



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

## CIP # RW-0156 VOLUME 2 OF 2

MAY 2017

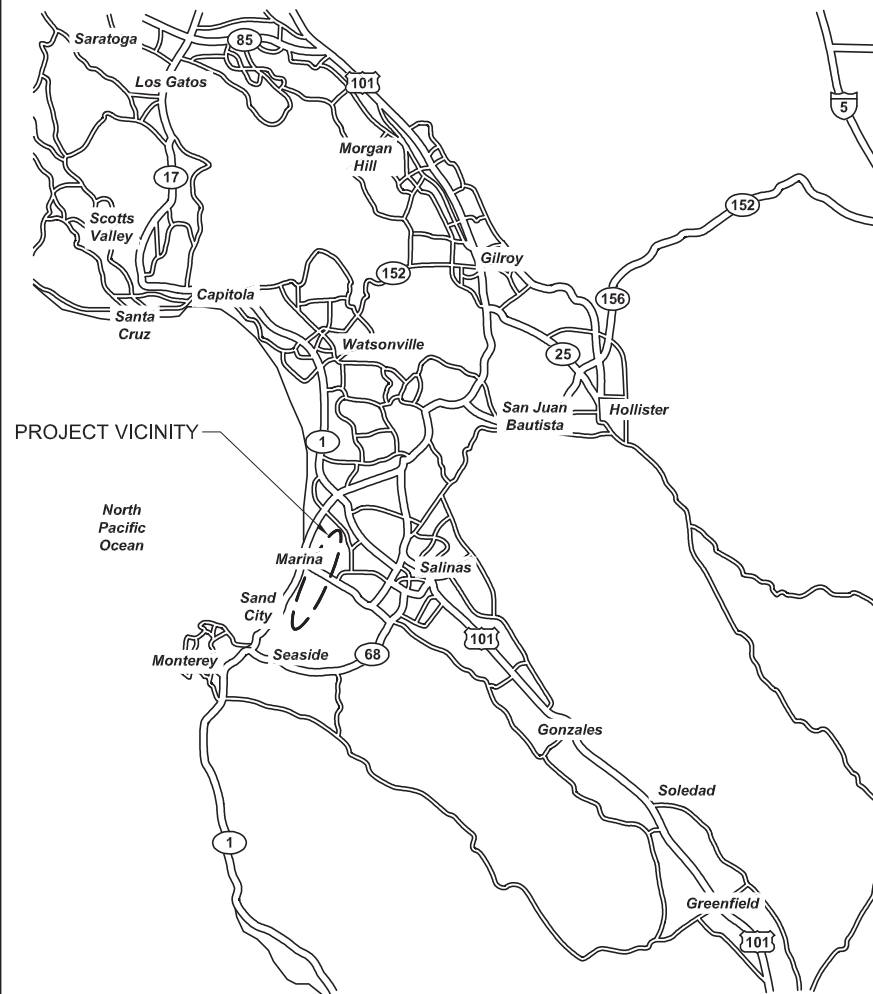
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#### RECYCLED WATER PIPELINE

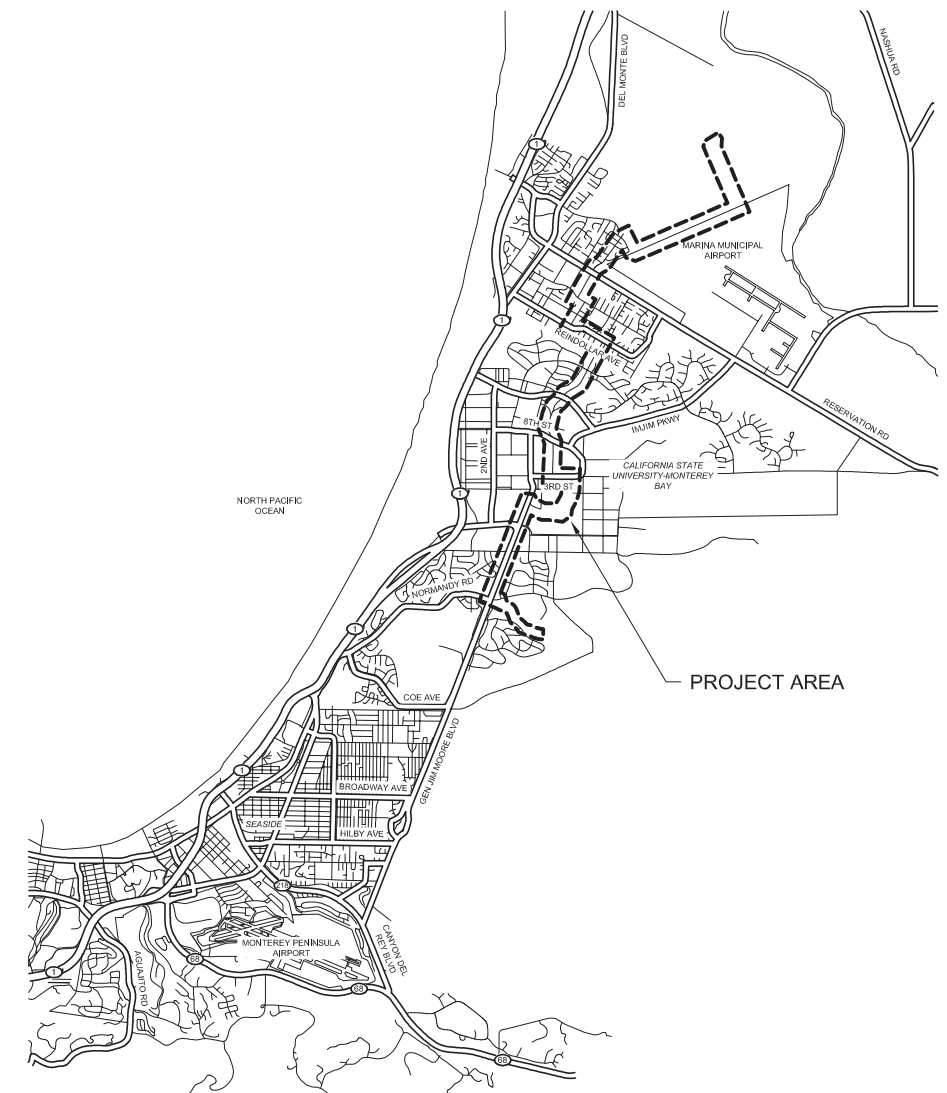
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VICINITY MAP



LOCATION MAP

Call before you Dig  
Avoid cutting underground utility lines. It's costly.



1-800-227-2600

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

53A TP-01 PIPELINE TYPICAL DETAILS  
53B TP-02 PIPELINE TYPICAL DETAILS-2

**carollo**  
Engineers...Working Wonders With Water™  
2700 YGNACIO VALLEY ROAD, SUITE 300  
WALNUT CREEK, CA. 94548  
925-932-1710

Digitally signed by Anne Prudhel  
Contact info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:06:03-07'00'



APPROVED:

MICHAEL WEGLEY  
DISTRICT ENGINEER

SUBMITTED:

*Anne E. Prudhel*  
ANNE PRUDHEL, P.E.  
CAROLLO ENGINEERS  
R.C.E. 66426

**GENERAL NOTES**

- REFER TO DRAWINGS 53A AND 53B AND SPECIFICATION APPENDIX E FOR DETAILS DENOTED BY XXX  
TYP AND MCWD STANDARD DETAILS.
- 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 AND/OR AB THICKNESS IF THE EXISTING THICKNESS IS GREATER THAN THE MINIMUM.
- 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.
- 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.
- 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 WITH ALL CONDITIONS PROVIDED IN THE EASEMENT, RIGHT-OF-ENTRY, OR TEMPORARY PERMIT DOCUMENTS AS DESCRIBED IN SECTION 01140.
- 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	CONNECTION 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
382+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"		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
				CONDUIT	2"	PLASTIC	37-1/2"	
				GAS	2"	PLASTIC	35"	
4	CRESCENT AVE & COSTA DEL MAR RD	3"		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"		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"	
15	CRESCENT AVE & RESERVATION RD	5"		GAS	4"	PLASTIC	44-1/2"	EXCAVATED TO A DEPTH OF 10' AND NO WATER LINE FOUND. 41' NW OF FACE OF CURB AT 3170 CRESCENT AVE
15-A	CRESCENT AVE & RESERVATION RD	5"	5"			DRY		8' SW OF STOP LINE AT CRESCENT AVE
16	CRESCENT AVE & RESERVATION RD	5"		TELE	3"	PLASTIC	35"	EXCAVATED TO A DEPTH OF 13'-2". 13' SW OF STOP LINE AT CRESCENT AVE
17	CRESCENT AVE & RESERVATION RD	5"		GAS	6"	STEEL	32"	30-1/2' SW OF STOP LINE AT CRESCENT AVE
18	CRESCENT AVE & RESERVATION RD							37' NE OF FACE OF ISLAND ON CRESCENT AVE
19	CRESCENT AVE	3"		GAS	2"	STEEL	71"	CLEARED BY PG&E NO ELECTRIC UNDERGROUND. ELECTRIC OVERHEAD
				GAS	3/4"	STEEL	66"	137" NW FROM FACE OF CURB AT LIGHT POLE ON CRESCENT AVE
21	CRESCENT AVE	3"		GAS		DRY		12' NW FROM FACE OF CURB AT LIGHT POLE ON CRESCENT AVE
21-A	CRESCENT AVE	3"		GAS	2"	STEEL	52"	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.
22	CRESCENT AVE & CARMEL AVE	5"		TELE CONDUIT		PLASTIC	62"	RE-MARKED BY PG&E AND FOUND 2" GAS. 41" NW FROM FACE OF CURB ON CRESCENT AVE
				WATER				12' NW FROM CENTER OF TELEPHONE MAN HOLE ON CARMEL AT CRESCENT AVE
23	CRESCENT AVE & CARMEL AVE	5"		GAS	2"	STEEL	48"	WATER LINE NOT FOUND AT AN EXCAVATION DEPTH OF 9'. FOUND CONCRETE ENCASUREMENT CONDUITS AND NO WATER LOCATED UNDER ENCASUREMENT
24	CRESCENT AVE & CARMEL AVE	5"		GAS	2"	STEEL	47"	21' NW FROM CENTER OF TELEPHONE MAN HOLE ON CARMEL AVE AT CRESCENT AVE
25	335 CARMEL AVE & VAUGHN AVE	5"		GAS	2"	STEEL	49"	135' NE FROM CENTER OF TELEPHONE MAN HOLE ON CARMEL AVE AT CRESCENT AVE
26	335 CARMEL AVE & VAUGHN AVE	5"		3-4" CONDUITS	3-4"	PLASTIC	41 - 1/2"	13' SW OF FACE OF CURB AT 335 CARMEL AVE
27	335 CARMEL AVE & VAUGHN AVE	4"		WATER	8"	TRANSITE	39"	36' SW FROM EDGE OF CURB AT 335 CARMEL AVE
28	VAUGHN AVE & EVERETT AVE	3"		GAS	2"	STEEL	41"	44' SW OF EDGE OF DRIVEWAY AT 335 CARMEL AVE
29	VAUGHN AVE & HILLCREST AVE	3"		GAS	2"	STEEL	30"	13' SE OF FACE OF CURB AT 3069 VAUGHN AVE
30	VAUGHN AVE & HILLCREST AVE	4"		WATER	8"	TRANSITE	32 1/2"	27' SW OF STOP LINE AT VAUGHN AVE
31	334 REINDOLLAR AVE & VAUGHN AVE	3"		GAS	2"	STEEL	35"	18' SW FROM MAN HOLE ON VAUGHN AVE
32	336 REINDOLLAR AVE & VAUGHN AVE	3"		WATER	6"	TRANSITE	40"	35' NE FROM EDGE OF DRIVEWAY AT 334 REINDOLLAR AVE
				GAS	2"	STEEL	35"	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"	

POTHOLES ARE DENOTED ON PLAN WITH X

Last Checked by: 5-19-17 02:30pm Bhwes

DESIGNED	AP
DRAWN	LGD
CHECKED	
DATE	MAY 2017
REV	05/19/17 JPM CHANGED PER ADDENDUM 1
DATE	BY DESCRIPTION

DISCIPLINE ENGINEER

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:42:34-0700'



REGIONAL URBAN WATER AUGMENTATION PROJECT  
RECYCLED WATER PIPELINE  
CIVIL  
GENERAL NOTES - 1

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

JOB NO. 7568A.10  
DRAWING NO. G-02  
SHEET NO. 2 OF 93

**GENERAL NOTES**

1. CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.
2. THE DISTRICT HAS SECURED A 45' TEMPORARY CONSTRUCTION EASEMENT AS SHOWN ON THE PLANS. THE CONTRACTOR MAY, AT HIS OWN DISCRETION, NEGOTIATE WITH THE PROPERTY OWNER FOR TEMPORARY CONSTRUCTION EASEMENT WIDTH BEYOND THE 45 FEET SHOWN.
3. ROAD SHALL CONSIST OF 6-INCHES OF CRUSHED AGGREGATE COMPACTED TO 95%.

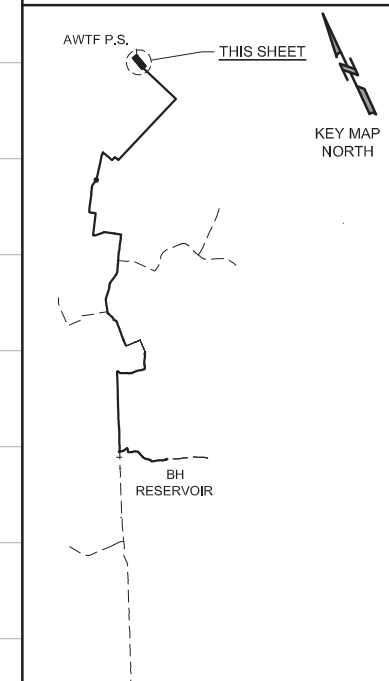
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

**Call before you Dig**

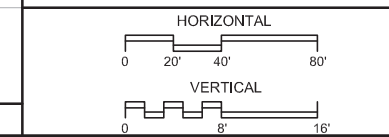
1-800-227-2600

UNDERGROUND SERVICE (USA)

**KEY MAP**



**SCALE**



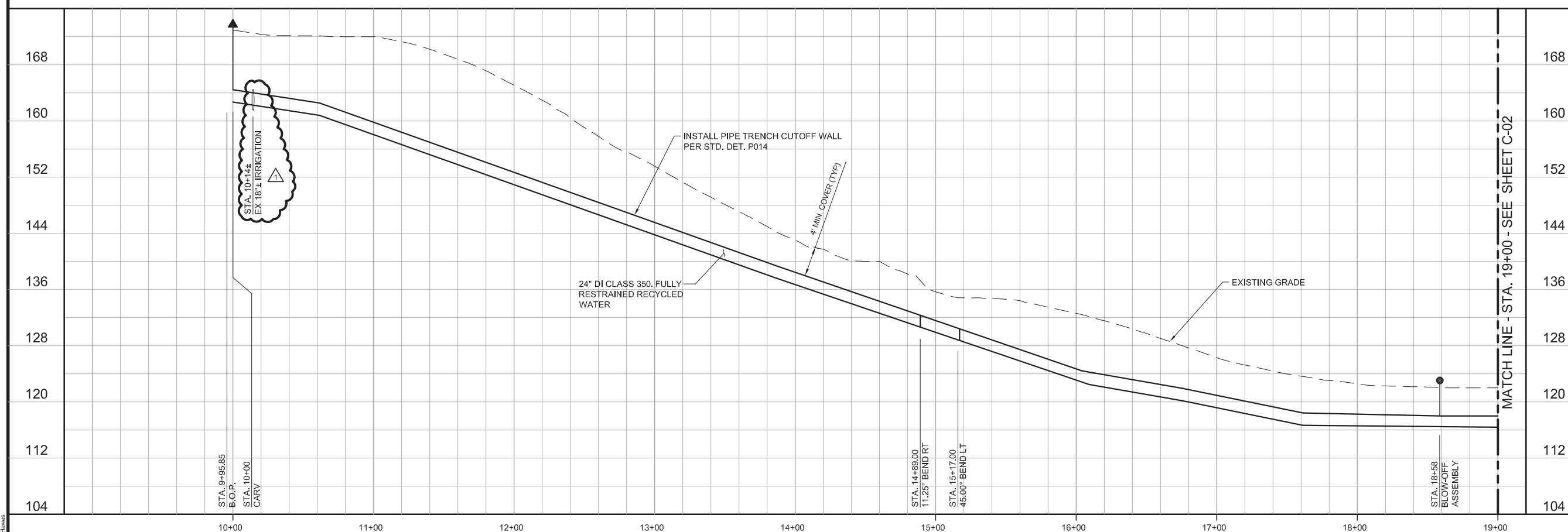
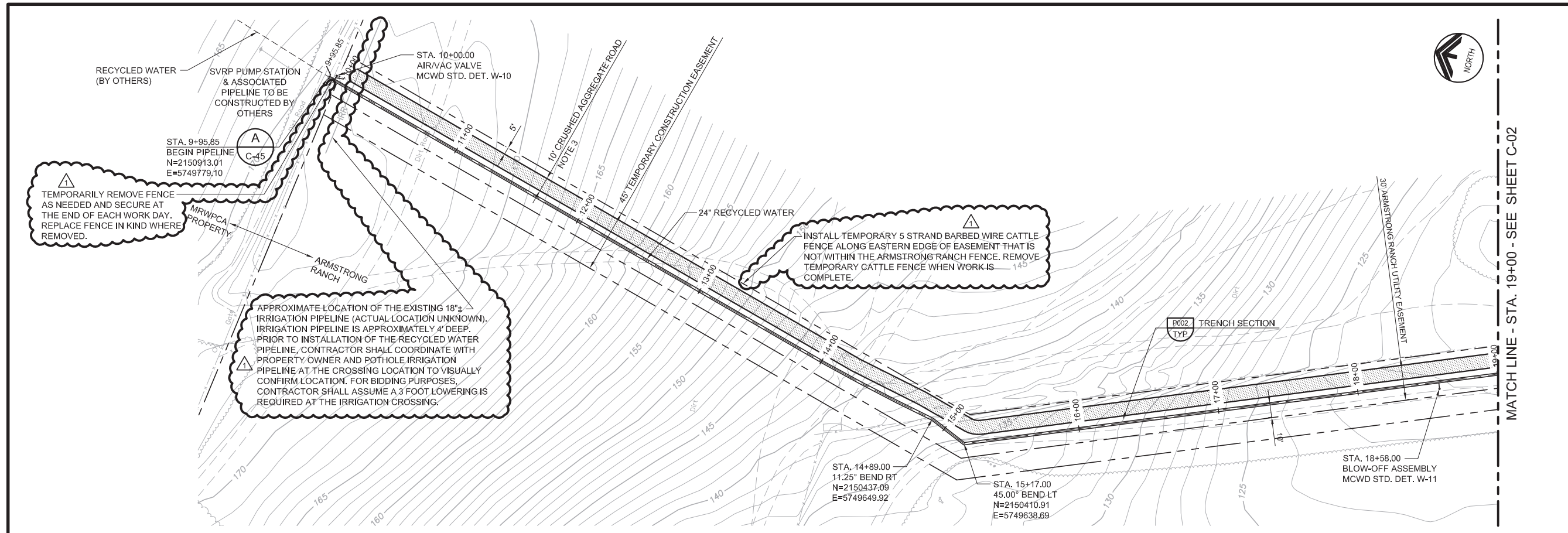
**VERIFY SCALES**

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1" 16'

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 7568A.10  
DRAWING NO. C-01  
SHEET NO. 9 OF 93



