April 25, 2025

Mr. Otis Spriggs
Director of Development Services
City of Angleton
121 S. Velasco
Angleton, TX 77515

Re: On-Going Services
Austin Colony Phase 1B Subdivision Improvement Plans – 1st Submittal Review
Angleton, Texas
HDR Job No. 10420700

Dear Mr. Spriggs:

HDR Engineering, Inc. (HDR) has reviewed the plans for the above referenced subdivision and offers the following comments:

Final Plat

1. A temporary turnaround area will be required in accordance to Angleton LDC Sec. 23-12. - Streets and driveways, G.2.B.

Subdivision Improvement Plans

1. Reference if this is Final Plat. If Final Plat, will need to note as reference only with a Final Plat application to be made separately.
2. Sheet 5 of 50 - Phase 1b only includes 1 boring location as noted in the geotech report by Intertek PSI dated 3/28/21. Verify and include additional borings per spacing found in the Angleton Construction Manual (CoSL Design Manual 1.21)
3. Sheet 6 of 50 - Street jogs (off-sets). Street off-sets less than 150 feet, measured centerline to centerline, are prohibited (Angleton LDC Sec. 23-12 F.4.
4. Sheet 6 of 50 - No proposed information shown in Sections
5. Sheet 7 of 50 - Fire hydrant placement/spacing to include intersections as noted in the Angleton ACM - CoSL Des. Std. 2.8.1 Fire Hydrant Spacing, C.
6. Sheet 7 of 50 - Label existing utilities and sizes
7. Sheet 8 of 50 - Please include the cross sections for the proposed pond as noted
8. Sheet 9 of 50 - Are these wall penetrations feasible at the inlets noted (I-10, I-5)
9. Sheet 9 of 50 - Recommend updating to provide an alignment to avoid traversing pipe in the ROW.
10. Sheet 11 of 50 - Information is missing on the plan. Please update accordingly
11. Sheet 12 of 50 - Update plan to show location of silt fencing for the project

hdrinc.com 4828 Loop Central Drive, Suite 700, Houston, TX 77081-2220
T (713) 622-9264 F (713) 622-9265
Texas Registered Engineering Firm F-754

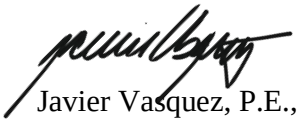
12. Sheet 12 of 50 - Verify use of IPB here if construction vehicles and equipment will utilize access from this area
13. Sheet 14 of 50 - If Phase 1b is being constructed first, a temporary No Outlet Sign shall be provided
14. Sheet 14 of 50 - Striping and signage to be provided for beginning of boulevard section (e.g. gores, median ahead, do not enter,
15. Sheet 16 of 50 - Verify and incorporate use of a pedestrian handrail along the culvert crossing area
16. Sheet 16 of 50 - Provide junction box at this location or consider other option such as discharge to south
17. Sheet 16 of 50 - Provide steel encasement for proposed sanitary sewer crossing under existing channel
18. Sheet 16 of 50 - Reevaluate proposed water line offset and include steel casing for portion crossing within the culvert/channel crossing. Proposed pipe does not meet minimum cover requirements.
19. Sheet 16 of 50 - Evaluate proposed water line (10"-12") for incorporation of air release valves
20. Sheet 16 of 50 - Verify what the purpose of the bends are here near STA. 0+60 and remove if not needed.
21. Sheet 16 of 50 - Street gradient is less than 0.35 %
22. Sheet 16 of 50 - Provide symbol for sanitary sewer service (Typical)
23. Sheet 17 of 50 - Show existing ditch highbank and flowline in plan
24. Sheet 18 of 50 - Revise sewer layout to offset from proposed water meter (Example shown)
25. Sheet 18 of 50 - Sanitary sewer minimum size to be 8-inch
26. Sheet 18 of 50 - Street gradient is less than 0.35 % where noted.
27. Sheet 19 of 50 - Fix overlapping text
28. Sheet 19 of 50 - Place valves outside of curb ramp
29. Sheet 19 of 50 - Verify if proposed inlet will allow for all pipe-wall penetrations shown may need to consider a junction box where noted by example
30. Sheet 19 of 50 - Street gradient is less than 0.35%
31. Sheet 19 of 50 - Notate gradient of curb returns
32. Sheet 19 of 50 - Minimum sanitary sewer pipe size to be 8-inch
33. Sheet 20 of 50 - A temporary turnaround and easement to be provided at the end of Moses Austin Street. Angleton LDC Sec. 23-12 G.2.
34. Sheet 20 of 50 - Street gradient is less than 0.35%
35. Sheet 20 of 50 - Sanitary sewer service graphic to follow direction of flow if intended to depict this graphically for single services (Typical)
36. Sheet 21 of 50 - Street gradient is less than 0.35 % where noted
37. Sheet 21 of 50 - Place valves outside of curb ramp where noted

The proposed construction plans are incomplete. We are unable to complete the review until the recommended corrections/changes are made and the additional information requested is submitted. HDR recommends that the Austin Colony Phase 1B Subdivision Improvement Plans be Revised and Resubmitted.

If you have any questions, please feel free to contact us at our office (713)-622-9264.

Sincerely,

HDR Engineering, Inc.



Javier Vasquez, P.E., CFM
Civil Engineer

cc: Files (10420700)

Attachments

BRAZORIA COUNTY, TEXAS
JOSE DE JESUS VALDERAS SURVEY
ABSTRACT 380

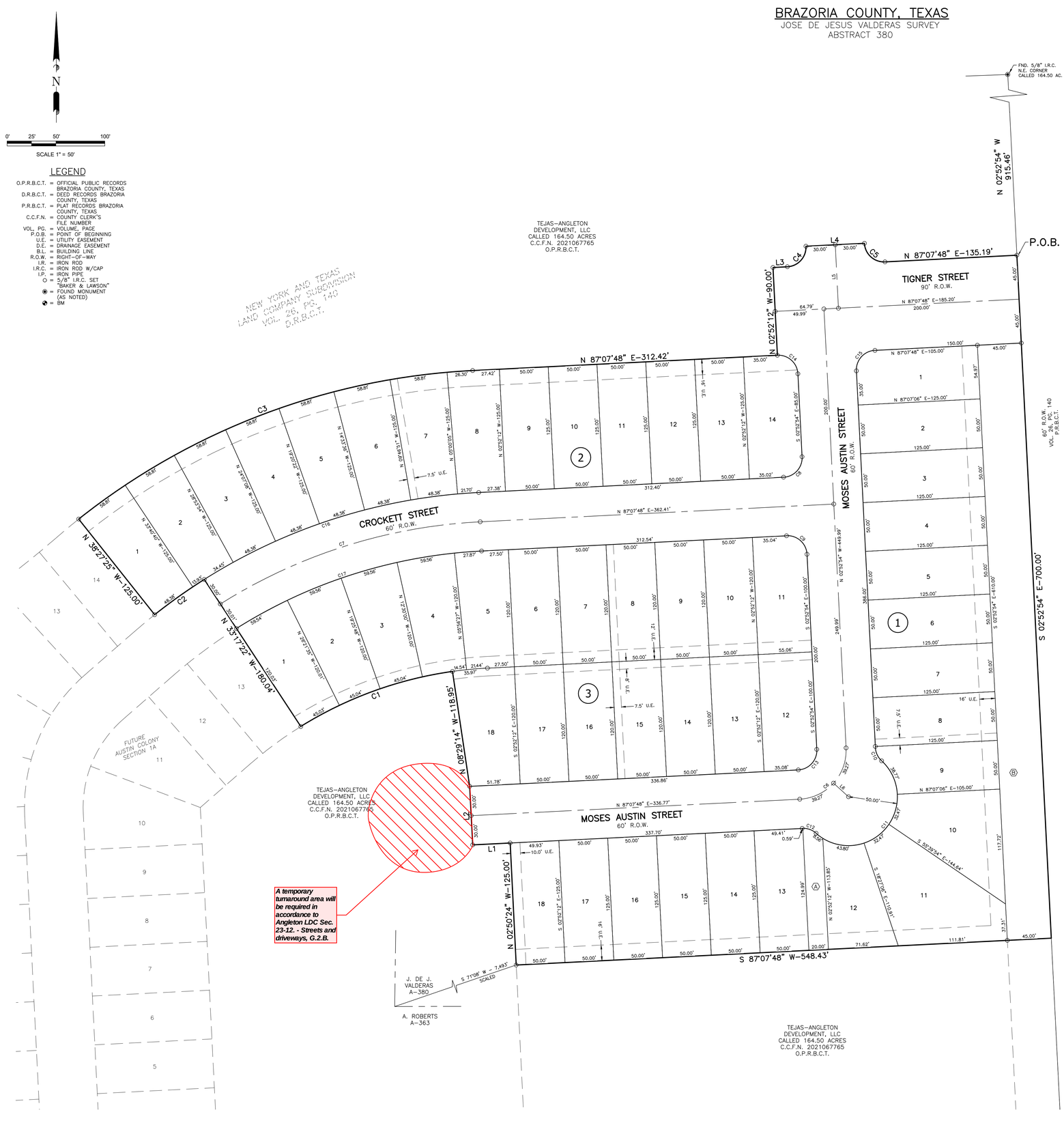
N

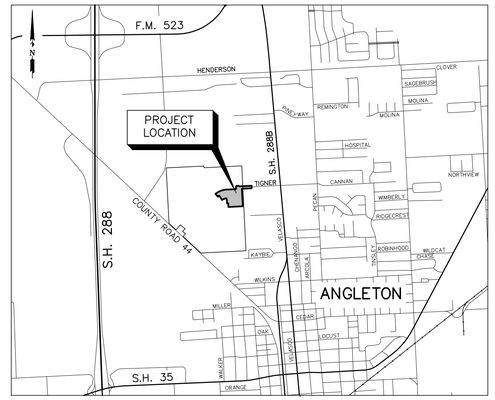
0' 25' 50' 100'

SCALE 1" = 50'

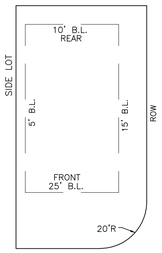
LEGEND

O.P.R.B.C.T. = OFFICIAL PUBLIC RECORDS BRAZORIA COUNTY, TEXAS
D.R.B.C.T. = DEED RECORDS BRAZORIA COUNTY, TEXAS
P.R.B.C.T. = PLAT RECORDS BRAZORIA COUNTY, TEXAS
C.C.F.N. = COUNTY CLERK'S FILE NUMBER
VOL, PG. = VOLUME, PAGE
P.O.B. = POINT OF BEGINNING
U.E. = UTILITY EASEMENT
D.E. = DRAINAGE EASEMENT
B.L. = BUILDING LINE
R.O.W. = RIGHT-OF-WAY
I.R. = IRON ROD
I.R.C. = IRON ROD W/CAP
I.P. = IRON PIPE
○ = 5/8" I.R.C. SET "BAKER & LAWSON"
◉ = FOUND MONUMENT (AS NOTED)
◔ = BM

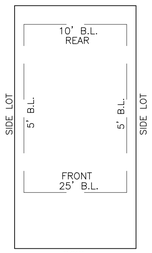




VICINITY MAP



TYPICAL SIDE LOT



TYPICAL INTERIOR LOT

LINE TABLE		
Line No.	Length	Direction
L1	38.35'	S87°07'48"W
L2	60.00'	N03°02'49"W
L3	14.79'	N87°07'48"E
L4	60.00'	N87°07'40"E
L5	65.00'	S02°52'12"E
L6	20.72'	N47°52'33"W

CURVE TABLE					
Curve No.	Length	Radius	Delta	Chord Bearing	Chord Distance
C1	166.39'	400.00'	23°50'03"	S70°03'36"W	165.20'
C2	62.31'	580.00'	6°09'19"	S54°37'14"W	62.28'
C3	437.96'	705.00'	35°35'36"	N69°20'23"E	430.95'
C4	31.41'	20.00'	89°59'49"	N42°07'53"E	28.28'
C5	31.42'	20.00'	90°00'11"	S47°52'07"E	28.29'
C6	78.55'	50.00'	90°00'41"	N42°07'27"E	70.72'
C7	282.12'	550.00'	29°23'23"	N72°26'49"E	279.04'
C9	31.41'	20.00'	89°59'19"	S47°52'33"E	28.28'
C10	15.50'	20.00'	44°24'55"	N25°05'21"W	15.12'
C11	156.07'	50.00'	178°50'32"	N42°07'27"E	99.99'
C12	15.50'	20.00'	44°24'55"	N70°39'45"W	15.12'
C13	31.42'	20.00'	90°00'41"	S42°07'27"W	28.29'
C15	31.42'	20.00'	90°00'41"	N42°07'27"E	28.29'
C16	298.06'	580.00'	29°26'37"	S72°25'12"W	294.79'
C17	266.08'	520.00'	29°19'04"	S72°28'16"W	263.19'

BLOCK 1 SECTION 1B	
PARCEL TABLE	
LOT NO.	AREA S.F.
1	6,788
2	6,250
3	6,250
4	6,250
5	6,250
6	6,250
7	6,250
8	6,250
9	5,681
10	8,311
11	10,745
12	6,072
13	6,250
14	6,250
15	6,250
16	6,250
17	6,250
18	6,246

BLOCK 2 SECTION 1B	
PARCEL TABLE	
LOT NO.	AREA S.F.
1	6,699
2	6,699
3	6,699
4	6,699
5	6,699
6	6,699
7	6,699
8	6,425
9	6,250
10	6,250
11	6,250
12	6,250
13	6,250
14	6,704

BLOCK 3 SECTION 1B	
PARCEL TABLE	
LOT NO.	AREA S.F.
1	6,274
2	6,276
3	6,276
4	6,323
5	6,259
6	6,000
7	6,000
8	6,000
9	6,000
10	6,000
11	6,520
12	6,522
13	6,000
14	6,000
15	6,000
16	6,000
17	6,000
18	6,903

RESERVE TABLE			
SYMBOL	DESCRIPTION	RESERVE USE	AREA
(A)	RESTRICTED RESERVE "A"	RESTRICTED TO UTILITY & DRAINAGE USE	0.056 AC.
(B)	RESTRICTED RESERVE "B"	RESTRICTED TO UTILITY & DRAINAGE USE	0.630 AC.

