

RPOQUE 09/27/2011 - 1:48PM
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LEGEND


B ₁	BOLLARD
EM _⊙	ELECTRIC METER
PP _•	POWER POLE
LS _✱	LIGHT STANDARD
WM _⊙	WATER METER
WV _⊙	WATER VALVE
ICV _⊙	IRRIGATION CONTROL VALVE
FD _⊙	FIRE HYDRANT
FD _⊙	FIRE DEPARTMENT CONNECTION
CO _⊙	CLEAN OUT
MH _⊙	MANHOLE
GM _⊙	GAS METER
TSC _□	TRAFFIC SIGNAL CONTROL
TSP _•	TRAFFIC SIGNAL POLE
SIG _•	TRAFFIC SIGN
TEL _□	TELEPHONE BOX
TV _□	TV BOX
FP _•	FLAG POLE
L.A.	LANDSCAPE AREA
---	PROPERTY LINE
—OHL—	O.H. POWER LINES
---U/G TELE---	U/G TELEPHONE LINES
---WATER---	U/G WATER LINE
---GAS---	U/G GAS LINE
-X-X-	FENCE
500	EXISTING CONTOURS
xxx.xx	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8-INCH IRON ROD WITH "POQUE ENG & DEV" CAP SET
777	PROPOSED CONTOURS
TC xxx.xx	PROPOSED SPOT GRADES
6 xxx.xx	PROPOSED EROSION CONTROL
---	PROPOSED DRAINAGE DIVIDES

PLAN ABBREVIATIONS LIST					
B	Bollard	GM	Gas Meter	ROW	Right of Way
BC	Back of Curb	ICV	Irrigation Control Valve	S	Subgrade
BFR	Barrier Free Ramp	IRR	Irrigation	SF	Square Feet
BLDG	Building	LA	Landscape Area	SIR	Set Iron Rod
BW	Exposed Bottom of Wall	LS	Light Standard	SSMH	Sanitary Sewer Manhole
C-C	Center to Center	MAX	Maximum	STA	Station
CI	Curb Inlet	MH	Manhole	STMH	Storm Sewer Manhole
CM	Controlling Monument	MIN	Minimum	T	Pavement Thickness
CO	Clean Out	NIC	Not In Contract	TC	Top of Curb
CONC	Concrete	NTS	Not to Scale	TEL	Telephone Lines
CR	Curb Return	OC	On Center	TELE	Telephone Riser
DBL CO	Double Clean Out	OCBW	On Center Each Way	TP	Top of Pavement
DOM	Domestic	PC	Point of Curve	TSC	Traffic Signal Control
EL	Elevation	PI	Point of Intersection	TSP	Traffic Signal Pole
ELEV	Elevation	PP	Power Pole	TV	Television Box
EM	Electric Meter	PRC	Point of Reverse Curve	TW	Top of Wall
EX	Existing	PROP	Proposed	TYP	Typical
FC	Face of Curb	PT	Point of Tangency	VC	Vertical Curve
FH	Fire Hydrant	PVC	Point of Vertical Curvature	W	Width
FR	Found Iron Rod	PVI	Point of Vertical Intersection	WM	Water Meter
FL	Flow Line	PVMT	Pavement	WSEL	Water Surface Elevation
FP	Flag Pole	PVT	Point of Vertical Tangency	WV	Water Valve
G	Gutter	R	Radius	XXXXXX	Ex or Prop Spot Grade
GB	Grade Break	REIN	Reinforcing		

FRANCHISE UTILITY NOTES:

- TXU ELECTRIC - (972) 771-3979 - JOE PECINA
- ATMOS ENERGY (GAS) - (972) 485-8277 - MS. DINAH WOOD
- SBC - (903) 457-2092 - CAROLYN NAYLOR
- CHARTER COMM. (CABLE) - (817) 509-6272 x6896 - HECTOR ELIZONDO

CAUTION!!
UNDERGROUND UTILITIES ARE LOCATED IN THIS AREA. 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES, CONTACT LINE LOCATES FOR FRANCHISE UTILITY INFO. CALL BEFORE YOU DIG:
TEXAS EXCAVATION SAFETY SYSTEM (TESS)
1-800-344-8377
TEXAS ONE CALL SYSTEMS
1-800-245-4545
LONE STAR NOTIFICATION CENTER
1-800-669-8344 EXT. 5



BEFORE YOU DIG...

BENCH MARK LIST:

BENCHMARK #1
X-CUT FOUND ON THE TOP OF CURB OF THE SOUTHERN CURB RETURN AT EAST SIDE OF INDUSTRIAL BLVD. 590'± SOUTH FROM CENTERLINE OF RAILROAD.
ELEVATION = 564.27

BENCHMARK #2
X-CUT SET AT THE SOUTHEAST CORNER OF CURB INLET LOCATED IN NORTH SIDE OF JUSTIN ROAD 40'± WEST OF SOUTHWEST CORNER OF SITE.
ELEVATION = 574.35

OWNER:

MR. STEVEN ROSENBERG
FLEXLAND, L.P.
1480 JUSTIN ROAD
ROCKWALL, TEXAS 75087
(469) 252-1070 PHONE
(469) 252-1069 FAX

CIVIL CONSTRUCTION PLANS FOR

SPR PACKAGING - EXPANSION BLOCK A, LOT 2, SPR PACKAGING ADDITION NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD N. BUTLER SURVEY, ABSTRACT NO. 20 AND THE R. BALLARD SURVEY, ABSTRACT NO. 29

ROCKWALL COUNTY CITY OF ROCKWALL, TEXAS

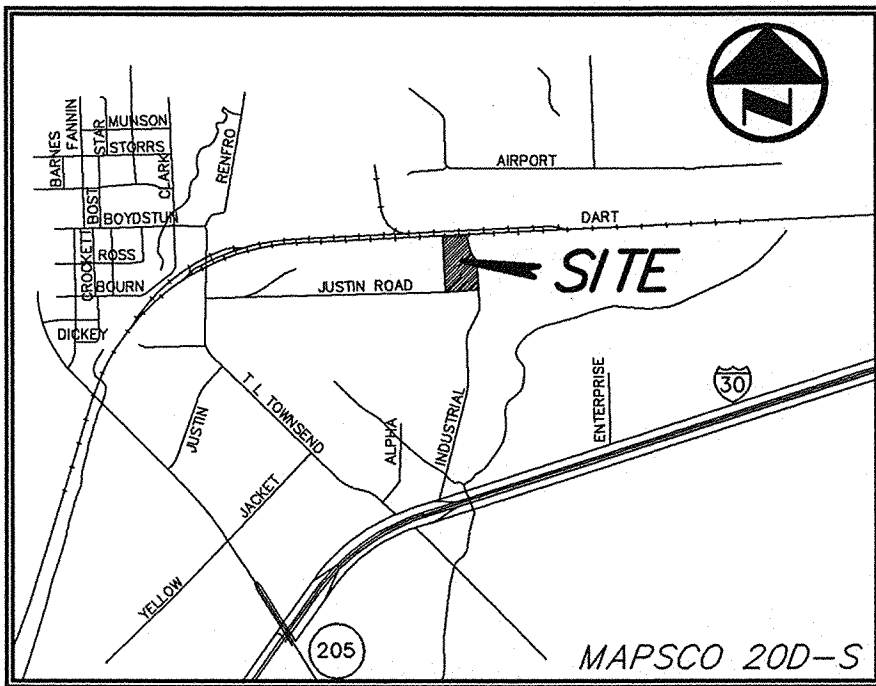
PLANS PREPARED BY:



1512 BRAY CENTRAL DRIVE, SUITE 100
MCKINNEY, TEXAS 75069
PH (214) 544-8880
FAX (214) 544-8882
RANDALL P. POGUE, P.E.

PLANS PREPARED FOR:

MR. STEVEN ROSENBERG
SPR PACKAGING, INC.
1480 JUSTIN ROAD
ROCKWALL, TEXAS 75087
(469) 252-1070 PHONE
(469) 252-1069 FAX



VICINITY MAP
NOT TO SCALE

RECORD DRAWINGS:

IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN. DATE: SEPTEMBER 27, 2011.

PROJECT GENERAL NOTES:

- SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES HAVE BEEN REPRODUCED FROM PLANS ON FILE WITH THE CITY. CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY.
- THE BEARING SYSTEM FOR THIS TRACT WAS BASED ON A BEARING OF NORTH 87 DEGREES, 51 MINUTES, 50 SECONDS WEST FOR THE SOUTH LINE OF THAT CERTAIN TRACT OF LAND DESCRIBED IN WARRANTY DEED TO THE WHITMORE MANUFACTURING COMPANY RECORDED IN VOLUME 453, PAGE 167 OF THE DEED RECORDS OF ROCKWALL COUNTY, TEXAS.
- BASE BOUNDARY AND TOPOGRAPHY INFORMATION SHOWN IS BASED ON THE GROUND SURVEY AS PREPARED BY POGUE ENGINEERING & DEVELOPMENT COMPANY, INC. DATED 11-05-2010.
- THE SUBJECT PROPERTY IS SHOWN ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR THE CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS AND INCORPORATED AREAS COMMUNITY PANEL NUMBER 480547 0005 C, DATED JULY 16, 1992. ALL OF THE SUBJECT PROPERTY IS INDICATED TO BE IN ZONE "X" ON SAID MAP. RELEVANT ZONES ARE DEFINED ON SAID MAP AS FOLLOWS:

ZONE "X" - AREAS DETERMINED TO BE OUTSIDE OF THE 500-YR FLOOD PLAIN.

THIS FLOOD STATEMENT REGARDING FLOODING DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS, GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR AND/OR ENGINEER.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PLANS AND SPECIFICATIONS INCLUDING ALL NOTES, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS ISSUED BY THE NORTH TEXAS CENTRAL TEXAS COUNCIL OF GOVERNMENTS 3rd ADDITION, THE CITY STANDARDS FOR PUBLIC WORKS CONSTRUCTION AND ANY OTHER APPLICABLE STANDARD AND SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK HEREIN SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BECOME FAMILIAR WITH SAID STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY OF PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO OWNER.
- REFER TO THE GEOTECHNICAL REPORT FOR SUBSURFACE SOIL CONDITIONS AND RECOMMENDATIONS PERTAINING TO THE SUBJECT SITE.
- ALL DIMENSIONS ARE FROM BACK OF CURB TO BACK OF CURB, UNLESS OTHERWISE NOTED.
- REFER TO THE STANDARD DETAILS AND GENERAL NOTES PLAN(S) FOR PAVING, DRAINAGE, AND UTILITY STANDARD DETAILS AND GENERAL NOTES.
- REFER TO THE ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
- REFER TO THE ARCHITECTURAL PLANS FOR DETAILED BUILDING ENTRANCE LAYOUTS, RAMPS, DUMPSTER AREA, BUILDING OVERHANGS, BOLLARDS, LANDSCAPING AND SIDEWALKS.
- REFER TO THE ARCHITECTURAL AND MECHANICAL PLANS FOR THE EXACT LOCATIONS FOR ROOF DRAIN COLLECTION SYSTEM TIE IN LOCATIONS.
- REFER TO THE ARCHITECTURAL AND ELECTRICAL PLANS FOR THE SITE LIGHTING LOCATIONS, REQUIREMENTS AND SPECIFICATIONS.
- DUMPSTER SCREENING TO COMPLY WITH CITY REQUIREMENTS.

INDEX OF DRAWINGS

- COVER SHEET
- REPLAT (Page 1 of 2)
- REPLAT (Page 2 of 2)

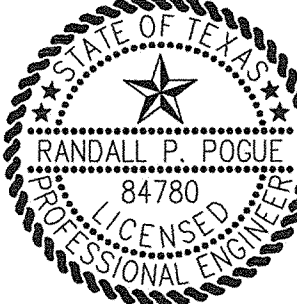
- A1.1 SITE PLAN
- C0.01 DEMOLITION PLAN
- C1.01 PAVING PLAN
- C1.02 STANDARD DETAILS (Page 1 of 4)
- C1.03 STANDARD DETAILS (Page 2 of 4)
- C1.04 STANDARD DETAILS (Page 3 of 4)
- C1.05 STANDARD DETAILS (Page 4 of 4)
- C2.01 DRAINAGE AREA MAP
- C3.01 GRADING PLAN
- C4.01 EROSION CONTROL PLAN (SWPPP)
- C4.02 EROSION CONTROL DETAILS (SWPPP)
- C5.01 STORM SEWER PLAN
- C5.02 STORM SEWER PROFILES
- C6.01 WATER & SANITARY SEWER PLAN
- C7.01 GENERAL NOTES SHEET
- L1.00 TREE PRESERVATION PLAN
- L1.01 LANDSCAPE PLAN
- L1.02 LANDSCAPE SPECIFICATIONS AND DETAILS

NOTE:
FOR STORM DETAILS SEE CITY
OF ROCKWALL/STANDARDS
AND NTCOG 3rd ADDITION

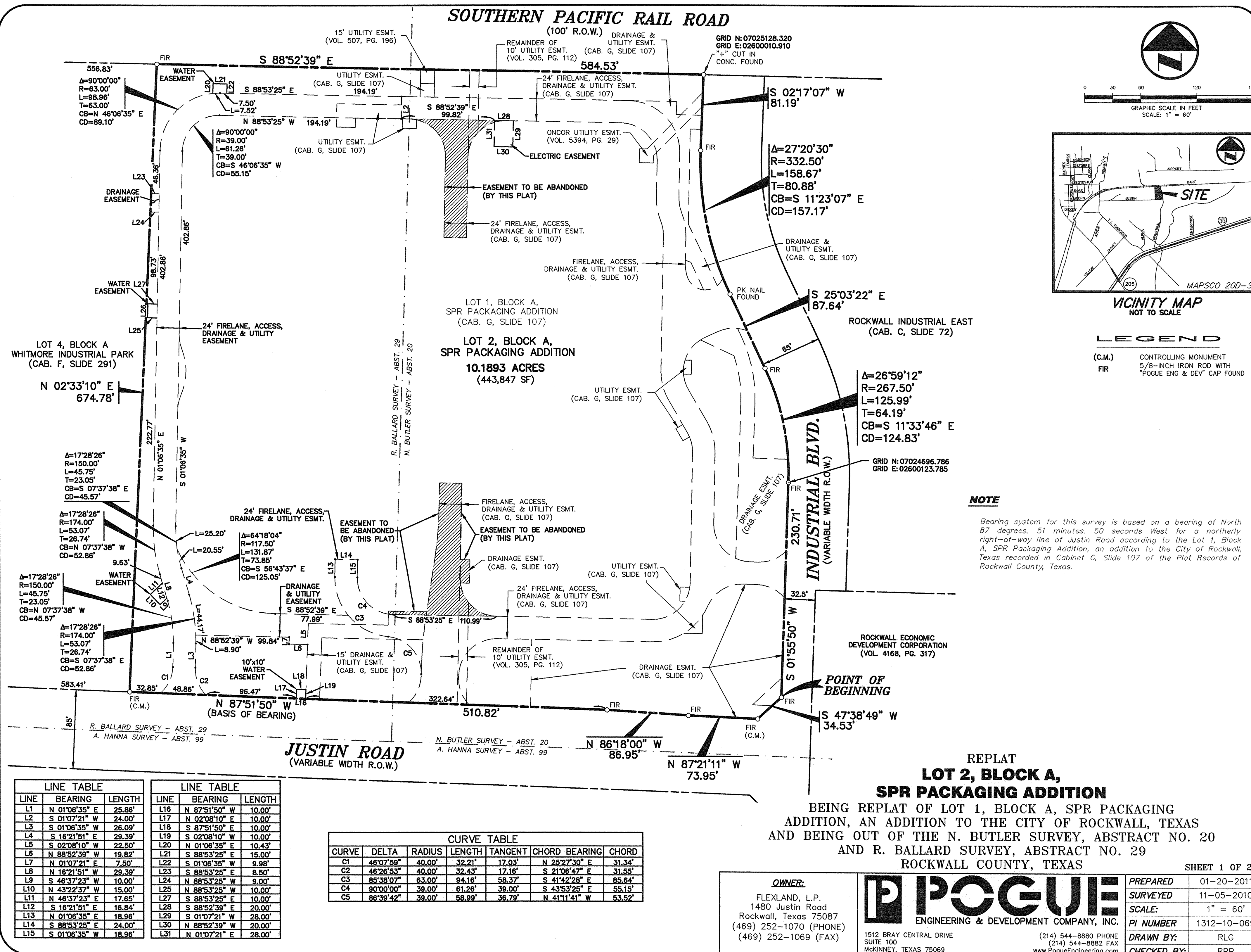
- 09-27-11 RECORD DRAWINGS
- 05-24-11 RFI #6 (ST-2; DELETED RADIUS PIPE)
- 05-17-11 COORDINATION AROUND 20' TREE

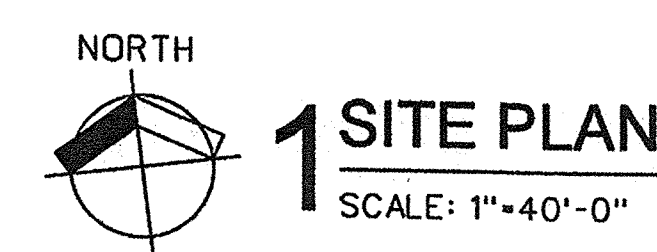
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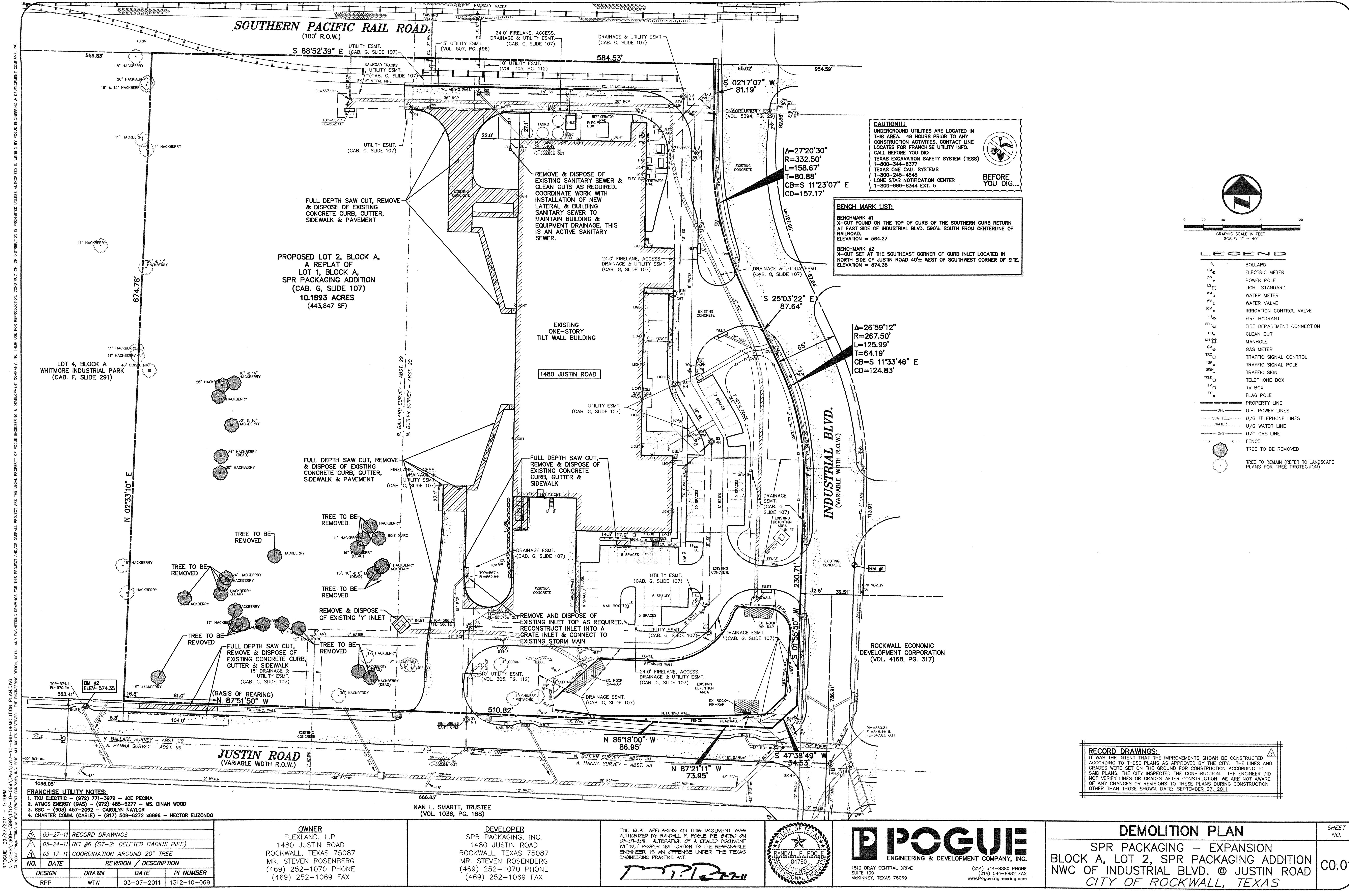
R. P. Pogue



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JOES 1300-1399 1312-10-069 DWG 1312-10-069 REPLAT DWG
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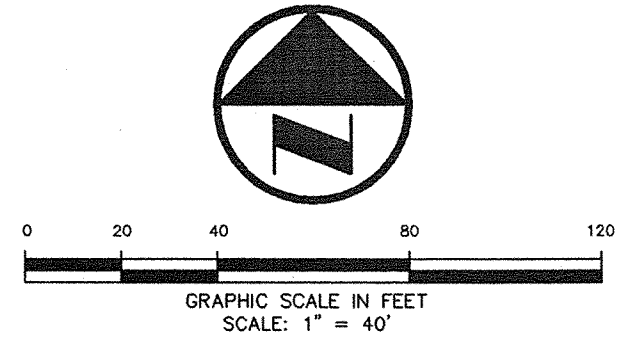






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BENCH MARK LIST:
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LEGEND

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- TRAFFIC SIGN
- TELEPHONE BOX
- TV BOX
- FLAG POLE
- PROPERTY LINE
- O.H. POWER LINES
- U/G TELEPHONE LINES
- U/G WATER LINE
- U/G GAS LINE
- FENCE
- TREE TO BE REMOVED
- TREE TO REMAIN (REFER TO LANDSCAPE PLANS FOR TREE PROTECTION)

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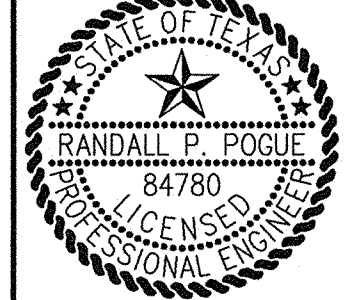
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NO.	DATE	REVISION / DESCRIPTION		
DESIGN	DRAWN	DATE	PI NUMBER	
RPP	WTW	03-07-2011	1312-10-069	

OWNER
FLEXLAND, L.P.
1480 JUSTIN ROAD
ROCKWALL, TEXAS 75087
MR. STEVEN ROSENBERG
(469) 252-1070 PHONE
(469) 252-1069 FAX

DEVELOPER
SPR PACKAGING, INC.
1480 JUSTIN ROAD
ROCKWALL, TEXAS 75087
MR. STEVEN ROSENBERG
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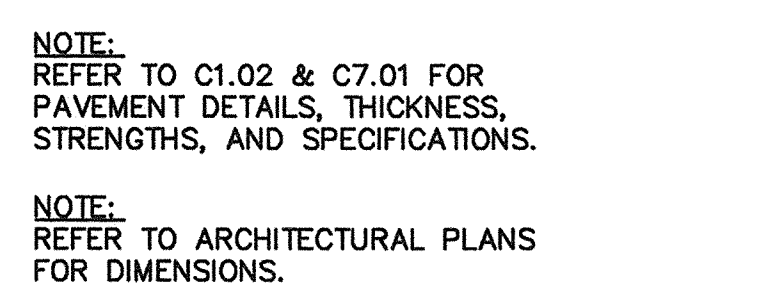
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ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 GRAY CENTRAL DRIVE
SUITE 100
MCKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

DEMOLITION PLAN
SPR PACKAGING - EXPANSION
BLOCK A, LOT 2, SPR PACKAGING ADDITION
NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD
CITY OF ROCKWALL, TEXAS

SHEET NO.
C0.01

POGUE 09/27/2011 - 1:49PM
NO. 1300-1389 1312-10-069 DWN 1312-10-069 REVOLUTION PLANDWG
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SPR PACKAGING - EXPANSION
TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #00481, TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