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

DESIGNED	JPM
DRAWN	BH
CHECKED	AP
DATE	MAY 2017

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:42:26 -0700

PROJECT MANAGER  
JONATHAN P. MARSHALL  
No. 73285  
CIVIL  
STATE OF CALIFORNIA

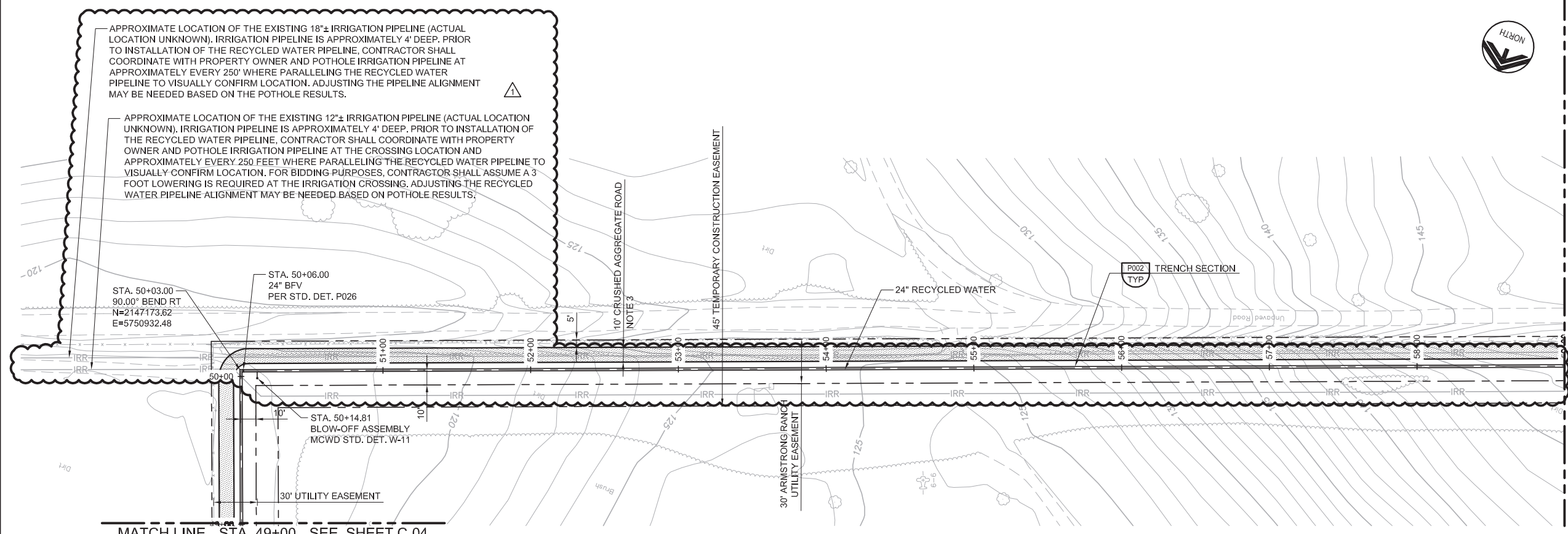
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Engineers...Working Wonders With Water™

**Marina Coast Water District**

REGIONAL URBAN WATER AUGMENTATION PROJECT  
RECYCLED WATER PIPELINE  
CIVIL  
PLAN AND PROFILE  
STA. 9+95.85 TO STA. 19+00

**GENERAL NOTES**

1. CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.
2. THE DISTRICT HAS SECURED A 45' TEMPORARY CONSTRUCTION EASEMENT AS SHOWN ON THE PLANS. THE CONTRACTOR MAY, AT HIS OWN DISCRETION, NEGOTIATE WITH THE PROPERTY OWNER FOR TEMPORARY CONSTRUCTION EASEMENT WIDTH BEYOND THE 45 FEET SHOWN.
3. ROAD SHALL CONSIST OF 6-INCHES OF CRUSHED AGGREGATE COMPACTED TO 95%.



MATCH LINE - STA. 59+00 - SEE SHEET C-06

MATCH LINE - STA. 49+00 - SEE SHEET C-04

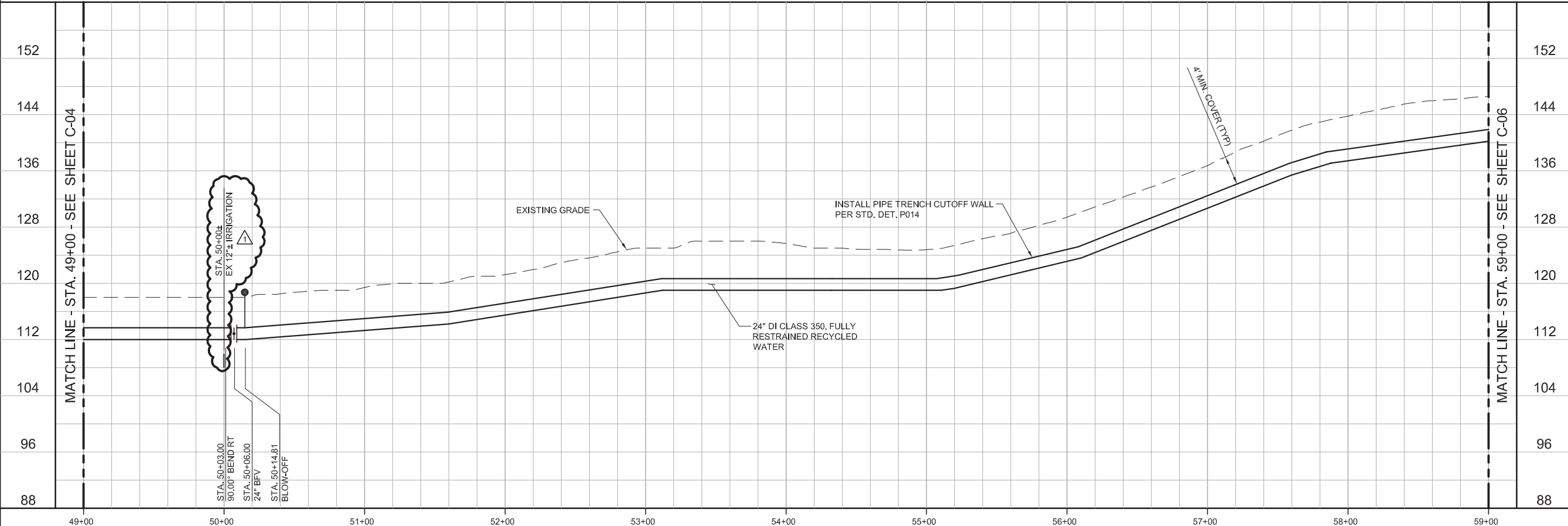
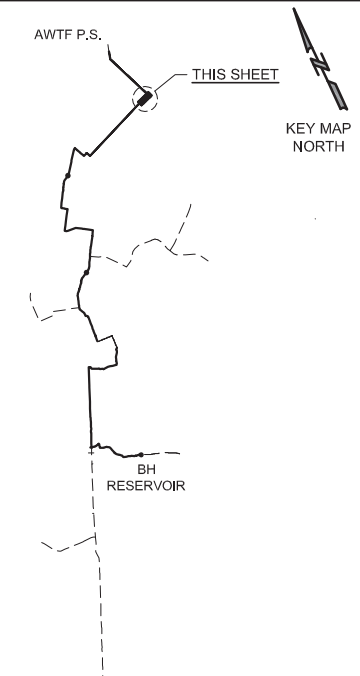
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

**Call before you Dig**

1-800-227-2800

UNDERGROUND SERVICE (USA)

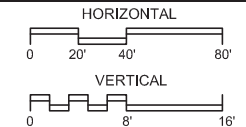
**KEY MAP**



MATCH LINE - STA. 59+00 - SEE SHEET C-06

MATCH LINE - STA. 49+00 - SEE SHEET C-04

**SCALE**



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

DESIGNED	JPM
DRAWN	BH
CHECKED	AP
DATE	MAY 2017

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:42:15-0700'

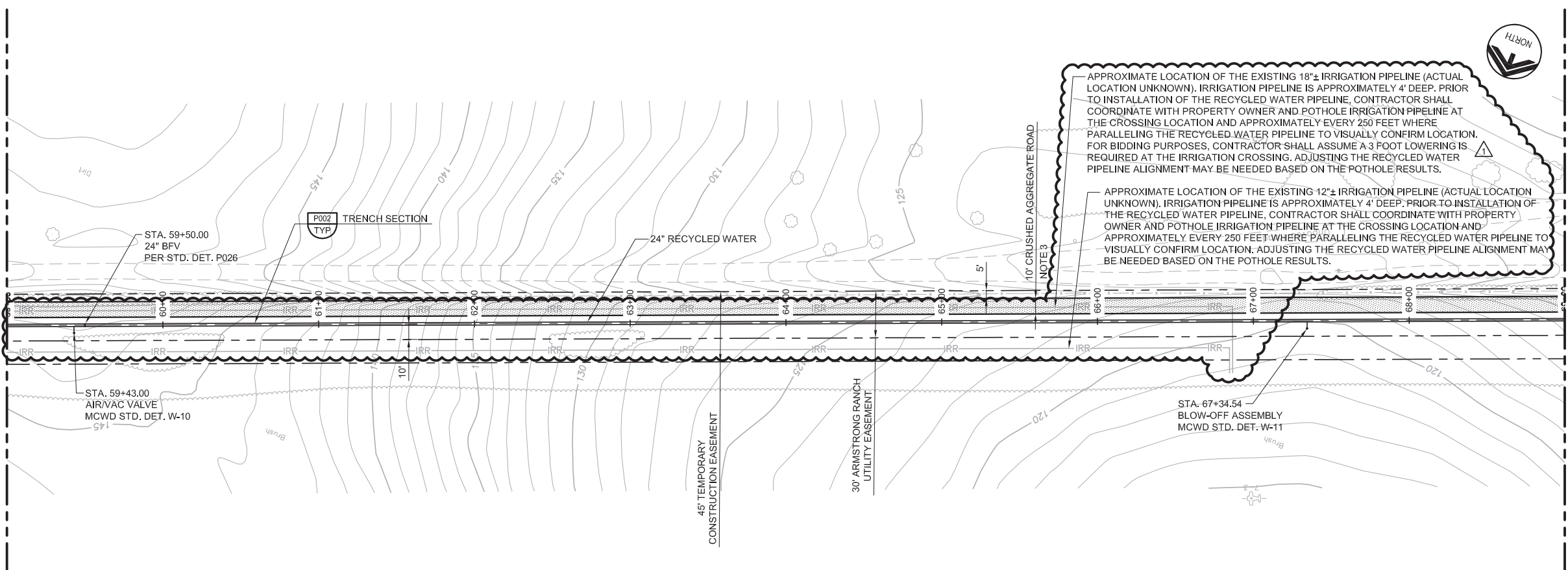


**REGIONAL URBAN WATER AUGMENTATION PROJECT**  
**RECYCLED WATER PIPELINE**  
CIVIL  
**PLAN AND PROFILE**  
STA. 49+00 TO STA. 59+00

<b>VERIFY SCALES</b> BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" 16' IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. 7568A.10 DRAWING NO. C-05 SHEET NO. 13 OF 93
---	---

MATCH LINE - STA. 59+00 - SEE SHEET C-05

MATCH LINE - STA. 69+00 - SEE SHEET C-07



APPROXIMATE LOCATION OF THE EXISTING 18"± IRRIGATION PIPELINE (ACTUAL LOCATION UNKNOWN). IRRIGATION PIPELINE IS APPROXIMATELY 4' DEEP. PRIOR TO INSTALLATION OF THE RECYCLED WATER PIPELINE, CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER AND POT HOLE IRRIGATION PIPELINE AT THE CROSSING LOCATION AND APPROXIMATELY EVERY 250 FEET WHERE PARALLELING THE RECYCLED WATER PIPELINE TO VISUALLY CONFIRM LOCATION. FOR BIDDING PURPOSES, CONTRACTOR SHALL ASSUME A 3 FOOT LOWERING IS REQUIRED AT THE IRRIGATION CROSSING. ADJUSTING THE RECYCLED WATER PIPELINE ALIGNMENT MAY BE NEEDED BASED ON THE POT HOLE RESULTS.

APPROXIMATE LOCATION OF THE EXISTING 12"± IRRIGATION PIPELINE (ACTUAL LOCATION UNKNOWN). IRRIGATION PIPELINE IS APPROXIMATELY 4' DEEP. PRIOR TO INSTALLATION OF THE RECYCLED WATER PIPELINE, CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER AND POT HOLE IRRIGATION PIPELINE AT THE CROSSING LOCATION AND APPROXIMATELY EVERY 250 FEET WHERE PARALLELING THE RECYCLED WATER PIPELINE TO VISUALLY CONFIRM LOCATION. ADJUSTING THE RECYCLED WATER PIPELINE ALIGNMENT MAY BE NEEDED BASED ON THE POT HOLE RESULTS.

**GENERAL NOTES**

1. CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.
2. THE DISTRICT HAS SECURED A 45' TEMPORARY CONSTRUCTION EASEMENT AS SHOWN ON THE PLANS. THE CONTRACTOR MAY, AT HIS OWN DISCRETION, NEGOTIATE WITH THE PROPERTY OWNER FOR TEMPORARY CONSTRUCTION EASEMENT WIDTH BEYOND THE 45 FEET SHOWN.
3. ROAD SHALL CONSIST OF 6-INCHES OF CRUSHED AGGREGATE COMPACTED TO 95%.

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

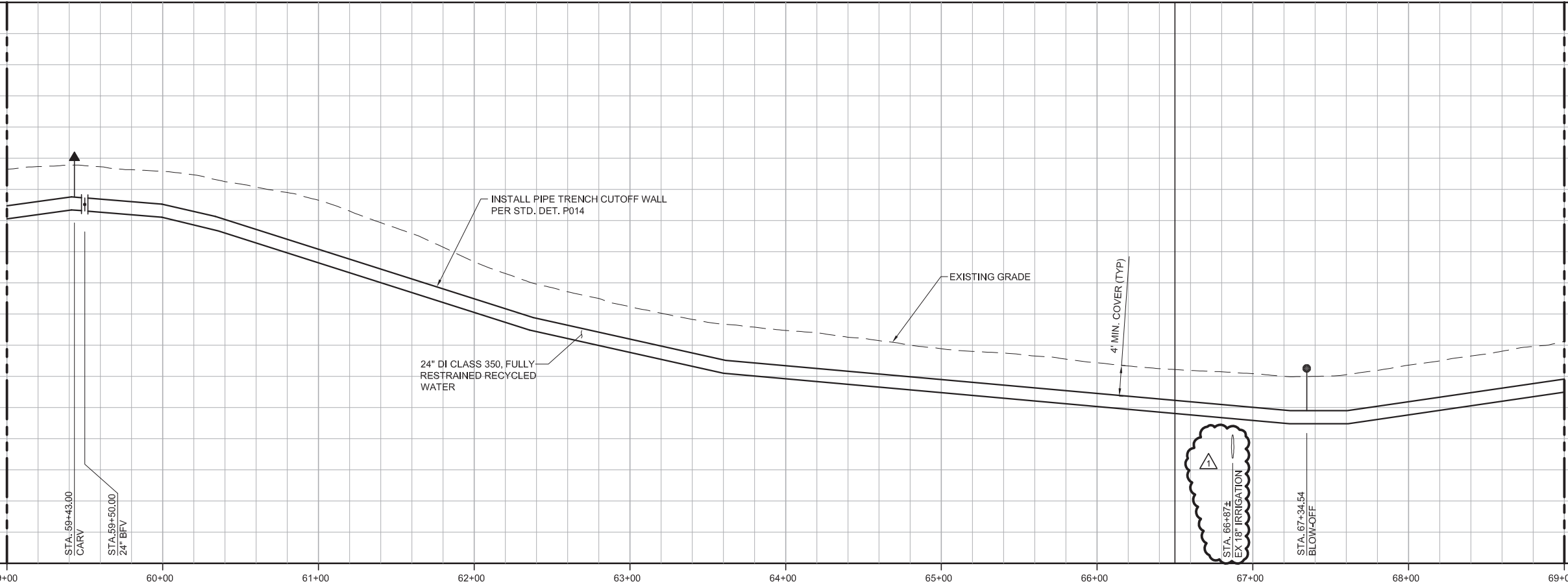
**Call before you Dig**

1-800-227-2800

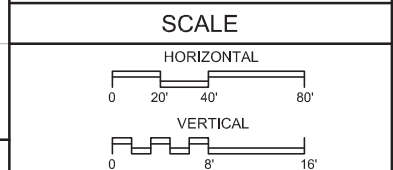
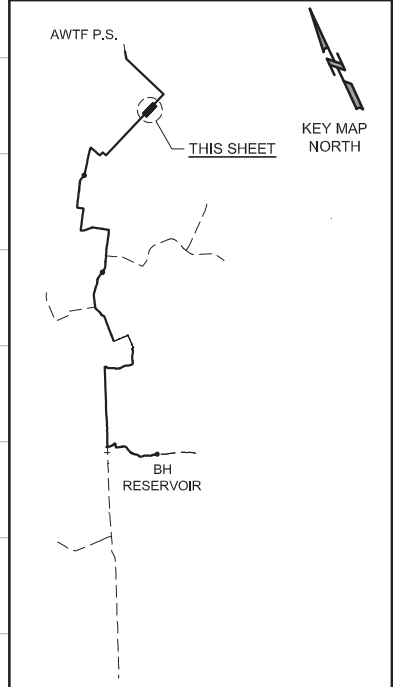
UNDERGROUND SERVICE (USA)

MATCH LINE - STA. 59+00 - SEE SHEET C-05

MATCH LINE - STA. 69+00 - SEE SHEET C-07



**KEY MAP**



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

DESIGNED	JPM
DRAWN	BH
CHECKED	AP
DATE	MAY 2017

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:42:06-0700'

PROJECT MANAGER  
REG. EX. PRO. CIVIL ENGINEER  
JONATHAN P. MARSHALL  
No. 73265  
CIVIL  
STATE OF CALIFORNIA

**carollo**  
Engineers...Working Wonders With Water™

MARINA COAST WATER DISTRICT

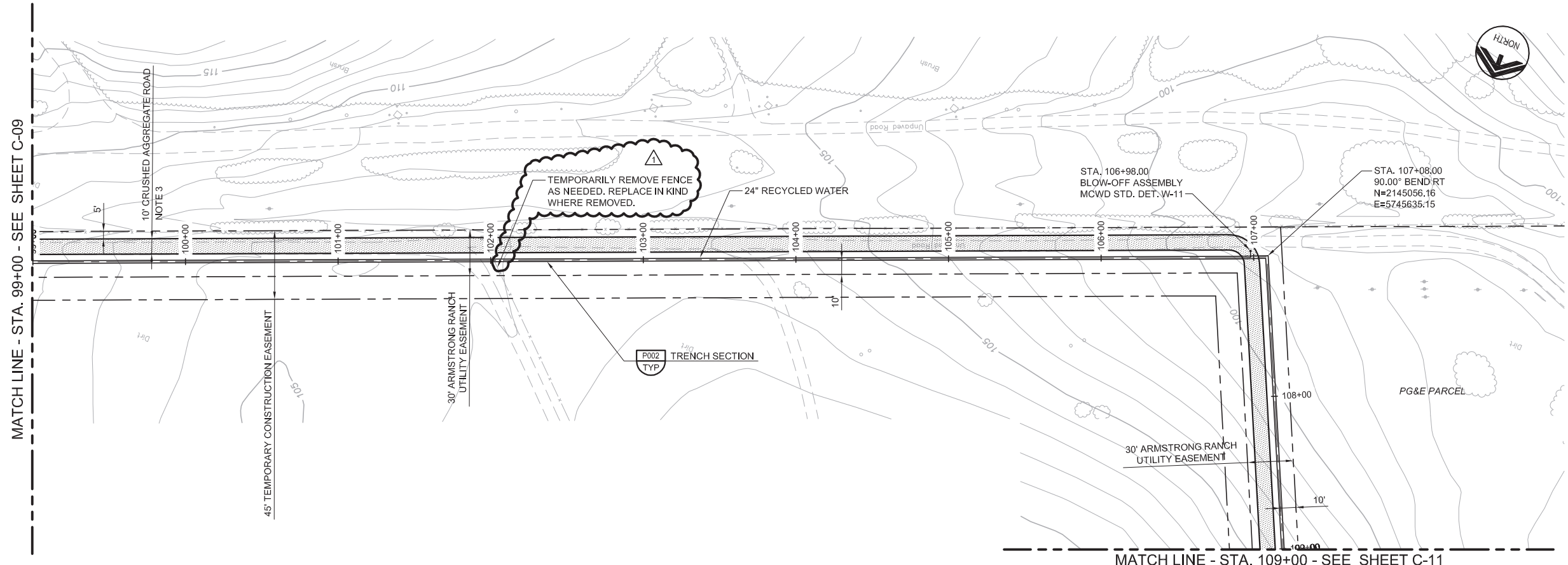
**Marina Coast Water District**

REGIONAL URBAN WATER AUGMENTATION PROJECT  
RECYCLED WATER PIPELINE  
CIVIL  
PLAN AND PROFILE  
STA. 59+00 TO STA. 69+00

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" 16'	JOB NO. 7568A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. C-06
	SHEET NO. 14 OF 93

**GENERAL NOTES**

1. CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.
2. THE DISTRICT HAS SECURED A 45' TEMPORARY CONSTRUCTION EASEMENT AS SHOWN ON THE PLANS. THE CONTRACTOR MAY, AT HIS OWN DISCRETION, NEGOTIATE WITH THE PROPERTY OWNER FOR TEMPORARY CONSTRUCTION EASEMENT WIDTH BEYOND THE 45 FEET SHOWN.
3. ROAD SHALL CONSIST OF 6-INCHES OF CRUSHED AGGREGATE COMPACTED TO 95%.