OWNER:
WAYNE L. "SANDY" REA, II
TEJAS VIEJO LAND COMPANY
5454 NEWCASTLE DRIVE
UNIT 1101
HOUSTON, TX 77081

SHEET 1 OF 2

FINAL PLAT
AUSTIN COLONY SECTION 1B

BEING 10.680 ACRES
50 LOTS 3 BLOCKS 2 RESERVES
SUBDIVISION

BEING A PORTION OF
A CALLED 164.50 ACRE TRACT
C.C.F.N. 2021067765
O.P.R.B.C.T.

JOSE DE JESUS VALDERAS SURVEY
ABSTRACT NO. 380
CITY OF ANGLETON
BRAZORIA COUNTY, TEXAS

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 Technology Drive, Suite 1530
Angleton, TX 77515
OFFICE: (979) 849-6681
TBPLS No. 10052500
REG. NO. F-825

PROJECT NO.: 16182	SCALE: 1" = 50'	DRAWN BY: BT
DRAWING NO.: 16182 PLAT SEC 1B FINAL.DWG	DATE: 3/4/2025	CHECKED BY: DH

J:\16000S\16100\16182\ENGINEERING-SURVEY\SURVEY\PLAT\16182 PLAT SEC 1B FINAL.DWG PLOT DATE:3/4/2025 Btaylor

PLANNING AND ZONING COMMISSION AND CITY COUNCIL:

APPROVED THIS _____ DAY OF _____, 20____, BY THE PLANNING AND ZONING COMMISSION, CITY OF ANGLETON, TEXAS.

_____
BILL GARWOOD, CHAIRMAN, PLANNING AND ZONING COMMISSION

_____
MICHELLE PEREZ, CITY SECRETARY

APPROVED THIS _____ DAY OF _____, 20____, BY THE CITY COUNCIL, CITY OF ANGLETON, TEXAS.

_____
JOHN WRIGHT, MAYOR

_____
MICHELLE PEREZ, CITY SECRETARY

STATE OF TEXAS §
COUNTY OF BRAZORIA §

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THE _____ DAY OF _____, 20____, BY _____, CITY OF ANGLETON, ON BEHALF OF THE CITY.

_____
NOTARY PUBLIC STATE OF TEXAS

_____
MY COMMISSION EXPIRES

DRAINAGE AND DETENTION EASEMENT

THIS PLAT IS HEREBY ADOPTED BY THE OWNERS AND APPROVED BY THE CITY OF ANGLETON (CALLED "CITY") SUBJECT TO THE FOLLOWING CONDITIONS WHICH SHALL BE BINDING UPON THE OWNERS, THEIR HEIRS, GRANTEES AND SUCCESSORS: THE PORTION SHOWN ON THE PLAT IS CALLED "DRAINAGE AND DETENTION EASEMENT:" THE DRAINAGE AND DETENTION EASEMENT WITHIN THE LIMITS OF THIS ADDITION, WILL REMAIN OPEN AT ALL TIMES AND WILL BE MAINTAINED IN A SAFE AND SANITARY CONDITION BY THE OWNERS OF THE LOT OR LOTS THAT ARE TRAVERSED BY OR ADJACENT TO THE DRAINAGE AND DETENTION EASEMENT. THE CITY WILL NOT BE RESPONSIBLE FOR THE MAINTENANCE AND OPERATION OF SAID EASEMENT OR FOR ANY DAMAGE TO PRIVATE PROPERTY OR PERSON THAT RESULTS FROM CONDITIONS IN THE EASEMENT, OR FOR THE CONTROL OF EROSION. NO OBSTRUCTION TO THE NATURAL FLOW OF STORMWATER RUN-OFF SHALL BE PERMITTED BY CONSTRUCTION OF ANY TYPE OF BUILDING, FENCE, OR ANY OTHER STRUCTURE WITHIN THE DRAINAGE AND DETENTION EASEMENT AS HEREIN ABOVE DEFINED, UNLESS APPROVED BY THE CITY ENGINEER. PROVIDED, HOWEVER, IT IS UNDERSTOOD THAT IN THE EVENT IT BECOMES NECESSARY FOR THE CITY TO ERECT OR CONSIDER ERECTING ANY TYPE OF DRAINAGE STRUCTURE IN ORDER TO IMPROVE THE STORM DRAINAGE THAT MAY BE OCCASIONED BY THE CITY SHALL HAVE THE RIGHT TO ENTER UPON THE DRAINAGE AND DETENTION EASEMENT AT ANY POINT, OR POINTS, TO INVESTIGATE, SURVEY OR TO ERECT, CONSTRUCT AND MAINTAIN ANY DRAINAGE FACILITY DEEMED NECESSARY FOR DRAINAGE PURPOSES. EACH PROPERTY OWNER SHALL KEEP THE DRAINAGE AND DETENTION EASEMENT CLEAN AND FREE OF DEBRIS, SILT, AND ANY SUBSTANCE WHICH WOULD RESULT IN UNSANITARY CONDITIONS OR OBSTRUCT THE FLOW OF WATER, AND THE CITY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS FOR THE PURPOSE OF INSPECTION AND SUPERVISION OF MAINTENANCE WORK BY THE PROPERTY OWNER TO ALLEVIATE ANY UNDESIRABLE CONDITIONS WHICH MAY OCCUR. THE NATURAL DRAINAGE THROUGH THE DRAINAGE AND DETENTION EASEMENT IS SUBJECT TO STORM WATER OVERFLOW AND NATURAL BANK EROSION TO AN EXTENT WHICH CANNOT BE DEFINITELY DEFINED. THE CITY SHALL NOT BE HELD LIABLE FOR ANY DAMAGES OF ANY NATURE RESULTING FROM THE OCCURRENCE OF THESE NATURAL PHENOMENA, OR RESULTING FROM THE FAILURE OF ANY STRUCTURE, OR STRUCTURES, WITHIN THE EASEMENT.

ANGLETON DRAINAGE DISTRICT

ACCEPTED THIS THE _____ DAY OF _____, 20____, BY THE ANGLETON DRAINAGE DISTRICT.

THE BOARD OF SUPERVISORS OF THE ANGLETON DRAINAGE DISTRICT DOES NOT WARRANT, REPRESENT OR GUARANTEE:

1. THAT DRAINAGE FACILITIES OUTSIDE THE BOUNDARIES OF THE SUBDIVISION PLAT ARE AVAILABLE TO RECEIVE RUNOFF FROM THE FACILITIES DESCRIBED IN THIS PLAT.

2. THAT DRAINAGE FACILITIES DESCRIBED IN THIS PLAT ARE ADEQUATE FOR RAINFALL IN EXCESS OF ANGLETON DRAINAGE DISTRICT MINIMUM REQUIREMENTS.

3. THAT BUILDING ELEVATION REQUIREMENTS HAVE BEEN DETERMINED BY THE ANGLETON DRAINAGE DISTRICT.

4. THAT THE DISTRICT ASSUMES ANY RESPONSIBILITY FOR CONSTRUCTION, OPERATION OR MAINTENANCE OF SUBDIVISION DRAINAGE FACILITIES.

THE DISTRICT'S REVIEW IS BASED SOLELY ON THE DOCUMENTATION SUBMITTED FOR REVIEW, AND ON THE RELIANCE ON THE REPORT SUBMITTED BY THE TEXAS REGISTERED PROFESSIONAL ENGINEER.

THE DISTRICT'S REVIEW IS NOT INTENDED NOR WILL SERVE AS A SUBSTITUTION OF THE OVERALL RESPONSIBILITY AND/OR DECISION MAKING POWER OF THE PARTY SUBMITTING THE PLAT OR PLAN HEREIN, THEIR OR ITS PRINCIPALS OR AGENTS.

_____ _____
CHAIRMAN, BOARD OF SUPERVISORS BOARD MEMBER

_____
BOARD MEMBER

DEDICATION STATEMENT:

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: THAT WAYNE L. REA II, OF TEJAS VIEJO LAND COMPANY, ACTING HEREIN BY AND THROUGH ITS DULY AUTHORIZED OFFICERS, DOES HEREBY ADOPT THIS PLAT DESIGNATING THE HEREINABOVE DESCRIBED PROPERTY AS AUSTIN COLONY SECTION 1B, A SUBDIVISION IN THE JURISDICTION OF THE CITY OF ANGLETON, TEXAS, AND DOES HEREBY DEDICATE, IN FEE SIMPLE, TO THE PUBLIC USE FOREVER, THE STREETS, ALLEYS AND PUBLIC PARKLAND SHOWN THEREON. THE STREETS, ALLEYS AND PARKLAND ARE DEDICATED FOR STREET PURPOSES. THE EASEMENTS AND PUBLIC USE AREAS, AS SHOWN, ARE DEDICATED FOR THE PUBLIC USE FOREVER, FOR THE PURPOSES INDICATED ON THIS PLAT. NO BUILDINGS, FENCES, TREES, SHRUBS, OR OTHER IMPROVEMENTS OR GROWTHS SHALL BE CONSTRUCTED OR PLACED UPON, OVER, OR ACROSS THE EASEMENTS AS SHOWN, EXCEPT THAT LANDSCAPE IMPROVEMENTS MAY BE PLACED IN LANDSCAPE EASEMENTS, IF APPROVED BY THE CITY OF ANGLETON. IN ADDITION, UTILITY EASEMENTS MAY BE USED FOR THE MUTUAL USE AND ACCOMMODATION OF ALL PUBLIC UTILITIES DESIRING TO USE OR USING THE SAME UNLESS THE EASEMENT LIMITS THE USE TO PARTICULAR UTILITIES, SAID USE BY PUBLIC UTILITIES BEING SUBORDINATE TO THE PUBLIC'S AND CITY OF ANGLETON'S USE THEREOF. THE CITY OF ANGLETON AND PUBLIC UTILITY ENTITIES SHALL HAVE THE RIGHT TO REMOVE AND KEEP REMOVED ALL OR PARTS OF ANY BUILDINGS, FENCES, TREES, SHRUBS, OR OTHER IMPROVEMENTS OR GROWTHS WHICH MAY IN ANY WAY ENDANGER OR INTERFERE WITH THE CONSTRUCTION, MAINTENANCE, OR EFFICIENCY OF THEIR RESPECTIVE SYSTEMS IN SAID EASEMENTS. THE CITY OF ANGLETON AND PUBLIC UTILITY ENTITIES SHALL AT ALL TIMES HAVE THE FULL RIGHT OF INGRESS AND EGRESS TO OR FROM THEIR RESPECTIVE EASEMENTS FOR THE PURPOSE OF CONSTRUCTING, RECONSTRUCTING, INSPECTING, PATROLLING, MAINTAINING, READING METERS, AND ADDING TO OR REMOVING ALL OR PARTS OF THEIR RESPECTIVE SYSTEMS WITHOUT THE NECESSITY AT ANY TIME OF PROCURING PERMISSION FROM ANYONE.

OWNER'S ACKNOWLEDGEMENT:

STATE OF TEXAS §
COUNTY OF BRAZORIA §

THE OWNER OF LAND SHOWN ON THIS PLAT, IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, DEDICATES TO THE USE OF THE PUBLIC FOREVER ALL STREETS, ALLEYS, PARKS, WATERCOURSES, DRAINS, EASEMENTS AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED.

