

MARINA COAST WATER DISTRICT REGIONAL URBAN WATER AUGMENTATION PROJECT RECYCLED WATER PIPELINE AND BLACKHORSE

RESERVOIR
CIP # RW-0156
VOLUME 2 OF 2

MAY 2017

SHEET INDEX

RECYCLED WATER PIPELINE

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CONNECTION

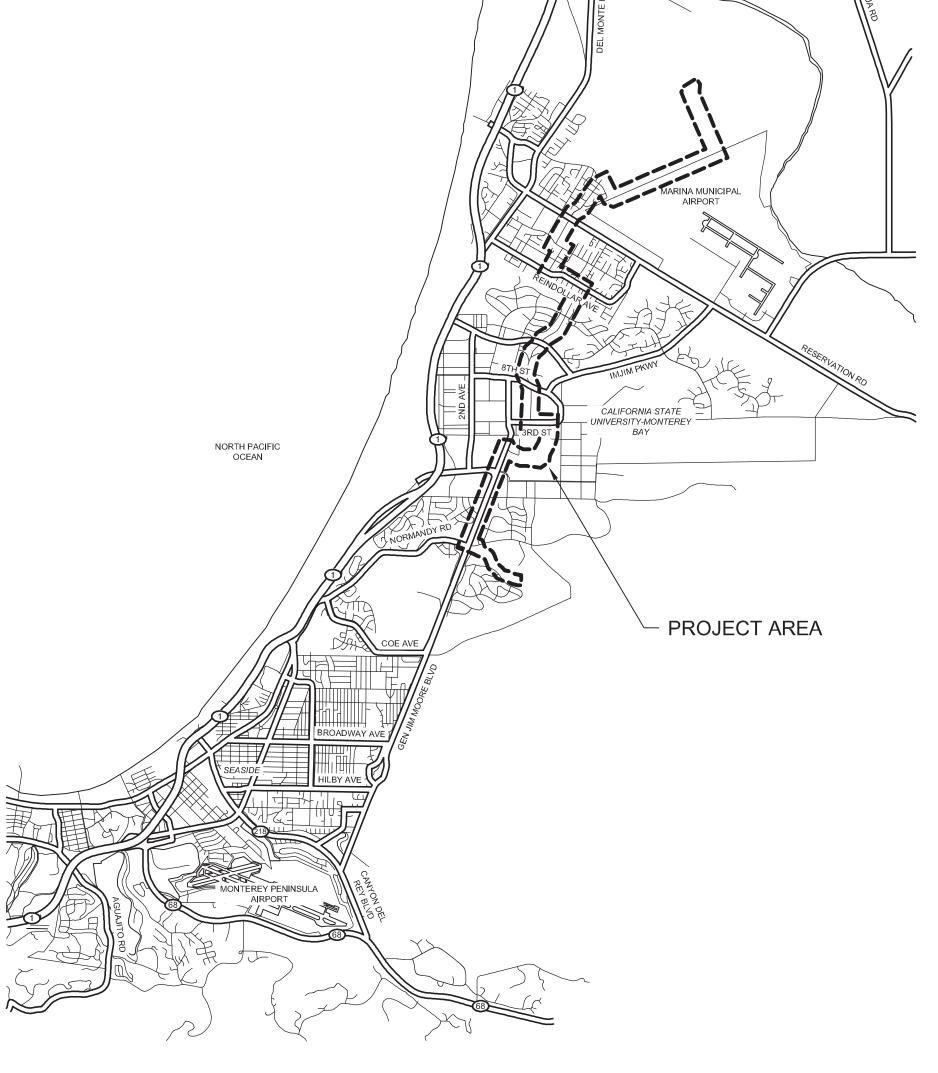
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TANK BOTTOM EXTERIOR DETAILS

TANK EXTERIOR DETAILS





LOCATION MAP

APPROVED:

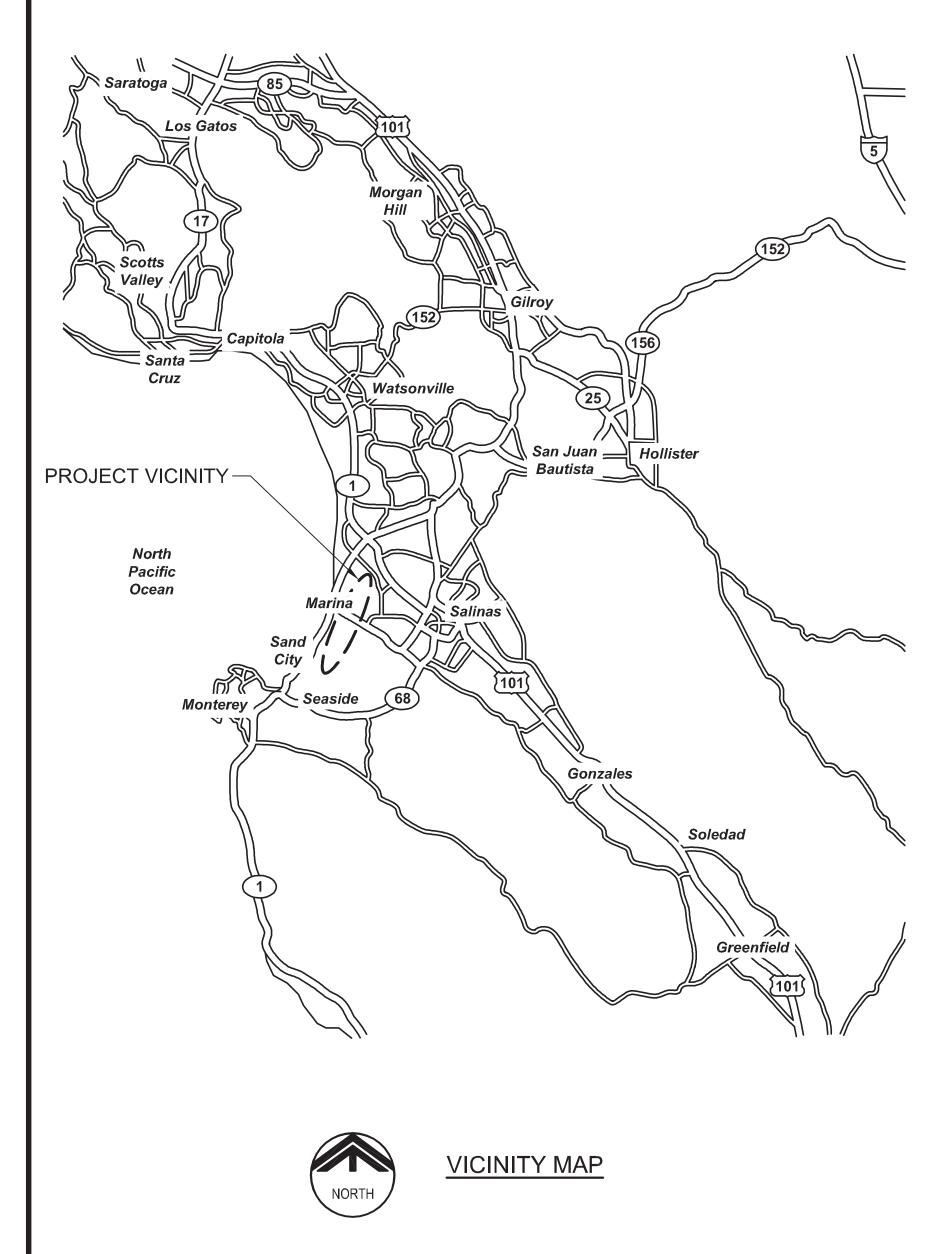
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MICHAEL WEGLEY
DISTRICT ENGINEER

SUBMITTED:

ANNE PRUDHEL, P.E. DATE
CAROLLO ENGINEERS
R.C.E. 66426



Call before you Dig

/1	05/19/17	JPM	CHANGED PER ADDENDUM 1
REV	DATE	BY	DESCRIPTION





CP-06

CP-07

2700 YGNACIO VALLEY ROAD, SUITE 300 WALNUT CREEK, CA. 94548 925-932-1710

GENERAL NOTES

- 1. REFER TO DRAWINGS 53A AND 53B AND SPECIFICATION APPENDIX E FOR DETAILS DENOTED BY XXX (AND MCWD STANDARD DETAILS.
- 2. TRENCH PAVING IN THE CITY OF MARINA SHALL BE A MINIMUM OF 6" AC OVER 8" AB OR MATCH THE EXISTING AC AND/OR AB THICKNESS IF THE EXISTING THICKNESS IS GREATER THAN THE MINIMUM.
- TRENCH PAVING ON CSUMB PROPERTY SHALL BE A MINIMUM OF 4" AC OVER 12" AB OR MATCH THE EXISTING AC /1AND/OR AB THICKNESS IF THE EXISTING THICKNESS IS GREATER THAN THE MINIMUM.
- 4. TRENCH PAVING ON GENERAL JIM MOORE BLVD SHALL BE A MINIMUM OF 4" AC OVER 12" AB OR MATCH THE EXISTING AC AND/OR AB THICKNESS IF THE EXISTING THICKNESS IS GREATER THAN THE MINIMUM.

STANDARD RECYCLED WATER NOTES

- CONTRACTOR SHALL POTHOLE AND VERIFY VERTICAL AND HORIZONTAL LOCATIONS OF EXISTING UTILITIES AT LEAST 7 DAYS IN ADVANCE OF CONSTRUCTION OPERATIONS TO ALLOW FOR MINOR GRADE ADJUSTMENTS WITHOUT DELAYING INSTALLATION.
- 2. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS, SURVEY OF VISIBLE ABOVE GROUND SURFACE FEATURES AT THE TIME OF SURVEY, AND LIMITED POTHOLING AS SHOWN ON THE PLANS. THIS DOES NOT GUARANTEE THE ACCURACY, COMPLETENESS, LOCATION, OR THE EXISTENCE OR NON-EXISTENCE OF ANY UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR IS REQUIRED TO TAKE ALL DUE PRECAUTIONARY MEANS NECESSARY TO PROTECT THOSE UTILITY LINES NOT SHOWN ON THESE PLANS.
- WATER, SEWER, AND GAS SERVICE LATERALS ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL SERVICE LATERALS.
- 4. ALL SERVICE LATERALS DAMAGED OR BROKEN DURING CONSTRUCTION SHALL BE REPLACED IN KIND. SEWER AND WATER LATERAL REPAIRS SHALL CONFORM TO MCWD STD. DETAILS S-6, W-1 and W-2 RESPECTIVELY UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- AN ENCROACHMENT PERMIT FROM THE APPLICABLE JURISDICTIONAL AGENCY IS REQUIRED PRIOR TO ANY WORK WITHIN PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL ADHERE TO ALL REQUIREMENTS OF ALL ENCROACHMENT PERMITS ISSUED.
- ALL WORK WITHIN PRIVATE EASEMENTS SHALL BE PERFORMED IN ACCORDANCE WILL ALL CONDITIONS PROVIDED IN THE EASEMENT, RIGHT-OF-ENTRY, OR TEMPORARY PERMIT DOCUMENTS AS DESCRIBED IN SECTION 01140.
- 7. UNDER THE DIRECTION OF A SURVEYOR LICENSED IN THE STATE OF CALIFORNIA, THE CONTRACTOR SHALL RESET ALL MONUMENTATION DISTURBED OR REMOVED DURING CONSTRUCTION ACTIVITIES PER C040/TYP.
- WHERE THE RECYCLED WATERLINE CROSSES EXISTING UTILITIES, THE RECYCLED WATERLINE SHALL BE INSTALLED A MINIMUM OF 12" VERTICALLY FROM THE EXISTING UTILITY. THE RECYCLED WATERLINE MUST CROSS BELOW EXISTING WATERLINES AND ABOVE EXISTING SANITARY SEWER LINES - SEE MCWD TYP DET W-16 FOR ADDITIONAL REQUIREMENTS.
- CARVs ARE REQUIRED AT ALL HIGH POINTS IN PEPELINES. BLOW-OFFS ARE REQUIRED AT ALL LOW POINTS IN PIPELINES.