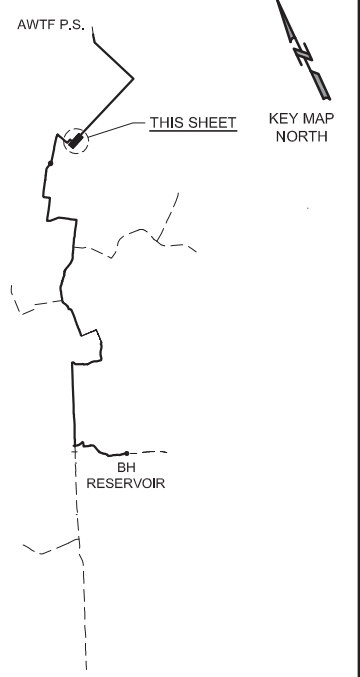
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

**Call before you Dig**

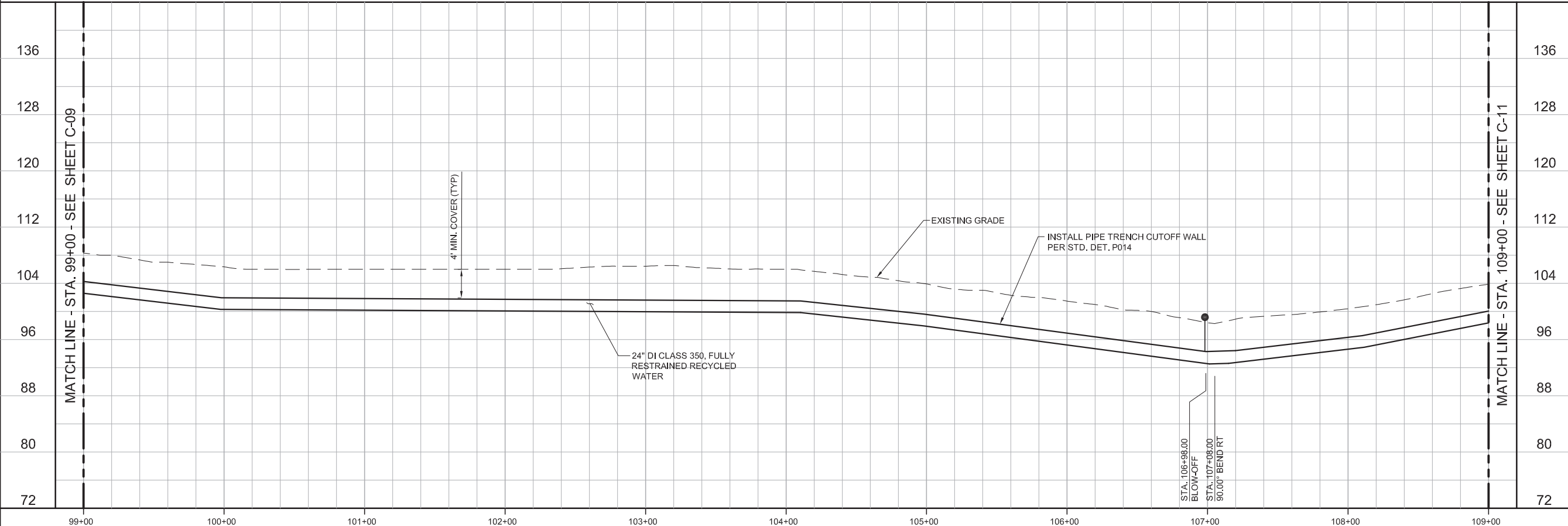
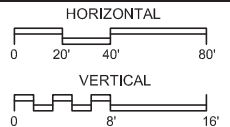
1-800-227-2600

UNDERGROUND SERVICE (USA)

**KEY MAP**



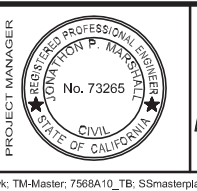
**SCALE**



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

DESIGNED	JPM
DRAWN	BH
CHECKED	AP
DATE	MAY 2017

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:41:57-0700'



**REGIONAL URBAN WATER AUGMENTATION PROJECT**

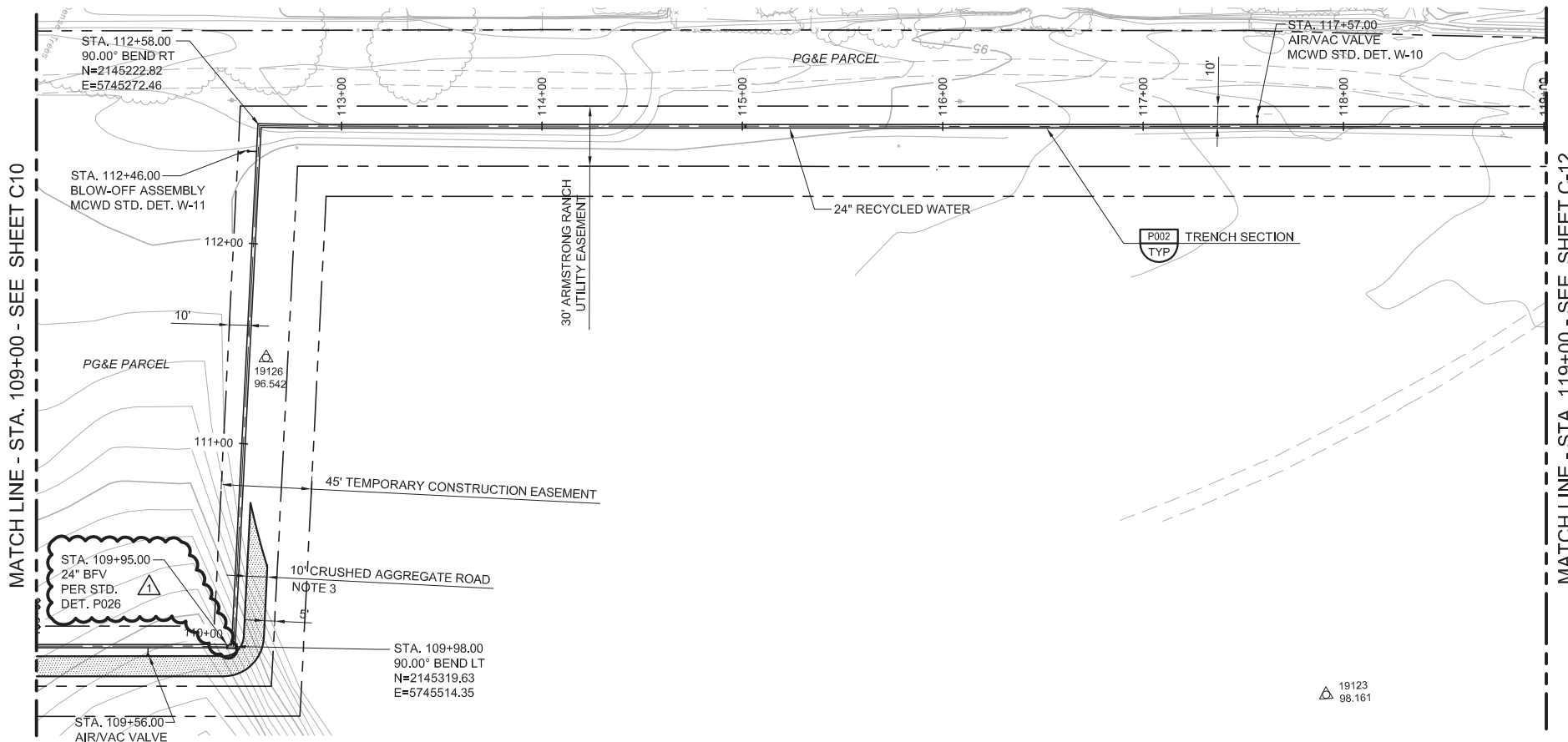
**RECYCLED WATER PIPELINE**

CIVIL

**PLAN AND PROFILE**

STA. 99+00 TO STA. 109+00

<b>VERIFY SCALES</b>	JOB NO.
BAR IS ONE INCH ON ORIGINAL DRAWING	7568A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO.
	C-10
	SHEET NO.
	18 OF 93



**GENERAL NOTES**

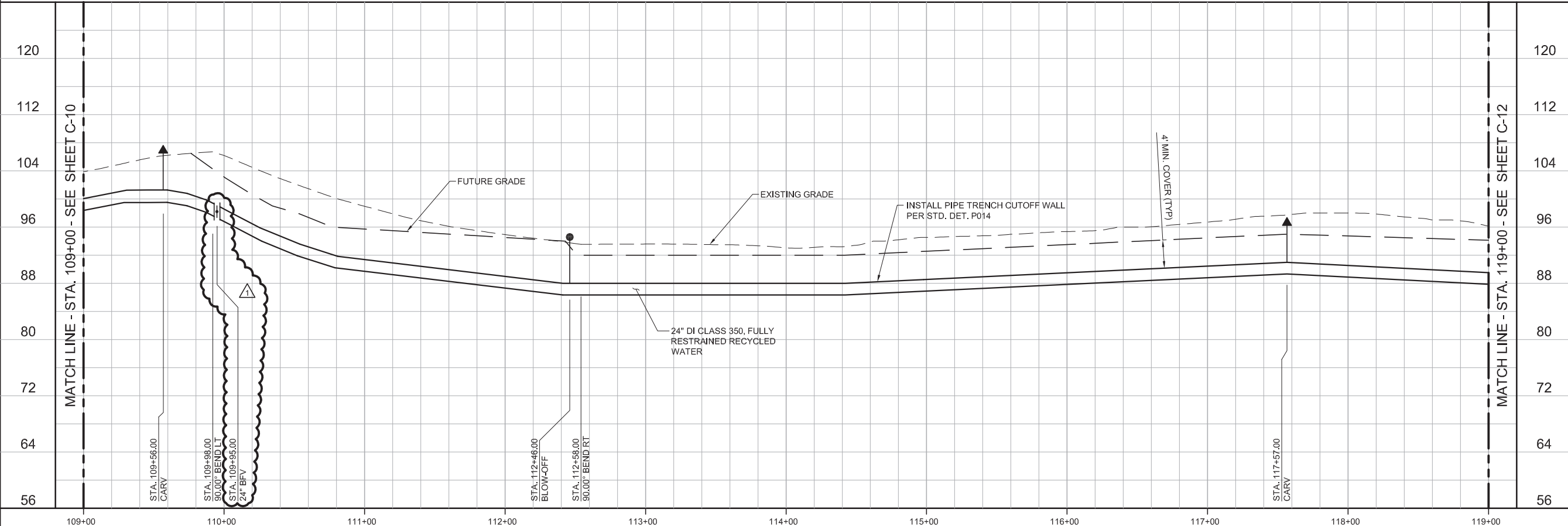
1. CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.
2. THE DISTRICT HAS SECURED A 45' TEMPORARY CONSTRUCTION EASEMENT AS SHOWN ON THE PLANS. THE CONTRACTOR MAY, AT HIS OWN DISCRETION, NEGOTIATE WITH THE PROPERTY OWNER FOR TEMPORARY CONSTRUCTION EASEMENT WIDTH BEYOND THE 45 FEET SHOWN.
3. ROAD SHALL CONSIST OF 6-INCHES OF CRUSHED AGGREGATE COMPACTED TO 95%.

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

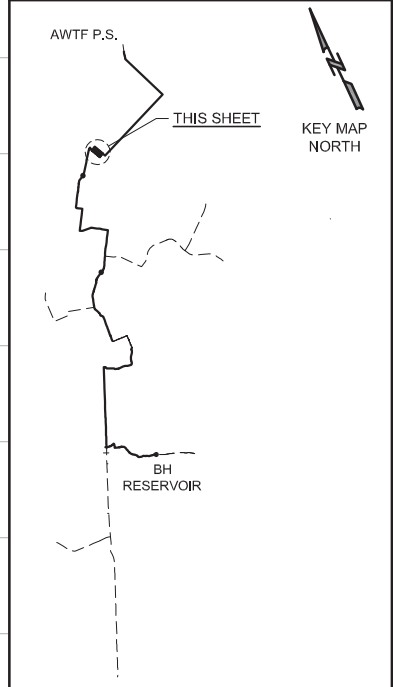
**Call before you Dig**

1-800-227-2600

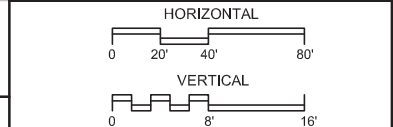
UNDERGROUND SERVICE (USA)



**KEY MAP**



**SCALE**



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

DESIGNED	JPM
DRAWN	BH
CHECKED	AP
DATE	MAY 2017

Project Engineer: Digitally signed by Jonathon P. Marshall  
 Contact Info: Carollo Engineers, Inc.  
 Date: 2017.05.19 16:41:48-07'00'

Project Manager: JONATHAN P. MARSHALL  
 No. 73265  
 CIVIL ENGINEER  
 STATE OF CALIFORNIA

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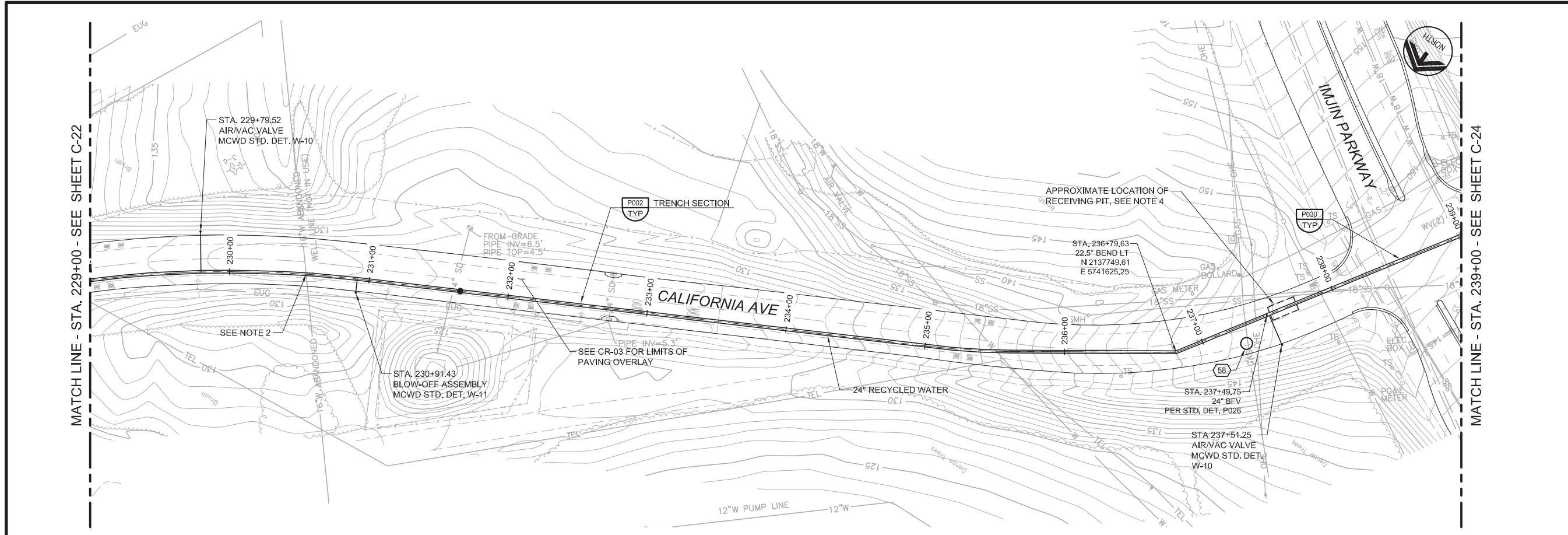
**MARINA COAST WATER DISTRICT**

**REGIONAL URBAN WATER AUGMENTATION PROJECT**

**RECYCLED WATER PIPELINE**

CIVIL  
**PLAN AND PROFILE**  
 STA. 109+00 TO STA. 119+00

<b>VERIFY SCALES</b>	JOB NO. 7568A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. C-11
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 19 OF 93



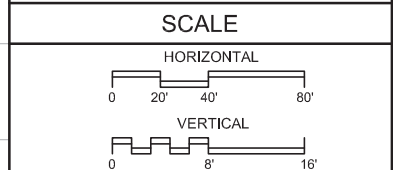
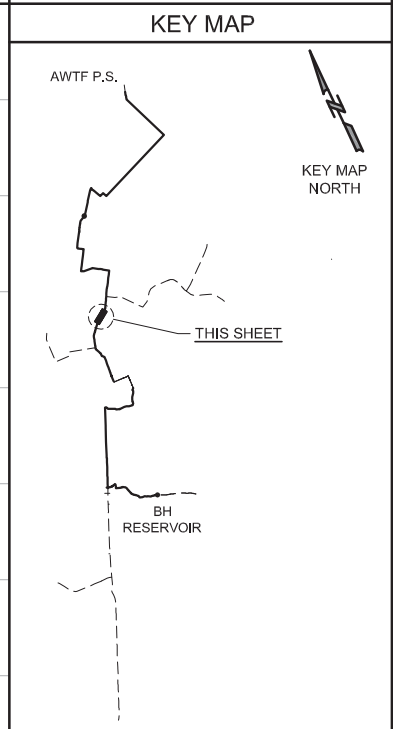
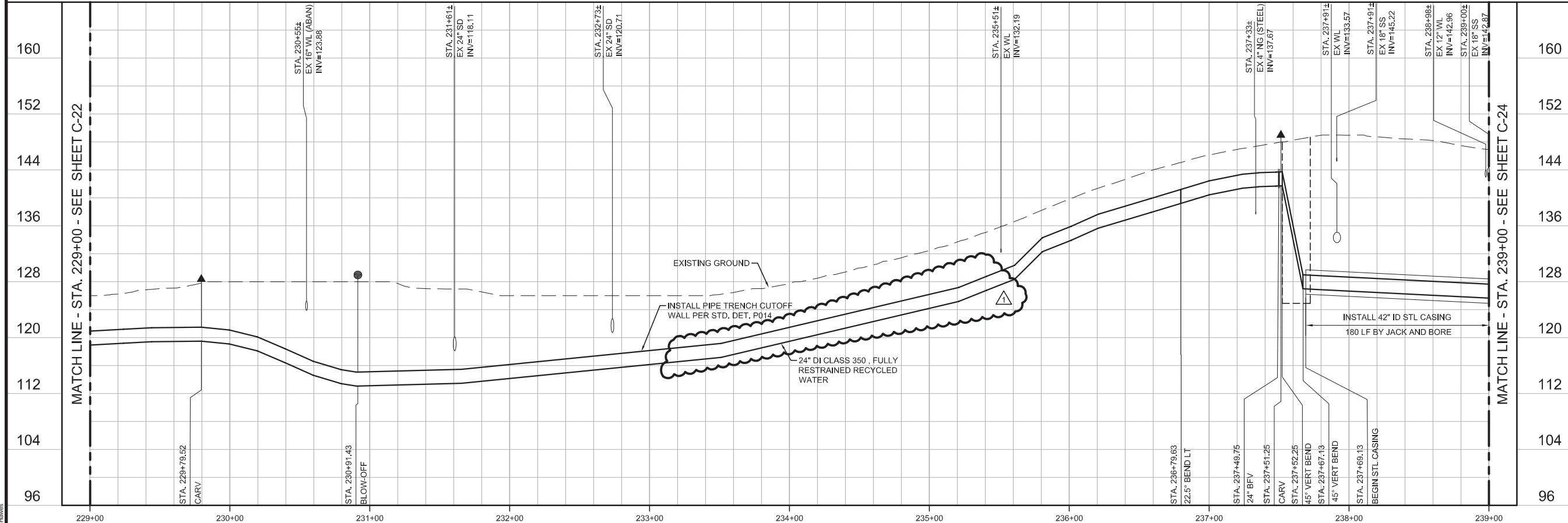
- ### GENERAL NOTES
- CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.
  - CONTRACTOR MAY CUT THROUGH ABANDONED LINE AND CAP IF IN CONFLICT WITH NEW RW LINE.
  - ANY CONSTRUCTION ACTIVITIES WHICH IMPACT PARKWAYS SHALL BE CONDUCTED TO MINIMIZE DISTURBANCE TO ADJACENT PROPERTY OWNERS. ANY AREAS IMPACTED SHALL BE PHOTOGRAPHED PRIOR TO CONSTRUCTION, AND RESTORED TO THEIR PRE-CONSTRUCTION CONDITION PRIOR TO CONTRACTOR DEMOBILIZATION.
  - EXACT LOCATIONS AND DIMENSIONS OF JACKING AND RECEIVING PITS TO BE DETERMINED BY CONTRACTOR AND SUBMITTED TO ENGINEER FOR REVIEW.