_____
WAYNE L. REA II
TEJAS VIEJO LAND COMPANY

STATE OF TEXAS §
COUNTY OF BRAZORIA §

BEFORE ME THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED WAYNE L. REA II, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THE SAME WAS THE ACTING OWNER FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE _____ DAY OF _____, 20____.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

_____
MY COMMISSION EXPIRES

DESCRIPTION OF 10.680 ACRES

BEING A 10.680 ACRE TRACT OF LAND LOCATED WITHIN THE JOSE DE JESUS VALDERAS SURVEY, ABSTRACT NO. 380, BRAZORIA COUNTY, TEXAS, BEING A PORTION OF A CALLED 164.50 ACRE TRACT IN THE NAME OF TEJAS-ANGLETON DEVELOPMENT, LLC, AS RECORDED IN COUNTY CLERKS FILE NO. (C.C.F.N.) 2021067765 OF THE OFFICIAL PUBLIC RECORDS, BRAZORIA COUNTY, TEXAS (O.P.R.B.C.T.), ALSO BEING A PORTION OF THE NEW YORK AND TEXAS LAND COMPANY SUBDIVISION, AS RECORDED IN VOLUME 26, PAGE 140 OF THE DEED RECORDS, BRAZORIA COUNTY, TEXAS (D.R.B.C.T.), REFERRED TO HEREAFTER AS THE ABOVE REFERENCED TRACT OF LAND, SAID 10.680 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS (BEARINGS ARE BASED ON THE TEXAS COORDINATE SYSTEM OF 1983, (NAD83) SOUTH CENTRAL ZONE, PER GPS OBSERVATIONS):

BEGINNING AT A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER, BEING ON THE EAST LINE OF THE ABOVE REFERENCED TRACT, SAME BEING ON THE WEST LINE OF A 60' PLATTED RIGHT-OF-WAY (R.O.W.), AS RECORDED IN VOLUME 26, PAGE 140 OF THE D.R.B.C.T., FROM WHICH A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" FOUND AT THE NORTHEAST CORNER OF THE ABOVE REFERENCED TRACT BEARS NORTH 02°52'54" WEST, A DISTANCE OF 915.46 FEET;

THENCE SOUTH 02°52'54" EAST, ALONG THE EAST LINE OF THE ABOVE REFERENCED TRACT, SAME BEING THE WEST LINE OF SAID 60' PLATTED RIGHT-OF-WAY (R.O.W.), A DISTANCE OF 700.00 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE SOUTH 87°07'48" WEST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 548.43 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE NORTH 02°50'24" WEST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 125.00 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE SOUTH 87°07'48" WEST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 38.35 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE NORTH 03°02'49" WEST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 60.00 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE NORTH 08°29'14" WEST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 118.95 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE, OVER AND ACROSS THE ABOVE REFERENCED TRACT, ALONG A CURVE TO THE LEFT AN ARC DISTANCE OF 166.39 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER, SAID CURVE HAVING A RADIUS OF 400.00 FEET, A CENTRAL ANGLE OF 23°50'03", A CHORD WHICH BEARS SOUTH 70°03'36" WEST A DISTANCE OF 165.20 FEET;

THENCE NORTH 33°17'22" WEST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 180.04 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE, OVER AND ACROSS THE ABOVE REFERENCED TRACT, ALONG A CURVE TO THE LEFT AN ARC DISTANCE OF 62.31 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER, SAID CURVE HAVING A RADIUS OF 580.00 FEET, A CENTRAL ANGLE OF 06°09'19", A CHORD WHICH BEARS SOUTH 54°37'14" WEST A DISTANCE OF 62.28 FEET;

THENCE NORTH 38°27'25" WEST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 125.00 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE, OVER AND ACROSS THE ABOVE REFERENCED TRACT, ALONG A CURVE TO THE RIGHT AN ARC DISTANCE OF 437.96 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER, SAID CURVE HAVING A RADIUS OF 705.00 FEET, A CENTRAL ANGLE OF 035°35'36", A CHORD WHICH BEARS NORTH 69°20'23" EAST A DISTANCE OF 430.95 FEET;

THENCE NORTH 87°07'48" EAST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 312.42 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE NORTH 02°52'12" WEST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 90.00 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE NORTH 87°07'48" EAST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 14.79 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE, OVER AND ACROSS THE ABOVE REFERENCED TRACT, ALONG A CURVE TO THE LEFT AN ARC DISTANCE OF 31.41 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER, SAID CURVE HAVING A RADIUS OF 20.00 FEET, A CENTRAL ANGLE OF 89°59'49", A CHORD WHICH BEARS NORTH 42°07'53" EAST A DISTANCE OF 28.28 FEET;

THENCE NORTH 87°07'40" EAST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 60.00 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER;

THENCE, OVER AND ACROSS THE ABOVE REFERENCED TRACT, ALONG A CURVE TO THE LEFT AN ARC DISTANCE OF 31.42 FEET TO A 5/8-INCH IRON ROD WITH CAP, STAMPED "BAKER & LAWSON" SET FOR CORNER, SAID CURVE HAVING A RADIUS OF 20.00 FEET, A CENTRAL ANGLE OF 90°00'11", A CHORD WHICH BEARS SOUTH 47°52'07" EAST A DISTANCE OF 28.29 FEET;

THENCE NORTH 87°07'48" EAST, OVER AND ACROSS THE ABOVE REFERENCED TRACT, A DISTANCE OF 135.19 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT OF LAND, AND CONTAINING 10.680 ACRES OF LAND, MORE OR LESS.

NOTES:

1. THE PURPOSE OF THIS PLAT IS TO PLAT THE 10.680 ACRE TRACT INTO A 50 LOT, 3 BLOCK 2 RESERVE SUBDIVISION.
2. ALL BEARINGS AND DISTANCES ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD-83, U.S. SURVEY FEET.
3. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMMITMENT FOR TITLE INSURANCE, WITH REGARD TO ANY RECORDED EASEMENTS, RIGHTS-OF-WAY OR SETBACKS AFFECTING THE SURVEYED PROPERTY. NO ADDITIONAL RESEARCH REGARDING THE EXISTENCE OF EASEMENTS, RESTRICTIONS, OR OTHER MATTERS OF RECORD HAS BEEN PERFORMED BY THE SURVEYOR.
4. FLOOD ZONE STATEMENT: THE SURVEYOR NAMED HEREON HAS EXAMINED THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR BRAZORIA COUNTY: MAP NUMBER 48039C0440K, WITH EFFECTIVE DATE OF DECEMBER 30, 2020, AND THAT MAP INDICATES THAT THE PROPERTY SURVEYED IS WITHIN ZONE "X" (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD-PLAIN. WARNING: THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES WILL BE FREE FROM FLOODING OR FLOOD DAMAGE, AND WILL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.
5. SITE BENCHMARK:
   TBM "A" BOX CUT IN CONCRETE, TOP OF INLET, SOUTH SIDE OF WEST END OF TIGNER ROAD.
   ELEVATION = 15.00' NAVD1988, REFERENCE BENCHMARK: NGS MONUMENT: TXAG REF MON 1 PID: DR8248, PUBLISHED ELEVATION: 32.0 FEET. TXDOT ANGLETON.
6. THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES OR SUBSURFACE CONDITIONS OTHER THAN THOSE SHOWN MAY AFFECT THE USE AND DEVELOPMENT OF THE SUBJECT PROPERTY SHOWN HEREON.
7. NOTICE: SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF THE UNIFIED DEVELOPMENT CODE OF THE CITY OF ANGLETON AND STATE PLATTING STATUTES AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.
8. NOTICE: PLAT APPROVAL SHALL NOT BE DEEMED TO OR PRESUMED TO GIVE AUTHORITY TO VIOLATE, NULLIFY, VOID, OR CANCEL ANY PROVISIONS OF LOCAL, STATE, OR FEDERAL LAWS, ORDINANCES, OR CODES.
9. NOTICE: THE APPLICANT IS RESPONSIBLE FOR SECURING ANY FEDERAL PERMITS THAT MAY BE NECESSARY AS THE RESULT OF PROPOSED DEVELOPMENT ACTIVITY. THE CITY OF ANGLETON IS NOT RESPONSIBLE FOR DETERMINING THE NEED FOR, OR ENSURING COMPLIANCE WITH ANY FEDERAL PERMIT.
10. NOTICE: APPROVAL OF THIS PLAT DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD OR REGISTERED PUBLIC LAND SURVEYOR IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY THE CITY ENGINEER.
11. NOTICE: ALL RESPONSIBILITY FOR THE ADEQUACY OF THIS PLAT REMAINS WITH THE ENGINEER OR SURVEYOR WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF ANGLETON MUST RELY ON THE ADEQUACY OF THE WORK OF THE ENGINEER AND/OR SURVEYOR OF RECORD.
12. IT SHALL BE THE RESPONSIBILITY OF THE HOMEOWNERS ASSOCIATION FOR THE MAINTENANCE OF THE RESERVES LOCATED ON THIS PLAT.
13. THE PLATTED PROPERTY LIES WITHIN A TRACT OF LAND (164.5 ACRE TRACT) ANNEXED BY THE CITY OF ANGLETON ON MARCH 9, 2021, CITY ORDINANCE NO. 20210309016

STATE OF TEXAS §
COUNTY OF BRAZORIA §

KNOWN ALL MEN BY THESE PRESENTS:

THAT I, DARREL HEIDRICH, DO HEREBY CERTIFY THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ACCURATE SURVEY OF THE LAND AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION.

_____
DARREL HEIDRICH
REGISTERED PROFESSIONAL LAND SURVEYOR
LAND SURVEYOR NO. 5378

STATE OF TEXAS §
COUNTY OF BRAZORIA §

KNOW ALL MEN BY THESE PRESENTS:
THAT I, DOUGLAS B. ROESLER, DO HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN PROVIDED IN THIS PLAT. TO THE BEST OF MY KNOWLEDGE, THIS PLAT CONFORMS TO ALL REQUIREMENTS OF THE ANGLETON LDC, EXCEPT FOR ANY VARIANCES THAT WERE EXPRESSLY GRANTED BY THE CITY COUNCIL.

SIGNED: _____
DOUGLAS B. ROESLER DATE
PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 56739

OWNER:
WAYNE L. "SANDY" REA, II
TEJAS VIEJO LAND COMPANY
5454 NEWCASTLE DRIVE
UNIT 1101
HOUSTON, TX 77081

FINAL PLAT
AUSTIN COLONY SECTION 1B

BEING 10.680 ACRES
50 LOTS 3 BLOCKS 2 RESERVES SUBDIVISION

BEING A PORTION OF A CALLED 164.50 ACRE TRACT C.C.F.N. 2021067765 O.P.R.B.C.T.

JOSE DE JESUS VALDERAS SURVEY
ABSTRACT NO. 380
CITY OF ANGLETON
BRAZORIA COUNTY, TEXAS

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 Technology Drive, Suite 1530
Angleton, TX 77515
OFFICE: (979) 849-6681
TBPLS No. 10052500
REG. NO. F-825

PROJECT NO.: 16182	SCALE:	DRAWN BY: BT
DRAWING NO.: 16182 PLAT SEC 1B FINAL.DWG	DATE: 3/4/2025	CHECKED BY: DH

J:\16000S\16100\16182\ENGINEERING-SURVEY\SURVEY\PLAT\16182 PLAT SEC 1B FINAL.DWG PLOT DATE:3/4/2025 Btaylor

PLANS FOR CONSTRUCTION OF

PAVING, DRAINAGE AND UTILITIES ON

AUSTIN COLONY SUBDIVISION

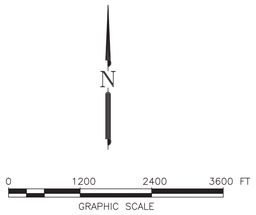
SECTION 1B

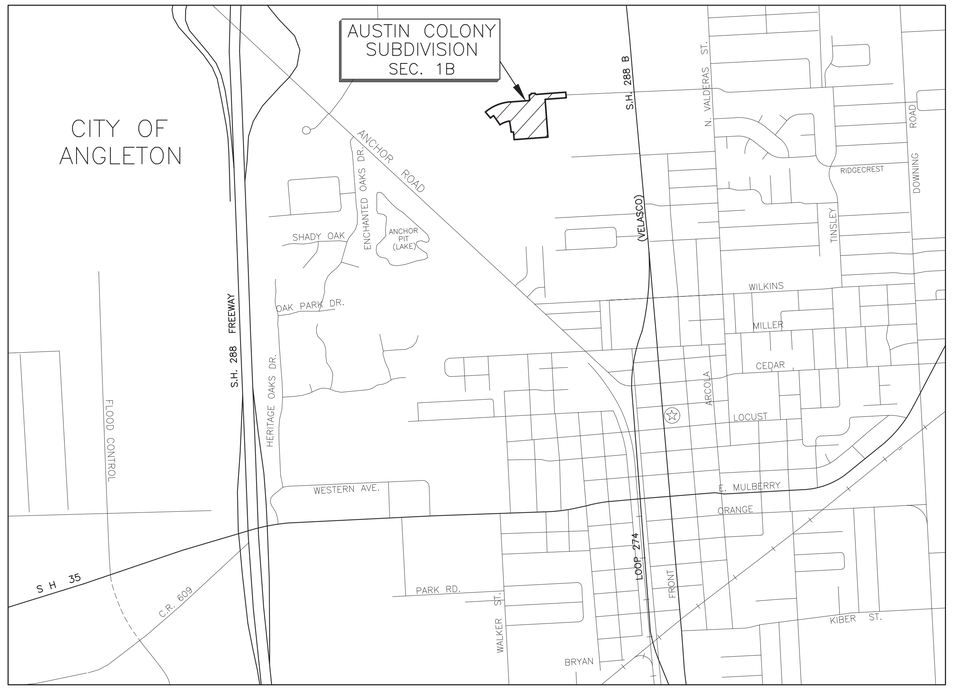
FOR THE

CITY OF ANGLETON

BRAZORIA COUNTY

B&L JOB No. 16182





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CITY OF ANGLETON

MAYOR
JOHN WRIGHT

CITY MANAGER
CHRIS WHITTAKER

CITY COUNCIL
CHRISTIENE DANIEL
CECIL BOOTH
TERRY ROBERTS
TRAVIS TOWNSEND
TANNER SARTIN

"Release of this application does not constitute a verification of all data, information and calculations supplied by the applicant. The engineer of record is solely responsible for the completeness, accuracy and adequacy of their submittal, whether or not the application is reviewed for Code compliance by the City Engineer."