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BEARINGS PER THE CALIFORNIA COORDINATE SYSTEM, NAD 83, ZONE 4 (EPOCH 2002.00), AS DETERMINED BY GPS OBSERVATIONS AND THE NATIONAL GEODETIC SURVEY'S (NGS) ONLINE POSITIONING USER SERVICE (OPUS). ALL DISTANCES ARE GRID DISTANCES. AERIAL TOPOGRAPHY FLOWN AUGUST-SEPTEMBER 2006.

BENCHMARK:

ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). A PUBLISHED NAVD 88 ELEVATION OF 145.94 FEET FOR THE NGS BENCHMARK "L 813 RESET" (PID GU2130) WAS HELD AS THE PRIMARY VERTICAL BENCHMARK FOR THE PROJECT.

TURNOUT SCHEDULE

STATION	LOCATION	CONNNECTION TYPE	CONNECTION DIAMETER
119+89.00	ARMSTRONG RANCH NEAR CRESCENT AVE	TEE	6
120+69.49	ARMSTRONG RANCH AND CRESCENT AVE	CROSS	24
120+69.49	ARMSTRONG RANCH AND CRESCENT AVE	CROSS	24
146+54.66	CRESCENT AVE AND RESERVATION ROAD	TEE	8
167+61.87	CARMEL AVE AND VAUGHN AVE	CROSS	24
174+88.57	VAUGHN AVE AND HILLCREST AVE	TEE	12
212+26.35	CALIFORNIA AVE AND PATTON PARKWAY	TEE	6
225+18.56	CALIFORNIA AVE AND FUTURE 3RD AVE	CROSS	16
225+42	CALIFORNIA AVE AND 3RD AVE	TEE	6
239+79.91	CALIFORNIA AVE AND IMJIM PKWY	TEE	8
256+47.09	5TH AVE AND 9TH STREET	TEE	12
256+85.00	5TH AVE AND 9TH STREET	TEE	6
270+13.46	5TH AVE IN CSUMB	TEE	6
271+74.16	5TH AVE IN CSUMB	TEE	6
273+07.70	5TH AVE IN CSUMB	TEE	6
277+64.35	5TH AVE IN CSUMB	TEE	6
279+21.33	5TH AVE AND 3RD STREET	TEE	24
279+33.31	5TH AVE AND 3RD STREET	TEE	24
283+36.51	5TH AVE AND 3RD STREET	TEE	6
309+20.16	CSUMB PROPERTY	TEE	6
326+67.76	ENGINEER ROAD AND ENGINEERING LANE	TEE	6
334+88.81	ENGINEER ROAD AND GENERAL JIM MOORE BLVD	TEE	6
343+60.31	GENERAL JIM MOORE BLVD AND LIGHTFIGHTER DRIVE	TEE	6
346+58.70	GENERAL JIM MOORE BLVD AND LIGHTFIGHTER DRIVE	TEE	6
346+63.12	GENERAL JIM MOORE BLVD AND LIGHTFIGHTER DRIVE	TEE	6
347+56.05	GENERAL JIM MOORE BLVD AND LIGHTFIGHTER DRIVE	CROSS	12
362+33.25	GENERAL JIM MOORE BLVD AND GIGLING ROAD	CROSS	16
389+03.84	GENERAL JIM MOORE BLVD AND NORMANDY ROAD	CROSS	24

POTHOLING SCHEDULE

(POTHOLING PERFORMED IN 2007)

POTHOLE #	LOCATION	AC THICKNESS	CONCRETE	TYPE	SIZE	MATERIAL	DEPTH	COMMENTS
1	3239 CRESCENT AVE	3"		GAS	1/2"	PLASTIC	40-1/2"	12" SE OF FACE OF DRIVEWAY AT 3239 CRESCENT AVE
				ELEC	2"	PLASTIC	41"	
				TV	1"	PLASTIC	40-1/2"	
2	CRESCENT AVE & QUEBRADA DEL MAR RD	4"	V	WATER	12"	PLASTIC	42"	EXCAVATED 12' SE FROM FACE OF CURB ALIGNMENT
3	CRESCENT AVE & QUEBRADA DEL MAR RD	3"		TV	2"	PLASTIC	37-1/2"	EXCAVATED 12' SE FROM FACE OF CURB ALIGNMENT
			Co	CONDUIT	2"	PLASTIC	37-1/2"	
				GAS	2"	PLASTIC	35"	
4	CRESCENT AVE & COSTA DEL MAR RD	3"	V	WATER	12"	PLASTIC	43"	56' NW OF STOP LINE AT COSTA DEL MAR RD
5	CRESCENT AVE & COSTA DEL MAR RD	3"		GAS	2"	PLASTIC	44"	19' SE OF STOP LINE AT COSTA DEL MAR RD
				ELEC	1"	PLASTIC	45"	
6	CRESCENT AVE & SIERENA DEL MAR RD	4"		GAS	2"	PLASTIC	32"	EXCAVATED 12' SE FROM FACE OF CURB ALIGNMENT
6-A	CRESCENT AVE & SIERENA DEL MAR RD	4"	V	WATER	12"	PLASTIC	96"	66' NW OF STOP LINE AT SIERENA DEL MAR RD
7	CRESCENT AVE	4"		GAS	4"	PLASTIC	42"	6' SE FROM FACE OF CURB ON CRESCENT AVE
8	3183 CRESCENT AVE & TALLMON ST	3"		GAS	2"	STEEL	37-1/2"	22' SE FROM FACE OF CURB AT 3183 CRESCENT AVE
13	CRESCENT AVE & SHULER CIRCLE	3"		GAS	6"	STEEL	32"	58' NW OF FACE OF CURB AT 3170 CRESCENT AVE
				GAS	2"	STEEL	32"	
14	CRESCENT AVE & SHULER CIRCLE	3"		GAS	2"	STEEL	33"	EXCAVATED TO A DEPTH OF 10' AND NO WATER LINE FOUND. 41' NW OF FACE OF CURB AT 3170 CRESCENT AVE
15	CRESCENT AVE & RESERVATION RD	5"		GAS	4"	PLASTIC	44-1/2"	8' SW OF STOP LINE AT CRESCENT AVE
15-A	CRESCENT AVE & RESERVATION RD	5"	5"				DRY	EXCAVATED TO A DEPTH OF 13'-2". 13' SW OF STOP LINE AT CRESCENT AVE
16	CRESCENT AVE & RESERVATION RD	5"		TELE	3"	PLASTIC	35"	30-1/2' SW OF STOP LINE AT CRESCENT AVE
17	CRESCENT AVE & RESERVATION RD	5"		GAS	6"	STEEL	32"	37' NE OF FACE OF ISLAND ON CRESCENT AVE
18	CRESCENT AVE & RESERVATION RD							CLEARED BY PG&E NO ELECTRIC UNDERGROUND. ELECTRIC OVERHEAD
19	CRESCENT AVE	3"		GAS	2"	STEEL	71"	137" NW FROM FACE OF CURB AT LIGHT POLE ON CRESCENT AVE
				GAS	3/4"	STEEL	66"	12' NW FROM FACE OF CURB AT LIGHT POLE ON CRESCENT AVE
21	CRESCENT AVE	3"		GAS			DRY	DRY HOLE AT AN EXCAVATION DEPTH OF 8'. 30" NORTHWEST FROM FACE OF CURB ON CRESCENT. CALLED PG&E ABOUT UTILITY NOT LOCATED, THEY WILL SEND SOMEONE TO LOCATE.
21-A	CRESCENT AVE	3"		GAS	2"	STEEL	52"	RE-MARKED BY PG&E AND FOUND 2" GAS. 41" NW FROM FACE OF CURB ON CRESCENT AVE
22	CRESCENT AVE & CARMEL AVE	5"	TELE	E CONDUIT		PLASTIC	62"	12' NW FROM CENTER OF TELEPHONE MAN HOLE ON CARMEL AT CRESCENT AVE
			V	WATER				WATER LINE NOT FOUND AT AN EXCAVATION DEPTH OF 9'. FOUND CONCRETE ENCASEMENT CONDUITS AND NO WATER LOCATED UNDER ENCASEMENT
23	CRESCENT AVE & CARMEL AVE	5"		GAS	2"	STEEL	48"	21' NW FROM CENTER OF TELEPHONE MAN HOLE ON CARMEL AVE AT CRESCENT AVE
24	CRESCENT AVE & CARMEL AVE	5"		GAS	2"	STEEL	47"	135" NE FROM CENTER OF TELEPHONE MAN HOLE ON CARMEL AVE AT CRESCENT AVE
25	335 CARMEL AVE & VAUGHN AVE	5"		GAS	2"	STEEL	49"	13' SW OF FACE OF CURB AT 335 CARMEL AVE
26	335 CARMEL AVE & VAUGHN AVE	5"	3-4" (" CONDUITS	3-4"	PLASTIC	41 - 1/2"	36' SW FROM EDGE OF CURB AT 335 CARMEL AVE
27	335 CARMEL AVE & VAUGHN AVE	4"	v	WATER	8"	TRANSITE	39"	44' SW OF EDGE OF DRIVEWAY AT 335 CARMEL AVE
28	VAUGHN AVE & EVERETT AVE	3"		GAS	2"	STEEL	41"	13' SE OF FACE OF CURB AT 3069 VAUGHN AVE
29	VAUGHN AVE & HILLCREST AVE	3"		GAS	2"	STEEL	30"	27' SW OF STOP LINE AT VAUGHN AVE
30	VAUGHN AVE & HILLCREST AVE	4"	V	WATER	8"	TRANSITE	32 1/2"	18' SW FROM MAN HOLE ON VAUGHN AVE
31	334 REINDOLLAR AVE & VAUGHN AVE	3"		GAS	2"	STEEL	35"	35' NE FROM EDGE OF DRIVEWAY AT 334 REINDOLLAR AVE
32	336 REINDOLLAR AVE & VAUGHN AVE	3"	V	WATER	6"	TRANSITE	40"	29' NE FROM FACE OF CURB AT 336 REINDOLLAR AVE
33	338 REINDOLLAR AVE	3"		GAS	2"	STEEL	35"	43" SW FROM FACE OF CURB AT 338 REINDOLLAR AVE
				GAS	3/4"	STEEL	35"	