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

**Call before you Dig**

1-800-227-2600

UNDERGROUND SERVICE (USA)



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

DESIGNED	JPM
DRAWN	BH
CHECKED	AP
DATE	MAY 2017

PROJECT ENGINEER

Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:41:38-0700'

PROJECT MANAGER

REG. EX. PRO. CIVIL ENGINEER  
JONATHAN P. MARSHALL  
No. 73265  
STATE OF CALIFORNIA

**carollo**  
Engineers...Working Wonders With Water™

MARINA COAST WATER DISTRICT

**Marina Coast Water District**

REGIONAL URBAN WATER AUGMENTATION PROJECT

RECYCLED WATER PIPELINE

CIVIL

PLAN AND PROFILE  
STA. 229+00 TO STA. 239+00

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1" 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 7568A.10

DRAWING NO. C-23

SHEET NO. 31 OF 93



**GENERAL NOTES**

1. CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.
2. ALLOWABLE CONSTRUCTION WORK AREA ON NORMANDY RD SHALL BE FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.

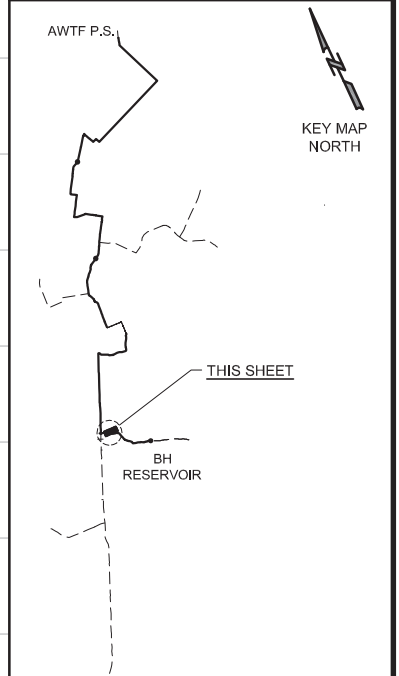
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

**Call before you Dig**

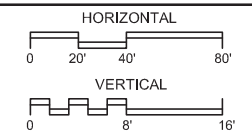
1-800-227-2800

UNDERGROUND SERVICE (USA)

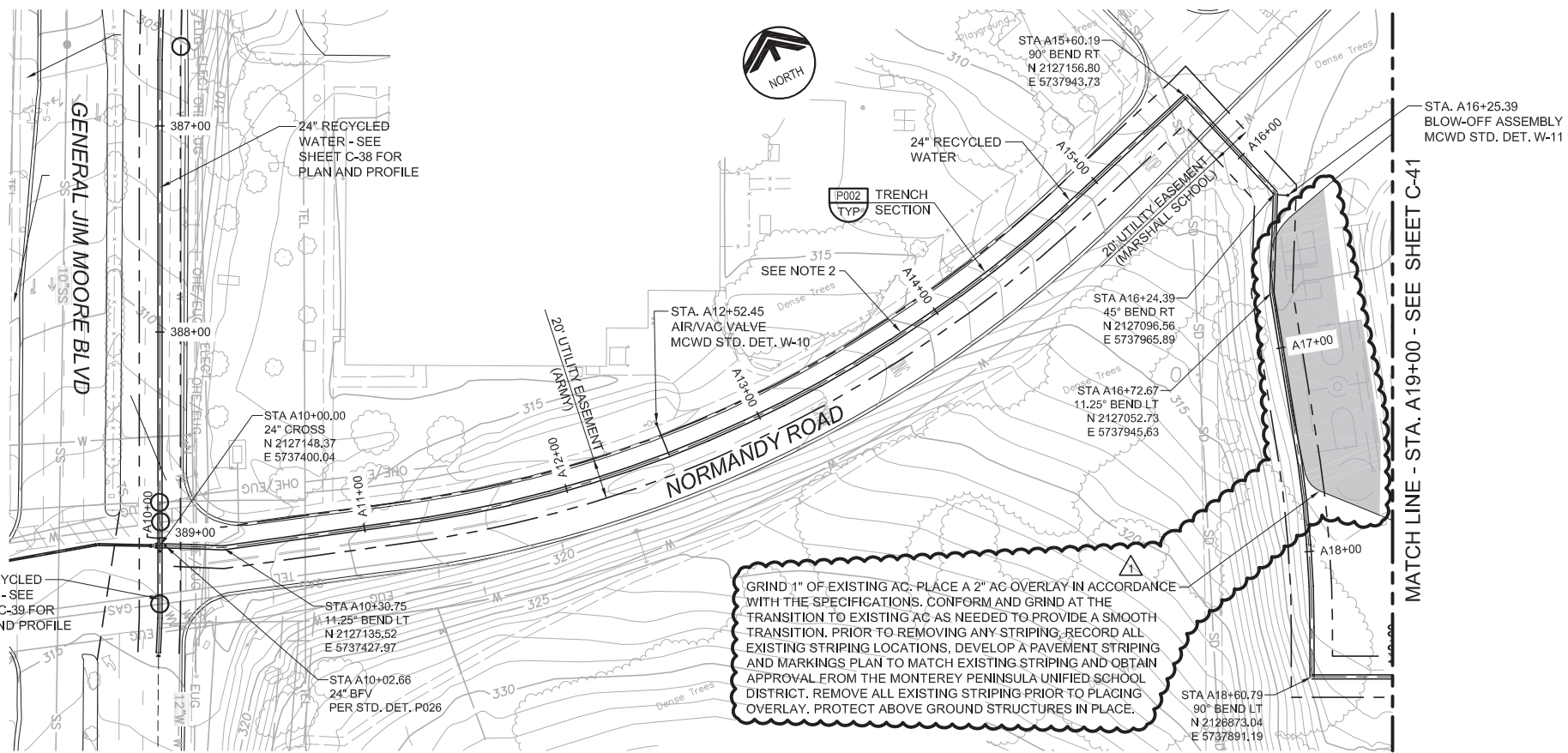
**KEY MAP**



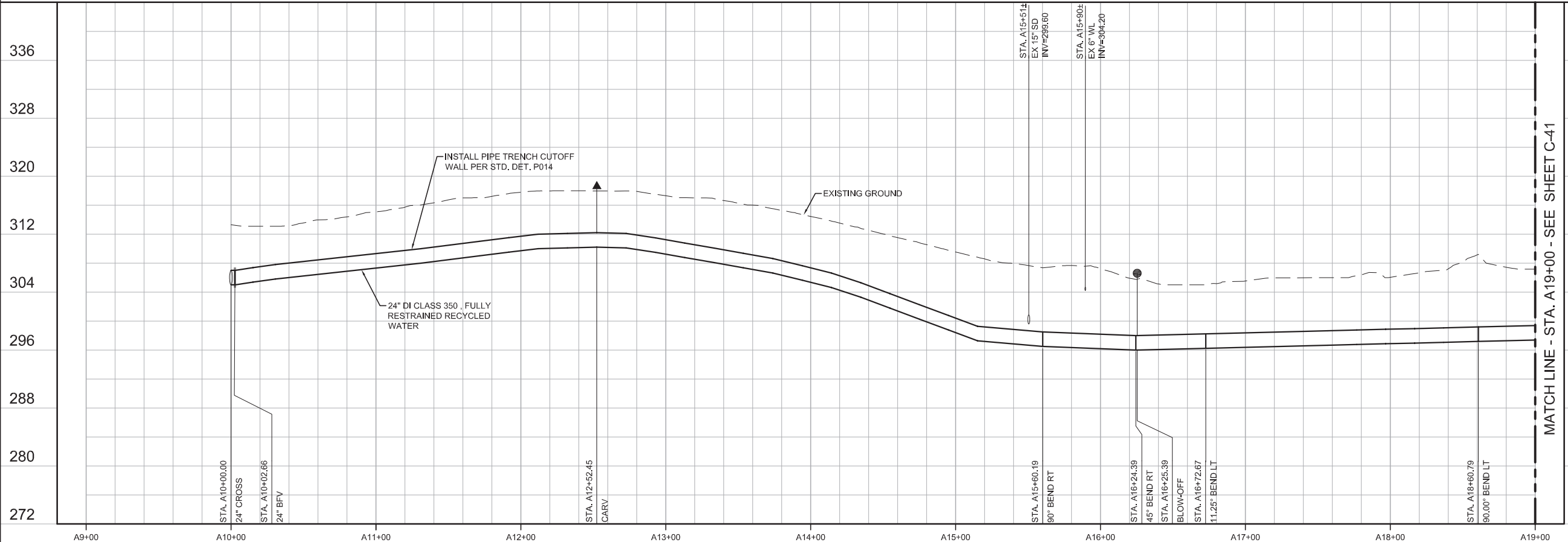
**SCALE**



<b>VERIFY SCALES</b> BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. 7568A.10 DRAWING NO. <b>C-40</b> SHEET NO. 48 OF 93
---	--



GRIND 1" OF EXISTING AC. PLACE A 2" AC OVERLAY IN ACCORDANCE WITH THE SPECIFICATIONS. CONFORM AND GRIND AT THE TRANSITION TO EXISTING AC AS NEEDED TO PROVIDE A SMOOTH TRANSITION. PRIOR TO REMOVING ANY STRIPING, RECORD ALL EXISTING STRIPING LOCATIONS, DEVELOP A PAVEMENT STRIPING AND MARKINGS PLAN TO MATCH EXISTING STRIPING AND OBTAIN APPROVAL FROM THE MONTEREY PENINSULA UNIFIED SCHOOL DISTRICT. REMOVE ALL EXISTING STRIPING PRIOR TO PLACING OVERLAY. PROTECT ABOVE GROUND STRUCTURES IN PLACE.



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

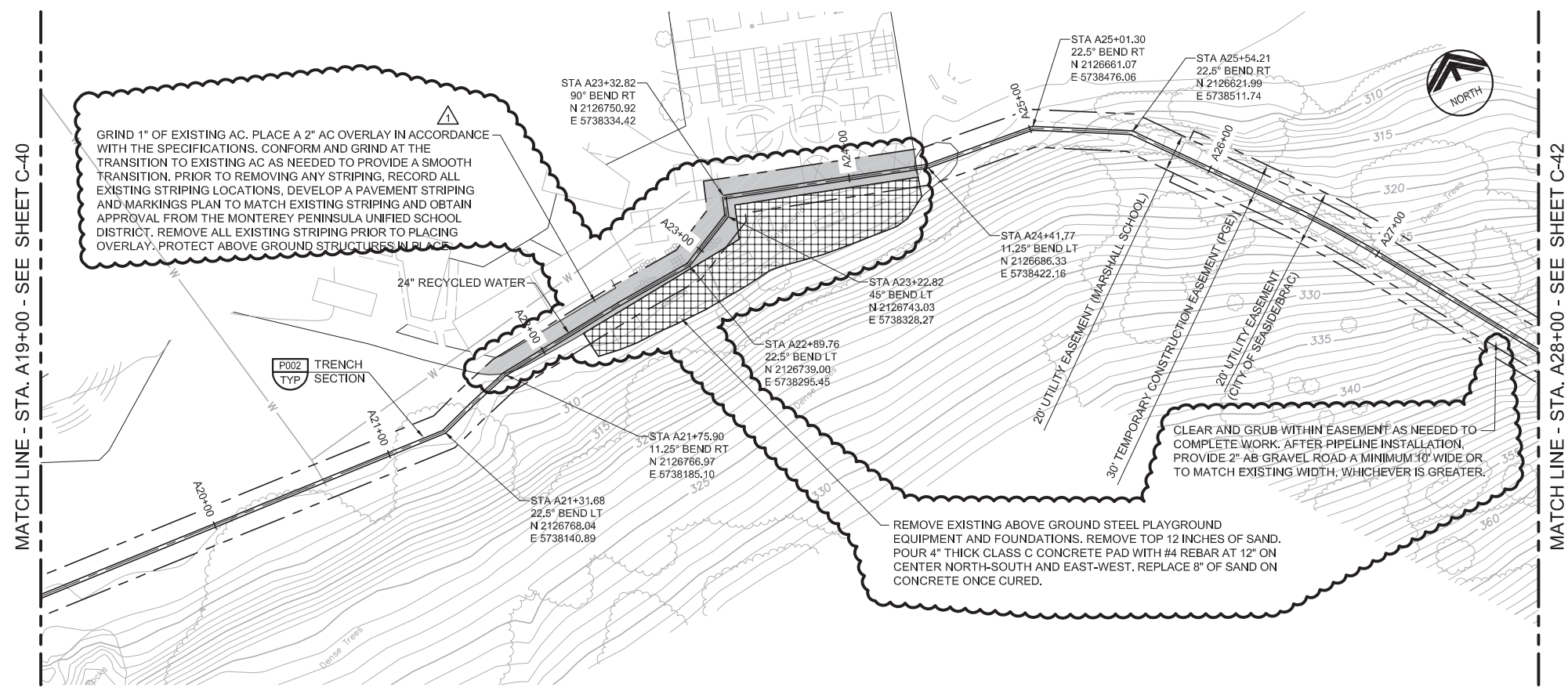
DESIGNED JPM	DISCIPLINE ENGINEER
DRAWN BH	
CHECKED AP	
DATE MAY 2017	

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:41:28 -0700'



REGIONAL URBAN WATER AUGMENTATION PROJECT  
**RECYCLED WATER PIPELINE**  
 CIVIL  
**PLAN AND PROFILE**  
 WATER LINE "A" - STA. A10+00 TO STA. A19+00

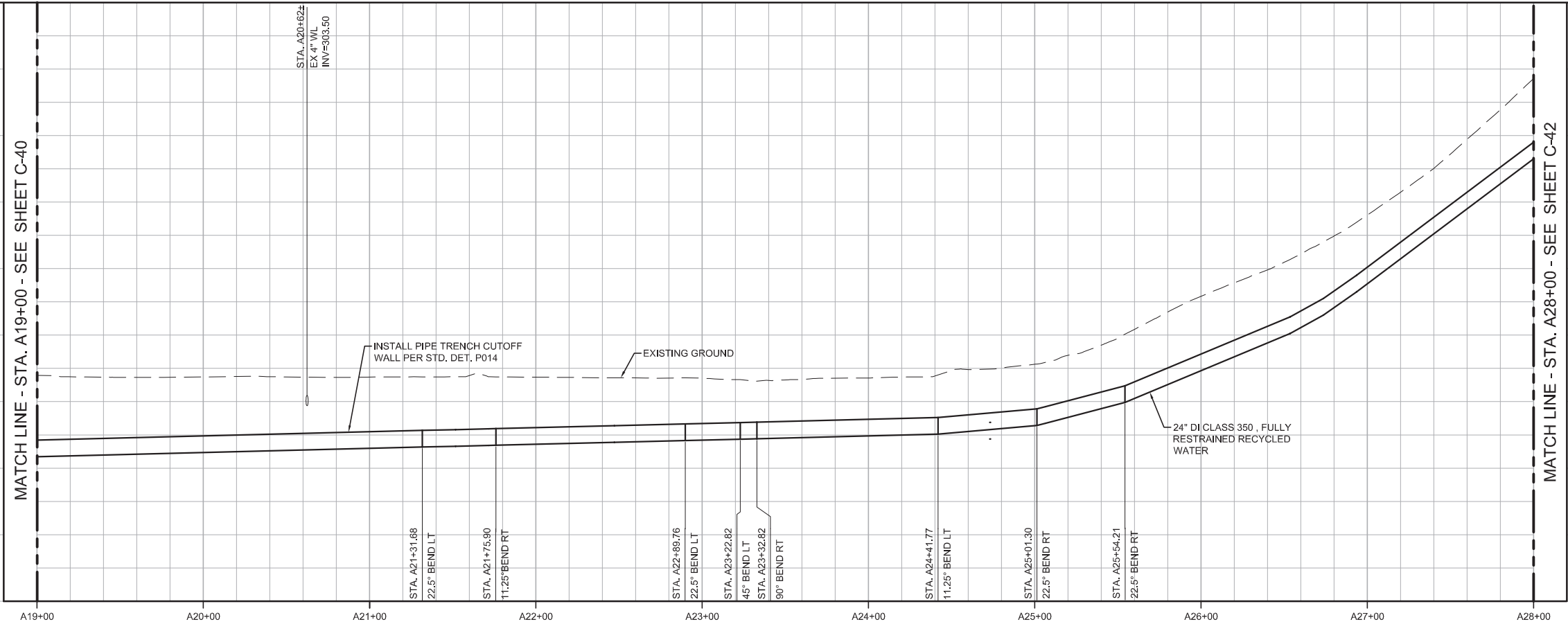
Last Created by: BHawes 4-29-17 10:21am C:\pwworking\projectwise\bhawes\dms09326\7568A10\_C-40\_XREFS:C-PIPE; X-SITE; x-topo; X-AERIAL; X-TOPO-UTILS; stawk; Potholes; TM-Master; 7568A10\_TB; SS-masterplan mcwd01; mcwd02; mcwd03;



