

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
677	TITLE SHEET
678-686	INDEX OF SHEETS

CAMINO REAL REGIONAL MOBILITY AUTHORITY

PLANS OF PROPOSED
URBAN STREETCAR

PROJECT NO. ()

CITY OF EL PASO STREETCAR
EL PASO COUNTY

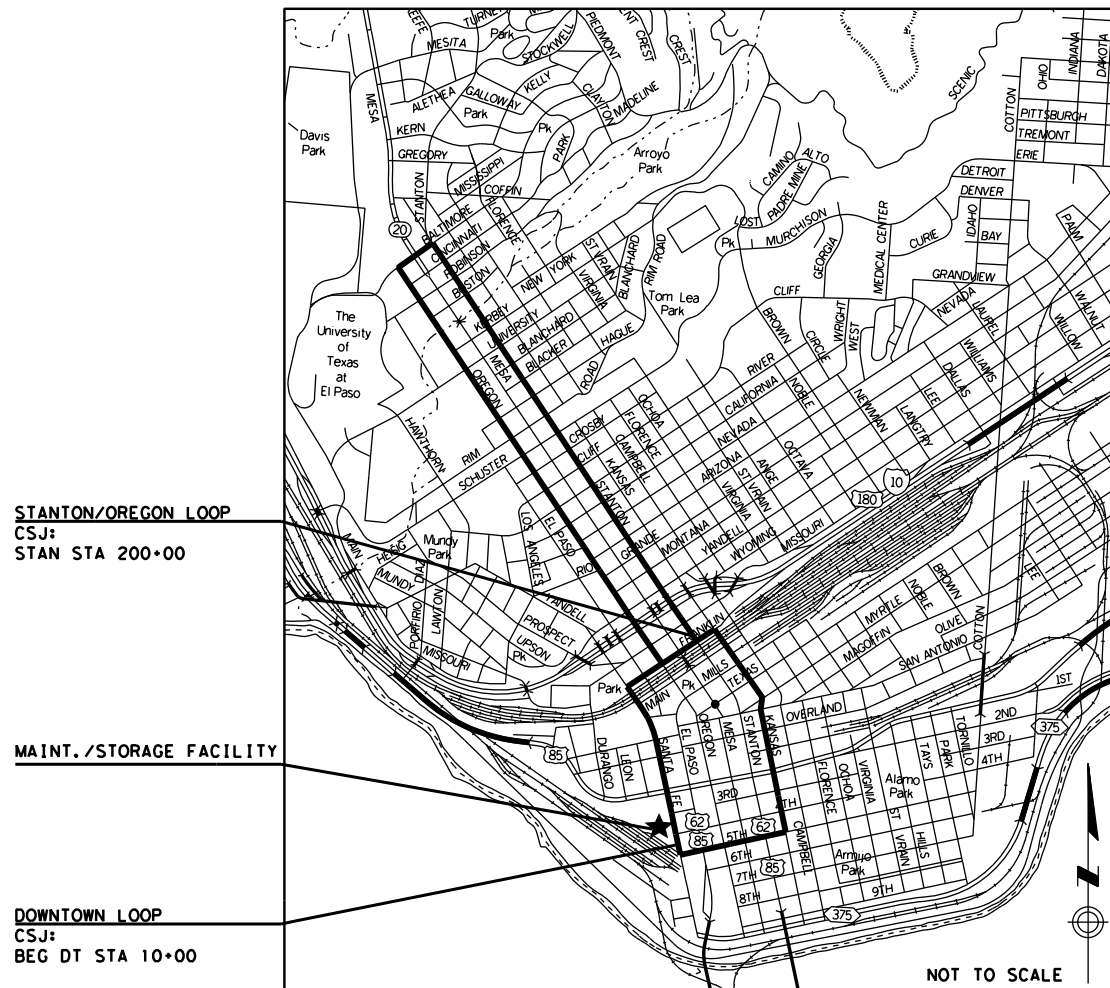
VOLUME 2 OF 4 - CIVIL/TRACK

FOR THE CONSTRUCTION OF AN URBAN STREETCAR SYSTEM CONSISTING OF
GRADING, STRUCTURES, SURFACE AND SUBSURFACE IMPROVEMENTS,
TRACKWORK, AND MAINTENANCE/STORAGE FACILITY

REGISTERED ACCESSIBILITY SPECIALIST (RAS)
INSPECTION REQUIRED
TDLR No.

REQUIRED SIGNS SHALL BE IN ACCORDANCE WITH
BC (1)- 07 THRU BC (12)- 07 AND THE "TEXAS
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

COUNTY _____ PROJ. NO. _____
HWY. NO. _____ LETTING DATE _____
DATE ACCEPTED _____



LIMITS:

DOWNTOWN LOOP LIMITS:

FROM INTERSECTION OF FATHER RAHM AVE AND SANTA FE ST, ALONG
SANTA FE ST TO FRANKLIN AVE, ALONG FRANKLIN AVE TO KANSAS ST,
ALONG KANSAS ST TO FATHER RAHM AVE, ALONG FATHER RAHM AVE TO
SANTA FE ST.

STANTON/OREGON LOOP LIMITS:

FROM INTERSECTION OF STANTON ST AND FRANKLIN AVE, ALONG
STANTON TO BALTIMORE DR, ALONG BALTIMORE DR TO OREGON ST,
ALONG OREGON ST TO FRANKLIN AVE.

STATE PROJECT NO. ()			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	677	

FINAL PLANS

LETTING DATE: _____
DATE CONTRACTOR BEGAN WORK: _____
DATE WORK WAS COMPLETED & ACCEPTED: _____
FINAL CONTRACT COST: \$ _____
CONTRACTOR : _____

URS

2829 Montana Suite 206
El Paso, Texas 79903
(915) 493-6468

TBPE REGISTRATION NO. F-3162



SUBMITTED FOR LETTING: _____
PROJECT MANAGER
CAMINO REAL REGIONAL MOBILITY AUTHORITY

PROJECT NO. ()

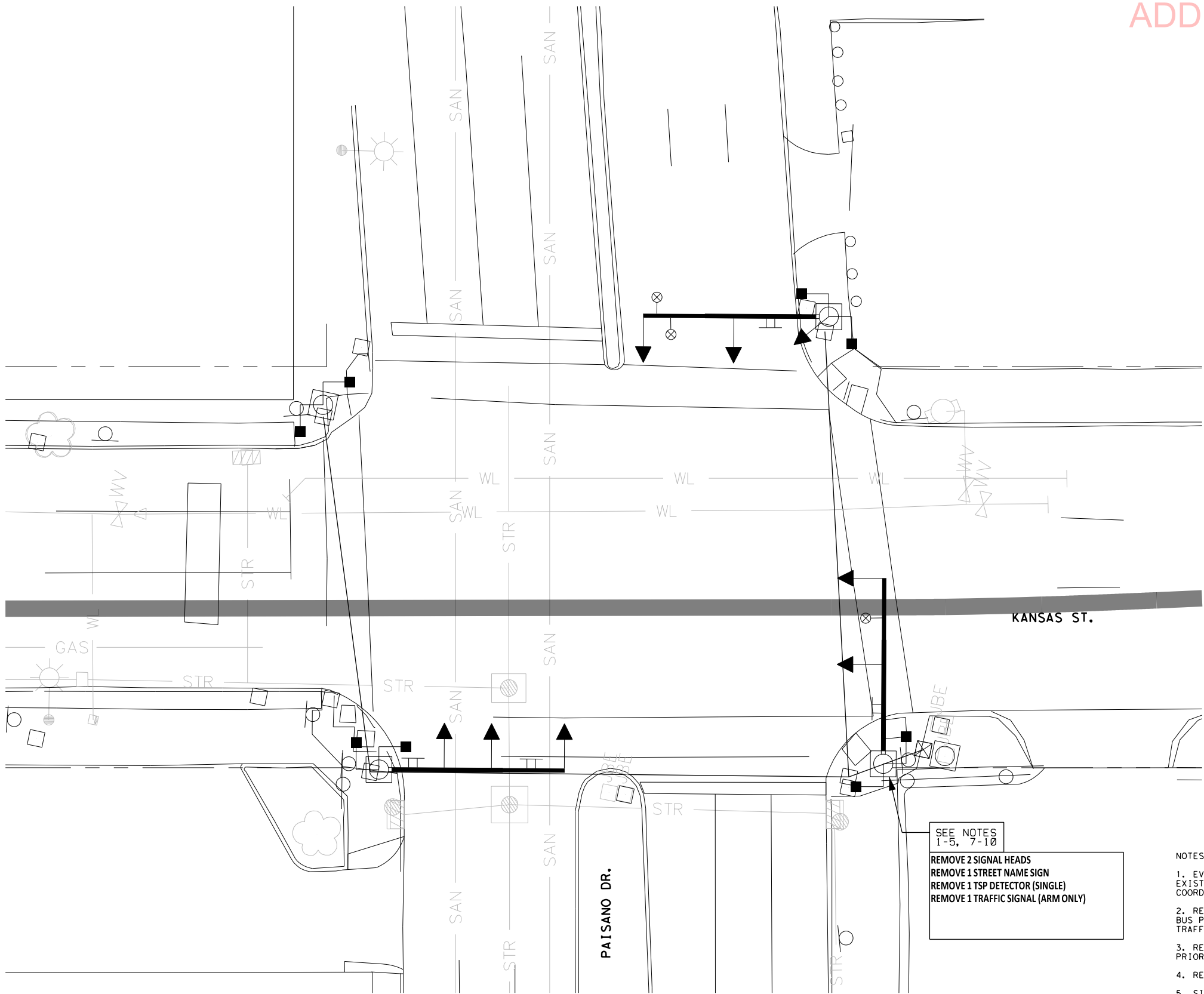
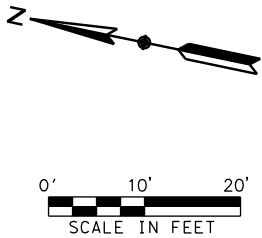
APPROVED FOR LETTING: _____
DIRECTOR, BRIDGE DIVISION

RECOMMENDED FOR LETTING: _____
DISTRICT DIRECTOR OF TRANSPORTATION
PLANNING AND DEVELOPMENT

APPROVED FOR LETTING: _____
DIRECTOR, TRAFFIC OPERATIONS DIVISION

RECOMMENDED FOR LETTING: _____
DISTRICT ENGINEER

APPROVED FOR LETTING: _____
DIRECTOR, DESIGN DIVISION



SEE NOTES
1-5, 7-10

REMOVE 2 SIGNAL HEADS
REMOVE 1 STREET NAME SIGN
REMOVE 1 TSP DETECTOR (SINGLE)
REMOVE 1 TRAFFIC SIGNAL (ARM ONLY)

- NOTES:
- EVALUATE CURRENT CONDITION OF ITEMS ON EXISTING TRAFFIC SIGNAL ARM TO BE REMOVED. COORDINATE THIS WORK WITH EPDOT.
 - REMOVE EXISTING TRAFFIC SIGNAL HEADS, VIVD, BUS PRIORITY DETECTOR AND SIGNS ON EXISTING TRAFFIC SIGNAL ARM.
 - REMOVE WIRE FOR REMOVED HEADS, VIVD, BUS PRIORITY DETECTOR FROM TRAFFIC SIGNAL POLE.
 - REMOVE TRAFFIC SIGNAL ARM.
 - SIDE MOUNT SIGNAL HEAD, PEDESTRAIN SIGNAL HEADS, PUSH BUTTONS, AND THEIR WIRING SHALL REMAIN IN THE TRAFFIC SIGNAL POLE.
 - REMOVE EXISTING POLE WITH ANY TRAFFIC SIGNAL HEADS, VIVD, BUS PRIORITY DETECTORS, SIGNS, PEDESTRAIN SIGNAL HEADS, PEDESTRAIN PUSH BUTTONS, AND THEIR WIRING.
 - DAMAGED EQUIPMENT DURING REMOVAL SHALL BE REPLACED TO AN EQUAL OR BETTER CONDITION AT NO COST TO CITY OF EL PASO.
 - STORE REMOVED ITEMS IN A SECURE AREA AT CONTRACTOR YARD.
 - REMOVED ITEMS MAY BE REUSED AT LOCATIONS SHOWN ON TRAFFIC SIGNAL LAYOUTS.
 - SALVAGE ALL OTHER ITEMS TO EL PASO DEPARTMENT OF TRANSPORTATION.

ITEM	CODE	DESCRIPTION	UNIT	QTY
680		REMOVAL OF ARM ASSEMBLY	EA	
680		REMOVAL OF STREET NAME SIGN	EA	
680		REMOVAL OF TRAFFIC SIGNAL HEADS	EA	
680		REMOVAL OF TRAFFIC SIGNAL PRIORITY SYSTEM	EA	

LEGEND

- PUSH BUTTON
- PED HEAD SIGNAL
- MAST ARM
- SIGNAL HEAD
- VIVIDS
- BUS PRIORITY SYSTEM
- CONTROLLER
- EXISTING GROUND BOX
- EXISTING SIGN
- EXISTING CONDUIT
- FLASHING BEACON

NO	DATE	REVISION	APPROVED

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

STATE OF TEXAS
L.C. CARDENAS
67802
LICENSED PROFESSIONAL ENGINEER
2/27/2015

WALTER P MOORE
WALTER P. MOORE AND ASSOCIATES, INC.
TBPE FIRM REGISTRATION NO. 1856
221 NORTH KANSAS STREET, SUITE 601
EL PASO, TEXAS 79901
PHONE: 915.838.3100 FAX: 915.838. 3150

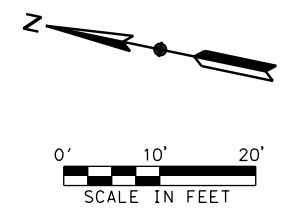
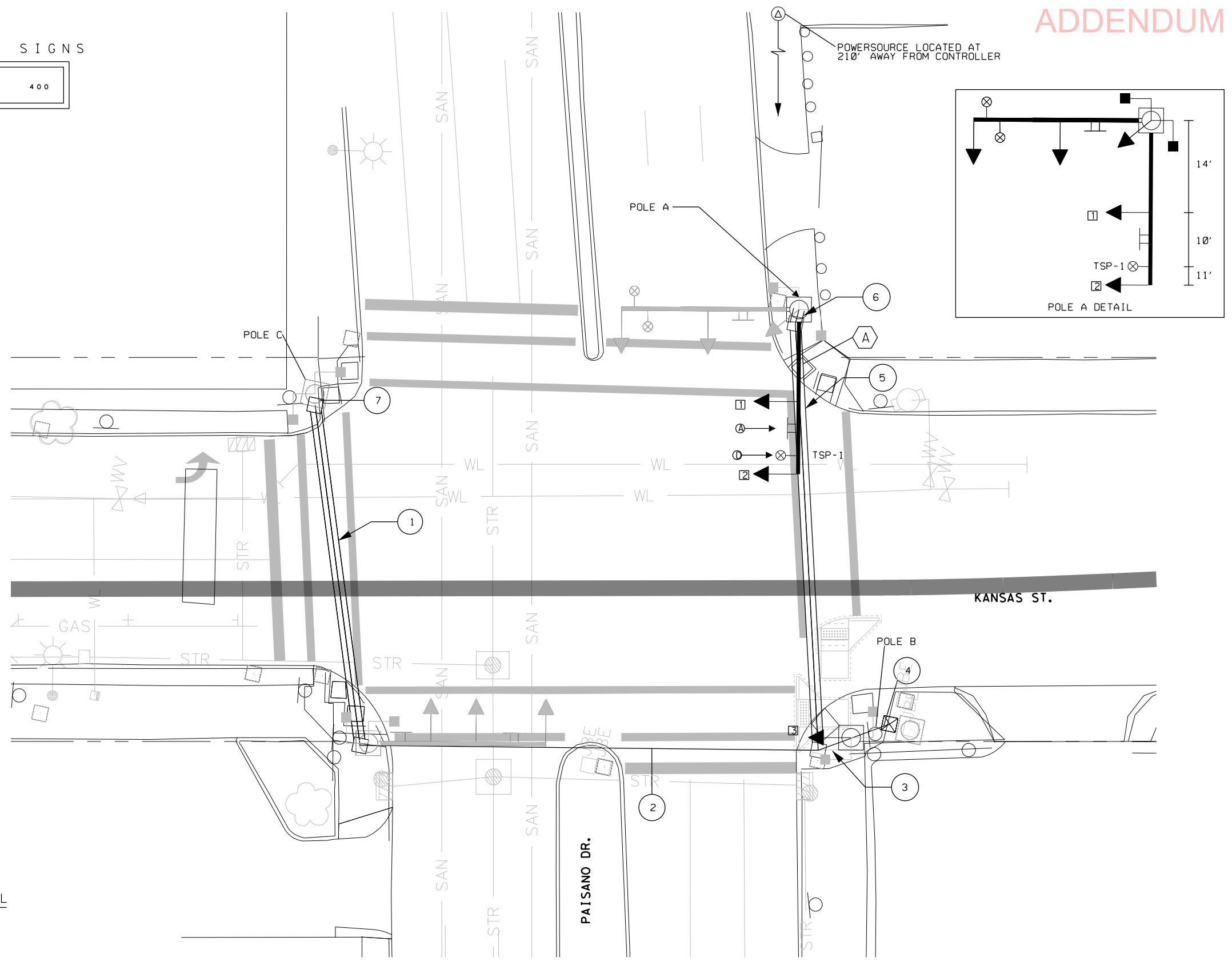
URS
2829 Montana Suite 206
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(915) 493-6468
TBPE REGISTRATION NO. F-3162

COEP STREETCAR
KANSAS-
PAISANO
DEMOLITION PLAN

T164			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	772A	

DATE: 6/18/2015 7:03:52 AM
FILE: c:\pwworking\wpm_shuaiyu_chen\transportation\dms36678\SIG_KANSAS_PAISANO-01.dgn

ADDENDUM 2 - JULY 14, 2015



LEGEND

- MAST ARM
- SIGNAL HEAD
- VIVDS
- BUS PRIORITY SYSTEM
- EXISTING CONTROLLER
- EXISTING GROUND BOX
- PROPOSED GROUND BOX (TY A)
- PROPOSED SIGN
- EXISTING CONDUIT
- PROPOSED CONDUIT (UNDER RDWY) SEE CONDUIT RUN TABLE
- FLASHING BEACON
- CONDUIT RUN NUMBER
- PLAN NOTE
- PED HEAD
- PUSH BUTTON
- EXISTING POWER SOURCE
- PROPOSED POWER SOURCE
- LOOP CONNECTING UNIT

TRAFFIC SIGNAL
LEGEND

- (A) STREET NAME SIGN (A)
- (B) STREET NAME SIGN (B)
- (C) PEDESTRIAN WARNING SIGN (W11-2)
- (D) TRANSIT SIGNAL PRIORITY DETECTOR
- (E) ONE WAY SIGN
- (F) LEFT ONLY, SHARED LEFT AND THROUGH SIGN
- (G) RIGHT TURN ONLY SIGN
- (H) INSTALL TRAIN TO WAYSIDE ANTENNA. SEE TRAIN TO WAYSIDE DETECTION DETAIL.

NOTES

- (A) PROPOSED ARM TO BE CLAMPED TO EXISTING TRAFFIC SIGNAL POLE
- (B) PROPOSED TRAFFIC SIGNAL
- (C) PROPOSED DUAL MAST ARM

EQUIPMENT TO BE CONNECTED TO THE TRAFFIC SIGNAL CONTROLLER											
	NEW EQUIPMENT	RELOCATED EQUIPMENT					EXISTING EQUIPMENT (TO BE REWIRED)				
	SIGNAL HEAD*	SIGNAL HEAD*	PED HEAD	PUSH BUTTON	VIVDS*	TSP	SIGNAL HEAD	PED HEAD	PUSH BUTTON	VIVDS*	TSP
POLE A		1, 2				TSP-1	x	x			
POLE B	3										
POLE C								x			
WIRE FROM SIGNAL HEAD, PED HEAD AND/OR PUSH BUTTON ON TRAFFIC SIGNAL POLE TO BE CONNECTED AT THE BASE OF THE POLE											

X= -WIRE FROM SIGNAL HEAD, PED HEAD AND/OR PUSH BUTTON ON TRAFFIC SIGNAL POLE TO BE CONNECTED AT THE BASE OF THE POLE
---WIRE FROM PED HEAD AND/OR PUSH BUTTON ON PED POLE TO BE CONNECTED FROM PED HEAD AND/OR PUSH BUTTON TO THE CONTROLLER
*NEW AND/OR RELOCATED SIGNAL HEADS AND VIVDS TO BE WIRED FROM SIGNAL HEAD AND/OR VIVDS TO THE CONTROLLER

NO	DATE	REVISION	APPROVED
1	6/18/2015	1	
2	6/18/2015	2	
3	6/18/2015	3	
4	6/18/2015	4	
5	6/18/2015	5	

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

STATE OF TEXAS
L. C. CARDENAS
67602
LICENSED PROFESSIONAL ENGINEER
Walter P. Moore and Associates, Inc.
2/27/2015

WALTER P MOORE
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COEP STREETCAR
KANSAS-
PAISANO
SIGNAL PLAN

T165			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	772B	

DATE: 6/18/2015 7:04:23 AM
FILE: c:\pwworking\wpm_shuaiyu_chen\transportation\dms36678\SIG_KANSAS_PAISANO-02.dgn

DN: URS
CK: URS
DW: URS
CK: URS

ADDENDUM 2 - JULY 14, 2015

CONDUIT AND CABLE SCHEDULE																				
RUN NO.	CONDUIT								NUMBER OF CONDUCTORS											RUN NO.
	CONDUIT STATUS							ITEM 8368	CABLE STATUS	PED PUSH BUTTONS CONDR	SIGNAL AND PED HEAD CONDR			VIVDS CABLING	TSP CABLING	TWC CABLING			LENGTH OF RUN	
		TRENCHED			BORED						NO. 6 XHHW (INSULATED) (POWER)	NO. 6 XHHW (INSULATED) (GROUND)								
		PVC SCHD 40 (1")	PVC SCHD 40 (2")	PVC SCHD 40 (3")	PVC SCHD 40 (1") (BORE)	PVC SCHD 40 (2") (BORE)	PVC SCHD 40 (3") (BORE)						CONDUIT (PREPARE)				TRF SIG CBL (TY A) (18 AWG) (2 CONDR)	TRF SIG CBL (TY A) (12 AWG) (5 CONDR)		
1	I																		62	1
2	E																		83	2
3	E																		5	3
4	E																		11	4
5	I																		77	5
6	E																		5	6
7	E																		2	7
TOTAL		0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0		TOTAL

STATUS: E = EXISTING : I = INSTALL

ITEM	CODE	DESCRIPTION	UNIT	QTY
618	6030	CONDT (PVC) (SCH 40) (3") (BORE)	LF	0
620	6010	ELEC CONDR (NO. 6) INSULATED	LF	0
680		INSTALLATION OF TRAFFIC SIGNAL ARM ASSEMBLY (30')	EA	
680		RE-INSTALLATION OF STREET NAME SIGN	EA	
680		RE-INSTALLATION OF TRAFFIC SIGNAL HEADS	EA	
682	6001	VEH SIG SEC (12") LED (GRN)	EA	
682	6003	VEH SIG SEC (12") LED (YEL)	EA	
682	6005	VEH SIG SEC (12") LED (RED)	EA	
684	6010	TRF SIG CBL (TY A) (12 AWG) (5 CONDR)	LF	0
684		TRF SIG CBL (TY A) (20 AWG) (5 CONDR)	LF	0
6027	6003	CONDUIT (PREPARE)	LF	0
		TSP SYSTEM (INSTALLATION ONLY)	EA	

CONDUCTORS FROM POLE BASE TO TRAFFIC SIGNAL PRIORITY DETECTOR						
POLE ID	TSP DETECTOR NO.				SUB-TOTAL (FT)	TSP CONDUCTOR
	TSP-1	TSP-2	TSP-3	TSP-4		
POLE A	43					(TYPE-A) (5 CONDR) (20AWG)
TOTAL					0	(TYPE-A) (5 CONDR) (20AWG)

CONDUCTOR FROM POLE BASE PEDESTRIAN HEAD						
POLE ID	PEDESTRIAN SIGNAL HEAD NO.				SUB-TOTAL (FT)	CONDUCTOR TYPE
	A - A	B - B	C - C	D - D		
POLE C	7	7				(TYPE-A) (5 CONDR) (12AWG)
TOTAL					0	(TYPE-A) (5 CONDR) (12AWG)

CONDUCTOR FROM POLE BASE TO SIGNAL HEAD															
POLE ID	VEHICLE SIGNAL HEAD NO.												SUB-TOTAL (FT)	SUB-TOTAL (FT)	CONDUCTOR TYPE
	1	2	3	4	5	6	7	8	9	10	11	12			
POLE A	33	47													(TYPE-A) (5 CONDR) (12 AWG)
														0	(TYPE-A) (7 CONDR) (12 AWG)
POLE B			19												(TYPE-A) (5 CONDR) (12 AWG)
														0	(TYPE-A) (7 CONDR) (12 AWG)
TOTAL													0	0	

SIGNAL HEAD SCHEDULE	
SIGNAL	DESCRIPTION
<div><div><div>R</div><div>Y</div><div>G</div></div><div>1, 2</div></div>	12" HORIZONTAL 3 SECTION LED
<div><div><div>R</div><div>Y</div><div>G</div></div><div>3</div></div>	12" VERTICAL 3 SECTION LED

NO	DATE	REVISION	APPROVED
/	/		
/	/		
/	/		
/	/		
/	/		

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

STATE OF TEXAS

L. C. CARDENAS

67602

LICENSED PROFESSIONAL ENGINEER

L. C. Cardenas, P.E.
2/27/2015

WALTER P MOORE

WALTER P. MOORE AND ASSOCIATES, INC.
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URS

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TBPE REGISTRATION NO. F-3162

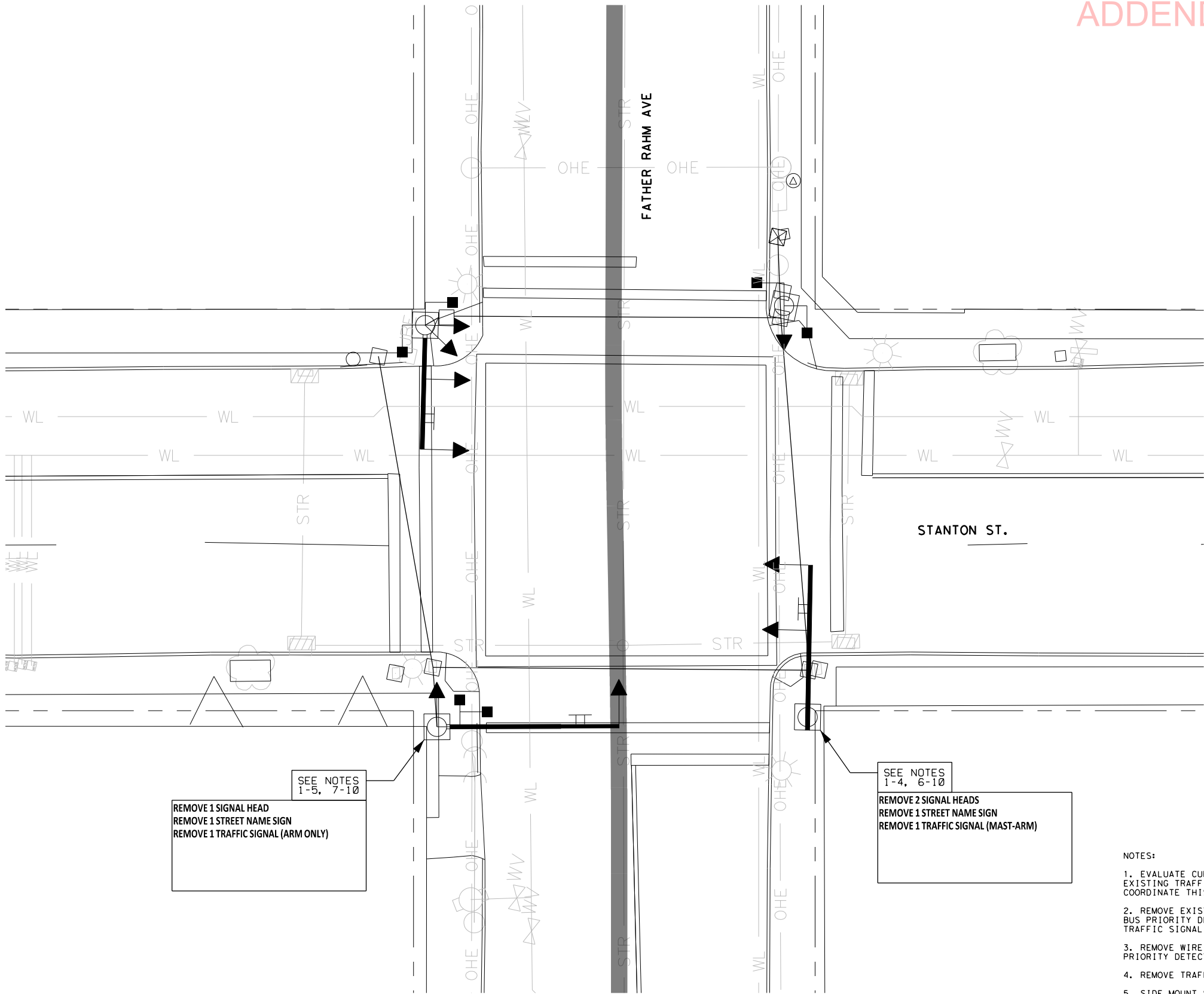
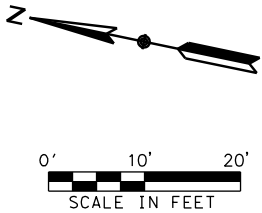
COEP STREETCAR

KANSAS-PAISANO
SIGNAL PLAN

THE CITY OF EL PASO

T166

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	772C	



SEE NOTES
1-5, 7-10

REMOVE 1 SIGNAL HEAD
REMOVE 1 STREET NAME SIGN
REMOVE 1 TRAFFIC SIGNAL (ARM ONLY)

SEE NOTES
1-4, 6-10

REMOVE 2 SIGNAL HEADS
REMOVE 1 STREET NAME SIGN
REMOVE 1 TRAFFIC SIGNAL (MAST-ARM)

- NOTES:
1. EVALUATE CURRENT CONDITION OF ITEMS ON EXISTING TRAFFIC SIGNAL ARM TO BE REMOVED. COORDINATE THIS WORK WITH EPDOT.
 2. REMOVE EXISTING TRAFFIC SIGNAL HEADS,VIVD, BUS PRIORITY DETECTOR AND SIGNS ON EXISTING TRAFFIC SIGNAL ARM.
 3. REMOVE WIRE FOR REMOVED HEADS, VIVD, BUS PRIORITY DETECTOR FROM TRAFFIC SIGNAL POLE.
 4. REMOVE TRAFFIC SIGNAL ARM.
 5. SIDE MOUNT SIGNAL HEAD, PEDESTRAIN SIGNAL HEADS, PUSH BUTTONS, AND THEIR WIRING SHALL REMAIN IN THE TRAFFIC SIGNAL POLE.
 6. REMOVE EXISTING POLE WITH ANY TRAFFIC SIGNAL HEADS, VIVD, BUS PRIORITY DETECTORS, SIGNS, PEDESTRAIN SIGNAL HEADS, PEDESTRAIN PUSH BUTTONS, AND THEIR WIRING.
 7. DAMAGED EQUIPMENT DURING REMOVAL SHALL BE REPLACED TO AN EQUAL OR BETTER CONDITION AT NO COST TO CITY OF EL PASO.
 8. STORE REMOVED ITEMS IN A SECURE AREA AT CONTRACTOR YARD.
 9. REMOVED ITEMS MAY BE REUSED AT LOCATIONS SHOWN ON TRAFFIC SIGNAL LAYOUTS.
 10. SALVAGE ALL OTHER ITEMS TO EL PASO DEPARTMENT OF TRANSPORTATION.

ITEM	CODE	DESCRIPTION	UNIT	QTY
680		REMOVAL OF ARM ASSEMBLY	EA	
680		REMOVAL OF STREET NAME SIGN	EA	
680		REMOVAL OF TRAFFIC SIGNAL HEADS	EA	
680		REMOVAL OF PEDESTRIAN SIGNAL HEADS	EA	
680		REMOVAL OF MAST ARM	EA	

- L E G E N D
- PUSH BUTTON
 - PED HEAD SIGNAL
 - MAST ARM
 - SIGNAL HEAD
 - VIVIDS
 - BUS PRIORITY SYSTEM
 - CONTROLLER
 - EXISTING GROUND BOX
 - EXISTING SIGN
 - EXISTING CONDUIT
 - FLASHING BEACON

NO	DATE	REVISION	APPROVED

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

L.C. CARDENAS
67802
L.C. Cardenas, P.E.
2/27/2015

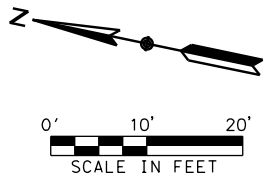
WALTER P MOORE
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TBPE REGISTRATION NO. F-3162

COEP STREETCAR

**STANTON-
FATHER RAHM
DEMOLITION PLAN**

T167			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	772D	



LEGEND

- MAST ARM
- SIGNAL HEAD
- VIVDS
- BUS PRIORITY SYSTEM
- EXISTING CONTROLLER
- EXISTING GROUND BOX
- PROPOSED GROUND BOX (TY A)
- PROPOSED SIGN
- EXISTING CONDUIT
- PROPOSED CONDUIT (UNDER RDWY) SEE CONDUIT RUN TABLE
- FLASHING BEACON
- CONDUIT RUN NUMBER
- PLAN NOTE
- PED HEAD
- PUSH BUTTON
- EXISTING POWER SOURCE
- PROPOSED POWER SOURCE
- LOOP CONNECTING UNIT

NO	DATE	REVISION	APPROVED

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

STATE OF TEXAS
L.C. CARDENAS
67602
LICENSED PROFESSIONAL ENGINEER
2/27/2015

WALTER P MOORE
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TBPE REGISTRATION NO. F-3162

COEP STREETCAR

STANTON-FATHER RAHM SIGNAL PLAN

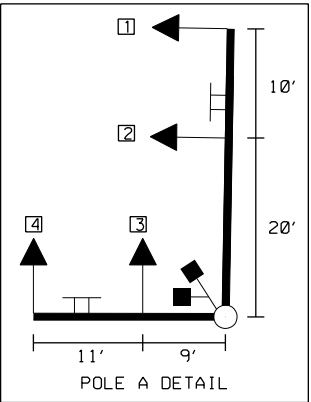
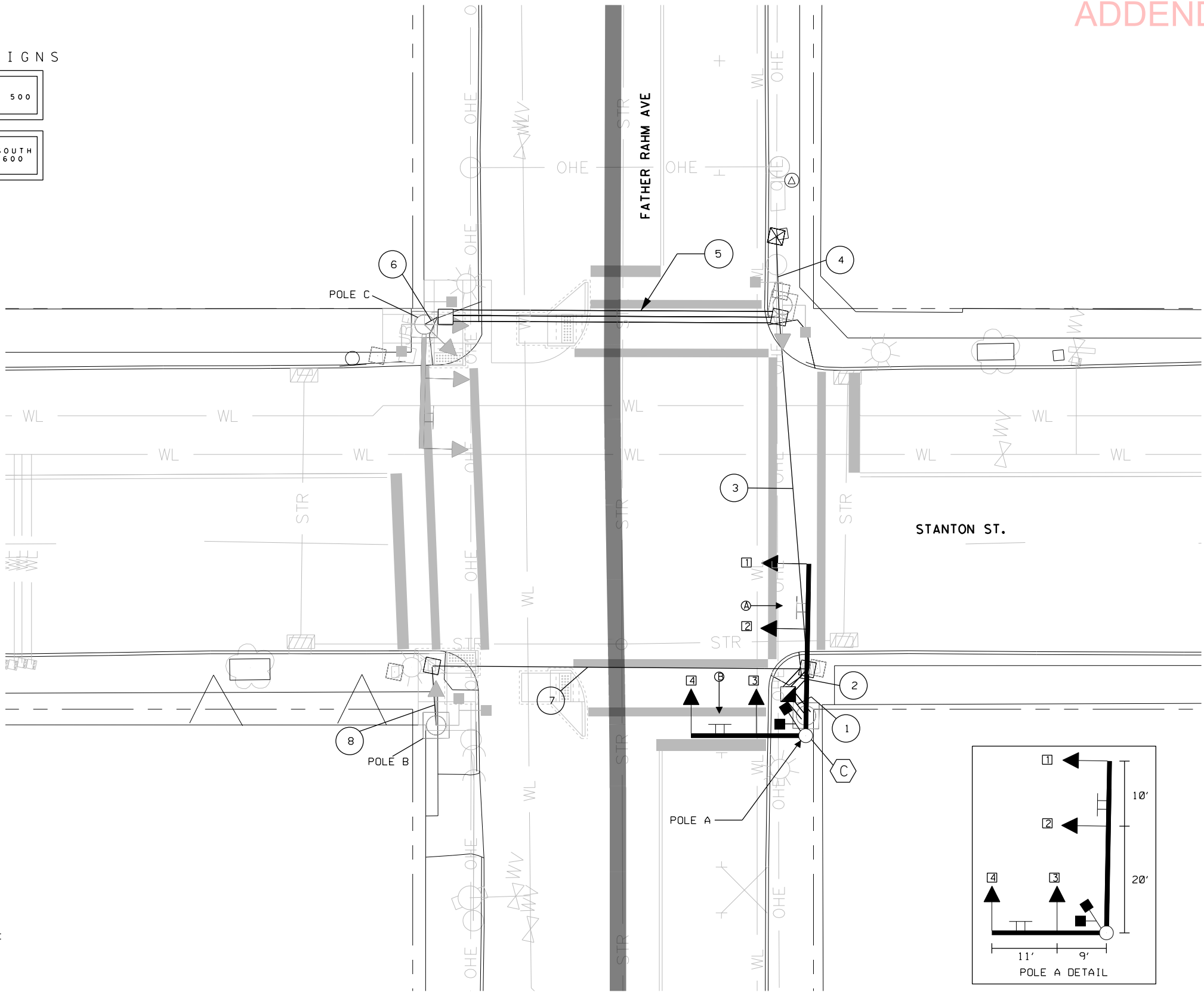
THE CITY OF EL PASO TEXAS

T168

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	772E	

STREET NAME SIGNS

- A 400 FATHER RAHM 500
- B SOUTH 700 STANTON SOUTH 600



TRAFFIC SIGNAL LEGEND

- (A) STREET NAME SIGN (A)
- (B) STREET NAME SIGN (B)
- (C) PEDESTRIAN WARNING SIGN (W11-2)
- (D) TRANSIT SIGNAL PRIORITY DETECTOR
- (E) ONE WAY SIGN
- (F) LEFT ONLY, SHARED LEFT AND THROUGH SIGN
- (G) RIGHT TURN ONLY SIGN
- (H) INSTALL TRAIN TO WAYSIDE ANTENNA. SEE TRAIN TO WAYSIDE DETECTION DETAIL.

NOTES

- (A) PROPOSED ARM TO BE CLAMPED TO EXISTING TRAFFIC SIGNAL POLE
- (B) PROPOSED TRAFFIC SIGNAL
- (C) PROPOSED DUAL MAST ARM

EQUIPMENT TO BE CONNECTED TO THE TRAFFIC SIGNAL CONTROLLER											
	NEW EQUIPMENT	RELOCATED EQUIPMENT					EXISTING EQUIPMENT (TO BE REWIRED)				
	SIGNAL HEAD*	SIGNAL HEAD*	PED HEAD	PUSH BUTTON	VIVDS*	TSP	SIGNAL HEAD	PED HEAD	PUSH BUTTON	VIVDS*	TSP
POLE A		1, 2, 3, 4	x								
POLE B							x	x			
POLE C							x	x			

X = -WIRE FROM SIGNAL HEAD, PED HEAD AND/OR PUSH BUTTON ON TRAFFIC SIGNAL POLE TO BE CONNECTED AT THE BASE OF THE POLE
---WIRE FROM PED HEAD AND/OR PUSH BUTTON ON PED POLE TO BE CONNECTED FROM PED HEAD AND/OR PUSH BUTTON TO THE CONTROLLER
*NEW AND/OR RELOCATED SIGNAL HEADS AND VIVDS TO BE WIRED FROM SIGNAL HEAD AND/OR VIVDS TO THE CONTROLLER

DATE: 6/18/2015 7:05:27 AM
FILE: c:\pwworking\wpm_shuaiyu_chen\transportation\dms36678\SIG_STANTON_FATHERAHM-02.dgn

DWG: URS
CHK: URS
DW: URS
CHK: URS

ADDENDUM 2 - JULY 14, 2015

CONDUIT AND CABLE SCHEDULE																				
RUN NO.	CONDUIT								NUMBER OF CONDUCTORS											RUN NO.
	CONDUIT STATUS							ITEM 8368	CABLE STATUS	PED PUSH BUTTONS CONDR	SIGNAL AND PED HEAD CONDR			VIVDS CABLING	TSP CABLING	TWC CABLING			LENGTH OF RUN	
		TRENCHED			BORED						NO. 6 XHHW (INSULATED) (POWER)	NO. 6 XHHW (INSULATED) (GROUND)								
		PVC SCHD 40 (1")	PVC SCHD 40 (2")	PVC SCHD 40 (3")	PVC SCHD 40 (1") (BORE)	PVC SCHD 40 (2") (BORE)	PVC SCHD 40 (3") (BORE)						CONDUIT (PREPARE)							
1	I									TRF SIG CBL (TY A) (18 AWG) (2 CONDR)	TRF SIG CBL (TY A) (12 AWG) (5 CONDR)	TRF SIG CBL (TY A) (12 AWG) (7 CONDR)	TRF SIG CBL (TY A) (12 AWG) (12 CONDR)	VIVDS COMM CABLE (COAXIAL)	TRF SIG CBL (TY A) (20 AWG) (5 CONDR)	TRF SIG CBL (TY A) (12 AWG) (2 CONDR)	NO. 6 XHHW (INSULATED) (POWER)	NO. 6 XHHW (INSULATED) (GROUND)	5	1
2	I																		6	2
3	E																		61	3
4	E																		13	4
5	I																		70	5
6	E																		5	6
7	E																		66	7
8	E																		10	8
TOTAL		0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0		TOTAL

STATUS: E = EXISTING : I = INSTALL

ITEM	CODE	DESCRIPTION	UNIT	QTY
416	6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	LF	
618	6030	CONDT (PVC) (SCH 40) (3") (BORE)	LF	0
620	6010	ELEC CONDR (NO. 6) INSULATED	LF	0
624	6002	GROUND BOX TY A (122311) W/APRON	EA	
680		RE-INSTALLATION OF STREET NAME SIGN	EA	
680		RE-INSTALLATION OF TRAFFIC SIGNAL HEADS	EA	
680		RE-INSTALLATION OF PEDESTRIAN SIGNAL HEAD	EA	
682	6001	VEH SIG SEC (12") LED (GRN)	EA	
682	6003	VEH SIG SEC (12") LED (YEL)	EA	
682	6005	VEH SIG SEC (12") LED (RED)	EA	
684	6010	TRF SIG CBL (TY A) (12 AWG) (5 CONDR)	LF	0
686		INS TRF SIG PL AM(S) 2 ARM (20-30')	EA	
6027	6003	CONDUIT (PREPARE)	LF	0


CONDUCTOR FROM POLE BASE PEDESTRIAN HEAD						
POLE ID	PEDESTRIAN SIGNAL HEAD NO.				SUB-TOTAL (FT)	CONDUCTOR TYPE
	A - A	B - B	C - C	D - D		
POLE B	7			7		(TYPE-A) (5 CONDR) (12AWG)
POLE C	7	7				(TYPE-A) (5 CONDR) (12AWG)
TOTAL						(TYPE-A) (5 CONDR) (12AWG)

CONDUCTOR FROM POLE BASE TO SIGNAL HEAD															
POLE ID	VEHICLE SIGNAL HEAD NO.												SUB-TOTAL (FT)	SUB-TOTAL (FT)	CONDUCTOR TYPE
	1	2	3	4	5	6	7	8	9	10	11	12			
POLE A	49	39	28	39											(TYPE-A) (5 CONDR) (12 AWG)
														0	(TYPE-A) (7 CONDR) (12 AWG)
TOTAL													0	0	

SIGNAL HEAD SCHEDULE	
SIGNAL	DESCRIPTION
<div><div><div>R</div><div>Y</div><div>G</div></div><div>1, 2, 3, 4</div></div>	12" HORIZONTAL 3 SECTION LED

NO	DATE	REVISION	APPROVED
	/ /		
	/ /		
	/ /		
	/ /		

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856


L.C. CARDENAS
67602
2/27/2015

WALTER P MOORE
WALTER P. MOORE AND ASSOCIATES, INC.
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El Paso, Texas 79903
(915) 493-6468

TBPE REGISTRATION NO. F-3162

COEP STREETCAR

STANTON-FATHER RAHM
SIGNAL PLAN

 T169

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	772F	

PROJECT OVERVIEW AND SEQUENCE OF WORK (AT NO ADDITIONAL COST TO THE OWNER)

1. THIS WORK TO BE DONE IN CONJUNCTION WITH THE CITY OF EL PASO STREETCAR PROJECT.
2. CONTRACTOR SHALL COORDINATE WATER AND WASTEWATER SYSTEM CONSTRUCTION AND PHASING OF WORK WITH CITY TRAFFIC CONTROL PLANS. ANY ADJUSTMENTS AND/OR MODIFICATIONS TO THE EXISTING TRAFFIC CONTROL PLANS THAT ARE REQUIRED FOR THE WATER AND WASTEWATER SYSTEM CONSTRUCTION WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS INCLUDING NIGHTTIME AND WEEKEND WORK AS NEEDED.
3. THE CONTRACTOR MAY NEED TO WORK DURING OFF-HOURS, NIGHTS AND/OR WEEKENDS TO INSTALL WATER AND WASTEWATER MAINS AND TO EXTEND SERVICES ACROSS THE STREET TO ASSURE ADEQUATE CONSTRUCTIBLE AND OPERATION OF THESE TWO SYSTEMS.
4. PUBLIC SERVICE BOARD (PSB) WATER AND WASTEWATER MAINS AND ASSOCIATED SERVICE LINES SHALL BE COMPLETED PRIOR TO OR DURING CONSTRUCTION PHASING AS SHOWN ON THE CITY PLANS.
5. WATER AND WASTEWATER MAINS AND ASSOCIATED SERVICE LINE INSTALLATION MAY REQUIRED THAT CERTAIN PORTIONS OF THIS WORK BE PERFORMED OUTSIDE THE RESPECTIVE WORK ZONE AREA LIMITS SHOWN ON THE PLANS FOR CONSTRUCTION. THEREFORE, THE WORK ZONE AREA LIMITS SHALL BE INCREASED AND/OR MODIFIED AS NEEDED TO ACCOMMODATE THIS WORK.
6. ALL SURVEY INFORMATION WERE PROVIDED BY AECOM. CEA HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED AS A RESULT ERRONEOUS INFORMATION PROVIDED BY OTHERS.
7. ALL INSTANCES WHERE THE TERM "PROPOSED" APPEARS ON THESE DOCUMENTS SHALL BE CONSIDERED AS WORK NECESSARY TO COMPLETE THE REQUIRED IMPROVEMENTS AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL INCLUDE ALL "PROPOSED" ITEMS AS PART OF HIS BID. THE TERMS "PROPOSED" AND "NEW" SHALL BE CONSIDERED EQUAL WHEN BIDDING THIS PROJECT.