"All responsibility for the adequacy of these plans remains with the Engineer who prepared them. In approving these plans, the City of Angleton must rely on the adequacy of the work of the Design Engineer."

NOTES:

1. ALL BEARINGS AND DISTANCES ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD-83, U.S. SURVEY FEET.
2. SITE BENCHMARK:
   TBM "A" BOX CUT IN CONCRETE, TOP OF INLET, SOUTH SIDE OF WEST END OF TIGNER ROAD. ELEVATION = 15.00' NAVD1988, REFERENCE BENCHMARK: NGS MONUMENT: TXAG REF MON 1 PID: DR8248, PUBLISHED ELEVATION: 32.0 FEET. TXDOT ANGLETON.
3. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP NO. 48039C0440K, REVISED DATE OF DECEMBER 30, 2020, THE SUBJECT TRACT LIES WITHIN ZONE "X" (UNSHADED).

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/7/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

TITLE SHEET

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jpena

16182 SHEET SET SEC 1B.DWG

GENERAL NOTES:

1. CONTACT THE ENGINEERING INSPECTORS WITH THE CITY'S DEVELOPMENT SERVICES AT 979-849-4364 PRIOR TO STARTING WORK TO SCHEDULE A PRE-CONSTRUCTION MEETING.
2. CONTRACTOR IS RESPONSIBLE FOR HAVING ALL BURIED UTILITIES IDENTIFIED, PROTECTED, REPLACED AND/OR PROPERLY REPAIRED IF DAMAGED. REPAIRS/REPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
3. CONTRACTOR SHALL OBTAIN AND MAINTAIN ON SITE ALL APPLICABLE PERMITS AND AN APPROVED COPY OF THE PLANS AND SPECIFICATIONS. NOTIFY THE CITY'S ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
4. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE CITY'S ENGINEERING DEPARTMENT 24 HOURS PRIOR TO WEEKDAY WORK REQUIRING INSPECTION INCLUDING, BUT NOT LIMITED TO, LIMING, PAVING OPERATIONS, CONCRETE PLACEMENT, FORMING AND SET-UP, DENSITIES, PIPE INSTALLATION, AND ANY TESTING BY LABORATORIES. THE ENGINEERING DEPARTMENT MAY BE REACHED AT 979-849-4364 OR BY CONTACTING THE ASSIGNED INSPECTOR.
5. ALL SATURDAY WORK SHALL BE REQUESTED, IN WRITING, WITH THE CITY'S PUBLIC WORKS DEPARTMENT AT LEAST 48 HOURS IN ADVANCE. SUNDAY AND HOLIDAY WORK REQUIRES 72 HOUR WRITTEN REQUESTS AND MUST BE APPROVED BY THE CITY PUBLIC WORKS DIRECTOR. REQUIRED INSPECTIONS MAY BE SUBJECT TO INSPECTION FEES. NON-NOTIFICATIONS MAY RESULT IN NON-COMPLIANCE, WORK ORDERED STOPPAGE AND DOUBLE INSPECTION FEES.
6. FULL-TIME RESIDENT INSPECTION BY THE PROJECT ENGINEER'S REPRESENTATIVE SHALL BE PROVIDED AT ALL CRITICAL POINTS OF CONSTRUCTION OR AS DEEMED NECESSARY BY THE CITY OF ANGLETON.
7. FOLLOW-UP INSPECTIONS OF ALL PUBLIC INFRASTRUCTURE SHALL BE SCHEDULED WITHIN 60 DAYS OF THE INITIAL INSPECTION. COMPLETE RE-INSPECTION AND A NEW PUNCH LIST MAY BE REQUIRED AFTER THE 60 DAY PERIOD.
8. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS LAND DEVELOPMENT CODE AND ANGLETON CONSTRUCTION MANUAL, CURRENT EDITION (ANGLETON LDC).
9. ALL STATIONS ARE CENTERLINE OF STREET RIGHT-OF-WAY UNLESS OTHERWISE NOTED ON THE PLANS EXCEPT IN SIDE OR BACK LOT EASEMENTS WHERE CENTERLINE IS CENTER OF PIPE. IN EASEMENTS WHERE SANITARY AND STORM SEWER ARE PRESENT PARALLEL, STATIONS SHALL BE BASED ON CENTERLINE OF SEWER PIPING.
10. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. ANY DRAINAGE AREA OR STRUCTURE DISTURBED, DURING CONSTRUCTION, SHALL BE RESTORED TO THE SATISFACTION OF THE CITY OF ANGLETON. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ANGLETON DESIGN STANDARDS. IF NON-COMPLIANCE OCCURS, CONTRACTOR SHALL REMEDY IMMEDIATELY AT THEIR OWN EXPENSE.
11. ANY POLLUTION CONTROL DEVICE, SOD, OR SEEDED AREA DAMAGED, DISTURBED, OR REMOVED SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR WATERING ANY SEED OR SOD WHICH THE CONTRACTOR HAS INSTALLED UNTIL ADEQUATE GROWTH IS ACHIEVED TO PREVENT EROSION.
12. STORM WATER POLLUTION PROTECTION SHALL BE DESIGNED, CONSTRUCTED, MAINTAINED AND SHALL BE IN TOTAL COMPLIANCE WITH THE STORM WATER QUALITY MANUAL OF THE CITY OF ANGLETON.
13. ANY MATERIALS OR WORKMANSHIP NOT MEETING OR EXCEEDING CITY OF ANGLETON STANDARDS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
14. THE CONTRACTOR SHALL KEEP THE STREETS, RIGHT OF WAY, AND WORK AREA CLEAN OF DIRT, MUD, AND DEBRIS. CLEAN DAILY OR AS REQUIRED BY CITY STAFF.
15. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL REQUIRED TRAFFIC SAFETY CONTROL DEVICES UP TO AND INCLUDING FLAGMEN OR POLICE OFFICERS, IF DEEMED NECESSARY BY THE CITY OF ANGLETON.
16. THE CONTRACTOR SHALL CONTACT THE CITY AS APPROPRIATE TO OPERATE EXISTING UTILITIES AND PRIOR TO MAKING TIE-INS.
17. ALL BACKFILL WITHIN PUBLIC RIGHTS OF WAY OR EASEMENTS SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY (IN 8 INCH LIFTS) AND TESTED FOR ±3% OPTIMUM MOISTURE BY AN APPROVED LAB.
18. IT IS PERMISSIBLE TO USE A BACKHOE FOR TRENCH EXCAVATION IN LIEU OF A TRENCHING MACHINE.
19. THE CONTRACTOR SHALL NEVER UNLOAD ANY TRACK TYPE VEHICLE OR EQUIPMENT ON ANY EXISTING PAVEMENT OR CROSS OVER ANY EXISTING PAVEMENT OR CURB.
20. ALL FINISH GRADES ARE TO CONFORM TO A MINIMUM SLOPE OF 1% POSITIVE DRAINAGE.
21. CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT ALL "POINT TIE-INS OR CROSSING" TO DETERMINE IF CONFLICTS EXIST BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICT.
22. ALL FINISHED GRADES SHALL VARY UNIFORMLY BETWEEN FINISHED ELEVATIONS.
23. ALL TESTING PROCEDURES SHALL CONFORM TO THE CITY OF ANGLETON STANDARDS. THE INITIAL TESTING EXPENSE SHALL BE BORNE BY THE OWNER. IF ANY OF THE TESTS DO NOT MEET THE TESTING STANDARDS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR REPLACE SUCH MATERIAL SO THE TESTING STANDARDS CAN BE MET. ADDITIONAL TESTING TO MEET COMPLIANCE SHALL BE AT THE CONTRACTOR'S EXPENSE.
24. CONTRACTOR SHALL PROVIDE SHEETING, SHORING, AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION AS PER OSHA REQUIREMENTS.
25. ALL MATERIALS AND WORKMANSHIP NOT GOVERNED BY CITY STANDARDS SHALL CONFORM TO THE LATEST VERSION OF THE TXDOT STANDARD SPECIFICATIONS AND THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND ANY REVISIONS THERETO.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIALS AND EQUIPMENT STORED ON THE JOBSITE IN A SAFE AND WORKMAN-LIKE MANNER (DURING AND AFTER WORKING HOURS), UNTIL JOB COMPLETION.
27. THE LOADING AND UNLOADING OF ALL PIPE, VALVES, HYDRANTS, MANHOLES, AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PRACTICES AND SHALL BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIAL. THE CONTRACTOR SHALL LOCATE AND PROVIDE THE NECESSARY STORAGE AREAS FOR MATERIAL AND EQUIPMENT.
28. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR FOR EXCAVATION, INSTALLATION, AND COMPLETION OF THE PROJECT AS SHOWN ON THE PLANS.
29. PRIVATE UTILITIES (PHONE, CABLE TV, ELECTRICITY, ETC.) WILL BE INSTALLED WITHIN DEDICATED UTILITY EASEMENT.
30. PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THE PLANS. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING CURRENT OSHA STANDARDS FOR TRENCH SAFETY SYSTEMS, SEALED BY A LICENSED PROFESSIONAL ENGINEER. APPROPRIATE TRENCH SAFETY PLANS SHALL BE SUBMITTED BY THE CONTRACTOR PRIOR TO EXECUTION OF A CONTRACT FOR HIS WORK.

