Project Plans



CONTRACT DRAWINGS FOR CITY OF NEWMAN



WWTRF MCPIKE 1 RECLAMATION IMPROVEMENTS AND NEWMAN INFLUENT TRUNK SEWER

CONFORMED SET

OCTOBER, 2022

NOTE:
EACH PROJECT HAS ITS OWN SEPARATE
DRAWING INDEX AND SHEET COUNT



VICINITY MAP

AND STORAGE -PROJECT AREA ORESTIMBA ROAD CITY OF SEE DWG G03 HOYER ROAD SHIELLS ROAD 33

CONTRACT DRAWINGS FOR CITY OF NEWMAN

WWTRF MCPIKE 1 RECLAMATION IMPROVEMENTS

AUGUST, 2019

GENERAL:		
DRAWING NO.	SHEET NO.	DESCRIPTION
G00	1	COVER SHEET
G01	2	PROJECT TITLE, VICINITY AND LOCATION MAP, DRAWING INDEX AND DESIGN CRITERIA
G02	3	ABBREVIATIONS, AREA DESIGNATIONS, LEGENDS, PIPING SYSTEM AND SYMBOLS
G03	4	KEY PLAN
G04	5	GENERAL NOTES, CONSTRUCTION STAGING AREA AND ACCESS ROAD
DEMOLITION	1	
DRAWING NO.	SHEET NO.	DESCRIPTION
D01	6	EXISTING 12" SE PIPE DEMOLITION — PLAN AND PROFILE
D02	7	EXISTING MCPIKE 1-1 IRRIGATION PIPE - DEMOLITION PLAN
D03	8	IRRIGATION PUMP STATION 2 DEMOLITION
CIVIL:		
DRAWING NO.	SHEET NO.	DESCRIPTION
C01	9	18" PRESSURIZED IRRIGATION PIPE - PLAN AND PROFILE STA 0+20 TO STA 11+00
C02	10	18" PRESSURIZED IRRIGATION PIPE - PLAN AND PROFILE STA 0+20 TO STA 11+00
C02	11	18" PRESSURIZED IRRIGATION PIPE - PLAN AND PROFILE STA 22+00 TO STA 33+00
C04	12	18" PRESSURIZED IRRIGATION PIPE - PLAN AND PROFILE STA 33+00 TO STA 44+50
C05	13	18" PRESSURIZED IRRIGATION PIPE - PLAN AND PROFILE STA 44+50 TO STA 49+18.85
	, -	AND 18" WELL DISCHARGE — PLAN AND PROFILE
C06	14	21" MCPIKE 1-1 IRRIGATION PIPE - PLAN AND PROFILE STA 0+20 TO STA 9+25
C07	15	24" MCPIKE 1-3 IRRIGATION PIPE - PLAN AND PROFILE 1 STA 0+20 TO STA 9+50
C08	16	24" MCPIKE 1-3 IRRIGATION PIPE - PLAN AND PROFILE 2 STA 9+50 TO STA 17+50
C09	17	24" MCPIKE 1-3 IRRIGATION PIPE - PLAN AND PROFILE 3 STA 17+50 TO STA 28+00
C10	18	IRRIGATION PUMP STATION 2 SITE PLAN
C11	19	MCPIKE DISTRIBUTION STRUCTURE - PLAN AND SECTION
C12	20	MISCELLANEOUS CIVIL DETAIL
C20	21	TYPICAL CIVIL DETAILS 1
C21	22	TYPICAL CIVIL DETAILS 2
STRUCTURA	\L:	
DRAWING NO.	SHEET NO.	DESCRIPTION
S01	23	TYPICAL STRUCTURAL NOTES 1
S02	24	TYPICAL STRUCTURAL NOTES 2
S03	25	TYPICAL STRUCTURAL DETAILS

DRAWING	INDEX	
ELECTRICAL	-•	
DRAWING NO.	SHEET NO.	DESCRIPTION
E01	31	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E02A	32	ELECTRICAL SINGLE LINE, DEMO/MODIFICATION AND LOAD CALCULATIONS
E02B	33	ELECTRICAL ELEVATIONS
E03	34	VFD ELEMENTARY WIRING DIAGRAM
E04	35	TYPICAL ELECTRICAL DETAILS 1
E05	36	TYPICAL ELECTRICAL DETAILS 2
E06	37	TYPICAL ELECTRICAL DETAILS 3
E10	38	OVERALL ELECTRICAL SITE PLAN
E11	39	OVERALL ELECTRICAL SITE PLAN
E12	40	IRRIGATION PUMP STATION 2 ELECTRICAL PLAN
E13	41	IRRIGATION PUMP STATION 2 GROUNDING PLAN

NUMBER	2
HP	20
GPM	2330
GPM	2030
GPM	2400
GPM	2100
GPM	3620
GPM	3100
GPM	3720
GPM	3220
	HP GPM GPM GPM GPM GPM GPM GPM GPM GPM GP

- REMOTE IRRIGATION HEADER.
- CAPACITY TO IRRIGATION HEADERS CLOSER TO THE DISTRIBUTION STRUCTURE WILL BE HIGHER.
- 3. PUMP CAPACITIES TO MCPIKE FIELD 1-2 CANNOT OCCUR CONCURRENTLY WITH PUMPING FROM THE WELL AND WILL INCREASE IN

CLOSE PROXIMITY TO THE PUMP STATION.

WELL PUMP DISTRIBUTION NUMBER CAPACITY OF WELL, O EFFLUENT PUMPS 1500

CAPACITY OF WELL TO THE MOST REMOTE IRRIGATION HEADER FROM THE DISTRIBUTION STRUCTURE. CAPACITY IS DEPENDENT ON THE WELL PUMP AND WILL INCREASE IN CLOSE PROXIMITY TO THE DISTRIBUTION STRUCTURE.

·	Issued	Ву	Appd	YYYY.MM.DD
7.21 0.40.04 AM				
17.00.07.7	Revision	Ву	Appd	YYYY.MM.DD

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MECHANICAL:

M02

M03

M04

DRAWING NO. | SHEET NO.

27

28

29

30

DESCRIPTION

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IRRIGATION PUMP STATION 2 - TOP PLAN

TYPICAL MECHANICAL DETAIL 1

TYPICAL MECHANICAL DETAIL 2

TYPICAL MECHANICAL DETAIL 3

IRRIGATION PUMP STATION 2 - SECTION AND DETAILS

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Client/Project Logo

Client/Project CITY OF NEWMAN

WWTRF MCPIKE 1 RECLAMATION IMPROVEMENTS

NEWMAN, CALIFORNIA

RG PR GA 2019.08.02 File Name: X05593-G01 AND COVER Dwn. Dsgn. Chkd. YYYY.MM.DD

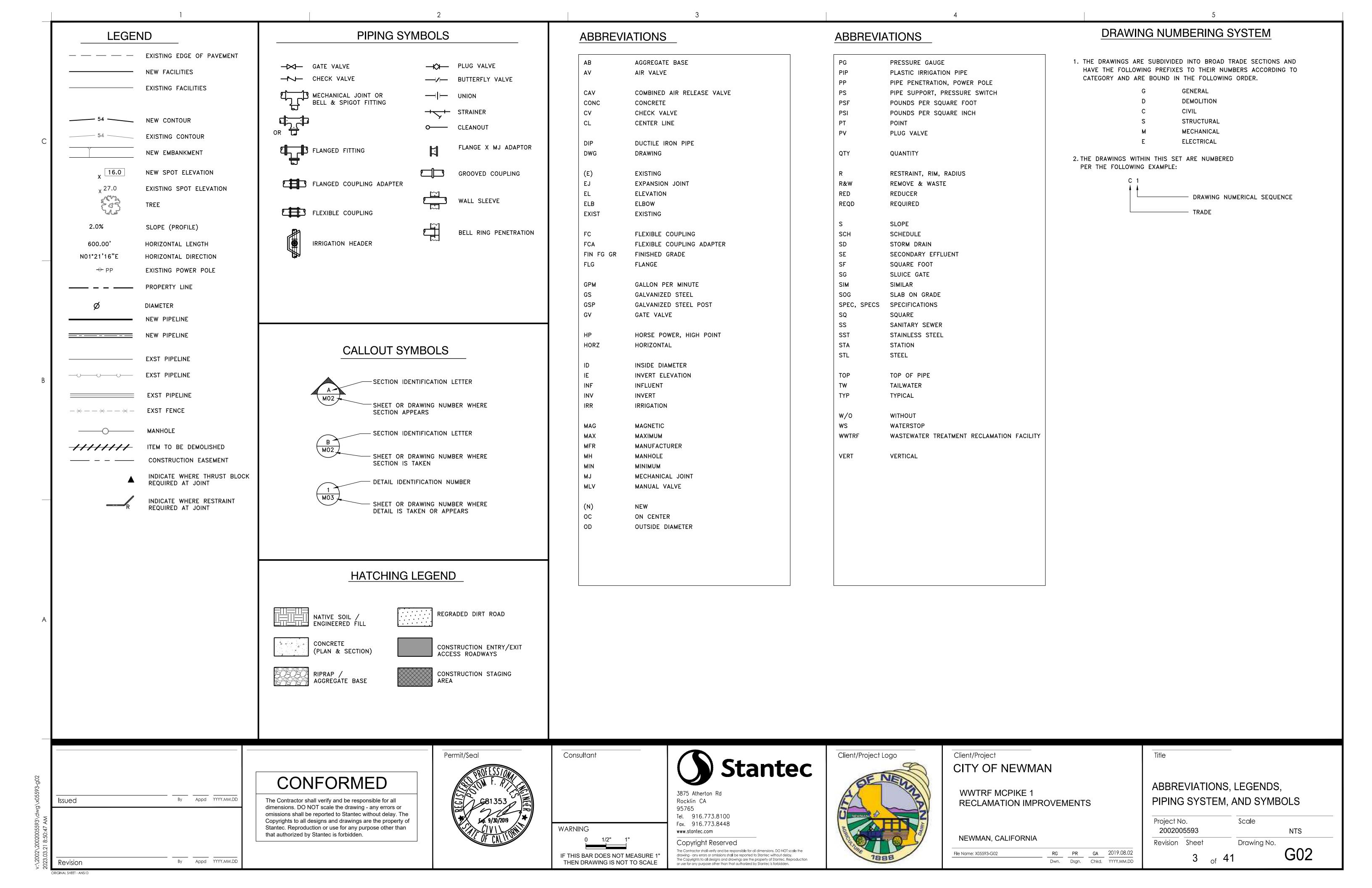
PROJECT TITLE VICINITY AND LOCATION MAP,

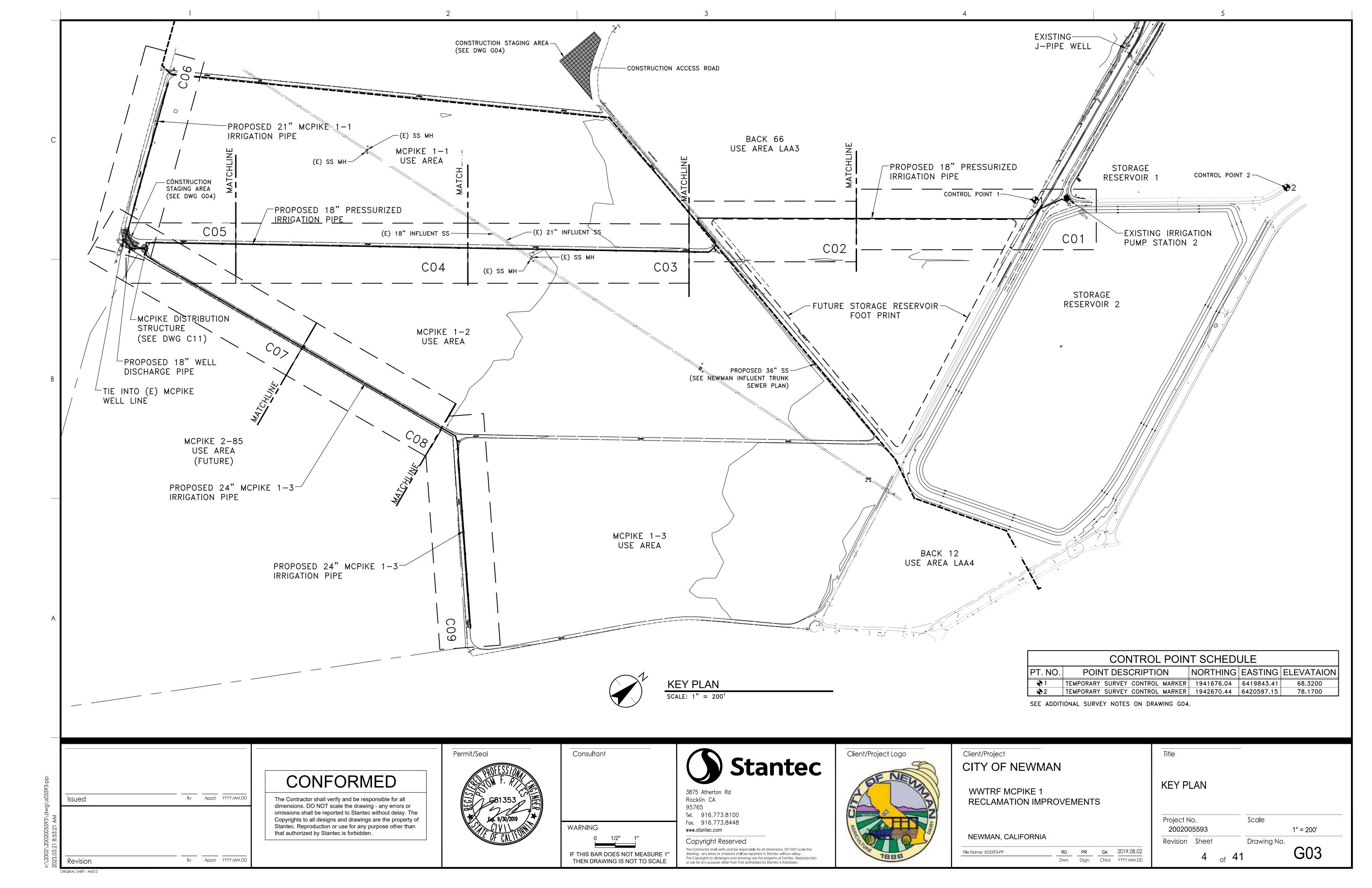
Scale Project No. 2002005593 NTS Revision Sheet Drawing No. G01

DRAWING INDEX, AND DESIGN CRITERIA

LOCATION MAP

SCALE: NTS





GENERAL NOTES CONSTRUCTION -NO ACCESS-ENTRANCE AND SECTIONS. HILLS FERRY ROAD - TAILWATER PUMP STATION USE AREA FRONT 66 (LAA2) CONSTRUCTION -MINIMUM COVER OF 30 INCHES. ACCESS ROAD CURVES SHOWN. REQUIRED FOR FINAL LAYOUT. -EFFLUENT DISTRIBUTION STATION CONSTRUCTION AND 50HP IRRIGATION WELL IRRIGATION — PUMP STATION 1 STAGING AREA DURING SITE RESTORATION. J-PIPE WELL (CONSTRUCTION WATER) STORAGE RESORVOIR NO.1 McPIKE 1-1 - IRRIGATION PUMP STATION 2 STRUCTURE CONSTRUCTION USE AREA BACK 66 -(E) 21" INF SS STAGING AREA (LAA3) PROPOSED MCPIKE DISTRIBUTION STRUCTURE (CURRENT PROJECT) McPIKE 1-2 STORAGE RESORVOIR NO.2 (LAA5) (E) 18" INF SS → OVERFLOW **TERRACES** McPIKE 1-3 (LAA5) USE AREA BACK 12 (LAA4) CONSTRUCTION STAGING AREA AND ACCESS ROAD Client/Project Logo Consultant Permit/Seal Stantec CONFORMED 3875 Atherton Rd By Appd YYYY.MM.DD Issued The Contractor shall verify and be responsible for all Rocklin CA dimensions. DO NOT scale the drawing - any errors or 95765 omissions shall be reported to Stantec without delay. The Tel. 916.773.8100 Copyrights to all designs and drawings are the property of Fax. 916.773.8448

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By Appd YYYY.MM.DD

- 1. VERTICAL DATUM: NGVD29 BASED ON BENCH MARK 'J-982' ELEVATION 66.77 FEET
- 2. HORIZONTAL DATUM CALIFORNIA STATE PLANE COORDINATE SYSTEM ZONE 8, NAD83 (1991.35) CA HPGN.
- 3. PIPELINES AND FINISHED GRADES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS SHOWN ON THE PLANS AND SECTIONS.
- 4. THE CONTRACTOR SHALL FIELD CHECK ALL EXISTING STRUCTURES, PIPELINES AND GRADES FOR VERIFICATION OF DIMENSIONS AND ELEVATIONS. SEE SPECIFICATIONS.
- 5. BEFORE BEGINNING ANY <u>EXCAVATION</u> THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (1800-643-2444) 48 HOURS PRIOR TO COMMENCEMENT OF EXCAVATION.
- 6. A MINIMUM OF 6 INCHES CLEARANCE SHALL BE MAINTAINED BETWEEN PIPE AND CROSSING UNDERGROUND WHETHER SHOWN ON THE PLANS OR NOT. UNLESS OTHERWISE SHOWN, ALL PIPELINES SHALL HAVE A MINIMUM COVER OF 30 INCHES
- 7. PULL JOINTS ON STANDARD FITTINGS OR ADJACENT PIPE JOINTS TO OBTAIN VERTICAL OR HORIZONTAL
- 8. WHERE FIXED DIMENSIONS ARE NOT SHOWN THE CONTRACTOR SHALL SCALE THE DRAWINGS TO DETERMINE LOCATIONS, SUBJECT TO MINOR ADJUSTMENTS BY THE ENGINEER.
- 9. LAYOUT OF ALL IRRIGATION VALVES AND IRRIGATION CHECKS IS APPROXIMATE. ENGINEERS APPROVAL IS REQUIRED FOR FINAL LAYOUT.
- 10. MINIMIZE DISTURBANCE AND COMPACTION OF AGRICULTURAL SOIL WHENEVER POSSIBLE. ALL CONSTRUCTION EQUIPMENT OPERATING IN AGRICULTURAL FIELDS MUST STAY WITHIN DESIGNATED CONSTRUCTION EASEMENTS.
- 11. FOR ALL EXCAVATIONS OCCURING ON AGRICULTURAL LAND REMOVE AND STOCKPILE TOP SOIL TO BE REPLACED DURING SITE RESTORATION.
- 12. TIMING OF ALL CONSTRUCTION ACTIVITY MUST BE CLOSELY COORDINATED WITH ENGINEER AND WWTRF STAFF.
- 13. NEW IRRIGATION VALVES ARE OWNER SELECTED, MINIMUM DUTY CONDITION OF 22 FEET OF HEAD.
- 14. CONTRACTOR WILL HAVE AN APPROVED DEWATERING PLAN IN PLACE PRIOR TO ANY EXCAVATION.

Client/Project

CITY OF NEWMAN

WWTRF MCPIKE 1
RECLAMATION IMPROVEMENTS

NEWMAN, CALIFORNIA

 File Name: X05593-G04
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GENERAL NOTES,
CONSTRUCTION STAGING AREA
AND ACCESS ROAD

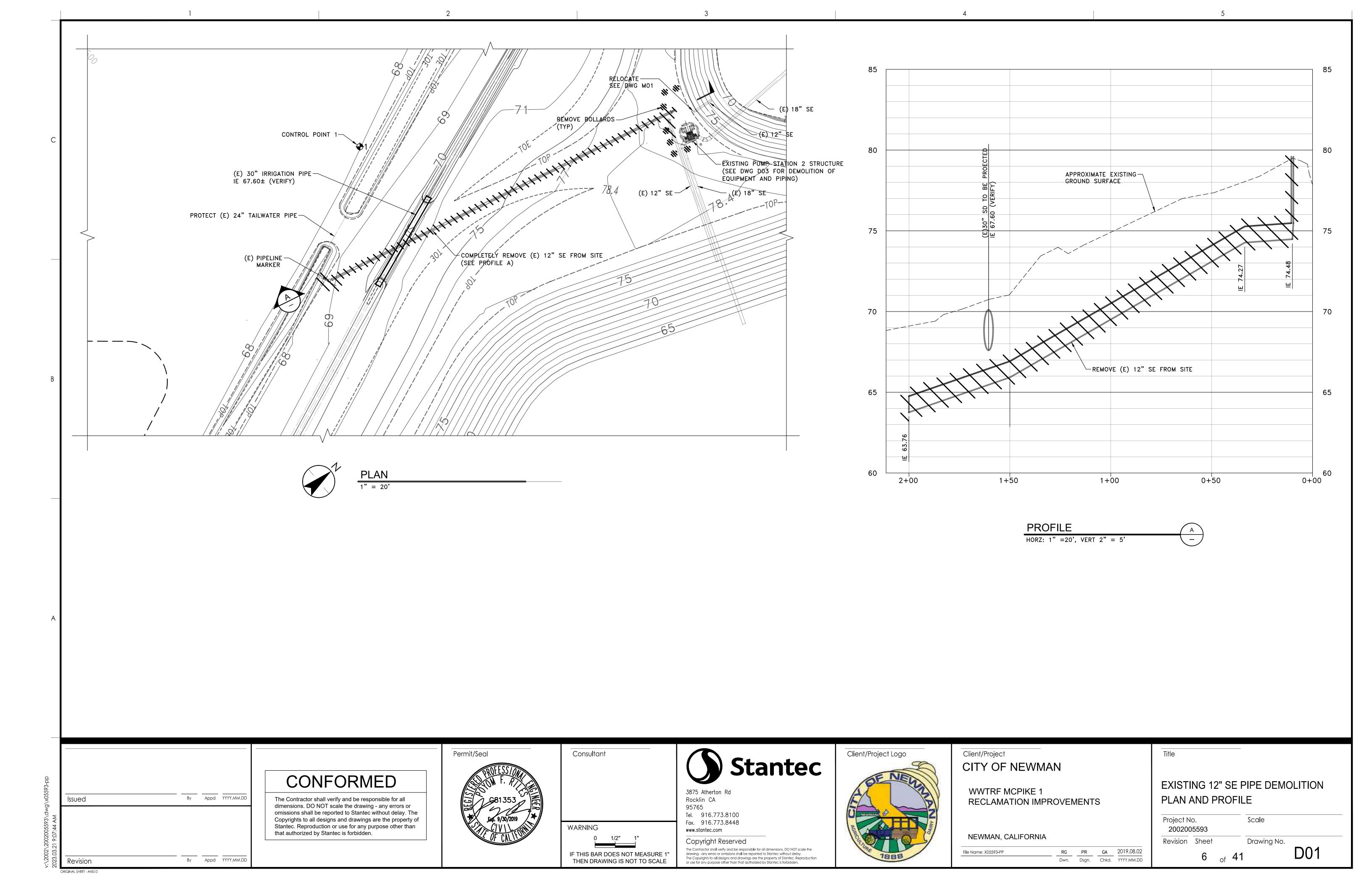
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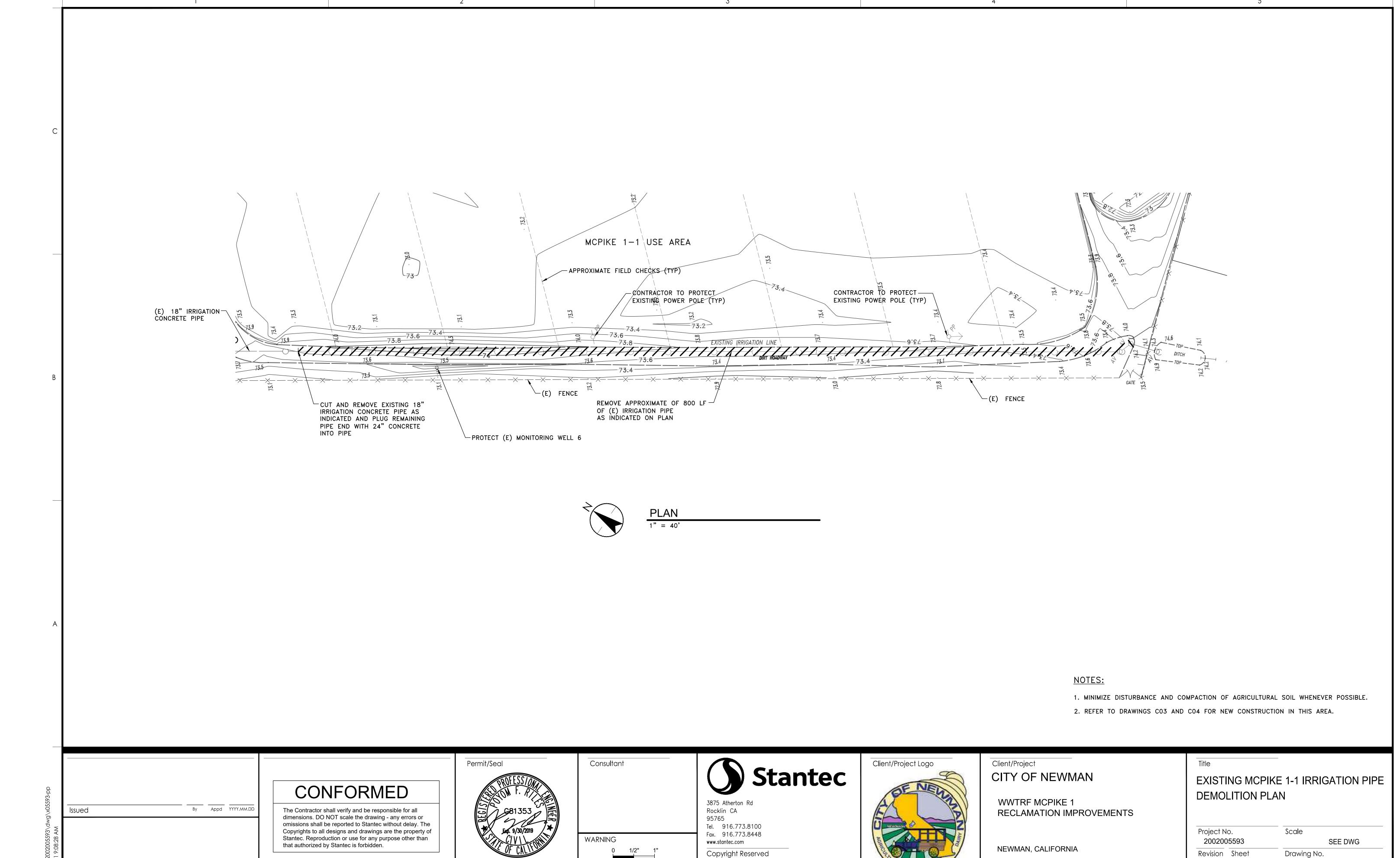
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 Revision Sheet
 Drawing No.

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 of 41

ORIGINAL SHEET - ANSI D





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D02

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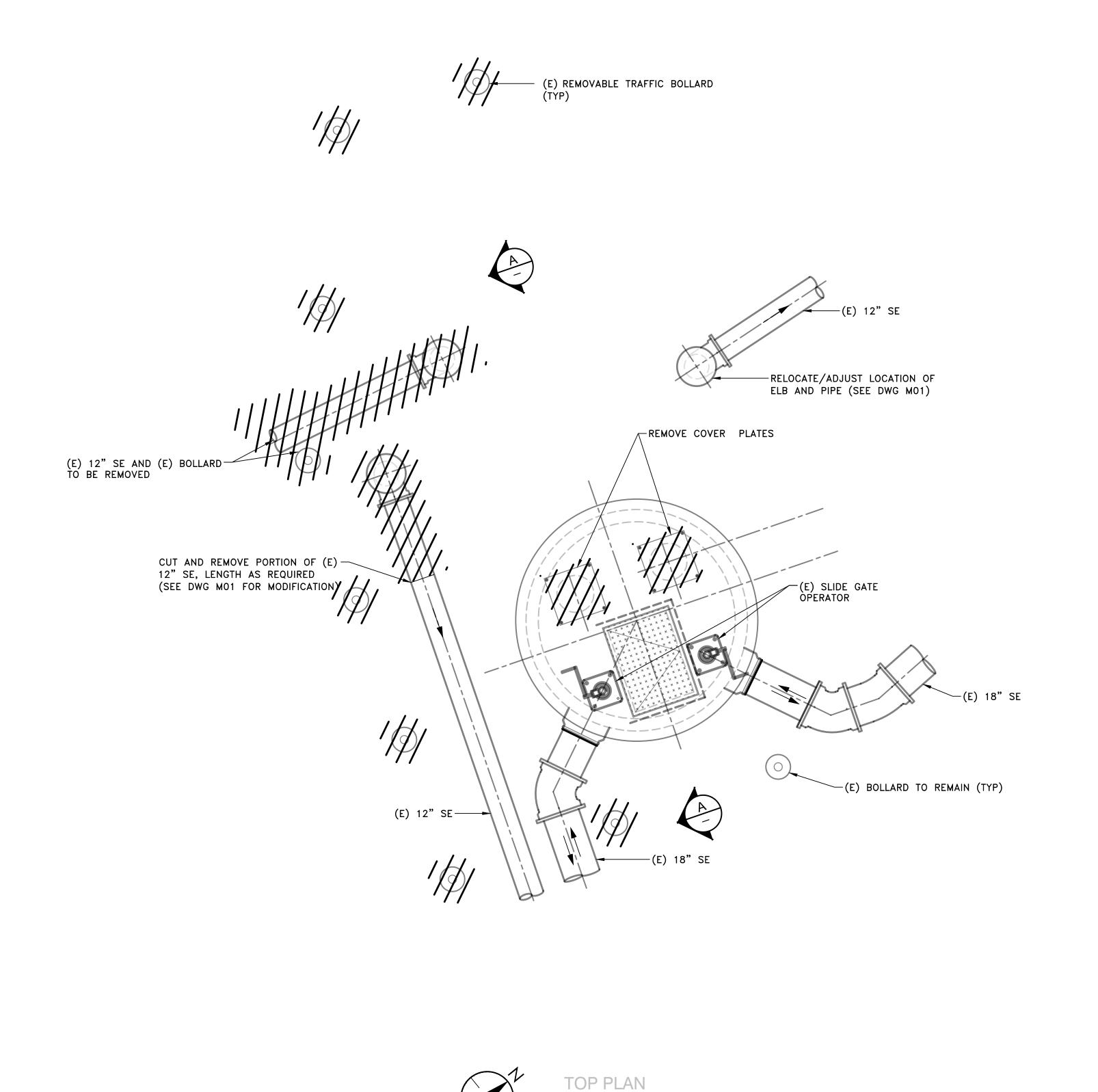
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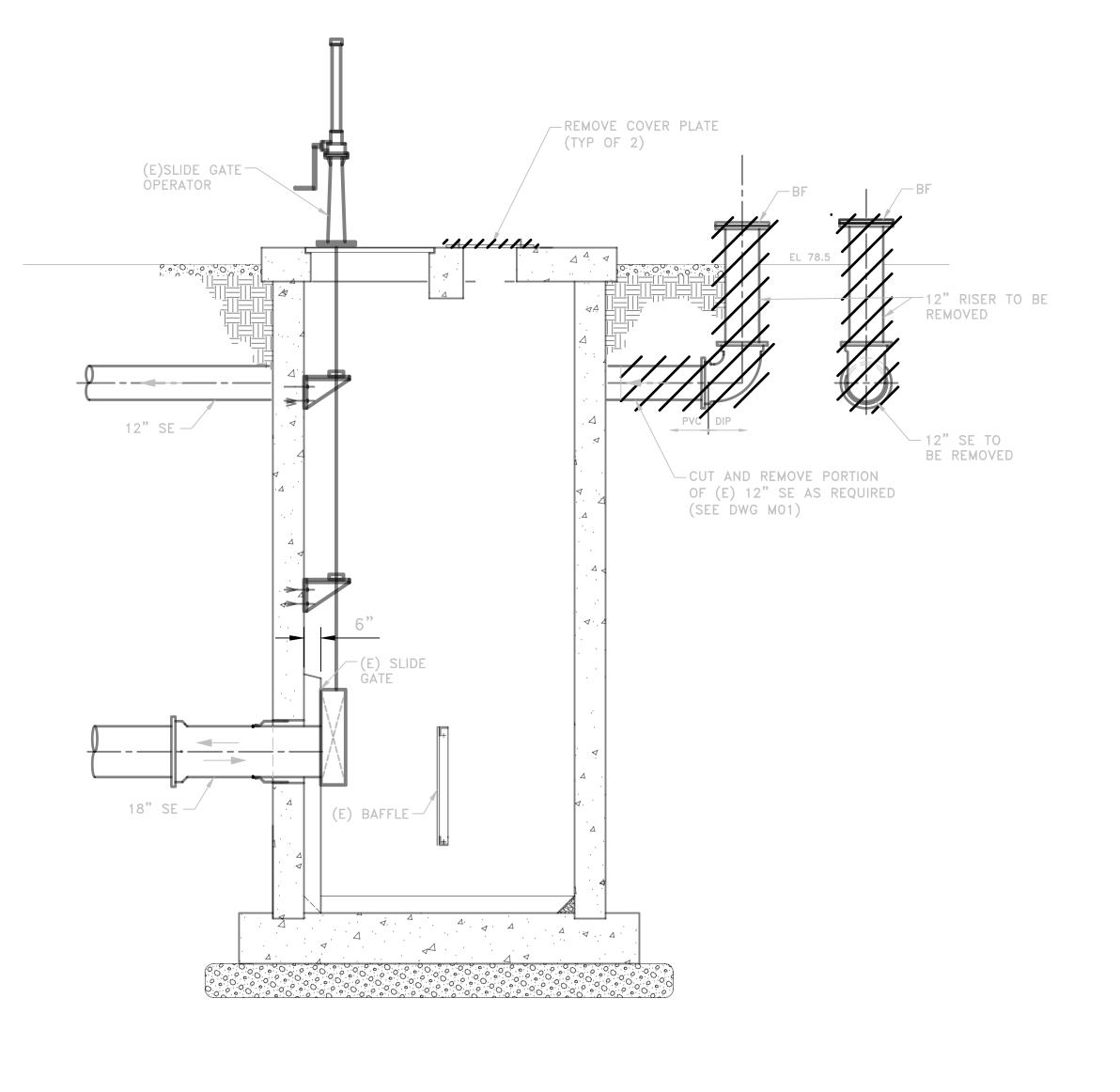
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File Name: X05593-PP

Revision

By Appd YYYY.MM.DD





SECTION

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

NOTES:

- SEE SPEC 02100 DEMOLITION, CLEARING, GRUBBING AND STRIPING.
 - SEE DWG C10 AND M01 FOR NEW CONSTRUCTION ASSOCIATED WITH THIS STRUCTURE.

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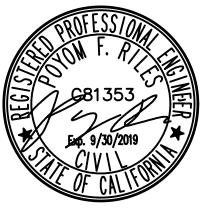


SCALE: 3/8"=1'-0"

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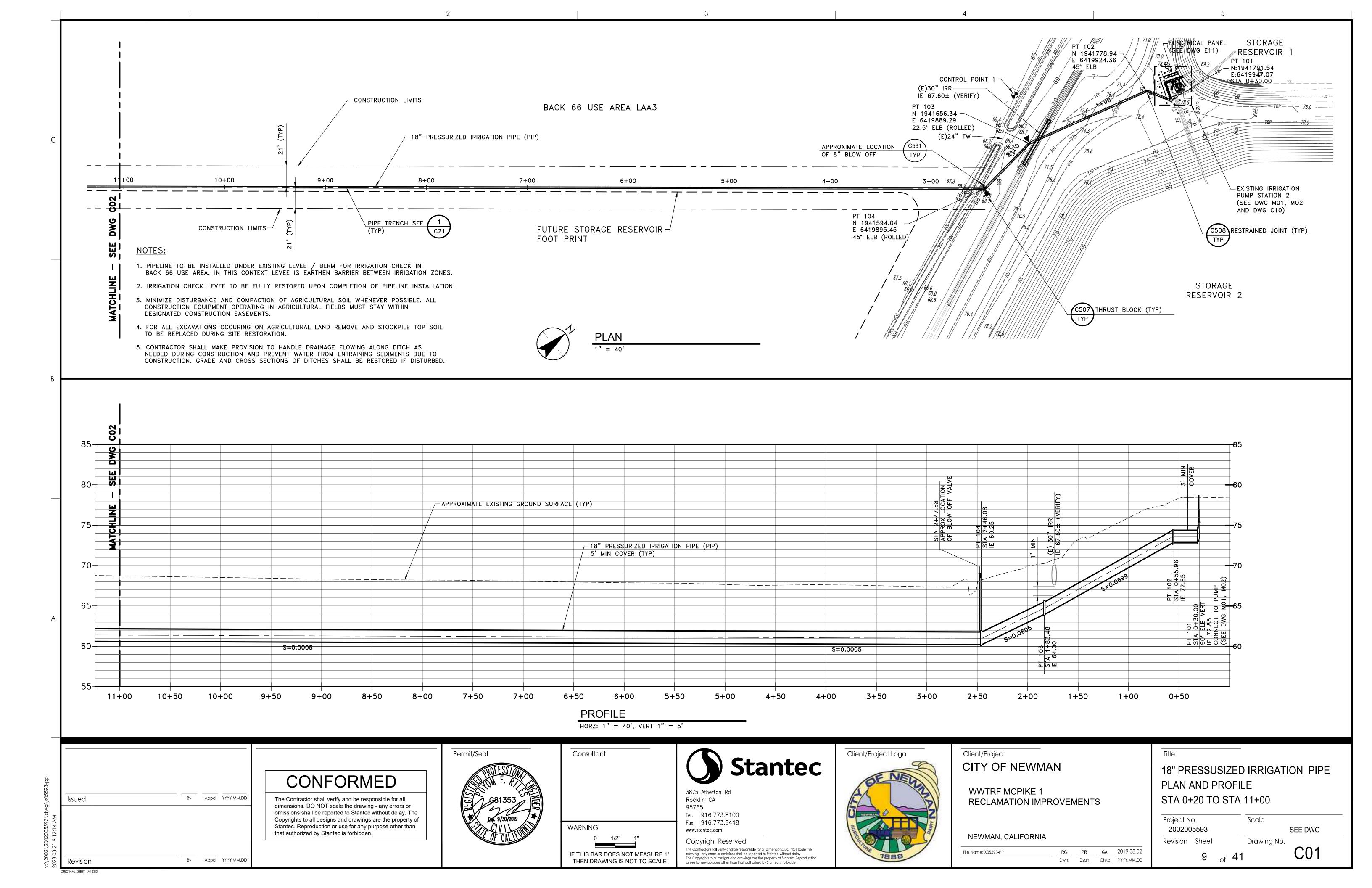
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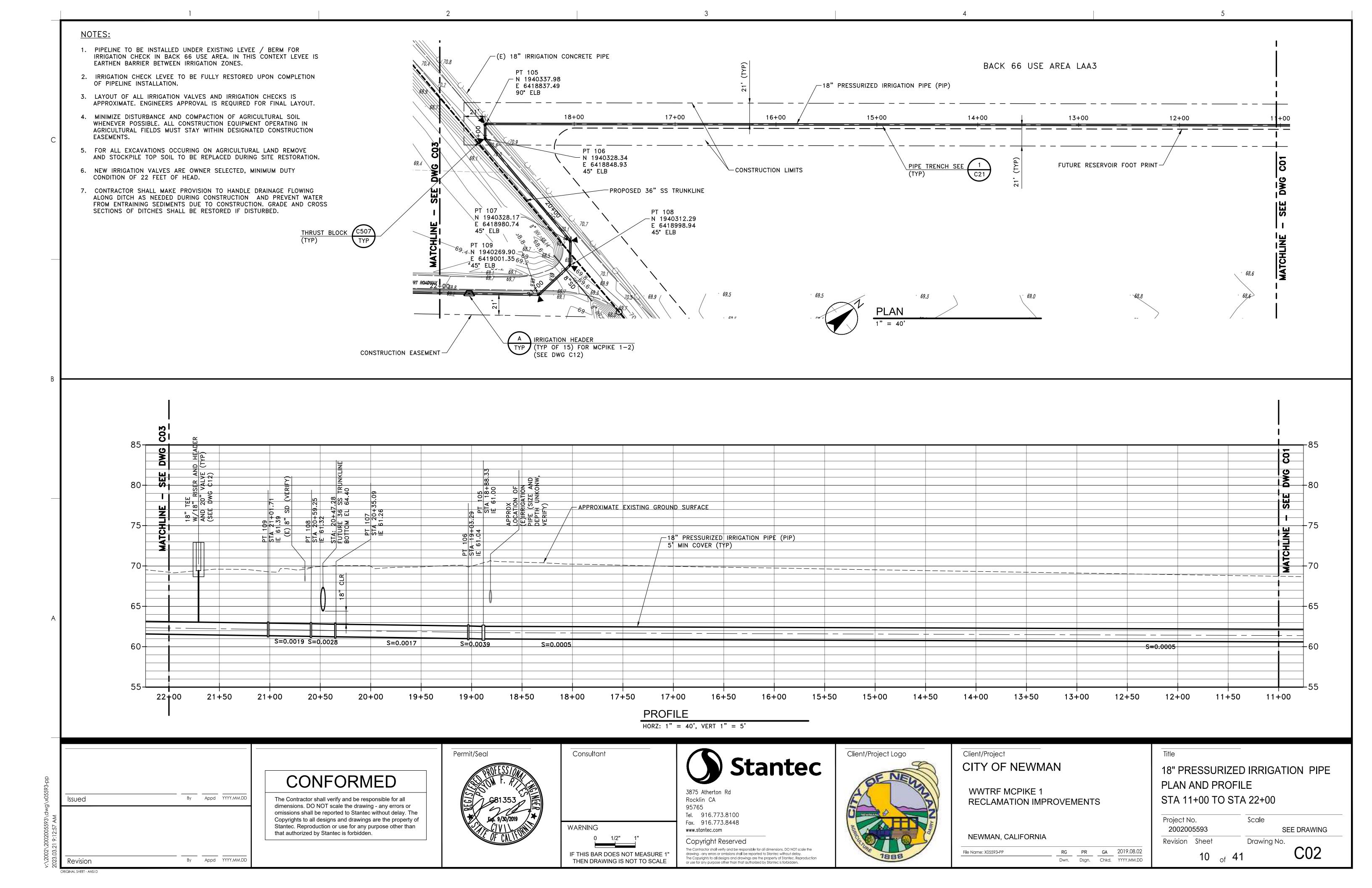
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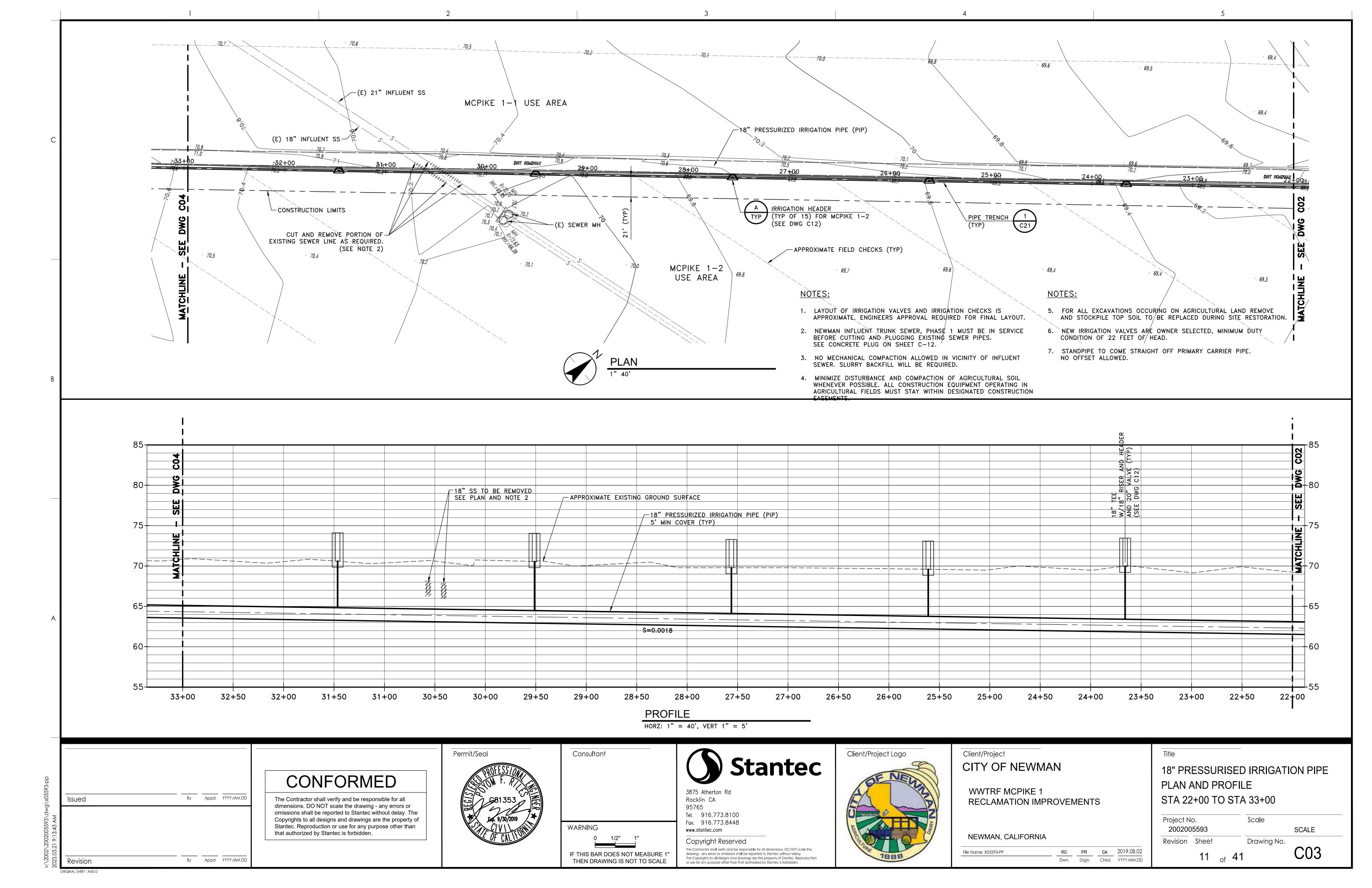
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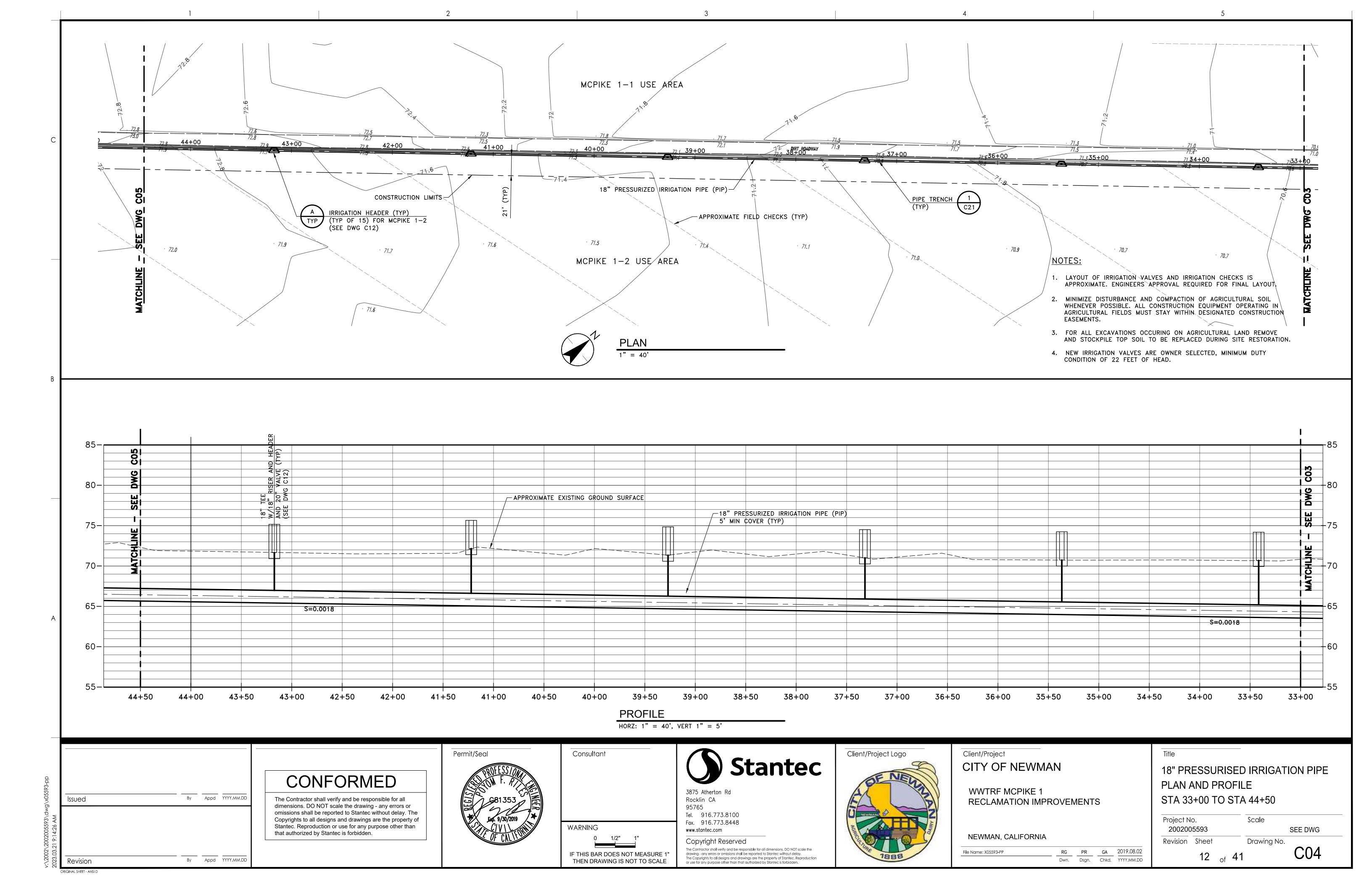
IRRIGATION PUMP STATION 2 **DEMOLITION**