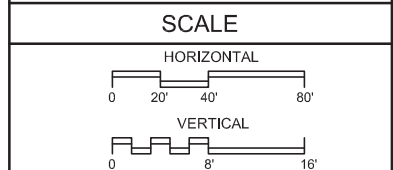
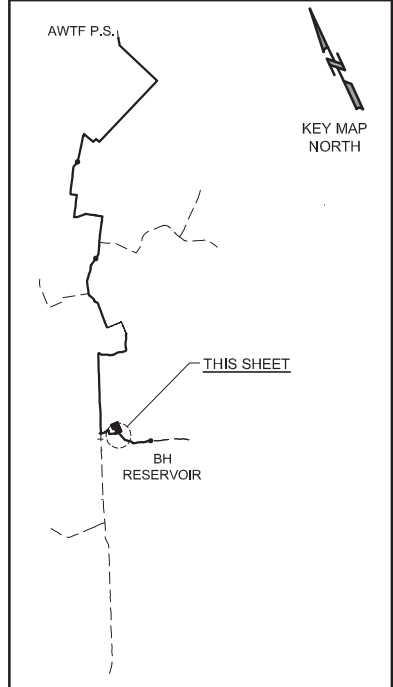
**GENERAL NOTES**

- CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.  
**Call before you Dig**  
 1-800-227-2600  
UNDERGROUND SERVICE (USA)



**KEY MAP**



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

DESIGNED	JPM
DRAWN	BH
CHECKED	AP
DATE	MAY 2017

PROJECT ENGINEER  
 Digitally signed by Jonathon P. Marshall  
 Contact Info: Carollo Engineers, Inc.  
 Date: 2017.05.19 16:40:45-0700'

PROJECT MANAGER

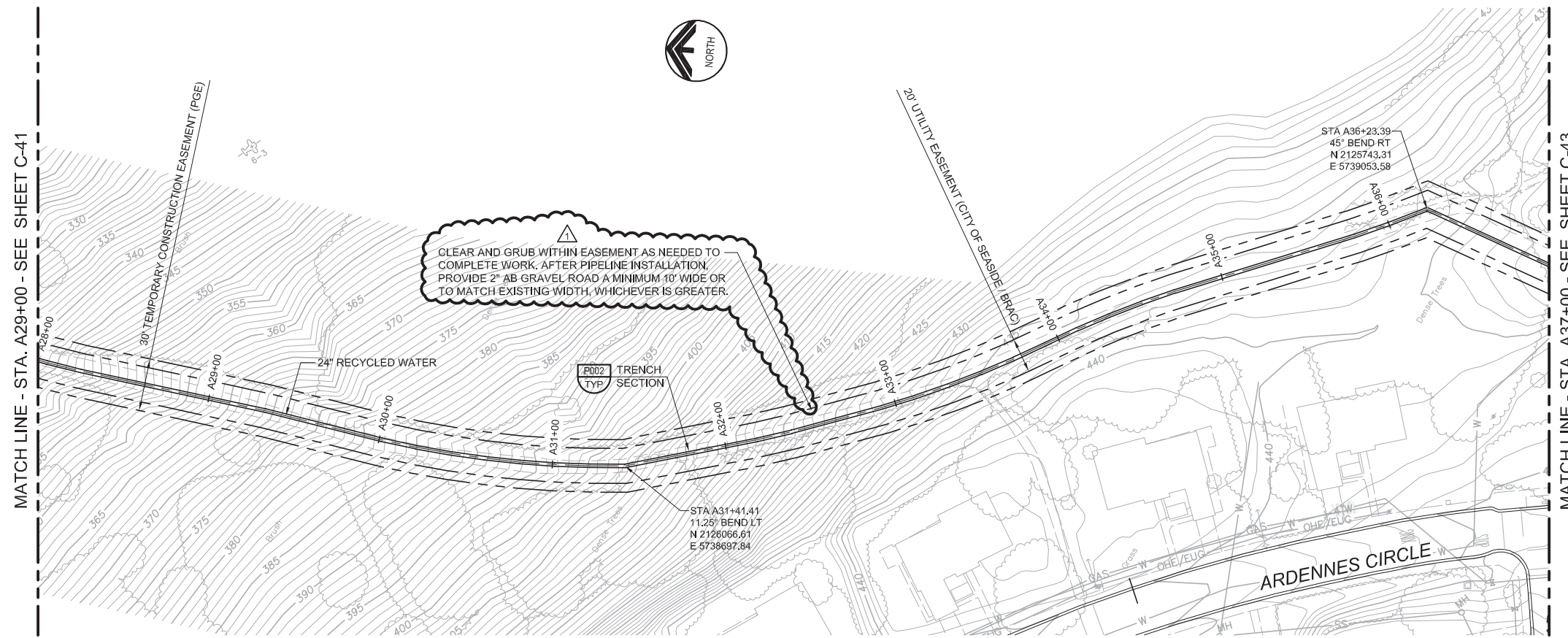
**Marina Coast Water District**

**REGIONAL URBAN WATER AUGMENTATION PROJECT**  
**RECYCLED WATER PIPELINE**  
 CIVIL  
**PLAN AND PROFILE**  
**WATER LINE "A" - STA. A19+00 TO STA. A28+00**

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

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 7568A.10  
 DRAWING NO. C-41  
 SHEET NO. 49 OF 93



**GENERAL NOTES**

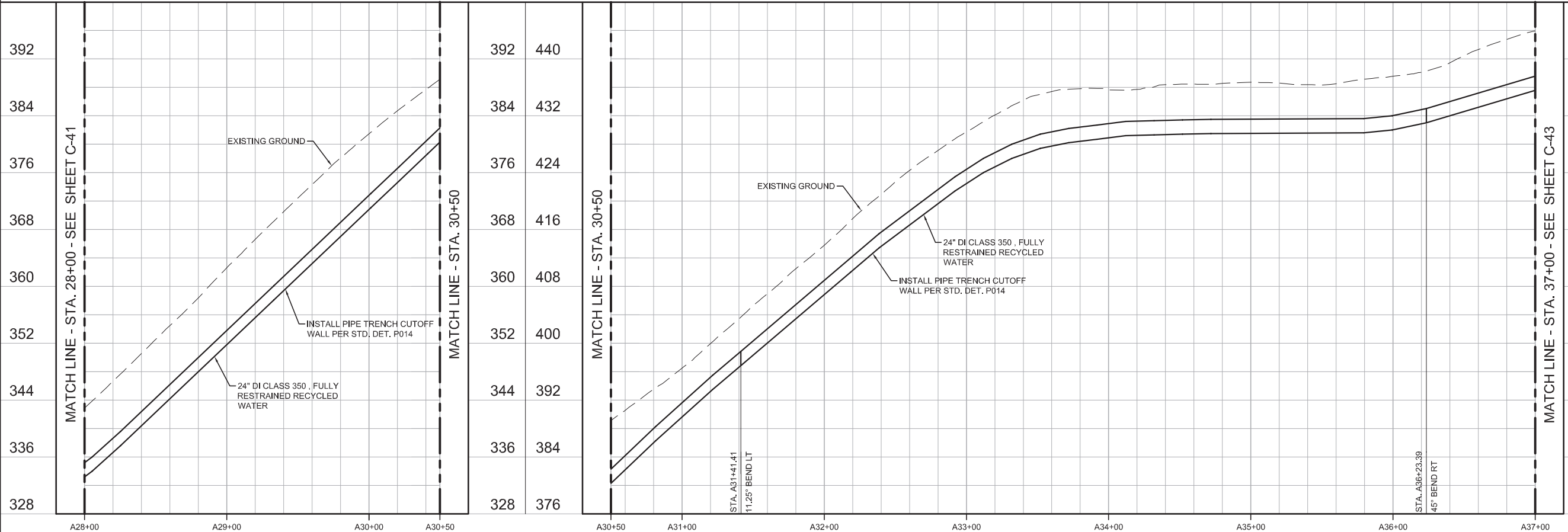
1. CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

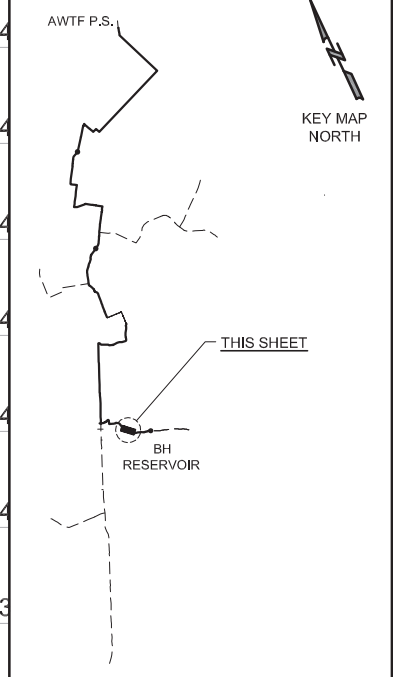
**Call before you Dig**

1-800-227-2600

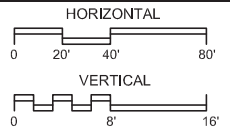
UNDERGROUND SERVICE (USA)



**KEY MAP**



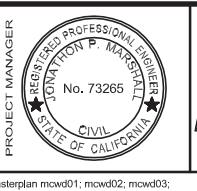
**SCALE**



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

DESIGNED	JPM
DRAWN	BH
CHECKED	AP
DATE	MAY 2017

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:40:36-0700'



REGIONAL URBAN WATER AUGMENTATION PROJECT  
 RECYCLED WATER PIPELINE  
 CIVIL  
 PLAN AND PROFILE  
 WATER LINE "A" - STA. A28+00 TO STA. A37+00

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 7568A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. C-42
	SHEET NO. 50 OF 93

Last Opened by: 5/19/17 02:20pm BHowes

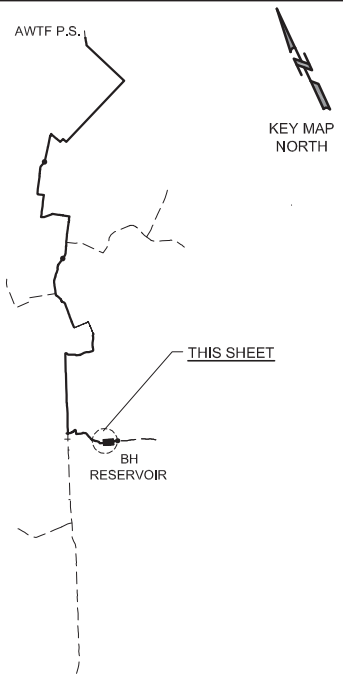
**GENERAL NOTES**

- CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.

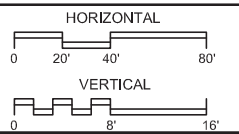
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.  
**Call before you Dig**  
 1-800-227-2600

UNDERGROUND SERVICE (USA)

**KEY MAP**

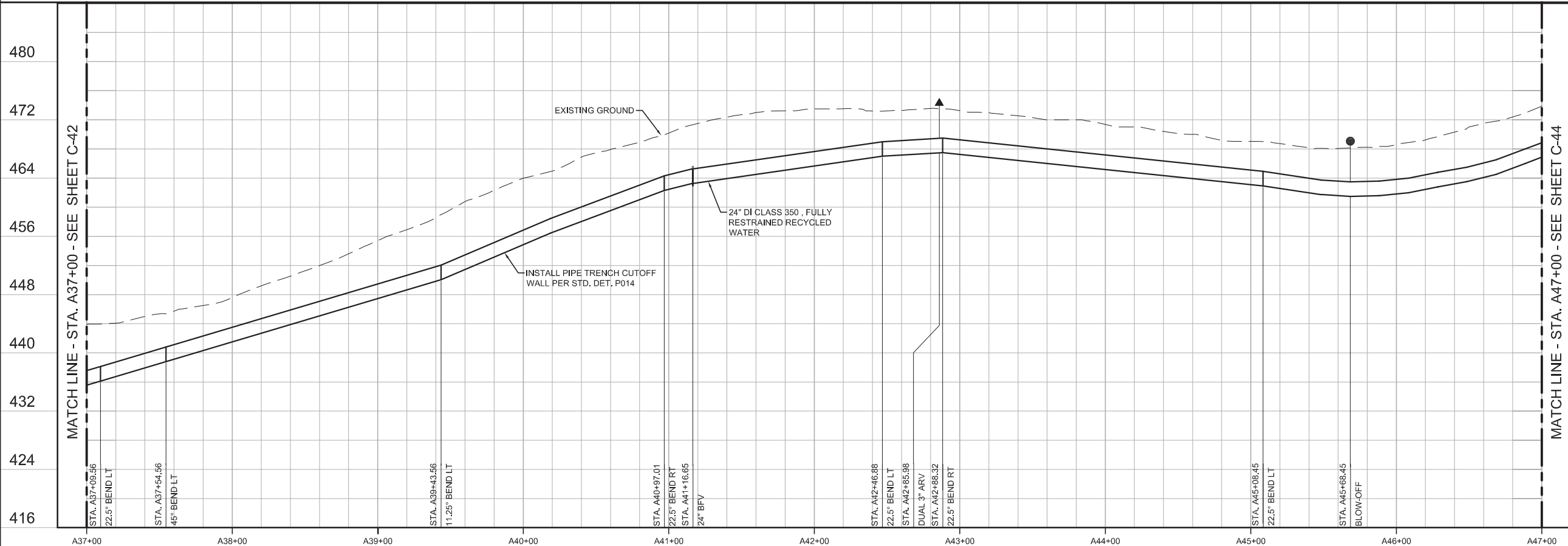
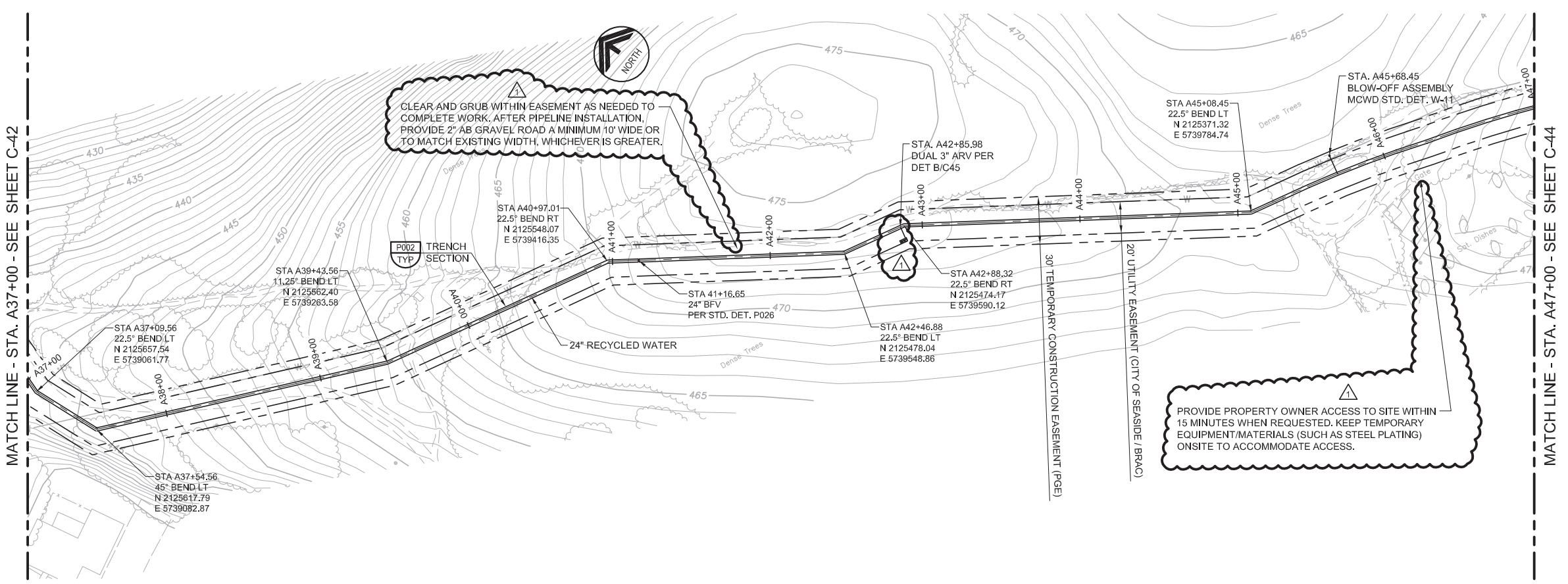


**SCALE**



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

JOB NO. 7568A.10  
 DRAWING NO. C-43  
 SHEET NO. 51 OF 93



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

DESIGNED	JPM
DRAWN	BH
CHECKED	AP
DATE	MAY 2017

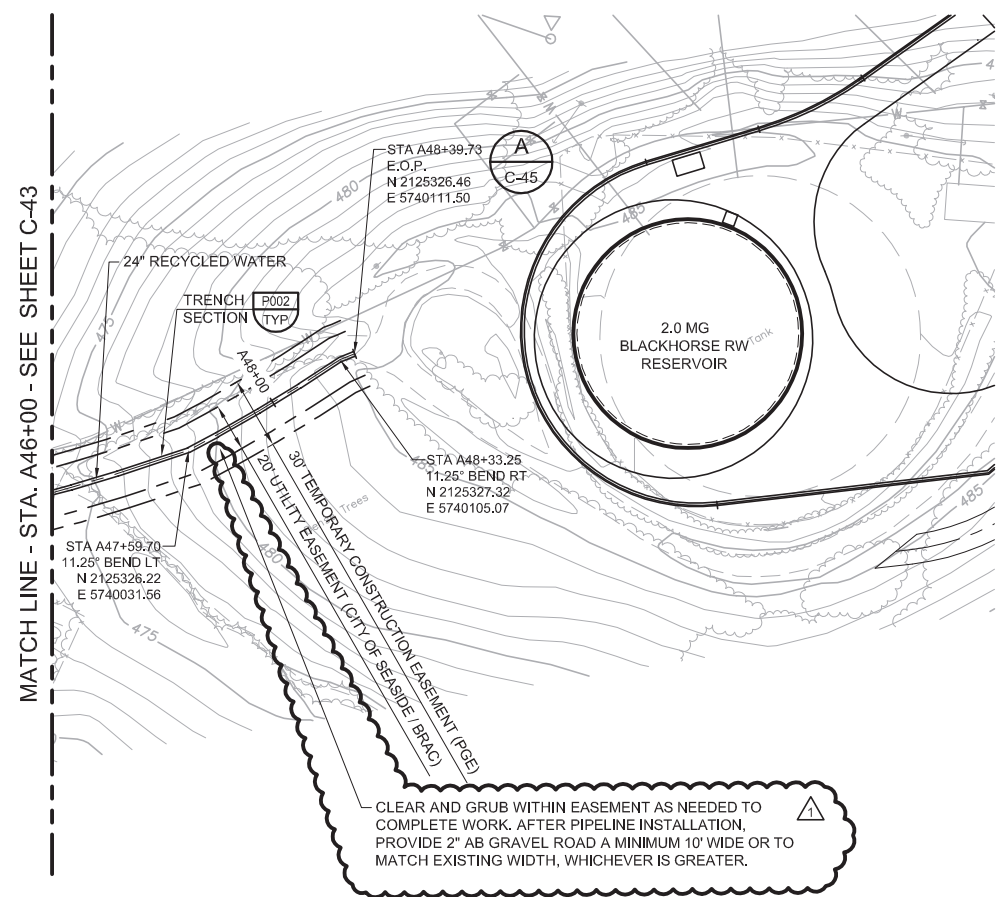
PROJECT ENGINEER  
 Digitally signed by Jonathon P. Marshall  
 Contact Info: Carollo Engineers, Inc.  
 Date: 2017.05.19 16:40:27-0700

PROJECT MANAGER  
 JONATHAN P. MARSHALL  
 No. 73265  
 CIVIL  
 STATE OF CALIFORNIA



**REGIONAL URBAN WATER AUGMENTATION PROJECT**  
**RECYCLED WATER PIPELINE**  
 CIVIL  
**PLAN AND PROFILE**  
**WATER LINE "A" - STA. A37+00 TO STA. A47+00**

Last Opened by: BHawes 4-28-17 01:23pm C:\pw\_working\project\wise\bhawes\dms09326\7568A10\_C-43 XREFS: C-PIPE; X-SITE; X-TOP; X-AERIAL; X-TOPO-UTILS; sitewk; Potholes; TM-Master; 7568A10\_TB; SSMasterplan mcwd01; mcwd02; mcwd03;



△ CLEAR AND GRUB WITHIN EASEMENT AS NEEDED TO COMPLETE WORK. AFTER PIPELINE INSTALLATION, PROVIDE 2" AB GRAVEL ROAD A MINIMUM 10' WIDE OR TO MATCH EXISTING WIDTH, WHICHEVER IS GREATER.