CONCRETE/PAVING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND AUTHORIZATION REQUIRED BY CITY OF ANGLETON.
2. CONTRACTOR IS RESPONSIBLE FOR HAVING ALL BURIED UTILITIES IDENTIFIED, PROTECTED, REPLACED AND/OR PROPERLY REPAIRED IF DAMAGED. REPAIRS/REPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
3. PAVING CONTRACTOR SHALL PROTECT WATER, SEWER, AND DRAINAGE FACILITIES AND WILL REPLACE ANY DAMAGED FACILITIES AT CONTRACTORS OWN EXPENSE. ALL MANHOLES AND VALVES WITHIN THE PAVEMENT AREA SHALL BE ADJUSTED TO FINISH GRADE BY THE PAVING CONTRACTOR WITH THE USE OF APPROVED BLOCKOUTS.
4. ALL PAVING SHALL BE IN ACCORDANCE WITH THE CITY OF ANGLETON DESIGN STANDARDS, APPROVED PLANS AND SPECIFICATIONS WITH THE LATEST REVISIONS OR AMENDMENTS. IN THE EVENT OF A CONFLICT, THE CITY OF ANGLETON DESIGN STANDARDS SHALL GOVERN.
5. PAVING CONTRACTOR SHALL PROVIDE AND MAINTAIN SILT PROTECTION FENCES ON ALL STAGES OF CURB INLETS.
6. EXISTING PAVEMENTS, CURBS, SIDEWALKS, DRIVEWAYS, PERIMETER DITCHES & ADJOINING PROPERTIES ETC., DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
7. CONDITION OF THE WORK AREA (INCLUDING ROADS, RIGHT OF WAYS, ETC.) UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN THE CONDITION PRIOR TO STARTING THE WORK.
8. ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.
9. REDWOOD AND KEYWAYS SHALL NOT INTERSECT WITHIN 2 FEET OF AN INLET.
10. AT INITIAL AND FINAL INSPECTIONS THE PAVEMENT WILL BE FLOODED TO CHECK FOR BIRDBATHS AND CRACKS. FLOODING OF STREETS SHALL OCCUR 1 HOUR PRIOR TO INSPECTION.
11. ALL CONCRETE PLACED SHALL BE UNIFORMLY SPRAYED WITH A WHITE MEMBRANE CURING COMPOUND AT AN UNDILUTED RATE OF 200 SF/GALLON OR RATE NOTED PER MANUFACTURE RECOMMENDATIONS IF LESS THAN NOTED. DESCRIBED IN ITEM 526 IN THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. IMPROPER APPLICATION WILL RESULT IN THE REJECTION OF THE CONCRETE.
12. SIX INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH GRADE 60, #4 REBAR, 24 INCH C-C EACH WAY IS THE MINIMUM ACCEPTABLE CONSTRUCTION FOR LOCAL STREETS.
13. SEVEN INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH GRADE 60, #4 REBAR, 18 INCH C-C EACH WAY IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR COLLECTOR STREETS.
14. EIGHT INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH GRADE 60, #4 18 INCH C-C EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.
15. ALL RETURNS SHALL HAVE A MINIMUM 25 FOOT RADIUS AT THE BACK OF CURB UNLESS OTHERWISE NOTED.
16. ALL INTERSECTIONS SHALL BE CONSTRUCTED WITH WHEELCHAIR RAMPS IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARD, THE AMERICAN DISABILITIES ACT, AND THE CITY OF ANGLETON STANDARDS (LATEST REVISIONS). (NO BLOCKOUTS).
17. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED WITHIN EACH STREET RIGHT OF WAY IN ACCORDANCE WITH CITY OF ANGLETON, THE ADA, AND THE TAS STANDARDS (LATEST REVISIONS).
18. CRACKS LARGER THAN 1/16 INCH ARE NOT ACCEPTABLE IN NEW PAVEMENT. CRACKS 1/16 INCH OR LESS SHALL BE ADDRESSED ON AN INDIVIDUAL BASIS BY DRILL AND EPOXY INJECTION, SUBJECT TO APPROVAL OR REJECTION.
19. PROPER TESTING AND LAB DOCUMENTATION IS REQUIRED. FAILURE TO MEET THE MINIMUM PAVEMENT REQUIREMENTS WILL RESULT IN THE REJECTION OF SAID PAVEMENT. IMMEDIATE REMOVAL AND REPLACEMENT OF SUBSTANDARD PAVEMENT SECTIONS WILL BE NECESSARY TO SATISFY THESE REQUIREMENTS.
20. FOUR CONCRETE CYLINDERS, SLUMP, AND AIR ENTRAINMENT TESTS ARE REQUIRED FOR EACH 100 CUBIC YARDS OF CONCRETE PAVING WITH A MINIMUM OF ONE SET OF 4 PER PLACEMENT. THE CITY OF ANGLETON RESERVES THE RIGHT TO REQUEST ANY ADDITIONAL TESTS AT THE CONTRACTOR'S EXPENSE, IF ANY MATERIAL APPEARS BELOW STANDARDS.
21. NO 3 REBAR, 18 INCH C-C EACH WAY IS THE MINIMUM ACCEPTABLE FOR SIDEWALKS. NUMBER 4 REBAR, 24 INCH C-C EACH WAY IS THE MINIMUM ACCEPTABLE FOR COMMERCIAL APPROACHES, WHEELCHAIR RAMPS, RESIDENTIAL APPROACHES AND DRIVEWAYS.
22. COLD WEATHER PRECAUTIONS. CONCRETE PAVEMENT SHALL NOT BE PLACED WHEN THE AMBIENT TEMPERATURE IS 40°F AND FALLING. CONCRETE MAY BE PLACED IF THE AMBIENT TEMPERATURE IS 35°F AND RISING. CONTRACTOR SHALL PROVIDE AN APPROVED COVERING MATERIAL (COTTON MATS, POLYETHYLENE SHEETING, ETC.) IN THE EVENT TEMPERATURE SHOULD FALL BELOW 32°F. NO SALT OR OTHER CHEMICALS SHALL BE ADDED TO CONCRETE TO PREVENT FREEZING.
23. HOT WEATHER PRECAUTIONS. NO CONCRETE PAVEMENT MIXTURE SHALL BE PLACED IF THE MIXTURE TEMPERATURE IS ABOVE 95°F. AIR AND WATER REDUCER ARE REQUIRED IF MIXTURE TEMPERATURE REACHES 85°F OR ABOVE.
24. IF NO AIR AND WATER REDUCER HAS BEEN ADDED, NO CONCRETE SHALL BE PLACED IF MORE THAN 60 MINUTES PAST BATCH TIME. IF AIR AND WATER REDUCER HAS BEEN ADDED, NO CONCRETE SHALL BE PLACED IF MORE THAN 90 MINUTES PAST BATCH TIME.
25. STRUCTURE TEMPERATURES AND TIMING FOR CONCRETE PLACEMENT MAY VARY. REFER TO CURRENT TXDOT STANDARDS ITEM 420 FOR DETAILS.
26. TRANSVERSE EXPANSION JOINTS AND STAKES SHALL BE OF SOUND REDWOOD AND PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS. MAXIMUM SPACING SHALL BE 59 FEET 6 INCH. EXPANSION JOINTS SHALL BE CLEANED, WIRE BRUSHED, BLOWN OR FLAME DRIED SEALED WITH AN APPROVED LIST RUBBERIZED HOT LAID ASPHALT JOINT AND CRACK SEALANT OR A TWO (2) COMPONENT POLYMERIC SELINEAR FEET LEVELING COLD APPLIED SEALANT.
27. CONTROL JOINTS SHALL BE PLACED AT 20 FEET C-C.
28. EXPANSION JOINT LAYOUT FOR INTERSECTIONS SHALL BE PROVIDED BY ENGINEER FOR CITY APPROVAL.
29. NO WIRE MESH IS ALLOWED IN ANY CONCRETE.
30. ALL REBAR SHALL BE 100% TIED. OVERLAPS SHALL BE 36 TIMES BAR DIAMETERS, DOUBLE TIED MINIMUM. REINFORCED STEEL GRADE 60 WITH A MINIMUM 60% COVERAGE. USE PLASTIC CHAIRS TO SUPPORT REINFORCEMENT AT 24 INCH SPACING EACH WAY.
31. ALL NEW CURB REQUIRES 3,500 PSI @ 28 DAYS. 4 CONCRETE CYLINDERS, SLUMP, AND AIR ENTRAINMENT TESTS ARE REQUIRED FOR EACH 50 CUBIC YARDS OF CONCRETE CURB WITH A MINIMUM OF ONE SET OF 4 PER PLACEMENT.
32. A CITY APPOINTED INSPECTOR OR ENGINEER MUST BE PRESENT ON ALL PROOF ROLLS, LIME DEPTH CHECKS AND DENSITY TESTS AND MUST BE CONTACTED AT LEAST 24 HOURS PRIOR TO THE TEST. PRIOR TO CONCRETE PLACEMENT CONTRACTOR SHALL PRESENT A CERTIFIED COPY OF TOP OF FORM GRADES TO THE ENGINEER FOR REVIEW AND APPROVAL. ELEVATION OF FORMS SHALL BE RECORDED AT 10 FOOT INTERVALS. ADJUSTMENTS TO FORMS SHALL BE COMPLETE 12 HOURS PRIOR TO CONCRETE PLACEMENT.
33. CONCRETE MIX DESIGN MUST BE SENT TO THE ENGINEER FOR APPROVAL A MINIMUM 72 HOURS BEFORE THE FIRST CONCRETE POUR.
34. FOR A REGULAR MIX, SLUMP SHALL BE A MAXIMUM OF 5 INCHES. FOR A MIX WITH A WATER REDUCER, SLUMP SHALL BE A MAXIMUM OF 6 INCHES.
35. VEHICLES OF ALL TYPES ARE PROHIBITED FROM DRIVING ON NEW PAVEMENTS 7 DAYS AFTER THE CONCRETE POUR AND UNTIL THE CONCRETE HAS REACHED A MINIMUM OF 3,000 PSI. PAVEMENT PROTECTION SUCH AS A DIRT LAYER OF AT LEAST 12 INCHES IS REQUIRED FOR TRACK EQUIPMENT AT PAVEMENT CROSSINGS.
36. IN LIEU OF MECHANICALLY CONTROLLED VIBRATORS CONTROLLED BY A SLIP FORM PAVING MACHINE, USE OF AN APPROVED VIBRATING SCREED WILL BE REQUIRED. AT INTERSECTIONS AND SMALL AREAS WHERE A VIBRATORY SCREED CAN NOT BE USED, A HAND VIBRATOR OR "JITTERBUG" SHALL BE REQUIRED.
37. ALL EXPOSED JOINTS SHALL BE EDGED AS NOTED ON DETAILS. SURFACE SHALL BE TYPICALLY A BELT FINISH OR BROOM FINISH (COARSE, MEDIUM OR LIGHT) AS REQUIRED BY THE APPLICATION AND DIRECTED BY THE ENGINEER.
38. ALL PAVEMENT MARKINGS TO BE DONE IN CONFORMANCE WITH THE LATEST VERSION OF TMUTCD AND TXDOT STANDARD SPECIFICATIONS AND ANY REVISIONS THERETO.
39. BB INDICATES ROAD WIDTH TO BACK OF CURB. CURB RADII ARE TO BACK OF CURB. T.C. INDICATES TOP OF CURB ELEVATIONS (BASED ON 4 INCH CURB UNLESS OTHERWISE NOTED).

CEMENT STABILIZED SAND:

1. ALL STABILIZED SAND SHALL HAVE A MINIMUM CEMENT CONTENT OF 1.5 SK PER CUBIC YARD.
2. CEMENT STABILIZED SAND (CSS) SHALL ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 100 PSI WITHIN 48 HOURS.
3. ANY CSS THAT DOES NOT MEET THE MINIMUM COMPRESSIVE STRENGTH OR MINIMUM CEMENT CONTENT SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
4. A MINIMUM OF 2 RANDOM SAMPLES SHALL BE TAKEN EACH WEEK. THE CITY ENGINEER RESERVES THE RIGHT TO REQUIRE ADDITIONAL TESTS, AT THE OWNER'S EXPENSE, IF IT IS DEEMED NECESSARY.
5. ALL CSS SHALL BE COMPACTED IN LIFTS NOT TO EXCEED 8-INCHES IN DEPTH. CSS SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95%.

BANK SAND:

1. BANK SAND IS DEFINED AS A WELL-GRADED SAND, FREE OF SILT, CLAY, FRIABLE OR SOLUBLE MATERIALS AND ORGANIC MATER, MEETING THE UNIFIED SOILS CLASSIFICATIONS SYSTEM GROUP SYMBOL SW CRITERIA WITH A PLASTICITY INDEX OF LESS THAN 10. NO MORE THAN 12% OF MATERIAL CAN PASS THE No. 200 SIEVE.

LIMING SUBGRADE:

1. LIME SHALL BE A "SLURRY" AS PER TXDOT 260 UNLESS SPECIFICALLY RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY ENGINEER.
2. ALL LIME SLURRIES SHALL BE FURNISHED AT OR ABOVE THE MINIMUM "DRY SOLIDS" CONTENTS AS APPROVED BY THE ENGINEER.
3. SUBGRADES SHALL BE STABILIZED WITH A MINIMUM 6% LIME BY WEIGHT, 8 INCH THICK FOR THE INITIAL MIX TO REDUCE PLASTICITY INDEX (PI) TO 20 OR LESS AS DETERMINED BY THE LIME SERIES. THE FINAL MIX SHALL BE AT 6 INCHES THICK. SUBGRADE TO BE STABILIZED 2 FOOT BACK OF EDGE OF PAVEMENT. SUBGRADE PREPARATION FOR PAVING SHALL INCLUDE PROOF ROLLING. SOFT AREAS TO BE EXCAVATED AND RE-COMPACTED TO ACHIEVE SOIL DENSITY TO PASS PROOF ROLLING.
4. LIME DRY SOLID CONTENT TESTS SHALL BE CONDUCTED ON SITE, ONCE PER ONE HUNDRED TONS OF MATERIAL DISTRIBUTED, UNLESS OTHERWISE NOTED.
5. THE SUBGRADE SHALL BE SHAPED AND GRADED TO CONFORM TO THE TYPICAL SECTIONS, AS SHOWN ON THE PLANS BY USE OF BLUE TOP STAKES. CITY TO INSPECT INSTALL OF BLUE TOPS & FINAL GRADING PRIOR TO LIME TREATMENT THE EXISTING MATERIAL.
6. UNLESS APPROVED BY THE CITY ENGINEER, LIME OPERATIONS SHALL NOT BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS BELOW 40°F AND FALLING. LIMING MAY, WITH APPROVAL, BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS 35°F AND RISING. LIME SHALL NOT BE PLACED WHEN WEATHER CONDITIONS, IN THE ENGINEER'S OPINION, ARE UNSUITABLE.
7. THE SUBGRADE MATERIAL AND SLURRY SHALL BE THOROUGHLY MIXED. ADD WATER AS NECESSARY TO BRING MATERIAL TO THE PROPER MOISTURE CONTENT (±2%) OF OPTIMUM MOISTURE CONTENT AND LEAVE TO CURE USUALLY 3 DAYS (72 HOURS) MINIMUM AS APPROVED BY THE CITY ENGINEER. KEEP LIME TREATED SUBGRADE WATERED DURING CURE PERIOD.
8. AFTER CURING, THE SUBGRADE SHALL BE REMIXED UNTIL PULVERIZATION REQUIREMENTS ARE MET, AS PER TXDOT. TEX-101-E, PART III.

PERCENT MINIMUM PASSING 1-3/4 INCH SIEVE	100
PERCENT MINIMUM PASSING 3/4 INCH SIEVE	85
PERCENT MINIMUM PASSING NO 4 SIEVE	60

9. SIEVE TESTS SHALL BE CONDUCTED EVERY 150 LINEAR FEET ON ALTERNATING LANES OF TRAFFIC OR EVERY 300 LINEAR FEET ON SINGLE LANES AS REQUIRED. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY OR CUL-DE-SAC.
10. THE MATERIAL SHALL BE AERATED OR MOISTENED TO ±2% OPTIMUM PRIOR TO COMPACTION. COMPACTION TO A MINIMUM 95% DENSITY SHALL BEGIN IMMEDIATELY AFTER ALL PULVERIZATION AND MOISTURE REQUIREMENTS ARE MET. THROUGHOUT THIS ENTIRE OPERATION, THE SURFACE SHALL BE SMOOTH AND IN CONFORMITY WITH THE LINES AND GRADES ON THE PLANS.
11. WHEN THE SUBGRADE FAILS TO MEET DENSITY REQUIREMENTS OR SHOULD IT LOSE THE REQUIRED STABILITY, DENSITY OR FINISH, IT SHALL BE REWORKED IN ACCORDANCE WITH TXDOT SUBARTICLE 260.4 "REWORKING A SECTION", WHICH MAY REQUIRE AN ADDITIONAL 25% OF THE SPECIFIED LIME AMOUNT.
12. THE TREATED SUBGRADE SHALL BE KEPT MOIST AND PREVENTED FROM DRYING. IN THE EVENT OF A 1/2 INCH RAINFALL AND/OR IF THE MATERIAL BECOMES DRY AND IS NOT IN COMPLIANCE WITH THE ±2% OPTIMUM MOISTURE, DENSITY AND MOISTURE TESTS SHALL BE RETAKEN.
13. NO SUBGRADE SHALL BE COVERED WITH ANOTHER MATERIAL UNLESS APPROVED BY THE CITY OF ANGLETON AND LIME DEPTH TESTS HAVE BEEN COMPLETED.