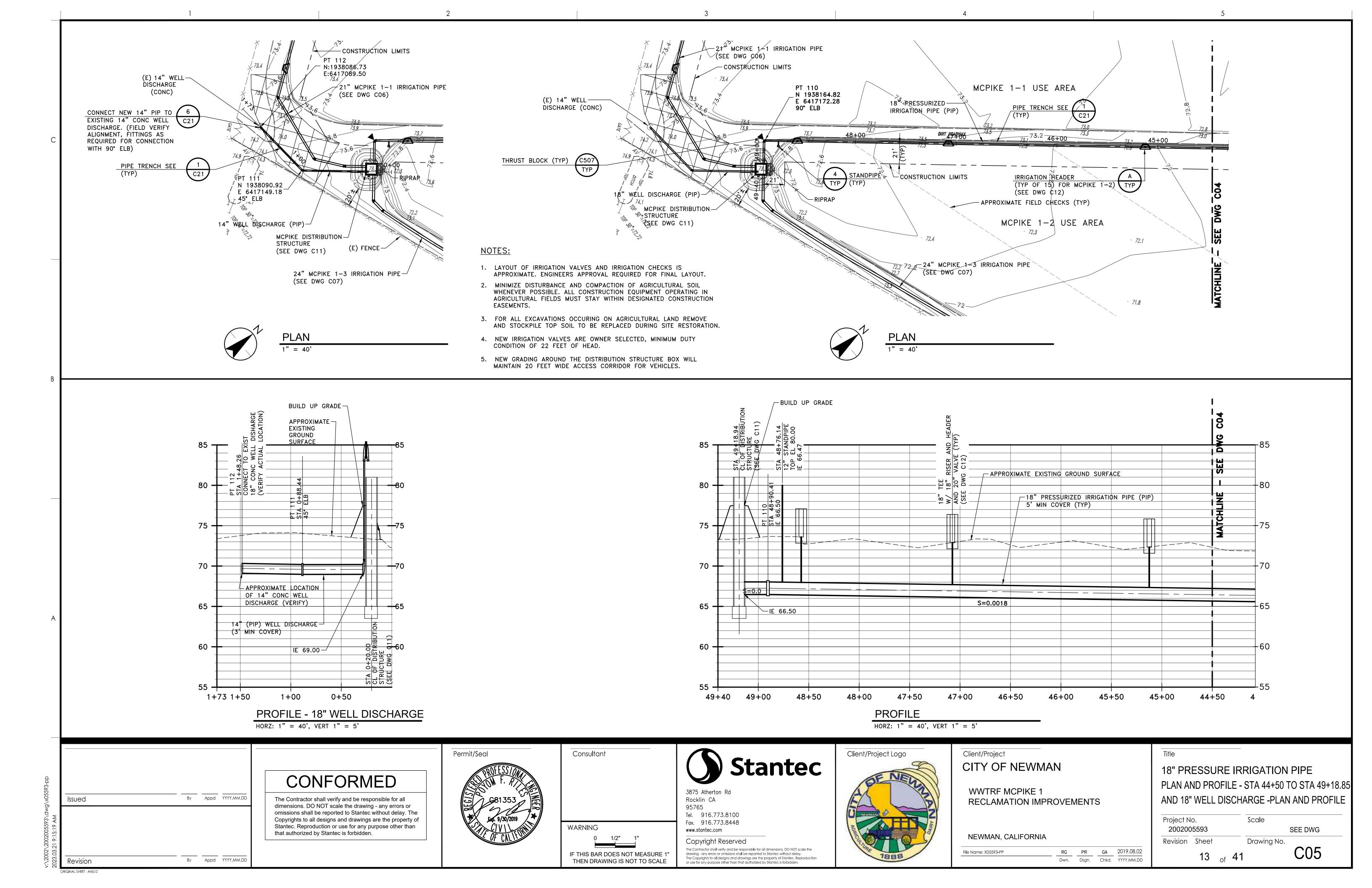
Scale Project No. 2002005593 Drawing No. Revision Sheet D03

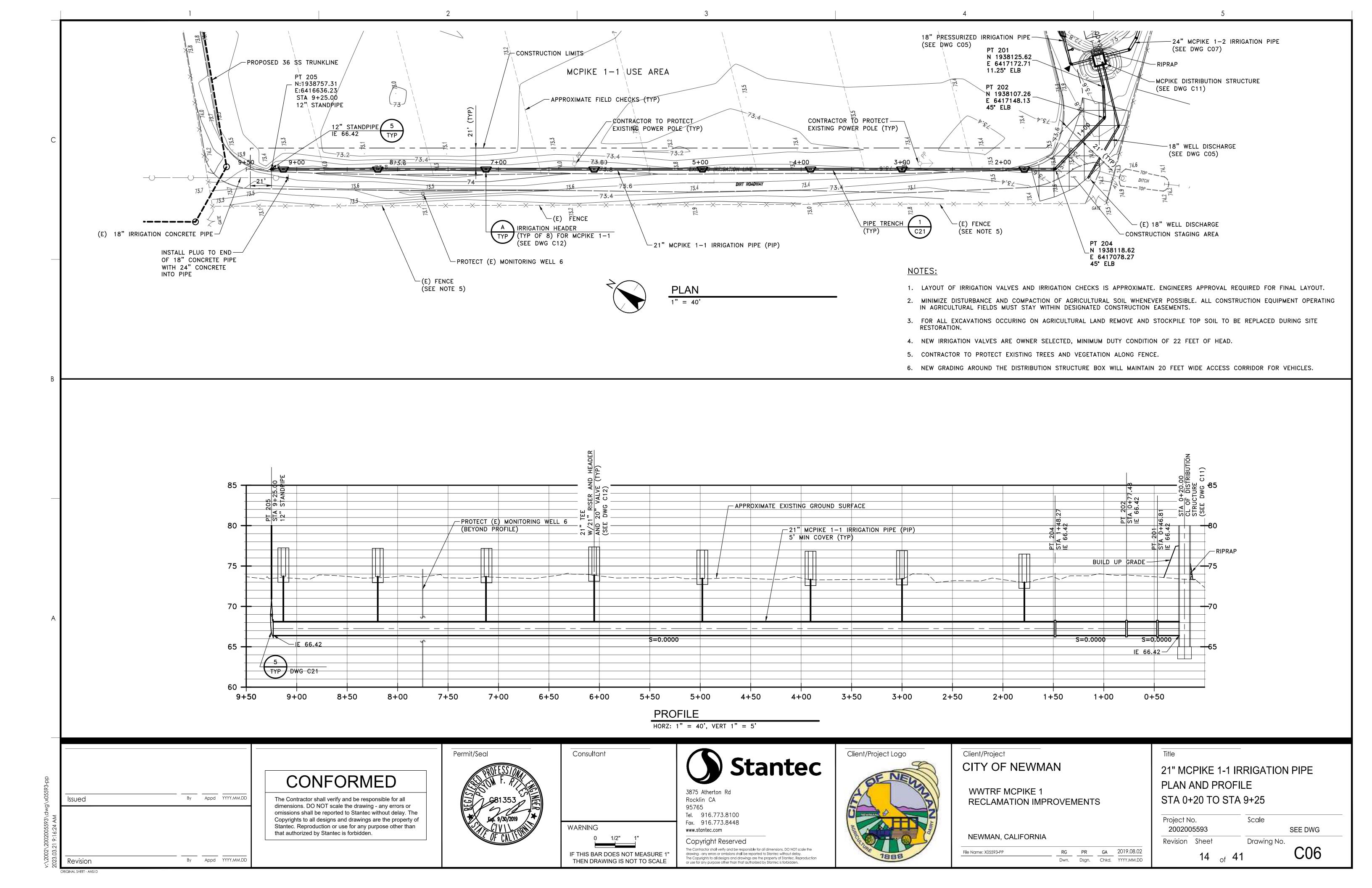


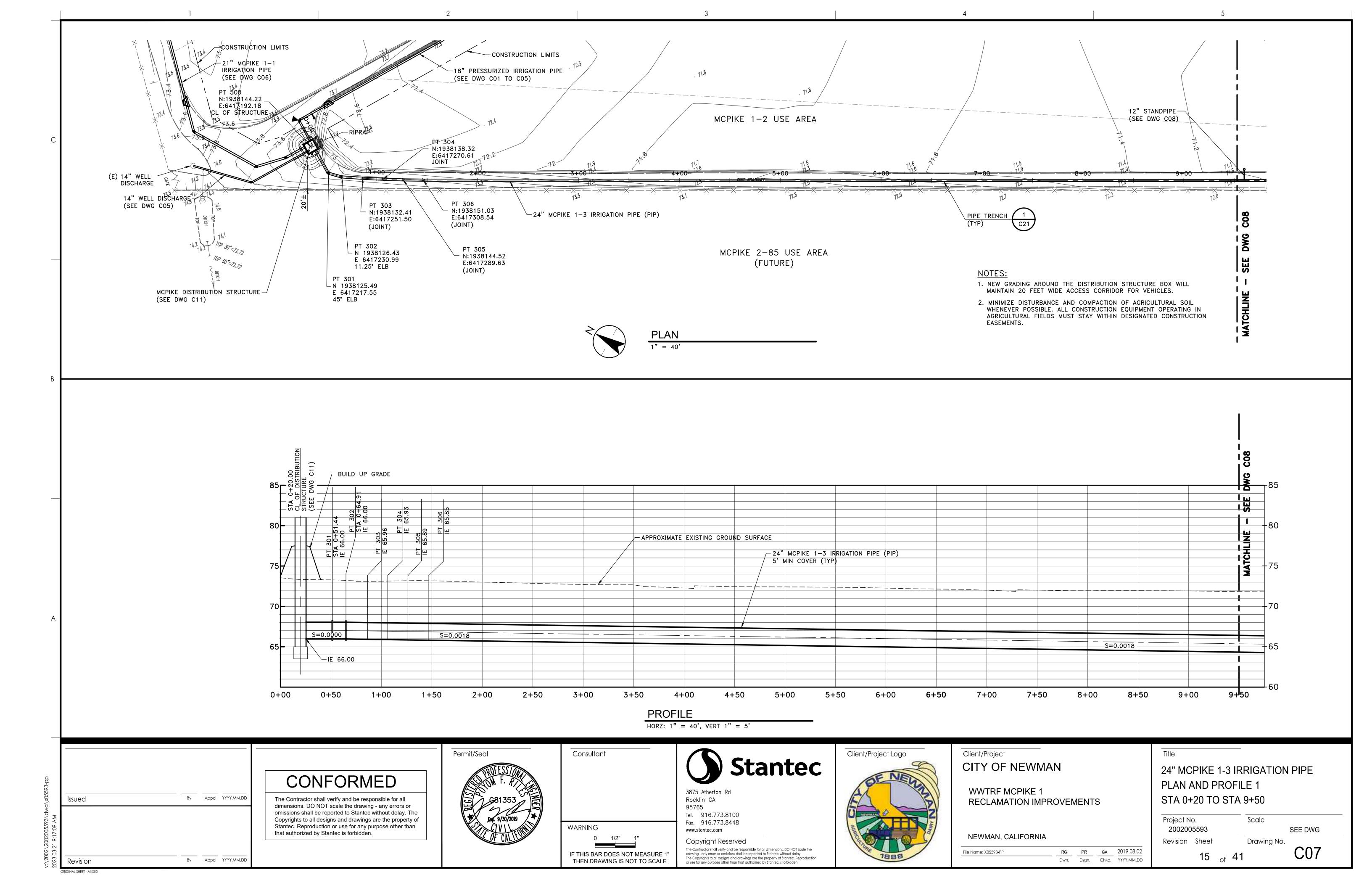


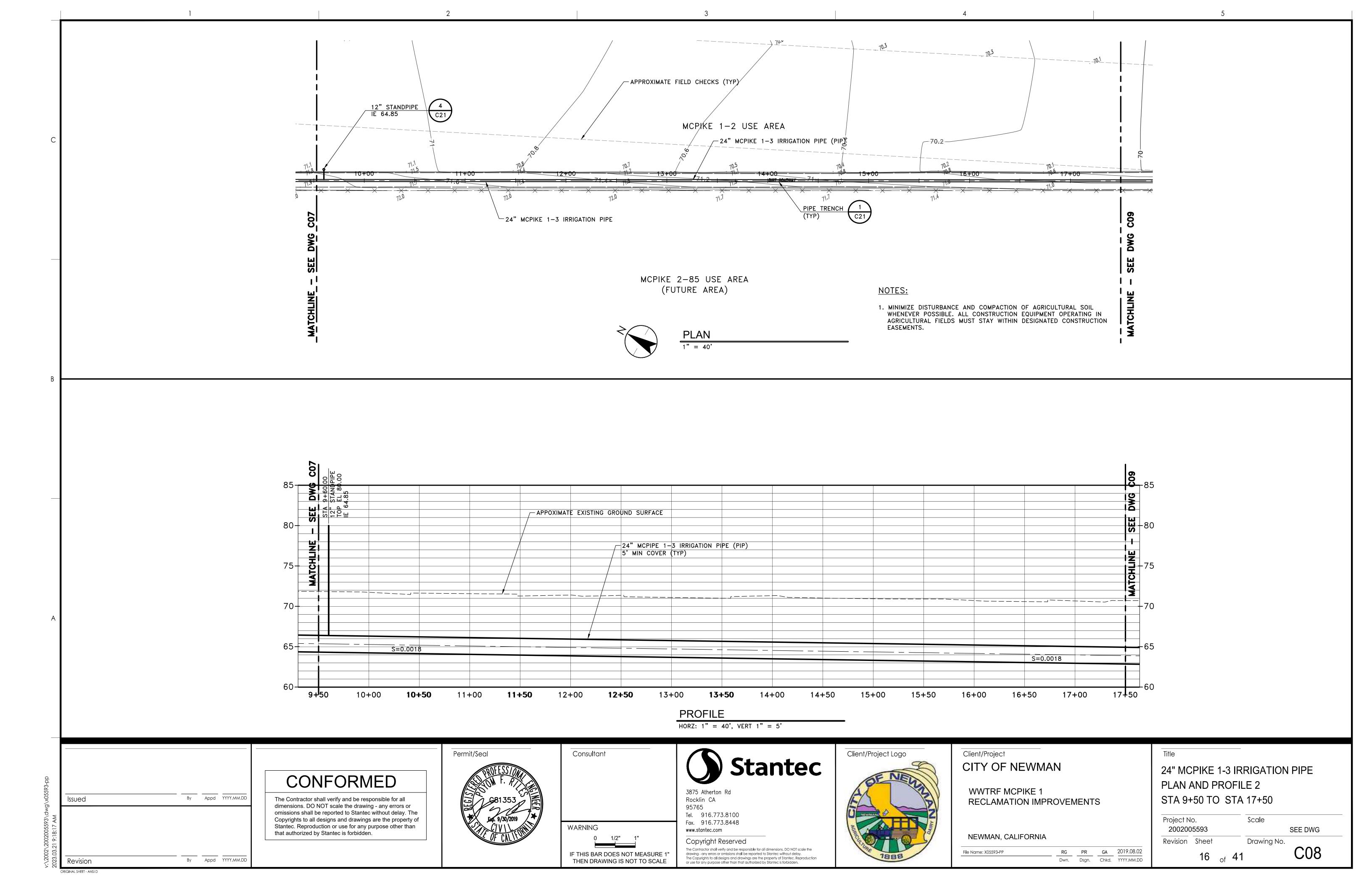


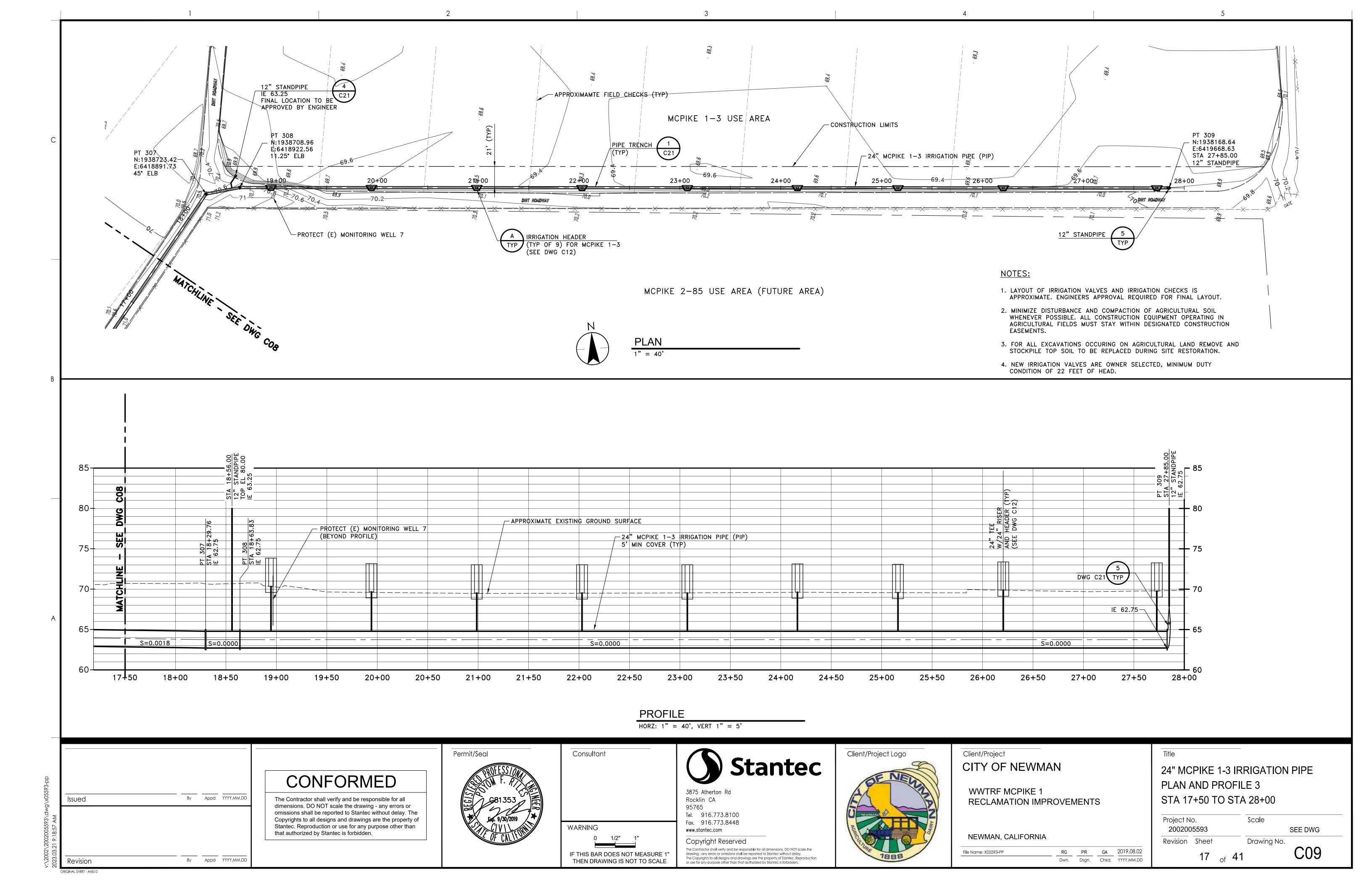


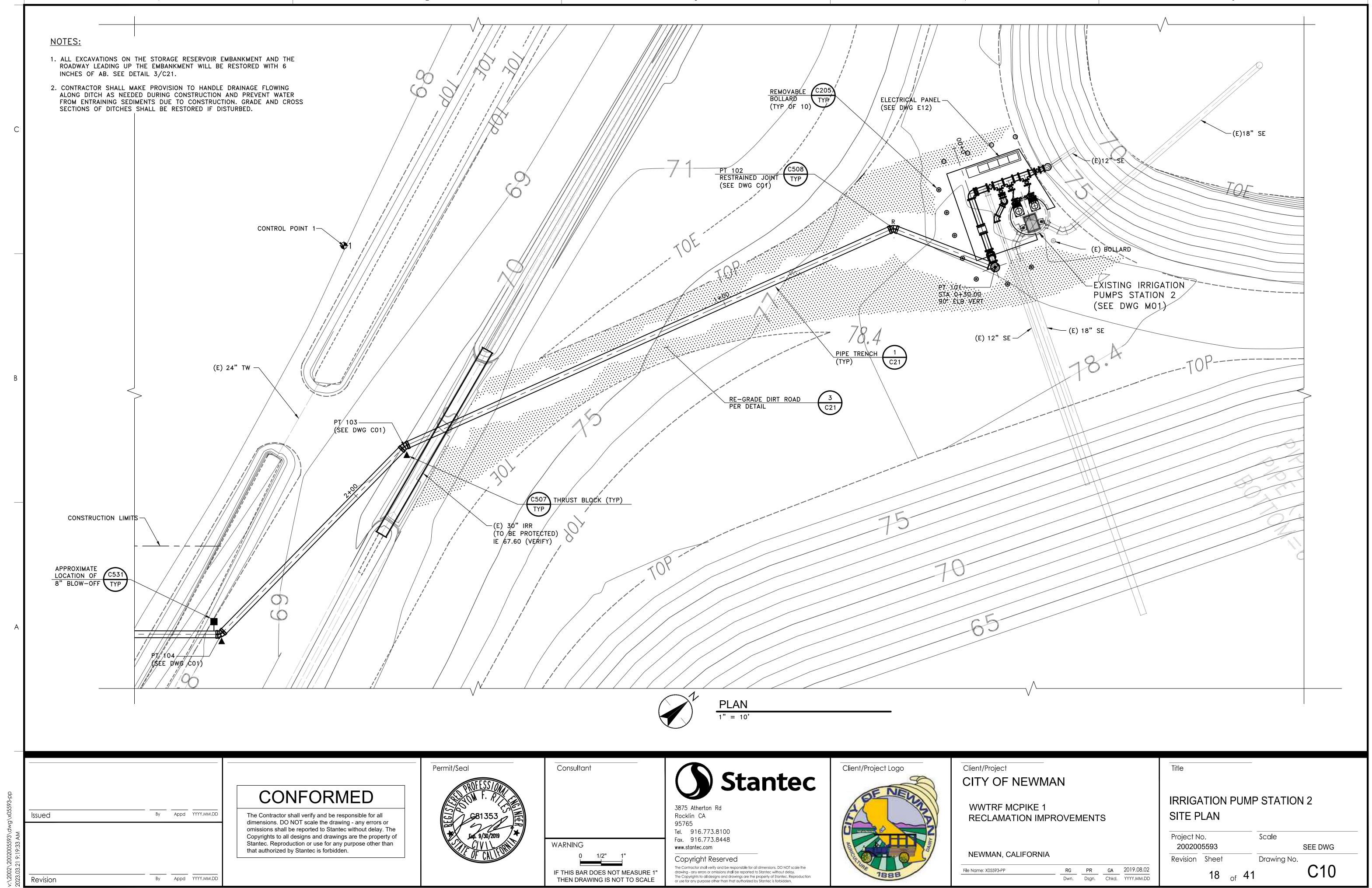


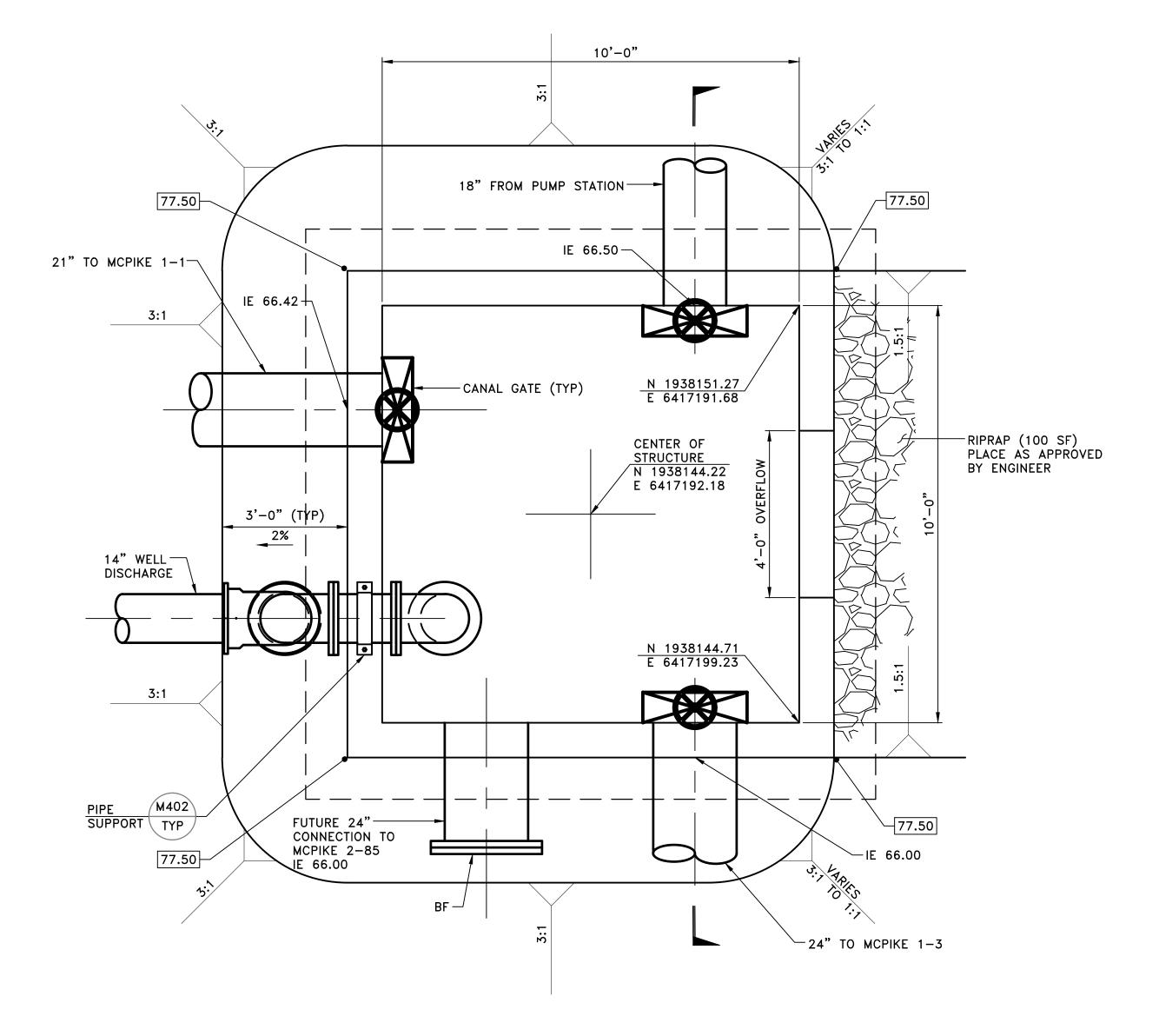


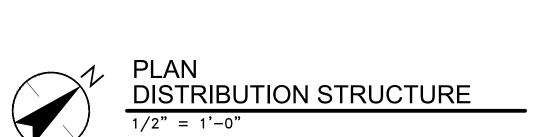


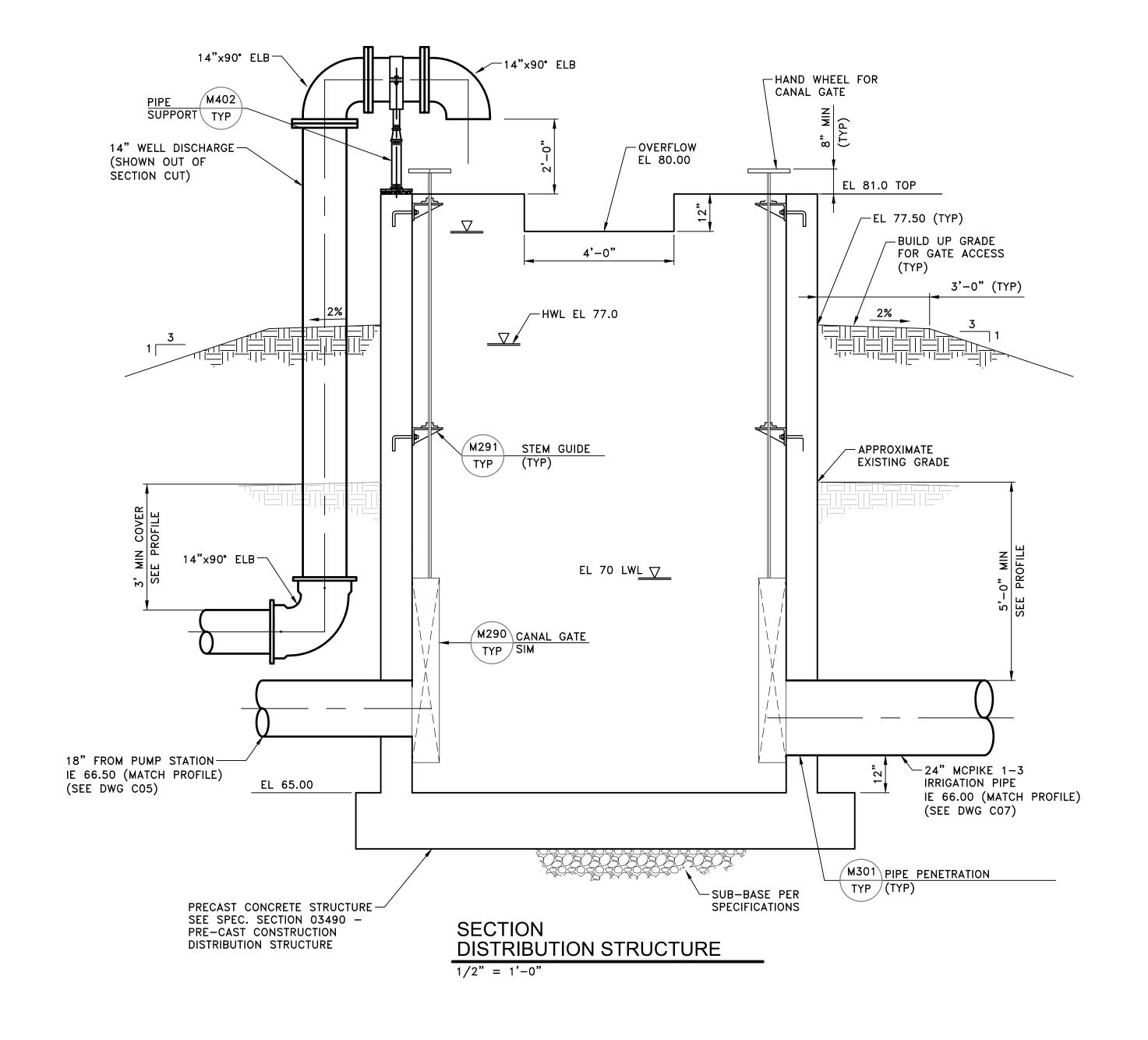






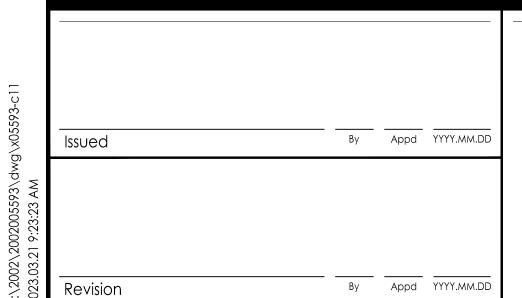






NOTES:

- 1. THREE GATES WILL BE SIZED AS SHOWN TO MATCH PIPE SIZE.
- 2. GATES WILL HAVE A MAIMUM SEATING HEAD AND UNSEATING HEAD OF 13.5 FEET.
- 3. WILL BE FLAT BACK WITH AN UPWARD OPENING AND SEAL ALL SIDES.
- 4. INSTALL ALL GATES PER MANUFACTURER SPECIFICATIONS.



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NEWMAN, CALIFORNIA

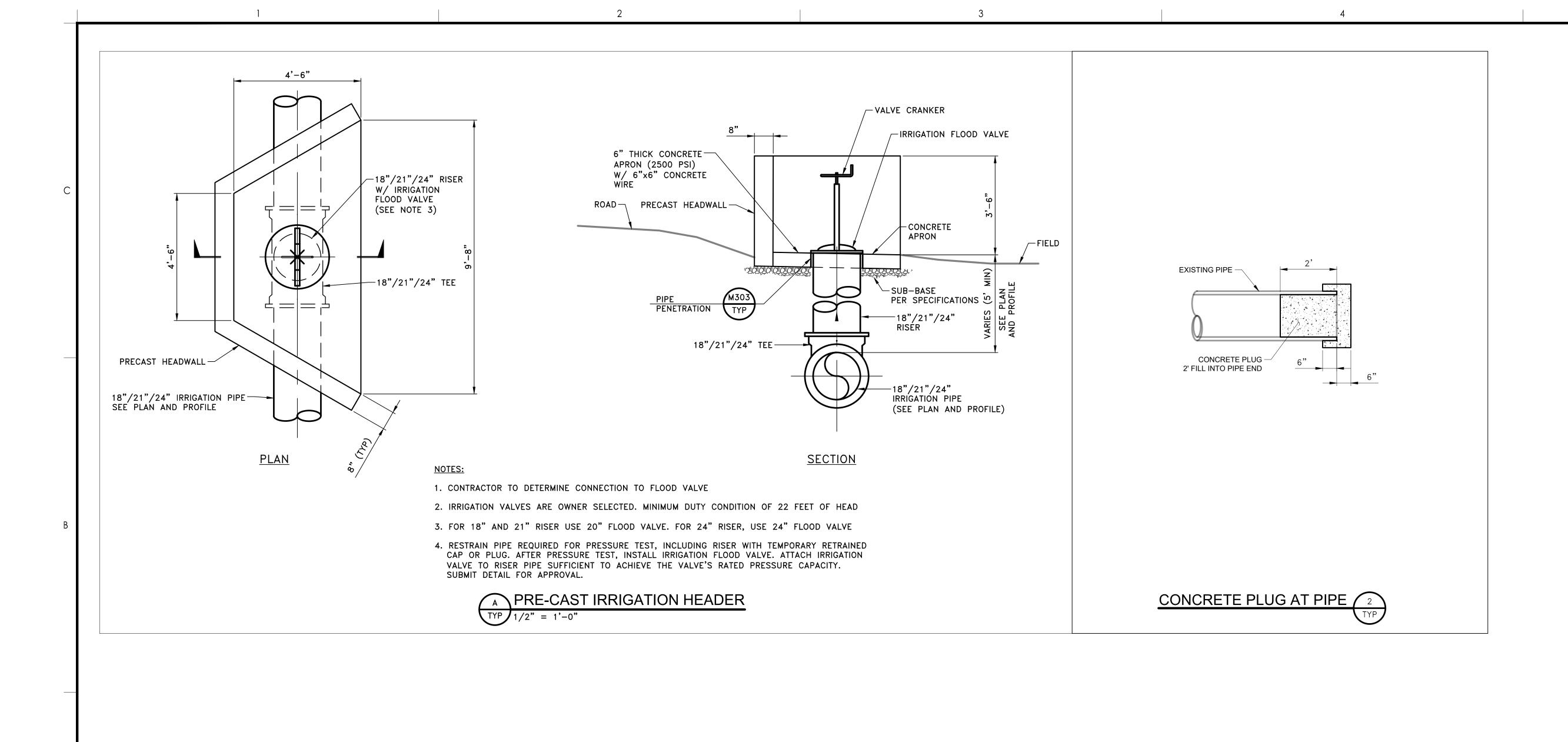
File Name: X05593-C11

MCPIKE DISTRIBUTION STRUCTURE

PLAN AND SECTION Scale Project No. 2002005593 SCALE Revision Sheet Drawing No. C11

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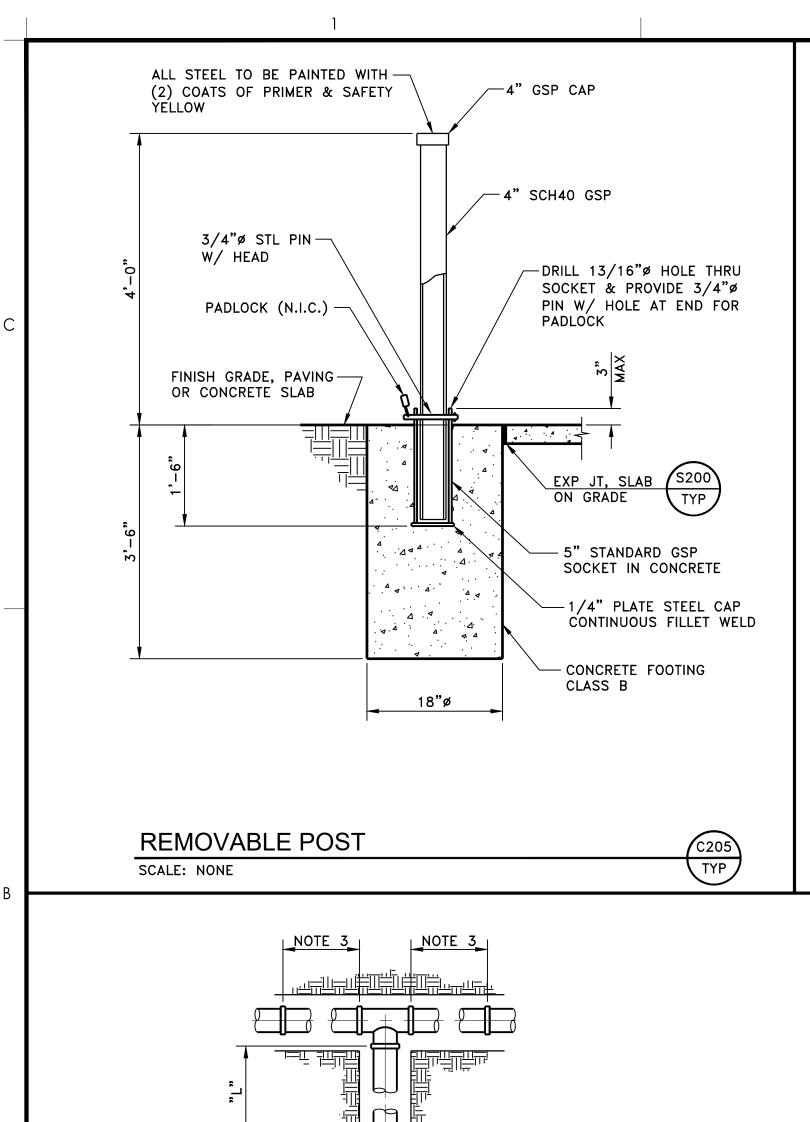
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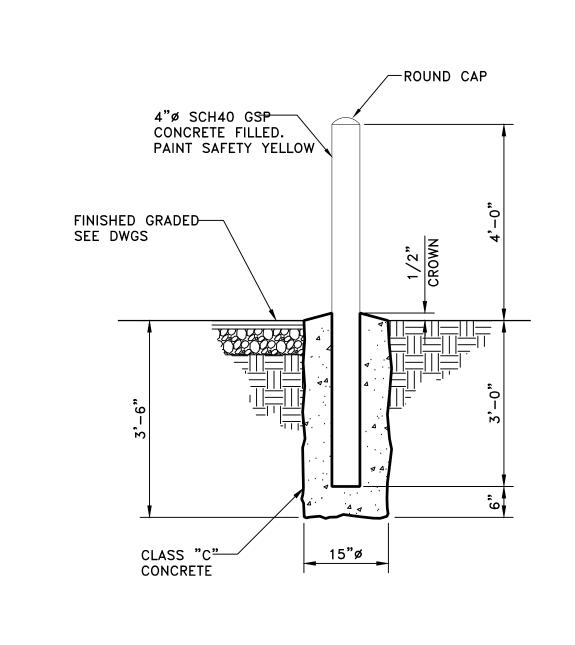
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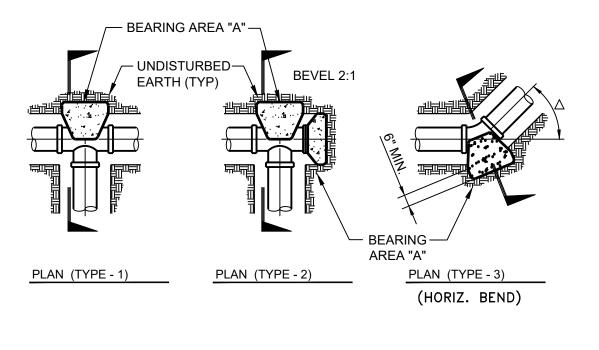
MISCELLENEOUS CIVIL DETAILS

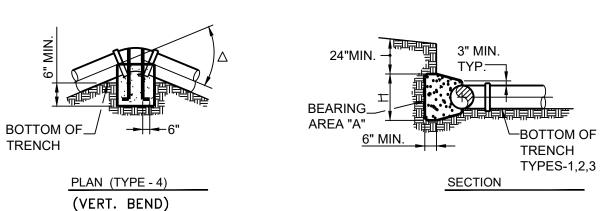
Scale Project No. 2002005593 Revision Sheet Drawing No. C12 20 of 41

NEWMAN, CALIFORNIA









THRUST BLOCK BEARING AREA "A" (S.F.) ANCHOR BLOCK VOL. TEST PIPE DIA. (in.) OF CONCRETE (C.Y.) PESSURE (P.S.I.) TEE OR 22.5° 11.25° BULKHEAD 10" 12" 14" 16" 18" 0.83 20"

THRUST BLOCKS SCHEDULE

REBA	R SIZ	ES
PIPE SIZE	Δ	REBAR
6"-10"	0-90°	#5
12"-20"	0-225°	#5
24"	0-225°	#6
12"-20"	45°	#7
12"-16"	90°	#8

SEE NOTE 4

NOTES:

- 1. THRUST BLOCKS ARE ONLY ALLOWED AT LOCATIONS SPECIFIED BY PIPE SERVICE OR AS APPROVED BY THE ENGINEER. PIPE TEST PRESSURE LESS THAN OR EQUAL TO 10 psi DO NOT REQUIRE RESTRAINT, TEST PRESSURE GREATER THAN 10 psi REQUIRE RESTRAINT. AREAS GIVEN ARE FOR 10 psi, ADJUST AREAS ACCORDING TO TEST PRESSURE. SEE SPECIFICATION SECTION 15010.
- 2. BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL.
- 3. JOINTS AND FACE OF PLUGS SHALL BE KEPT CLEAN OF CONCRETE.
- 4. COAT REBAR WITH TWO COATS OF KOPPERS 505, TNEMEC 46-450, OR EQUAL, 15 MILS EACH COAT

SCALE: NONE

5. MAXIMUM PRESSURE 22 FEET OF HEAD.

TYPICAL THRUST BLOCK

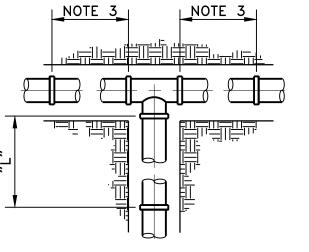


24"

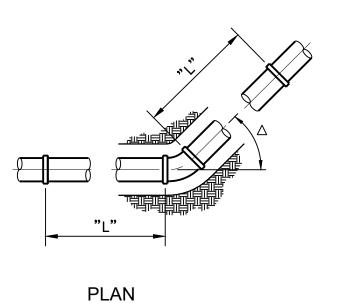
30"

36"

42"



PLAN



RESTRAINED LENGTH SCHEDULE

PIPE TEST PESSURE (D.S.L.)	LENGTH "L" (FT)					
DIA. (III.)	(P.S.I.)	∆ 45°	∆ 90°	TEE RUN	TEE BRANCH	REDUCER
4	100	6	14	NOTE 4	36	
6	100	8	19	NOTE 4	54	
8	100	10	25	NOTE 4	74	
10	100	12	30	NOTE 4	79	
12	100	14	35	NOTE 4	97	64 (12"x 8")
14	100	16	39	NOTE 4	112	
16	100	18	44	NOTE 4	119	
18	100	20	48	NOTE 4	124	93 (18"x 12)
20	100	22	52	NOTE 4	139	
24	100	25	60	NOTE 4	168	

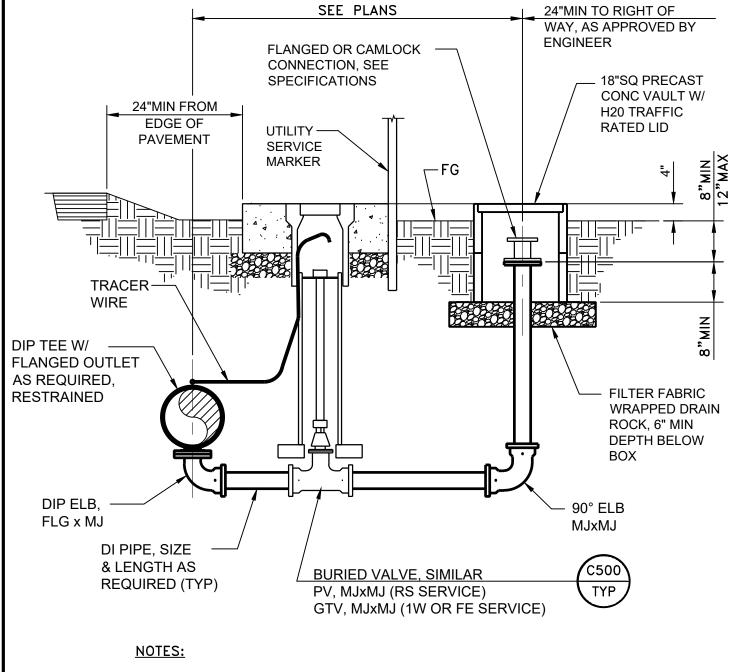
NOTES:

- 1. PIPE JOINTS AND FITTINGS SHALL BE RESTRAINED A MINIMUM LENGTH AS SHOWN IN THE ABOVE TABLE.
- 2. PIPE TEST PRESSURES LESS THAN OR EQUAL TO 10 PSI DO NOT REQUIRE RESTRAINT; TEST PRESSURE GREATER THAN 10 PSI REQUIRE RESTRAINT. LENGTHS GIVEN ABOVE ARE FOR 100 PSI. ADJUST LENGTHS ACCORDING TO TEST PRESSURE (EG. FOR 150 PSI-MULTIPLY SCHEDULE LENGTH VALUES BY 1.5). SEE SPECIFICATION SECTION 15010 FOR TEST PRESSURES.
- 3. CONTRACTOR SHALL INSTALL ONE FULL LENGTH PIPE EITHER SIDE OF TEE RUN.
- 4. TEE RUN RESTRAINT SHALL BE PER FITTING ADJACENT TO TEE AS REQUIRED.
- 5. MAXIMUM PRESSURE 22 FEET OF HEAD.

