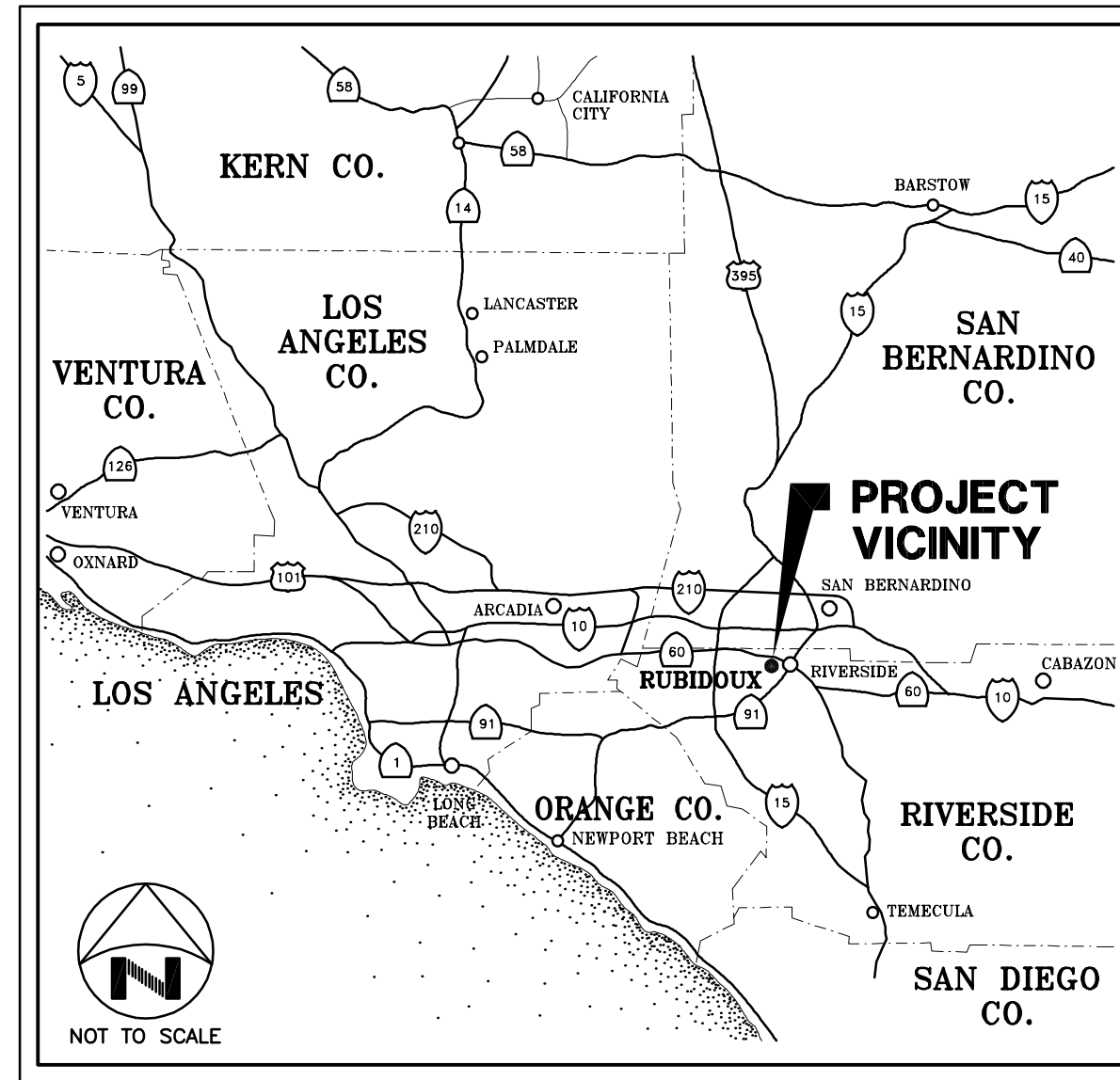


RUBIDOUX COMMUNITY SERVICES DISTRICT

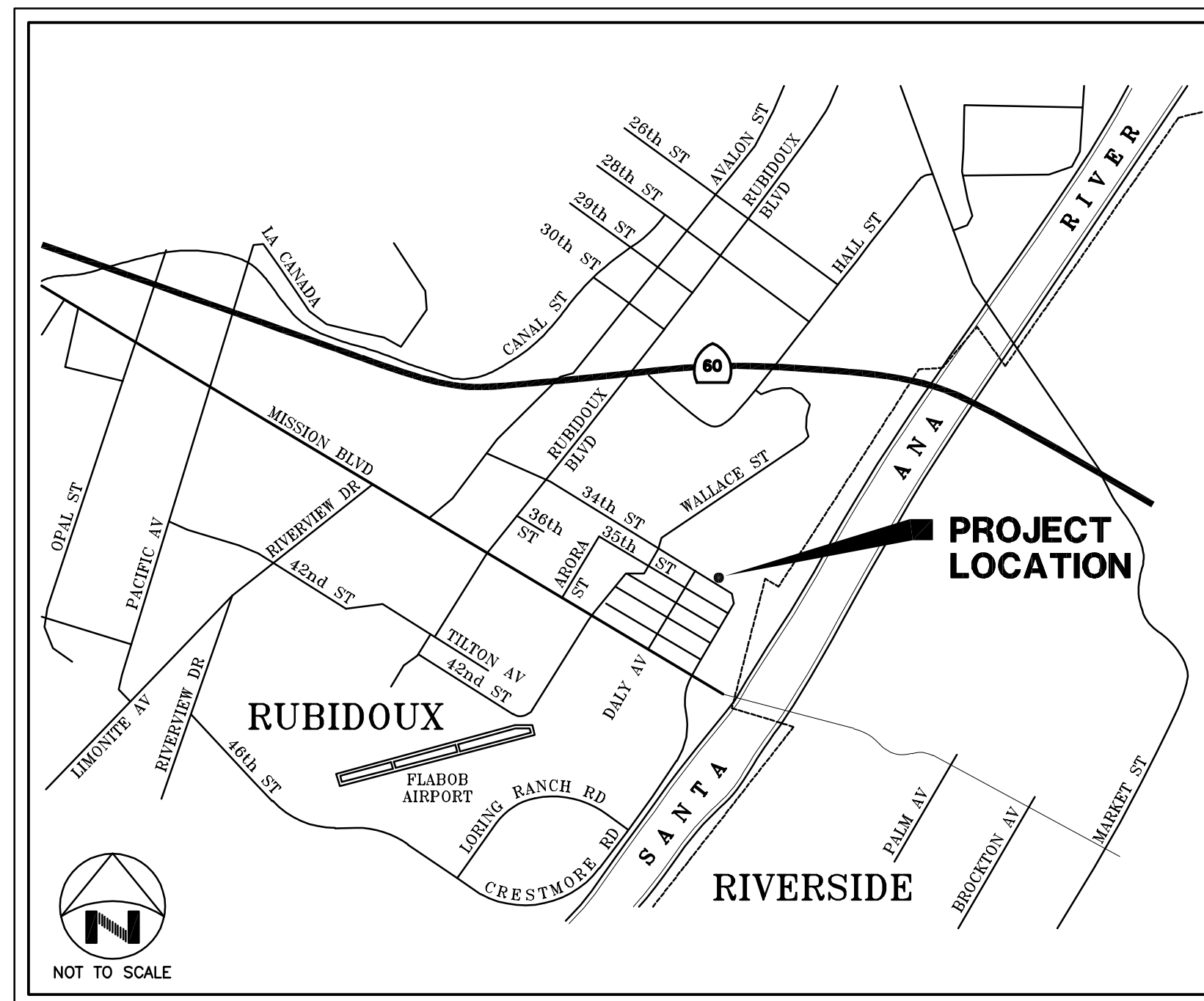
LELAND J. THOMPSON WATER TREATMENT PLANT FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE



VICINITY MAP

DRAWING INDEX

DWG. No.	SHEET No.	DESCRIPTION
G-1	1	TITLE SHEET, LOCATION AND VICINITY MAPS, AND DRAWING INDEX
G-2	2	CONSTRUCTION NOTES
G-3	3	LEGENDS, SYMBOLS, AND ABBREVIATIONS
G-4	4	SCHEDULES
G-5	5	TREATMENT PROCESS SCHEMATIC
C-1	6	SITE PLAN
C-2	7	CIVIL SECTIONS AND DETAILS
M-1	8	MECHANICAL PLAN
M-2	9	MECHANICAL SECTIONS
M-3	10	MECHANICAL DETAILS



LOCATION MAP

BENCHMARK:

FD. R.R. SPIKE, DN. 0.1' AT C/L INTERSECTION OF 34TH STREET AND DALY AVE. TGT NO.2" PER R.C.S.D. 34TH ST. PPLN DWG. W-96-003 (REF. K&S W.O. 587-19.31) ELEV = 782.21 (NAVD 29)

BASIS OF BEARINGS:

BASIS OF BEARINGS IS THE CENTERLINE OF 34TH STREET BEING N.59°58'00"W. PER PARCEL MAP 10879 (PM 56/13)

BOUNDARY SHOWN HEREON WAS COMPILED FROM RECORD DATA PER PM 56/13 AND DEED RECORDED AS DOC# 260731 DATED 6/14/1999. RIV. CO.

DWG. NO.: 587-19.65_01 FILE NO.: 587-19.65_UPDATE BY: TMW_PROJ. ENG.: BCV_PLOT DATE: 11/16/23_PLOT TIME: 6:09AM_PLOT SCALE: 1"=1'

48 hours BEFORE excavation
1-800-227-2600
 CALL Underground Service Alert

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING

 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:
 DATE _____ DIRECTOR OF ENGINEERING RCE 48798

SYM	REVISIONS	DATE	BY



KRIEGER & STEWART
 Engineering Consultants
 3602 University Avenue • Riverside, CA 92501
 www.kriegerandstewart.com • 951-684-6900
 APPROVED BY *Brandon C. Valdez*
 REGISTERED ENGINEER No. 78326 DATE 11/17/23

SCALE	AS SHOWN
FIELD BOOK	N/A
DESIGN	BCV
DRAWN	TMW
CHECKED	BCV

RUBIDOUX COMMUNITY SERVICES DISTRICT
 LELAND J. THOMPSON WATER TREATMENT PLANT
 FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE
TITLE SHEET, LOCATION AND VICINITY MAPS, AND DRAWING INDEX

DRAWING
G-1
 1 OF 10 SHEETS
 R.C.S.D. PLAN No. 587-19.65

CONSTRUCTION NOTES

GENERAL

- CONTRACTOR SHALL PERFORM CONSTRUCTION WORK IN A MANNER TO MAINTAIN CONTINUOUS OPERATION OF THE EXISTING TREATMENT PLANT (PLANT), EXCEPT FOR SHUTDOWNS AS MAY BE ALLOWED AS SPECIFIED IN THE SEQUENCE OF WORK AND WORK RESTRICTIONS, SPECIFICATION SECTION 01185. CONTRACTOR SHALL COOPERATE WITH THE DISTRICT, WHO WILL BE OPERATING THE EXISTING AND PROPOSED FACILITIES AND SHALL NOT INTERFERE NOR INTERRUPT FACILITY OPERATION, EXCEPT AS SPECIFICALLY APPROVED BY THE DISTRICT. CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVE, GATE, OR EQUIPMENT. ANY SUCH WORK NECESSARY SHALL BE PERFORMED BY THE DISTRICT. CONTRACTOR SHALL FOLLOW THE SEQUENCE OF WORK SPECIFIED IN SPECIFICATION SECTION 01185.
 - CONTRACTOR SHALL FURNISH, INSTALL, PLACE INTO PROPER OPERATION, MAINTAIN, AND REMOVE AFTER COMPLETION, ANY AND ALL NECESSARY TEMPORARY FACILITIES, INCLUDING (BUT NOT LIMITED TO) TEMPORARY PIPING, VALVES, SUPPORTS, PUMPS, EQUIPMENT, INSTRUMENTATION, ELECTRICAL POWER FACILITIES, AND APPURTENANCES AS REQUIRED TO MAINTAIN CONTINUOUS PLANT OPERATION AND TO FACILITATE STARTUP AND TESTING OF CONSTRUCTED FACILITIES.
 - CONTRACTOR SHALL PROTECT EXISTING FACILITIES AND IMPROVEMENTS IN PLACE AND NOT INTERRUPT EXISTING FACILITIES OPERATION. OPERATIONAL MODIFICATIONS NECESSARY FOR CONSTRUCTION SHALL BE PERFORMED AS SPECIFIED IN THE SEQUENCE OF WORK PER SPECIFICATION SECTION 01185. ANY DAMAGED FACILITIES SHALL BE REPAIRED OR REPLACED IN KIND AS APPROVED BY THE DISTRICT.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AS SPECIFIED IN THE SAFETY REQUIREMENTS AND PROGRAMS PER THE SPECIAL CONSTRUCTION PROVISIONS.
 - APPROVAL OF DISTRICT IMPLIES NO PERMISSION OTHER THAN THAT WITHIN THE DISTRICT'S JURISDICTION. ALL PERMITS REQUIRED BY LAW AND NOT ALREADY OBTAINED BY THE DISTRICT SHALL BE ACQUIRED BY CONTRACTOR. REQUIREMENTS OF DISTRICT SHALL TAKE PRECEDENCE OVER REQUIREMENTS OF OTHER AGENCIES ONLY WHERE DISTRICT REQUIREMENTS ARE MORE STRINGENT.
 - EQUIPMENT AND MATERIALS, INCLUDING PIPING, VALVES, FITTINGS, DRAINS, PIPE SUPPORTS, ETC., ARE SHOWN ON THE DRAWINGS BY SYMBOLS. PIPE SIZE IS SHOWN AS STANDARD CALL OUT WITH SIZE AND PIPE DUTY. MATERIAL DESCRIPTION LISTS, WHERE PROVIDED, ARE FOR CLARITY AND SPECIAL ITEMS ON SOME DRAWINGS. NOT ALL EQUIPMENT, PIPING, VALVES, AND FITTINGS ARE INCLUDED IN MATERIAL DESCRIPTION LISTS. CONTRACTOR SHALL FURNISH AND INSTALL EQUIPMENT AND MATERIALS AS SHOWN ON THE DRAWINGS BY SYMBOL AND PER MATERIAL DESCRIPTION LISTS INCLUDING MINOR PIPE FITTINGS, ADAPTERS, AND APPURTENANCES NECESSARY TO PROVIDE COMPLETE, OPERABLE SYSTEMS.
 - ASTERISK (*) DENOTES A DIMENSION DEPENDENT UPON ACTUAL EQUIPMENT FURNISHED OR EXISTING EQUIPMENT AS INSTALLED. DIMENSION TO BE VERIFIED PRIOR TO CONSTRUCTION AND PRIOR TO ORDERING EQUIPMENT DEPENDENT UPON DIMENSION. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS WITH ACTUAL FABRICATED EQUIPMENT DELIVERED TO PROJECT OR AS-BUILT CONDITIONS. CONTRACTOR SHALL ALLOW FOR ADJUSTMENTS TO CONNECTIONS TO EQUIPMENT DUE TO FABRICATION TOLERANCES AND INSTALLATION TOLERANCES.
- THE PRECISE DIMENSIONS AND LOCATIONS OF ALL EQUIPMENT, MATERIALS AND COMPONENTS, AND RELATED OPENINGS AND PENETRATIONS SHALL BE DETERMINED FOR THE ACTUAL EQUIPMENT BEING FURNISHED. SHOP DRAWINGS WITH ADEQUATE ACCURATE DIMENSIONS MUST BE SUBMITTED AND ACCEPTED PRIOR TO CONTRACTOR CONSTRUCTING FACILITIES THAT ARE AFFECTED BY SAID EQUIPMENT.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE AND CROSS CHECK DETAILS AND DIMENSIONS SHOWN ON THE DRAWINGS. FLOOR AND WALL OPENINGS, SLEEVES, PENETRATIONS AND OTHER CIVIL, STRUCTURAL, MECHANICAL, OR ELECTRICAL REQUIREMENTS MUST BE COORDINATED BEFORE CONTRACTOR PROCEEDS WITH CONSTRUCTION.
 - CONTRACTOR, SUBCONTRACTORS, AND SUPPLIERS PERFORMING WORK OR SUPPLYING EQUIPMENT AND MATERIALS SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS. ALTHOUGH THE DRAWINGS ARE ARRANGED BY TYPE OF WORK (DISCIPLINE), MULTIPLE TYPES OF WORK MAY BE SHOWN ON ANY DRAWING TO REDUCE THE NUMBER OF DRAWINGS.
 - IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON DRAWINGS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROJECT SITE SECURITY. PLANT AREA MUST BE SECURE AT END OF EACH WORK DAY. UNLESS SPECIFIED OTHERWISE, CONTRACTOR'S WORK HOURS SHALL BE 7:00AM TO 5:00PM MONDAY THROUGH FRIDAY.
 - CONTRACTOR SHALL GENERALLY RESTRICT ITS WORK ACTIVITIES TO THE PROJECT SITE. CONTRACTOR SHALL NOT STORE MATERIALS OR EQUIPMENT ON PRIVATE OR PUBLIC PROPERTY WITHOUT WRITTEN PERMISSION APPROVING SUCH USE. CONTRACTOR MAY STORE MATERIALS AND EQUIPMENT ON THE DISTRICT'S PROPERTY IN DESIGNATED AREAS ONLY, AS SHOWN ON THE DRAWINGS.
 - CONTRACTOR SHALL PROVIDE ITS OWN SANITARY FACILITIES AND OFFICE FACILITIES, INCLUDING TELEPHONE AND TEMPORARY POWER.
 - UNLESS NOTED OTHERWISE, ALL MACHINE BOLTS, ANCHOR BOLTS, DEFERRED BOLTING DEVICES, AND FASTENERS SHALL BE CONSTRUCTED OF TYPE 316 STAINLESS STEEL. UNLESS NOTED OTHERWISE, ALL ANCHOR BOLTS SHALL BE CAST-IN-PLACE OR DRILLED AND EPOXIED. EPOXY ANCHORS SHALL BE HILTI HIT-HY200 SYSTEM (ICC ESR-3187 FOR CONCRETE AND ICC ESR-3963 FOR MASONRY), RED HEAD EPCON A7+ SYSTEM (ICC ESR-3903 FOR CONCRETE AND ICC ESR-3951 FOR MASONRY), OR EQUAL. PRIOR TO INJECTING EPOXY, EACH DRILLED HOLE SHALL BE CLEANED OUT WITH A NYLON BRUSH. CONTRACTOR SHALL INSTALL DOWELS AND ANCHOR BOLTS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS AND ICC-ES EVALUATION REPORTS.

