

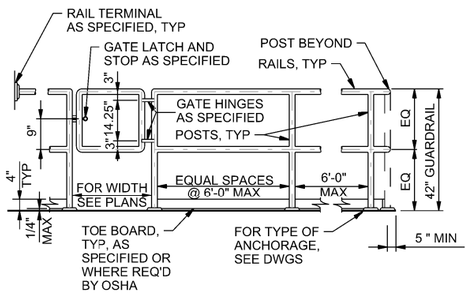
STEEL STAIRS

NTS

5152



PLAN



ELEVATION

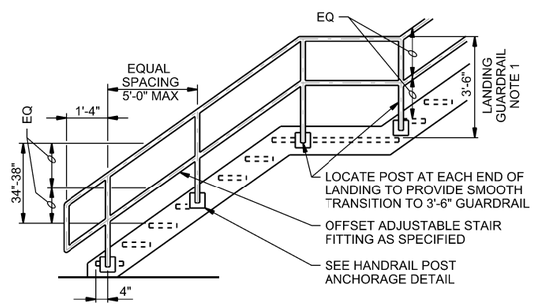
NOTE:

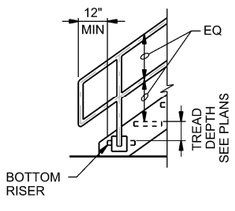
1. FOR GUARDRAIL MATERIAL REFERENCE DRAWINGS AND/OR JOB SPECIFICATIONS

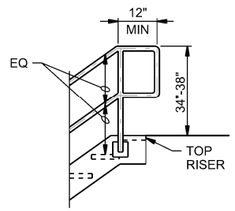
TWO-RAIL GUARDRAIL

NTS

5200A







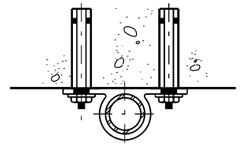
NOTES:

1. SEE TYPICAL GUARDRAIL DETAIL (5200A) .
2. SEE SPECIFICATIONS FOR HANDRAIL MATERIAL.

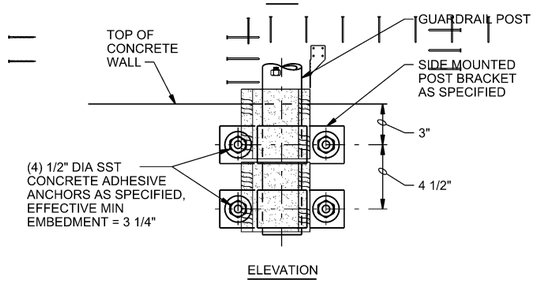
TWO-RAIL HANDRAIL AT STAIRS

NTS

5201A



PLAN



ELEVATION

NOTES:

1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.
2. USE SIDE MOUNTED POST BRACKET AS A TEMPLATE FOR THE ANCHOR BOLTS.
3. MAINTAIN THE CLEARANCES BETWEEN THE TOE BOARD AND THE CONCRETE SURFACES REQUIRED BY ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

GUARDRAIL POST ANCHORAGE-ALUMINUM

NTS

5250B

DESIGNED J KELLOGG
DRAWN B TROTTER
CHECKED J KELLOGG
APPROVED M FISHER

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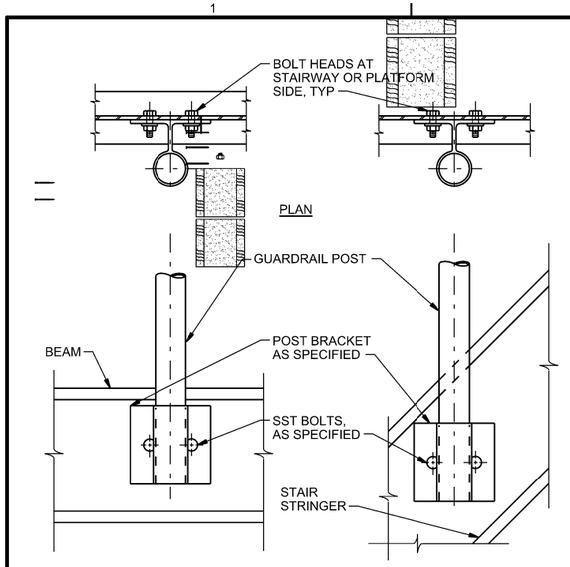
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

STANDARD DETAILS

STANDARD DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-8
SHEET NUMBER 70



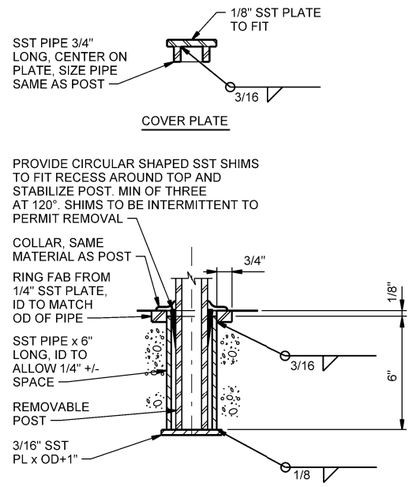
NOTES:

1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.
2. HANDRAIL POST ANCHORAGE TO ALSO BE USED FOR GUARDRAIL POST ANCHORAGE.
3. REFERENCE DRAWINGS AND OR SPECIFICATIONS FOR MATERIALS.

GUARDRAIL POST ANCHORAGE-TYPE D

NTS

5250D



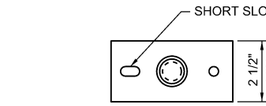
NOTES:

1. PROVIDE COVER PLATE FOR EACH ANCHORAGE SLEEVE.
2. HANDRAIL POST ANCHORAGE TO ALSO BE USED FOR GUARDRAIL POST ANCHORAGE.

GUARDRAIL POST ANCHORAGE-TYPE E

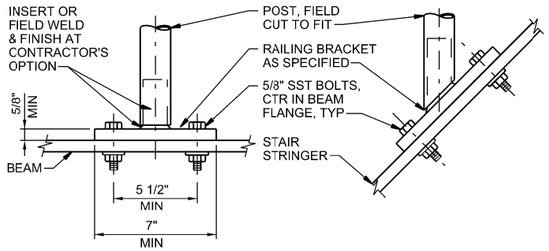
NTS

5250E



PLAN

NTS



ELEVATION

NTS

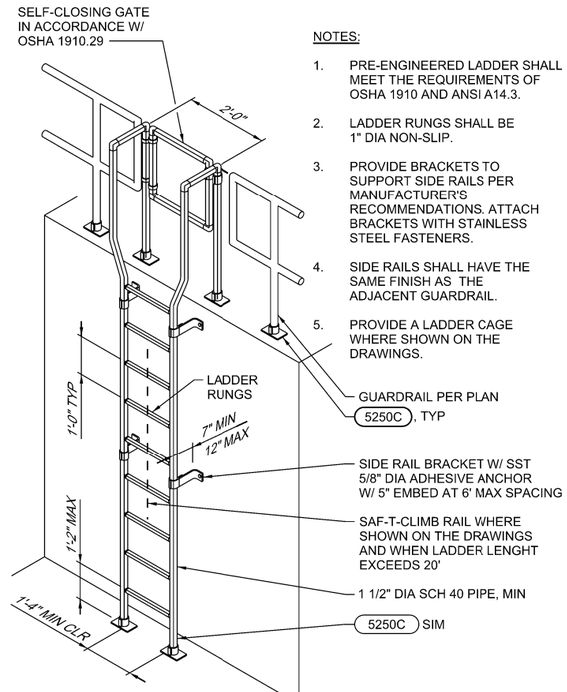
NOTE:

PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.

HANDRAIL POST ANCHORAGE TYPE F

NTS

5250F



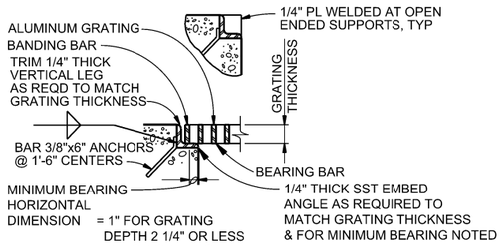
NOTES:

1. PRE-ENGINEERED LADDER SHALL MEET THE REQUIREMENTS OF OSHA 1910 AND ANSI A14.3.
2. LADDER RUNGS SHALL BE 1" DIA NON-SLIP.
3. PROVIDE BRACKETS TO SUPPORT SIDE RAILS PER MANUFACTURER'S RECOMMENDATIONS. ATTACH BRACKETS WITH STAINLESS STEEL FASTENERS.
4. SIDE RAILS SHALL HAVE THE SAME FINISH AS THE ADJACENT GUARDRAIL.
5. PROVIDE A LADDER CAGE WHERE SHOWN ON THE DRAWINGS.

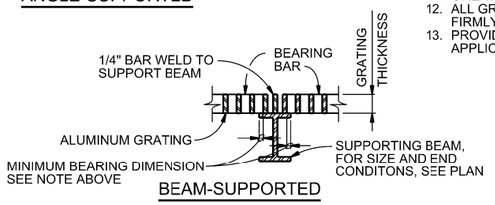
FIXED LADDER - ALUMINUM

NTS

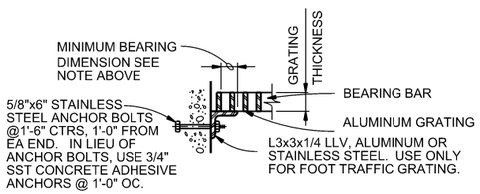
5300



CONCRETE INSERT ANGLE-SUPPORTED



BEAM-SUPPORTED



LEDGER ANGLE-SUPPORTED

GRATING NOTES

1. EXTEND GRATING CONTINUOUSLY OVER GATE GUIDES AND GATES.
2. NOTCH GRATING SUPPORTS AT GATES AS REQUIRED.
3. GRATING SPAN ⟷ SEE PLAN.
4. WIDTH OF GRATING SECTIONS SHALL NOT EXCEED 3'-0" AND INDIVIDUAL SECTION WEIGHT SHALL NOT EXCEED 150 POUNDS.
5. SHOP DRAWINGS BASED ON FIELD DIMENSIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION.
6. MATERIAL FOR SUPPORTS OF ALUMINUM GRATING TO BE SAME AS GRATING, EXCEPT METAL SUPPORTS THAT ARE TO BE EMBEDED IN CONCRETE SHALL BE TYPE 316 STAINLESS STEEL.
7. UNLESS NOTED OTHERWISE ON PLANS, GRATING THICKNESS SHALL BE AS TABULATED IN "GRATING THICKNESS TABLE" FOR APPLICABLE TRAFFIC.
8. BEARING BAR THICKNESS FOR GRATING TO BE 3/16" MINIMUM.
9. BAND ALL EDGES WITH 3/16 x DEPTH OF BEARING BAR.
10. PROVIDE MISCELLANEOUS GRATING FASTENERS AS REQUIRED.
11. THE HORIZONTAL CLEARANCE BETWEEN THE GRATING AND GRATING SUPPORTS SHALL NOT BE LESS THAN 1/4" NOR GREATER THAN 1/2" AND AS SPECIFIED.
12. ALL GRATING SECTIONS, WHEN IN PLACE, SHALL ALWAYS BE FIRMLY ANCHORED TO THEIR SUPPORTS AS SPECIFIED.
13. PROVIDE SUPPORT TYPE SHOWN IN DRAWINGS OR MOST APPLICABLE FOR THE INSTALLATION CONDITIONS.

FOOT TRAFFIC

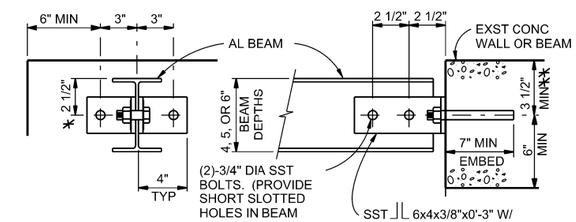
GRATING THICKNESS TABLE

MAXIMUM SPAN	ALUMINUM (IN.)
3'-6"	1 1/4"
4'-0"	1 1/2"
4'-6"	1 3/4"
5'-0"	1 3/4"
5'-6"	2"
6'-0"	2 1/4"
6'-6"	2 1/4"
7'-0"	2 1/2"

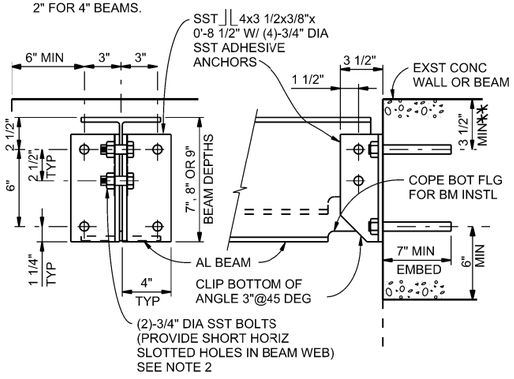
ALUMINUM GRATING

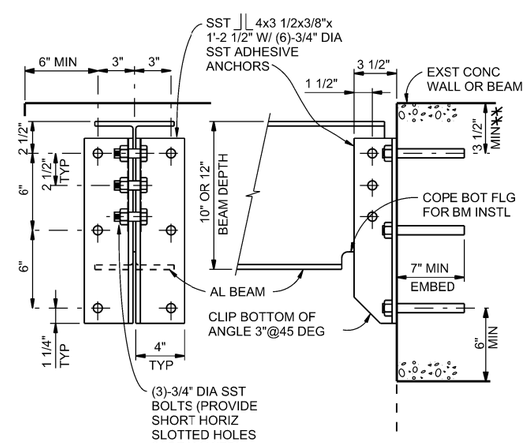
NTS

5400



✶ NOTE:
2 1/2" DIMENSION TYPICAL EXCEPT 2" FOR 4" BEAMS.





