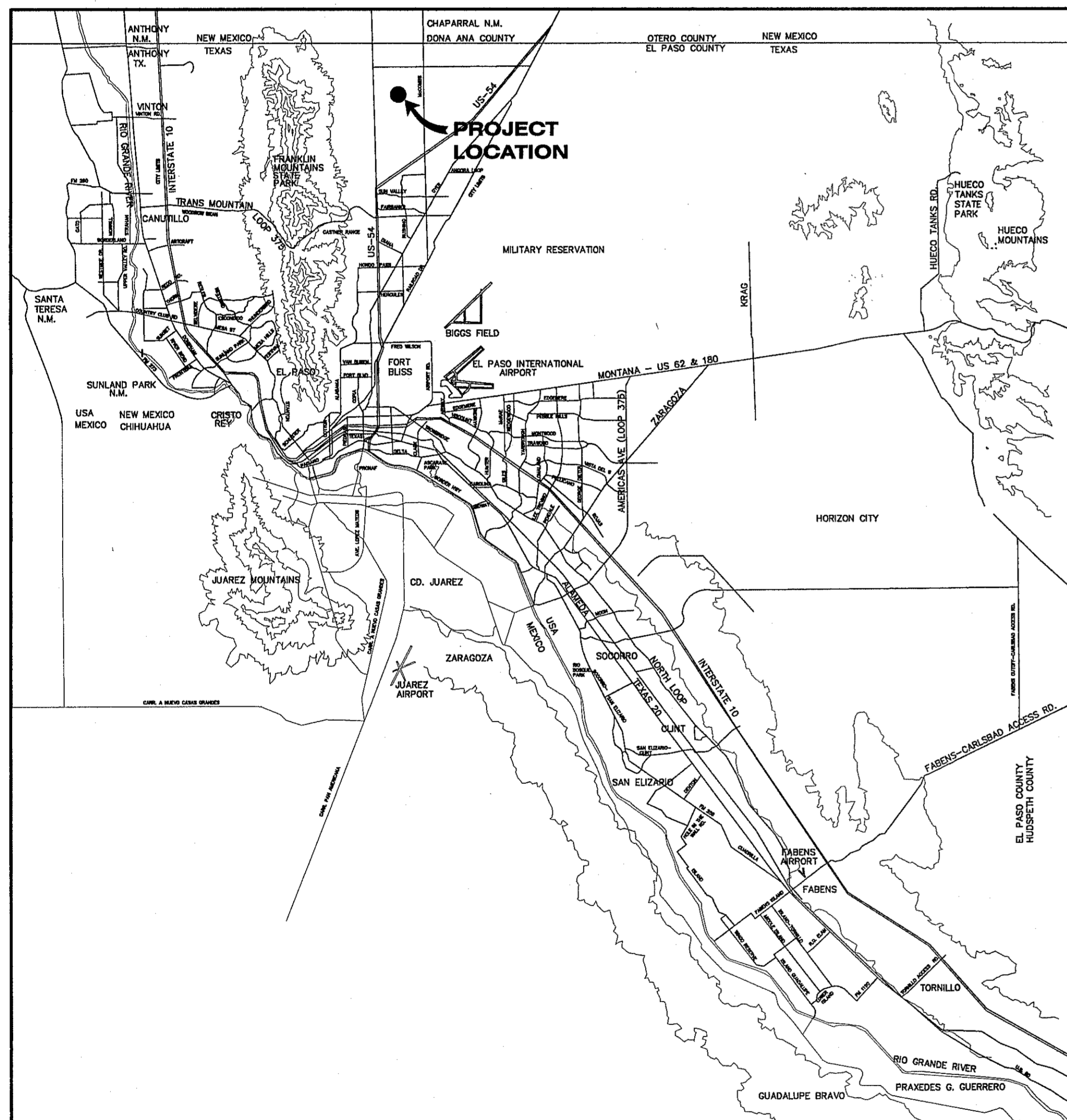


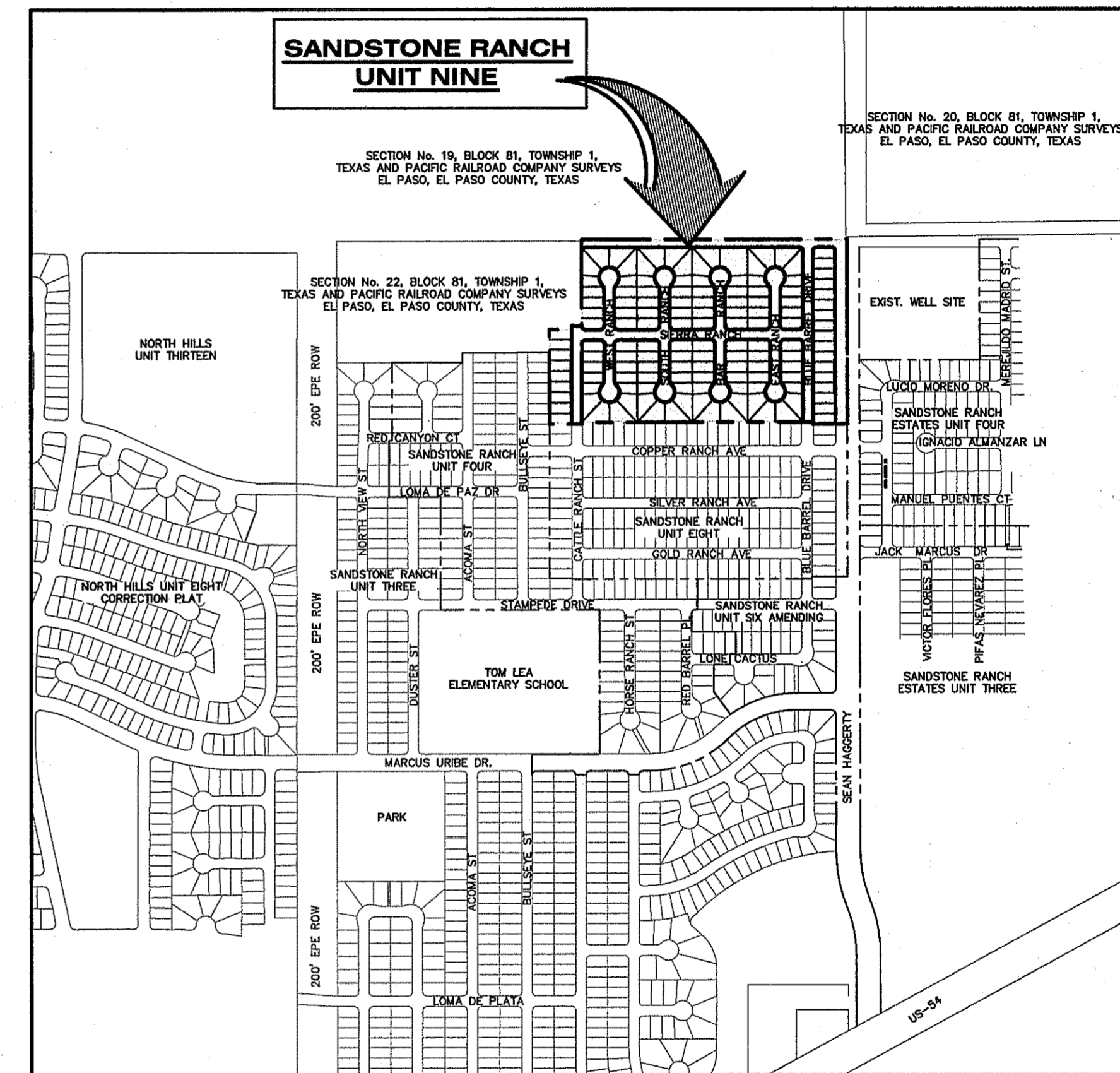
# SANDSTONE RANCH UNIT NINE SUBDIVISION IMPROVEMENTS

BEING A PORTION OF SECTION 22, BLOCK 81, TOWNSHIP 1,  
TEXAS AND PACIFIC RAILROAD CO. SURVEYS,  
CITY OF EL PASO, EL PASO COUNTY, TEXAS.  
CONTAINING 29.37 ACRES±

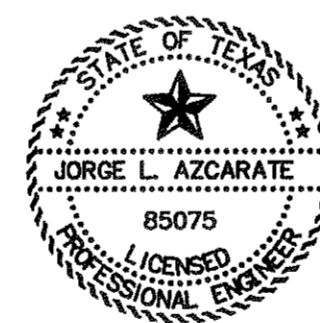


**VICINITY MAP**  
APPROXIMATE SCALE:  
1" = 2 MILES

SHEET NUMBER	SHEET TITLE
CVR	COVER SHEET
C1.1	GENERAL INFORMATION
C2.1, C2.2	FINAL PLAT
C3.1	GRADING PLAN
C4.1-C4.2	DRAINAGE PLAN
C5.1	GRADING SECTIONS
C6.1-C6.13	STREET PLAN & PROFILES
C7.1-C7.4	STORM SEWER PLAN & PROFILES
C8.1-C8.3	STANDARD DETAILS
C9.1-C9.3	DRAINAGE DETAILS
C10.1	ILLUMINATION PLAN
C11.1	WATER INDEX / GENERAL INFORMATION
C11.2 & C11.3	12" WATER LINE PLAN & PROFILE
C12.1-C12.4	WATER DETAILS
C13.1	SANITARY SEWER INDEX / GENERAL INFORMATION
C14.1-C14.5	SANITARY SEWER PLAN & PROFILES
C15.1-C15.3	SANITARY SEWER DETAILS
C16.1-C16.3	STORM WATER POLLUTION PREVENTION PLAN



**LOCATION MAP**  
APPROXIMATE SCALE: 1" = 600'



*[Signature]*  
12-26-13  
JORGE L. AZCARATE, P.E.



**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



Reviewed For Conformance For Condition Related To:

- Stormwater
- Driveways
- Grading & Drainage
- Retaining Rock Walls
- Wheelchair Ramps
- Sidewalks
- Slope Stability/Soil Erosion

Contractor Must Call 24 Hours Prior To Construction for Inspections

by *[Signature]* DATE 1/13/2014

**PRINCIPAL CONTACTS:**

	NAME	ADDRESS	CITY & ZIP	PHONE	FAX
OWNER:	NORTHTOWNE VILLAGE JOINT VENTURE	4655 COHEN AVENUE	EL PASO, TX 79924	(915) 821-3550	(915) 821-3556
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 F	EL PASO, TX 79936	(915) 591-5709	(915) 591-5706

**GENERAL NOTES**

- THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING BIDS.
- 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.
- 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.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM HIS WORK SO AS TO ASSURE PROPER PASSAGE OF STORM RUNOFF DURING THE COURSE OF HIS 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.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE USER, ALL UTILITIES, AND ALL OTHER AGENCIES WITH JURISDICTION OVER THE PROJECT.
- 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.
- 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.
- SEE REFERENCED BENCHMARK ON TITLE BLOCK FOR DATUM ELEVATIONS.
- VIBRATORY ROLLERS WILL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE ENGINEER.
- ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THE PROJECT.
- THE LOCATION OF THE INLETS SHALL BE AT THE FIELD LOW POINT AND APPROVED BY THE ENGINEER.

**LEGEND**

- SUBDIVISION BOUNDARY
- ROW LINE
- CURB LINE
- PROPERTY LINE
- STREET CENTERLINE
- EASEMENT LINE
- MATCH LINE
- STORM SEWER LINE
- HIGH WATER MARK
- CURB AND GUTTER DROP INLET
- STORM SEWER MANHOLE
- FINISHED GROUND CONTOUR ELEVATION (INDEX)
- FINISHED GROUND CONTOUR ELEVATION (INTERMEDIATE)
- EXISTING GROUND CONTOUR ELEVATION (INDEX)
- EXISTING GROUND CONTOUR ELEVATION (INTERMEDIATE)
- NEW RETAINING ROCKWALL (2'-3" IN HEIGHT)
- NEW RETAINING ROCKWALL (3'-9" IN HEIGHT)
- STANDARD DETAIL/SECTION NUMBER
- SHEET NUMBER WHERE STANDARD/SECTION DETAIL IS LOCATED
- FINISHED SPOT ELEVATION
- LOT FINISHED GROUND ELEVATION
- TOP OF CURB ELEVATION
- TOP OF PAVEMENT ELEVATION
- SUBDIVISION LOT AND BLOCK NUMBER
- DRAINAGE FLOW
- HIGH POINT
- LOW POINT
- EXISTING HIGH POINT
- EXISTING LOW POINT
- HEADWALL WITH WINGWALLS
- DRAINAGE AREA
- HORIZONTAL: VERTICAL SLOPE RATIO
- WHEELCHAIR RAMP

**GRADING SPECIFICATIONS**

- 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.
- SATISFACTORY FILL MATERIALS: FILL MATERIALS SHALL BE FREE OF ANY ORGANIC OR DELETERIOUS SUBSTANCE AND SHALL NOT CONTAIN ROCKS OR LUMPS OVER 3 INCHES IN GREATEST DIMENSION AND SHALL BE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, GC, SM, SP, SM, AND SC.
- 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 12, UNLESS OTHERWISE APPROVED BY ENGINEER, OR CITY ENGINEER.
- EXCAVATION: IS UNCLASSIFIED AND INCLUDES EXCAVATION TO ELEVATIONS INDICATED, REGARDLESS OF CHARACTER OF MATERIAL AND OBSTRUCTIONS ENCOUNTERED.
- 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 6-INCHES, AND UNTIL THE SURFACE IS FREE FROM RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH WOULD PREVENT UNIFORM COMPACTION. FLOW STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO THAT FILL MATERIAL WILL BOND WITH 1 VERTICAL TO 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.
- PLACEMENT OF FILL: PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 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 D-1557.
- 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 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.
- 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 DURING THE GRADING OPERATIONS TO ENSURE GRADING WORK IN ACCORDANCE WITH THIS PLAN AND SPECIFICATIONS.

**ABBREVIATIONS**

- LP LOW POINT
- HP HIGH POINT
- ELEV ELEVATION
- STA STATION
- VCS VERTICAL CURVE STATION
- VCE VERTICAL CURVE ELEVATION
- TC TOP OF CURB
- TM TOP OF MEDIAN
- TP TOP OF PAVEMENT
- TYP TYPICAL
- PVC 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
- MAX. MAXIMUM
- 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
- R RADIUS
- T TANGENT
- Δ DELTA ANGLE
- S SLOPE
- TEMP TEMPORARY
- V VELOCITY IN FEET PER SECOND
- HGL HYDRAULIC GRADE LINE
- HWE HIGH WATER ELEVATION

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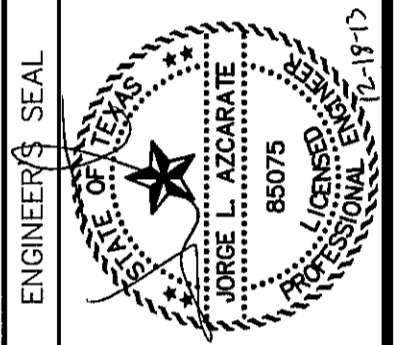
DRAWING NAME	SHEET NO.
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GRADING PLAN.....	C3.1
DRAINAGE PLAN.....	C4.1-C4.2
GRADING SECTIONS.....	C5.1
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SEAN HAGGERTY DRIVE PLAN & PROFILE FROM STA. 33+00.00 TO STA. 37+46.71.....	C6.2
LOMA REAL DRIVE PLAN & PROFILE FROM STA. 0+00.00 TO STA. 8+00.00.....	C6.3
LOMA REAL DRIVE PLAN & PROFILE FROM STA. 8+00.00 TO STA. 13+22.32.....	C6.4
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BLUE BARREL DRIVE PLAN & PROFILE FROM STA. 0+00.00 TO STA. 5+50.00.....	C6.6
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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

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

REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
FOUND TWOOT BRASS CAP AT SECTION CORNERS 19, 20, 21 AND 22. ELEVATION: 4033.92 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).			

**csa**  
engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM #484  
4712 Woodrow Branch, Ste. F, El Paso, TX 79924  
Office: 915-544-2222 Fax: 915-544-6233 www.csaonline.com



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	NOVEMBER 2013
DESIGN BY:	J.M.
DRAWN BY:	J.G.
CHKD. BY:	J.G.
APPVD. BY:	J.L.A.
JOB No.:	2000-163-LD

**SANDSTONE RANCH UNIT NINE**  
**SUBDIVISION IMPROVEMENTS**

**CITY DEVELOPMENT DEPARTMENT**  
**REVIEWED**

**SPECIAL CONDITIONS**

- CONTRACTOR SHALL HAVE A QUALIFIED PROJECT SUPERINTENDENT AT THE PROJECT SITE AT ALL TIMES DURING THE CONSTRUCTION DURATION.
- CONTRACTOR SHALL PREPARE CURB GRADES WITHIN 0.10- FEET.
- CONTRACTOR TO INSTALL AND MAINTAIN SWSP BEST MANAGEMENT PRACTICES AS INDICATED ON THE PLANS. CONTRACTOR SHALL COMPLY WITH THE SWSP SPECIFICATIONS, AND TCEQ RULES AND REGULATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL SWP3 REGULATIONS.
- CONTRACTOR SHALL CONSTRUCT TEMPORARY SLOPES BETWEEN LOTS THAT HAVE A VERTICAL GRADE DIFFERENTIAL OF OVER 4- FEET.

SHEET TITLE
GENERAL INFORMATION
SHEET NO.
C1.1

# SANDSTONE RANCH UNIT NINE

A PORTION OF SECTION No. 20,  
BLOCK 81, TOWNSHIP 1,  
TEXAS AND PACIFIC RAILROAD  
COMPANY SURVEYS  
EL PASO, EL PASO COUNTY, TEXAS

A PORTION OF SECTION No. 19, BLOCK 81, TOWNSHIP 1,  
TEXAS AND PACIFIC RAILROAD COMPANY SURVEYS  
EL PASO, EL PASO COUNTY, TEXAS

BEING A PORTION OF  
SECTION 22, BLOCK 81, TOWNSHIP 1,  
TEXAS AND PACIFIC RAILROAD CO. SURVEYS,  
CITY OF EL PASO, EL PASO COUNTY, TEXAS  
CONTAINING 29.37 ACRES ±  
SHEET 1 OF 2

## DEDICATION

NORTHTOWN VILLAGE JOINT VENTURE, 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, 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 \_\_\_\_\_ day of \_\_\_\_\_, 2013.

R. L. Bowling III, President

## ACKNOWLEDGEMENT

STATE OF TEXAS  
COUNTY OF EL PASO

Before me, the undersigned authority, on this day personally appeared R. L. Bowling III, 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 \_\_\_\_\_ day of \_\_\_\_\_, 2013.

Notary Public in and for El Paso County

My Commission Expires \_\_\_\_\_

## 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 \_\_\_\_\_ day of \_\_\_\_\_, 2013.

Chairperson

Executive Secretary

Approved for filing this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

City Development Director

## FILING

Filed and recorded in the office of the County Clerk of El Paso County, Texas, this \_\_\_\_\_ day of \_\_\_\_\_, 2013, in File No. \_\_\_\_\_ of the Plat Records.

County Clerk

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, P.E.  
Licensed Professional Engineer  
Texas License No. 85075

Benito Barragan TX, R.P.L.S. No. 5615



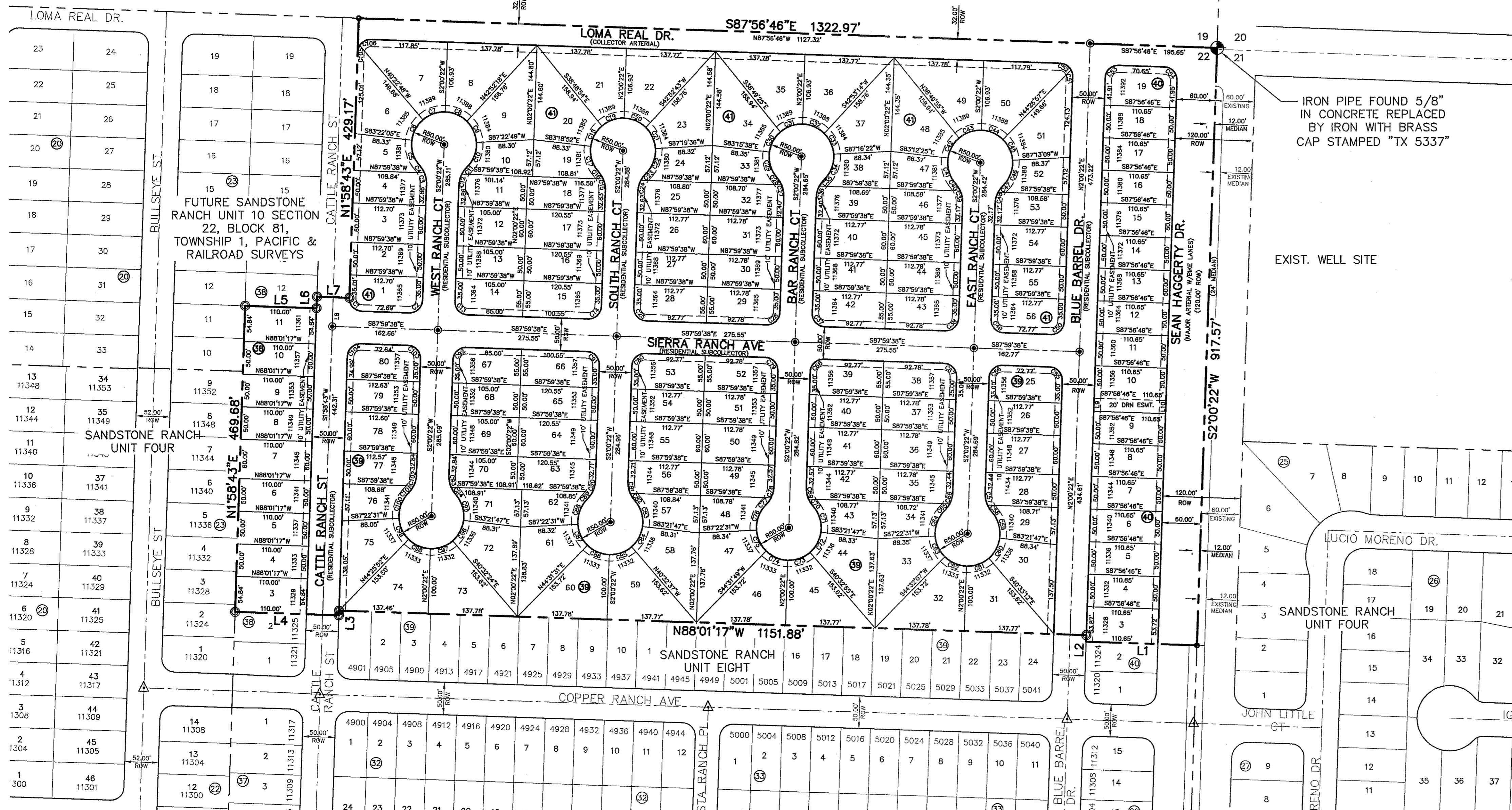
REVIEWED  
SURVEYOR

**Barragan & Associates Inc.**

LAND PLANNING & LAND SURVEYING  
10950 Pellicano Dr. Bldg. F - El Paso, TX 79924  
Phone (915) 591-5709 Fax (915) 591-5706

CONTACT: BENITO BARRAGAN, R.P.L.S.

DATE OF PREPARATION: NOVEMBER, 2013



IRON PIPE FOUND 5/8" IN CONCRETE REPLACED BY IRON WITH BRASS CAP STAMPED "TX 5337"

EXIST. WELL SITE

LUCIO MORENO DR.

SANDSTONE RANCH UNIT FOUR

JOHN LITTLE CT.

BENO DR.

## NOTES:

THIS IS TO CERTIFY THAT WATER AND SEWER SERVICES WILL BE PROVIDED TO SANDSTONE RANCH UNIT NINE BY THE EL PASO WATER UTILITIES/PUBLIC SERVICE BOARD IN ACCORDANCE WITH THEIR RULES AND REGULATIONS AND WITH SECTION 16.344 OF THE TEXAS WATER CODE. WATER AND SEWER SERVICES WILL BE EXTENDED TO THE SUBDIVISION FROM EXISTING FACILITIES LOCATED ON SANDSTONE RANCH UNIT EIGHT AND WILL BE CONSTRUCTED TO SERVE THE SUBDIVISION.

TAX CERTIFICATE(S) FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.

RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.

SUBDIVISION IMPROVEMENTS AGREEMENT & GUARANTEE FOR THIS SUBDIVISION IS FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.

INTERIOR LOT CORNERS WILL BE SET UP UPON COMPLETION OF CONSTRUCTION OF ROADWAYS AND UTILITIES. (BY OTHERS) SET 1/2" REBAR WITH CAP STAMPED "B&A INC" AT ALL EXTERIOR BOUNDARY CORNERS UNLESS OTHERWISE SHOWN.

"U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS."

THIS SUBDIVISION LIES WITH IN ZONE "C" AS DESIGNATED IN PANEL NO. 480214 0014 D, DATED AUGUST 5, 1991, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "C" INDICATES AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.

THE SUBJECT PROPERTY IS LOCATED WITHIN AN INTERMEDIATE PRESSURE ZONE. THE LOT/HOME BUYER SHALL ACQUIRE OWNERSHIP OF THE WATER PRESSURE REGULATING DEVICE TO BE LOCATED AT THE DISCHARGE SIDE OF THE WATER METER ON THEIR PROPERTY AND SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE WATER PRESSURE REGULATING DEVICE.

VEHICULAR ACCESS TO THOSE RESIDENTIAL LOTS ABUTTING SEAN HAGERTY & LOMA REAL DRIVE SHALL BE FROM OTHER DEDICATED STREETS ONLY. THE INSTRUMENT ASSURING RELEASE OF ACCESS IS FILED IN THE OFFICE OF THE COUNTY CLERK.

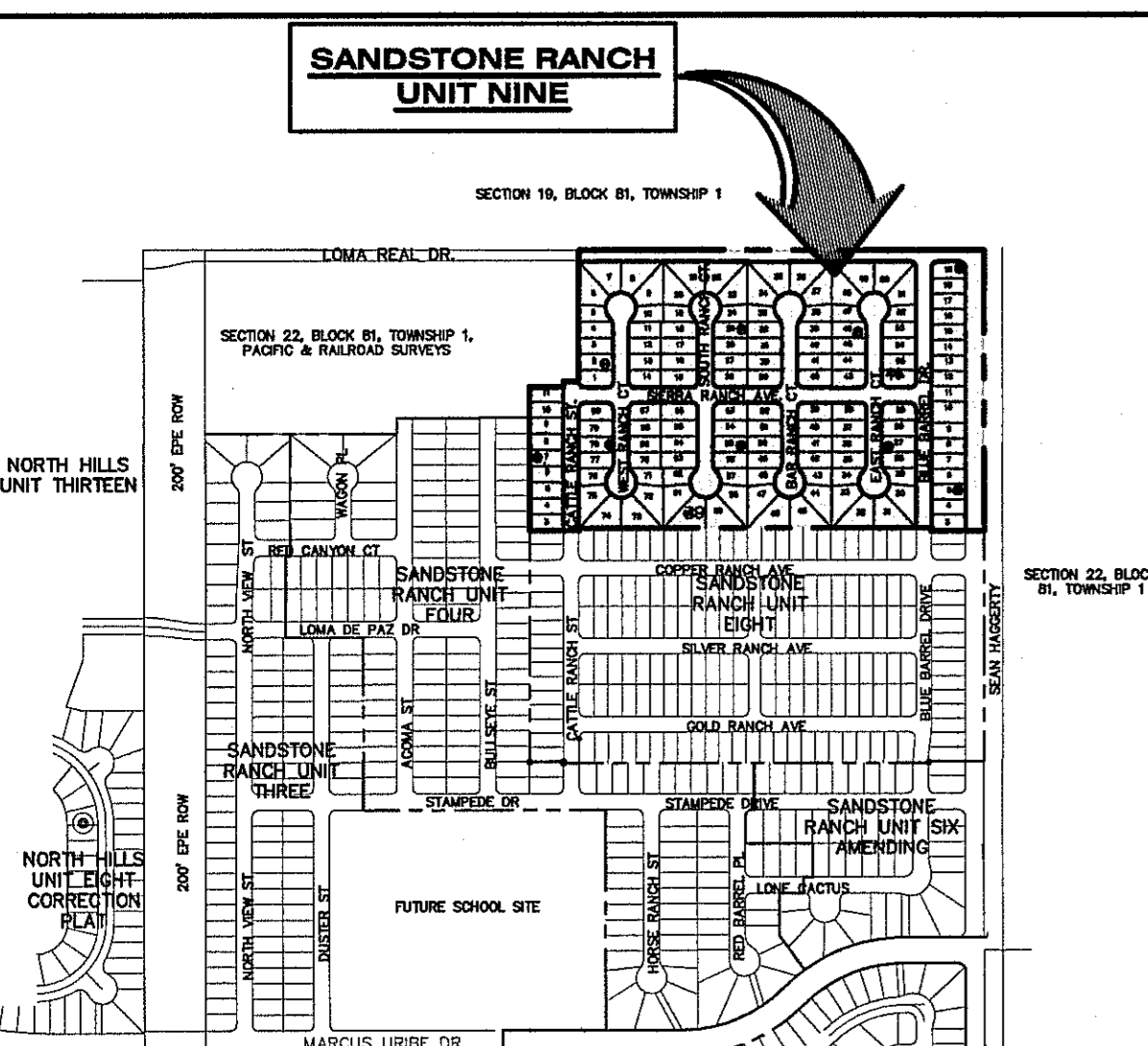
DEED AND RECORD SECTION. INSTRUMENT No. \_\_\_\_\_

⊙ DENOTES PROPOSED MONUMENT. (FOR EXACT LOCATION CONTACT CITY OF EL PASO)

⊕ DENOTES EXISTING MONUMENT.

## LOCATION MAP

SCALE: 1" = 600'

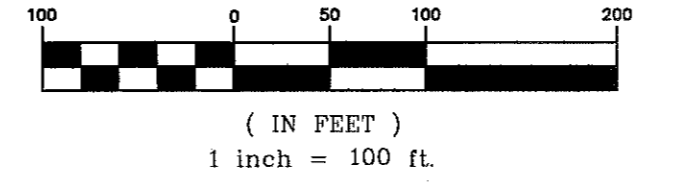


SCHOOL DISTRICT  
EL PASO INDEPENDENT SCHOOL DISTRICT  
6531 BOEING DRIVE, EL PASO, TX 79925

## FINAL PLAT

SCALE: 1" = 100'

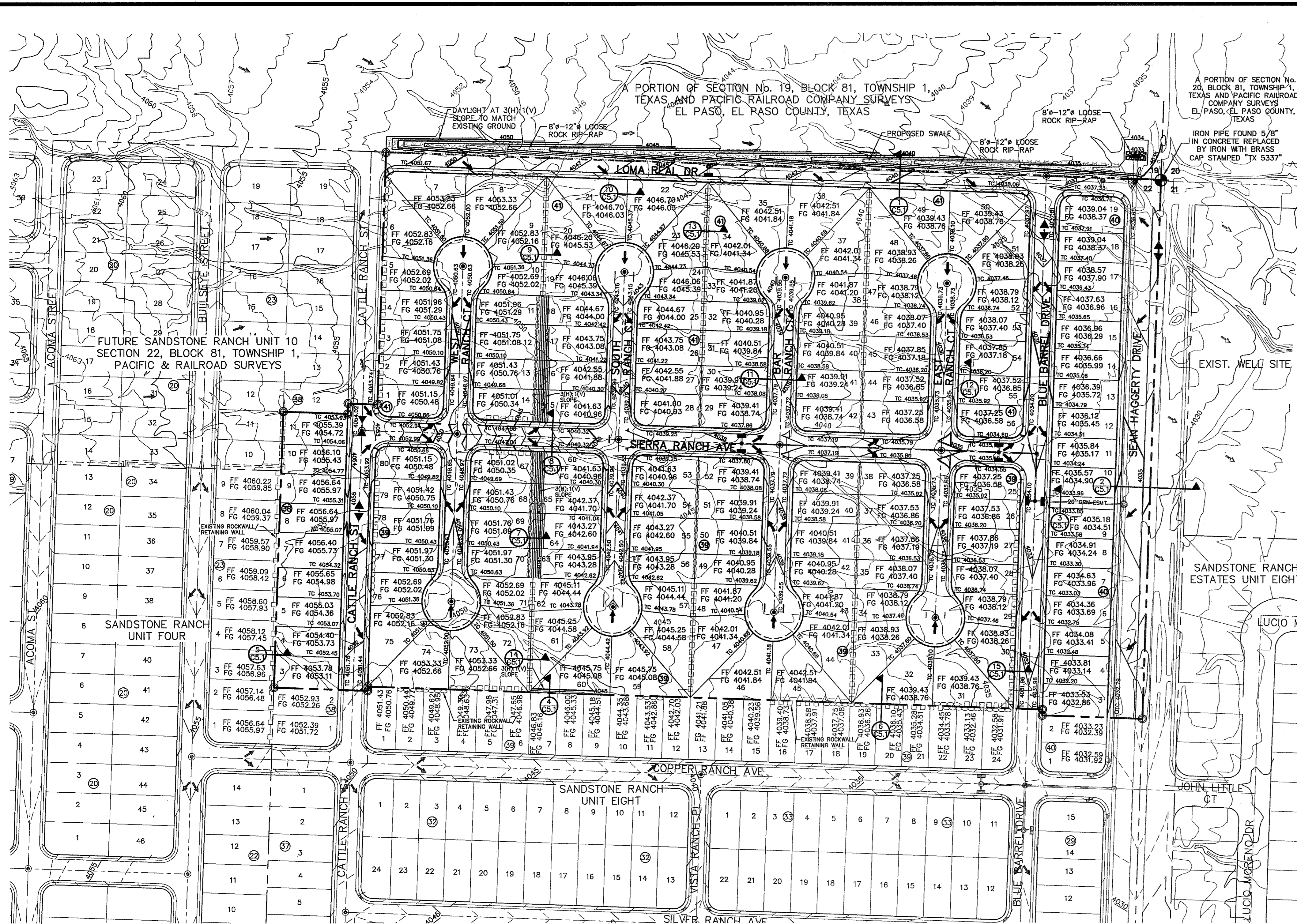
GRAPHIC SCALE



BENCHMARK:  
FOUND TXDOT BRASS CAP AT SECTION CORNER 19, 20, 21 AND 22.  
ELEVATION: 4033.22 (NGVD DATUM)  
(SUBSTRACT 8.462 TO CONVERT TO CITY DATUM).

S:\2000\2000-1634D-Sandstone Ranch Unit Nine\DWG\Plat\2000-1634D-Final Plat REV 11-14-13.dwg, Sandstone Ranch U9, 12/19/2013 3:00:14 PM





**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) 772-1125
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

**WARNING ! BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

**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 WALL DESIGN REQUIRED AT THE TIME OF BUILDING PERMIT.
- DEVELOPER SHALL COMPLY WITH SECTION 13.08.070 (EXCESSIVE PAVING CUTS) OF THE EL PASO MUNICIPAL CODE.
- IMPROVEMENTS SHALL NOT BE PLACED ON SIDEWALK (NDBC'S, SIGNS, POLES, FIRE HYDRANTS, ETC.).
- IMPROVEMENTS SHALL COMPLY WITH T.A.S./A.D.A. STANDARDS.
- WHEELCHAIR RAMPS WILL BE CONSTRUCTED BY DEVELOPER AS PART OF SUBDIVISION IMPROVEMENTS.
- ALL RETAINING ROCKWALLS (RETAINING PORTIONS ONLY) IN EXCESS OF 4' IN HEIGHT SHALL BE BUILT BY DEVELOPER. REMAINING ROCKWALL SECTIONS TO BE BUILT BY BUILDER.

**BENCHMARK**

FOUND TYPED BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVDG DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

**FLOOD ZONE:**

THIS SUBDIVISION LIES WITH IN ZONE "C" AS DESIGNATED IN PANEL NO. 480214 0014 D, DATED AUGUST 5, 1991, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.

REFERENCES - BENCHMARKS

FOUND TYPED BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVDG DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

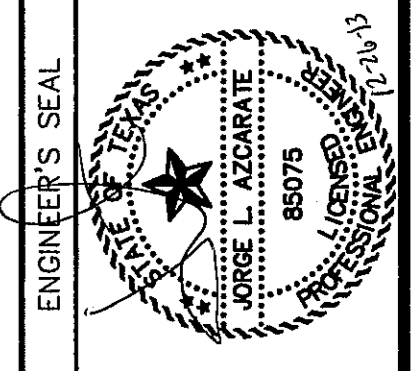
DATE	REVISIONS	BY

**COA**

engineers • architects • planners

TEXAS REGISTERED ENGINEERING FIRM F-6584

4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
Office: 915.544.5207 Fax: 915.544.0233 www.coaeng.com



SCALE: 1"=100'

Horizontal: N/A  
Vertical: Interval: N/A

DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPRD. BY: J.L.A.

JOB NO. 2000-163-LD

PROJECT TITLE

**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

GRADING PLAN

SHEET NO.

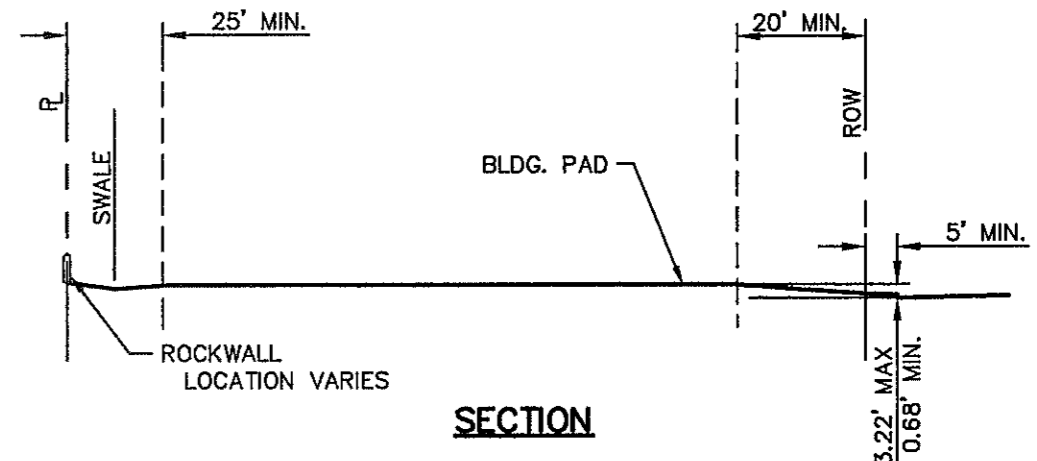
CITY DEVELOPMENT DEPARTMENT

**REVIEWED**

**C3.1**

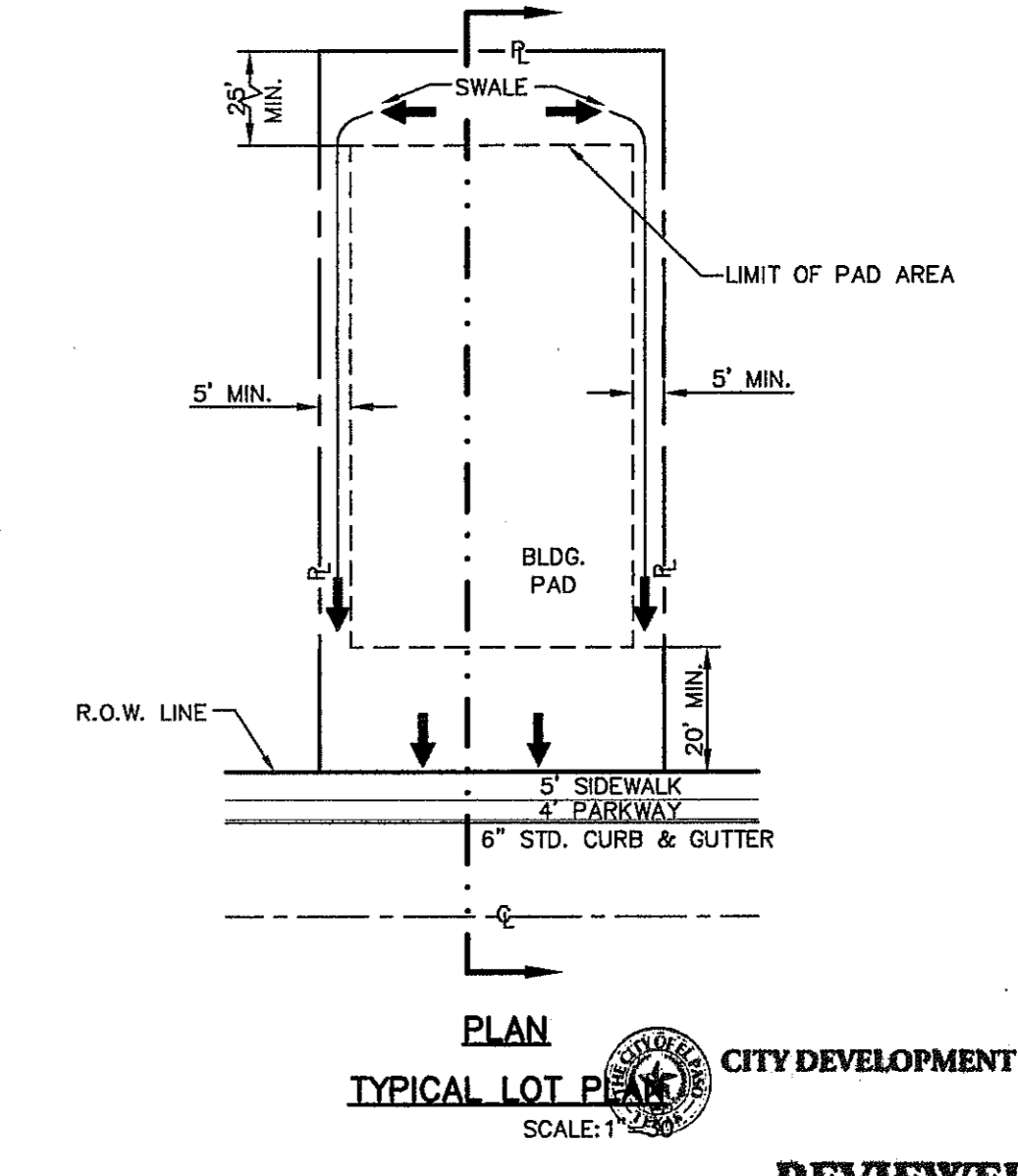
**LEGEND:**

△-△-△-△-△	NEW ROCKWALL (0'-2' IN HEIGHT)
○-○-○-○-○	NEW RETAINING ROCKWALL (2'-3' IN HEIGHT)
□-□-□-□-□	NEW RETAINING ROCKWALL (3'-9' IN HEIGHT)
---	EXISTING MINOR CONTOUR (CITY DATUM)
---	EXISTING MAJOR CONTOUR (CITY DATUM)
---	PROPOSED MINOR CONTOUR (CITY DATUM)
---	PROPOSED MAJOR CONTOUR (CITY DATUM)
---	PROPOSED ROLLED CURB
---	STANDARD CURB & GUTTER
TC 4075.00	TOP OF CURB ELEVATION
FG 4075.00	FINISH FLOOR ELEVATION
FF 4075.00	FINISH FLOOR ELEVATION
FG 4075.00	EXISTING FINISH FLOOR ELEVATION
FF 4075.00	EXISTING FINISH FLOOR ELEVATION
→	DRAINAGE FLOW
▲	HIGH POINT
▼	LOW POINT
⊙	CITY MONUMENT



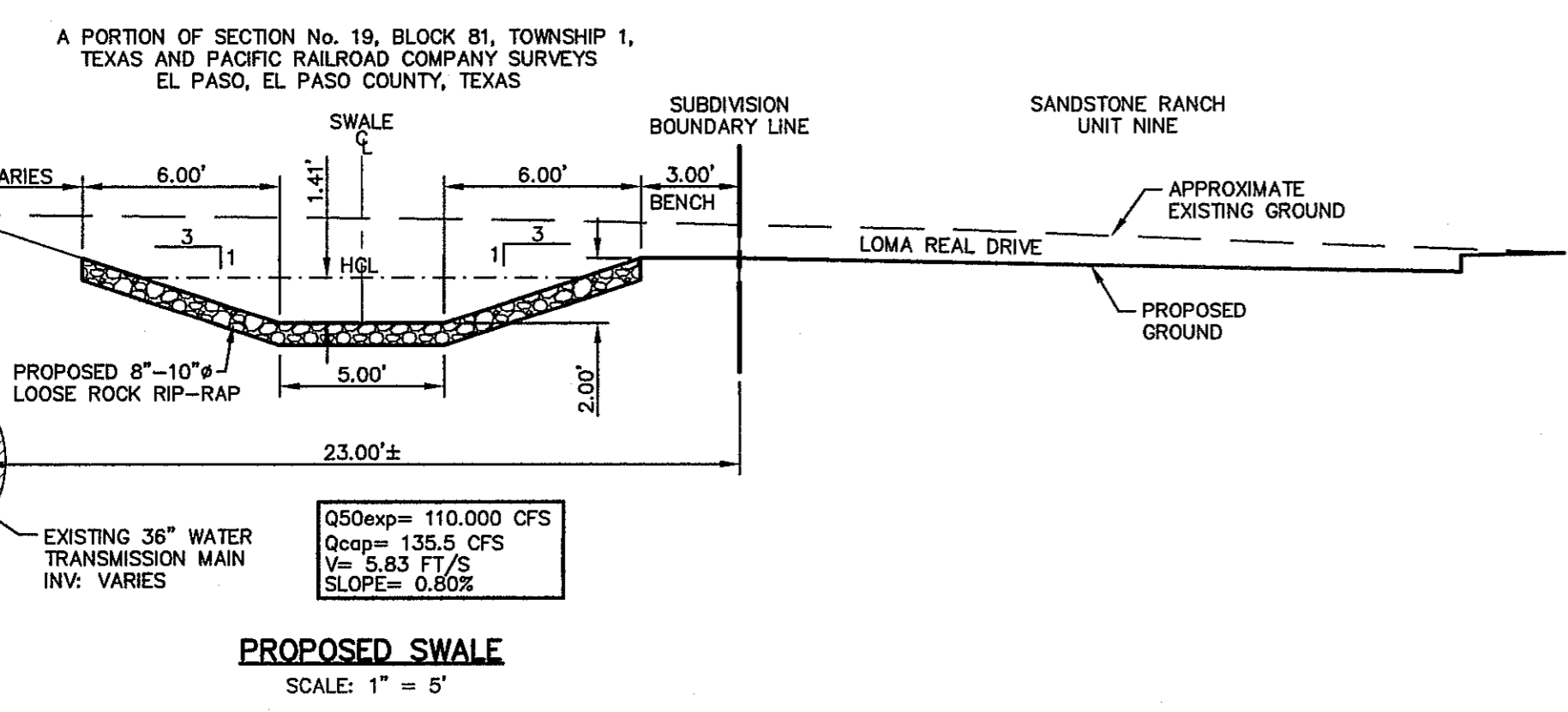
**NOTES:**

- DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (EL PASO MUNICIPAL CODE). (DRIVEWAY SHALL BE LOCATED @ HIGH SIDE OF LOT UNLESS OTHERWISE COORDINATED WITH BUILDING SERVICES)



**GRADING PLAN**

SCALE: 1" = 100'



S: 2000 2000-163-LD-C3.1-Grading.dwg, Grading Plan, 12/23/2013 3:10:08 PM

A PORTION OF SECTION No. 22, BLOCK 81, TOWNSHIP 1,  
TEXAS AND PACIFIC RAILROAD COMPANY SURVEYS  
EL PASO, EL PASO COUNTY, TEXAS

A PORTION OF SECTION  
No. 20, BLOCK 81,  
TOWNSHIP 1,  
TEXAS AND PACIFIC  
RAILROAD COMPANY  
SURVEYS  
EL PASO, EL PASO  
COUNTY, TEXAS

**UTILITY LOCATOR SERVICES**

EL PASO ELECTRIC COMPANY	(915) 543-5720
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U.S. SPRINT TELECOMM	(800) 521-0579

**WARNING I  
BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

**BENCHMARK:**  
FOUND TYPOT BRASS CAP AT  
SECTION CORNERS 19, 20, 21, AND 22.  
ELEVATION: 4033.22 (NVGD DATUM)  
(SUBTRACT 8.462 TO CONVERT TO CITY  
DATUM).

**FLOOD ZONE:**  
THIS SUBDIVISION LIES WITH IN ZONE "C" AS DESIGNATED IN  
PANEL NO. 480214 0014 D, DATED AUGUST 5, 1991, OF THE FLOOD  
INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "C"  
INDICATES AREAS OF MINIMAL FLOODING.

**NOTE:**  
1. SANDSTONE RANCH UNIT NINE STORM SEWER INFRASTRUCTURE  
IS DESIGNED AND SHALL CONVEY FUTURE SANDSTONE RANCH  
UNIT TEN DEVELOPED RUN OFF.  
2. REFERENCE SANDSTONE RANCH UNITS SIX & EIGHT FOR  
ADDITIONAL DRAINAGE INFORMATION.

**LEGEND:**

---●---	DRAINAGE AREA BOUNDARY	▲	LOW POINT
---	EXISTING DRAINAGE AREA BOUNDARY	▼	DROP INLET
- - - -	PROPOSED DRAINAGE SWALE	○	STORM DRAIN MANHOLE
→	DRAINAGE FLOW	—	RCP
→	EXISTING FLOW	DA-1	PROPOSED WATERSHED
↕	HIGH POINT	WS-1	EXISTING WATERSHED AREA
---	PROPOSED CURB & GUTTER		
- - - -	PROPOSED ROLLED CURB		
			PROPOSED TEMPORARY DESILTIN BASIN

**WATERSHED AREAS**

DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	DESIGN STORM INTENSITY (ISO) (3)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C) (5)	Q50 (CFS) (6)
DA-1	0.406	5.572	10,000	0.900	2,036
DA-2	0.751	5.572	10,000	0.838	3,506
DA-3	1.414	3.669	23,000	0.650	3,372
DA-4	0.314	5.572	10,000	0.900	1,574
DA-5	5.428	3.465	25,300	0.661	12,432
DA-6	5.433	3.465	25,300	0.661	12,443
DA-7	4.468	3.399	28,100	0.666	12,993
DA-8	6.045	3.498	24,900	0.668	14,125
DA-9	1.122	3.966	20,100	0.568	2,536
DA-10	1.099	5.152	12,000	0.900	5,095
DA-11	0.203	5.572	10,000	0.900	1,018
DA-12	1.127	3.669	23,000	0.654	2,704
DA-13	0.163	5.572	10,000	0.900	0,817

**NOTES:**

\* Q<sub>50</sub> IS BASED ON DEVELOPED RUNOFF (50-yr)  
REFERENCE: CITY OF EL PASO SUBDIVISION  
STANDARDS (5-11-97)

(1) WATERSHED AREA IDENTIFICATION  
(2) AREA FROM DRAINAGE PLAN  
(3) RAINFALL INTENSITY, HYDROLOGY - LOCATED IN THE WESTSIDE  
REGION  
50-YR STORM  
b = 90.00  
d = 12,000  
e = 0.9000

(4) TIME OF CONCENTRATION: TC = T (OVERLAND) + T (GUTTER)  
(5) RATIONAL METHOD DEVELOPED CONDITIONS  
RUNOFF COEFFICIENT, PLATE No. 2-10 TABLE A

**COEFFICIENT**

BASIN AREA SPACE = 0.33  
RESIDENTIAL AREA SPACE = 0.60  
PAVEMENT AREA SPACE = 0.90

(6) Q<sub>50</sub> = C X A X I<sub>50</sub> 50-yr  
C = RATIONAL COEFFICIENT  
A = COMPUTED CONTRIBUTING WATERSHED  
AREA, ACRES  
I = RAINFALL INTENSITY, inch per hour

**REVIEWED**

CITY DEVELOPMENT DEPARTMENT

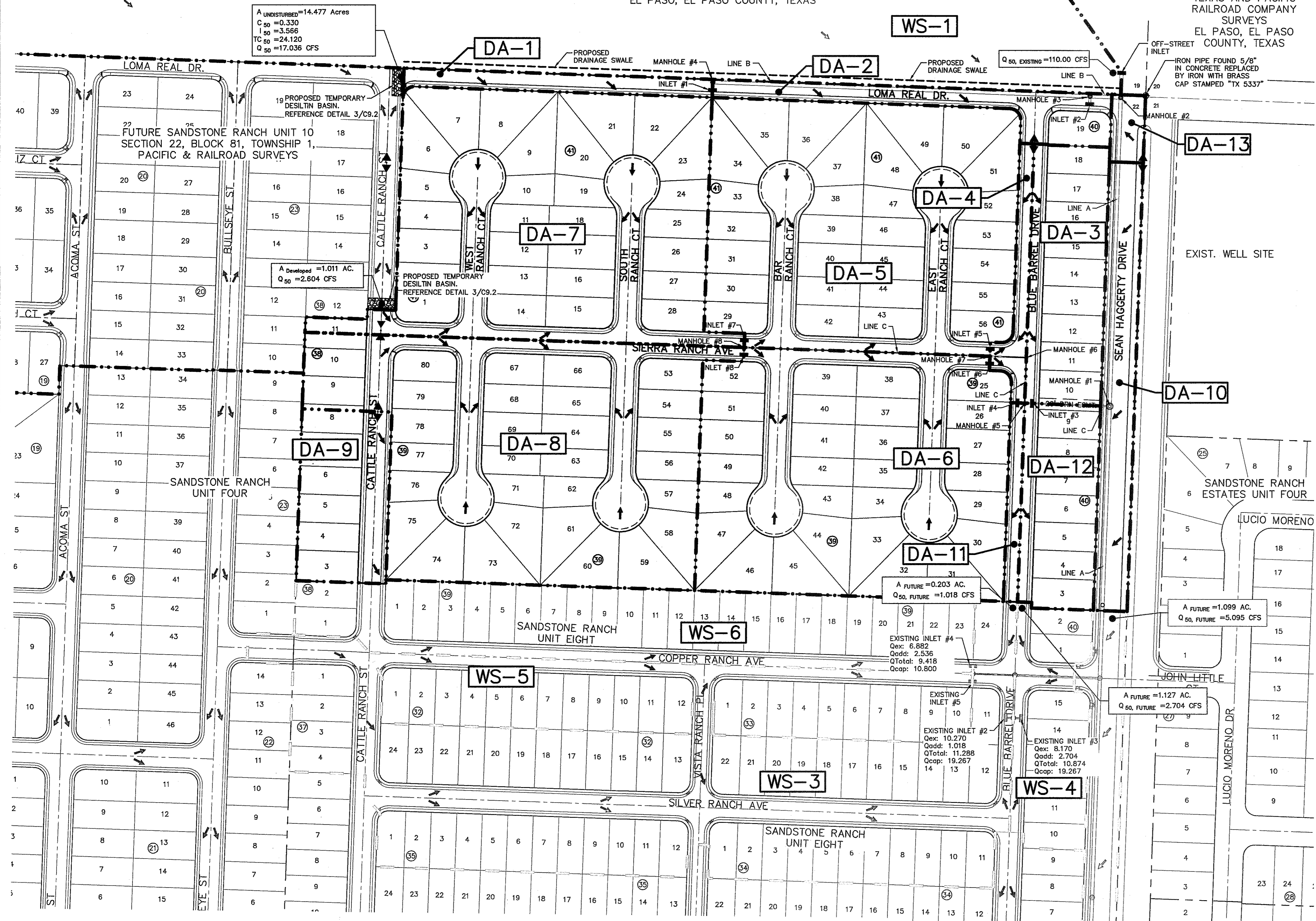


**DRAINAGE PLAN**  
SCALE: 1" = 100'

**MOMENTUM COMPUTATION**

LOCATION INLET (1)	DEPTH (2)	VELOCITY (3)	PRODUCT NUMBER (4)
1	0.425	4.754	2,020
2	0.312	2,923	0,911
3	0.235	2,008	0,471
4	0.320	2,463	0,788
5	0.362	3,126	1,131
6	0.362	3,127	1,131
7	0.394	3,309	1,303
8	0.380	3,228	1,226
EXISTING I-1	0.333	2,878	0,958
EXISTING I-2	0.449	3,227	1,448
EXISTING I-3	0.281	2,358	0,662
EXISTING I-4	0.298	4,264	1,270

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



**DROP INLETS**

NO.	REQ. FLOW Q REQ. (CFS)	ADDITIONAL FLOW Q FROM INLET (CFS)	Q(CFS) OVERTOP AT CROWN	Q EXP. (CFS)	AVAIL. FLOW CAPACITY Q AVAIL. (CFS)	Q(CFS) BYPASS TO INLET	# OF GRATES	TYPE OF INLET	INLET LOCATION
OFF-STREET	110.817	0	0	110.817	121.640	0	9	OFF-STREET	LOW POINT
1	28.064	0	0	28.064	20.947	0	4	ON GRADE	ON GRADE
2	3.506	1/1 (5.117 CFS)	0	8.623	9.537	0	3	ON GRADE	ON GRADE
3	3.372	0	0	3.372	5.432	0	2	ON GRADE	ON GRADE
4	1.574	1/5 (3.024 CFS) 1/6 (3.030)	0	7.628	9.621	0	3	ON GRADE	ON GRADE
5	12.432	0	0	12.432	9.408	1/4 (3.024 CFS)	2	ON GRADE	ON GRADE
6	12.443	0	0	12.443	9.413	1/4 (3.030 CFS)	2	ON GRADE	ON GRADE
7	15.597	0	0	15.597	17.213	0	4	ON GRADE	ON GRADE
8	14.125	0	0	14.125	16.296	0	4	ON GRADE	ON GRADE

**FOR REFERENCE ONLY  
EXISTING WATERSHED AREAS**

DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	DESIGN STORM INTENSITY (ISO) (3)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C) (5)	Q50 (CFS) (6)
WS-1	201.58	1.864	72.260	0.330	110.00
WS-3	7.971	2.890	24.480	0.685	15.80
WS-4	1.276	3.110	21.500	0.678	2,690
WS-5	2.971	3.160	20.790	0.666	6,260
WS-6	3.514	3.000	22.900	0.666	6,882

NOTE: WS-1 Q'S REFLECT UNDEVELOPED CONDITIONS

**FOR REFERENCE ONLY  
EXISTING DROP INLETS**

NO.	REQ. FLOW Q REQ. (CFS)	AVAIL. FLOW CAPACITY Q AVAIL. (CFS)	ADDITIONAL FLOW (CFS)	# OF GRATES	TYPE OF INLET
1	6.93	19.630	0	0	2
2	10.27	19.267	0	0	2
3	8.17	19.267	0	0	2
4	8.15	10.800	0	0	2

**NOTE:**  
1. AVAILABLE FLOW CAPACITIES SHOWN REFLECT CAPACITIES WITH ON-GRADE INLET GRATE EFFICIENCY.  
2. INLET 1 & 2 CALCULATIONS ARE BASED ON PROPOSED SANDSTONE RANCH UNIT TEN DEVELOPED WATERSHEDS.

REFERENCES - BENCHMARKS  
FOUND TYPOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

ENGINEER'S SEAL  
SCALE: 1" = 100'  
Vertical: N/A  
Horizontal: N/A  
Contour Interval: 1/4'  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.A.  
APPD. BY: J.A.  
JOB No. 2000-163-LD

**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**DRAINAGE PLAN**  
(SHEET 1 OF 2)  
SHEET NO.

**C4.1**

DATE  
REVISIONS  
BY

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

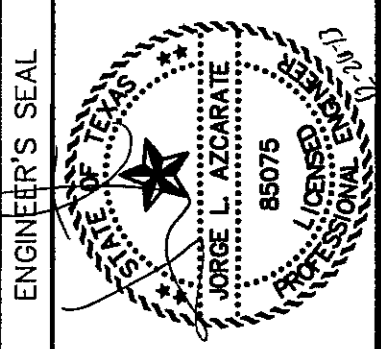
**WARNING!**  
**BEFORE YOU DIG**

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

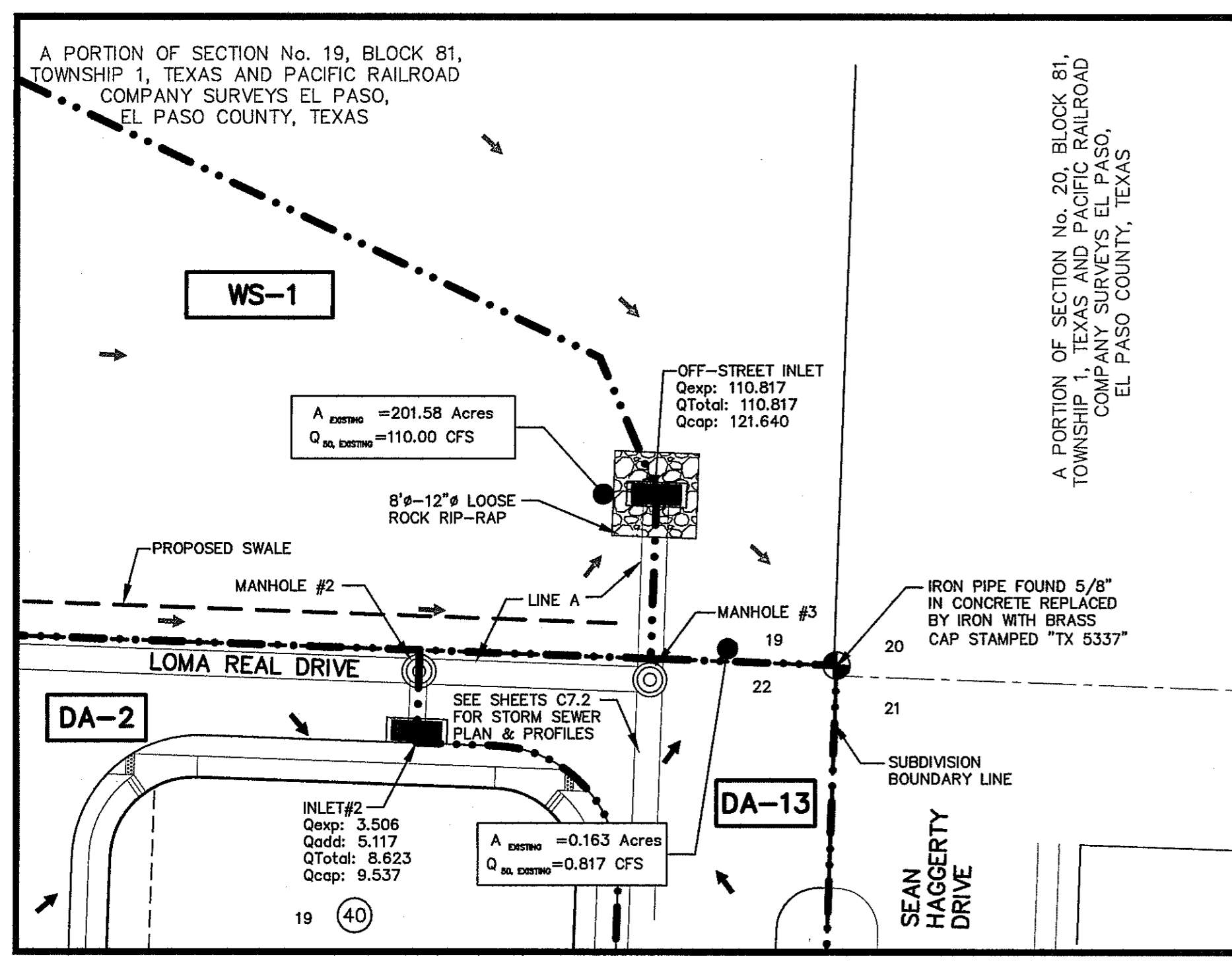
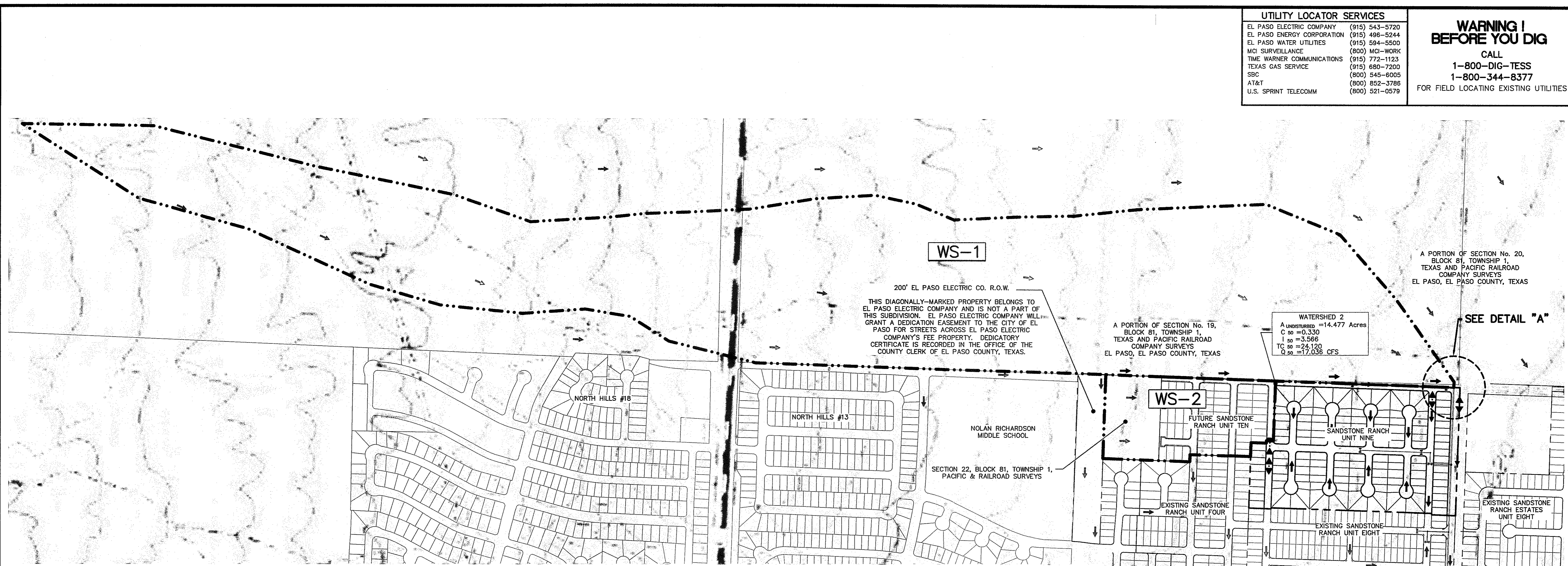
FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
FOUND TYPOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).



SCALE: 1" = 350'  
Horizontal: 1" = 350'  
Vertical: 1" = 10'  
Contour Interval: 1' / 4'  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.G.  
APPVD. BY: J.L.A.  
JOB No. 2000-163-LD



**OFF-SITE DRAINAGE PLAN**

SCALE: 1" = 350'

EXISTING WATERSHED AREAS					
DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	DESIGN STORM INTENSITY (ISO) (3)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C) (5)	Q50 (CFS) (6)
WS-1	201.58	1.664	72.260	0.330	110

NOTE: WS-X Q'S REFLECT UNDEVELOPED CONDITIONS

WATERSHED AREAS					
DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	DESIGN STORM INTENSITY (ISO) (3)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C) (5)	Q50 (CFS) (6)
DA-2	0.751	5.572	10.000	0.838	3.506
DA-13	0.163	5.572	10.000	0.900	0.817

- NOTES:**
- \* Q<sub>50</sub> IS BASED ON DEVELOPED RUNOFF (50-YR)
  - REFERENCE: CITY OF EL PASO SUBDIVISION STANDARDS (3-11-97)
  - (1) WATERSHED AREA IDENTIFICATION
  - (2) AREA FROM DRAINAGE PLAN
  - (3) RAINFALL INTENSITY, HYDROLOGY - LOCATED IN THE WESTSIDE REGION
  - 50-YR STORM  
b = 90.00  
d = 12.000  
e = 0.9000
  - (4) TIME OF CONCENTRATION: TC = T (OVERLAND) + T (GUTTER)
  - (5) RATIONAL METHOD DEVELOPED CONDITIONS  
RUNOFF COEFFICIENT, PLATE No. 2-10 TABLE A
  - (6) Q<sub>50</sub> = C X A X I<sub>50</sub> 50-YR
  - C = RATIONAL COEFFICIENT
  - A = COMPUTED CONTRIBUTING WATERSHED AREA, ACRES
  - I = RAINFALL INTENSITY, Inch per hour

DROP INLETS									
NO.	REQ. FLOW Q REQ. (CFS)	ADDITIONAL FLOW Q FROM INLET (CFS)	Q(CFS) OVERTOP AT CROWN	Q EXP. (CFS)	AVAIL. FLOW CAPACITY Q AVAIL. (CFS)	Q(CFS) BYPASS TO INLET	# OF GRATES	TYPE OF INLET	INLET LOCATION
OFF-STREET	110.817	0	0	110.817	121.640	0	9	OFF-STREET	LOW POINT
2	3.506	1/ft (5.117 CFS)	0	8.623	9.537	0	3	1	ON GRADE

NOTE: AVAILABLE FLOW CAPACITIES SHOWN REFLECT CAPACITIES WITH ON-GRADE INLET GRATE EFFICIENCY.

**DETAIL A**

SCALE: 1" = 40'

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

**BENCHMARK:**  
FOUND TYPOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

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THIS SUBDIVISION LIES WITH IN ZONE "C" AS DESIGNATED IN PANEL NO. 480214 0014 D, DATED AUGUST 5, 1991, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "C" INDICATES AREAS OF MINIMAL FLOODING.

**NOTE:**  
FUTURE SANDSTONE RANCH UNIT TEN DEVELOPMENT RUNOFF WILL BE DISCHARGED TO THE PROPOSED STORM SEWER INFRASTRUCTURE LOCATED IN SANDSTONE RANCH UNIT NINE.

- LEGEND:**
- DRAINAGE AREA BOUNDARY
  - DRAINAGE FLOW
  - ▲ HIGH POINT
  - ▼ LOW POINT
  - DROP INLET
  - STORM DRAIN MANHOLE
  - RCP

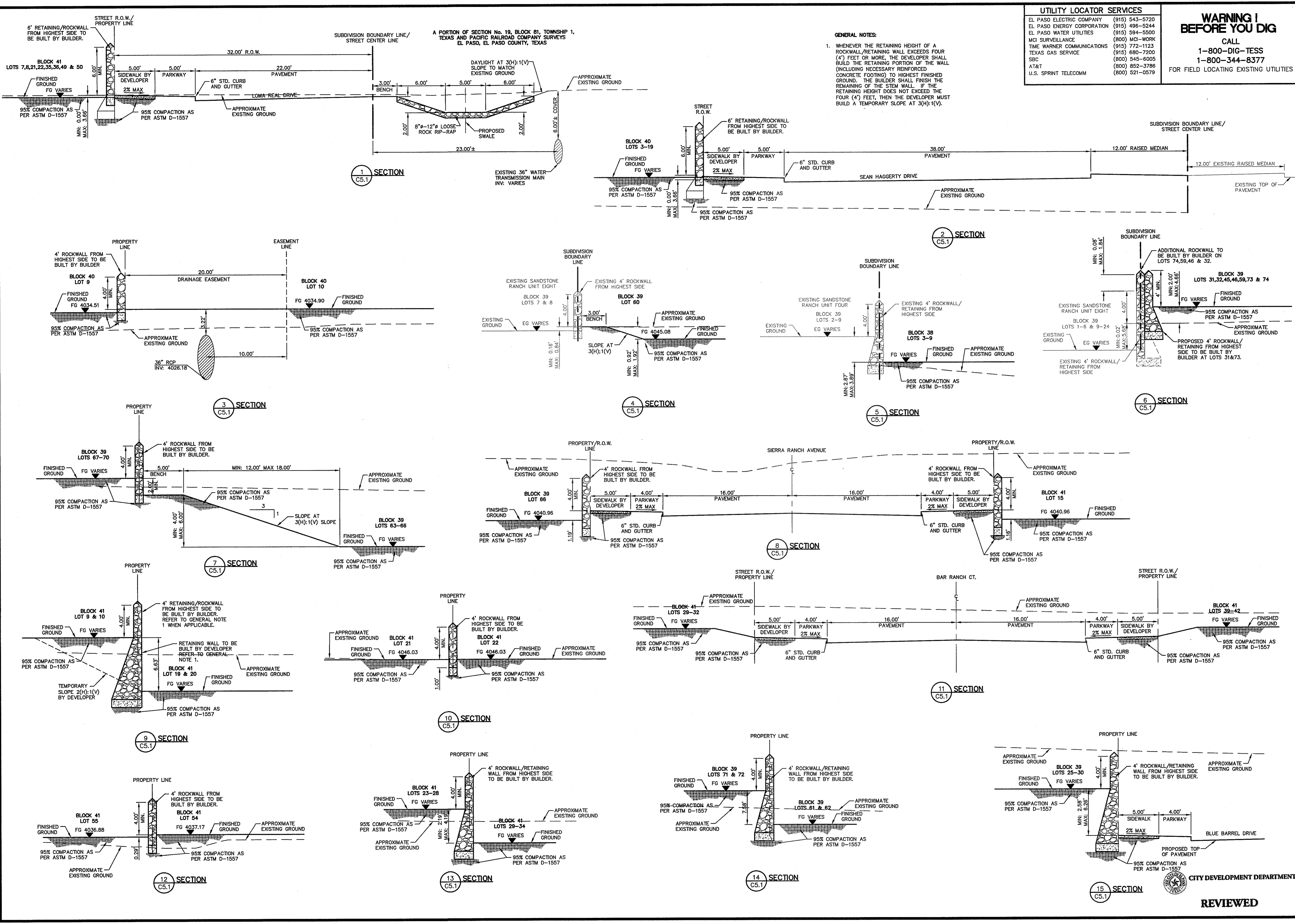
**WS-1** EXISTING WATERSHED

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE**  
**SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**OFF-SITE DRAINAGE PLAN**  
(SHEET 2 OF 2)  
SHEET NO.

**C4.2**

S:\2000\2000-163LD-Sandstone Ranch Unit Nine\Improvements\Drawings\Grading\Grading Sections\12/23/2013 3:12:01 PM



**UTILITY LOCATOR SERVICES**

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
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AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

**WARNING ! BEFORE YOU DIG**

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 1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS

FOUND TWOOD BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. (ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).)

DATE

REVISIONS

BY

**CSA**

engineers • architects • planners

TEXAS REGISTERED ENGINEERING FIRM F-454

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

Office: 915.544.5232 Fax: 915.544.5233 www.csaengr.com

ENGINEER'S SEAL

SCALE

Horizontal: 1"=5'

Vertical: N/A

Contour Interval: N/A

DATE: NOVEMBER 2013

DESIGN BY: J.M.

DRAWN BY: J.M.

CHKD. BY: J.G.

APPD. BY: J.L.A.

JOB NO. 2000-163-LD

PROJECT TITLE

**SANDSTONE RANCH UNIT NINE**

**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

GRADING SECTIONS

SHEET NO.

**C5.1**

CITY DEVELOPMENT DEPARTMENT

**REVIEWED**



S:\2000\2000-163.D-Sandstone Ranch Unit Nine\DWG5\Construction Drawings\Improvement Plans\2000-163-LD-C6.1-C6.2-Sean Haggerty P&P.dwg, Sean Haggerty 1/12/23/2013 3:12:39 PM

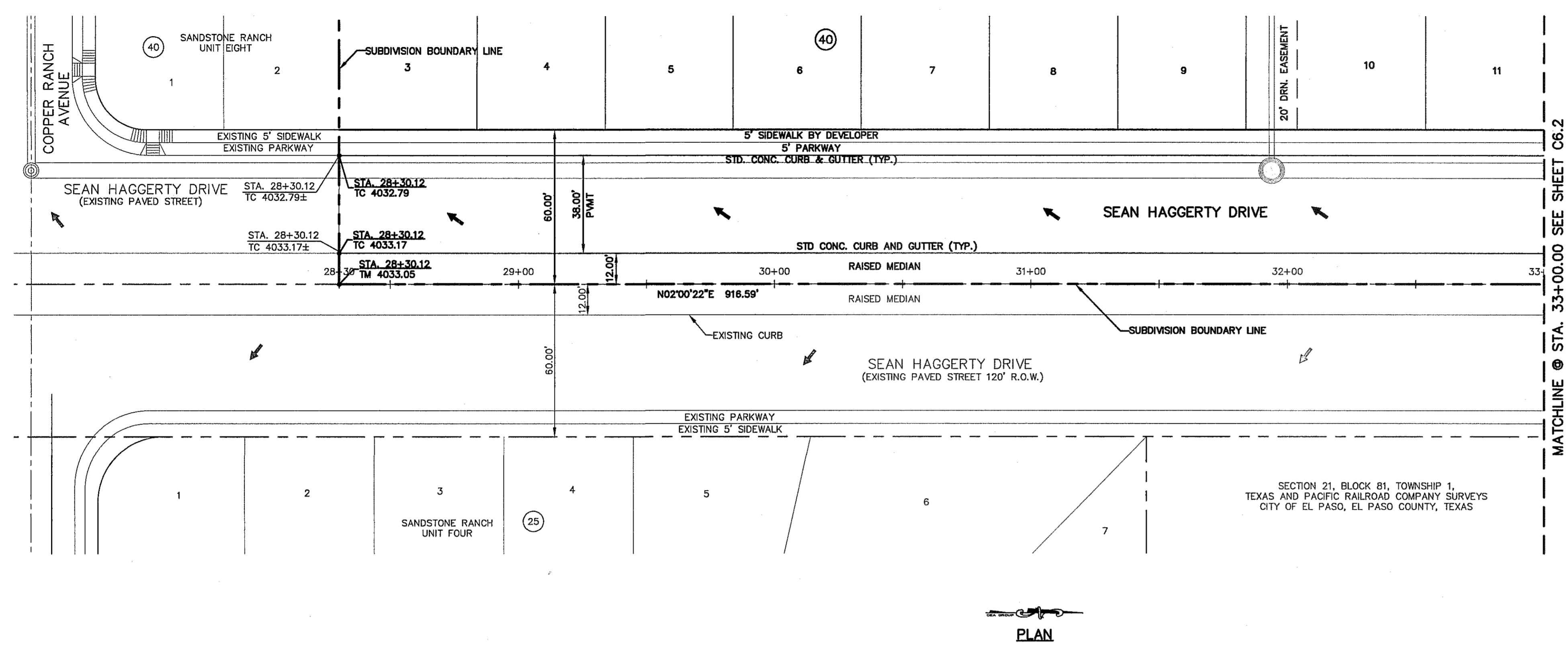
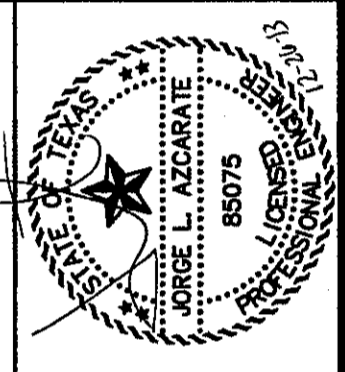
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 1-800-DIG-TESS  
 1-800-344-8377  
 FOR FIELD LOCATING EXISTING UTILITIES

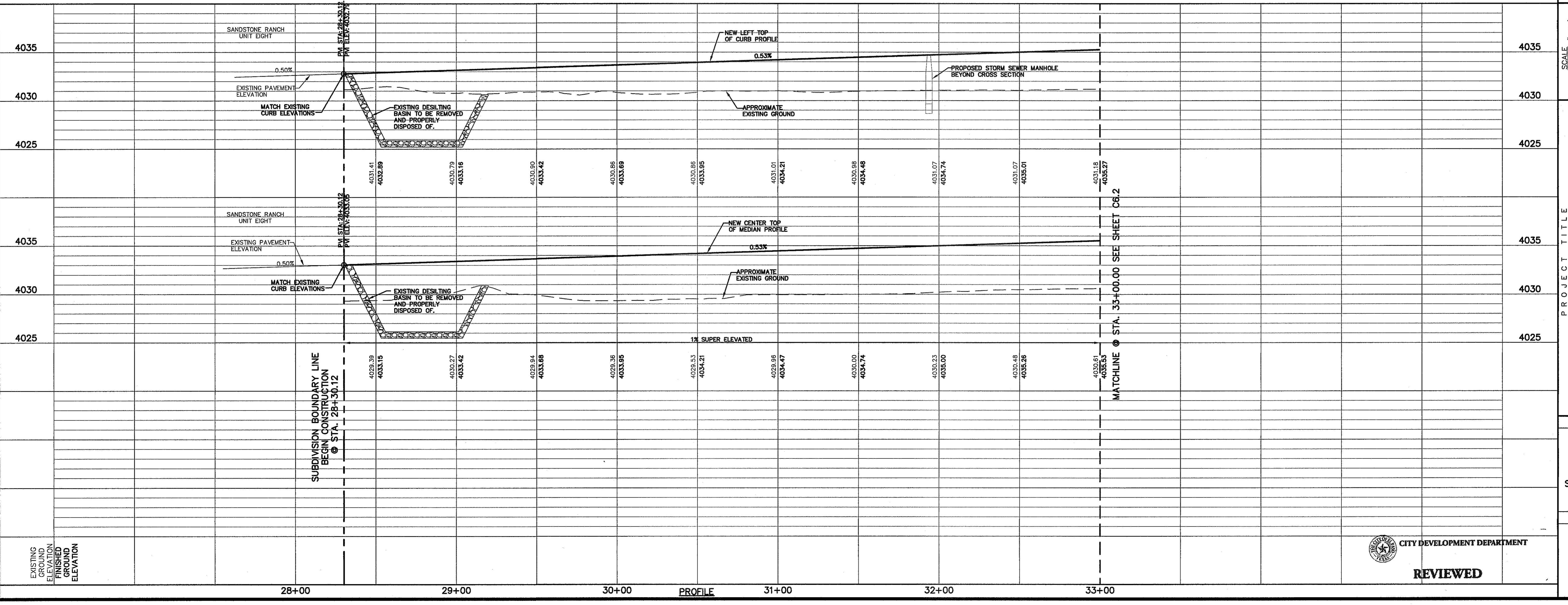
REFERENCES - BENCHMARKS  
 FOUND TYPED BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVDG DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

DATE	REVISIONS	BY

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 4712 Woodrow Blann, Ste. F, El Paso, TX 79924  
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**LEGEND**  
 WHEELCHAIR RAMP BY DEVELOPER (TYP.)  
 PROFILE DEPICTS 6" DROP AT INTERSECTION RETURNS. REFER TO PVI STATIONS FOR ACTUAL PAVEMENT ELEVATIONS.



SCALE: 1"=30'  
 Horizontal: 1"=50'  
 Vertical: Contour Interval: 1' / A.

DATE: NOVEMBER 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.G.  
 APPVD. BY: J.L.A.  
 JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**SEAN HAGGERTY  
 STREET PLAN &  
 PROFILE FROM  
 STA. 28+30.12 TO  
 STA. 33+00.00**

SHEET NO.  
**C6.1**

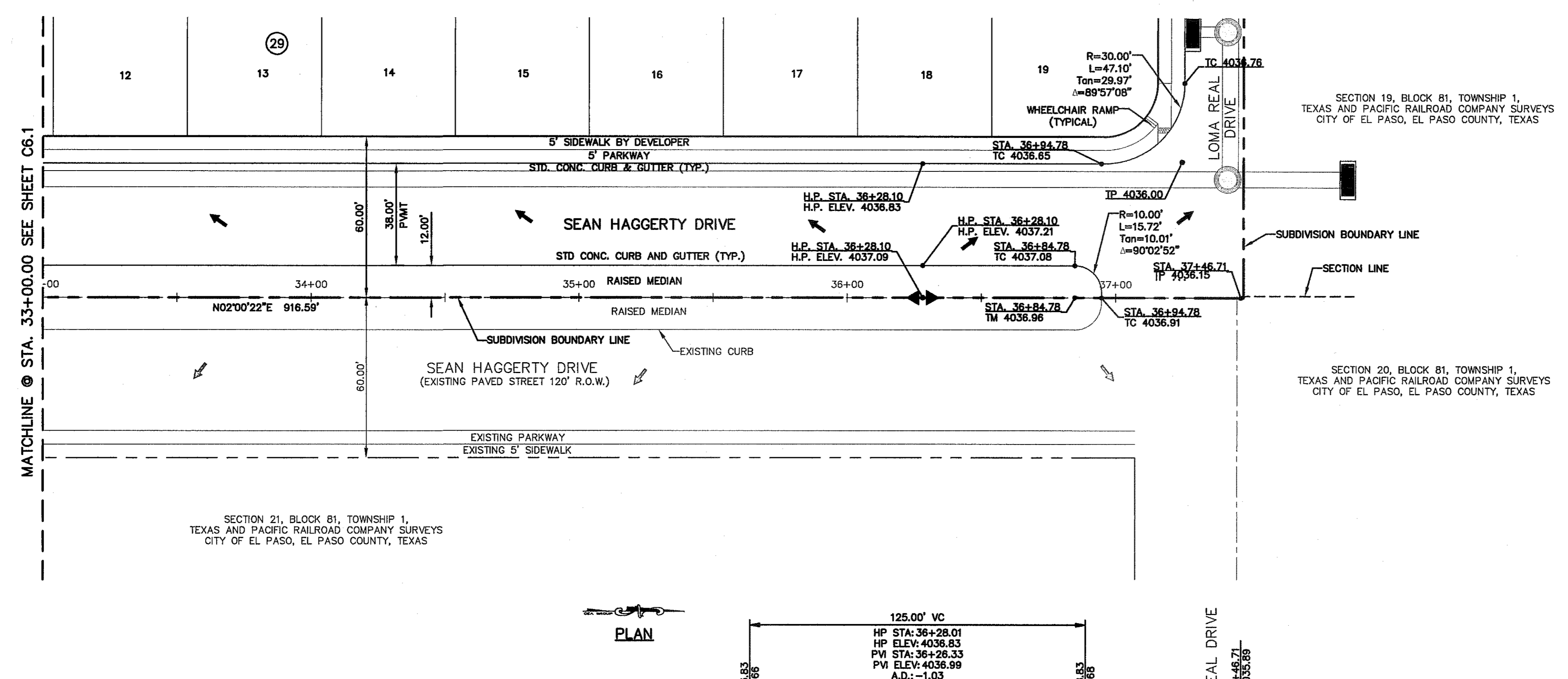
CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

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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

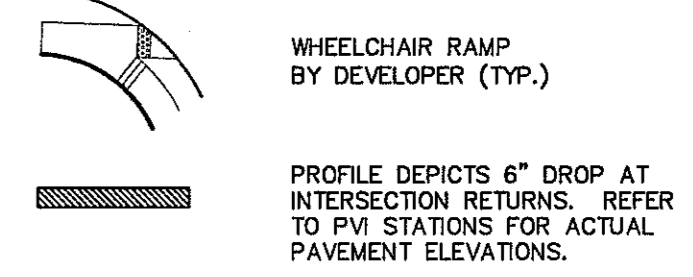
**WARNING I BEFORE YOU DIG**  
 CALL  
 1-800-DIG-TESS  
 1-800-344-8377  
 FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS	DATE	REVISIONS	BY
FOUND TYPOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVDG DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).			

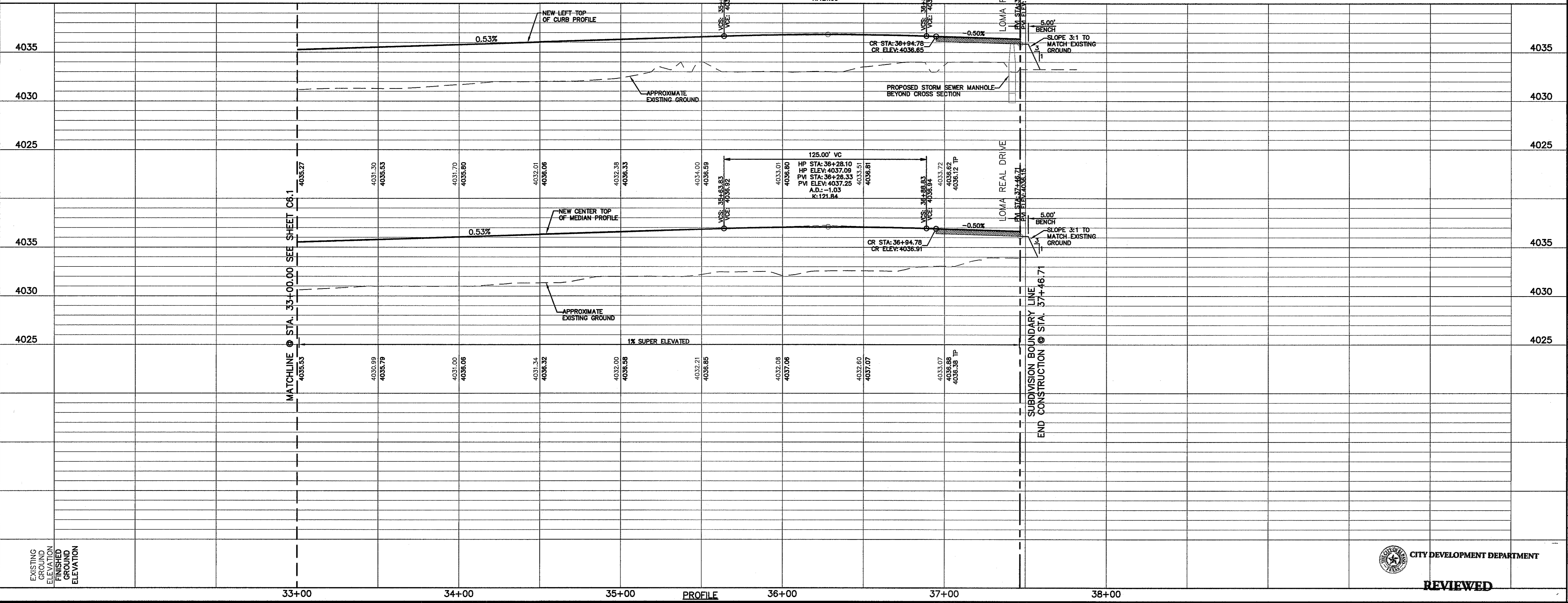
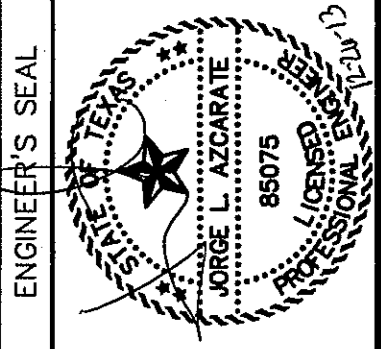


**PLAN**

**LEGEND**



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 4712 Woodrow Bland, Ste. F, El Paso, TX 79924  
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SCALE: Horizontal: 1"=30', Vertical: 1"=5'

Contour Interval: 1/4"

DATE: NOVEMBER 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.G.  
 APPVD. BY: J.L.A.  
 JOB No. 2000-163-LD

**SANDSTONE RANCH UNIT NINE**  
**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

SEAN HAGGERTY STREET PLAN & PROFILE FROM STA. 33+00.00 TO STA. 37+46.71

SHEET NO.

**C6.2**

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

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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) 852-3766
U.S. SPRINT TELECOMM	(800) 521-0579

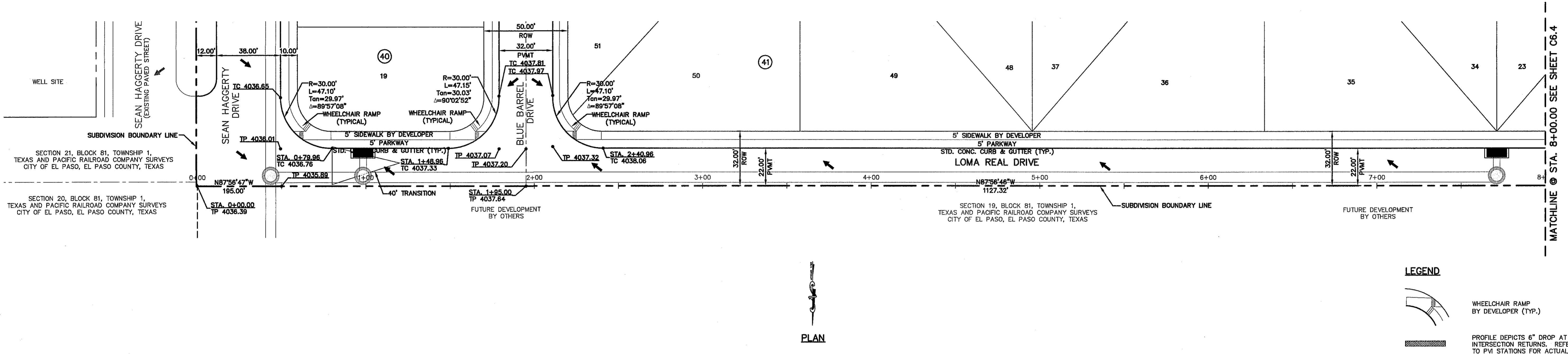
**WARNING I BEFORE YOU DIG**  
 CALL  
 1-800-DIG-TESS  
 1-800-344-8377  
 FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
 FOUND TYPICAL BRASS CAP AT  
 SECTION CORNERS 19, 20, 21, AND 22.  
 ELEVATION: 4033.22 (NVDG DATUM)  
 (SUBTRACT 8.462 TO CONVERT TO CITY  
 DATUM).

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 4712 Woodrow Bland, Ste. F, El Paso, TX 79924  
 Office: 915.544.5232 Fax: 915.544.5233 www.csandco.com

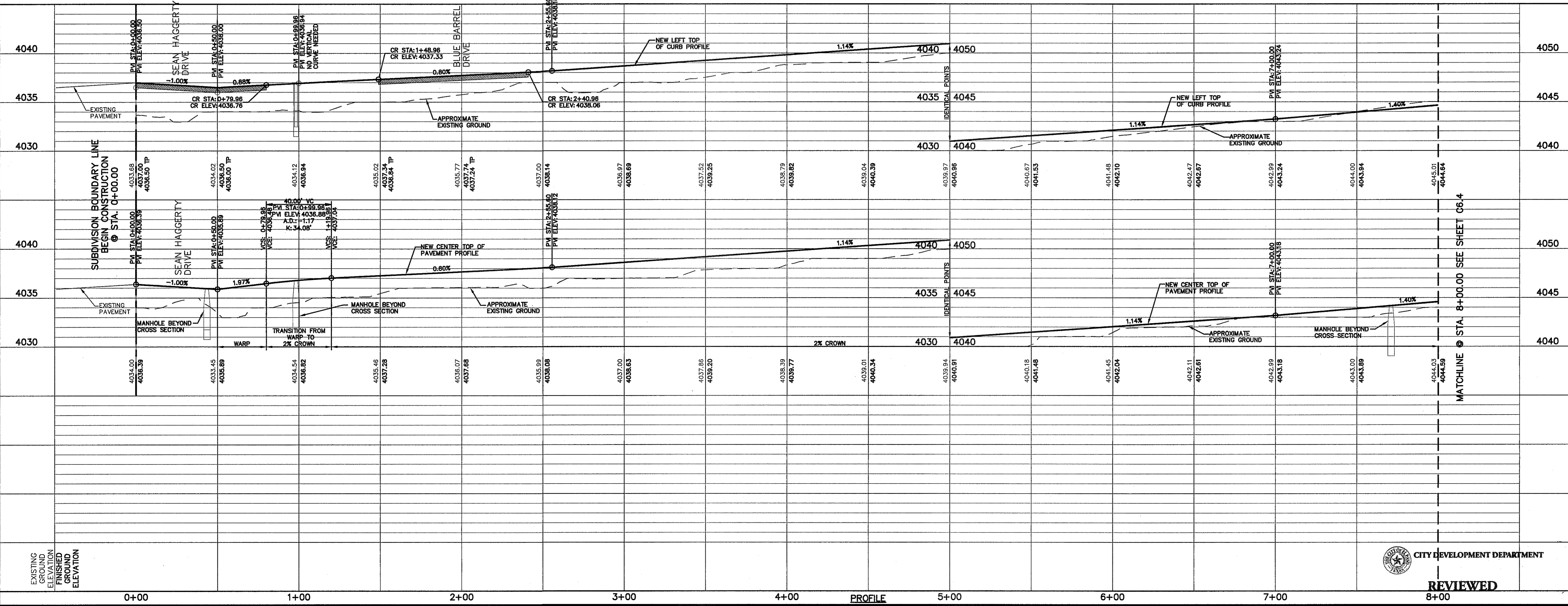
ENGINEER'S SEAL  
  
 DATE: NOVEMBER 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APPVD. BY: J.L.A.  
 JOB No. 2000-163-LD



PLAN

**LEGEND**

- WHEELCHAIR RAMP BY DEVELOPER (TYP.)
- PROFILE DEPICTS 6" DROP AT INTERSECTION RETURNS. REFER TO PVI STATIONS FOR ACTUAL PAVEMENT ELEVATIONS.



SCALE: Horizontal: 1"=30'  
 Vertical: 1"=5'  
 Contour Interval: 1/4'  
 DATE: NOVEMBER 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APPVD. BY: J.L.A.  
 JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**LOMA REAL DRIVE  
 PLAN & PROFILE  
 FROM STA. 0+00.00 TO  
 STA. 8+00.00**

SHEET NO.  
**C6.3**

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

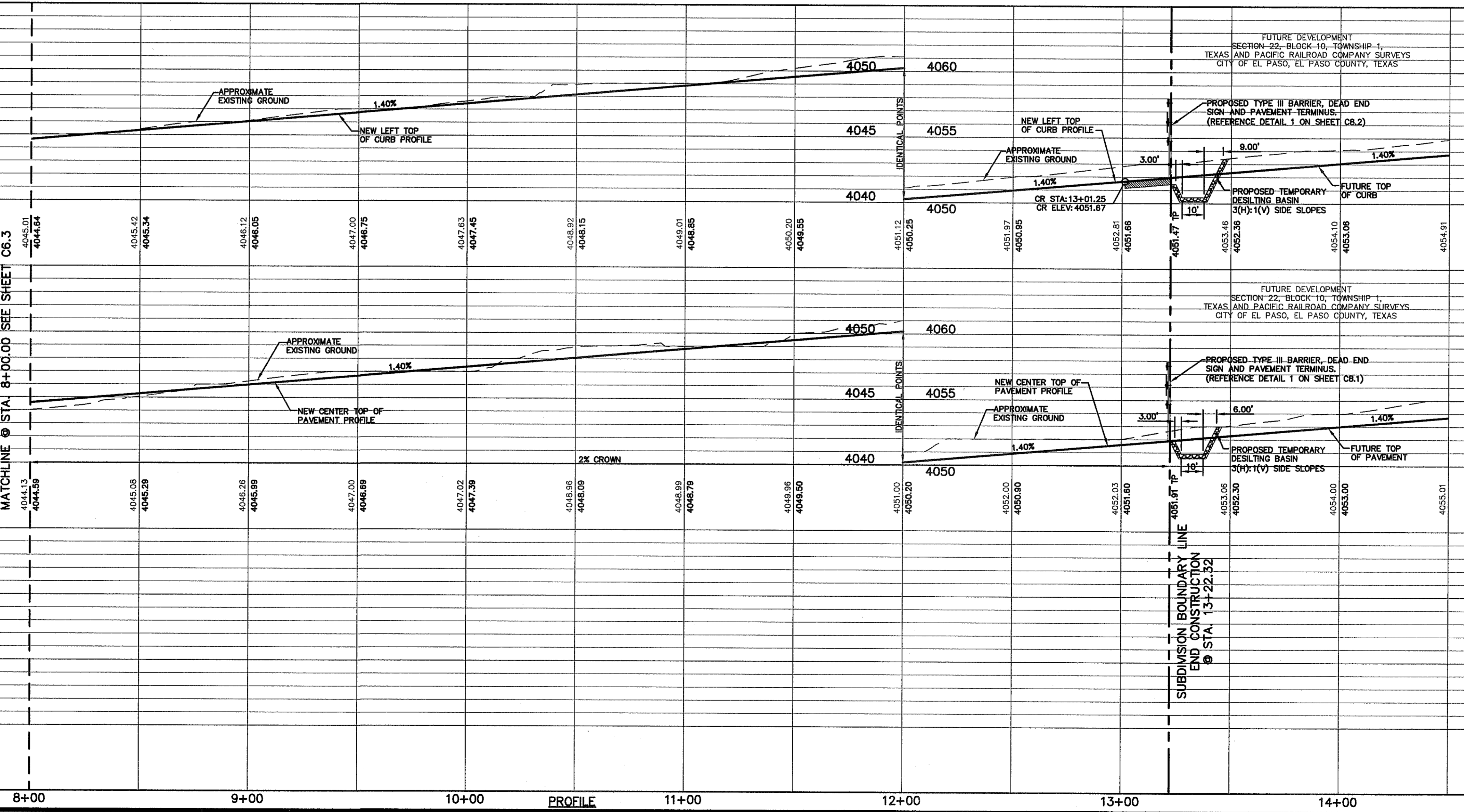
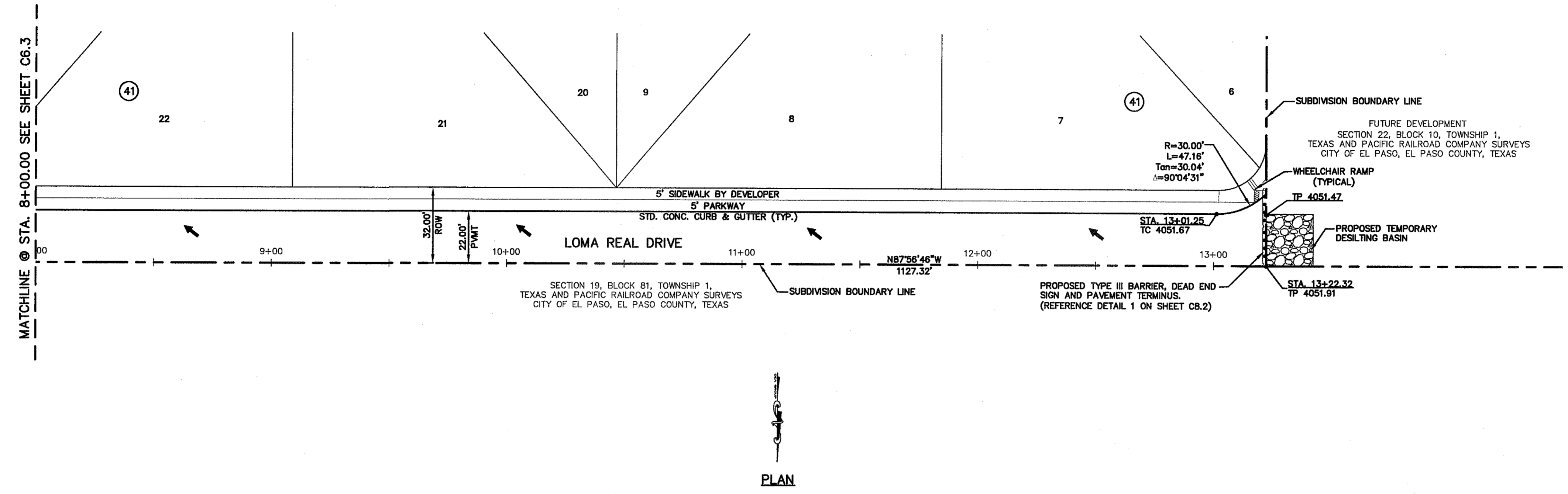
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MG SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

**WARNING I BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



S:\2000\2000-163D-Sandstone Ranch Unit Nine\DWG\Construction Drawings\Improvement Plans\2000-163-1D-C6.3-C6.4-Loma Real P&P.dwg, Loma Real Drive 2, 12/26/2013 8:19:28 AM

REFERENCES - BENCHMARKS

FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

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Office: 915.544.5232 Fax: 915.544.6233 www.daggroup.net

ENGINEER'S SEAL

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

Contour Interval: N/A

DATE: NOVEMBER 2013

DESIGN BY: J.M.

DRAWN BY: J.G.

CHKD. BY: J.L.A.

APPD. BY: J.L.A.

JOB No. 2000-163-1D

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

**WARNING I BEFORE YOU DIG**

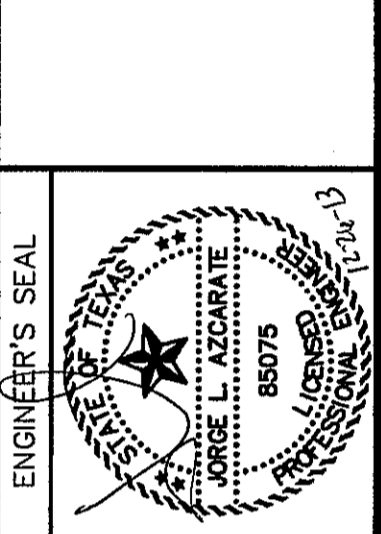
CALL  
1-800-DIG-TESS  
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
FOUND TYGOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

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4772 Woodrow Bann, Ste. F, El Paso, TX 79924  
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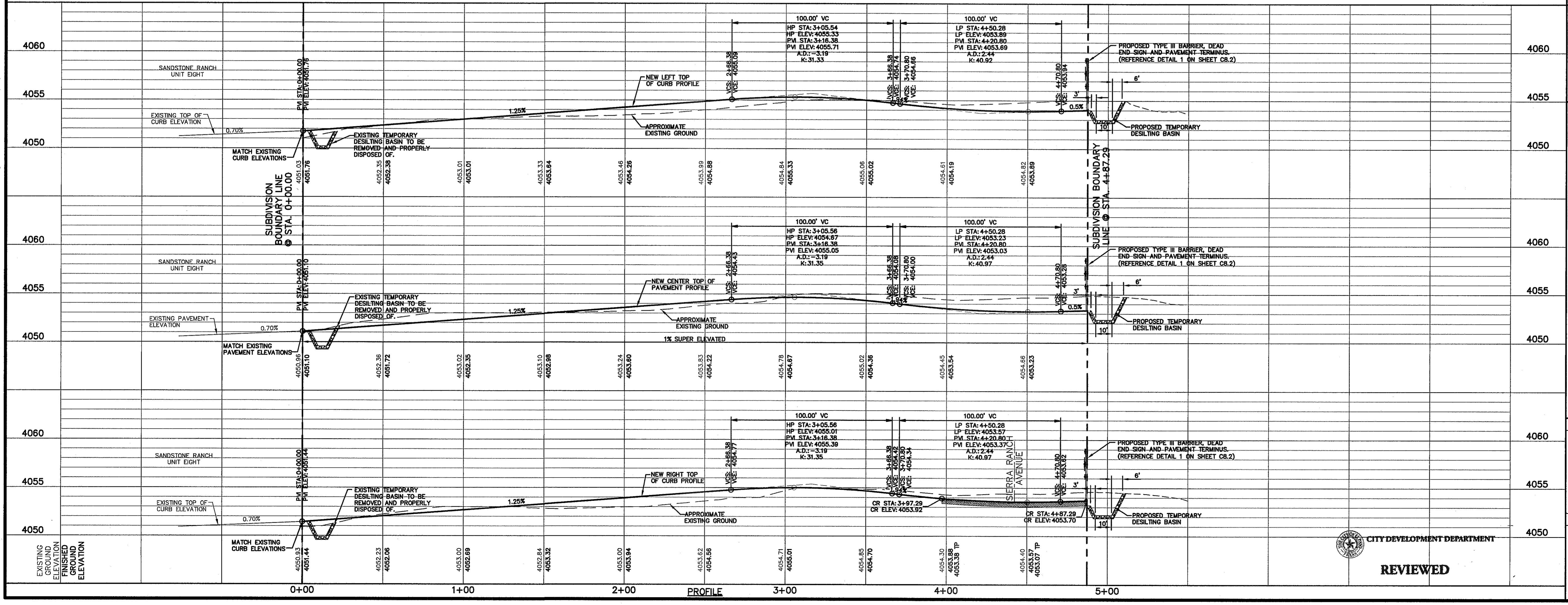
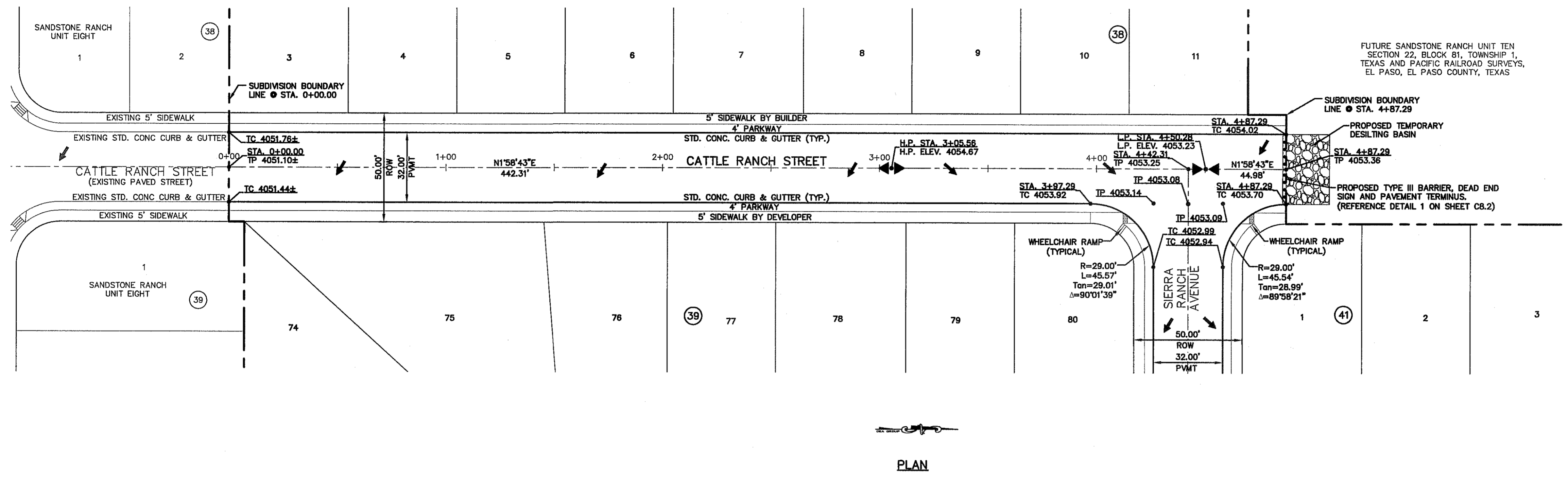


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DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPVD. BY: J.L.A.  
JOB No. 2000-163-ID

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**CATTLE RANCH STREET PLAN & PROFILE FROM STA. 0+00.00 TO STA. 4+87.29**

SHEET NO.  
**C6.5**



CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

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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	

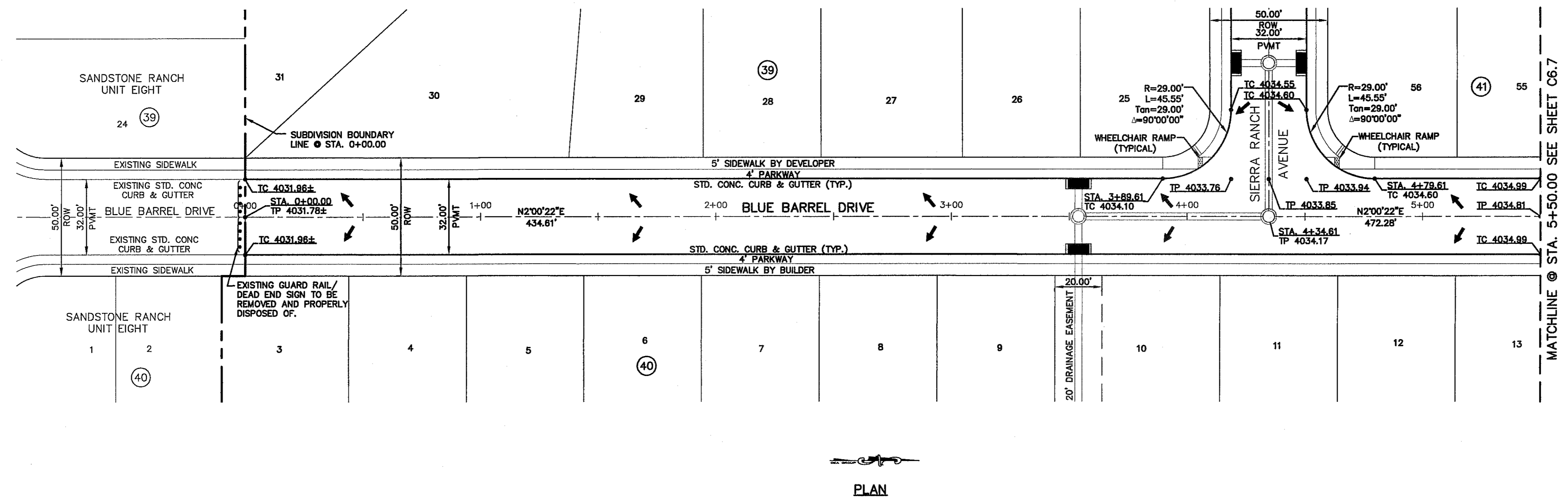
**WARNING I BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22 (ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).)

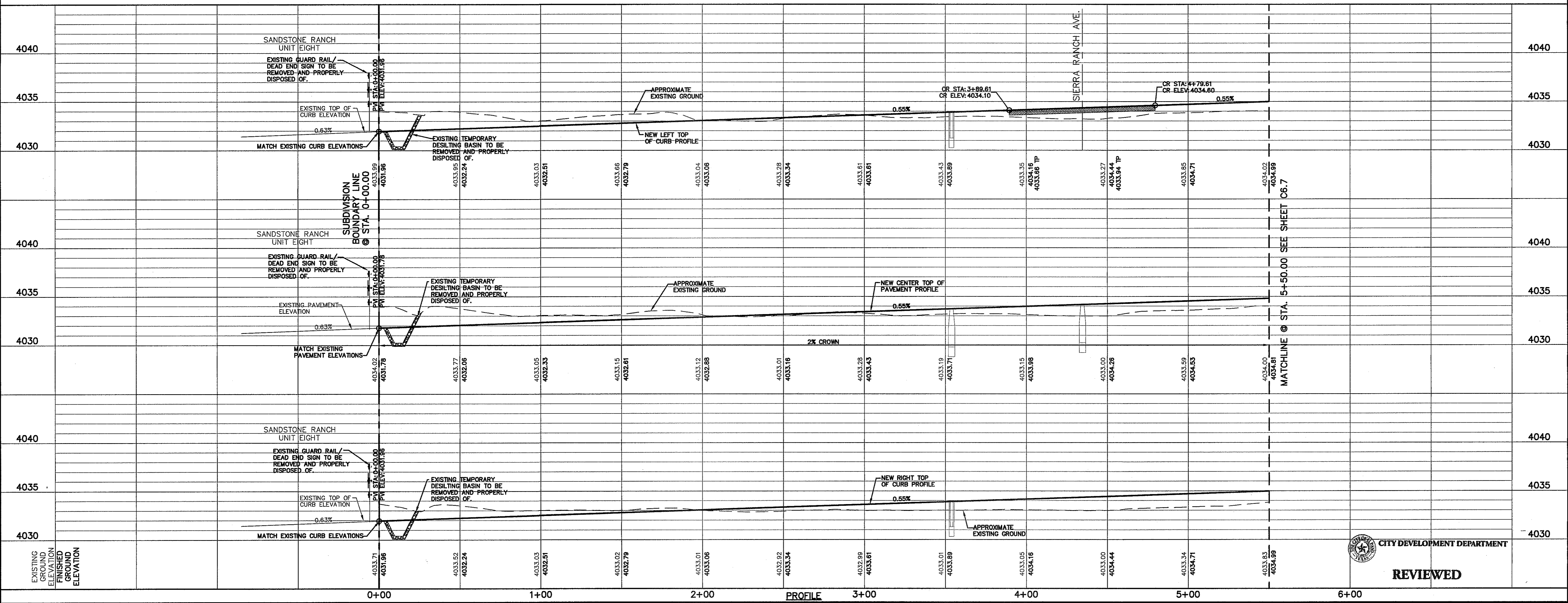


PLAN

**LEGEND**

WHEELCHAIR RAMP BY DEVELOPER (TYP.)

PROFILE DEPICTS 6" DROP AT INTERSECTION RETURNS. REFER TO PVI STATIONS FOR ACTUAL PAVEMENT ELEVATIONS.



SCALE: 1"=30'  
Horizontal: 1"=50'  
Vertical: 1"=5'  
Contour Interval: 1/4'  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**BLUE BARREL DRIVE  
PLAN & PROFILE  
FROM STA. 0+00.00  
TO STA. 5+50.00**

SHEET NO.  
**C6.6**

REVIEWED

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

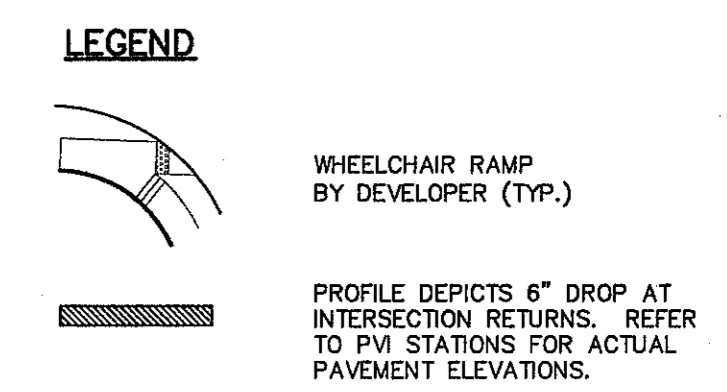
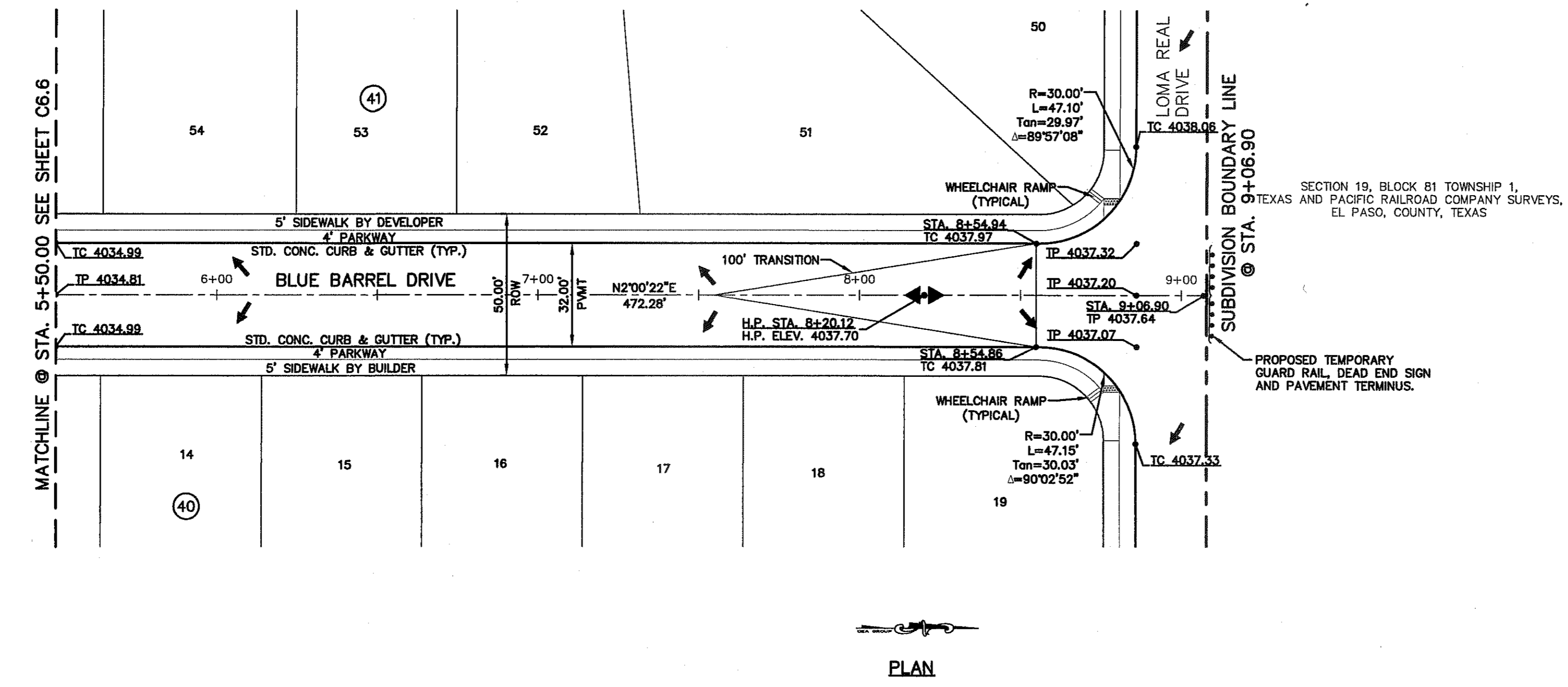
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-8005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

**WARNING I BEFORE YOU DIG**

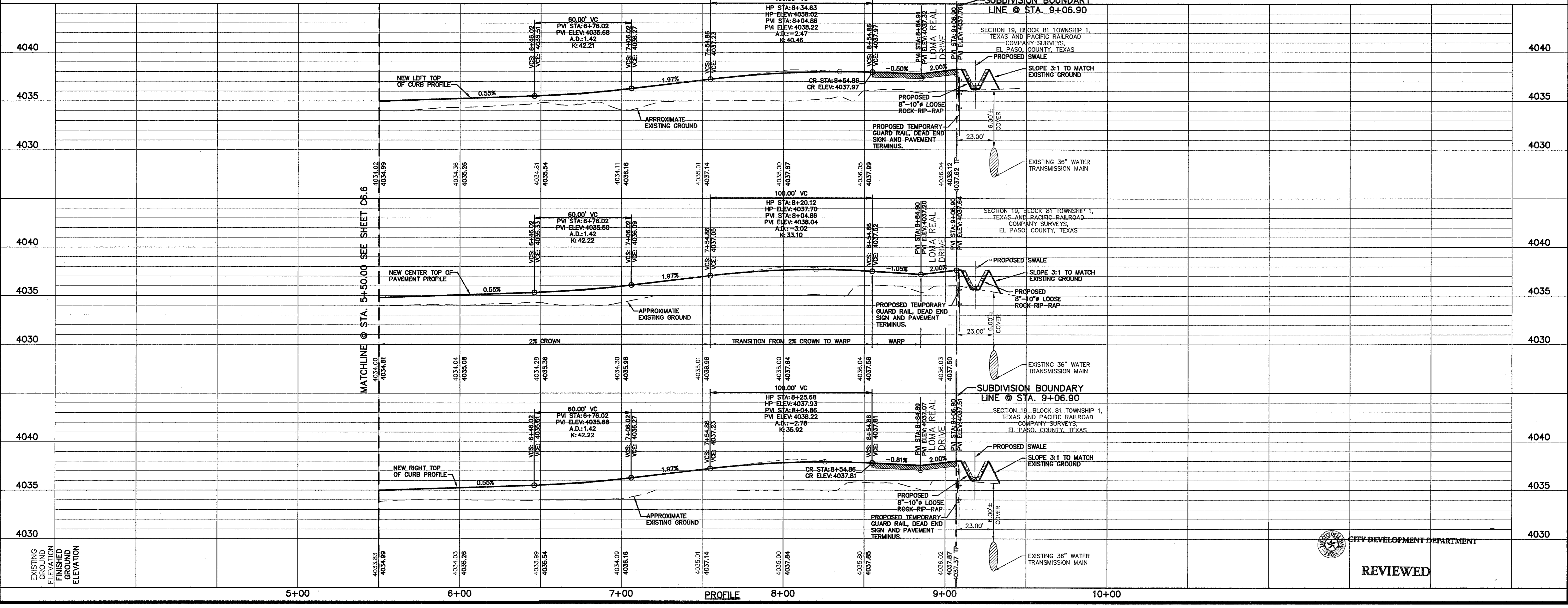
CALL  
1-800-DIG-TESS  
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS		
FOUND TYOOT BRASS CAP AT SECTION CORNERS 19, 20, 21 AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).		
DATE	REVISIONS	BY



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PROJECT TITLE
SANDSTONE RANCH UNIT NINE SUBDIVISION IMPROVEMENTS
SHEET TITLE
BLUE BARREL DRIVE PLAN & PROFILE FROM STA. 5+50.00 TO STA. 9+06.90
SHEET NO.
C6.7

CITY DEVELOPMENT 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

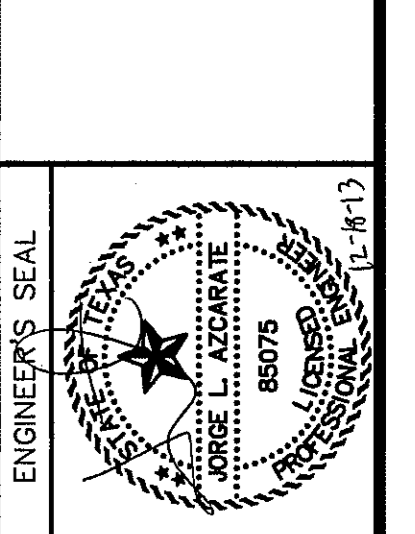
**WARNING I BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
FOUND TYPED BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).



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Contour Interval: 1/4'

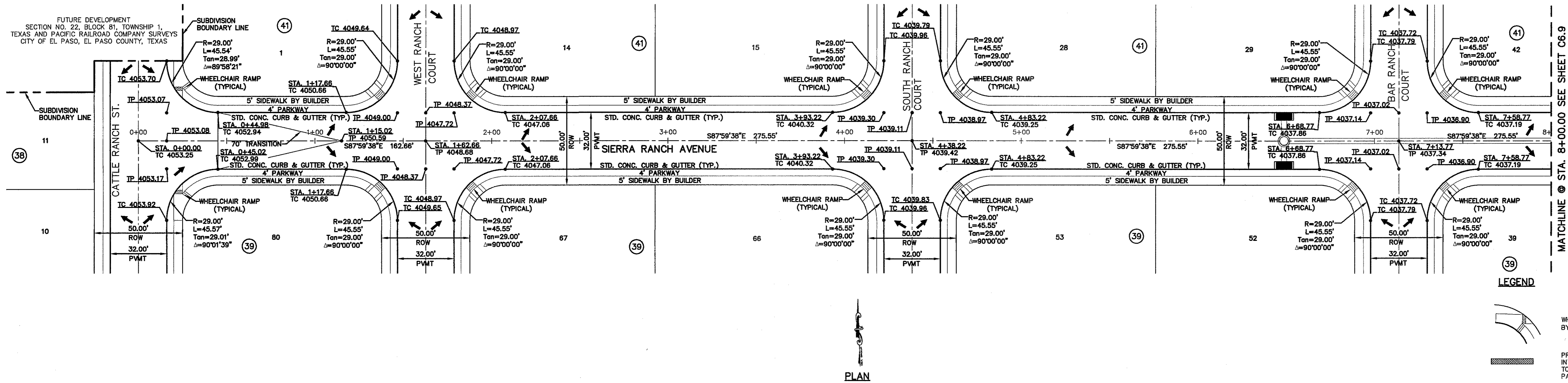
DESIGN BY: J.M.  
DATE: NOVEMBER 2013  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.

JOB NO. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE**  
SUBDIVISION IMPROVEMENTS

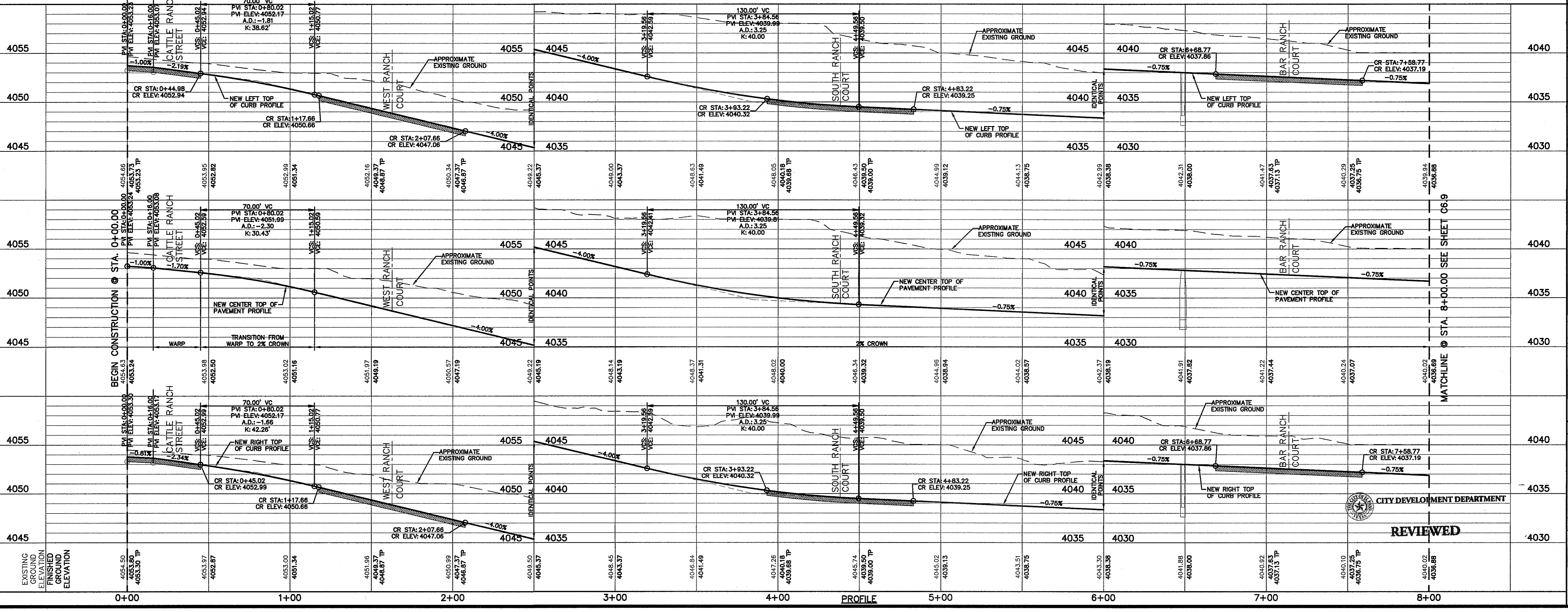
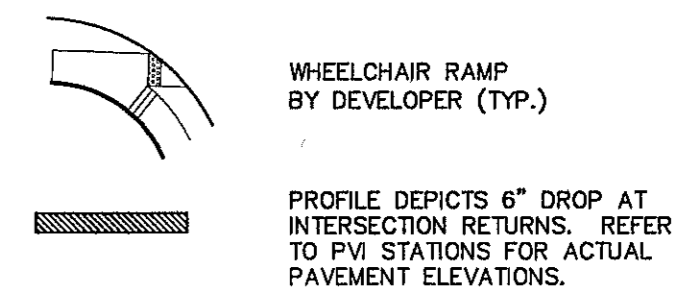
SHEET TITLE  
SIERRA RANCH AVE. PLAN & PROFILE FROM STA. 0+00.00 TO STA. 8+00.00

SHEET NO.  
**C6.8**



PLAN

LEGEND



REVIEWED

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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

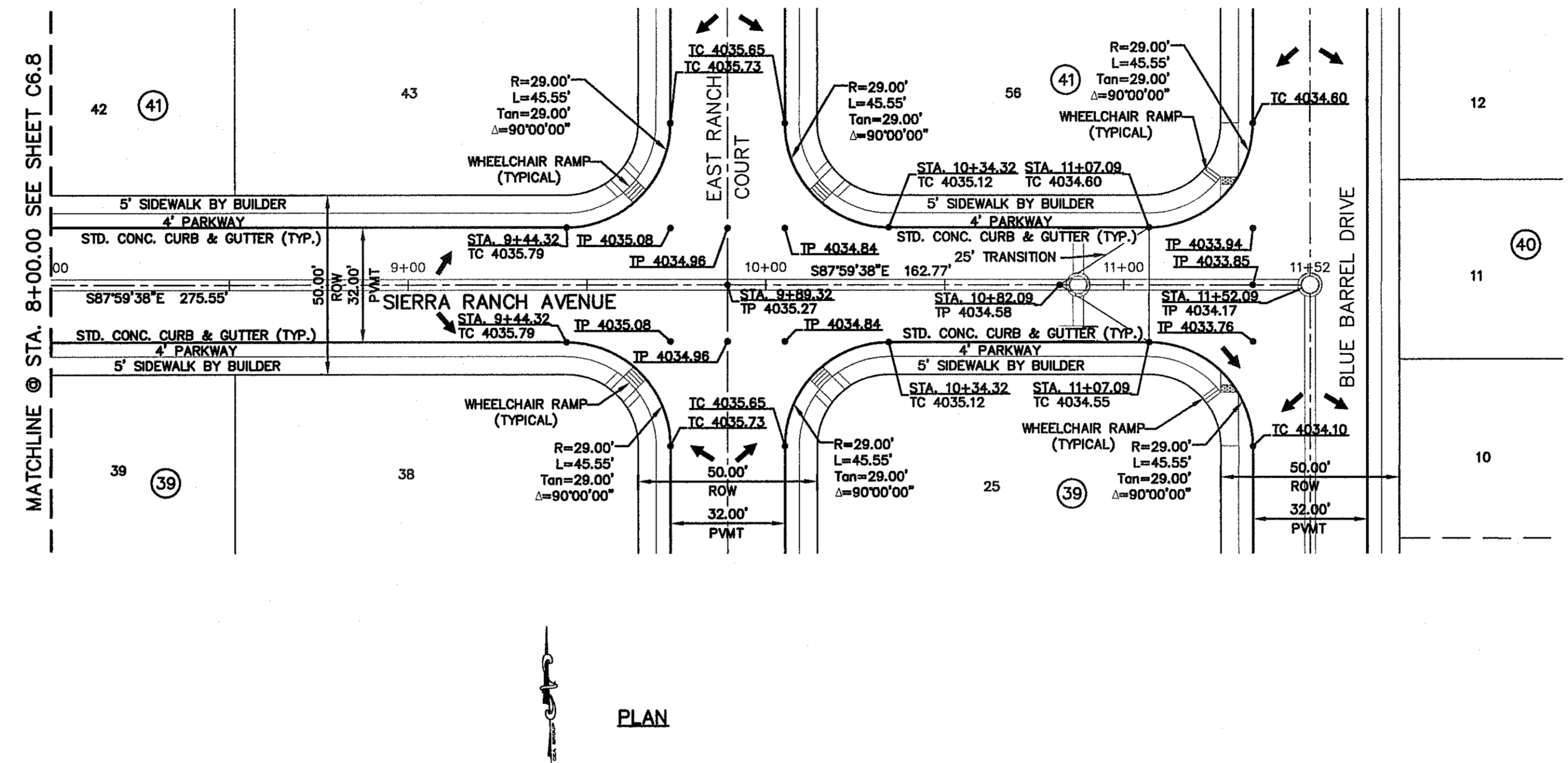
**WARNING I BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

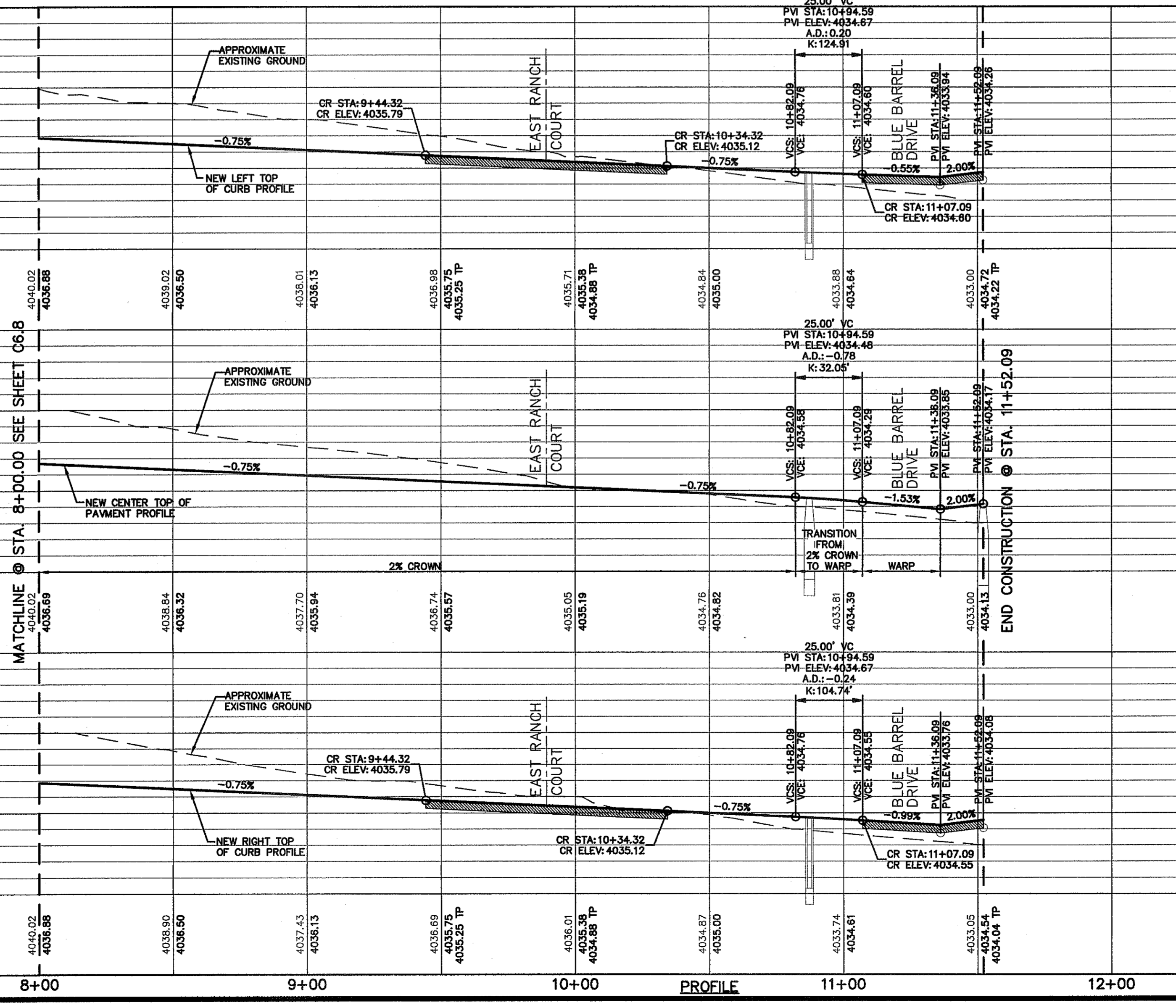
REFERENCES - BENCHMARKS  
FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).



**LEGEND**

WHEELCHAIR RAMP BY DEVELOPER (TYP.)

PROFILE DEPICTS 6" DROP AT INTERSECTION RETURNS. REFER TO PVI STATIONS FOR ACTUAL PAVEMENT ELEVATIONS.



EXISTING GROUND ELEVATION	FINISHED PAVEMENT ELEVATION	STATION
4040.02	4036.88	8+00
4038.90	4036.50	9+00
4037.43	4036.13	10+00
4036.69	4035.29 TP	10+00
4036.01	4034.80 TP	10+00
4034.87	4035.00	11+00
4033.74	4034.61	11+00
4033.05	4034.04 TP	12+00

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

SCALE	PROJECT TITLE
Horizontal: 1"=30' Vertical: 1"=5' Contour Interval: N/A	SANDSTONE RANCH UNIT NINE SUBDIVISION IMPROVEMENTS

DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.G.  
APPD. BY: J.L.A.

SHEET NO. C6.9

S:\2000\2000-1631D-Sandstone Ranch Unit Nine\DWG\Construction Drawings\Improvement Plans\2000-1631D-C6.9-Sandstone Ranch P&P.dwg, Sierra Ranch 2, 12/18/2013 2:00:28 PM

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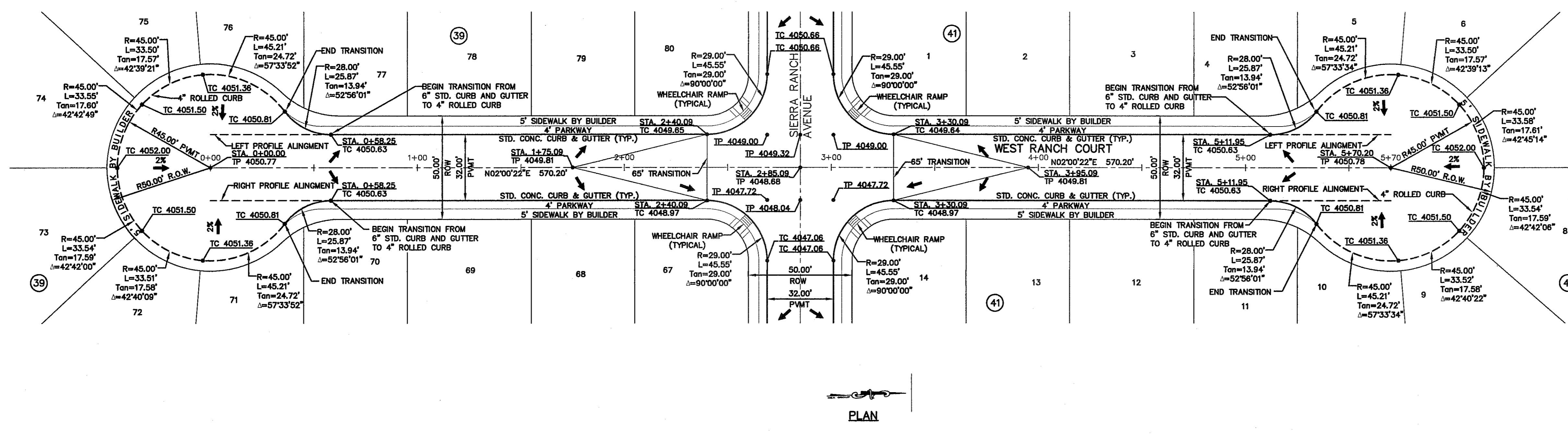
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

**WARNING I BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



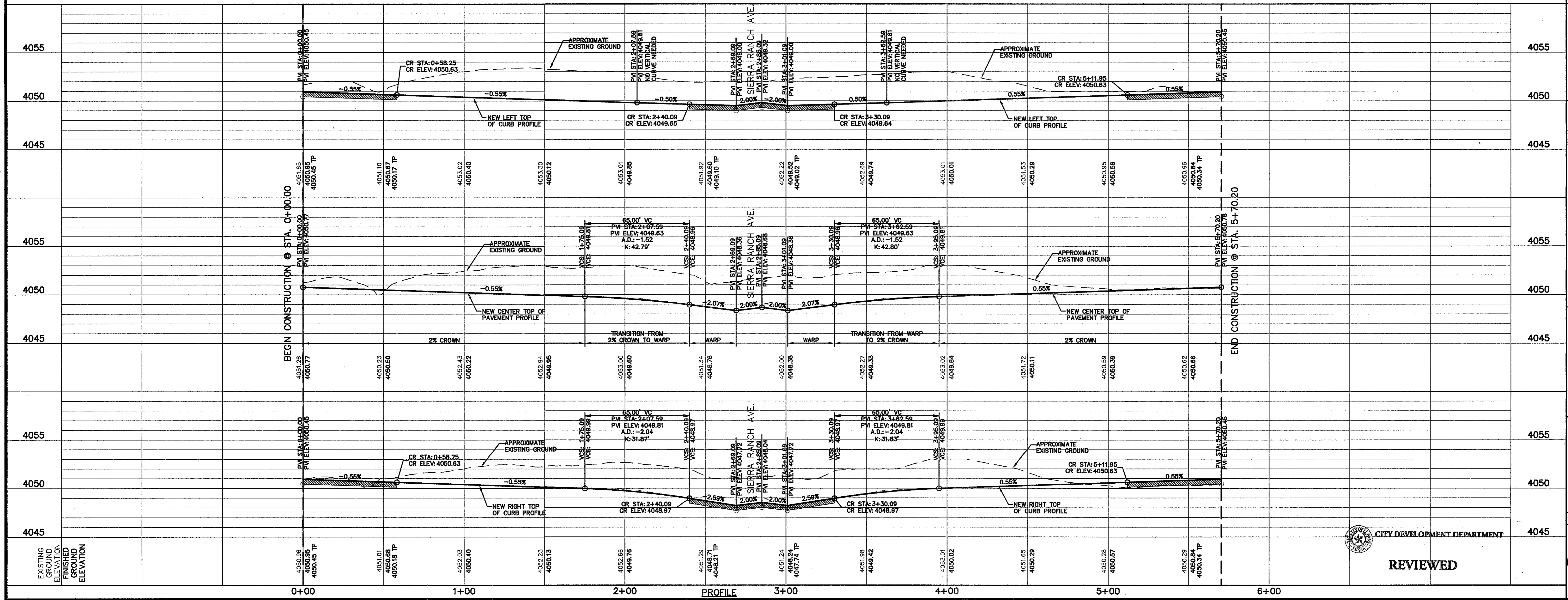
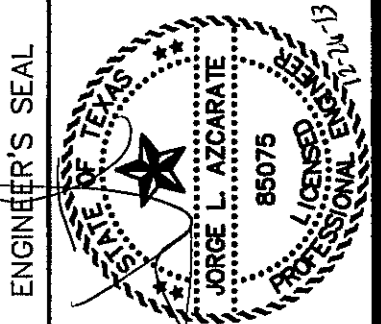
**LEGEND**

WHEELCHAIR RAMP BY DEVELOPER (TYP.)

PROFILE DEPICTS 6" DROP AT INTERSECTION RETURNS. REFER TO PVI STATIONS FOR ACTUAL PAVEMENT ELEVATIONS.

REFERENCES - BENCHMARKS  
FOUND TxDOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

**CSA**  
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Contour Interval: N/A

DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.

JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**WEST RANCH COURT  
PLAN & PROFILE  
FROM STA. 0+00.00  
TO STA. 5+70.20**

SHEET NO.  
4045

**REVIEWED**

C6.10

UTILITY LOCATOR SERVICES		
EL PASO ELECTRIC COMPANY	(915) 543-5720	
EL PASO ENERGY CORPORATION	(915) 496-5244	
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MCI SURVEILLANCE	(800) MCI-WORK	
TIME WARNER COMMUNICATIONS	(915) 772-1123	
TEXAS GAS SERVICE	(915) 680-7200	
SBC	(800) 545-6005	
AT&T	(800) 852-3786	
U.S. SPRINT TELECOM	(800) 521-0579	

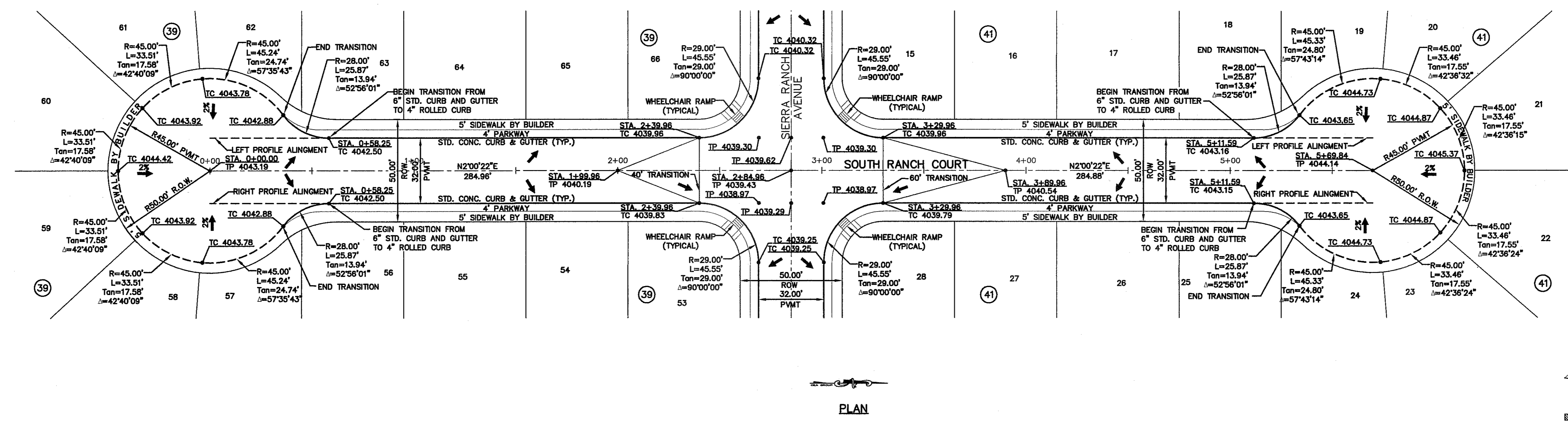
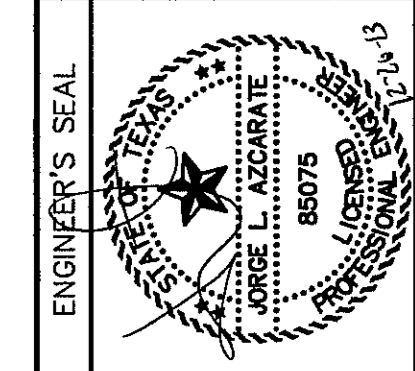
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BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARKS  
FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).

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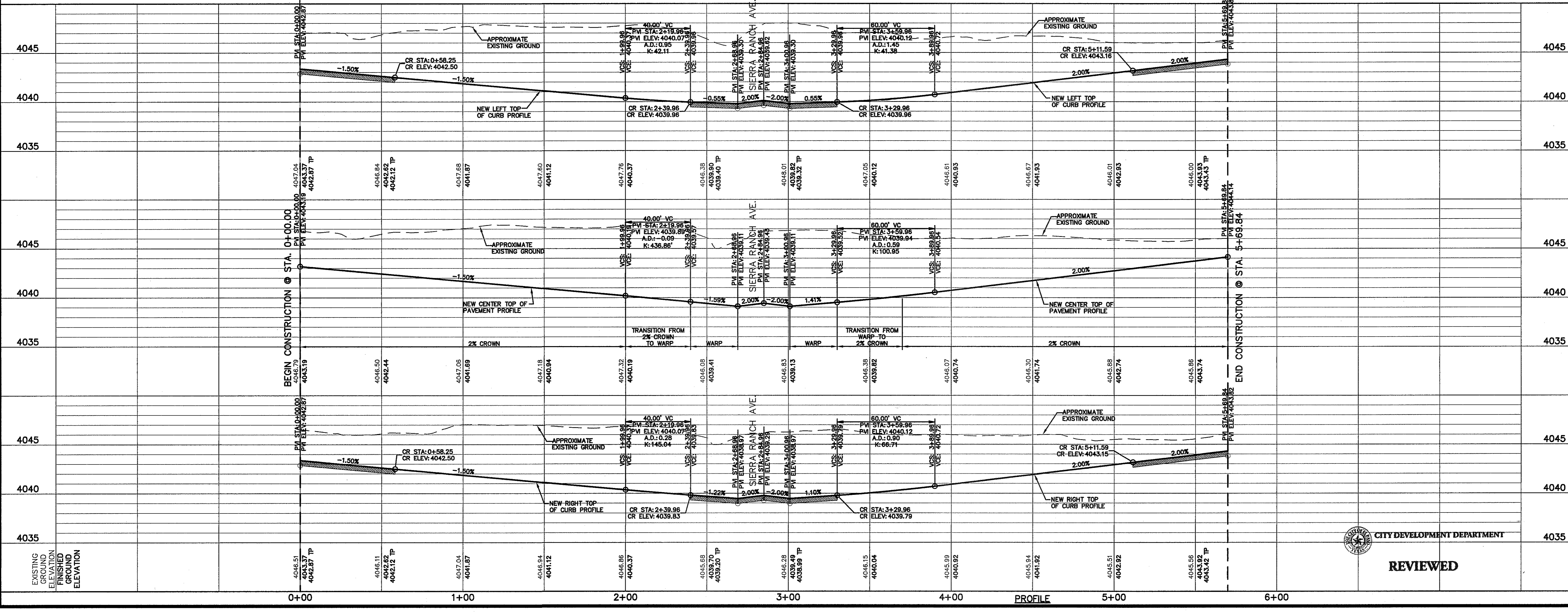
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WHEELCHAIR RAMP BY DEVELOPER (TYP.)

PROFILE DEPICTS 6" DROP AT INTERSECTION RETURNS. REFER TO PVI STATIONS FOR ACTUAL PAVEMENT ELEVATIONS.

PLAN

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DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**SOUTH RANCH COURT  
PLAN & PROFILE  
FROM STA. 0+00.00  
TO STA. 5+69.84**

SHEET NO.  
**C6.11**

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

UTILITY LOCATOR SERVICES	
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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

**WARNING I BEFORE YOU DIG**

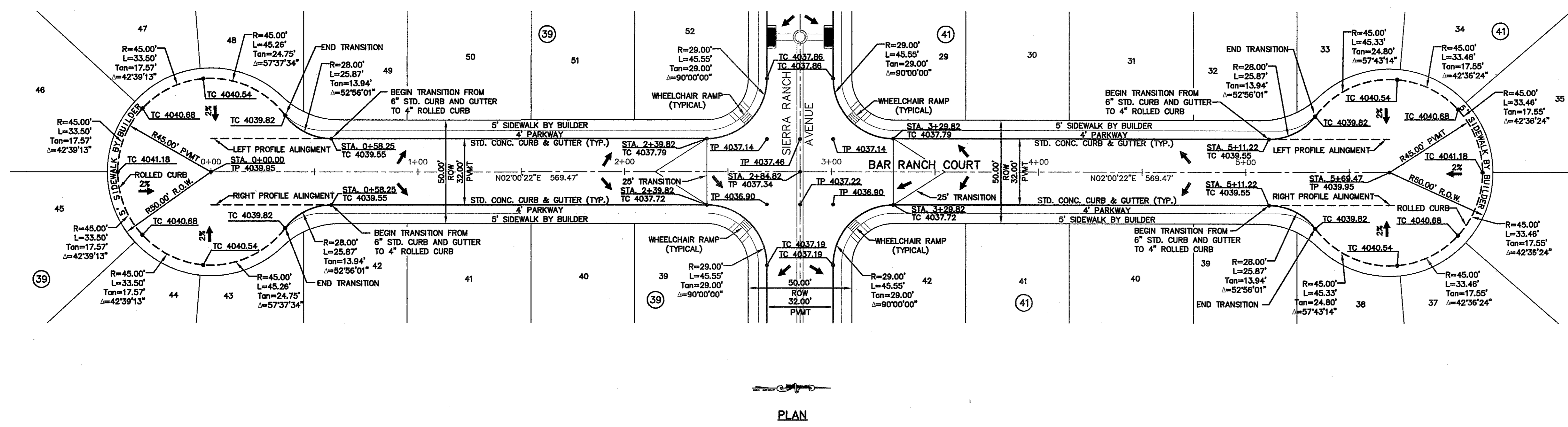
CALL  
1-800-DIG-TESS  
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
FOUND TYPED BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

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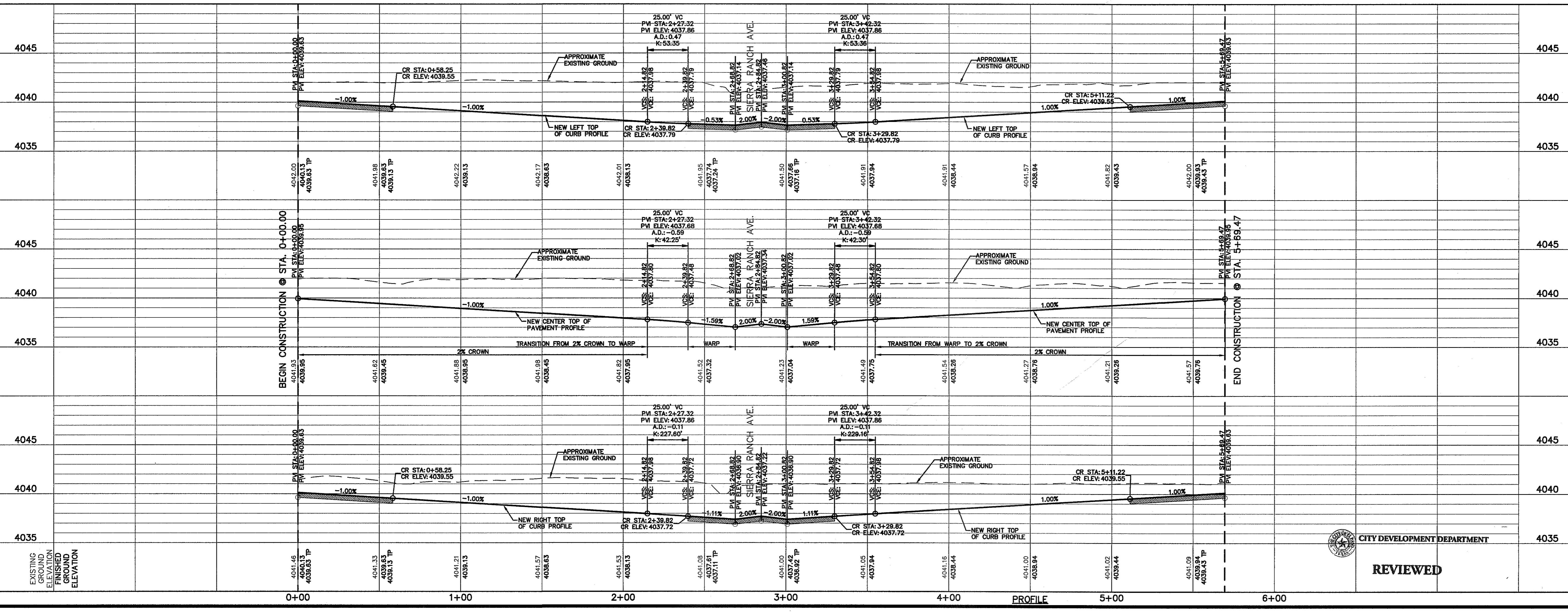


**LEGEND**

WHEELCHAIR RAMP BY DEVELOPER (TYP.)

PROFILE DEPICTS 6" DROP AT INTERSECTION RETURNS. REFER TO PVI STATIONS FOR ACTUAL PAVEMENT ELEVATIONS.

S:\2000\2000-163.D-Subdivision\Drawings\Improvement Plans\2000-163-LD-C6.12-Subdivision\Bar Ranch Court.dwg, Bar Ranch Court, 12/18/2013 2:02:22 PM



ENGINEER'S SEAL

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 DRAWN BY: J.G.  
 APP'D. BY: J.L.A.  
 JOB NO.: 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**BAR RANCH COURT  
 PLAN & PROFILE  
 FROM STA. 0+00.00  
 TO STA. 5+69.47**

SHEET NO.  
**C6.12**

CITY DEVELOPMENT 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) 545-8005
AT&T	(800) 852-3786
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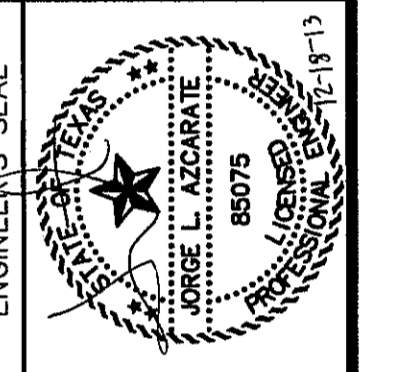
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FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21 AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).

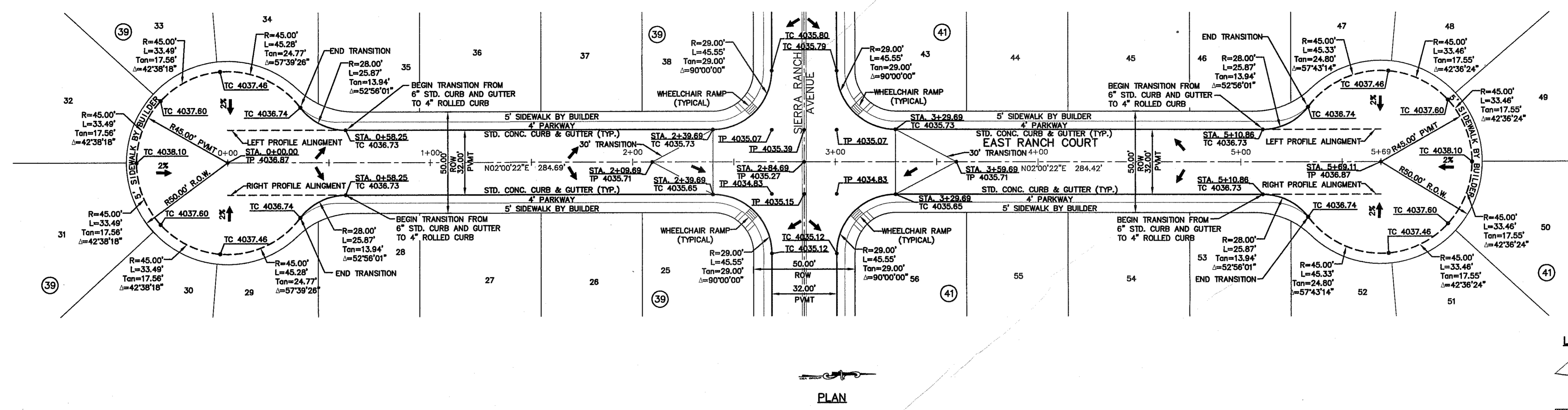


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DRAWN BY: J.C.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**EAST RANCH COURT  
PLAN & PROFILE  
FROM STA. 0+00.00  
TO STA. 5+69.11**

SHEET NO.  
**C6.13**

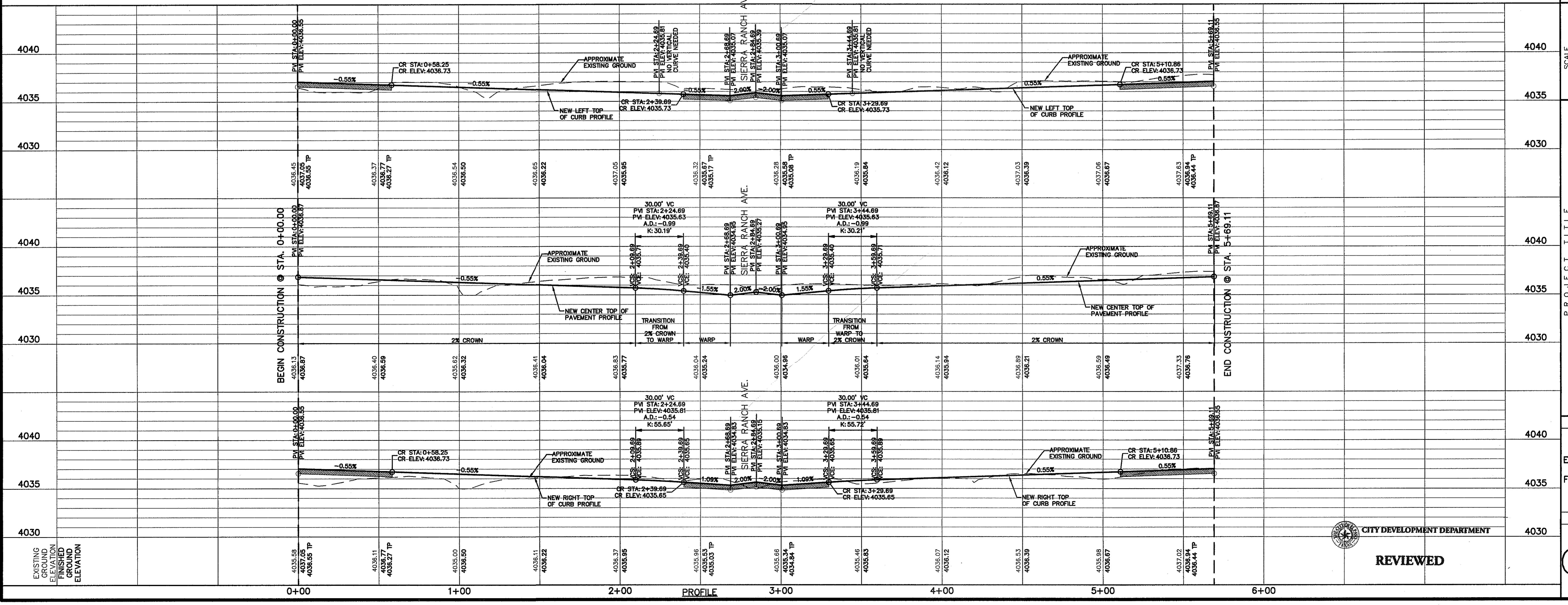


**LEGEND**

WHEELCHAIR RAMP BY DEVELOPER (TYP.)

PROFILE DEPICTS 6" DROP AT INTERSECTION RETURNS. REFER TO PVI STATIONS FOR ACTUAL PAVEMENT ELEVATIONS.

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CITY DEVELOPMENT DEPARTMENT

**REVIEWED**

STORM PIPE LINE A OUTPUT INFORMATION						
PIPE	DOWNSTREAM INVERT ELEVATION (ft)	UPSTREAM INVERT ELEVATION (ft)	HYDRAULIC GRADE DOWNSTREAM (ft)	HYDRAULIC GRADE UPSTREAM (ft)	Q(50) Expected (cfs)	Q(50) Capacity (cfs)
P-1	4023.15	4024.92	4028.19	4029.45	197.23 CFS	237.49 CFS
P-2	4024.92	4026.52	4030.42	4031.23	144.71 CFS	181.31 CFS

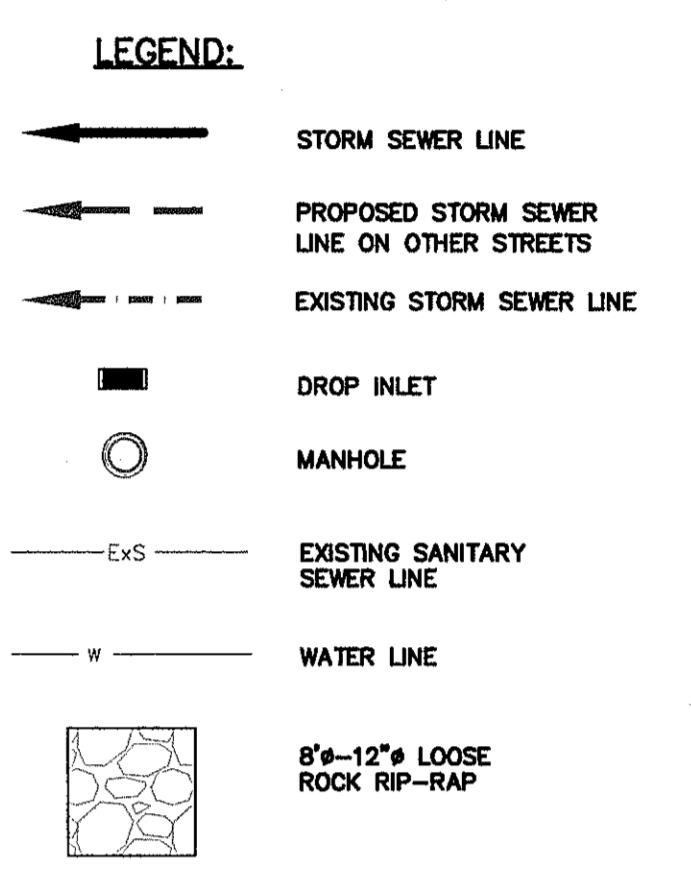
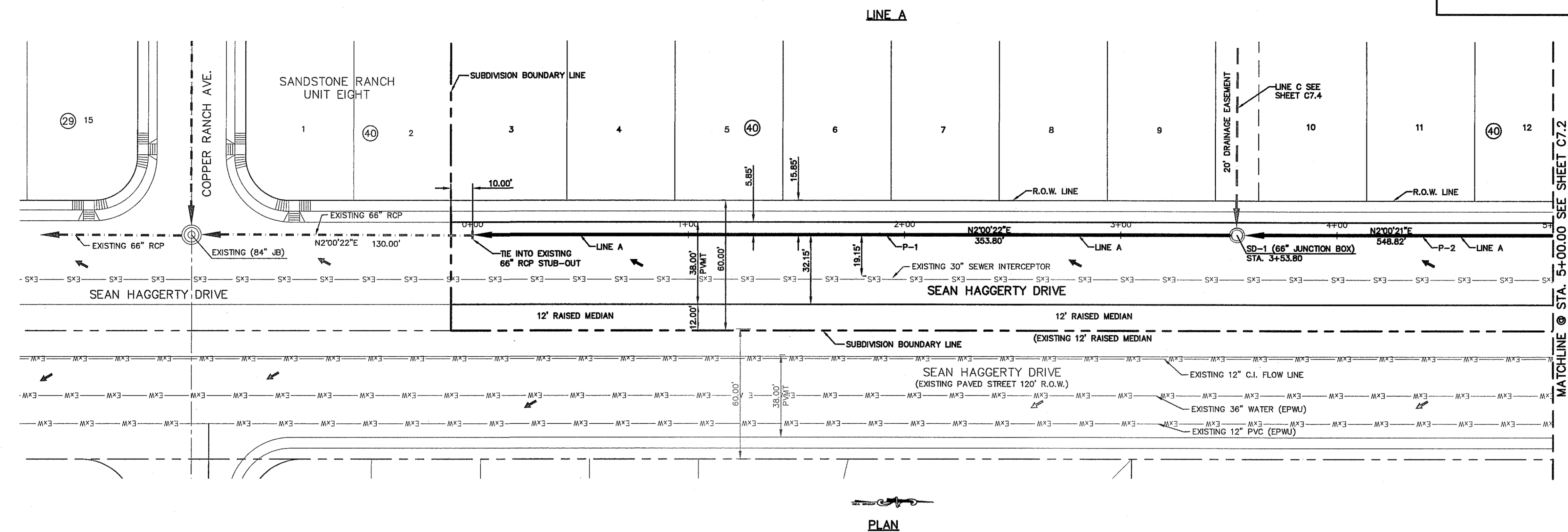
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

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**1-800-344-8377**

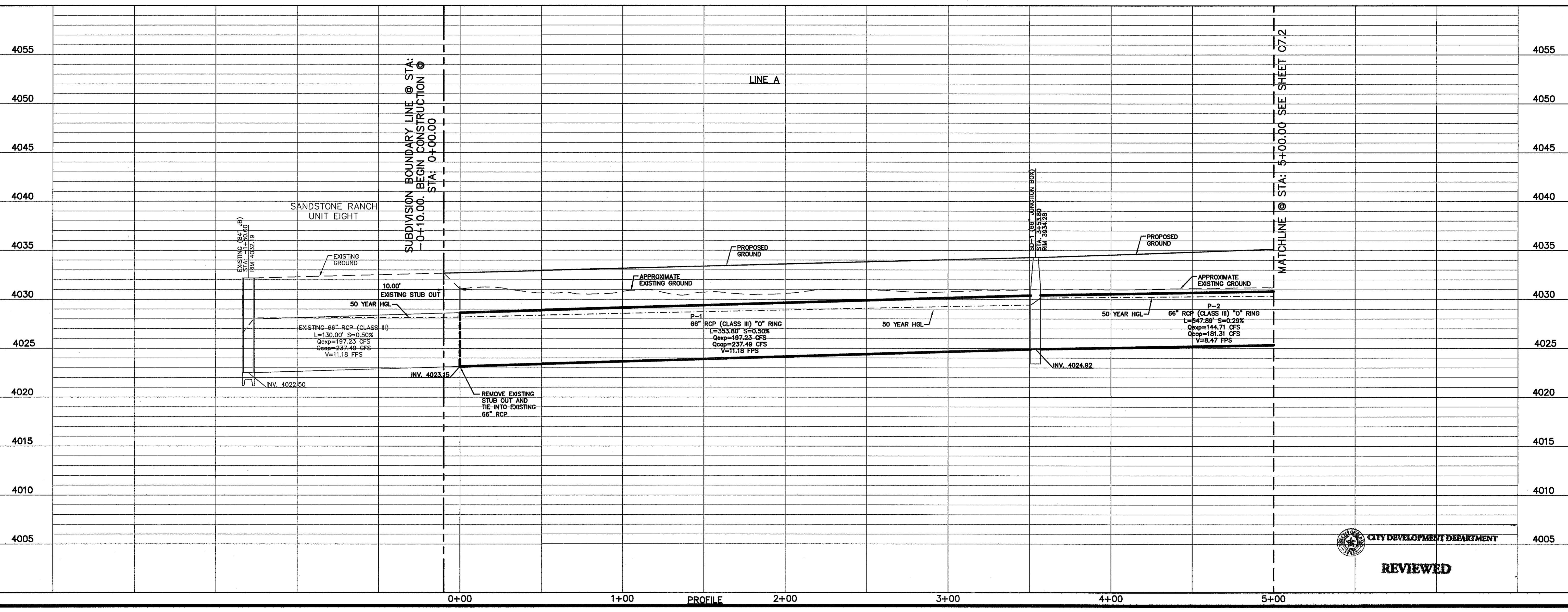
FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



PLAN

S:\2000\2000-163.D-Sandstone Ranch Unit Nine\DWG\Construction Drawings\Improvement Plans\2000-163-ID-C7.1&2-Storm Sewer P&P Line Adtg. Storm Sewer Line A, 12/23/2013 3:13:55 PM



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DATE: NOVEMBER 2013	
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.G.
APPD. BY:	J.L.A.
JOB NO. 2000-163-ID	

PROJECT TITLE

**SANDSTONE RANCH UNIT NINE**  
**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**LINE A**  
**PLAN & PROFILE**  
**FROM STA. 0+00.00**  
**TO STA. 5+00.00**

SHEET NO.

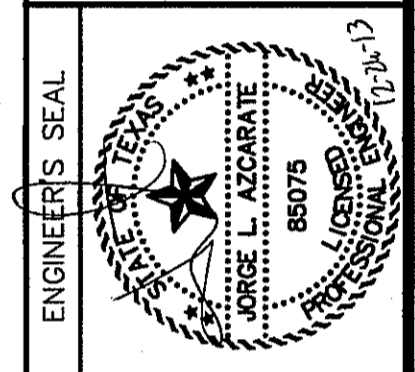
**C7.1**

CITY DEVELOPMENT DEPARTMENT

**REVIEWED**

REFERENCES - BENCHMARKS

FOUND TYPED BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).



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STORM PIPE LINE A OUTPUT INFORMATION						
PIPE	DOWNSTREAM INVERT ELEVATION (ft)	UPSTREAM INVERT ELEVATION (ft)	HYDRAULIC GRADE DOWNSTREAM (ft)	HYDRAULIC GRADE UPSTREAM (ft)	Q(50) Expected (cfs)	Q(50) Capacity (cfs)
P-2	4024.92	4026.52	4030.42	4031.23	144.71 CFS	181.31 CFS
P-3	4024.92	4026.52	4031.71	4031.96	110.82 CFS	154.61 CFS

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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
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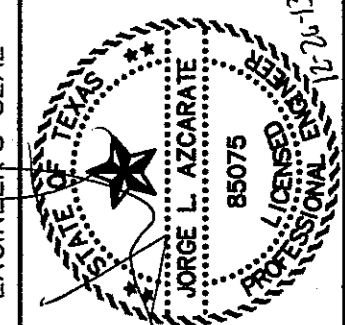
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FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
FOUND TYOOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

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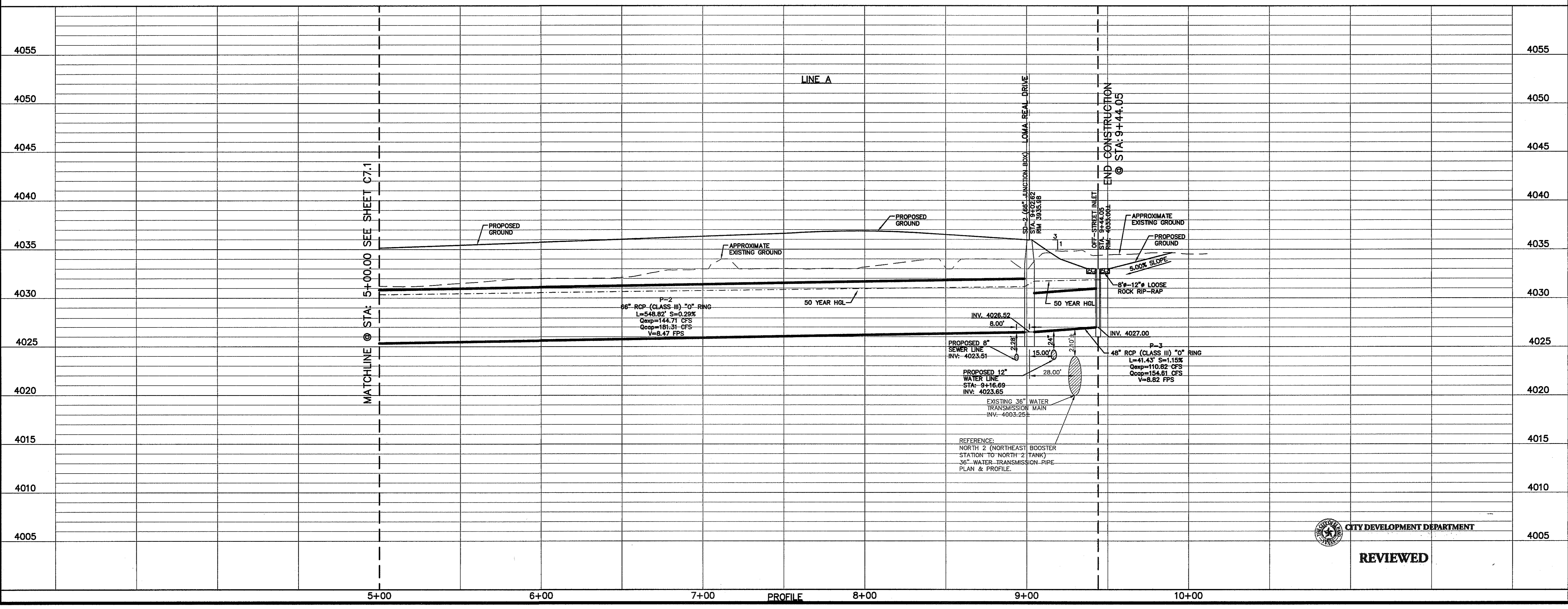
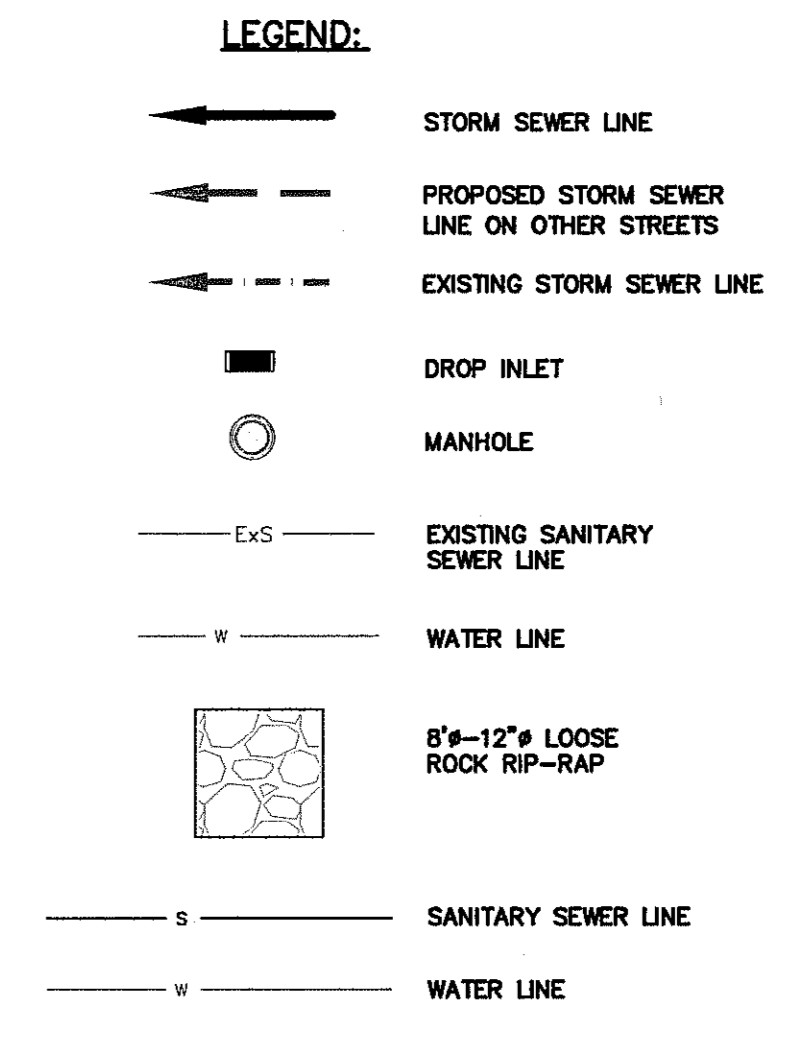
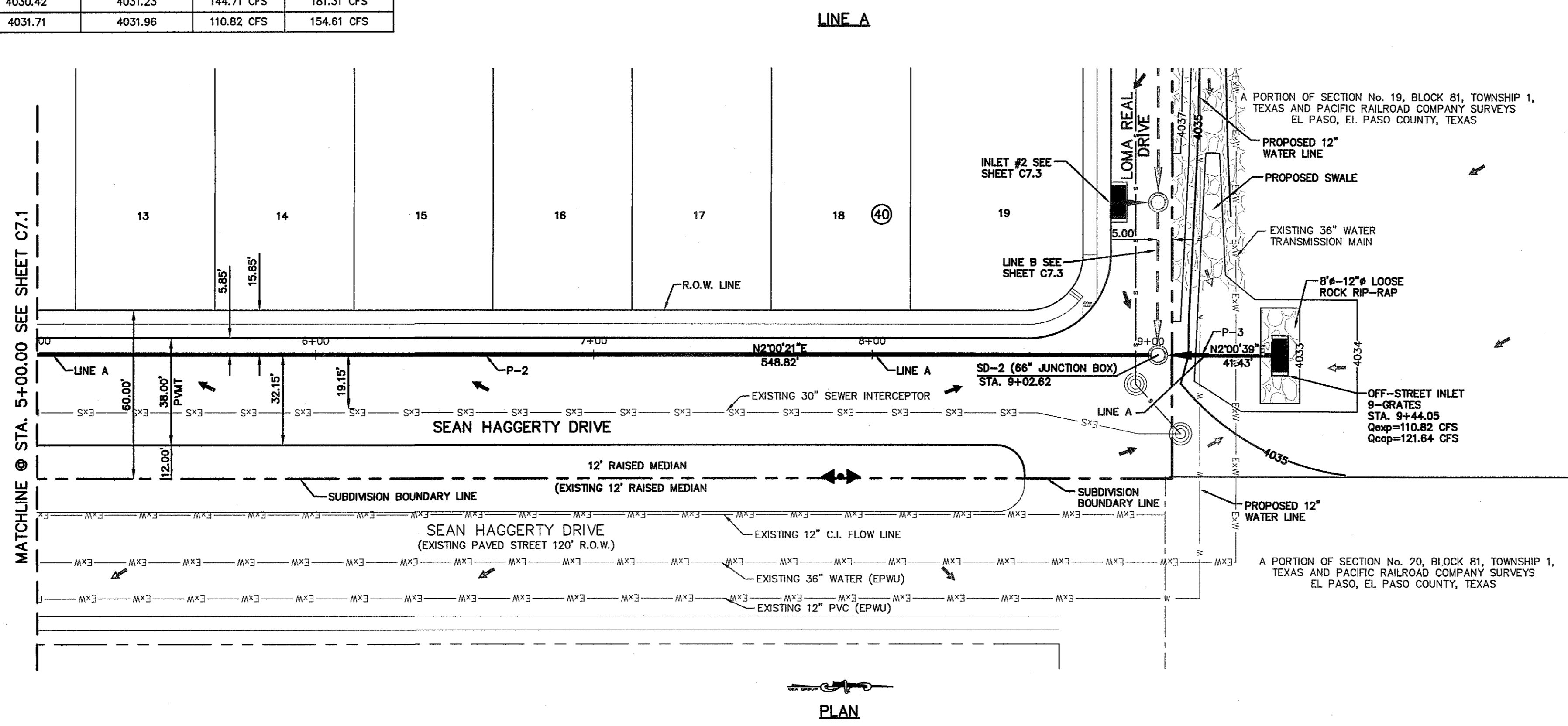


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DATE: NOVEMBER 2013  
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APPVD. BY: J.L.A.  
JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**LINE A  
PLAN & PROFILE  
FROM STA. 5+00.00  
TO STA. 9+44.05**

SHEET NO.  
**C7.2**



CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

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STORM PIPE LINE B OUTPUT INFORMATION						
PIPE	DOWNSTREAM INVERT ELEVATION (ft)	UPSTREAM INVERT ELEVATION (ft)	HYDRAULIC GRADE DOWNSTREAM (ft)	HYDRAULIC GRADE UPSTREAM (ft)	Q(50) Expected (cfs)	Q(50) Capacity (cfs)
P-1	4026.52	4027.92	4031.71	4032.09	33.95 CFS	65.56 CFS
P-2	4031.50	4031.92	4032.36	4033.05	8.50 CFS	16.51 CFS
P-3	4027.92	4038.08	4032.61	4041.54	26.06 CFS	27.80 CFS
P-4	4038.08	4039.24	4042.39	4042.62	26.06 CFS	59.09 CFS

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
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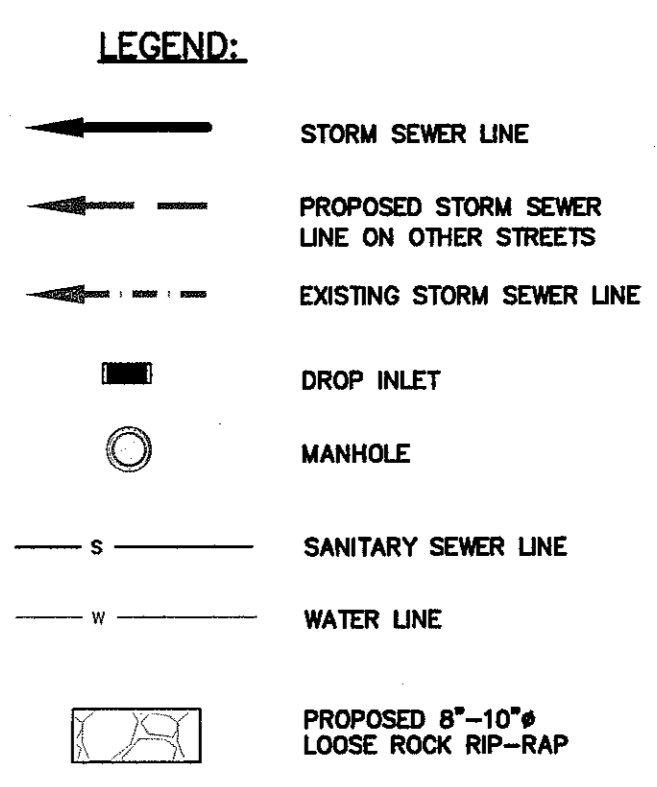
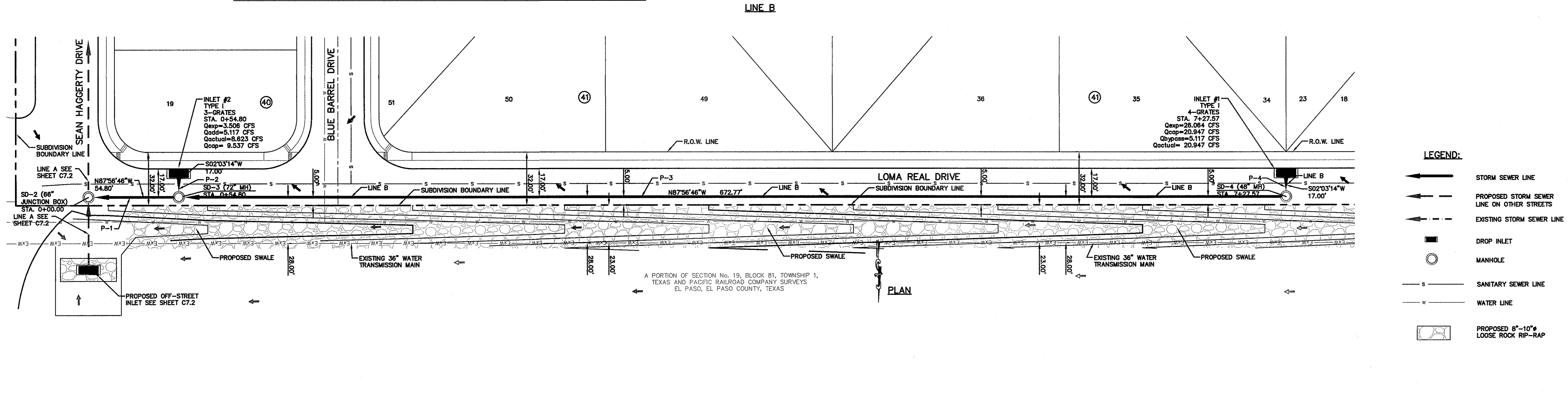
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FOR FIELD LOCATING EXISTING UTILITIES

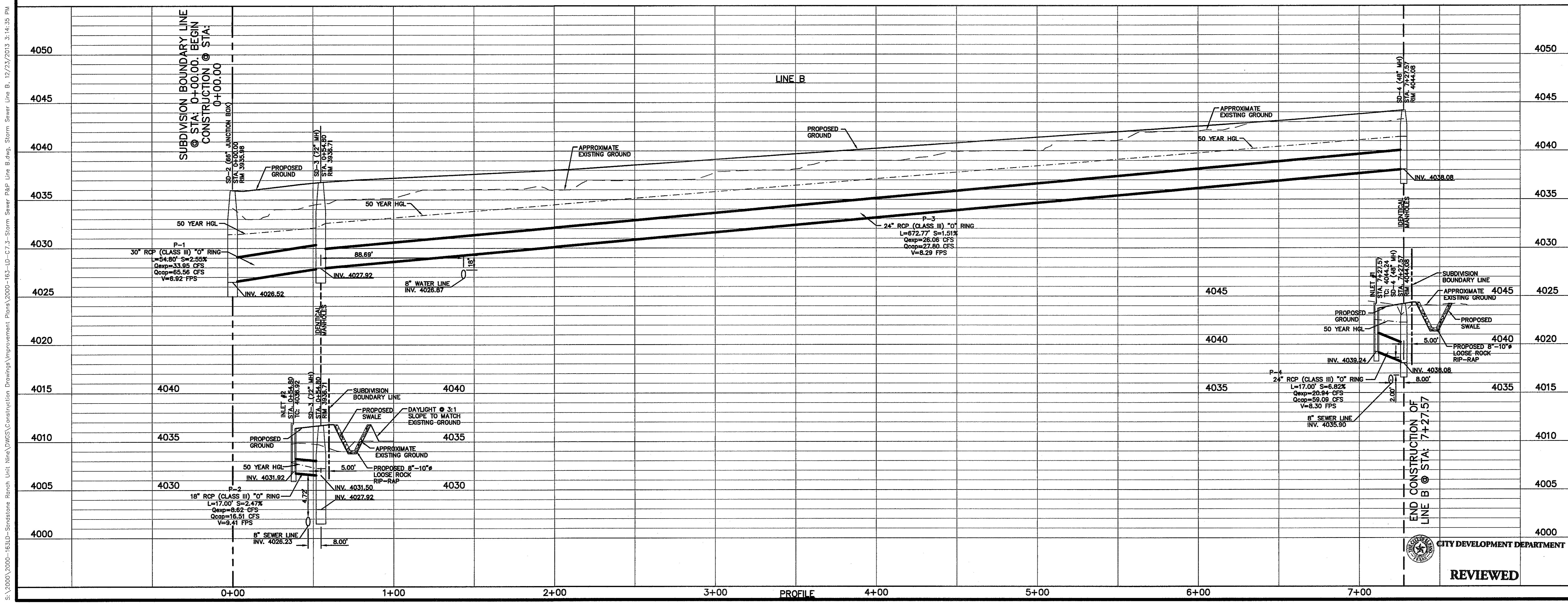
REFERENCES - BENCHMARKS  
FOUND TxDOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

DATE \_\_\_\_\_ REVISIONS \_\_\_\_\_ BY \_\_\_\_\_



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ENGINEER'S SEAL  
J. L. AZARATE  
68075



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Vertical: 1"=5'

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DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APP'D. BY: J.L.A.

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
LINE B  
PLAN & PROFILE  
FROM STA. 0+00.00  
TO STA. 7+27.57

SHEET NO.  
**C7.3**

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

S:\2000\2000-183D-Sandstone Ranch Unit Nine\DWG\Construction Drawings\Improvement Plans\2000-163-10-C7.3-Storm Sewer P&P Line B.dwg, Storm Sewer Line B, 12/23/2013 3:14:35 PM



PIPE	DOWNSTREAM INVERT ELEVATION (ft)	UPSTREAM INVERT ELEVATION (ft)	HYDRAULIC GRADE DOWNSTREAM (ft)	HYDRAULIC GRADE UPSTREAM (ft)	Q(50) Expected (cfs)	Q(50) Capacity (cfs)
P-1	4024.92	4026.50	4030.42	4030.86	57.31 CFS	108.64 CFS
P-2	4026.50	4027.00	4031.13	4031.24	53.90 CFS	117.90 CFS
P-3	4027.00	4028.91	4031.87	4031.84	7.62 CFS	36.29 CFS
P-4	4027.00	4027.82	4031.87	4032.27	47.13 CFS	60.76 CFS
P-5	4027.62	4028.53	4032.83	4033.15	47.27 CFS	76.85 CFS

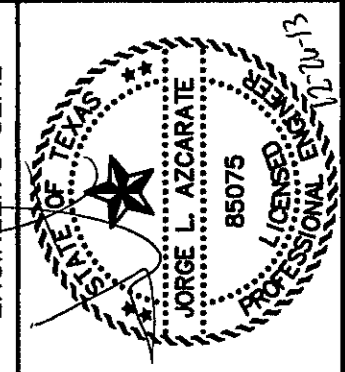
PIPE	DOWNSTREAM INVERT ELEVATION (ft)	UPSTREAM INVERT ELEVATION (ft)	HYDRAULIC GRADE DOWNSTREAM (ft)	HYDRAULIC GRADE UPSTREAM (ft)	Q(50) Expected (cfs)	Q(50) Capacity (cfs)
P-6	4028.53	4029.22	4033.85	4033.97	9.41 CFS	21.81 CFS
P-7	4028.53	4030.00	4033.85	4033.97	9.41 CFS	31.84 CFS
P-8	4028.53	4033.83	4033.85	4035.96	29.38 CFS	45.09 CFS
P-9	4033.83	4034.00	4036.57	4036.65	15.59 CFS	23.32 CFS
P-10	4033.83	4034.51	4036.57	4036.86	14.13 CFS	21.65 CFS

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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

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

REFERENCES - BENCHMARKS  
FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

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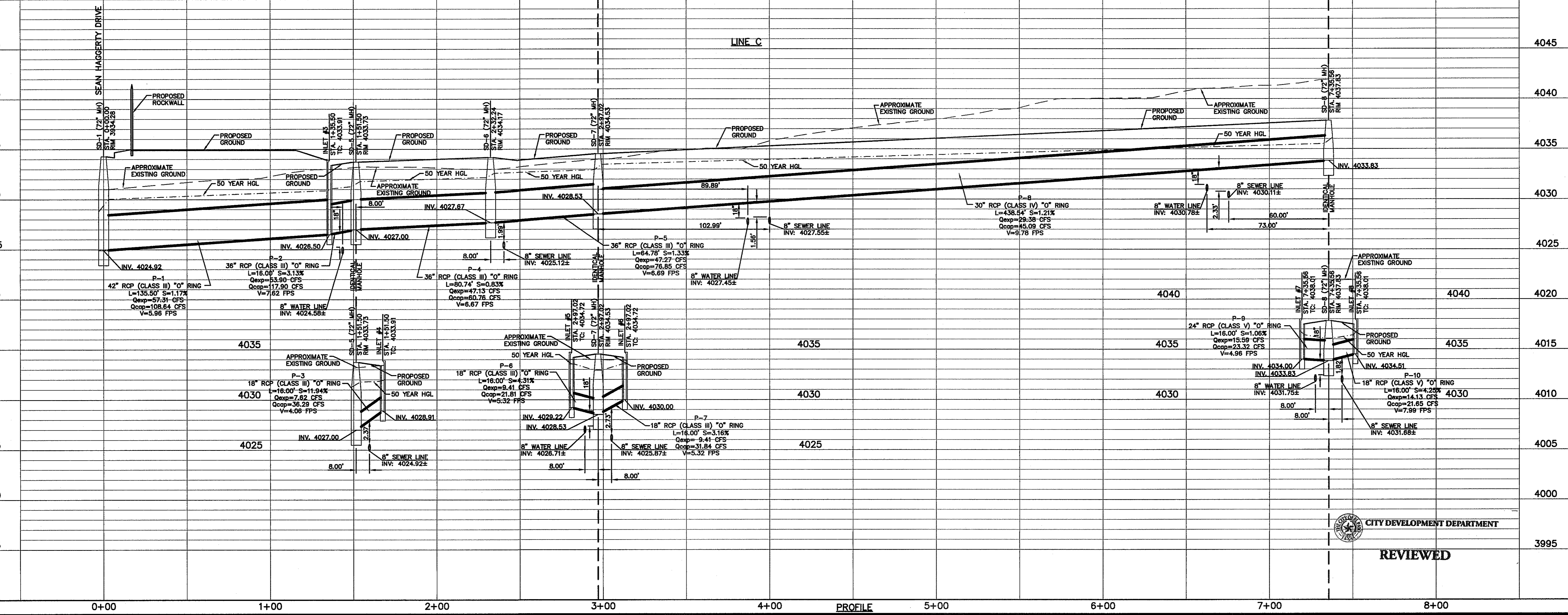
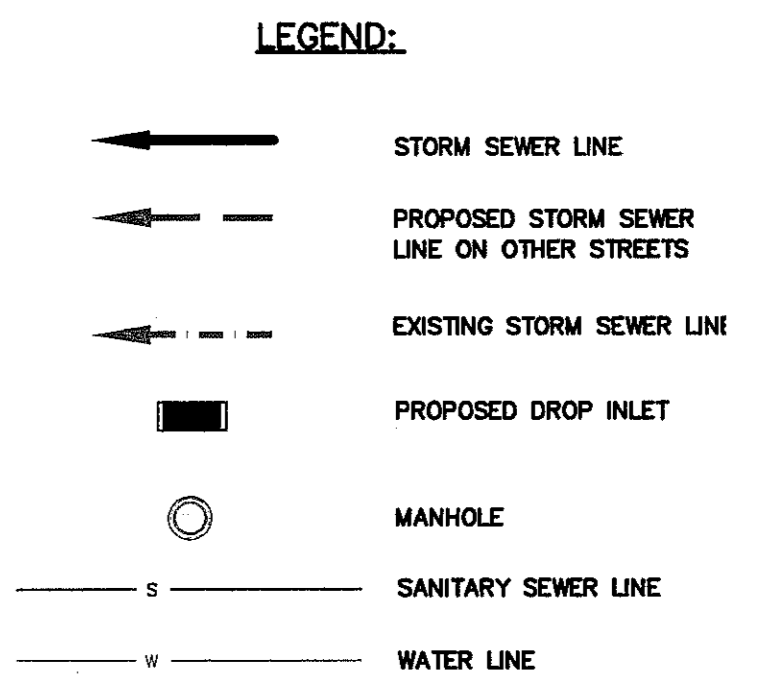
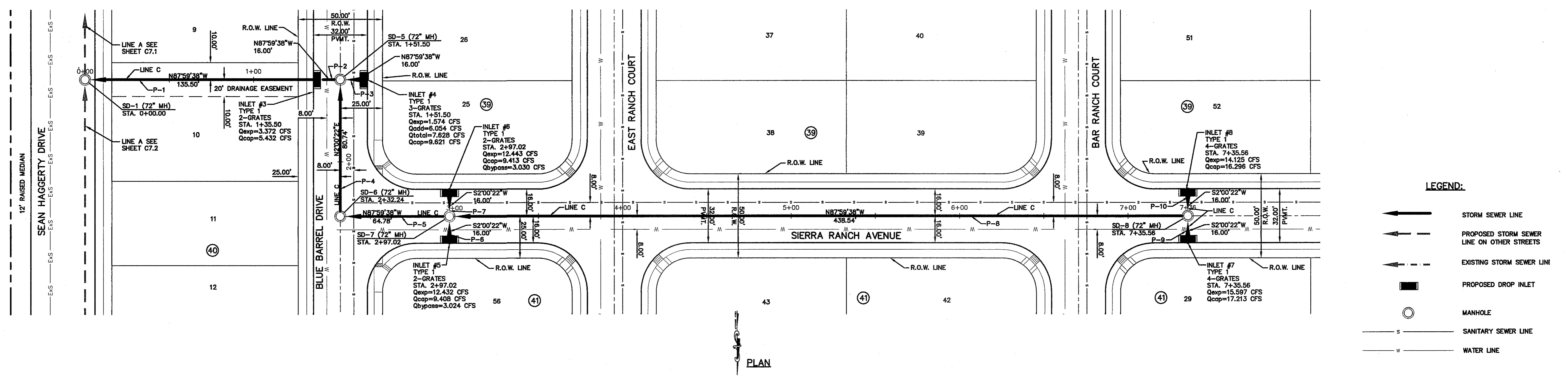
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DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**LINE C  
PLAN & PROFILE  
FROM STA. 0+00.00  
TO STA. 7+35.56**

SHEET NO.  
**C7.4**

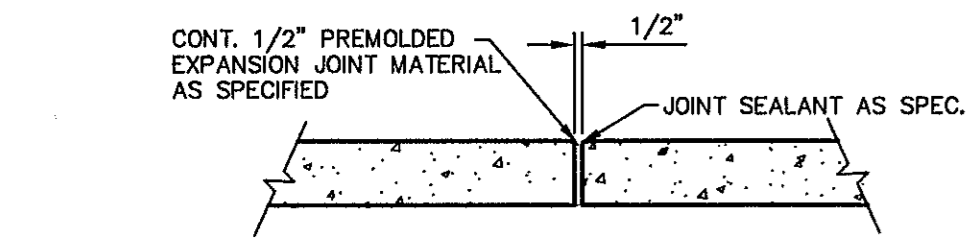
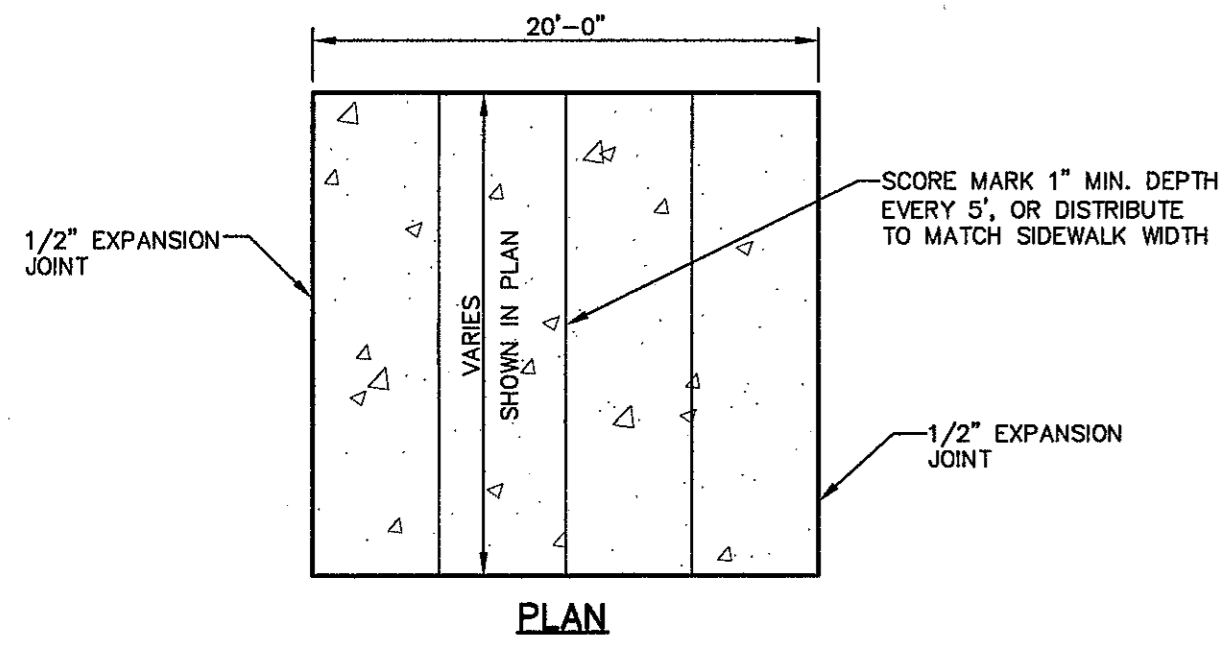
REVISIONS  
DATE  
BY



CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

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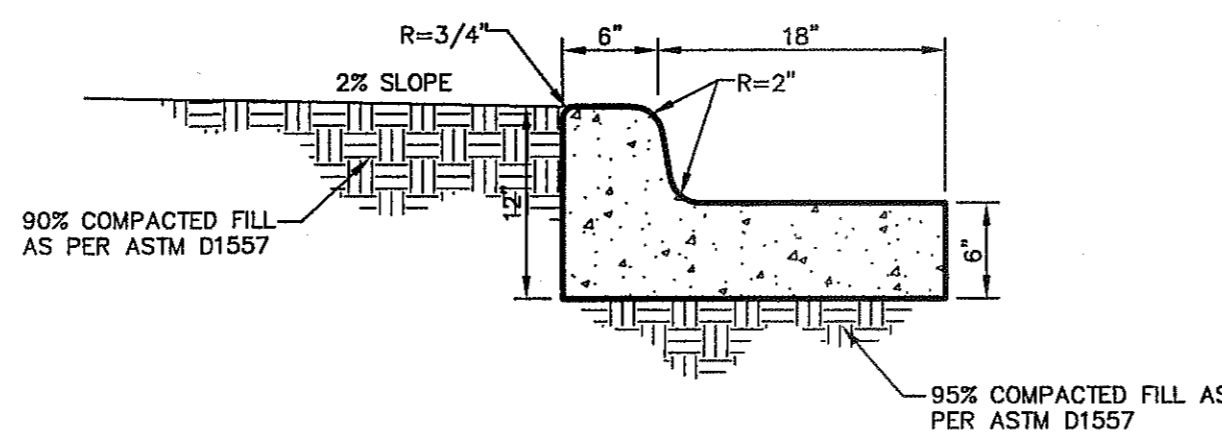
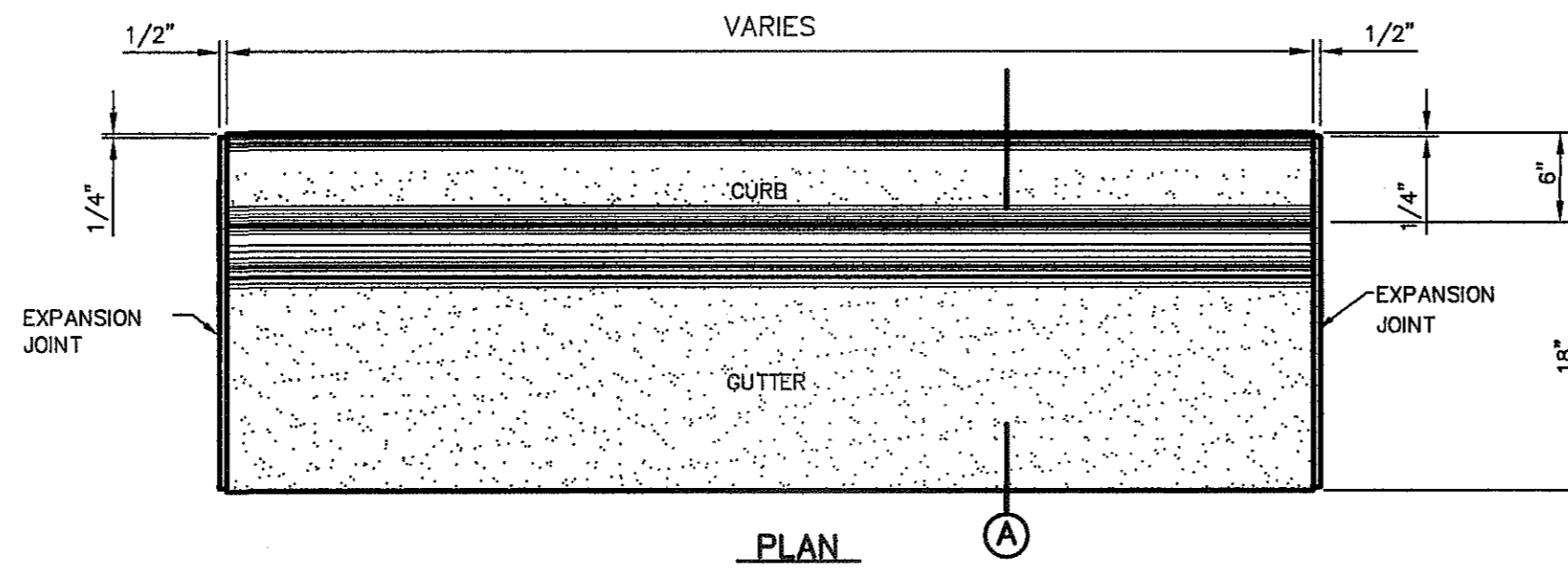
- NOTES:**
- EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREFORMED JOINT FILLER (AASHTO M-33)
  - EXPANSION JOINTS SHALL BE SPACED AT 20'-0" MAX.
  - WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS, EXPANSION JOINTS FILLER SHALL BE PLACED IN ACCORDANCE WITH STANDARD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

**EXPANSION JOINT SECTION**  
SCALE: N.T.S.

**SIDEWALK NOTES:**

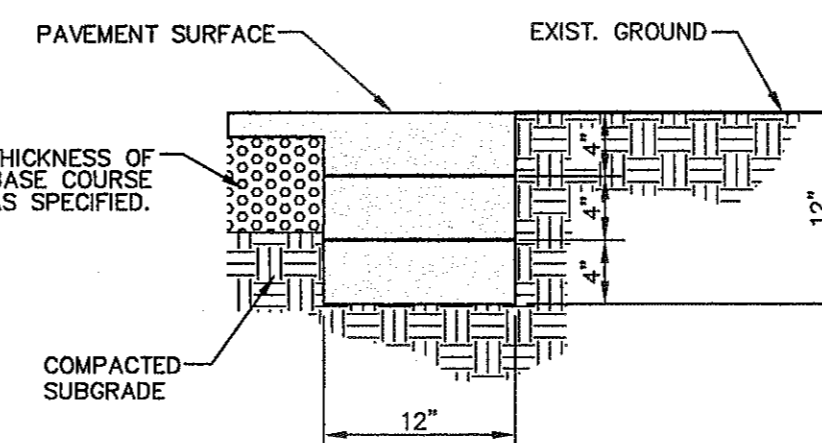
- CONCRETE SIDEWALK SHALL BE 3,000 P.S.I.
- DUMMY JOINTS REQUIRED AT 5' O.C.
- EXPANSION JOINTS SHALL BE AT 20' O.C. MAXIMUM, USE 1/2" PREFORMED BITUMINOUS EXPANSION JOINTS (AASHTO M-33)
- EXPANSION JOINT FILLER SHALL BE PLACED WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS.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

1 **SECTION-SIDEWALK/SLAB**  
CB.1 SCALE: N.T.S.



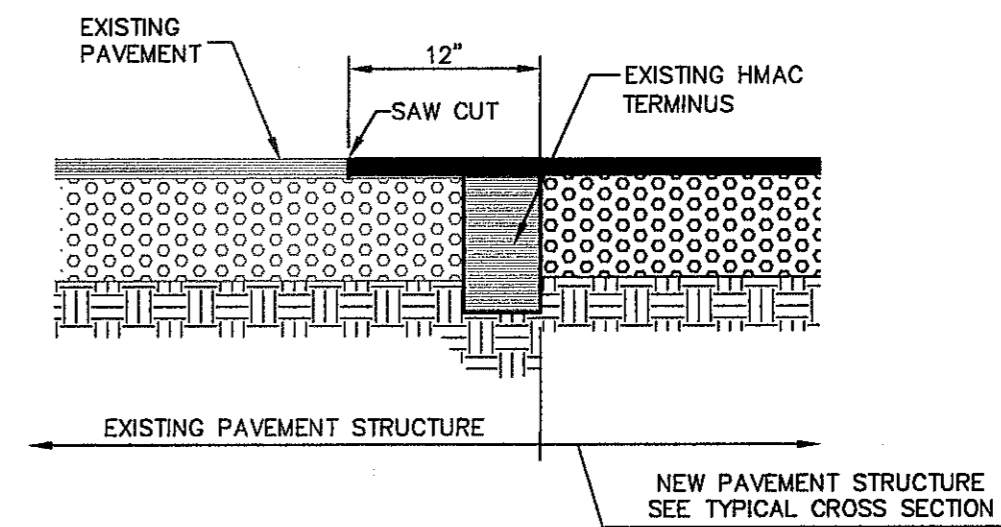
- NOTES:**
- CONCRETE SHALL BE 3,000 P.S.I. MIN.
  - DUMMY JOINT REQUIRED AT 10' O.C. FOR CURB & GUTTER, AND 5' O.C. FOR SIDEWALK
  - EXPANSION MATERIAL REQUIRED AT CURB RETURNS AND AT 20' ON CENTER FOR SIDEWALKS WITH 1/2" PREFORMED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL
  - EXPANSION JOINTS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

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

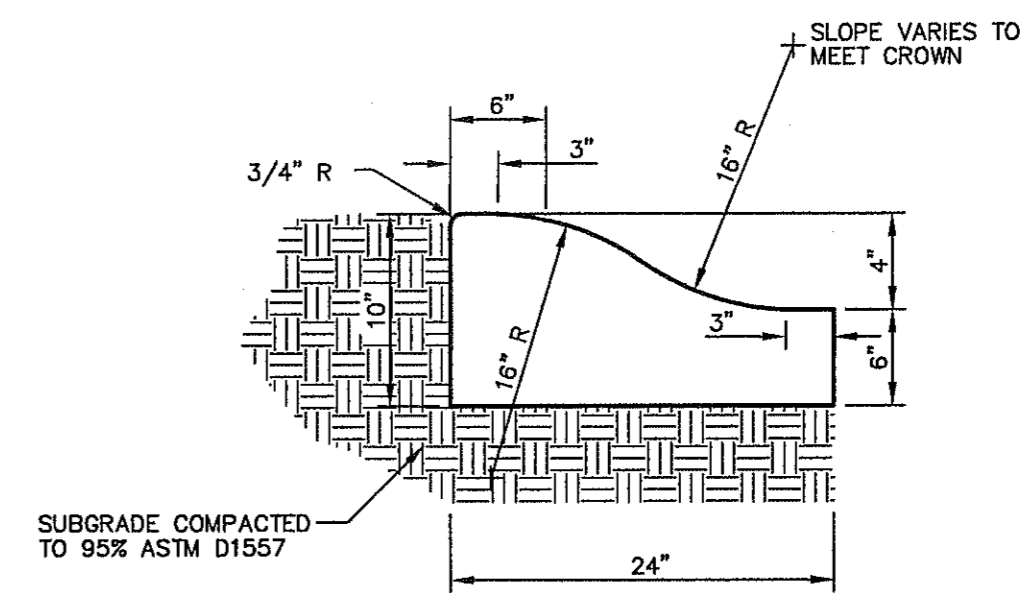


**NOTE:**  
TERMINUS MUST BE CONSTRUCTED IN 4" LIFTS. FINAL LIFT MUST BE PLACED WITH FINAL PAVEMENT COURSE.

3 **TERMINUS OF STREET**  
CB.1 SCALE: 1"=1'-0"

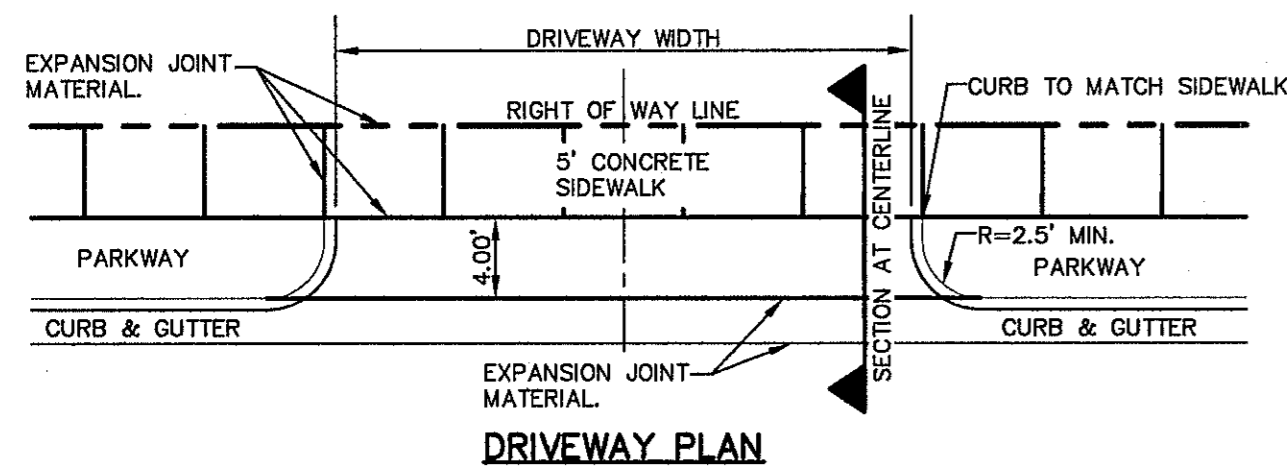


4 **TYPICAL PAVEMENT JOINT SECTION**  
CB.1 SCALE: N.T.S.

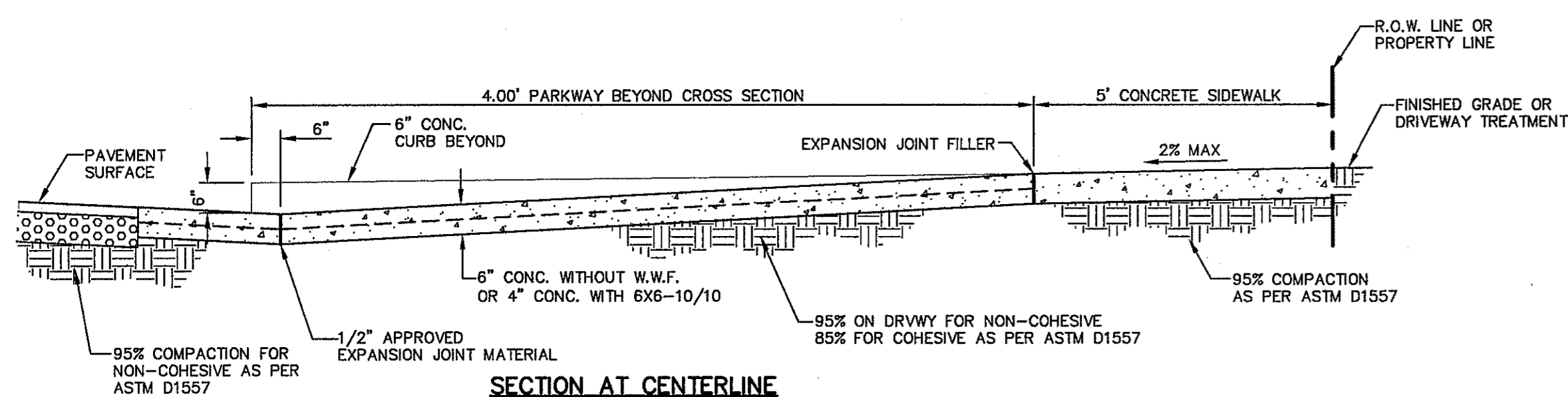


- CONCRETE TO BE 3000 PSI MIN.
- DUMMY JOINTS REQUIRED AT 10' O.C. FOR HEADERS AND 5' O.C. FOR SIDEWALK
- EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREFORMED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL
- EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR HEADERS.
- EXPANSION JOINTS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

7 **4" CONCRETE ROLLED CURB DETAIL**  
CB.1 SCALE: 1"=1'-0"

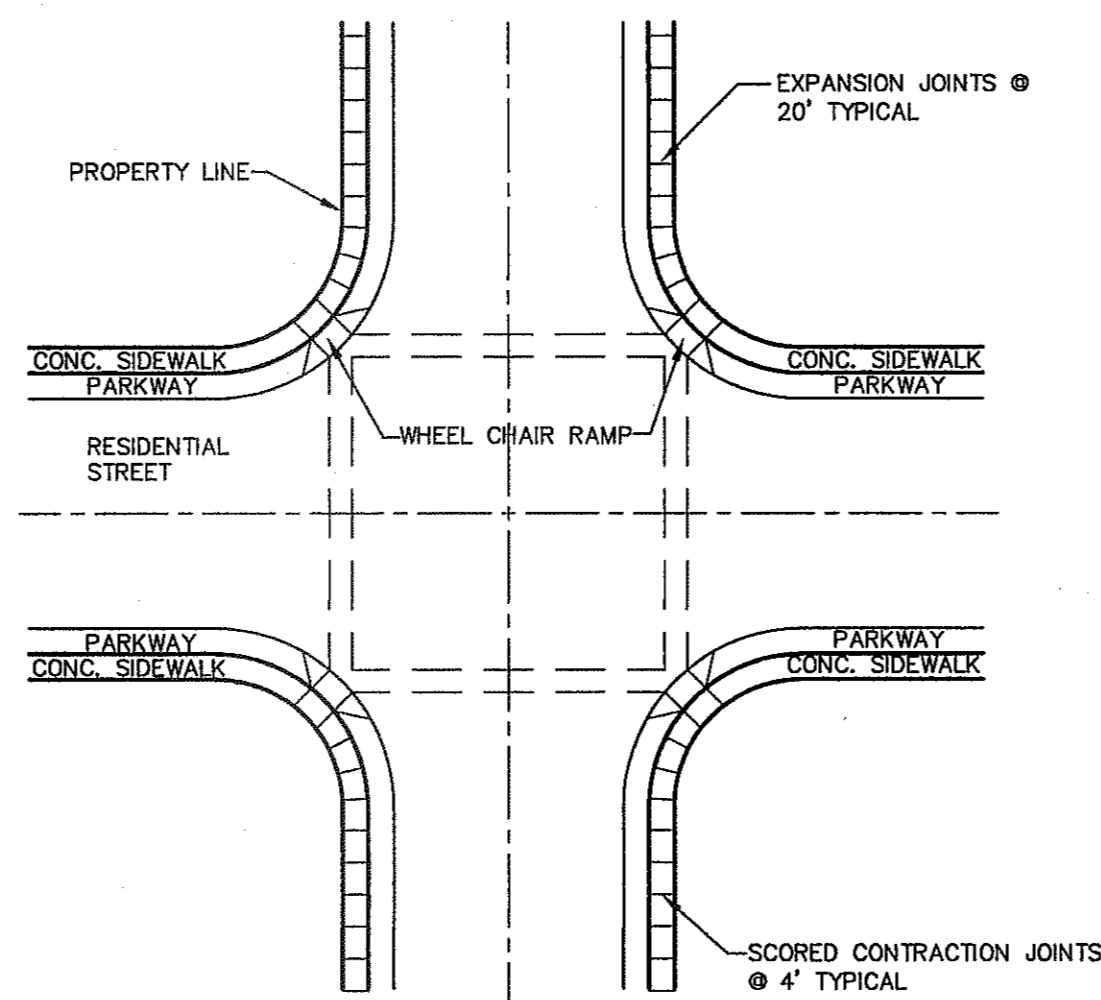


5 **TYPICAL DRIVEWAY DETAIL**  
CB.1 SCALE: N.T.S.



**NOTES:**

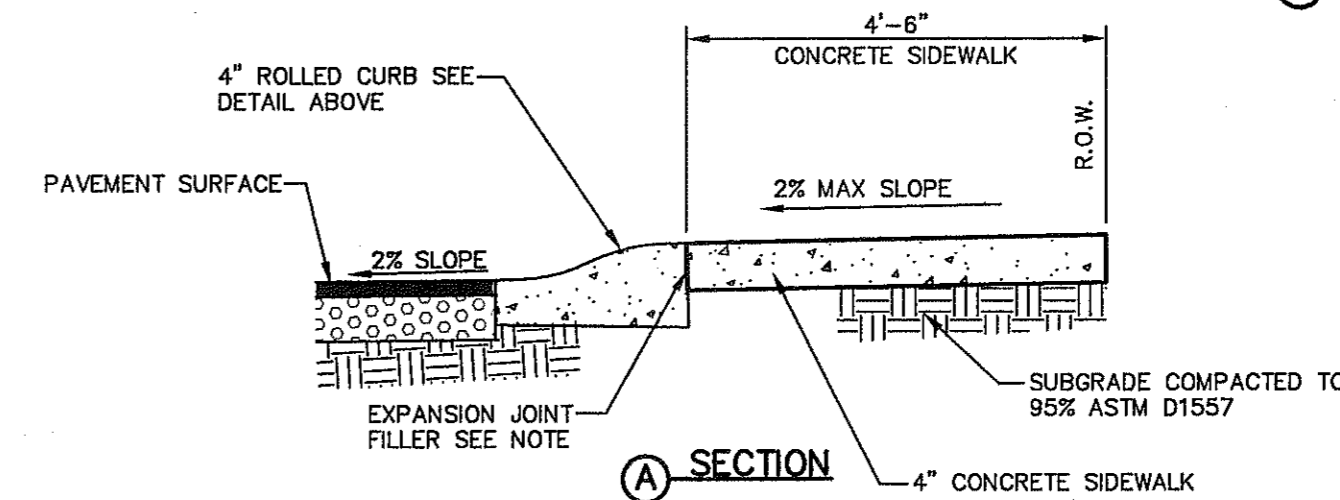
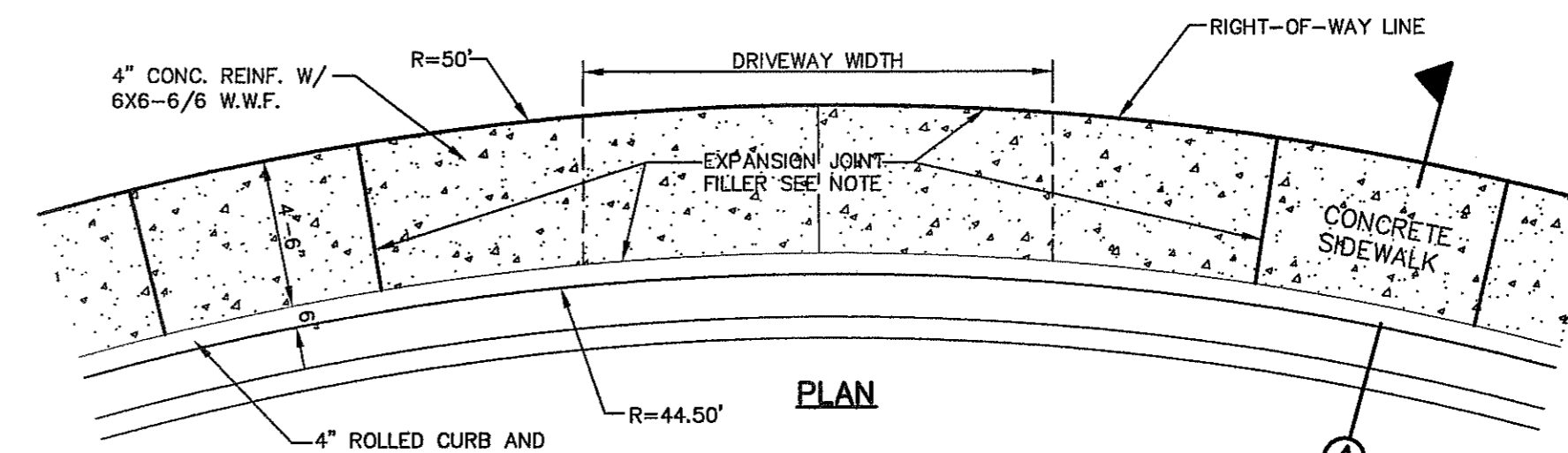
- DRIVEWAY SLOPES MUST BE 10% MAX. FROM GUTTER FOR FIRST 12 FEET AND 14% MAX. THEREAFTER (DRIVEWAY SHALL BE LOCATED @ HIGH SIDE OF LOT UNLESS OTHERWISE COORDINATED WITH CITY OF EL PASO)
- RESIDENTIAL**  
6" CONCRETE WITHOUT W.W.F.  
4" CONCRETE WITH 6X6-10/10



**NOTES:**

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

6 **WHEELCHAIR RAMP STREET PLAN**  
CB.1 SCALE: 1" = 30'-0"



**NOTE:**

EXPANSION MATERIAL SHALL BE 1/2" PREFORMED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL

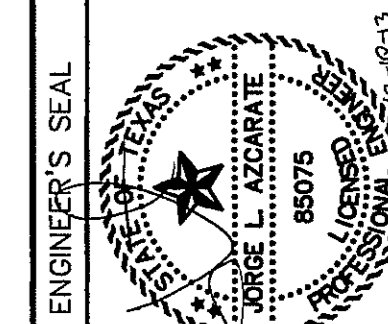
8 **HEEL/CUL-DE-SAC DRIVEWAY DETAIL**  
CB.1 SCALE: N.T.S.

REFERENCES - BENCHMARKS

FOUND TxDOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. (ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

DATE	REVISIONS	BY
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engineers • architects • planners  
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4712 Woodrow Blinn, Ste. F El Paso, TX 79924  
Office: 915.544.6222 Fax: 915.544.6233 www.csaengineers.com



SCALE AS SHOWN	
Vertical:	AS SHOWN
Horizontal:	N/A
Contour Interval:	N/A
DATE: NOVEMBER 2013	
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.L.A.
APPD. BY:	J.L.A.
JOB No. 2000-1633-LD	

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE**  
**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

STANDARD DETAILS

(SHEET 1 OF 3)

SHEET NO.

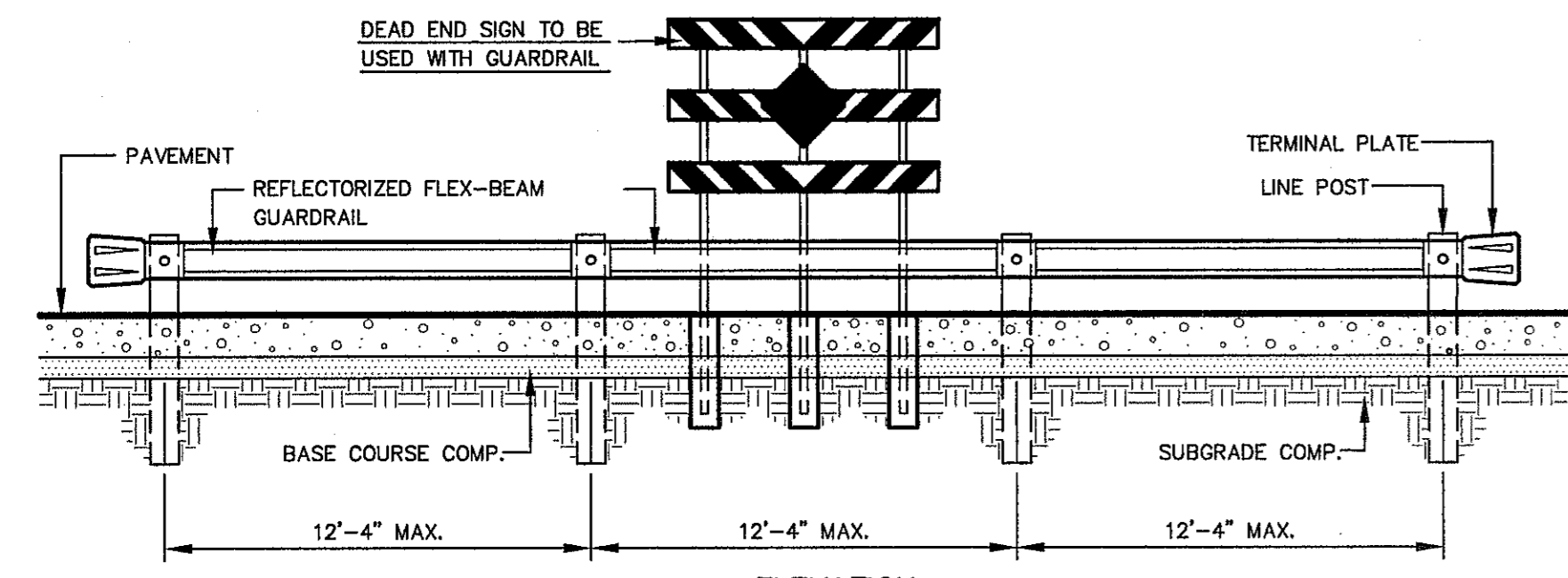
C8.1

CITY DEVELOPMENT DEPARTMENT

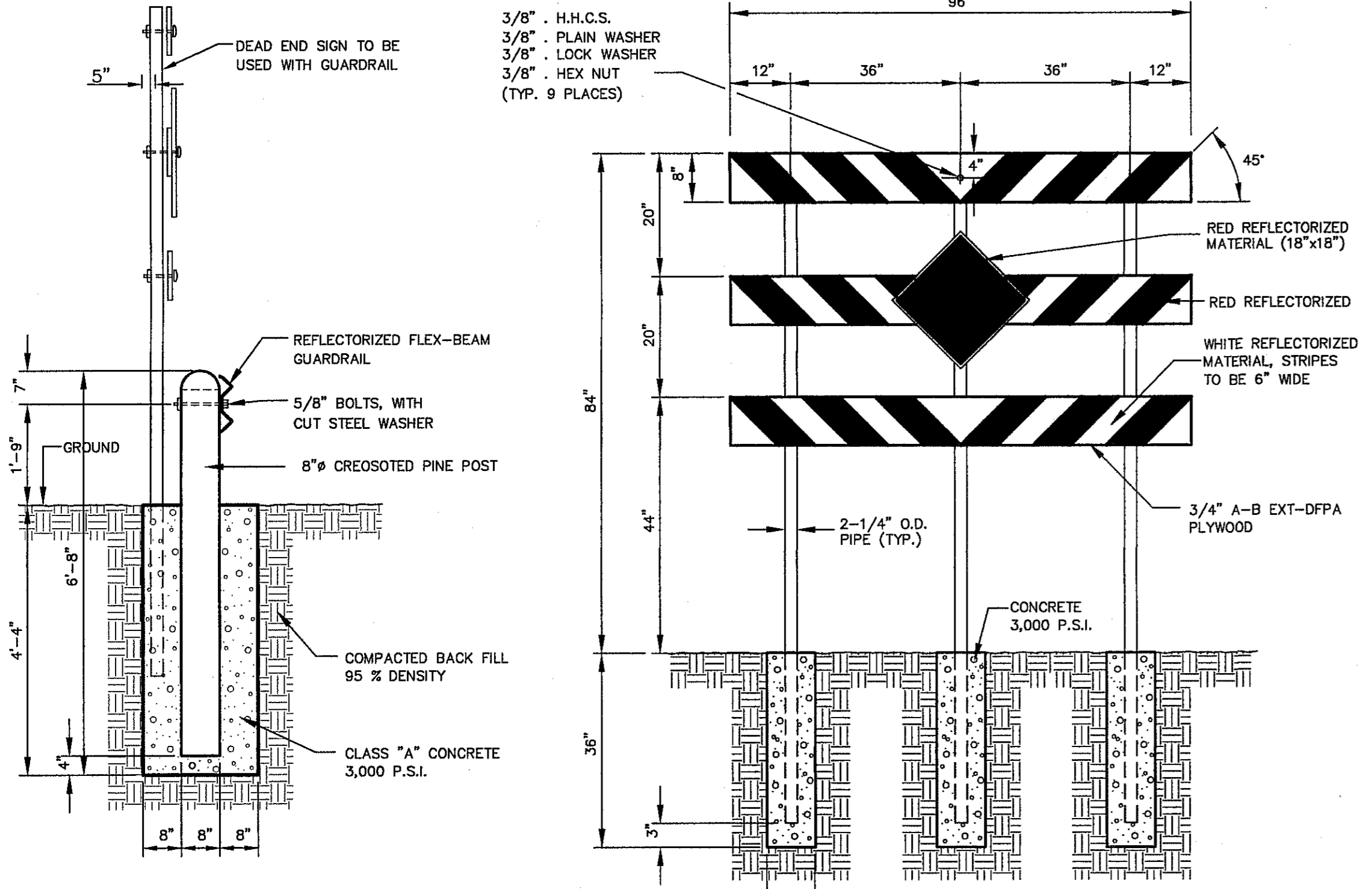


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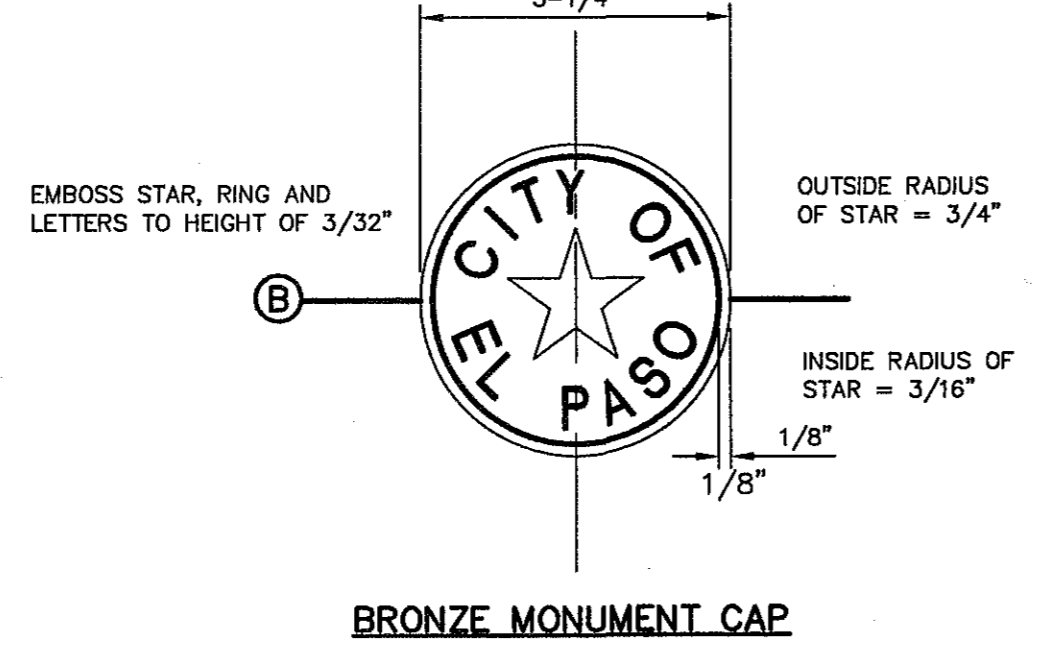
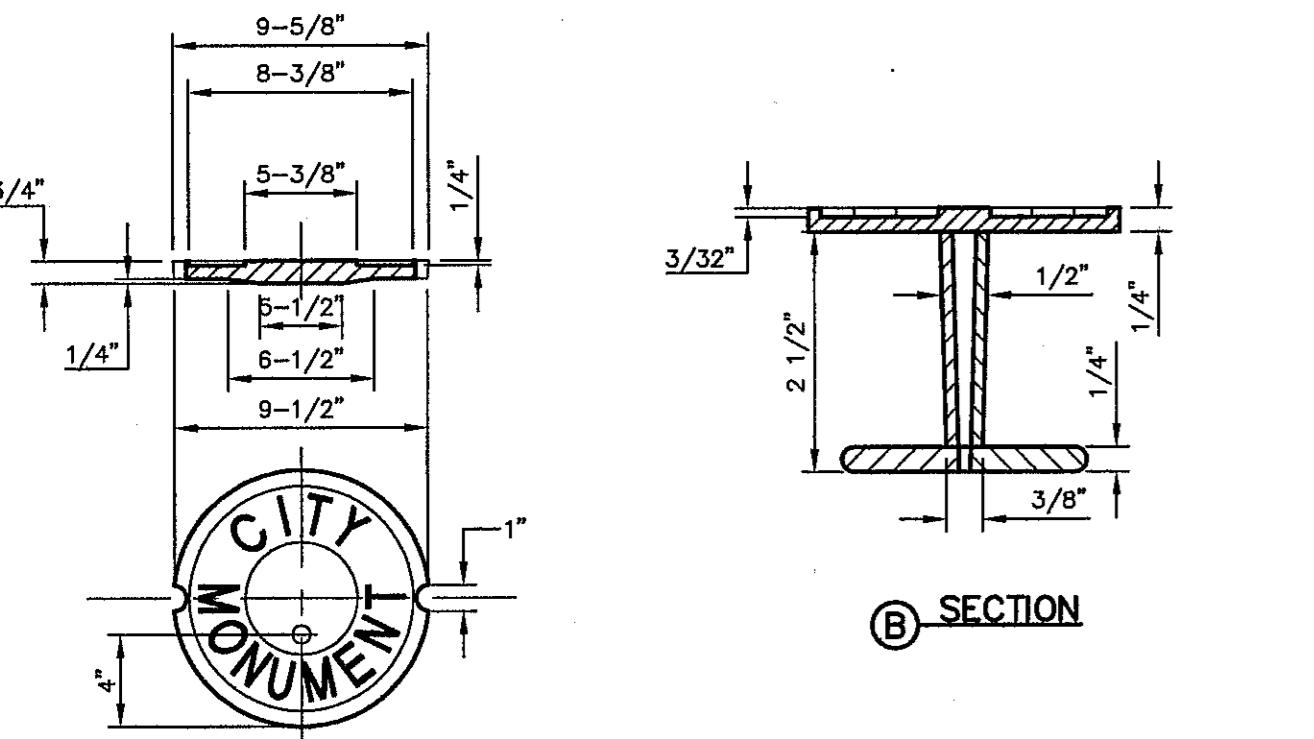


**ELEVATION**  
SCALE: 1"=5'

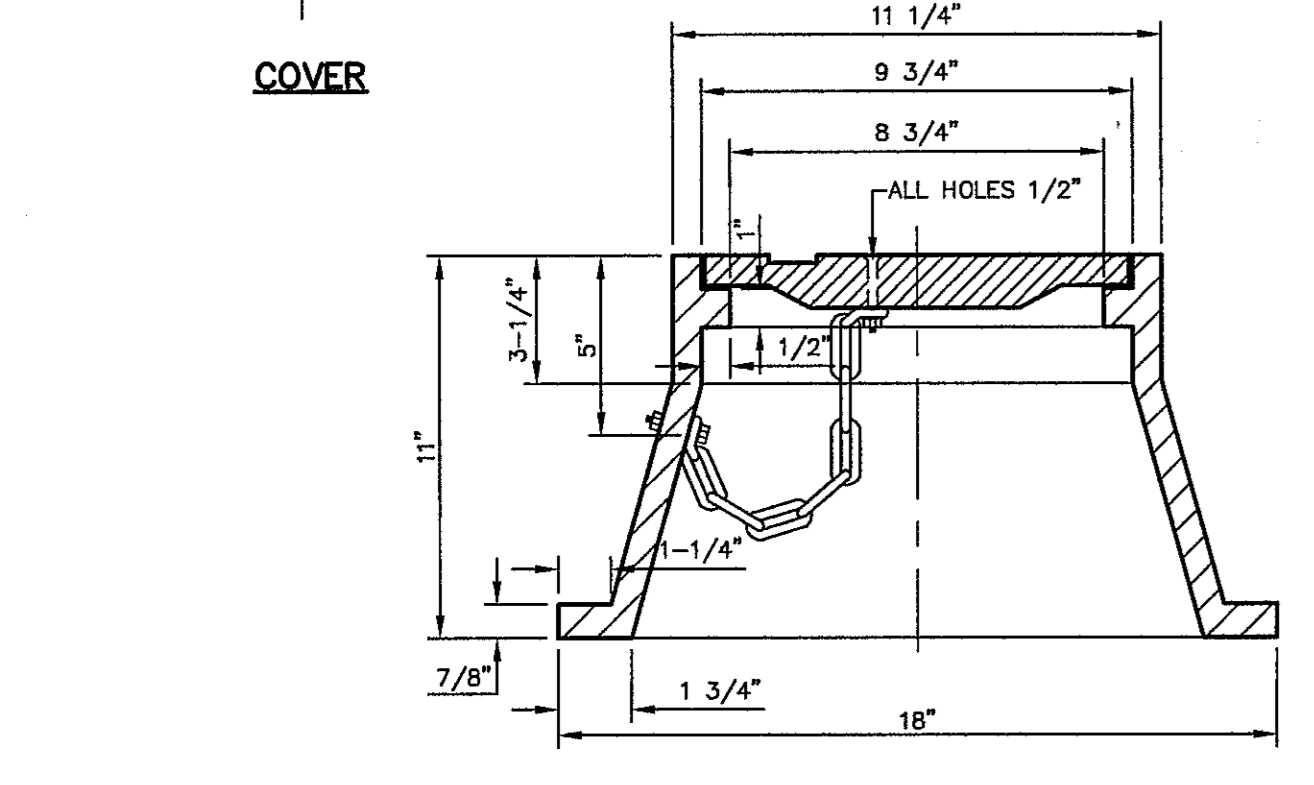


**POST AND SIGN DETAIL**  
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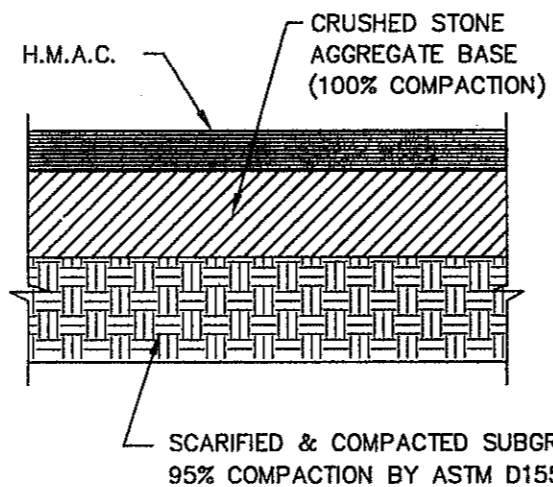
**1 GUARD RAIL/SIGN ASSEMBLY AT DEAD END STREET DETAIL**  
SCALE: AS SHOWN



**BRONZE MONUMENT CAP**



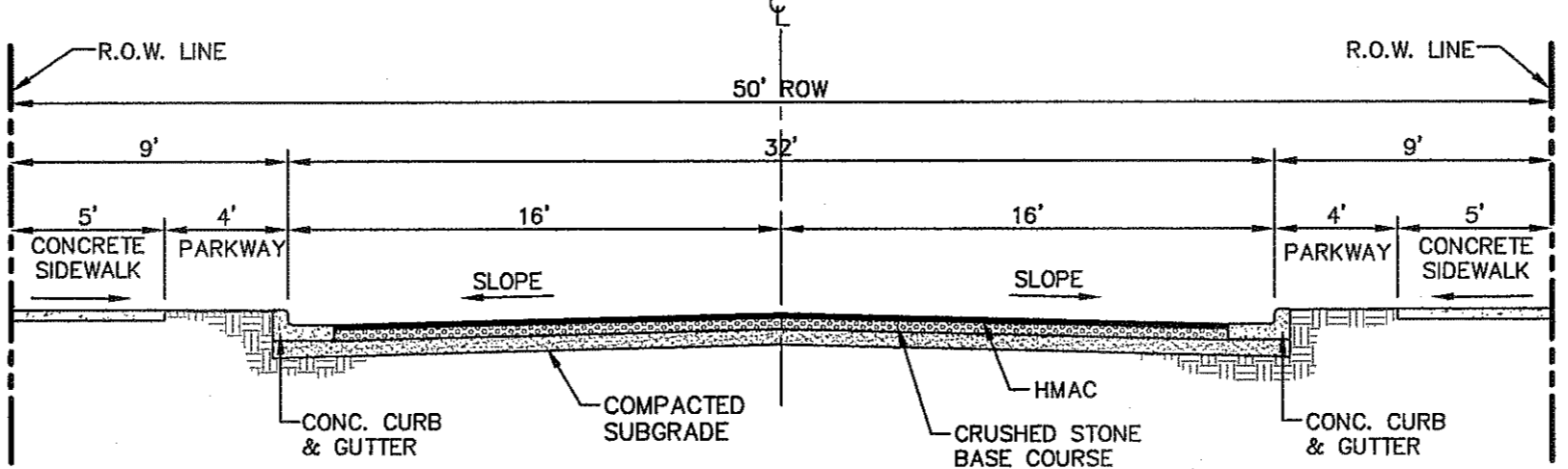
**FRAME SECTION**  
**7 CITY SURVEY MONUMENT DETAILS**  
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**PAVEMENT SECTION NOTES:**

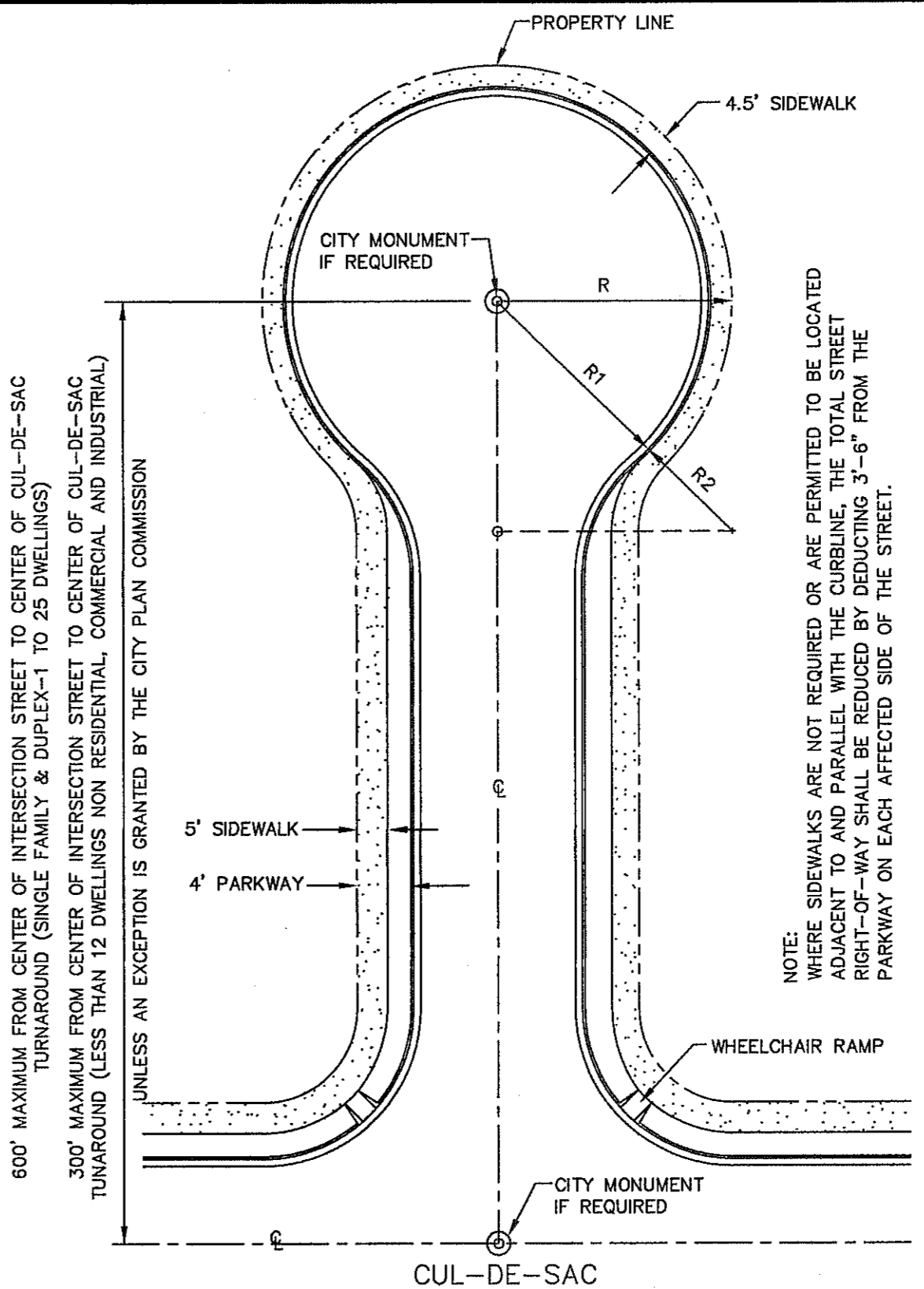
- SUBGRADE TO BE COMPACTED TO 95% OF MAXIMUM DENSITY AS PER ASTM D-1557.
- MINIMUM PAVEMENT DESIGN DETAILS ARE SHOWN, ACTUAL PAVEMENT DESIGN WILL BE DETERMINED BY CBR.
- STREET IMPROVEMENTS (FLEXIBLE PAVEMENT DESIGN STRUCTURE) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF EL PASO PAVING CONSTRUCTION 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. THE CBR RESULTS WILL DICTATE THE REQUIRED THICKNESS OF THE PAVEMENT STRUCTURE BASED ON CITY OF EL PASO DESIGN STANDARDS. THE DEVELOPER SHALL PLACE THE HIGHER VALUE OF PAVEMENT STRUCTURE BASED ON THE CBR RESULTS OR THE MINIMUM PAVEMENT THICKNESS AS SHOW ON THE CITY OF EL PASO DESIGN STANDARDS.

**2 TYPICAL PAVEMENT SECTION**  
SCALE: N.T.S.

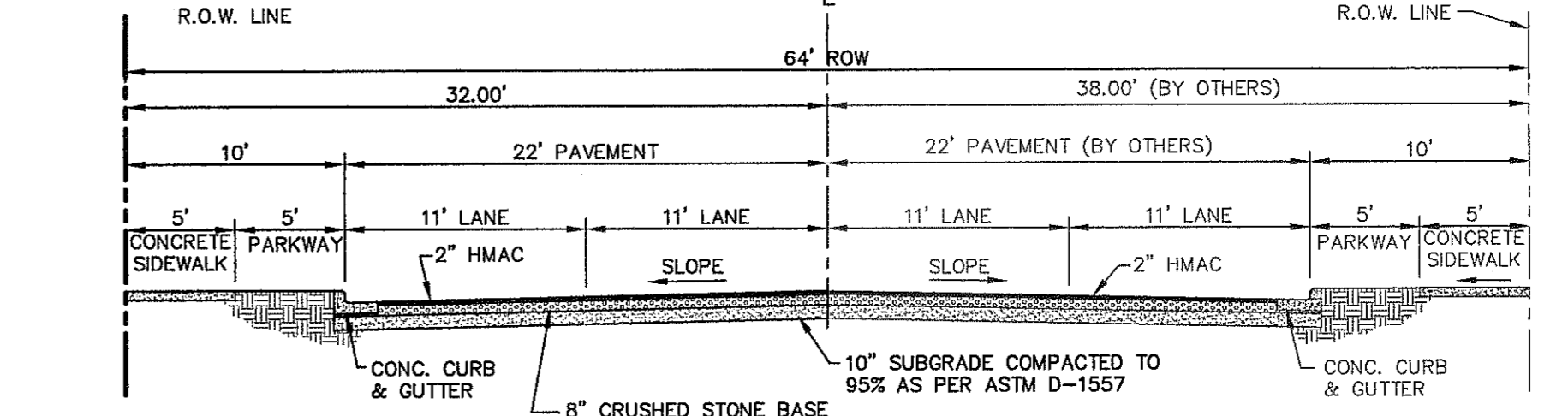


**NOTE:**  
STREET IMPROVEMENTS (FLEXIBLE PAVEMENT DESIGN STRUCTURE) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF EL PASO PAVING CONSTRUCTION DETAILS AND STANDARD SPECIFICATIONS: CBR @ EVERY 500' RESULTS TO BE SUBMITTED TO THE CITY OF EL PASO FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF PAVEMENT. THE CBR RESULTS WILL DICTATE THE REQUIRED THICKNESS OF THE PAVEMENT STRUCTURE BASED ON CITY OF EL PASO DESIGN STANDARDS. THE DEVELOPER SHALL PLACE THE HIGHER VALUE OF PAVEMENT STRUCTURE BASED ON THE CBR RESULTS OR THE MINIMUM PAVEMENT THICKNESS AS SHOW ON THE CITY OF EL PASO DESIGN STANDARDS.

**4 TYPICAL 50' ROW STREET SECTIONS DETAIL**  
(RESIDENTIAL SUBCOLLECTOR)  
SCALE: N.T.S.

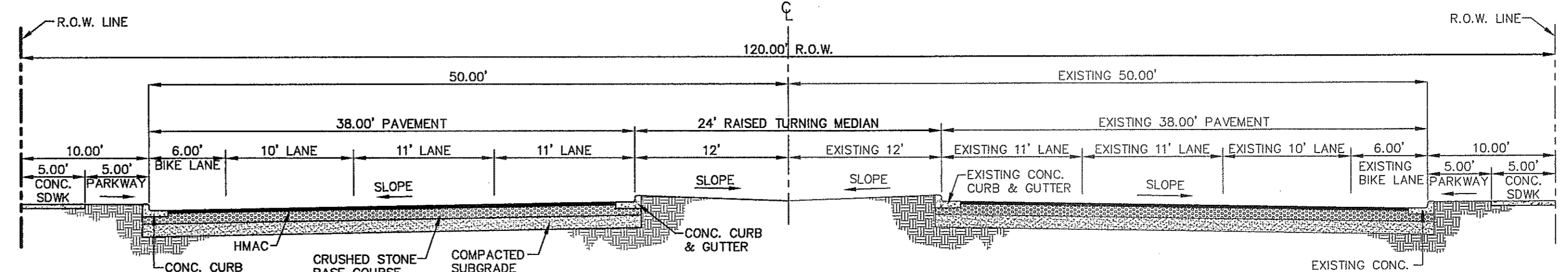


**3 CUL-DE-SAC**  
SCALE: N.T.S.



**NOTE:**  
STREET IMPROVEMENTS (FLEXIBLE PAVEMENT DESIGN STRUCTURE) 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. THE CBR RESULTS WILL DICTATE THE REQUIRED THICKNESS OF THE PAVEMENT STRUCTURE BASED ON CITY OF EL PASO DESIGN STANDARDS. THE DEVELOPER SHALL PLACE THE HIGHER VALUE OF PAVEMENT STRUCTURE BASED ON THE CBR RESULTS OR THE MINIMUM PAVEMENT THICKNESS AS SHOW ON THE CITY OF EL PASO DESIGN STANDARDS.

**5 TYPICAL 64' ROW STREET SECTION DETAIL**  
(COLLECTOR ARTERIAL)  
SCALE: N.T.S.



**NOTE:**  
STREET IMPROVEMENTS (FLEXIBLE PAVEMENT DESIGN STRUCTURE) 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. THE CBR RESULTS WILL DICTATE THE REQUIRED THICKNESS OF THE PAVEMENT STRUCTURE BASED ON CITY OF EL PASO DESIGN STANDARDS. THE DEVELOPER SHALL PLACE THE HIGHER VALUE OF PAVEMENT STRUCTURE BASED ON THE CBR RESULTS OR THE MINIMUM PAVEMENT THICKNESS AS SHOW ON THE CITY OF EL PASO DESIGN STANDARDS.

**6 TYPICAL 120' ROW STREET SECTION DETAIL**  
(MAJOR ARTERIAL STREET W/BIKE LANES)  
SCALE: N.T.S.

REFERENCES - BENCHMARKS

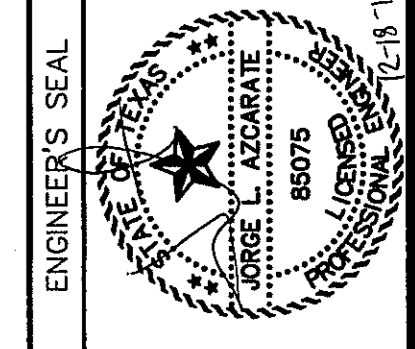
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DATE	REVISIONS

**CSA**

engineers • architects • planners

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4712 Woodrow Blann, Ste. F El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.csaengr.com



SCALE AS SHOWN AS SHOWN

Horizontal: Contour Interval: N/A

Vertical: N/A

DATE: NOVEMBER 2013

DESIGN BY: J.M.

DRAWN BY: J.M.

CHKD. BY: J.L.A.

APPVD. BY: J.L.A.

JOB NO. 2000-163-LD

**SANDSTONE RANCH UNIT NINE**  
**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

STANDARD DETAILS

(SHEET 2 OF 3)

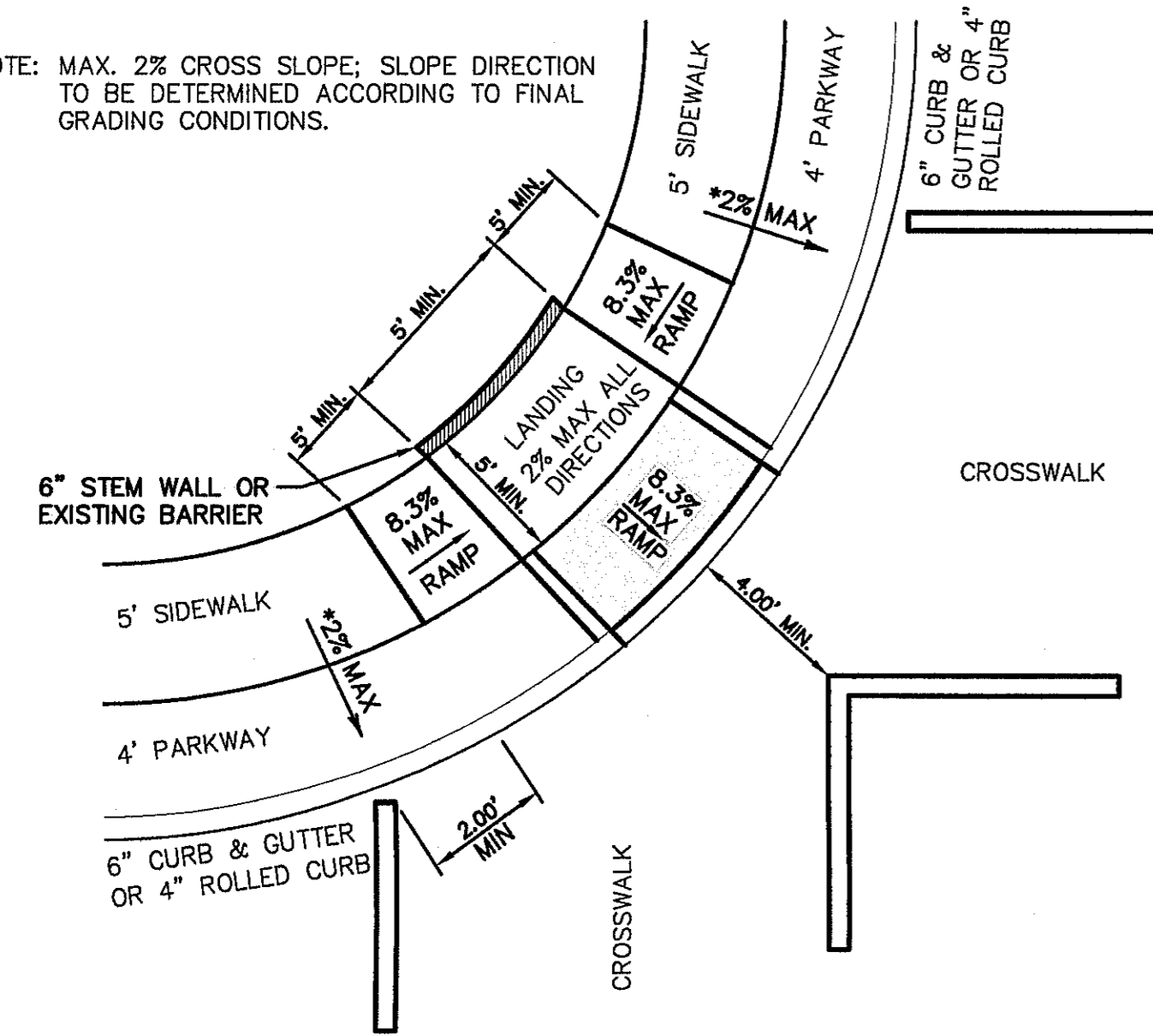
SHEET NO.

**C8.2**

**CITY DEVELOPMENT DEPARTMENT**

**REVIEWED**

\* NOTE: MAX. 2% CROSS SLOPE; SLOPE DIRECTION TO BE DETERMINED ACCORDING TO FINAL GRADING CONDITIONS.



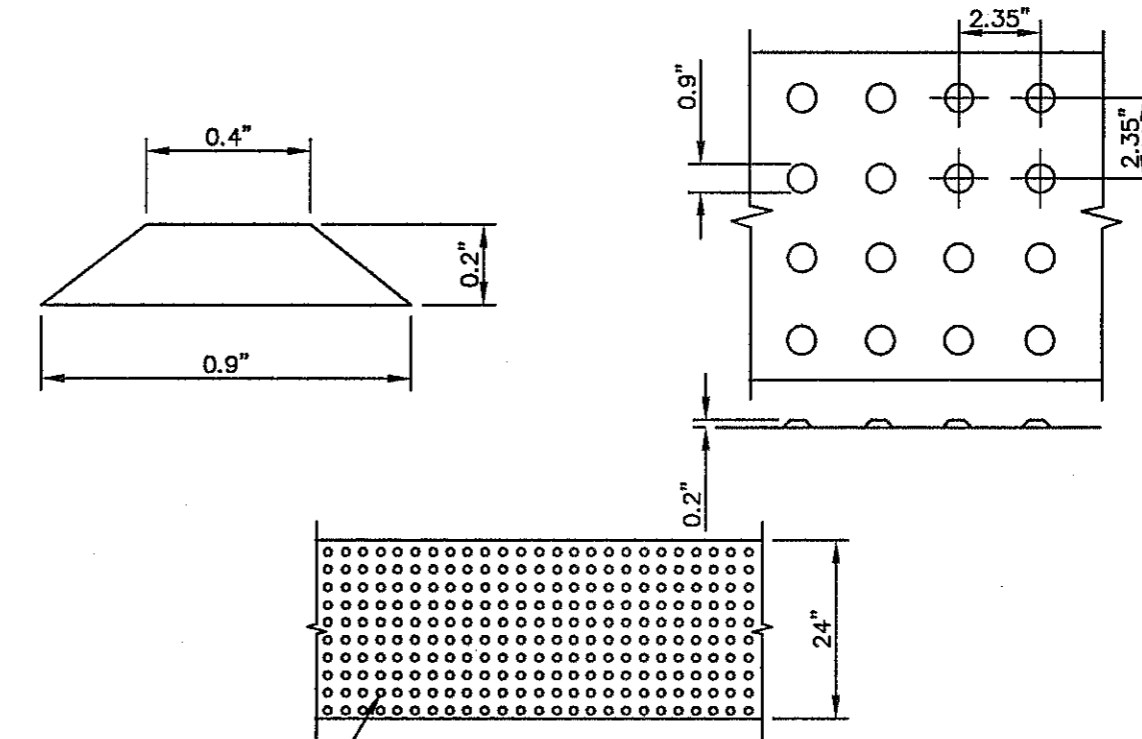
1 DIAGONAL COMBINATION CURB RAMP (TYPE III)  
SCALE: N.T.S.

**LEGEND**

DETECTABLE WARNING SURFACE

**GENERAL NOTES:**

- IMPROVEMENTS SHALL COMPLY WITH AMERICANS WITH DISABILITY 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 4.8 - 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.