UNDERGROUND FACILITIES AND EXISTING IMPROVEMENTS

- THE EXISTENCE AND LOCATION OF ANY EXISTING UNDERGROUND FACILITY (INCLUDING STRUCTURES, PIPING, CONDUIT, ETC.) SHOWN ON THE DRAWINGS ARE BASED ON A SEARCH OF THE OWNER'S EXISTING RECORDS. THE DRAWINGS DO NOT SHOW ALL INFORMATION AND DATA PERTAINING TO EXISTING FACILITIES THAT MAY AFFECT THE CONTRACTOR'S WORK. CONTRACTOR SHALL CAREFULLY EXAMINE THE OWNER'S EXISTING RECORDS TO DETERMINE THE NATURE AND EXTENT OF ANY EXISTING FACILITY (UNDERGROUND AND ABOVEGROUND) THAT MAY AFFECT THE WORK. SUBMISSION OF A BID SHALL BE CERTIFICATION THAT THE CONTRACTOR AND HIS SUBCONTRACTORS HAVE EXAMINED THE EXISTING RECORDS AND CONTRACT DOCUMENTS, AND HAVE INSPECTED THE EXISTING FACILITIES; AND ARE SATISFIED AS TO THE FACILITIES AND CONDITIONS TO BE ENCOUNTERED, AND AS TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

- THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES (PIPING, VALVES, CONDUCTORS, ELECTRICAL CONDUIT, ETC.) ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND DEPTHS ARE UNKNOWN (UNLESS ELEVATIONS ARE INDICATED). CONTRACTOR SHALL EXERCISE CARE DURING EXCAVATIONS TO AVOID DAMAGE TO SAID FACILITIES. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UNDERGROUND FACILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY DAMAGES WHICH RESULT FROM HIS FAILURE TO EXACTLY LOCATE AND PROTECT ANY AND ALL FACILITIES.
- AT LEAST 48 HOURS BEFORE COMMENCING ANY EXCAVATION, CONTRACTOR SHALL REQUEST UNDERGROUND SERVICE ALERT (1-800-227-2600) AND NON-MEMBER COMPANIES OR UTILITIES TO MARK OR OTHERWISE INDICATE THE LOCATION(S) OF THEIR SUBSURFACE FACILITIES INCLUDING, BUT NOT LIMITED TO, STRUCTURES, GRAULTS, PIPING, VALVES, CONDUCTORS, CONDUIT, CABLES, AND SERVICE CONNECTIONS.
- AS THE FIRST ITEM OF WORK (WITHIN 45 DAYS OF EXECUTION OF CONTRACT) CONTRACTOR SHALL EXCAVATE AND EXPOSE ("POTHOLE") EXISTING FACILITIES IN LOCATIONS WHERE NEW FACILITIES ARE PROPOSED OR CONNECTIONS TO EXISTING FACILITIES ARE PROPOSED TO ESTABLISH THE EXACT HORIZONTAL LOCATION (SURVEY COORDINATE, ± 0.1'), SIZE, MATERIAL, AND ELEVATION, AND DETERMINE IF THERE WILL BE AN INTERFERENCE WITH PROPOSED FACILITIES. CHANGES OR DELAYS CAUSED BY CONTRACTOR'S FAILURE TO PERFORM "POTHOLING" AND INTERFERENCE LOCATION WORK SHALL NOT BE ELIGIBLE FOR EXTRA WORK COMPENSATION OR TIME EXTENSION.
 - CONTRACTOR SHALL SUBMIT "POTHOLE" DATA (EXACT ELEVATION, SIZE, MATERIAL, AND HORIZONTAL LOCATION) TO DISTRICT. BASED ON SAID "POTHOLE DATA", DISTRICT MAY MODIFY BELOW GRADE PIPING/CONDUIT ALIGNMENT AND GRADE TO AVOID EXISTING PIPING/ CONDUIT AND WILL SUBMIT MODIFICATIONS, IF ANY, TO CONTRACTOR WITHIN TWO WEEKS OF RECEIPT OF ALL "POTHOLE" DATA.
 - EXISTING IMPROVEMENTS DAMAGED OR REMOVED BY CONSTRUCTION SHALL BE REPLACED IN KIND. LIMITS OF REMOVAL AND REPLACEMENT SHALL BE APPROVED BY THE DISTRICT PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
 - PROPOSED UNDERGROUND PIPING AND ELECTRICAL CONDUITS ARE SHOWN ON SITE PLANS AND DRAWINGS IN APPROXIMATE LOCATIONS BASED ON LOCATIONS OF EXISTING UTILITIES AND FACILITIES SHOWN ON DISTRICT RECORD DRAWINGS. THE CONTRACTOR SHALL USE POTHOLE DATA TO ADJUST PROPOSED FACILITIES LOCATIONS AS APPROVED BY DISTRICT TO FACILITATE CONSTRUCTION OF PROPOSED FACILITIES.

SITE WORK AND GRADING

- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH TECHNICAL SPECIFICATION SECTION 02300, THE SPECIAL REQUIREMENTS, AND NOTES HEREON.
 - RELATIVE COMPACTION OF 95% SHALL MEAN SOIL COMPACTED TO A DRY DENSITY EXCEEDING 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 1557, LATEST EDITION.
 - EXCAVATED NATIVE SOILS MAY BE UTILIZED FOR SELECT FILL MATERIAL, PROVIDED THESE MATERIAL ARE FREE OF VEGETATIVE MATTER AND OTHER DELETERIOUS SUBSTANCES, AND SHALL NOT CONTAIN ROCKS, BOULDERS (OR PORTIONS OF BOULDERS), OR IRREDUCIBLE MATERIALS WITH A MAXIMUM DIMENSION GREATER THAN 3", AND WITH 5% TO 35% PASSING THE No. 200 SIEVE.
- ALL EXCESS EXCAVATION SOILS AND MATERIALS, INCLUDING CONCRETE, ROCK, VEGETATIVE MATTER, AND OTHER DELETERIOUS SUBSTANCES SHALL BE REMOVED FROM THE SITE AND PROPERLY AND LEGALLY DISPOSED OF. NO EXCESS MATERIAL SHALL REMAIN ON SITE. CONTRACTOR SHALL NOT DISPOSE OF SUCH MATERIAL ON VACANT PRIVATE OR PUBLIC PROPERTY WITH OR WITHOUT PERMISSION.
- CONTRACTOR SHALL IMPORT SUFFICIENT QUANTITIES OF SELECT FILL MATERIAL TO ACHIEVE THE SPECIFIED FINISHED GRADES AND MINIMUM RELATIVE COMPACTION. IMPORT SELECT FILL MATERIAL SHALL BE INORGANIC, GRANULAR, NON-EXPANSIVE SOIL, FREE OF ROCKS OR LUMPS GREATER THAN 3" IN MAXIMUM DIMENSION. IMPORT SELECT FILL MATERIAL SHALL MEET THE USCS CLASSIFICATIONS OF SM, SP-SM, OR SW-SM WITH 5% TO 35% PASSING THE No. 200 SIEVE.
 - SELECT FILL MATERIAL SHALL BE PLACED IN LIFTS NO GREATER THAN 8" IN LOOSE THICKNESS AND COMPACTED TO 95% MINIMUM RELATIVE COMPACTION.
 - PRIOR TO PLACEMENT OF FILL ON ANY GROUND SURFACE, DISTRICT SHALL APPROVE PREPARATION AND COMPACTION OF SAME.
 - CLASS II AGGREGATE BASE, CLASS II BASE, OR CLASS 2 BASE SHALL BE CRUSHED AGGREGATE BASE PER SSPWC SECTION 200-2.2.
 - WHERE EXISTING ASPHALT CONCRETE PAVEMENT IS TO BE REMOVED FOR CONSTRUCTION OF STRUCTURES OR INSTALLATION OF BELOW GRADE PIPING AND ELECTRICAL CONDUIT, SAW CUT EXISTING PAVEMENT EDGES (1" MIN.) ADDITIONAL EACH SIDE OF EXCAVATION) TO STRAIGHT NEAT, VERTICAL EDGES, EITHER PERPENDICULAR OR PARALLEL WITH EXCAVATION. UPON COMPLETION OF STRUCTURE CONSTRUCTION OR PIPING AND CONDUIT INSTALLATION, CONSTRUCT PERMANENT ASPHALT CONCRETE PAVEMENT PER REQUIREMENTS HEREON.
 - PERMANENT ASPHALT CONCRETE PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATION 02700, EXCEPT AS MODIFIED HEREAFTER.
 - GEOTEXTILE FABRIC IS NOT REQUIRED BENEATH THE CLASS 2 BASE.
 - PAVEMENT SHALL BE HOT PLACED TO 4 1/2" TOTAL THICKNESS (MINIMUM) OVER 8" (MINIMUM) OF CLASS 2 BASE. ASPHALT CONCRETE PAVEMENT AND CLASS 2 BASE SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
 - PAVEMENT MATERIALS SHALL COMPLY WITH SPECIFICATION SECTION 02700, THE FIRST LIFT SHALL BE B-P664-10 AND SECOND LIFT SHALL BE C2-P665-10.
 - ALL ASPHALT CONCRETE PAVING, INCLUDING UTILITY TRENCH PAVING (5' MINIMUM EACH SIDE OF TRENCH), SHALL BE PROVIDED WITH A SEALCOAT PER SPECIFICATION 02500.
 - CONTRACTOR SHALL PROVIDE THE SERVICES OF AN INDEPENDENT THIRD PARTY GEOTECHNICAL FIRM TO HAVE ALL PROPOSED BEDDING, BACKFILL, SELECT FILL, AND AGGREGATE BASE MATERIALS LABORATORY TESTED TO DETERMINE MAXIMUM DENSITY, OPTIMUM MOISTURE CONTENT, SAND EQUIVALENT, AND R VALUE. CONTRACTOR SHALL OBTAIN AND DELIVER ALL SAMPLES NECESSARY FOR SAID LABORATORY TESTING. ALL COSTS FOR SAMPLING AND TESTING MATERIAL SHALL BE PAID FOR BY THE CONTRACTOR.

PIPING/VALVES

- UNO, ALL EXISTING PIPING SHOWN ON THE DRAWINGS IS IN SERVICE.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL PIPING AND FITTINGS REQUIRED FOR FIELD INSTALLATIONS, ALL BASED ON CONTRACTOR'S FIELD MEASUREMENTS AND ALL AT NO ADDITIONAL COST TO DISTRICT. CONTRACTOR SHALL FURNISH FITTINGS, ADAPTERS, AND BUSHINGS AS REQUIRED FOR FIELD INSTALLATIONS.
- PIPE MATERIALS AND TEST PRESSURES SHALL BE AS SHOWN ON THE PIPE MATERIAL SCHEDULES AND AS SPECIFIED HEREIN. PIPING HAS BEEN DESIGNED BASED ON SAID TABLE. ALL PIPING SHALL BE CONSTRUCTED WITH RESTRAINED JOINTS. RESTRAINED JOINTS SHALL BE FLANGED, VICTAULIC (GROOVED TYPE), WELDED, THREADED, OR EQUAL. FLANGED AND VICTAULIC JOINTS SHALL BE PROVIDED WHERE SHOWN.
- UNLESS NOTED OTHERWISE, PIPING ELEVATIONS SHOWN ARE FOR CENTERLINE OF PIPE. PIPELINES SHALL BE STRAIGHT GRADE BETWEEN ELEVATIONS AND DIMENSIONS SHOWN. CONTRACTOR SHALL PROVIDE ALL SHORTS, SPOOLS, AND FITTINGS NECESSARY TO MEET ELEVATIONS AND DIMENSIONS SPECIFIED.
- VALVES SHALL BE AS SPECIFIED IN THE SPECIFICATIONS, AS LISTED IN EQUIPMENT AND MATERIALS DESCRIPTIONS, AS SHOWN BY SYMBOL ON THE DRAWINGS, AND AS SPECIFIED HEREON. UNO, VALVES 4" AND LARGER SHALL BE FLANGED AND FURNISHED WITH GEAR OPERATORS. ALL VALVES ABOVE GRADE SHALL BE FURNISHED WITH WHEEL OPERATORS (9" MINIMUM DIAMETER). BURIED VALVES SHALL BE FURNISHED WITH VALVE BOXES AND STEM EXTENSIONS PER DISTRICT STANDARD DRAWINGS. ALL BURIED VALVES SHALL BE INSTALLED IN ACCORDANCE WITH DISTRICT STANDARD DRAWING W1030. VALVE CAN LIDS SHALL BE MARKED ACCORDING TO THEIR RESPECTIVE SERVICE.
- ALL PIPE, FITTINGS, VALVES, AND APPURTENANCES SHALL BE CONSTRUCTED OF MATERIALS AND PROVIDED WITH INTERIOR COATINGS AND LININGS THAT ARE CERTIFIED BY THE NATIONAL SANITATION FOUNDATION TO BE IN ACCORDANCE WITH ANSI/NSF STANDARD 61 FOR POTABLE WATER CONTACT AND INDIRECT ADDITIVES.
- ALL PIPE ZONE BEDDING AND TRENCH BACKFILL SHALL BE PER DISTRICT STANDARD DRAWING G20. UNLESS NOTED OTHERWISE, PIPE ZONE (BOTTOM OF TRENCH TO ONE FOOT OVER TOP OF PIPE) BACKFILL MATERIALS SHALL BE CLEAN COMMERCIAL IMPORTED SAND WITH A MINIMUM SAND EQUIVALENT OF 50 AS DETERMINED BY ASTM TEST METHOD D2419. SAID MATERIAL SHALL ALSO CONFORM WITH THE FOLLOWING CRITERIA:

$D_{15} > 0.5 \text{ MM}$ AND $D_{50} < 5 \text{ MM}$

WHERE D_{15} AND D_{50} REPRESENT BEDDING MATERIAL PARTICLE SIZE CORRESPONDING TO 15 AND 50 PERCENT PASSING BY WEIGHT, RESPECTIVELY.

BACKFILL ABOVE THE PIPE ZONE SHALL BE EITHER COMMERCIAL IMPORTED MATERIAL OR SELECT NATIVE MATERIAL (SCREENED OR WASHED).
- PIPE SHALL BE INSTALLED IN TRENCH CONDITION AND AS SPECIFIED IN SPECIFICATION SECTION 15070. BACKFILL SHALL BE COMPLETED INCLUDING COMPACTION TESTS PRIOR TO PRESSURE TESTING. BACKFILL IN PIPE ZONE SHALL BE COMPACTED BY HAND TAMPING TO MINIMUM 90% COMPACTION. WHERE PIPE IS LOCATED UNDER CONCRETE SLABS, ALL TRENCH BACKFILL SHALL BE MINIMUM 95% COMPACTION.
- CONTRACTOR SHALL BACKFILL WITH TWO SACK CEMENT/SAND SLURRY ALL PIPELINE CROSSINGS WITH EXISTING MAINLINE UTILITIES AND AT LOCATIONS SHOWN ON THE CONSTRUCTION DRAWINGS. THE TWO SACK CEMENT/SAND SLURRY SHALL EXTEND 18" ON EACH SIDE OF THE EXISTING FACILITY AND EXTEND FROM THE BOTTOM OF THE PROPOSED PIPELINE TO THE SPRINGLINE OF THE EXISTING FACILITY TO BE SUPPORTED.
- UNLESS OTHERWISE SHOWN, MINIMUM COVER ON BELOW GRADE PIPE SHALL BE 30".
- UNLESS NOTED OTHERWISE, TRENCH BACKFILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION (MINIMUM).
- UNLESS SPECIFIED OTHERWISE, MINIMUM PRESSURE RATING FOR ALL VALVES SHALL BE 200 PSI.