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Marina Coast Water

REGIONAL URBAN WATER AUGMENTATION PROJECT RECYCLED WATER PIPELINE

GENERAL NOTES - 1

CIVIL

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING

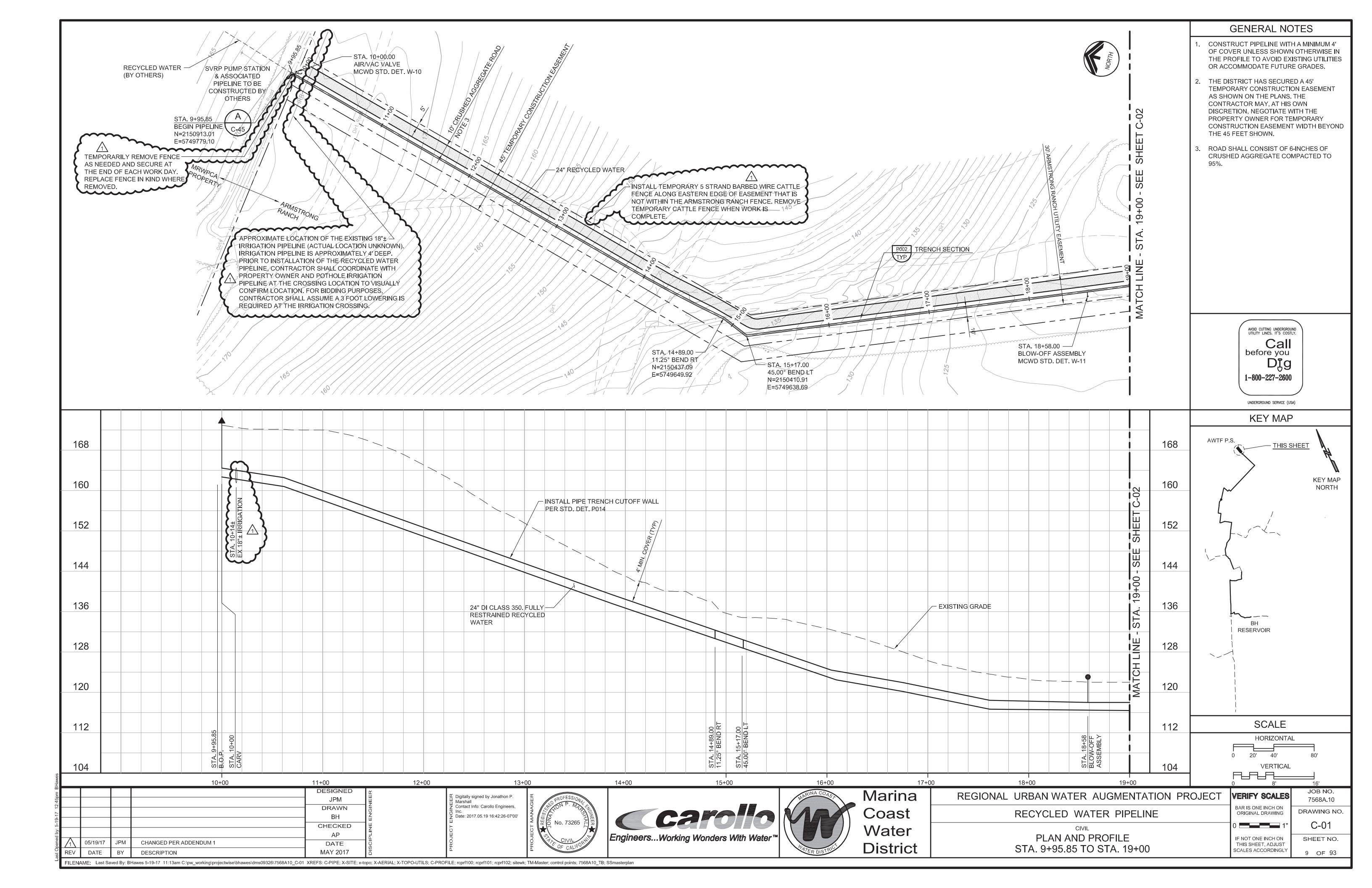
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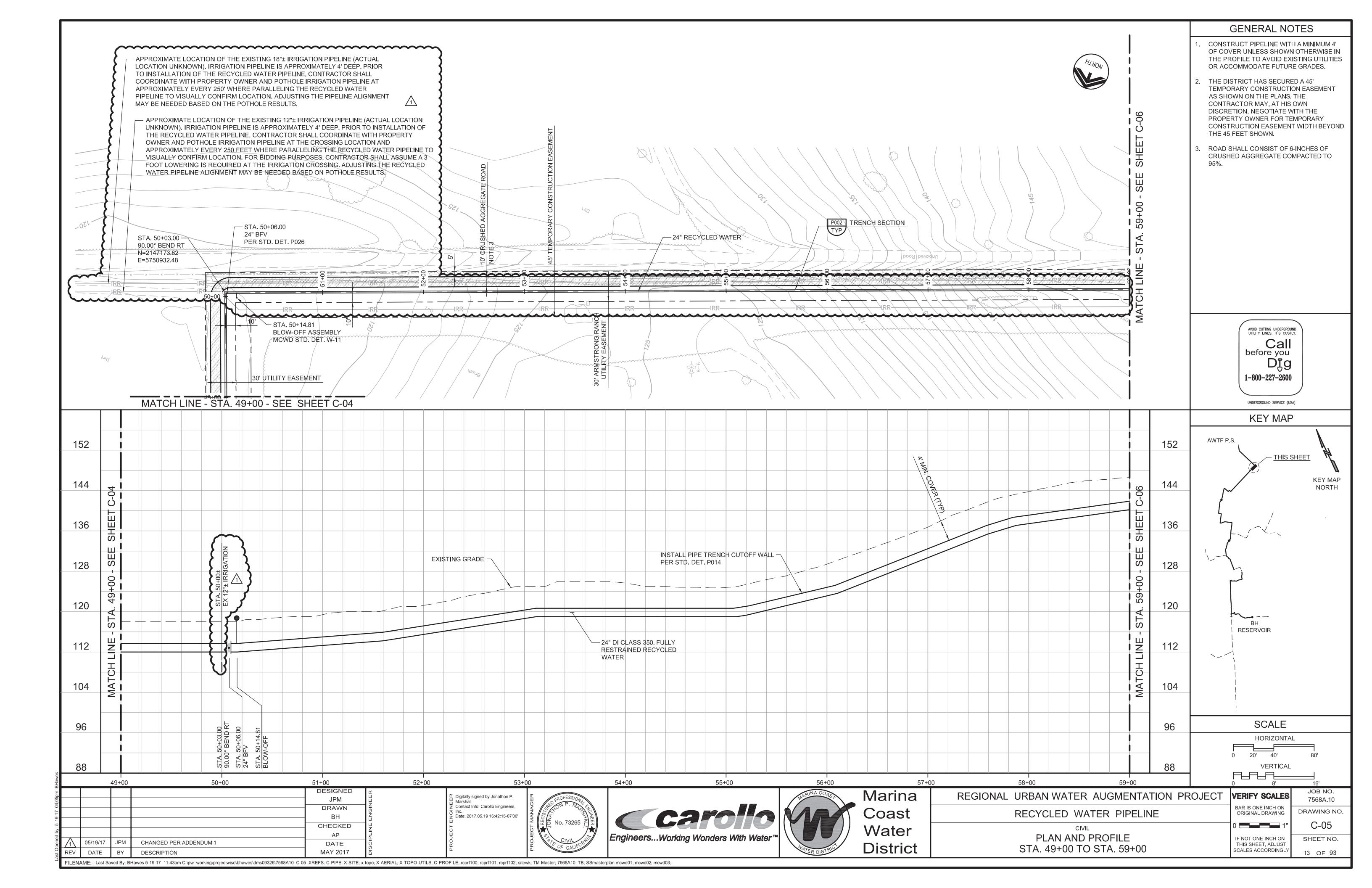