**GENERAL NOTES**

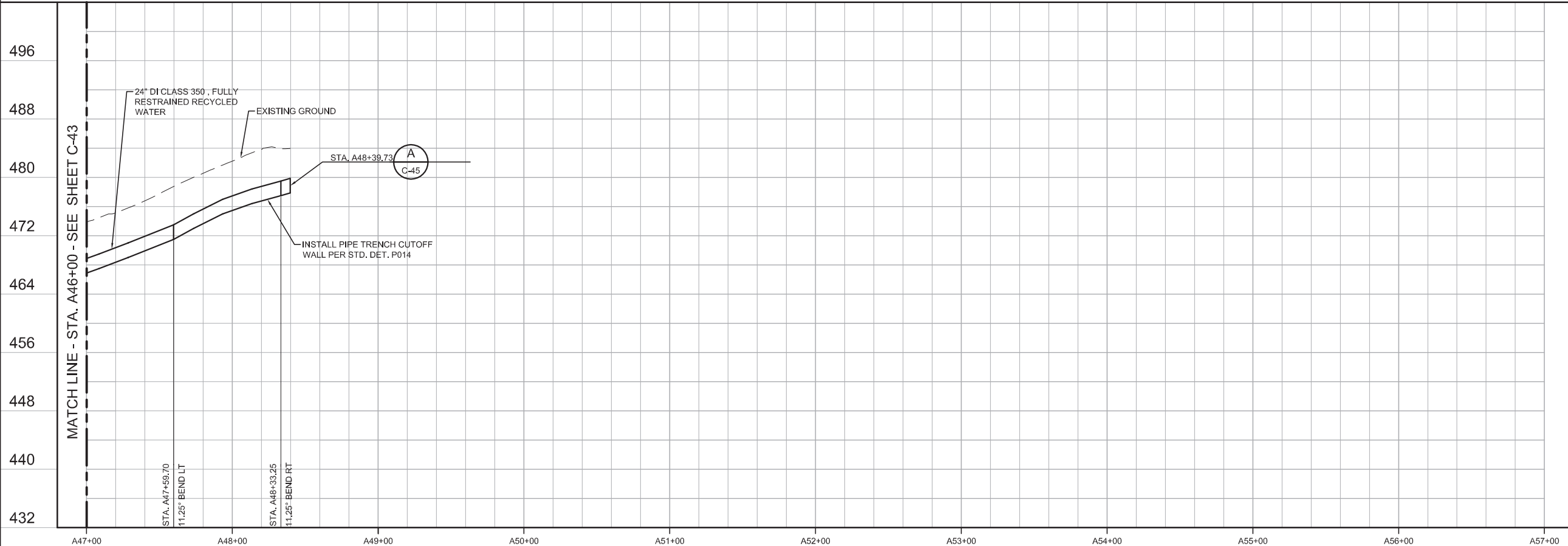
- CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SHOWN OTHERWISE IN THE PROFILE TO AVOID EXISTING UTILITIES OR ACCOMMODATE FUTURE GRADES.

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

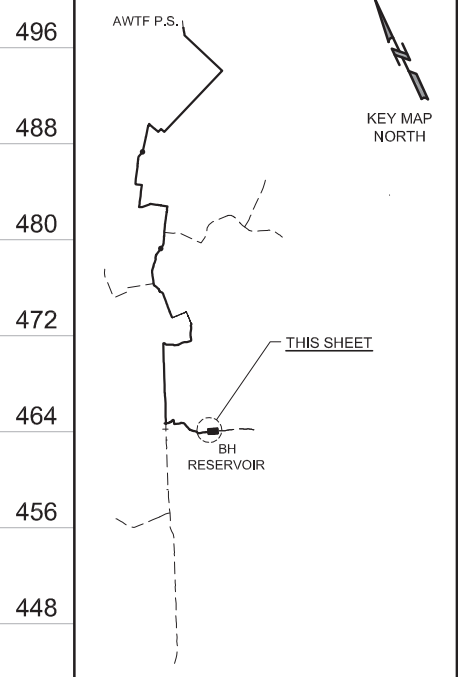
**Call before you Dig**

1-800-227-2800

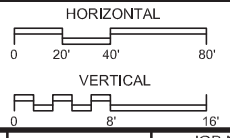
UNDERGROUND SERVICE (USA)



**KEY MAP**



**SCALE**



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

DESIGNED	AP / AS
DRAWN	LGD
CHECKED	
DATE	MAY 2017

PROJECT ENGINEER

Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:40:14 -07'00'



REGIONAL URBAN WATER AUGMENTATION PROJECT

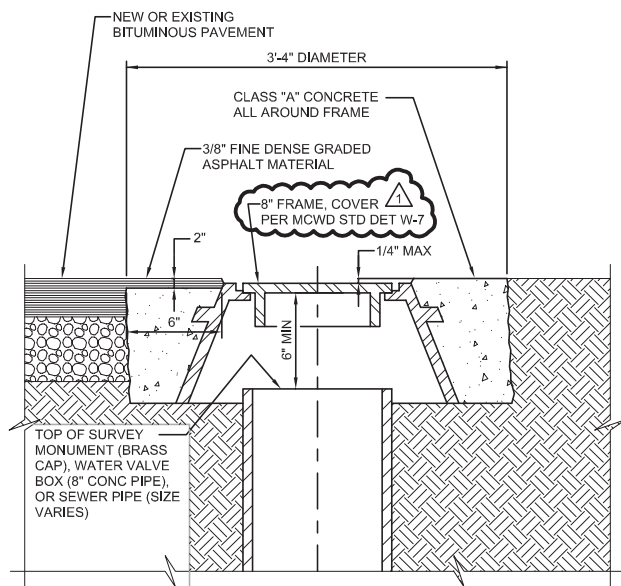
RECYCLED WATER PIPELINE

CIVIL

PLAN AND PROFILE

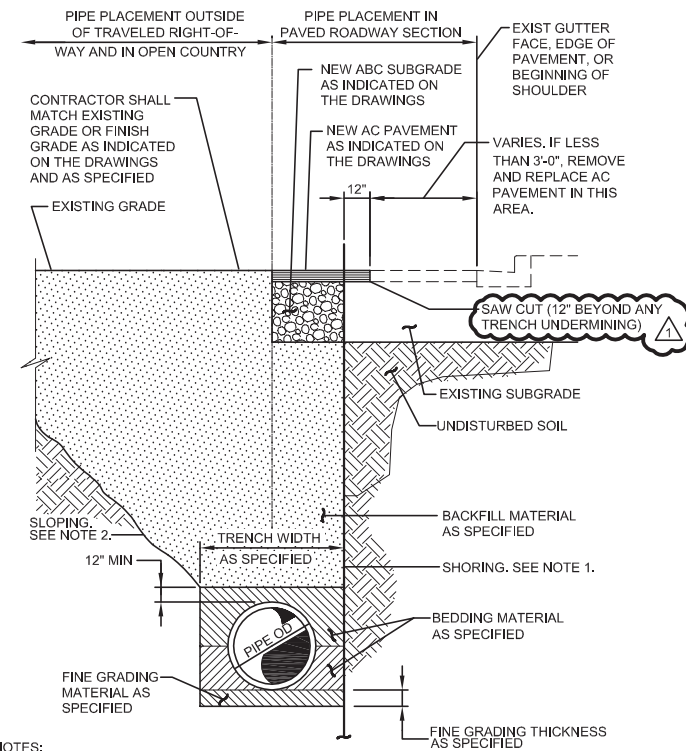
WATER LINE "A" - STA. A47+00 TO STA. A48+39.73

<b>VERIFY SCALES</b>	JOB NO. 7568A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. C-44
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 52 OF 93



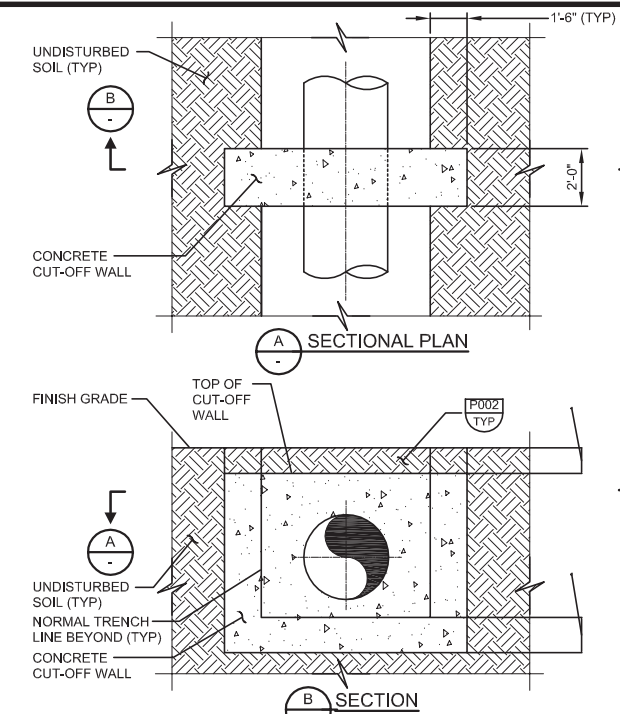
**C040** TYP GRADE ADJUSTMENT FOR WATER VALVE, SURVEY MONUMENT, OR SEWER CLEANOUT FRAME

08/01/05



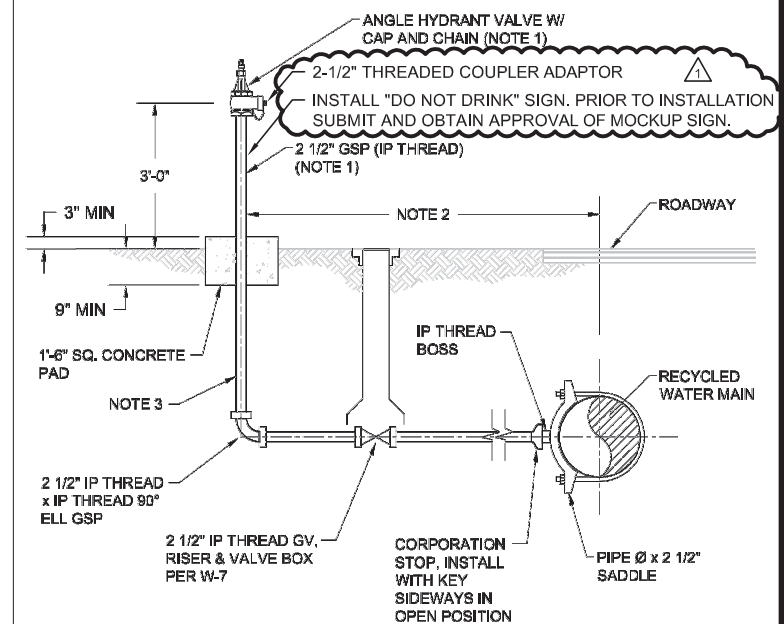
**P002** TYP PIPE INSTALLATION AND PAVEMENT REPLACEMENT

09/06/13



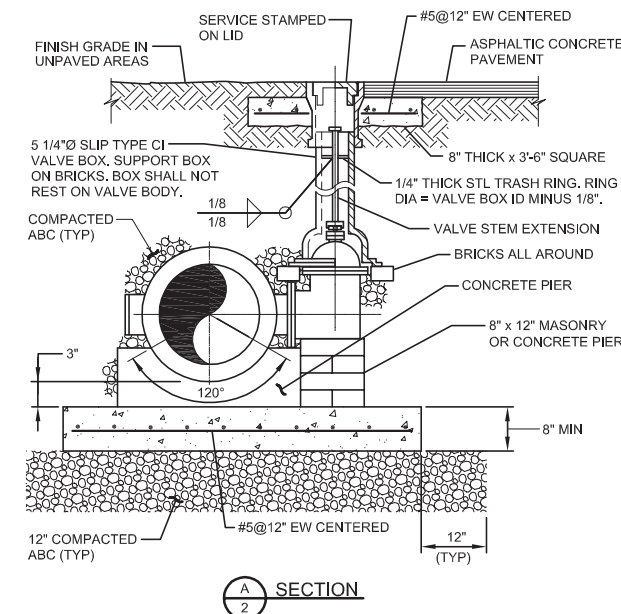
**P014** TYP PIPE TRENCH CONCRETE CUT-OFF WALL

03/24/15



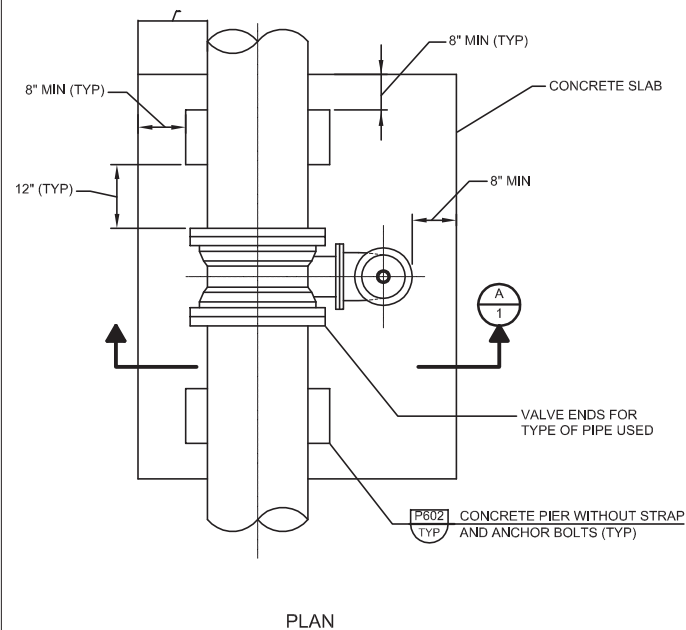
**P021** TYP FILL STATION

NTS



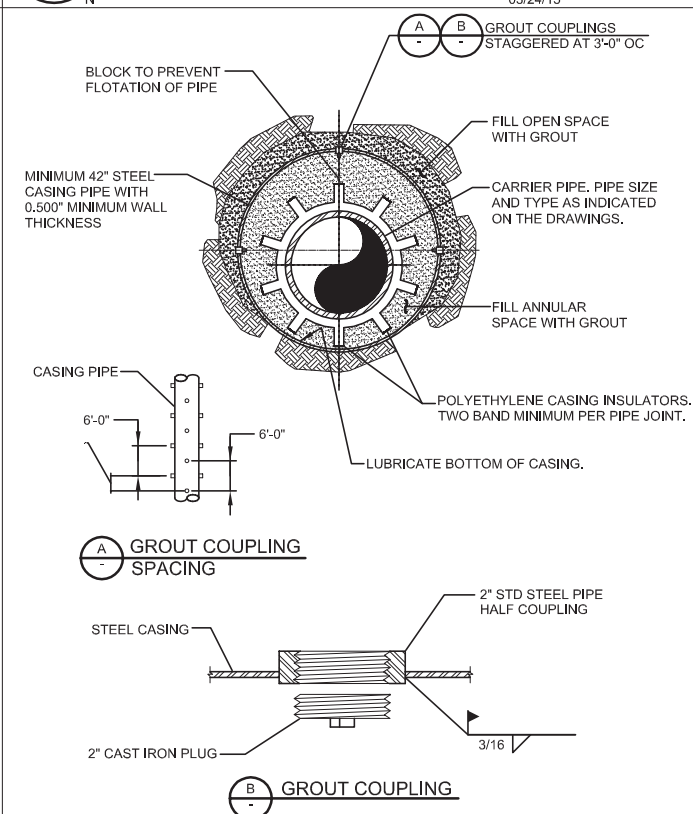
**P026** TYP BURIED BUTTERFLY VALVE

11/30/08



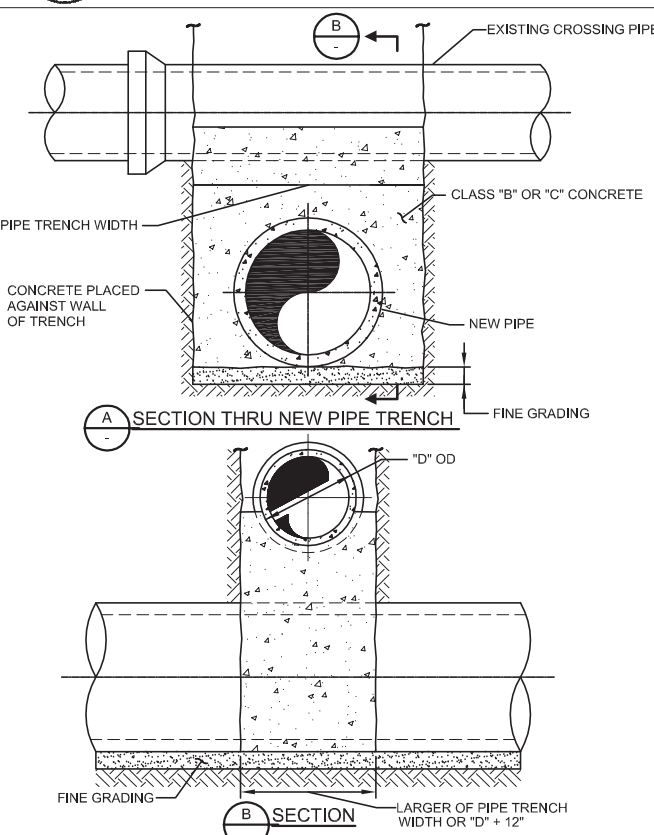
**P026** TYP BURIED BUTTERFLY VALVE

11/30/08



**P030** TYP PIPE IN JACKED STEEL CASING - GROUT FILL

03/01/10



**P048** TYP PIPE SUPPORT ACROSS TRENCH

03/02/15

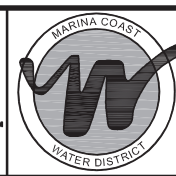
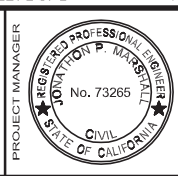
- NOTES:
- ALL BURIED VALVES SHALL BE PROVIDED WITH EXTENSION STEM OPERATOR WITH 2" SQUARE AWWA NUT WITHIN 36" OF VALVE BOX COVER. INDICATE ON NUT DIRECTION OF ROTATION TO OPEN VALVE.
  - COAT BURIED PIPE AND VALVE BOX PER SPECIFICATIONS.
  - CLEAN VALVE BOX OF ALL DEBRIS AND SOIL.

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

DESIGNED	RRH
DRAWN	SJB
CHECKED	RH
DATE	MAY 2017

DISCIPLINE ENGINEER

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:40:03-0700'

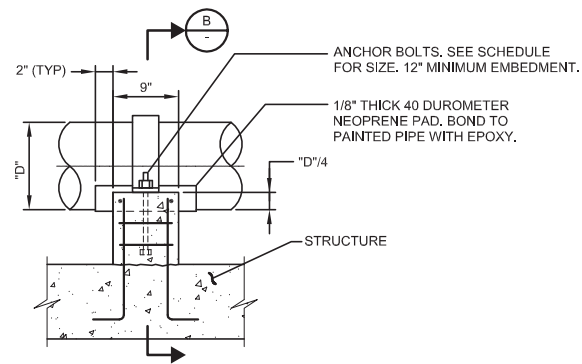


Marina Coast Water District

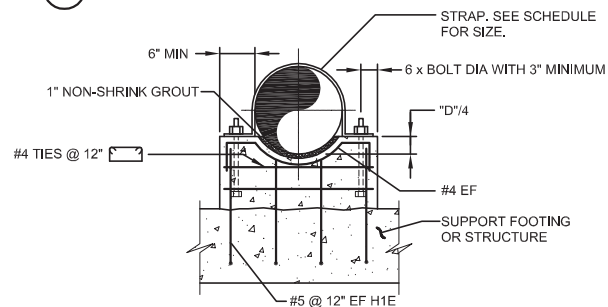
REGIONAL URBAN WATER AUGMENTATION PROJECT  
RECYCLED WATER PIPELINE  
CIVIL  
PIPELINE TYPICAL DETAILS

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

JOB NO. 7568A.10  
DRAWING NO. TP-01  
SHEET NO. 53A OF 93



(A) SECTION-SUPPORT AT STRUCTURE



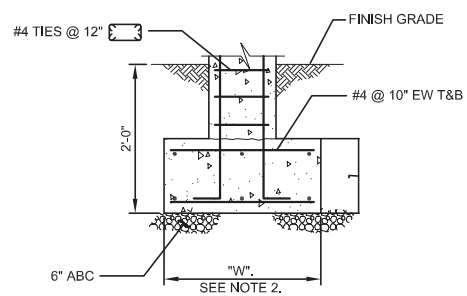
(B) SECTION

P602 CONCRETE PIPE SUPPORT

TYP

SHEET 1 OF 2

07/19/16



(C) SECTION-ISOLATED SUPPORT WITH FOOTING

SCHEDULE		
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:

- 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.
- THE WIDTH OF THE FOOTING "W" = 2'-6". THE LENGTH OF THE FOOTING = "D" + 2'-0".