STABILIZED CRUSHED CONCRETE:

1. TEST AND ANALYSIS OF AGGREGATE AND BINDER MATERIALS WILL BE PERFORMED IN ACCORDANCE WITH ASTM D 1557 AND ASTM D 4318. CEMENT SHALL BE ASTM C 150 TYPE I.
2. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES CURRENT EDITION AND CITY OF ANGLETON STANDARDS.
3. PRIME COAT SHALL BE MC 30 OR EPR-1 PRIME.
4. DESIGN MIX FOR MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 200 PSI IN 48 HOURS. PROVIDE MINIMUM CEMENT CONTENT OF 2 SACK PER TON OF MIX. CEMENT CONTENT MAY BE RAISED AT THE CONTRACTOR'S EXPENSE IF TESTS ON FIELD SAMPLES FALL BELOW 200 PSI.
5. THREE SAMPLES SHALL BE MOLDED EACH DAY FOR EACH 300 TONS OF PRODUCTION. COMPRESSIVE STRENGTH SHALL BE THE AVERAGE OF THREE TESTS FOR EACH PRODUCTION LOT. CONTRACTOR SHALL REPLACE, AT CONTRACTORS OWN EXPENSE, ANY MATERIAL BELOW MINIMUM REQUIREMENTS.
6. CONTRACTOR SHALL VERIFY LINES, GRADES, AND COMPACTED SUBGRADE AS READY TO RECEIVE MATERIALS PRIOR TO ITS PLACEMENT.
7. CEMENT STABILIZED BASE MAY NOT BE PLACED IF AMBIENT TEMPERATURE IS 40°F AND FALLING. BASE MATERIAL MAY BE PLACED IF AMBIENT TEMPERATURE IS 35°F AND RISING.
8. MATERIAL MAY NOT BE PLACED IN LIFTS EXCEEDING 8 INCHES IN DEPTH. EACH LIFT SHALL HAVE DENSITIES TAKEN.
9. CEMENT STABILIZED BASE MAY NOT BE STORED BEYOND A MAXIMUM TIME ALLOWED OF 3 HOURS.
10. CEMENT STABILIZED BASE SHALL NOT BE INSTALLED IN WET OR SOFT AREAS.
11. COMPACT TO MINIMUM DENSITY OF 95% OF MAXIMUM DRY DENSITY. UNLESS OTHERWISE INDICATED ON DRAWINGS, MOISTURE SHALL BE BETWEEN ±2% OPTIMUM AS DETERMINED BY ASTM D 698.
12. AFTER COMPACTING FINAL COURSE, BLADE SURFACE TO FINAL GRADE. ANY IRREGULARITIES, WEAK SPOTS, AREAS OF EXCESSIVE WETNESS, OR SURFACE HAIR LINE CRACKING SHALL BE REPAIRED AND/OR REPLACED AT CONTRACTOR'S EXPENSE.
13. A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS.
14. COMPACTION TESTING WILL BE PERFORMED IN ACCORDANCE WITH ASTM D 1556 OR ASTM D 2922 AND ASTM D 3017 AT RANDOMLY SELECTED LOCATIONS AS DIRECTED BY CITY OF ANGLETON CONSTRUCTION INSPECTOR.
15. A MINIMUM OF ONE CORE SHALL BE TAKEN AT RANDOM LOCATIONS PER 300 LINEAR FEET PER LANE OF ROADWAY OR ONE PER 250 SQUARE YARD, WHICHEVER MAY APPLY AND SHALL BE STAGGERED RELATIVE TO TESTING SITES IN ABUTTING TRAFFIC LANES.
16. CURE FOR A MINIMUM OF 7 DAYS BEFORE ADDING ASPHALT PAVEMENT COURSES.
17. COVER SURFACE WITH CURING MEMBRANES AT THE FOLLOWING RATES: MC-30:0.15 GAL PER SQUARE YARD, OR EPR-1 PRIME: 0.15 GALLON PER SQUARE YARD. DO NOT USE CUTBACK ASPHALT APRIL 16 TO SEPTEMBER 15. PROTECT THE MEMBRANE BY ALLOWING MEMBRANE TO FULLY CURE PRIOR TO PERMITTING TRAFFIC TO DRIVE ON IT.
18. UNSTABILIZED CRUSHED CONCRETE MAY NOT BE USED ON PUBLIC STREETS, ROADS, OR RIGHTS OF WAY,
19. STABILIZED LIMESTONE BASE MAY BE SUBSTITUTED FOR STABILIZED CRUSHED CONCRETE IF SUBMITTED AND APPROVED BY THE ENGINEER.

STORM SEWER NOTES:

1. STORM SEWERS SHALL BE DESIGNED AND CONSTRUCTED WITH CITY OF SUGAR LAND STANDARD CONSTRUCTION SPECIFICATIONS AND IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD DETAILS SHEET AND LATEST REVISIONS.
2. ALL PIPE STORM SEWERS SHALL BE INSTALLED, BEDDED, AND BACKFILLED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD DETAIL DRAWINGS.
3. ALL CEMENT STABILIZED SAND (CSS) SHALL BE 1.5 SACK PER CUBIC YARD. AND MEET MINIMUM CSS STANDARDS COMPACTED TO 95%.
4. ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES OR INLETS ARE TO BE PLUGGED WITH 8 INCH BRICK WALLS WITH FULL MORTAR HEAD AND BED JOINTS AND GROUTED WITH A MINIMUM OF 1/2 INCH NON-SHRINK GROUT INSIDE AND OUTSIDE, UNLESS OTHERWISE NOTED.
5. RIM ELEVATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE THE FINISH GRADE AT EACH LOCATION AFTER CONTRACTOR HAS COMPLETED FINAL GRADING. SLOPED FILL SHALL BE ADDED FOR STORM WATER DRAINAGE AWAY FROM RIM.
6. RIM ELEVATIONS SHALL BE PROPERLY ADJUSTED TO GRADE IN PAVEMENT AND SIDEWALKS. APPROVED BLOCKOUTS SHALL BE USED IN PAVEMENT.
7. ALL STORM SEWER MANHOLE COVERS MUST INCLUDE "STORM SEWER" AND "DUMP NO WASTE", "DRAINS TO WATERWAYS" WITH CITY OF ANGLETON EMBLEM AS DEPICTED IN THE DETAIL SHEETS.
8. MINIMUM STORM SEWER SIZE SHALL BE 18 INCH DIAMETER. ALL STORM SEWER PIPES 18 INCH AND LARGER ARE TO BE REINFORCED CONCRETE PIPE ASTM C-76 CLASS III, INCLUDING INLET LEADS CROSSING UNDER EXISTING OR PROPOSED PAVEMENTS. ALL INLET LEADS SHALL BE 18 INCH RCP OR LARGER. ALL STORM SEWER PIPE SHALL BE RUBBER GASKETED. ALL CMP PIPE SHALL BE IN ACCORDANCE WITH COSL APPROVED PRODUCT LIST AND STANDARD DETAILS.
9. CONTRACTOR SHALL VERIFY FINAL GRADE PRIOR TO FINAL STAGE OF MANHOLE CONSTRUCTION.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR OTHER CONSTRUCTION, CONTRACTOR SHALL ENSURE THAT STORM DRAINAGE PATHWAYS ARE MAINTAINED AND REMAIN OPEN TO ENSURE POSITIVE DRAINAGE AND THAT SUCH CONVEYANCES ARE NOT IMPEDED OR BLOCKED IN ANY WAY. STORM SEWER INLETS SHALL BE PROTECTED FROM ENTRY OF SILT, TRASH, DEBRIS AND ANY SUBSTANCES DELETERIOUS TO THE STORM SEWER SYSTEM AND/OR WATERWAYS RECEIVING STORM WATER RUNOFF. CONTRACTOR SHALL AT COMPLETION OF WORK, FILL LOW SPOTS AND GRADE ALL RIGHTS OF WAY AND UTILITY EASEMENTS AND REGRADE/RESTORE DITCHES AS NECESSARY TO MAINTAIN AND/OR ESTABLISH POSITIVE DRAINAGE.
11. CONTRACTOR TO PROVIDE A MINIMUM OF 12 INCHES CLEARANCE AT UTILITY CROSSINGS UNLESS OTHERWISE SPECIFIED ON PLANS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY DRAINAGE SYSTEM DISTURBED AS A RESULT OF CONTRACTORS WORK.
13. ALL DITCHES SHALL BE RESTORED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE COMPACTED AND ALL DISTURBED AREAS SHALL BE RE-SEEDED OR SODDED WITHIN 10 WORKING DAYS OF EACH OCCURRENCE (NO SEPARATE PAY).
14. THE UTILITY CONTRACTOR SHALL ROUGH CUT ALL ROADSIDE SWALES IN PROPER ALIGNMENT AND SLOPE TO WITHIN 0.2 FEET. OF FINISH GRADE. THE PAVING CONTRACTOR, UPON COMPLETION OF PAVING, SHALL COMPLETE FINAL GRADING ALIGNMENT OF SWALES AND RESTORE ALL AREAS WITHIN RIGHT-OF-WAY FOR SEEDING OR SODDING AND FERTILIZATION.
15. ALL STORM SEWERS MUST BE CLEAN/FREE OF DIRT AND DEBRIS BEFORE FINAL ACCEPTANCE.

SANITARY SEWER NOTES:

1. SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL BE DESIGNED AND CONSTRUCTED AS PER THE REQUIREMENTS OF THE CITY OF ANGLETON LDC AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS AND AS PER THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY "DESIGN CRITERIA FOR SEWERAGE SYSTEMS". SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND/OR INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF ANGLETON LDC SHALL GOVERN.
2. ALL MATERIALS AND PRODUCTS USED IN THE CONSTRUCTION OF SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL COMPLY WITH THE CITY OF ANGLETON LDC AND THE CURRENT APPROVED PRODUCTS LIST.
3. STACKS SHALL BE BUILT IN ACCORDANCE WITH THE REQUIREMENTS OF THE ANGLETON LDC. EXACT LOCATION OF THE STACK SHALL BE SUPPLIED BY THE PROJECT ENGINEER (BAKER & LAWSON) ON SEALED AS-BUILT DRAWINGS AT COMPLETION OF CONSTRUCTION.
4. EACH SANITARY SEWER SERVICE LEAD STUB, PLUGGED WYE BRANCH OUTLET AND STACK SHALL BE MARKED IN ACCORDANCE WITH THE DETAILS AT THE TIME OF CONSTRUCTION, BEGINNING AT THE INVERT ELEVATION OF THE STUB OR WYE AND AT AN ELEVATION TWO FEET BELOW THE CAPPED TERMINATION POINT OF THE STACK AND EXTENDING TWO FEET ABOVE FINISHED GRADE.
5. LOCATION OF SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED PER DRAWINGS. MANHOLES SHALL BE CONSTRUCTED A MINIMUM OF 1 FOOT FROM BACK OF CURB, MEASURED FROM OUTSIDE DIAMETER OF MANHOLE RING. ALL SANITARY SEWER MANHOLES SHALL INCORPORATE INFLOW PROTECTORS. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED BENEATH STREET PAVING EXCEPT WHERE DESIGNATED ON APPROVED CONSTRUCTION DRAWINGS. BRICK MANHOLES AND FIBERGLASS MANHOLES ARE PROHIBITED. MANHOLES DEEPER THAN EIGHT FEET SHALL HAVE ECCENTRIC CONES.
6. SANITARY SEWER MANHOLE COVERS SHALL BE MINIMUM OF 32 INCHES IN DIAMETER. ALL SUCH MANHOLE COVERS SHALL HAVE THE CITY OF ANGLETON EMBLEM AND THE WORDS "ANGLETON" AND "SANITARY SEWER" CAST IN RAISED RELIEF AS DEPICTED IN CITY OF ANGLETON STANDARD CONSTRUCTION DETAILS SHEETS.
7. MANHOLE RIM ELEVATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY. UTILITY CONTRACTORS SHALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE FINISHED GRADE, AND 0.5 FEET ABOVE NATURAL GROUND WITHIN RIGHTS OF WAY AND EASEMENTS AT EACH MANHOLE LOCATION AFTER PAVEMENT CONTRACTOR HAS COMPLETED FINAL GRADING. THE AREA ADJACENT TO SANITARY SEWER MANHOLE LOCATIONS SHALL BE GRADED AWAY FROM SUCH MANHOLES SO AS PREVENT ENTRY OF STORM WATER RUNOFF TO THE SANITARY SEWER SYSTEM.
8. MINIMUM SEPARATION DISTANCES AS REQUIRED BY TCEQ SECTION 317.13, APPENDIX E MUST BE MAINTAINED BETWEEN POTABLE WATER LINES AND SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS. INSTALLATION OF FIRE HYDRANTS WITHIN NINE FEET OF A SANITARY SEWER SYSTEM IS PROHIBITED. REFER TO THE ANGLETON LDC INFRASTRUCTURE STANDARDS AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS FOR CONSTRUCTION REQUIREMENTS OF OTHER INSTALLATIONS WHERE SEPARATION DISTANCES OF GREATER THAN NINE FEET CANNOT BE MAINTAINED.
9. TESTING OF SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL BE CONDUCTED AS NOTED IN SANITARY SEWER CHAPTER OF THE ANGLETON LDC DESIGN STANDARDS AND AS PER THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY "DESIGN CRITERIA FOR SEWERAGE SYSTEMS".
10. ALL SANITARY SEWER PIPING AND BEDDING SHALL BE INSPECTED BY CITY CONSTRUCTION INSPECTOR FOR CONFORMANCE WITH CITY DESIGN STANDARDS PRIOR TO BACKFILLING OF PIPING IN TRENCH. CONTRACTOR SHALL NOT COVER PIPING UNTIL SUCH TIME AS INSPECTOR HAS NOTIFIED CONTRACTOR THAT RESULTS OF PIPING INSPECTION ARE SATISFACTORY AND THAT BACKFILLING MAY BE ACCOMPLISHED. ANY PIPING INSTALLED AND/OR BACKFILLED WITHOUT INSPECTOR'S SPECIFIC APPROVAL SHALL BE UNCOVERED AT INSPECTOR'S DIRECTION AND INSPECTED ACCORDINGLY. CONTRACTOR SHALL NOTIFY INSPECTOR 24 HOURS PRIOR TO INSPECTION.
11. ALL COMMERCIAL DEVELOPMENTS WITH A FAR SIDE SANITARY SERVICE LEAD ACROSS THE STREET SHALL PROVIDE A 6 INCH RISER AND CLEAR OUT ON THE PROPERTY SIDE. PUBLIC MAINTENANCE OF THE FAR SIDE LEAD SHALL END AT THIS RISER.

