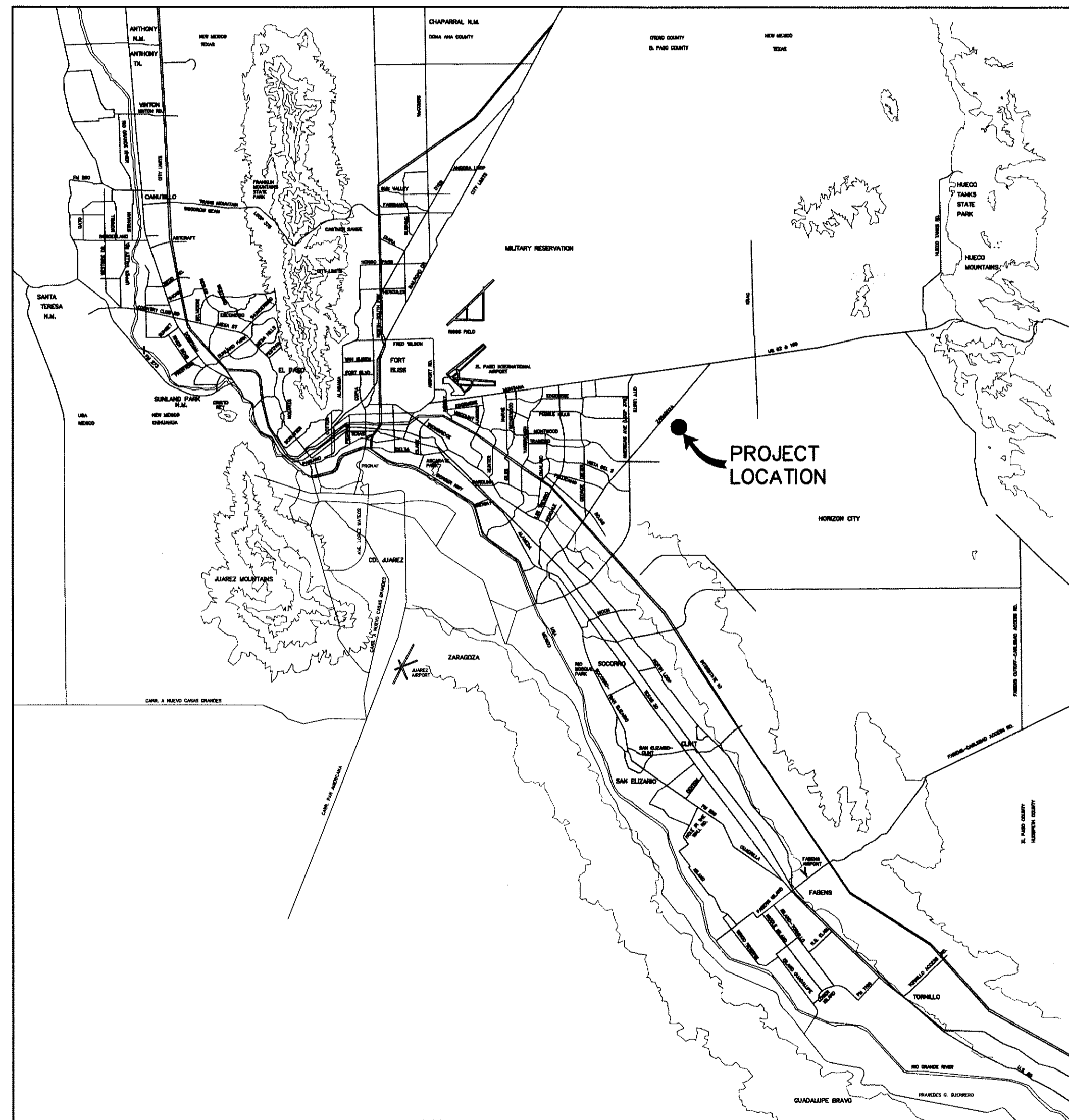


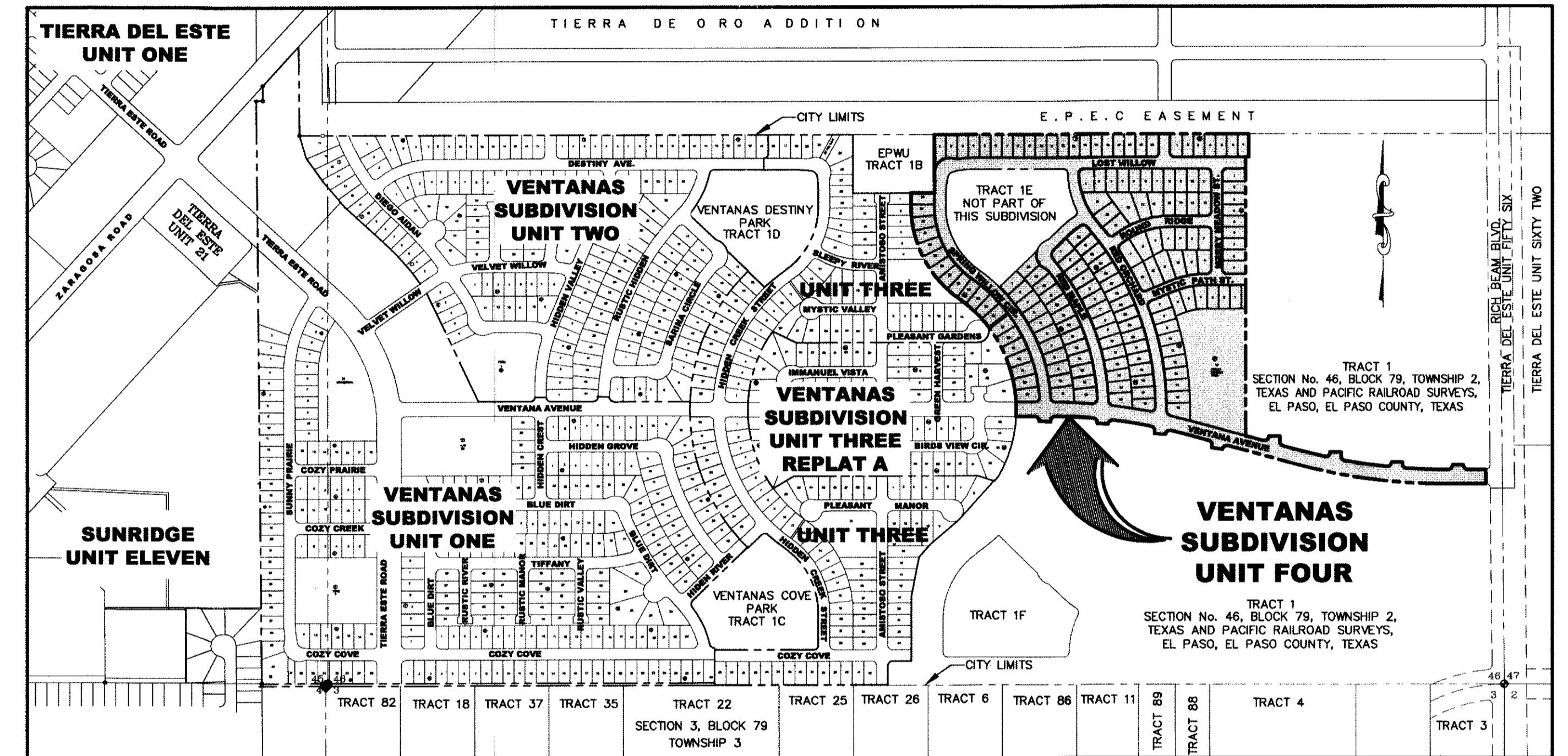
VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS

BEING A PORTION OF SECTION 46, BLOCK 79, TOWNSHIP 2,
TEXAS AND PACIFIC RAILWAY COMPANY SURVEY
CITY OF EL PASO, EL PASO COUNTY, TEXAS
CONTAINING 35.748± ACRES

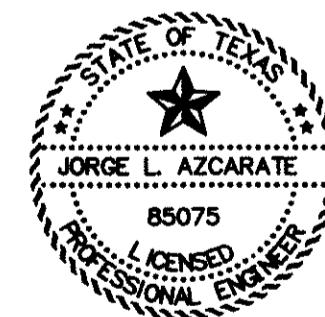


VICINITY MAP
APPROXIMATE SCALE:
1" = 2 MILES

SHEET NUMBER	SHEET TITLE
CVR	COVER SHEET - HEADING WITH LEGAL DESCRIPTION AND NUMBER OF ACRES; INDEX OF SHEETS; VICINITY MAP; LOCATION MAP; PRINCIPAL CONTACTS; TITLE - REVISION BLOCK AND ENGINEER'S SEAL.
C1.1	GENERAL INFORMATION
C2.1, C2.2	FINAL PLAT - HEADING WITH LEGAL DESCRIPTION OF SUBDIVISION AND NUMBER OF ACRES; OWNER'S DEDICATION, CERTIFICATION, AND ATTESTATION; SUBDIVISION MEETS AND BOUNDS WITH SURVEYORS CERTIFICATION; NOTARY SEAL; CITY APPROVAL CERTIFICATE; COUNTY APPROVAL CERTIFICATE; COUNTY CLERK RECORDING CERTIFICATE; LOCATION MAP; PLAT NOTES AND RESTRICTIONS; PLAT MAP WITH UTILITY EASEMENTS, LOT AND BLOCK NUMBERS, LOT SIZE, NUMBER OF LOTS, ADDRESSES FOR EACH LOT, LOTS AND ROADS DIMENSIONS, PRINCIPAL CONTACT, TITLE - REVISION BLOCK AND ENGINEER'S SEAL.
C3.1	GRADING PLAN
C4.1	DRAINAGE PLAN
C5.1-C5.3	GRADING SECTIONS
C6.1-C6.14	STREET PLAN & PROFILES
C7.1-C7.6	STORM SEWER PLAN & PROFILES
C8.1	POND DESIGN PLAN
C9.1-C9.3	STANDARD DETAILS
C10.1-C10.4	DRAINAGE DETAILS
C11.1	ILLUMINATION PLAN
C12.1	STORM WATER POLLUTION CONTROL PLAN: GENERAL NOTES
C12.2	STORM WATER POLLUTION CONTROL PLAN: SITE PLAN
C12.3	STORM WATER POLLUTION CONTROL PLAN: DETAILS
W1.1	WATER INDEX / GENERAL INFORMATION
W2.1-W2.5	WATER DETAILS
SS1.1	SANITARY SEWER INDEX / GENERAL INFORMATION
SS2.1-SS2.5	SANITARY SEWER PLAN & PROFILES
SS3.1-SS3.3	SANITARY SEWER DETAILS



LOCATION MAP
APPROXIMATE SCALE: 1" = 600'



Jorge L. Azcarate
JORGE L. AZCARATE, P.E. PROJECT MANAGER

cea
GROUP
engineers • architects • planners
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

DEVELOPMENT SERVICES DEPARTMENT

SITE PLAN REVIEW
Reviewed For Conformance For Conditions Related To:

- Demolition Only
- Grading & Drainage
- Wheelchair Ramps
- On Site Parking Layout
- Sidewalks
- Driveways
- Retaining Rock Walls
- On-Site Ponding of Storm Waters

Contractor Must Call 24 Hours Prior To Construction
Jorge L. Azcarate DATE 02/20/2012

PRINCIPAL CONTACTS:

	NAME	ADDRESS	CITY & ZIP	PHONE	FAX
OWNER:	GFA, LLC.	1525 GOODYEAR DRIVE	EL PASO, TX 79936	(915) 598-1105	(915) 591-4985
ENGINEER:	CEA GROUP	4712 WOODROW BEAN DR. STE. F	EL PASO, TX 79924	(915) 544-5232	(915) 544-5233
SURVEYOR:	BARRAGAN & ASSOCIATES	10950 PELLICANO DR. BUILDING B	EL PASO, TX 79936	(915) 591-5709	(915) 591-5706

VENTANAS SUBDIVISION UNIT FOUR COVER SHEET				
DATE PREPARED	DRAWN BY:	DESIGN BY:	CHECKED BY:	APPROVED BY:
OCTOBER 2011	A.B.	F.Z.	J.L.A.	J.L.A.
REVISION NUMBER	SHEET NAME OR NUMBER	DESCRIPTION OF REVISION	DATE OF REVISION	REVISION APPROVED BY:

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING BIDS.
2. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AUTOMOBILE AND PEDESTRIAN ACCESS TO THE USER AT ALL TIMES, INCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS. THIS INCLUDES, BUT IS NOT LIMITED TO DRIVEWAYS, STREETS, PARKING, AND WALKWAYS. THIS REQUIREMENT SHALL BE FULFILLED AT NO EXTRA COST TO THE OWNER.
3. CONTRACTOR SHALL WATER CONSTRUCTION AREA A MINIMUM OF TWICE A DAY TO KEEP DUST TO A MINIMUM - ONCE IN THE MORNING AND BEFORE QUITTING TIME. THIS SHALL ALSO BE DONE DURING WEEKENDS AND HOLIDAYS.
4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, PROTECT, AND REPLACE ALL UNDERGROUND UTILITY LINES AT NO EXTRA COST TO THE OWNER WHEN LINES ARE DISTURBED AS A RESULT OF THE WORK. SERVICE SHALL BE PROVIDED TO USER AT ALL TIMES.
5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM WORK SO AS TO ASSURE PROPER PASSAGE OF STORM RUNOFF DURING THE COURSE OF THE OPERATIONS. ALL LABOR, TOOLS, EQUIPMENT, AND SUPERVISION REQUIRED TO ASSURE SUCH PROPER PASSAGE OF RUNOFF WATER AND ANY REMOVAL OR HANDLING OF WATER IN ORDER TO MAINTAIN DRY CONDITIONS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
6. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE USER, ALL UTILITIES, AND ALL OTHER AGENCIES WITH JURISDICTION OVER THE PROJECT.
7. ALL EXISTING PAVEMENT, ADJACENT UTILITIES, STRUCTURES, ETC., DISTURBED AS A RESULT OF THE NEW CONSTRUCTION, SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
8. THE OWNER WILL FURNISH HORIZONTAL AND VERTICAL CONTROL REFERENCED POINTS ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES FOUND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER, OTHERWISE THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THEIR CORRECTNESS.
9. FOR ELEVATIONS, REFERENCE BENCHMARK IN TITLE BLOCK FOR ADDITIONAL INFORMATION.
10. VIBRATORY ROLLERS WILL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE ENGINEER AND CITY OF EL PASO.
11. ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THE PROJECT.
12. THE LOCATION OF THE FLUMES AND INLETS SHALL BE AT THE FIELD LOW POINT AND APPROVED BY THE ENGINEER PRIOR TO PAVING AND PLACEMENT OF STRUCTURES.
13. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE FINAL CITY OF EL PASO APPROVED SUBDIVISION PLANS PRIOR TO COMMENCING ANY CONSTRUCTION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE ANY WORK NOT PERFORMED AS PER THE CITY APPROVED PLANS. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE CITY OF EL PASO APPROVED PLANS ARE ALWAYS ACCESSIBLE AT THE JOB SITE FOR REVIEW BY SUB-CONTRACTORS, THE OWNER, THE ENGINEER AND CITY STAFF.
14. SIDEWALKS SHALL BE BUILT BY BUILDER UNLESS SPECIFIED ELSEWHERE IN PLANS.
15. NO BLASTING SHALL BE PERMITTED.
16. THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, MEASUREMENTS AND EXISTING CONDITIONS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. NOTIFY THE ENGINEER PROMPTLY OF ANY OMISSIONS, ERRORS, OR DISCREPANCIES FOUND SO THAT NECESSARY CORRECTIONS AND INTERPRETATIONS BE MADE PRIOR TO CONSTRUCTION.
17. ALL CONSTRUCTION PRACTICES AND PROCEDURES WILL COMPLY WITH THE PERTINENT PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARD (TITLE 29, CODE OF FEDERAL REGULATIONS) PUBLISHED BY THE OSHA, DEPARTMENT OF LABOR.

GRADING SPECIFICATIONS

1. CLEARING AND GRUBBING: CLEAR SITE OF TREES, SHRUBS AND OTHER VEGETATION; COMPLETELY REMOVE STUMPS, ROOTS AND OTHER DEBRIS PROTRUDING THROUGH GROUND SURFACE; FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY FILL MATERIAL, UNLESS FURTHER EXCAVATION OF EARTHWORK IS INDICATED; REMOVE EXISTING ABOVE-GRADE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION. BURNING IS NOT PERMITTED ON OWNER'S PROPERTY. REMOVE WASTE MATERIALS FROM OWNER'S PROPERTY.
2. SATISFACTORY FILL MATERIALS: FILL MATERIALS SHALL BE FREE OF ANY ORGANIC OR DELETERIOUS SUBSTANCE AND SHALL NOT CONTAIN ROCKS OR LUMPS OVER THREE (3) INCHES IN GREATEST DIMENSION AND SHALL BE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, GC, SM, SP, SC, OR UNLESS OTHERWISE APPROVED BY THE DESIGN ENGINEER, GEOTECHNICAL ENGINEER OR CITY ENGINEER.
3. UNSATISFACTORY FILL MATERIAL: ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS ML, MH, CL, CH, OL, OH, AND PT, OR WHERE THE PLASTICITY INDEX EXCEEDS TWELVE (12)
4. EXCAVATION: IS UNCLASSIFIED AND INCLUDES EXCAVATION TO ELEVATIONS INDICATED, REGARDLESS OF CHARACTER OF MATERIAL AND OBSTRUCTIONS ENCOUNTERED.
5. GROUND SURFACE PREPARATION FOR FILL: REMOVE VEGETATION, DEBRIS, UNSATISFACTORY SOIL MATERIAL, OBSTRUCTIONS, AND DELETERIOUS MATERIAL FROM GROUND SURFACE UPON WHICH THE FILL IS TO BE PLACED. THE SURFACE SHALL THEN BE SCARIFIED TO A DEPTH OF AT LEAST SIX (6) INCHES, AND UNTIL THE SURFACE IS FREE FROM RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH WOULD PREVENT UNIFORM COMPACTION. PLOW STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN ONE (1) VERTICAL TO FOUR (4) HORIZONTAL SO THAT FILL MATERIAL WILL BOND WITH EXISTING SURFACE. AFTER PLOWING AND SCARIFYING FILL AREA, IT SHALL THEN BE DISCED OR BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS, BROUGHT TO OPTIMUM MOISTURE, AND COMPACTED TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557.
6. PLACEMENT OF FILL: PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN EIGHT (8) INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN FOUR (4) INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. PLACE FILL MATERIALS EVENLY ADJACENT TO SITE APPURTENANCES, PIPING, OR CONDUIT TO REQUIRED ELEVATIONS. PREVENT WEDGING ACTION OF BACKFILL AGAINST SITE APPURTENANCES OR DISPLACEMENT OF PIPING OR CONDUIT BY CARRYING MATERIAL UNIFORMLY AROUND SITE APPURTENANCES, PIPING, OR CONDUIT TO APPROXIMATELY SAME ELEVATION IN EACH LIFT. COMPACT SOIL TO NOT LESS THAN 95% OF MAXIMUM DENSITY, IN ACCORDANCE WITH ASTM D1557.
7. MOISTURE CONTROL: WHERE SUBGRADE OR LAYER OF SOIL MATERIAL MUST BE CONDITIONED FOR OPTIMUM MOISTURE BEFORE COMPACTION, UNIFORMLY APPLY WATER TO SURFACE OF SUBGRADE OR LAYER OF SOIL MATERIAL. APPLY WATER IN MINIMUM QUANTITY AS NECESSARY TO PREVENT FREE WATER FROM APPEARING ON SURFACE DURING OR SUBSEQUENT TO COMPACTION OPERATIONS. WATER CONTENT SHALL BE WITHIN TWO (2%) PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY SOIL MATERIAL THAT IS TOO WET TO PERMIT COMPACTION TO SPECIFIED DENSITY.
8. QUALITY CONTROL: THE OWNER SHALL PROVIDE A GEOTECHNICAL ENGINEER TO PERFORM FIELD DENSITY TEST OF THE COMPACTION OF EACH LAYER OF FILL. DENSITY TESTS SHALL BE TAKEN IN THE COMPACTED MATERIAL BELOW THE DISTURBED SURFACE. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED UNTIL THE REQUIRED DENSITY HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL TESTING AND WHEN REQUIRED DENSITIES ARE NOT MET, SUPERVISION BY THE GEOTECHNICAL ENGINEER IS REQUIRED DURING THE GRADING OPERATIONS TO ENSURE GRADING WORK IN ACCORDANCE WITH THIS PLAN AND SPECIFICATIONS.

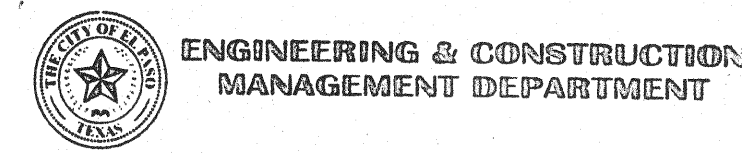
LEGEND

	SUBDIVISION BOUNDARY		4000.00	FINISHED SPOT ELEVATION
	ROW LINE		FG. 56.00	LOT FINISHED GROUND ELEVATION
	CURB LINE		TC4000.00	TOP OF CURB ELEVATION
	PROPERTY LINE		TP 4000.00	TOP OF PAVEMENT ELEVATION
	STREET CENTERLINE		1 ②	SUBDIVISION LOT AND BLOCK NUMBER
	EASEMENT LINE			DRAINAGE FLOW
	MATCH LINE			STORM SEWER LINE FLOW
	STORM SEWER LINE			HIGH POINT
	HIGH WATER MARK			LOW POINT
	CURB AND GUTTER DROP INLET			EXISTING HIGH POINT
	STORM SEWER MANHOLE			EXISTING LOW POINT
	FINISHED GROUND CONTOUR ELEVATION (INDEX)			HEADWALL WITH WINGWALLS
	FINISHED GROUND CONTOUR ELEVATION (INTERMEDIATE)		DA-4	DRAINAGE AREA
	EXISTING GROUND CONTOUR ELEVATION (INDEX)		2(H):1(V) SLOPE	HORIZONTAL:VERTICAL SLOPE RATIO
	EXISTING GROUND CONTOUR ELEVATION (INTERMEDIATE)		APPROXIMATE AREA OF 100 YEAR FLOOD, AS PER FIRM PANEL NO. 480214-0016-C (FEBRUARY 5, 1986)	
	NEW RETAINING ROCKWALL (3'-9' IN HEIGHT)		APPROXIMATE BASE FLOOD ELEVATION (NATIONAL GEODETIC VERTICAL DATUM, NGVD). TO CONVERT TO CITY OF EL PASO DATUM FROM NGVD, SUBTRACT 8.462- FEET.	
	EXISTING RETAINING ROCKWALL		WHEELCHAIR RAMP	
	NEW RETAINING ROCKWALL (2'-3' IN HEIGHT)			
	EXISTING ELECTRICAL LINE			
	STANDARD DETAIL/SECTION NUMBER			
	SHEET NUMBER WHERE STANDARD/SECTION DETAIL IS LOCATED			

ABBREVIATIONS

LP	LOW POINT
HP	HIGH POINT
ELEV	ELEVATION
STA	STATION
VCS	VERTICAL CURVE STATION
VCE	VERTICAL CURVE ELEVATION
TC	TOP OF CURB
TP	TOP OF PAVEMENT
TYP	TYPICAL
PVI	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
AD	ALGEBRAIC DIFFERENCE
CR	CURVE RETURN
ROW	RIGHT OF WAY
CL	CENTER LINE
PL	PROPERTY LINE
FG	FINISH GRADE
FF	FINISH FLOOR
EG	EXISTING GRADE
MIN.	MINIMUM
RCP	REINFORCED CONCRETE PIPE
Q	QUANTITY
CAP	CAPACITY
EXP	EXPECTED
INV	INVERT
CFS	CUBIC FEET PER SECOND
A	AREA
DA	DRAINAGE AREA
LF	LINEAR FEET
STD	STANDARD
CONC	CONCRETE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT
L	LENGTH
S	SLOPE
TEMP	TEMPORARY
V	VELOCITY IN FEET PER SECOND
HGL	HYDRAULIC GRADE LINE
HWE	HIGH WATER ELEVATION

REVIEWED



UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDoT) (AFTER HOURS)	(915) 621-6750 (915) 240-3220

WARNING!
BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

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RED ORCHARD DRIVE PLAN & PROFILE FROM STA. 10+83.79 TO STA. 18+50.00	C6.10
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SANITARY SEWER DETAILS (SHEET 2 OF 3)	SS3.2
SANITARY SEWER DETAILS (SHEET 3 OF 3)	SS3.3

REFERENCES - BENCHMARKS EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM) LOCATED AT THE CENTERLINE INTERSECTION OF SUN, TRAIL DRIVE AND SETTING SUN DRIVE. DATE: _____ BY: _____ REVISIONS: _____	ENGINEERS & ARCHITECTS - PLANNERS TEXAS REGISTERED ENGINEERING FIRM F-464 4712 Woodrow Blvd, Ste. F, El Paso, TX 79924 Office: 915.544.5232 Fax: 915.544.5233 www.oasa.com
SCALE: N/A Horizontal: N/A Vertical: N/A Contour Interval: N/A DATE: OCTOBER 2011 DESIGN BY: F.Z. DRAWN BY: J.L.A. CHKD. BY: J.L.A. APP. NO.: _____ BY: J.L.A. JOB No. 2260-012-LD	PROJECT NAME VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS
SHEET TITLE	GENERAL INFORMATION
SHEET NO.	C1.1

VENTANAS SUBDIVISION UNIT FOUR

BEING A PORTION OF SECTION 46, BLOCK 79,
TOWNSHIP 2, TEXAS AND PACIFIC RAILROAD SURVEY
EL PASO, EL PASO COUNTY, TEXAS
CONTAINING 35.748± ACRES

SHEET 1 OF 2

DEDICATION

GFA, LLC the owners of this land, do hereby present this map and dedicate their respective portions of property to the use of the public, the streets, ponding area, pedestrian right-of-way, drainage right of way and utility easements as hereon laid down and designated, including easements for overhead of service wires for pole type utilities and the right for installation of service poles alongside lot lines as may be required, easements for buried service wires, conduits and pipes for underground utilities, and the right to ingress and egress for service and construction, and the right to trim interfering trees and shrubs.

Witness my signature this 3rd day of May, 2012.

ALBERT GAMBOA, President

ACKNOWLEDGEMENT

STATE OF TEXAS
COUNTY OF EL PASO
Before me, the undersigned authority, on this day personally appeared Albert Gamboa, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same as the act and deed for the purpose and consideration herein expressed.

Given under my hand and seal of office this 3rd day of May, 2012.

Carol R. Gonzalez
Notary Public in and for El Paso County, Texas
My Commission Expires March 29, 2016

CITY PLANNING COMMISSION

This subdivision is hereby approved as to the platting and as to the condition of the dedication in accordance with Chapter 212 of the Local Government Code of Texas this 21st day of May, 2012.

Jorge L. Azcarate Chairman
Benito Barragan Executive Secretary

Approved for filing this 9th day of May, 2012.

John A. ...
City Engineer

FILING

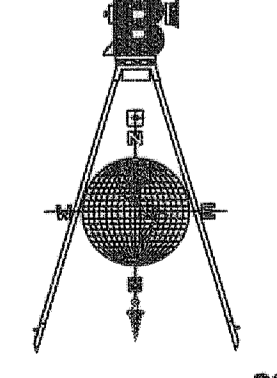
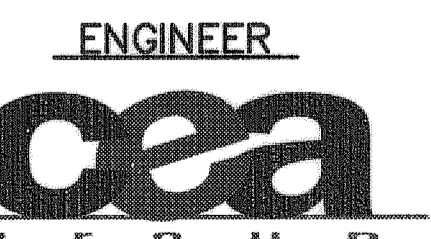
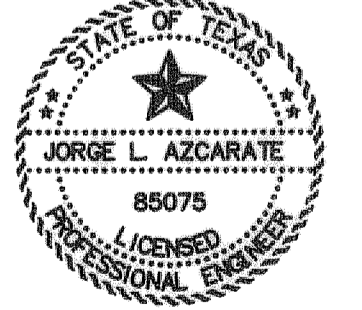
Filed and recorded in the office of the County Clerk of El Paso County, Texas, this 22 day of May, 2012 in File No. 20120057903 of the Plat Records.

Robbie ... County Clerk
Christian ... by Deputy

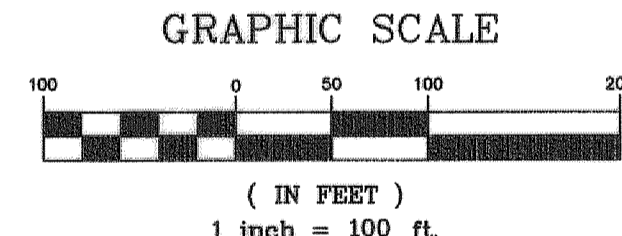
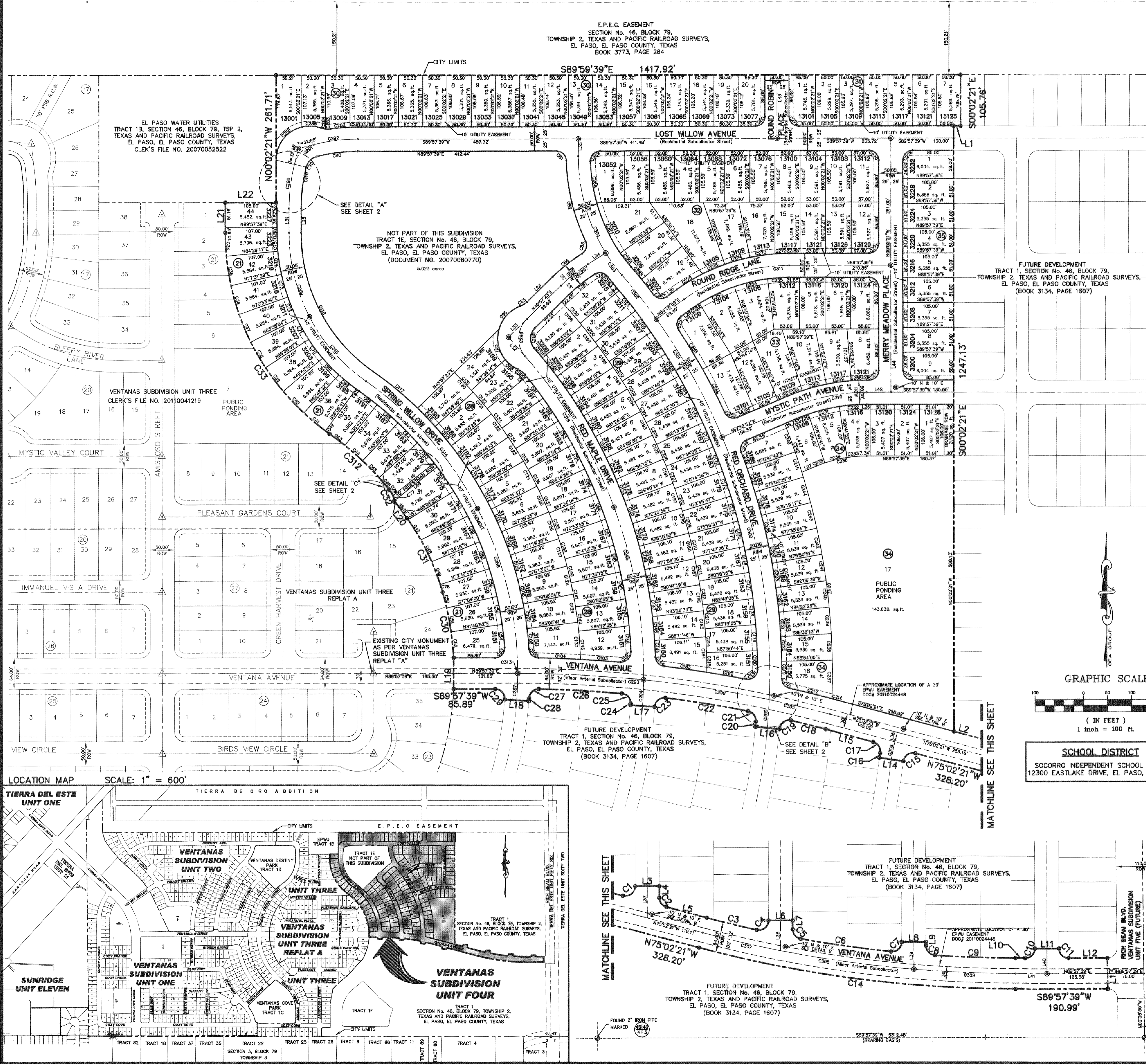
Subdivision improvement plans prepared by and under the supervision of CEA Group.
This plat represents a survey made on the ground by me or under my supervision and complies with the current Texas Board of Professional Land Survey Professional and Technical Standards.

Jorge L. Azcarate
JORGE L. AZCARATE, P.E.
Licensed Professional Engineer
Texas License No. 85075

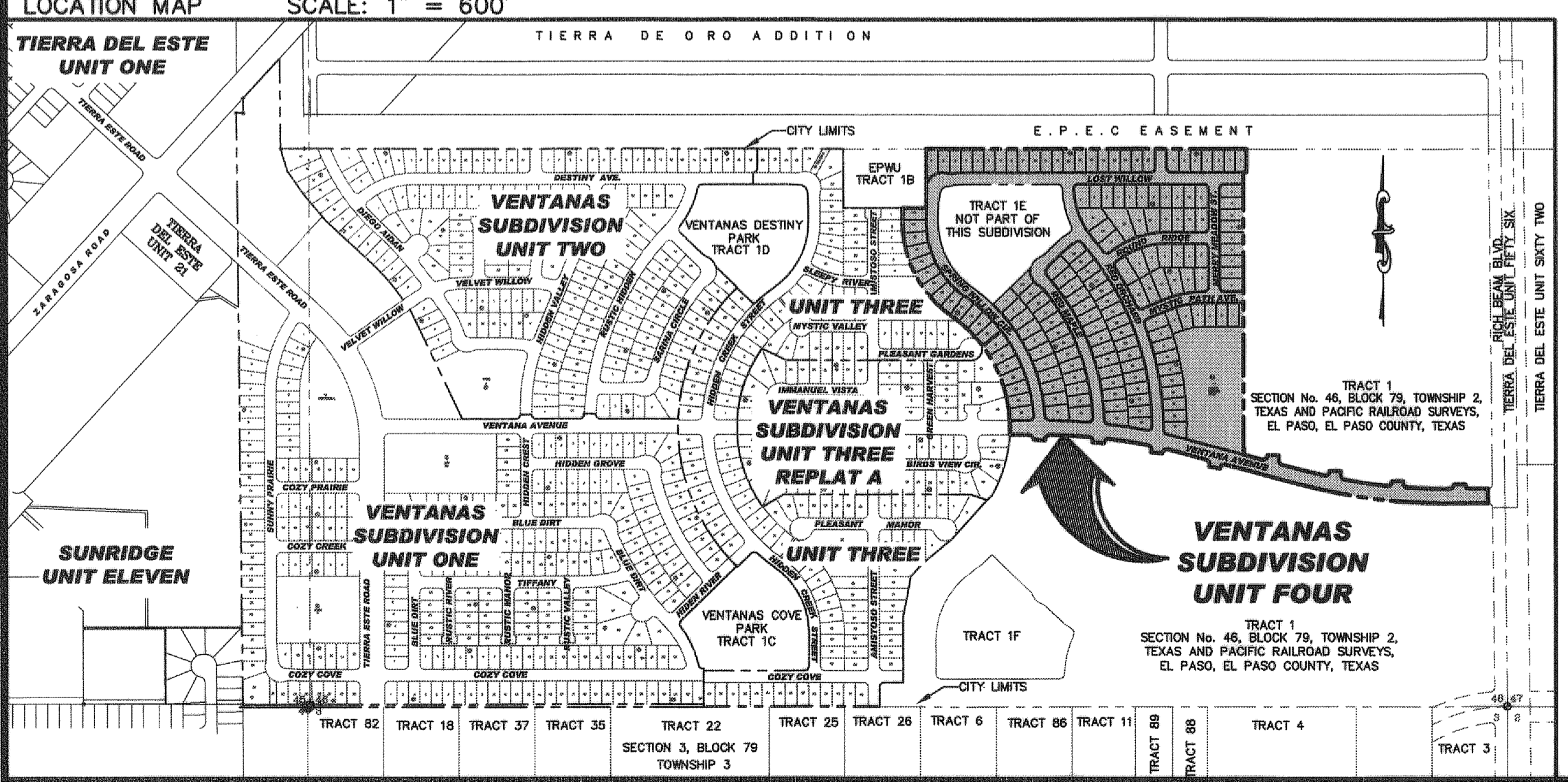
Benito Barragan
Benito Barragan U.S. R.P.L.S. No. 5615



Surveyor
Barragan & Associates Inc.
LAND PLANNING & LAND SURVEYING
10950 Pelloano Drive Bldg. F - El Paso TX 79936
Phone (915) 591-5709 Fax (915) 591-5706
CONTACT: BENITO BARRAGAN, R.P.L.S.
CONTACT: JORGE L. AZCARATE, P.E.
DATE OF PREPARATION: APRIL 26, 2012



SCHOOL DISTRICT
SOCORRO INDEPENDENT SCHOOL DISTRICT
12300 EASTLAKE DRIVE, EL PASO, TX 79928



S:\2760\2760-3\2760-3\CONSULTANTS\LANDSURVEYING\4797212-1\12.16.12.AM

TIERRA DE ORO ADDITION

E.P.E.C. EASEMENT

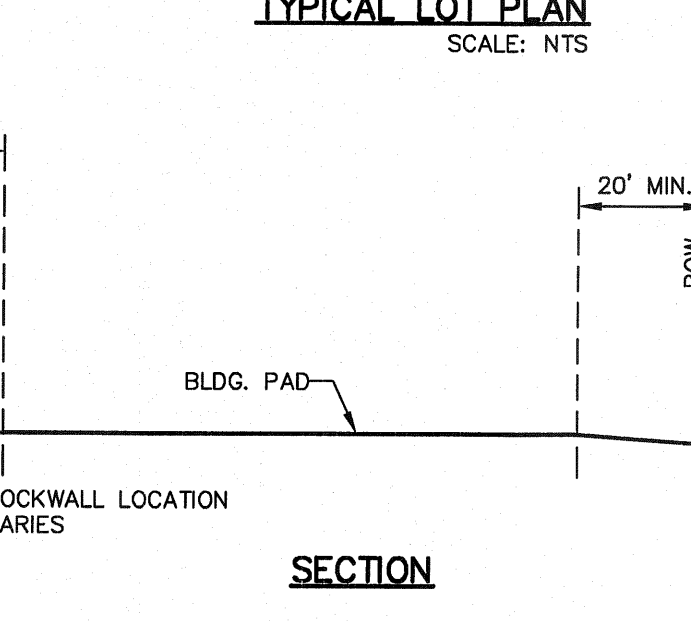
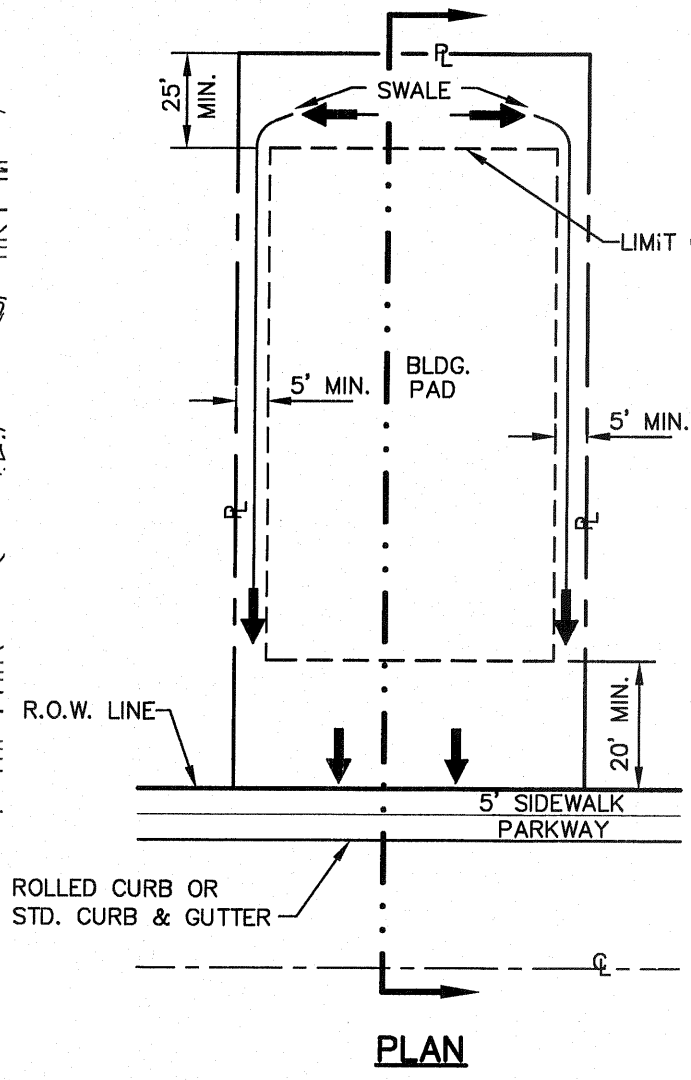
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPD&T) (AFTER HOURS)	(915) 621-6750 (915) 240-3220

WARNING!
BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	REVISIONS
EXISTING CITY MONUMENT ELEVATION = 3970.52 FEET (CITY DATUM)	DATE
LOCATED AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE	BY



- NOTES:**
- RETAINING WALLS SHALL BE CONSTRUCTED FOR VERTICAL GRADES GREATER THAN 2'-FEET.
 - SLOPED AREAS SHALL BE MAINTAINED BY THE PROPERTY OWNERS.
 - ALL RETAINING WALLS NOT SPECIFIED TO BE CONSTRUCTED BY DEVELOPER, SHALL BE BUILT BY BUILDER.
 - RETAINING ROCKWALLS (RETAINING PORTIONS ONLY) IN EXCESS OF 4' HIGH TO BE BUILT BY DEVELOPER.
 - DEVELOPER SHALL COMPLY WITH SECTION 13.08.170 (EXCESSIVE PAVING CUTS) OF THE EL PASO MUNICIPAL CODE.
 - IMPROVEMENTS SHALL NOT BE PLACED ON SIDEWALK (NDBC'S, SIGNS, POLES, FIRE HYDRANTS, ETC.) REFER TO STANDARD DETAIL SHEETS.
 - IMPROVEMENTS SHALL COMPLY WITH T.A.S./A.D.A. STANDARDS.
 - WHEELCHAIR RAMP WILL BE CONSTRUCTED BY DEVELOPER AS PART OF SUBDIVISION IMPROVEMENTS.
 - DEVELOPER SHALL PERFORM A PERCOLATION TEST WITHIN THE PROPOSED POND AND BE SUBMITTED PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS BY THE CITY OF EL PASO AND EL PASO WATER UTILITIES. PERCOLATION TEST SHALL CONFORM TO ASTM D5126.

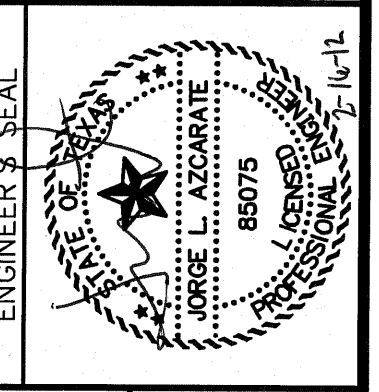
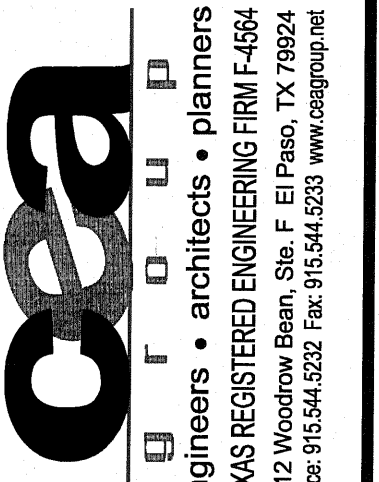
BENCHMARK

BENCHMARK IS CITY MONUMENT AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE ELEVATION = 3970.52 (CITY DATUM).

FLOOD ZONE:

THIS SUBDIVISION USES WITH IN ZONE "X" AS DESIGNATED IN PANEL NO. 480212 0175 B, DATED SEPTEMBER 4, 1991, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "X" INDICATES AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.

- LEGEND:**
- NEW 6' HIGH RETAINING ROCKWALL (2'-3" RETAINING HEIGHT)
 - NEW 6' HIGH RETAINING ROCKWALL (3'-9" RETAINING HEIGHT)
 - PROPOSED TEMPORARY DESILTING BASIN



SCALE: 1" = 100'	PROJECT NAME:
Horizontal: N/A	VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS
Vertical: N/A	
Contour Interval: 3/4"	
DATE: OCTOBER 2011	
DESIGN BY: E.L.Z.	SHEET TITLE:
DRAWN BY: A.B.	GRADING PLAN
CHKD. BY: J.L.A.	SHEET NO.:
APPROV. BY: J.L.A.	C3.1
JOB NO. 2260-012-1D	

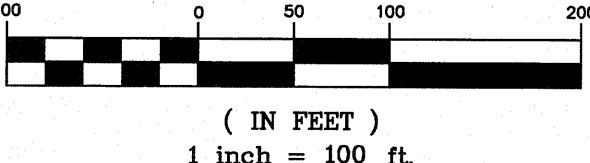
ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

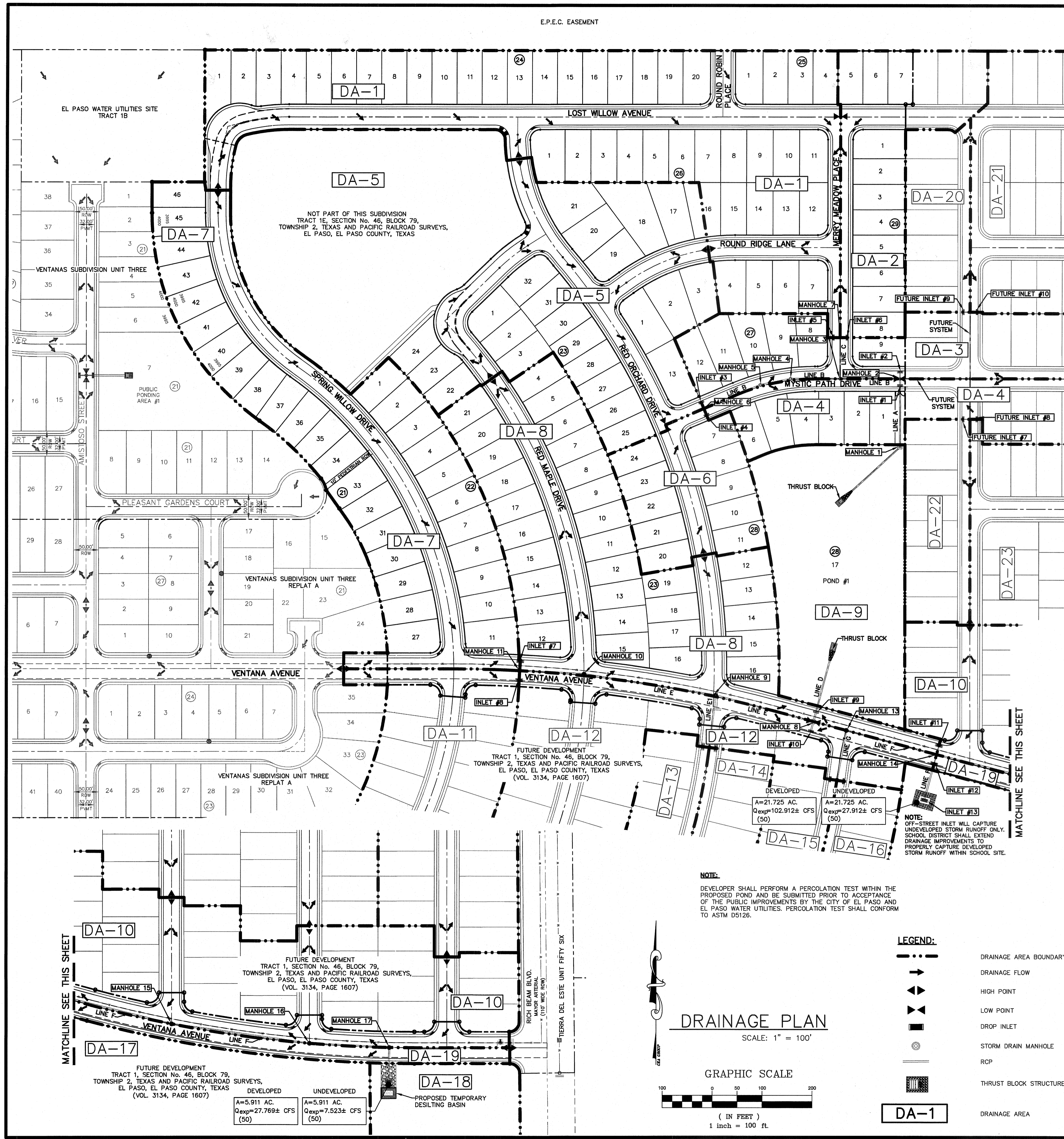
REVIEWED

GRADING PLAN

SCALE: 1" = 100'

GRAPHIC SCALE





NEW POND #1 CALCULATIONS

$QT = (ARC)/12$
 $QT = 26.982 \text{ AC-FT}$
 $A = 128.485^*$
 $R = 4^*$
 $Cw = 0.63$
 $QT \times 25\% = 6.745$
 $26.982 + 6.745 = 33.727$

SILT VOLUME = 1.542
 0.012 AC-FT/AC
 $33.727 \times 1.542 = 35.269 \text{ AC-FT}$
TOTAL reqd = 35.269 AC-FT

Cw = WEIGHTED COEFFICIENT INCLUDES ALL WATERSHEDS AS INDICATED AND D-17 AND D-18.
 *INCLUDES ALL FUTURE RUNOFF TOTAL AREA.

NEW POND #1

BASIN NO.	REQUIRED CAPACITY (AC-FT)	AVAILABLE CAPACITY (AC-FT)	PEAK INFLOW (CFS)	OUTLET TOWER FLOW (CFS)	HIGH WATER SURFACE ELEV. (FT.)	BOTTOM ELEVATION (FT.)	FREE BOARD (FT.)	TOP ELEVATION
1	35.269	40.309	333.99	0	3991.08	3964	1.71	3993

NOTE:

1. THE HWSE REFLECTS THE ELEVATION AS REQUIRED BY THE CITY OF EL PASO. THE HWSE DOES NOT INCLUDE 25% FREEBOARD. HOWEVER, THE TOTAL POND CAPACITY SHALL HOLD TOTAL REQUIRED STORM WATER RUNOFF.

HWSE 1 = $QT + \text{SILT VOLUME}$
 HWSE 1 = $26.982 + 1.542 = 28.524 \text{ AC-FT}$
 CONTOUR 3988, ACCUMULATED VOLUME = 27.955 AC-FT
 CONTOUR 3991, ACCUMULATED VOLUME = 30.228 AC-FT
 HIGH WATER SURFACE ELEVATION = 3988.25

HWSE 2 = $QT + \text{SILT VOLUME} + 25\% \text{ EMERGENCY}$
 HWSE 2 = $26.982 + 1.542 + 6.745 = 35.269 \text{ AC-FT}$
 CONTOUR 3992, ACCUMULATED VOLUME = 37.637 AC-FT
 CONTOUR 3994, ACCUMULATED VOLUME = 40.309 AC-FT
 HIGH WATER SURFACE ELEVATION = 3991.08

50 YEAR STORM CALCULATIONS FOR WATERSHED AREAS

DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	DESIGN STORM INTENSITY (150) (3)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C) (5)	Q50 (CFS) (6)
DA-1	7.884	3.090	30.35	0.600	14.616
DA-2	2.271	3.498	24.90	0.600	4.766
*DA-3	5.046	3.472	25.21	0.600	10.511
*DA-4	7.734	3.182	29.00	0.600	14.765
DA-5	9.951	2.671	37.80	0.543	14.432
DA-6	1.556	3.717	22.50	0.600	3.470
DA-7	5.707	3.222	28.44	0.600	11.032
DA-8	5.625	3.331	26.95	0.600	11.242
DA-9	3.305	5.573	10.00	0.330	6.078
*DA-10	5.999	3.123	29.86	0.600	11.240
*DA-11	4.687	3.587	23.88	0.600	10.087
*DA-12	5.778	3.211	28.58	0.600	11.131
*DA-13	4.163	3.534	24.48	0.580	8.532
*DA-14	4.099	3.433	25.68	0.600	8.443
*DA-15	2.965	3.932	20.41	0.600	6.995
*DA-16	3.235	3.906	20.65	0.600	7.581
*DA-17 (D)	21.725	5.573	10.00	0.850	102.912
*DA-17 (U)	21.725	3.212	28.57	0.400	27.912
*DA-18 (D)	5.911	5.527	10.20	0.850	27.769
*DA-18 (U)	5.911	3.182	29.00	0.400	7.523
*DA-19	0.762	5.573	10.00	0.900	3.821
*DA-20	1.091	3.786	21.80	0.600	2.478
*DA-21	10.894	3.480	25.210	0.600	22.746
*DA-22	1.209	3.816	21.50	0.600	2.768
*DA-23	7.191	3.676	22.93	0.600	15.860

*WATERSHED INCLUDES ALL PROPOSED FUTURE DRAINAGE AREA
 (D) DEVELOPED RUN-OFF THAT WILL BE CAPTURED BY SEPARATE STORM SYSTEM
 (U) UNDEVELOPED RUN-OFF

REFERENCE: CITY OF EL PASO SUBDIVISION STANDARDS (3-11-97)

- (1) WATERSHED AREA IDENTIFICATION
 (2) AREA FROM DRAINAGE PLAN
 (3) RAINFALL INTENSITY, 50 YEAR STORM => PLATE NO. 2-14
 (4) TIME OF CONCENTRATION: $Tc = T(\text{OVERLAND}) + T(\text{GUTTER})$
 (5) RUNOFF COEFFICIENT => PLATE NO. 2-10 TABLE A
 RESIDENTIAL AREA = 0.60
 PAVEMENT AREA = 0.90
 (6) $Q_{50} = C \times A \times I \times 1.50$

NEW POND#1 AREAS

CONTOUR	ACCUMULATED VOLUME (AC-FT.)
3983	40.309
3982	37.637
3981	35.067
3980	32.598
3989	30.228
3988	27.955
3987	25.778
3986	23.695
3985	21.705
3984	19.804
3983	17.993
3982	16.270
3981	14.631
3980	13.077
3979	11.672
3978	10.411
3977	9.227
3976	8.118
3975	7.081
3974	6.115
3973	5.219
3972	4.391
3971	3.628
3970	2.930
3969	2.295
3968	1.721
3967	1.206
3966	0.749
3965	0.347
3964	0.000

DROP INLETS

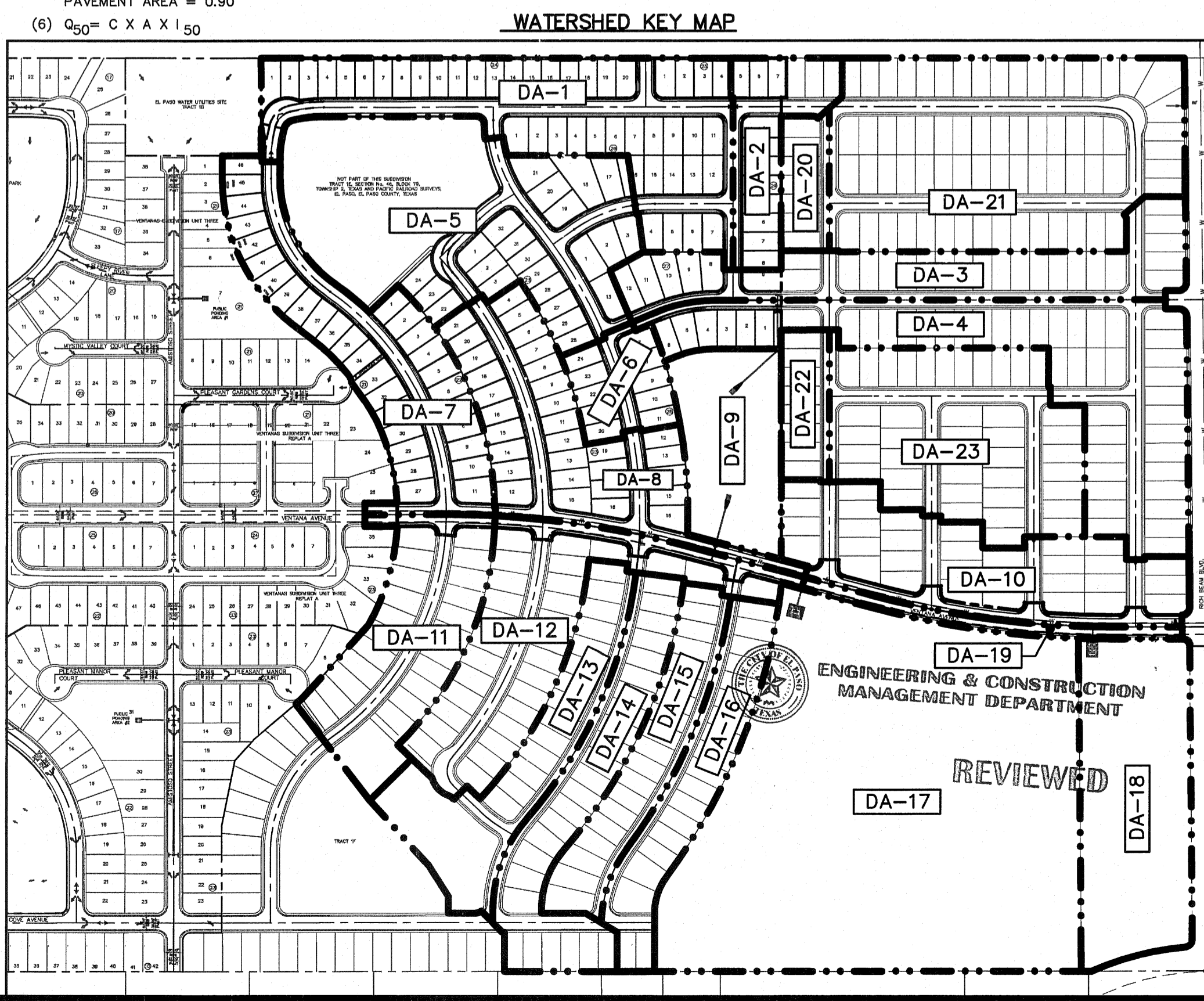
NO.	REQ. FLOW CAPACITY Q REQ (CFS)	AVAIL. FLOW CAPACITY Q AVAIL. (CFS)	ADDITIONAL FLOW BYPASS (CFS)	# OF INLETS	TYPE OF INLET	LOCATION
1	14.765	17.748	0	2	I	SUMP
2	10.511	19.297	2.127	0	I	SUMP
3	14.432	10.123	0	5	I	ON-GRADE
4	3.470	10.123	5.481	0	I	ON-GRADE
5	14.616	11.501	0	4	I	ON-GRADE
6	4.766	11.501	4.825	0	I	ON-GRADE
7	11.032	15.020	0	3	I	ON-GRADE
8	10.087	11.031	0	0	I	ON-GRADE
9	11.242	19.267	0	0	I	SUMP
10	11.131	19.267	**4.462	0	I	SUMP
11	11.240	11.824	0	1	I	ON-GRADE
12	11.723	11.380	0	0.993	2	ON-GRADE
13	27.912	31.439	0	0	I	OFF-ST SUMP

THESE CAPACITIES CORRESPOND TO A LOGON FACTOR OF 0.5
 AVAILABLE FLOW CAPACITIES SHOWN AT ON-GRADE INLETS
 REFLECTS CAPACITIES WITH INLET GRADE EFFICIENCIES.
 **BYPASS FROM FUTURE INLET STRUCTURES AND INCLUDES
 0.393 CFS FROM INLET 12.

MOMENTUM COMPUTATION

LOCATION (1)	DEPTH (2)	VELOCITY (3)	PRODUCT NUMBER (4)
1	0.373	3.000	1.125
2	0.373	3.000	1.125
3	0.328	2.745	0.900
4	0.328	2.745	0.900
5	0.340	2.745	0.933
6	0.340	2.745	0.933
7	0.360	2.791	1.005
8	0.349	2.729	0.952
9	0.341	3.195	1.089
10	0.368	3.468	1.335
11	0.341	3.195	1.089
12	0.347	3.232	1.121

- (1) LOCATION
 (2) DEPTH
 (3) VELOCITY
 (4) PRODUCT NUMBER = DEPTH X VELOCITY



NOTE:
 DEVELOPER SHALL PERFORM A PERCOLATION TEST WITHIN THE PROPOSED POND AND BE SUBMITTED PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS BY THE CITY OF EL PASO AND EL PASO WATER UTILITIES. PERCOLATION TEST SHALL CONFORM TO ASTM D5126.

LEGEND:

- DRAINAGE AREA BOUNDARY
- DRAINAGE FLOW
- ▲ HIGH POINT
- ▼ LOW POINT
- DROP INLET
- STORM DRAIN MANHOLE
- RCP
- THRUST BLOCK STRUCTURE
- DRAINAGE AREA

DRAINAGE PLAN
 SCALE: 1" = 100'

GRAPHIC SCALE
 (IN FEET)
 1 inch = 100 ft

REFERENCES - BENCHMARKS
 EXISTING CITY MONUMENT
 ELEVATION=3970.52 FEET (CITY DATUM)
 LOCATED AT THE CENTERLINE
 INTERSECTION OF
 SUN TRAIL DRIVE AND SETTING SUN
 DRIVE.

DATE: _____ REVISIONS: _____ BY: _____

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 4712 Woodrow Bean, Ste. F, El Paso, TX 79904
 Office: 915.544.5202 Fax: 915.544.6233 www.oosaplan.com

ENGINEER'S SEAL
 JORGE L. AGUIAR
 88075
 LICENSED PROFESSIONAL ENGINEER
 CIVIL
 STATE OF TEXAS

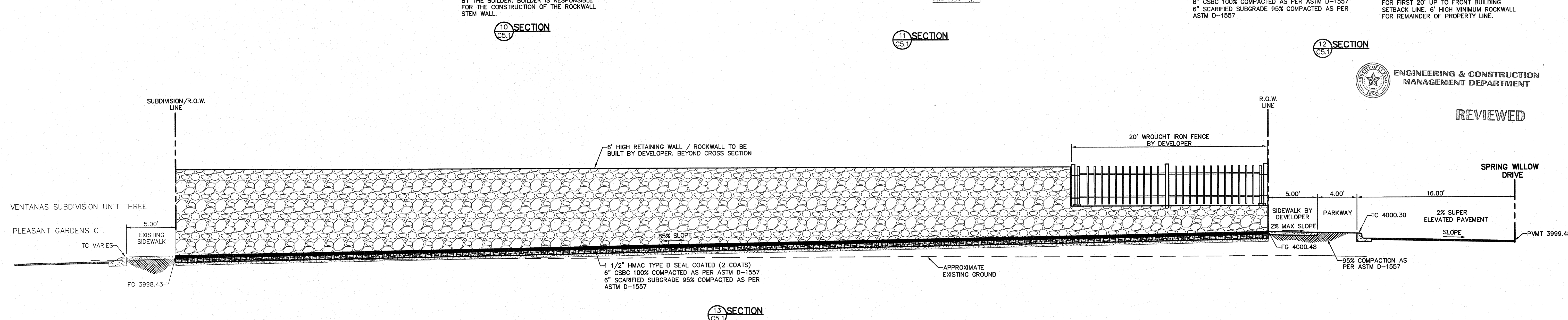
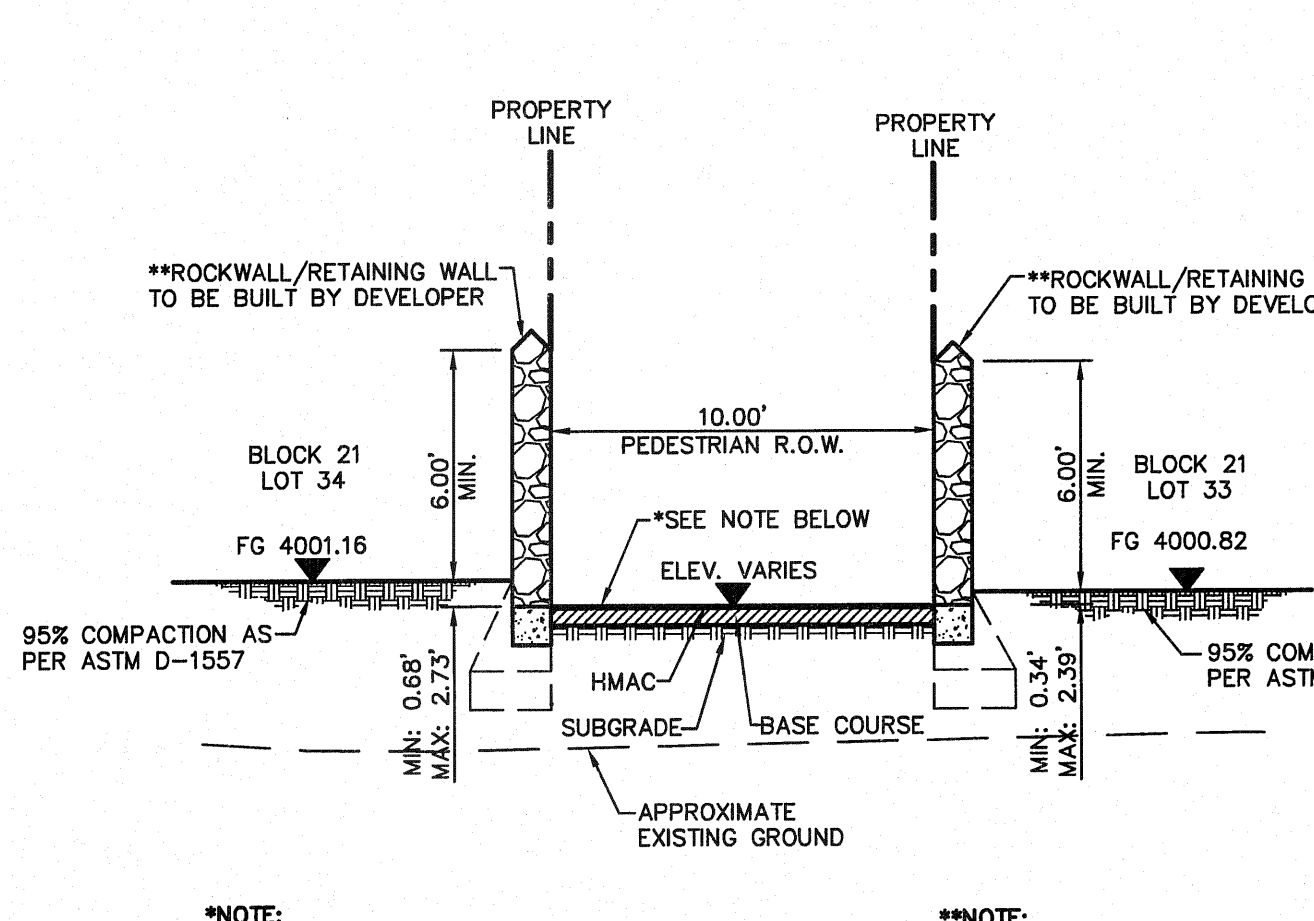
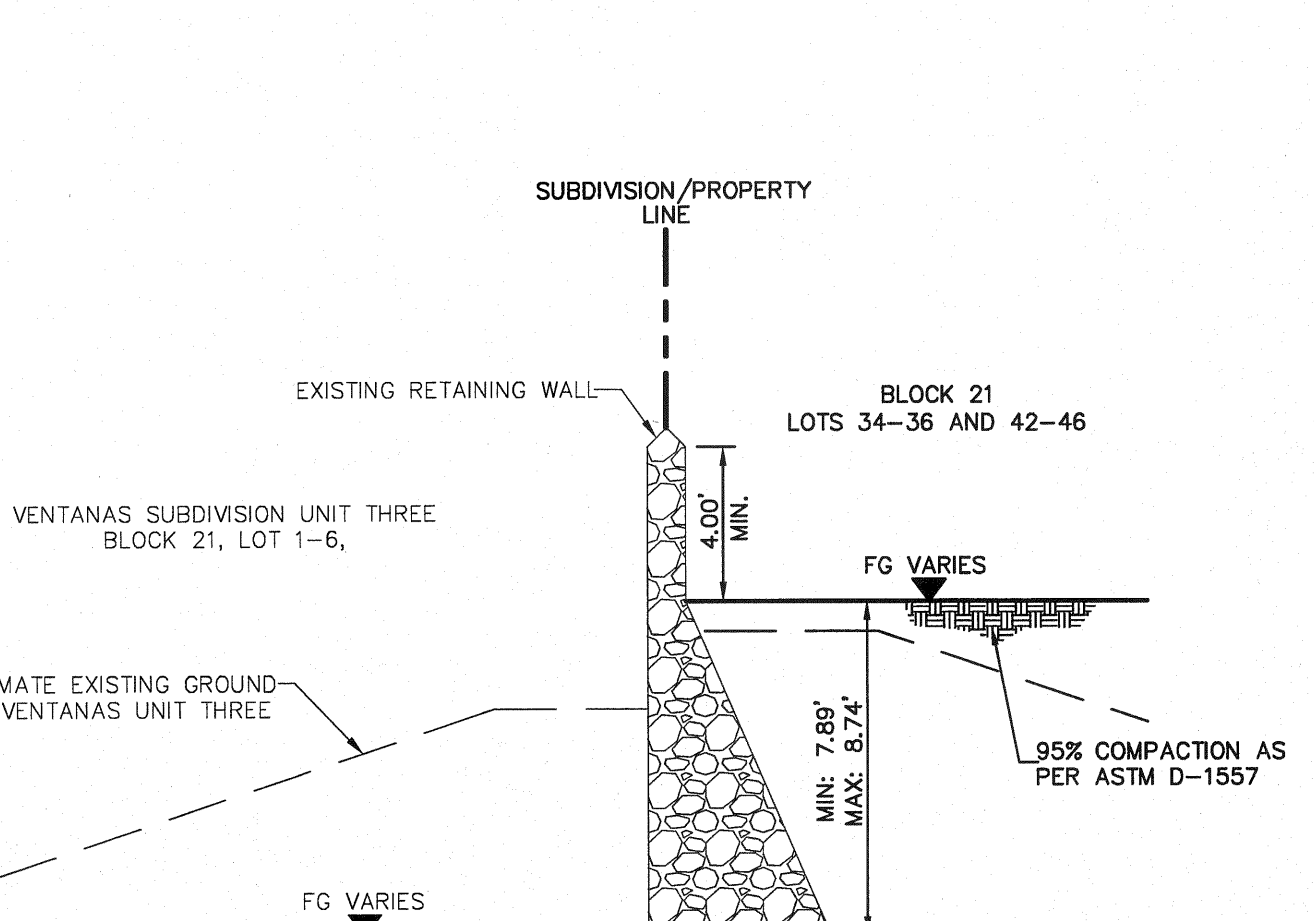
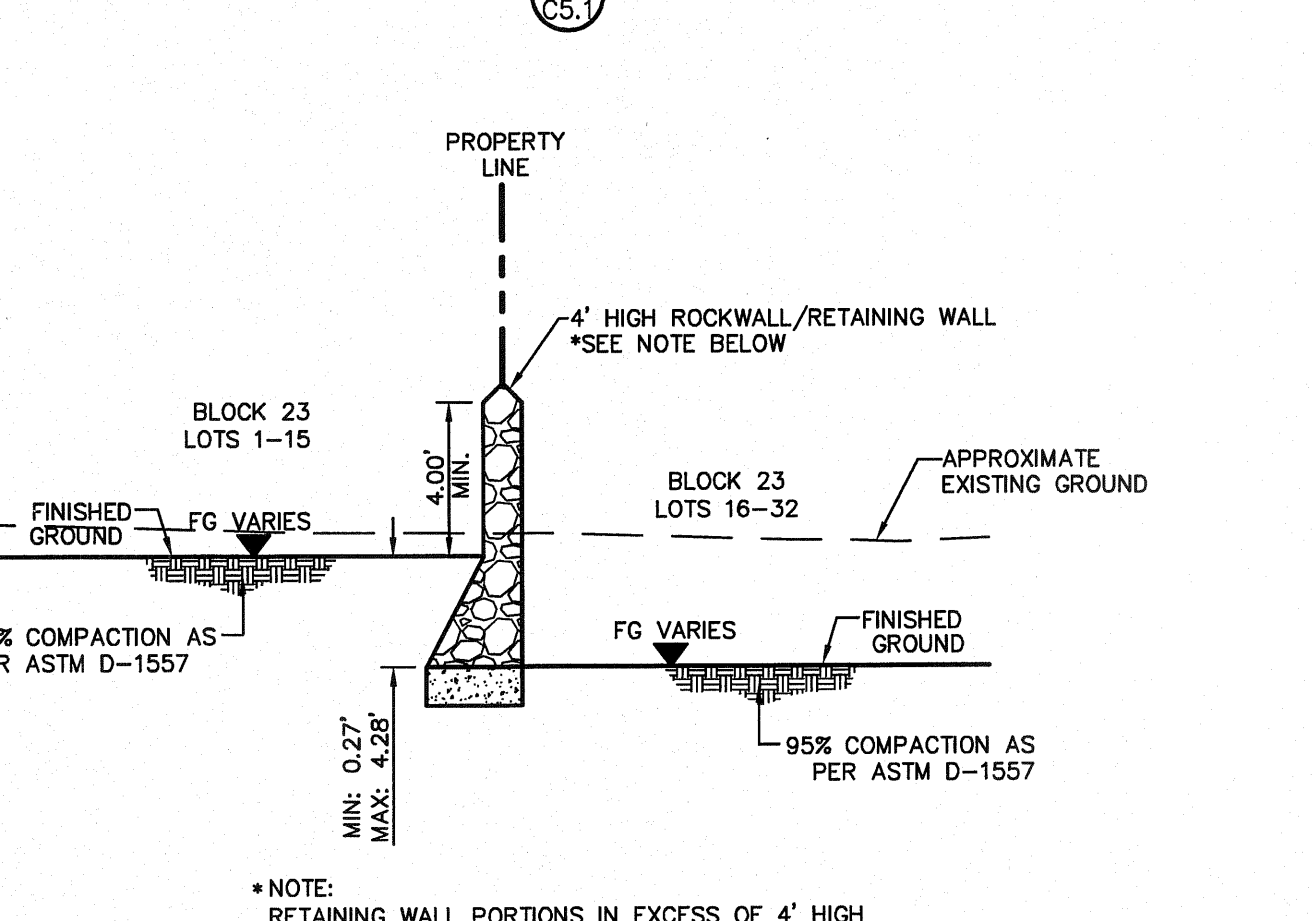
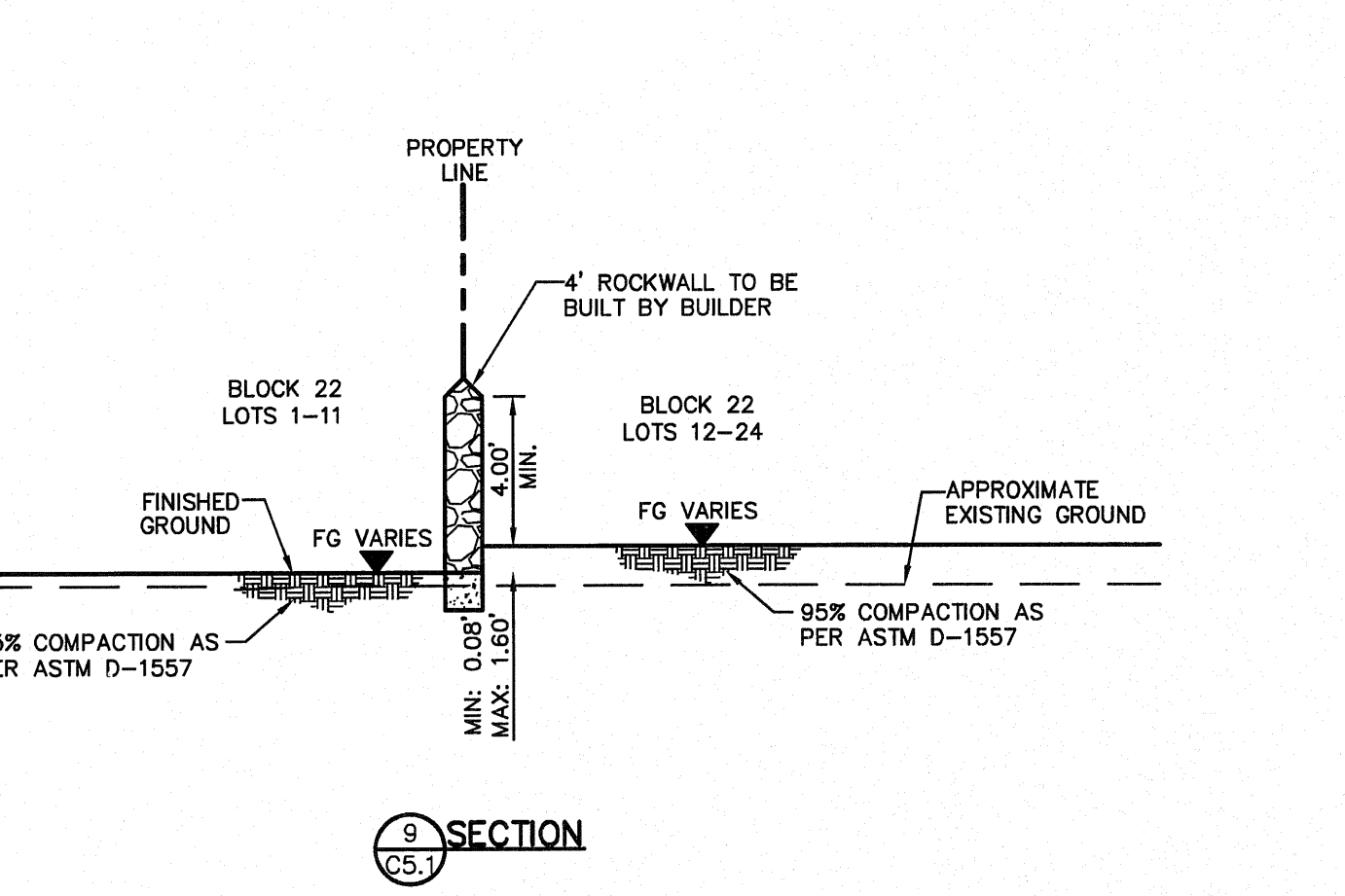
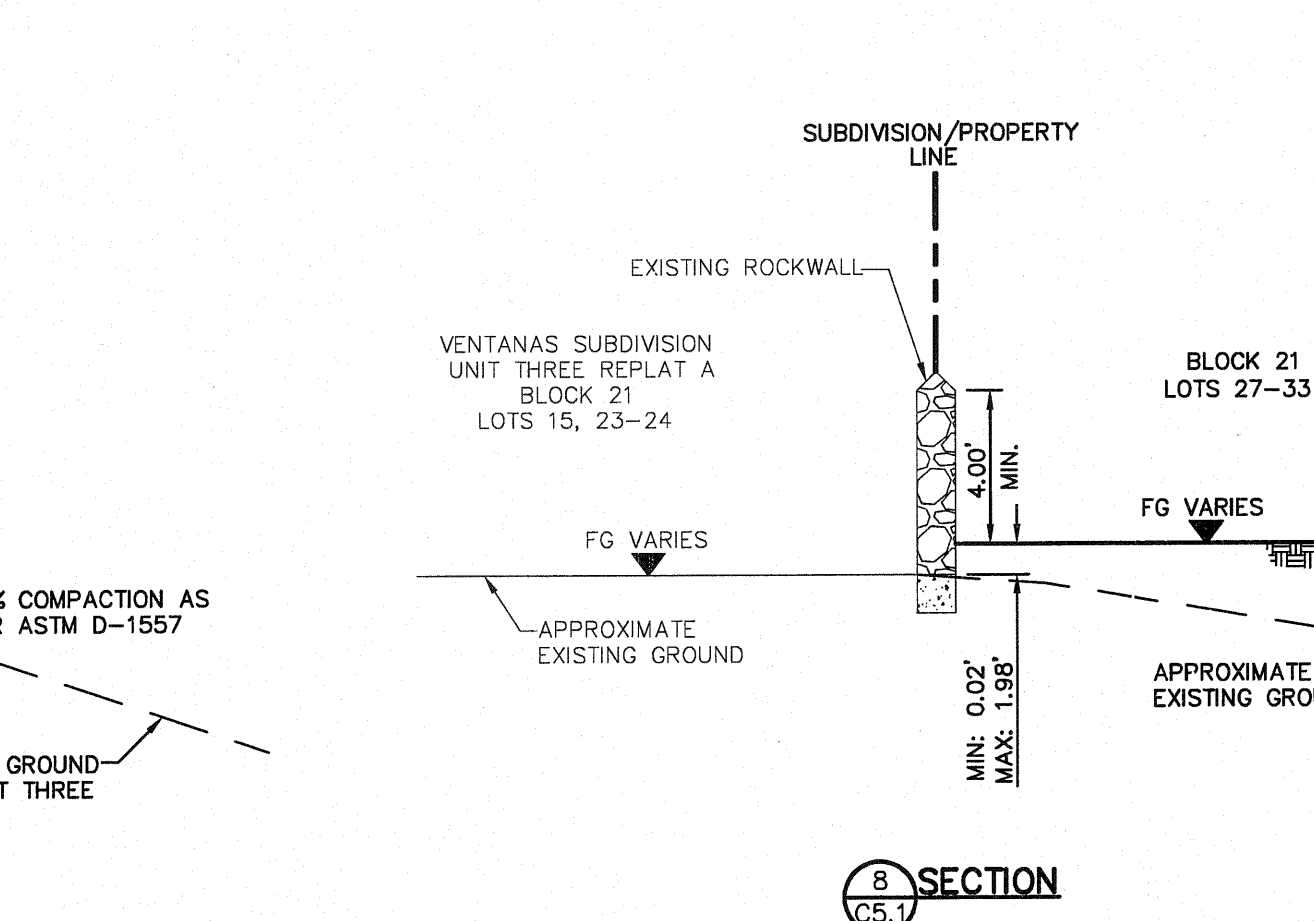
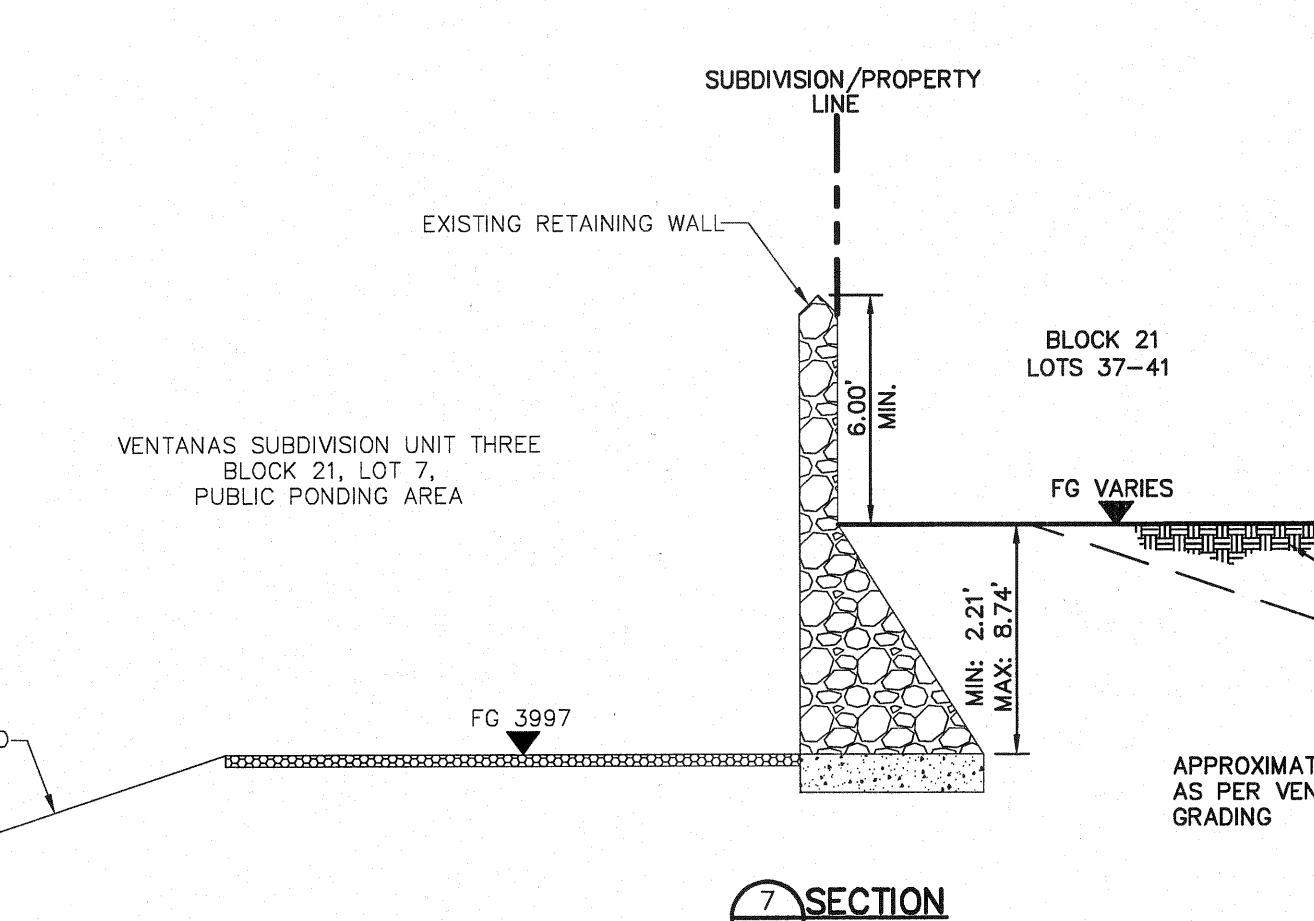
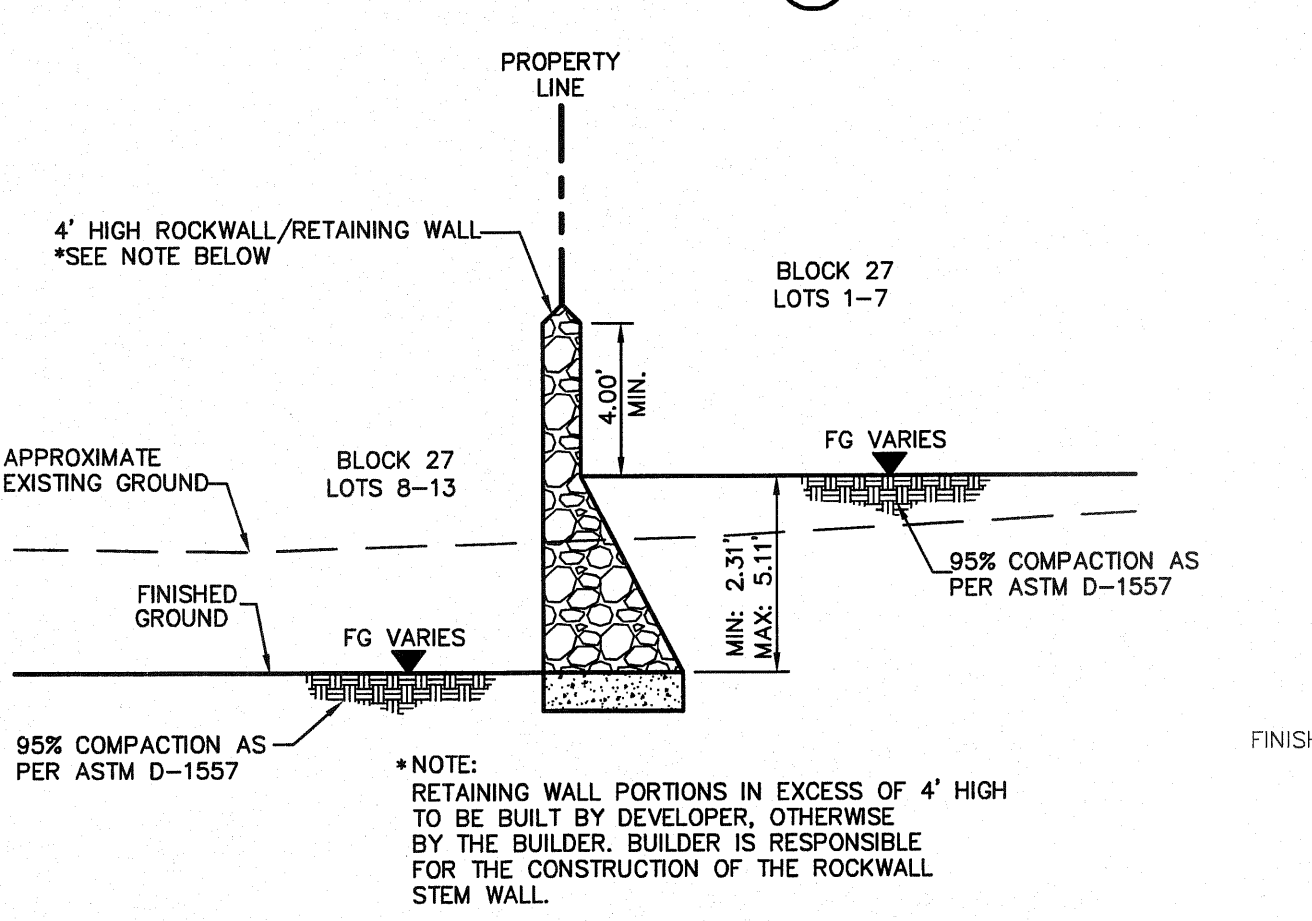
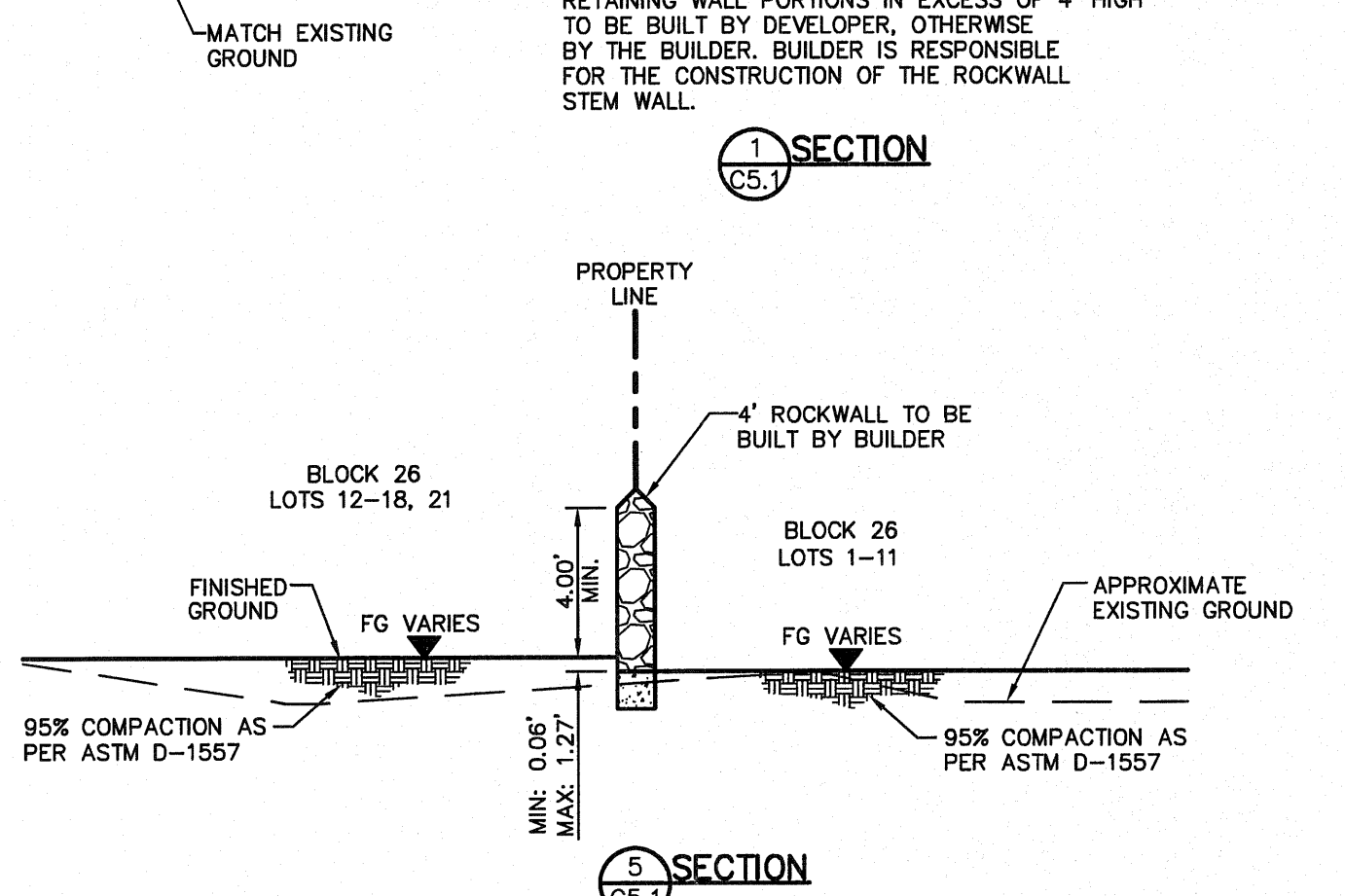
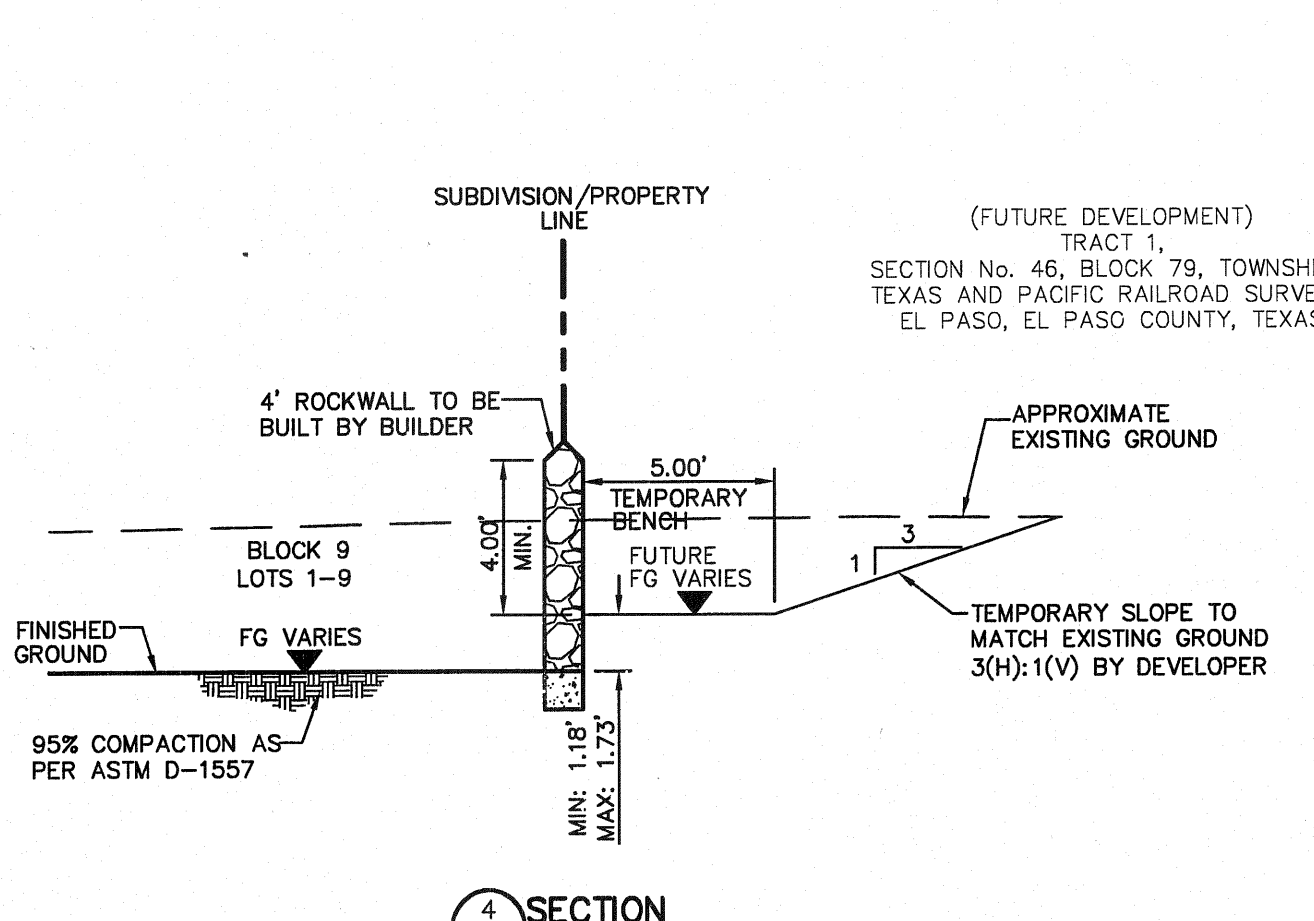
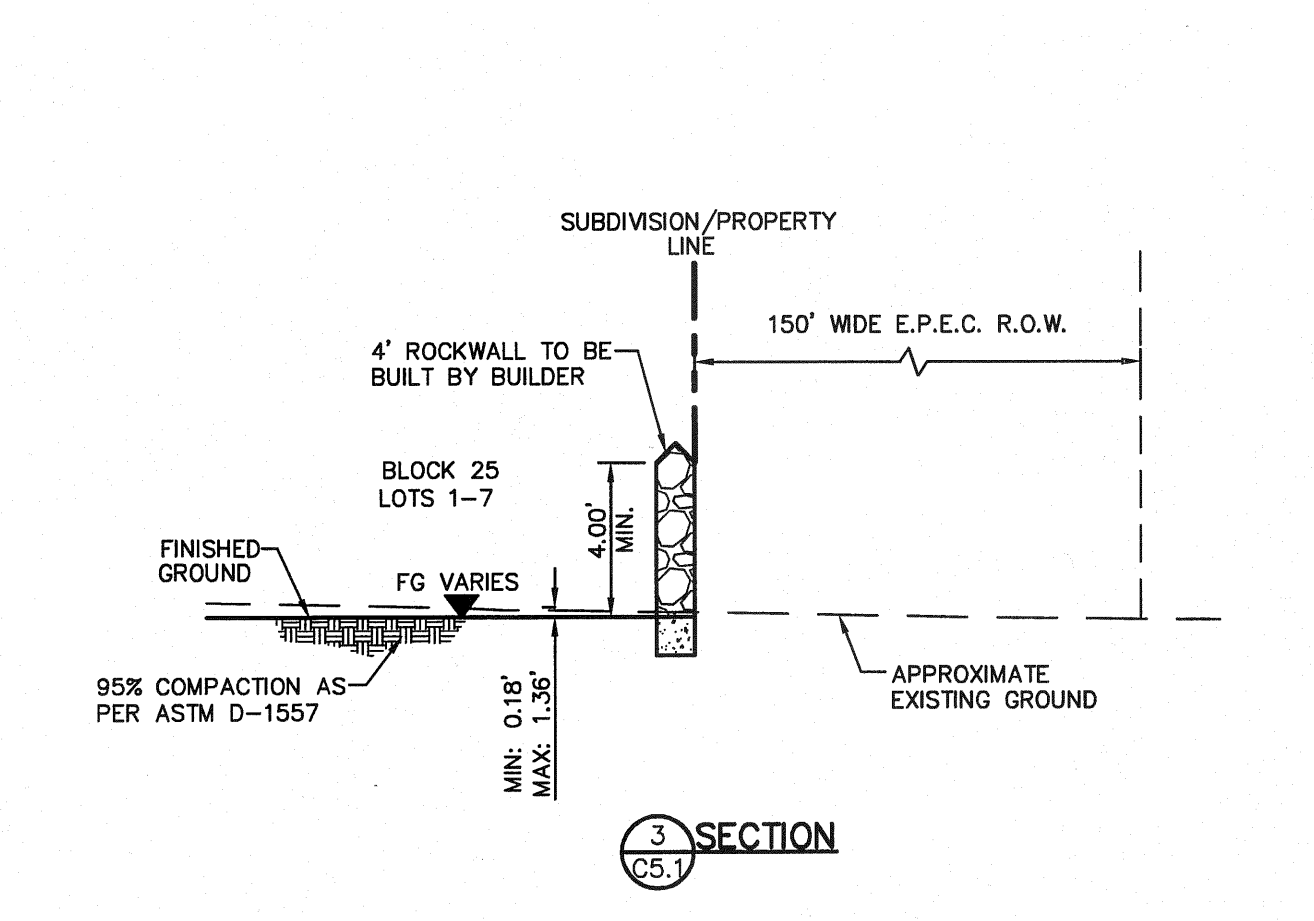
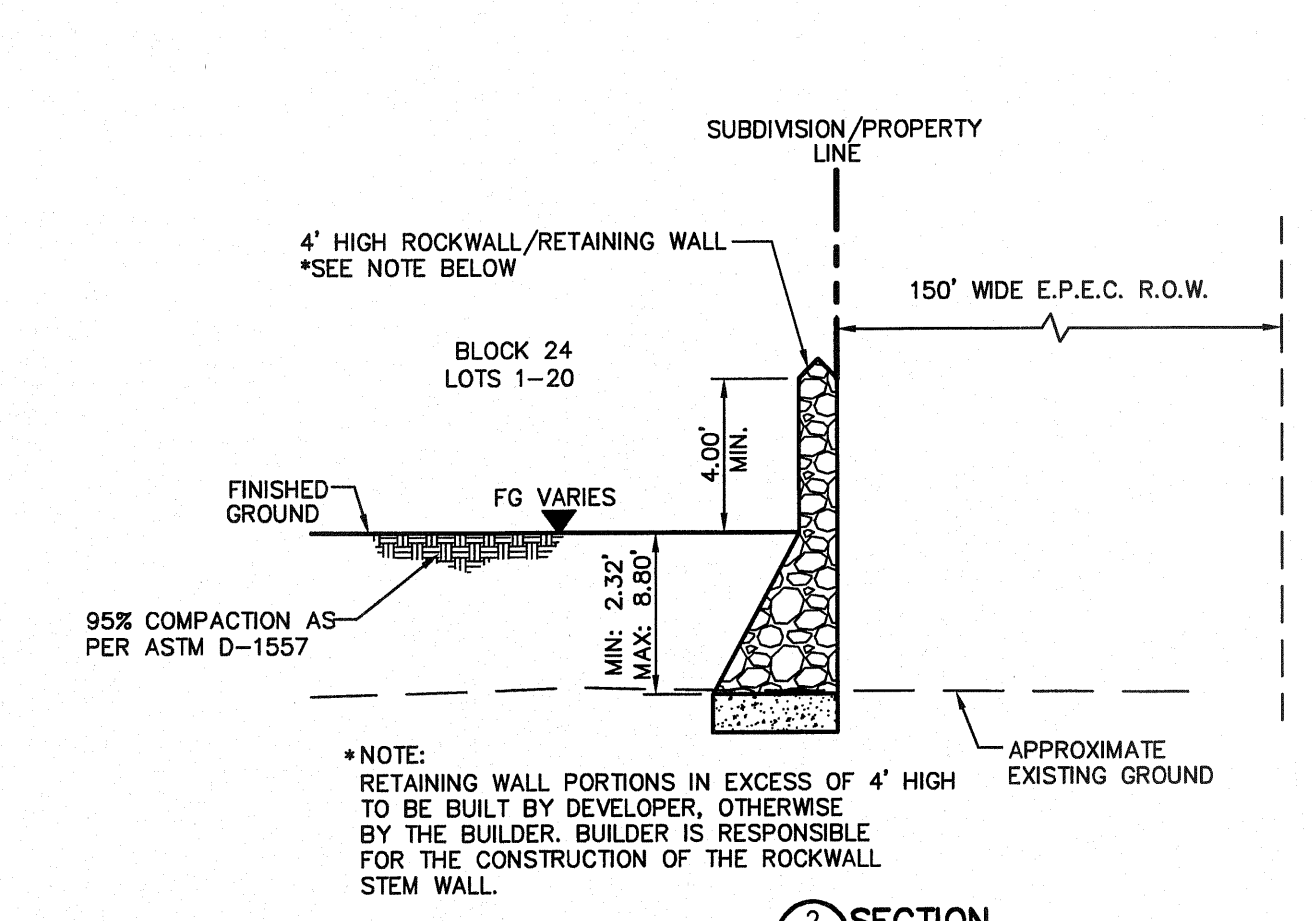
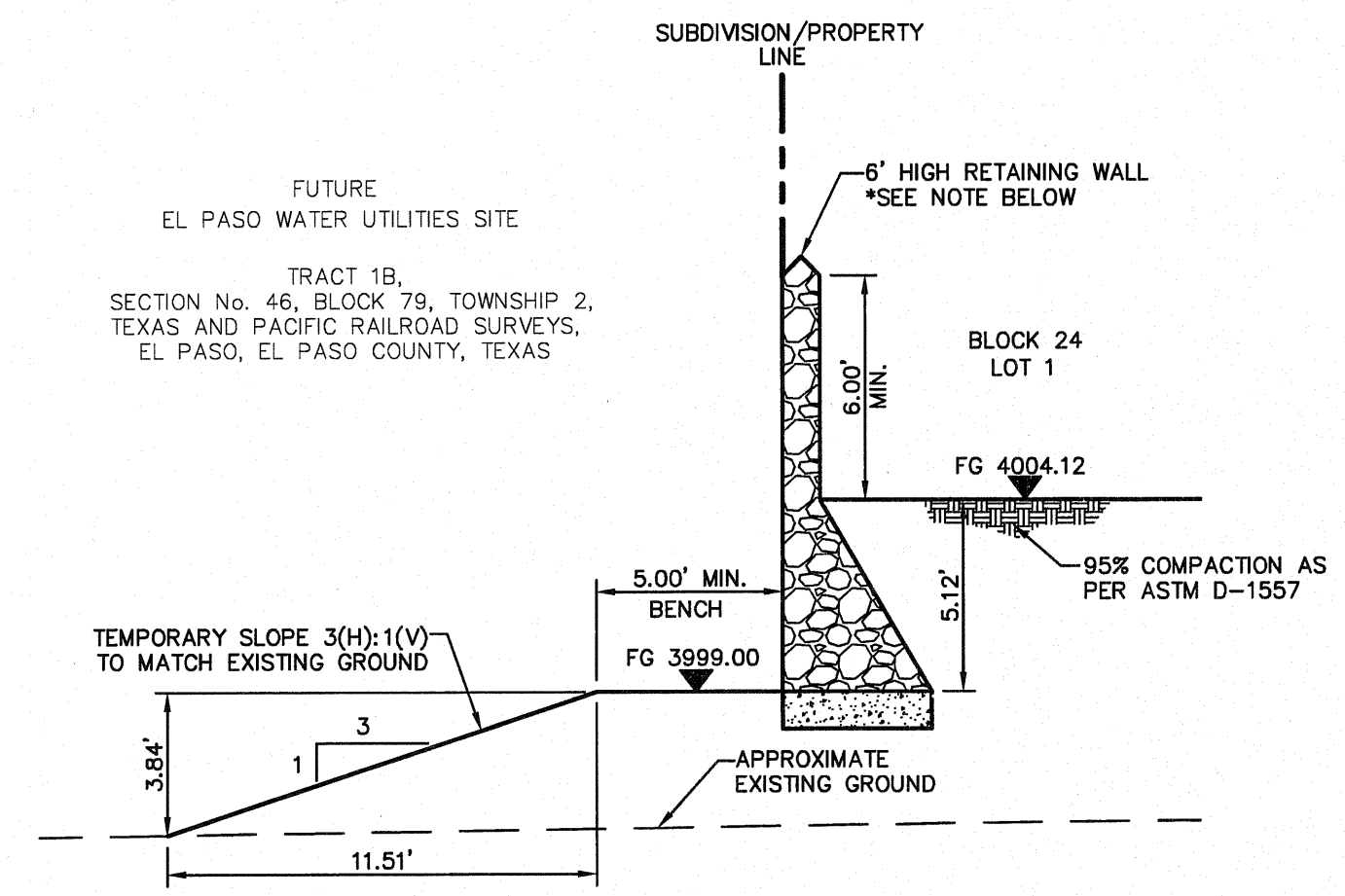
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 Vertical: N/A
 Contour Interval: N/A

DATE: OCTOBER 2011
 DESIGN BY: F.Z.
 DRAWN BY: A.B.
 CHECKED BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB NO. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS**

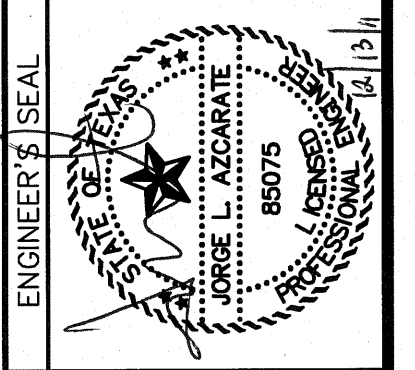
SHEET TITLE
DRAINAGE PLAN

SHEET NO.
C4.1



REFERENCES - BENCHMARKS
 EXISTING CITY MONUMENT
 ELEVATION=3970.52 FEET (CITY DATUM)
 LOCATED AT THE CENTERLINE
 INTERSECTION OF
 SUN TRAIL DRIVE AND SETTING SUN
 DRIVE.
 DATE _____ REVISIONS _____ BY _____

esa
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM #4864
 1712 Woodrow Bean, Suite 100, El Paso, TX 79924
 Office: 915-834-4321 Fax: 915-834-4320 www.esainc.com



SCALE: 1"=5'
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A
 DATE: OCTOBER 2011
 DESIGN BY: F.Z.
 DRAWN BY: A.B.
 CHKD. BY: J.L.A.
 APPVD. BY: J.L.A.
 JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS**

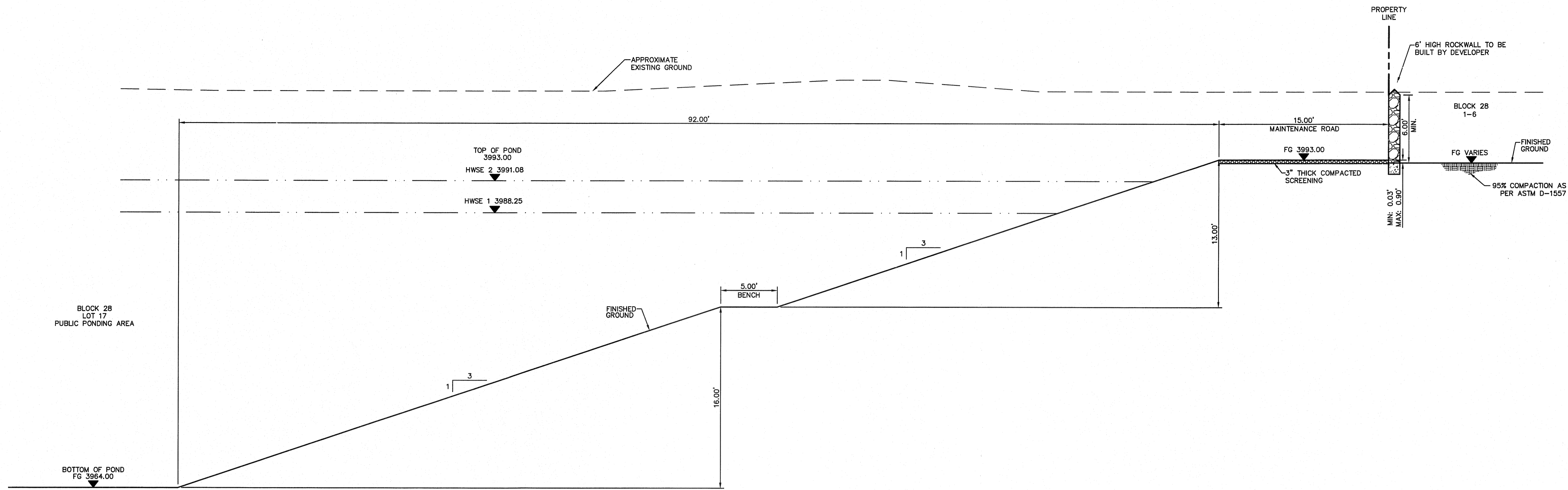
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GRADING SECTIONS

SHEET 1 OF 3
 SHEET NO.