CONCRETE AND MASONRY CONSTRUCTION

- ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTIONS 03100, 03200, AND 03300, AND NOTES HEREON. UNLESS NOTED OTHERWISE IN SITEWORK AND GRADING NOTES HEREON, ALL CONCRETE FOUNDATIONS, SLABS, AND PIPE SUPPORTS SHALL BE PLACED ON SOIL SCARIFIED TO A MINIMUM DEPTH OF 12" THEN COMPACTED TO 95% RELATIVE COMPACTION.
- ALL CONCRETE SHALL BE CLASS "A" STRUCTURAL CONCRETE (4,000 PSI MINIMUM 28-DAY COMPRESSIVE STRENGTH) UNLESS INDICATED OTHERWISE ON DRAWINGS.
- CONCRETE FINISHING
 - GRADE SLABS, FLOOR SLABS, AND EQUIPMENT PADS SHALL RECEIVE A MONOLITHIC TROWEL FINISH FOLLOWED BY A LIGHT BROOM AS APPROVED BY DISTRICT.
 - ALL EXPOSED INTERIOR AND EXTERIOR FORMED CONCRETE SHALL RECEIVE A "SACKED" FINISH PER CAST-IN-PLACE CONCRETE SPECIFICATIONS.
- CONCRETE SHALL CURE A MINIMUM OF 7 DAYS AND ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI PRIOR TO INSTALLING DRILLED AND EPOXIED ANCHOR BOLTS.
- THE LOCATION OF ALL CONSTRUCTION JOINTS NOT SPECIFICALLY NOTED OR SHOWN SHALL BE APPROVED BY THE DISTRICT.
- ALL NON-SHRINK GROUT SHALL BE NON-METALLIC.
- UNLESS NOTED OTHERWISE, PROVIDE 3/4" CHAMFER AT ALL EXPOSED EDGES OF CONCRETE WALLS, BEAMS, ROOF SLABS, SLABS ON GRADE, PIPE/EQUIPMENT SUPPORT FOOTINGS, EQUIPMENT PADS, ETC.
- UNLESS NOTED OTHERWISE, ALL CONCRETE SURFACES (NEW AND EXISTING) TO WHICH NEW CONCRETE IS TO BE PLACED UPON OR AGAINST SHALL BE ROUGHENED TO A UNIFORM 1/4" AMPLITUDE AND COATED WITH BONDING AGENT.
- UNLESS NOTED OTHERWISE, ALL EXISTING ANCHOR BOLTS TO BE ABANDONED SHALL BE CUT FLUSH WITH EXISTING CONCRETE AND MASONRY SURFACES.

STRUCTURAL AND MISCELLANEOUS METAL


- ALL STRUCTURAL AND MISCELLANEOUS METAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 05120.
- STRUCTURAL STEEL SHOP DRAWINGS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND ERECTION.
- ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATION (UNLESS NOTED OTHERWISE):

WIDE FLANGE (W AND WT) SECTIONS:	ASTM A992 Fy=50 KSI
CHANNELS AND MISC. SHAPES (C,MC,S,M,HP):	ASTM A36 Fy=36 KSI
ANGLES AND PLATES:	ASTM A36 Fy=36 KSI
PIPE COLUMNS (STANDARD X-STRG, XX-STRG):	ASTM A53 TYPE E, GR B Fy=36 KSI
HOLLOW STRUCTURAL SECTIONS (TUBES):	ASTM A500, GR B Fy=46 KSI
- ALL WELDING SHALL COMPLY WITH AMERICAN WELDING SOCIETY (AWS) SPECIFICATIONS AND SHALL BE EXECUTED BY ELECTRIC ARC PROCESS WITH E70XX ELECTRODES. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS SHALL BE PERFORMED USING "INNERSHIELD" AND "ML-2" SEMI-AUTOMATIC EQUIPMENT. ALL WELDERS SHALL BE AWS CERTIFIED FOR THE TYPE OF WELDING PERFORMED.
- WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN THE AISC MANUAL OF STEEL CONSTRUCTION, 14th EDITION, SPECIFICATION J2.2.B.
- UNLESS NOTED OTHERWISE, ALL MACHINE BOLTS, ANCHOR BOLTS, DEFERRED BOLTING DEVICES, AND FASTENERS SHALL BE TYPE 316 STAINLESS STEEL. DRILLED AND EPOXIED ANCHOR BOLTS SHALL BE PROVIDED IN ACCORDANCE WITH GENERAL NOTES HEREON.

DWG. NO.: 587-19665-02 FILE NO.: 587-19.65 UPDATE BY: TMM PROJ. ENG.: BCV PLOT DATE: 11/16/23 PLOT TIME: 6:20AM PLOT SCALE: 1"=1'

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING



IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:

DATE _____ DIRECTOR OF ENGINEERING
RCE 48798

SYM	REVISIONS	DATE	BY



KRS KRIEGER & STEWART
Engineering Consultants

3602 University Avenue • Riverside, CA 92501
www.kriegerandstewart.com • 951-684-6900

APPROVED BY *Brandon C. Vally*
REGISTERED ENGINEER No. 78326 DATE 11/17/23

SCALE	AS SHOWN
FIELD BOOK	N/A
DESIGN	BCV
DRAWN	TMM
CHECKED	BCV

RUBIDOUX COMMUNITY SERVICES DISTRICT

LELAND J. THOMPSON WATER TREATMENT PLANT
FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE

CONSTRUCTION NOTES

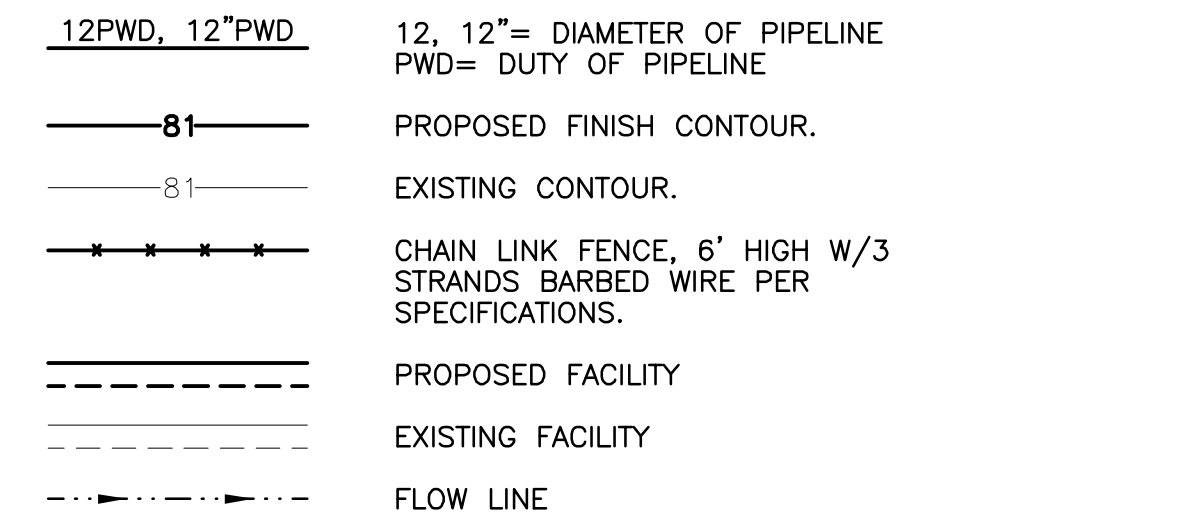
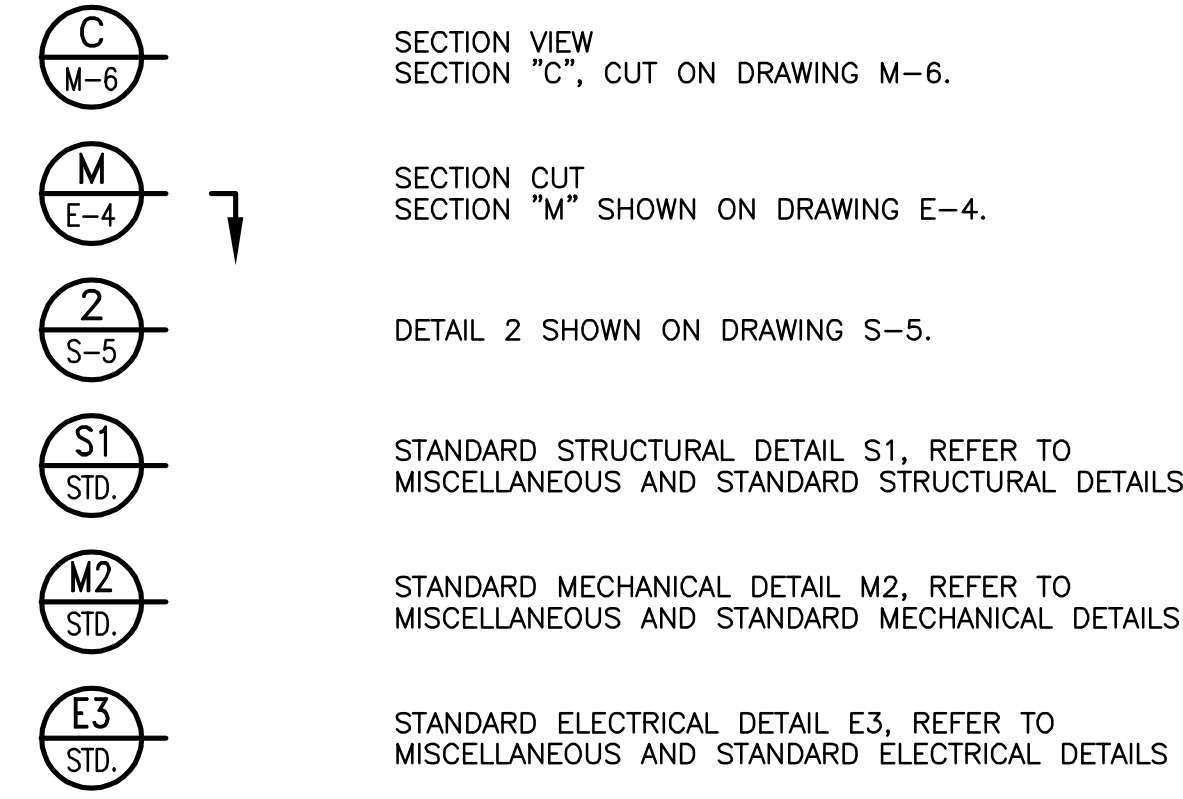
DRAWING

G-2

2 OF 10 SHEETS

R.C.S.D. PLAN NO.

SYMBOLS AND LEGEND

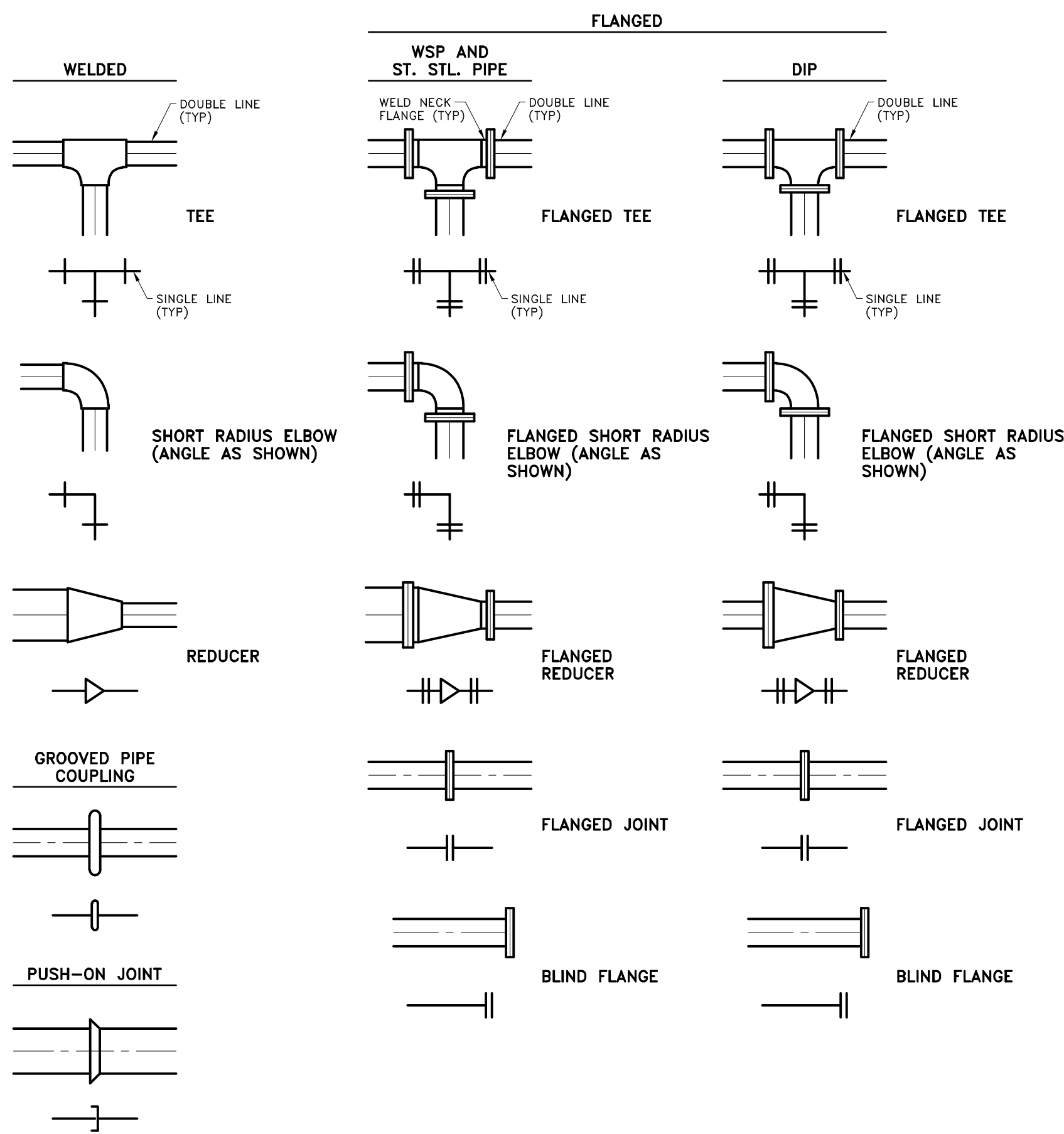


DRAWING DESIGNATION ABBREVIATIONS

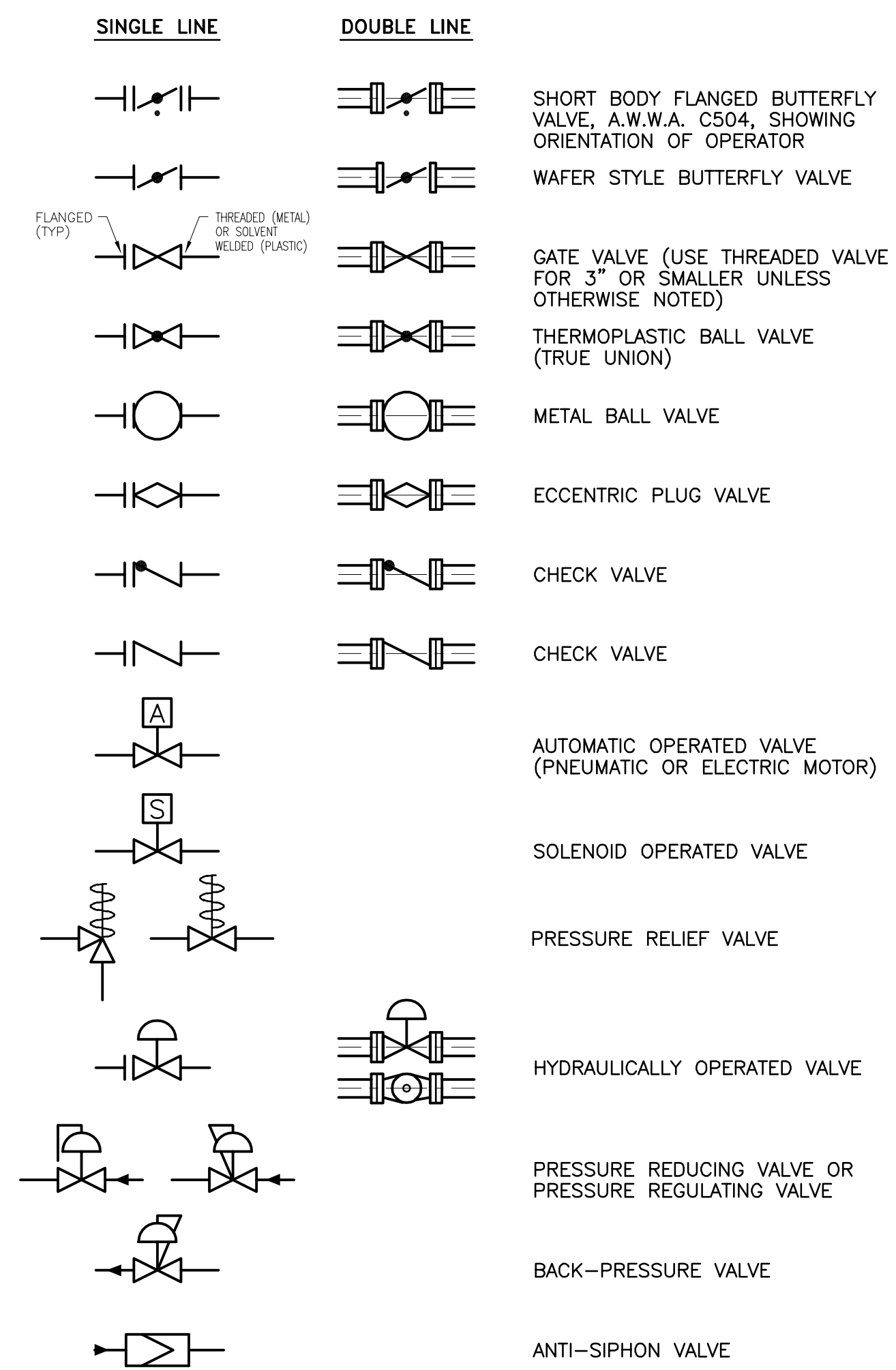
A= ARCHITECTURAL	G= GENERAL	ME= MECHANICAL ELECTRICAL
C= CIVIL	IR= IRRIGATION	S= STRUCTURAL
D= DEMOLITION	LS= LANDSCAPE	SP= SITE PIPING
E= ELECTRICAL	M= MECHANICAL	

ALTHOUGH DRAWINGS MAY BE ARRANGED BY DESIGNATION DEPICTING A CERTAIN TYPE OF WORK, MULTIPLE TYPES OF WORK MAY BE SHOWN ON ANY DRAWING. CONTRACTOR, SUBCONTRACTORS, AND SUPPLIERS PERFORMING WORK OR SUPPLYING EQUIPMENT AND MATERIALS SHALL BE RESPONSIBLE TO REVIEW ALL DRAWINGS AND SPECIFICATIONS TO DETERMINE COMPLETE SCOPE OF WORK. ALL DESIGNATIONS LISTED MAY NOT NECESSARILY BE INCLUDED IN THIS DRAWING SET.