WATER DISTRIBUTION NOTES:

1. WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE DESIGNED AND CONSTRUCTED AS PER REQUIREMENTS OF THE ANGLETON LDC DESIGN STANDARDS AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS AND AS PER THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND/OR INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, THE ANGLETON LDC DESIGN STANDARDS SHALL GOVERN.
2. ALL MATERIALS AND PRODUCTS USED IN THE CONSTRUCTION OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL COMPLY WITH THE ANGLETON LDC DESIGN STANDARDS AND THE CURRENT APPROVED PRODUCTS LIST AS MAINTAINED BY THE CITY'S ENGINEERING DEPARTMENT.
3. ALL GATE VALVES INSTALLED BELOW GRADE SHALL BE OF NON-RISING STEM DESIGN.
4. ALL FIRE HYDRANTS SHALL BE PAINTED AND/OR REPAINTED WITH GREEN BONNET POLYURETHANE ENAMEL MANUFACTURED BY GEO-GLEN ENTERPRISES, INC, SURFACE PREPARATION SHALL INCLUDE REMOVAL OF OIL, GREASE AND MOISTURE, FOLLOWED BY MEDIA BLASTING TO SSPC-SP15-10-63 SPECIFICATIONS (NEAR WHITE METAL) AS PER MANUFACTURER'S RECOMMENDATIONS. PRIME BARE METAL WITH TP-251 EPOXY PRIMER EPOXY PRIMER OR WITH TP-221, TP-231 OR TP-241 UNIVERSAL PRIMER. TEMP OF 80°F AND 50% RELATIVE HUMIDITY ARE OPTIMAL CONDITIONS FOR APPLICATION OF PRIMER AND PAINT. DO NOT APPLY PRIMER AND/OR PAINT WHEN SURFACE TO BE PAINTED IS LESS THAN 5 FEET ABOVE THE DEW POINT IN ORDER TO PREVENT MOISTURE FROM CONDENSING ON THE SURFACE TO BE PRIMED AND/OR PAINTED. A BLUE TRAFFIC BUTTON SHALL BE INSTALLED ON THE STREET 12 INCHES OFF THE CENTER LINE FOR EACH HYDRANT.
5. MINIMUM SEPARATION DISTANCES AS REQUIRED BY TCEQ SECTION 317.13, 290. APPENDIX E MUST BE MAINTAINED BETWEEN POTABLE WATER LINES AND SANITARY SEWERS, FORCE MAINS, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS. INSTALLATION OF FIRE HYDRANTS WITHIN 9 FEET OF A SANITARY SEWER SYSTEM IS PROHIBITED. REFER TO CITY OF ANGLETON STANDARDS FOR CONSTRUCTION REQUIREMENTS OF OTHER INSTALLATIONS WHERE DISTANCES ARE GREATER THAN 9 FEET CANNOT BE MAINTAINED.
6. EACH WATER SERVICE LEAD STUB SHALL BE MARKED WITH A PRESSURE TREATED 4 X 4 TIMBER OR PVC PIPE AT THE TIME OF CONSTRUCTION, BEGINNING AT THE INVERT ELEVATION OF THE STUB AND EXTENDING TWO FEET ABOVE FINISHED GRADE. EACH TIMBER MARKER SHALL BE PAINTED BLUE AND LABELED "POTABLE WATER" WITH PIPE SIZE NOTED.
7. TESTING OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF AWWA C605-94.
8. DISINFECTION OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF AWWA C651 AND TCEQ. NO CONNECTIONS SHALL BE MADE TO EXISTING WATER LINES UNTIL NEWLY CONSTRUCTED WATER LINES HAVE BEEN THOROUGHLY DISINFECTED, TESTED, FLUSHED, AND SAMPLED AND CONNECTION HAS BEEN AUTHORIZED BY THE CITY ENGINEER.
9. ALL WATER PIPING AND BEDDING SHALL BE INSPECTED BY THE CITY INSPECTOR FOR CONFORMANCE TO DESIGN STANDARDS PRIOR TO BACKFILLING OF PIPING IN TRENCH. CONTRACTOR SHALL NOT COVER PIPING UNTIL SUCH TIME AS INSPECTOR HAS NOTIFIED CONTRACTOR THAT RESULTS OF PIPING INSPECTION ARE SATISFACTORY AND THAT BACKFILLING MAY BE ACCOMPLISHED. ANY PIPING INSTALLED AND/OR BACKFILLED WITHOUT INSPECTOR'S SPECIFIC APPROVAL SHALL BE UNCOVERED AT INSPECTOR'S DIRECTION AND INSPECTED ACCORDINGLY. 24 HOUR NOTICE REQUIRED.
10. ALL MECHANICALLY RESTRAINED FITTINGS MUST BE MEGALUG RESTRAINED JOINTS OR APPROVED EQUAL.
11. THE CITY OF ANGLETON MUST HAVE A COPY OF THE BACTERIOLOGICAL TEST RESULTS AT LEAST 24 HOURS PRIOR TO THE INITIAL INSPECTION. IF NOT, THEN THE INSPECTION WILL BE RESCHEDULED.

CENTERPOINT ENERGY / ENTEX NOTES
CAUTION: UNDERGROUND GAS FACILITIES

LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY, INTRASTATE PIPELINE, LLC (WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE NOT USUALLY SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 979-849-4364 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED. WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL 800-752-8036 OR 713-659-2111 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS. WHEN EXCAVATING WITHIN EIGHTEEN INCHES OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING. FOR EMERGENCIES REGARDING GAS LINES CALL 800-659-2111 OR 713-659-2111. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES. ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT 713-207-5769.

WARNING: OVERHEAD ELECTRICAL FACILITIES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL TEXAS NEW MEXICO ENERGY AT 888-866-7456.

TEXAS NEW MEXICO POWER NOTES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH AND SAFETY CODE FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL TEXAS NEW MEXICO POWER AT 888-866-7456.

TYPICAL ABBREVIATIONS	
AC	ACRES
ASPH	ASPHALT
BB	CURB BACK TO BACK
BC	BACK OF CURB
BCCF	BRAZORIA COUNTY CLERKS FILE
BCDR	BRAZORIA COUNTY DEED RECORDS
BCPR	BRAZORIA COUNTY PLAT RECORDS
BFE	BASE FLOOD ELEVATION
BL	BUILDING LINE
BLVD	BOULEVARD
BM	BENCHMARK
BOV	BLOW-OFF VALVE
CC	CENTER TO CENTER
CCEW	CENTER TO CENTER EACH WAY
CCFN	COUNTY CLERK FILE NUMBER
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
CO	CLEAN OUT
CONC	CONCRETE
CSS	CEMENT STABILIZED SAND
CY	CUBIC YARDS
DA	DRAINAGE AREA
DBL	DOUBLE
DE	DRAINAGE EASEMENT
DI	DUCTILE IRON
DIA	DIAMETER
DR	DRIVE
E	EASTING/EAST
EA	EDGE OF ASPHALT
EL	ELEVATION
ESMT	EASEMENT
ETC	EXECTRA
EW	EACH WAY
EXIST OR EX	EXISTING
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FM	FORCE MAIN
FND	FOUND
FP	FLOODPLAIN
FPS	FEET PER SECOND
FW	FLOODWAY
GFL	GUTTER FLOW LINE
GPM	GALLON PER MINUTE
GUY	GUY WIRE
GV	GATE VALVE
GV&B	GATE VALVE AND BOX
HB	HIGH BANK
HC	HANDICAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HGL	HYDRAULIC GRADE LINE
HMAC	HOT MIX ASPHALT CONCRETE
ID	INSIDE DIAMETER
IN	INCHES
INT	INTERSECTION
IP	IRON PIPE
IR	IRON ROD
JB	JUNCTION BOX
L	LENGTH
LF	LINEAR FEET
LP	LOOP
LT	LEFT
MAX	MAXIMUM
ME	MATCH EXISTING ELEVATION
MEP	MATCH EXISTING PAVEMENT
MH	MANHOLE
MIN	MINIMUM
MOD	MODIFIED
N	NORTHING/NORTH
NG	NATURAL GROUND
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OFST	OFFSET
OHE	OVERHEAD ELECTRIC
OPR	OFFICIAL PUBLIC RECORDS
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PP	POWER POLE
PPR	POLYPROPYLENE PIPE
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RED	REDUCER
ROW	RIGHT OF WAY
RT	RIGHT
S	SOUTH
SAN	SANITARY SEWER
SF	SQUARE FEET
SHLDR	SHOULDER
SHT	SHEET
SNGL	SINGLE
STA	STATION
STM	STORM SEWER
SW	SIDEWALK
SY	SQUARE YARDS
TB OR TOB	TOP OF BANK
TBM	TEMPORARY BENCHMARK
TC	TOP OF CURB
TEMP	TEMPORARY
TG	TOP OF GRATE OR RIM
TP	TOP OF PAVEMENT
TPE	TREE PRESERVATION EASEMENT
TPZ	TREE PRESERVATION ZONE
TS&V	TAP SLEEVE AND VALVE
TY	TYPE
TYP	TYPICAL
UE	UTILITY EASEMENT
UG	UNDERGROUND
VIP	VERTICAL INTERSECTION POINT
W	WEST
W/	WITH
WL	WATER LINE
WSEL	WATER SURFACE ELEVATION
X	X-AXIS
Y	Y-AXIS
YR	YEAR

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/7/2025

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

CONSTRUCTION NOTES

PROJECT NO. 16182

2

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 Jpena

16182 SHEET SET SEC 1B.DWG

(1)

Drainage Analysis

Job # 16182 - Texas Viejo Land Co.- Austin Colony Sec. 1B

Rainfall intensity calculations for Brazoria County

I	=	intensity (in/hr)
b	=	coefficient
t	=	time of concentration
d	=	coefficient
e	=	coefficient

subscript

i =1 = 2year storm
i =2 = 5 year storm
i =3 = 10 year strom
i =4 = 25 year storm
i =5 = 50 year storm
i =6 = 100 year storm

$i := 1..6$

$b_i :=$

71.0
70.1
96.6
89.2
86.5
120.2

$e_i :=$

0.774
0.752
0.770
0.736
0.709
0.741

$d_i :=$

8.4
7.7
17.2
10.4
10.0
21.3

$T_0 := 53.33$ ENTER PREDEVELOPMENT TIME OF CONCENTRATION

$I_i := \frac{b_i}{(d_i + T_0)^{e_i}}$ $I_6 = 4.921$ Predevelopment Intensity of interest

$C := .091$ ENTER PREDEVELOPMENT C VALUE

$A := 13.52$ ENTER AREA

(2)

$C_f := 1.00$

$Q := C \cdot C_f \cdot I_6 \cdot A$ Must Insert correct subscript for I to obtain the relevant Q

$Q = 6.055$

$V := (C) \cdot A \cdot 43560 \cdot 1.08$ For these calculations, total volume storage is assumed to equal (C)*A with A converted to square feet multiplied by 13" (1.08")

$V = 5.788 \times 10^4$

DEVELOPMENT OF RUNOFF HYDROGRAPH MALCOM'S METHOD AS DESCRIBED IN THE BRAZORIA COUNTY DRAINAGE CRITERIA MANUAL

$T := \frac{V}{1.39 \cdot Q}$ $T = 6.877 \times 10^3$ T = Time to peak, presented as a function of volume and peak flow and therebre indirectly related to time of concentration

$t := 0, 1000.. 84000$

$f(t) := \left(\frac{Q}{2}\right)\left(1 - \cos\left(\frac{t \cdot \pi}{T}\right)\right)$ f(t) describes rising limb of hydrograph

$g(t) := 4.34 \cdot Q \cdot \exp\left[-1.30 \cdot \left(\frac{t}{T}\right)\right]$ g(t) describes descending limb of hydrograph