BARRIER POST

SCALE: NONE





- 1. ALL PIPE SHALL BE DUCTILE IRON WITH RESTRAINED JOINTS.
- 2. SEE PLANS FOR BLOW-OFF SIZE.

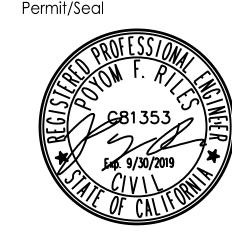
BLOW-OFF VALVE

SCALE: NONE

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File Name: X05593-C20 RG PR GA 2019.08.02

Title

TYPICAL CIVIL DETAILS 1

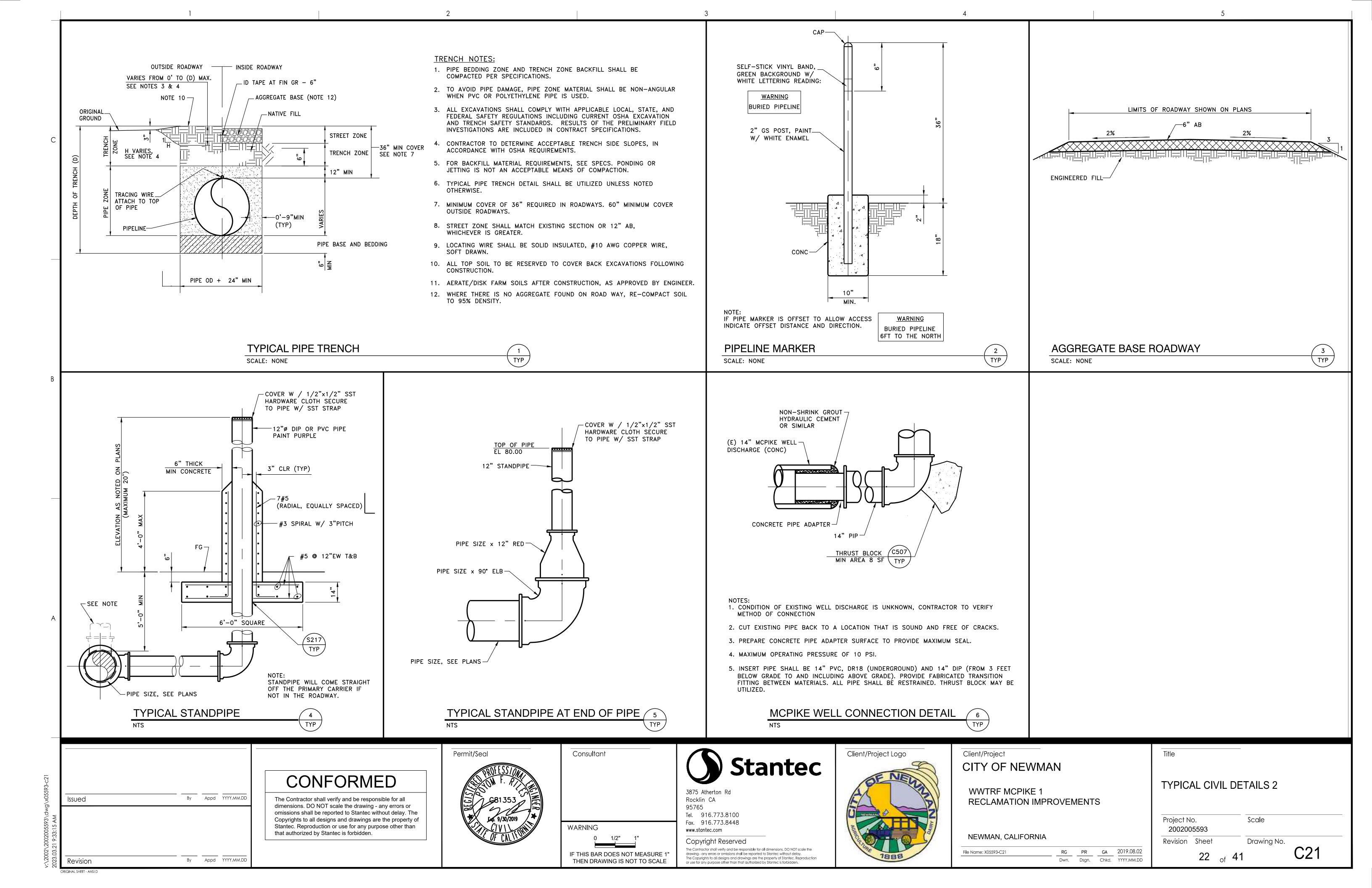
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Scale Project No. 2002005593 SCALE Revision Sheet Drawing No. C20

Dwn. Dsgn. Chkd. YYYY.MM.DD

C200 TYP

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		I			Z
	ABBREVIATION	S:	ABBREVIATIONS	(Continued):	
	ADDL	ADDITIONAL	ID	INSIDE DIAMETER	<u>IN</u>
	AB	AGGREGATE BASE, ANCHOR BOLT	INCL	INCLUDING	A.
	AC	ASPHALT CONCRETE	INSP	INSPECTION	
	ACP AL	ASBESTOS CEMENT PIPE ALUMINUM	INV IE	INVERT INVERT ELEVATION	GE
	ALT	ALTERNATE	IF	INSIDE FACE	INS
	APPROX	APPROXIMATE (LY)	IN	INCH	AC SP
	ARCH	ARCHITECTURAL	JT	JOINT	4
	@	AT	JCT	JUNCTION	1 .
	BETW	BETWEEN	KP KIPS	KICK PLATE KILO POUNDS	
	BEV BLKG	BEVELED WOOD BLOCKING	L	LENGTH	1 2.
	BOT	BOTTOM	LS	LAG SCREW	
	BRG	BEARING	LAT	LATERAL	_
C	BLDG	BUILDING	LB	POUND	▼ 3.
Ĭ	BF D (W)	BOTTOM OF FOOTING	LF LL	LINEAR FOOT LIVE LOAD	
	B/W BIT CTD	BACK OF WALL BITUMINOUS COATED	LT	LEFT	
	CHK PL	CHECKERED PLATE	LONG	LONGITUDE	
	CLR	CLEAR	LONGIT	LONGITUDINAL	□ 5.
	CL	CENTER LINE	LTS	LIME TREATED SOIL	□ 6.
	CLSM	CONTROLLED LOW STRENGTH MATERIAL	MANUF	MANUFACTURER	
	CC	CENTER TO CENTER	MAX MB	MAXIMUM MACHINE BOLT	
	CMU COL	CONCRETE MASONRY UNIT COLUMN	MECH	MECHANICAL	□ 7.
	CONC	CONCRETE	MIN	MINIMUM	□ 8.
	CJ	CONSTRUCTION JOINT	MPH	MILES PER HOUR	
	CONT	CONTINOUS	MISC	MISCELLANEOUS	1 9.
	CT J	CONTROL JOINT	(N)	NEW NON-SHRINK	
	CR J CIP	CONTRACTION JOINT CAST—IN—PLACE	NS N/S	NEAR SIDE	▼ 10
	CIDH	CAST-IN-DRILLED-HOLE	NTS	NOT TO SCALE	_
	CTR	CENTER (ED)	NO., NOS	NUMBER, NUMBERS	
	CG	CENTER OF GRAVITY	OC	ON CENTER	
	CONST	CONSTRUCTION	OD	OUTSIDE DIAMETER	
	COORD	COUNTER SINK	OF OG	OUTSIDE FACE ORIGINAL GROUND	В.
	CSK CAB	COUNTER SINK CRUSHED AGGREGATE BASE	OE OE	OUTER EDGE	
	CAP	CORRUGATED ALUMINUM PIPE	OH	OVERHEAD, OPPOSITE HAND	TH
	D	DEPTH	OPNG	OPENING	ST BU
	db	BAR DIAMETER	OPP	OPPOSITE	_
	DF	DOUGLAS FIR	0-0 PVMT	OUT TO OUT	1 .
	DEMO DIA	DEMOLITION DIAMETER	PVM1 PL	PAVEMENT PLATE	
	DIM	DIMENSION	PREFAB	PREFABRICATED	□ 2.
	DN	DOWN	PSI	POUNDS PER SQUARE INCH	_
	DWG	DRAWING	P/S	PRESTRESSED	☐ 3.
3	DL	DEAD LOAD	R	RADIUS	4 .
	DIST DD	DISTANCE DOWN DRAIN	REINF RC	REINFORCEMENT REINFORCED CONCRETE	<u>v</u> 4.
	DIAPH	DIAPHRAGM	RCB	REINFORCED CONCRETE BOX	
	DSA	DIVISION OF STATE ARCHITECT	RCE	REGISTERED CIVIL ENGINEER	G
	EXIST, (E)	EXISTING	RET	RETAINING	<u>G</u> l 1.
	EA	EACH	RT	RIGHT	1.
	EF -	EACH FACE	REQD	REQUIRED	
	EJ EL, ELEV	EXPANSION JOINT ELEVATION	SEC SF	SECTION SQUARE FOOT	2.
	EQ	EQUAL	SIM	SIMILAR	
	EQUIP	EQUIPMENT	SPEC	SPECIFICATIONS	3.
	EXT	EXTERIOR	SHT	SHEET	
	EMBED	EMBEDMENT	STR	STRUCTURE/STRUCTURAL	4.
	EN	EDGE NAILING	SG	SUBGRADE	
	ES EW	EACH SIDE EACH WAY	STD SOG	STANDARD SLAB ON GRADE	
	ENGR	ENGINEER, ENGINEERING	SP	STRUCTURAL PLYWOOD	
	EXC	EXCAVATION	SS	STAINLESS STEEL	
	EXP	EXPANSION	SSB	STAINLESS STEEL BOLT	
	FAB	FABRICATE	ST	STEEL	5.
	F & I FB	FURNISH AND INSTALL FACE OF BLOCK	STIFF STAG	STIFFENER STAGGERED	
	FC	FACE OF BLOCK FACE OF CONCRETE	STIR	STAGGERED STIRRUPS	
	FD	FLOOR DRAIN	SQ	SQUARE	
	FF	FINISHED FLOOR, FACE OF FRAMING	SYMM	SYMMETRICAL	
	FDN	FOUNDATION CRADE	T & B	TOP AND BOTTOM	6.
	FG FS	FINISHED GRADE FINISHED SURFACE, FACE OF STUD	TF TOB	TOP OF FOOTING TOP OF BLOCK	
	F/S	FAR SIDE	TOC	TOP OF BLOCK TOP OF CONCRETE	7.
	FLG	FLANGE	TOG	TOP OF GRATING	
	FN	FIELD NAILING	TOS	TOP OF STEEL	
	FTG	FOOTING	TS	TUBE STEEL	8.
Ą	FW	FACE OF WALL	TOW TYP	TOP OF WALL TYPICAL	0.
	FT GA	FEET (FOOT) GAGE	TEMP	TEMPORARY	
	GAF	GALVANIZE AFTER FABRICATION	UG	UNDER GROUND	
	GALV	GALVANIZED	UNO (UON)	UNLESS NOTED OTHERWISE	
	GS	GALVANIZED STEEL	VERT	VERTICAL	
	GR	GUARD RAILING, GRADE	VOL W	VOLUME WIDTH	9.
	GTR GRTG	GUTTER GRATING	W WS	WIDTH WATERSTOP	J.
	GSP	GALVANIZED STEEL PIPE	WP	WORKING POINT	
	H	HIGH OR HEIGHT	WH	WEEP HOLE	Co
	НА	HEADED ANCHOR	WM	WIRE MESH	ST
	HR	HANDRAIL	WSP	WELDED STEEL PIPE	TH
	HSB HORIZ	HIGH STRENGTH BOLT	WWF w /	WELDED WIRE FABRIC WITH	CO
	HORIZ HW	HORIZONTAL HEAD WALL	W/ W/O	WITHOUT	TH
	HS	HIGH STRENGTH	11 / ∪	WITHOUT	WA
					Permit/Seal
			_		DRO
			CONFO	RMFD	
					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
		By Appd YYYY.MM.DD	The Contractor shall verify a	nd be responsible for all	
			dimensions. DO NOT scale t	•	

INSPECTION / OBSERVATION NOTES:

A. SPECIAL INSPECTIONS:

GENERAL: IN ADDITION TO THE INSPECTIONS REQUIRED BY 110 OF THE CURRENT CBC. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION ON THE FOLLOWING TYPES OF WORK. ALL INSPECTIONS SHALL BE PREFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE CURRENT CBC. REFER TO CHAPTER 17 FOR ADDITIONAL REQUIREMENTS OF THE SPECIAL INSPECTOR.

1. CONCRETE: DURING THE TAKING OF TEST SPECIMENS AND PLACING OF ALL REINFORCED CONCRETE.

2. REINFORCING STEEL:

a. DURING THE PLACING OF REINFORCING STEEL, FOR ALL STRUCTURAL CONCRETE

b. DURING THE PLACEMENT OF ALL CONCRETE INSERTS.

3. WELDING: DURING ALL STRUCTURAL WELDING INCLUDING WELDING OF REINFORCING STEEL. SUBMIT FIELD WELDERS CERTIFICATE TO THE DSA APPROVED WELDING INSPECTOR FOR APPROVAL PRIOR TO THE START OF WELDING.

4. HIGH STRENGTH BOLTING: IN ACCORDANCE WITH CBC REQUIREMENTS.

5. STRUCTURAL MASONRY: IN ACCORDANCE WITH CBC REQUIREMENTS.

☐ 6. PILING, DRILLED PIERS AND CAISSIONS: DURING DRIVING AND TESTING OF PILES AND CONSTRUCTION OF CAST-IN-PLACE DRILLED PILES AND CAISSIONS.

7. SHOTCRETE: DURING THE TAKING OF TEST SPECIMENS AND PLACING OF SHOTCRETE PER CBC REQUIREMENTS.

8. GLULAM FABRICATION INSPECTION PER 2337A.1.

9. A REPRESENTATIVE OF THE CIVIL ENGINEER OF RECORD SHALL BE PRESENT DURING THE GRADING, EXCAVATION AND FOUNDATION CONSTRUCTION.

10. ADHESIVE ANCHOR INSTALLATION: PERFORM SPECIAL INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CBC. THE SPECIAL INSPECTOR MUST RECORD PRODUCT DESCRIPTION (INCLUDING PRODUCT NAME), ADHESIVE EXPIRATION DATE. CONCRETE TYPE AND STRENGTH, ANCHOR DIAMETER AND STEEL GRADE, COMPLIANCE OF DRILL BIT WITH THE ICC-ES REPORT, HOLE DIAMETER AND LOCATION, CLEANLINESS OF HOLE AND ANCHOR, ADHESIVE APPLICATION, AND ANCHOR EMBEDMENT.

B. STRUCTURAL OBSERVATIONS:

THE STRUCTURAL ENGINEER SHALL MAKE VISITS TO THE SITE TO OBSERVE GENERAL COMPLIANCE WITH THE APPROVED STRUCTURAL PLANS, SPECIFICATIONS AND CHANGE ORDERS. THE ENGINEER SHALL SUBMIT A STATEMENT IN WRITING TO THE BUILDING OFFICIAL STATING THE SITE VISITS HAVE BEEN MADE AND THAT ANY DEFICIENCIES NOTED HAVE BEEN CORRECTED.

OBSERVE FOUNDATION EXCAVATIONS AND REINFORCEMENT PLACEMENT PRIOR TO THE PLACING OF CONCRETE. PROVIDE 48 HR. NOTICE.

2. OBSERVE EDGE NAILING ON PLYWOOD SHEAR WALLS AND ROOFS.

☐ 3. OBSERVE THE CONNECTION OF SEISMIC TIES, STRAPS AND CONNECTORS.

4. PERFORM ADDITIONAL OBSERVATIONS, IF REQUIRED IN THE OPINION OF THE STRUCTURAL ENGINEER.

GENERAL NOTES:

- TYPICAL STRUCTURAL DETAILS AND NOTES SHALL APPLY TO ALL "S" SHEETS UNLESS OTHERWISE SHOWN OR NOTED ON
- 2. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITION.
- CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS.
- 4. PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER ON ALL STRUCTURAL STEEL, METAL DECK, STRUCTURAL ALUMINUM, REINFORCING STEEL, CONST. JT. LAYOUT AND CONCRETE MIX DESIGN. SHOP DRAWINGS: CONTRACTOR AGREES THAT SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS AND THAT THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL HE INTENDS TO FURNISH AND INSTALL AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS HE INTENDS TO USE.
- SAFETY NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE A) "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT. THE ENGINEER AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S B) FAILURE TO COMPLY WITH THESE REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL C) FORMS AND SHORING REQUIRED.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
- 7. CONTRACTOR SHALL NOTIFY THE ENGINEER WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF STRUCTURES THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.
- 8. MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTRUAL DRAWINGS, BUT REQUIRED BY OTHER CONTRACT DRAWINGS SHALL BE PROVIDED. OPENINGS THROUGH NEW AND EXISTING WALLS AND SLABS FOR PIPES. DUCTS CONDUITS. ETC. ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR SHALL PROVIDE THESE OPENINGS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. REINFORCEMENT AROUND OPENINGS IN NEW WALLS AND SLABS SHALL BE AS SHOWN IN THE TYPICAL DETAILS UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL VERIFY MECHANICAL AND ELECTRICAL PLANS FOR THE LOCATION OF EQUIPMENT.

CONSTRUCTION LOADS:

STRUCTURES HAVE BEEN DESIGNED FOR OWNER'S OPERATIONAL LOADS ON THE FINISHED STRUCTURES. DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND BRACING THE STRUCTURES AND BALANCING WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. BACKFILL SHALL BE PLACED AROUND STRUCTURES SYMMETRICALLY AND UNIFORMLY SO THAT LOADS AGAINST STRUCTURES ARE INTRODUCED IN BALANCE. LIQUID-CONTAINING STRUCTURES SHALL BE TESTED FOR WATER-TIGHTNESS BEFORE BACKFILLING - SEE SPECS.

CONCRETE AND REINFORCING STEEL

. CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-14 AND ACI CODE OF STANDARD PRACTICE.

2. SEE SPECIFICATIONS FOR REQUIREMENTS.

3. CEMENT SHALL CONFORM TO ASTM C-150, TYPE II, MODIFIED/TYPE V. 4. CONCRETE AGGREGATES: NATURAL SAND AND ROCK AGGREGATES CONFORMING TO ASTM C-33.

5. REINFORCING SHALL CONFORM TO ASTM A706 GRADE 60 OR 70, EXCEPT #3 & #4 STIRRUPS AND TIES MAY BE GRADE40.

6. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4 USING PROPER LOW HYDROGEN ELECTRODES. TACK WELDING TO REBAR IS STRICTLY PROHIBITED. SEE "REBAR WELDING".

7. REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND INSTALLED ACCORDING TO "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION" BY CRSI.

8. WIRE FABRIC SHALL CONFORM TO ASTM A-185.

9. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF MAIN BARS AND DENOTE CLEAR COVERAGE. UNLESS OTHERWISE NOTED, CLEAR COVERAGE SHALL BE AS FOLLOWS:

FORMED CONCRETE EXPOSED TO WEATHER OR GROUND OR LIQUID

SLABS ON GROUND WITH ONE LAYER OF REINFORCEMENT POSITION IN CENTER OF SLAB

10. A) UNLESS OTHERWISE NOTED ALL BARS SHOWN WITH LAPS OR SPLICES SHALL HAVE CLASS 'B' LAP LENGTH. SEE TABLE

CLASS	'B' LAP	LENGTH
BAR SIZE	OTHER	TOP *
#3	1'-7"	2'-0"
#4	2'-1"	2'-8"
# 5	2'-7"	3'-4"
#6	3'-1"	4'-0"
#7	4'-6"	5'-11"
#8	5'-2"	6'-9"
#9	5'-10"	7'-7"
#10	6'-7"	8'-6"
#11	7'-3"	9'-6"

* TOP REINFORCING IS HORIZONTAL REINFORCEMENT THAT HAS MORE THAN 12" OF CONCRETE PLACED BELOW IT.

- B) DOWEL ALL VERTICAL REBARS IN WALLS AND COLUMNS FROM FOUNDATION WITH SAME SIZE AND SPACING AS WALL VERTICAL BAR U.N.O.
- C) SPLICES IN ADJACENT HORIZ. BARS SHALL BE STAGGERED NOT LESS THAN 5'-0" APART.

D) SPLICE CONTINUOUS BARS IN SOIL-BEARING GRADE BEAMS AS FOLLOWS: BOTTOM BARS AT MID-SPAN, TOP BARS AT CENTERLINE OF SUPPORT, UNLESS NOTED OTHERWISE.

E) SPLICE CONTINUOUS BARS IN BEAMS, SPANDRELS, WALL BEAMS ETC. AS FOLLOWS: BOTTOM BARS AT CENTERLINE OF SUPPORT, TOP BARS AT MIDSPAN, UNLESS NOTED OTHERWISE.

F) REINFORCING BARS SHALL BE RUN IN A MANNER THAT FORMS A CONTINUOUS SYSTEM OF BARS TYING ALL PARTS OF THE STRUCTURE TOGETHER. EXTEND ALL REINFORCING BARS AS FAR AS POSSIBLE IN EACH CONCRETE MEMBER AND TERMINATE BAR W/ 90° STD. HOOK TO 2" OF CONCRETE COVER OVER END OF HOOK. FACE OR BEND.

G) BEAM STIRRUPS AND COLUMN TIES SHALL HOOK 135 DEGREES AROUND A CORNER BAR UNLESS NOTED OTHERWISE.

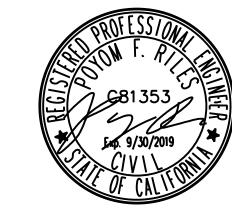
11. GENERAL:

- A) NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE SLABS, BEAMS, WALLS OR GRADE BEAMS UNLESS SPECIFICALLY DETAILED.
- B) REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ALL OPENINGS,
- FLANGES, MOULDS, GROOVES, CLIPS AND GROUNDS TO BE CAST IN CONCRETE. 12. CONSTRUCTION JOINTS SHALL BE MADE ROUGH AND ALL LAITANCE REMOVED FROM THE SURFACE. CONCRETE MAY BE ROUGHENED BY CHIPPING THE ENTIRE SURFACE, SANDBLASTING, OR HOSING THE SURFACE 4 TO 6 HOURS AFTER THE
- POUR WITH A FINE SPRAY. 13. REMOVE ALL DEBRIS FROM THE FORMS BEFORE PLACING ANY CONCRETE.
- 14. REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE SHALL BE SECURELY POSITIONED BEFORE PLACING CONCRETE. OBTAIN APPROVAL OF ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
- 15. MAXIMUM FREE FALL OF CONCRETE SHALL BE 4'-0". 16. CONCRETE FOR WALLS SHALL BE PLACED SO THAT NO PART OF THE LIFT IS MORE THAN 2 FT. HIGHER THAN ANY
- OTHER PART. 17. CONCRETE IN WALLS, PIERS, OR COLUMNS SHALL SET AT LEAST 2 HOURS BEFORE PLACING CONCRETE IN BEAMS,
- 18. REINFORCE ALL SLABS ON GRADE AS SHOWN ON DRAWINGS.
- 19. USE #2 SPREADERS APPROXIMATELY EVERY THIRD INTERSECTION EACH DIRECTION FOR ALL DOUBLE LAYER WALLS. PLACE SPREADERS IN VERTICAL LINES WITH FORM TIES.
- 20. NO WOOD SPREADERS ARE ALLOWED. NO WOOD STAKES ARE ALLOWED IN AREAS TO BE CONCRETED.
- 21. CONCRETE MIX DESIGN SHALL BE SUBMITTED FOR ENGINEER'S REVIEW PRIOR TO PLACING CONCRETE.
- 22. NOTIFY THE ENGINEER 48 HOURS PRIOR TO PLACING CONCRETE. 23. SPACING OF CONST. JOINTS IN WALLS AND SLABS IS 30 FT. MAXIMUM EA. WAY; LENGTH OF WALL POUR FROM CORNER IS 20 FT. MAXIMUM; MAXIMUM AREA OF ONE POUR IS 900 SF. U.N.O. SUBMIT SHOP DRAWINGS FOR
- 24. EXCEPT AS OTHERWISE REQUIRED, EXPOSED CONCRETE CORNERS AND EDGES SHALL HAVE 3/4" CHAMFERS. RE ENTRANT CORNERS SHALL NOT HAVE FILLETS.
- 25. POST INSTALLED ANCHORS AS APPROVED BY ICC-ES FOR THE USE IN CRACKED CONCRETE SHALL BE USED. THE DESIGN SHALL BE IN ACCORDANCE WITH CHAPTER-17 OF ACI 318-14. PROVIDE ICC-ES REPORT FOR ENGINEERS APPROVAL.

26. IF EXPANSION JOINTS ARE GOING TO BE USED, THEY WILL BE SHOWN ON CONSTRUCTION DRAWINGS.

By Appd YYYY.MM.DD

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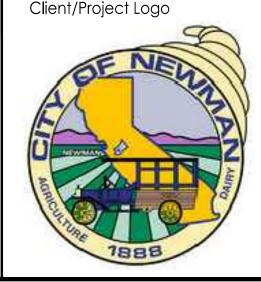
WARNING

IF THIS BAR DOES NOT MEASURE 1

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Client/Project

CITY OF NEWMAN

SPANDRELS, OR SLABS SUPPORTED THEREON.

WWTRF MCPIKE 1 RECLAMATION IMPROVEMENTS

NEWMAN, CALIFORNIA

RG KCC KCC 2019.08.02 File Name: X05593-S01-S02 Dwn. Dsgn. Chkd. YYYY.MM.DD

TYPICAL STRUCTURAL NOTES 1

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S01

- 2. WATER STOPS SHALL BE CAREFULLY POSITIONED IN PLACE AND SUPPORTED AS REQUIRED TO REMAIN IN PLACE DURING OPERATIONS.
- 3. WATERSTOPS MUST BE USED AT ALL CONSTRUCTION JOINTS IN LIQUID CONTAINING STRUCTURES.

REBAR WELDING:

ALL REBAR TO BE WELDED SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED LABORATORY APPROVED BY THE BUILDING OFFICIAL OF LOCAL JURISDICTION. CONTRACTOR MUST FURNISH TO THE LABORATORY MILL CERTIFICATES SHOWING CHEMICAL ANALYSIS. ALL PREHEATING AND WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.4 STANDARDS (LATEST EDITION).

FOUNDATIONS

- 1. THE FOOTINGS SHALL BEAR ON FIRM, DRY NATIVE MATERIAL OR ENGINEERED FILL WITH A MINIMUM PENETRATION OF 12 INCHES.
- 2. EXCAVATIONS SHALL BE CLEANED OF ALL DEBRIS. STANDING WATER SHALL BE REMOVED.
- 3. ALL FOOTINGS SHALL BE FORMED. FOUNDATIONS MAY BE PLACED IN NEAT EXCAVATIONS PROVIDED WRITTEN PERMISSION IS OBTAINED FROM THE ENGINEER AND FOOTINGS ARE INCREASED 2" IN WIDTH. SEE TYPICAL DETAIL.
- 4. NOTIFY THE ENGINEER 48 HOURS BEFORE PLACING FOUNDATIONS.

EXPANSION ANCHOR AND ADHESIVE ANCHOR NOTES:

- 1. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS GIVEN IN THE ICC-ES REPORT.
- 2. SPECIAL INSPECTION IS REQUIRED FOR ICBO ALLOWABLE TENSION VALUES LISTED IN THE INSPECTION NOTES. UNLESS NOTED OTHERWISE ANCHORS HAVE BEEN DESIGNED FOR SPECIAL INSPECTION.
- 3. DESIGN LOADS ON ANCHORS ARE NOT TO EXCEED 80% OF THE TENSION AND SHEAR VALUES AS RECOMMENDED BY THE MANUFACTURER.
- 4. TENSION TEST LOAD VALUES ARE BASED ON 80% OF TWICE THE TENSION VALUES LISTED.
- 5. ALLOWABLE LOADS MAY NOT BE INCREASED FOR DURATION OF LOADS SUCH AS WIND OR SEISMIC FORCES.
- 6. WHEN INSTALLING DRILLED IN ANCHORS IN EXISTING CONCRETE OR MASONRY, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS.
- 7. THE TESTING OF THE ANCHORS SHALL BE DONE BY THE TESTING LABORATORY AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE GOVERNING AGENCY AND ARCHITECT/STRUCTURAL ENGINEER. TESTING SHALL OCCUR 24 HOURS MINIMUM AFTER THE INSTALLATION OF THE ANCHORS.
- 8. ANCHORS INSTALLED IN METAL DECK WITH CONCRETE SHALL BE INSTALLED IN THE CENTER OF THE LOW FLUTE OF THE DECKING. THE DECKING SHALL HAVE A MINIMUM THICKNESS OF 20 GAUGE. THE MINIMUM DEPTH OF EMBEDMENT ABOVE THE TOP OF THE DECK SHALL BE 1-1/2". THE EFFECTIVE DEPTH OF EMBEDMENT IS CONSIDERED TO BE 1/3 OF THE METAL DECK HEIGHT PLUS THE DEPTH OF EMBEDMENT ABOVE THE TOP OF THE DECK.
- 9. ANCHORS SHALL NOT BE INSTALLED IN CONCRETE LESS THAN 21 DAYS OLD.

CODE:

- 1. 2016 CALIFORNIA BUILDING CODE (CBC).
- 2. CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES (ACI 350-06) AND COMMENTARY (ACI 350R-06).
- 3. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14).
- 4. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-10).

SEISMIC DESIGN REQUIREMENTS:

SINCE SOIL PARAMETERS ARE NOT KNOWN IN SUFFICIENT DETAIL TO DETERMINE THE SITE CLASS, THE SITE CLASS WAS ASSUMED TO BE "D" PER CODE RECOMMENDATIONS, AND THE FOLLOWING SEISMIC PARAMETERS WERE OBTAINED USING "SEAOC WEB TOOL"

SEISMIC COEFFICIENTS Ss = 1.329gSms = 1.329gS1 = 0.445gSm1 = 0.629gFa = 1.0SDS = 0.886gFv = 1.555SD1 = 0.462gSITE CLASS RISK CATEGORY SEISMIC DESIGN CATEGORY IMPORTANCE FACTOR I = 1.25PER ASCE 7-10 NON-BUILDING STRUCTURE CHAPTER 15 SECTION RESPONSE MODIFICATION FACTOR

15.4.1.1 & TABLES

15.4-1 & 15.4-2

SEE SPECIFICATION SECTION — 01610 FOR OTHER REQUIREMENTS.

WIND DESIGN REQUIREMENTS:

BASIC WIND SPEED, VULT 115 MPH EXPOSURE CATEGORY RISK CATEGORY

SEE SPECIFICATION SECTION - 01615 FOR OTHER REQUIREMENTS.

GEOTECHNICAL REPORT:

IMPORTANCE FACTOR

GEOTECHNICAL REPORT SPECIFIC TO THIS PROJECT WAS NOT MADE AVAILABLE AT THE TIME OF DESIGN STAGE. FOLLOWING SOIL PARAMETER IS USED ON PRESUMPTIVE BASIS.

- ALLOWABLE SOIL BEARING CAPACITY 1,500 PSF.

FLOOR LIVE LOAD:

SLAB ON GRADE= 250 PSF

By Appd YYYY.MM.DD Issued By Appd YYYY.MM.DD

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Client/Project

CITY OF NEWMAN

WWTRF MCPIKE 1 RECLAMATION IMPROVEMENTS

NEWMAN, CALIFORNIA

 RG
 KCC
 KCC
 2019.08.02

 Dwn.
 Dsgn.
 Chkd.
 YYYY.MM.DD
 File Name: X05593-S01-S02

Title

TYPICAL STRUCTURAL NOTES 2

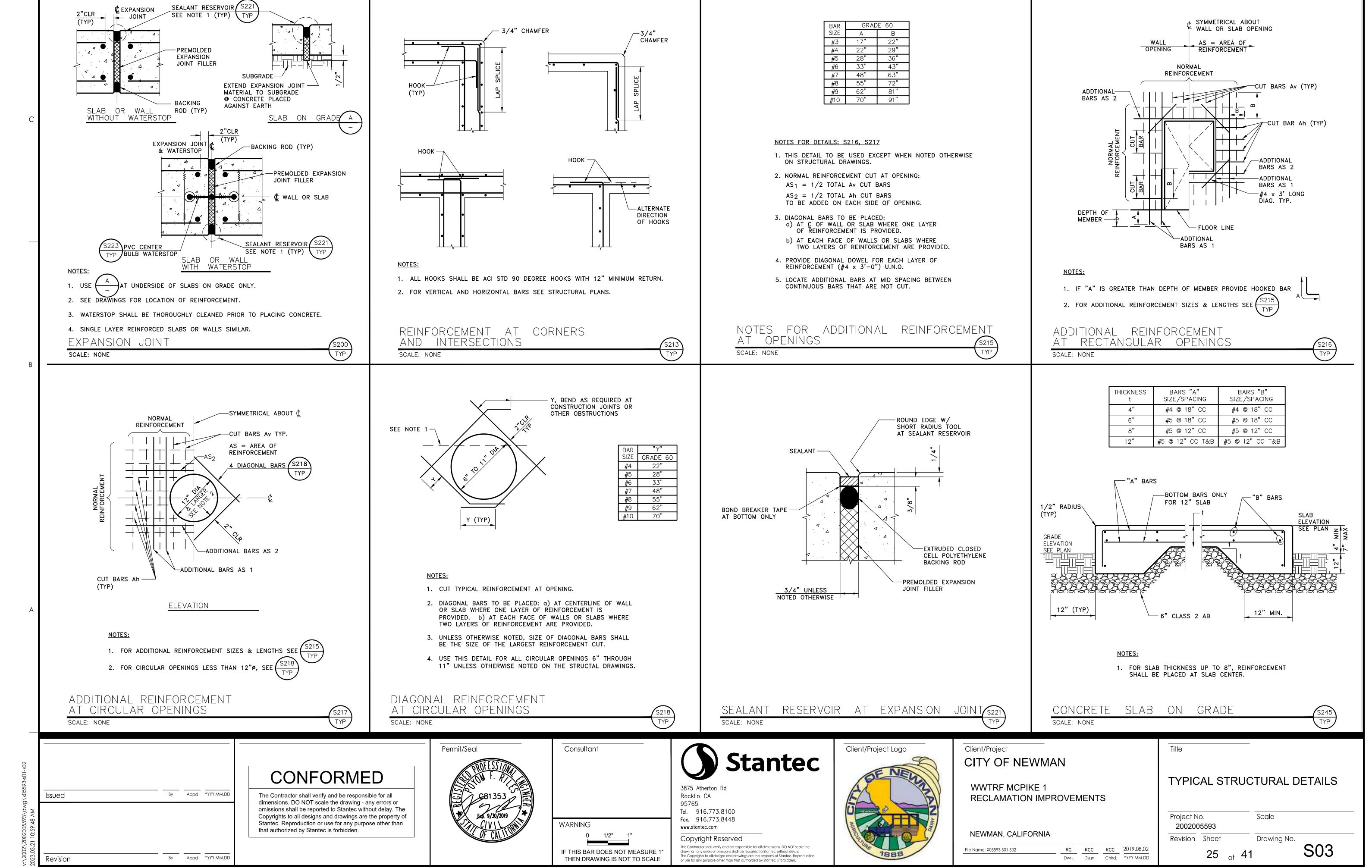
Project No. 2002005593

Revision Sheet Drawing No.

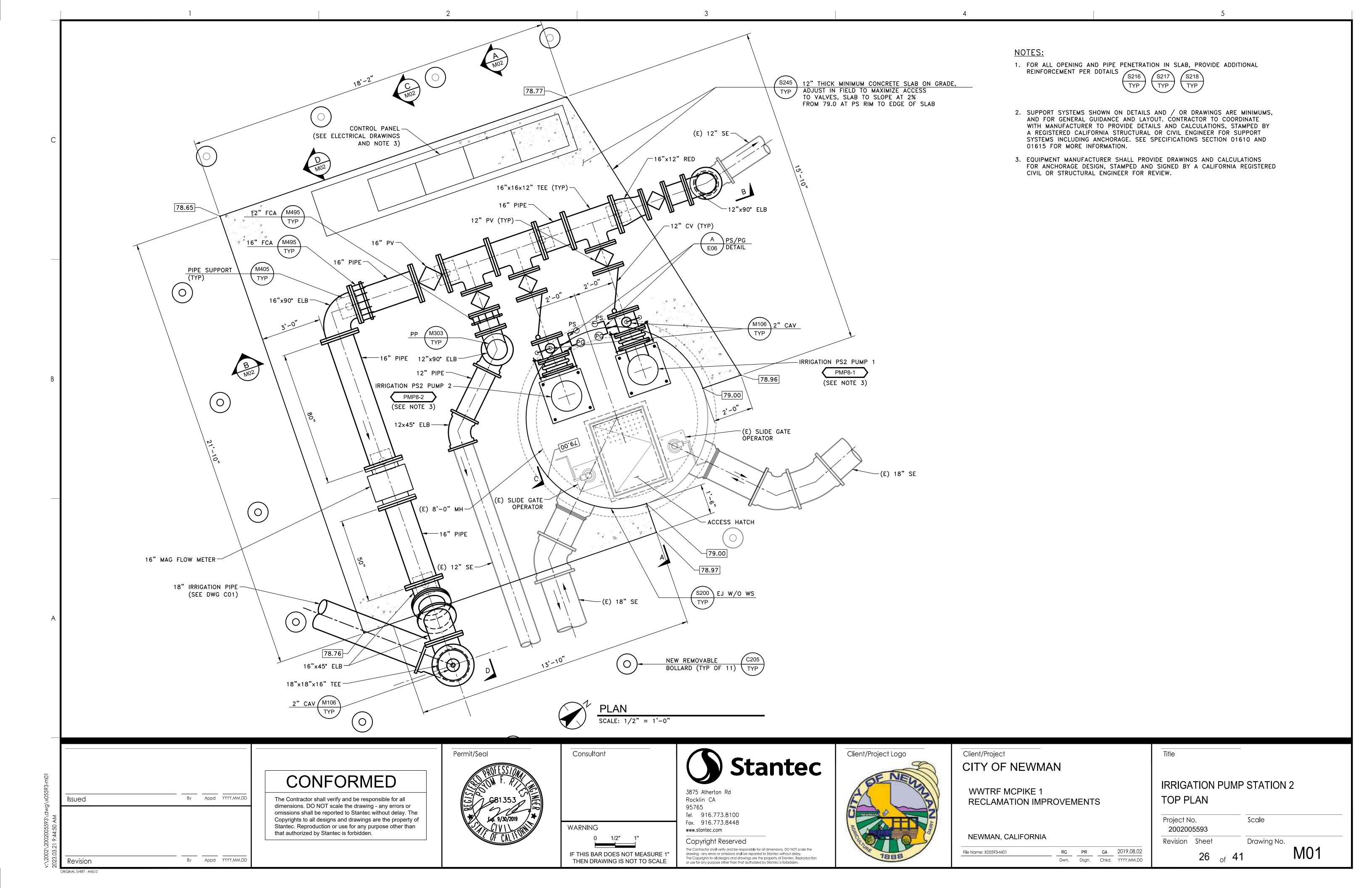
24 of 41

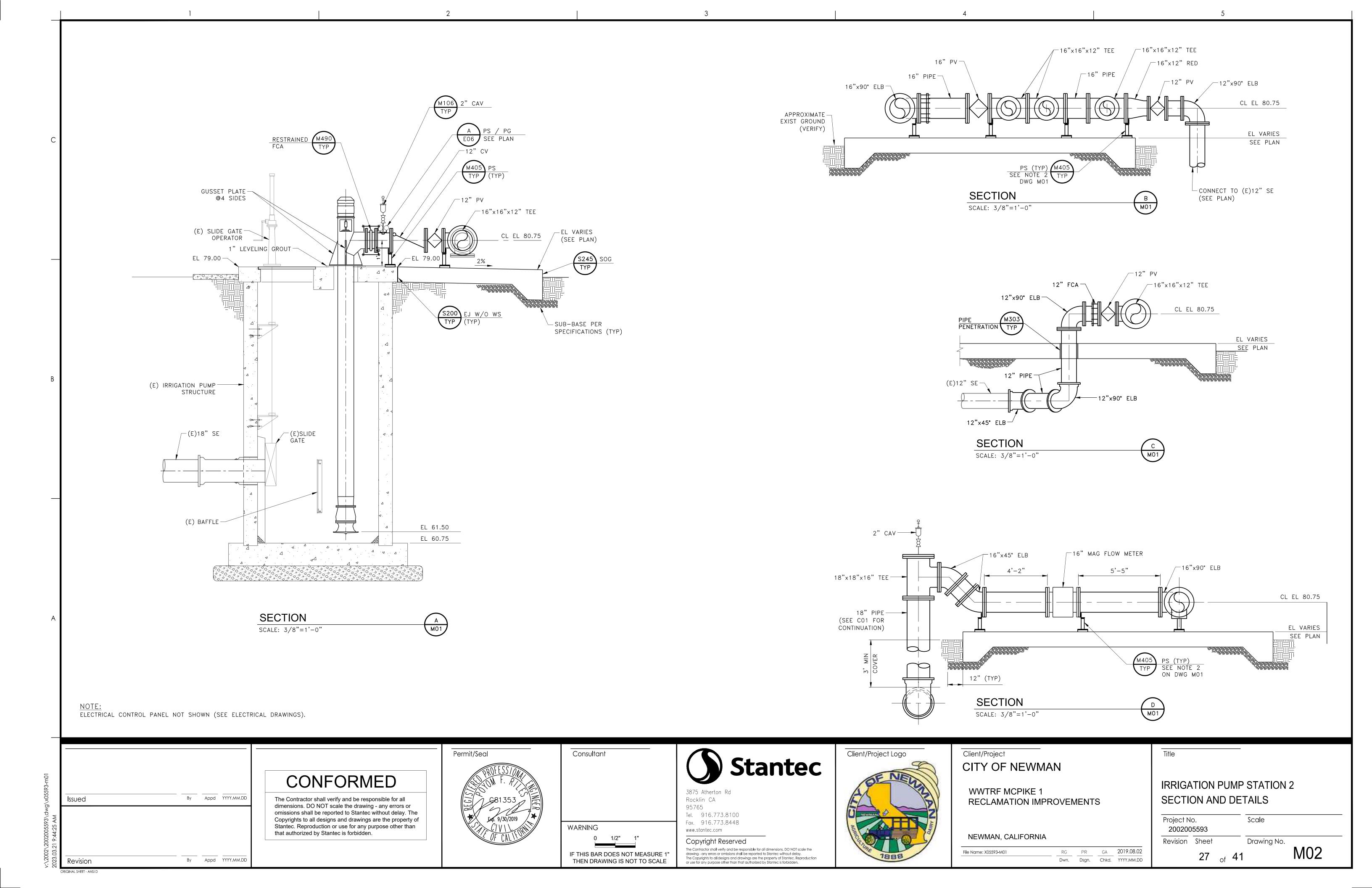
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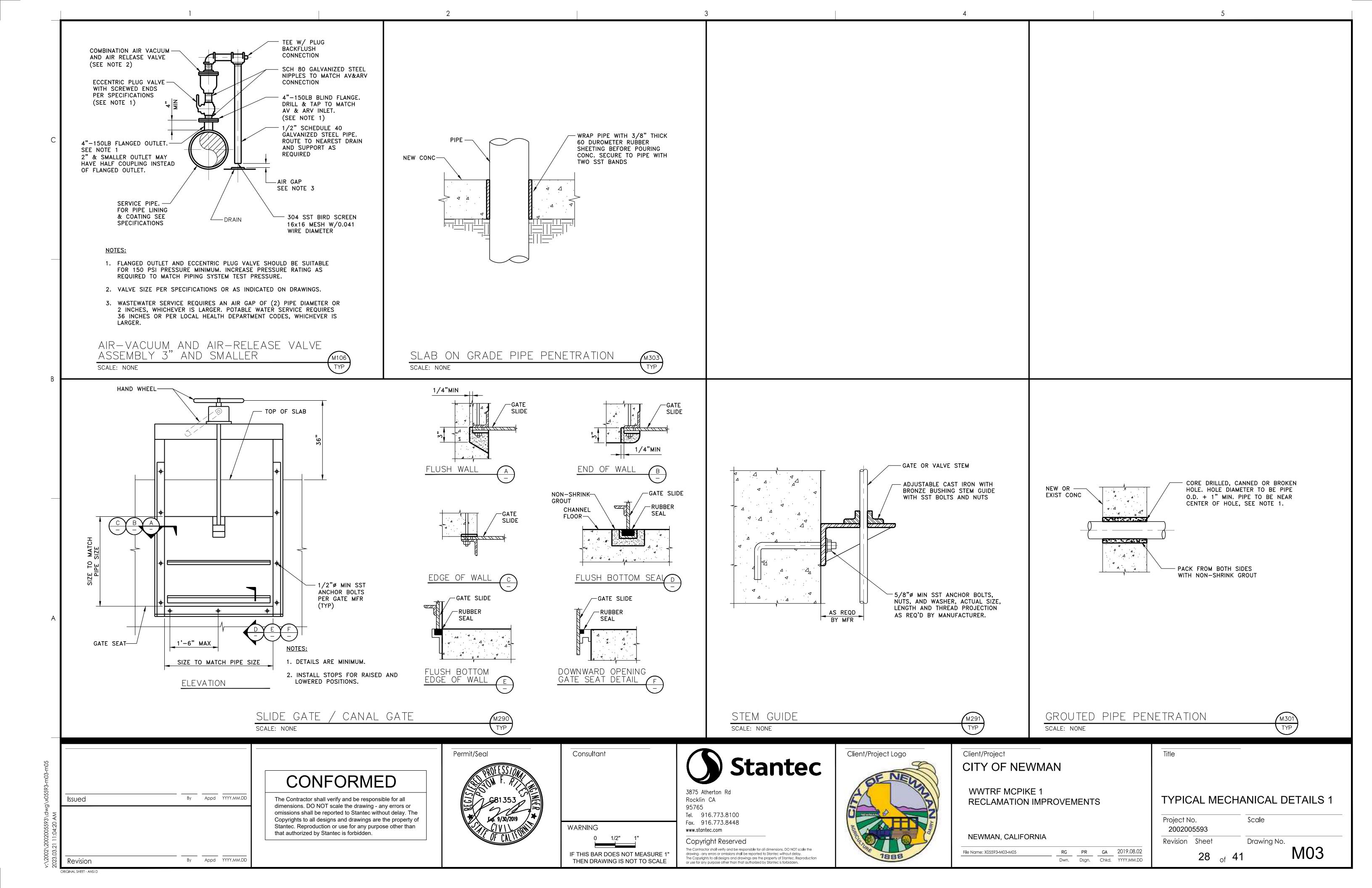
S02