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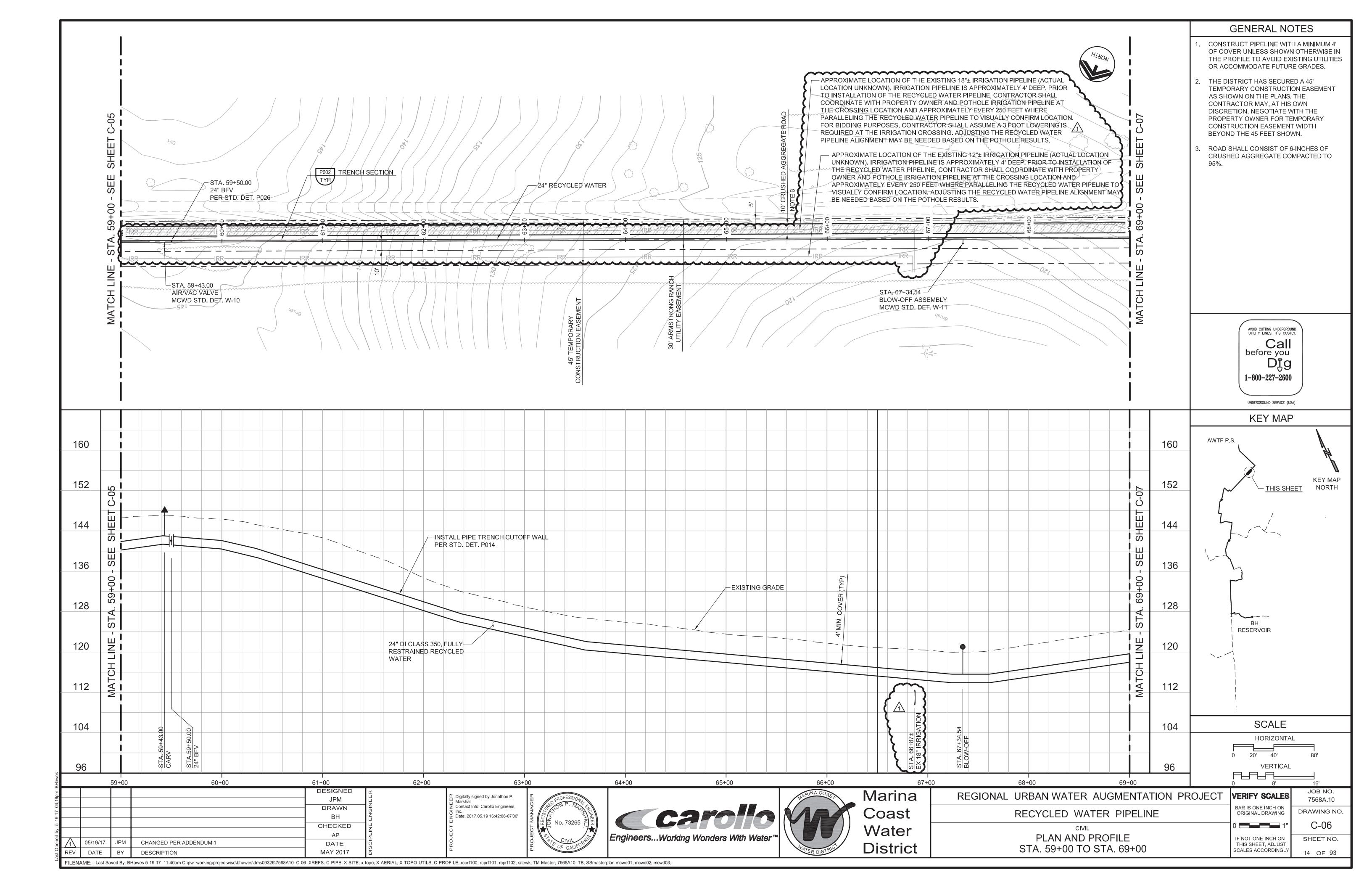
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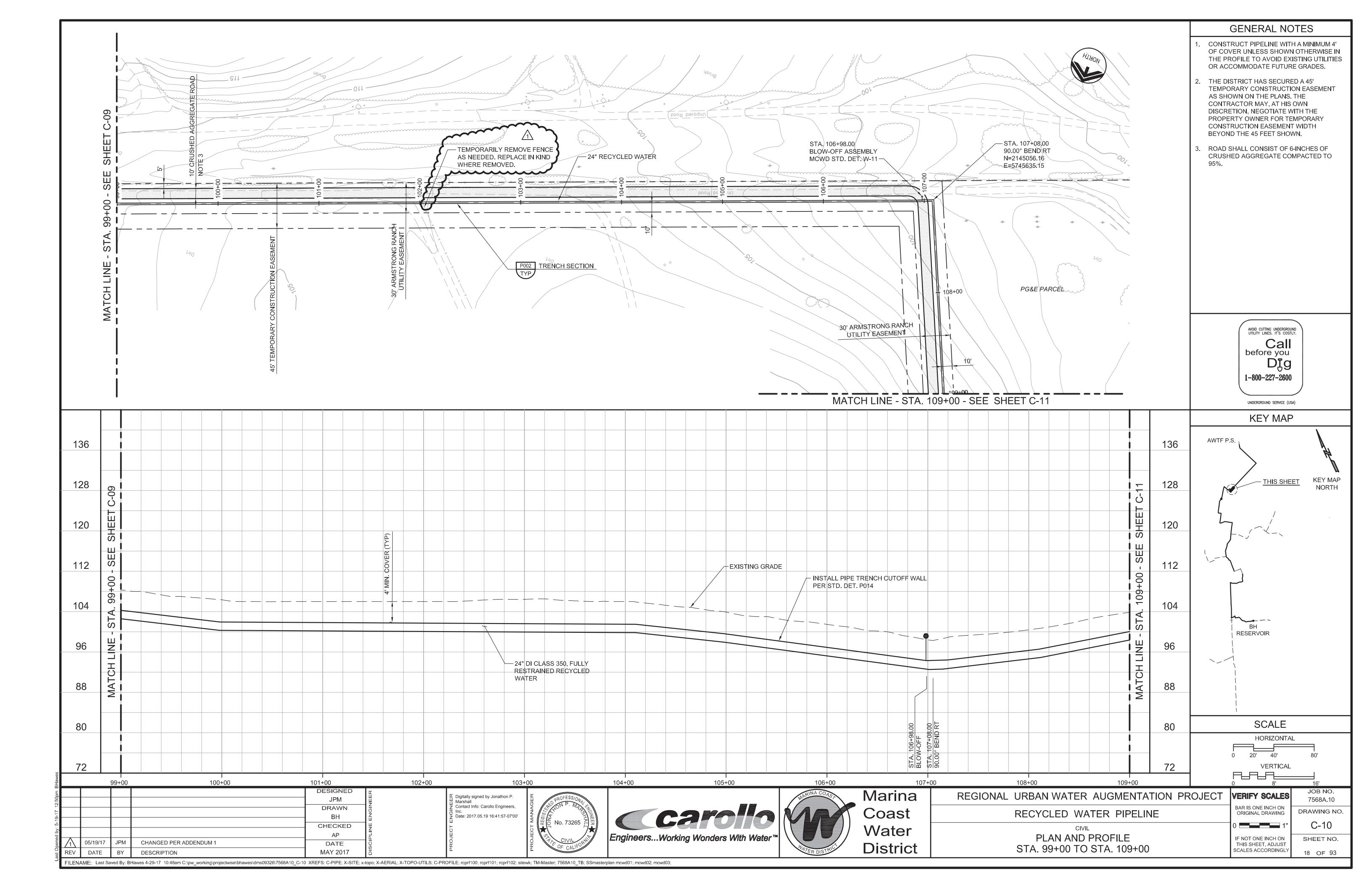
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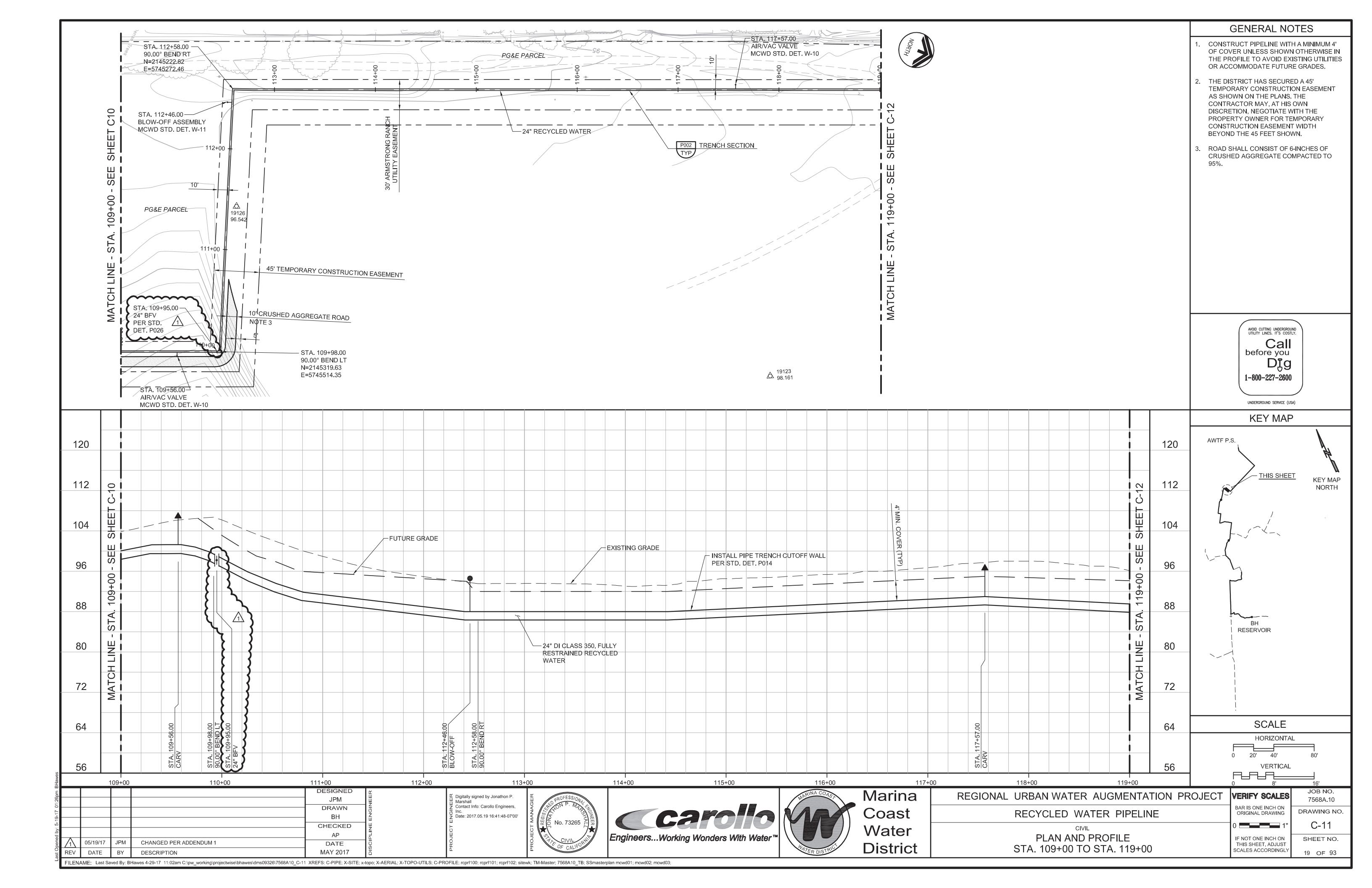
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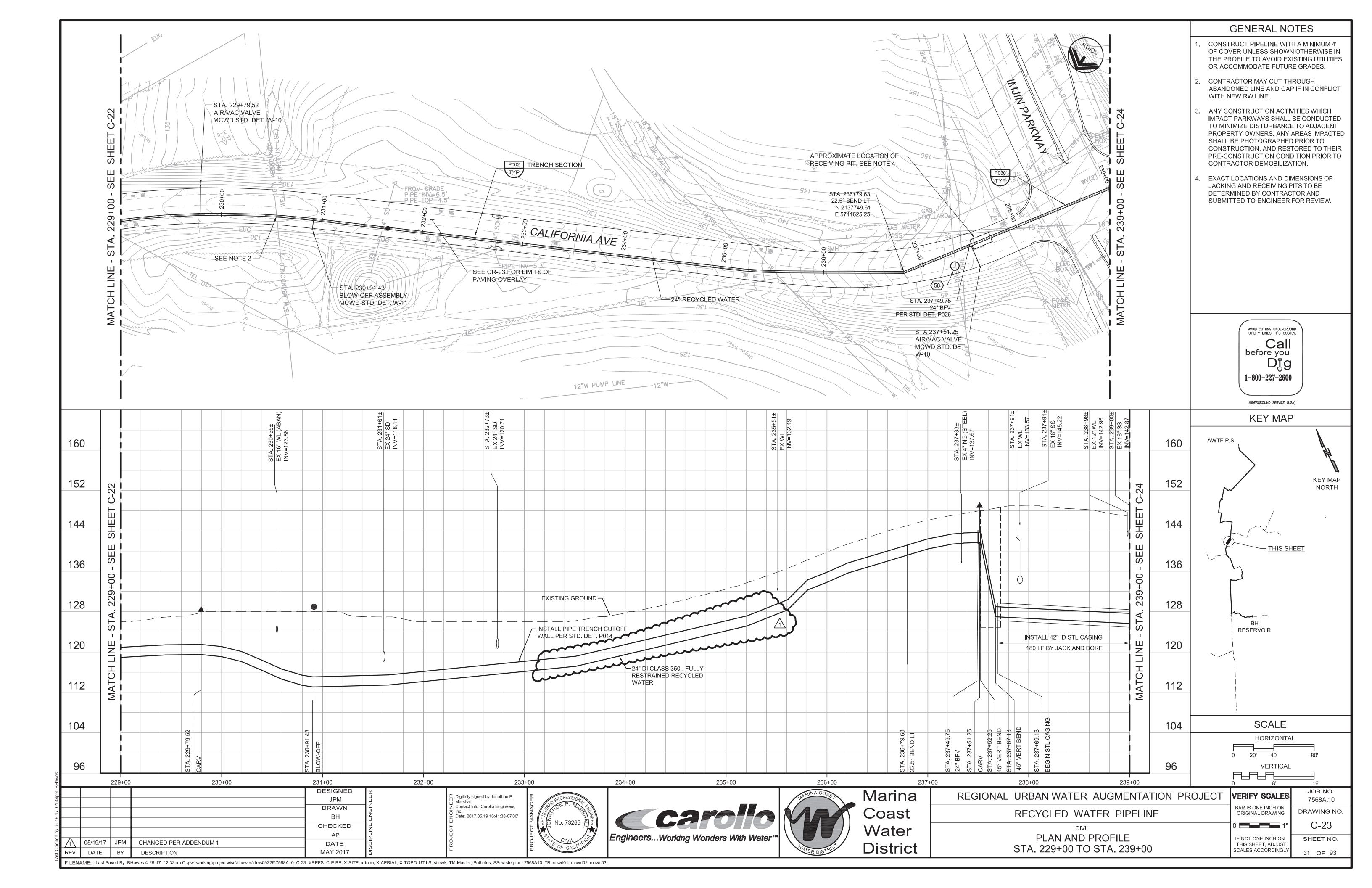