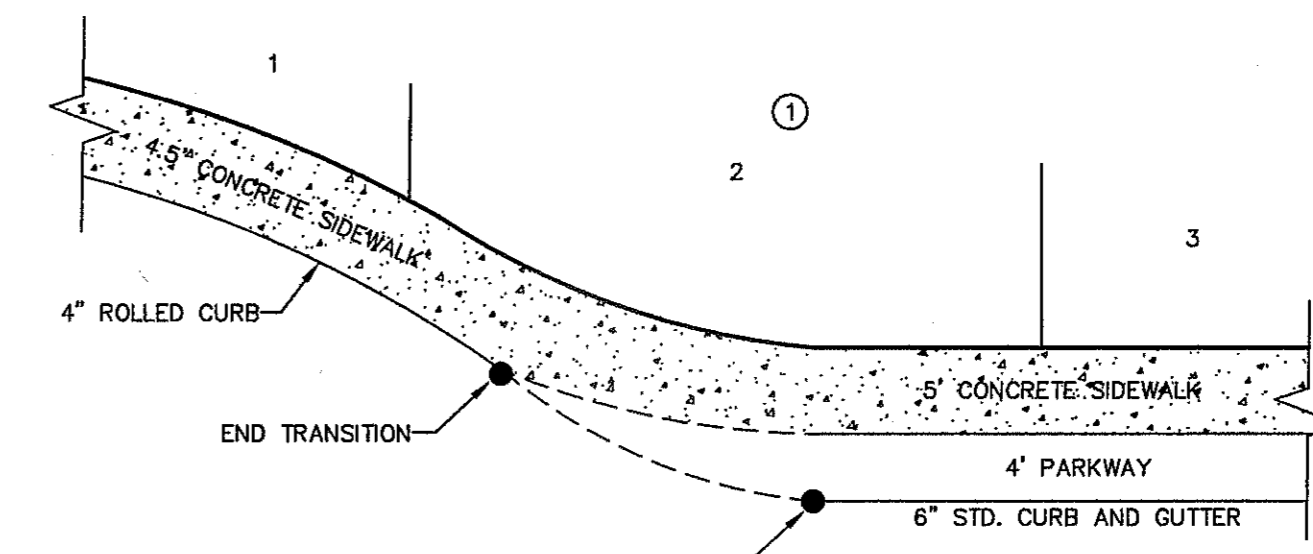
TRUNCATED DOMETILES, ADA CERTIFIED "ARMOR-TILE" TACTILE SYSTEMS OR APPROVED EQUAL

DOMES 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 INCH (5 mm), AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 mm) MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT.

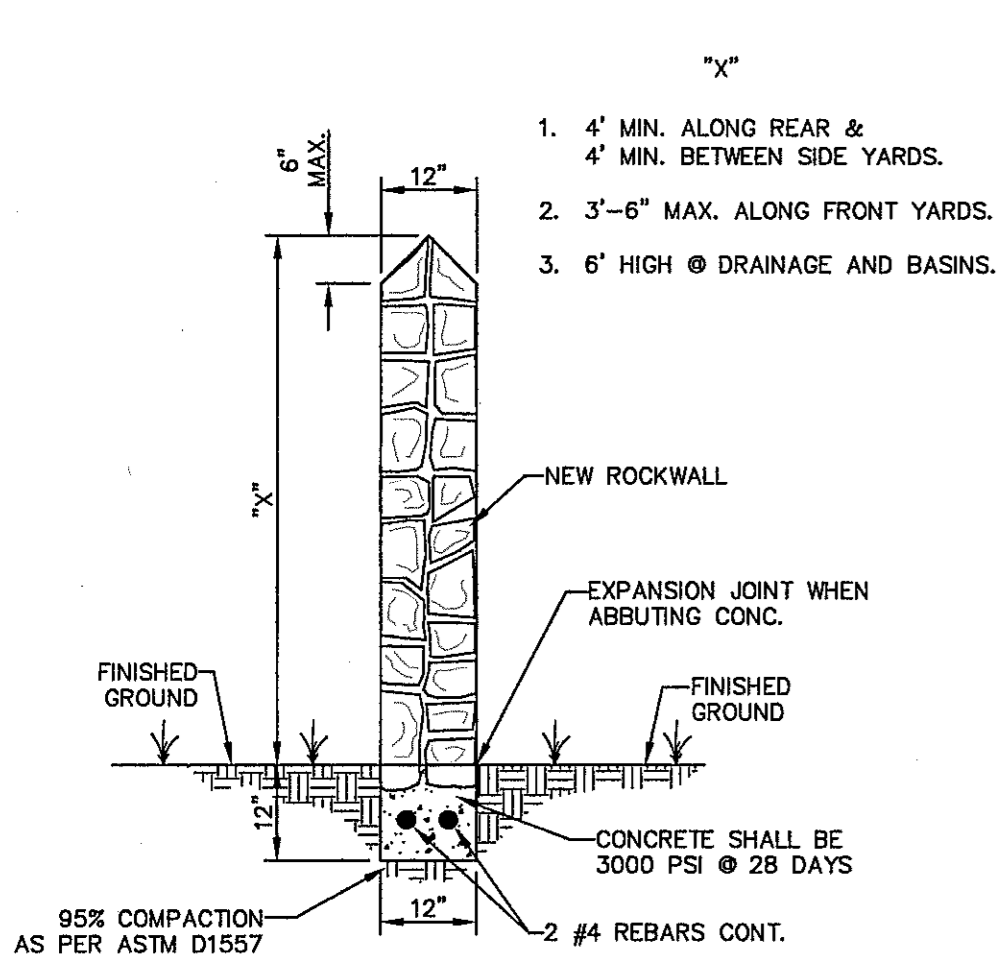
DOMES ALIGNMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING SURFACES SHALL EXTEND 24 INCHES (610 mm) MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION.

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 FLUOR AND MIXING TINT IN THE PLASTIC CONCRETE USED FOR THE DETECTABLE WARNING SURFACE. NO PAINTING OF SURFACE SHALL BE PERMITTED.

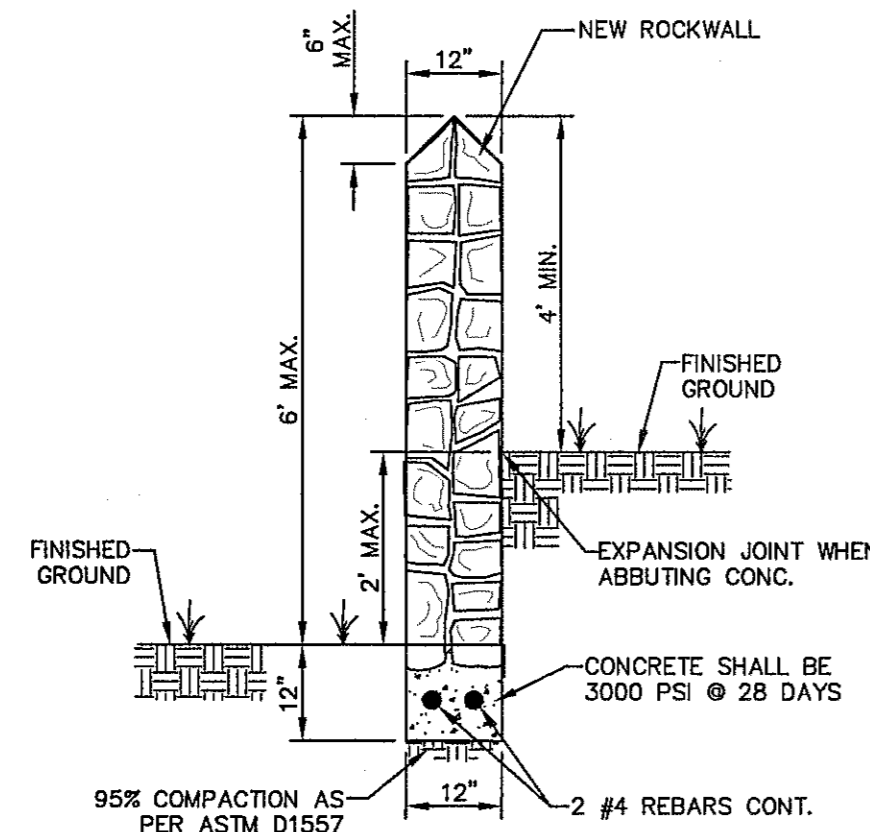
2 TRUNCATED DOME SIZE AND SPACING  
SCALE: N.T.S.



4 TYPICAL HEEL/CUL-DE-SAC SIDEWALK TRANSITION  
SCALE: N.T.S.



GARDEN WALL SECTION

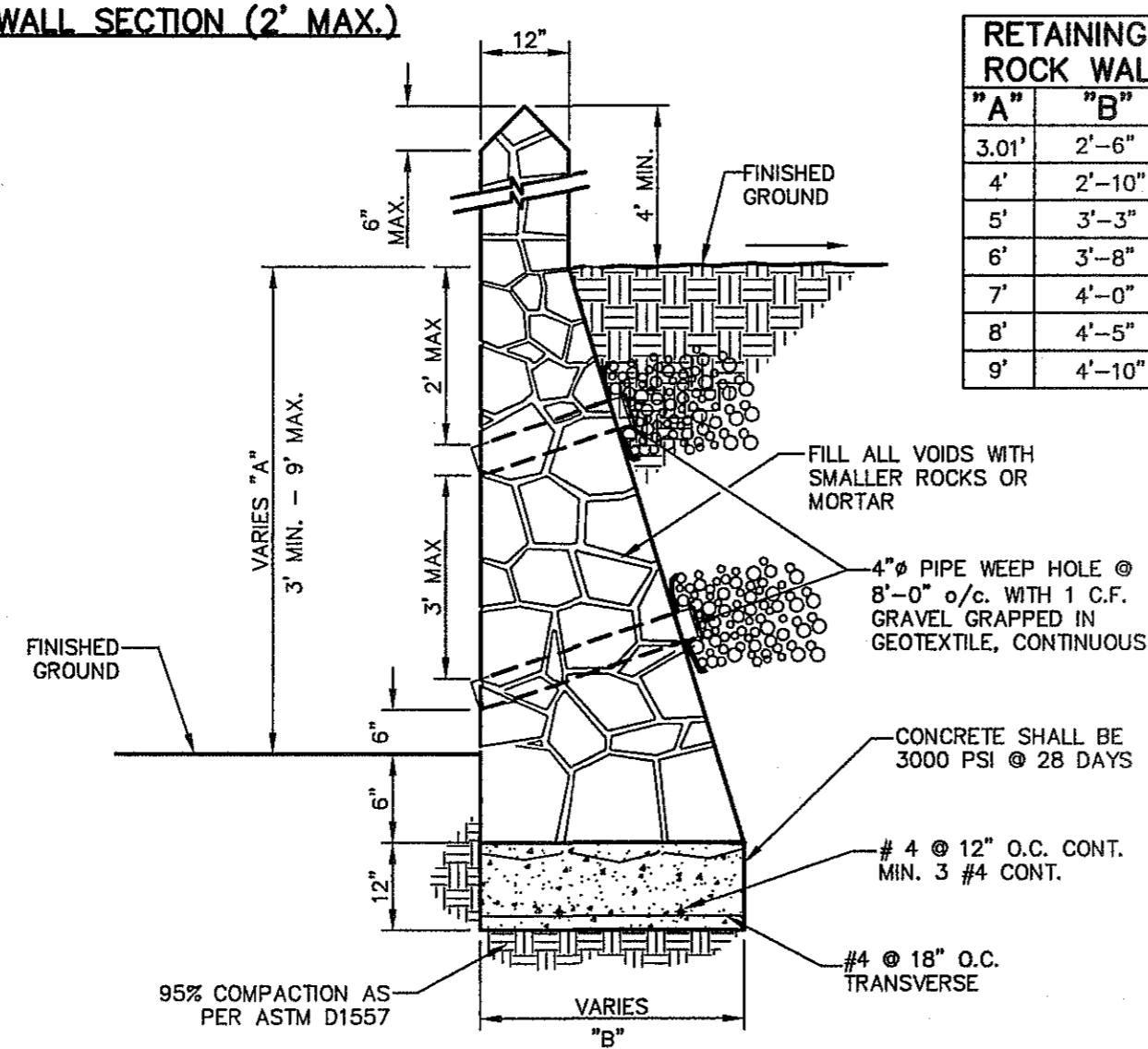


GARDEN WALL SECTION (2' MAX.)

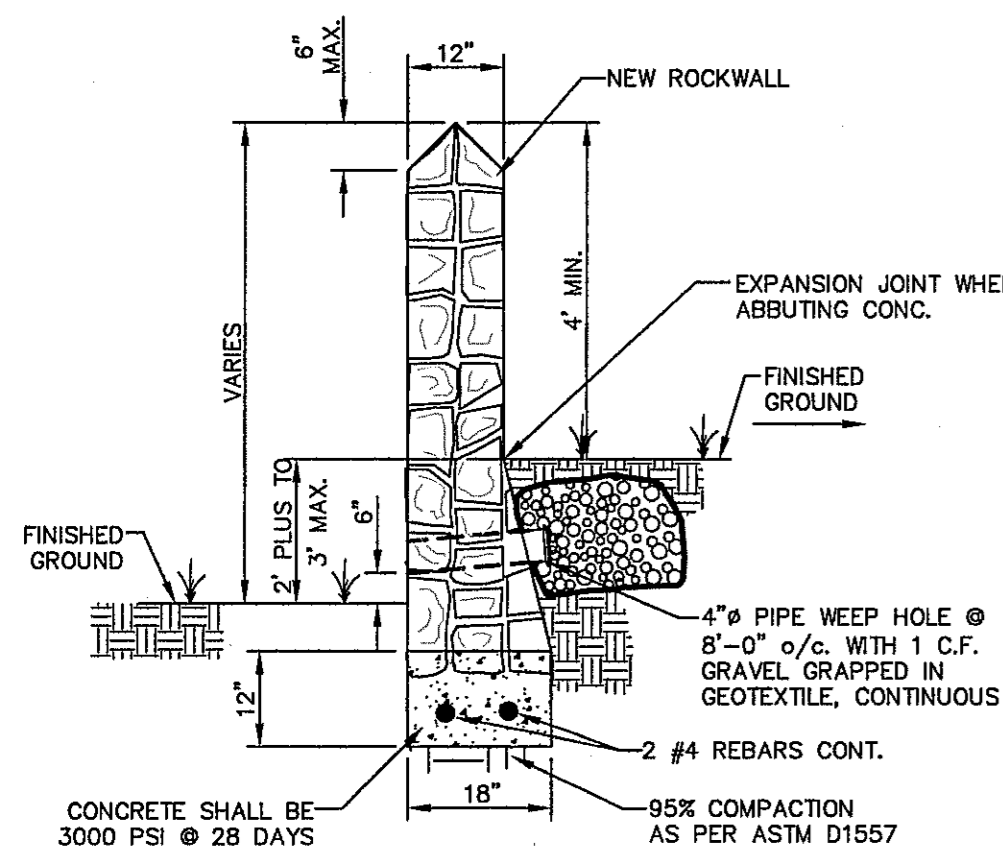
RETAINING ROCK WALL	
"A"	"B"
3.01'	2'-6"
4'	2'-10"
5'	3'-3"
6'	3'-8"
7'	4'-0"
8'	4'-5"
9'	4'-10"

**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.

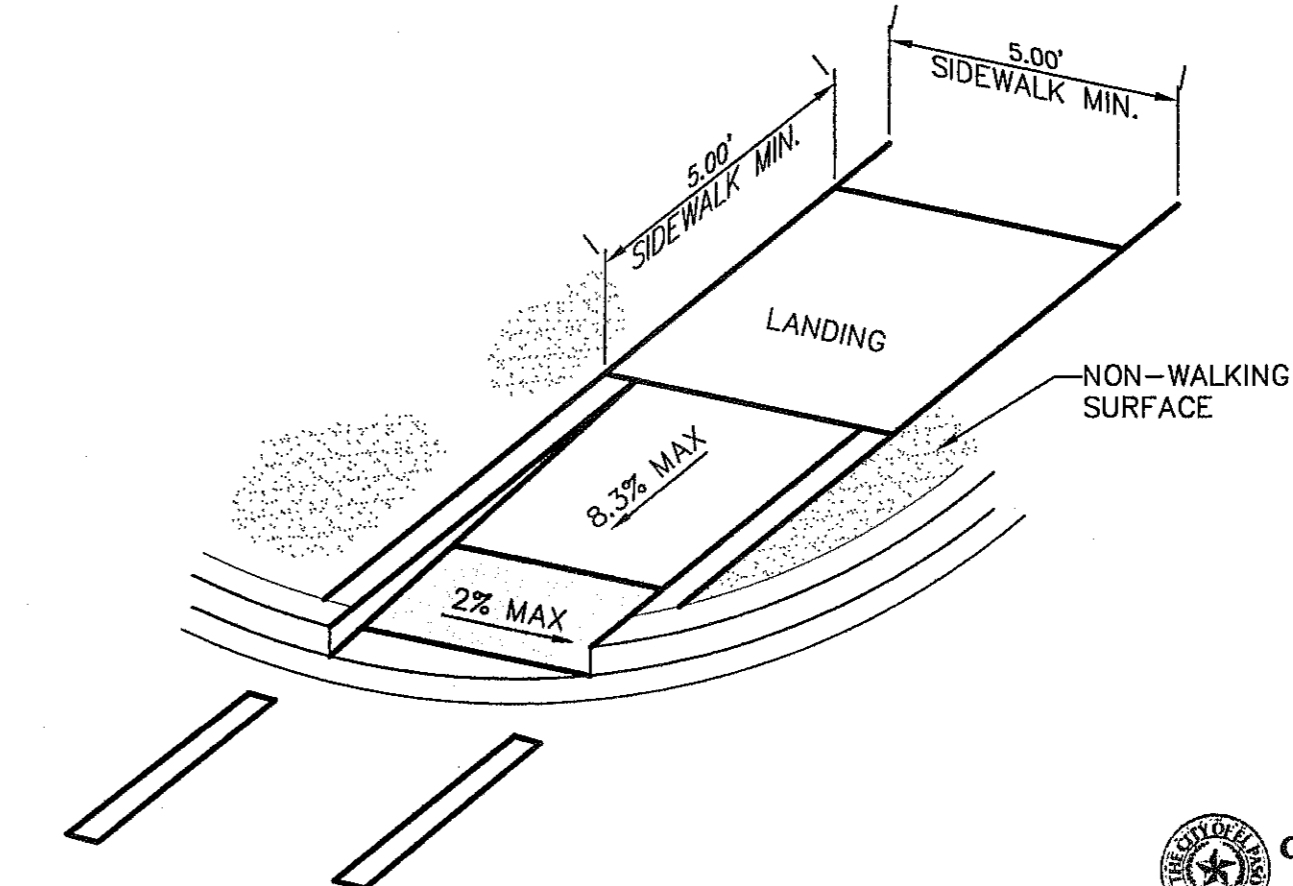


RETAINING WALL SECTION (3' MIN. TO 9' MAX.)



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

3 TYPICAL ROCKWALL DETAILS  
SCALE: 1" = 2'-0"



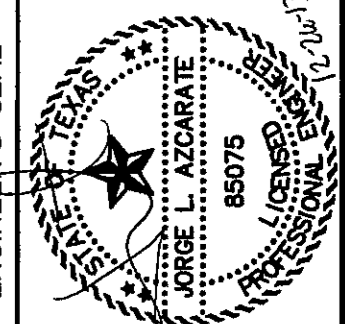
5 DIRECTIONAL RAMP WITHIN RADIUS (TYPE IV)  
SCALE: N.T.S.

REFERENCES - BENCHMARKS

FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVDG DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).

DATE	REVISIONS	BY

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4712 Woodrow Bann, Ste. F, El Paso, TX 79924  
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SCALE: AS SHOWN  
Horizontal: AS SHOWN  
Vertical: AS SHOWN  
Contour Interval: 1/2' A.

DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APP'D. BY: J.L.A.  
JOB No. 2000-163-LD

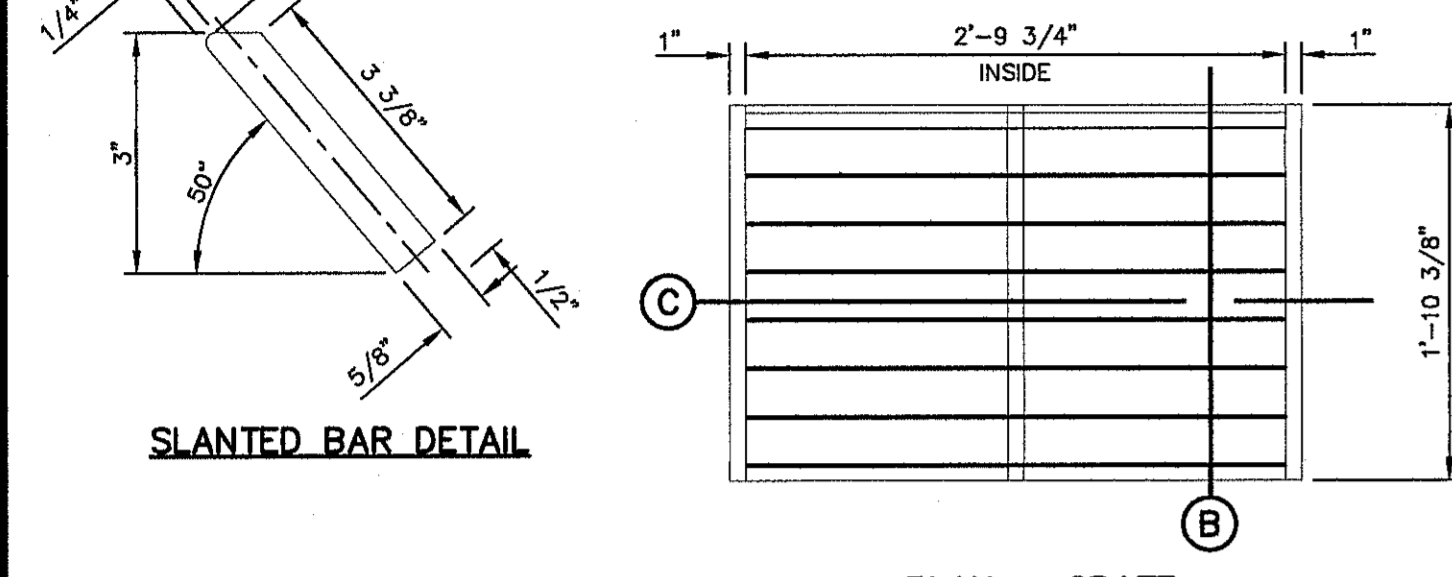
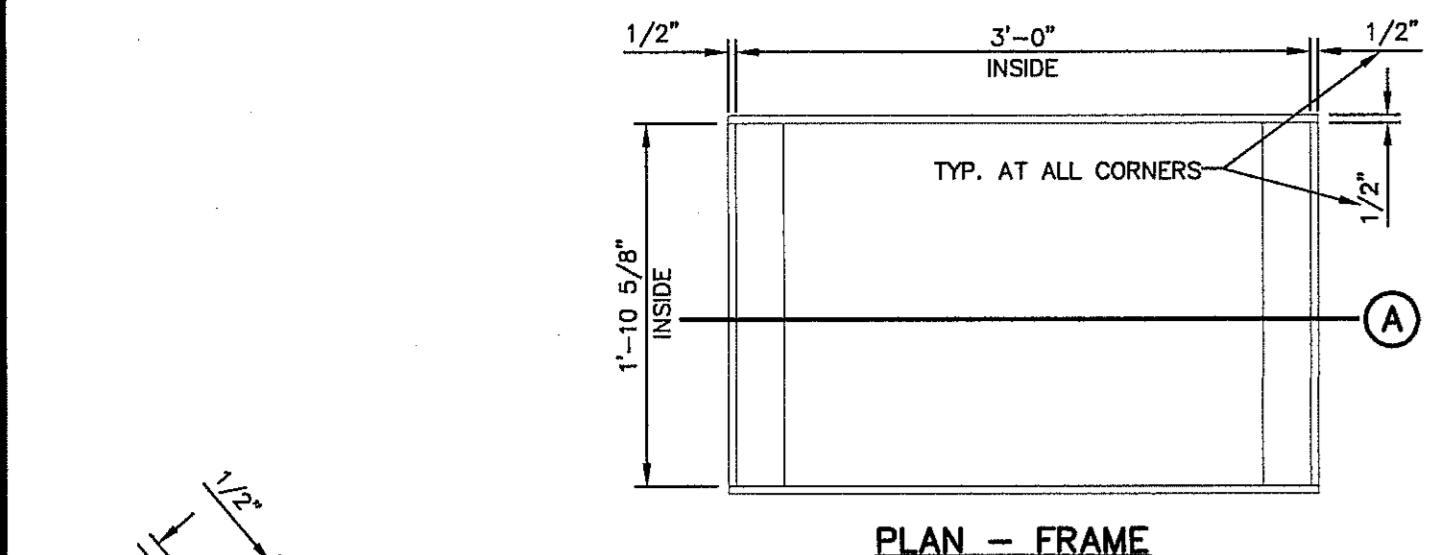
PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
STANDARD DETAILS  
(SHEET 3 OF 3)  
SHEET NO.

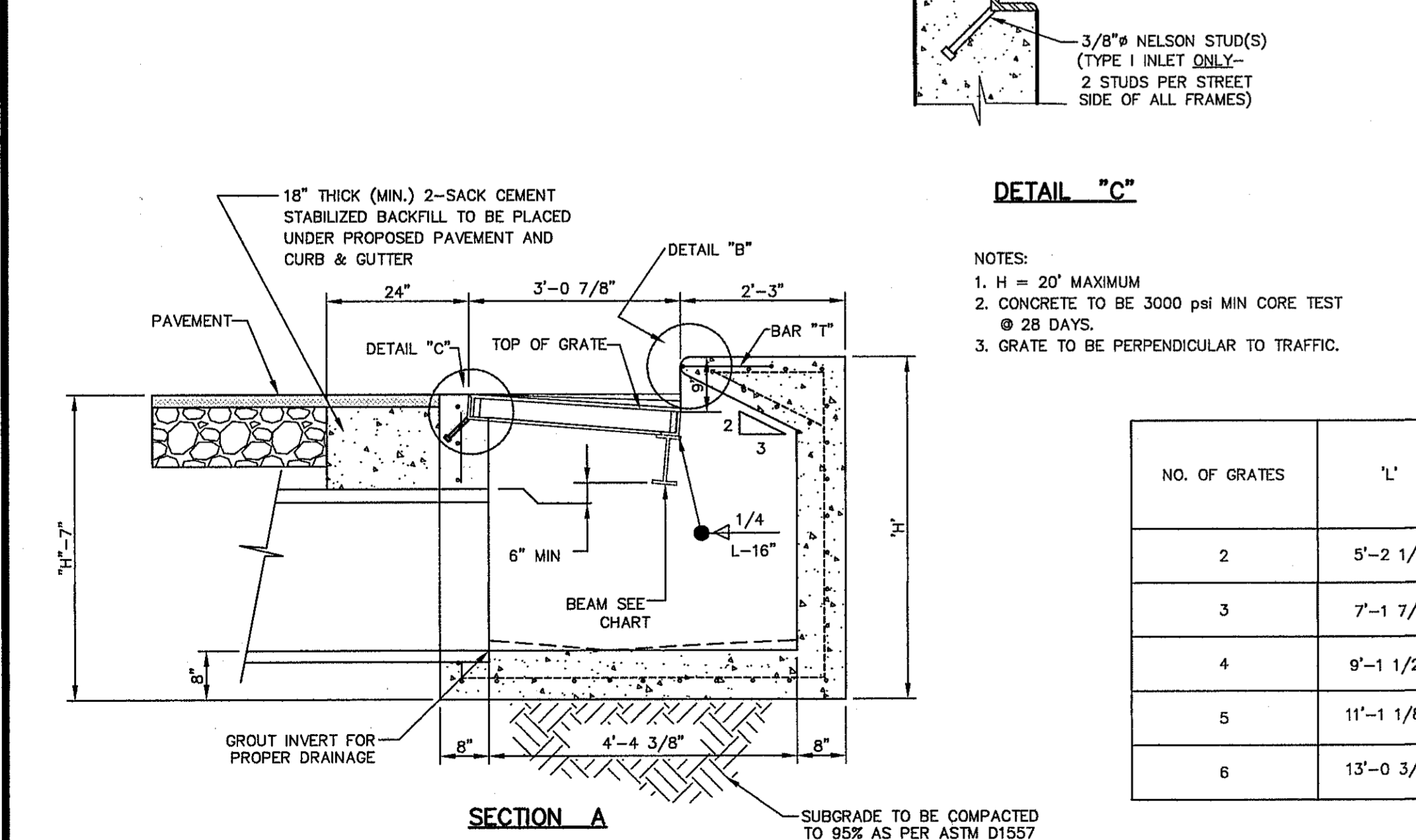
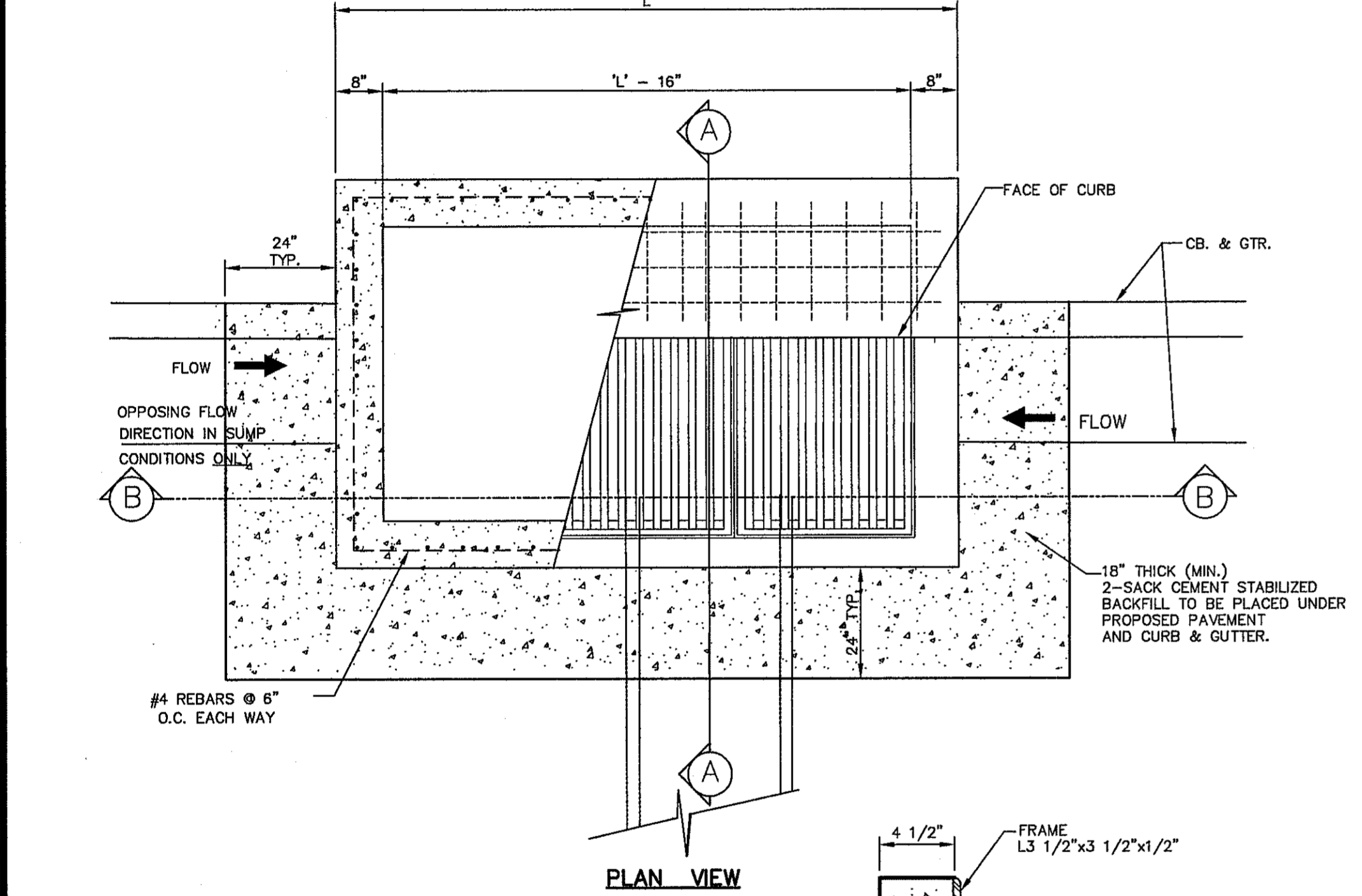
C8.3

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

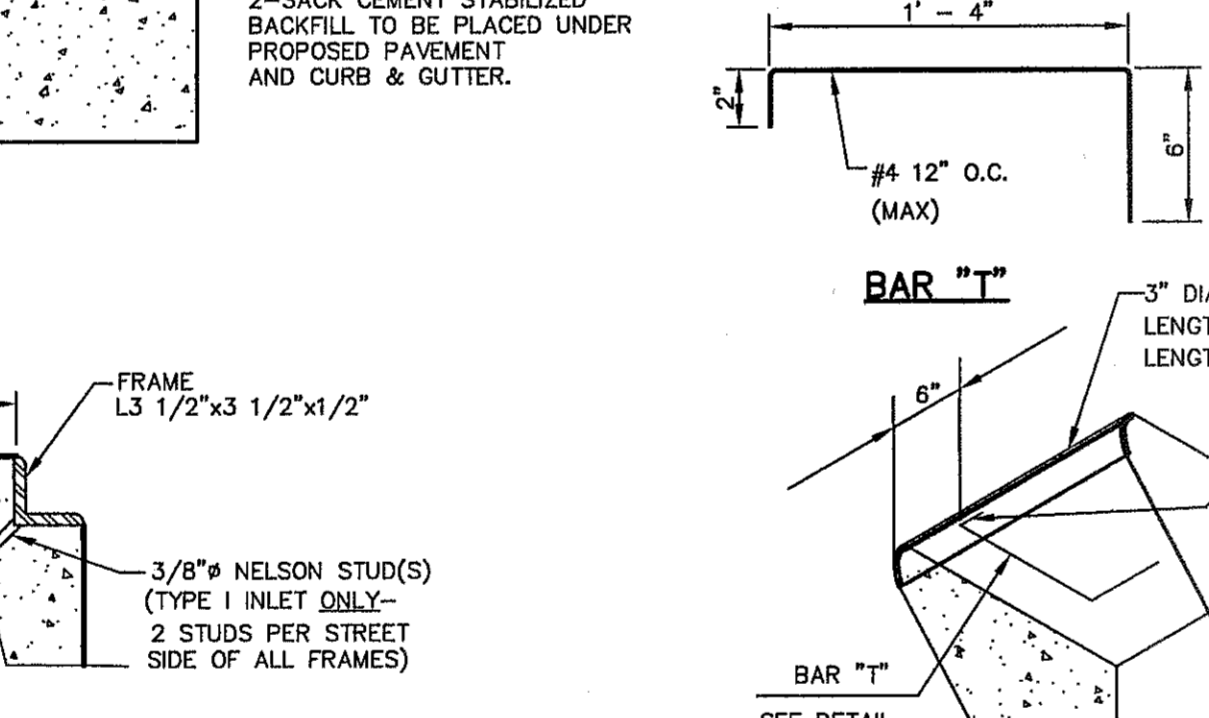
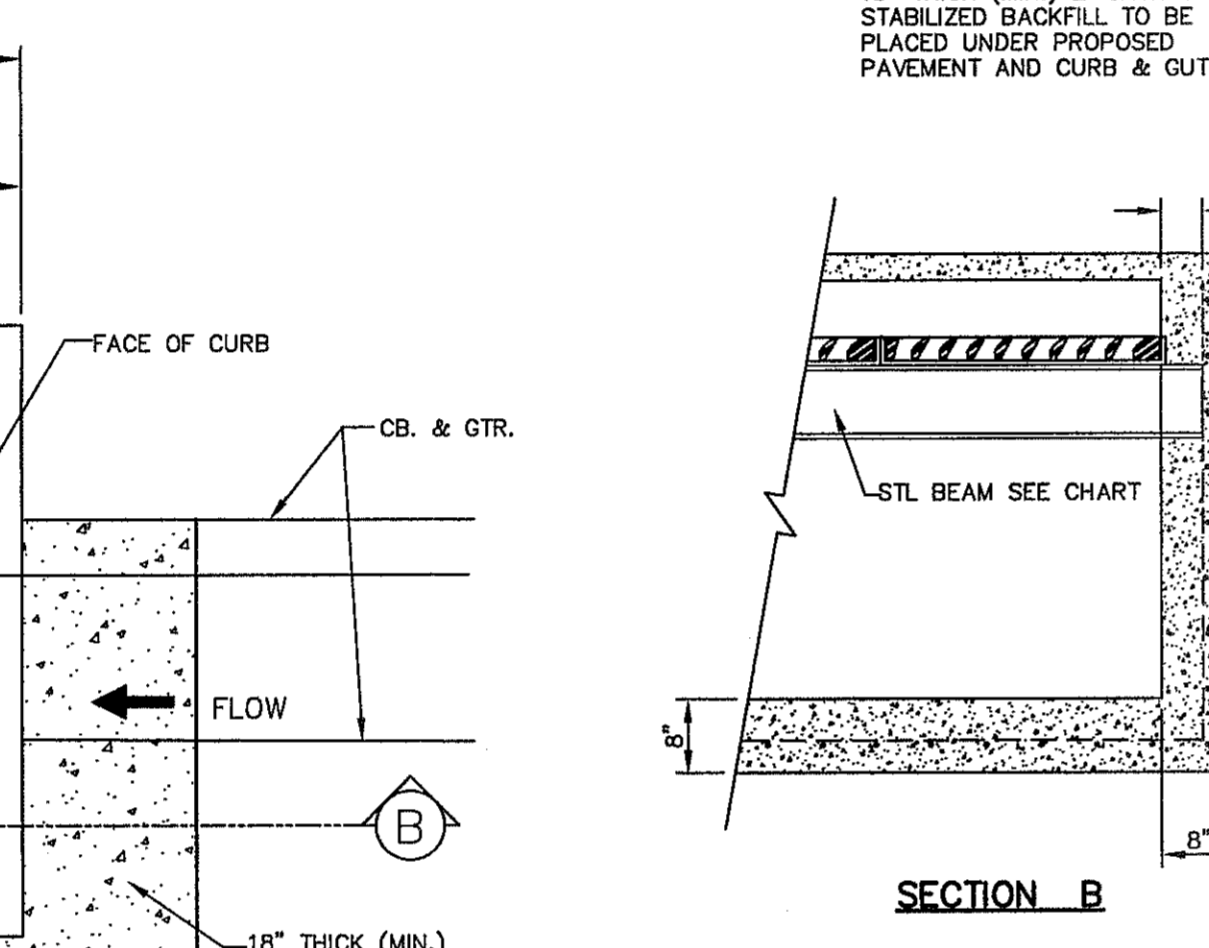
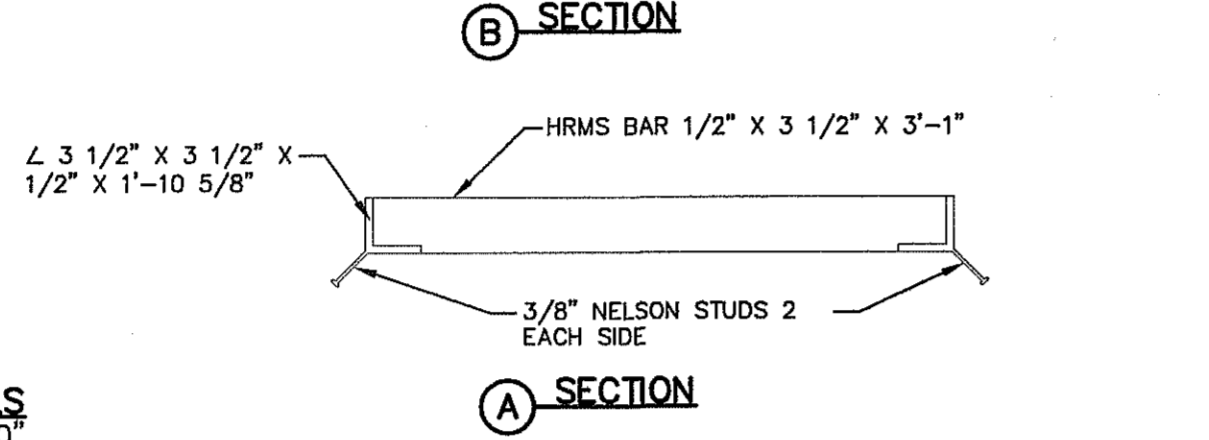
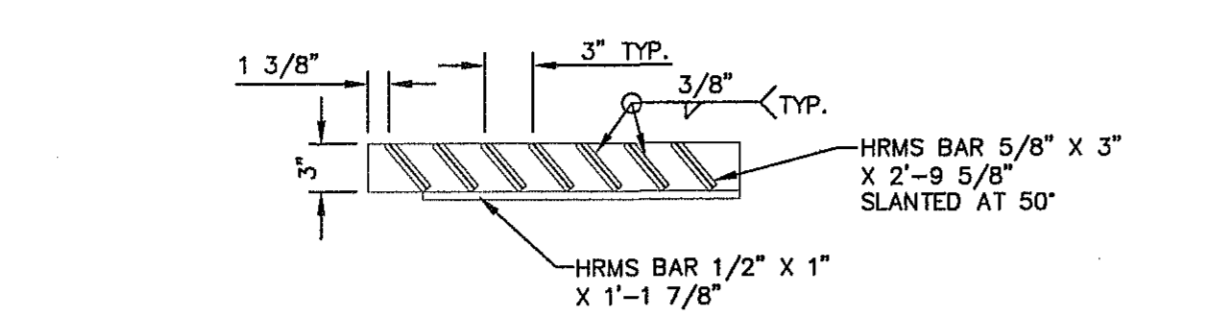
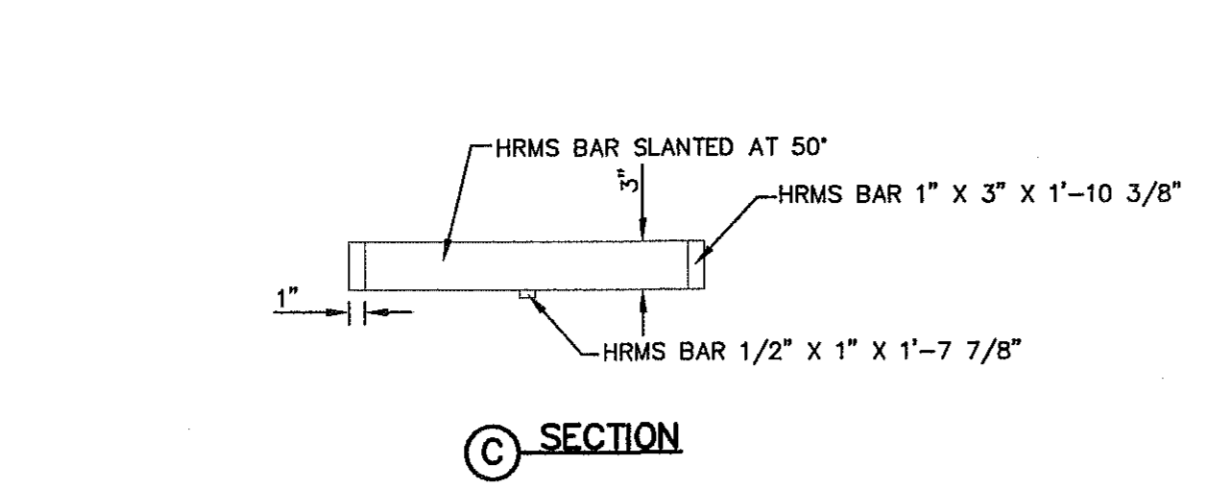
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1 GRATE AND FRAME DETAILS  
SCALE: 1" = 1'-0"

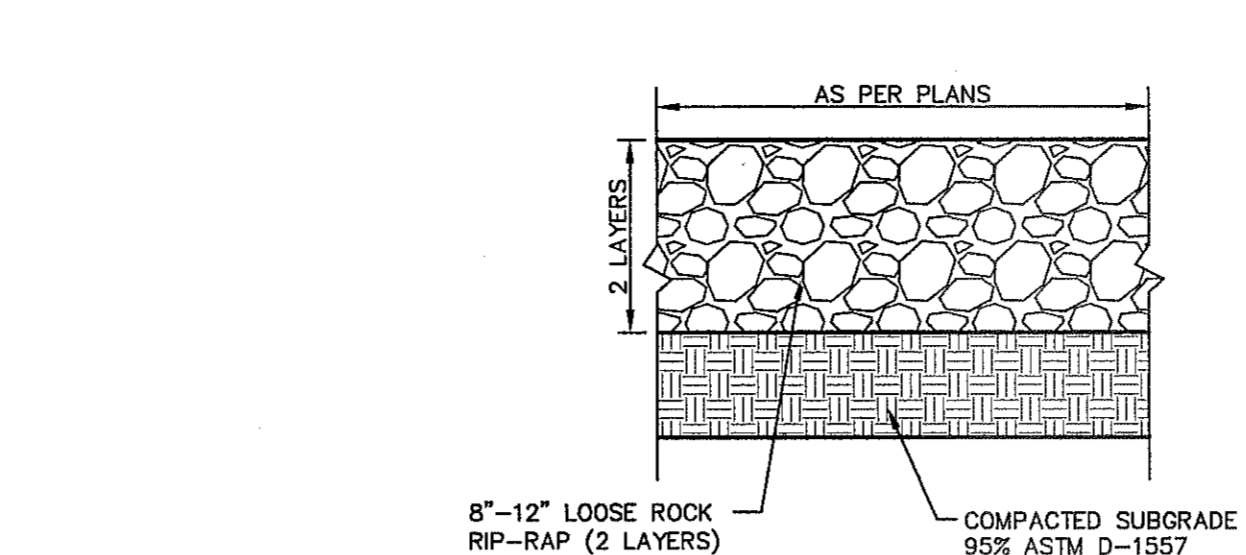


4 DROP INLET (TYPE I) DETAILS  
SCALE: NTS



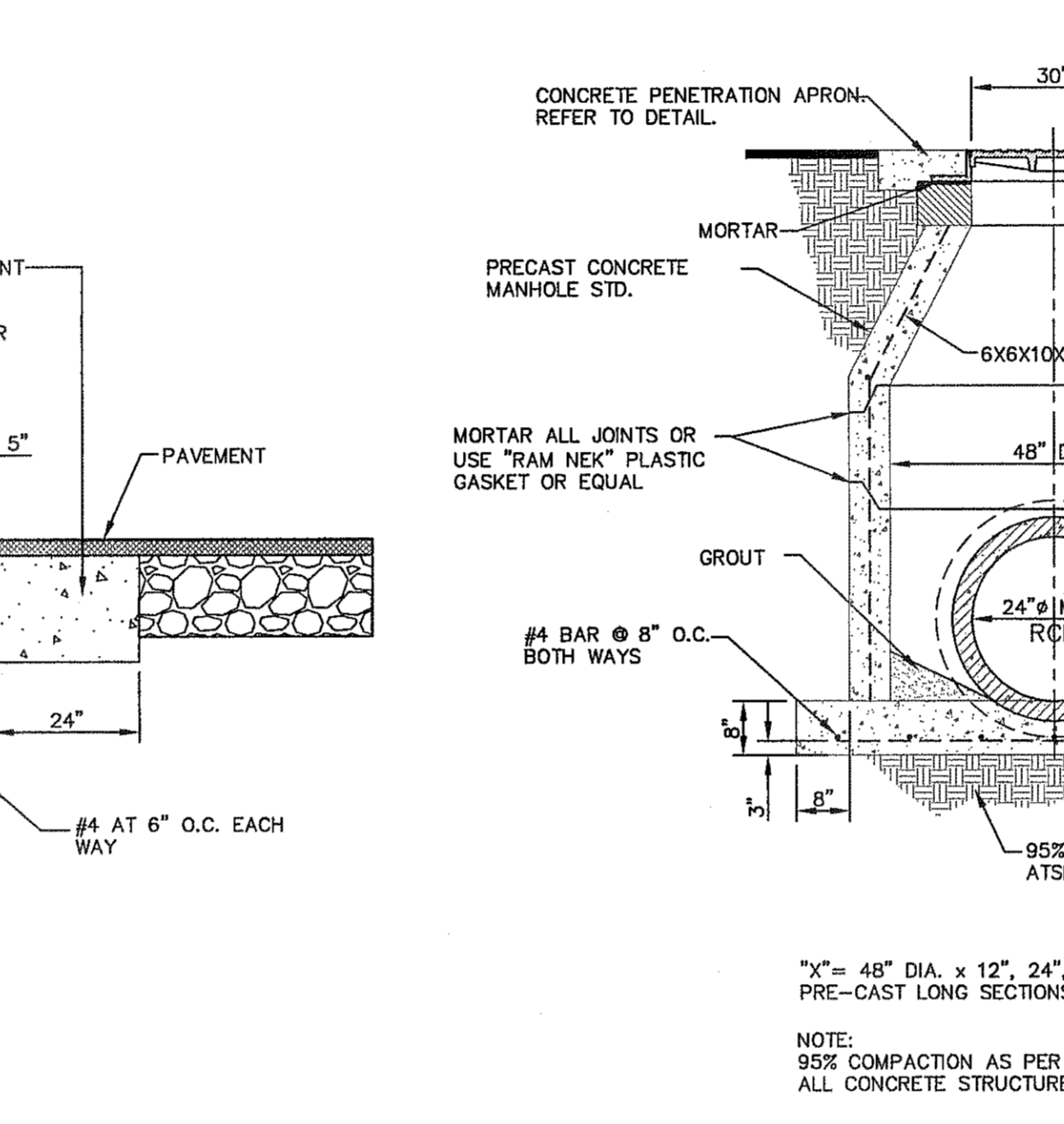
NOTES:  
1. H = 20' MAXIMUM  
2. CONCRETE TO BE 3000 PSI MIN CORE TEST @ 28 DAYS.  
3. GRATE TO BE PERPENDICULAR TO TRAFFIC.

NO. OF GRATES	L'	BEAM	
		LENGTH	MINIMUM SIZES
2	5'-2 1/4"	4'-8 1/4"	WBX12, S6X12.5, MC6X15.1
3	7'-1 7/8"	6'-7 7/8"	WBX15, S7X18.4, MC7X19.1
4	9'-1 1/2"	8'-7 1/2"	W10X19, SBX18.4, MC10X22
5	11'-1 1/8"	10'-7 1/8"	W12X16, SBX23, MC10X22
6	13'-0 3/4"	12'-6 3/4"	W12X19, SBX23, MC10X25



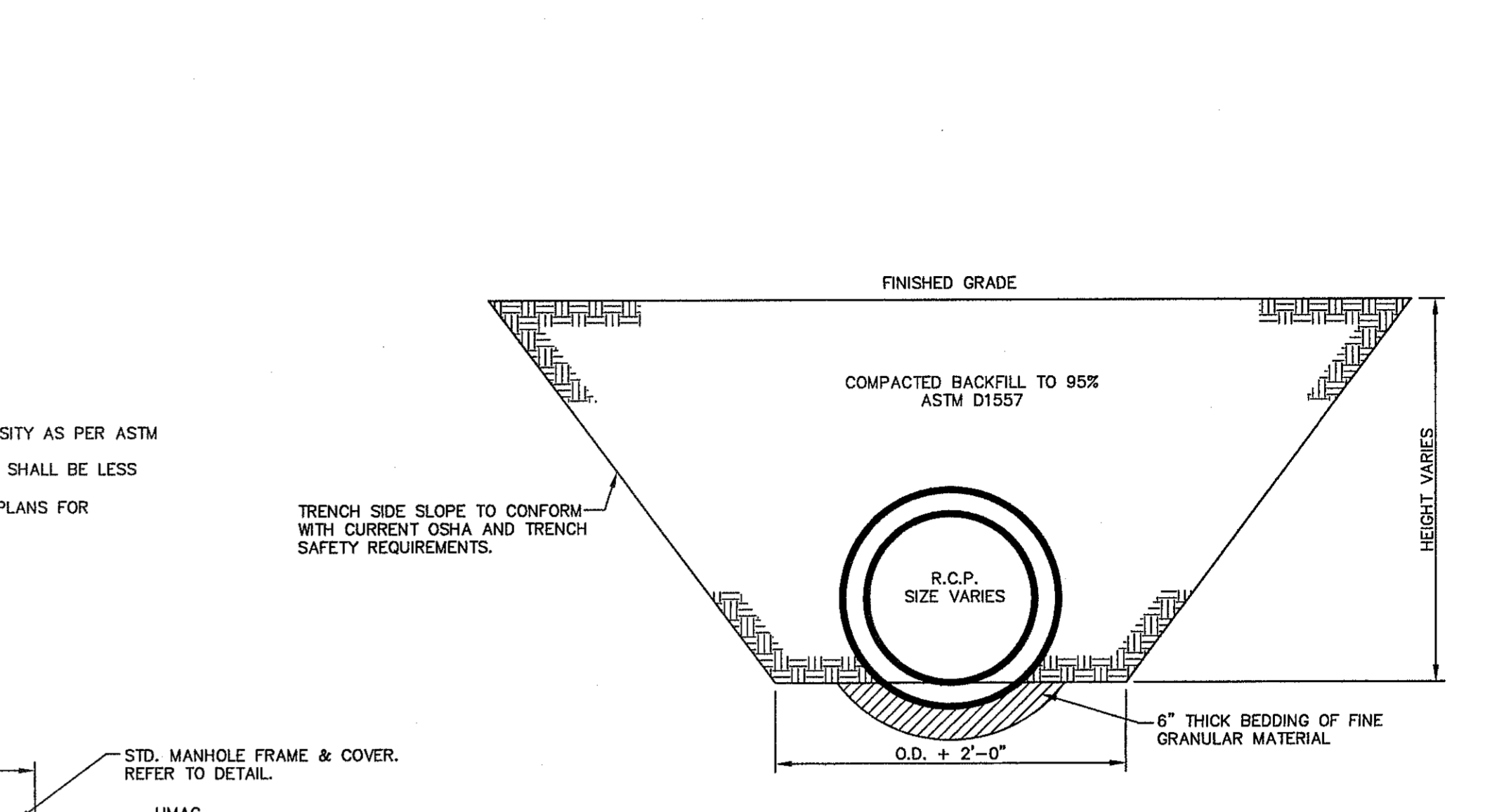
NOTE:  
1. SUBGRADE TO BE COMPACTED TO NINETY-FIVE (95%) PERCENT OF MAXIMUM DENSITY AS PER ASTM D-1557.  
2. TYPICAL THICKNESS IS SHOWN, ACTUAL THICKNESS WILL VARY, BUT IN NO EVENT SHALL BE LESS THAN TWELVE (12") INCHES.  
3. CONFIGURATION OF STRUCTURE VARIES ON A CASE BY CASE BASIS. REFER TO PLANS FOR ADDITIONAL INFORMATION ON WIDTH, LENGTH, LIMITS OF RIP RAP, SLOPE, ETC.

2 LOOSE ROCK RIP RAP DETAIL  
SCALE: 1" = 2'-0"

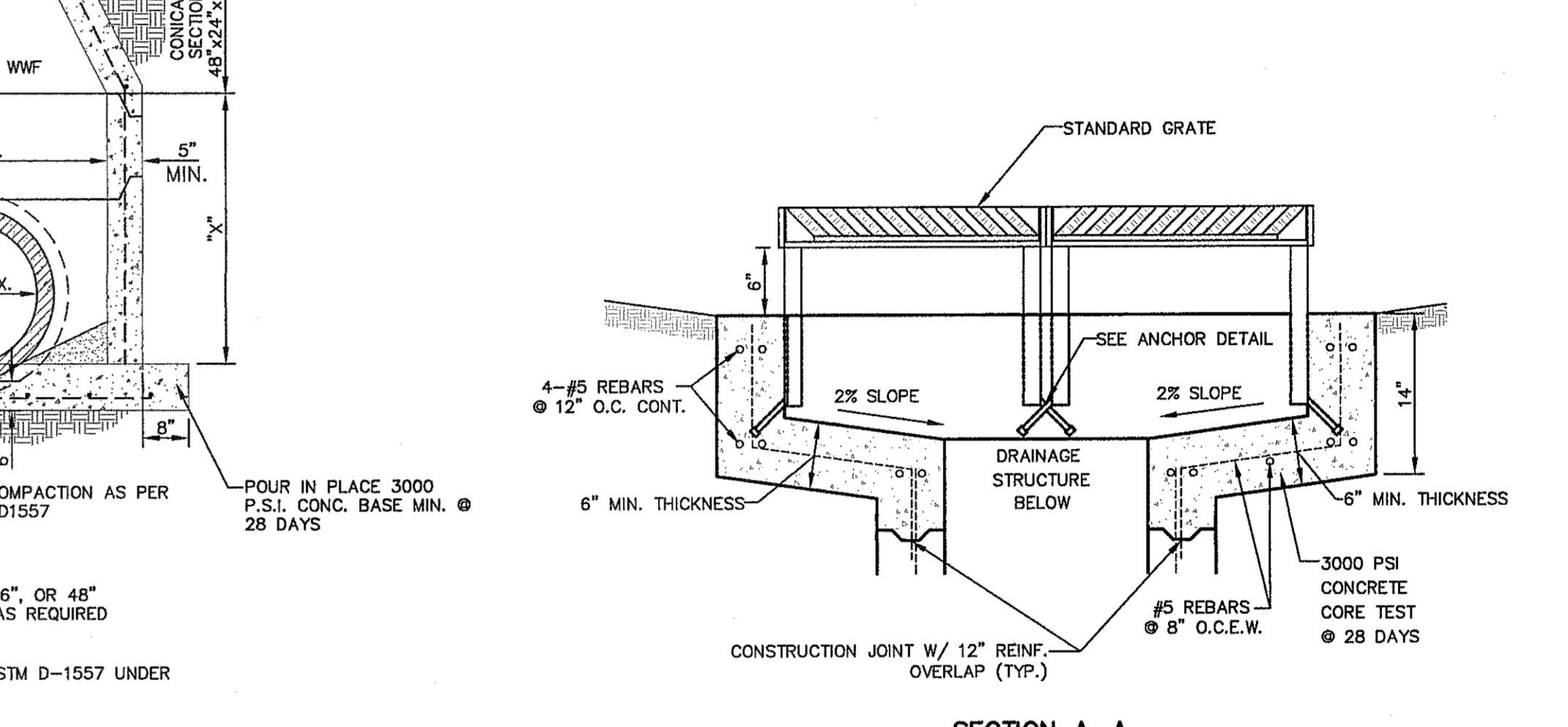


5 48" STANDARD MANHOLE DETAIL  
SCALE: N.T.S.

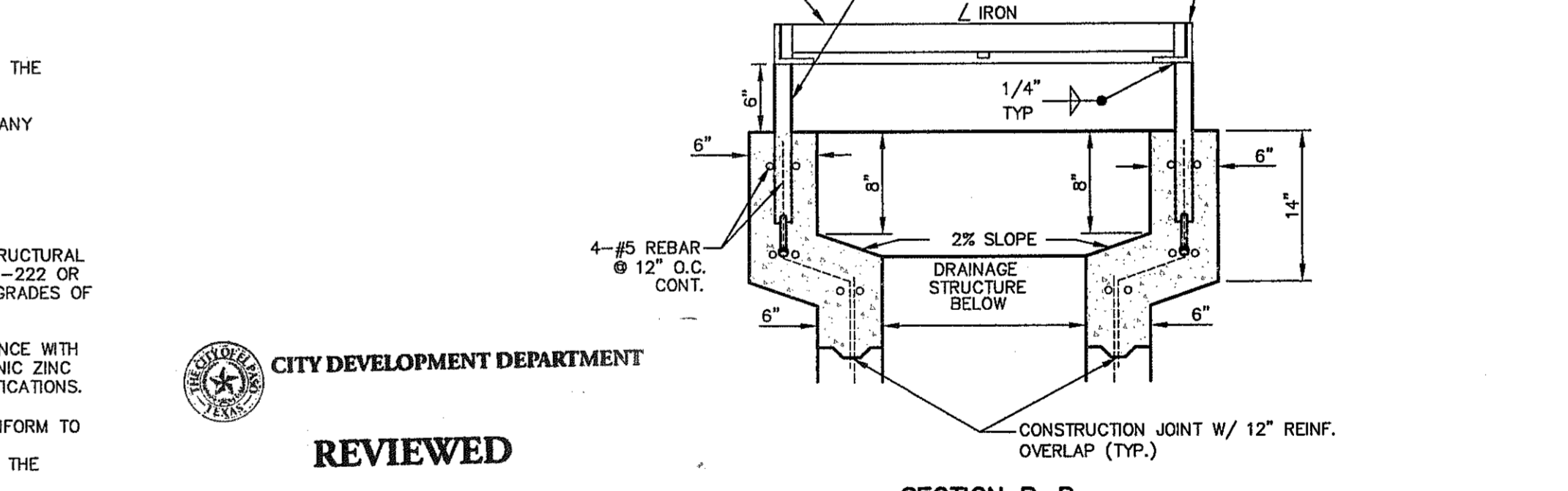
- DROP INLET GENERAL NOTES:**
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.
  - SHARP EDGES RESULTING FROM FABRICATION SHALL BE DULLED BY ANY ACCEPTABLE METHOD FOR SAFETY IN HANDLING.
  - GRATES SHALL BE INSTALLED IN FRAME WITH FLOW ARROW POINTING DOWNSTREAM 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.
  - GRATED 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 REQUIREMENTS OF AASHTO M-111 SPECIFICATIONS 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 THE 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 PLACED WHERE PROPOSED CONCRETE COMES IN CONTACT WITH ANY EXISTING OR APPROVED 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 DEPRESSURED 1" BELOW PROPOSED OR EXISTING GRADE.
  - ALL REINFORCED 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 GRATED OF ALL INLETS WITH THE STREET PAVEMENT MUST BE CONSTRUCTED WITH THE GRATE BARS PERPENDICULAR TO THE CURB.



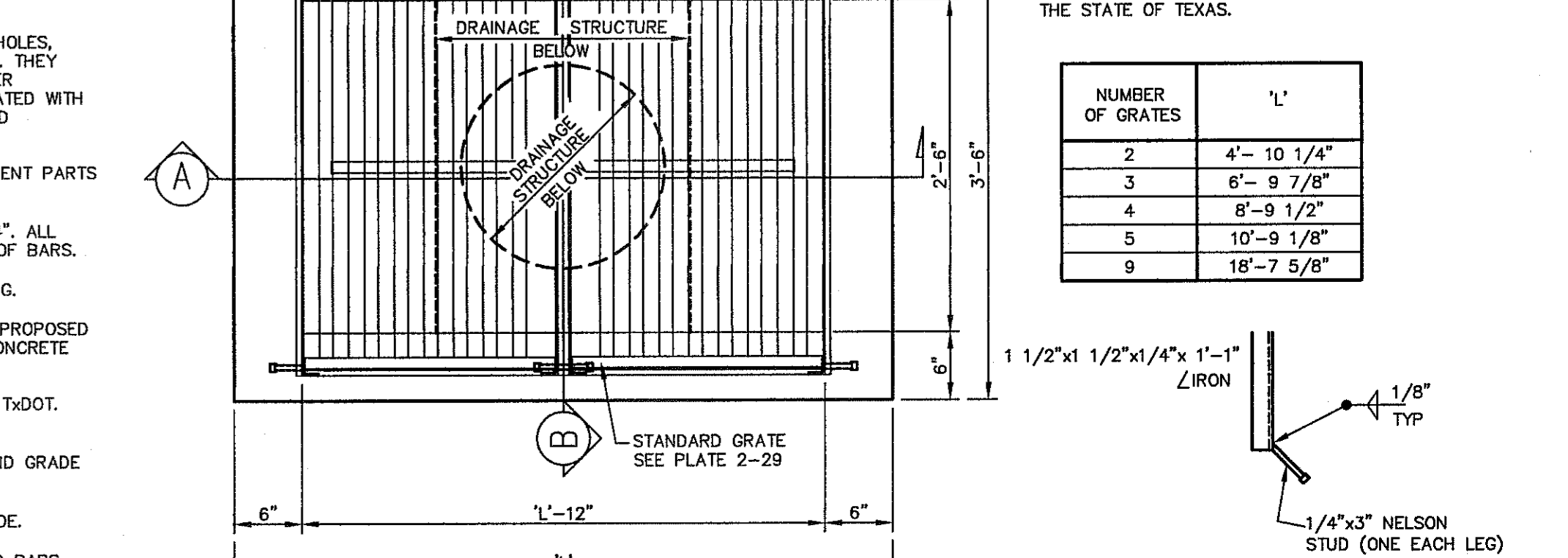
3 STORM SEWER BEDDING DETAIL  
SCALE: 1/2" = 1'-0"



SECTION A-A



SECTION B-B



6 OFF-STREET STORM INLET DETAIL  
SCALE: NTS

REFERENCES - BENCHMARKS  
FOUND TROUT BRASS CAP AT SECTION CORNERS 19, 20, 21 AND 22. (ELEVATION: 4033.22 (AVG. DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).)

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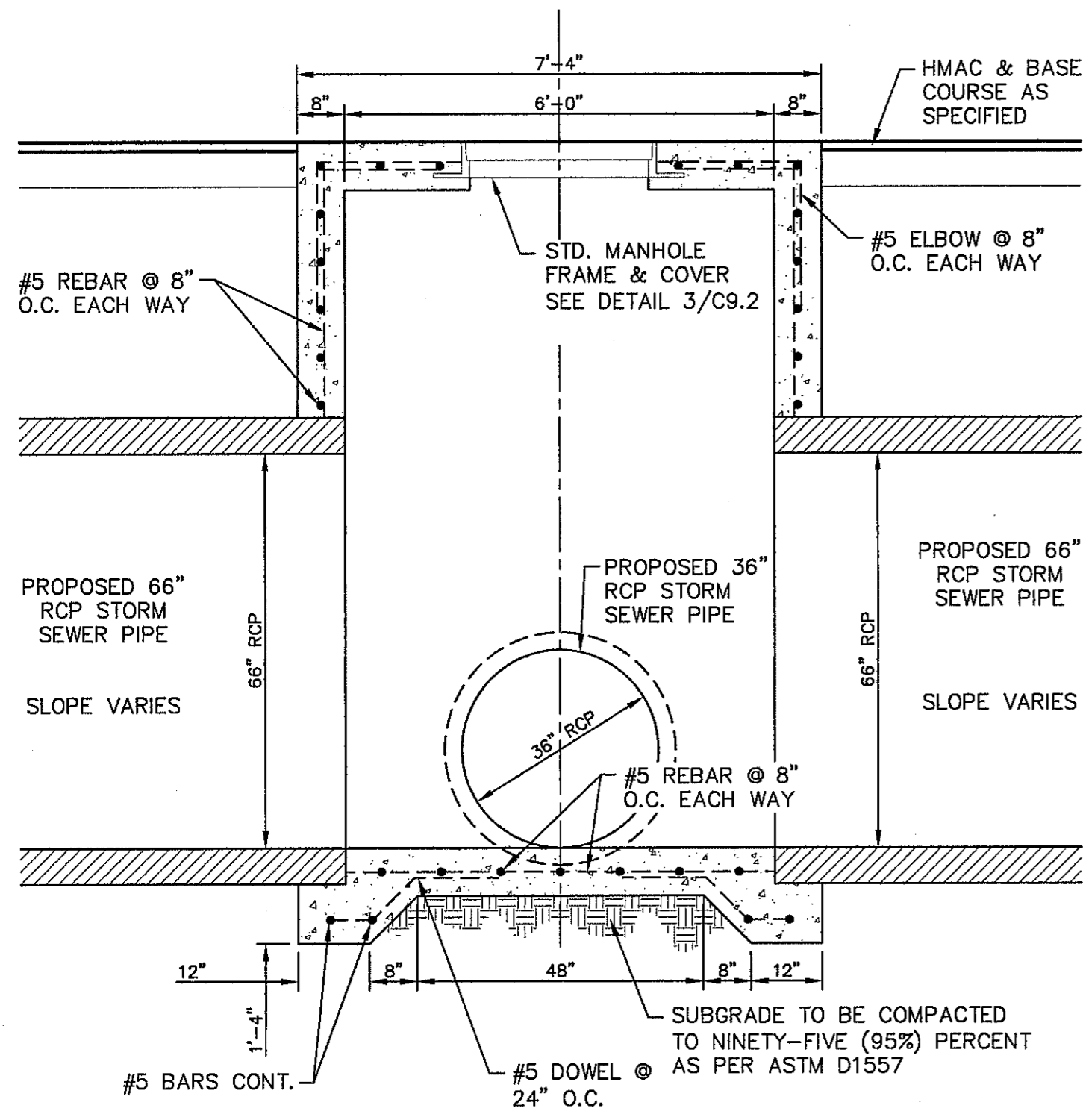
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TEXAS REGISTERED ENGINEERING FIRM F-4684  
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Office: 936.544.5232 Fax: 936.544.5233 www.osaeng.com

ENGINEER'S SEAL  
SCALE: AS SHOWN  
Horizontal: N/A  
Vertical: N/A  
Contour Interval: N/A  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.G.  
APPRD. BY: J.L.A.  
JOB No. 2000-163-LD

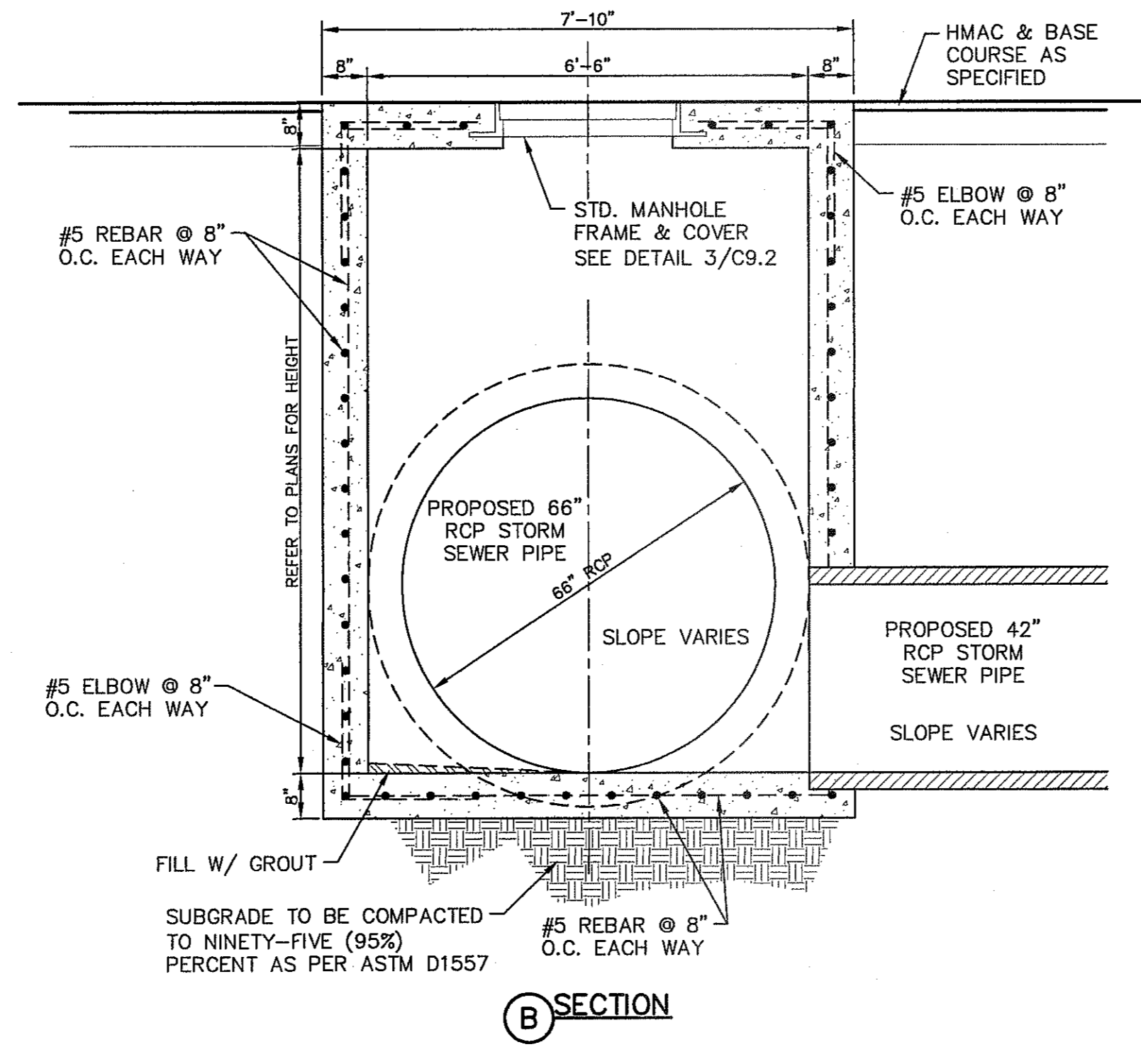
PROJECT TITLE  
SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS

SHEET TITLE  
DRAINAGE DETAILS  
(SHEET 1 OF 3)  
SHEET NO.  
C9.1

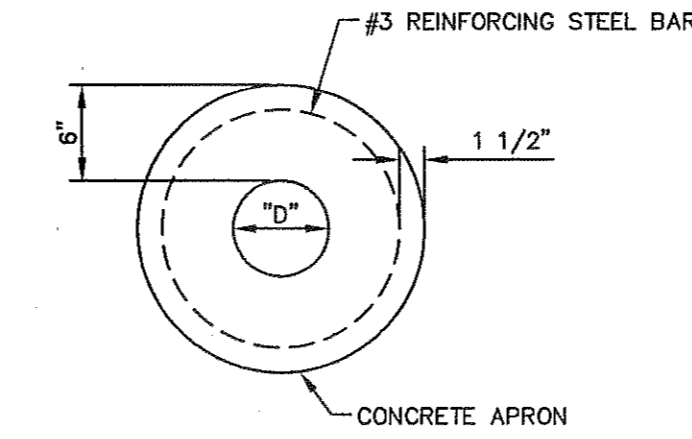
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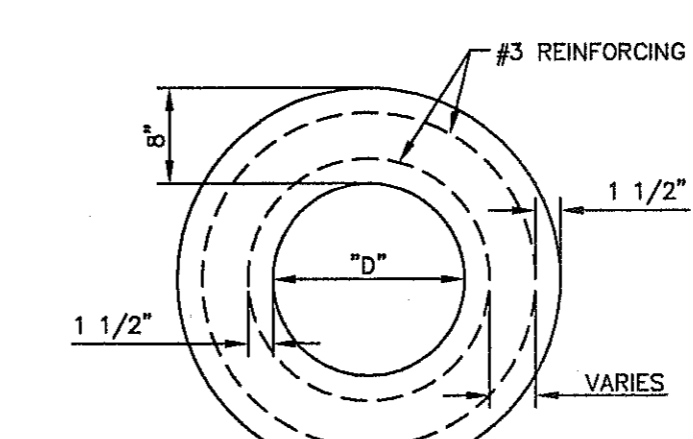
**A SECTION**



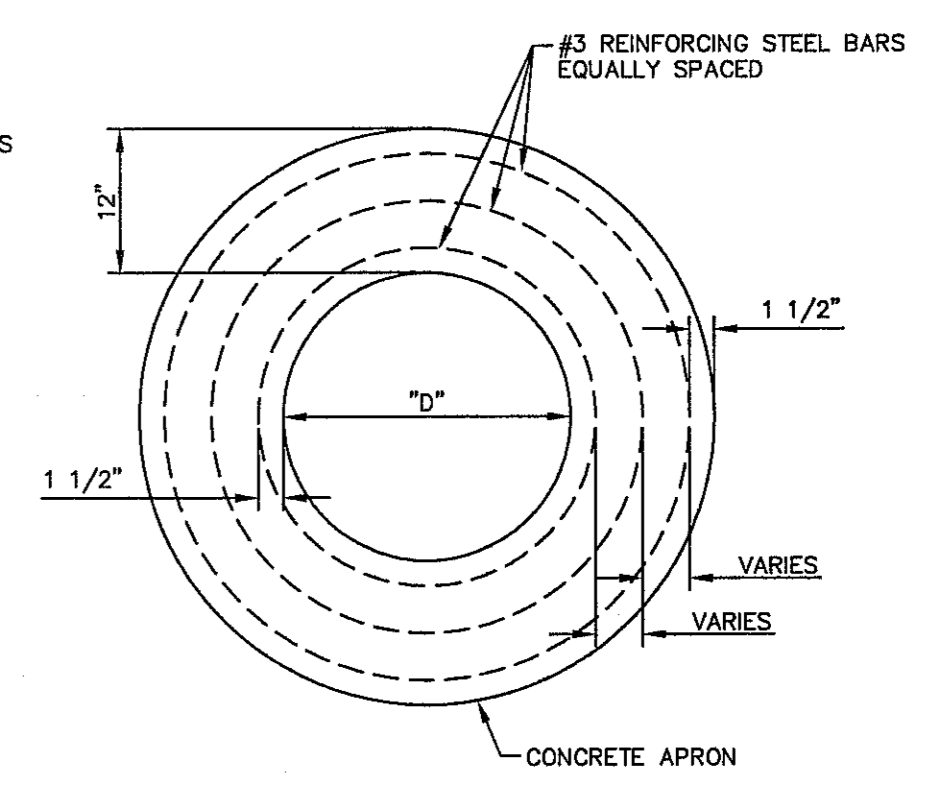
**B SECTION**



**PLAN VIEW - SINGLE REBAR**



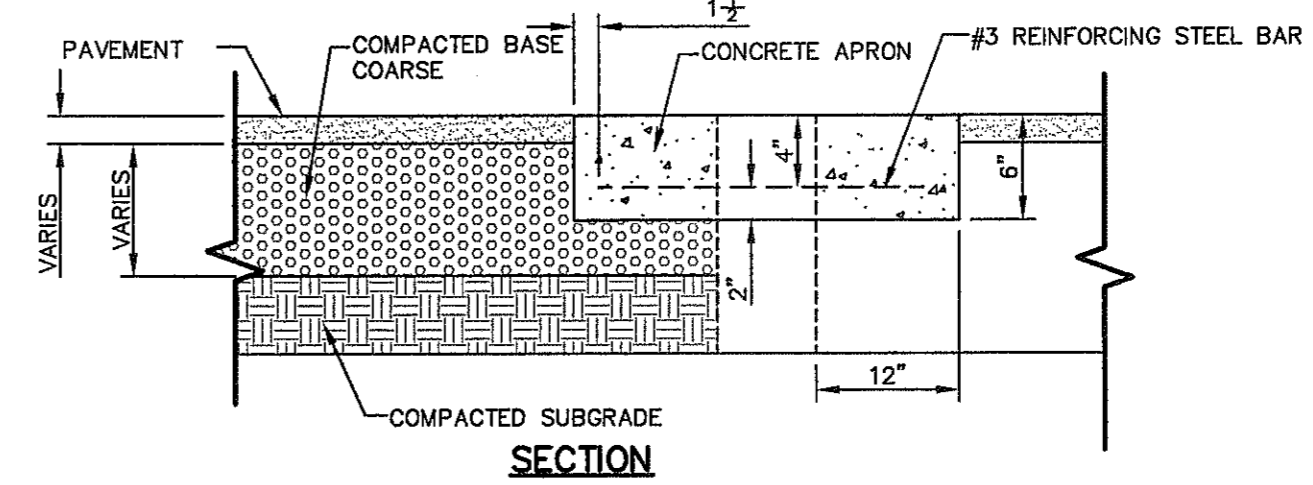
**PLAN VIEW - 2 REBAR**



**PLAN VIEW - 3 REBAR**

- CONSTRUCTION NOTES:**
1. ANY DISTURBED SUBGRADE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 95% DENSITY ±3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
  2. ANY DISTURBED COARSE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 100% DENSITY ±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-476 AND TRAFFIC LOADING (HS-20).
  5. NO. 3 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

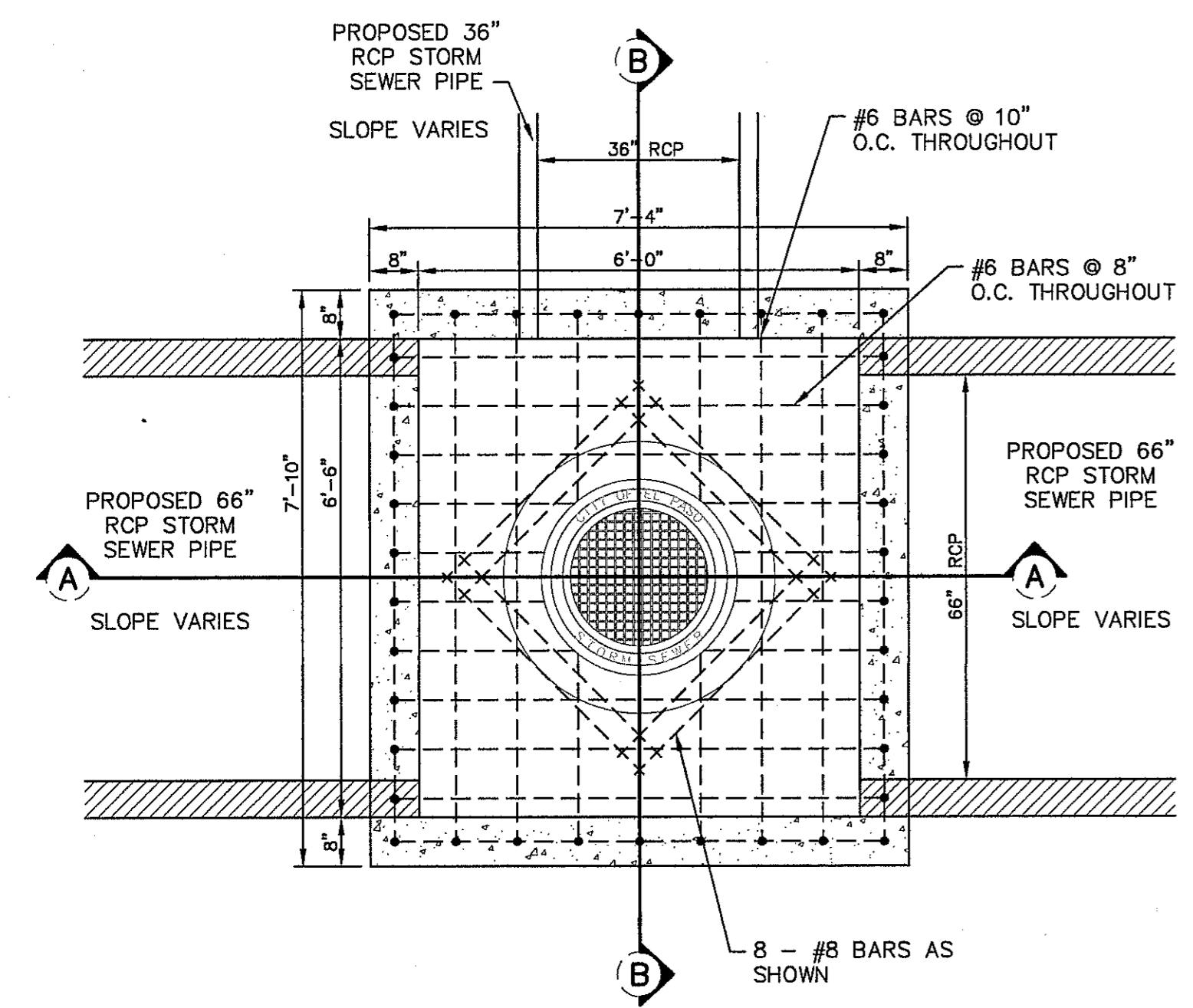
- GENERAL NOTES:**
1. THE PENETRATION APRON SHOULD BE CAST IN-PLACE CONCRETE (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED).
  2. TOPS OF PENETRATION APRON SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.



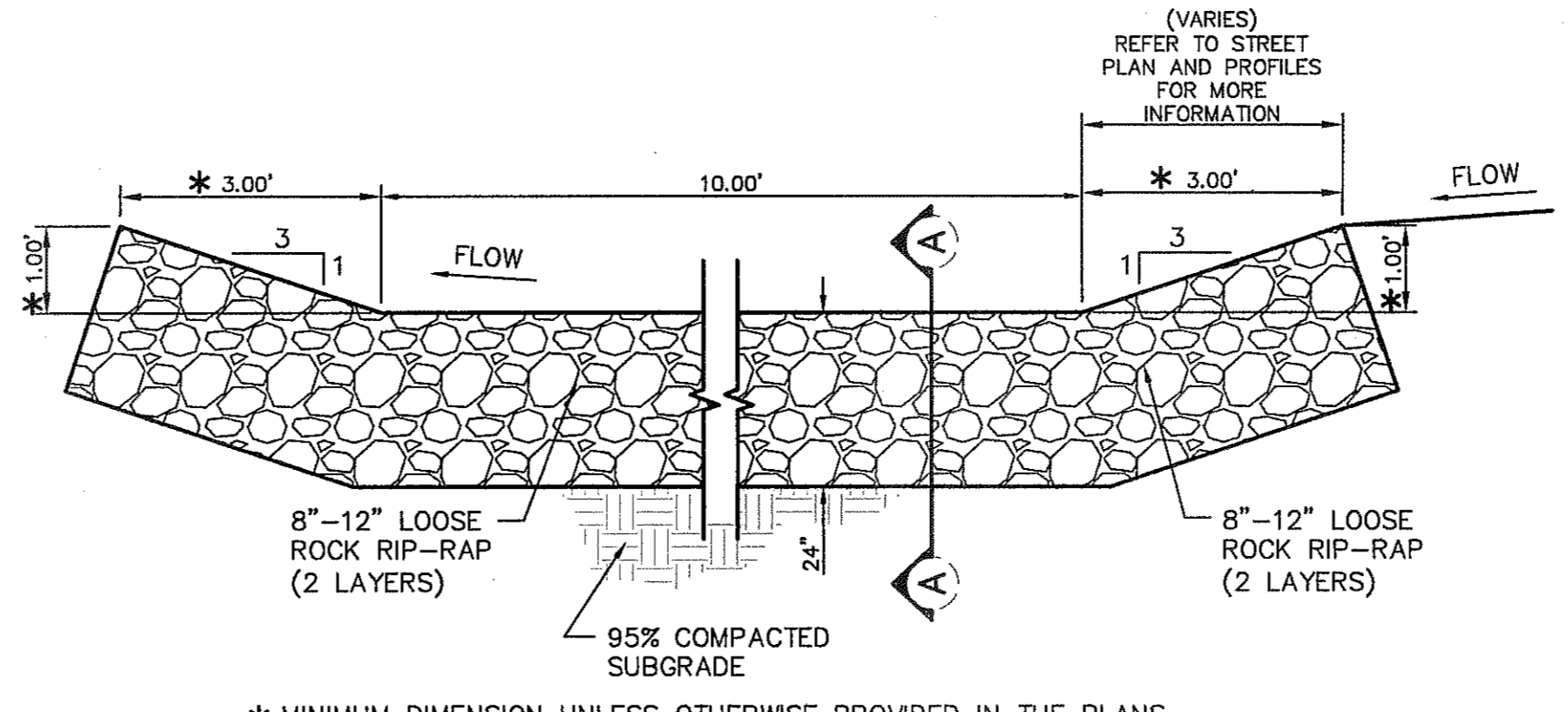
**SECTION**

CONCRETE APRON FOR CIRCULAR PENETRATIONS IN ASPHALT PAVEMENTS				
"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

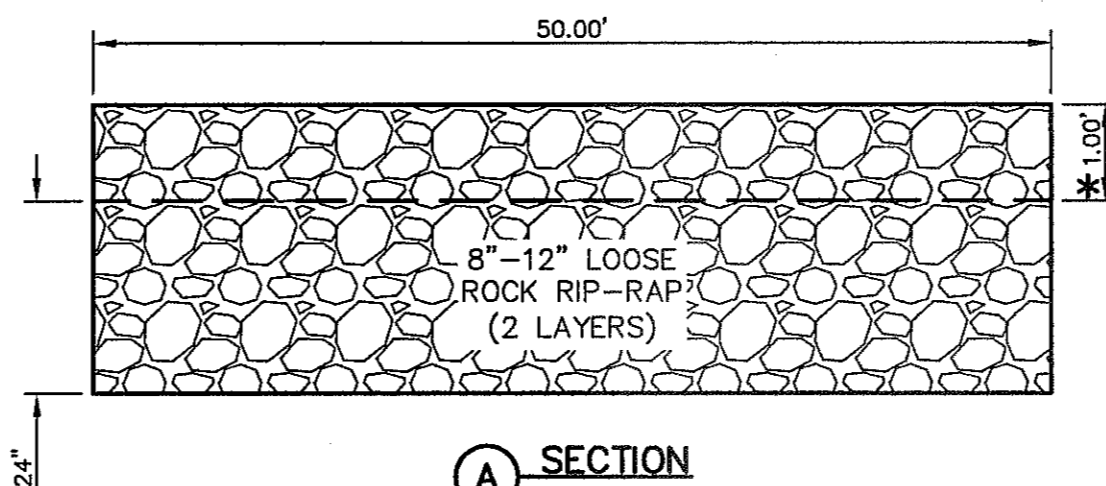
**2 PENETRATION APRON DETAILS**  
SCALE: N.T.S.



**A SECTION**



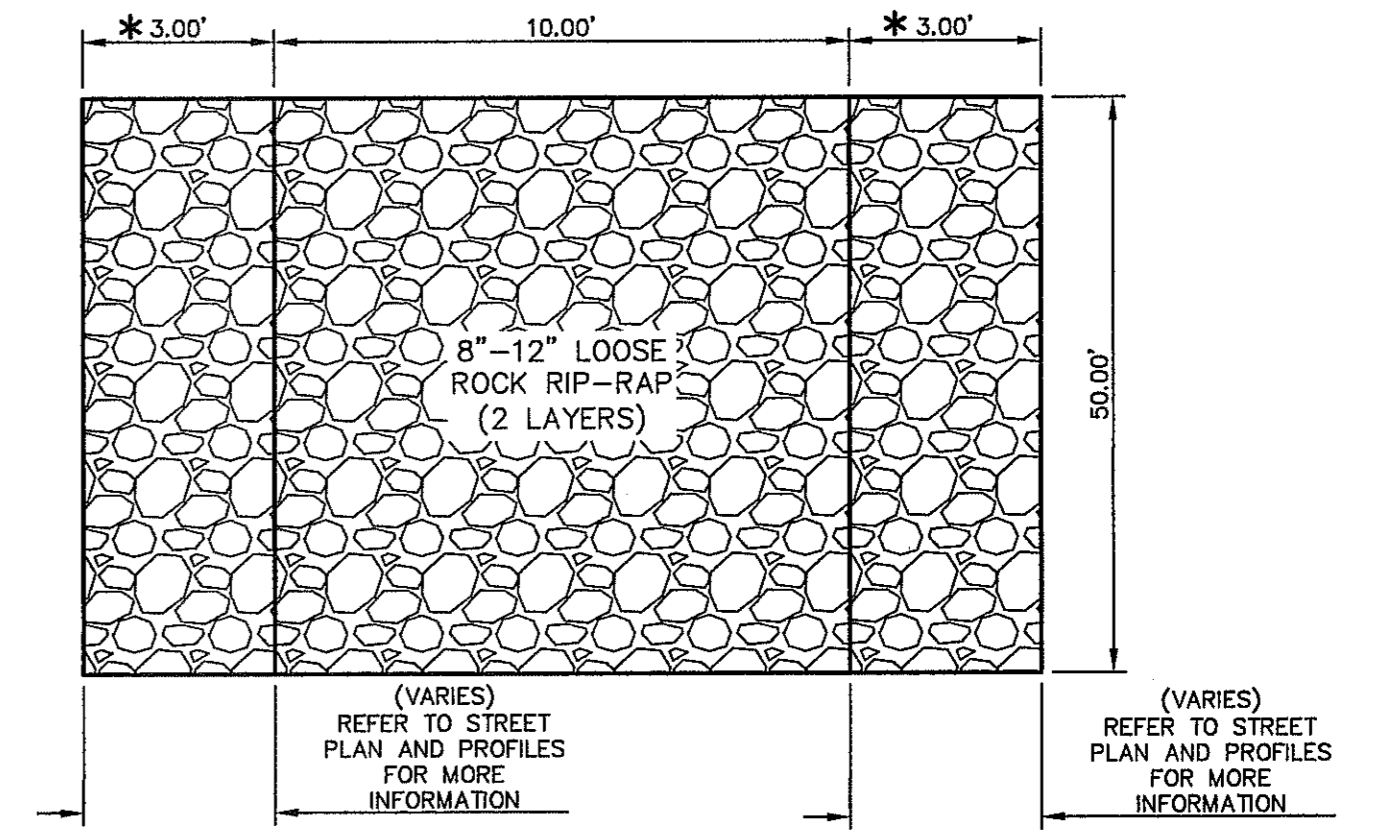
- NOTE:**
1. SUBGRADE TO BE COMPACTED TO NINETY-FIVE (95%) PERCENT OF MAXIMUM DENSITY AS PER ASTM D-1557.
  2. TYPICAL THICKNESS IS SHOWN, ACTUAL THICKNESS WILL VARY, BUT IN NO EVENT SHALL BE LESS THAN TWELVE (12") INCHES.



**A SECTION**

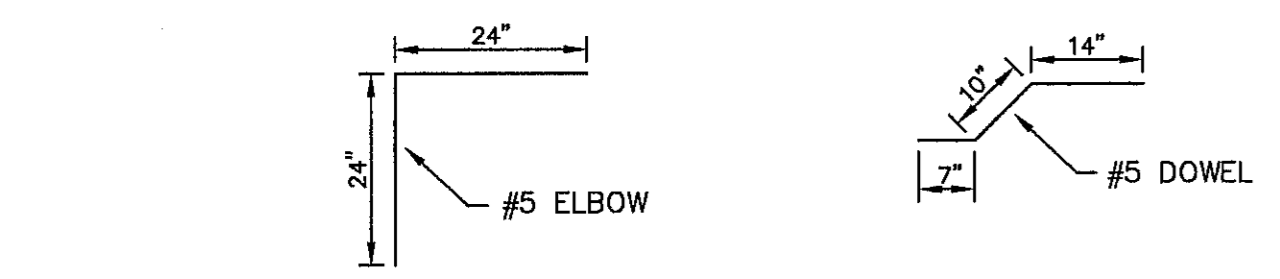
\* MINIMUM DIMENSION UNLESS OTHERWISE PROVIDED IN THE PLANS.

**3 TEMPORARY DESILTING BASIN DETAIL**  
SCALE: 1" = 2'-0"



**PLAN VIEW**

\* MINIMUM DIMENSION UNLESS OTHERWISE PROVIDED IN THE PLANS.



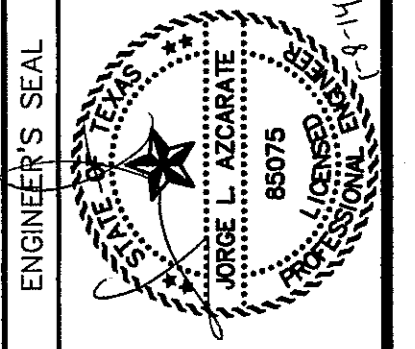
- NOTE:**
1. ALL REINFORCING BARS SHALL HAVE A MINIMUM OF 3-INCHES OF COVER WHEN ABUTTING EARTHEN MATERIAL.
  2. ALL CONCRETE SHALL HAVE 3,000 P.S.I. (MIN.) AT TWENTY-EIGHT (28) DAYS
  3. NINETY-FIVE (95%) PERCENT COMPACTATION AS PER ASTM D-1557 UNDER ALL CONCRETE STRUCTURES.
  4. REINFORCED STEEL SHALL BE DEFORMED AND HAVE A MINIMUM OF GRADE 40.
  5. STRUCTURE SHALL BE DESIGNED FOR HS-20 LOADING.
  6. IN NO MEANS IS THIS ATTEMPTING OR IMPLYING ON HOW TO CONSTRUCT ITEMS, BUT WHENEVER NEEDED A MONOLITHIC POUR MAY BE REQUIRED.

**1 REINFORCED MODIFIED CAST-IN-PLACE CONCRETE JUNCTION BOX**  
SCALE: 1" = 2'-0"

REFERENCES - BENCHMARKS  
FOUND TYPICAL BRASS CAP AT  
SECTION CORNERS 19, 20, 21, AND 22.  
ELEVATION: 4033.22 (NVD DATUM)  
(SUBTRACT 8.462 TO CONVERT TO CITY  
DATUM).

DATE \_\_\_\_\_ REVISIONS \_\_\_\_\_ BY \_\_\_\_\_

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SCALE AS SHOWN  
Horizontal: N/A  
Vertical: N/A  
Contour Interval: N/A  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPVD. BY: J.L.A.  
JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**DRAINAGE  
DETAILS**

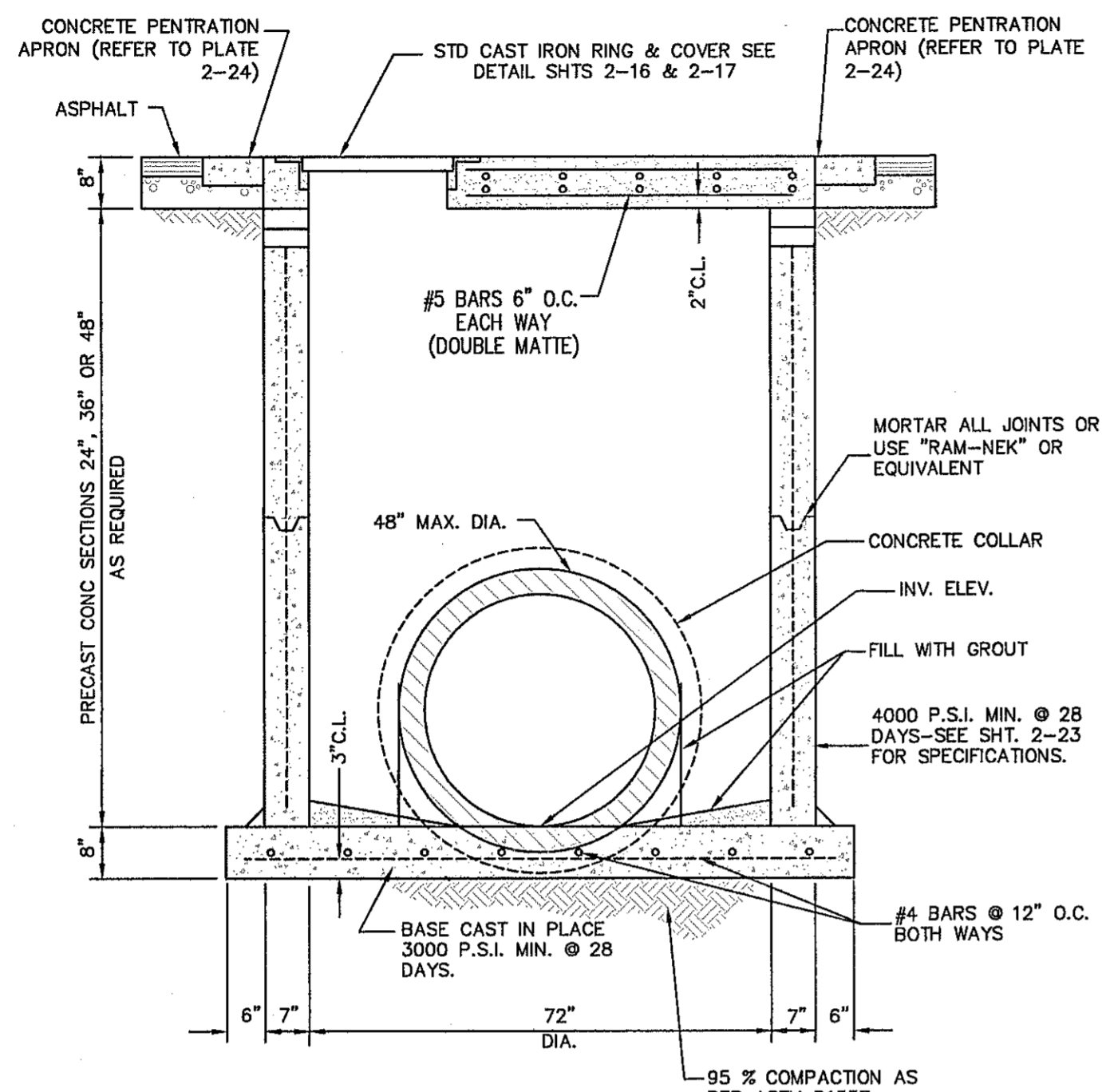
(SHEET 2 OF 3)  
SHEET NO.

**C9.2**

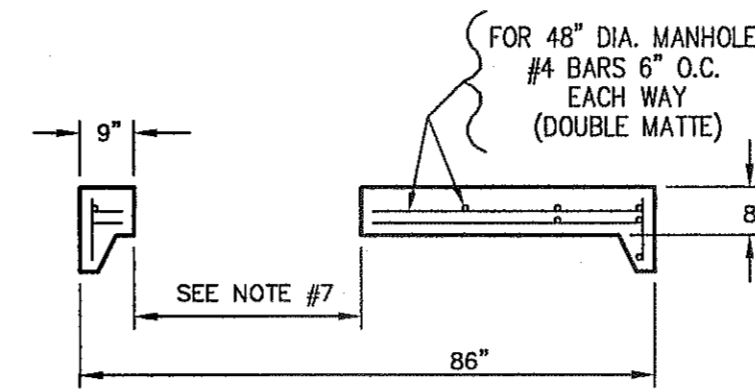
**CITY DEVELOPMENT DEPARTMENT**  
**REVIEWED**

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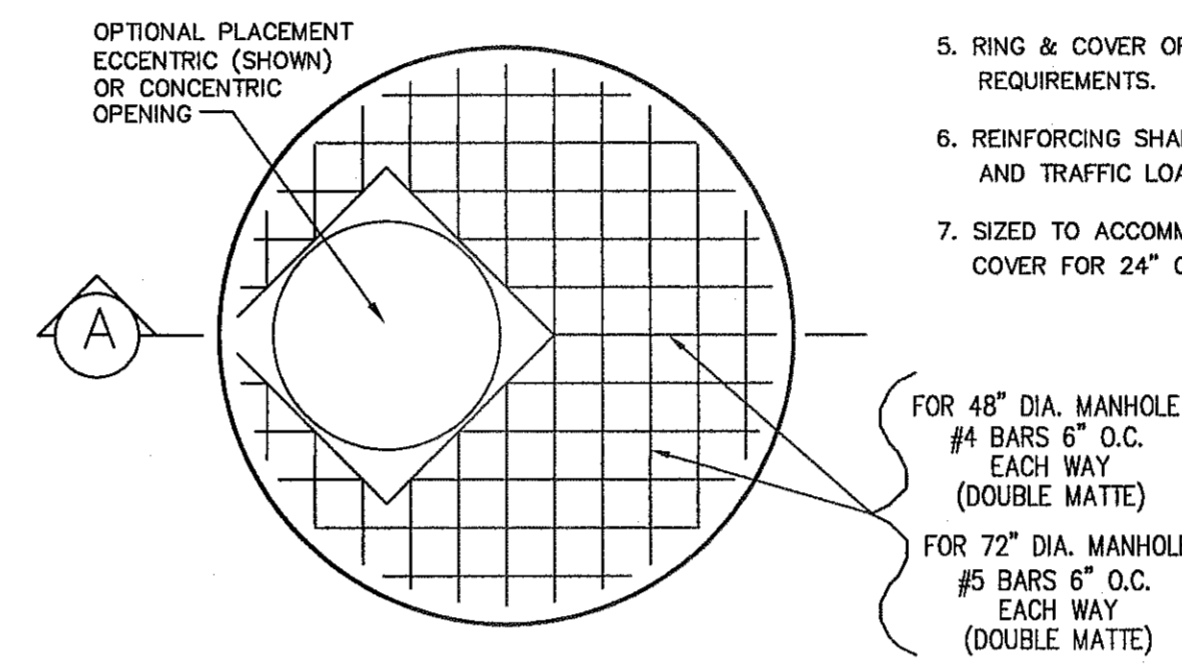
SEE SHIT 2-23 FOR STANDARD PRECAST MANHOLE SPECIFICATIONS



1 72" DIAMETER PRECAST MANHOLE SECTIONS  
SCALE: N.T.S.



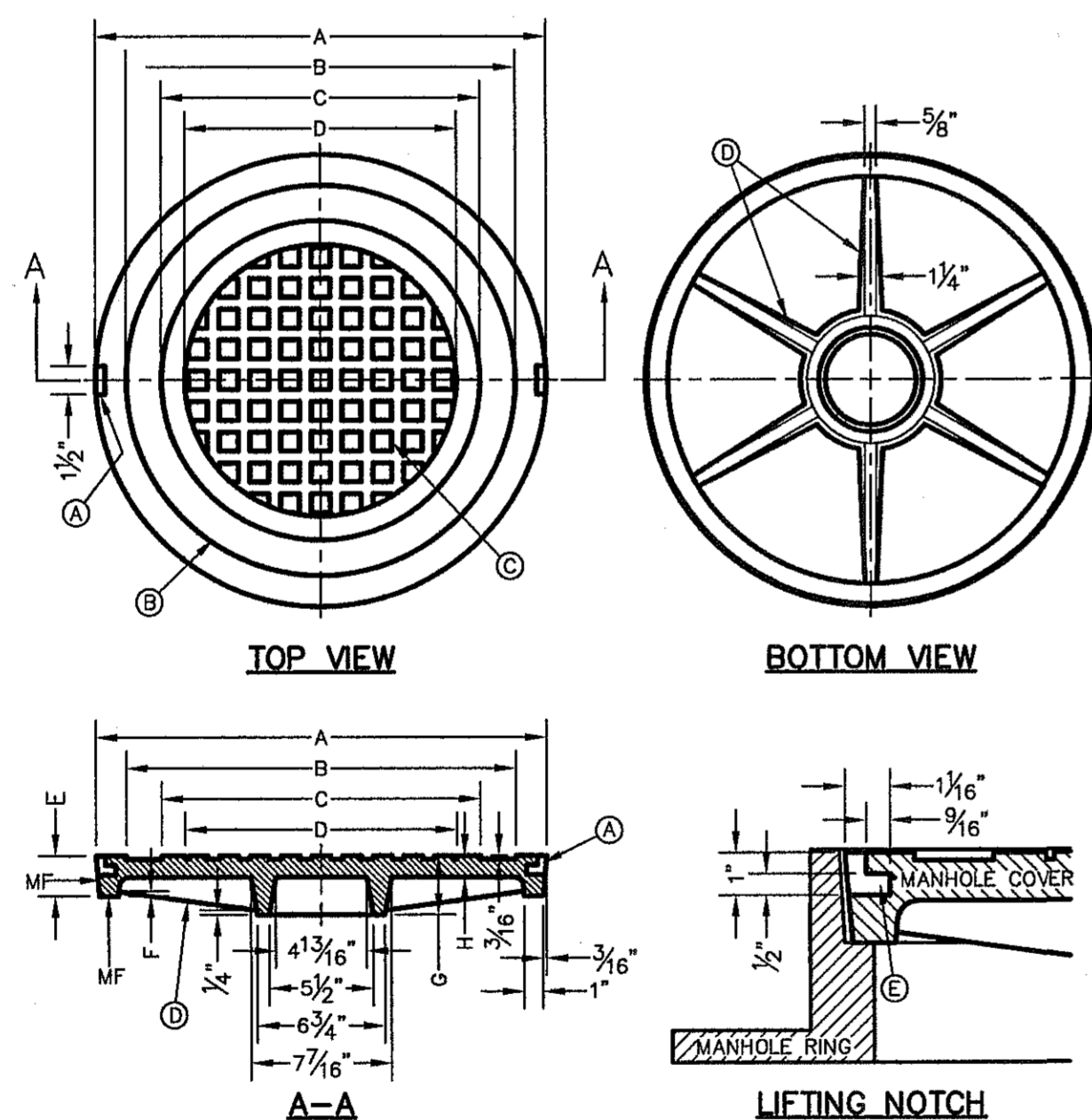
SECTION A-A



2 MANHOLE COVER FOR 48" and 72" MANHOLE  
SCALE: N.T.S.

GENERAL NOTES:

1. ALL JOINTS TO BE TONGUE AND GROOVE AND SEALED WITH RAM-NEK OR EQUAL.
2. MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
3. 4000 P.S.I. CONCRETE 28 DAYS.
4. KEYLOCK ADDS 8" TO VERTICAL HEIGHT.
5. RING & COVER OR SPECIAL LIDS TO MEET REQUIREMENTS.
6. REINFORCING SHALL MEET A.S.T.M. C478-87 AND TRAFFIC LOADING (HS-20).
7. SIZED TO ACCOMMODATE APPLICABLE RING & COVER FOR 24" OR 32" MANHOLE COVER.



3 MANHOLE RING AND COVER DETAILS  
SCALE: N.T.S.

GENERAL NOTES:

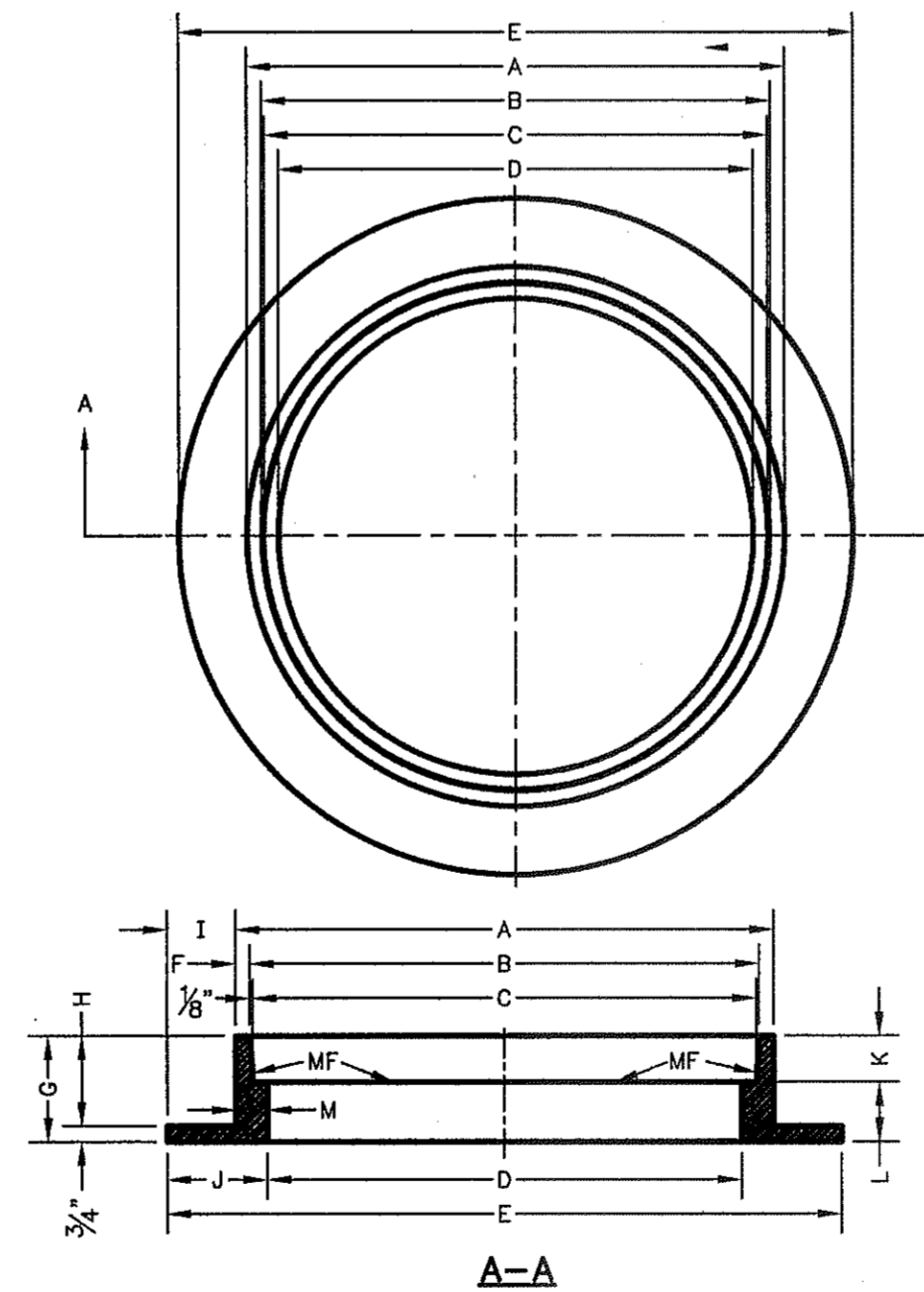
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
4. AS-CAST DIMENSIONS MAY VARY  $1/16"$  ± PER FOOT (AASHTO M306-07).
5. WEIGHT MAY VARY 5%± (AASHTO M306-07).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

CONSTRUCTION KEY NOTES:

- A. LIFTING NOTCH.
- B.  $3/16"$  RAISED LETTERING.
- C. 1" SQUARES ( $3/16"$  TALL) WITH  $5/8"$  SPACE BETWEEN.
- D. REINFORCING RIBS.
- E. SLOT.

SEE NOTE 6

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



4 STORMWATER MANHOLE RING

GENERAL NOTES:

1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
4. AS-CAST DIMENSIONS MAY VARY  $1/16"$  (AASHTO M306-07).
5. WEIGHT MAY VARY 5%± (AASHTO M306-07).
6. 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 3/4"	32 3/4"
B	31 3/4"	23 3/8"	31 3/8"
C	31 1/2"	23 3/8"	31 3/8"
D	30"	22 1/4"	30"
E	35 1/2"	34 1/2"	42"
F	5"	1 1/2"	1 1/2"
G	5"	8"	8"
H	4 1/4"	5 1/4"	5 1/4"
I	3 1/4"	4 1/4"	4 1/4"
J	4 3/4"	6"	6"
K	2 3/8"	3 3/8"	3 3/8"
L	2 1/16"	2 1/16"	2 1/16"
M	1 1/2"	1 3/8"	1 3/8"
WEIGHT	220 lbs.	165 lbs.	225 lbs.

REFERENCES - BENCHMARKS

FOUND TYPOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. (ELEVATION: 4033.22 (NVDG DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).)

DATE \_\_\_\_\_ REVISIONS \_\_\_\_\_ BY \_\_\_\_\_

**CSA**  
engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-464  
4712 Woodrow Bann, Ste. F El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.csaeng.com

ENGINEER'S SEAL  
KIRK L. ZACHARIE  
18075  
CITY OF EL PASO, TEXAS  
REGISTERED PROFESSIONAL ENGINEER  
NOVEMBER 1987

SCALE AS SHOWN  
Horizontal: AS SHOWN  
Vertical: AS SHOWN  
Contour Interval: 12' / A  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-163-LD

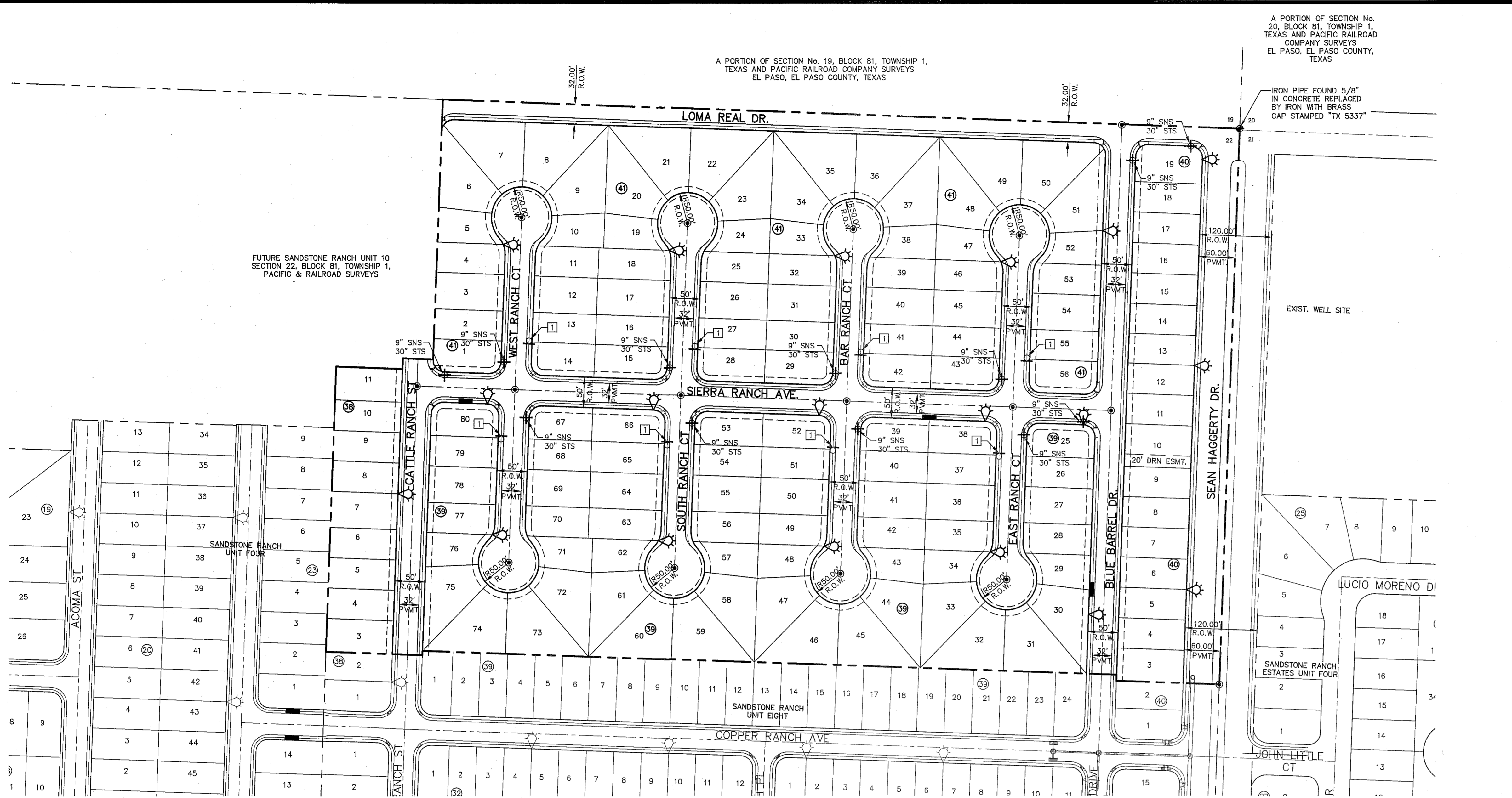
PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

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

C9.3

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

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**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

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**BEFORE YOU DIG**

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1-800-344-8377

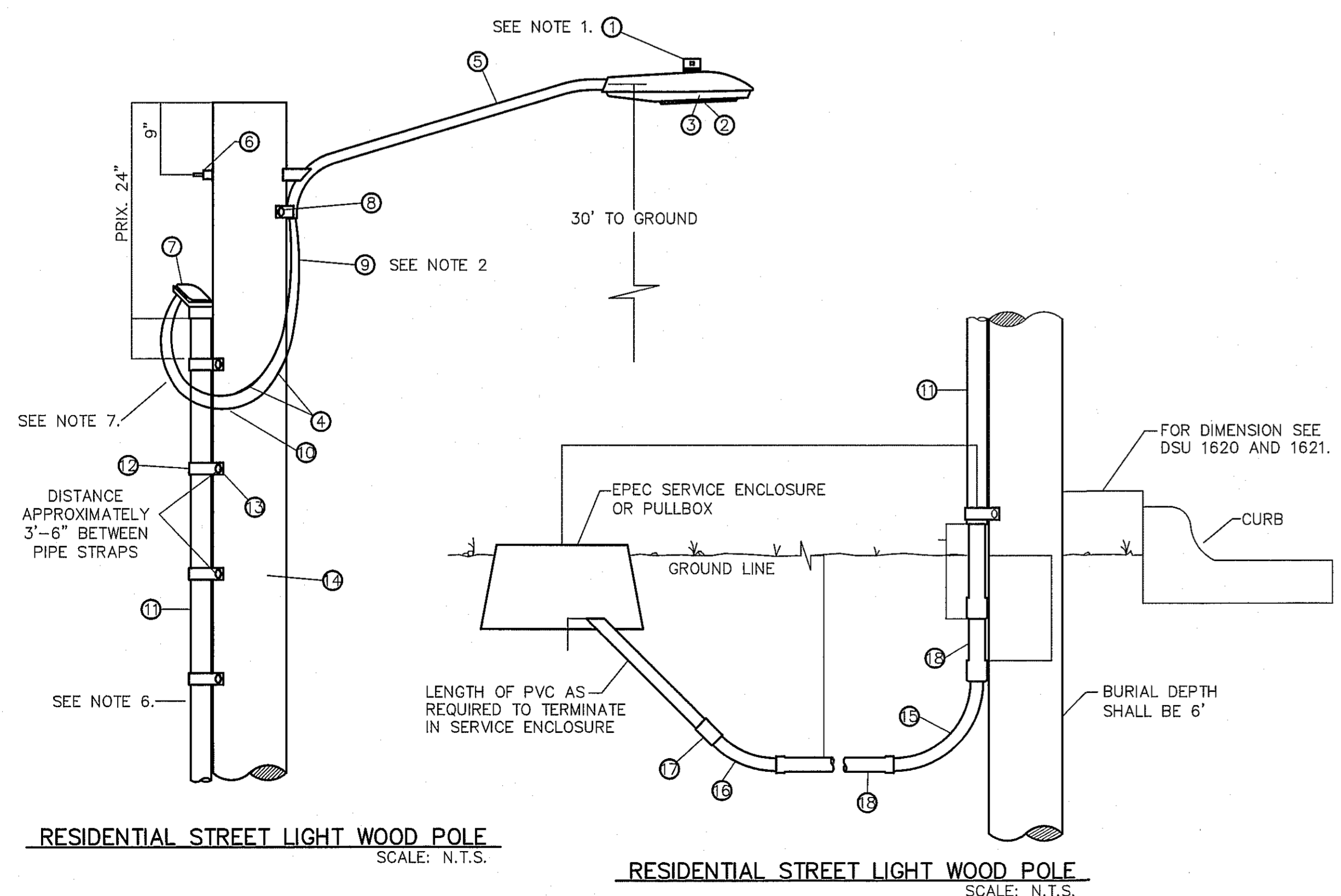
FOR FIELD LOCATING EXISTING UTILITIES

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

- NOTES**
- TRAFFIC STREET SIGNS MUST BE OF HIGH INTENSITY REFLECTIVE SHEETING.
  - TEXT SIZES, FONTS, COLORS, ETC. MUST BE AS PER MUTCD STANDARDS & REQUIREMENTS
  - SIGNS & STRIPING SHOULD COMPLY WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
  - ANY STRIPING, SIGNS, ETC WITHIN TxDOT ROW SHALL COMPLY W/TxDOT STANDARDS & REQUIREMENTS
  - POSTS MUST BE BREAK-AWAY TYPE AS SHOWN ON THIS SHEET



**SIGNS DETAIL**  
SCALE: N.T.S.



ITEM No.	DESCRIPTION	STOCK No.	QTY.	C/U CODE	MACRO CODE
1	PHOTOCELL, 240V-SEE NOTE 1	21-225	1		
2	HPS LAMP, 100W	21-085	1	LCOBRAHD	
3	LUMINAIRE, 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	LMB5/812	
	COIL-SPRING WASHER, 5/8"	02-786	1		
	LOCKNUT, 5/8"	02-705	1		
7	SERVICE ENTERANCE CAP FOR 1" PVC CONDUIT	17-281	1	LSVCCAP1	LCOBRAUG
8	LAG BOLT, 3/8" x 3"	02-343	2	LLAG38*3	
9	CABLE #10, 2 CONDUCTOR, 600 V, UF	13-600	8'	L2C#10S	
10	COPPER CABLE, #12, SOLID, 600 V, 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 IV	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	LOPLG1	
18	1" PVC CONDUIT	17-299	AS REQ	LPVC1	

- KEYED NOTES:**
- MOUNT SO THAT PHOTO CELL IS FACING NORTH.
  - ITEM #9 SHALL NOT BE SPLICED INSIDE ITEM #5.
  - INSTALLATION MUST COMPLY WITH LOCAL CODE REQUIREMENTS.
  - FOR ANY CLARIFICATION, EXCEPTIONS OR QUESTIONS REGARDING THIS STANDARD, CALL THE EL PASO ELECTRIC COMPANY DISTRIBUTION DESIGN DEPARTMENT.
  - ON STREETS WHERE SIDEWALK IS ADJACENT TO CURB, STREET LIGHT POLE SHALL BE INSTALLED IN THE SIDEWALK NEXT TO PROPERTY LINE. THIRTY-SIX (36") INCHES REQUIRED FROM BACK OF CURB TO COMPLY WITH AMERICAN DISABILITY'S ACT AND LOCAL CODES.
  - THE CONDUIT RISER SHALL BE INSTALLED ON THE BACK OF THE WOOD POLE (AWAY FROM THE STREET).
  - THE WIRE LEADS FROM THE WEATHER HEAD TO THE MAST ARM SHALL HAVE A MINIMUM 4" DRIP LOOP BELOW THE WEATHER HEAD.

**ILLUMINATION PLAN**  
SCALE: 1" = 100'

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

REFERENCES - BENCHMARKS

FOUND TxDOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. LOCATION: 4035.22 (NGB DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

DATE	REVISIONS	BY

**oca**  
engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-4584  
4712 Woodchuck Ranch, Ste. F, El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.oca.net

SCALE: 1"=100'  
Horizontal: N/A  
Vertical: N/A  
Contour Interval: N/A  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPROV. BY: J.L.A.  
JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**ILLUMINATION PLAN**

SHEET NO.

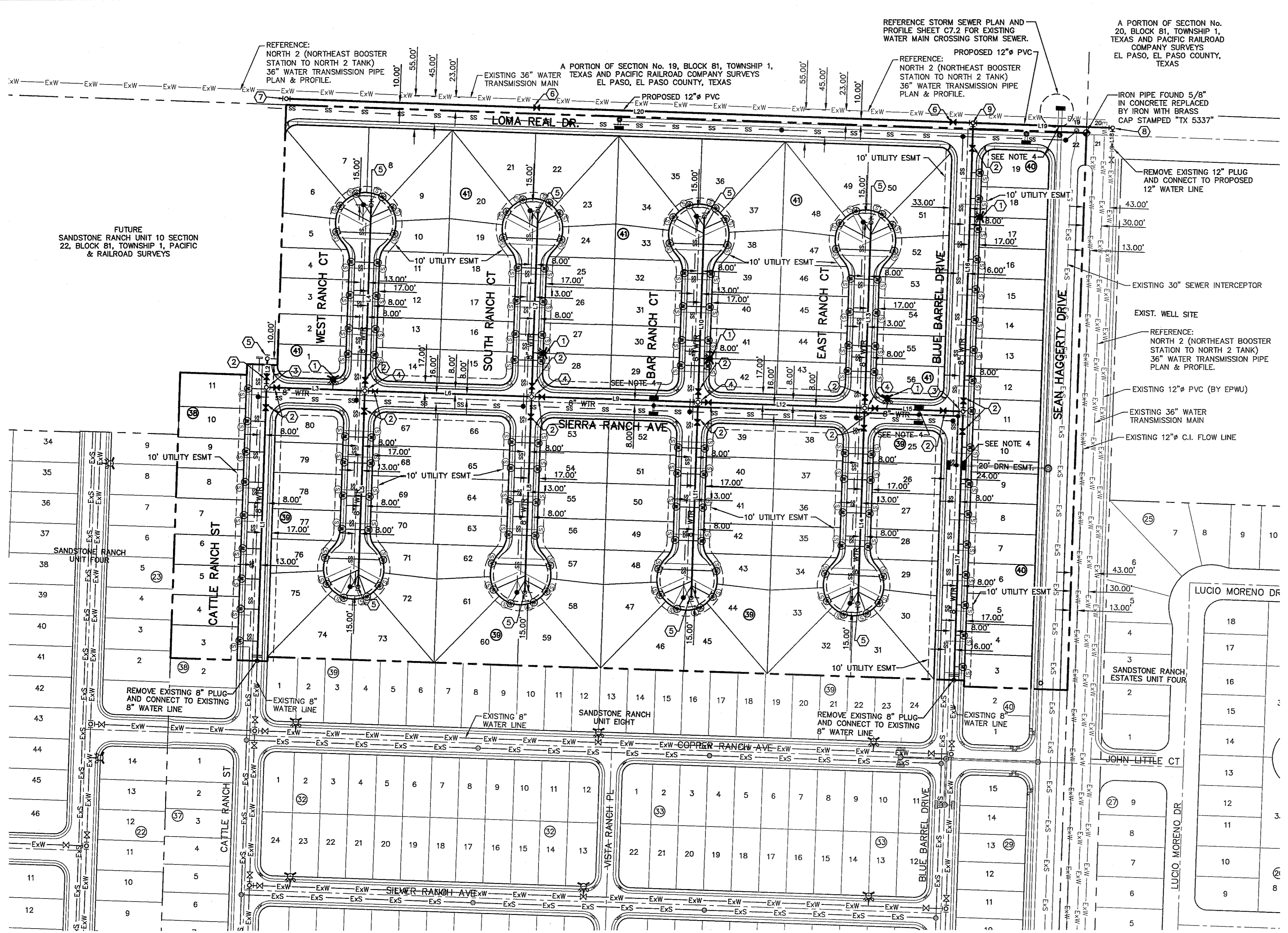
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CALL  
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1-800-344-8377  
FOR FIELD LOCATING EXISTING UTILITIES



**LINE TABLE**

LINE	BEARING	LENGTH
L1	S01°58'43"W	450.31'
L2	S01°58'43"W	46.98'
L3	S87°59'38"E	162.67'
L4	S02°00'22"W	306.39'
L5	S02°00'22"W	322.37'
L6	S87°59'38"E	275.55'
L7	S02°00'22"W	306.16'
L8	S02°00'22"W	322.24'
L9	S87°59'38"E	275.55'
L10	S02°00'22"W	305.93'
L11	S02°00'22"W	322.11'
L12	S87°59'38"E	275.55'
L13	S02°00'22"W	305.70'
L14	S02°00'22"W	321.97'
L15	S87°59'38"E	162.77'
L16	N02°00'22"E	475.21'
L17	N02°00'22"E	442.61'
L18	N02°00'22"E	32.56'
L19	N87°56'46"W	230.65'
L20	N87°56'46"W	1135.31'

**WATER KEYED NOTES**

①	FIRE HYDRANT
②	8" # GATE VALVE
③	8" TEE
④	8" CROSS
⑤	8" PLUG
⑥	12" # GATE VALVE
⑦	12" PLUG
⑧	12" BEND
⑨	12" X 12" X 8" TEE

**WATER QUANTITIES**

DESCRIPTION	QUANTITY	UNIT
8" PVC WATER LINE	4,860.08	LF
8" DIP WATER LINE	220	LF
8" GATE VALVE	20	EA
8" PLUG	10	EA
FIRE HYDRANT	4	EA
12" PVC WATER LINE	1,378.53	LF
12" GATE VALVE	2	EA
12" PLUG	1	EA
12" DIP WATER LINE	20	LF

CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.

**WATER INDEX MAP**  
SCALE: 1" = 100'

- 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.
  - 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  
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
- FIBER OPTICS:**  
MCI TELECOMMUNICATIONS CORP.  
4045 DONIPHAN PARK CIRCLE  
EL PASO, TX. 79922  
(915) 542-2770 EXT. 201
- WATER & SEWER:**  
PASEO DEL ESTE MUD #1  
12429 ROJAS DRIVE, STE. A2  
EL PASO, TX. 79928  
(915) 543-2076  
MR. JOHN DIXON
- ELECTRIC:**  
EL PASO ELECTRIC CO.  
501 W. SAN ANTONIO ST.  
EL PASO, TX. 79902  
(915) 858-1085  
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. TED MARQUEZ
- CABLE TELEVISION:**  
TIME WARNER COMMUNICATIONS 7010  
AIRPORT ROAD  
EL PASO, TX. 79906  
(915) 772-1123
- TELEPHONE:**  
SPC  
11200 PELLICANO  
EL PASO, TX. 79935  
(915) 595-5151
- FIBER OPTICS:**  
AT&T  
P.O. BOX 1650  
EL PASO, TX. 79949  
(800) 852-3786
- RESIDENTIAL GAS LINES:**  
TEXAS GAS SERVICE  
4700 POLLARD ST.  
EL PASO, TX. 79930  
(915) 680-7218  
MR. TONY FIERRO

**INDEX**

SHEET NO.	DESCRIPTION
C11.1	SANDSTONE RANCH UNIT NINE WATER MAIN PIPE LAYOUT
C12.1	WATER DETAILS
C12.2	WATER DETAILS
C12.3	WATER DETAILS
C12.4	WATER DETAILS

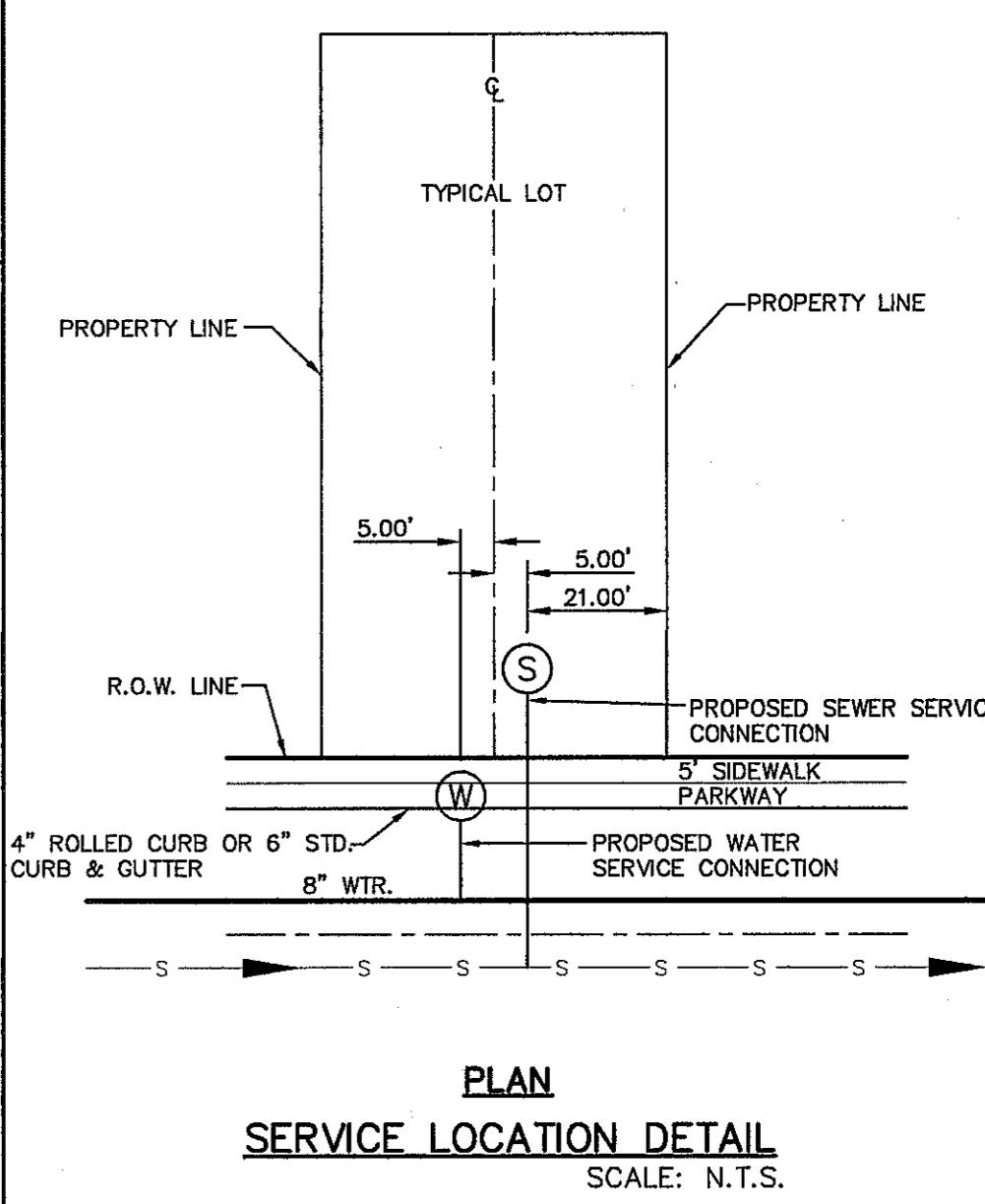
- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
  - ALL WATER LINES SHALL BE PVC C-900, CLASS 305.
  - REFERENCE WATER DETAILS FOR TYPICAL VALVE AND WATER LOCATION AT STREET INTERSECTIONS.
  - REFERENCE WATER DETAILS FOR WATER LINE CROSSING STORM SEWER.
  - THE SUBJECT PROPERTY IS LOCATED WITHIN AN INTERMEDIATE PRESSURE ZONE. THE LOT/HOME BUYER SHALL ACQUIRE OWNERSHIP OF THE WATER PRESSURE REGULATING DEVICE TO BE LOCATED AT THE DISCHARGE SIDE OF THE WATER METER ON THEIR PROPERTY AND SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE WATER PRESSURE REGULATING DEVICE.

**LEGEND**

SYMBOL	DESCRIPTION
---	SUBDIVISION BOUNDARY LINE
---	PROPERTY LINE
---	CENTER LINE
8" WTR.	PROPOSED 8" C-900 P.V.C. PIPE CL. 305
12" WTR.	PROPOSED 12" C-900 P.V.C. PIPE CL. 305
SS	PROPOSED SEWER LINE (PLAN VIEW)
ExW	EXISTING WATER LINE
ExS	EXISTING SEWER LINE
---	PROPOSED STORM SEWER
---	PROPOSED SERVICE CONNECTION (PLAN VIEW)
---	PROPOSED FIRE HYDRANT, KENNEDY OR MUELLER MODEL
---	EXISTING FIRE HYDRANT
---	PROPOSED GATE VALVE
---	EXISTING GATE VALVE
---	PROPOSED WATER LINE PLUG
---	EXISTING PLUG
---	PROPOSED POINT OF TANGENCY

**CITY DEVELOPMENT DEPARTMENT**

**REVIEWED**



**PROJECT TITLE**  
SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS

**SHEET TITLE**  
WATER INDEX

**SHEET NO.**  
C11.1

**REFERENCES - BENCHMARKS**  
FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. (ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).)

**DATE**  
05/31/2013

**BY**  
AC

**REVISIONS**  
REVISED QUANTITIES

**SCALE**  
Horizontal: 1" = 100'  
Vertical: N/A  
Contour Interval: N/A

**DATE: NOVEMBER 2013**  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB NO. 2000-163-LD

**ENGINEER'S SEAL**  
JORGE L. AZCARATE  
80075  
TEXAS REGISTERED ENGINEERING PRF# 4684  
4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

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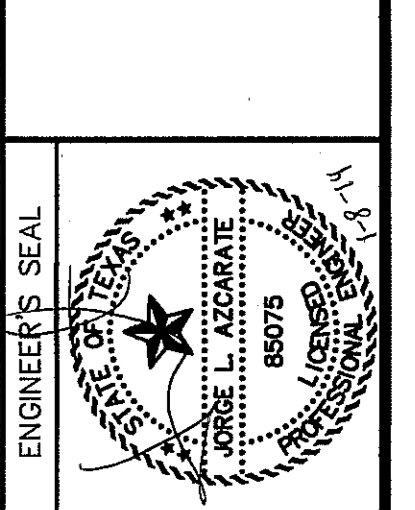
WATER KEYED NOTES	
①	12" Ø GATE VALVE
②	12" BEND
③	12" PLUG
④	12" X 8" TEE

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

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 1-800-344-8377  
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DATE	REVISIONS	BY

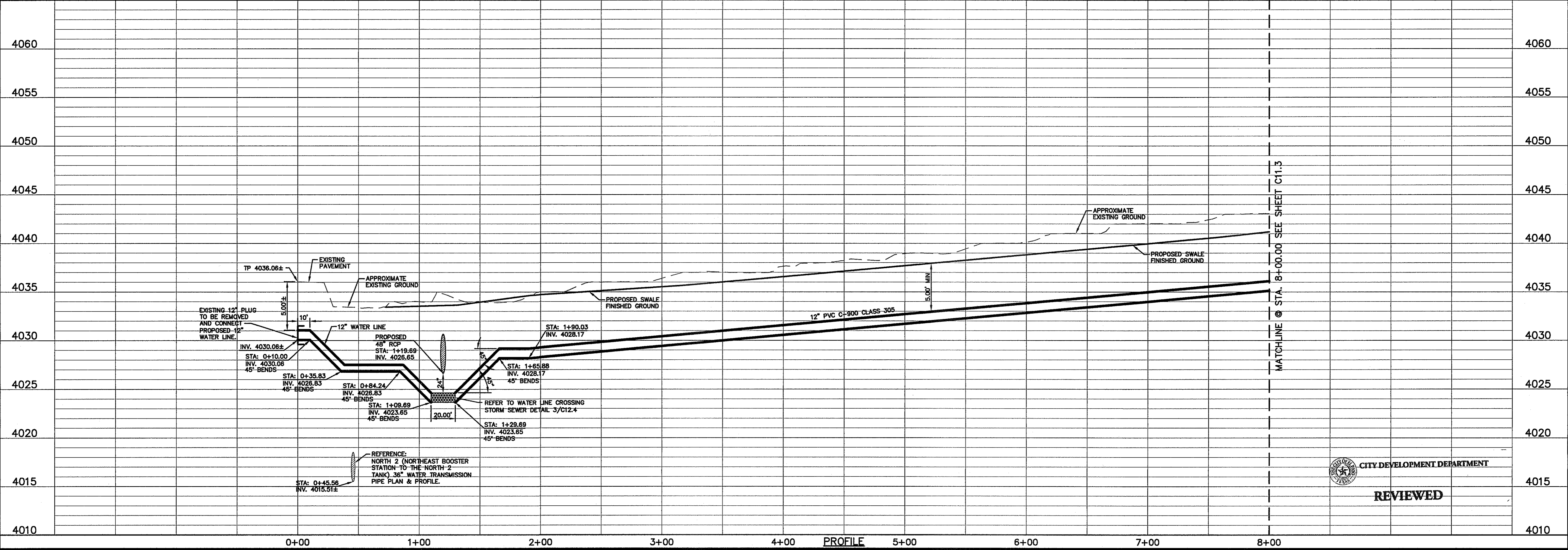
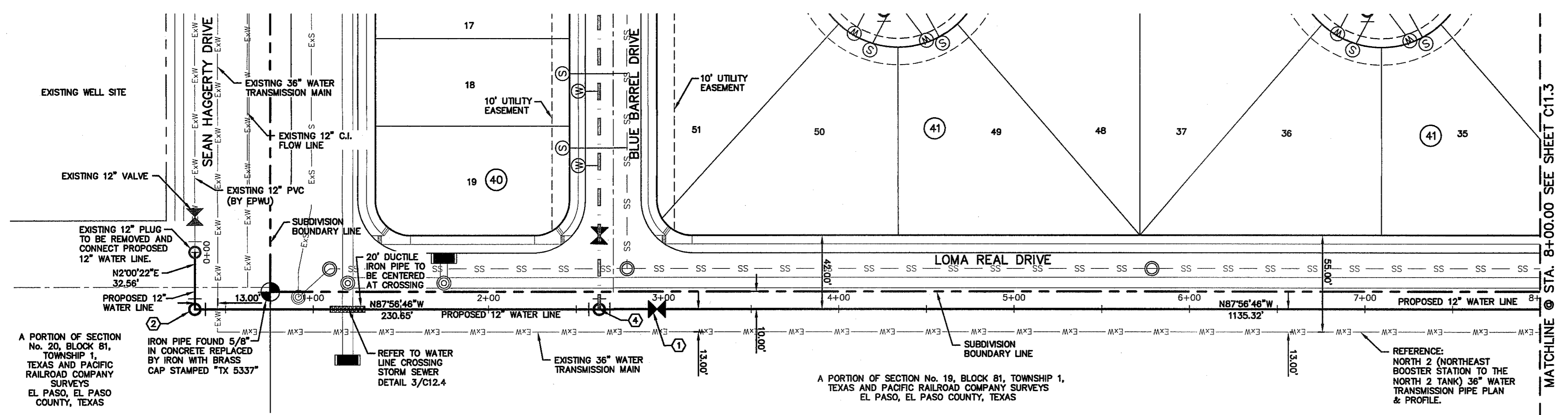
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 FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21 AND 22. ELEVATION: 4033.22 (NVDG DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).



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 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APPVD. BY: J.L.A.  
 JOB No. 2000-163-LD

**LEGEND**

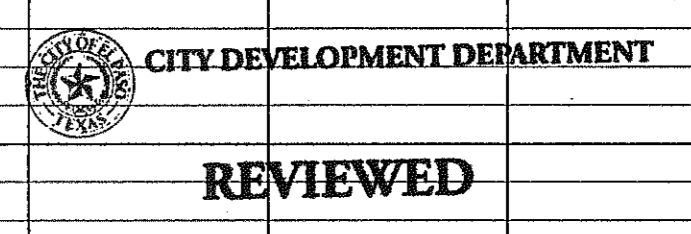
SYMBOL	DESCRIPTION
---	STREET R.O.W. LINE
---	PROPERTY LINE
---	SUBDIVISION BOUNDARY
ExW --- ExW	EXISTING WATER LINES
WATER LINE	PROPOSED 12", C-900 P.V.C. PIPE
WATER LINE	PROPOSED 8" / 12", C-900 P.V.C. PIPE (SEE OTHER LINE)
SS --- SS	PROPOSED SANITARY SEWER
SS --- SS	PROPOSED STORM SEWER
S	PROPOSED SEWER SERVICE CONNECTION
W	PROPOSED WATER SERVICE CONNECTION
X	PROPOSED GATE VALVE
O	BEND(S)
O	PLUG
2' DUCTILE IRON PIPE	20' DUCTILE IRON PIPE



PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE**  
**SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**12" WATER LINE**  
**PLAN & PROFILE**  
**FROM STA. 0+00.00**  
**TO STA. 8+00.00**

SHEET NO.  
**C11.2**



S:\2000\2000-163.D-Sandstone Ranch Unit Nine\DWG\Construction\Drawings\Improvement Plans\2000-163-LD-C11.2&3-12 INCH Water P&P.dwg, C11.3, 1/8/2014 9:05:30 AM

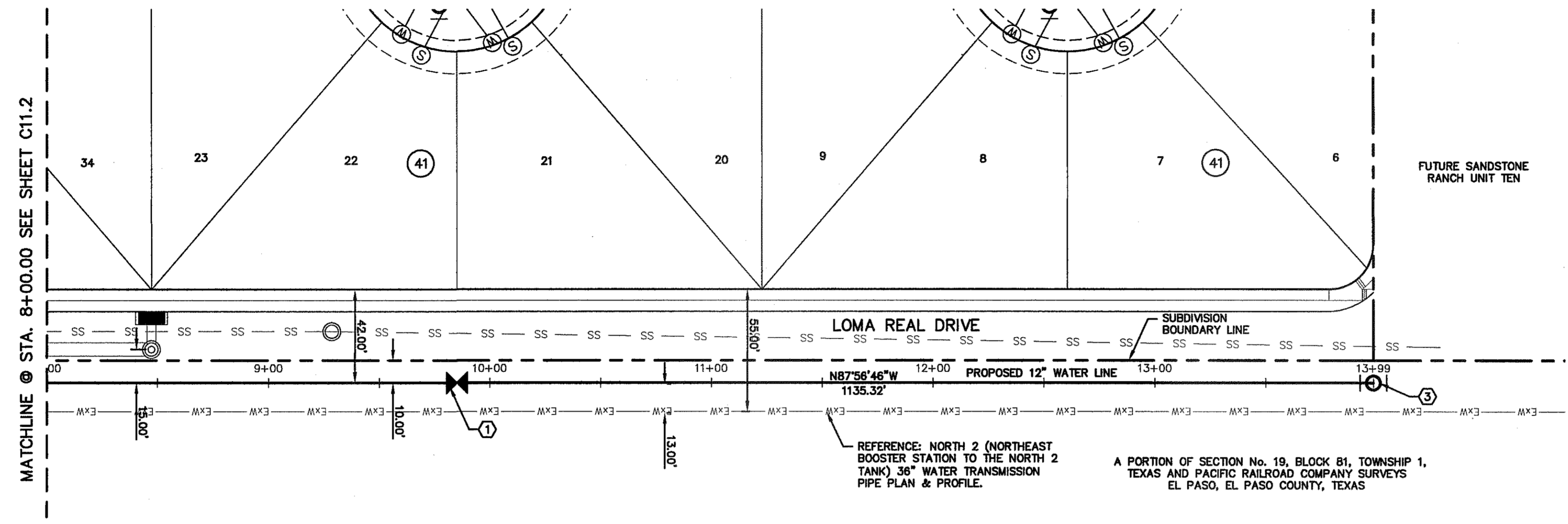
WATER KEYED NOTES	
①	12" Ø GATE VALVE
②	12" BEND
③	12" PLUG
④	FIRE HYDRANT

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
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SBC	(800) 545-6005
AT&T	(800) 852-3786
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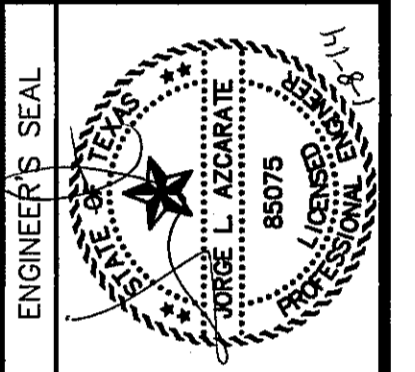


SYMBOL	DESCRIPTION
—	STREET R.O.W. LINE
—	PROPERTY LINE
---	SUBDIVISION BOUNDARY
ExW — ExW	EXISTING WATER LINES
—	WATER LINE
—	WATER LINE
— SS — SS	PROPOSED SANITARY SEWER
—	PROPOSED STORM SEWER
⊙	PROPOSED SEWER SERVICE CONNECTION
⊙	PROPOSED WATER SERVICE CONNECTION
⊗	PROPOSED GATE VALVE
○	BEND(S)
○	PLUG

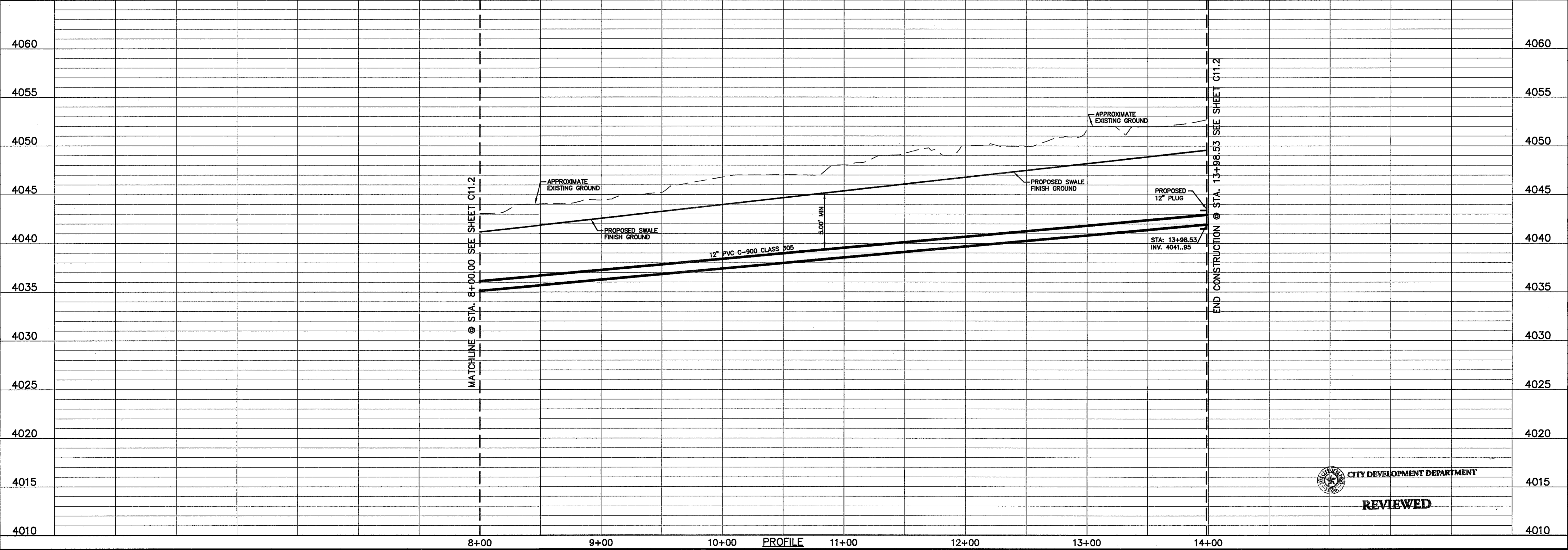
DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
FOUND TYDOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).

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SCALE	
Horizontal:	1"=40'
Vertical:	1"=5'
Contour Interval:	N/A
DATE:	NOVEMBER 2013
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.G.
APPVD. BY:	J.L.A.
JOB No.	2000-163-LD

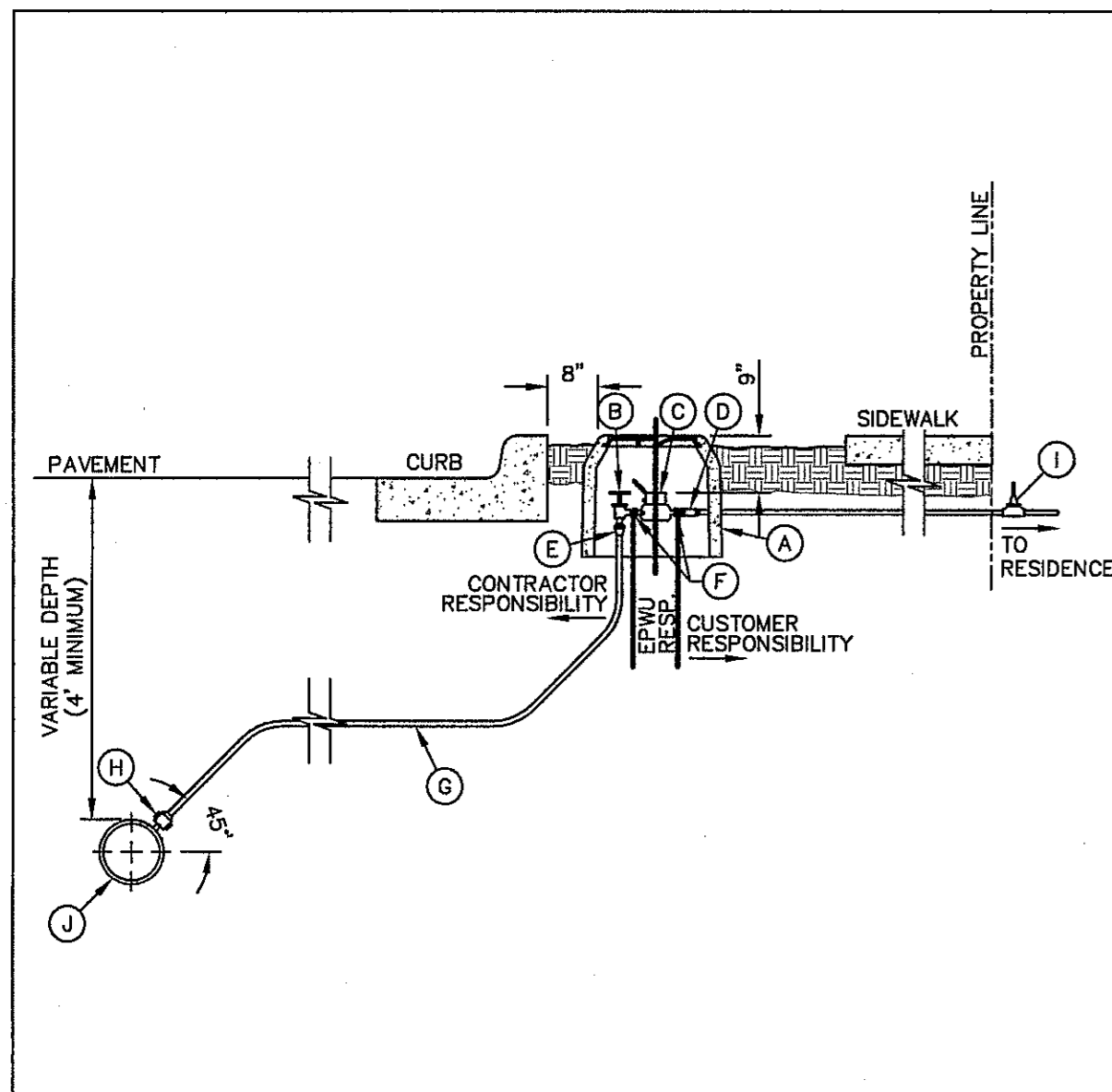


PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**12" WATER LINE  
PLAN & PROFILE  
FROM STA. 8+00.00  
TO STA. 13+98.53**

SHEET NO.  
**C11.3**

**CITY DEVELOPMENT DEPARTMENT**  
**REVIEWED**



**GENERAL NOTES:**

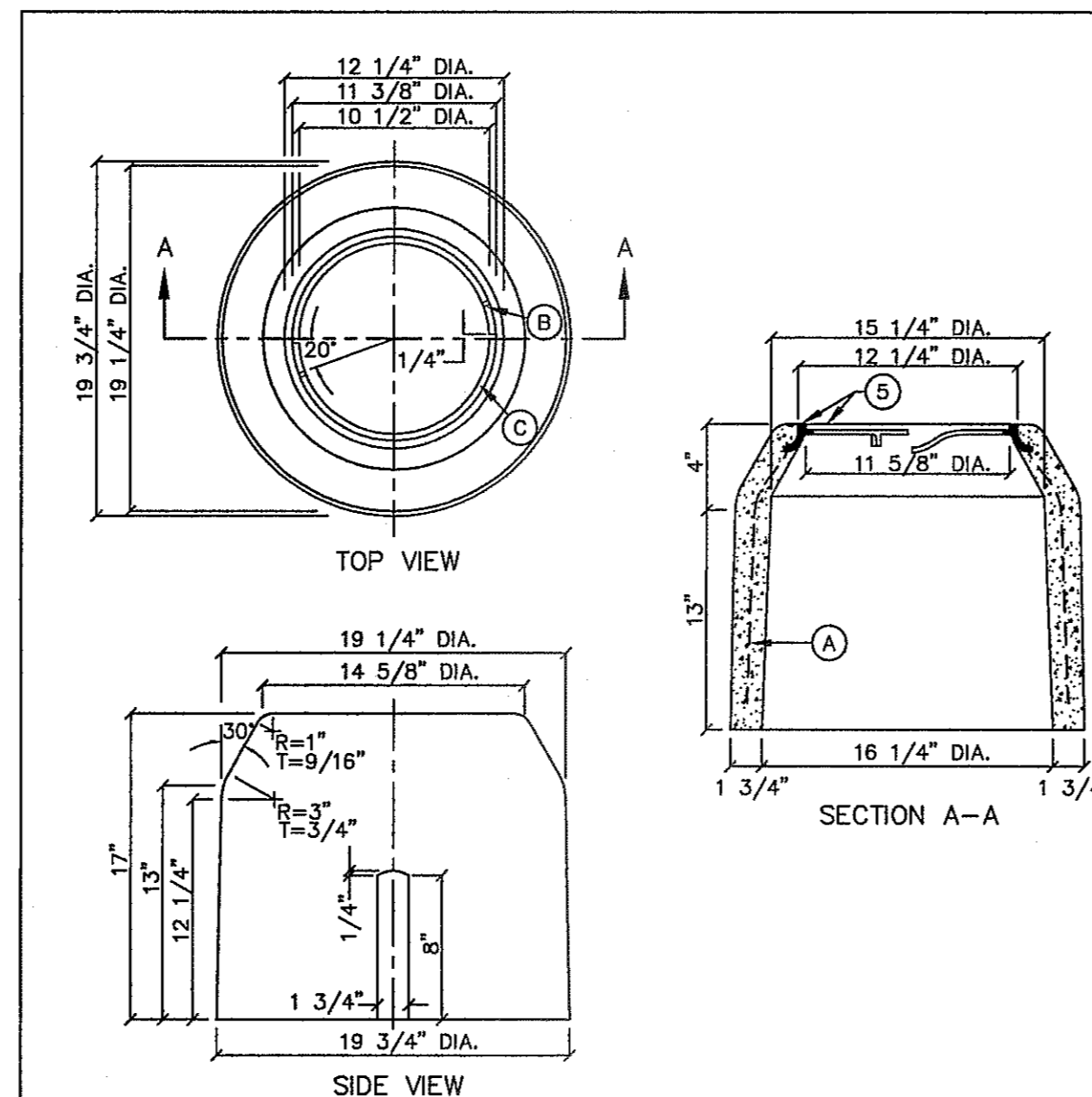
- DETAIL SHOWN FOR A 3/4" SERVICE. 1" SERVICE INSTALLATION IS SIMILAR EXCEPT FOR SIZES OF PIPE, FITTING, METER AND BOX (TYPE "B").
- WHERE NO CURB EXISTS, METER IS TO BE SET NEAR PROPERTY LINE OR AT DESIGNATED LOCATION.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY PIPE, FITTINGS, AND METER BOXES REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE PRIVATE OWNER TO HAVE A CERTIFIED PLUMBER INSTALL A BACKFLOW PREVENTER AND EXTEND SERVICE LINE ON DISCHARGE SIDE OF METER.
- NO SPLINGING SHALL BE ALLOWED. FULL LENGTH OF PIPING SERVICE SHALL BE INSTALLED.
- THE EPWU WILL FURNISH AND INSTALL THE METER.

**CONSTRUCTION KEY NOTES:**

- METER BOX TYPE "A" (SEE DETAILS 300 & 301) SHALL BE SET SLIGHTLY HIGHER THAN SURROUNDING GROUND OR AT CURB LEVEL.
- 3/4" ANGLE SERVICE VALVE.
- WATER METER (CENTER INSIDE METER BOX).
- WHEN REQUIRED BY EPWU, A DUAL CHECK BACKFLOW PREVENTER SHALL BE INSTALLED ON THE OUTLET SIDE OF THE METER.
- END FLARE OF SERVICE LINE.
- INLET AND OUTLET COUPLINGS.
- 3/4" COPPER SERVICE LINE (SEE NOTE 4).
- 5/8" X 3/4" CORPORATION STOP.
- PRESSURE REGULATOR (SOMETIMES LOCATED NEAR THE RESIDENCE).
- WATER MAIN.

STANDARD DETAIL	DATE: 10/20/2000 REV: 5/24/2007	SERVICE LINE 3/4" AND 1" INSTALLATION BY CONTRACTOR	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 290-4
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1 TYPICAL SERVICE LINE INSTALLATION  
SCALE: N.T.S.



**GENERAL NOTES:**

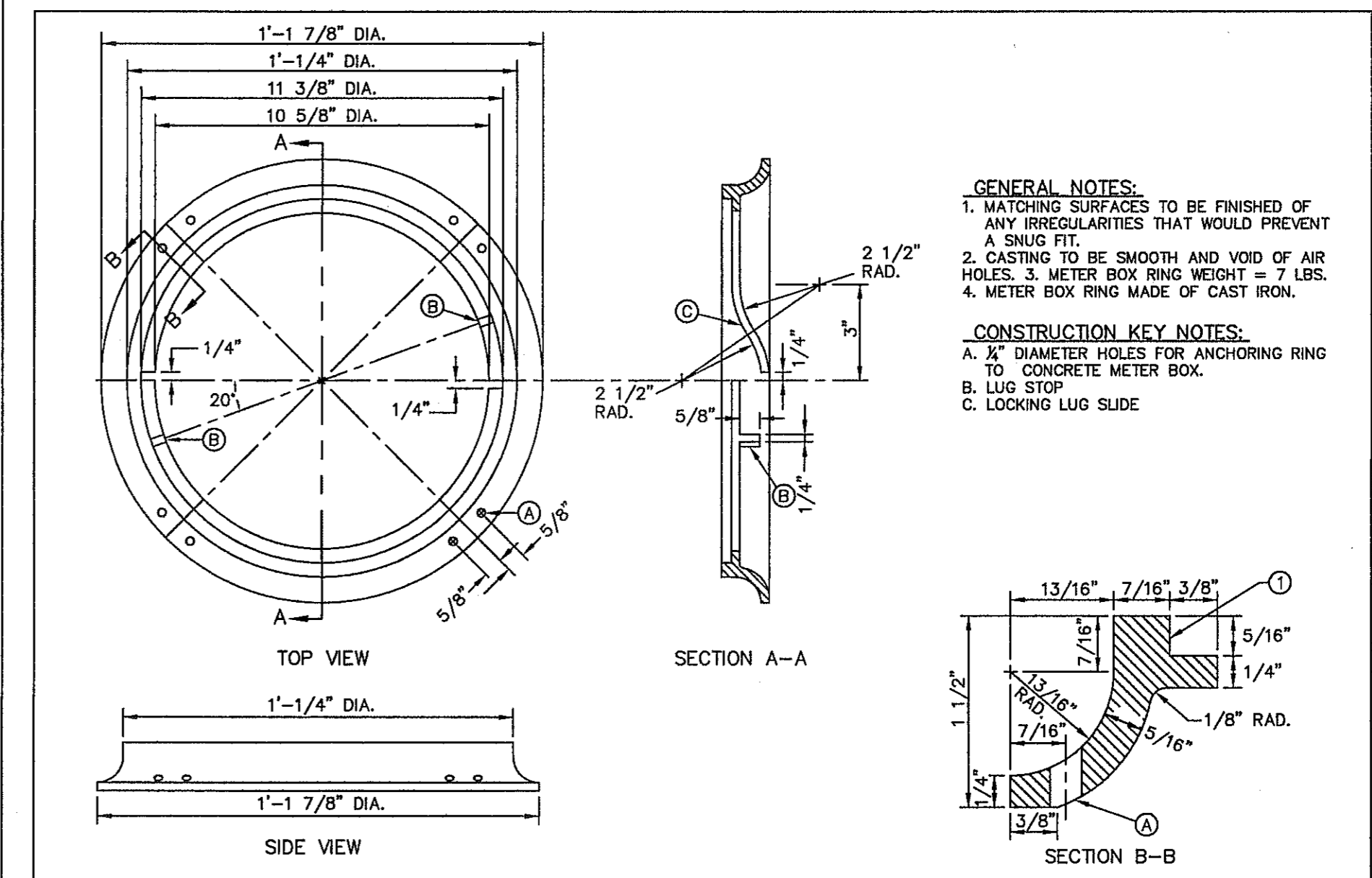
- INSTALL TO GRADE MATCHING TOP OF CURB.
- ANGLE VALVE SHALL BE IN LINE WITH THE INLET/OUTLET PORTS OF THE METER BOX.
- METER BOXES SHALL NOT BE INSTALLED UNDER SIDEWALKS, DRIVEWAYS, OR PROPOSED ABOVE GROUND STRUCTURES.
- WHERE NO CURBING EXISTS, INSTALL BOXES IN ACCESSIBLE LOCATIONS BEYOND LIMITS OF STREET SURFACING, WALKS AND DRIVEWAYS.
- METER BOX RING AND COVER PER EPWU DETAILS 300 AND 301.
- WHERE IT IS NECESSARY TO INSTALL A TYPE "A" BOX FOR 3/4" METER UNDER ROADWAYS OF TRAFFIC BEARING SURFACES, BOX SHALL BE ENCASED IN 12" CONCRETE, 3000 PSI, MINIMUM.
- METER BOX SHALL BE SINGLE UNIT CONSTRUCTION; CONCRETE TO HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 4000 PSI.

**CONSTRUCTION KEY NOTES:**

- 3/16", 9 GAUGE BLACK ANNEALED WIRE
- LUG-STOP C. CAST IRON RING

STANDARD DETAIL	DATE: 4/1994 REV: 8/24/2006	METER BOX TYPE "A" FOR 3/4" SERVICE INSTALLATION	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 291
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2 METER BOX DETAIL  
SCALE: N.T.S.



**GENERAL NOTES:**

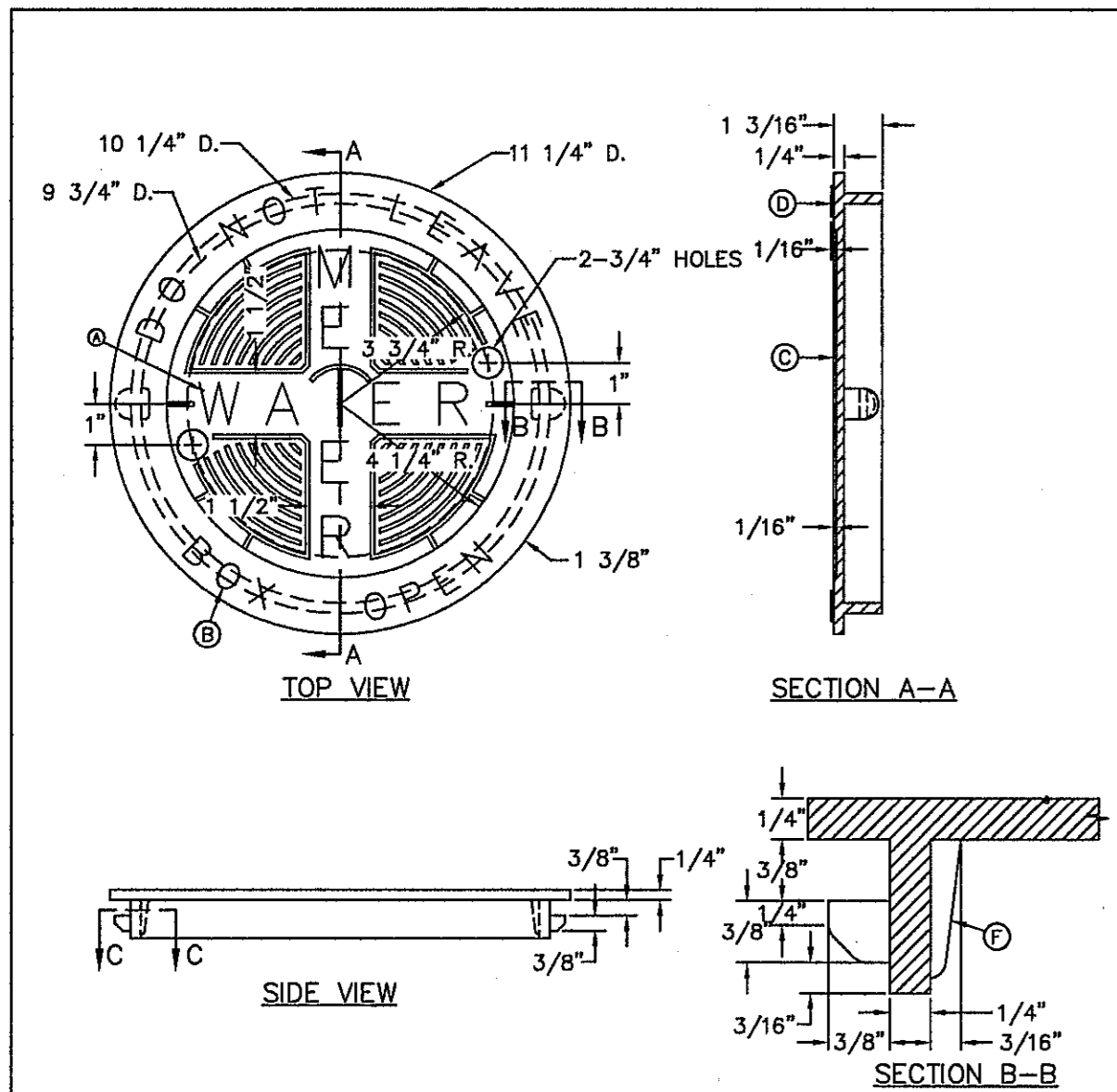
- MATCHING SURFACES TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
- CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
- METER BOX RING WEIGHT = 7 LBS.
- METER BOX RING MADE OF CAST IRON.

**CONSTRUCTION KEY NOTES:**

- 1/2" DIAMETER HOLES FOR ANCHORING RING TO CONCRETE METER BOX.
- LUG STOP
- LOCKING LUG SLIDE

STANDARD DETAIL	DATE: 1/1995 REV: 8/10/2006	METER BOX RING FOR TYPE "A" & "B" METER BOXES	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 300
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3 METER BOX RING DETAIL  
SCALE: N.T.S.



**GENERAL NOTES:**

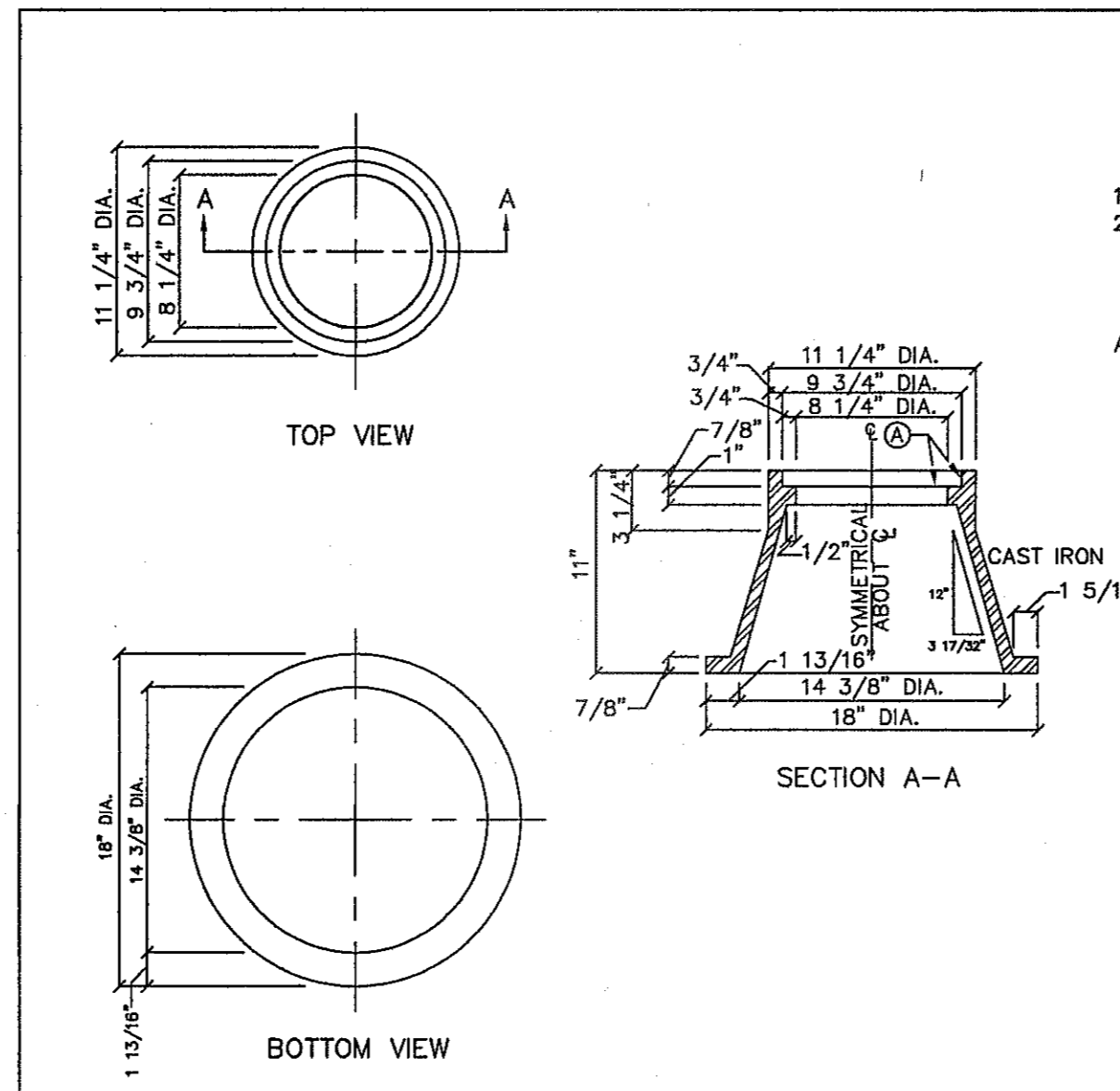
- MATCHING SURFACES TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
- CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
- METER BOX COVER WEIGHT = 1 1/4 lbs.

**CONSTRUCTION KEY NOTES:**

- LETTERS TO BE 1" HIGH, 3/4" WIDE, 1/8" THICK
- LETTERS TO BE 3/4" HIGH, 5/8" WIDE, 1/8" THICK
- INSIDE LETTERS & RIBS 1/8" TALL
- OUTSIDE LETTERS 1/8" TALL
- REINFORCE BACK OF LUG
- REINFORCEMENT

STANDARD DETAIL	DATE: 4/1994 REV: 8/10/2006	METER BOX COVER FOR TYPE "A" & "B" METER BOXES	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 301
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4 METER BOX COVER DETAIL  
SCALE: N.T.S.



**GENERAL NOTES:**

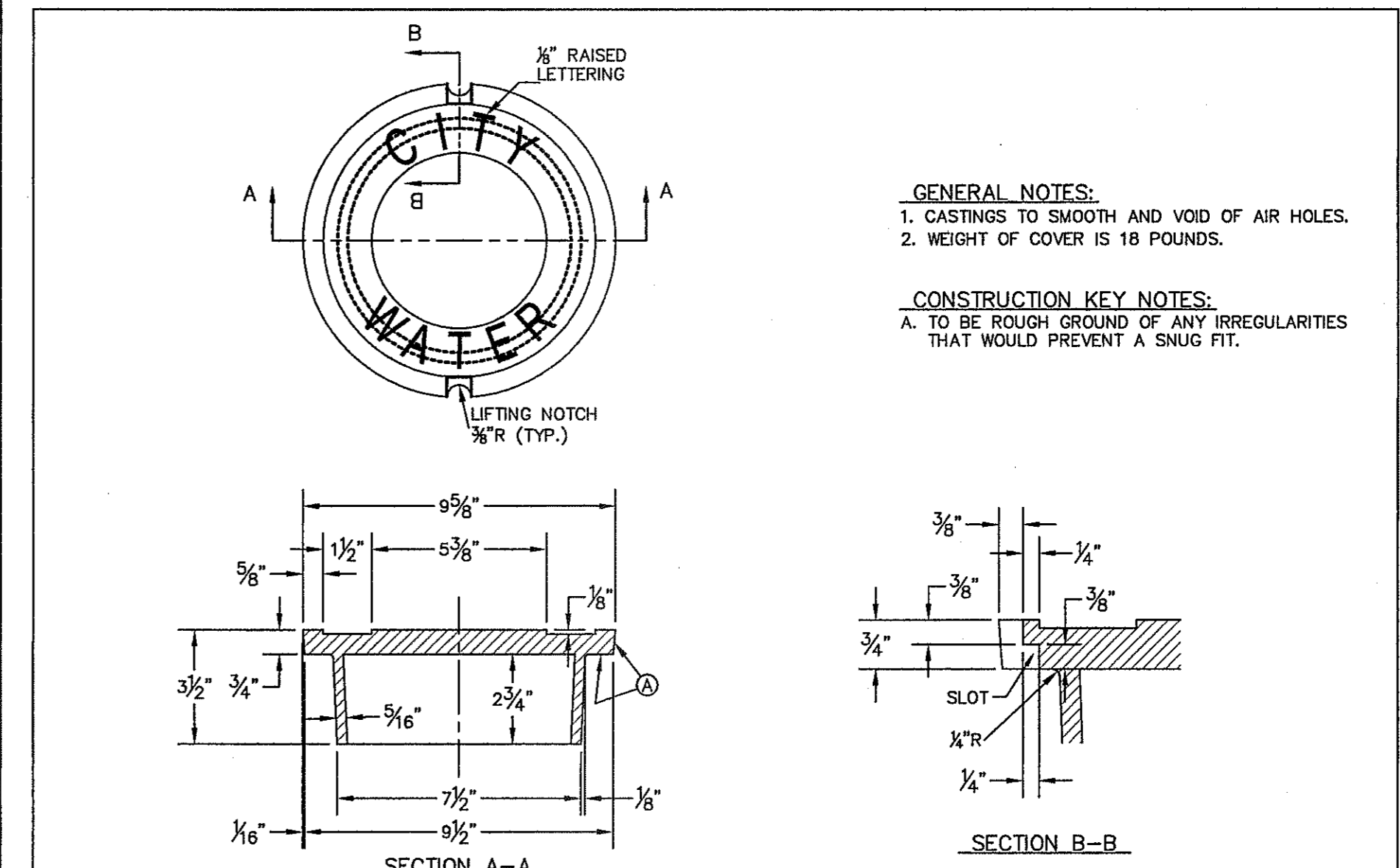
- CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
- WEIGHT OF BONNET BOX IS 95 POUNDS.

**CONSTRUCTION KEY NOTES:**

- TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

STANDARD DETAIL	FEB. 1994 REV:	BONNET BOX SCALE: N.T.S.	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 268
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5 BONNET BOX  
SCALE: N.T.S.



**GENERAL NOTES:**

- CASTINGS TO BE SMOOTH AND VOID OF AIR HOLES.
- WEIGHT OF COVER IS 18 POUNDS.

**CONSTRUCTION KEY NOTES:**

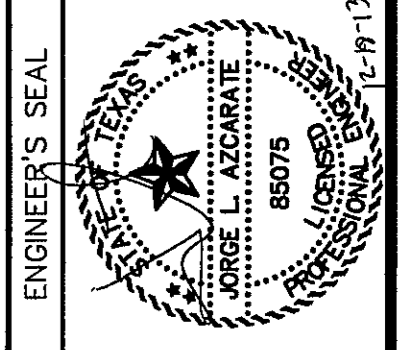
- TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

STANDARD DETAIL	DATE: 2/16/2006 REV: 12/14/2007	BONNET BOX COVER (FLIP RESISTANT)	EL PASO WATER UTILITIES PUBLIC UTILITIES BOARD	DETAIL No. 269-2
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6 BONNET BOX COVER (FLIP RESISTANT)  
SCALE: N.T.S.

REFERENCES - BENCHMARKS	FOUND TPOOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVD, DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).
DATE	REVISIONS
BY	

**oa**  
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4710 Woodloch Drive, Suite F, El Paso, TX 79904  
PHONE: 915.544.2222 FAX: 915.544.2223 www.oaeng.com



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	NOVEMBER 2013
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.G.
APP'D. BY:	J.L.A.
JOB No.	2000-163-LD

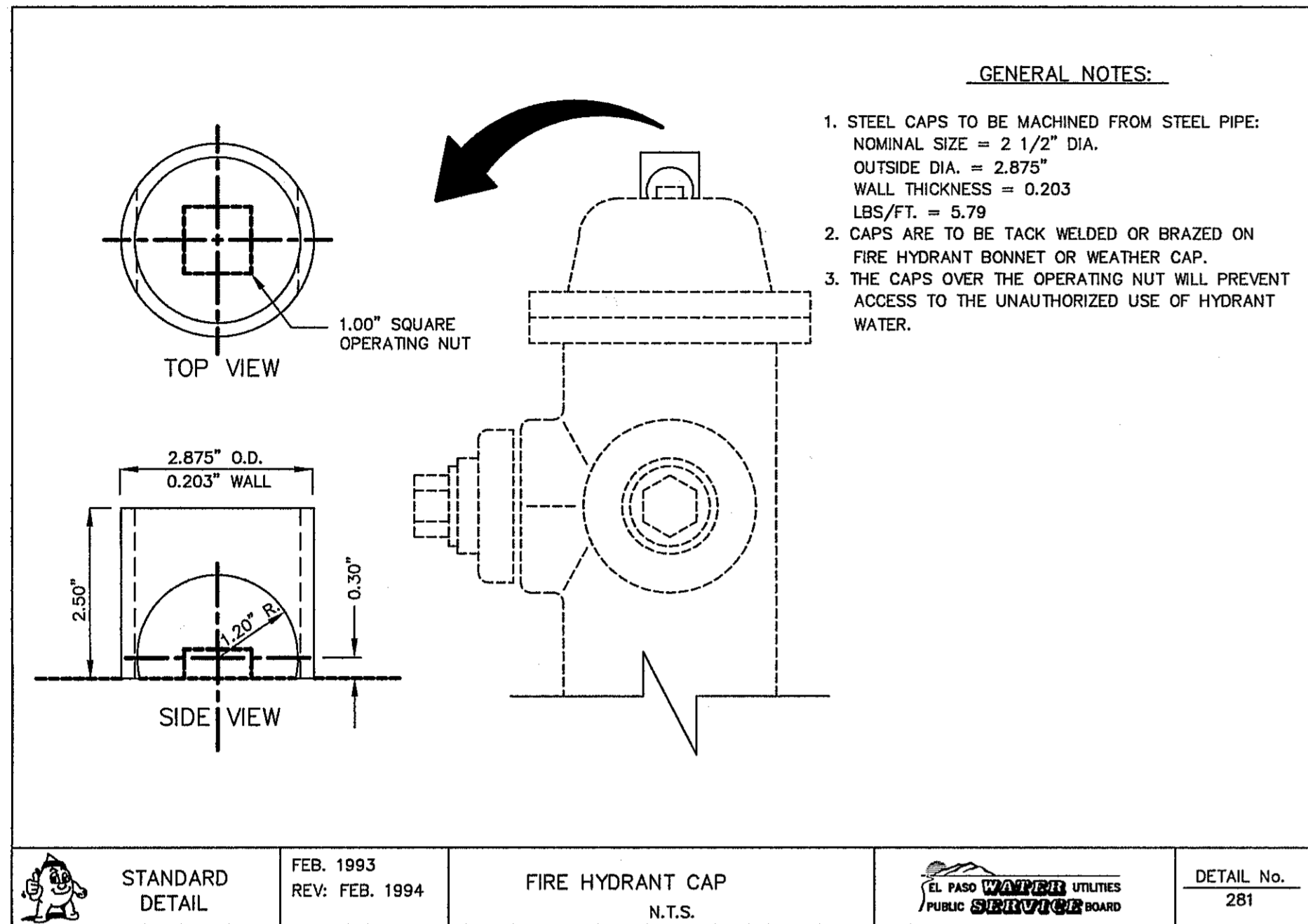
PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE	WATER DETAILS
(SHEET 1 OF 4)	SHEET NO.

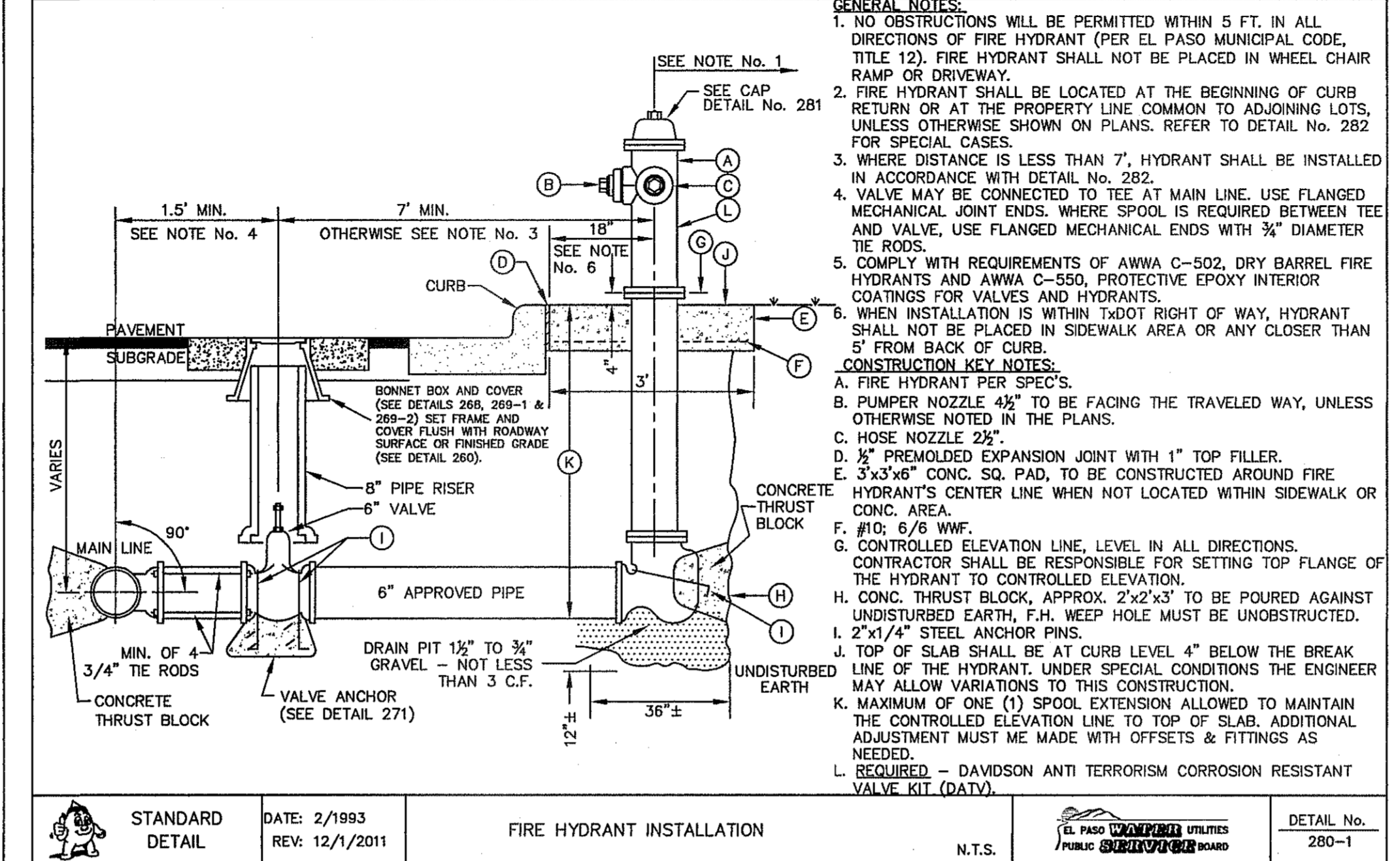
C12.1

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

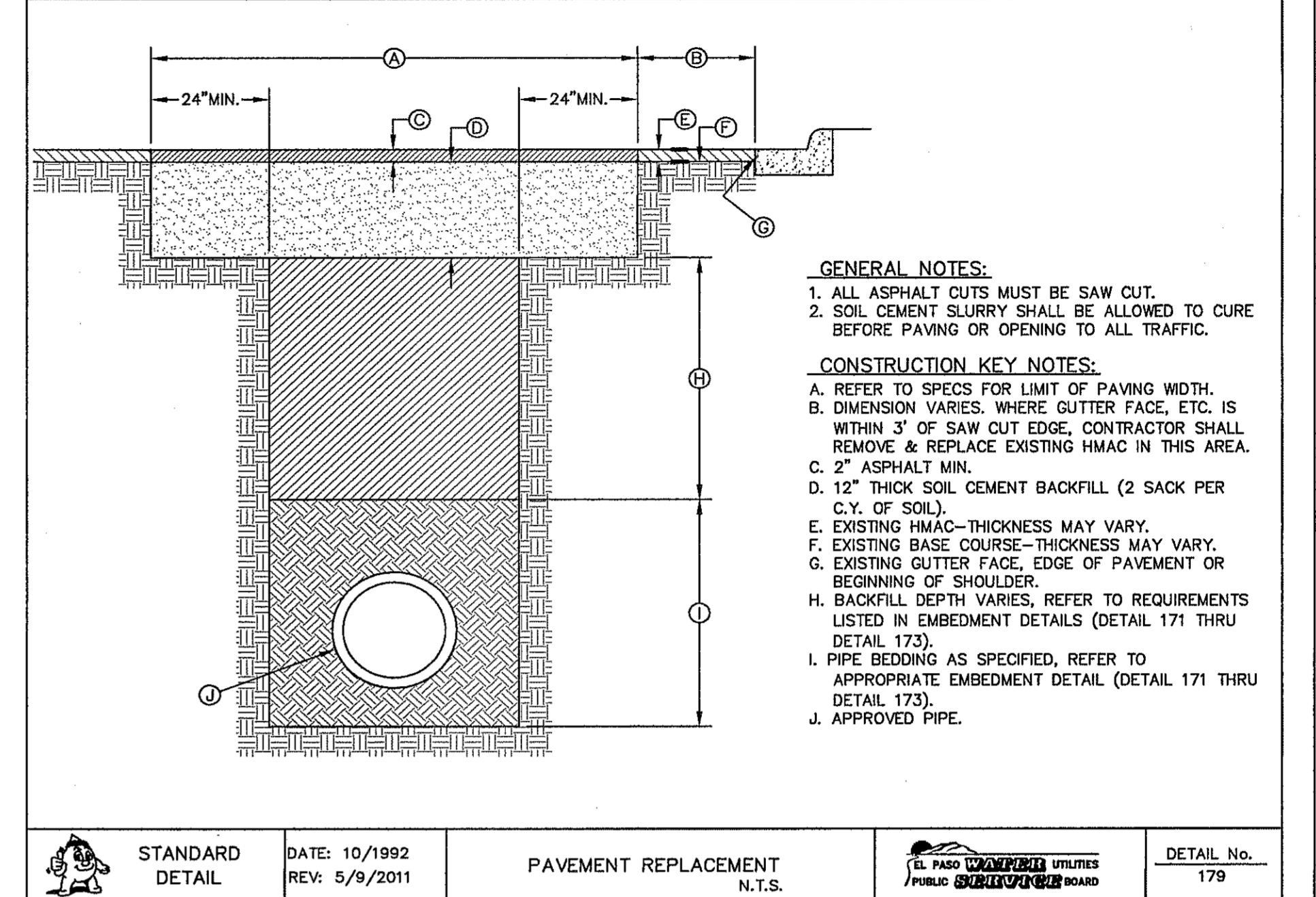
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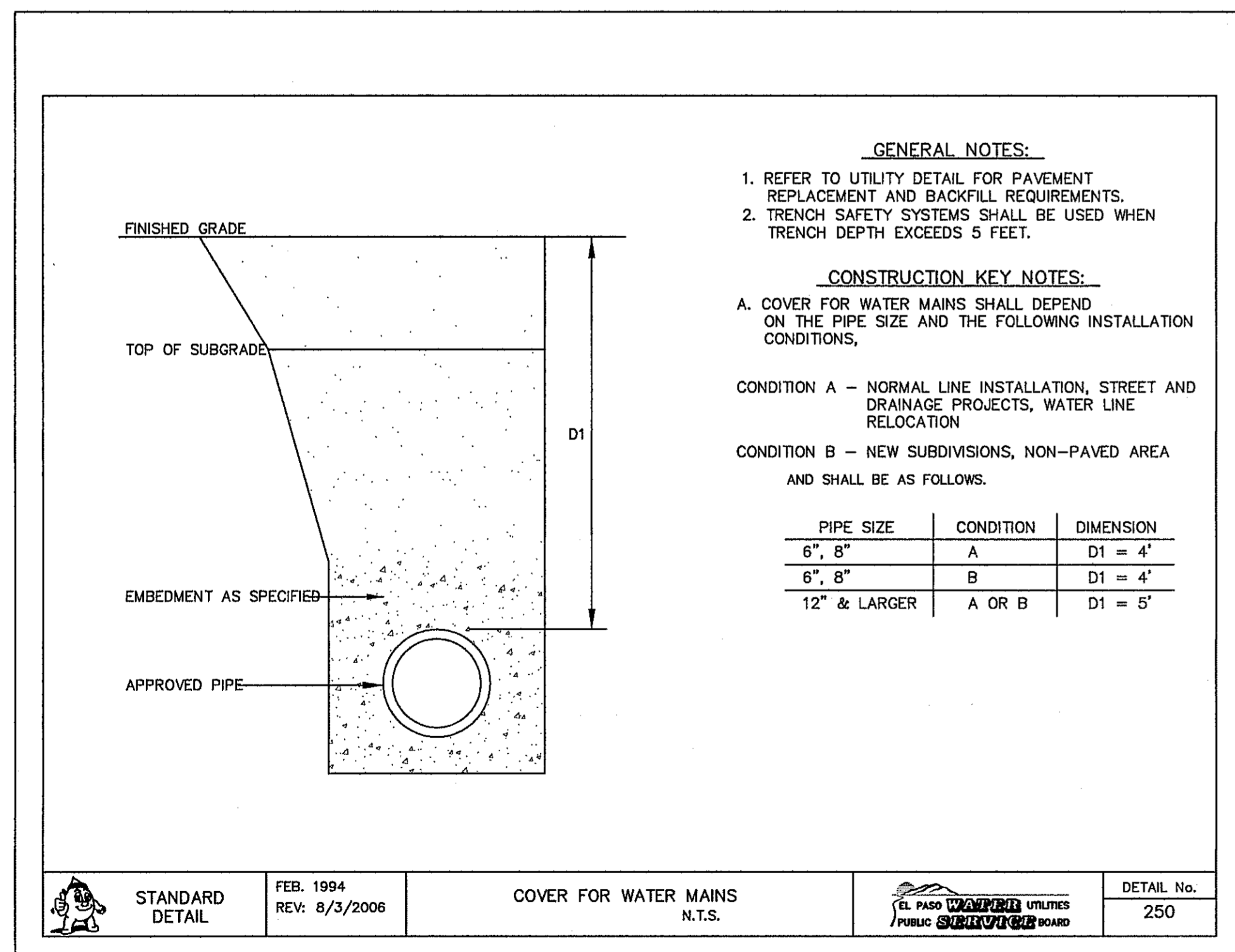
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SCALE: N.T.S.



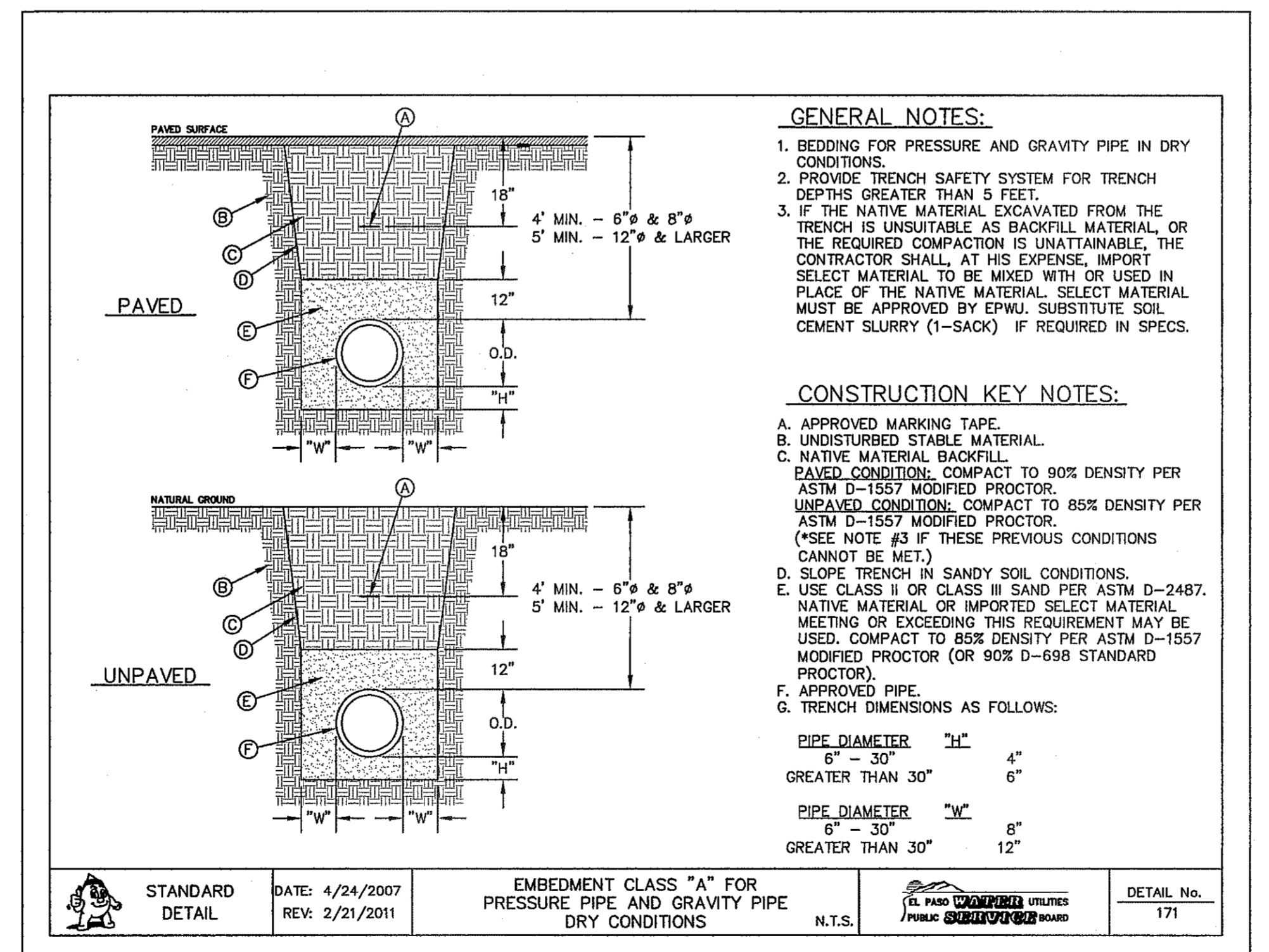
2 STANDARD FIRE HYDRANT INSTALLATION  
SCALE: N.T.S.



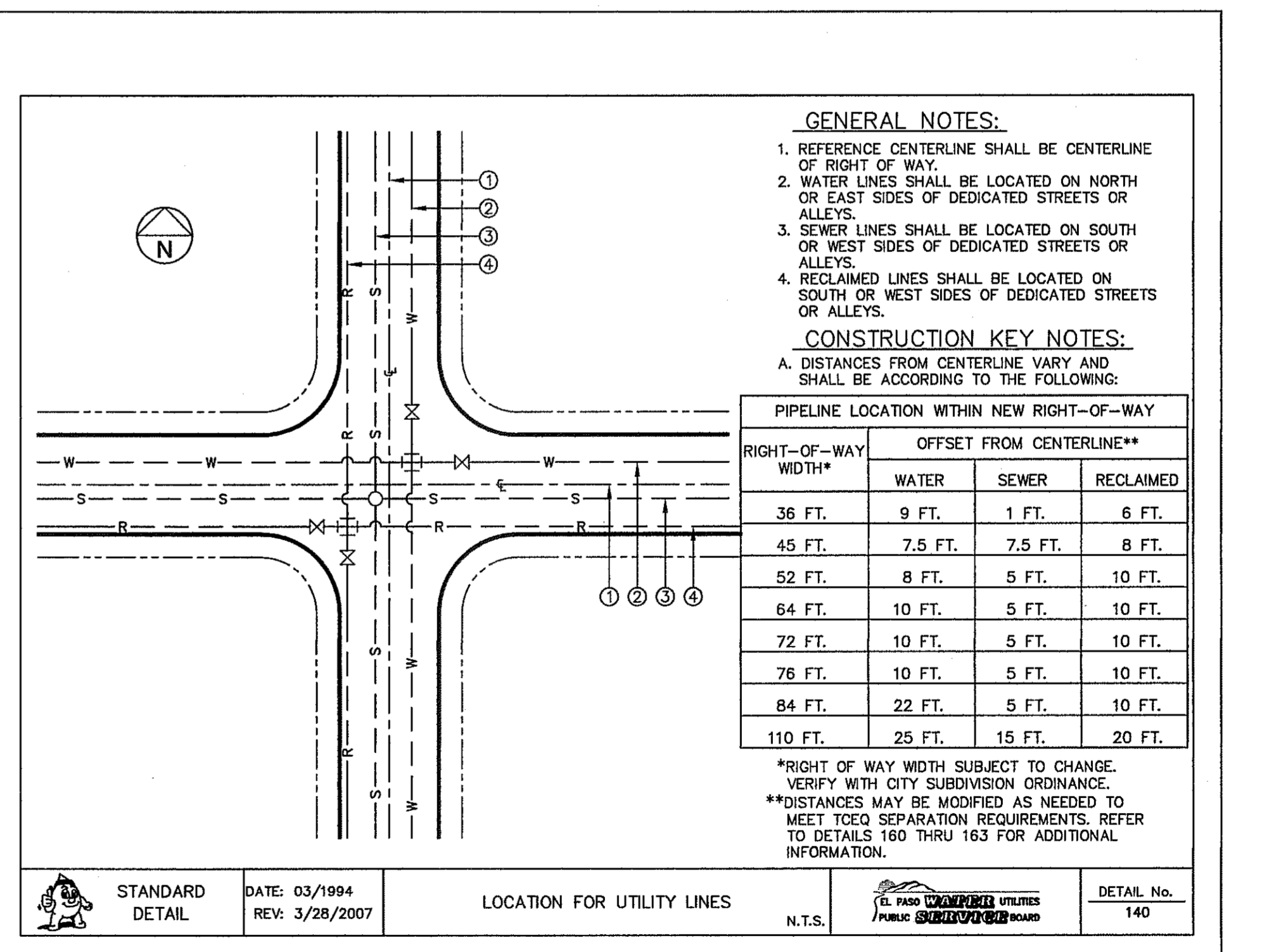
3 PAVEMENT REPAIR DETAIL  
SCALE: N.T.S.



4 STANDARD COVER FOR WATER MAINS  
SCALE: N.T.S.



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



6 STANDARD LOCATION FOR EXTENSIONS DETAIL  
SCALE: N.T.S.

REFERENCES - BENCHMARKS  
FOUND TYPOT BRASS CAP AT SECTION CORNERS 19, 20, 21 AND 22. ELEVATION: 4033.22 (AVGD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).

ENGINEER'S SEAL  
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Professional Engineer  
No. 88075  
State of Texas  
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SCALE  
Horizontal: N/A  
Vertical: N/A  
Contour Interval: N/A  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPVD. BY: J.L.A.  
JOB No. 2000-153-LD

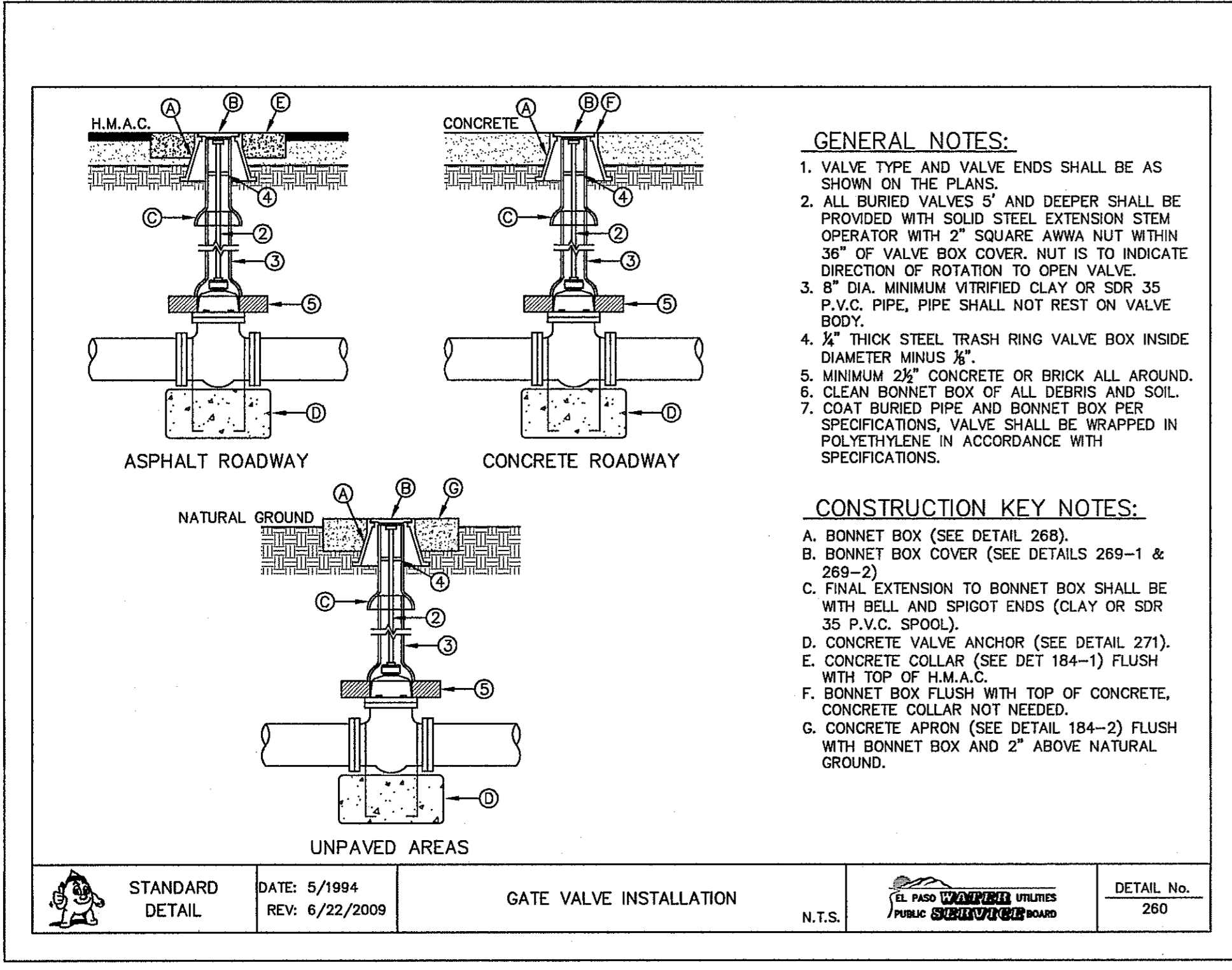
PROJECT TITLE  
SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS

SHEET TITLE  
WATER DETAILS  
(SHEET 2 OF 4)  
SHEET NO.  
C12.2

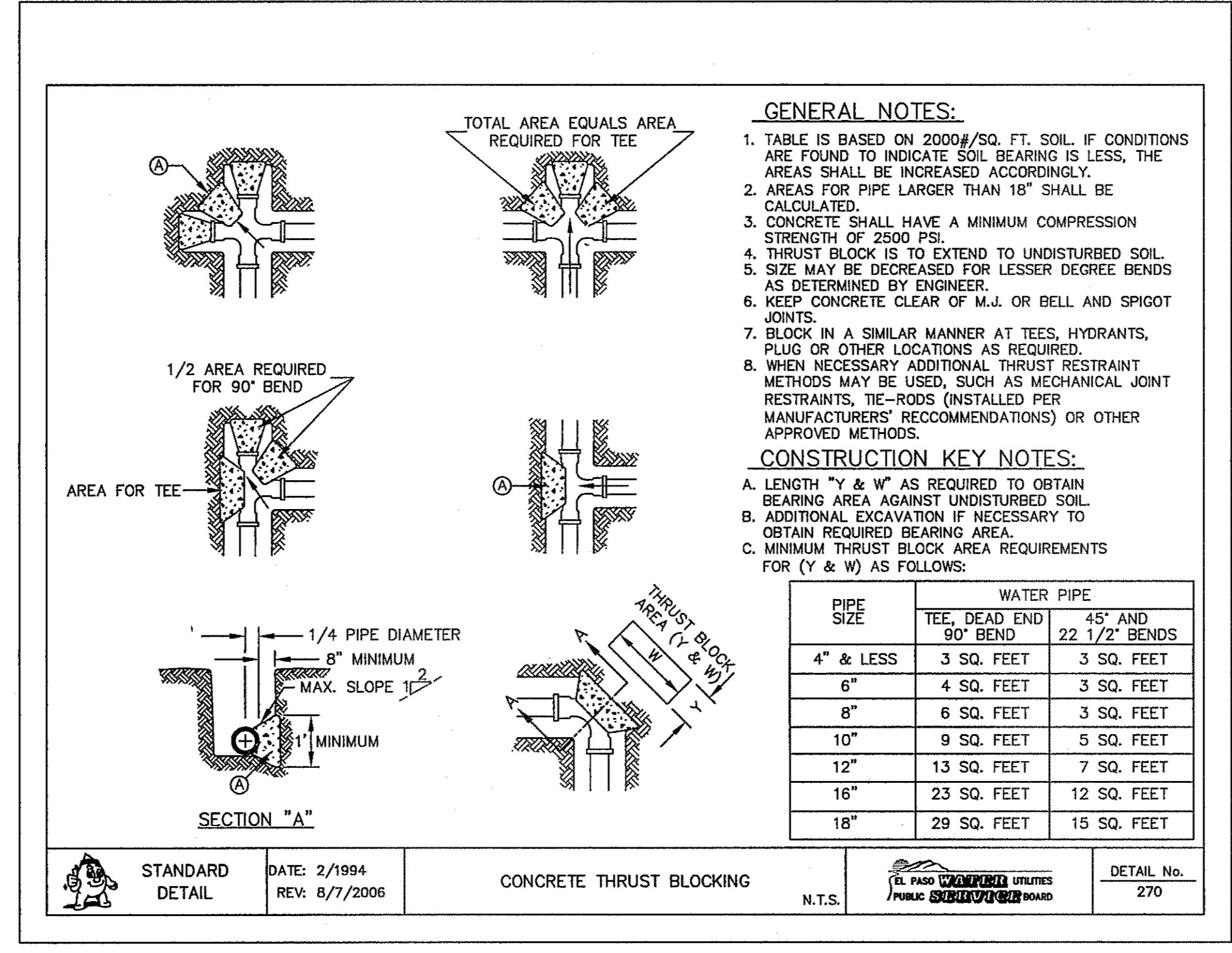
REVISIONS  
DATE  
BY

CITY DEVELOPMENT DEPARTMENT  
REVIEWED

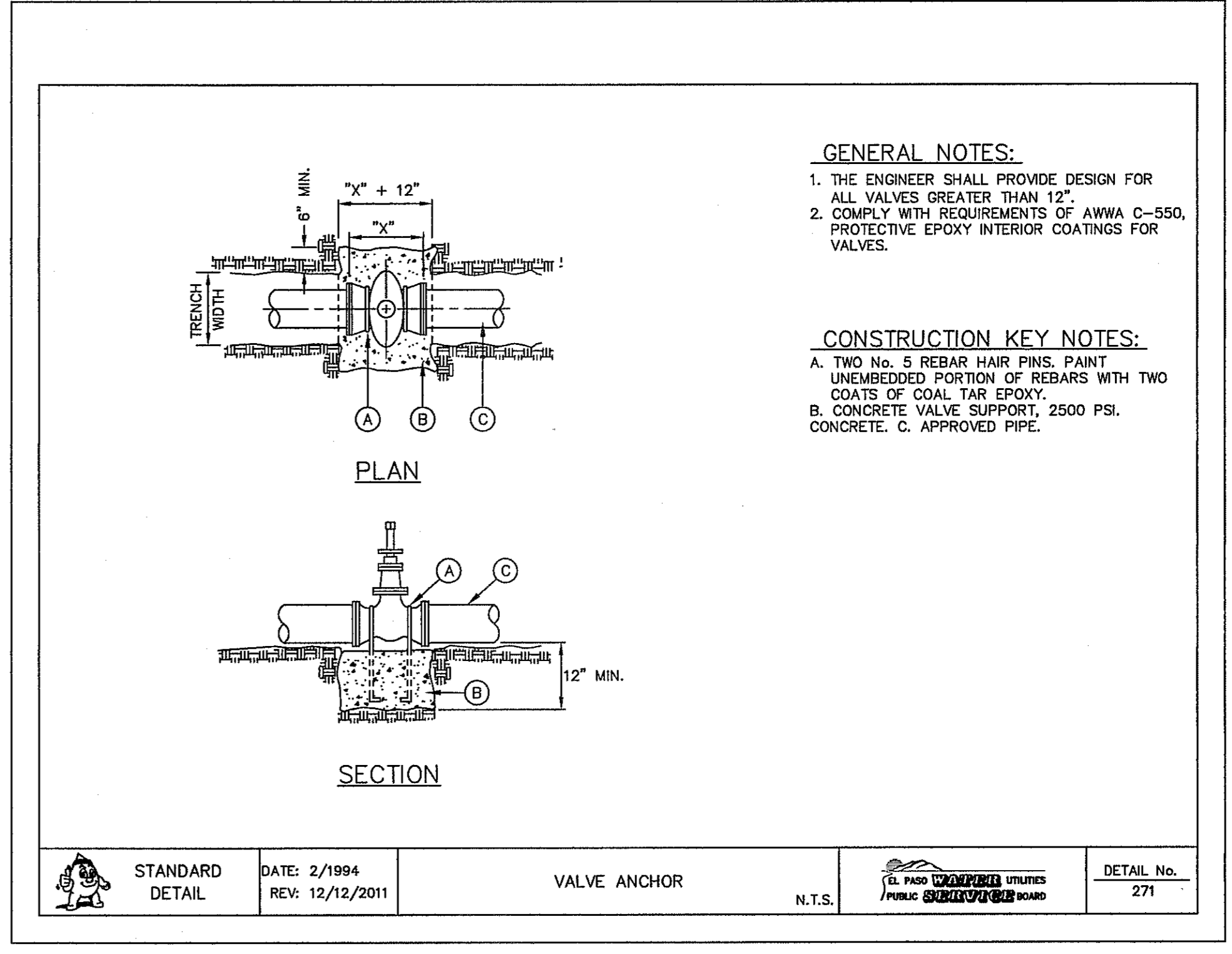
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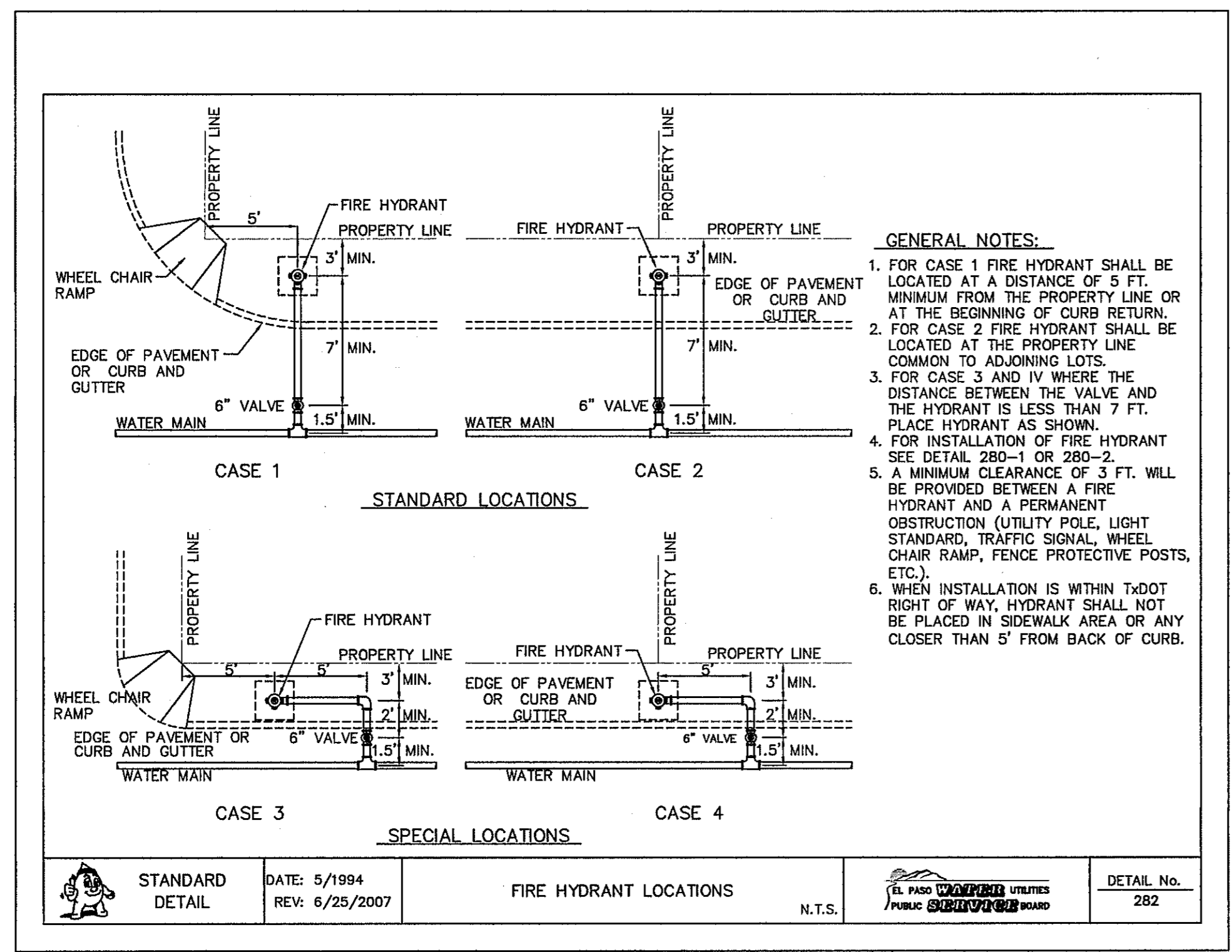
1 GATE VALVE INSTALLATION SCALE: N.T.S.



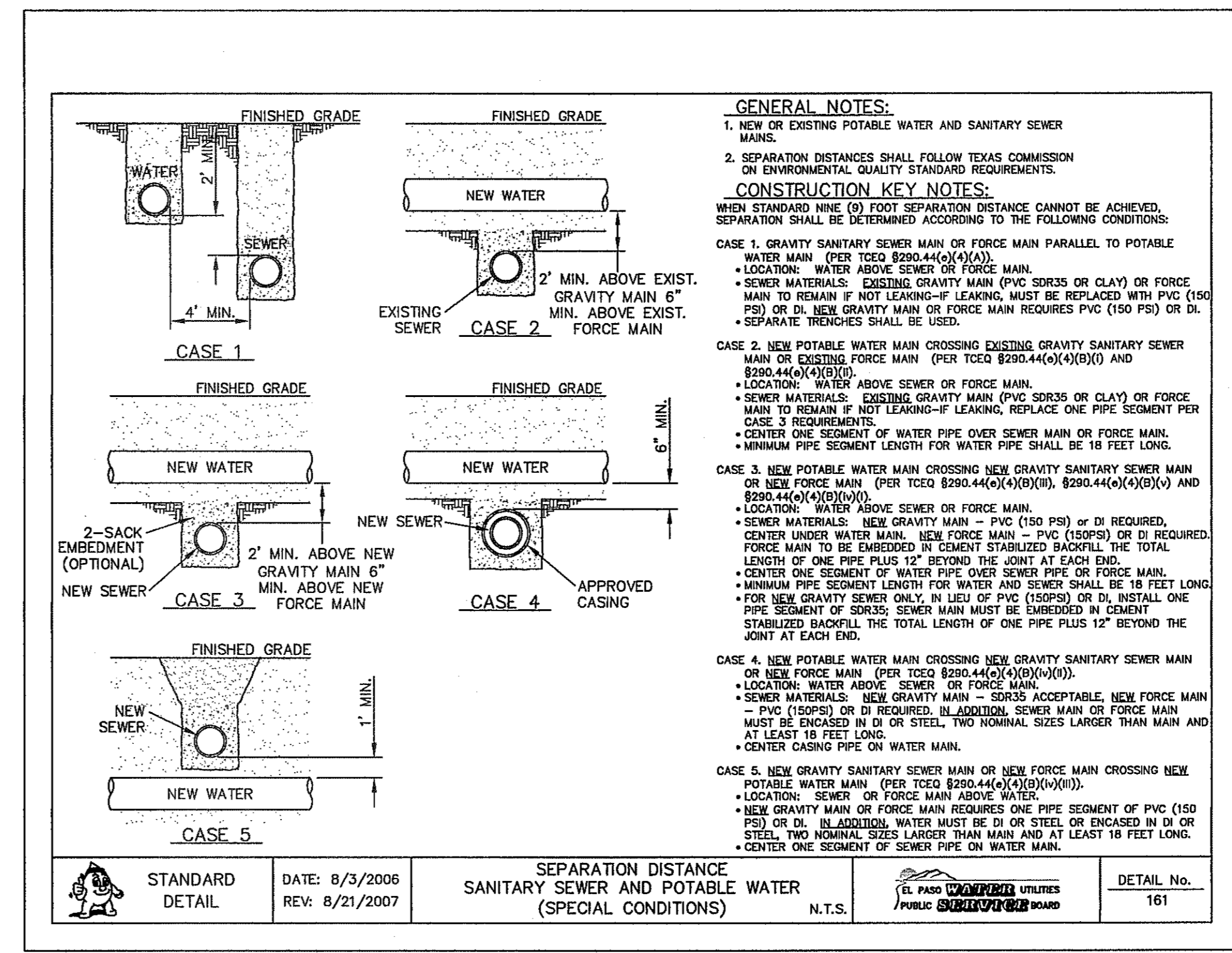
2 THRUST BLOCKING SCALE: N.T.S.



3 VALVE ANCHOR SCALE: N.T.S.



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



5 SEPARATION DISTANCE POTABLE WATER AND SANITARY SEWER (SPECIAL CONDITIONS) SCALE: N.T.S.

REFERENCES - BENCHMARKS

FOUND TxDOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

DATE	REVISIONS	BY

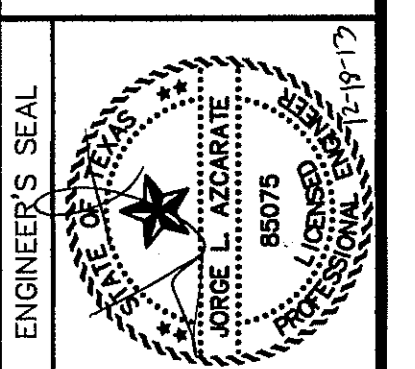
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Office: 915.544.8222 Fax: 915.544.8233 www.osagroup.net



SCALE

Horizontal: N/A

Vertical: N/A

Contour Interval: N/A

DATE: NOVEMBER 2013

DESIGN BY: J.M.

DRAWN BY: J.C.

CHKD. BY: J.L.A.

APPD. BY: J.L.A.

JOB No. 2000-163-LD

SANDSTONE RANCH UNIT NINE

SUBDIVISION IMPROVEMENTS

SHEET TITLE

WATER DETAILS

(SHEET 3 OF 4)

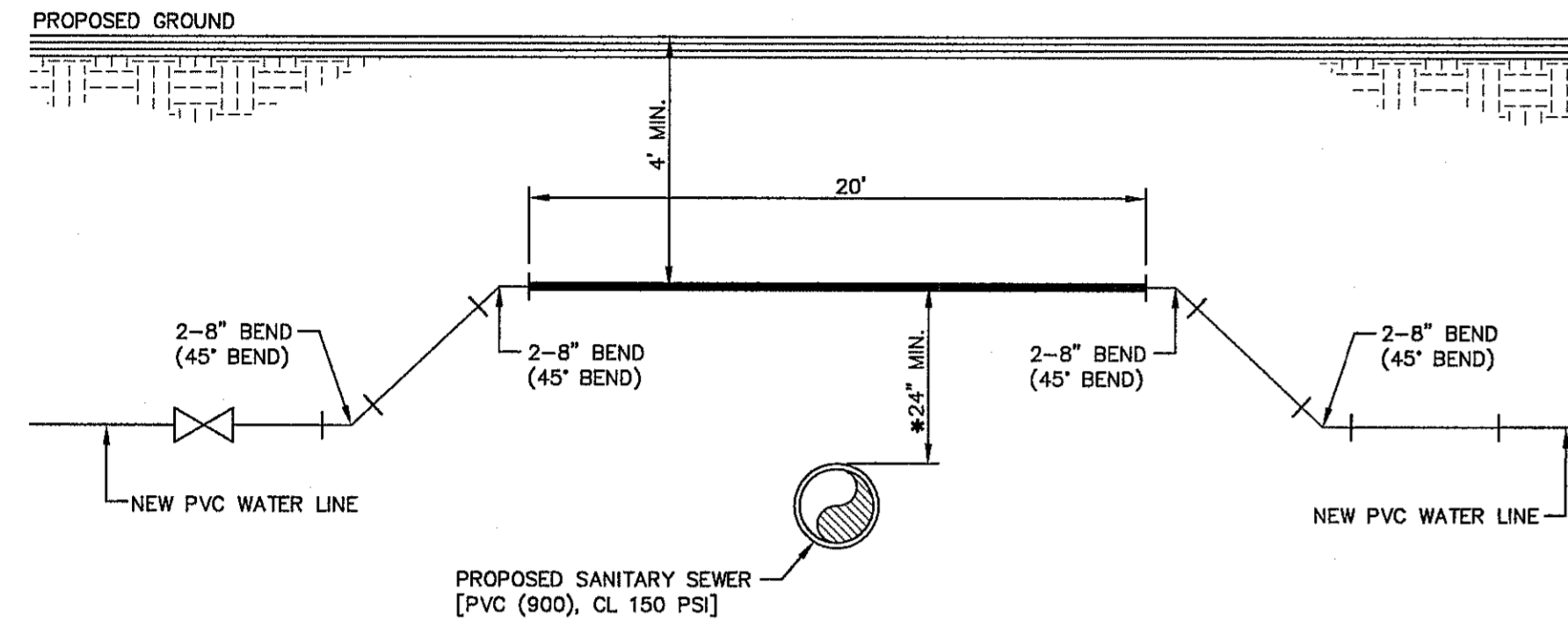
SHEET NO.

CITY DEVELOPMENT DEPARTMENT

REVIEWED

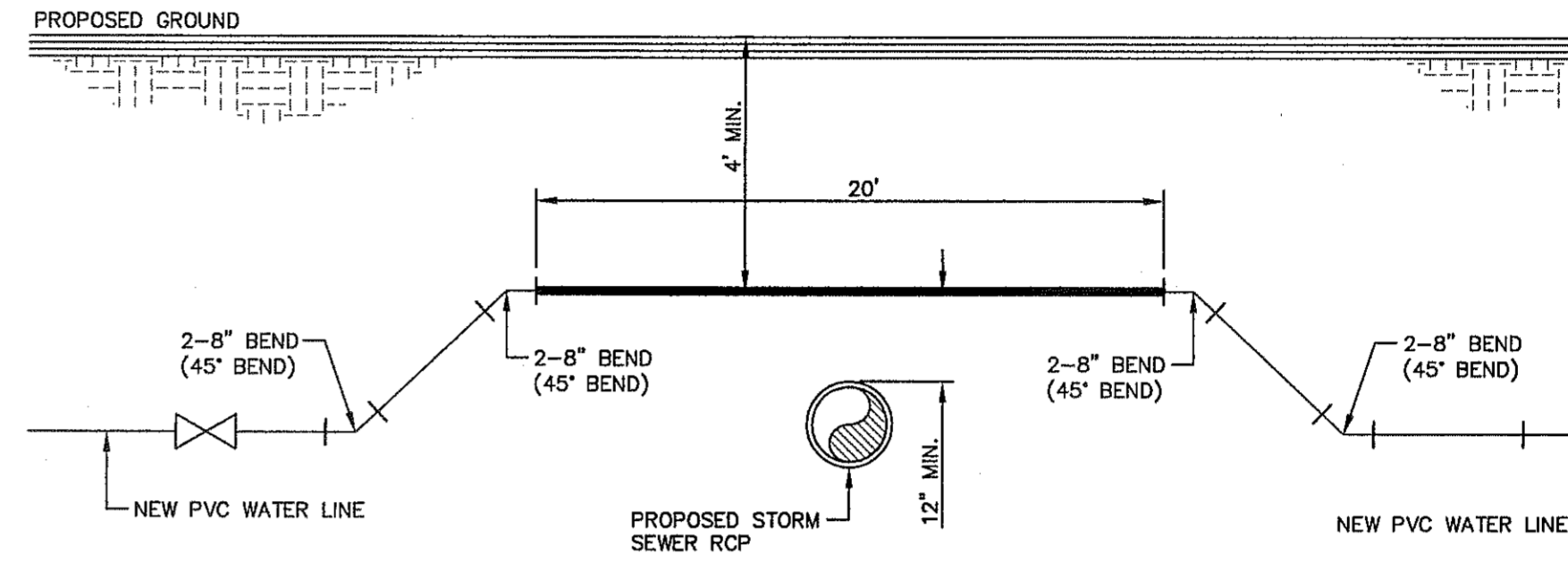
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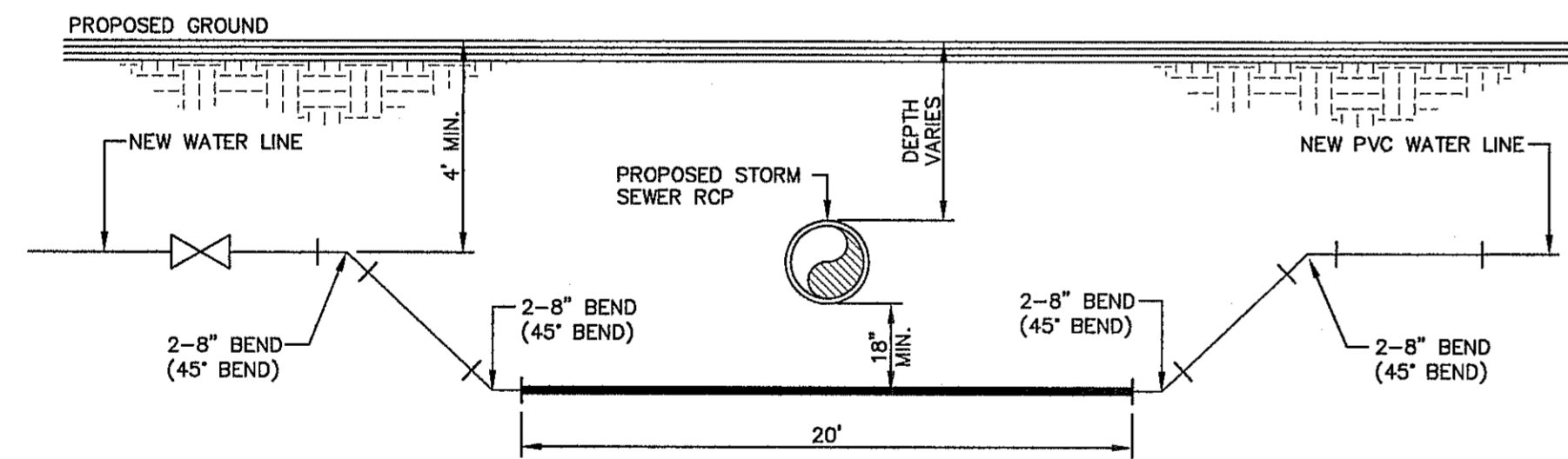


\* IF DISTANCE BETWEEN PROPOSED SANITARY SEWER AND PROPOSED WATER LINE IS BETWEEN 6" (MIN.) - 2' (MAX.), SANITARY SEWER MUST BE ENCASED IN DUCTILE IRON PIPE AS PER SEPARATION DISTANCE (SPECIAL CONDITION) DETAIL: 5/C12.3

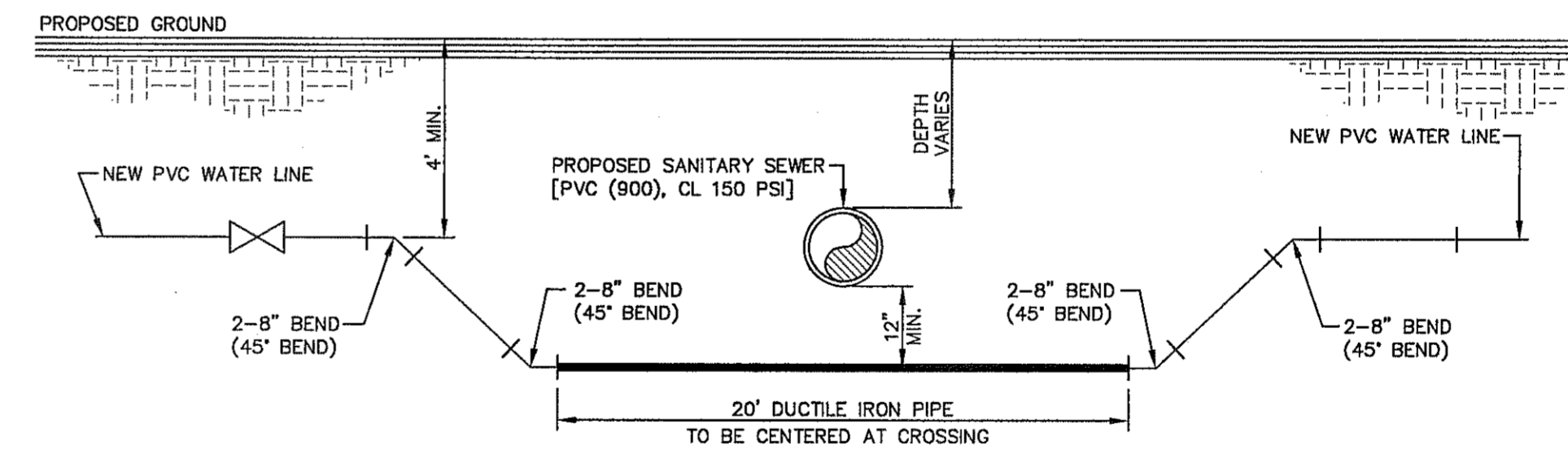
1 WATER LINE OVER SANITARY SEWER CROSSING DETAIL  
C12.4 SCALE: N.T.S.



2 WATER LINE OVER STORM SEWER CROSSING DETAIL  
C12.4 SCALE: N.T.S.



3 WATER LINE UNDER STORM SEWER CROSSING DETAIL  
C12.4 SCALE: N.T.S.



4 WATER LINE UNDER SANITARY SEWER CROSSING DETAIL  
C12.4 SCALE: N.T.S.

REFERENCES - BENCHMARKS

FOUND. TYDOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22.	BY
ELEVATION: 4033.22 (NVGD DATUM)	DATE
(SUBTRACT 8.462 TO CONVERT TO CITY DATUM).	REVISIONS

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ENGINEER'S SEAL  
JOSÉ L. ALZARRATE  
68075  
Professional Engineer  
State of Texas

SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	NOVEMBER 2013
DESIGN BY:	J.M.
DRAWN BY:	J.G.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	2000-163-LD

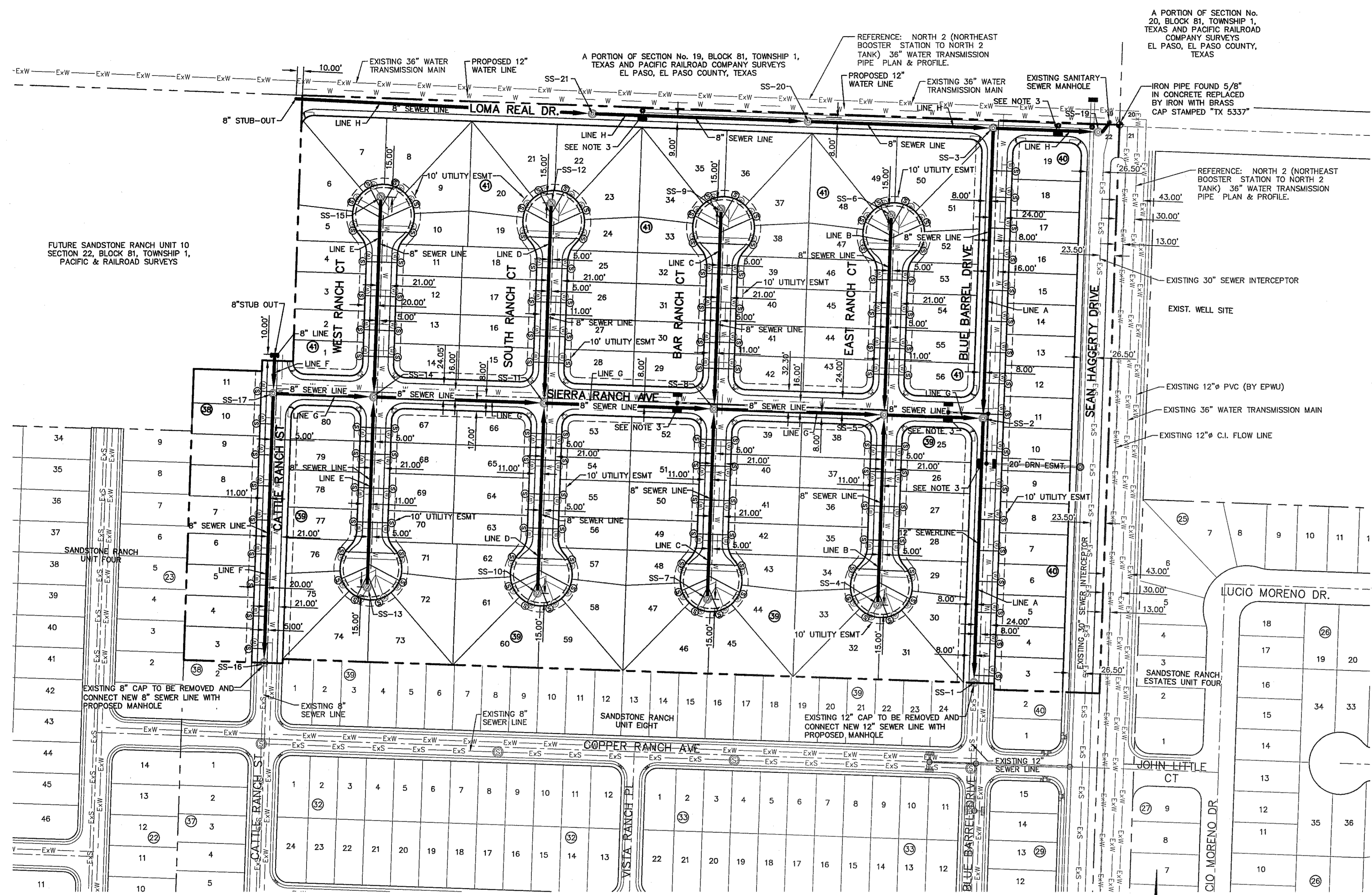
PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

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



C12.4

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### INDEX

SHEET NO.	DESCRIPTION
C13.1	SANDSTONE RANCH UNIT NINE LEGEND INDEX GENERAL INFORMATION
C14.1	LINE A & B
C14.2	LINE C & D
C14.3	LINE E & F
C14.4	LINE G
C14.5	LINE H
C15.1	SANITARY SEWER DETAILS
C15.2	SANITARY SEWER DETAILS
C15.3	SANITARY SEWER DETAILS

- NOTES:**
- ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
  - ALL SANITARY SEWER PIPES SHALL BE PVC, SDR 35, (D 3034), UNLESS OTHERWISE SHOWN. AS REQUIRED BY THE EPWU/PSB RULES AND REGULATIONS AND DESIGN STANDARDS.
  - REFERENCE SANITARY SEWER DETAILS FOR SEWER CROSSINGS AT STORM SEWER.

### LEGEND

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

#### WASTEWATER QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
1	8" PVC SDR35 GRAVITY LINE	5,678.05	LINEAR FEET
2	8" PVC C-900, CL150	280'	LINEAR FEET
3	12" PVC SDR35 GRAVITY LINE	426.61'	LINEAR FEET
4	STANDARD WASTEWATER MANHOLE (0'-8" DEEP)	16	EACH
5	STANDARD WASTEWATER MANHOLE (8'-12" DEEP)	4	EACH
6	4" WASTEWATER SERVICE CONNECTION	138	EACH

**CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.**

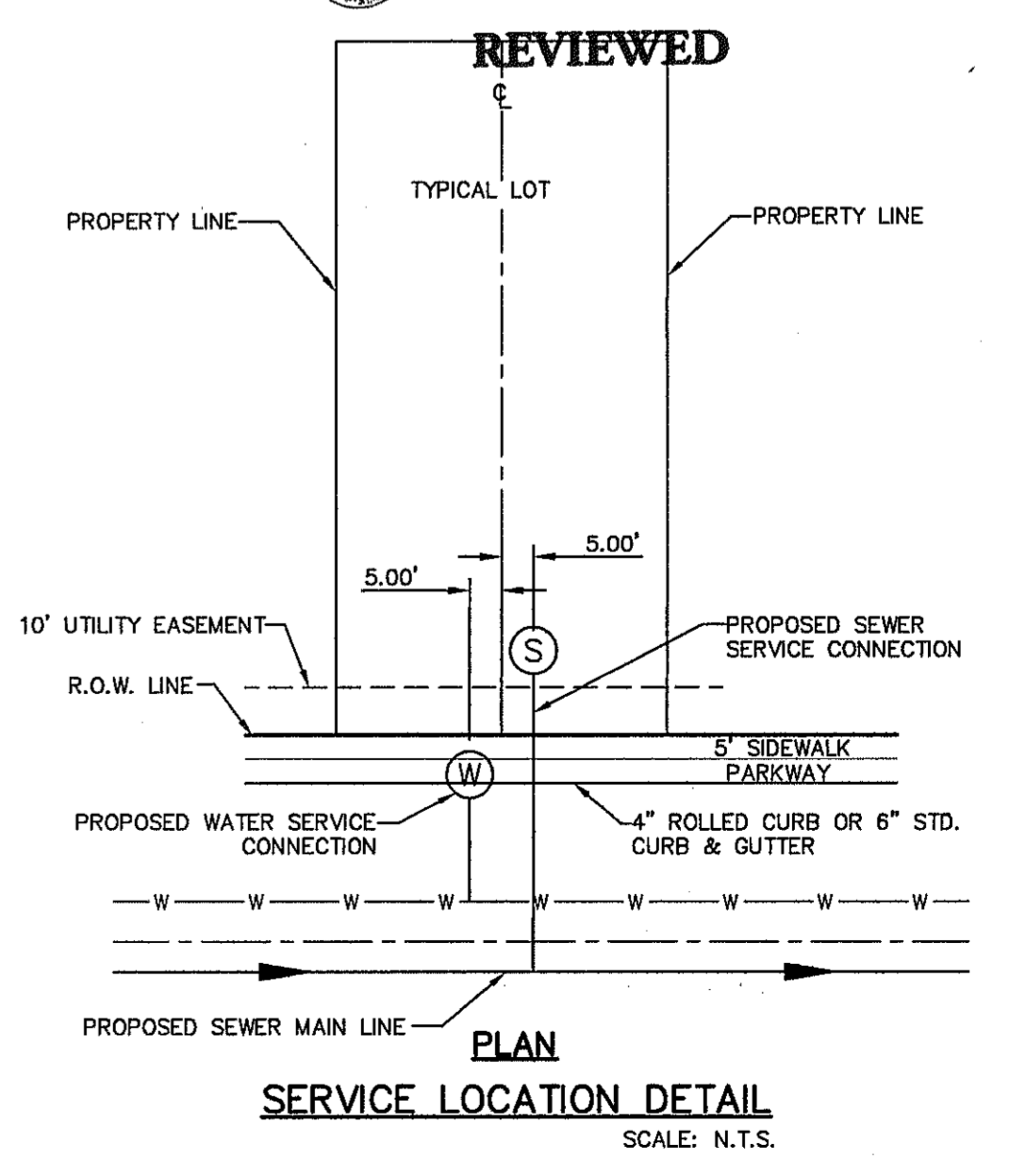
**SANITARY SEWER INDEX MAP**  
SCALE: 1" = 100'

#### 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.
- ALL WATER AND SEWER UTILITY WORK, INCLUDING TIE-INS SHALL BE CLOSELY COORDINATED WITH EL PASO WATER UTILITIES FIELD ENGINEERING AT LEAST 48 HOURS PRIOR TO COMMENCING ANY UTILITY WORK.
- TRAFFIC CONTROL SHALL BE IN PLACE PRIOR TO INITIATING WORK.
- 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  
CASTNER 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. TED MARQUEZ
- 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. TONY FIERRO
- CABLE TELEVISION:**  
TIME WARNER COMMUNICATIONS  
7010 AIRPORT ROAD  
EL PASO, TX. 79906  
(915) 772-1123

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



REFERENCES - BENCHMARKS  
FOUND TYPED BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

DATE: 05/31/2013  
REVISIONS: BY: AC

ENGINEER'S SEAL  
Jorge L. Azcarate  
Professional Engineer  
No. 86075  
Texas Registered Engineering Firm F-4664  
4712 Woodrow Bean, Ste. F, El Paso, TX 79924  
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

SCALE: 1"=100'  
Horizontal: N/A  
Vertical: N/A  
Contour Interval: N/A  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APP'D. BY: J.L.A.  
JOB NO. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE  
**SANITARY SEWER INDEX**

SHEET NO.  
**C13.1**

S:\2000\2000-163-LD-Sandstone Ranch Unit Nine\DWG\Construction Drawings\Improvement Plans\2000-163-LD-C13.1-Sewer Index.dwg, Sanitary Index, 12/23/2013 3:19:03 PM



**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) 852-3798  
 U.S. SPRINT TELECOMM (800) 521-0579

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

REFERENCES - BENCHMARKS  
 FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).

DATE: \_\_\_\_\_ REVISIONS: \_\_\_\_\_ BY: \_\_\_\_\_

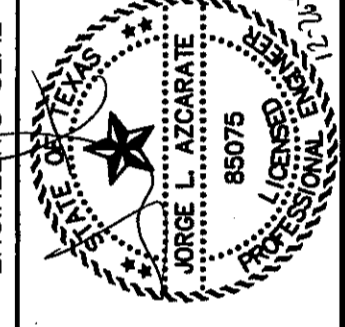
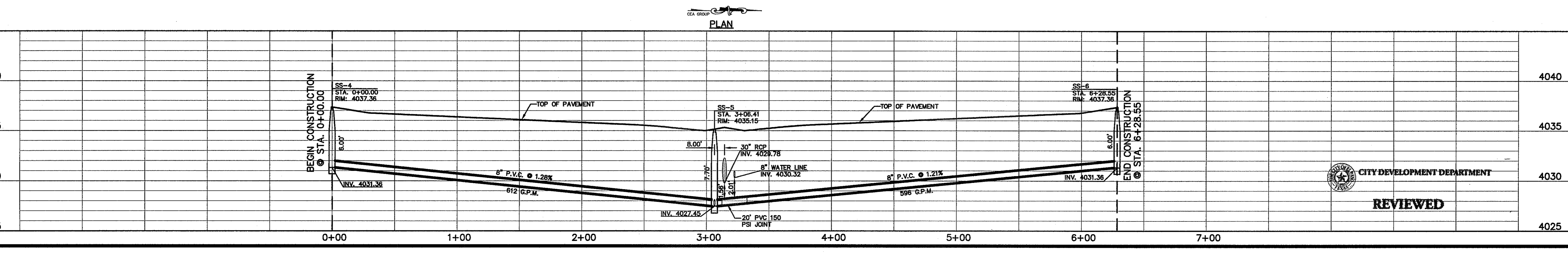
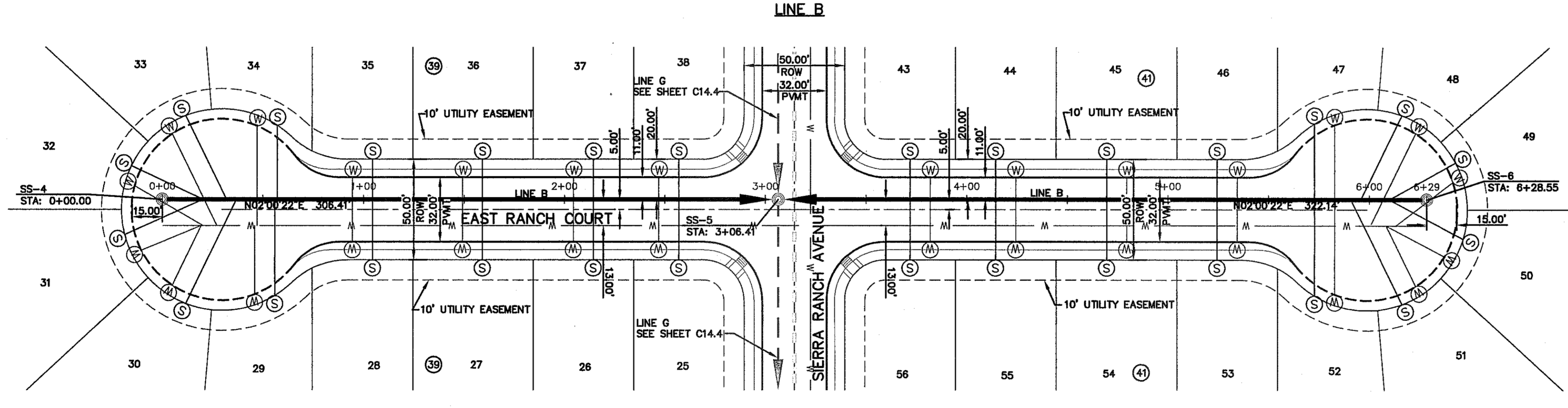
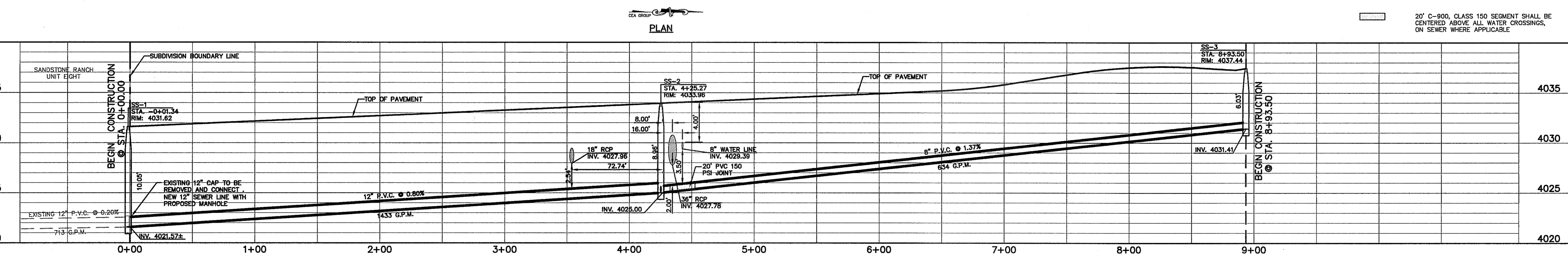
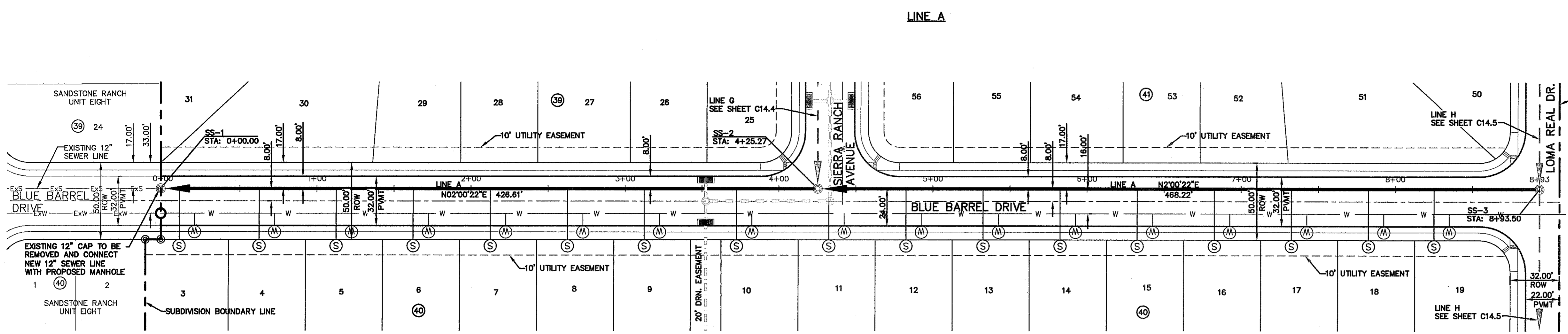
SECTION 19, BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILROAD SURVEYS, CITY OF EL PASO, EL PASO COUNTY, TEXAS

**LEGEND:**  

- W W PROPOSED WATER LINE
- S S PROPOSED STORM SEWER LINE
- PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
- PROPOSED SEWER LINE
- W PROPOSED WATER SERVICE
- S PROPOSED SEWER SERVICE
- M PROPOSED SEWER MANHOLE

 20' C-900, CLASS 150 SEGMENT SHALL BE CENTERED ABOVE ALL WATER CROSSINGS, ON SEWER WHERE APPLICABLE.

**o&a**  
 engineers • architects • planners  
 TEXAS REGISTERED ENGINEERING FIRM F-4694  
 4712 Woodrow Blain, Ste. F El Paso, TX 79904  
 Office: 915.544.5232 Fax: 915.544.5233 www.oandae.com



SCALE:  
 Horizontal: 1"=40'  
 Vertical: 1"=5'  
 Contour Interval: N/A  
 DATE: NOVEMBER 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.L.A.  
 APP'D. BY: J.L.A.  
 JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
 SUBDIVISION IMPROVEMENTS**

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

SHEET NO.  
**C14.1**

**REVIEWED**

S:\2000\2000-163-LD-Sandstone Ranch Unit Nine\DWG\Construction Drawings\Improvements\163-LD-C14.1-Sewer P&P Line A & B.dwg, Sewer Line A & B.dwg, Sewer Line A & B.dwg, Sewer Line A & B.dwg, 12/23/2013 3:20:11 PM

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) 690-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

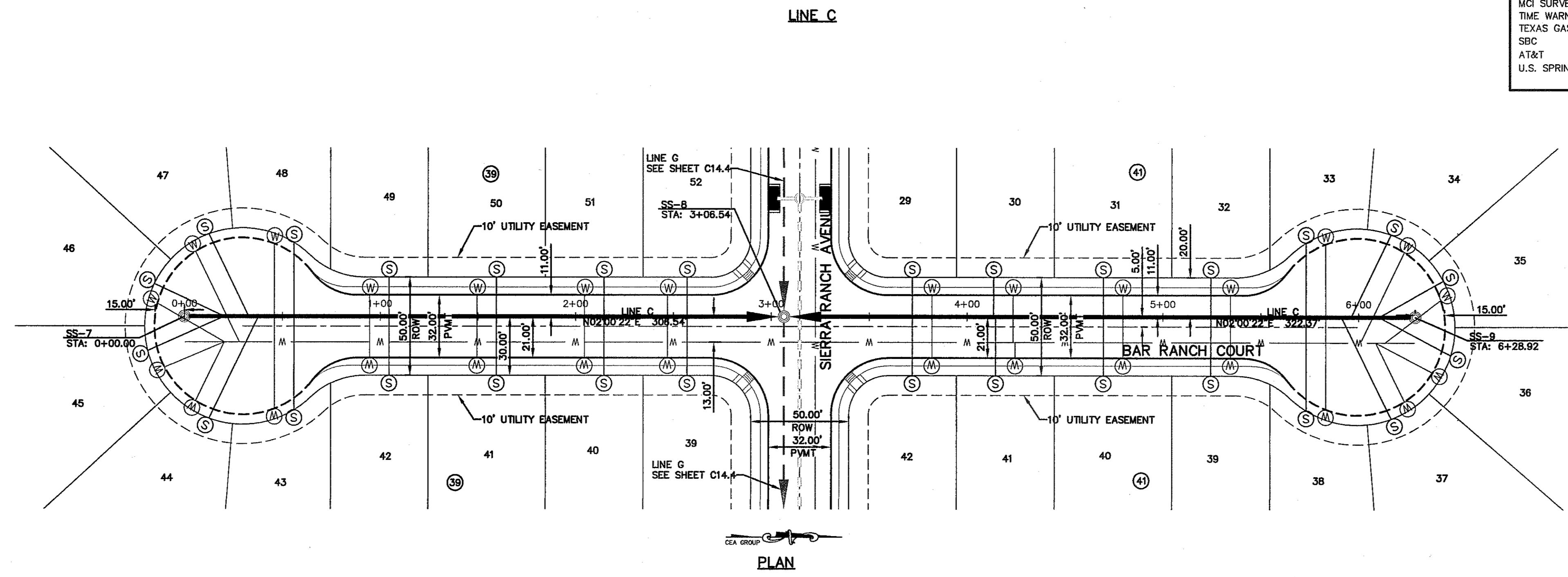
**WARNING I BEFORE YOU DIG**

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

FOR FIELD LOCATING EXISTING UTILITIES

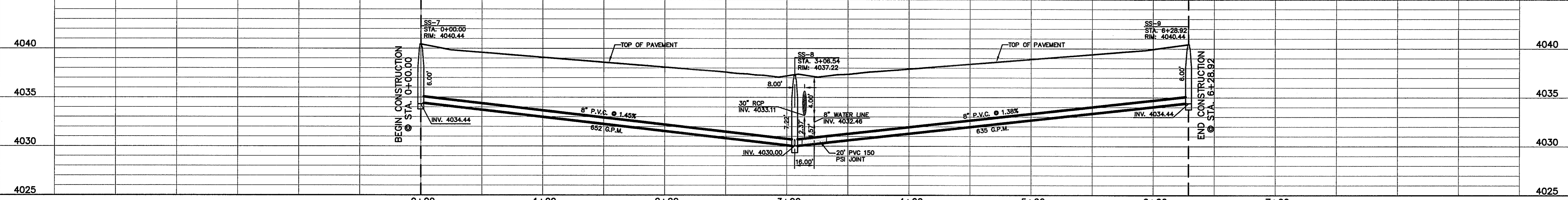
DATE	REVISIONS	BY

REFERENCES - BENCHMARKS  
FOUND 1X00T BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (AVGD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).



**LEGEND:**

- W — W — PROPOSED WATER LINE
- S — S — PROPOSED STORM SEWER LINE
- S — S — PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
- S — S — PROPOSED SEWER LINE
- ⊙ — PROPOSED WATER SERVICE
- ⊙ — PROPOSED SEWER SERVICE
- ⊙ — PROPOSED SEWER MANHOLE
- ▭ — 20' C-900, CLASS 150 SEGMENT SHALL BE CENTERED ABOVE ALL WATER CROSSINGS, ON SEWER WHERE APPLICABLE

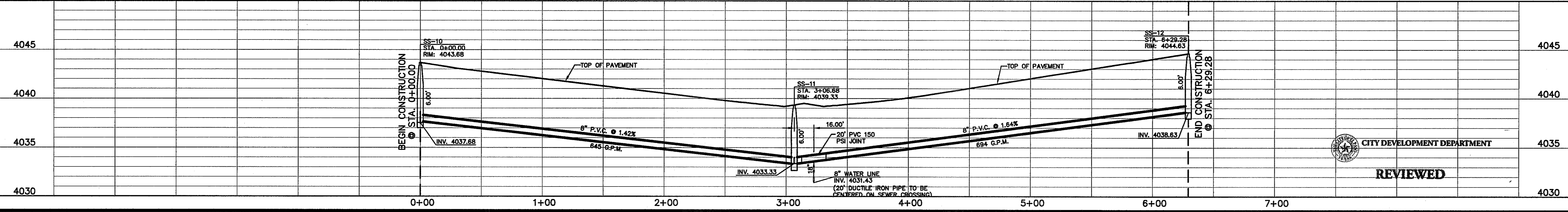
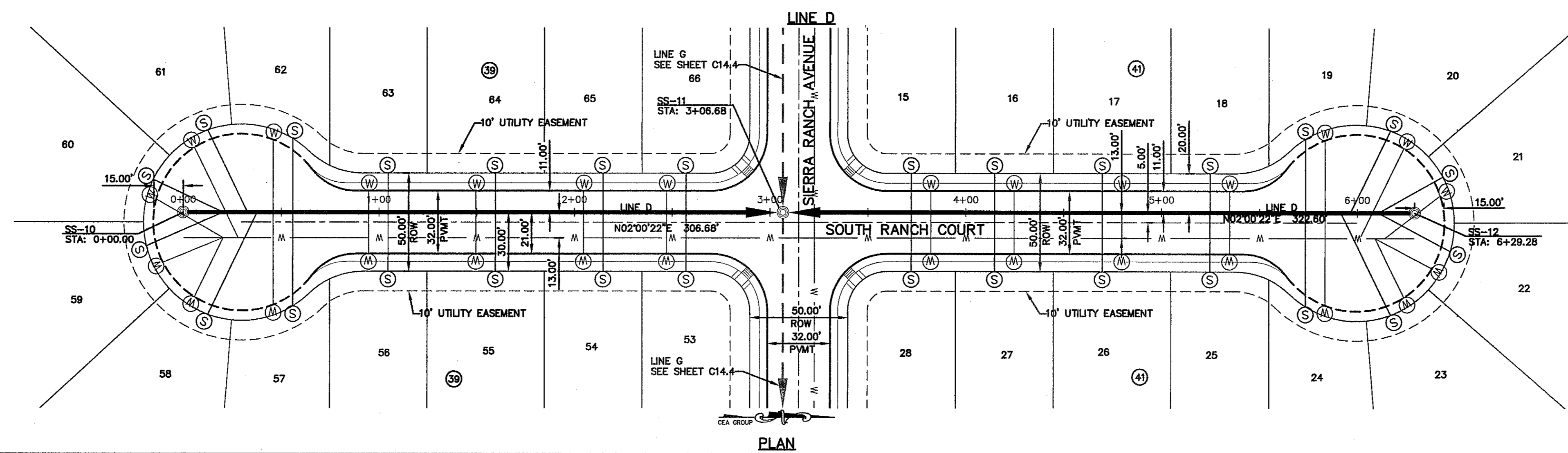


ENGINEER'S SEAL

SCALE  
Horizontal: 1"=40'  
Vertical: 1"=5'

Contour Interval: N/A

DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-163-LD



CITY DEVELOPMENT DEPARTMENT

**REVIEWED**

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

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

SHEET NO.  
**C14.2**

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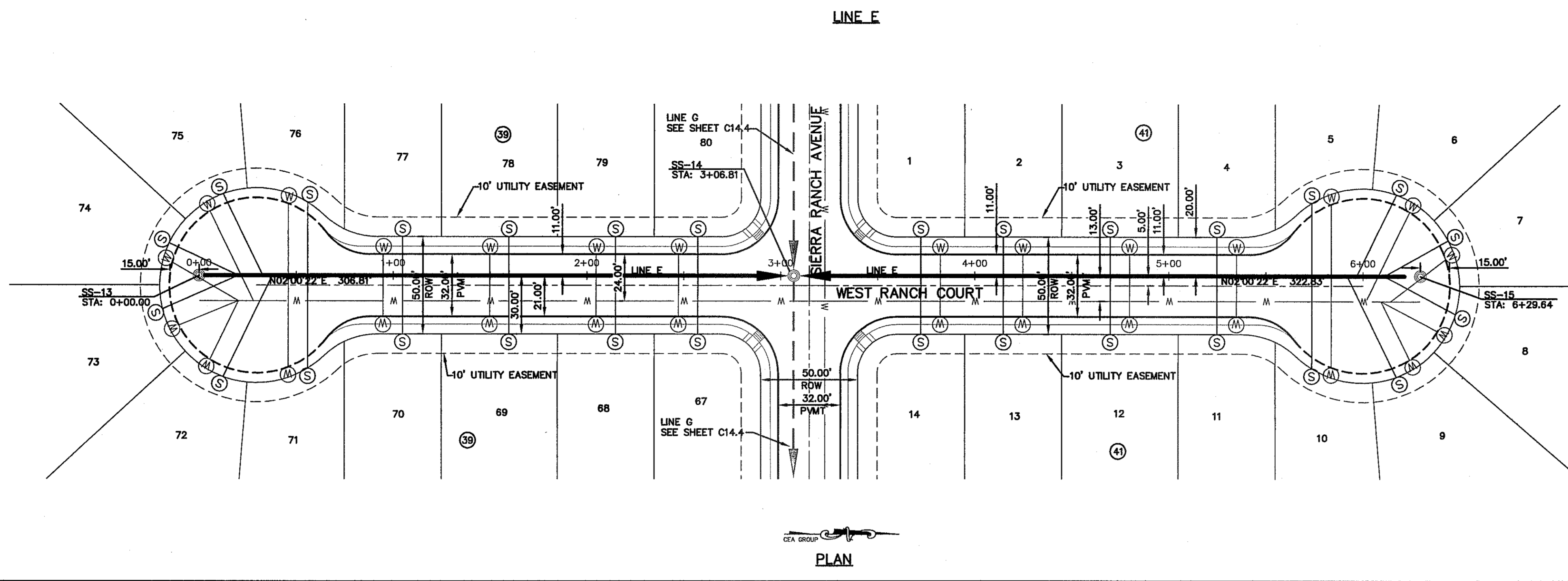
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
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1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

DATE	REVISIONS	BY



- LEGEND:**
- W — W — PROPOSED WATER LINE
  - S — S — PROPOSED STORM SEWER LINE
  - S — S — PROPOSED SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
  - S — S — PROPOSED SEWER LINE
  - ⊙ — ⊙ — PROPOSED WATER SERVICE
  - ⊙ — ⊙ — PROPOSED SEWER SERVICE
  - ⊙ — ⊙ — PROPOSED SEWER MANHOLE
  - 20' C-900, CLASS 150 SEGMENT SHALL BE CENTERED ABOVE ALL WATER CROSSINGS, ON SEWER WHERE APPLICABLE

REFERENCES - BENCHMARKS

FOUND TYPICAL BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVDG DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).

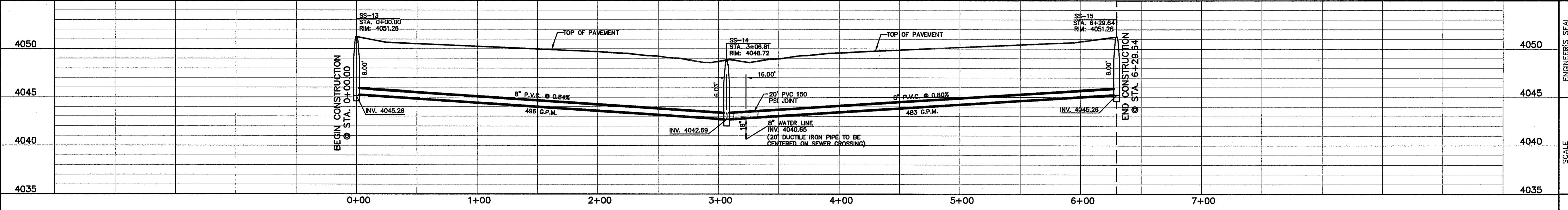
**osa**

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

Office: 915.544.5232 Fax: 915.544.5233 www.osainc.net



ENGINEER'S SEAL

SCALE

Horizontal: 1"=40'

Vertical: 1"=5'

Contour Interval: 1' / A

DATE: NOVEMBER 2013

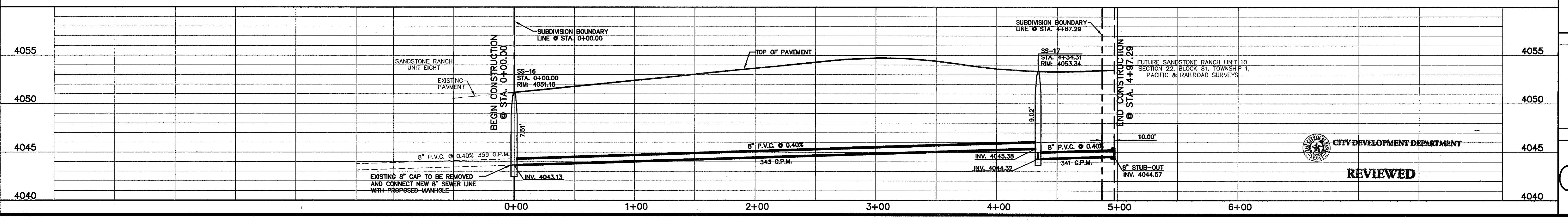
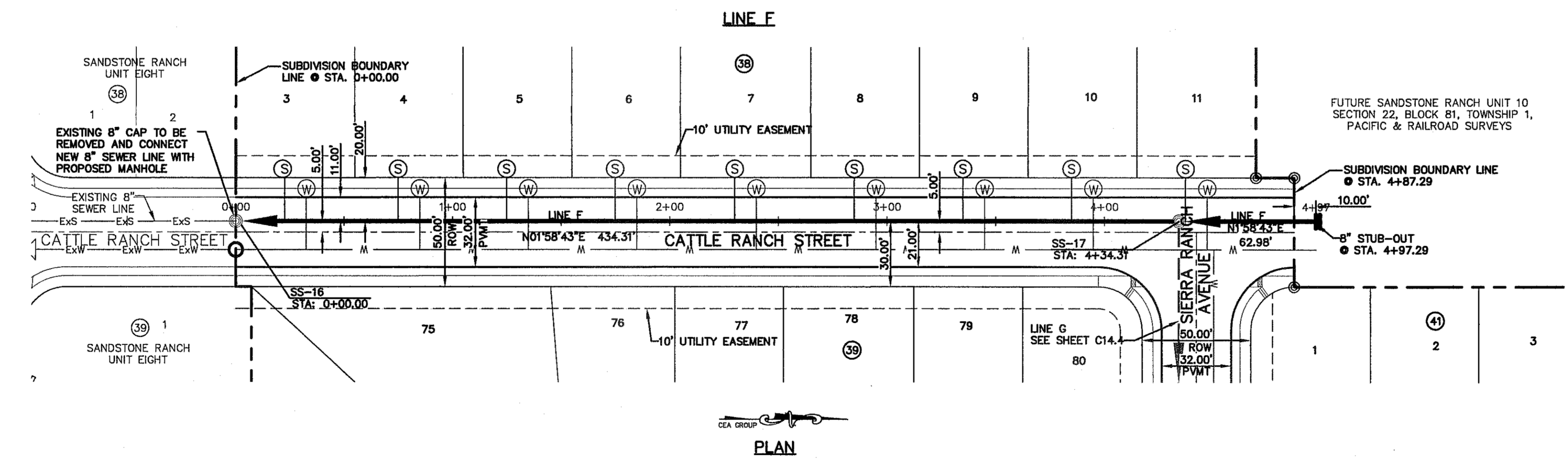
DESIGN BY: J.M.

DRAWN BY: J.M.

CHKD. BY: J.L.A.

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

JOB No. 2000-163-LD



PROJECT TITLE

**SANDSTONE RANCH UNIT NINE**

**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

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

SHEET NO.

**C14.3**

CITY DEVELOPMENT DEPARTMENT

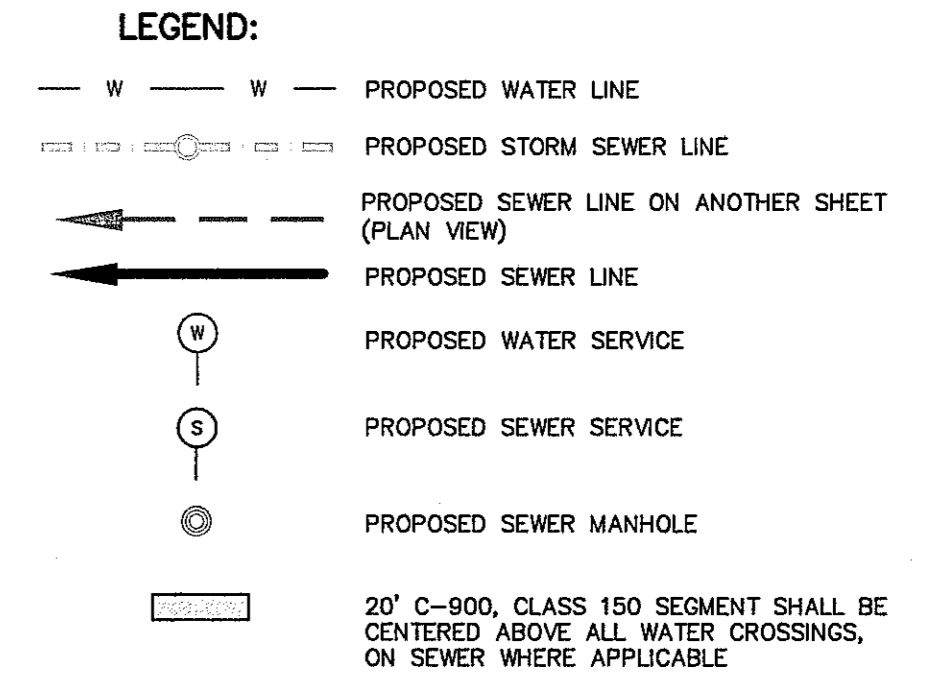
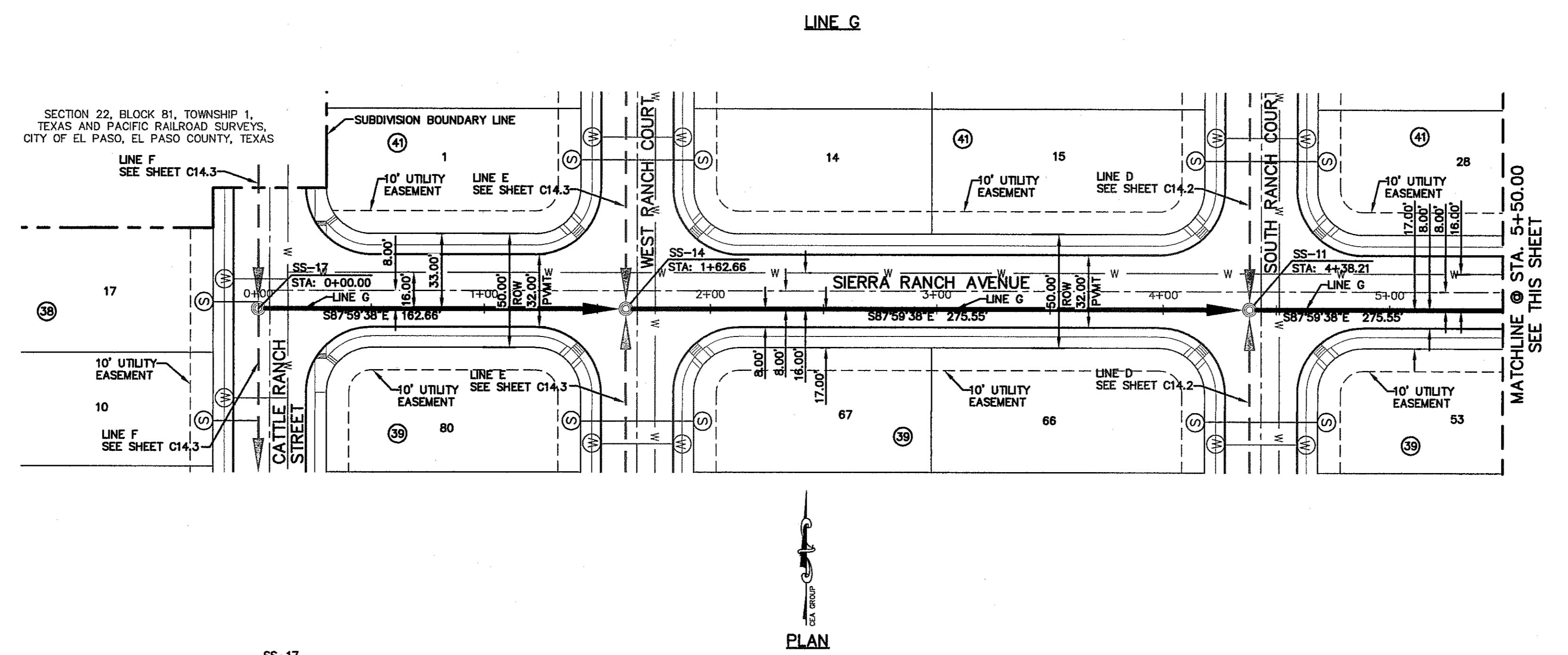
**REVIEWED**

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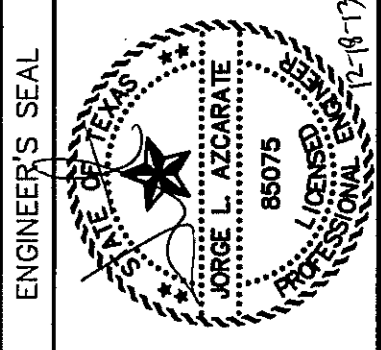
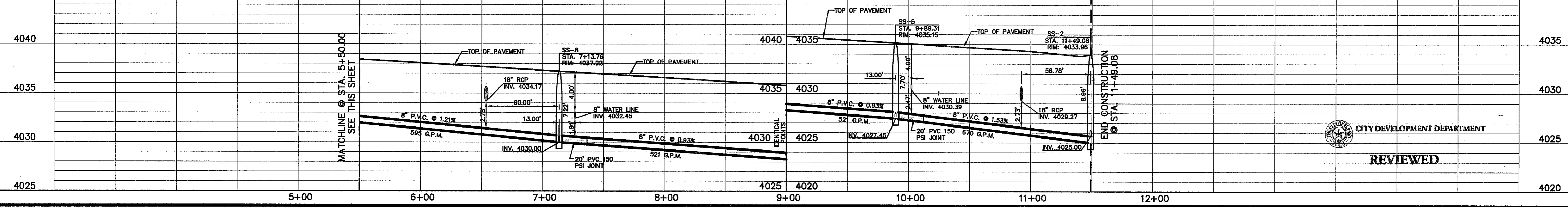
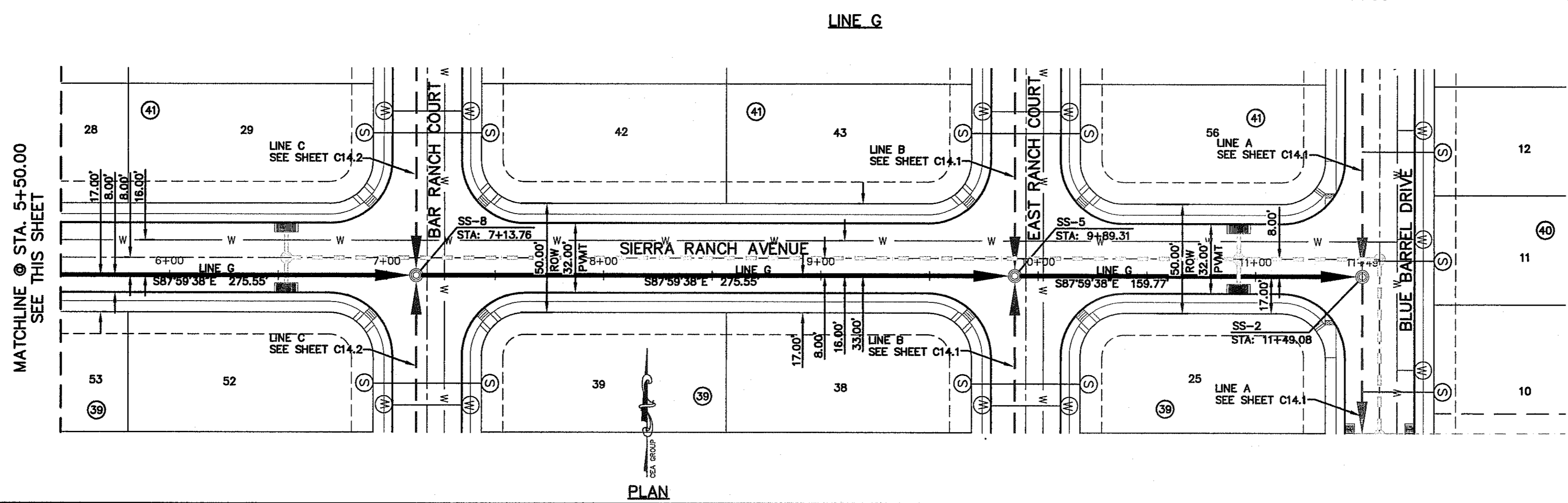
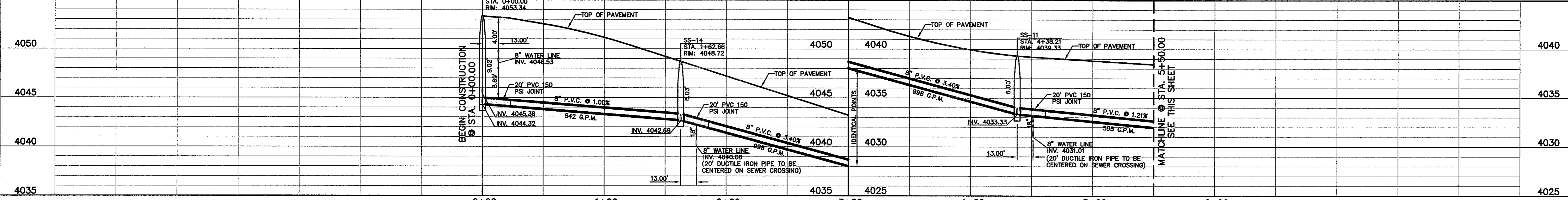
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

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

DATE	REVISIONS	BY



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SCALE:	1"=40'
Horizontal:	1"=40'
Vertical:	1"=5'
Contour Interval:	1/2'
DATE:	NOVEMBER 2013
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE**  
**SUBDIVISION IMPROVEMENTS**

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

SHEET NO.  
**C14.4**

**REVIEWED**  
 CITY DEVELOPMENT DEPARTMENT

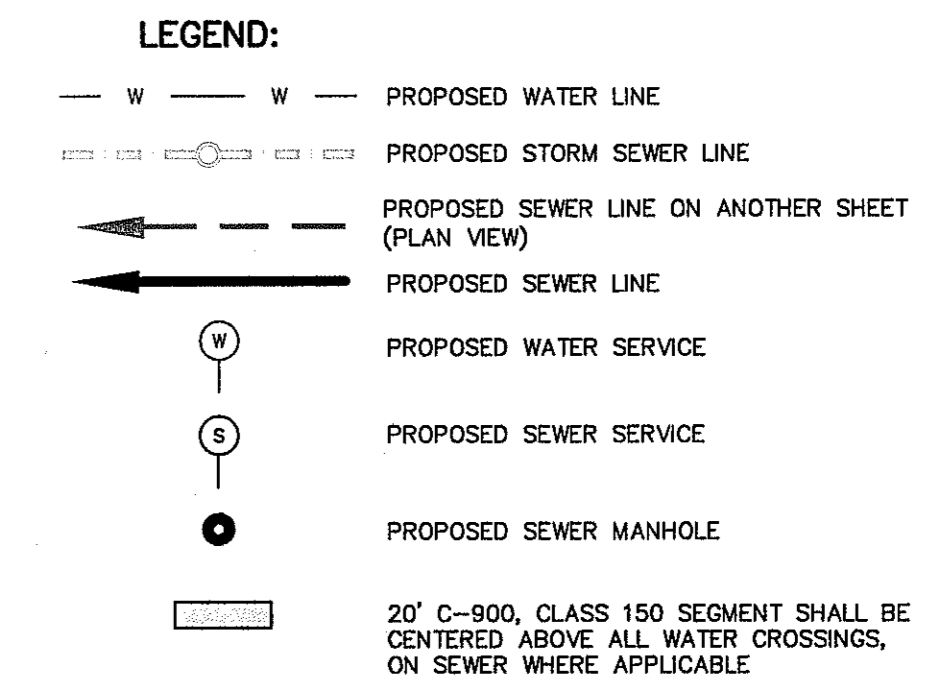
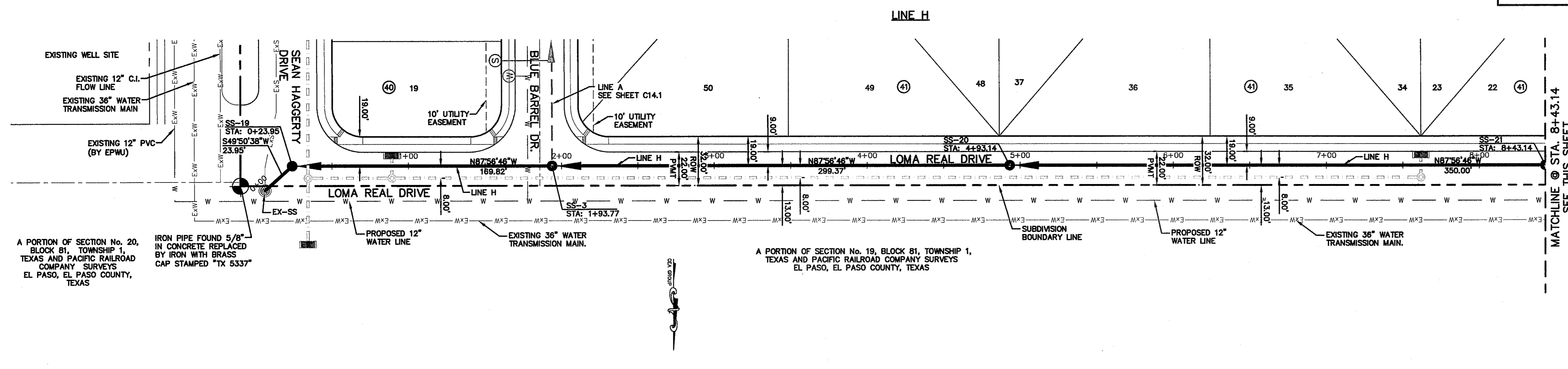
**UTILITY LOCATOR SERVICES**  
 EL PASO ELECTRIC COMPANY (915) 543-5720  
 EL PASO ENERGY CORPORATION (915) 498-5244  
 EL PASO WATER UTILITIES (915) 594-5500  
 MCI SURVEILLANCE (800) MCI-WORK  
 TIME WARNER COMMUNICATIONS (915) 772-1123  
 TEXAS GAS SERVICE (915) 680-7200  
 SBC (800) 545-0005  
 AT&T (800) 852-3786  
 U.S. SPRINT TELECOMM (800) 521-0579

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

REFERENCES - BENCHMARKS  
 FOUND TXDOT BRASS CAP AT  
 SECTION CORNERS 19, 20, 21, AND 22.  
 ELEVATION: 4033.22 (NVD DATUM)  
 (SUBTRACT 8.462 TO CONVERT TO CITY  
 DATUM).

DATE \_\_\_\_\_ REVISIONS \_\_\_\_\_ BY \_\_\_\_\_

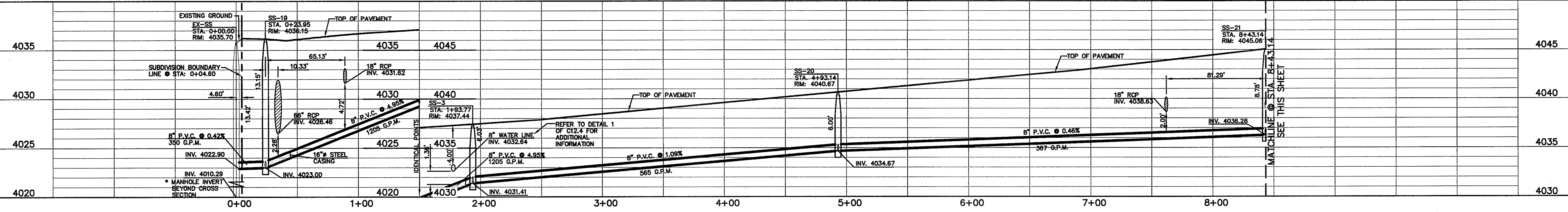
**CSA**  
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 TEXAS REGISTERED ENGINEERING FIRM # 654  
 4712 Woodrow Branch, Ste. F, El Paso, TX 79924  
 Office: 915.544.6322 Fax: 915.544.6293 www.csaonline.com



A PORTION OF SECTION No. 20, BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILROAD COMPANY SURVEYS EL PASO, EL PASO COUNTY, TEXAS

IRON PIPE FOUND 5/8" IN CONCRETE REPLACED BY IRON WITH BRASS CAP STAMPED "X 5337"

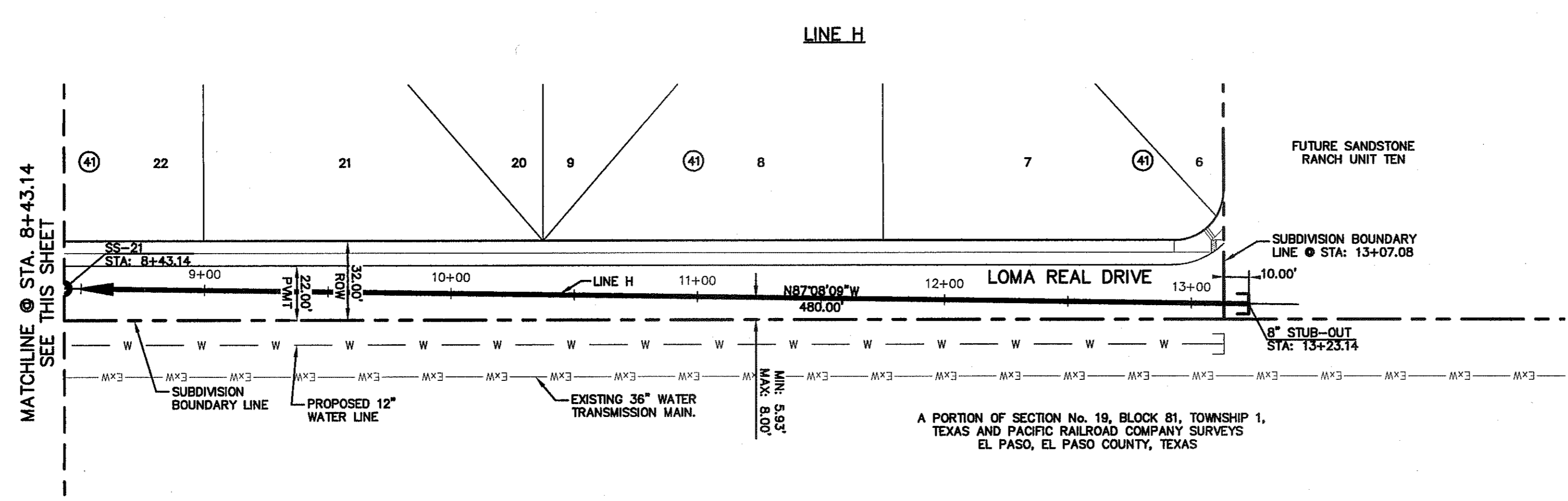
A PORTION OF SECTION No. 19, BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILROAD COMPANY SURVEYS EL PASO, EL PASO COUNTY, TEXAS



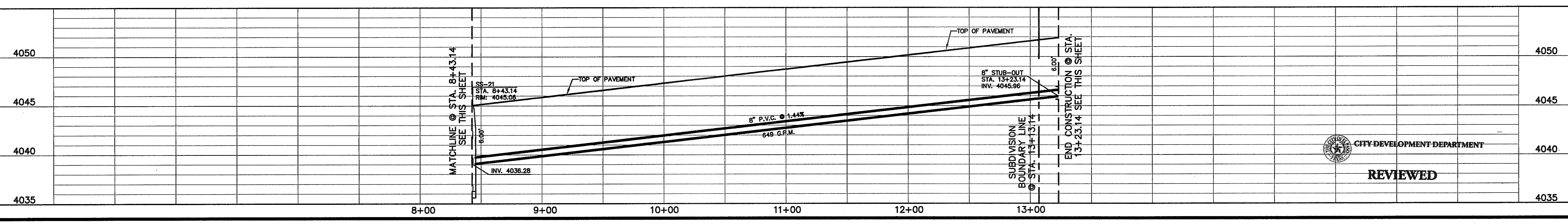
ENGINEER'S SEAL

SCALE: 1"=40'  
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 Vertical: 1"=8'  
 Contour Interval: N/A

DATE: NOVEMBER 2013  
 DESIGN BY: J.M.  
 DRAWN BY: J.M.  
 CHKD. BY: J.G.  
 APP'D. BY: J.L.A.  
 JOB No. 2000-163-LD



A PORTION OF SECTION No. 19, BLOCK 81, TOWNSHIP 1, TEXAS AND PACIFIC RAILROAD COMPANY SURVEYS EL PASO, EL PASO COUNTY, TEXAS



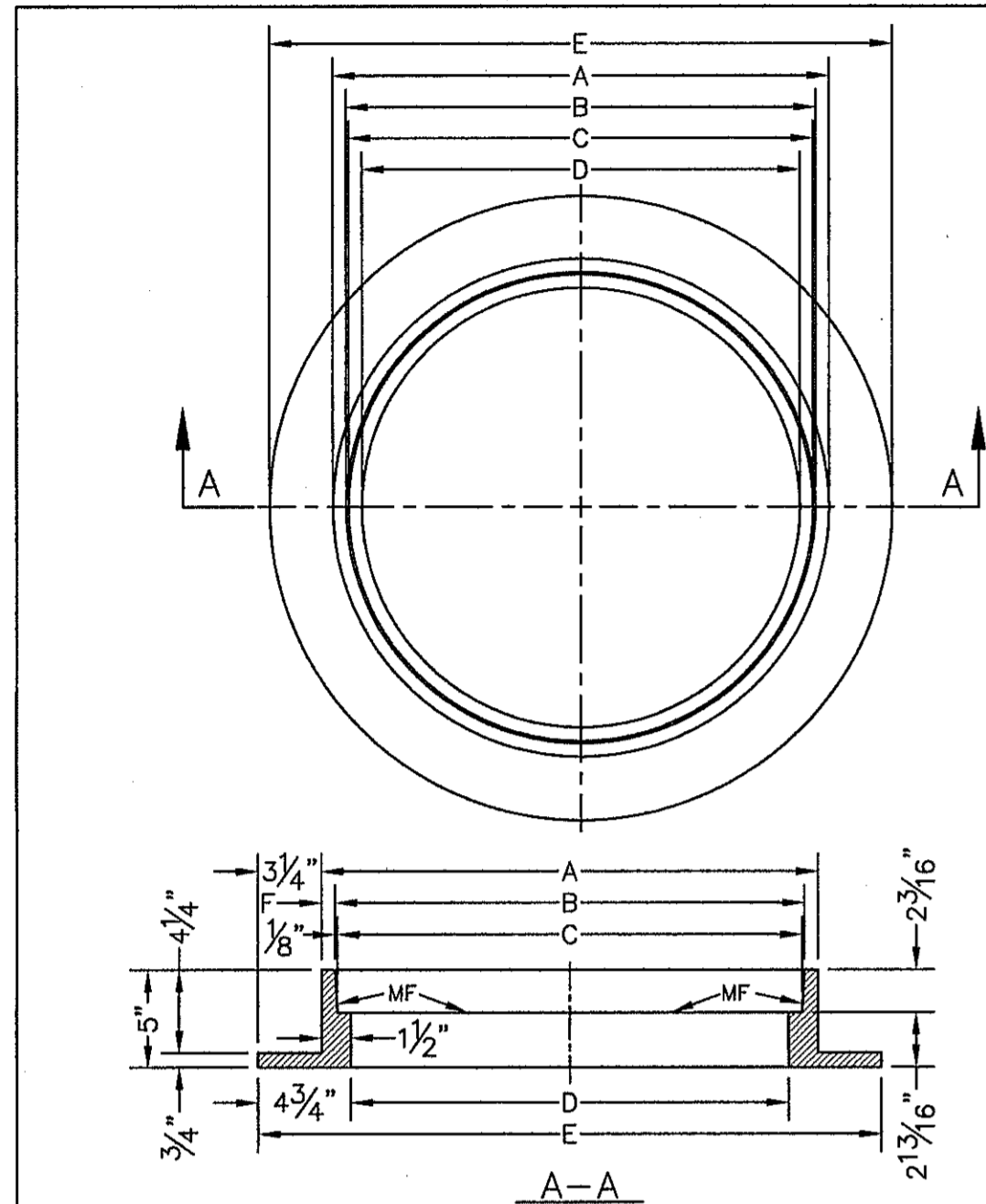
PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
 SUBDIVISION IMPROVEMENTS**

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

SHEET NO.  
**C14.5**

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

S:\2000\2000-163-LD-Sandstone Ranch Unit Nine\DWG\Construction Drawings\Improvement Plans\2000-163-LD-C14.5-Sewer P&P Line H.dwg, Layout1, 12/23/2013 3:20:49 PM



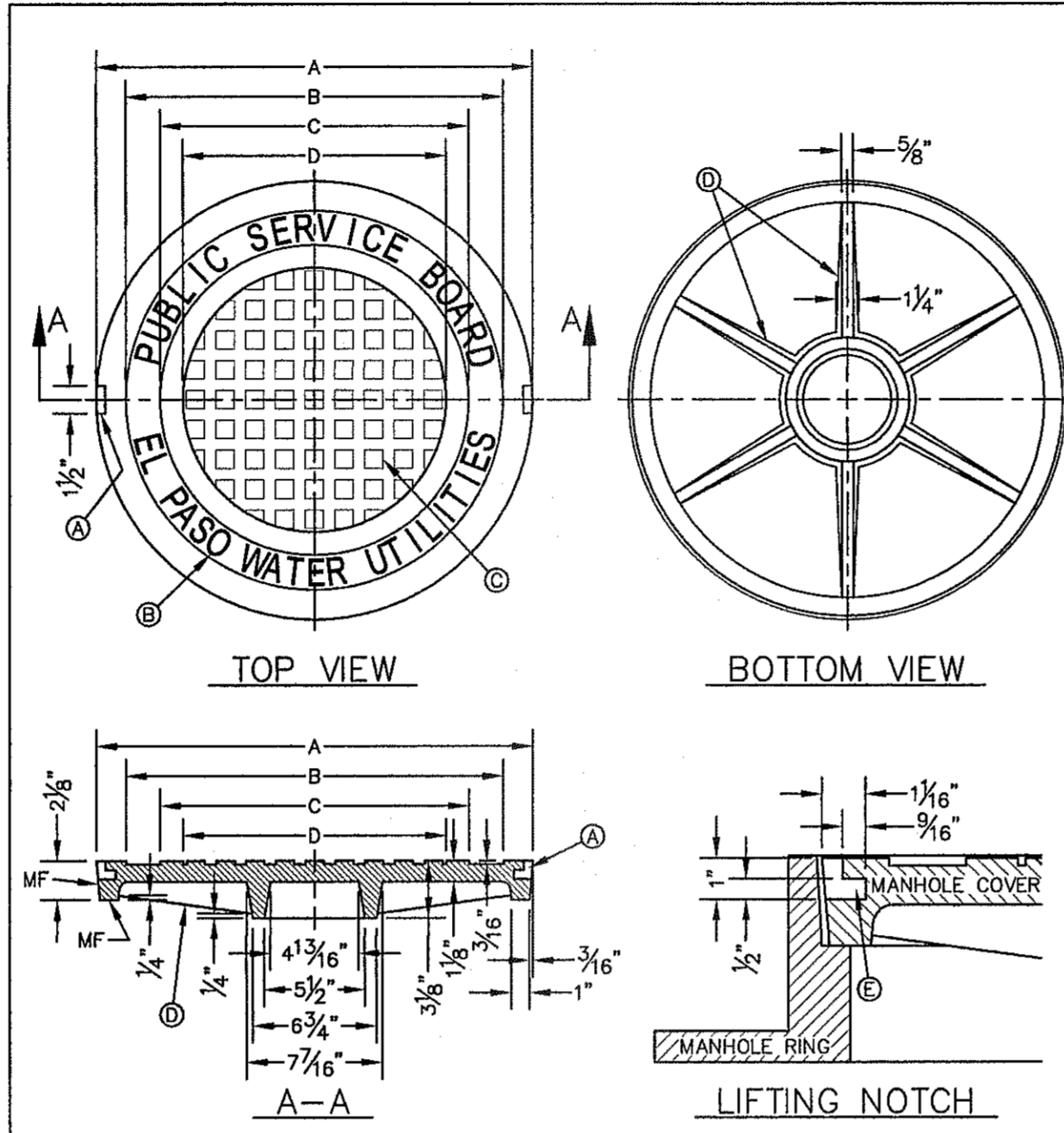
- GENERAL NOTES:**
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
  2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
  3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
  4. AS-CAST DIMENSIONS MAY VARY  $\frac{1}{8}$ " PER FOOT (AASHTO M306-07).
  5. WEIGHT MAY VARY 5%± (AASHTO M306-07).

MANHOLE RING	MANHOLE - ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	33"	25 $\frac{1}{2}$ "
B	31 $\frac{3}{4}$ "	24 $\frac{1}{8}$ "
C	31 $\frac{1}{2}$ "	23 $\frac{7}{8}$ "
D	30"	22 $\frac{1}{2}$ "
E	39 $\frac{1}{2}$ "	32"
F	$\frac{3}{8}$ "	$\frac{1}{16}$ "
WEIGHT	205 lbs.	170 lbs.

\*OBSOLETE - DO NOT USE (FOR REFERENCE ONLY)

STANDARD DETAIL DATE: 11/1992 REV: 2/21/2011 SEWER MANHOLE RING N.T.S. EL PASO WATER UTILITIES PUBLIC SERVICE BOARD DETAIL No. 377

1 STANDARD MANHOLE RING N.T.S.



- GENERAL NOTES:**
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
  2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
  3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
  4. AS-CAST DIMENSIONS MAY VARY  $\frac{1}{8}$ " PER FOOT (AASHTO M306-07).
  5. WEIGHT MAY VARY 5%± (AASHTO M306-07).

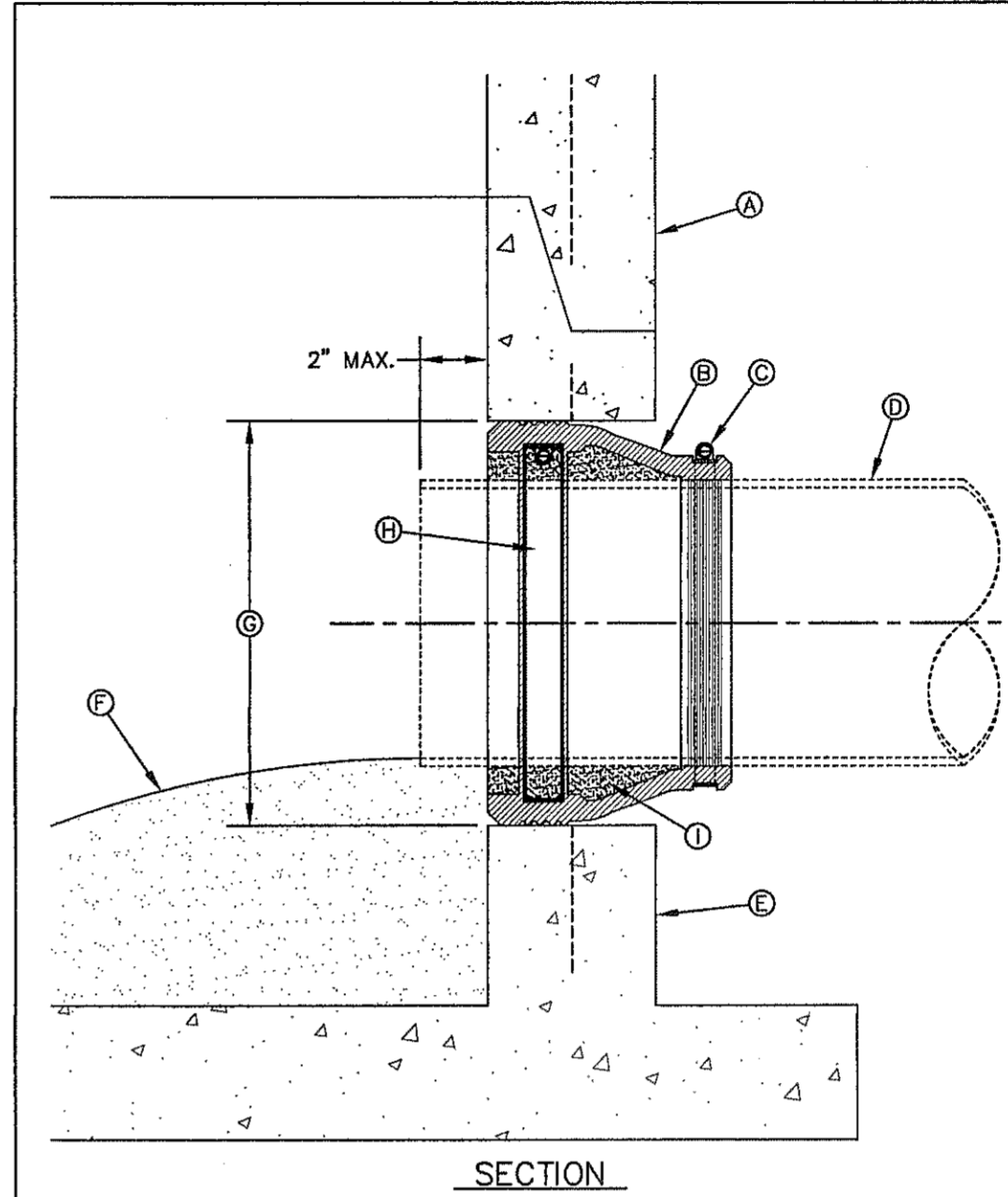
- CONSTRUCTION KEY NOTES:**
- A. LIFTING NOTCH
  - B.  $\frac{3}{8}$ " RAISED LETTERING
  - C. 1" SQUARES ( $\frac{3}{8}$ " TALL) WITH  $\frac{3}{8}$ " SPACE BETWEEN.
  - D. REINFORCING RIBS.
  - E. SLOT.

MANHOLE COVER	MANHOLE - ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	31 $\frac{3}{8}$ "	23 $\frac{7}{8}$ "
B	28 $\frac{1}{2}$ "	20 $\frac{1}{2}$ "
C	24 $\frac{3}{8}$ "	16 $\frac{1}{2}$ "
D	21 $\frac{7}{8}$ "	14 $\frac{3}{8}$ "
WEIGHT	200 lbs.	165 lbs.

\*OBSOLETE - DO NOT USE (FOR REFERENCE ONLY)

STANDARD DETAIL DATE: 11/1992 REV: 2/21/2011 SEWER MANHOLE COVER N.T.S. EL PASO WATER UTILITIES PUBLIC SERVICE BOARD DETAIL No. 378

2 STANDARD COVER DETAIL N.T.S.



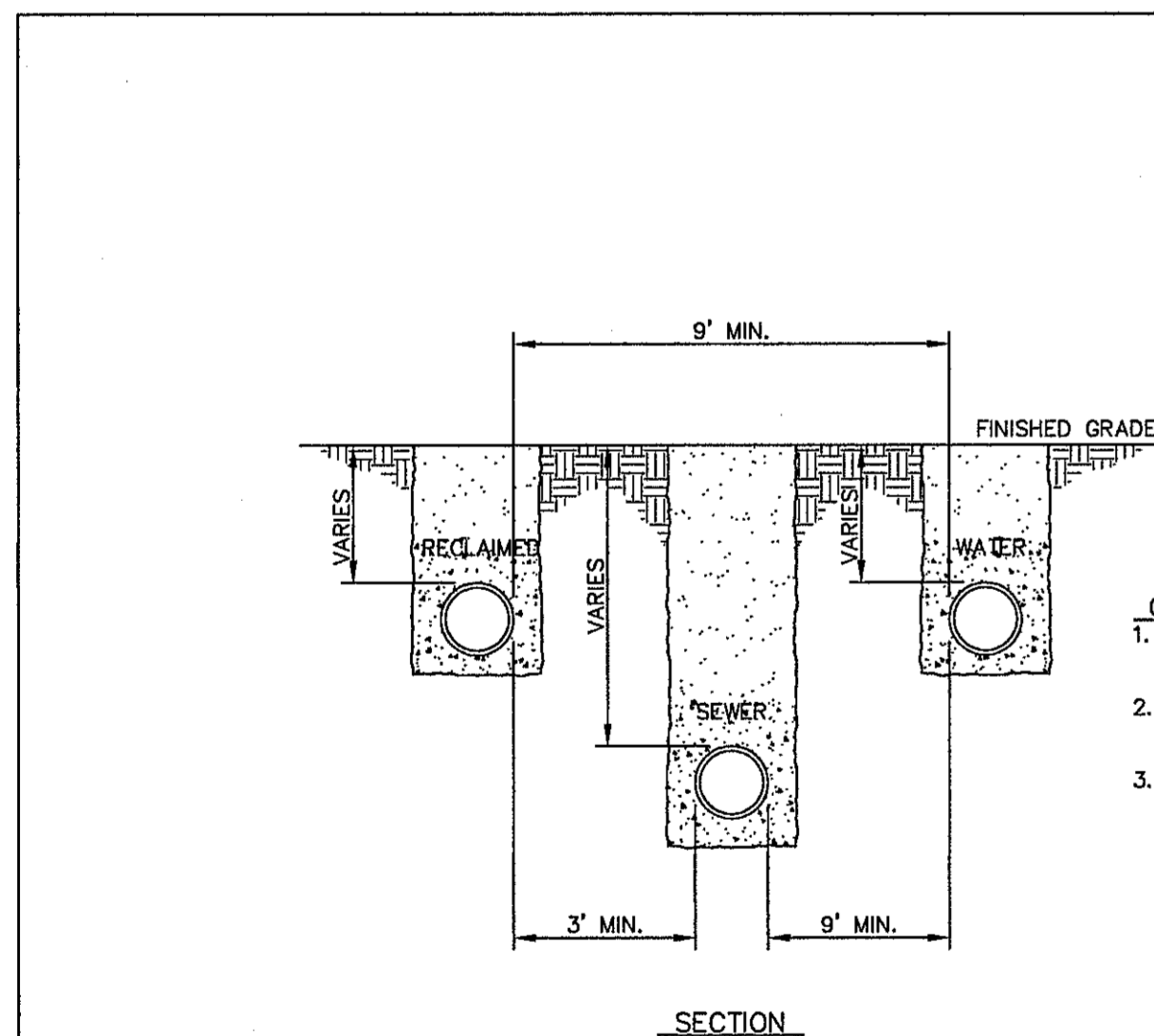
- GENERAL NOTES:**
1. MANHOLE CONNECTOR SHALL BE KOR-N-SEAL OR EQUAL MEETING THE REQUIREMENTS OF ASTM C-923. CONNECTOR SHALL BE FURNISHED BY CONTRACTOR.

**CONSTRUCTION KEY NOTES:**

- A. PRECAST MANHOLE BARREL
- B. FLEXIBLE CONNECTOR
- C. PIPE CLAMP SS 316
- D. APPROVED PIPE
- E. PRECAST MANHOLE BASE
- F. GROUT AS REQUIRED TO FORM SMOOTH CHANNEL TO MANHOLE INVERT.
- G. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE
- H. EXPANSION BAND SS 316
- I. FILL SPACE WITH GROUT.

STANDARD DETAIL DATE: 11/1992 REV: 8/13/2009 PIPE CONNECTION TO MANHOLE N.T.S. EL PASO WATER UTILITIES PUBLIC SERVICE BOARD DETAIL No. 376

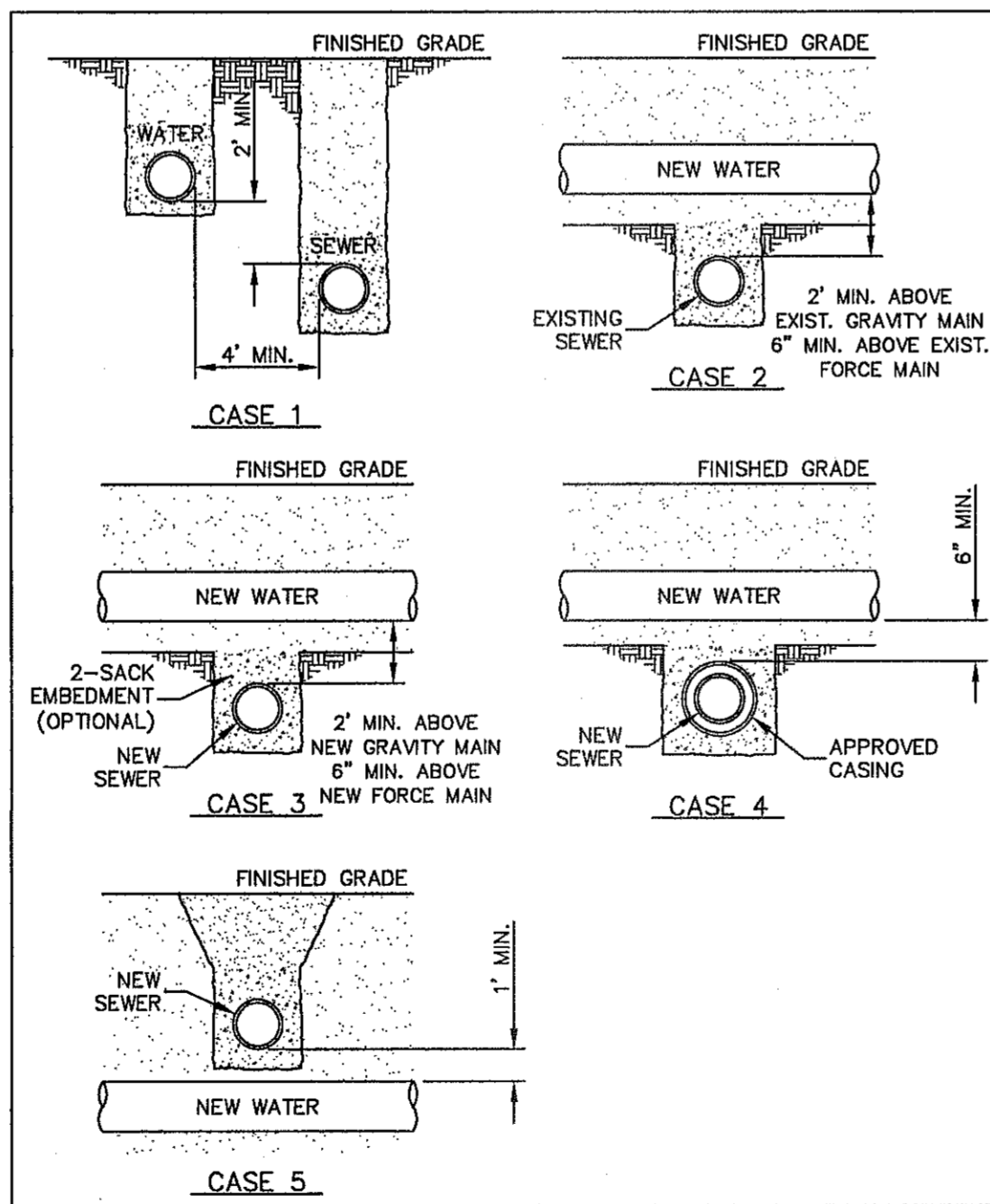
3 PIPE CONNECTION TO MANHOLE N.T.S.



- GENERAL NOTES:**
1. SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.
  2. MINIMUM SEPARATION DISTANCES SHOWN, IF CONDITIONS DO NOT ALLOW FOR INDICATED DISTANCES REFER TO DETAILS 161, 162 & 163.
  3. RECLAIMED WATER LINE AT OR ABOVE SEWER LINE.

STANDARD DETAIL DATE: 8/3/2006 REV: 3/28/2007 SEPARATION DISTANCE POTABLE WATER, SANITARY SEWER AND RECLAIMED WATER N.T.S. EL PASO WATER UTILITIES PUBLIC SERVICE BOARD DETAIL No. 160

4 SEPARATION DISTANCE-POTABLE WATER, SANITARY SEWER AND RECLAIMED WATER N.T.S.



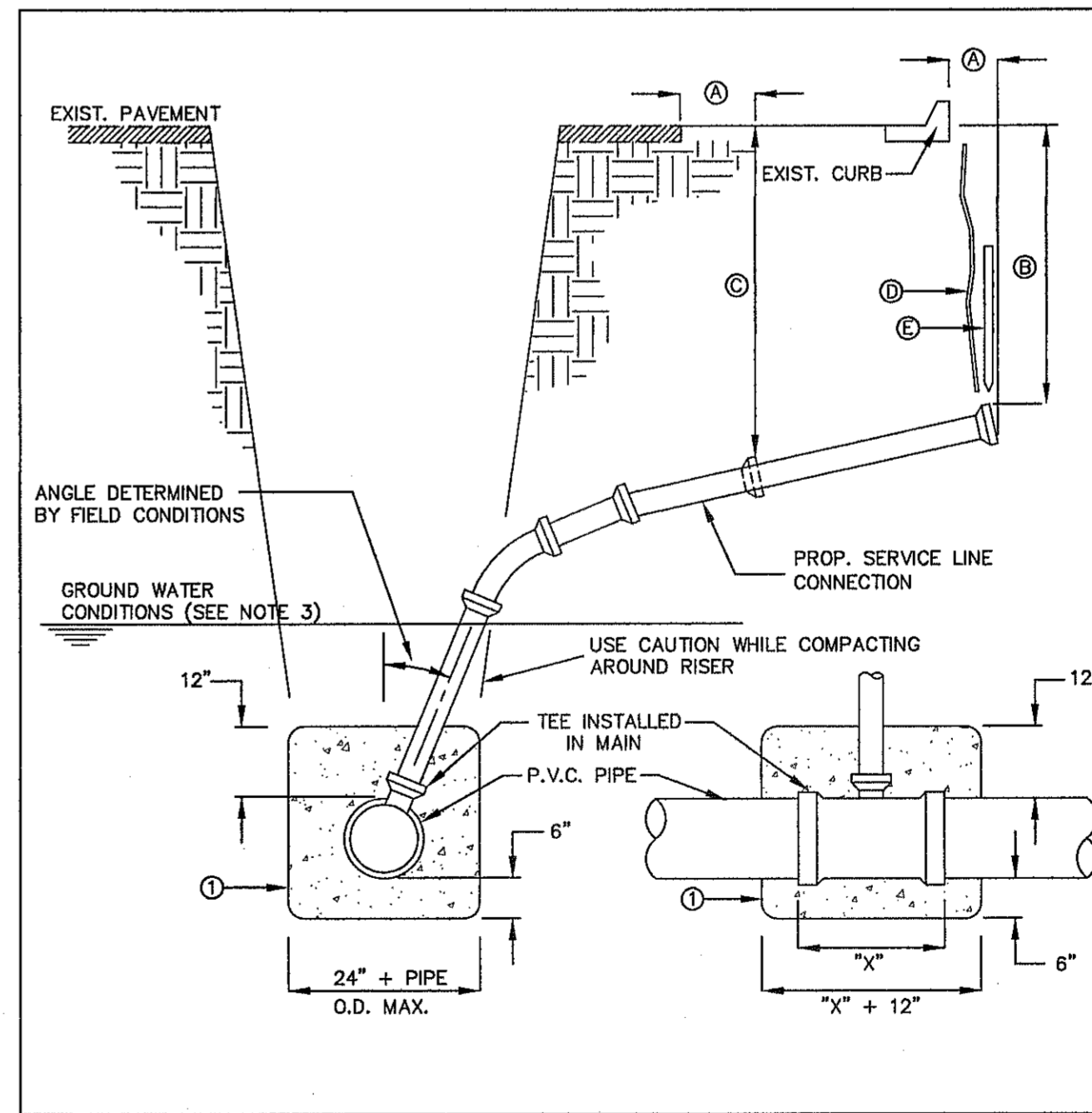
- GENERAL NOTES:**
1. NEW OR EXISTING POTABLE WATER AND SANITARY SEWER MAINS.
  2. SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.

**CONSTRUCTION KEY NOTES:**

- WHEN STANDARD NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, SEPARATION SHALL BE DETERMINED ACCORDING TO THE FOLLOWING CONDITIONS:
- CASE 1: GRAVITY SANITARY SEWER MAIN OR FORCE MAIN PARALLEL TO POTABLE WATER MAIN (PER TCEQ §290.44(a)(9)(B)(i)).
    - LOCATION: WATER ABOVE SEWER OR FORCE MAIN
    - SEWER MATERIALS: EXISTING GRAVITY MAIN PVC SD305 OR CLAY OR FORCE MAIN TO REMAIN IF NOT LEAKING; IF LEAKING, MUST BE REPLACED WITH PVC (150 PSI) OR DI. NEW GRAVITY MAIN OR FORCE MAIN REQUIRES PVC (150 PSI) OR DI.
    - SEPARATE TRENCHES SHALL BE USED.
  - CASE 2: NEW POTABLE WATER MAIN CROSSING EXISTING GRAVITY SANITARY SEWER MAIN OR EXISTING FORCE MAIN (PER TCEQ §290.44(a)(9)(B)(ii) AND §290.44(a)(9)(B)(iii)).
    - LOCATION: WATER ABOVE SEWER OR FORCE MAIN
    - SEWER MATERIALS: EXISTING GRAVITY MAIN PVC SD305 OR CLAY OR FORCE MAIN TO REMAIN IF NOT LEAKING; IF LEAKING, REPLACE ONE PIPE SEGMENT PER CASE 3 REQUIREMENTS
    - CENTER ONE SEGMENT OF WATER PIPE OVER SEWER MAIN OR FORCE MAIN
    - MINIMUM PIPE SEGMENT LENGTH FOR WATER PIPE SHALL BE 18 FEET LONG.
  - CASE 3: NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §290.44(a)(9)(B)(ii), §290.44(a)(9)(B)(iii) AND §290.44(a)(9)(B)(iv)).
    - LOCATION: WATER ABOVE SEWER OR FORCE MAIN
    - SEWER MATERIALS: NEW GRAVITY MAIN - PVC (150 PSI) OR DI REQUIRED; CENTER UNDER WATER MAIN. NEW FORCE MAIN - PVC (150 PSI) OR DI REQUIRED; FORCE MAIN TO BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.
    - CENTER ONE SEGMENT OF WATER PIPE OVER SEWER PIPE OR FORCE MAIN
    - MINIMUM PIPE SEGMENT LENGTH FOR WATER AND SEWER SHALL BE 18 FEET LONG.
    - FOR NEW GRAVITY SEWER ONLY, IN LIEU OF PVC (150 PSI) OR DI, INSTALL ONE PIPE SEGMENT OF SD305 SEWER MAIN MUST BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.
  - CASE 4: NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §290.44(a)(9)(B)(ii), §290.44(a)(9)(B)(iii), §290.44(a)(9)(B)(iv)).
    - LOCATION: WATER ABOVE SEWER OR FORCE MAIN
    - SEWER MATERIALS: NEW GRAVITY MAIN - PVC (150 PSI) OR DI REQUIRED; NEW FORCE MAIN - PVC (150 PSI) OR DI REQUIRED. IN ADDITION, SEWER MAIN OR FORCE MAIN MUST BE ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
    - CENTER CASING PIPE ON WATER MAIN
  - CASE 5: NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN CROSSING NEW POTABLE WATER MAIN (PER TCEQ §290.44(a)(9)(B)(ii), §290.44(a)(9)(B)(iii)).
    - LOCATION: SEWER OR FORCE MAIN ABOVE WATER
    - NEW GRAVITY MAIN OR FORCE MAIN REQUIRES ONE PIPE SEGMENT OF PVC (150 PSI) OR DI. IN ADDITION, WATER MUST BE DI OR STEEL OR ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
    - CENTER ONE SEGMENT OF SEWER PIPE ON WATER MAIN.

STANDARD DETAIL DATE: 8/3/2006 REV: 8/21/2007 SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS) N.T.S. EL PASO WATER UTILITIES PUBLIC SERVICE BOARD DETAIL No. 161

5 SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS) N.T.S.



- GENERAL NOTES:**
1. IN GROUND WATER CONDITIONS ONLY, P.V.C. SADDLES OR TEES ARE TO BE ENCASED WITH CLASS B CONCRETE.
  2. UNDER CERTAIN CONDITIONS FIELD INVESTIGATIONS WILL BE REQUIRED TO DETERMINE THE ADEQUACY OF THE DEPTH ON THE LATERAL.
  3. WHEN GROUND WATER IS ENCOUNTERED SERVICE RISER SHALL BE EXTENDED ABOVE ANTICIPATED WATER TABLE LEVEL.

**CONSTRUCTION KEY NOTES:**

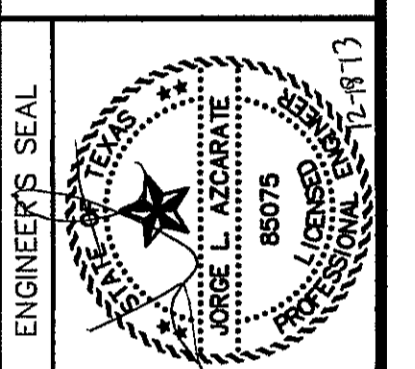
- A. CONTRACTOR TO INSTALL SEWER SERVICE LINE FROM THE MAIN TO A LOCATION 6" BEHIND THE CURB OR 18" BEYOND THE EDGE OF PAVEMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
- B. 18" FOR STANDARD SUBDIVISION, 3.5' FOR SUBDIVISIONS WITH ON-SITE PONDING OR FLAT TERRAIN.
- C. RISERS OR LATERALS EXTENDING BEYOND EXISTING PAVING SHALL BE INSTALLED TO 3.5' MINIMUM TOP OF GROUND OR PAVEMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
- D. PLASTIC METALLIC MARKING TAPE RISING TO WITHIN 6" OF GROUND SURFACE OR METALLIC DISK.
- E. WOODEN STAKE (1"x2"x36") VERTICALLY PLACED AT PLUGGED END OF PROPOSED SERVICE LINE.

STANDARD DETAIL DATE: 11/1992 REV: 1/23/2009 SEWER SERVICE RISER AND SERVICE LINE CONNECTION N.T.S. EL PASO WATER UTILITIES PUBLIC SERVICE BOARD DETAIL No. 391

6 SEWER SERVICE RISER AND SERVICE LINE CONNECTION N.T.S.

REFERENCES - BENCHMARKS  
FOUND TxDOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

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Vertical: N/A  
Contour Interval: N/A  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-163-LD

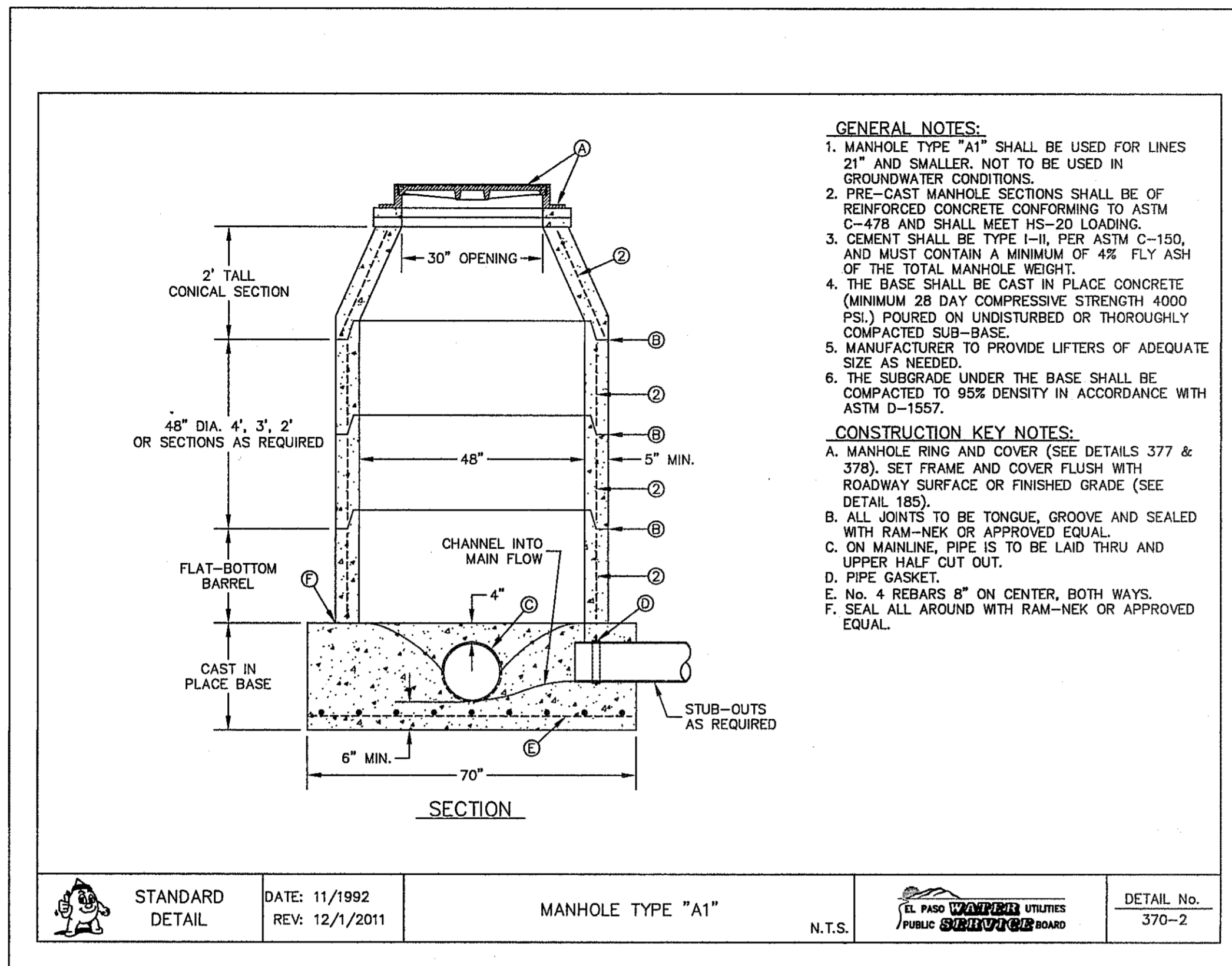
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**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

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

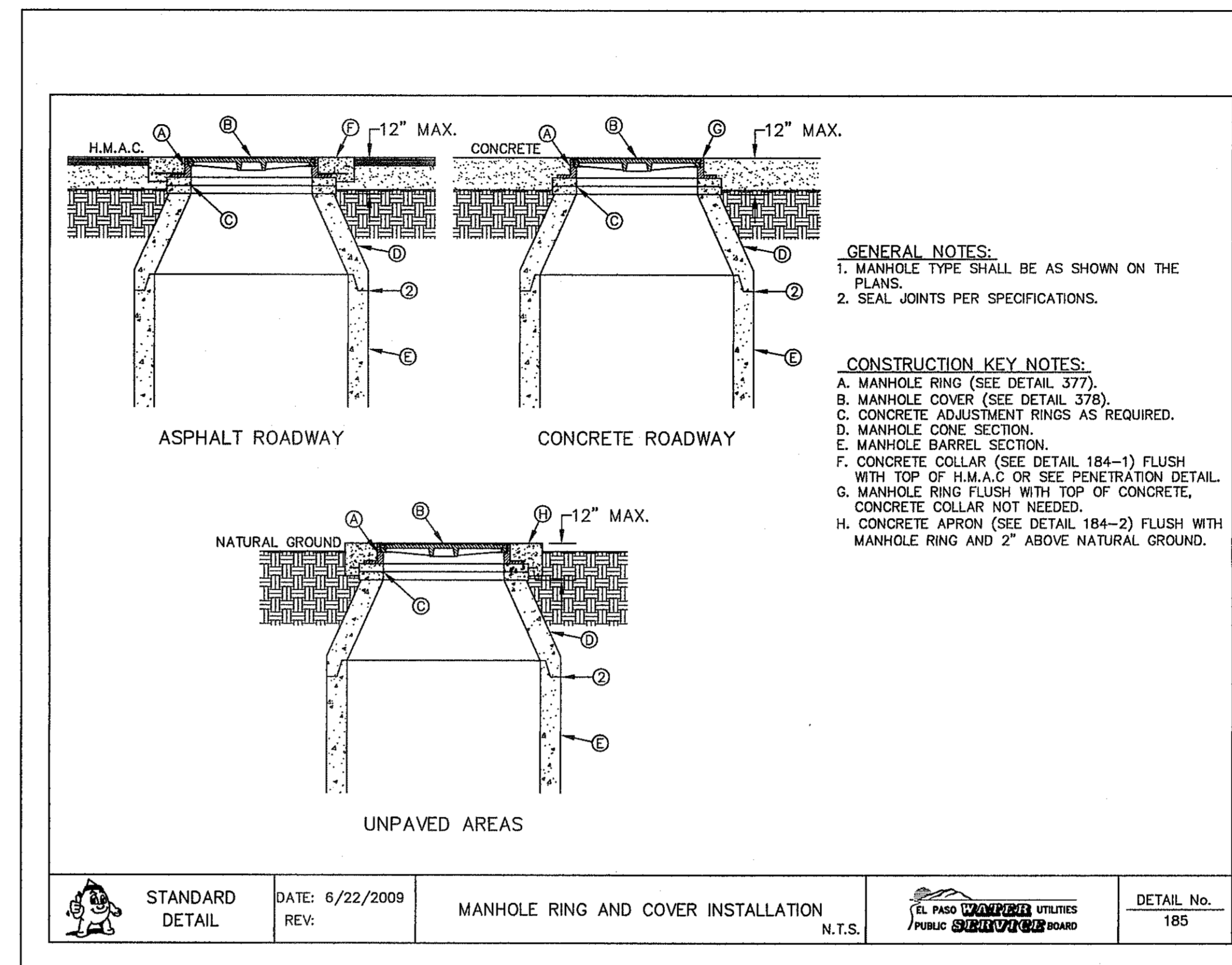
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CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

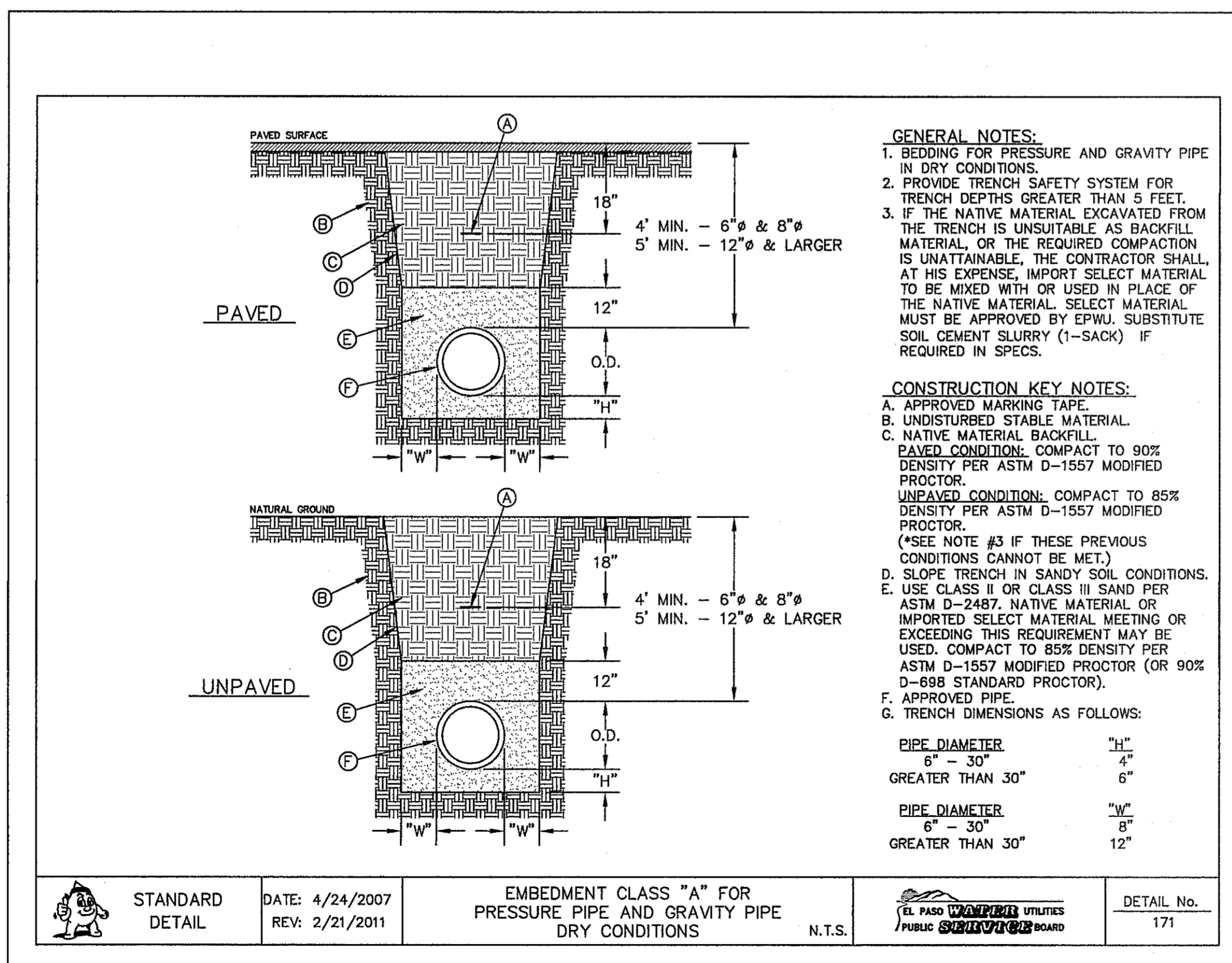
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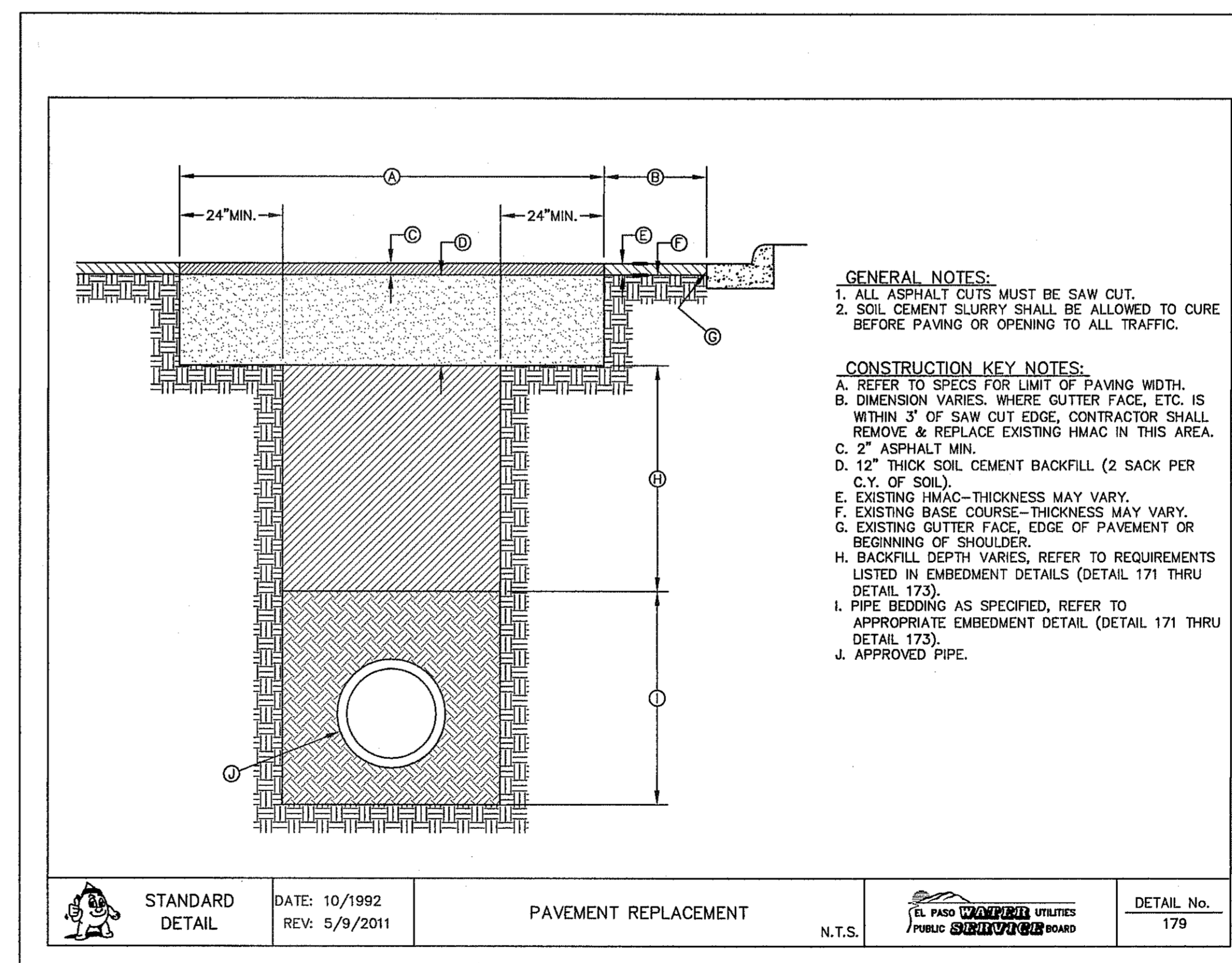
1 STANDARD MANHOLE TYPE "A1" SCALE: N.T.S.



2 STANDARD MANHOLE RING AND COVER INSTALLATION DETAIL N.T.S.



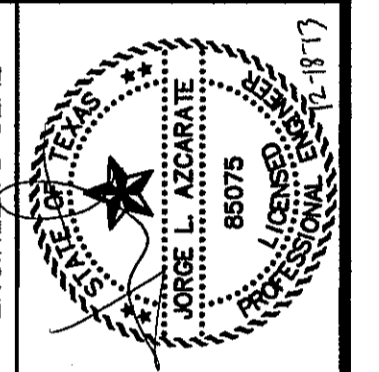
3 EMBEDMENT CLASS "A" FOR PRESSURE PIPE AND GRAVITY PIPE DRY CONDITIONS N.T.S.



4 PAVEMENT REPAIR DETAIL N.T.S.

REFERENCES - BENCHMARKS  
FOUND TYPOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVGD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).

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CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-163-LD

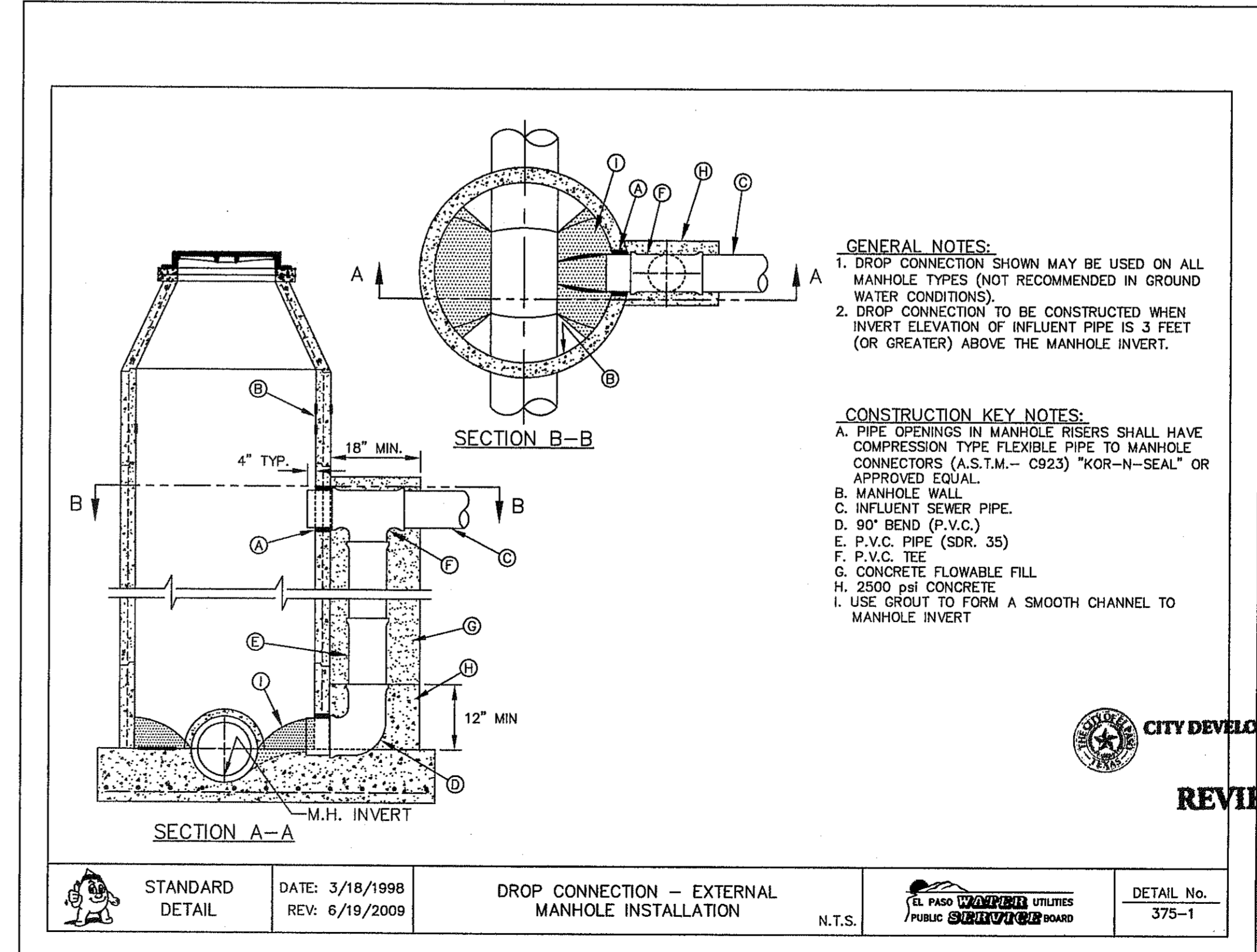
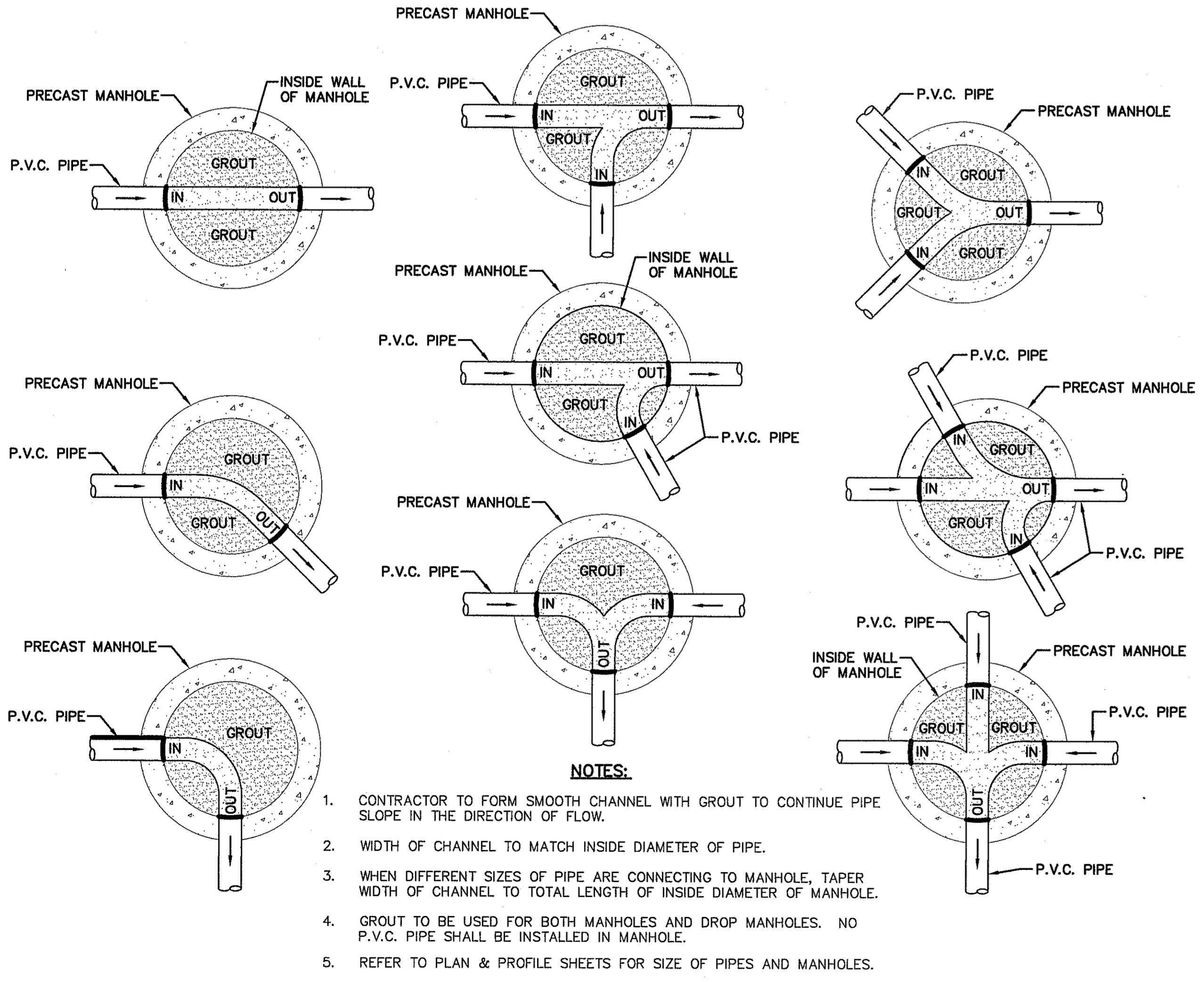
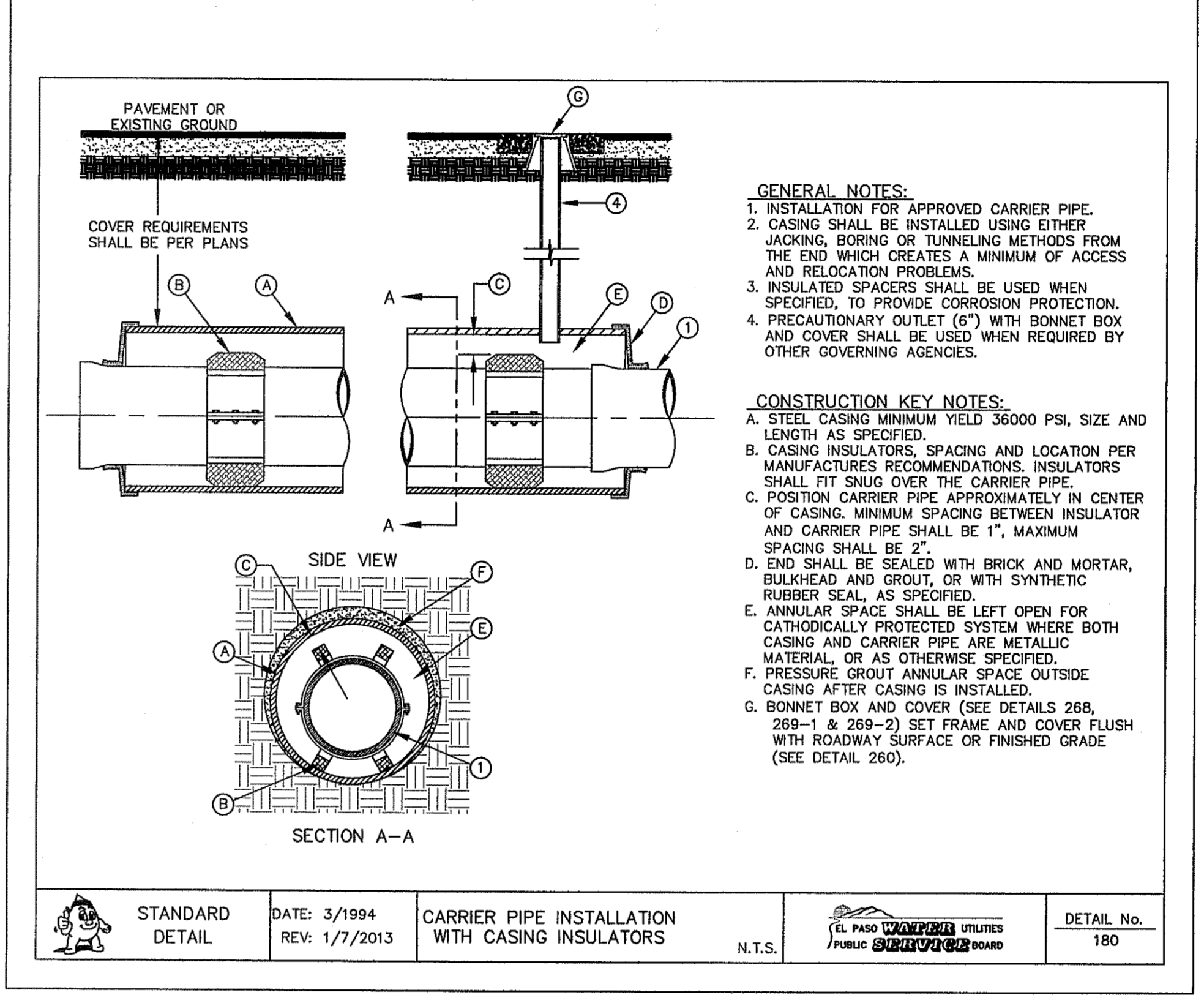
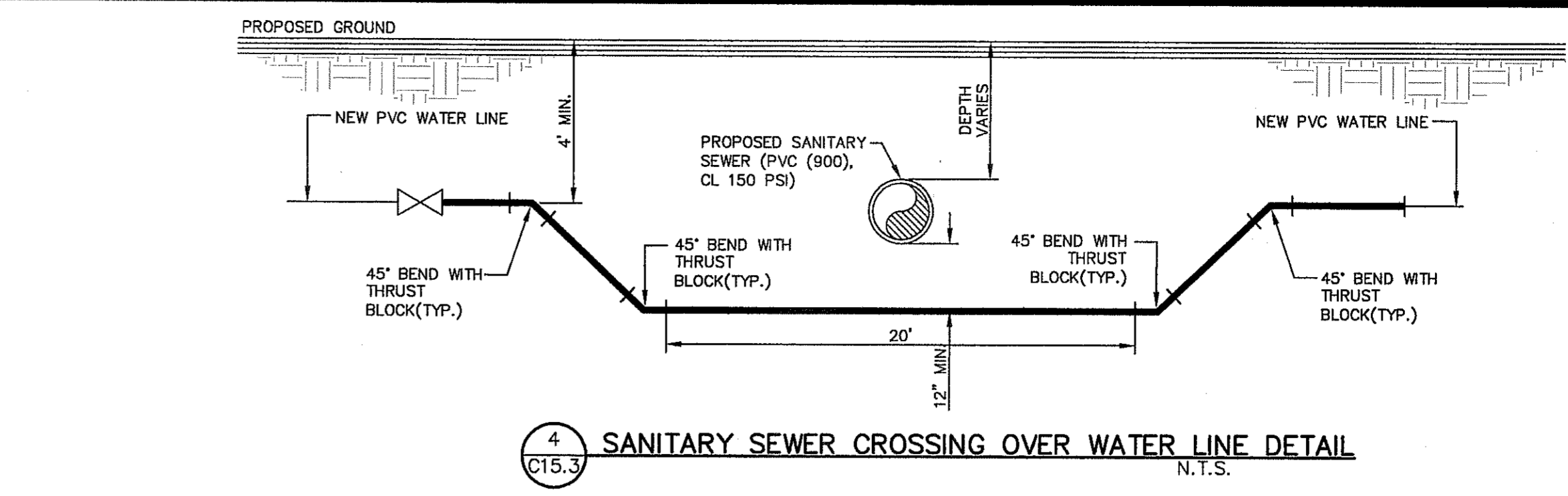
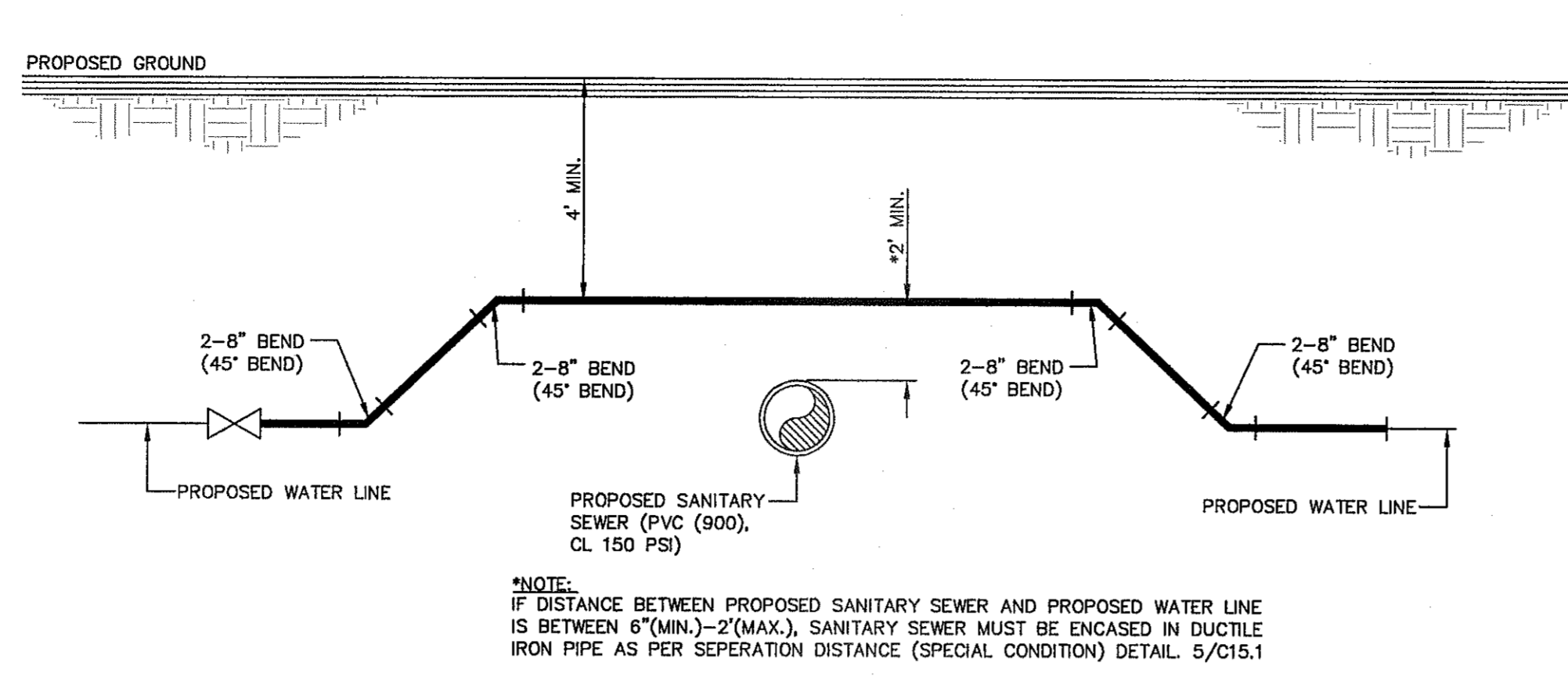
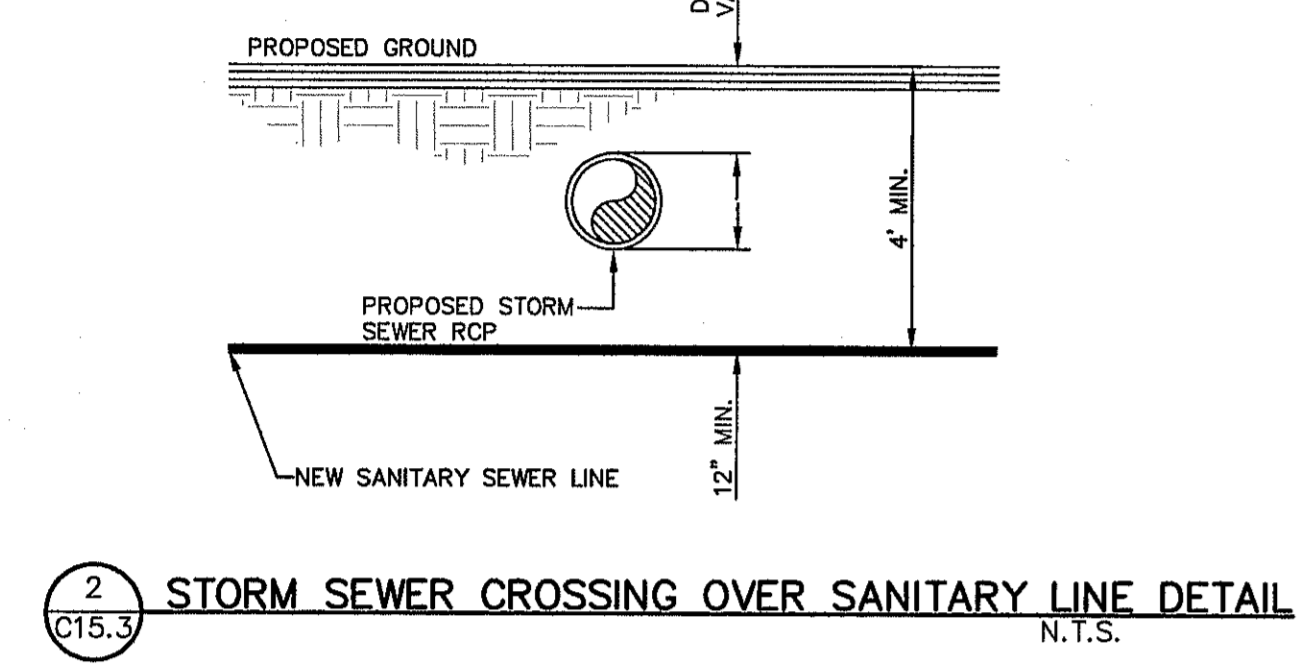
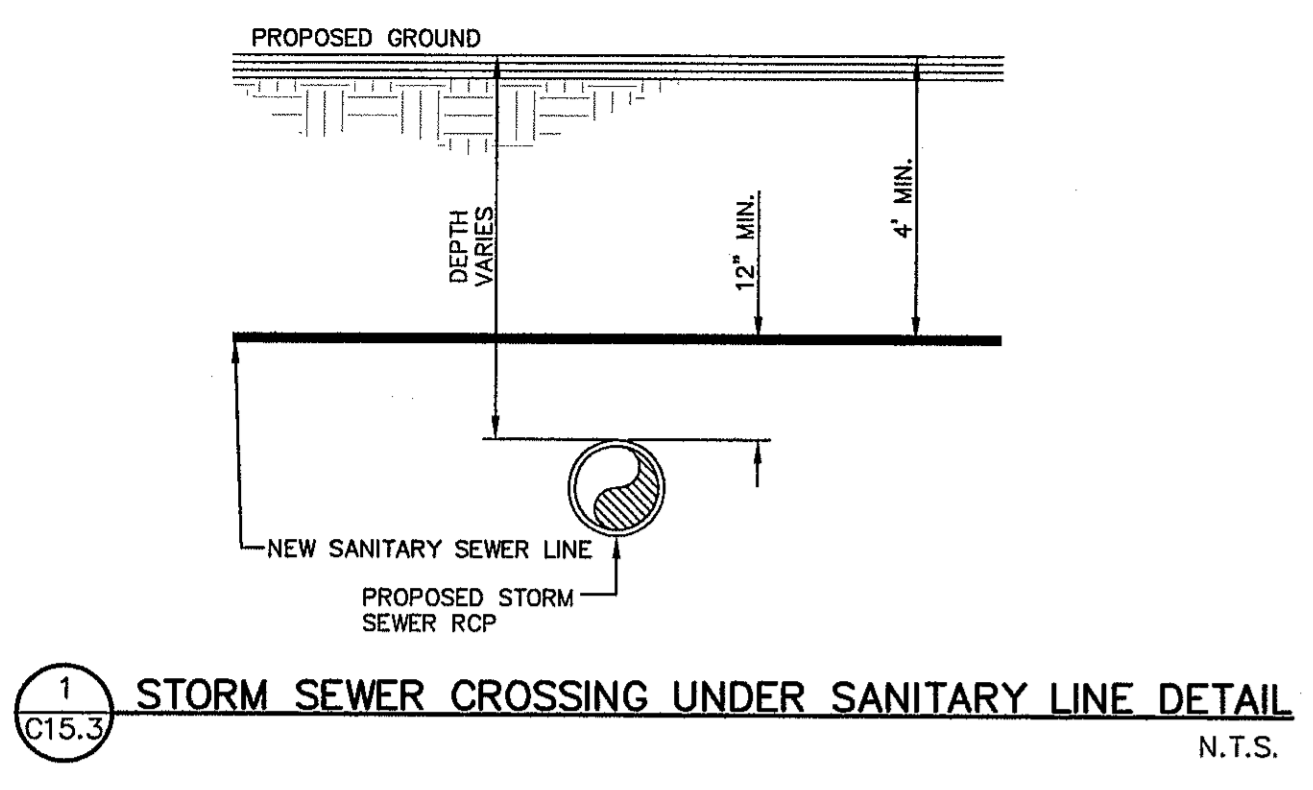
PROJECT TITLE  
SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS

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

CITY DEVELOPMENT DEPARTMENT  
REVIEWED

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REFERENCES - BENCHMARKS  
FOUND TPOOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NGVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

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PROJECT TITLE  
SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS

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

CITY DEVELOPMENT DEPARTMENT  
REVIEWED

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APPVD. BY: J.L.A.  
JOB No. 2000-163-ID

REVISIONS  
DATE  
BY

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**SITE DESCRIPTION**

PROJECT NAME AND LIMITS: SANDSTONE RANCH UNIT NINE  
THE PROJECT IS BORDERED BY SANDSTONE RANCH UNIT EIGHT SUBDIVISION TO THE SOUTH,  
SANDSTONE RANCH ESTATES UNIT FOUR AND A EXISTING WELL SITE TO THE EAST.  
A PORTION OF SECTION 22, BLOCK 81, TO THE NORTH, AND SANDSTONE RANCH  
UNIT FOUR SUBDIVISION TO THE WEST.

PROJECT DESCRIPTION: THE SITE FOR THE NEW SUBDIVISION WILL ENCOMPASS APPROXIMATELY  
29.34± ACRES, AND WILL CONTAIN 138 RESIDENTIAL LOTS. PROJECT IMPROVEMENTS  
SHALL CONSIST OF STREET AND LOT GRADING.

EXISTING CONDITIONS: THE SITE IS CLEAR OF SITE IMPROVEMENTS AND IS COVERED WITH ITS  
NATURAL SURROUNDINGS. EXISTING RUNOFF GENERALL FLOWS IN A EASTERLY DIRECTION.

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

TOTAL PROJECT AREA: 29.37± ac.

TOTAL AREA TO BE DISTURBED: 29.37± ac.

WEIGHTED RUNOFF COEFFICIENT  
(AFTER CONSTRUCTION): 0.615

EXISTING CONDITION OF SOIL AND VEGETATIVE  
COVER AND % OF EXISTING VEGETATIVE COVER: THE PROJECT SITE IS LOCATED IN THE VICINITY OF THE  
TURNERY-BERINO ASSOCIATION: NEARLY LEVEL AND GENTLY SLOPING SOILS THAT HAVE A CLAY  
LOAM SUBSOIL AND ARE MODERATELY DEEP OVER SOFT CALICHE; IN THE HUECO BOLSON.

NAME OF RECEIVING WATERS: STORM RUNOFF FROM THE NEW SUBDIVISION WILL BE CONVEYED THROUGH A  
NEW STORM SEWER INFRASTRUCTURE AND ULTIMATELY BE DISCHARGED INTO AN OFF-SITE  
CHANNEL. (NORTHEAST CHANNEL NO. 1)

**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 BERMS
- 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
- 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. COMPLETE STREET, LOT AND POND GRADING;
4. 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 SWPPP 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 & C4.2, 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 EMPTIED 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.

**V. 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

**VI. 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

**VII. 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.

**VIII. 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

**IX. 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.

**X. 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.

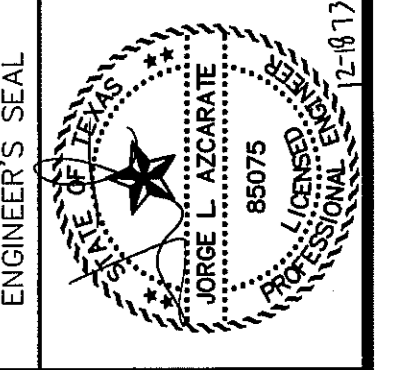
**XI. OFFSITE VEHICLE TRACKING:**

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: \_\_\_\_\_

REFERENCES - BENCHMARKS	FOUND TYPICAL BRASS CAP AT CORNER OF BLOCK 21, AND 22. ELEVATION: 8033.72 (NAD 83 TUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).
DATE	REVISIONS
BY	

**osa**  
engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM #484  
4712 Woodrow Bess, Ste. F, El Paso, TX 79904  
Office: 915.544.8292 Fax: 915.544.8293 www.osainc.com



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	NOVEMBER 2013
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.G.
APPVD. BY:	J.L.A.
JOB No.	2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**STORM WATER  
POLLUTION  
PREVENTION PLAN:  
NOTES**

SHEET NO.

**C16.1**

**CITY DEVELOPMENT DEPARTMENT**  
**REVIEWED**


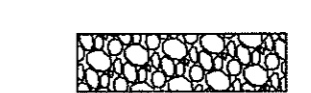




S:\V000\2000-163D-Sandstone Ranch Unit Nine DWG\Construction Drawings\Improvement Plans\2000-163-LD-C16.2-SWGP Site.dwg, SWPPP Site, 12/18/2013 2:48:53 PM

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

**WARNING !  
BEFORE YOU DIG**

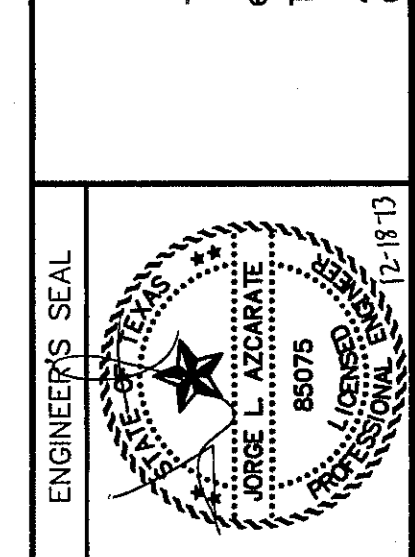
CALL  
1-800-DIG-TESS  
1-800-344-8377

FOR FIELD LOCATING EXISTING UTILITIES

-  SILT FENCE OR EARTHEN BERM
-  STABILIZED CONSTRUCTION ENTRANCE
-  STAGING AREA
-  PORTABLE TOILETS
-  WASH OUT
-  TEMPORARY WOOD CHIP FILLED MESH BAGS PLACED TO PROTECT INLET.

REFERENCES - BENCHMARKS  
FOUND TWOOD BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVD DATUM) (SUBTRACT 8.482 TO CONVERT TO CITY DATUM).

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TEXAS REGISTERED ENGINEERING FIRM F-664  
4712 Woodrow Bham, Ste. F El Paso, TX 79904  
Office: 915.544.5222 Fax: 915.544.5233 www.csaengr.com

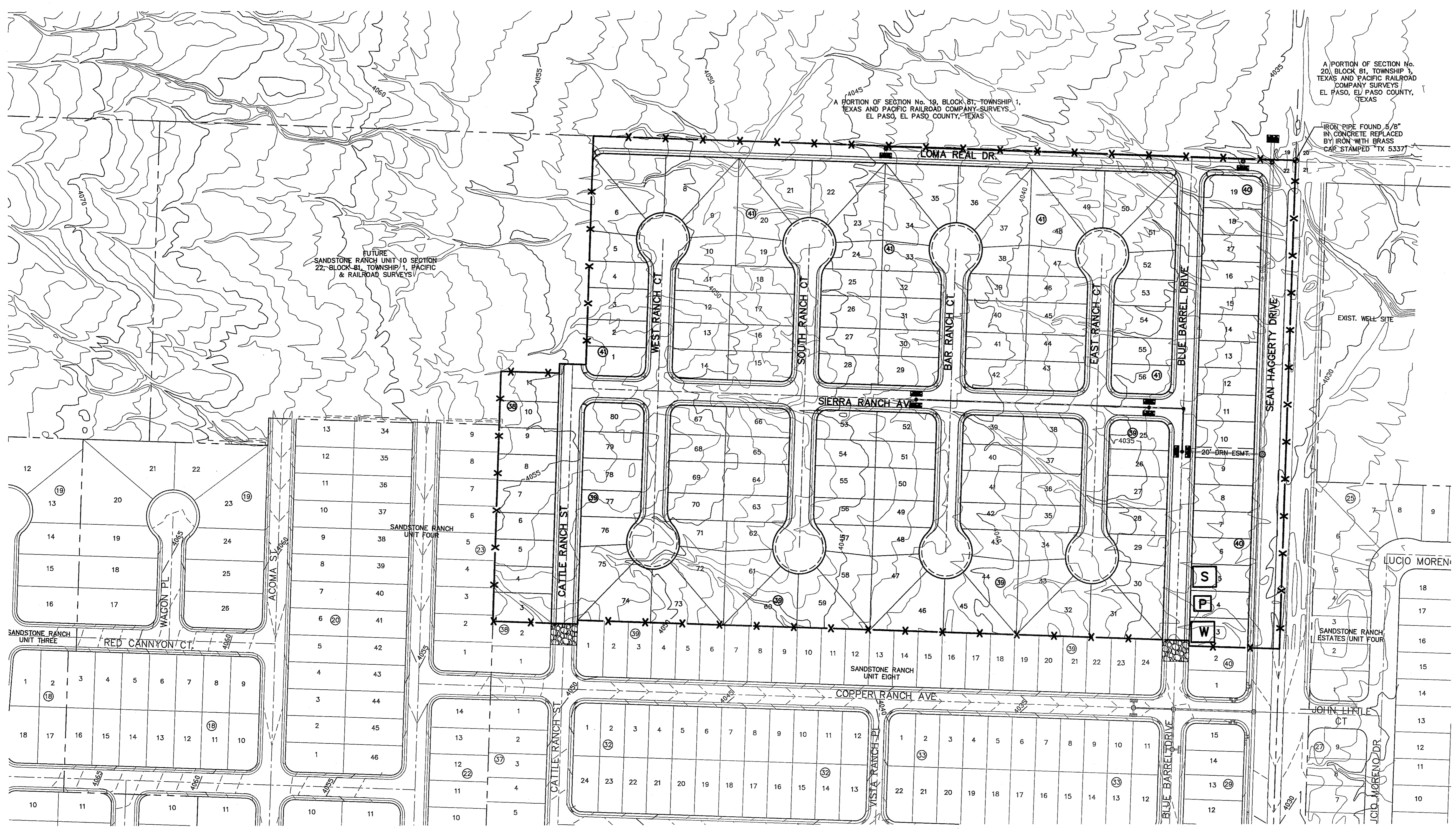


SCALE: 1" = 100'  
Horizontal: N/A  
Vertical: N/A  
Contour Interval: N/A  
DATE: NOVEMBER 2013  
DESIGN BY: J.M.  
DRAWN BY: J.M.  
CHKD. BY: J.L.A.  
APPD. BY: J.L.A.  
JOB No. 2000-163-LD

PROJECT TITLE  
**SANDSTONE RANCH UNIT NINE  
SUBDIVISION IMPROVEMENTS**

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

SHEET NO.  
**C16.2**



**SITE PLAN**  
SCALE: 1" = 100'

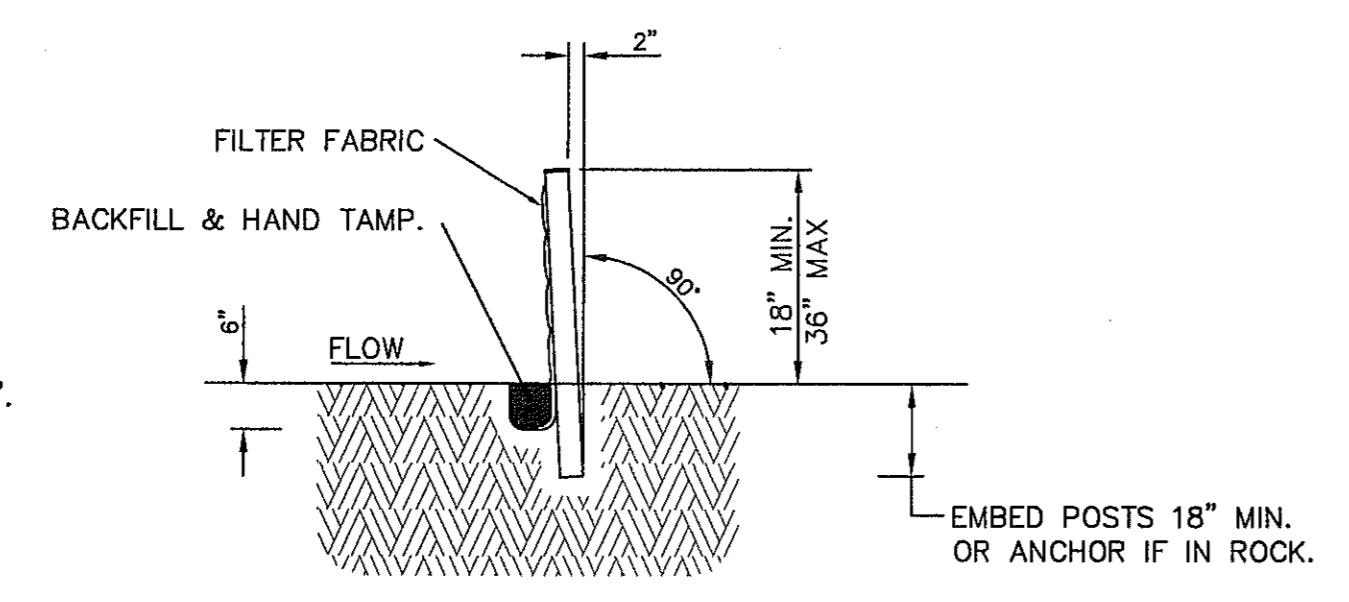


CITY DEVELOPMENT DEPARTMENT

**REVIEWED**

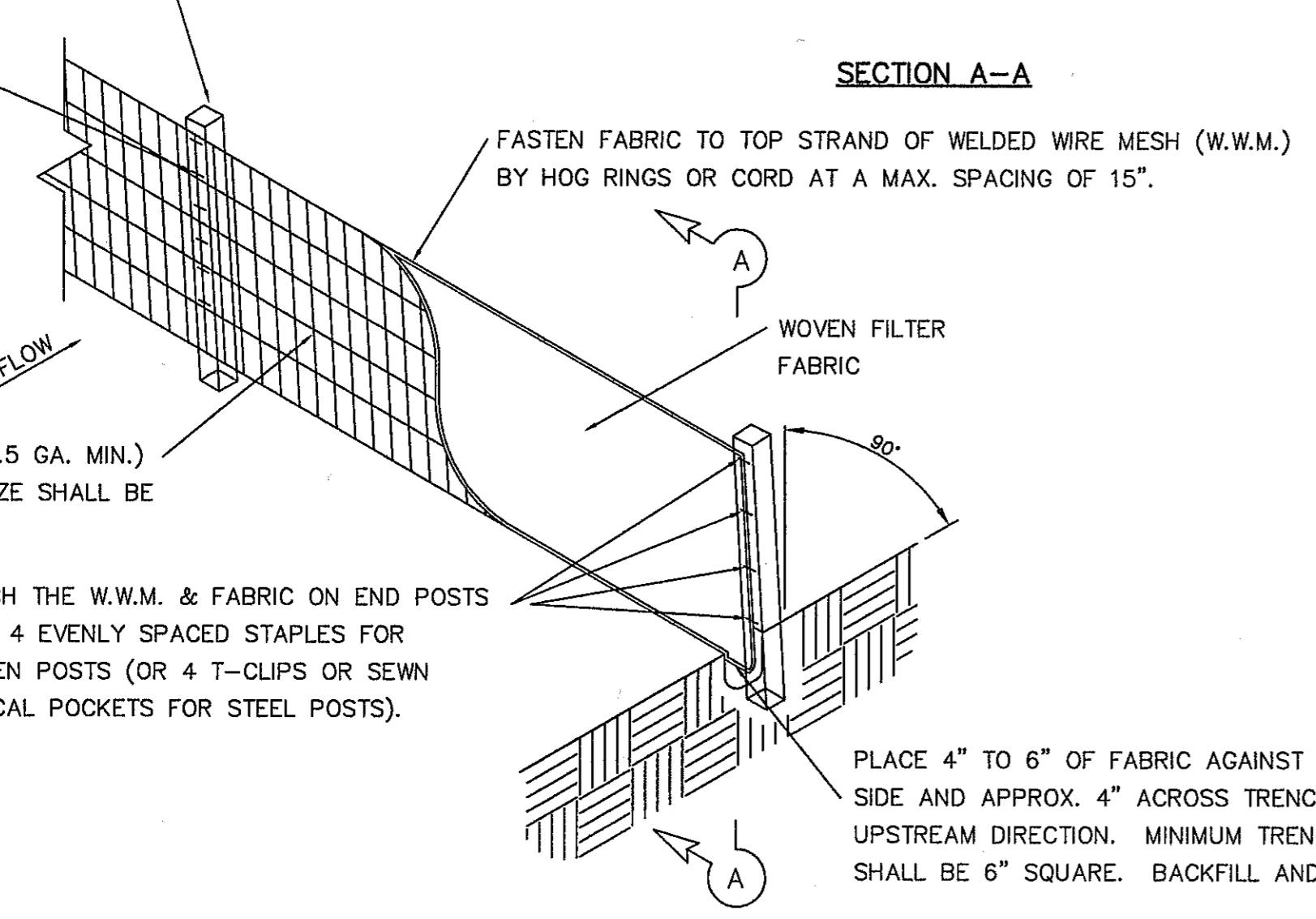
S:\2000\2000-16310-Sandstone Ranch Unit Nine DWGS\Construction Drawings\Improvement Plans\2000-163-LD-C16.3-SWSP Details.dwg, SWPPP Detail, 12/19/2013 2:49:16 PM

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".



SECTION A-A

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

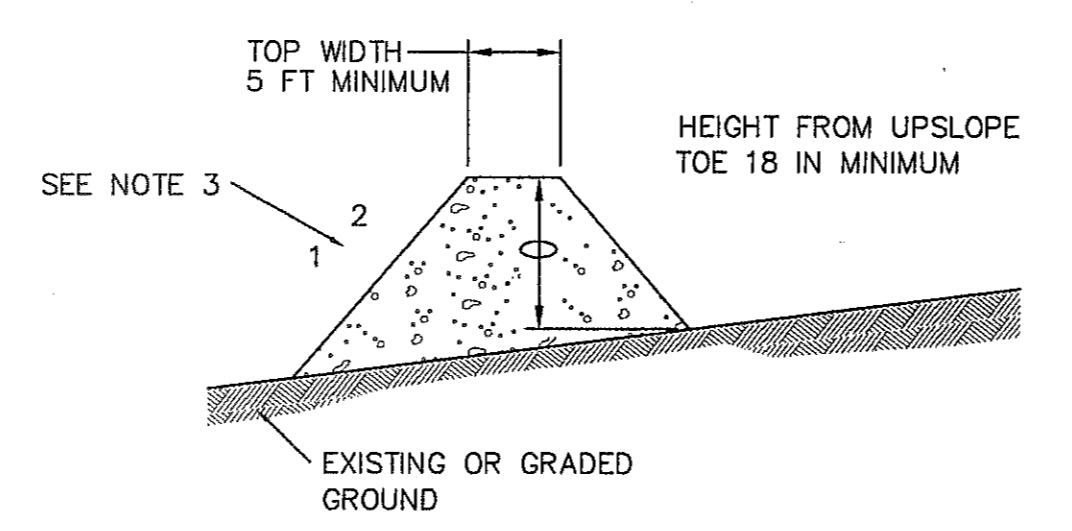


GALV. W.W.M. (12.5 GA. MIN.)  
MAX. OPENING SIZE SHALL BE 2" X 4".

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).

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.

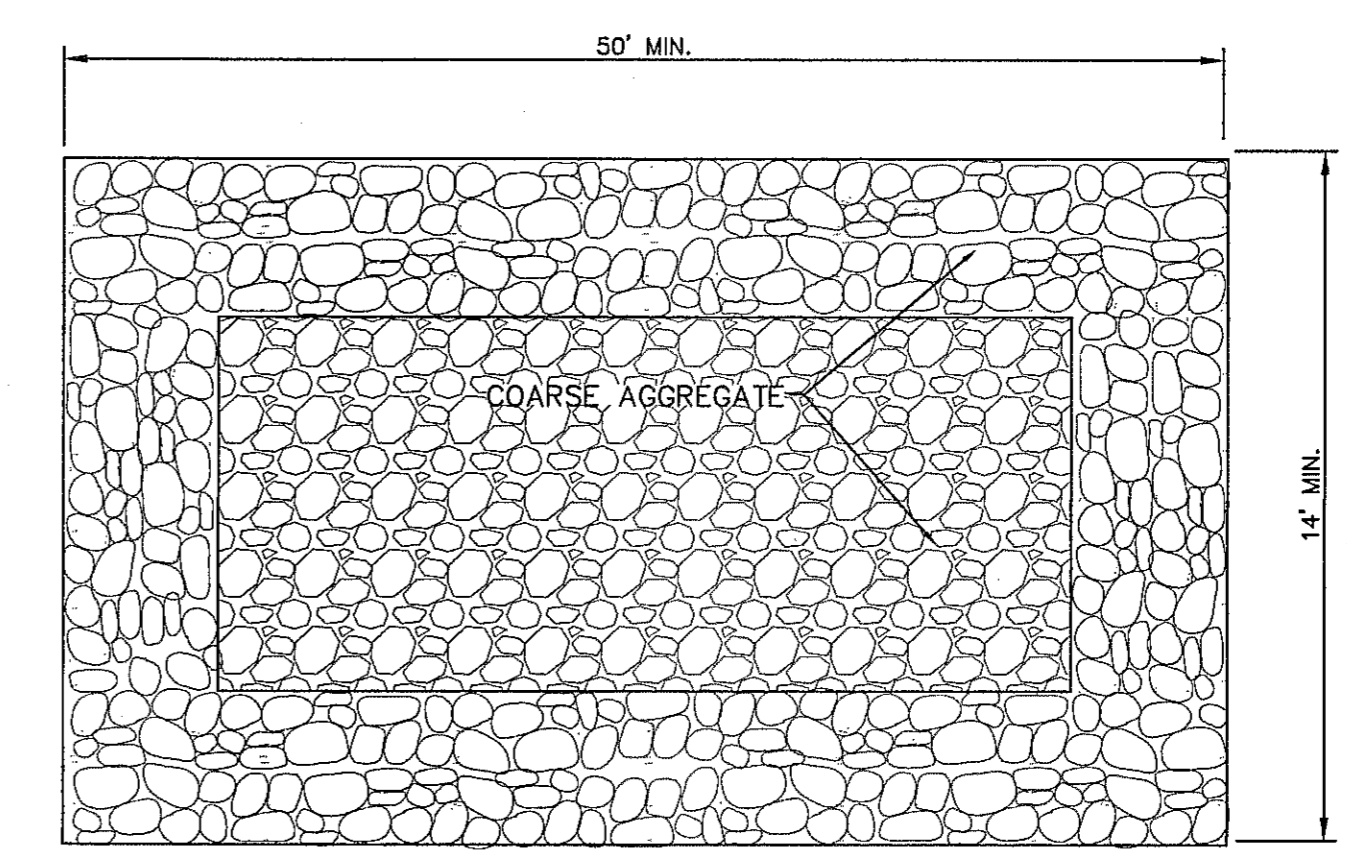
TEMPORARY SEDIMENT CONTROL FENCE



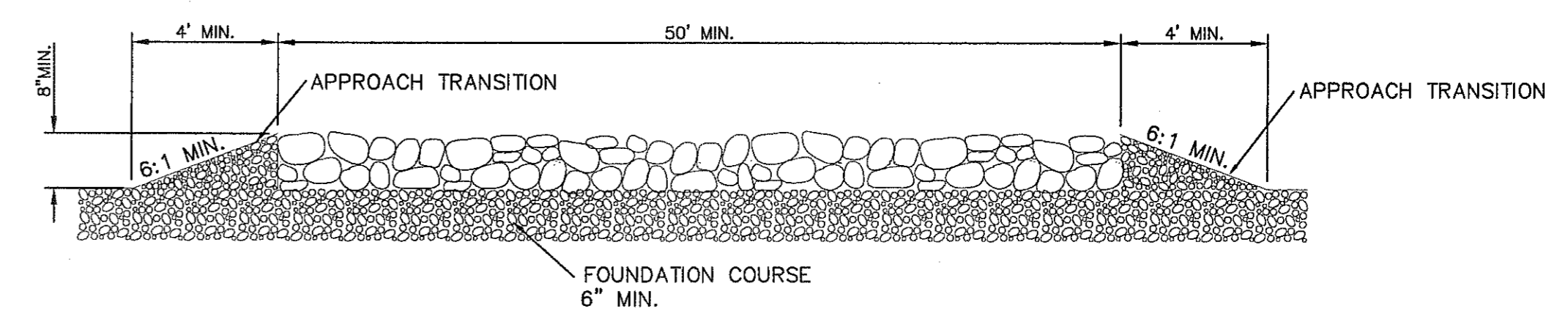
TYPICAL BERM CONFIGURATION

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

TYPICAL BERM CONFIGURATION



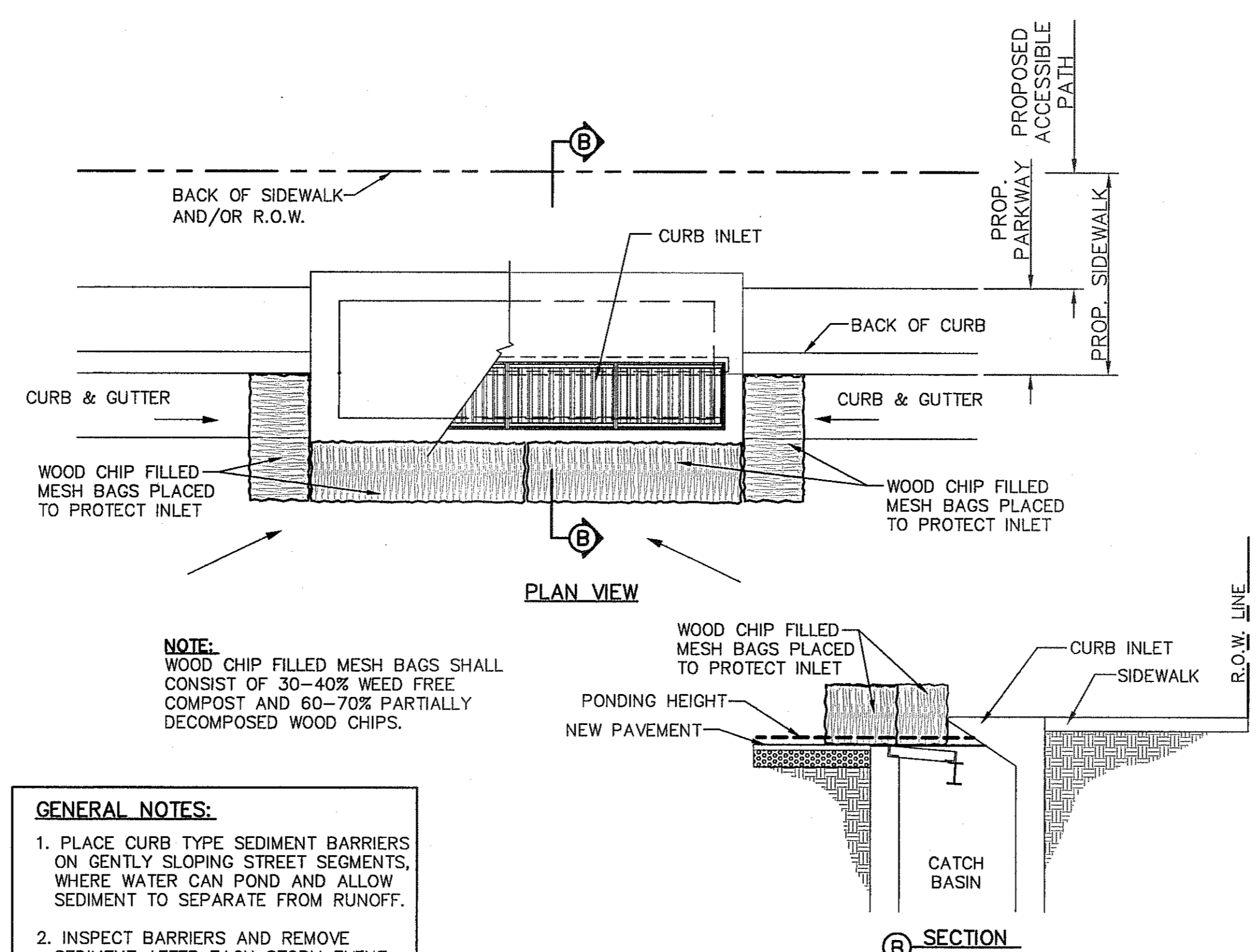
PLAN



PROFILE

GENERAL NOTES

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



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

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

TEMPORARY INLET PROTECTION

REFERENCES - BENCHMARKS

FOUND TYPOT BRASS CAP AT SECTION CORNERS 19, 20, 21, AND 22. ELEVATION: 4033.22 (NVD DATUM) (SUBTRACT 8.462 TO CONVERT TO CITY DATUM).

DATE	REVISIONS	BY

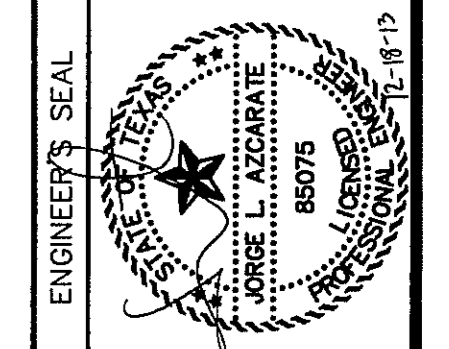
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4712 Woodrow Bean, Ste. F, El Paso, TX 79924

Office: 915.544.5232 Fax: 915.544.5233 www.osagroup.net



SCALE	N/A
Horizontal:	N/A
Vertical:	N/A
Contour Interval:	N/A
DATE:	NOVEMBER 2013
DESIGN BY:	J.M.
DRAWN BY:	J.M.
CHKD. BY:	J.L.A.
APPVD. BY:	J.L.A.
JOB No.	2000-163-LD

PROJECT TITLE

**SANDSTONE RANCH UNIT NINE**

**SUBDIVISION IMPROVEMENTS**

SHEET TITLE

**STORM WATER POLLUTION PREVENTION PLAN: DETAILS**

SHEET NO.

**C16.3**

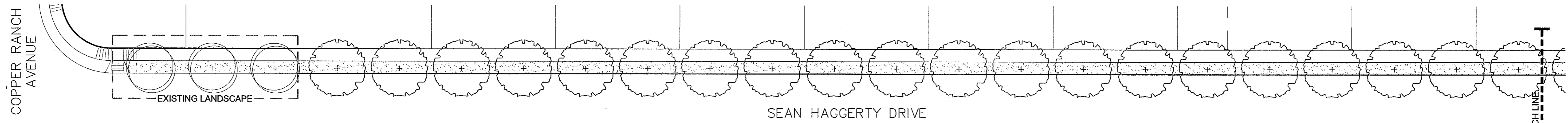
CITY DEVELOPMENT DEPARTMENT

**REVIEWED**

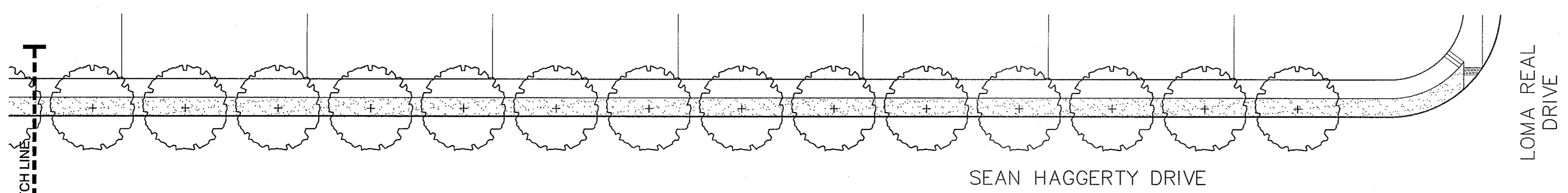
UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT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

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

DATE	REVISIONS	BY



**LANDSCAPE PLAN**



**LANDSCAPE PLAN**

**LANDSCAPE LEGEND**

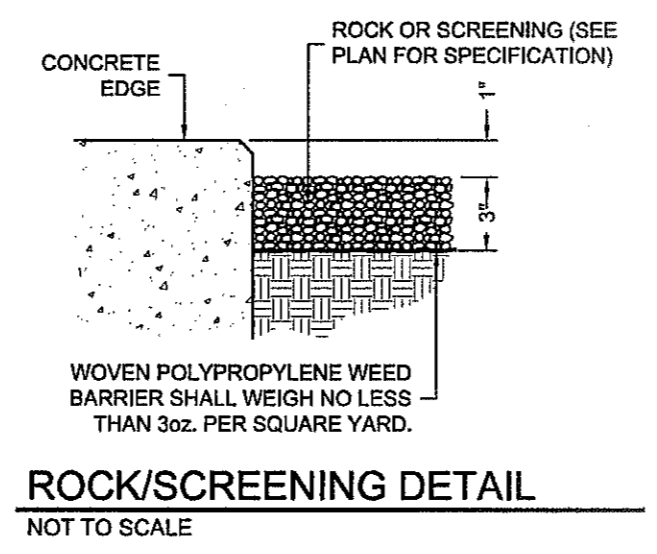
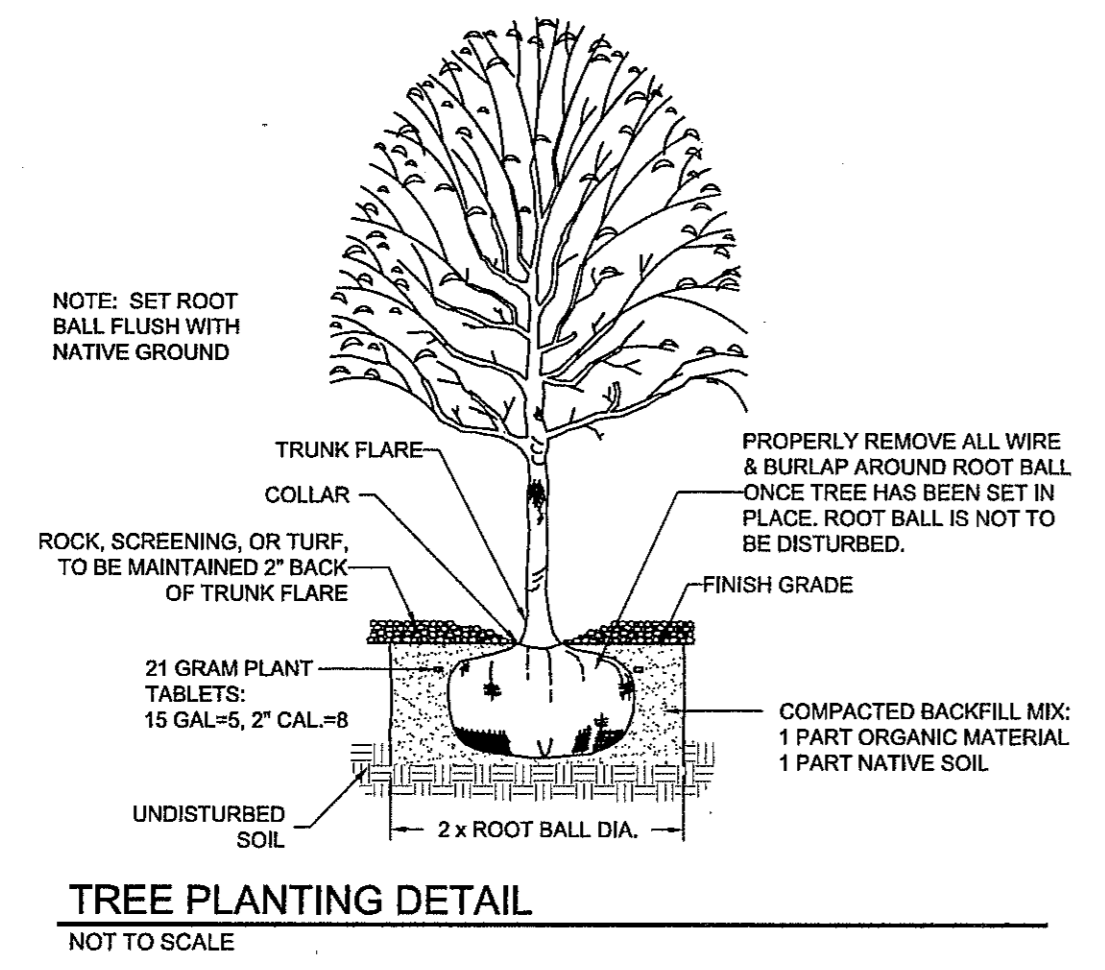
SYMBOL	COMMON NAME	BOTANICAL NAME	QTY
<b>2" CALIPER TREE - 10' HEIGHT MINIMUM</b>			
	CHINQUAPIN OAK	QUERCUS MUHLENBERGII	34
<b>TURF, GRAVELS, &amp; MULCHES</b>			
	FRANKLIN RED 1.5" ROCK (OR EQUIVALENT), 3" DEPTH W/ DEWITT PRO-5 WEED BARRIER		

**LANDSCAPE NOTES**

- ALL UTILITY EASEMENTS SHALL BE MARKED PRIOR TO EXCAVATION, AND PARTICULAR ATTENTION PAID TO TREE PLACEMENT WITHIN AND THROUGHOUT SITE.
- THERE SHALL BE NO STEEL EDGING BETWEEN ROCK TYPES.
- CONTRACTOR SHALL PROVIDE ROCK SAMPLES AND OBTAIN APPROVAL FROM OWNER PRIOR TO FINAL DELIVERY OF QUARRIED MATERIALS.
- CONTRACTOR TO PAY CLOSE ATTENTION TO FINISH GRADES. SHOULD GRAVELLED AREAS EXCEED 4:1 SLOPE, CONTRACTOR TO OBTAIN APPROVAL OF LANDSCAPE DESIGNER PRIOR TO MULCH INSTALLATION.
- ALL TREES SHALL BE SINGLE LEADER TRUNK, UNLESS INDICATED IN PLANS.

**SITE OBSERVATION SCHEDULE**

- CONTRACTOR SHALL CONTACT OWNER FOR INSPECTION ON THE FOLLOWING ITEMS:
- TREE REVIEW, PRIOR TO INSTALLATION (AT NURSERY OR ON SITE).
  - PLANT PLACEMENT, PRIOR TO INSTALLATION OF MULCH.



**CSA**  
 CONSULTANTS  
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 TEXAS REGISTERED ENGINEERING FIRM F-4684  
 4712 Westchase Pkwy, Ste. 400, El Paso, TX 79964  
 OFFICE: 915.544.3333 FAX: 915.544.3339 [www.csaonline.com](http://www.csaonline.com)

SCALE	PROJECT TITLE
Horizontal: 1" = 20' Vertical: 1" = 20'	SANDSTONE RANCH UNIT NINE SUBDIVISION IMPROVEMENTS

CITY DEVELOPMENT DEPARTMENT

**REVIEWED**

SHEET TITLE

LANDSCAPE PLAN

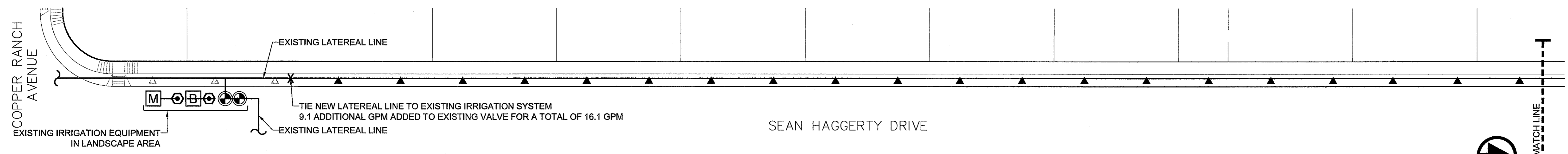
SHEET NO.

L-1

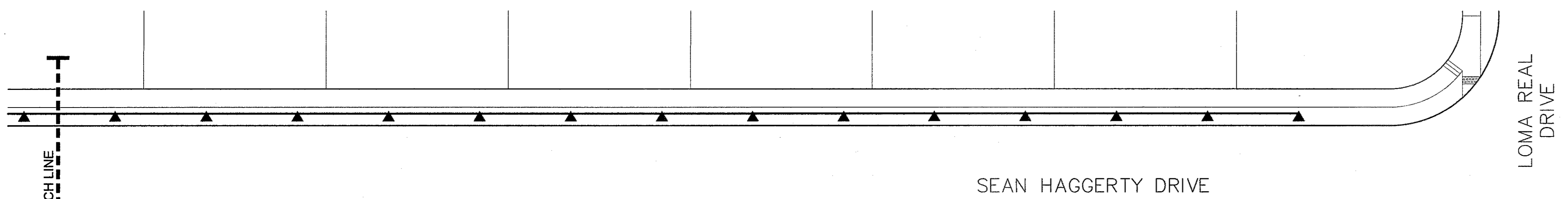
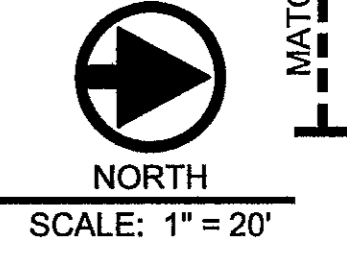
**desert elements**  
 LANDSCAPE DESIGN, LLC  
 143 arroyo drive, milled park, new mexico 88063  
 DE-jennifer@desertelements.com • phone: 575.589.9100 • fax: 575.589.9104

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

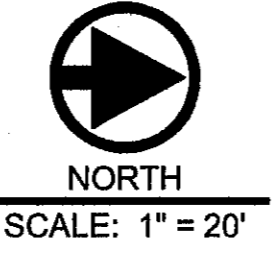
**WARNING!**  
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 FOR FIELD LOCATING EXISTING UTILITIES



**IRRIGATION PLAN**



**IRRIGATION PLAN**

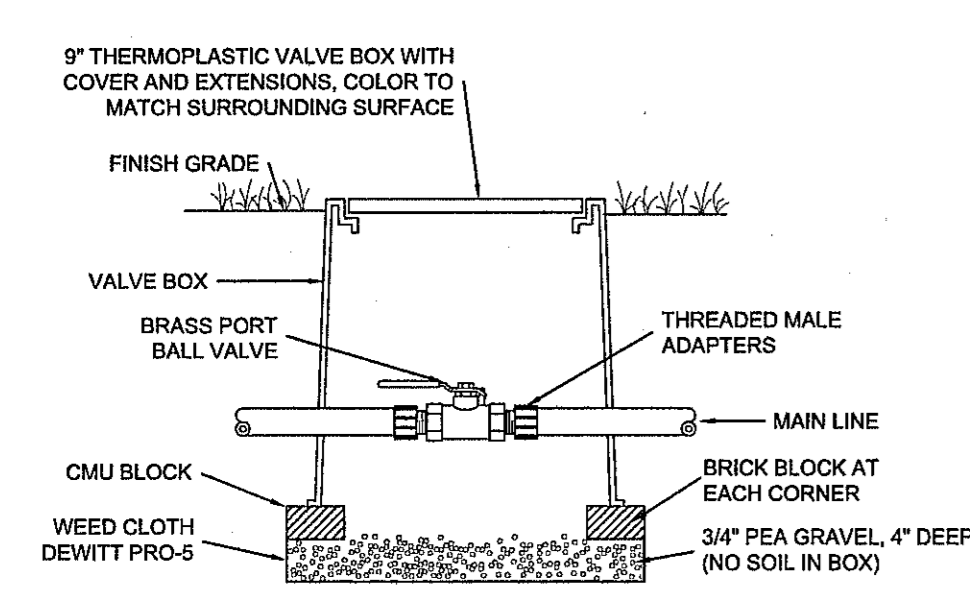


**IRRIGATION LEGEND**

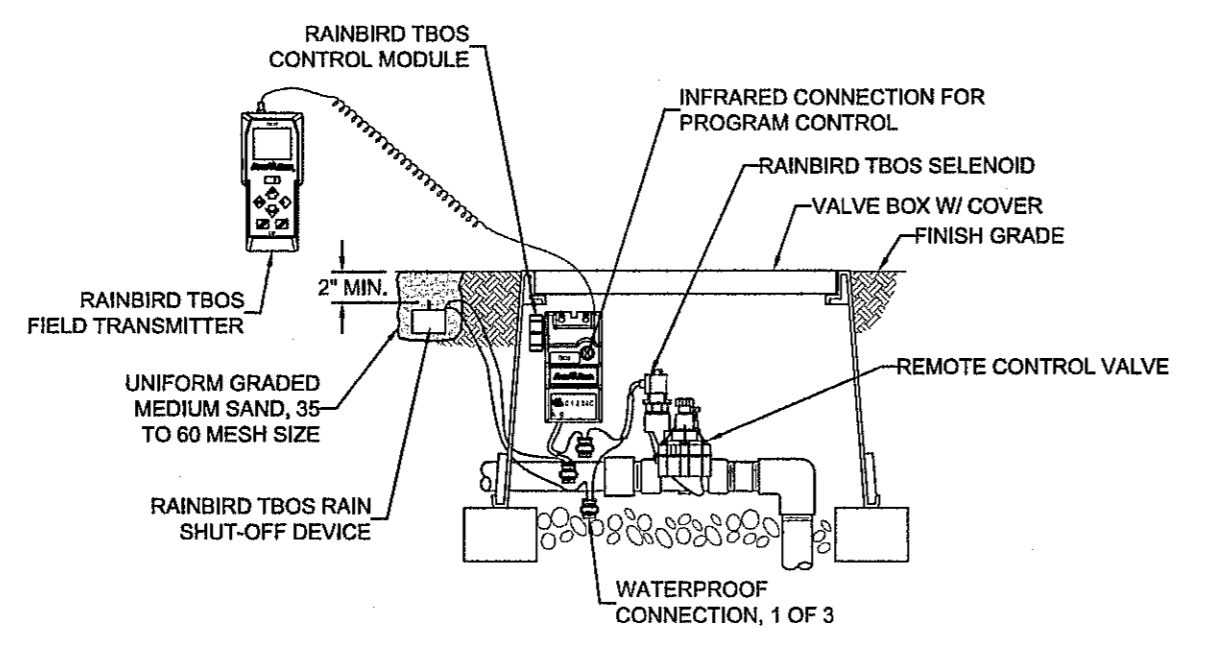
SYMBOL	ITEM
[M]	EXISTING: 1" METER (BY OWNER)
[B]	EXISTING: 3/4" FEBCO 850 DOUBLE CHECK VALVE BACKFLOW PREVENTER W/ 17"x30" REINFORCED CONCRETE BOX W/ SCREW DOWN STEEL CHECKER LID
[C]	EXISTING: 1" BRASS PORT VALVE
[R]	EXISTING: 1" REMOTE CONTROL VALVE, RAINBIRD 100-PESB W/ AMIAD Y FILTER AFTER THE VALVE
[T]	RAIN BIRD TBOS CONTROLLER/ WITH POTTED LATCHING SELENOID & TBOS FIELD TRANSMITTER (SEE DETAIL FOR INSTALLATION)
---	EXISTING: MAINLINE - 1.5" SCHED. 40 PVC
---	PVC SLEEVE - 2 SIZES LARGER THAN LATERAL OR MAIN
---	LATERAL LINE - SCHED. 40 PVC - 1.5" UNLESS OTHERWISE INDICATED
[▲]	RAINBIRD XERI-BIRD 8 MULTI-OUTLET EMISSION DEVICE RAINBIRD XB-20 DRIP EMITTERS - 8 PER TREE
[A/B/C]	A) STATION NUMBER    B) SIZE OF VALVE IN INCHES C) TOTAL GPM

**IRRIGATION NOTES**

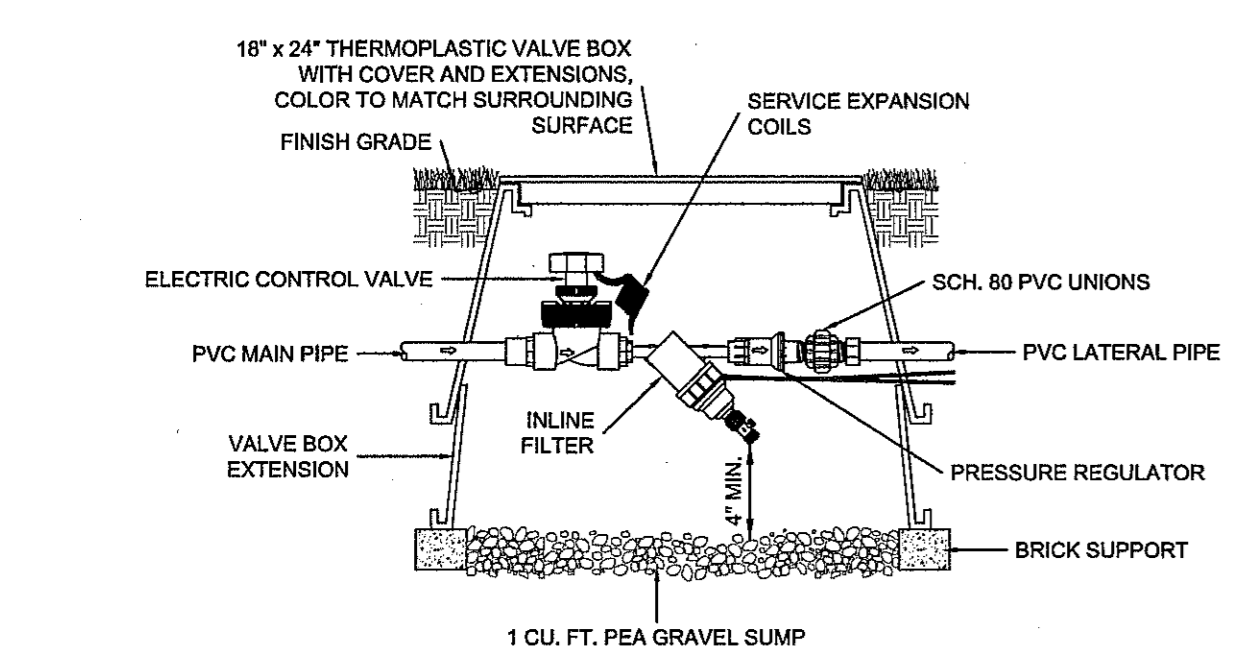
- IRRIGATION IN TEXAS IS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, P.O. BOX 13067, AUSTIN, TX 78711.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING AND PROPOSED UTILITIES AND ALL SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- IRRIGATION SHALL BE INSTALLED ACCORDING TO PLANS, DETAILS, AND SPECIFICATIONS. SHOULD CHANGES BE IMPLEMENTED IN THE FIELD, A NEW SET OF PLANS IS REQUIRED TO BE SUBMITTED TO THE CITY OF EL PASO. LANDSCAPE DESIGNER IS NOT UNDER CONTRACT TO PROVIDE THESE PLANS, EXCEPT AS PROVIDED FOR IN ORIGINAL CONTRACT.
- CONTRACTOR WILL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM IRRIGATION SYSTEM AS DESIGNED, WHEN IT IS OBVIOUS THAT FIELD CONDITIONS EXIST, THAT WERE NOT CONSIDERED AT TIME OF DESIGNING THE SYSTEM. ANY CONDITIONS NOTED AS SUCH, SHALL BE REPORTED TO THE ARCHITECT AND IRRIGATION DESIGNER. IF THE CONTRACTOR FAILS TO DO SO, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ANY CORRECTIONS NEEDED.
- PLANS SCHEMATIC FOR READABILITY. CONTRACTOR TO ADJUST AS NECESSARY TO FIT SITE.
- CONTRACTOR SHALL VERIFY STATIC PRESSURE AT METER MEETS SYSTEM NEEDS. LICENSED IRRIGATOR TO AMEND AS NECESSARY.
- PROVIDE SHUTOFF VALVE BETWEEN METER AND BACKFLOW.
- CONTROL VALVE SHALL BE PROVIDED TO MAINLINE AFTER BACKFLOW
- CONTRACTOR IS RESPONSIBLE FOR CONNECTING AUTOMATIC CONTROLLER TO ELECTRICITY.
- 14 GA. SOLID COPPER WIRE (PVC INSULATED AND UL APPROVED) SHALL RUN FROM CONTROLLER TO VALVES. COMMON WIRE TO BE 12GA.
- ALL CONTROL WIRING FROM THE VALVES TO THE CONTROLLER MUST BE INSTALLED IN A 1" PVC CONDUIT PIPE IF BURIED BENEATH CONCRETE OR ASPHALT SURFACES.
- LOCATE VALVES AWAY FROM LOW SPOTS OR AREAS OF DRAINAGE FLOW.
- VALVE CAPS SHALL MATCH COLOR OF SURROUNDING MATERIAL, AS CLOSELY AS POSSIBLE.
- ALL MAINLINES SHALL BE BURIED MIN. 18", ALL LATERALS 12".
- MAINTAIN 4" MINIMUM CLEARANCE BETWEEN PIPE RUNNING IN THE SAME TRENCH. CONTROL WIRE SHALL ALWAYS BE TO THE SIDE AND BELOW THE TOP OF THE PIPE RUNNING IN THE SAME TRENCH.
- POLYETHYLENE TUBING TO BE PLACED UNDER WEED BARRIER FABRIC. MICROTUBING TO BE STAKED.
- THE CONTRACTOR SHALL PROVIDE THE OWNER WITH AS-BUILT DRAWINGS ON MYLAR PRIOR TO APPROVAL OF FINAL PAYMENT.
- ALL PIPING/WIRING RUNNING BENEATH PAVED SURFACES (DRIVES, SIDEWALKS, ETC.) SHALL BE INSTALLED IN SCH 40 PVC SLEEVES. SLEEVES SHALL BE OF THE SIZE SO THAT THE INSIDE DIAMETER OF THE SLEEVE IS 3 TIMES GREATER THAN THAT OF THE COMBINED OUTER DIAMETER OF ALL ITEMS INSTALLED IN THE SLEEVES.
- PEA GRAVEL SHALL BE INSTALLED AT THE BASE OF ALL VALVE BOXES, WITH A CLEARANCE OF MIN. 2" BETWEEN VALVE AND TOP OF GRAVEL.
- CONTRACTOR SHALL VERIFY THAT EXISTING BACKFLOW IS IN PROPER WORKING ORDER, IS CODE COMPLIANT AND HAS BEEN TESTED WITHIN THE PAST YEAR.
- CONTRACTOR SHALL VERIFY THAT EXISTING IRRIGATION CONTROLLER IS IN PROPER WORKING ORDER.



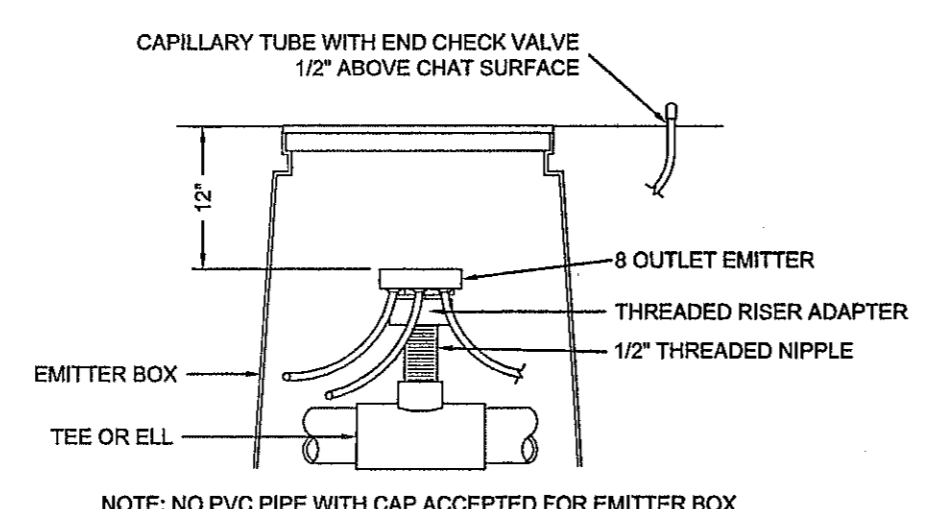
**ISOLATION VALVE DETAIL**  
 NOT TO SCALE



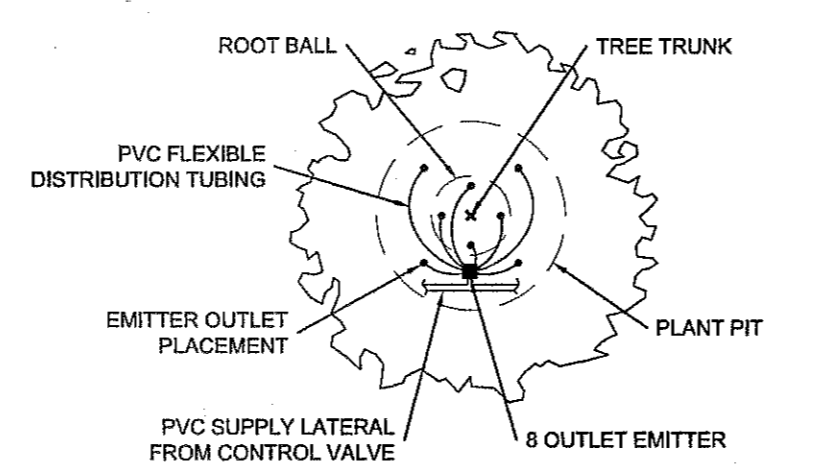
**TBOS BATTERY OPERATED CONTROLLER W/ TRANSMITTER**  
 NOT TO SCALE



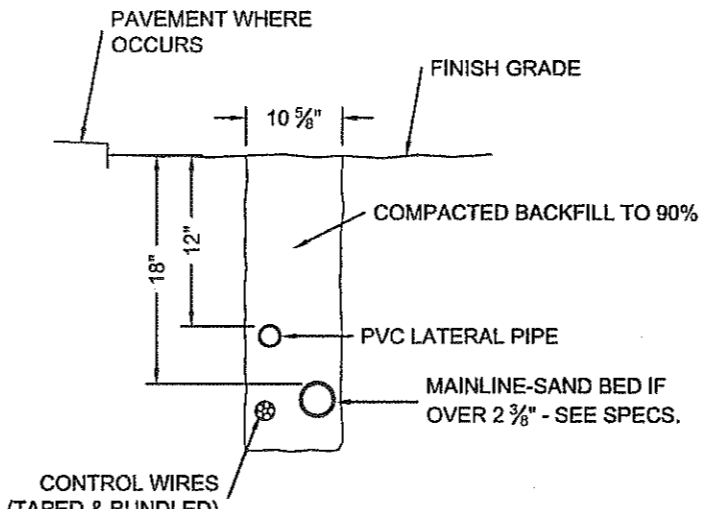
**REMOTE CONTROL VALVE, PRESSURE REGULATOR & FILTER**  
 NOT TO SCALE



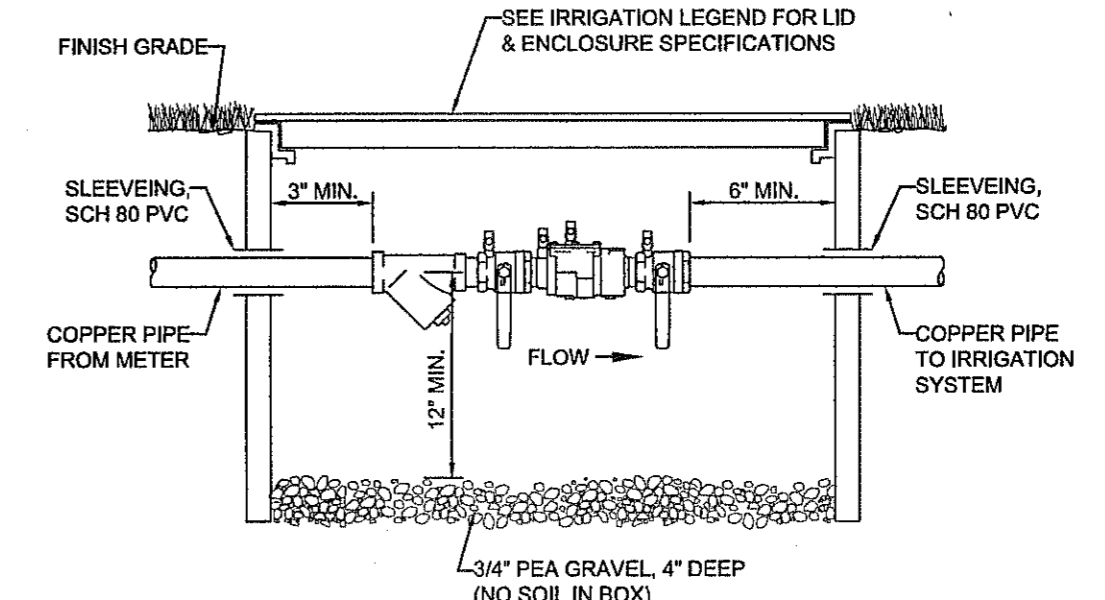
**DRIP EMITTER DETAIL**  
 NOT TO SCALE



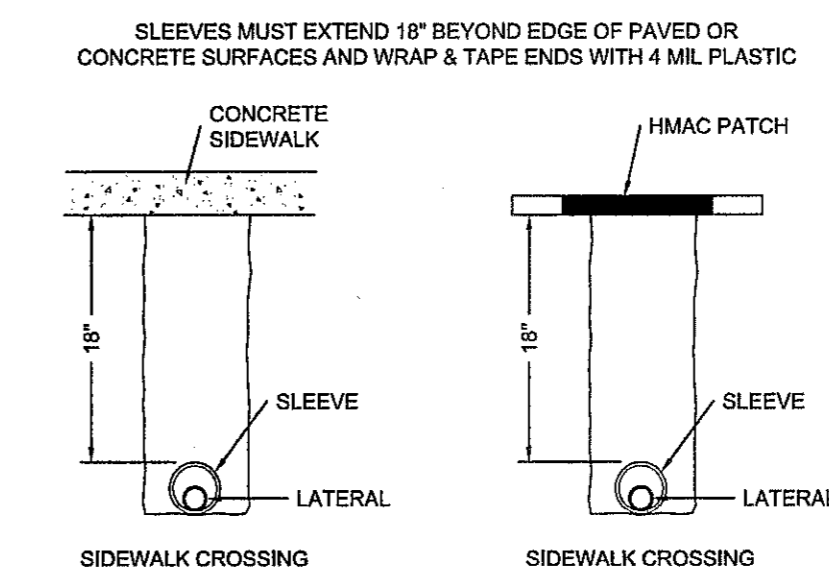
**EMITTER OUTLET PLACEMENT DETAIL**  
 NOT TO SCALE



**TRENCHING DETAIL**  
 NOT TO SCALE



**DOUBLE CHECK ASSY. FEBCO Mo.850**  
 NOT TO SCALE



**SLEEVING STANDARD DETAIL**  
 NOT TO SCALE

DATE	REVISIONS	BY

**CSA**  
 CONSULTANTS  
 engineers • architects • planners  
 TEXAS REGISTERED ENGINEERING FIRM F-4584  
 4712 Woodrow Bean, Ste. F El Paso, TX 79924  
 Office: 915-543-5233 Fax: 915-543-5234

ENGINEER'S SEAL  

 CARLOS HOLGUIN  
 No. 15907  
 State of Texas  
 Mechanical

SCALE	DATE	DESIGN BY	DETAILED BY	CHKD. BY	APPVD. BY	JOB NO.
Horizontal: N/A Vertical: N/A	DECEMBER 2013	C.H.	C.H.	C.H.	C.H.	20000-16.3-LD

**SANDSTONE RANCH UNIT NINE  
 SUBDIVISION IMPROVEMENTS**

SHEET TITLE

IRRIGATION PLAN

SHEET NO.

L-2

CITY DEVELOPMENT DEPARTMENT  
**REVIEWED**

**desert elements**  
 LANDSCAPE DESIGN, LLC  
 13 Andros Drive, Garland Park, New Mexico 89043  
 DE-janitor@desertelements.com • phone: 575.589.9100 • fax: 575.589.9104

# SANDSTONE RANCH UNIT NINE

BEING A PORTION OF  
SECTION 22, BLOCK 81, TOWNSHIP 1,  
TEXAS AND PACIFIC RAILROAD CO. SURVEYS,  
CITY OF EL PASO, EL PASO COUNTY, TEXAS  
CONTAINING 29.37 ACRES ±  
SHEET 1 OF 2

## DEDICATION

NORTHWOOD VILLAGE JOINT VENTURE, 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, 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 MARCH, 2014.

R. L. Bowling III, President

## ACKNOWLEDGEMENT

STATE OF TEXAS  
COUNTY OF EL PASO

Before me, the undersigned authority, on this day personally appeared R. L. Bowling III, 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 MARCH, 2014.

*[Signature]*  
Notary Public in and for El Paso County

AUGUST 28, 2017  
My Commission Expires

## 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 13th day of March, 2014.

*[Signature]*  
Chairperson

*[Signature]*  
Executive Secretary

Approved for filing this 30th day of March, 2014.

*[Signature]*  
City Development Director

## FILING

Filed and recorded in the office of the County Clerk of El Paso County, Texas, this 7th day of April, 2014, in File No. 20140021681 of the Plat Records.

*[Signature]*  
Public Records Officer

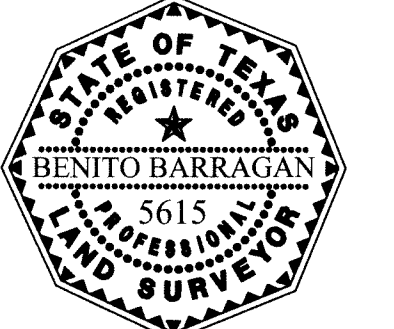
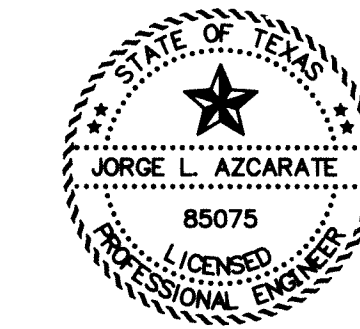
*[Signature]*  
By Deputy

Subdivision improvement plans prepared by and under the supervision of CEA Group.

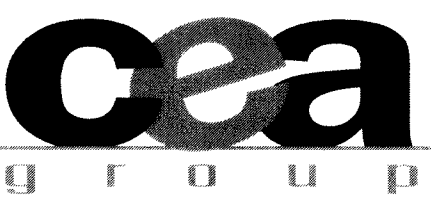
This plat represents a survey made on the ground by me or under my supervision and complies with the current Texas Board of Professional Land Survey Professional and Technical Standards.

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

*[Signature]*  
Benito Barragan TX, R.P.L.S. No. 5615

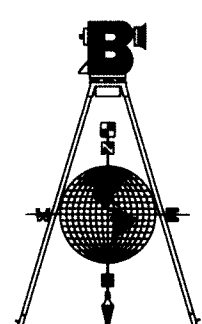


ENGINEER



engineers • architects • planners  
TEXAS REGISTERED ENGINEERING FIRM F-4564

CONTACT: JORGE L. AZCARATE, P.E.



SURVEYOR  
**Barragan & Associates Inc.**

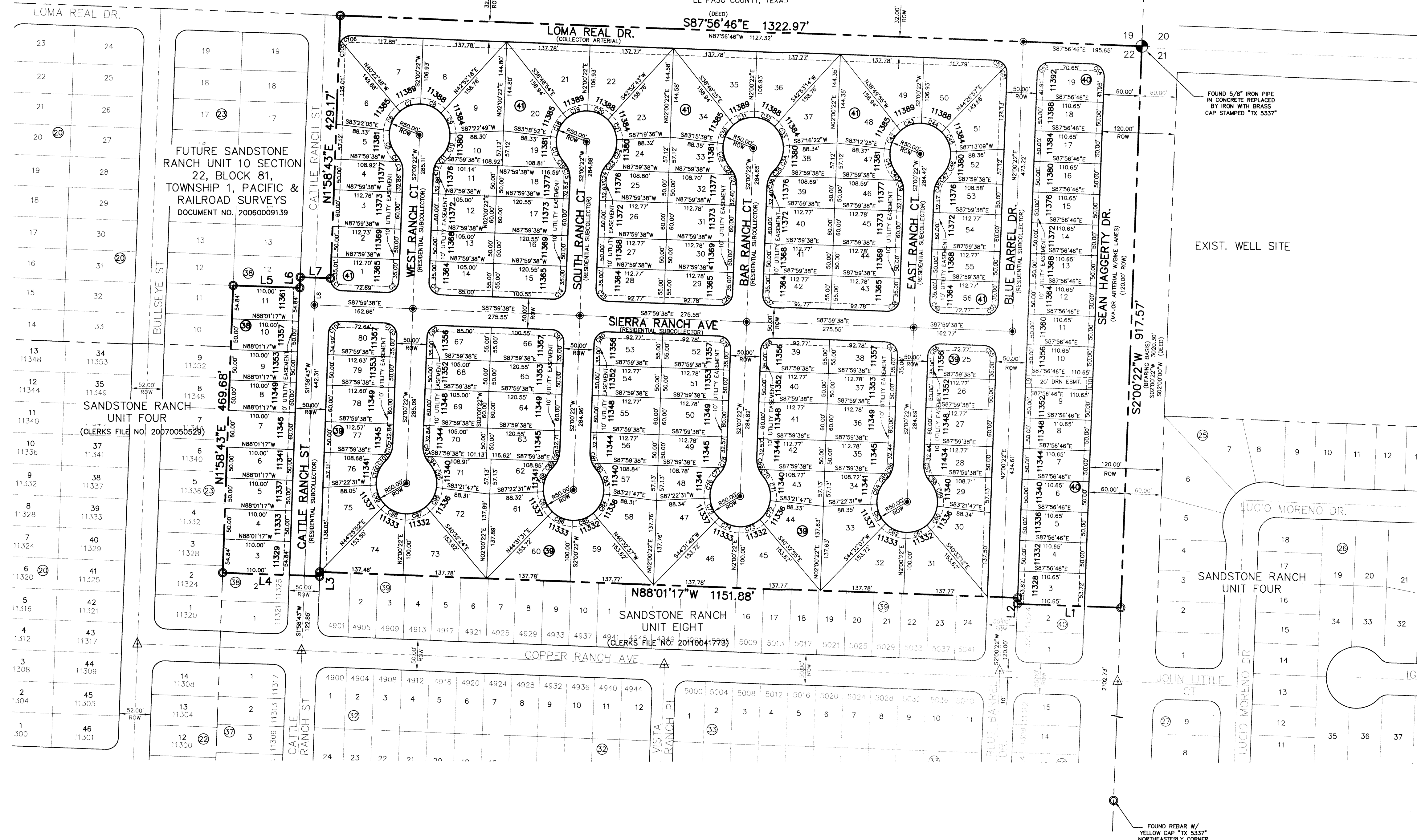
LAND PLANNING & LAND SURVEYING  
10950 Pellicano Dr. Bldg. F - El Paso, TX 79935  
Phone (915) 591-5709 Fax (915) 591-5706

CONTACT: BENITO BARRAGAN, R.P.L.S.

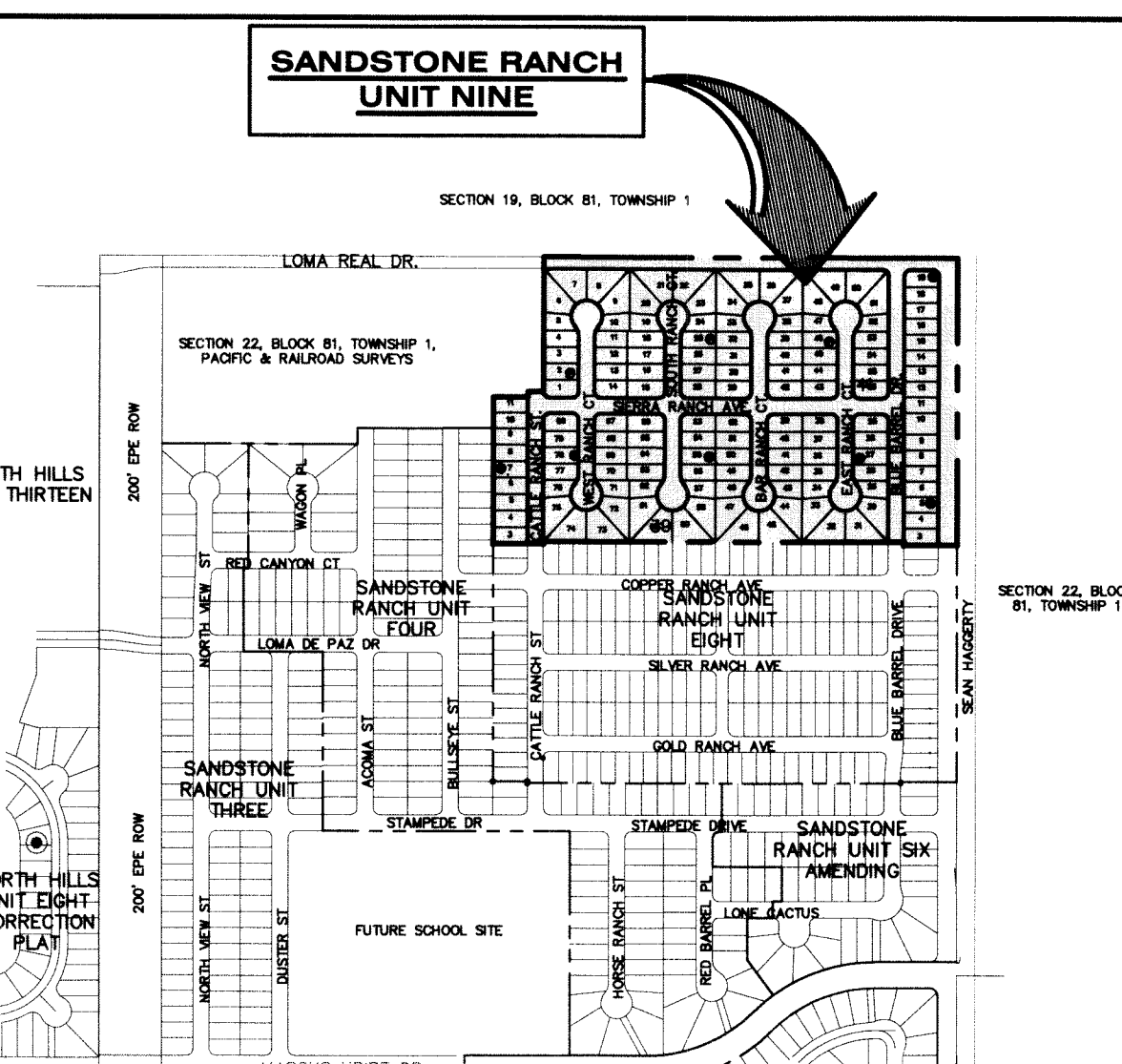
DATE OF PREPARATION: FEBRUARY, 2014

A PORTION OF SECTION No. 19, BLOCK 81, TOWNSHIP 1,  
TEXAS AND PACIFIC RAILROAD COMPANY SURVEYS  
EL PASO, EL PASO COUNTY, TEXAS  
CITY OF EL PASO  
VOL. 1186 PG. 183, DEED RECORDS OF  
EL PASO COUNTY, TEXAS

A PORTION OF SECTION No. 20,  
BLOCK 81, TOWNSHIP 1,  
TEXAS AND PACIFIC RAILROAD  
COMPANY SURVEYS  
EL PASO, EL PASO COUNTY, TEXAS

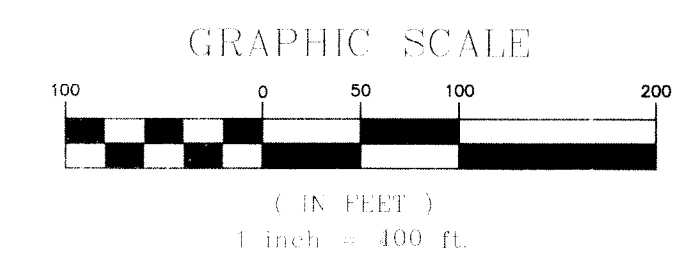


LOCATION MAP SCALE: 1" = 600'



### NOTES:

- THIS IS TO CERTIFY THAT WATER AND SEWER SERVICES WILL BE PROVIDED TO SANDSTONE RANCH UNIT NINE BY THE EL PASO WATER UTILITIES/PUBLIC SERVICE BOARD IN ACCORDANCE WITH THEIR RULES AND REGULATIONS AND WITH SECTION 16.343 OF THE TEXAS WATER CODE. WATER AND SEWER SERVICES WILL BE EXTENDED TO THE SUBDIVISION FROM EXISTING FACILITIES LOCATED ON SANDSTONE RANCH UNIT EIGHT AND WILL BE CONSTRUCTED TO SERVE THE SUBDIVISION.
  - TAX CERTIFICATE(S) FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.  
INSTRUMENT No. 20140021682 4/2/2014
  - RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.  
INSTRUMENT No. 20140021683 4/2/2014
  - SUBDIVISION IMPROVEMENTS AGREEMENT & GUARANTEE FOR THIS SUBDIVISION IS FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.  
INSTRUMENT No. 20140021685 4/2/2014
  - INTERIOR LOT CORNERS WILL BE SET UPON COMPLETION OF CONSTRUCTION OF ROADWAYS AND UTILITIES. (BY OTHERS)
  - SET 1/2" REBAR WITH CAP STAMPED "B&A INC" AT ALL EXTERIOR BOUNDARY CORNERS UNLESS OTHERWISE SHOWN.
  - "U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS."
  - THIS SUBDIVISION LIES WITH IN ZONE "C" AS DESIGNATED IN PANEL NO. 480214 0014 D, DATED AUGUST 5, 1991, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS. ZONE "C" INDICATES AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.
  - THE SUBJECT PROPERTY IS LOCATED WITHIN AN INTERMEDIATE PRESSURE ZONE, THE LOT/HOME BUYER SHALL ACQUIRE OWNERSHIP OF THE WATER PRESSURE REGULATING DEVICE TO BE LOCATED AT THE DISCHARGE SIDE OF THE WATER METER ON THEIR PROPERTY AND SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE WATER PRESSURE REGULATING DEVICE.
  - VEHICULAR ACCESS TO THOSE RESIDENTIAL LOTS ABUTTING SEAN HAGGERTY & LOMA REAL DRIVE SHALL BE FROM OTHER DEDICATED STREETS ONLY. THE INSTRUMENT ASSURING RELEASE OF ACCESS IS FILED IN THE OFFICE OF THE COUNTY CLERK.  
DEED AND RECORD SECTION, INSTRUMENT No. 20140021684 4/2/2014
  - DEED REFERENCE: DOCUMENT NO. 20060009139, REAL PROPERTY RECORDS OF EL PASO COUNTY, TEXAS.
- DENOTES PROPOSED CITY MONUMENT. (MAY BE SUBJECT TO RELOCATION AT TIME OF CONSTRUCTION FOR EXACT LOCATION CONTACT CITY OF EL PASO).  
▲ DENOTES EXISTING MONUMENT.



**BENCHMARK:**  
FOUND TXDOT BRASS CAP AT SECTION CORNER 19, 20, 21 AND 22.  
ELEVATION: 4033.22 (NGVD DATUM)  
(SUBSTRACT 8.462 TO CONVERT TO CITY DATUM).

FOUND REBAR W/ YELLOW CAP TX 5337 NORTHEASTERLY CORNER SANDSTONE RANCH U-5

**SCHOOL DISTRICT**  
EL PASO INDEPENDENT SCHOOL DISTRICT  
6531 BOEING DRIVE, EL PASO, TX 79925

2014-03-03 10:30:13 AM SUB-CONSULTANT: Survey/Platting/Recorders/Title/Title/RECORDED: PLAT 2014-03-03 10:30:13 AM