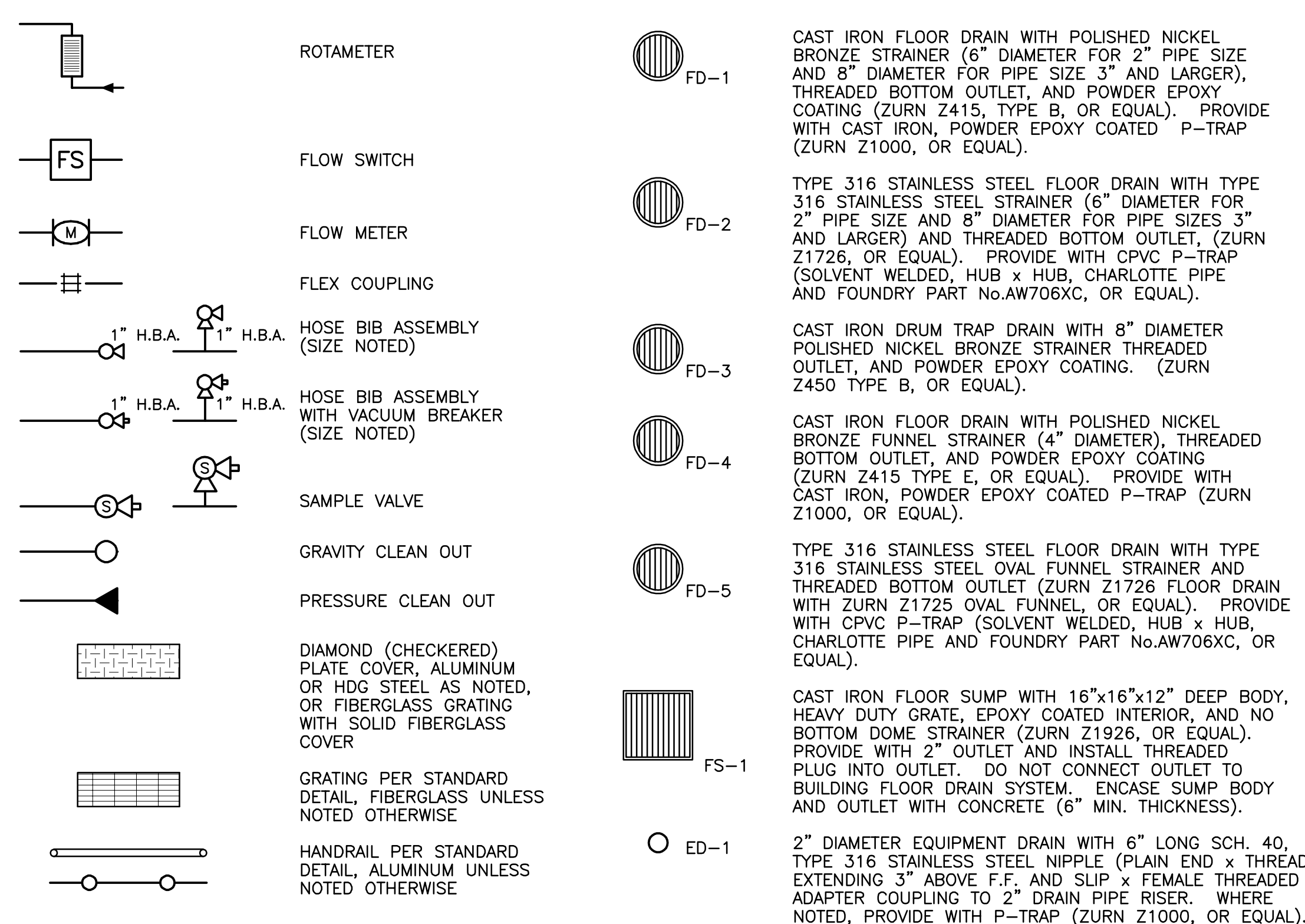
FITTING SYMBOLS, UNO



VALVE SYMBOLS, UNO



MISCELLANEOUS SYMBOLS



ABBREVIATIONS AND NOTATIONS

ABBR.	ABBREVIATION	FPT	FEMALE PIPE THREAD	OHE	OVERHEAD ELECTRICAL
A/C	AIR CONDITIONER	FRP	FIBERGLASS REINFORCED PLASTIC	PCC	PORTLAND CEMENT CONCRETE
A.C., AC	ASHPALT CONCRETE	FS	FINISH SURFACE ELEVATION	PE	PLAIN END
A.S.	AS SHOWN	FS-1	FLOOR SUMP, TYPE 1, 2, ETC., REFER TO MISCELLANEOUS SYMBOLS	PG	PRESSURE GAUGE
AV	AIR VALVE	FTG	FOOTING	PORC	POINT OF REVERSE CURVE
BFV	BUTTERFLY VALVE	FUT.	FUTURE CONSTRUCTION	PL, PL	PROPERTY LINE
BOT	BOTTOM	G	GAS	PS1	PIPE SUPPORT TYPE 1, 2, ETC., REFER TO MISCELLANEOUS DETAILS AND STANDARD DRAWINGS
BC	BEGINNING CURVE	GA.	GAUGE	PSI	POUNDS PER SQUARE INCH
CG	CENTER GRADE	GB	GRADE BREAK	PT	PRESSURE TRANSMITTER
CJ, C.J.	CONSTRUCTION JOINT	GPM	GALLONS PER MINUTE	R	RADIUS
CL2	CHLORINE	GSM	GALVANIZED SHEET METAL	RC, R.C.	RELATIVE COMPACTION
CL, CL	CENTERLINE	HB	HOSE BIBB	REQ.	REQUIRED, REQUIREMENTS
CL EL	CENTERLINE ELEVATION	HDL	HOT DIPPED GALVANIZED	RPBFD	REDUCED PRESSURE BACKFLOW DEVICE
CLR.	CLEAR, CLEARANCE	HDPE	HIGH DENSITY POLYETHYLENE	R/W	RIGHT OF WAY
CMB	CRUSHED MISCELLANEOUS BASE	HHWL	HIGH HIGH WATER LEVEL	SCH, SCHED	SCHEDULE
CMU	CONCRETE MASONRY UNIT	HP	HIGH POINT	SPEC	BOUND SPECIFICATIONS
CONC.	CONCRETE	HPI	HORIZONTAL POINT OF INFLECTION	SSQ.	SQUARE
CONT.	CONTINUOUS	HSS	HOLLOW STRUCTURAL SECTION	SSPWC	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION)
C.O.T.G.	CLEAN-OUT TO GRADE	HWL	HIGH WATER LEVEL	STA.	STATION
CTF	CUT-TO-FIT	ID, I.D.	INSIDE DIAMETER	ST. STL, S.S.	STAINLESS STEEL
CTRL JT	CONTROL JOINT	INV.	INVERT ELEVATION	STD DWG	STANDARD DRAWING- REFER TO BOUND SPECIFICATION
DIA.	DIAMETER	L	METAL ANGLE, SIZE AS SPECIFIED	T&B	TOP AND BOTTOM
DWG.	DRAWING	LF	LINEAR FEET	TB	TOP OF BERM ELEVATION
E.#	EAST COORDINATE	LLH	LONG LEG HORIZONTAL	TC, TOC	TOP OF CONCRETE ELEVATION, TOP OF CURB ELEVATION
EC	END CURVE	LLV	LONG LEG VERTICAL	TD	TOP OF DRAIN ELEVATION
ED1, ED-1	EQUIPMENT DRAIN, TYPE 1, REFER TO MISCELLANEOUS SYMBOLS	LLWL	LOW LOW WATER LEVEL	TEL.	TELEPHONE
EG	EXISTING GRADE ELEVATION	LWL	LOW WATER LEVEL	TELM.	TELEMETRY
EJ	EXPANSION JOINT	MANUF, MFR.	MANUFACTURER	TF	TOP OF FOOTING ELEVATION
EL	ELEVATION	MAX.	MAXIMUM	TG	TOP OF GRATE ELEVATION, TOP OF GRATING
EMH	ELECTRICAL MANHOLE	MG	MILLION GALLONS	THK.	THICK, THICKNESS
EP	EDGE OF PAVING	MGD	MILLION GALLONS PER DAY	TP	TOP OF PAVING
EQ.	EQUAL, EQUALLY	MH	MANHOLE	TS	TOP OF SLAB, TOP OF STEEL
E.W.	EACH WAY	MIN.	MINIMUM	TW, TOW	TOP OF WALL ELEVATION
EXIST, (E)	EXISTING	MIP	MALE IRON PIPE	TYP, TYP.	TYPICAL
EXP.	EXPANSION	MISC.	MISCELLANEOUS	UNO, U.N.O.	UNLESS NOTED OTHERWISE
FD1, FD-1	FLOOR DRAIN, TYPE 1, 2, ETC., REFER TO MISCELLANEOUS SYMBOLS	MJ	MECHANICAL JOINT CONNECTION	VPI	VERTICAL POINT OF INFLECTION
FF, FIN, FLR	FINISH FLOOR ELEVATION	MPT	MALE PIPE THREAD	VTR	VENT TO ROOF
F.F.C.O.	FLUSH FLOOR CLEAN-OUT	N.#	NORTH COORDINATE	W	WATER
FG	FINISH GRADE ELEVATION	N/A	NOT APPLICABLE, NOT AVAILABLE	W/	WITH
FIP	FEMALE IRON PIPE	N.I.C., NIC	NOT IN CONTRACT	WPJ	WEAKENED PLANE JOINT
FL, FL	FLOW LINE ELEVATION	No.	NUMBER	WS	WATER SURFACE
FLG	FLANGE, FLANGED	NPT	AMERICAN NATIONAL STANDARD TAPERED PIPE THREADS	WT.	WEIGHT
		N.T.S.	NOT TO SCALE	*	DENOTES A DIMENSION DEPENDENT UPON THE EQUIPMENT FURNISHED. CONTRACTOR TO VERIFY DIMENSION WITH ACTUAL EQUIPMENT DELIVERED TO SITE. SEE GENERAL CONSTRUCTION NOTES. DIMENSION TO BE VERIFIED PRIOR TO CONSTRUCTION AND PRIOR TO ORDERING EQUIPMENT DEPENDENT UPON DIMENSION.
		O.C.	ON CENTER		
		OD, O.D.	OUTSIDE DIAMETER		
		OFCl, O.F.C.I.	OWNER FURNISHED EQUIPMENT, CONTRACTOR TO INSTALL		
		OFOI, O.F.O.I.	OWNER FURNISHED OWNER INSTALLED EQUIPMENT		
		OH	OPPOSITE HAND		

THREADED AND SOLVENT-WELDED FITTING SYMBOLS



ABBREVIATIONS FOR PIPE MATERIALS

ABS	ACRYLONITRILE BUTADIENE STYRENE	HC	HASTELLOY C (SCH.40 UNO)
BSP	BLACK STEEL PIPE	HDG	HOT DIPPED GALVANIZED (SCH.40 STEEL UNO)
CIP	CAST IRON PIPE	HDPE	HIGH DENSITY POLYETHYLENE
CISP	CAST IRON SOIL PIPE	PCC	PRESTRESSED CONCRETE CYLINDER
CMC	CEMENT MORTAR COATED	PTFE	POLYTETRAFLUOROETHYLENE
CML	CEMENT MORTAR LINED	PVC	POLYVINYL CHLORIDE
CMLC, CML&C	WELDED STEEL PIPE CEMENT MORTAR LINED AND COATED	PVDF	POLYVINYLIDENE FLUORIDE
CML&TC	WELDED STEEL PIPE CEMENT MORTAR LINED, TAPE WRAPPED, AND CEMENT MORTAR COATED	RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE	SCS	SEAMLESS CARBON STEEL
CPVC	CHLORINATED POLYVINYL CHLORIDE	SS, S.STL.	STAINLESS STEEL (SCH.40 UNO)
DI	DUCTILE IRON	STD.WT.	STANDARD WEIGHT
DIP	DUCTILE IRON PIPE	STL.	STEEL
FRP	FIBERGLASS REINFORCED PLASTIC	VCP	VITRIFIED CLAY PIPE (EXTRA-STRENGTH)
GIP	GALVANIZED IRON PIPE (STD.WT.)	WSP	WELDED STEEL PIPE (CARBON STEEL)
		1/4\"/>	

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING

 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:

DATE _____ DIRECTOR OF ENGINEERING RCE 48798

SYM	REVISIONS	DATE	BY

KRIEGER & STEWART
 Engineering Consultants
 3602 University Avenue • Riverside, CA 92501
 www.kriegerandstewart.com • 951-684-6900

APPROVED BY
 REGISTERED ENGINEER No. 78326 DATE 11/17/23

REGISTERED PROFESSIONAL ENGINEER
 BRANDON CARY VALLY
 No. 78326
 CIVIL
 STATE OF CALIFORNIA

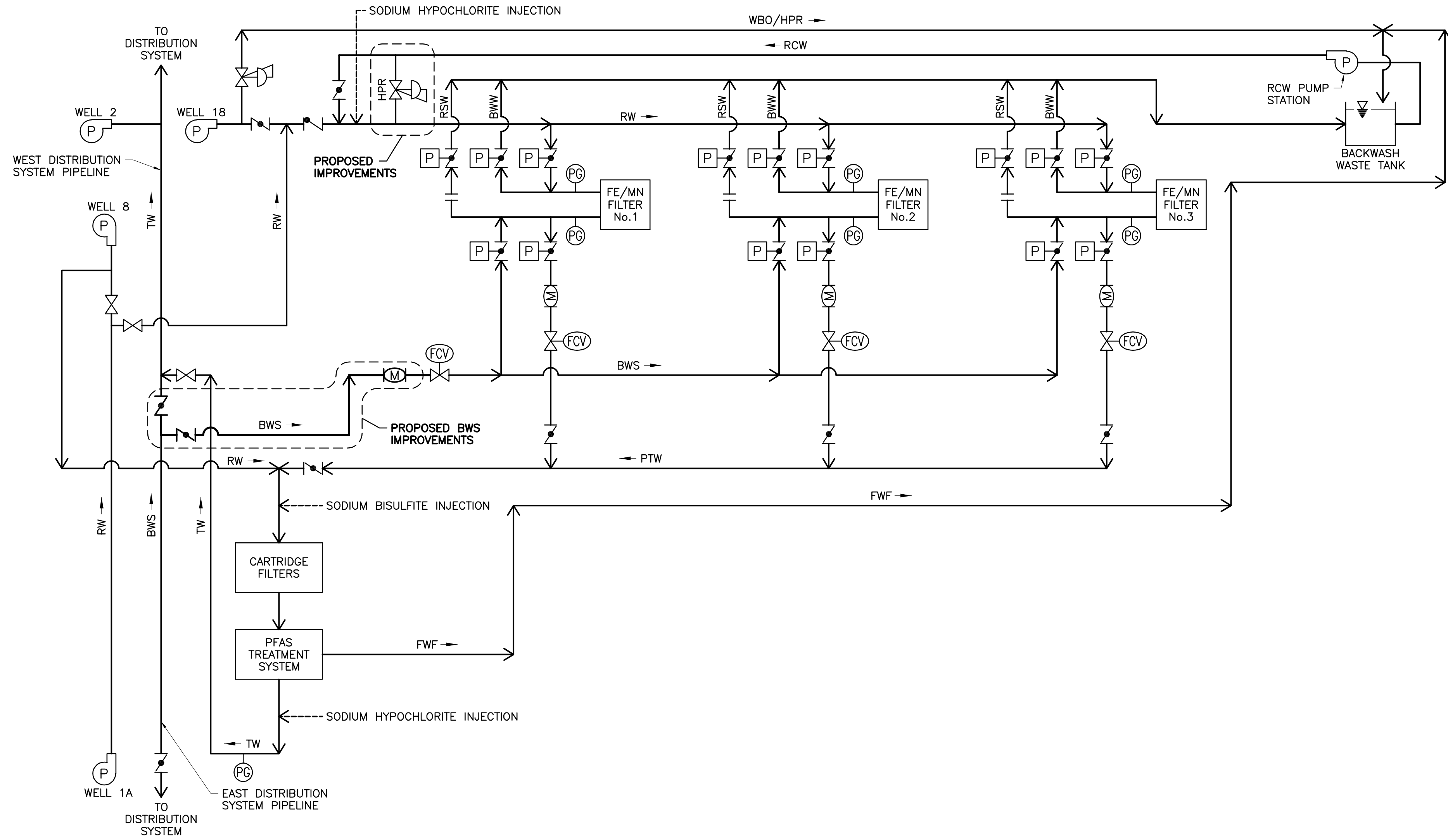
RUBIDOUX COMMUNITY SERVICES DISTRICT

LELAND J. THOMPSON WATER TREATMENT PLANT
 FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE

LEGENDS, SYMBOLS, AND ABBREVIATIONS

DRAWING G-3
 3 OF 10 SHEETS
 R.C.S.D. PLAN No. 587-19.65

DWG. NO.: 587-19.65_03 FILE NO.: 587-19.66 UPDATE BY: TMM PROJ. ENG.: BCY PLOT DATE: 11/16/23 PLOT TIME: 6:22AM PLOT SCALE: 1"=1'