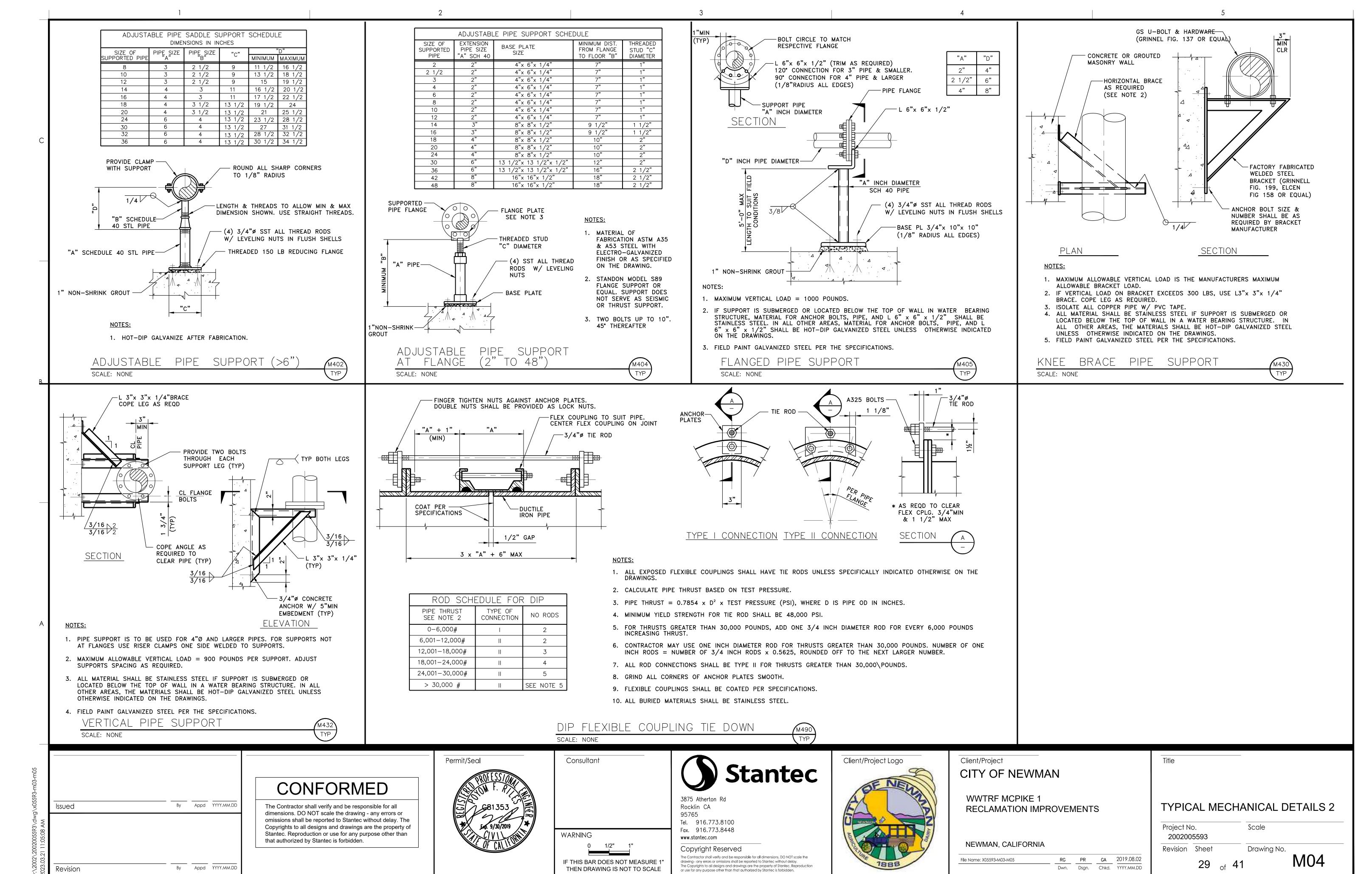


ORIGINAL SHEET - AN

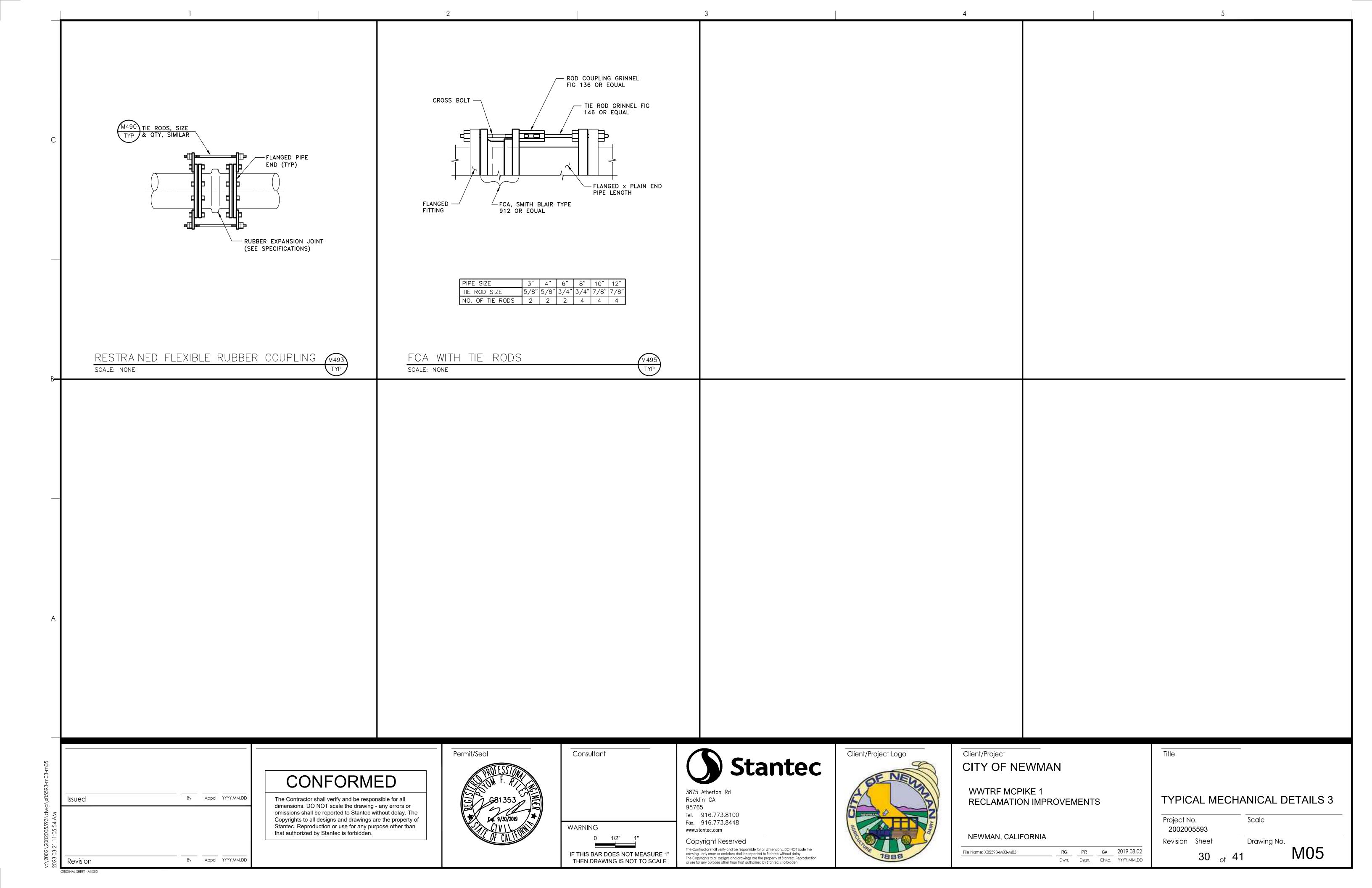








ORIGINAL SHEET - ANSI D



ELECTRICAL SYMBOLS - PLANS CLG. WALL FLOOR SYMBOLS DESCRIPTION $O \mid \Theta \mid$ INCANDESCENT OR HID FIXTURE | FLUORESCENT FIXTURE - CIRCLE INDICATES J-BOX ABOVE AREA LIGHT AND POLE LIGHTING FIXTURE WITH EMERGENCY BATTERY BACKUP EXIT FIXTURE, ARROWS AS INDICATED, SHADE AREA INDICATES EXIT FACE EMERGENCY LIGHTING UNIT (BATTERY POWERED) FIXTURE CONNECTED TO CKT #1, SWITCH "b" FIXTURE TYPE "A", 2-40 WATT LAMPS TYPICAL FOR ROOM NOTED, UON 2/40/ ⊗clg = DUPLEX RECEPTACLE ₩G DUPLEX RECEPTACLE GFCI TYPE ⊕clg | ⊕ | DOUBLE DUPLEX RECEPTACLE \otimes RECEPTACLE, TYPE AS NOTED ON PLANS SINGLE POLE SWITCH DOUBLE POLE SWITCH THREE WAY SWITCH ** FOUR WAY SWITCH "b" DENOTES OUTLET CONTROLLED KEY OPERATED SWITCH ** MANUAL MOTOR STARTER OCCUPANCY SENSOR ▼ | TELEPHONE OUTLET DATA OUTLET TELEPHONE/DATA OUTLET THERMOSTAT OUTLET + 66" UON **-**① 0 -0 JUNCTION BOX * FOR WALL MTD. INDICATES HEIGHT FROM FINISHED +18" FLOOR GRADE TO CENTERLINE OF DEVICE + 18" UON + 48" UON CONTROLLER/STARTER FURNISHED WITH EQUIPMENT DETAIL CALL-OUT: X, DETAIL IDENTIFIER; Y, SHEET WHERE DETAIL IS DRAWN

	POV	WER WIRE C	OLOR CODE		
SYSTEM	PHASE A	PHASE B	PHASE C	NEUTRAL	GROUND
208Y/120V	BLACK	RED	BLUE	WHITE	GREEN
480Y/277V	BROWN	ORANGE	YELLOW	GRAY	GREEN

<u>GENERAL NOTES:</u>

- 1. FIELD VERIFY EXACT LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK.
- 2. REFERENCE MECHANICAL AND CIVIL DRAWINGS FOR NEW AND EXISTING PIPING.
- 3. BELOW GRADE CONDUITS SHALL BE INSTALLED A MINIMUM DEPTH OF 18" BELOW THE FINISHED FLOOR/GRADE OR 18" BELOW ANY PIPE CROSSING THE CONDUIT PATH WHICHEVER IS DEEPER DOWN TO 5 FEET.
- 4. PROVIDE ELECTRICAL SYSTEM TESTING PER CONTRACT SPECIFICATION SECTION 16030 PRIOR TO ENERGIZING ANY ELECTRICAL EQUIPMENT OR SERVICES.

ELECTRICAL S	SYMBOLS - PLANS (CONTINUED)
	HAND HOLE, 11"Hx17"Lx12"D, UON
□ РВ	PULLBOX, 36"HX60"LX36"D, UON
	PAD MOUNTED TRANSFORMER/ DRY TYPE TRANSFORMER
40	NON-FUSIBLE DISCONNECT SWITCH, SIZE AS NOTED ON ONE LINE DIAGRAM
4	FUSIBLE DISCONNECT SWITCH, 3P UON SIZE AS NOTED ON ONE LINE DIAGRAM **
40	DISCONNECT WITH EMERGENCY STOP
0	FIELD CONTROL STATION SEE SCHEMATIC DIAGRAM **
	FEEDER DESIGNATION SEE SCHEDULE FOR SIZE
	EQUIPMENT TAG
	CONDUIT CONCEALED IN WALLS OR CEILING 3/4"C-2#12, 1#12G, UON
	CONDUIT UNDER GROUND 3/4"C-2#12, 1#12G, UON
	CONDUIT EXPOSED 3/4"C-2#12, 1#12G, UON
	QUANTITY #12 WIRE CURVE LINE INDICATES GROUND WIRE
——————————————————————————————————————	WIRE SIZE OTHER THAN #12 CURVE LINE INDICATES GROUND WIRE
	CONDUIT STUBBED UP INTO EQUIPMENT AND PLUGGED
	NUMBER OF 18 AWG TWISTED SHIELDED PAIR CABLE
	NUMBER OF 18 AWG TWISTED SHIELDED TRIAD CABLE
— G— ←	CONNECTION TO GROUND BUS.
— — G— —	GROUNDING CONDUCTOR 30" BELOW GRADE, #4/0 UON
	EXOTHERMIC WELD CONNECTION
	DUCT BANK
—E—E—E—	EXISTING UNDERGROUND ELECTRICAL
A-1,3	HOMERUN TO PANEL A, CIRCUIT 1 AND 3
	CONDUIT BENDS TOWARD OBSERVER
	CONDUIT BENDS AWAY FROM OBSERVER
	CONDUIT STUB-OUT AND CAPPED
	FLEXIBLE CONDUIT CONNECTION
0	MOTOR CONNECTION
	MOTOR CONNECTION. DISCONNECT FURNISHED WITH MOTOR
SV	SOLENOID VALVE
	DISCONNECTS OR COMBINATION STARTERS SERVING EQUIPMENT SHOWN. PROVIDE CONNECTING FEEDERS BETWEEN DEVICES, SIZE TO MATCH SERVING FEEDER.
	POWER DISTRIBUTION SWITCHBOARD
=	SURFACE MOUNTED PANELBOARD
_	FLUSH MOUNTED PANELBOARD
\otimes	SHEET NOTE, SEE NOTE INDICATED
	DEVICE CONNECTION POINT
•	INTERCEPTION POINT FROM EXISTING TO NEW

(DM)	DIGITAL MULTI-FUNCTION METER
$+$ 3	CURRENT TRANSFORMER, QUANTITY INDICATED
→ { ₃	POTENTIAL TRANSFORMER, QUANTITY INDICATED
<u></u>	POWER TRANSFORMER
	FEEDER DESIGNATION SEE SCHEDULE OR ONE LINE DIAGRAM FOR SIZE
 <u>30A</u> MCP	CIRCUIT BREAKER, 3 POLE UNLESS NOTED MCP INDICATES MOTOR CIRCUIT PROTECTOR
T _{RV}	MAGNETIC MOTOR STARTER, NEMA SIZE INDICATED FULL-VOLTAGE NON-REVERSING UNLESS NOTED RV=REDUCED VOLTAGE STARTING 2S, 2W = 2 SPEED, 2 WINDING
	FUSE
	DISCONNECT SWITCH, NON-FUSIBLE, SEE PLANS FOR RATING
F	DISCONNECT SWITCH, FUSIBLE, SEE PLANS FOR RATING
15/	MOTOR, 10 HORSEPOWER
G	GENERATOR
⊸	SURGE ARRESTER
п —	GROUND
Δ	DELTA CONNECTION
Y A	WYE CONNECTION
PFR	POWER FAILURE RELAY
VFD	VARIABLE FREQUENCY DRIVE
RVSS	REDUCED-VOLTAGE SOLID STATE STARTER
	CONTROLLER/STARTER FURNISHED WITH EQUIPMENT
GFP	GROUND FAULT PROTECTION
_	INCOMING ELECTRIC SERVICE

ORMALLY OPEN	NORMALLY CLOSED	DEVICE			
	1/	CONTACT			
\sim	~T°	TIMED CONTACT CONTACT ACTION RETARDED ON ENERGIZATION			
~ ~	~	TIMED CONTACT CONTACT ACTION RETARDED ON DE-ENERGIZATION			
0 0	ماه	PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT			
	ماء	PUSH BUTTON SINGLE CIRCUIT LOCK-OUT			
\sim	070	LIMIT SWITCH			
%	0-50	LIQUID LEVEL SWITCH			
~°	0 50	PRESSURE OR VACUUM SWITCH			
~	o_to	FLOW SWITCH			
	0-50	TEMPERATURE SWITCH			
<u> </u>	7_0	SELECTOR SWITCH			
	\overline{x}	MANUAL MOTOR STARTER			
\	D/I	DOOR INTERLOCK SWITCH			
	Ł ^{OL}	MOTOR OVERLOAD RELAY CONTACT			
	<u>'</u>	MOTOR OVERLOAD HEATER			
),	Ŋ	PILOT LIGHT R=RED, W=WHITE, G=GREEN, A=AMBER, C=CLEAR			
0	R	PILOT LIGHT-PUSH TO TEST			
(F	3)	RELAY			
Ţ	D	TIME DELAY RELAY			
(M	STARTER COIL			
(5)	SOLENOID OPERATED VALVE			
		MOTOR			
		BELL OR BUZZER			
E	ТМ	ELAPSED TIME METER			
<u> </u>		FUSE			
	<u>უ</u>	CONTROL POWER TRANSFORMER			
1]	<u> </u>	GROUND			
		WIRING IN MOTOR STARTER OR CONTROL PANEL			
		FIELD WIRING			
\boxtimes		TERMINAL BLOCK IN FCS			
\otimes		TERMINAL BLOCK IN MOTOR STARTER OR PANEL			
		TERMINAL BLOCK IN PLC			
PFR		POWER FAILURE			
₽ ∏₽		SPACE HEATER			
- W-		RESISTOR			
		CIRCUIT BREAKER			
(P	R)	PLC OUTPUT ISOLATION RELAY			

	ELECTRICAL ADDITEVIATIONS
Α	AMPERES
AC	ALTERNATING CURRENT
AICS	AMPERES INTERRUPTING CAPACITY, SYMMETRICAL
AIP	ABANDON IN PLACE
AT&T	ATLANTIC TELEPHONE AND TELEGRAPH
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
/C	MULTI-CONDUCTOR CABLE
C	CONDUIT, CONDUCTOR
CB	CIRCUIT BREAKER
CL	CONTINUOUS LOAD
CKT	CIRCUIT
CNTL	CONTROL
СО	CONDUIT ONLY
СРТ	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DTB	DATA TERMINAL BOARD
DTL	DETAIL
DWG	DRAWING
E	EXISTING
ELEV	ELEVATION, ELEVATOR
EOL	ELECTRONIC OVERLOAD
FAP	FIRE ALARM PANEL
FCS	
	FIELD CONTROL STATION
FLUOR	FLUORESCENT
FO	FIBER OPTIC
G, GND	GROUND
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER
GFP	GROUND-FAULT PROTECTION
HH	HANDHOLE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HZ	HERTZ
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS AND GROUND FAULT
LTG	LIGHTING
MA	MILLIAMPERE
MAX	MAXIMUM
мсс	MOTOR CONTROL CENTER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MM	MULTI MODE
мм MTD	
	MOUNTED
MSC	MANUFACTURER SUPPLIED CABLE
N	NEUTRAL
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE
P	POLE
PB DC	PUSH BUTTON, PULL BOX
PC	PHOTO CELL
PFM	POWER FAIL MONITOR
PG&E	PACIFIC GAS & ELECTRIC
PH, Ø	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PS	PRESSURE SWITCH
PSW	
	PAD MOUNTED SWITCH
PT 	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RECPT	RECEPTACLE
REF	REFERENCE
REQ'D	REQUIRED
RR	REMOVE AND REINSTALL
RS	REMOVE AND SAVE
- · -	
RW	REMOVE AND WASTE
SW	SWITCH
TB	TERMINAL BOARD
TEL	TELEPHONE
TM	THERMAL MAGNETIC
	TWISTED SHIELDED PAIR
ISP	
-	TELEPHONE TERMINAL BOARD
TTB	TYPICAL
TTB TYP	
TTB TYP	UNDERGROUND
TTB TYP UG UON	UNDERGROUND UNLESS OTHERWISE NOTED
TTB TYP UG UON	UNDERGROUND
TTB TYP UG UON VFD	UNDERGROUND UNLESS OTHERWISE NOTED VARIABLE FREQUENCY DRIVE WATTS, WIRE
TTB TYP UG UON VFD W WP	UNDERGROUND UNLESS OTHERWISE NOTED VARIABLE FREQUENCY DRIVE WATTS, WIRE WEATHERPROOF
TSP TTB TYP UG UON VFD W WP	UNDERGROUND UNLESS OTHERWISE NOTED VARIABLE FREQUENCY DRIVE WATTS, WIRE

ELECTRICAL ABBREVIATIONS

By Appd YYYY.MM.DD Issued

By Appd YYYY.MM.DD

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Client/Project

CITY OF NEWMAN

WWTRF MCPIKE 1 RECLAMATION IMPROVEMENTS

NEWMAN, CALIFORNIA

File Name: 05593-E01 Dwn. Dsgn. Chkd. YYYY.MM.DD

ELECTRICAL SYMBOLS AND **ABBREVIATIONS**

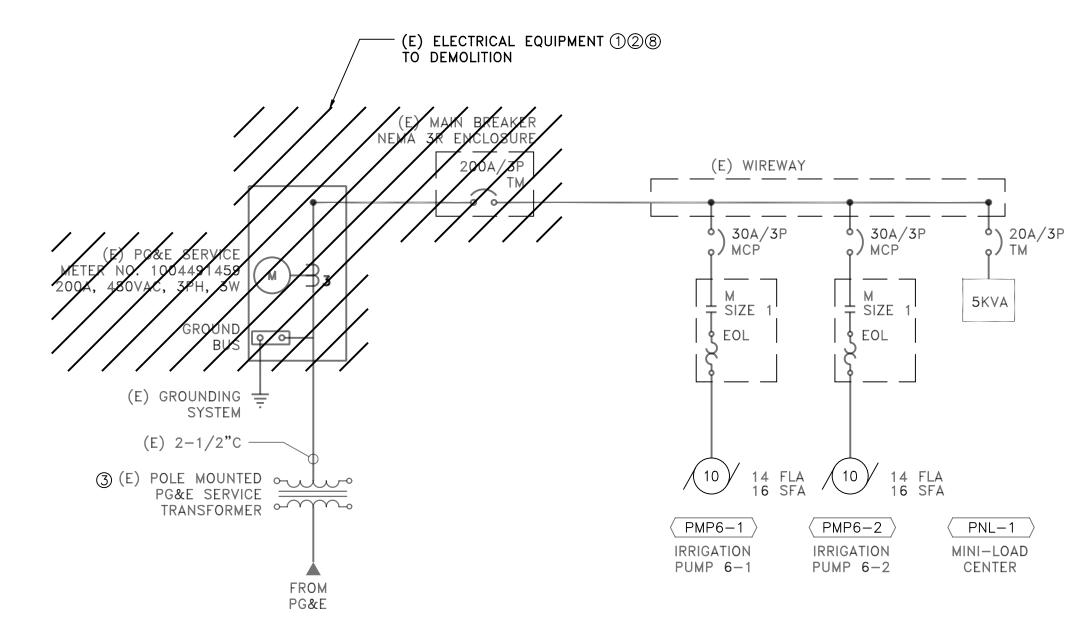
Project No. 2002005593

2019.08.02

Scale NOT TO SCALE

Revision Sheet Drawing No. 31 of 41

E01



SINGLE LINE DIAGRAM - DEMOLITION PLAN

SCALE: NONE

DEMO SHEET NOTES:

- 1 REMOVED AND WASTE (E) PG&E SERVICE METER PANEL AND MAIN DISCONNECT WITH (E) AS INDICATED ON SINGLE LINE DIAGRAM B/E02.
- 2 CONTRACTOR SHALL TURN OVER REMOVED EQUIPMENT TO OPERATIONS.
- (3) CONTRACTOR SHALL COORDINATE POWER DISCONNECTION REQUIREMENTS TO REMOVE AND REPLACE (E) SERVICE METER PANEL.
- 4 REMOVE (E) CONDUITS AND CIRCUITRY (WIRING) BETWEEN PG&E SERVICE FEEDER AND (E) WIREWAY.

			LOAD CALCULATION					
	480 vac, 3 phase service				3 WIRE			
	со	NNECTED	UTILITY					
EQUIPMENT NUMBER					QTY	LOAD (KVA)	RUN QTY	RUN (KVA)
PMP6-1,PMP6-2	10	FVNR	IRRIGATION PUMP STATION 1 PUMPS	14.0	2	23.3	2	23.3
PNL-1	5KW	СВ	MINI-LOAD CENTER	6.0	1	5.0	1	5.0
IRRIGATION PS PNL-8-1	8-1 CB (N) IRR PS 2 PNL				1	54.9	1	54.9
SUBTOTAL			83.2		83.			
LARGEST MOTOR @ 25%	10	HP			13.			
TOTAL			3 PHASE CURRENT	117	 AMPS			96.
			3 PHASE CORRENT			M LOAD CURI	RENT	
			CALCULATED SERVICE SIZE	117	AMPS			
			MAIN DDEAKED SIZE	200	VIVIDO			

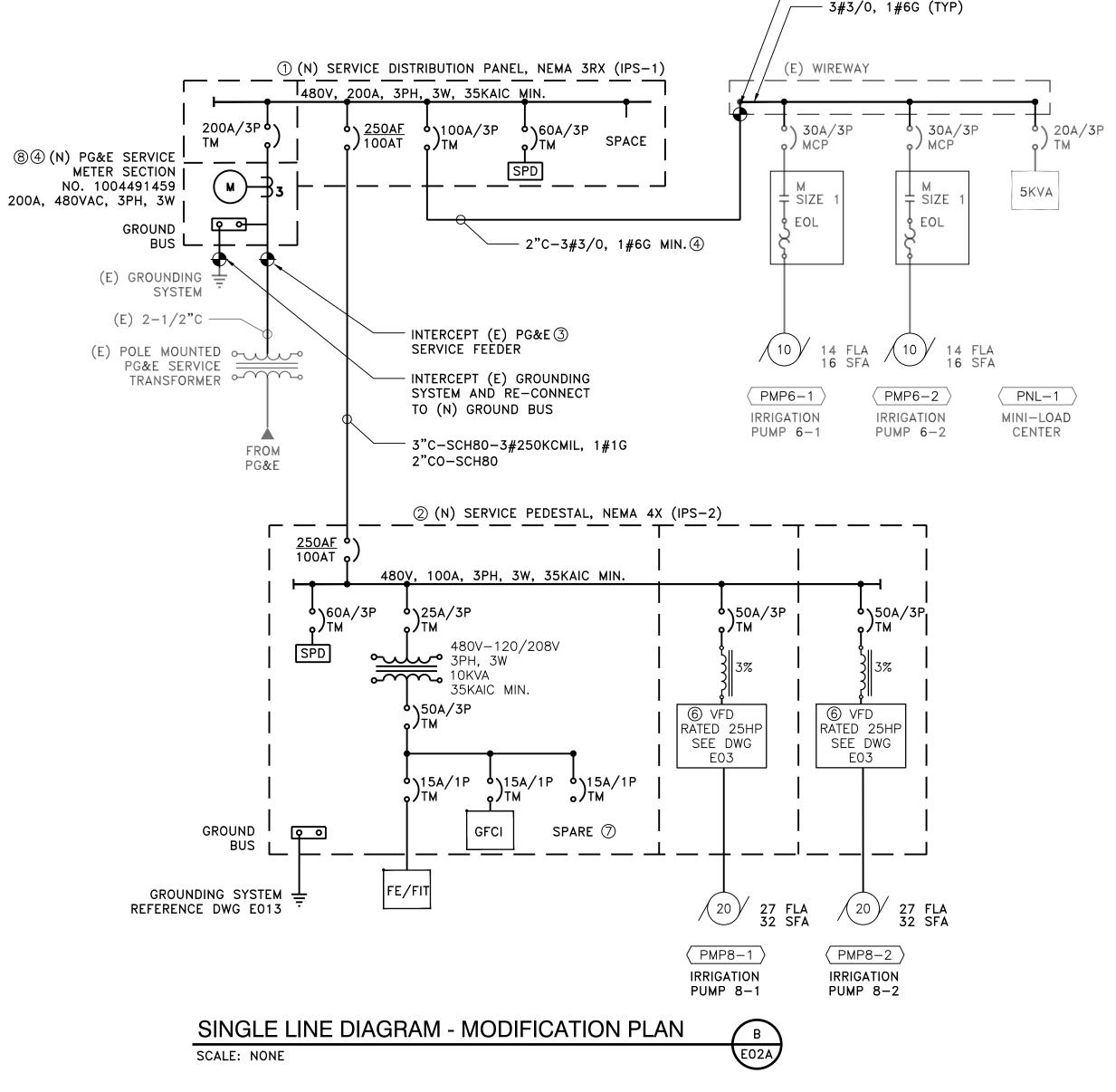
E02A

IVIAIN BREAKER SIZE

% MAIN BREAKER LOAD

200 AIVIPS

			LOAD CALCULATION					
	480 VAC, 3 PHASE SERVICE 3 WIRE				3 WIRE			
	FED FROM: (N) SERVICE PANEL					CONNECTED		
EQUIPMENT NUMBER			LOAD (AMPS)	QTY (KVA)		RUN QTY	RUN (KVA)	
PMP8-1,PMP8-2	20	VFD	IRRIGATION PUMP STATION 2 PUMPS	27.0	2	44.9	2	44.9
PNL-8	10KVA	СВ	MINI-LOAD CENTER	12.0	1	10.0	1	10.0
SUBTOTAL						54.9		54.
LARGEST MOTOR @ 25% 20 HP								5.6
TOTAL 3 PHASE CURRENT 73 AMPS 100% MAXIMUM LOAD CURRENT							RENT	60.9
			CALCULATED SERVICE SIZE MAIN BREAKER SIZE MAIN BREAKER LOAD	100	AMPS AMPS			



MODIFICATION SHEET NOTES:

- 1 PROVIDE (N) SERVICE METER PANEL WITH INTEGRATED METER SECTION, METER MAIN, AND ELECTRICAL DISTRIBUTION SECTION. ALL CIRCUIT BREAKERS SHALL HAVE LOCKABLE PROVISIONS. PANEL SHALL HAVE INTEGRATED TYPE 2 SPD WITH RATING AS NOTED IN ELECTRICAL SPECIFICATION 16051. THE (N) METER SECTION SHALL BE "EUSERC" APPROVED PER PG&E GREENBOOK REQUIREMENT.
- ② PROVIDE (N) POWER DISTRIBUTION PANEL WITH INTEGRATED TYPE 2 SPD WITH RATING AS NOTED IN ELECTRICAL SPECIFICATION 16051.
- ③ INTERCEPT (E) PG&E SERVICE FEEDER AND RECONNECT TO (N) SERVICE PANEL. CONTRACTOR SHALL COORDINATE WITH PG&E TO RE-SERVE PANEL AND INSTALLATION OF (N) SERVICE PANEL.
- 4 CONTRACTOR SHALL COORDINATE WITH PG&E FOR SERVICE SHUTDOWN REQUIREMENTS.

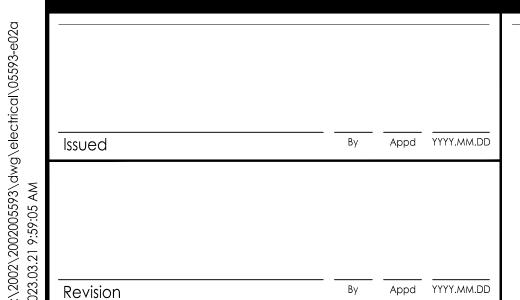
- ⑤ PROVIDE (N) 2" PVC-GRS CONDUIT BETWEEN (N) DISTRIBUTION SECTION AND (E) WIREWAY. PROVIDE (N) CONDUCTORS AND RE-SERVE (E) EQUIPMENT.
- 6 PROVIDE COMBINATION VFD WITH LOCKABLE DISCONNECTS, LINE FILTERS, AND CONTROL REQUIREMENTS PER E03.

INTERCEPT (E) WIREWAY

EQUIPMENT

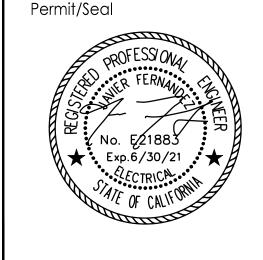
TO RE-SERVE (E) ELECTRICAL

- 7 PROVIDE (3) SPARE 15A/1P CIRCUIT BREAKERS.
- 8 CONTRACTOR SHALL BE RESPONSIBLE FOR PG&E SERVICE APPLICATION AND COORDINATION REQUIRED FOR SERVICE UPGRADE. REFERENCE SPEC SECTION 16010 FOR ADDITIONAL REQUIREMENTS.



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Client/Project CITY OF NEWMAN

WWTRF MCPIKE 1 RECLAMATION IMPROVEMENTS

NEWMAN, CALIFORNIA File Name: 05593-E02A 2019.08.02 Dwn. Dsgn. Chkd. YYYY.MM.DD

ELECTRICAL SINGLE LINE DEMO/MODIFICATIONS AND LOAD CALCULATIONS

Scale Project No. 2002005593 NOT TO SCALE Revision Sheet Drawing No. E02A

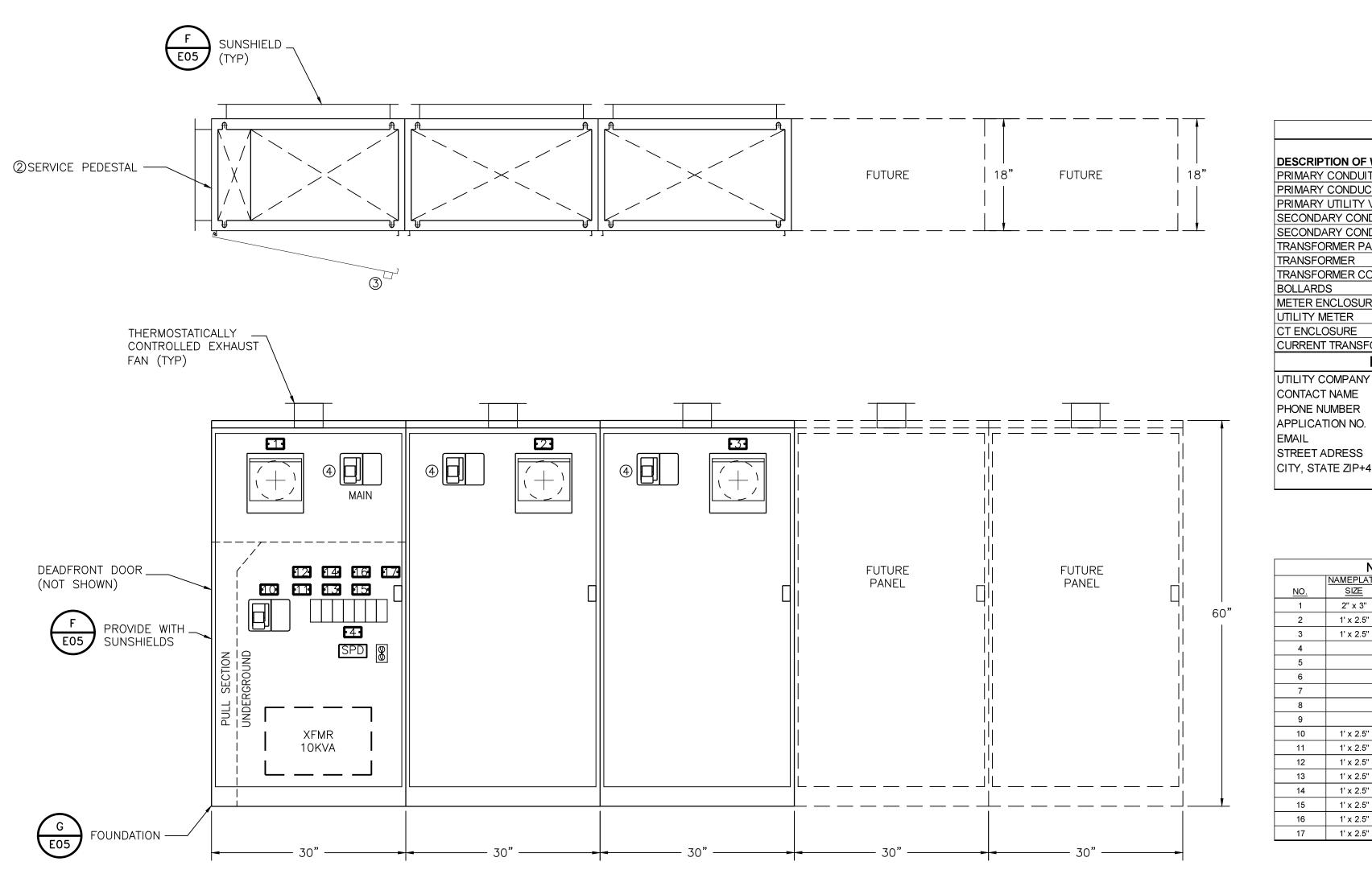
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GENERAL ENCLOSURE NOTES

- 1. EXTERIOR 12 GAUGE HOT DIPPED STAINLESS STEEL, INTERIOR DEAD FRONT PANEL AND BACK PAN SHALL BE 14 GAUGE COLD ROLLED STEEL ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
- 2. CONSTRUCTION IS NEMA 4X, RAINTIGHT AND DUSTTIGHT, RATED FOR OUTDOOR USE.
- 3. ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL.
- 4. NUTS, BOLTS AND SCREWS SHALL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
- 5. DOOR SHALL HAVE THREE POINT LATCHING MECHANISM WITH PADLOCKABLE HASP.
- 6. PROVIDE PHENOLIC NAMEPLATES TO IDENTIFY ALL DEVICES AND OPERATOR CONTROLS.
- 7. CONTROL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
- 8. A LAMINATED PLASTIC COVERED WIRING DIAGRAM WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
- 9. ENCLOSURE WILL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
- 10. ENCLOSURE WILL BE U.L. LISTED AS INDUSTRIAL CONTROL PANELS U.L. 508 FILE NO. E62062.
- 11. ENCLOSURE SHALL BE OF TWO PIECE CONSTRUCTION, ONE METER SECTION AND ONE SERVICE SECTION.
- 12. EXTERIOR COLOR: WHITE. INTERIOR COLOR: WHITE.

SHEET NOTES:

- 1 PROVIDE SUNSHIELDS PER DETAIL TO TOP, SIDE AND REAR PANEL.
- ② PROVIDE NEMA 4X MINIMUM RATED PANEL.
- 3 PROVIDE HINGED LOCKABLE FRONT PANEL DOOR TO PREVENT UNAUTHORIZED PERSONNEL ACCESS.
- 4 PROVIDE CIRCUIT BREAKERS WITH PERMANENT LOCKABLE PROVISIONS.



STREET ADRESS CITY, STATE ZIP+4							
	NAMPLATE SCHEDULE						
NO.	NAMEPLATE SIZE	<u>LETTER</u> <u>SIZE</u>	LABEL				
1	2" x 3"	1/2"	IRRIGATION PUMP STATION				
2	1' x 2.5"	1/4"	IPS2 PUMP 1				
3	1' x 2.5"	1/4"	IPS2 PUMP 2				
4							
5							
6							
7							
8							
9							
10	1' x 2.5"	1/4"	XFMR PRIMARY DSC				
11	1' x 2.5"	1/4"	SPD				
12	1' x 2.5"	1/4"	FE/FIT8-1				

1' x 2.5" | 1/4" | GFCI RECEPTACLE 1/4" SPARE

1/4" SPARE

1' x 2.5"

16 1' x 2.5" 1/4" SPARE 17 1' x 2.5" 1/4" SPARE

1' x 2.5"

UTILITY DIVISION OF WORK

POWER UTILITY INFORMATION

CONTRACTOR UTILITY COMPANY

DESCRIPTION OF WORK

SECONDARY CONDUITS

TRANSFORMER PAD

TRANSFORMER

BOLLARDS

UTILITY METER CT ENCLOSURE

PHONE NUMBER

APPLICATION NO.

SECONDARY CONDUCTORS

TRANSFORMER CONNECTIONS

METER ENCLOSURE AND BASE

CURRENT TRANSFORMERS (CT)

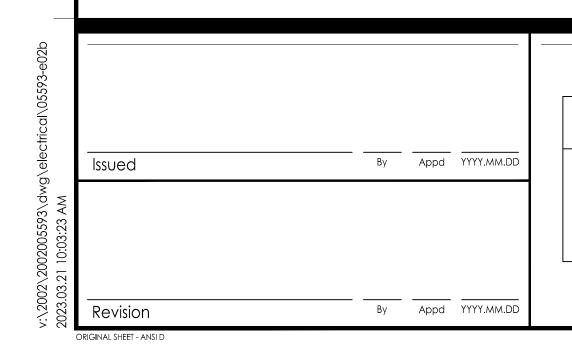
PRIMARY UTILITY VAULTS (IF SHOWN)

PRIMARY CONDUITS PRIMARY CONDUCTORS

SERVICE PEDESTAL AND CONTROL PANEL

SCALE: NONE





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Client/Project CITY OF NEWMAN

WWTRF MCPIKE 1 RECLAMATION IMPROVEMENTS

NEWMAN, CALIFORNIA

File Name: 05593-E02B 2019.08.02 **ELECTRICAL ELEVATIONS**

Project No. Scale 2002005593 NOT TO SCALE Revision Sheet Drawing No.