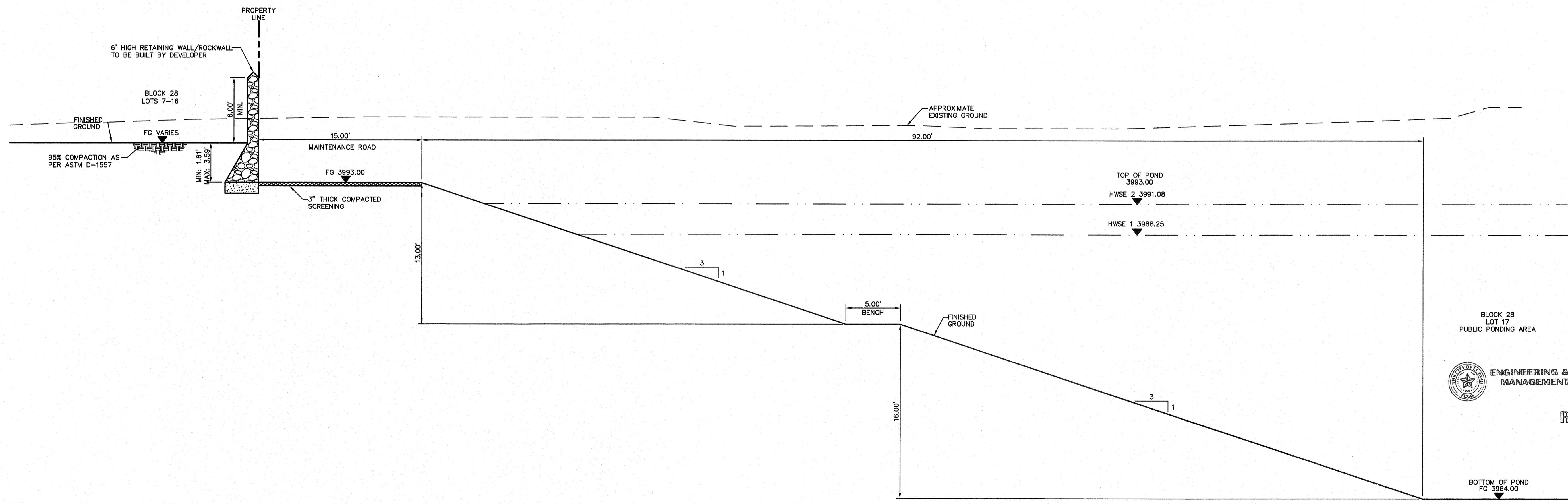
C5.1

ENGINEERING & CONSTRUCTION
 MANAGEMENT DEPARTMENT

REVIEWED



14 SECTION
C5.2



15 SECTION
C5.2

ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

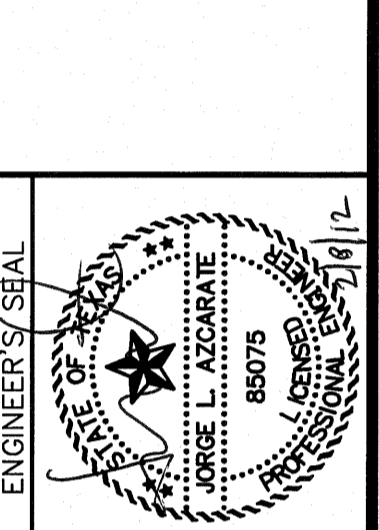
REVIEWED

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT	ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE	MANASSAS AVENUE
MANASSAS AVENUE	SUN TRAIL DRIVE AND SETTING SUN DRIVE.
DATE	REVISIONS
	BY

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GROUP
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4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net



SCALE

Horizontal: 1"=5'

Vertical: N/A

Contour Interval: N/A

DATE: OCTOBER 2011

DESIGN BY: F.Z.

DRAWN BY: A.B.

CHKD. BY: J.L.A.

APP'D. BY: J.L.A.

JOB No. 2260-012-LD

PROJECT NAME

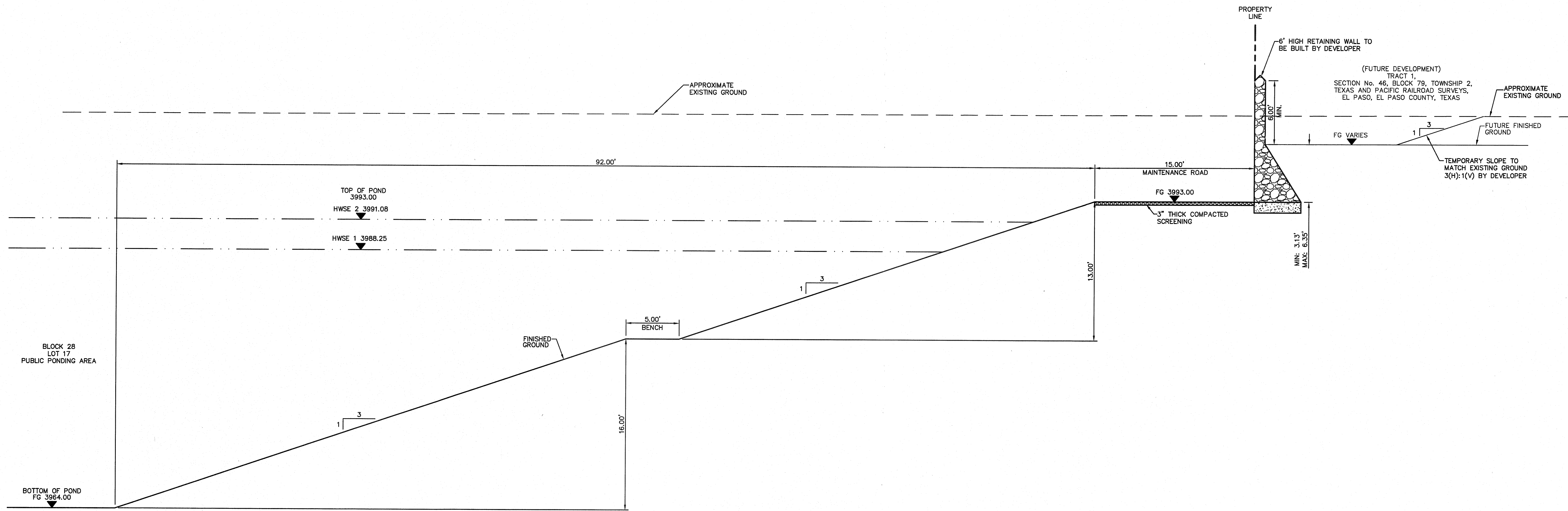
VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE

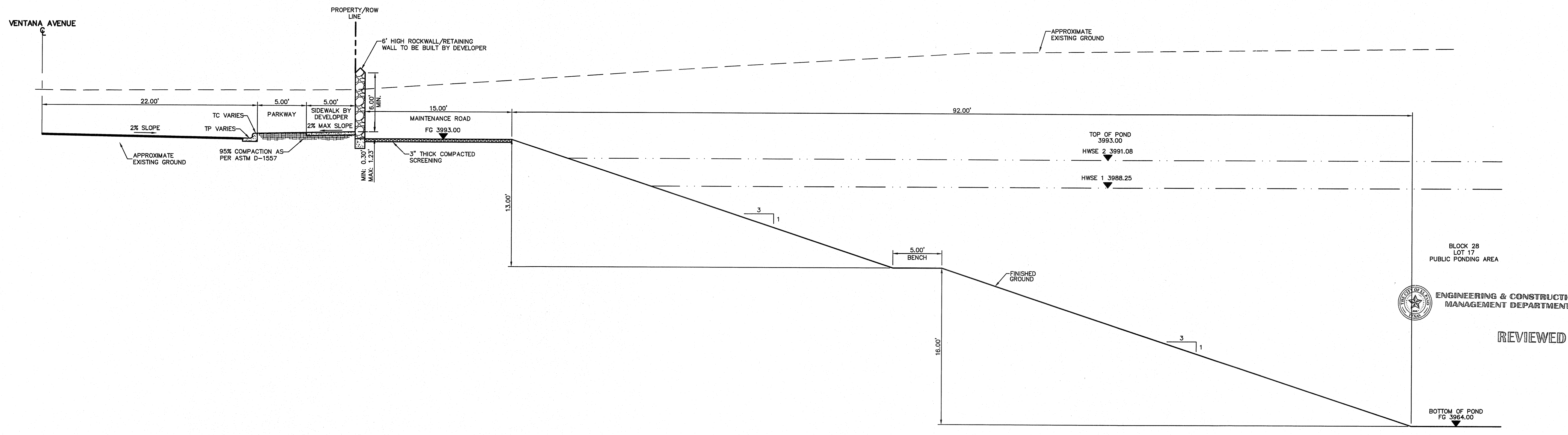
GRADING SECTIONS

SHEET 2 OF 3
SHEET NO.

C5.2



16 SECTION



17 SECTION

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)

LOCATED AT THE CENTERLINE
INTERSECTION OF
SUNSET HILL DRIVE AND SETTING SUN
DRIVE.

DATE	REVISIONS	BY

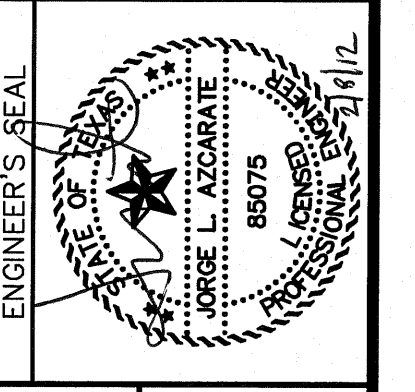
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4712 Woodrow Bean, Ste. F El Paso, TX 79924

Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net



SCALE: 1"=5'

Horizontal: N/A

Vertical: N/A

Contour Interval: N/A

DATE: OCTOBER 2011

DESIGN BY: F.Z.

DRAWN BY: A.B.

CHKD. BY: J.L.A.

APP'D. BY: J.L.A.

JOB No. 2280-012-LD

PROJECT NAME

**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

SHEET TITLE

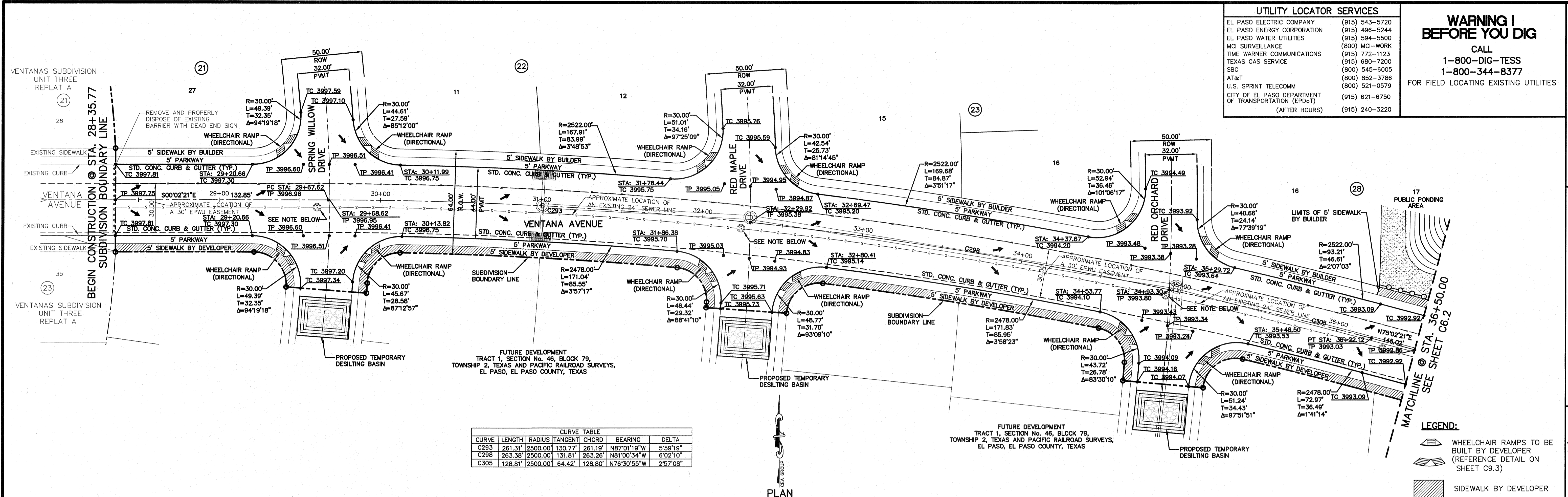
GRADING SECTIONS

SHEET 3 OF 3

SHEET NO.

C5.3

REVIEWED



UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
A/T&T	(800) 852-3786
U.S. SPRINT TELECOM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPoD)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

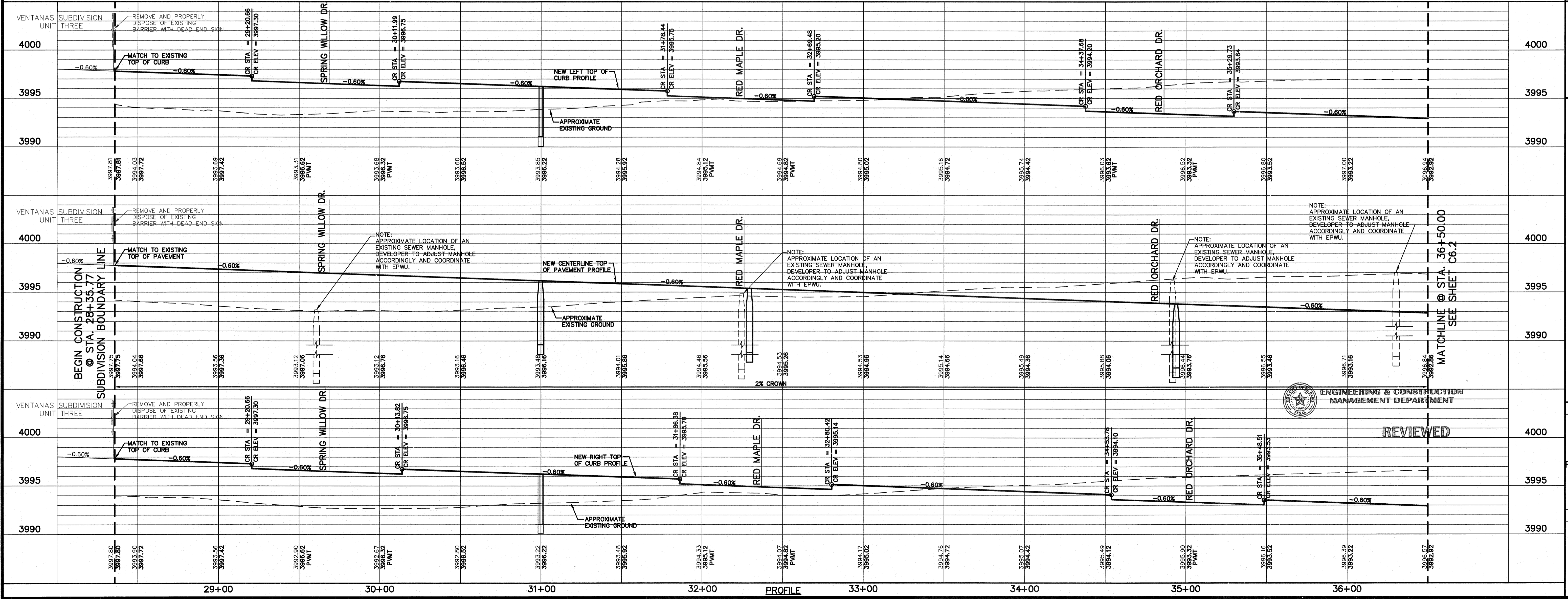
CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

ENGINEER'S SEAL

engineers • architects • planners
Jorge L. Azcarate
 TEXAS REGISTERED ENGINEERING FIRM-4864
 4712 Woodrow Bean, Ste F El Paso, TX 79904
 Office: 915.544.5232 Fax: 915.544.5233 www.azcarate.com



SCALE	PROJECT NAME
Horizontal: 1"=30' Vertical: 1"=5' Contour Interval: N/A	VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS

DATE: OCTOBER 2011
 DESIGN BY: F.Z.
 DRAWN BY: A.B.
 CHKD. BY: J.L.A.
 APPD. BY: J.L.A.
 JOB No. Z260-012-LD

SHEET TITLE
VENTANA AVE. PLAN & PROFILE FROM STA. 28+35.77 TO STA. 36+50.00

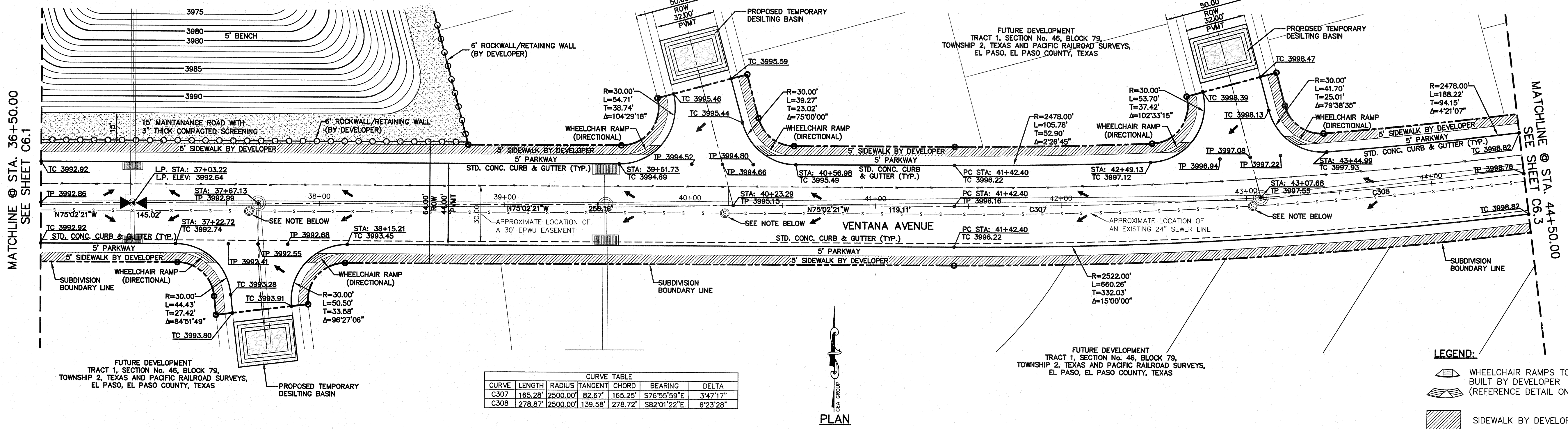
SHEET NO.
C6.1

17
PUBLIC PONDING
AREA

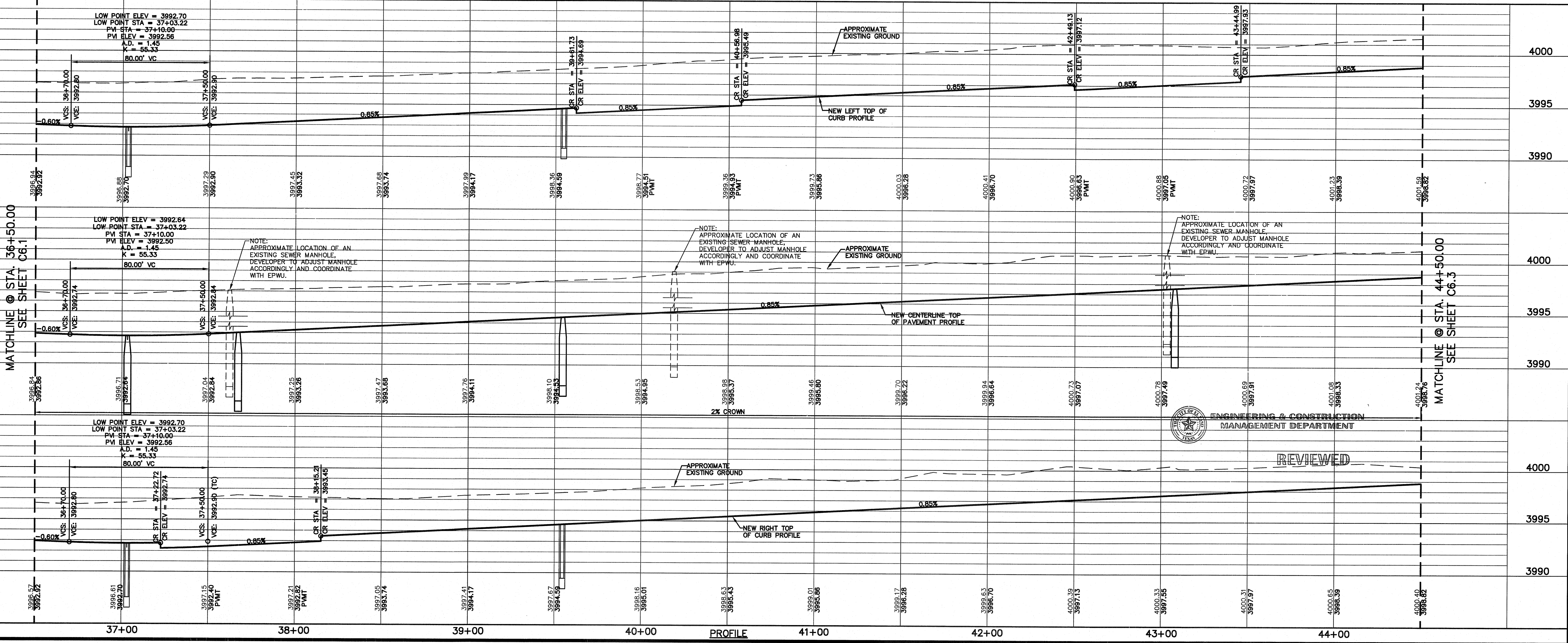
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

**WARNING I
BEFORE YOU DIG**
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

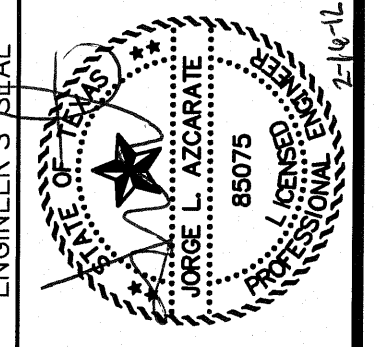
REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)			
LOCATED AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE.			



CURVE	LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
C307	165.28'	2500.00'	82.67'	165.25'	S76°33'59"E	3°47'17"
C308	278.67'	2500.00'	139.58'	278.72'	S82°01'22"E	8°23'28"



OS&A
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #484
4712 Woodrow Began, Ste. F El Paso, TX 79924
Office: 915.541.5252 Fax: 915.541.5253 www.osaeng.com



SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**VENTANA AVE.
PLAN & PROFILE
FROM STA. 36+50.00
TO STA. 44+50.00**

SHEET NO.

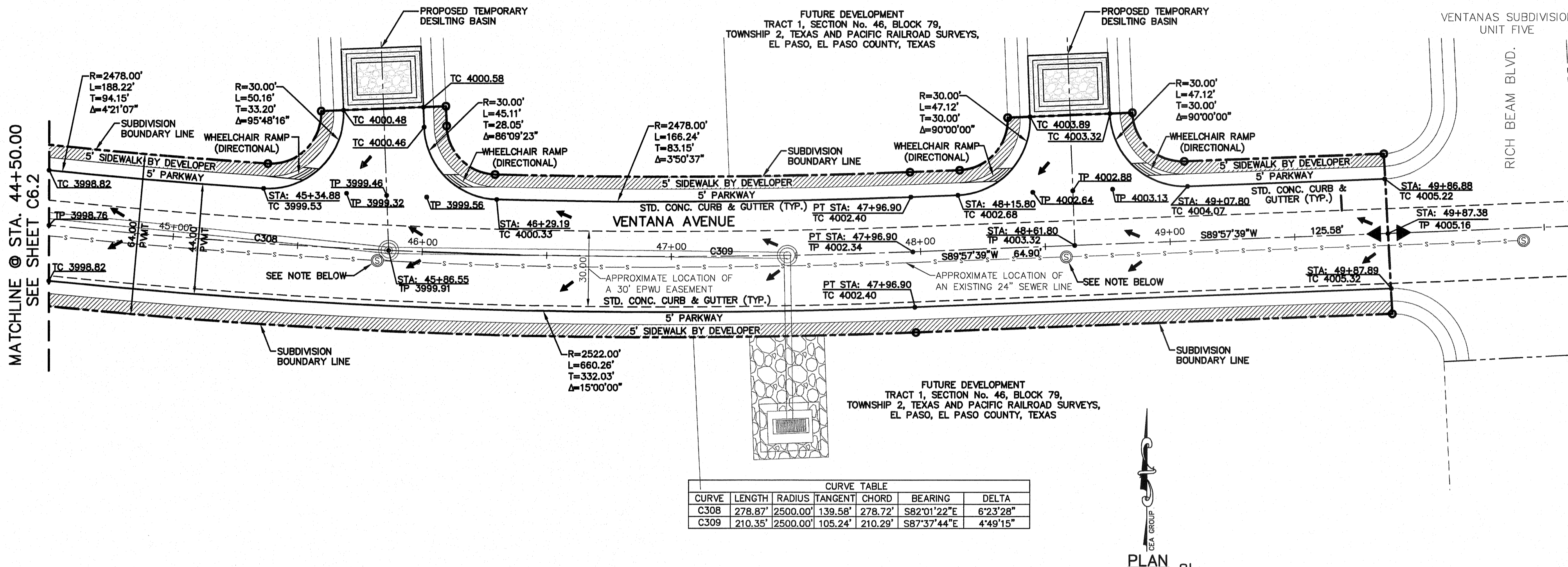
C6.2

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
A&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

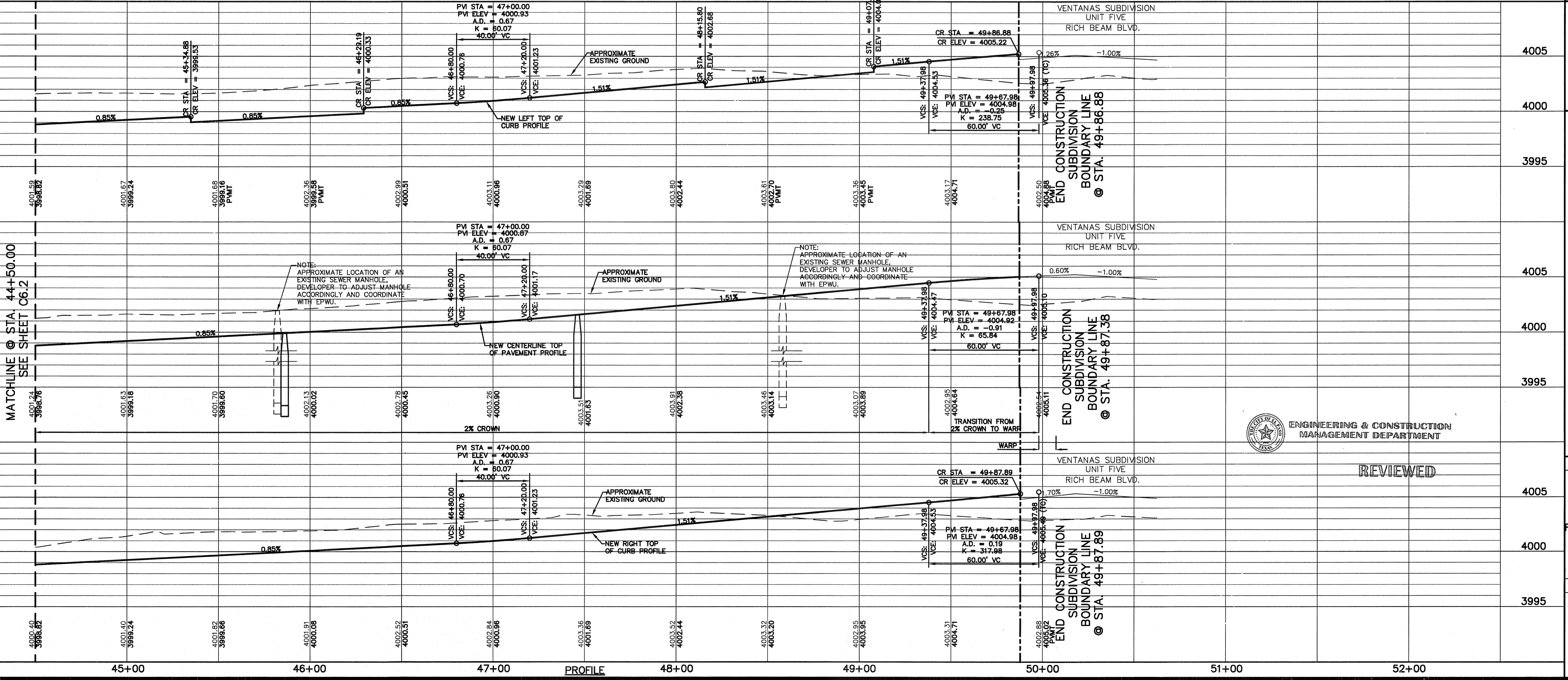
CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES



LEGEND:

- WHEELCHAIR RAMP TO BE BUILT BY DEVELOPER (REFERENCE DETAIL ON SHEET C9.3)
- SIDEWALK BY DEVELOPER



REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE.

ENGINEER'S SEAL
J. L. AZARATE
REGISTERED PROFESSIONAL ENGINEER
NO. 88075
J.L.A.
APPROVED BY: J.L.A.
JOB No. 2260-012-LD

SCALE: 1"=30'
Horizontal: 1"=5'
Vertical: 1"=5'
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.
JOB No. 2260-012-LD

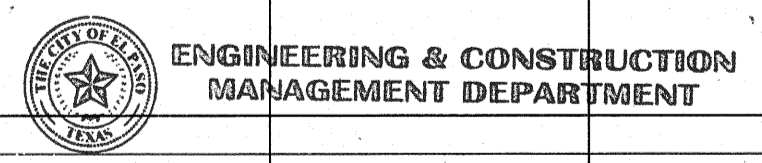
PROJECT NAME
VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS

SHEET TITLE
VENTANA AVE. PLAN & PROFILE FROM STA. 44+50.00 TO STA. 49+87.89

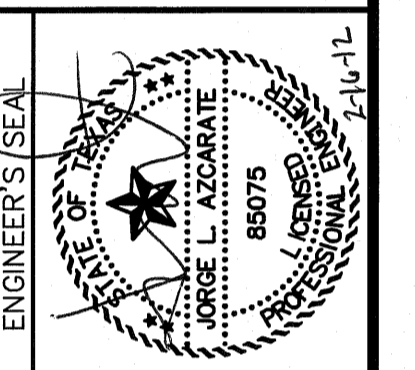
SHEET NO.
C6.3

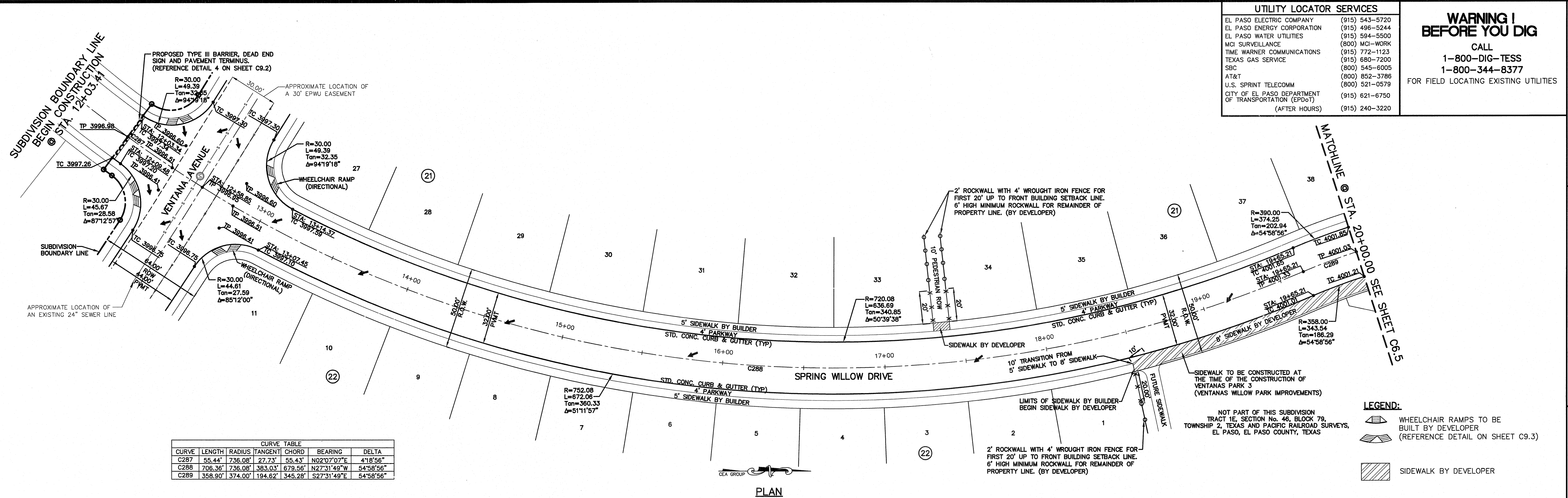
REVISIONS

DATE	REVISIONS	BY

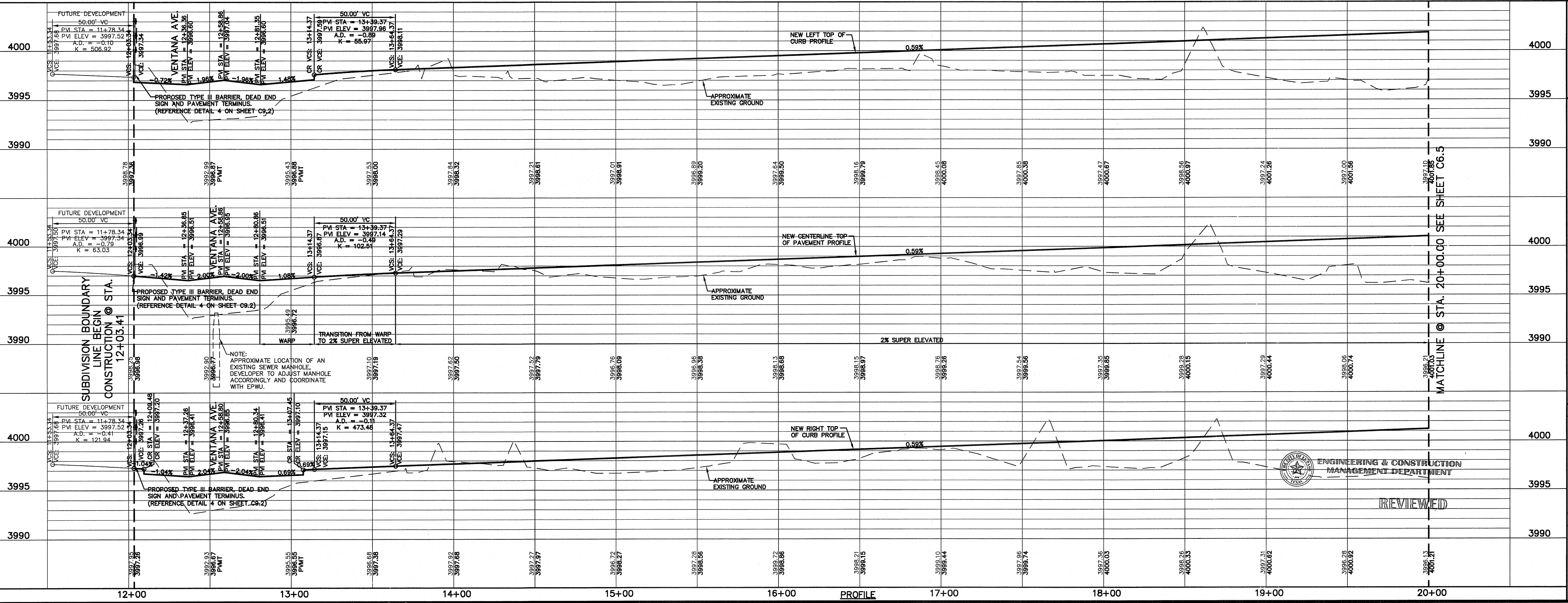


REVIEWED





PLAN



REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)

LOCATED AT THE CENTERLINE
INTERSECTION OF
SUNSHINE TRAIL DRIVE AND SETTING SUN
DRIVE.

DATE _____ BY _____

REVISIONS _____

ENGINEER'S SEAL

SCALE: Horizontal: 1"=30'
Vertical: 1"=5'

Contour Interval: 1'/4"

DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.

JOB No. 2260-012-LD

PROJECT NAME

VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE

SPRING WILLOW DR.
PLAN & PROFILE
FROM STA. 12+03.41
TO STA. 20+00.00

SHEET NO.

C6.4

ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

REVIEWED

UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT) (AFTER HOURS)	(915) 621-6750 (915) 240-3220

WARNING!
BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

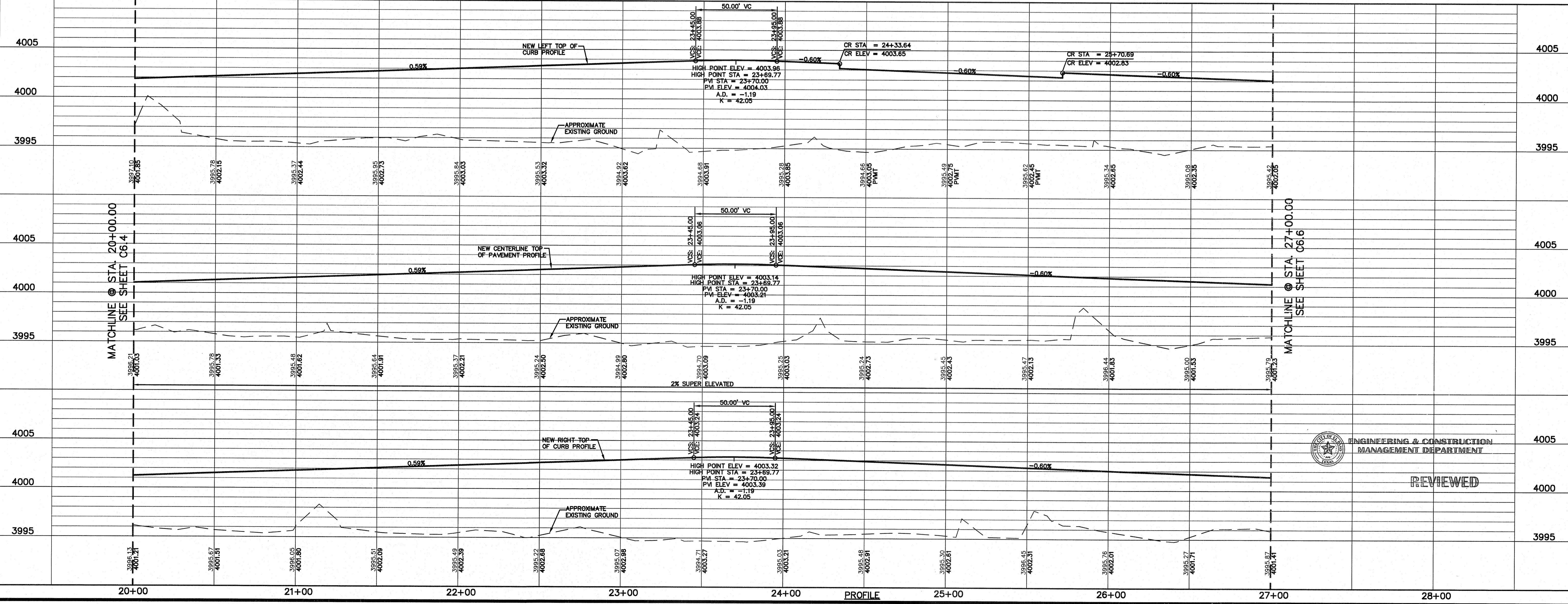
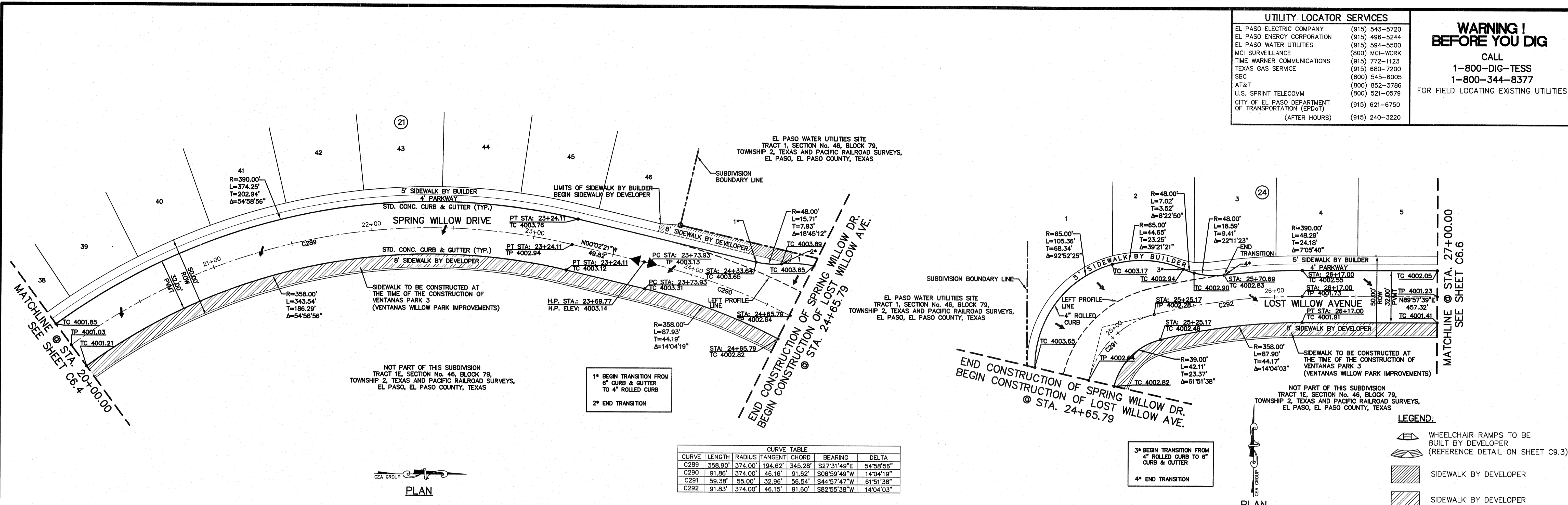
REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
INTERSECTION OF
SUNSHINE DRIVE AND SETTING SUN
DRIVE.

DATE	REVISIONS

ENGINEER'S SEAL

SCALE: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A

DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPROV. BY: J.L.A.
JOB No. Z260-012-LD



PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
SPRING WILLOW DR.
PLAN & PROFILE
FROM STA. 20+00.00
TO STA. 24+65.79

LOST WILLOW AVE.
PLAN & PROFILE
FROM STA. 24+65.79
TO STA. 27+00.00

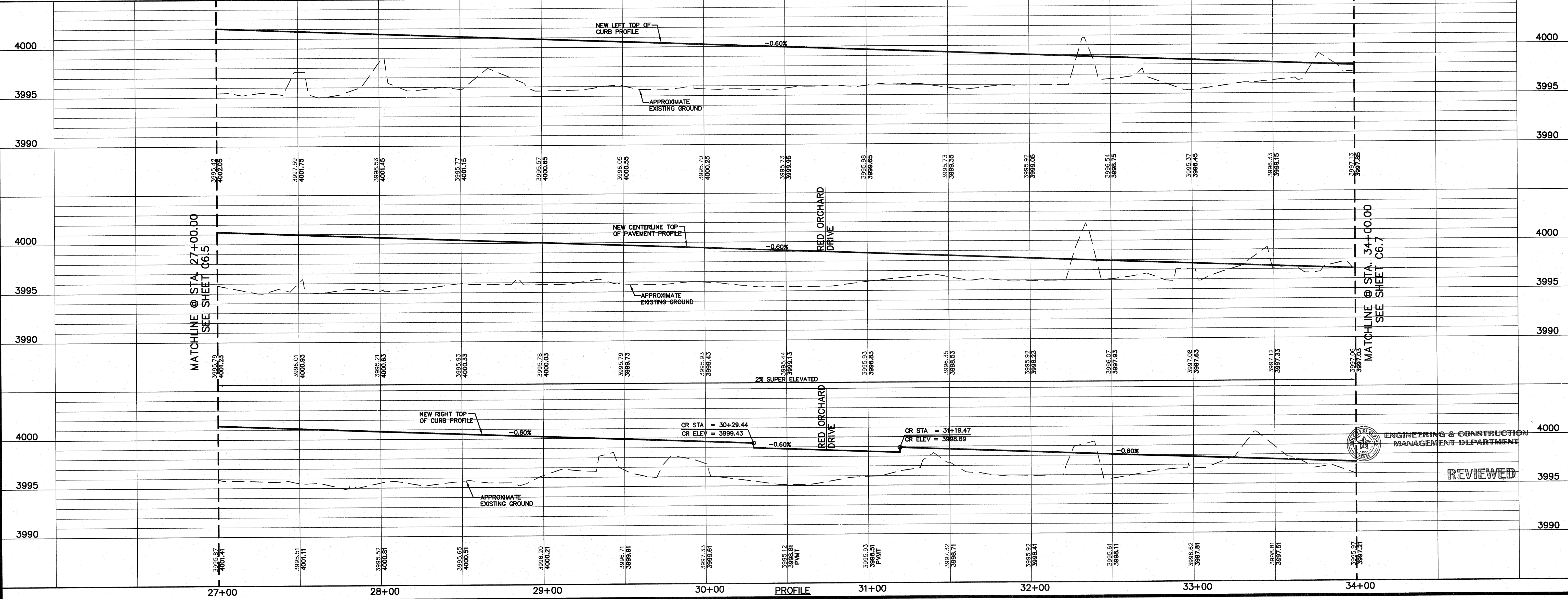
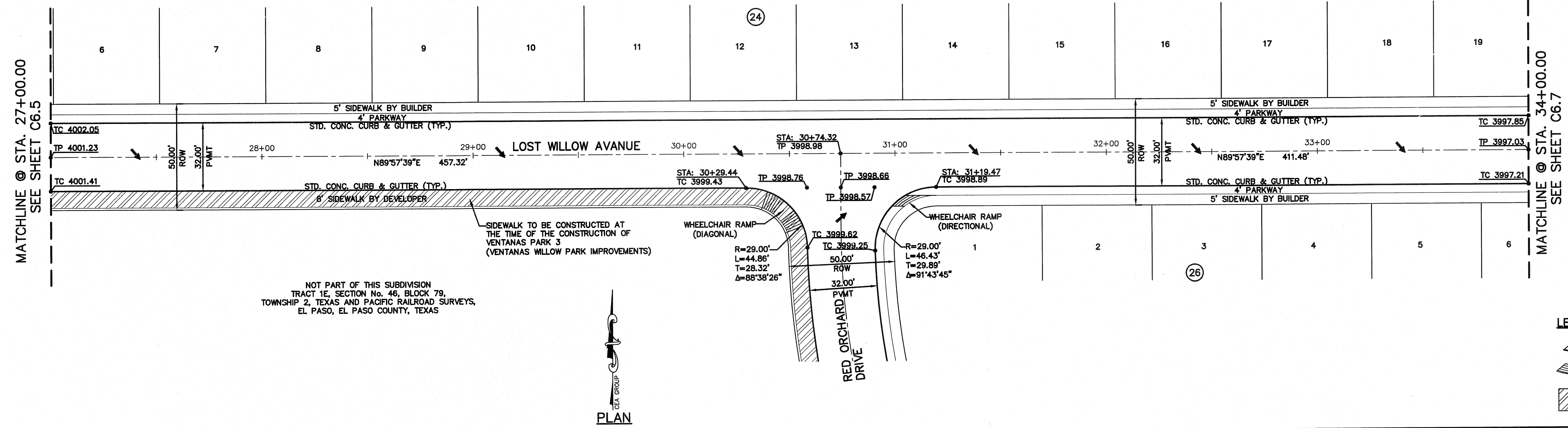
SHEET NO.
C6.5

ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

REVIEWED

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 853-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDoT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING!
BEFORE YOU DIG
 CALL
 1-800-DIG-TESS
 1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES



REFERENCES - BENCHMARKS
 EXISTING CITY MONUMENT
 ELEVATION=5970.52 FEET (CITY DATUM)
 LOCATED AT THE CENTERLINE
 INTERSECTION OF
 SUN TRAIL DRIVE AND SETTING SUN
 DRIVE.

DATE: _____ BY: _____
 REVISIONS

ceea
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM F-684
 4712 Woodrow Bearn, Ste. F, El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.ceea.com

ENGINEER'S SEAL

PROJECT NAME
**VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**LOST WILLOW DR.
 PLAN & PROFILE
 FROM STA. 27+00.00
 TO STA. 34+00.00**

SHEET NO.
C6.6

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 485-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)			
LOCATED AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE.			

SCALE: 1"=30'

Vertical: 1"=5'

Contour Interval: N/A

DATE: OCTOBER, 2011

DESIGN BY: F.Z.

DRAWN BY: J.L.A.

CHECK BY: J.L.A.

APPROV. BY: J.L.A.

JOB No. 2260-012-LD

PROJECT NAME

VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS

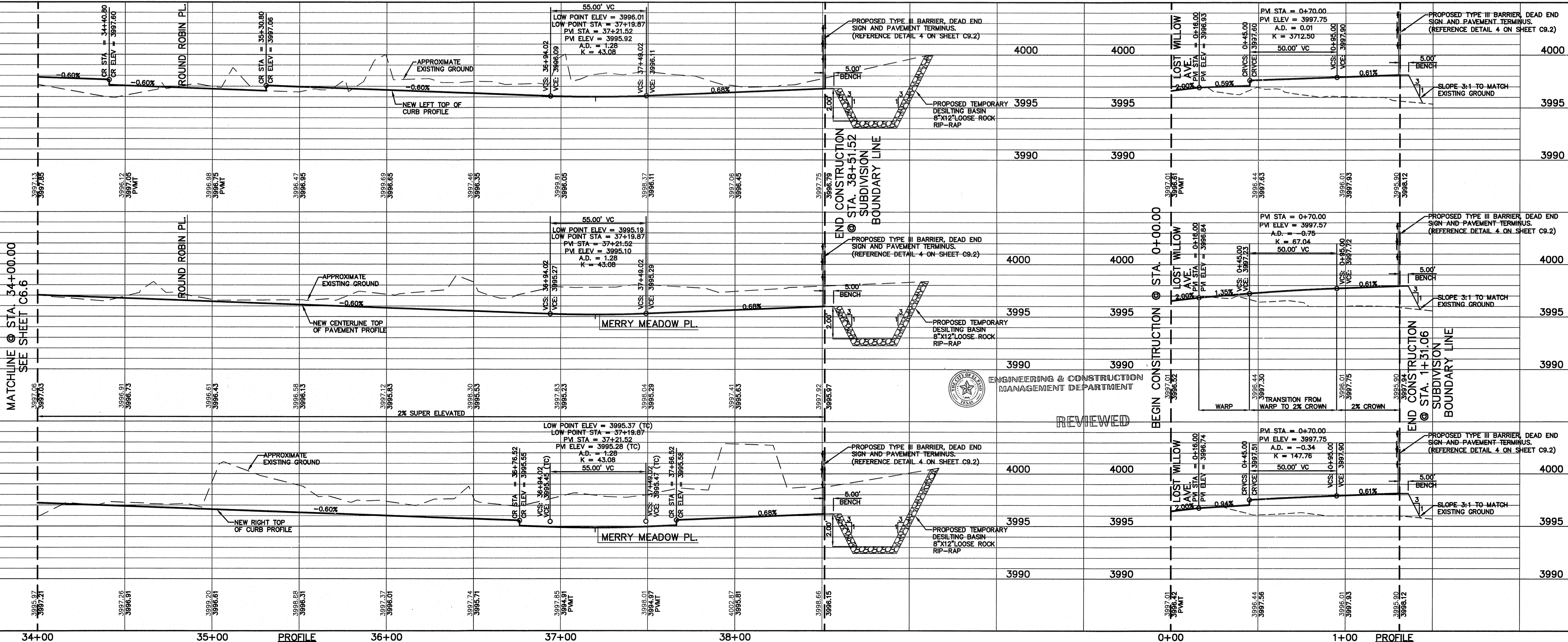
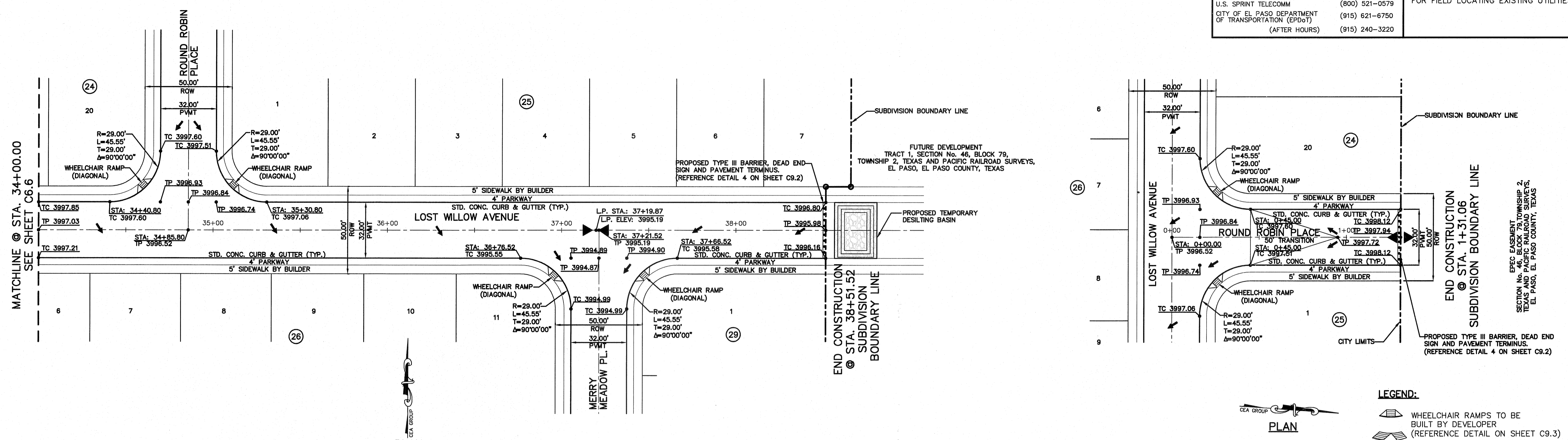
SHEET TITLE

LOST WILLOW AVE. PLAN & PROFILE FROM STA. 34+00.00 TO STA. 38+51.52

ROUND ROBIN PL. PLAN & PROFILE FROM STA. 0+00.00 TO STA. 1+31.06

SHEET NO.

C6.7



34+00 35+00 36+00 37+00 38+00 0+00 1+00

PROFILE PROFILE

ENGINEERING & CONSTRUCTION MANAGEMENT DEPARTMENT

REVIEWED

MATCHLINE @ STA. 34+00.00 SEE SHEET C6.6

MATCHLINE @ STA. 34+00.00 SEE SHEET C6.6

34+00

35+00

36+00

37+00

38+00

0+00

1+00

UTILITY LOCATOR SERVICES		
EL PASO ELECTRIC COMPANY	(915) 543-5720	
EL PASO ENERGY CORPORATION	(915) 496-5244	
EL PASO WATER UTILITIES	(915) 594-5500	
MCI SURVEILLANCE	(800) MCI-WORK	
TIME WARNER COMMUNICATIONS	(915) 772-1123	
TEXAS GAS SERVICE	(915) 680-7200	
SBC	(800) 545-6005	
A&T	(800) 852-3788	
U.S. SPRINT TELECOMM	(800) 521-0579	
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750	
(AFTER HOURS)	(915) 240-3220	

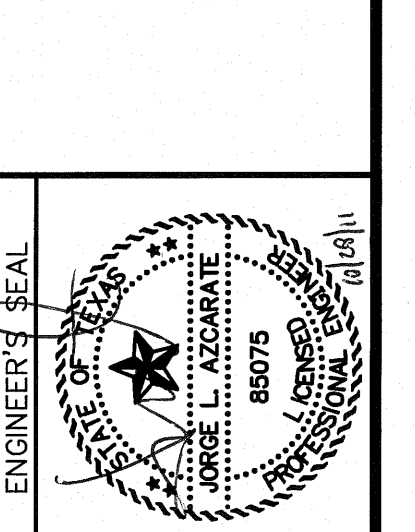
WARNING I BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
OF VENTANAS DRIVE AND SETTING SUN
DRIVE.



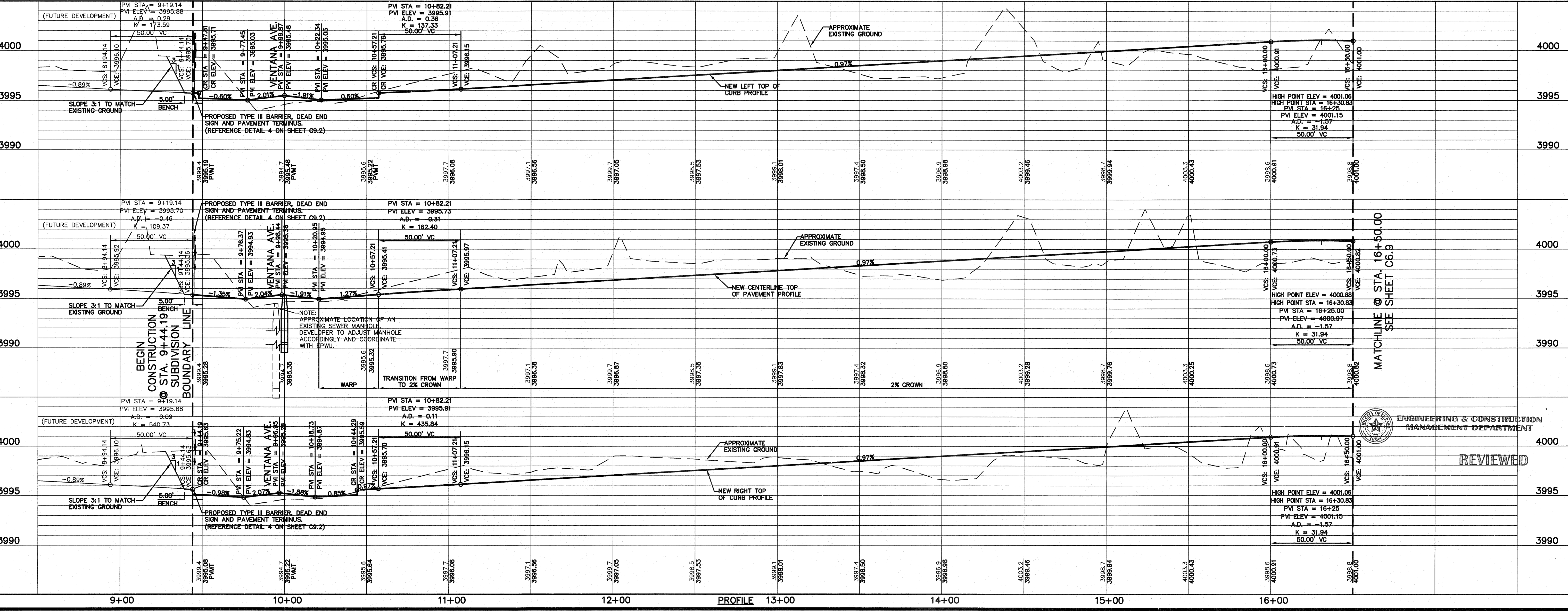
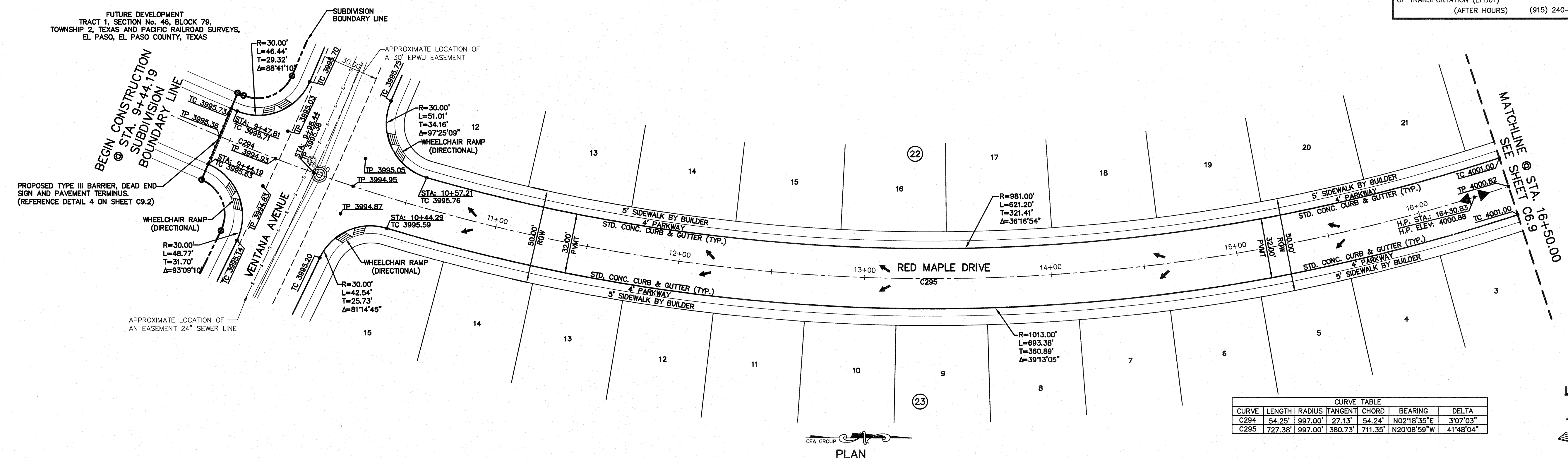
SCALE: Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: 1.0'
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.
JOB No. Z260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**RED MAPLE DR.
PLAN & PROFILE
FROM STA. 9+44.19
TO STA. 16+50.00**

SHEET NO.
C6.8

FUTURE DEVELOPMENT
TRACT 1, SECTION No. 46, BLOCK 79,
TOWNSHIP 2, TEXAS AND PACIFIC RAILROAD SURVEYS,
EL PASO, EL PASO COUNTY, TEXAS



ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

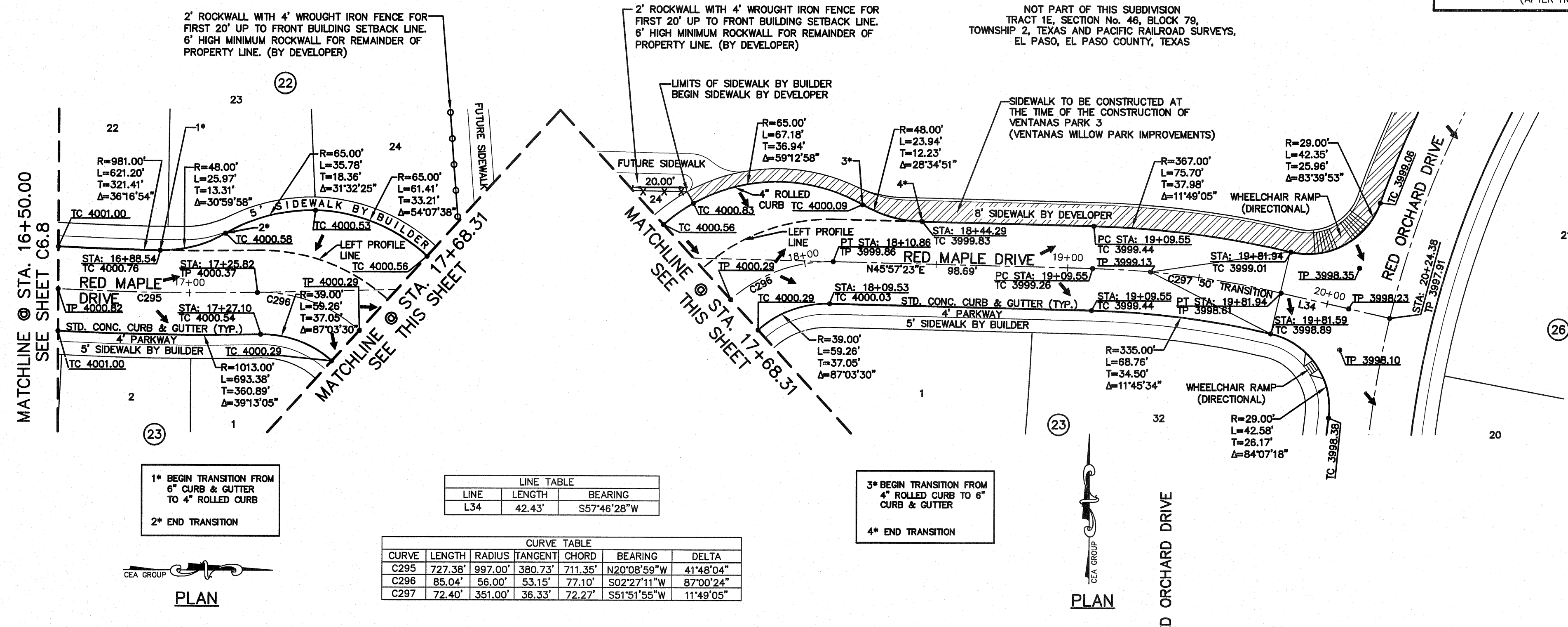
REVIEWED

UTILITY LOCATOR SERVICES		
EL PASO ELECTRIC COMPANY	(915) 543-5720	
EL PASO ENERGY CORPORATION	(915) 496-5244	
EL PASO WATER UTILITIES	(915) 594-5500	
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 TELECOMM	(800) 521-0579	
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750	
(AFTER HOURS)	(915) 240-3220	

WARNING I BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	BY
EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)	
LOCATED AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE.	
DATE	REVISIONS

ceea
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4584
4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.5222 Fax: 915.544.5233 www.ceea.com



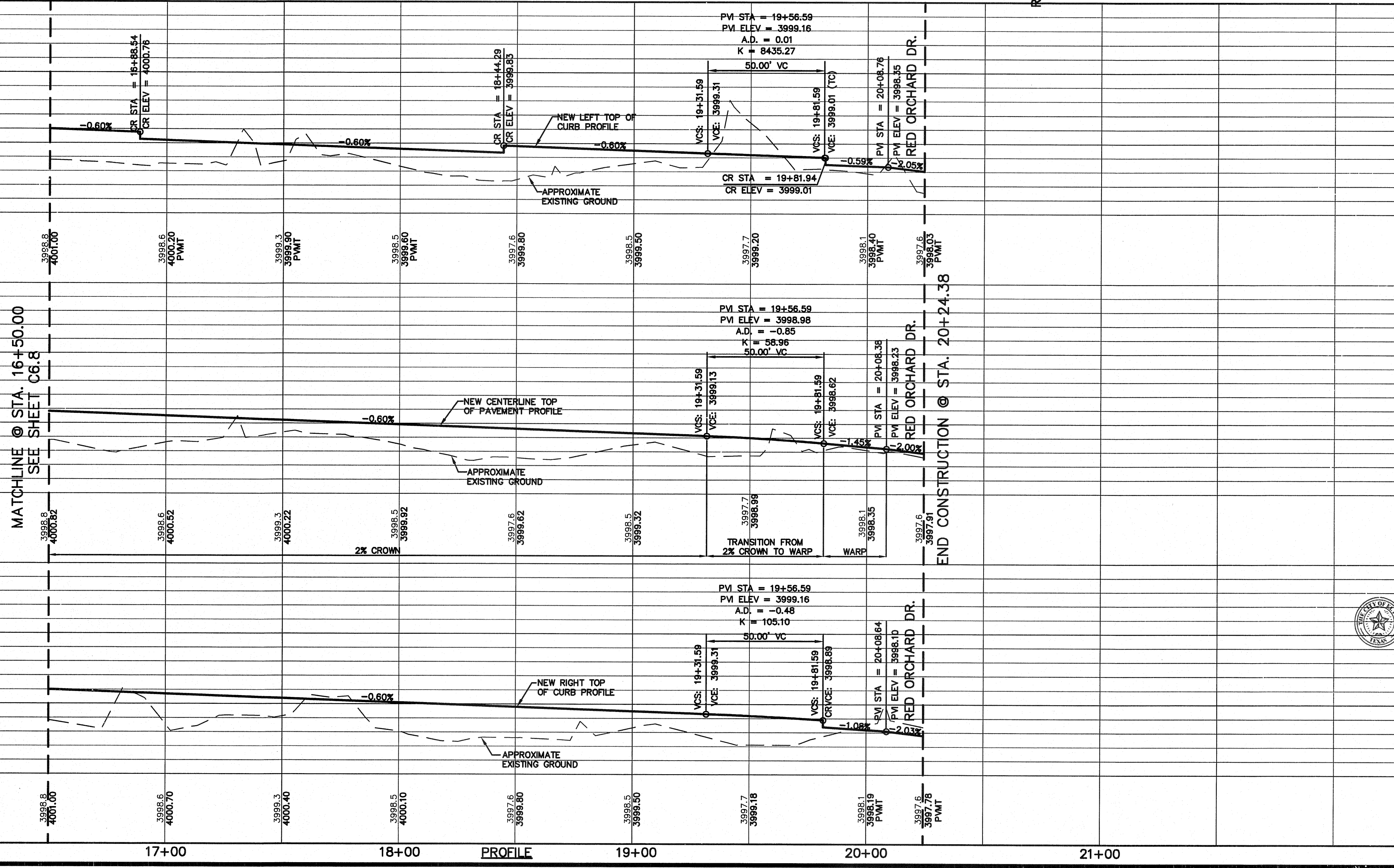
LINE TABLE			
LINE	LENGTH	BEARING	
L34	42.43'	S57°46'28"W	

CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
C295	727.38'	997.00'	380.73'	711.35'	N20°08'59"W	41°48'04"
C296	85.04'	56.00'	53.15'	77.10'	S02°27'11"W	87°00'24"
C297	72.40'	351.00'	36.33'	72.27'	S51°51'55"W	11°49'05"

1* BEGIN TRANSITION FROM 6" CURB & GUTTER TO 4" ROLLED CURB
2* END TRANSITION

3* BEGIN TRANSITION FROM 4" ROLLED CURB TO 6" CURB & GUTTER
4* END TRANSITION

LEGEND:
 WHEELCHAIR RAMP TO BE BUILT BY DEVELOPER (REFERENCE DETAIL ON SHEET C9.3)
 SIDEWALK BY DEVELOPER



SCALE	PROJECT NAME
Horizontal: 1"=30' Vertical: 1"=5'	VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS

DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APP'D. BY: [Signature]
JOB NO. 2260-012-LD

REVIEWED

ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

SHEET TITLE
RED MAPLE DR.
PLAN & PROFILE
FROM STA. 16+50.00
TO STA. 20+24.38

SHEET NO.
C6.9

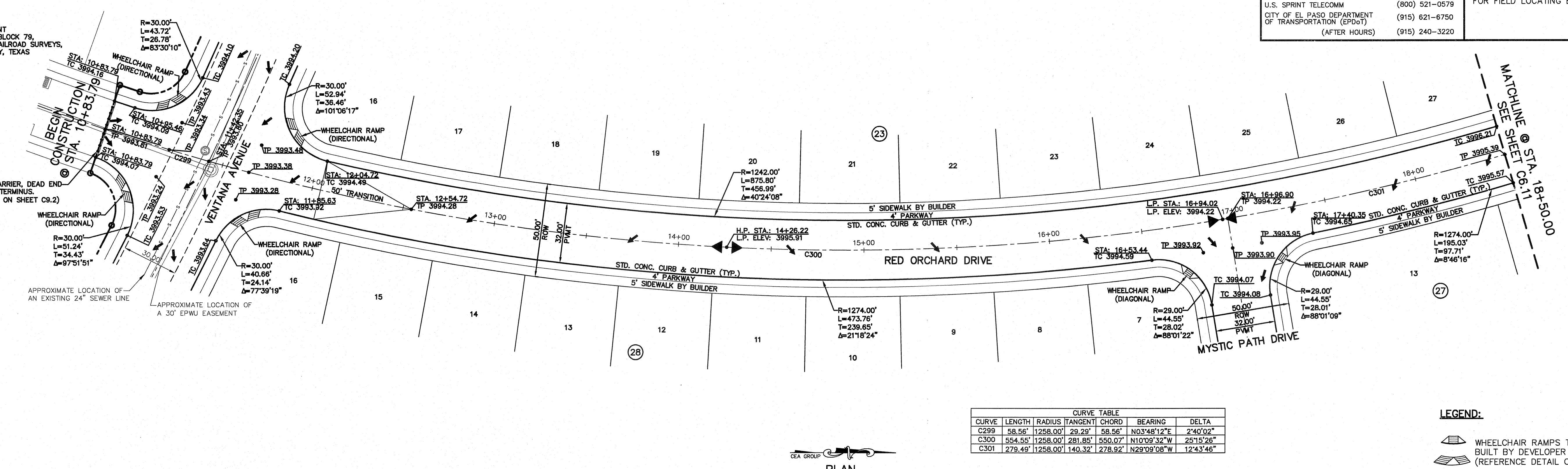
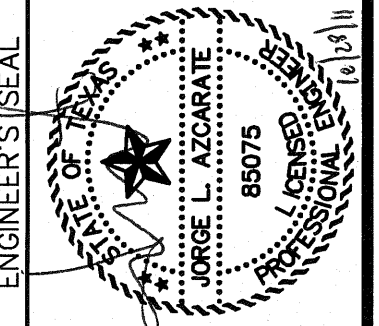
FUTURE DEVELOPMENT
TRACT 1, SECTION No. 46, BLOCK 79,
TOWNSHIP 2, TEXAS AND PACIFIC RAILROAD SURVEYS,
EL PASO, EL PASO COUNTY, TEXAS

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 495-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(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
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	REVISIONS
EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)	DATE
LOCATED AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE.	BY

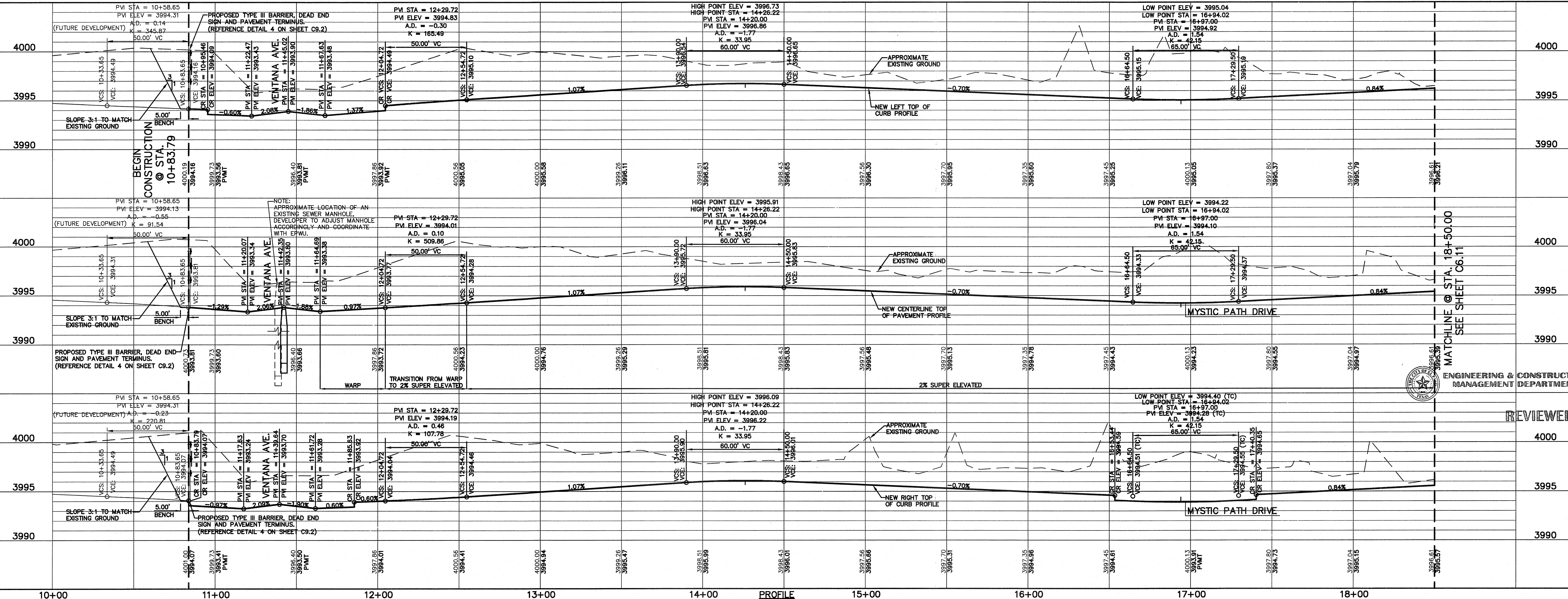
osa
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #484
4712 Woodrow Bean, Ste. F, El Paso, TX 79964
Office: 915.544.5202 Fax: 915.544.5233 www.osainc.net



CURVE TABLE				
CURVE	LENGTH	RADIUS	TANGENT CHORD	DELTA
C299	58.56'	1258.00'	29.29'	58.56'
C300	554.55'	1258.00'	281.85'	550.07'
C301	278.49'	1258.00'	140.32'	278.92'

LEGEND:
WHEELCHAIR RAMPS TO BE BUILT BY DEVELOPER (REFERENCE DETAIL ON SHEET C9.3)

PLAN



SCALE: 1"=30'
Horizontal
Vertical: 1"=5'
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: J.A.
CHKD. BY: J.L.
APP'D. BY: J.L.
JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

SHEET TITLE

RED ORCHARD DR.
PLAN & PROFILE
FROM STA. 10+83.79
TO STA. 18+50.00

SHEET NO.

C6.10

UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-8005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING ! BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT
ELEVATION=5970.52 FEET (CITY DATUM)

LOCATED AT THE CENTERLINE
INTERSECTION OF
SUN TRAIL DRIVE AND SETTING SUN DRIVE.

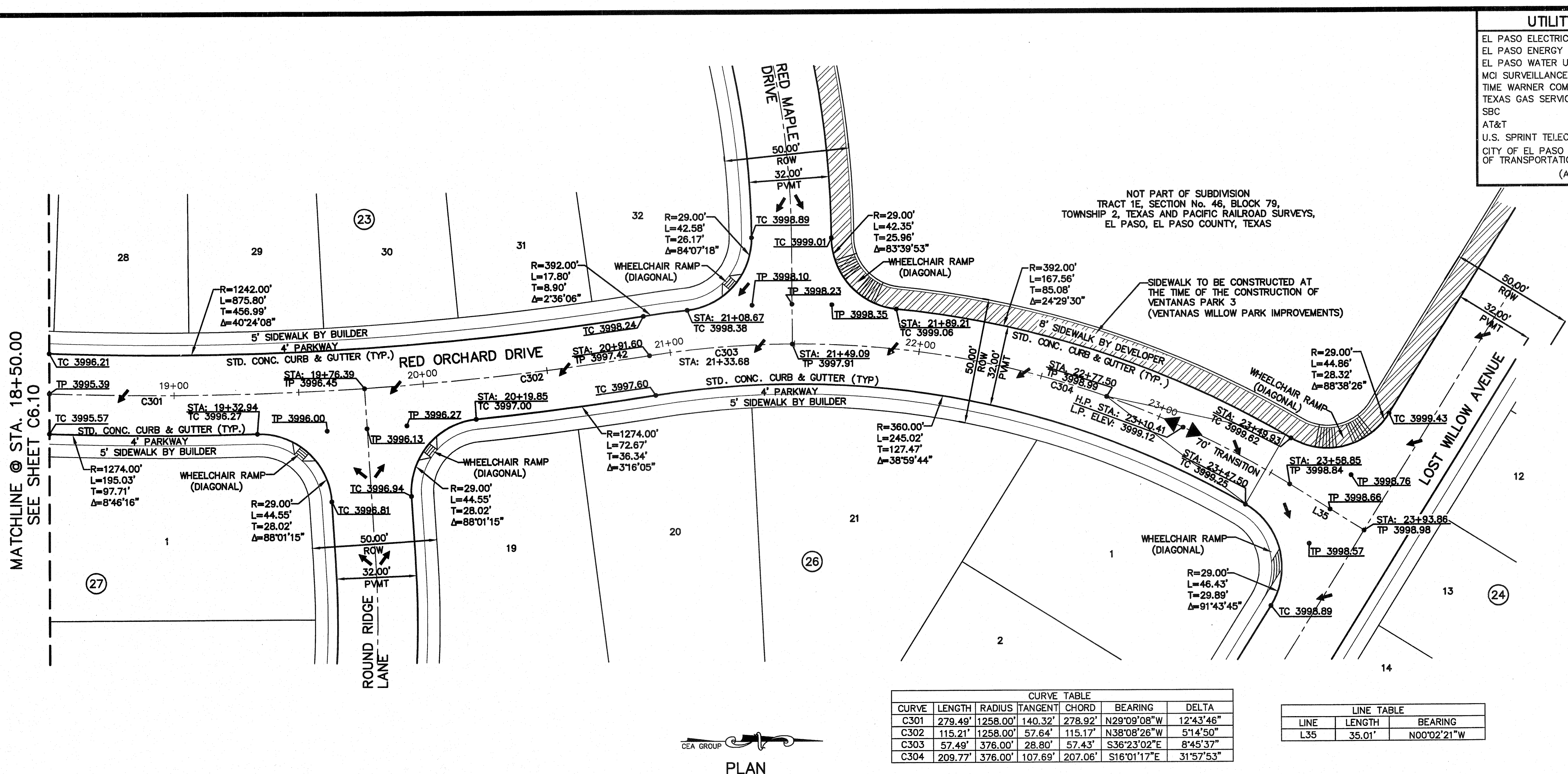
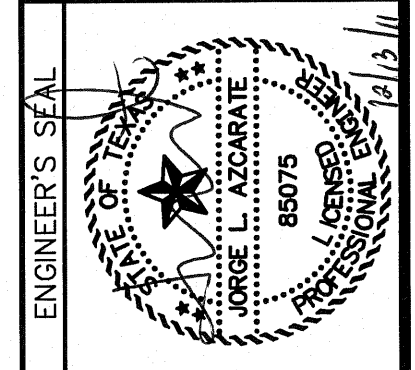
DATE _____ BY _____

REVISIONS _____

ceea

ENGINEERS • ARCHITECTS • PLANNERS

TEXAS REGISTERED ENGINEERING FIRM F-6584
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5222 Fax: 915.544.5233 www.ceeaonline.net



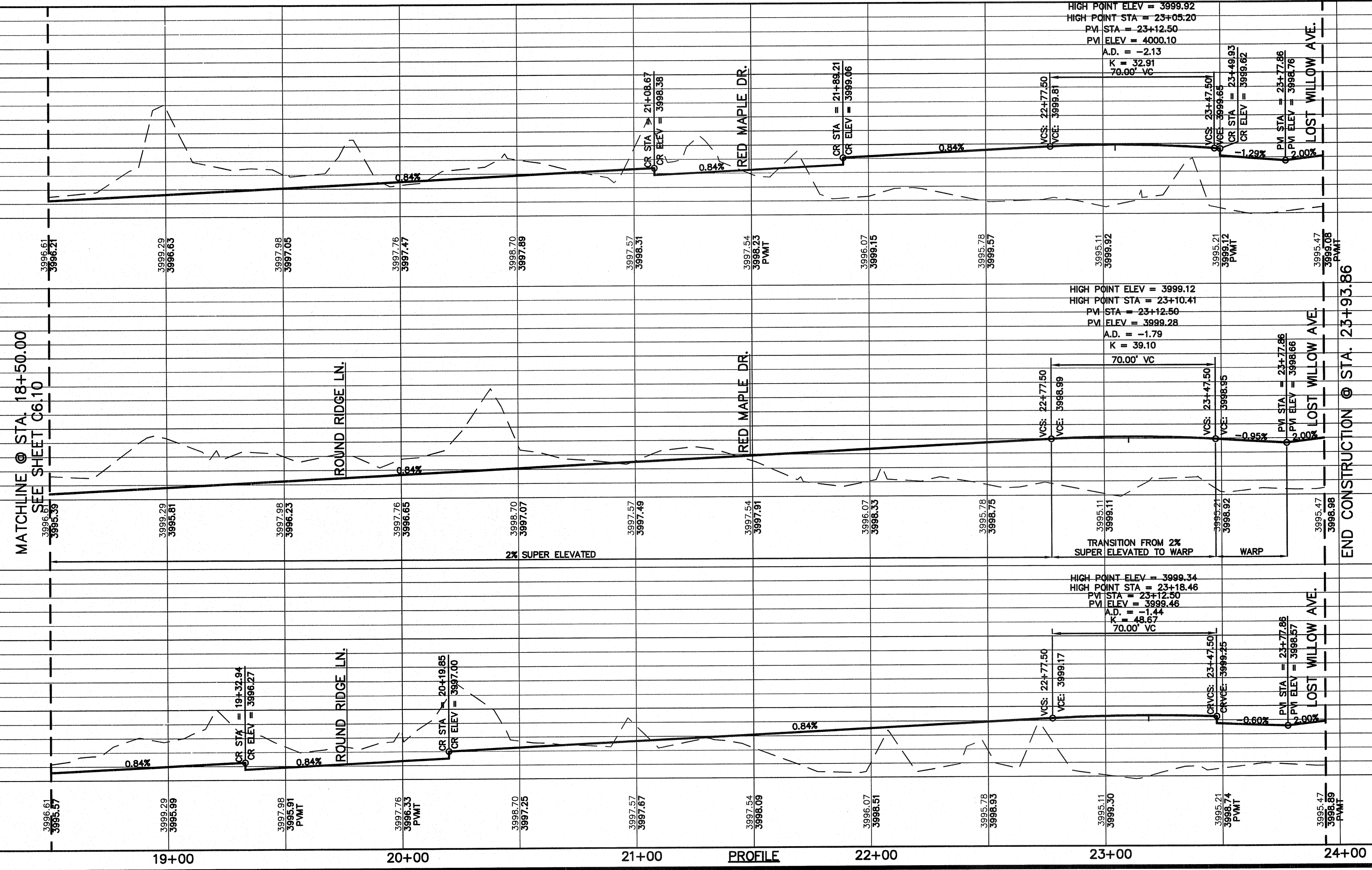
CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
C301	279.49'	1258.00'	140.32'	278.92'	N29°09'08"W	12°43'46"
C302	115.21'	1258.00'	57.64'	115.17'	N38°08'26"W	5°14'50"
C303	57.49'	376.00'	28.80'	57.43'	S36°23'02"E	8°45'37"
C304	209.77'	376.00'	107.69'	207.06'	S16°01'17"E	31°57'53"

LINE TABLE

LINE	LENGTH	BEARING
L35	35.01'	N00°02'21"W

- LEGEND:**
- WHEELCHAIR RAMPS TO BE BUILT BY DEVELOPER (REFERENCE DETAIL ON SHEET C9.3)
 - SIDEWALK BY DEVELOPER



MATCHLINE @ STA. 18+50.00
SEE SHEET C6.10

MATCHLINE @ STA. 18+50.00
SEE SHEET C6.10

ENGINEERING & CONSTRUCTION MANAGEMENT DEPARTMENT

IRREVIEWED

SCALE

Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A

DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2260-012-ID

PROJECT NAME

**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

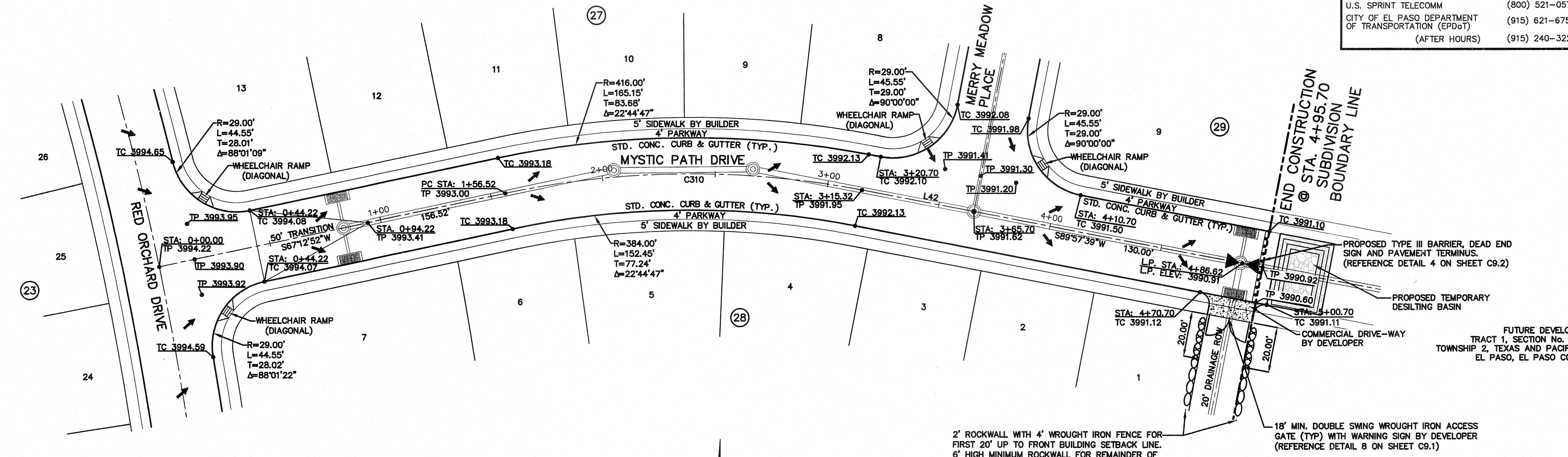
**RED ORCHARD DR.
PLAN & PROFILE
FROM STA. 18+50.00
TO STA. 23+93.86**

SHEET NO.