- SYMBOLS LEGEND**
- PROCESS FLOW
 - - - - -> CHEMICAL INJECTION
 - (M) FLOW METER
 - (P) PNEUMATICALLY-OPERATED BUTTERFLY VALVE
 - ⊘ MANUAL BUTTERFLY VALVE
 - ⊘ MANUAL GATE VALVE
 - ⊘ SWING CHECK VALVE
 - ⊘ PRESSURE RELIEF/CONTROL VALVE
 - (FCV) MODULATING RATE OF FLOW CONTROL VALVE
 - (PG) PRESSURE GAUGE
 - (P) PUMP
 - || ORIFICE PLATE

- ABBREVIATIONS**
- BWS BACKWASH SUPPLY
 - BWW BACKWASH WASTE
 - FE/MN IRON AND MANGANESE
 - FWF FORWARD FLUSH
 - HPR HIGH PRESSURE RELIEF
 - PFAS PER/POLYFLUOROALKYL SUBSTANCES
 - PTW PRE-TREATED WATER
 - RCW RECYCLE WATER
 - RSW RINSE WATER
 - RW RAW WATER
 - TW TREATED WATER
 - WBO WELL BLOW OFF

DWG. NO.: 587-19.65.05 FILE NO.: 587-19.66 UPDATE BY: TMM PROJ. ENG.: BCV PLOT DATE: 11/16/23 PLOT TIME: 7:08AM PLOT SCALE: 1=1

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING

 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:

 DATE _____ DIRECTOR OF ENGINEERING
 RCE 48798

SYM	REVISIONS	DATE	BY



KRS KRIEGER & STEWART
 Engineering Consultants
 3602 University Avenue • Riverside, CA 92501
 www.kriegerandstewart.com • 951-684-6900

APPROVED BY: *Brandon C. Valdez*
 REGISTERED ENGINEER No. 78326 DATE 11/17/23

SCALE	AS SHOWN
FIELD BOOK	N/A
DESIGN	BCV
DRAWN	TMM
CHECKED	BCV

RUBIDOUX COMMUNITY SERVICES DISTRICT
 LELAND J. THOMPSON WATER TREATMENT PLANT
 FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE
TREATMENT PROCESS SCHEMATIC

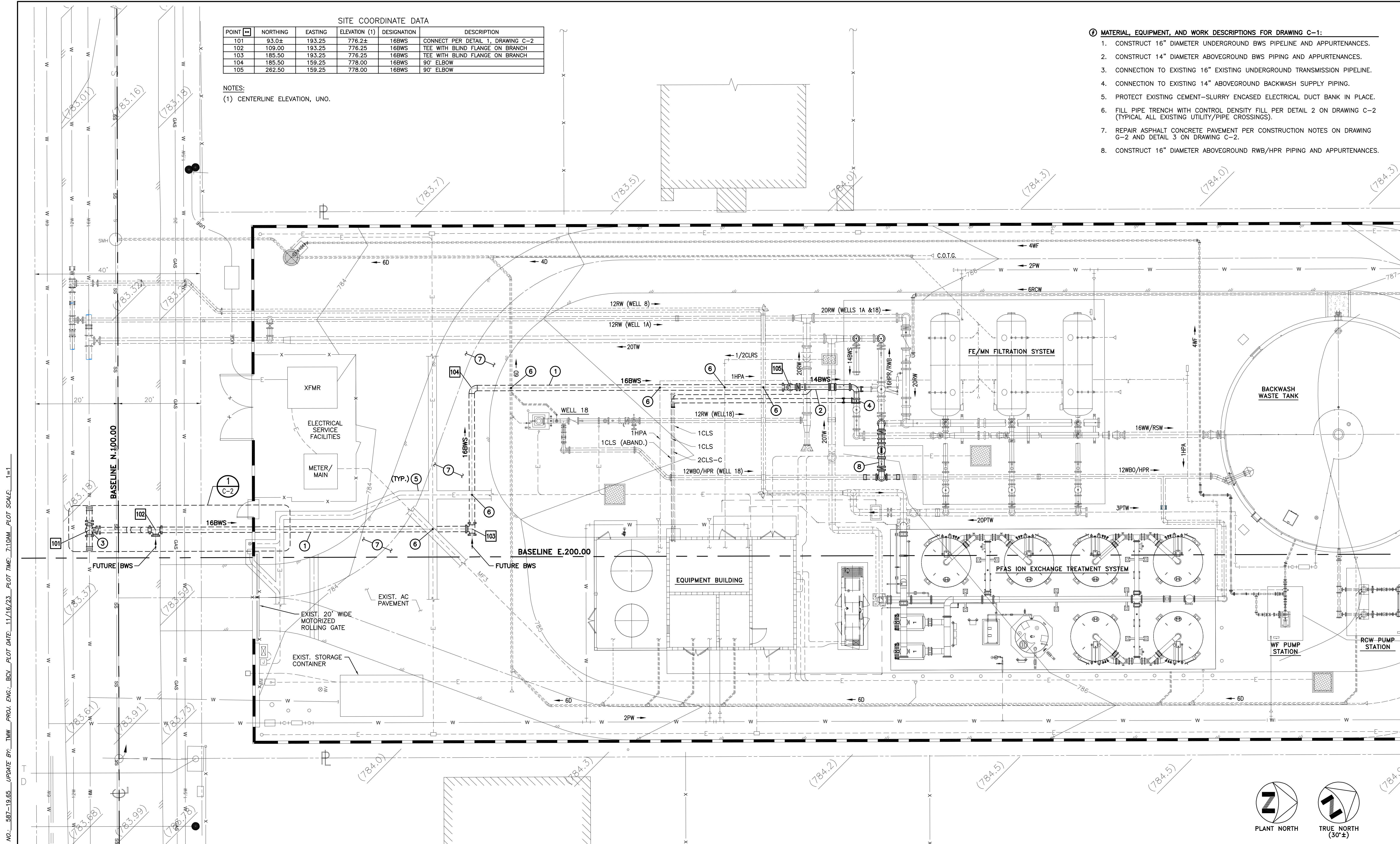
DRAWING
G-5
 5 OF 10 SHEETS
 R.C.S.D. PLAN No.

SITE COORDINATE DATA

POINT	NORTHING	EASTING	ELEVATION (1)	DESIGNATION	DESCRIPTION
101	93.0±	193.25	776.2±	16BWS	CONNECT PER DETAIL 1, DRAWING C-2
102	109.00	193.25	776.25	16BWS	TEE WITH BLIND FLANGE ON BRANCH
103	185.50	193.25	776.25	16BWS	TEE WITH BLIND FLANGE ON BRANCH
104	185.50	159.25	778.00	16BWS	90° ELBOW
105	262.50	159.25	778.00	16BWS	90° ELBOW

NOTES:
 (1) CENTERLINE ELEVATION, UNO.

- ① MATERIAL, EQUIPMENT, AND WORK DESCRIPTIONS FOR DRAWING C-1:
1. CONSTRUCT 16" DIAMETER UNDERGROUND BWS PIPELINE AND APPURTENANCES.
 2. CONSTRUCT 14" DIAMETER ABOVEGROUND BWS PIPING AND APPURTENANCES.
 3. CONNECTION TO EXISTING 16" EXISTING UNDERGROUND TRANSMISSION PIPELINE.
 4. CONNECTION TO EXISTING 14" ABOVEGROUND BACKWASH SUPPLY PIPING.
 5. PROTECT EXISTING CEMENT-SLURRY ENCASED ELECTRICAL DUCT BANK IN PLACE.
 6. FILL PIPE TRENCH WITH CONTROL DENSITY FILL PER DETAIL 2 ON DRAWING C-2 (TYPICAL ALL EXISTING UTILITY/PIPE CROSSINGS).
 7. REPAIR ASPHALT CONCRETE PAVEMENT PER CONSTRUCTION NOTES ON DRAWING G-2 AND DETAIL 3 ON DRAWING C-2.
 8. CONSTRUCT 16" DIAMETER ABOVEGROUND RWB/HPR PIPING AND APPURTENANCES.



DWG. NO.: 587-19.65_G1 FILE NO.: 587-19.65_UPDATE BY: TMW PROJ. ENG.: BCV PLOT DATE: 11/16/23_PLOT TIME: 7:10AM_PLOT SCALE: 1"=1'

NOTE:
 CONTRACTOR SHALL REFER TO "POTHOLE" REQUIREMENTS ON DRAWING G-2. CONSTRUCTION OF PROPOSED UNDERGROUND FACILITIES SHALL NOT COMMENCE UNTIL DISTRICT HAS REVIEWED CONTRACTOR'S POTHOLE DATA.

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING

 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:

 DIRECTOR OF ENGINEERING
 RCE 48798

SYM	REVISIONS	DATE	BY

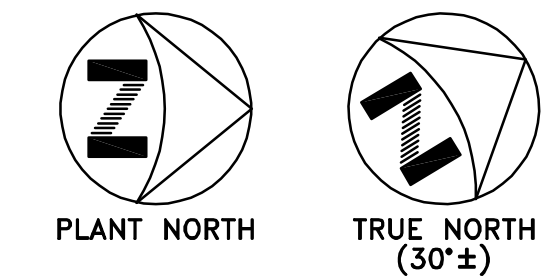


KRIEGER & STEWART
 Engineering Consultants
 3602 University Avenue • Riverside, CA 92501
 www.kriegerandstewart.com • 951-684-6900
 APPROVED BY: *Brandon C. Vally*
 REGISTERED ENGINEER No. 78326 DATE 11/17/23

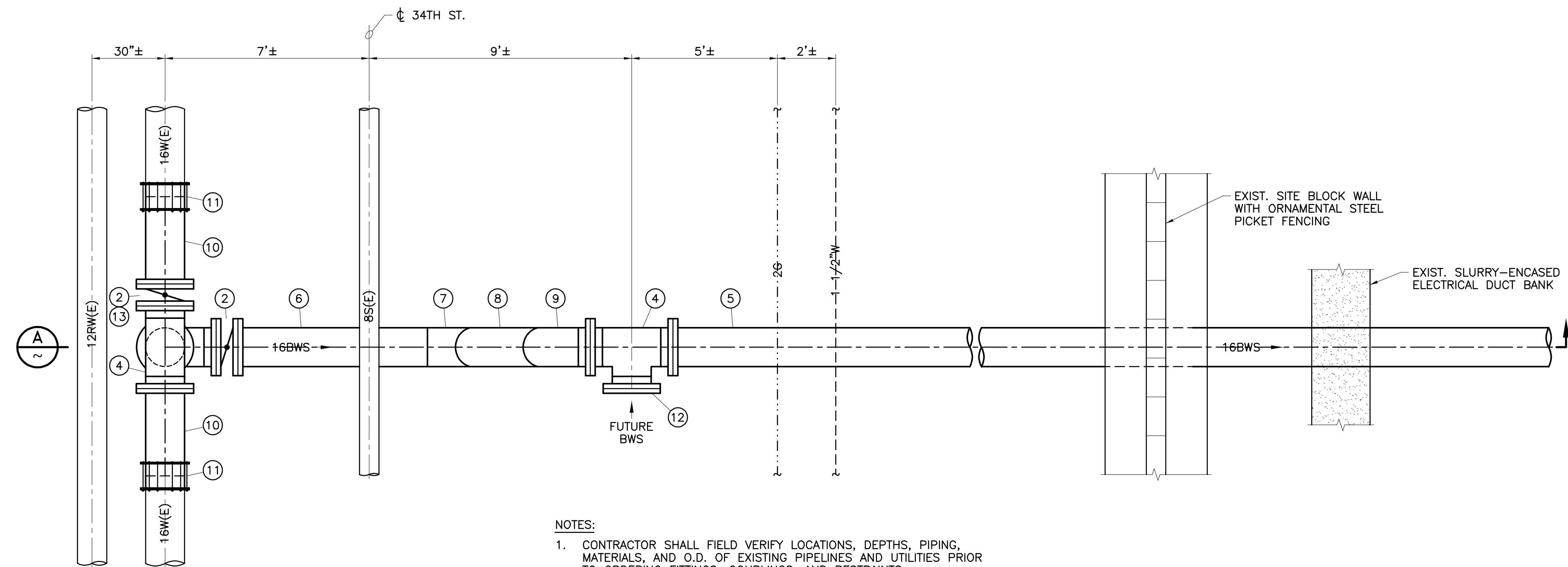
SCALE
 1"=10'
 FIELD BOOK
 N/A
 DESIGN
 BCV/FMN
 DRAWN
 TMW
 CHECKED
 BCV

RUBIDOUX COMMUNITY SERVICES DISTRICT
 LELAND J. THOMPSON WATER TREATMENT PLANT
 FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE
 SITE PLAN

DRAWING
C-1
 6 OF 10 SHEETS
 R.C.S.D. PLAN NO.
 587-19.65



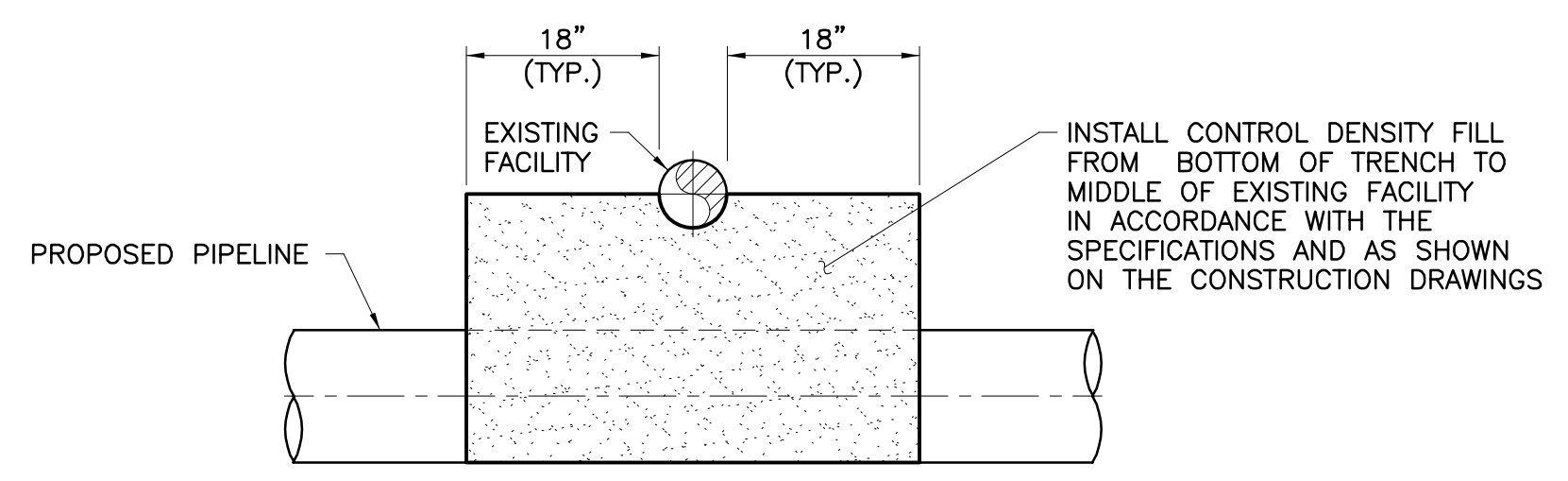
DWG. NO.: 587-19.65.02 FILE NO.: 587-19.66. UPDATE BY: TMM PROJ. ENG.: BCV PLOT DATE: 11/16/23 PLOT TIME: 7:13AM PLOT SCALE: 1"=1'



- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY LOCATIONS, DEPTHS, PIPING, MATERIALS, AND O.D. OF EXISTING PIPELINES AND UTILITIES PRIOR TO ORDERING FITTINGS, COUPLINGS, AND RESTRAINTS.
 - IT IS ACCEPTABLE FOR CONTRACTOR INSTALL SLEEVE COUPLING(S), AND D.I. SPOOL(S) ON OTHER SIDE OF D.I. TEE(S) TO AVOID EXISTING JOINTS.
 - CONTROL DENSITY FILL (CDF) IS NOT SHOWN IN PLAN AND IS NOT SHOWN AT FULL WIDTH IN SECTION FOR CLARITY. CONTRACTOR SHALL PROVIDE CDF FOR ALL UTILITIES CROSSING OVER THE 12RW AND 16W PIPELINES PER DETAIL HEREON.
 - CONTRACTOR SHALL COORDINATE REQUIRED PIPELINE SHUTDOWN PER SPECIAL REQUIREMENTS OF THE SPECIFICATION.