P602 CONCRETE PIPE SUPPORT

TYP

SHEET 2 OF 2

11/30/08



Last Changed by: 5-19-17 01:15pm B.Hawes

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

DESIGNED	RRH
DRAWN	SJB
CHECKED	RH
DATE	MAY 2017

DISCIPLINE ENGINEER

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:39:40-0700'

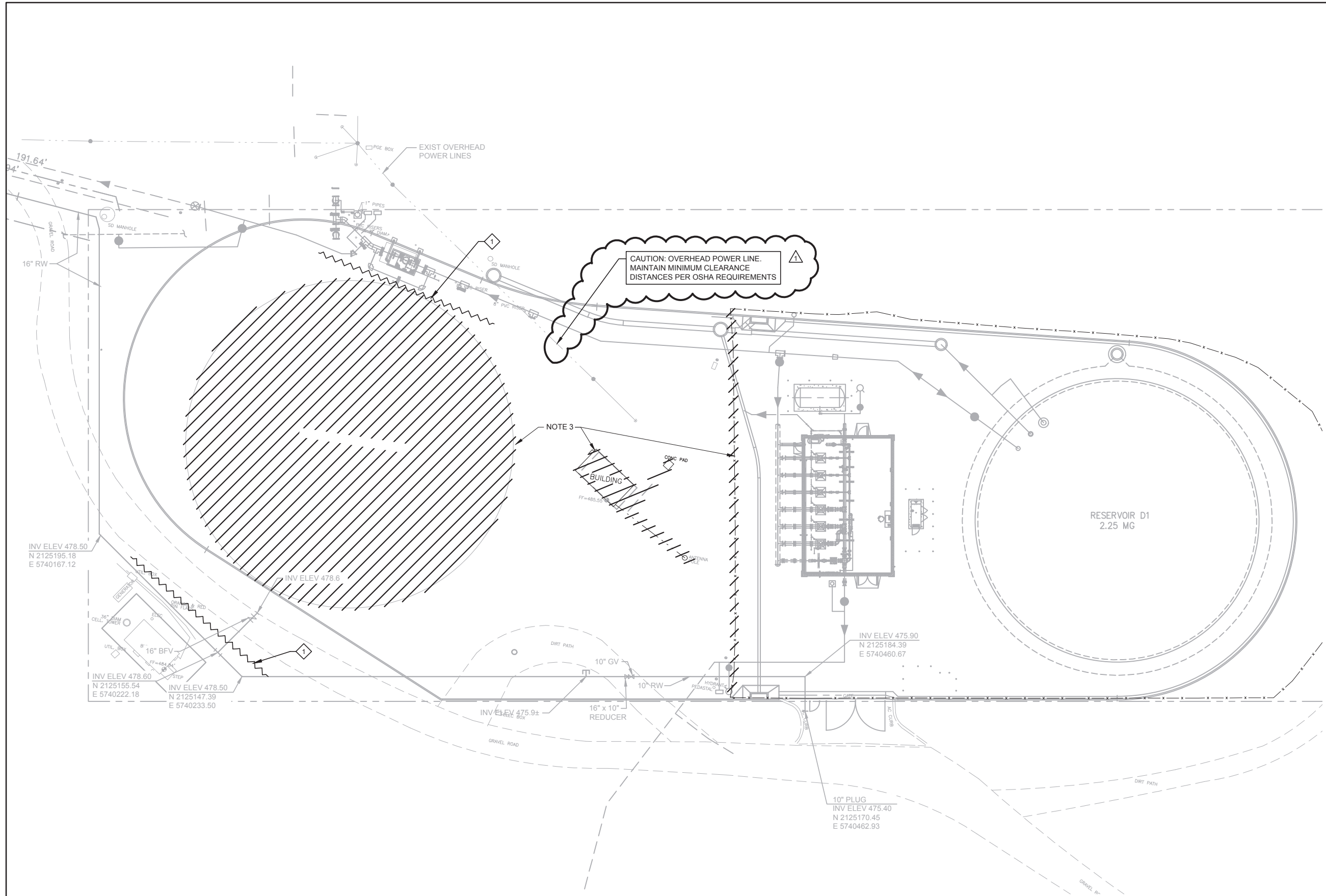


Marina Coast Water District

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

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

JOB NO. 7568A.10  
DRAWING NO. TP-02  
SHEET NO. 53B OF 93



**GENERAL NOTES**

1. CONTRACTOR SHALL FIELD VERIFY ELEVATION OF ALL EXISTING PIPING AND ELECTRICAL DIRECT BURIED CABLES PRIOR TO CONSTRUCTION. PIPING AND UNDERGROUND INFRASTRUCTURE REMAIN IN SERVICE AT ALL TIMES. PROVIDE SHORING AS REQUIRED AND PROTECT ALL EXISTING UNDERGROUND INFRASTRUCTURE FROM DAMAGE DURING CONSTRUCTION.
2. SEE SPECIFICATION 01140 FOR WORK RESTRICTIONS.
3. SEE SECTION 02222 FOR DESCRIPTION OF ITEMS TO BE DEMOLISHED.

**KEY NOTES**

1. PROVIDE TEMPORARY SHORING AS REQUIRED 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 REQUIREMENTS. SHORING SHALL BE IN ACCORDANCE WITH SECTION 02260.

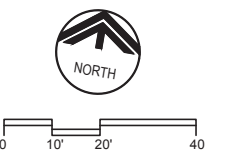
**LEGEND**

 DEMOLITION

CAUTION: OVERHEAD POWER LINE. MAINTAIN MINIMUM CLEARANCE DISTANCES PER OSHA REQUIREMENTS

NOTE 3

**PLAN**  
SCALE: 1" = 20'



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

DESIGNED	SAS
DRAWN	LGD
CHECKED	RJH
DATE	APRIL 2017

DISCIPLINE ENGINEER

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:39:31-0700'



**Marina Coast Water District**

REGIONAL URBAN WATER AUGMENTATION PROJECT  
BLACKHORSE RECYCLED WATER RESERVOIR  
CIVIL  
EXISTING SITE PLAN AND DEMOLITION PLAN

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

JOB NO. 7568A.10  
DRAWING NO. D-01  
SHEET NO. 55 OF 93

FILENAME:

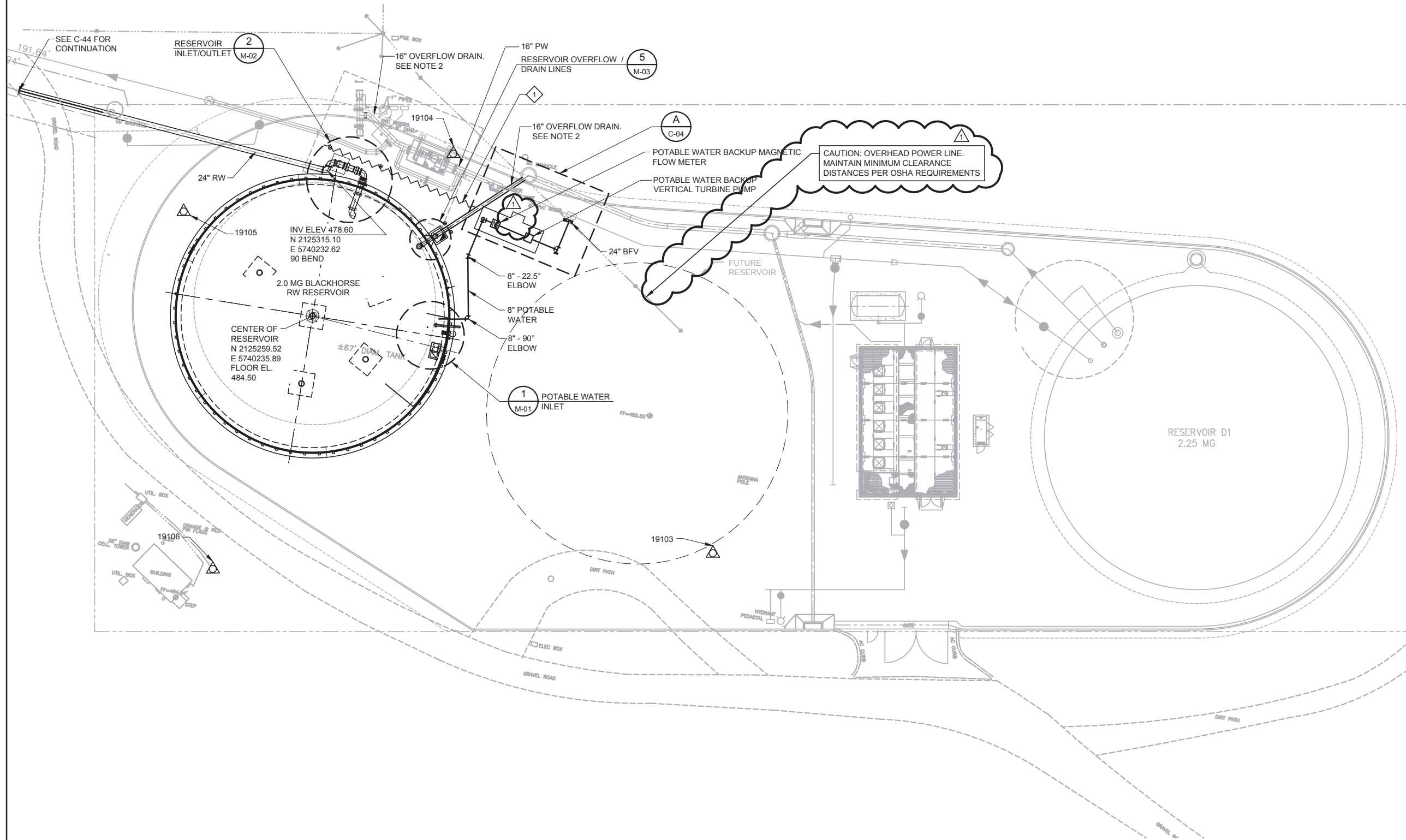


**GENERAL NOTES**

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.
2. SLOPE 16" OVERFLOW/DRAIN PIPE SUCH THAT IT PASSES BELOW THE 24" POTABLE WATER PIPING WITH A MINIMUM OF 12" OF CLEARANCE.

**KEY NOTES**

1. PROVIDE TEMPORARY SHORING AS REQUIRED 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 REQUIREMENTS. SHORING SHALL BE IN ACCORDANCE WITH SECTION 02266.



**PLAN**  
SCALE: 1" = 20'

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

DESIGNED	RRH	DISCIPLINE ENGINEER
DRAWN	SJB	
CHECKED	BH	
DATE	APRIL 2017	

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:39:21-07'00'



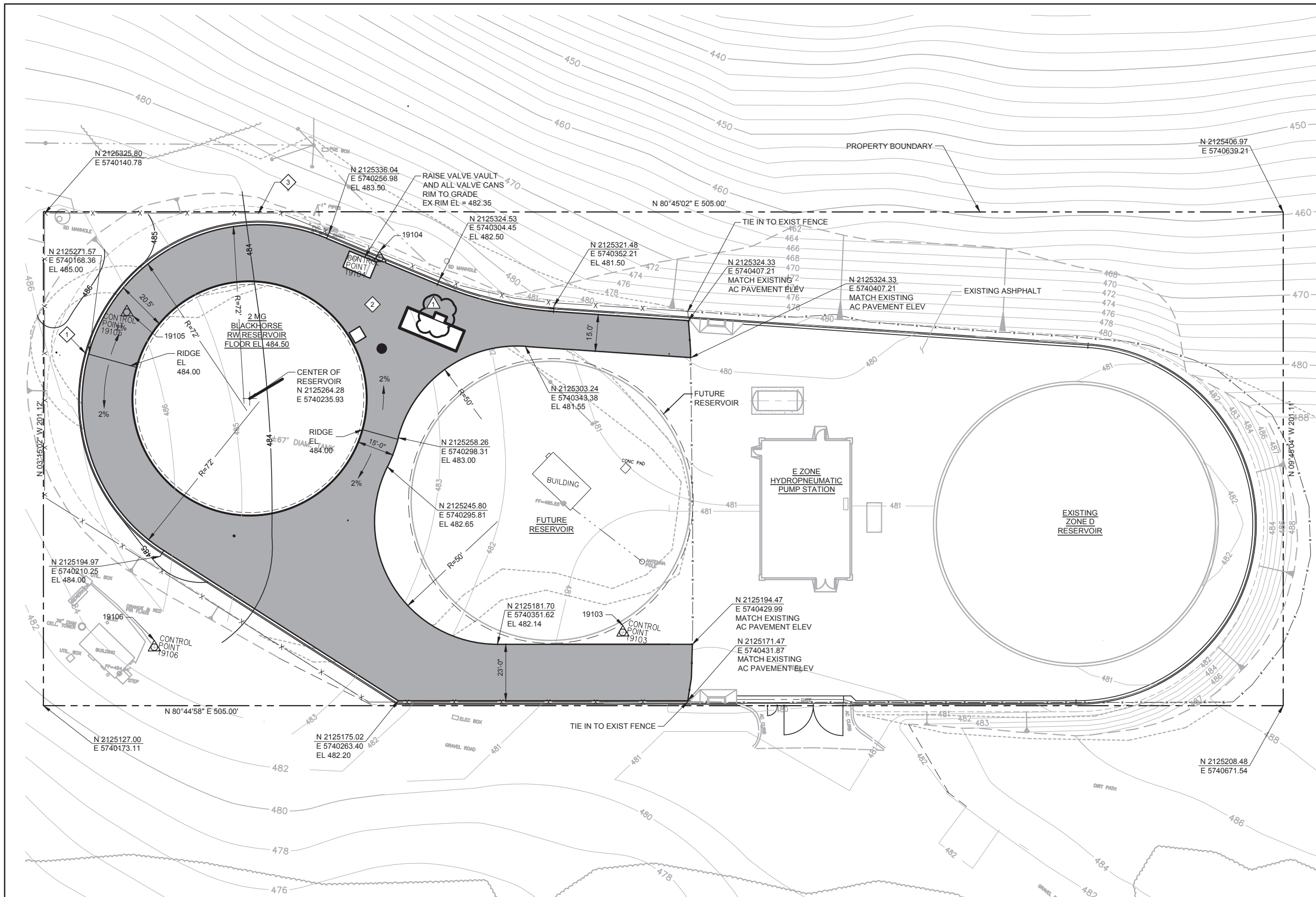
**Marina Coast Water District**

REGIONAL URBAN WATER AUGMENTATION PROJECT  
BLACKHORSE RECYCLED WATER RESERVOIR  
CIVIL  
FINISHED SITE PLAN & YARD PIPING

VERIFY SCALES	JOB NO. 7568A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. C-01
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 61 OF 93

FILENAME:

- KEY NOTES**
- 1 CONCRETE CURBS PER DETAIL 2/C-03.
  - 2 SITE PAVING PER DETAIL 1/C-03.
  - 3 INSTALL NEW CHAIN LINK FENCE TO MATCH EXIST. INSTALL PER SECTION 02820.



**PLAN**  
SCALE: 1" = 20'

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

DESIGNED	RRH	DISCIPLINE ENGINEER
DRAWN	SJB	
CHECKED	RH	
DATE	APRIL 2017	

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:38:58 -07'00'

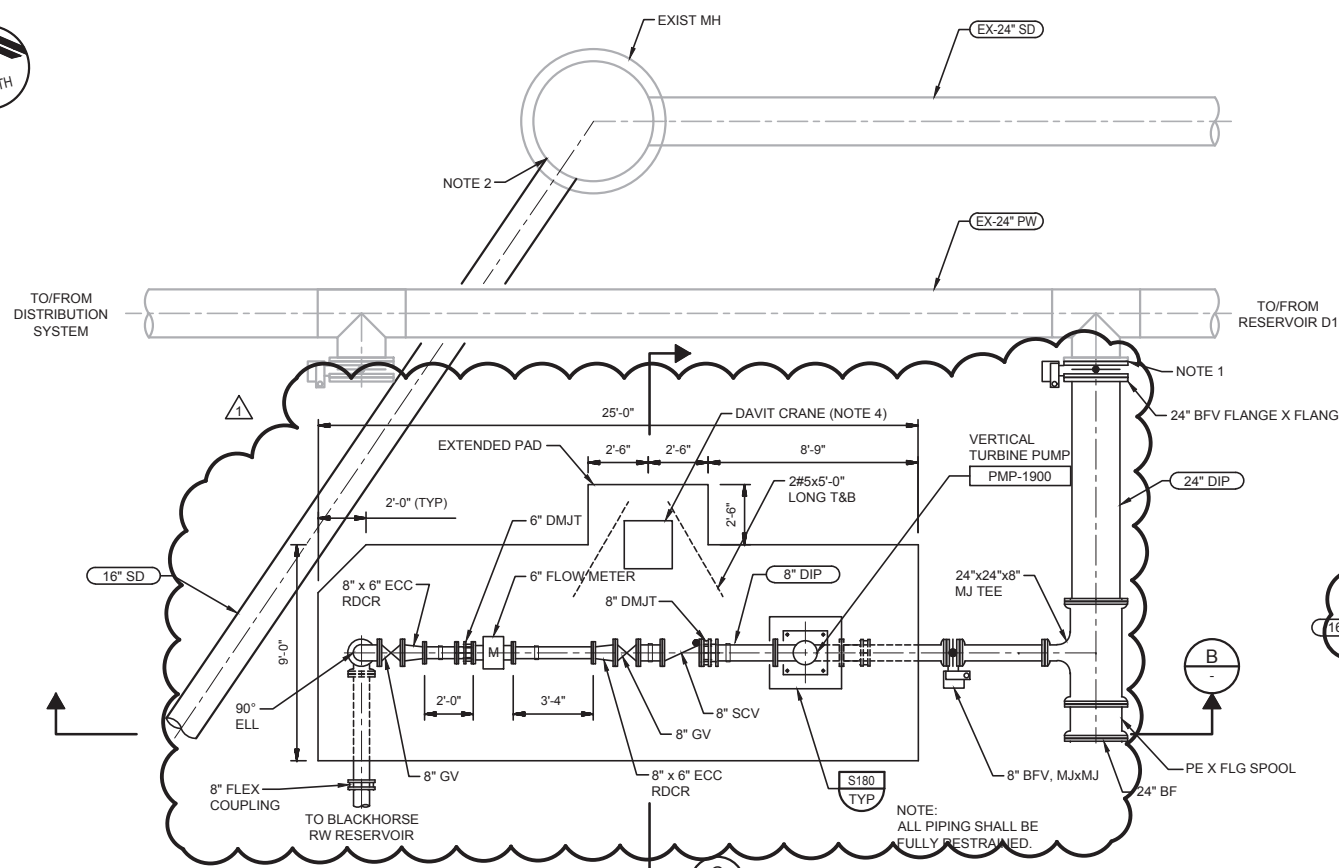


**Marina Coast Water District**

REGIONAL URBAN WATER AUGMENTATION PROJECT  
BLACKHORSE RECYCLED WATER RESERVOIR  
CIVIL  
PAVING AND GRADING PLAN AND HORIZONTAL CONTROL