C6.11

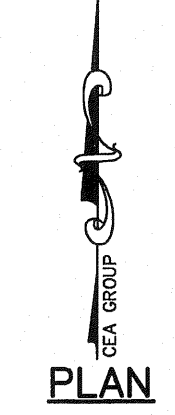
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 495-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (CDDOT) (AFTER HOURS)	(915) 621-6750 (915) 240-3220

WARNING I BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES.

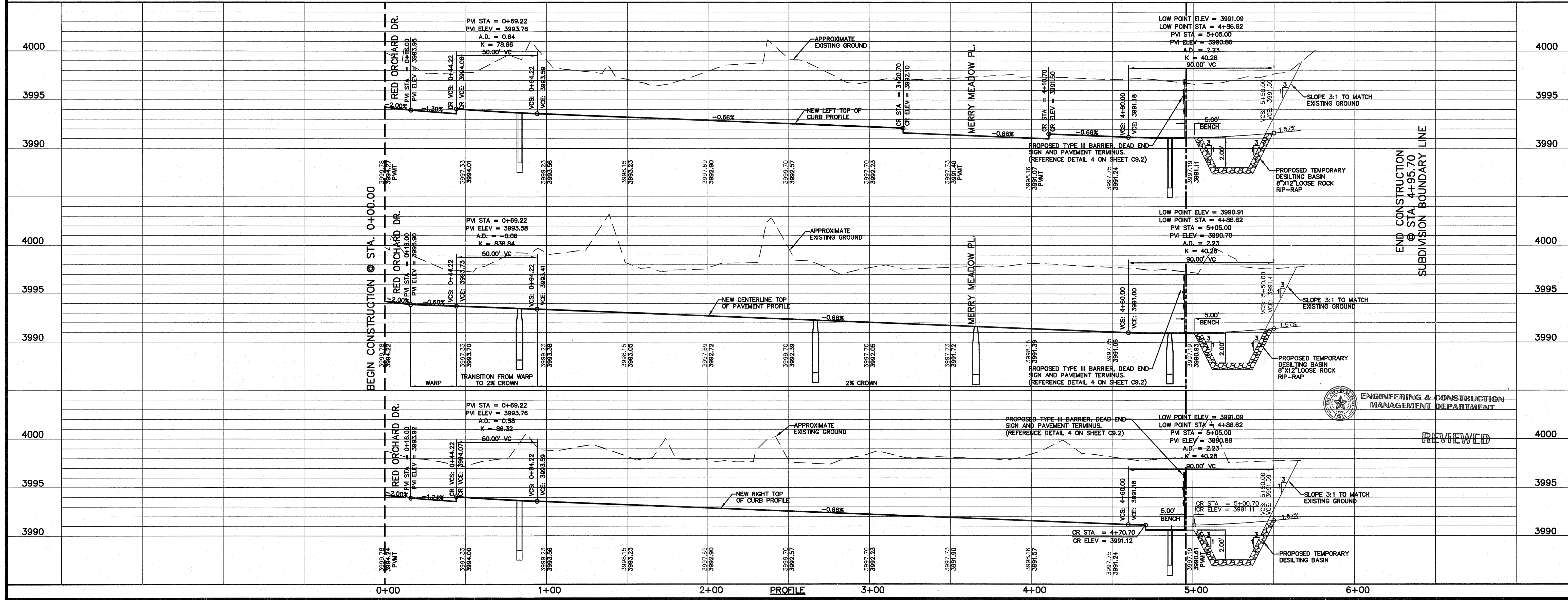


LINE TABLE						
LINE	LENGTH	BEARING				
L42	50.37'	S89°37'39"W				

CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
C310	158.80'	400.00'	80.46'	157.76'	S78°35'15"W	22°44'47"

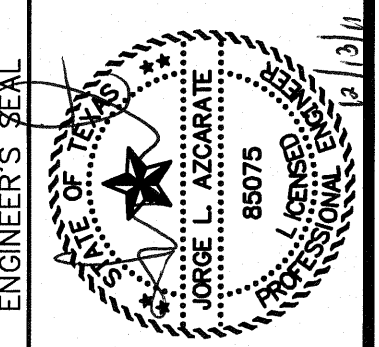


LEGEND:
 WHEELCHAIR RAMP TO BE BUILT BY DEVELOPER (REFERENCE DETAIL ON SHEET C9.3)
 PROPOSED TYPE III BARRIER, DEAD END SIGN AND PAVEMENT TERMINUS (REFERENCE DETAIL 4 ON SHEET C9.2)



REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)			
LOCATED AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE.			

OEA GROUP, INC.
 engineers • architects • planners
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 Office: 915.544.5252 Fax: 915.544.5233 www.oegrp.com



SCALE	
Horizontal: 1"=30'	
Vertical: 1"=5'	
Contour Interval: N/A	
DATE: OCTOBER 2011	
DESIGN BY: F.Z.	APP'D BY: J.L.A.
DRAWN BY: A.B.	CHECKED BY: J.L.A.
PROJECT NO. 2260-012-LD	

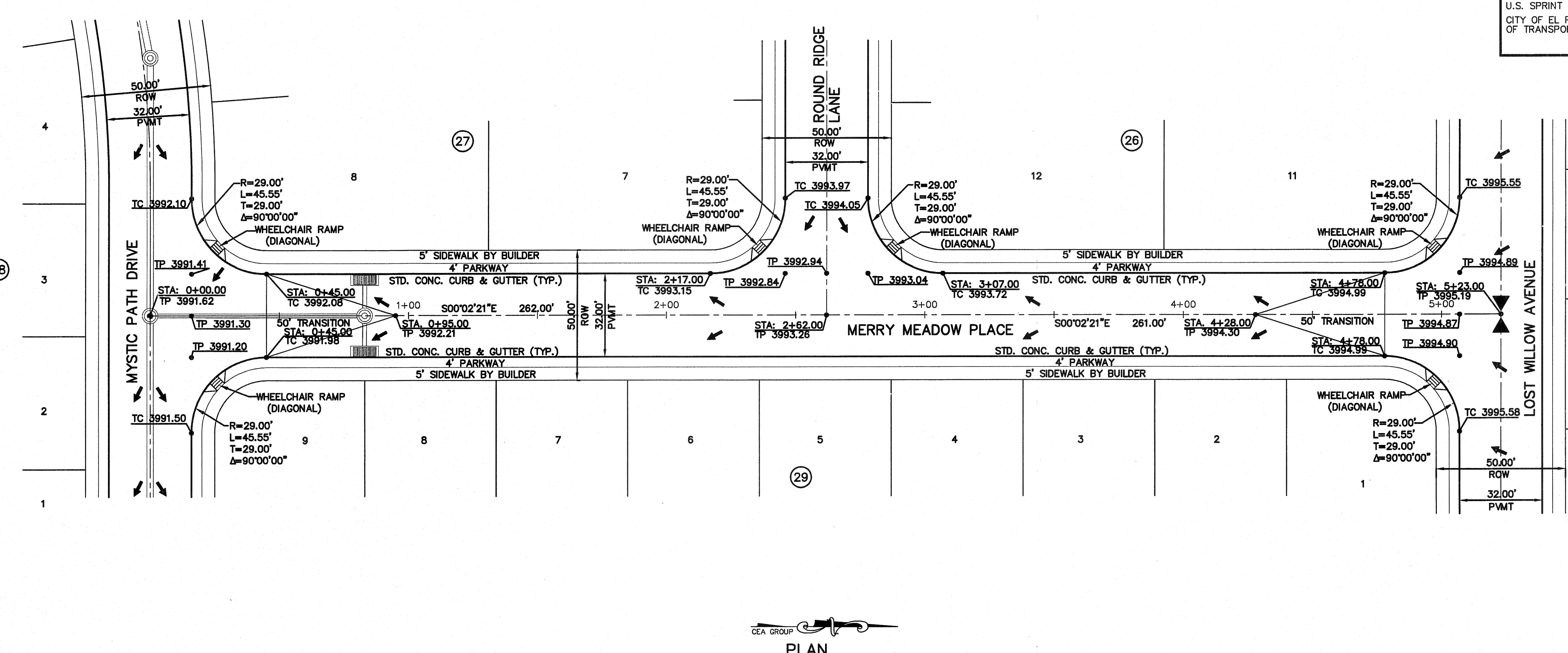
PROJECT NAME
 VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS

ENGINEERING & CONSTRUCTION
 MANAGEMENT DEPARTMENT

SHEET TITLE
 MYSTIC PATH DR.
 PLAN & PROFILE
 FROM STA. 0+00.00
 TO STA. 4+95.70

SHEET NO.

C6.12



PLAN

UTILITY LOCATOR SERVICES

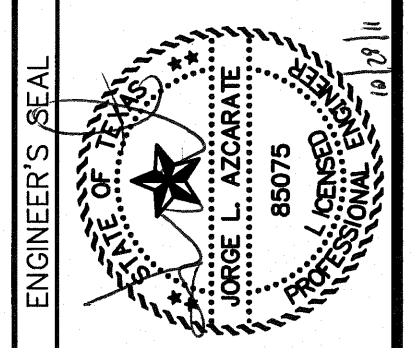
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPD&T) (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

WARNING!
BEFORE YOU DIG
 CALL
1-800-DIG-TESS
1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES

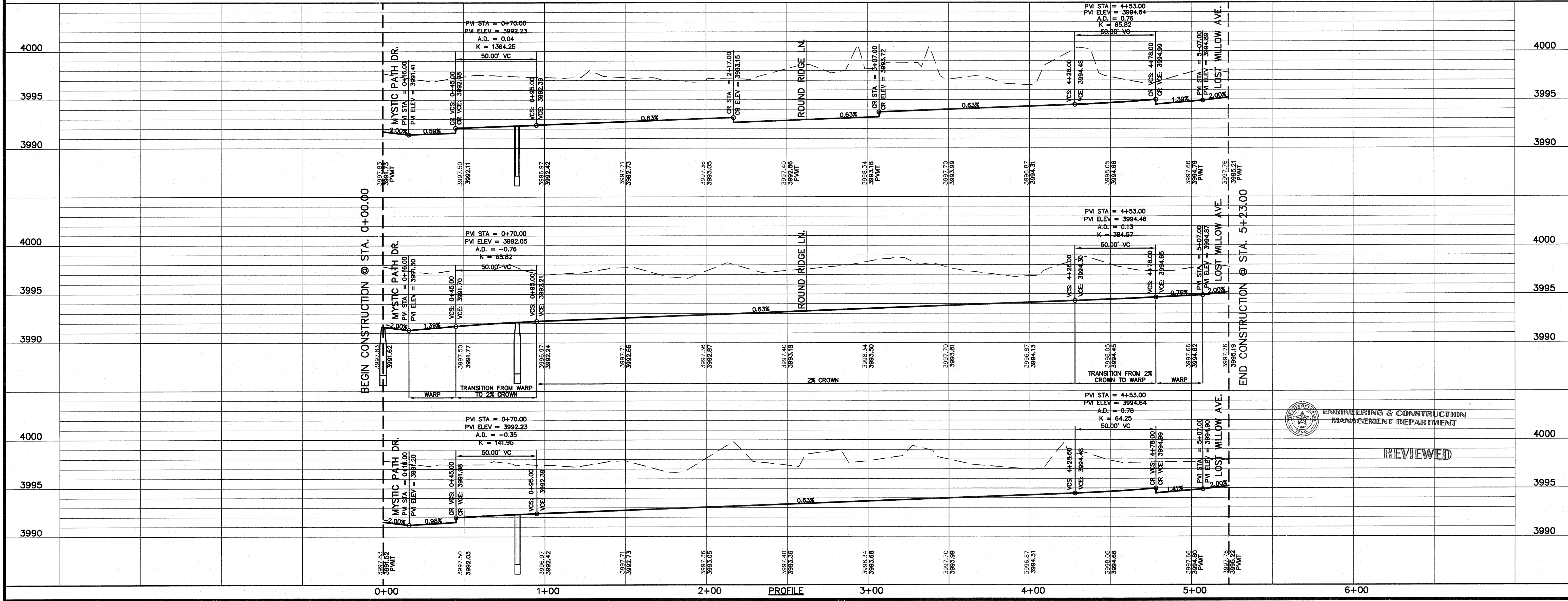
REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT	ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE.	

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 4712 Woodrow Bean, Ste. F El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.osainc.net



LEGEND:
 WHEELCHAIR RAMPS TO BE BUILT BY DEVELOPER (REFERENCE DETAIL ON SHEET C9.3)



SCALE: 1"=30'
 Horizontal: 1"=50'
 Vertical: 1"=5'
 Contour Interval: N/A
 DATE: OCTOBER, 2011
 DESIGN BY: F.Z.
 DRAWN BY: A.B.
 CHECK BY: J.L.A.
 APP'D BY: J.L.A.
 JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS**

ENGINEERING & CONSTRUCTION
 MANAGEMENT DEPARTMENT

REVIEWED

SHEET TITLE
**MERRY MEADOW PL.
 PLAN & PROFILE
 FROM STA. 0+00.00
 TO STA. 5+23.00**

SHEET NO.

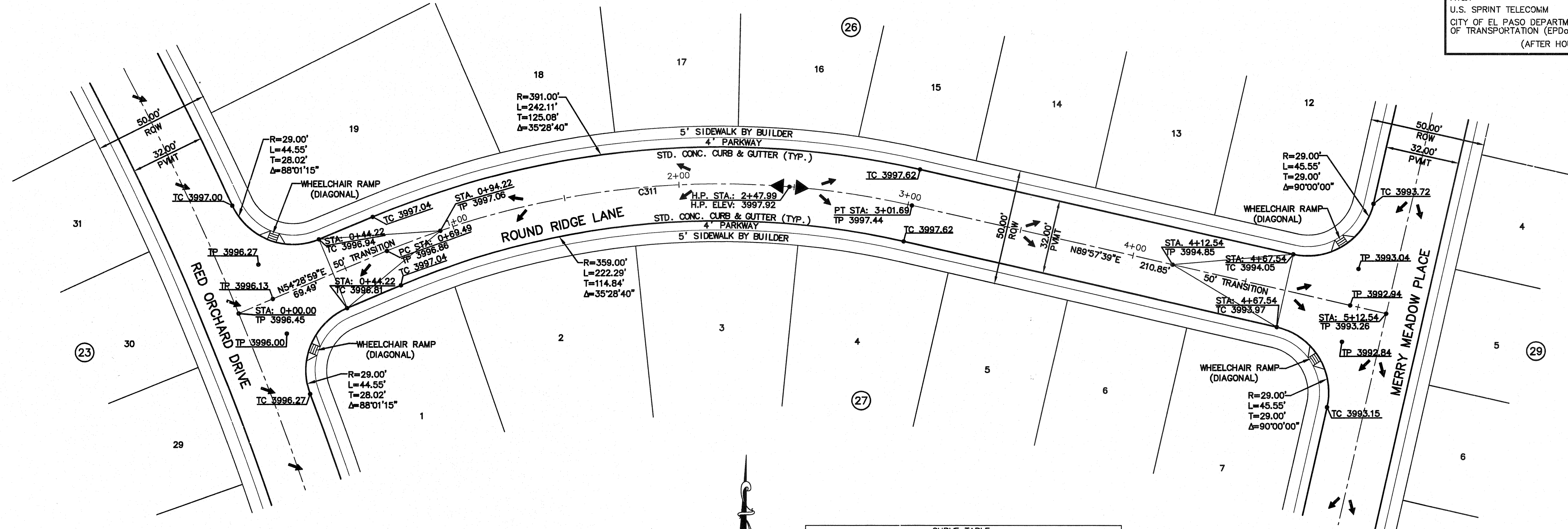
C6.13

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING!
BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

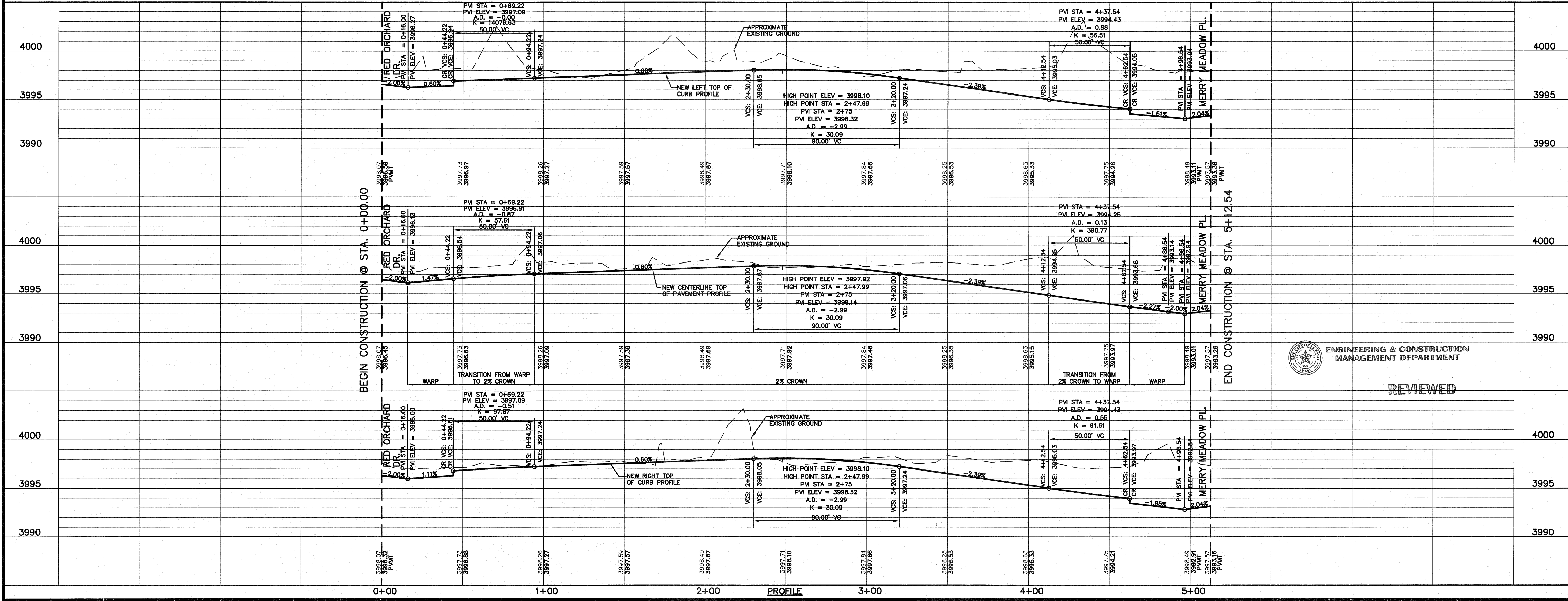


CURVE	LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
C311	232.20'	375.00'	119.96'	228.51'	S72°13'19"W	35°28'40"

PLAN

LEGEND:

WHEELCHAIR RAMPS TO BE BUILT BY DEVELOPER (REFERENCE DETAIL ON SHEET C9.3)

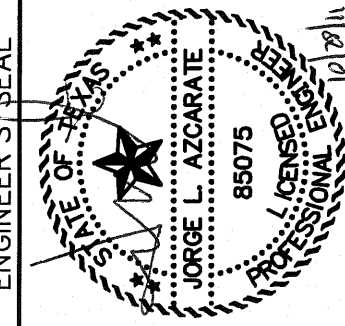


ENGINEERING & CONSTRUCTION MANAGEMENT DEPARTMENT

REVIEWED

DATE	REVISIONS	BY

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Office 915.545.5252 Fax 915.544.5233 www.osadgroup.net



SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: N/A

DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD BY: J.L.A.
APPVD BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**ROUND RIDGE LN.
PLAN & PROFILE
FROM STA. 0+00.00
TO STA. 5+12.54**

SHEET NO.
C6.14

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 650-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

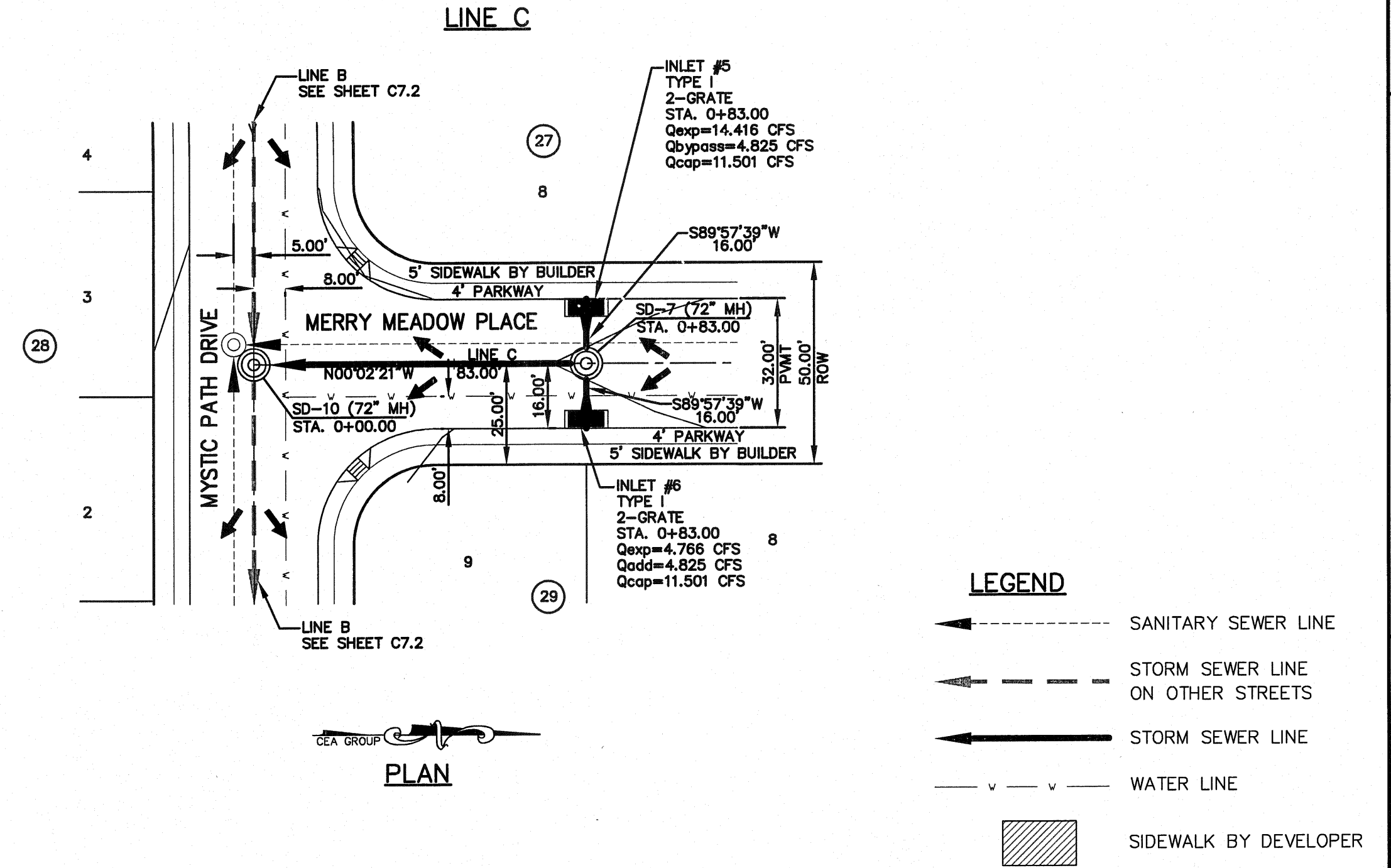
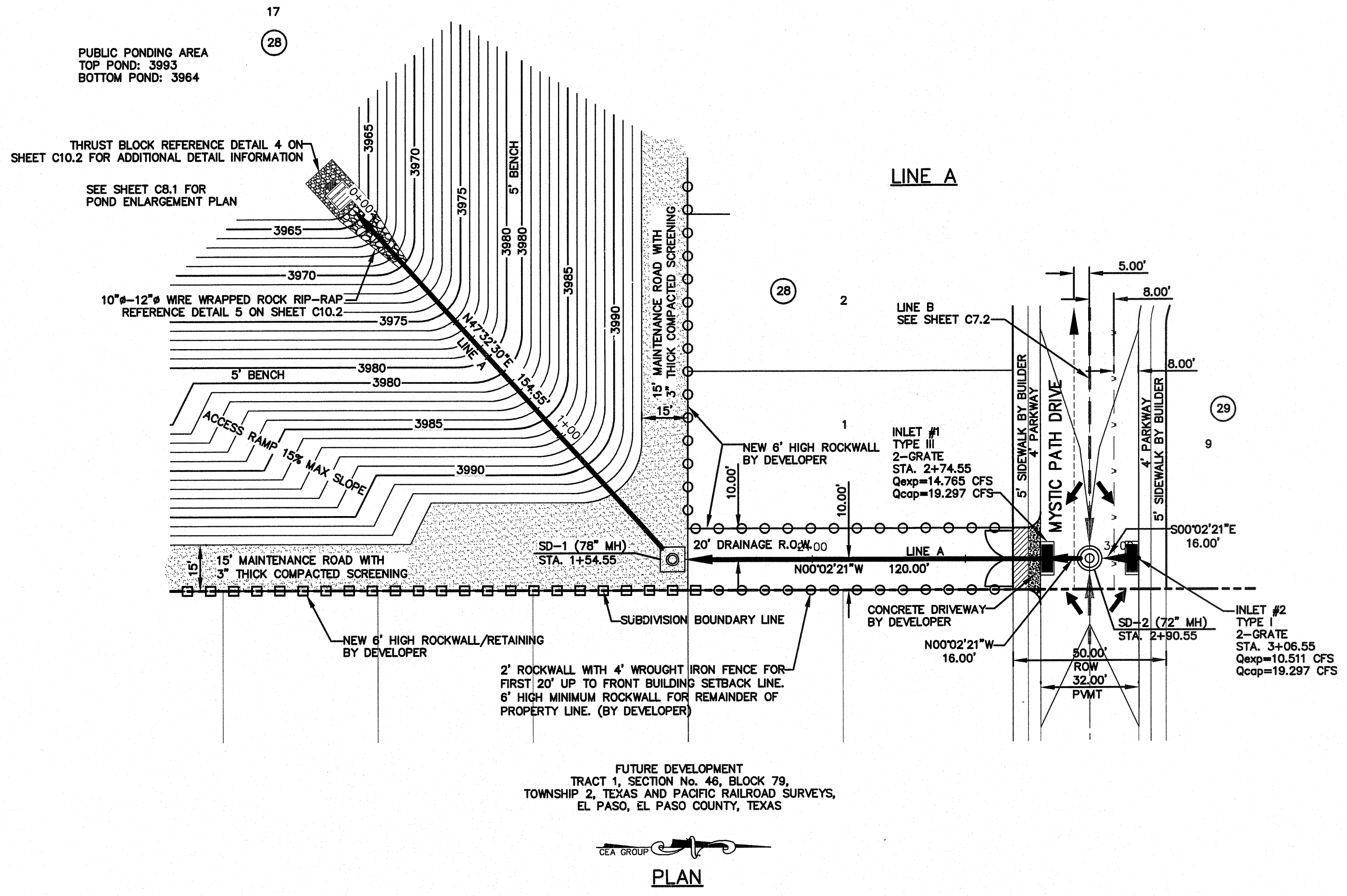
WARNING I BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

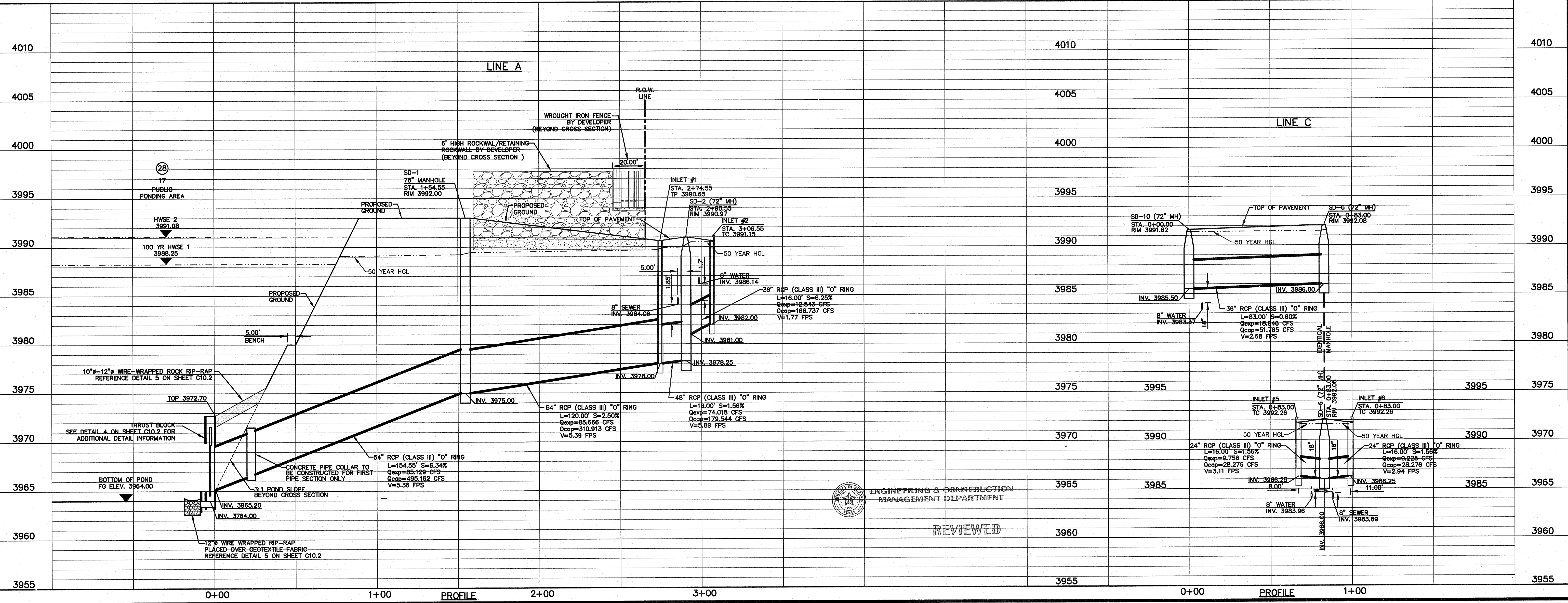
REFERENCES - BENCHMARKS	BY
EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)	
LOCATED AT THE CENTERLINE INTERSECTION OF MERRY MEADOW PLACE AND SETTING SUN DRIVE.	
DATE	REVISIONS

CSA GROUP
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4584
4712 Woodrow Bham, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.csa-group.net



LEGEND

- SANITARY SEWER LINE
- - - STORM SEWER LINE ON OTHER STREETS
- STORM SEWER LINE
- - - WATER LINE
- ▨ SIDEWALK BY DEVELOPER



SCALE: Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: 10'

DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.

JOB No. 2260-012-ID

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
STORM DRAIN PLAN & PROFILE LINE A FROM STA. 0+00.00 TO STA. 2+83.83
STORM DRAIN PLAN & PROFILE LINE C FROM STA. 0+00.00 TO STA. 0+83.00

SHEET NO.
C7.1

ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT
REVIEWED

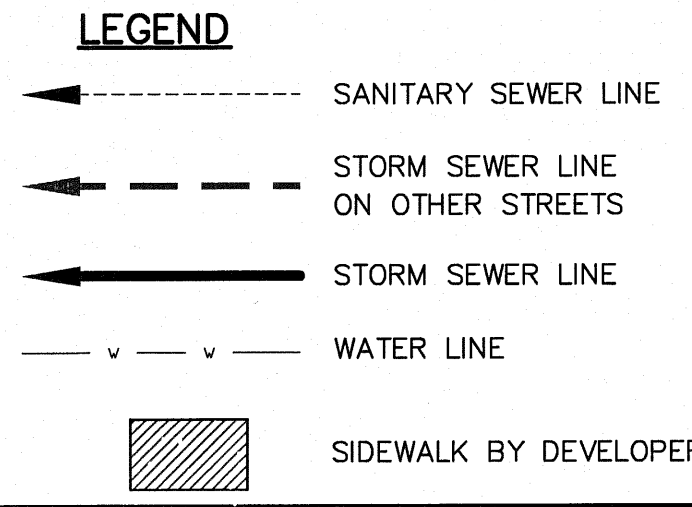
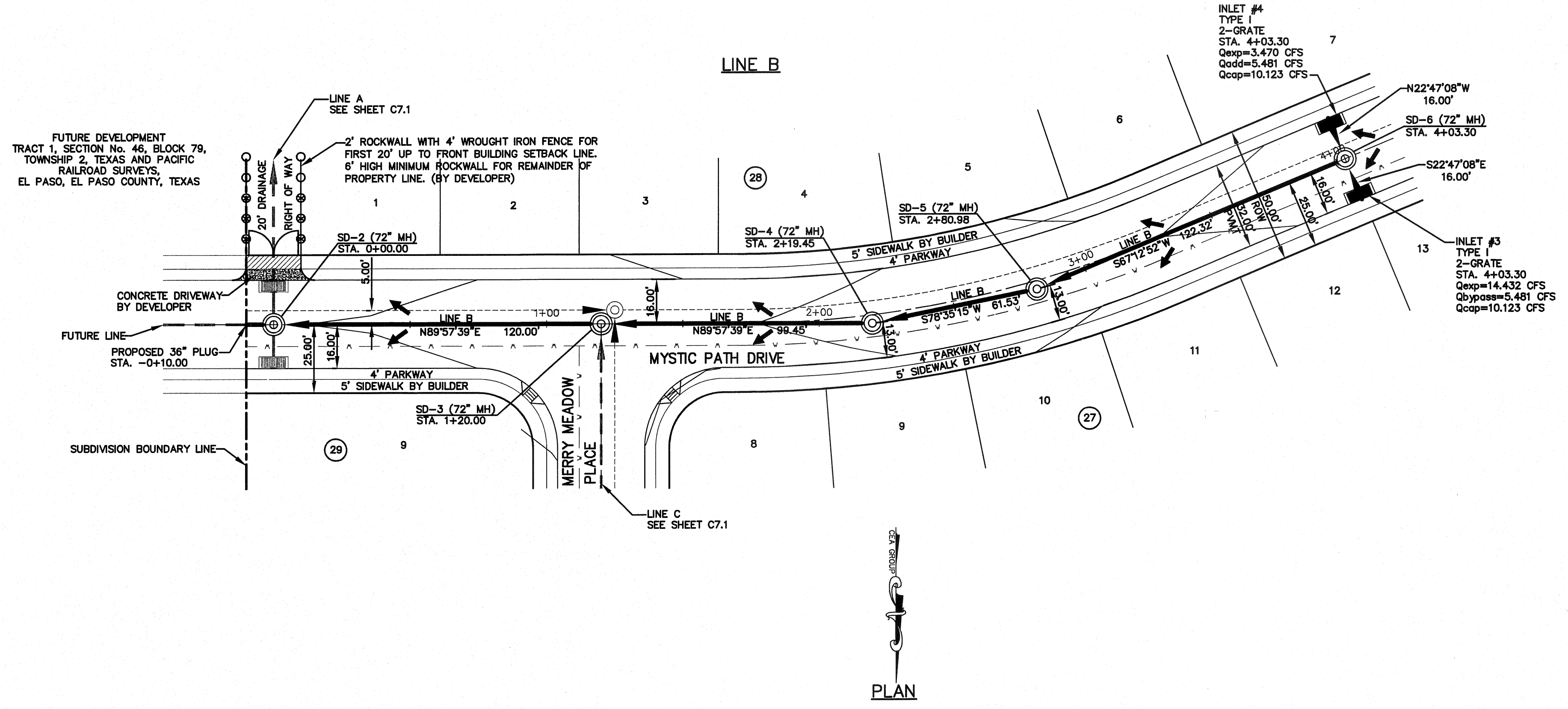
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
A&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

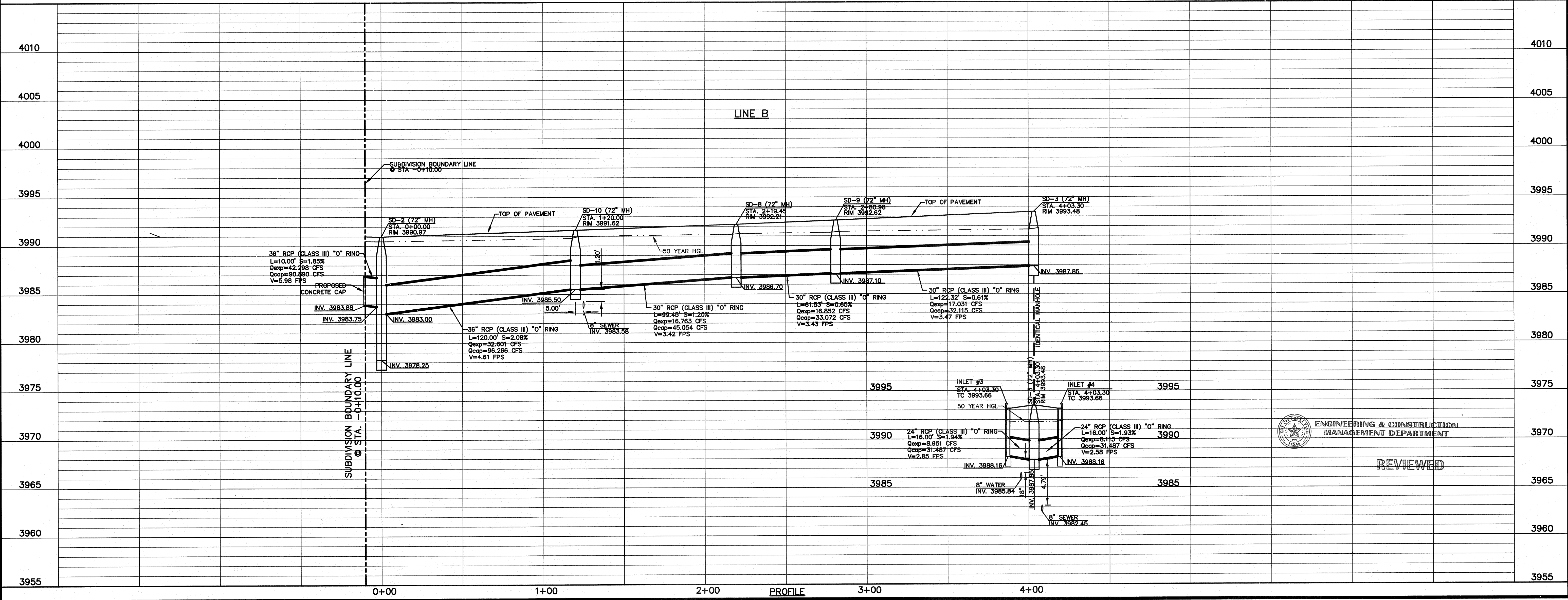
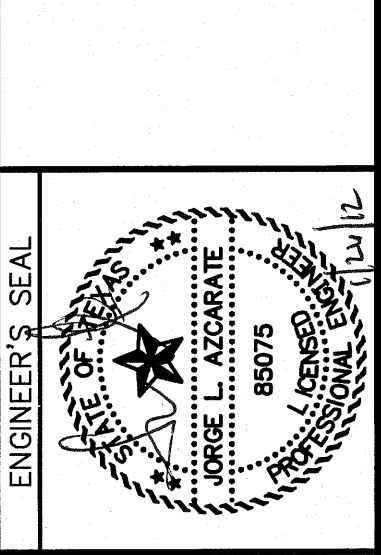
FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)

LOCATED AT THE CENTERLINE
INTERSECTION OF
SUNRAIL DRIVE AND SETTING SUN
DRIVE.

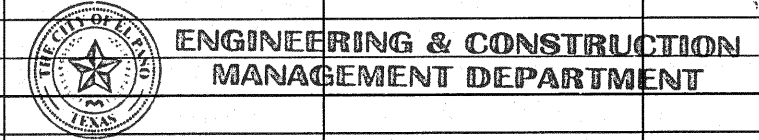


SCALE	
Horizontal:	1"=30'
Vertical:	1"=5'
Contour Interval:	N/A
DATE:	OCTOBER 2011
DESIGN BY:	F.Z.
DRAWN BY:	A.B.
CHKD. BY:	J.L.A.
APP'D. BY:	J.L.A.
JOB No.	2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**STORM DRAIN PLAN
& PROFILE LINE B
FROM STA. 0+00.00
TO STA. 4+03.30**

SHEET NO.
C7.2

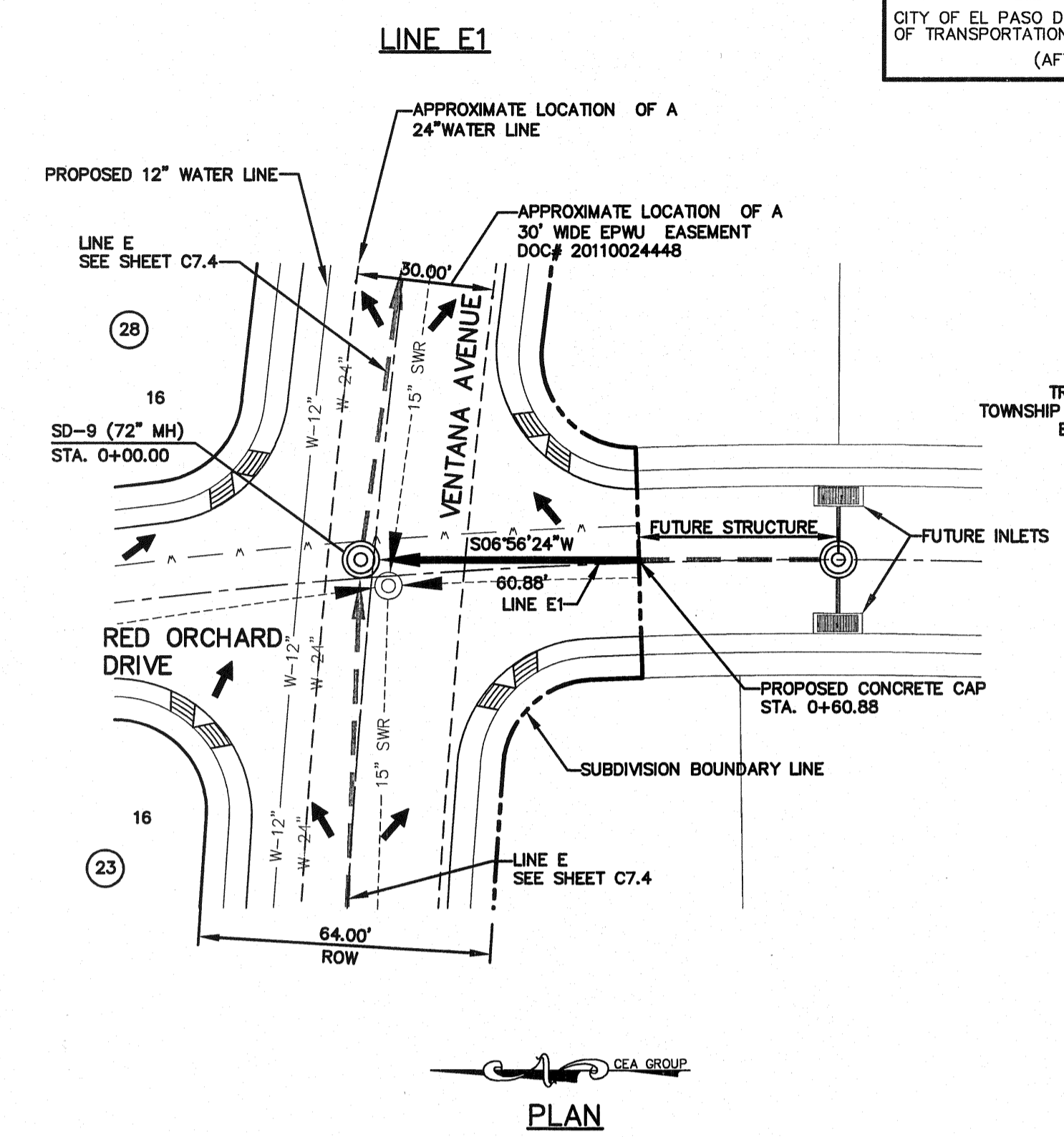
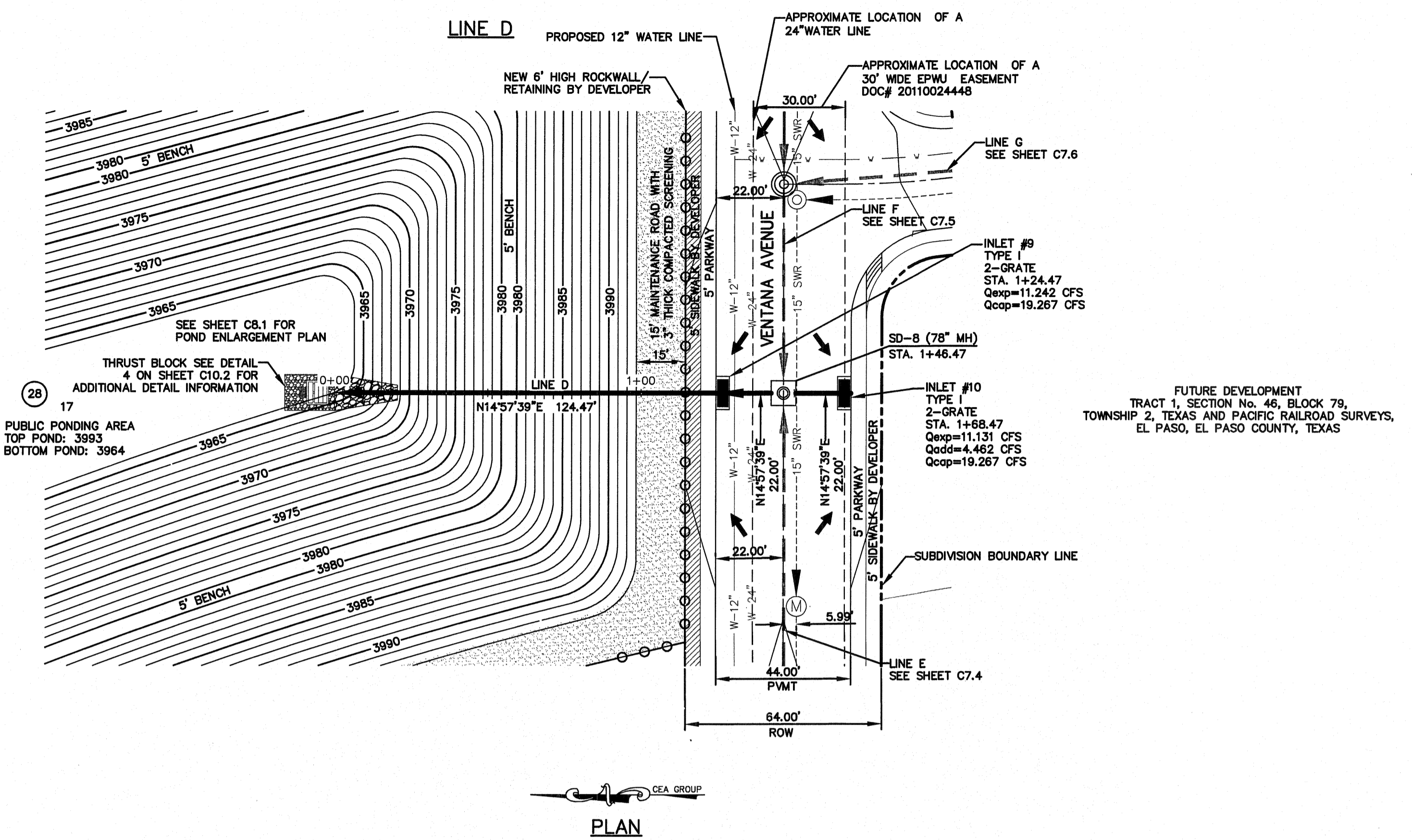


REVIEWED

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG
CALL
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1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)			
LOCATED AT THE CENTERLINE INTERSECTION OF SUNRISE VALLEY DRIVE AND SETTING SUN DRIVE.			



LEGEND

- SANITARY SEWER LINE
- - - STORM SEWER LINE ON OTHER STREETS
- STORM SEWER LINE
- - - WATER LINE
- (M) EXISTING SEWER MANHOLE (BY OTHERS)
- - - 15" SWR EXISTING 15" SEWER LINE (BY OTHERS)
- ▨ SIDEWALK BY DEVELOPER

CEA GROUP
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #484
4712 Woodrow Bean, Ste. F, El Paso, TX 79904
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

ENGINEER'S SEAL
J. L. AZARATE
80075
REGISTERED PROFESSIONAL ENGINEER
NOVEMBER 1988

4010	LINE D	4010	LINE E1	4010
4005		4005		4005
4000		4000		4000
3995		3995		3995
3990		3990		3990
3985		3985		3985
3980		3980		3980
3975		3975		3975
3970		3970		3970
3965		3965		3965
3960		3960		3960
3955		3955		3955

SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
STORM DRAIN PLAN & PROFILE LINE D FROM STA. 0+00.00 TO STA. 1+45.00
STORM DRAIN PLAN & PROFILE LINE E1 FROM STA. 0+00.00 TO STA. 0+60.88
SHEET NO.
C7.3

REVIEWED
ENGINEERING & CONSTRUCTION MANAGEMENT DEPARTMENT

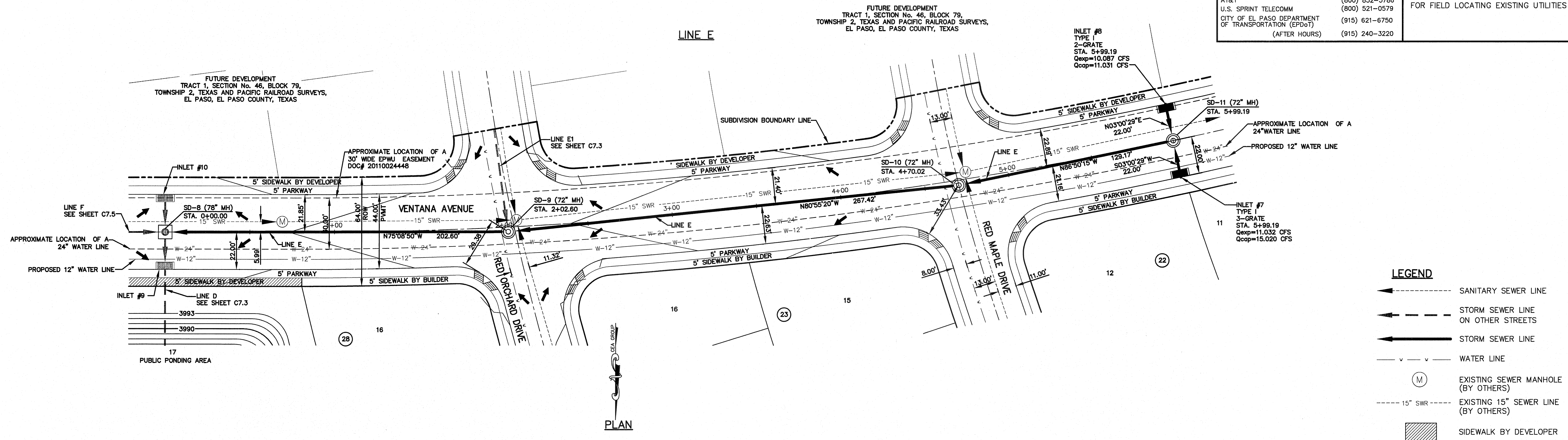
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG

CALL
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1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)

LOCATED AT THE CENTERLINE
INTERSECTION OF
TRAIL DRIVE AND SETTING SUN
DRIVE.

DATE

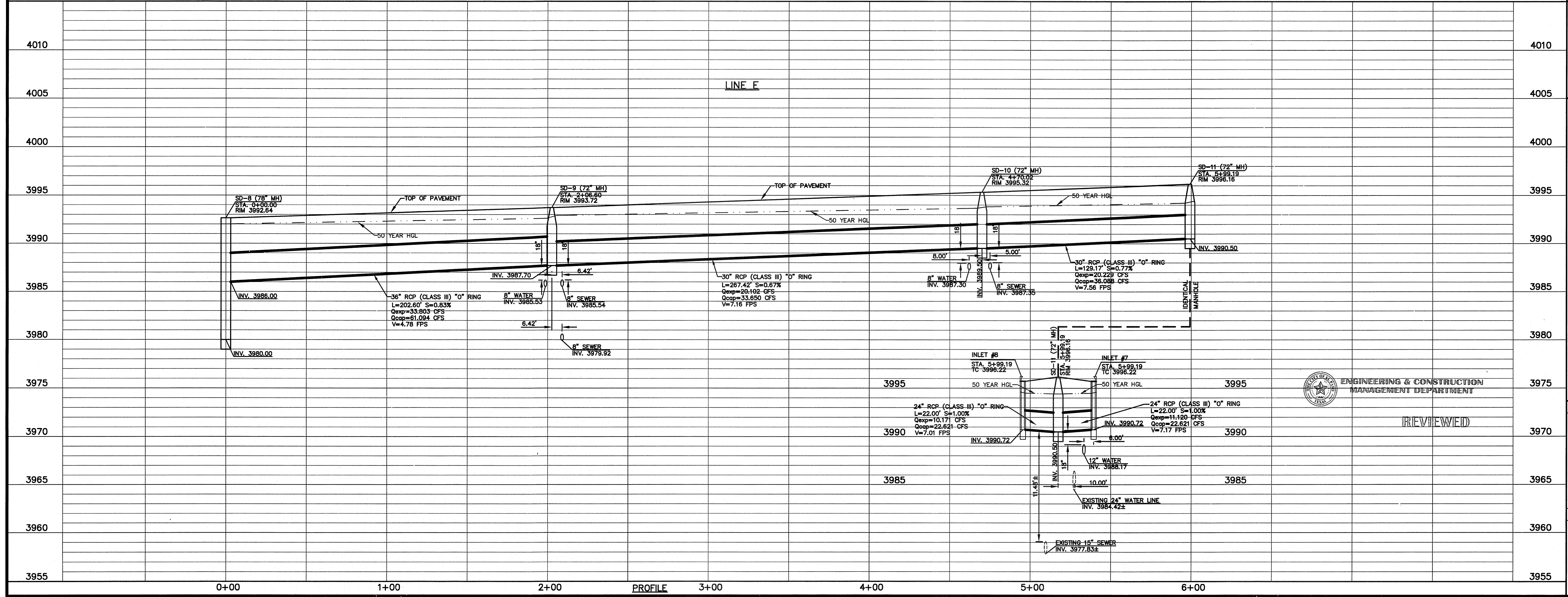
REVISIONS

BY

SEA GROUP
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #4964
4712 Woodrow Bawn, Ste. F El Paso, TX 79904
Office: 915.544.5232 Fax: 915.544.5233 www.seagroup.net

ENGINEER'S SEAL

JOSE L. AZCARRATE
68075



ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

REVIEWED

PUBLIC PONDING AREA
TOP POND: 3992
BOTTOM POND: 3967
SEE SHEET C8.1 FOR
POND ENLARGEMENT PLAN

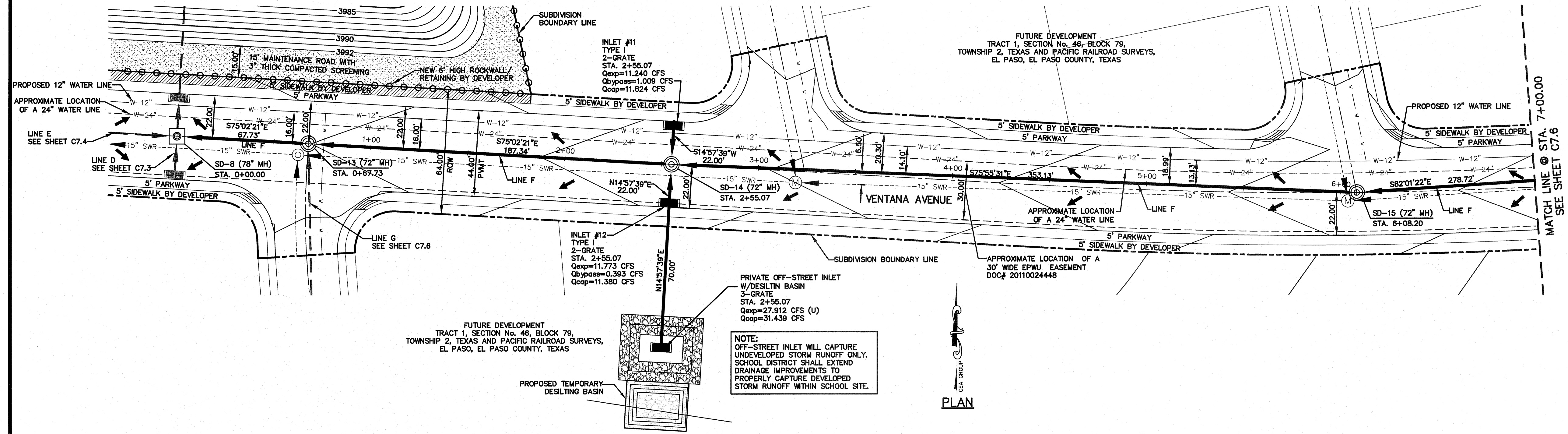
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING I BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

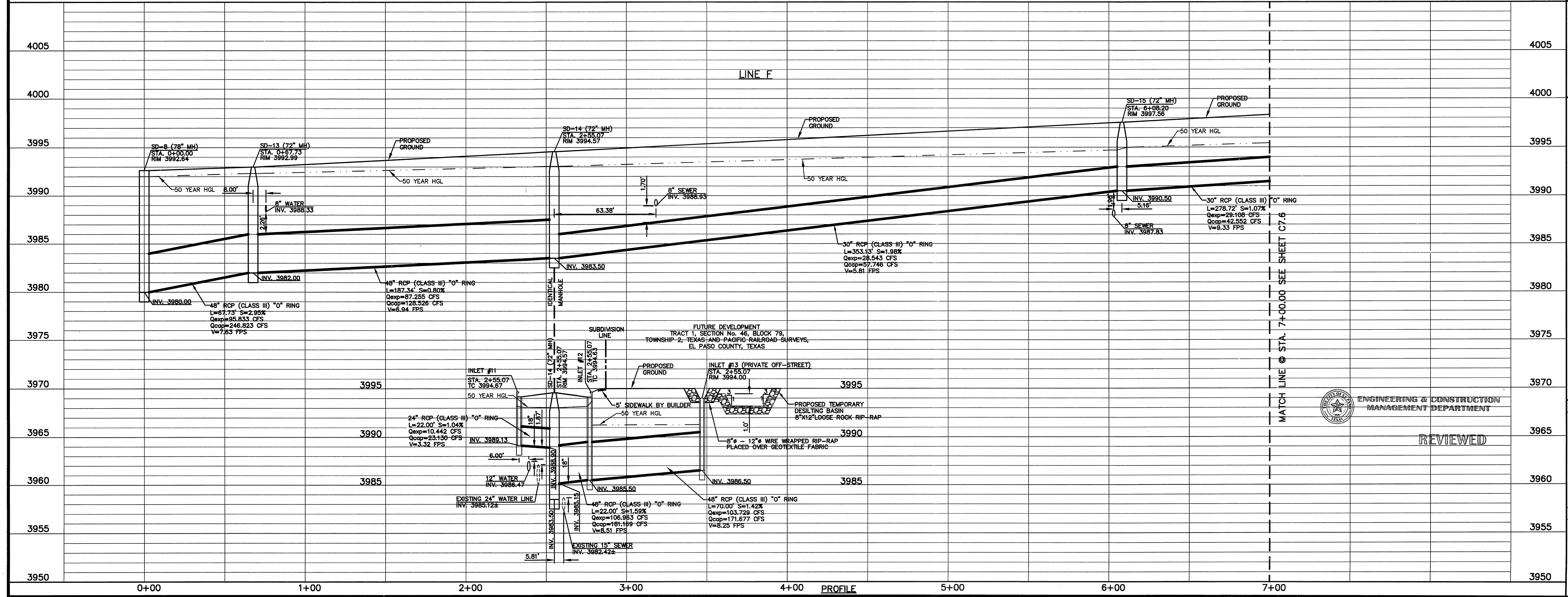
ENGINEER'S SEAL

ENGINEERS • ARCHITECTS • PLANNERS
COSA
4712 Woodrow Bean, Ste. F, El Paso, TX 79904
Office: 915.544.5232 Fax: 915.544.5233 www.cosagroup.net



LEGEND

- SANITARY SEWER LINE
- STORM SEWER LINE ON OTHER STREETS
- STORM SEWER LINE
- WATER LINE
- EXISTING SEWER MANHOLE (BY OTHERS)
- EXISTING 15" SEWER LINE (BY OTHERS)
- SIDEWALK BY DEVELOPER
- UNDEVELOPED RUNOFF



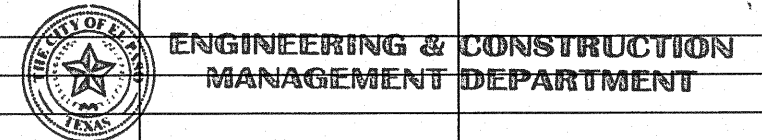
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Vertical: 1"=5'
Contour Interval: N/A

DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
STORM DRAIN PLAN & PROFILE LINE F FROM STA. 0+00.00 TO STA. 7+00.00

SHEET NO.
C7.5



REVIEWED

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPD01)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

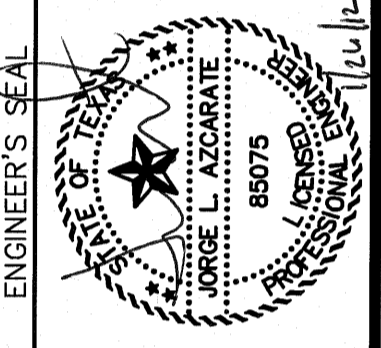
WARNING!
BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

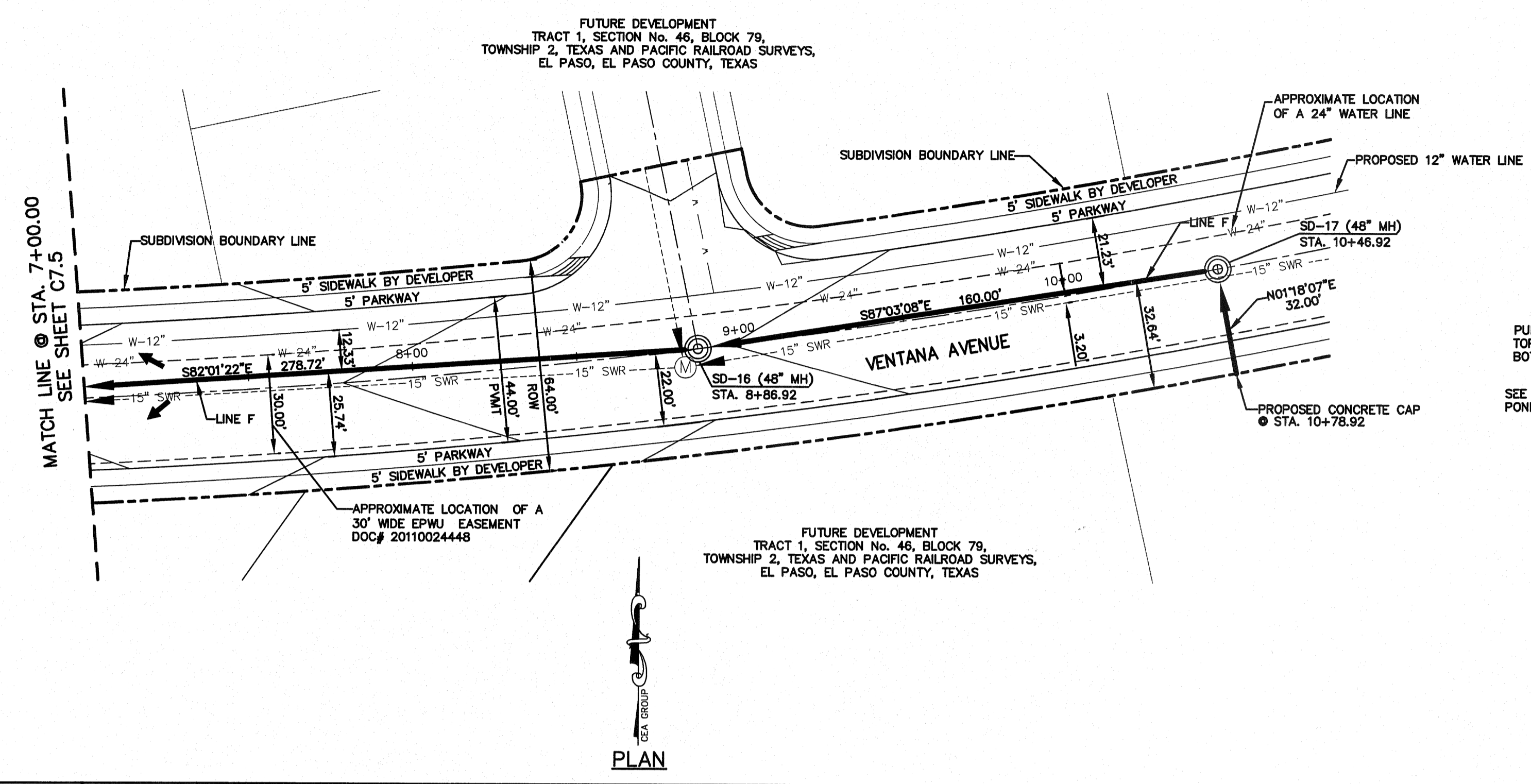
FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

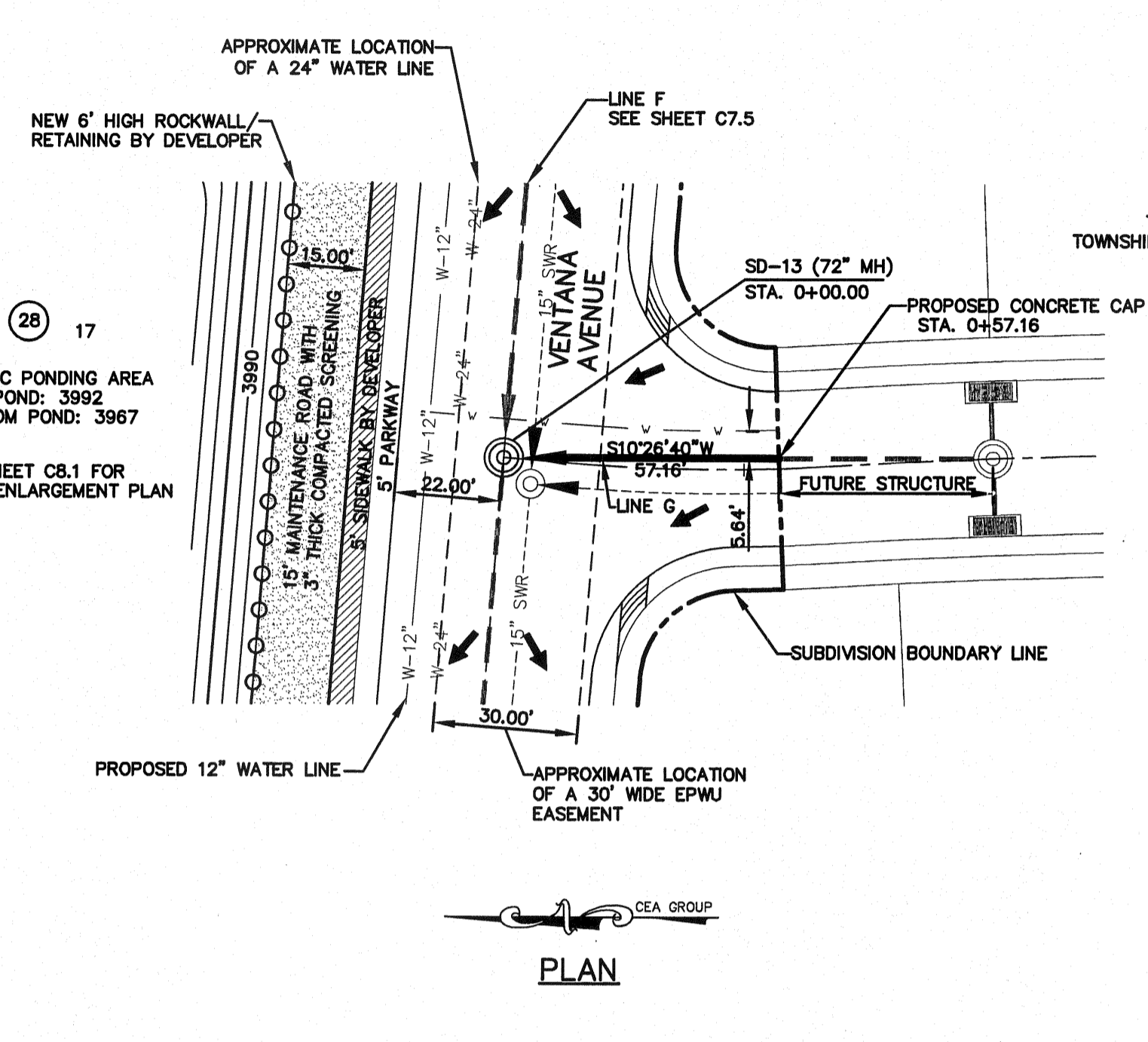
CEA GROUP
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #4884
4712 Woodrow Bess, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net



LINE F



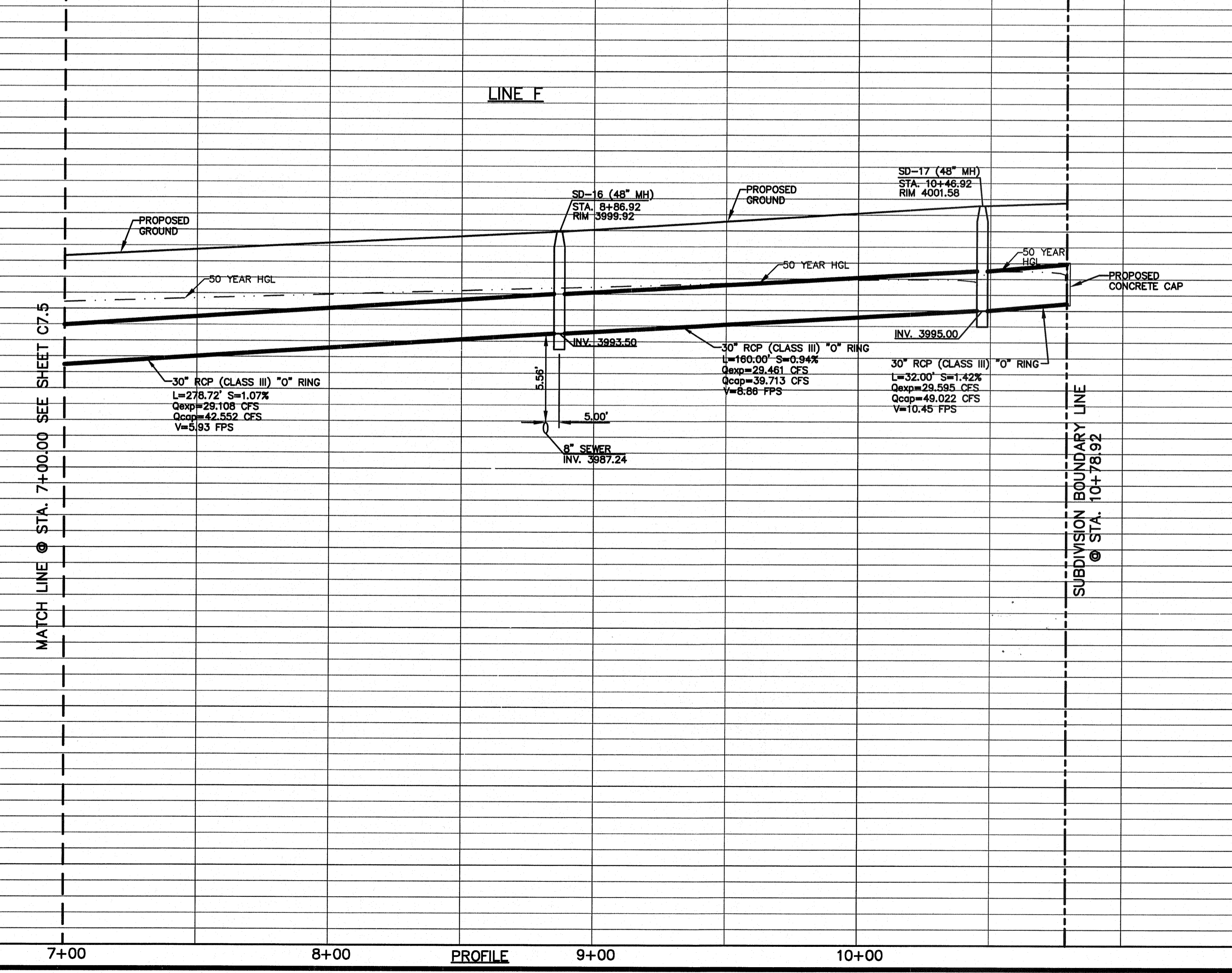
LINE G



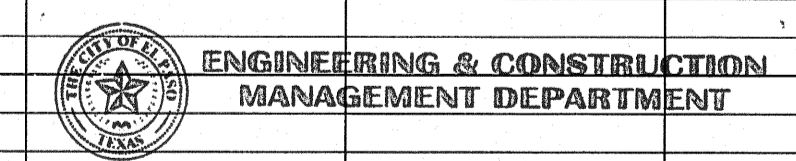
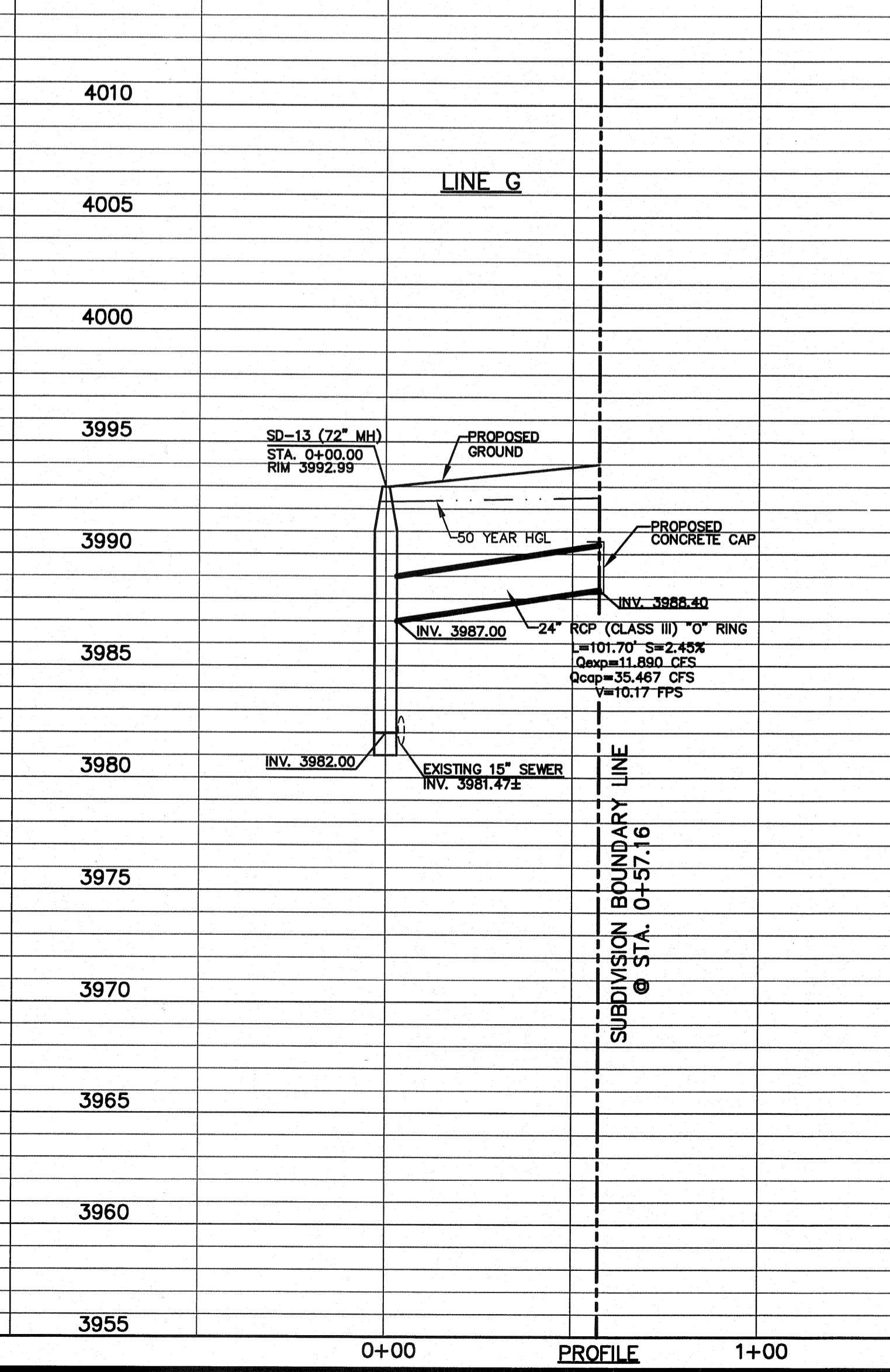
LEGEND

- SANITARY SEWER LINE
- STORM SEWER LINE ON OTHER STREETS
- STORM SEWER LINE
- WATER LINE
- (M) EXISTING SEWER MANHOLE (BY OTHERS)
- 15" SWR --- EXISTING 15" SEWER LINE (BY OTHERS)
- ▨ SIDEWALK BY DEVELOPER

LINE F



LINE G



REVIEWED

SCALE
Horizontal: 1"=30'
Vertical: 1"=5'
Contour Interval: 1/4'
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPRD. BY: J.L.A.
JOB No. 2260-012-LD

**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
STORM DRAIN PLAN & PROFILE LINE F FROM STA. 7+00.00 TO STA. 10+78.92
STORM DRAIN PLAN & PROFILE LINE G FROM STA. 0+00.00 TO STA. 0+57.16
SHEET NO.

C7.6

UTILITY LOCATOR SERVICES
 EL PASO ELECTRIC COMPANY (915) 543-5720
 EL PASO ENERGY CORPORATION (915) 496-5244
 EL PASO WATER UTILITIES (915) 594-5500
 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 TELECOMM (800) 521-0579
 CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT) (915) 621-6750
 (AFTER HOURS) (915) 240-3220

WARNING ! BEFORE YOU DIG
 CALL
 1-800-DIG-TESS
 1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS
 EXISTING CITY MONUMENT
 ELEVATION=3970.52 FEET (CITY DATUM)
 LOCATED AT THE CENTERLINE
 INTERSECTION OF
 SUN TRAIL DRIVE AND SETTING SUN
 DRIVE.
 DATE _____ REVISIONS _____ BY _____

o&a
 ENGINEERS • ARCHITECTS • PLANNERS
 TEXAS REGISTERED ENGINEERING FIRM #464
 4712 Woodrow Bean, Ste. F, El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.oandagroup.net

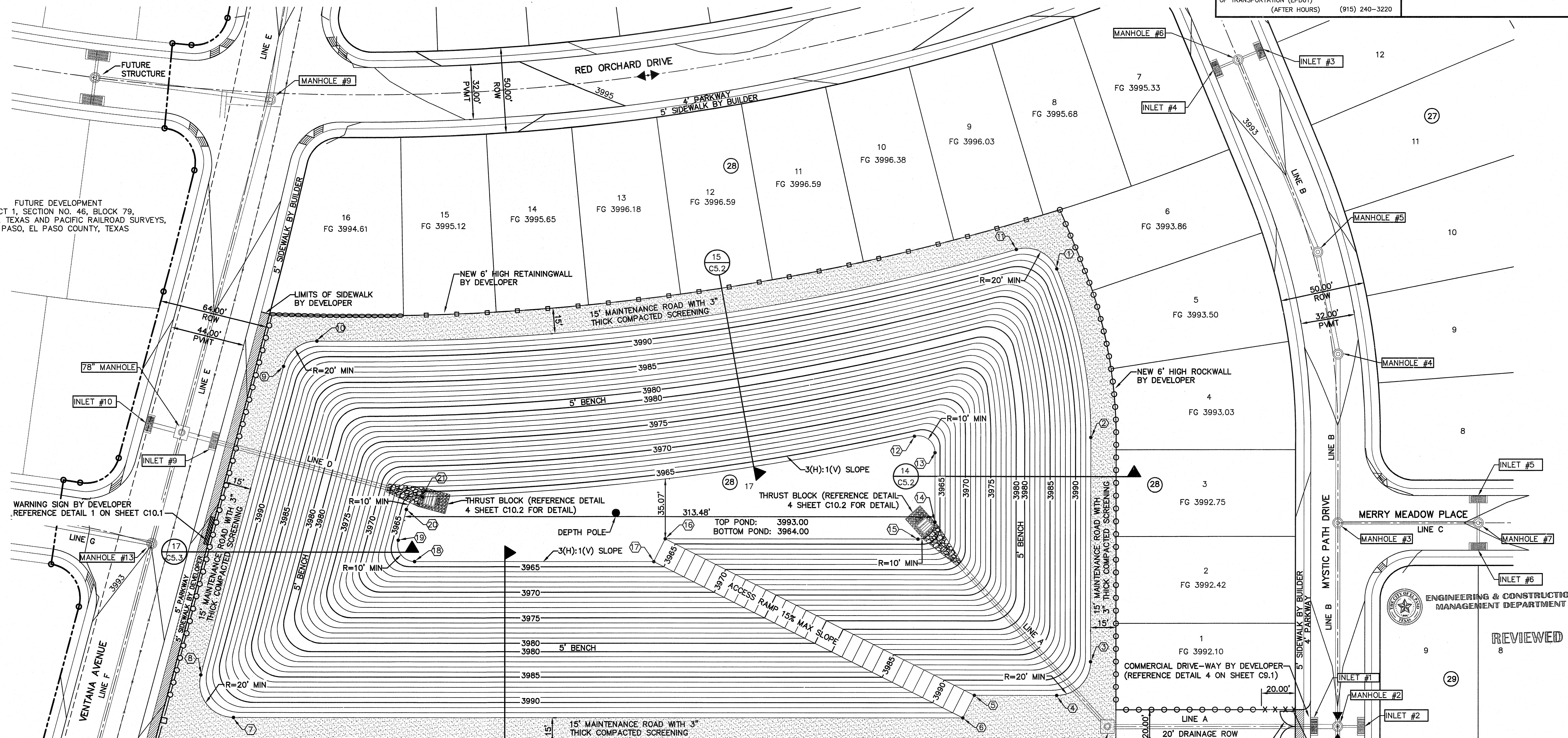
ENGINEER'S SEAL
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 Vertical: N/A
 Contour Interval: N/A
 DATE: OCTOBER 2011
 DESIGN BY: F.Z.
 DRAWN BY: A.B.
 CHKD. BY: J.L.A.
 APP'D. BY: J.L.A.
 JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS**

ENGINEERING & CONSTRUCTION
 MANAGEMENT DEPARTMENT
 REVIEWED

SHEET TITLE
POND DESIGN PLAN

SHEET NO.
C8.1



FUTURE DEVELOPMENT
 TRACT 1, SECTION NO. 46, BLOCK 79,
 TOWNSHIP 2, TEXAS AND PACIFIC RAILROAD SURVEYS,
 EL PASO, EL PASO COUNTY, TEXAS

POND COORDINATES

POINT NUMBER	NORTHING	EASTING
1	10672240.1287	464725.3780
2	10672260.4728	464824.8062
3	10672260.5630	464956.7833
4	10672240.5767	464976.7970
5	10672191.9425	464976.8303
6	10672185.2017	464990.2303
7	10671754.1003	464990.5250
8	10671734.7645	464965.3619
9	10671783.3424	464783.5698
10	10671803.0121	464768.7360
11	10672216.1883	464714.0021
12	10672156.2792	464824.3241
13	10672168.4791	464834.0723
14	10672168.5070	464874.8344
15	10672158.5123	464884.8412
16	10672008.2116	464884.9208
17	10672002.4675	464898.3432
18	10671860.9037	464898.4470
19	10671851.2353	464885.8654
20	10671856.0416	464867.8787
21	10671865.4481	464860.4636
DEPTH POLE	10671980.0148	464869.7475

NEW POND #1 CALCULATIONS

$QT = (ARC) / 12$ SILT VOLUME = 1.542
 $QT = 26.982 \text{ AC-FT}$ 0.012 AC-FT/AC
 $A = 128.485'$ $33.727 + 1.542 = 35.269 \text{ AC-FT}$
 $R = 4'$
 $C = 0.63$ **TOTAL req = 35.269 AC-FT**
 $QT \times 25\% = 6.745$
 $26.982 + 6.745 = 33.727$
 *INCLUDES ALL FUTURE RUNOFF TOTAL AREA.

NEW RETENTION BASIN #1

BASIN NO.	REQUIRED CAPACITY (AC.-FT.)	AVAILABLE CAPACITY (AC.-FT.)	PEAK INFLOW (CFS)	OUTLET TOWER FLOW (CFS)	HIGH WATER SURFACE ELEV. (FT.)	BOTTOM ELEVATION (FT.)	FREE BOARD (FT.)	TOP ELEVATION
1	35.269	40.309	333.99	0	3991.08	3964	1.71	3993

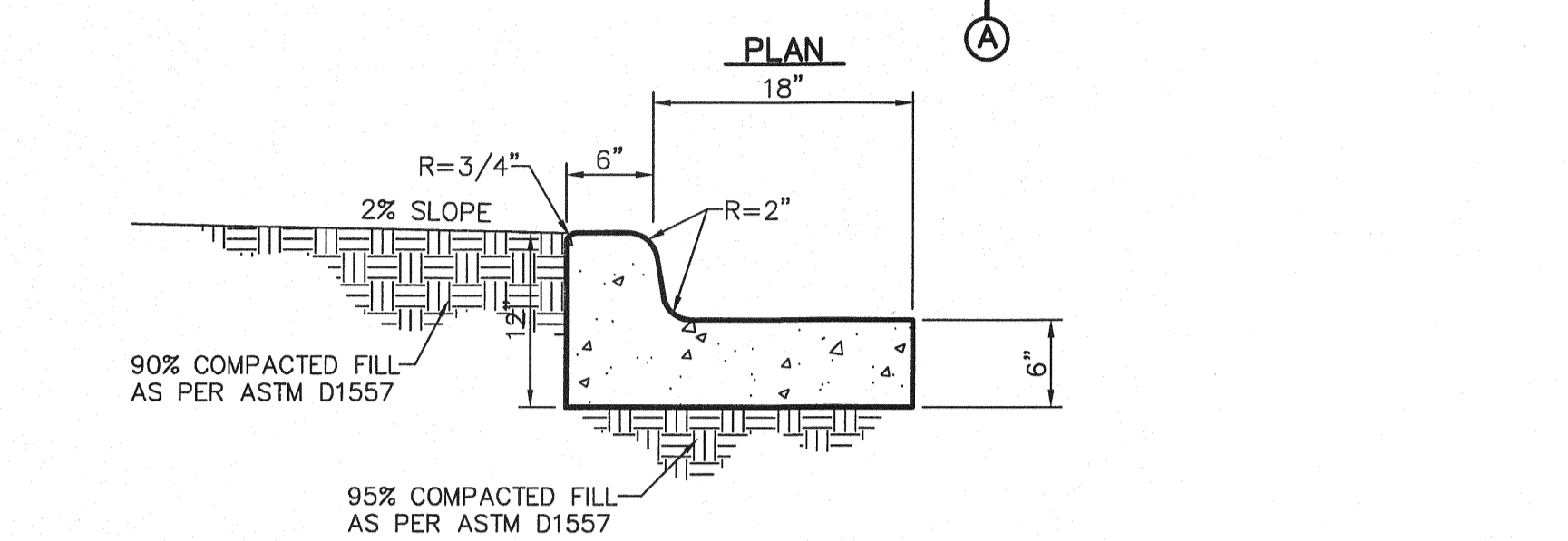
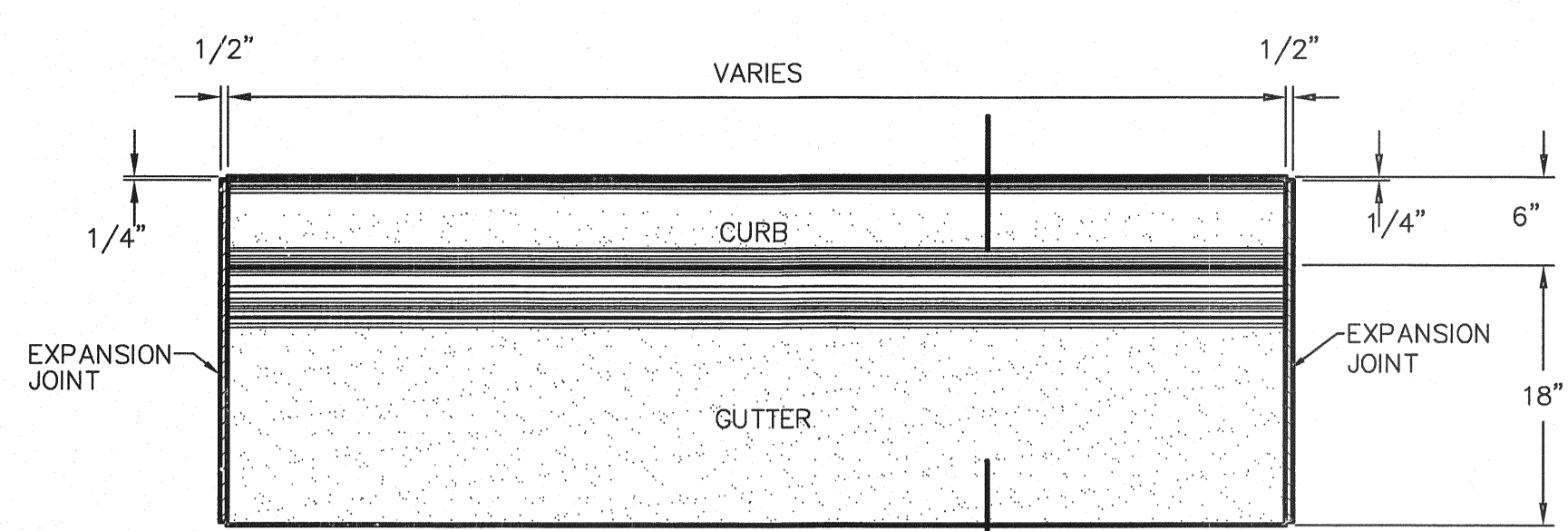
NEW POND #1 AREAS

CONTOUR	ACCUMULATED VOLUME (AC.-FT.)
3993	40.309
3992	37.637
3991	35.067
3990	32.598
3989	30.228
3988	27.955
3987	25.778
3986	23.695
3985	21.705
3984	19.804
3983	17.993
3982	16.270
3981	14.631
3980	13.077
3979	11.612
3978	10.411
3977	9.227
3976	8.118
3975	7.081
3974	6.115
3973	5.219
3972	4.391
3971	3.628
3970	2.930
3969	2.295
3968	1.721
3967	1.206
3966	0.749
3965	0.347
3964	0.000

- NOTES:**
- 15' WIDE POND ACCESS RAMP SHALL HAVE A MINIMUM P.I. OF 8 WITH NO LOOSE MATERIAL AND A MINIMUM 95% COMPACTION PER ASTM-D1557.
 - POND ROCKWALL/RETAINING WALL SHALL BE BUILT TO A 6' MIN. HEIGHT FROM THE HIGHEST GROUND.
 - PROPOSED ROCKWALLS & RETAINING WALL LOCATIONS SHALL BE CONSTRUCTED ACCORDING TO GRADING SECTIONS AND RELATED DETAILS.
 - DEVELOPER SHALL PERFORM A PERCOLATION TEST WITHIN THE PROPOSED POND AND BE SUBMITTED PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS BY THE CITY OF EL PASO AND EL PASO WATER UTILITIES. PERCOLATION TEST SHALL CONFORM TO ASTM D5126.

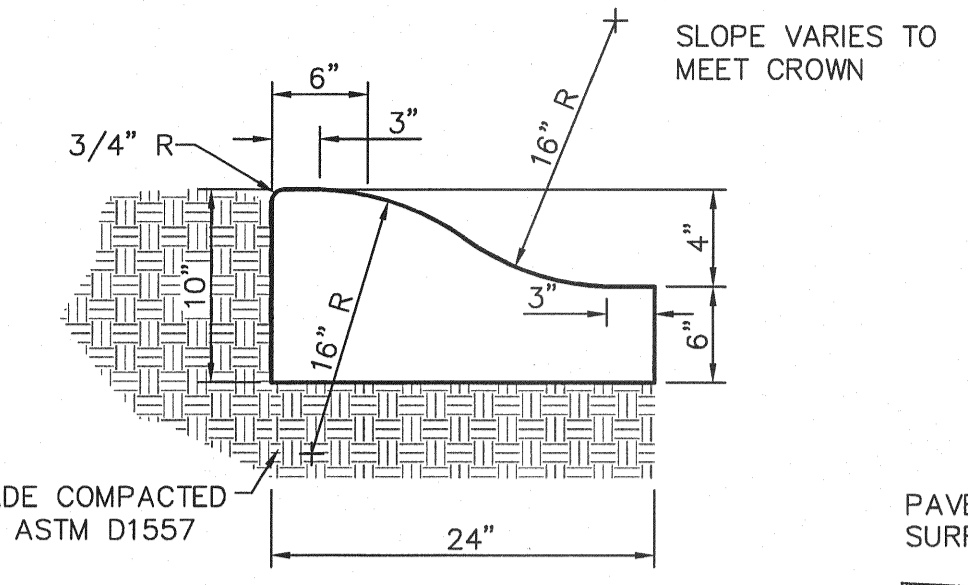
- LEGEND:**
- NEW 6' HIGH ROCKWALL BY DEVELOPER
 - NEW 6' HIGH RETAINING ROCKWALL (2'-3' RETAINING HEIGHT)
 - NEW 6' HIGH RETAINING ROCKWALL (3'-9' RETAINING HEIGHT)
 - 2' ROCKWALL WITH 4' WROUGHT IRON FENCE FOR FIRST 20' UP TO FRONT BUILDING SETBACK LINE. 6' HIGH MINIMUM ROCKWALL FOR REMAINDER OF PROPERTY LINE. (BY DEVELOPER)
 - 3" THICK COMPACTED SCREENING
 - SIDEWALK BY DEVELOPER
 - PROPOSED INLET & STORM SEWER PIPE
 - 10"-12" WIRE WRAPPED ROCK RIP-RAP

CEA GROUP
POND DESIGN PLAN
 SCALE: 1" = 30'



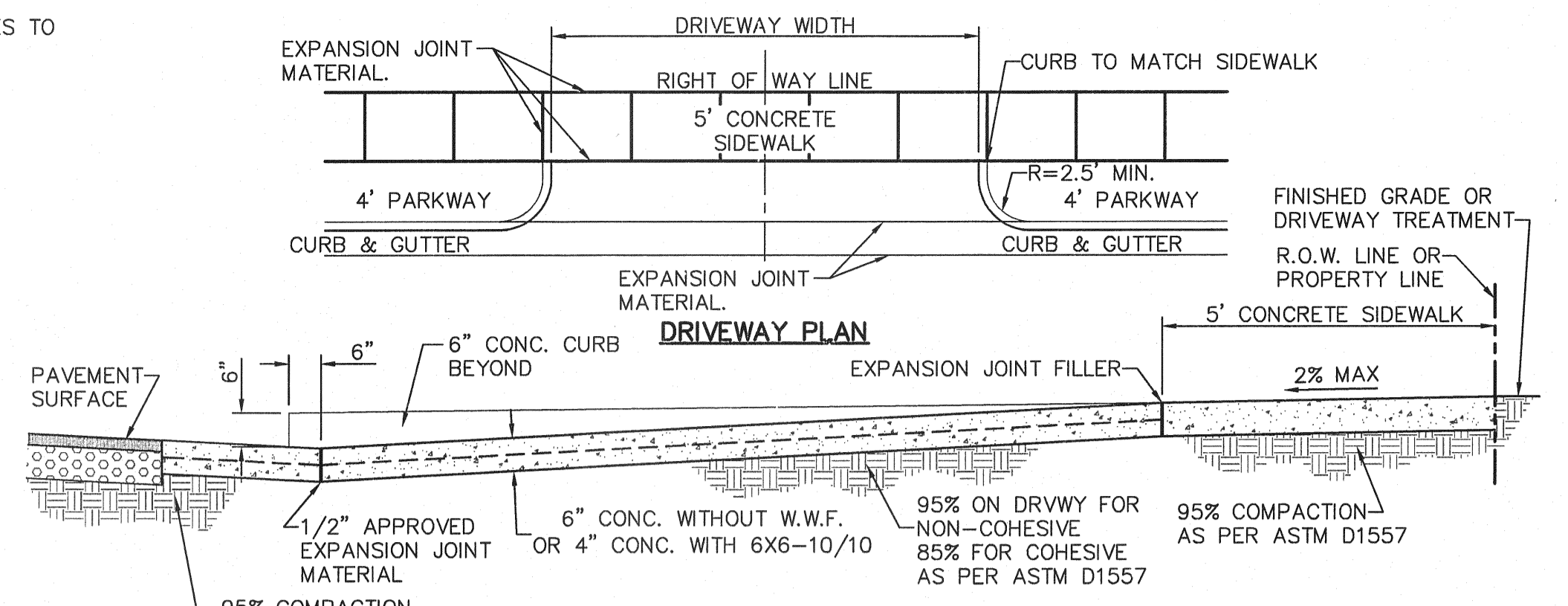
- NOTES:**
1. CONCRETE SHALL BE 3,000 P.S.I. MIN.
 2. DUMMY JOINT REQUIRED AT 10' O.C. FOR CURB & GUTTER, AND 5' O.C. FOR SIDEWALK
 3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS AND AT 20' ON CENTER FOR SIDEWALKS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
 4. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR CURBS.

2 CURB & GUTTER DETAIL
SCALE: 1"=1'-0"



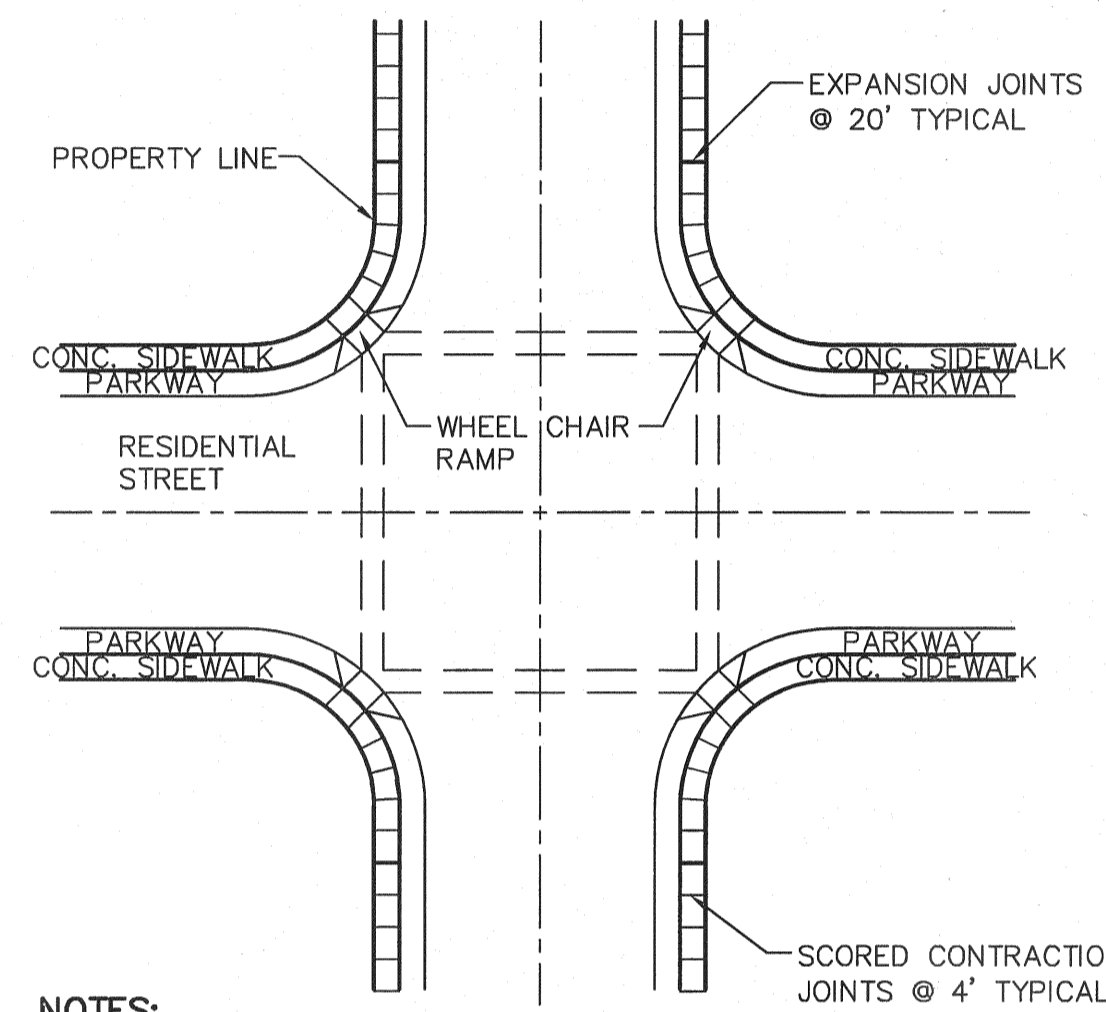
1. CONCRETE TO BE 3000 PSI MIN.
2. DUMMY JOINTS REQUIRED AT 10' O.C. FOR HEADERS AND 5' O.C. FOR SIDEWALK
3. EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
4. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR HEADERS.
5. EXPANSION JOINTS REQUIRED FOR SIDEWALK AT 20' O.C.
6. * FOR CUL-DE-SAC AND HEEL ONLY.

3 4" CONCRETE ROLLED CURB DETAIL
SCALE: 1"=1'-0"



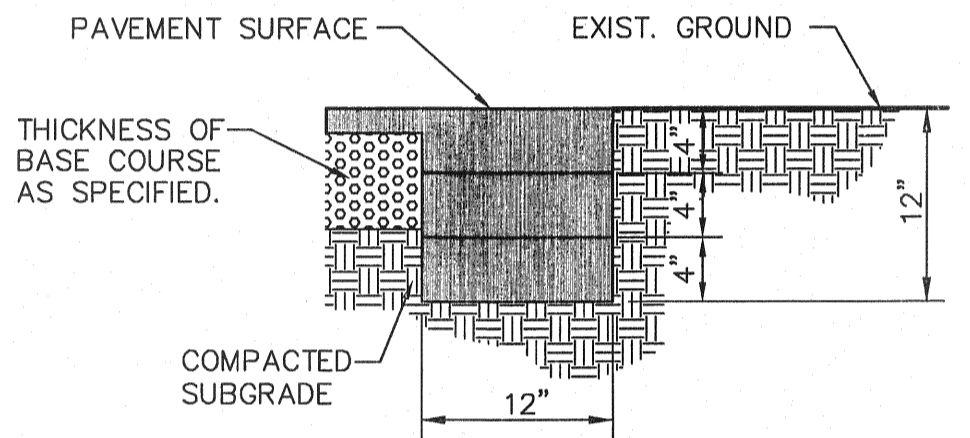
- NOTES:**
1. DRIVEWAY SLOPES MUST BE 10% MAX. FROM CUTTER FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (DRIVEWAY SHALL BE LOCATED @ HIGH SIDE OF LOT UNLESS OTHERWISE COORDINATED WITH CITY OF EL PASO)
 2. RESIDENTIAL
6" CONCRETE WITHOUT W.W.F.
4" CONCRETE WITH 6X6-10/10
 3. COMMERCIAL
6" CONCRETE WITH 6X6-6/6 W.W.F.

4 TYPICAL DRIVEWAY DETAIL
SCALE: N.T.S.



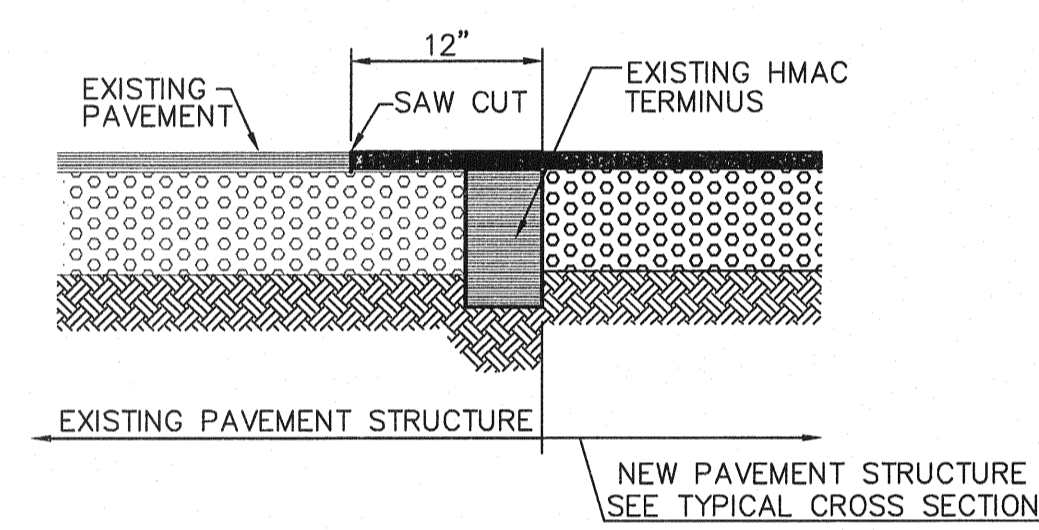
- NOTES:**
1. RAMPS MAY BE PLACED AS SUGGESTED, HOWEVER EXISTING LIGHT POLES, FIREHYDRANTS, DROP INLETS, ETC., MAY AFFECT PLACEMENT.
 2. THE CONCRETE SURFACE SHALL HAVE A ROUGH, NONSKID TYPE FINISH.
 3. CONSTRUCTION METHODS SHALL CONFORM WITH THE CITY OF EL PASO SPECIFICATIONS.
 4. ALL PARKING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF EL PASO STANDARDS.

5 WHEELCHAIR RAMP STREET PLAN
SCALE: 1"=30'-0"

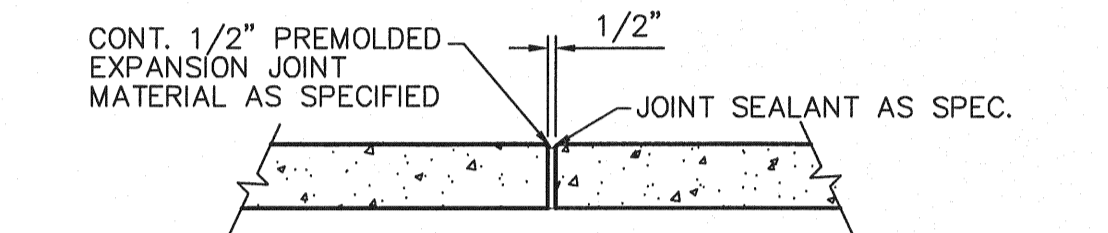
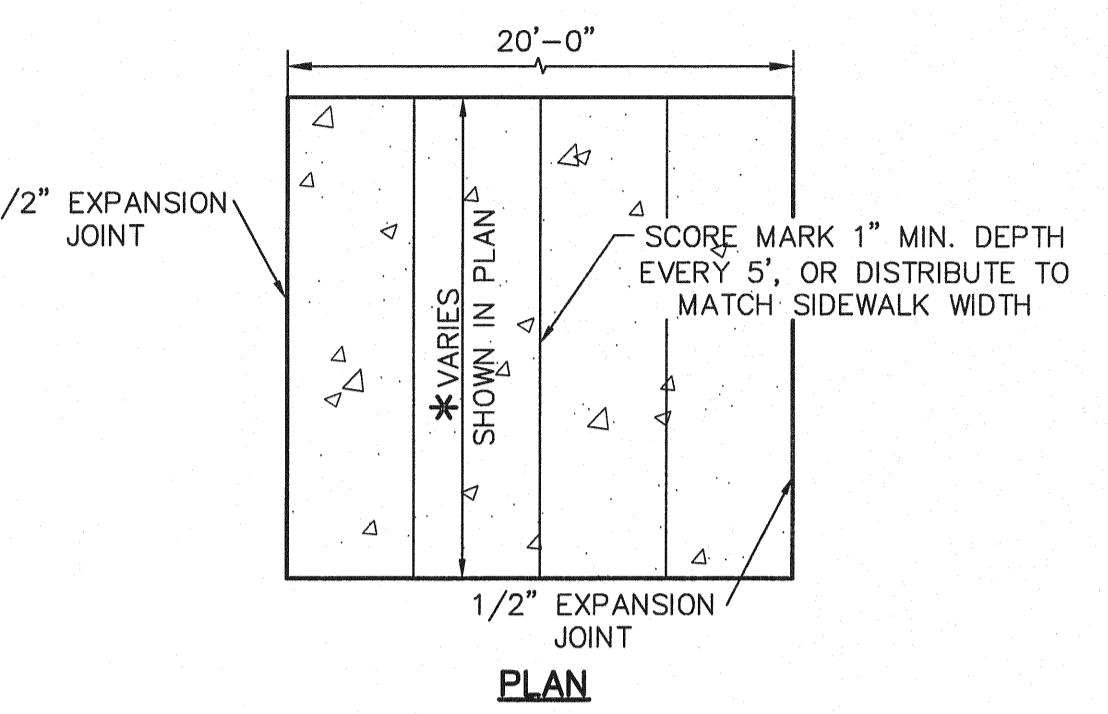


- NOTE:** TERMINUS MUST BE CONSTRUCTED IN 4" LIFTS. FINAL LIFT MUST BE PLACED WITH FINAL PAVEMENT COURSE.

6 TERMINUS OF STREET
SCALE: 1"=1'-0"



7 TYPICAL PAVEMENT JOINT SECTION
SCALE: N.T.S.

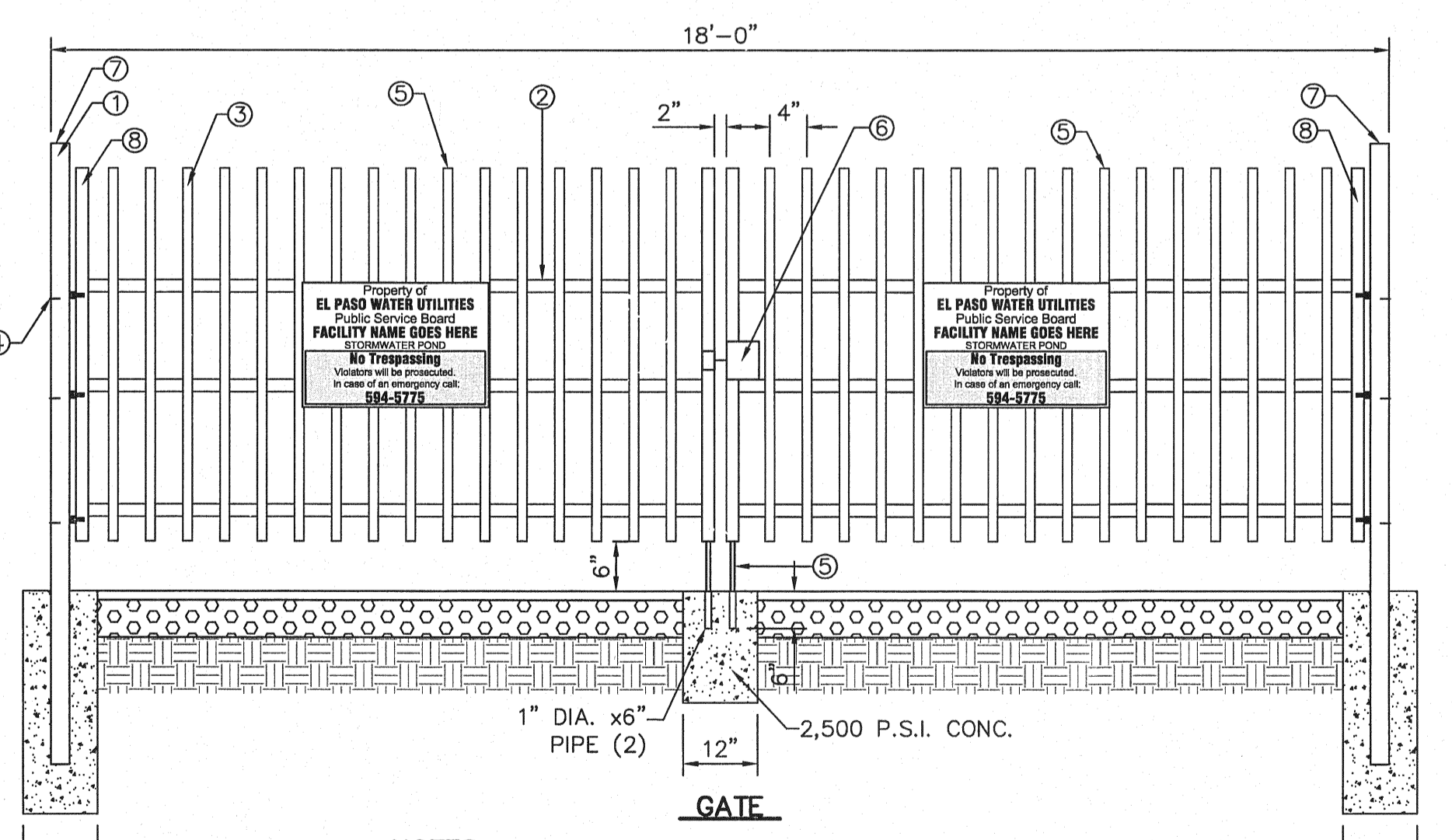
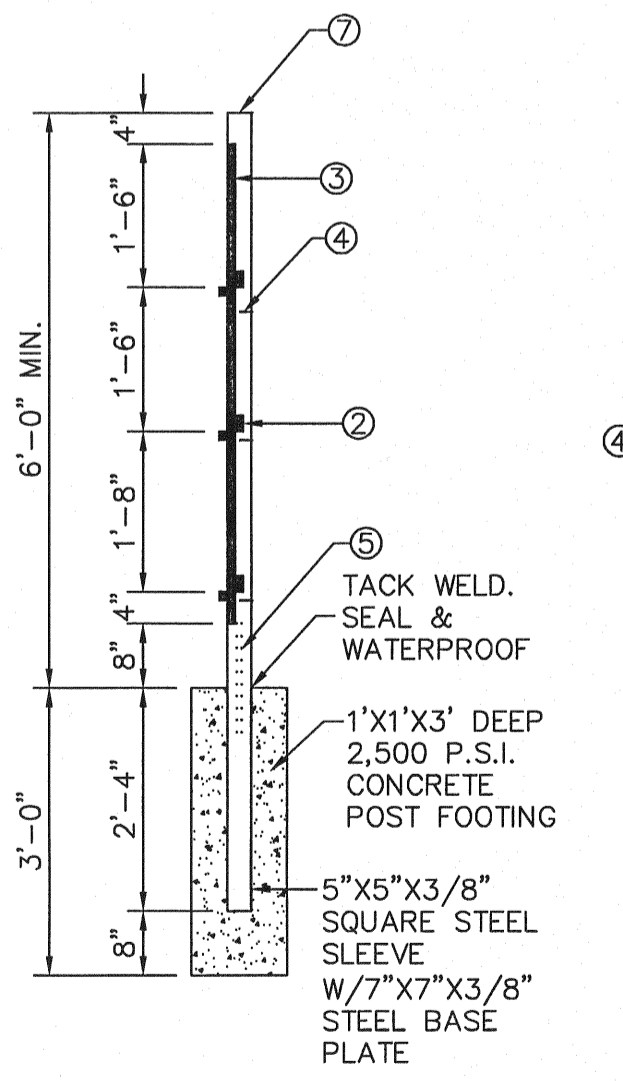


- NOTES:**
1. EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREMOLDED JOINT FILLER (AASHTO M-33)
 2. EXPANSION JOINTS SHALL BE SPACED AT 20'-0" MAX.
 3. WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS, EXPANSION JOINTS FILLER SHALL BE PLACED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

1 EXPANSION JOINT SECTION
SCALE: 1"=1'-0"

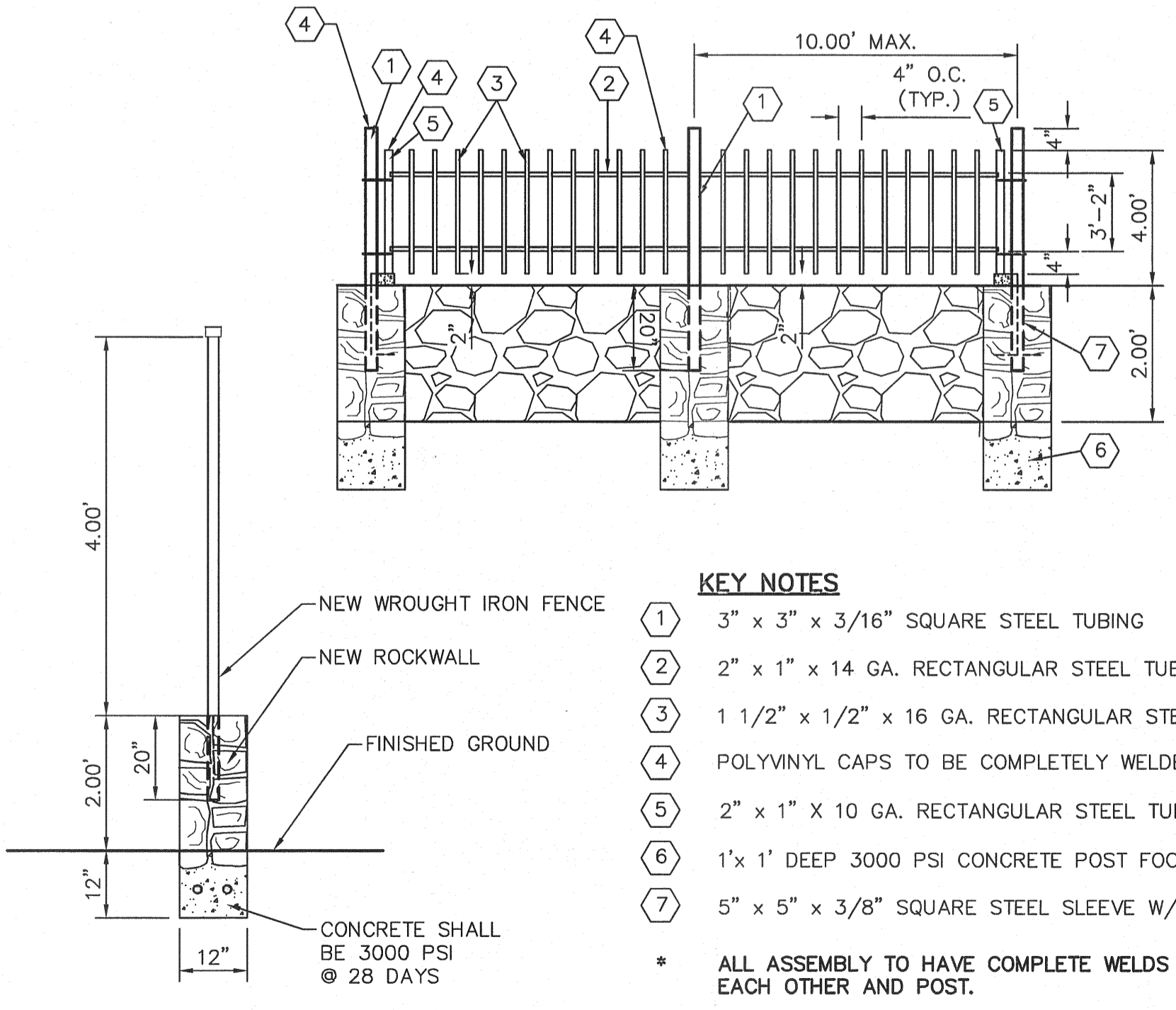
- SIDEWALK NOTES:**
1. CONCRETE SIDEWALK SHALL BE 3,000 P.S.I.
 2. DUMMY JOINTS REQUIRED AT 5' O.C.
 3. EXPANSION JOINTS SHALL BE AT 20' O.C. MAXIMUM, USE 1/2" PREMOLDED BITUMINOUS EXPANSION JOINTS (AASHTO M-33)
 4. EXPANSION JOINT FILLER SHALL BE PLACED WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS.
 5. SUBGRADE TO BE COMPACTED TO 95% AS PER ASTM D1557.
 6. REINFORCEMENT (6X6-10/10 W.W.F.) SHALL BE PLACED WHEREVER SIDEWALK ABUTS A PEDESTRIAN WALKWAY AND/OR PARK.
 - * SIDEWALK SHALL BE SEVEN (8) FEET WHEN ABUTTING PARKS. IT SHALL ALSO BE 4" CONCRETE REINFORCED WITH 6X6-10/10 W.W.F.

1 SECTION-SIDEWALK/SLAB
SCALE: 1"=2'-0"



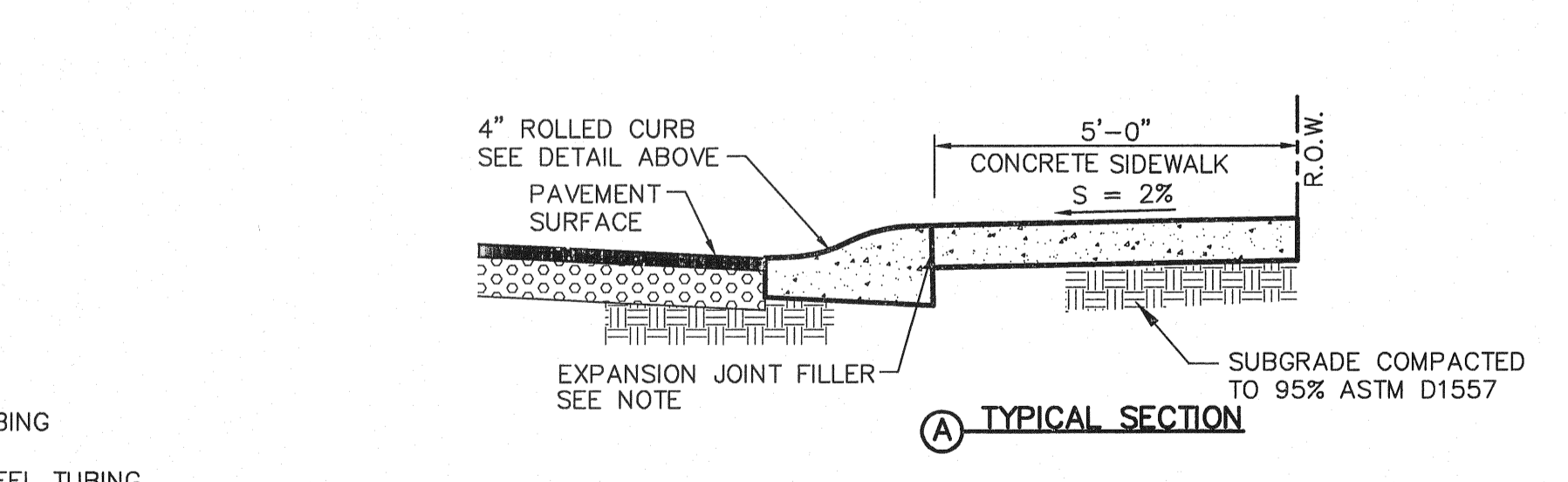
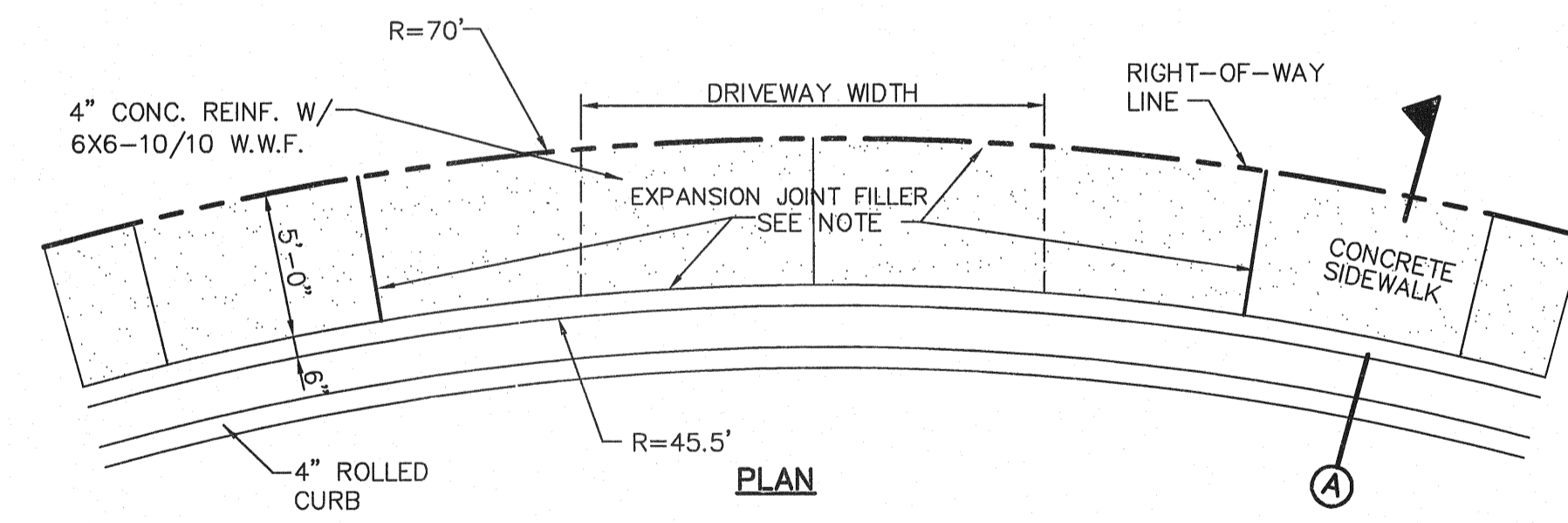
- NOTES:**
1. 3"x3"x3/16" SQUARE STEEL TUBING
 2. 2"x1"x1/4" GA. RECTANGULAR STEEL TUBING
 3. 1 1/2"x 1/2" X16 GA. RECTANGULAR STEEL TUBING
 4. BOLT HOOK AND STRAP HINGE
 5. CANE BOLT LATCH W/KEEPER 5-8"x18" LONG (2 REQUIRED)
 6. DOUBLE GATE HEAVY DUTY INDUSTRIAL LATCH W/PAD LOCK
 7. FLAT TOP POLYVINYL CAP
 8. 2"x1"x10 GA. RECTANGULAR STEEL TUBING

8 18' WROUGHT IRON GATE
SCALE: 1"=2'-0"



9 TYPICAL ROCKWALL W/ WROUGHT IRON FENCE DETAILS
SCALE: N.T.S.

- KEY NOTES**
1. 3" x 3" x 3/16" SQUARE STEEL TUBING
 2. 2" x 1" x 1/4" GA. RECTANGULAR STEEL TUBING
 3. 1 1/2" x 1/2" x 16 GA. RECTANGULAR STEEL TUBING
 4. POLYVINYL CAPS TO BE COMPLETELY WELDED.
 5. 2" x 1" X 10 GA. RECTANGULAR STEEL TUBING
 6. 1'x 1' DEEP 3000 PSI CONCRETE POST FOOTING
 7. 5" x 5" x 3/8" SQUARE STEEL SLEEVE W/7" x 7" x 3/8" BASE PLATE
- * ALL ASSEMBLY TO HAVE COMPLETE WELDS FOR RAILS AND SLATS ONTO EACH OTHER AND POST.



10 CUL-DE-SAC (50' R) DRIVEWAY DETAIL
SCALE: N.T.S.

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
INTERSECTION OF
SUN TRAIL DRIVE AND SETTING SUN
DRIVE.

DATE _____ BY _____

REVISIONS _____

osa
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #4684
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.3232 Fax: 915.544.3233 www.osainc.net

ENGINEER'S SEAL
L. A. ANTONIO
88075
Professional Engineer
No. 10111
Exp. 12-31-14

SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: OCTOBER, 2011
DESIGN BY: F.Z.
DRAWN BY: J.L.A.
CHECKED BY: J.L.A.
APPROVED BY: J.L.A.
JOB No. 2260-012-LD

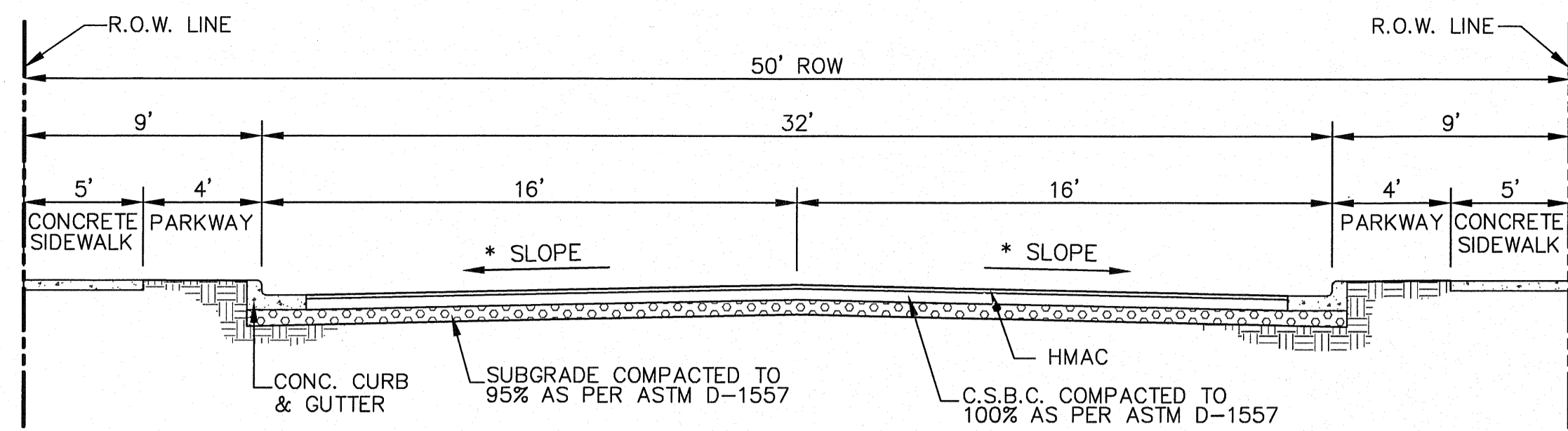
PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

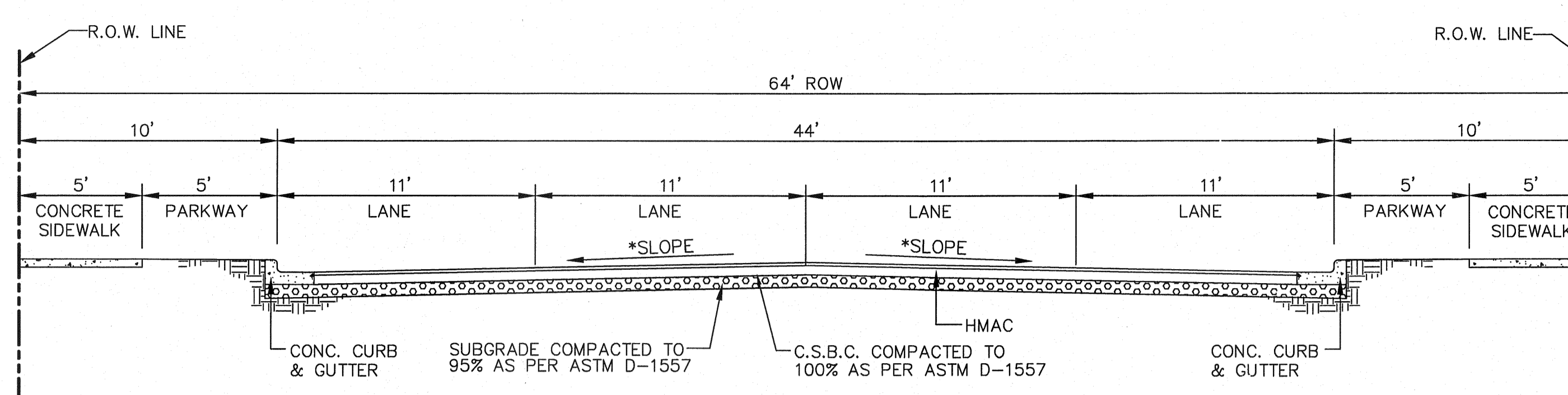
STANDARD DETAILS
(SHEET 1 OF 3)
SHEET NO.

C9.1

REVIEWED



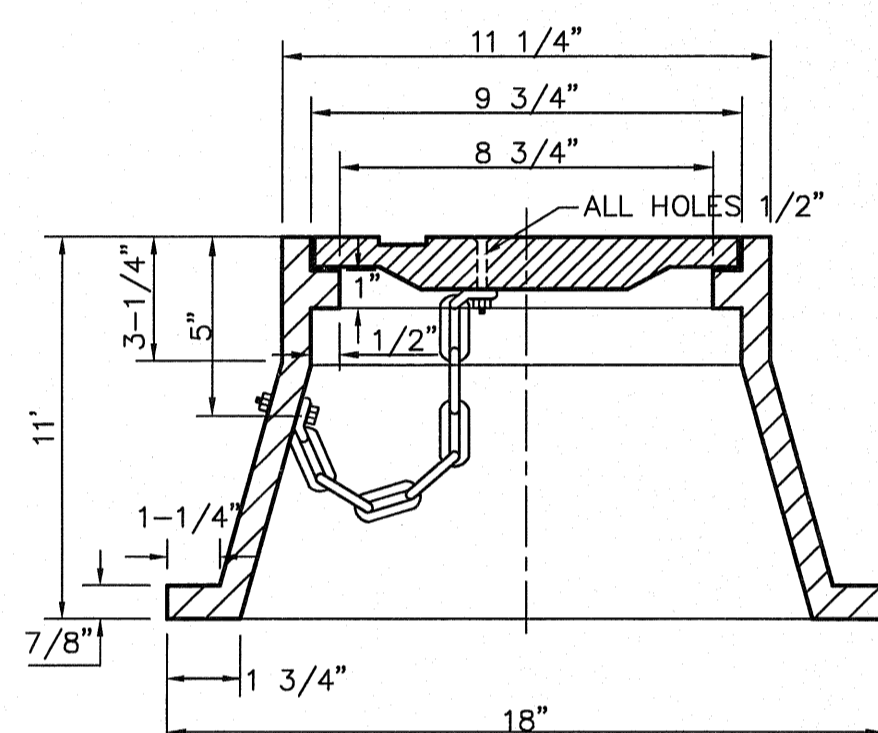
1 TYPICAL 50' ROW STREET SECTION DETAIL
C9.2 SCALE: N.T.S.



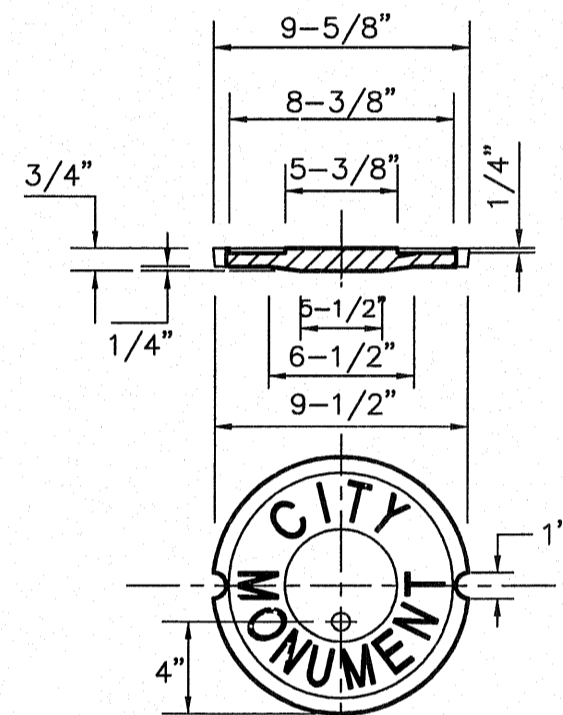
2 TYPICAL 64' ROW STREET SECTION DETAIL
C9.2 SCALE: N.T.S.

STREETS NOTES:

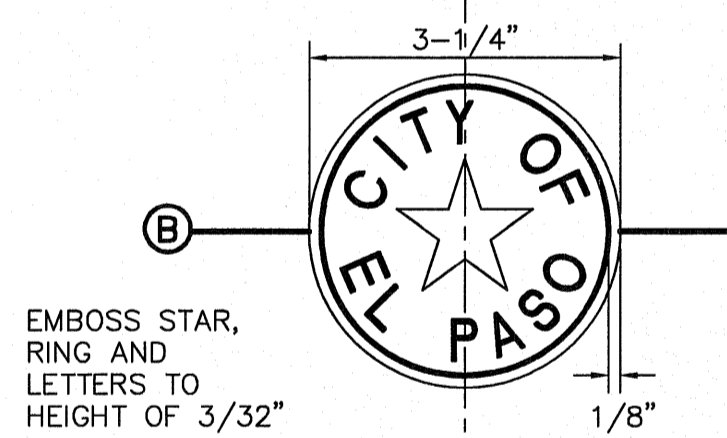
- (*) STREET TRANSVERSE SLOPE AS SHOWN IN PLANS
- SIDEWALK WIDTH IS REQUIRED TO COMPLY WITH ADA/TAS REGULATIONS.
- STREET IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF EL PASO PAVING CONSTRUCTION DETAILS AND STANDARD SPECIFICATIONS: CBR @ EVERY 500' RESULTS TO BE SUBMITTED TO THE CITY OF EL PASO FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF PAVEMENT.



FRAME SECTION

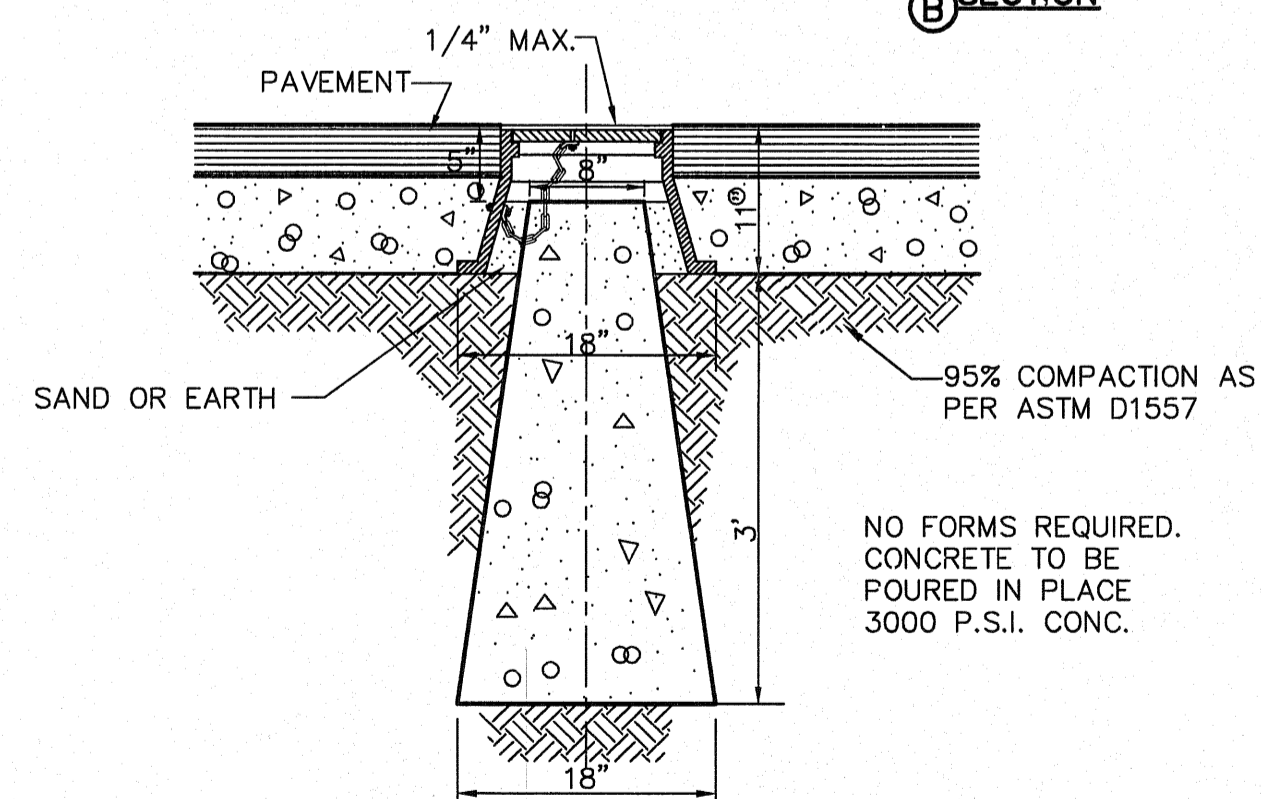


COVER

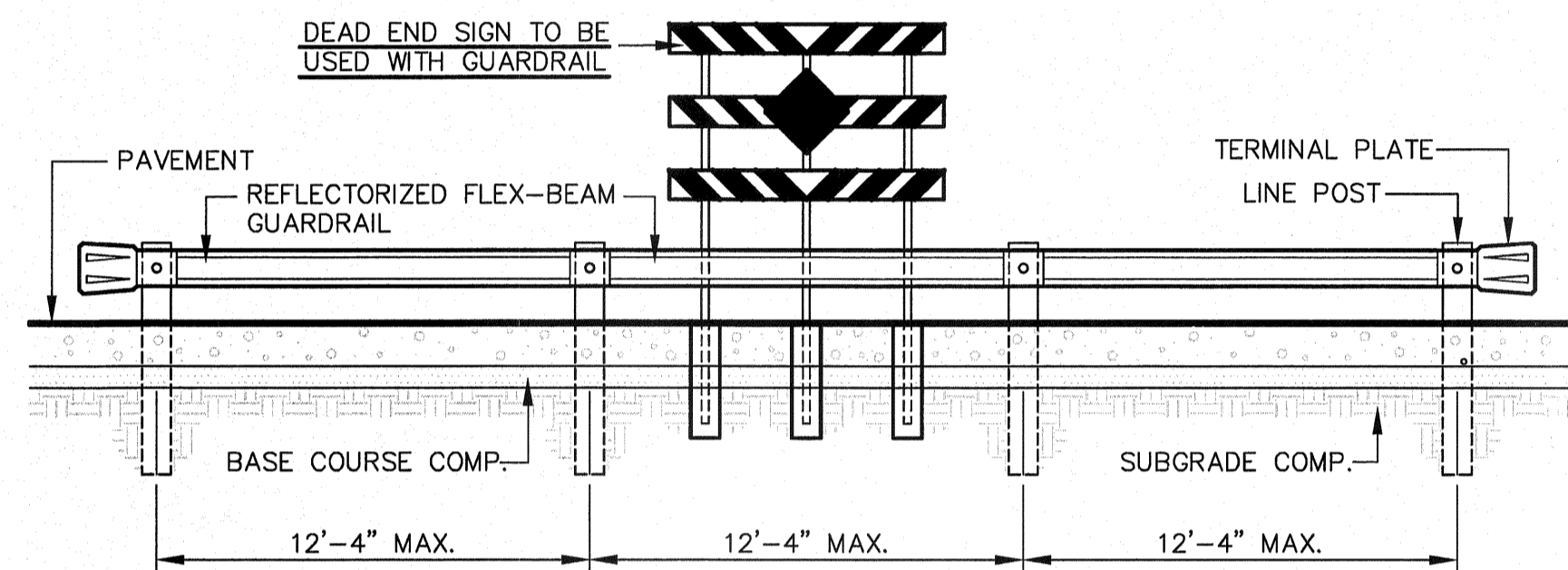


BRONZE MONUMENT CAP

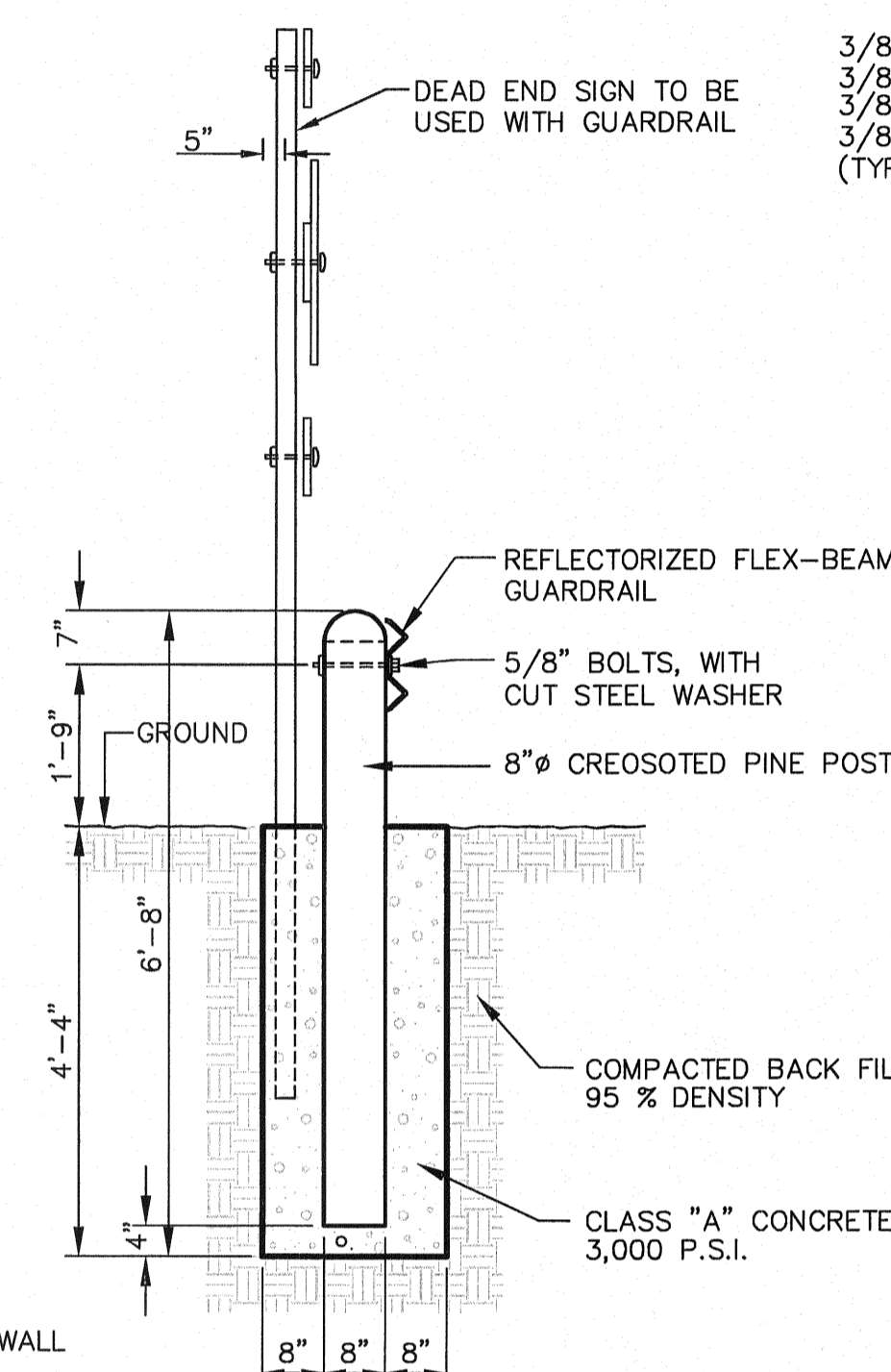
OUTSIDE RADIUS OF STAR = 3/4"
INSIDE RADIUS OF STAR = 3/16"



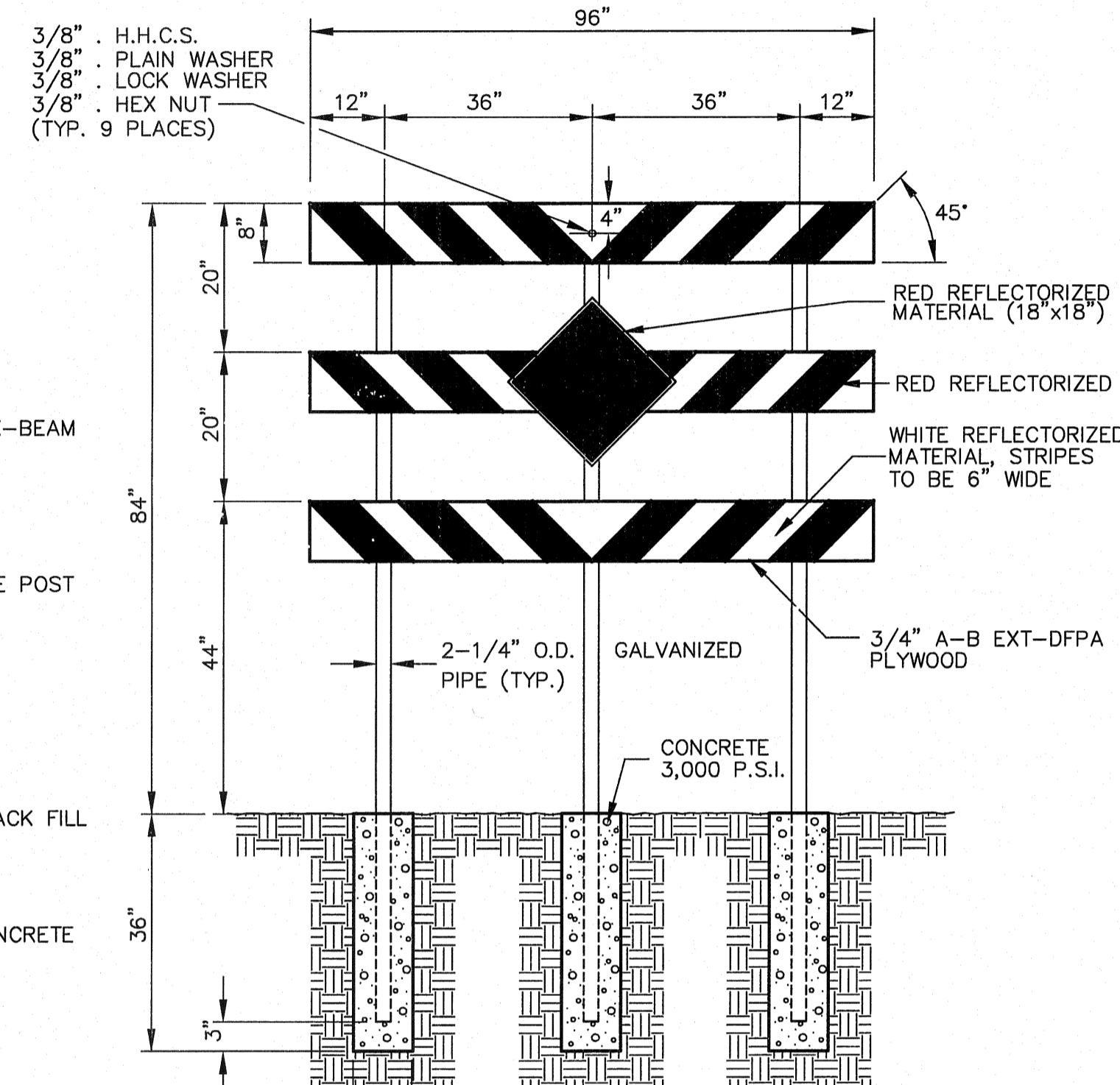
3 CITY SURVEY MONUMENT DETAILS
C9.2 SCALE: N.T.S.



ELEVATION
SCALE: 1" = 5'-0"

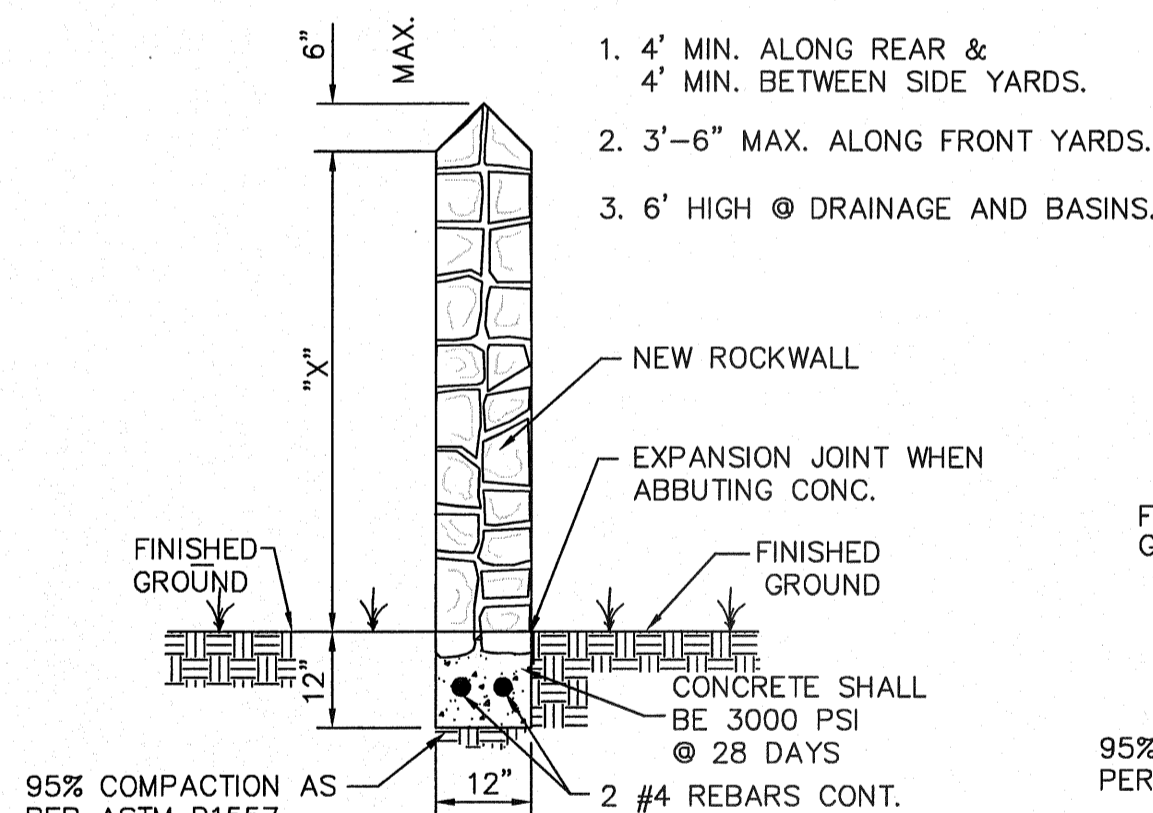


POST AND SIGN DETAIL
SCALE: N.T.S.

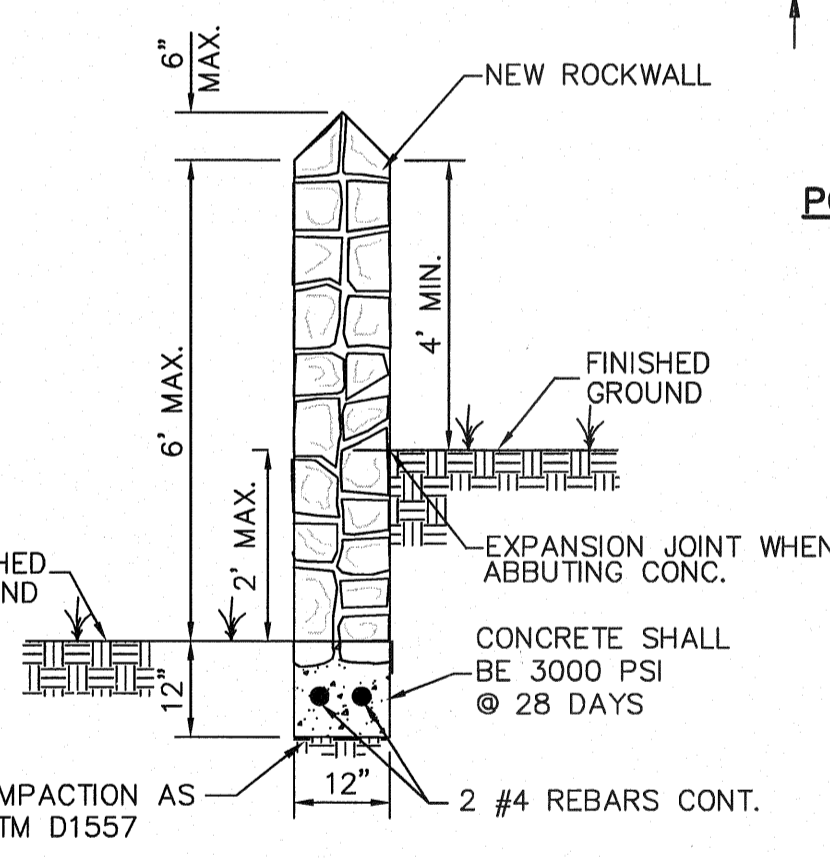


DEAD END SIGN DETAIL
SCALE: 1" = 2'-0"

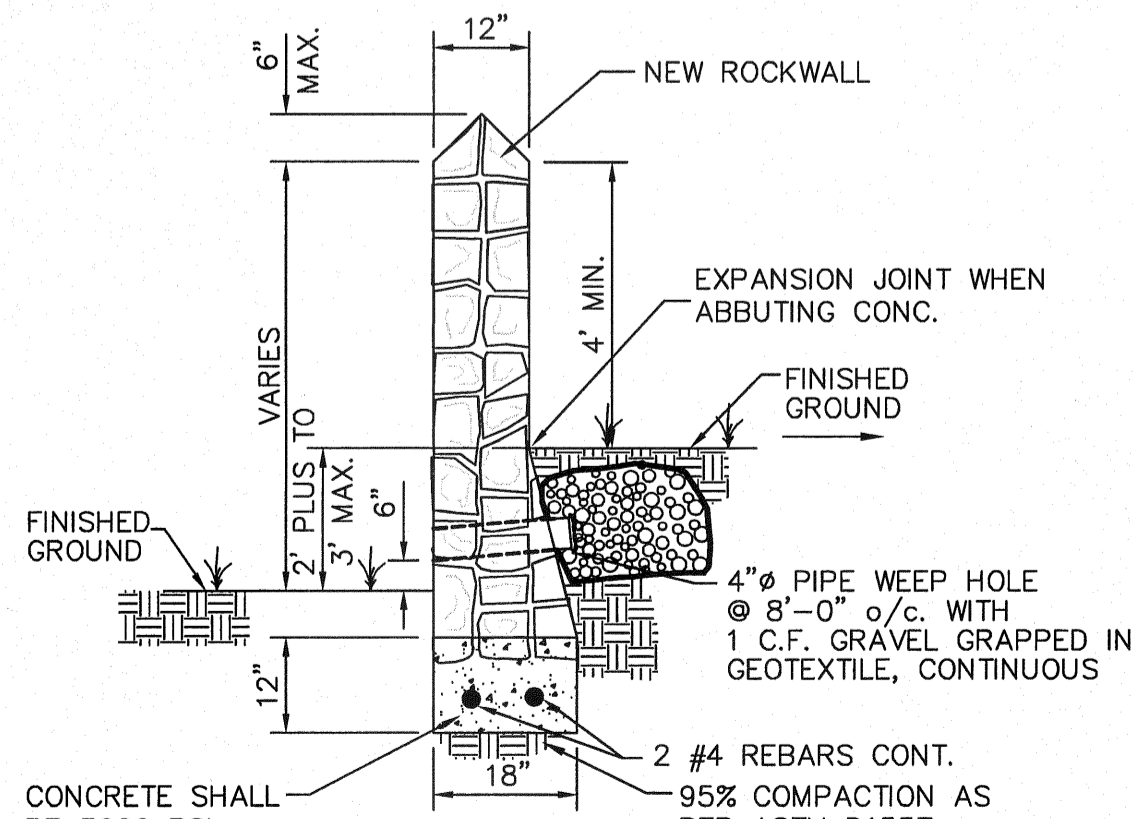
4 GUARD RAIL/SIGN ASSEMBLY AT DEAD END STREET DETAIL
C9.2 SCALE: AS SHOWN



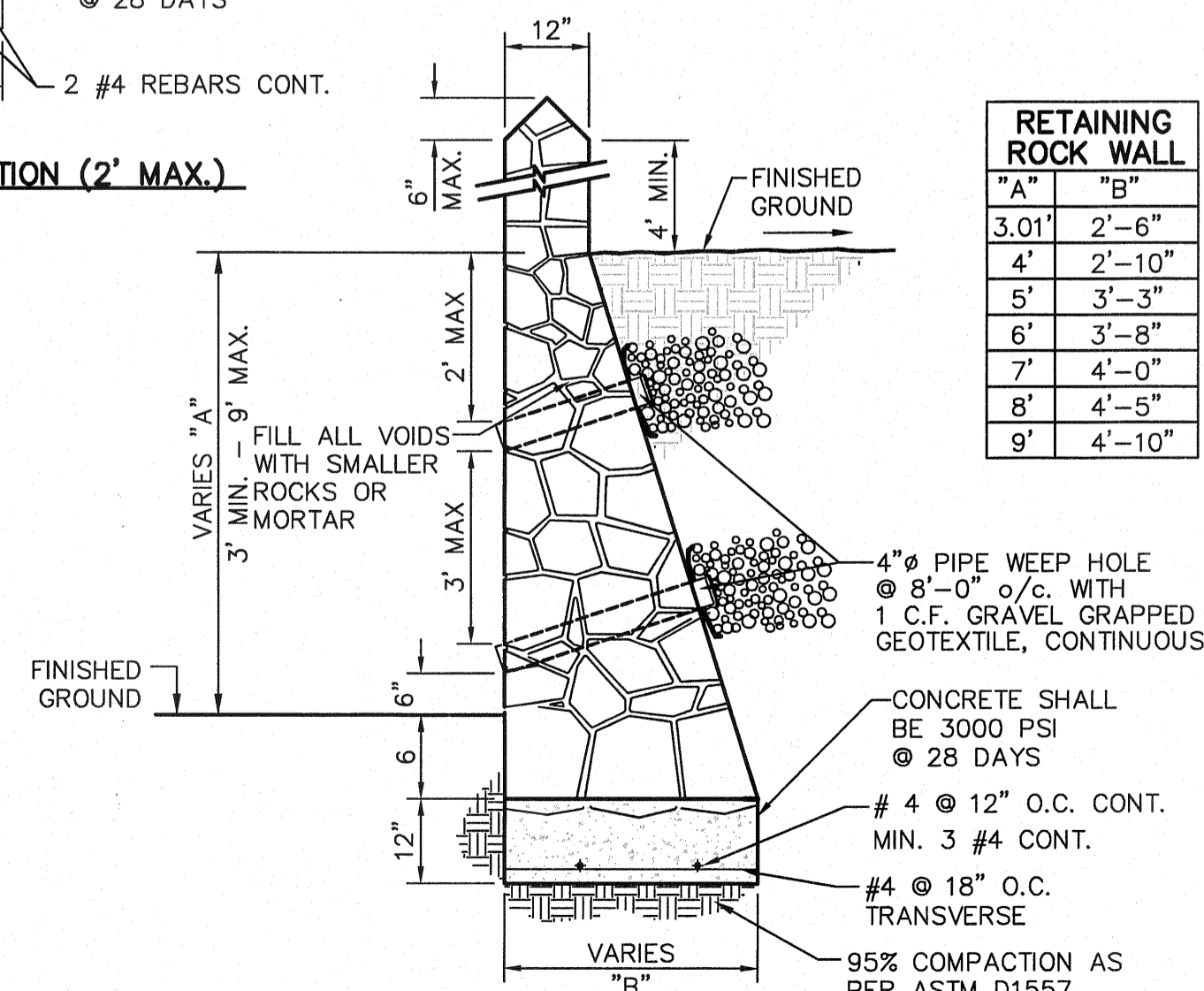
GARDEN WALL SECTION



GARDEN WALL SECTION (2' MAX.)



RETAINING WALL SECTION (2' PLUS TO 3' MAX.)



RETAINING WALL SECTION (3' MIN. TO 9' MAX.)

5 TYPICAL ROCKWALL DETAILS
C9.2 SCALE: 1" = 2'-0"

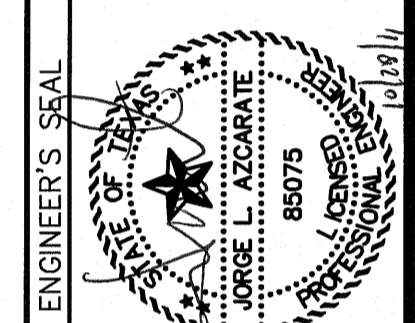
RETAINING ROCK WALL	
"A"	"B"
3.01'	2'-6"
4'	2'-10"
5'	3'-3"
6'	3'-8"
7'	4'-0"
8'	4'-5"
9'	4'-10"

ROCK WALL NOTES

- STONE FOR ROCKWALL SHALL BE AS NEARLY UNIFORM IN SECTIONS AS IN PRACTICABLE THE STONE SHALL BE DENSE AND RESISTANT OF AIR AND WATER.
- MORTAR MUST BE TYPE "S" 1800 P.S.I. AS PER ASTM C270.
- MASONRY WALL OVER SIX (6) FEET IN HEIGHT AND THOSE USED FOR EARTH RETENTION OVER TWO (2) FEET MUST BE DESIGNED AS STRUCTURAL WALLS.
- WALLS ADJACENT TO PONDING AREAS OR DRAINAGE DITCHES MAY BE CONSTRUCTED OF BRICK, ROCK, STONE, OR CINDER BLOCK AND SHALL NOT BE LESS THAN SIX (6) FEET HIGH.
- ROCKWALL MORTAR JOINTS MUST NOT EXCEED TWO (2) INCHES.
- PROVIDE ONE (1) INCH EXPANSION JOINTS AT EVERY 100 FEET.
- ALL STONE SHALL BE THOROUGHLY SOAKED BEFORE BEING PLACED.
- ALL STONE FOR ROCKWALLS SHALL BE FRACTURED QUARRIED ROCK OR ROUND ROCK, NO RIVER ROCK SHALL BE ALLOWED.
- REINFORCING STEEL SHALL BE ASTM A615 GRADE 40.
- ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSI (MINIMUM).
- BACKFILL MATERIALS SHALL CONSIST OF COARSE GRAINED, WELL-DRAINED SOILS (WITH NO CLAY CONTENT).
- WHENEVER THE RETAINING HEIGHT OF A ROCKWALL/RETAINING WALL EXCEEDS FOUR (4) FEET OR MORE, THE DEVELOPER SHALL BUILD THE RETAINING PORTION OF THE WALL (INCLUDING NECESSARY REINFORCED CONCRETE FOOTING) TO HIGHEST FINISHED GROUND. THE BUILDER SHALL FINISH CONSTRUCTING THE REMAINING OF THE STEM WALL.
- WHENEVER PLANS SPECIFY A WROUGHT IRON FENCE, REFER TO DETAIL A.

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
INTERSECTION OF
SUN TRAIL DRIVE AND SETTING SUN
DRIVE.
DATE: _____
REVISIONS: _____
BY: _____

cepa
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #4864
4712 Woodrow Bean, Ste. F, El Paso, TX 79904
Office: 915.544.5232 Fax: 915.544.6233 www.cepaengr.com



SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

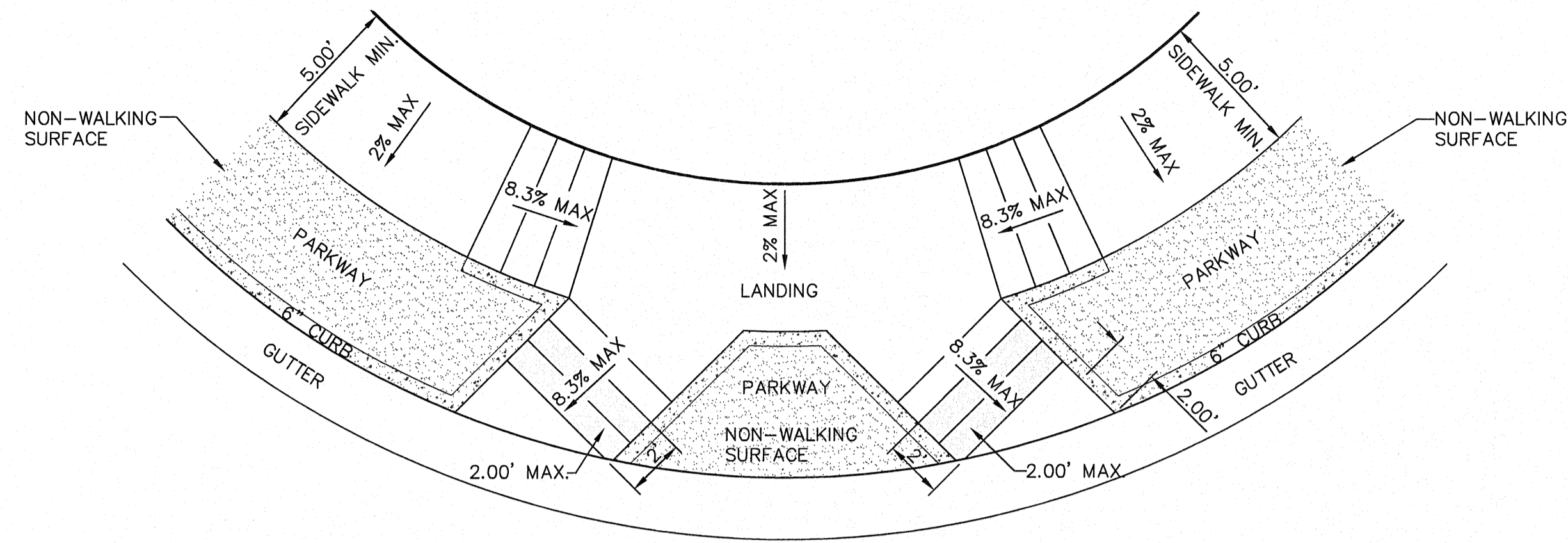
STANDARD DETAILS

(SHEET 2 OF 3)
SHEET NO.

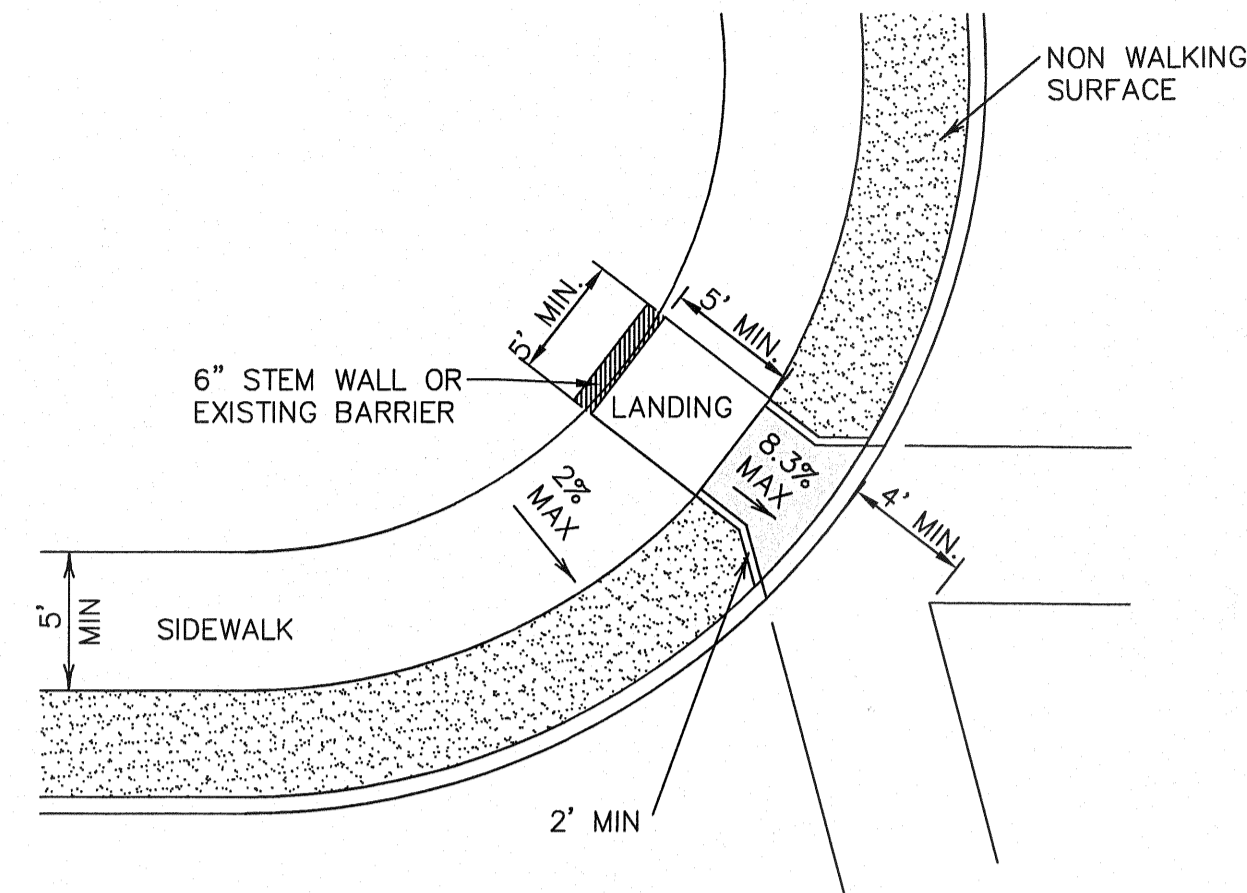
C9.2

REVIEWED

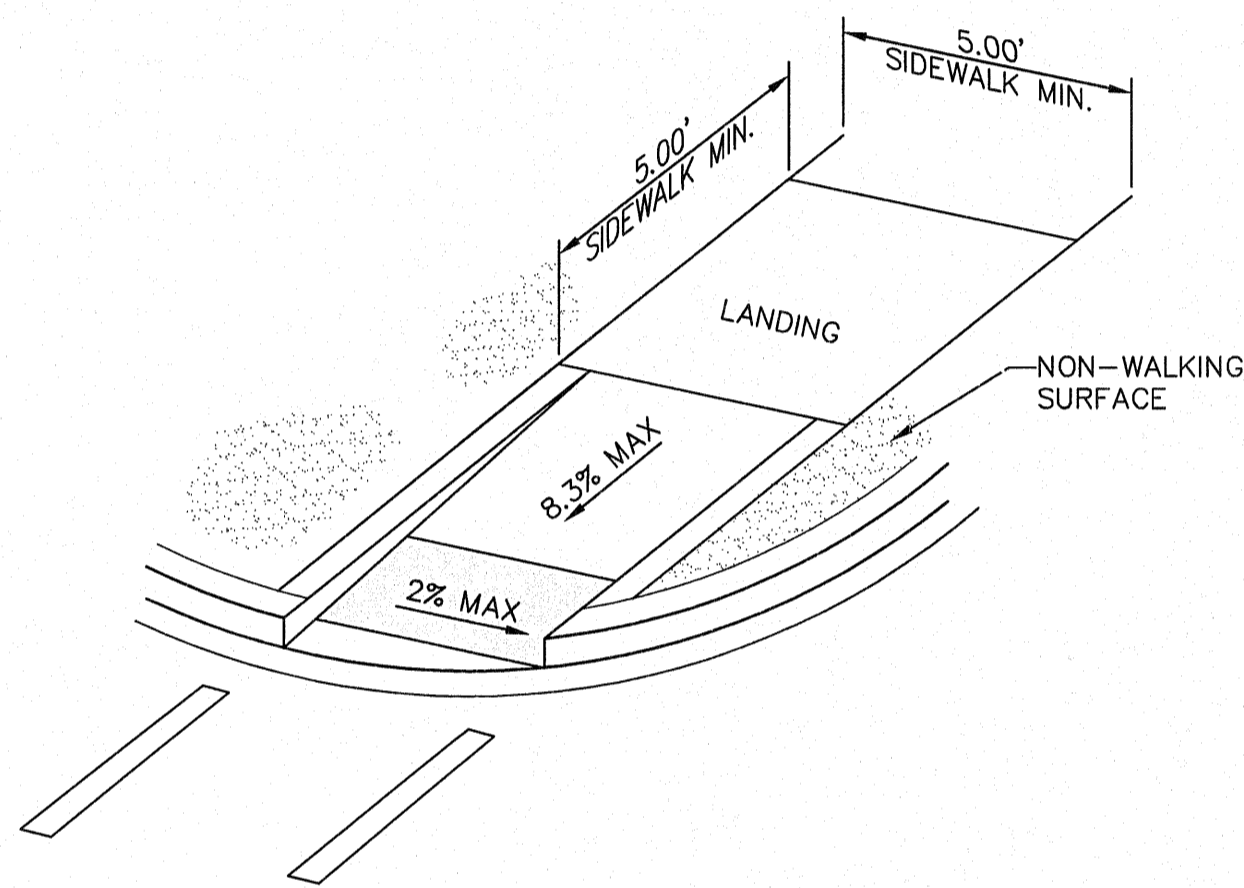
ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT



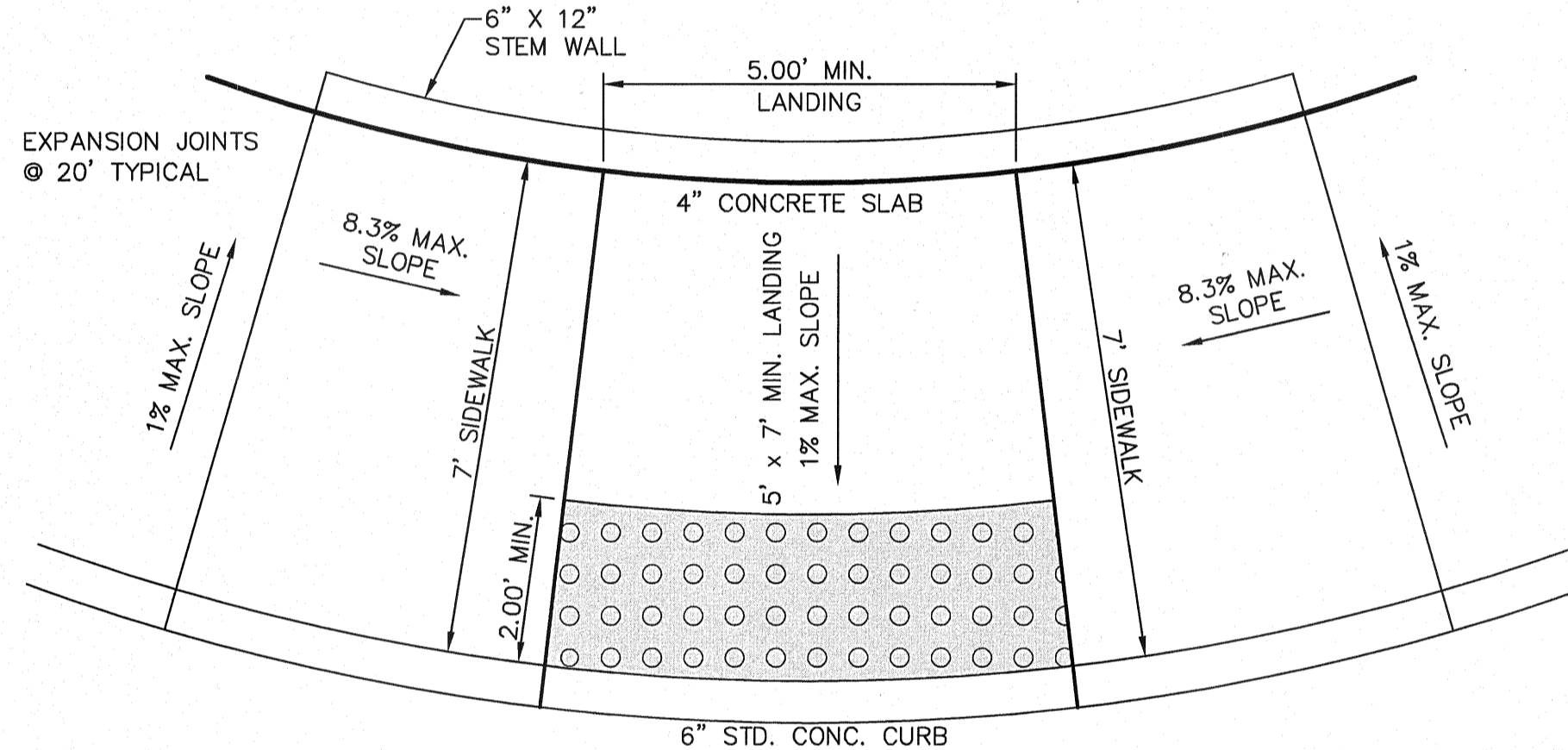
1 DIRECTIONAL RAMP @ INTERSECTION
C9.3 SCALE: N.T.S.



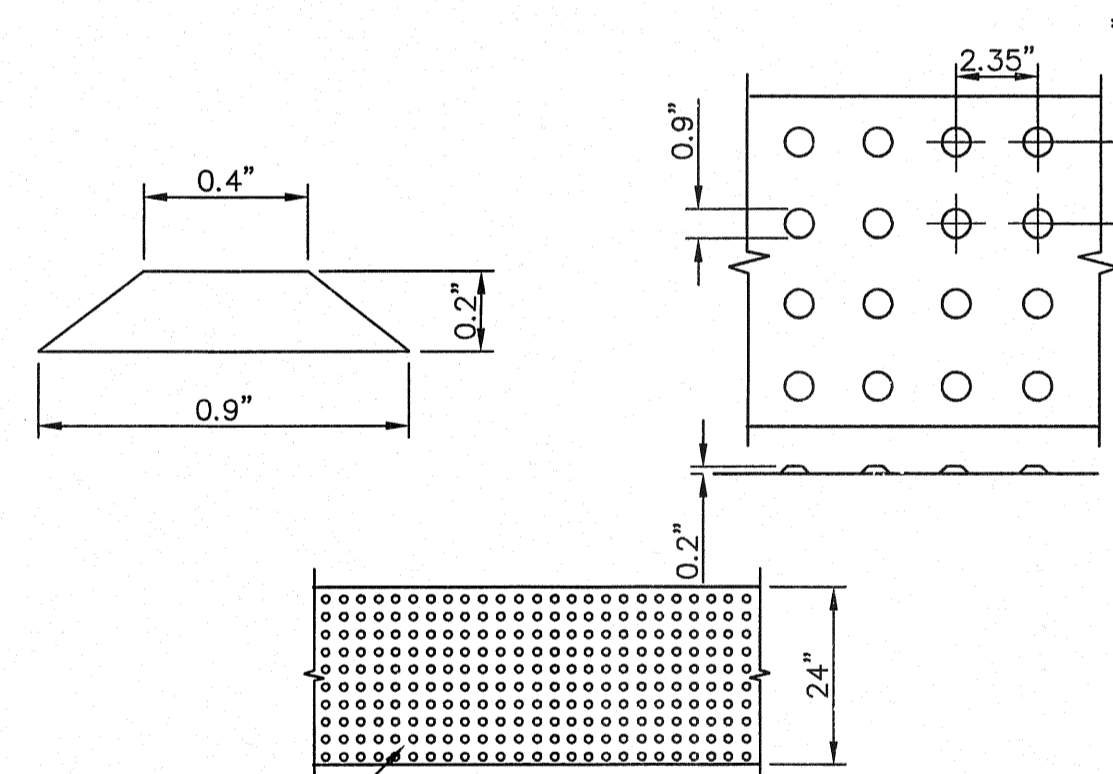
2 DIAGONAL CURB RAMP (RETURNED CURB) (TYPE VI)
C9.3 SCALE: N.T.S.



3 DIRECTIONAL RAMP WITHIN RADIUS (TYPE IV)
C9.3 SCALE: N.T.S.



4 TYPICAL WHEELCHAIR RAMP DETAIL
C9.3 SCALE: 1" = 2'-0"



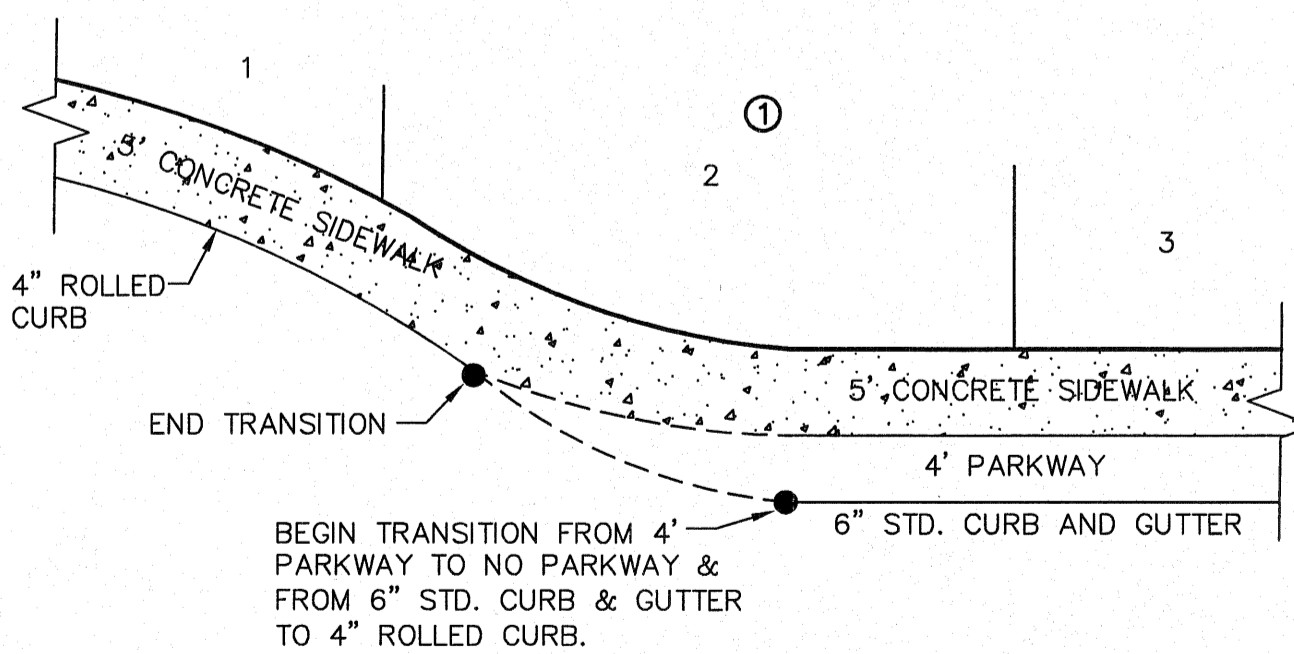
TRUNCATED DOMETILES, ADA CERTIFIED "ARMOR-TILE" TACTILE SYSTEMS OR APPROVED EQUAL

DOME SIZE AND SPACING. TRUNCATED DOMES SHALL HAVE A DIAMETER OF NOMINAL 0.9 INCHES (23 mm) AT THE BOTTOM, A DIAMETER OF 0.4 INCH (10 mm) AT THE TOP, A HEIGHT OF NOMINAL 0.2 INCHES (5 mm), AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 mm) MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT.

DOME ALIGNMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING SURFACES SHALL EXTEND 24 INCHES (610 mm) MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION.

CONTRAST. THERE SHALL BE A MINIMUM OF 70 PERCENT CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE, OR THE DETECTABLE WARNING SHALL BE "RED BRICK" COLOR, UNLESS OTHERWISE DIRECTED BY THE OWNER. THE MATERIAL USED TO PROVIDE VISUAL CONTRAST SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE. CONTRAST SHALL BE PROVIDED BY PLACING AND MIXING TINT IN THE PLASTIC CONCRETE USED FOR THE DETECTABLE WARNING SURFACE. NO PAINTING OF SURFACE SHALL BE PERMITTED.

6 TRUNCATED DOME SIZE AND SPACING
C9.3 SCALE: N.T.S.



5 TYPICAL HEEL/CUL-DE-SAC SIDEWALK TRANSITION
C9.3 SCALE: N.T.S.

LEGEND

DETECTABLE WARNING SURFACE

GENERAL NOTES:

- IMPROVEMENTS SHALL COMPLY WITH AMERICANS WITH DISSABILITY ACT (ADA) AND TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR) STANDARDS.
- ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
- THE MINIMUM SIDEWALK WIDTH IS FOUR (4') FEET. WHERE A FIVE (5') FEET SIDEWALK CAN NOT BE PROVIDED DUE TO SITE CONSTRAINTS, A MINIMUM THREE (3') FEET SIDEWALK WITH 5'x5' PASSING SPACE AREAS ARE REQUIRED TO BE LOCATED AT REASONABLE INTERVALS NOT TO EXCEED TWO-HUNDRED (200') FEET.
- LANDINGS SHALL BE 5'x5' MINIMUM WITH A MAXIMUM TWO (2%) PERCENT SLOPE IN ANY DIRECTION.
- MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'x4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
- CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED WITH A MAXIMUM 10(H):1(V) SLOPE. IF THE LANDING DEPTH IS LESS THAN FOUR (4') FEET, THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 12(H):1(V) SLOPE.
- ALL CONCRETE SIDEWALK SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
- RAMP TEXTURES MUST CONSIST OF TRUNCATED DOMED SURFACES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED. REFER TO TRUNCATED DOME DETAIL.
- CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE ENGINEER.
- ACCESSIBLE ROUTES WITH A RUNNING SLOPE GREATER THAN FIVE (5%) PERCENT IS A RAMP AN SHALL COMPLY WITH TDLR 4.B - RAMPS. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND RAMP SURFACES IS TWO (2%) PERCENT.
- ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY TDLR.

REFERENCES - BENCHMARKS	EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)
ENGINEER'S SEAL	LOCATED AT THE CENTERLINE INTERSECTION OF SUN TRAIL DRIVE AND SETTING SUN DRIVE.
SCALE	Horizontal: N/A Vertical: N/A
PROJECT NAME	VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS
SHEET TITLE	STANDARD DETAILS
DATE	OCTOBER 2011
DESIGN BY	F.Z.
DRAWN BY	A.B.
CHKD. BY	J.L.A.
APPVD. BY	J.L.A.
JOB NO.	2260-012-LD
REVISIONS	BY
DATE	

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REVIEWED

(SHEET 3 OF 3)
SHEET NO.

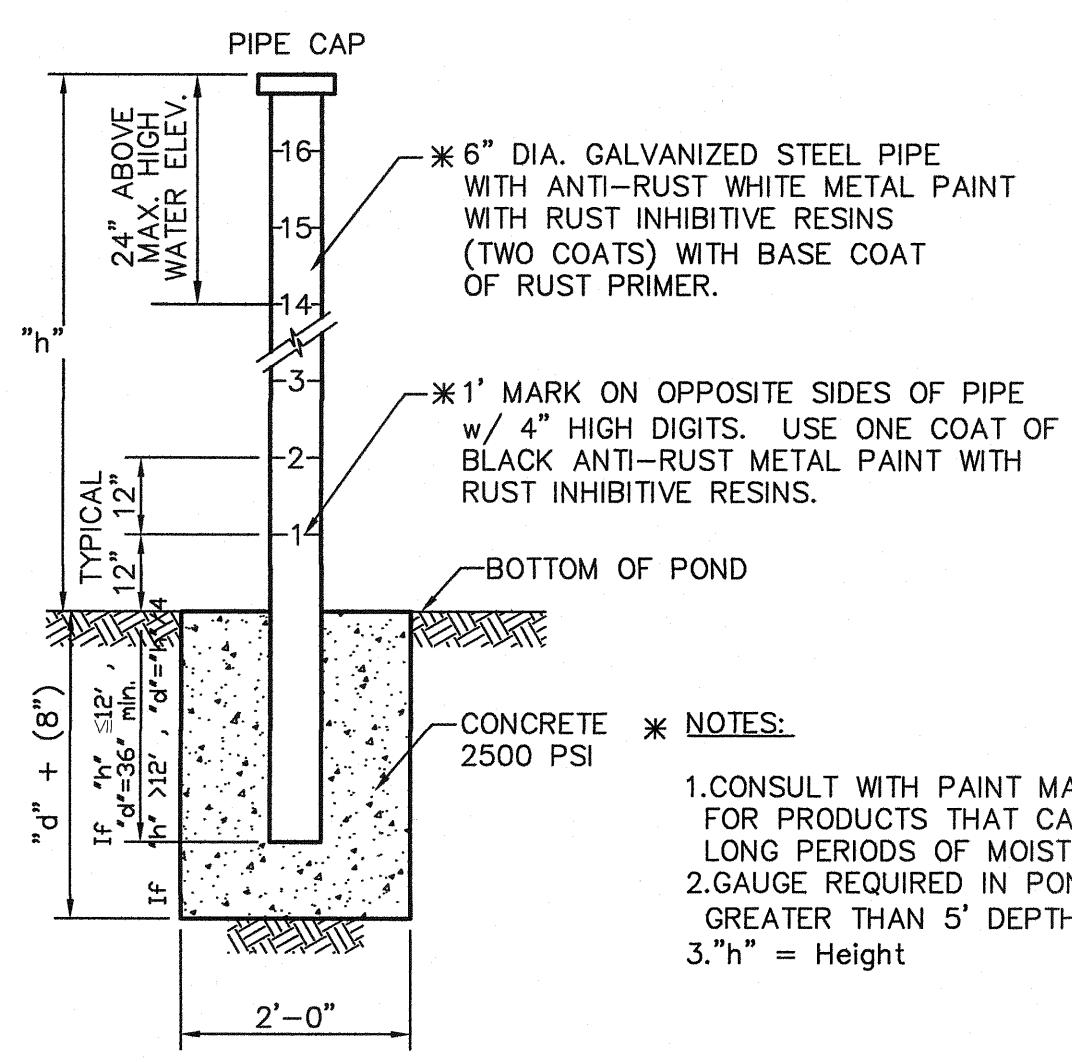
C9.3



- GENERAL NOTES:**
- SIGN MATERIAL TO BE 16 GAUGE GALVANIZED SHEET METAL.
 - TOP PART OF SIGN SHALL SHOW BLACK LETTERS ON A WHITE BACKGROUND.
 - BOTTOM PART OF SIGN SHALL SHOW WHITE LETTERS ON A BLACK BACKGROUND.

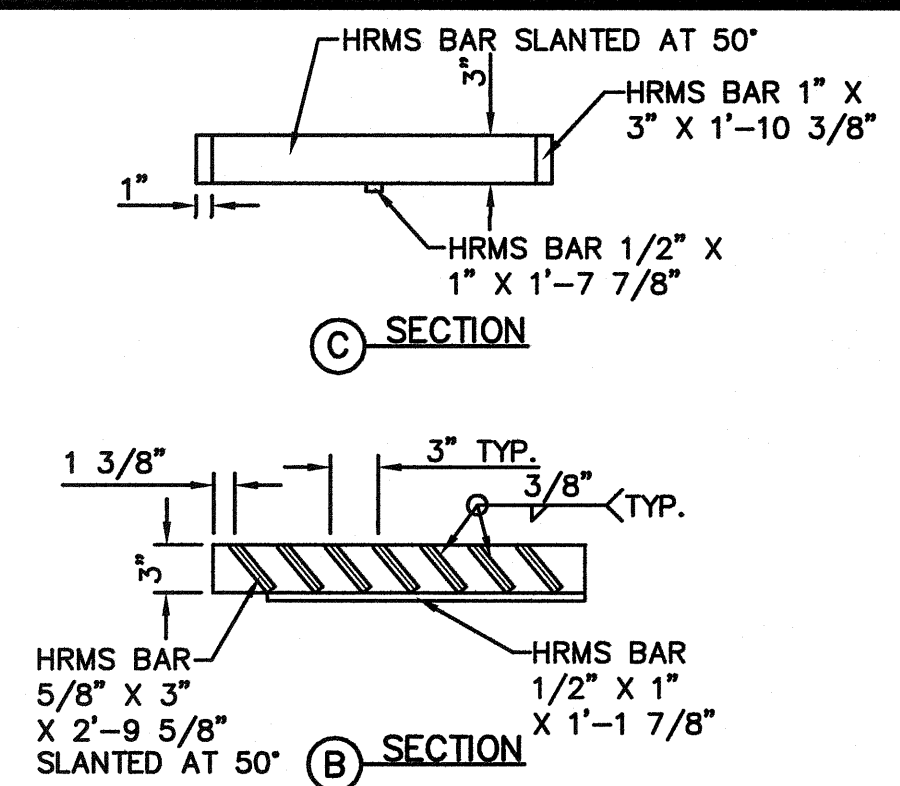
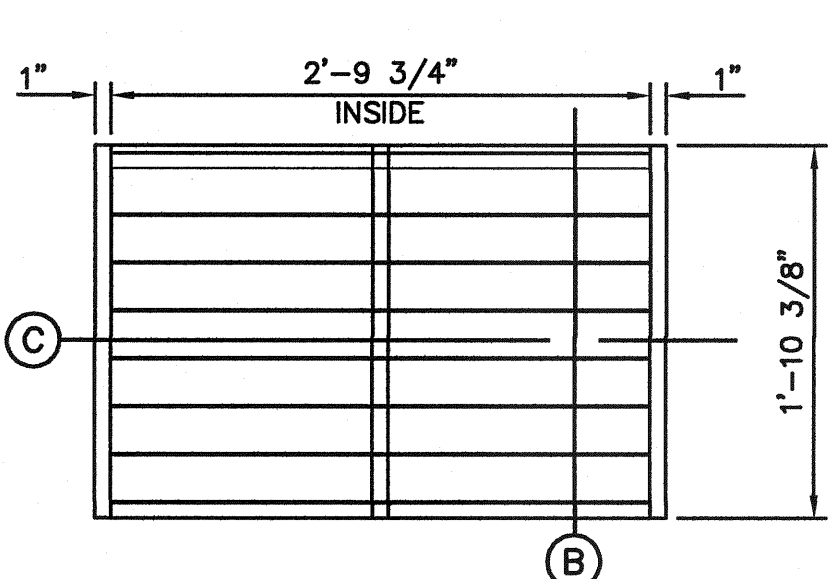
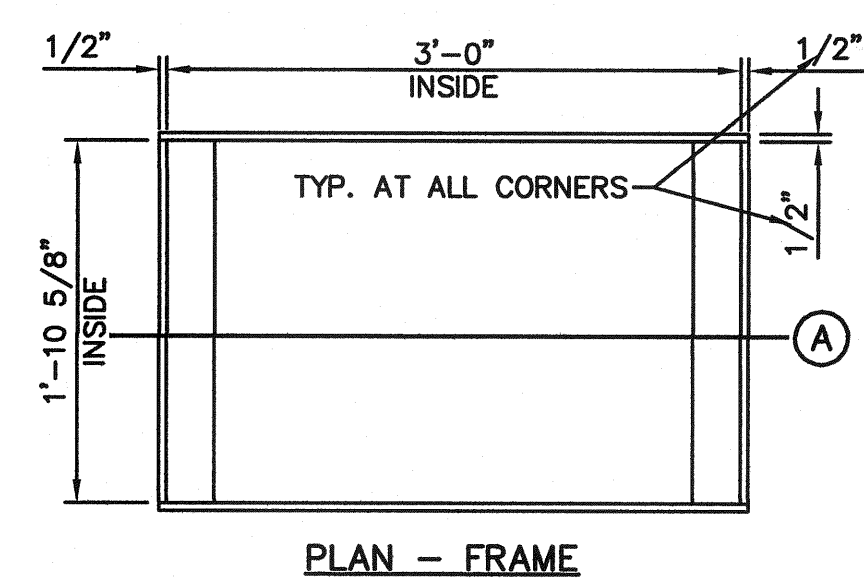
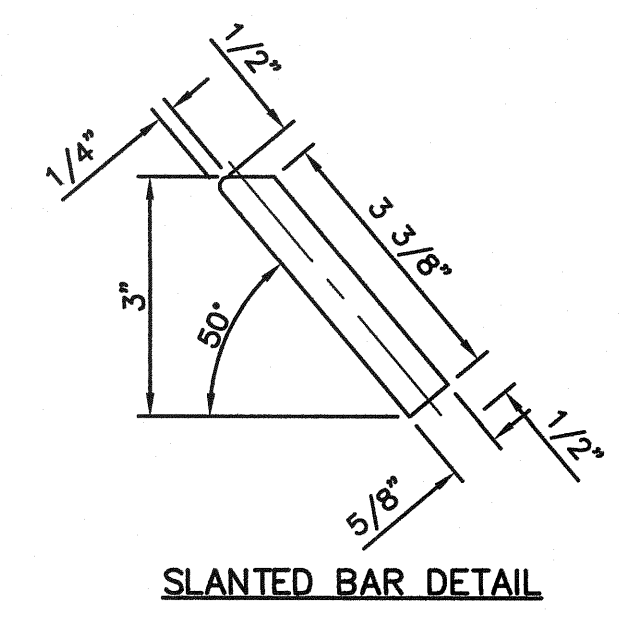
1 NO TRESPASSING WARNING SIGN
SCALE: NTS

NOTE
ALTERNATES WILL BE ALLOWED WITH THE PRIOR REVIEW AND APPROVAL OF THE CITY ENGINEER.

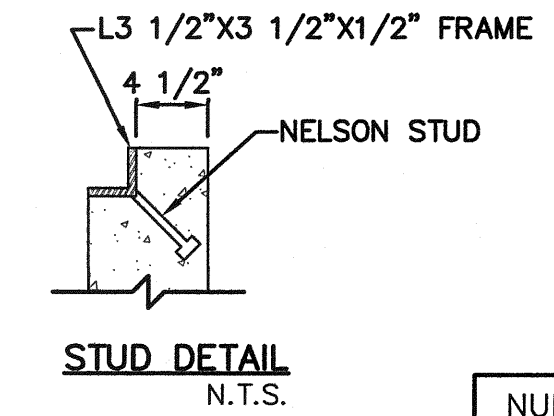
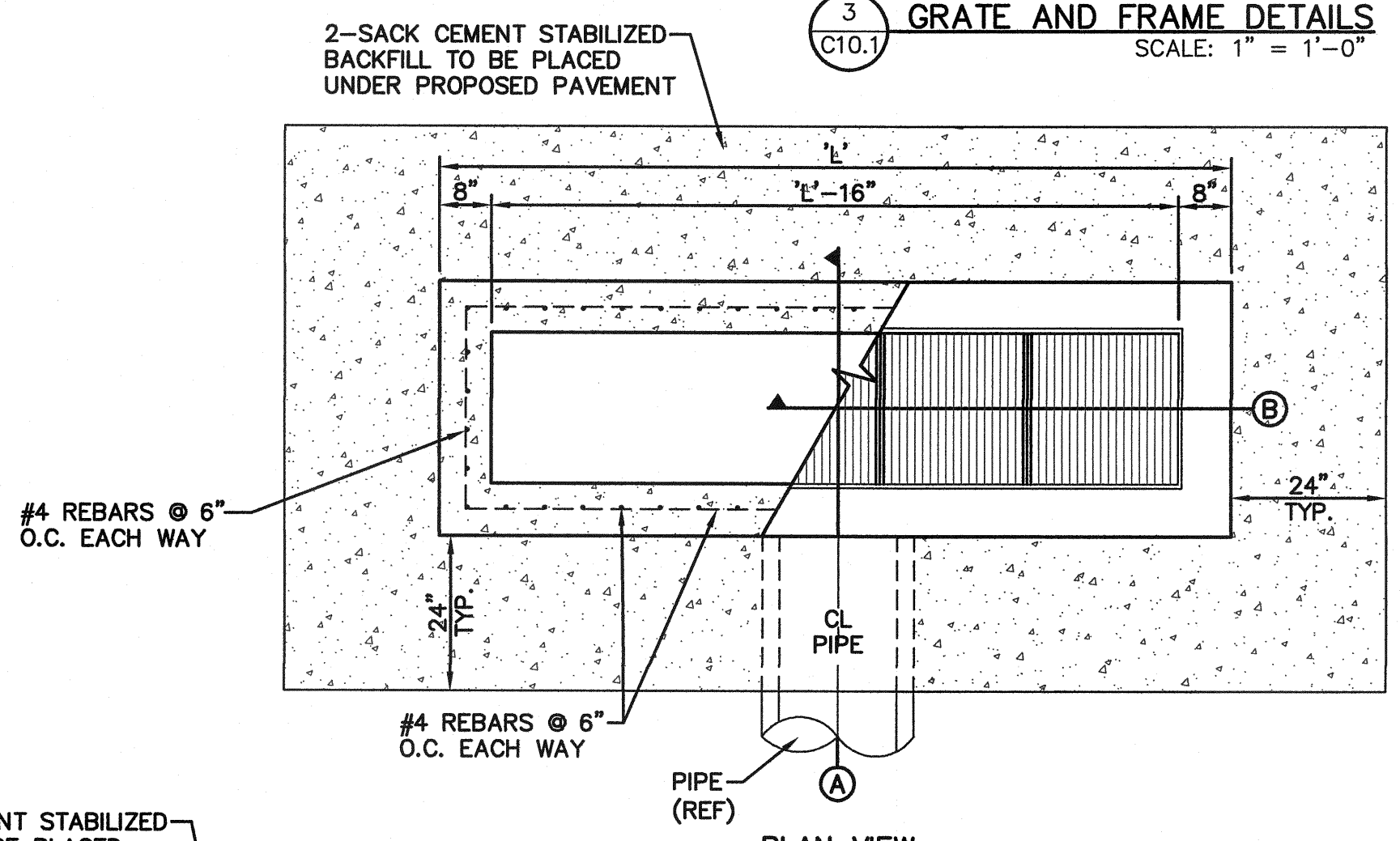


POND DEPTH GAUGE

2 POND DEPTH GAUGE
SCALE: NTS



3 GRATE AND FRAME DETAILS
SCALE: 1" = 1'-0"



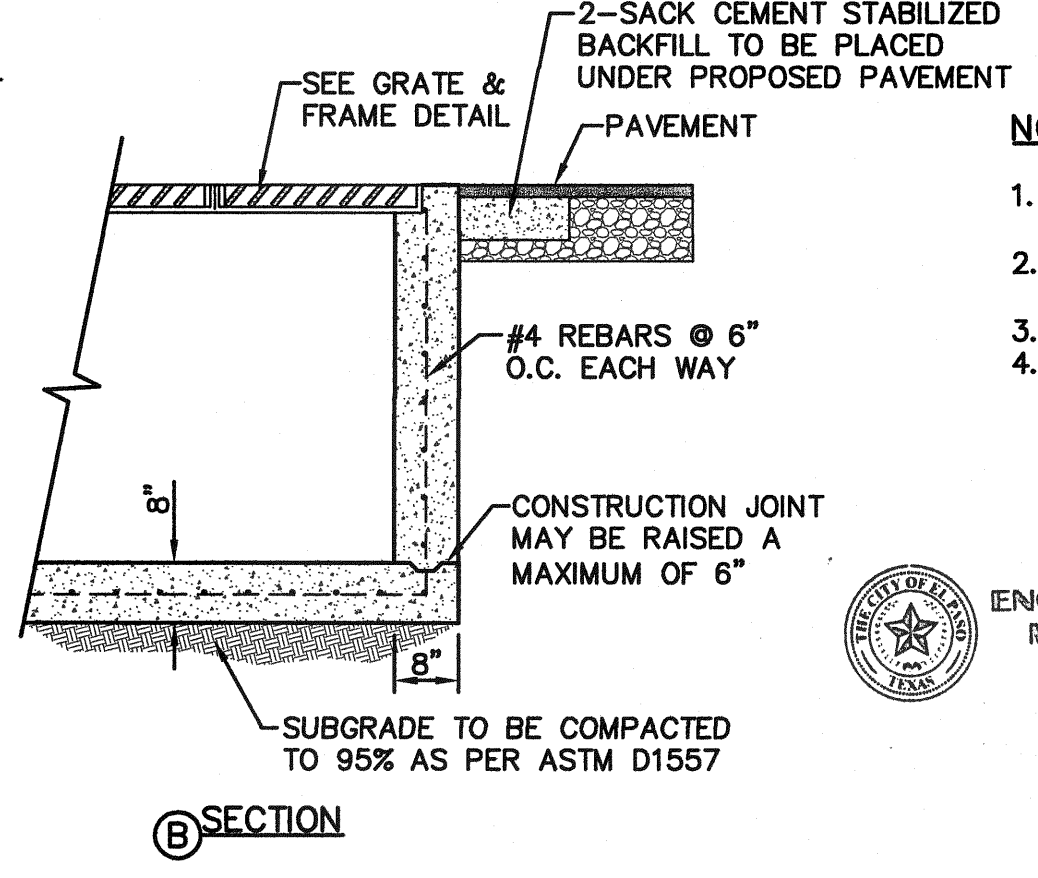
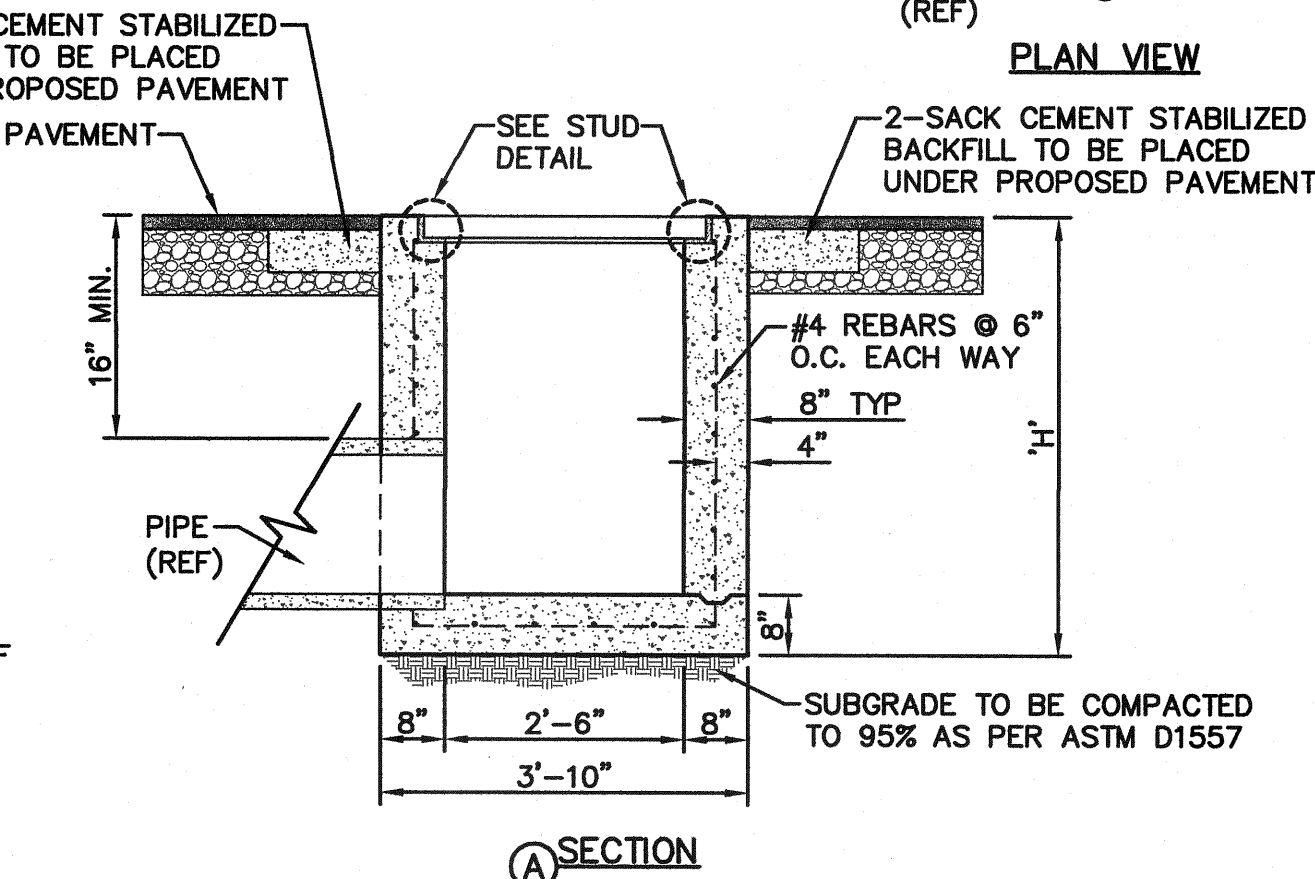
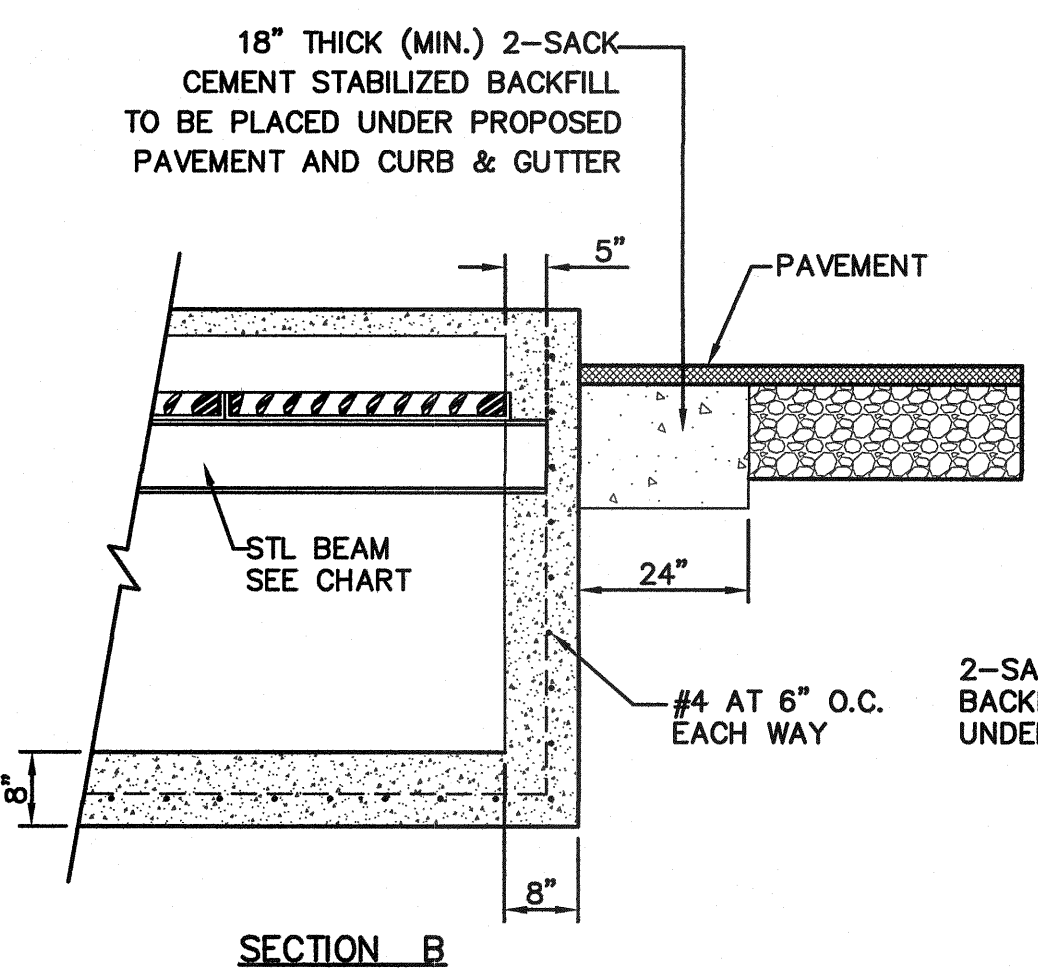
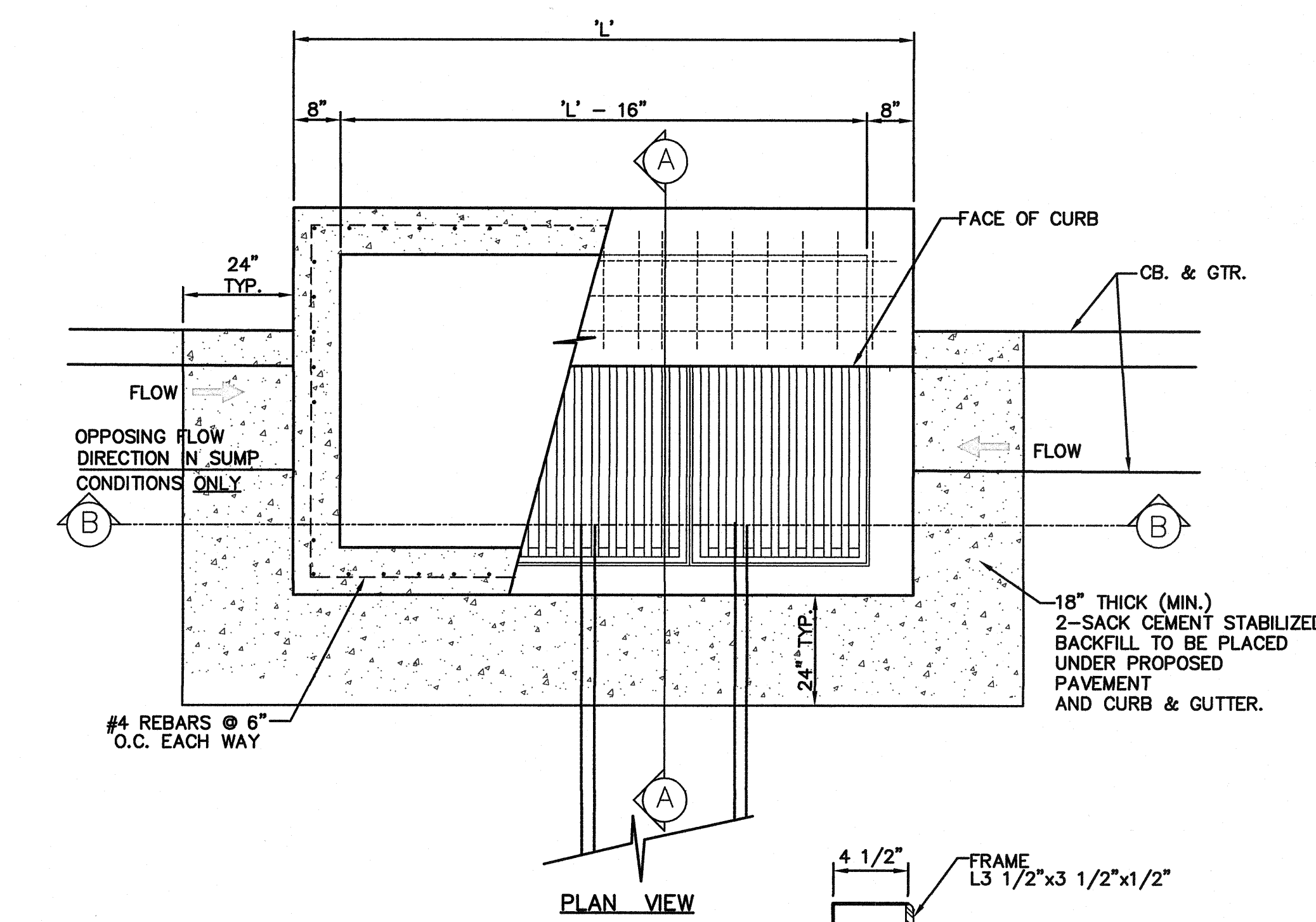
NUMBER OF GRATES	"L"	CAPACITY*
2	5'-1 1/8"	9.436 CFS
3	7'-1 7/8"	14.155 CFS
4	8'-9 7/8"	18.873 CFS
5	10'-8"	23.592 CFS

* THESE CAPACITIES CORRESPOND TO A CLOGGING FACTOR OF 0.5

- NOTES:**
- GRATES TO BE PERPENDICULAR TO TRAFFIC
 - CONCRETE TO BE 3,000 PSI (MIN.) CORE TEST @ 28 DAYS.
 - H=20' MAXIMUM
 - SEE STORM SEWER PLAN & PROFILES FOR APPROVED PIPE DIAMETER.

ENGINEERING & CONSTRUCTION MANAGEMENT DEPARTMENT

REVIEWED



5 DROP INLET (TYPE III) DETAILS
SCALE: 1" = 2'-0"

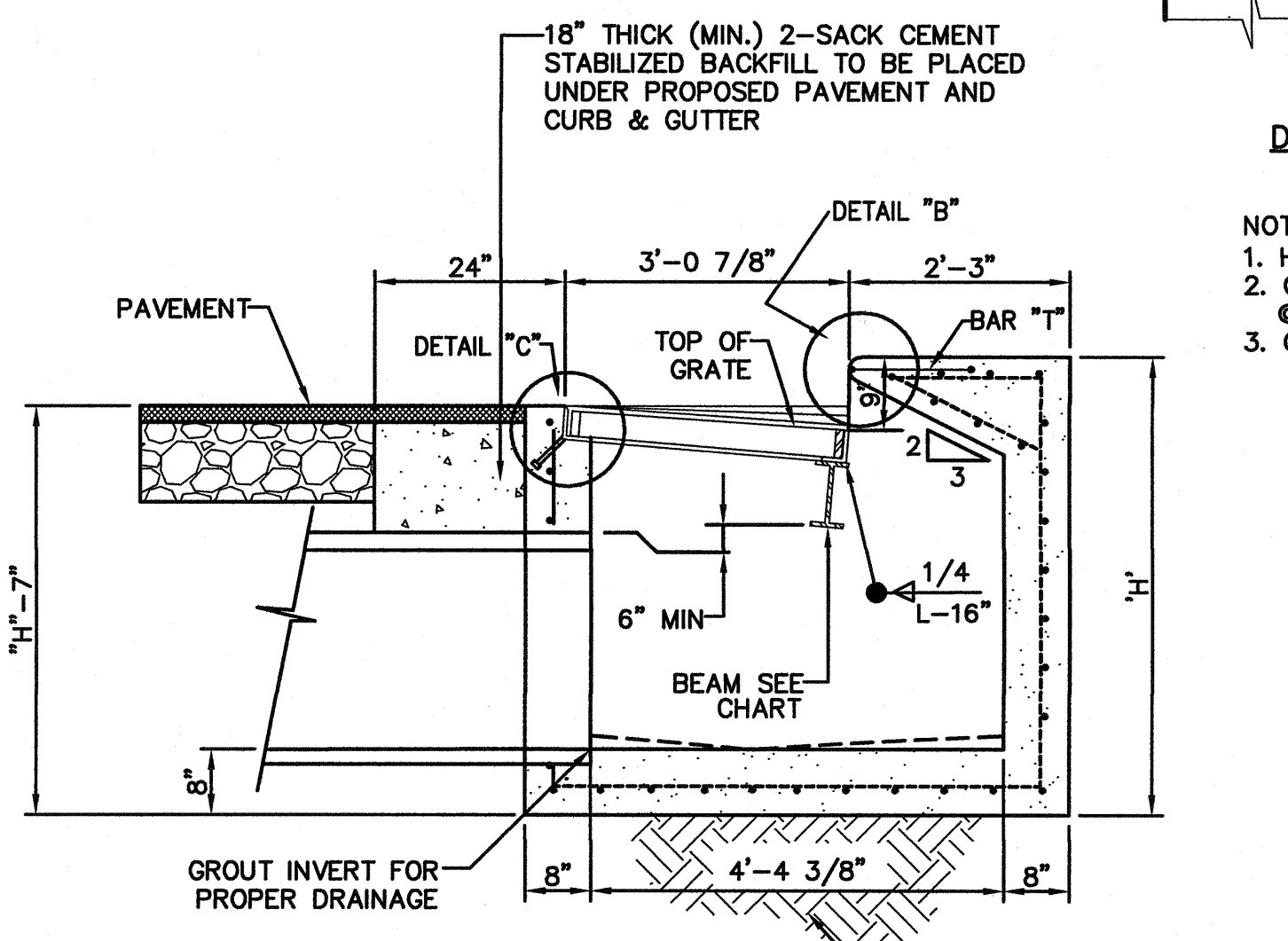
DROP INLET GENERAL NOTES:

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.
- SHARP EDGES RESULTING FROM FABRICATION SHALL BE DULLED BY ANY ACCEPTABLE METHOD FOR SAFETY IN HANDLING.
- GRATES SHALL BE INSTALLED IN FRAME WITH FLOW ARROW POINTING DOWNSTREAM OR TOWARD THE LOW POINT IN A SUMP.
- WELDED GRATES SHALL BE STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-183 OR OF CORROSION RESISTANT STRUCTURAL STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-161 OR M-222 OR BE MADE OF OTHER APPROVED STEELS OF EQUAL QUALITY. MIXING GRADES OF STEEL ON THE SAME GRATE WILL NOT BE PERMITTED.
- GRATES MADE OF M-183 STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-111 SPECIFICATIONS OR SHALL BE PAINTED WITH INORGANIC ZINC PAINTS, MEETING THE REQUIREMENTS OF CURRENT STANDARD SPECIFICATIONS.
- ALL WELDS SHALL HAVE A MINIMUM OF 1/4" FILLET AND SHALL CONFORM TO THE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND TO THE AWS STRUCTURAL WELDING CODE. ELECTRODES SHALL BE COMPATIBLE TO THE DIFFERENT GRADES OF STEEL THAT COMPRISE THE GRATE MEMBERS.
- CAST GRATES SHALL BE CAST STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M-103, GRADE 65-35 OR OF DUCTILE IRON CONFORMING TO THE REQUIREMENTS OF ASTM A-536, SPECIAL GRADE 60-45, OR OF GRAY IRON CONFORMING TO THE REQUIREMENTS OF AASHTO M-105, CLASS 35B OR ASTM A-48 CLASS 35B. THE SPECIFICATIONS OF GENERAL APPLICATION FOR CAST STEEL GRATES SHALL BE AASHTO M-103 SCOPE 1.2.1, GRADE N-1.
- FERROUS CASTINGS SHALL BE OF UNIFORM QUALITY, FREE OF BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTION OR OTHER DEFECTS. THEY SHALL BE SMOOTH AND WELL CLEANED BY SHOT BLASTING OR OTHER APPROVED CLEANING METHOD. AFTER CLEANING THEY SHALL BE COATED WITH ASPHALT BASE PAINT RESULTING IN A SMOOTH COATING, TOUGH AND TENACIOUS WHEN COLD, NOT TACKY OR BRITTLE.
- ALL CASTING SHALL BE MANUFACTURED TRUE TO PATTERN. COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER.
- ALL CONCRETE TO BE 3000 PSI. CHAMFER ALL EXPOSED EDGES 3/4". ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
- MINIMUM CONCRETE COVER SHALL BE 1 1/2" FOR STEEL REINFORCING.
- EXPANSION MATERIAL TO BE 1/2" BITUMINOUS FIBER AND PLACED WHERE PROPOSED CONCRETE COMES IN CONTACT WITH ANY EXISTING OR PROPOSED CONCRETE OR MASONRY STRUCTURE.
- STRUCTURAL STEEL SHALL BE SHOP PAINTED IN ACCORDANCE WITH TxDOT ITEM 446 "PAINT AND PAINTING"
- SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE AND GRADE TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO INLETS.
- GRATES WILL BE DEPRESSSED 1" BELOW PROPOSED OR EXISTING GRADE.
- ALL REINFORCING BARS TO BE #4 BARS AT 6" O.C. GRADE 60. BEND BARS AROUND PIPE OPENINGS.
- INLETS TO BE DESIGNATED IN PLANS BY NUMBER OF GRATES REQUIRED.
- LOCATION OF SEWER PIPES SHOWN ELSEWHERE IN PLANS.
- THE GRATES OF ALL INLETS WITHIN THE STREET PAVEMENT MUST BE CONSTRUCTED WITH THE GRATE BARS PERPENDICULAR TO THE CURB.

- NOTES:**
- H = 20' MAXIMUM
 - CONCRETE TO BE 3000 psi MIN CORE TEST @ 28 DAYS.
 - GRATE TO BE PERPENDICULAR TO TRAFFIC.

NO. OF GRATES	L'	BEAM	
		LENGTH	MINIMUM SIZES
2	5'-2 1/4"	4'-8 1/4"	W6X12, S8X12.5, MC6X15.1
3	7'-1 7/8"	6'-7 7/8"	W8X15, S7X18.4, MC7X19.1
4	9'-1 1/2"	8'-7 1/2"	W10X19, S8X18.4, MC10X22
5	11'-1 1/8"	10'-7 1/8"	W12X16, S8X23, MC10X22
6	13'-0 3/4"	12'-6 3/4"	W12X19, S8X23, MC10X25

ALL SUBSTITUTIONS OF STRUCTURAL STEEL BEAMS AND CHANNELS FOR DROP INLETS MUST BE SUBMITTED FOR REVIEW AND INCLUDE SECTION MODULUS AND DEFLECTION CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS.



4 DROP INLET (TYPE I) DETAILS
SCALE: NTS

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
INTERSECTION OF
SUN TRAIL DRIVE AND SETTING SUN
DRIVE.

DATE _____ BY _____
REVISIONS _____

CSA
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4684
1712 West Loop, Suite 1000, Dallas, TX 75220
Phone: 972.443.8822 Fax: 972.443.8820 www.csa.com

ENGINEER'S SEAL
STATE OF TEXAS
J. L. A. 95075
J. L. A. 95075

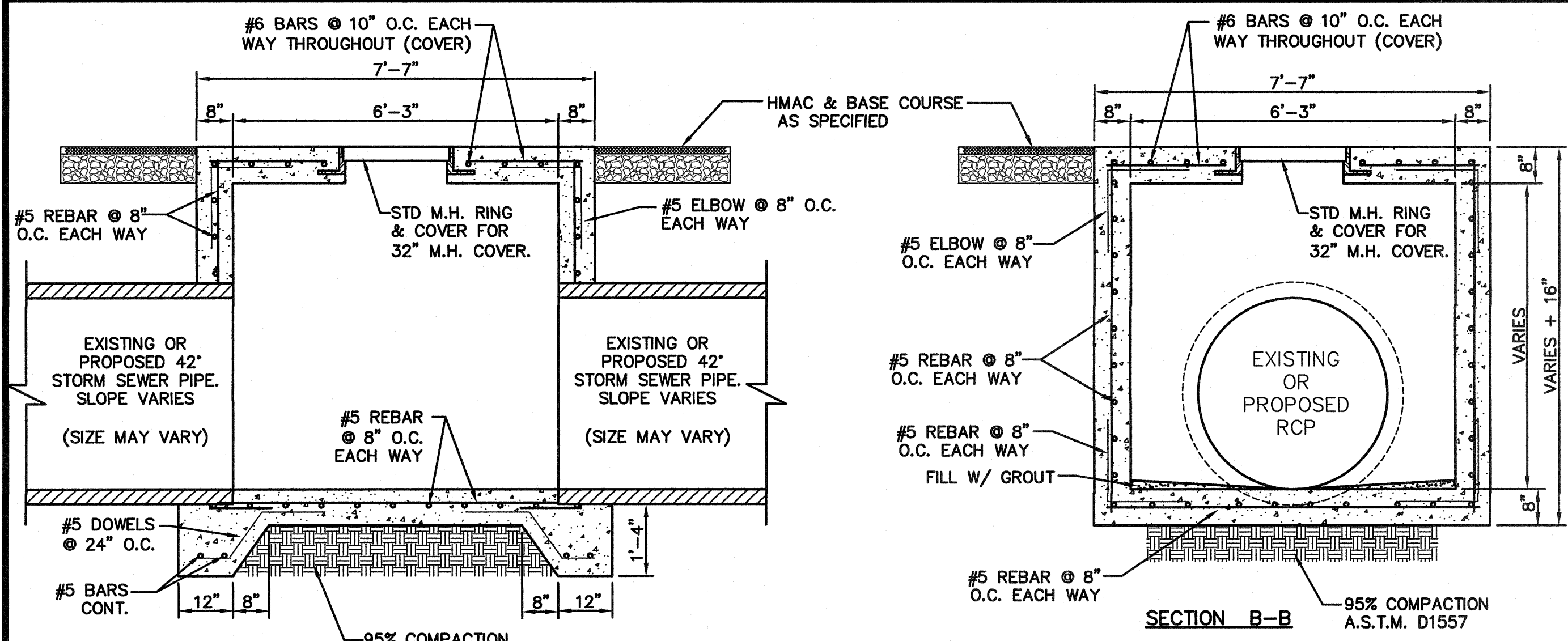
SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPRD. BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

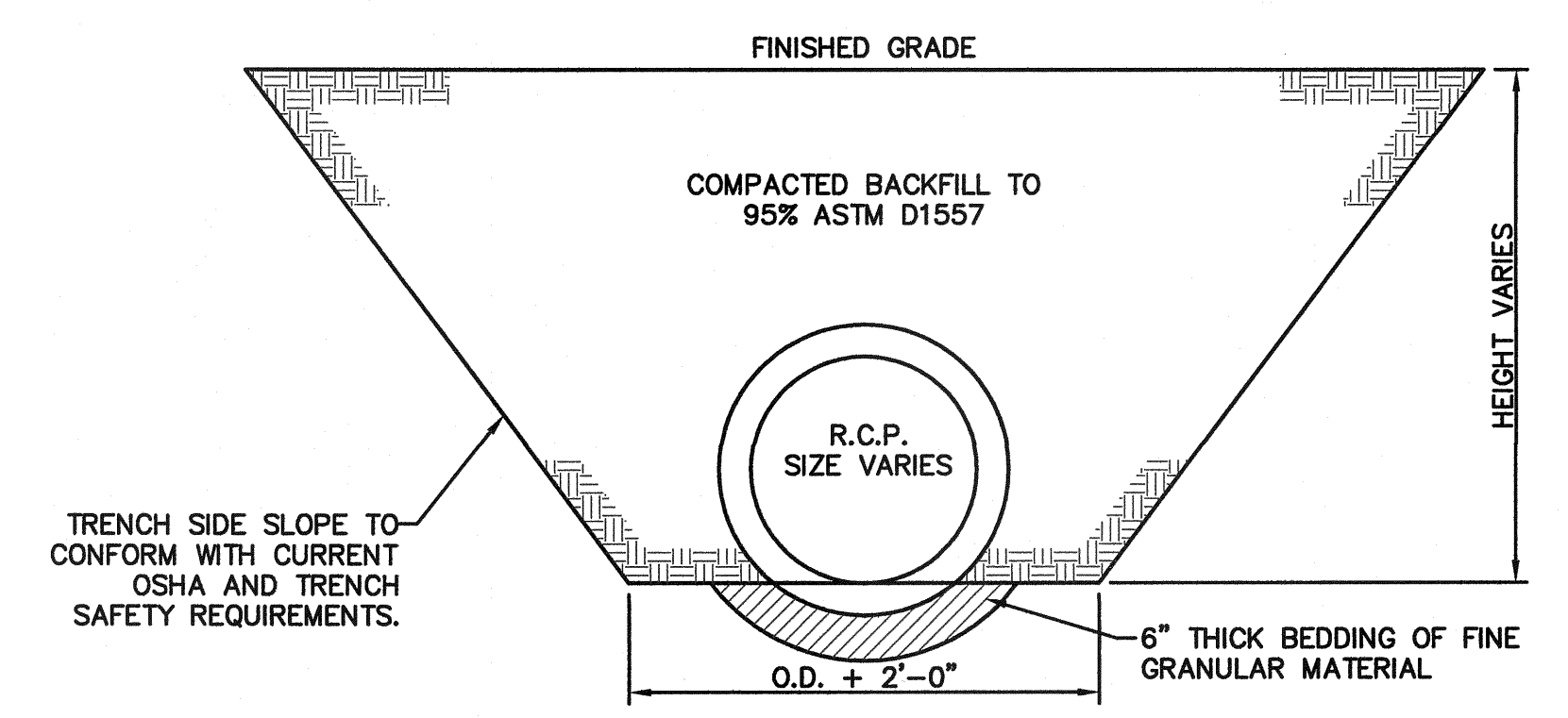
SHEET TITLE
**DRAINAGE
DETAILS**

(SHEET 1 OF 4)
SHEET NO.

C10.1

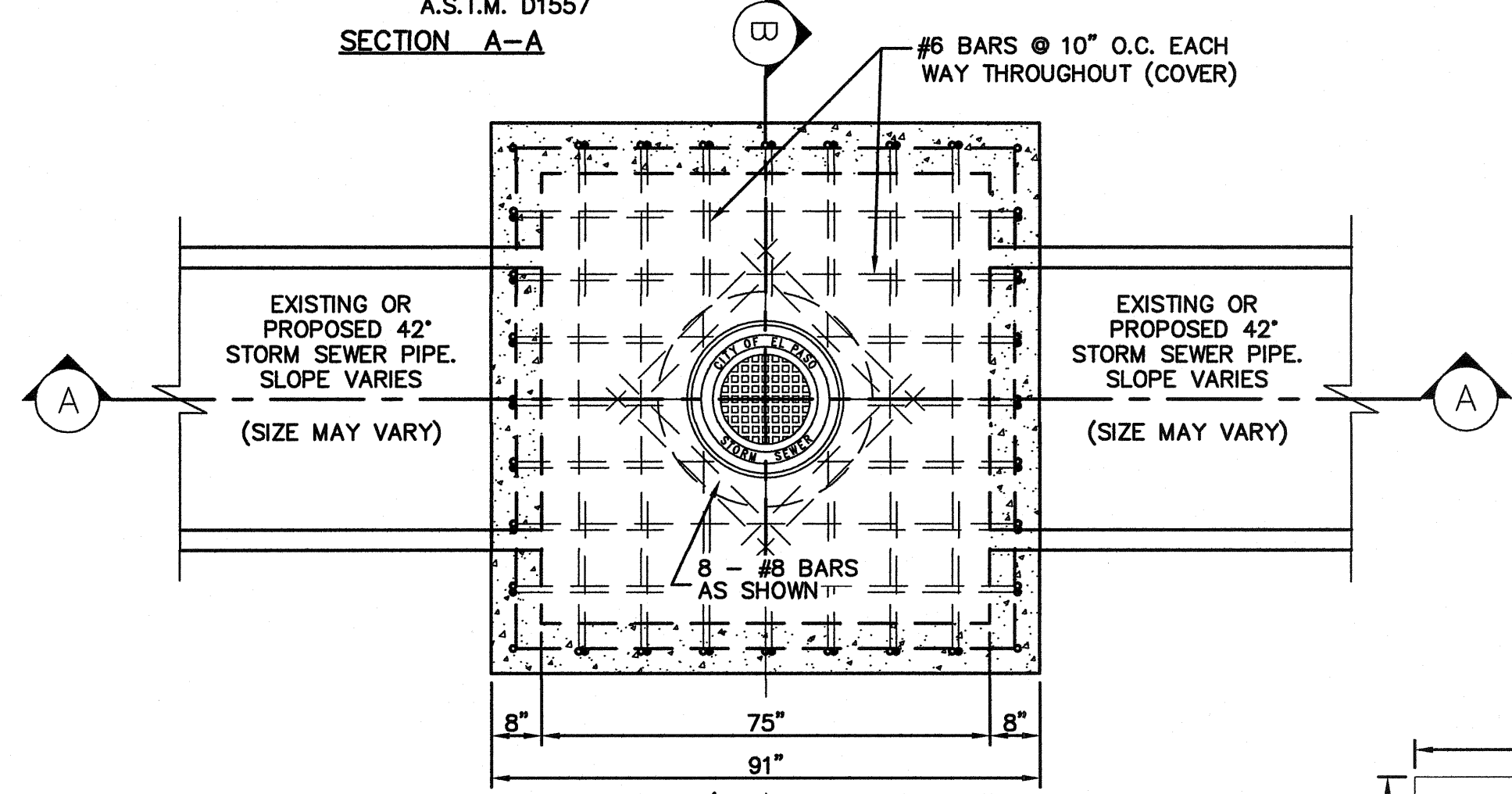


NOTE:
FOR JUNCTION BOXES USING INFLOW/OUTFLOW PIPE SIZES OTHER THAN THOSE INDICATED IN THIS TYPICAL DETAIL, ATTACHED TABLE SHALL BE USED AS A GUIDELINE FOR BOX SIZING ONLY. COMPLETE ENGINEERING DESIGN DRAWINGS INCLUDING ALL CALCULATIONS, DIMENSIONING, REINFORCEMENT AND SPECIFICATIONS SHALL BE SUBMITTED FOR REVIEW AND COMMENT SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS.

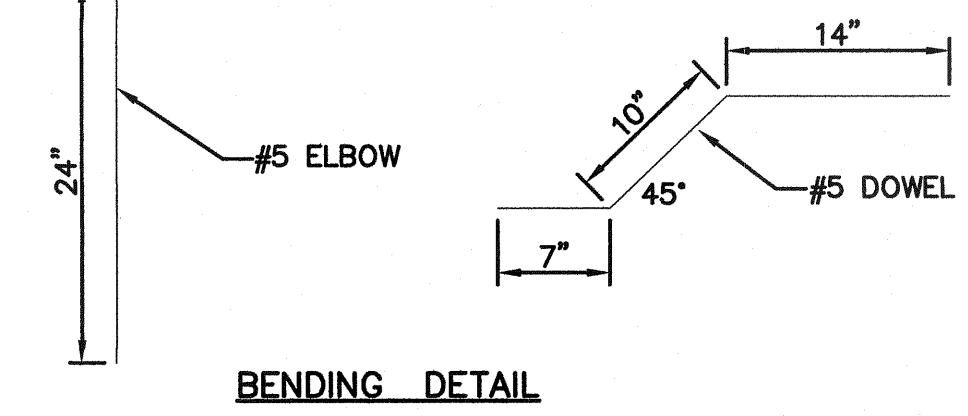


2 STORM SEWER BEDDING DETAIL
SCALE: 1/2" = 1'-0"

"W" WIDTH OF JUNCTION BOX (MIN.)	JUNCTION BOX WALL THICKNESS	PIPE SIZE ENTERING JUNCTION BOX
5'-3"	8"	18"
5'-10"	8"	24"
6'-5"	8"	30"
7'-0"	8"	36"
7'-7"	8"	42"
8'-2"	8"	48"
8'-9"	8"	54"
9'-4"	8"	60"
9'-11"	8"	66"
10'-6"	8"	72"
11'-8"	8"	84"
12'-10"	8"	96"



FOR INFLOW/OUTFLOW PIPES SIZES OTHER THAN 42" REFER TO NOTE & TABLE.



BENDING DETAIL

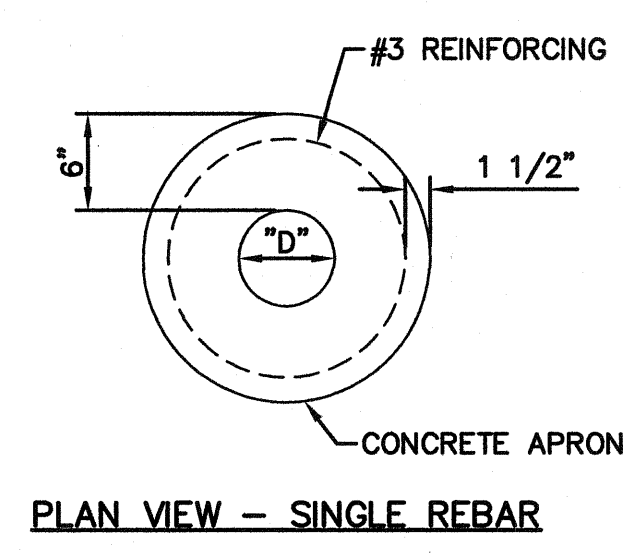
1 72" SQUARE CAST-IN PLACE STANDARD JUNCTION BOX
SCALE: N.T.S.

CONSTRUCTION NOTES:

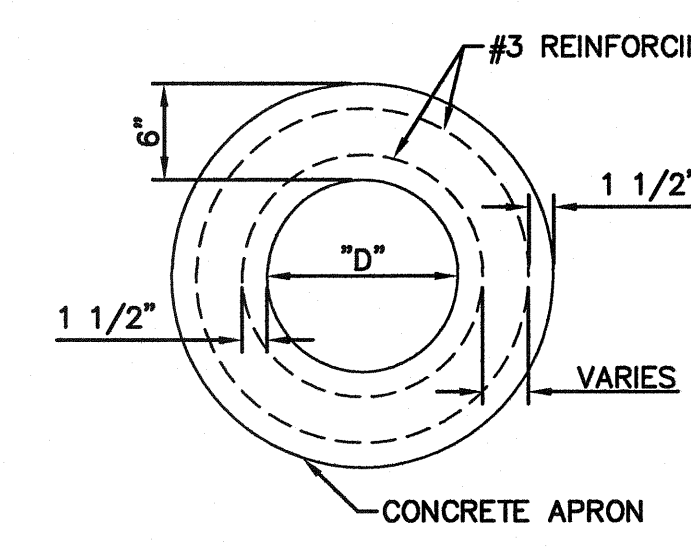
1. ANY DISTURBED SUBGRADE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 95% DENSITY \pm 3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
2. ANY DISTURBED COARSE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 100% DENSITY \pm 2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
3. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR ALL REINFORCEMENT STEEL.
4. REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
5. NO. 3 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

GENERAL NOTES:

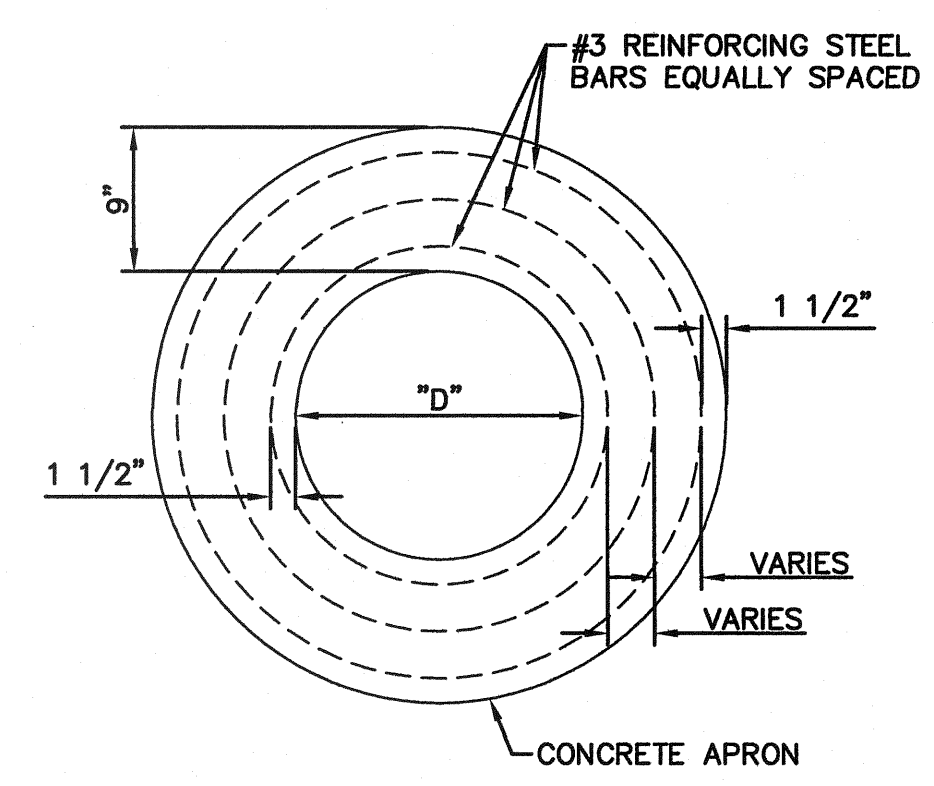
1. THE PENETRATION APRON SHOULD BE CAST IN-PLACE CONCRETE. (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED).
2. TOPS OF PENETRATION APRON SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.



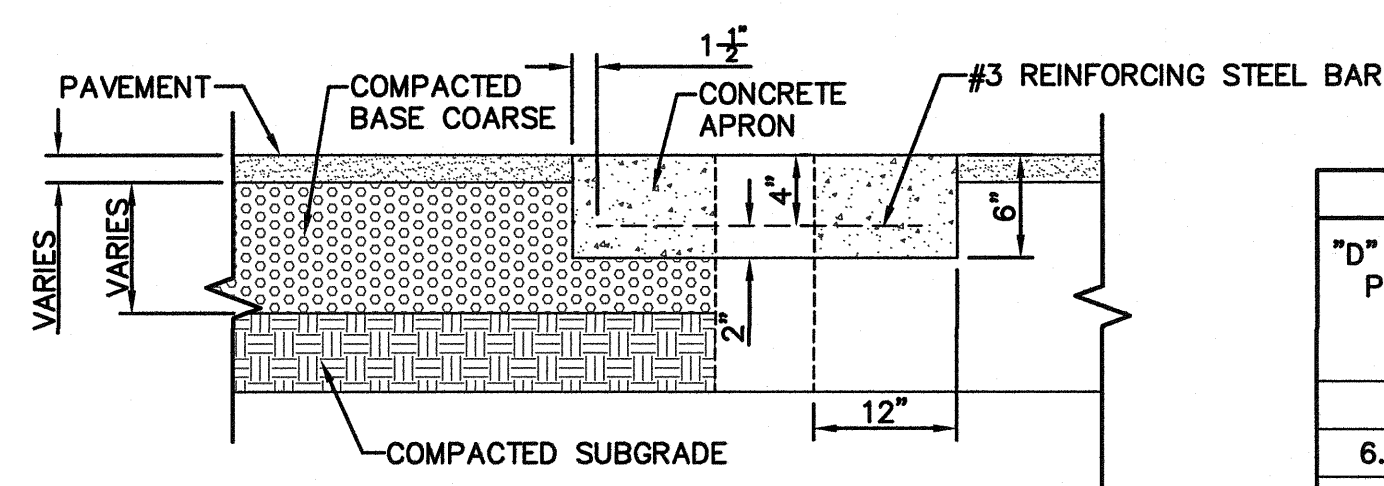
PLAN VIEW - SINGLE REBAR



PLAN VIEW - 2 REBAR



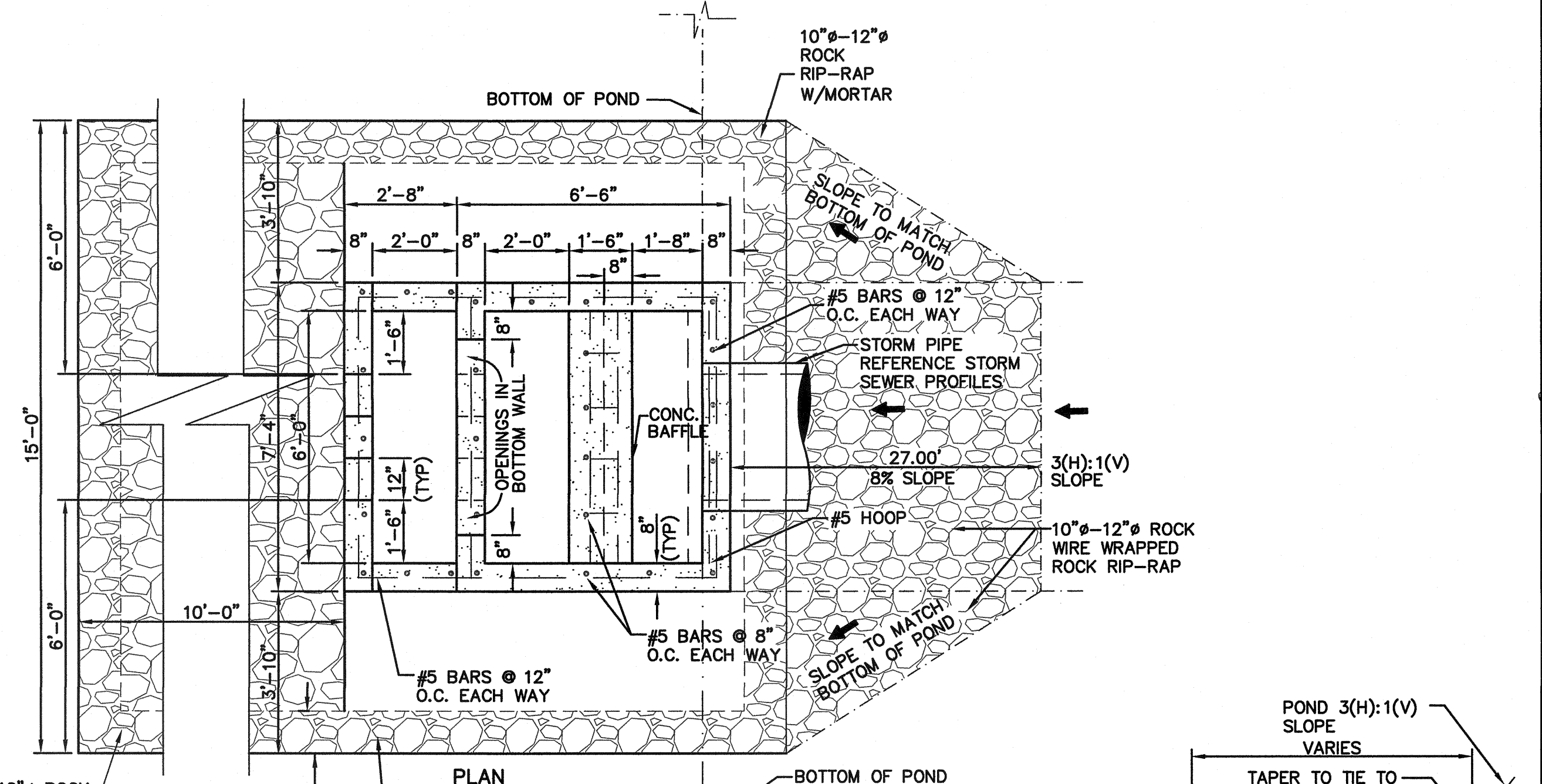
PLAN VIEW - 3 REBAR



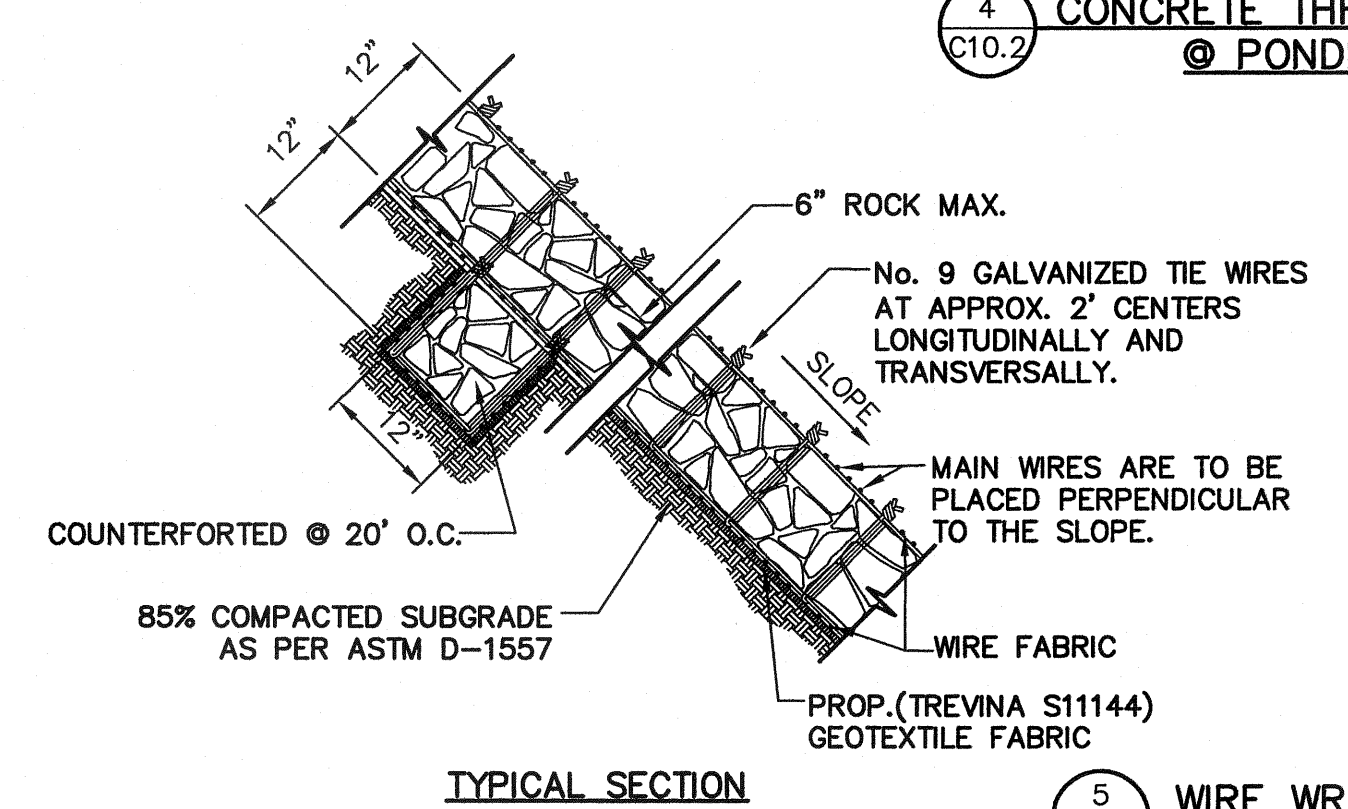
SECTION

3 PENETRATION APRON DETAILS
SCALE: N.T.S.

"D" DIAMETER OF PENETRATION (INCHES)	"A" CONCRETE HORIZONTAL DIMENSION FROM PENETRATION (INCHES)	NUMBER OF NO. 3 REINFORCING STEEL BARS (QUANTITY)	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE APRON TO CENTER OF NEAREST REBAR (INCHES)	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR (INCHES)
0 TO 6.01	6	1	1 1/2	1 1/2
6.01 TO 18.01	8	2	1 1/2	1 1/2
18.01 AND OVER	12	3	1 1/2	1 1/2

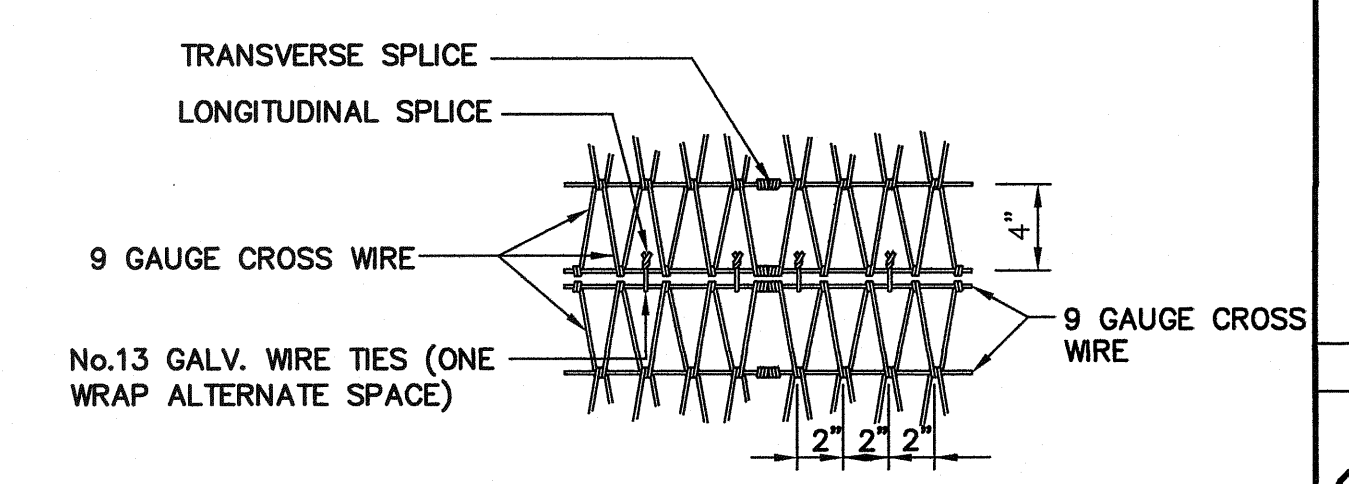


4 CONCRETE THRUST BLOCK STRUCTURE @ PONDING AREA DETAIL
SCALE: N.T.S.



TYPICAL SECTION

5 WIRE WRAPPED RIP RAP
SCALE: N.T.S.



WIRE FABRIC AND SPLICE DETAIL (FOR NON-COHESIVE SOIL)
SCALE: N.T.S.

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
INTERSECTION OF
SUN TRAIL DRIVE AND SETTING SUN
DRIVE.

DATE: _____ BY: _____
REVISIONS: _____

CSA
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4694
4712 Victoria Road, Suite E, Fort Worth, TX 76104
Office: 817.544.6226 Fax: 817.544.6223 www.csa-usa.net

ENGINEER'S SEAL
JAMES L. AZARHAT
REGISTERED PROFESSIONAL ENGINEER
88075

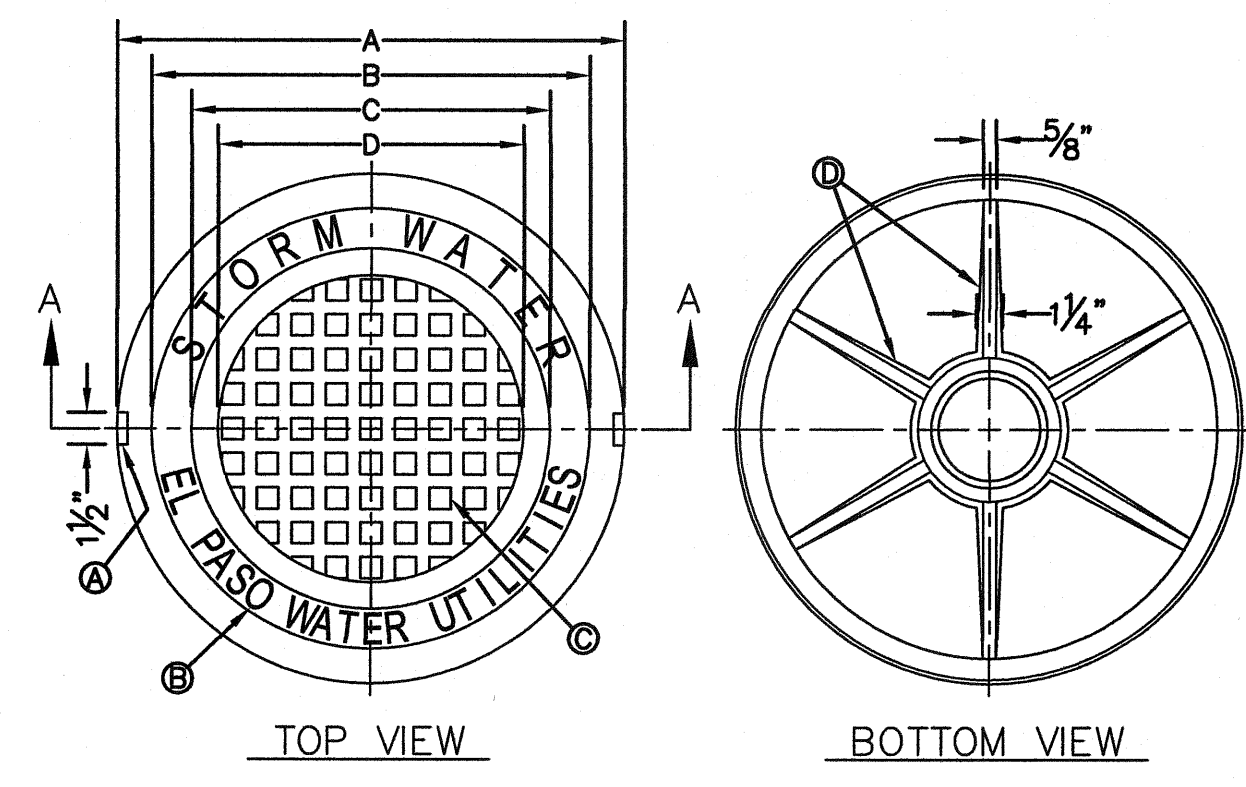
SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**DRAINAGE
DETAILS**

(SHEET 2 OF 4)
SHEET NO.

C10.2

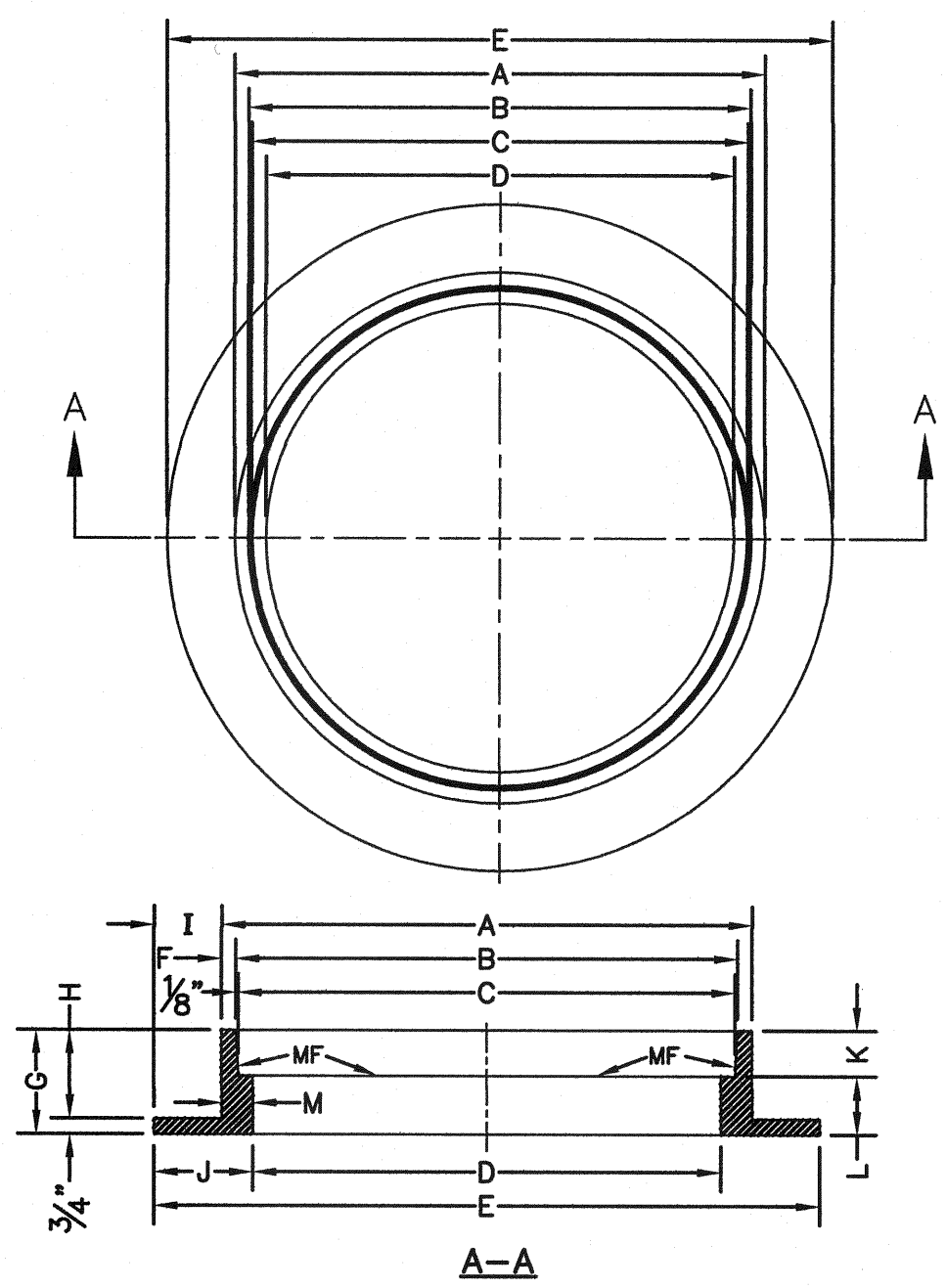


- GENERAL NOTES:**
- MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
 - CASTING TO BE SMOOTH & VOID OF AIR HOLES.
 - CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
 - AS-CAST DIMENSIONS MAY VARY $\frac{1}{16} \pm$ PER FOOT (AASHTO M306-07).
 - WEIGHT MAY VARY 5%± (AASHTO M306-07).
 - SHADED DIMENSIONS IN TABLE FOR REFERENCE ONLY. SOURCE: CITY OF EL PASO DESIGN STANDARDS FOR CONSTRUCTION, DETAIL 2-17.

- CONSTRUCTION KEY NOTES:**
- LIFTING NOTCH.
 - $\frac{3}{16}$ " RAISED LETTERING.
 - 1" SQUARES ($\frac{3}{16}$ " TALL) WITH $\frac{5}{8}$ " SPACE BETWEEN.
 - REINFORCING RIBS.
 - SLOT.

SEE NOTE 6

MANHOLE COVER	MANHOLE - ALL TYPES	MANHOLE TYPE 48"	MANHOLE TYPE 72"
A	31 $\frac{3}{8}$ "	23 $\frac{3}{8}$ "	31 $\frac{1}{2}$ "
B	28 $\frac{1}{8}$ "	20 $\frac{3}{8}$ "	28 $\frac{1}{8}$ "
C	24 $\frac{3}{8}$ "	16 $\frac{7}{8}$ "	24 $\frac{3}{8}$ "
D	21 $\frac{1}{8}$ "	14 $\frac{3}{8}$ "	21 $\frac{1}{8}$ "
E	2 $\frac{1}{8}$ "	3"	3"
F	$\frac{1}{4}$ "	$\frac{1}{4}$ "	$\frac{1}{4}$ "
G	$\frac{3}{8}$ "	3"	3"
H	$\frac{1}{8}$ "	1"	1"
WEIGHT	265 lbs.	175 lbs.	310 lbs.



- GENERAL NOTES:**
- MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
 - CASTING TO BE SMOOTH & VOID OF AIR HOLES.
 - CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
 - AS-CAST DIMENSIONS MAY VARY $\frac{1}{16}$ (AASHTO M306-07).
 - WEIGHT MAY VARY 5%± (AASHTO M306-07).
 - SHADED DIMENSIONS IN TABLE FOR REFERENCE ONLY. SOURCE: CITY OF EL PASO DESIGN STANDARDS FOR CONSTRUCTION, DETAIL 2-17.

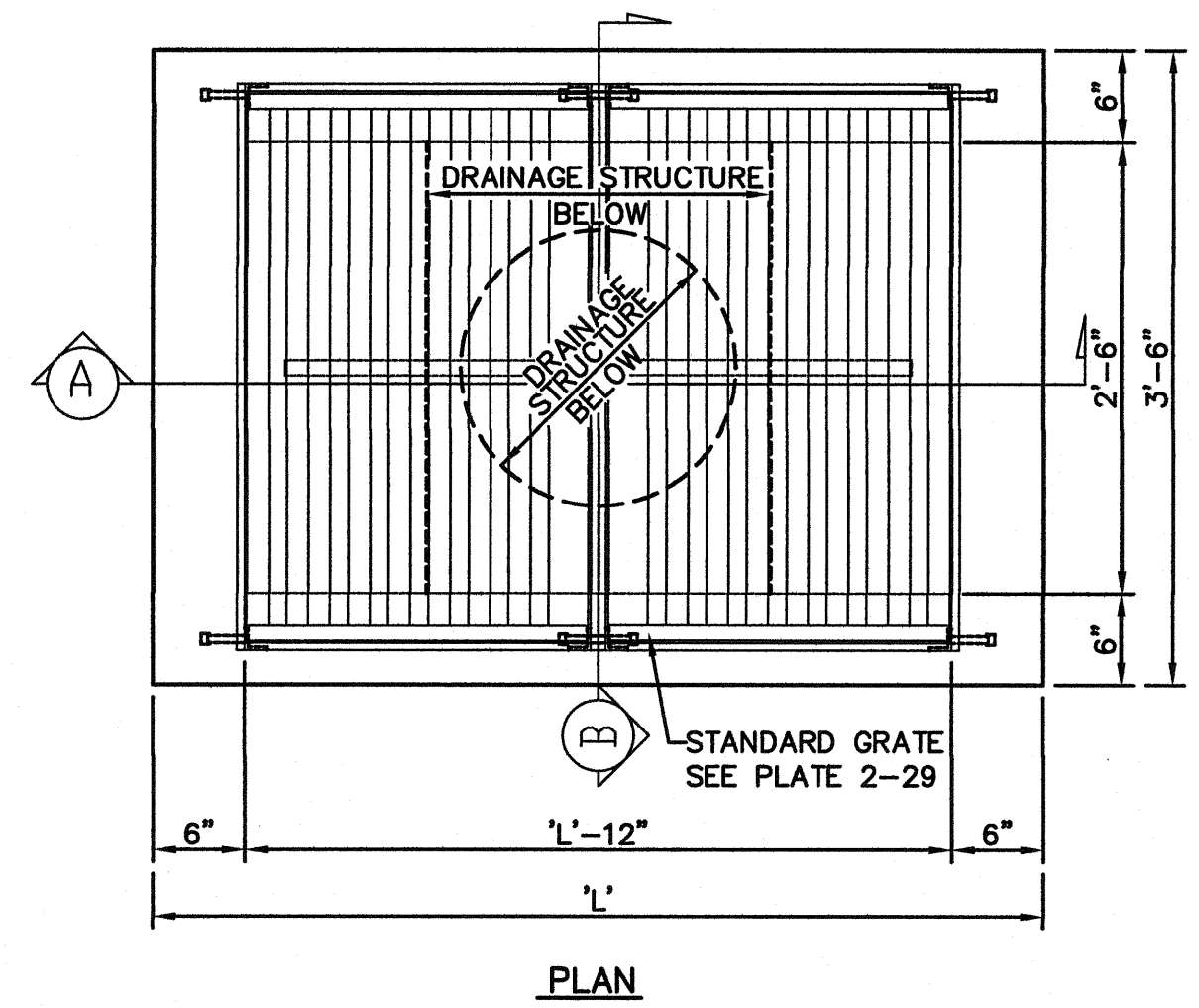
SEE NOTE 6

MANHOLE RING	MANHOLE - ALL TYPES	MANHOLE TYPE 48"	MANHOLE TYPE 72"
A	33"	25 $\frac{1}{2}$ "	32 $\frac{1}{2}$ "
B	31 $\frac{1}{2}$ "	23 $\frac{3}{8}$ "	31 $\frac{3}{8}$ "
C	31 $\frac{1}{2}$ "	23 $\frac{3}{8}$ "	31 $\frac{3}{8}$ "
D	30"	22 $\frac{1}{2}$ "	30"
E	39 $\frac{1}{2}$ "	34 $\frac{1}{2}$ "	42"
F	$\frac{5}{8}$ "	$\frac{1}{8}$ "	$\frac{1}{8}$ "
G	5"	6"	6"
H	4 $\frac{1}{2}$ "	5 $\frac{1}{2}$ "	5 $\frac{1}{2}$ "
I	3 $\frac{1}{2}$ "	4 $\frac{1}{8}$ "	4 $\frac{1}{8}$ "
J	4 $\frac{3}{8}$ "	5"	6"
K	2 $\frac{3}{8}$ "	3 $\frac{3}{8}$ "	3 $\frac{3}{8}$ "
L	2 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "
M	1 $\frac{1}{2}$ "	1 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "
WEIGHT	220 lbs.	165 lbs.	225 lbs.

STORMWATER MANHOLE COVER

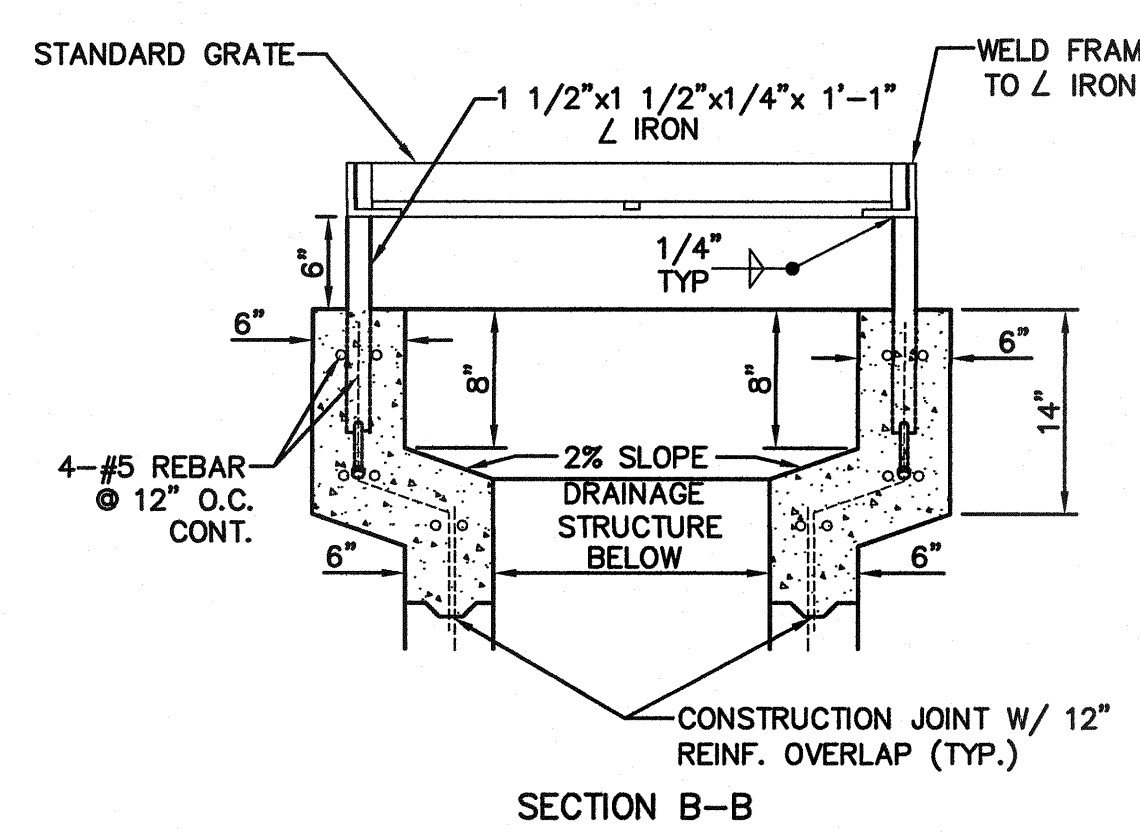
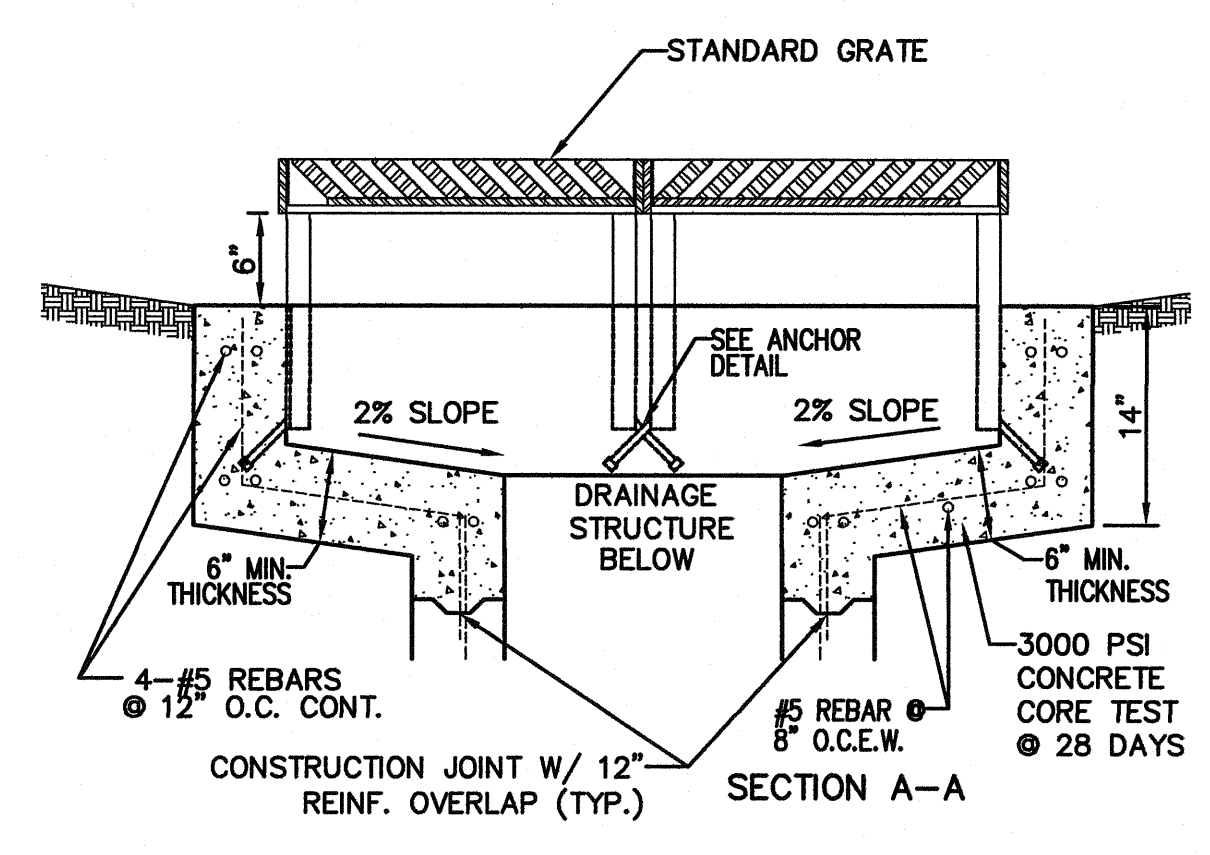
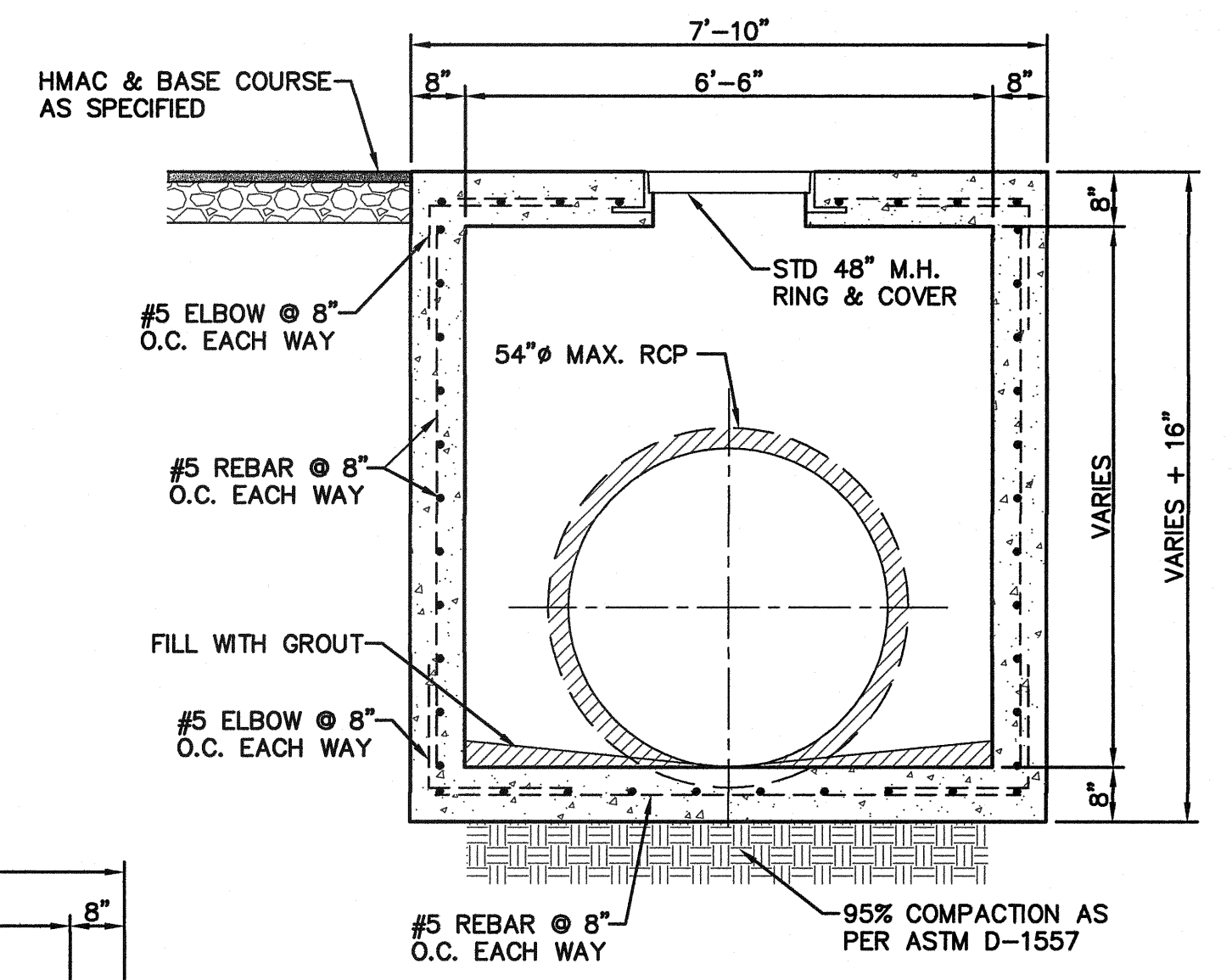
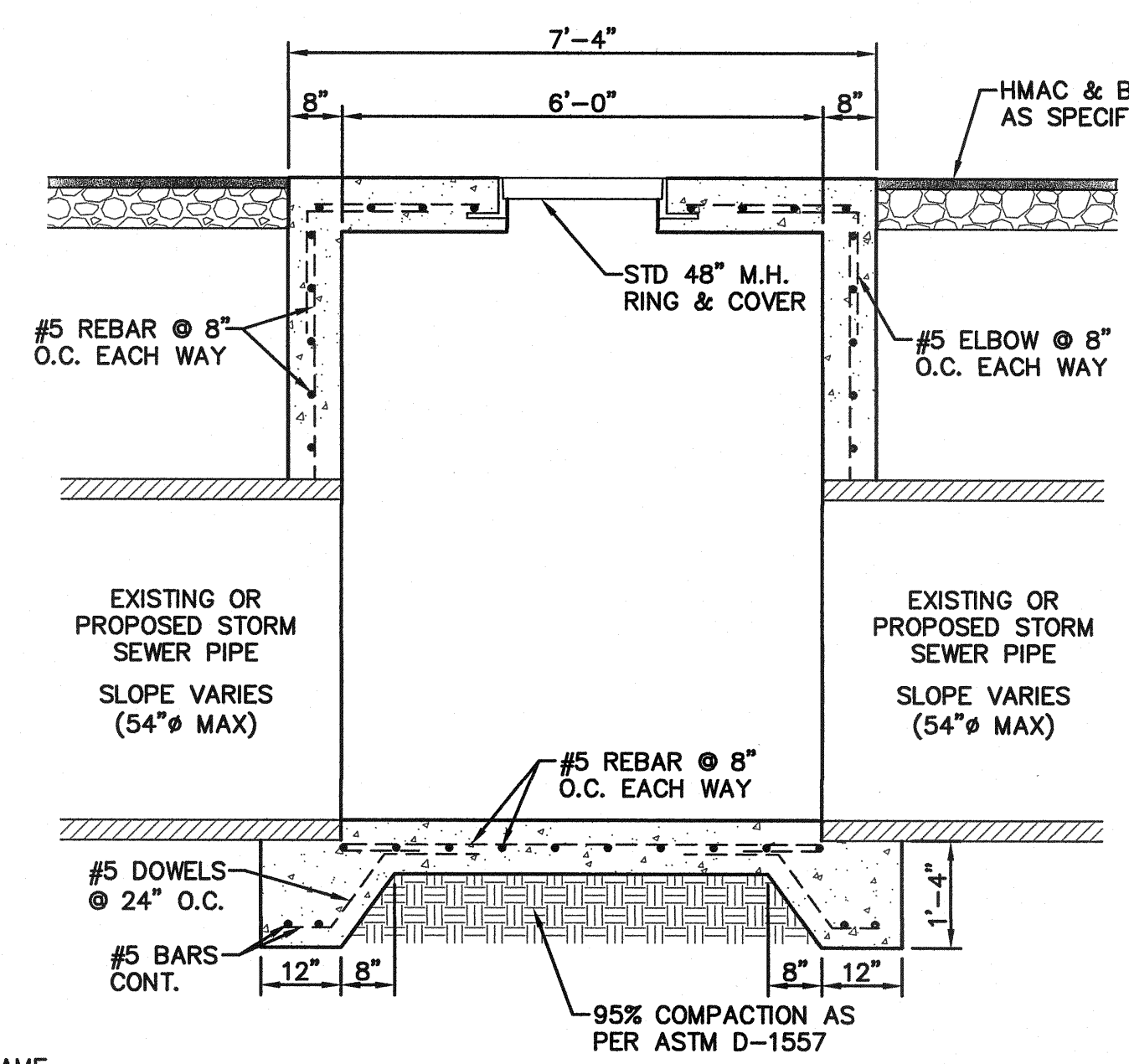
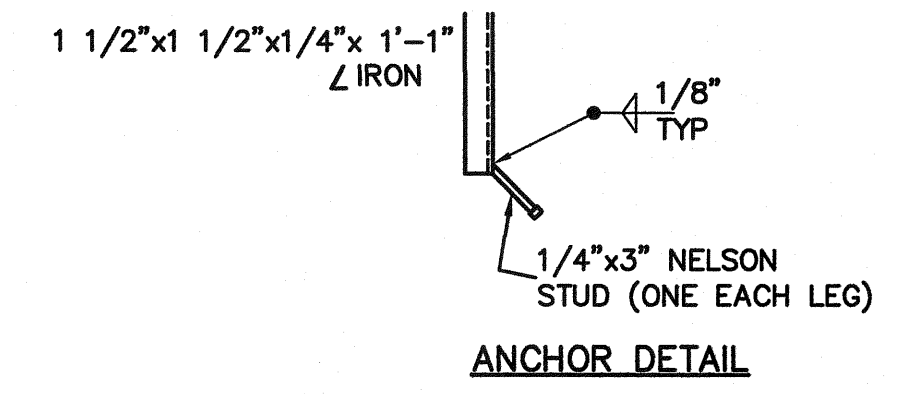
STORMWATER MANHOLE RING

1 MANHOLE RING AND COVER DETAILS SCALE: NTS

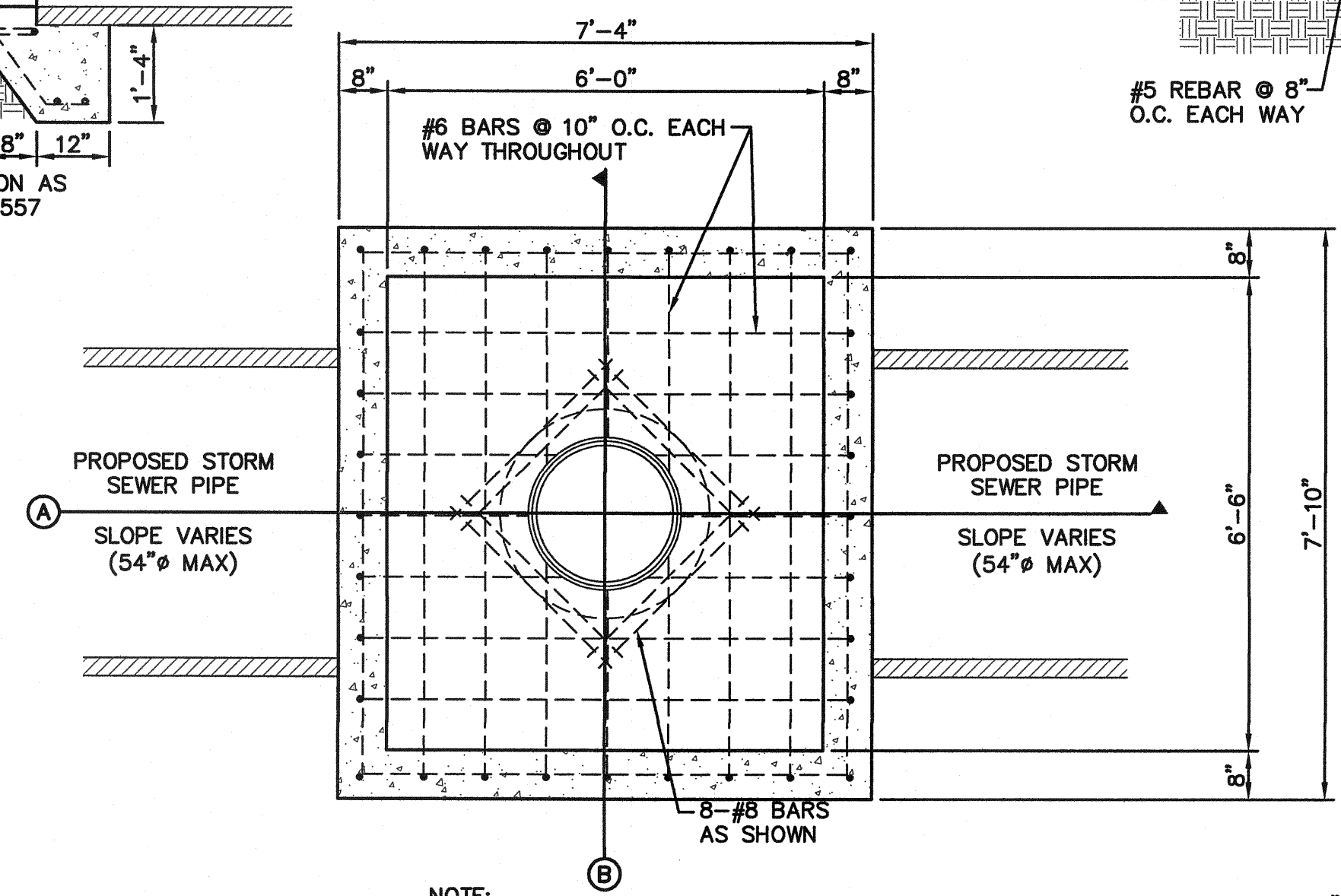


ALL SUBSTITUTIONS OF STRUCTURAL STEEL BEAMS, ANGLES, AND CHANNELS FOR DROP INLETS MUST BE SUBMITTED FOR REVIEW AND INCLUDE SECTION MODULUS AND DEFLECTION CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS.

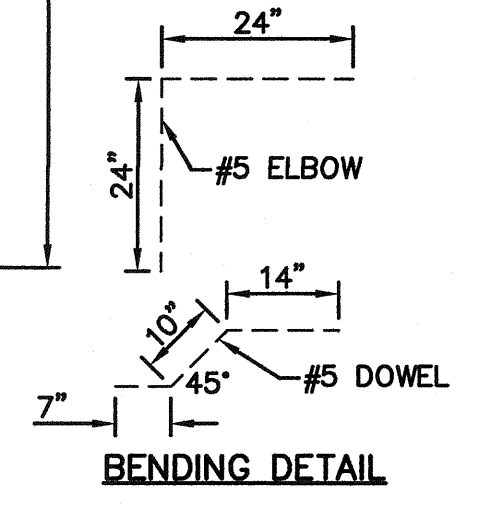
NUMBER OF GRATES	L'
2	4'- 10 1/4"
3	6'- 9 7/8"
4	8'- 9 1/2"
5	10'- 9 1/8"



2 OFF-STREET STORM INLET DETAIL SCALE: NTS



NOTE: 95% COMPACTION AS PER ASTM D-1557 UNDER ALL CONCRETE STRUCTURES.



3 78\"/>

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
INTERSECTION OF
TRAIL DRIVE AND SETTING SUN
DRIVE.
DATE _____ REVISIONS _____ BY _____

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engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4584
4712 Woodrow Beaumont, Suite F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.cepaeng.com

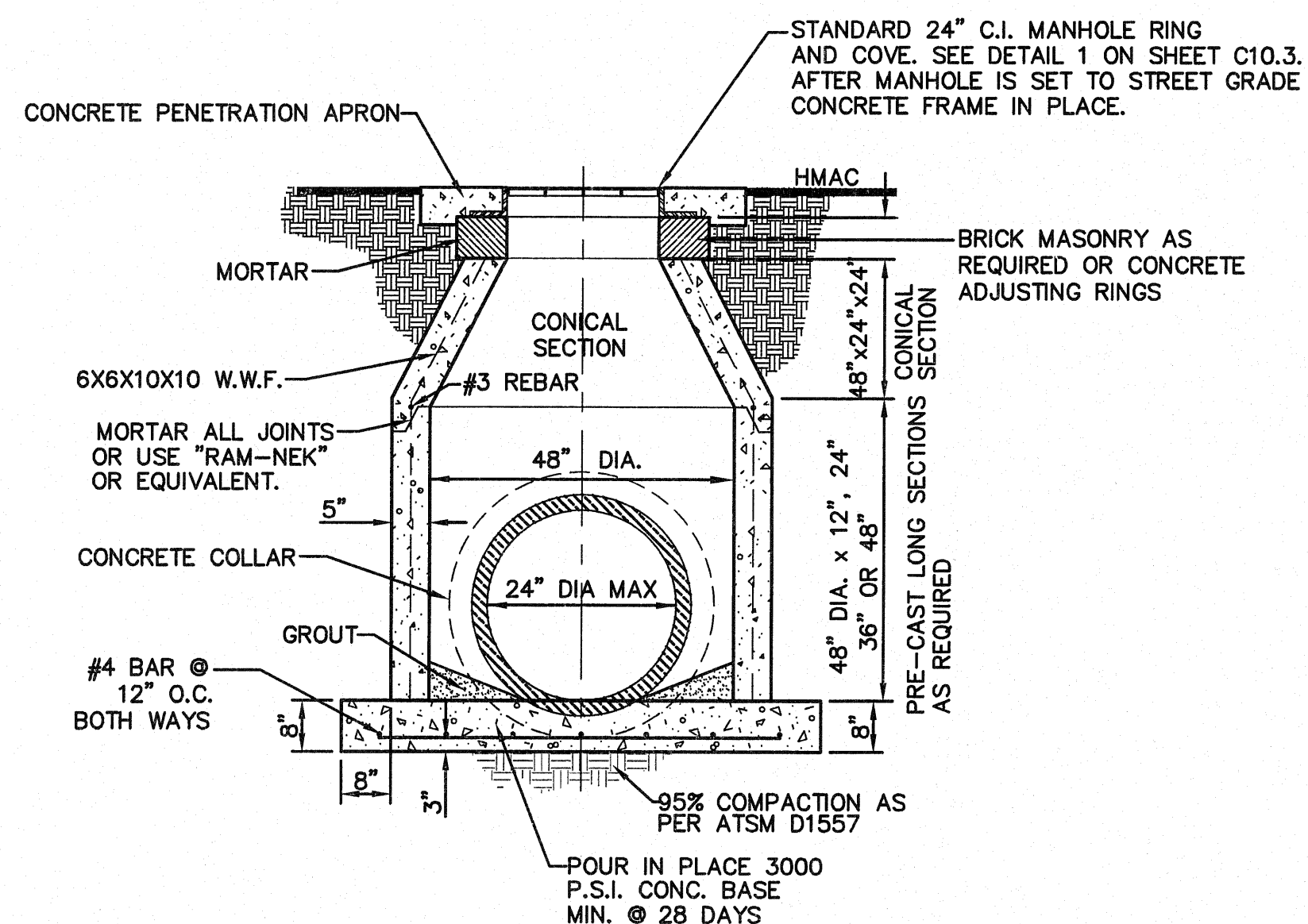
ENGINEER'S SEAL
J. L. AZARATE
80075

SCALE: N/A
Horizontal: N/A
Vertical: N/A
Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPRD. BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
DRAINAGE DETAILS
(SHEET 3 OF 4)
SHEET NO.

C10.3



NOTE:

1. ALL CONCRETE SHALL HAVE 3000 PSI MIN. @ 28 DAYS.
2. NINETY-FIVE (95%) PERCENT COMPACTION AS PER ASTM D1557 UNDER ALL CONCRETE STRUCTURES.
3. REINFORCED STEEL SHALL BE DEFORMED AND A MINIMUM OF GRADE 40.

1 48" DIAMETER STANDARD MANHOLE
C10.4 SCALE: NTS

STANDARD PRECAST MANHOLE SPECIFICATIONS

1. 48" DIA. MANHOLE SHALL BE USED FOR LINES W/ 24" I.D. MAX. DIAMETER AND 72" MANHOLES SHALL BE USED FOR LINES W/ 48" I.D. MAX. DIAMETER FOR PIPES GREATER THAN 48" I.D. REFER TO DETAIL 1 ON SHEET C10.2 "CAST-INPLACE JUNCTION BOX".
2. MANHOLE RING AND COVER (SEE DETAIL 3 ON SHEET C10.1). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE.
3. MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
4. THE MANHOLES CONICAL SECTIONS (CONCENTRIC / ECCENTRIC) SHALL CONFORM TO ASTM SPECIFICATIONS C-478.
5. PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONFORMING CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING. PROVIDE REINFORCEMENT WITHIN 3" @ OPENINGS OR KNOCKOUTS. OPENING (UP TO 8") MADE IN FIELD SHALL BE CORE DRILLED.
6. CEMENT SHALL BE TYPE I-II, PER ASTM C-150, AND MUST CONTAIN A MINIMUM OF 4% FLY ASH OF THE TOTAL MANHOLE WEIGHT.
7. ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH MORTAR OR RAM-NEK (OR APPROVED EQUAL).
8. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE TO MANHOLE. FOR LATERAL CONNECTORS SEE (COMPRESSION TYPE ASTM-923), "KOR-N-SEAL" OR APPROVED EQUAL.
9. GROUT AS REQUIRED.
10. THE SUBGRADE UNDER THE BASE SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D-1557.
11. THE BASE SHALL BE CAST CONCRETE AND SHALL BE MIN. 28 DAY COMPRESSIVE STRENGTH 4000psi.
12. CONCRETE BASE SHALL BE 8" (MIN.) FOR MH'S UP TO 12' DEEP AND 12" (MIN.) FOR DEPTHS GREATER THAN 12'.
13. MANHOLES BELOW GROUNDWATER TO BE EXTERNALLY AND INTERNALLY COATED WITH BITUMINOUS COATING.

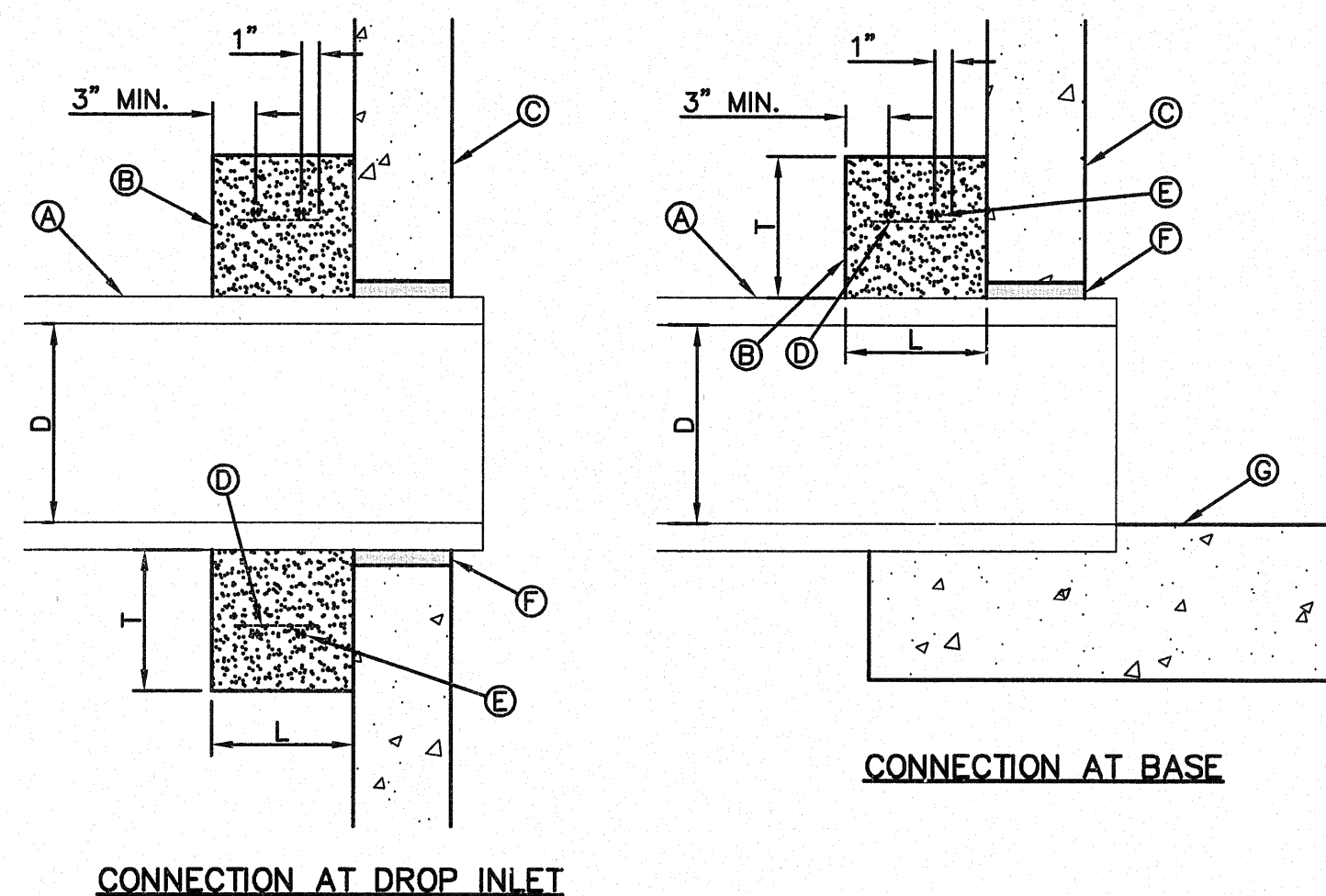
GENERAL NOTES:

1. NOT TO BE USED UNDER GROUND WATER CONDITIONS.

CONSTRUCTION KEY NOTES:

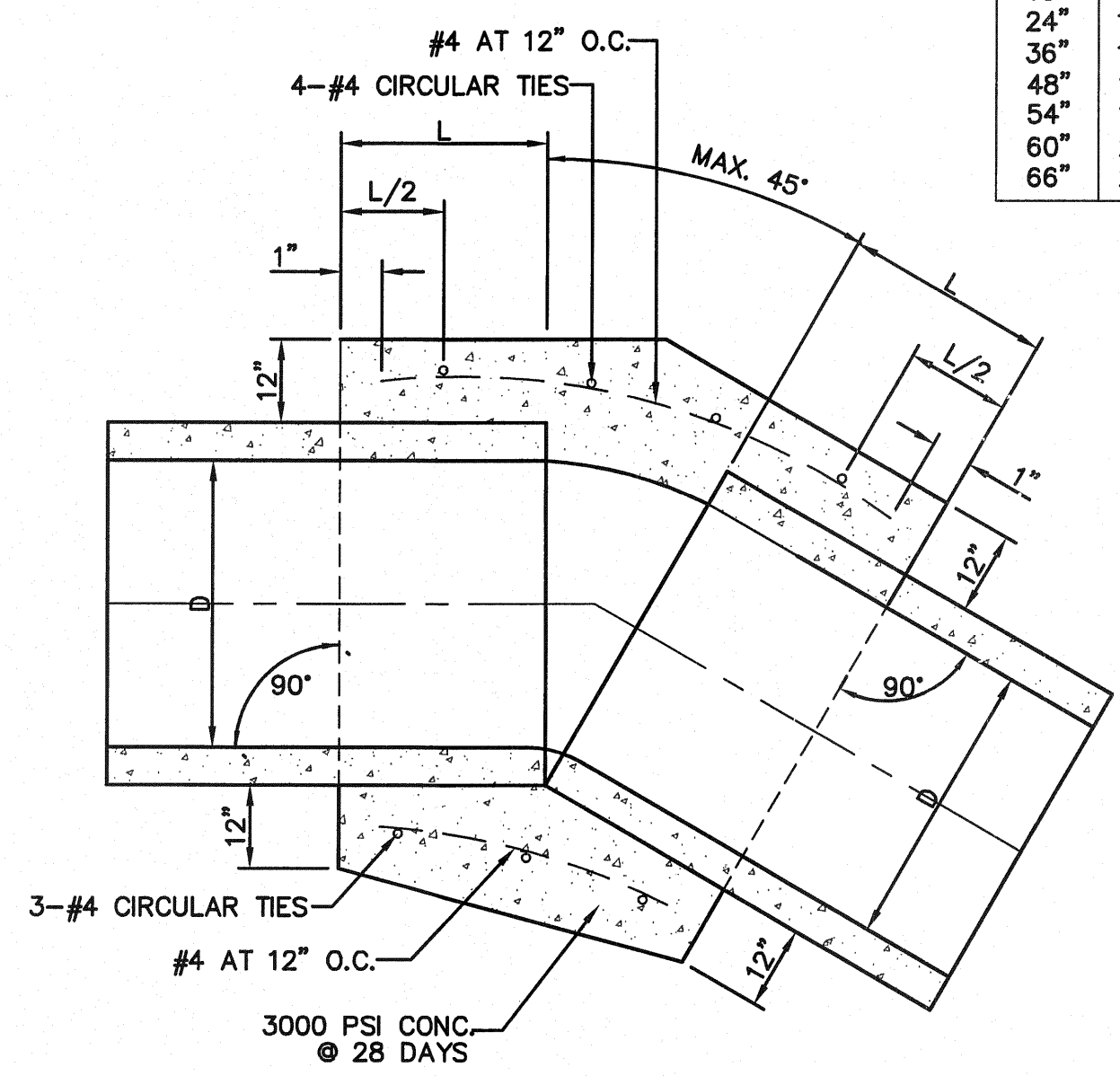
- A. PROPOSED R.C.P. PIPE.
- B. CONCRETE COLLAR (3000 PSI CONCRETE).
- C. INSIDE WALL OF EXISTING MANHOLE OR PRECAST STRUCTURE.
- D. #4's @ 12" O.C.
- E. 2-#4 CIRCULAR TIES.
- F. NON-SHRINK GROUT TO BE PLACED BETWEEN EXISTING MANHOLE AND RCP TO COVER ALL GAPS (TYPICAL). THE AREA BETWEEN THE EXISTING MANHOLE/STRUCTURE AND THE RCP SHALL BE 1/2 OF THE WALL THICKNESS OF THE EXISTING STRUCTURE.
- G. MANHOLE BASE.

TABLE		
D	L	T
18"	12"	12"
24"	12"	12"
30"	12"	12"
36"	18"	18"
42"	18"	18"



3 LATERAL CONNECTION AT STORMWATER PRECAST JUNCTION BOXES OR EXISTING MANHOLES (CONCRETE COLLAR) 2-28C
C10.4 SCALE: NTS

D	L
18"	12"
24"	12"
36"	18"
48"	18"
54"	18"
60"	21"
66"	21"



CONCRETE PIPE COLLAR

1. A CONCRETE COLLAR IS REQUIRED WHERE PIPES CHANGE IN HORIZONTAL OR VERTICAL ALIGNMENT.
2. FOR ANGLES GREATER THAN 45° USE JUNCTION BOXES.
3. THRUST BOX AS REQUIRED BY ENGINEER.
4. NOT TO BE USED FOR EFFLUENT PUMP STATION PIPES.

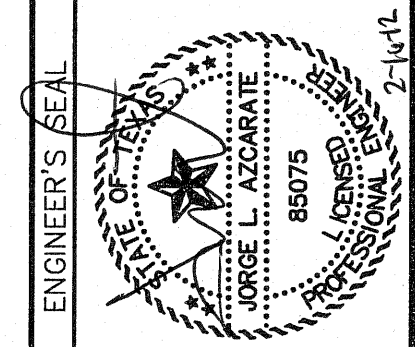
2 CONCRETE PIPE COLLAR
C10.4 SCALE: NTS

ENGINEERING & CONSTRUCTION MANAGEMENT DEPARTMENT

REVIEWED

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
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4712 Woodrow Bean, Ste. F, El Paso, TX 79924
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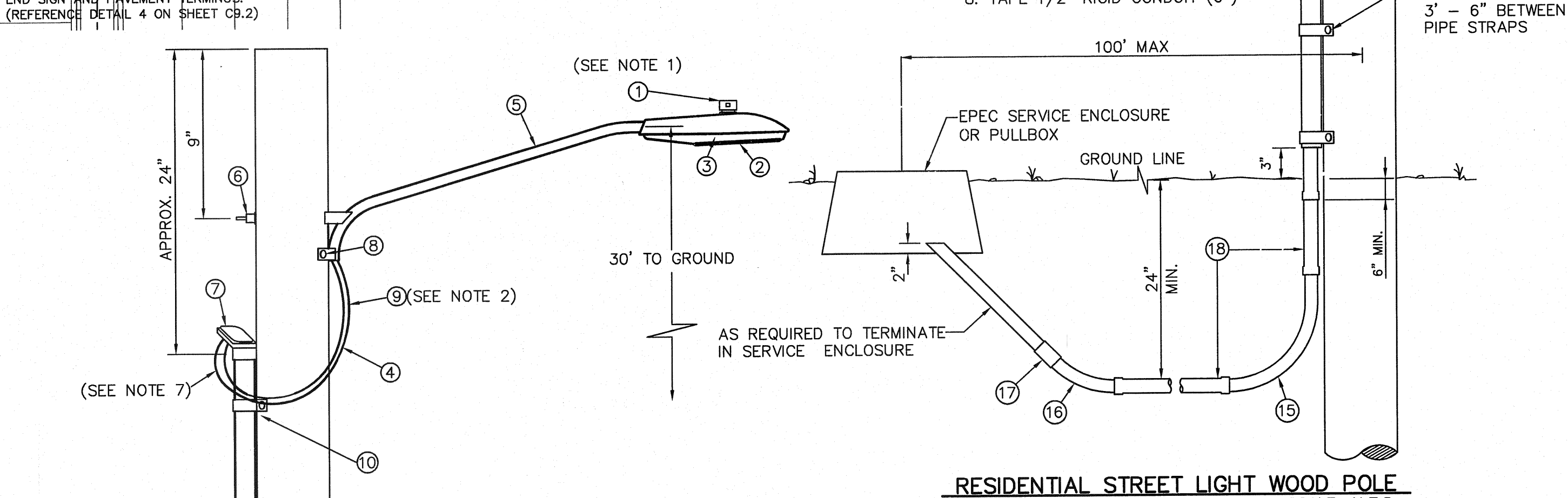
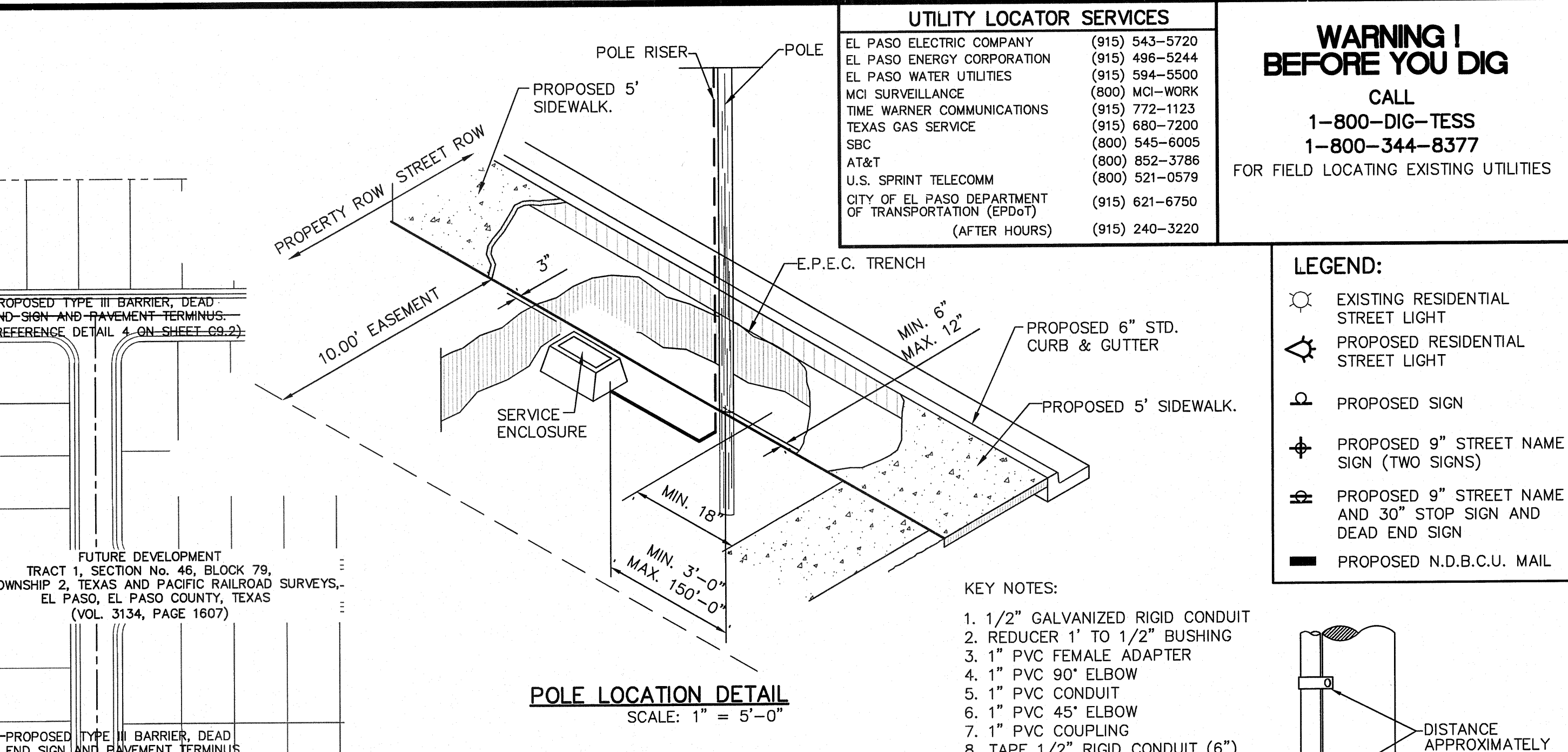
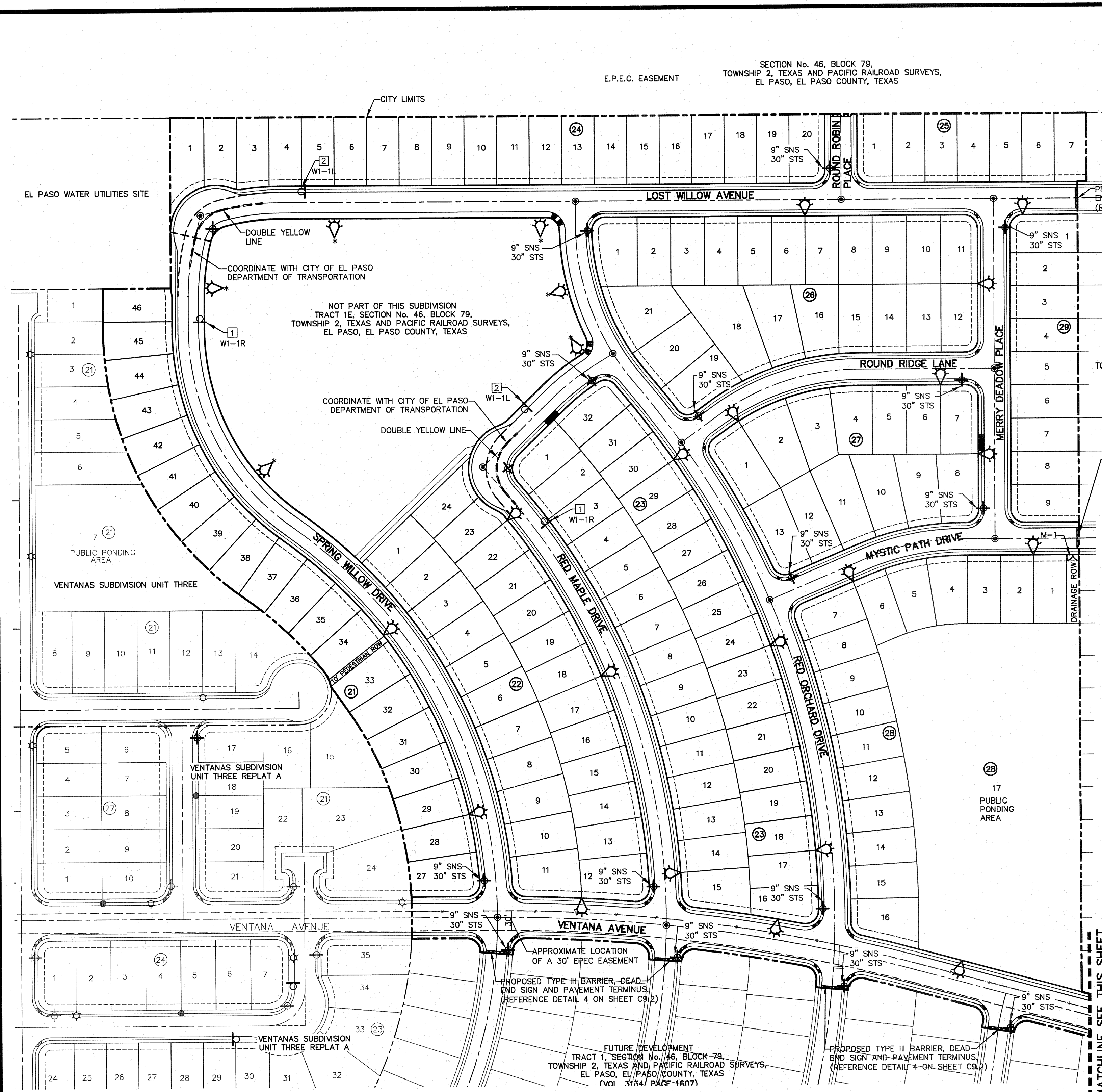


SCALE
Horizontal: N/A
Vertical: Interval: N/A
Contour: Interval: 2011
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2260-012-LD

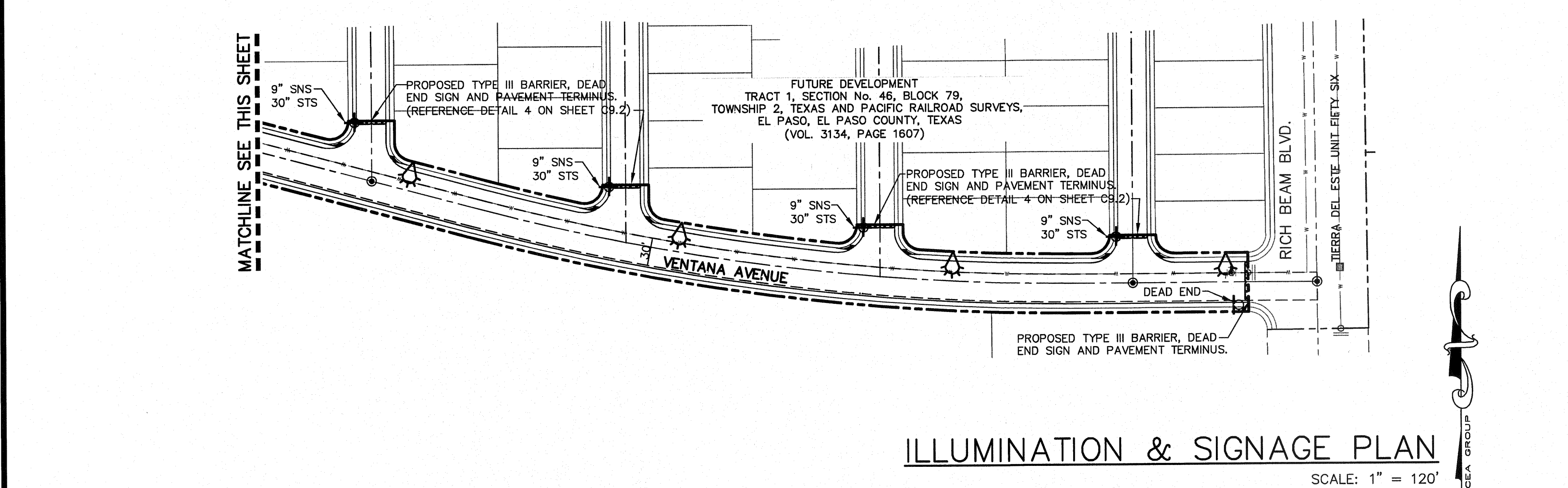
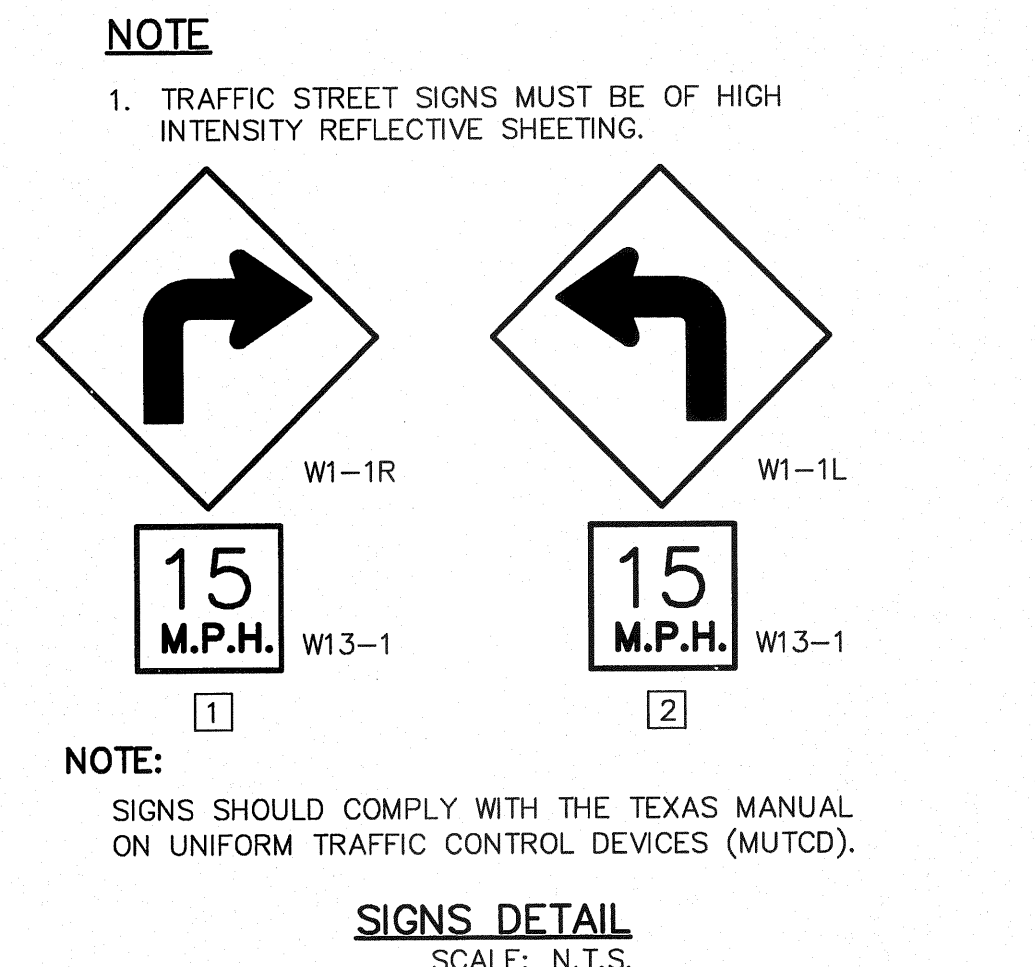
PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**DRAINAGE
DETAILS**
(SHEET 4 OF 4)
SHEET NO.

C10.4



ITEM NO.	DESCRIPTION	STOCK NO.	QTY.	LCOBRAHD	LCOBRAUG
1	PHOTO CELL, 240 V--SEE NOTE 1	21-225	1		
2	HPS LASMP, 100W	21-085	1		
3	LUMINARE, 100W H.P.S.	21-335	1		
4	SLEEVES, #12-10	05-140	2	LSLV1210	
5	MAST ARM, 6' X 1 1/4"	21-200	1	LBRKT1*6	
6	MACHINE BOLT, 5/8" X 12"	02-470	1		
	SQUARE GALV. WASHER, 2 1/4" X 2 1/4"	02-760	1		
	COIL SPRING WASHER, 5/8"	02-786	1		
	LOCK NUT, 5/8"	02-705	1		
7	SERVICE ENTRANCE CAP FOR 1" PVC CONDUIT	17-281	1	LSVCCAP1	
8	LAG BOLT, 3/8" X 3"	02-343	1	LLAG38*3	
9	CABLE, #10, 2 CONDUCTOR, 600V, UF	13-600	8'	L2C#10S	
10	COPPER CABLE, #12, SOLID, 600V, BLUE	13-702	60'	LC#12CU	
11	SCHEDULE 80 1" PVC CONDUIT	17-280	30'	LSCH801	
12	PIPE STRAP FOR 1" PVC CONDUIT, 2-HOLE	17-283	9'	LPVCSTRP	
13	NAIL, STAINLESS STEEL SCREW 2.5 IN.	14-427	.25#	LNAL14*2	
14	POLE, 35 FT. - CLASS 4	09-035	1	L354UG	
15	1" PVC 90 DEGREE ELBOW	17-297	1	LEL901	
16	1" PVC 45 DEGREE ELBOW	17-298	1	LEL451	
17	1" PVC COUPLING	17-296	1	LCPL1G1	
18	1" PVC CONDUIT				



UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT) (AFTER HOURS)	(915) 621-6750 (915) 240-3220

WARNING!
BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

- LEGEND:**
- EXISTING RESIDENTIAL STREET LIGHT
 - PROPOSED RESIDENTIAL STREET LIGHT
 - PROPOSED SIGN
 - PROPOSED 9" STREET NAME SIGN (TWO SIGNS)
 - PROPOSED 9" STREET NAME AND 30" STOP SIGN AND DEAD END SIGN
 - PROPOSED N.D.B.C.U. MAIL

- KEY NOTES:**
- 1/2" GALVANIZED RIGID CONDUIT
 - REDUCER 1" TO 1/2" BUSHING
 - 1" PVC FEMALE ADAPTER
 - 1" PVC 90° ELBOW
 - 1" PVC CONDUIT
 - 1" PVC 45° ELBOW
 - 1" PVC COUPLING
 - TAPE 1/2" RIGID CONDUIT (6")

ENGINEERING & CONSTRUCTION MANAGEMENT DEPARTMENT

PROJECT NAME: VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS

SHEET TITLE: ILLUMINATION & SIGNAGE PLAN

SHEET NO.: C11.1

SCALE: 1" = 120'

DATE: OCTOBER 2011

DESIGN BY: E.L.A.

CHECK BY: J.L.A.

APPROV. BY: J.L.A.

JOB NO.: 22660-012-LD

SCALE: 1" = 100'

Horizontal: N/A

Vertical: N/A

Contour Interval: N/A

DATE: OCTOBER 2011

DESIGN BY: E.L.A.

CHECK BY: J.L.A.

APPROV. BY: J.L.A.

JOB NO.: 22660-012-LD

SITE DESCRIPTION

PROJECT NAME AND LIMITS: VENTANAS SUBDIVISION UNIT FOUR
THE PROJECT IS BORDERED BY VENTANAS UNIT THREE TO THE WEST, TIERRA DE ORO
ADDITION TO THE NORTH, A PORTION OF SECTION 46, BLOCK 79, TOWNSHIP 2, T&P R.R Co. SURVEYS
TO THE EAST AND SOUTH.

PROJECT DESCRIPTION: THE SITE FOR THE NEW SUBDIVISION WILL ENCOMPASS APPROXIMATELY
35.781± ACRES, AND WILL CONTAIN 162 RESIDENTIAL LOTS, 1 PONDING AREA,
PROJECT IMPROVEMENTS SHALL CONSIST OF GRADING AND PAVING.

EXISTING CONDITIONS: THE SITE IS CLEAR OF SITE IMPROVEMENTS AND IS COVERED WITH ITS
NATURAL SURROUNDINGS.

MAJOR SOIL DISTURBING ACTIVITIES: MAJOR SOIL DISTURBING ACTIVITIES WILL CONSIST OF CLEARING
AND GRUBBING, GRADING FOR BUILDING PAD ELEVATIONS, CONSTRUCTION OF STREETS AND
EXCAVATION FOR UTILITIES.

TOTAL PROJECT AREA: 35.748± ac.

TOTAL AREA TO BE DISTURBED: 35.748± ac.

WEIGHTED RUNOFF COEFFICIENT
(AFTER CONSTRUCTION): 0.680

EXISTING CONDITION OF SOIL AND VEGETATIVE
COVER AND % OF EXISTING VEGETATIVE COVER: THE PROJECT SITE IS LOCATED IN THE VICINITY OF THE
HUECO-WINK ASSOCIATION. THE SOILS IN THIS AREA ARE GENERALLY DESCRIBED AS
NEARLY LEVEL AND GENTLY SLOPING SOILS THAT HAVE A FINE SANDY LOAM SUBSOIL
AND ARE MODERATELY DEEP OVER CALICHE, IN THE HUECO BOLSON.

NAME OF RECEIVING WATERS: STORM RUNOFF FROM THE NEW SUBDIVISION WILL BE DISCHARGED INTO
NEW RETENTION BASINS.

CERTIFICATION

DEVELOPER/OWNER CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGES THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OPERATOR: _____

SIGNATURE: _____

NAME (PRINT): _____

TITLE: _____

DATE: _____

CONTRACTOR'S CERTIFICATION

GENERAL CONTRACTOR

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGES THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OPERATOR: _____

SIGNATURE: _____

NAME (PRINT): _____

TITLE: _____

DATE: _____

EROSION AND SEDIMENT CONTROL

SOIL STABILIZATION PRACTICES

- _____ TEMPORARY SEEDING
- PERMANENT PLANTING, SODDING, OR SEEDING
- _____ MULCHING
- _____ SOIL RETENTION BLANKET
- _____ BUFFER ZONES
- _____ PRESERVATION OF NATURAL RESOURCES

OTHER: _____

STRUCTURAL PRACTICES:

- SILT FENCES OR EARTHEN BERM
- _____ HAY BALES
- _____ ROCK BERMS
- _____ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- _____ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- _____ DIVERSION DIKE AND SWALE COMBINATION
- _____ PIPE SLOPE DRAINS
- _____ CONCRETE FLUMES
- _____ ROCK BEDDING AT CONSTRUCTION EXIT
- _____ TIMBER MATTING AT CONSTRUCTION EXIT
- _____ CHANNEL LINERS
- _____ SEDIMENT TRAPS
- _____ SEDIMENT BASINS
- _____ STORM INLET SEDIMENT TRAP
- _____ STONE OUTLET STRUCTURES
- CURBS AND GUTTERS
- INLET PROTECTIONS
- _____ STORM DRAINS
- _____ VELOCITY CONTROL DEVICES
- _____ VEGETATED SWALES & NATURAL DEPRESSIONS

OTHER: _____

NARRATIVE - SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

1. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS (e.g. SILT FENCE AND/OR EARTHEN BERM, AND STABILIZED CONSTRUCTION ENTRANCE) ;
2. PERFORM CLEARING AND GRUBBING;
3. EXCAVATION FOR UTILITIES;
4. COMPLETE STREET AND LOT GRADING;
5. CONSTRUCTION OF SUBDIVISION IMPROVEMENTS; AND,
6. WHEN ALL CONSTRUCTION ACTIVITY RELATED IN DEVELOPMENT OF THE SITE IS COMPLETE, REMOVE TEMPORARY CONTROLS IN 1. ABOVE.

SWPPP GENERAL NOTES:

1. PLACEMENT OF SILT FENCE SHALL BE ADJUSTED AS NECESSARY TO PREVENT THE BLOCKING OF DRIVEWAYS OR DRIVING LANES.
2. THE SWPPP MANUAL IDENTIFIES THE DUTIES AND RESPONSIBILITIES OF THE GENERAL CONTRACTOR IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. THIS ITEM SHALL BE SUBSIDIARY TO THE SWPP BEST MANAGEMENT PRACTICES (COMPLETE IN PLACE) ITEMS. THE SWPPP PROJECT MANUAL IS AVAILABLE FOR REVIEWING AT THE CITY OF EL PASO - ENGINEERING DEPARTMENT. UPON SELECTION, THE CONTRACTOR WILL BE PROVIDED AN SWPPP MANUAL. THE CONTRACTOR SHALL MAINTAIN THIS MANUAL AT THE CONSTRUCTION SITE AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD.
3. THE CONTRACTOR SHALL COMPLETE AND SUBMIT ALL REGULATORY FORMS AND APPLICATIONS, AS PROVIDED IN THE SWPPP MANUAL, INCLUDING, BUT NOT LIMITED TO; NOI, NOT, SDPCP, AND ANY OTHER FORM REQUIRED BY THE CITY OF EL PASO AND TCEQ.
4. ALLOWABLE STORM WATER AND NON-STORMWATER DISCHARGE SHALL COMPLY WITH 15.20.080 (GENERAL PROHIBITION) AND 15.20.090 (SPECIFIC PROHIBITIONS AND REQUIREMENTS) OF THE CITY OF EL PASO STORM DRAIN POLLUTION CONTROL PLAN ORDINANCE. NON-STORMWATER DISCHARGES MAY CONSIST OF, BUT ARE NOT LIMITED TO, THE DISCHARGE RESULTING FROM FIREFIGHTING, LAWN WATERING, LANDSCAPE IRRIGATION, NATURAL SPRING, AND/OR AGRICULTURAL STORM WATER RUNOFF.
5. REFER TO DRAINAGE PLAN SHEET C4.1, FOR ADDITIONAL INFORMATION ON WATERSHED AREAS AND RUNOFF QUANTITIES (Q).
6. THE FOLLOWING HAVE BEEN IDENTIFIED AS POTENTIAL CONTAMINATION SOURCES: CLEARED AND GRADED AREAS; CONSTRUCTION SITE ENTRANCE AND ASPHALT PARKING AREA CONSTRUCTION; ASPHALT LOADING/UNLOADING AREAS; CONCRETE LOADING/UNLOADING AREAS; AND, ALL UNDISTURBED AREAS.
7. THE FOLLOWING IS A LIST OF POTENTIAL CONSTRUCTION SITE STORM WATER POLLUTANTS: ASPHALT; CONCRETE; GLUE/ADHESIVE; PAINTS; CURING COMPOUNDS; WASTEWATER FROM CONSTRUCTION EQUIPMENT WASHING; HYDRAULIC OIL/FLUIDS; GASOLINE; DIESEL FUEL; KEROSENE; ANTIFREEZE/COOLANT; AND EROSION.

BEST MANAGEMENT PRACTICES CONTROLS

I. WASTE MATERIALS:

ALL WASTE MATERIALS, INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. NO CONSTRUCTION WASTE MATERIAL SHALL BE BURIED ON SITE. THE TRANSIT DUMPSTER SHALL COMPLY WITH ORDINANCE 18.52.010 (ENCLOSURE AND REMOVAL OF WASTE MATERIALS DURING CONSTRUCTION). THE DUMPSTER SHALL BE EMPLOYED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH SHALL BE HAULED TO A LICENSED LANDFILL.

II. HAZARDOUS WASTE:

AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES SHALL BE CONSIDERED HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATION, CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPT. AND TCEQ.

III. SANITARY WASTE:

ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY OR AS REQUIRED, CHAPTER 18.08 (BUILDING CODE), BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV. SPILL PREVENTION:

THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURES OF MATERIALS TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING:

- A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB
- B. NEATLY STORE MATERIALS ON-SITE IN AN ORDERLY MANNER
- C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER
- D. DO NOT MIX SUBSTANCES WITH ONE ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER
- E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING THE CONTAINER
- F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL

HAZARDOUS PRODUCTS:

PRACTICES USED TO REDUCE RISKS:

- A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
- B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
- C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURER'S OR LOCAL & STATE RECOMMENDED METHODS

PETROLEUM PRODUCTS:

ALL ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

SPILL CONTROL PRACTICES:

- A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES:
- B. MATERIALS AND EQUIPMENT NECESSARY FOR CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE:
- C. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY
- D. SPILL AREA SHALL BE WELL VENTILATED AND APPROPRIATE CLOTHING WILL BE WORN:
- E. ANY SPILL SHALL BE REPORTED TO THE APPROPRIATE GOVERNMENTAL AGENCY
- F. MEASURES SHALL BE TAKEN TO PREVENT A SPILL FROM REOCCURRING

V. MAINTENANCE AND INSPECTION PROCEDURES:

ALL POLLUTION PREVENTION MEASURES SHALL BE INSPECTED AT LEAST ONCE A MONTH OR WITHIN 24-HOURS PRIOR TO ANTICIPATED STORM EVENT AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR MORE. INSPECTION IN FINAL STABILIZED AREAS OR DURING ARID PERIODS WILL BE CONDUCTED MONTHLY, BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY.

VI. REMARKS:

DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEANED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.

VII. OFFSITE VEHICLE TRACKING:

IN ADDITION TO THE STABILIZED CONSTRUCTION ENTRANCES, THE FOLLOWING MEASURES SHALL BE OBSERVED DURING CONSTRUCTION:
- HAUL ROADS SHALL BE DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPULIN
- EXCESS DIRT ON ROAD SHALL BE REMOVED IMMEDIATELY
- STABILIZED CONSTRUCTION ENTRANCE
- OTHER: _____

VIII. REFER TO SWPPP REPORT FOR ADDITIONAL INFORMATION

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
INTERSECTION OF
DRIVE AND SETTING SUN
DRIVE.
DATE _____ REVISIONS _____ BY _____

ceea
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #4594
4712 Woodrow Bess, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceea.org

ENGINEER'S SEAL
Jorge L. Azcarate
Professional Engineer
No. 189075
State of Texas

SCALE: Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPVD. BY: J.L.A.
JOB No. 2260-072-ID

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**STORM WATER
POLLUTION
CONTROL PLAN:
GENERAL NOTES**

SHEET NO.
C12.1

ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT
REVIEWED



UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

WARNING!
BEFORE YOU DIG
 CALL
1-800-DIG-TESS
1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES

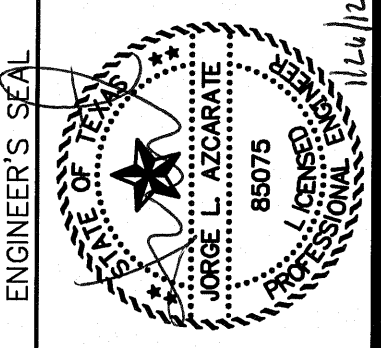
- LEGEND**
- X-X- SILT FENCE OR EARTHEN BERM
 - [Hatched Box] STABILIZED CONSTRUCTION ENTRANCE
 - [S] STAGING AREA
 - [P] PORTABLE TOILETS

NOTES:

1. SELECTION OF BEST MANAGEMENT PRACTICES (SILT FENCE OR EARTHEN) SHALL BE AT THE DISCRETION OF THE DEVELOPER/CONTRACTOR.

DATE	REVISIONS	BY

csa
C O U P
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-4584
 4712 Woodrow Bea. Ste. F El Paso, TX 79924
 Office: 915.544.5232 Fax: 915.544.5233 www.csaengr.com



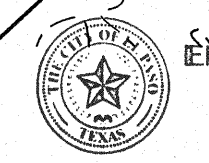
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Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	OCTOBER 2011
DESIGN BY:	F.Z.
DRAWN BY:	A.B.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	2260-012-ID

PROJECT NAME
 VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS

SHEET TITLE
 STORM WATER
 POLLUTION
 CONTROL PLAN:
 SITE PLAN

SHEET NO.

C12.2



ENGINEERING & CONSTRUCTION
 MANAGEMENT DEPARTMENT

REVIEWED

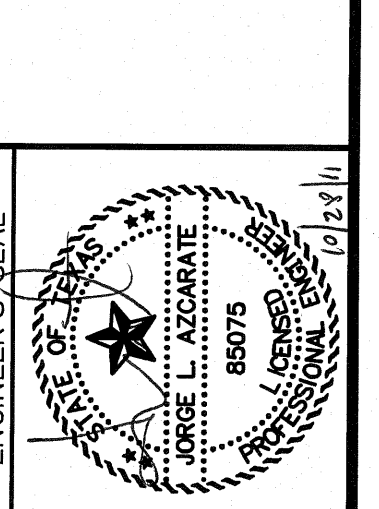
SITE PLAN
 SCALE: 1" = 100'

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5800
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 FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS
 EXISTING CITY MONUMENT
 ELEVATION-3970.52 FEET (CITY DATUM)
 LOCATED AT THE CENTERLINE
 INTERSECTION OF
 SUN TRAIL DRIVE AND SETTING SUN
 DRIVE.



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	OCTOBER 2011
DESIGN BY:	F.Z.
DRAWN BY:	A.B.
CHKD. BY:	J.L.A.
APPROV. BY:	J.L.A.
JOB NO.	2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**STORM WATER
 POLLUTION
 PREVENTION PLAN:
 DETAILS**

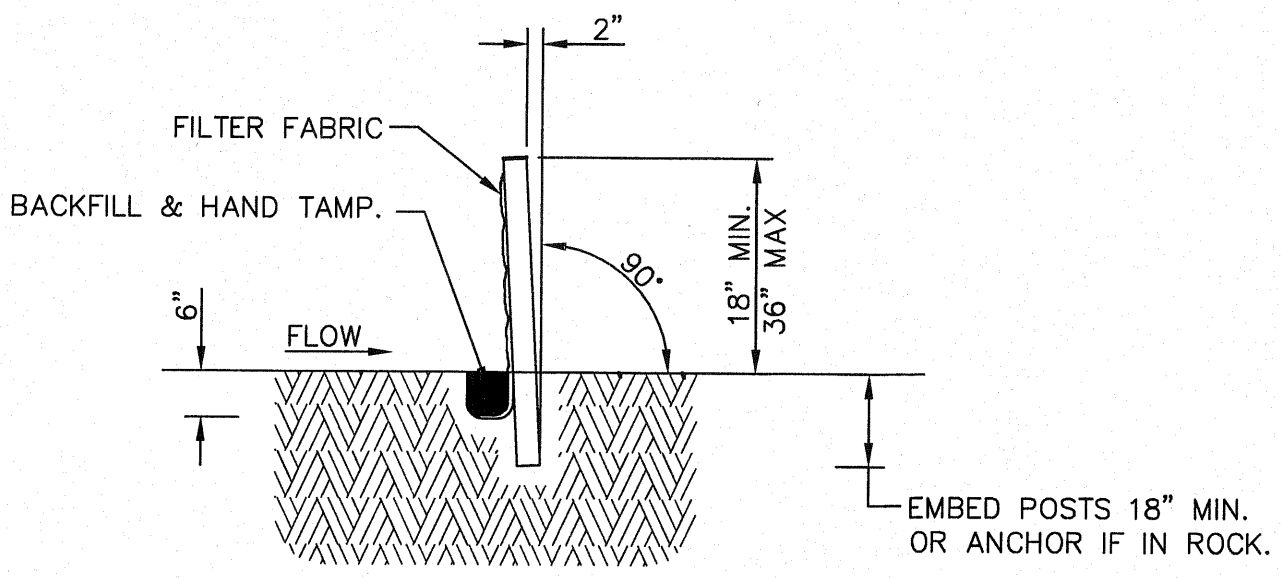
SHEET NO.
C12.3

4' MIN. STEEL OR WOOD POSTS SPACED AT 6' TO 8' O.C.
 SOFTWOOD POSTS SHALL BE 3" MIN. DIA. OR NOMINAL 2"x4".
 HARDWOOD POSTS SHALL HAVE A MIN. CROSS SECTION OF 1.5" X 1.5".

CONNECT THE ENDS OF
 SUCCESSIVE REINFORCEMENT
 SHEETS OR ROLLS A MIN. OF
 6 TIMES WITH HOG RINGS.

GALV. W.W.M. (12.5 GA. MIN.)
 MAX. OPENING SIZE SHALL BE
 2" X 4".

ATTACH THE W.W.M. & FABRIC ON END POSTS
 USING 4 EVENLY SPACED STAPLES FOR
 WOODEN POSTS (OR 4 T-CLIPS OR SEWN
 VERTICAL POCKETS FOR STEEL POSTS).



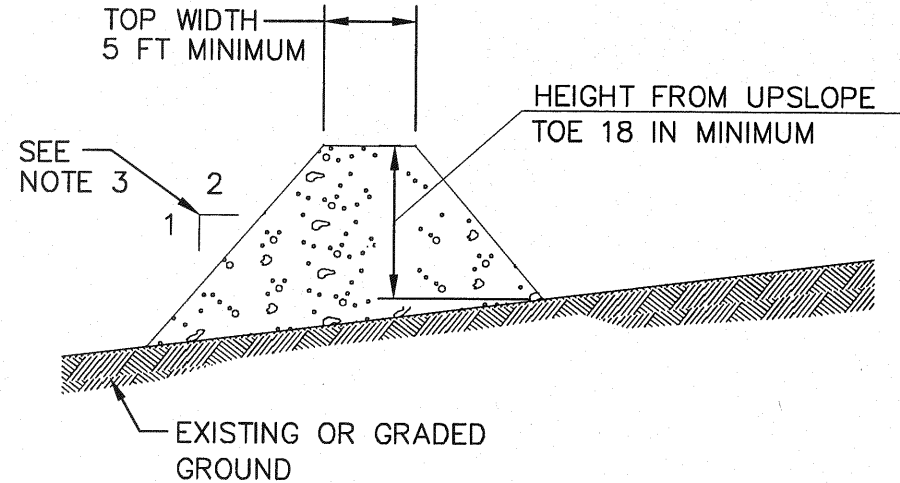
SECTION A-A

FASTEN FABRIC TO TOP STRAND OF WELDED WIRE MESH (W.W.M.)
 BY HOG RINGS OR CORD AT A MAX. SPACING OF 15".

WOVEN FILTER
 FABRIC

PLACE 4" TO 6" OF FABRIC AGAINST THE TRENCH
 SIDE AND APPROX. 4" ACROSS TRENCH BOTTOM IN
 UPSTREAM DIRECTION. MINIMUM TRENCH SIZE
 SHALL BE 6" SQUARE. BACKFILL AND HAND TAMP.

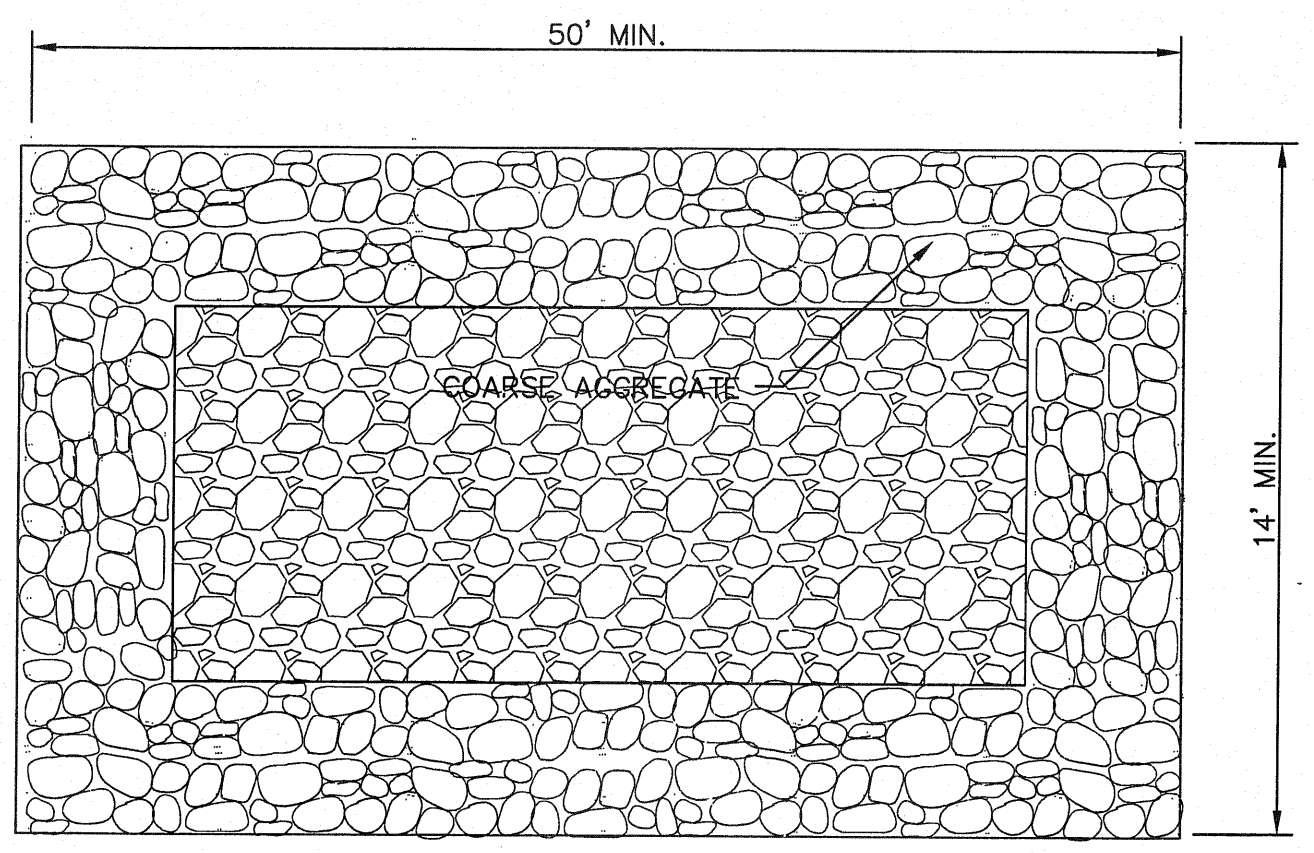
TEMPORARY SEDIMENT CONTROL FENCE



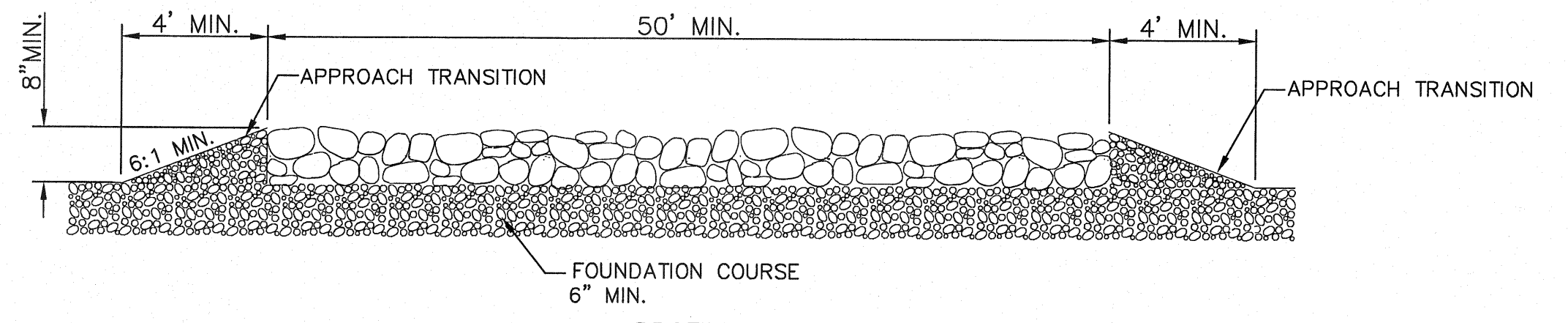
GENERAL NOTES:

- SOIL USED IN BERM CONSTRUCTION SHALL BE MACHINE COMPACTED.
- TOP WIDTH AND HEIGHT OF BERM MAY BE MODIFIED WITH PRIOR APPROVAL OF THE ENGINEER.
- SIDE SLOPES WITHIN THE SAFETY CLEAR ZONE OF A ROADWAY SHALL BE 6:1 OR FLATTER.
- GRADING SHALL BE SHOWN ELSEWHERE IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
- THE ENGINEER RESERVES THE RIGHT TO MODIFY THE DIMENSIONS SHOWN FOR THE BERM DEPENDENT ON RUNOFF VOLUME CHARACTERISTICS.
- BERM THAT ARE IN PLACE FOR MORE THAN 14 CALENDAR DAYS SHOULD BE STABILIZED TO PREVENT SEDIMENT RUNOFF.
- THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

TYPICAL BERM CONFIGURATION



PLAN

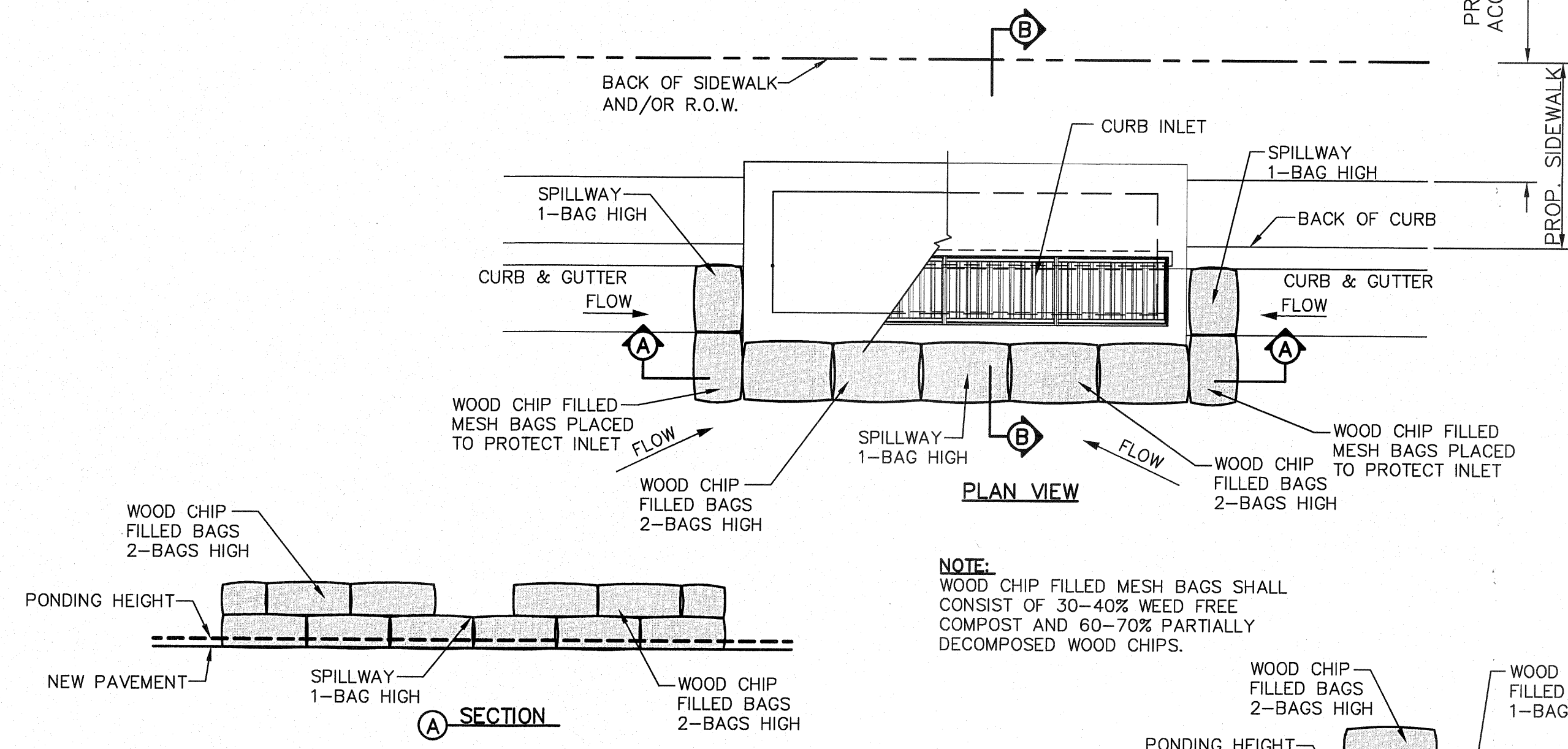


PROFILE

GENERAL NOTES

- THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'.
- THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 4" TO 8".
- THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
- THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
- THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
- THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

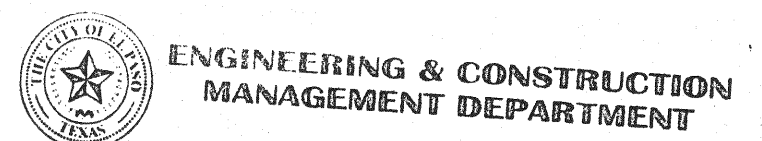
CONSTRUCTION EXIT (TYPE 1)



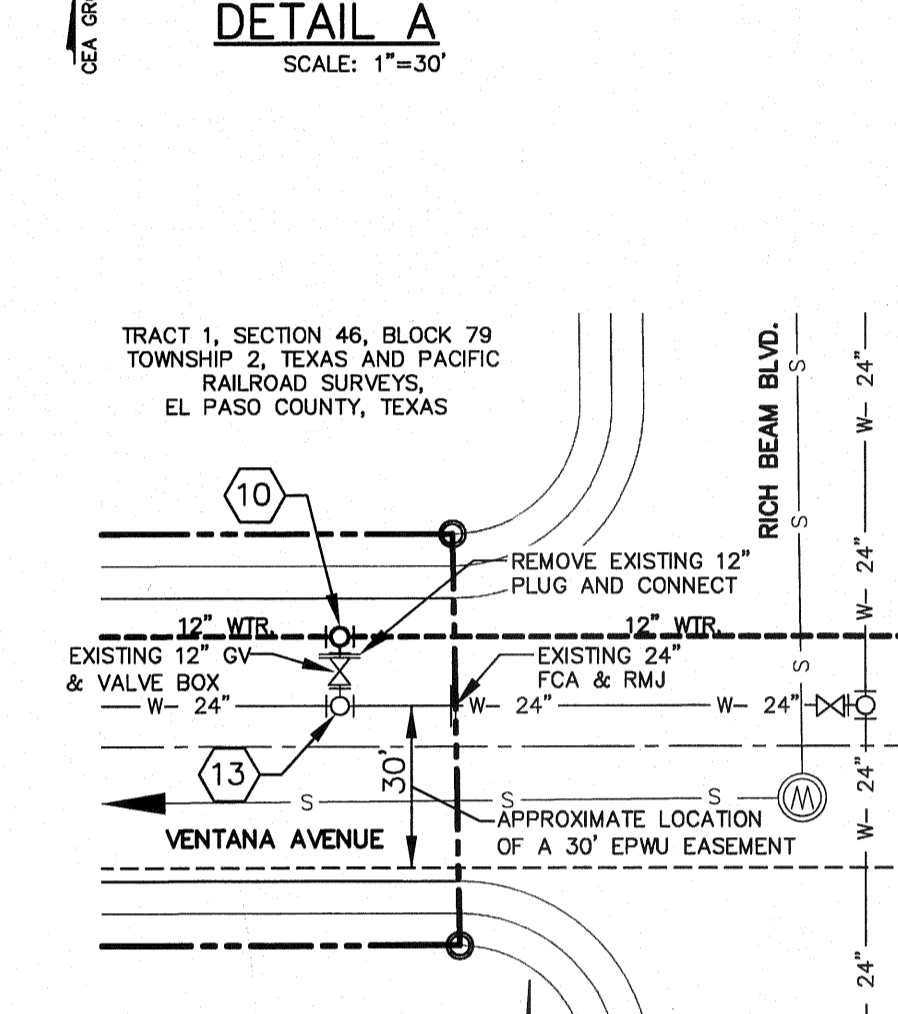
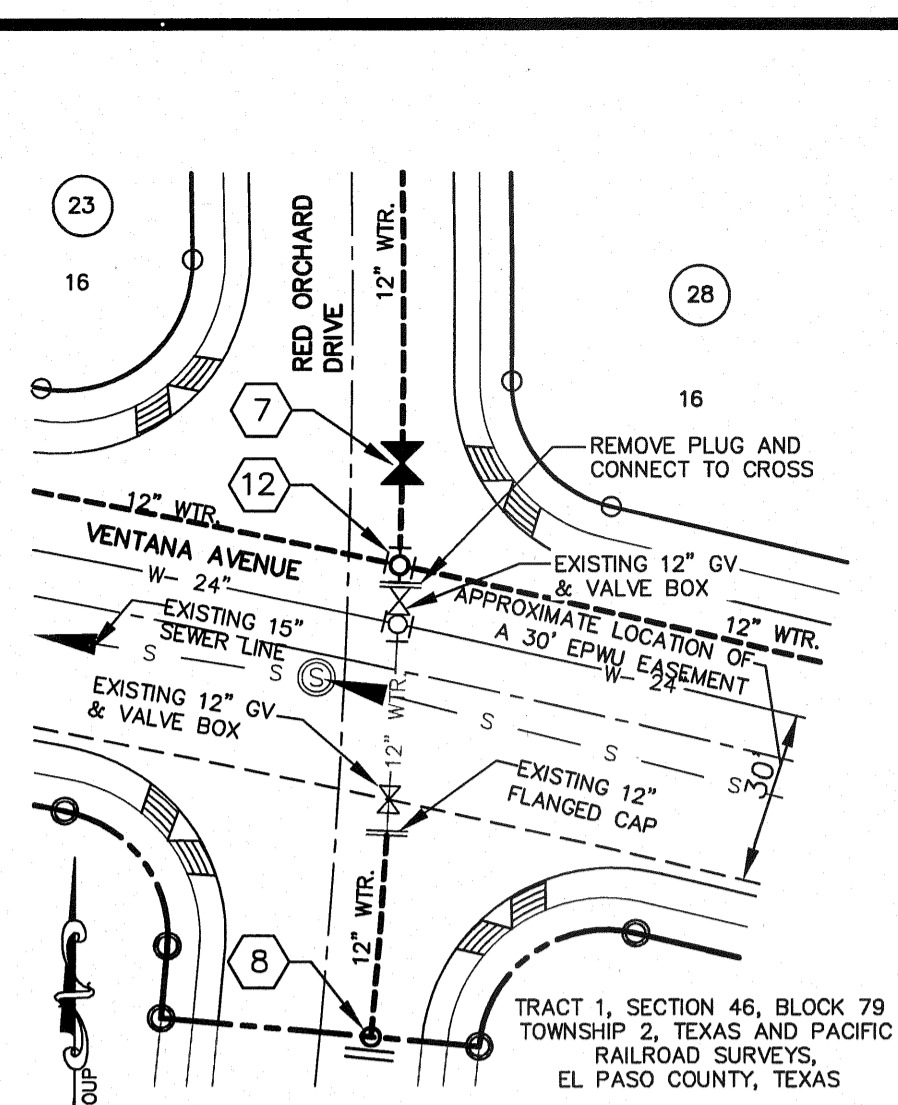
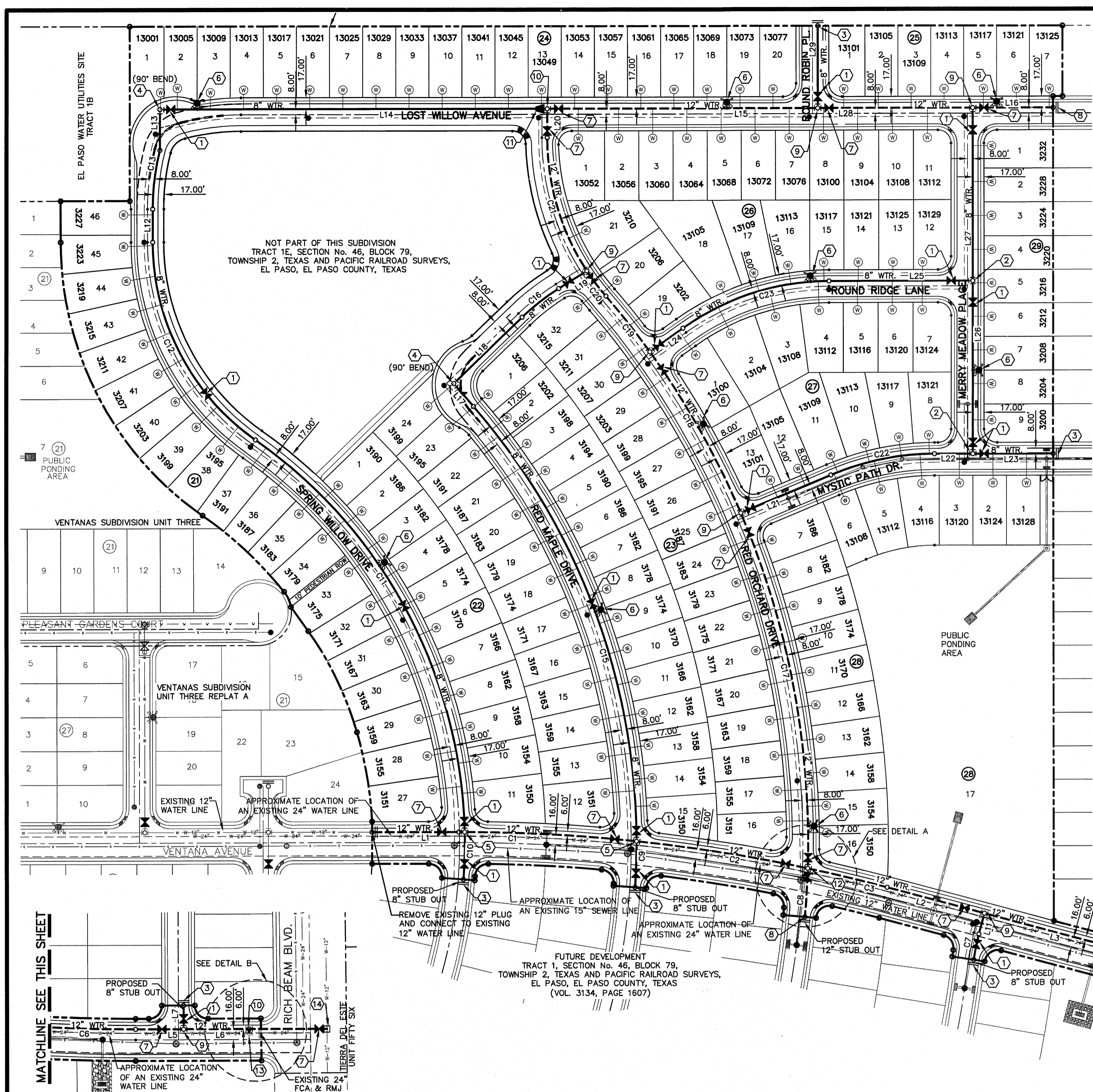
NOTE:
 WOOD CHIP FILLED MESH BAGS SHALL
 CONSIST OF 30-40% WEED FREE
 COMPOST AND 60-70% PARTIALLY
 DECOMPOSED WOOD CHIPS.

- GENERAL NOTES:
- PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
 - INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

TEMPORARY INLET PROTECTION



REVIEWED



CURVE	LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
C1	261.61	2516.00	130.82	261.49	N85°51'34"W	5°57'07"
C2	263.95	2516.00	132.09	263.82	N80°52'31"W	6°00'10"
C3	124.30	2516.00	62.16	124.29	N76°27'16"W	2°49'29"
C4	169.21	2484.00	84.61	169.17	S76°59'26"E	3°54'11"
C5	278.78	2484.00	139.54	278.63	S82°09'26"E	6°25'49"
C6	202.32	2484.00	101.22	202.27	S87°42'21"E	4°40'00"
C7	39.84	342.00	19.94	39.82	S11°37'24"W	6°40'30"
C8	34.73	1266.00	17.36	34.73	N04°21'04"E	1°34'18"
C9	70.02	1005.00	35.03	70.01	N01°52'21"E	3°58'31"
C10	72.03	744.00	36.05	72.01	N01°30'12"E	3°52'48"
C11	698.05	744.00	377.08	672.53	N29°30'51"W	12°43'46"
C12	351.22	366.00	180.45	337.80	N38°19'49"E	54°58'56"
C13	89.89	366.00	45.17	89.67	S06°59'49"W	14°04'19"
C14	113.41	382.00	57.08	113.04	S81°42'36"W	16°07'14"
C15	717.88	1005.00	375.02	702.71	N20°25'13"W	40°55'36"
C16	70.75	343.00	35.50	70.62	S51°51'55"W	11°49'05"
C17	551.19	1266.00	280.03	546.85	N10°40'37"W	24°58'43"
C18	281.27	1266.00	141.24	280.69	N29°30'51"W	12°43'46"
C19	107.94	1266.00	54.00	107.91	N38°19'49"E	43°50'08"
C20	48.30	368.00	24.18	48.26	S37°00'16"E	7°31'10"
C21	213.27	368.00	109.72	210.30	S16°38'31"E	33°12'19"
C22	161.98	408.00	82.07	160.91	S78°35'15"W	22°44'47"
C23	237.16	383.00	122.52	233.38	S72°13'19"W	35°28'40"

LINE	LENGTH	BEARING
L1	140.68	N89°58'02"E
L2	153.02	S75°02'21"E
L3	126.08	S75°02'21"E
L4	58.38	S75°02'21"E
L5	72.90	N89°58'02"E
L6	217.43	N89°57'24"E
L7	36.01	N00°02'21"W
L8	41.09	N00°02'21"W
L9	47.86	N00°02'21"W
L10	51.47	N00°02'21"W
L11	32.55	S14°57'39"E
L12	49.82	N00°02'21"W
L13	61.14	N14°01'58"E
L14	588.45	N89°57'39"E
L15	647.20	N89°57'39"E
L16	122.00	N89°57'39"E
L17	45.56	N41°03'01"W
L18	144.24	N45°57'23"E
L19	50.49	S57°45'28"W
L20	43.01	N00°02'21"W
L21	148.55	N67°12'52"E
L22	58.37	N89°57'39"E
L23	122.00	N89°57'39"E
L24	61.51	N54°28'59"E
L25	216.85	N89°57'39"E
L26	262.00	N00°02'21"W
L27	261.00	N00°02'21"W
L28	235.72	N89°57'39"E
L29	123.06	N00°02'21"W

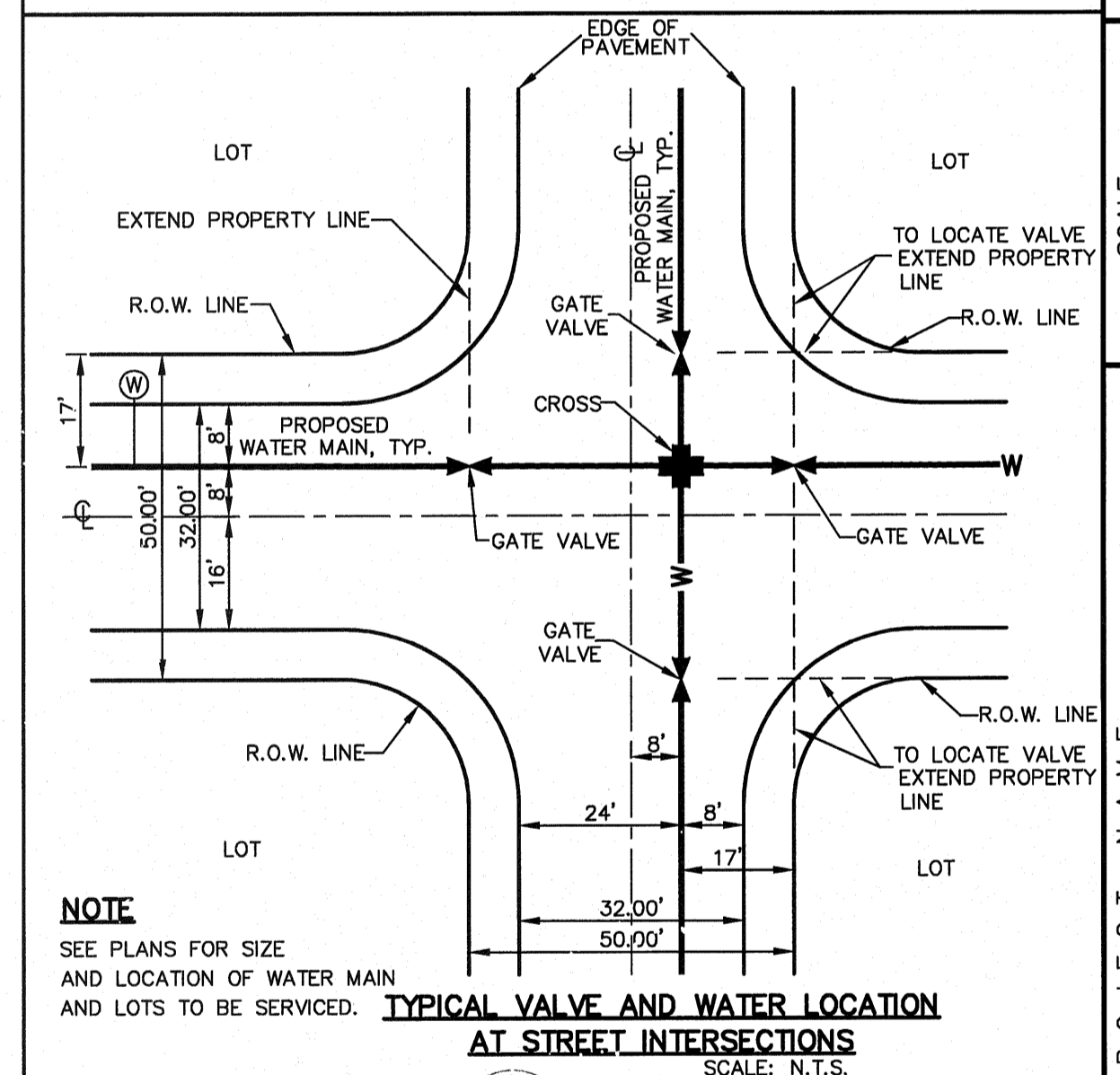
SYMBOL	DESCRIPTION
(1)	8" # GATE VALVE
(2)	8" X 8" TEE
(3)	8" PLUG
(4)	8" BEND
(5)	8" X 12" CROSS
(6)	FIRE HYDRANT
(7)	12" # GATE VALVE
(8)	12" PLUG
(9)	8" X 12" TEE
(10)	12" X 12" TEE
(11)	8" X 12" REDUCER
(12)	12" X 12" CROSS
(13)	EXISTING 24" X 12" TEE
(14)	TAPPING SLEEVE VALVE

NOTES:

- ALL WATER LINES SHALL COMPLY WITH AWWA C-900 DR 14 PRESSURE CLASS 305, OR UNLESS OTHERWISE REQUIRED BY THE EPWU/PSB RULES AND REGULATIONS AND DESIGN STANDARDS.

LEGEND

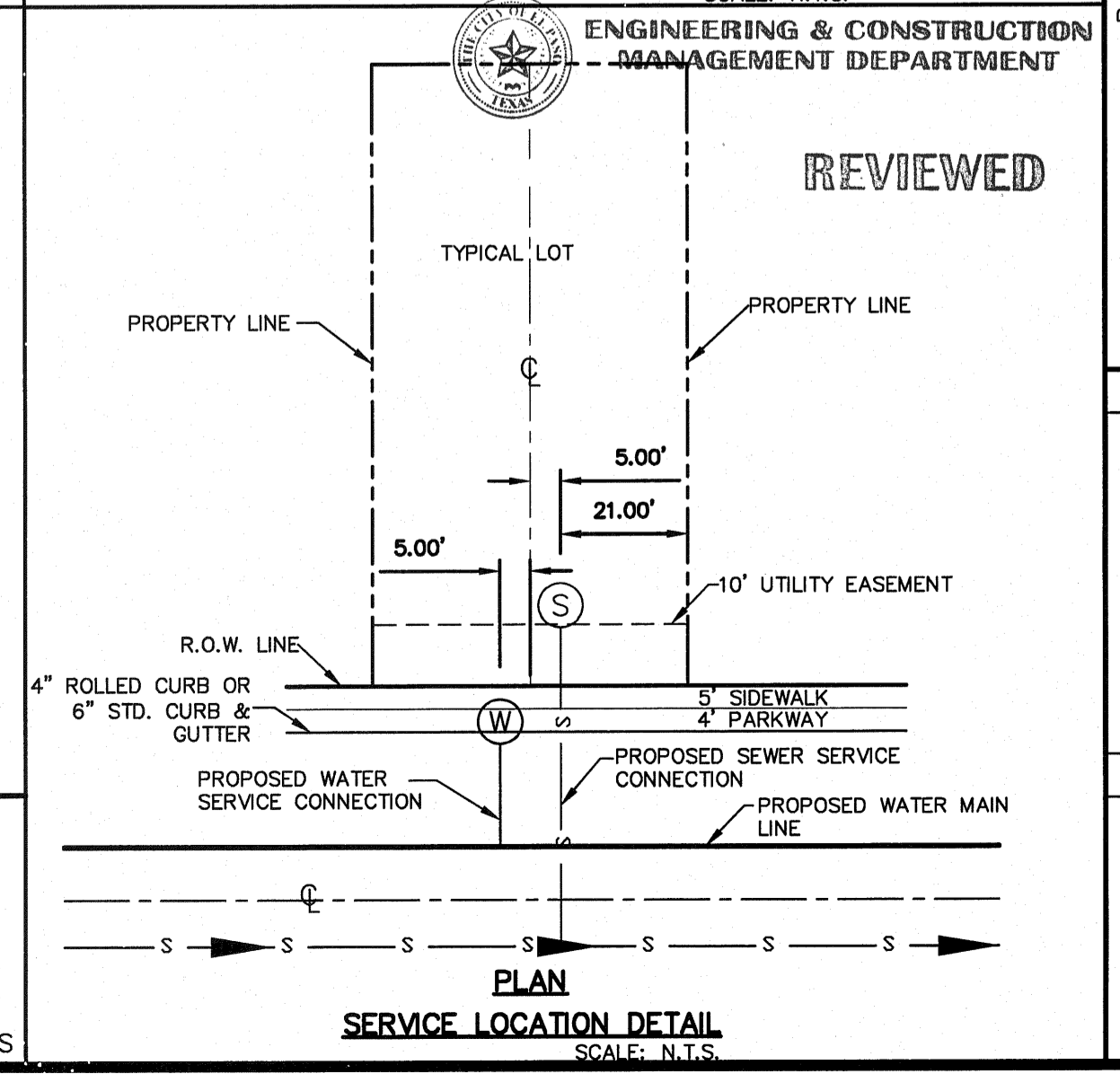
SYMBOL	DESCRIPTION
---	PROPERTY LINE
---	SUBDIVISION BOUNDARY
---	STREET R.O.W. LINE
---	10' UTILITY EASEMENT
---	PROPOSED 8", C-900 P.V.C. PIPE, UNLESS OTHERWISE SPECIFIED
---	PROPOSED 12", C-900 P.V.C. PIPE, UNLESS OTHERWISE SPECIFIED
---	EXISTING 12" WATER LINE
---	EXISTING 24" WATER LINE
---	PROPOSED SANITARY SEWER
---	PROPOSED STORM SEWER
---	EXISTING SEWER LINE
---	EXISTING WATER LINE
---	PROPOSED SERVICE CONNECTION
---	PROPOSED SERVICE CONNECTION (REFER TO NOTE 14)
---	PROPOSED FIRE HYDRANT, KENNEDY OR MUELLER MODEL
---	EXISTING FIRE HYDRANT
---	PROPOSED GATE VALVE
---	EXISTING GATE VALVE
---	PLUG
---	POINT OF TANGENCY
---	REDUCER



- GENERAL NOTES**
- UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE PROPOSED WATER MAINS SHALL BE INSTALLED NO LESS THAN 10' AWAY FROM EXISTING SEWER LINE. SEPARATIONS DISTANCES SHALL FOLLOW TCEQ STANDARD REQUIREMENTS (§290.44).
 - THE INTENT OF THE OWNER IS TO HAVE THE WATER MAINS INSTALLED TO SUCH A DEPTH THAT THEY WILL HAVE AT LEAST 60" FROM INVERT OF PIPELINE TO PROPOSED ELEVATIONS AT ALL LOCATIONS. THE PIPELINES SHALL HAVE NO DIPS, ELEVATIONS AT ALL LOCATIONS. THE PIPELINES SHALL HAVE NO DIPS, SAGS OR HUMPS OR OTHER IRREGULARITIES IN VERTICAL ALIGNMENT. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INSTALLING THE WATER PIPELINE SO THAT AN ACCEPTABLE PROFILE CAN BE ESTABLISHED PRIOR TO INSTALLATION OF THE PIPELINE.
 - 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 UTILITY COMPANIES, EL PASO WATER UTILITIES AND CITY OF EL PASO 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.
 - TRENCH SAFETY REQUIREMENTS SHALL BE AS REQUIRED BY OSHA.
 - 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 VALVE, FIRE HYDRANT, ELBOW, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
 - THE EL PASO WATER UTILITIES AND CITY OF EL PASO MUST BE NOTIFIED 48 HOURS PRIOR TO COMMENCING ANY WORK IN AREAS WITHIN THEIR JURISDICTION.
 - EXISTING STREETS, DRIVEWAYS, PARKING LOTS, MAILBOXES, SIGNS, CHAIN-LINK FENCES, AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGE OR REMOVED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION AT NO COST TO OWNER.
 - TRAFFIC CONTROL SHALL BE IN PLACE PRIOR TO INITIATING WORK.
 - ALL TIE-INS SHALL BE CLOSELY COORDINATED WITH THE EL PASO WATER UTILITIES AT LEAST 48 HOURS PRIOR TO ACTUAL CONSTRUCTION.
 - CONTRACTOR SHALL PROVIDE THE REQUIRED COUPLINGS, ELBOWS AND NECESSARY PIPING APPURTENANCES FOR A COMPLETE AND OPERATIONAL WATER SYSTEM.
 - ALL NEW VALVES SHALL BE ALIGNED PERPENDICULAR TO PROPERTY LINES.
 - CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFORM EPWU-PSB SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS AND RELATED APPURTENANCES.
 - FIRE HYDRANTS SHALL BE INSTALLED IN THE PARKWAY AREA.
 - THE WATER METERS FOR THE PROPOSED WATER SERVICE CONNECTIONS SHALL BE INSTALLED ON THE PARKWAYS. SYMBOLS ARE ONLY SHOWN FOR DEPICTION PURPOSES ONLY.

- GENERAL UTILITIES:**
TEXAS EXCAVATION SAFETY SERVICE
11884 GREENVILLE AVENUE.
DALLAS, TX. 75243
(800) 344-8377
- ENGINEER:**
CEA GROUP
CASTNER CENTER @ TRANSMOUNTAIN
4712 WOODROW BEAN, STE. F
EL PASO, TX. 79924
(915) 544-5232
MR. JORGE L. AZCARATE, P.E.
- FIBER OPTICS:**
MCI TELECOMMUNICATIONS CORPS.
4045 DONIPHAN PARK CIRCLE
EL PASO, TX. 79922
(915) 544-5232 EXT. 201
MR. DANIEL HERNANDEZ
- CABLE TELEVISION:**
TIME WARNER COMMUNICATIONS
7010 AIRPORT ROAD
EL PASO, TX. 79906
(915) 772-1123
- WATER & SEWER:**
EL PASO WATER UTILITIES
1154 HAWKINS BOULEVARD
EL PASO, TX. 79961
(915) 594-5530
MR. FELIPE LOPEZ, JR., P.E.
- ELECTRIC:**
EL PASO ELECTRIC CO.
501 W. SAN ANTONIO ST.
EL PASO, TX. 79902
(915) 543-2076
MR. FRANK VIGEL (DISTRIBUTION)
- EL PASO STREETS**
CITY OF EL PASO
DEPARTMENT OF TRANSPORTATION
7968 SAN PAULO DRIVE
EL PASO, TX. 79907
(915) 621-6750
MR. DARYL W. COLE
- RESIDENTIAL GAS LINES:**
TEXAS GAS SERVICE
4700 POLLARD ST.
EL PASO, TX. 79930
(915) 680-7329
MR. JOSE DE ALBA
- TELEPHONE:**
SBC
11200 PELICANO
EL PASO, TX. 79935
(915) 595-5151
MR. TIM BROWN
- FIBER OPTICS:**
A&T
P.O. BOX 1650
EL PASO, TX. 79949
(800) 852-3786
MS. DARLENE NORIS

WARNING!
BEFORE YOU DIG
CALL
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1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES



PROJECT NAME: VENTANAS SUBDIVISION UNIT FOUR SUBDIVISION IMPROVEMENTS

SCALE: 1"=100'

Horizontal: N/A
Vertical: N/A
Contour: INTERVAL 2011

DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.L.A.
APPROVED BY: J.L.A.
JOB NO. 2260-012-LD

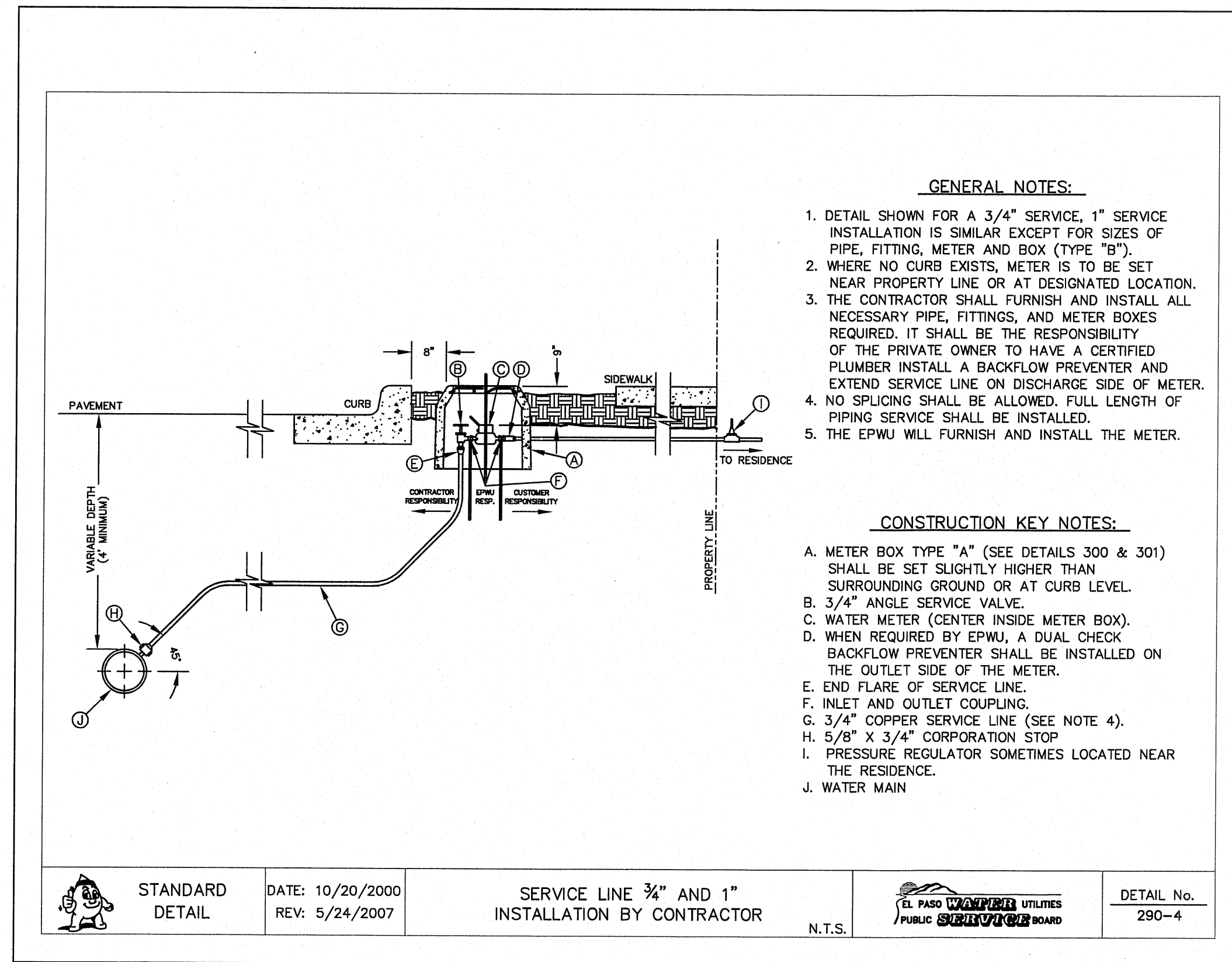
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ENGINEERING & CONSTRUCTION MANAGEMENT DEPARTMENT

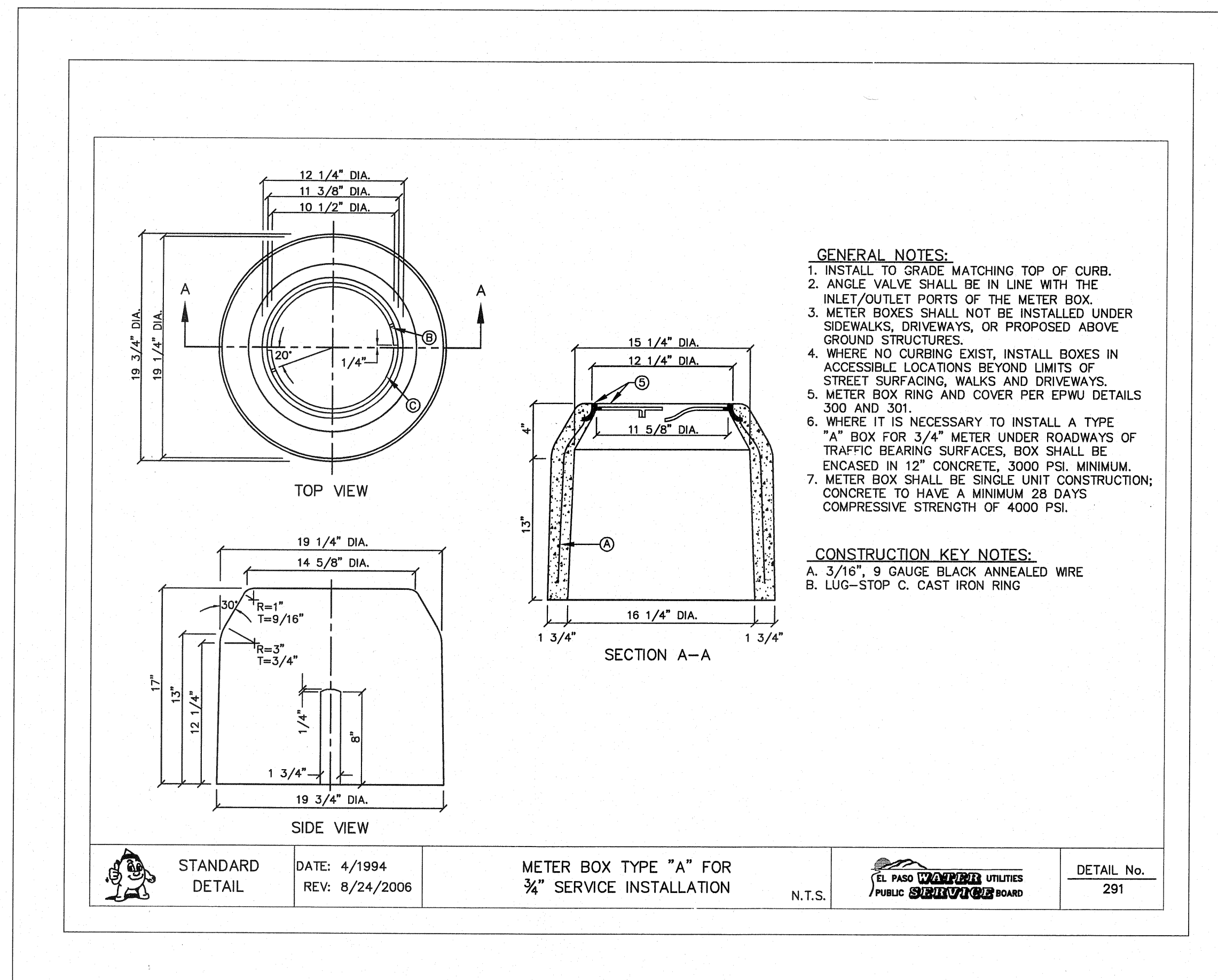
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SHEET TITLE: WATER INDEX MAP/GENERAL INFORMATION

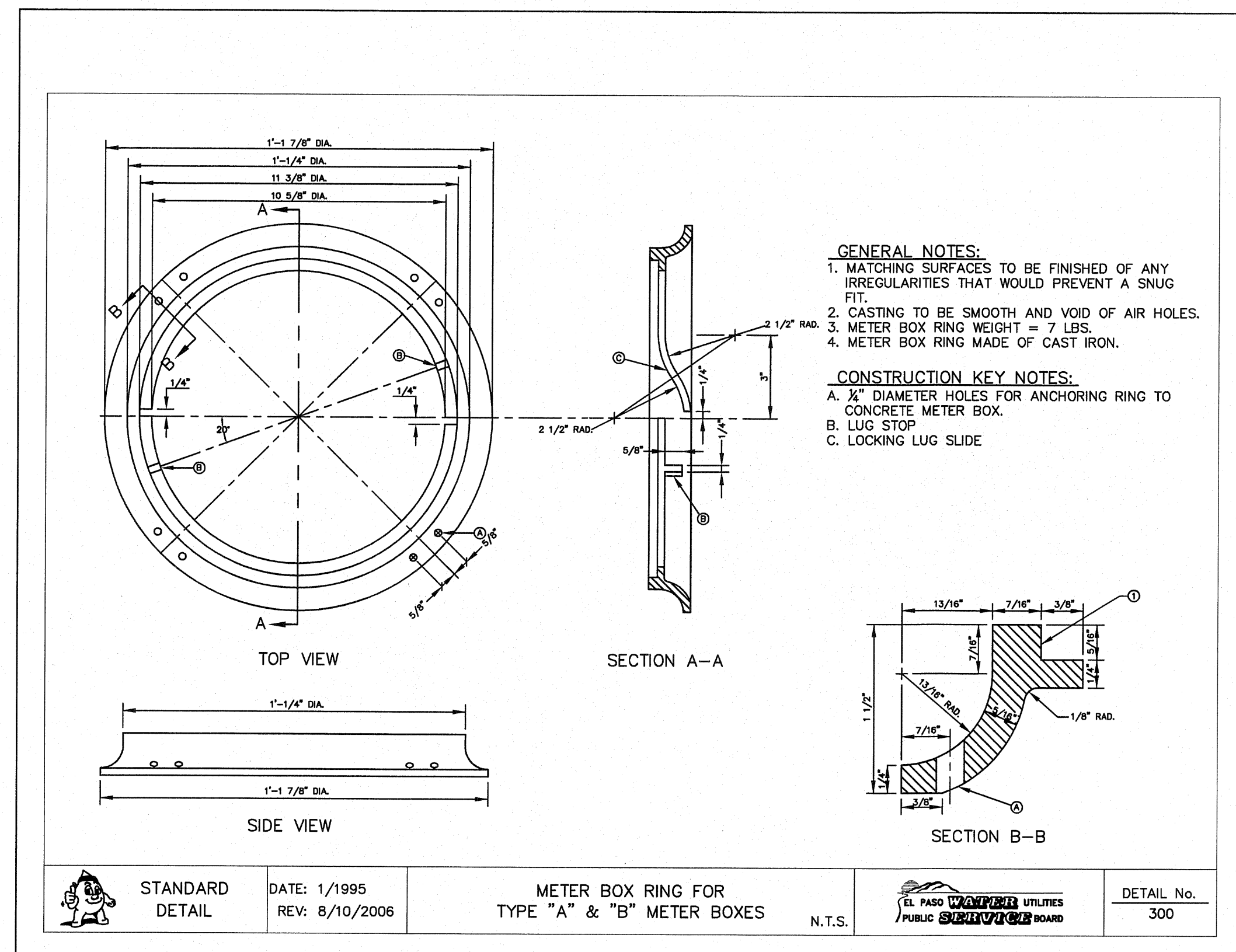
SHEET NO. W1.1



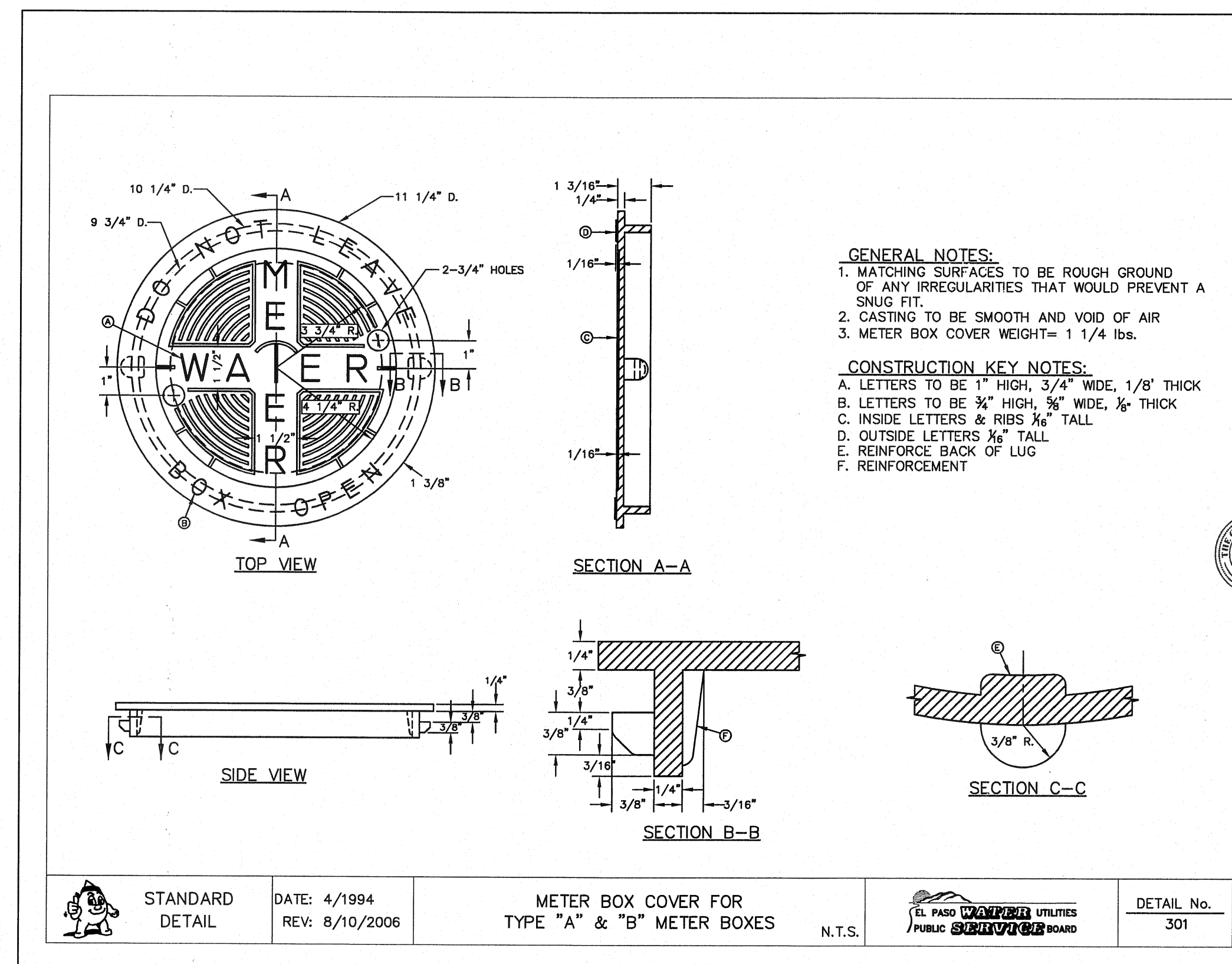
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2 METER BOX DETAIL
SCALE: N.T.S.



4 METER BOX RING DETAIL
SCALE: N.T.S.



4 METER BOX COVER DETAIL
SCALE: N.T.S.

REFERENCES — BENCHMARKS
EXISTING CITY MONUMENT
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DRIVE.

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Office: 915.544.5232 Fax: 915.544.5233 www.oesa.com

EL PASO UTILITIES
PUBLIC SUBDIVISION BOARD

ENGINEER'S SEAL
J. L. A. 85075
STATE OF TEXAS
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING

SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPRD. BY: J.L.A.
JOB No. 2260-012-1D

PROJECT NAME
VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS

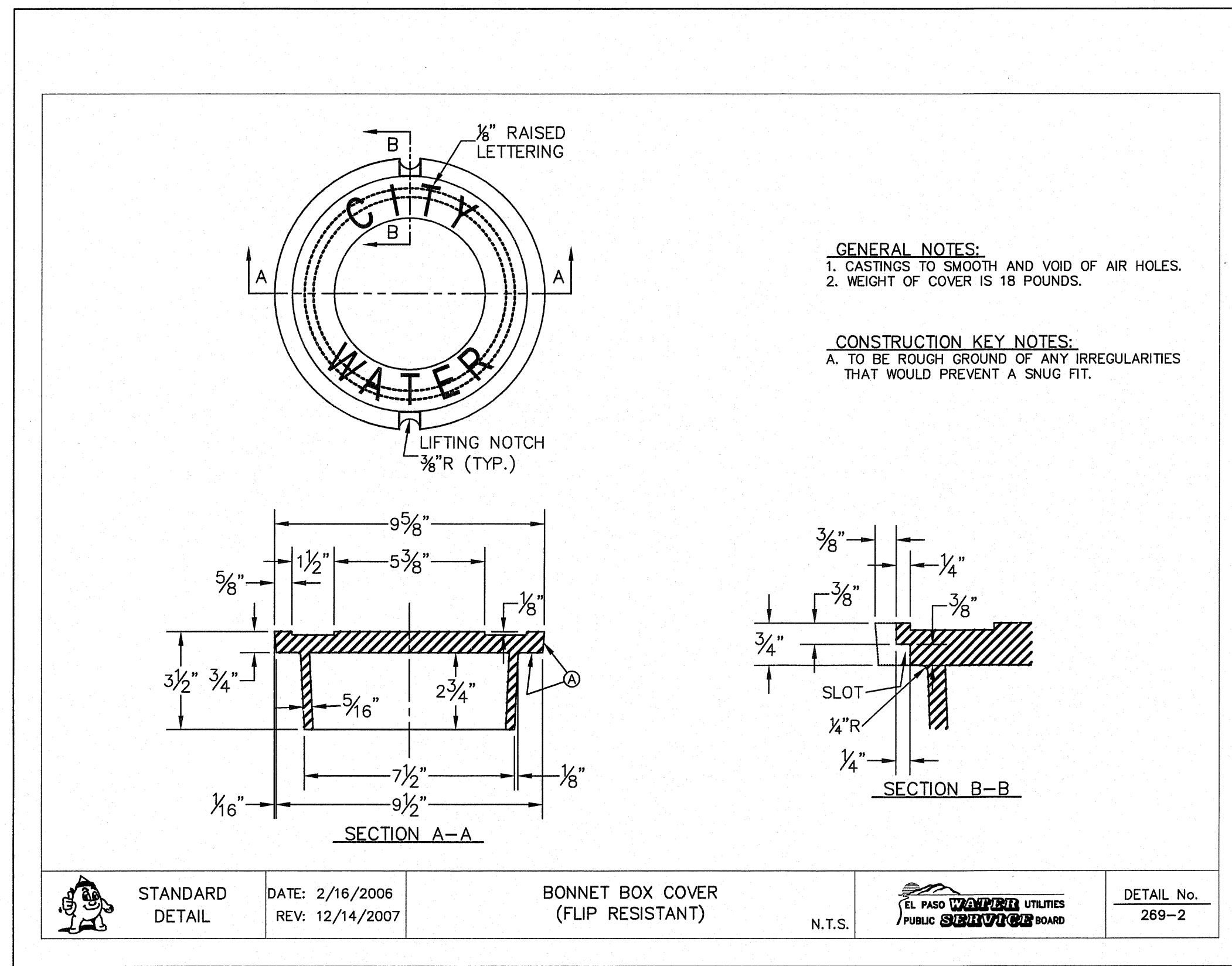
ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT

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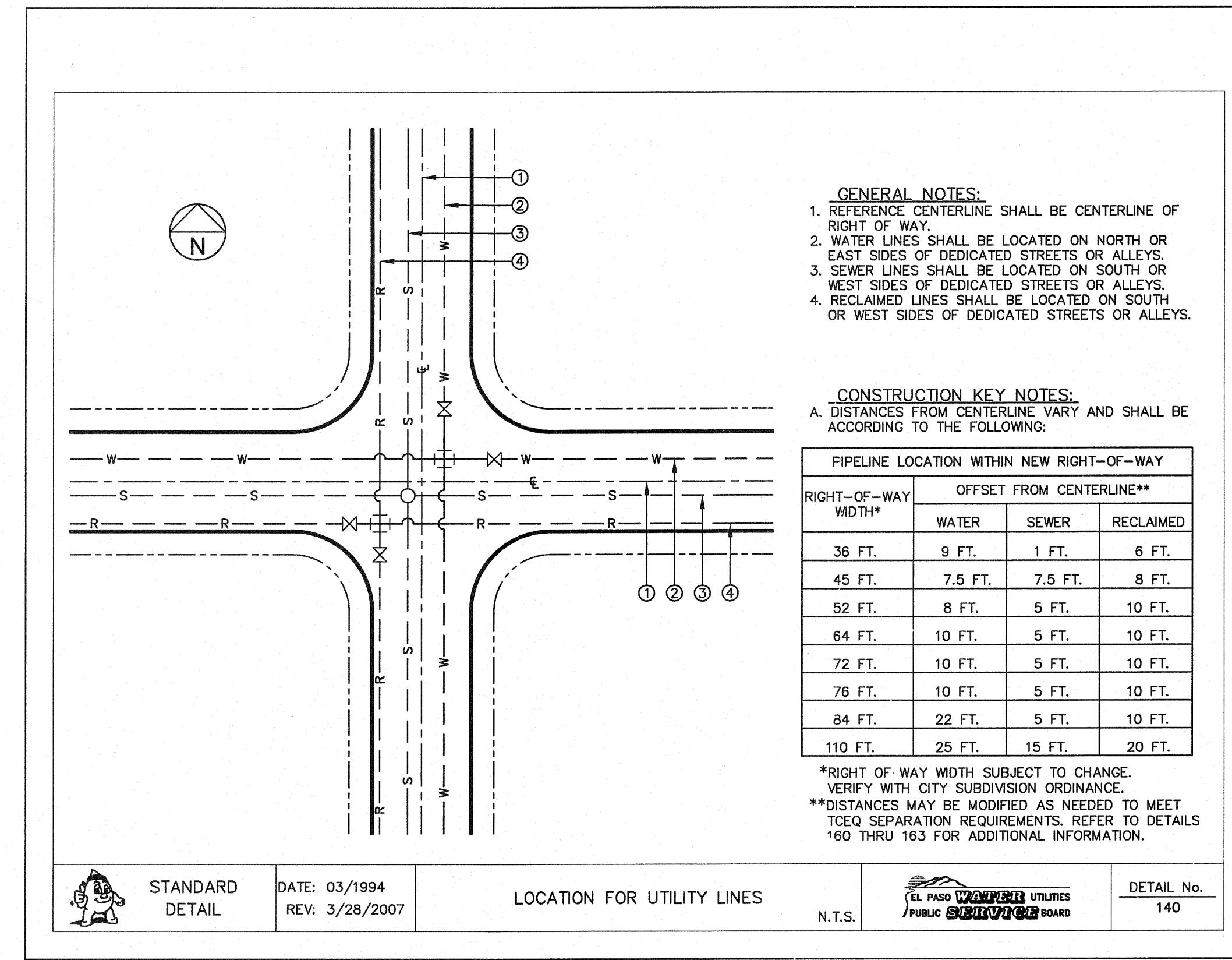
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WATER DETAILS

(SHEET 1 OF 5)
SHEET NO.

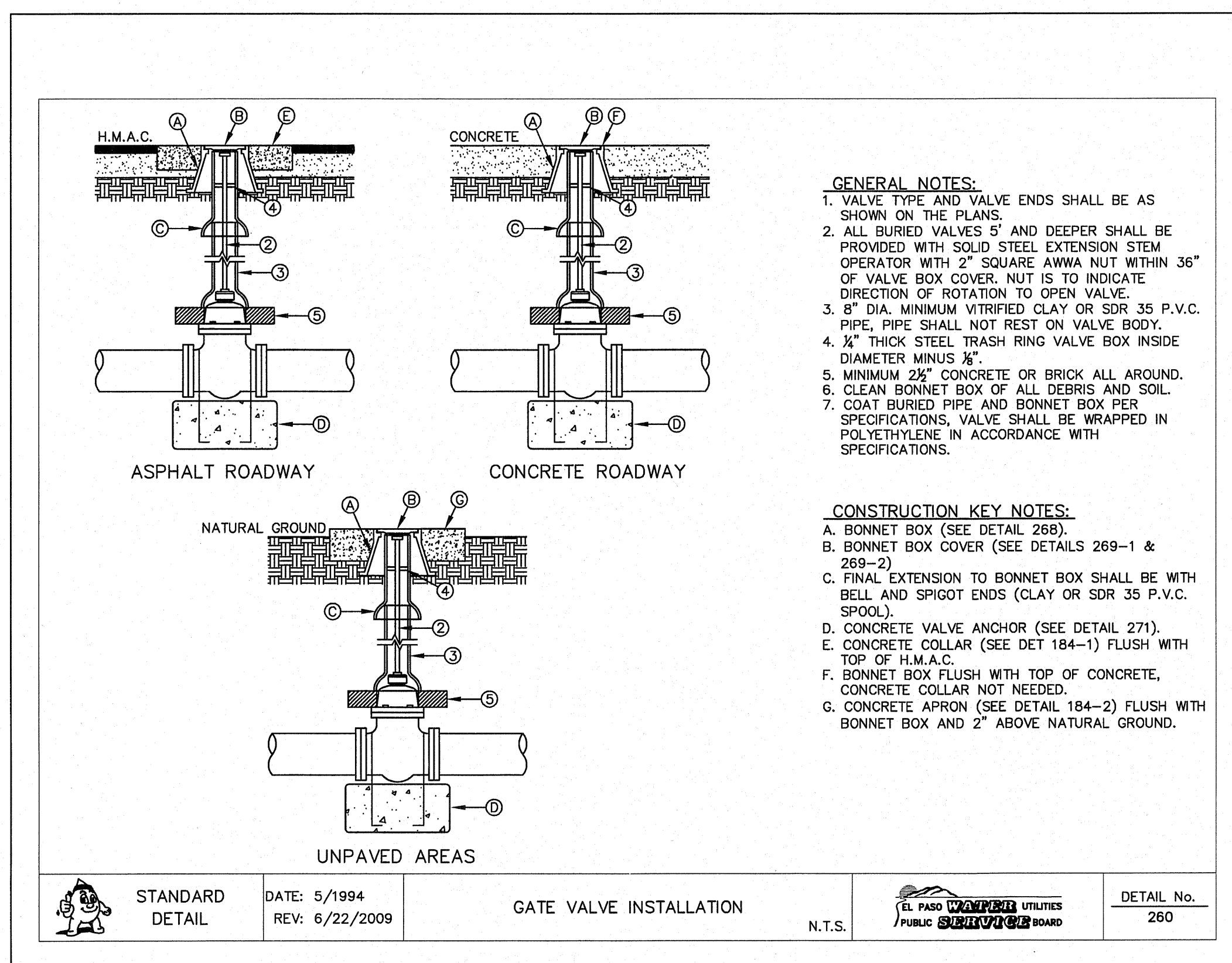
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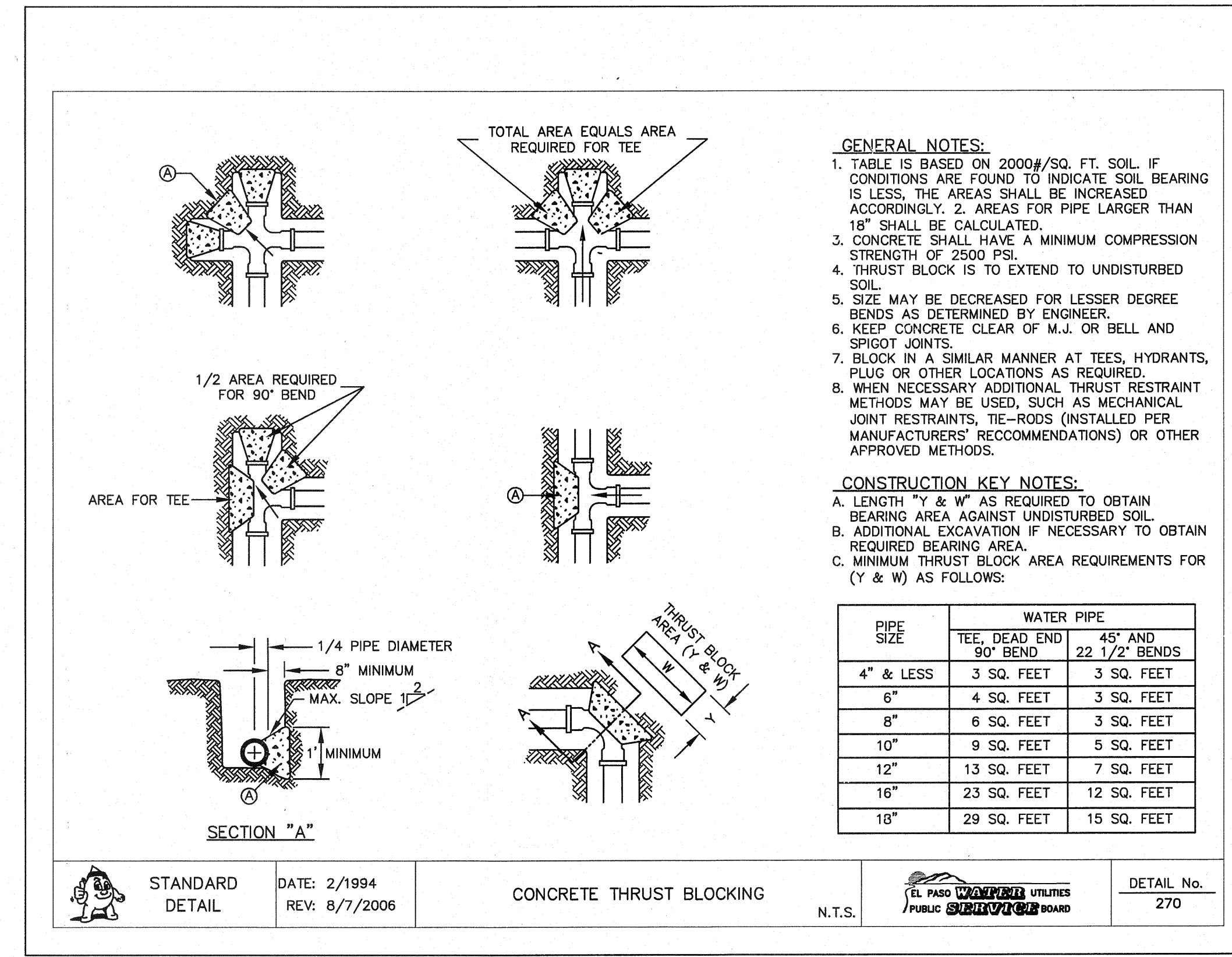
1 **BONNET BOX COVER (FLIP RESISTANT)**
 SCALE: N.T.S.



2 **STANDARD LOCATION FOR EXTENSIONS DETAIL**
 SCALE: N.T.S.



3 **GATE VALVE INSTALLATION**
 SCALE: N.T.S.



4 **THRUST BLOCKING**
 SCALE: N.T.S.

REFERENCES - BENCHMARKS
 EXISTING CITY MONUMENT
 ELEVATION=3970.52 FEET (CITY DATUM)
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ENGINEER'S SEAL

 J. L. ALVARADO
 No. 88075
 State of Texas
 Mechanical Engineering

SCALE: N/A
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A
 DATE: OCTOBER, 2011
 DESIGN BY: F.Z.
 DRAWN BY: A.B.
 CHECKED BY: J.L.A.
 APP'D BY: J.L.A.
 JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS**

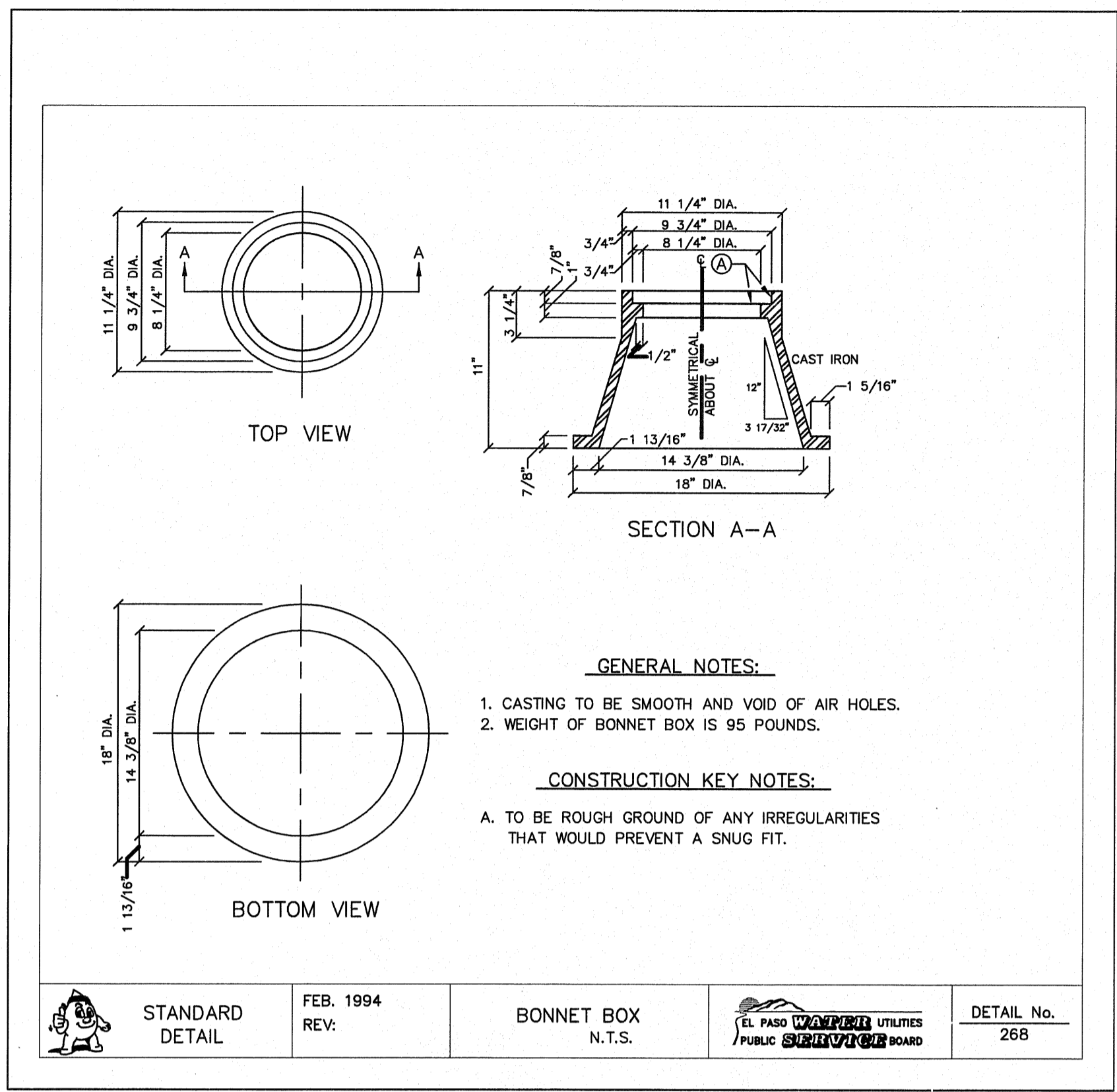
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WATER DETAILS

(SHEET 2 OF 5)
 SHEET NO.

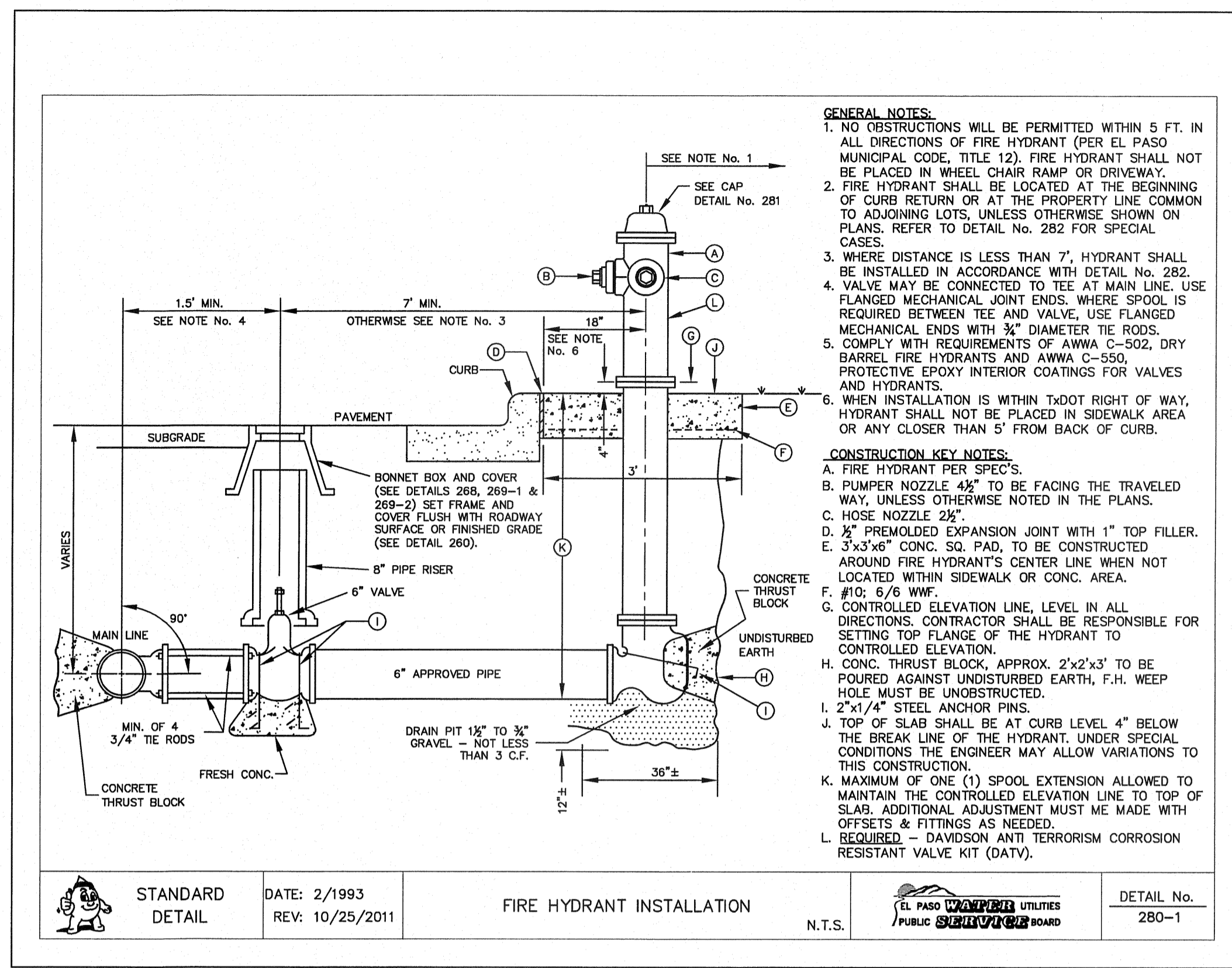
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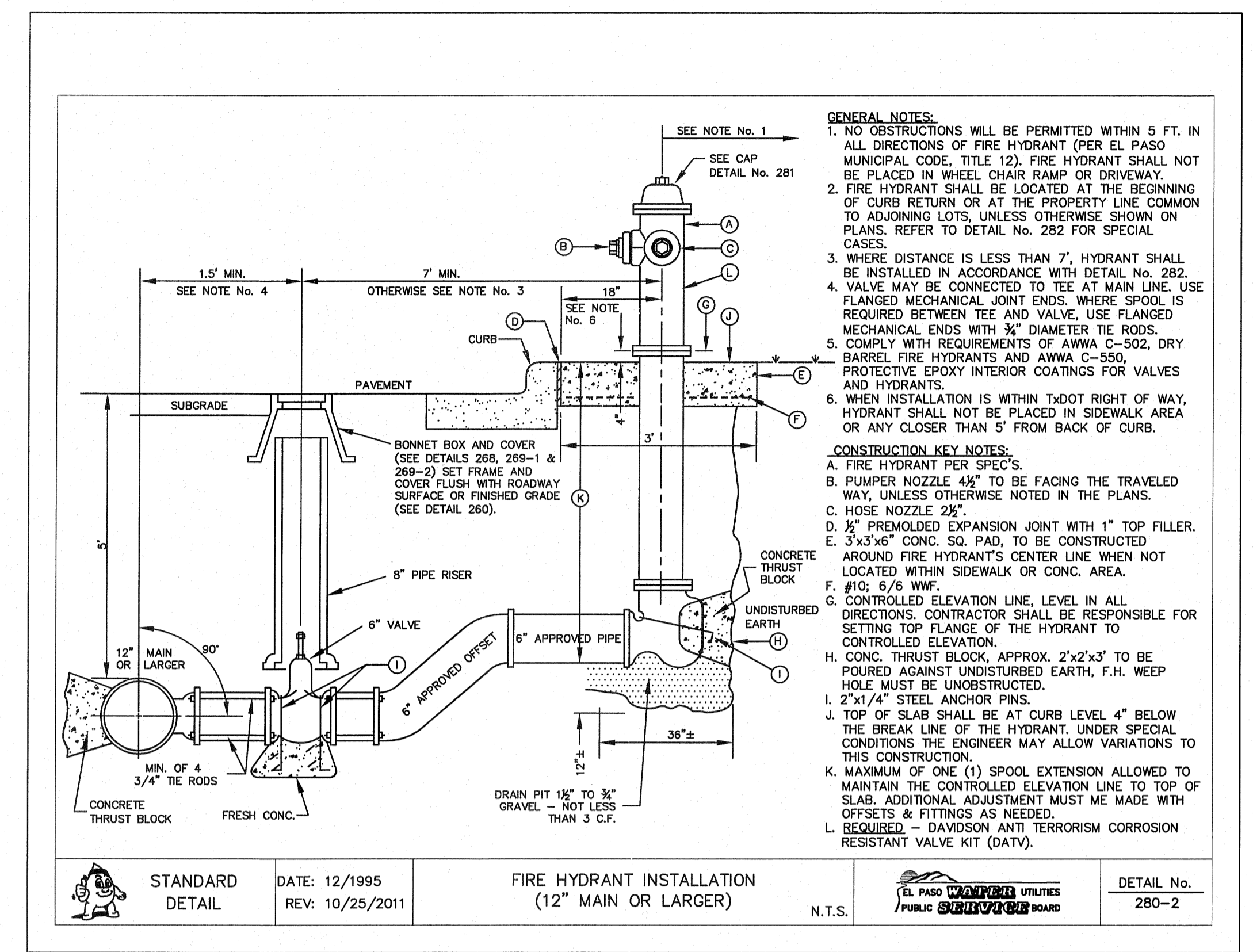
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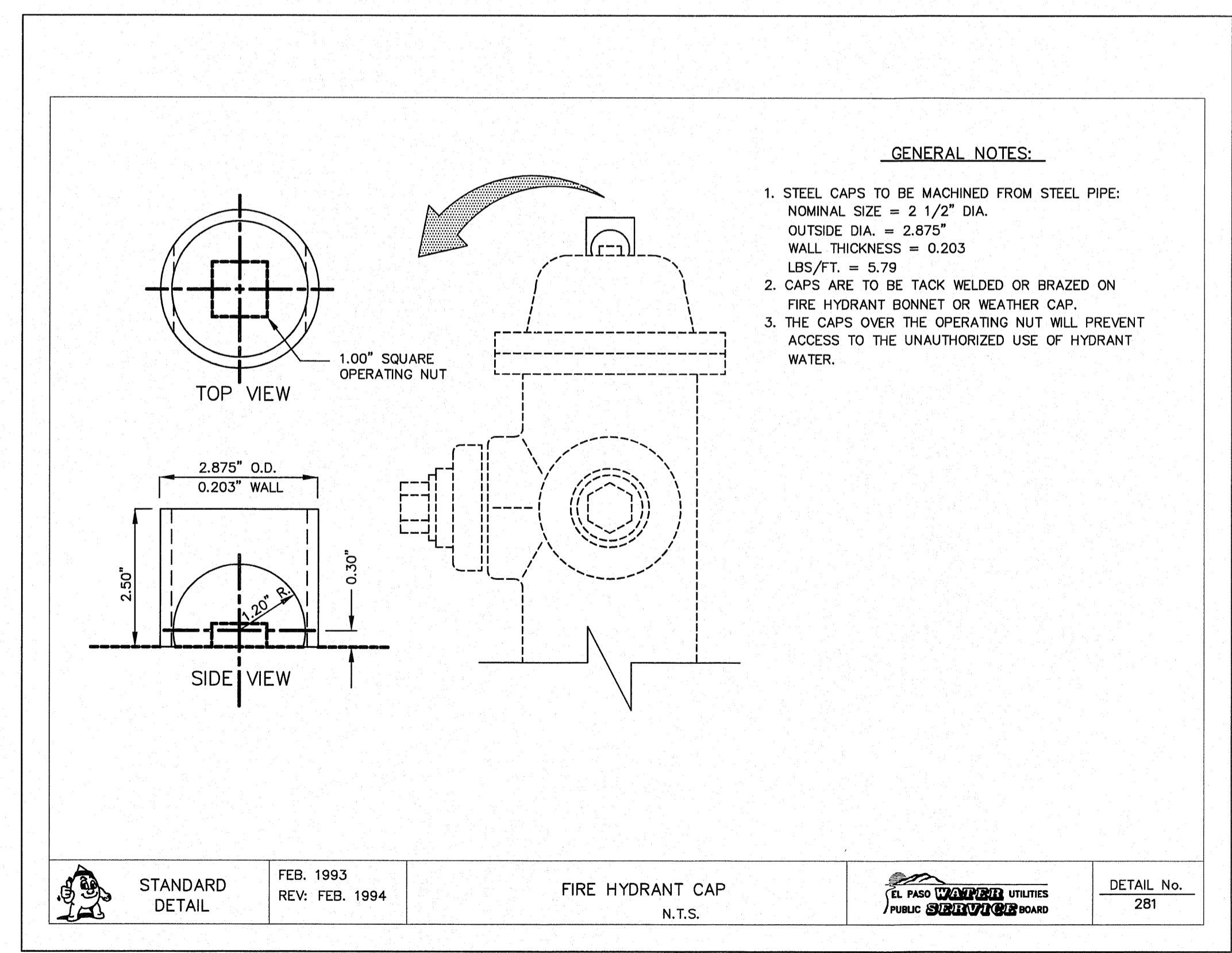
1 BONNET BOX
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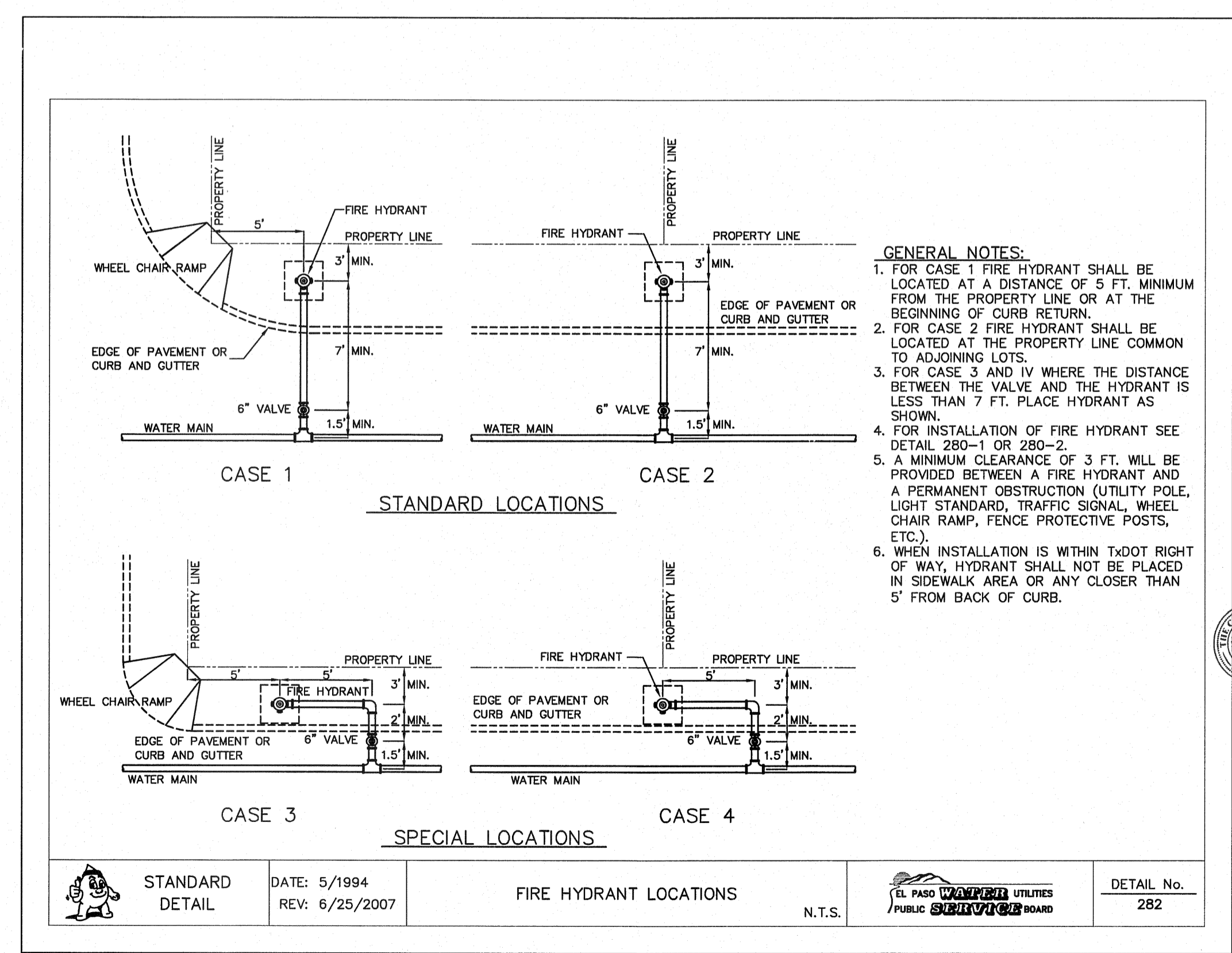
2 STANDARD FIRE HYDRANT INSTALLATION
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3 STANDARD FIRE HYDRANT INSTALLATION
SCALE: N.T.S.



4 FIRE HYDRANT CAP
SCALE: N.T.S.

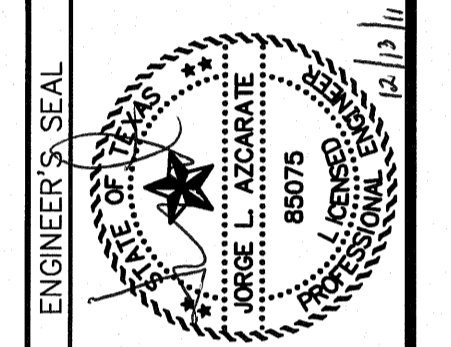


5 FIRE HYDRANT LOCATIONS
SCALE: N.T.S.

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT	ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE	
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DATE	REVISIONS
	BY

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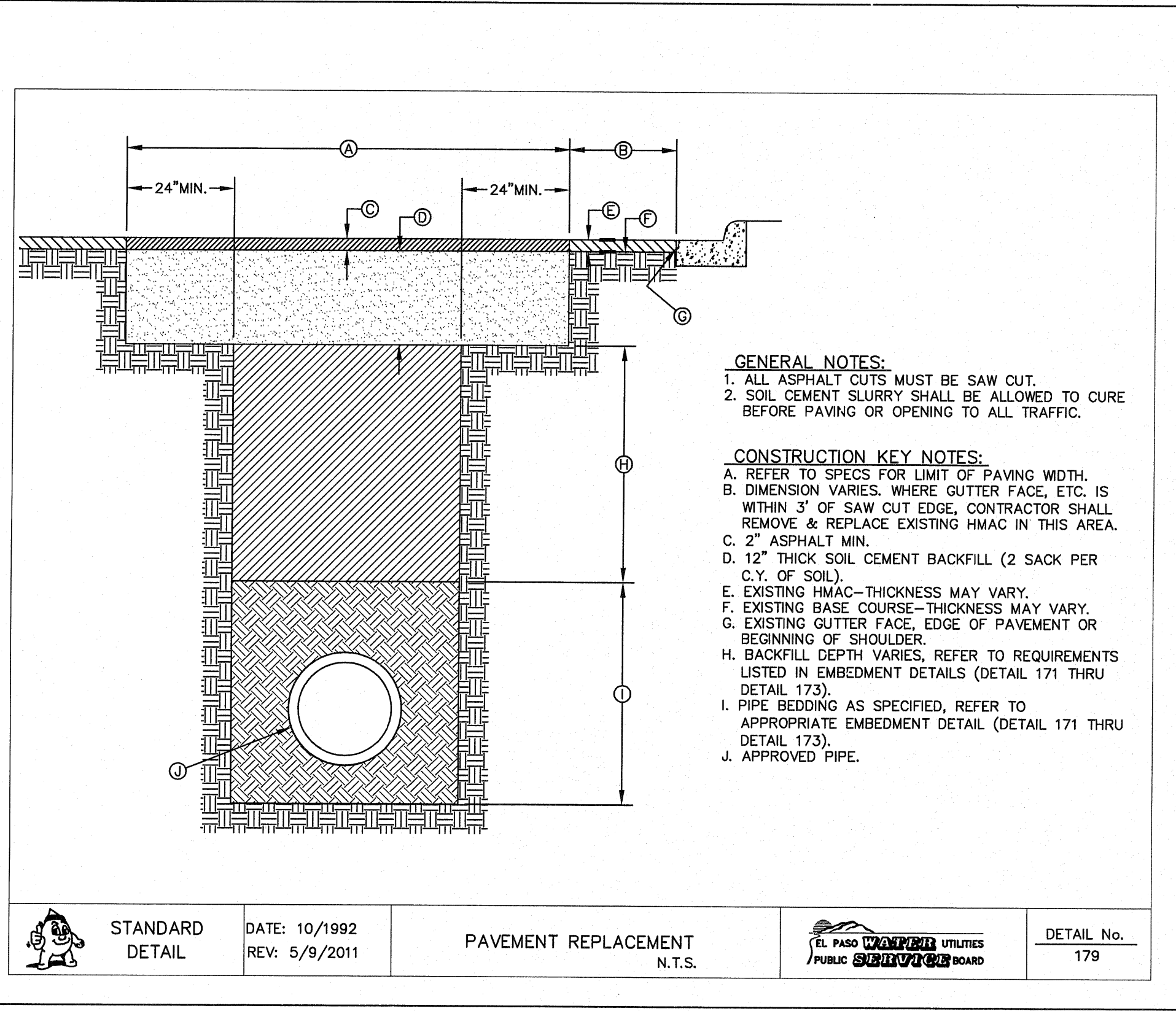
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Horizontal	N/A
Vertical	N/A
Contour Interval	N/A
DATE	OCTOBER 2011
DESIGN BY	F.Z.
DRAWN BY	A.B.
CHKD. BY	J.L.A.
APPRD. BY	J.L.A.
JOB NO.	2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

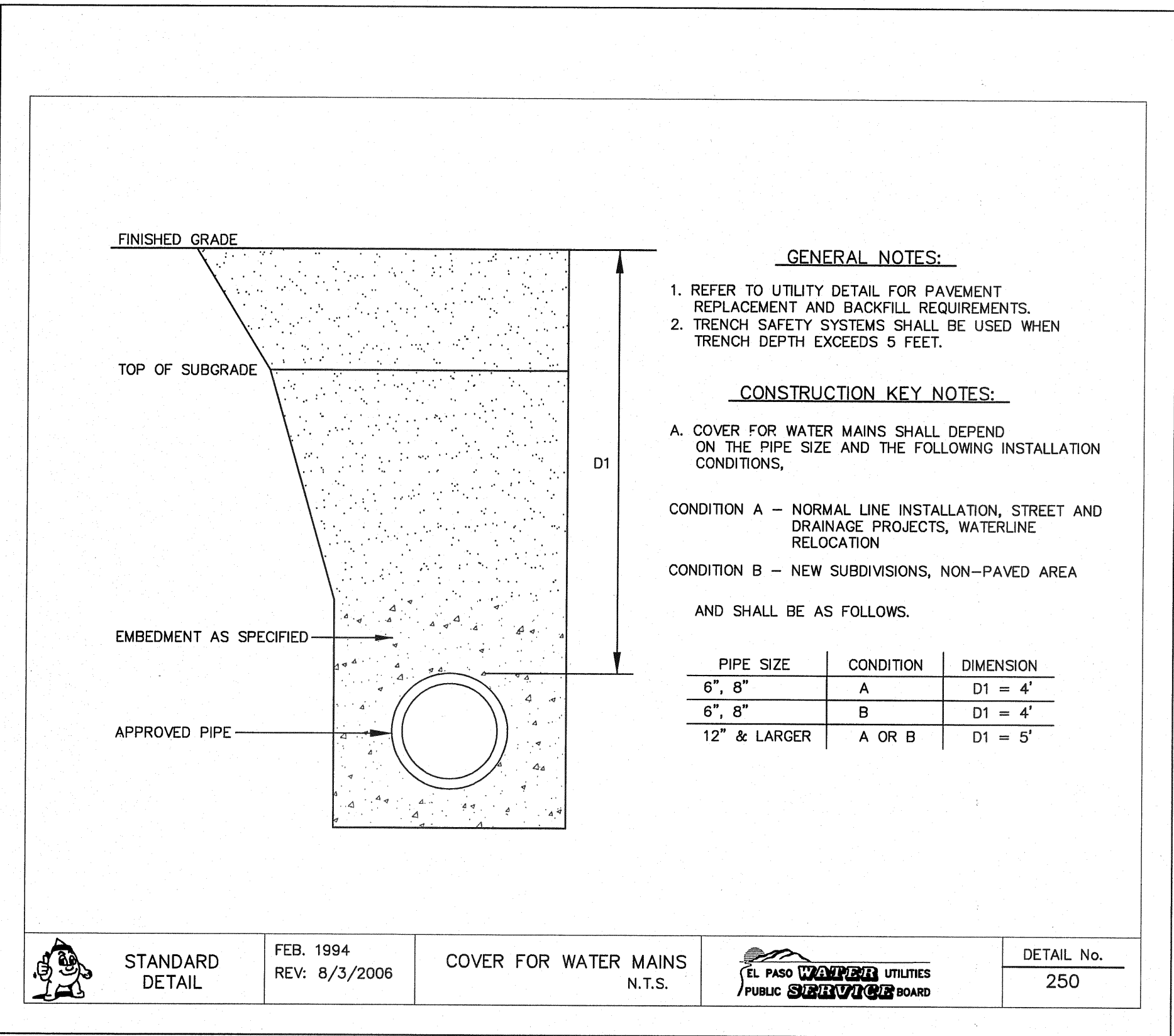
ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT
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SHEET TITLE
WATER DETAILS
(SHEET 3 OF 5)
SHEET NO.

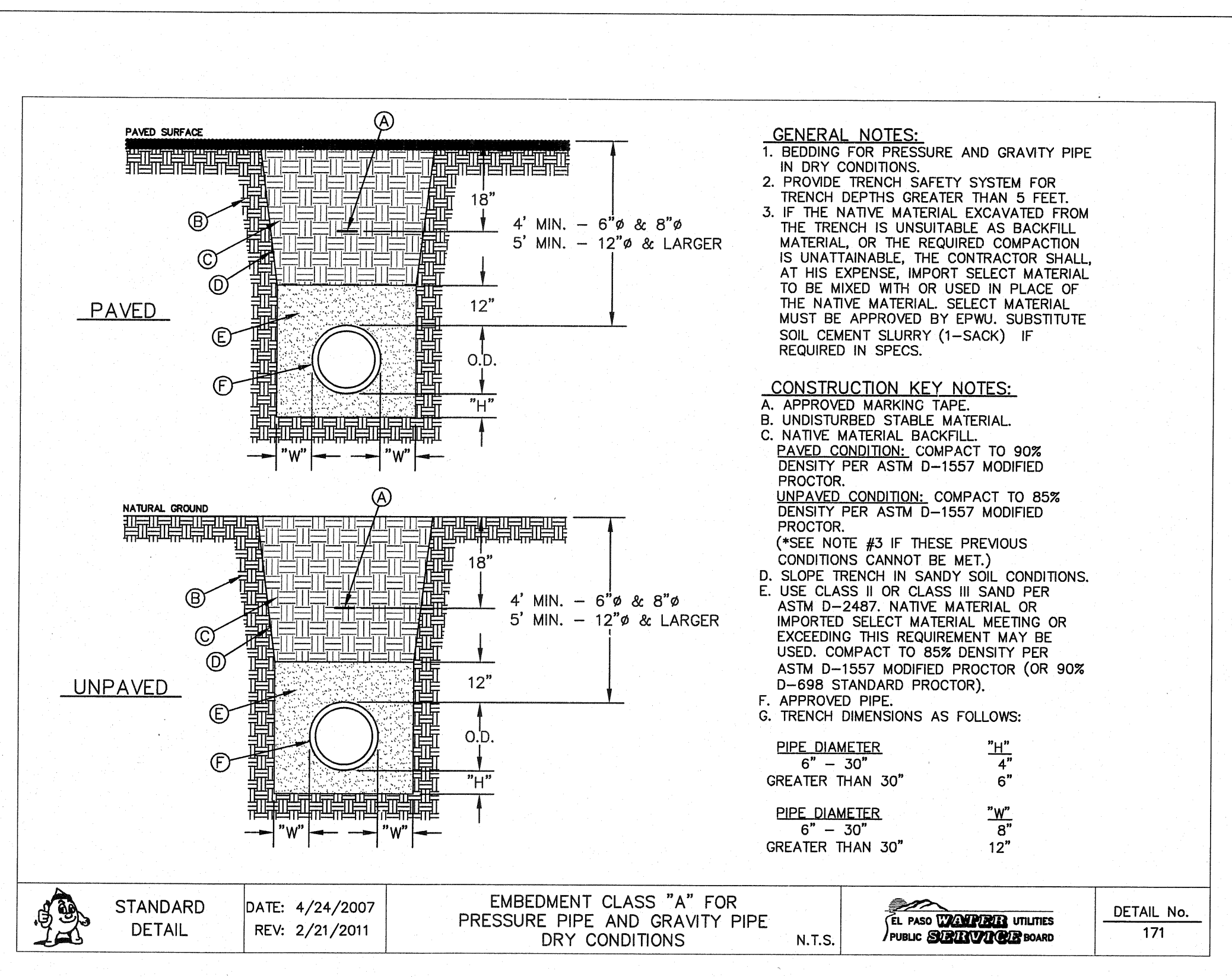
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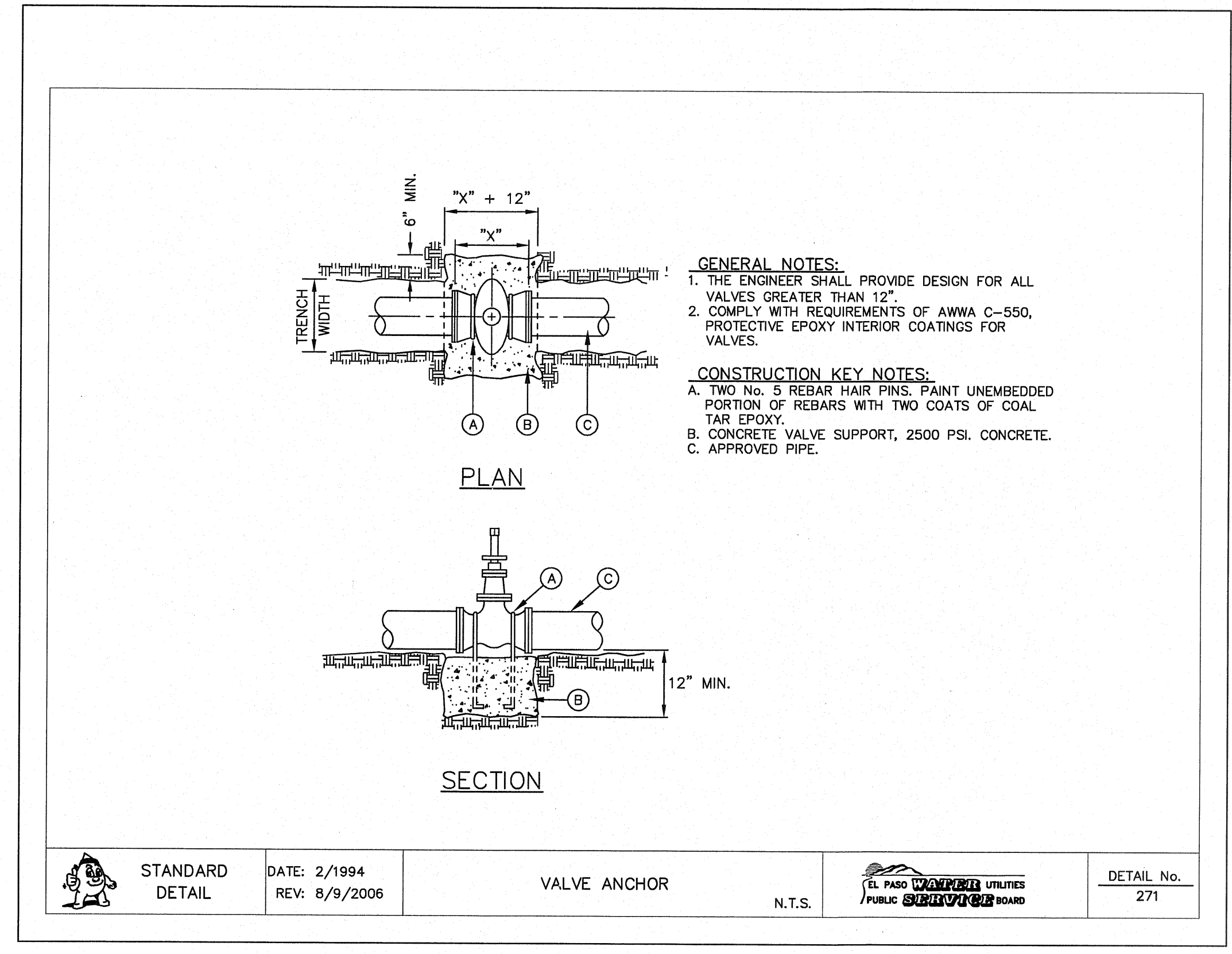
1 PAVEMENT REPAIR DETAIL
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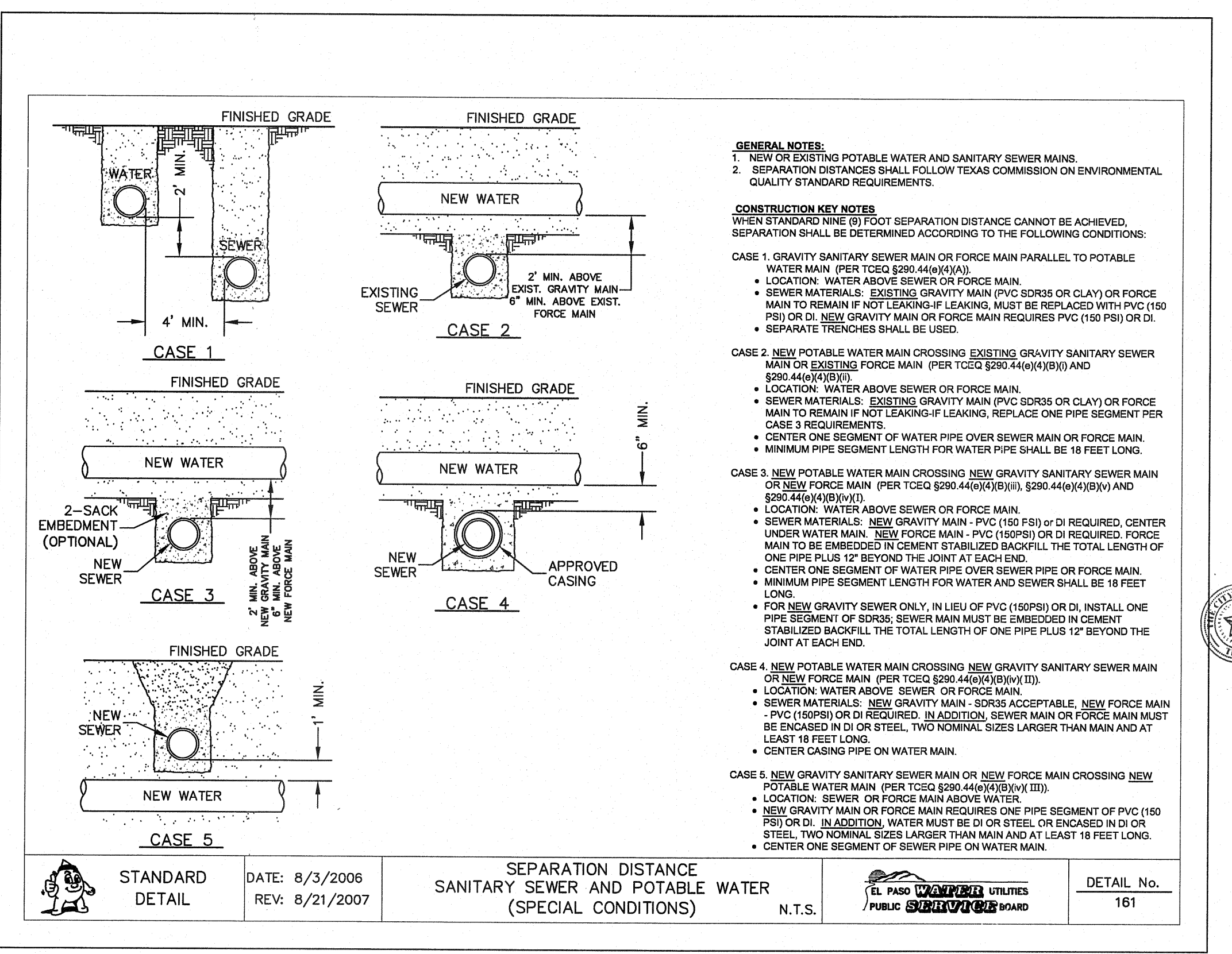
2 STANDARD COVER FOR WATER MAINS
SCALE: N.T.S.



3 BEDDING CLASS DETAILS FOR P.V.C. PRESSURE PIPE
SCALE: N.T.S.



4 VALVE ANCHOR
SCALE: N.T.S.



5 SEPARATION DISTANCE - SANITARY SEWER AND POTABLE WATER
SCALE: N.T.S.

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION - 3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
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Circ. #1324-1222 Fax: #934-5233 www.oceainc.com

ENGINEER'S SEAL
J. L. A. 16181

SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPROV. BY: J.L.A.
JOB No. 2260-012-LD

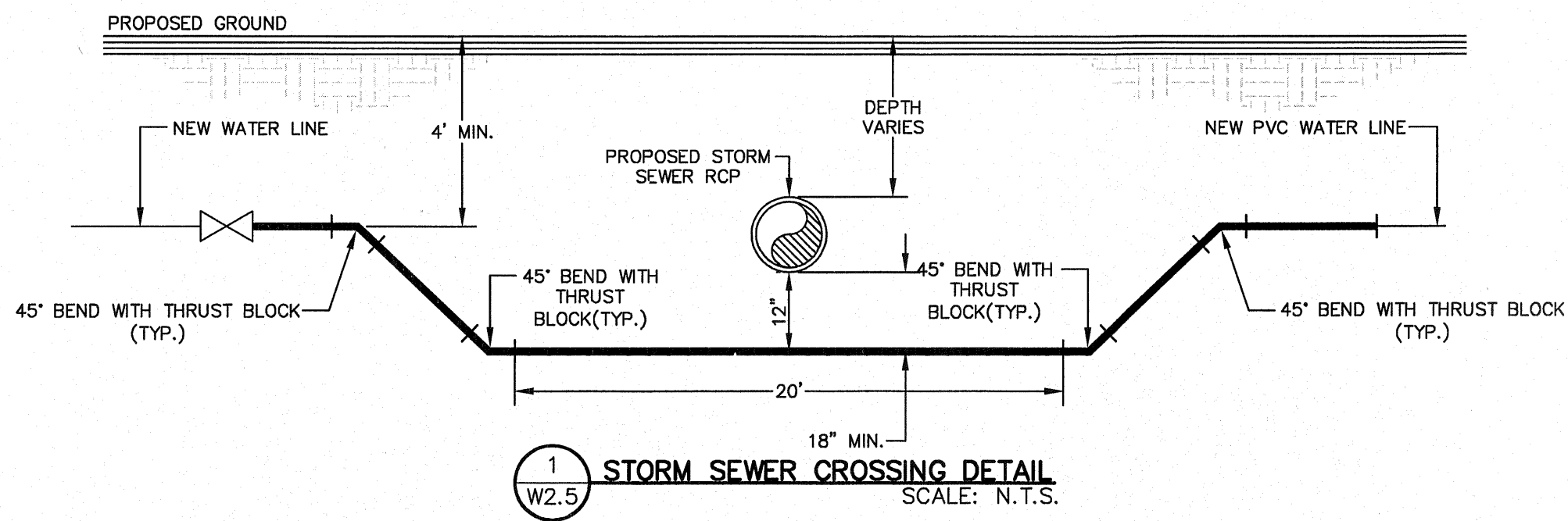
PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

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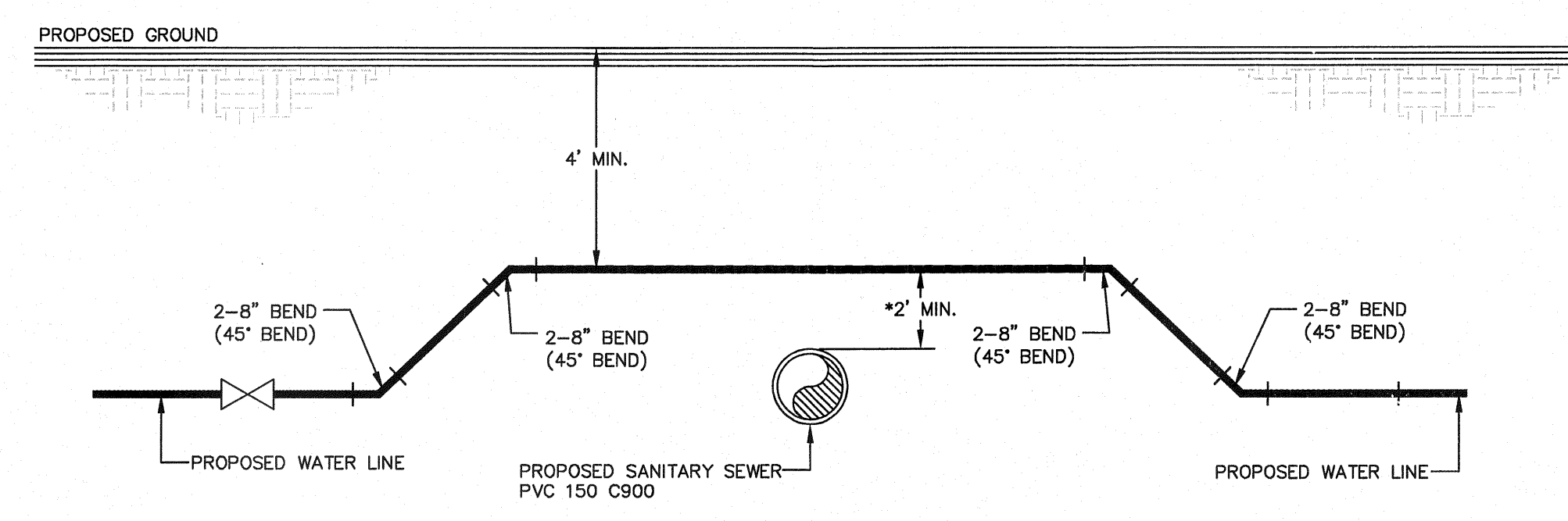
SHEET TITLE
WATER DETAILS

(SHEET 4 OF 5)
SHEET NO.

W2.4

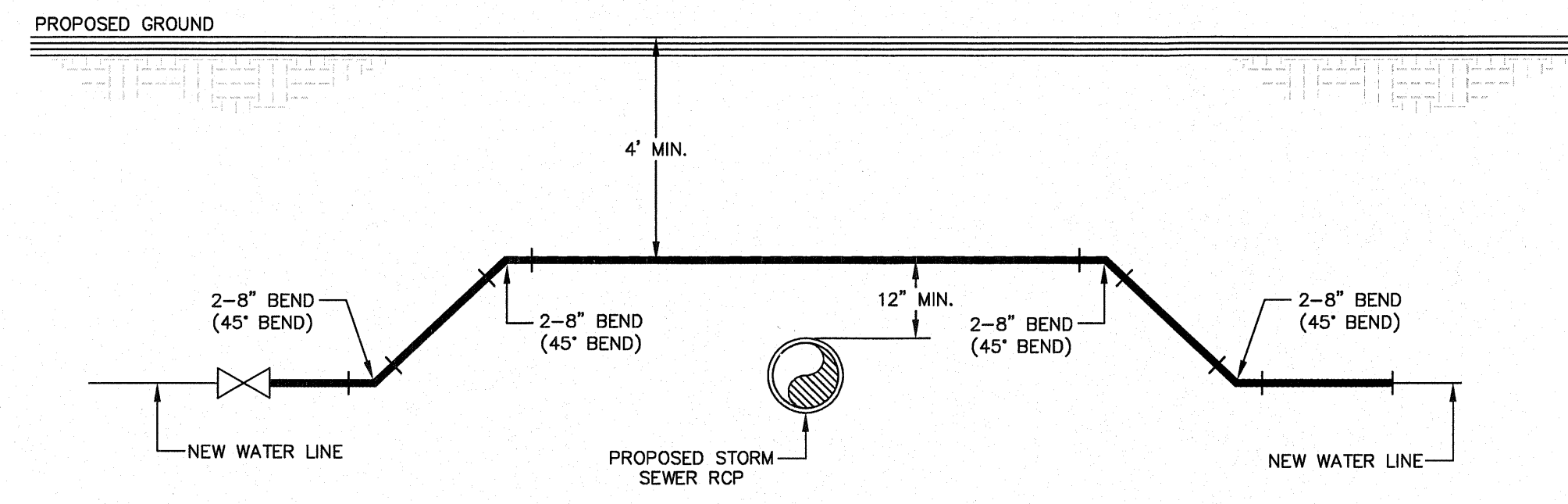


1 STORM SEWER CROSSING DETAIL
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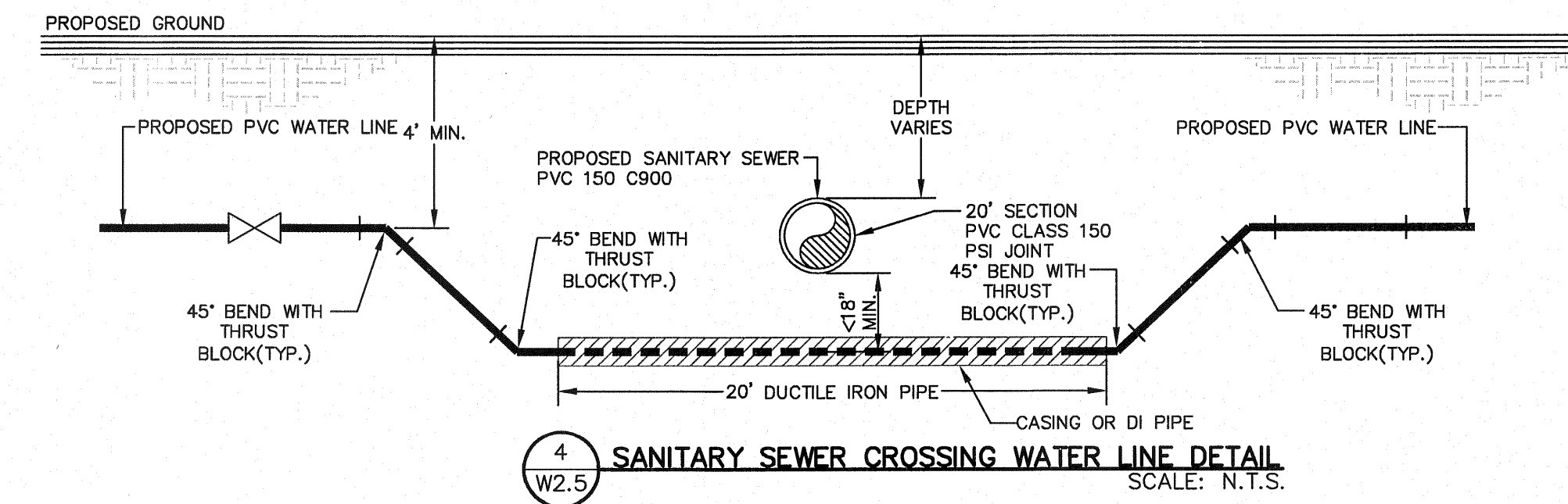


2 SANITARY SEWER CROSSING WATER LINE DETAIL
W2.5 SCALE: N.T.S.

*NOTE:
IF DISTANCE BETWEEN PROPOSED SANITARY SEWER AND PROPOSED WATER LINE IS BETWEEN 6"(MIN.)-2"(MAX.), SANITARY SEWER MUST BE ENCASED IN DUCTILE IRON PIPE AS PER SEPARATION DISTANCE (SPECIAL CONDITION) DETAIL.



3 STORM SEWER CROSSING DETAIL
W2.5 SCALE: N.T.S.



4 SANITARY SEWER CROSSING WATER LINE DETAIL
W2.5 SCALE: N.T.S.

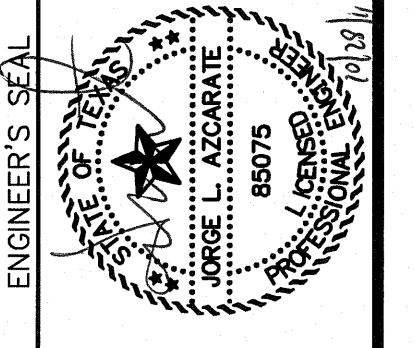
ENGINEERING & CONSTRUCTION
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REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT	ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE	INTERSECTION OF
SUNSHINE DRIVE	AND SETTING SUN DRIVE.
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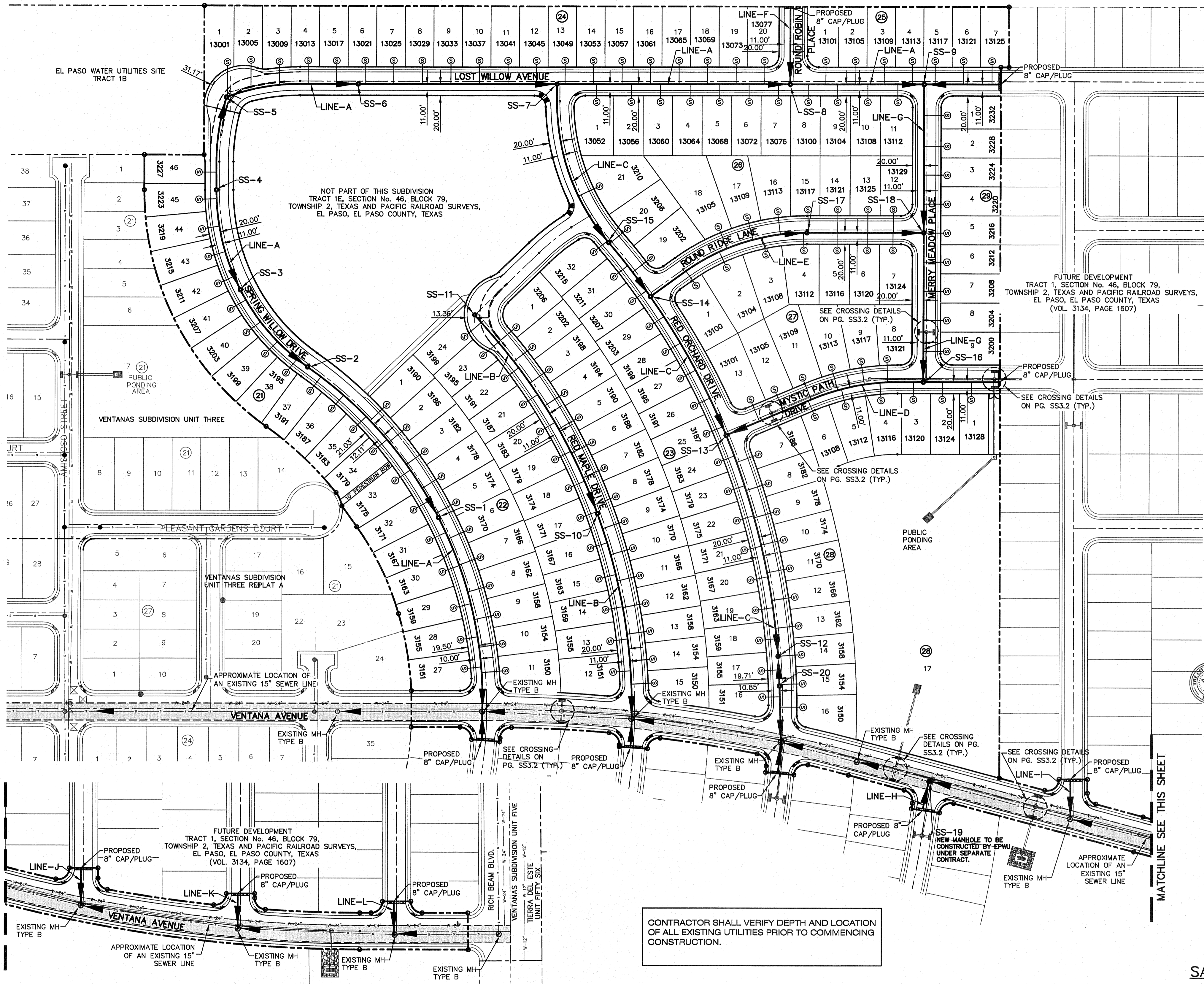


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DATE:	OCTOBER 2011
DESIGN BY:	F.Z.
DRAWN BY:	A.B.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
WATER DETAILS
(SHEET 5 OF 5)
SHEET NO.

W2.5

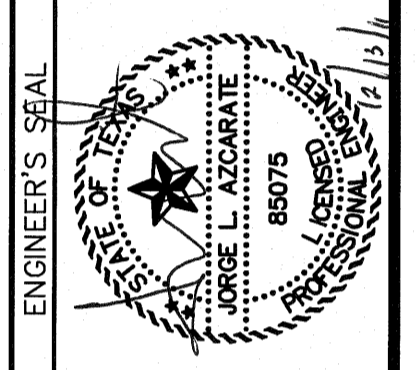


NOTES:
 1. ALL SANITARY SEWER PIPES SHALL BE PVC SDR35, UNLESS OTHERWISE REQUIRED BY THE EPWU/PSB RULES AND REGULATIONS AND DESIGN STANDARDS.

SYMBOL	DESCRIPTION
	PROPOSED STORM SEWER LINE
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING 24" WATER LINE
	SUBD. BOUNDARY LINE
	PROPERTY LINE
	CENTER LINE
	PROPOSED SEWER LINE (PLAN VIEW)
	PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
	PROPOSED SEWER LINE (PROFILE VIEW)
	EXISTING MANHOLE (PLAN VIEW)
	PROPOSED MANHOLE (PLAN VIEW)
	PROPOSED 8" CAP/PLUG
	PROPOSED SERVICE CONNECTION (PLAN VIEW)
	PROPOSED MANHOLE (PROFILE VIEW)
	EXISTING MANHOLE (PROFILE VIEW)

REFERENCES - BENCHMARKS
 EXISTING CITY MONUMENT
 ELEVATION=3970.52 FEET (CITY DATUM)
 LOCATED AT THE CENTERLINE
 INTERSECTION OF
 SUN TRAIL DRIVE AND SETTING SUN
 DRIVE.
 DATE: _____
 REVISIONS: _____
 BY: _____

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 TEXAS REGISTERED ENGINEERING FIRM #484
 4712 Woodrow Bean, Ste. F El Paso, TX 79904
 Office: 915-544-8377 Fax: 915-544-8323 www.ceagroup.net



SCALE: 1"=100'
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A
 DATE: OCTOBER 2011
 DESIGN BY: F.Z.
 DRAWN BY: J.L.A.
 CHECKED BY: J.L.A.
 APP'D BY: J.L.A.
 JOB No. 2260-012-LD

**VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS**

**SEWER INDEX
 INDEX/GENERAL
 INFORMATION**

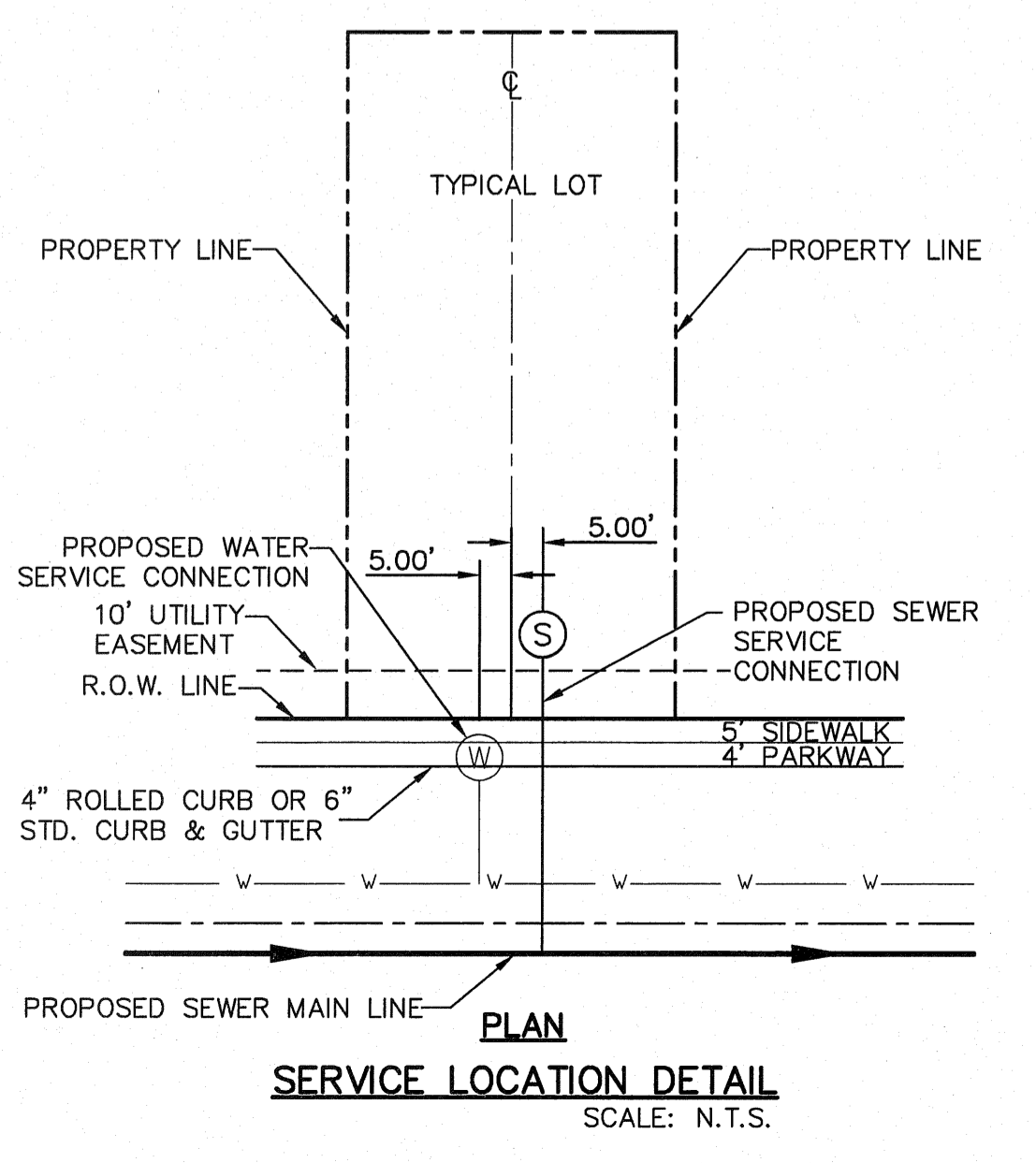
SHEET NO.

SS1.1

- GENERAL NOTES**
- UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE PROPOSED SEWER MAINS AND SEWER MANHOLES SHALL BE INSTALLED NO LESS THAN 10' AWAY FROM EXISTING WATER LINE. SEPARATIONS DISTANCES SHALL FOLLOW TCEQ STANDARD REQUIREMENTS (§290.44)
 - THE INTENT OF THE OWNER IS TO HAVE THE SANITARY SEWER PIPELINES INSTALLED TO SUCH A DEPTH THAT THEY WILL HAVE AT LEAST 48" OF COVER BELOW PROPOSED GROUND AT ALL LOCATIONS. THE PIPELINES 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. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INSTALLING THE SEWER PIPELINE SO THAT AN ACCEPTABLE PROFILE CAN BE ESTABLISHED PRIOR TO INSTALLATION OF THE PIPELINE.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN IN THE PLANS, AND COORDINATE HIS WORK WITH ALL UTILITY COMPANIES, EL PASO WATER UTILITIES AND CITY OF EL PASO PRIOR TO CONSTRUCTION. ALL EXISTING UTILITY DEPTHS ARE UNKNOWN. THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR ACQUIRING FIELD DEPTHS OF ALL UTILITIES WITH THE PROJECT AREAS.
 - TRENCH SAFETY REQUIREMENTS SHALL COMPLY WITH CURRENT OSHA REGULATIONS.
 - 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, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
 - THE EL PASO WATER UTILITIES AND CITY OF EL PASO MUST BE NOTIFIED 48 HOURS PRIOR TO COMMENCING ANY WORK IN AREAS WITHIN THEIR JURISDICTION. A COPY OF ALL FIELD SOIL DENSITY TESTS WITHIN THEIR RESPECTIVE R.O.W. SHALL BE FORWARDED TO THE DEVELOPER'S ENGINEER AND THE DEVELOPER BY THE CONTRACTOR.
 - EXISTING STREETS, DRIVEWAYS AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGE OR REMOVED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION.
 - CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFIRM TO EPWU-PSB STANDARD SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS AND RELATED APPURTENANCES.

- GENERAL UTILITIES:**
 TEXAS EXCAVATION SAFETY SERVICE
 11884 GREENVILLE AVENUE
 DALLAS, TX 75243
 (800) 344-8377
- ENGINEER:**
 CEA GROUP
 CASTER CENTER @ TRANSMOUNTAIN
 4712 WOODROW BEAN, STE. F
 EL PASO, TX 79924
 (915) 544-5232
 MR. JORGE L. AZCARATE, P.E.
- FIBER OPTICS:**
 U.S. SPRINT
 151 N. BOONE ST.
 EL PASO, TX 79905
 (915) 534-7910
 MR. RICK DERAGISCH
- FIBER OPTICS:**
 MCI TELECOMMUNICATIONS CORP.
 4045 DONIPHAN PARK CIRCLE
 EL PASO, TX 79922
 (915) 542-2770 EXT. 201
 MR. DANIEL HERNANDEZ
- WATER & SEWER:**
 EL PASO WATER UTILITIES
 1154 HAWKINS BOULEVARD
 EL PASO, TX 79961
 (915) 594-5530
 MR. FELIPE LOPEZ, JR., P.E.
- ELECTRIC:**
 EL PASO ELECTRIC CO.
 501 W. SAN ANTONIO ST.
 EL PASO, TX 79902
 (915) 543-2076
 MR. FRANK VIGEL (DISTRIBUTION)
- EL PASO STREETS**
 CITY OF EL PASO
 DEPARTMENT OF TRANSPORTATION
 7969 SAN PAULO DRIVE
 EL PASO, TX 79907
 (915) 621-6750
 MR. DARYL W. COLE
- CABLE TELEVISION:**
 TIME WARNER COMMUNICATIONS
 7010 AIRPORT ROAD
 EL PASO, TX 79906
 (915) 772-1123
- 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
 (800) 852-3786
 MS. DARLENE NORIS
- RESIDENTIAL GAS LINES:**
 TEXAS GAS SERVICE
 4700 POLLARD ST.
 EL PASO, TX 79930
 (915) 680-7218
 MR. JOSE DE ALBA

SANITARY SEWER INDEX MAP
 SCALE: 1" = 100'



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 CALL
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1-800-344-8377
 FOR FIELD LOCATING EXISTING UTILITIES

FUTURE DEVELOPMENT
TRACT 1, SECTION No. 46, BLOCK 79,
TOWNSHIP 2, TEXAS AND PACIFIC RAILROAD SURVEYS,
EL PASO, EL PASO COUNTY, TEXAS

UTILITY LOCATOR SERVICES		
EL PASO ELECTRIC COMPANY	(915) 543-5720	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244	(915) 498-5244
EL PASO WATER UTILITIES	(915) 594-5500	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200	(915) 680-7200
SBC	(800) 545-6005	(800) 545-6005
AT&T	(800) 852-3786	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750	(915) 621-6750
(AFTER HOURS)	(915) 240-3220	(915) 240-3220

WARNING!
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1-800-344-8377

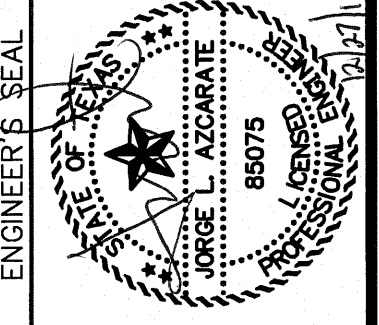
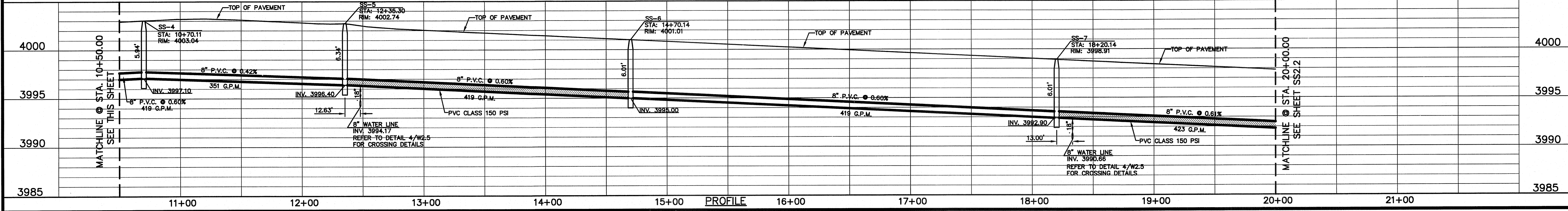
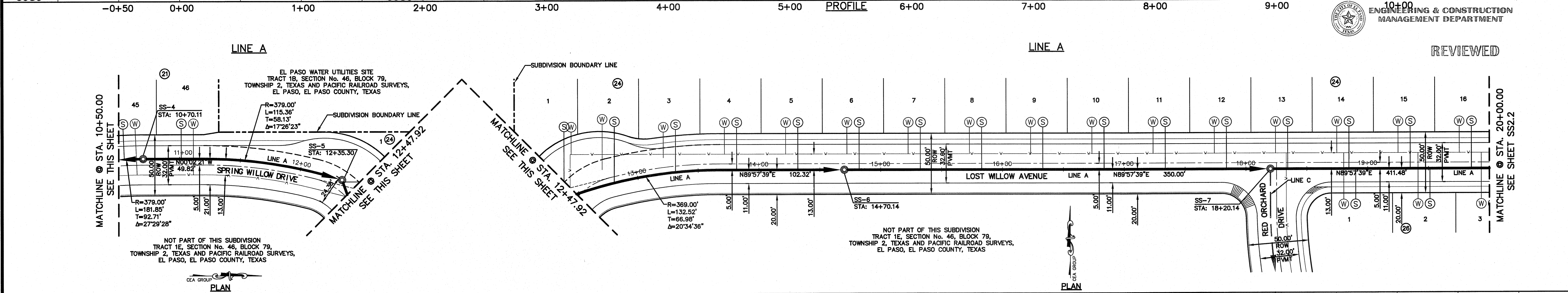
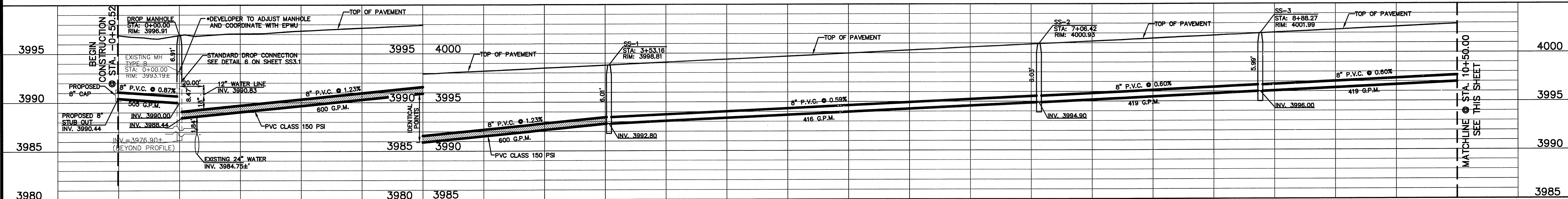
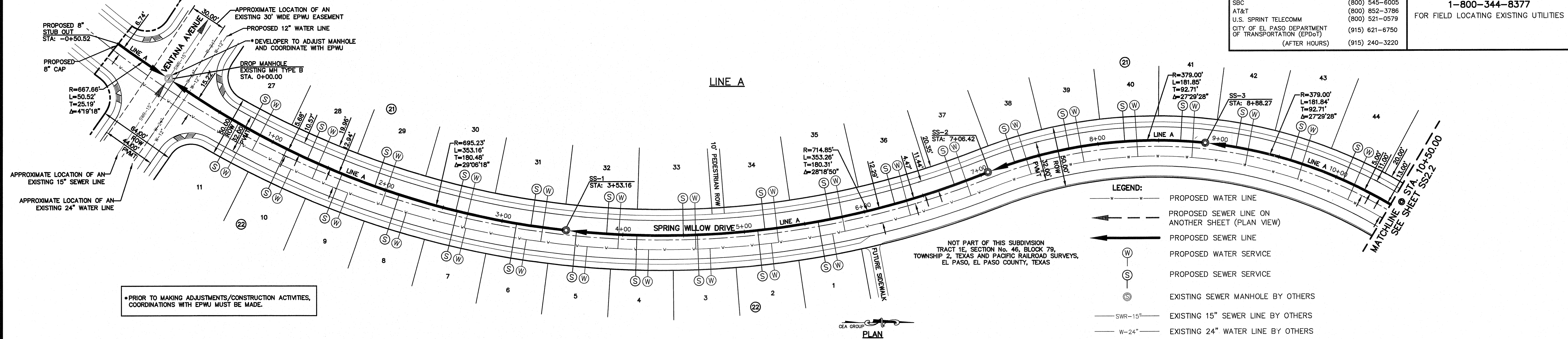
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)

LOCATED AT THE CENTERLINE
INTERSECTION OF
SUN TRAIL DRIVE AND SETTING SUN
DRIVE.