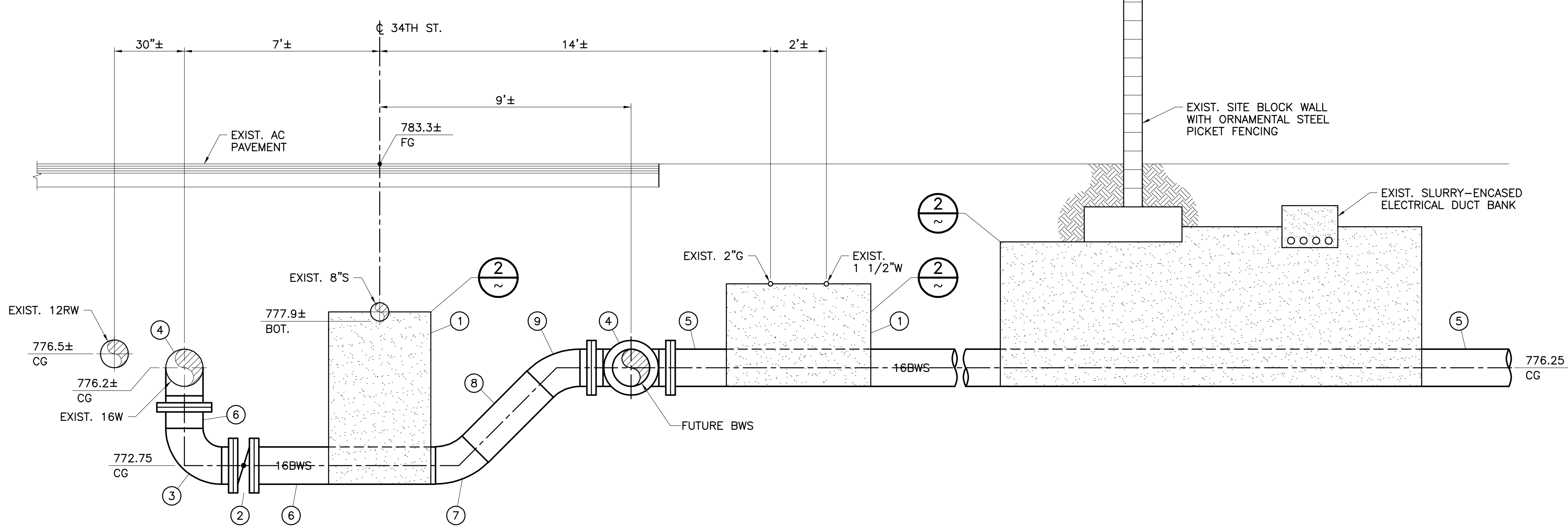
CONNECTION DETAIL 1 2
SCALE: 3/8"=1'-0"

- ① MATERIAL, EQUIPMENT, AND WORK DESCRIPTIONS FOR DRAWING C-2:**
- CONTRACTOR SHALL FILL PIPE TRENCH WITH CONTROL DENSITY FILL UNDER EXISTING UTILITIES/FACILITIES PER CONTROL DENSITY FILL DETAIL HEREON.
 - 16" FLANGED BUTTERFLY VALVE.
 - 16" SHORT RADIUS 90° ELBOW (FLG x FLG).
 - 16" TEE (FLG x FLG x FLG).
 - 16" CML&C PIPE/FITTINGS.
 - 16" FLG x PE SPOOL, LENGTH AS REQUIRED.
 - 16" 45° ELBOW (PE x PE).
 - 16" DIAM. PE x PE SPOOL, LENGTH AS REQUIRED.
 - 16" 45° ELBOW (FLG. x PE).
 - 16" DIAM. DUCTILE IRON FLG x PE SPOOL, LENGTH AS REQUIRED.
 - 16" DIAM. RESTRAINED SLEEVE COUPLING WITH INTEGRAL RESTRAINT SYSTEM AND FUSION BONDED EPOXY COATING. COUPLE LENGTH SHALL BE 10" MINIMUM. COUPLING AND INTEGRAL RESTRAINT SYSTEM SHALL BE RATED FOR A MINIMUM WORKING PRESSURE OF 250 PSI. PROVIDE MODEL 400RG RESTRAINED SLEEVE COUPLING BY ROMAC INDUSTRIES, OR APPROVED EQUAL.
 - 16" BLIND FLANGE.
 - PROVIDE VALVE WITH "NORMALLY CLOSED" VALVE BOX PER DISTRICT STD. DWG. W1040.

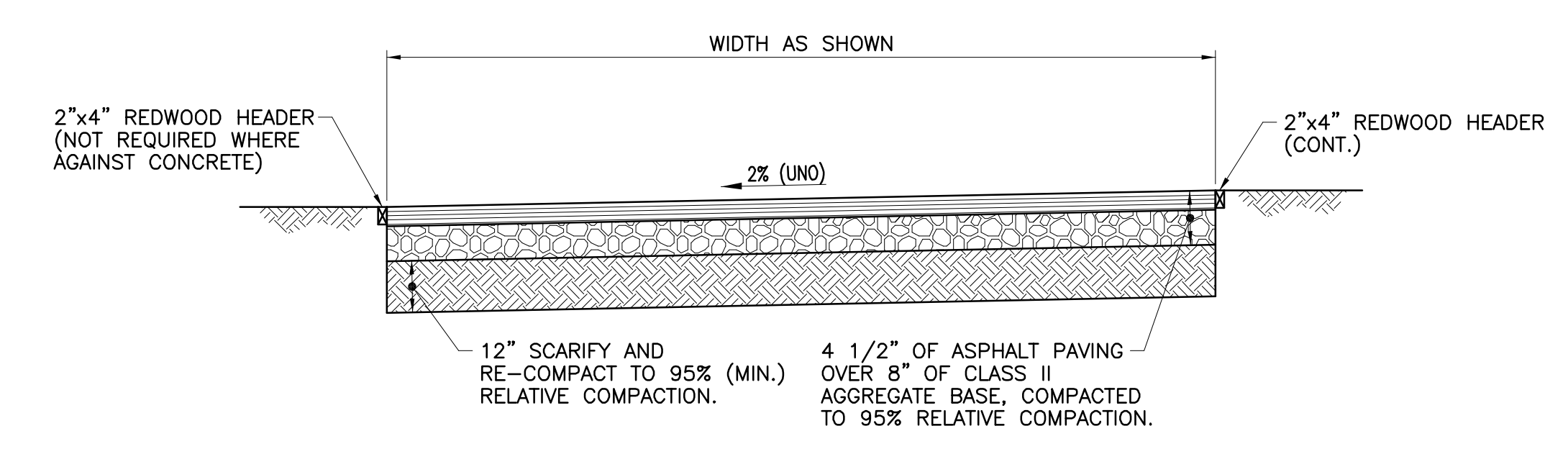


- NOTES:**
- CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UNDERGROUND FACILITIES PRIOR TO COMMENCING WORK, PER "UNDERGROUND FACILITIES AND EXISTING IMPROVEMENTS" CONSTRUCTION NOTES ON DRAWING G-2.
 - CONTRACTOR SHALL BACKFILL WITH CONTROL DENSITY FILL (CDF), ALL MAINLINE UTILITY CROSSINGS, WITH 1' OR LESS OF SEPARATION BETWEEN PROPOSED PIPELINE AND SAID CROSSINGS AND AT LOCATIONS SHOWN ON THE CONSTRUCTION DRAWINGS. THE CONTROL DENSITY FILL SHALL EXTEND THREE FEET ON EACH SIDE OF THE EXISTING FACILITY AND EXTEND FROM THE BOTTOM OF THE PROPOSED PIPELINE TRENCH TO THE SPRING LINE OF THE EXISTING FACILITY TO BE SUPPORTED.

CONTROL DENSITY FILL DETAIL 2 2
N.T.S.



SECTION A
SCALE: 3/8"=1'-0"



- NOTE:**
- REDWOOD HEADER SHALL BE "TRUE HEART" REDWOOD. HEADER SHALL BE INSTALLED WITH 1 1/2" x 12" L x 1/4" THK. HDG STEEL STAKES AT 4' O.C. SET TOP OF STAKES AT 1/4" BELOW TOP OF HEADER. PROVIDE 1/4" DIA. HDG LAG SCREWS FOR CONNECTING HEADER TO METAL STAKES.

ROADWAY DETAIL 3
SCALE: 3/8"=1'-0"

<p>VERIFY SCALES</p> <p>BAR IS ONE INCH ON ORIGINAL DRAWING</p> <p>0 1"</p> <p>IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY</p>	<p>APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:</p>				
	<p>DATE _____</p> <p>DIRECTOR OF ENGINEERING RCE 48798</p>				
	SYM	REVISIONS	DATE	BY	

REGISTERED PROFESSIONAL ENGINEER
BRANDON CARY VALLEY
No. 78326
CIVIL
STATE OF CALIFORNIA

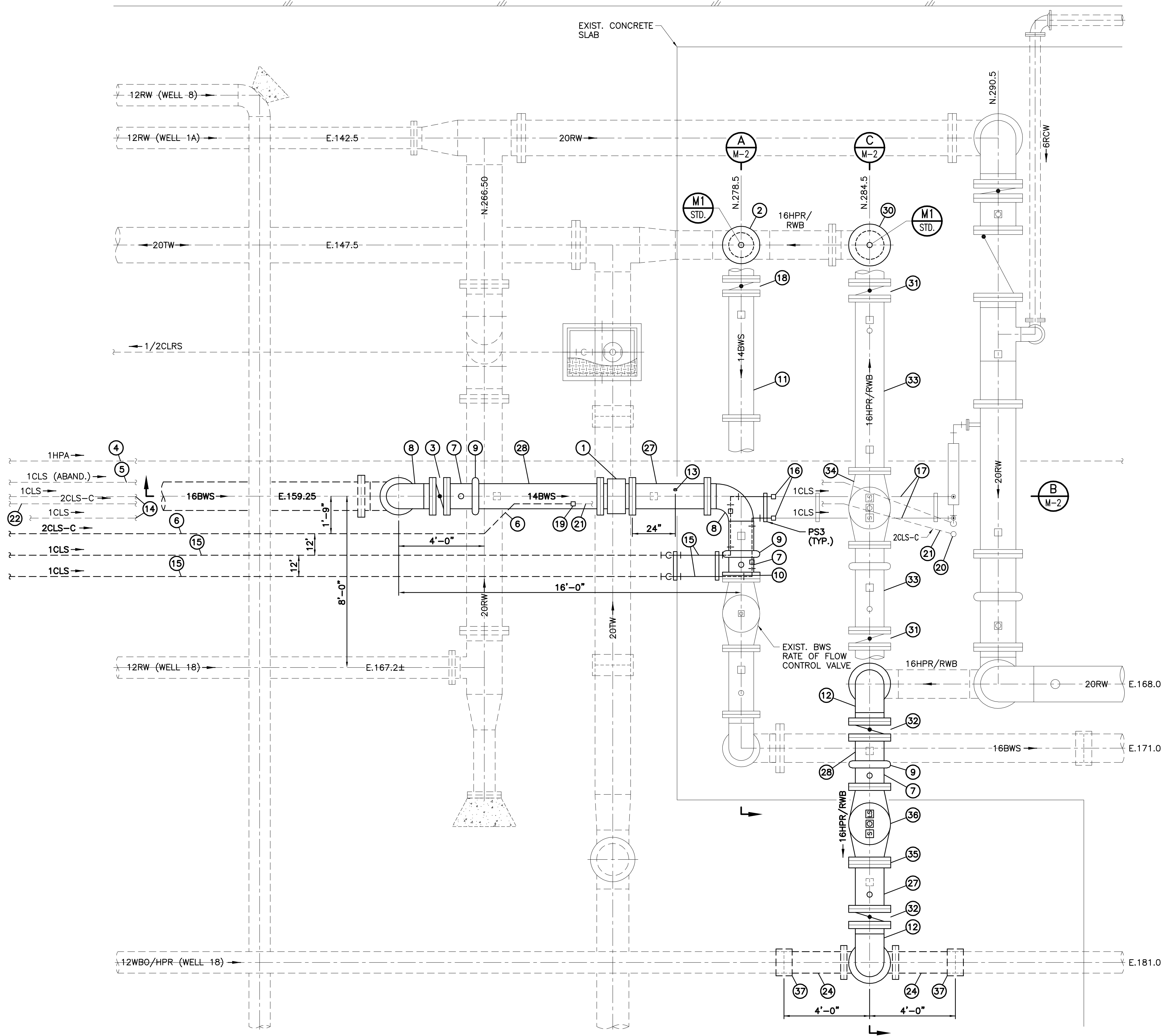
K&S KRIEGER & STEWART
Engineering Consultants

3602 University Avenue • Riverside, CA 92501
www.kriegerandstewart.com • 951-684-6900

APPROVED BY *Brandon C. Valley*
REGISTERED ENGINEER No. 78326 DATE 11/17/23

SCALE AS SHOWN	<p>RUBIDOUX COMMUNITY SERVICES DISTRICT</p> <p>LELAND J. THOMPSON WATER TREATMENT PLANT FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE</p> <p>CIVIL SECTIONS AND DETAILS</p>	DRAWING	
FIELD BOOK N/A		C-2	
DESIGN BCV			7 OF 10 SHEETS
DRAWN SPK			R.C.S.D. PLAN No.
CHECKED BCV			587-19.65

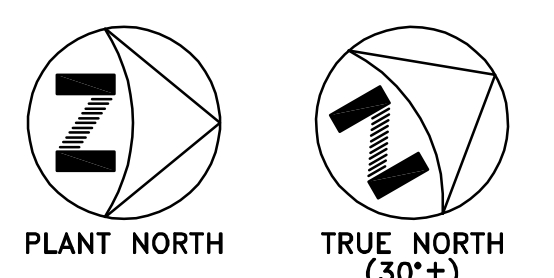
DWG. NO.: 587-19.65_m1 FILE NO.: 587-19.66_UPDATE BY: TMW PROJ. ENG.: BCV_PLOT DATE: 11/16/23_PLOT TIME: 7:41AM_PLOT SCALE: 1=1