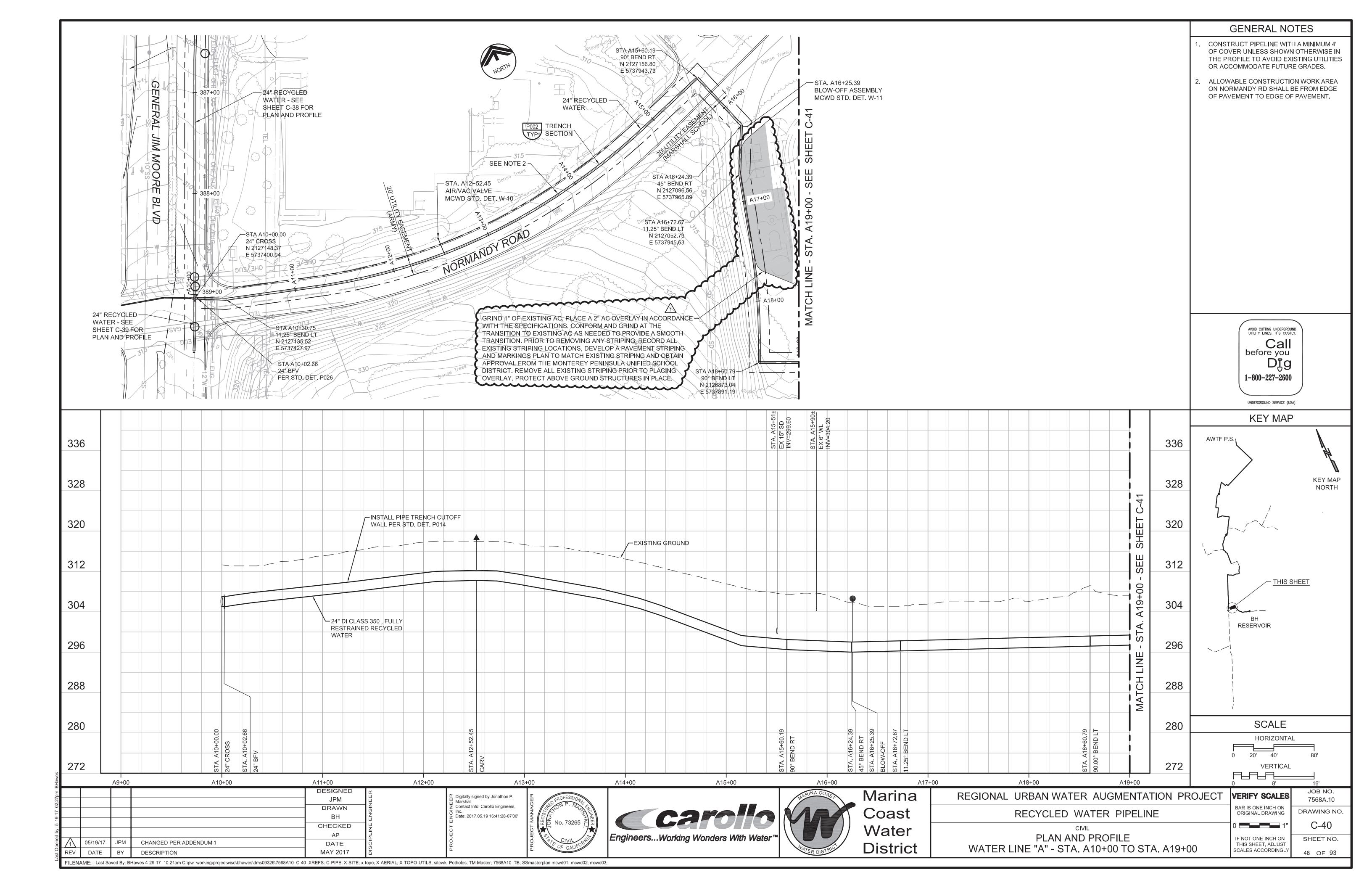


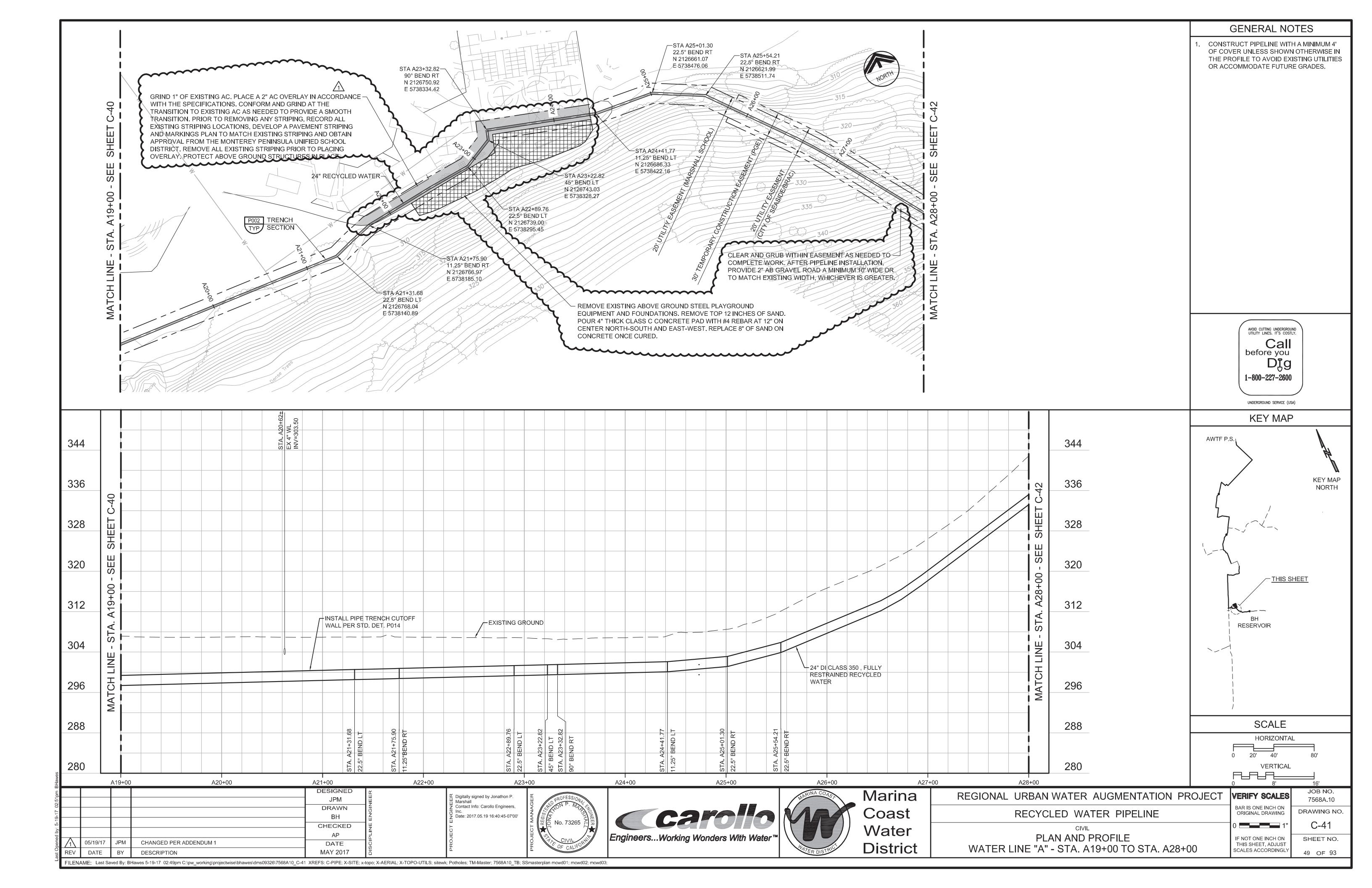


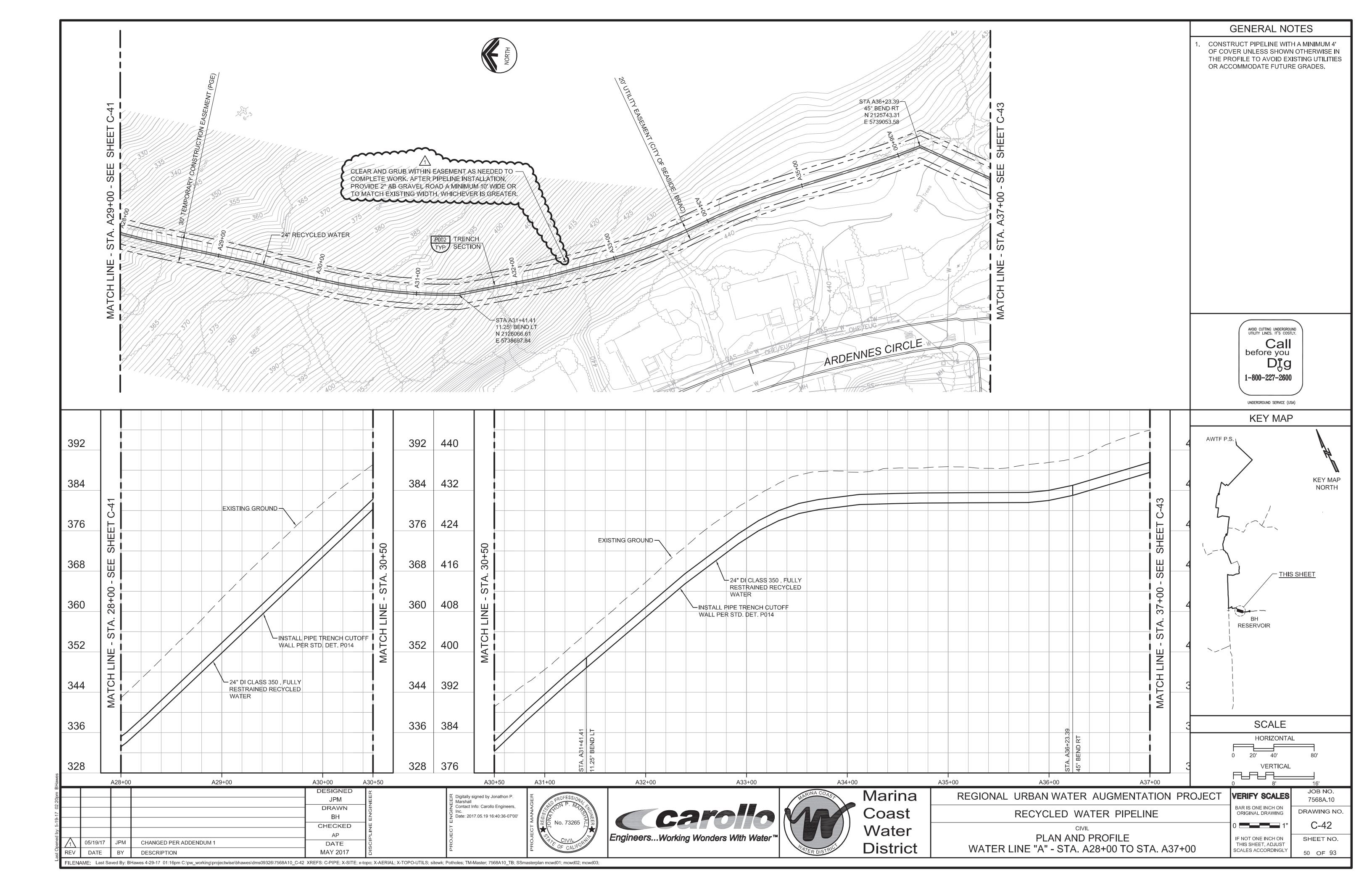


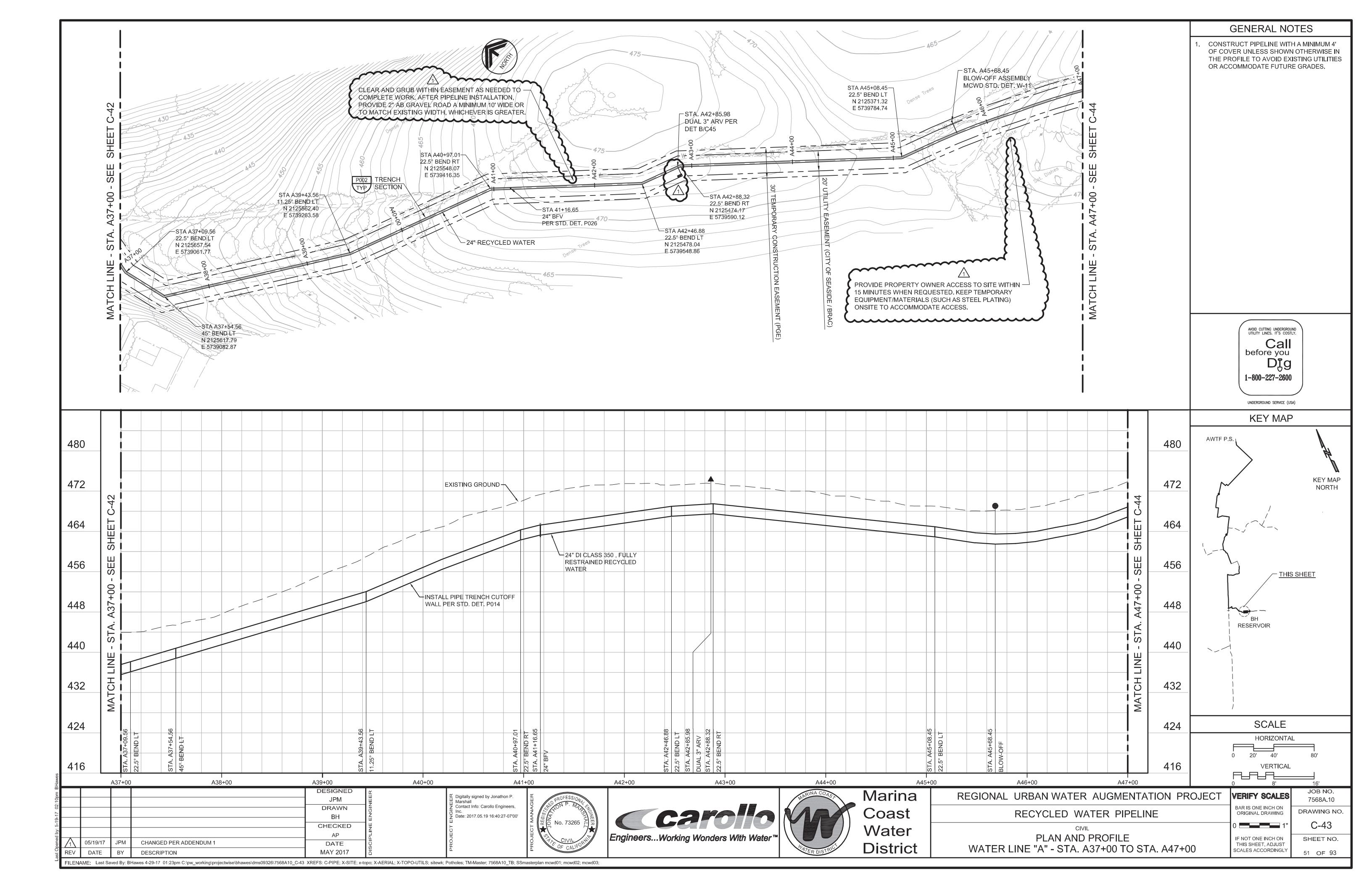


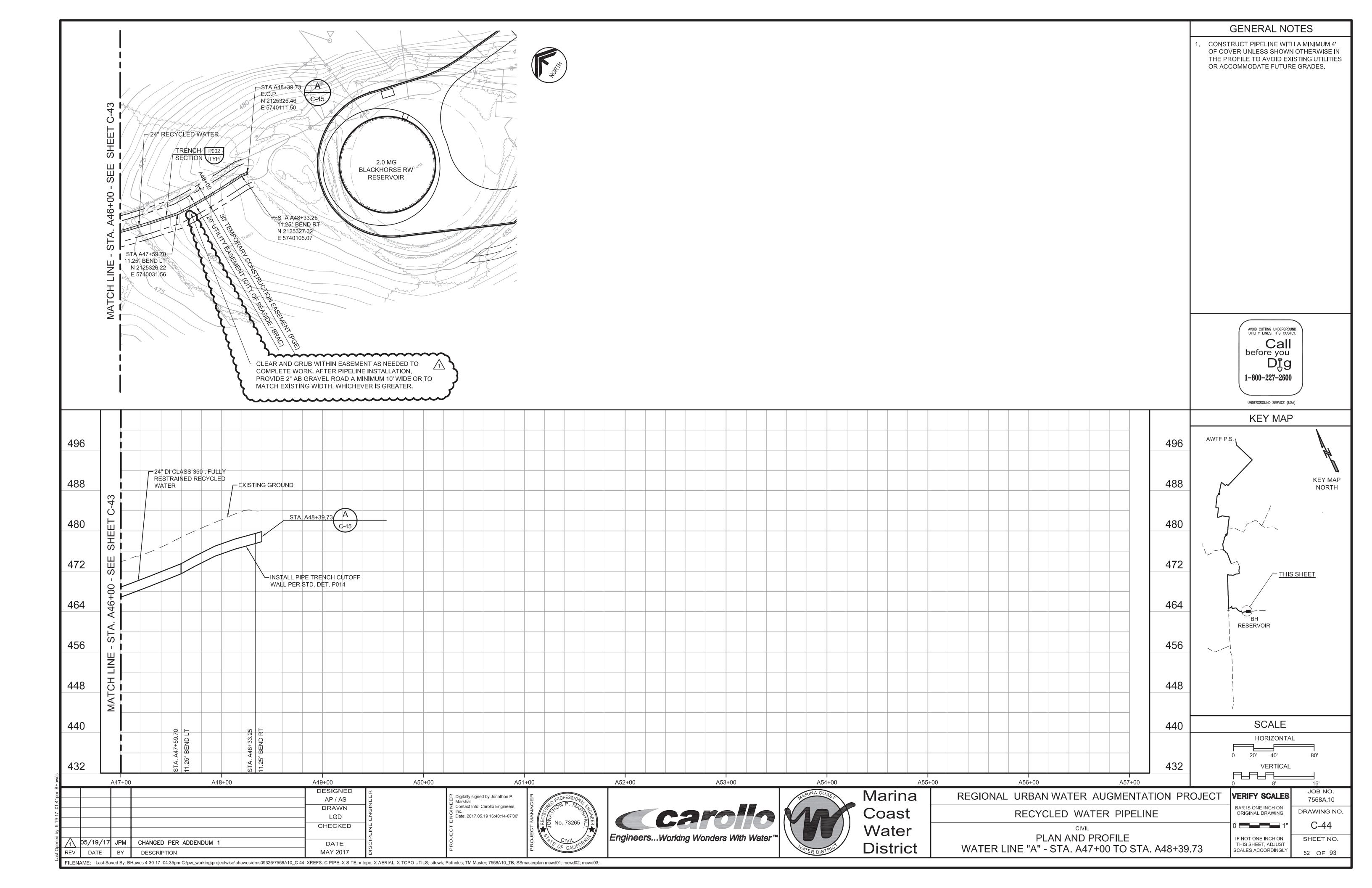


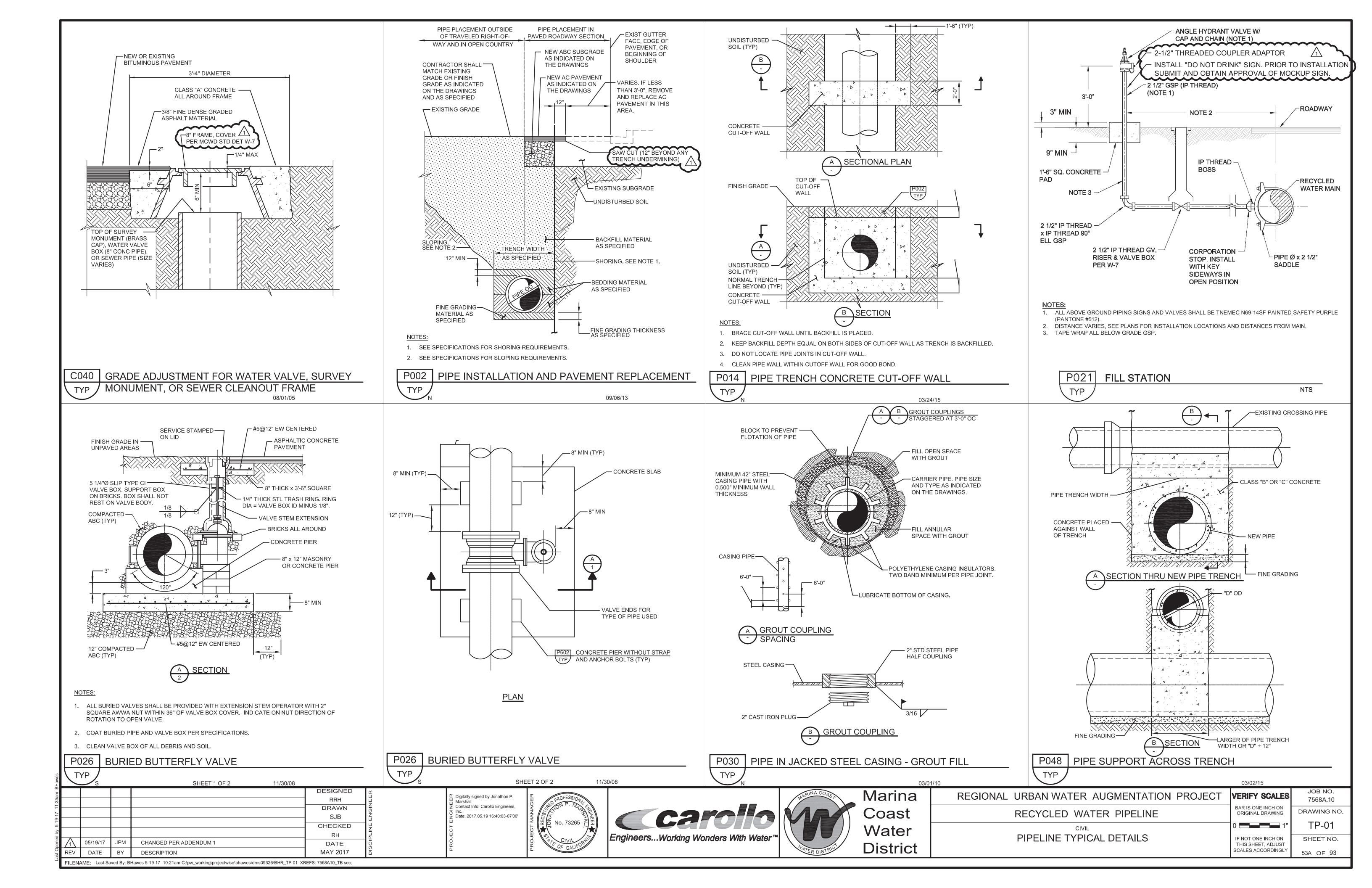


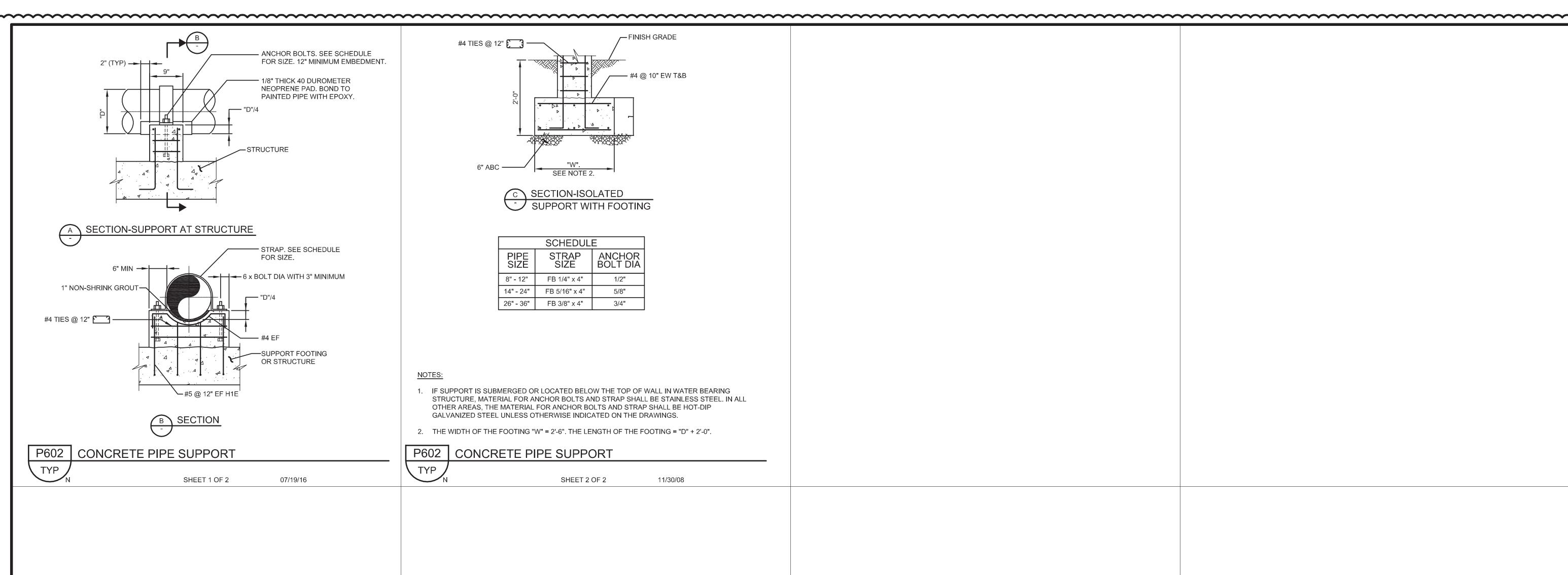


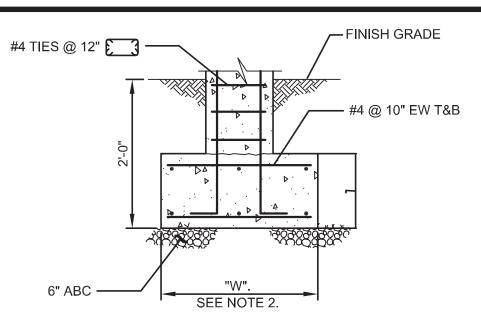












SECTION-ISOLATED SUPPORT WITH FOOTING

	SCHEDUL	E	
PIPE SIZE	STRAP SIZE	ANCHOR BOLT DIA	
8" - 12"	FB 1/4" x 4"	1/2"	
14" - 24"	FB 5/16" x 4"	5/8"	
26" - 36"	FB 3/8" x 4"	3/4"	

NOTES:

- 1. IF SUPPORT IS SUBMERGED OR LOCATED BELOW THE TOP OF WALL IN WATER BEARING STRUCTURE, MATERIAL FOR ANCHOR BOLTS AND STRAP SHALL BE STAINLESS STEEL. IN ALL OTHER AREAS, THE MATERIAL FOR ANCHOR BOLTS AND STRAP SHALL BE HOT-DIP GALVANIZED STEEL UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- 2. THE WIDTH OF THE FOOTING "W" = 2'-6". THE LENGTH OF THE FOOTING = "D" + 2'-0".

P602 CONCRETE PIPE SUPPORT SHEET 2 OF 2 11/30/08

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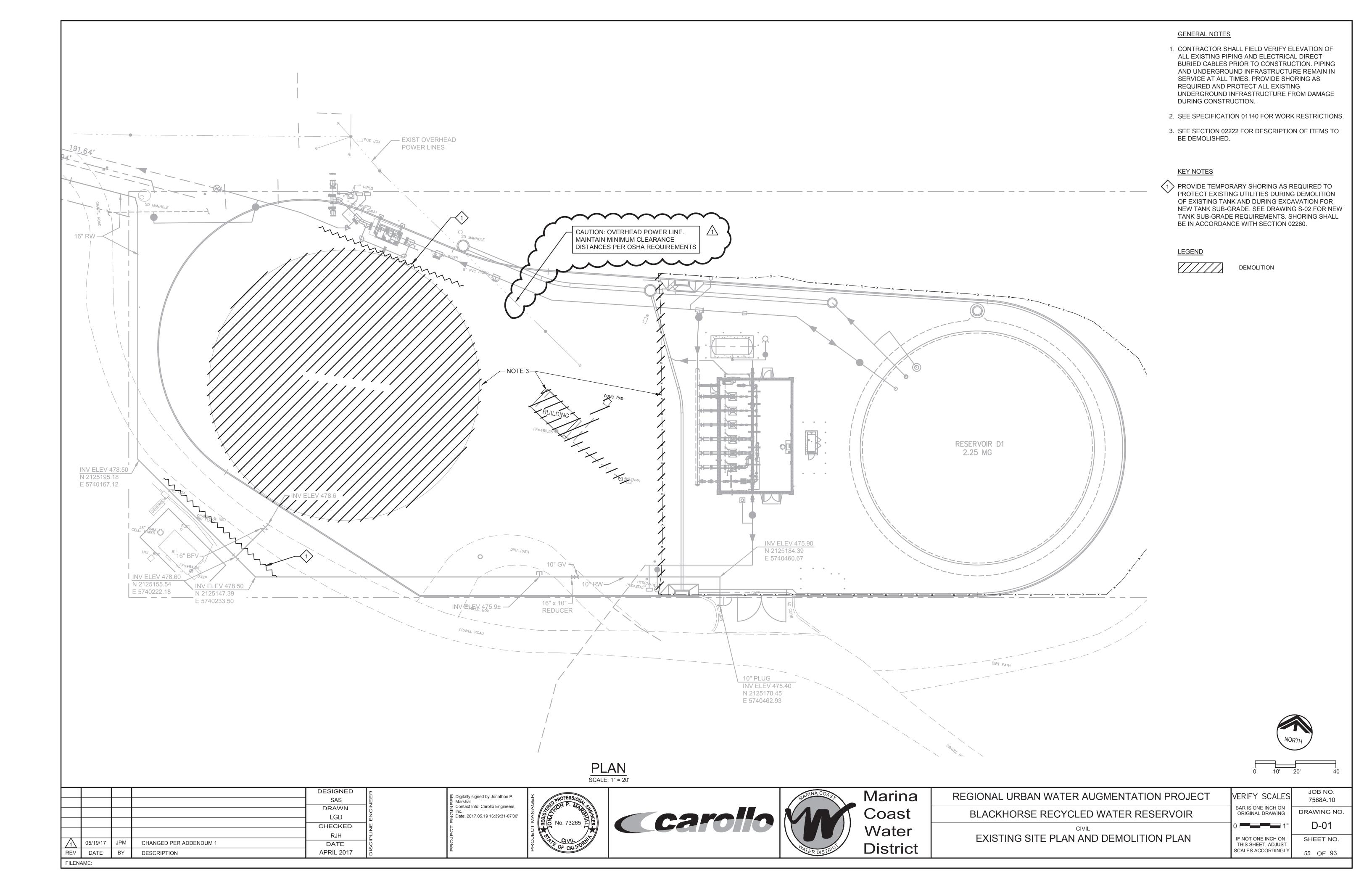