DATE: _____ BY: _____
REVISIONS: _____

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Office: 915.544.5522 Fax: 915.544.5523 www.ceagroup.net



SCALE: 1"=40'
Horizontal: 1"=50'
Vertical: 1"=5'
Contour Interval: N/A

DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APP'D. BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**SANITARY SEWER
PLAN & PROFILE
LINE A**

SHEET NO.
SS2.1

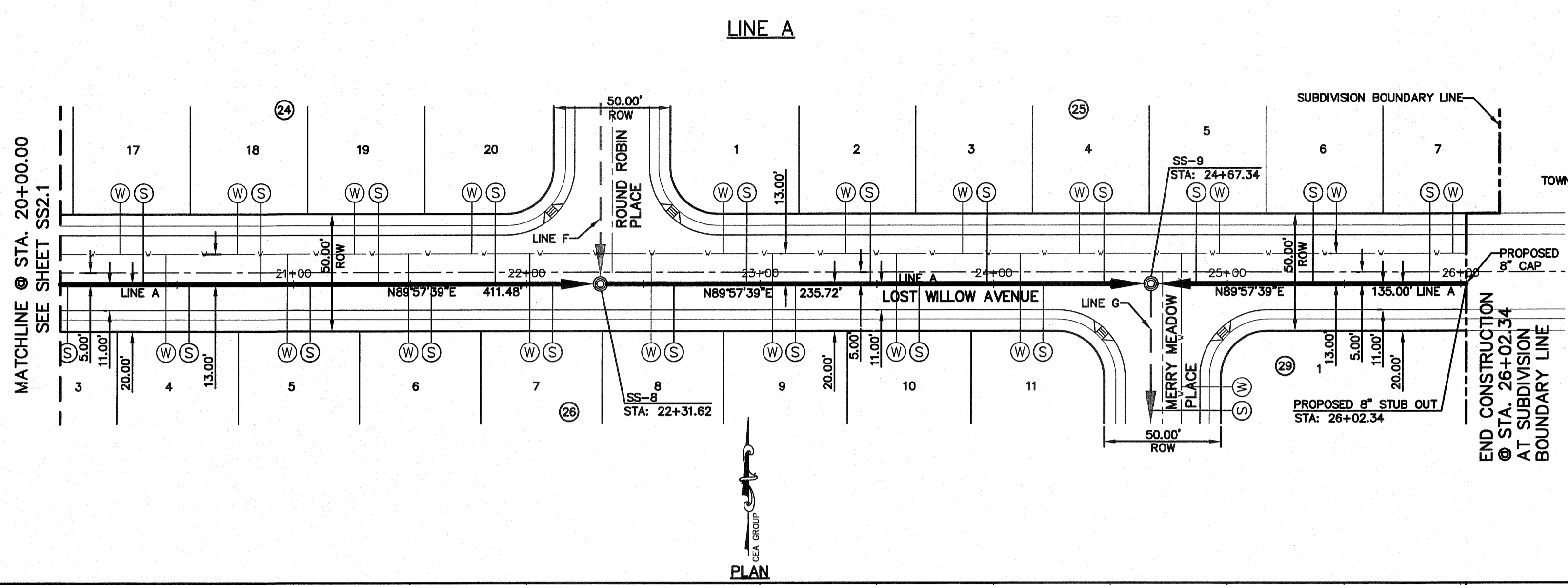
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
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SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT) (AFTER HOURS)	(915) 621-6750
	(915) 240-3220

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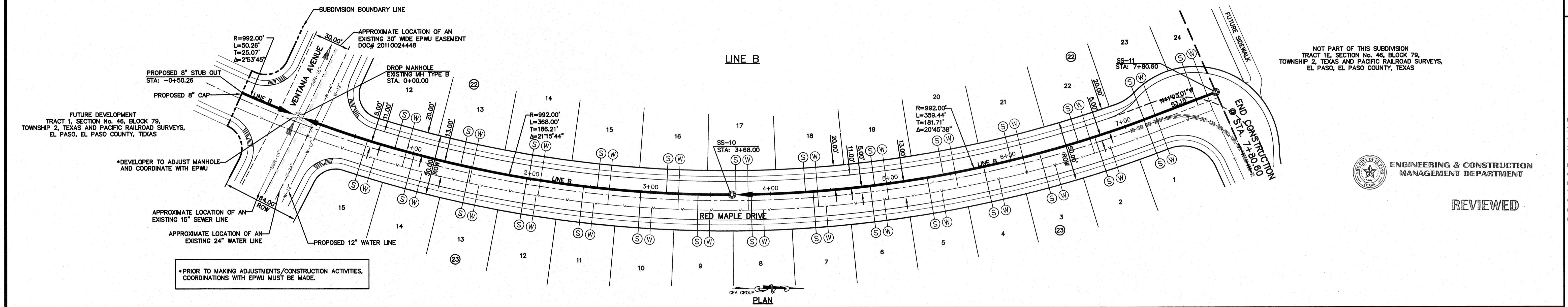
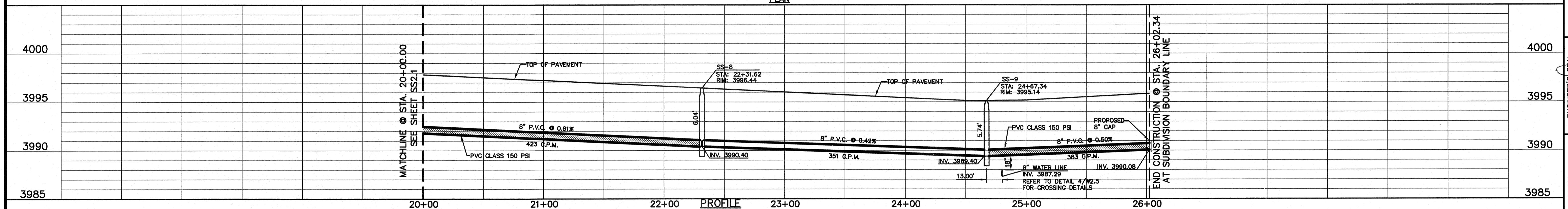
FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



- LEGEND:**
- PROPOSED WATER LINE
 - - - PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
 - - - PROPOSED SEWER LINE
 - ⊙ PROPOSED WATER SERVICE
 - ⊙ PROPOSED SEWER SERVICE
 - ⊙ EXISTING SEWER MANHOLE BY OTHERS
 - SWR-15" EXISTING 15" SEWER LINE BY OTHERS

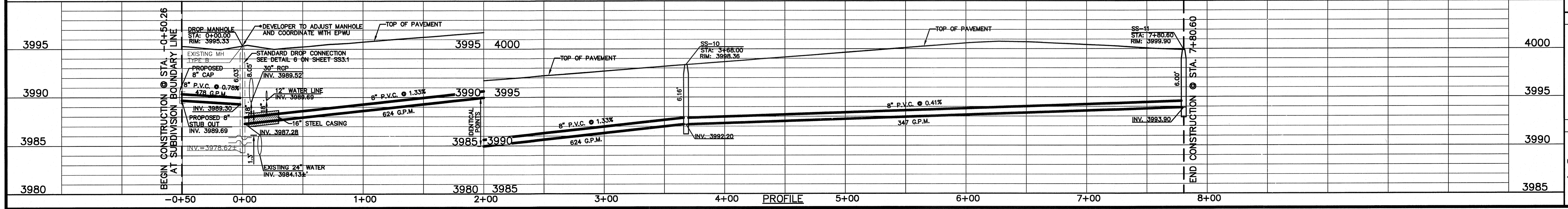
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TRACT 1, SECTION No. 46, BLOCK 79,
TOWNSHIP 2, TEXAS AND PACIFIC RAILROAD SURVEYS,
EL PASO, EL PASO COUNTY, TEXAS



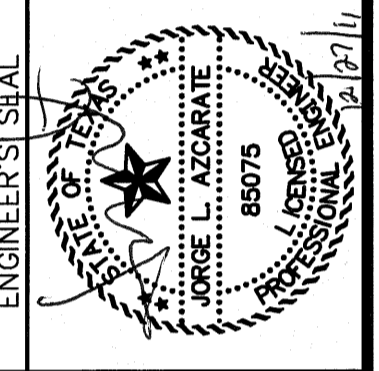
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TOWNSHIP 2, TEXAS AND PACIFIC RAILROAD SURVEYS,
EL PASO, EL PASO COUNTY, TEXAS

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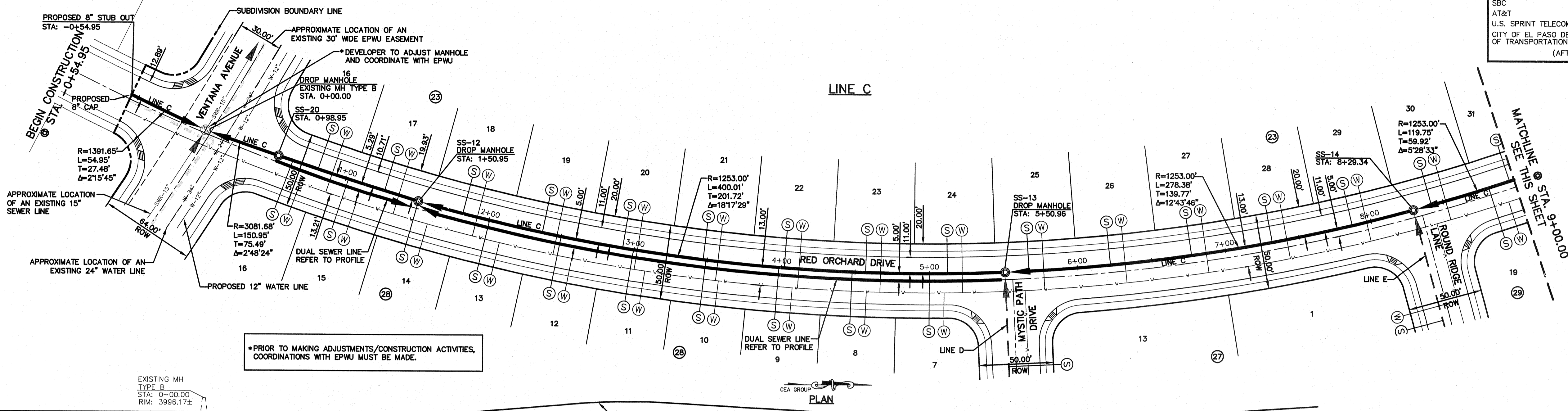
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DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APP. NO.: J.L.A.
JOB NO.: 2260-012-LD

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**SANITARY SEWER
PLAN & PROFILE
LINE A, B**

SHEET NO.
SS2.2

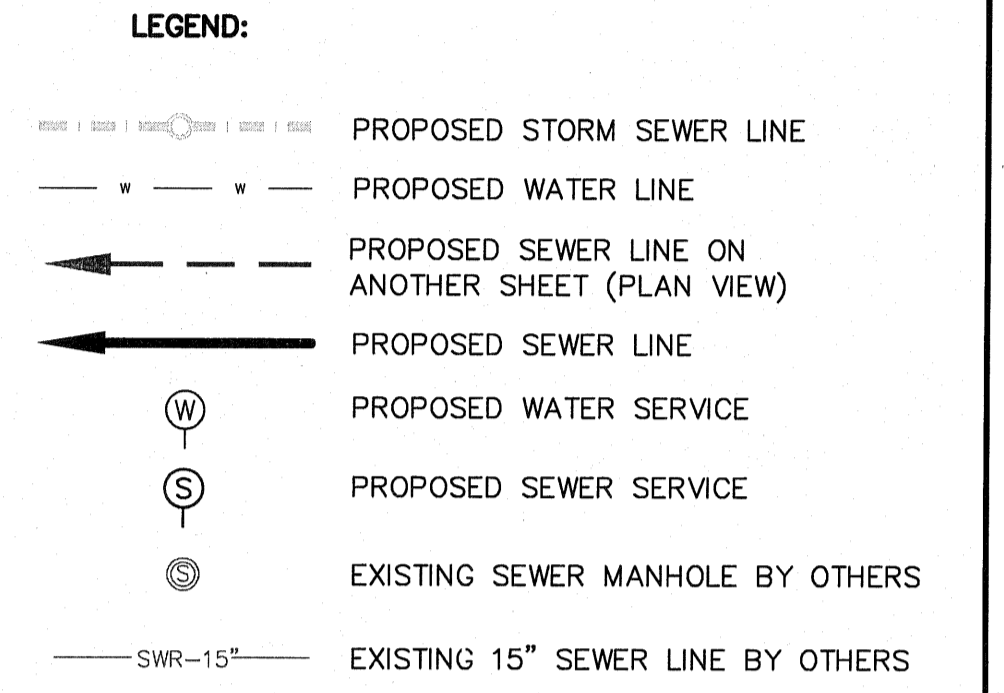
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TRACT 1, SECTION No. 46, BLOCK 79,
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EL PASO, EL PASO COUNTY, TEXAS



UTILITY LOCATOR SERVICES

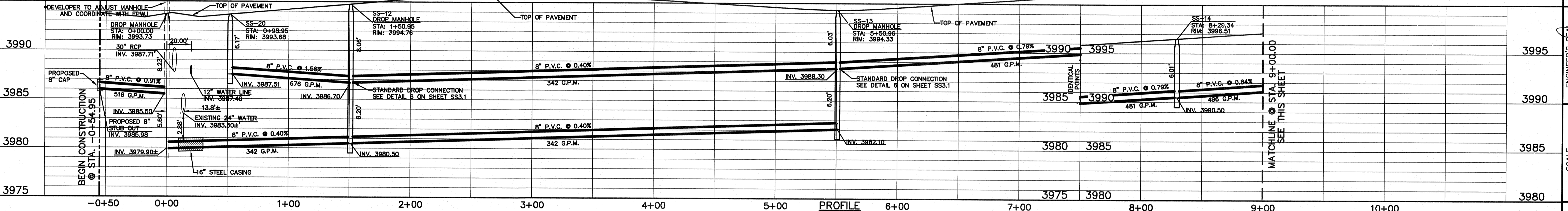
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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FOR FIELD LOCATING EXISTING UTILITIES

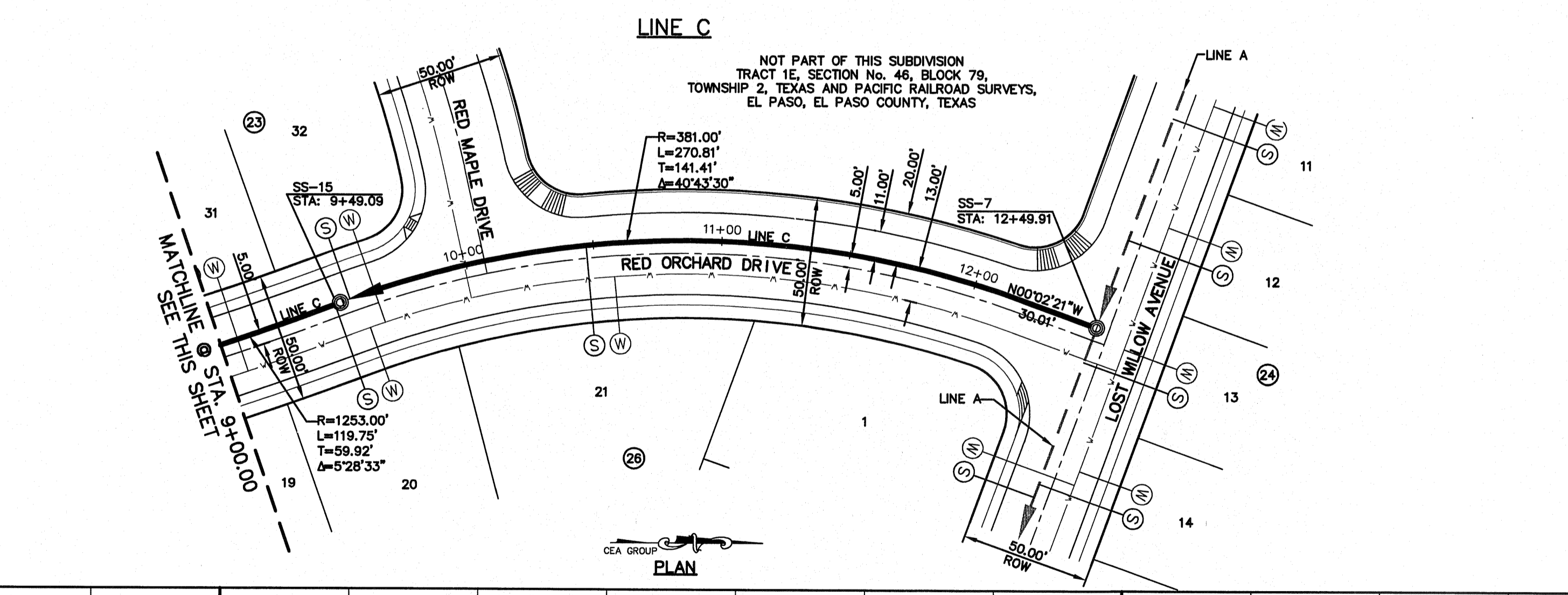


*PRIOR TO MAKING ADJUSTMENTS/CONSTRUCTION ACTIVITIES, COORDINATIONS WITH EPWU MUST BE MADE.

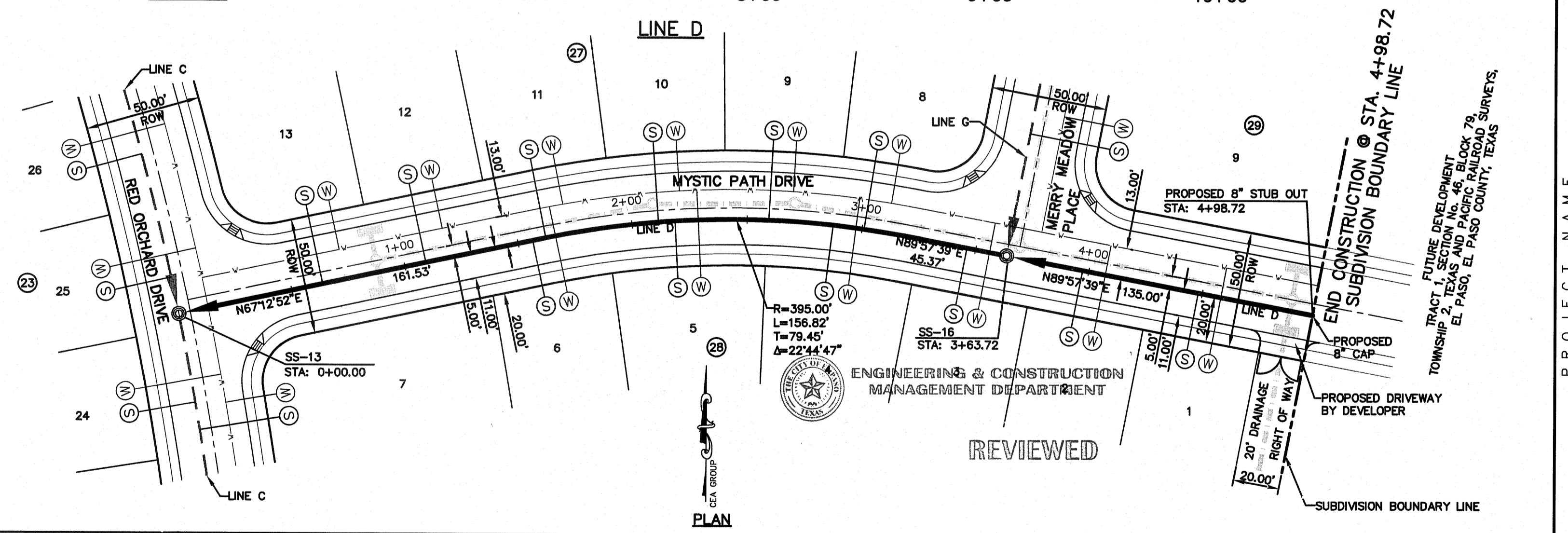
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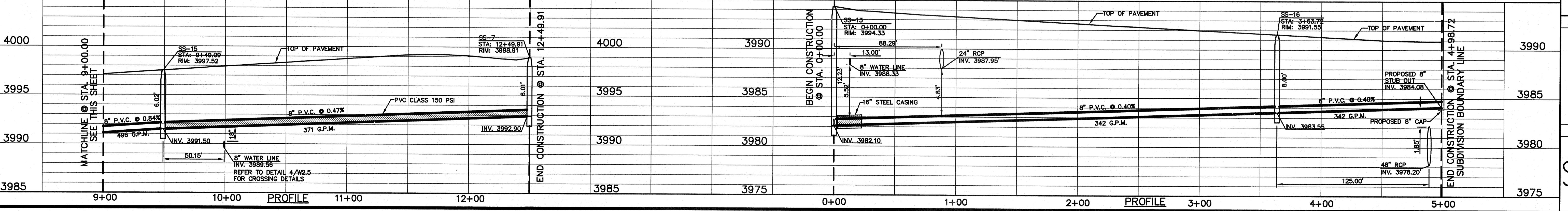
PROFILE



PLAN



PLAN



PROFILE

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION = 3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
INTERSECTION OF
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Office: 915.544.5232 Fax: 915.544.5233 www.ceea.com

ENGINEER'S SEAL
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Vertical: 1"=5'
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: E.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPROV. BY: J.L.A.
JOB No. 2260-012-1D

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**SANITARY SEWER
PLAN & PROFILE
LINE C, D**

SHEET NO.
SS2.3

UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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1-800-344-8377

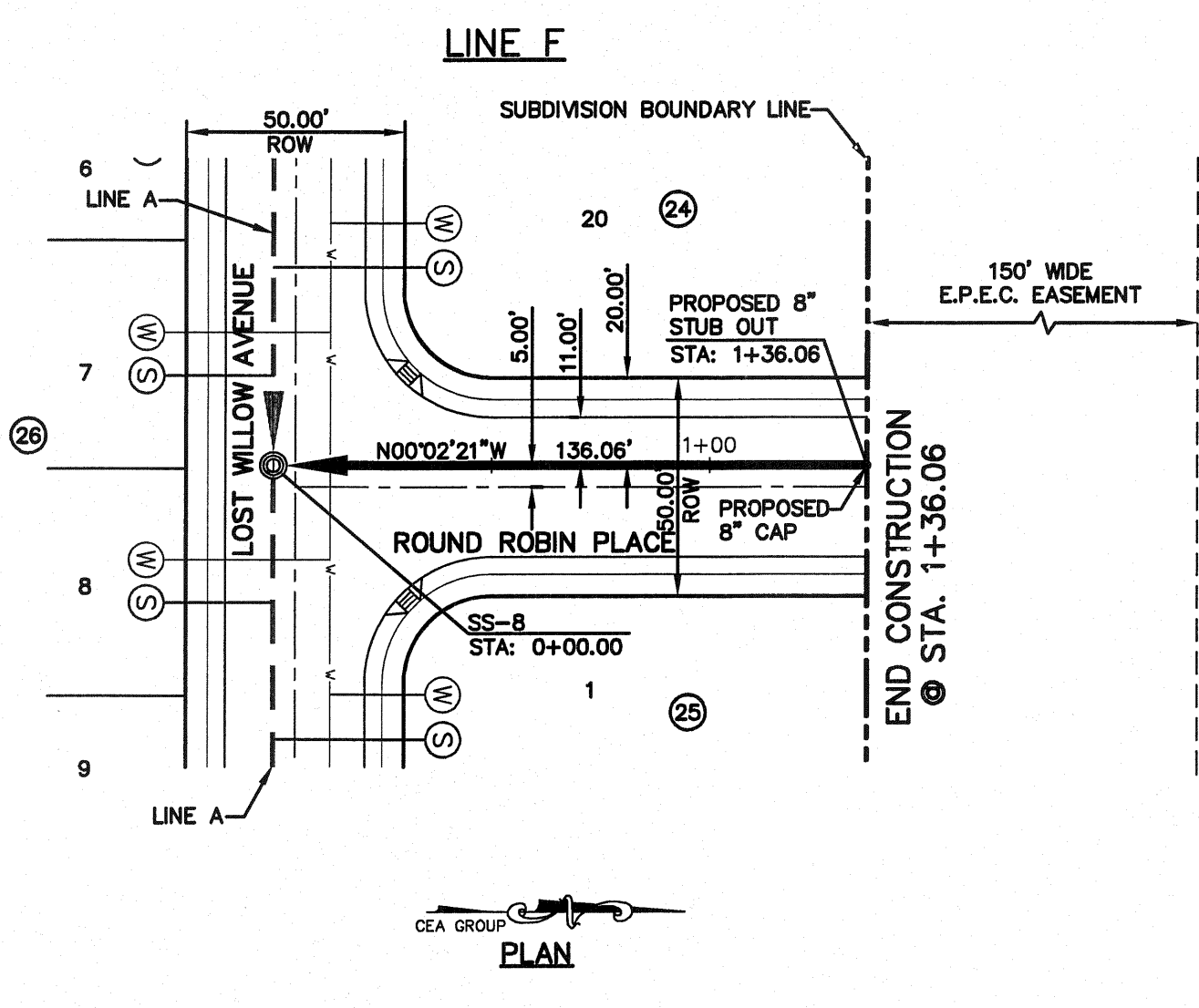
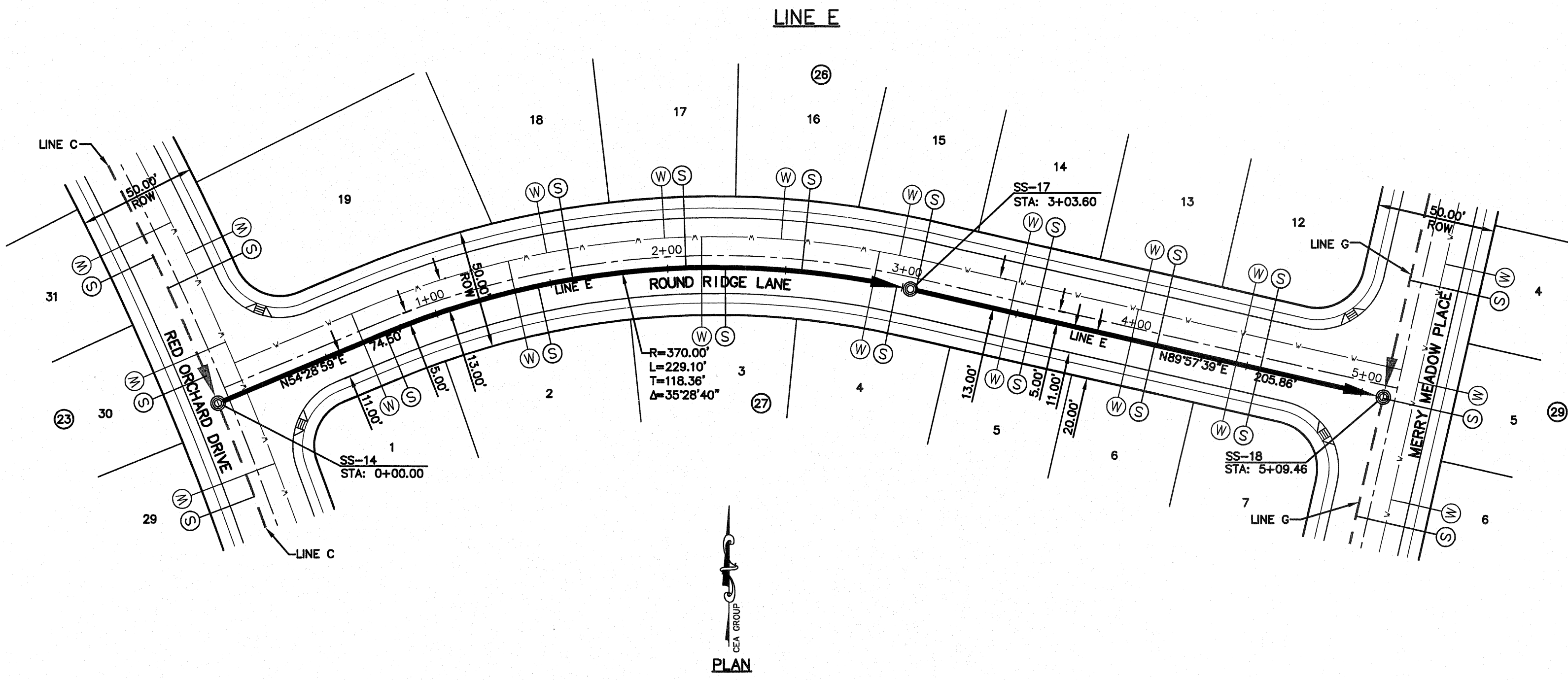
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)

LOCATED AT THE CENTERLINE
INTERSECTION OF
SUN TRAIL DRIVE AND SETTING SUN
DRIVE.

DATE	REVISIONS	BY

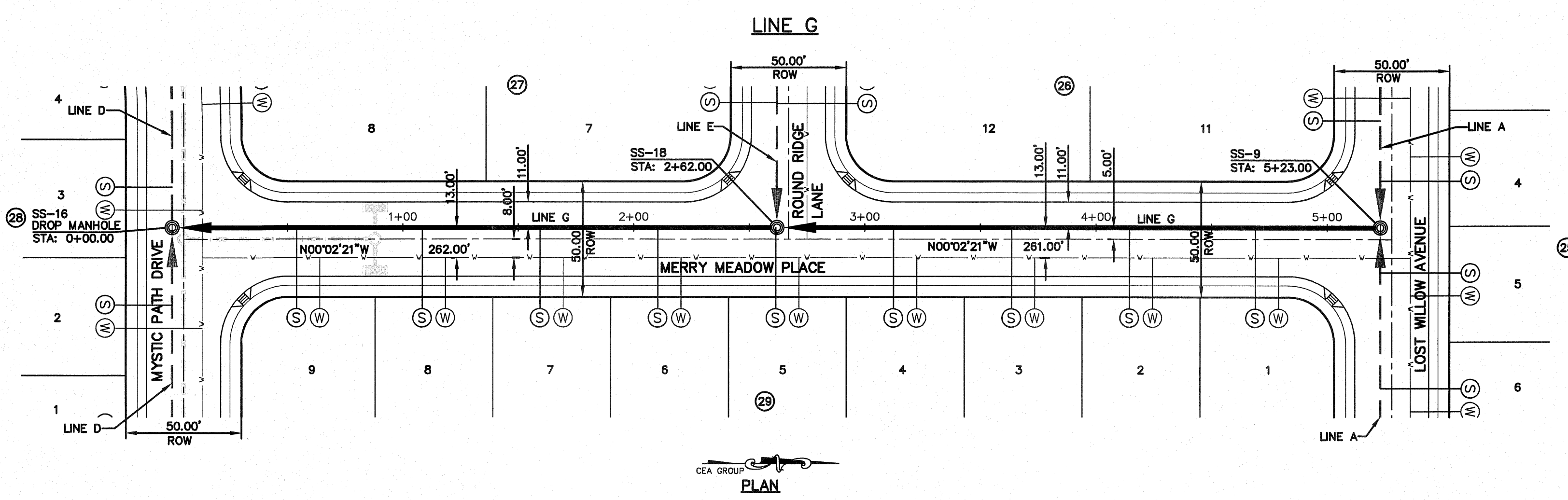
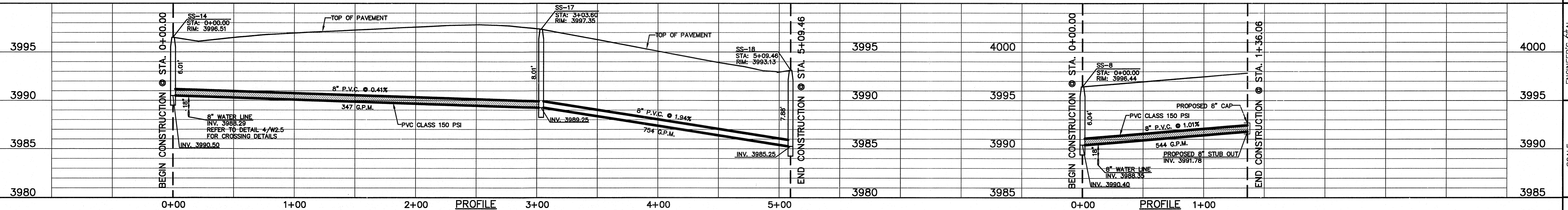


- LEGEND:**
- (dashed line) PROPOSED STORM SEWER LINE
 - (solid line) PROPOSED WATER LINE
 - (dashed line with arrow) PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
 - (solid line with arrow) PROPOSED SEWER LINE
 - ⊙ (circle with W) PROPOSED WATER SERVICE
 - ⊙ (circle with S) PROPOSED SEWER SERVICE

cea GROUP

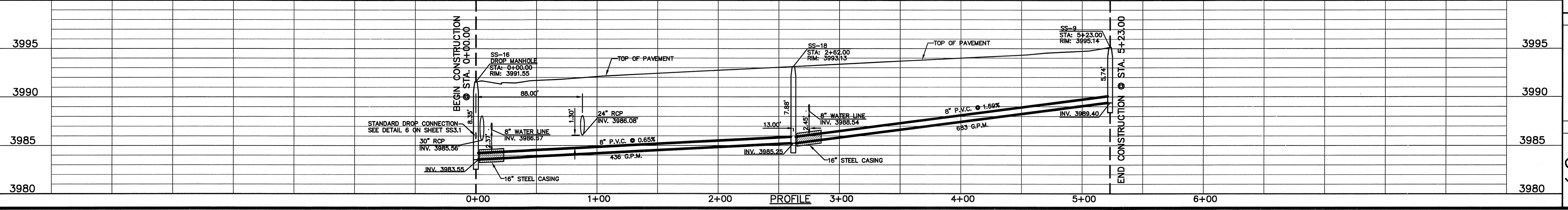
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MANAGEMENT DEPARTMENT

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Horizontal: 1"=50'

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DATE: OCTOBER, 2011

DESIGN BY: F.Z.

DRAWN BY: A.B.

CHECKED BY: J.L.A.

APP'D BY: J.L.A.

JOB No. 2260-012-LD

PROJECT NAME

**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**SANITARY SEWER
PLAN & PROFILE
LINE E, F, G**

SHEET NO.

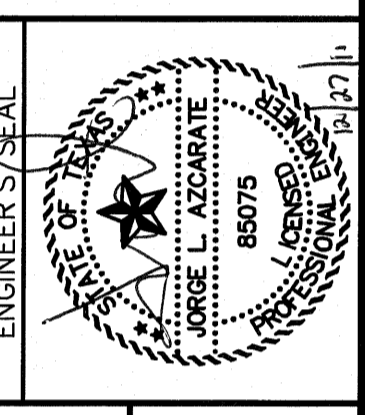
SS2.4

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 498-5244
EL PASO WATER UTILITIES	(915) 594-5500
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 TELECOMM	(800) 521-0579
CITY OF EL PASO DEPARTMENT OF TRANSPORTATION (EPDOT)	(915) 621-6750
(AFTER HOURS)	(915) 240-3220

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1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
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DRIVE.

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4712 Woodrow Bean, Ste. F, El Paso, TX 79924
Office: 915.544.5252 Fax: 915.544.6233 www.ceagroup.net

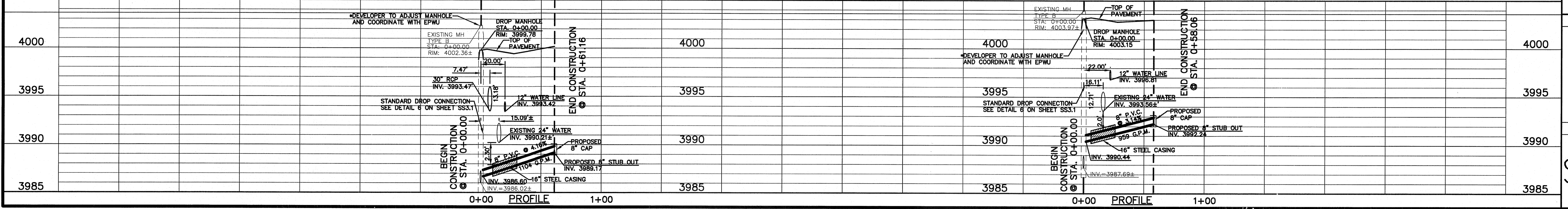
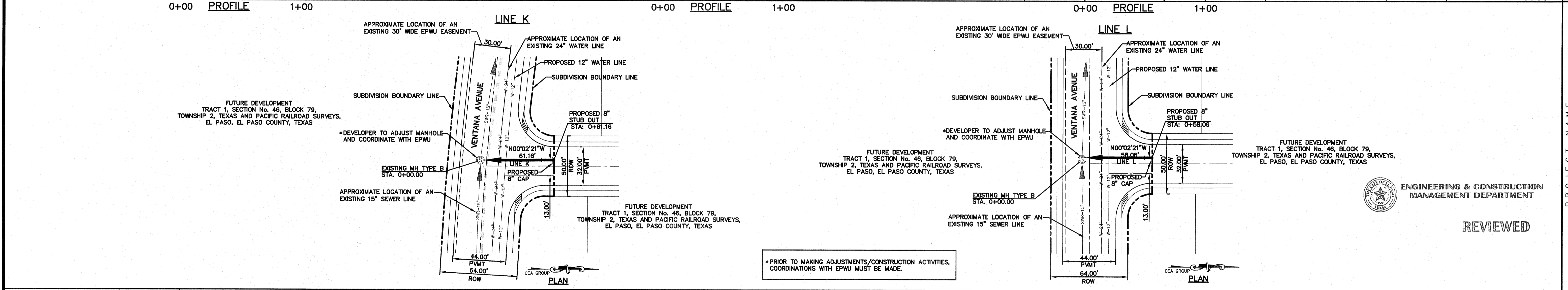
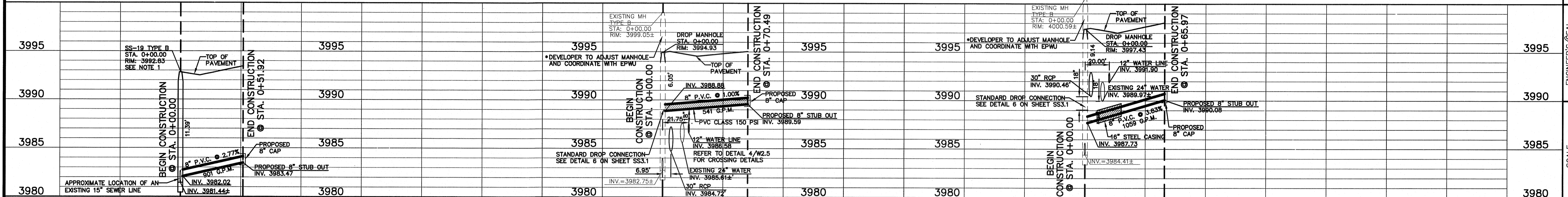
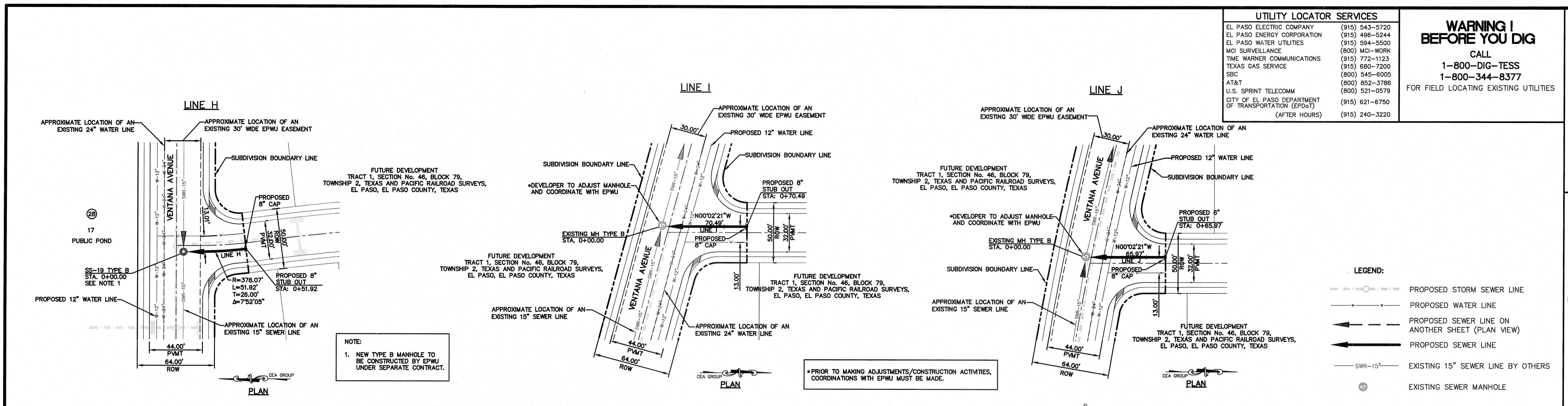


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Vertical: Contour Interval: N/A
DATE: OCTOBER, 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHECK BY: J.L.A.
APPROV. BY: J.L.A.
JOB No. 2260-012-1D

PROJECT NAME
**VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS**

SHEET TITLE
**SANITARY SEWER
PLAN & PROFILE
LINE H, I, J, K, L**

SHEET NO.
SS2.5



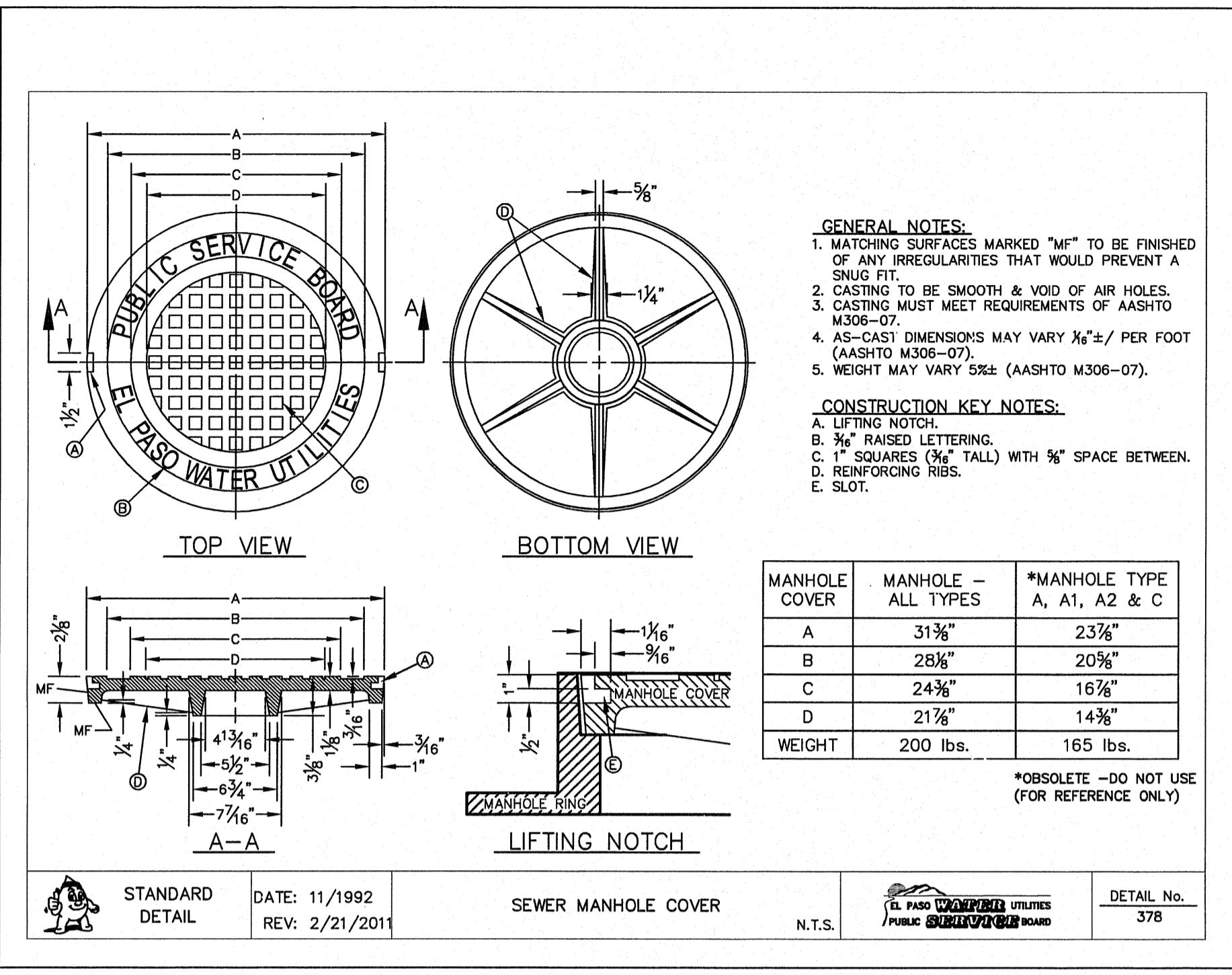
ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT
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NOTE:
1. NEW TYPE B MANHOLE TO BE CONSTRUCTED BY EPWU UNDER SEPARATE CONTRACT.

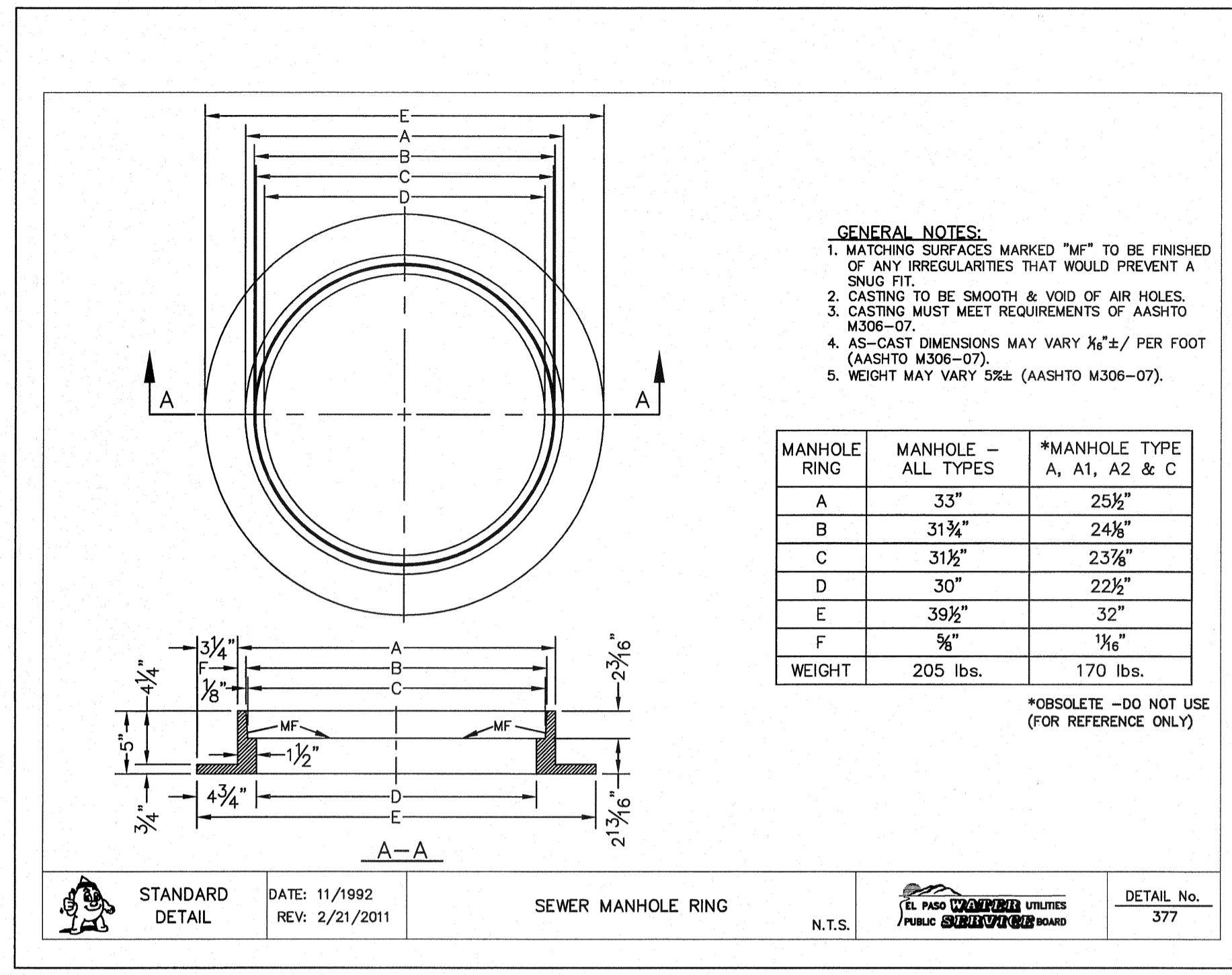
*PRIOR TO MAKING ADJUSTMENTS/CONSTRUCTION ACTIVITIES, COORDINATIONS WITH EPWU MUST BE MADE.

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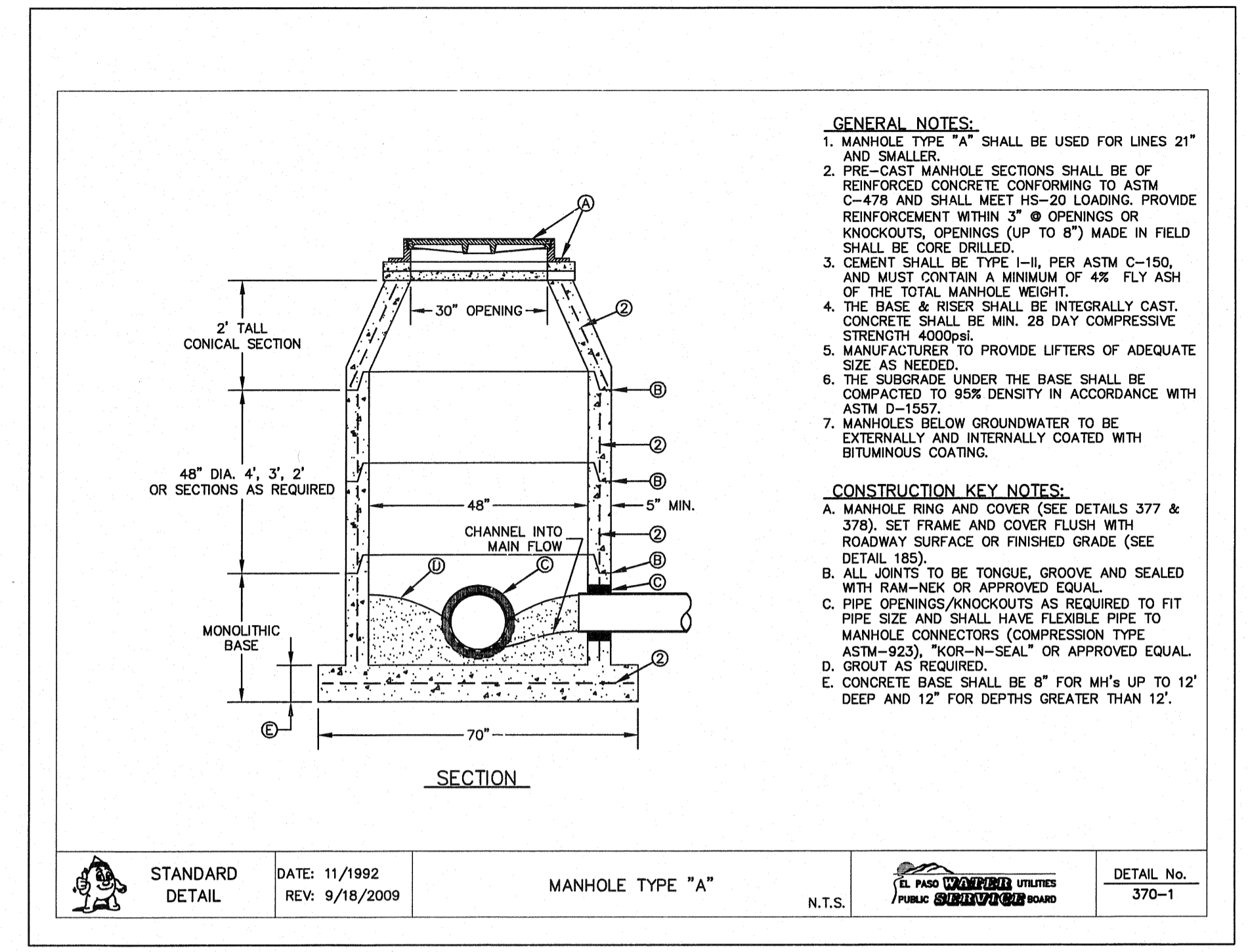
*PRIOR TO MAKING ADJUSTMENTS/CONSTRUCTION ACTIVITIES, COORDINATIONS WITH EPWU MUST BE MADE.



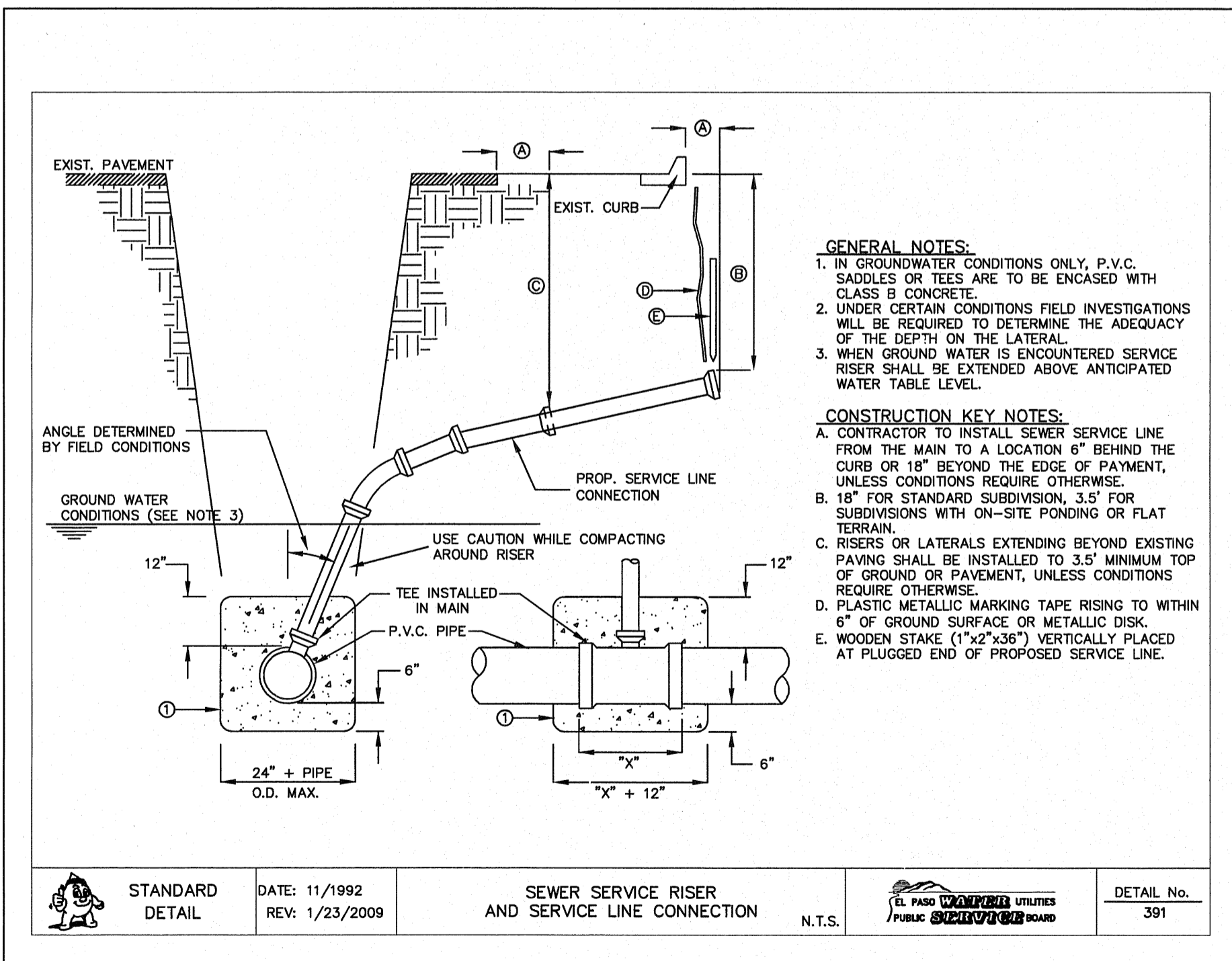
1 STANDARD MANHOLE COVER DETAIL SCALE: N.T.S.



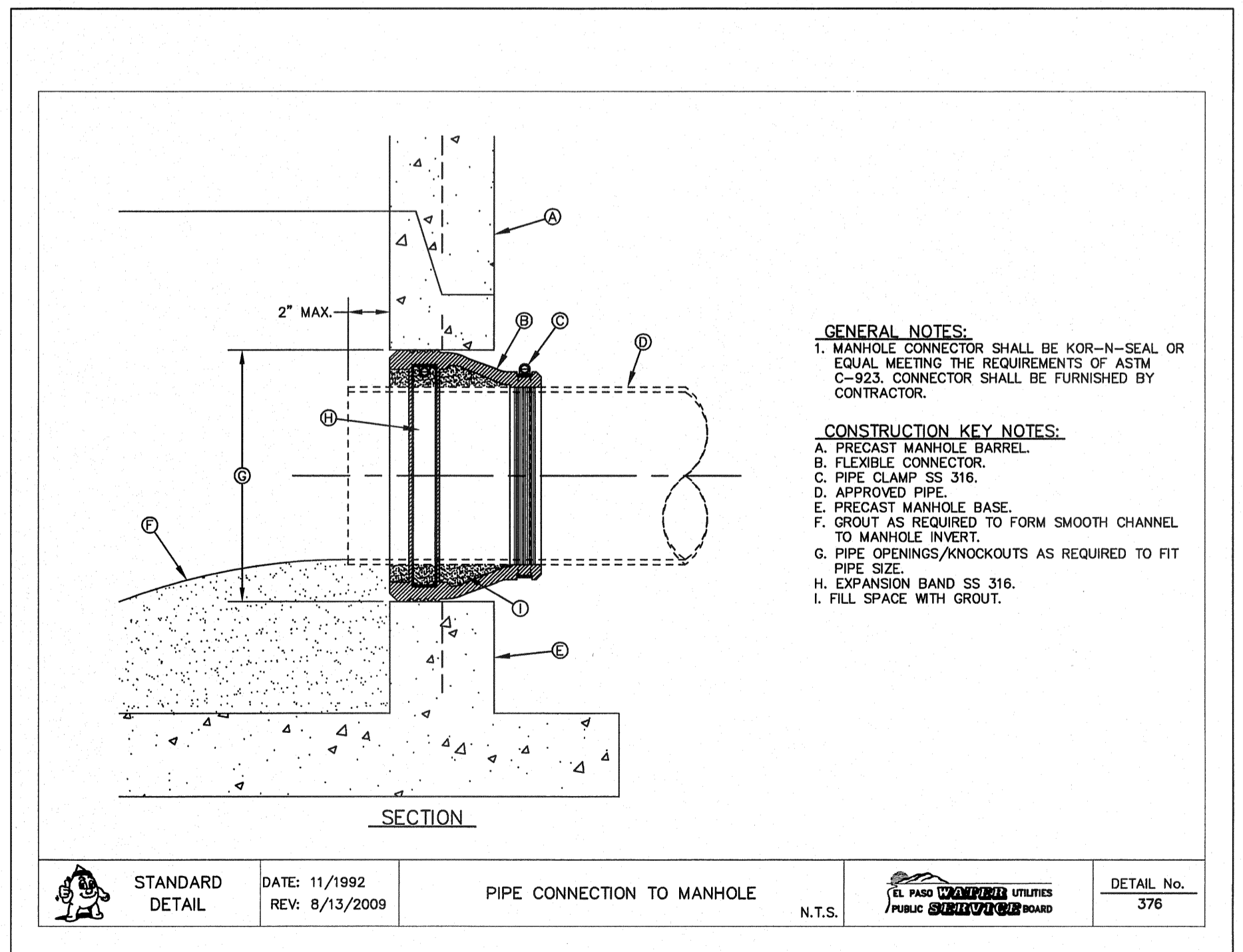
2 STANDARD MANHOLE RING DETAIL SCALE: N.T.S.



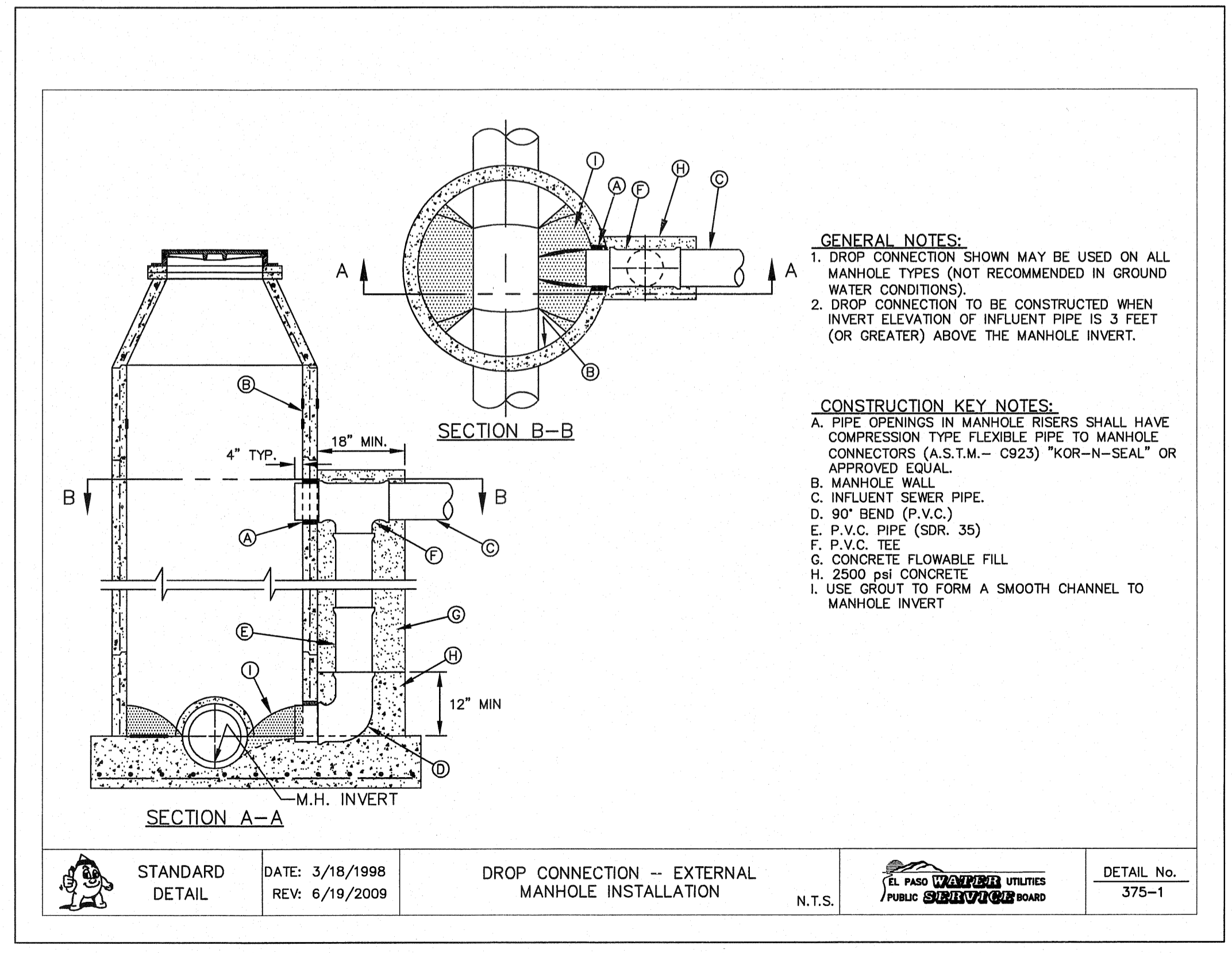
3 STANDARD MANHOLE TYPE "A" SCALE: N.T.S.



4 SEWER SERVICE RISER AND SERVICE LINE CONNECTION SCALE: N.T.S.



5 PIPE CONNECTION TO MANHOLE SCALE: N.T.S.



6 DROP CONNECTION - EXTERNAL MANHOLE INSTALLATION SCALE: N.T.S.

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE INTERSECTION OF SUTHERLAND DRIVE AND SETTING SUN DRIVE.

DATE REVISIONS BY

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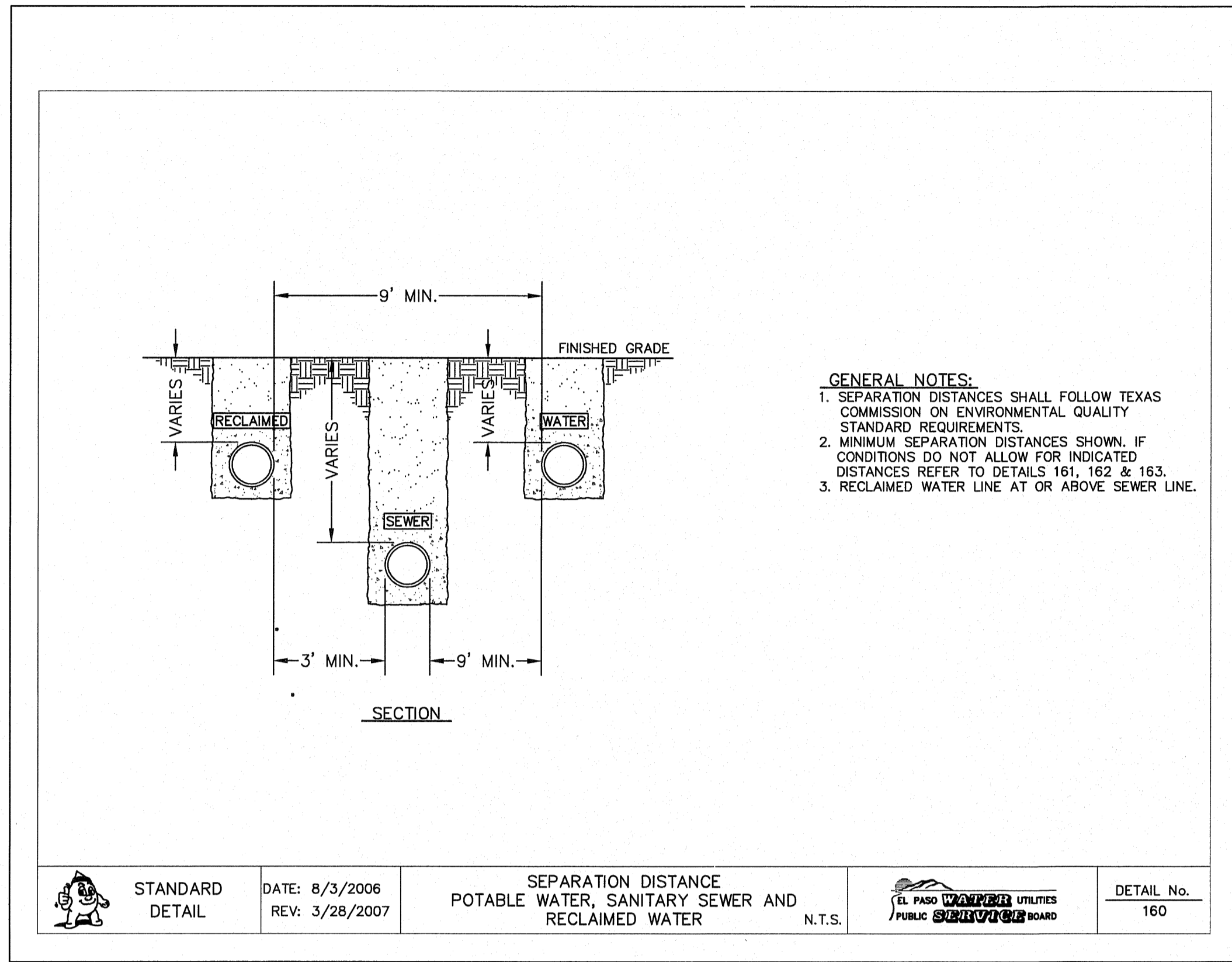
ENGINEER'S SEAL
J. L. AZARATE
REGISTERED PROFESSIONAL ENGINEER
NO. 80075
STATE OF TEXAS

SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: OCTOBER 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHKD. BY: J.L.A.
APPD. BY: J.L.A.
JOB No. 2260-012-LD

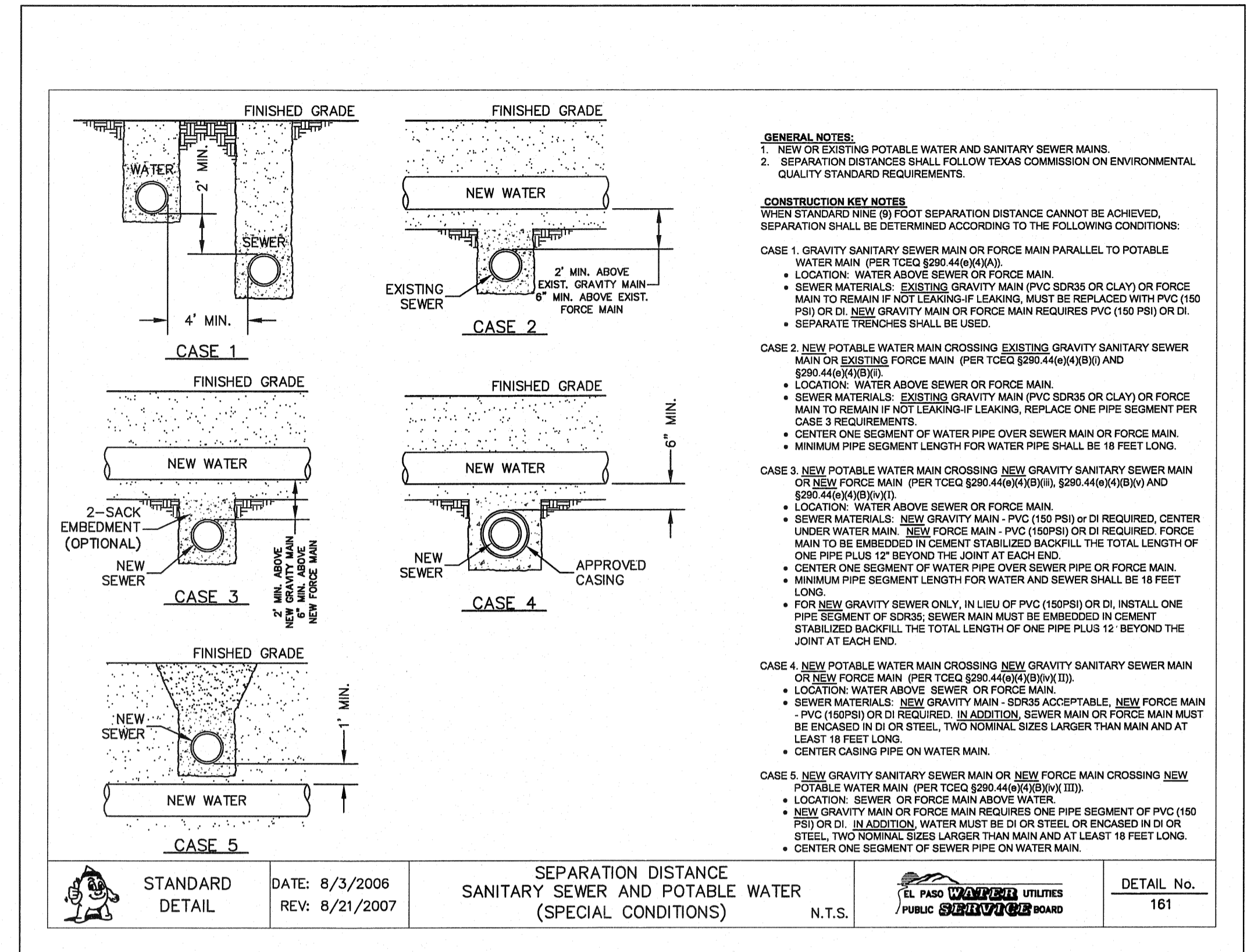
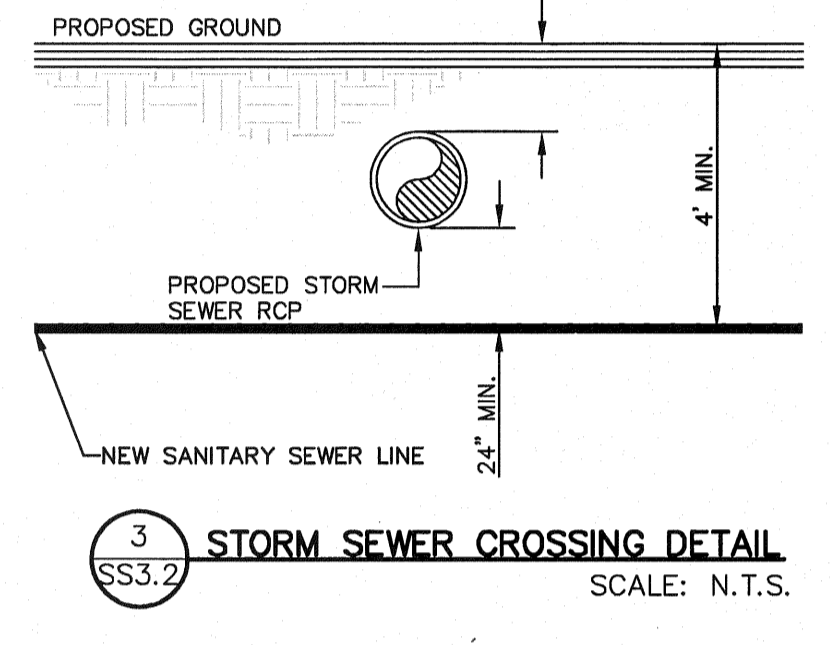
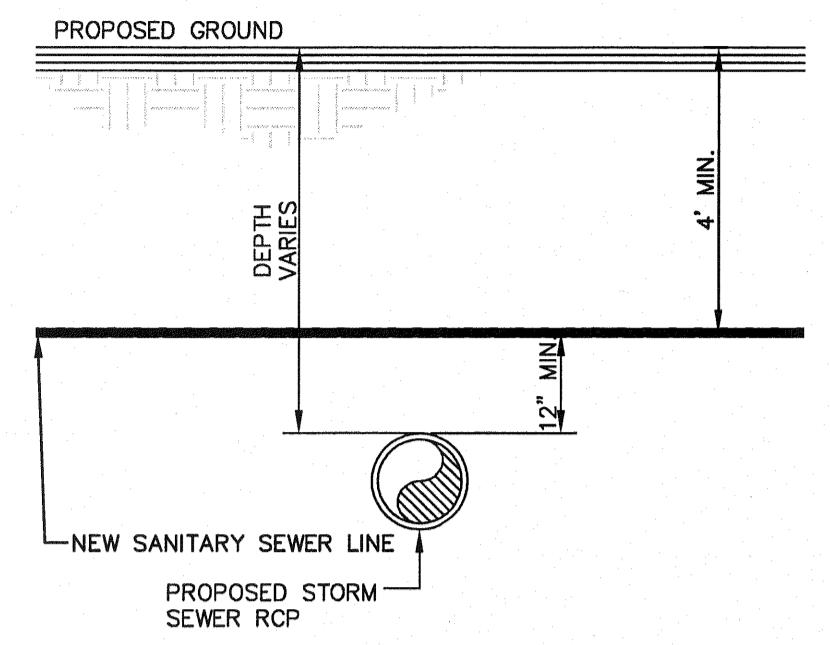
PROJECT NAME
VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS

SHEET TITLE
SANITARY SEWER DETAILS
(SHEET 1 OF 3)
SHEET NO.

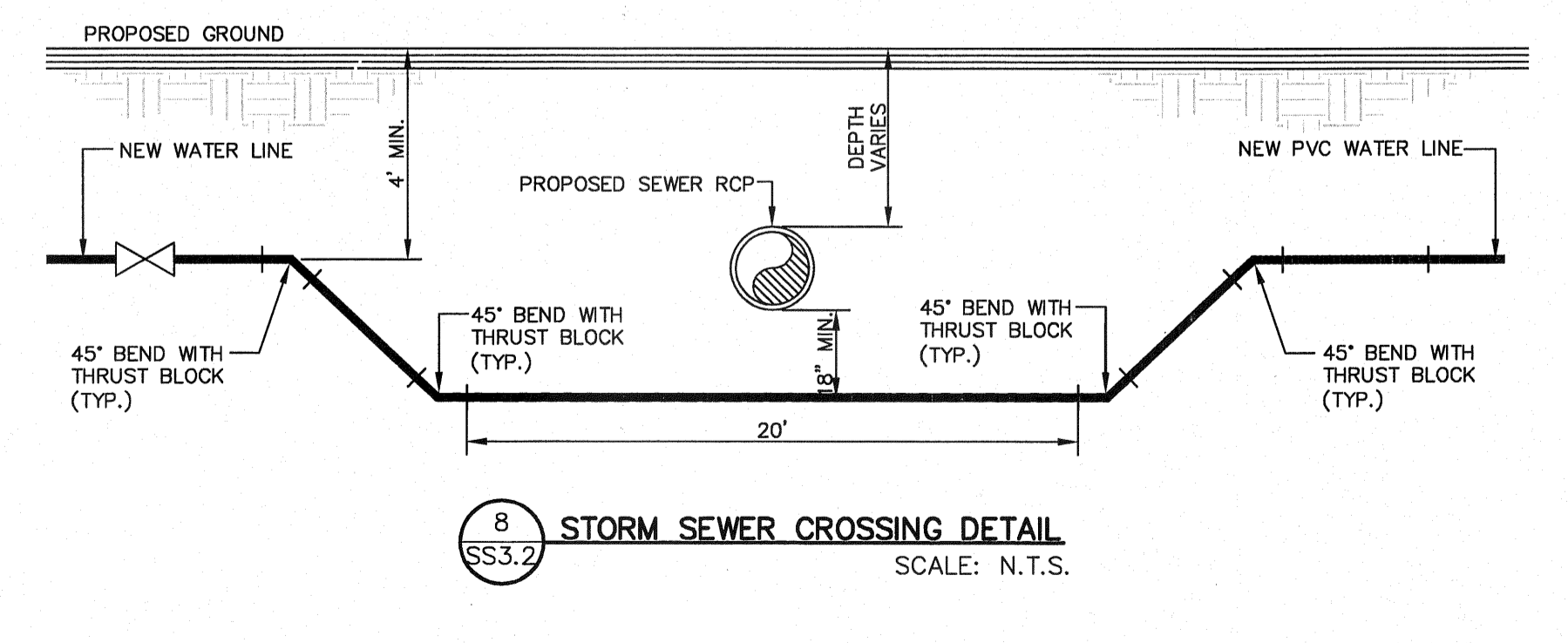
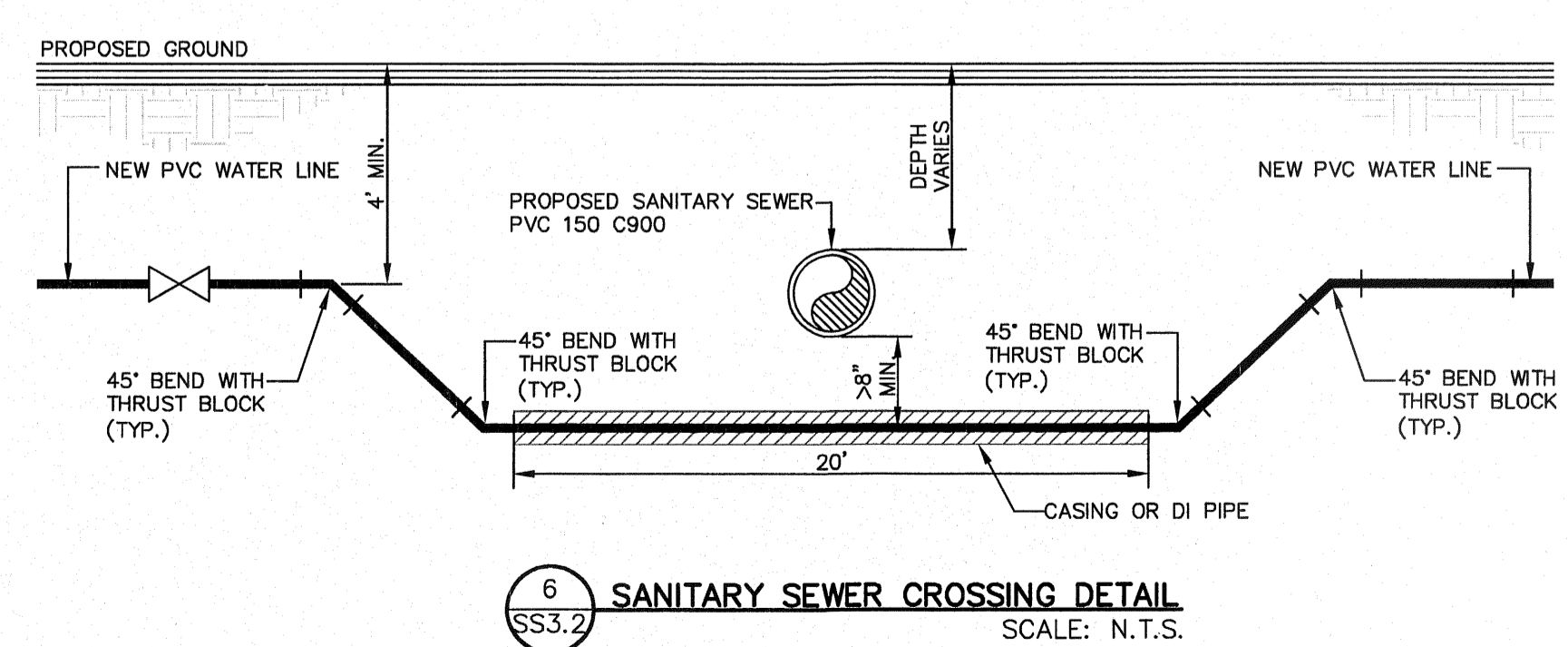
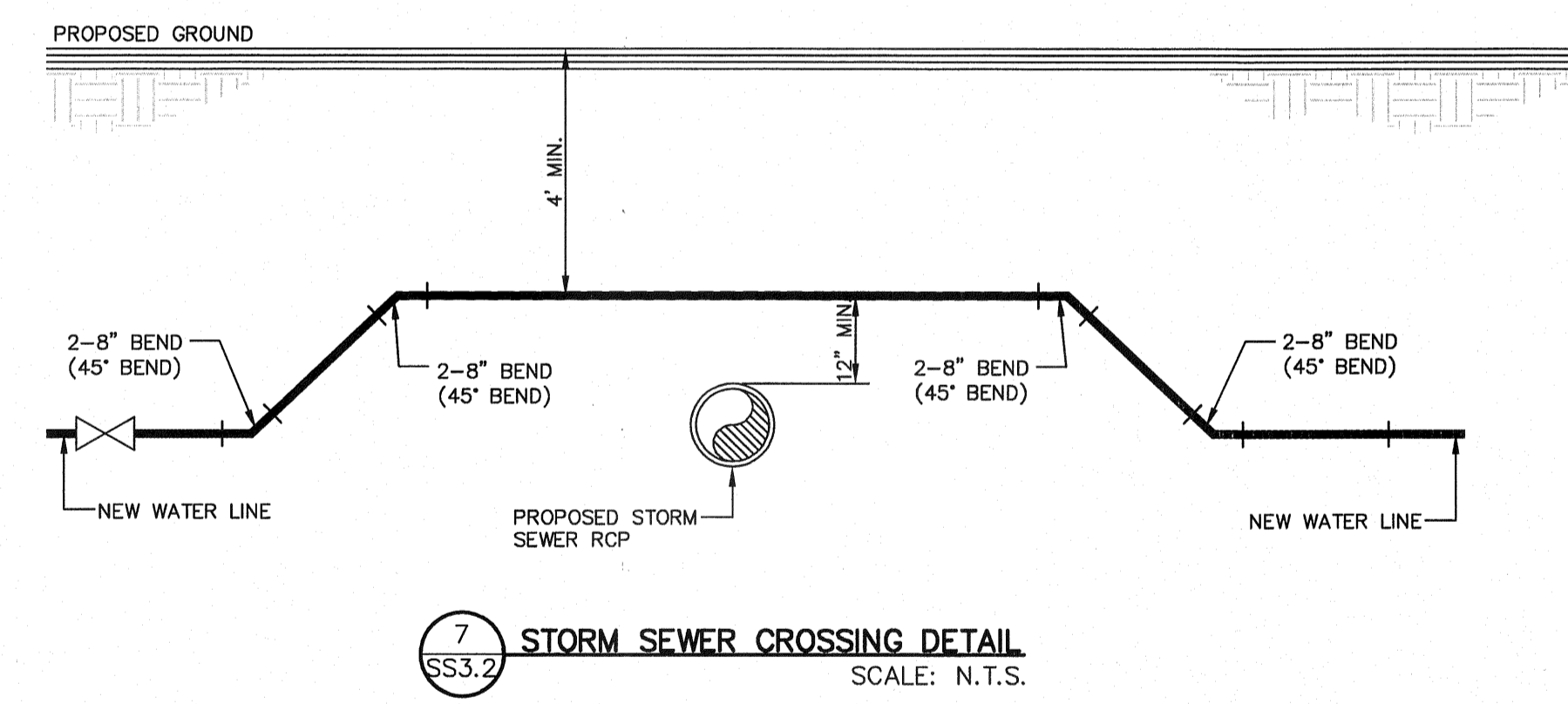
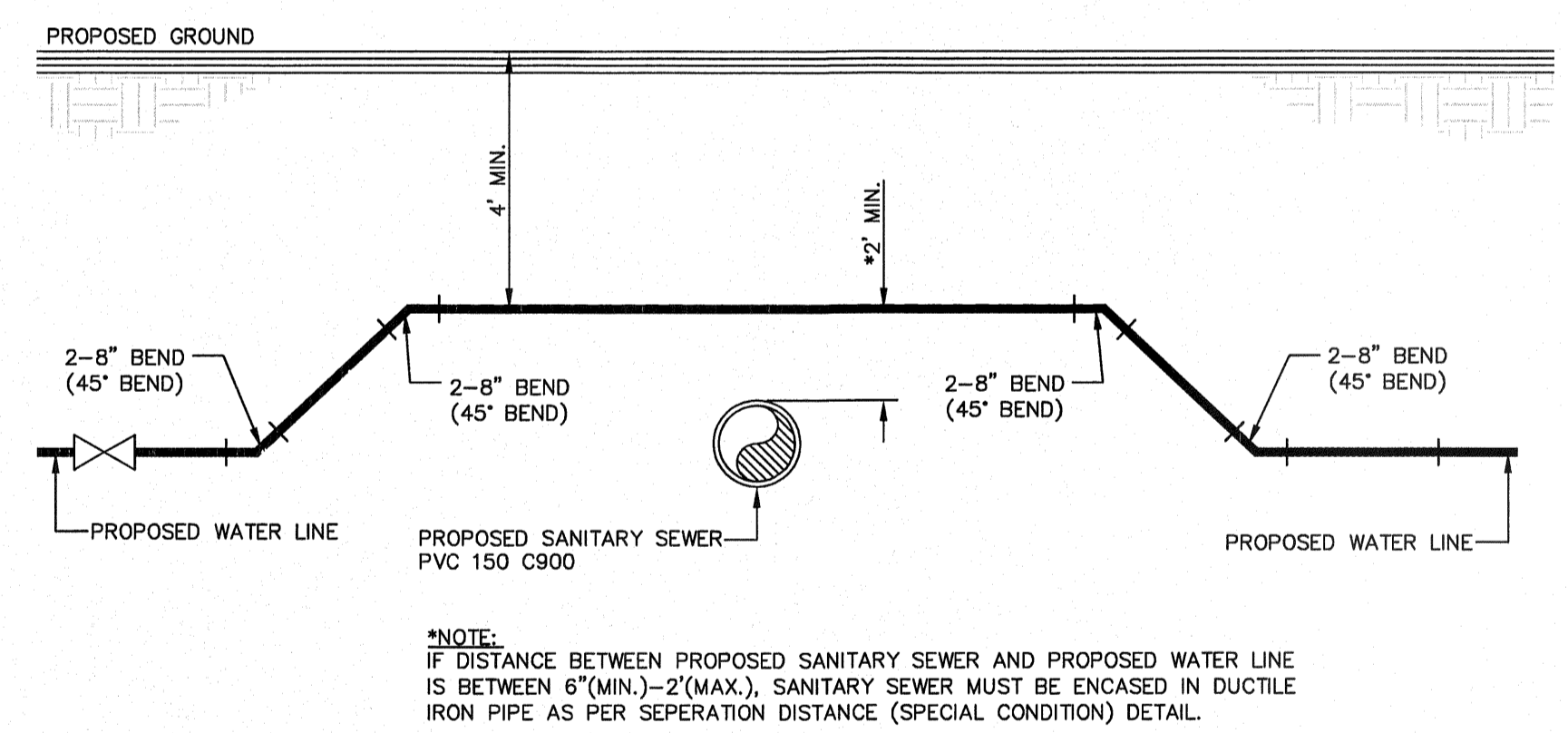
SS3.1



1 SEPARATION DISTANCE-NEW WATER AND NEW SEWER SCALE: N.T.S.



4 SEPARATION DISTANCE-SANITARY SEWER AND POTABLE WATER SCALE: N.T.S.



REFERENCES - BENCHMARKS
 EXISTING CITY MONUMENT ELEVATION=3970.52 FEET (CITY DATUM)
 LOCATED AT THE CENTERLINE INTERSECTION OF TRAIL DRIVE AND SETTING SUN DRIVE.

DATE REVISIONS BY

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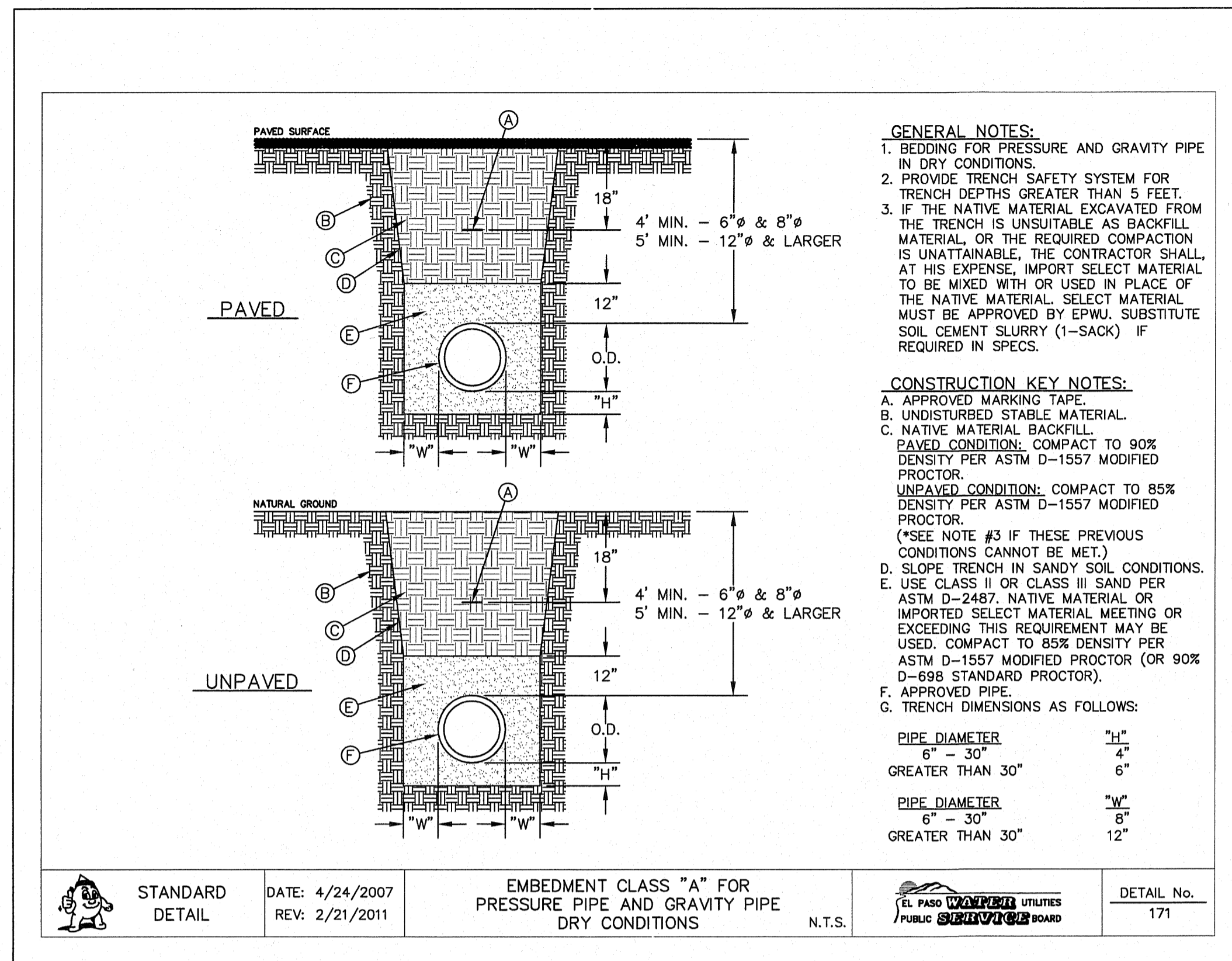
SCALE
 Horizontal: N/A
 Vertical: N/A
 Contour Interval: N/A
 DATE: OCTOBER 2011
 DESIGN BY: F.Z.
 DRAWN BY: A.B.
 CHKD. BY: J.L.A.
 APPD. BY: J.L.A.
 JOB No. 2260-012-LD

PROJECT NAME
 VENTANAS SUBDIVISION
 UNIT FOUR
 SUBDIVISION IMPROVEMENTS

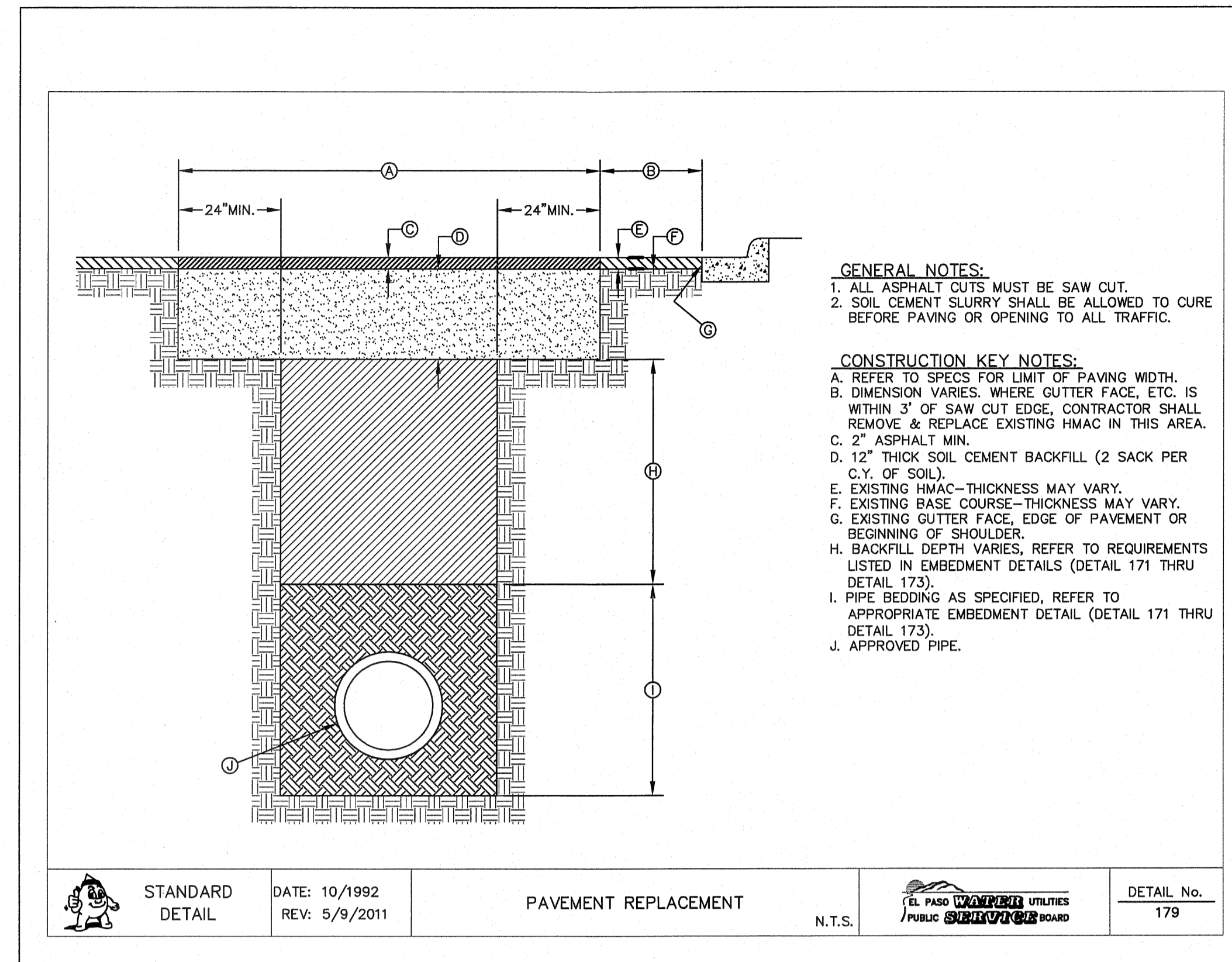
ENGINEERING & CONSTRUCTION MANAGEMENT DEPARTMENT
 REVIEWED

SHEET TITLE
 SANITARY SEWER DETAILS
 (SHEET 2 OF 3)
 SHEET NO.

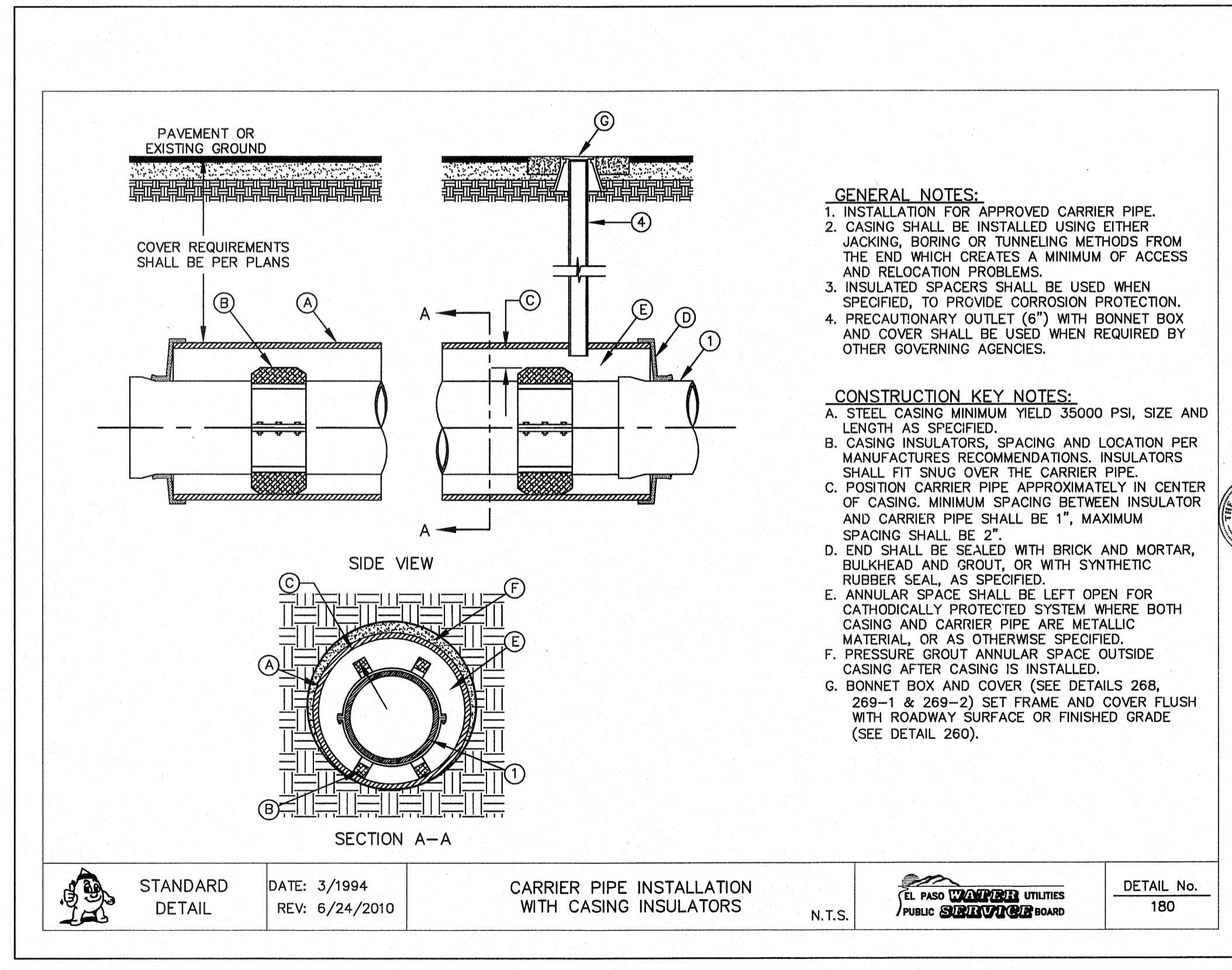
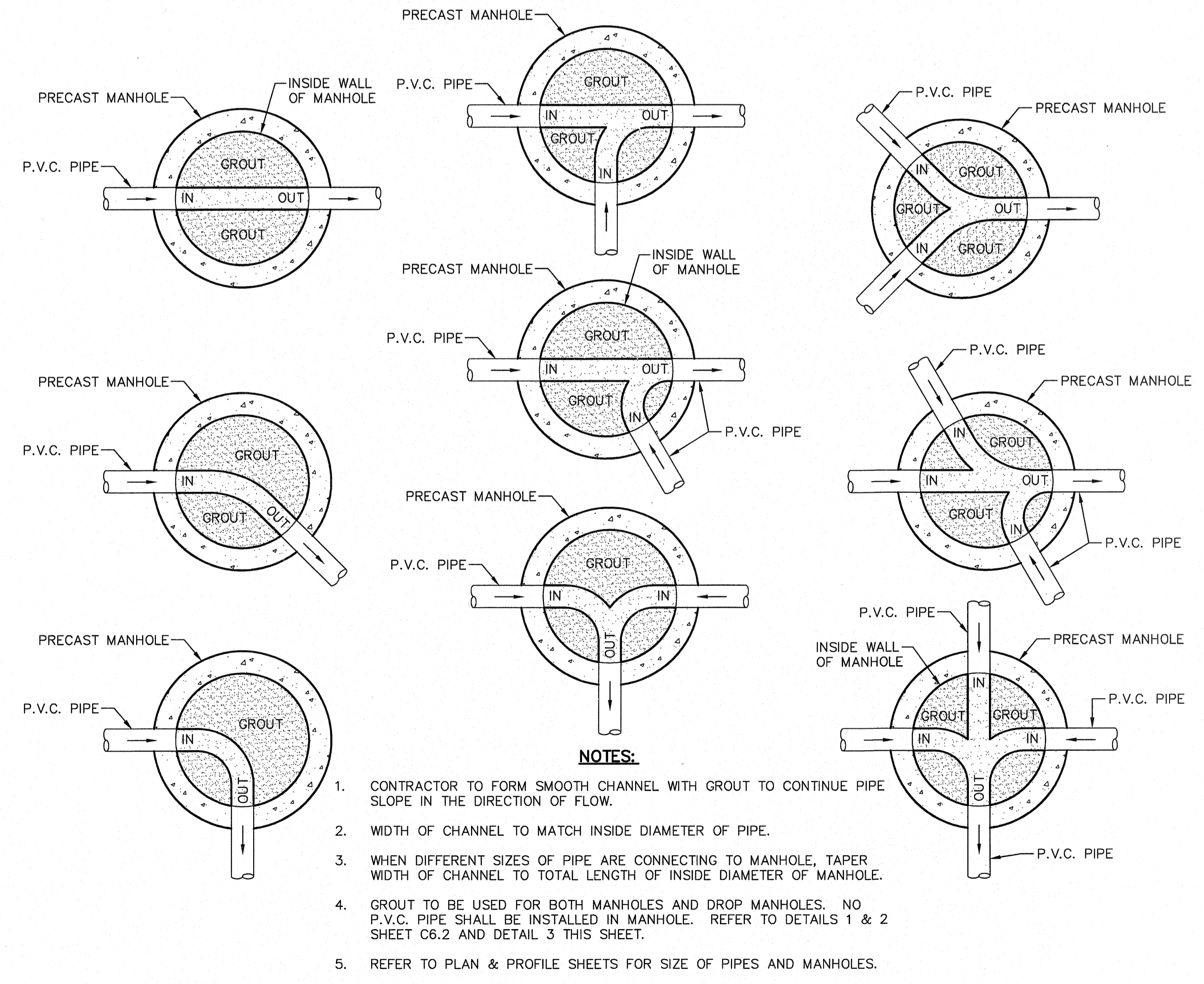
SS3.2



1 BEDDING CLASS DETAILS FOR P.V.C. PRESSURE PIPE SCALE: N.T.S.



2 PAVEMENT REPLACEMENT DETAIL SCALE: N.T.S.



3 CASING DETAIL SCALE: N.T.S.

REFERENCES - BENCHMARKS
EXISTING CITY MONUMENT
ELEVATION=3970.52 FEET (CITY DATUM)
LOCATED AT THE CENTERLINE
INTERSECTION OF
SUN TRAIL DRIVE AND SETTING SUN
DRIVE.

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ENGINEER'S SEAL
JAMES L. ALVARADO
REGISTERED PROFESSIONAL ENGINEER
NO. 88075
EXPIRES 09/01/11

SCALE: N/A
Horizontal: N/A
Vertical: N/A
Contour Interval: N/A
DATE: OCTOBER, 2011
DESIGN BY: F.Z.
DRAWN BY: A.B.
CHECK BY: J.L.A.
APP'D BY: J.L.A.
JOB No. 2260-012-LD

PROJECT NAME
VENTANAS SUBDIVISION
UNIT FOUR
SUBDIVISION IMPROVEMENTS

ENGINEERING & CONSTRUCTION
MANAGEMENT DEPARTMENT
REVIEWED

SHEET TITLE
SANITARY SEWER
DETAILS
(SHEET 3 OF 3)

SHEET NO.
SS3.3