- ① MATERIAL, EQUIPMENT, AND WORK DESCRIPTIONS FOR DRAWINGS M-1 AND M-2:**
1. INSTALL FLANGED MAG METER FURNISHED BY DISTRICT (OFC). DISTRICT TO CONSTRUCT REQUIRED ELECTRICAL FACILITIES. CONNECT TO EXISTING PLANT CONTROL PANEL, CONFIGURE METER, AND COMMISSION METER.
 2. INSTALL 14" BLIND FLANGE ON RISER. BLIND FLANGE SHALL BE DRILLED FOR 1" DIA. 3000 LB. HALF COUPLING WELDED TO CENTER OF BLIND FLANGE.
 3. RELOCATED EXISTING 14" FLANGED BUTTERFLY VALVE.
 4. PROTECT EXISTING 1HPA PIPING IN PLACE.
 5. REMOVE AND DISPOSE OF EXISTING ABANDONED 1CLS AS REQUIRED.
 6. CONSTRUCT 2CLS-C PIPING. SEE DRAWING C-1 FOR CONTINUATION.
 7. FLANGED x GROOVED END SPOOL, LENGTH AS REQUIRED PLUS 6" CUT-TO-FIT, SHIP FLANGE LOOSE AND FIELD WELD TO REQUIRED LENGTH.
 8. 14" SHORT RADIUS 90° ELBOW (FLG x FLG).
 9. GROOVED COUPLING, VICTAULIC STYLE 77, OR EQUAL.
 10. CONNECT TO EXISTING 14" BACKWASH SUPPLY PIPING.
 11. REMOVE AND DISPOSE OF EXISTING 90° ELBOW, 14" STD. WT. STEEL SPOOL, PROPELLER FLOW METER, AIR VALVE ASSEMBLY, AND PIPE SUPPORT. RELOCATE EXISTING 14" FLANGED BUTTERFLY VALVE (SEE ITEM 3). GRIND PIPE SUPPORT ANCHOR BOLTS FLUSH WITH CONCRETE.
 12. 16" SHORT RADIUS 90° ELBOW (FLG x FLG).
 13. 1 1/2" COUPLING PER STANDARD DETAIL M2 WITH DIELECTRIC ISOLATION BUSHING, 1" STAINLESS STEEL BALL VALVE, HEX NIPPLE, AND THREADED PLUG. ORIENT COUPLING 45° ABOVE HORIZONTAL. SEE PLAN FOR ACTUAL ORIENTATION.
 14. REMOVE AND DISPOSE OF EXISTING (ACTIVE) 1" SCH. 80 CPVC CLS PIPING.
 15. CONSTRUCT 1CLS PIPING. SEE DRAWING C-1 FOR CONTINUATION.
 16. 1" SCH. 80 CPVC COUPLING.
 17. PROTECT EXISTING (ACTIVE) EXPOSED CLS PIPING AND APPURTENANCES IN PLACE.
 18. RELOCATE EXISTING 14" FLANGED BUTTERFLY VALVE (SEE ITEM 3).
 19. CONNECT TO EXISTING 2CLS-C PIPING.
 20. REMOVE EXISTING TUBING/HOSES (2 TOTAL) FROM 2CLS-C PIPING AND INSTALL NEW TUBING/HOSES (2 TOTAL) PER PIPE MATERIAL SCHEDULE.
 21. PROTECT EXISTING 2CLS-C IN PLACE.
 22. REMOVE AND DISPOSE OF EXISTING (ACTIVE) 2" PVC CONTAINMENT PIPING AND TUBING.
 23. PIPE SUPPORT CONCRETE PAD SHALL BE 18" THICK x 24" SQUARE AND PROJECT 3" ABOVE ADJACENT FINISHED GRADE.
 24. FLG x PE SPOOL, LENGTH AS REQUIRED PLUS 6" CUT-TO-FIT, SHIP FLANGE LOOSE AND FIELD WELD TO REQUIRED LENGTH.
 25. 16" x 14" REDUCER (PE x PE).
 26. 16" SHORT RADIUS 90° ELBOW (FLG x PE).
 27. FLG x FLG SPOOL, LENGTH AS REQUIRED.
 28. FLG x GROOVED ENG SPOOL, LENGTH AS REQUIRED.
 29. PE x GROOVED END SPOOL, LENGTH AS REQUIRED.
 30. INSTALL 16" BLIND FLANGE ON RISER. BLIND FLANGE SHALL BE DRILLED FOR 1" DIA. 3000 LB. HALF COUPLING WELDED TO CENTER OF BLIND FLANGE.
 31. RELOCATE EXISTING 16" FLANGED BUTTERFLY VALVE (SEE ITEM 32).
 32. RELOCATED EXISTING 16" FLANGED BUTTERFLY VALVE.
 33. REMOVE AND DISPOSE OF EXISTING 90° ELBOWS, 16" STD. WT. STEEL SPOOLS, AIR VALVE ASSEMBLIES, VICTAULIC COUPLING, AND PIPE SUPPORTS. RELOCATE EXISTING 16" FLANGED BUTTERFLY VALVE (SEE ITEM 32) AND 16" FLANGED PRESSURE RELIEF VALVE (SEE ITEM 34). GRIND PIPE SUPPORT ANCHOR BOLTS FLUSH WITH CONCRETE.
 34. RELOCATE AND MODIFY EXISTING 16" FLANGED PRESSURE RELIEF VALVE (SEE ITEM 36).
 35. MODEL X55A ORIFICE PLATE AS MANUFACTURED BY CLA-VAL WITH 7.0" DIA. BORE.
 36. RELOCATED EXISTING 16" FLANGED PRESSURE RELIEF VALVE. CONTRACTOR SHALL FURNISH THE SERVICES OF THE VALVE MANUFACTURER (CLA-VAL) TO ADD ANTI-CAVITATION TRIM TO THE EXISTING VALVE, MODIFY THE EXISTING PILOTRY AS REQUIRED, AND ASSIST WITH INSTALLATION AND COMMISSIONING OF THE VALVE. DISTRICT TO CONSTRUCT REQUIRED ELECTRICAL FACILITIES AND CONNECT TO EXISTING PLANT CONTROL PANEL.
 37. BUTT-STRAP WITH HANDHOLES PER DISTRICT STD. DWG. W1220. CONTRACTOR SHALL REMOVE CEMENT MORTAR COATING FROM EXISTING
 38. 16" x 12" REDUCER (PE x PE).
 39. 12" x 12" x 12" TEE (FLG x FLG x PE).
 40. CONNECT TO EXISTING 16" RAW WATER BYPASS/HIGH PRESSURE RELIEF PIPING.

- NOTES:**
1. CONTRACTOR SHALL REFER TO "POTHOLE" REQUIREMENTS ON DRAWING G-2. CONSTRUCTION OF PROPOSED UNDERGROUND FACILITIES SHALL NOT COMMENCE UNTIL DISTRICT HAS REVIEWED CONTRACTOR'S POTHOLE DATA.
 2. CONTRACTOR SHALL "POTHOLE" THE EXISTING 1HPA, 1CLS, AND 2CLS-C LINES IN A MINIMUM OF TWO (2) LOCATIONS ALONG THE PROPOSED NORTH/SOUTH 16BWS ALIGNMENT SHOWN HEREON.
 3. EXISTING ELECTRICAL FACILITIES NOT SHOWN FOR CLARITY.

MECHANICAL PLAN
SCALE: 3/8"=1'-0"



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:

DATE _____ DIRECTOR OF ENGINEERING
RCE 48798

SYM	REVISIONS	DATE	BY

KRIEGER & STEWART
Engineering Consultants
3602 University Avenue • Riverside, CA 92501
www.kriegerandstewart.com • 951-684-6900

APPROVED BY *Brendon C. Vally*
REGISTERED ENGINEER No. 78326 DATE 11/17/23

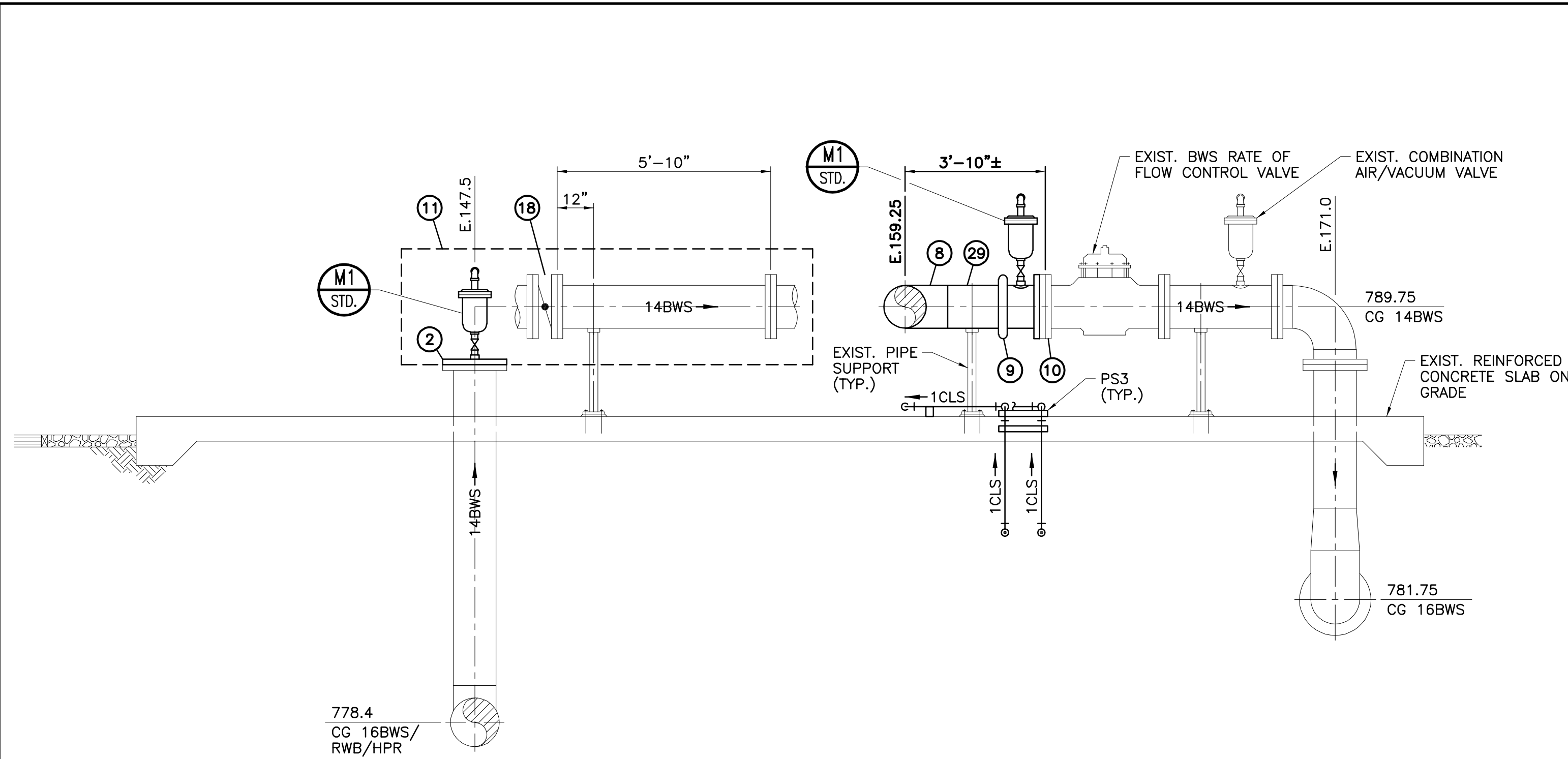
SCALE	3/8"=1'-0"
FIELD BOOK	N/A
DESIGN	BCV/FMN
DRAWN	TMW
CHECKED	BCV

RUBIDOUX COMMUNITY SERVICES DISTRICT

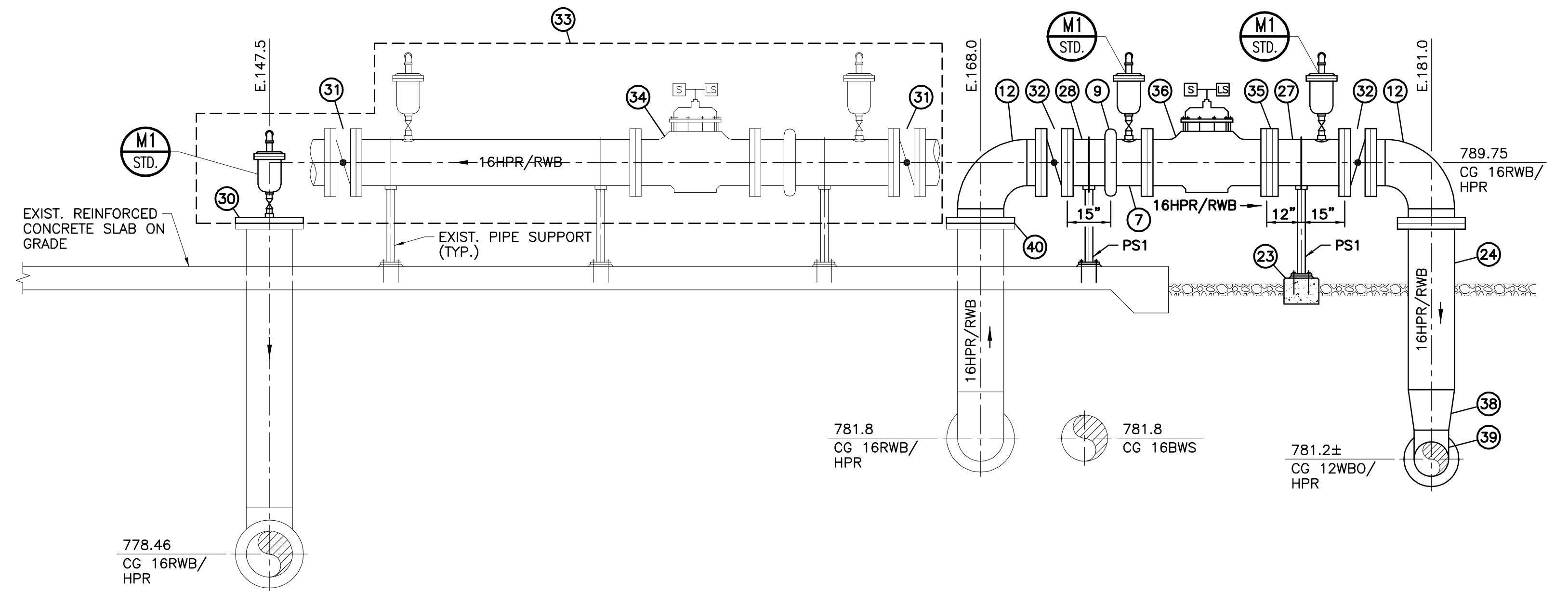
LELAND J. THOMPSON WATER TREATMENT PLANT
FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE

MECHANICAL PLAN

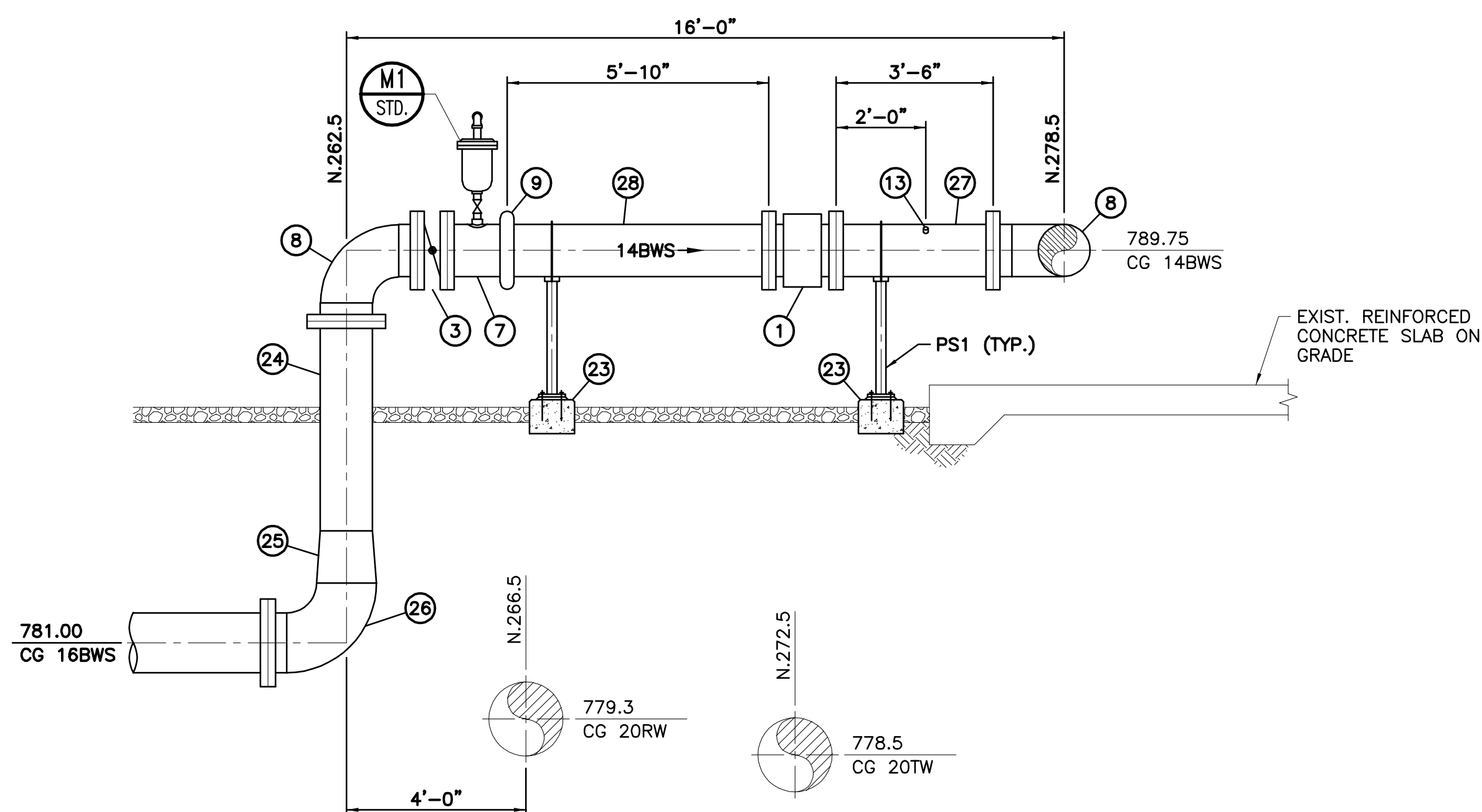
DRAWING
M-1
8 OF 10 SHEETS
R.C.S.D. PLAN NO.



SECTION A
SCALE: 3/8"=1'-0"



SECTION C
SCALE: 3/8"=1'-0"



SECTION B
SCALE: 3/8"=1'-0"

DWG. NO.: 587-19.65_m2FILE NO.: 587-19.66_UPDATE BY: TMM_PROJ. ENG.: BCV_PLOT DATE: 11/16/23_PLOT TIME: 7:42AM_PLOT SCALE: 1=1

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:
DATE _____ DIRECTOR OF ENGINEERING RCE 48798

SYM	REVISIONS	DATE	BY

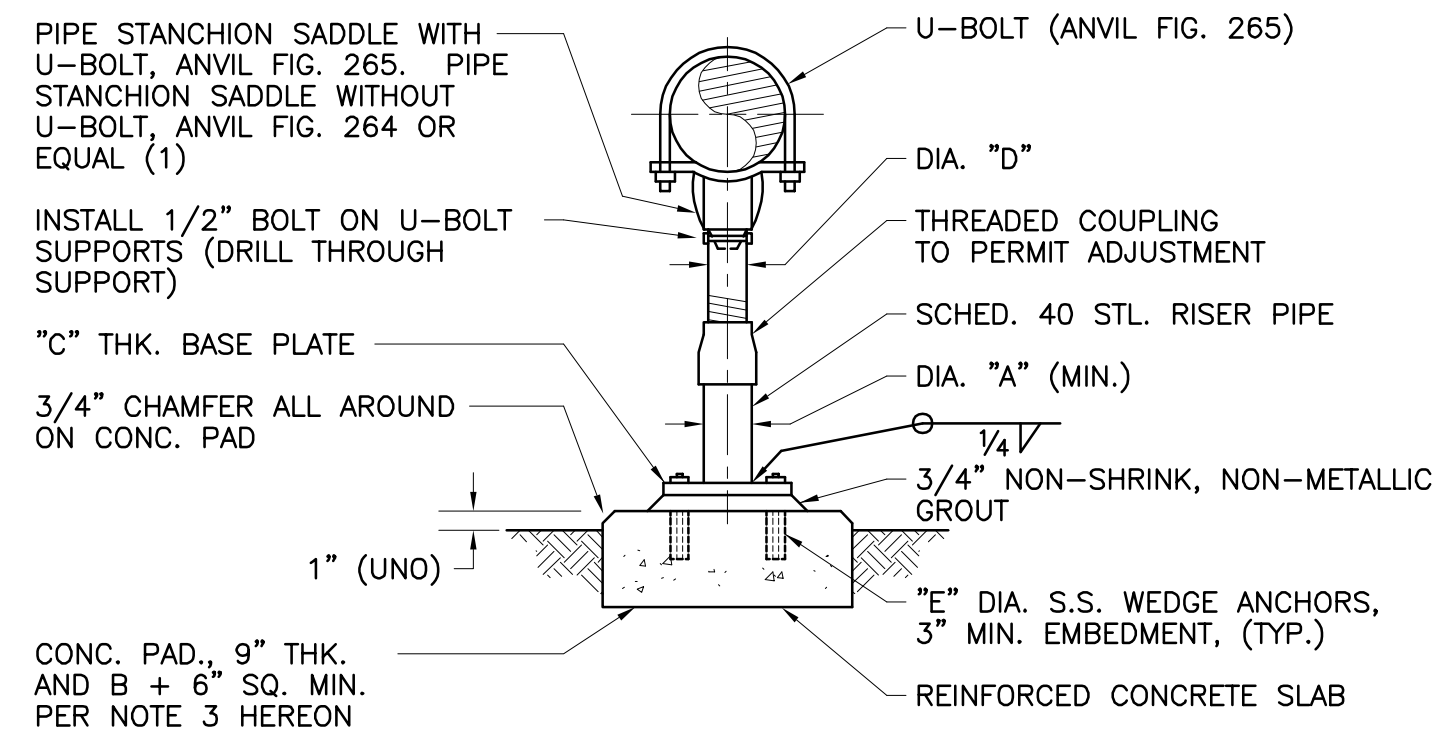


KRIEGER & STEWART
Engineering Consultants
3602 University Avenue • Riverside, CA 92501
www.kriegerandstewart.com • 951-684-6900
APPROVED BY: *Brandon C. Valdez*
REGISTERED ENGINEER No. 78326 DATE 11/17/23

SCALE AS SHOWN
FIELD BOOK N/A
DESIGN BCV/FMN
DRAWN TMM
CHECKED BCV

RUBIDOUX COMMUNITY SERVICES DISTRICT
LELAND J. THOMPSON WATER TREATMENT PLANT
FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE
MECHANICAL SECTIONS

DRAWING
M-2
9 OF 10 SHEETS
R.C.S.D. PLAN No.

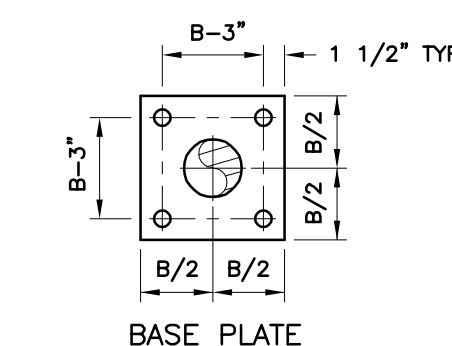


TYPE PS1 - WITH U-BOLT

PIPE SIZE	A	B	C	D	E
4", 6"	4"	10"	3/8"	3"	3/8"
8", 10", 12"	4"	10"	1/2"	3"	1/2"
14", 16"	4"	12"	5/8"	3"	1/2"
18", 20"	6"	14"	3/4"	3 1/2"	1/2"
24", 30", 36"	6"	14"	3/4"	4"	1/2"

TYPE PS2 - WITHOUT U-BOLT

PIPE SIZE	A	B	C	D	E
2 1/2", 3", 3 1/2"	2 1/2"	9"	3/8"	1 1/2"	3/8"
4", 6"	3"	10"	3/8"	2 1/2"	3/8"
8", 10", 12"	3"	10"	1/2"	2 1/2"	1/2"
14", 16"	4"	12"	5/8"	3"	1/2"
18", 20"	6"	14"	3/4"	3 1/2"	1/2"
24", 30", 36"	6"	14"	3/4"	4"	1/2"



- NOTES:**
- WHERE LOCATED UNDER FLANGE OR VALVE USE PS2 SUPPORT WITH SADDLE RADIUS TO MATCH FLANGE OR VALVE BODY. SADDLE SHALL BE CAST IRON OR FABRICATED STEEL.
 - UNO, PIPE STANCHIONS AND ACCESSORIES SHALL BE HOT DIP GALVANIZED (HDG).
 - PROVIDE INDIVIDUAL CONCRETE SUPPORT PAD WITH #4 AT 12" O.C. TOP AND BOTTOM, EACH WAY, FOR PIPE STANCHIONS NOT LOCATED ON CONCRETE SLABS OF 6" MIN. THICKNESS.

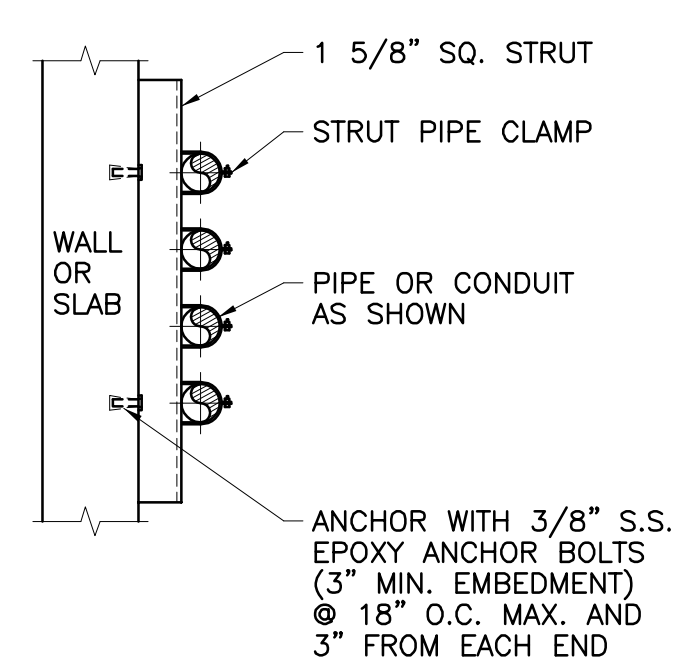
PS1 - PIPE STANCHION WITH U-BOLT
PS2 - PIPE STANCHION WITHOUT U-BOLT
 N.T.S.

NOTES:

- UNLESS SHOWN OTHERWISE ON THE DRAWINGS, PIPE AND CONDUIT SUPPORT SPACING SHALL BE AS FOLLOWS:

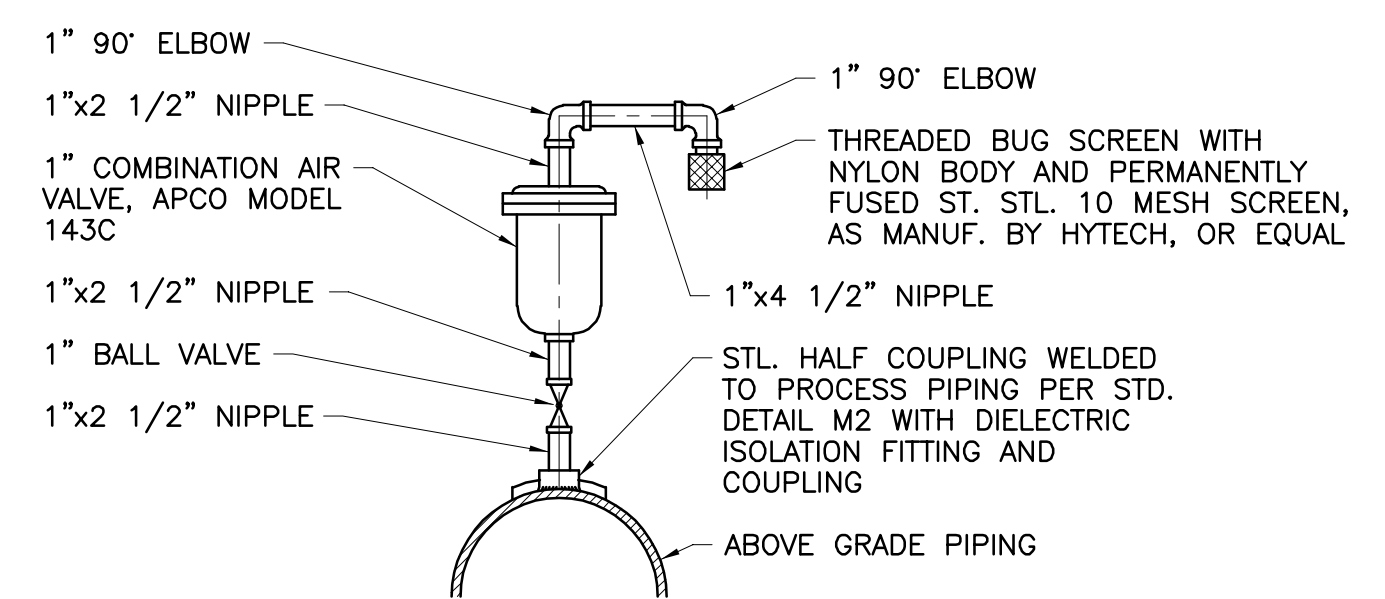
NOMINAL PIPE SIZE (INCHES)	MAXIMUM SPACING (FEET)
2 AND SMALLER	6
3 TO 5	10
6 AND LARGER	12

- SUPPORTS SHALL BE PROVIDED WITHIN 18" OF PIPE FITTINGS, AT EACH CHANGE IN DIRECTION.
- PIPE SUPPORTS SHALL BE SPACED NOT OVER 5 FEET APART AT VALVES.



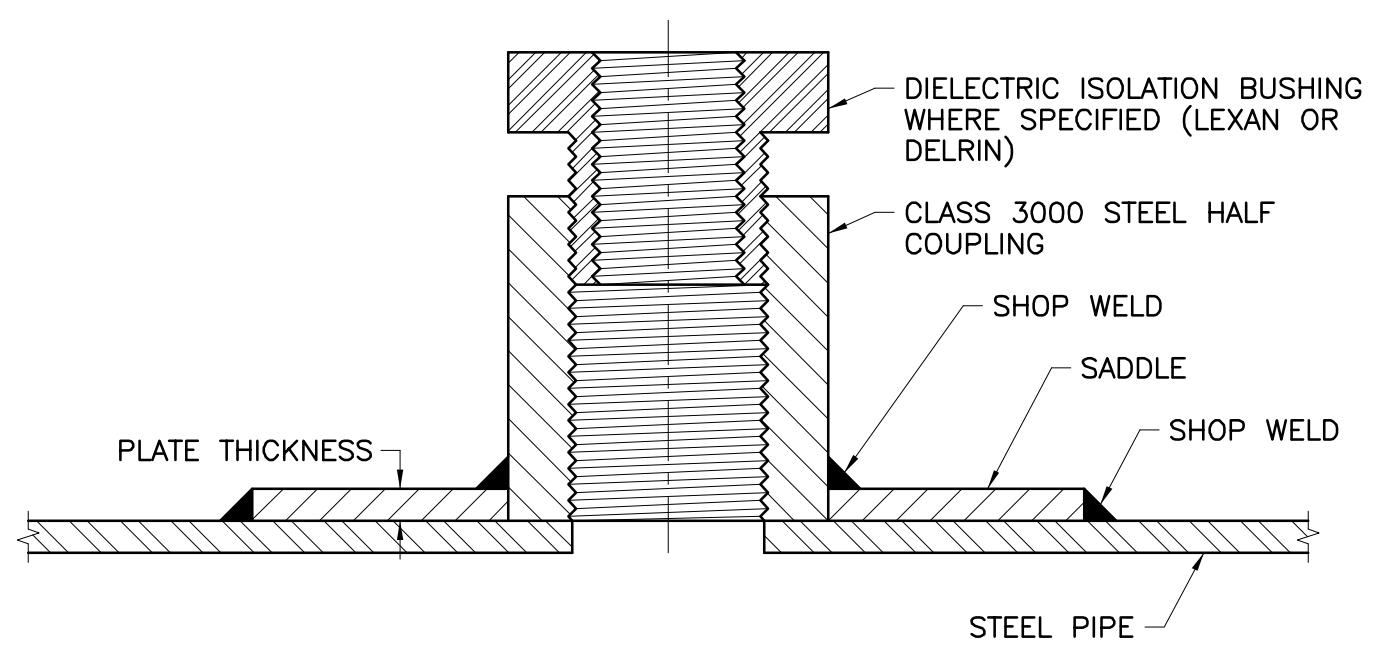
- NOTES:**
- UNLESS NOTED OTHERWISE, FOR INDOOR AND OUTDOOR LOCATIONS ALL MATERIAL SHALL BE STAINLESS STEEL. STRUT CHANNEL SHALL BE 12 GAUGE 1 5/8"x1 5/8" TYPE 304 ST. STL. PROVIDE NECESSARY STRUT ACCESSORIES TO ACCOMMODATE SUPPORT CONFIGURATION, INCLUDING CONNECTION FITTINGS AND POST BASES. UNLESS OTHERWISE NOTED, ALL NUTS, BOLTS, THREADED RODS, AND PIPE/CONDUIT STRAPS SHALL BE TYPE 304 ST. STL. ALL ANCHOR BOLTS SHALL BE TYPE 316 ST. STL.
 - STRUT SYSTEM, INCLUDING ALL COMPONENTS, SHALL BE AS MANUFACTURED BY UNISTRUT, B-LINE, OR EQUAL.
 - PROVIDE DOUBLE OR DEEP STRUT WHERE REQUIRED FOR LOAD OR CONFIGURATION, OR WHERE NOTED AS PSX-D ON DRAWINGS.
 - ALL CUT ENDS OF STRUT SHALL BE GROUND SMOOTH.

PS3
 N.T.S.



- NOTES:**
- UNLESS NOTED OTHERWISE, ALL PIPING AND FITTINGS SHOWN SHALL BE STD. WT. SCH. 40, RED BRASS, PAINTED.
 - AIR VALVE SEAT AND NEEDLE DUROMETER HARDNESS TO BE SELECTED FOR SYSTEM OPERATING PRESSURE.
 - ALL VALVES AND FITTINGS SHALL BE SUITABLE FOR A WORKING PRESSURE OF 200 PSI (MIN.).
 - AIR VALVE INTERIOR SHALL BE EPOXY LINED (8 TO 12 MILS) IN ACCORDANCE WITH AWWA C550.

1" COMBINATION AIR VALVE DETAIL M1
 N.T.S. STD.



- NOTES:**
- SADDLE CURVATURE TO BE SHOP FORMED TO MATCH OUTSIDE DIAMETER OF STEEL PIPE.
 - AFTER SHOP WELDING OF HALF COUPLING TO CURVED SADDLE, SHOP GRIND HALF COUPLING TO MATCH DIAMETER OF PIPE.
 - PIPE COATING AND LINING NOT SHOWN FOR CLARITY.

SERVICE SADDLE OUTLETS

OUTLET SIZE	HALF COUPLING SIZE	SADDLE OUTSIDE DIA.	SADDLE PLATE THICKNESS
3/4"	1 1/4"	4 1/2"	3/16"
1"	1 1/4"	4 1/2"	3/16"
1 1/2"	2 1/2"	6 1/2"	1/4"
2"	2 1/2"	6 1/2"	1/4"

WELDED OUTLET DETAIL M2
 N.T.S. STD.

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:

DATE _____ DIRECTOR OF ENGINEERING RCE 48798

SYM	REVISIONS	DATE	BY

REGISTERED PROFESSIONAL ENGINEER
 BRANDON CARY VALLEY
 No. 78326
 CIVIL
 STATE OF CALIFORNIA

KRIEGER & STEWART
 Engineering Consultants
 3602 University Avenue • Riverside, CA 92501
 www.kriegerandstewart.com • 951-684-6900

APPROVED BY *Brandon C. Valley*
 REGISTERED ENGINEER No. 78326 DATE 11/17/23

SCALE	AS SHOWN
FIELD BOOK	N/A
DESIGN	BCV
DRAWN	SPK
CHECKED	BCV

RUBIDOUX COMMUNITY SERVICES DISTRICT

LELAND J. THOMPSON WATER TREATMENT PLANT
 FE/MN FILTRATION SYSTEM BACKWASH SUPPLY PIPELINE

MECHANICAL DETAILS

DRAWING **M-3**
 10 OF 10 SHEETS
 R.C.S.D. PLAN No. 587-19.65

DWG. NO.: 587-19.65_m3 FILE NO.: 587-19.66_UPDATE BY: TMM PROJ. ENG.: BCV PLOT DATE: 11/16/23_PLOT TIME: 7:44AM_PLOT SCALE: 1=1