GENERAL NOTES

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN IN THE PLANS, AND COORDINATE WORK WITH ALL HOME OWNERS, UTILITY COMPANIES, BUSINESSES, TXDOT, AND THE CITY OF EL PASO FOR ANY RELOCATION AND/OR PROTECTION OF EXISTING LINES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITY DEPTHS ARE UNKNOWN. THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR ACQUIRING FIELD DEPTHS OF ALL UTILITIES WITHIN THE PROJECT AREAS. CONTRACTOR SHALL CALL THE RESPECTIVE "1-CALL" NUMBER FOR SUCH UTILITIES. REFER TO PLANS & SPECIAL CONDITIONS SECTION OF SPECIFICATIONS FOR POT-HOLING REQUIREMENTS. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITY LINES BY POT HOLING AND/OR OTHER METHODS AT LEAST 14 DAYS AHEAD OF PIPE LAYING CREWS TO ALLOW THE ENGINEER A REASONABLE AMOUNT OF TIME TO INITIATE ANY NECESSARY CHANGES IN ALIGNMENT AND/OR GRADE OF PIPELINE. THE CONTRACTOR SHALL OBTAIN JURISDICTIONAL APPROVALS AND PERMITS FROM THE CITY'S ENGINEERING DEPARTMENT, CONSTRUCTION DIVISION.
2. ALTHOUGH ALL EFFORTS HAVE BEEN MADE TO INDICATE ALL MAJOR EXISTING UTILITIES ON PLANS, ALL EXISTING UTILITIES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION OF THE NEW LINE EXCEPT AS NOTED IN THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND RELOCATING ALL IN PLACE UTILITIES (INCLUDING SERVICE CONNECTIONS) FROM DAMAGE DURING CONSTRUCTION ACTIVITIES. SERVICE CONNECTIONS SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR TO SUPPORT AND MAINTAIN ALL EXISTING EXPOSED UTILITIES IN SERVICE.
3. THE CONTRACTOR SHALL NOTIFY (VERBALLY AND WRITTEN) ALL RESIDENTS AND BUSINESS OWNERS THAT MAY BE AFFECTED BY THE CONSTRUCTION FOURTEEN DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TEMPORARY SERVICE TO CUSTOMERS IF SERVICE WILL BE INTERRUPTED FOR MORE THAN 4 HOURS IN A 24-HOUR PERIOD AND SHALL ISSUE A 48-HOUR ADVANCE NOTICE TO THE CUSTOMERS WHOSE SERVICES WILL BE INTERRUPTED.
4. PRIOR TO BEGINNING WORK ADJACENT TO AND/OR WITHIN TXDOT RIGHT-OF-WAY, CONTRACTOR SHALL DEVELOP A TRAFFIC CONTROL PLAN AND SUBMIT TO TEXAS HIGHWAY DEPARTMENT FOR APPROVAL. CONTRACTOR SHALL NOT BEGIN WORK UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN APPROVED, A COPY OF WHICH IS TO BE PROVIDED TO THE ENGINEER. TRAFFIC CONTROL PLAN SHALL BE PREPARED IN CONFORMANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. ALL WORK WITHIN OR ADJACENT TO TXDOT R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH TXDOT RULES AND REGULATIONS, INCLUDING TXDOT'S UTILITY ACCOMMODATION RULES.
5. MOBILIZATION AND TRAFFIC CONTROL WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.
6. THE CONTRACTOR SHALL SUBMIT A PROJECT SCHEDULE, COMMENCEMENT AND COMPLETION OF THE CONSTRUCTION, FOR REVIEW BY THE ENGINEER, PRIOR TO CONSTRUCTION. ADDITIONALLY, CONTRACTOR SHALL PROVIDE A TWO-WEEK CONSTRUCTION SCHEDULE, UPDATED WEEKLY, TO THE ENGINEER.
7. THE INTENT OF THE E.P.W.U. IS TO HAVE THE WASTEWATER INSTALLED TO SUCH A DEPTH THAT THEY WILL MATCH OR EXCEED THE EXISTING WASTEWATER INVERT ELEVATION AT ALL LOCATIONS. THE PIPELINES, INCLUDING WATER LINES, SHALL HAVE NO DIPS, SAGS OR HUMPS OR OTHER IRREGULARITIES IN VERTICAL ALIGNMENT. CONSIDERING UTILITIES AND OTHER CONDITIONS, VARIANCE FROM GRADE PROFILE IS NOT RECOMMENDED IF OTHER EXISTING UTILITIES OR OBSTRUCTIONS ARE ENCOUNTERED DURING THE WORK.
8. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE REQUIRED GRADING PERMIT AS WELL AS MUNICIPAL SERVICES REVIEW AND APPROVAL OF THE TPDES. TRAFFIC CONTROL PLANS & PHASING FOR THE ENTIRE PROPOSED WATER DISTRIBUTION MAIN ROUTE AND PROPOSED TRUCK ROUTE, SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY'S ENGINEERING DEPARTMENT-TRAFFIC DIVISION. PAVING CUT AND EXCAVATION PERMITS FOR BORE PITS, TRENCHING, POT-HOLING, AND ANY OTHER EXCAVATION SHALL BE OBTAINED FROM THE CITY'S ENGINEERING DEPARTMENT, PRIOR TO CONSTRUCTION WITHIN OR ADJACENT TO CITY R.O.W.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASCERTAINING THE NATURE AND EXTENT OF ANY COLLATERAL WORK DONE BY OTHER TRADES. CONTRACTOR SHALL BE AWARE OF ANY AND ALL CONCURRENT WORK IN THE AREA THAT WILL REQUIRE COORDINATION FOR TIE-INS OF THIS WORK. IF NECESSARY TO AVOID OR MINIMIZE DAMAGE OR DELAY, THE CONTRACTOR SHALL REDEVELOP HIS WORK FORCE TO OTHER AREAS OF THE WORK AT NO COST TO THE OWNER.
10. CONTRACTOR SHALL PROVIDE THE REQUIRED COUPLINGS, ELBOWS AND NECESSARY PIPING APPURTENANCES FOR A COMPLETE AND OPERATIONAL WATER SYSTEM. CONTRACTOR TO VERIFY EXISTING PIPE SIZES PRIOR TO PREPARATION OF SHOP DRAWINGS AND ORDERING OF MATERIALS.
11. PEDESTRIAN AND VEHICULAR ACCESS TO ALL RESIDENTS AND COMMERCIAL SITES SHALL BE PROVIDED AT ALL TIMES. COORDINATION FOR THIS ACTIVITY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
12. CONTRACTOR TO COORDINATE IN ADVANCE WITH ENGINEER THE FINAL LOCATIONS OF ALL COMBINATION AIR/VACUUM VALVE BOXES, BLOW-OFF VALVES, MANHOLES, AIR VENTS, TEST STATIONS, AND METER BOXES. THESE FACILITIES ARE TO BE LOCATED IN PLACES MINIMIZING DISTURBANCE TO EXISTING LANDSCAPING. ANY LANDSCAPING DISTURBED WILL BE RESTORED BY CONTRACTOR AS PART OF THE INSTALLATION.
13. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE PROPOSED WASTEWATER MAINS AND WASTEWATER MANHOLES SHALL BE INSTALLED NO LESS THAN 10' AWAY FROM PROPOSED WATER MAINS.
14. ALL TIE-INS SHALL BE CLOSELY COORDINATED WITH E.P.W.U. AT LEAST 72 HOURS PRIOR TO ACTUAL CONSTRUCTION. CLOSING AND OPENING OF EXISTING VALVES SHALL BE OPERATED BY E.P.W.U. ONLY. CONTACT ROBERT CORRAL AT 915-594-5782 WITH E.P.W.U.
15. CONTRACTOR SHALL INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF FIVE FEET (5') AS REQUIRED BY O.S.H.A. EXISTING SOIL CONDITIONS MAY DICTATE THE NEED FOR A TRENCH SAFETY SYSTEM WHEN TRENCH IS LESS THAN 5' IN DEPTH.
16. CONTRACTOR SHALL COORDINATE NEW WATER SERVICE METER LOCATION WITH E.P.W.U. & PROPERTY OWNER PRIOR TO RELOCATION.
17. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING VERTICAL AND HORIZONTAL OFFSETS USING ADDITIONAL FITTINGS AND BENDS FOR GRADE ADJUSTMENTS AND TO AVOID OTHER EXISTING UNDERGROUND UTILITIES AND OBSTRUCTIONS WHEN ENCOUNTERED. FLOWABLE FILL SHALL EXTEND 2 FT. PAST EACH SIDE OF THE UTILITY/OBSTRUCTION. FLOWABLE BACKFILL WILL NOT BE REQUIRED FOR PIPES/OBSTRUCTIONS LESS THAN 8" IN DIAMETER, UNLESS INDICATED ON THE DRAWINGS.
18. INSTALLATION OF THE TRANSMISSION WATER MAIN SHALL BE COORDINATED WITH, AND ALL RESTORATION INSPECTIONS WILL BE BY, BOTH CITY'S ENGINEERING AND STREET DEPARTMENTS DURING CONSTRUCTION.
19. FIRE HYDRANT LOCATIONS ARE APPROXIMATE. COORDINATE FINAL FIRE HYDRANT LOCATION WITH ENGINEER AND OWNER'S OPERATIONS PERSONNEL.
20. EXISTING STREETS, CURB & GUTTER, SIDEWALKS, HARDSCAPES, DRIVEWAYS AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGED OR REMOVED BY CONSTRUCTION ACTIVITIES, NOT SHOWN IN PLANS, SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR, I.E., WHEN INSTALLING WATER MAINS, SERVICE LINES, VALVES, SEWER MAINS, SEWER LATERALS, YARD LINES, SERVICE CONNECTIONS AND MANHOLES WITH IN PROJECT LIMITS.
21. AS-BUILT STATIONING OFFSET FROM R.O.W. AND INVERT ELEVATIONS SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR ON A CLEAN SET OF PLANS FOR EACH MANHOLE, VALVE, FIRE HYDRANT, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
22. EMERGENCY RESPONSE NOTE: THE CONTRACTOR SHALL IMMEDIATELY CALL AND NOTIFY THE EL PASO WATER UTILITIES DISPATCHER AT 594-5775 OR 594-5778 WHEN A WATER OR WASTEWATER MAIN IS BROKEN DURING CONSTRUCTION EXCAVATION AND THE EXTEND OF THE BREAK FOR IMPLEMENTATION OF UTILITIES EMERGENCY RESPONSE ACTION PLAN. THE CONTRACTOR SHALL ALSO IMMEDIATELY NOTIFY THE EL PASO WATER UTILITIES FIELD INSPECTOR AND PROJECT ENGINEER ASSIGNED TO THE PROJECT.
23. THE CONTRACTOR SHALL NOTIFY THE CITY'S ENGINEERING AND MUNICIPAL SERVICES (ENVIRONMENTAL DIVISION) DEPARTMENTS IMMEDIATELY, IF SUBSURFACE CONTAMINATION IS ENCOUNTERED OR SUSPECTED DURING POT HOLING, EXCAVATION OR BORING. ALL EXCAVATION AND CONSTRUCTION OPERATIONS SHALL BE CEASED UNTIL FURTHER NOTICE FROM THE MUNICIPAL SERVICES DEPARTMENT.
24. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
25. CONTRACTOR SHALL PAY CLOSE ATTENTION TO THE UTILITY SHEETS; COORDINATE SEQUENCE OF WORK, AND SHALL COORDINATE FIELD LOCATIONS OF ALL UTILITIES WITH THE APPROPRIATE UTILITY COMPANIES IN ORDER TO MINIMIZE CONFLICTS DURING WATER AND WASTEWATER CONSTRUCTION AND TO PREVENT DAMAGE TO ANY UTILITIES.
26. CITY PAVING CUT PERMIT REQUIRED BEFORE EXCAVATING WITHIN CITY STREETS.
27. TXDOT PAVING CUT PERMIT REQUIRED BEFORE EXCAVATING WITHIN TXDOT RIGHT-OF-WAY.
28. WHEN EXISTING PAVEMENT AND BASE ARE TO BE CUT & RESTORED, CONTRACTOR SHALL PLACE 12-INCHES OF CEMENT STABILIZED BACKFILL (2-SACK) AND 2-INCHES OF ASPHALT, TYPE OF REPLACEMENT MATERIALS MUST BE APPROVED BY ENGINEER.
29. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AND PAYING ALL PERMITS ASSOCIATED WITH WATER AND WASTEWATER CONSTRUCTION.
30. RECONNECTION OF EXISTING FACILITIES SHOWN ON THE PLAN MUST BE MADE SUCH THAT MINIMAL INTERRUPTION OF WATER AND WASTEWATER SERVICE TO CUSTOMER IS MADE.
31. ALL WORK REQUIRED TO SAW-CUT THE EXISTING PAVEMENT, EXISTING CONCRETE SIDEWALKS, EXISTING DRIVEWAYS, ETC., AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
32. USE CAUTION WHEN DIGGING IN THE AREA OF EXISTING ELECTRIC & GAS MAINS.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PRIVATE PROPERTY CAUSED BY THE CONSTRUCTION PROJECT. THE CONTRACTOR UPON RECEIPT OF A COMPLAINT OF DAMAGE, SHALL WITHIN 10 DAYS, RESPOND IN WRITING WITH A PROPOSAL TO REPAIR SAID DAMAGE.
34. ALL PRESSURIZED PVC PIPE SHALL BE MARKED WITH DUAL INDICATOR LINES AT THE SPIGOT END INDICATING PROPER PENETRATION.
35. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AND PAYING ALL PERMITS ASSOCIATED WITH WATER CONSTRUCTION.
36. ALL EXISTING FACILITIES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING WATER AND SANITARY SEWER LINES (INCLUDING SERVICES) FROM DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES.
37. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY ROCK(S) BY THE USE OF HAND DIGGING AND/OR MACHINERY AS NEEDED FOR THE INSTALLATION OF THE WATER AND/OR WASTEWATER PIPELINES. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT CONSIDERED SUBSIDIARY TO THE WATER AND/OR WASTEWATER PIPELINE, PAY ITEMS.

WATER NOTES

1. VERIFY SIZE AND TYPE OF PIPE PRIOR TO ORDERING MATERIALS. COORDINATE WITH E.P.W.U. 2 WEEKS IN ADVANCE OF TIE-IN WORK TO ISOLATE AND DRAIN EXISTING VARIOUS SIZES OF WATER LINES. CONTRACTOR IS RESPONSIBLE FOR DRAINING EXISTING WATER LINES AS NECESSARY FOR MAKING TIE-IN CONNECTION AND SHALL PREPARE AND SUBMIT A DRAINING PLAN TO THE ENGINEER AT LEAST TWO WEEKS PRIOR TO MAKING TIE-IN. AFTER THE WATER LINES ARE ISOLATED AND DRAINED, CUT EXISTING PIPELINE AND CONNECT NEW WATER LINES TO EXISTING. BOND NEW PIPE TO EXISTING. CONTRACTOR HAS A 4 HOUR WINDOW TO COMPLETE THE TIE-IN. IF WORK WILL REQUIRE MORE THAN 4 HOURS, THEN CONTRACTOR SHALL PERFORM THE WORK AT NIGHT, 11:00 PM TO 4:00 AM, AT NO COST TO OWNER.
2. PROVIDE ADEQUATE CONCRETE THRUST BLOCKING AND/OR MECHANICAL RESTRAINT DEVICES AS NECESSARY AT THE FOLLOWING: TAPPING SLEEVES, TEES, BENDS, PLUGS, AND ALL FITTINGS.
3. ALL PVC PIPE ON THIS PLAN SHALL BE ENCASED WITH SELECT BEDDING MATERIAL.
4. CUT AND PLUG EXISTING WATER LINES TO BE REPLACED AND ABANDONED IN PLACE OR REMOVED. WATER LINES DESIGNATED TO BE ABANDONED IN PLACE SHALL BE COMPLETELY DEWATERED BEFORE THEY ARE PLUGGED. CONTRACTOR TO REMOVE AND DELIVER SALVAGEABLES TO OWNER AT PREFERRED SITE(S) (REFER TO SPECIFICATIONS).
5. CONTRACTOR IS RESPONSIBLE FOR ABANDONMENT OF ALL VALVES CONNECTED TO WATER LINES SCHEDULED FOR ABANDONMENT. THIS CONSISTS OF REMOVAL OF BONNET BOX OR SUFFICIENT AMOUNT TO BE BELOW SUBGRADE AND FILL WITH CEMENT STABILIZED BACKFILL (2 SACKS OF CEMENT PER CUBIC YARD OF SOIL) TO BOTTOM OF PROPOSED SUBGRADE. WHERE IN CONFLICT WITH PROPOSED LINES OR INDICATED BY THE ENGINEER, VALVE IS TO BE REMOVED. ABANDONMENT OF VALVES, INCLUDING CSB UTILIZED FOR THEIR ABANDONMENT, WILL NOT BE MEASURED SEPARATELY FOR PAYMENT BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS WATER SYSTEM BID PAY ITEMS.
6. CUTTING, REMOVAL, AND RECONNECTION OF EXISTING WATER MAINS AND/OR SERVICES SHALL BE SUBSIDIARY TO THE WATER SYSTEM CONSTRUCTION.
7. BY-PASS OF EXISTING WATER MAINS AND/OR SERVICES TO ASSIST IN CONSTRUCTION ACTIVITIES SHALL BE SUBSIDIARY TO THE WATER SYSTEM CONSTRUCTION.
8. WHEN IN CONFLICT WITH NEW WATER LINE ALIGNMENT, EXISTING WATER, WASTEWATER, & GAS LINE SHALL BE REMOVED AND DISPOSED OF ONCE OUT OF SERVICE. WHEN NOT IN CONFLICT, EXISTING UTILITIES TO BE CUT AND PLUGGED AND ABANDONED IN PLACE.
9. FOR ALL NEW WATER DISTRIBUTION PIPING MODIFICATIONS IDENTIFIED TO BE COMPLETED UNDER THIS PROJECT, CONTRACTOR SHALL PROVIDE AND INSTALL ALL FITTINGS AND PIPE FOR VERTICAL AND HORIZONTAL ADJUSTMENTS TO AVOID CONFLICTS WITH OTHER EXISTING UNDERGROUND UTILITIES AND OBSTRUCTIONS SHOWN OR NOT SHOWN ON PLANS, INCIDENTAL TO THE WORK TO BE PERFORMED. CONTRACTOR SHALL POT HOLE AND FIELD VERIFY ANY HORIZONTAL AND VERTICAL ADJUSTMENTS TO BE MADE PRIOR TO STARTING THE WORK TASK.
10. ALL VALVES ON DI AND PVC WATER MAINS SHALL BE ANCHORED IN CONCRETE, AS PER DETAILS AND SPECIFICATIONS.
11. INSTALL 6" & 8" NEW WATER LINE WITH MIN. OF 4 FEET OF COVER UNDER PROP. FINISHED GRADE AND 12" AND LARGER NEW WATER LINE WITH MIN. OF 5 FEET OF COVER UNDER PROP. FINISHED GRADE.
12. LOCATION OF EXISTING WATER SERVICES IS APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATION OF SERVICES PRIOR TO CONSTRUCTION.
13. CONTRACTOR SHALL REMOVE ANY MATERIALS SCHEDULED TO BE SALVAGED OR DEEMED SALVAGEABLE BY THE ENGINEER AND DELIVER TO THE OWNER.
14. ALL ASBESTOS CEMENT PIPE THAT REQUIRES REMOVAL SHALL BE HANDLED AND DISPOSED IN ACCORDANCE WITH STATE REQUIREMENTS & SPECIFICATIONS.
15. ALL DUCTILE IRON PIPE FOR WATER SYSTEM SHALL BE PRESSURE CLASS 350 PSI.
16. CONTRACTOR TO RECONNECT ALL EXISTING WATER SERVICES TO NEW MAIN AND ADJUST LOCATION AND ELEVATION OF SERVICE LATERALS AS NEEDED TO MAKE PROPER CONNECTION TO EXISTING WATER METER. WATER SERVICE INSTALLATION SHALL BE AS PER CITY'S PLUMBING CODES.
17. AFTER COMPLETE INSTALLATION OF THE PROPOSED WATER LINE, THE CONTRACTOR SHALL FILL ABANDONED WATER MAINS WITHIN TXDOT RIGHT-OF-WAY ONLY WITH FLOWABLE FILL AND CAP AS PER TXDOT STANDARDS. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT CONSIDERED SUBSIDIARY TO THE WATER PIPELINE PAY OPTIONS.
18. EXISTING STREETS, CURB & GUTTER, SIDEWALKS, HARDSCAPES, DRIVEWAYS AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGED OR REMOVED BY CONSTRUCTION ACTIVITIES, NOT SHOWN IN PLANS, SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR, I.E., WHEN INSTALLING WATER MAINS, SERVICE LINES, VALVES, AND MANHOLES WITH IN PROJECT LIMITS.

WASTEWATER NOTES

1. ALL PVC PIPE ON THIS PLAN SHALL BE ENCASED WITH SELECT BEDDING MATERIAL.
2. CONTRACTOR SHALL VERIFY EXACT LOCATION OF WASTEWATER SERVICES BY VIDEO TAPING EXISTING WASTEWATER MAINS, AT AND WITH RESPECT TO THE NEW RIGHT-OF-WAY, PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO RECONNECT ALL EXISTING WASTEWATER SERVICES TO NEW MAIN AND ADJUST LOCATION AND ELEVATION OF SERVICE LATERALS AS NEEDED TO MAKE PROPER CONNECTION TO EXISTING YARDLINE. WASTEWATER SERVICE INSTALLATION SHALL BE AS PER CITY'S PLUMBING CODES.
4. CONTRACTOR SHALL SET NEW TOP OF MANHOLE RIMS TO MATCH TEMPORARY TRAFFIC LANES AND FINISHED STREET GRADES.
5. ALL NEW WASTEWATER LINES ARE TO BE COMPLETED, ACCEPTED FOR USE AND OPERATIONAL BEFORE THE EXISTING WASTEWATER LINES AND MANHOLES ARE ABANDONED.
6. EXISTING WASTEWATER LINES TO BE ABANDONED WILL BE CHECKED FOR FLOW BY INSERTING A PLUG IN THE DOWNSTREAM MANHOLE AND CHECKED DAILY FOR ACCUMULATION OF SEWAGE FOR A PERIOD OF ONE WEEK.
7. WASTEWATER LINES TO BE ABANDONED IN PLACE SHALL BE COMPLETELY DEWATERED BEFORE THEY ARE PLUGGED. THE LINES TO BE ABANDONED SHALL BE CUT AND PLUGGED AT ALL OPENINGS.
8. AFTER IT HAS BEEN DETERMINED THAT THE LINE TO THE MANHOLE IS DEAD, THE ABANDONMENT OF THE MANHOLE WILL PROCEED.
9. ABANDONMENT OF EXISTING MANHOLES WILL CONSIST OF CUTTING AND PLUGGING AT THE OUTSIDE OF THE MANHOLE ALL CONNECTING MAINS; REMOVAL OF CONE SECTION OR SUFFICIENT AMOUNT TO BE BELOW SUBGRADE; AND FILL WITH CEMENT STABILIZED BACKFILL (2 SACKS OF CEMENT PER CUBIC YARD OF SOIL) TO BOTTOM OF PROPOSED SUBGRADE. WHERE INDICATED ON THE PLANS, IN CONFLICT WITH PROPOSED LINES, OR DIRECTED BY THE ENGINEER, MANHOLE IS TO BE REMOVED AT NO ADDITIONAL COST TO THE OWNER. CSB UTILIZED FOR ABANDONMENT OF MANHOLES WILL NOT BE MEASURED SEPARATELY FOR PAYMENT, BUT SHALL BE CONSIDERED SUBSIDIARY TO THIS ITEM.
10. BY-PASSING TO MAINTAIN WASTEWATER MAINS AND SERVICES SHALL BE PROVIDED BY THE CONTRACTOR. ALL REQUIRED PLUGGING AND BY-PASSING SHALL BE CONSIDERED SUBSIDIARY TO THE PARTICULAR WASTEWATER WORK BEEN DONE. AN EXISTING WASTEWATER SYSTEM MAP OF THE PROJECT AREA CAN BE OBTAINED FROM EL PASO WATER UTILITIES AND IS AVAILABLE FOR REVIEW AT THEIR OFFICE, 1154 HAWKINS BLVD., EL PASO TX. 79925, DURING REGULAR BUSINESS HOURS.
11. BYPASS OF EXISTING WATER MAINS AND/OR SERVICES TO ASSIST IN CONSTRUCTION ACTIVITIES SHALL BE SUBSIDIARY TO THE WATER SYSTEM CONSTRUCTION.
12. CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW MANHOLES WITH FINISHED ROAD ELEVATIONS AND SHALL ADJUST NEW MANHOLES TO TEMPORARY AND FINISHED GRADE, AS REQUIRED FOR CONSTRUCTION. PER SPECIFICATION, ALL ADJUSTMENT COSTS FOR NEW MANHOLES SHALL BE CONSIDERED SUBSIDIARY TO THE MANHOLE UNIT.
13. CONTRACTOR TO INSTALL TEMPORARY SIPHON ON EXISTING WASTEWATER MAINS AT CROSSINGS WITH NEW WASTEWATER MAIN IF NECESSARY TO RESOLVE ELEVATION CONFLICTS BETWEEN BOTH MAINS. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR THIS WORK.
14. CONTRACTOR TO CONFIRM INVERT ELEVATIONS OF ALL NEW MANHOLES CONNECTING TO EXISTING WASTEWATER MAINS PRIOR TO INSTALLATION.
15. INSTALLATION OF NEW WASTEWATER MAINS, MANHOLES AND SERVICE RECONNECTION SHALL ALSO INCLUDE REMOVAL OF EXISTING WASTEWATER FACILITIES SCHEDULED FOR ABANDONMENT, INCLUDING BUT NOT LIMITED TO MANHOLES, MAINS AND SERVICES AS NECESSARY FOR PROPER INSTALLATION OF NEW WASTEWATER IMPROVEMENTS.
16. CONTRACTOR SHALL INSTALL A TEMPORARY WASTEWATER SERVICE LINE, AS NEEDED FOR CONTINUITY OF SERVICE FOR AFFECTED RESIDENTS.
17. PROVIDE MANHOLE ADAPTER WHERE PVC PIPE CONNECTS TO MANHOLE.
18. AFTER COMPLETE INSTALLATION OF THE PROPOSED WASTEWATER LINE, THE CONTRACTOR SHALL FILL ABANDONED WASTEWATER MAINS WITHIN TXDOT RIGHT-OF-WAY ONLY WITH FLOWABLE FILL AND CAP AS PER TXDOT STANDARDS. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT CONSIDERED SUBSIDIARY TO THE WASTEWATER PIPELINE PAY ITEMS.
19. CONTRACTOR WILL BE REQUIRED TO PLUG AND/OR CORE EXISTING OR PROPOSED MANHOLES. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT CONSIDERED SUBSIDIARY TO THE MANHOLE PAY ITEMS.
20. EXISTING STREETS, CURB & GUTTER, SIDEWALKS, HARDSCAPES, DRIVEWAYS AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGED OR REMOVED BY CONSTRUCTION ACTIVITIES, NOT SHOWN IN PLANS, SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR, I.E., WHEN INSTALLING SEWER MAINS, SEWER LATERALS, YARD LINES, SERVICE CONNECTIONS AND MANHOLES WITH IN PROJECT LIMITS.

ADDENDUM 2

UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	1-800-DIG-TESS
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDoT) (AFTER HOURS)	(915) 621-6750 (915) 240-3220

WARNING I
BEFORE YOU DIG

CALL 811

FOR FIELD LOCATING EXISTING UTILITIES

NO	DATE	REVISION	APPROVED
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06/24/15

CEA GROUP
F-4564



engineers • architects • planners

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COEP STREETCAR

GENERAL NOTES



SHEET 1 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	940	

LEGEND

EXISTING		PROPOSED	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PROPERTY LINE		PROPOSED DRAINAGE INLET
	R.O.W. LINE		PROPOSED JUNCTION BOX
	MATCHLINE		PROPOSED STORM DRAIN PIPE
	CENTER LINE		PROPOSED SEWER MANHOLE
	OVERHEAD ELECTRIC LINE		PROPOSED SEWER MANHOLE (WATER PLAN)
	UNDERGROUND COMMUNICATIONS LINE		NEW WATER LINE
	UNDERGROUND FIBER OPTICS		NEW SEWER LINE
	EXISTING WATER LINE		NEW WATER LINE (SANITARY SEWER PLAN)
	EXISTING GAS LINE		NEW SEWER LINE (WATER PLAN)
	EXISTING SEWER LINE		PROPOSED FIRE HYDRANT W/ VALVE ASSEMBLY
	EXISTING SEWER MANHOLE		GATE VALVE
	EXISTING FIRE HYDRANT		BUTTERFLY VALVE W/ MANHOLE
	EXISTING VALVE		COMBINATION AIR RELEASE/VACUUM VALVE W/ MANHOLE
	EXISTING WATER METER		WATER SERVICE CONNECTION
PROFILES			90° BEND
	EXISTING MANHOLE TO REMAIN		45° BEND
	EXISTING MANHOLE TO BE REMOVED & DISPOSED		22.5° BEND
			11.25° BEND
			2-45° VERTICAL BENDS
			TEE
			CROSS
			REDUCER
			PLUG
			STEEL CASING

PROFILES

EXISTING MANHOLE
TO REMAIN

EXISTING MANHOLE
TO BE REMOVED &
DISPOSED

PROPOSED MANHOLE

PROPOSED BUTTERFLY
VALVE W/ MANHOLE

PROPOSED COMBINATION AIR
RELEASE/VACUUM VALVE W/
MANHOLE

— APPROXIMATE FINISHED
GROUND ELEVATION

— APPROXIMATE EXISTING
GROUND ELEVATION

INDEX

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17-51	POTABLE WATER REPLACEMENT & RELOCATION
52	STANDARD DETAILS

ABBREVIATIONS

A.S.T.M.	AMERICAN SOCIETY FOR TESTING AND MATERIAL STANDARDS
O.S.H.A.	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
TXDOT	TEXAS DEPARTMENT OF TRANSPORTATION
E.P.C.W.I.D.#1	EL PASO COUNTY WATER IMPROVEMENT DISTRICT NO.1
L.V.W.D.	LOWER VALLEY WATER DISTRICT
BM	BENCHMARK
PVMT	PAVEMENT
CONC.	CONCRETE
CL	CENTERLINE
PL	PROPERTY LINE
R.O.W.	RIGHT-OF-WAY LINE
MIN.	MINIMUM
MAX.	MAXIMUM
REF.	REFERENCE
STD.	STANDARD
TYP.	TYPICAL
TEMP.	TEMPORARY
W/	WITH
FT	FEET
L.F.	LINEAR FEET
L	LENGTH
S	SLOPE
STA.	STATION
INV.	INVERT ELEVATION
RIM.	RIM ELEVATION
APPR.	APPROVED
T.B.A.	TO BE ABANDONED
@	AT
SWR	SEWER
SMH	SEWER MANHOLE
C.I.	CAST IRON
S.S.	STAINLESS STEEL
P.V.C.	POLYVINYL CHLORIDE PIPE
D.I.P.	DUCTILE IRON PIPE
AC	ASBESTOS CEMENT PIPE
PPE	POLYETHYLENE PIPE (GAS ONLY)
GAL	GALLON
G.P.M.	GALLONS PER MINUTE
DAVE	DAVE FIBRE FABRIC
Ø	DIAMETER
I.D.	INSIDE DIAMETER
O.D.	OUTSIDE DIAMETER
O.C.	OFF CENTER
TC	TOP OF CURB
TG	TOP OF GRADE
TH	TOP OF HEADER
TP	TOP OF PAVEMENT
SW	TOP OF SIDEWALK
FG	FINISHED GRADE
FF	FINISHED FLOOR
EG	EXISTING GRADE
Q	QUANTITY
CAP	CAPACITY
EXP	EXPECTED
CFS	CUBIC FEET PER SECOND
A	AREA
DA	DRAINAGE AREA
P.S.I.	POUNDS PER SQUARE INCH
H.M.A.C.	HOT MIX ASPHALTIC CONCRETE

ADDENDUM 2 - JULY 14, 2015

UTILITY CONTACTS

GENERAL UTILITIES:

TEXAS EXCAVATION SAFETY SERVICE
11884 GREENVILLE AVENUE.
DALLAS, TX. 75243
(800) 344-8377

TELEPHONE:

SBC
11200 PELICANO
EL PASO, TX. 79935
(915) 595-5151
MR. TIM BROWN

FIBER OPTICS:

AT&T
P.O. BOX 1650
EL PASO, TX. 79949
1(800) 852-3786
MS. DARLENE NORIS

ENGINEER:

CEA GROUP
CASTNER CENTER @ TRANSMOUNTAIN
4712 WOODROW BEAN, STE. F
EL PASO, TX. 79924
(915) 544-5232
MR. ABEL GARCIA, P.E.

FIBER OPTICS:

MCI TELECOMMUNICATIONS CORP.
4045 DONIPHAN PARK CIRCLE
EL PASO, TX. 79922
(915) 542-2770 EXT. 201
MR. DANIEL HERNANDEZ

RESIDENTIAL GAS LINES:

TEXAS GAS SERVICE
4700 POLLARD ST.
EL PASO, TX 79930
(915) 680-8218
MR. JOSE DE ALBA

FIBER OPTICS:

U.S. SPRINT
151 N. BOONE ST.
EL PASO, TX. 79905
(915) 534-7910
MR. RICK DERAGISCH

WATER & SAN. SEWER:

EL PASO WATER UTILITIES
PROJECT ADMINISTRATION DEPT.
1154 HAWKINS BLVD.
EL PASO, TX. 79925
(915) 594-5591
MR. FELIPE LOPEZ, P.E.

STATE HIGHWAYS &
FARM ROADS

TEXAS DEPARTMENT OF
TRANSPORTATION
13301 GATEWAY WEST
EL PASO, TX. 79927
(915) 790-4319
MR. LEO BETANCOURT, P.E.

CABLE TELEVISION:

TIME WARNER COMMUNICATIONS
7010 AIRPORT ROAD
EL PASO, TX. 79906
(915) 772-1123
MR. RAYMOND MENDOZA


ELECTRIC:

EL PASO ELECTRIC CO.
501 W. SAN ANTONIO ST.
EL PASO, TX. 79902
(915) 543-2076
MR. FRANK VIJEL (DISTRIBUTION)

KEYED NOTES


1	NEW FIRE HYDRANT
2	NEW WATER SERVICE
3	EXIST. WATER METER
4	NEW C.A.R.V. W/ MH
5	NEW 6" TEE
6	NEW 6" GATE VALVE
7	NEW 6" 90° ELBOW
8	NEW 6" 45° ELBOW
9	NEW 6" VERTICAL ELBOW
10	NEW 6" WET TAP
11	NEW 6" X 2" REDUCER
12	NEW 8" TEE
13	NEW 8" GATE VALVE
14	NEW 8" CROSS
15	NEW 8" 90° ELBOW
16	NEW 8" 45° ELBOW
17	NEW 8" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW
19	NEW 8" VERTICAL ELBOW
20	NEW 8" X 6" TEE
21	NEW 8" X 6" CROSS
22	NEW 8" X 6" REDUCER
23	NEW 8" X 4" REDUCER
24	NEW 8" PLUG
25	NEW 12" TEE
26	NEW 12" GATE VALVE
27	NEW 12" 45° ELBOW
28	NEW 12" 11.25° ELBOW
29	NEW 12" VERTICAL ELBOW
30	NEW 12" X 6" TEE
31	NEW 12" X 6" CROSS
32	NEW 12" X 6" REDUCER
33	NEW 12" X 8" TEE
34	NEW 12" X 8" CROSS
35	NEW 12" X 8" REDUCER
36	NEW 16" 45° ELBOW
37	NEW 16" BUTTERFLY VALVE
38	NEW 20" BUTTERFLY VALVE
39	NEW 20" 45° ELBOW
40	NEW 20" 22.5° ELBOW
41	NEW 20" X 8" TEE
42	NEW 20" X 8" CROSS
43	NEW 20" X 12" TEE
44	NEW 20" X NEW 16" TEE
45	NEW 20" X 12" REDUCER
46	NEW FIRE LINE EXTENSION

NO	DATE	REVISION	APPROVED
	/ /		
	/ /		
	/ /		
	/ /		



06/24/15

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COEP STREETCAR

INDEX AND

LEGEND



SHEET 2 of 52

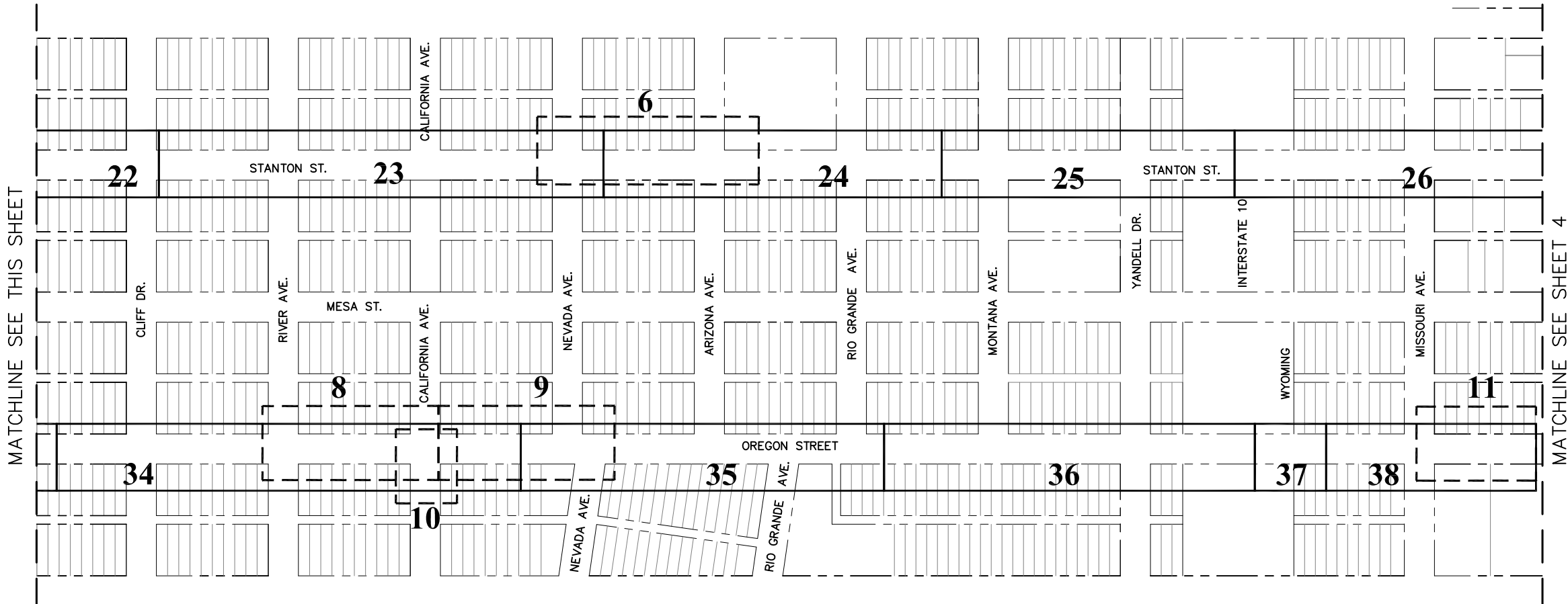
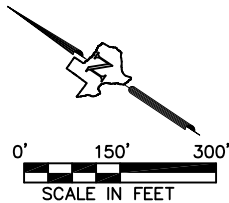
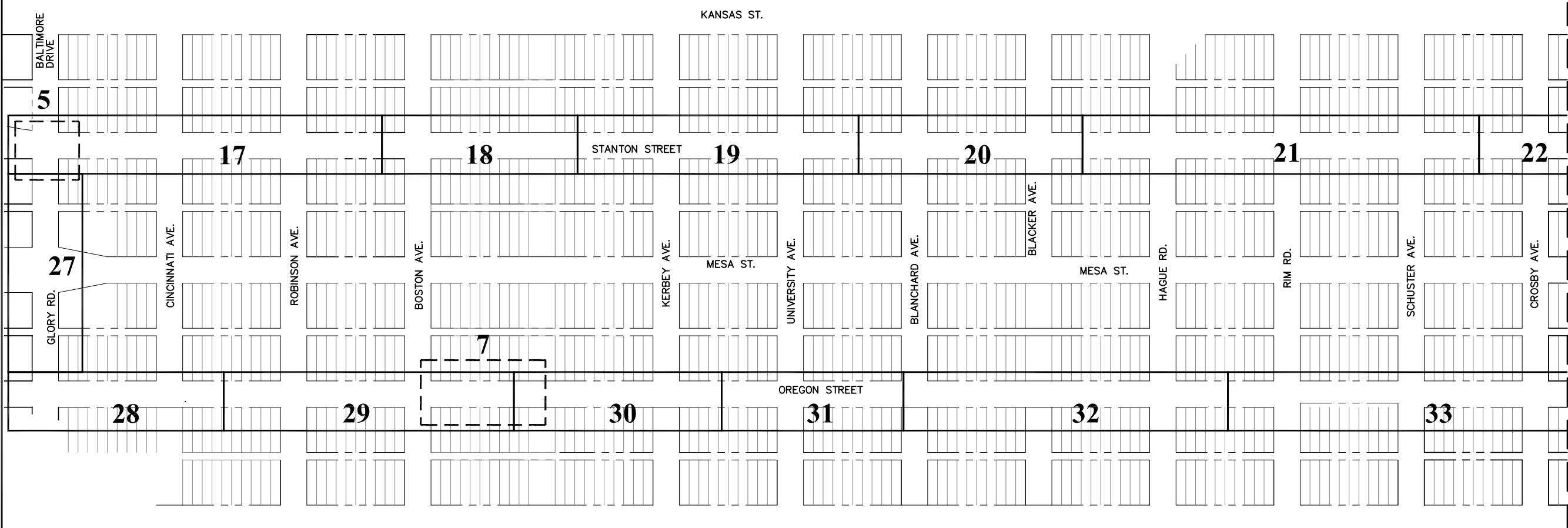
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DIST		COUNTY	SHEET NO.
EL PASO		EL PASO	941

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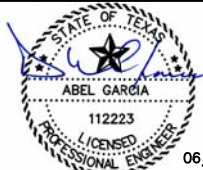
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WASTEWATER SHEET REFERENCE
- 17

WATER SHEET REFERENCE




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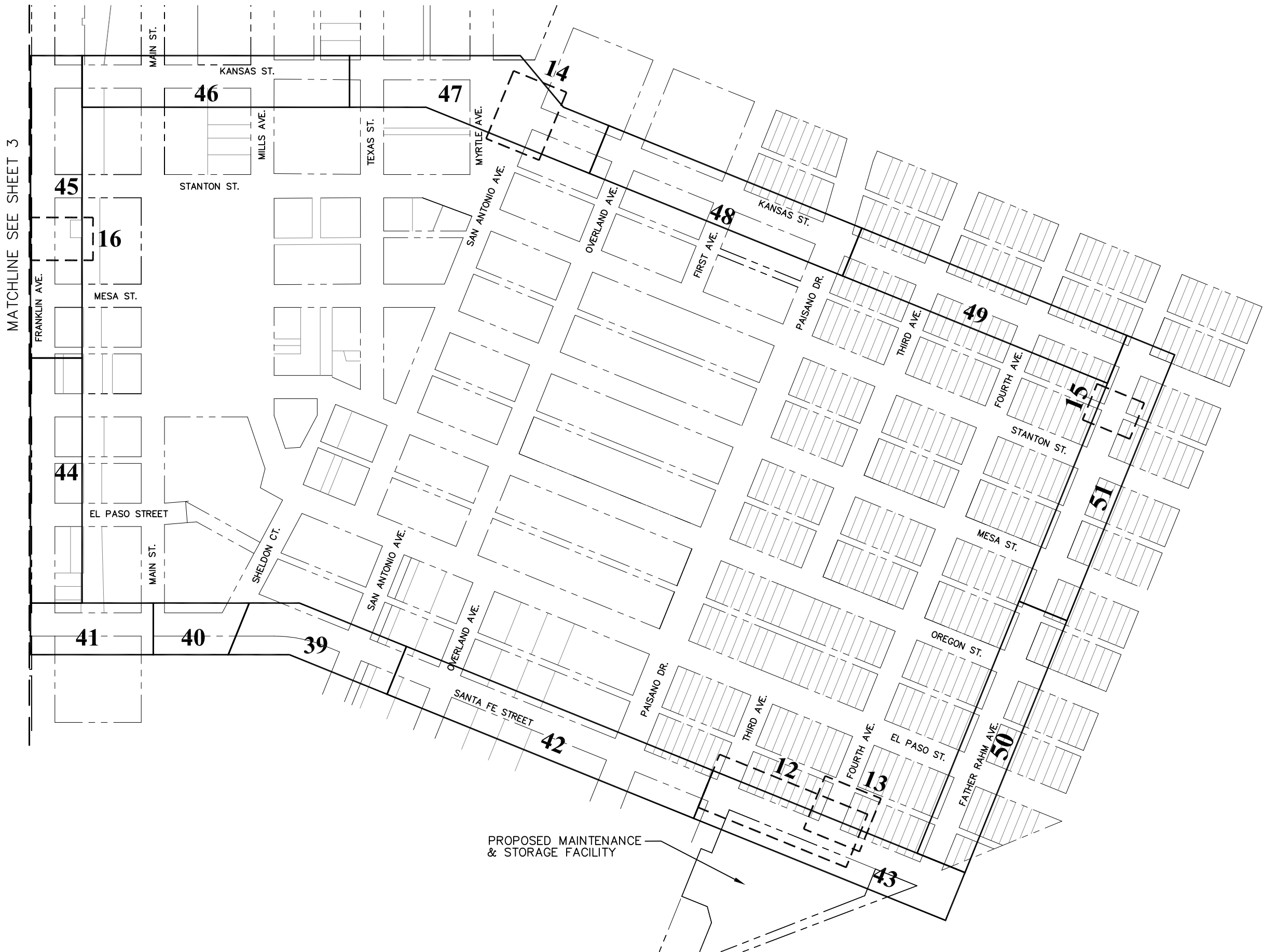


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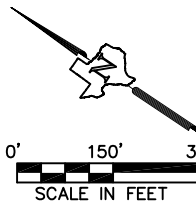
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COEP STREETCAR			
INDEX MAP			
			
SHEET <u>3</u> of <u>52</u>			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	942	




LEGEND:

- 16** WASTEWATER SHEET REFERENCE
- 51** WATER SHEET REFERENCE



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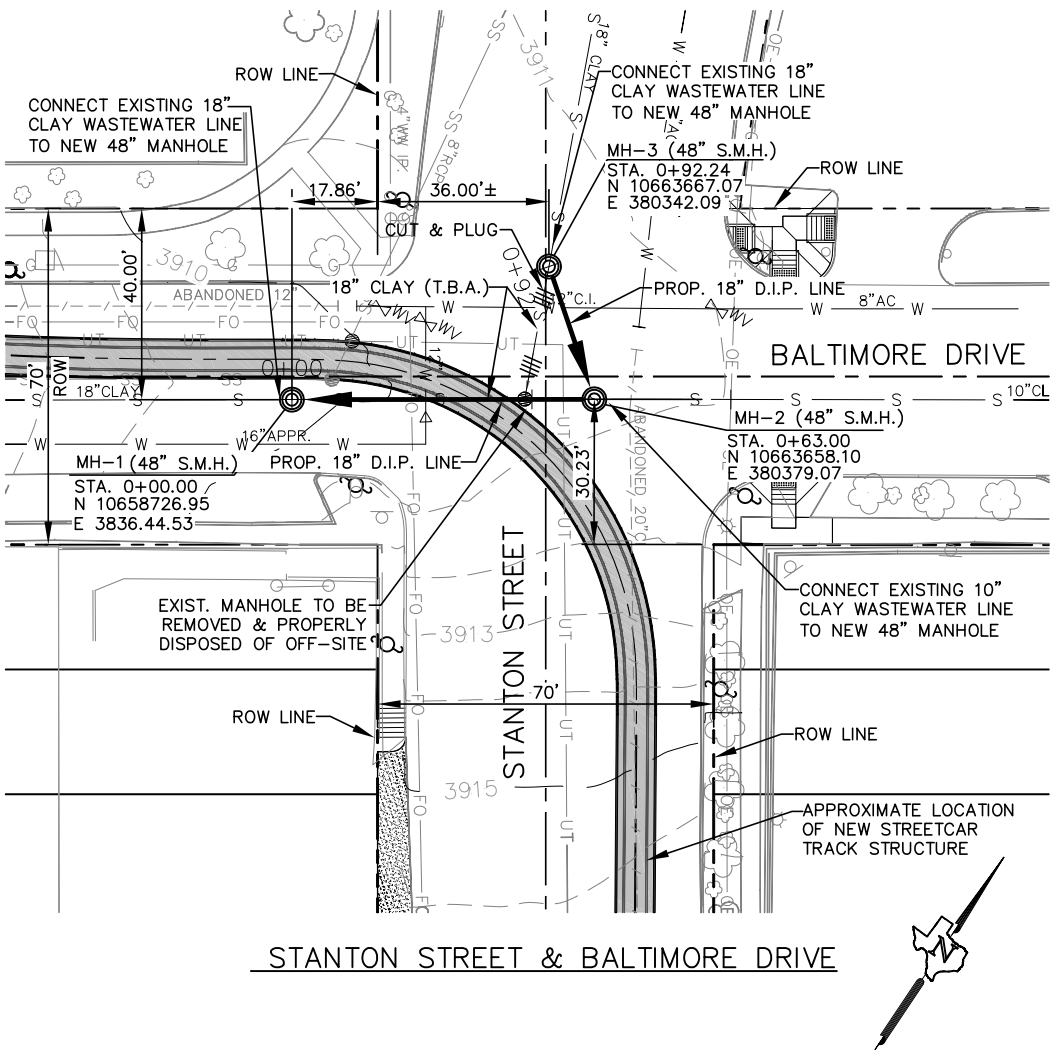
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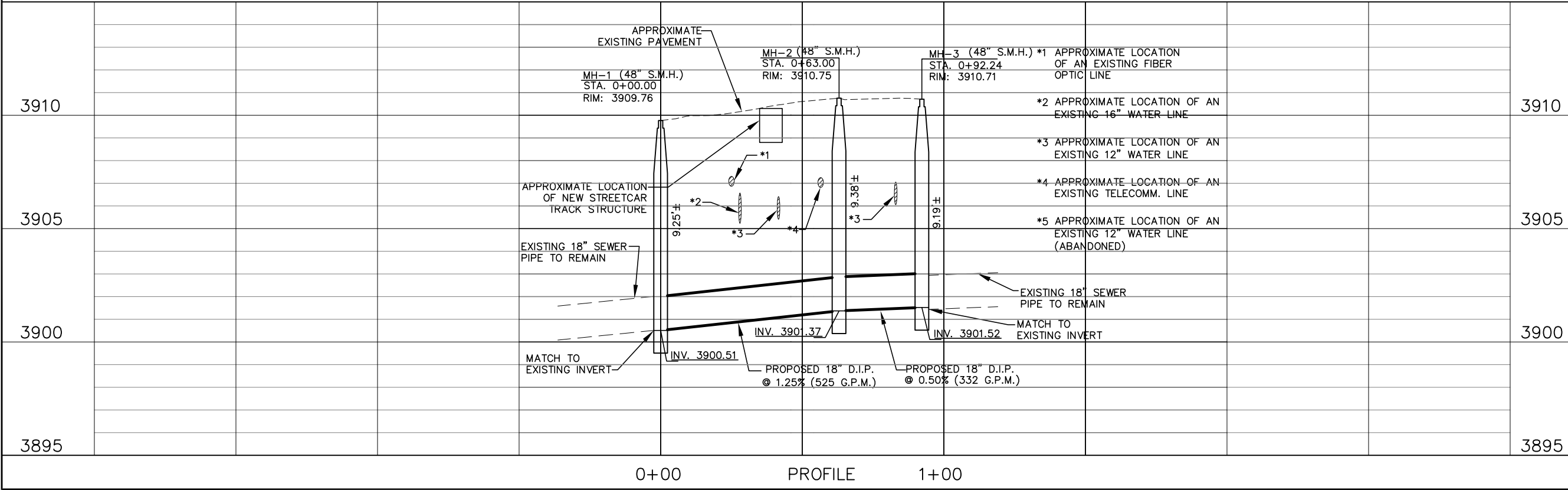
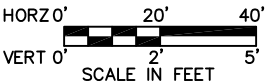
INDEX MAP



SHEET <u>4</u> of <u>52</u>			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	943	



- NOTES:
1. A BYPASS SYSTEM OR SIMILAR MUST BE USED TO HAVE EXISTING WASTEWATER LINE REMAIN ACTIVE AT ALL TIMES.
 2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS



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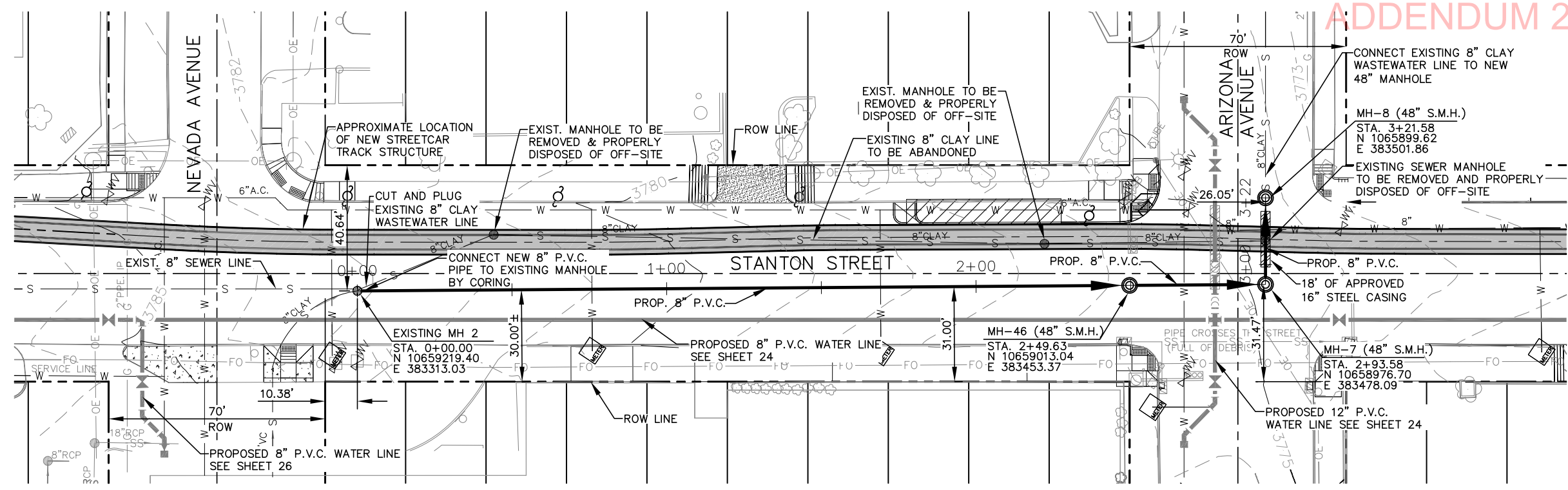
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 WASTEWATER
 REPLACEMENT &
 RELOCATION

SHEET 5 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS

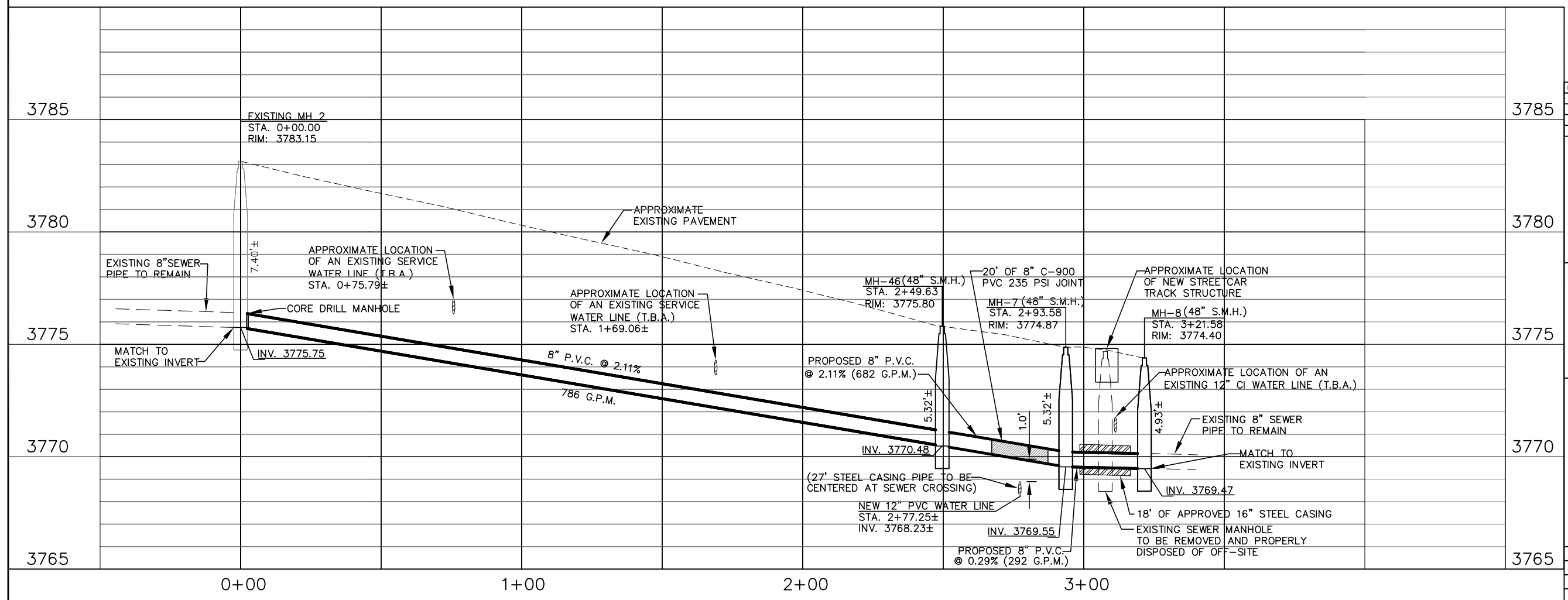
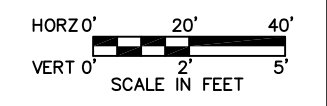
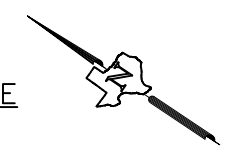
DIST	COUNTY	SHEET NO.
EL PASO	EL PASO	944

0+00 PROFILE 1+00



- NOTES:
1. A BYPASS SYSTEM OR SIMILAR MUST BE USED TO HAVE EXISTING WASTEWATER LINE REMAIN ACTIVE AT ALL TIMES.
 2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS

STANTON STREET BETWEEN
NEVADA AVENUE & ARIZONA AVENUE



NO	DATE	REVISION	APPROVED
1	11/11/14	ISSUED FOR PERMIT	
2	06/24/15	ADDENDUM 2	



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WASTEWATER
REPLACEMENT &
RELOCATION

SHEET 6 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	945	

SEWER LINE A
SEE THIS SHEET

EXISTING 10" P.V.C. (T.B.A.)

EXISTING MANHOLE TO BE
REMOVED AND PROPERLY
DISPOSED OF OFF-SITE

EXISTING MH-4
STA. 0+28.85
N 10662229.96
E 380507.30

MH-20 (48" S.M.H.)
STA. 0+00.00
N 10662213.94
E 380483.32

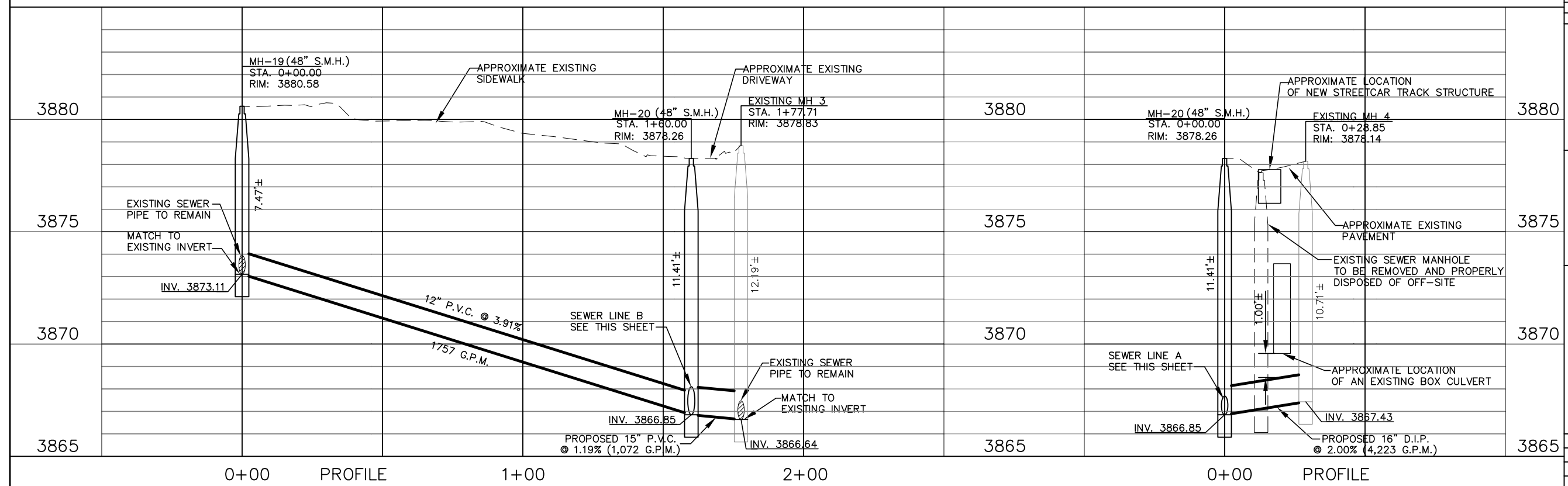
CUT & PLUG
EXISTING 15" P.V.C. TO
BE ABANDONED

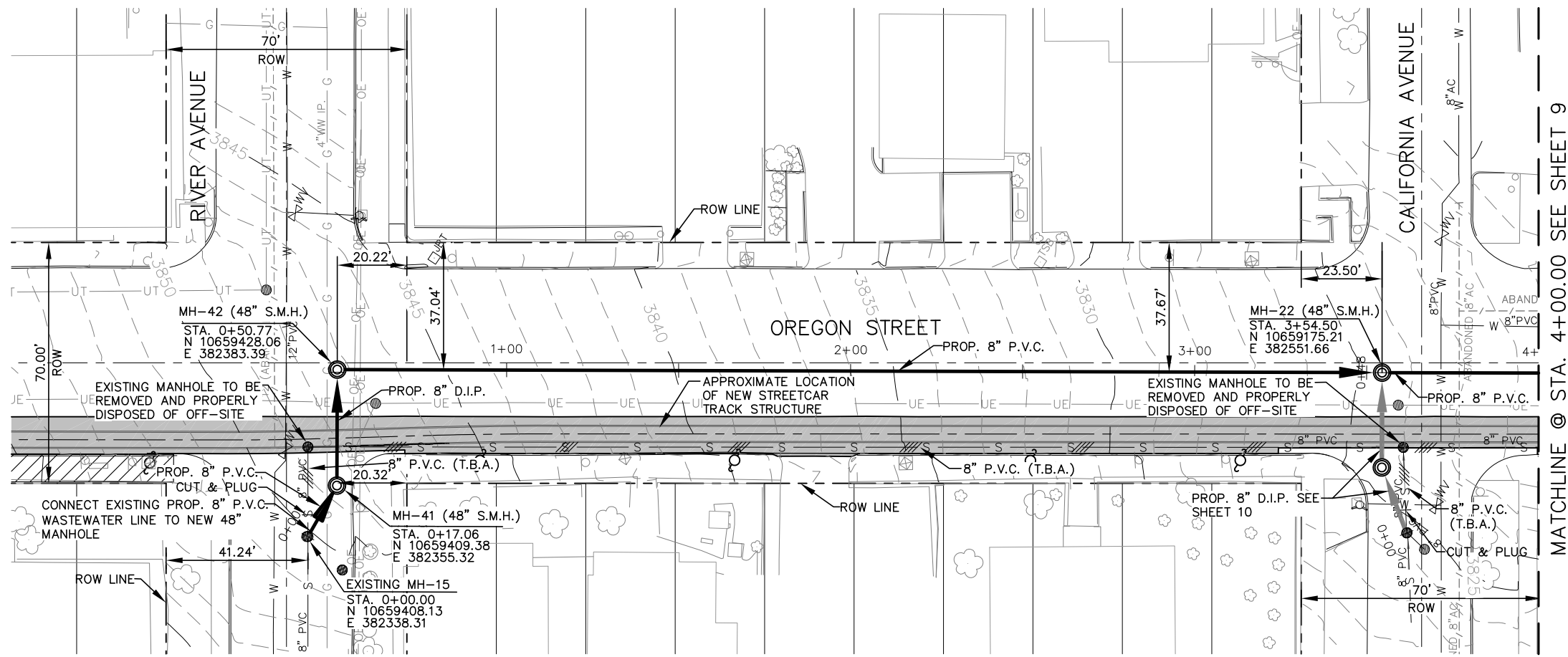
PROF. 16" D.I.P. LINE

OREGON STREET

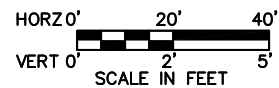
70.00' ROW

CONT	SECT	JOB	HIGHWAY
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DIST		COUNTY	SHEET NO.
EL PASO		EL PASO	946

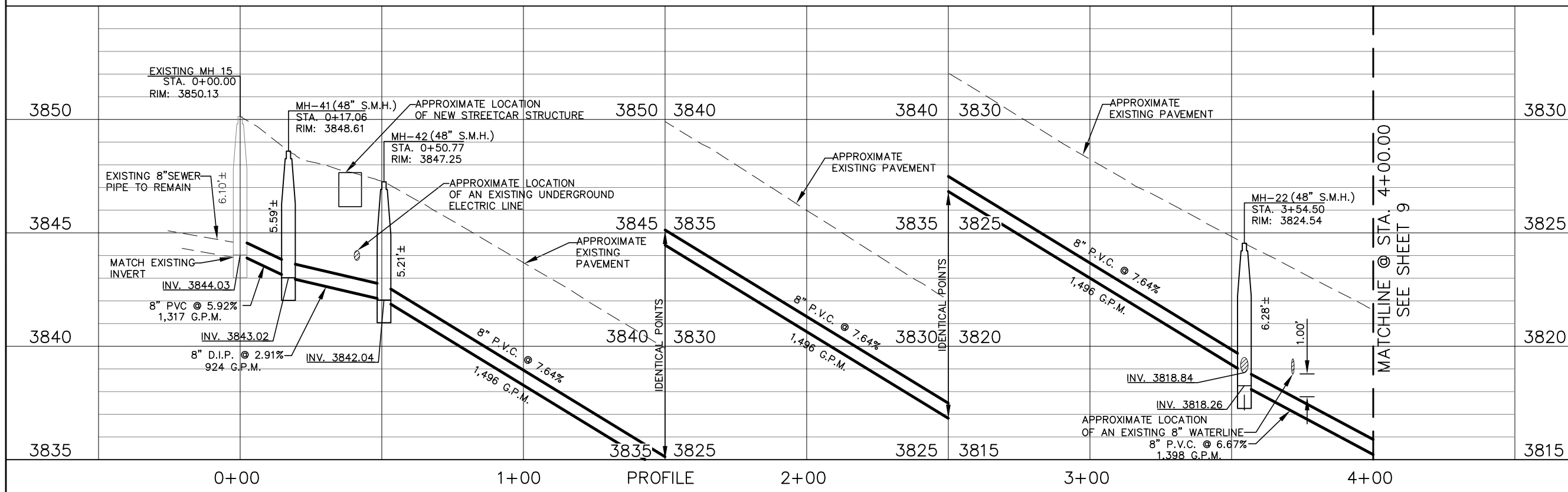




- NOTES:
1. A BYPASS SYSTEM OR SIMILAR MUST BE USED TO HAVE EXISTING WASTEWATER LINE REMAIN ACTIVE AT ALL TIMES.
 2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS



OREGON STREET BETWEEN
RIVER AVENUE & CALIFORNIA AVENUE



NO	DATE	REVISION	APPROVED
1	06/24/15		

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06/24/15
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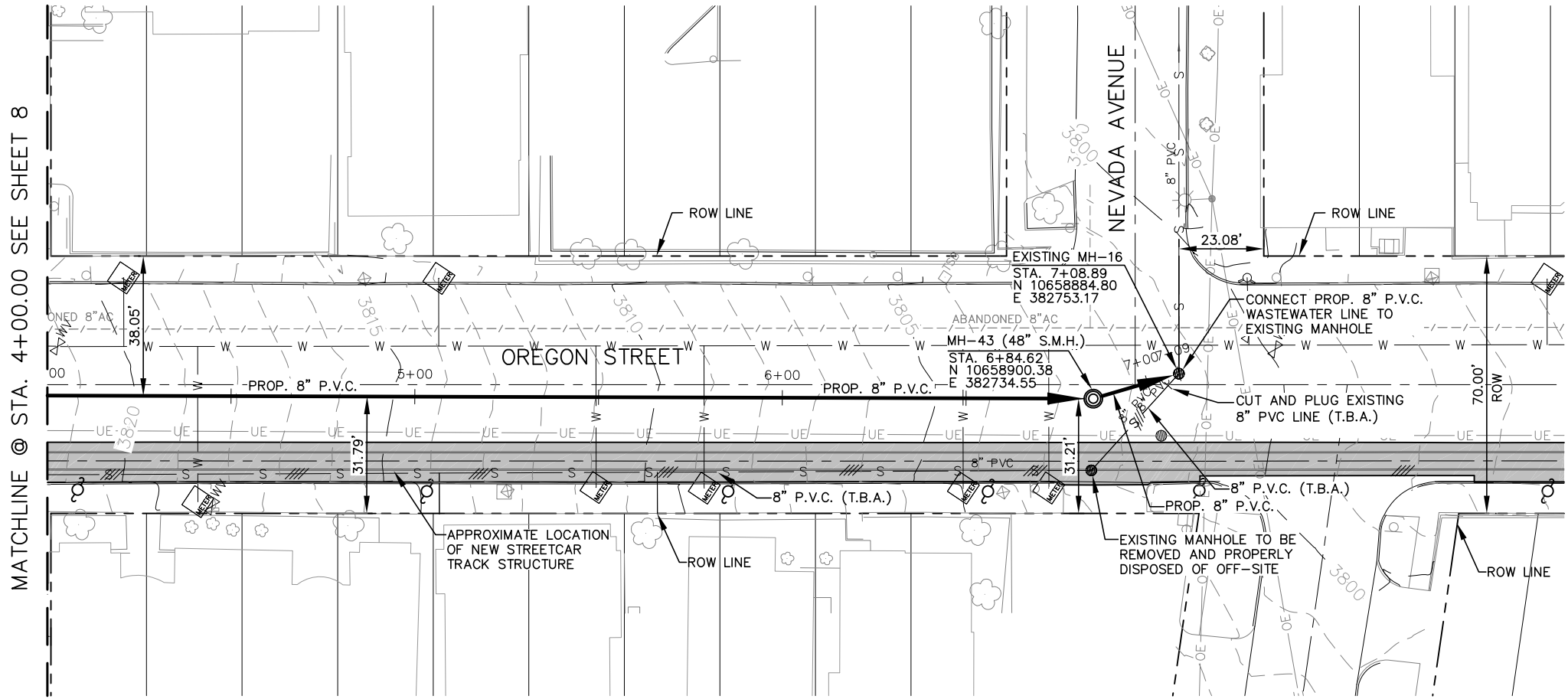
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RELOCATION

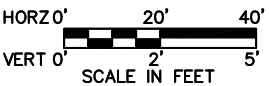
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CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS

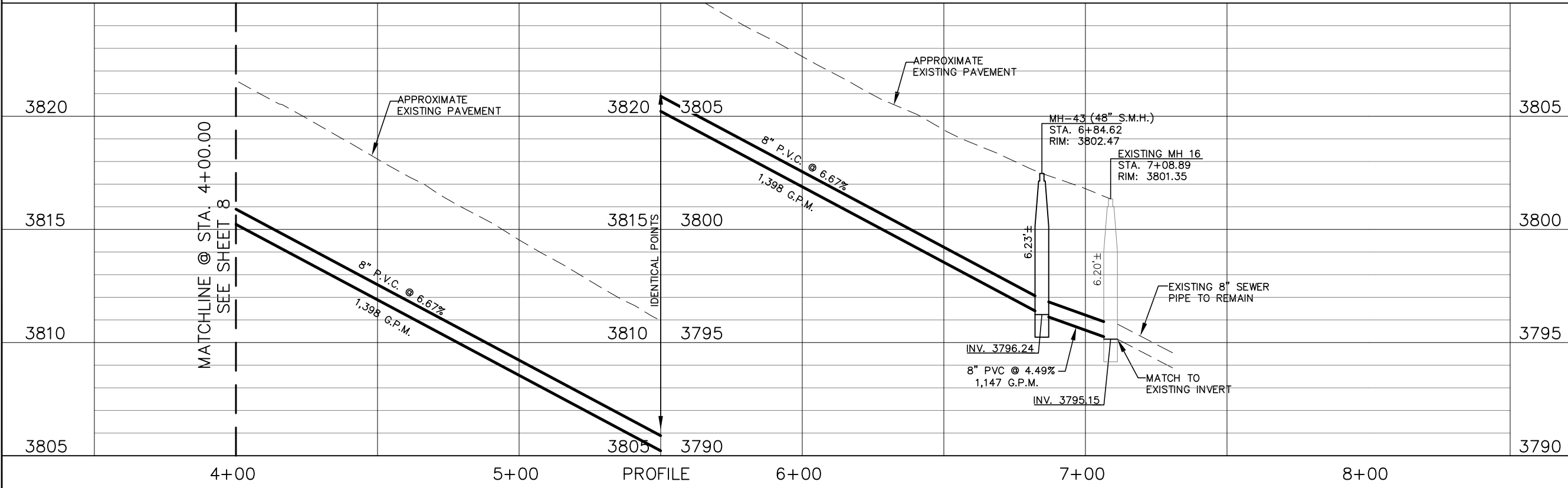
DIST	COUNTY	SHEET NO.
EL PASO	EL PASO	947



- NOTES:
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 2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS



OREGON STREET BETWEEN CALIFORNIA AVENUE & NEVADA AVENUE



NO	DATE	REVISION	APPROVED
1	06/24/15		
2			
3			
4			

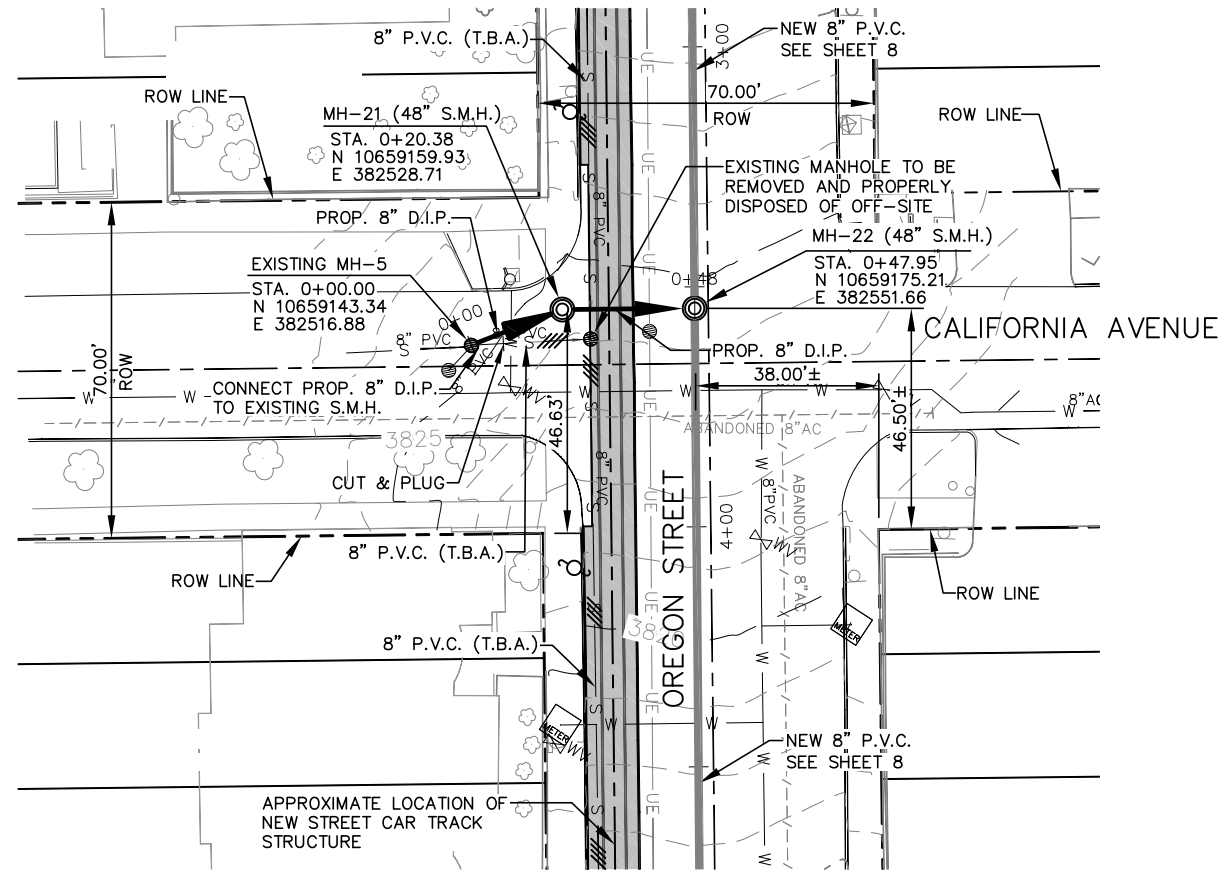
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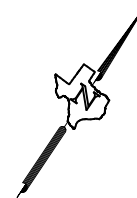
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WASTEWATER
REPLACEMENT &
RELOCATION

SHEET 9 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST		COUNTY	SHEET NO.
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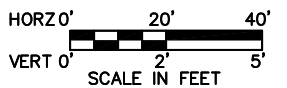


OREGON STREET & CALIFORNIA AVENUE

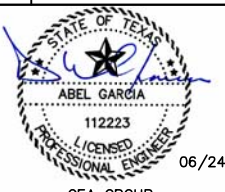


NOTES:

1. A BYPASS SYSTEM OR SIMILAR MUST BE USED TO HAVE EXISTING WASTEWATER LINE REMAIN ACTIVE AT ALL TIMES.
2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS



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6/24/15

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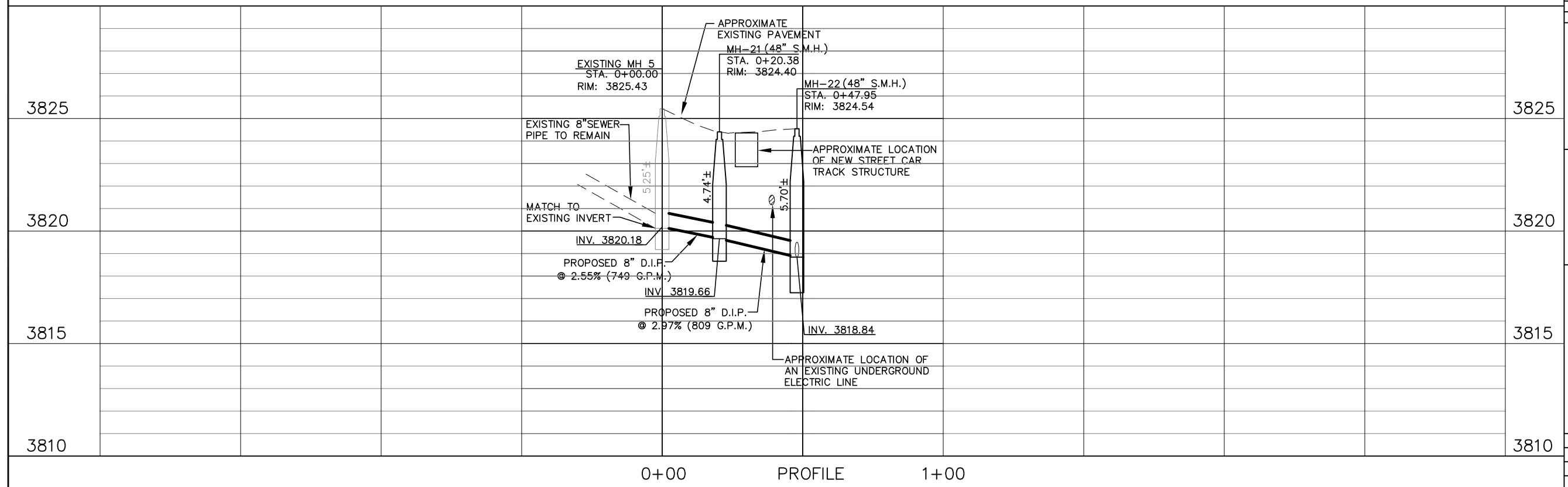


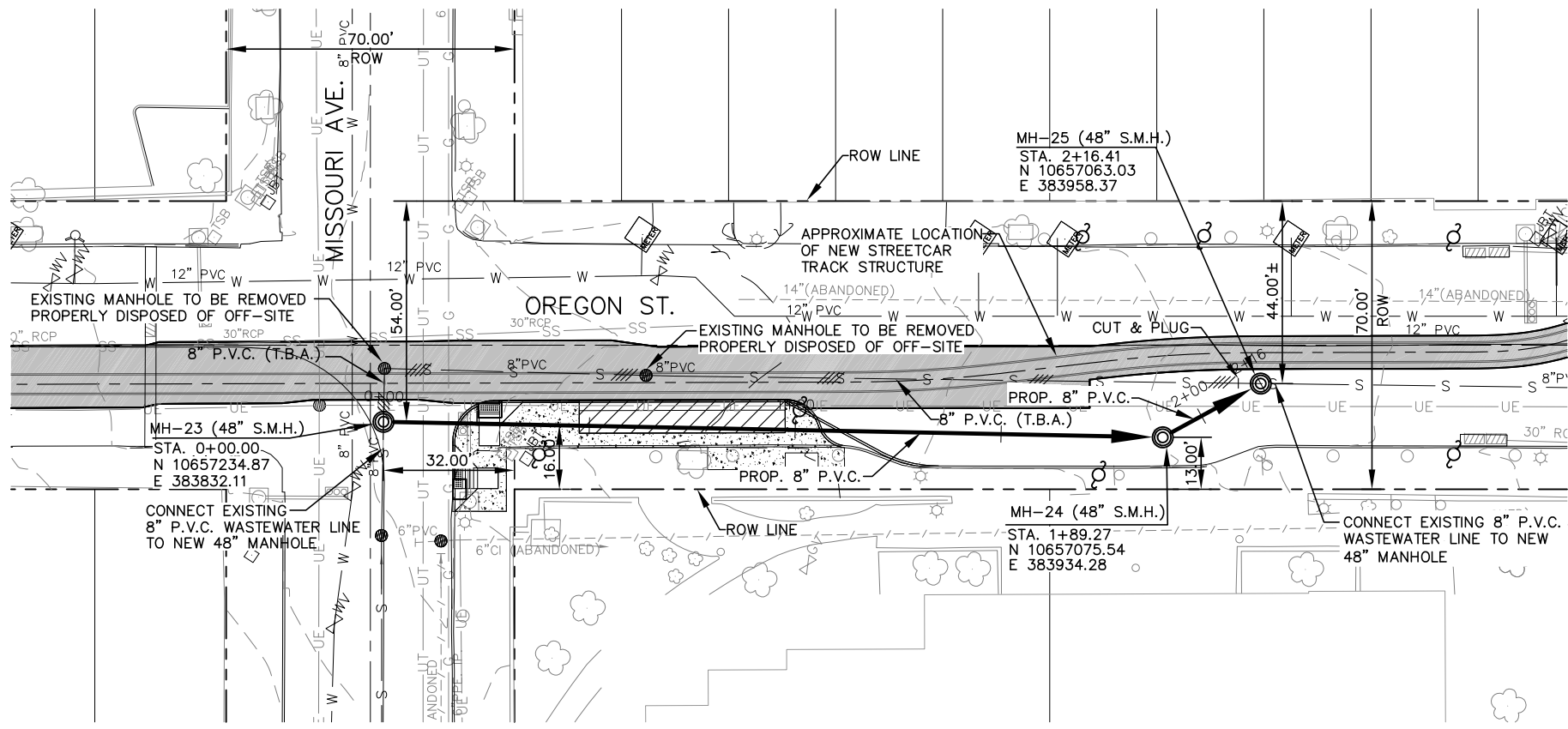
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RELOCATION

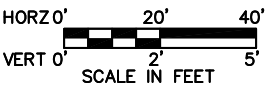
SHEET 10 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST		COUNTY	SHEET NO.
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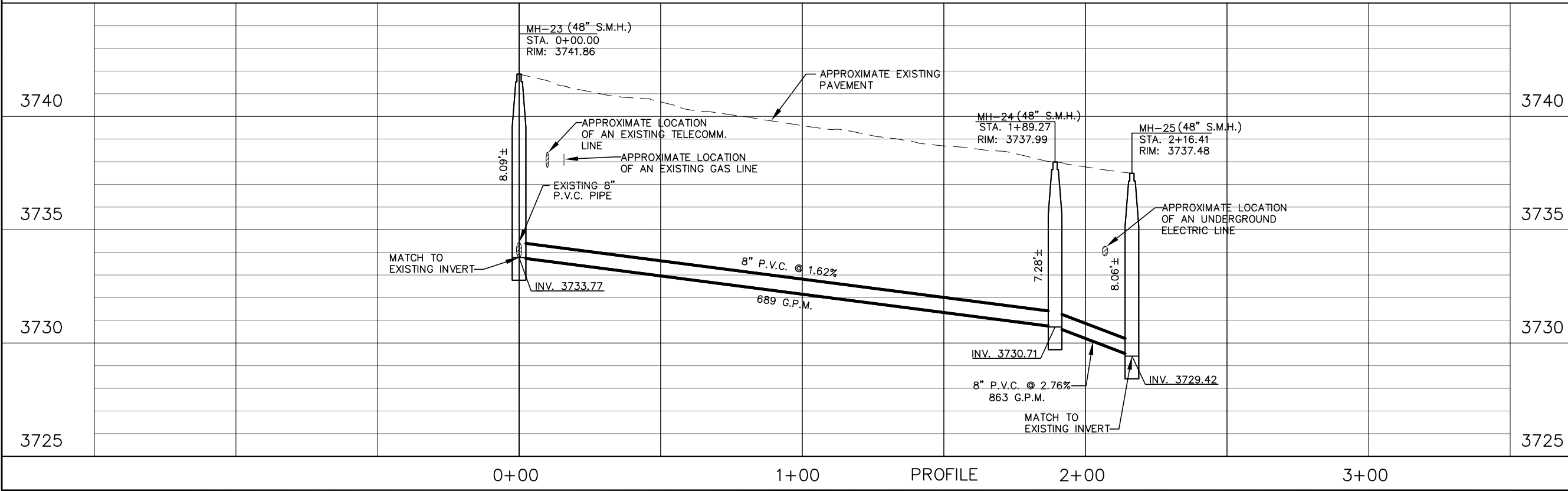




- NOTES:
1. A BYPASS SYSTEM OR SIMILAR MUST BE USED TO HAVE EXISTING WASTEWATER LINE REMAIN ACTIVE AT ALL TIMES.
 2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS



OREGON STREET & MISSOURI AVENUE



NO	DATE	REVISION	APPROVED
1	06/24/15		
2			
3			
4			

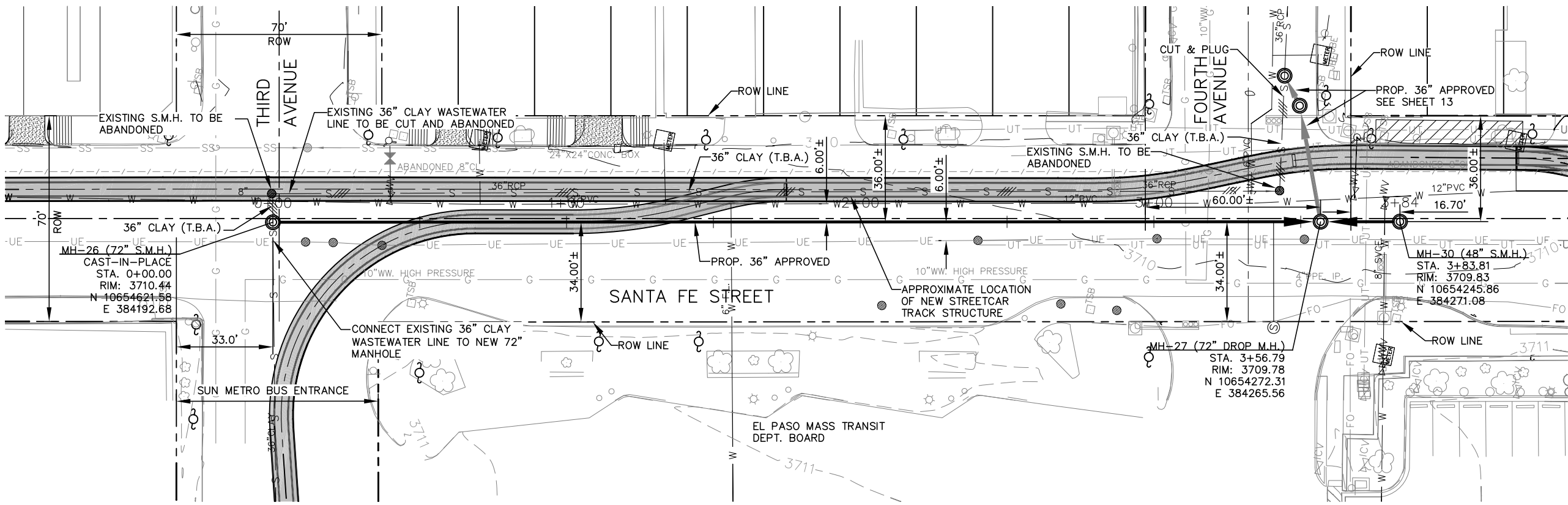
ABEL GARCIA
112223
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REPLACEMENT &
RELOCATION

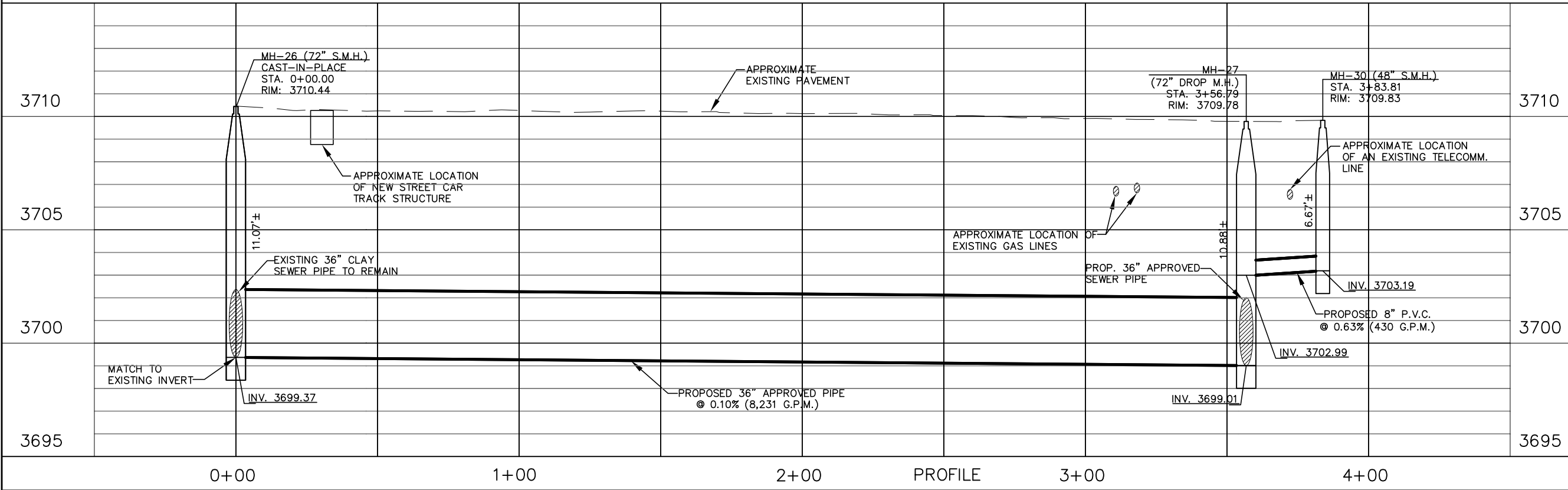
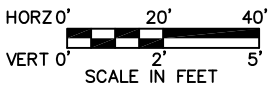
SHEET 11 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	950	



- NOTES:
1. A BYPASS SYSTEM OR SIMILAR MUST BE USED TO HAVE EXISTING WASTEWATER LINE REMAIN ACTIVE AT ALL TIMES.
 2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS

SANTA FE STREET BETWEEN 3RD AVENUE & 4TH AVENUE



NO	DATE	REVISION	APPROVED

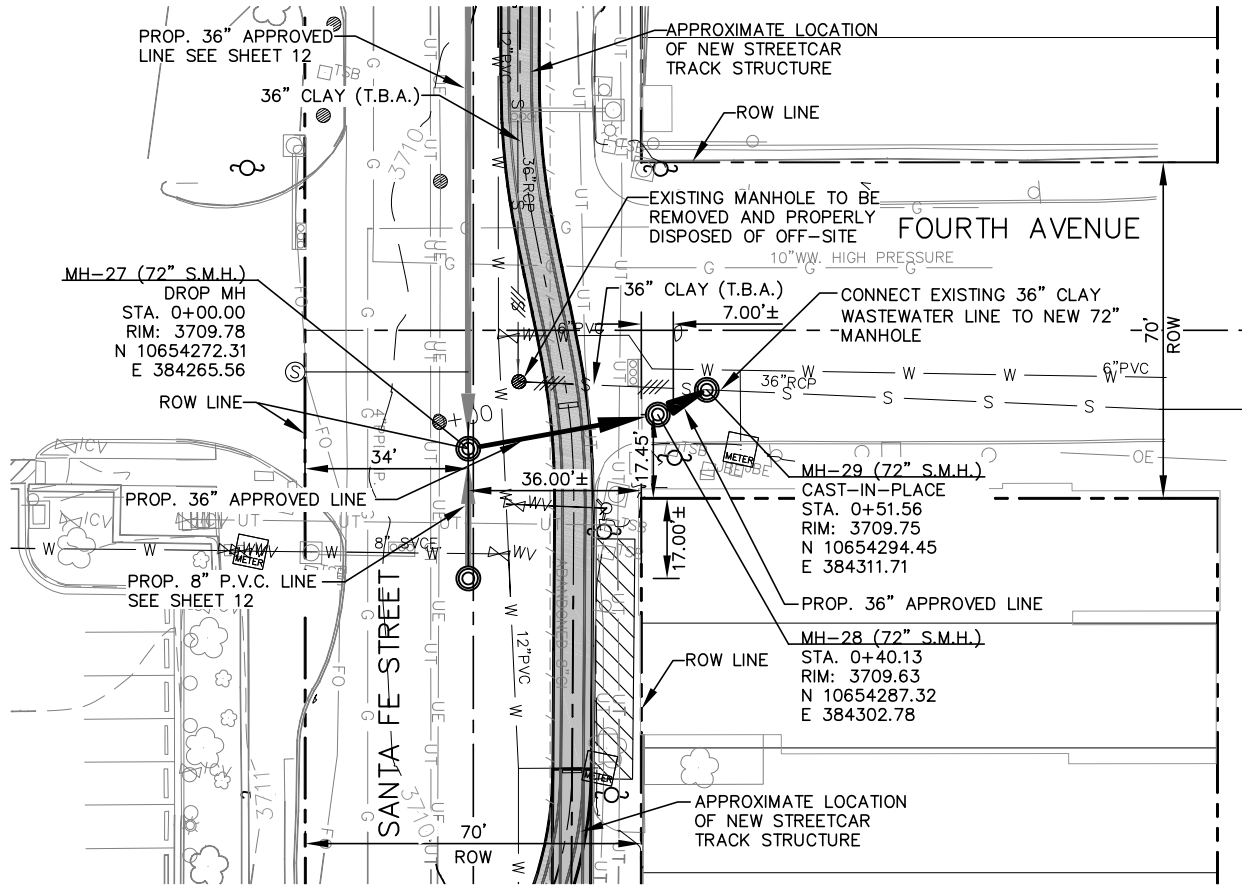
06/24/15
ABEL GARCIA
112223
LICENSED PROFESSIONAL ENGINEER
CEA GROUP
F-4564

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TEXAS REGISTERED ENGINEERING FIRM F-4564
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

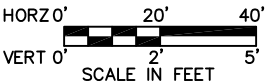
**COEP STREETCAR
WASTEWATER
REPLACEMENT &
RELOCATION**

SHEET 12 of 52

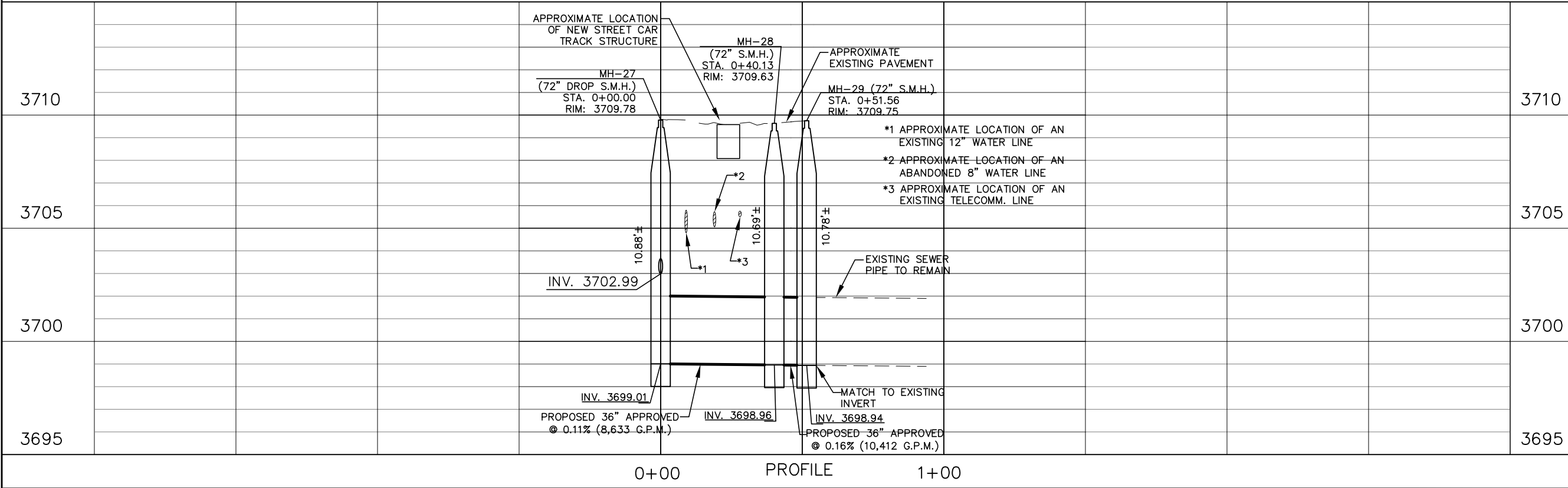
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	951	



- NOTES:
1. A BYPASS SYSTEM OR SIMILAR MUST BE USED TO HAVE EXISTING WASTEWATER LINE REMAIN ACTIVE AT ALL TIMES.
 2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS



SANTA FE STREET AND FOURTH AVENUE



NO	DATE	REVISION	APPROVED

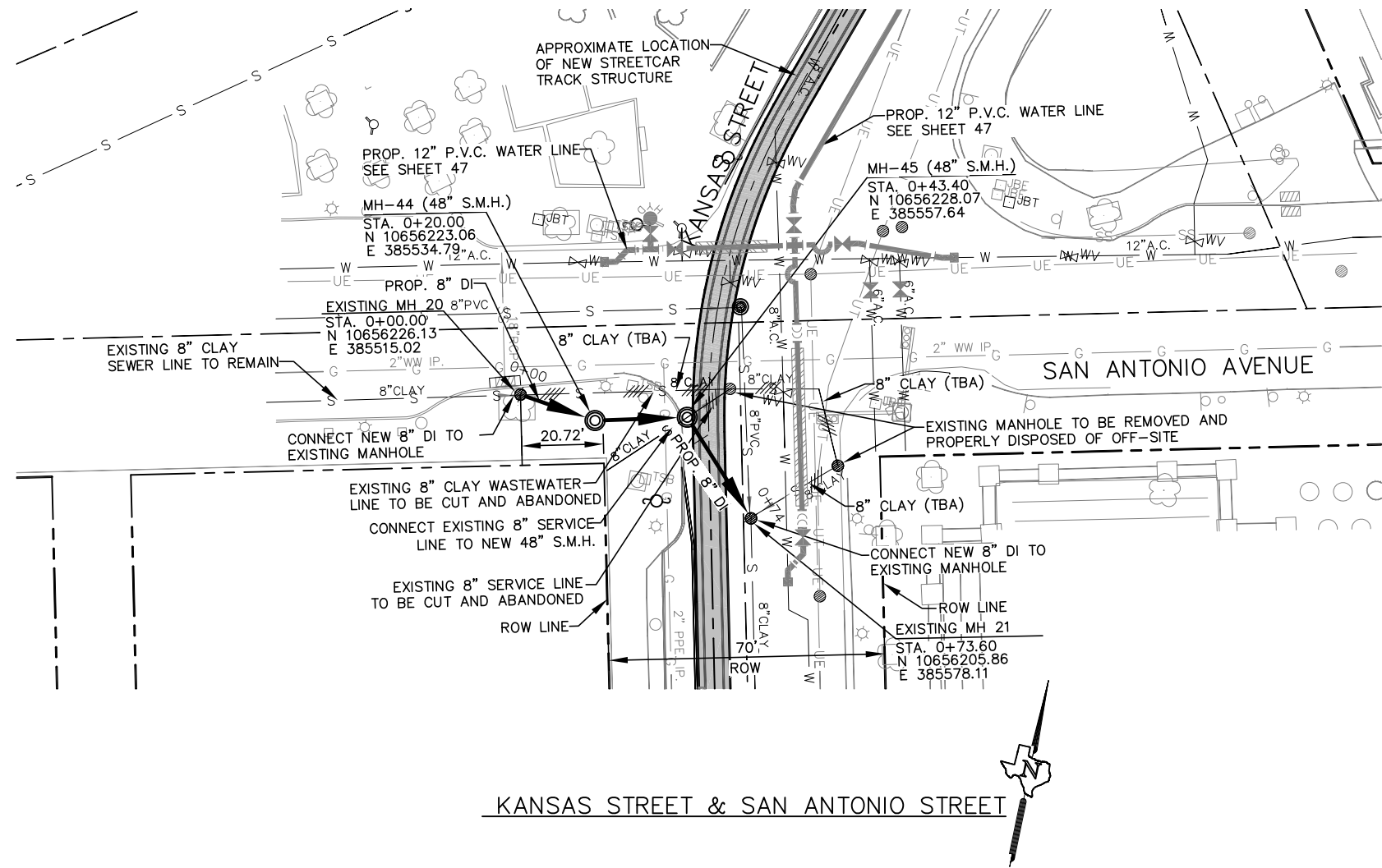
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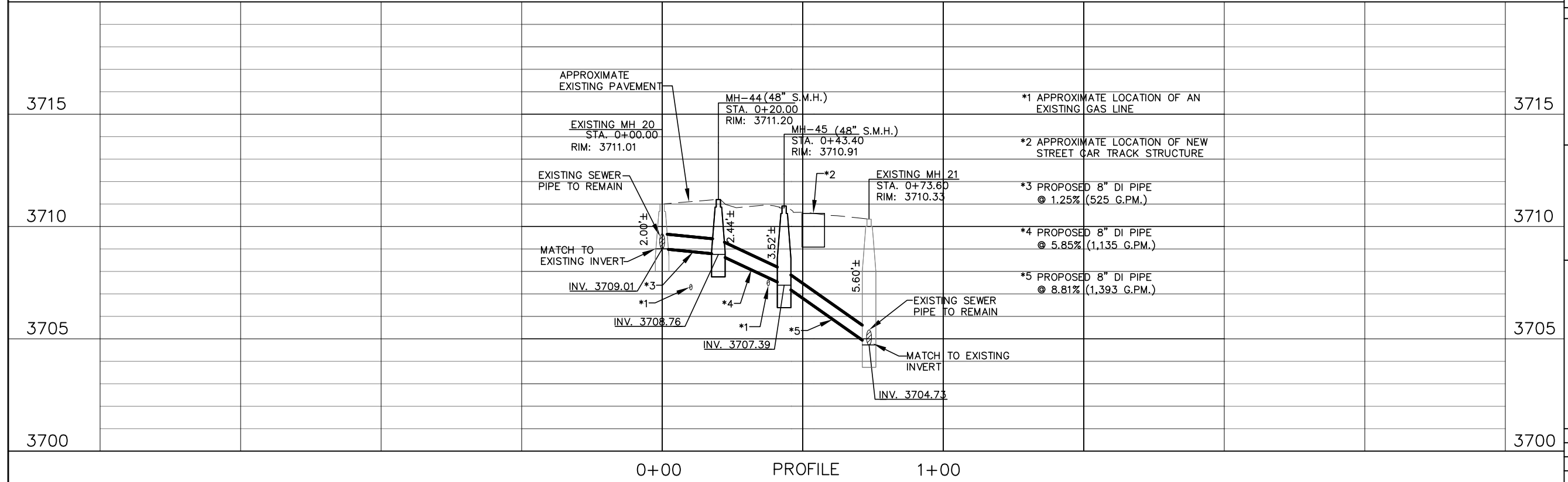
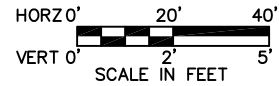
COEP STREETCAR
 WASTEWATER
 REPLACEMENT &
 RELOCATION

SHEET 13 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	952	



- NOTES:
- 1. A BYPASS SYSTEM OR SIMILAR MUST BE USED TO HAVE EXISTING WASTEWATER LINE REMAIN ACTIVE AT ALL TIMES.
 - 2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS



NO	DATE	REVISION	APPROVED

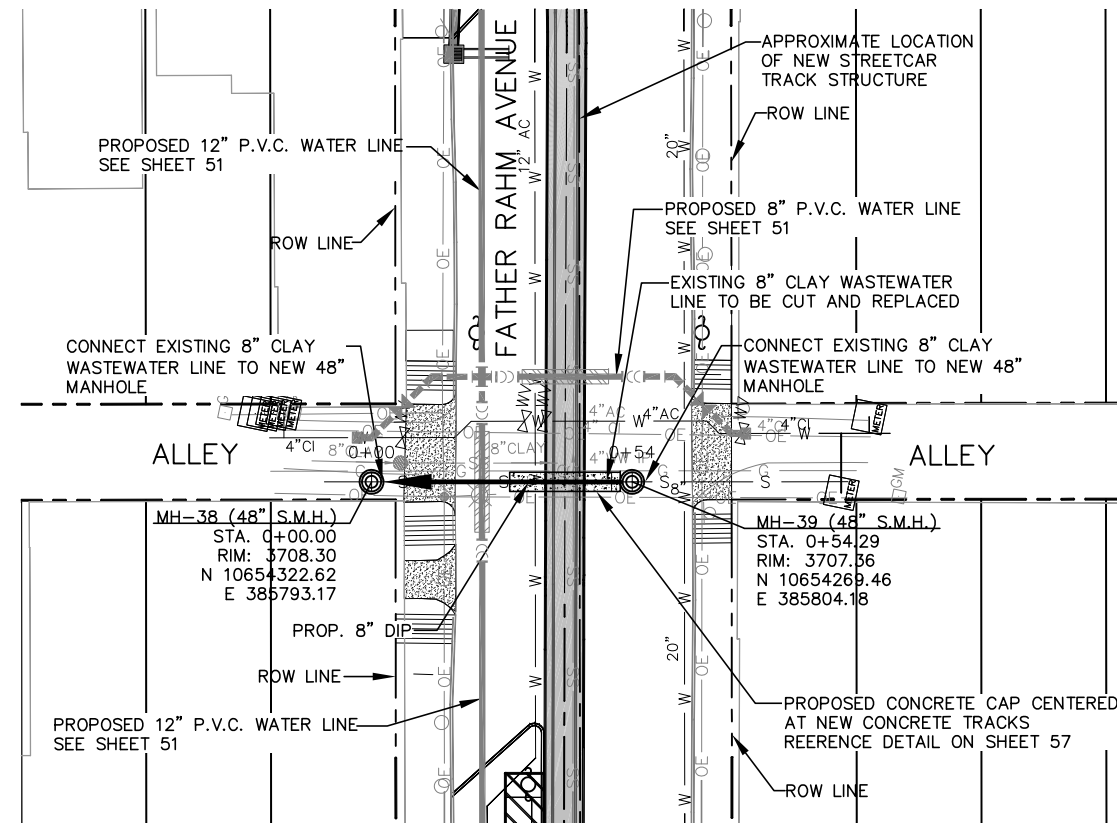
ABEL GARCIA
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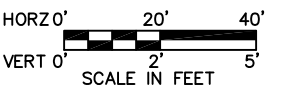
COEP STREETCAR
WASTEWATER
REPLACEMENT &
RELOCATION

SHEET 14 of 52

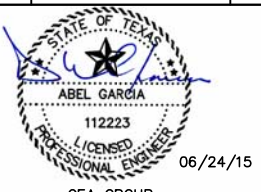
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	953	



FATHER RAHM AVENUE ALLEY BETWEEN
STANTON STREET AND KANSAS STREET



NO	DATE	REVISION	APPROVED
	/ /		
	/ /		
	/ /		
	/ /		



6/24/15

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F-4564

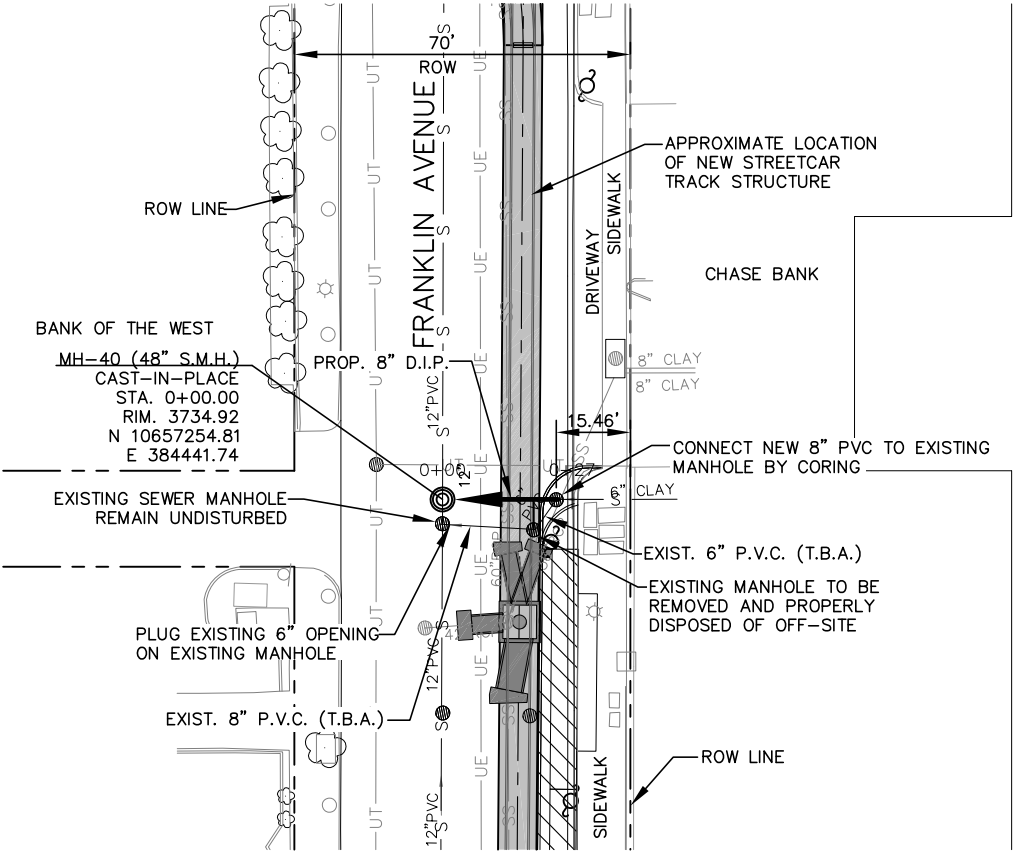


COEP STREETCAR
WASTEWATER
REPLACEMENT &
RELOCATION

SHEET 15 of 52

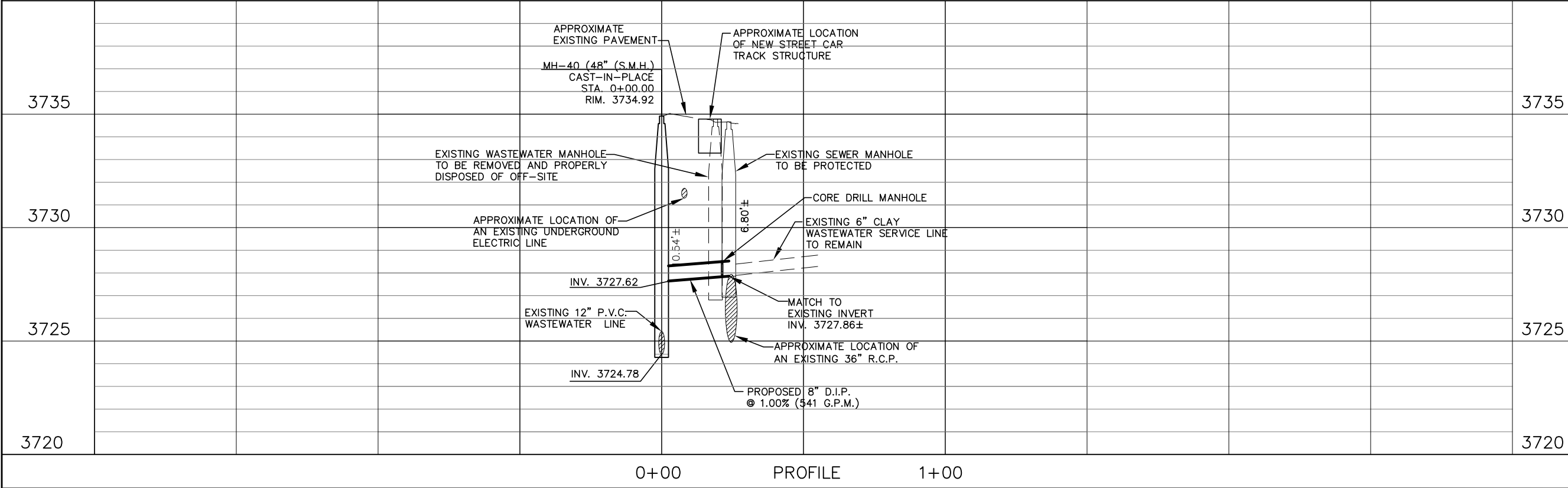
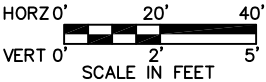
CONT	SECT	JOB	CH
0924	06	446	VARIOUS
DIST		COUNTY	SHEET NO.
EL PASO		EL PASO	954

3710					<p>PROPOSED CONCRETE CAP CENTERED AT NEW CONCRETE TRACKS REFERENCE DETAIL ON SHEET 60</p> <p>APPROXIMATE LOCATION OF NEW CONCRETE TRACKS</p> <p>MH-38 (48" S.M.H.) STA. 0+00.00 RIM: 3708.30</p> <p>APPROXIMATE EXISTING PAVEMENT</p> <p>MH-39 (48" S.M.H.) STA. 0+54.29 RIM: 3707.36</p>					3710
3705					<p>EXISTING 8" CLAY SEWER PIPE TO REMAIN</p> <p>EXISTING 8" CLAY SEWER PIPE TO REMAIN</p> <p>MATCH TO EXISTING INVERT INV. 3704.78±</p> <p>MATCH TO EXISTING INVERT INV. 3704.01±</p>					3705
3700					<p>PROPOSED 8" D.I.P. @ 0.47% (322 G.P.M.)</p> <p>EXISTING 24" SS STA. 0+37.04±</p>					3700
3695					<p>NEW 12" PVC WATER LINE WITH 21' OF 24" STEEL CASING STA. 0+18.00± INV. 3701.30±</p> <p>APPROXIMATE LOCATION OF AN EXISTING 12" WATER LINE (T.B.A.)</p>					3695
<p>0+00 PROFILE 1+00</p>										



FRANKLIN AVENUE BETWEEN
MESA STREET AND STANTON STREET

- NOTES:
1. A BYPASS SYSTEM OR SIMILAR MUST BE USED TO HAVE EXISTING WASTEWATER LINE REMAIN ACTIVE AT ALL TIMES.
 2. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WASTEWATER SERVICES BY VIDEOTAPING MAINS PRIOR TO INSTALLATION OF NEW WASTEWATER MAIN IMPROVEMENTS



NO	DATE	REVISION	APPROVED
1	06/24/15		
2			
3			
4			

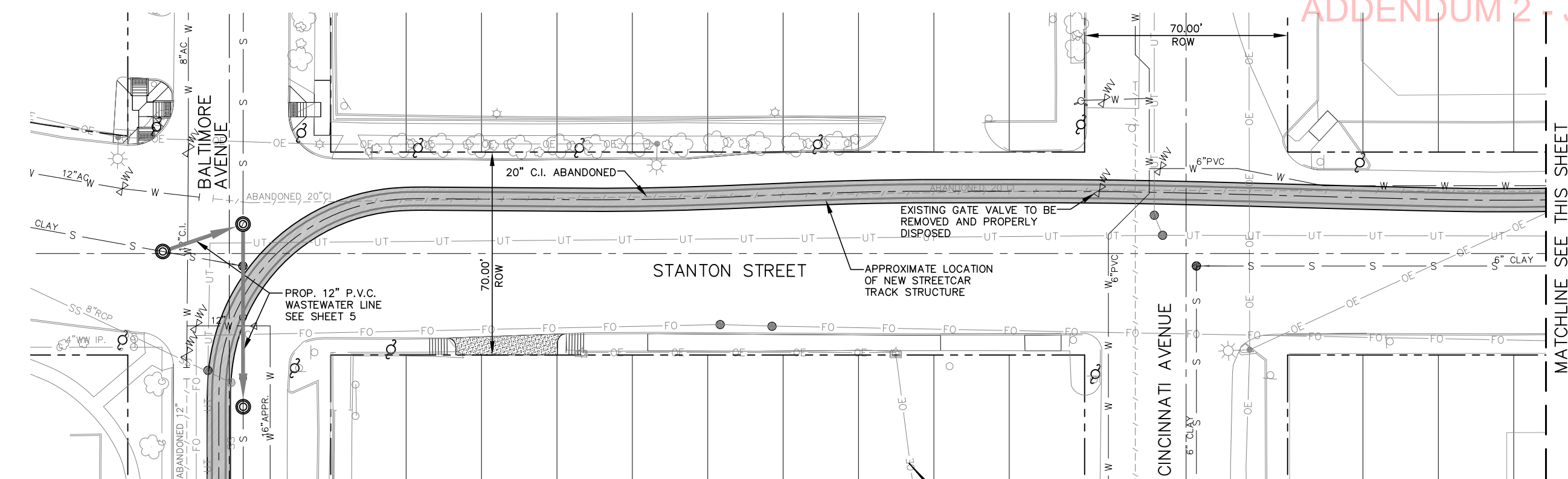
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COEP STREETCAR
WASTEWATER
REPLACEMENT &
RELOCATION

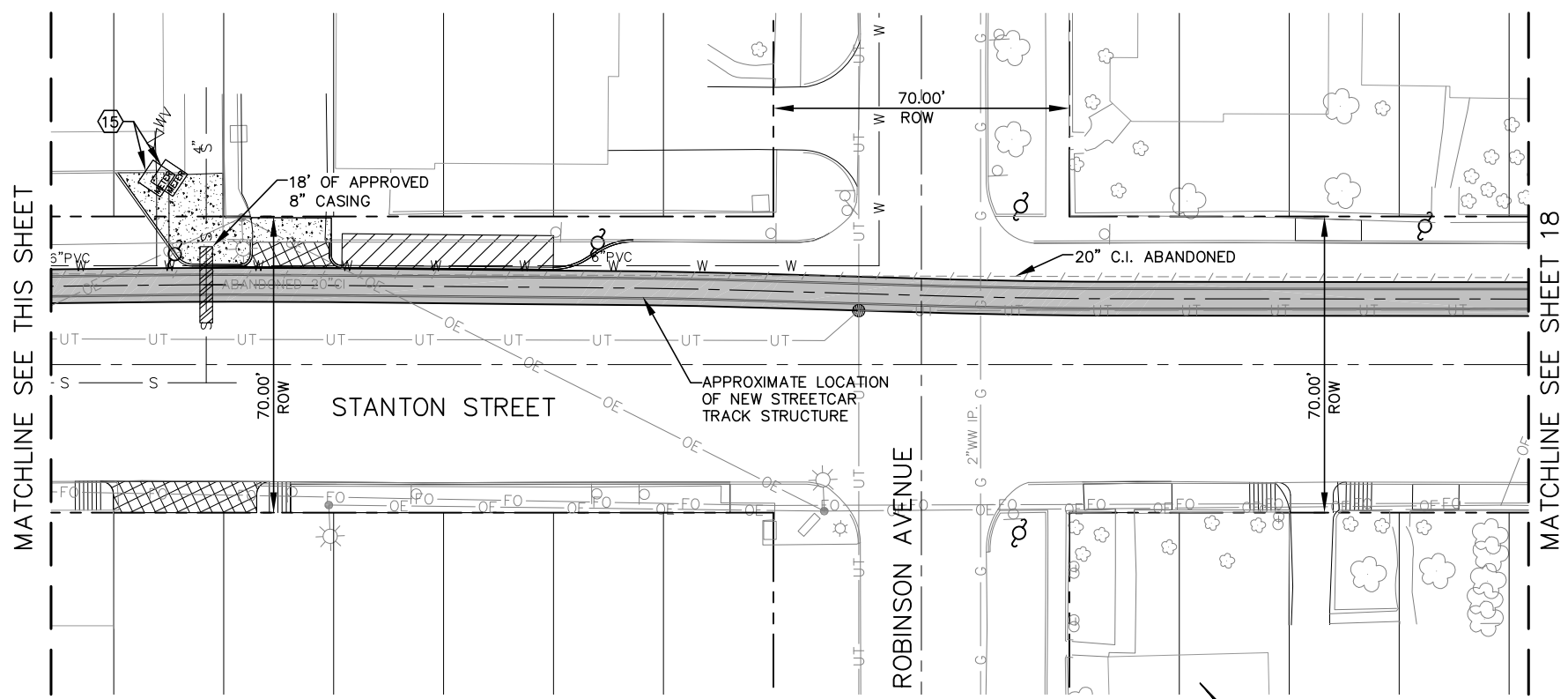
SHEET 16 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	955	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 20" C.I. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

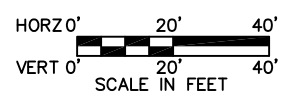
STANTON STREET & BALTIMORE AVENUE TO CINCINNATI AVENUE



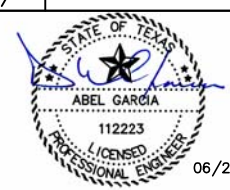
STANTON STREET & ROBINSON AVENUE

KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



NO	DATE	REVISION	APPROVED



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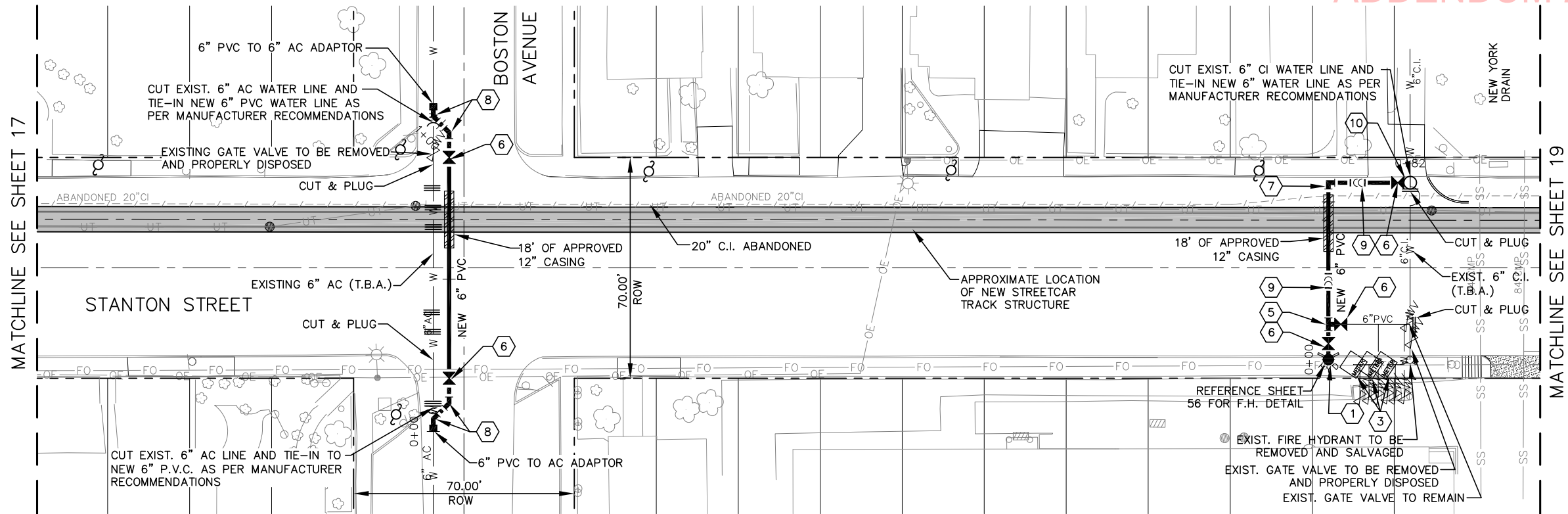


COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION



SHEET 17 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	956	



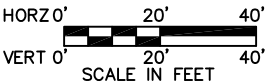
- NOTES:
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 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

STANTON STREET & BOSTON AVENUE



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



NO	DATE	REVISION	APPROVED

STATE OF TEXAS

ABEL GARCIA

112223

PROFESSIONAL ENGINEER

06/24/15

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F-4564

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COEP STREETCAR

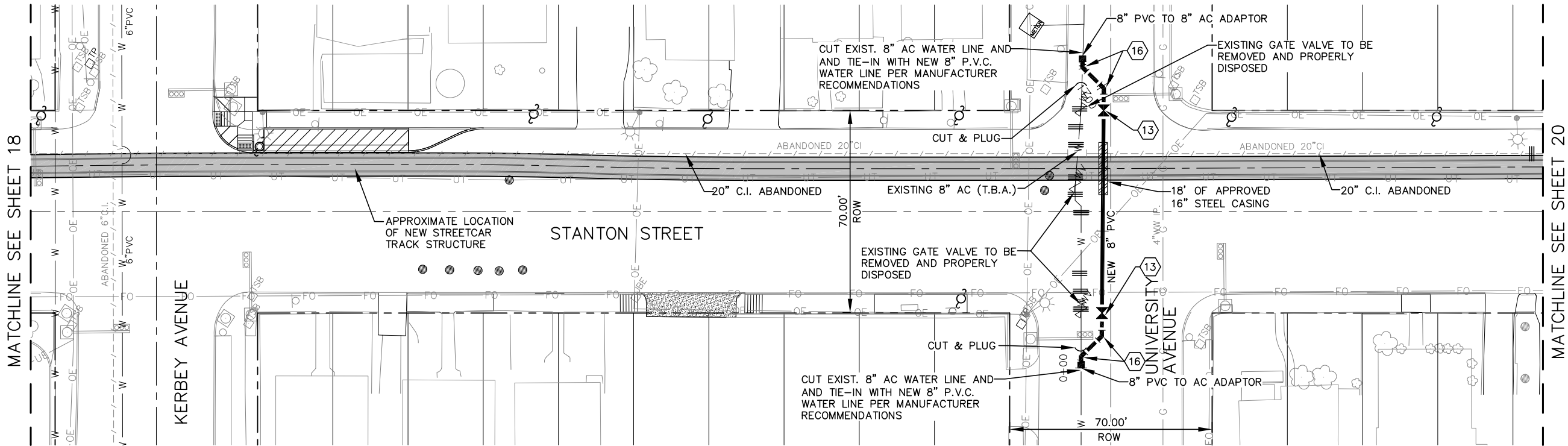
POTABLE WATER

REPLACEMENT

AND RELOCATION

SHEET 18 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	957	

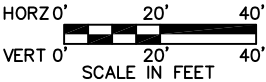


STANTON STREET & KERBEY AVENUE TO UNIVERSITY AVENUE

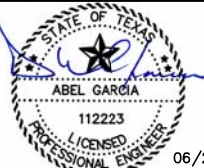
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 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



NO	DATE	REVISION	APPROVED



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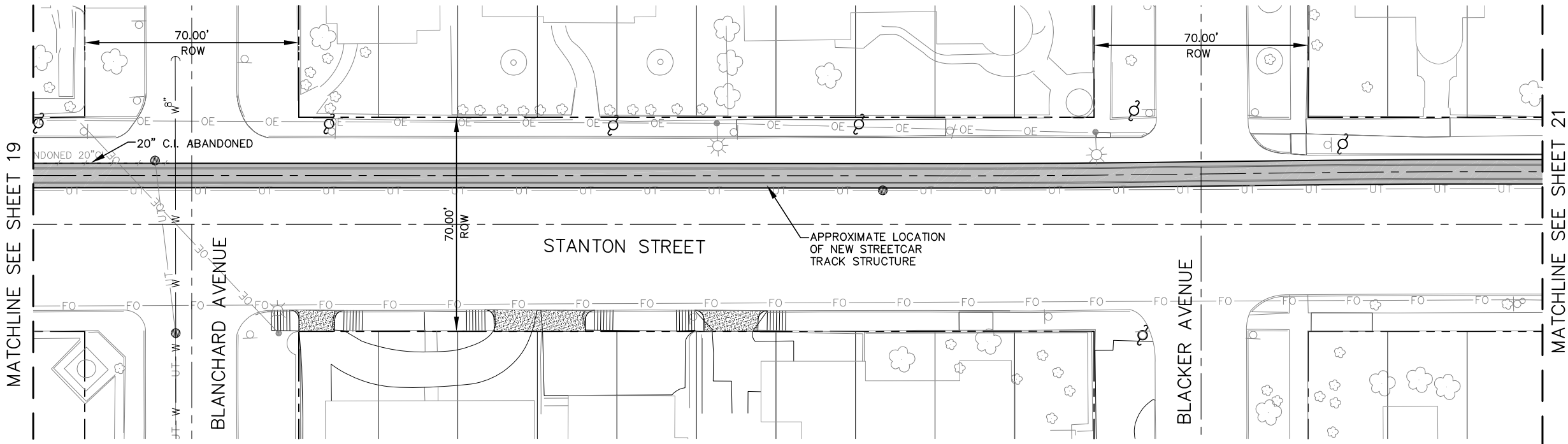
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Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION



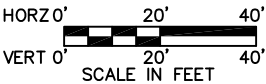
SHEET 19 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	958	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 20" C.I. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

STANTON STREET & BLANCHARD AVENUE TO BLACKER AVENUE



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

NO	DATE	REVISION	APPROVED

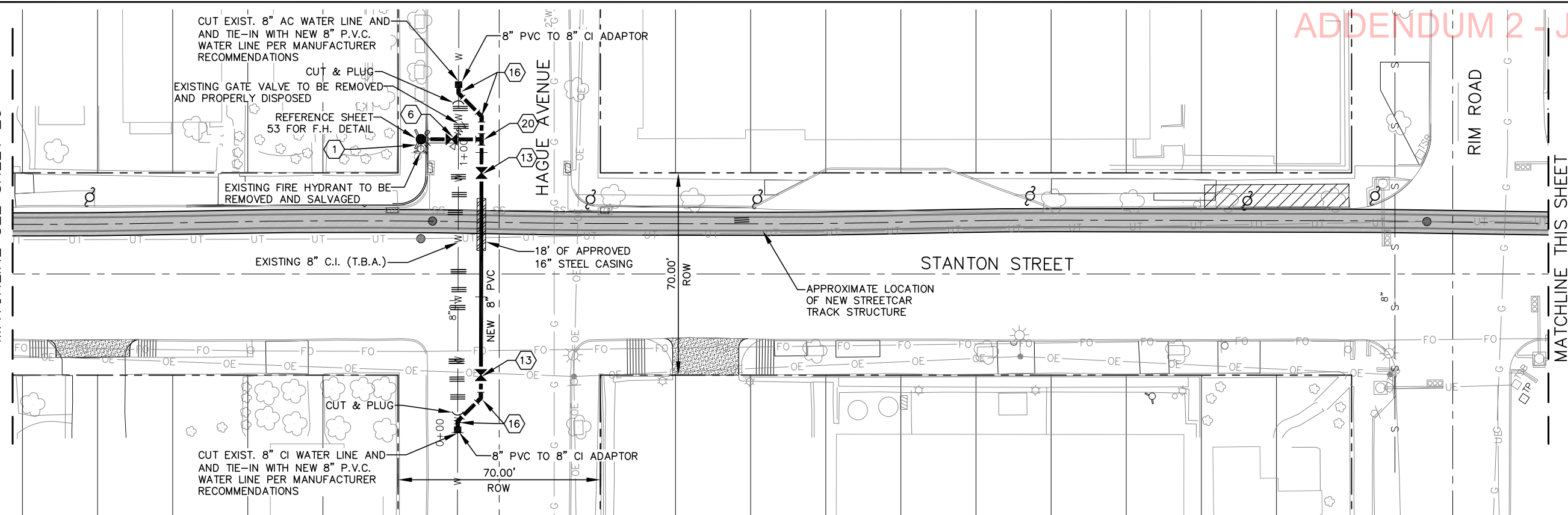


COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION



SHEET 20 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST		COUNTY	SHEET NO.
EL PASO		EL PASO	959

MATCHLINE SEE SHEET 20



NOTES:

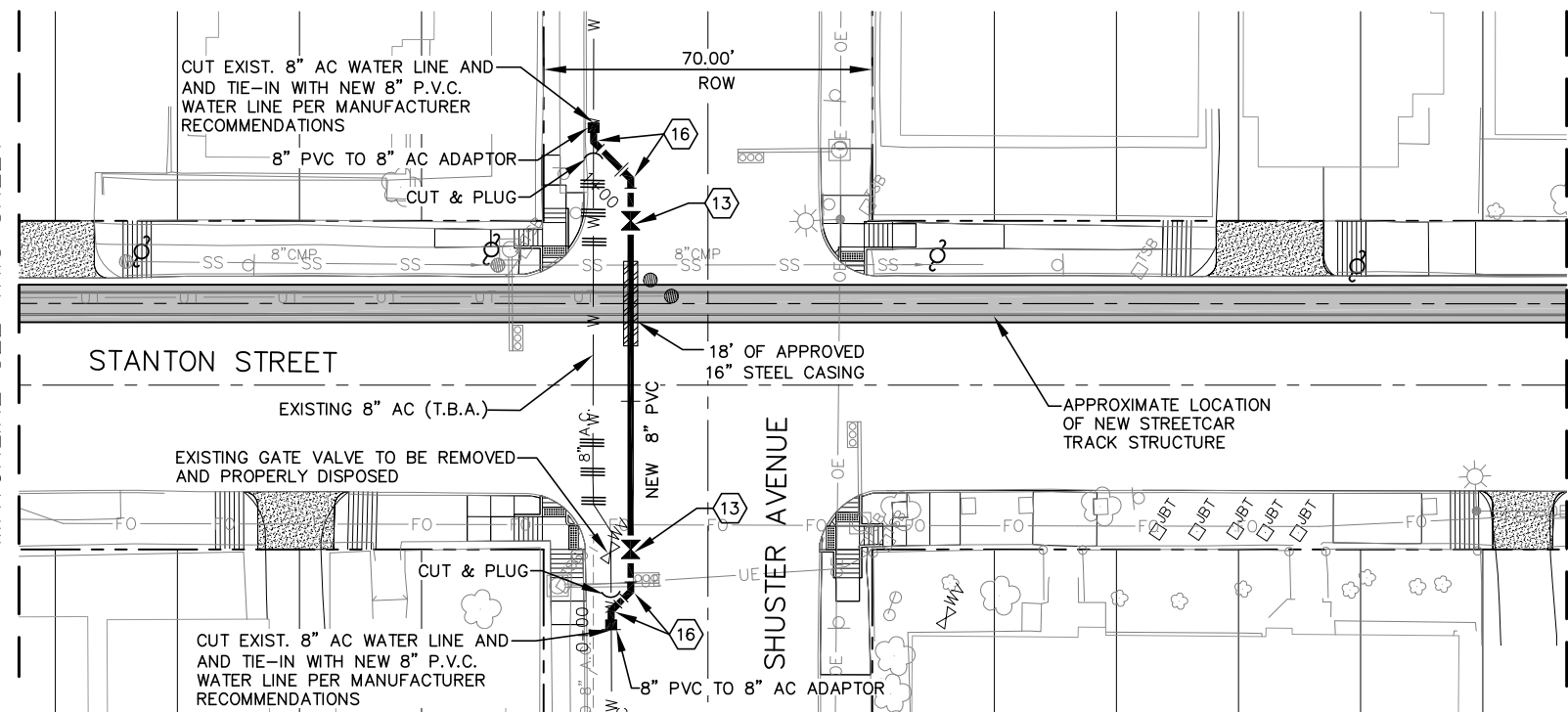
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
3. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
4. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

MATCHLINE THIS SHEET

STANTON STREET & HAGUE AVENUE TO RIM ROAD

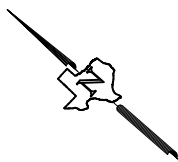


MATCHLINE SEE THIS SHEET



MATCHLINE SEE SHEET 22

STANTON STREET & SCHUSTER AVENUE

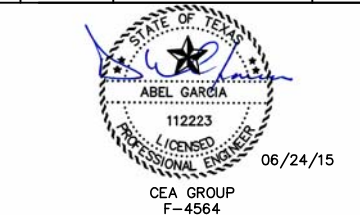


KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

HORZO' 0' 20' 40'
VERT 0' 20' 40'
SCALE IN FEET

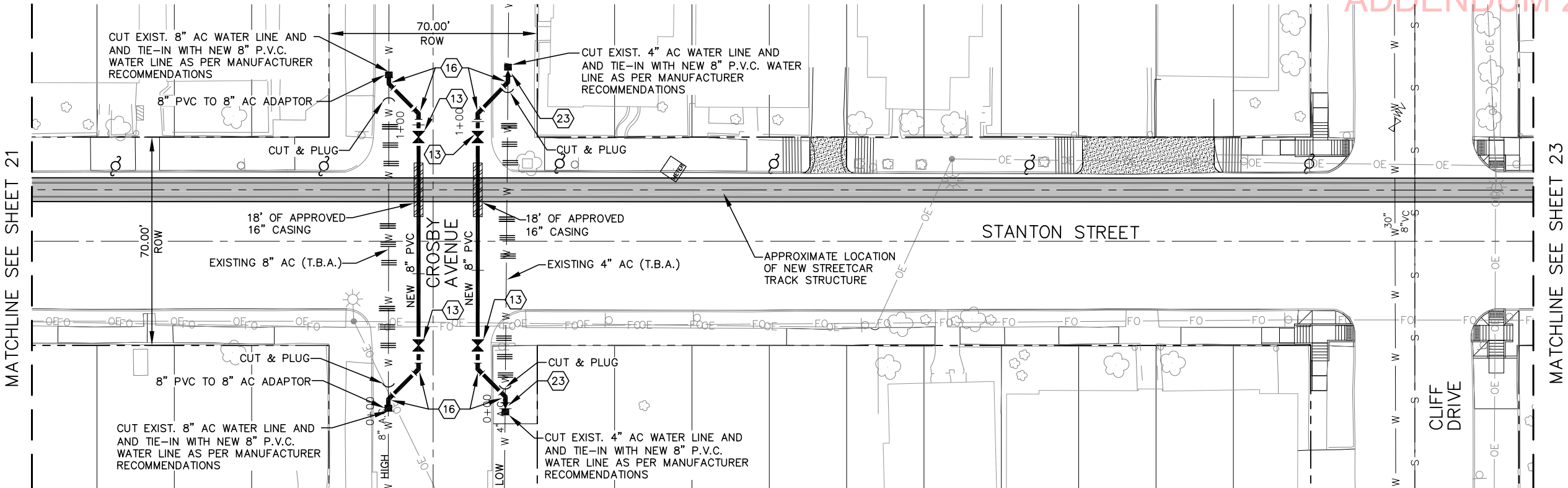
NO	DATE	REVISION	APPROVED



COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

SHEET 21 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	960	



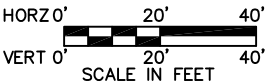
STANTON STREET & CROSBY AVENUE TO CLIFF DRIVE

NOTES:

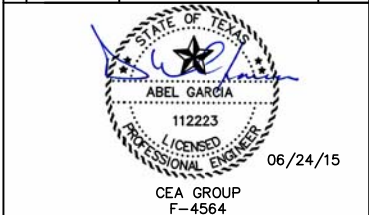
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
3. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
4. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



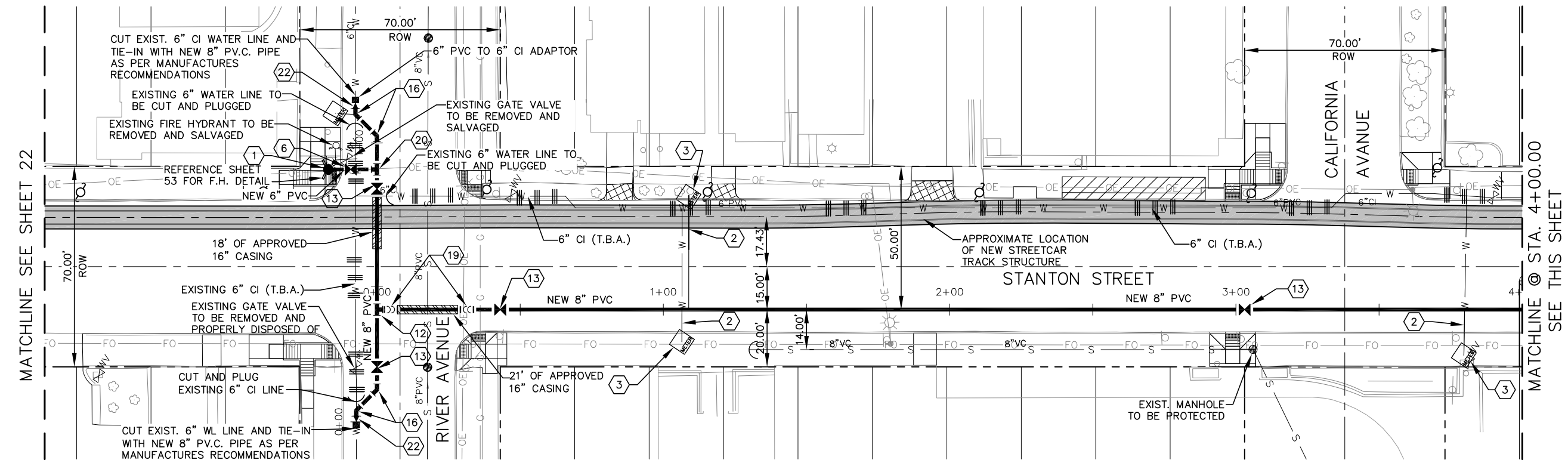
NO	DATE	REVISION	APPROVED



COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

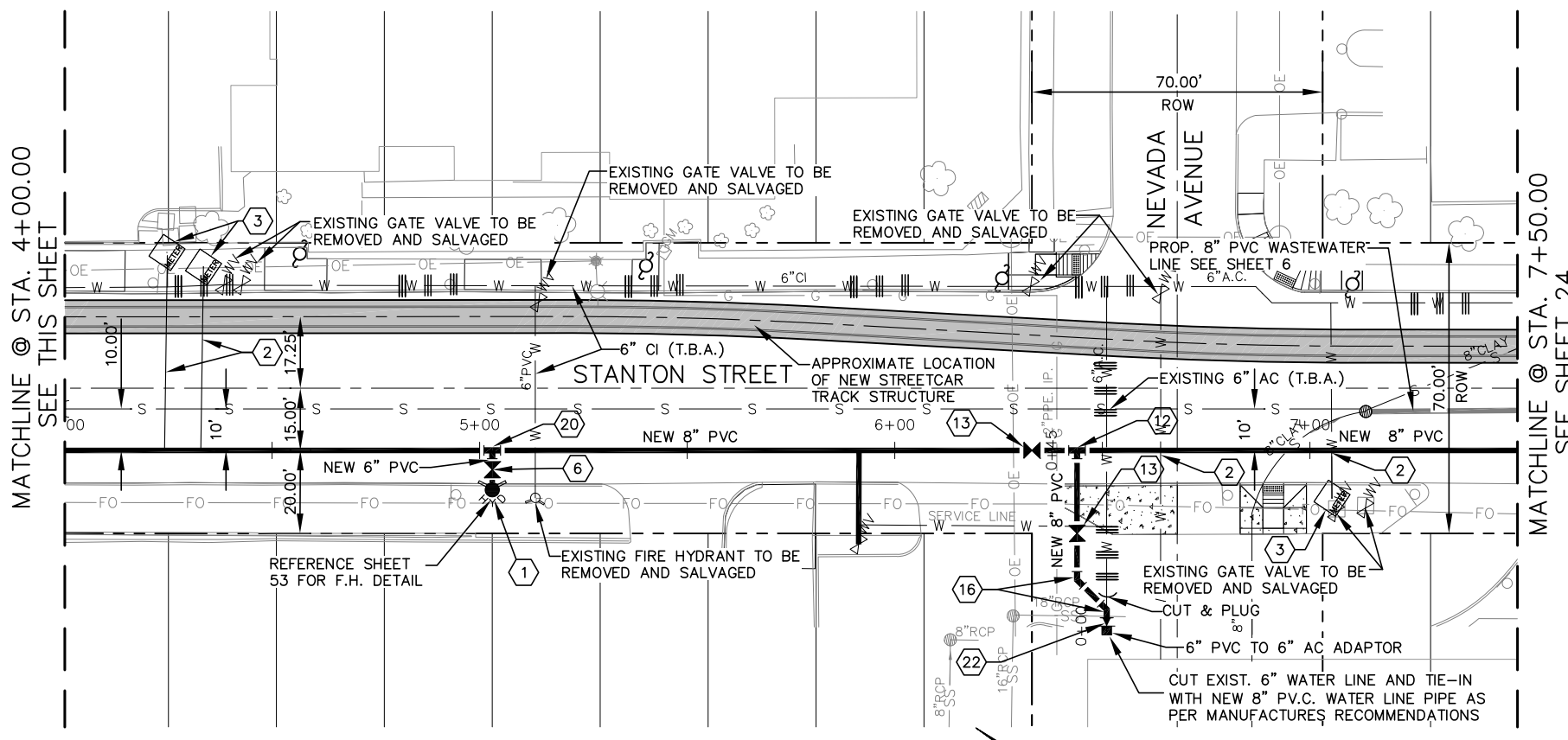


SHEET 22 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	961	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 4. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

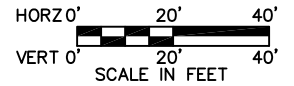
STANTON STREET FROM RIVER AVENUE TO NEVADA AVENUE



STANTON STREET FROM NEVADA AVENUE TO RIVER AVENUE

KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



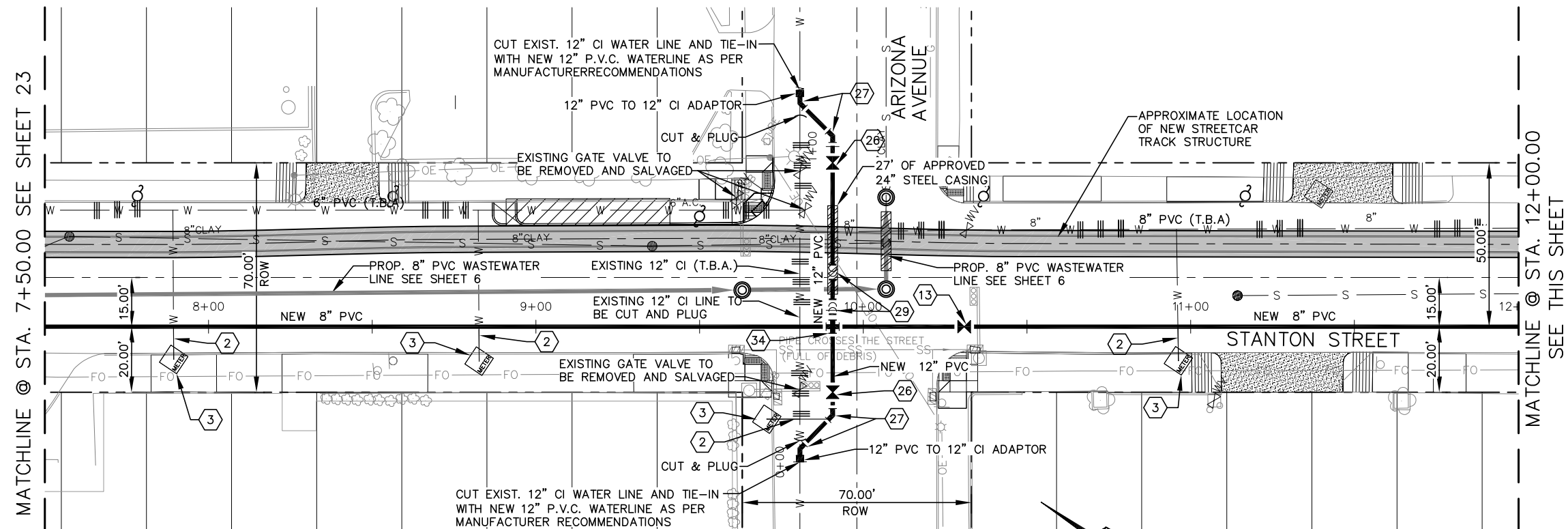
NO	DATE	REVISION	APPROVED



COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

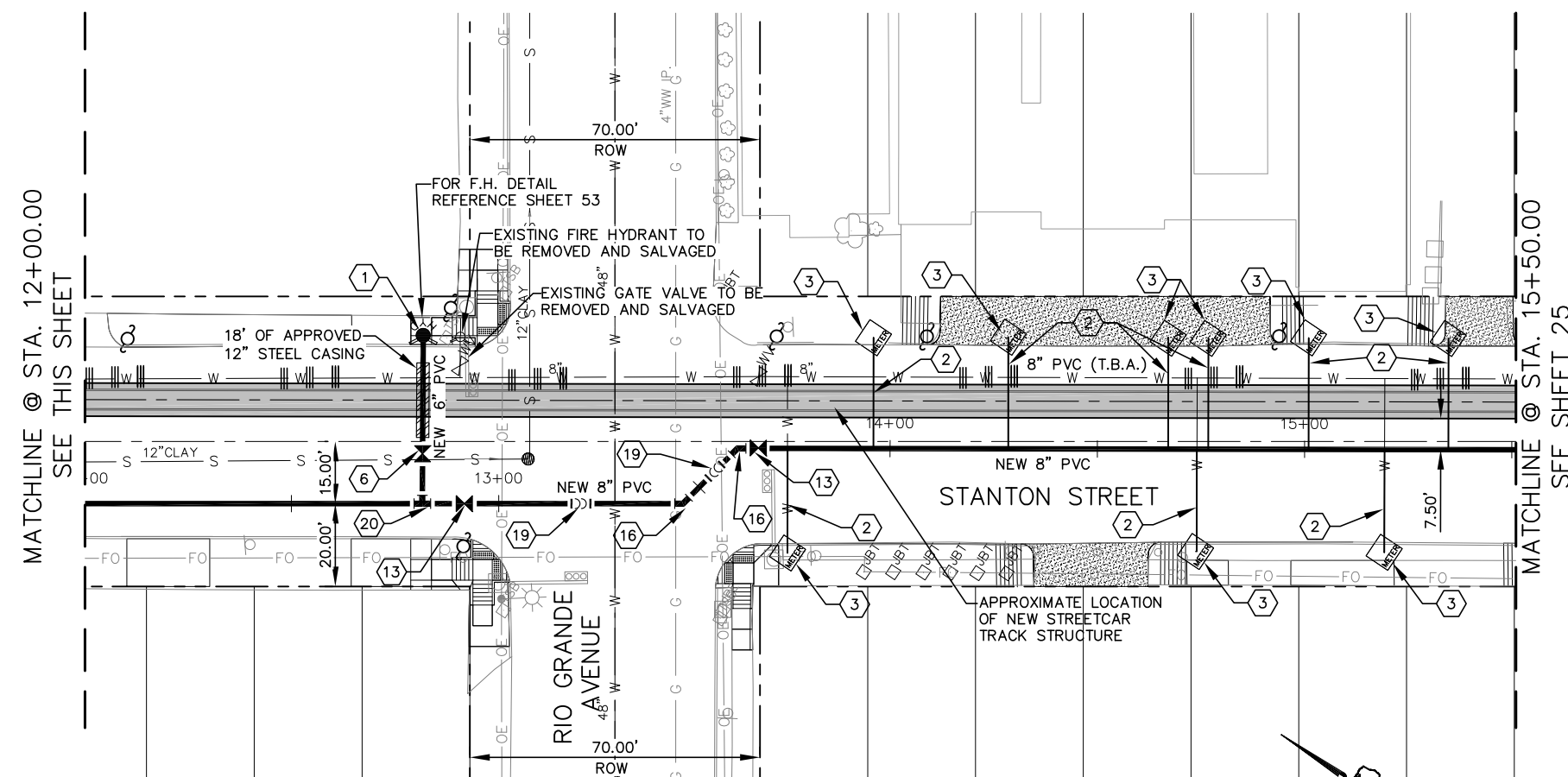
SHEET 23 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	962	



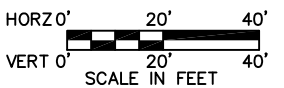
STANTON STREET FROM ARIZONA AVENUE TO RIO GRANDE AVENUE

- NOTES:**
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 4. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

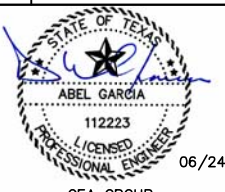


STANTON STREET FROM ARIZONA AVENUE TO RIO GRANDE AVENUE

# KEYED NOTES			
1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



NO	DATE	REVISION	APPROVED
	/ /		
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	/ /		
	/ /		



6/24/15

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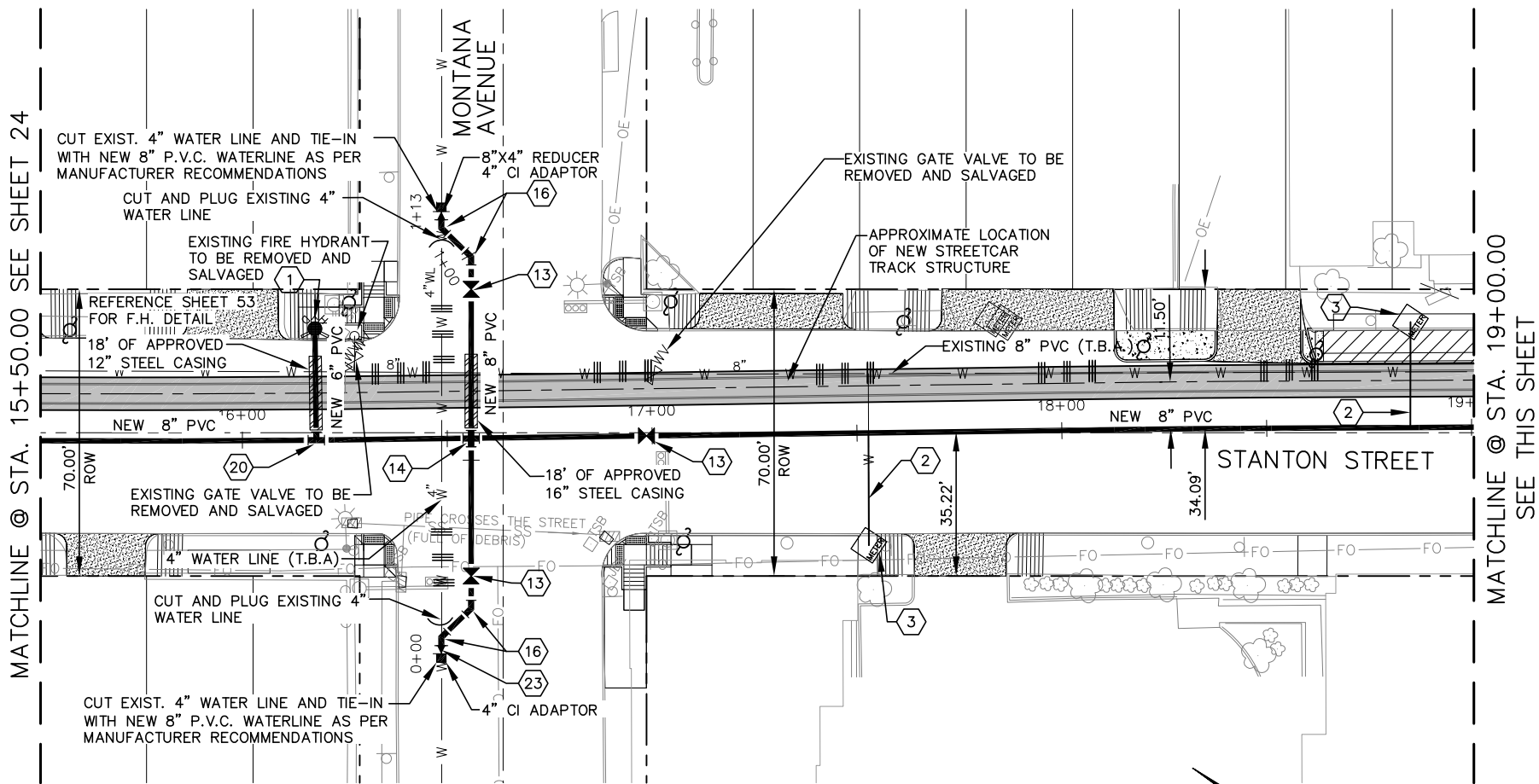


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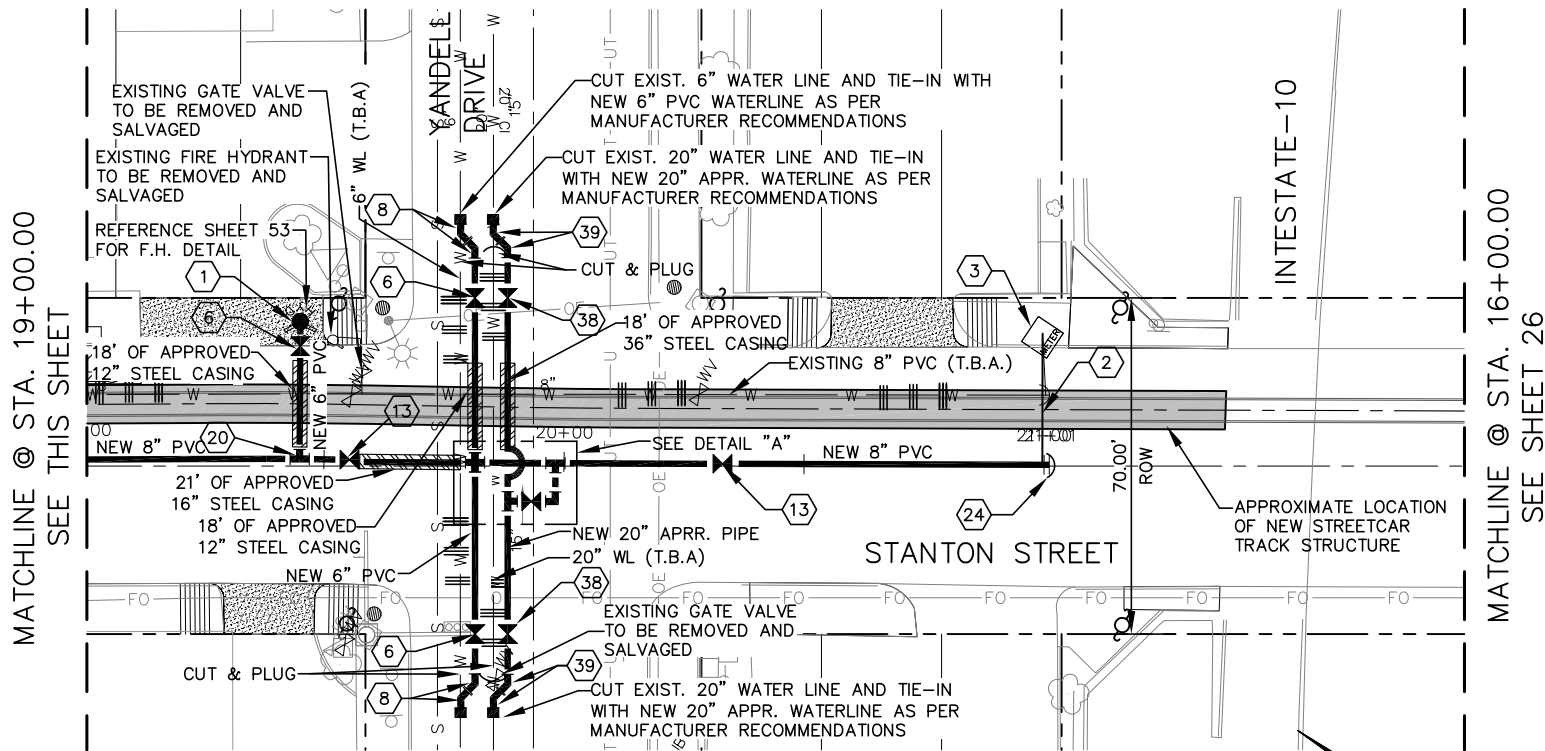
COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

SHEET 24 of 52

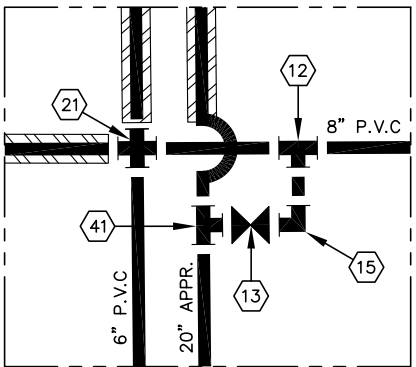
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST		COUNTY	SHEET NO.
EL PASO		EL PASO	963



STANTON STREET FROM MONTANA AVENUE TO YANDELL DRIVE



STANTON STREET FROM MONTANA AVENUE TO YANDELL DRIVE



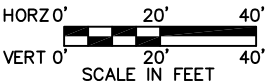
DETAIL "A"

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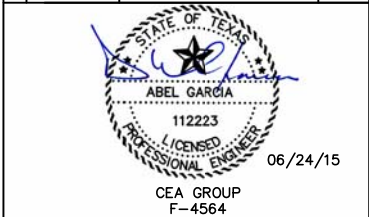
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
3. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
4. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
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7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
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15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

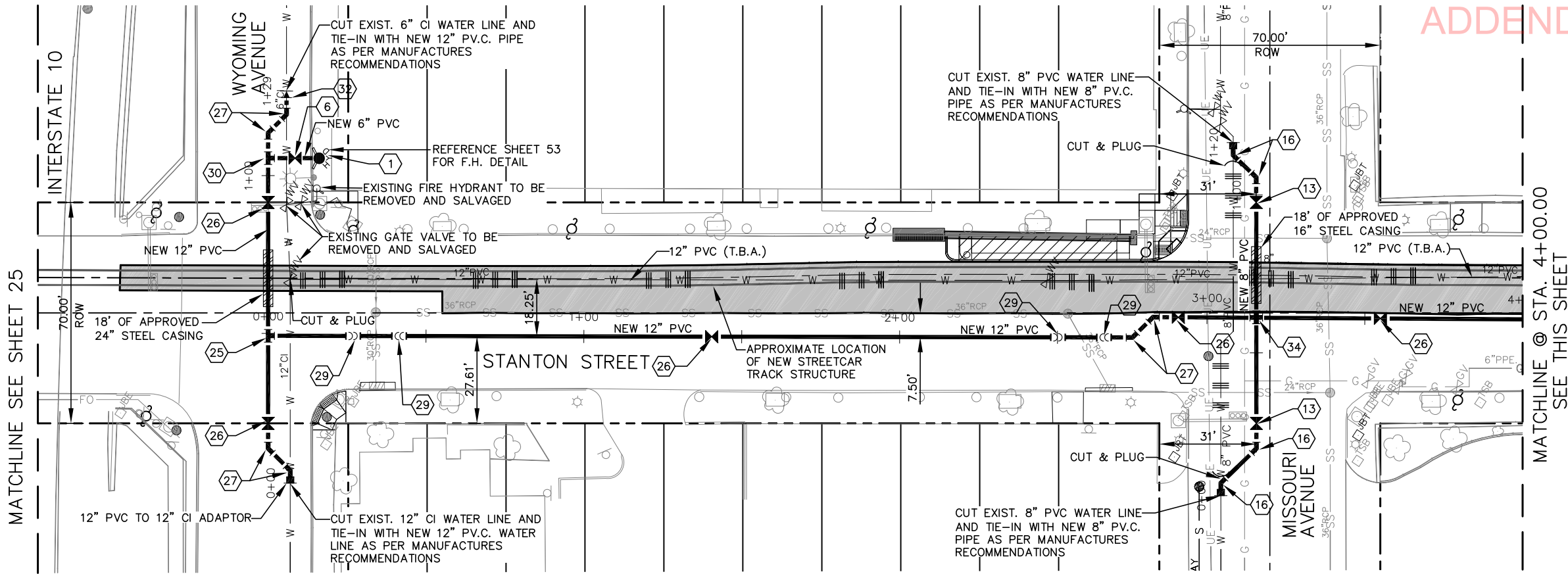


NO	DATE	REVISION	APPROVED
1	06/24/15		
2			
3			
4			



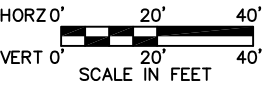
COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

SHEET 25 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	964	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 4. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

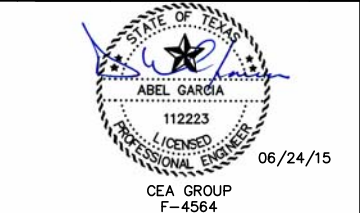
STANTON STREET FROM WYOMING AVENUE TO MISSOURI AVENUE



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

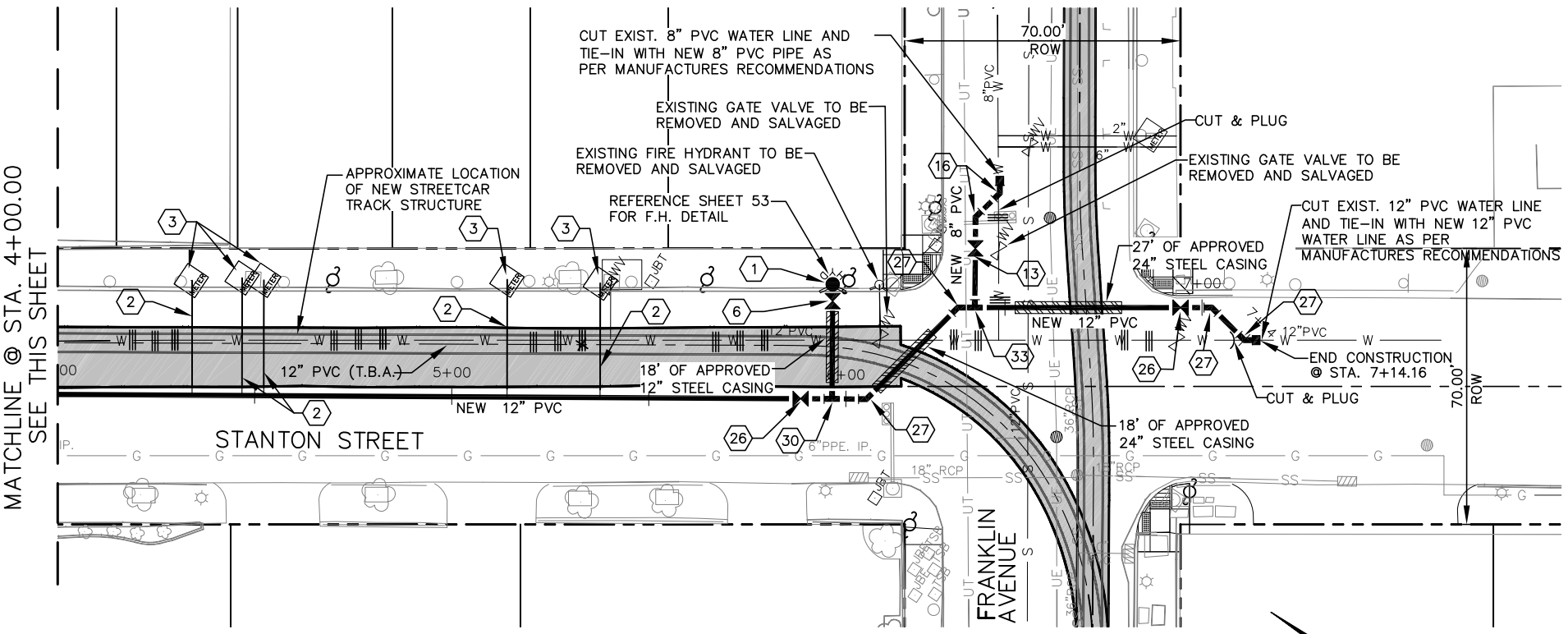
NO	DATE	REVISION	APPROVED



COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

SHEET 26 of 52

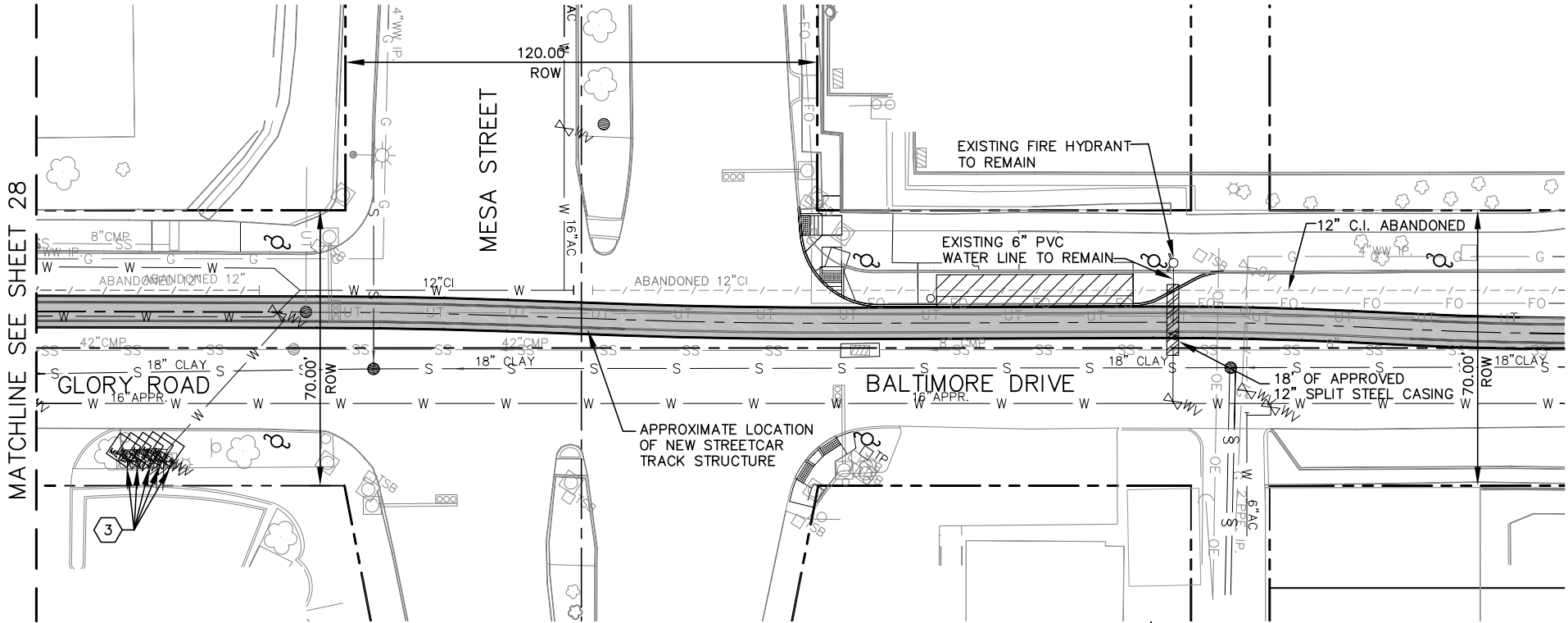
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	965	



STANTON STREET FROM MISSOURI AVENUE TO FRANKLIN STREET

MATCHLINE @ STA. 4+00.00
SEE THIS SHEET

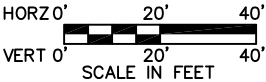
MATCHLINE @ STA. 4+00.00
SEE THIS SHEET



BALTIMORE DRIVE AND MESA STREET

NOTES:


1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
3. EXISTING ABANDONED 12" C.I. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
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15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
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19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

NO	DATE	REVISION	APPROVED




06/24/15
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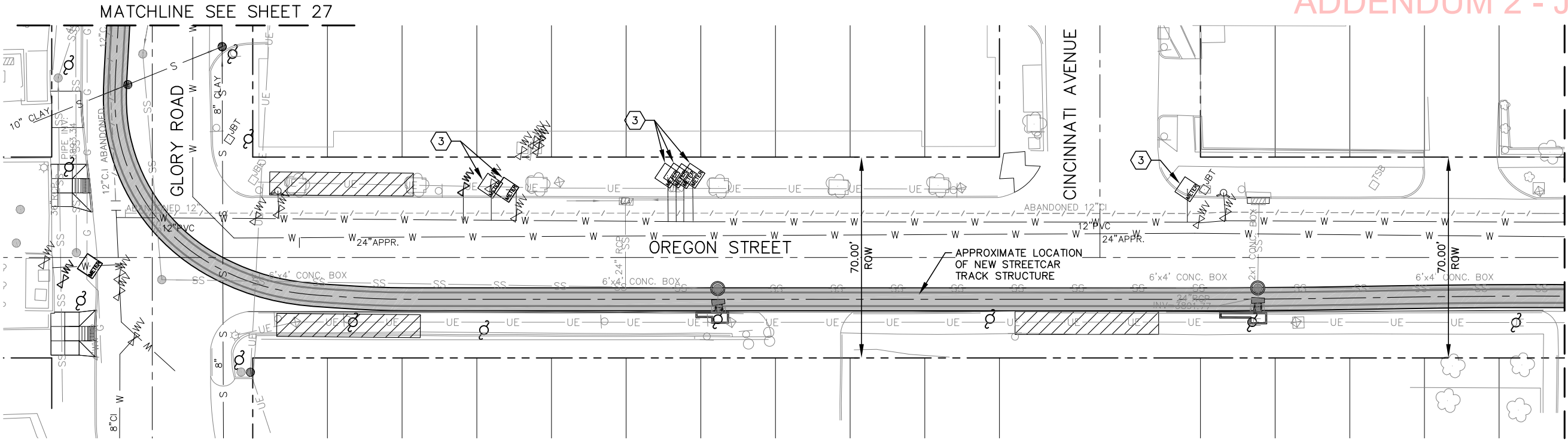
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4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

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AND RELOCATION



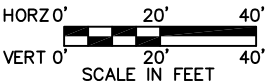
SHEET 27 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	966	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 4. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

OREGON STREET AND GLORY ROAD TO CINCINNATI AVENUE



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
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9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
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12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
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15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
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22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

NO	DATE	REVISION	APPROVED



06/24/15

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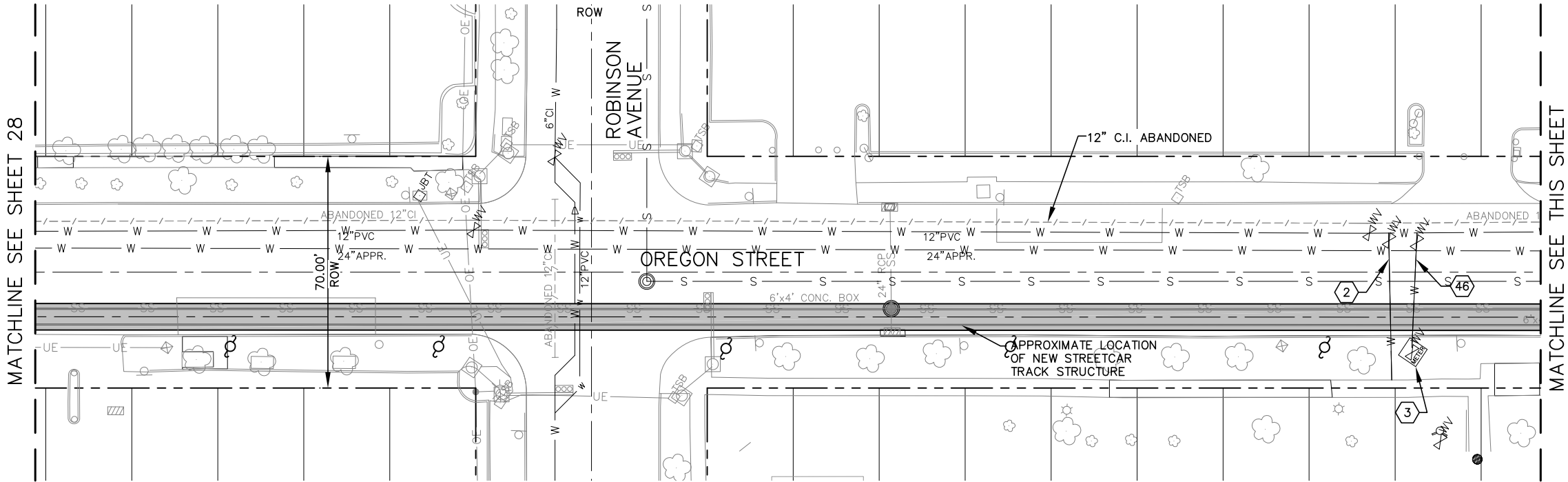
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REPLACEMENT
AND RELOCATION



SHEET 28 of 52

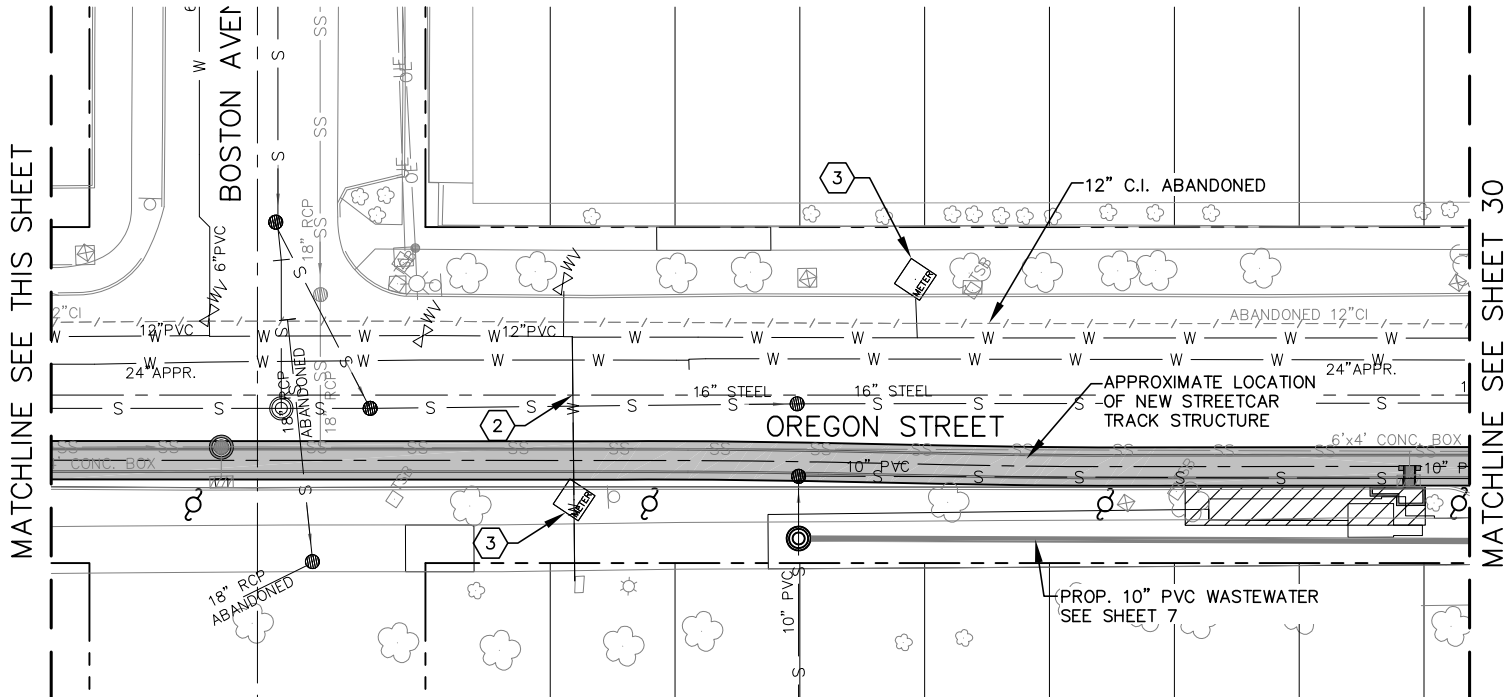
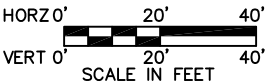
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	967	



OREGON STREET AND ROBINSON AVENUE

NOTES:

1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
3. EXISTING ABANDONED 12" C.I. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

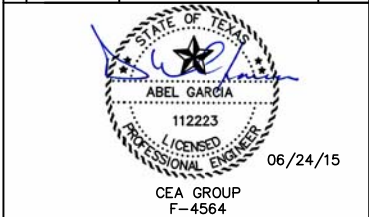


OREGON STREET AND BOSTON AVENUE

KEYED NOTES

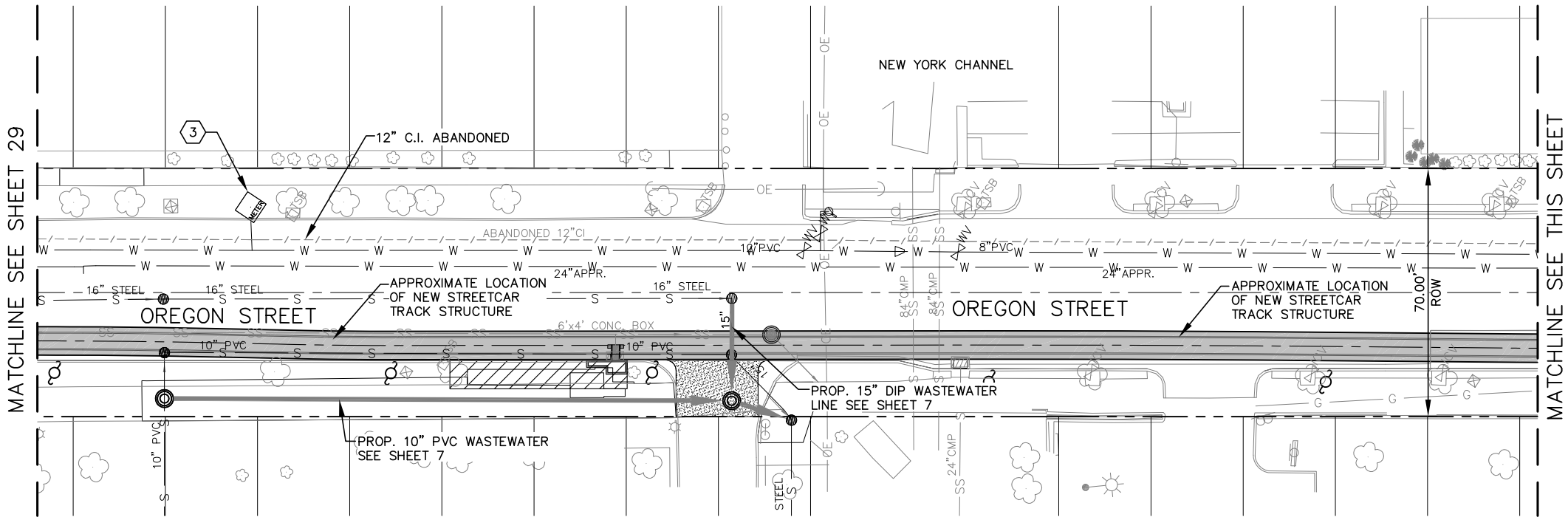
1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25' ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

NO	DATE	REVISION	APPROVED
1	11/11/14		
2	11/11/14		
3	11/11/14		
4	11/11/14		



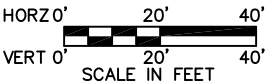
COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

SHEET 29 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	968	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 12" C.I. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

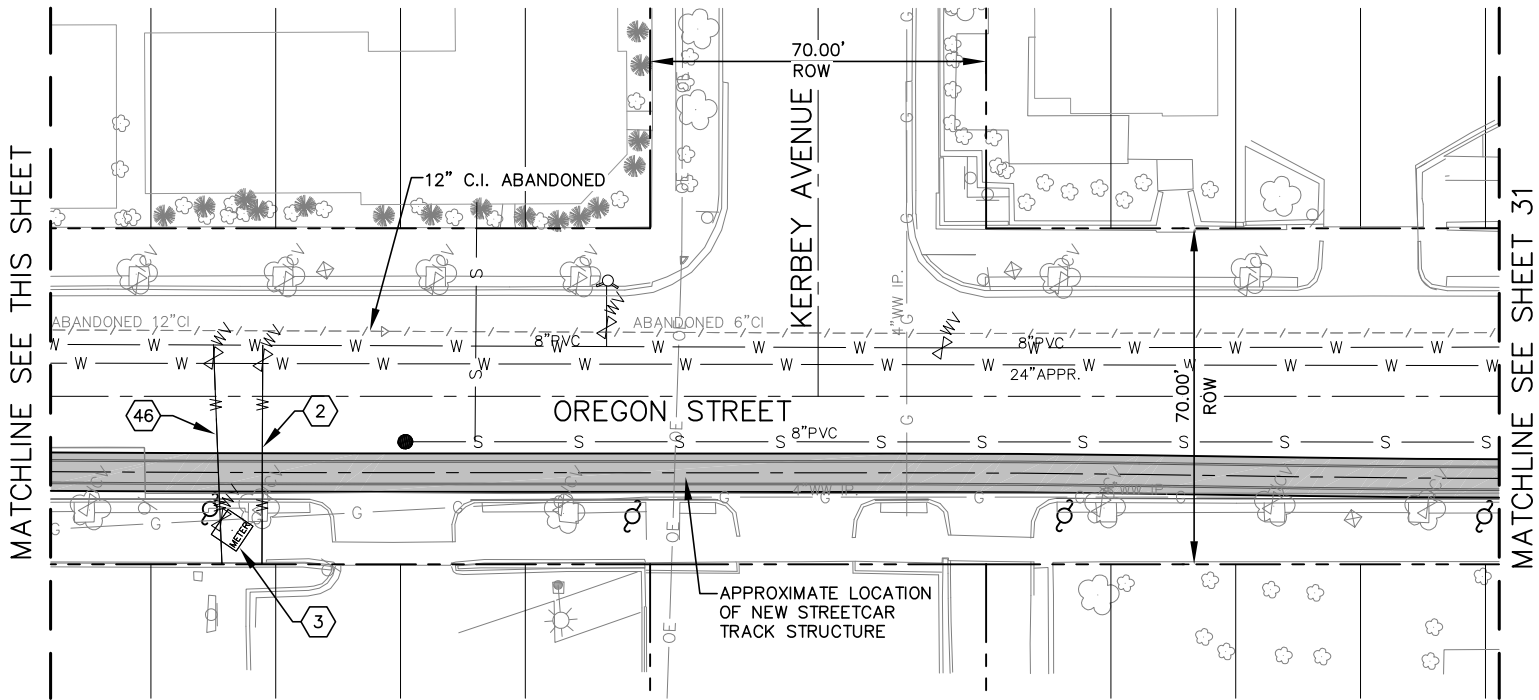
OREGON STREET BETWEEN BOSTON AVENUE AND KERBEY AVENUE



KEYED NOTES

1	NEW FIRE HYDRANT
2	NEW WATER SERVICE
3	EXIST. WATER METER
4	NEW C.A.R.V. W/ MH
5	NEW 6" TEE
6	NEW 6" GATE VALVE
7	NEW 6" 90° ELBOW
8	NEW 6" 45° ELBOW
9	NEW 6" VERTICAL ELBOW
10	NEW 6" WET TAP
11	NEW 6" X 2" REDUCER
12	NEW 8" TEE
13	NEW 8" GATE VALVE
14	NEW 8" CROSS
15	NEW 8" 90° ELBOW
16	NEW 8" 45° ELBOW
17	NEW 8" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW
19	NEW 8" VERTICAL ELBOW
20	NEW 8" X 6" TEE
21	NEW 8" X 6" CROSS
22	NEW 8" X 6" REDUCER
23	NEW 8" X 4" REDUCER

24	NEW 8" PLUG
25	NEW 12" TEE
26	NEW 12" GATE VALVE
27	NEW 12" 45° ELBOW
28	NEW 12" 11.25° ELBOW
29	NEW 12" VERTICAL ELBOW
30	NEW 12" X 6" TEE
31	NEW 12" X 6" CROSS
32	NEW 12" X 6" REDUCER
33	NEW 12" X 8" TEE
34	NEW 12" X 8" CROSS
35	NEW 12" X 8" REDUCER
36	NEW 16" 45° ELBOW
37	NEW 16" BUTTERFLY VALVE
38	NEW 20" BUTTERFLY VALVE
39	NEW 20" 45° ELBOW
40	NEW 20" 22.5° ELBOW
41	NEW 20" X 8" TEE
42	NEW 20" X 8" CROSS
43	NEW 20" X 12" TEE
44	NEW 20" X NEW 16" TEE
45	NEW 20" X 12" REDUCER
46	NEW FIRE LINE EXTENSION



OREGON STREET AND KERBEY AVENUE

NO	DATE	REVISION	APPROVED

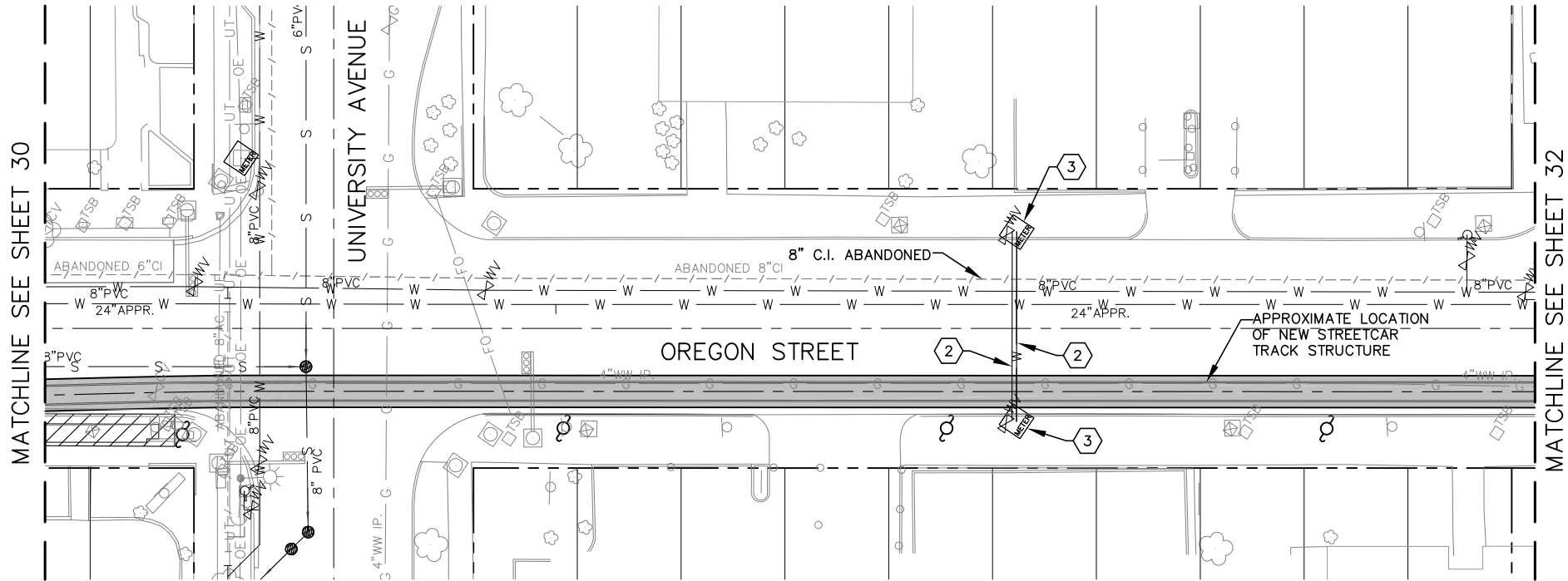
ABEL GARCIA
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06/24/15
CEA GROUP
F-4564

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COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

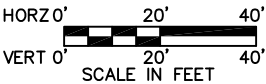
SHEET 30 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	969	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 8" C.I. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

OREGON STREET AND UNIVERSITY AVENUE



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

NO	DATE	REVISION	APPROVED



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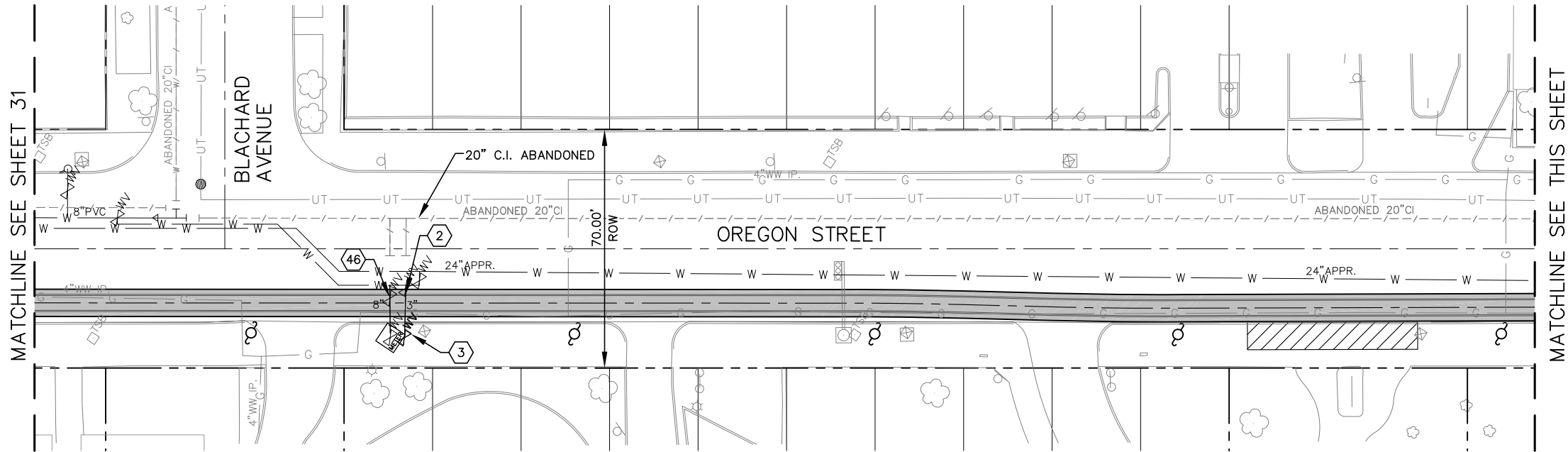
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REPLACEMENT
AND RELOCATION



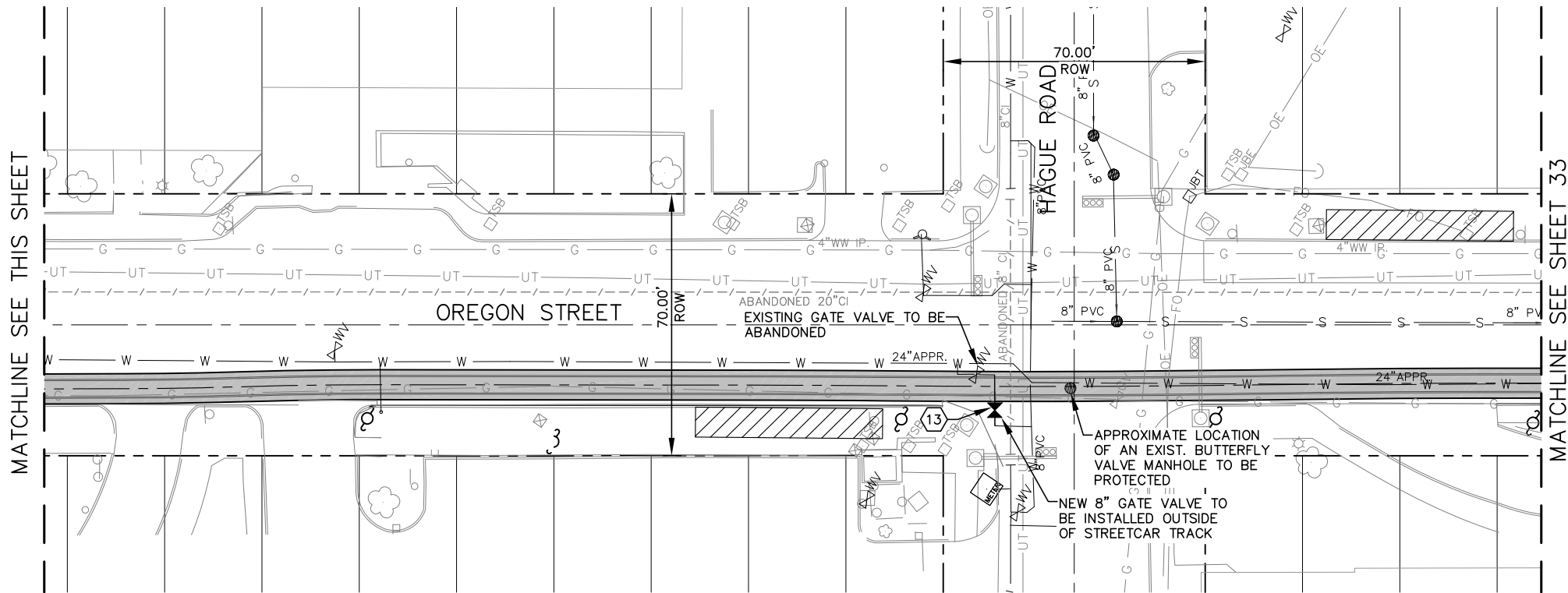
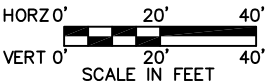
SHEET 31 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	970	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 20" C.I. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

OREGON STREET BETWEEN
BLANCHARD AVENUE AND HAGUE AVENUE



OREGON STREET BETWEEN
BLANCHARD AVENUE AND HAGUE AVENUE



NO	DATE	REVISION	APPROVED
1	06/24/15		
2			
3			
4			

STATE OF TEXAS
112223
ABEL GARCIA
LICENSED PROFESSIONAL ENGINEER
06/24/15
CEA GROUP
F-4564

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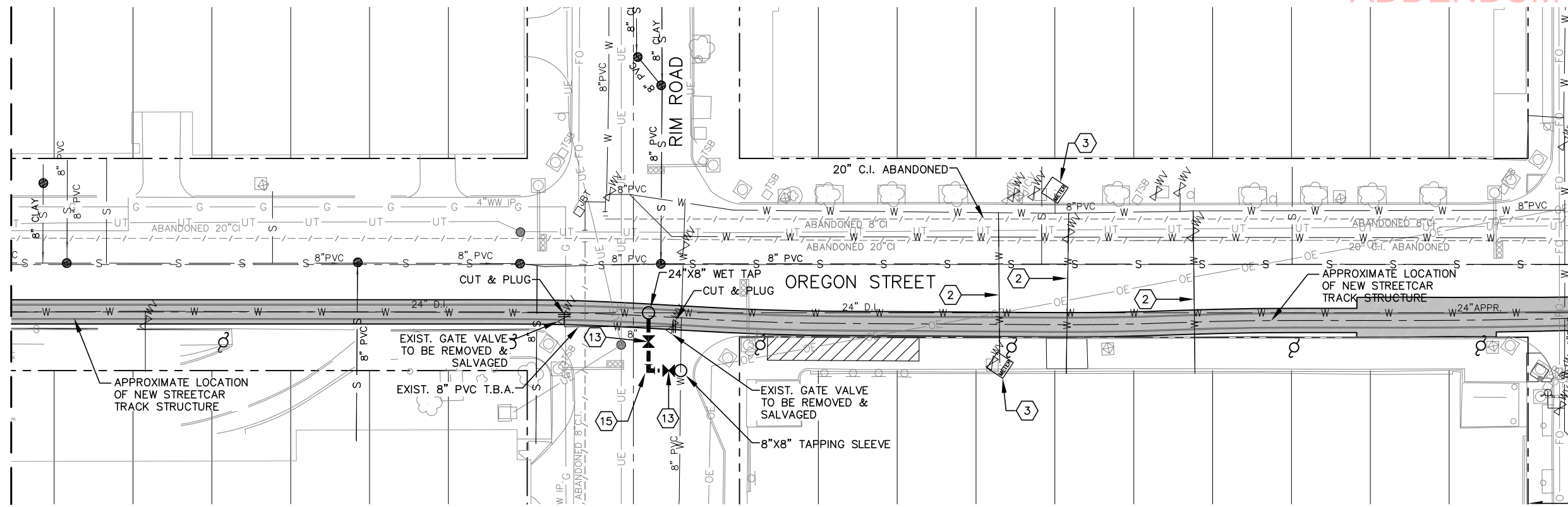
COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

 SHEET 32 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	971	

MATCH LINE SEE SHEET 32

MATCH LINE SEE THIS SHEET



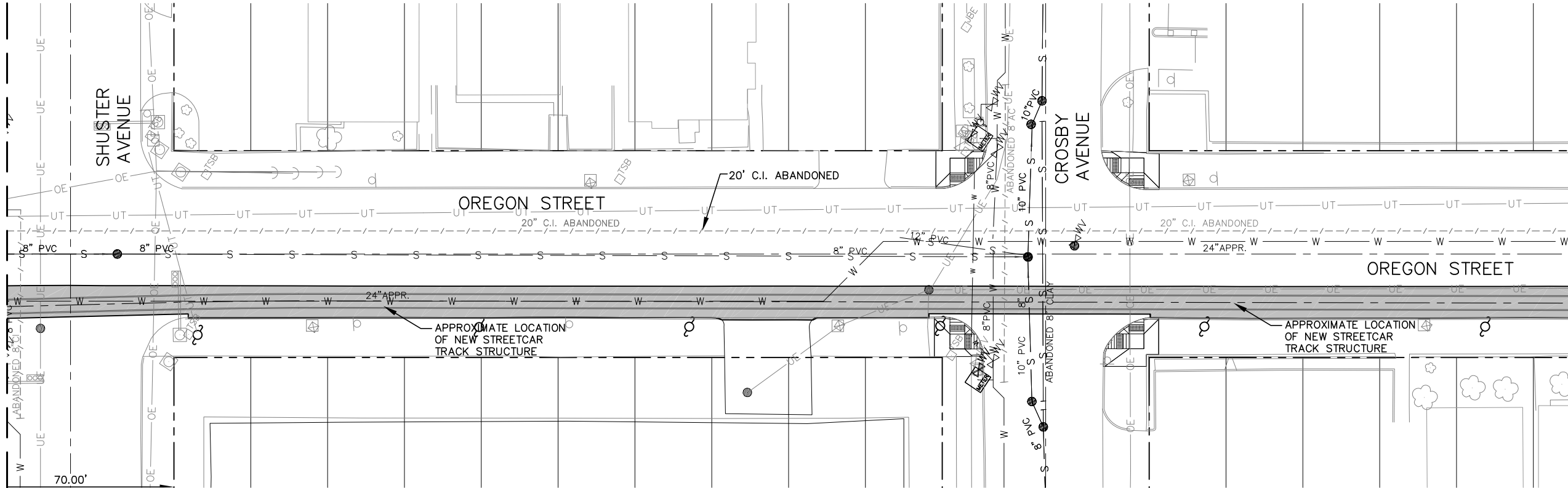
OREGON STREET BETWEEN
RIM AVENUE AND CROSBY AVENUE

- NOTES:**
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 20" C.I. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.



MATCH LINE SEE THIS SHEET

MATCH LINE SEE SHEET 34




OREGON STREET BETWEEN
RIM AVENUE AND CROSBY AVENUE

NO	DATE	REVISION	APPROVED

STATE OF TEXAS
112223
ABEL GARCIA
LICENSED PROFESSIONAL ENGINEER
06/24/15
CEA GROUP
F-4564

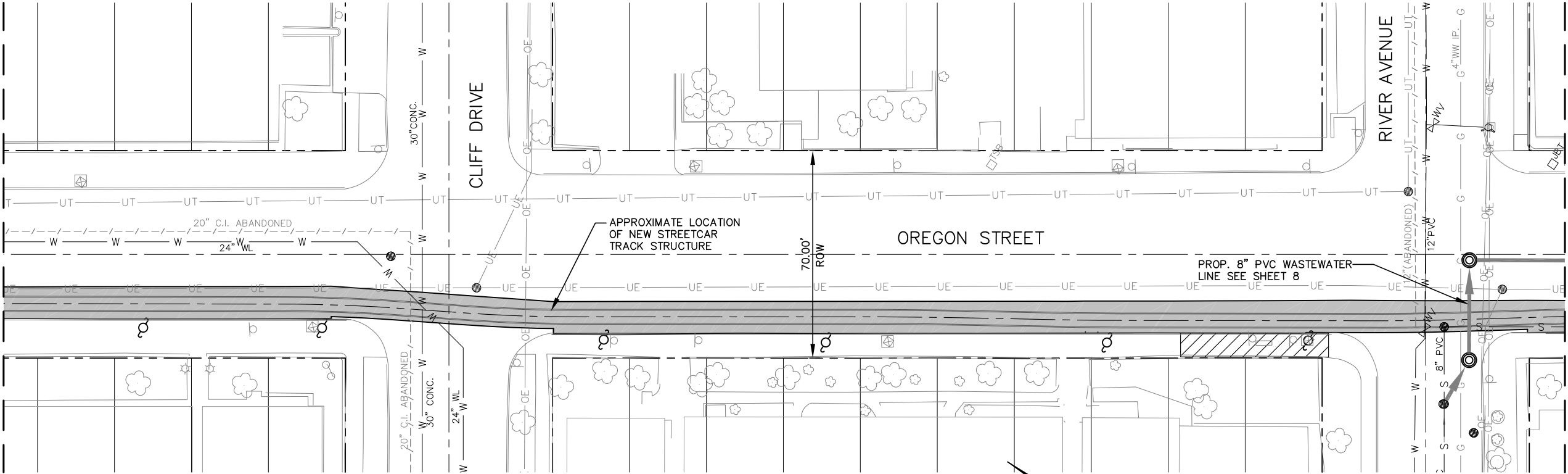
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COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

 SHEET 33 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	972	

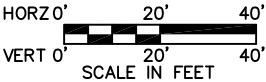
MATCH LINE SEE SHEET 33



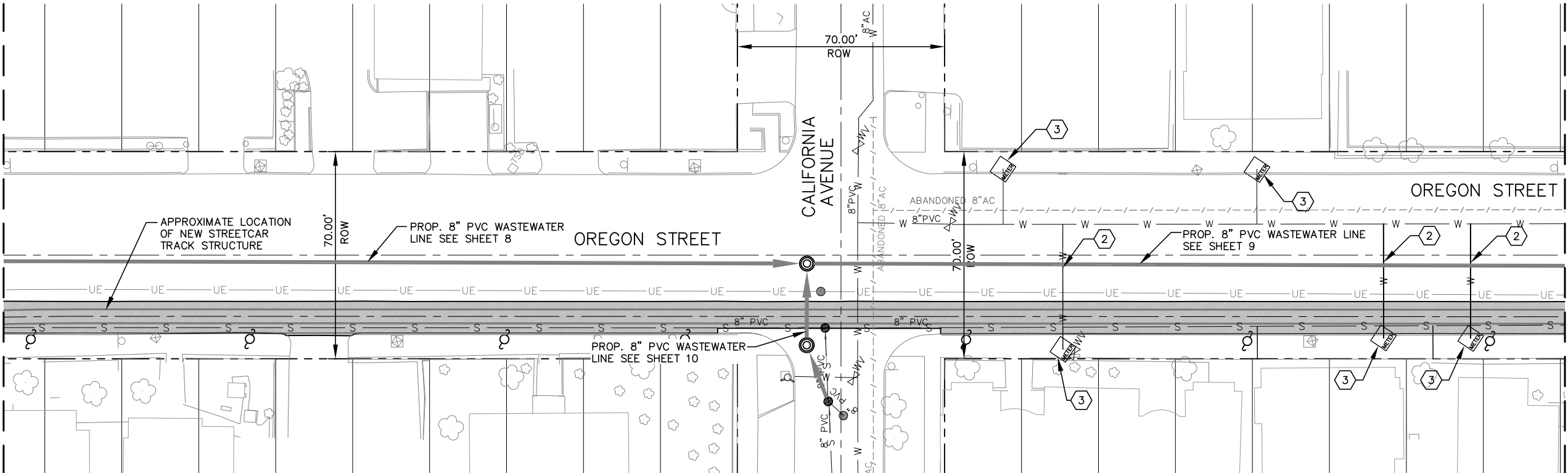
MATCH LINE SEE THIS SHEET

- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 20" C.I. LINE AND 8" A.C. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

OREGON STREET & CLIFF AVENUE TO RIVER AVENUE



MATCH LINE SEE THIS SHEET



MATCH LINE SEE SHEET 35

NO	DATE	REVISION	APPROVED

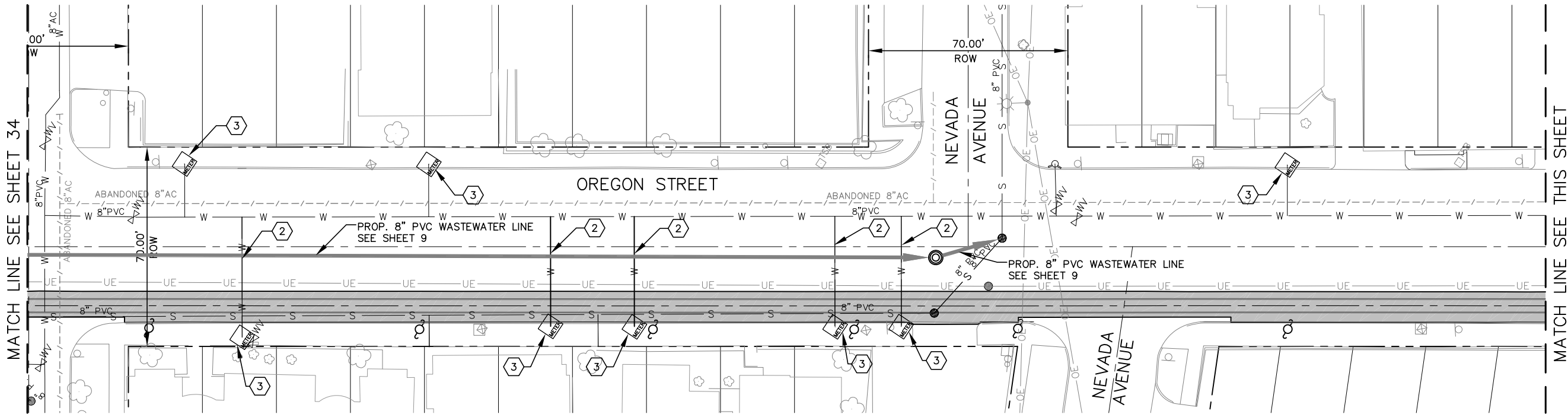
ABEL GARCIA
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06/24/15
CEA GROUP
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REPLACEMENT
AND RELOCATION

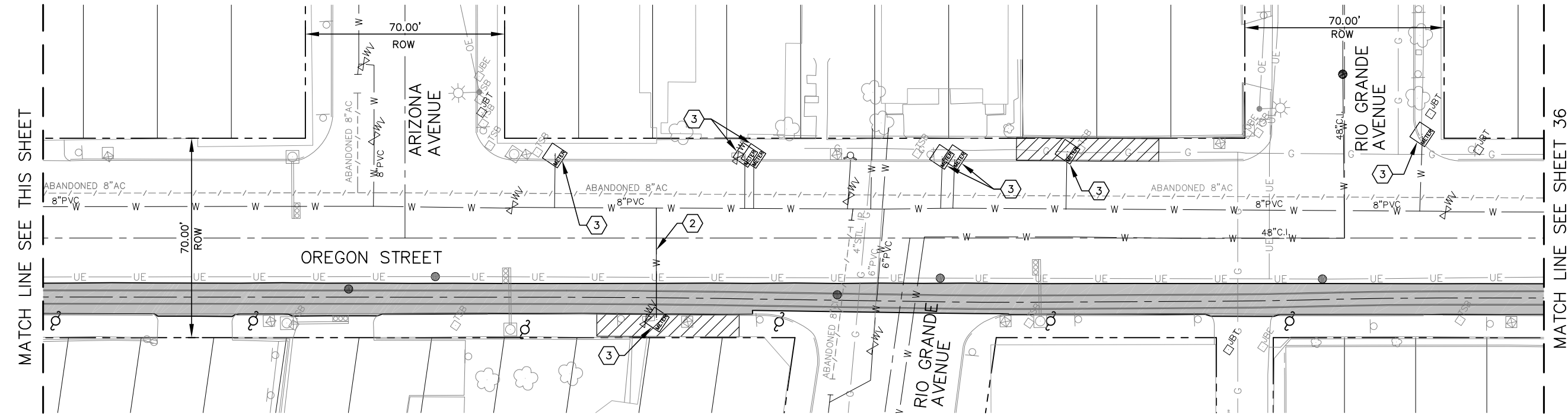
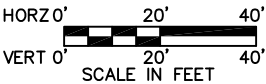
SHEET 34 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	973	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 8" A.C. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

OREGON STREET & NEVADA AVENUE TO GRANDE AVENUE



NO	DATE	REVISION	APPROVED

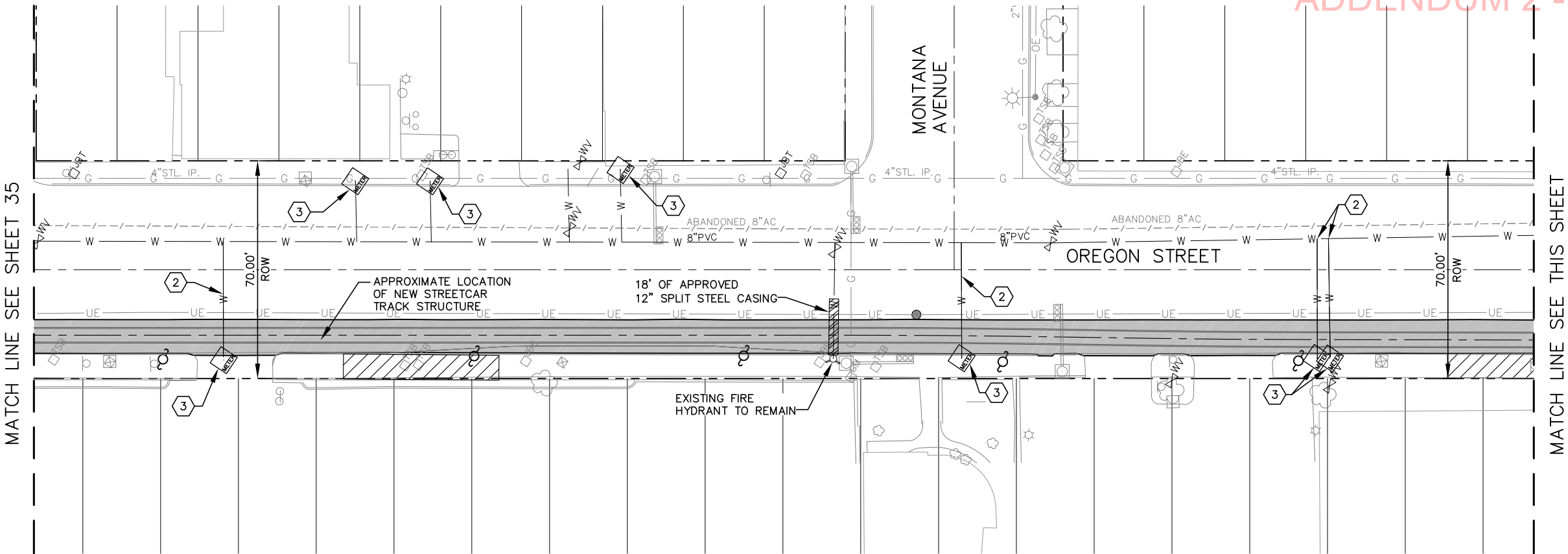
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REPLACEMENT
AND RELOCATION

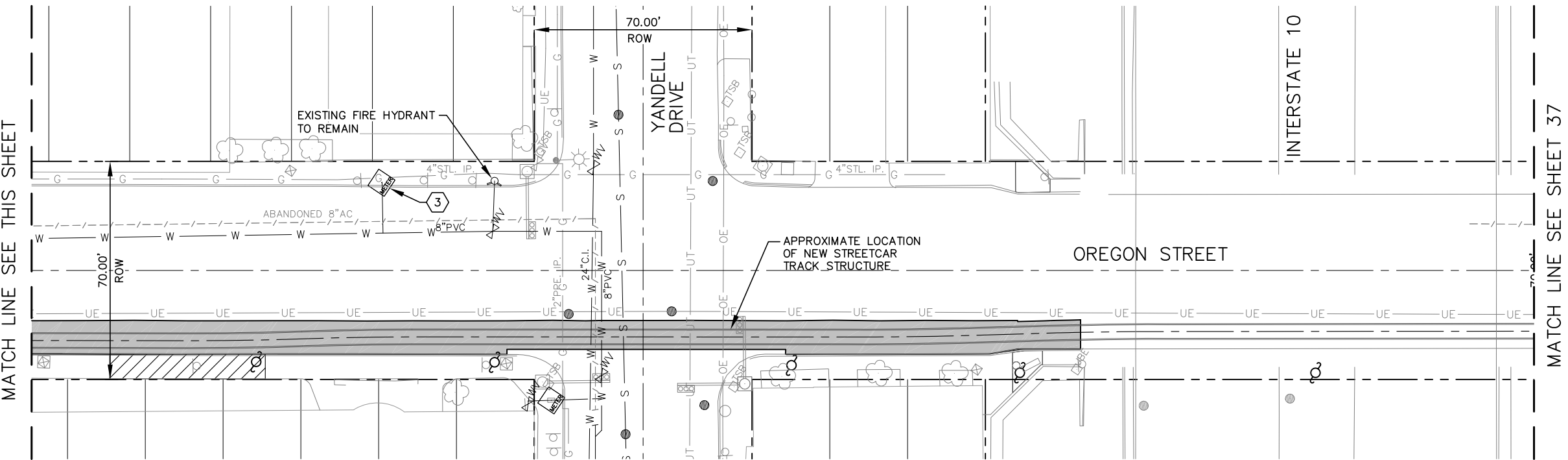
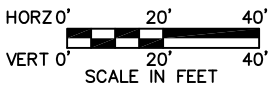
SHEET 35 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	974	



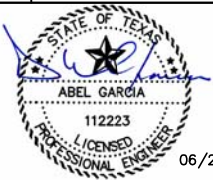
- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 8" A.C. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

OREGON STREET & MONTANA AVENUE



OREGON STREET & YANDELL DRIVE

NO	DATE	REVISION	APPROVED



06/24/15

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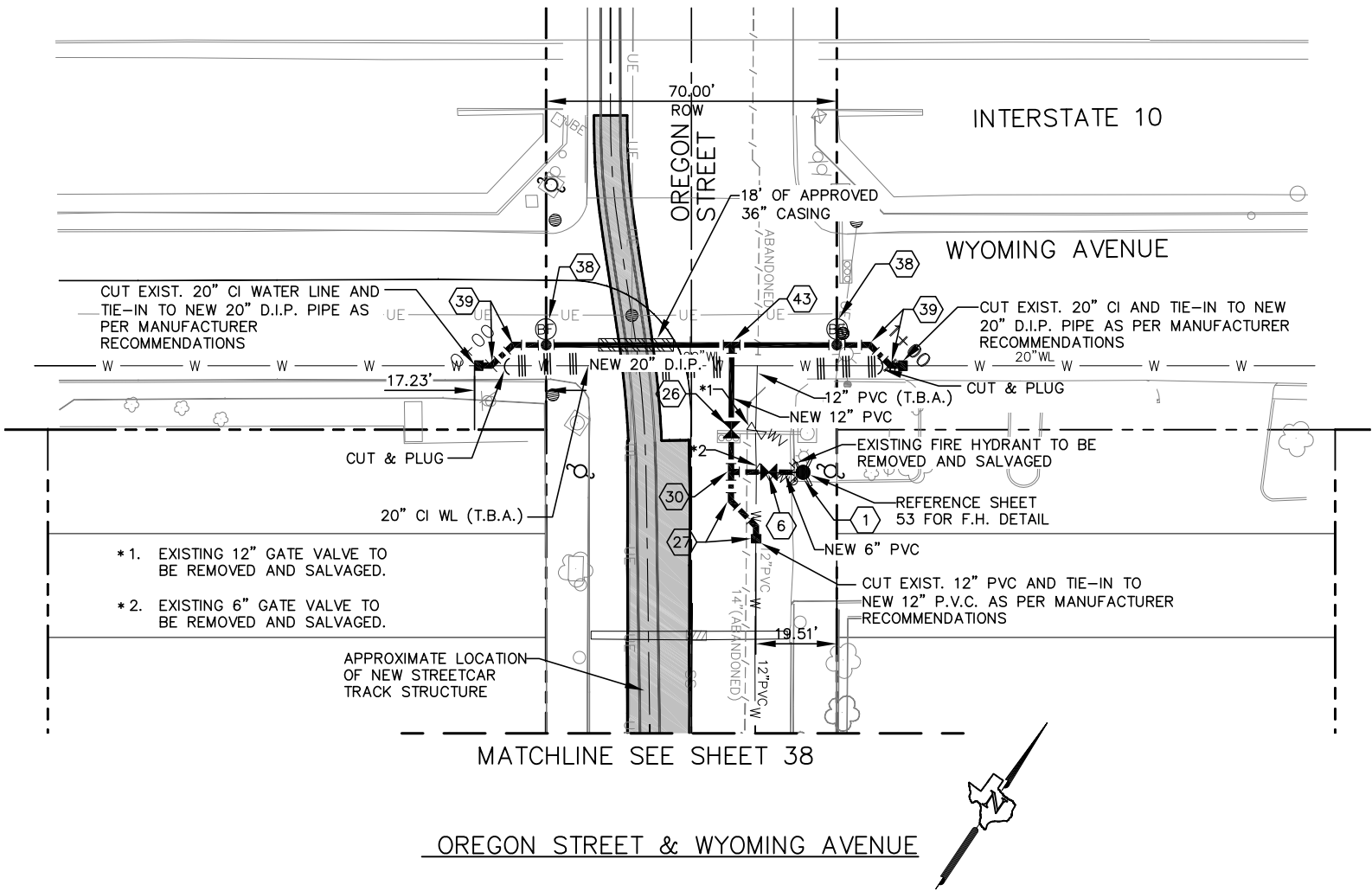
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COEP STREETCAR
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REPLACEMENT
AND RELOCATION



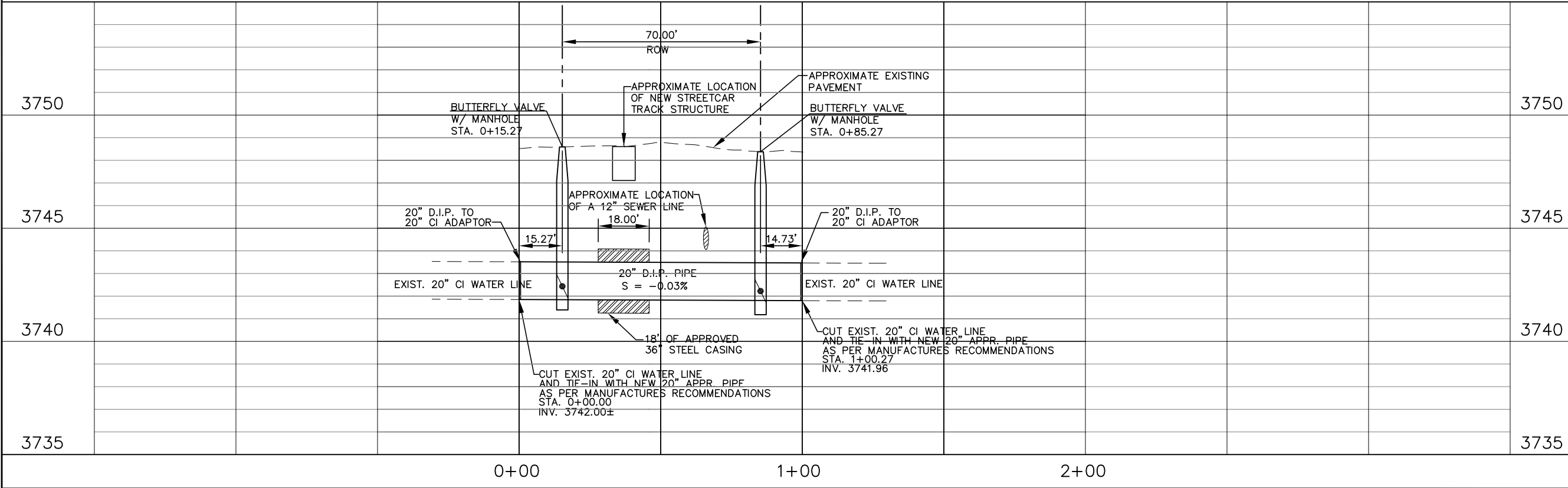
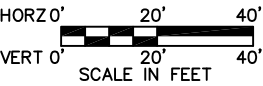
SHEET 36 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	975	



# KEYED NOTES			
1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 14" WATER LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.



NO	DATE	REVISION	APPROVED
1	11/11/14	1	
2	11/11/14	2	
3	11/11/14	3	
4	11/11/14	4	

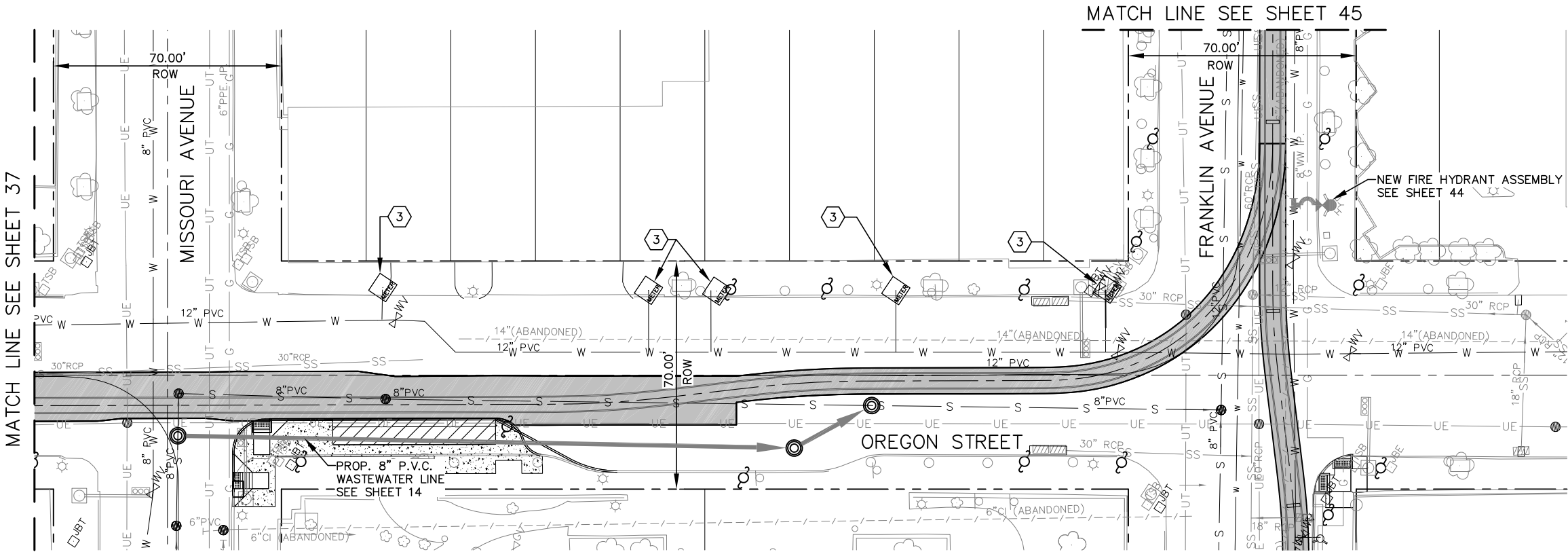
ABEL GARCIA
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06/24/15
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AND RELOCATION

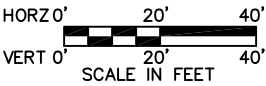
SHEET 37 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	976	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 14" WATER LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

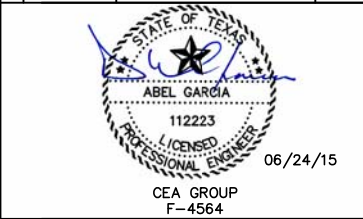
OREGON STREET & MISSOURI AVENUE TO FRANKLIN AVENUE



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

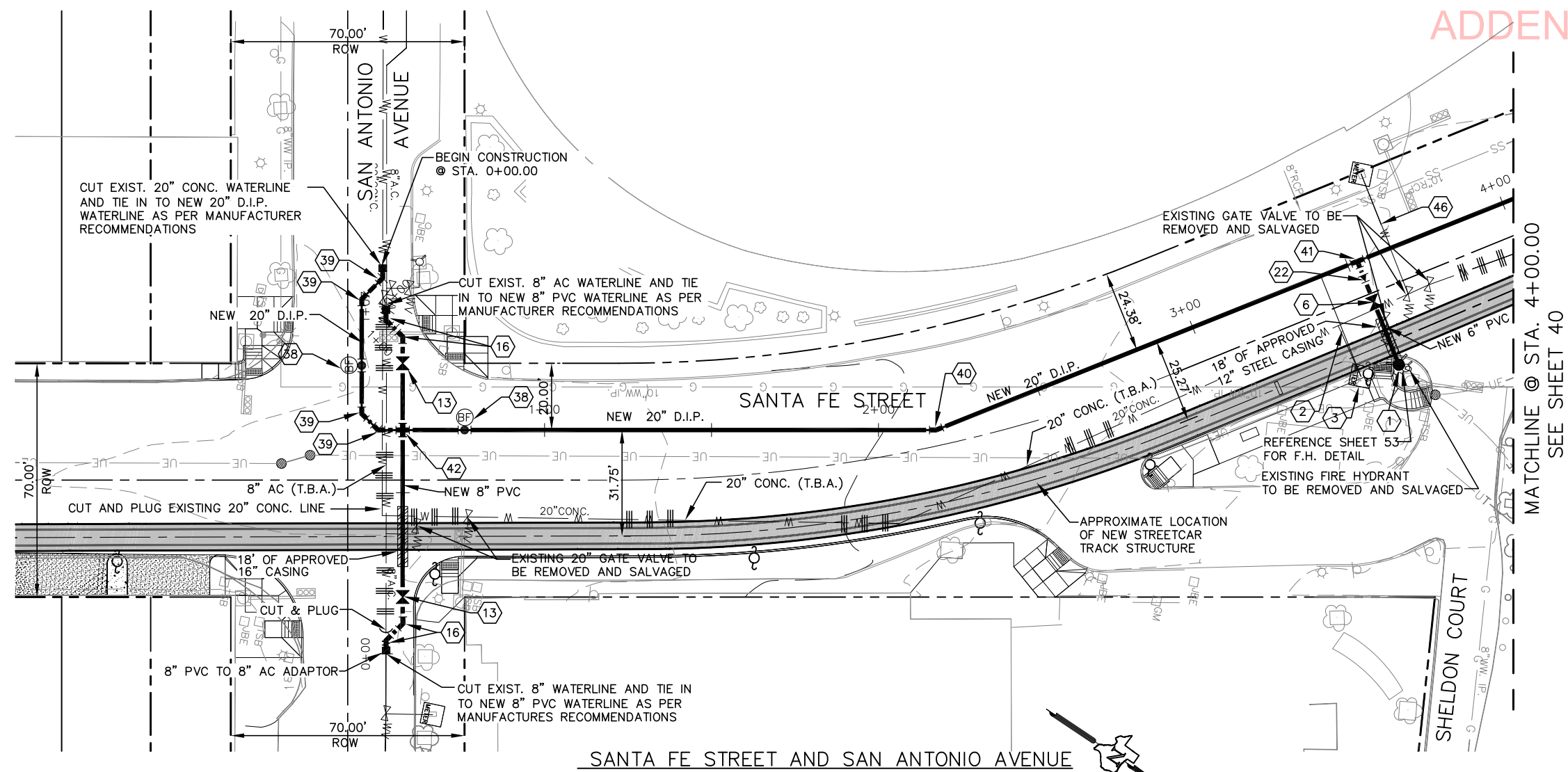
NO	DATE	REVISION	APPROVED



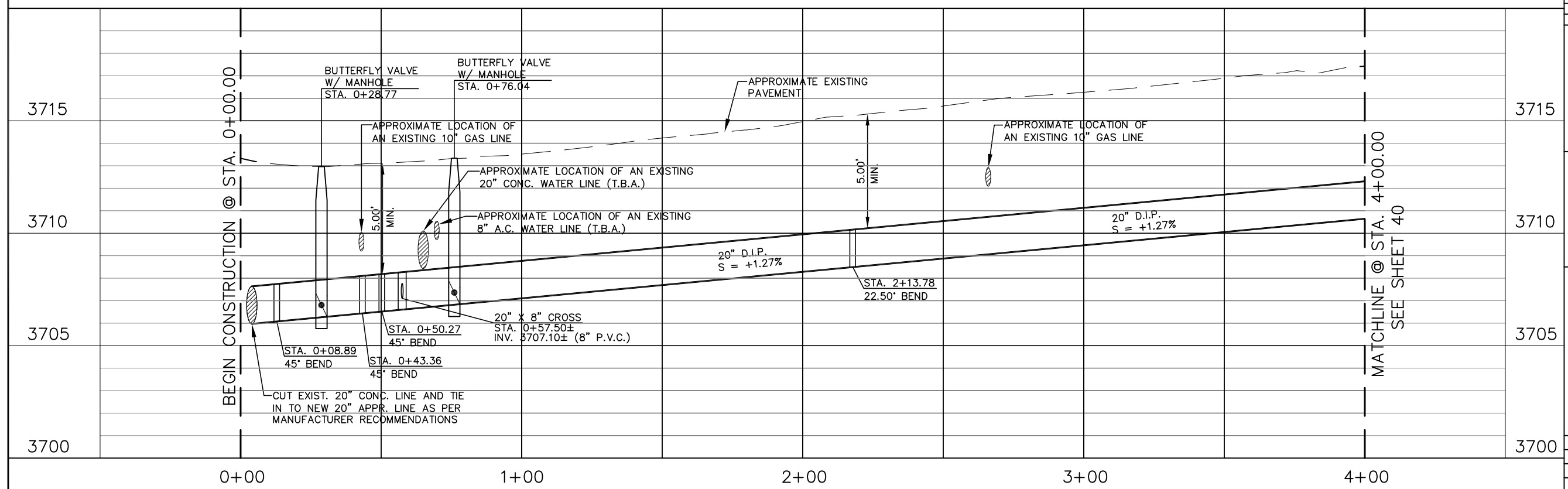
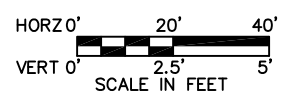
COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION



SHEET 38 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST		COUNTY	SHEET NO.
EL PASO		EL PASO	977



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING 20" CONC. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.



NO	DATE	REVISION	APPROVED
1	06/24/15		

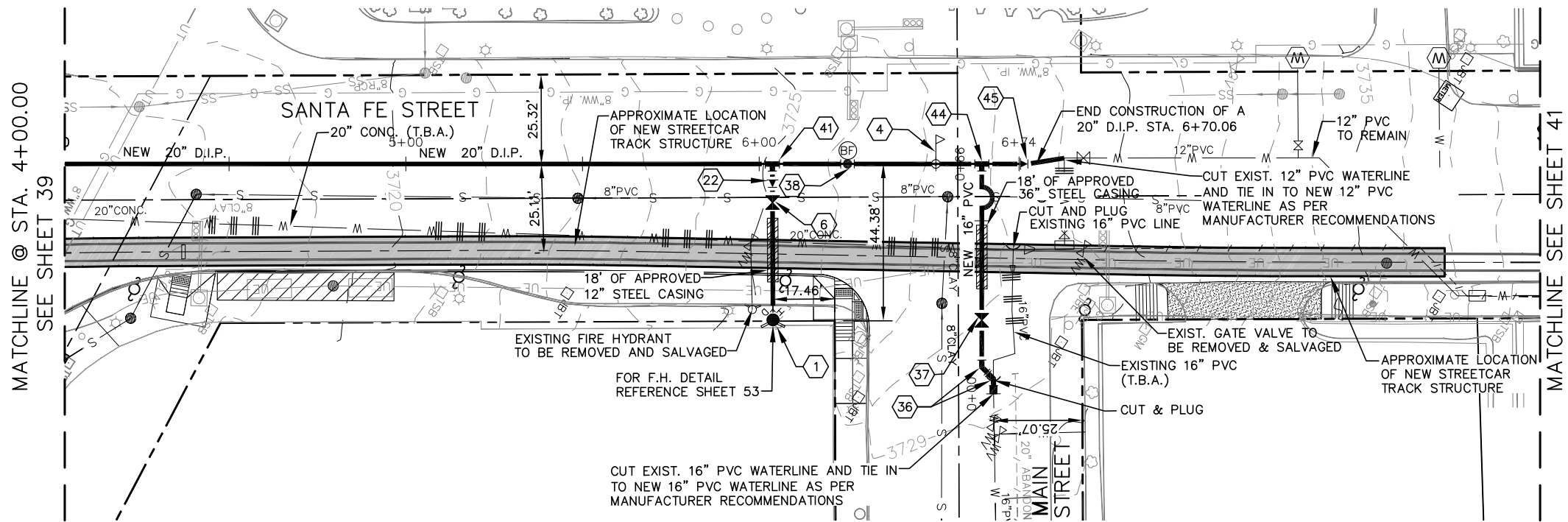
ABEL GARCIA
112223
LICENSED PROFESSIONAL ENGINEER
06/24/15
CEA GROUP
F-4564

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4712 Woodrow Bean, Ste. F El Paso, TX 79924
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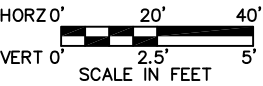
COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

SHEET 39 of 52

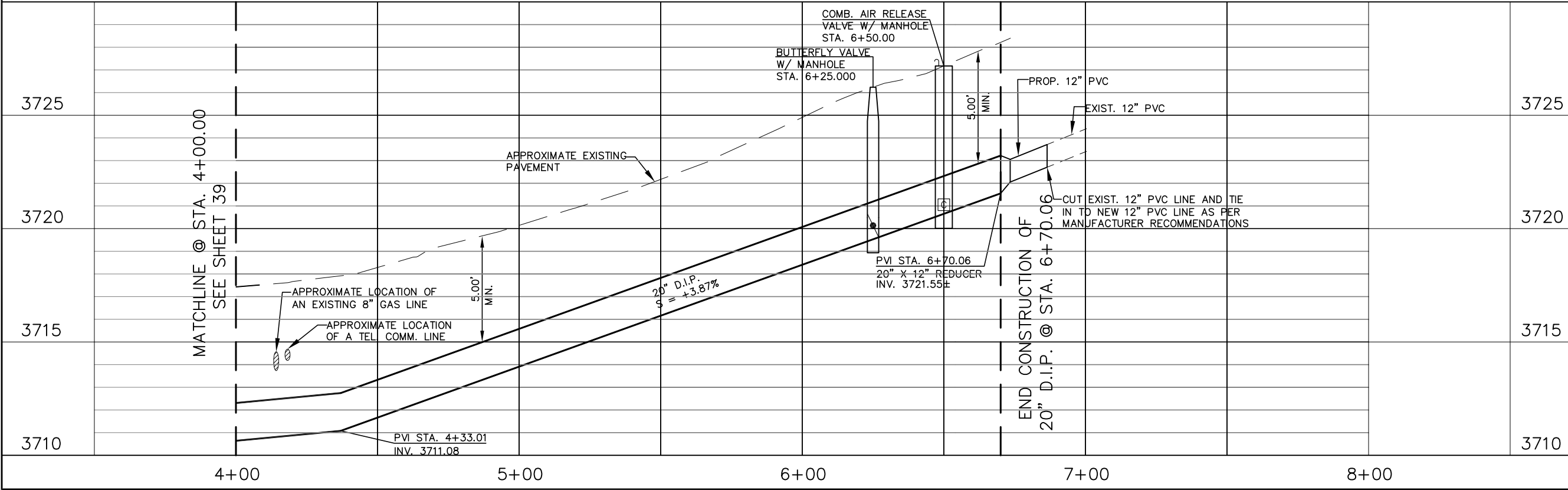
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	978	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING 20" CONC. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.



SANTA FE STREET AND MAIN STREET



NO	DATE	REVISION	APPROVED

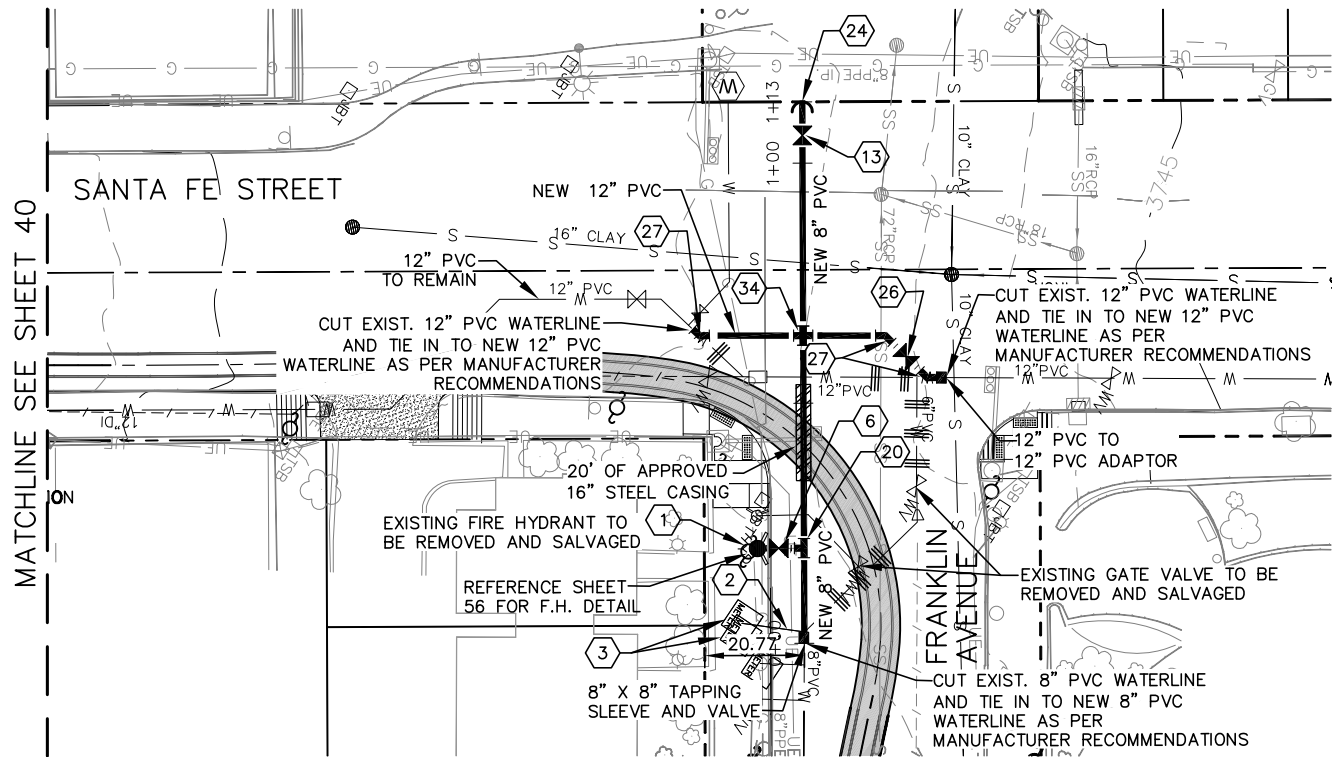
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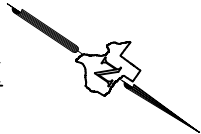
COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

SHEET 40 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	979	



SANTA FE STREET AND MAIN DRIVE TO FRANKLIN AVENUE



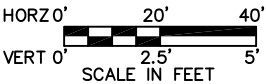
NOTES:

- 1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
- 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
- 3. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
- 4. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.


KEYED NOTES

1	NEW FIRE HYDRANT
2	NEW WATER SERVICE
3	EXIST. WATER METER
4	NEW C.A.R.V. W/ MH
5	NEW 6" TEE
6	NEW 6" GATE VALVE
7	NEW 6" 90° ELBOW
8	NEW 6" 45° ELBOW
9	NEW 6" VERTICAL ELBOW
10	NEW 6" WET TAP
11	NEW 6" X 2" REDUCER
12	NEW 8" TEE
13	NEW 8" GATE VALVE
14	NEW 8" CROSS
15	NEW 8" 90° ELBOW
16	NEW 8" 45° ELBOW
17	NEW 8" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW
19	NEW 8" VERTICAL ELBOW
20	NEW 8" X 6" TEE
21	NEW 8" X 6" CROSS
22	NEW 8" X 6" REDUCER
23	NEW 8" X 4" REDUCER

24	NEW 8" PLUG
25	NEW 12" TEE
26	NEW 12" GATE VALVE
27	NEW 12" 45° ELBOW
28	NEW 12" 11.25° ELBOW
29	NEW 12" VERTICAL ELBOW
30	NEW 12" X 6" TEE
31	NEW 12" X 6" CROSS
32	NEW 12" X 6" REDUCER
33	NEW 12" X 8" TEE
34	NEW 12" X 8" CROSS
35	NEW 12" X 8" REDUCER
36	NEW 16" 45° ELBOW
37	NEW 16" BUTTERFLY VALVE
38	NEW 20" BUTTERFLY VALVE
39	NEW 20" 45° ELBOW
40	NEW 20" 22.5° ELBOW
41	NEW 20" X 8" TEE
42	NEW 20" X 8" CROSS
43	NEW 20" X 12" TEE
44	NEW 20" X NEW 16" TEE
45	NEW 20" X 12" REDUCER
46	NEW FIRE LINE EXTENSION



NO	DATE	REVISION	APPROVED



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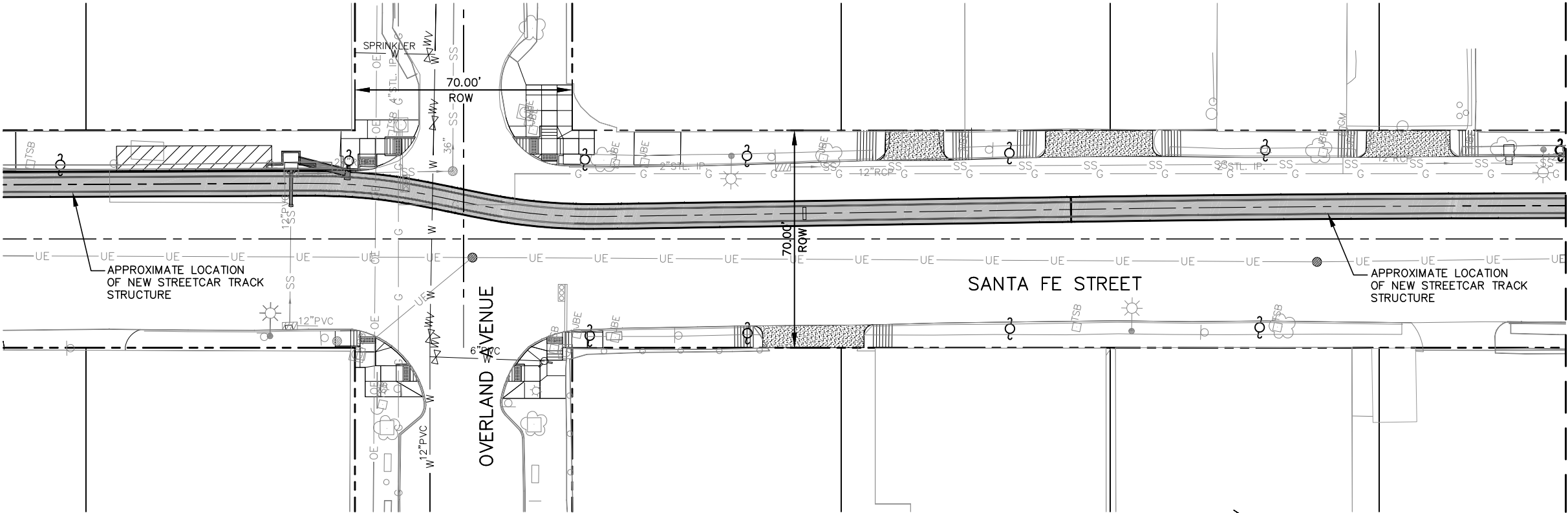
TEXAS REGISTERED ENGINEERING FIRM F-4564

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REPLACEMENT
AND RELOCATION



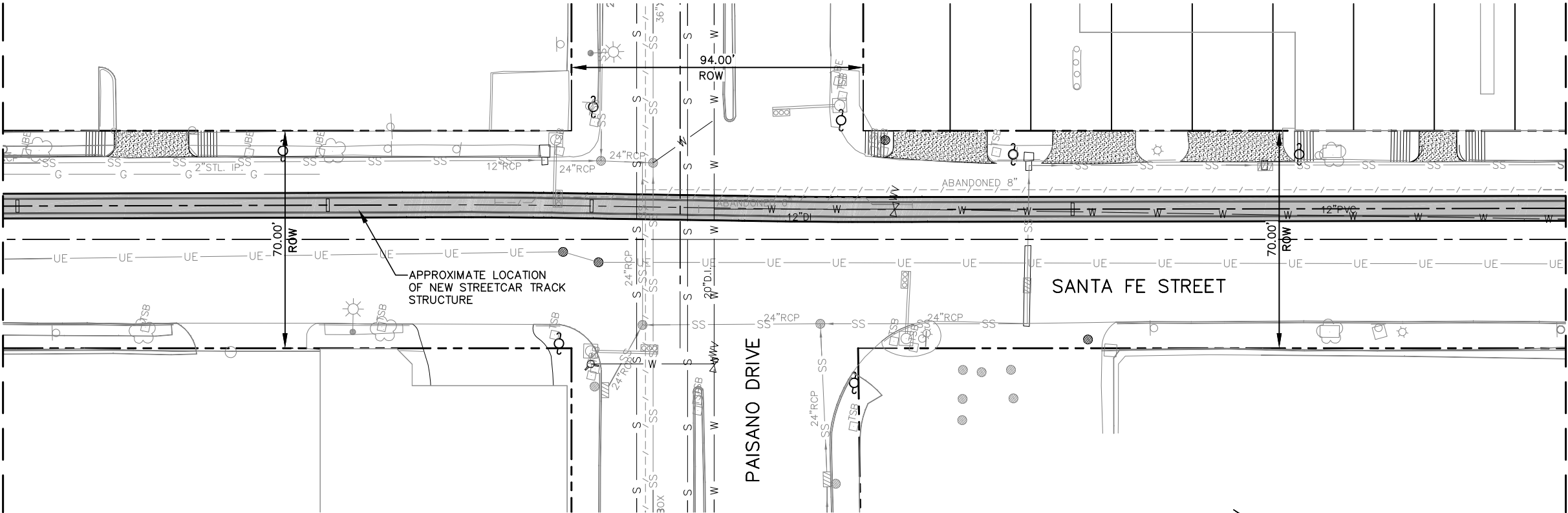
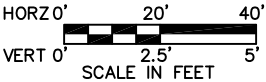
SHEET 41 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST		COUNTY	SHEET NO.
EL PASO		EL PASO	980



MATCHLINE SEE THIS SHEET

- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 8" WATER LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

SANTA FE STREET AND OVERLAND AVENUE



MATCHLINE SEE THIS SHEET

MATCHLINE SEE SHEET 43

SANTA FE STREET AND PAISANO DRIVE

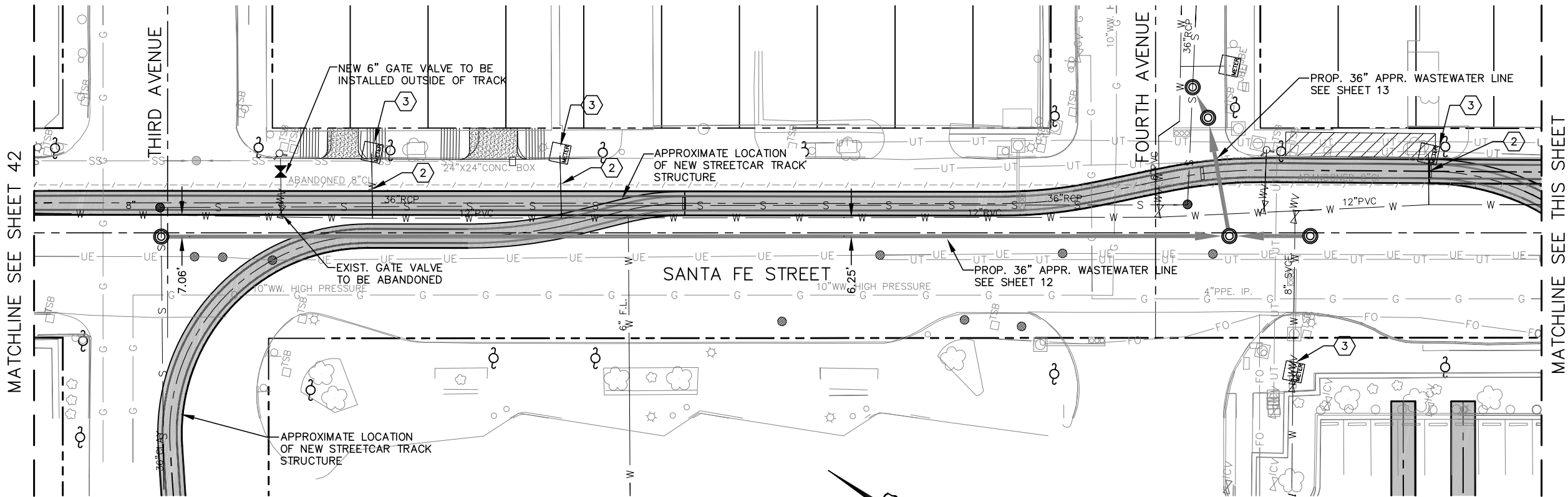
NO	DATE	REVISION	APPROVED
1	06/24/15		
2			
3			
4			

STATE OF TEXAS
112223
ABEL GARCIA
LICENSED PROFESSIONAL ENGINEER
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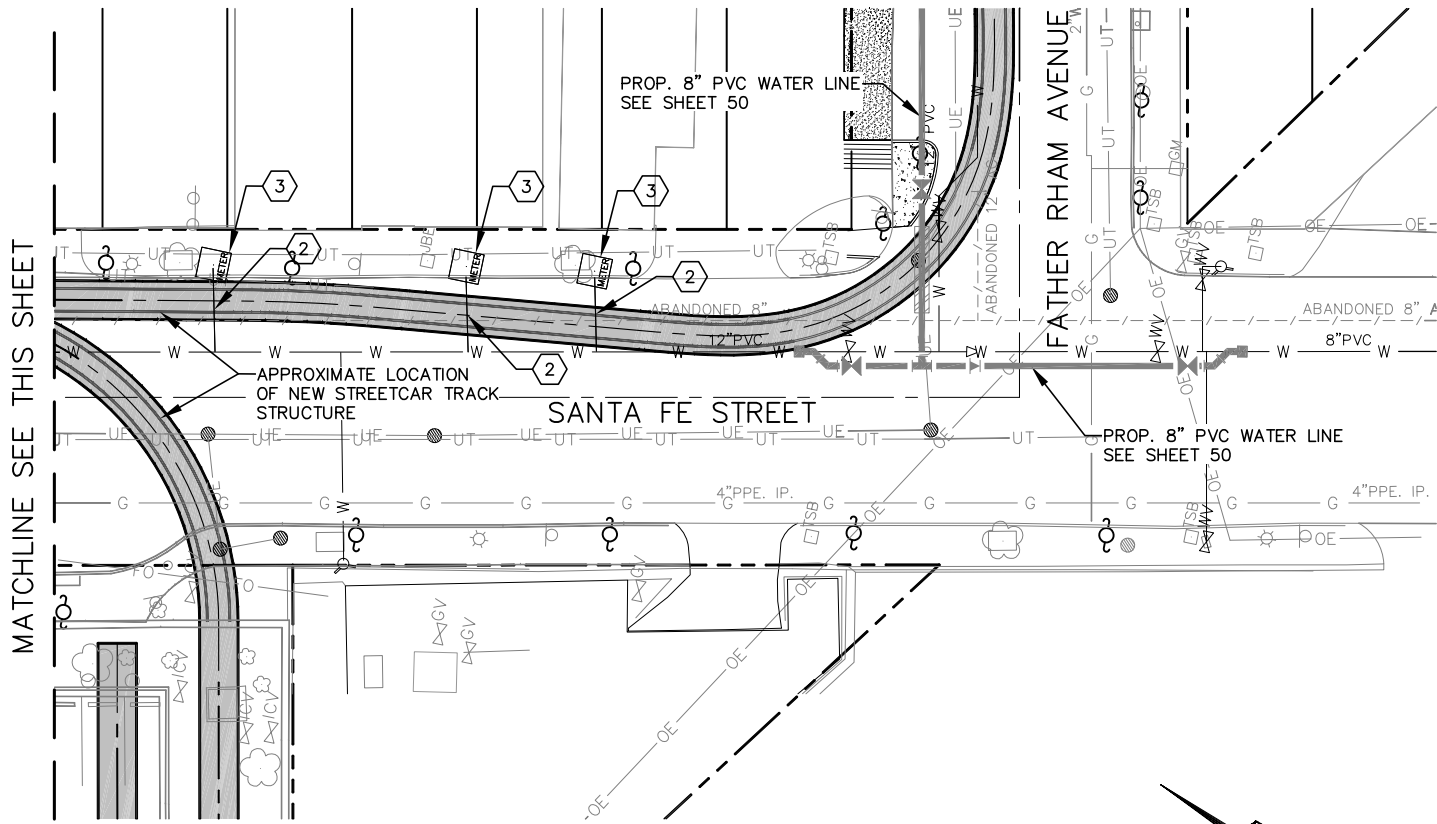
COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

SHEET 42 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	981	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 8" C.I. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

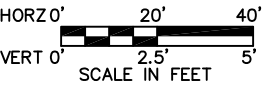
SANTA FE STREET AND THIRD AVENUE TO FOURTH AVENUE



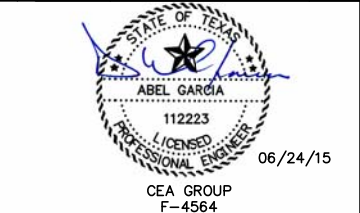
SANTA FE STREET AND FATHER RHAME AVENUE

KEYED NOTES


1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



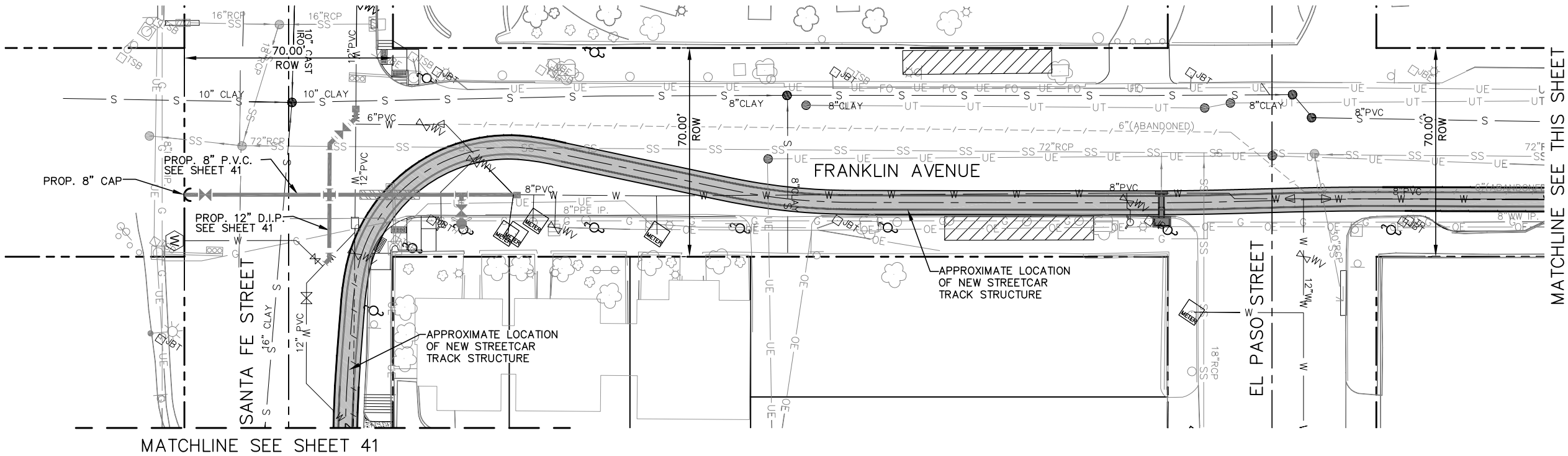
NO	DATE	REVISION	APPROVED



COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

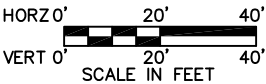
 SHEET 43 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	982	



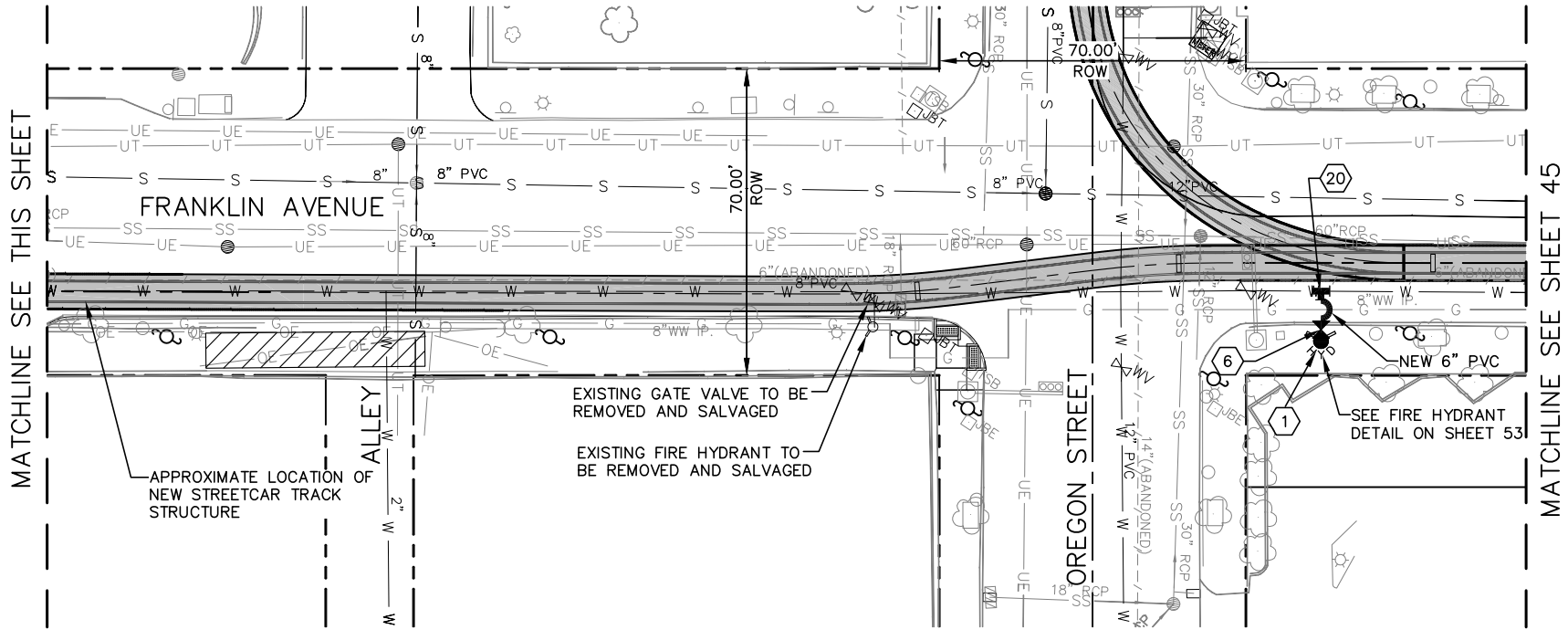
- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 6" WATER LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

FRANKLIN AVENUE AND SANTA FE STREET TO EL PASO STREET



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



FRANKLIN AVENUE AND OREGON STREET

NO	DATE	REVISION	APPROVED

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112223
06/24/15
CEA GROUP
F-4564

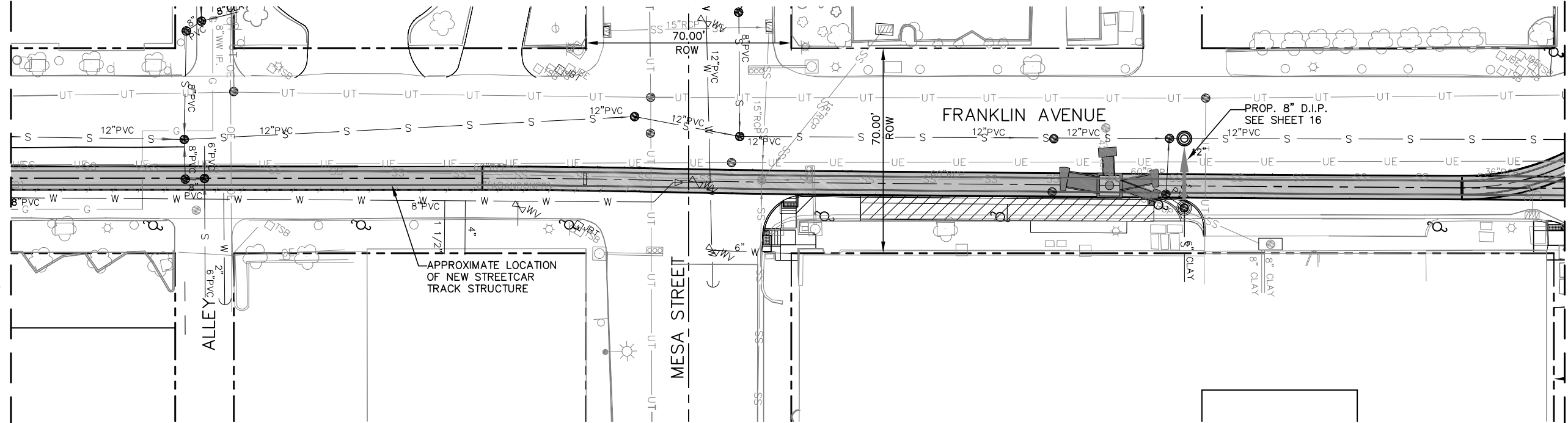
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AND RELOCATION

SHEET 44 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	983	

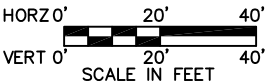
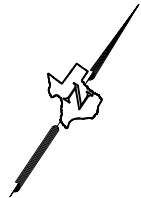
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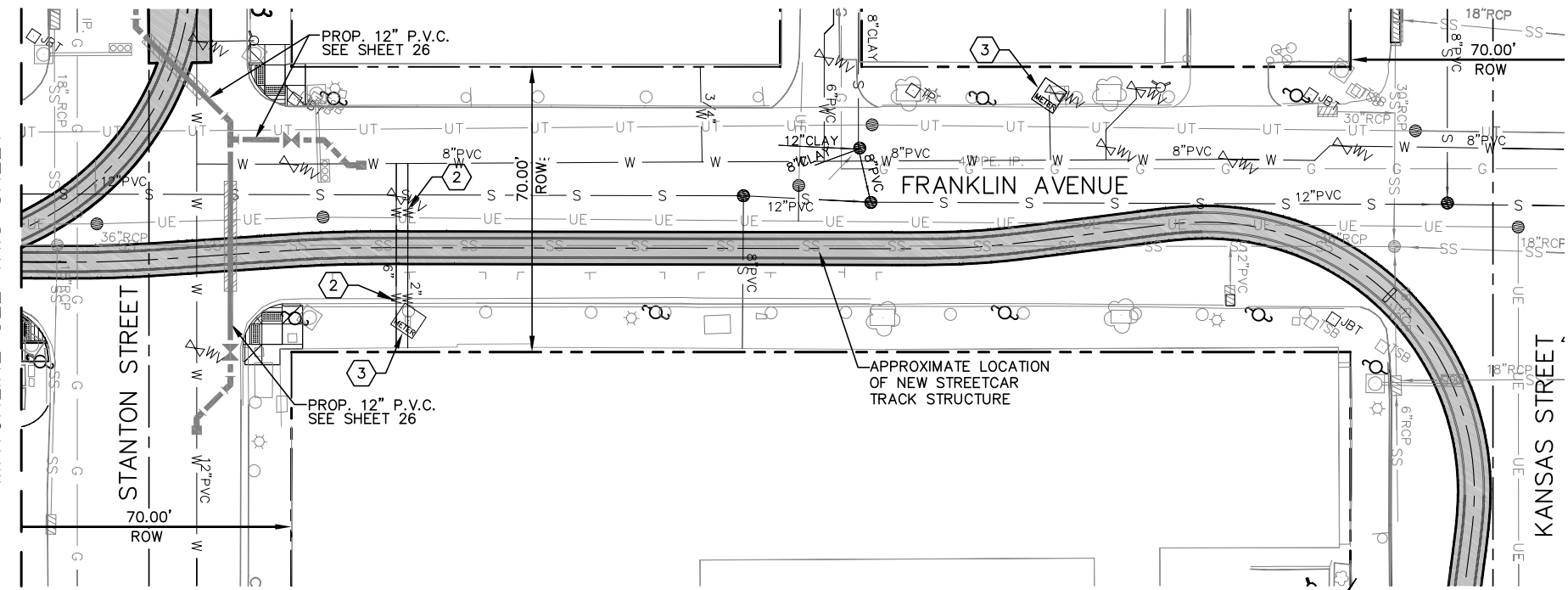
MATCHLINE SEE THIS SHEET

- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 6" WATER LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

FRANKLIN AVENUE AND OREGON STREET



MATCHLINE SEE THIS SHEET



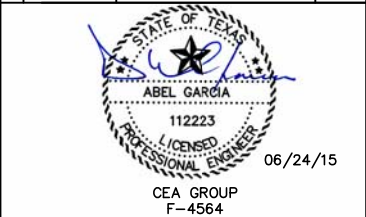
FRANKLIN AVENUE AND STANTON STREET TO KANSAS STREET



KEYED NOTES

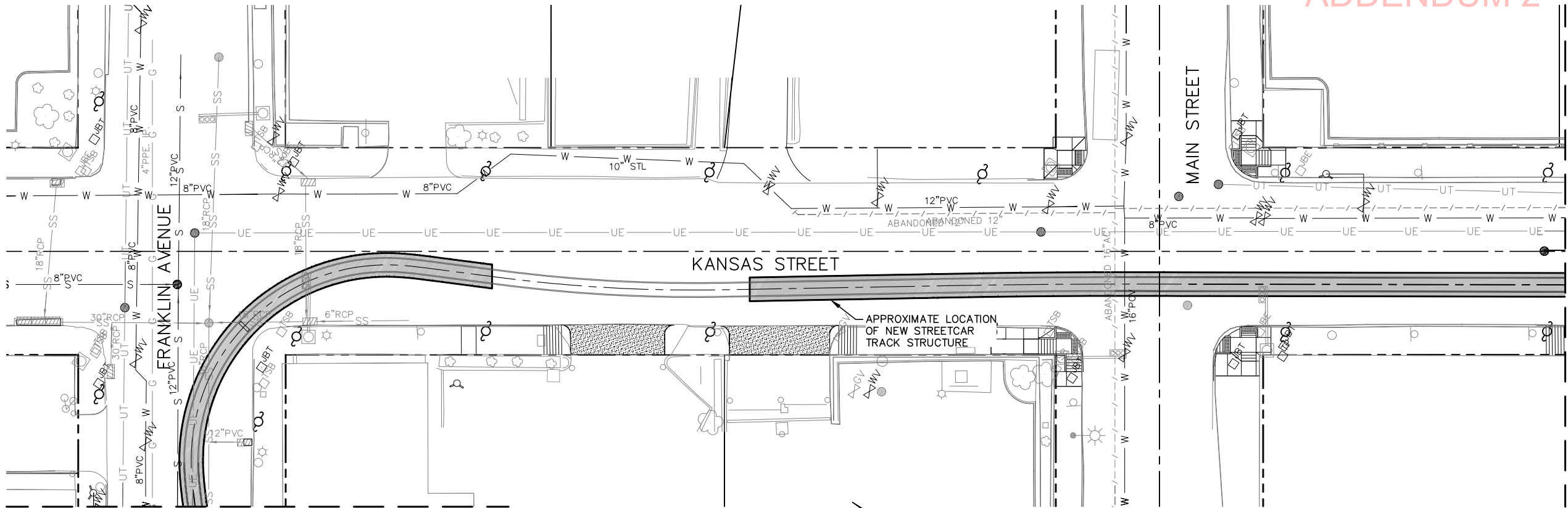
1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
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14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

NO	DATE	REVISION	APPROVED



COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION

SHEET 45 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	984	

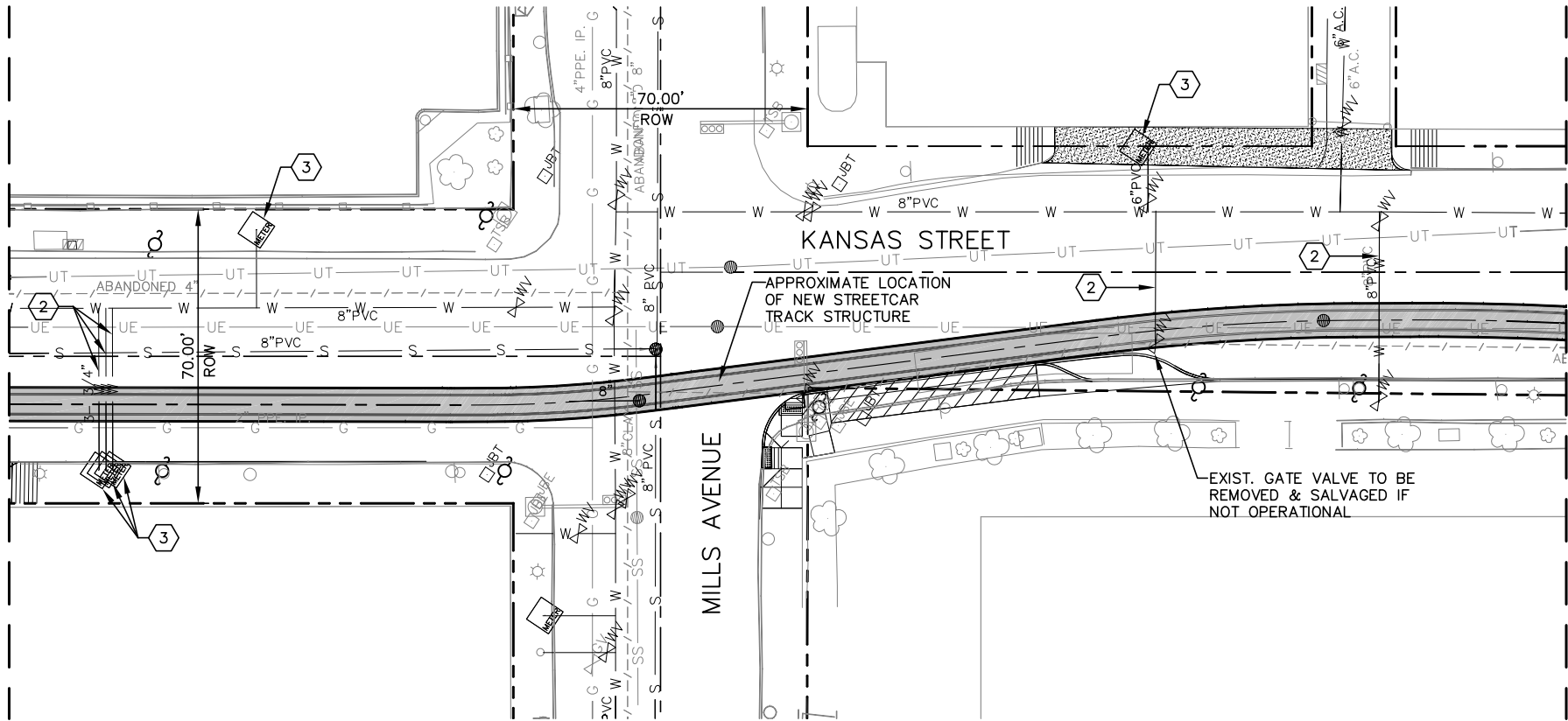
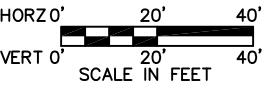


- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 12" WATER LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

MATCHLINE SEE THIS SHEET

MATCHLINE SEE SHEET 45

KANSAS STREET AND MAIN STREET



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION

NO	DATE	REVISION	APPROVED



CEA GROUP
F-4564



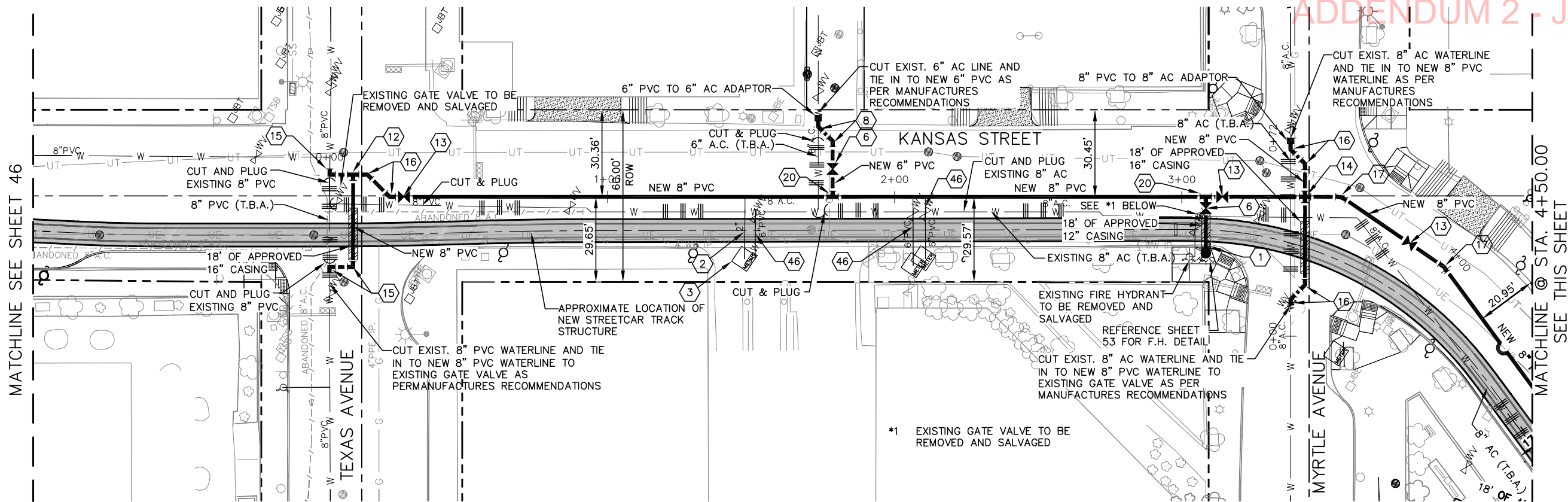
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TEXAS REGISTERED ENGINEERING FIRM F-4564
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION



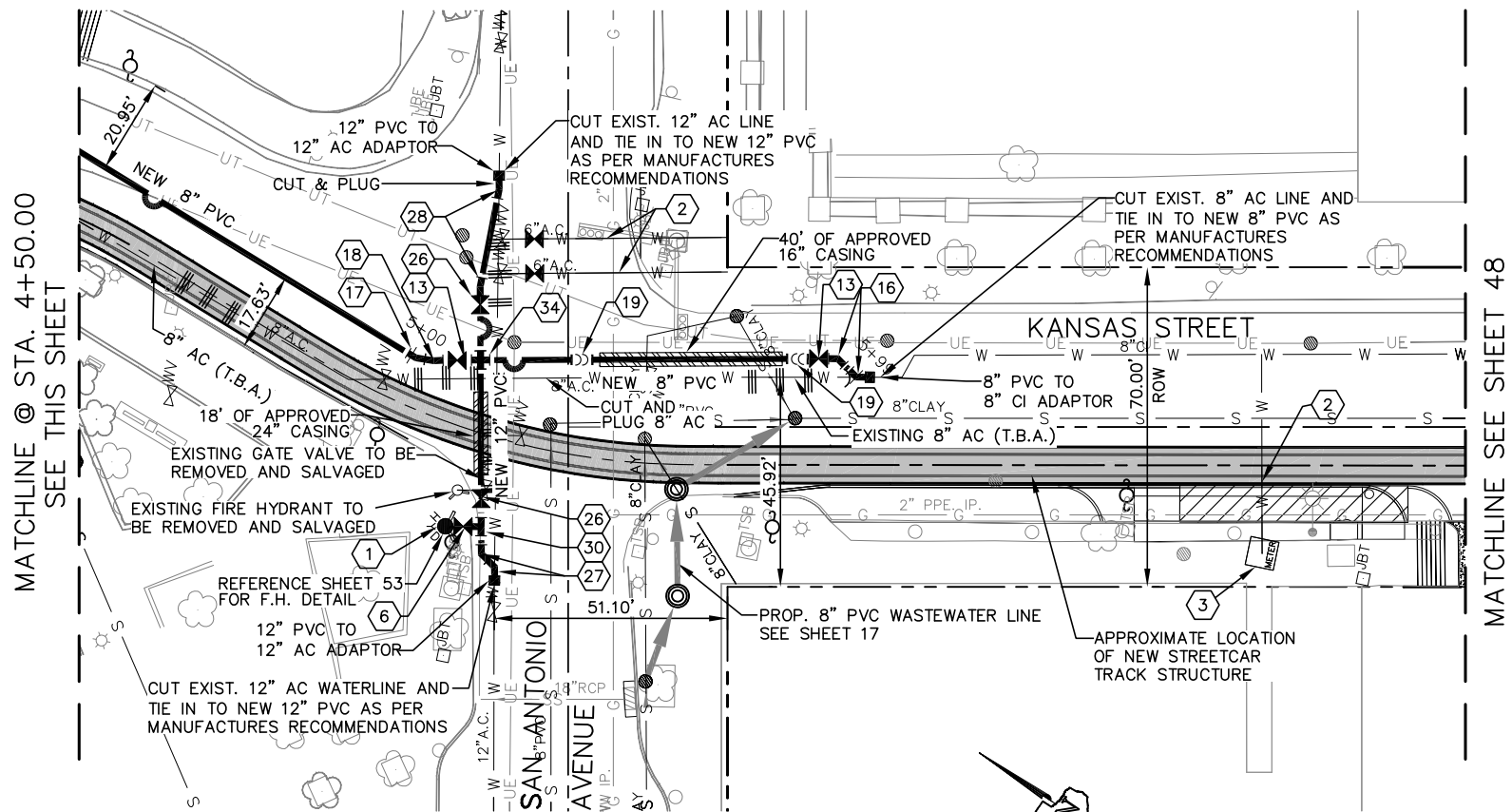
SHEET 46 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	985	



- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING ABANDONED 8" A.C. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

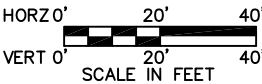
KANSAS STREET AND TEXAS AVENUE TO MYRTLE AVENUE



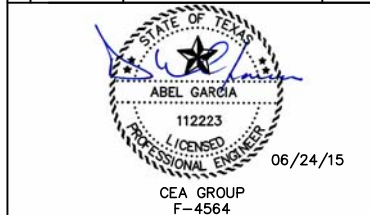
KANSAS STREET AND SAN ANTONIO AVENUE

KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25' ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



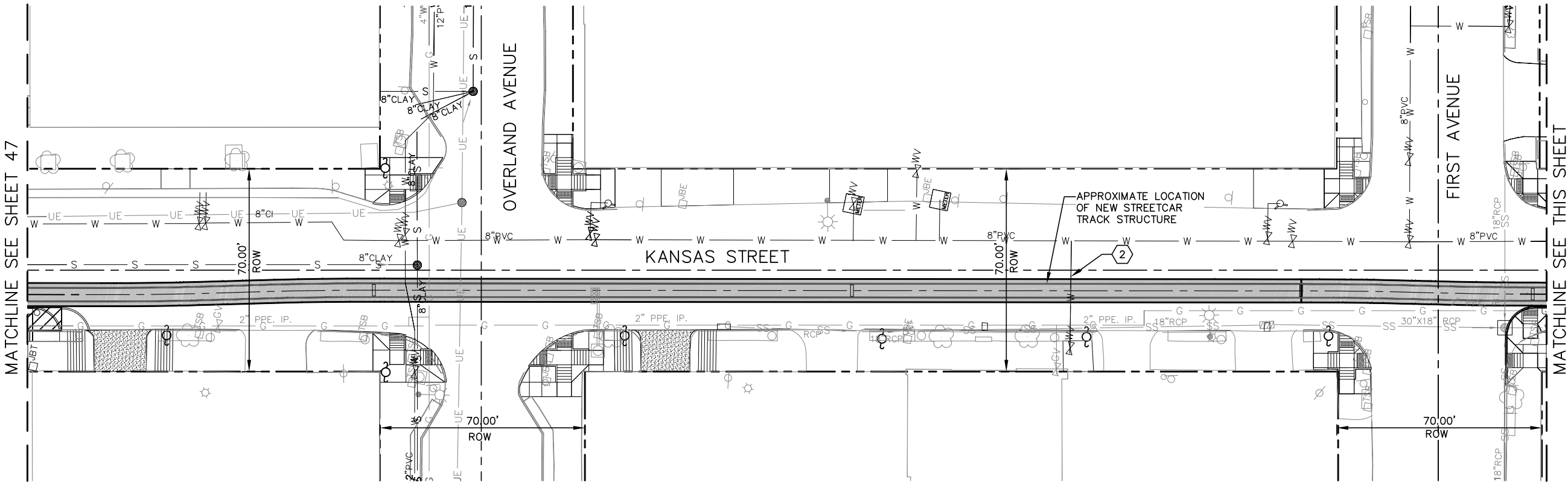
NO	DATE	REVISION	APPROVED



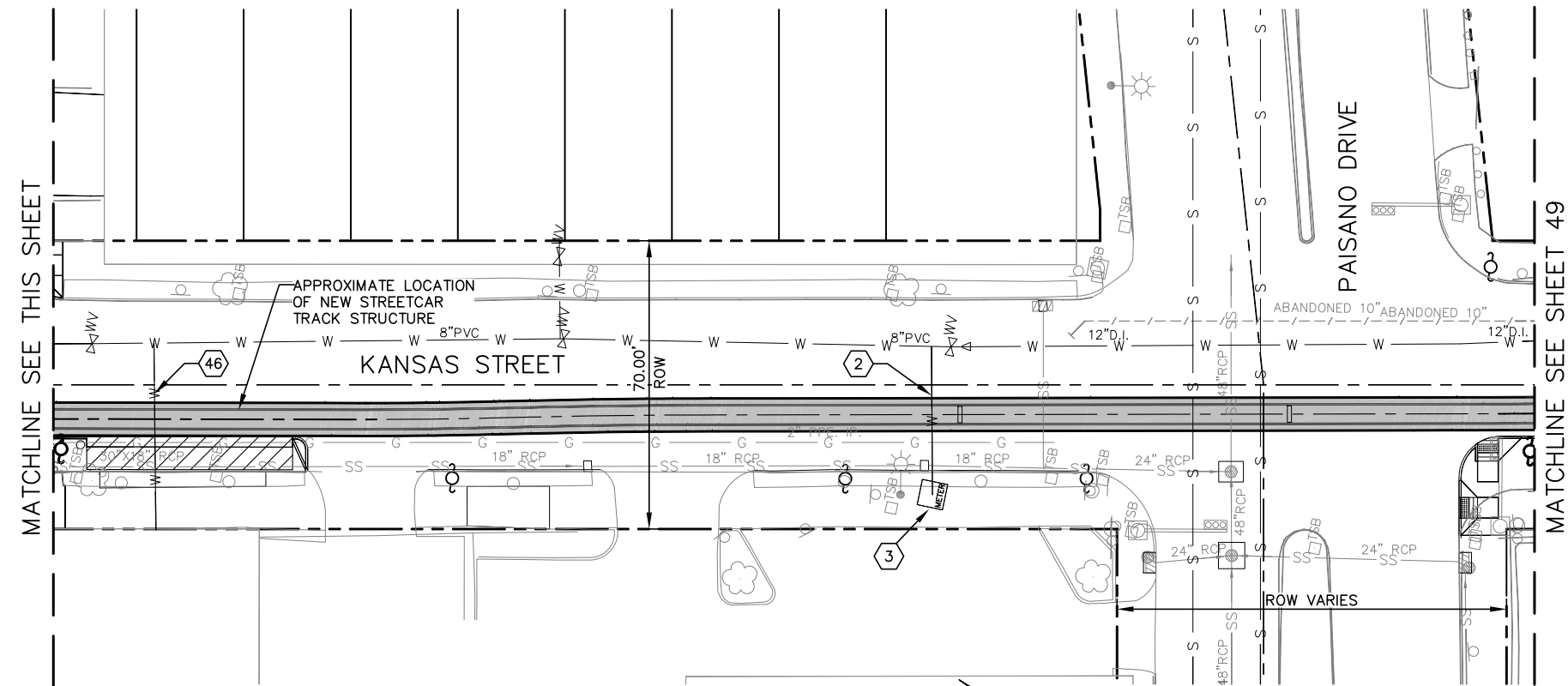
COEP STREETCAR
POTABLE WATER
REPLACEMENT
AND RELOCATION



SHEET 47 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	986	



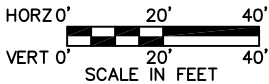
KANSAS STREET AND OVERLAND AVENUE TO FIRST AVENUE



KANSAS STREET AND PAISANO DRIVE

KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



NO	DATE	REVISION	APPROVED

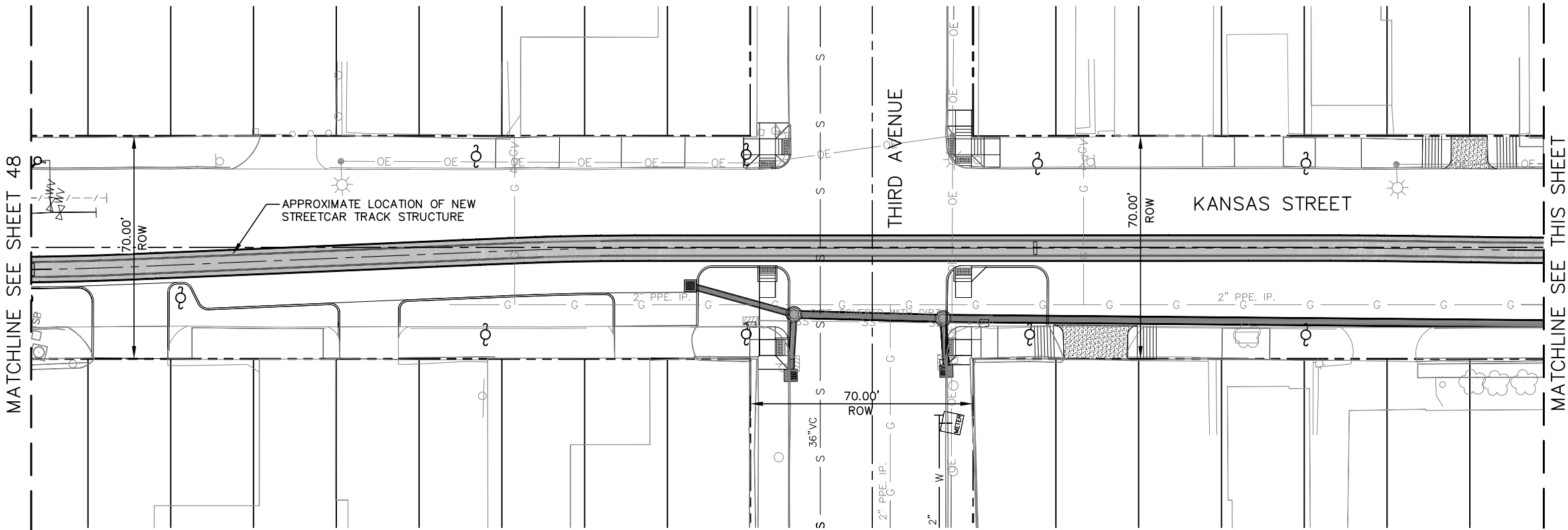
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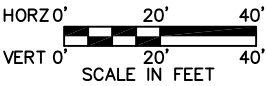
SHEET 48 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	987	



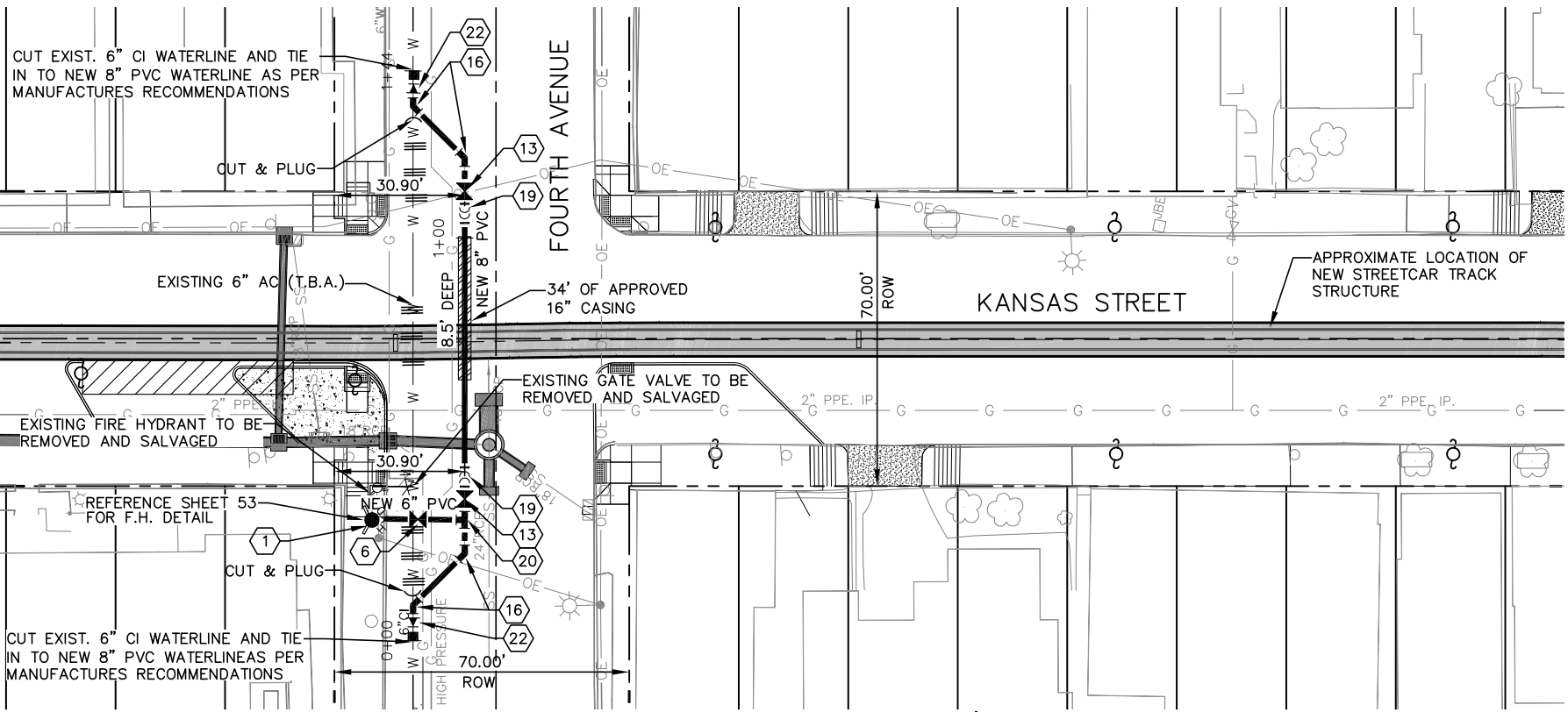
- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING 6" A.C. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

KANSAS STREET AND THIRD AVENUE



KEYED NOTES

1	NEW FIRE HYDRANT	24	NEW 8" PLUG
2	NEW WATER SERVICE	25	NEW 12" TEE
3	EXIST. WATER METER	26	NEW 12" GATE VALVE
4	NEW C.A.R.V. W/ MH	27	NEW 12" 45° ELBOW
5	NEW 6" TEE	28	NEW 12" 11.25° ELBOW
6	NEW 6" GATE VALVE	29	NEW 12" VERTICAL ELBOW
7	NEW 6" 90° ELBOW	30	NEW 12" X 6" TEE
8	NEW 6" 45° ELBOW	31	NEW 12" X 6" CROSS
9	NEW 6" VERTICAL ELBOW	32	NEW 12" X 6" REDUCER
10	NEW 6" WET TAP	33	NEW 12" X 8" TEE
11	NEW 6" X 2" REDUCER	34	NEW 12" X 8" CROSS
12	NEW 8" TEE	35	NEW 12" X 8" REDUCER
13	NEW 8" GATE VALVE	36	NEW 16" 45° ELBOW
14	NEW 8" CROSS	37	NEW 16" BUTTERFLY VALVE
15	NEW 8" 90° ELBOW	38	NEW 20" BUTTERFLY VALVE
16	NEW 8" 45° ELBOW	39	NEW 20" 45° ELBOW
17	NEW 8" 22.5° ELBOW	40	NEW 20" 22.5° ELBOW
18	NEW 8" 11.25° ELBOW	41	NEW 20" X 8" TEE
19	NEW 8" VERTICAL ELBOW	42	NEW 20" X 8" CROSS
20	NEW 8" X 6" TEE	43	NEW 20" X 12" TEE
21	NEW 8" X 6" CROSS	44	NEW 20" X NEW 16" TEE
22	NEW 8" X 6" REDUCER	45	NEW 20" X 12" REDUCER
23	NEW 8" X 4" REDUCER	46	NEW FIRE LINE EXTENSION



KANSAS STREET AND FOURTH AVENUE

NO	DATE	REVISION	APPROVED

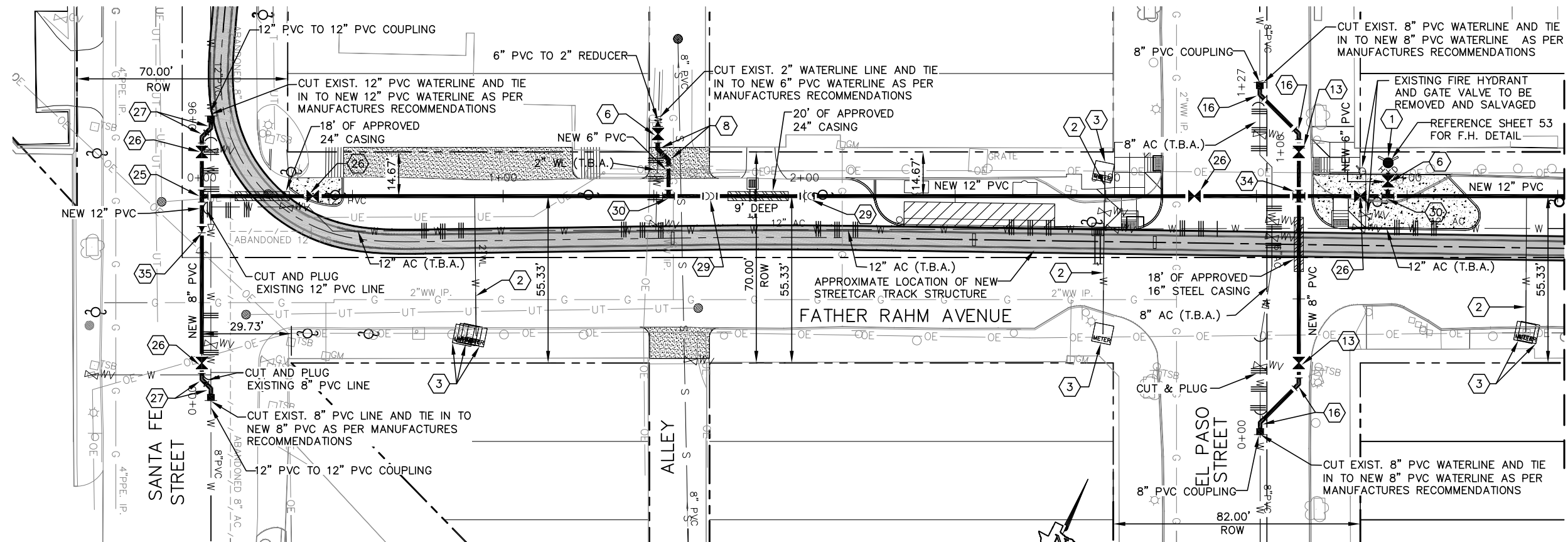
ABEL GARCIA
112223
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06/24/15
CEA GROUP
F-4564

engineers • architects • planners
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SHEET 49 of 52

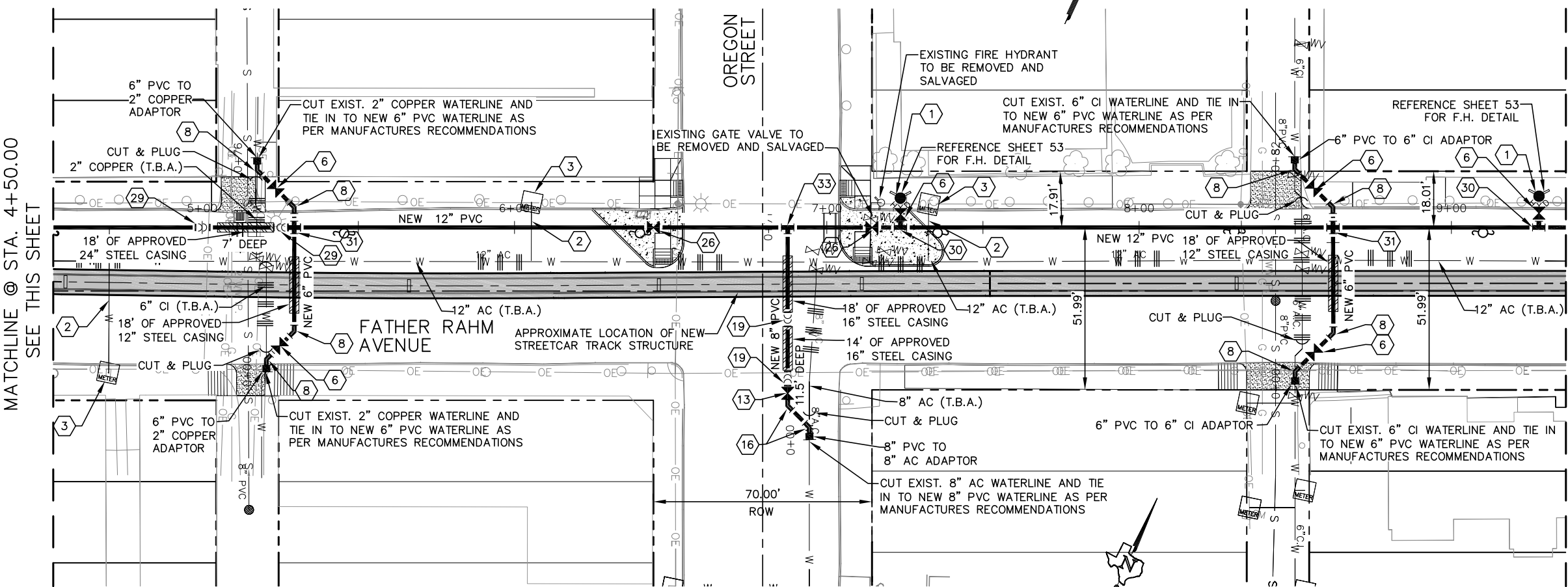
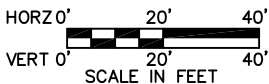
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	988	



FATHER RAHM AVENUE AND SANTA FE STREET TO EL PASO STREET

MATCHLINE @ STA. 4+50.00
SEE THIS SHEET

- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING 12" A.C. LINE TO BE REMOVED IF NECESSARY IN ORDER TO INSTALL NEW WATER LINE & STEEL CASING.
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.

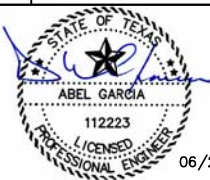


FATHER RAHM AVENUE AND OREGON STREET

MATCHLINE @ STA. 4+50.00
SEE THIS SHEET

MATCHLINE @ STA. 9+50.00
SEE SHEET 51

NO	DATE	REVISION	APPROVED
1	06/24/15		



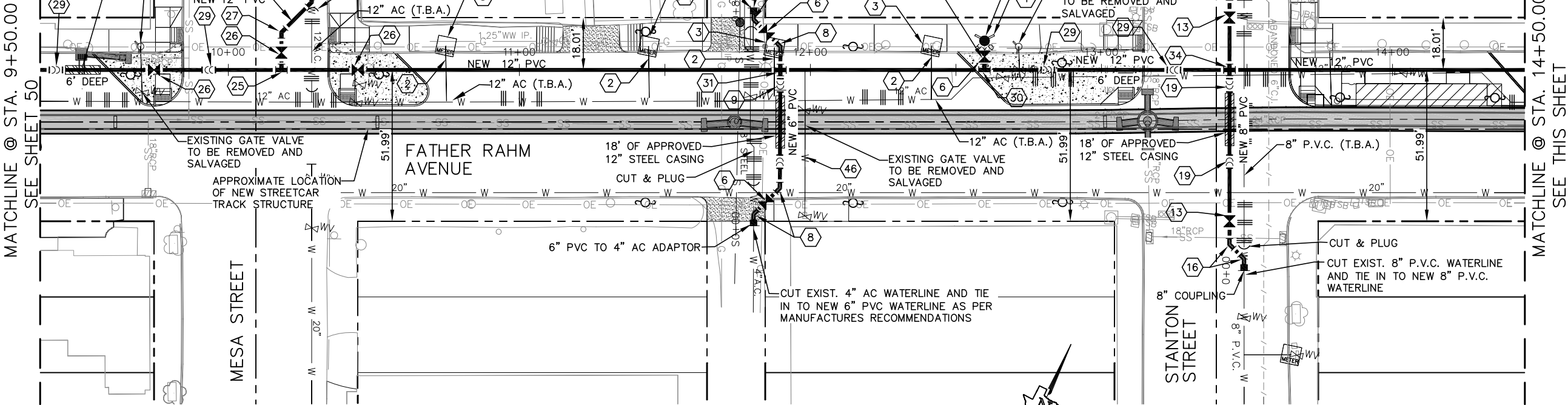
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POTABLE WATER
REPLACEMENT
AND RELOCATION

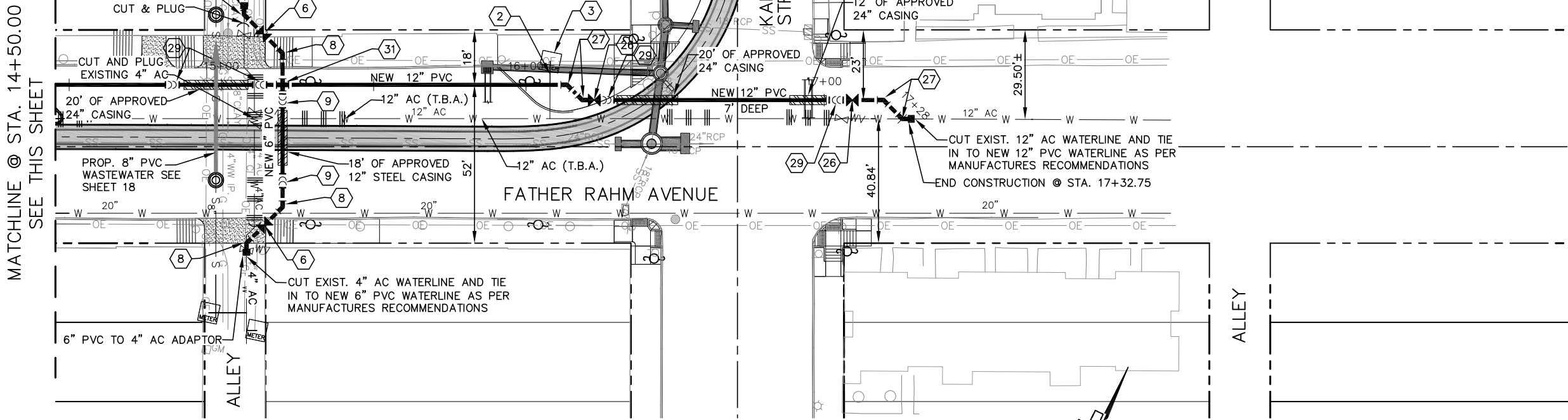
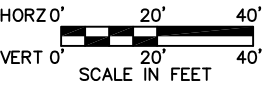


SHEET 50 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	989	



FATHER RAHM AVENUE AND SANTA FE STREET TO EL PASO STREET

- NOTES:
1. CONTRACTOR TO VERIFY DEPTHS & LOCATION OF WATER SERVICES.
 2. ALL NEW WATER SERVICE & FIRE HYDRANTS SHALL BE INSTALLED PER THEIR RESPECTIVE DETAIL.
 3. EXISTING 12\"/>
 4. ALL WATER SERVICES SHALL BE CONNECTED TO NEW WATER LINE.
 5. CASING OF WATER SERVICES CROSSING TRACK STRUCTURE REFER DETAIL ON SHEET 54.



FATHER RAHM AVENUE AND OREGON STREET

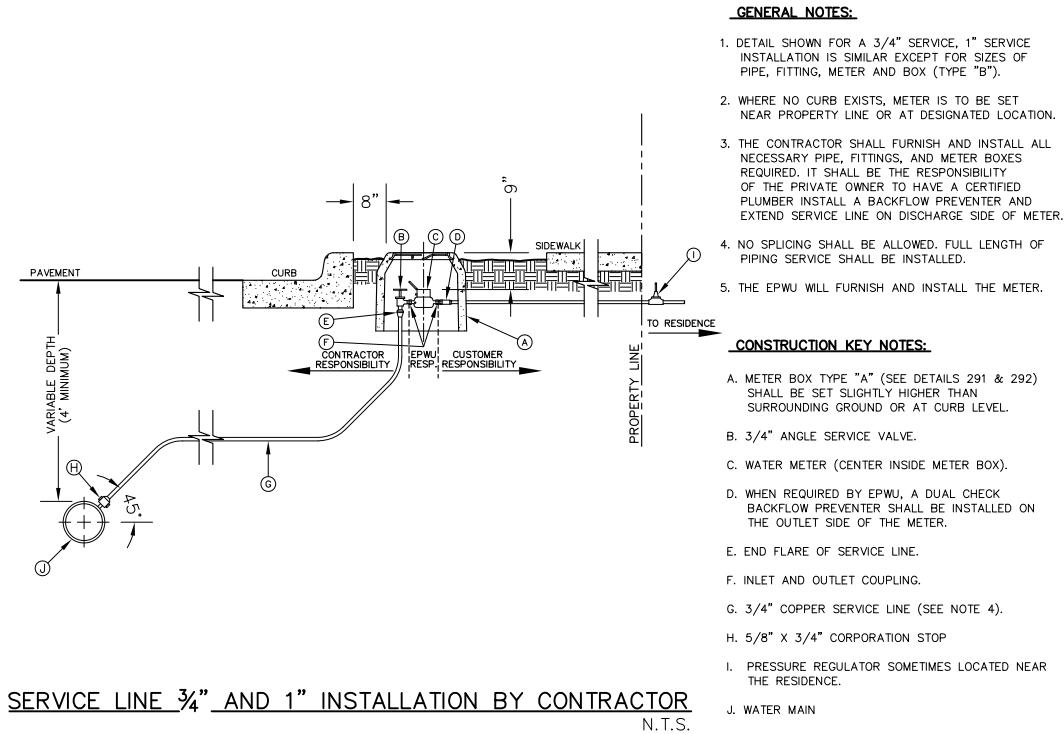
NO	DATE	REVISION	APPROVED

STATE OF TEXAS
ABEL GARCIA
112223
LICENSED PROFESSIONAL ENGINEER
06/24/15
CEA GROUP
F-4564

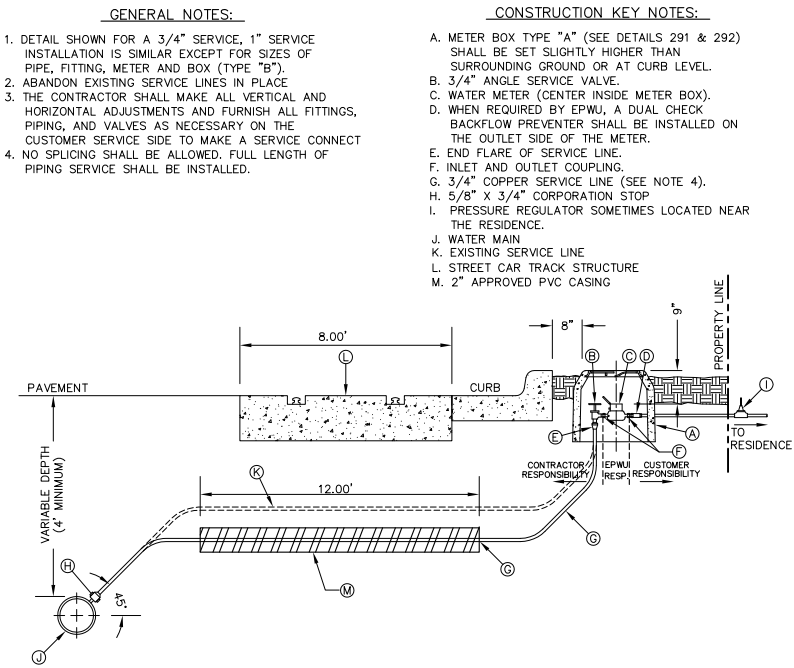
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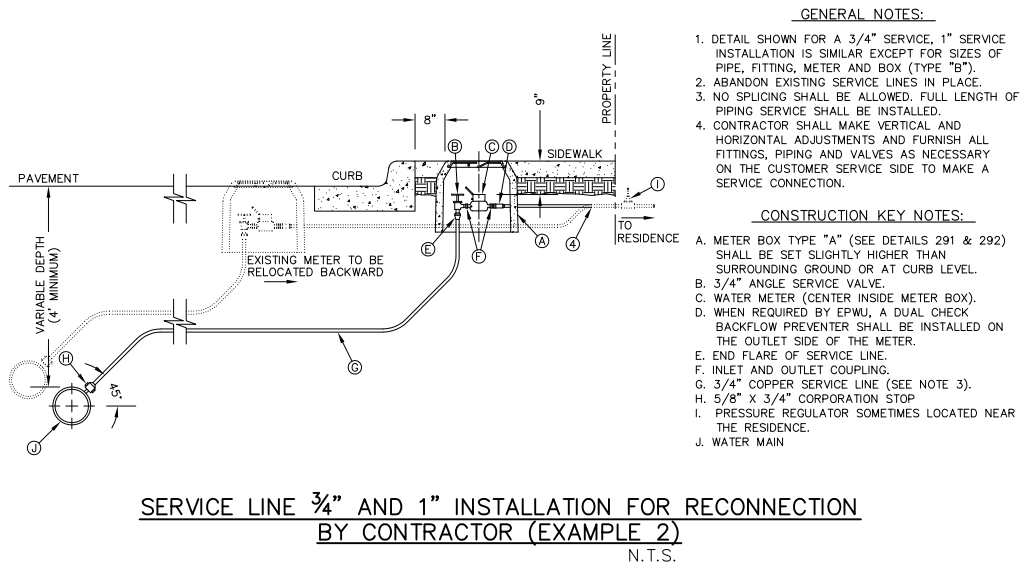
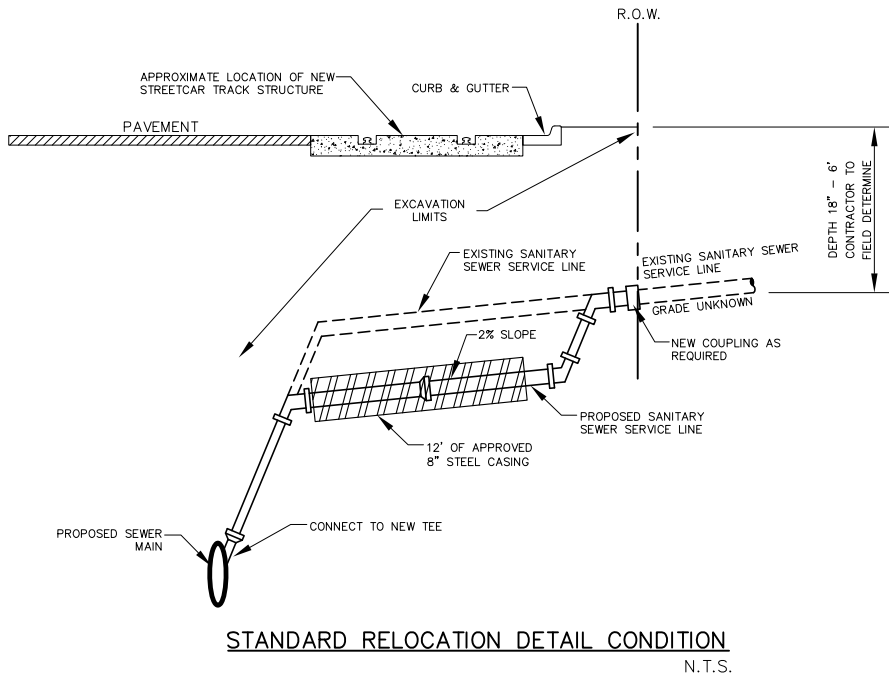
SHEET 51 of 52			
CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	990	



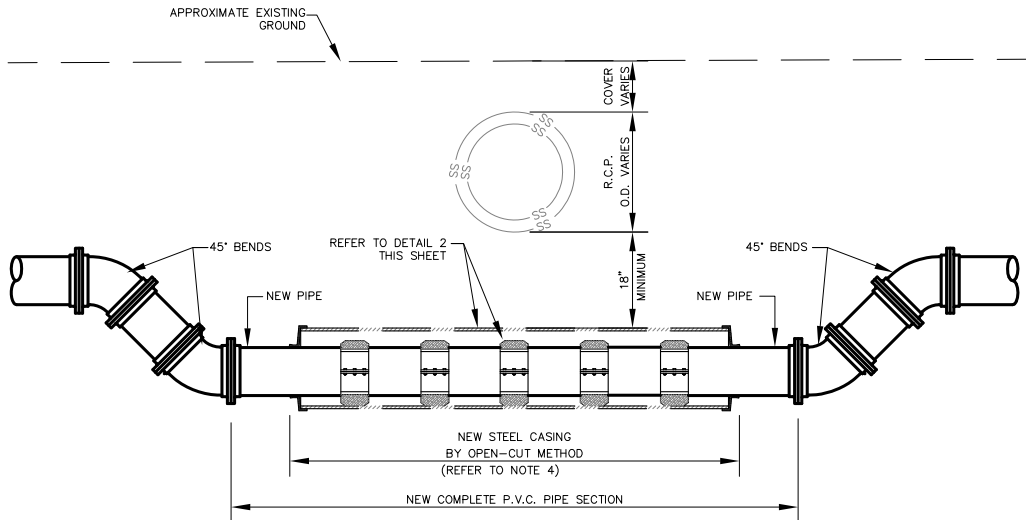
SERVICE LINE 3/4" AND 1" INSTALLATION BY CONTRACTOR
N.T.S.



STANDARD DETAIL OF SERVICE LINE 3/4" AND 1" RECONNECTION
N.T.S.



SERVICE LINE 3/4" AND 1" INSTALLATION FOR RECONNECTION
BY CONTRACTOR (EXAMPLE 2)
N.T.S.



- NOTES:**
1. CONTRACTOR SHALL VERIFY LOCATION, DEPTH, SIZE AND TYPE OF PIPE BEFORE CONSTRUCTION.
 2. CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE OF 18" FEET BELOW R.C.P. TO TOP OF CASING.
 3. CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE OF TWO (2') FEET BELOW GAS LINE PIPE TO TOP OF CASING.
 4. REFER TO PIPE CASING DETAILS THIS SHEET. NO VENTS REQUIRED FOR STEEL CASING WHEN CROSSING UNDER PIPES.
 5. CONTRACTOR TO INSTALL A MINIMUM 10 L.F. CASING SECTION OR AS NOTED ON DRAWINGS.

TYPICAL CASING UNDER PIPE DETAIL
N.T.S.

NO	DATE	REVISION	APPROVED
1	06/24/15		
2			
3			
4			
5			

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06/24/15
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Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

COEP STREETCAR

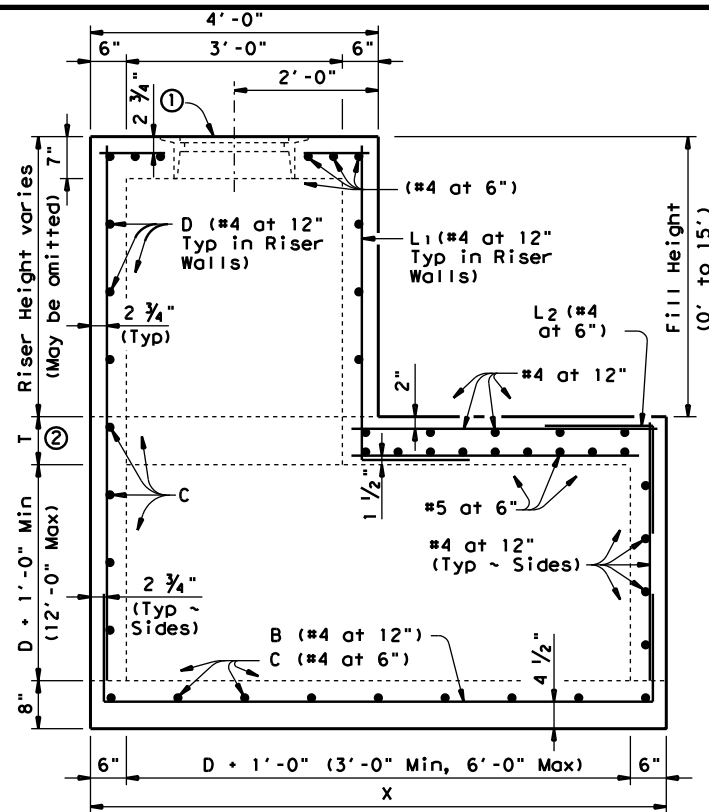
**STANDARD
DETAILS**

SHEET 52 of 52

CONT	SECT	JOB	HIGHWAY
0924	06	446	VARIOUS
DIST	COUNTY	SHEET NO.	
EL PASO	EL PASO	991	

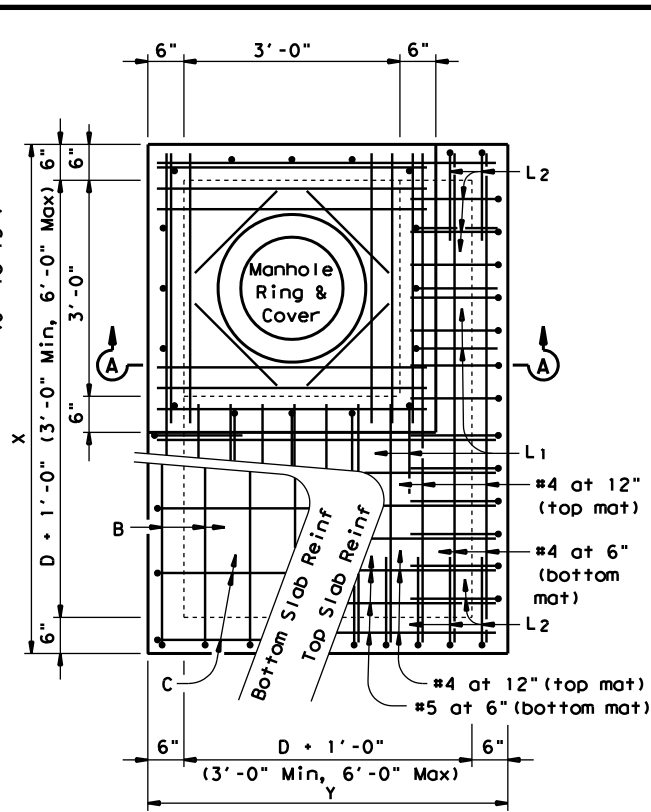
DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

ACC:
LEVELS DISPLAYED



ELEVATION

D = Maximum inside diameter of any Pipe entering the side shown or the opposite side

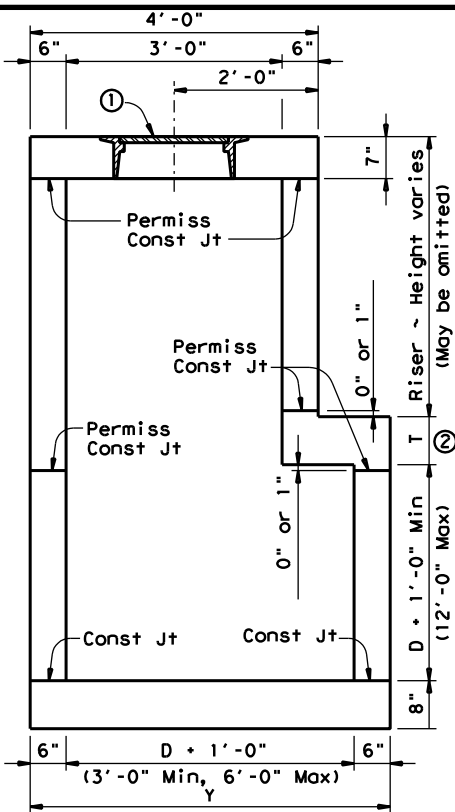


PLAN

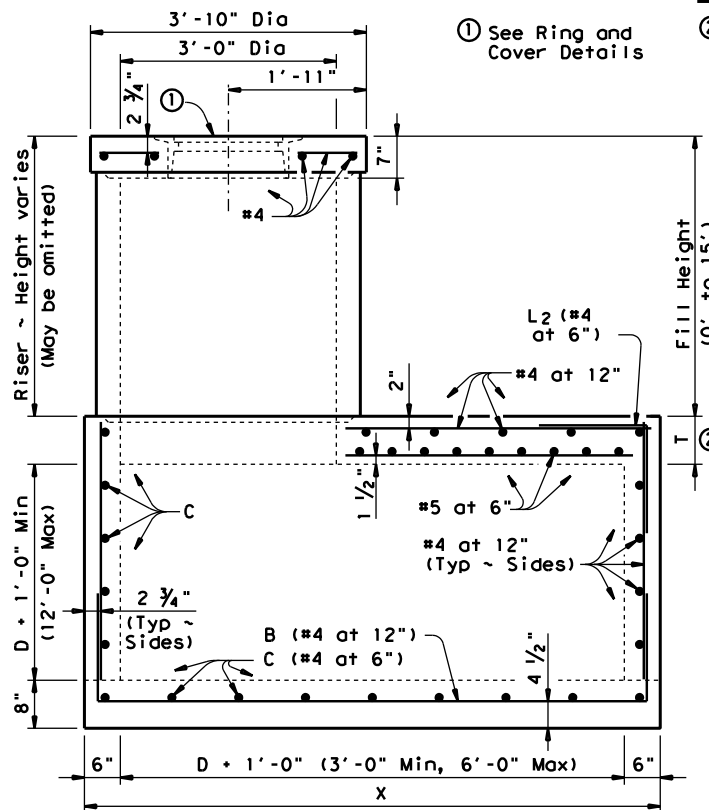
MANHOLE WITH CAST-IN-PLACE RISER

① See Ring and Cover Details

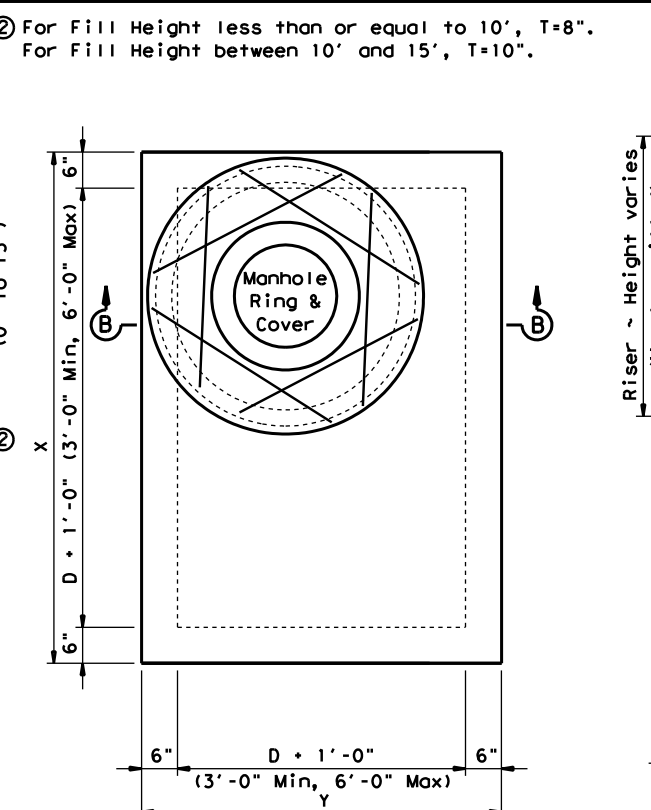
② For Fill Height less than or equal to 10', T=8".
For Fill Height between 10' and 15', T=10".



SECTION A-A

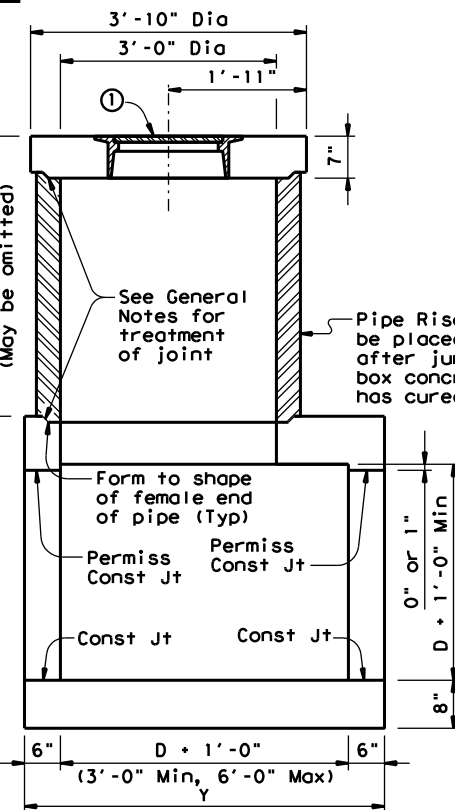


ELEVATION

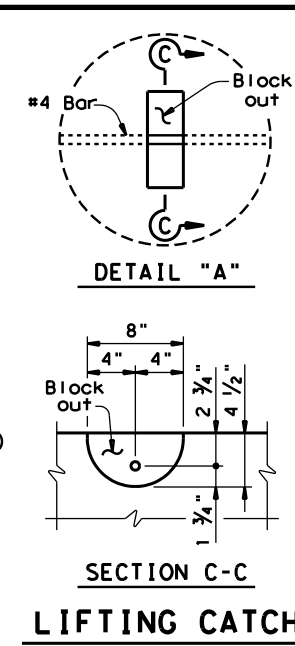
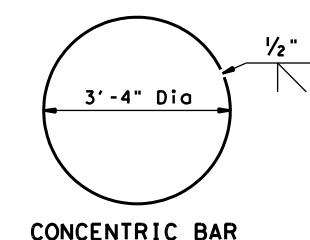
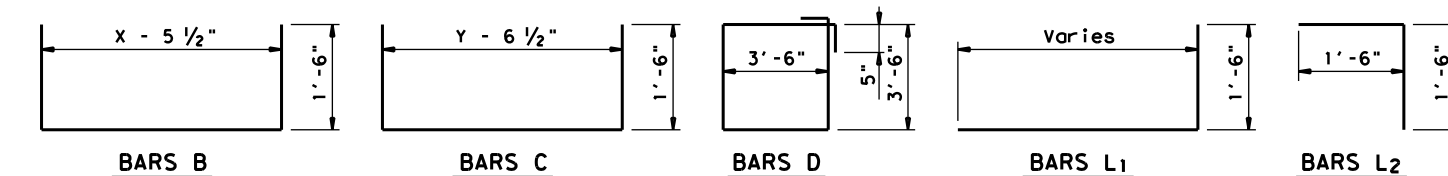


PLAN

OPTIONAL MANHOLE WITH CONCRETE PIPE RISER



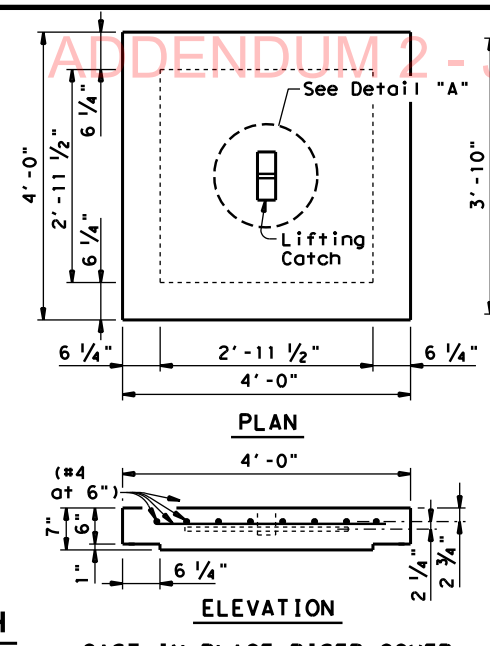
SECTION B-B



DETAIL "A"

SECTION C-C

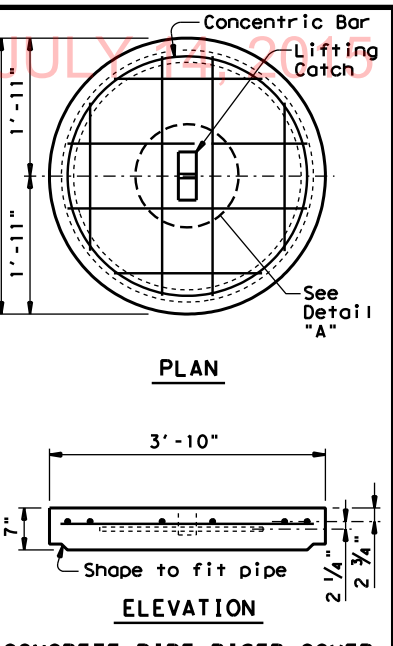
LIFTING CATCH



PLAN

ELEVATION

CAST-IN-PLACE RISER COVER

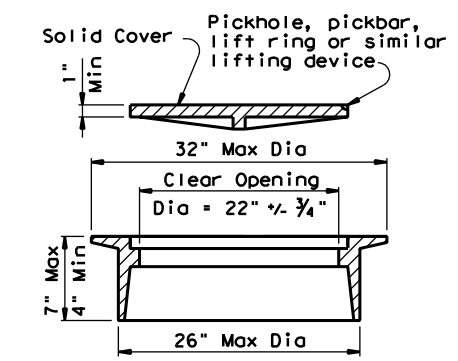


PLAN

ELEVATION

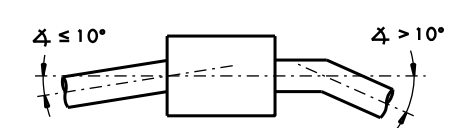
CONCRETE PIPE RISER COVER

OPTIONAL PRECAST CONCRETE LIFT-OFF COVERS



RING AND COVER DETAILS

Approximate Weight = 245 lb



PIPE CONNECTION DETAIL

Connecting pipes should enter within 10° of normal to inlet wall. If necessary, pipe elbow or curved approach alignment should be used to stay within this limit.

GENERAL NOTES:
Unless otherwise shown in the plans, payment will be made for each manhole of the Type M.
When approved, precast inlets with equivalent structural capacity may be furnished. Sealed engineering calculations and drawings shall be submitted for approval prior to construction. Shop drawings will not be required.
In areas of conflict between reinforcing steel, blockouts, pipes, anchor bolts or other reinforcing steel, the reinforcement shall be bent or adjusted to clear as directed by the Engineer.
The riser may be constructed of reinforced concrete as shown or of Reinforced Concrete Pipe, Class III, in accordance with ASTM Designation C-76. If pipe is used, joints shall conform to the item "Reinforced Concrete Pipe Culverts". Precast Concrete Lift-Off Cover may be substituted for Ring and Cover.
The riser, either cast-in-place or concrete pipe, may be located in any corner.
All reinforcing steel shall be #4 unless otherwise noted.
Pipes may enter any or all walls. The maximum size of pipe that can be accommodated is 60". More than one pipe may enter a side, subject to the maximum box dimension shown. The clear distance between adjacent pipes should be 9" minimum.
Ring and cover shall conform to the requirements of AASHTO M306, "Standard Specification for Drainage Structure Castings". Materials shall conform to ASTM A48, Class 35B for gray iron castings or ASTM A536, Grade 65-45-12 for ductile iron castings. Aluminum alloy castings shall not be permitted.
All concrete shall be Class "A" (f'c = 3000 psi).

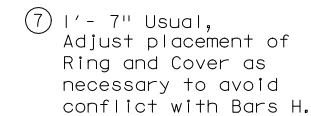
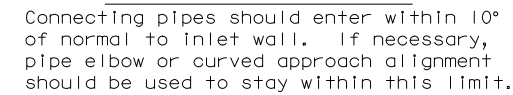
Texas Department of Transportation
Bridge Division

MANHOLE TYPE M (JUNCTION BOX WITH ACCESS) 15' MAX FILL

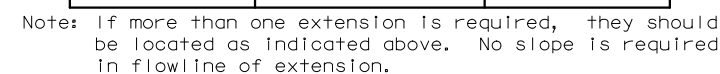
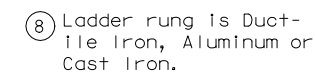
MH-M

FILE: mh-mstd.dgn	DN: TxDOT	CK: TER	DW: MCB	CK:TER/GAF
© TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT	SHEET	
REVISIONS	EL PASO		1010	
COUNTY	CONTROL	SECT	JOB	HIGHWAY
EL PASO	0924	06	446	VARIOUS

As shown



Ring and cover shall conform to the requirements of AASHTO M306, "Standard Specification for Drainage Structure Castings". Materials shall conform to ASTM A48, Class 35B for gray iron castings or ASTM A536, Grade 65-45-12 for ductile iron castings. Aluminum alloy castings shall not be permitted.



DESIGNERS:
CLARIFY FLOWLINE OF OPENING AND INCLUDE
OPENING IN HYDRAULIC CALCULATIONS.

D = Diameter
R = Radius

CURB INLET TYPE C1
(WITH OR WITHOUT EXTENSION)

HIL-CI

FILE#	STDD2.DGN	DN# TxDOT	CK# TxDOT	DW# TxDOT	CK# TxDOT	STD#	
Ⓒ TxDOT	Feb 2010	DIST	FED REG	PROJECT NO.			SHEET
2/2010 REVISIONS Note for alternate design added.	HOUS	6					1011
2/2010 Added note concerning opening on the back of iniet.	COUNTY	CONTROL		SECT	JOB	HIGHWAY	
	EL PASO	0924	06	446	VARIOUS		

ADDENDUM 2 - JULY 14, 2015

GENERAL NOTES:

Alternate designs shall conform to special provisions for Item 465.

Where Size Of Pipes Passing Thru Inlet Exceeds
30" Increase Inside Width To Outside Diameter
Of Pipe Plus 1'-0" (OD + 1'-0").

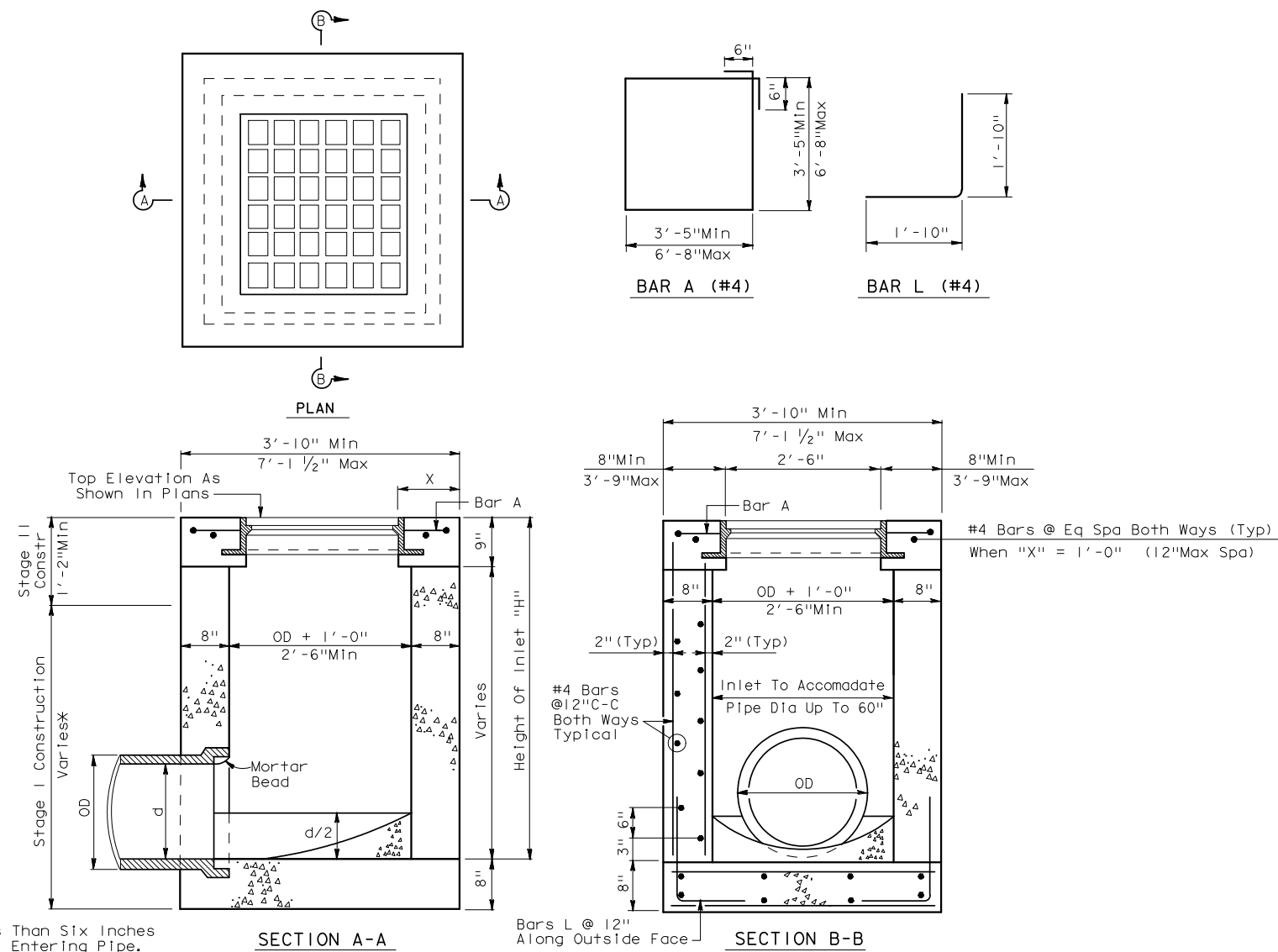
Cast Iron Manhole Steps (See Manhole Details)
Spaced At 16" Centers And Located On Wall
Specified By The Engineer Shall Be Provided
And Installed Where "D" Exceeds 5'-0".

See Standard or Detail Sheet For Excavation
and Backfill Diagrams.

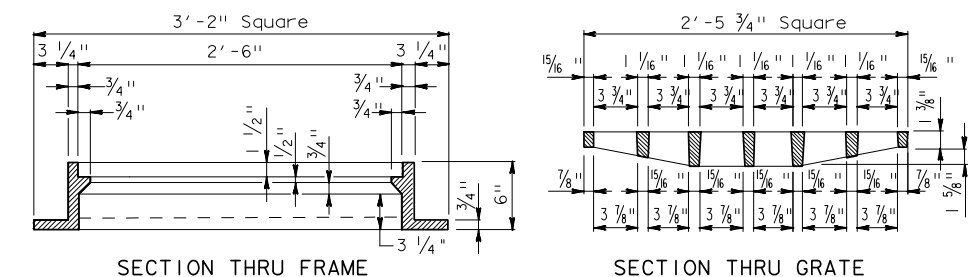
Inlets Shall Be Built To Stage 1 And Finished After All Grading Operations Are Substantially Completed.

Frames And Grates May Be Gray Cast Iron.

Shop Drawings Will Be Required For Precast Construction Of Inlets.

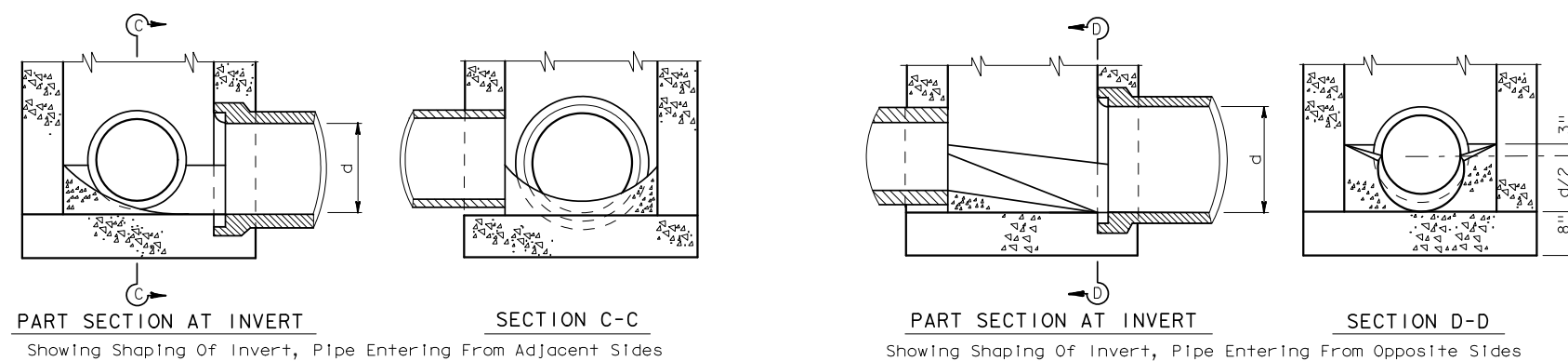


TYPE A INLET



FRAME AND GRATE

Neenah No. R3418-A
EJIW No. V-4880-1



d = Diameter

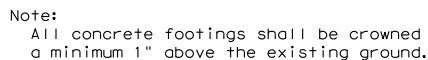
NOT FOR TRAFFIC LOADS



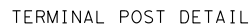
INLET TYPE A

HIL-A

FILE#	STDD4, DGN	DN# TxDOT	CK# TxDOT	DW# TxDOT	CK# TxDOT	STD#
C TxDOT Feb 2010		DIST	FED REG	PROJECT NO.		SHEET
REVISIONS		HOUS	6			1012
12/2008 Updated abbreviation of Std. title		COUNTY	CONTROL	SECT	JOB	HIGHWAY
2/2010 Note for alternate design added.		EL PASO	0924	06	446	VARIOUS




Foundation designs shown are "minimums" for a 6 ft. fence. Taller fences may require larger foundation designs.



Barbed wire arm related items shall conform to Item 550, "Chain Link Fence."

DATE:
FILE:

1. Items hereon shall conform to Item 550, "Chain Link Fence."
2. Typical installation plan may vary as shown elsewhere on the plans or as directed by the Engineer. Location of gates shown elsewhere on plans.
3. Gate-frame members shall be bolted, at frame corners, to joint fittings with four 1/2" bolts per joint.
4. All cable connections are to be made with two 3/8" cable clamps.
5. All pull posts and end posts and their foundations shall have the same respective dimensions as those shown for corner post.
6. All pull post shall be furnished with two stretcher bars.
7. One end of each turnbuckle may be attached directly to fittings with a clevis.
8. Concrete footings are to be crowned at the top to shed water.

 <p style="font-size: 1.2em; margin: 0;">Texas Department of Transportation</p>	<p style="margin: 0;"><i>Design Division Standard</i></p>
<h1 style="margin: 0;">CHAIN LINK FENCE</h1> <h2 style="margin: 20px 0 0 0;">CLF - 10</h2>	

FILE: clf10.dgn	DN: TxDOT	CK: AM	DW: BD	CK: VP
© TxDOT 1996	CONT	SECT	JOB	HIGHWAY
REVISIONS	0924	06	446	VARIOUS
	DIST		COUNTY	SHEET NO.
	EL PASO		EL PASO	1015