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" 1"	JOB NO. 7568A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. C-02
	SHEET NO. 62 OF 93

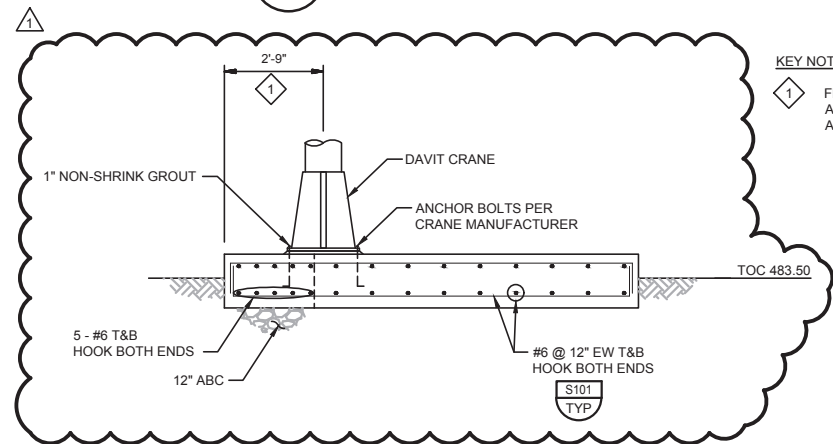
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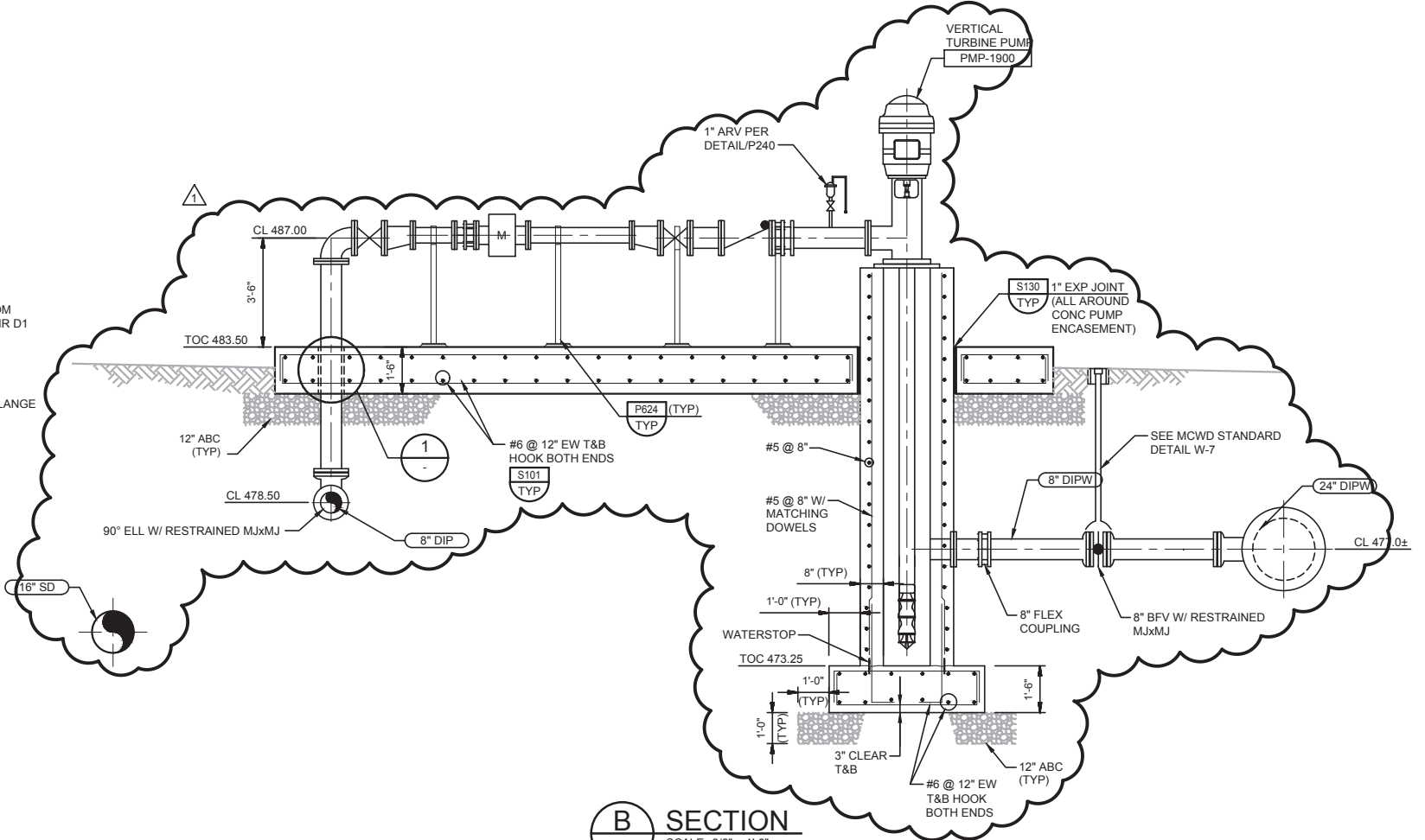
**NOTES:**

1. REMOVE EXISTING BLIND FLANGE FROM 24" OUTLET AND INSTALL NEW 24" BFV.
2. CORE DRILL HOLE PIPE OD + 2" MAX. INSTALL 16"x1' STUB INTO HOLE AND SEAL ANNULAR SPACE WITH NON-SHRINK GOUT.
3. ALL PIPING SHALL BE FULLY RESTRAINED.
4. STATIONARY DAVIT CRANE TO BE HAND WINCH OPERATED WITH 2,200 LBS CAPACITY, AND ADJUSTABLE BOOM WITH RACHET STYLE SCREW-JACK. MAST AND BOOM ROTATION CAPABILITY OF 360°. DAVIT CRANE TO HAVE EPOXY FINISH. WIRE ROPE ASSEMBLY TO BE STAINLESS STEEL AND WIRE ROPE DIAMETER OF 5/16". DAVIT CRANE TO BE MANUFACTURED BY THERN, CAPTAIN 2200 SERIES 572, MODEL 572 MI AND RACHET STYLE SCREW JACK MODEL SJ2. SUBMIT DAVIT CRANE DATA SHEET FOR REVIEW AND APPROVAL, INCLUDING ANCHOR BOLT CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.

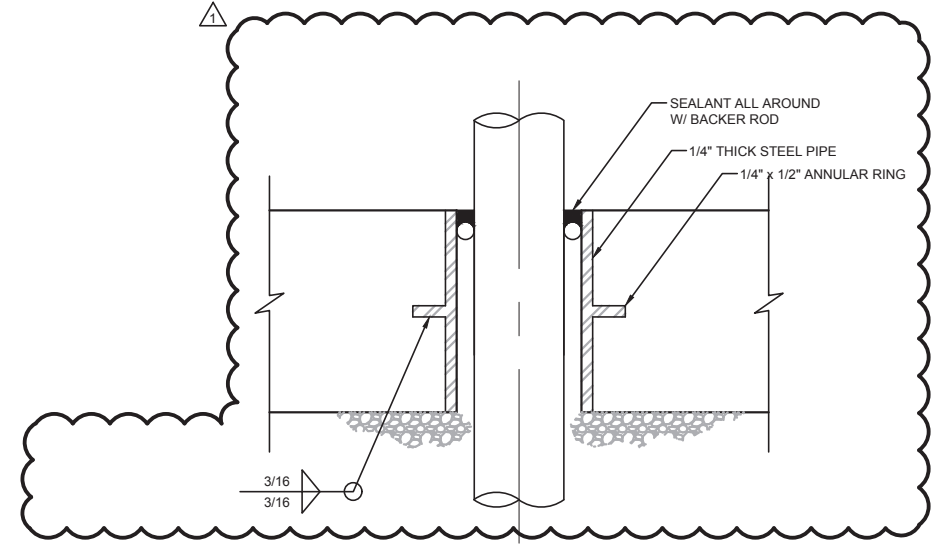
**A PARTIAL PLAN**  
C-01 SCALE: 1/4" = 1'-0"



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



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



**1 DETAIL**  
SCALE: NO SCALE

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

DESIGNED	ST
DRAWN	AL
CHECKED	
DATE	APRIL 2017

PROJECT ENGINEER  
Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:38:47-07'00'

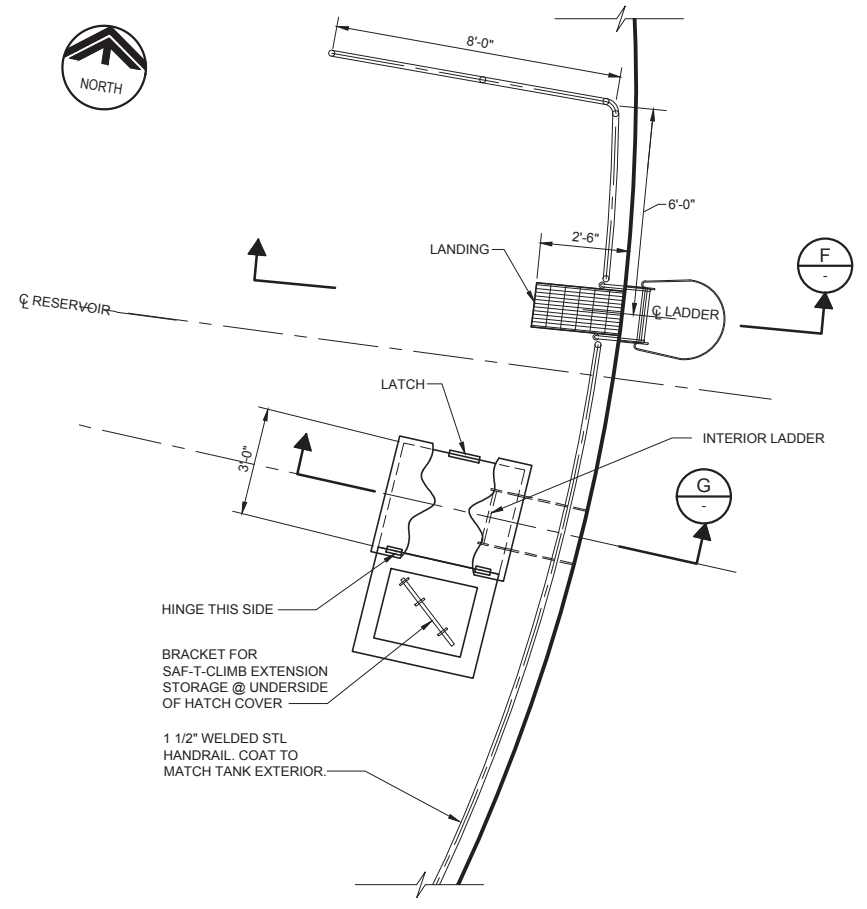


**Marina Coast Water District**

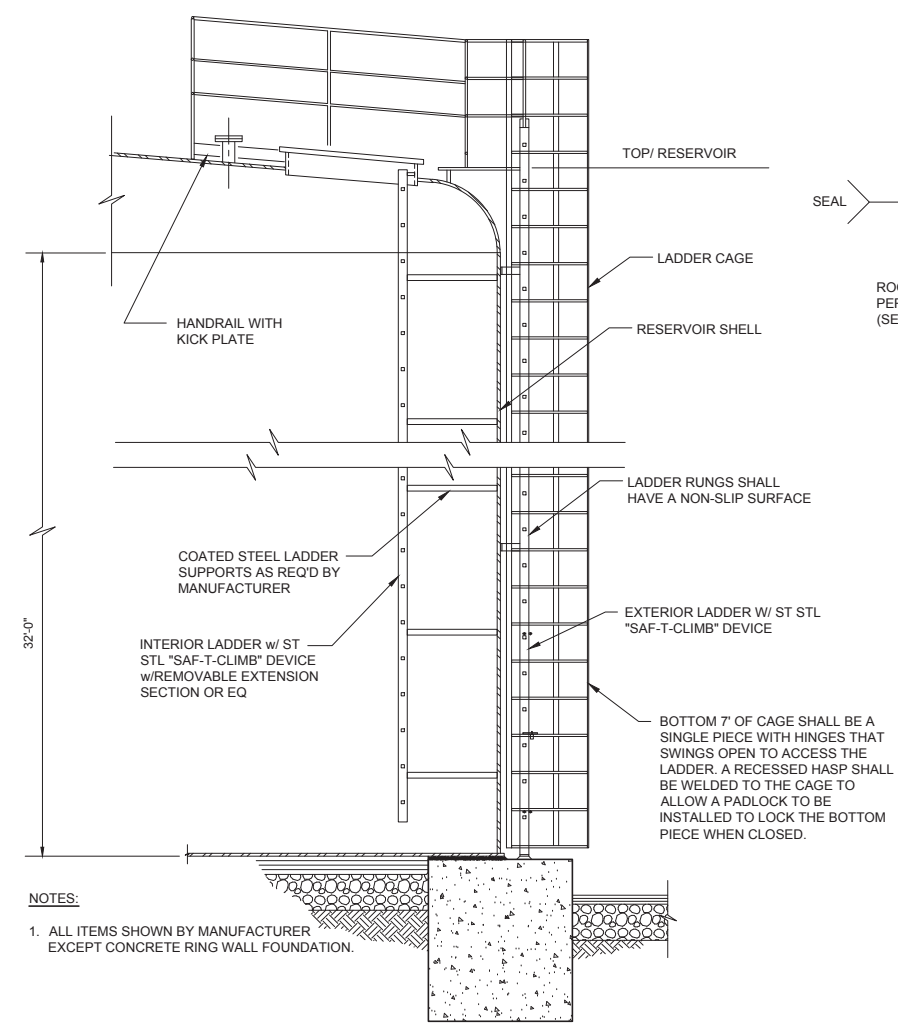
REGIONAL URBAN WATER AUGMENTATION PROJECT  
BLACKHORSE RECYCLED WATER RESERVOIR  
CIVIL  
PUMP STATION  
PLAN AND SECTION

VERIFY SCALES	JOB NO. 7568A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. C-04
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 64 OF 93

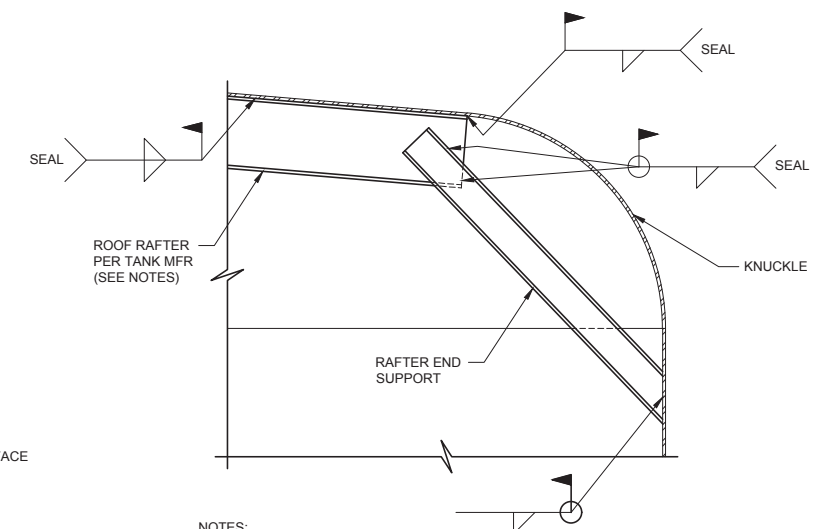
FILENAME:



**E ACCESS COVER PLAN**  
S-01 SCALE: 3/8" = 1'-0"  
FILE: 7568A10\_M-103

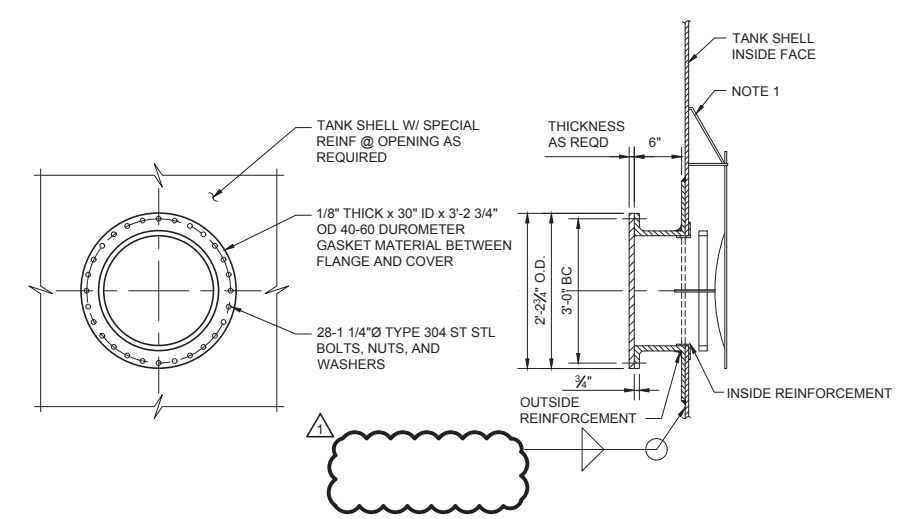


**F SECTION**  
SCALE: 3/8" = 1'-0"  
FILE: 7568A10\_M-304

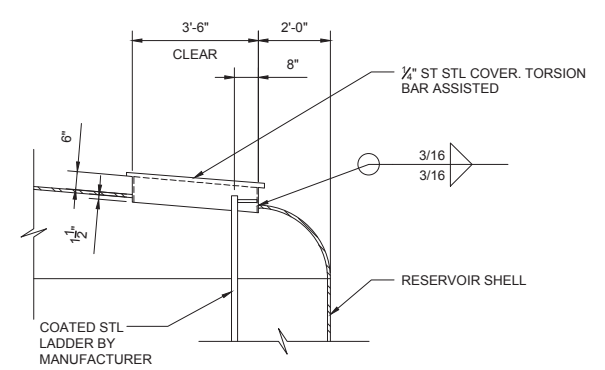


- NOTES:**
1. ALL RAFTER FAYING SURFACES SHALL BE SEAL WELDED.
  2. ROOF RAFTER LATERAL BRACING SHALL BE STRUCTURAL STEEL CHANNELS OR ANGLES WITH WELDED CONNECTIONS. THREADED CONNECTIONS SHALL NOT BE USED.
  3. GUARDRAIL NOT SHOWN.

**4 DETAIL**  
S-02 SCALE: 3/4" = 1'-0"  
FILE: 7568A10\_S-401



**5 SECTION-30" ACCESS MANWAY**  
S-01 SCALE: 1/2" = 1'-0"  
FILE: 7568A10\_M-307



**G SECTION-ACCESS HATCH**  
SCALE: 3/8" = 1'-0"  
FILE: 7568A10\_M-306

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

DESIGNED EQ  
DRAWN SJB/AL  
CHECKED TWP  
DATE APRIL 2017

DISCIPLINE ENGINEER

PROJECT ENGINEER

Digitally signed by Jonathon P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:37:47-07'00'

PROJECT MANAGER

Digitally signed by Edgardo Quiroz  
Contact Info: Carollo Engineers, Inc.  
Date: 2017.05.19 16:35:53-07'00'

**Marina Coast Water District**

REGIONAL URBAN WATER AUGMENTATION PROJECT

BLACKHORSE RECYCLED WATER RESERVOIR

STRUCTURAL  
RESERVOIR  
PLAN, SECTIONS AND DETAILS

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 7568A.10  
DRAWING NO. S-03  
SHEET NO. 69 OF 93

FILENAME: