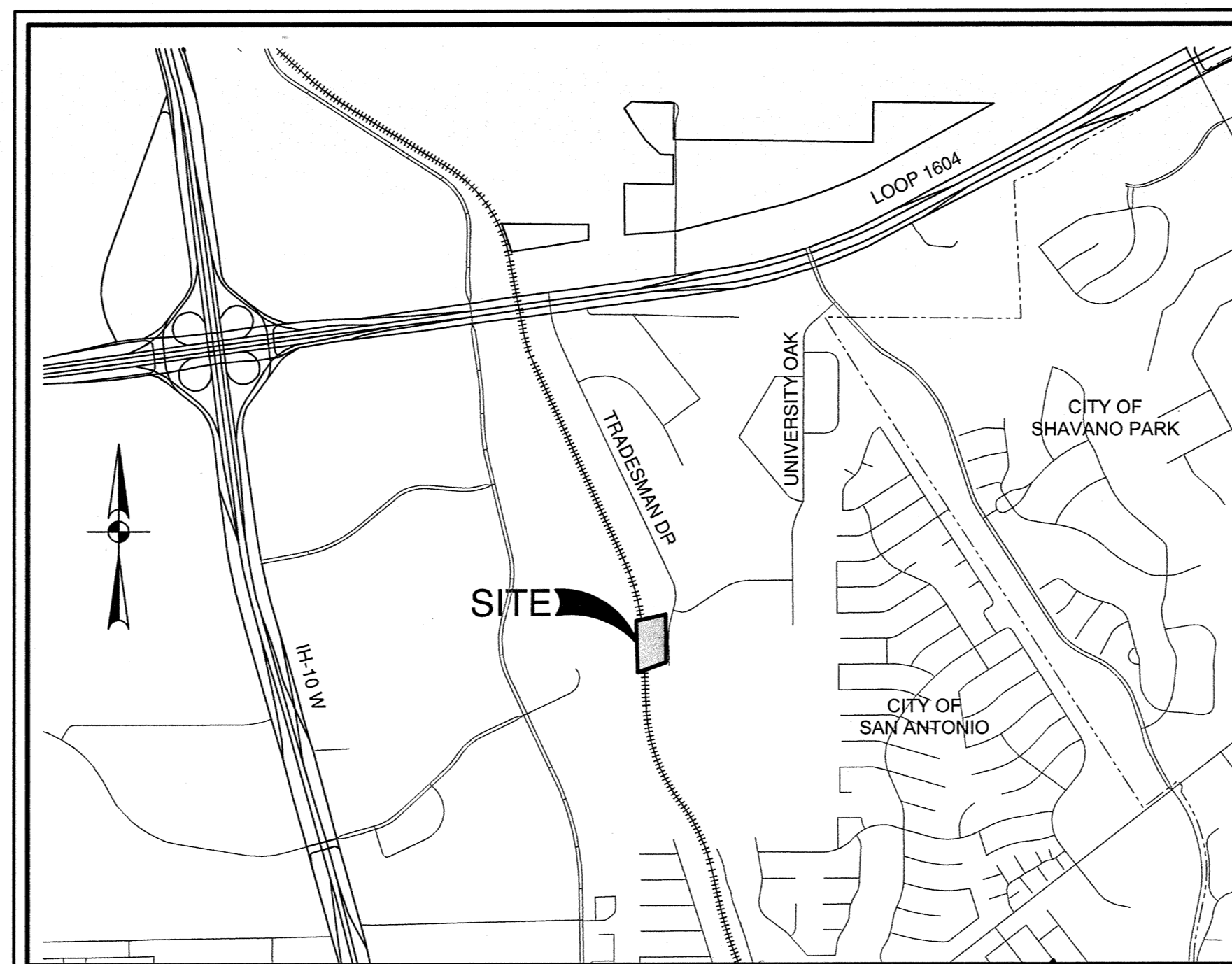


# TRADESMAN DRIVE FLEX SPACE

## SAN ANTONIO, TEXAS

### CIVIL CONSTRUCTION PLANS



LOCATION MAP  
NOT-TO-SCALE

#### Sheet Index

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COVER SHEET	C0.00
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UTILITY PLAN	C3.00
GRADING PLAN	C4.00
TEMPORARY POLLUTION ABATEMENT PLAN	C5.00
TEMPORARY POLLUTION ABATEMENT PLAN DETAILS	C5.10
PERMANENT POLLUTION ABATEMENT PLAN	C5.20
CIVIL DETAILS	1 OF 2 C6.00
CIVIL DETAILS	2 OF 2 C6.10

BALEARIA, LLC  
15555 TRADESMAN STE 400  
SAN ANTONIO, TEXAS 78249

APRIL 2016



2000 NW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000  
FAX: 210.375.9010  
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470  
TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, FIRM REGISTRATION # 10193974



SLT 4/18/16

**PAVEMENT NOTES:**

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK WHERE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY OR TPOOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION LATEST EDITION.
- THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITY AND STORM DRAIN SYSTEMS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).
- THE CONTRACTOR SHALL VERIFY ELEVATIONS AND LOCATIONS OF EXISTING FACILITIES AND NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
- ALL PAINT SHALL BE 4" WIDE WHITE REFLECTIVE PAINT.
- ALL PAVEMENT MARKINGS SHALL RECEIVE TWO COATS OF PAINT.
- NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.
- ALL SIGNS SHALL CONFORM TO MUTCD, LATEST EDITION.
- THE CONTRACTOR SHALL SAW CUT EXISTING PAVING, CURB, AND SIDEWALKS TO PROVIDE A SMOOTH TRANSITION. NO JAGGED OR IRREGULAR EDGES WILL BE ALLOWED.

**DIMENSIONAL CONTROL NOTES:**

- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT OR LIMITS OF DIMENSIONS NECESSARY FOR CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR SHALL PRESERVE ALL CONTROL POINTS, PROPERTY PINS, BENCHMARKS, HUBS OR OTHER KEY CONTROL POINTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO RE-ESTABLISH ANY SUCH POINTS AT THEIR OWN EXPENSE IN THE EVENT THEY ARE REMOVED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO THE START OF CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL HORIZONTAL AND VERTICAL CONTROL PER THE CONSTRUCTION DRAWINGS.
- UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL USE THE PROPERTY PINS FOR HORIZONTAL CONTROL POINTS. BENCHMARKS ARE NOT TO BE USED FOR HORIZONTAL CONTROL.
- COORDINATES FOR HORIZONTAL CONTROL POINTS ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83(96) DISPLAYED IN SURFACE VALUES USING A SURFACE ADJUSTMENT FACTOR FOR EACH COUNTY. (THE SURFACE ADJUSTMENT FACTOR FOR BEJAR COUNTY IS 1.00017. OTHER COUNTIES WILL HAVE A DIFFERENT FACTOR. CHECK WITH THE SURVEYOR TO OBTAIN THE CORRECT SURFACE ADJUSTMENT FACTOR FOR PROJECTS LOCATED OUTSIDE OF BEJAR COUNTY.)
- BENCHMARK ELEVATIONS ARE BASED ON NAVD 88, GEOID 03.
- ALL DIMENSIONAL CONTROL POINTS OR DIMENSIONS ARE TO THE FACE OF CURB, FACE OF RETAINING WALL, AND CENTER OF PAVEMENT STRIPPING. ALL DIMENSIONS ARE PERPENDICULAR TO THE POINT OF REFERENCE.
- REFER TO THE ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONAL CONTROL INFORMATION.
- CURB RADI ARE 3' UNLESS OTHERWISE NOTED ON THE DRAWINGS.

**PARKING SUMMARY**

USE	SIZE	MIN. PARKING (REQUIRED)	MAX. PARKING (REQUIRED)
WAREHOUSE (FLEX SPACE)	40,827 SF	1/2,000 SF	1/200 SF
MINIMUM REQUIRED PARKING		= 21	
MAXIMUM REQUIRED PARKING		= 204	
STANDARD PARKING PROVIDED (8'X18')		= 61	
COMPACT PARKING PROVIDED (8'X14')		= 0	
ACCESSIBLE PARKING PROVIDED (8'X18')		= 4	
TOTAL PARKING PROVIDED		= 65	
<b>BICYCLE PARKING SUMMARY</b>			
BICYCLE SPACES REQUIRED (10% OF MIN.)		= 2	
BICYCLE SPACES PROVIDED		= 2 (1 BIKE RACK)	

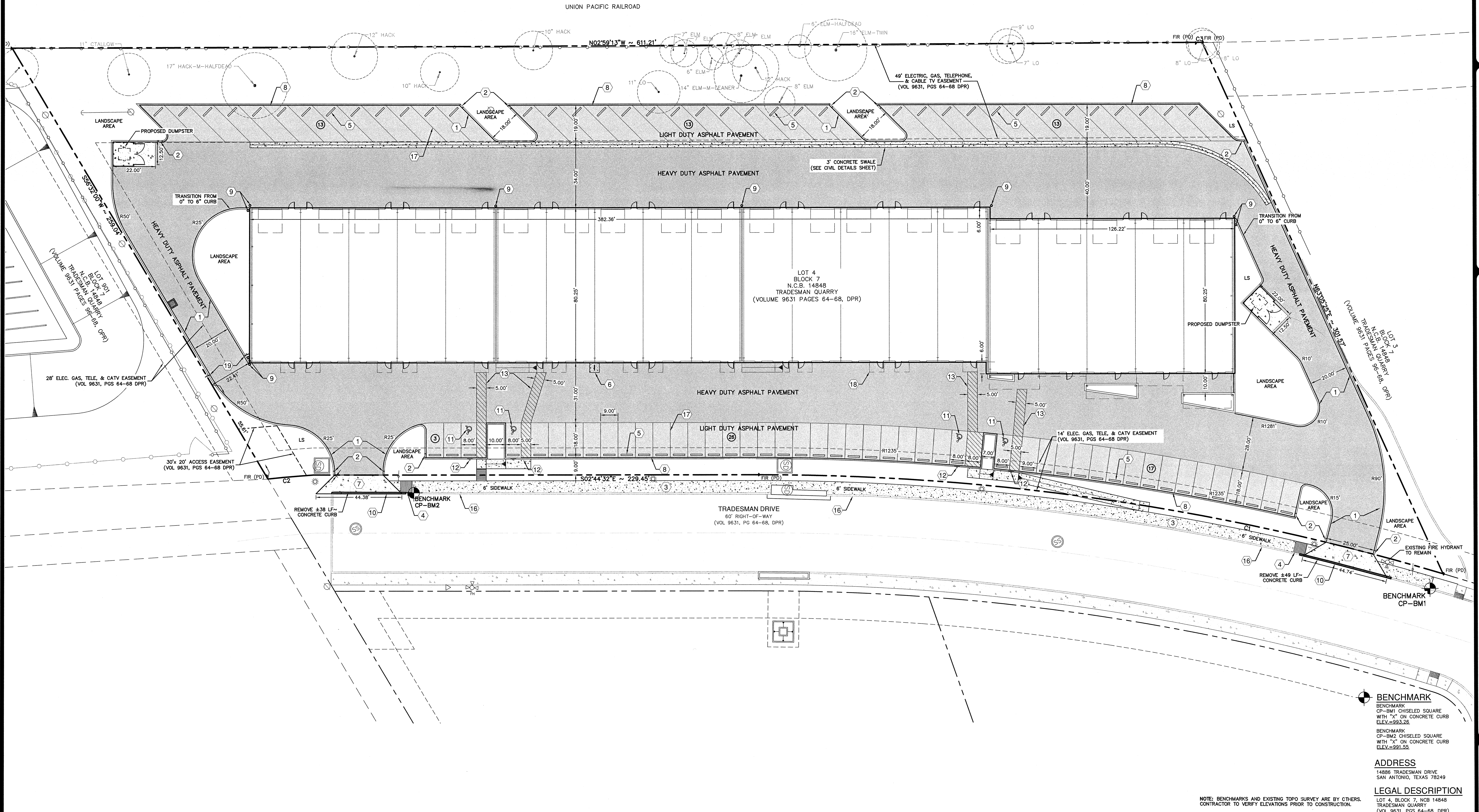
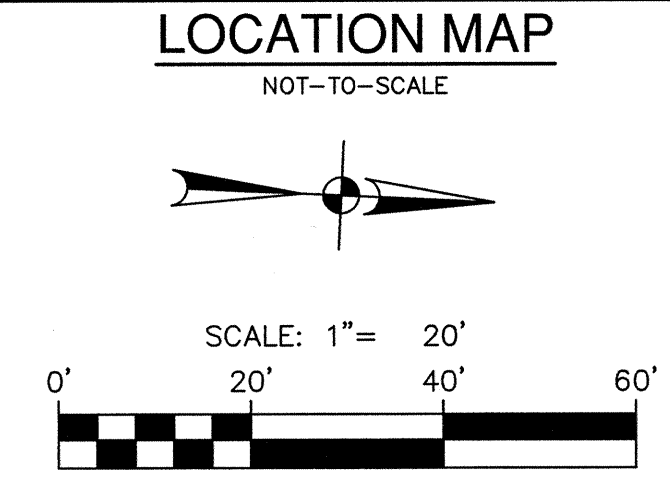
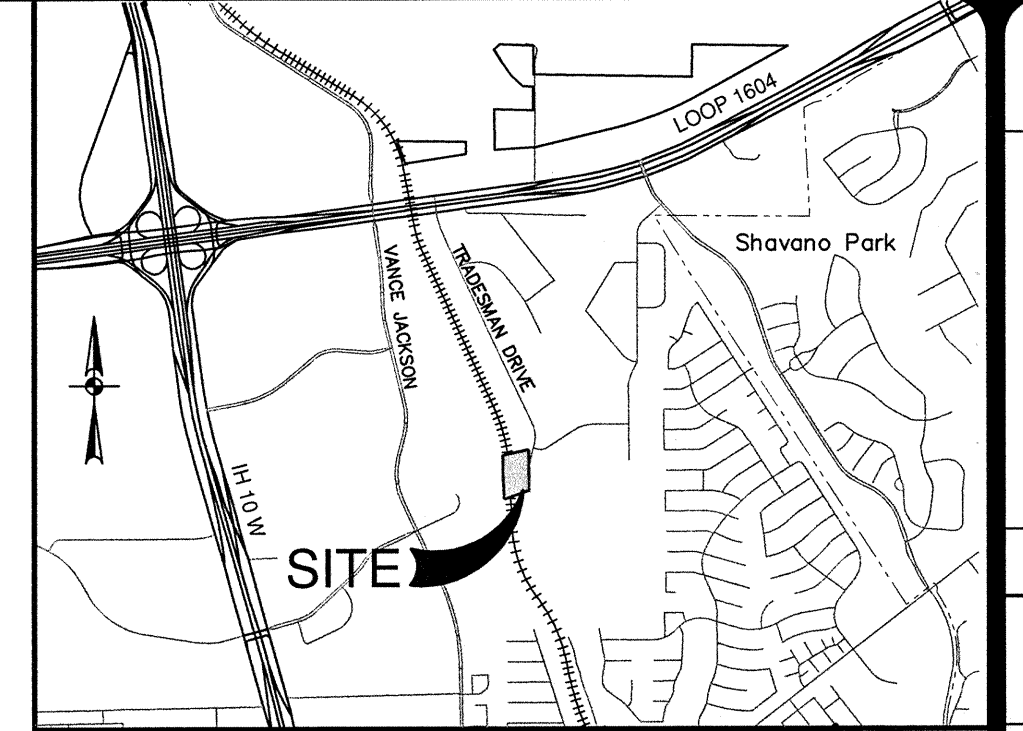
CURVE #	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	1206.31'	016°45'39"	S09°37'18"W	356.72', 357.99'
C2	544.09'	002°29'07"	S07°49'03"E	23.60', 23.60'
C3	2342.33'	000°09'14"	N03°01'30"W	3.56', 3.56'

**KEYED NOTES**

- PROPOSED STANDARD 6" CURB (TYP) (SEE CIVIL DETAILS SHEET)
- PROPOSED STANDARD 2" CURB TRANSITION (SEE CIVIL DETAILS SHEET)
- PROPOSED CONCRETE SIDEWALK (SEE CIVIL DETAILS SHEET)
- PROPOSED WHEEL CHAIR RAMP (SEE CIVIL DETAILS SHEET)
- PROPOSED WHEEL STOP (TYP) (SEE CIVIL DETAILS SHEET)
- PROPOSED BIKE RACK (SEE CIVIL DETAILS SHEET)
- PROPOSED CONCRETE DRIVEWAY (SEE CIVIL DETAILS SHEET)
- PROPOSED HEADER CURB (SEE CIVIL DETAILS SHEET)
- PROPOSED BOLLARD (TYP) (SEE CIVIL DETAILS SHEET)
- CONCRETE/ASPHALT PAVEMENT JUNCTURE (SEE CIVIL DETAILS SHEET)
- PROPOSED ACCESSIBLE PARKING SYMBOL (TYP) (PAINT BLUE)
- PROPOSED ACCESSIBLE PARKING SIGN (TYP) (SEE CIVIL DETAILS SHEET)
- PROPOSED PEDESTRIAN CROSSWALK (SEE CIVIL DETAILS SHEET)
- PROPOSED 5'X5' CONCRETE LANDING (SEE ARCHITECT PLAN FOR DETAILS)
- PROPOSED STEPS (SEE ARCHITECT PLAN FOR DETAILS)
- EXISTING CURB TO REMAIN (SEE CIVIL DETAILS SHEET)
- PROPOSED PARKING STRIPE (SEE CIVIL DETAILS SHEET)
- PROPOSED OVERHEAD CANOPY (SEE ARCHITECT PLAN FOR DETAILS)
- PROPOSED DO NOT ENTER SIGN (SEE CIVIL DETAILS SHEET)

**LEGEND**

- PROPERTY LINE
- EXISTING CURB TO REMAIN
- PROPOSED CURB
- EXISTING CONCRETE SIDEWALK
- PROPOSED CONCRETE SIDEWALK
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- EXISTING FIRE HYDRANT
- VAN ACCESSIBLE PARKING SPACE
- ACCESSIBLE PARKING SYMBOL
- LANDSCAPE AREA
- PARKING COUNT
- EXISTING STORM DRAIN MANHOLE



**BENCHMARK**  
 CP-BM1 CHISELED SQUARE WITH "X" ON CONCRETE CURB ELEV = 993.26  
 CP-BM2 CHISELED SQUARE WITH "X" ON CONCRETE CURB ELEV = 991.55

**ADDRESS**  
 14886 TRADESMAN DRIVE  
 SAN ANTONIO, TEXAS 78249

**LEGAL DESCRIPTION**  
 LOT 4, BLOCK 7, NCB 14848  
 TRADESMAN QUARRY (VOL. 9631, PGS 64-68, DPR)

NOTE: BENCHMARKS AND EXISTING TOPO SURVEY ARE BY OTHERS. CONTRACTOR TO VERIFY ELEVATIONS PRIOR TO CONSTRUCTION.



**PAPE-DAWSON ENGINEERS**  
 2000 NW LOOP 410 | SAN ANTONIO, TEXAS 78212 | PHONE: 210.375.9000  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM LICENSE # 13028  
 TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, FIRM REGISTRATION # 10028900

**TRADESMAN DRIVE FLEX SPACE**  
 SAN ANTONIO, TEXAS  
 DIMENSIONAL CONTROL & PAVING PLAN

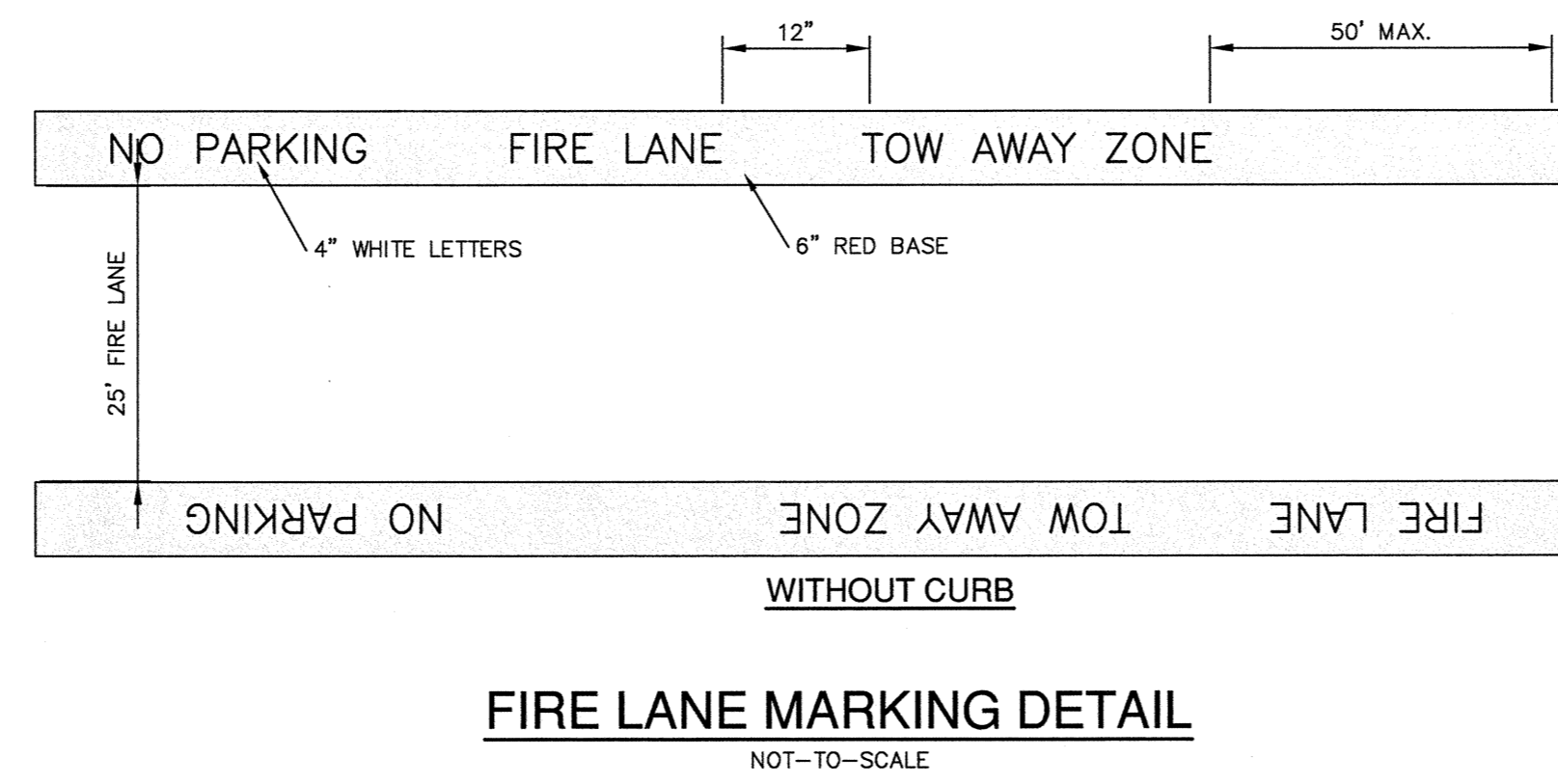
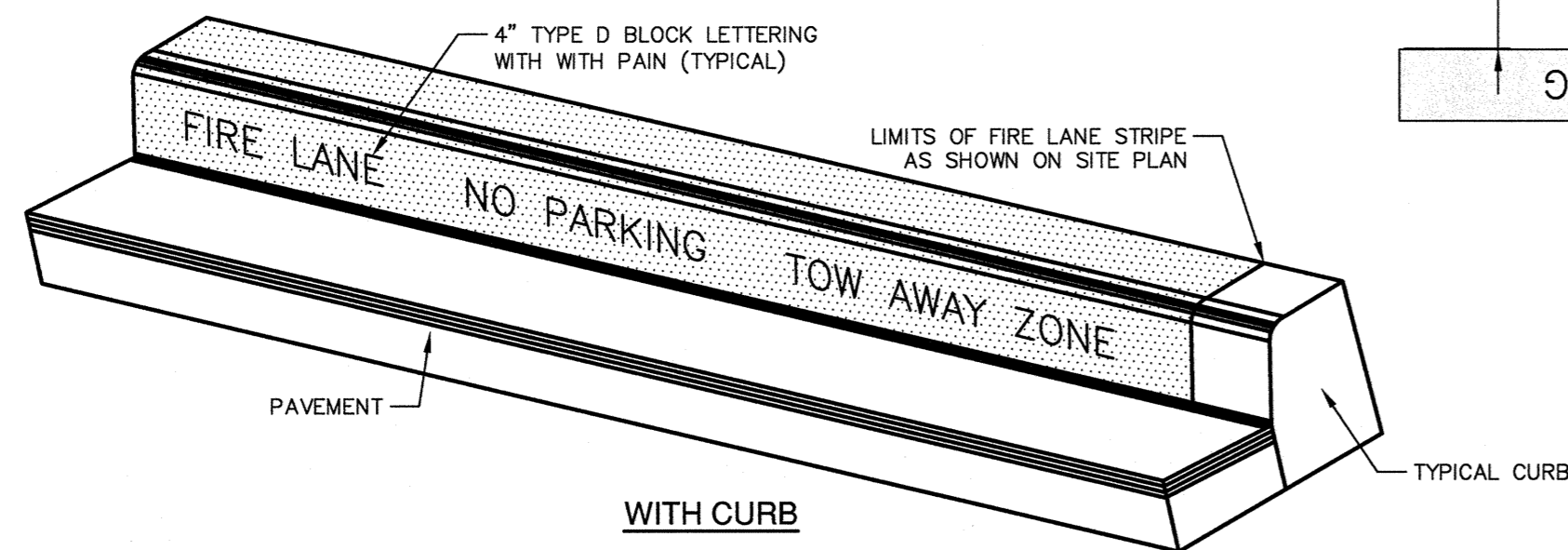
PLAT NO. **070744**  
 JOB NO. 11001-00  
 DATE APRIL 2016  
 DESIGNER BES  
 CHECKED GS DRAWN DD  
 SHEET **C1.00**

**TRENCH EXCAVATION SAFETY PROTECTION:**

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

**NOTES:**

1. NO PARKING FIRE LANE TO BE PAINTED ENTIRE LENGTH OF DEDICATED FIRE LANE.
2. FIRE LANE MARKINGS SHALL BE PLACED UPON THE VERTICAL SURFACE OF CURBS OR ON THE PAVEMENT SURFACE.
3. WHERE THE ABOVE FIRE LANE MARKINGS ARE DETERMINED TO BE INADEQUATE IN CONTROLLING TRAFFIC, THE PROPERTY OWNER WILL BE REQUIRED TO POST FIRE LANE SIGNS IN ADDITION TO OTHER MARKINGS.
4. WHEN RESTRIPING, ADDITIONS TO THE EXISTING FIRE LINES ARE NOT ALLOWED WITHOUT PRIOR APPROVAL OF THE FIRE DEPARTMENT.
5. ALL DESIGNATED FIRE LANES SHALL BE MAINTAINED AND KEPT IN A STATE OF GOOD REPAIR AT ALL TIMES BY THE OWNER OR PERSON IN CONTROL OF THE PREMISES.
6. CONTRACTOR TO COORDINATE WITH FIRE MARSHALL TO REQUEST PAVEMENT STRIPING IN-LIEU OF PAINTED CURB AT FRONT OF BUILDING.



**CAUTION!!!**

THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

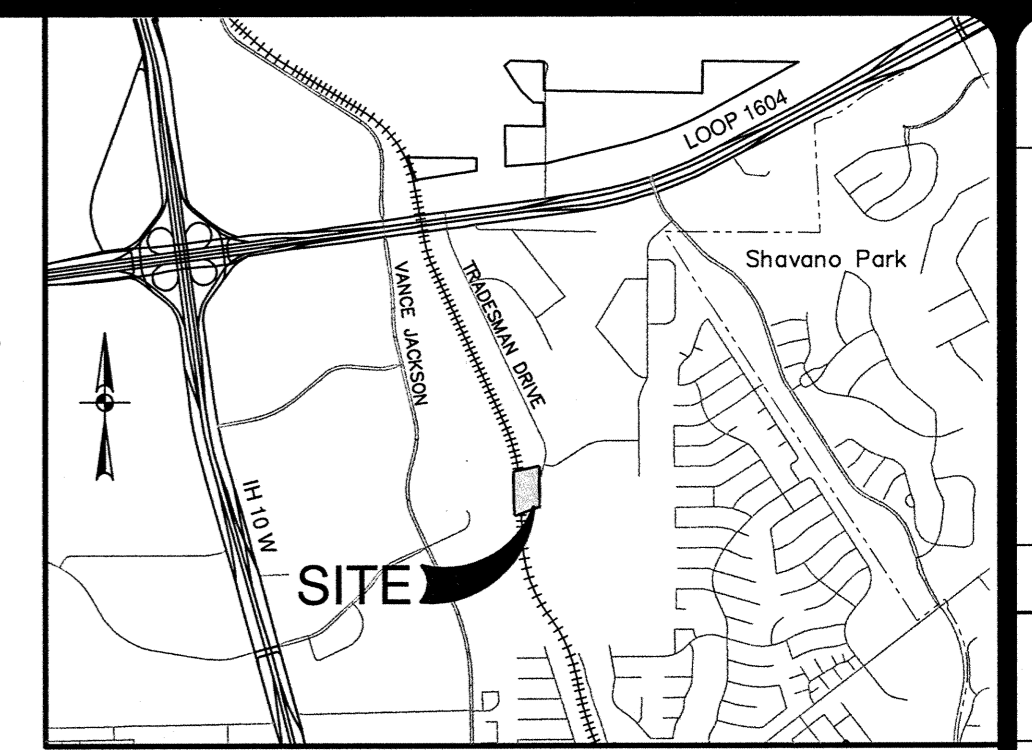
**FIRE PROTECTION NOTES:**

1. FIRE LANES SHALL HAVE A MINIMUM 2-WAY TRAFFIC WIDTH OF 25 FT. WITH A MINIMUM OUTSIDE TURNING RADIUS OF 50 FT., UNLESS OTHERWISE NOTED.
2. FIRE LANES NEXT TO FIRE HYDRANTS OR DESIGNATED FOR AERIAL APPARATUS SHALL BE A MINIMUM OF 26 FT.
3. FIRE LANES SHALL BE DESIGNATED IN ACCORDANCE TO THE LATEST INTERNATIONAL FIRE CODE AND PER APPLICABLE LOCAL AMENDMENTS.

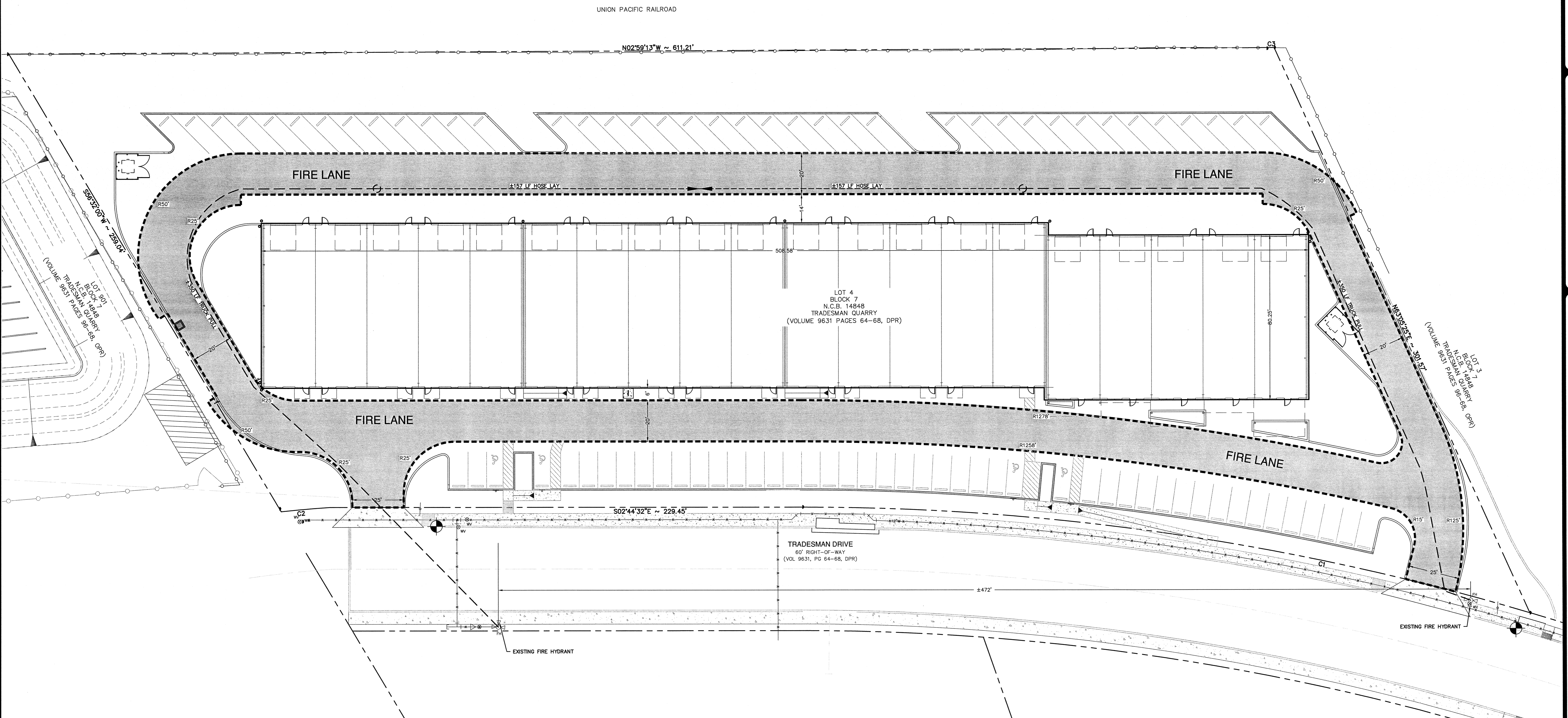
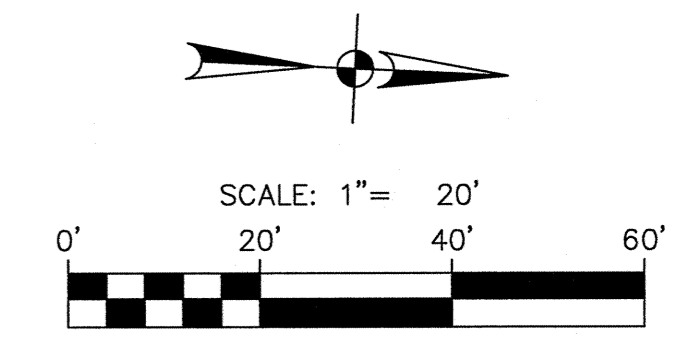
CURVE #	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH	LENGTH
C1	1228.21'	016°43'39"	S25°37'18"W	356.72'	357.99'
C2	844.09'	002°59'07"	S67°49'03"E	23.80'	23.67'
C3	2342.23'	000°09'14"	N03°01'30"W	3.56'	3.56'

**LEGEND**

- PROPERTY LINE
- EXISTING WATER LINE
- FIRE LANE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION (FDC)
- HOSE LAY (550' MAX BY TRUCK)
- HOSE LAY (200' MAX BY HAND)



**LOCATION MAP**



**BENCHMARK**  
 CP-BM1 CHISELED SQUARE WITH "X" ON CONCRETE CURB ELEV.=993.28  
 CP-BM2 CHISELED SQUARE WITH "X" ON CONCRETE CURB ELEV.=991.55

**ADDRESS**  
 14886 TRADESMAN DRIVE, SAN ANTONIO, TEXAS 78249

**LEGAL DESCRIPTION**  
 LOT 4, BLOCK 7, NCB 14848 TRADESMAN QUARRY (VOL. 9631, PGS 64-68, DPR)

NO.	REVISION	DATE



**PAPE-DAWSON ENGINEERS**  
 2000 NW LOOP 410 | SAN ANTONIO, TEXAS 78217 | PHONE: 210.375.9000  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM # 102280  
 TEXAS BOARD OF PROFESSIONAL LAND SURVEYORS, FIRM # 102280

**TRADESMAN DRIVE FLEX SPACE**  
 SAN ANTONIO, TEXAS  
 FIRE PROTECTION SITE PLAN

PLAT NO. **070744**  
 JOB NO. 11001-00  
 DATE APRIL 2016  
 DESIGNER BES  
 CHECKED GS DRAWN DD  
 SHEET **C2.00**

Date: Apr 15, 2016 1:56pm User: JD\_Alex44 File: P:\110101\03\Design\Chal\CD.DWG P:\110101-10.dwg

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**UTILITY CONSTRUCTION NOTES:**

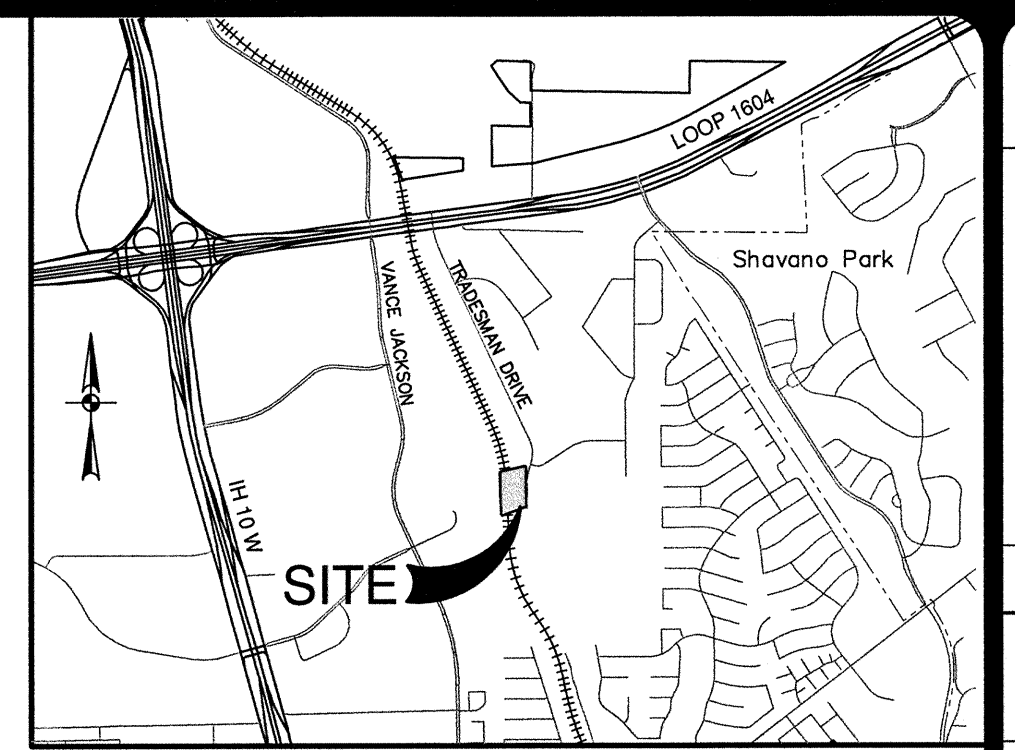
- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL CONFORM TO ALL APPLICABLE CITY OF SAN ANTONIO AND SAN ANTONIO RULES AND REQUIREMENTS FOR STREETS, SIDEWALKS, ALLEYS AND ROADWAY DESIGN (LATEST EDITION), THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (LATEST EDITION), AND THE CITY OF SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER WORKS CONSTRUCTION (LATEST EDITION).
- THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS IMMEDIATELY. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE SYSTEMS WHETHER SHOWN ON PLANS OR NOT.
- ALL UTILITIES SHALL BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION.
- ALL UTILITY CONNECTIONS SHALL BE COORDINATED WITH THE MECHANICAL AND ELECTRICAL PLANS. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL ANY BENDS, FITTINGS, ETC. IN THE WATER AND FIRE LINES AS REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES. NO SEPARATE PAY.
- NO WATER SETTING TO BACK FILL TRENCHES WILL BE ALLOWED ON THIS PROJECT.
- REFER TO ELECTRICAL PLANS FOR PARKING LOT LIGHTING AND SIGN LIGHTING.
- ADDITIONAL CONDUITS ARE SHOWN ON OTHER PLANS.
- THE CONTRACTOR SHALL INSTALL THE SANITARY SEWER SYSTEM OUTSIDE OF THE BUILDING IN ACCORDANCE WITH PROCEDURES SPECIFIED BY THE CITY OF SAN ANTONIO PLUMBING CODE. THE LINE SHALL BE INSPECTED BY CITY OF SAN ANTONIO.
- WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS DEPARTMENT OF HEALTH RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS (9888 OR ANY REVISIONS THERETO).

- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.191, CITY PUBLIC SERVICE MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- ALL SPOIL AND OTHER UNSUITABLE MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
- ALL SERVICES ARE BROUGHT TO WITHIN 5 FEET OF THE BUILDING. BUILDING CONTRACTOR SHALL INCLUDE IN THEIR BID THE COST TO CONNECT ALL SERVICES TO THE BUILDING.
- CLEAN OUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLUMBING CODE AND AS DIRECTED BY THE PLUMBING INSPECTOR. ALL CLEAN OUT TOPS SHALL BE INSTALLED AT LEAST 2' ABOVE FINISHED GRADE OUTSIDE PAVEMENT AND FLUSH WITH FINISHED GRADE WITHIN THE PAVEMENT AREAS.
- ELECTRICAL SERVICE IS SHOWN APPROXIMATELY ONLY. FINAL ENGINEERING DRAWINGS WILL BE PROVIDED BY CITY PUBLIC SERVICE. CONTRACTOR SHALL CONTACT CITY PUBLIC SERVICE FOR FINAL PLANS AND DETAILS FOR ELECTRIC SERVICE TO BUILDING.
- REFER TO MEP PLANS FOR CONDUITS/SLEEVES TO PARKING LOT LIGHTS AND ALL SIGNALS.
- ALL 1 1/2" AND 3" WATER LINE SHALL BE SCH. 80 PVC PIPE.
- ALL SANITARY SEWER LINES SHALL BE SDR 26 PVC.

**CAUTION!!!**  
THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

**TRENCH EXCAVATION SAFETY PROTECTION:**

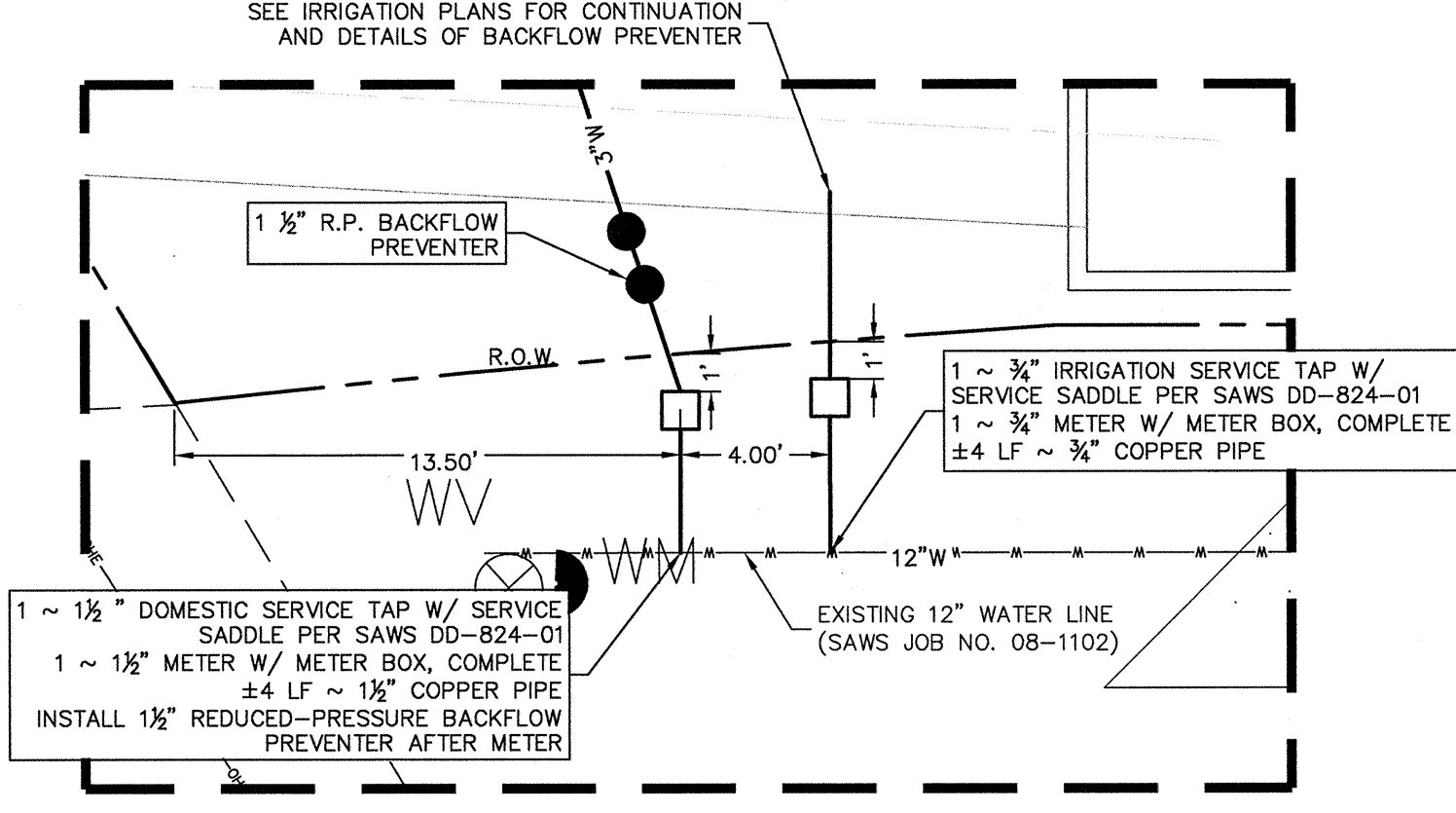
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LOCATION MAP NOT-TO-SCALE

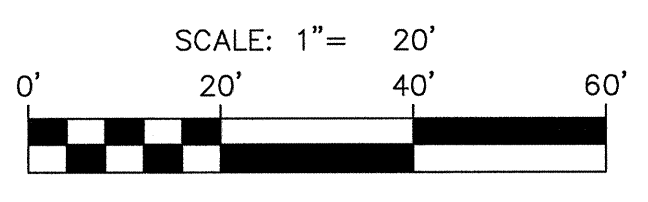
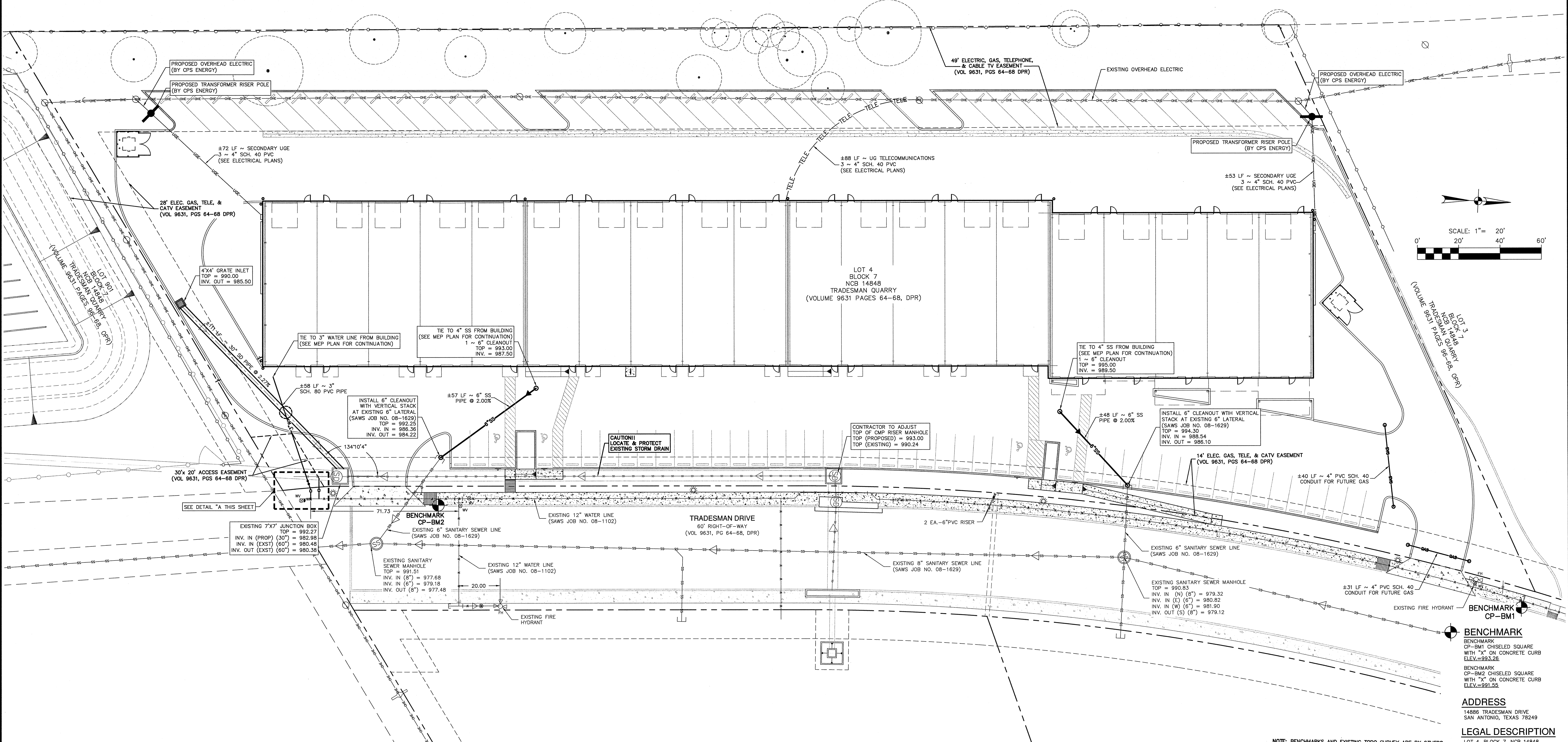
**LEGEND**

- PROPERTY LINE
- EXISTING SANITARY SEWER
- EXISTING OVERHEAD ELECTRIC & POWER POLE
- EXISTING WATER LINE
- EXISTING STORM DRAIN
- PROPOSED SANITARY SEWER LINE
- PROPOSED OVERHEAD ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED DOMESTIC WATER LINE
- PROPOSED GAS LINE CONDUIT
- PROPOSED TELECOMMUNICATIONS LINE
- PROPOSED STORM DRAIN
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- UTILITY CROSSING



DETAIL "A" SCALE: 1" = 5'

UNION PACIFIC RAILROAD



**PAPE-DAWSON ENGINEERS**  
SAN ANTONIO, TEXAS  
PHONE: 210.375.9000  
FAX: 210.375.8070  
2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78212

**SONG LUTIAN**  
79798  
LICENSED PROFESSIONAL ENGINEER  
STATE OF TEXAS

DATE: \_\_\_\_\_  
NO. REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
NO. REVISION: \_\_\_\_\_

**TRADESMAN DRIVE FLEX SPACE**  
SAN ANTONIO, TEXAS  
UTILITY PLAN

**BENCHMARK CP-BM1**  
BENCHMARK CP-BM1 CHISELED SQUARE WITH "X" ON CONCRETE CURB ELEV.=993.26

**BENCHMARK CP-BM2**  
BENCHMARK CP-BM2 CHISELED SQUARE WITH "X" ON CONCRETE CURB ELEV.=991.55

**ADDRESS**  
14886 TRADESMAN DRIVE  
SAN ANTONIO, TEXAS 78249

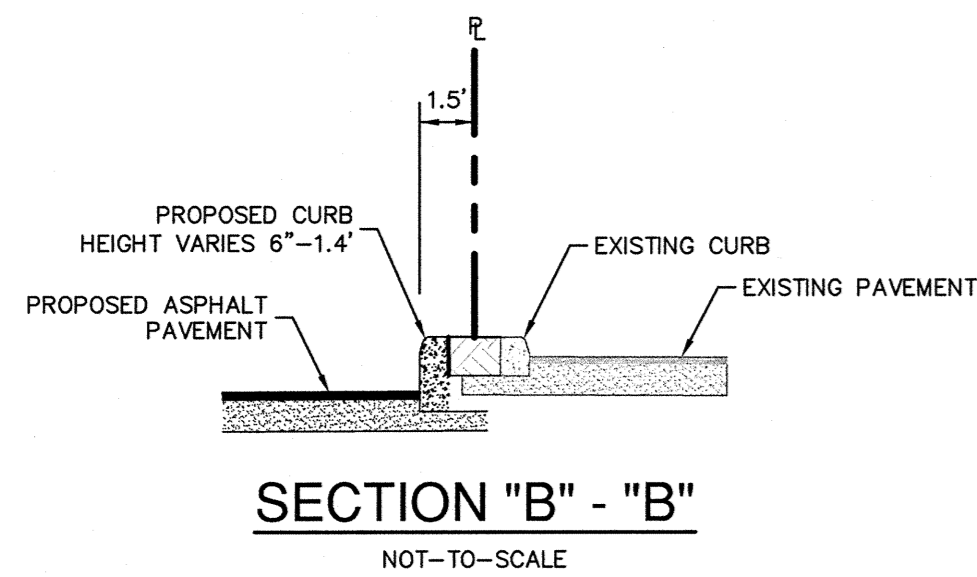
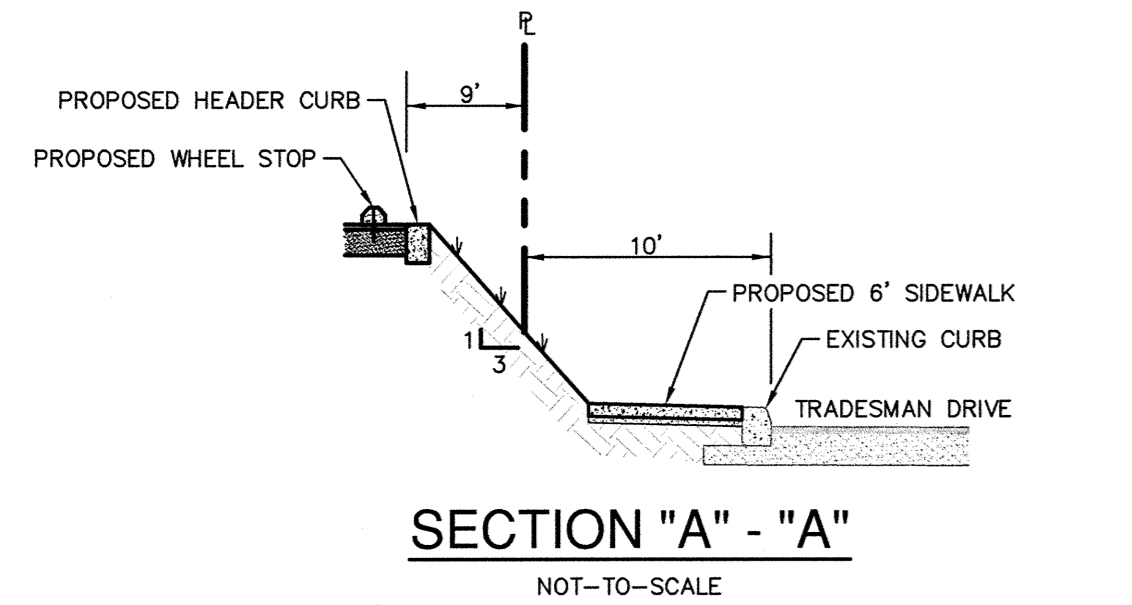
**LEGAL DESCRIPTION**  
LOT 4, BLOCK 7, NCB 14848 TRADESMAN QUARRY (VOL. 9631, PGS 64-68, DPR)

PLAT NO. **070744**  
JOB NO. 11001-00  
DATE APRIL 2016  
DESIGNER BES  
CHECKED GS DRAWN DD  
SHEET **C3.00**

Date: Apr 15, 2016, 2:58pm User: G:\46466... File: P:\1101010\Drawings\CA\163.00 UT1101010-1D.dwg

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PERMIT SET



**GRADING NOTES:**

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK WHERE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND TxDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).
2. SITE PREPARATION, GRADING, EXCAVATION AND FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AND SPECIFICATIONS.
3. ALL SELECT FILL MATERIAL PROVIDED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING.
4. ALL ELEVATIONS AND PROPOSED CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BASE, GRASS, TOPSOIL, AND MULCH MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
5. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
6. THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
8. THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC. AND DISPOSE OFF SITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND TOPSOIL. CLEAN STRIPPINGS AND TOPSOIL MAY BE STOCKPILED ON SITE FOR REUSE IN A LOCATION SPECIFIED BY THE OWNER.
9. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION. ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SWPPP REQUIREMENTS. REFERENCE THE LANDSCAPE ARCHITECT'S PLAN, IF APPLICABLE.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS USE OF SILT FENCES, ETC. TO KEEP DRAINAGE AND SILT FROM WASHING ONTO ADJACENT PROPERTY, STREETS OR DRAINAGEWAYS. CONTRACTOR SHALL IMMEDIATELY REMOVE SILT/DEBRIS WHICH WASHES

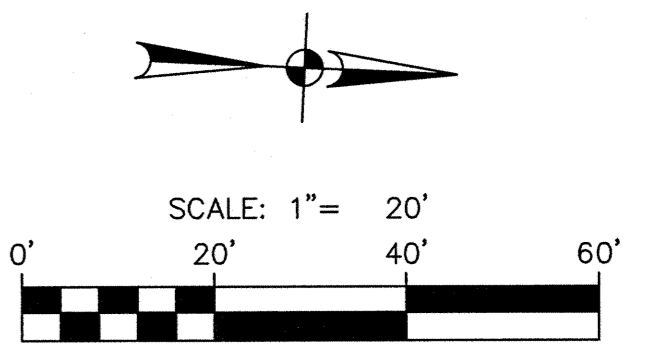
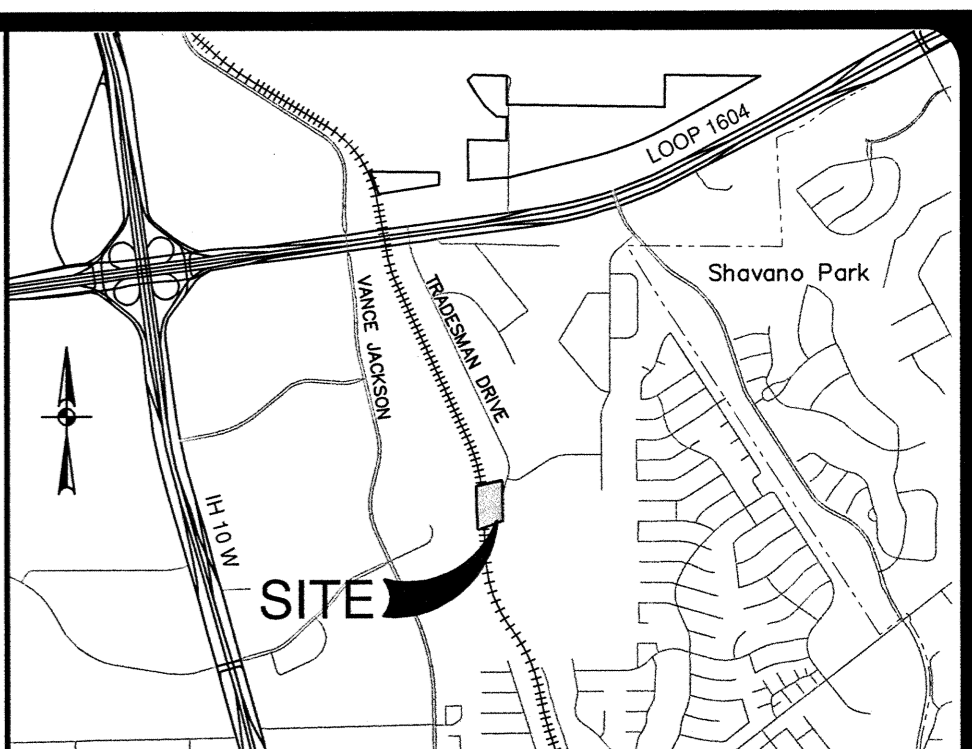
11. THE CONTRACTOR SHALL OBTAIN GRADES SHOWN HEREON WITHIN  $\pm 0.1$ -TENTH (0.10) FOOT.
12. IN PROPOSED PAVING AREAS, IT IS INTENDED THAT THE MINIMUM GRADE IS 0.5% ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 1.0% UNLESS OTHERWISE SHOWN.
13. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SITE AND PROPOSED IMPROVEMENTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).
15. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN WORKING NEAR UTILITIES, GAS LINES, SEWER, OR EXISTING APPURTENANCES. PRIOR TO PERFORMING ANY EXCAVATION, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND ASSURE HIMSELF THAT ALL UTILITIES HAVE BEEN ADEQUATELY LOCATED AND IDENTIFIED. THE ENGINEER SHALL BE NOTIFIED IF ANY UTILITY CONFLICTS ARE DISCOVERED.
16. UTILITIES SHOWN ON THE PLANS ARE FROM INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION AND VERIFY SIZE, GRADE AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR, AT HIS OWN EXPENSE.
17. POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
18. FOR FILL PLACEMENT ON HILL SIDES OR STEEP SLOPE AREAS, THE CONTRACTOR SHALL REFERENCE THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR SPECIAL INSTRUCTIONS REGARDING BENCHING.
19. NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.

**DRAINAGE NOTES:**

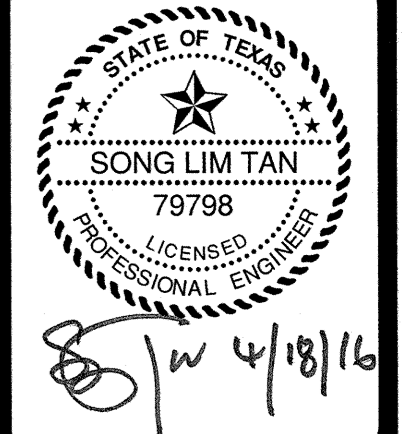
1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK SHALL COMPLY WITH THE PROJECT GEOTECH REPORT, THE PROJECT SPECIFICATIONS, AND THE CURRENT CITY, COUNTY OR TxDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
2. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING, ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHALL BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT THE CONTRACTORS SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.
3. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES. THE CONTRACTOR SHOULD EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITIES AND SHOULD THEY BE DAMAGED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR WILL BE REQUIRED TO REPAIR OR REPLACE THE DAMAGED FACILITIES AT CONTRACTORS EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL OR BETTER CONDITION DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.
5. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION.
6. WATER LETTING THE BACKFILL OF UTILITY TRENCHES WILL NOT BE PERMITTED.
7. CONTRACTOR SHALL ENSURE PROPER SIZE OF JUNCTION BOXES (NEEDED WHERE INDICATED ON PLAN, CONTRACTOR SHALL CONNECT STORM DRAIN PIPE TO JUNCTION BOXES PER MANUFACTURERS SPECIFICATIONS).
8. ALL STORM DRAIN TO JUNCTION BOX CONNECTIONS SHALL HAVE CONCRETE COLLARS.
9. ALL GRATE INLETS MUST BE H20 RATED GRATES.
10. TOPS OF MANHOLES, JUNCTION BOXES AND GRATES SHALL BE SET FLUSH TO FINISHED SURFACE BASED UPON GRADING PLAN.
11. ALL STORM DRAIN PIPE TO BE ULTRAFLO CORRUGATED METAL PIPE (MFCMP) WITH A MAXIMUM MANNINGS ROUGHNESS COEFFICIENT (N-VALUE) OF 0.015. STORM DRAIN PIPE 36" AND SMALLER MAY BE HIGH DENSITY POLYETHYLENE (HDPE) PIPE WITH N-OF 0.013.

**LEGEND:**

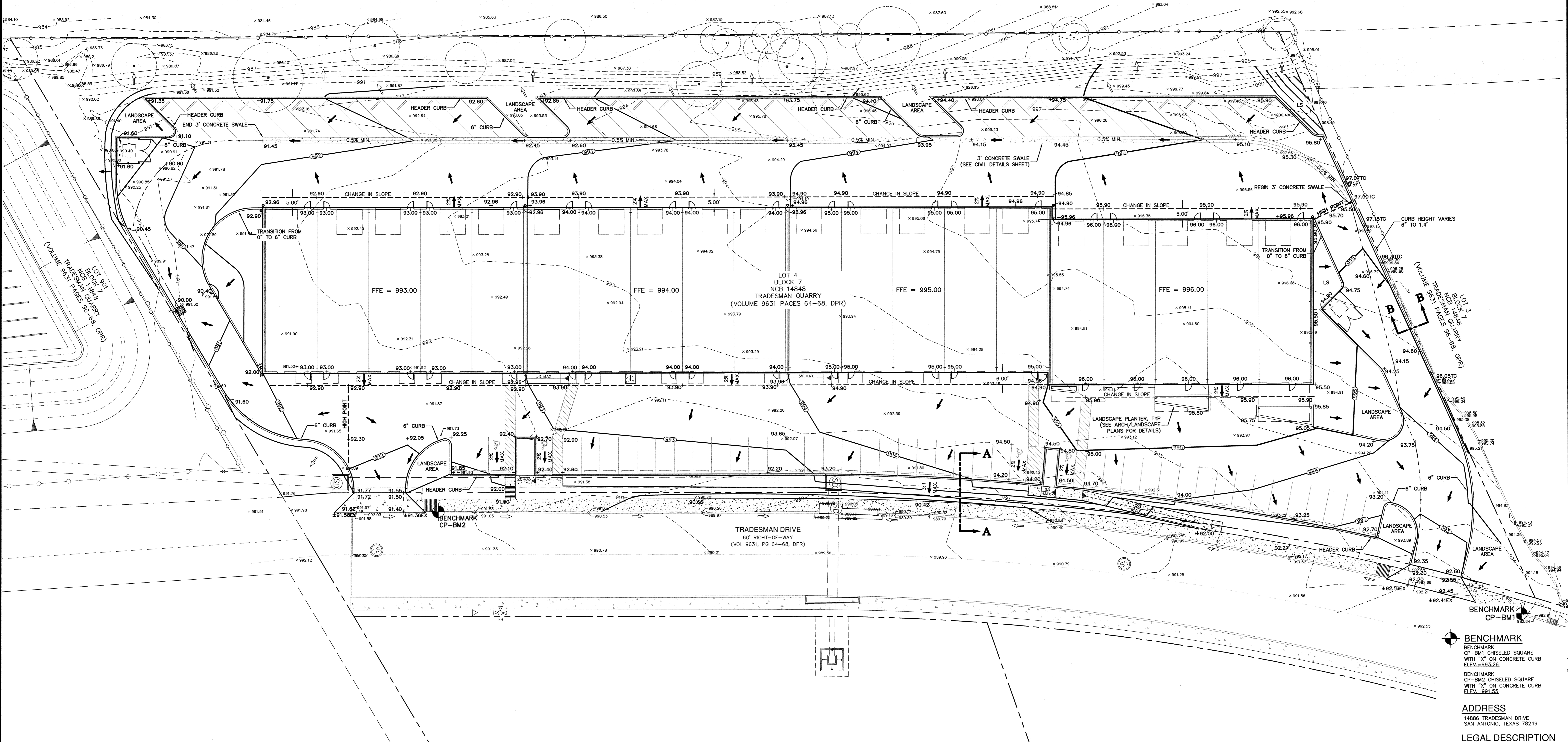
- PROPERTY LINE
- + 974.70 EXISTING SPOT ELEVATION
- + 76.00 PROPOSED SPOT ELEVATION
- - - EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED CURB
- PROPOSED HIGH POINT
- PROPOSED CHANGE IN SLOPE
- DRAINAGE SWALE
- FLOW ARROW (EXISTING)
- FLOW ARROW (PROPOSED)
- EXISTING TREE TO REMAIN



NO.	REVISION	DATE



UNION PACIFIC RAILROAD



**BENCHMARK**  
 CP-BM1 CHISELED SQUARE WITH "X" ON CONCRETE CURB ELEV = 993.28  
 CP-BM2 CHISELED SQUARE WITH "X" ON CONCRETE CURB ELEV = 991.55

**ADDRESS**  
 1486 TRADESMAN DRIVE  
 SAN ANTONIO, TEXAS 78249

**LEGAL DESCRIPTION**  
 LOT 4, BLOCK 7, NCB 14848  
 TRADESMAN QUARRY  
 (VOL. 9631, PGS 64-68, DPR)

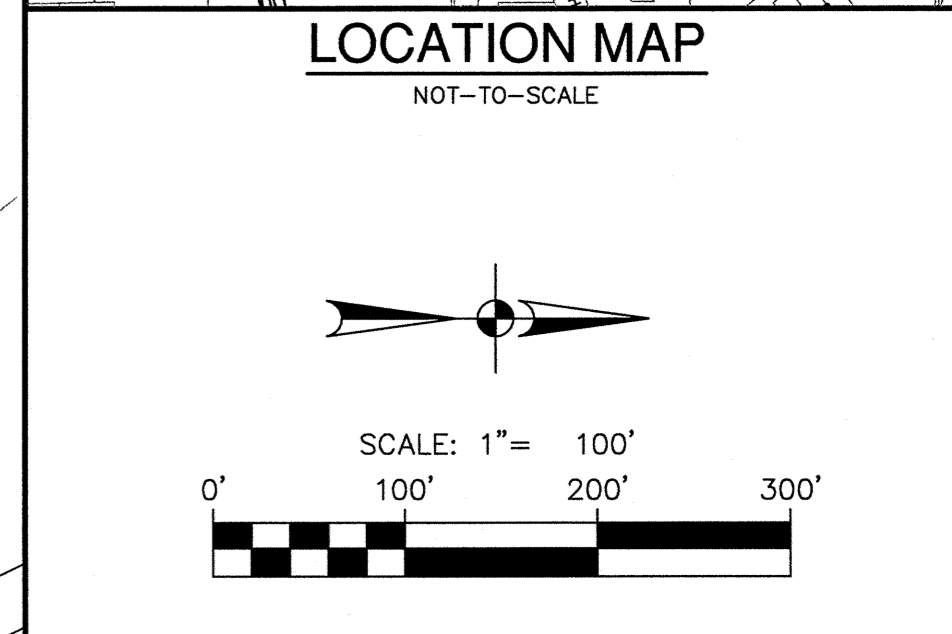
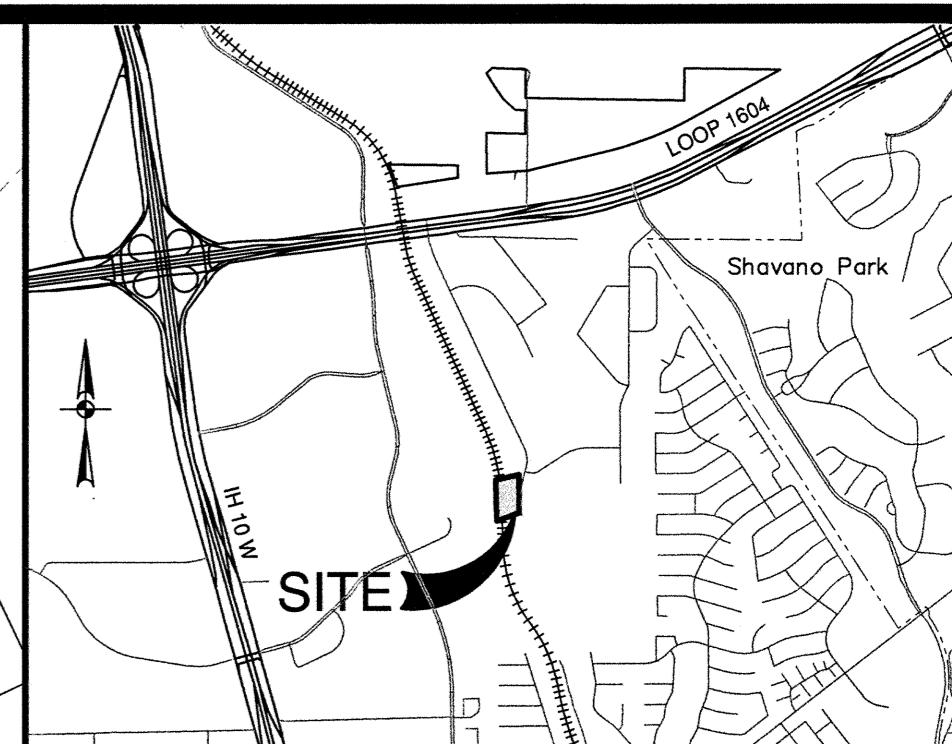
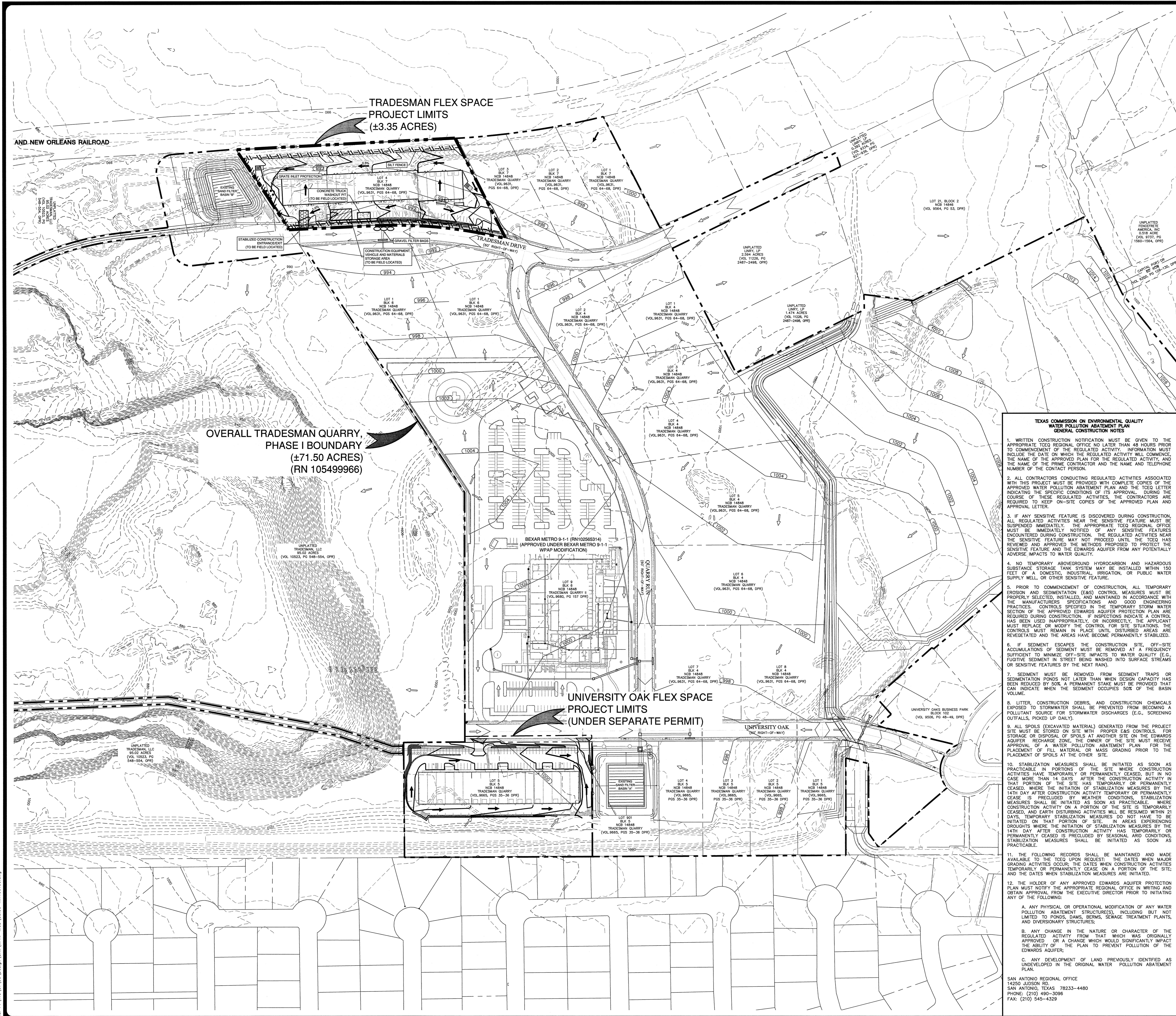
NOTE: BENCHMARKS AND EXISTING TOPO SURVEY ARE BY OTHERS. CONTRACTOR TO VERIFY ELEVATIONS PRIOR TO CONSTRUCTION.

**TRADESMAN DRIVE FLEX SPACE**  
 SAN ANTONIO, TEXAS  
 GRADING PLAN

PLAT NO. 070744  
 JOB NO. 11001-00  
 DATE APRIL 2016  
 DESIGNER BEB  
 CHECKED GS DRAWN DD  
 SHEET C4.00

Date: Apr 15, 2016 3:54pm User: D:\Mkcd  
 File: P:\110101\1030\Design\Chal\64-68.dwg

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- LEGEND
SITE BOUNDARY
PROJECT LIMITS FOR OVERALL TRADESMAN QUARRY, PHASE I BOUNDARY (RN 105499966)
PROJECT LIMITS FOR UNIVERSITY OAKS FLEX SPACE BOUNDARY
EXISTING CONTOUR (1050)
PROPOSED CONTOUR (1050)
FLOW ARROW (EXISTING)
FLOW ARROW (PROPOSED)
SILT FENCE
GRATE INLET PROTECTION
GRAVEL FILTER BAGS
STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)
CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)
CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)

- GENERAL NOTES
1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
2. LOCATIONS OF CONSTRUCTION ENTRANCE/EXITS, CONCRETE WASHOUT PITS, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARDS TO BE DETERMINED IN THE FIELD.
3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
6. CONTRACTOR, TO THE EXTENT PRACTICAL, SHALL MINIMIZE THE AMOUNT OF AREA DISTURBED AS SOON AS PRACTICAL. ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENTS, OR EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
7. BEST MANAGEMENT PRACTICES MUST BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADE AREAS.
8. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED.
9. ALL TEMPORARY BMPs WILL BE REMOVED ONCE WATERSHED IS STABILIZED.
10. MUD OR DIRT INADVERTENTLY TRACKED OFF-SITE AND ONTO EXISTING STREETS SHALL BE REMOVED IMMEDIATELY BY HAND OR MECHANICAL BROOM SWEEPING.
11. PRIOR TO INITIATION OF SUBSEQUENT PHASES OF CONSTRUCTION, TEMPORARY BMPs INCLUDING SILT FENCING, CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND CONSTRUCTION STAGING AREA SHALL BE FIELD LOCATED AS APPROPRIATE FOR THE AREA OF CONSTRUCTION.
12. TEMPORARY POLLUTION ABATEMENT MEASURES SHOWN ON THE PLAN ARE FOR THE OVERALL DEVELOPMENT. TEMPORARY BMPs MAY REQUIRE ADJUSTMENT BASED ON PHASING OF CONSTRUCTION OF THE DEVELOPMENT. RECORDS OF ADJUSTMENTS AND REVISIONS SHALL BE MAINTAINED APPROPRIATE.
13. TEMPORARY BMPs SHOWN ON THIS SHEET ARE FOR GRAPHICAL PURPOSES AND MAY NOT BE TO SCALE. BMPs SHALL BE LOCATED WITHIN THE PROJECT LIMITS.
14. UPON COMPLETION OF THE PROJECT AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND REMOVAL OF TEMPORARY POLLUTION ABATEMENT MEASURES THAT CONFLICT WITH SITE IMPROVEMENTS SUCH AS LANDSCAPING AND FENCES SO AS TO PREVENT SEDIMENT FROM ESCAPING THE PROJECT SITE.

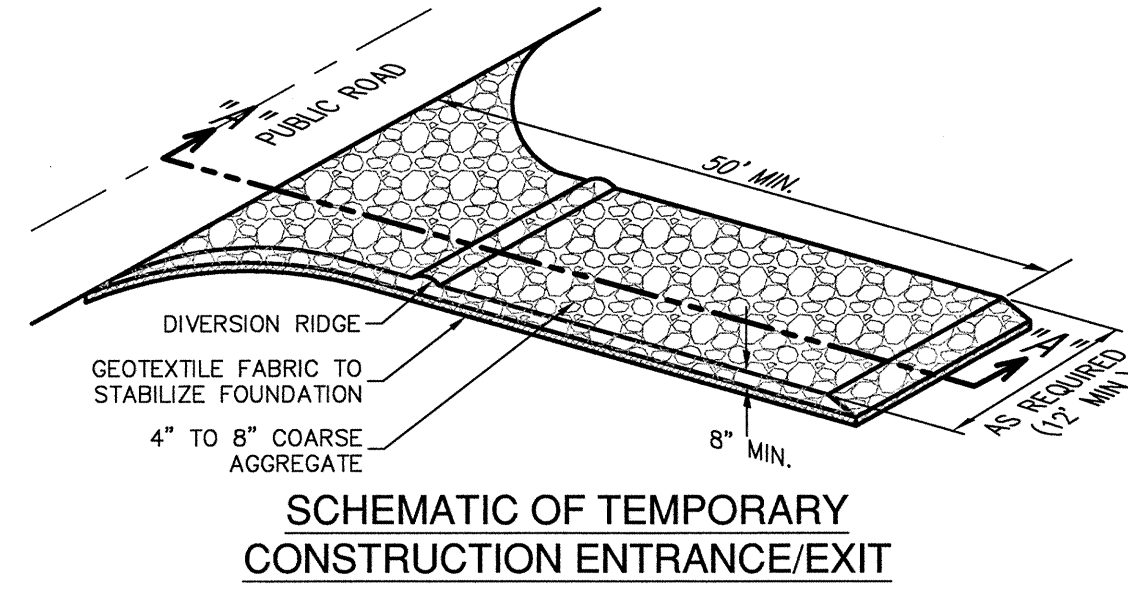
- TEMPORARY POLLUTION ABATEMENT NOTES
1. CONSTRUCTION OF PARKING LOT AND DRAINAGE STRUCTURES MAY PRECEDE BUILDING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PLACING SILT FENCE ALONG THE DOWN GRADIENT SIDE OF THE DISTURBED AREA PERPENDICULAR TO THE DRAINAGE FLOW.
2. GRAVEL FILTER BAGS SHALL BE PLACED IN AREAS WHERE DRAINAGE FLOW IS CONCENTRATED DUE TO NATURAL CONDITIONS OR CONSTRUCTION ACTIVITIES SUCH AS AT DRAINAGE STRUCTURES. THESE BAGS WILL BE MAINTAINED UNTIL THEY ARE NO LONGER NEEDED OR UNTIL THEY ARE REPLACED WITH PERMANENT POLLUTION ABATEMENT MEASURES.
3. CONSTRUCTION WITHIN THE DEVELOPMENT MAY NOT BE CONTINUOUS. THE CONTRACTOR IS RESPONSIBLE FOR PLACING SILT FENCE ALONG THE DOWN GRADIENT SIDE OF EACH PAD DURING BUILDING CONSTRUCTION. ALL SILT FENCE SHALL BE PLACED PERPENDICULAR TO DRAINAGE FLOW.

ADDRESS: 14888 TRADESMAN DRIVE, SAN ANTONIO, TEXAS 78249
LEGAL DESCRIPTION: LOT 4, BLOCK 7, NCB 14848 TRADESMAN QUARRY
PLAT NO: 070744
JOB NO: 11000-01
DATE: MARCH 2016
DESIGNER: BES
CHECKED: CS DRAWN: DD
SHEET: C5.00

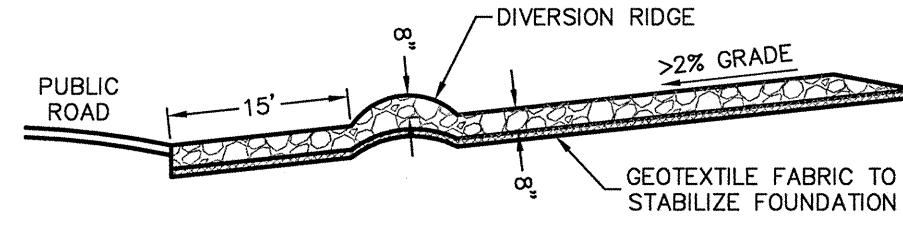
- TEXAS COMMISSION ON ENVIRONMENTAL QUALITY WATER POLLUTION ABATEMENT PLAN GENERAL CONSTRUCTION NOTES
1. WRITTEN CONSTRUCTION NOTIFICATION MUST BE GIVEN TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION MUST INCLUDE THE DATE ON WHICH THE REGULATED ACTIVITY WILL COMMENCE, THE NAME OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR AND THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
3. IF ANY SENSITIVE FEATURE IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
4. NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM MAY BE INSTALLED WITHIN 150 FEET OF A DOMESTIC, INDUSTRIAL, IRRIGATION, OR PUBLIC WATER SUPPLY WELL, OR OTHER SENSITIVE FEATURE.
5. PRIOR TO COMMENCEMENT OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E/S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE TEMPORARY STORM WATER SECTION OF THE APPROVED EDWARDS AQUIFER PROTECTION PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS STORM WATER HAS BEEN USED INAPPROPRIATELY OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE. DISTURBED AREAS CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.
6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS TO WATER QUALITY (E.G. FLUCTUATE SEDIMENT IN STREET BEING WASHED INTO SURFACE STREAMS OR SENSITIVE FEATURES BY THE NEXT RAIN).
7. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS NOT LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME.
8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES (E.G., SCREENING OUTFALLS, PICKED UP DAILY).
9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON SITE WITH PROPER E/S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
10. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASES IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE AFTER CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 30 DAYS. TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE IN AREAS EXPERIENCING DROUGHTS WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SEASONAL AND WEATHER CONDITIONS. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
12. THE HOLDER OF ANY APPROVED EDWARDS AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BEHNS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.
SAN ANTONIO REGIONAL OFFICE
14250 JUDSON RD.
SAN ANTONIO, TEXAS 78233-4480
PHONE: (210) 490-3096
FAX: (210) 545-4329

DATE:
NO. REVISION:
NO. REVISION:
DATE:
SITE OF TEXAS
SONG LIM TAN
79798
PAPER ENGINEERS
TRADESMAN DRIVE FLEX SPACE
SAN ANTONIO, TEXAS
TEMPORARY POLLUTION ABATEMENT PLAN
PLAT NO: 070744
JOB NO: 11000-01
DATE: MARCH 2016
DESIGNER: BES
CHECKED: CS DRAWN: DD
SHEET: C5.00
PERMIT SET

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Schematic of Temporary Construction Entrance/Exit



Section "A-A" of a Construction Entrance/Exit

MATERIALS

- 1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD^2, A MULLEN BURST RATING OF 140 LB/IN^2, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4-INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION

- 1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 8-INCHES TO 8-INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

COMMON TROUBLE POINTS

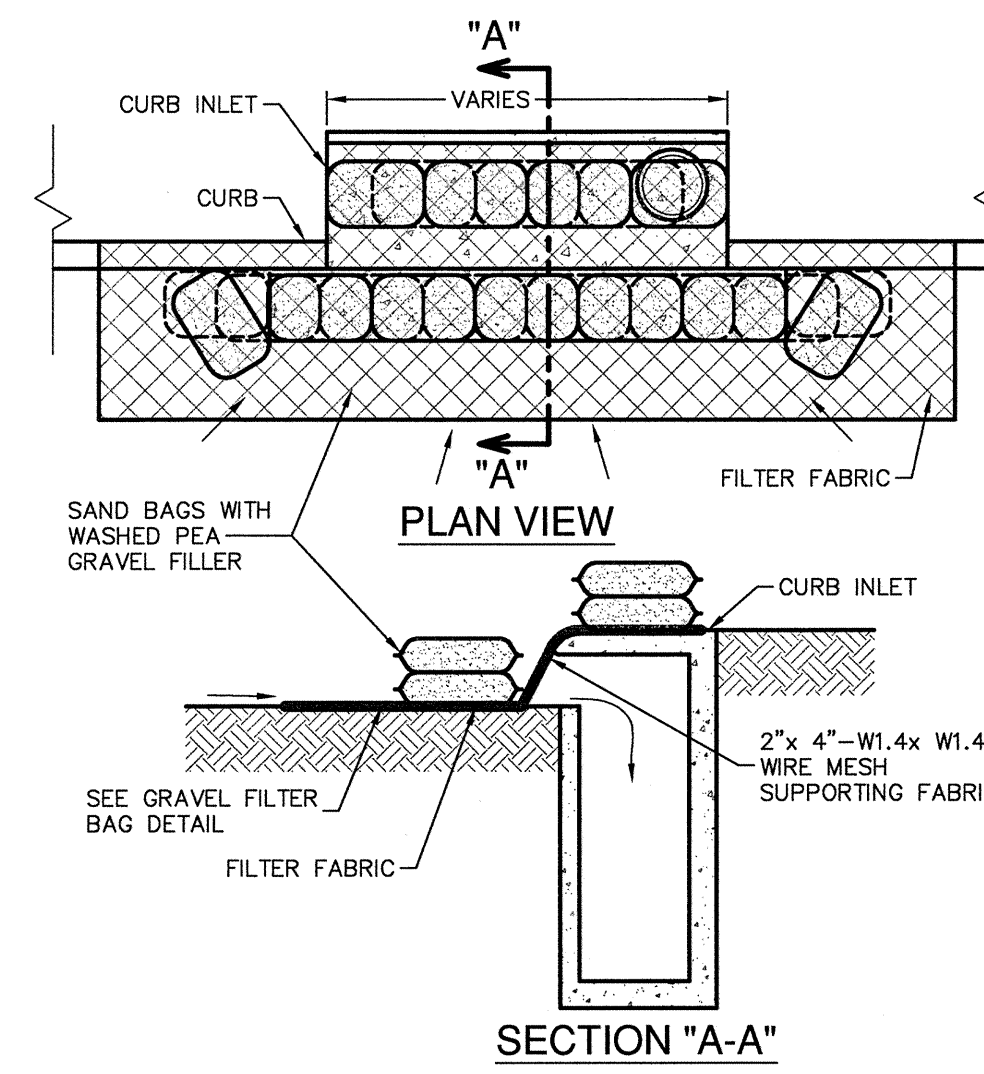
- 1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ONTO PUBLIC ROAD.
2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.
3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC-EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.
4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.
5. UNSTABLE FOUNDATION - USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES

- 1. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE



GENERAL NOTES

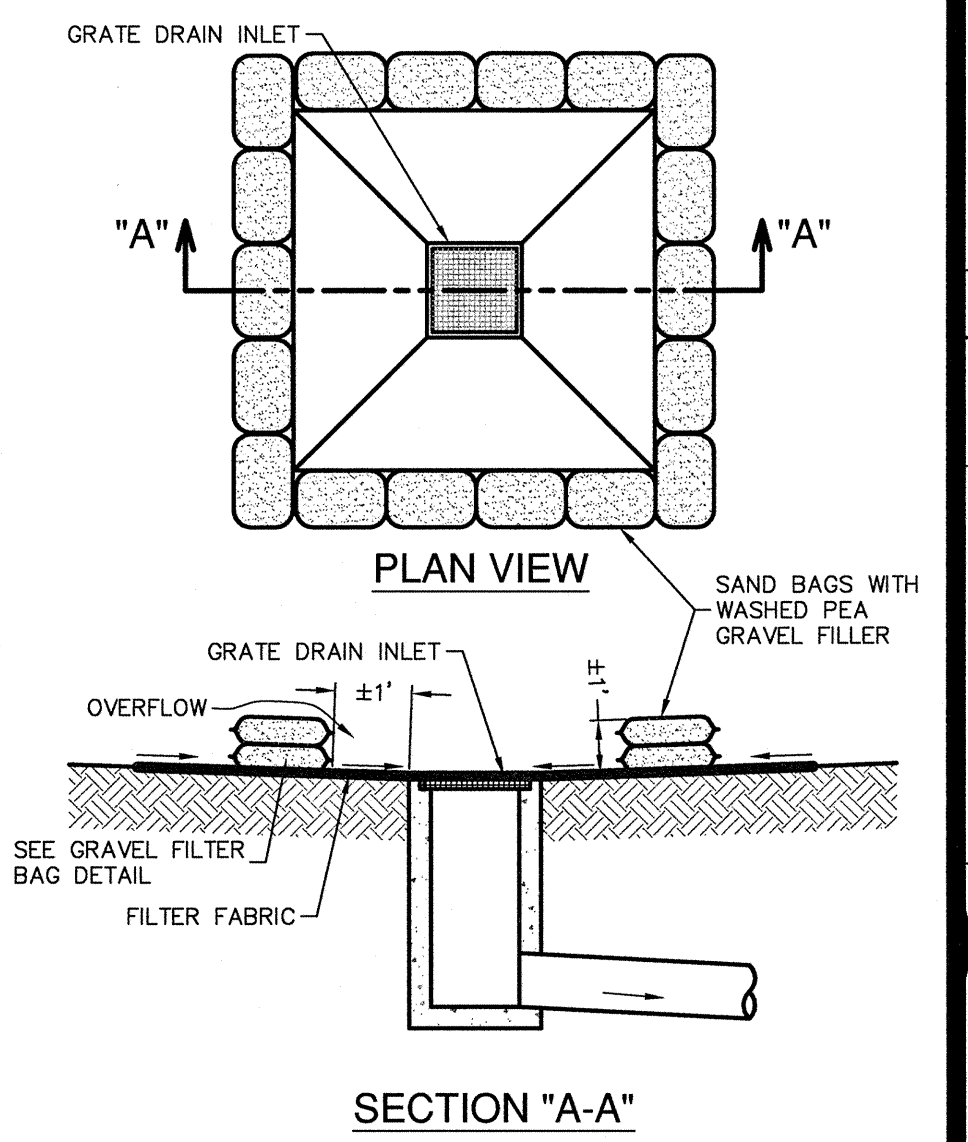
- 1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE OUTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.
2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES

- 1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT-TO-SCALE



GENERAL NOTES

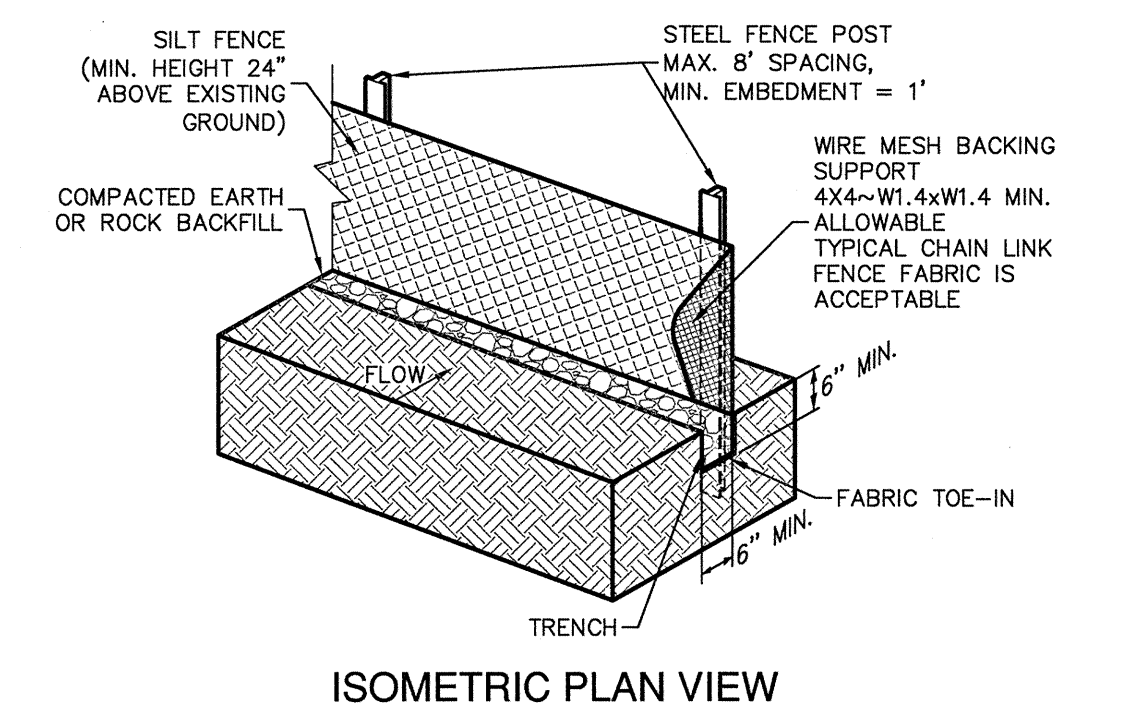
- 1. THE SANDBAGS SHOULD BE FILLED WITH WASHED PEA GRAVEL AND STACKED TO FORM A CONTINUOUS BARRIER ABOUT 1 FOOT HIGH AROUND INLETS.
2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES

- 1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL GRATE INLET PROTECTION DETAIL

NOT-TO-SCALE



ISOMETRIC PLAN VIEW

SILT FENCE

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE. WHEN PROPERLY USED, SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION, CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE AREAS OF CONCENTRATED FLOW.

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED AT ANY TIME.

MATERIALS

- 1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD^2, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN^2, ULTRAVIOLET STABILITY EXCEEDING 70% AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION

- 1. STEEL POSTS WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.
2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.

- 3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACES OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), HEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.

COMMON TROUBLE POINTS

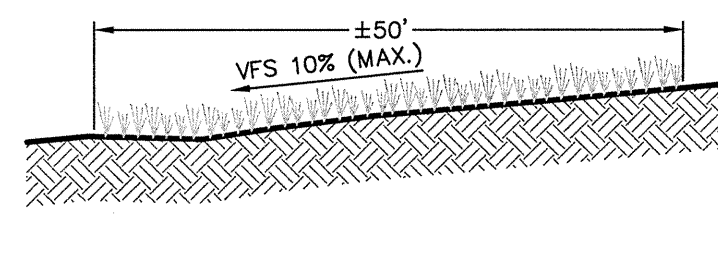
- 1. FENCE NOT INSTALLED ALONG THE CONTOUR CAUSING WATER TO CONCENTRATE AND FLOW OVER THE FENCE.
2. FABRIC NOT SEALED SECURELY TO GROUND (RUNOFF PASSING UNDER FENCE).
3. FENCE NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND SIDES).
4. FENCE TREATING TOO LARGE AN AREA, OR EXCESSIVE CHANNEL FLOW (RUNOFF OVERTOPS OR COLLAPSES FENCE).

INSPECTION AND MAINTENANCE GUIDELINES

- 1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
4. REPLACE OR REPAIR SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICULAR ACCESS POINTS.
5. WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SITUATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.

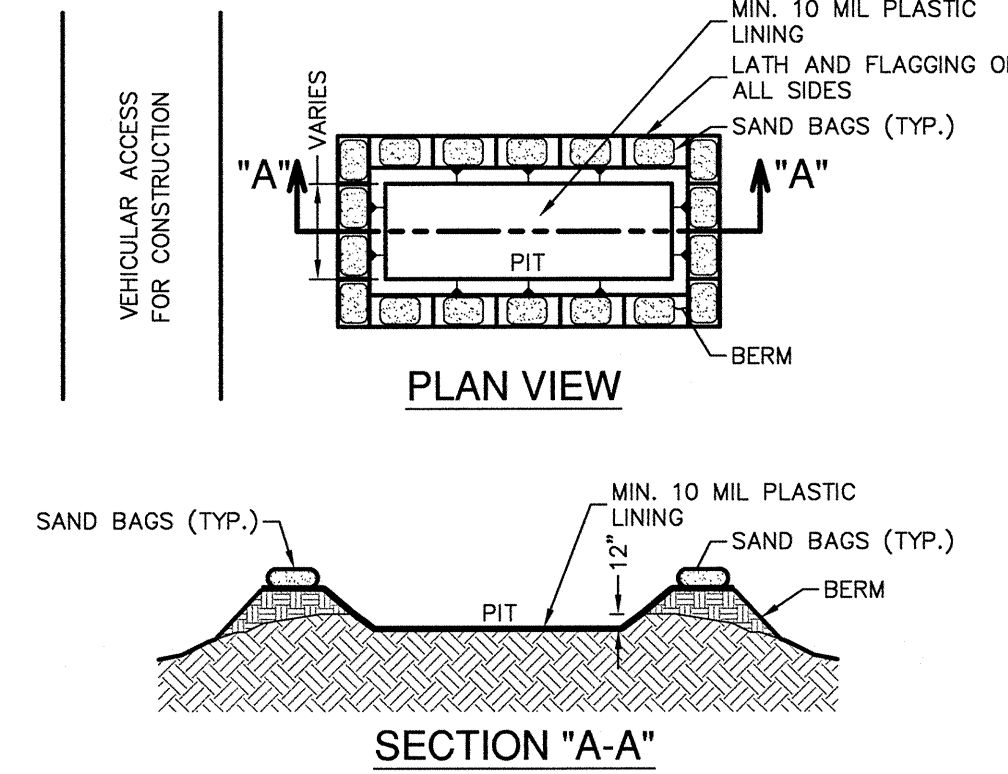
SILT FENCE DETAIL

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NATURAL VEGETATIVE BUFFER DETAIL

NOT-TO-SCALE



GENERAL NOTES

- 1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.
5. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

MATERIALS

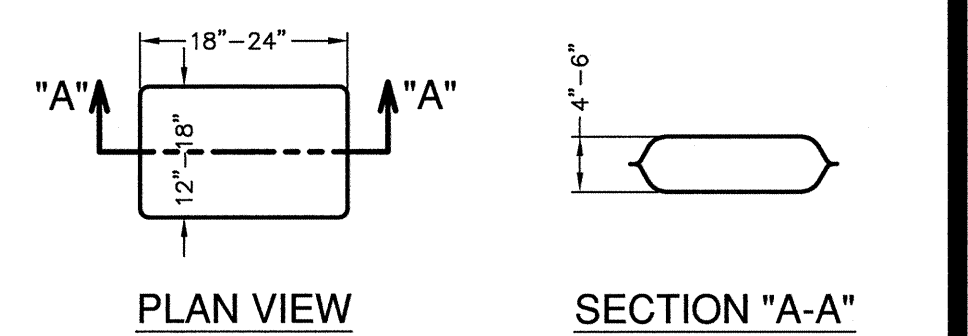
PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

MAINTENANCE

- 1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.
2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REPAIRED AND REPAIRED.

CONCRETE TRUCK WASHOUT PIT DETAIL

NOT-TO-SCALE



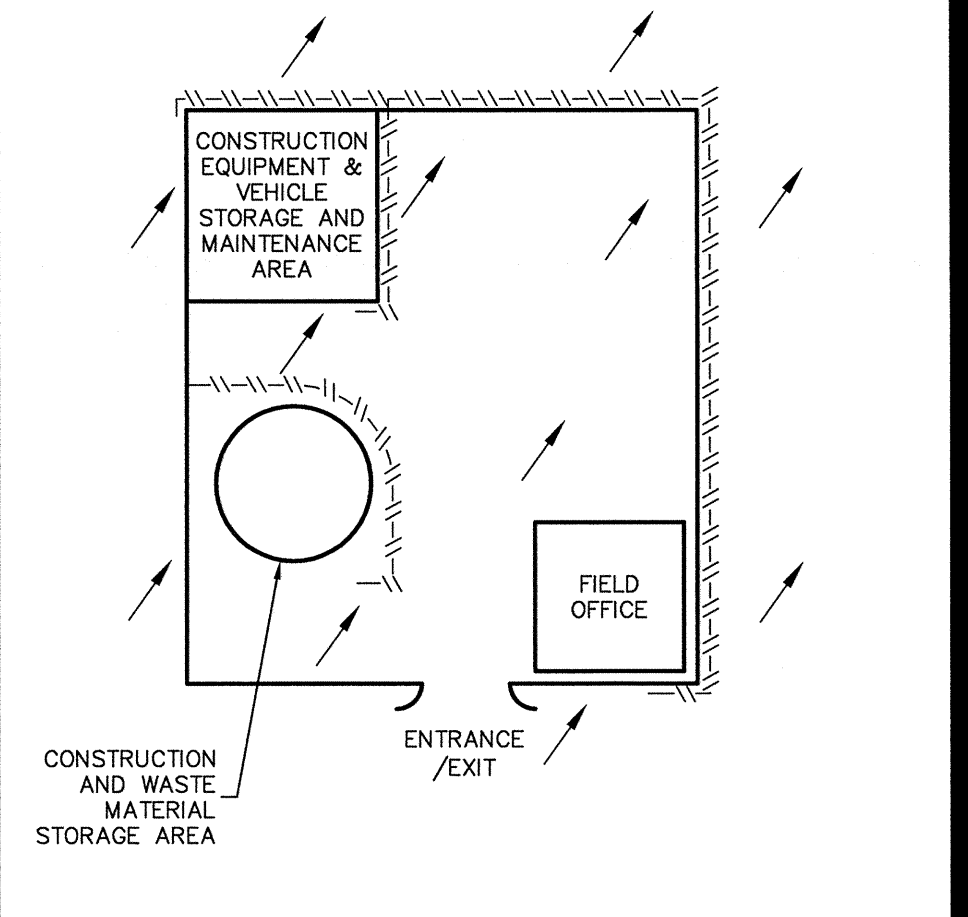
GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE

- NOTES:
1. THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC. MIN. UNIT WEIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.
2. THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).
3. SAND SHALL NOT BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



CONSTRUCTION STAGING AREA

NOT-TO-SCALE

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF POLLUTION ABATEMENT ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIL IMPROVEMENT PLANS.

EXHIBIT 2

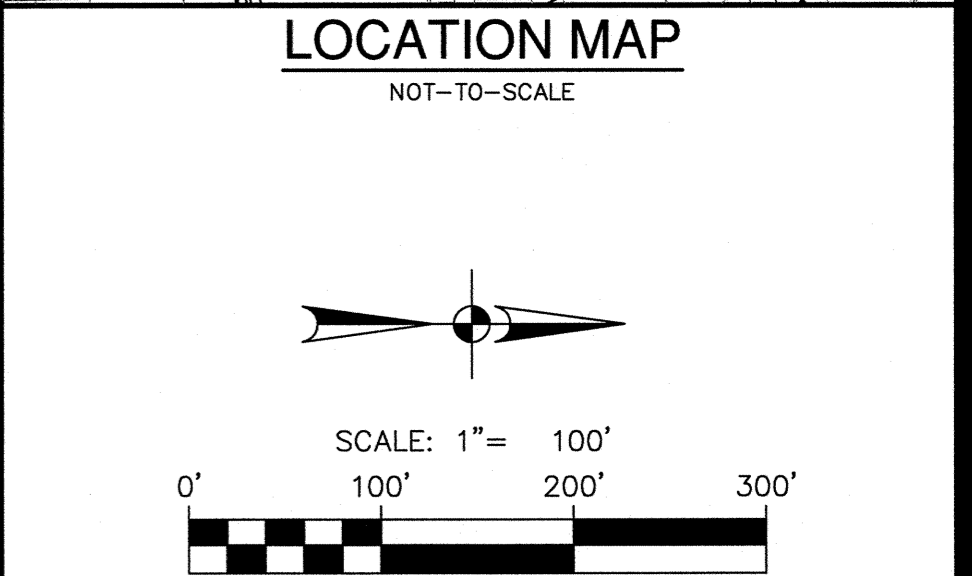
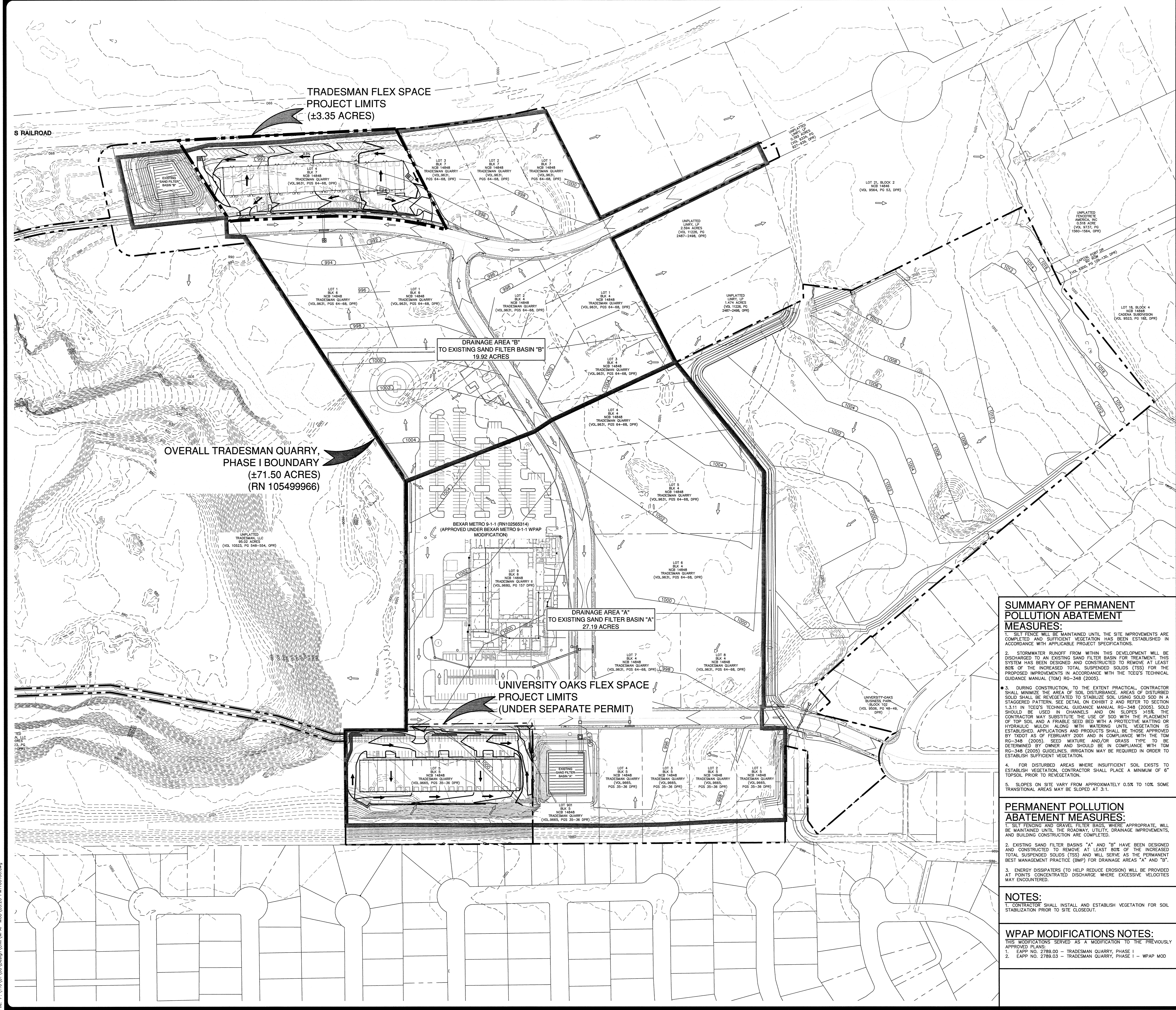
Professional Engineer information for Song Lim Tan, State of Texas, License No. 79798. Includes contact information for Pape-Dawson Engineers in San Antonio, Texas.

TRADESMAN DRIVE FLEX SPACE SAN ANTONIO, TEXAS TEMPORARY POLLUTION ABATEMENT PLAN DETAILS

Table with project information: Flat No. 070744, Job No. 11000-01, Date March 2016, Designer BES, Checked CS, Drawn DD, Sheet C5.10.

Plot: Mar 23 2016, 8:16am, User: J. Alford, File: E:\11000\Drawings\Civil\WAP\_MGD\C5.10\_TEMP11000001.dwg

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**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**  
**GENERAL CONSTRUCTION NOTES**

- WRITTEN CONSTRUCTION NOTIFICATION MUST BE GIVEN TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION MUST INCLUDE THE DATE ON WHICH THE REGULATED ACTIVITY WILL COMMENCE, THE NAME OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR AND THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.
- ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST PROVIDE WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL DURING THE COURSE OF THESE REGULATED ACTIVITIES. THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
- IF ANY SENSITIVE FEATURE IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
- NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM MAY BE INSTALLED WITHIN 150 FEET OF A DOMESTIC, INDUSTRIAL, IRRIGATION, OR PUBLIC WATER SUPPLY WELL, OR OTHER SENSITIVE FEATURE.
- PRIOR TO COMMENCEMENT OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE TEMPORARY STORM WATER SECTION OF THE APPROVED EDWARDS AQUIFER PROTECTION PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.
- IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS TO WATER QUALITY (E.G., FUGITIVE SEDIMENT IN STREET BEING WASHED INTO SURFACE STREAMS OR SENSITIVE FEATURES BY THE NEXT RAIN).
- SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION TANKS NO LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME (PICKER).
- LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A POLLUTED SOURCE FOR STORMWATER DISCHARGES (E.G., SCREENING OUTFALLS).
- ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASED IS PRECEDDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE, WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS. TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE IN AREAS EXPERIENCING DROUGHTS WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IS PRECEDDED BY SEASONAL ARID CONDITIONS. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
- THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
- THE HOLDER OF ANY APPROVED EDWARDS AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
  - ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURES, INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES.
  - ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER.
  - ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

**SUMMARY OF PERMANENT POLLUTION ABATEMENT MEASURES:**

- SEED MIXTURE WILL BE MAINTAINED UNTIL THE SITE IMPROVEMENTS ARE COMPLETED AND SUFFICIENT VEGETATION HAS BEEN ESTABLISHED IN ACCORDANCE WITH APPLICABLE PROJECT SPECIFICATIONS.
- STORMWATER RUNOFF FROM WITHIN THIS DEVELOPMENT WILL BE DISCHARGED TO AN EXISTING SAND FILTER BASIN FOR TREATMENT. THIS SYSTEM HAS BEEN DESIGNED AND CONSTRUCTED TO REMOVE AT LEAST 80% OF THE INCREASED TOTAL SUSPENDED SOLIDS (TSS) FOR THE PROPOSED IMPROVEMENTS IN ACCORDANCE WITH THE TCEQ'S TECHNICAL GUIDANCE MANUAL (TGM) RG-348 (2005).
- DURING CONSTRUCTION, TO THE EXTENT PRACTICAL, CONTRACTOR SHALL MINIMIZE THE AREA OF SOIL DISTURBANCE. AREAS OF DISTURBED SOIL SHALL BE REVEGETATED TO STABILIZE SOIL USING SOIL 300 IN A STAGGERED PATTERN. SEE DETAIL ON EXHIBIT 2 AND REFER TO SECTION 13.11 IN TCEQ'S TECHNICAL GUIDANCE MANUAL RG-348 (2005). SOIL SHOULD BE USED IN CHANNELS AND ON SLOPES  $>10\%$ . THE CONTRACTOR MAY SUBSTITUTE THE USE OF SOIL WITH THE PLACEMENT OF TOP SOIL AND A FRAGILE SEED BED WITH A PROTECTIVE MATTING OR HYDRALIC MULCH ALONG WITH WATERING UNTIL VEGETATION IS ESTABLISHED. APPLICATIONS AND PRODUCTS SHALL BE THOSE APPROVED BY TDOOT AS OF FEBRUARY 2001 AND IN COMPLIANCE WITH THE TGM RG-348 (2005). SEED MIXTURE AND/OR GRASS TYPE TO BE DETERMINED BY OWNER AND SHOULD BE IN COMPLIANCE WITH TGM RG-348 (2005) GUIDELINES. IRRIGATION MAY BE REQUIRED IN ORDER TO ESTABLISH SUFFICIENT VEGETATION.
- FOR DISTURBED AREAS WHERE INSUFFICIENT SOIL EXISTS TO ESTABLISH VEGETATION, CONTRACTOR SHALL PLACE A MINIMUM OF 6" TOPSOIL PRIOR TO REVEGETATION.
- SLOPES ON SITE VARY FROM APPROXIMATELY 0.5% TO 10%. SOME TRANSITIONAL AREAS MAY BE SLOPED AT 3:1.

**PERMANENT POLLUTION ABATEMENT MEASURES:**

- SEED MIXTURE AND GRAVEL FILTER BAGS, WHERE APPROPRIATE, WILL BE MAINTAINED UNTIL THE ROADWAY, UTILITY, DRAINAGE IMPROVEMENTS, AND BUILDING CONSTRUCTION ARE COMPLETED.
- EXISTING SAND FILTER BASINS "A" AND "B" HAVE BEEN DESIGNED AND CONSTRUCTED TO REMOVE AT LEAST 80% OF THE INCREASED TOTAL SUSPENDED SOLIDS (TSS) AND WILL SERVE AS THE PERMANENT BEST MANAGEMENT PRACTICE (BMP) FOR DRAINAGE AREAS "A" AND "B".
- ENERGY DISSIPATORS (TO HELP REDUCE EROSION) WILL BE PROVIDED AT POINTS OF CONCENTRATED DISCHARGE WHERE EXCESSIVE VELOCITIES MAY BE ENCOUNTERED.

**NOTES:**

- CONTRACTOR SHALL INSTALL AND ESTABLISH VEGETATION FOR SOIL STABILIZATION PRIOR TO SITE CLOSEOUT.

**WPAP MODIFICATIONS NOTES:**

- THIS MODIFICATION SERVED AS A MODIFICATION TO THE PREVIOUSLY APPROVED PLANS:
- EAPP NO. 2789.00 - TRADESMAN QUARRY, PHASE I
  - EAPP NO. 2789.03 - TRADESMAN QUARRY, PHASE I - WPAP MOD

**PERMANENT POLLUTION ABATEMENT PLAN**

TRADESMAN DRIVE FLEX SPACE  
 SAN ANTONIO, TEXAS

PERMANENT POLLUTION ABATEMENT PLAN

PLAT NO. 070744  
 JOB NO. 11000-01  
 DATE MARCH 2016  
 DESIGNER BES  
 CHECKED GS DRANN DD  
 SHEET C5.20

DATE NO. REVISION  
 DATE NO. REVISION

STATE OF TEXAS  
 SONG LIM TAN  
 79798  
 LICENSE NO. 1000000000  
 TEXAS BOARD OF PROFESSIONAL LAND SURVEYING # 10000000

PAPE-DAWSON  
 ENGINEERS  
 2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000  
 FAX: 210.375.9010  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS FROM REGISTRATION # 10000000

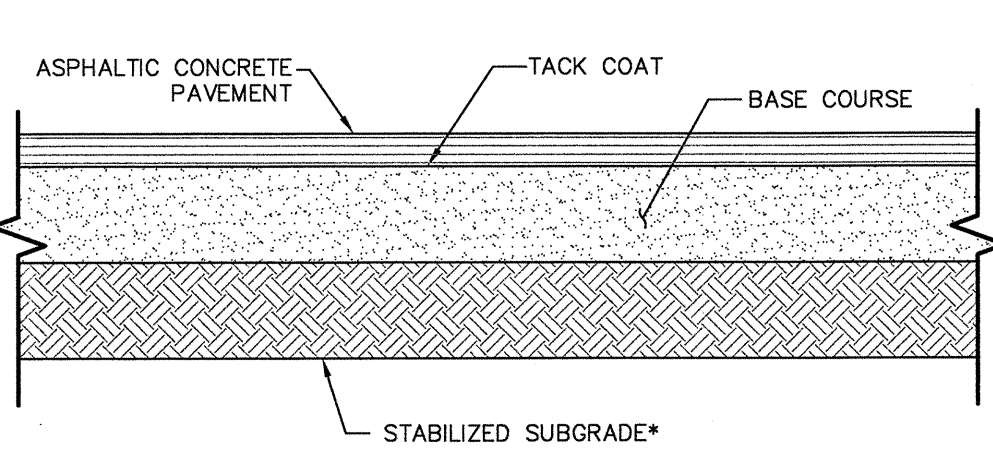
EXHIBIT 3

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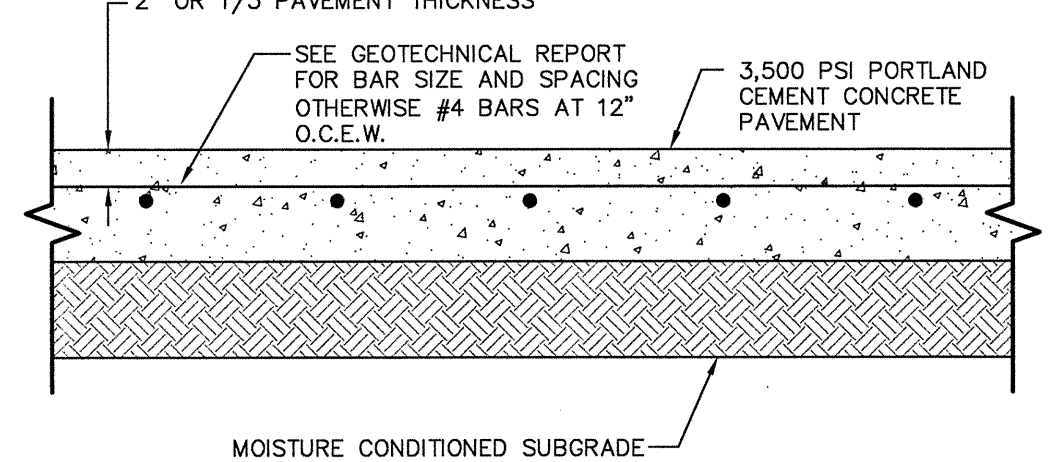
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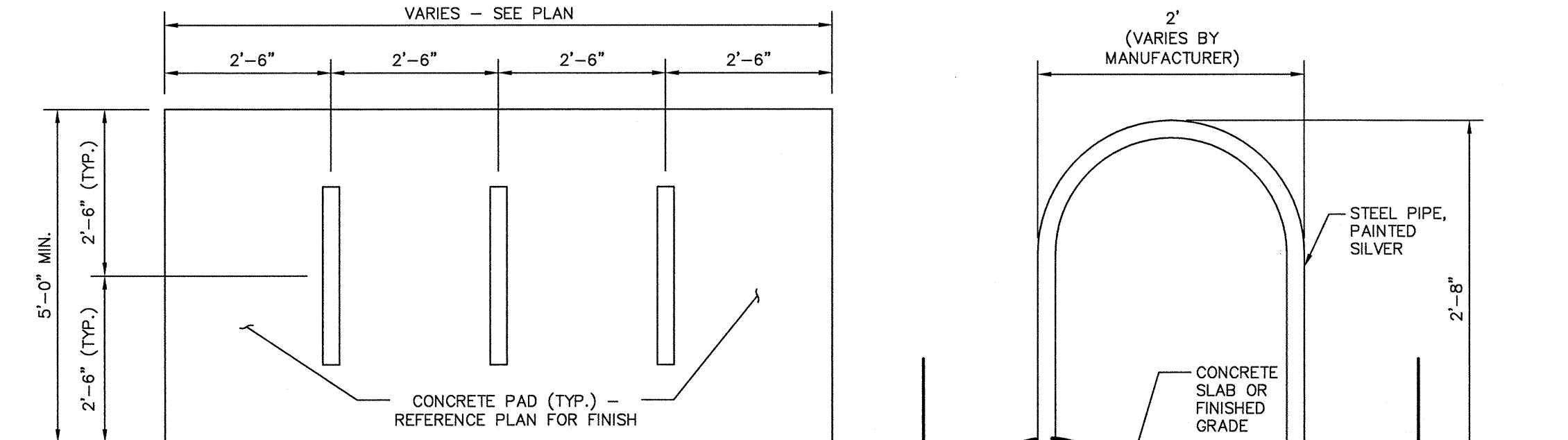
PAVEMENT MATERIALS	LIGHT DUTY (IN)		HEAVY DUTY (IN)	
	2	2.5	9	10
ASPHALTIC CONCRETE SURFACE COURSE	2	2.5	9	10
CRUSHED LIMESTONE BASE COURSE	9	10		
STABILIZED SUBGRADE*	6	6		

**FLEXIBLE PAVEMENT SECTIONS**  
 REFERENCE GEOTECHNICAL ENGINEERING REPORT PREPARED BY INTEC OF SAN ANTONIO, L.P., PROJECT NO. S151742, DATED FEBRUARY 23, 2016 FOR PAVEMENT MATERIALS AND CONSTRUCTION REQUIREMENTS. CONTRACTOR SHALL MEET OR EXCEED ALL PAVING RECOMMENDATIONS.

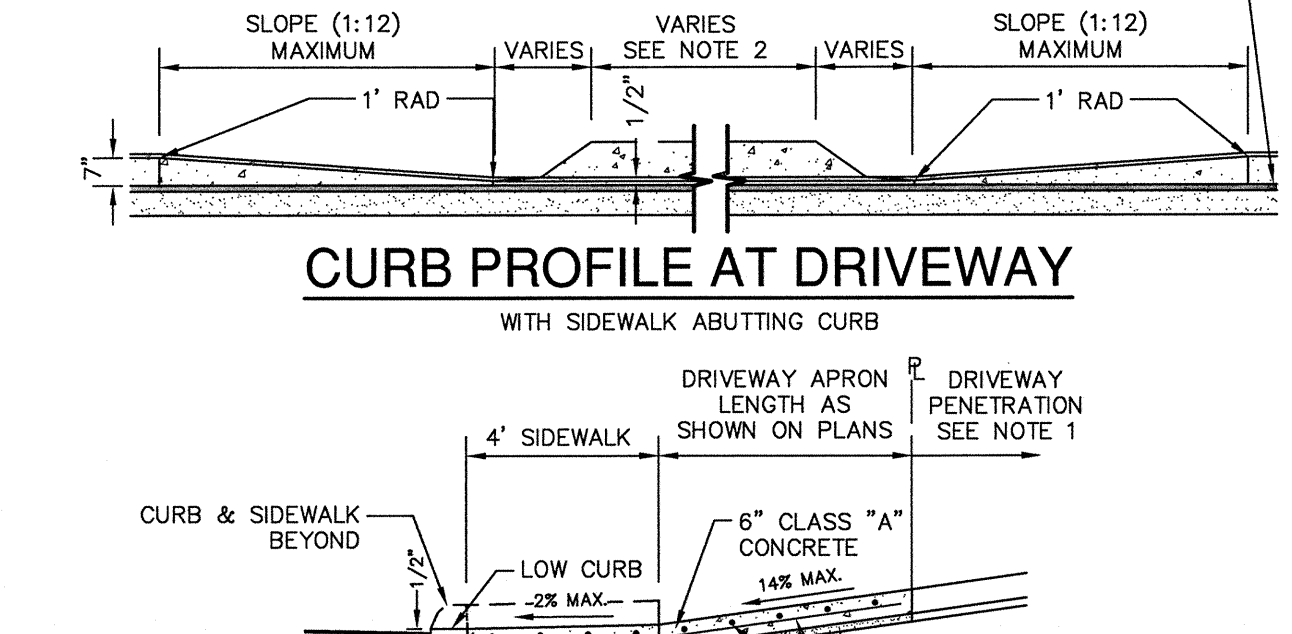


PAVEMENT MATERIALS	CONCRETE (IN)
PORTLAND CEMENT CONCRETE	8
MOISTURE CONDITIONED SUBGRADE	6

**CONCRETE PAVEMENT SECTION (FOR DUMPSTER AREAS)**  
 REFERENCE GEOTECHNICAL ENGINEERING REPORT PREPARED BY INTEC OF SAN ANTONIO, L.P., PROJECT NO. S151742, DATED FEBRUARY 23, 2016 FOR PAVEMENT MATERIALS AND CONSTRUCTION REQUIREMENTS. CONTRACTOR SHALL MEET OR EXCEED ALL PAVING RECOMMENDATIONS.



**BIKE RACK DETAIL**  
 NOT-TO-SCALE  
 NOTE: ACTUAL DIMENSIONS WILL VARY BASED ON NUMBER OF BIKE RACKS. REFERENCE PLAN FOR MORE DETAIL.



**TYPICAL COMMERCIAL DRIVEWAY SECTION**  
 WITH SIDEWALK ABUTTING CURB  
 ITEM 503.2  
 1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:  
 A.) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2.  
 B.) ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE "D" & 6" FLEXIBLE BASE.  
 C.) GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE.  
 2. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

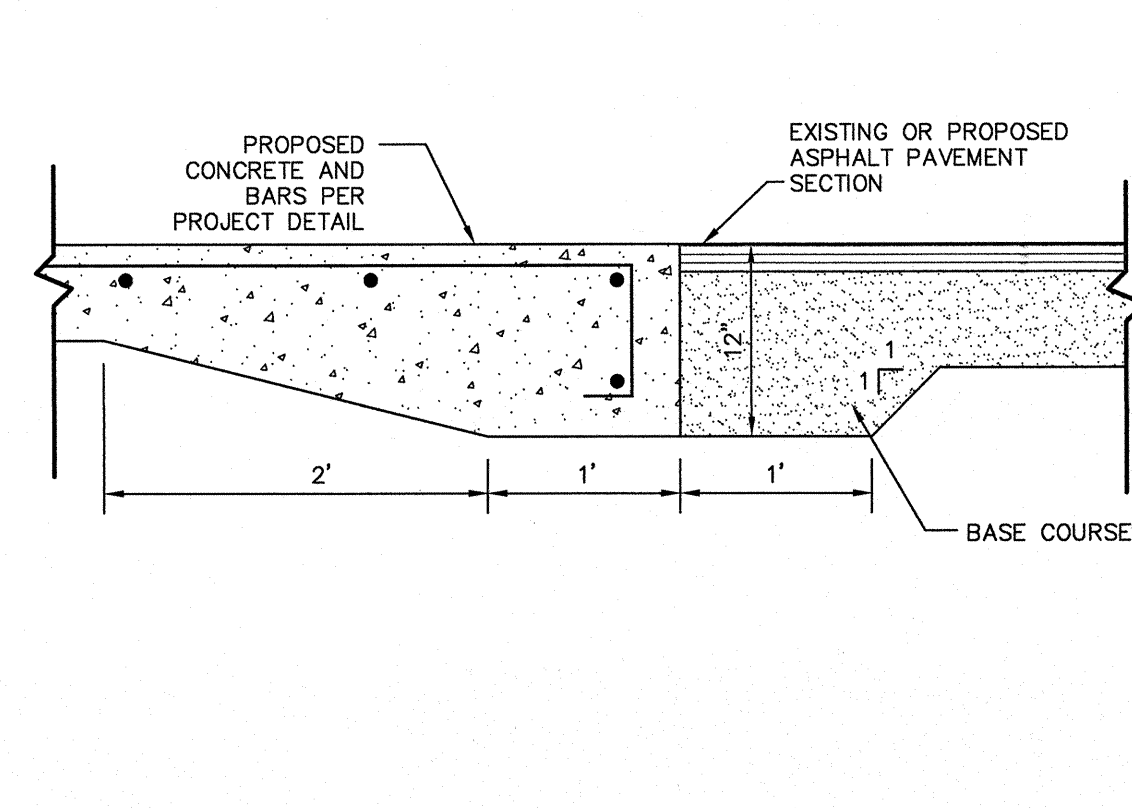
TYPE	MINIMUM	MAXIMUM
COMMERCIAL - ONE WAY	12'	30'
COMMERCIAL - TWO WAY	24'	30'

1

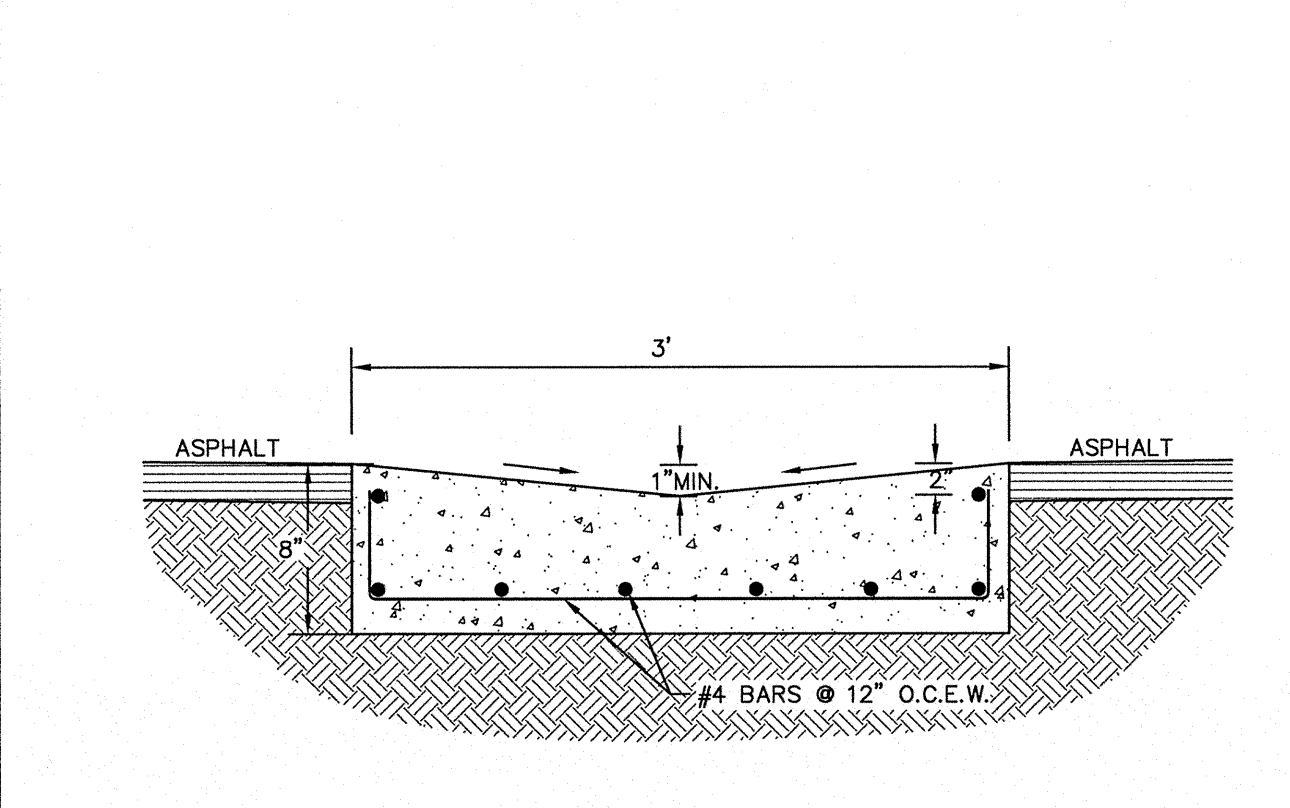
2

3

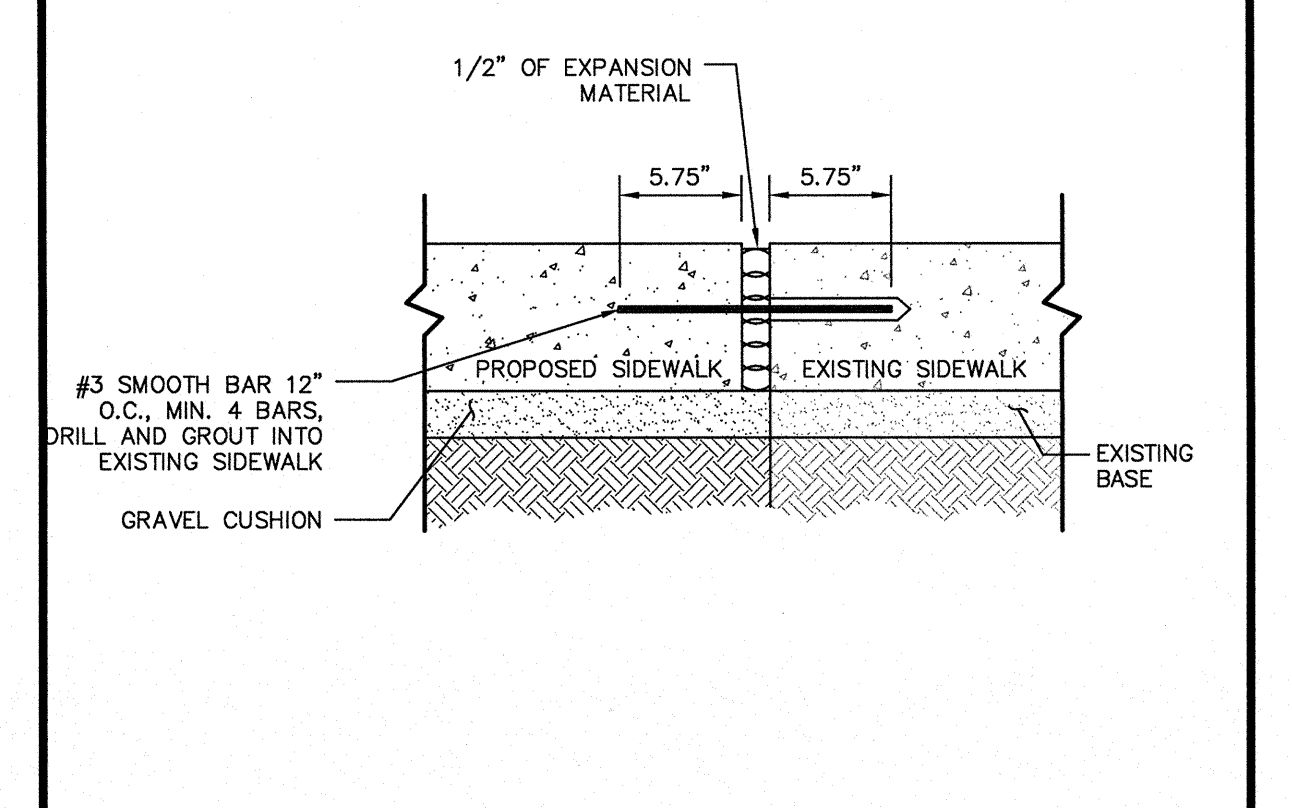
4



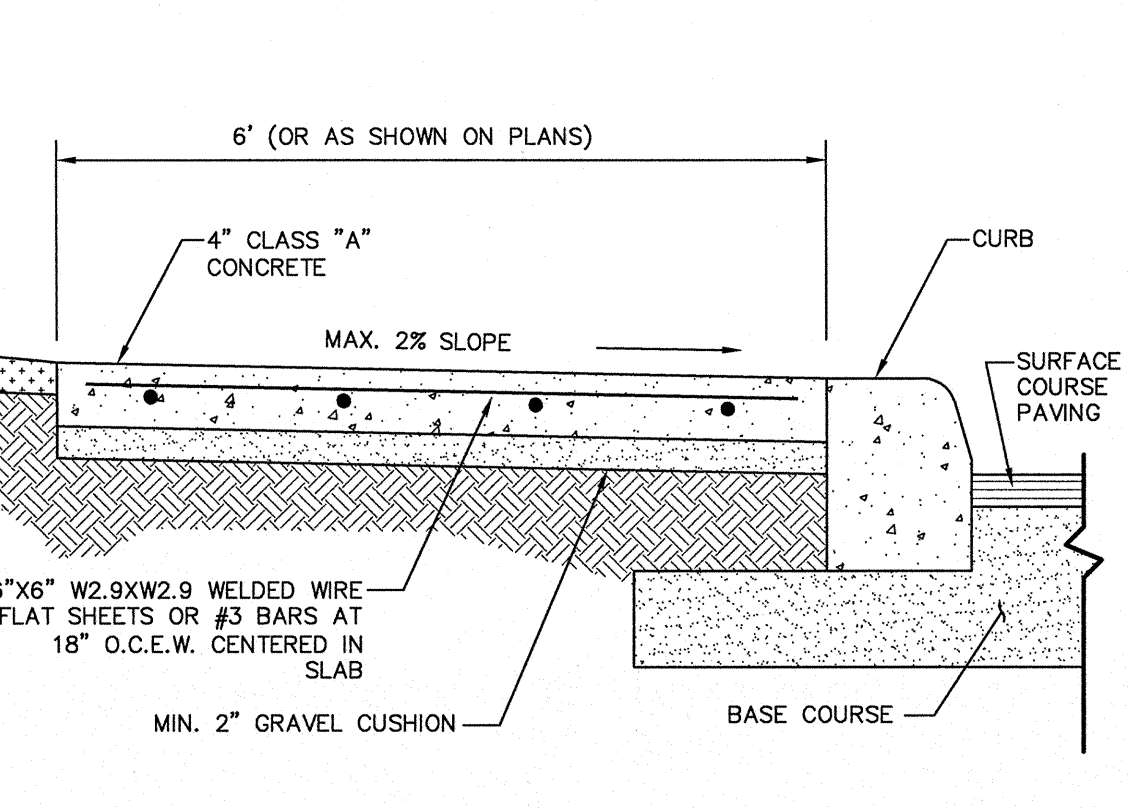
**CONCRETE/ASPHALT JUNCTURE DETAIL**  
 NOT-TO-SCALE



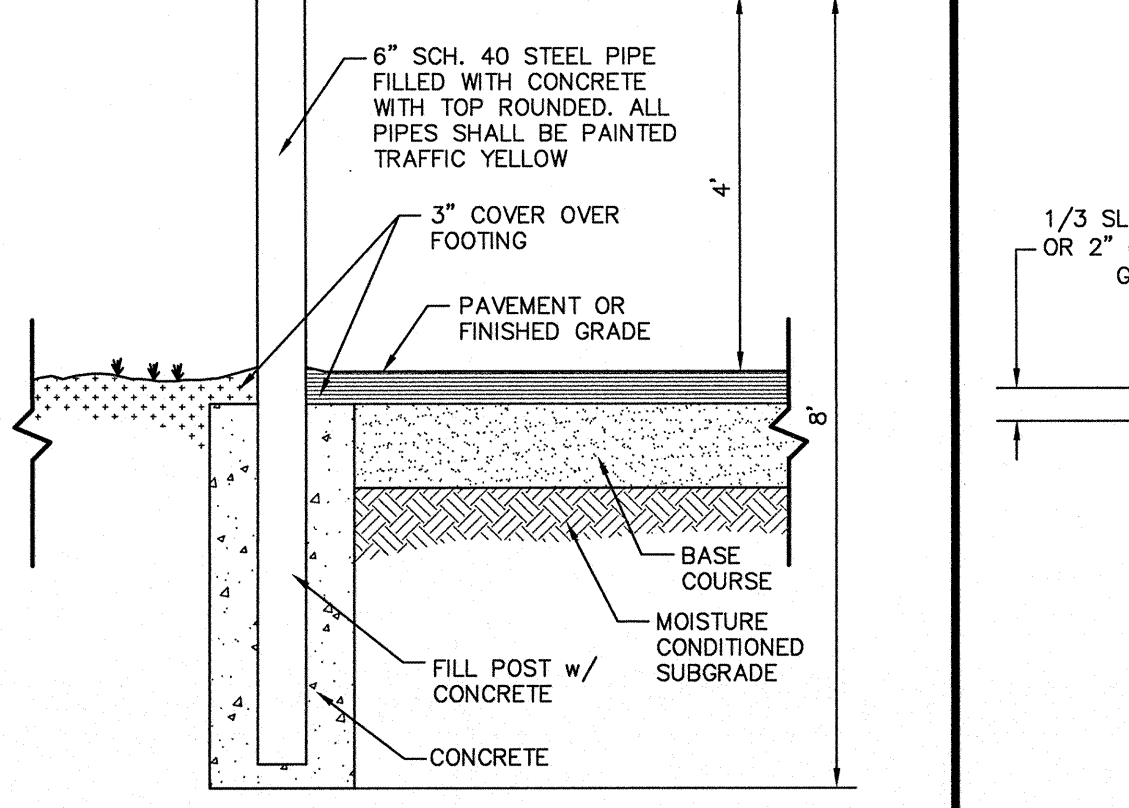
**CONCRETE SWALE**  
 NOT-TO-SCALE



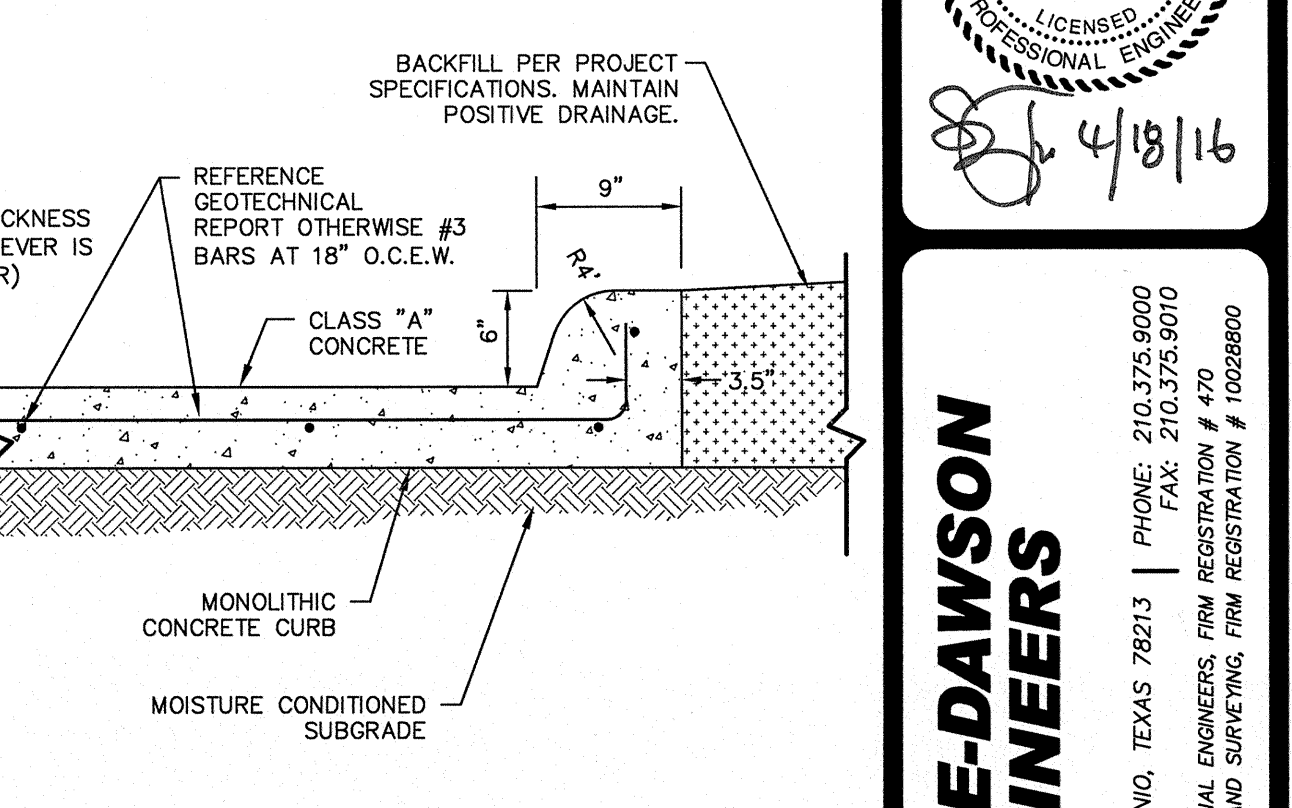
**SIDEWALK JUNCTURE DETAIL**  
 NOT-TO-SCALE



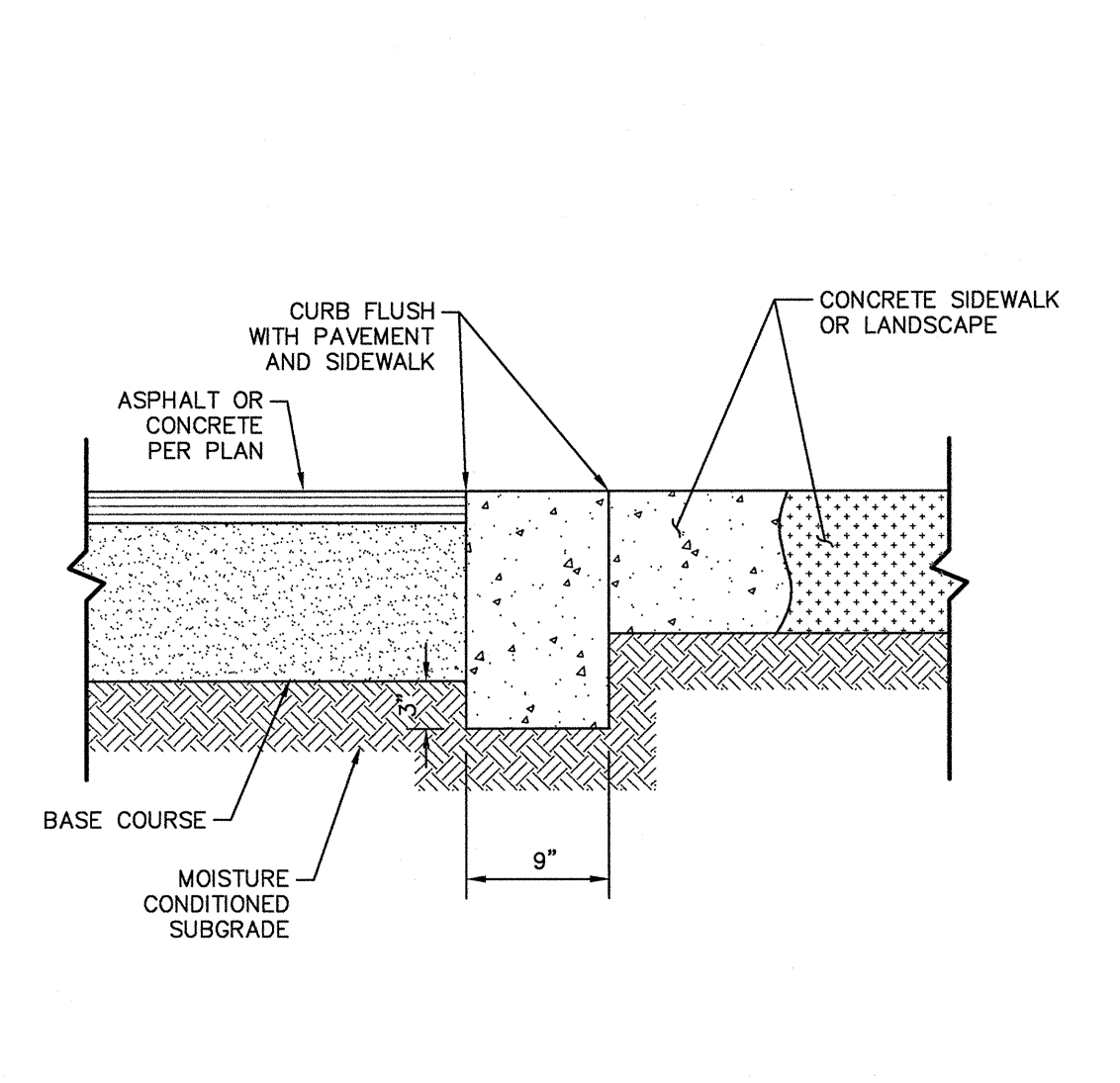
**SIDEWALK DETAIL**  
 NOT-TO-SCALE



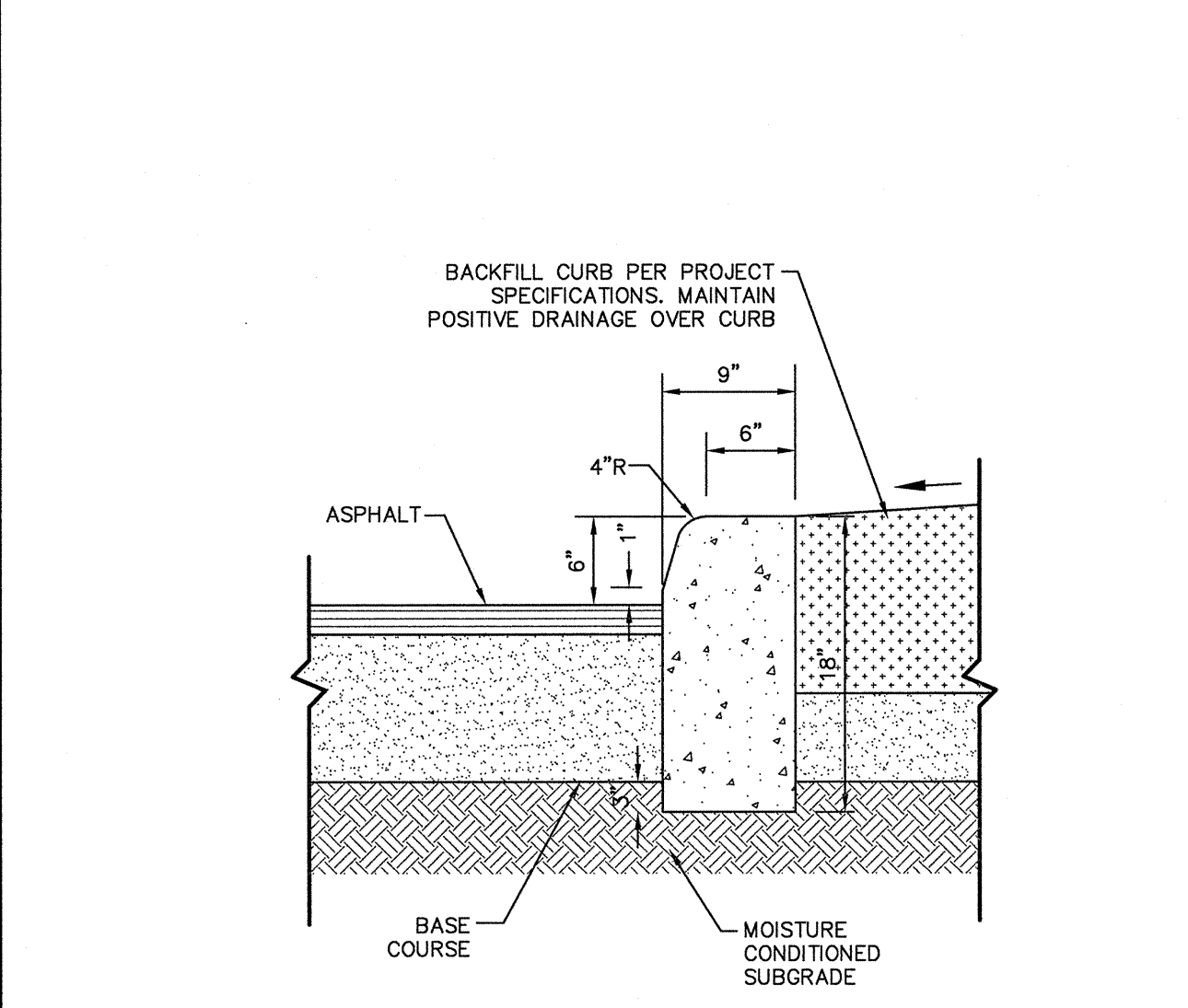
**PIPE BOLLARD DETAIL**  
 NOT-TO-SCALE



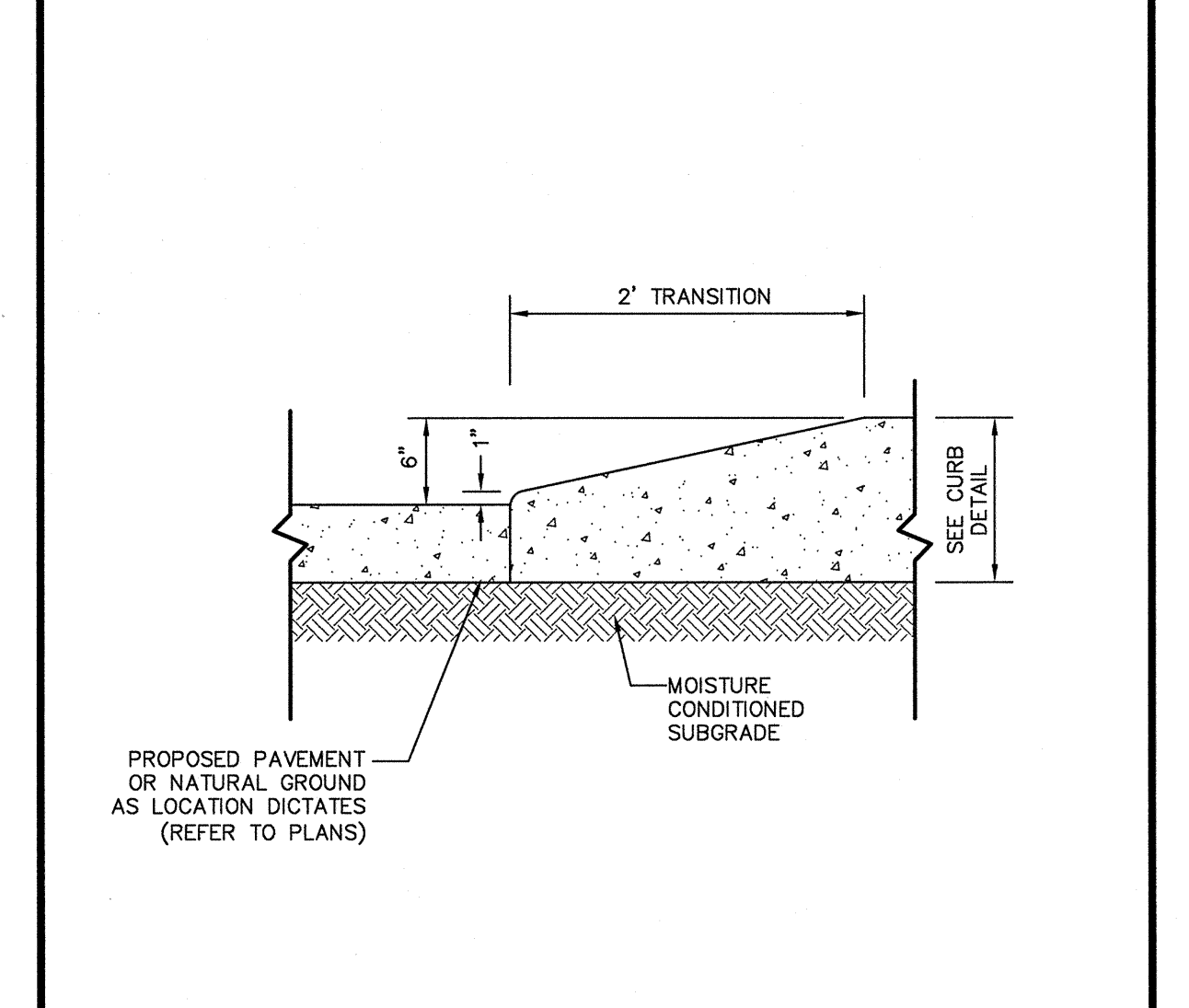
**CONCRETE PAVEMENT AND MONOLITHIC CURB DETAIL**  
 NOT-TO-SCALE



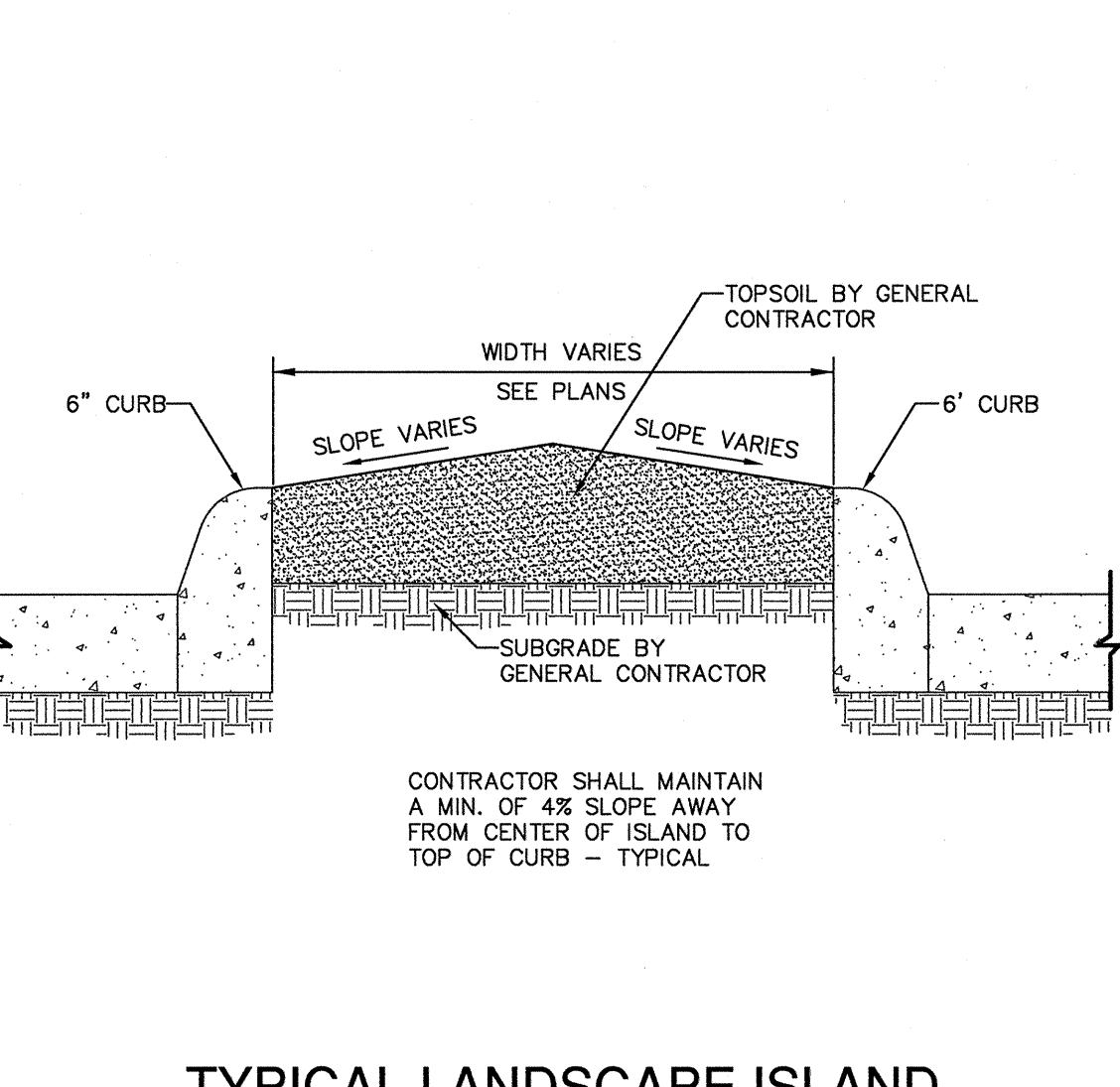
**HEADER CURB DETAIL**  
 NOT-TO-SCALE



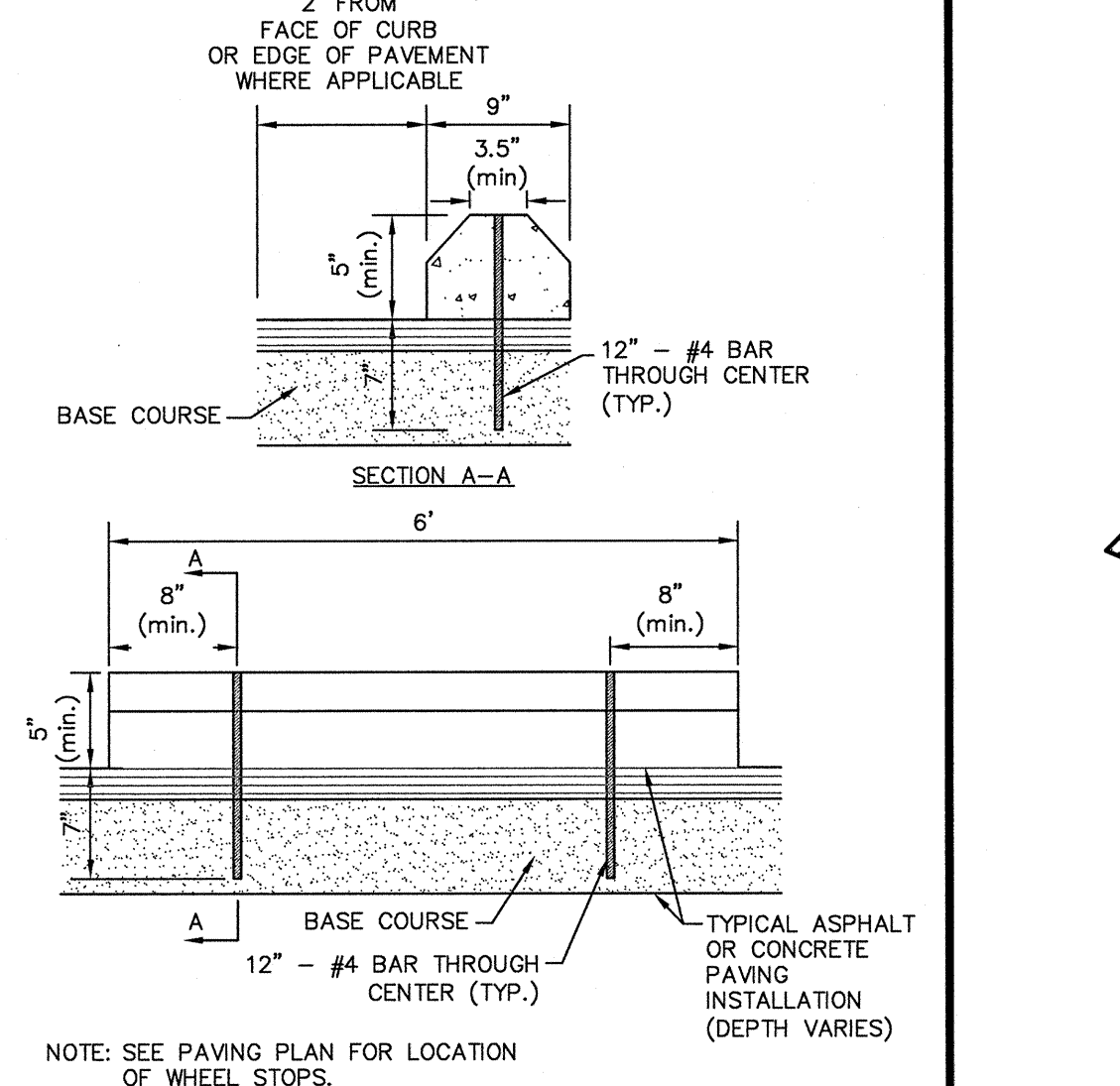
**6" CONCRETE CURB**  
 NOT-TO-SCALE



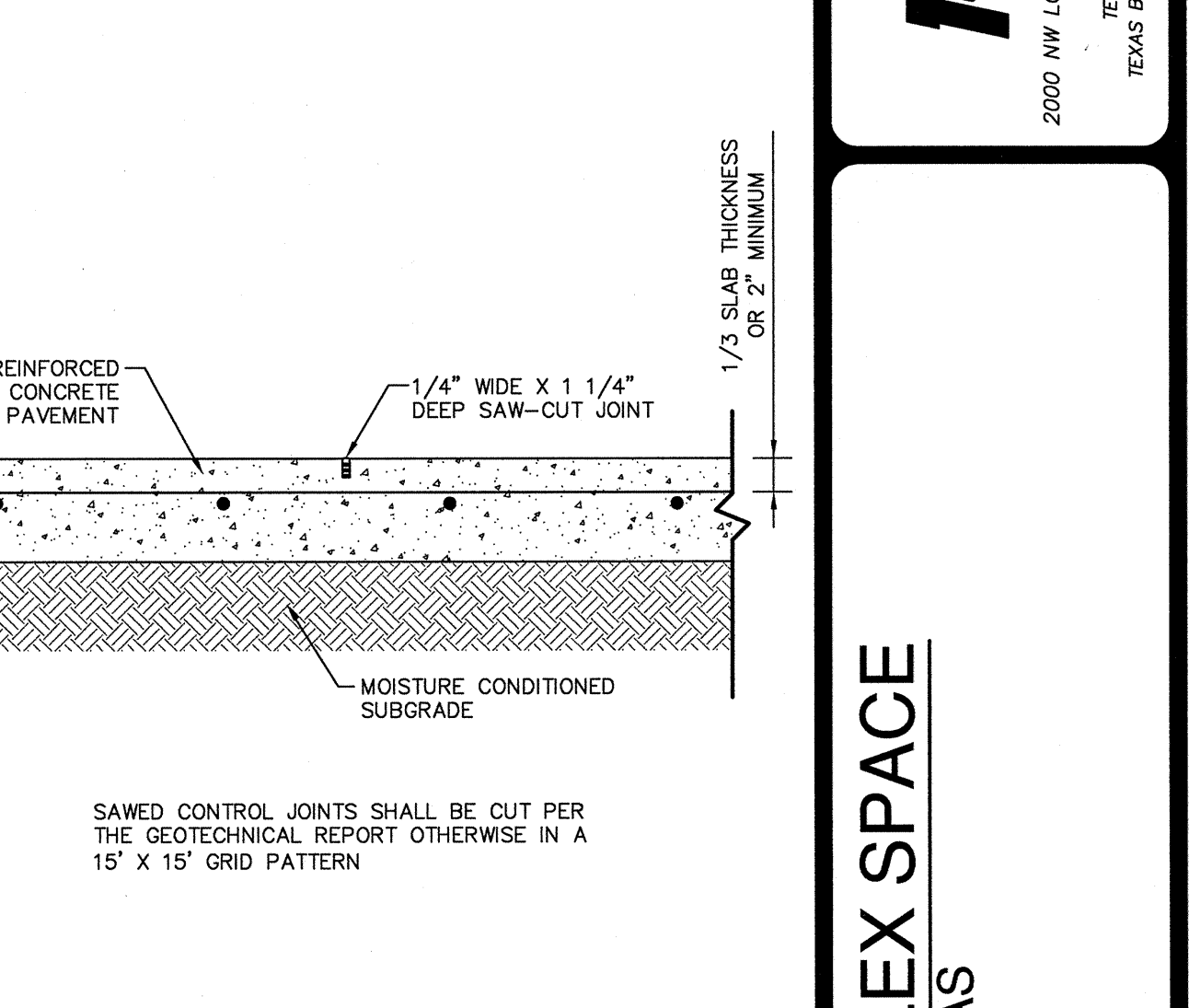
**CURB TRANSITION DETAIL**  
 NOT-TO-SCALE



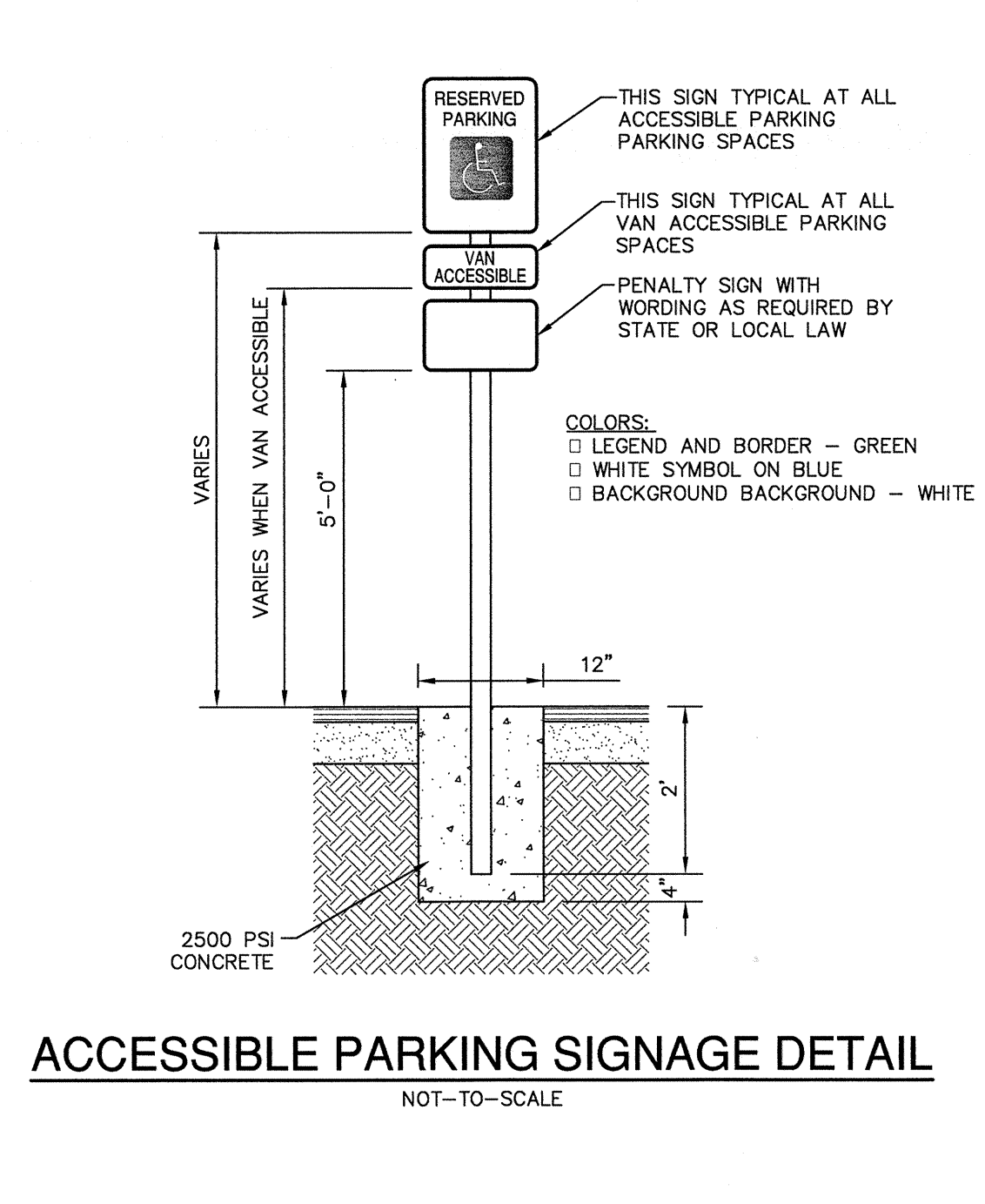
**TYPICAL LANDSCAPE ISLAND GRADING DETAIL**  
 NOT-TO-SCALE



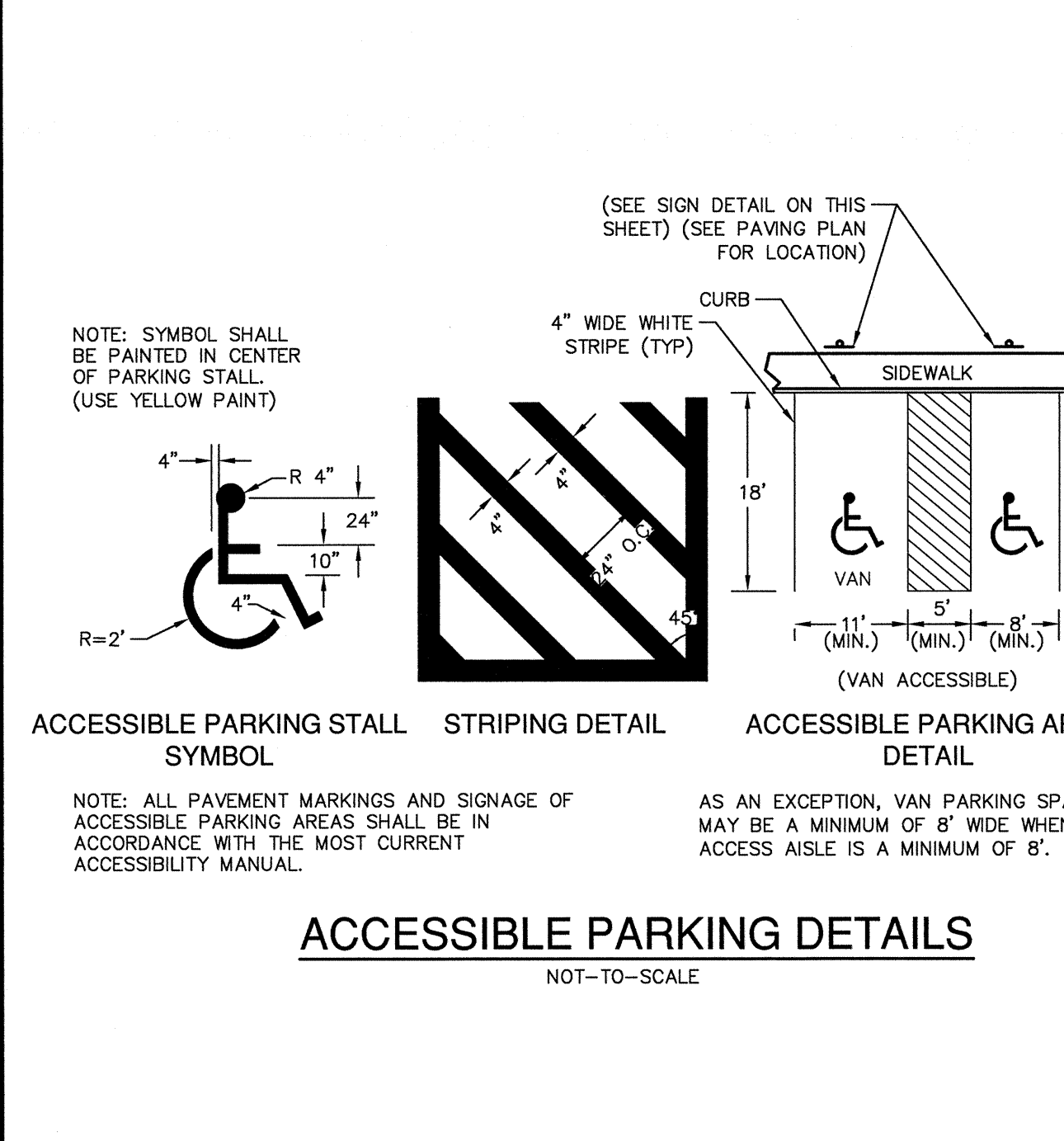
**WHEEL STOP DETAIL**  
 NOT-TO-SCALE



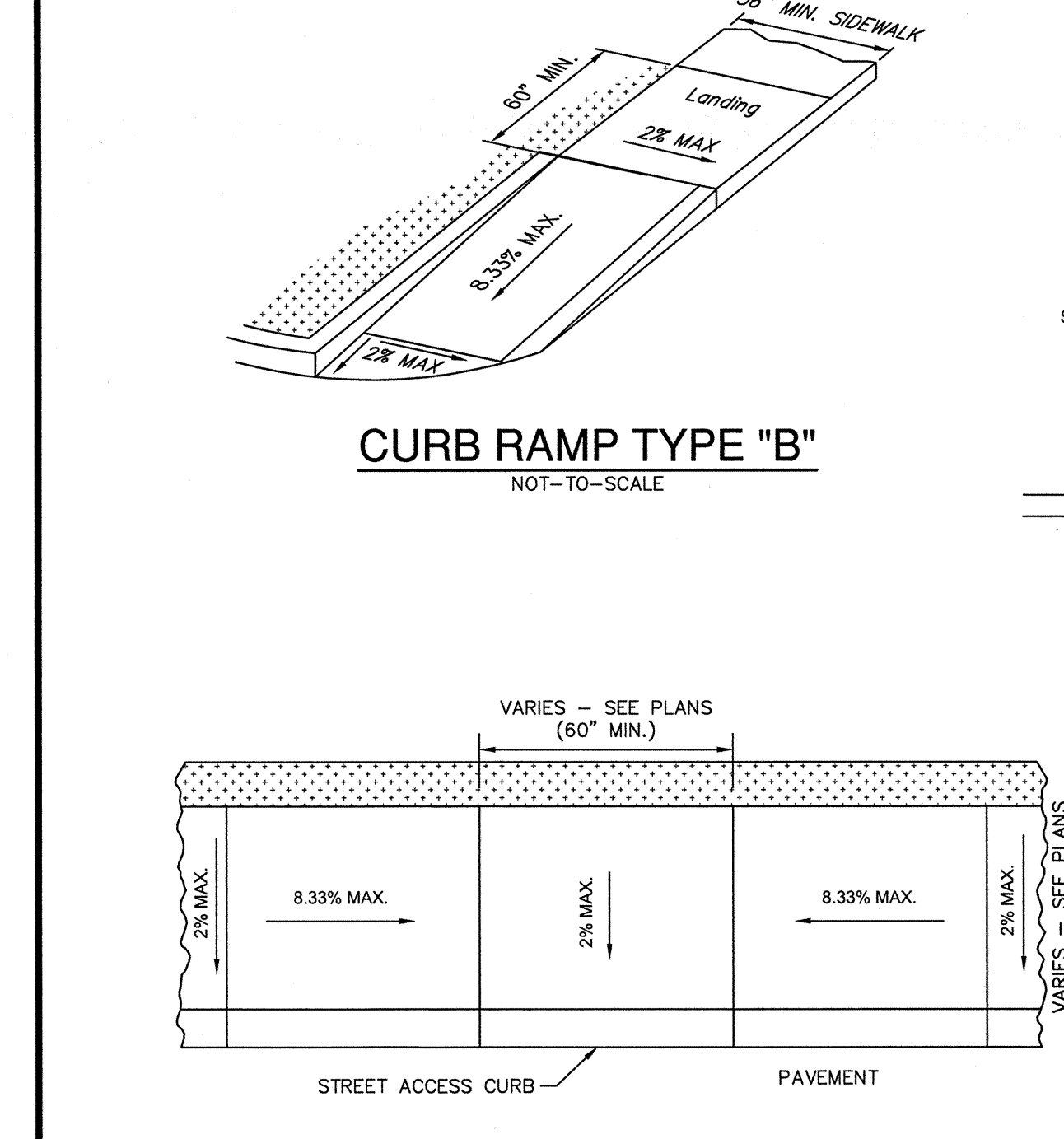
**SAWCUT CONTROL JOINT DETAIL**  
 NOT-TO-SCALE



**ACCESSIBLE PARKING SIGNAGE DETAIL**  
 NOT-TO-SCALE

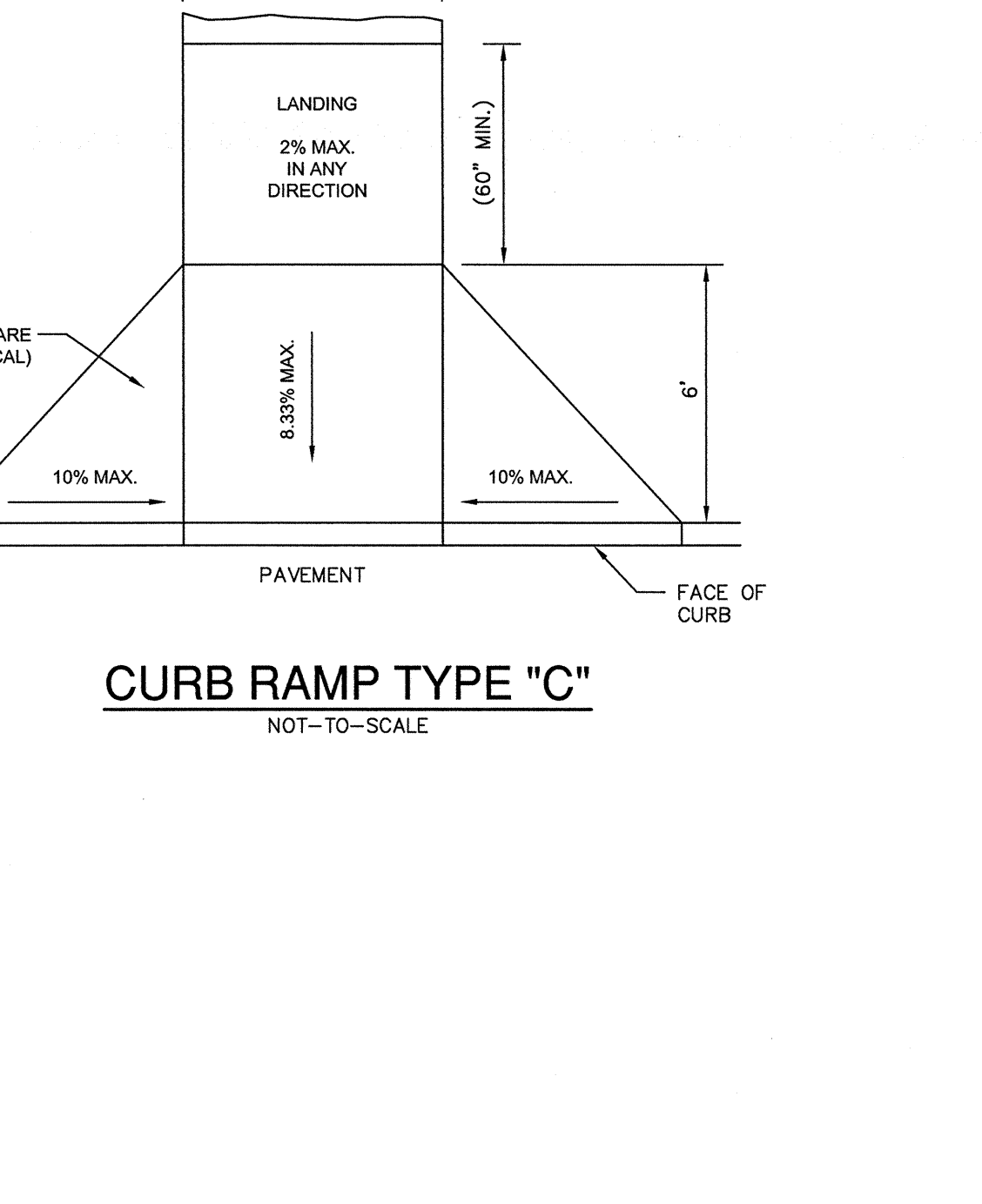


**ACCESSIBLE PARKING DETAILS**  
 NOT-TO-SCALE

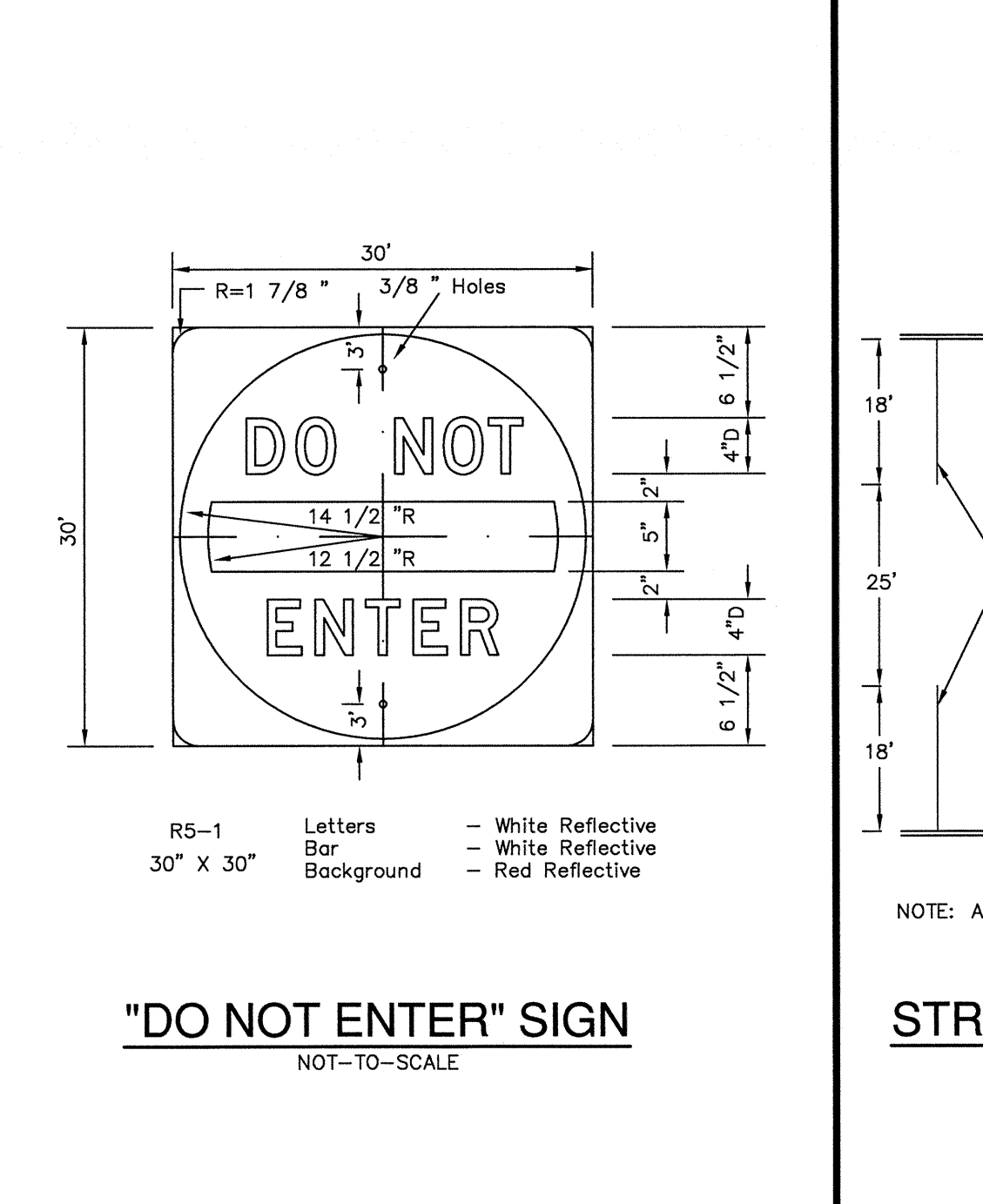


**CURB RAMP TYPE "B"**  
 NOT-TO-SCALE

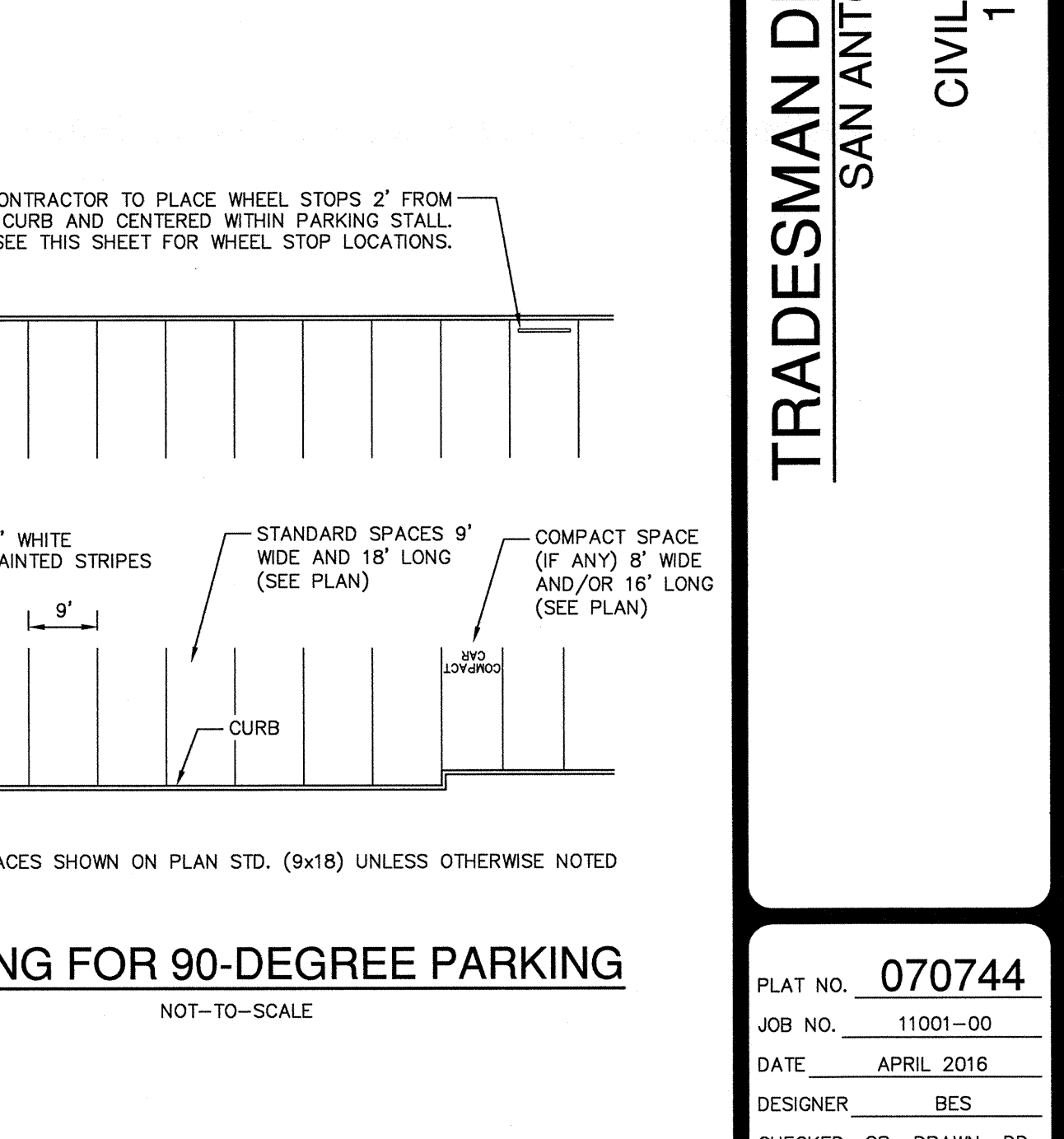
**CURB RAMP TYPE "A"**  
 NOT-TO-SCALE



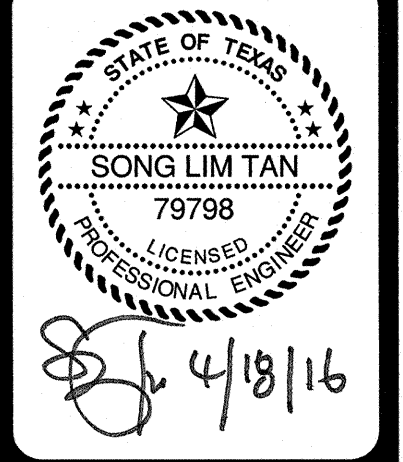
**CURB RAMP TYPE "C"**  
 NOT-TO-SCALE



**"DO NOT ENTER" SIGN**  
 NOT-TO-SCALE



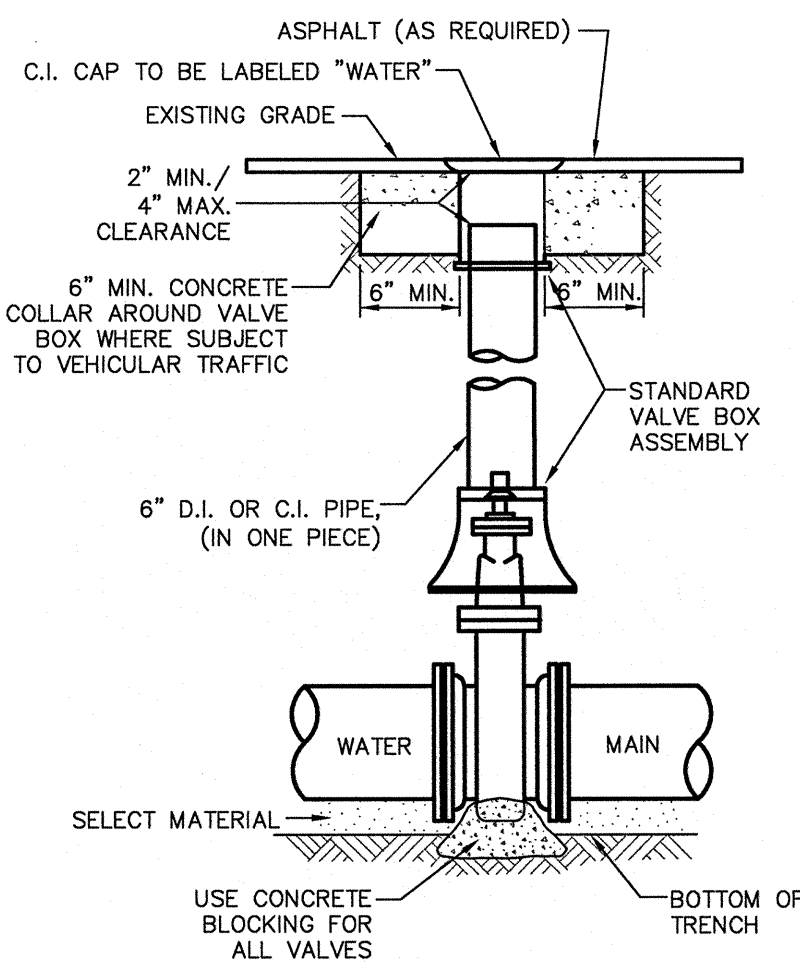
**STRIPING FOR 90-DEGREE PARKING**  
 NOT-TO-SCALE



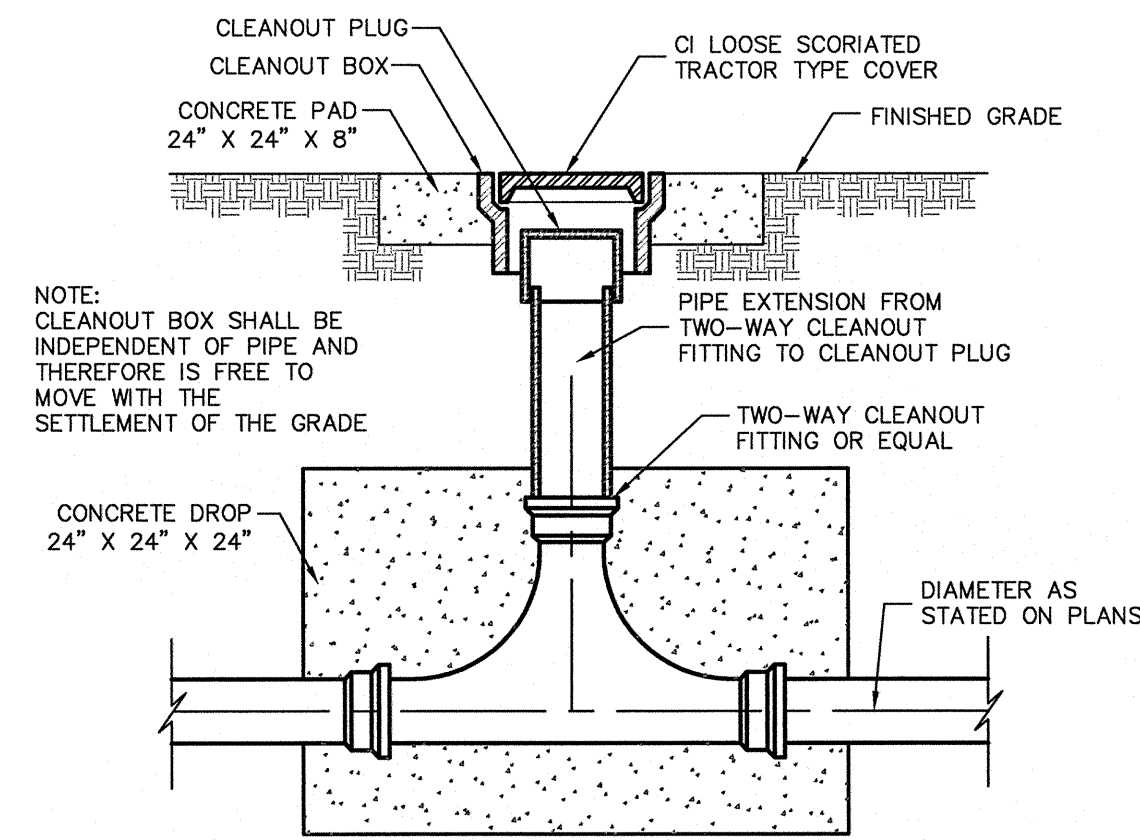
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000  
 2000 NW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.8070  
 TEXAS PROFESSIONAL LAND SURVEYORS LICENSE NO. 110181  
 TEXAS BOARD OF PROFESSIONAL LAND SURVEYING REGISTRATION # 102880

**TRADES MAN DRIVE FLEX SPACE**  
 SAN ANTONIO, TEXAS  
 CIVIL DETAILS  
 1 OF 2

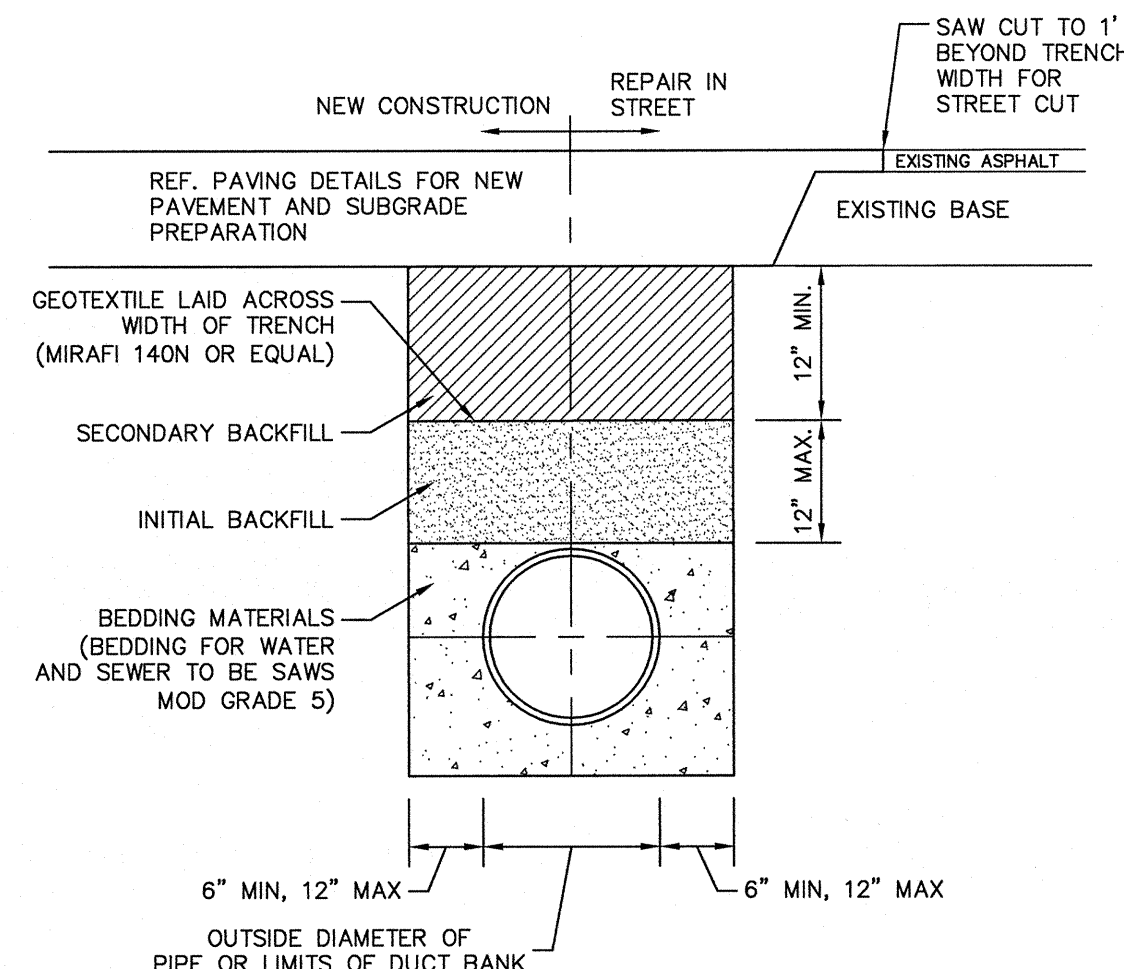
PLAT NO. 070744  
 JOB NO. 11001-00  
 DATE APRIL 2016  
 DESIGNER BES  
 CHECKED GS DRAWN DD  
 SHEET C6.00



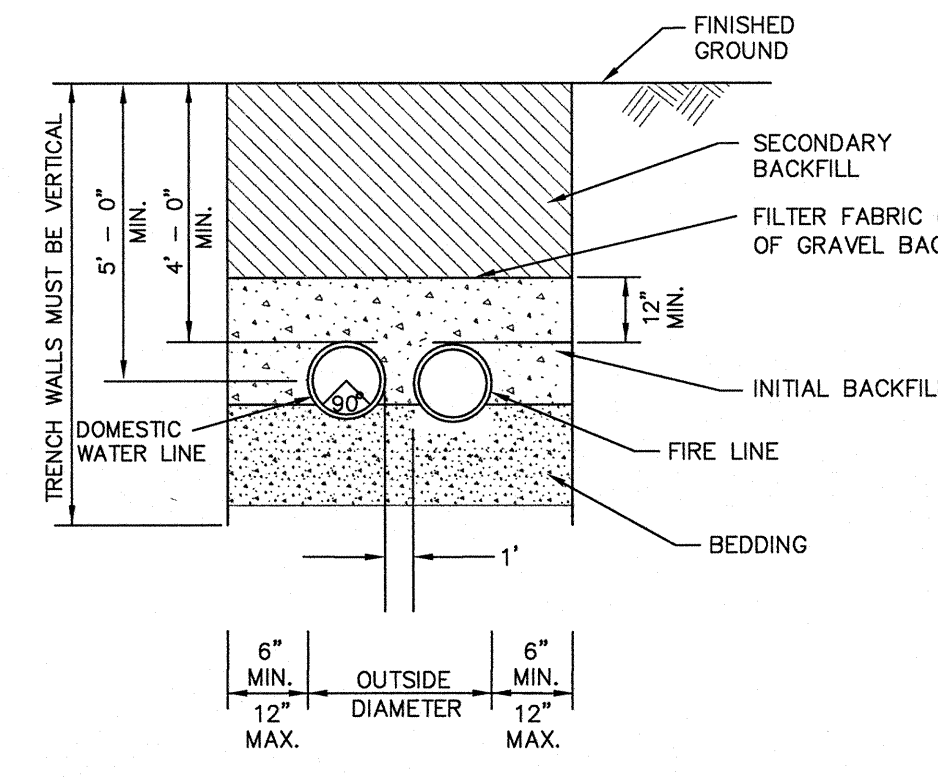
**VALVE BOX**  
NOT-TO-SCALE



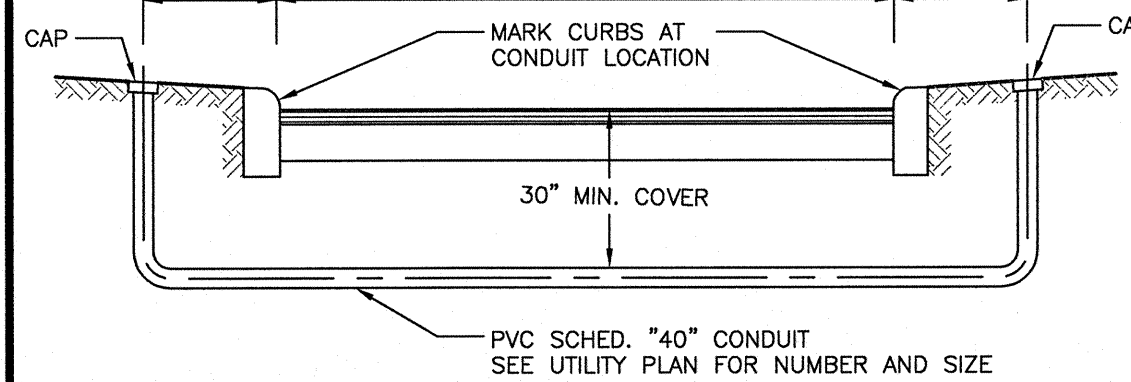
**SEWER CLEANOUT DETAIL**  
NOT-TO-SCALE



**UTILITY TRENCH DETAIL**  
NOT-TO-SCALE

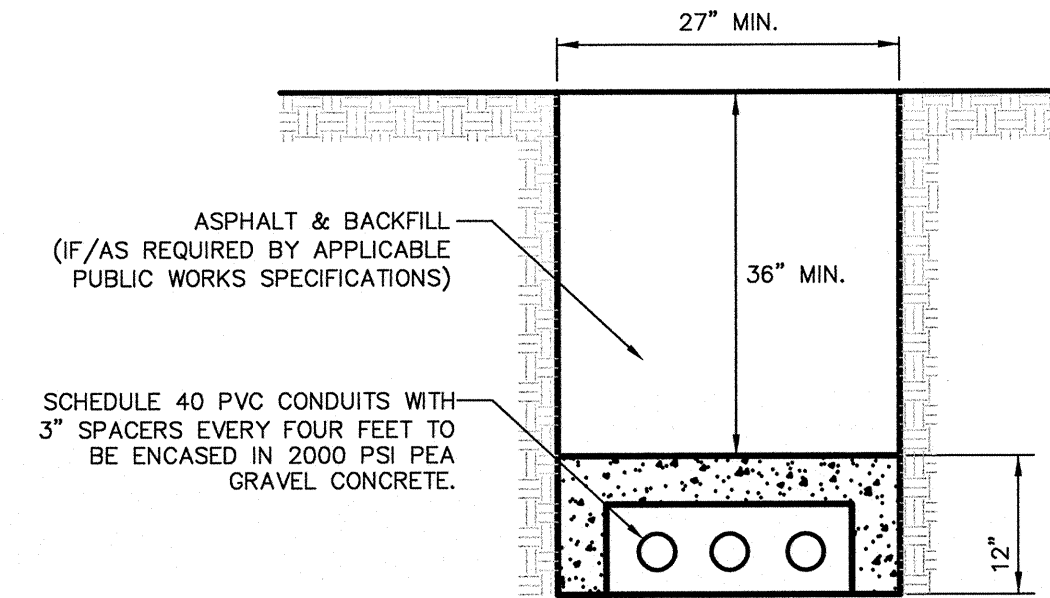


**JOINT TRENCH DETAIL**  
NOT-TO-SCALE

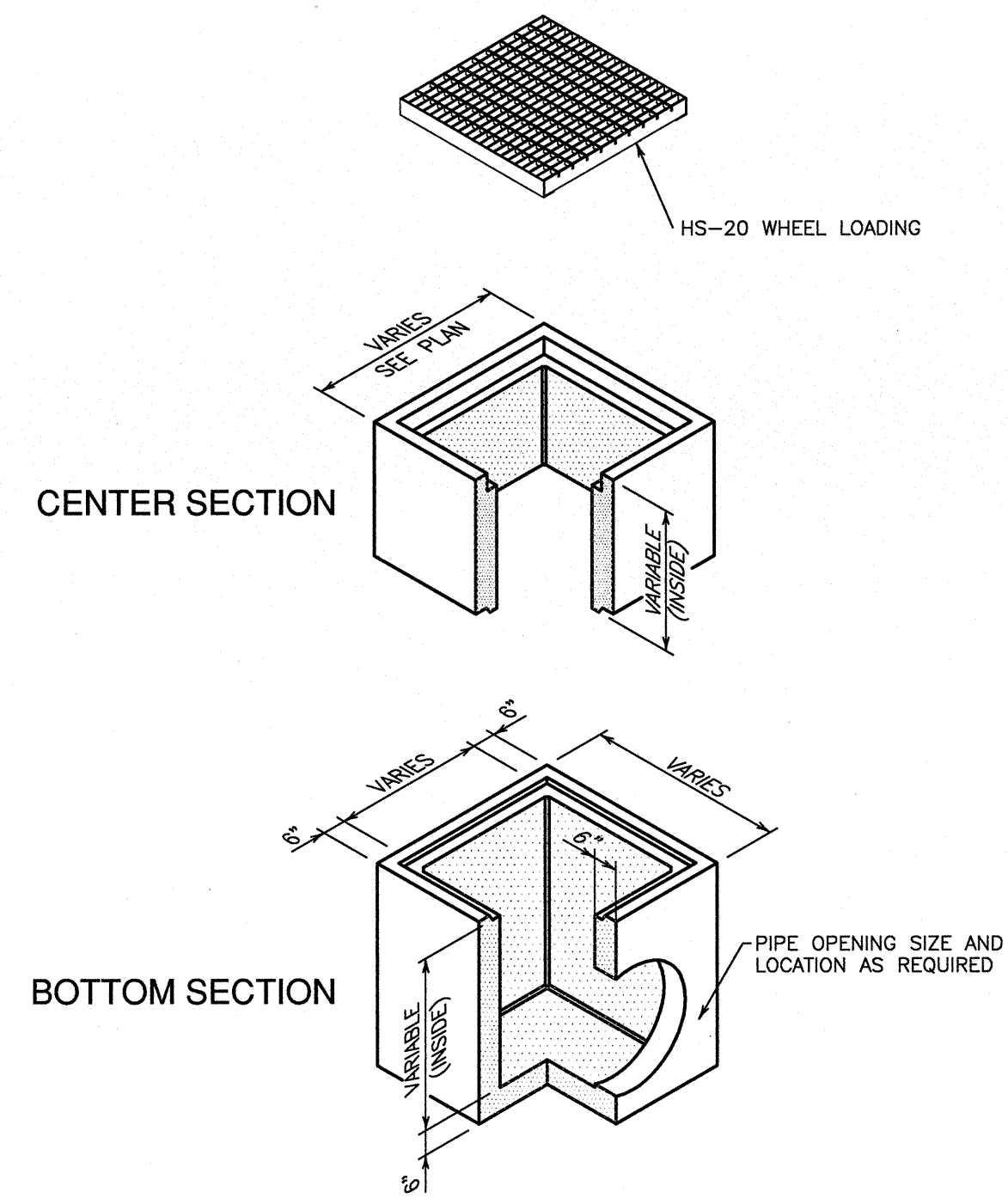


- CONDUIT NOTES**
- CONTRACTOR SHALL INSTALL PERMANENT MARKERS IN PROPOSED CURB WHERE CONDUITS CROSS THE ROADWAY (BOTH SIDES).
  - ALL CONDUIT SHALL BE P.V.C. SCHEDULE 40 WITH MINIMUM BURY OF 30 INCHES.
  - ALL CONDUIT SHALL BE EXTENDED BEHIND CURBS OR PROPOSED SIDEWALKS A MINIMUM OF 3 FEET AND CAPPED FOR FUTURE USE.
  - A NYLON "PULL STRING" SHALL BE LEFT IN PLACE IN ALL CONDUITS AFTER FINAL ACCEPTANCE OF CONDUIT WORK. THE NYLON "PULL STRING" SHALL HAVE A MINIMUM TENSILE STRENGTH OF 100 LBS.

**TYPICAL CONDUIT DETAIL**  
NOT-TO-SCALE

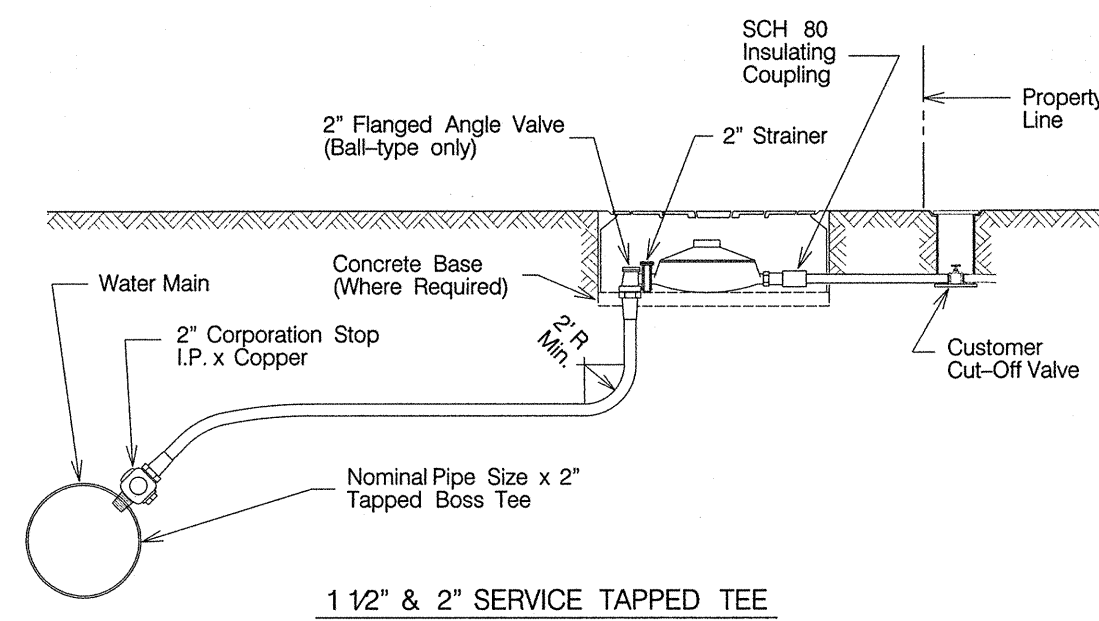


**DUCTLINE DETAIL "A"**  
**3-4" CONDUITS DETAIL**  
**(ELECTRIC DUCTBANK)**  
NOT-TO-SCALE



**TYPICAL PRECAST GRATE INLET**  
NOT-TO-SCALE

PIPE DIAMETER	SERVICE SIZE			
	3/4"	1"	1 1/2"	2"
6" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
6" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle
8" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
8" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle
8" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle
10" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle
12" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
16" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
16" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle



Note:  
For direct tap to main, see Tapping Schedule

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	COPPER SERVICE INSTALLATION TAPPING SCHEDULE	APPROVED March 2016	REVISED
		DD-824-01	SHEET 3 OF 3



**PAPE-DAWSON  
ENGINEERS**

2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000  
TEXAS BOARD OF PROFESSIONAL ENGINEERS, P.E. | FAX: 210.375.8010  
TEXAS BOARD OF PROFESSIONAL LAND SURVEYORS, P.L.S. | REGISTRATION # 1028800

**TRADES MAN DRIVE FLEX SPACE**  
SAN ANTONIO, TEXAS

CIVIL DETAILS  
2 OF 2

PLAT NO. **070744**  
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DESIGNER BES  
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SHEET **C6.10**