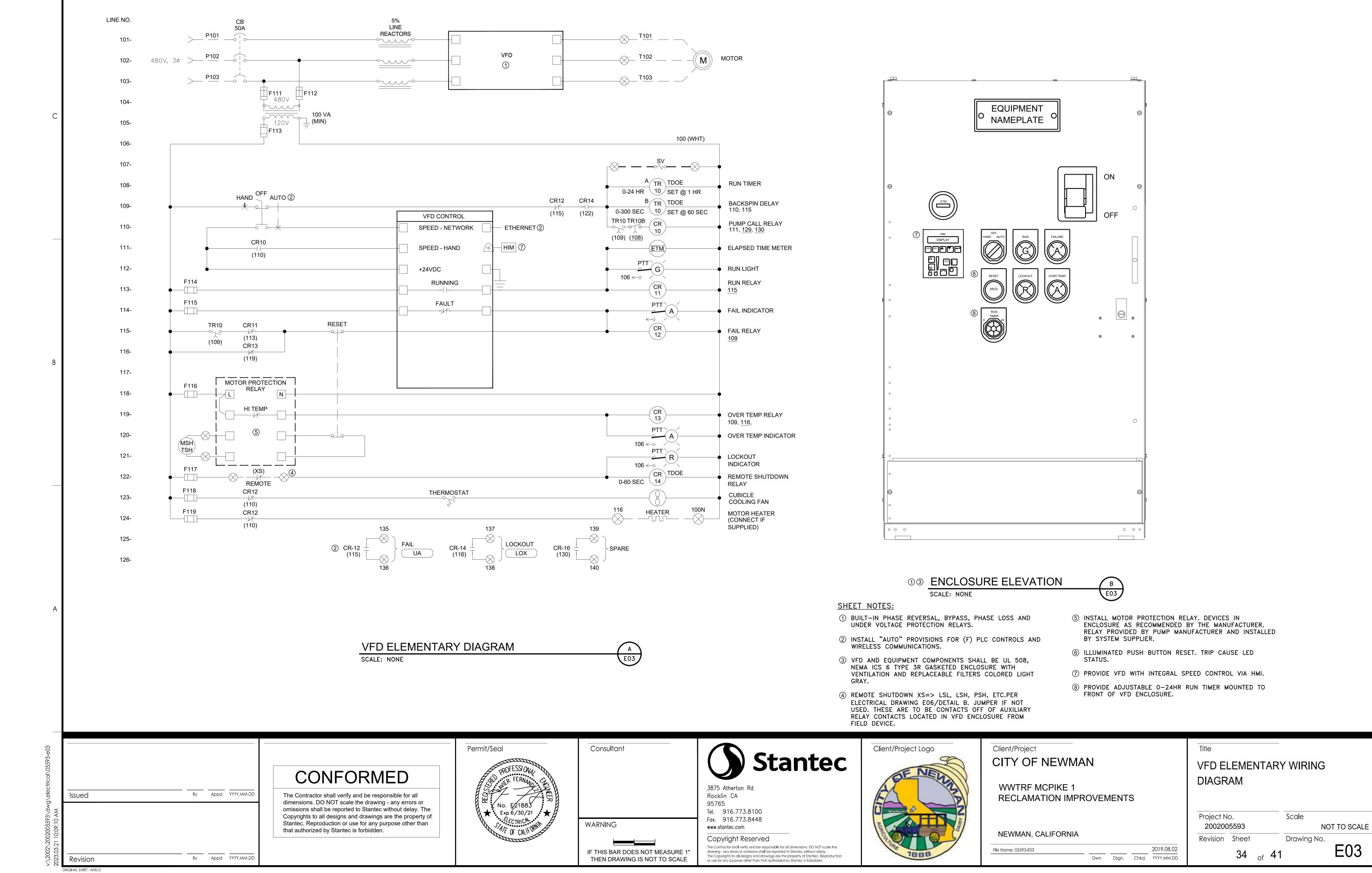
33 of 41

E02B

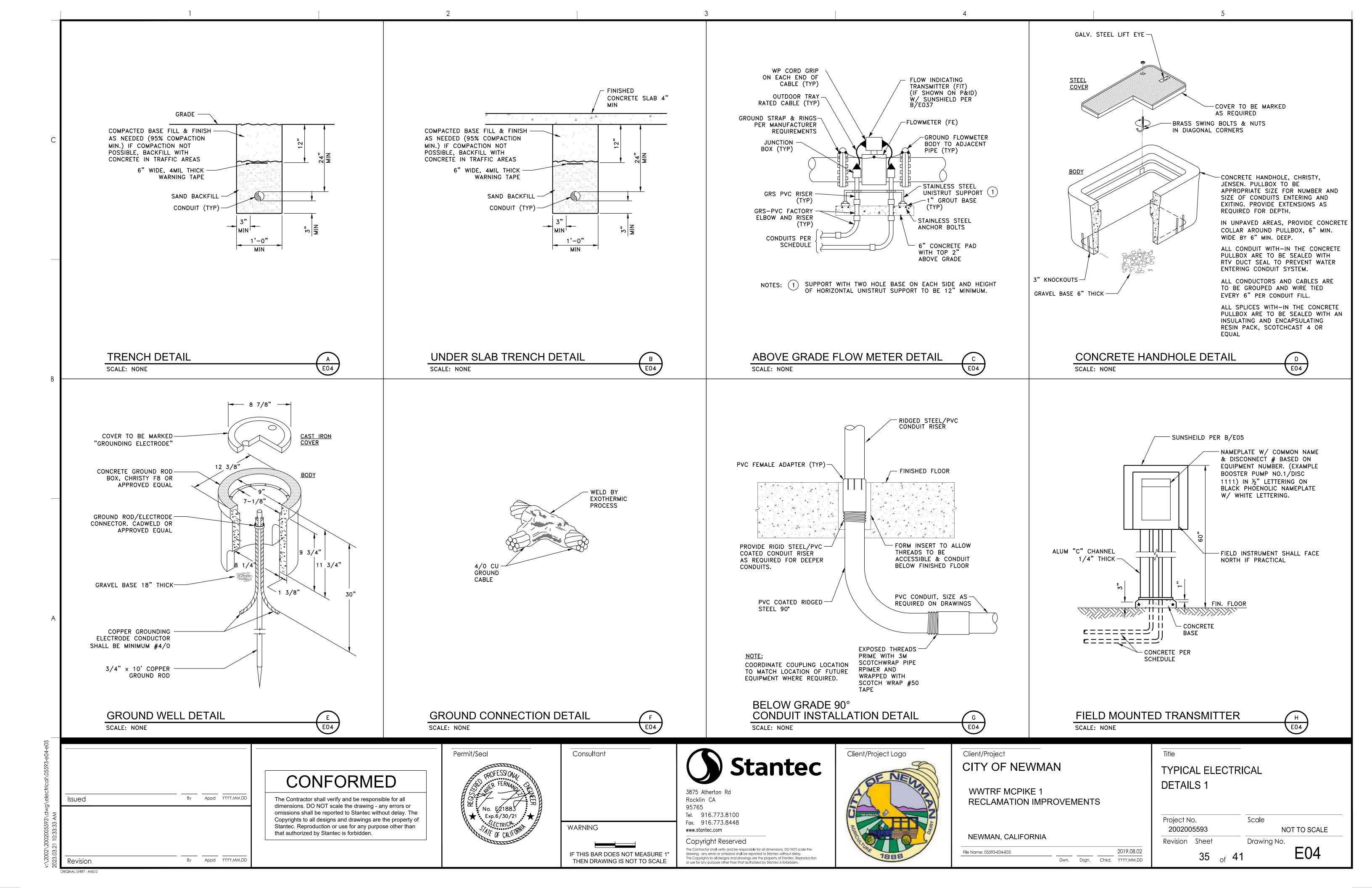
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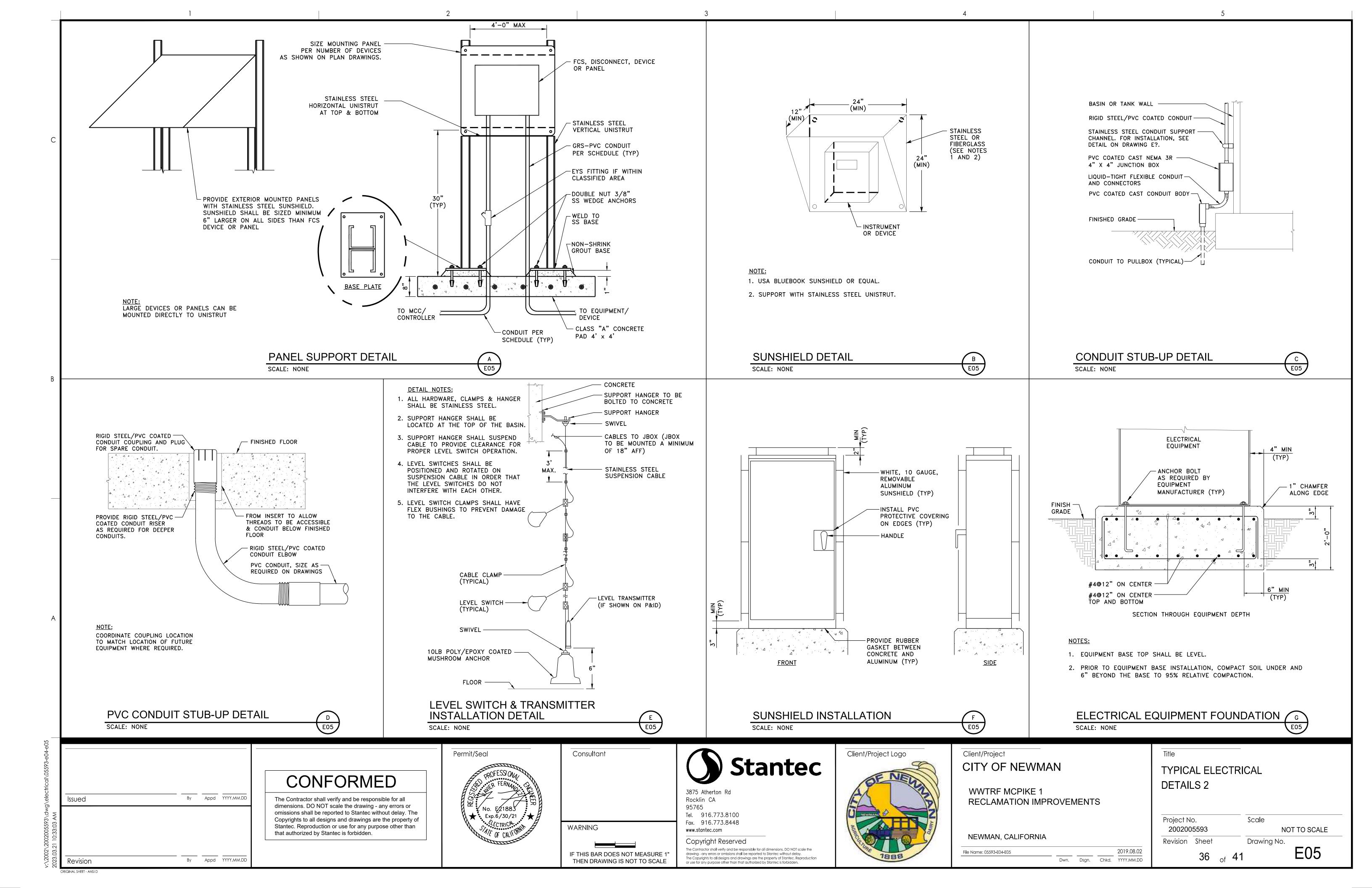
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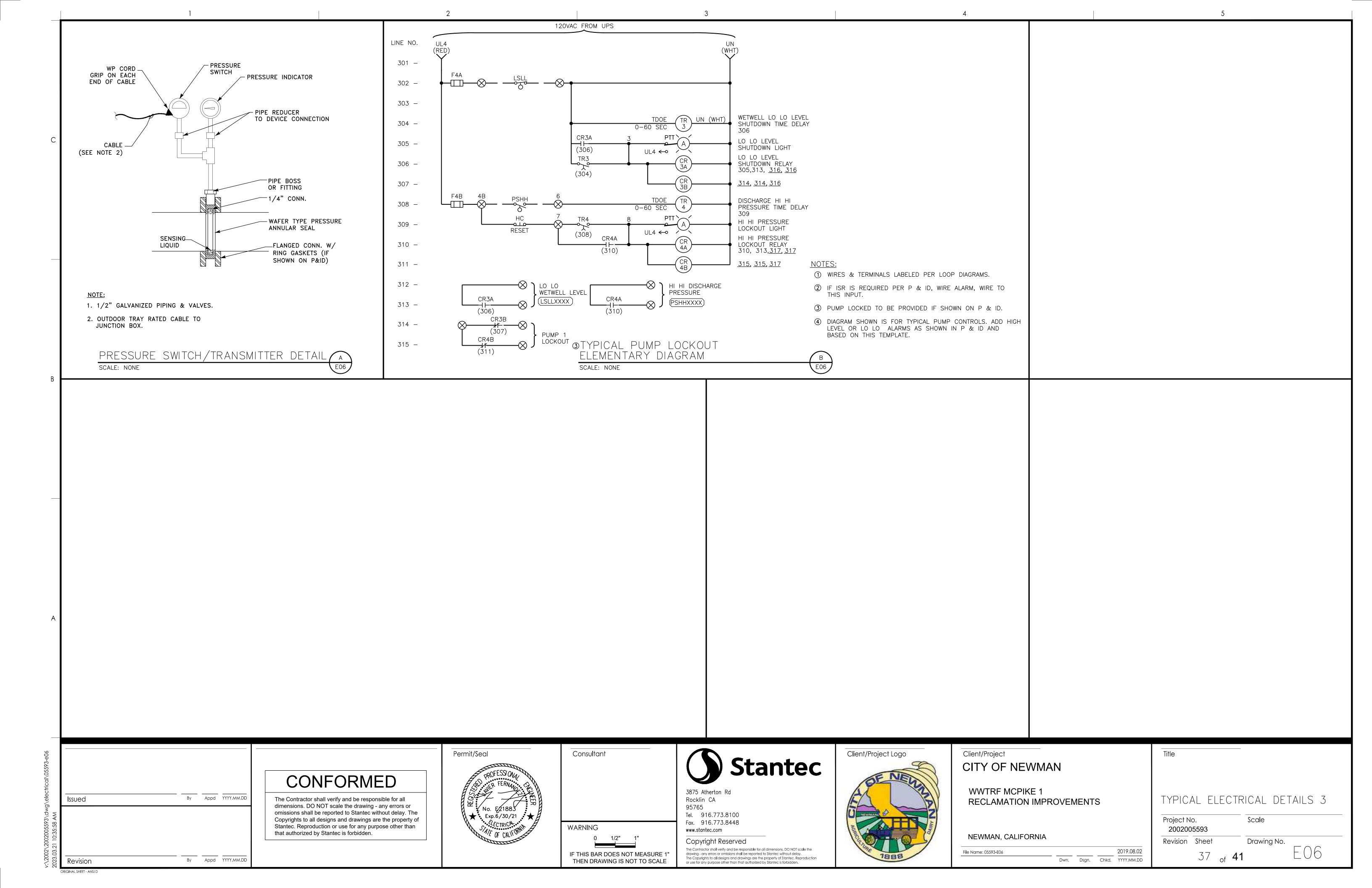
Dwn. Dsgn. Chkd. YYYY.MM.DD

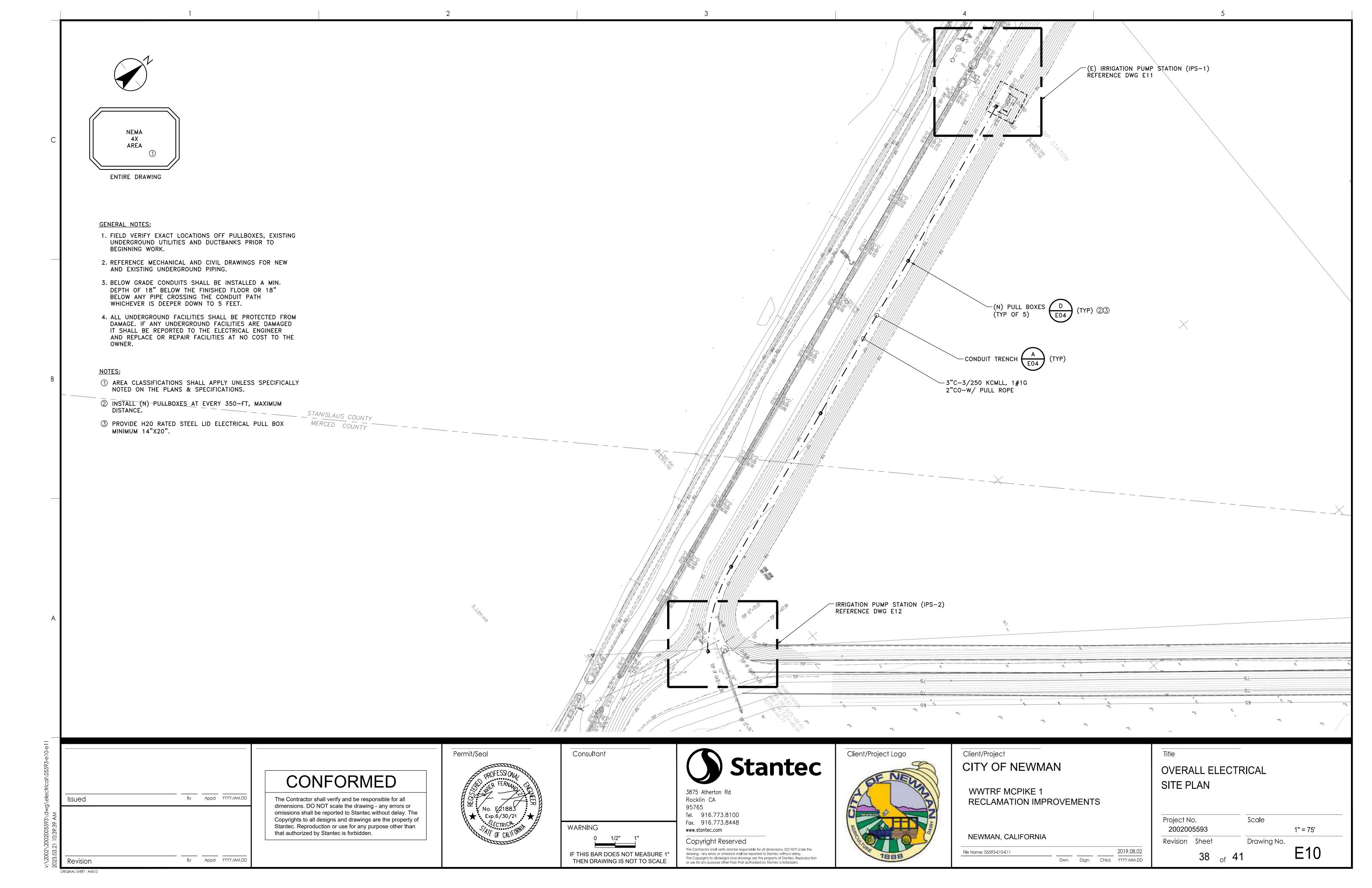


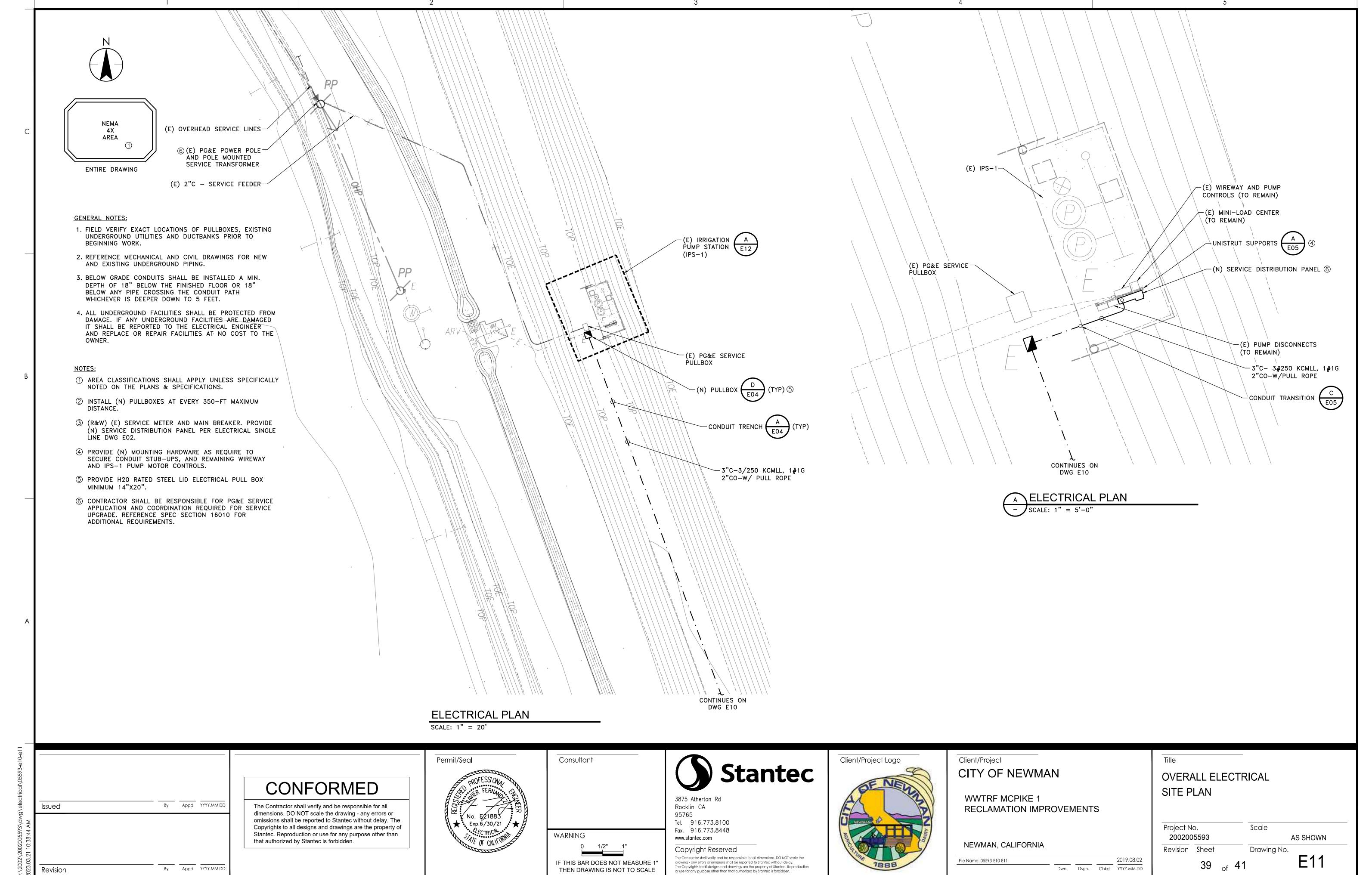
E03





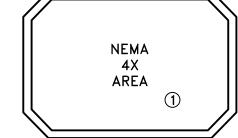






ORIGINAL SHEET - ANSI D





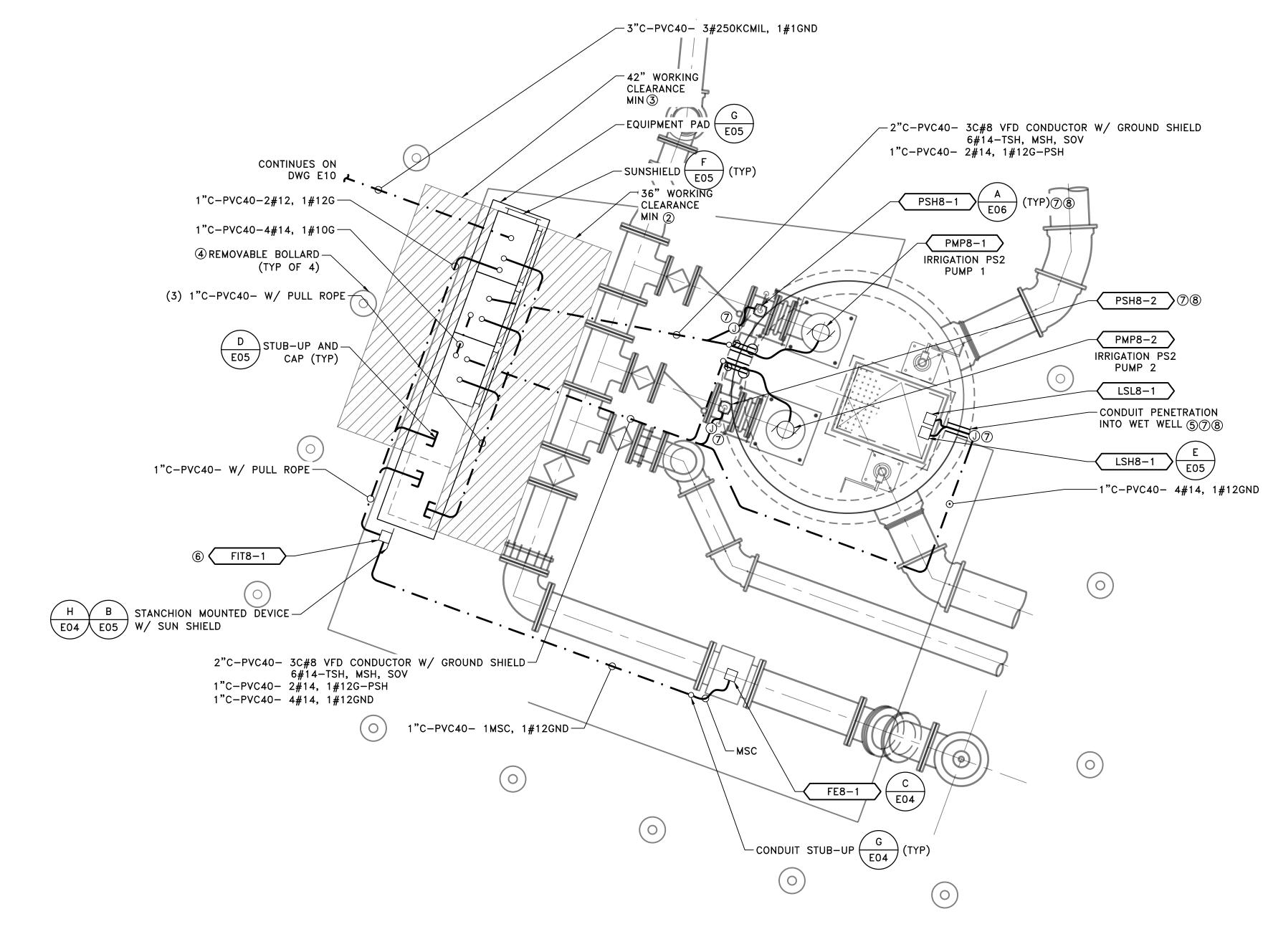
ENTIRE DRAWING

GENERAL NOTES:

- 1. FIELD VERIFY EXACT LOCATIONS OFF PULLBOXES, EXISTING UNDERGROUND UTILITIES AND DUCTBANKS PRIOR TO BEGINNING WORK.
- 2. REFERENCE MECHANICAL AND CIVIL DRAWINGS FOR NEW AND EXISTING UNDERGROUND PIPING.
- 3. BELOW GRADE CONDUITS SHALL BE INSTALLED A MIN. DEPTH OF 18" BELOW THE FINISHED FLOOR OR 18" BELOW ANY PIPE CROSSING THE CONDUIT PATH WHICHEVER IS DEEPER DOWN TO 5 FEET.
- 4. ALL UNDERGROUND FACILITIES SHALL BE PROTECTED FROM DAMAGE. IF ANY UNDERGROUND FACILITIES ARE DAMAGED IT SHALL BE REPORTED TO THE ELECTRICAL ENGINEER AND REPLACE OR REPAIR FACILITIES AT NO COST TO THE OWNER.

NOTE:

- ① AREA CLASSIFICATIONS SHALL APPLY UNLESS SPECIFICALLY NOTED ON THE PLANS & SPECIFICATIONS.
- ② PROVIDE 36" WORKING CLEARANCE BETWEEN REAR PANEL AND EDGE OF PIPE.
- 3 PROVIDE 42" WORKING CLEARANCE BETWEEN FRONT PANEL AND EDGE OF BOLLARD.
- 4 PROVIDE REMOVAL BOLLARDS IN FRONT OF ELECTRICAL EQUIPMENT TO ALLOW FOR OPERATIONAL MAINTENANCE.
- (5) PROVIDE WATER-TIGHT SEAL FOR ALL CONDUIT PENETRATION INTO WETWELL.
- 6 CONTRACTOR SHALL COORDINATE FIT8-1 LOCATION WITH OPERATIONS PRIOR TO INSTALLATION.
- 7 PROVIDE UNISTRUT SUPPORTS FOR JUNCTION BOX, ELECTRICAL EQUIPMENT AND DEVICES AS REQUIRED.
- 8 CONTRACTOR SHALL COORDINATE WITH OPERATIONS FOR LEVEL FLOATS AND PRESSURE SWITCH SETPOINT AND INSTALLATION REQUIREMENTS.



ELECTRICAL PLAN

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

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0 1/2" 1"

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Client/Project

CITY OF NEWMAN

WWTRF MCPIKE 1

RECLAMATION IMPROVEMENTS

NEWMAN, CALIFORNIA

IRIGATION PUMP STATION 2

Project No. Scale 2002005593 3/8"=1'-0"

Project No. Scale
2002005593 3/8"=1'-0"

Revision Sheet Drawing No. E12

Revision





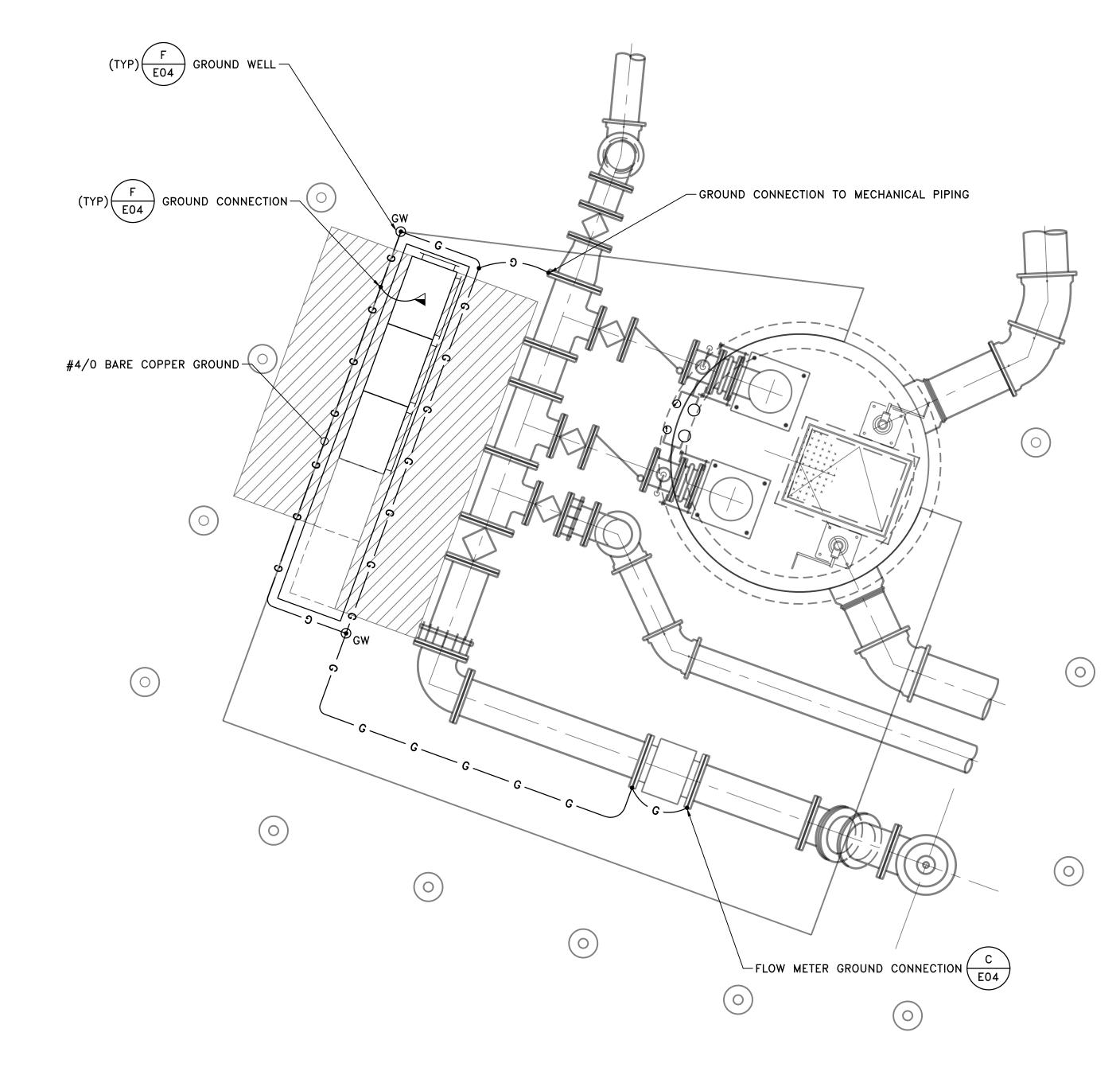
ENTIRE DRAWING

GENERAL NOTES:

- 1. FIELD VERIFY EXACT LOCATIONS OFF PULLBOXES, EXISTING UNDERGROUND UTILITIES AND DUCTBANKS PRIOR TO BEGINNING WORK.
- 2. REFERENCE MECHANICAL AND CIVIL DRAWINGS FOR NEW AND EXISTING UNDERGROUND PIPING.
- 3. BELOW GRADE CONDUITS SHALL BE INSTALLED A MIN. DEPTH OF 18" BELOW THE FINISHED FLOOR OR 18" BELOW ANY PIPE CROSSING THE CONDUIT PATH WHICHEVER IS DEEPER DOWN TO 5 FEET.
- 4. ALL UNDERGROUND FACILITIES SHALL BE PROTECTED FROM DAMAGE. IF ANY UNDERGROUND FACILITIES ARE DAMAGED IT SHALL BE REPORTED TO THE ELECTRICAL ENGINEER AND REPLACE OR REPAIR FACILITIES AT NO COST TO THE OWNER.

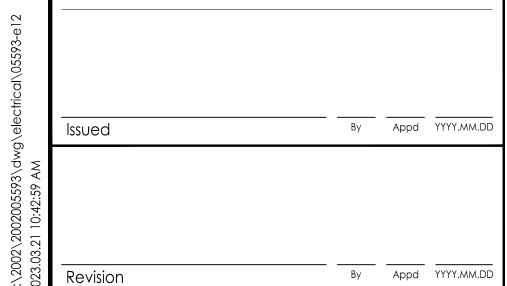
NOTES:

1 AREA CLASSIFICATIONS SHALL APPLY UNLESS SPECIFICALLY NOTED ON THE PLANS & SPECIFICATIONS.



GROUNDING PLAN

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



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Client/Project

CITY OF NEWMAN

WWTRF MCPIKE 1 RECLAMATION IMPROVEMENTS

NEWMAN, CALIFORNIA

File Name: 05593-E12 Dwn. Dsgn. Chkd. YYYY.MM.DD

2019.08.02

IRIGATION PUMP STATION 2 **GROUNDING PLAN**

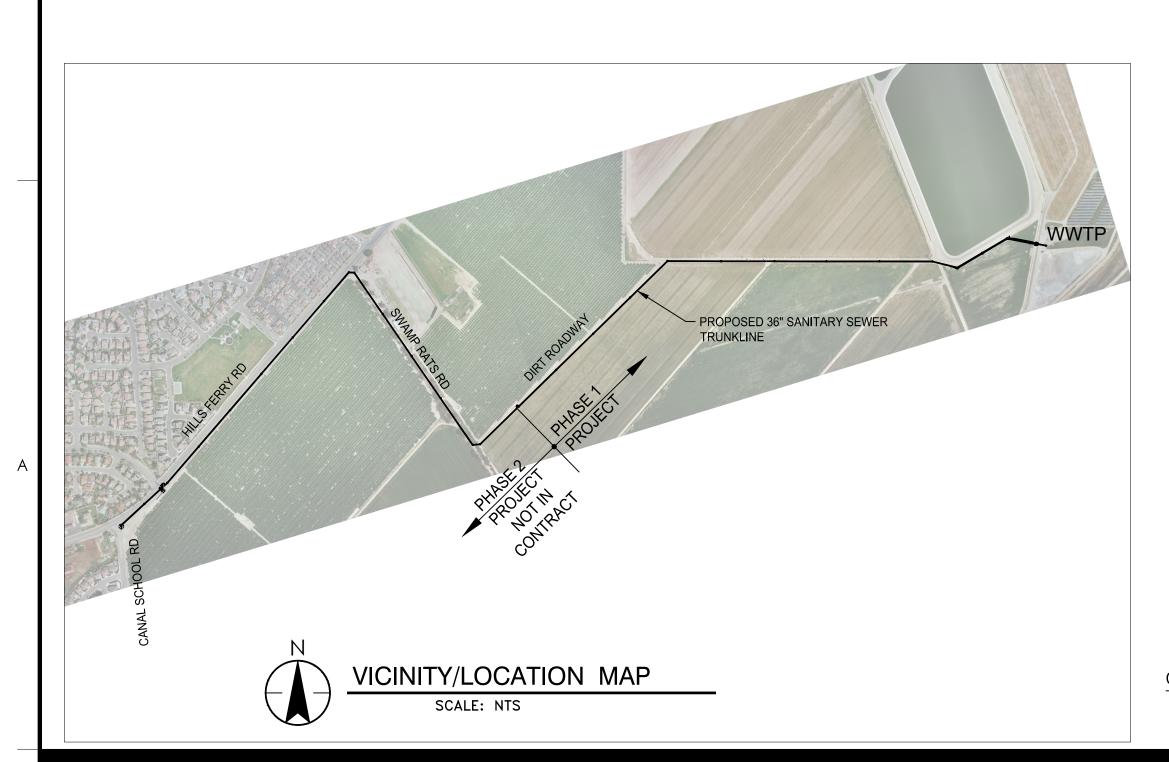
Scale Project No. 2002005593 3/8"=1'-0" Revision Sheet Drawing No. 41 of 41

Revision

CALIFORNIA MAP

CONTRACT DRAWINGS FOR CITY OF NEWMAN NEWMAN INFLUENT TRUNK SEWER

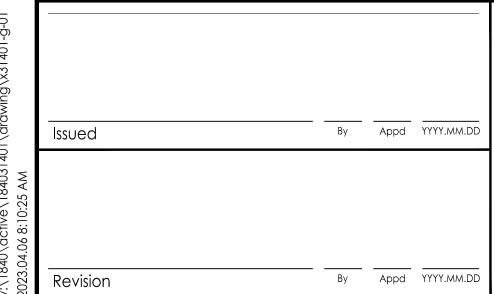
OCTOBER, 2022



CITY APPROVAL

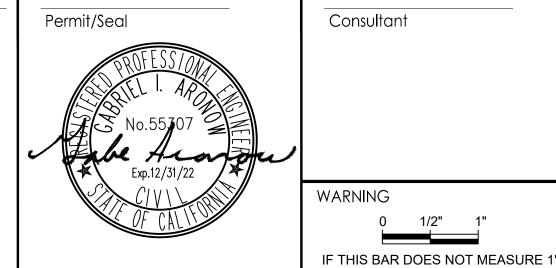
Project Manager

SHT NO.	DWG NO.	DESCRIPTION	
1	G-01	PROJECT TITLE, VICINITY AND LOCATION MAP, AND INDEX OF DRAWIN	NGS
2	G-02	ABBREVIATIONS, LEGENDS, PIPING SYSTEM, AND SYMBOLS	
3	GC-01	TYPICAL CIVIL DETAILS 1	
4	GC-02	CITY OF NEWMAN STANDARD TYPICAL	
5	GC-03	GATED MANHOLE - PLAN, SECTIONS AND DETAILS	(NOT IN CONTRACT)
6	C-01	GENERAL SITE PLAN / KEY MAP AND SURVEY CONTROL	
7	C-10	36" SS TRUNKLINE - PLAN AND PROFILE STA -0+25 TO STA 5+00	(NOT IN CONTRACT)
8	C-11	36" SS TRUNKLINE - PLAN AND PROFILE STA 5+00 TO STA 10+00	(NOT IN CONTRACT)
9	C-12	36" SS TRUNKLINE - PLAN AND PROFILE STA 10+00 TO STA 15+00	(NOT IN CONTRACT)
10	C-13	36" SS TRUNKLINE - PLAN AND PROFILE STA 15+00 TO STA 20+00	(NOT IN CONTRACT)
11	C-14	36" SS TRUNKLINE - PLAN AND PROFILE STA 20+00 TO STA 25+00	(NOT IN CONTRACT)
12	C-15	36" SS TRUNKLINE - PLAN AND PROFILE STA 25+00 TO STA 30+00	(NOT IN CONTRACT)
13	C-16	36" SS TRUNKLINE - PLAN AND PROFILE STA 30+00 TO STA 35+00	(NOT IN CONTRACT)
14	C-17	36" SS TRUNKLINE - PLAN AND PROFILE STA 35+00 TO STA 40+00	(NOT IN CONTRACT)
15	C-18	36" SS TRUNKLINE - PLAN AND PROFILE STA 40+00 TO STA 45+00	(NOT IN CONTRACT)
16	C-19	36" SS TRUNKLINE - PLAN AND PROFILE STA 45+00 TO STA 50+00	(NOT IN CONTRACT)
17	C-20	36" SS TRUNKLINE - PLAN AND PROFILE STA 50+00 TO STA 55+00	
18	C-21	36" SS TRUNKLINE - PLAN AND PROFILE STA 55+00 TO STA 60+00	
19	C-22	36" SS TRUNKLINE - PLAN AND PROFILE STA 60+00 TO STA 65+00	
20	C-23	36" SS TRUNKLINE - PLAN AND PROFILE STA 65+00 TO STA 70+00	
21	C-24	36" SS TRUNKLINE - PLAN AND PROFILE STA 70+00 TO STA 75+00	
22	C-25	36" SS TRUNKLINE/GRADING - PLAN AND PROFILE STA 75+00 TO STA 8	30+00
23	C-26	36" SS TRUNKLINE/GRADING - PLAN AND PROFILE STA 80+00 TO STA 8	35+00
24	C-27	36" SS TRUNKLINE/GRADING - PLAN AND PROFILE STA 85+00 TO STA 9	90+00
25	C-28	36" SS TRUNKLINE/GRADING - PLAN AND PROFILE STA 90+00 TO STA 9	95+00
26	C-29	36" SS TRUNKLINE/GRADING - PLAN AND PROFILE STA 95+00 TO STA 9	98+50
27	C-30	36" SS TRUNKLINE/GRADING - PLAN AND PROFILE STA 98+50 TO STA 1	102+00
28	C-31	SECTIONS AND DETAILS	
29	C-32	36" SS TRUNKLINE - PLAN AND PROFILE - DETAILS	
30	C-33	36" SS TRUNKLINE - PLAN AND PROFILE - DETAILS	



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Client/Project CITY OF NEWMAN

NEWMAN INFLUENT TRUNK SEWER

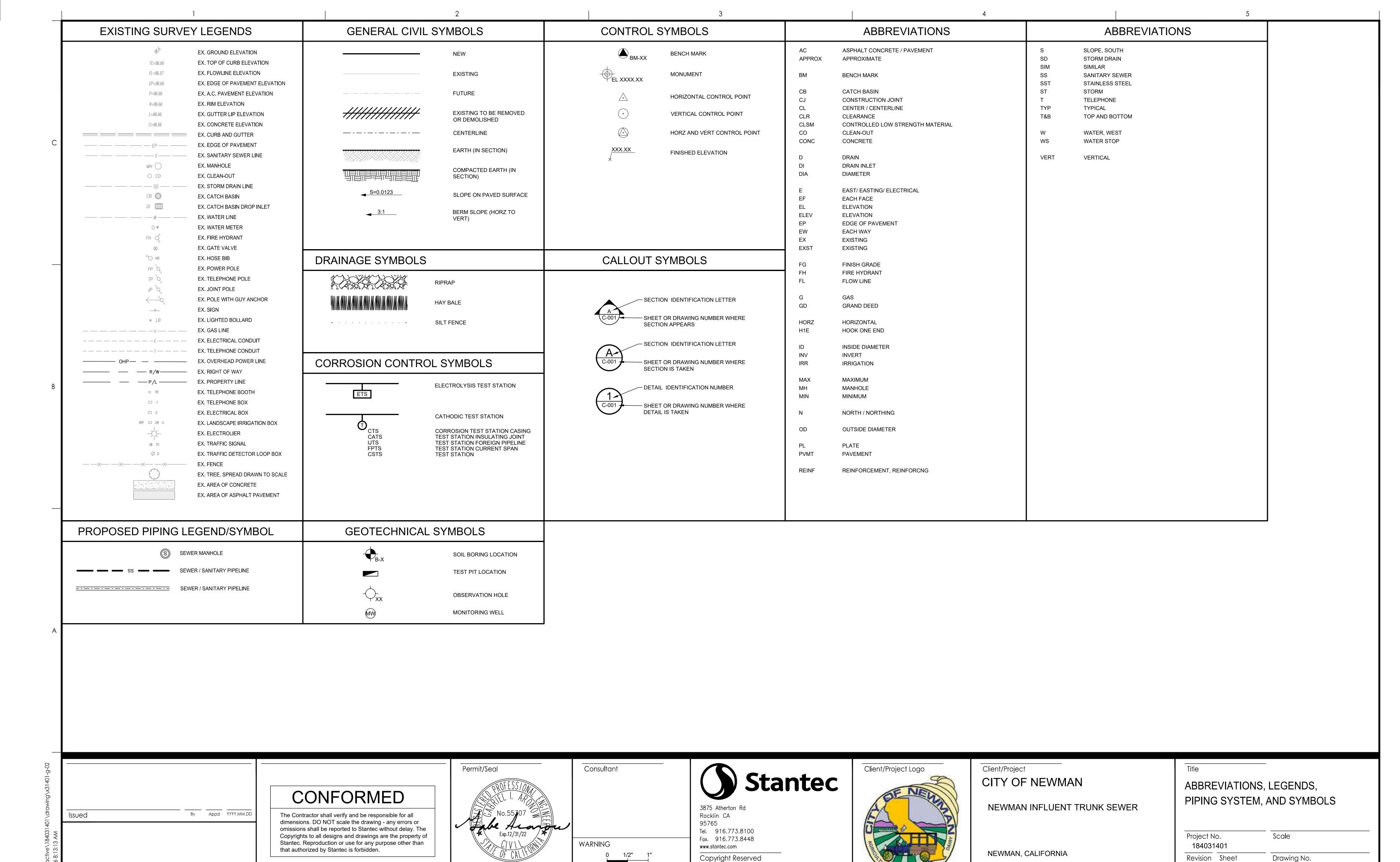
NEWMAN, CALIFORNIA

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 2022.10.03

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 Dsgn.
 Chkd.
 YYYY.MM.DD
 File Name: X31401-G-01

PROJECT TITLE VICINITY AND LOCATION MAP, DRAWING INDEX, AND DESIGN CRITERIA

Scale Project No. 184031401 NTS Drawing No. Revision Sheet G-01



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G-02

2 of 30

RG FR FR 2022.10.03

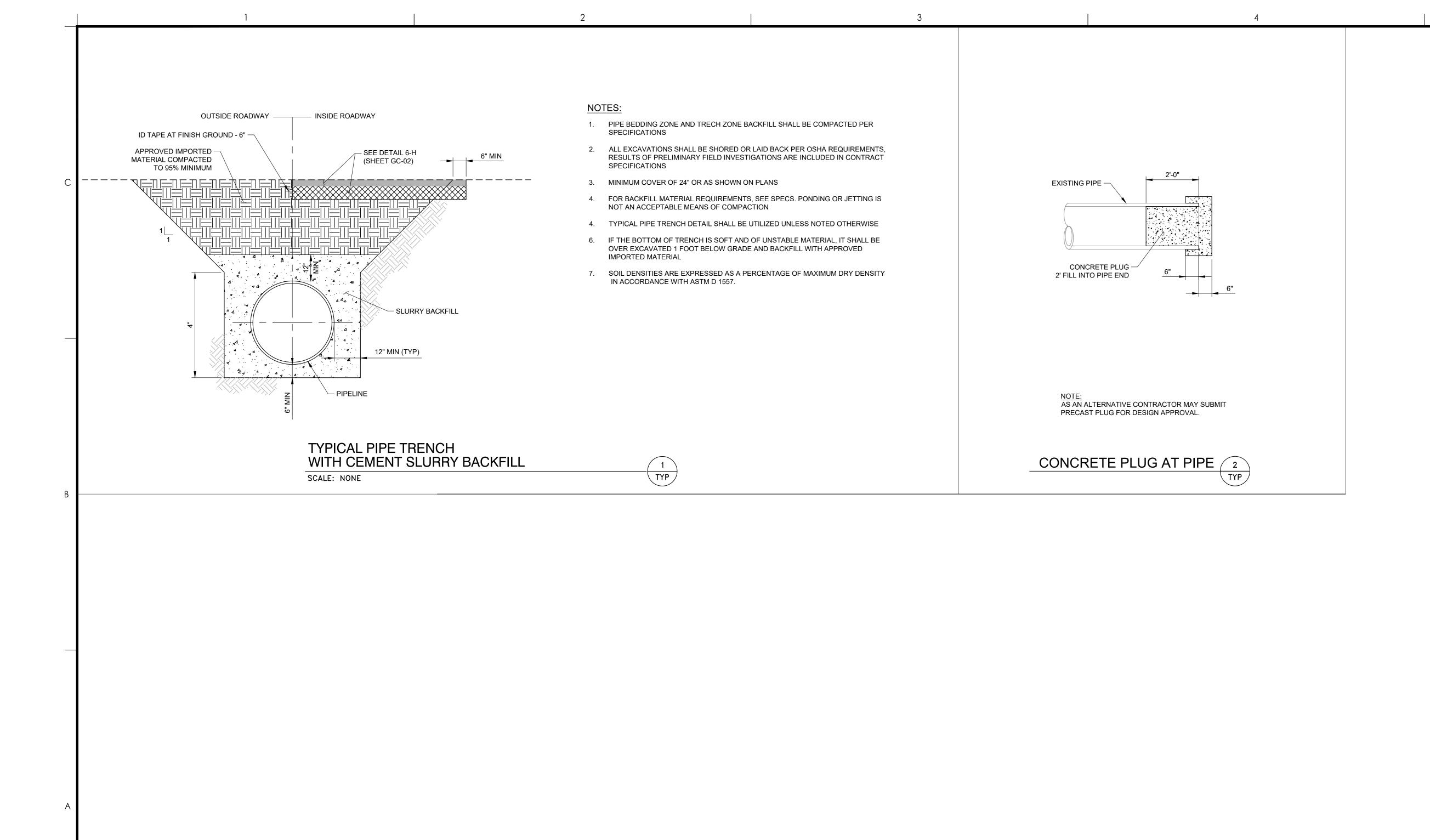
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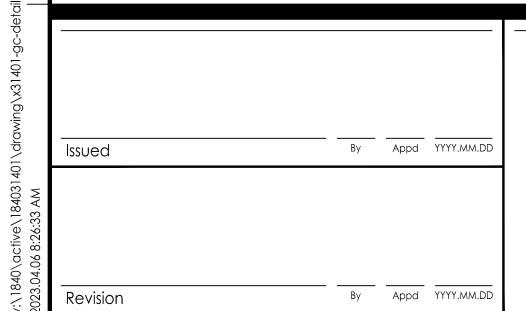
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ORIGINAL SHEET - ANSI D

Revision

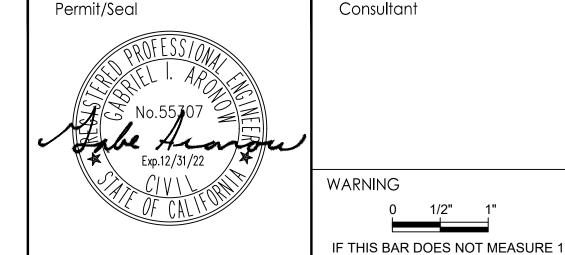
By Appd YYYY.MM.DD





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Client/Project CITY OF NEWMAN

NEWMAN INFLUENT TRUNK SEWER

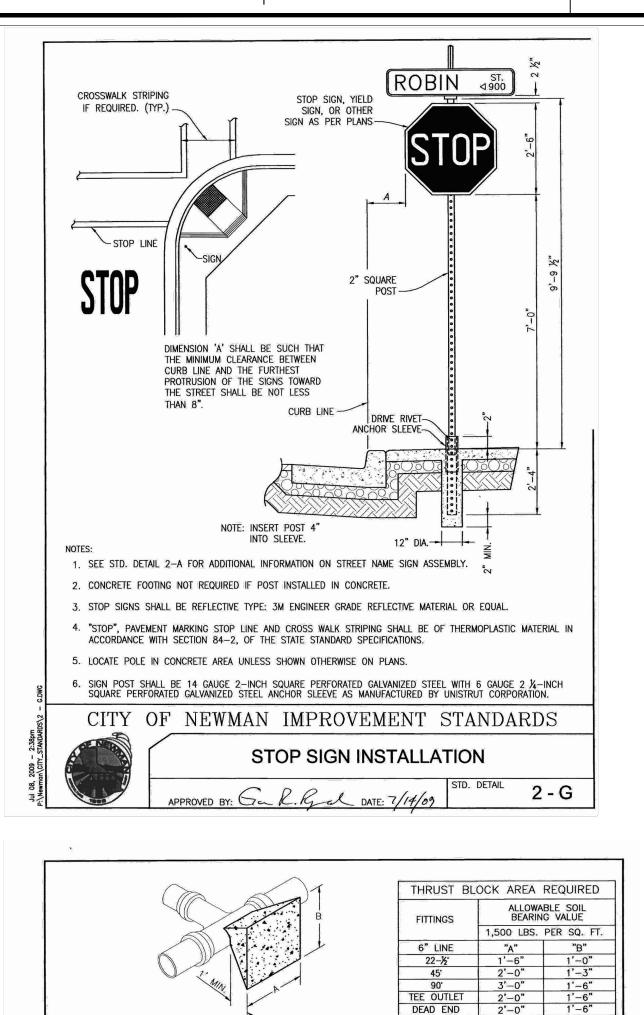
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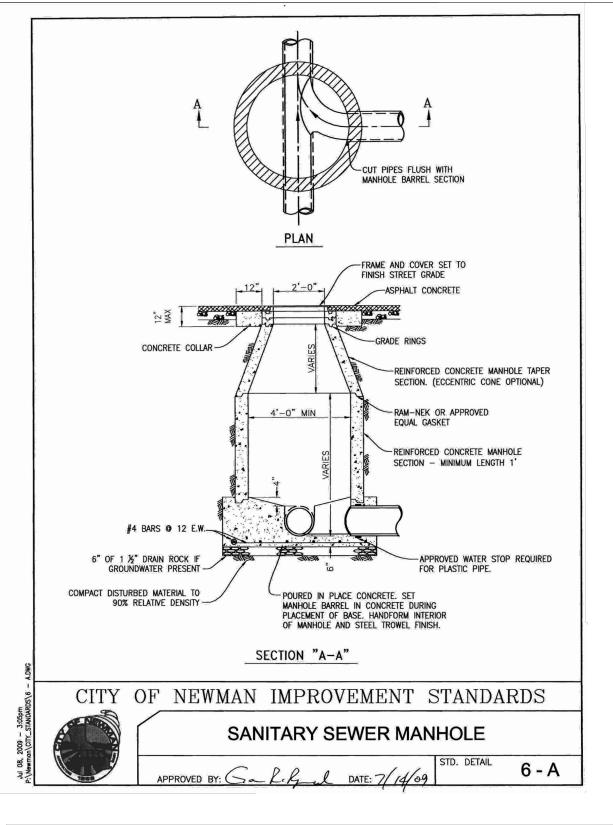
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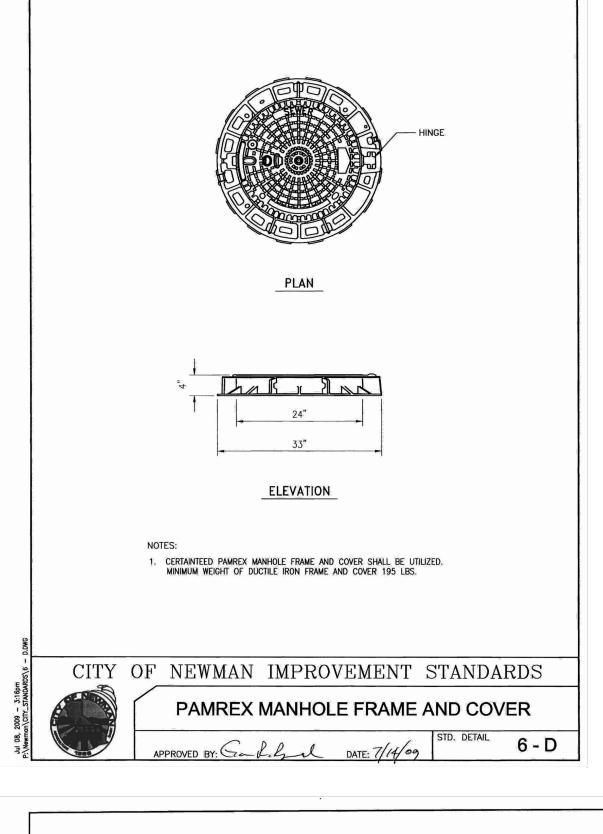
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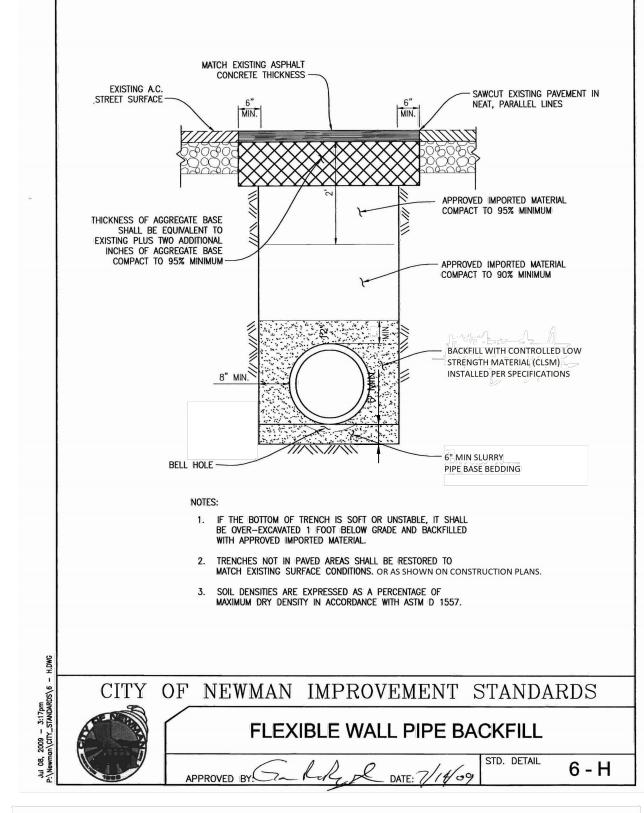
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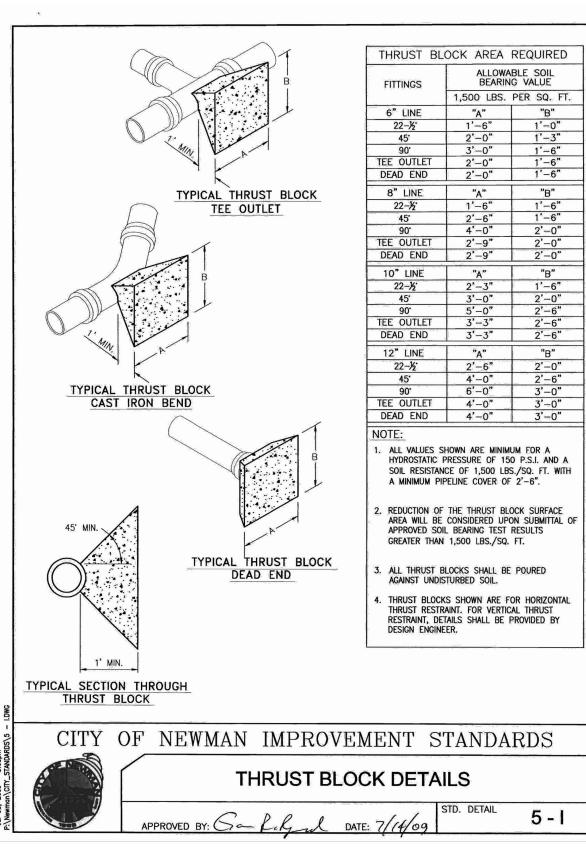
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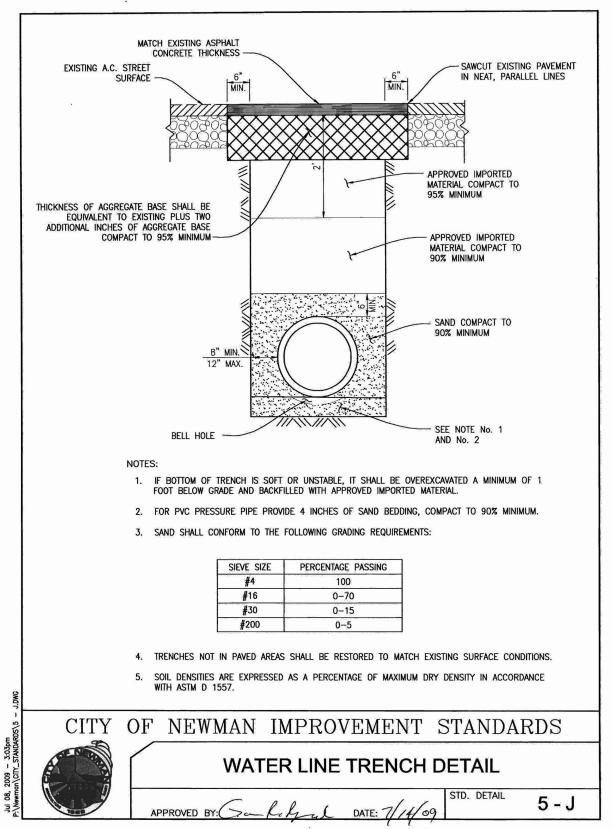


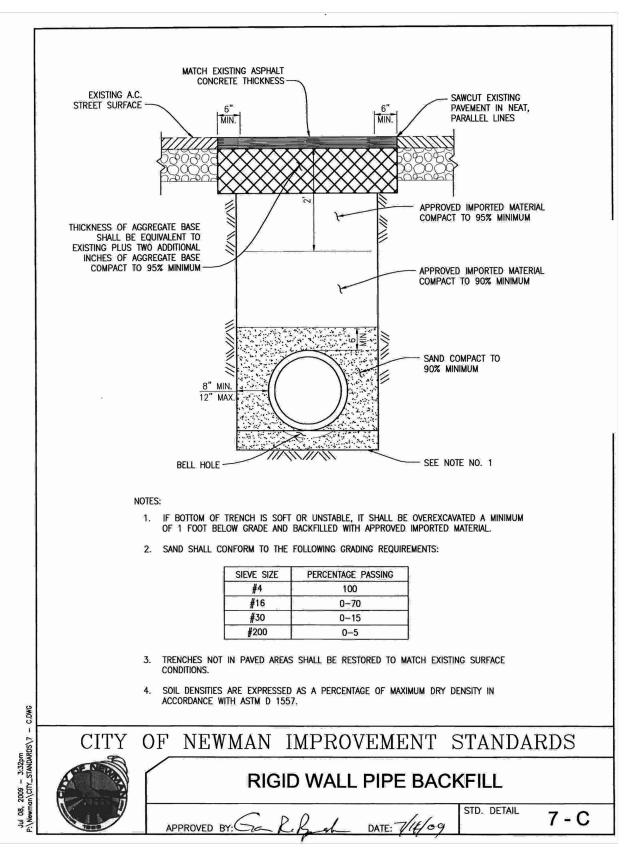


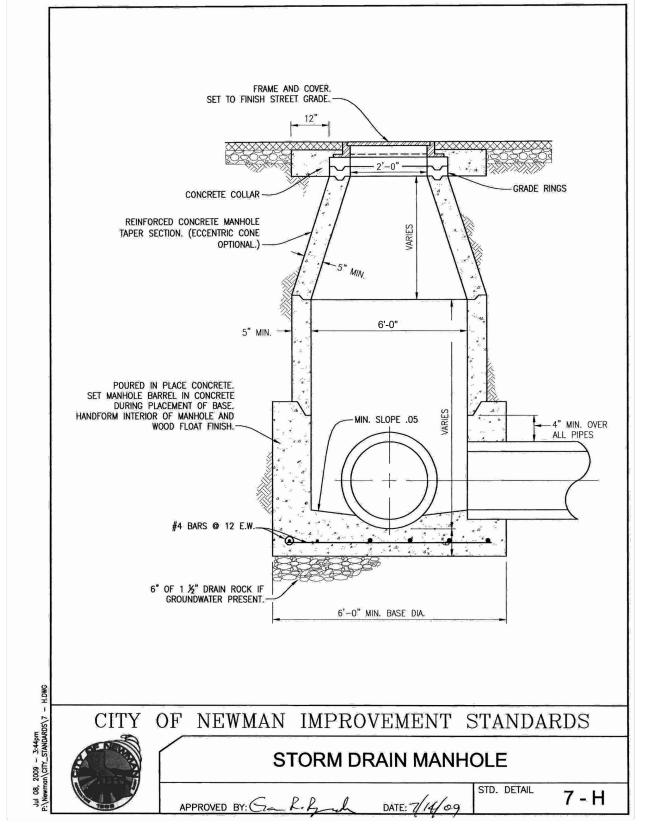


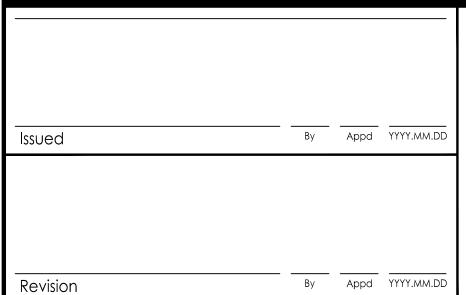












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Client/Project CITY OF NEWMAN

NEWMAN INFLUENT TRUNK SEWER

NEWMAN, CALIFORNIA				
File Name: X31401-GC-DETAILS	RG	FR	FR	2022.10.03
	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

TYPICAL CIVIL DETAILS 2 CITY OF NEWMAN STANDARD TYPICAL

Scale Project No. 184031401 Drawing No. Revision Sheet GC-02

By Appd YYYY.MM.DD

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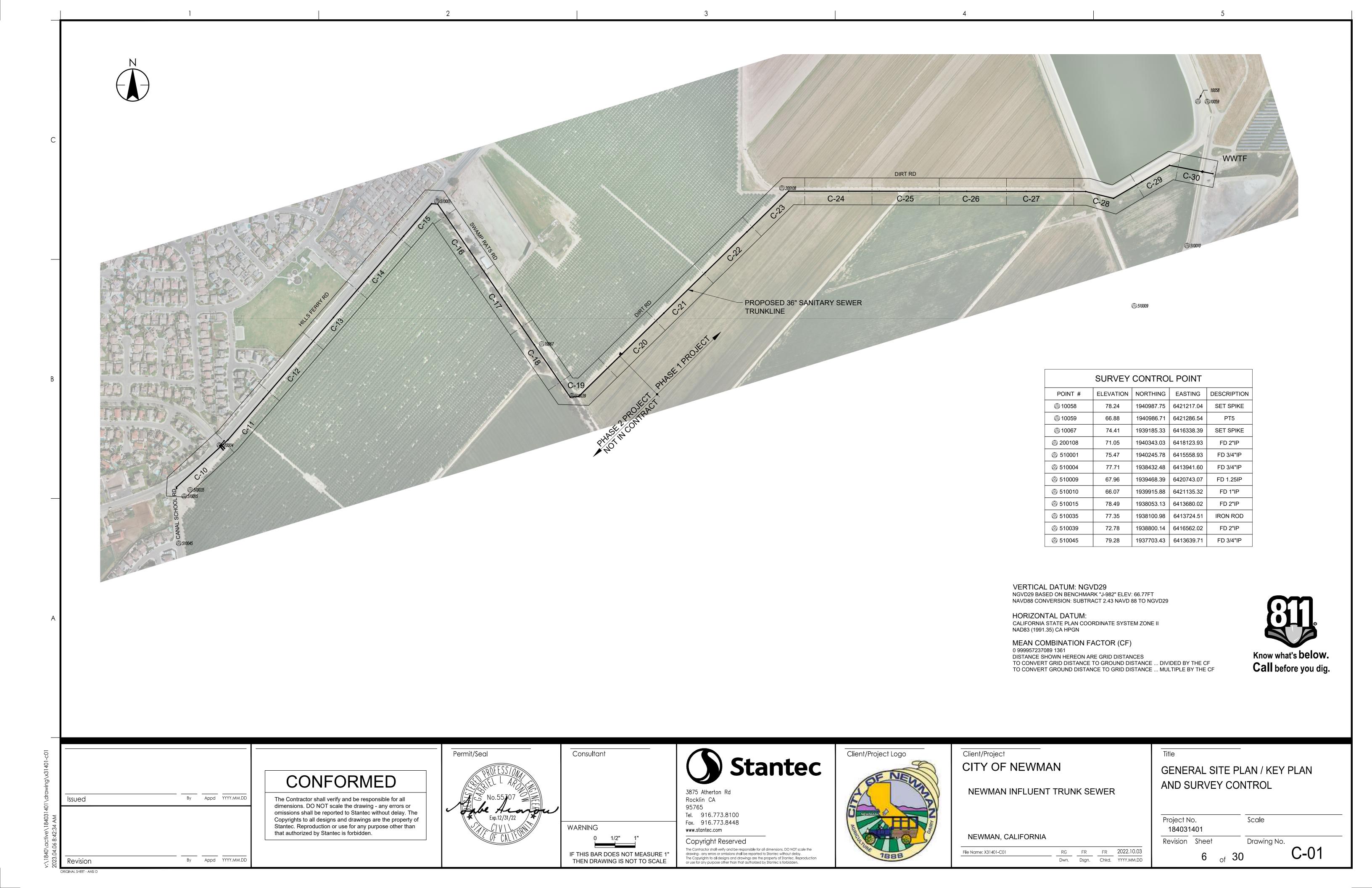
1. MANHOLE COVER, CONCRETE LID, AND FLOOR BOX LIFT SHALL BE DESIGNED TO WITHSTAND H-20 LOADING OR GREATER 2. PVC T-LOCK LINER ON INTERIOR EXPOSED CONCRETE AND GROUT SURFACES PER SPECS CAST IRON FLOOR BOX LIFT TRUMBULL 367-4620 OR TRAFFIC RATED COVER -3. COAT EXTERIOR OF BARREL WITH COAL TAR EPOXY. APPROVED EQUAL 8" THICK PRECAST REINFORCED CONC LID TOP OF MH (OR MATCH GRADE) 72" PRECAST CONC MANHOLE RISERS. USE RAM-NEK OR APPROVED 3'-0" 3'-0" EQUAL GASKET BETWEEN 3'-0" 3'-0" SECTIONS CL OF MH — USE STAINLESS STEEL WATERMAN SLIDE GATE, GATE SS-250 SERIES WITH COORDINATE WITH GATE NON-RISING STEM OR APPROVED MANUFACTURE FOR ACTUAL 6" PRECAST CONC WALL -1'-6" 24"x48" NEENAH R-6663-E1P -DIMENSION CAST IRON LID AND FRAME FLOOR BOX LIFT 6" THICK PRECAST -OR APPROVED EQUAL COORDINATE WITH GATE CONC WALL MANUFACTURER FOR ACTUAL - TOP OF GATE AT CLOSE POSITION - KEY WALL INTO RISERS, LOCATION (27" ABOVE INVERT) 1" MIN (TYP) 36" HDPE IN -- GATE FRAME - 36" HDPE OUT TOP OF GATE 25" ABOVE INVERT GATE MUST CLEAR 33" PIPE OPENING IN RAISED POSITION SLIDE GATE 3" GROUT FILL -- INVERT INV SEE PLAN INV SEE PROFILE -- INV SEE PROFILE 72" ID MH -3" GROUT FILL SEE DETAIL 6-A FOR ADDITIONAL -- DETAIL 1 BASE DETAILS NOT SHOWN PLAN SCALE: 1/2" = 1'-0" 4-1/2" CONC WALL -1" GROUT -DETAIL 2 DETAIL 1 Client/Project Logo Client/Project Permit/Seal Consultant Stantec CITY OF NEWMAN **GATED MANHHOLE** CONFORMED PLAN AND SECTIONS NEWMAN INFLUENT TRUNK SEWER 3875 Atherton Rd DD.MM.YYYY k The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay. The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden. Rocklin CA 95765 Tel. 916.773.8100 Scale Project No. Fax. 916.773.8448 WARNING 184031401 www.stantec.com NEWMAN, CALIFORNIA Drawing No. Copyright Reserved Revision Sheet GC-03 The Contractor shall verify and be responsible for all dimensions. DO NOT scale the
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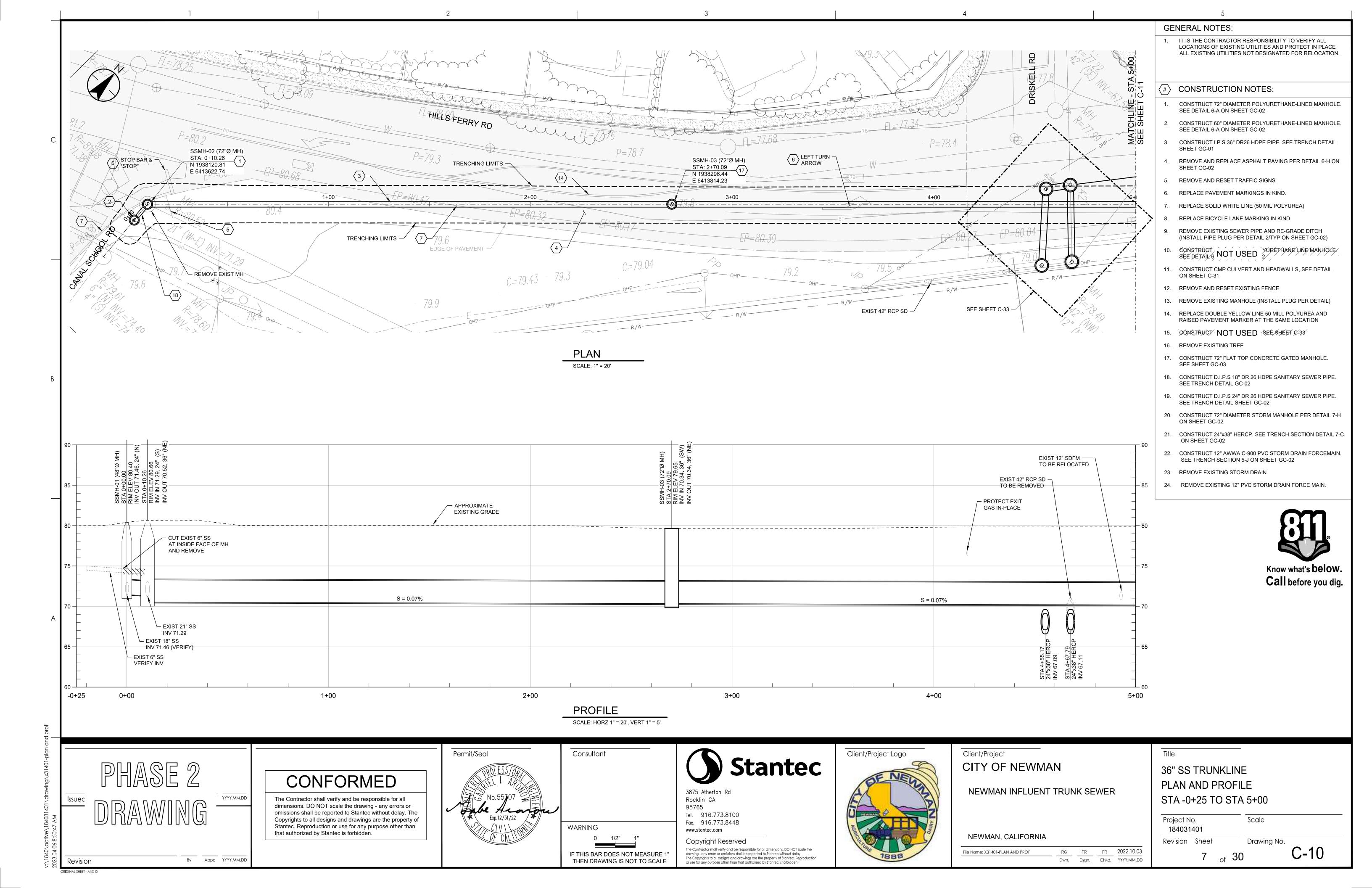
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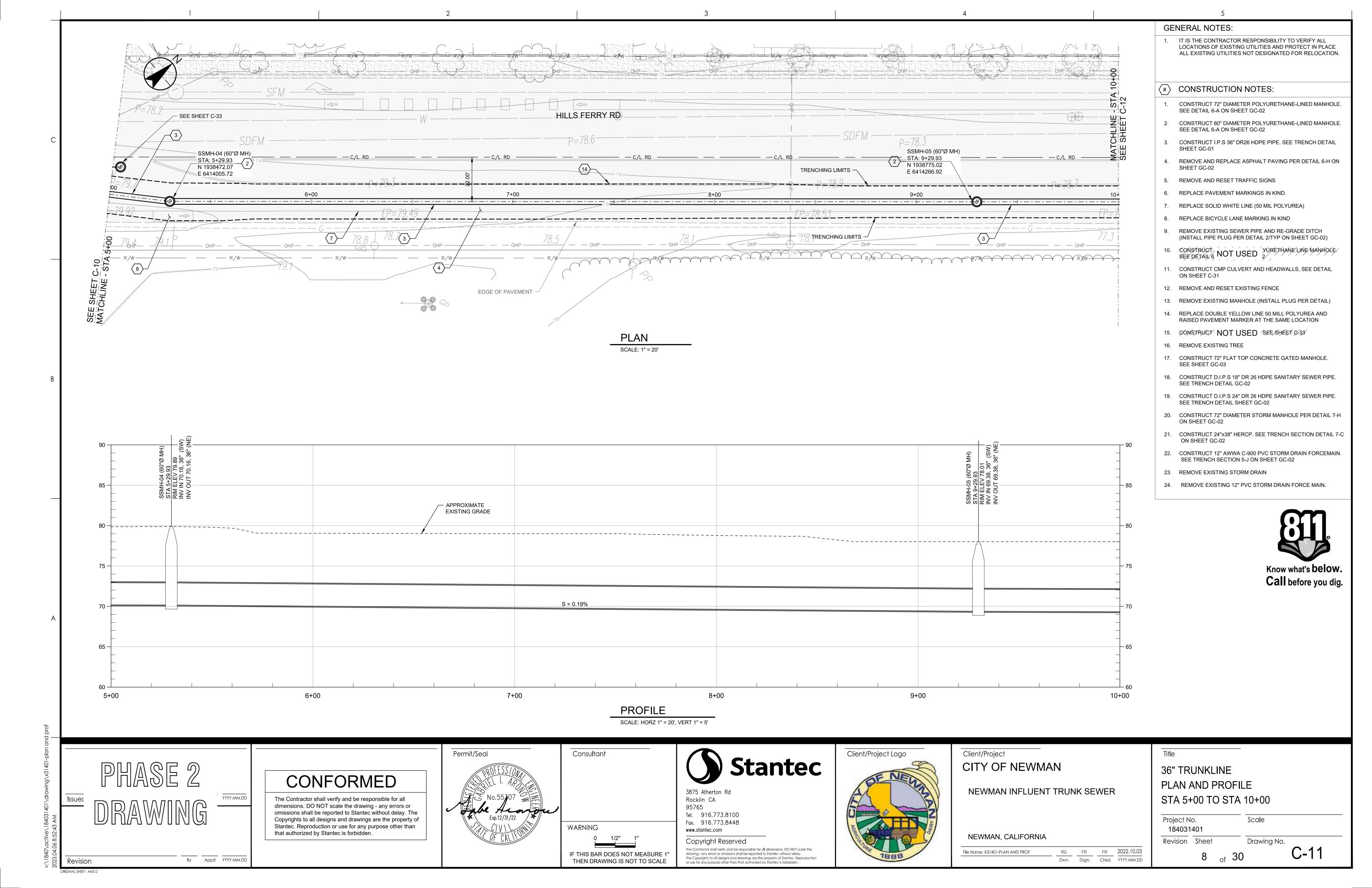
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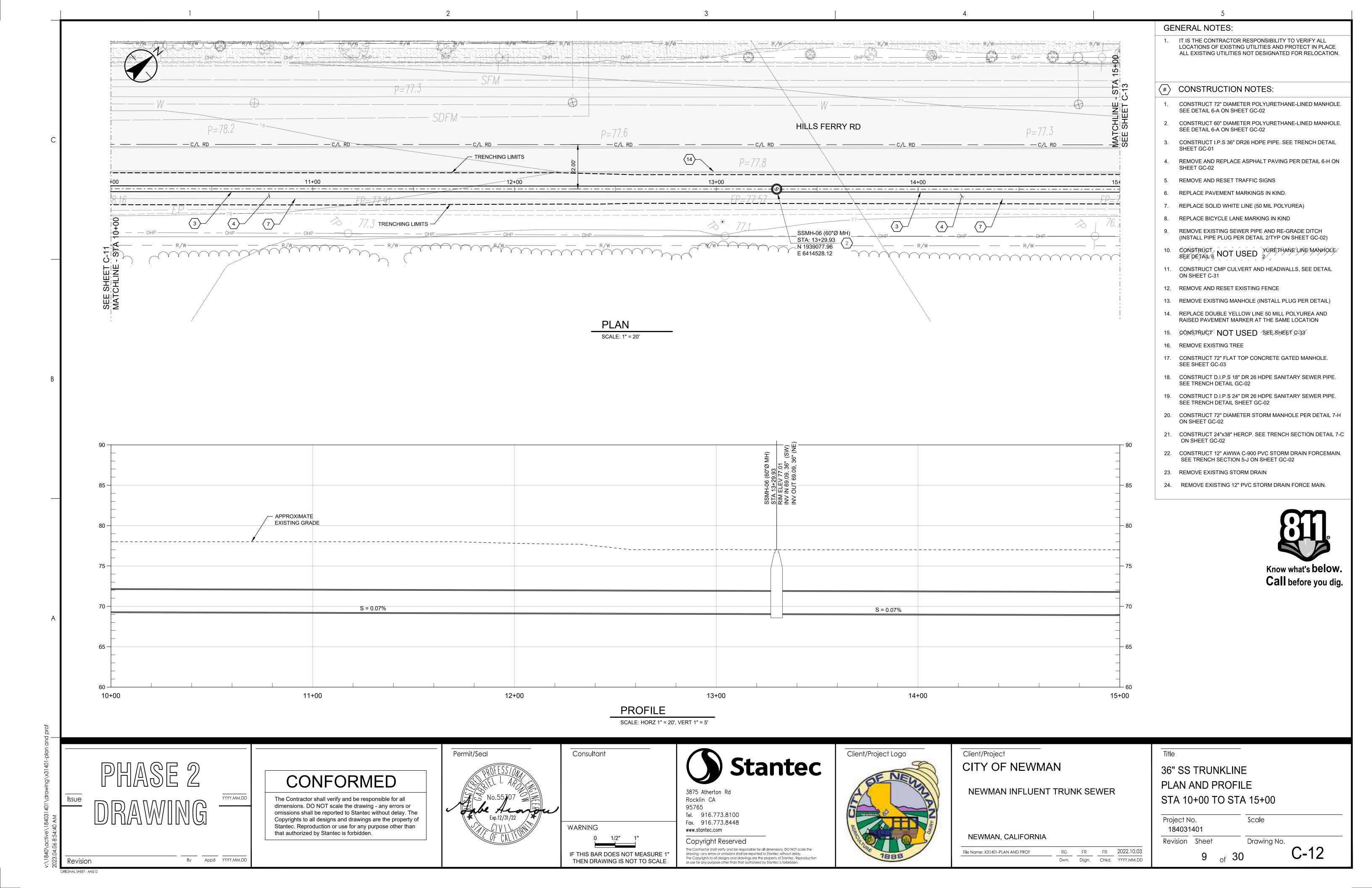
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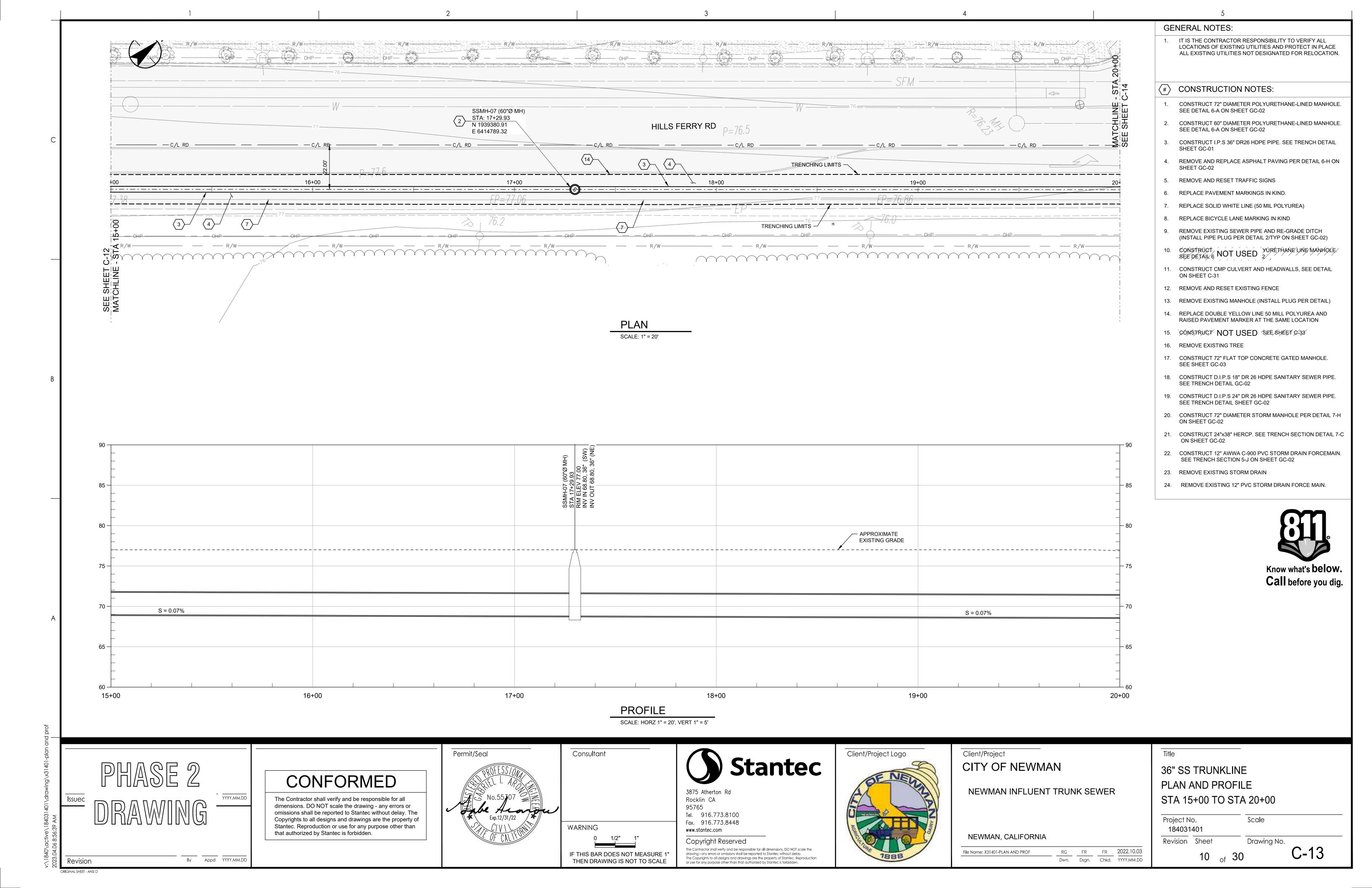
Revision

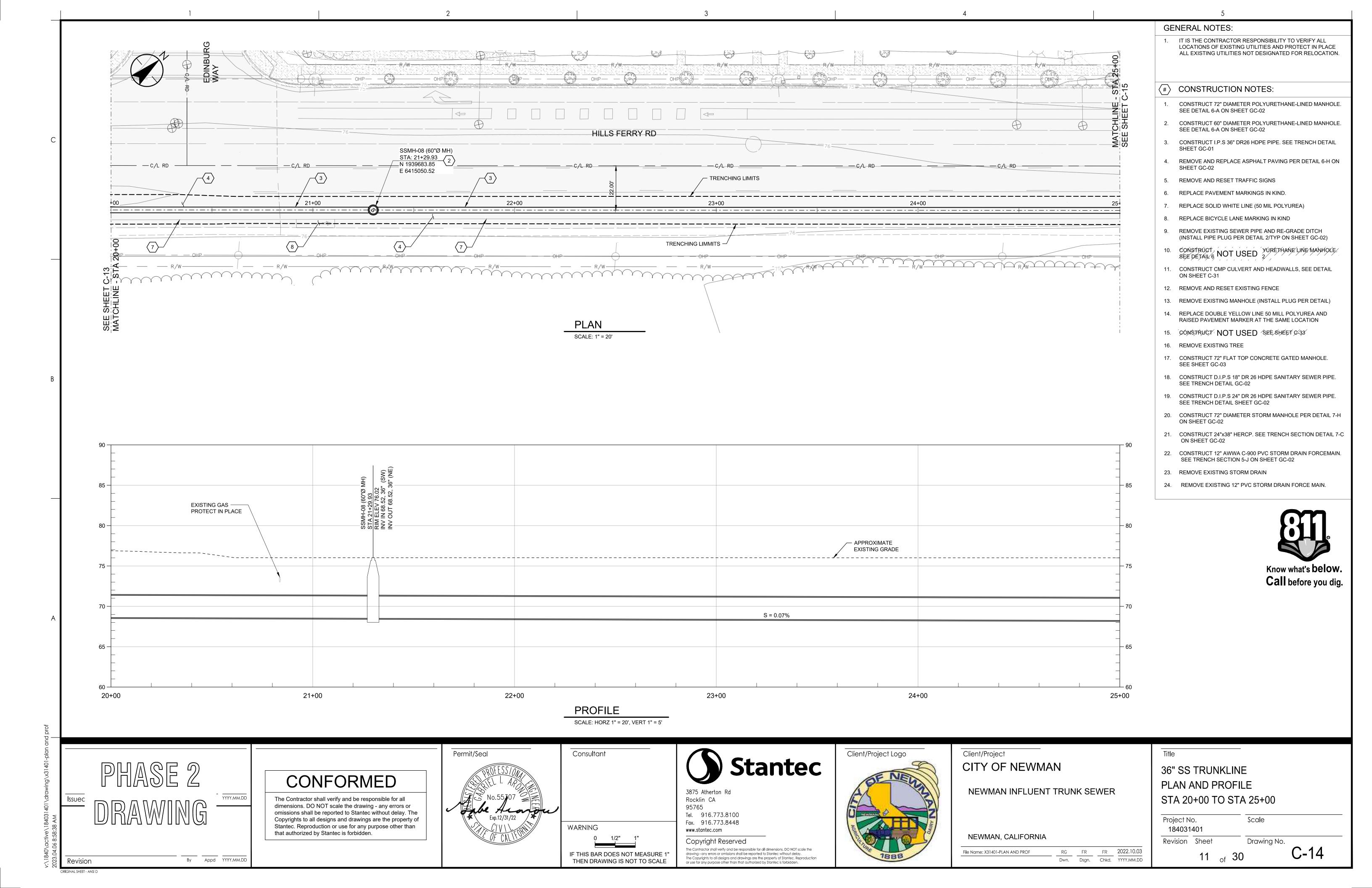


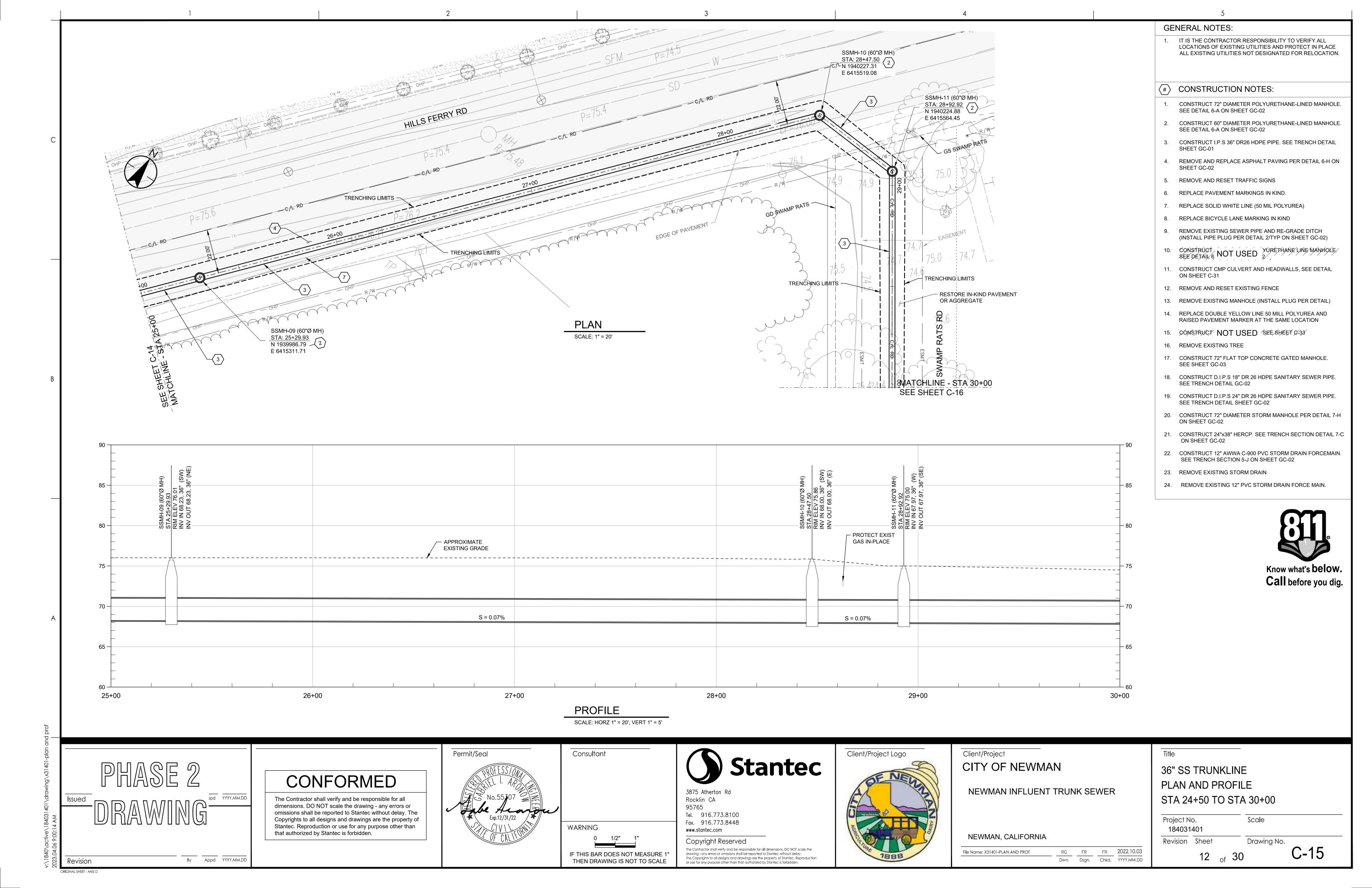


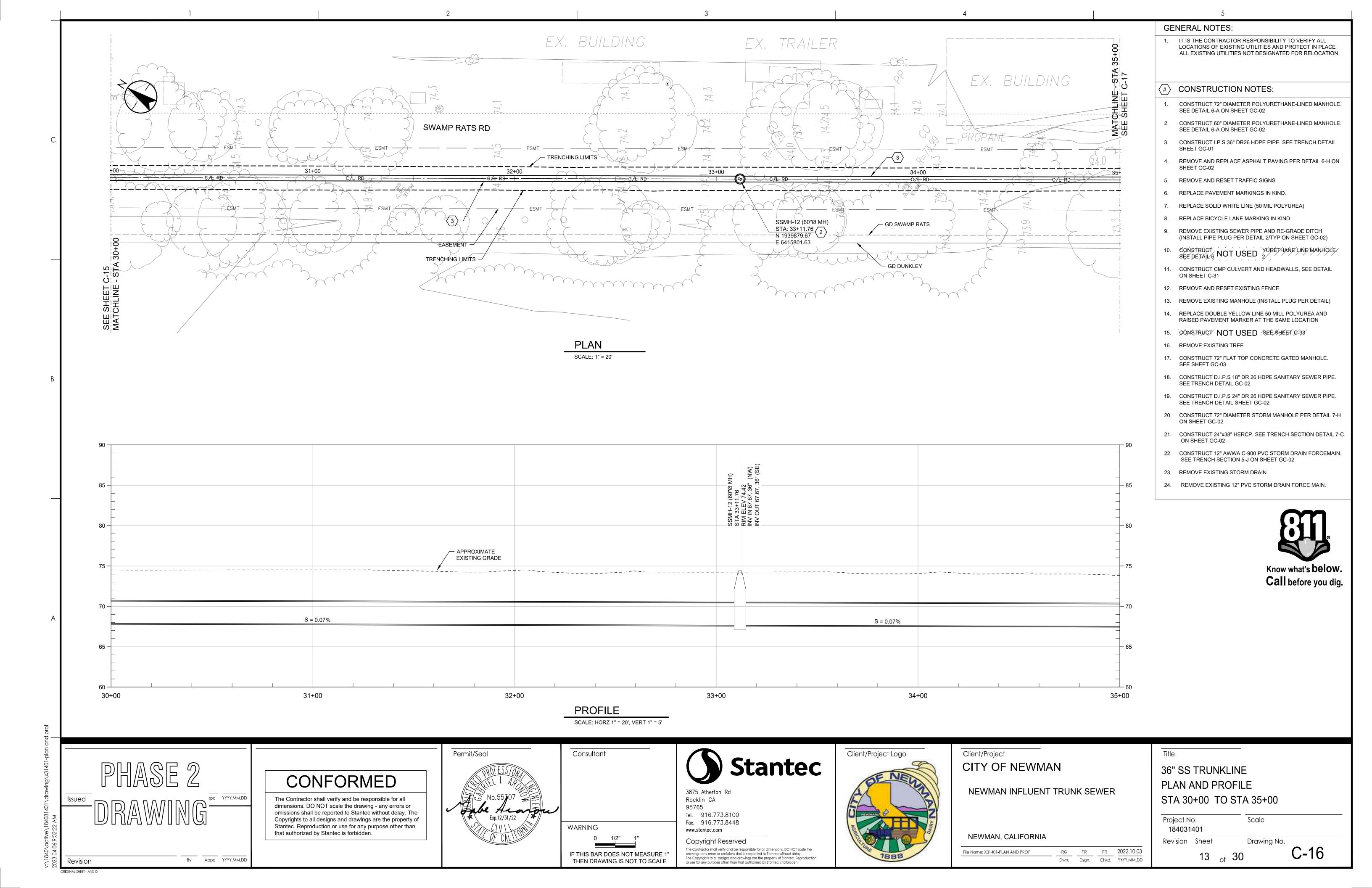


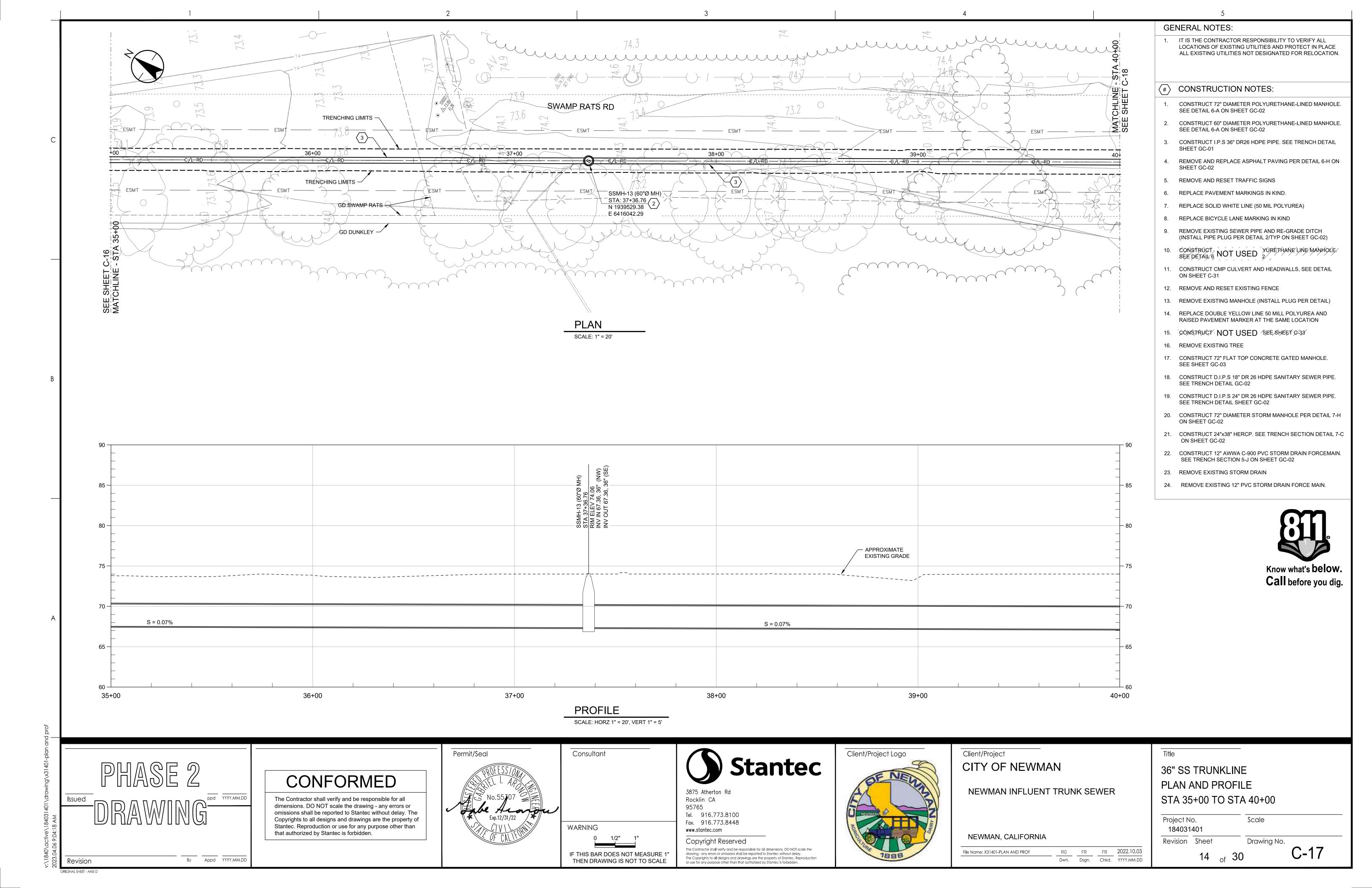


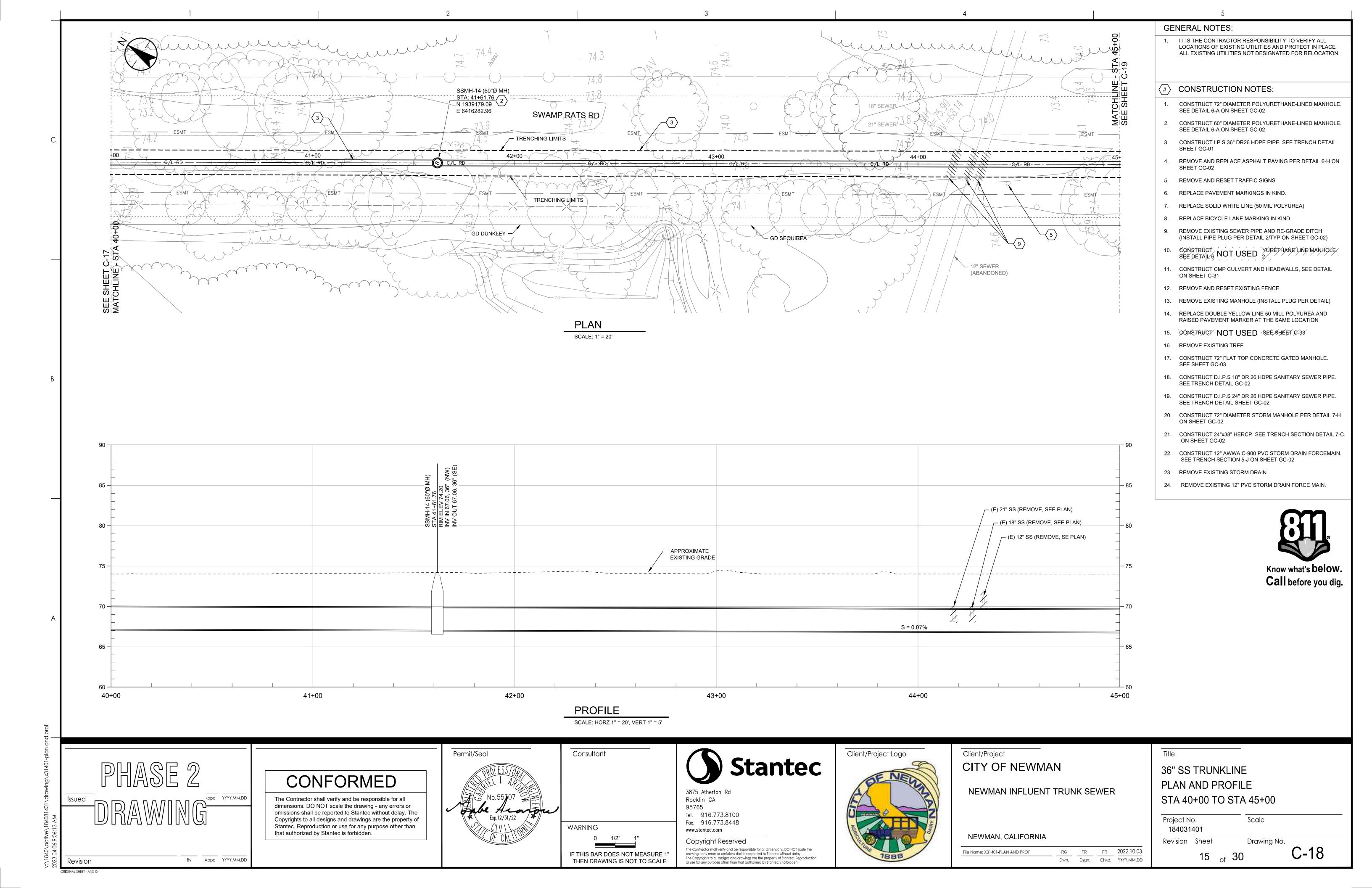


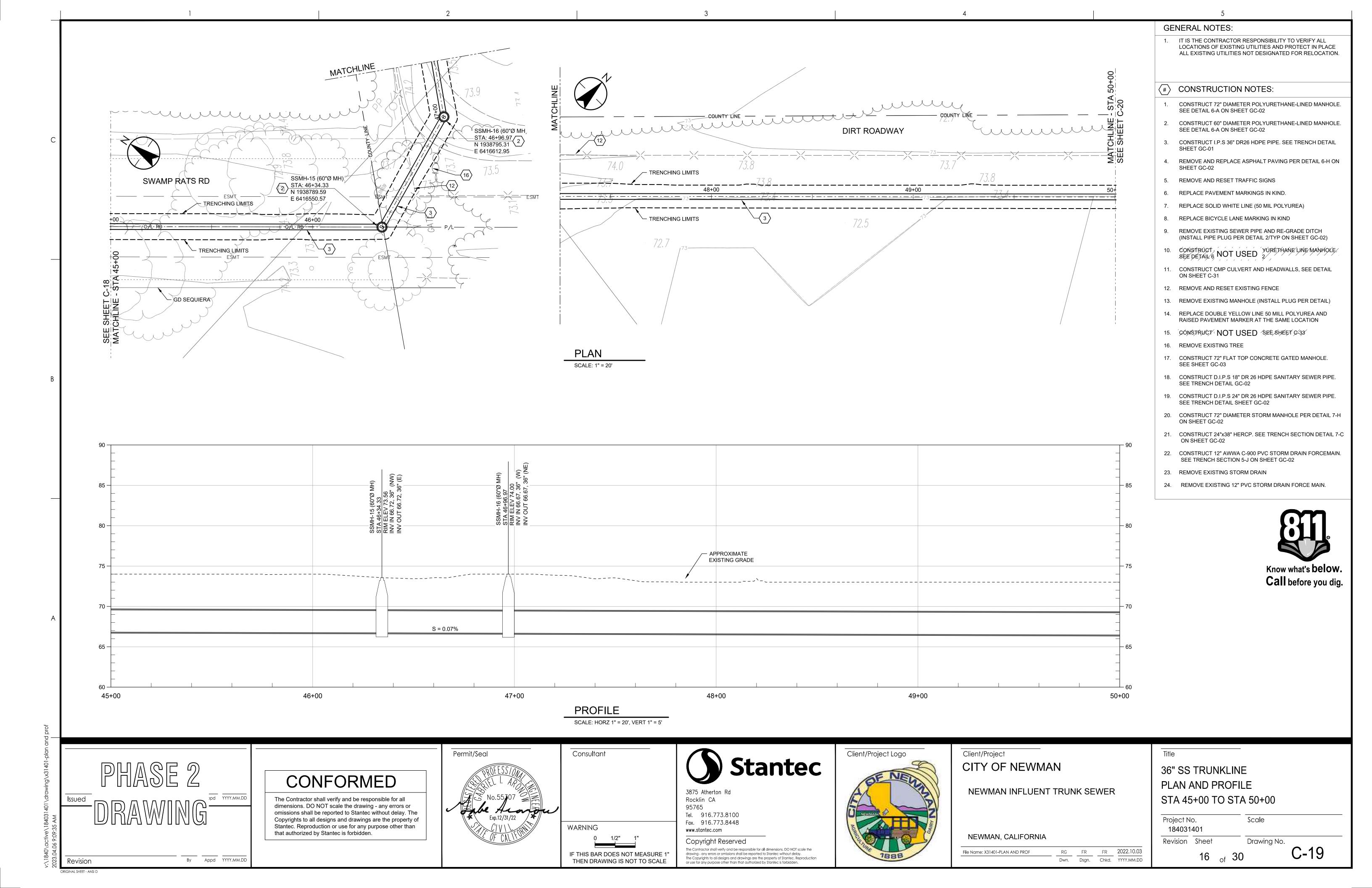


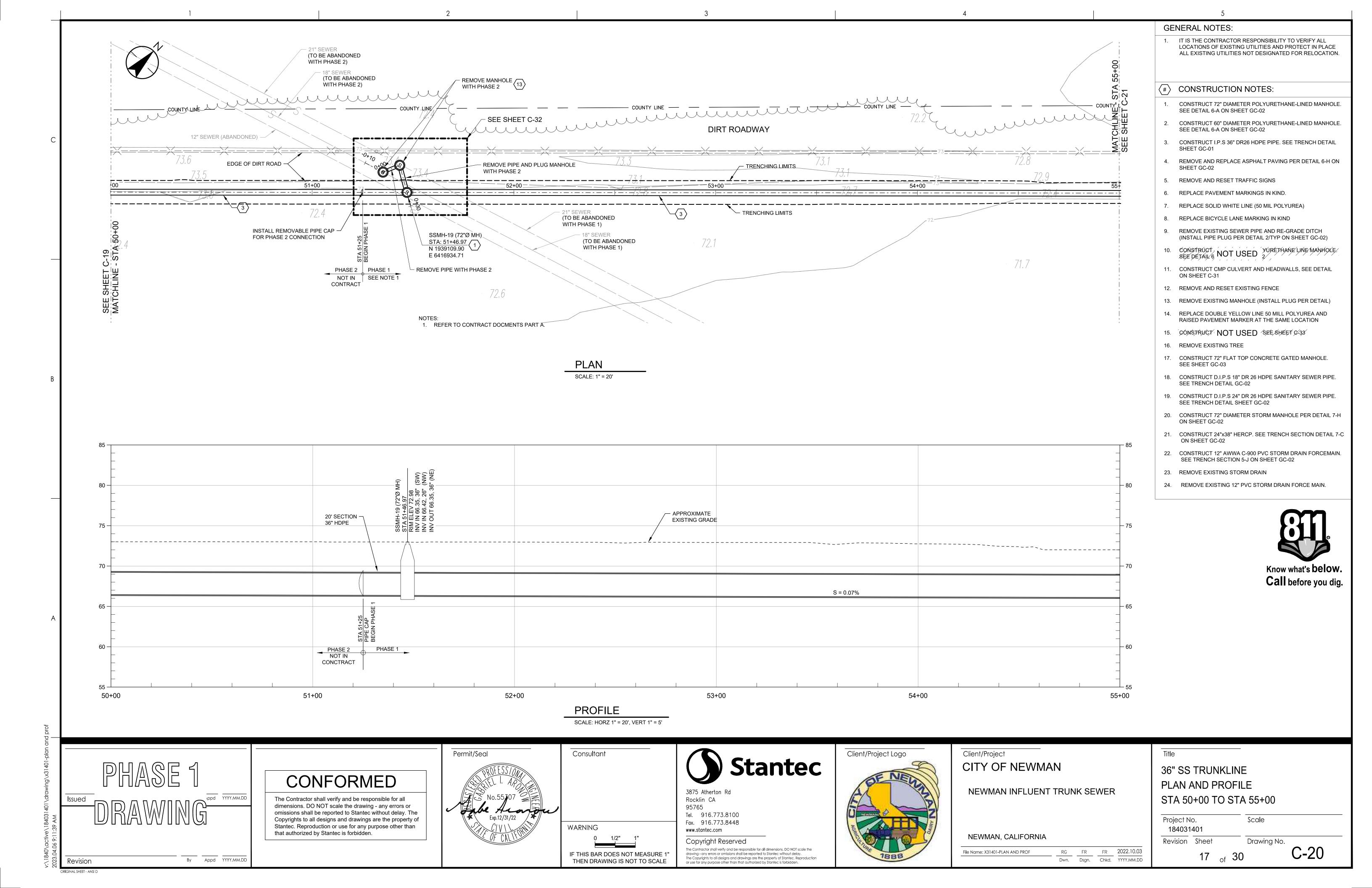






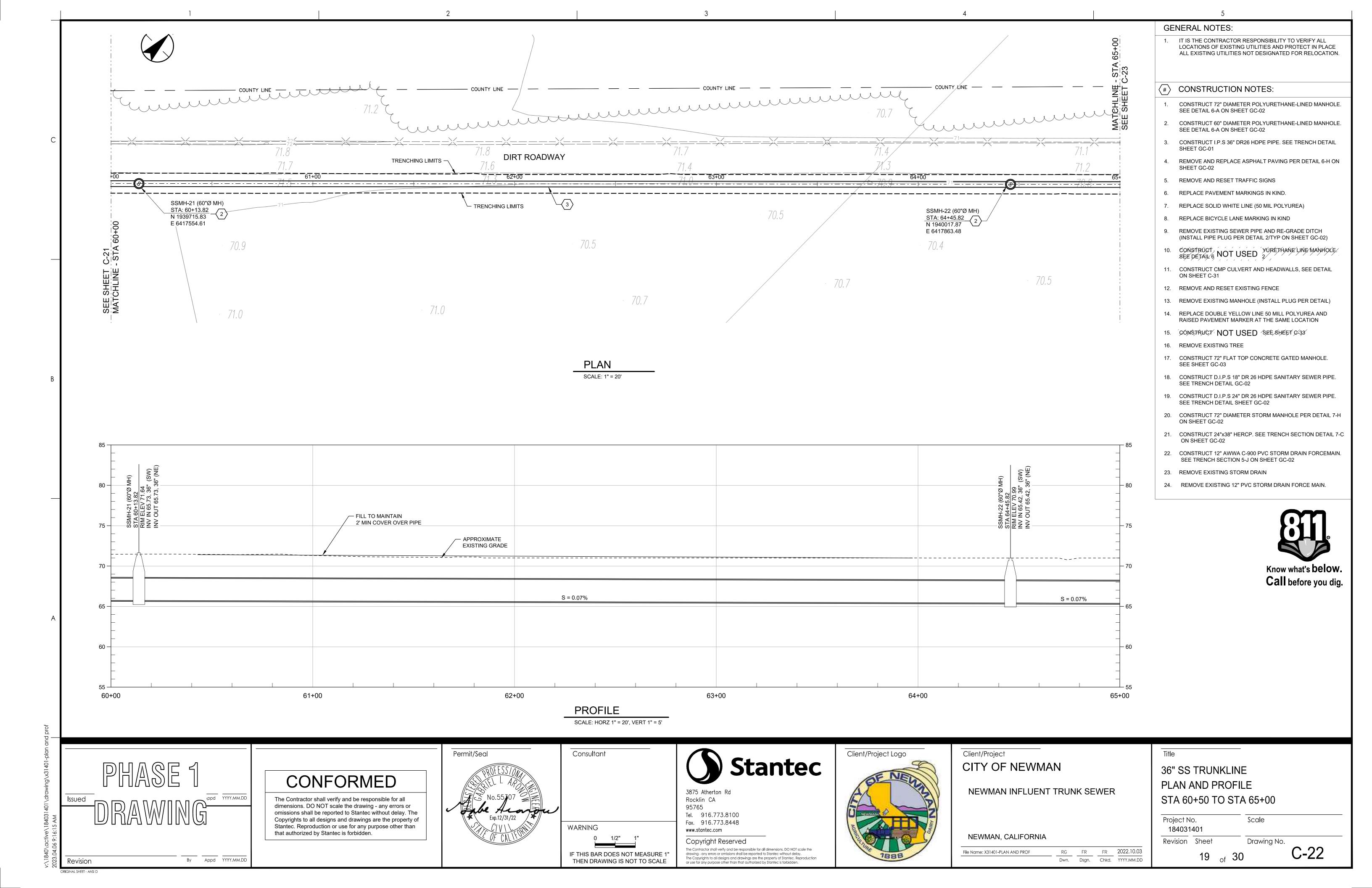


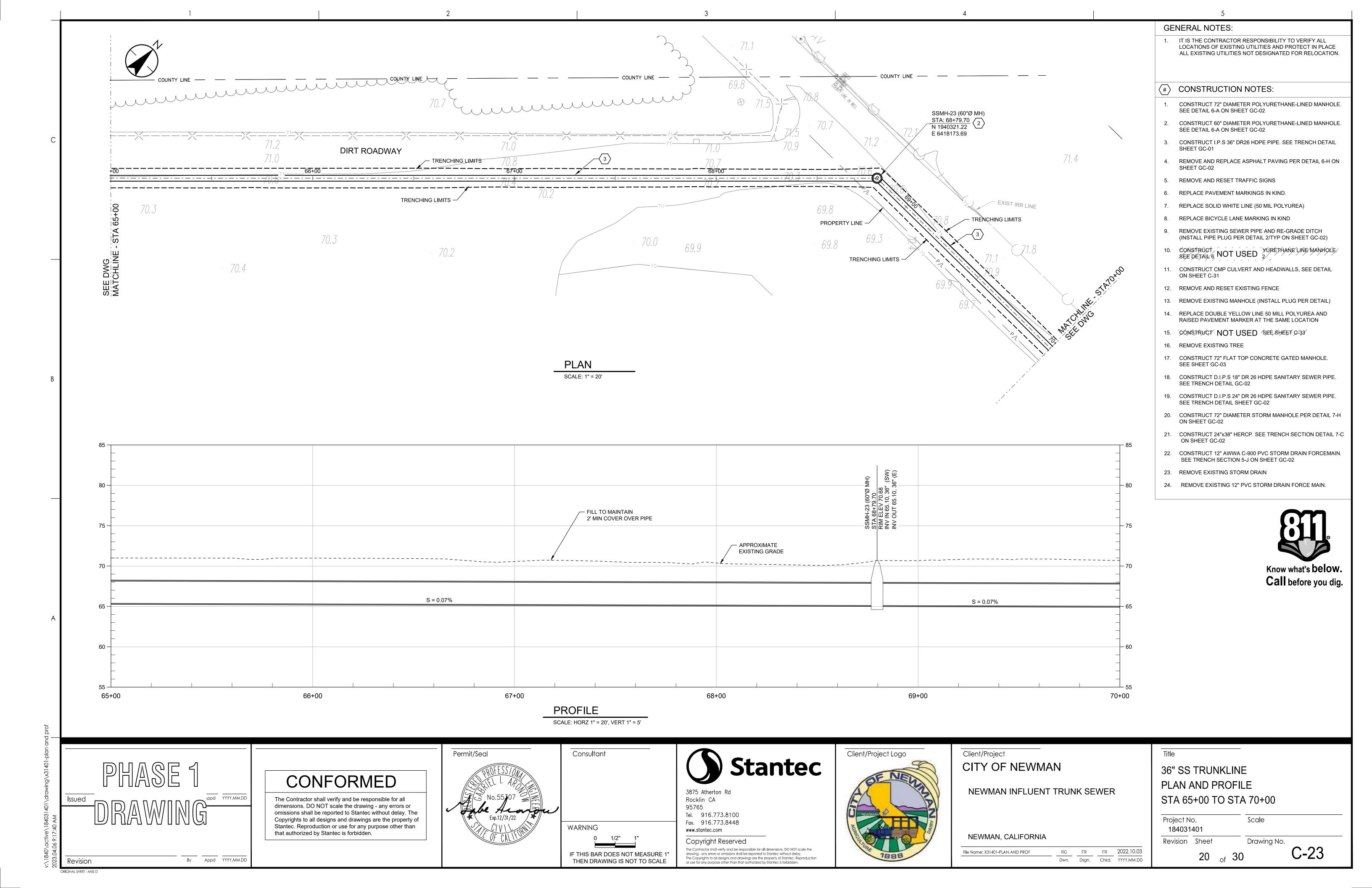


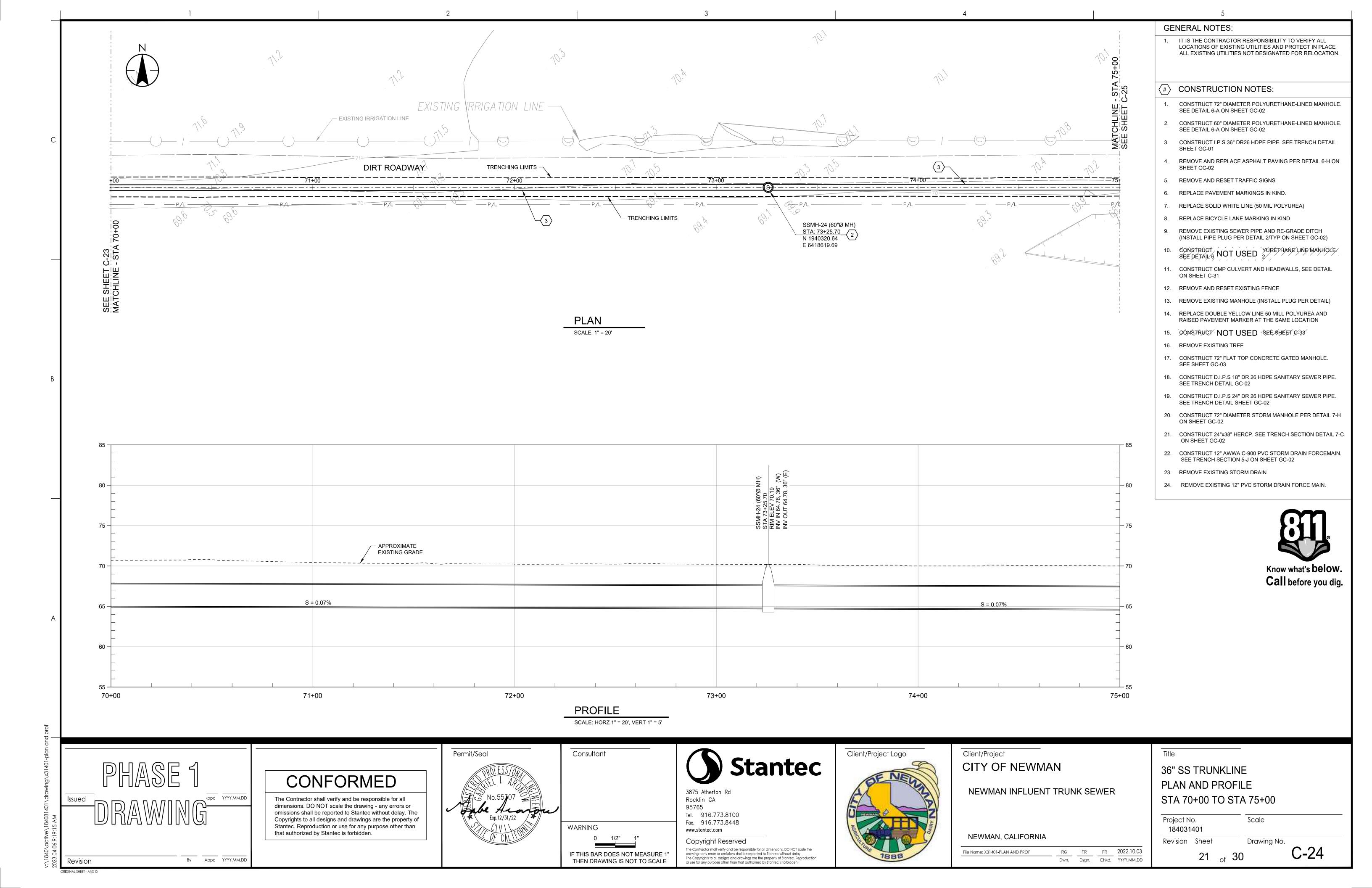


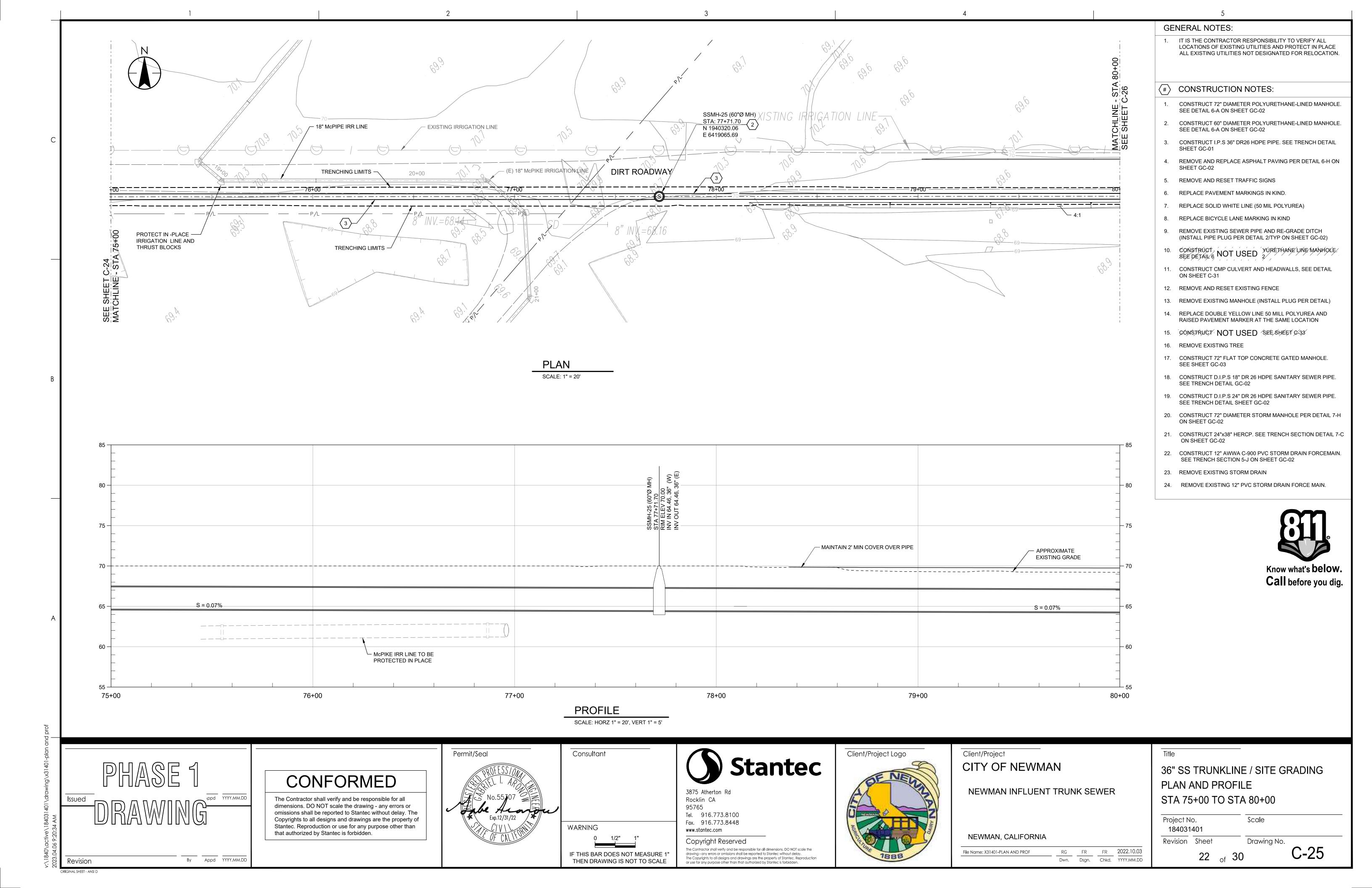
GENERAL NOTES: IT IS THE CONTRACTOR RESPONSIBILITY TO VERIFY ALL LOCATIONS OF EXISTING UTILITIES AND PROTECT IN PLACE ALL EXISTING UTILITIES NOT DESIGNATED FOR RELOCATION. **CONSTRUCTION NOTES:** CONSTRUCT 72" DIAMETER POLYURETHANE-LINED MANHOLE. SEE DETAIL 6-A ON SHEET GC-02 CONSTRUCT 60" DIAMETER POLYURETHANE-LINED MANHOLE. SEE DETAIL 6-A ON SHEET GC-02 CONSTRUCT I.P.S 36" DR26 HDPE PIPE. SEE TRENCH DETAIL SHEET GC-01 DIRT ROADWAY REMOVE AND REPLACE ASPHALT PAVING PER DETAIL 6-H ON TRENCHING LIMITS SHEET GC-02 56+00 57+00 58+00 REMOVE AND RESET TRAFFIC SIGNS REPLACE PAVEMENT MARKINGS IN KIND. REPLACE SOLID WHITE LINE (50 MIL POLYUREA) SSMH-20 (60"Ø MH) TRENCHING LIMITS STA: 55+81.82 2 N 1939413.79 8. REPLACE BICYCLE LANE MARKING IN KIND E 6417245.75 9. REMOVE EXISTING SEWER PIPE AND RE-GRADE DITCH (INSTALL PIPE PLUG PER DETAIL 2/TYP ON SHEET GC-02) 10. CONSTRUCT NOT USED YURETHANE LINE MANHOLE. 71.5 11. CONSTRUCT CMP CULVERT AND HEADWALLS, SEE DETAIL ON SHEET C-31 12. REMOVE AND RESET EXISTING FENCE 13. REMOVE EXISTING MANHOLE (INSTALL PLUG PER DETAIL) 14. REPLACE DOUBLE YELLOW LINE 50 MILL POLYUREA AND RAISED PAVEMENT MARKER AT THE SAME LOCATION 15. CONSTRUCT NOT USED SEE SHEET C-33 16. REMOVE EXISTING TREE 17. CONSTRUCT 72" FLAT TOP CONCRETE GATED MANHOLE. PLAN SEE SHEET GC-03 SCALE: 1" = 20' 18. CONSTRUCT D.I.P.S 18" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL GC-02 19. CONSTRUCT D.I.P.S 24" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL SHEET GC-02 20. CONSTRUCT 72" DIAMETER STORM MANHOLE PER DETAIL 7-H ON SHEET GC-02 21. CONSTRUCT 24"x38" HERCP. SEE TRENCH SECTION DETAIL 7-C ON SHEET GC-02 22. CONSTRUCT 12" AWWA C-900 PVC STORM DRAIN FORCEMAIN. SEE TRENCH SECTION 5-J ON SHEET GC-02 23. REMOVE EXISTING STORM DRAIN 24. REMOVE EXISTING 12" PVC STORM DRAIN FORCE MAIN. - APPROXIMATE Call before you dig. **EXISTING GRADE** S = 0.07%57+00 55+00 56+00 59+00 60+00 PROFILE SCALE: HORZ 1" = 20', VERT 1" = 5' Client/Project Logo Permit/Seal Client/Project Consultant Stantec CITY OF NEWMAN 36" SS TRUNKLINE CONFORMED PLAN AND PROFILE NEWMAN INFLUENT TRUNK SEWER 3875 Atherton Rd vppd YYYY.MM.DD STA 55+00 TO STA 60+00 The Contractor shall verify and be responsible for all Rocklin CA dimensions. DO NOT scale the drawing - any errors or 95765 omissions shall be reported to Stantec without delay. The Tel. 916.773.8100 Copyrights to all designs and drawings are the property of Scale Project No. Fax. 916.773.8448 Stantec. Reproduction or use for any purpose other than WARNING 184031401 www.stantec.com that authorized by Stantec is forbidden. NEWMAN, CALIFORNIA Revision Sheet Drawing No. Copyright Reserved The Contractor shall verify and be responsible for all dimensions. DO NOT scale the C-21
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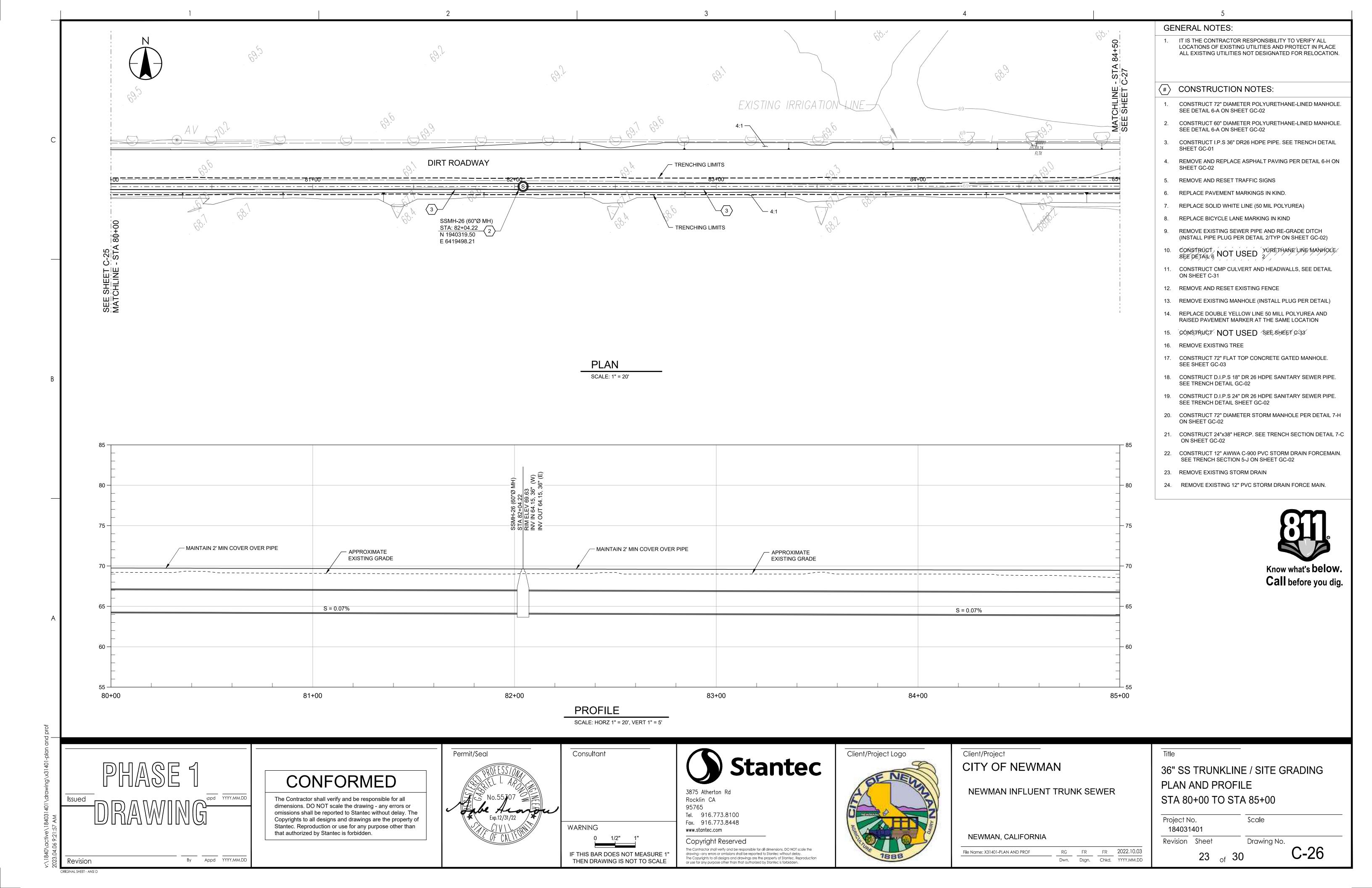
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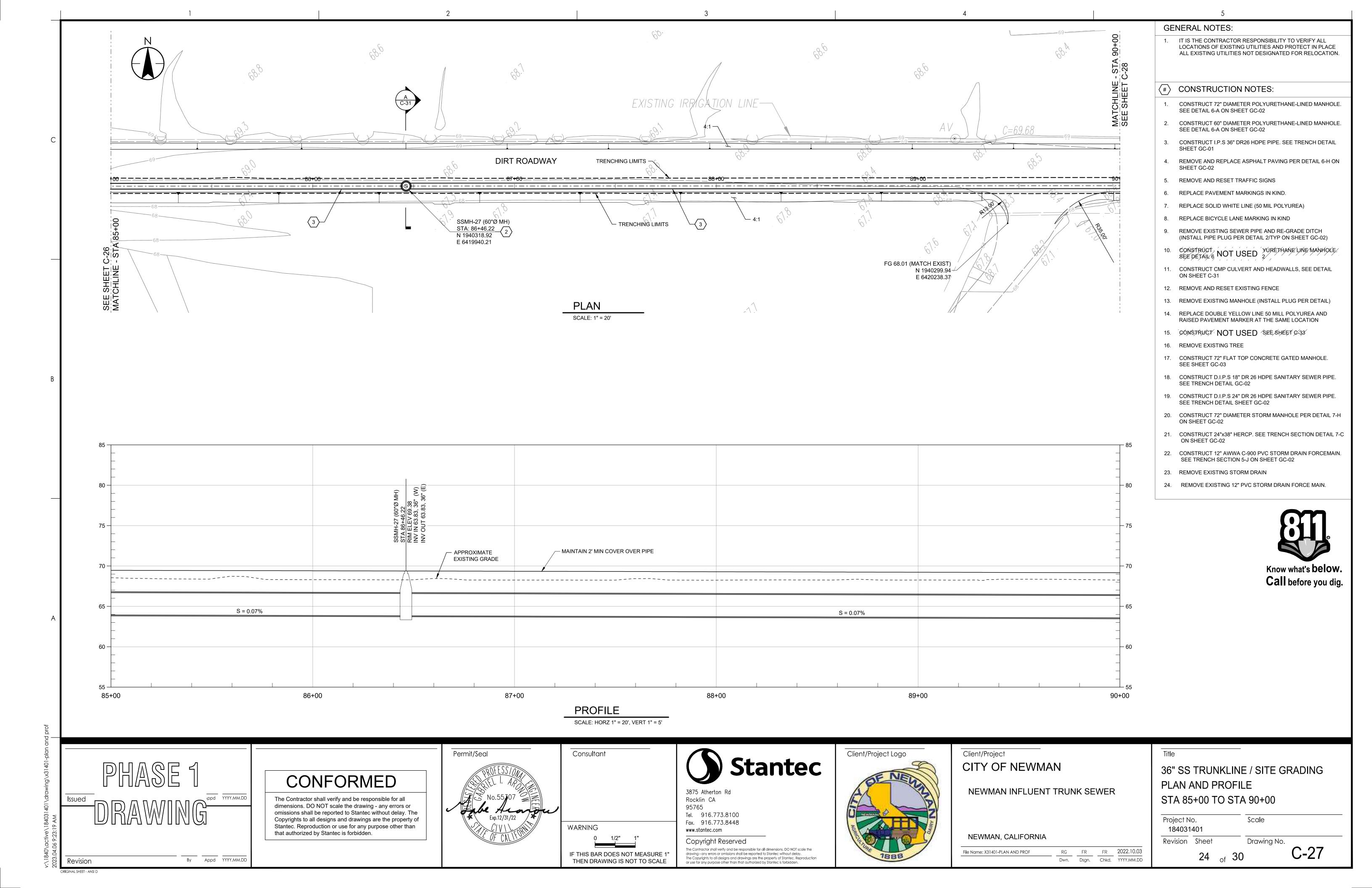


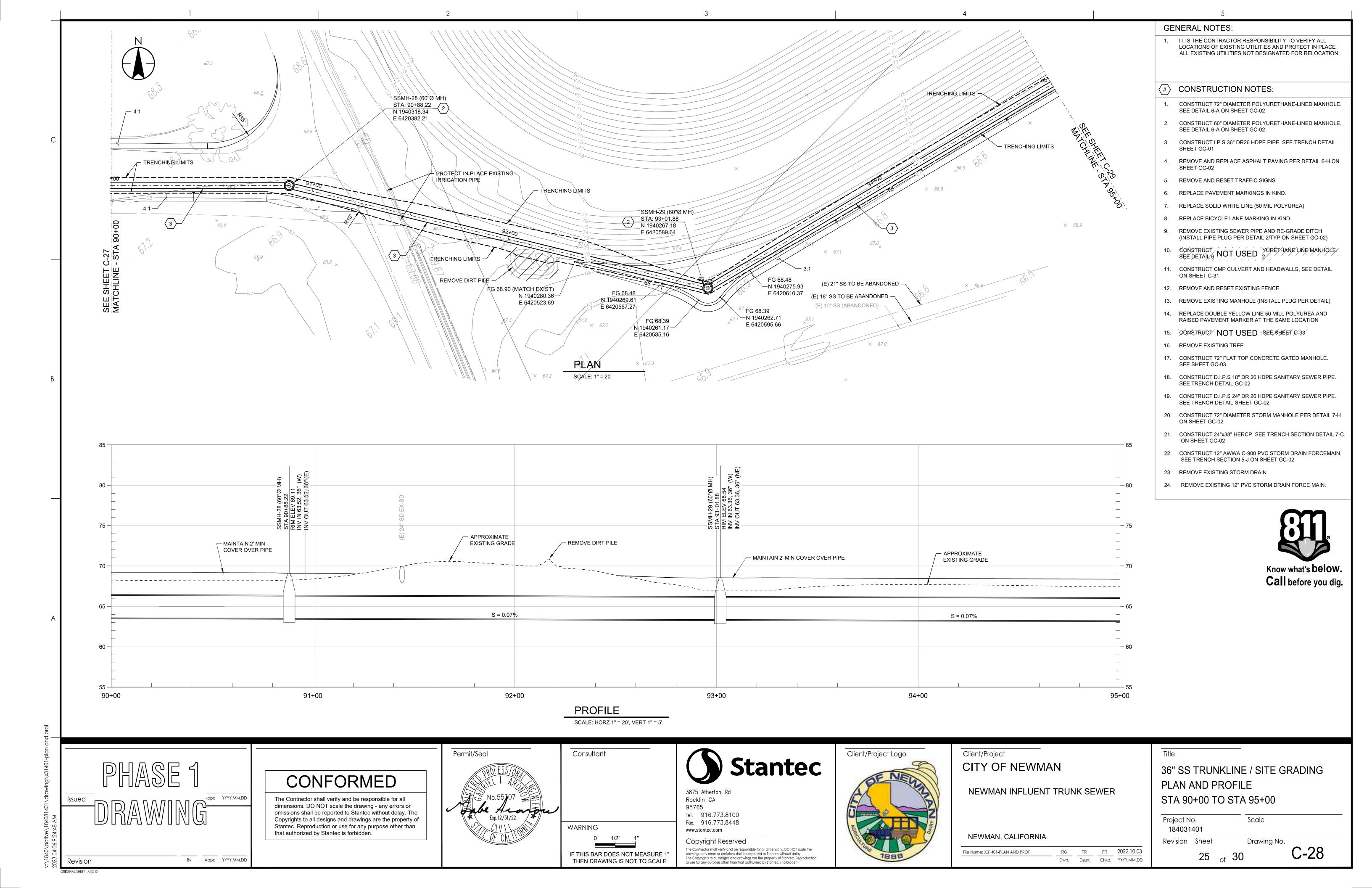












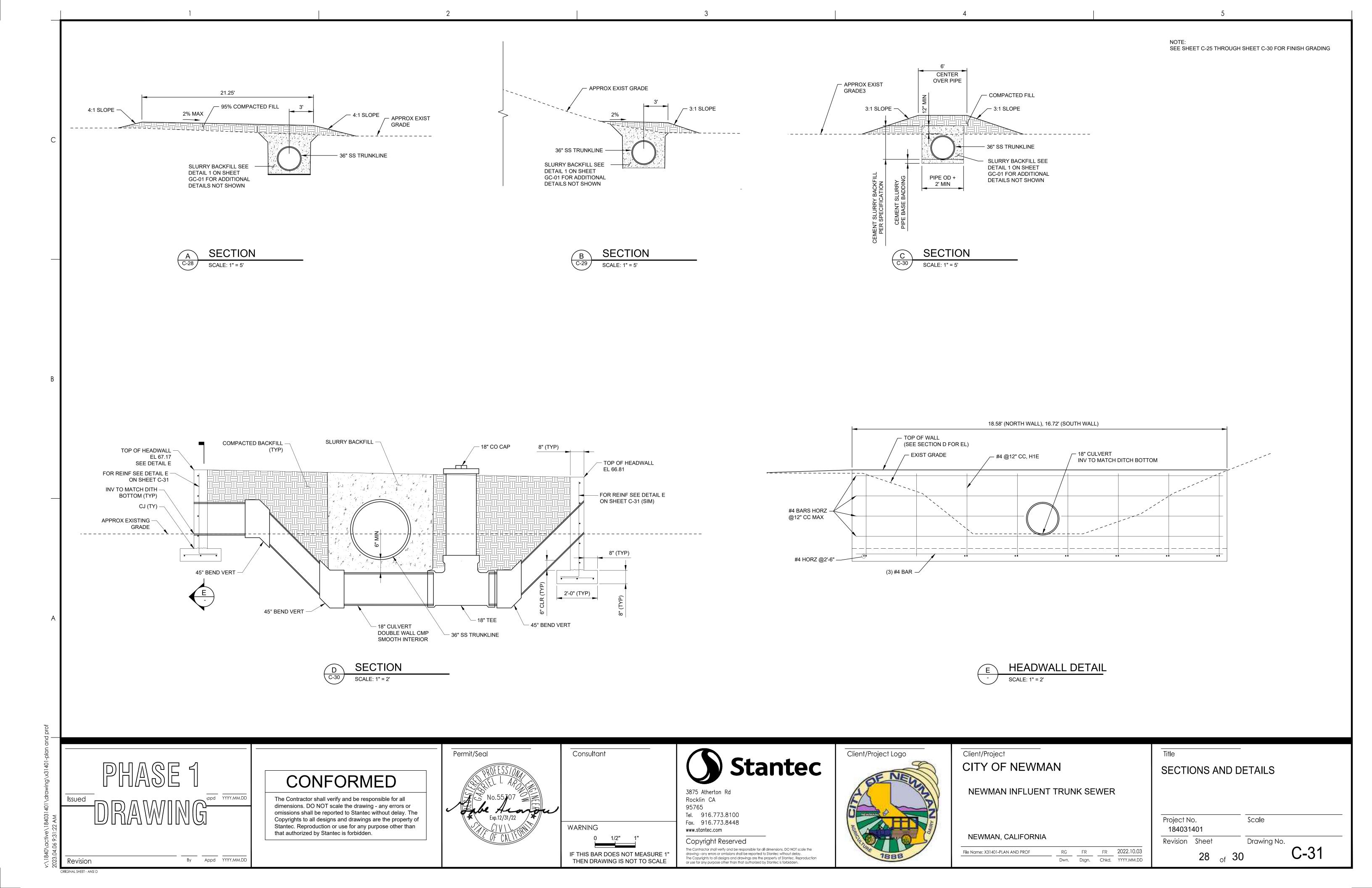
GENERAL NOTES: IT IS THE CONTRACTOR RESPONSIBILITY TO VERIFY ALL LOCATIONS OF EXISTING UTILITIES AND PROTECT IN PLACE ALL EXISTING UTILITIES NOT DESIGNATED FOR RELOCATION. CONSTRUCTION NOTES: SSMH-31 (60"Ø MH) SSMH-30 (60"Ø MH) STA: 97+85.13 N 1940512.71 STA: 95+43.50 2 CONSTRUCT 72" DIAMETER POLYURETHANE-LINED MANHOLE. N 1940512.71 -N 1940389.95 SEE DETAIL 6-A ON SHEET GC-02 E 6421005.87 E 6420797.76 2. CONSTRUCT 60" DIAMETER POLYURETHANE-LINED MANHOLE. FG 68.00 TRENCHING LIMITS SEE DETAIL 6-A ON SHEET GC-02 N 1940529.08 3. CONSTRUCT I.P.S 36" DR26 HDPE PIPE. SEE TRENCH DETAIL E 6421024.14 SHEET GC-01 REMOVE AND REPLACE ASPHALT PAVING PER DETAIL 6-H ON SHEET GC-02 FG 68.33 N 1940511.39 5. REMOVE AND RESET TRAFFIC SIGNS - TRENCHING LIMITS N 1940398.67 FG 68.08 E 6421028.41 FG 68.28 → FG 68.19 → └─ FG 68.19 E 6420818.45 N 1940497.99 N 1940376.07 N 1940382.54 6. REPLACE PAVEMENT MARKINGS IN KIND. N 1940385.49 E 6420986.82 FG 68.33 — E 6420780.13 E 6420798.77 E 6420803.77 N 1940505.44 7. REPLACE SOLID WHITE LINE (50 MIL POLYUREA) E 6421007.12 8. REPLACE BICYCLE LANE MARKING IN KIND FG 68.33 -9. REMOVE EXISTING SEWER PIPE AND RE-GRADE DITCH N 1940505.21 (INSTALL PIPE PLUG PER DETAIL 2/TYP ON SHEET GC-02) E 6421028.74 10. CONSTRUCT NOT USED YURETHANE LINE MANHOLE. 11. CONSTRUCT CMP CULVERT AND HEADWALLS, SEE DETAIL ON SHEET C-31 12. REMOVE AND RESET EXISTING FENCE 13. REMOVE EXISTING MANHOLE (INSTALL PLUG PER DETAIL) 14. REPLACE DOUBLE YELLOW LINE 50 MILL POLYUREA AND RAISED PAVEMENT MARKER AT THE SAME LOCATION 15. CONSTRUCT NOT USED SEESHEET C-33 16. REMOVE EXISTING TREE 17. CONSTRUCT 72" FLAT TOP CONCRETE GATED MANHOLE. SEE SHEET GC-03 SCALE: 1" = 20' 18. CONSTRUCT D.I.P.S 18" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL GC-02 19. CONSTRUCT D.I.P.S 24" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL SHEET GC-02 20. CONSTRUCT 72" DIAMETER STORM MANHOLE PER DETAIL 7-H ON SHEET GC-02 21. CONSTRUCT 24"x38" HERCP. SEE TRENCH SECTION DETAIL 7-C ON SHEET GC-02 22. CONSTRUCT 12" AWWA C-900 PVC STORM DRAIN FORCEMAIN. SEE TRENCH SECTION 5-J ON SHEET GC-02 23. REMOVE EXISTING STORM DRAIN 24. REMOVE EXISTING 12" PVC STORM DRAIN FORCE MAIN. SSMH-31 (STA 97+8E RIM ELEV INV IN 63.0 APROXIMATE **EXISTING GRADE** MAINTAIN 2' MIN COVER OVER PIPE Know what's below. Call before you dig. ·----S = 0.07%96+00 97+00 95+00 98+00 98+50 PROFILE SCALE: HORZ 1" = 20', VERT 1" = 5' Client/Project Logo Permit/Seal Client/Project Consultant Stantec CITY OF NEWMAN 36" SS TRUNKLINE / SITE GRADING CONFORMED PLAN AND PROFILE NEWMAN INFLUENT TRUNK SEWER 3875 Atherton Rd vppd YYYY.MM.DD STA 95+00 TO STA 98+50 The Contractor shall verify and be responsible for all Rocklin CA dimensions. DO NOT scale the drawing - any errors or 95765 omissions shall be reported to Stantec without delay. The Tel. 916.773.8100 Copyrights to all designs and drawings are the property of Project No. Scale Fax. 916.773.8448 Stantec. Reproduction or use for any purpose other than WARNING 184031401 www.stantec.com that authorized by Stantec is forbidden. NEWMAN, CALIFORNIA Drawing No. Copyright Reserved Revision Sheet C-29 The Contractor shall verify and be responsible for all dimensions. DO NOT scale the
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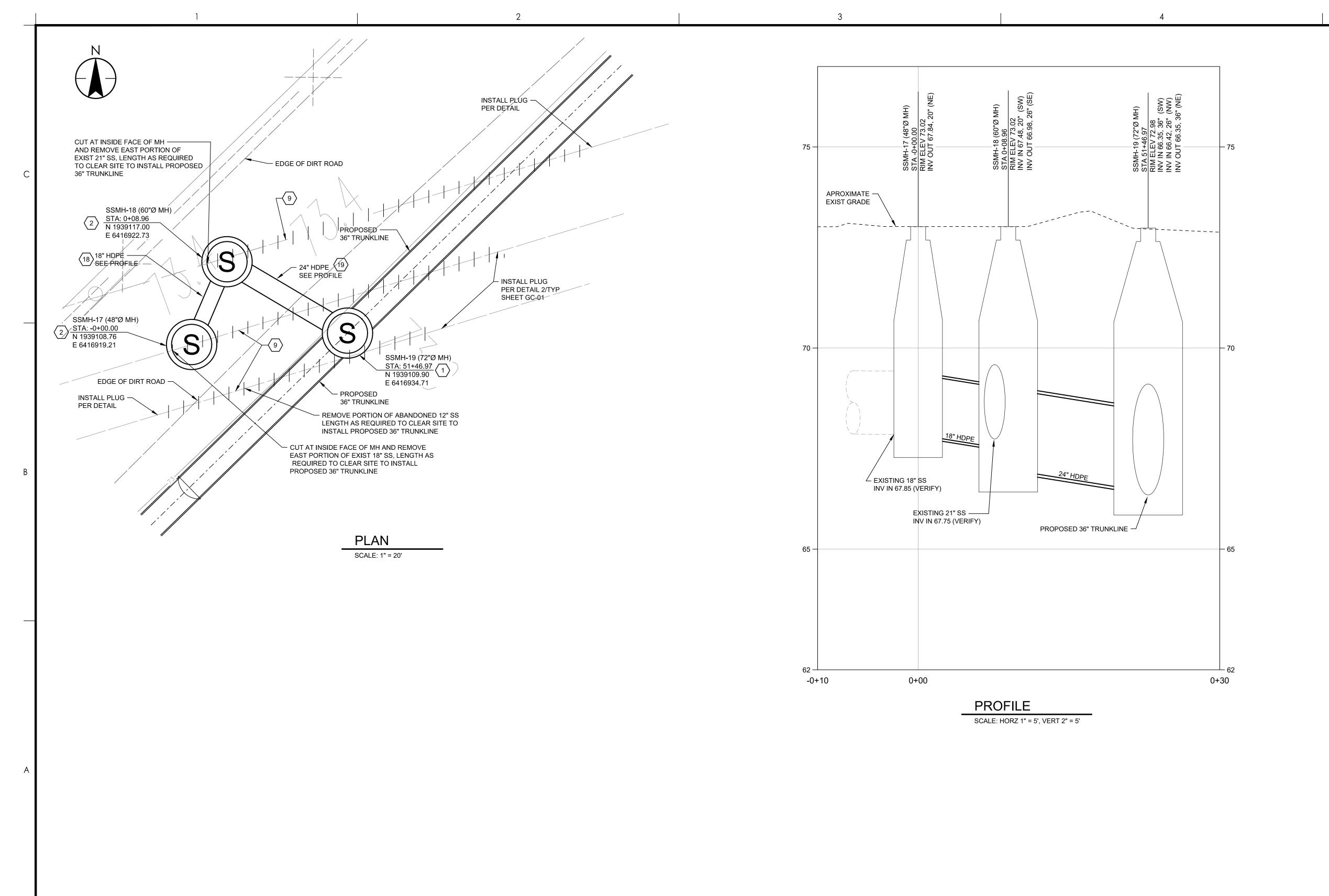
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GENERAL NOTES: IT IS THE CONTRACTOR RESPONSIBILITY TO VERIFY ALL LOCATIONS OF EXISTING UTILITIES AND PROTECT IN PLACE ALL EXISTING UTILITIES NOT DESIGNATED FOR RELOCATION. 65.8 CONSTRUCTION NOTES: CONSTRUCT 72" DIAMETER POLYURETHANE-LINED MANHOLE. SEE DETAIL 6-A ON SHEET GC-02 HEADWALL FG 67.17 -2. CONSTRUCT 60" DIAMETER POLYURETHANE-LINED MANHOLE. N 1940475.62 – FG 67.17 SEE DETAIL 6-A ON SHEET GC-02 E 6421241.89 N 1940472.08 CONSTRUCT I.P.S 36" DR26 HDPE PIPE. SEE TRENCH DETAIL E 6421260.14 FG 68.33 — ─ HEADWQRKS SHEET GC-01 ∕— FG 67.00 N 1940472.11 SSMH-32 (72"Ø MH) N 1940463.75 TRENCHING LIMITS -/E 6421231.15 REMOVE AND REPLACE ASPHALT PAVING PER DETAIL 6-H ON STA: 101+13.34 N 1940450.15 E 6421258.04 SHEET GC-02 TRENCHING LIMITS E 6421328.07 5. REMOVE AND RESET TRAFFIC SIGNS 6. REPLACE PAVEMENT MARKINGS IN KIND. 7. REPLACE SOLID WHITE LINE (50 MIL POLYUREA) FG 68.33 -8. REPLACE BICYCLE LANE MARKING IN KIND ⊢ 18" CO REMOVE EXISTING MH. N 1940466.15 CUT PIPE TO SUIT NEW MH 9. REMOVE EXISTING SEWER PIPE AND RE-GRADE DITCH E 6421229.93 (INSTALL PIPE PLUG PER DETAIL 2/TYP ON SHEET GC-02) N 1940454,60 TRENCHING LIMITS -E 6421255.73 FG 67.00 -C-29 - STA 10. CONSTRUCT NOT USED YURETHANE LINE MANHOLE. HEADWALL N 1940467.12 E 6421240.68 11. CONSTRUCT CMP CULVERT AND HEADWALLS, SEE DETAIL FG 66.81 ON SHEET C-31 N 1940457.78 E 6421239.32 12. REMOVE AND RESET EXISTING FENCE 13. REMOVE EXISTING MANHOLE (INSTALL PLUG PER DETAIL) 14. REPLACE DOUBLE YELLOW LINE 50 MILL POLYUREA AND RAISED PAVEMENT MARKER AT THE SAME LOCATION 15. CONSTRUCT NOT USED SEE SHEET C-33 16. REMOVE EXISTING TREE 17. CONSTRUCT 72" FLAT TOP CONCRETE GATED MANHOLE. SEE SHEET GC-03 SCALE: 1" = 20' 18. CONSTRUCT D.I.P.S 18" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL GC-02 19. CONSTRUCT D.I.P.S 24" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL SHEET GC-02 20. CONSTRUCT 72" DIAMETER STORM MANHOLE PER DETAIL 7-H ON SHEET GC-02 21. CONSTRUCT 24"x38" HERCP. SEE TRENCH SECTION DETAIL 7-C ON SHEET GC-02 22. CONSTRUCT 12" AWWA C-900 PVC STORM DRAIN FORCEMAIN. SEE TRENCH SECTION 5-J ON SHEET GC-02 23. REMOVE EXISTING STORM DRAIN 24. REMOVE EXISTING 12" PVC STORM DRAIN FORCE MAIN. - MAINTAIN 2' MIN COVER OVER PIPE Know what's below. Call before you dig. **HEADWORKS** - 65 - 18" SS S = 0.07%INV 62.71 98+50 99+00 100+00 101+00 102+00 PROFILE SCALE: HORZ 1" = 20', VERT 1" = 5' Client/Project Logo Client/Project Permit/Seal Consultant Stantec CITY OF NEWMAN 36" SS TRUNKLINE / SITE GRADING CONFORMED PLAN AND PROFILE NEWMAN INFLUENT TRUNK SEWER 3875 Atherton Rd vppd YYYY.MM.DD STA 98-50 TO STA 101+00 The Contractor shall verify and be responsible for all Rocklin CA dimensions. DO NOT scale the drawing - any errors or 95765 omissions shall be reported to Stantec without delay. The Copyrights to all designs and drawings are the property of Tel. 916.773.8100 Scale Project No. Fax. 916.773.8448 Stantec. Reproduction or use for any purpose other than WARNING 184031401 SCALE www.stantec.com that authorized by Stantec is forbidden. NEWMAN, CALIFORNIA Copyright Reserved Revision Sheet Drawing No. The Contractor shall verify and be responsible for all dimensions. DO NOT scale the C-30
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GENERAL NOTES:

 IT IS THE CONTRACTOR RESPONSIBILITY TO VERIFY ALL LOCATIONS OF EXISTING UTILITIES AND PROTECT IN PLACE ALL EXISTING UTILITIES NOT DESIGNATED FOR RELOCATION.

CONSTRUCTION NOTES:

- 1. CONSTRUCT 72" DIAMETER POLYURETHANE-LINED MANHOLE. SEE DETAIL 6-A ON SHEET GC-02
- 2. CONSTRUCT 60" DIAMETER POLYURETHANE-LINED MANHOLE. SEE DETAIL 6-A ON SHEET GC-02
- CONSTRUCT I.P.S 36" DR26 HDPE PIPE. SEE TRENCH DETAIL SHEET GC-01
- 4. REMOVE AND REPLACE ASPHALT PAVING PER DETAIL 6-H ON SHEET GC-02
- 5. REMOVE AND RESET TRAFFIC SIGNS
- 6. REPLACE PAVEMENT MARKINGS IN KIND.
- 7. REPLACE SOLID WHITE LINE (50 MIL POLYUREA)
- 8. REPLACE BICYCLE LANE MARKING IN KIND
- 9. REMOVE EXISTING SEWER PIPE AND RE-GRADE DITCH (INSTALL PIPE PLUG PER DETAIL 2/TYP ON SHEET GC-02)
- 10. CONSTRUCT NOT USED YURETHANK LIKE MANHOLE.
- 11. CONSTRUCT CMP CULVERT AND HEADWALLS, SEE DETAIL
- 12. REMOVE AND RESET EXISTING FENCE
- 13. REMOVE EXISTING MANHOLE (INSTALL PLUG PER DETAIL)
- 14. REPLACE DOUBLE YELLOW LINE 50 MILL POLYUREA AND RAISED PAVEMENT MARKER AT THE SAME LOCATION
- 15. CONSTRUCT NOT USED SEE SHEET 9-33
- 16. REMOVE EXISTING TREE

ON SHEET C-31

- 17. CONSTRUCT 72" FLAT TOP CONCRETE GATED MANHOLE. SEE SHEET GC-03
- 18. CONSTRUCT D.I.P.S 18" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL GC-02
- 19. CONSTRUCT D.I.P.S 24" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL SHEET GC-02
- 20. CONSTRUCT 72" DIAMETER STORM MANHOLE PER DETAIL 7-H ON SHEET GC-02
- 21. CONSTRUCT 24"x38" HERCP. SEE TRENCH SECTION DETAIL 7-C ON SHEET GC-02
- 22. CONSTRUCT 12" AWWA C-900 PVC STORM DRAIN FORCEMAIN. SEE TRENCH SECTION 5-J ON SHEET GC-02
- 23. REMOVE EXISTING STORM DRAIN
- 24. REMOVE EXISTING 12" PVC STORM DRAIN FORCE MAIN.

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WARNING

0 1/2" 1"

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CITY OF NEWMAN

NEWMAN INFLUENT TRUNK SEWER

NEWMAN, CALIFORNIA

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Title

36" SS TRUNKLINE PLAN AND PROFILE

DETAIL

Project No. Scale

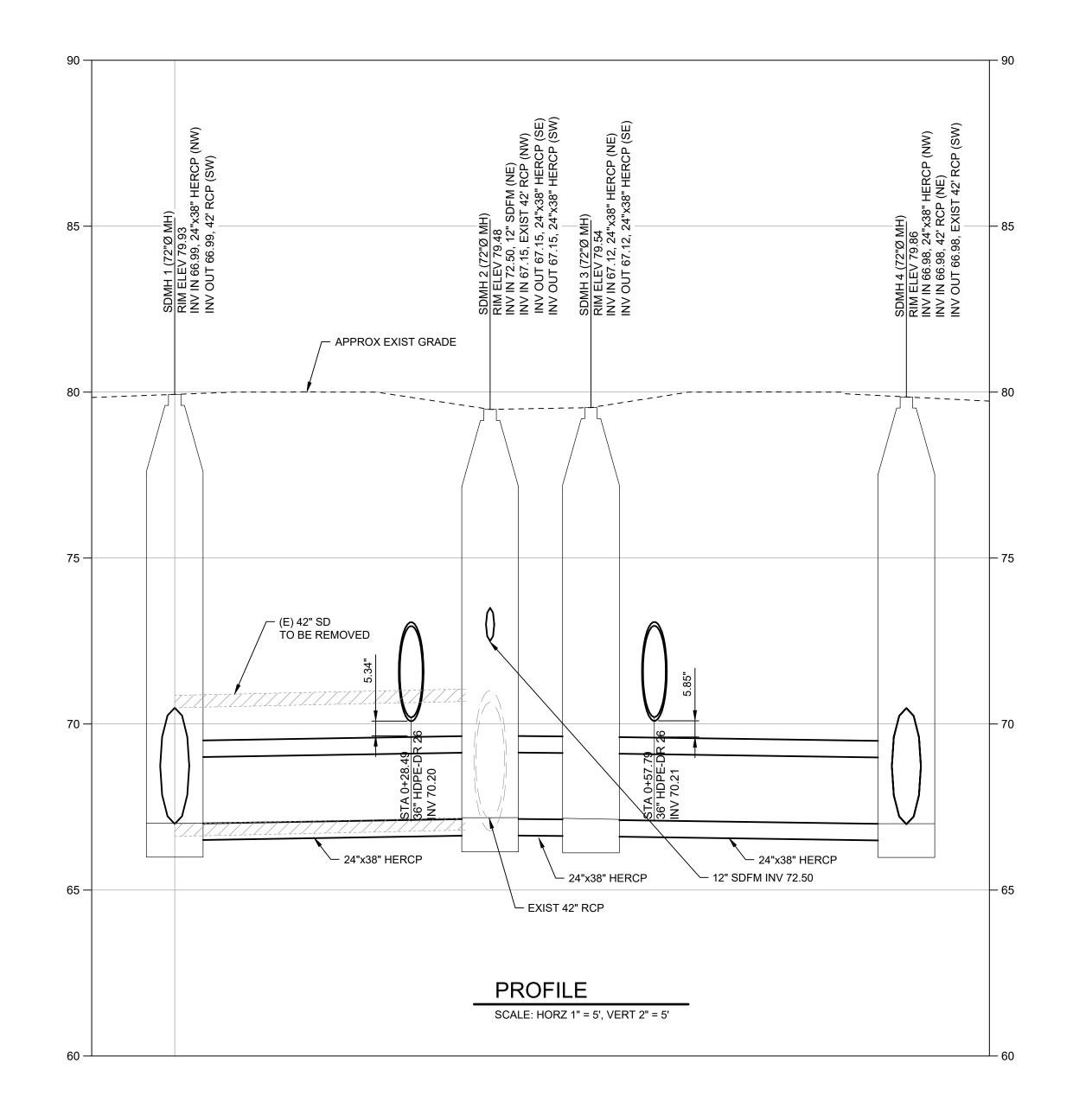
184031401RevisionSheetDrawing No.

29 of 30

C-32

Revision Colonial States And D

[/] 12"x45° ELL — WITH THRUST BLOCK SEE DETAIL ON SHEET GC-03 R=77.99 REMOVE 12" SDFM — AS REQUIRED 22 RELOCATED 12" SDFM — SDMH 2 (72"Ø MH) N 1938436.95 E 6413953.36 REMOVE EXIST 42"/RCP STORM DRAIN PER (23) SDMH 3 (72"Ø MH) 20 N 1938427.45 E 6413945.79 21) 24"x38" HERCP SDMH 1 (72"Ø MH) N 1938409.46 N 1938409.46 E 6413979.59 EXIST 42" RCP TO REMAIN REMOVE SECTION OF EXIST 23 42" RCP AS REQUIRED TO SDMH 4 (72"Ø MH) (20) (NW) NV.=66.99 N 1938398.04 INSTALL NEW MH// N 1938398.04 E 6413969.86 12" (NE) TOP.=73.47 - (E) 42" SD VERIFY ELEVATION EXIST 42" RCP TO REMAIN SCALE: 1" = 20'



GENERAL NOTES:

IT IS THE CONTRACTOR RESPONSIBILITY TO VERIFY ALL LOCATIONS OF EXISTING UTILITIES AND PROTECT IN PLACE ALL EXISTING UTILITIES NOT DESIGNATED FOR RELOCATION.

CONSTRUCTION NOTES:

- CONSTRUCT 72" DIAMETER POLYURETHANE-LINED MANHOLE. SEE DETAIL 6-A ON SHEET GC-02
- CONSTRUCT 60" DIAMETER POLYURETHANE-LINED MANHOLE. SEE DETAIL 6-A ON SHEET GC-02
- CONSTRUCT I.P.S 36" DR26 HDPE PIPE. SEE TRENCH DETAIL SHEET GC-01
- REMOVE AND REPLACE ASPHALT PAVING PER DETAIL 6-H ON SHEET GC-02
- 5. REMOVE AND RESET TRAFFIC SIGNS
- REPLACE PAVEMENT MARKINGS IN KIND.
- REPLACE SOLID WHITE LINE (50 MIL POLYUREA)
- 8. REPLACE BICYCLE LANE MARKING IN KIND
- REMOVE EXISTING SEWER PIPE AND RE-GRADE DITCH
- (INSTALL PIPE PLUG PER DETAIL 2/TYP ON SHEET GC-02)
- 10. CONSTRUCT NOT USED YURETHANE LINE MANHOLE.
- 11. CONSTRUCT CMP CULVERT AND HEADWALLS, SEE DETAIL ON SHEET C-31
- 12. REMOVE AND RESET EXISTING FENCE
- 13. REMOVE EXISTING MANHOLE (INSTALL PLUG PER DETAIL)
- 14. REPLACE DOUBLE YELLOW LINE 50 MILL POLYUREA AND RAISED PAVEMENT MARKER AT THE SAME LOCATION
- 15. CONSTRUCT NOT USED SEE SHEET C-33
- 16. REMOVE EXISTING TREE
- 17. CONSTRUCT 72" FLAT TOP CONCRETE GATED MANHOLE. SEE SHEET GC-03
- 18. CONSTRUCT D.I.P.S 18" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL GC-02
- 19. CONSTRUCT D.I.P.S 24" DR 26 HDPE SANITARY SEWER PIPE. SEE TRENCH DETAIL SHEET GC-02
- 20. CONSTRUCT 72" DIAMETER STORM MANHOLE PER DETAIL 7-H ON SHEET GC-02
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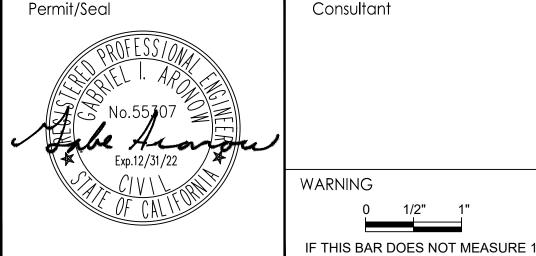




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Client/Project

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36" SS TRUNKLINE PLAN AND PROFILE

DETAIL

Revision Sheet

Scale Project No. 184031401

> Drawing No. 30 of 30

C-33

Revision

CalEEMod Results

BAPPENDIX

Page 1 of 1

Date: 1/4/2023 3:00 PM

Newman Sewer Trunk Construction Emissions - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Newman Sewer Trunk Construction Emissions

San Joaquin Valley Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	28.80	1000sqft	0.66	28,800.00	0
Other Non-Asphalt Surfaces	68.60	1000sqft	1.57	68,600.00	0

(lb/MWhr)

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas and Electric Con	mpany			
CO2 Intensity	203.98	CH4 Intensity	0.033	N2O Intensity	0.004

(lb/MWhr)

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

(lb/MWhr)

Land Use - 5165-2878=2287

Construction Phase - Per City Consultant Email 122922

Off-road Equipment -

Off-road Equipment - Per City Consultant EMail 122922

Trips and VMT - No building construction

Offloading spoils to WWTRF

Hauling Trips to match vendor default

Demolition -

Date: 1/4/2023 3:00 PM

Newman Sewer Trunk Construction Emissions - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading - per City Consultant EMail 122922

Construction Off-road Equipment Mitigation - Add clean engines and dust control per SJVAPCD Rule 9510 and Reg VIII

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	1.00
tblConstructionPhase	NumDays	3.00	70.00
tblConstructionPhase	NumDays	6.00	70.00
tblGrading	MaterialExported	0.00	4,000.00
tblGrading	MaterialExported	0.00	600.00
tblGrading	MaterialImported	0.00	2,600.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	7.30
tblTripsAndVMT	olTripsAndVMT HaulingTripLength		1.00
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tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	WorkerTripNumber	41.00	0.00

2.0 Emissions Summary

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Newman Sewer Trunk Construction Emissions - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

=																
	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	2 Total CO2	CH4	N2O	CO2e
Year					tor	ns/yr							M	T/yr		
2024	0.1502	1.2514	1.0109	2.4300e-003	0.3182	0.0498	0.3680	0.1299	0.0462	0.1760	0.0000	212.7289	212.7289	0.0583	2.2000e-003	214.84
Maximum	0.1502	1.2514	1.0109	2.4300e-003	0.3182	0.0498	0.3680	0.1299	0.0462	0.1760	0.0000	212.7289	212.7289	0.0583	2.2000e-003	214.84
litigated Con	structio	<u>n</u>														
	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2
Year					tor	ns/yr							M	T/yr		
2024	0.1219	0.9946	1.0226	2.4300e-003	0.1513	0.0378	0.1891	0.0606	0.0350	0.0957	0.0000	212.7286	212.7286	0.0583	2.2000e-003	214.84
Maximum	0.1219	0.9946	1.0226	2.4300e-003	0.1513	0.0378	0.1891	0.0606	0.0350	0.0957	0.0000	212.7286	212.7286	0.0583	2.2000e-003	214.84
	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
ercent Reduction	18.85	20.52	-1.16	0.00	52.47	24.00	48.62	53.31	24.13	45.66	0.00	0.00	0.00	0.00	0.00	0.00
Quarter	Sta	rt Date	End	Date	Maxim	um Unmitiga	ited ROG + NO	X (tons/qua	rter)	Maxim	um Mitigated	d ROG + NO	X (tons/quart	er)		
1	1-	1-2024	3-31-	-2024			0.5219					0.4202				
2	4-	1-2024	6-30-	-2024			0.2971					0.2387				
3	7-	1-2024	9-30-	-2024			0.5332					0.4162				
			Hig	hest			0.5332					0.4202				

CNDDB Records



Appendix C Special-Status Plant Species with Potential to Occur in the Project Vicinity

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on Project Site
Alkali milk-vetch (Astragalus tener var. tener)	//1B.2	Alkaline sites in playas, valley and foothill grassland (on adobe clay), and vernal pools; elevation 1-60m. Blooming Period: March - June.	Unlikely. Suitable vernal pool or alkaline habitat not found at the project site.
Alkali-sink goldfields (Lasthenia chrysantha)	//1B.1	Vernal pools. Alkaline; elevation 0-200m.	Unlikely. Suitable vernal pool or alkaline habitat not found at the project site.
Big tarplant (Blepharizonia plumosa)	//1B.1	Valley and foothill grassland. Dry hills and plains in annual grassland. Clay to clay-loam soils, usually on slopes and often in burned areas; elevation 15-445m. Blooming Period: July - October.	Unlikely. Suitable clay soil habitat not found at the project site.
California alkali grass (Puccinellia simplex)	//1B.2	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernally mesic. Sinks, flats, and lake margins; elevation 1-915m. Blooming Period: March - May.	Unlikely. Suitable vernal pool or alkaline habitat not found at the project site.
Coulter's goldfields (Lasthenia glabrata ssp. coulteri)	//1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands; elevation 1-1375m. Blooming Period: February – June.	Unlikely. Suitable vernal pool or alkaline habitat not found at the project site.
Delta button-celery (Eryngium racemosum)	/SE/1B.1	Riparian scrub; prefers seasonally inundated floodplain on clay soils; elevation 3-75m. Blooming Period: June - August.	Unlikely. Suitable riparian scrub habitat not found at the project site.
Diamond-petaled California poppy (Eschscholzia rhombipetala)	//1B.1	Valley and foothill grassland. Alkaline, clay slopes and flats; elevation 0-97m. Blooming Period: March - April.	Unlikely. Suitable vernal pool or alkaline habitat not found at the project site.
Heartscale (Atriplex cordulata var. cordulata)	//1B.2	Chenopod scrub, valley and foothill grassland, and meadows. Prefers alkaline flats and scalds in the Central Valley, on sandy soils; elevation 1-150m. Blooming Period: April - October.	Unlikely. Suitable alkaline habitat not found at the project site.
Hispid's salty bird's-beak (Chloropyron molle ssp. hispidum)	//1B.1	Meadows, playas, valley and foothill grassland. In damp alkaline soils, especially in alkaline meadows and alkali sinks with Distichlis sp.; elevation 10-155m. Blooming Period: June - September.	Unlikely. Suitable meadow or alkaline habitat not found at the project site.
Hospital Canyon larkspur (Delphinium californicum ssp. interius)	//1B.2	Cismontane woodland and chaparral, in wet, boggy meadows, openings in chaparral, and in canyons; elevation 225-1060m. Blooming Period: April - June.	Unlikely. Suitable meadow habitat not found at the project site.
Lemmon's jewel-flower (Caulanthus lemmonii)	//1B.2	Pinyon-juniper woodland, valley and foothill grassland; elevation 80-1220m. Blooming Period: March - May.	Unlikely. Suitable woodland or undisturbed grassland habitat not found at the project site.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on Project Site
Lesser saltscale (Atriplex minuscula)	//1B.1	Chenopod scrub, playas, and valley and foothill grassland. In alkali sinks in sandy, alkaline soils; elevation 20-100m. Blooming Period: May - October.	Unlikely. Suitable alkaline habitat not found at the project site.
Lime Ridge navarretia (Navarretia gowenii)	//1B.2	Chaparral, on calcium carbonate-rich soil with high clay content; elevation 180-305m. Blooming Period: May - June.	Unlikely. Suitable clay soil habitat not found at the project site.
Northern slender pondweed (Stuckenia filiformis ssp. alpina)	//2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels; elevation 5-2325m. Blooming Period: May – July.	Unlikely. Suitable wetland habitat not found at the project site.
Prostrate vernal pool navarretia (Navarretia prostrata)	//1B.1	Coastal scrub, valley and foothill grassland, and vernal pools. Alkaline soils in grassland, or in vernal pools; elevation 15-700m. Blooming Period: April - July.	Unlikely. Suitable vernal pool or alkaline habitat not found at the project site.
San Joaquin spearscale (Extriplex joaquinana)	//1B.2	Alkaline sites in chenopod scrub, meadows and seeps, playas, and valley and foothill grassland; elevation 1-320m. Blooming Period: April - October.	Unlikely. Suitable vernal pool or alkaline habitat not found at the project site.
Sanford's arrowhead (Sagittaria sanfordii)	//1B.2	Marshes and swamps. Found in standing or slow-moving freshwater ponds, marshes, and ditches; elevation 0-610m. Blooming Period: May - October.	Unlikely. Suitable wetland habitat not found at the project site.
Shining navarretia (Navarretia nigelliformis ssp. radians)	//1B.2	Cismontane woodland, valley and foothill grassland, and vernal pools; elevation 200-1000m. Blooming Period: May - July.	Unlikely. Suitable vernal pool habitat not found at the project site.
Spiny-sepaled button-celery (Eryngium spinosepalum)	//1B.2	Vernal pools within valley and foothill grassland. Some sites on clay soils of granitic origin; elevation 100-420m. Blooming Period: April - May.	Unlikely. Suitable vernal pool habitat not found at the project site.
Vernal pool smallscale (Atriplex persistens)	//1B.2	Vernal pools on alkaline soils; elevation 10-115m. Blooming Period: July - October.	Unlikely. Suitable vernal pool or alkaline habitat not found at the project site.
Wright's trichocoronis (Trichocoronis wrightii var. wrightii)	//2B.1	Marshes and swamps, riparian forest, meadows and seeps, vernal pools. Mud flats of vernal lakes, drying river beds, alkali meadows; elevation 5-435m. Blooming Period: May – September.	Unlikely. Suitable wetland habitat not found at the project site.

SOURCE: CDFW 2022, CNPS 2022

NOTE: Status Codes: Federal (USFWS)

FE: Listed as Endangered under the Federal Endangered Species Act.

FT: Listed as Threatened under the Federal Endangered Species Act.

FC: A Candidate for listing as Threatened or Endangered under the Federal Endangered Species Act.

FSC: Species of Special Concern.

FD: Delisted under the Federal Endangered Species Act.

State (CDFW)

- SE: Listed as Endangered under the California Endangered Species Act.
- ST: Listed as Threatened under the California Endangered Species Act.
- SR: Listed as Rare under the California Endangered Species Act.
- SC: A Candidate for listing as Threatened or Endangered under the California Endangered Species Act.
- SSC: Species of Special Concern.
- SFP: Fully Protected species under the California Fish and Game Code.
- SD: Delisted under the California Endangered Species Act.

CNPS Rare Plant Ranks and Threat Code Extensions

- 1B: Plants that are considered Rare, Threatened, or Endangered in California and elsewhere.
- 2B: Plants that are considered Rare, Threatened, or Endangered in California, but more common elsewhere.
- .1: Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat).

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- .2: Fairly endangered in California (20-80% occurrences threatened).
- .3: Not very endangered in California (<20% of occurrences threatened or no current threats known).

Appendix C Special-Status Wildlife Species with Potential to Occur in the Project Vicinity

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
American badger (Taxidea taxus)	/SSC	Most abundant in drier, open stages of most shrub, forest, and herbaceous habitats. Need sufficient food and open, uncultivated ground with friable soils to dig burrows. Prey on burrowing rodents.	Unlikely. Suitable undisturbed habitat not found at the project site.
Bald eagle (Haliaeetus leucocephalus)	FD/SE	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within one mile of water. Nests in large, old-growth, or dominant live tree with open branches.	Unlikely. Suitable open water habitat not found at the project site.
Blunt-nosed leopard lizard (Gambelia sila)	FE/SE	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Seeks cover in mammal burrows, under shrubs or structures such as fence posts.	Unlikely. Suitable alkaline habitat not found at the project site.
Burrowing owl (Athene cunicularia)	/SSC	Open, dry, annual or perennial grasslands, desert, or scrubland, with available small mammal burrows.	Low potential to occur on project site due to presence of marginally suitable habitat. CNDDB occurrences recorded within the project site vicinity.
California condor (Gymnogyps californianus)	FE/SE	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Unlikely. Suitable open grassland habitat not found at the project site.
California horned lark (Eremophila alpestris actia)	/SSC	Coastal regions, chiefly from Sonoma County to San Diego County, also within the main part of the San Joaquin Valley and east to the foothills. Prefers short-grass prairie, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Unlikely. Suitable native grassland habitat not found at the project site.
California linderiella (Linderiella occidentalis)	FSC/	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools typically has very low alkalinity, conductivity, and total dissolved solids.	Unlikely. Suitable vernal pool habitat not found at the project site.
California red-legged frog (Rana draytonii)	FT/SSC	Rivers, creeks, and stock ponds with pools and overhanging vegetation. Requires dense, shrubby or emergent riparian vegetation, and prefers short riffles and pools with slow-moving, well-oxygenated water. Needs upland habitat to aestivate (remain dormant during dry months) in small mammal burrows, cracks in the soil, or moist leaf litter.	Unlikely. Suitable wetland habitat not found at the project site.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
California tiger salamander (Ambystoma californiense)	FT/ST	Grasslands and oak woodlands near seasonal pools and stock ponds in central and coastal California. Needs upland habitat to aestivate (remain dormant during dry months) in small mammal burrows, cracks in the soil, or moist leaf litter. Requires seasonal water sources that persist into late March for breeding habitat.	Unlikely. Suitable wetland habitat not found at the project site.
Conservancy fairy shrimp (Branchinecta conservatio)	FE/	Endemic to the grasslands of the northern two-thirds of the central valley; found in large, turbid pools. Also occurs in swales formed by old, braided alluvium filled by winter/spring rains.	Unlikely. Suitable vernal pool habitat not found at the project site.
Fresno kangaroo rat (Dipodomys nitratoides exilis)	FE/SE	Alkali sink-open grassland habitats in western Fresno County. Bare alkaline clay-based soils subject to seasonal inundation, with more friable soil mounds around shrubs and grasses.	Unlikely. Suitable alkaline habitat not found at the project site.
Foothill yellow-legged frog (Rana boylii)	/SSC	Partly shaded, shallow streams and riffles with rocky substrate in a variety of habitats. Requires at least some cobble-sized substrate for egg-laying and 15 weeks of available water to attain metamorphosis.	Unlikely. Suitable wetland habitat not found at the project site.
Giant garter snake (Thamnophis gigas)	FT/ ST	Prefers freshwater marsh and low gradient streams. Adapted to drainage canals and irrigation ditches. The most aquatic garter snake in California.	Unlikely. Suitable wetland habitat not found at the project site.
Golden eagle (Aquila chrysaetos)	/SFP	Rolling foothill mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range. Also uses large trees in open areas.	Unlikely. Suitable habitat not found at the project site.
Hoary bat (Lasiurus cinereus)	/SSC	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Low potential to occur on project site due to presence of marginally suitable habitat. CNDDB occurrences recorded within the project site vicinity.
Least Bell's vireo (Vireo bellii pusillus)	FE/SE	Summer resident of southern and central California in riparian habitats below 2,000 feet in elevation. Often nests in large shrubs, along margins of bushes or on twigs projecting into pathways.	Unlikely. Suitable riparian habitat not found at the project site.
Loggerhead shrike (Lanius ludovicianus)	/SSC	(Nesting) Broken woodlands, savannah, pinyon-juniper, Joshua tree and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning and fairly dense shrubs and brush for nesting.	Low potential to occur on project site due to presence of marginally suitable habitat. CNDDB occurrences recorded within the project site vicinity.
Long-horn fairy shrimp (Branchinecta longiantenna)	FE/	Endemic to the eastern margin of the Central Coast mountains in seasonally astatic grassland vernal pools. Inhabits small, clear-water depressions in sandstone and clear to turbid clay/grass-bottomed pools in shallow swales.	Unlikely. Suitable vernal pool habitat not found at the project site.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
Monarch butterfly (<i>Danaus plexippus</i>)	FC/	Winter roost sites. Wind protected tree groves (Eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	Unlikely. Potentially suitable habitat (eucalyptus) found at the project site but no known overwintering sites in area. Most winter roost site are along the coast.
Northern California legless lizard (Anniella pulchra)	/SSC	Sandy or loose loamy soils under sparse vegetation, moist soils. Anniella pulchra is traditionally split into two subspecies: <i>A. pulchra pulchra</i> (silvery legless lizard) and <i>A. pulchra nigra</i> (black legless lizard), but these subspecies are typically no longer recognized.	Unlikely. Suitable undisturbed sandy soil habitat not found at the project site.
Northern harrier (Circus cyaneus)	/SSC	Found near coastal salt and freshwater marshes. Nests and forages in grasslands. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Unlikely. Suitable undisturbed habitat not found at the project site.
Pallid bat (Antrozous pallidus)	/SSC	Deserts, grasslands, scrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures.	Low potential to occur on project site due to presence of marginally suitable habitat. CNDDB occurrences recorded within the project site vicinity.
Prairie falcon (Falco mexicanus)	/SSC	Nesting Habitats. Open terrain, either level or hilly breeding sites located on cliffs. Forages far distances, including to marshlands and ocean shores.	Unlikely. Suitable undisturbed habitat not found at the project site.
Sacramento splittail (Pogonichthys macrolepidotus)	/SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay, and associated marshes. Slow moving river sections, dead end sloughs, requires flooded vegetation for spawning and foraging for young.	Unlikely. Suitable riverine habitat not found at the project site.
San Joaquin coachwhip (Masticophis flagellum ruddocki)	/SSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Requires mammal burrows for refuge and oviposition sites.	Unlikely. Suitable undisturbed habitat not found at the project site.
San Joaquin kit fox (Vulpes macrotis mutica)	FE/ST	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose-textured sandy soils for burrowing, and suitable prey base.	Low potential to occur on project site due to presence of marginally suitable habitat. CNDDB occurrences recorded within the project site vicinity.
Steelhead (Oncorhynchus mykiss irideus)	FT/	Coastal stream with clean spawning gravel. Requires cool water and pools. Needs migratory access between natal stream and ocean.	Unlikely. Suitable riverine habitat not found at the project site.
Swainson's hawk (Buteo swainsoni)	/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas, such as grasslands or agricultural fields supporting rodent populations.	Low potential to occur on project site due to presence of marginally suitable habitat. CNDDB occurrences recorded within the project site vicinity.

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Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
Tricolored blackbird (Agelaius tricolor)	/SE	Areas adjacent to open water with protected nesting substrate, which typically consists of dense, emergent freshwater marsh vegetation.	Unlikely. Suitable marsh habitat not found at the project site.
Valley elderberry longhorn beetle (Desmocerus californicus dimorphus)	FT/	Elderberry shrubs, usually in Central Valley riparian habitats.	Unlikely. Suitable riparian habitat not found at the project site.
Vernal pool fairy shrimp (Branchinecta lynchi)	FT/	Endemic to the grasslands of the Central Valley, Central Coast Mtns., and South Coast Mtns. in astatic rain-filled pools. Inhabits small, clearwater sandstone depression pools and grass swale, earth slump, or basalt-flow depression pools.	Unlikely. Suitable vernal pool habitat not found at the project site.
Vernal pool tadpole shrimp (Lepidurus packardi)	FE/	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in swales of unplowed grasslands.	Unlikely. Suitable vernal pool habitat not found at the project site.
Western pond turtle (Emys marmorata)	/SSC	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites (such as rocks or partially submerged logs) and suitable upland habitat for egg-laying (sandy banks or grassy open fields).	Unlikely. Suitable pond or marsh habitat not found at the project site.
Western red bat (Lasiurus blossevillii)	/SSC	Roosts primarily in trees, 2-40 feet above the ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Low potential to occur on project site due to presence of marginally suitable habitat. CNDDB occurrences recorded within the project site vicinity.
Western spadefoot (Spea hammondii)	/SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands, breeds in winter and spring (January - May) in quiet streams and temporary pools.	Unlikely. Suitable undisturbed grassland habitat not found at the project site.

SOURCE: CDFW 2022 NOTE: Status Codes: Federal (USFWS)

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