Marina Coast Water **District**

REGIONAL URBAN WATER AUGMENTATION PROJECT RECYCLED WATER PIPELINE PIPELINE TYPICAL DETAILS - 2

VERIFY SCALES 7568A.10 BAR IS ONE INCH ON ORIGINAL DRAWING DRAWING NO.) IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEET NO. 53B OF 93

FILENAME: Last Saved By: BHawes 5-19-17 01:14pm C:\pw_working\projectwise\bhawes\dms09326\BHR_TP-02 XREFS: 7568A10_TB



GENERAL NOTES 1. CONTRACTOR SHALL FIELD VERIFY ELEVATION OF ALL EXISTING PIPING AND ELECTRICAL DIRECT BURIED CABLES PRIOR TO CONSTRUCTION. PIPING AND UNDERGROUND INFRASTRUCTURE SHALL REMAIN IN SERVICE AT ALL TIMES. PROVIDE SHORING AS REQUIRED AND PROTECT ALL EXISTING UNDERGROUND INFRASTRUCTURE FROM DAMAGE DURING CONSTRUCTION. SLOPE 16" OVERFLOW/DRAIN PIPE SUCH THAT IT PASSES BELOW THE 24" POTABLE WATER PIPING WITH A MINIMUM OF 12" OF CLEARANCE. -SEE C-44 FOR RESERVOIR CONTINUATION INLET/OUTLET M-02 **KEY NOTES** —16" OVERFLOW DRAIN. RESERVOIR OVERFLOW / 5 SEE NOTE 2 1 PROVIDE TEMPORARY SHORING AS REQUIRED DRAIN LINES TO PROTECT EXISTING UTILITIES DURING DEMOLITION OF EXISTING TANK AND DURING EXCAVATION FOR NEW TANK SUB-GRADE. SEE DRAWING S-02 FOR NEW TANK SUB-GRADE 19104 — REQUIREMENTS. SHORING SHALL BE IN —16" OVERFLOW DRAIN. ACCORDANCE WITH SECTION 02266. SEE NOTE 2 - POTABLE WATER BACKUP MAGNETIC CAUTION: OVERHEAD POWER LINE. FLOW METER MAINTAIN MINIMUM CLEARANCE DISTANCES PER OSHA REQUIREMENTS -POTABLE WATER BACK VERTICAL TURBINE PUMP INV ELEV 478.60 N 2125315.10 E 5740232.62 90 BEND FUTURE (0) RESERVOIR — 8" - 22.5° 2.0 MG BLACKHORSE **ELBOW** RW RESERVOIR - 8" PQTABLE WATER CENTER OF -⁄8" - 90° RESERVOIR / ELBOW N 2125259.52 E 5740235.89 FLOOR EL. 484.50 1 POTABLE WATER RESERVOIR D1 2.25 MG PLAN SCALE: 1" = 20' DESIGNED Marina REGIONAL URBAN WATER AUGMENTATION PROJECT VERIFY SCALES Digitally signed by Jonathon P. Marshall Contact Info: Carollo Engineers, RRH BAR IS ONE INCH ON ORIGINAL DRAWING DRAWN Coast BLACKHORSE RECYCLED WATER RESERVOIR Inc. Date: 2017.05.19 16:39:21-07'00' SJB CHECKED Water BH FINISHED SITE PLAN & YARD PIPING IF NOT ONE INCH ON

District

JOB NO.

7568A.10

DRAWING NO.

C-01

SHEET NO.

61 OF 93

THIS SHEET, ADJUST SCALES ACCORDINGLY

FILENAME:

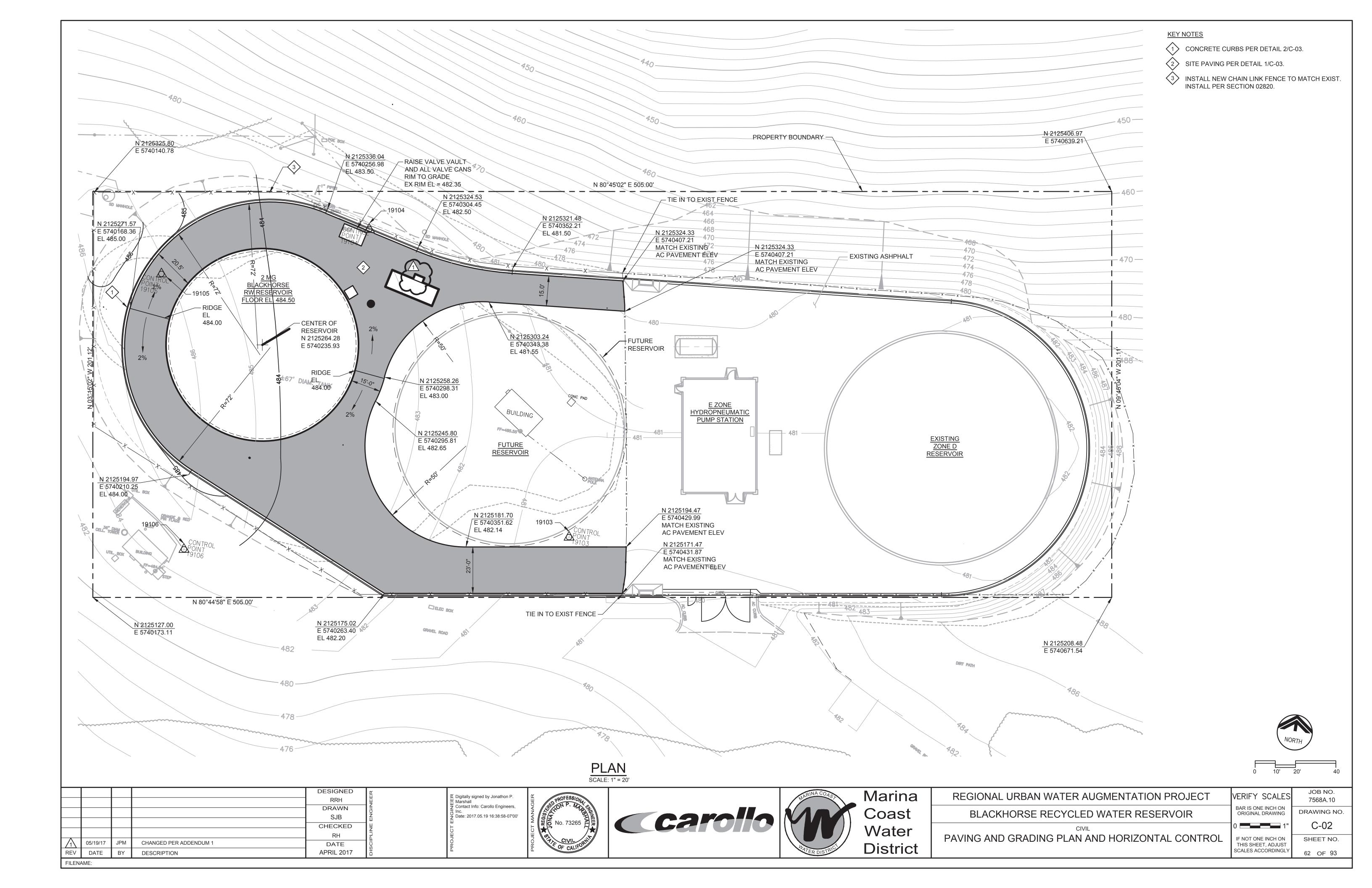
JPM

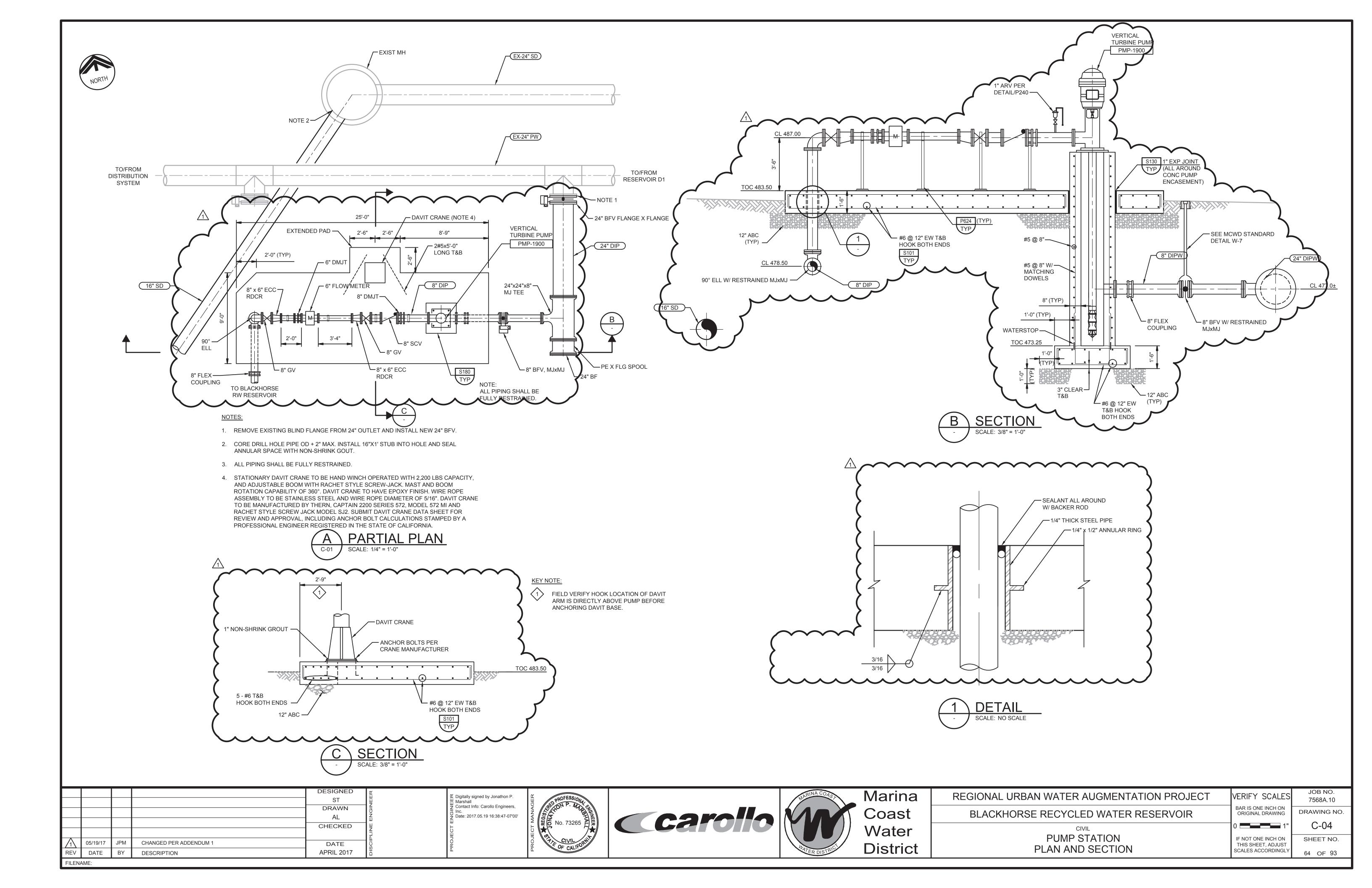
05/19/17

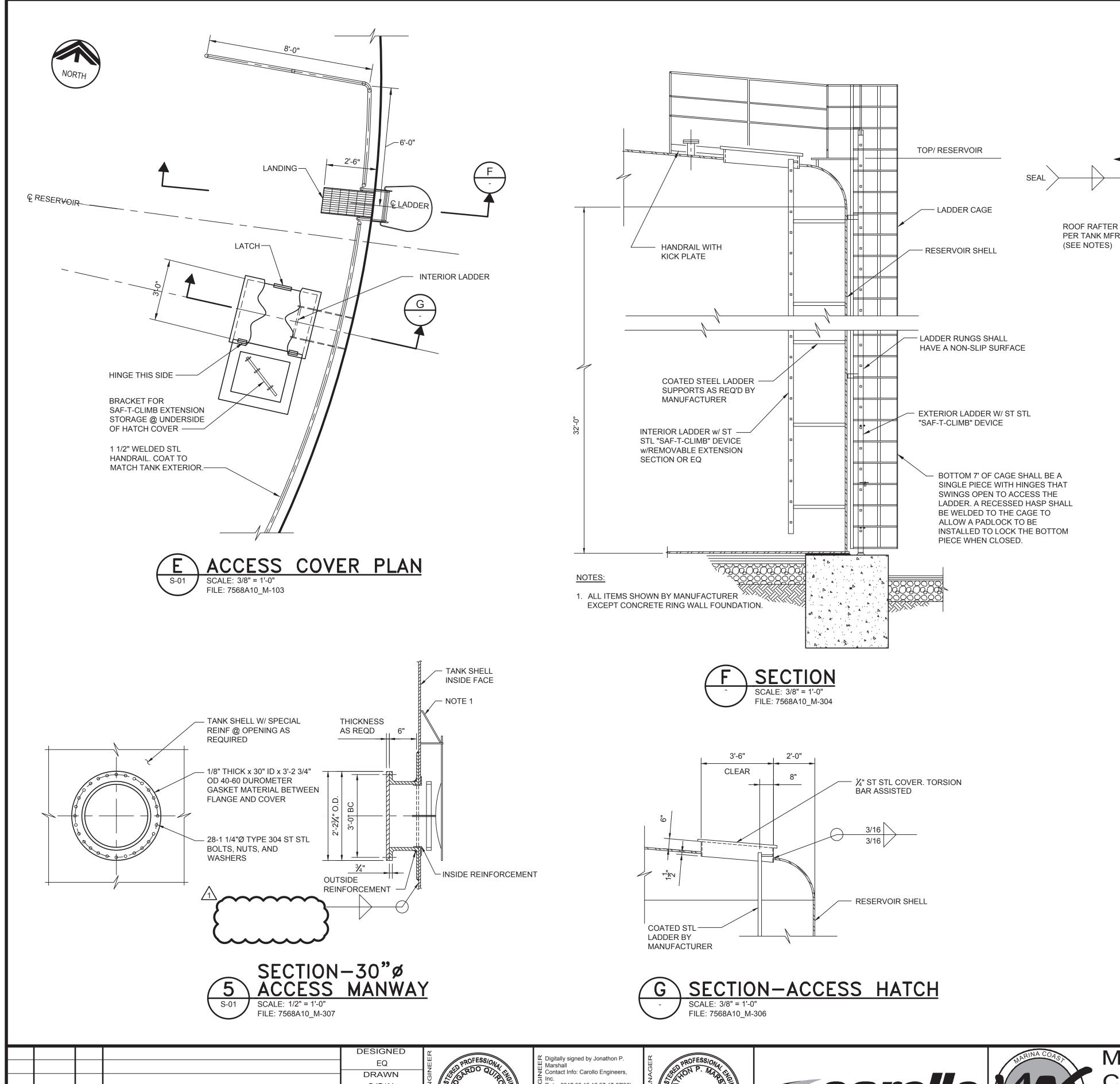
CHANGED PER ADDENDUM 1

DESCRIPTION

DATE APRIL 2017







ROOF RAFTER PER TANK MFR (SEE NOTES)	SEAL SEAL SEAL RAFTER END SUPPORT
_	
<u>NOT</u>	
•	ALL RAFTER FAYING SURFACES SHALL BE SEAL WELDED.
9	ROOF RAFTER LATERAL BRACING SHALL BE STRUCTURAL STEEL CHANNELS OR ANGLES WITH WELDED CONNECTIONS. THREADED CONNECTIONS SHALL NOT BE USED.
3. (GUARDRAIL NOT SHOWN.



				DESIGNED
				EQ
				DRAWN
				SJB/AL
-				CHECKED
				TWP
1	05/19/17	JPM	CHANGED PER ADDENDUM 1	DATE
REV	DATE	BY	DESCRIPTION	APRIL 2017

FILENAME:



Date: 2017.05.19 16:37:47-07'00'

Digitally signed by Edgardo Quiroz
Contact Info: Carollo Engineers, Inc.
Date: 2017.05.19 16:55:53-07'00'







REGIONAL URBAN WATER AUGMENTATION PROJECT
BLACKHORSE RECYCLED WATER RESERVOIR
STRUCTURAL
RESERVOIR

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON PLAN, SECTIONS AND DETAILS

SHEET NO. THIS SHEET, ADJUST SCALES ACCORDINGLY

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7568A.10

DRAWING NO.

S-03