NOTES:

1. ✶ DO NOT CUT EXISTING CONCRETE BEAM TOP REINFORCING DURING DRILL-IN ANCHOR INSTALLATION. FIELD LOCATE BEAM REINFORCING PRIOR TO FABRICATION. ADD LENGTH TO CLIP ANGLES AS REQUIRED TO LOWER ANCHORS TO CLEAR REINFORCING WHILE MAINTAINING SPACING AND EDGE DISTANCE AS SHOWN.
2. AT ONE END ONLY, TIGHTEN SNUG TIGHT AND BACK OFF HALF TURN AND DOUBLE NUT.

BEAM / WALL CONNECTION - ALUM

NTS

5828

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED J KELLOGG
DRAWN B TROTTER
CHECKED J KELLOGG
APPROVED M FISHER

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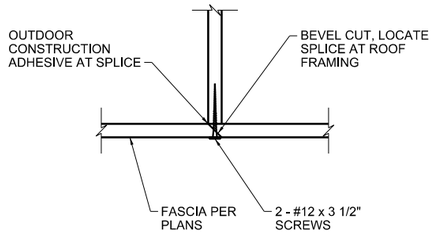
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

STANDARD DETAILS

STANDARD DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-9
SHEET NUMBER 70

FILENAME: 1782D-SD801.dgn PLOT DATE: 2/10/2020 10:48:34 AM



FASCIA SPLICE 6000

NTS

ALLOWABLE VERTICAL LOADS:

C_D = 1.0, C_L = 1.0		ALLOW UNIFORM VERTICAL LOAD	ALLOW VERT REACTION
2x4 WALLS: L=4'		955 plf	3281 #
C_F = 1.3	L=8'	415 plf	3281 #
2x6 WALLS: L=4'		1387 plf	5156 #
C_F = 1.0	L=8'	645 plf	5156 #

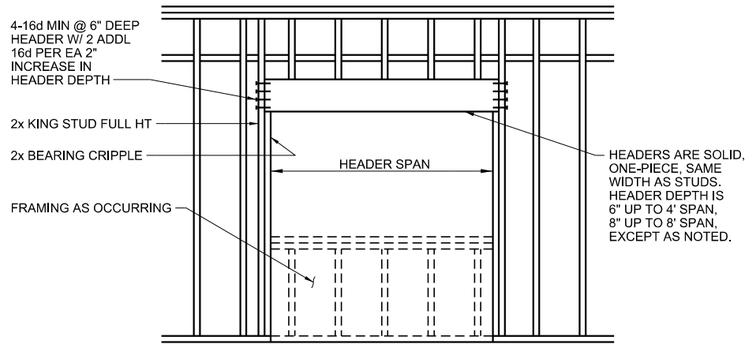
NOTE: ALLOWABLE UNIFORM VERTICAL LOAD IS GOVERNED BENDING. THE ALLOWABLE VERTICAL REACTION IS GOVERNED BY COMPRESSION PERPENDICULAR TO GRAIN

TYPICAL DETAIL AT WALL, USING ROOFING MANUFACTURER'S STANDARD TERMINATION BAR. ADD WALL AND ROOF DECK CONSTRUCTION AS REQUIRED. OTHER TERMINATIONS ARE AVAILABLE, OR FLASHING MEMBRANE CAN BE CONTINUED UP AND SECURED TO WOOD NAILER BELOW METAL COPING.

ALLOWABLE HORIZONTAL LOADS:

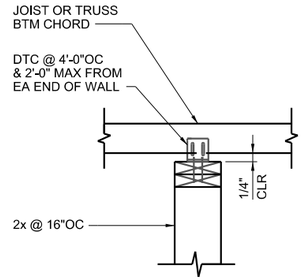
C_D = 1.6, C_L = 1.0 C_{eg} = 0.67	ALLOW UNIFORM HORZ LOAD	ALLOW HORZ REACTION 2x4
WALLS:	L=4'253 plf506 #	L=8'190 plf759 #2x6
C_F = 1.3	L=4'253 plf506 #	L=8'190 plf759 #NOTE;

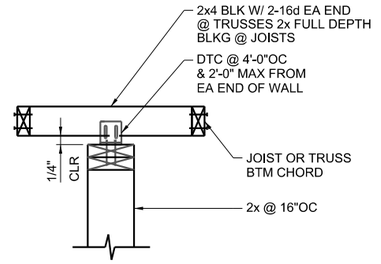
ALLOWABLE UNIFORM HORZ LOADS ARE GOVERNED BY THE CONNECTION, THE ALLOWABLE LOADS MAYBE INCREASED FOR BENDING & DEFLECTION IF THE CONNECTION ISSTRENGTHENED.



WALL OPENING 6005

NTS

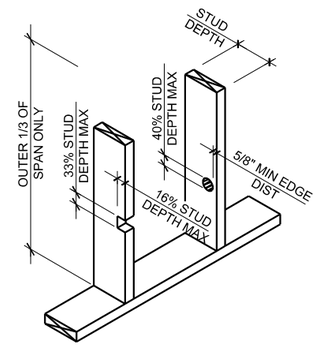




*PLYWOOD AND FINISHES NOT SHOWN FOR CLARITY

NON-BRG WALL DETAIL 6010

NTS



BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH

WOOD STUD CUTTING, NOTCHING, & BORING LIMITS 6020

NTS

DESIGNED J KELLOGG
DRAWN B TROTTER
CHECKED J KELLOGG
APPROVED M FISHER

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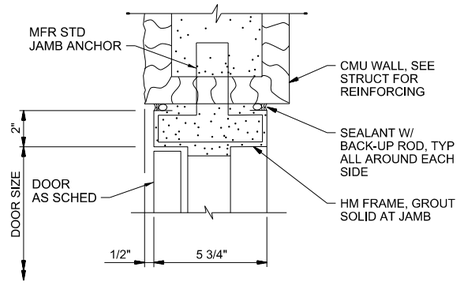
STANDARD DETAILS

STANDARD DETAILS

PRELIMINARY NOT FOR CONSTRUCTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-10
SHEET NUMBER 70

FILENAME: 1782D-SD801.dgn PLOT DATE: 2/6/2020 1:02:10 PM

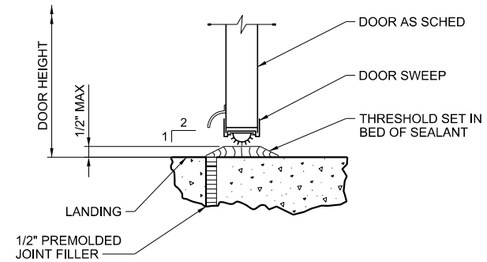


NOTE:
HEAD SIMILAR

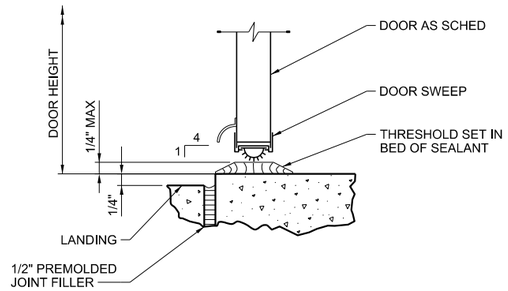
DOOR JAMB - 8" CMU

8100

NTS



FLUSH LANDING - TYPE A

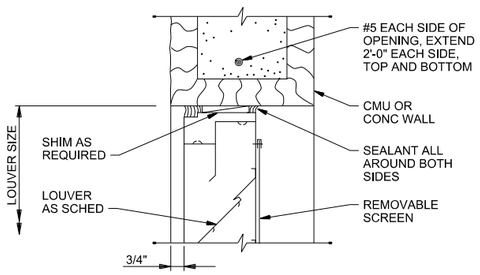


OFFSET LANDING - TYPE B

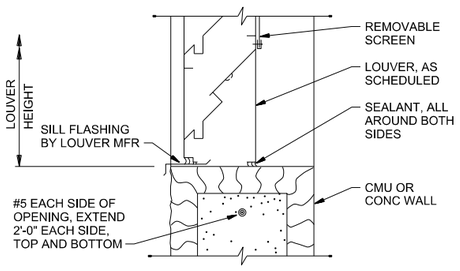
DOOR THRESHOLD

8110

NTS



HEAD
(JAMB SIMILAR)

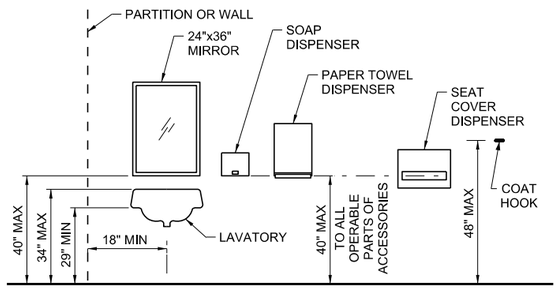


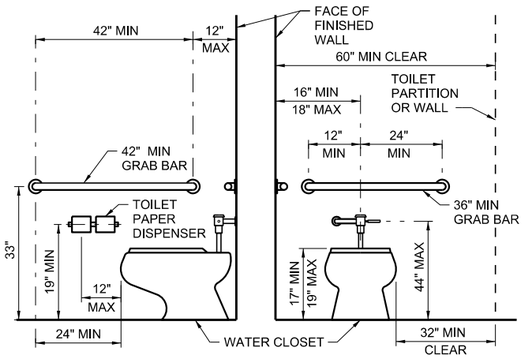
SILL

LOUVER

8115

NTS





STANDARD ACCESSIBLE FIXTURE MOUNTING LOCATIONS

10100

NTS

WATERWORKS ENGINEERS
1405 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

DESIGNED J KELLOGG
DRAWN B TROTTER
CHECKED J KELLOGG
APPROVED M FISHER

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

STANDARD DETAILS

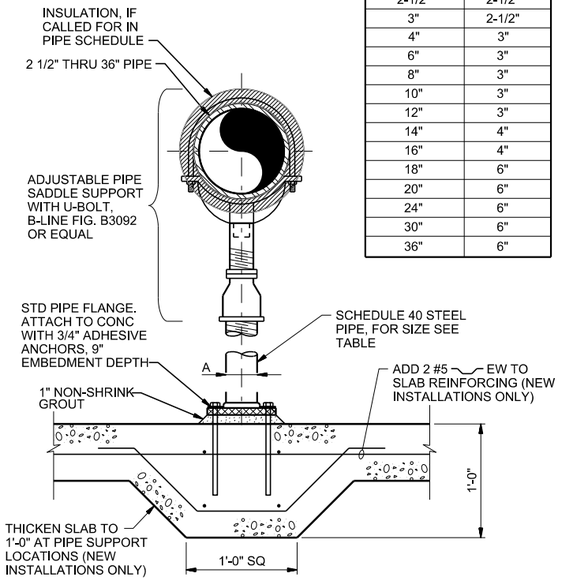
STANDARD DETAILS

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
SD-11
SHEET NUMBER 70

FILENAME: 1782D-SD801.dgn PLOT DATE: 2/6/2020 1:02:34 PM

DIMENSION TABLE	
PIPE SIZE	A
2-1/2"	2-1/2"
3"	2-1/2"
4"	3"
6"	3"
8"	3"
10"	3"
12"	3"
14"	4"
16"	4"
18"	6"
20"	6"
24"	6"
30"	6"
36"	6"

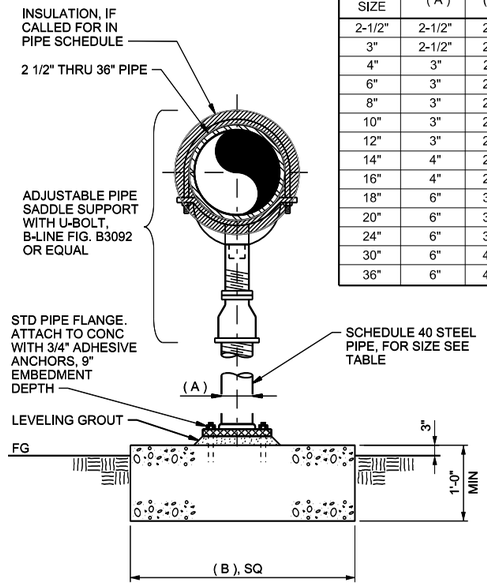


ADJUSTABLE-HEIGHT SADDLE PIPE SUPPORT

NTS

15000

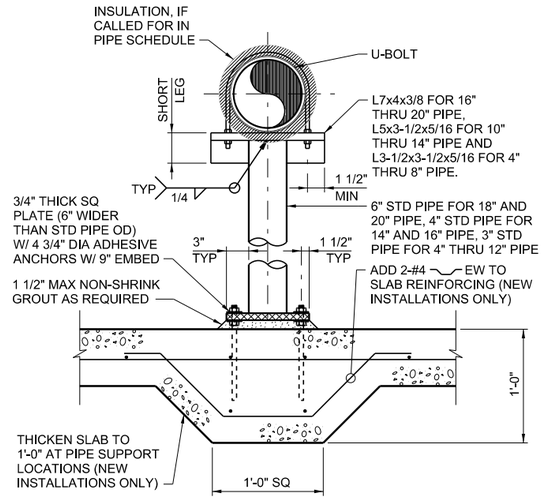
DIMENSION TABLE		
PIPE SIZE	(A)	(B)
2-1/2"	2-1/2"	2'-0"
3"	2-1/2"	2'-0"
4"	3"	2'-0"
6"	3"	2'-0"
8"	3"	2'-0"
10"	3"	2'-0"
12"	3"	2'-0"
14"	4"	2'-0"
16"	4"	2'-0"
18"	6"	3'-0"
20"	6"	3'-0"
24"	6"	3'-0"
30"	6"	4'-0"
36"	6"	4'-0"



ADJUSTABLE-HEIGHT SADDLE PIPE SUPPORT WITH CONCRETE PAD

NTS

15000A



NOTES:

1. COAT ALL SHAPES PER SPECIFICATION SECTION 09900 SYSTEM 300.

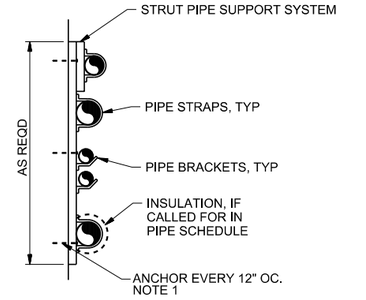
FIXED-HEIGHT T-POST PIPE SUPPORT

NTS

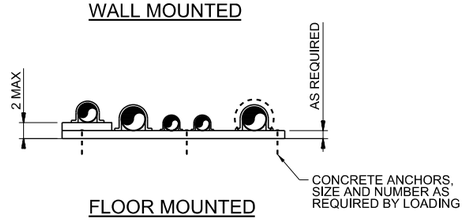
15001

NOTE:

USE NEOPRENE SLEEVE ON COPPER AND PVC PIPING AT STRAPS AND BRACKETS.



WALL MOUNTED



FLOOR MOUNTED

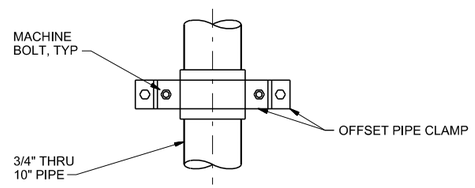
NOTE :

1. ATTACH TO WALL WITH SST ANCHORS, 3/8" DIAMETER MIN, COORDINATED WITH WALL CONSTRUCTION

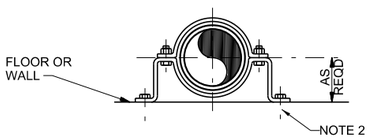
PIPE SUPPORTS

NTS

15010



PLAN OR VERTICAL PIPE ELEVATION



SECTION

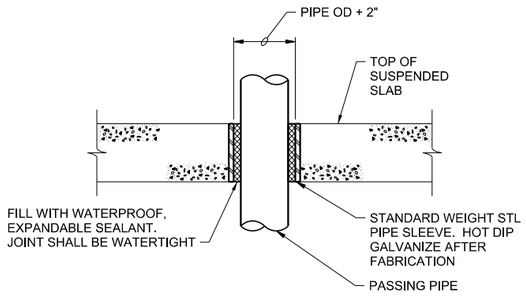
NOTES:

1. FOR VERTICAL PIPE RUNS ONLY.
2. ATTACH TO WALL WITH SST ANCHORS, 3/8" DIAMETER MIN, COORDINATED WITH WALL CONSTRUCTION

WALL-MOUNTED STANDOFF PIPE SUPPORT, TYPE 1

NTS

15040



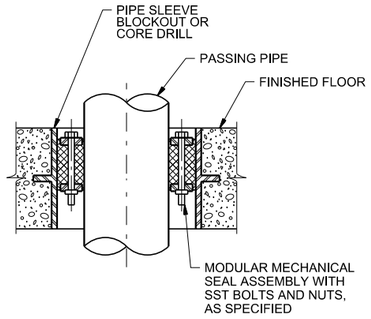
NOTES:

1. COAT FLOOR SLEEVE WITH SPECIFIED PAINT SYSTEM BEFORE CONCRETE PLACEMENT.

FLOOR SLEEVE

NTS

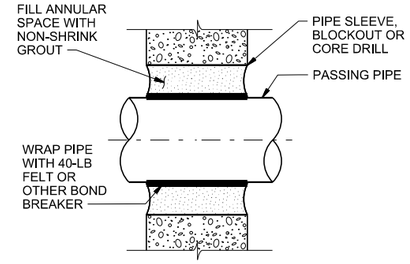
15103



FLOOR SLEEVE WITH MODULAR MECHANICAL SEAL

NTS

15105



WALL SLEEVE WITH GROUT SEAL

NTS

15131

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED J KELLOGG
DRAWN B TROTTER
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APPROVED M FISHER

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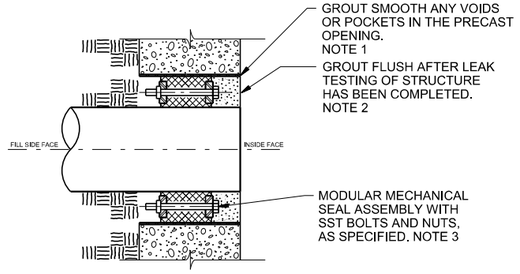
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

STANDARD DETAILS

STANDARD DETAILS

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-12
SHEET NUMBER 70

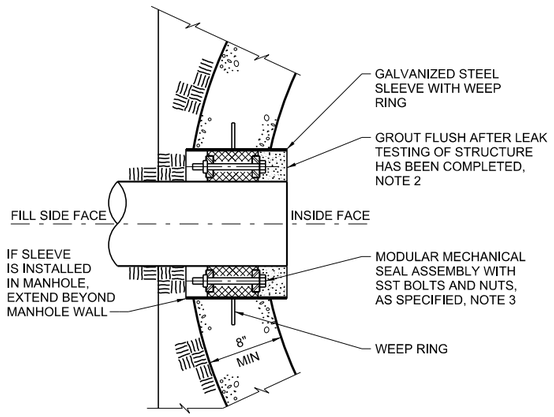


NOTES:

1. COORDINATE MODULAR SEAL SPACE REQUIRMENTS WITH PRECAST VENDER FOR OPENING SIZES PRIOR TO PLACING ORDER OF PRE-CAST STRUCTURE.
2. AFTER MODULAR SEAL INSTALL AND LEAK TEST BUT BEFORE GROUT IS PLACED, GREASE INSIDE FACE OF SEAL.
3. INSTALL PER MANUFACTURER'S INSTRUCTIONS WITH THE BOLT HEADS FACING THE INSIDE FACE OF THE STRUCTURE.

PRE-CAST OPENING WITH MODULAR MECHANICAL SEAL (BURIED) 15132A

NTS



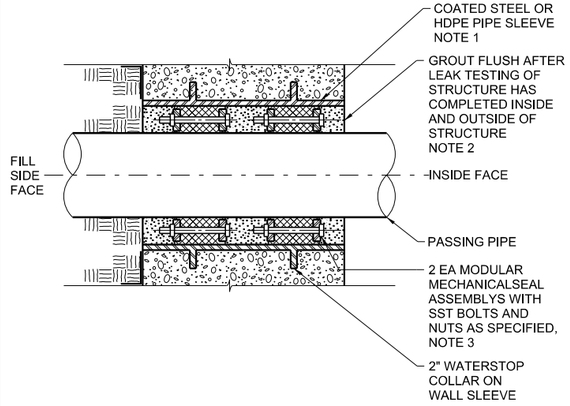
NOTES:

1. COORDINATE MODULAR SEAL SPACE REQUIRMENTS WITH PRECAST VENDER FOR OPENING SIZES PRIOR TO PLACING ORDER OF PRE-CAST STRUCTURE.
2. AFTER MODULAR SEAL INSTALL AND LEAK TEST BUT BEFORE GROUT IS PLACED, GREASE INSIDE FACE OF SEAL.
3. INSTALL PER MANUFACTURER'S INSTRUCTIONS WITH THE BOLT HEADS FACING THE INSIDE FACE OF THE STRUCTURE.

PRE-CAST MANHOLE OPENING WITH MODULAR MECHANICAL SEAL (BURIED)

NTS

15132C

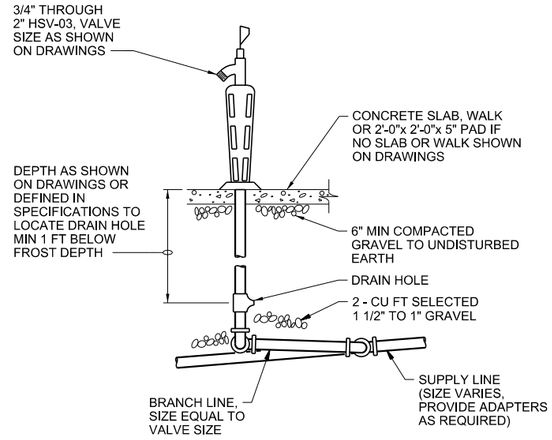


NOTES:

1. COORDINATE SIZE OF WALL SLEEVE WITH MODULAR MECHANICAL SEAL MANUFACTURER TO CREATE A LEAK PROOF ASSEMBLY TO 20 PSI.
2. AFTER MODULAR SEAL INSTALL AND LEAK TESTED, BUT BEFORE GROUT IS PLACED GREASE INSIDE FACE OF SEAL.
3. INSTALL PER MANUFACTURES INSTRUCTIONS WITH THE BOLT HEADS FACING THE INSIDE FACE OF THE STRUCTURE.

WALL SLEEVE WITH DOUBLE MODULAR MECHANICAL SEALS 15132D

NTS

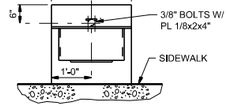


NOTE:

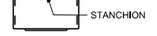
WHERE HOSE VALVE IS SUPPLIED WITH NON-POTABLE WATER, INSTALL SIGN S-101 IN A CONSPICUOUS PLACE NEXT TO EACH HOSE VALVE. SEE SPEC SECTION 10400 FOR SIGN REQUIREMENTS.

NON-FREEZE POST HYDRANT 15201A

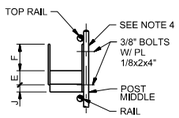
NTS



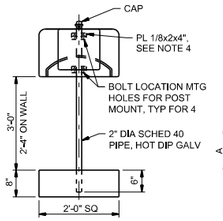
PLAN-POST MOUNT



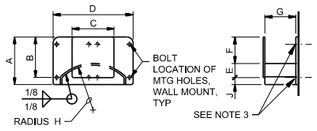
STANCHION MOUNTED



HANDRAIL POST MOUNTED



SECTION



WALL MOUNTED

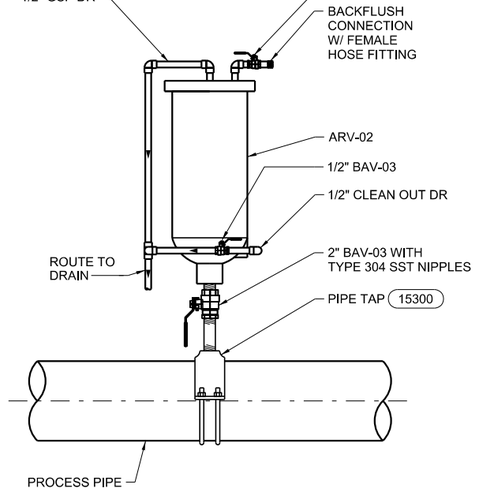
RACK TYPE	DIMENSION IN INCHES								
	A	B	C	D	E	F	G	H	J
TYPE A-3/4" & 1" HOSE	9	7-1/2	6	9	3	4	7-1/2	9-3/4	2
TYPE B-1 1/2" HOSE	12	10	9	12	4	6	10	13	2

NOTES:

1. INTERIOR UNITS SHALL BE FABRICATED FROM 1/8" A-36 STEELPLATE AND ENTIRE UNIT SHALL BE HOT DIP GALVANIZED AFTERFABRICATION.
2. EXTERIOR UNITS SHALL BE FABRICATED FROM 3/16" 6061-T6 ALUMINUM ALLOY PLATE.
3. ATTACH TO WALL WITH SST ANCHORS, 3/8" DIAMETER MIN, COORDINATE WITH WALL CONSTRUCTION
4. ATTACH TO VERTICAL HANDRAIL OR INDIVIDUAL POST WITHPLATES AND (4) - 3/8" STAINLESS STEEL BOLTS.
5. ATTACH TO STEEL COLUMN WITH (4) - 3/8" ROUND HEAD BOLTS,ONE EACH CORNER. INSERT DOUBLE SPACER NUTS BETWEEN COLUMN AND HOSE RACK.

HOSE RACK 15205

NTS



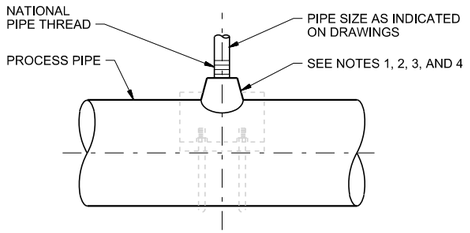
NOTES:

1. PIPING BETWEEN PIPE TAP AND ISOLATION VALVE SHALL BE TYPE 304 SST. ALL OTHER PIPING SHALL BE GALVANIZED STEEL.

AIR RELEASE VALVE INSTALLATION SEWAGE SERVICE

NTS

15231



PIPE TAPS

NOTES:

1. FOR STEEL, GALVANIZED STEEL, AND PVC 2 1/2" AND SMALLER USE A BUSHING IN A TEE.
2. FOR DUCTILE IRON, ALL SIZES, USE SERVICE SADDLE.
3. FOR NEW STEEL AND STAINLESS STEEL PIPES 3" AND LARGER, AND PRESSURE VESSELS, USE THRED-O-LET AS SHOWN.
4. FOR EXISTING PVC, STEEL AND STAINLESS STEEL PIPES 3" AND LARGER, USE SERVICE SADDLE.

PIPE TAPS 15300

NTS

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CHECKED K ALACON
APPROVED M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

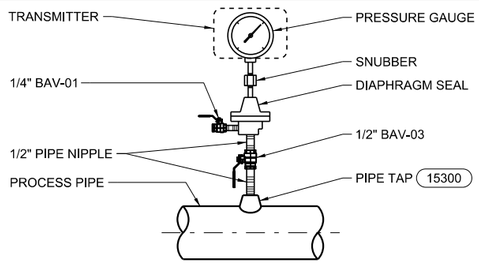
STANDARD DETAILS

STANDARD DETAILS

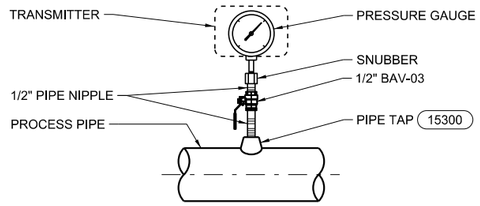
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-13
SHEET NUMBER 70

PRELIMINARY NOT FOR CONSTRUCTION

FILENAME: 1782D-SD801.dgn PLOT DATE: 2/6/2020 1:03:24 PM



DIAPHRAGM SEAL INSTALLATION



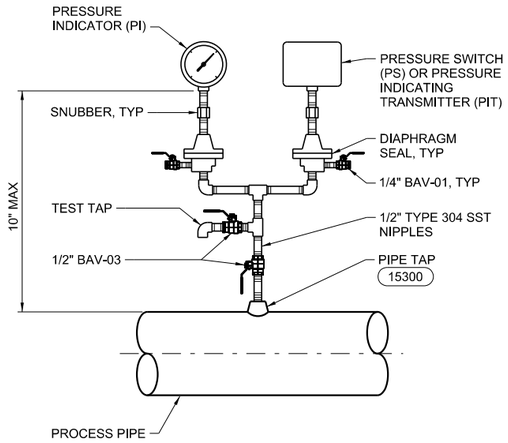
DIRECT INSTALLATION

NOTES:

1. USE DIRECT INSTALLATION FOR POTABLE WATER, RAW WATER, RECLAIMED WATER AND AIR PROCESS PIPING.
2. USE DIAPHRAGM SEAL INSTALLATION FOR SEWAGE, SLUDGE, CHEMICAL AND ALL PROCESS PIPES THAT ARE NOT WATER OR AIR.
3. ALL PIPE NIPPLES TO BE TYPE 304 STAINLESS STEEL.
4. FOR MULTIPLE INSTRUMENTS, PROVIDE TEE, PIPE NIPPLES AND ELBOWS AS REQUIRED IN INSTRUMENT LOCATION.

PRESSURE GAUGE OR TRANSMITTER INSTALLATION 15310

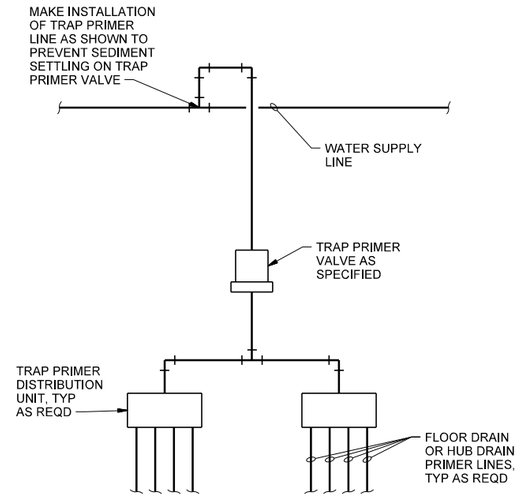
NTS



PRESSURE SWITCH AND INDICATOR INSTALLATION 15313

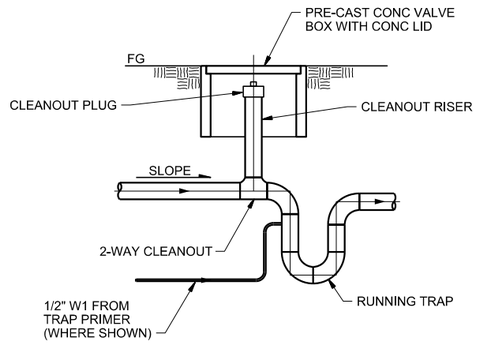
NTS

DIRECT MOUNTING WITH DIAPHRAGM SEAL



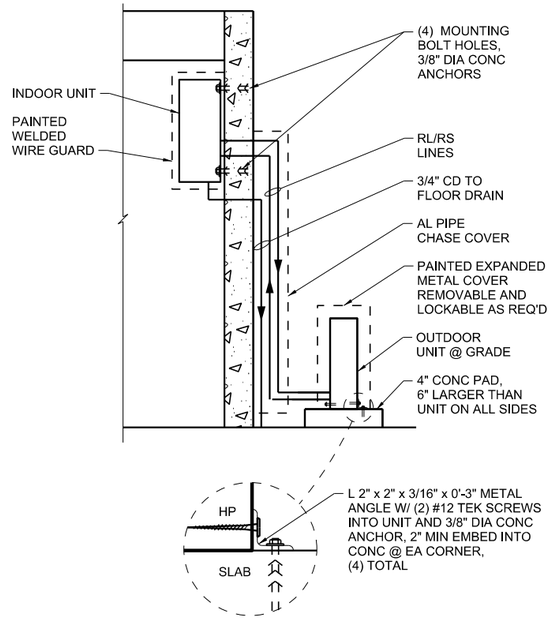
FLOOR DRAIN TRAP PRIMER VALVE 15401

NTS



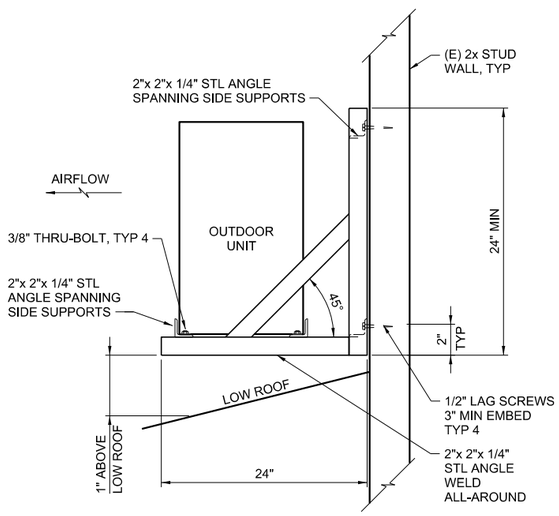
BUILDING TRAP 15410

NTS



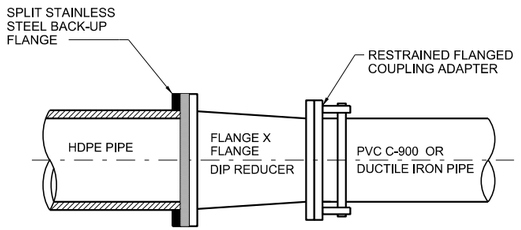
DUCTLESS WALL MOUNTED SPLIT-SYSTEM HEAT PUMP 15515

NTS



OUTDOOR UNIT WALL SUPPORT 15520

NTS



NOTES:

1. PIPE SIZES, MATERIALS AND DIMENSION RATIO (DR) OR PIPE WALL THICKNESS PER DRAWINGS AND SPECIFICATIONS. HDPE IS GENERALLY AT LEAST ONE PIPE SIZE LARGER THAN C-900 OR DUCTILE IRON PIPE
2. MAKE FINAL CUT ON HDPE AND PVC C-900 OR DUCTILE IRON PIPE AND MAKE CONNECTION WHEN HDPE PIPE AND PVC C-900 ARE AT THEIR COOLEST TEMPERATURES.

HDPE TRANSITION TO PVC C-900 OR DUCTILE IRON PIPE 15850

NTS

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APPROVED M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

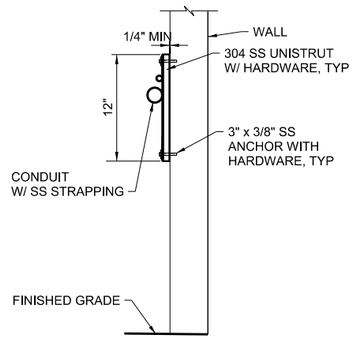
STANDARD DETAILS

STANDARD DETAILS

PRELIMINARY NOT FOR CONSTRUCTION

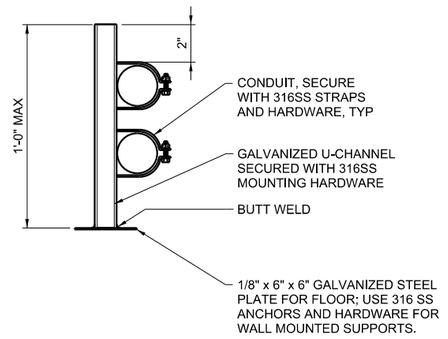
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-14
SHEET NUMBER 70

FILENAME: 1782D-SD801.dgn PLOT DATE: 2/6/2020 1:03:50 PM



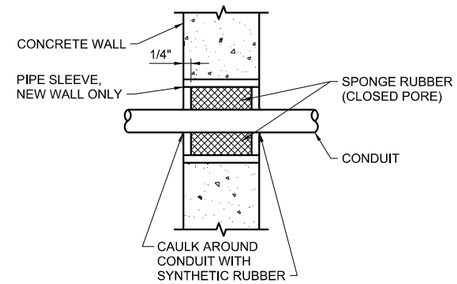
CONDUIT WALL MOUNTING 16005

NTS



INTERMEDIATE CONDUIT SUPPORT NEAR FLOOR 16006

NTS

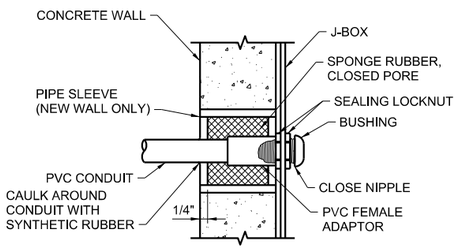


NOTE:

IN EXISTING WALL, CORE DRILL HOLE CONDUIT OD +1-1/2". IN NEW CONCRETE, WALL OR DRY WALL, INSTALL PVC SCHEDULE 40 SLEEVE, CONDUIT OD +1-1/2"

CONDUIT THROUGH BLOCK WALL 16020

NTS

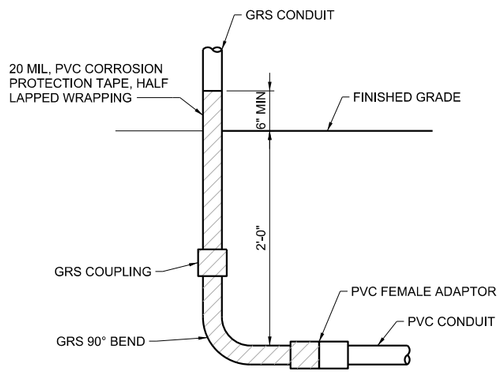


NOTE:

IN EXISTING WALL, CORE DRILL HOLE CONDUIT OD +1-1/2". IN NEW CONCRETE, WALL OR DRY WALL, INSTALL PVC SCHEDULE 40 SLEEVE, CONDUIT OD +1-1/2"

CONDUIT THROUGH CEMENT WALL 16022

NTS

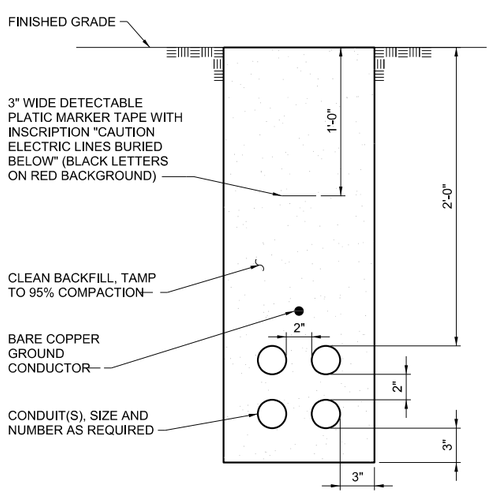


NOTES:

1. WHERE CONDUITS ARE INSTALLED INA CONCRETE SLAB, THE 2'-0" DIMENSION DOES NOT APPLY. CONDUITS SHALL BE INSTALLED BETWEEN REBAR MATS OR UNDER A SINGLE REBAR MAT.
2. IN CORROSIVE AREAS, PVC COATED GRS SHALL BE USED.

CONDUIT STUB-UP 16025

NTS



NOTES:

1. GROUND CONDUCTORS SHALL RUN CONTINUOUSLY THROUGH MANHOLES AND SHALL CONTINUE FROM DUCTBANK INTO SWITCHGEAR OR BUILDING GROUNDING SYSTEM AND SHALL BE BONDED TO EACH RIGID METAL CONDUIT. SIZE TO BE 4/0 UNLESS OTHERWISE INDICATED ON PLANS.
2. ALL DIMENSIONS ARE MINIMUM.

TRENCH/DUCTBANK 16030

NTS

DESIGNED T FRISCH
DRAWN B TROTTER
CHECKED T FRISCH
APPROVED M FISHER

WATERWORKS ENGINEERS
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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND
OFFSITE PIPELINES

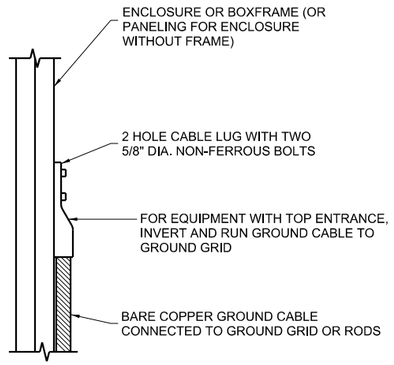
STANDARD DETAILS

STANDARD DETAILS

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE
FEBRUARY 2020
PROJECT NUMBER
17-082
DRAWING NUMBER
SD-15
SHEET NUMBER 70

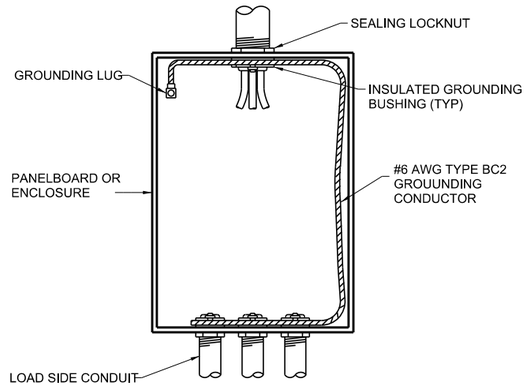
FILENAME: 1782D-SD801.dgn PLOT DATE: 2/6/2020 1:04:19 PM



TYPICAL EQUIPMENT ENCLOSURE OR BOX GROUNDING

NTS

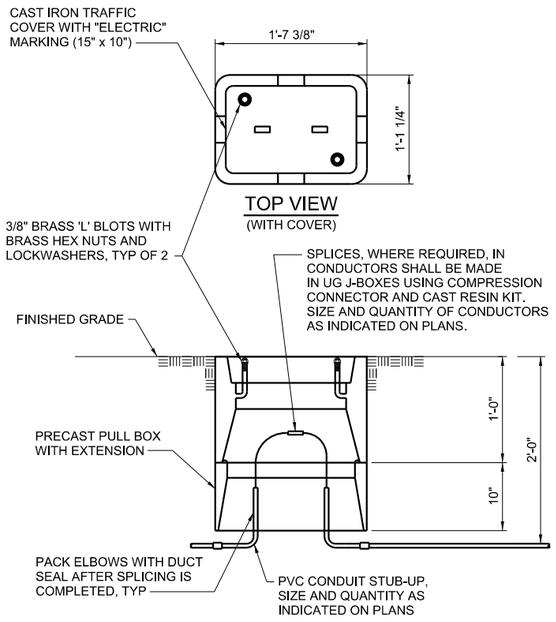
16105



TYPICAL ENCLOSURE CONDUIT GROUNDING

NTS

16110

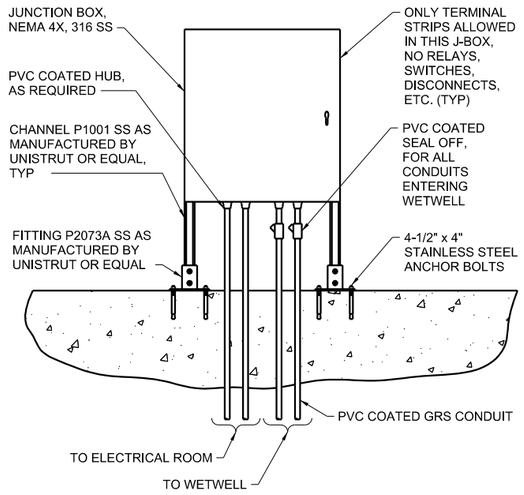


NOTE: ALL DIMENSIONS ARE MINIMUM

UNDERGROUND CONCRETE JUNCTION BOX

NTS

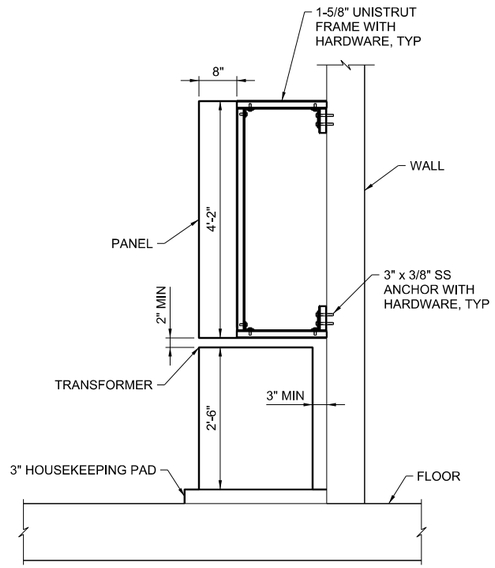
16112



WETWELL INSTRUMENTS/MOTORS TERMINATION BOX

NTS

16115

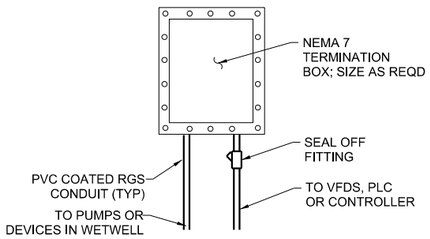


NOTE: COORDINATE DIMENSIONS WITH EACH TRANSFORMER AND PANEL.

TRANSFORMER AND PANEL

NTS

16117



WETWELL INSTRUMENTS/MOTORS TERMINATION BOX

NTS

16120

DESIGNED T FRISCH
DRAWN B TROTTER
CHECKED T FRISCH
APPROVED M FISHER

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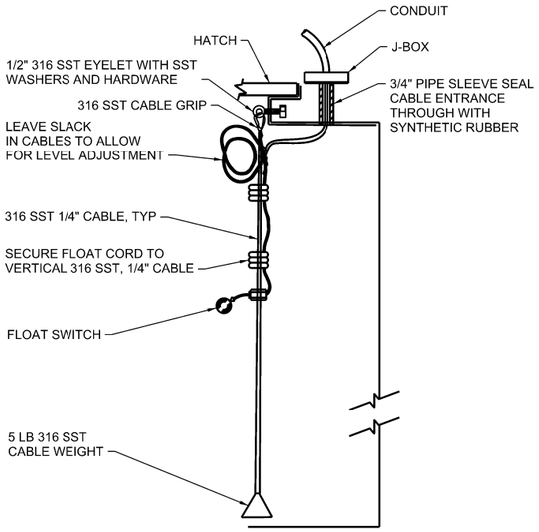
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

STANDARD DETAILS

STANDARD DETAILS

PRELIMINARY NOT FOR CONSTRUCTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-16
SHEET NUMBER 70

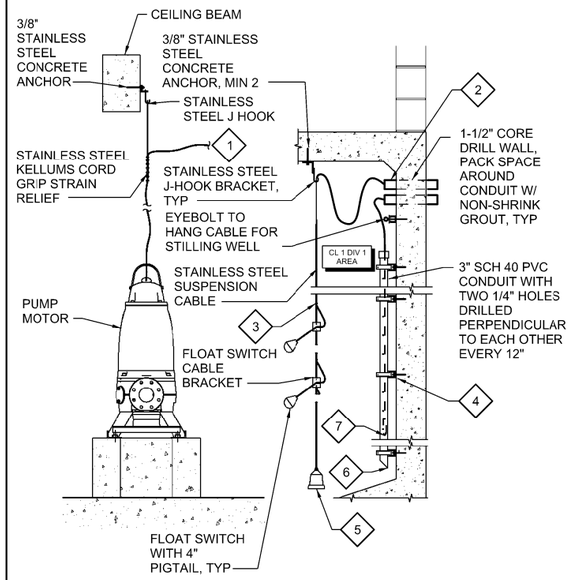


NOTE:

FLOAT ASSEMBLY MUST BE REMOVABLE FROM TOP WITHOUT ENTERING RESERVOIR.

FLOAT SWITCH DETAIL 16205

NTS



FLOAT SWITCH 16210

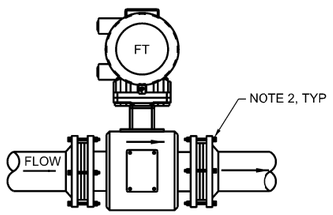
NTS

NOTES:

1. PUMP CABLES TO BE MOUNTED PER PLAN TO TERMINATION BOX.
2. CONDUITS TO TERMINATION BOX.
3. ATTACH INSTRUMENT CABLES TO SUSPENSION CABLE WITH PLASTIC TIE WRAPS EVERY 8".
4. 3" SS CONDUIT PIPE CLAMPS ON SS UNISTRUTS WITH TWO 3/8" SS EPOXY ANCHORS, SPACING BETWEEN CLAMPS SHALL BE 36" MAXIMUM, TYP.
5. PVC COATED WEIGHT SHALL BE SUSPENDED 2" ABOVE WETWELL FLOOR.
6. STILLING WELL SHALL END 3" ABOVE WALL AND SLOPE OF FLOOR INTERSECTION.
7. LEVEL PROBE SHALL BE 6" ABOVE WETWELL FLOOR.

FLOAT SWITCH NOTES 16211

NTS

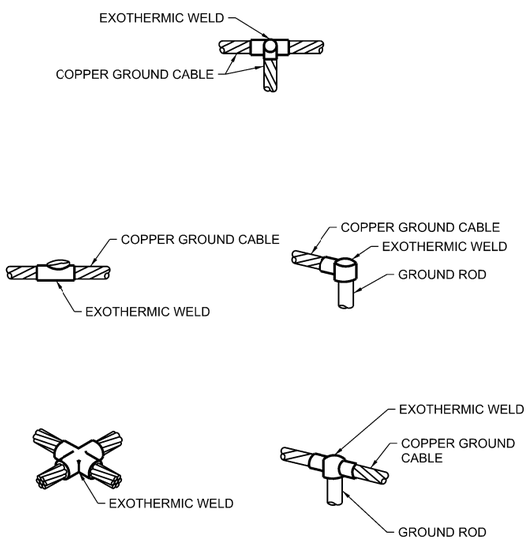


NOTES:

1. INSTALL WITH A MINIMUM OF FIVE (5) STRAIGHT PIPE DIAMETERS UPSTREAM AND TWO (2) STRAIGHT PIPE DIAMETERS DOWNSTREAM.
2. PROVIDE MATING FLANGES, GROUND RING KIT, GASKETS, AND BOLTING PER THE PDT OF THE PROCESS PIPE.

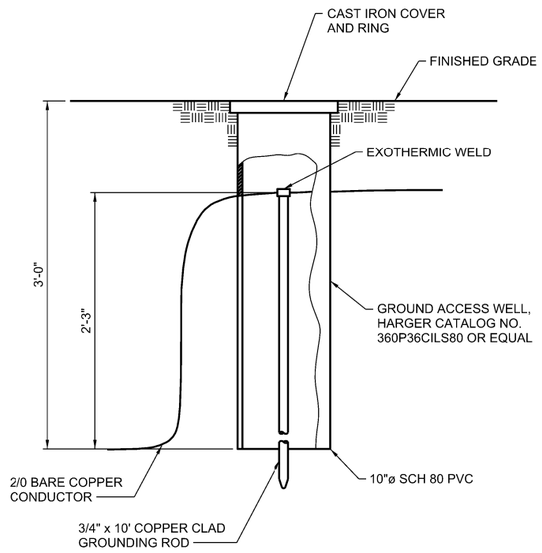
MAGNETIC FLOWMETER 16300

NTS



TYPICAL EXOTHERMIC WELDS 16400

NTS



GROUND ROD WITH TEST WELL 16410

NTS

DESIGNED T FRISCH
DRAWN B TROTTER
CHECKED T FRISCH
APPROVED M FISHER

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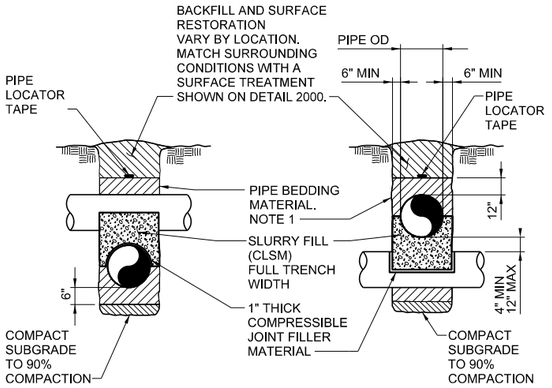
CITY OF MORRO BAY
WATER RECLAMATION FACILITY LIFT STATION AND OFFSITE PIPELINES

STANDARD DETAILS

STANDARD DETAILS

PRELIMINARY NOT FOR CONSTRUCTION

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-17
SHEET NUMBER 70



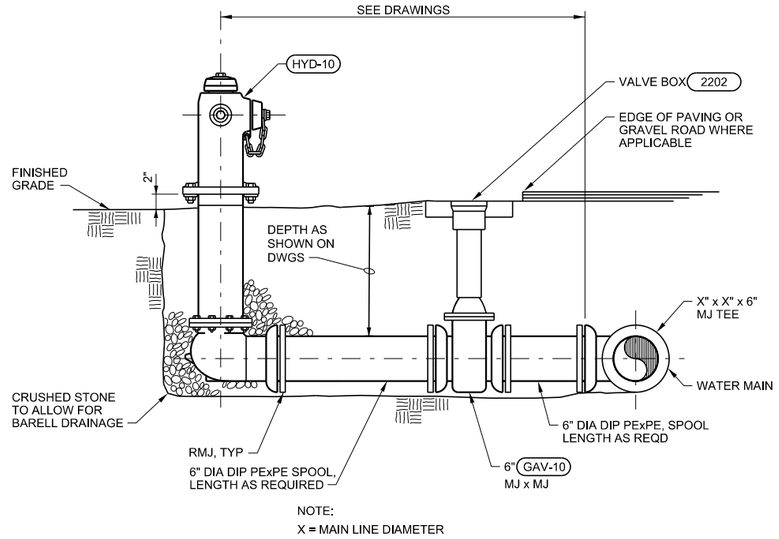
NOTES:

1. PIPE BEDDING SHALL BE GRANULAR BEDDING FOR ALL DUCTILE IRON OR STEEL PIPE AND SAND FOR ALL OTHER PIPE.COMPACT TO 90% RELATIVE COMPACTION. ALTERNATELY, SLURRY FILL MAY BE USED FOR PIPE BEDDING. TAKE PRECAUTIONS TO PREVENT PIPE FLOATING.
2. COMPACT ALL TRENCH BACK FILL (COMMON FILL AND SELECT FILL) TO 90% COMPACTION MORE THAN 2-FEET BELOW GRADE; 95% COMPACTION LESS THAN 2-FEET BELOW GRADE.
3. PROVIDE MINIMUM 3-FEET OF COVER OVER ALL BURIED PIPELINES, UNLESS OTHERWISE NOTED.

VERTICAL PROXIMITY PIPE CROSSING

NTS

2055

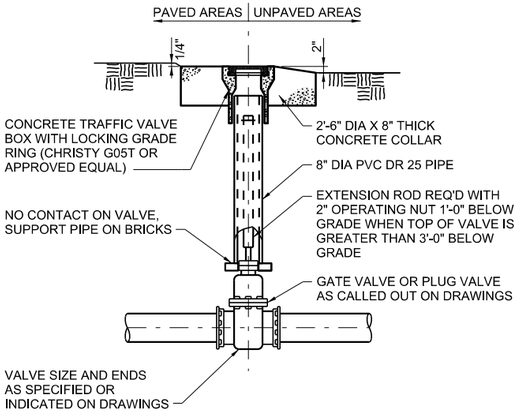


NOTE:
X = MAIN LINE DIAMETER

FIRE HYDRANT ASSEMBLY

NTS

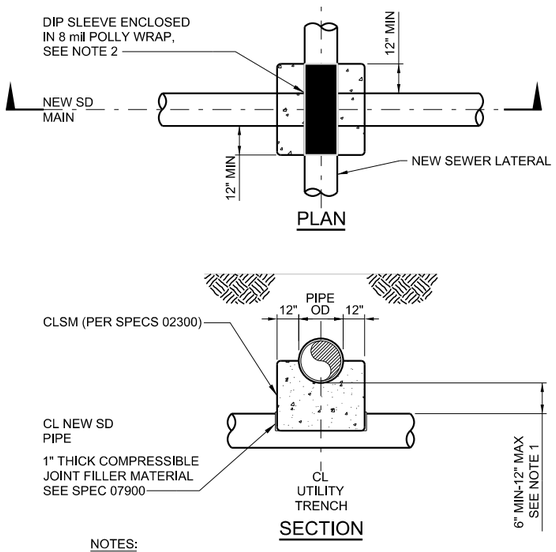
2200



BURIED GATE OR PLUG VALVE BOX, TYPE 2

NTS

2203



PLAN

SECTION

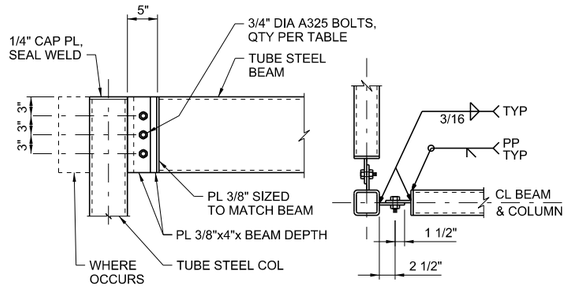
NOTES:

1. WHERE VERTICAL CLEARANCE IS LESS THAN 12", UTILIZE DIP SLEEVE.
2. UTILIZE NEXT NORMAL SLEEVE SIZE OVER NORMAL SS SIZE.
3. WHERE VERTICAL CLEARANCE IS LESS THAN 6", CONTACT CITY REP FOR AUTHORIZATION TO UTILIZE THIS DETAIL.

UTILITY CROSSING

NTS

2210



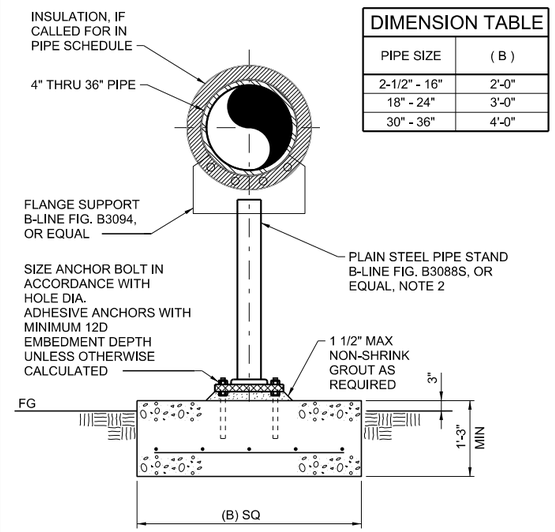
ELEVATION PLAN

BOLT QUANTITY	
NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS
4	1, CTR BOLT IN PL
6	1
8-10	2
12-15	3

TYPICAL TUBE STEEL BEAM AND COLUMN CONNECTION

NTS

5804



DIMENSION TABLE	
PIPE SIZE	(B)
2-1/2" - 16"	2'-0"
18" - 24"	3'-0"
30" - 36"	4'-0"

NOTES:

1. COAT ALL SHAPES PER SPECIFICATION SECTION 09900 SYSTEM 300.
2. B-LINE FIG. B3088 MAY BE USED IN NON-SEISMIC SUPPORT APPLICATIONS OR WHERE 12X ANCHOR HOLE SPACING IS PROVIDED. FOR VERTICAL ADJUSTMENTS USE PIPE ADJUSTER B-LINE FIG. B3089 AND FIG. B3088ST OR FIG. B3088T IN NON-SEISMIC SUPPORT APPLICATIONS.

FLANGE MOUNTED PIPE SUPPORT W/ CONCRETE PAD

NTS

15002A

DESIGNED T FRISCH
DRAWN B TROTTER
CHECKED T FRISCH
APPROVED M FISHER

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CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

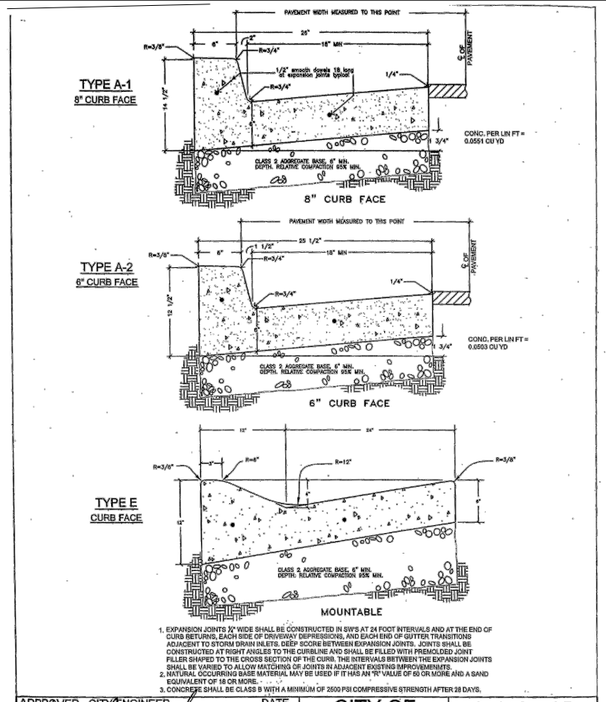
STANDARD DETAILS

STANDARD DETAILS

PRELIMINARY NOT FOR CONSTRUCTION

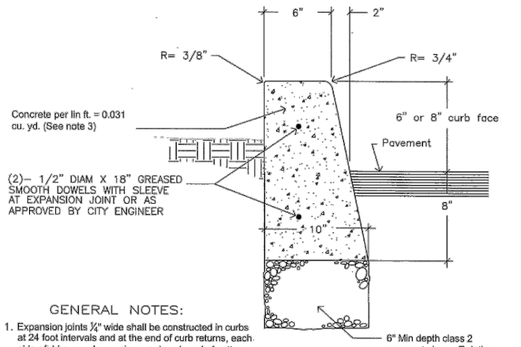
DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-18
SHEET NUMBER 70

FILENAME: 1782D-SD801.dgn PLOT DATE: 2/10/2020 3:52:13 PM



1. EXPANSION JOINTS ½" WIDE SHALL BE CONSTRUCTED IN SWS AT 24 FOOT INTERVALS AND AT THE END OF CURB RETURNS, EACH SIDE OF DRIVEWAY DEPRESSIONS, AND EACH END OF GUTTER TRANSITIONS ADJACENT TO STORM DRAIN INLETS. DEEP SCORE BETWEEN EXPANSION JOINTS. JOINTS SHALL BE CONSTRUCTED AT RIGHT ANGLES TO THE CURBLINE AND SHALL BE FILLED WITH PREMOLDED JOINT FILLER SHAPED TO THE CROSS SECTION OF THE CURB. THE INTERVALS BETWEEN THE EXPANSION JOINTS SHALL BE VARIED TO ALLOW MATCHING OF JOINTS IN ADJACENT EXISTING IMPROVEMENTS.
2. NATURAL OCCURRING BASE MATERIAL MAY BE USED IF IT HAS AN "R" VALUE OF 50 OR MORE AND A SAND EQUIVALENT OF 18 OR MORE.
3. CONCRETE SHALL BE CLASS B WITH A MINIMUM OF 2500 PSI COMPRESSIVE STRENGTH AFTER 28 DAYS.

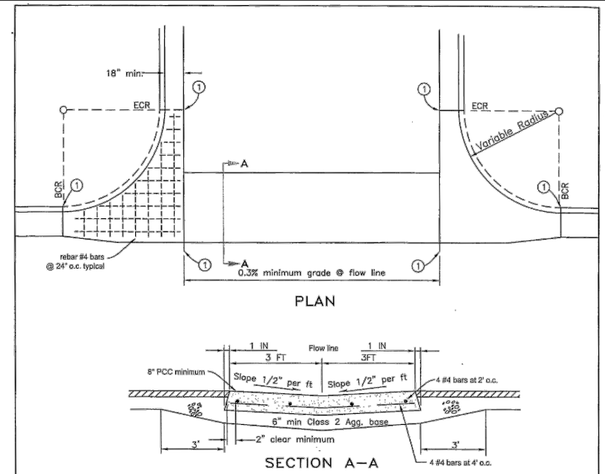
APPROVED - CITY ENGINEER Frank Cunningham	DATE 8-5-05	CITY OF MORRO BAY DEPARTMENT OF PUBLIC SERVICES	TYPE A / E
REVISIONS	BY APP DATE		CONCRETE CURB & GUTTER
			SCALE: NONE B-1



GENERAL NOTES:

1. Expansion joints ½" wide shall be constructed in curbs at 24 foot intervals and at the end of curb returns, each side of driveway depressions and each end of gutter transitions adjacent angles to the curblline and schall be filled with premolded joint between the expansion joints shall be varied to allow matching of joints in adjacent existing improvements.
2. Natural occurring base material may be used if it has an "R" value of 50 or more and a sand equivalent of 18 or more.
3. Concrete shall have a minimum of 2500 psi compressive strength after 28 days.

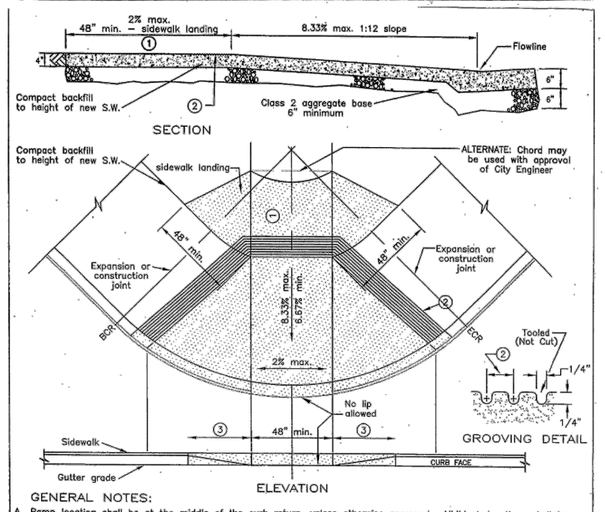
APPROVED - CITY ENGINEER Frank Cunningham	DATE 3/1/07	CITY OF MORRO BAY DEPARTMENT OF PUBLIC SERVICES	TYPE C
DRAWN BY: ZLJ	DATE: 03/07		CONCRETE CURB
REVISIONS	BY APP DATE		SCALE: NONE B-2



NOTES:

1. All expansion joints shall have 1/2" diameter x 18" smooth, wrapped or greased dowels @ 24" o.c.
- All concrete, including curb and gutter, shall have a minimum of 3000 psi compressive strength in 28 days
- Curb and gutter to be placed monolithic unless otherwise approved by City Engineer
- All work should comply with ADA standards

APPROVED - CITY ENGINEER Frank Cunningham	DATE 3-7-07	CITY OF MORRO BAY DEPARTMENT OF PUBLIC SERVICES	TYPICAL CROSS GUTTER & SPANDREL
DRAWN BY: ZLJ	DATE: 6/06		
REVISIONS	BY APP DATE		SCALE: NONE B-3



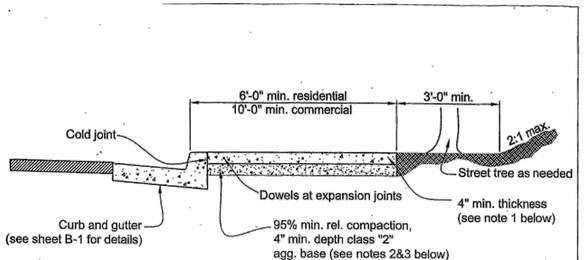
GENERAL NOTES:

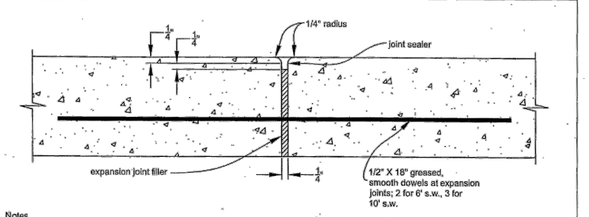
A. Ramp location shall be at the middle of the curb return, unless otherwise approved. Midblock locations shall be as determined by the City Engineer.
B. Ramp width shall be a flat plane, a minimum of 48" wide at the rear and a minimum of 48" wide at the curb edge. Slope of ramp width shall be a straight grade from the top of the lip at the gutter to the rear of the ramp.
C. Central and side ramps shall have a medium broom finish.

OTHER NOTES:

(1) Ramp and/or landing length may be varied with approval of City Engineer, but in no case shall the maximum allowable slope be exceeded. Landing shall not slope more than 2%. Landing may be deleted if flares are sloped 8.33% or less and adjacent sidewalk is sloped 5% or less for 48".
(2) The ramp shall have a 12" wide grooved border with 1/4" grooves at approx. 3/4" o.c. (See Grooving Detail.)
(3) Flares may be vertical where ramp is in a parkway and flares do not connect to a sidewalk. Where flares connect to a sidewalk, minimum distance to flares shall be 5'–0" for a 6" curb, and 6'–8" for an 8" curb.
(4) Slopes less than 6.67% will require truncated domes

APPROVED - CITY ENGINEER Frank Cunningham	DATE 8-5-05	CITY OF MORRO BAY DEPARTMENT OF PUBLIC SERVICES	WHEELCHAIR RAMP
REVISIONS	BY APP DATE		SCALE: NONE B-4

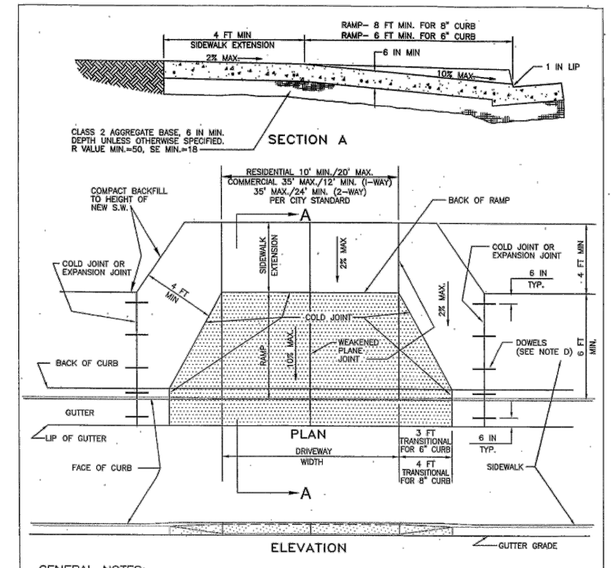




Notes

1. Sidewalk thickness shall be not less that 4"; driveway approach thickness shall be not less than 6".
2. Expansion joints ¾" wide shall be constructed in curbs at 20 or 24 foot intervals and at the end of curb returns, each side of driveway depressions, and each end of gutter transitions adjacent to storm drain inlets. Deepscore curb midway betweene expansion joints. Joints shall be constructed at right angles to the curbline and shall be filled with premolded joint filler shaped to the cross section of the curb. The intervals between the expansion joints shall be varied to allow matching of joints in adjacent existing improvements. The intervals for expansion joints shall be a maximum of 10' for exposed aggregate sidewalks.
3. Naturally occuring base material may be used if it has an "R" value of 50 or more and a send equivalent of 18 or more.
4. Concrete shall have a minimum of 2500 psi compressive strength in 28 days.
5. Residential and commercial sidewalks shall be scored every 4' to 5' between expansion joints. Commercial sidewalks shall also be scored longitudinally so scoring shall not exceed 20 sq. ft. rectangles.

APPROVED - CITY ENGINEER Frank Cunningham	DATE 8-5-05	CITY OF MORRO BAY DEPARTMENT OF PUBLIC SERVICES	SIDEWALKS
REVISIONS	BY APP DATE		SCALE: NONE B-5



GENERAL NOTES:

A. A DEPRESSION IN A NEW CURB AND GUTTER FOR A DRIVEWAY WILL NOT BE PERMITTED UNLESS THE RAMP AND SIDEWALK EXTENSION ARE CONSTRUCTED ALSO.
B. SLOPE OF RAMP IS A STRAIGHT GRADE FROM THE TOP OF THE BACK OF RAMP TO THE TOP OF THE LIP AT THE GUTTER.
C. CONCRETE SHALL HAVE A MINIMUM OF 2500 PSI COMPRESSIVE STRENGTH AFTER 28 DAYS
D. DOWELS AT EXPANSION, OR COLD JOINT, WITH NEW CONSTRUCTION SHALL BE 1/2 IN SMOOTH BARS, 18 IN LONG AT 24 IN O.C., ONE END SHALL BE SLEEVED OR GREASED.

APPROVED - CITY ENGINEER Frank Cunningham	DATE 8-5-05	CITY OF MORRO BAY DEPARTMENT OF PUBLIC SERVICES	TYPICAL DRIVEWAY POURED W/CURB & GUTTER
REVISIONS	BY APP DATE		SCALE: NONE B-6

DESIGN	K ALACON
DRAWN	L CHAPMAN
CHECKED	M FISHER
APPROVED	M FISHER

WATERWORKS ENGINEERS
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PRELIMINARY - NOT FOR CONSTRUCTION

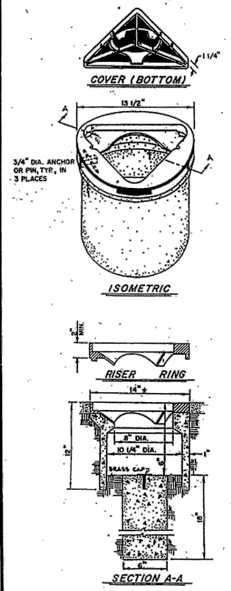
CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

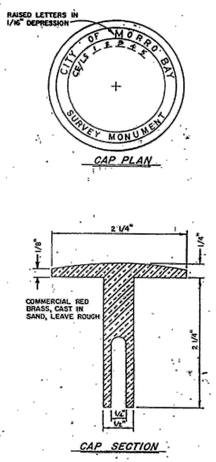
CIVIL
DETAILS AND SECTIONS
CITY OF MORRO BAY

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-20
SHEET NUMBER XX

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-SD20.DWG

JOB NUMBER: 14-010 FILENAME: 1782D-SD20.DWG PLOT DATE: 06-Feb-20 PLOT TIME: 15:57:52



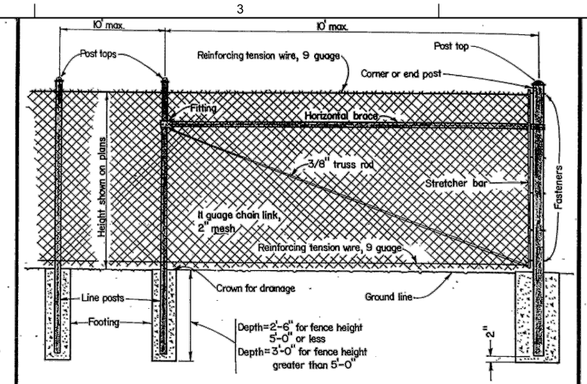


NOTES:

1. Engineer or surveyor setting the monument shall indicate exact point by marking a cross on the cap. He shall also stamp his license type and number.
2. Monument well to be Brooks Products No. 4TT or equal.
3. Cover shall be marked "MONUMENT".

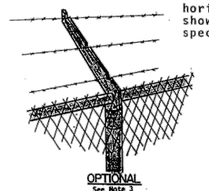
APPROVED-CITY ENGINEER	DATE	CITY OF MORRO BAY DEPARTMENT OF PUBLIC WORKS	STANDARD MONUMENT
	10-5-87		SCALE:NONE M-1

REVISIONS	BY	APP	DATE



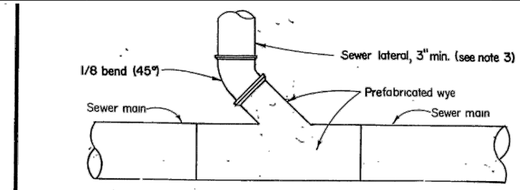
NOTES:

1. Concrete for footings shall have a minimum 2500 psi compressive strength in 28 days.
2. Diameter of post footings shall be 4 times outside diameter of post.
3. Barbed wire, extension arm, and/or top horizontal rail shall be installed only when shown on the plans and/or called for in the special conditions.



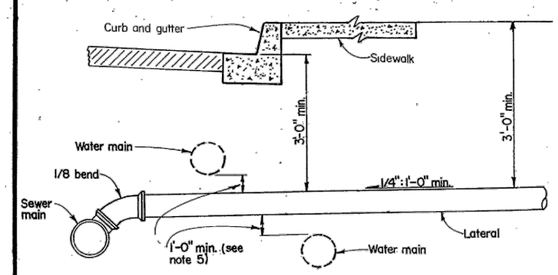
APPROVED-CITY ENGINEER	DATE	CITY OF MORRO BAY DEPARTMENT OF PUBLIC WORKS	CHAIN LINK FENCE
	10-5-87		SCALE: AS SHOWN M-4

REVISIONS	BY	APP	DATE



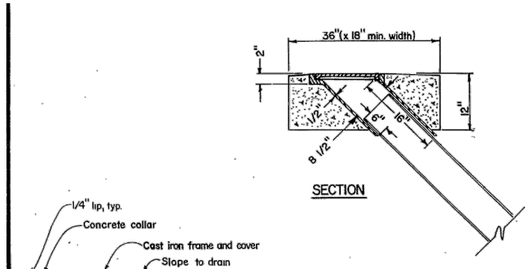
NOTES:

1. Sewer main shall be cut, and prefabricated wye installed; no saddle taps.
2. Lateral may be cast iron, ductile iron, V.C., PVC, or ABS sched. 40 pipe. Cast iron shall be used when cover over lateral is less than 36".
3. Lateral sizes to be determined by Community Development Department.
4. Sewer lateral and water service connection shall not be in same trench unless provisions of Section 1108 of the Uniform Plumbing Code are adhered to.
5. If minimum clearance of 1'-0" from water main cannot be obtained, Public Works Dept. shall determine joint spacing and lateral material. In the event a sewer lateral passes over a water main said main shall be exposed to determine clearance.
6. Trench backfill shall be select sand or sandy loam as approved by City Engineer.



APPROVED-CITY ENGINEER	DATE	CITY OF MORRO BAY DEPARTMENT OF PUBLIC WORKS	SEWER MAIN CONNECTION
	10-5-87		SCALE:NONE S-1

REVISIONS	BY	APP	DATE

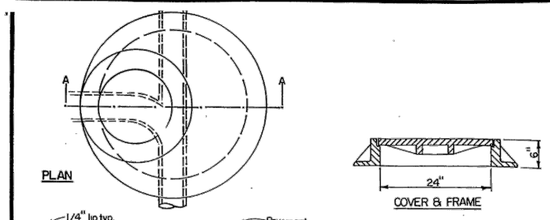


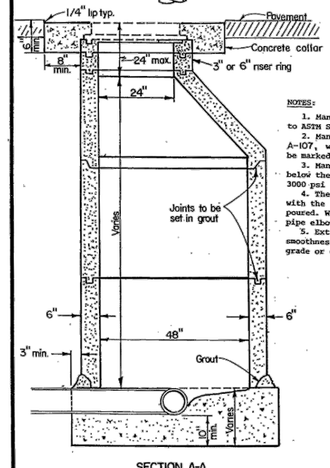
NOTES:

1. Flushing branch (cleanout) shall be K.P. Foundrys model No. 2615 cast iron frame and model No. 3615 cast iron cover, or approved equals. Cover to be marked "SEWER".
2. Prefab. wye shall be same material as sewer main. If sewer main and wye are clay, bell on wye shall be snapped off and appropriate couplings shall be used to connect wye and PVC riser.
3. Concrete for collar shall have a minimum 2500 psi compressive strength in 28 days.

APPROVED-CITY ENGINEER	DATE	CITY OF MORRO BAY DEPARTMENT OF PUBLIC WORKS	SEWER FLUSHING BRANCH (CLEANOUT)
	10-5-87		SCALE: NONE S-2

REVISIONS	BY	APP	DATE



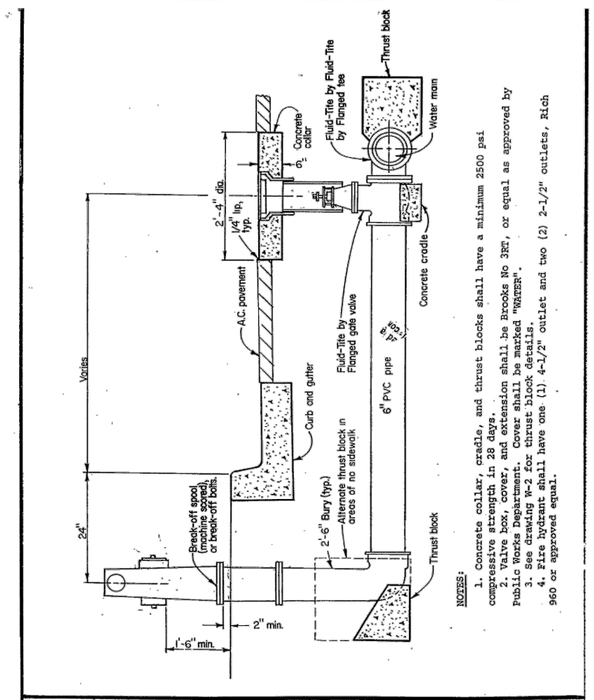


NOTES:

1. Manhole walls shall be precast type conforming to ASTM Standard C478-61T for Class 2 reinforced pipe.
2. Manhole frame and cover shall be Pinkerton No. A-107, weight 264 lbs, or approved equal. Cover shall be marked with "SEWER" in the center.
3. Manhole base shall be a minimum of 10" thick below the pipe with a minimum compressive strength of 3000 psi in 28 days.
4. The sewer pipe shall be laid through the manhole with the top half sawcut and removed after the base is poured. When there is a change in direction, use a pipe elbow or bend.
5. Extra caution shall be taken to insure smoothness of flowline. Roughness or abrupt changes in grade or curvature shall not be permitted.

APPROVED-CITY ENGINEER	DATE	CITY OF MORRO BAY DEPARTMENT OF PUBLIC WORKS	ECCENTRIC-CONE PRECAST CONCRETE MANHOLE (TYPICAL)
	10-5-87		SCALE:NONE S-3

REVISIONS	BY	APP	DATE



NOTES:

1. Concrete collar, cradle, and thrust blocks shall have a minimum 2500 psi compressive strength in 28 days.
2. Fire hydrant connection shall be Brooks No 3RT, or equal as approved by Public Works Department. Cover shall be marked "WATER".
3. See drawing W-2 for thrust block details.
4. Fire hydrant shall have one (1) 4-1/2" outlet and two (2) 2-1/2" outlets, Rich 960 or approved equal.

APPROVED-CITY ENGINEER	DATE	CITY OF MORRO BAY DEPARTMENT OF PUBLIC WORKS	FIRE HYDRANT INSTALLATION
	10-5-87		SCALE: NONE W-1

REVISIONS	BY	APP	DATE

DESIGN	K ALACON
DRAWN	L CHAPMAN
CHECKED	M FISHER
APPROVED	M FISHER

PRELIMINARY - NOT FOR CONSTRUCTION

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CIVIL

DETAILS AND SECTIONS
CITY OF MORRO BAY

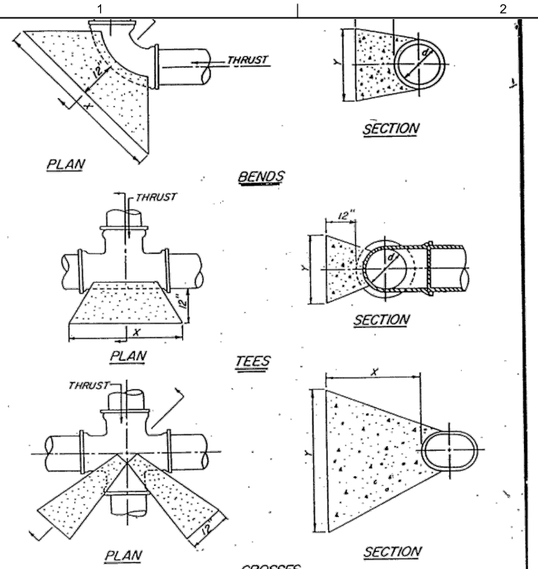
CITY OF MORRO BAY

WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

DATE	FEBRUARY 2020
PROJECT NUMBER	17-082
DRAWING NUMBER	SD-21
SHEET NUMBER	XX

L:\CAD\PROJECTS\17-082 MORRO BAY PS AND PIPELINE_(S)\PROJECT FILES\DELIVERABLES\1782D-SD21.DWG

JOB NUMBER: 14-010 FILENAME: 1782D-SD21.DWG PLOT DATE: 06-Feb-20 PLOT TIME: 15:58:11



NOTES:

1. This detail for 6" and 8" mains only. Thrust blocks for larger mains shall be engineered and submitted to the City Engineer for approval.
2. All thrust blocks shall be poured against undisturbed soil.
3. All concrete shall have a minimum 2500 psi compressive strength in 28 days.
4. Dimensions shown are minimum.

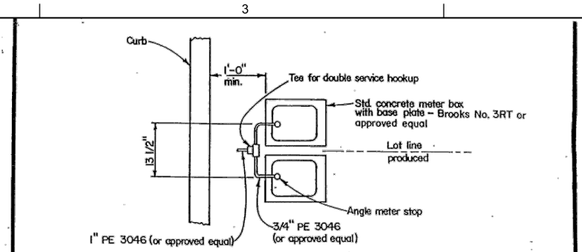
	SOIL TYPE	
	CLAY	SANDY
6" I.D.	X=3'-6" Y=2'-9" SQ.FT=7.0	2'-0" 1'-6" 3.5
8" I.D.	X=4'-4" Y=3'-0" SQ.FT=13.01	3'-3" 2'-0" 6.5

APPROVED-CITY ENGINEER DATE 10-5-87

REVISIONS	BY	APP	DATE

CITY OF MORRO BAY
DEPARTMENT OF PUBLIC WORKS

THRUST BLOCKING
SCALE: NONE W-2



NOTES:

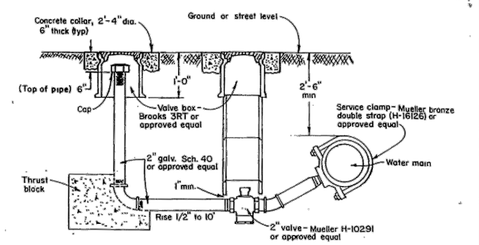
1. Concrete meter box shall have traffic cover when located in travelled way or any portion of driveway approach.
2. Meter box shall have base plate.
3. City of Morro Bay shall install meters and meter boxes for residential developments of two (2) families or less. For all other developments meters and meter boxes shall be installed by developer.

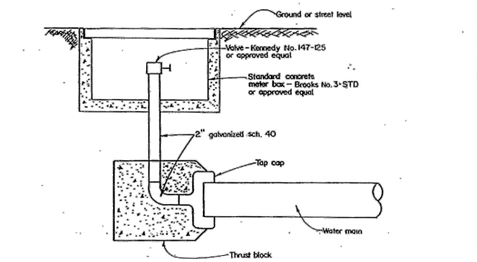
APPROVED-CITY ENGINEER DATE 10-5-87

REVISIONS	BY	APP	DATE
Redwood Blocks	EP		5/10/99

CITY OF MORRO BAY
DEPARTMENT OF PUBLIC WORKS

WATER SERVICE CONNECTION
SCALE: NONE W-3





NOTES:

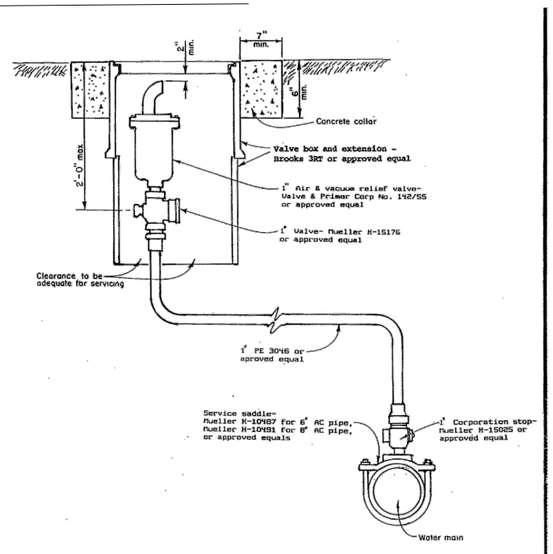
1. Valve boxes shall have cast iron faces and lids.
2. Concrete meter box shall have traffic cover when located in street or driveway.
3. See drawing W-2 for thrust block details.

APPROVED-CITY ENGINEER DATE 10-5-87

REVISIONS	BY	APP	DATE

CITY OF MORRO BAY
DEPARTMENT OF PUBLIC WORKS

BLOW-OFF ASSEMBLY
SCALE: NONE W-4



NOTES:

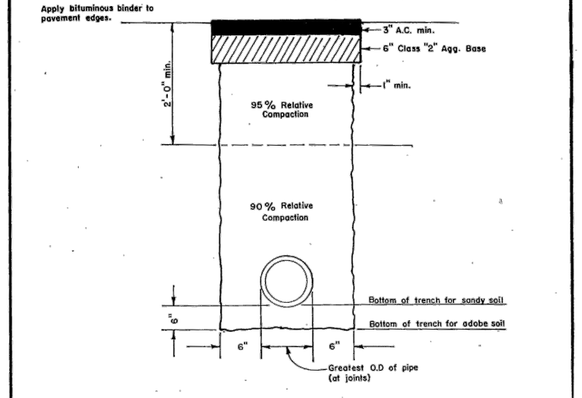
1. This detail for use at high spots in water mains.
2. Valve boxes shall have cast iron faces and lids.
3. Concrete for collar shall have a minimum 2500 PSI compressive strength in 28 days.

APPROVED-CITY ENGINEER DATE 10-5-87

REVISIONS	BY	APP	DATE

CITY OF MORRO BAY
DEPARTMENT OF PUBLIC WORKS

AIR AND VACUUM RELIEF ASSEMBLY
SCALE: NONE W-5



NOTES:

1. All backfill shall be select sand or sandy loam as approved by the City Engineer.
2. Place 3" A.C. hot-mix pavement or replace with same depth as exists, whichever is greater.
3. Hot-mix A.C. shall be 1/2" max. AR 8000.
4. 85% relative compaction permitted in non-roadway trenches when no structures are to be constructed over trench.
5. Ponding, flooding, or jetting not permitted unless specifically allowed by the City Engineer.
6. Contractor shall install and maintain temporary pavement for 2 weeks prior to installation of permament hot-mix pavement.

APPROVED-CITY ENGINEER DATE 10-5-87

REVISIONS	BY	APP	DATE

CITY OF MORRO BAY
DEPARTMENT OF PUBLIC WORKS

TRENCH BACKFILL REQUIREMENTS
SCALE: NONE W-6

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGN K. ALACON
DRAWN L. CHAPMAN
CHECKED M. FISHER
APPROVED M. FISHER

WATERWORKS ENGINEERS
1406 Victor Avenue, Suite A • Redding, CA 96003 • 530-243-2113

CITY OF MORRO BAY
WATER RECLAMATION FACILITY
LIFT STATION AND OFFSITE PIPELINES

CIVIL
DETAILS AND SECTIONS
CITY OF MORRO BAY

DATE FEBRUARY 2020
PROJECT NUMBER 17-082
DRAWING NUMBER SD-22
SHEET NUMBER XX