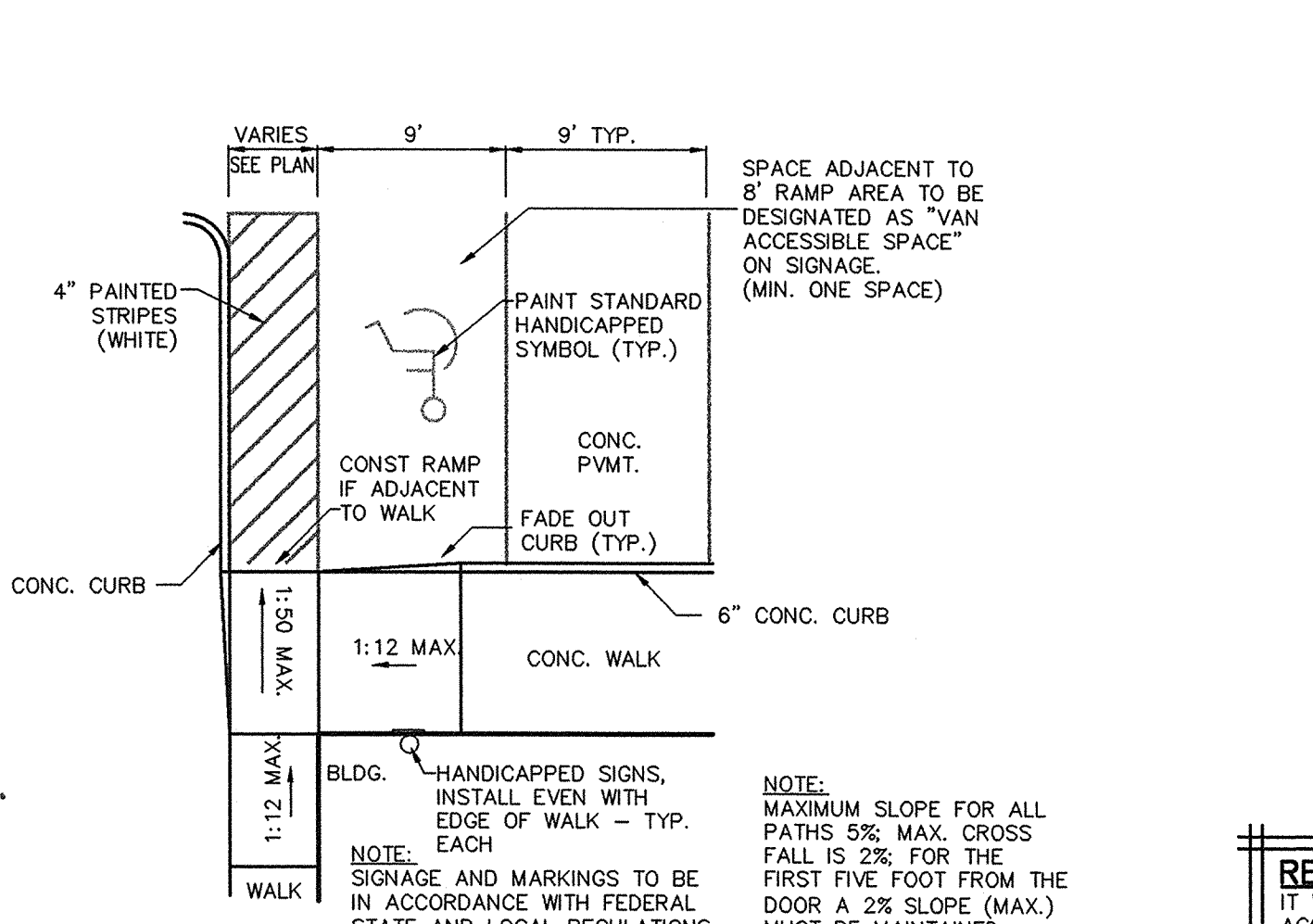
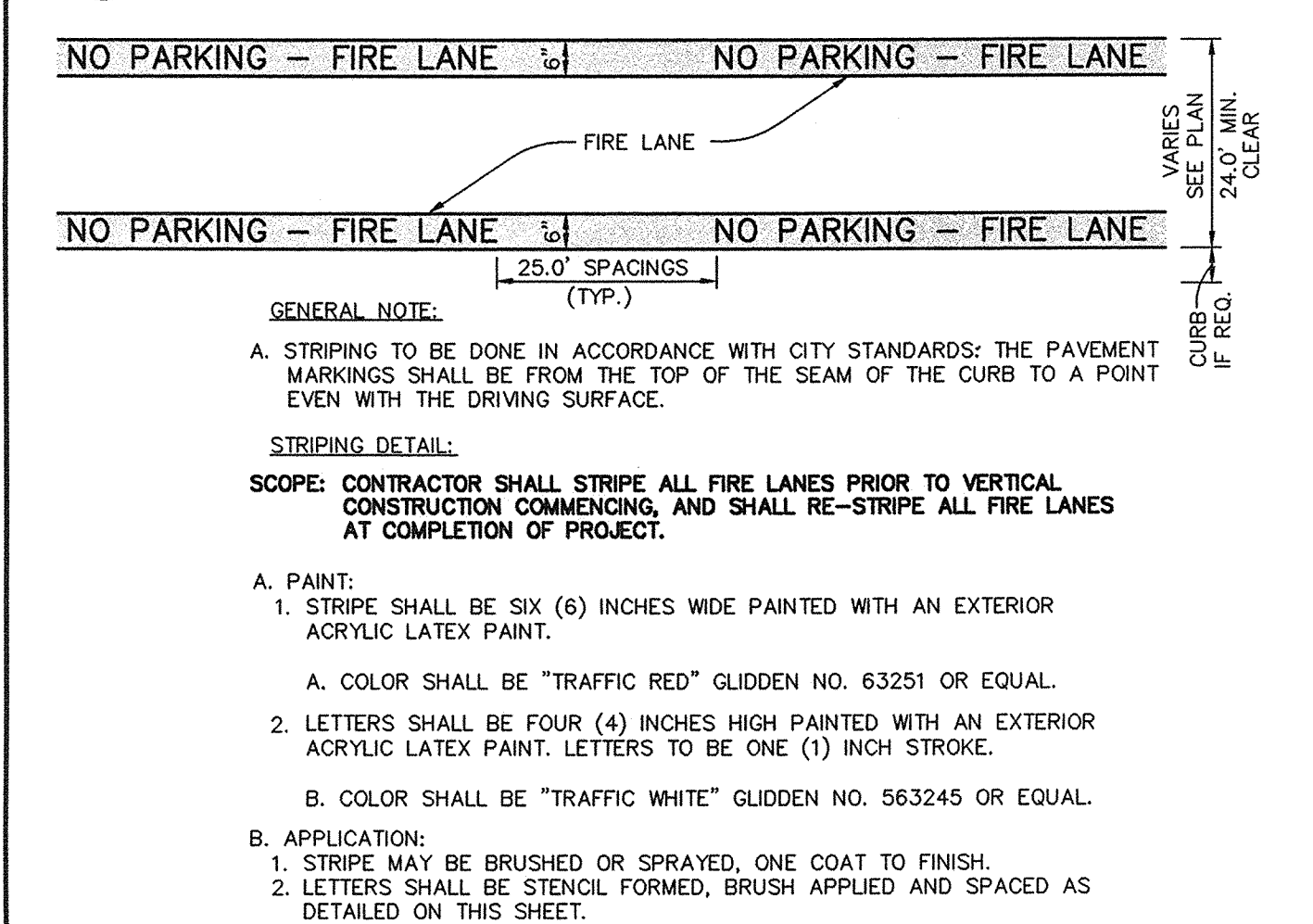
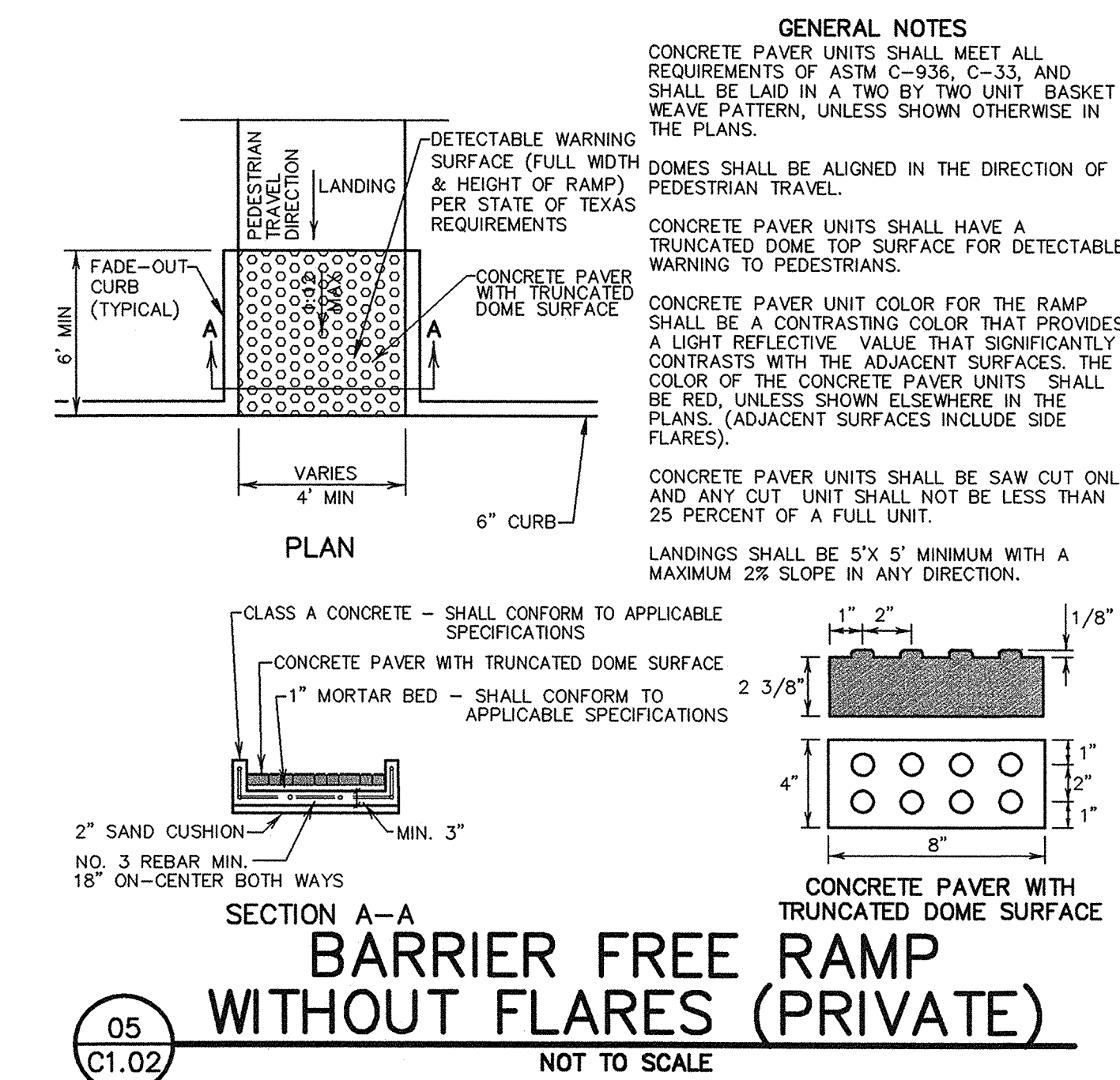
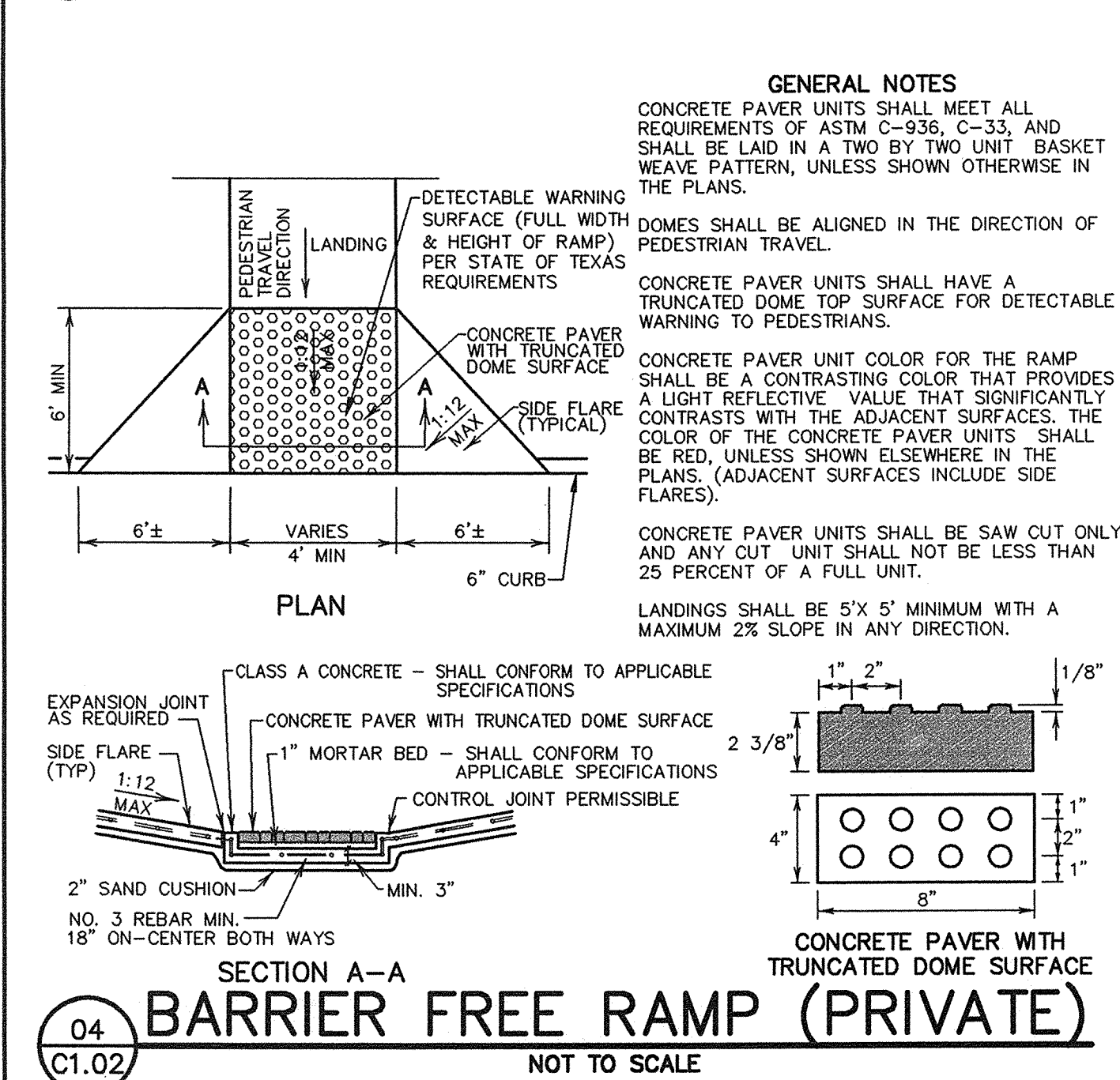
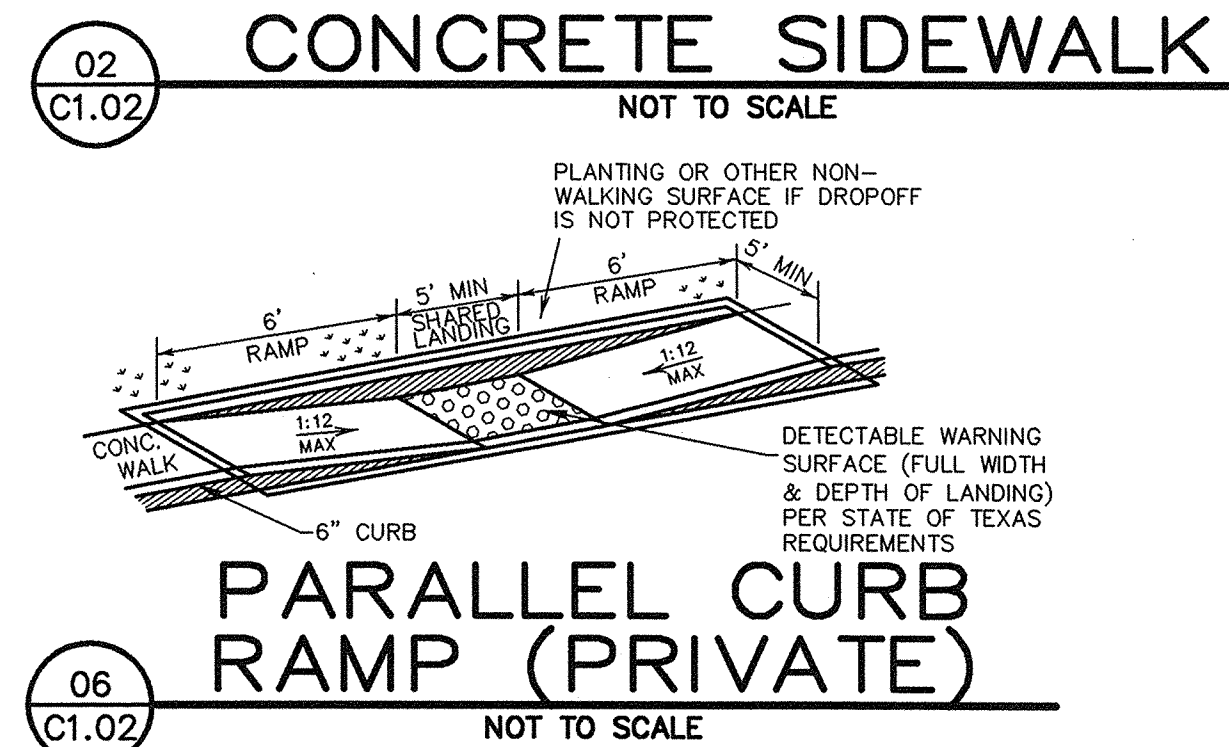
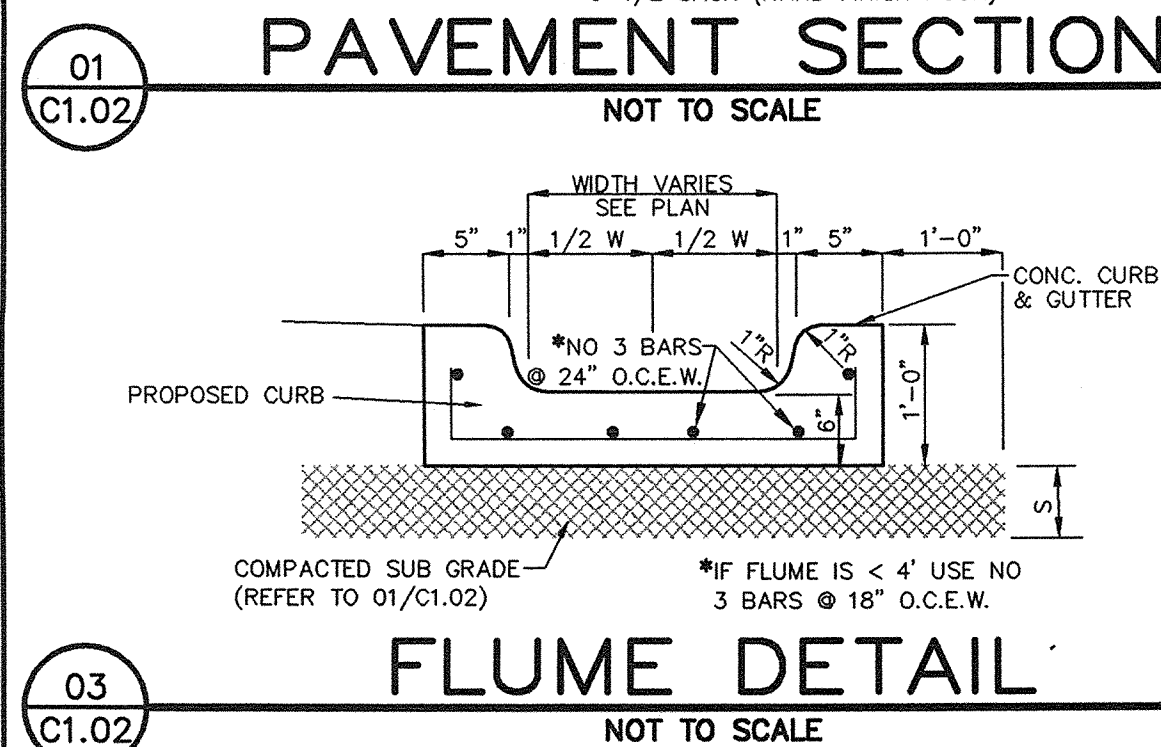
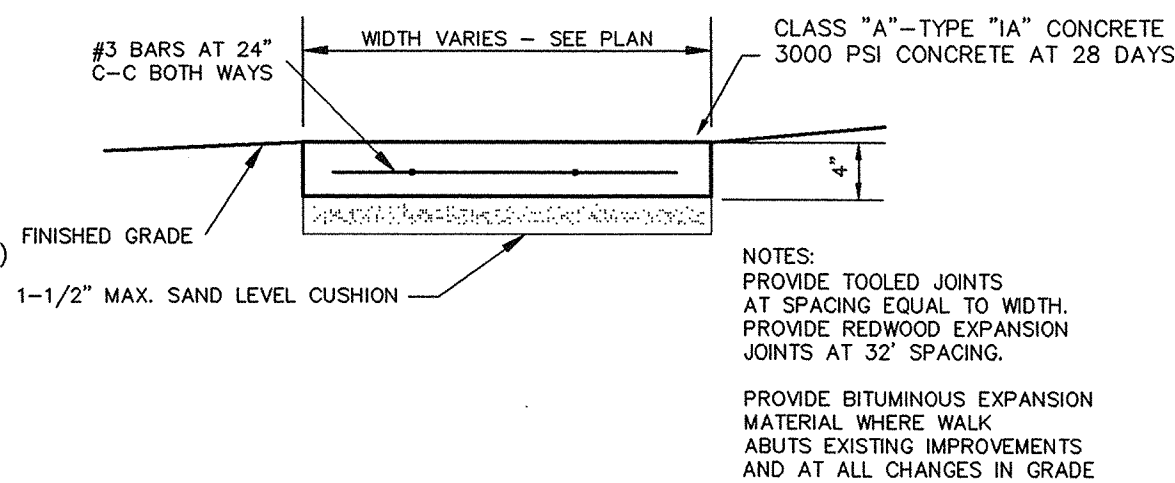
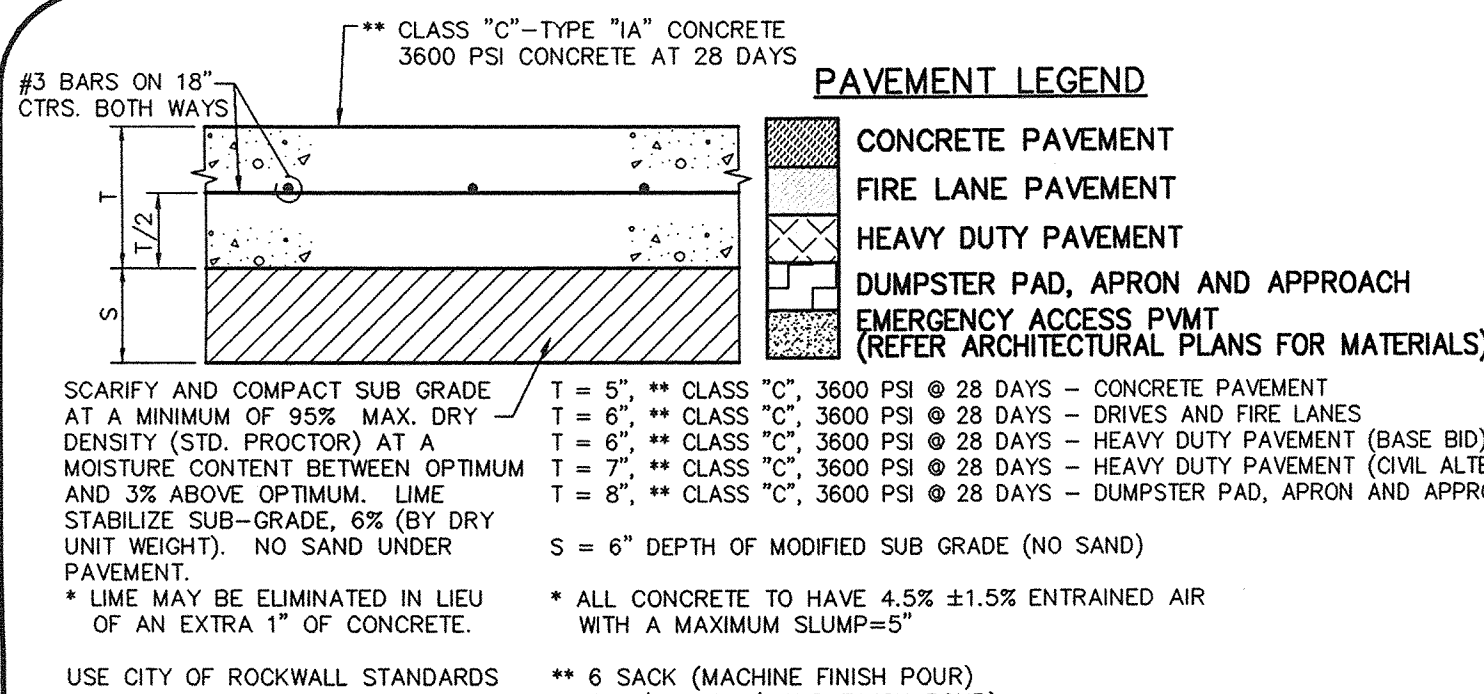


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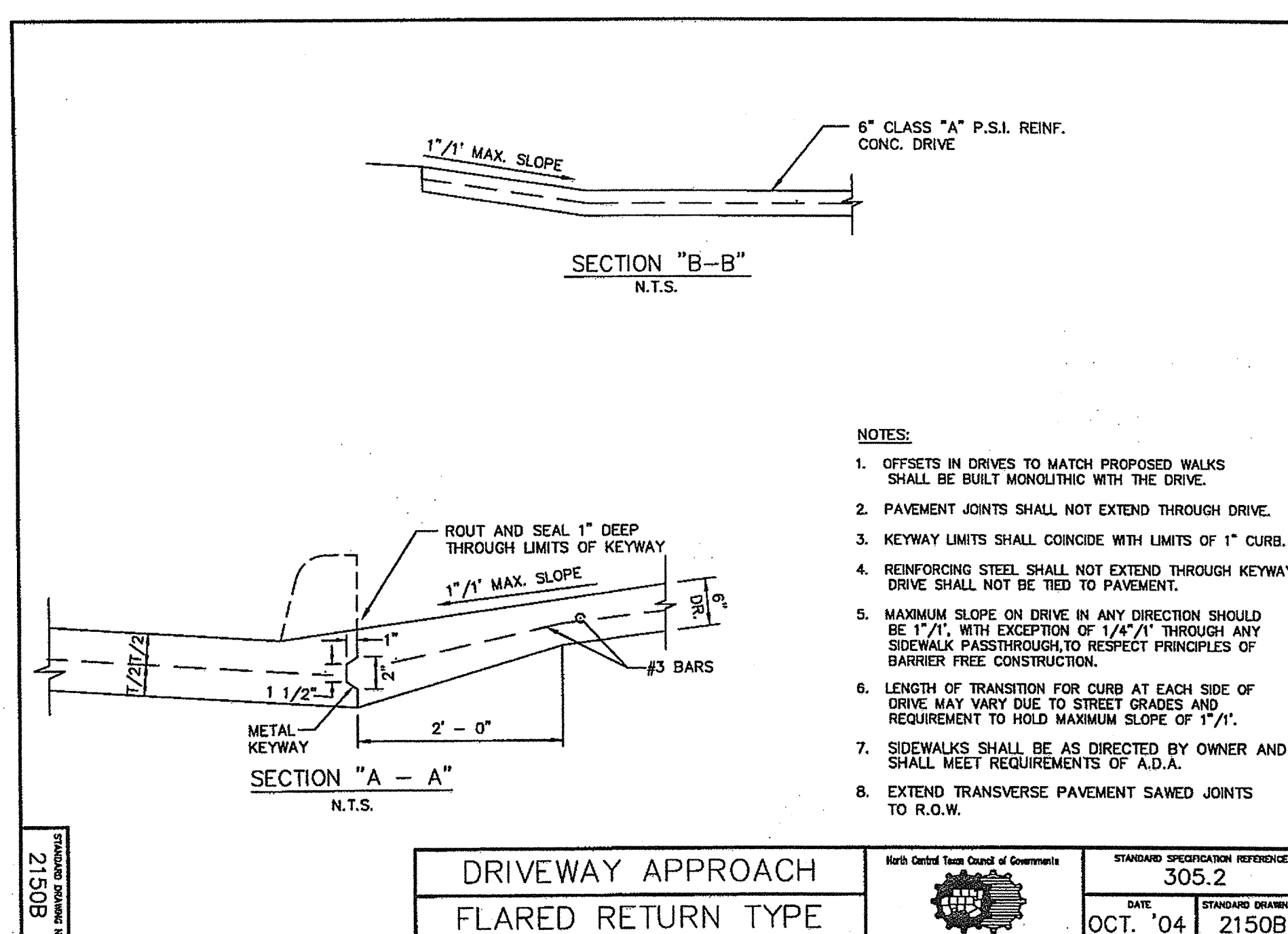
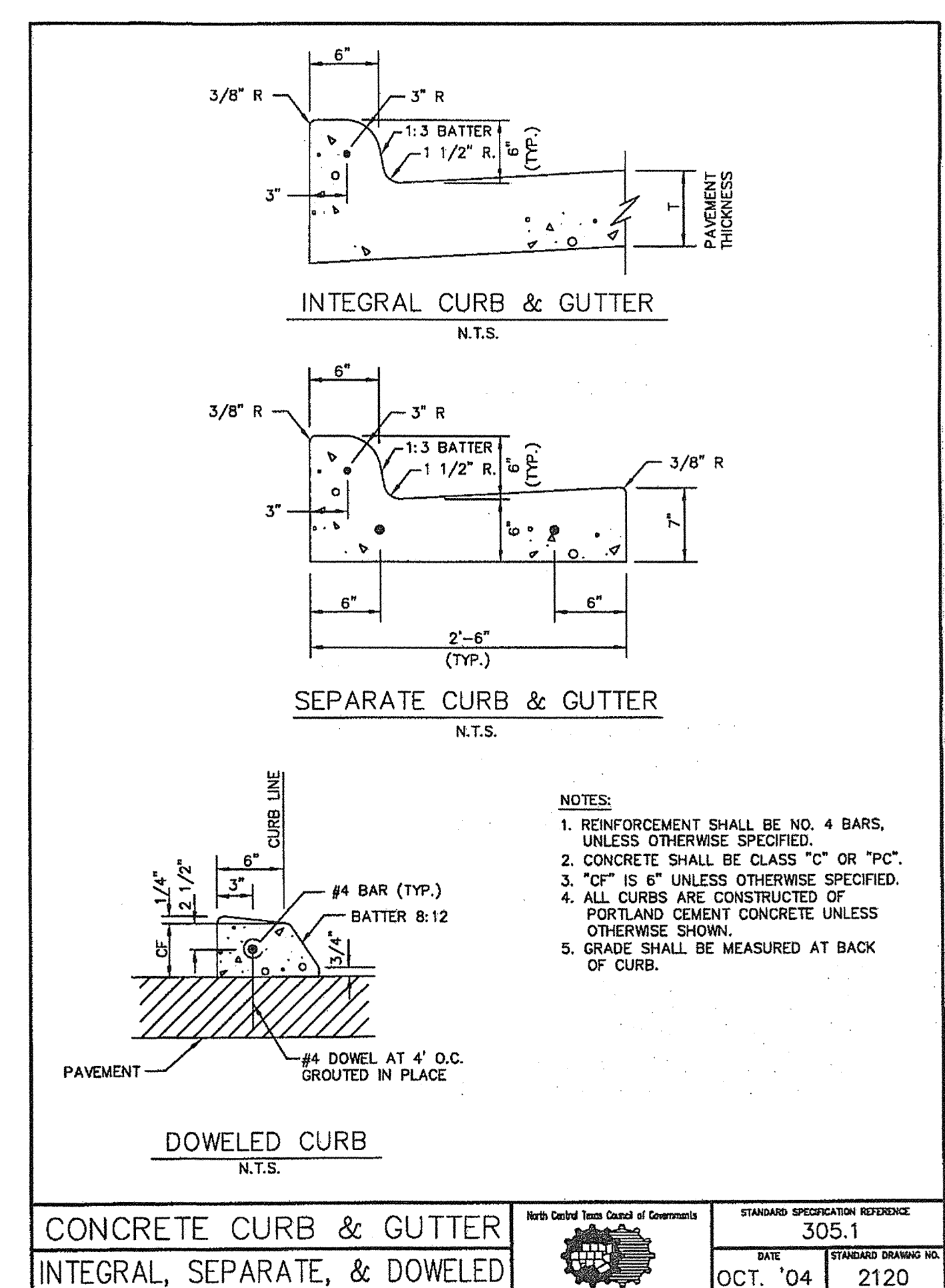
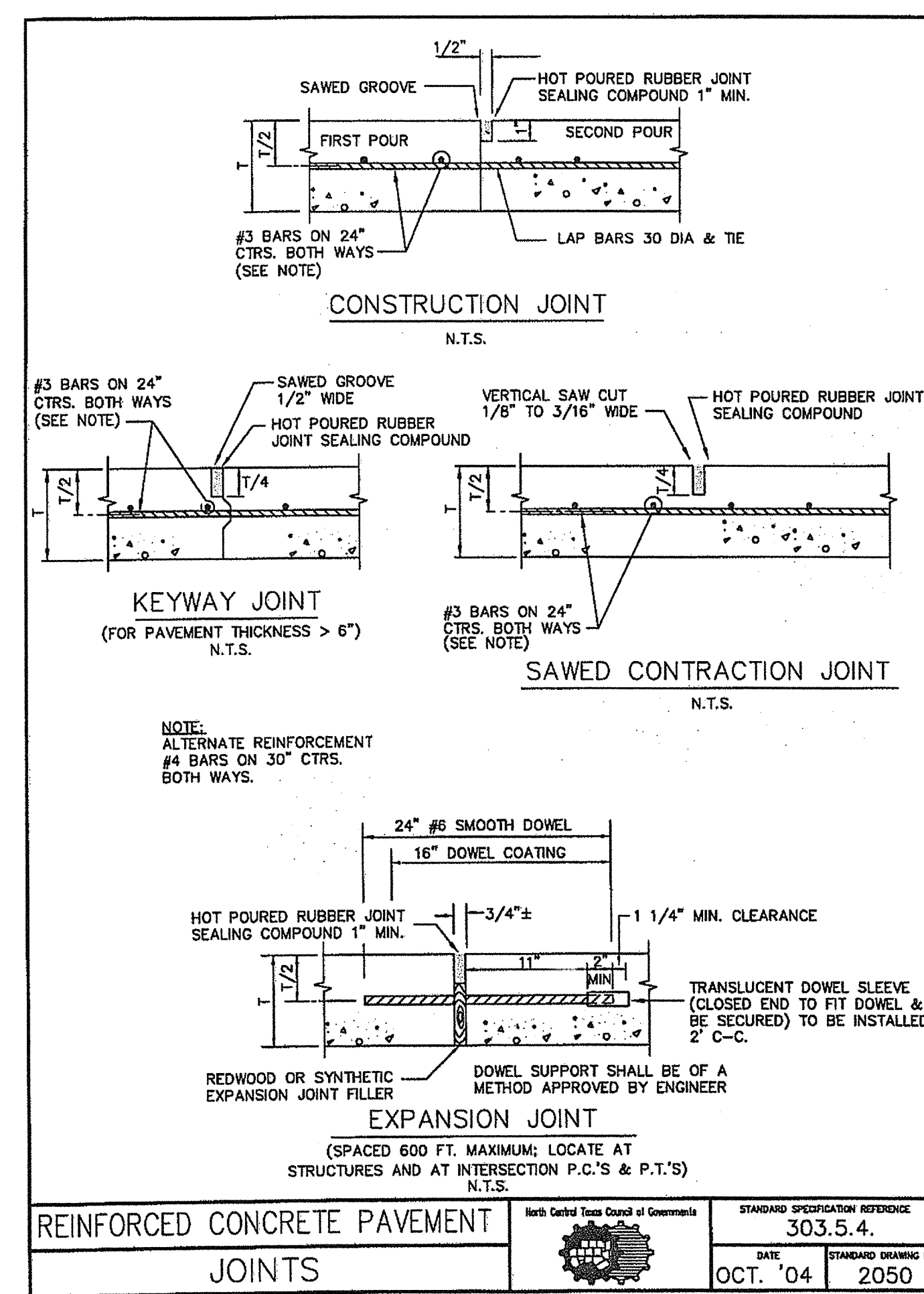
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TEXAS BOARD OF PROFESSIONAL ENGINEERING

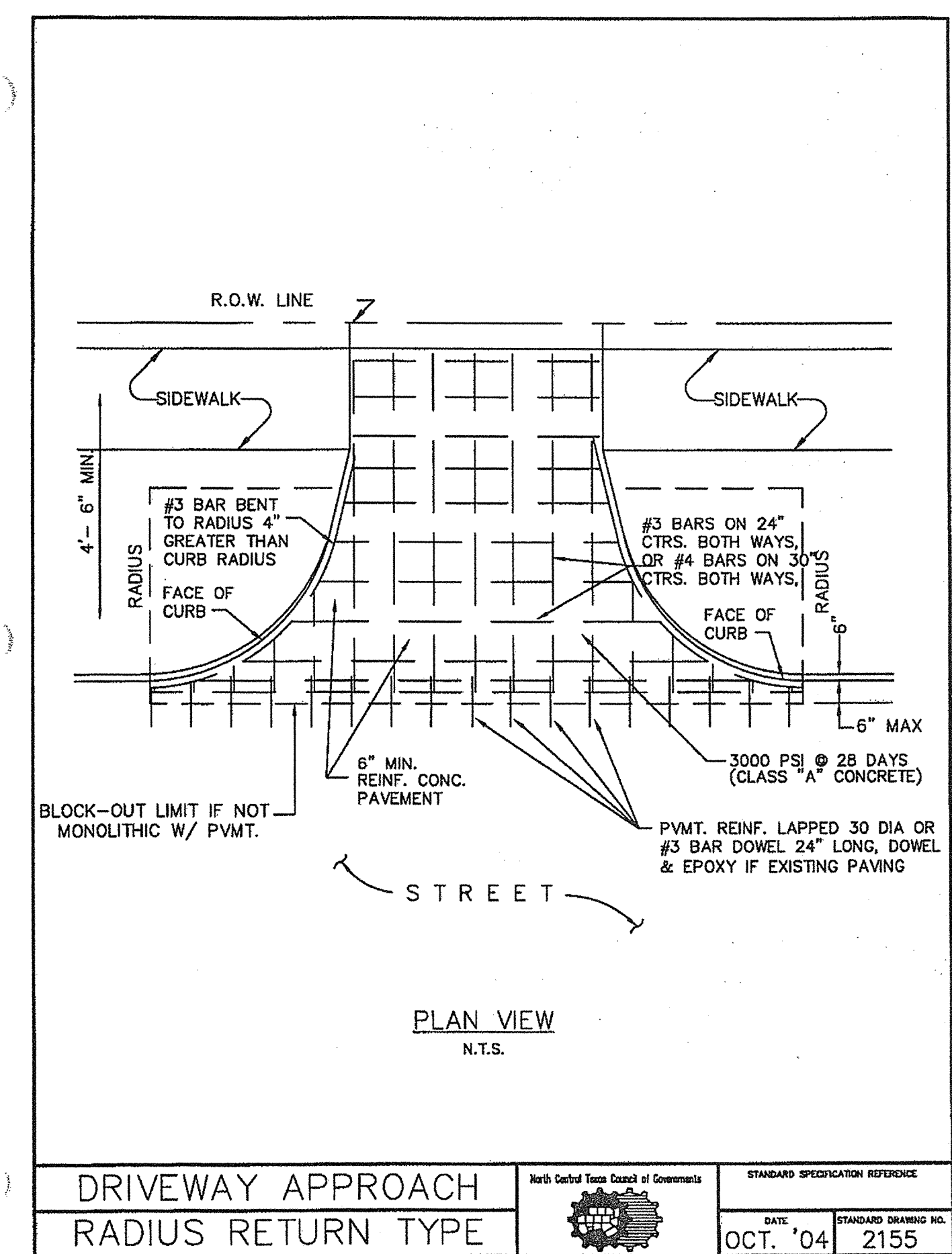
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NOTE:
FOR ALL OTHER PAVING DETAILS, USE CITY OF ROCKWALL/STANDARDS AND NTCOG 3rd ADDITION

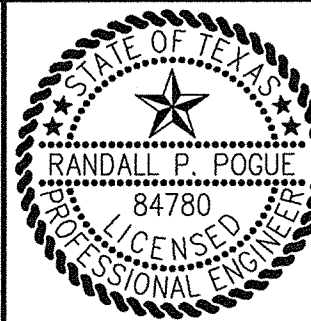


<div>07</div> <div>C1.02</div>		<div>FIRE LANE STRIPIN</div>	
		<div>NOT TO SCALE</div>	
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OWNER	DEVELOPER
FLEXLAND, L.P. 1480 JUSTIN ROAD ROCKWALL, TEXAS 75087 MR. STEVEN ROSENBERG (469) 252-1070 PHONE (469) 252-1069 FAX	SPR PACKAGING, INC. 1480 JUSTIN ROAD ROCKWALL, TEXAS 75087 MR. STEVEN ROSENBERG (469) 252-1070 PHONE (469) 252-1069 FAX

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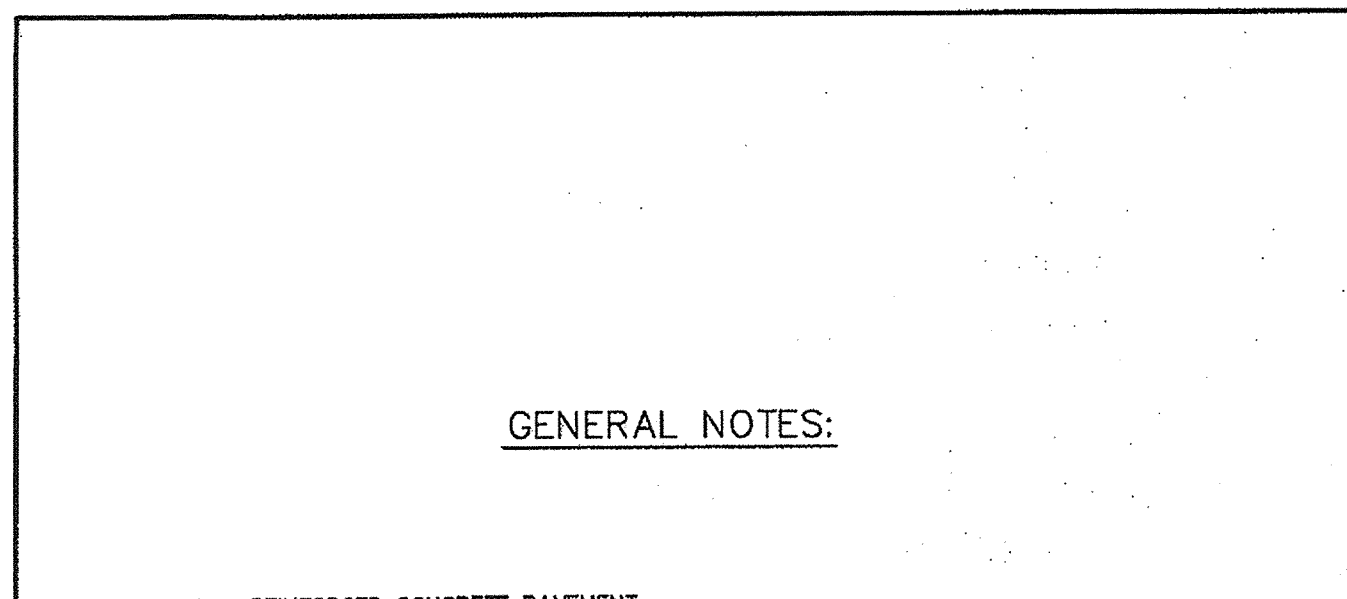
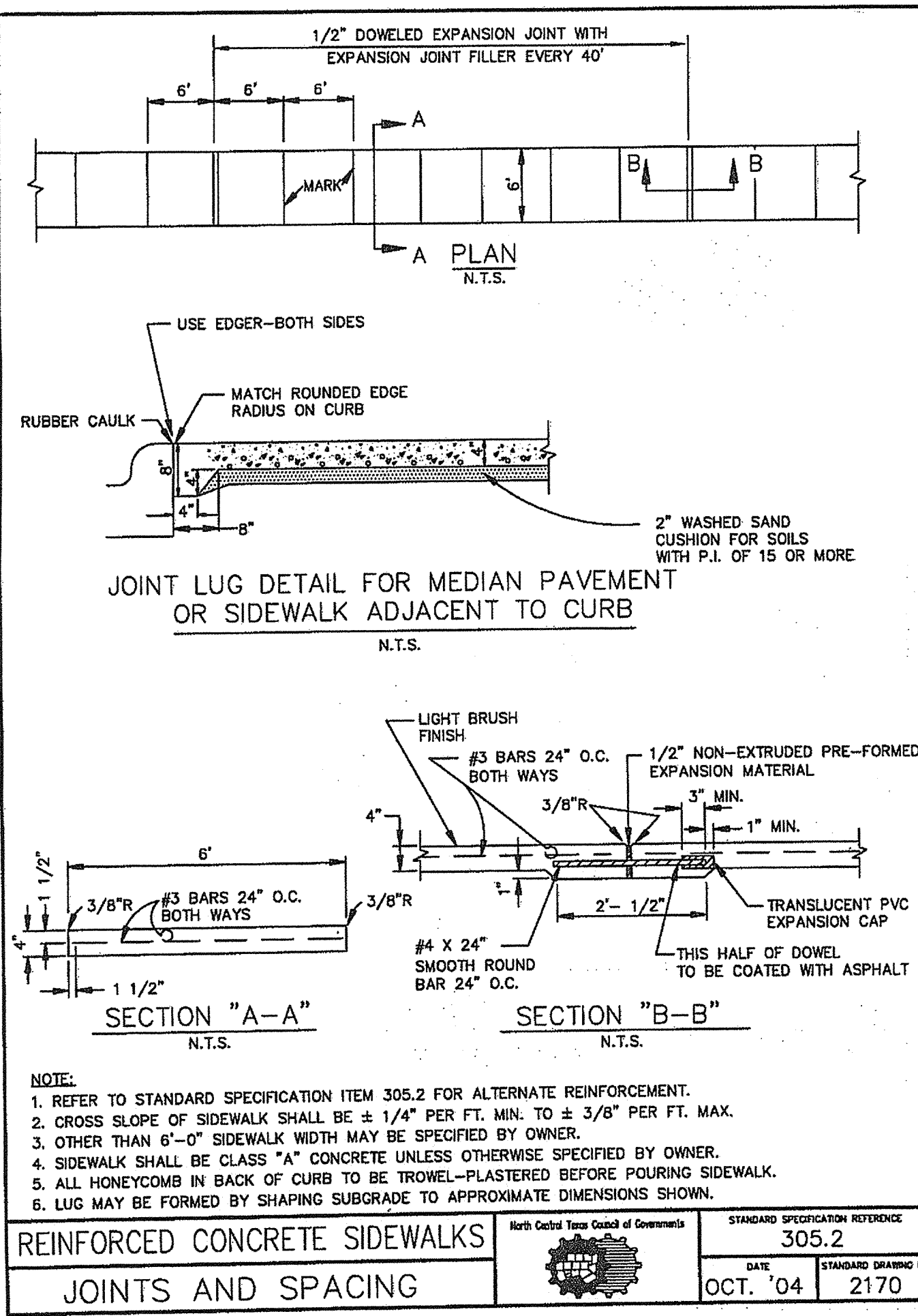
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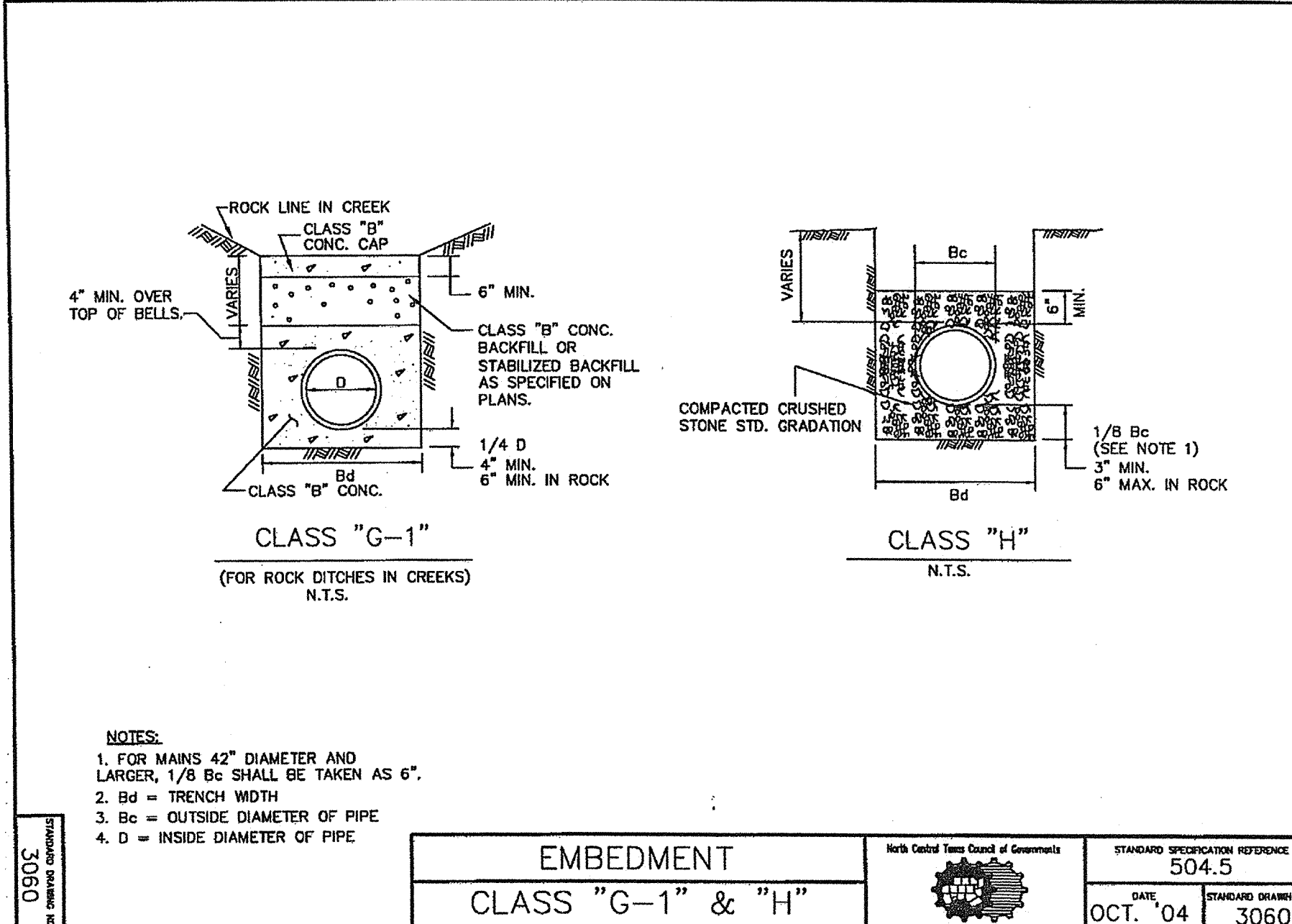
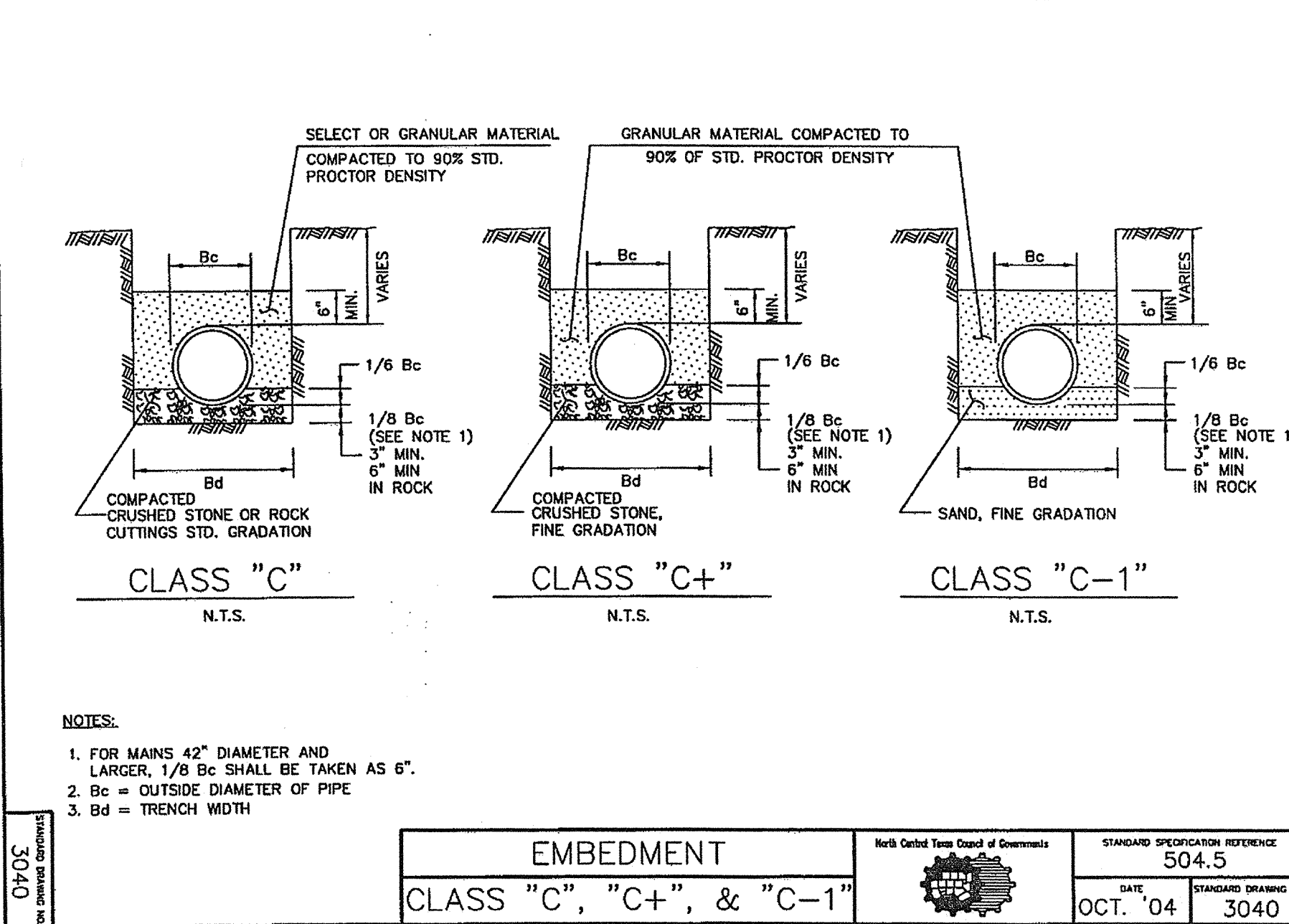
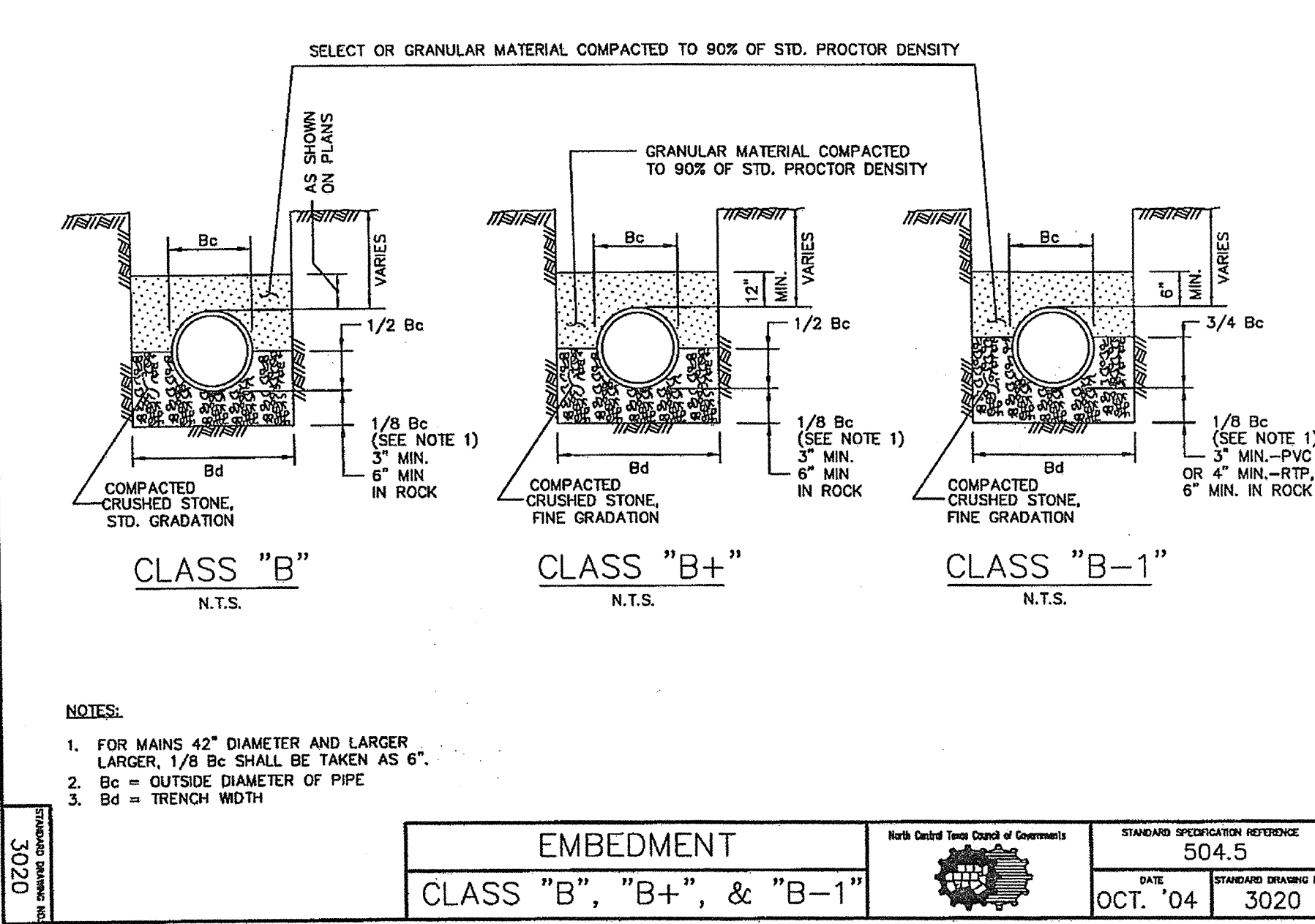
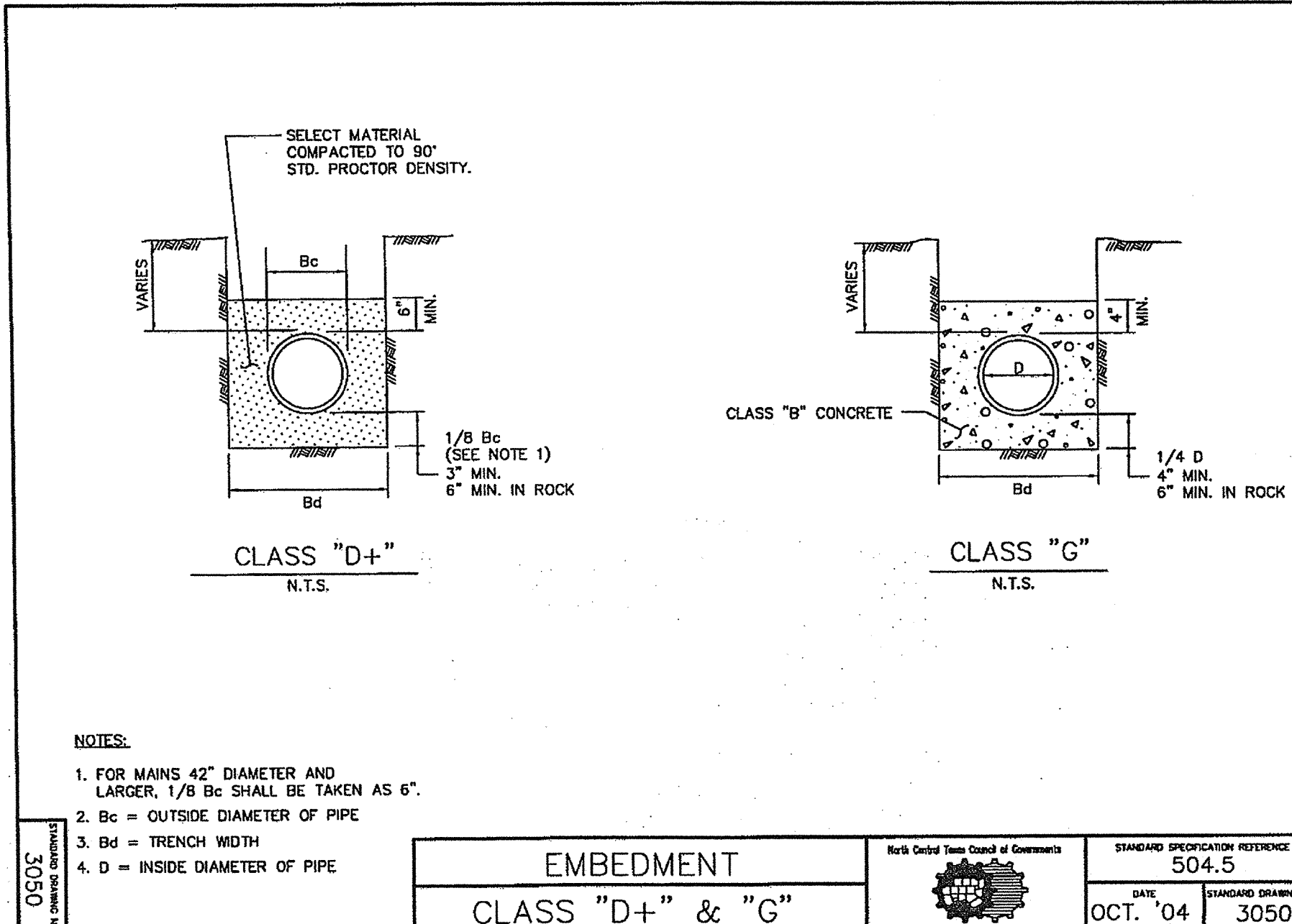
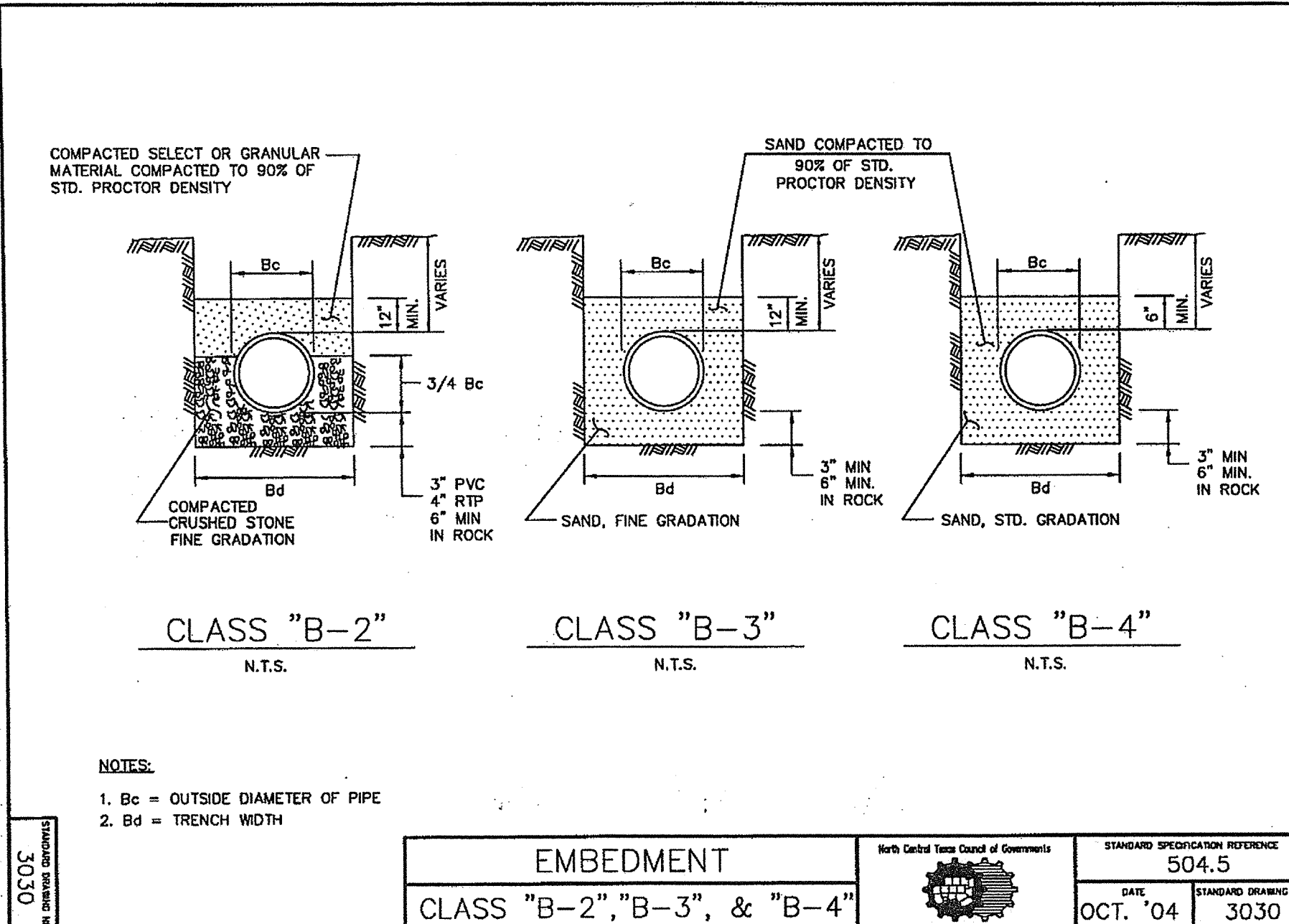
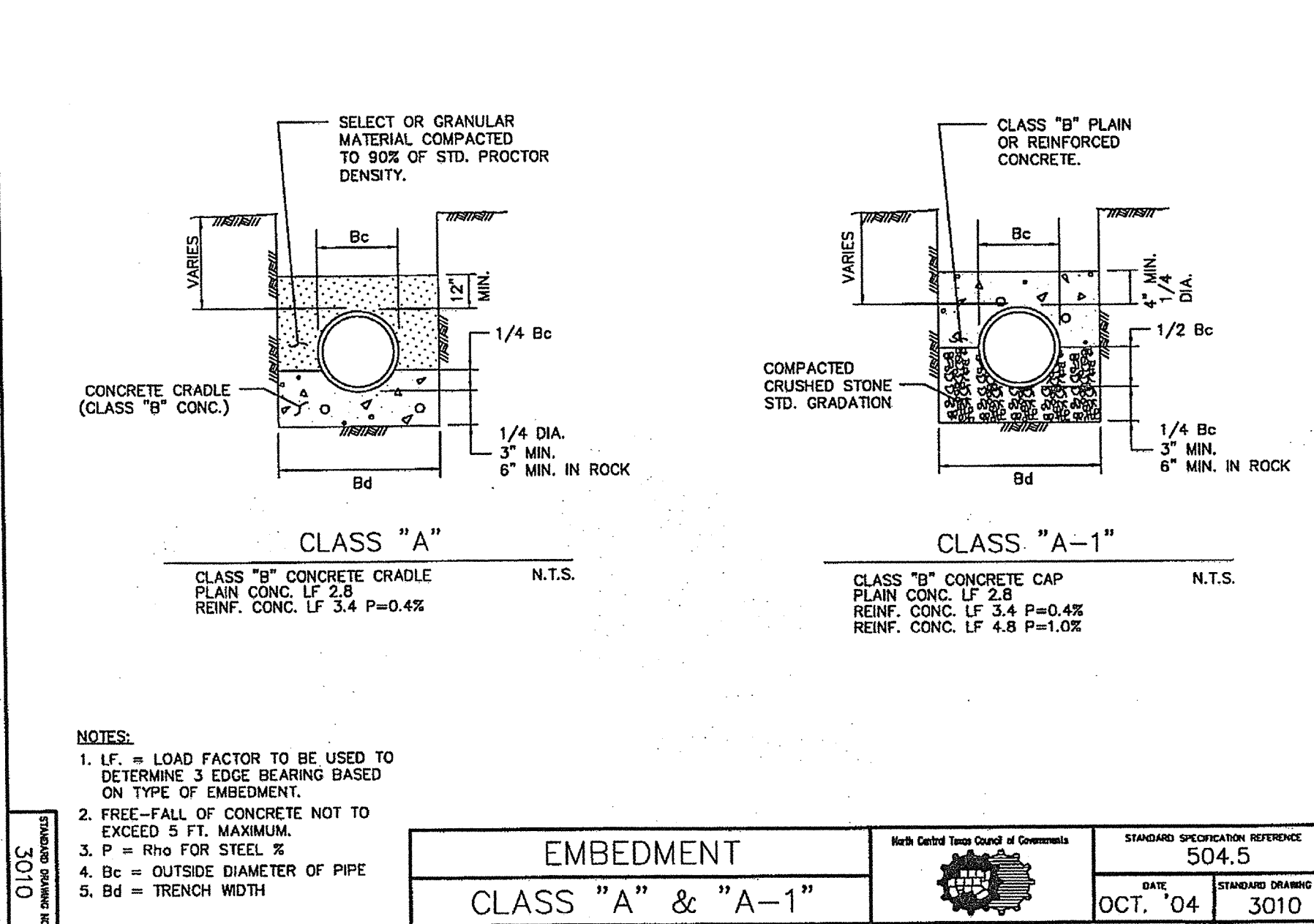
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1512 BRAY CENTRAL DRIVE
SUITE 100
MCKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
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STANDARD DETAILS (PAGE 1 OF 4)	SHEET NO.
SPR PACKAGING - EXPANSION BLOCK A, LOT 2, SPR PACKAGING ADDITION NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD CITY OF ROCKWALL, TEXAS	C1.02




SPR PACKAGING - EXPANSION
TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #00461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00



PAVEMENT SYSTEMS			
GENERAL NOTES			
<ol style="list-style-type: none"> REINFORCED CONCRETE PAVEMENT: <ol style="list-style-type: none"> ALL CURBS SHALL BE PLACED INTEGRAL WITH PAVEMENT UNLESS OTHERWISE APPROVED BY THE OWNER. CURBS SHALL MEET THE SAME COMPRESSIVE STRENGTH AS SPECIFIED FOR THE PAVEMENT. BAR LAPS SHALL BE 30 DIAMETERS. REINFORCING BARS SHALL BE SUPPORTED BY CHAIRS OR OTHER DEVICES APPROVED BY THE OWNER. SUBGRADE: (UNLESS OTHERWISE SPECIFIED BY OWNER) <ol style="list-style-type: none"> SUBGRADE UNDER ALL PAVEMENTS SHALL BE STABILIZED TO A MINIMUM DEPTH OF 6" WITH HYDRATED LIME OR CEMENT WHEN THE P.I. OF THE INPLACE MATERIAL IS GREATER THAN 15. LABORATORY TESTS MUST BE PERFORMED TO DETERMINE THE AMOUNT OF LIME OR CEMENT REQUIRED TO LOWER THE P.I. TO 15 OR BELOW. SATURATION P.I. (PH ≥ 12.4) WILL BE THE LIMIT WHEN A SOIL'S P.I. CANNOT BE BROUGHT TO 15 OR LOWER. WHERE THE INPLACE MATERIAL HAS A P.I. OF LESS THAN 15, THE SUBGRADE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6" AND RECOMPACTED. IF THE ROADWAY IS A DESIGNATED BIKE ROUTE OR BIKE USAGE IS ANTICIPATED, REFER TO NCTCOG'S REGIONAL BICYCLE AND PEDESTRIAN FACILITIES DESIGN MANUAL FOR DESIGN GUIDANCE. 			
North Central Texas Council of Governments		STANDARD SPECIFICATION REFERENCE	
		302.303	
DATE		STANDARD DRAWING NO.	
OCT. '04		2190	



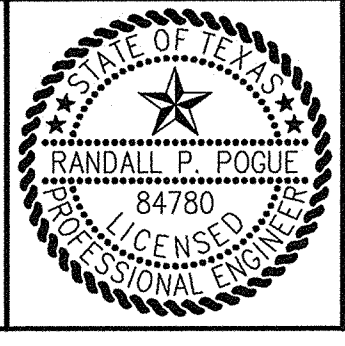
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	09-27-11	RECORD DRAWINGS		
	05-24-11	RFI #6 (ST-2; DELETED RADIUS PIPE)		
	05-17-11	COORDINATION AROUND 20" TREE		
NO.	DATE	REVISION / DESCRIPTION		
DESIGN	DRAWN	DATE	PI NUMBER	
RPP	WTV	03-07-2011	1312-10-069	

OWNER
 FLEXLAND, L.P.
 1480 JUSTIN ROAD
 ROCKWALL, TEXAS 75087
 MR. STEVEN ROSENBERG
 (469) 252-1070 PHONE
 (469) 252-1069 FAX

DEVELOPER
 SPR PACKAGING, INC.
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 ROCKWALL, TEXAS 75087
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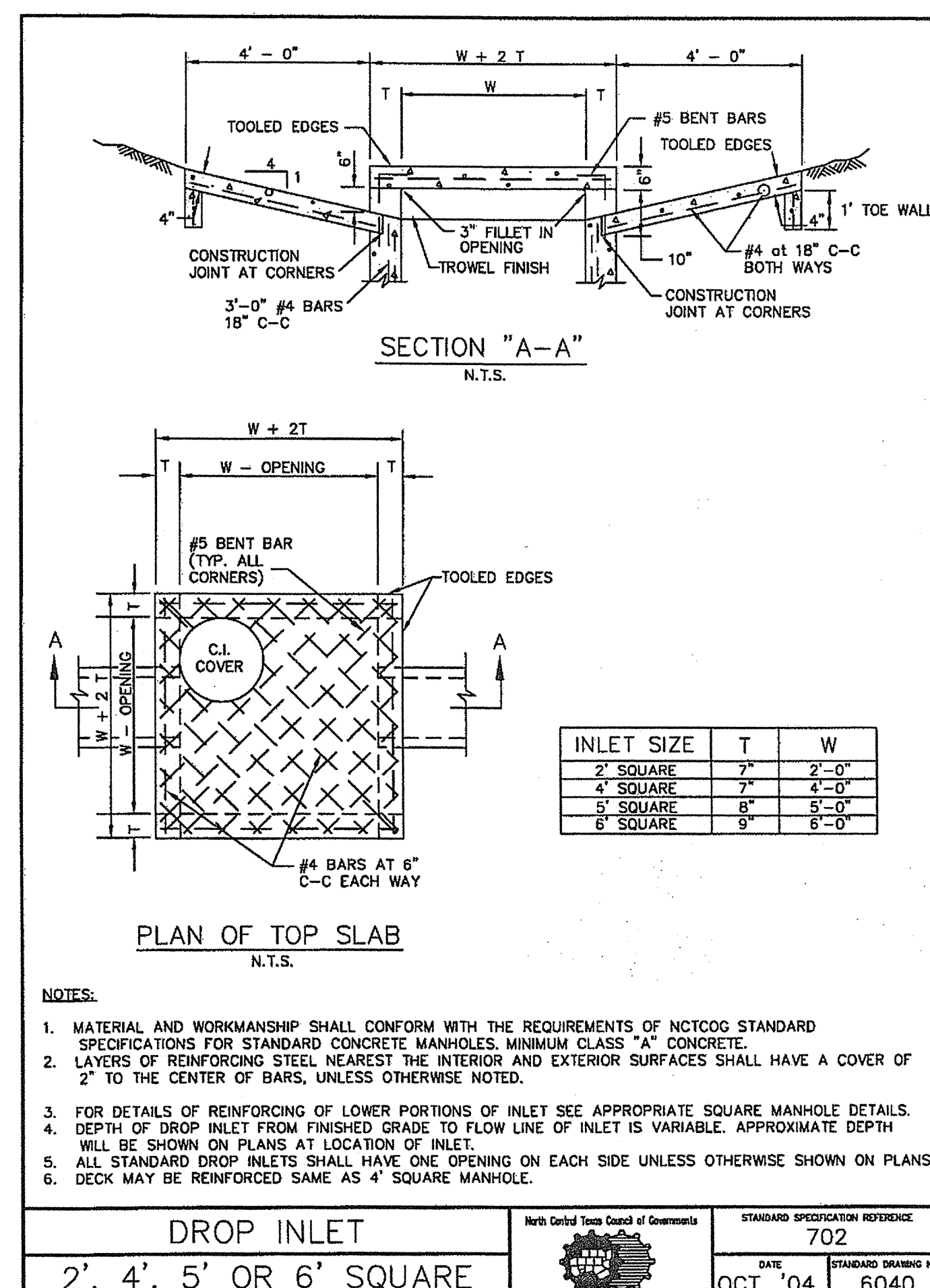
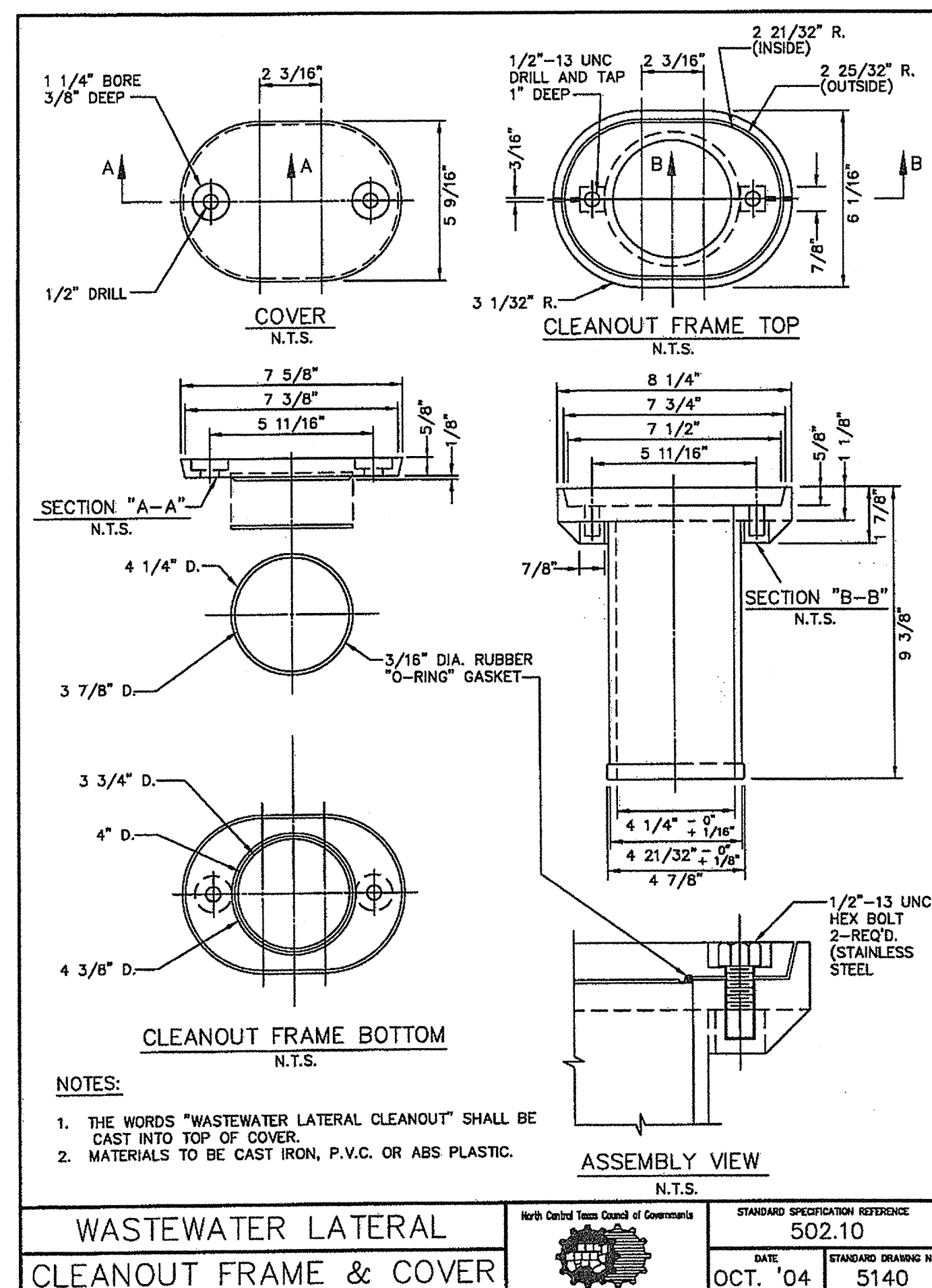
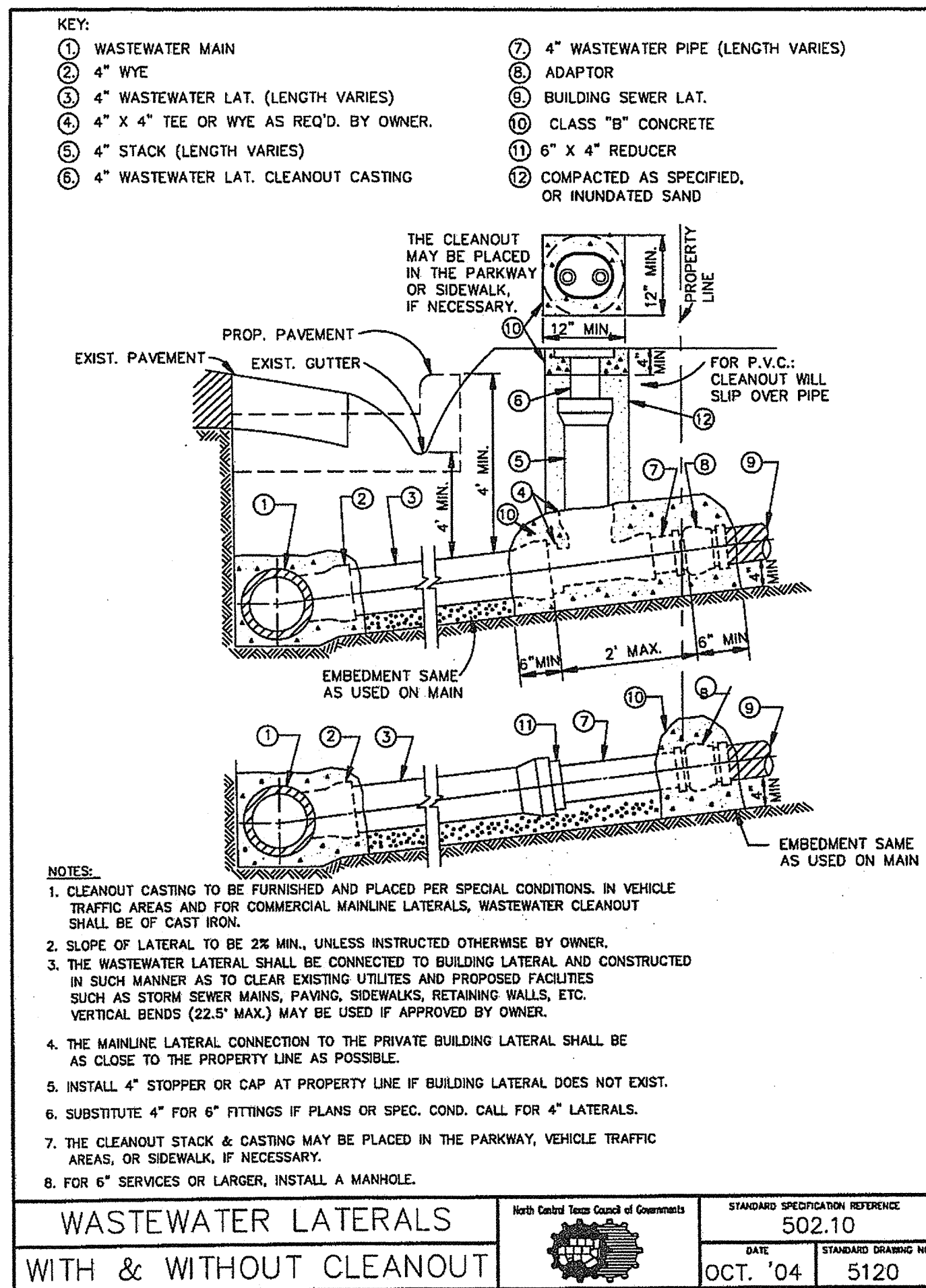
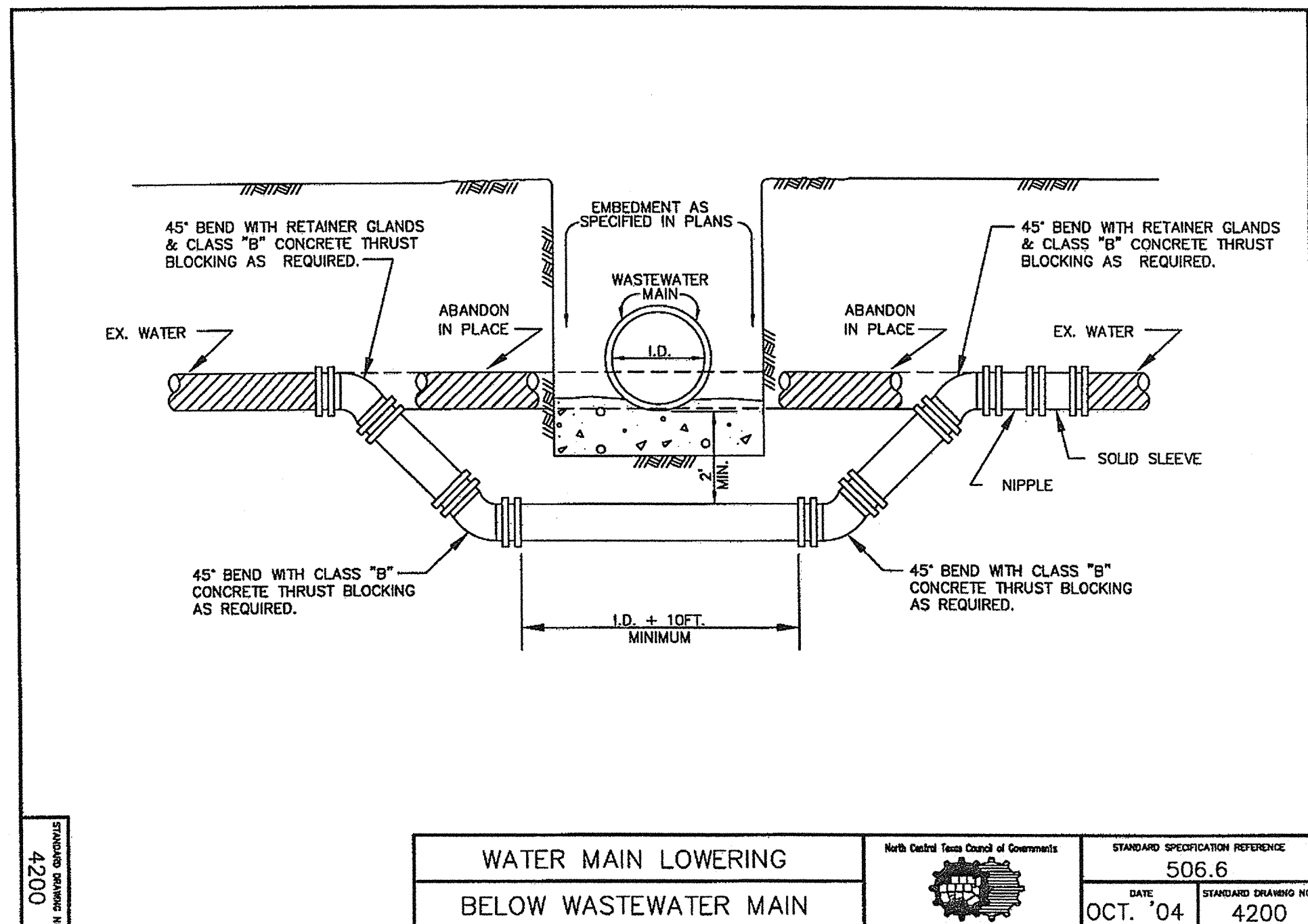
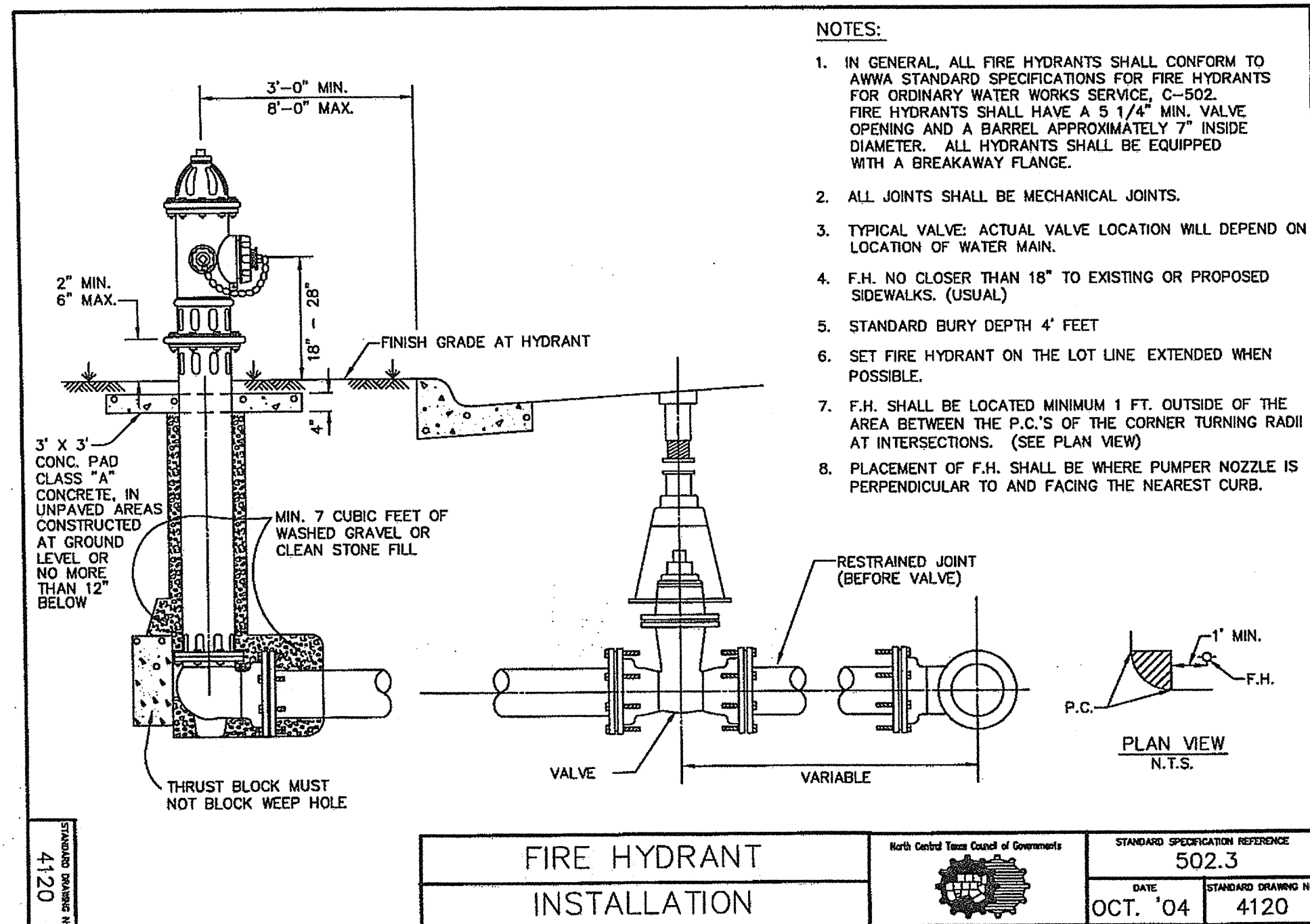
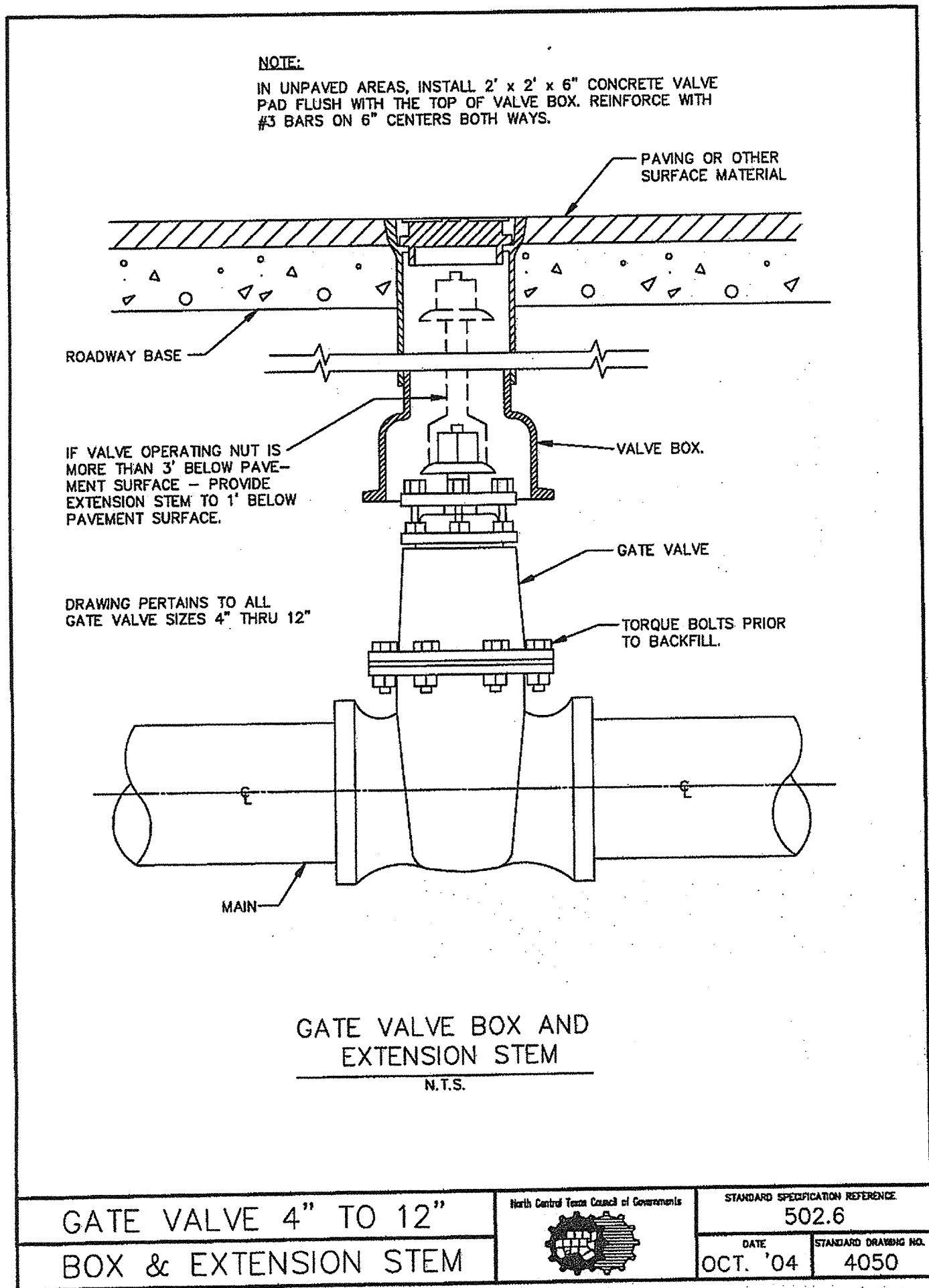
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STANDARD DETAILS (PAGE 2 OF 4)
 SPR PACKAGING - EXPANSION
 BLOCK A, LOT 2, SPR PACKAGING ADDITION
 NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD
 CITY OF ROCKWALL, TEXAS




SHEET NO.
C1.03

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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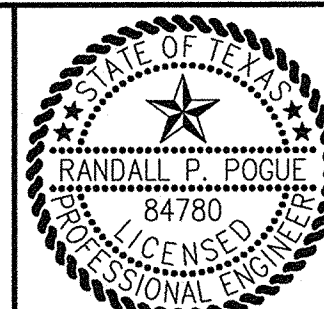
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STANDARD DETAILS (PAGE 3 OF 4)
SPR PACKAGING - EXPANSION
BLOCK A, LOT 2, SPR PACKAGING ADDITION
NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD
CITY OF ROCKWALL, TEXAS

SHEET
NO.
C1.04

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City of Rockwall Special Provisions to Section II
Standard Drawings of the Standard Specifications for Public Works Constructing
North Central Texas, Third Edition, dated 1998
(City's Revisions- August 2003)

DIVISION 2000 PAVEMENT SYSTEMS

~~Standard Drawing No. 2030 (Reinforced Concrete Pavement – 2- and 4-Lane Undivided Thoroughfare)
Drawing shall be modified as follows:~~

1. Street crown height for forty-four (44) foot street is six (6) inches.

~~Standard Drawing No. 2040 (Reinforced Concrete Pavement – Alleys)
Drawing shall be modified as follows:~~

1. Rockwall's alley width (W) is twelve (12) feet.
2. Alley right-of-way is twenty (20) foot (C).
3. B = Four (4) feet.
4. Concrete to be 4000 psi concrete.
5. Alley joint is minimum of five (5) inches.
6. Alley thickness is 7'-5"-7".
7. Reinforcing steel is to be Grade 60.
8. Alley parkway is to be 2% maximum slope.

~~Standard Drawing No. 2050 (Reinforced Concrete Pavement – Joints)
Drawing shall be modified as follows:~~

1. Construction joint dowel bars to be twelve (12) inches on center.
2. Delete note re: Alternate reinforcement- No. 4 bars on 30" centers both ways.

~~Standard Drawing No. 2070 (Reinforced Concrete Pavement – Joints)
Drawing shall be modified as follows:~~

1. The railroad header is to have a two (2) inch notch into the concrete pavement for the installation of a HMA overlay. The concrete under the HMA is to be the full street thickness. The notch should start at the end of the pavement and go twenty (20) feet up the road away from the crossing.

~~Standard Drawing No. 2090 (Hot Mix Asphaltic Concrete Pavement – Six Lane Divided Thoroughfare)~~

1. Delete this detail.

~~Standard Drawing No. 3050 (Embedment – Class "C-2" and "D+")
Drawing shall be modified as follows:~~

1. Compact sand and select material to 95% Std. Proctor.

~~Standard Drawing No. 3080 (Embedment – Class "C-2" and "D+")
Drawing shall be modified as follows:~~

1. Delete this detail.

DIVISION 4000 WATER DISTRIBUTION

~~Standard Drawing No. 4050 (Gate Valve 4" to 12" Box and Extension Stem)
Drawing shall be modified as follows:~~

1. Extension Stem to be two (2) feet below pavement surface, instead of one (1) foot.

~~Standard Drawing No. 4060A, 4060B, 4070A and 4070B (Vault Construction- Gate Valve 12" or Greater)
Drawing shall be modified as follows:~~

1. Delete these details.
2. No gate valves on water lines sixteen (16) inches and larger, only butterfly valves.

~~Standard Drawing No. 4090 (Air Release Valve- Type "1")
Drawing shall be modified as follows:~~

1. Use SDR 9, no copper.
2. One (1) inch pipe, use CC thread.
3. Greater than one (1) inch pipe, use iron pipe thread.

~~Standard Drawing No. 4110 (Flush Point Installation- Type "1")
Drawing shall be modified as follows:~~

1. Service pipe to be SDR 9 (no copper).

~~Standard Drawing No. 4120 (Fire Hydrant Installation)
Drawing shall be modified as follows:~~

1. All joints are to be restrained. Mega-lug or approved equal.

~~Standard Drawing No. 2100 (Hot Mix Asphaltic Concrete Pavement – Four Lane Divided Thoroughfare)~~

1. Delete this detail.

~~Standard Drawing No. 2110 (Hot Mix Asphaltic Concrete Pavement – 2 and 4 Lane Undivided Thoroughfare)~~

1. Delete this detail.

~~Standard Drawing No. 2130 (Median Island Pavement- Nose and Left Turn Lane)~~

1. Left turn lanes shall have mower access ramp.
2. Median nose to have pavers installed over four (4) inch 3600 psi monolithic reinforced concrete base with a maximum of one (1) inch bedding sand.
3. Street light pole bases in median are to have a thirty-six (36) inch by thirty-six (36) inch, four (4) inch thick 3000 psi reinforced concrete mow strip.

~~Standard Drawing Nos. 2150A and 2150B (Driveway Approach)~~

1. Delete this detail.
2. Utilize City detail.

~~Standard Drawing No. 2160 (Alley Approach)
Drawing shall be modified as follows:~~

1. Rockwall's alley width (W) is twelve (12) feet.
2. Alley right-of-way is twenty (20) foot (C).
3. Transition length is ten (10) feet instead of twenty (20) feet.
4. B = four (4) feet.

~~Standard Drawing No. 2170 (Reinforced Concrete Sidewalk)
Drawing shall be modified as follows:~~

1. Maximum 1 1/2" compacted sand cushion.
2. No sidewalk adjacent to curb without City approval. Sidewalk against curb is five (5) feet wide.

~~Standard Drawing No. 2190 (Pavement Systems)
Drawing shall be modified as follows:~~

1. Number 2, Subgrade- replace A with revised A. Revise A, to read: Subgrade under all pavements shall be stabilized to a minimum depth of six inches (6") with hydrated lime or cement. Laboratory tests will be performed to determine the amount of lime or cement to be used.
2. Number 2, Subgrade, delete B.
3. Delete Number 3.

~~Standard Drawing No. 4170 (8" Fire Line Standpipe – Service with 8" Meter)
Drawing shall be modified as follows:~~

1. Install gate valve before eight (8) inch coupling adapter.
2. Install double check valve after eight (8) inch blind flange.

~~Standard Drawing No. 4180 (4" Domestic Service with 3" Meter)
Drawing shall be modified as follows:~~

1. Strainer shall be installed after reducer coupling adapter.
2. Double check valve shall be installed after 4" x 3" reducer.
3. Ductile iron should be used for all material.

~~Standard Drawing No. 4190A (Large Service Meter Vault Installation)
Drawing shall be modified as follows:~~

1. Gate valves shall be installed on each side of meter.
2. Strainer shall be installed before meter.
3. Double check valve shall be installed after meter.
4. Install by-pass line with valve.

~~Standard Drawing No. 4200 (Water Main Lowering Below Wastewater Main)
Drawing shall be modified as follows:~~

1. The concrete encasement shall encase entire wastewater main.
2. Deflect water line when possible.

DIVISION 5000 WASTEWATER COLLECTION

~~Standard Drawing No. 5010 (Wastewater Main Tie-In at Cleanout or M.H. Stubout)
Drawing shall be modified as follows:~~

1. "C – T" pipe adapters shall be non-shear.

~~Standard Drawing Nos. 5020, 5030, 5060, 5068 and 5080 (Wastewater Manholes)
Drawing shall be modified as follows:~~

1. Install green EMS disks at all manholes.

~~Standard Drawing No. 5020 (Wastewater Manhole – Pre-cast)
Drawing shall be modified as follows:~~

1. Lip to be pre-cast.

~~Standard Drawing Nos. 2220, 2230, 2240, 2250 (Alley Geometries)
Drawing shall be modified as follows:~~

1. Rockwall's alley width (W) is twelve (12) feet.
2. Alley right-of-way is twenty (20) foot (C).
3. A = six (6) feet.
4. B = four (4) feet.

DIVISION 3000 GENERAL UNDERGROUND CONDUIT

~~Standard Drawing No. 3010 (Embedment – Class "A" and "A-1")
Drawing shall be modified as follows:~~

1. Material to be compacted to 95% of Standard Proctor.
2. Class "A-1" Embedment- crushed stone 3/4 Bc.
3. Material above crushed stone is to be non-granular compacted material.

~~Standard Drawing No. 3020 (Embedment – Class "B", "B+", "B-1")
Drawing shall be modified as follows:~~

1. No granular material above rock or stone embedment.
2. Class "B" Embedment to be used for RCP storm sewer pipe.
3. Class "B" and "B-1" – Select non-granular material to be compacted to 95% Standard Proctor. Select non-granular material above embedment.
4. Class "B+" – Non-granular material to be compacted to 95% Std. Proctor.

~~Standard Drawing No. 3030 (Embedment – Class "B-2", "B-3" and "B-4")
Drawing shall be modified as follows:~~

1. No granular material above rock or stone embedment.
2. Class "B-3" Embedment to be used for PVC water pipe.
3. Class "B-2" – Delete compacted select or granular material above crushed stone and replace with crushed stone- fine gradation.
4. Modified Class "B-2" Embedment to be used for PVC sanitary sewer pipe.
5. Class "B-3" and "B-4" – Compact sand to 95% Std. Proctor.

~~Standard Drawing No. 3040 (Embedment – Class "C", "C+", and "C-1")
Drawing shall be modified as follows:~~

1. No granular material above rock or stone embedment.
2. Class "C" and "C+" – Compact select non-granular material to 95% Std. Proctor.
3. Class "C-1" – Compact granular material to 95% Std. Proctor.

~~Standard Drawing No. 5040 (Wastewater Manhole – Fiberglass)
Drawing shall be modified as follows:~~

1. Delete this detail.

~~Standard Drawing No. 5070 (Wastewater Manhole – Outside Drop Connection)
Drawing shall be modified as follows:~~

1. Delete this detail.

~~Standard Drawing No. 5110 (Wastewater Main- Cleanout)
Drawing shall be modified as follows:~~

1. PVC pipe only. No clay pipe.

~~Standard Drawing No. 5120 (Wastewater Laterals With and Without Cleanout)
Drawing shall be modified as follows:~~

1. Replace with City Detail.
2. Green EMS disk shall be installed at cleanout or end of lateral.
3. Cleanout shall be cast iron sewer cleanout, Type Trinity Valley, Pattern 1684 or approved equal.
4. If cleanout is installed in roadway or parking area then traffic cleanout shall be designed to handle traffic loads.

~~Standard Drawing No. 5130 (Wastewater Laterals- In Earth and In Rock)
Drawing shall be modified as follows:~~

1. Delete this detail.

~~Standard Drawing No. 5150 (Wastewater Lateral Stub Out in Advance of Paving)
Drawing shall be modified as follows:~~




1. Install green EMS disk at end of lateral.

~~Standard Drawing No. 5160 (Wastewater Lateral Replacement in Advance of Paving)
Drawing shall be modified as follows:~~

1. Install green EMS disk at property line.
2. Wyess only, no tees.

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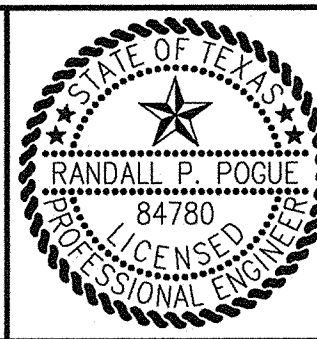
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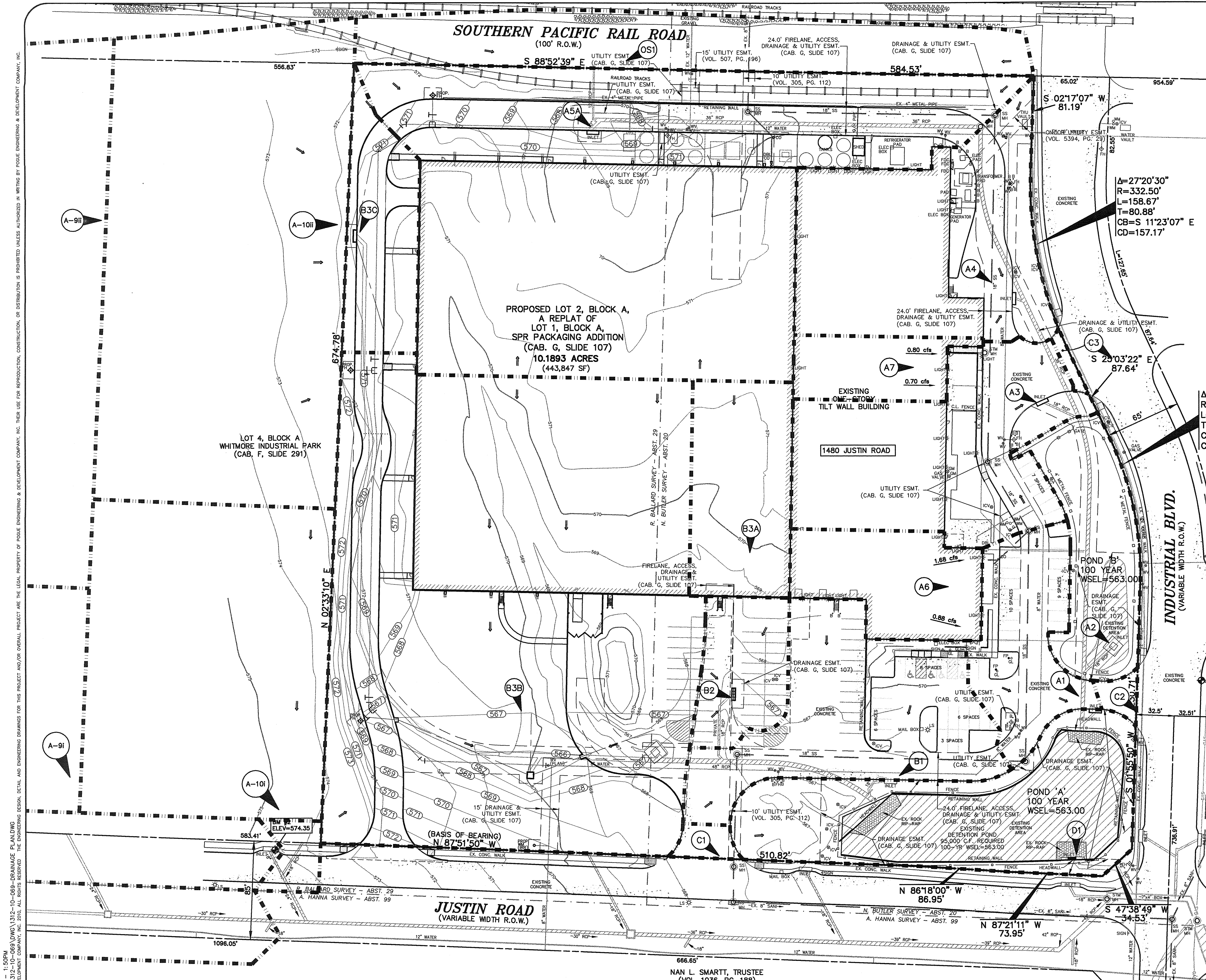
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STANDARD DETAILS (PAGE 4 OF 4)

SPR PACKAGING – EXPANSION
BLOCK A, LOT 2, SPR PACKAGING ADDITION
NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD
CITY OF ROCKWALL, TEXAS

SHEET NO.

C1.05

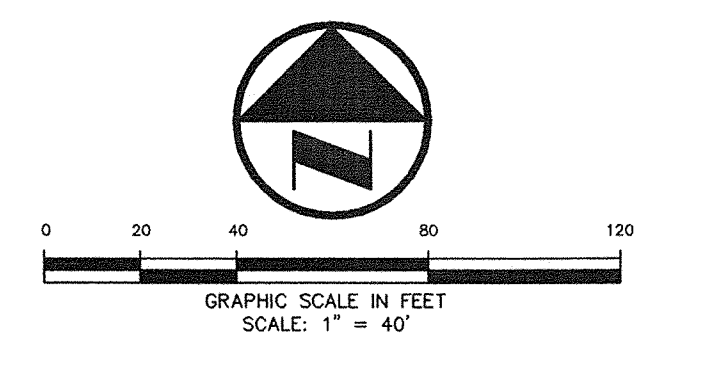


FRANCHISE UTILITY NOTES:
1. TXU ELECTRIC - (972) 771-3979 - JOE PECINA
2. ATMOS ENERGY (GAS) - (972) 485-8277 - MS. DINAH WOOD
3. SBC - (803) 457-2092 - CAROLYN NAYLOR
4. CHARTER COMM. (CABLE) - (817) 509-8272 x6896 - HECTOR ELIZONDO

CAUTION!!!
UNDERGROUND UTILITIES ARE LOCATED IN THIS AREA. 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES, CONTACT LOCAL FRANCHISE UTILITY INFO. CALL BEFORE YOU DIG!
TEXAS EXCAVATION SAFETY SYSTEM (TESS) 1-800-344-8377
TEXAS ONE CALL SYSTEMS 1-800-245-4545
LONE STAR NOTIFICATION CENTER 1-800-669-8344 EXT. 5

BEFORE YOU DIG...

BENCH MARK LIST:
BENCHMARK #1
X-CUT FOUND ON THE TOP OF CURB OF THE SOUTHERN CURB RETURN AT EAST SIDE OF INDUSTRIAL BLVD. 590'± SOUTH FROM CENTERLINE OF RAILROAD. ELEVATION = 564.27
BENCHMARK #2
X-CUT SET AT THE SOUTHEAST CORNER OF CURB INLET LOCATED IN NORTH SIDE OF JUSTIN ROAD 40'± WEST OF SOUTHWEST CORNER OF SITE. ELEVATION = 574.35



LEGEND

- BOLLARD
- ELECTRIC METER
- POWER POLE
- LIGHT STANDARD
- WATER METER
- WATER VALVE
- IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- CLEAN OUT
- MANHOLE
- GAS METER
- TRAFFIC SIGNAL CONTROL
- TRAFFIC SIGNAL POLE
- TRAFFIC SIGN
- TELEPHONE BOX
- TV BOX
- FLAG POLE
- PROPERTY LINE
- O.H. POWER LINES
- U/G TELEPHONE LINES
- U/G WATER LINE
- U/G GAS LINE
- FENCE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED DRAINAGE DIVIDES

Drainage Area Table / Calculations									
Drainage Area #	Area (Ac)	To (Min)	C Dev	100 Dev	Q100	C Pre-Dev	100 Pre-Dev	Q100 Pre-Dev	Description
A1	0.320	10.00	0.90	9.80	2.82	0.35	8.25	0.92	10' Curb Inlet
A2	0.350	10.00	0.90	9.80	2.91	0.35	8.25	0.95	4' X 4' Drop Inlet
A3	0.710	10.00	0.90	9.80	6.26	0.35	8.25	2.05	10' Curb Inlet
A4	0.780	10.00	0.90	9.80	6.88	0.35	8.25	2.25	10' Curb Inlet
A5A	2.358	10.00	0.90	9.80	20.80	0.35	8.25	6.81	10' Curb Inlet
A5	0.290	10.00	0.90	9.80	2.56	0.35	8.25	0.84	Roof Collection
A7	0.170	10.00	0.90	9.80	1.50	0.35	8.25	0.49	Roof Collection
B1	0.640	10.00	0.90	9.80	5.84	0.35	8.25	1.85	10' Curb Inlet
B2	0.211	10.00	0.90	9.80	1.86	0.35	8.25	0.61	15' Curb Inlet
B3A	0.389	10.00	0.90	9.80	3.25	0.35	8.25	1.07	Grate Inlet
B3B	2.943	10.00	0.90	9.80	25.99	0.35	8.25	8.50	5' X 5' Drop Inlet
B3C	0.285	10.00	0.90	9.80	2.51	0.35	8.25	0.82	10' Curb Inlet
C1	0.030	10.00	0.90	9.80	0.26	0.35	8.25	0.09	To Justin Road
C2	0.020	10.00	0.90	9.80	0.18	0.35	8.25	0.06	To Industrial Boulevard
C3	0.010	10.00	0.90	9.80	0.09	0.35	8.25	0.03	To Industrial Boulevard
D1	0.700	10.00	0.90	9.80	6.17	0.35	8.25	2.02	Detention Pond
CS1	0.600	10.00	0.90	9.80	5.29	0.35	8.25	1.73	Grate Inlet
A-9ii	2.850	10.00	0.90	9.80	25.14	0.35	8.25	8.23	4' X 4' Drop Inlet-Justin Rd
A-10i	4.490	10.00	0.90	9.80	39.60	0.35	8.25	12.96	10' Curb Inlet-Line ST-2
A-10ii	1.310	10.00	0.90	9.80	11.55	0.35	8.25	3.78	Fut. 4' X 4' Drop Inlet-Justin Rd
A-10iii	2.070	10.00	0.90	9.80	18.26	0.35	8.25	5.98	10' Curb Inlet-Line ST-2

DRAINAGE CRITERIA - RATIONAL METHOD
Q = C * I * A, CFS
C = WEIGHTED RUNOFF COEFFICIENT, DIMENSIONLESS
I = AVERAGE RAINFALL INTENSITY, IN/HR
A = DRAINAGE BASIN AREA, ACRES

Notes:
1. Areas that are being subdivided from the original areas for SPR Packaging as prepared by Pogue Engineering & Development Company, Inc., dated 1-29-07.
2. Detention for Block A, Lot 1, SPR Packaging Addition has been provided within the Phase 1 plans as prepared by Pogue Engineering & Development Company, Inc., dated 1-29-07.

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN. DATE: SEPTEMBER 27, 2011.

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DEVELOPER
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M.P.D. 9-27-11

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DRAINAGE AREA MAP
SPR PACKAGING - EXPANSION
BLOCK A, LOT 2, SPR PACKAGING ADDITION
NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD
CITY OF ROCKWALL, TEXAS

REVISIONS

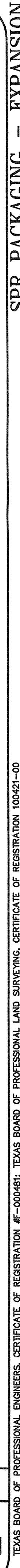
NO.	DATE	REVISION / DESCRIPTION
01	09-27-11	RECORD DRAWINGS
02	05-24-11	RFI #6 (ST-2; DELETED RADIUS PIPE)
03	05-17-11	COORDINATION AROUND 20" TREE

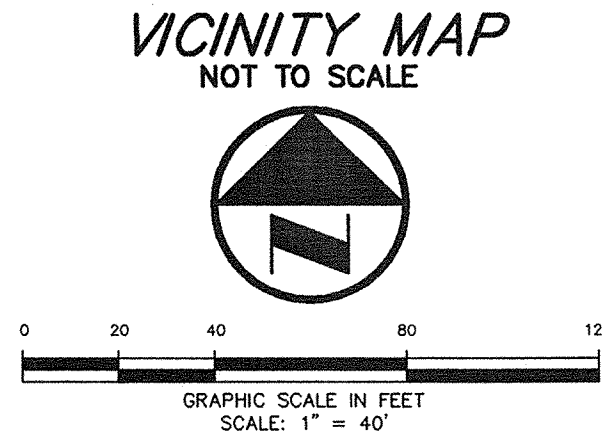
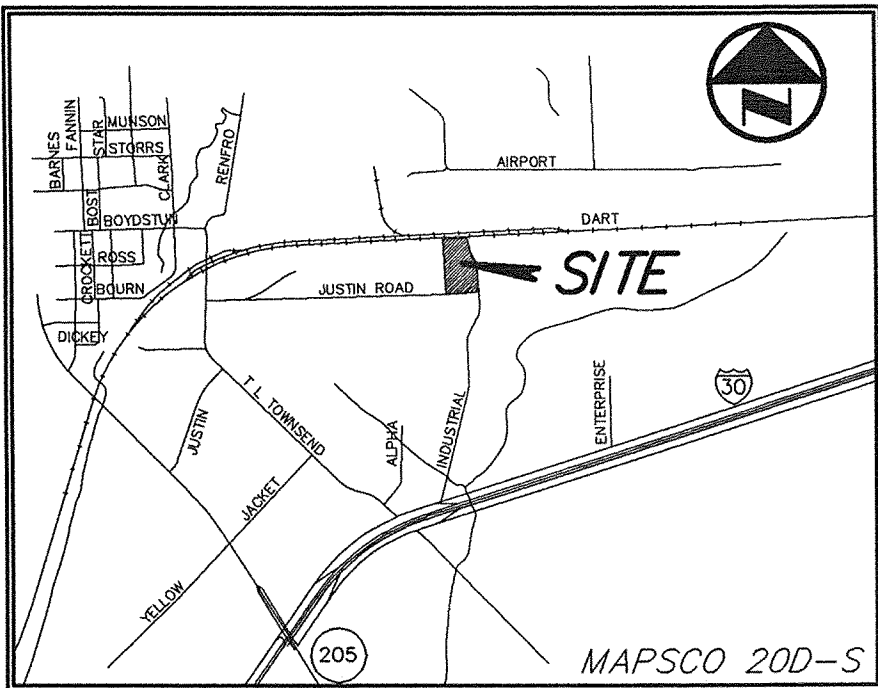
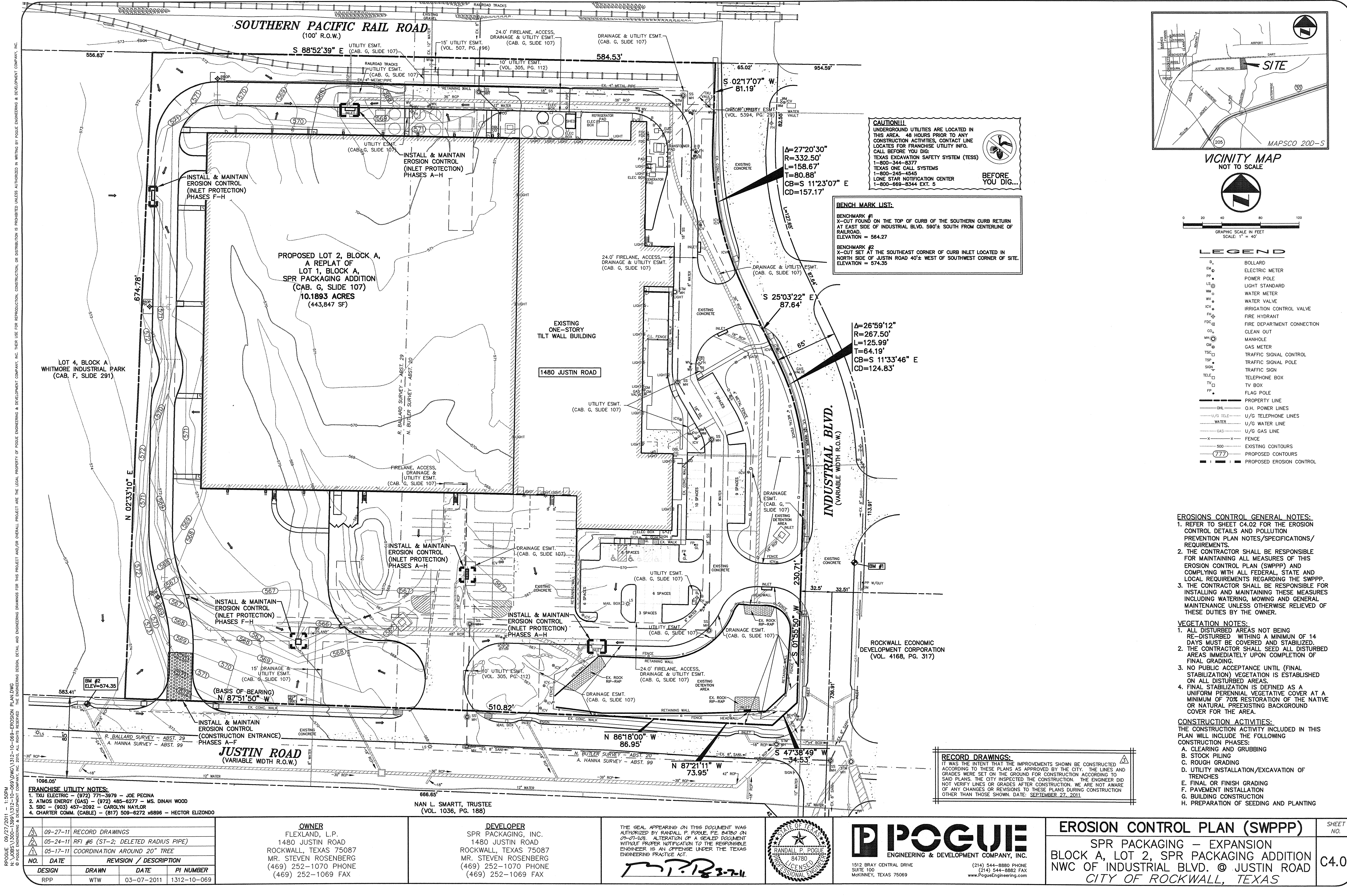
DESIGN RPP **DRAWN** WTW **DATE** 03-07-2011 **PI NUMBER** 1312-10-069

SHEET NO.
C2.01

POGUE 09/27/2011 - 1:50PM
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TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #00481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00





EROSIONS CONTROL GENERAL NOTES:

1. REFER TO SHEET C4.02 FOR THE EROSION CONTROL DETAILS AND POLLUTION PREVENTION PLAN NOTES/SPECIFICATIONS/REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL MEASURES OF THIS EROSION CONTROL PLAN (SWPPP) AND COMPLYING WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING THE SWPPP.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE MEASURES INCLUDING WATERING, MOWING AND GENERAL MAINTENANCE UNLESS OTHERWISE RELIEVED OF THESE DUTIES BY THE OWNER.

VEGETATION NOTES:

1. ALL DISTURBED AREAS NOT BEING RE-DISTURBED WITHIN A MINIMUM OF 14 DAYS MUST BE COVERED AND STABILIZED.
2. THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF FINAL GRADING.
3. NO PUBLIC ACCEPTANCE UNTIL (FINAL STABILIZATION) VEGETATION IS ESTABLISHED ON ALL DISTURBED AREAS.
4. FINAL STABILIZATION IS DEFINED AS A UNIFORM PERENNIAL VEGETATIVE COVER AT A MINIMUM OF 70% RESTORATION OF THE NATIVE OR NATURAL PREEXISTING BACKGROUND COVER FOR THE AREA.

CONSTRUCTION ACTIVITIES:
THE CONSTRUCTION ACTIVITY INCLUDED IN THIS PLAN WILL INCLUDE THE FOLLOWING CONSTRUCTION PHASES:

- A. CLEARING AND GRUBBING
- B. STOCK PILING
- C. ROUGH GRADING
- D. UTILITY INSTALLATION/EXCAVATION OF TRENCHES
- E. FINAL OR FINISH GRADING
- F. PAVEMENT INSTALLATION
- G. BUILDING CONSTRUCTION
- H. PREPARATION OF SEEDING AND PLANTING

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FRANCHISE UTILITY NOTES:

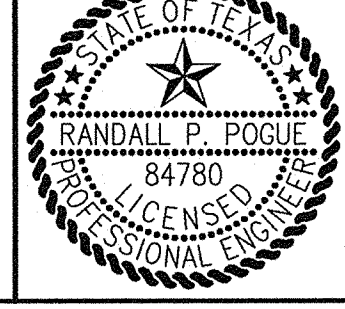
1. TAU ELECTRIC - (972) 771-3979 - JOE PECINA
2. ATMOS ENERGY (GAS) - (972) 485-6277 - MS. DINAH WOOD
3. SBC - (903) 457-2092 - CAROLYN NAYLOR
4. CHARTER COMM. (CABLE) - (817) 509-6272 x8898 - HECTOR ELIZONDO

NO.	DATE	REVISION / DESCRIPTION	
		DESIGN	DRAWN
09-27-11	RECORD DRAWINGS	RPP	WTW
05-24-11	RFI #6 (ST-2; DELETED RADIUS PIPE)		
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1312-10-069			

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EROSION CONTROL PLAN (SWPPP)
SPR PACKAGING - EXPANSION
BLOCK A, LOT 2, SPR PACKAGING ADDITION
NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD
CITY OF ROCKWALL, TEXAS

SHEET NO.
C4.01

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SPR PACKAGING - EXPANSION
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N:\JOBS\1300-1399\1312-10-069\DWG\1312-10-069-COVER & DETAILS.DWG
© POGUE ENGINEERING & DEVELOPMENT COMPANY, INC. 2010. ALL RIGHTS RESERVED. THE ENGINEERING DESIGN, DETAIL AND ENGINEERING DRAWINGS FOR THIS PROJECT AND/OR OVERALL PROJECT ARE THE LEGAL PROPERTY OF POGUE ENGINEERING & DEVELOPMENT COMPANY, INC. THEIR USE FOR REPRODUCTION, CONSTRUCTION OR DISTRIBUTION IS PROHIBITED UNLESS AUTHORIZED IN WRITING BY POGUE ENGINEERING & DEVELOPMENT COMPANY, INC.

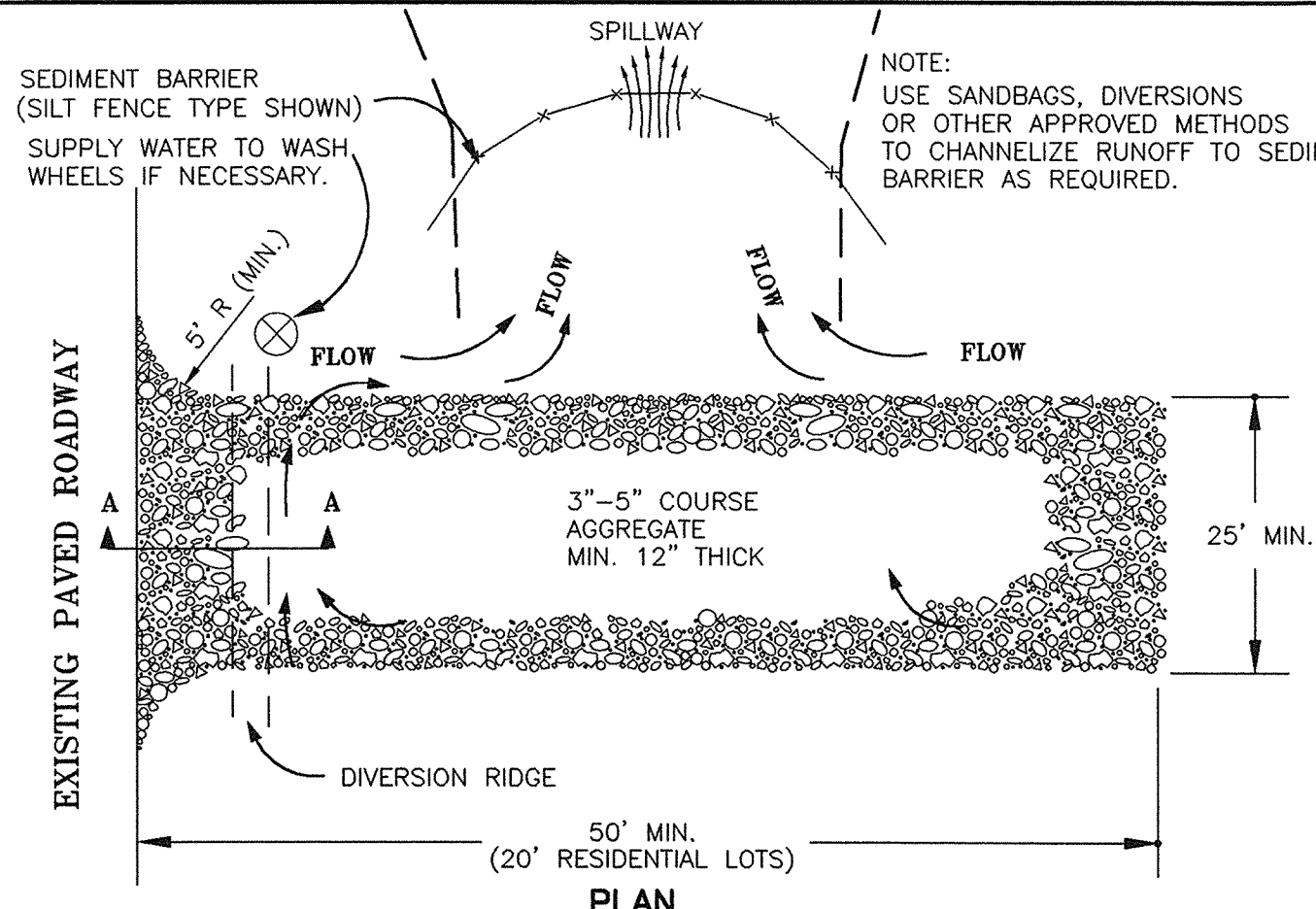
SILT FENCE GENERAL NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHEIL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAD IN THE GROUND AND BACK FILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE MADE EVERY TWO WEEKS AND AFTER EACH 1/2" RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPIDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

NOTE:
SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0° TO 120°.

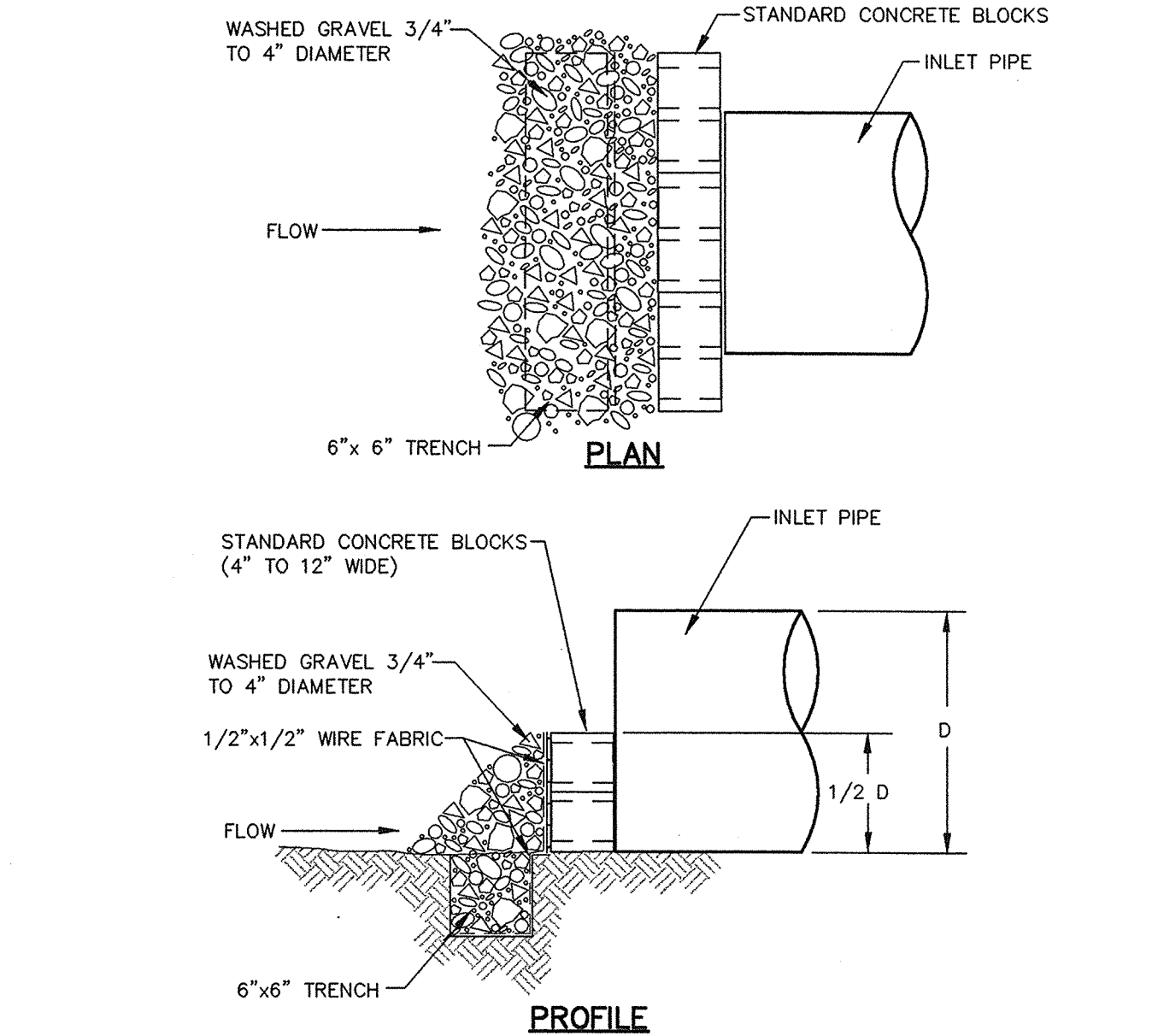
01 SILT FENCE

C4.02 NOT TO SCALE



02 CONSTRUCTION ENTRANCE

C4.02 NOT TO SCALE

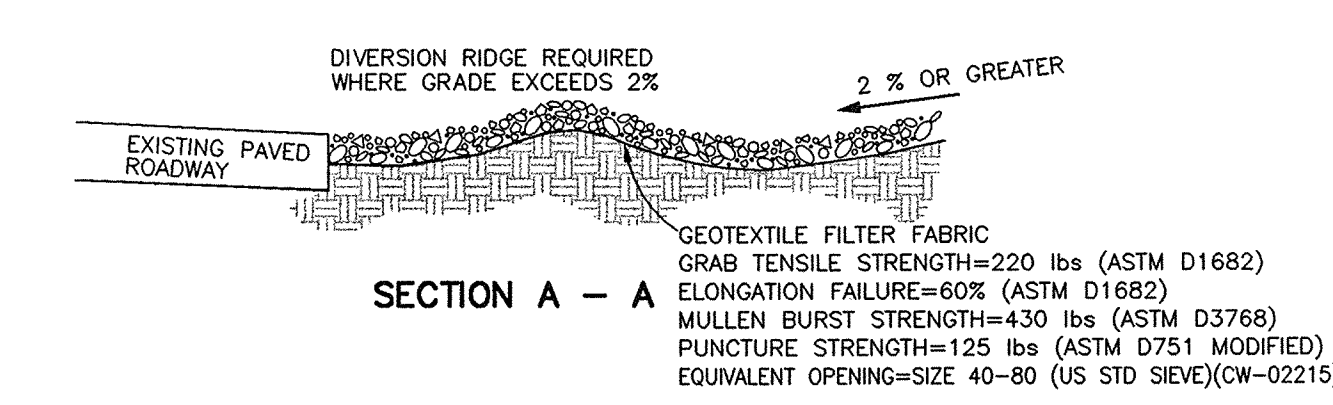


04 PIPE INLET PROTECTION

C4.02 NOT TO SCALE

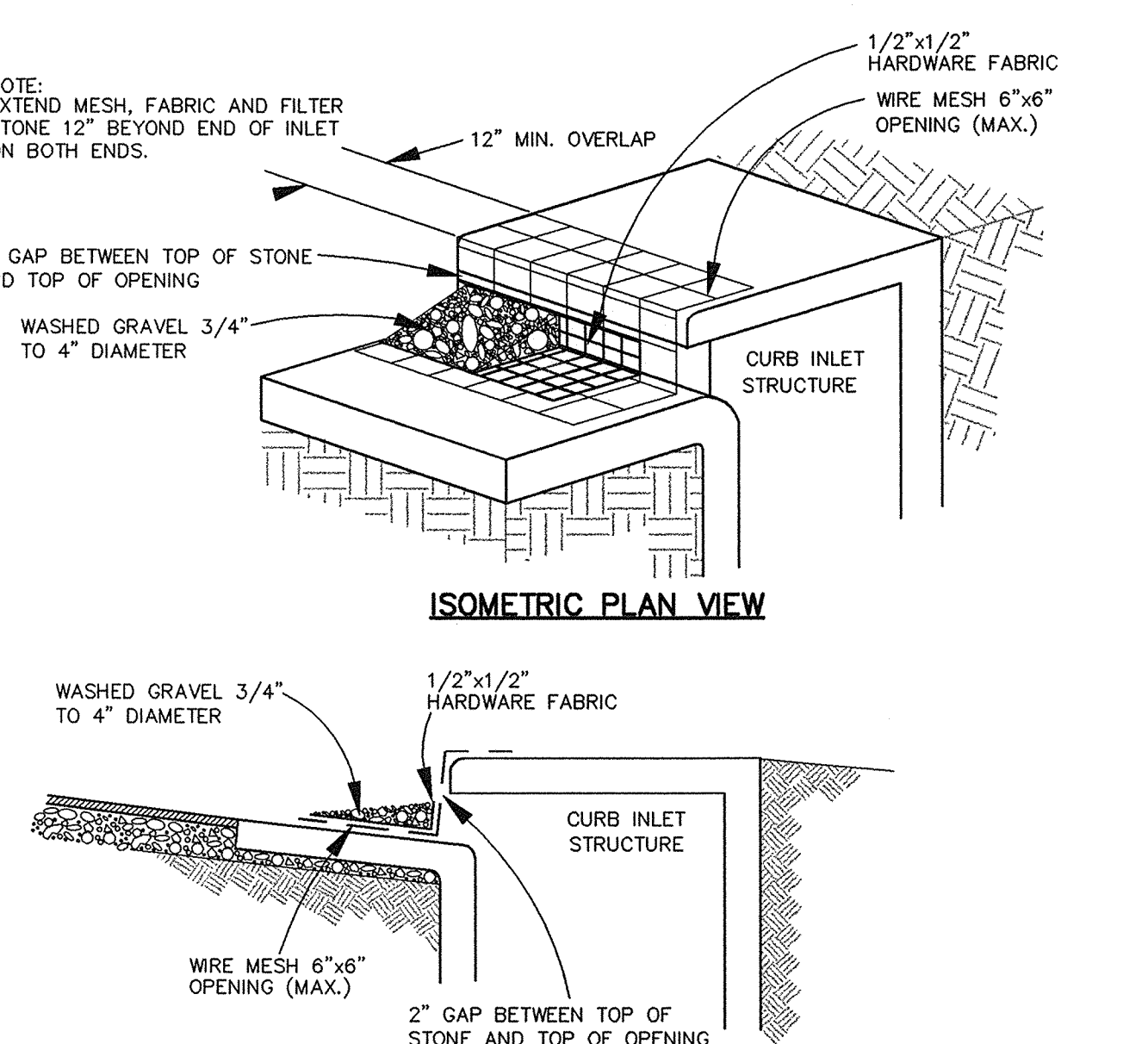
STABILIZED CONSTRUCTION ENTRANCE GENERAL NOTES:

1. STONE SHALL BE 3 TO 5 INCH DIAMETER CRUSHED ROCK (NO CRUSHED CONCRETE ALLOWED).
2. LENGTH SHALL BE SHOWN ON PLANS, WITH A MINIMUM LENGTH OF 30 FEET FOR LOTS WHICH ARE LESS THAN 150 FEET FROM EDGE OF PAVEMENT. THE MINIMUM DEPTH IN ALL OTHER CASES SHALL BE 50 FEET.
3. THE THICKNESS SHALL NOT BE LESS THAN 12 INCHES.
4. THE WIDTH SHALL BE NO LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PAVED SURFACES MUST BE REMOVED IMMEDIATELY.
7. THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.



05 CURB INLET PROTECTION

C4.02 NOT TO SCALE



05 CURB INLET PROTECTION

C4.02 NOT TO SCALE

SOLID WASTE MANAGEMENT

DESCRIPTION
LARGE VOLUMES OF SOLID WASTE ARE OFTEN GENERATED AT CONSTRUCTION SITES INCLUDING: PACKAGING, PALLETS, WOOD WASTE, CONCRETE WASTE, SOIL, ELECTRICAL WIRING, CUTTINGS, AND A VARIETY OF OTHER MATERIALS. THE SOLID WASTE MANAGEMENT PRACTICE LISTS TECHNIQUES TO MINIMIZE THE POTENTIAL OF STORM WATER CONTAMINATION FROM SOLID WASTE THROUGH APPROPRIATE STORAGE AND DISPOSAL PRACTICES.

PRIMARY USE
THESE PRACTICES SHOULD BE A PART OF ALL CONSTRUCTION PRACTICES. BY LIMITING THE TRASH AND DEBRIS ON SITE, STORM WATER QUALITY IS IMPROVED ALONG WITH REDUCED CLEAN UP REQUIREMENTS AT THE COMPLETION OF THE PROJECT.

APPLICATIONS
THE SOLID WASTE MANAGEMENT PRACTICE FOR CONSTRUCTION SITES IS BASED ON PROPER STORAGE AND DISPOSAL PRACTICES BY CONSTRUCTION WORKERS AND SUPERVISORS. KEY ELEMENTS OF THE PROGRAM ARE: EDUCATION AND MONITORING OF IMPROPER DISPOSAL HABITS, COOPERATION AND VIGILANCE IS REQUIRED ON THE PART OF SUPERVISORS AND WORKERS TO ENSURE THAT THE RECOMMENDATIONS AND PROCEDURES ARE FOLLOWED. FOLLOWING ARE LISTS DESCRIBING THE TARGETED MATERIALS AND RECOMMENDED PROCEDURES:

- o TARGETED SOLID WASTE MATERIALS
 - o PAPER AND CARDBOARD CONTAINERS
 - o PLASTIC PACKAGING
 - o STRUCTURAL PACKAGING AND FORMS
 - o INSULATION MATERIALS (NON-HAZARDOUS)
 - o WOOD PALLETS
 - o WOOD CUTTINGS
 - o PIPE AND ELECTRICAL CUTTINGS
 - o CONCRETE, BRICK, AND MORTAR WASTE
 - o SHINGLE CUTTINGS AND WASTE
 - o ROOFING TAR
 - o STEEL CUTTINGS, NAILS, RUST RESIDUE
 - o FIBER BOARD CUTTINGS AND WASTE
 - o SHEATHING CUTTINGS AND WASTE
 - o MISCELLANEOUS CUTTINGS AND WASTE
 - o FOOD WASTE
 - o DEMOLITION WASTE
- o WHEREVER POSSIBLE, MINIMIZE PRODUCTION OF SOLID WASTE MATERIALS.
- o DESIGNATE A FOREMAN OR SUPERVISOR TO OVERSEE AND ENFORCE PROPER SOLID WASTE PROCEDURES.
- o INSTRUCT CONSTRUCTION WORKERS IN PROPER SOLID WASTE PROCEDURES.
- o SEGREGATE POTENTIALLY HAZARDOUS WASTE FROM NON-HAZARDOUS CONSTRUCTION SITE DEBRIS.
- o KEEP SOLID WASTE MATERIALS UNDER COVER IN EITHER A CLOSED DUMPSTER OR OTHER ENCLOSED TRASH CONTAINER THAT LIMITS CONTACT WITH RAIN AND RUNOFF.
- o STORE WASTE MATERIALS AWAY FROM DRAINAGE DITCHES, SWALES AND CATCH BASINS.
- o DO NOT ALLOW TRASH CONTAINERS TO OVERFLOW.
- o DO NOT ALLOW WASTE MATERIALS TO ACCUMULATE ON THE GROUND.
- o PROHIBIT LITTERING BY WORKERS AND VISITORS.
- o POLICE AREA DAILY FOR LITTER AND DEBRIS.
- o ENFORCE SOLID WASTE HANDLING AND STORAGE PROCEDURES.

DISPOSAL PROCEDURES

- o IF FEASIBLE, SEGREGATE RECYCLABLE WASTES FROM NON-RECYCLABLE WASTE MATERIALS AND DISPOSE OF PROPERLY.
- o GENERAL CONSTRUCTION DEBRIS MAY BE HAULED TO A LICENSED CONSTRUCTION DEBRIS LANDFILL (TYPICALLY LESS EXPENSIVE THAN A SANITARY LANDFILL).
- o USE WASTE FACILITIES APPROVED BY LOCAL JURISDICTION.
- o RUNOFF WHICH COMES INTO CONTACT WITH UNPROTECTED WASTE SHALL BE DIRECTED INTO STRUCTURAL TREATMENT SUCH AS SILT FENCE TO REMOVE DEBRIS.

EDUCATION

- o EDUCATE ALL WORKERS ON SOLID WASTE STORAGE AND DISPOSAL PROCEDURES.
- o INSTRUCT WORKERS IN IDENTIFICATION OF SOLID WASTE AND HAZARDOUS WASTE.
- o HAVE REGULAR MEETINGS TO DISCUSS AND REINFORCE DISPOSAL PROCEDURES (INCORPORATE IN REGULAR SAFETY SEMINARS).
- o CLEARLY MARK ON ALL SOLID WASTE CONTAINERS WHICH MATERIALS ARE ACCEPTABLE.

QUALITY CONTROL

- o FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHALL MONITOR ON-SITE SOLID WASTE STORAGE AND DISPOSAL PROCEDURES.
- o DISCIPLINE WORKERS WHO REPEATEDLY VIOLATE PROCEDURES.

REQUIREMENTS

- o 15-35 SITE WASTE HANDLING AND DISPOSAL EDUCATION AND AWARENESS PROGRAM.
- o COMMITMENT BY MANAGEMENT TO IMPLEMENT AND ENFORCE SOLID WASTE MANAGEMENT PROGRAM.
- o COMPLIANCE BY WORKERS.
- o SUFFICIENT AND APPROPRIATE WASTE STORAGE CONTAINERS.
- o TIMELY REMOVAL OF STORED SOLID WASTE MATERIALS.
- o POSSIBLE MODERATE COST IMPACT FOR ADDITIONAL WASTE STORAGE CONTAINERS.
- o MINIMAL OVERALL COST IMPACT.

LIMITATIONS
ONLY ADDRESSES NON-HAZARDOUS SOLID WASTE. ONE PART OF A COMPREHENSIVE CONSTRUCTION SITE MANAGEMENT PROGRAM.

CONCRETE WASTE MANAGEMENT
DESCRIPTION
CONCRETE WASTE AT CONSTRUCTION SITES COMES IN TWO FORMS: 1) EXCESS FRESH CONCRETE MIX INCLUDING TRUCK AND EQUIPMENT WASHING, AND 2) CONCRETE DUST AND CONCRETE DEBRIS RESULTING FROM DEMOLITION. BOTH FORMS HAVE THE POTENTIAL TO IMPACT WATER QUALITY THROUGH STORM WATER RUNOFF CONTACT WITH THE WASTE.

PRIMARY USE
CONCRETE WASTE IS PRESENT AT MOST CONSTRUCTION SITES. THIS BMP SHOULD BE UTILIZED AT SITES IN WHICH CONCRETE WASTE IS PRESENT.

APPLICATIONS
A NUMBER OF WATER QUALITY PARAMETERS CAN BE AFFECTED BY INTRODUCTION OF CONCRETE - ESPECIALLY FRESH CONCRETE. CONCRETE AFFECTS THE PH OF RUNOFF, CAUSING SIGNIFICANT CHEMICAL CHANGES IN WATER BODIES AND HARMING AQUATIC LIFE. SUSPENDED SOLIDS IN THE FORM OF BOTH CEMENT AND AGGREGATE DUST ARE ALSO GENERATED FROM BOTH FRESH AND DEMOLISHED CONCRETE WASTE.

CURRENT UNACCEPTABLE WASTE CONCRETE DISPOSAL PRACTICES

- o DUMPING IN VACANT AREAS ON THE JOB-SITE.
- o ILLICIT DUMPING OFF-SITE.
- o DUMPING INTO DITCHES OR DRAINAGE FACILITIES.

RECOMMENDED DISPOSAL PRACTICES

- o AVOID UNACCEPTABLE DISPOSAL PRACTICES LISTED ABOVE.
- o DEVELOP PREDETERMINED SAFE CONCRETE DISPOSAL AREAS.
- o PROVIDE A WASHOUT AREA WITH A MINIMUM OF 6 CUBIC FEET OF CONTAINMENT AREA VOLUME FOR EVERY 10 CUBIC YARDS OF CONCRETE POURED.
- o NEVER DUMP WASTE CONCRETE ILLEGITLY OR WITHOUT PROPERTY OWNERS KNOWLEDGE AND CONSENT.
- o TREAT RUNOFF FROM STORAGE AREAS THROUGH THE USE OF STRUCTURAL CONTROLS AS REQUIRED.

EDUCATION

- o DRIVERS AND EQUIPMENT OPERATORS SHOULD BE INSTRUCTED ON PROPER DISPOSAL AND EQUIPMENT WASHING PRACTICES (SEE ABOVE).
- o SUPERVISORS MUST BE MADE AWARE OF THE POTENTIAL ENVIRONMENTAL CONSEQUENCES OF IMPROPERLY HANDLED CONCRETE WASTE.

ENFORCEMENT

- o THE CONSTRUCTION SITE MANAGER OR FOREMAN MUST ENSURE THAT EMPLOYEES AND PREMIX COMPANIES FOLLOW PROPER PROCEDURES FOR CONCRETE DISPOSAL AND EQUIPMENT WASHING.
- o EMPLOYEES VIOLATING DISPOSAL OR EQUIPMENT CLEANING DIRECTIVES MUST BE REEDUCATED OR DISCIPLINED IF NECESSARY.

DEMOLITION PRACTICES

- o MONITOR WEATHER AND WIND DIRECTION TO ENSURE CONCRETE DUST IS NOT ENTERING DRAINAGE STRUCTURES AND SURFACE WATERS.
- o WHERE APPROPRIATE, CONSTRUCT SEDIMENT TRAPS OR OTHER TYPES OF SEDIMENT DETENTION DEVICES DOWNSTREAM OF DEMOLITION ACTIVITIES.

REQUIREMENTS

- o USE PREDETERMINED DISPOSAL SITES FOR WASTE CONCRETE.
- o PROHIBIT DUMPING WASTE CONCRETE ANYWHERE BUT PREDETERMINED AREAS.
- o ASSIGN PREDETERMINED TRUCK AND EQUIPMENT WASHING AREAS.
- o EDUCATE DRIVERS AND OPERATORS ON PROPER DISPOSAL AND EQUIPMENT CLEANING PROCEDURES.

EDUCATION

- o MINIMAL COST IMPACT FOR TRAINING AND MONITORING.
- o CONCRETE DISPOSAL COST DEPENDS ON AVAILABILITY AND DISTANCE TO SUITABLE DISPOSAL AREAS.
- o ADDITIONAL COSTS INVOLVED IN EQUIPMENT WASHING COULD BE SIGNIFICANT.

LIMITATIONS
THIS CONCRETE WASTE MANAGEMENT PROGRAM IS ONE PART OF A COMPREHENSIVE CONSTRUCTION SITE WASTE MANAGEMENT PROGRAM.

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADING WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO ASH PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN. DATE: SEPTEMBER 27, 2011.

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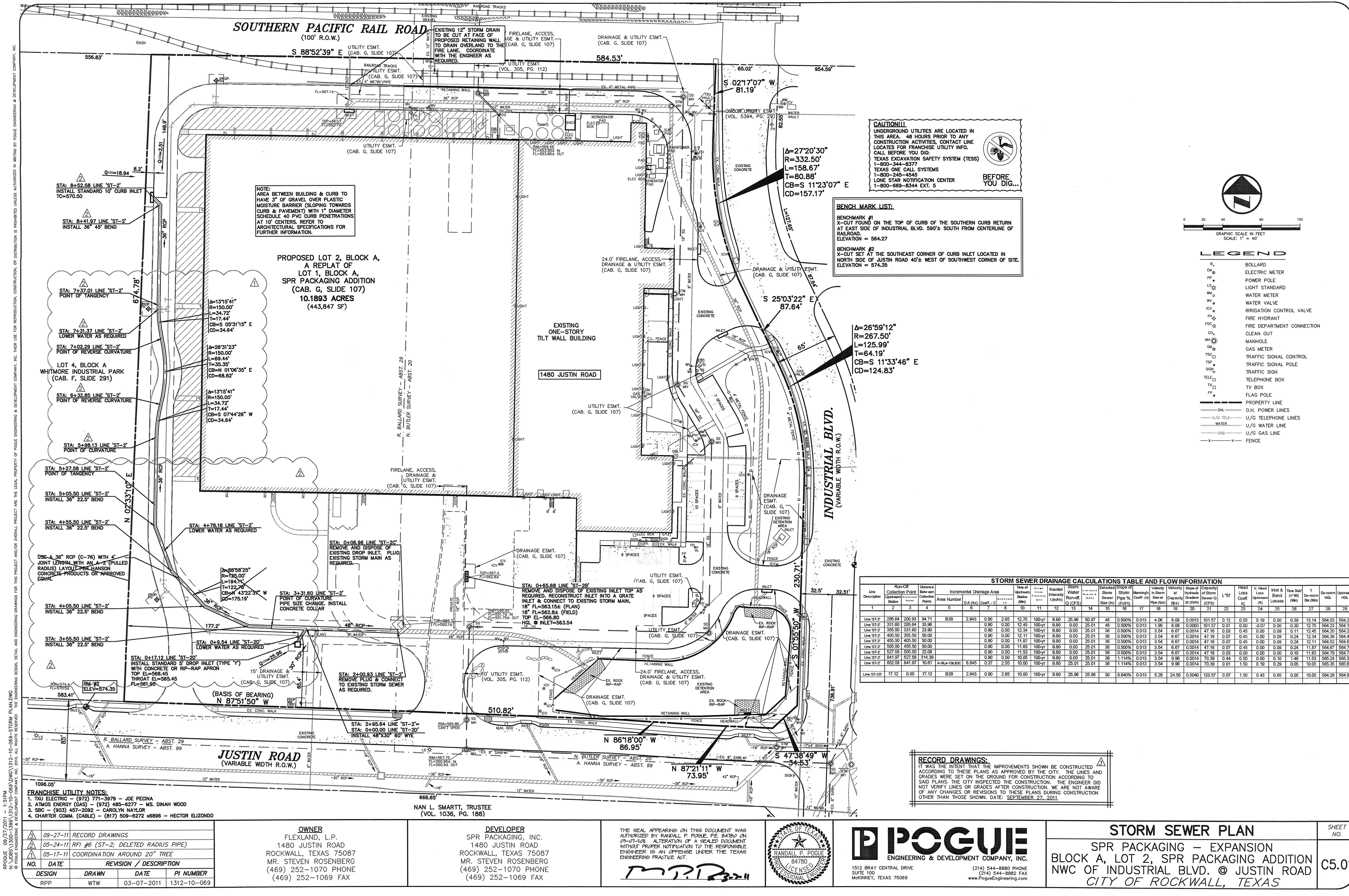
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APPLICATIONS PERMETER CONTROL SLOPE PROTECTION SEDIMENT TRAPPING CHANNEL PROTECTION TEMPORARY STABILIZATION
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POGUE 09/27/2011 - 1:51PM
NO. 1300-1309 (1312-10-069) DWA 1312-10-069 STORM PLAN DWG
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SPR PACKAGING - EXPANSION
TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #00481, TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

- FRANCHISE UTILITY NOTES:**
- TXU ELECTRIC - (972) 771-3979 - JOE PECINA
 - ATMOS ENERGY (GAS) - (972) 485-6277 - MS. DINAH WOOD
 - SBC (903) 457-2092 - CAROLYN NAYLOR
 - CHARTER COMM. (CABLE) - (817) 509-6272 x8896 - HECTOR ELIZONDO

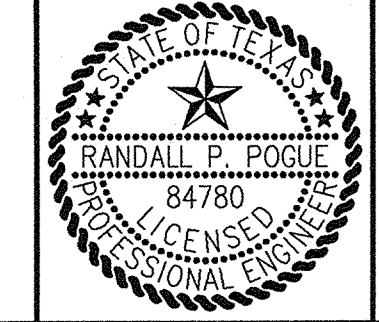
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	05-17-11	COORDINATION AROUND 20" TREE	
NO.	DATE	REVISION / DESCRIPTION	
DESIGN		DRAWN	DATE
RPP		WTW	03-07-2011
			1312-10-069

OWNER
FLEXLAND, L.P.
1480 JUSTIN ROAD
ROCKWALL, TEXAS 75087
MR. STEVEN ROSENBERG
(469) 252-1070 PHONE
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DEVELOPER
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ROCKWALL, TEXAS 75087
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M.P.D. 8-2-11



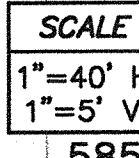
POGUE
ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 GRAY CENTRAL DRIVE
SUITE 100
MCKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

STORM SEWER PLAN
SPR PACKAGING - EXPANSION
BLOCK A, LOT 2, SPR PACKAGING ADDITION
NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD
CITY OF ROCKWALL, TEXAS

SHEET NO.
C5.01

STORM SEWER DRAINAGE CALCULATIONS TABLE AND FLOW INFORMATION																											
Line Description	Run-Off Collection Station	Distance Between Collection Points	Area Number	D.A. (Ac)	Coef. - C	Time of Travel (Min)	Rainfall Intensity (in/hr)	Storm Water Run-Off Q (CFS)	Selected Storm Sewer Size (in)	Slope of Storm Sewer (ft/ft)	Velocity in Storm Sewer (ft/s)	Velocity of Hydraulic Storm Sewer (ft/s)	Capacity of Storm Sewer (CFS)	Loss Coeff. (K)	Head Loss (ft)	V. Head Loss (ft)	Inlet & Bend Losses (ft)	Time of Travel (Min)	Time of Travel (Min)	Time of Travel (Min)	Time of Travel (Min)	Time of Travel (Min)	Time of Travel (Min)	Time of Travel (Min)	Time of Travel (Min)	Time of Travel (Min)	Time of Travel (Min)
Line ST-2	296.64	200.93	94.71	B38	2.943	0.90	2.65	12.75	100-yr	9.80	25.96	50.97	48	0.500%	0.013	4.06	8.08	0.0013	101.57	0.12	0.00	0.19	0.00	0.39	13.14	564.03	564.22
Line ST-2	331.60	295.64	35.96			0.90	0.00	12.45	100-yr	9.80	0.00	25.01	48	0.500%	0.013	1.99	8.08	0.0003	101.57	0.01	0.00	-0.07	0.00	0.30	12.75	564.23	564.27
Line ST-2	395.50	331.60	23.90			0.90	0.00	12.34	100-yr	9.80	0.00	25.01	36	0.500%	0.013	3.64	6.67	0.0014	47.16	0.03	0.45	0.00	0.09	0.11	12.45	564.20	564.29
Line ST-2	405.60	395.50	50.00			0.90	0.00	12.11	100-yr	9.80	0.00	25.01	36	0.500%	0.013	3.54	6.67	0.0014	47.16	0.07	0.45	0.00	0.09	0.24	12.34	564.36	564.45
Line ST-2	455.50	405.60	50.00			0.90	0.00	11.87	100-yr	9.80	0.00	25.01	36	0.500%	0.013	3.54	6.67	0.0014	47.16	0.07	0.45	0.00	0.09	0.24	12.11	564.52	564.60
Line ST-2	505.50	455.50	50.00			0.90	0.00	11.63	100-yr	9.80	0.00	25.01	36	0.500%	0.013	3.54	6.67	0.0014	47.16	0.07	0.45	0.00	0.09	0.24	11.87	564.67	564.76
Line ST-2	527.58	505.50	22.08			0.90	0.00	11.53	100-yr	9.80	0.00	25.01	36	0.500%	0.013	3.54	6.67	0.0014	47.16	0.03	0.00	0.00	0.00	0.10	11.63	564.79	564.79
Line ST-2	541.97	527.58	314.39			0.90	0.00	10.05	100-yr	9.80	0.00	25.01	36	1.144%	0.013	3.54	9.96	0.0014	70.39	0.44	0.50	0.00	0.10	1.48	11.53	565.24	565.33
Line ST-2	652.58	541.97	10.61	A-841-10L83C	6.845	0.37	2.55	10.00	100-yr	9.80	25.01	25.01	36	1.144%	0.013	3.54	9.96	0.0014	70.39	0.01	1.50	0.19	0.29	0.05	10.05	565.35	565.44
Line ST-2	712.12	0.00	17.12	B38	2.943	0.90	2.65	10.00	100-yr	9.80	25.96	25.96	30	8.640%	0.013	5.29	24.56	0.0040	120.57	0.07	1.50	0.43	0.65	0.05	10.05	564.28	564.94

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN. DATE: SEPTEMBER 27, 2011






A circular professional engineer seal for the State of Texas. The outer ring contains the text "STATE OF TEXAS" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars on each side. The inner circle features a five-pointed star at the top, followed by the name "RANDALL P. POGUE", the license number "84780", and the title "LICENSED ENGINEER" at the bottom.



POGUE
ENGINEERING & DEVELOPMENT COMPANY, INC.

BENCHMARK #1
X-CUT FOUND ON THE TOP OF CURB OF THE SOUTHERN CURB RETURN
AT EAST SIDE OF INDUSTRIAL BLVD. 590'± SOUTH FROM CENTERLINE OF
RAILROAD.
ELEVATION = 564.27

BENCHMARK #2
X-CUT SET AT THE SOUTHEAST CORNER OF CURB INLET LOCATED IN
NORTH SIDE OF JUSTIN ROAD 40'± WEST OF SOUTHWEST CORNER OF SITE
ELEVATION = 574.35

	09-27-11	RECORD DRAWINGS		
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	05-17-11	COORDINATION AROUND 20" TREE		
NO.	DATE	REVISION / DESCRIPTION		
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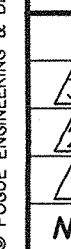
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<p align="center">STORM SEWER PROFILES</p> <p>SPR PACKAGING – EXPANSION BLOCK A, LOT 2, SPR PACKAGING ADDITION NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD <i>CITY OF ROCKWALL, TEXAS</i></p>

SHEET NO.	C5.02
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PAVING AND DRAINAGE GENERAL NOTES:

1. ALL WORK UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AS ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, AND THE CITY OF ROCKWALL STANDARD CONSTRUCTION SPECIFICATIONS. COPIES OF NCTCOG SPECIFICATIONS 3rd VERSION CAN BE OBTAINED BY CONTACTING NCTCOG @ (817) 640-3300
2. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE TYPE IA, CLASS 'A', 3000 PSI STRENGTH AT 28 DAYS. CONCRETE FOR INLET AND DRAINAGE STRUCTURES SHALL BE TYPE I, CLASS 'F', 4200 PSI STRENGTH AT 28 DAYS. FIRE LANES AND APPROACHES SHALL BE TYPE IA, CLASS 'C', 3600 PSI STRENGTH AT 28 DAYS. 6 SACK MINIMUM FOR MACHINE PLACED AND 6-1/2 SACK MINIMUM FOR HAND PLACED. NO SAND UNDER PAVEMENT.
3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PUBLIC UTILITIES IN THE CONSTRUCTION OF THIS PROJECT.
4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEAN OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. THEY MUST BE ADJUSTED TO THE PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.
5. CONTRACTOR SHALL MAINTAIN ONE SET OF "RECORD DRAWINGS" ON SITE WHICH WILL BE SUBMITTED TO THE OWNER OR ENGINEER UPON COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL INDICATE THE LOCATION OF ALL SUBTERRANEAN UTILITY IMPROVEMENTS AND/OR RELOCATIONS. THEY SHALL ALSO INCLUDE DIMENSIONAL TIES TO ALL MANHOLES, CULVERTS, INLETS, JUNCTION BOXES, FIRE HYDRANTS, ETC.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND BEING IN COMPLIANCE WITH ALL FEDERAL (O.S.H.A. STANDARDS AND REGULATIONS), STATE AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.
7. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO "STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION BARRICADING AND CONSTRUCTION STANDARDS" ON TXDOT ROADWAYS AND "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART VI" FOR PRIVATE WORK. BARRICADES AND PROJECT SIGNS SHALL ALSO MEET CITY CODE.
8. UNLESS OTHERWISE NOTED, THE STORM DRAIN LINES MAY BE OF THE FOLLOWING MATERIALS:
A. CLASS III, RCP C-76 (CIRCULAR) INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
9. STORM SEWER JOINT MATERIALS MAY BE OF THE FOLLOWING:
A. RAM-NECK
B. CON-SEAL
C. CEMENT GROUT
INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
10. STORM SEWER CONNECTIONS FOR NEW INTERCEPTING MAINS SHALL BE FACTORY WYES FOR 48" AND SMALLER PIPE.
11. ALL HEADWALLS SHALL BE POURED IN PLACE.
12. GRADING OF ALL HANDICAPPED SPACES AND ROUTES SHALL CONFORM TO STATE, LOCAL AND FEDERAL REGULATIONS. THE MAXIMUM CROSS FALL SHALL BE 2% (1' IN 50') AND THE MAXIMUM SLOPE FOR INGRESS/EGRESS ALONG THE ROUTE SHALL BE 5% (1' IN 20'), AND A 2% MAXIMUM SLOPE IN ANY DIRECTION MUST BE MAINTAINED WITHIN THE FIRST 5' FROM ANY ENTRY OR EXIT OF A BUILDING OR LANDING AREA.
13. FINAL PAVING, CURB AND SIDEWALK ELEVATIONS SHALL BE PLACED AT THE PROPOSED GRADE ELEVATIONS WITHIN PLUS OR MINUS 0.05 FEET.
14. ANY CONCRETE, ROCK, DEBRIS OR MATERIAL DEEMED UNSUITABLE FOR SUB-GRADE BY THE ENGINEER SHALL BE DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.
15. TRENCH BACK FILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 6.2.10 AND SHALL BE MECHANICALLY COMPACTED IN ACCORDANCE WITH NCTCOG ITEM 6.2.9 TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR DENSITY UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE CITY STANDARD SPECIFICATIONS OR IN THE GEOTECHNICAL REPORT. SEE CITY OF ROCKWALL STANDARDS OF DESIGN & CONSTRUCTION DATED AUGUST 2003, FOR ADDENDUMS.
16. EMBEDMENT FOR PIPES SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 6.2.9 UNLESS OTHERWISE SHOWN ON THESE PLANS OR NOTED IN THE STANDARD CITY SPECIFICATIONS. CRUSHED STONE BEDDING OR APPROVED EQUAL SHALL BE PROVIDED BY THE CONTRACTOR WHEN ROCK IS ENCOUNTERED IN TRENCHES. THERE SHALL BE NO ADDITIONAL PAY ITEM OF THE CRUSHED STONE BEDDING. IF ROCK IS ENCOUNTERED, ROCK SPOIL SHALL NOT BE USED IN THE UPPER 1.5 FEET OF THE TRENCH. THE UPPER 1.5 FEET OF TRENCH SHALL BE BACK FILLED WITH QUALITY TOPSOIL. SEE CITY OF ROCKWALL STANDARDS OF DESIGN & CONSTRUCTION DATED AUGUST 2003, FOR ADDENDUMS. REFER TO DETAILS.
17. IF REQUIRED BY CONSTRUCTION, POWER POLES TO BE BRACED AND/OR RELOCATED AT THE CONTRACTOR'S EXPENSE.
18. REFER TO THE GEOTECHNICAL REPORT FOR REQUIREMENTS REGARDING FILL COMPACTION AND RELATED MOISTURE CONTENT.
19. DRAINAGE SHALL BE MAINTAINED AWAY FROM ALL FOUNDATIONS, BOTH DURING AND AFTER CONSTRUCTION.
20. TREES SHALL REMAIN AND BE PROTECTED UNLESS SPECIFIED OTHERWISE ON THE LANDSCAPE PLAN OR APPROVED BY THE OWNER AND THE CITY.
21. REFER TO THE ARCHITECTURAL AND M.E.P. PLANS FOR COORDINATION OF ALL UTILITY CONNECTIONS (ROOF DRAIN COLLECTION, WATER, SEWER, ETC.).
22. REFER TO THE PAVING AND DRAINAGE PLANS FOR ADDITIONAL INFORMATION RELATED TO SAID CONSTRUCTION.
23. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SUBMIT BOND AND THREE WAY CONTRACTS TO THE CITY AND OWNER AS REQUIRED.
24. ALL FILL SHALL BE COMPACTED WITH A SHEEPS FOOT ROLLER (MIN 95%).

WATER AND SANITARY SEWER GENERAL NOTES:

1. ALL WORK UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AS ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, AND THE CITY OF ROCKWALL STANDARD CONSTRUCTION SPECIFICATIONS. COPIES OF NCTCOG SPECIFICATIONS 3rd VERSION CAN BE OBTAINED BY CONTACTING NCTCOG @ (817) 640-3300
2. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE TYPE IA, CLASS 'A', 3000 PSI STRENGTH AT 28 DAYS. CONCRETE FOR INLET AND DRAINAGE STRUCTURES SHALL BE TYPE I, CLASS 'F', 4200 PSI STRENGTH AT 28 DAYS.
3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PUBLIC UTILITIES IN THE CONSTRUCTION OF THIS PROJECT.
4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEAN OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. THEY MUST BE ADJUSTED TO THE PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.
5. CONTRACTOR SHALL MAINTAIN ONE SET OF "RECORD DRAWINGS" ON SITE WHICH WILL BE SUBMITTED TO THE OWNER OR ENGINEER UPON COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL INDICATE THE LOCATION OF ALL SUBTERRANEAN UTILITY IMPROVEMENTS AND/OR RELOCATIONS. THEY SHALL ALSO INCLUDE DIMENSIONAL TIES TO ALL MANHOLES, CULVERTS, INLETS, JUNCTION BOXES, FIRE HYDRANTS, ETC.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND BEING IN COMPLIANCE WITH ALL FEDERAL (O.S.H.A. STANDARDS AND REGULATIONS), STATE AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.
7. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO "STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION BARRICADING AND CONSTRUCTION STANDARDS" ON TXDOT ROADWAYS AND "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART VI" FOR PRIVATE WORK. BARRICADES AND PROJECT SIGNS SHALL ALSO MEET CITY CODE.
8. ALL WATER MAINS 12" IN DIAMETER OR LESS SHALL BE PVC C-900, DR 14, CLASS 200.
9. ALL WATER MAINS UNLESS OTHERWISE NOTED SHALL HAVE A MINIMUM COVER OF 48 INCHES (4" THRU 8"); 60 INCHES (10" THRU 12"); 72 INCHES (14 INCHES AND LARGER) TO THE TOP OF PIPE BELOW FINISHED GRADES.
10. ALL WATER SERVICES TO BE INSTALLED IN ACCORDANCE TO CITY REQUIREMENTS.
11. ALL SANITARY SEWER PIPE TO BE PVC SDR-35, UNLESS OTHERWISE NOTED.
12. CONTRACTOR TO TEST WATER AND SANITARY SEWER LINES IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.
13. ALL METER BOXES TO BE LOCATED IN NON-TRAFFIC AREAS.
14. FIRE SPRINKLER LINE TO BE SIZED AND INSTALLED BY A STATE LICENSED FIRE SPRINKLER CONTRACTOR.
15. FIRE HYDRANTS SHALL BE PLACED 3 FEET FROM THE BACK OF CURB LOCATED AS SHOWN ON THE PLANS. THE FIRE HYDRANT SHALL BE CITY APPROVED AND PAINTED TO BE COLOR CODED PER CITY REQUIREMENTS. FIRE HYDRANTS TO HAVE 5 FOOT CLEARANCE AROUND.
16. ALL UTILITIES INSTALLED OUTSIDE OF AN EASEMENT SHALL BE INSTALLED BY A LICENSED PLUMBER AND INSPECTED BY THE CITY CODE ENFORCEMENT.
17. ALL DUCTILE IRON FITTINGS SHALL BE OF THE MECHANICAL JOINT TYPE OR SLIP JOINT AND SHALL BE CLASS D, OR CLASS 250 ON SIZES 12 INCHES AND SMALLER IN ACCORDANCE WITH A.W.W.A. SPECIFICATIONS C-110-64 AND C-111-64.
18. CONCRETE BLOCKING SHALL BE PROVIDED ON WATER MAINS AT ALL TEES, BENDS AND FIRE HYDRANTS PER STANDARD CITY SPECIFICATIONS. PAYMENT FOR CONCRETE BLOCKING SHALL BE SUBSIDIARY TO PIPE INSTALLATION AND SHALL BE INCLUDED IN THE BID PRICE THEREOF.
19. ANY CONCRETE, ROCK, DEBRIS OR MATERIAL DEEMED UNSUITABLE FOR SUB-GRADE BY THE ENGINEER SHALL BE DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.
20. TRENCH BACK FILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 6.2.10 AND SHALL BE MECHANICALLY COMPACTED IN ACCORDANCE WITH NCTCOG ITEM 6.2.9 TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR DENSITY UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE CITY STANDARD SPECIFICATIONS OR IN THE GEOTECHNICAL REPORT.
21. EMBEDMENT FOR PIPES SHALL CONFORM TO THE REQUIREMENTS OF VERSION 3 NCTCOG ITEM 6.2.9 UNLESS OTHERWISE SHOWN ON THESE PLANS OR NOTED IN THE STANDARD CITY SPECIFICATIONS. CRUSHED STONE BEDDING OR APPROVED EQUAL SHALL BE PROVIDED BY THE CONTRACTOR WHEN ROCK IS ENCOUNTERED IN TRENCHES. THERE SHALL BE NO ADDITIONAL PAY ITEM OF THE CRUSHED STONE BEDDING. IF ROCK IS ENCOUNTERED, ROCK SPOIL SHALL NOT BE USED IN THE UPPER 1.5 FEET OF THE TRENCH. THE UPPER 1.5 FEET OF TRENCH SHALL BE BACK FILLED WITH QUALITY TOPSOIL. REFER TO DETAILS.
22. CLASS "B" EMBEDMENT SHALL BE USED FOR RCP PIPE.
23. CLASS "B-3" EMBEDMENT SHALL BE USED FOR PVC PIPE FOR WATER.
24. ROCK EMBEDMENT SHALL BE USED FOR PVC SEWER PIPE.
25. NOT USED
26. NOT USED
27. IF REQUIRED BY CONSTRUCTION, POWER POLES TO BE BRACED AND/OR RELOCATED AT THE CONTRACTOR'S EXPENSE.

WATER AND SANITARY SEWER GENERAL NOTES CONT.:

28. REFER TO THE GEOTECHNICAL REPORT FOR REQUIREMENTS REGARDING FILL COMPACTION AND RELATED MOISTURE CONTENT.
29. TREES SHALL REMAIN AND BE PROTECTED UNLESS SPECIFIED OTHERWISE ON THE LANDSCAPE PLAN OR APPROVED BY THE OWNER AND THE CITY.
30. REFER TO THE ARCHITECTURAL AND M.E.P. PLANS FOR COORDINATION OF ALL UTILITY CONNECTIONS (ROOF DRAIN COLLECTION, WATER, SEWER, ETC.).
31. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES FLOW LINES PRIOR TO BEGINNING CONSTRUCTION.
32. CONTRACTOR SHALL TIE A 1" WIDE PIECE OF RED PLASTIC FLAGGING TO THE END OF SEWER SERVICE AND SHALL LEAVE A MINIMUM OF 36" OF FLAGGING EXPOSED AFTER BACK FILL. AFTER CURB AND PAVING IS COMPLETE, CONTRACTOR SHALL MARK THE LOCATION OF THE SEWER SERVICE ON THE CURB OR PAVING WITH A RED LETTER 'S' IN ACCORDANCE WITH STANDARD CITY SPECIFICATIONS.
33. THE CONTRACTOR TO INSTALL THE WATER SERVICES TO A POINT 2 FEET FROM BACK OF THE CURB LINE AT A DEPTH OF 12 INCHES. THE METER BOX SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AFTER THE PAVING HAS BEEN COMPLETED AND THE FINE GRADING BEHIND THE CURB AND PAVING AREAS. EACH SERVICE LOCATION SHALL BE MARKED ON THE CURB OR PAVING WITH A BLUE LETTER "W" IN ACCORDANCE WITH STANDARD CITY SPECIFICATIONS AND TIED TO PROPERTY CORNERS ON THE "RECORD DRAWINGS"
34. VALVE BOXES SHALL BE FURNISHED AND SET ON EACH GATE VALVE. AFTER FINAL GRADING AND ALIGNMENT HAS BEEN COMPLETED, THE CONTRACTOR SHALL POUR A CONCRETE PAD BLOCK (24"x24"x6") AROUND ALL VALVES AS TO PROVIDE THE FINISHED GRADE OF THE PAD TO BE EQUAL TO THE FINISHED GRADES ADJACENT TO THE VALVES.
35. WHEN WATER AND SANITARY SEWER MAINS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER THAN NINE (9) FEET TO EACH OTHER IN ALL DIRECTIONS AS MEASURED FROM THE OUTSIDE OF THE PIPES. PARALLEL LINES SHALL BE INSTALLED IN SEPARATE TRENCHES. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED OR MAINTAINED, THE FOLLOWING GUIDELINES SHALL APPLY:
A. WHERE A SANITARY SEWER PARALLELS A WATER LINE, THE SEWER SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC PIPE MEETING ASTM SPECIFICATIONS WITH A PRESSURE RATING FOR BOTH THE PIPE AND JOINTS OF 150 PSI. THE VERTICAL SEPARATION SHALL BE A MINIMUM OF 2 FEET BETWEEN OUTSIDE DIAMETERS AND THE HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR FEET BETWEEN OUTSIDE DIAMETERS. THE SEWER SHALL BE LOCATED BELOW THE WATER.
B. WHERE A SANITARY SEWER CROSSES A WATERLINE AND THE SEWER IS CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, AN ABSOLUTE MINIMUM DISTANCE OF SIX INCHES BETWEEN OUTSIDE DIAMETERS SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF SEWER PIPE MUST BE CENTERED ON THE WATERLINE.
C. WHERE A SANITARY SEWER CROSSES UNDER A WATERLINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM OF TWO FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATERLINE.
D. WHERE A SEWER CROSSES OVER A WATERLINE ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. IN LIEU OF THIS PROCEDURE, THE NEW CONVEYANCE MAY BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE FEET INTERVALS WITH SPACERS OR BE FILLED TO THE SPRING LINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.
E. THE SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO BE INSTALLED PARALLEL TO AN EXISTING SEWER THAT SHOWS NO EVIDENCE OF LEAKAGE AND THE WATERLINE IS INSTALLED ABOVE THE SEWER A MINIMUM OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY. SHOULD EXCAVATION FOR THE WATERLINE PRODUCE EVIDENCE THAT THE SEWER IS LEAKING, THE SEWER MUST BE REPAIRED OR REPLACED AS DESCRIBED IN SUBPARAGRAPHS (A) OR (D) OF THIS PARAGRAPH.
F. THE SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO CROSS OVER (BY TWO FEET OR MORE) EXISTING SEWER SHOWING NO EVIDENCE OF LEAKAGE. SHOULD EXCAVATION FOR THE WATERLINE PRODUCE EVIDENCE THAT THE SEWER IS LEAKING, THEN THE SEWER MUST BE REPAIRED OR REPLACED AS DESCRIBED IN SUBSECTIONS (C) OF (D) OF THIS PARAGRAPH.
36. REFER TO THE WATER AND SEWER PLANS FOR ADDITIONAL INFORMATION RELATED TO SAID CONSTRUCTION.
37. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SUBMIT BOND AND THREE WAY CONTRACTS TO THE CITY AND OWNER AS REQUIRED.
38. CONTRACTOR SHALL INSTALL BLUE EMS DISKS (WATER LINE) AT EVERY CHANGE IN DIRECTION, VALVES, & SERVICES. CONTRACTOR SHALL INSTALL GREEN EMS DISKS (SEWER) AT EVERY CHANGE IN DIRECTION, MANHOLE, CLEANOUT, AND SERVICES.

NO SAND OR GRANULAR MATERIAL ALLOWED FOR USE IN BACKFILL ABOVE ROCK EMBEDMENT.




ALL FILL SHALL BE COMPACTED WITH SHEEPS FOOT ROLLER AT A MINIMUM OF 95%.

RECORD DRAWINGS:

IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN. DATE: SEPTEMBER 27, 2011

LANDSCAPING GENERAL NOTES:

1. ALL MATERIALS FOR TURF GRASS PROVIDED SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AS ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, AND THE CITY SPECIFICATIONS AND AS NOTED IN THE PLANS AND CONTRACT DOCUMENTS.
2. BERMUDA GRASS SEED. TURF GRASS SEED SHALL BE "CYNODON DACTYLON" (COMMON BERMUDA GRASS). THE SEED SHALL BE HARVESTED WITHIN ONE YEAR PRIOR TO PLANTING, FREE OF JOHNSON GRASS, FIELD BIND WEED, DODDER SEED, AND FREE OF OTHER WEED SEED TO THE LIMITS ALLOWABLE UNDER THE FEDERAL SEED ACT AND APPLICABLE SEED LAWS. THE SEED SHALL NOT BE A MIXTURE. THE SEED SHALL BE HULLED, EXTRA FANCY GRADE, TREATED WITH FUNGICIDE AND HAVE A GERMINATION AND PURITY THAT SHALL PRODUCE, AFTER ALLOWANCE FOR FEDERAL SEED ACT TOLERANCES, A PURE LIVE SEED CONTENT OF NOT LESS THAN 85% USING THE FORMULA: PURITY PERCENT TIME (GERMINATION PERCENT TIMES PLUS HARD OR SOUND SEED FIVE PERCENT). SEED SHALL BE LABELED IN ACCORDANCE WITH U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS.
A. CERTIFICATE SUBMITTAL. PRIOR TO PLANTING, PROVIDE THE OWNER AND ENGINEER WITH THE STATE OF TEXAS CERTIFICATE STATING ANALYSIS OF PURITY AND GERMINATION OF SEED.
3. RYE GRASS SEED. TURF GRASS SEED SHALL BE "LOLIUM MULTIFLORUM" (ITALIAN OR ANNUAL RYE GRASS). THE SEED SHALL BE HARVESTED WITHIN ONE YEAR PRIOR TO PLANTING AND SHALL BE FREE OF PERENNIAL RYE GRASS SEED, OTHER GRASS SEED AND WEED SEED TO THE LIMITS ALLOWABLE UNDER THE FEDERAL SEED ACT AND APPLICABLE SEED LAWS. SEED SHALL BE AT LEASE 95% PURE AND SHALL HAVE A 90% MINIMUM GERMINATION RATE.
A. CERTIFICATE SUBMITTAL. PRIOR TO PLANTING, PROVIDE THE OWNER AND ENGINEER WITH THE STATE OF TEXAS CERTIFICATE STATING ANALYSIS OF PURITY AND GERMINATION OF SEED.
4. TIMES OF HYDROMULCHING SHALL BE AS FOLLOWS:
A. SEPTEMBER 1 TO APRIL 1 - RYE GRASS SEED SHALL BE APPLIED.
B. APRIL 2 TO AUGUST 31 - BERMUDA GRASS SEED SHALL BE APPLIED.
5. 75% - 80% OF ALL DISTURBED AREAS SHALL HAVE MINIMUM 1" (HEIGHT) OF GRASS ESTABLISHED PRIOR TO CITY ACCEPTANCE.
6. REFER TO LANDSCAPE DRAWINGS FOR ADDITIONAL NOTES AND SPECIFICATIONS. IN THE EVENT OF CONFLICT, MOST STRINGENT INTERPRETATION, SPECIFICATION, OR REQUIREMENTS SHALL APPLY.

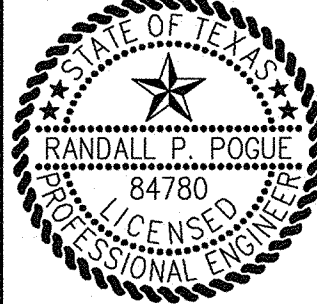
	09-27-11	RECORD DRAWINGS		
	05-24-11	RFI #6 (ST-2; DELETED RADIUS PIPE)		
	05-17-11	COORDINATION AROUND 20" TREE		
NO.	DATE	REVISION / DESCRIPTION		
DESIGN	DRAWN	DATE	PI NUMBER	
RPP	WTW	03-07-2011	1312-10-069	

OWNER
FLEXLAND, L.P.
1480 JUSTIN ROAD
ROCKWALL, TEXAS 75087
MR. STEVEN ROSENBERG
(469) 252-1070 PHONE
(469) 252-1069 FAX

DEVELOPER
SPR PACKAGING, INC.
1480 JUSTIN ROAD
ROCKWALL, TEXAS 75087
MR. STEVEN ROSENBERG
(469) 252-1070 PHONE
(469) 252-1069 FAX

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY RANDALL P. POGUE, P.E. 84780 ON 03-07-2011. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

MPR-2-11



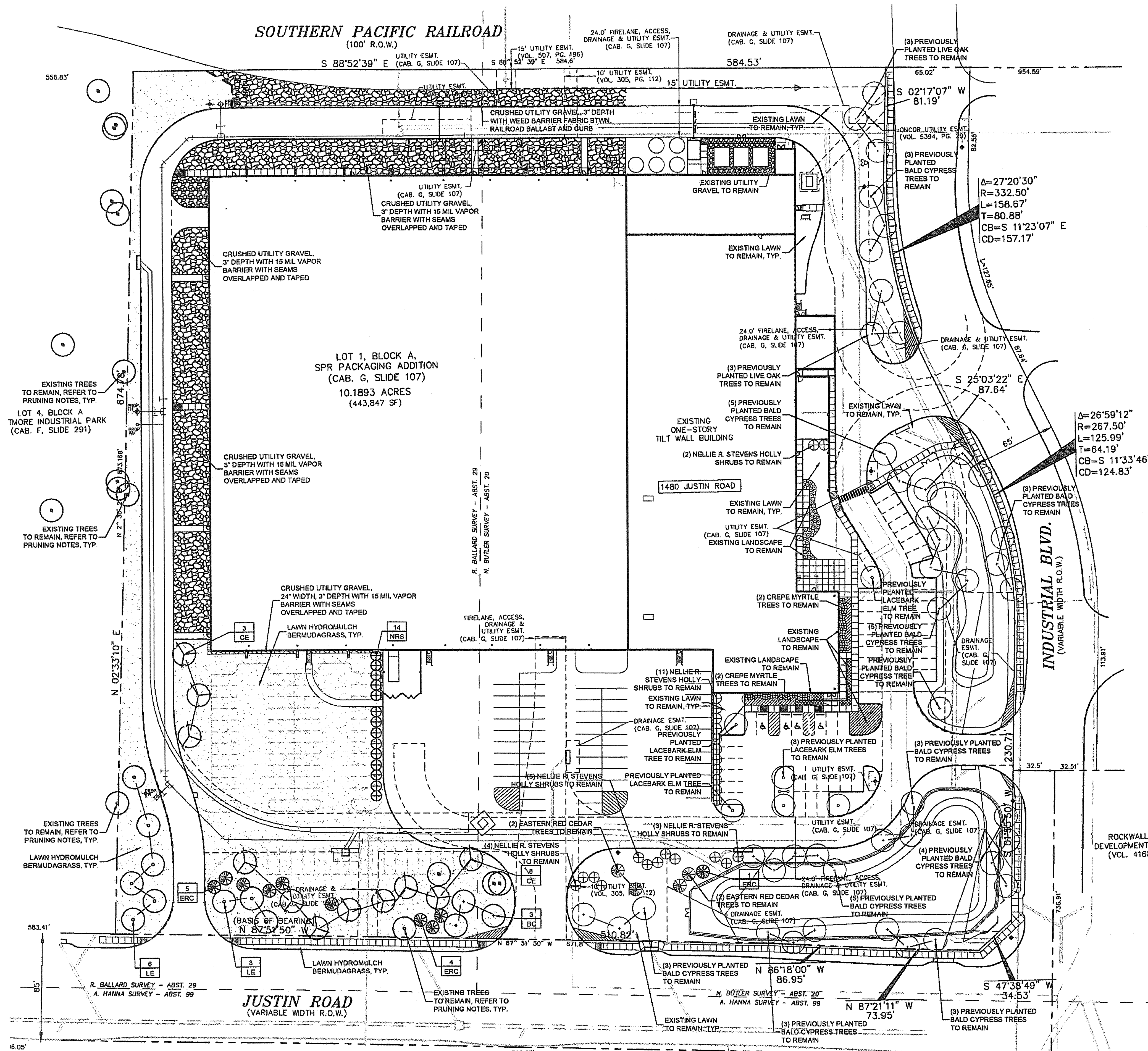
GENERAL NOTES SHEET

SPR PACKAGING - EXPANSION
BLOCK A, LOT 2, SPR PACKAGING ADDITION
NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD
CITY OF ROCKWALL, TEXAS

SHEET NO.

C7.01





LANDSCAPE NOTES

- CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
- CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
- CONTRACTOR SHALL PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES, UNLESS NOTED OTHERWISE ON GRADING PLAN.
- CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 1" BELOW FINAL FINISHED GRADE IN LAWN AREAS.
- ALL PLANTING BEDS AND LAWN AREAS SHALL BE SEPARATED BY STEEL EDGING. NO STEEL EDGING SHALL BE INSTALLED ADJACENT TO BUILDINGS, WALKS, OR CURBS. CUT STEEL EDGING AT 45 DEGREE ANGLE WHERE IT INTERSECTS WALKS AND CURBS.
- TOP OF MULCH SHALL BE 1/2" MINIMUM BELOW THE TOP OF WALKS AND CURBS.
- ALL LAWN AREAS SHALL BE HYDROMULCH BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- CONTRACTOR SHALL PROVIDE BID PROPOSAL LISTING UNIT PRICES FOR ALL MATERIAL PROVIDED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.

MAINTENANCE NOTES

- THE OWNER, TENANT AND THEIR AGENT, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE.
- ALL LANDSCAPE SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE MOWING, EDGING, PRUNING, FERTILIZING, WATERING, WEEDING AND OTHER SUCH ACTIVITIES COMMON TO LANDSCAPE MAINTENANCE.
- ALL LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER, WEEDS AND OTHER SUCH MATERIAL OR PLANTS NOT PART OF THIS PLAN.
- ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR.
- ALL PLANT MATERIAL WHICH DIES SHALL BE REPLACED WITH PLANT MATERIAL OF EQUAL OR BETTER VALUE.
- CONTRACTOR SHALL PROVIDE SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE.

HYDROMULCH NOTES

- CONTRACTOR SHALL SCARIFY, RIP AND LOOSEN ALL AREAS TO BE HYDROMULCHED TO A MINIMUM DEPTH OF 4" PRIOR TO TOPSOIL AND HYDROMULCH INSTALLATION.
- BERMUDAGRASS SEED SHALL BE EXTRA HULLED AND TREATED LAWN TYPE. SHALL BE DELIVERED TO THE SITE IN ITS ORIGINAL UNOPENED CONTAINER AND SHALL MEET STATE LAW REQUIREMENTS.
- FIBER SHALL BE ONE HUNDRED PERCENT (100%) WOOD CELLULOSE FIBER, DELIVERED TO THE SITE IN ITS ORIGINAL UNOPENED CONTAINER AS MANUFACTURED BY 'CONWEB' OR EQUAL.
- FIBER TACK SHALL BE DELIVERED TO THE SITE IN ITS ORIGINAL UNOPENED CONTAINER AND SHALL BE 'TERRO-TACK ONE', AS MANUFACTURED BY GROWERS, INC. OR EQUAL.
- HYDROMULCH WITH BERMUDAGRASS SEED AT A RATE OF TWO (2) POUNDS PER ONE THOUSAND (1000) SQUARE FEET.
- USE A 4X6" BATTER BOARD AGAINST ALL BED AREAS.
- IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND MAY 1, ALL HYDROMULCH AREAS TO BE WINTER RYEGRASS, AT A RATE OF FOUR (4) POUNDS PER ONE THOUSAND (1000) SQUARE FEET. CONTRACTOR SHALL BE REQUIRED TO RE-HYDROMULCH WITH BERMUDAGRASS THE FOLLOWING GROWING SEASON AS PART OF THIS CONTRACT.
- ALL LAWN AREAS TO BE HYDROMULCHED SHALL HAVE ONE HUNDRED (100%) PERCENT COVERAGE PRIOR TO FINAL ACCEPTANCE.

NO TREES WITHIN 5'-0" OF ANY UTILITIES.

GENERAL LAWN NOTES

- CONTRACTOR SHALL COORDINATE OPERATIONS AND AVAILABILITY OF EXISTING TOPSOIL WITH ON-SITE CONSTRUCTION MANAGER.
- CONTRACTOR SHALL LEAVE LAWN AREAS 1" BELOW FINAL FINISHED GRADE PRIOR TO TOPSOIL INSTALLATION.
- CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED ON CIVIL PLANS. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BOUNDING IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
- ALL LAWN AREAS SHALL BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR LANDSCAPE ARCHITECT PRIOR TO LAWN INSTALLATION.
- CONTRACTOR SHALL REMOVE ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, ETC. PRIOR TO PLACING TOPSOIL AND LAWN INSTALLATION.
- CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
- CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.

PRUNING AND TRIMMING NOTES

- CONTRACTOR SHALL SCHEDULE ON-SITE MEETING WITH LANDSCAPE ARCHITECT TO REVIEW PRUNING GUIDELINES PRIOR TO COMMENCING ANY WORK.
- PRUNE ALL EXISTING TREES ON-SITE USING THE FOLLOWING GUIDELINES.
- ALL TREES SHALL BE TRIMMED SO THAT NATURAL SHAPES OF THE PLANTS ARE RETAINED.
- DO NOT 'TOP' OR 'HEAD' TREES.
- IF BALLING OR SHEARING OF TREES HAS OCCURRED IN THE PAST, DISCONTINUE THIS PRACTICE AND ALLOW PLANTS TO GROW INTO NATURAL SHAPE.
- REMOVE SUCKERS, DEAD, DYING, DISEASED, BROKEN AND / OR WEAK BRANCHES FROM ALL TREES ALONG THE MAIN TRUNK STRUCTURE AND WITHIN THE BRANCHING AREA.
- CONTRACTOR SHALL PRUNE EXISTING DECIDUOUS HARDWOOD BY REMOVING LOWER LIMBS TO RAISE THE CANOPY. THE BOTTOM OF THE CANOPY SHALL BE RAISED TO 12'-0" ABOVE GRADE FOR DECIDUOUS HARDWOOD TREES, WHEN POSSIBLE. THE INTEGRITY OF THE CANOPY AND STRUCTURE OF THE TREE SHALL BE MAINTAINED. DO NOT CUT OR PRUNE CENTRAL LEADERS.
- CONTRACTOR SHALL THIN THE CANOPY BY ONE-FOURTH. PRUNE TREE TO EVENLY SPACE BRANCHES WITHIN THE CANOPY WHENEVER POSSIBLE. REMOVE THOSE LIMBS THAT CROSS OTHERS, DOUBLE LEADERS AND THOSE THAT EXCESSIVELY EXTEND BEYOND THE NATURAL CROWN OF THE TREE.
- CONTRACTOR SHALL PROVIDE DEEP ROOT FEEDING AND INVIGORATION OF EXISTING TREES. THIS SHALL BE ORGANIC BASED NUTRIENTS BASED FOR ROOT GROWTH AND LEAF GROWTH STIMULATION.
- CONTRACTOR SHALL BE REQUIRED TO CHIP ALL REMOVED BRANCHES, LEAFS, ETC.

LANDSCAPE TABULATIONS

THE CITY OF ROCKWALL, TEXAS

SCREENING OF OFF-STREET LOADING DOCKS
1. 6' height screening of loading docks required from all public street.

Provided

STREET LANDSCAPING
1. 10' wide landscape buffer with one tree per 50 L.F.

JUSTIN ROAD - 872 L.F.
Required (13) trees, 3" cal. Provided (13) trees, 3" cal.
INDUSTRIAL BLVD. - 684 L.F.
Required (14) trees, 3" cal. Provided (14) trees, 3" cal.

PARKING LOT LANDSCAPING

1. 5% of the interior parking lot shall be landscaped.
2. One (1) large tree per 10 spaces.
3. No required parking space more than 80' from a tree.
Total interior parking lot area = 59,504 s.f.
Total parking spaces = 100 spaces
Required 2,975 s.f. (5%) 3,193 s.f. (5%)
Provided 44,385 s.f. (100%) 118,332 s.f. (27%)
all spaces within 80' of tree all spaces within 80' of tree

SITE LANDSCAPING

1. 10% of the total site shall be landscaped for LIGHT INDUSTRIAL.
2. 100% of the total requirements shall be located in the front of and along side buildings for "L.I." use.
Total site = 10.18 AC; 443,848 s.f.

Required 44,385 s.f. (10%) 118,332 s.f. (27%)
Provided 44,385 s.f. (100%) 118,332 s.f. (27%)

DETENTION BASINS

1. One (1) large tree per 750 s.f. of dry land area.

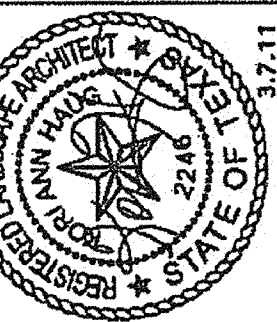
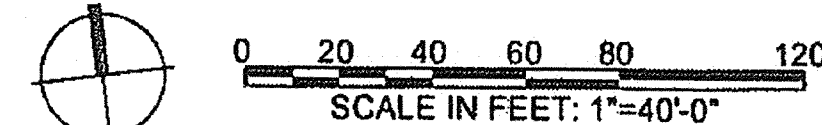
SOUTH DETENTION POND - 15,507 s.f.
Required (21) trees, 3" cal. Provided (21) trees, 3" cal.

EAST DETENTION POND - 10,725 s.f.
Required (14) trees, 3" cal. Provided (14) trees, 3" cal.

Belle
Belle
firm

823 Brookhurst Drive
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www.bellefirma.com

LANDSCAPE PLAN



pross design group, incorporated
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TEXAS

SPR
PACKAGING

ROCKWALL

Job no
sheet
L1.01

drawn: LS/KH
checked: KH
date: 03/07/2011

SECTION 02900 - LANDSCAPE

PART 1 - GENERAL

1.1 REFERENCED DOCUMENTS

- A Refer to Landscape Plans, notes, details, bidding requirements, special provisions, and schedules for additional requirements.

1.2 DESCRIPTION OF WORK

- A Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:

1. Planting (trees, shrubs and grasses)
2. Bed preparation and fertilization
3. Notification of sources
4. Water and maintenance until final acceptance
5. Guarantee

1.3 REFERENCE STANDARDS

- A American Standard for Nursery Stock published by American Association of Nurserymen, 27 October 1980, Edition; by American National Standards Institute, Inc. (Z80.1) - plant material
- B American Joint Committee on Horticultural Nomenclature. 1942 Edition of Standardized Plant Names.
- C Texas Association of Nurserymen, Grades and Standards
- D Hortis Third, 1976 - Cornell University

1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

- A Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel and crushed stone. Samples shall be approved by Owner's Authorized Representative before use on the project.

1.5 JOB CONDITIONS

- A General Contractor to complete the following punch list. Prior to Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below final finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the final finish grade of sidewalks, drives and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.
- B Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

1.6 MAINTENANCE AND GUARANTEE

- A Maintenance:
 1. The Landscape Contractor shall be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show healthy growth and satisfactory foliage conditions.
 2. Maintenance shall include watering of trees and plants, cultivation, weeding, spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary of maintenance.
 3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by the Owner's Authorized Representative will be completed prior to written acceptance.
- B Guarantee:
 1. Trees, shrubs and groundcover shall be guaranteed for a twelve (12) month period after final acceptance. The Contractor shall

replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry have been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.

- a Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.

- b At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises immediately.

- c When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and re-inspected for full compliance with the contract requirements. All replacements are to be included under "Work" of this section.

2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final acceptance.

3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or theft.

4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a complete, undamaged condition and there is a stand of grass in all lawn areas. At that time, the Owner will assume maintenance on the accepted work.

- C Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting. In the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense to the Landscape Contractor.

1.7 QUALITY ASSURANCE

- A General: Comply with applicable federal, state, county and local regulations governing landscape materials and work.

- B Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.

- C Selection of Plant Material:
 1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will ensure the purchased materials will meet and / or exceed project specifications.

2. Substitutions: Do not make plant material substitutions. If the specified landscape material is not obtainable, submit proof of non-availability to Landscape Architect, together with proposal for use of equivalent material. At the time bids are submitted, the Contractor is assumed to have located the materials necessary to complete the job as specified.

3. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules to site.

4. Measurements: Measure trees with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements six inches above ground for trees up to and including 4" caliper size, and twelve inches above ground for larger sizes. Measure main body of all plant material of height and spread dimensions, do not measure from branch or root tip-to-tip.

5. Owner's Authorized Representative shall inspect all plant material with requirements for genus, species, cultivar / variety size and quality.

6. Owner's Authorized Representative retains the right to further inspect all plant material upon arrival to the site and during installation for size and condition of root balls and root systems, limbs, branching habit, insects, injuries and latent defects.

7. Owner's Authorized Representative may reject unsatisfactory or defective material at any time during the process work. Remove rejected materials immediately from the site and replace with acceptable material at no additional cost to the Owner. Plants damaged in transit or at job site shall be rejected.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Preparation:

1. Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape and future development.
2. Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.

B. Delivery:

1. Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored on site.
2. Deliver only plant materials that can be planted in one day unless adequate storage and watering facilities are available on job site.
3. Protect root balls by heeling in with sawdust or other approved moisture retaining material if not planted within 24 hours of delivery.
4. Protect plants during delivery to prevent damage to root balls or desiccation of leaves. Keep plants moist at all times. Cover all materials during transport.
5. Notify Owner's Authorized Representative of delivery schedule 72 hours in advance job site.
6. Remove rejected plant material immediately from job site.
7. To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems.

PART 2 - PRODUCTS

2.1 PLANTS

- A General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant, not to the outer leaf tips. Plants will be individually approved by the Owner's Authorized Representative and his decision as to their acceptability shall be final.

- B Quantities: The drawings and specifications are complementary. Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.

- C Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken ranches, objectionable disfigurements, insect eggs and larvae, and are to be of specimen quality.

- D Approval: All plants which are found unsuitable in growth, or are in any unhealthy, badly shaped or undrained condition will be rejected by the Owner's Authorized Representative either before or after planting and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plant as specified at no additional cost to the Owner.

- E Trees shall be healthy, full-branched, well-shaped, and shall meet the minimum trunk and diameter requirements of the plant schedule. Balls shall be firm, root, slightly tapered and well wrapped in burlap. Any tree loose in the ball or with a broken root ball at time of planting will be rejected. Balls shall be ten (10") inches in diameter for each one (1") inch of trunk diameter, measured six (6") inches above ball. (Nomenclature confirms to the customary nursery usage. For clarification, the term "multi-trunk" defines a plant having three (3) or

more trunks of nearly equal diameter.)

- F Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect prior to final acceptance, shall be executed by the Landscape Contractor at no additional cost to the Owner.

2.2 SOIL PREPARATION MATERIALS

A. Sandy Loam:

1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallisgrass or Nutgrass shall be rejected.

2. Physical properties as follows:
 - a Clay - between 7-27 percent
 - b Silt - between 15-25 percent
 - c Sand - less than 52 percent

3. Organic matter shall be 3%-10% of total dry weight.

4. If requested, Landscape Contractor shall provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.

- B Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of coarse and fine textured material.

- C Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved equal.

- D Sharp Sand: Sharp sand must be free of seeds, soil particles and weeds.

- E Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.

- F Organic Fertilizer: Fertilid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.

- G Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulfur and 4% iron, plus micronutrients.

- H Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

2.3 MISCELLANEOUS MATERIALS

- A Steel Edging: 3/16" x 4" x 16' - dark green, DURAEDGE® steel landscape edging manufactured by The J.D. Russell Company under its trade name DURAEDGE Heavy Duty Steel.

- B Staking Material for Shade Trees: refer to details.

PART 3 - EXECUTION

3.1 BED PREPARATION & FERTILIZATION

- A Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.

- B All planting areas shall be conditioned as follows:

1. Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per Manufacturer's recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand (1,000) square feet.

2. All planting areas shall receive a two (2") inch layer of specified mulch.

3. Backfill for tree pits shall be as follows: Use existing top soil

on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

3.2 INSTALLATION

- A Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.

- B Plant materials shall be delivered to the site only after the beds are prepared and areas are ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and Balls of earth of 5 & 8 plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.

- C Position the trees and shrubs in their intended location as per plan.

- D Notify the Owner's Authorized Representative for inspection and approval of all positioning of plant materials.

- E Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit heeling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.

- F Shrub and tree pits shall be no less than twenty-four (24") inches wider than the lateral dimension of the earth ball and six (6") inches deeper than it's vertical dimension. Remove and haul from site all rocks and stones over three-quarter (3/4") inch in diameter. Plants should be thoroughly moist before removing containers.

- G Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at the surface of the ground. The sides of the hole should be rough and jagged, never slick or glazed.

- H Percolation Test: Fill the hole with water. If the water level does not percolate within 24 hours, the tree needs to move to another location or have drainage added. Install a PVC stand pipe per tree planting detail as approved by the Landscape Architect if the percolation test fails.

- I Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When the hole is dug in solid rock, topsoil from the same area should not be used. Carefully settle by watering to prevent air pockets. Remove the burlap from the top 1/2 of the ball, as well as all nylon, plastic string and wire. Container trees will usually be root bound, if so follow standard nursery practice of "root scoring".

- J Do not wrap trees.

- K Do not over prune.

- L Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the area above the top of the ball and mulch with at least two (2") inches of specified mulch.

- M All plant beds and trees to be mulched with a minimum settled thickness of two (2") inches over the entire bed or pit.

- N Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Owner. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3) feet below grade and no less than six (6") inches below the bottom of ball when plant is properly set at the required grade. The work of this section shall include the removal from the site of such rock or underground obstructions encountered at the cost of the Landscape Contractor.

- O Trees and large shrubs shall be staked as site conditions require. Position stakes to secure trees against seasonal prevailing winds.

- P Pruning and Mulching: Pruning shall be directed by the Landscape Architect and shall be pruned in accordance with standard horticultural practice following Fine Pruning, Class 1 pruning standards provided by the National Arborist Association.

1. Dead wood, suckers, broken and badly bruised branches shall be removed. General tipping of the branches is not permitted. Do not cut terminal branches.

2. Pruning shall be done with clean, sharp tools.

3. Immediately after planting operations are completed, all tree pits shall be covered with a layer of organic material two (2") inches in depth. This limit of the organic material for trees shall be the diameter of the plant pit.

Q. Steel Curbing Installation:

1. Curbing shall be aligned as indicated on plans. Stake out limits of steel curbing and obtain Owners approval prior to installation.

2. All steel curbing shall be free of kinks and abrupt bends.

3. Top of curbing shall be 1/2" maximum height above final finished grade.

4. Stakes are to be installed on the planting bed side of the curbing, as opposed to the grass side.

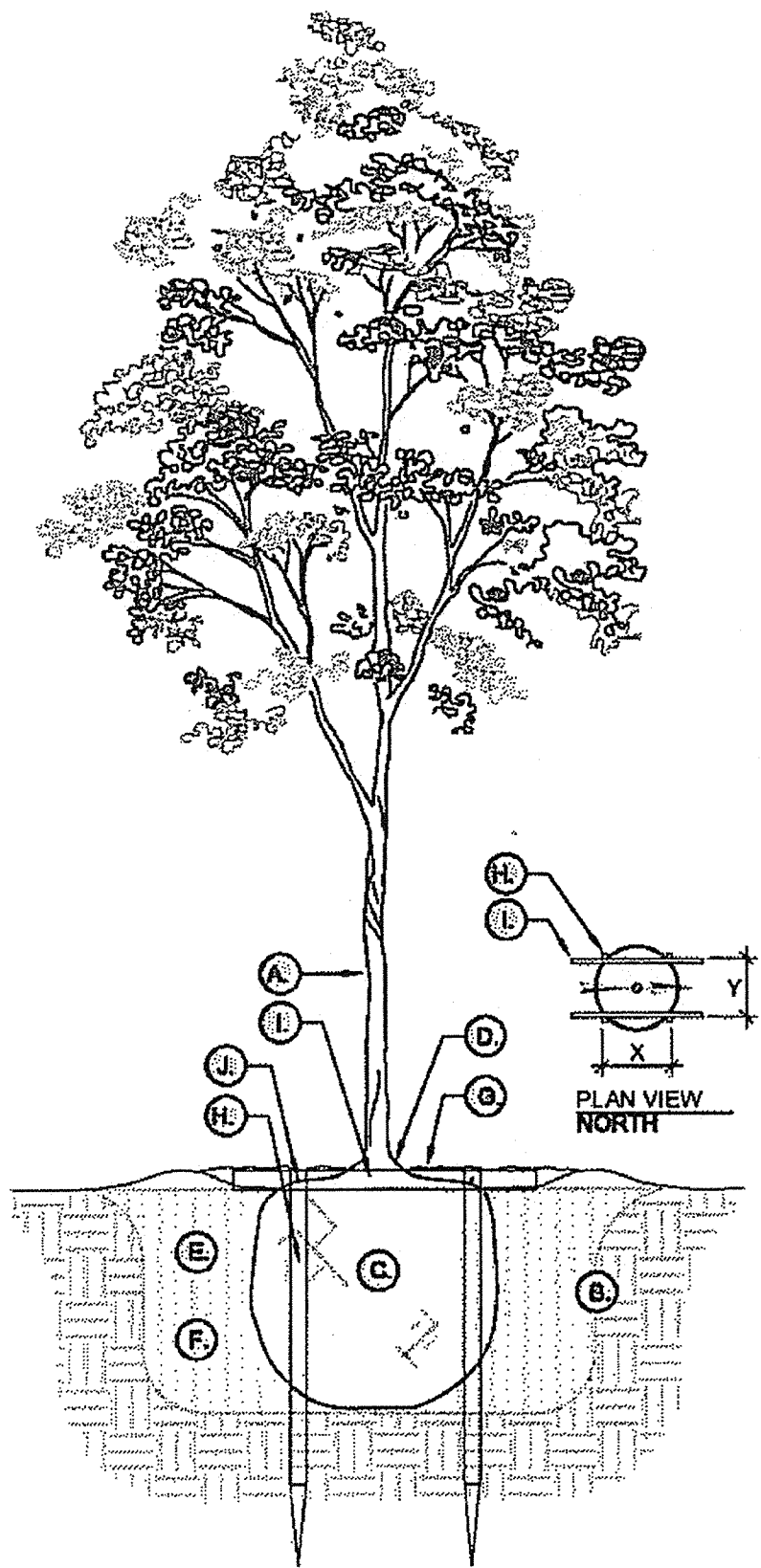
5. Do not install steel edging along sidewalks or curbs.

6. Cut steel edging at 45 degree angle where edging meets sidewalks or curbs.

3.3 CLEANUP AND ACCEPTANCE

- A Cleanup: During the work, the premises shall be kept neat and orderly at all times. Storage areas for all materials shall be so organized so that they, too, are neat and orderly. All trash and debris shall be removed from the site as work progresses. Keep paved areas clean by sweeping or hosing them at end of each work day.

END OF SECTION



01 TREE PLANTING DETAIL

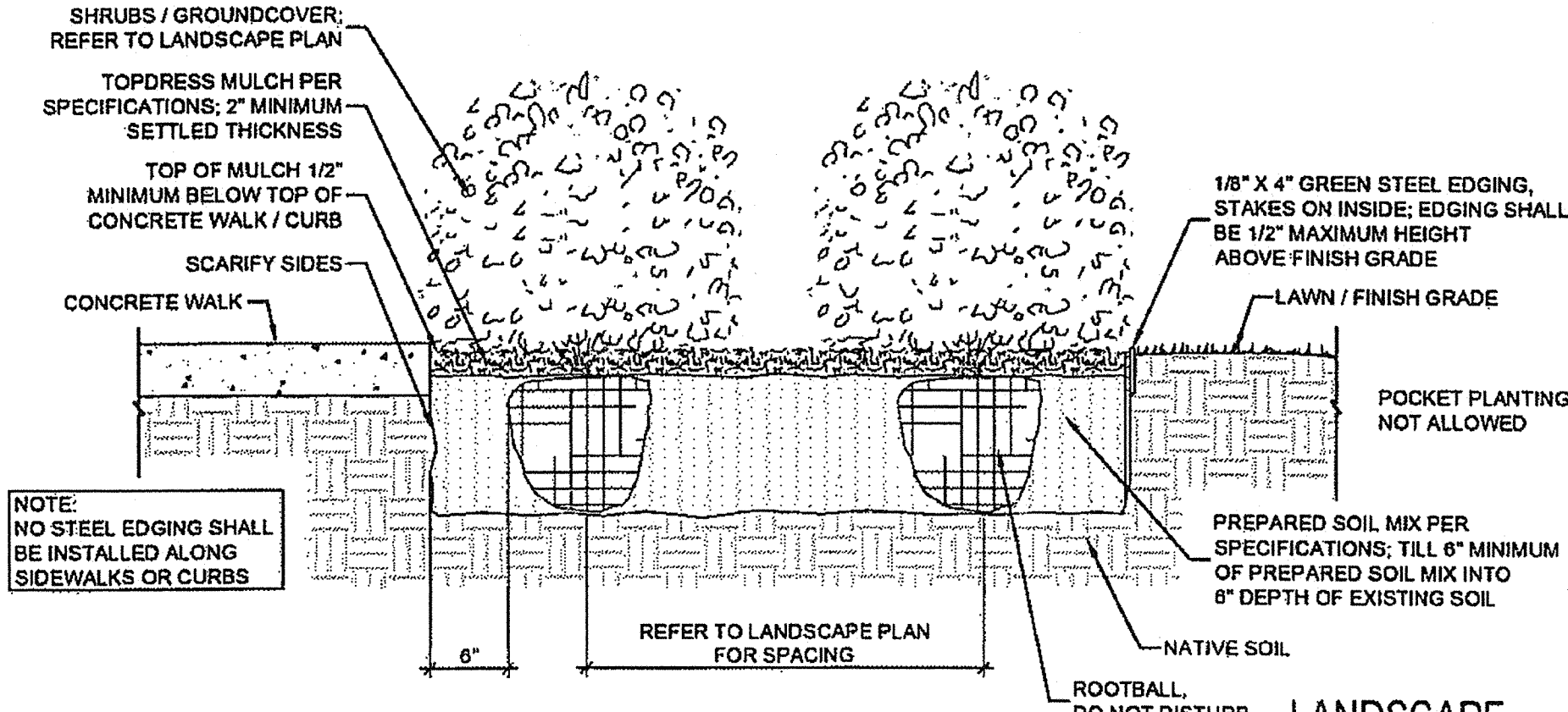
NOT TO SCALE

TREE PLANTING DETAIL LEGEND

- A TREE: TREES SHALL CONFORM WITH LATEST AMERICAN STANDARD FOR NURSERY STOCK. www.anla.org
- B TREE PIT: WIDTH TO BE AT LEAST TWO (2) TIMES THE DIAMETER OF THE ROOT BALL. CENTER TREE IN HOLE & REST ROOT BALL ON UNDISTURBED NATIVE SOIL.
- C ROOT BALL: REMOVE TOP 1/3 BURLAP AND ANY OTHER FOREIGN OBJECT; CONTAINER GROWN STOCK TO BE INSPECTED FOR GIRDLING ROOTS.**
- D ROOT FLARE: ENSURE THAT ROOT FLARE IS EXPOSED**, FREE FROM MULCH, AND AT LEAST TWO INCHES ABOVE GRADE.
- E BACKFILL: USE EXISTING NATIVE SOIL (no amendments) WATER THOROUGHLY TO ELIMINATE AIR POCKETS.
- F FUNGI: APPLY DIVERSE ARRAY MYCORRHIZAE ENDO/ECTO INOCULANT;** APPLICATION RATE PER MANUFACTURERS SPECIFICATIONS.
- G MULCH: DOUBLE SHREDDED HARDWOOD MULCH 2 INCH DEPTH W/ 2" HT. WATERING RING; ENSURE THAT ROOT FLARE IS EXPOSED.
- H VERTICAL STAKES: 2in. by 2in. UNTREATED #1 LUMBER LENGTH OF VERTICAL STAKES TO EXTEND 1 1/2 TIMES THE HEIGHT OF ROOT BALL.**
- I LATERAL SUPPORT: 2in. by 2in. UNTREATED #1 LUMBER. LENGTH OF LATERAL SUPPORTS TO BE 1 1/2 TIMES DIAMETER OF ROOT BALL.
- J FASTENERS: 2 1/2in. COARSE THREAD UNFINISHED DRYWALL SCREWS, (2) each PER VERTICAL STAKE; (8) TOTAL. NOTE: PRE-DRILL HOLES IN LATERALS & VERTICALS.

TREE PLANTING NOTES

1. GIRDLING ROOTS & ROOT FLARE: TREES SHALL BE REJECTED WHEN GIRDLING ROOTS ARE PRESENT & ROOT FLARE IS NOT APPARENT.
2. FUNGI INOCULANT: CONTRACTOR TO USE MycoApply Endo/Ecto OR EQUAL PRODUCT. www.mycosupply.com (866.476.7800)
3. INSTALL VERTICAL STAKES FIRST; THEN PRE-DRILL & INSTALL LATERAL SUPPORTS.
4. WHEN CONDITIONS EXIST WHICH PREVENT VERTICAL STAKES FROM EXTENDING 1 1/2 TIMES INTO PARENT MATERIAL (ie. rock), THE CONTRACTOR SHALL INSTALL STAKES AS DEEP AS POSSIBLE.
5. LATERAL SUPPORTS SHALL BE ORIENTED AS SHOWN IN PLAN VIEW. (shown left)
6. QUESTIONS ABOUT INSTALLATION OR FABRICATION OF BELOW-GROUND STAKING SHALL BE DIRECTED TO LANDSCAPE ARCHITECT.
7. ALSO REFERENCE SPECIFICATIONS SECTION 02900.



NOTE: NO STEEL EDGING SHALL BE INSTALLED ALONG SIDEWALKS OR CURBS

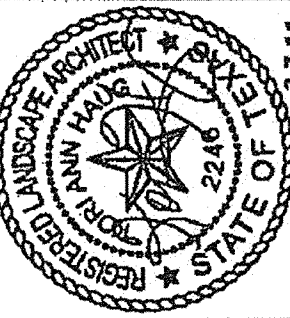
02 SHRUB / GROUNDCOVER DETAIL

NOT TO SCALE

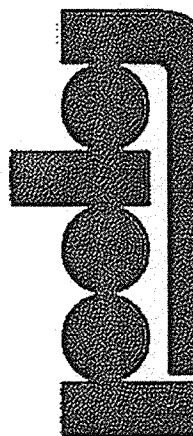
LANDSCAPE SPECIFICATIONS AND DETAILS

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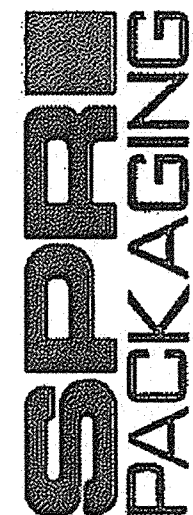
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checked
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date
05/07/2011



pross design group, incorporated
6310 Harvest Hill Road, Suite 100, Dallas, Texas 75230 972.7708-1400



TEXAS



ROCKWALL

Job no

sheet

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