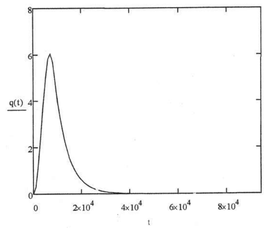
$q(t) := if(t \le 1.25 \cdot T, f(t), g(t))$

$Volume_{pre} := \int_0^{86400} q(t)\, dt$

$Volume_{pre} = 5.808 \times 10^4$

(3)

Predevelopment hydrograph



$T_0 := 26.42$ ENTER POST DEVLOPMENT TIME OF CONCENTRATION

$I_i := \frac{b_i}{(d_i + T_0)^{e_i}}$ $I_6 = 6.855$ Post development I of interest

$C := 0.65$ ENTER POST DEVELOPMENT C FACTOR REVISE CfAND AREA IF NECESSARY

$C_f := 1.25$

$Q := C \cdot I_6 \cdot A \cdot C_f$

$Q = 75.299$

$V := (C) \cdot A \cdot 43560 \cdot 1.08$

$V = 4.134 \times 10^5$

$T := \frac{V}{1.39 \cdot Q}$ $T = 3.95 \times 10^3$

(4)

$t := 0, 1000.. 25000$

$f(t) := \left(\frac{Q}{2}\right)\left(1 - \cos\left(\frac{t \cdot \pi}{T}\right)\right)$

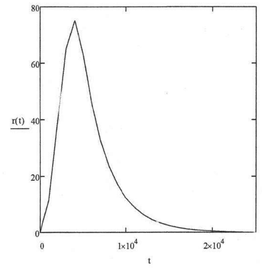
$g(t) := 4.34 \cdot Q \cdot \exp\left[-1.30 \cdot \left(\frac{t}{T}\right)\right]$

$r(t) := if(t \le 1.25 \cdot T, f(t), g(t))$

$Volume_{post} := \int_0^{86400} r(t)\, dt$

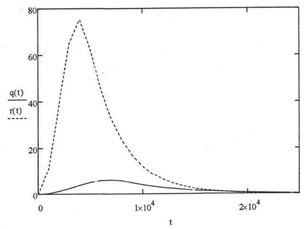
$Volume_{post} = 4.149 \times 10^5$

Post development hydrograph



Combined pre and post development hydrographs

(5)



$v(t) := (r(t) - q(t)) \cdot 1$

$v(t) := if(f(t) > 0, f(t), 0)$

THE REQUIRED STORAGE COMPUTED AS THAT PART OF THE POST DEVELOPMENT HYDROGRAPH THAT FALLS ABOVE THE PREDEVELOPMENT HYDROGRAPH

ACRE -FEET

$$\frac{\int_0^{86400} v(t)\, dt}{43560} = 8.236$$

(6)

Hydrological and Hydraulic Impacts
Texas Viejo Land Co.- Austin Colony Sec. 1B
Anchor Road

Job # 16182

Brazoria County, Texas

A = 13.52 Acre Development :
(50 Lots, Road ROW and 1.8 Ac. Detention)

Pre Development:

C = 0.30 (Adjust to 0.091)
TC = 53.33 Minutes, I = 4.921
Q = 100 Year Storm = 17.248 cfs
Q-Allowable is 0.45 cfs / ac. = 6.08 cfs

Post Development

C = 0.65
T/C = 26.42 Minutes, I= 6.855
Q = 100 Year Storm = 75.299 cfs

Required Detention:

8.236 acre - feet (358,760 c.f.)
0.61 ac-ft / ac

Douglas B. Roesler, P.E. Jan. 23, 2025

EXISITNG CONDITIONS

Bra. Co. Master Drg. Study allows only 0.45 cfs/acre in this area. This is Oyster Creek drainage areas OC 25.

TC = 15 Minutes gather time plus diagonal length 1,150' overland at 0.50 fps = 53.33 Minutes

PROPOSED CONDITIONS

TC = 15 Minutes gather time + 140' overland at 0.50 fps + 320' gutter @ 2.0 fps + 735 l.f. storm sewer @ 3.0 fps =
26.42 Minutes
C = 0.65 per Bra. Co. Drg. Criteria manual.

ORIFICE EQUATION

ORIFICE EQUATION		
Q = Cd * A * (2 * G * H)^0.5		
Where:		
Q =	Varies (cfs)	12.76 (14.83 Acres in 1A + 13.52 Acres in 1B) * 0.45 cfs/acre
Cd =	Coefficient	0.8
A =	Dia. (s.f.)	?
G =	Gravity (fps)	32.2
H =	Varies (ft)	2
A =	**1.41**	**15" = 1.23**

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/7/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739 03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

HYDROLOGICAL CALCULATIONS

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jpena

16182 SHEET SET SEC 1B.DWG

JOB NO: 16182
PROJECT: ANGLETON AUSTIN COLONY SEC. 1B

STORM SEWER CALCULATIONS (10-YEAR AND 100-YEAR FREQUENCY STORMS)

INTENSITY COEFFICIENTS	b	d	e
5-YEAR	58.019	9.24	0.7120
10-YEAR	57.515	7.78	0.6760
100-YEAR	46.316	1.56	0.5330

STORM SEWER CALCULATIONS (5-YEAR FREQUENCY STORM)

DRAINAGE AREA	FROM	TO	AREA (ac)	CUM. AREA (ac)	RUNOFF COEFF. C	FREQUENCY CORRECTION FACTOR Cf	Cf*C C*Cf <= 1.0	Cf*C*A	SUM OF Cf*C*A	TIME OF CONC. (min)	INLET THROAT LENGTH (ft)	INTENSITY i (in/hr)	SUM OF FLOWS (cfs)	REACH LENGTH (ft)	PIPE COUNT	DIAM OR RISE (in)	SPAN (in)	AREA (sf)	SLOPE (%)	MANNINGS "N"	DESIGN CAPACITY (cfs)	DESIGN VELOCITY (fps)	FALL (ft)	MH DROP (ft)	FLOWLINE UP STREAM (ft)	FLOWLINE DOWN STREAM (ft)	ACTUAL VELOCITY (fps)	HYDRAULIC GRADIENT (%)	CHANGE IN HEAD (ft)	HYD GRAD UP STREAM (ft)	HYD GRAD DOWN STREAM (ft)	GUTTER UP STREAM (ft)	
Column1	Columr	Column3	Columr	Column5	Column6	Column7	Column8	Columr	Column1	Column11	Column12	Column13	Column1	Column1	Column	Column1	Column	Column	Column	Column	Column21	Column22	Column23	Columr	Column	Column26	Column27	Column28	Column29	Column3	Column31	Column32	Column33	Column34
SYSTEM (10 Year)																																		
1	I-1	I-2	2.0000	2.0000	0.60	1.00	0.60	1.2000	1.2000	15.00	5.56	6.95	8.34	32	1	24	0	3.1416	0.22	0.013	10.61	3.38	0.07	0.00	24.53	24.46	2.66	0.14	0.04	27.70	27.65	28.37	HGL OK
2	I-2	I-5	1.4500	3.4500	0.60	1.00	0.60	0.8700	2.0700	15.17	4.01	6.92	14.32	294	1	30	0	4.9087	0.20	0.013	18.58	3.78	0.60	0.00	24.46	23.86	2.92	0.12	0.36	27.65	27.30	28.37	HGL OK
3	I-3	I-5	0.2600	0.2600	0.60	1.00	0.60	0.1560	0.1560	15.00	0.72	6.95	1.08	32	1	18	0	1.7671	0.22	0.013	4.93	2.79	0.07	0.00	24.53	24.46	0.61	0.01	0.00	27.30	27.30	28.70	HGL OK
4	I-4	I-5	0.3200	0.3200	0.60	1.00	0.60	0.1920	0.1920	15.00	0.89	6.95	1.33	60	1	18	0	1.7671	0.22	0.013	4.71	2.67	0.12	0.00	24.55	24.43	0.76	0.02	0.01	27.30	27.29	28.37	HGL OK
5	I-5	MH-1	0.5500	4.5800	0.60	1.00	0.60	0.3300	2.7480	16.84	1.45	6.60	18.13	34	1	30	0	4.9087	0.18	0.013	17.28	3.52	0.06	0.00	23.26	23.20	3.69	0.19	0.07	27.29	27.22	28.37	HGL OK
MH-1	MH-1	I-7			0.60	1.00	0.60						18.13	208	1	30	0	4.9087	0.20	0.013	18.26	3.72	0.41	0.00	23.20	22.79	3.69	0.19	0.40	27.22	26.82		HGL OK
6	I-6	I-7	0.9400	0.9400	0.60	1.00	0.60	0.5640	0.5640	15.00	2.61	6.95	3.92	32	1	18	0	1.7671	0.22	0.013	4.93	2.79	0.07	0.00	24.53	24.46	2.22	0.14	0.04	26.82	26.77	28.47	HGL OK
7	I-7	I-10	0.2500	5.7700	0.60	1.00	0.60	0.1500	3.4620	18.12	0.64	6.37	22.07	78	1	36	0	7.0686	0.19	0.013	29.33	4.15	0.15	0.00	22.79	22.64	3.12	0.11	0.08	26.77	26.69	28.47	HGL OK
8	I-8	I-9	1.1400	1.1400	0.60	1.00	0.60	0.6840	0.6840	15.00	3.17	6.95	4.76	32	1	24	0	3.1416	0.19	0.013	9.82	3.13	0.06	0.00	24.54	24.48	1.51	0.04	0.01	26.69	26.67	28.37	HGL OK
9	I-9	I-10	1.1000	2.2400	0.60	1.00	0.60	0.6600	1.3440	15.17	3.04	6.92	9.30	207	1	30	0	4.9087	0.22	0.013	18.39	3.75	0.41	0.00	24.48	24.07	1.89	0.05	0.11	26.67	26.57	28.37	HGL OK
10	I-10	OUT	0.4300	8.4400	0.60	1.00	0.60	0.2580	5.0640	18.52	1.09	6.31	31.95	175	1	42	0	9.6211	0.19	0.013	44.47	4.62	0.34	1.43	22.64	22.30	3.32	0.10	0.18	26.18	26.00	28.67	HGL OK
11	I-11	I-12	0.2600	0.2600	0.60	1.00	0.60	0.1560	0.1560	15.00	0.72	6.95	1.08	68	1	18	0	1.7671	0.22	0.013	4.71	2.67	0.14	0.00	24.83	24.69	0.61	0.01	0.01	26.27	26.27	28.67	HGL OK
12	I-12	I-14	0.3800	0.6400	0.60	1.00	0.60	0.2280	0.3840	15.33	1.05	6.88	2.64	98	1	18	0	1.7671	0.22	0.013	4.71	2.67	0.20	0.39	24.30	24.10	1.50	0.06	0.06	26.27	26.20	28.67	HGL OK
13	I-13	I-14	0.3200	0.3200	0.60	1.00	0.60	0.1920	0.1920	15.00	0.89	6.95	1.33	68	1	18	0	1.7671	0.22	0.013	4.71	2.67	0.14	0.00	24.83	24.69	0.76	0.02	0.01	26.20	26.19	28.67	HGL OK
14	I-14	OUT	0.6900	1.6500	0.60	1.00	0.60	0.4140	0.9900	15.83	1.87	6.79	6.72	137	1	24	0	3.1416	1.24	0.013	25.27	8.04	1.70	0.00	24.10	22.40	2.14	0.09	0.12	26.12	26.00	28.67	HGL OK

STORM SEWER CALCULATIONS (100-YEAR FREQUENCY STORM)

DRAINAGE AREA	FROM MH	TO MH	AREA (ac)	CUM. AREA (ac)	RUNOFF COEFF. C	FREQUENCY CORRECTION FACTOR Cf	Cf*C C*Cf <= 1.0	Cf*C*A	SUM OF Cf*C*A	TIME OF CONC. (min)		INTENSITY i (in/hr)	SUM OF FLOWS (cfs)	REACH LENGTH (ft)	PIPE COUNT	DIAM OR RISE (in)	SPAN (in)	AREA (sf)	SLOPE (%)	MANNINGS N"	DESIGN CAPACITY (cfs)	DESIGN VELOCITY (fps)	FALL (ft)	MH DROP (ft)	FLOWLINE UP STREAM (ft)	FLOWLINE DOWN STREAM (ft)	ACTUAL VELOCITY (fps)	HYDRAULIC GRADIENT (%)	CHANGE IN HEAD (ft)	HYD GRAD UP STREAM (ft)	HYD GRAD DOWN STREAM (ft)	GUTTER UP STREAM (ft)	
SYSTEM (100 Year)																																	
1	I-1	I-2	2.0000	2.0000	0.60	1.00	0.60	1.2000	1.2000	15.00	8.30	10.38	12.45	32	1	24	0	3.1416	0.22	0.013	10.61	3.38	0.07	0.00	24.53	24.46	3.96	0.30	0.10	28.59	28.49	28.37	HGL>GUTTER!
2	I-2	I-5	1.4500	3.4500	0.60	1.00	0.60	0.8700	2.0700	15.17	5.99	10.32	21.36	294	1	30	0	4.9087	0.20	0.013	18.58	3.78	0.60	0.00	24.46	23.86	4.35	0.27	0.79	28.49	27.70	28.37	HGL>GUTTER!
3	I-3	I-5	0.2600	0.2600	0.60	1.00	0.60	0.1560	0.1560	15.00	1.08	10.38	1.62	32	1	18	0	1.7671	0.22	0.013	4.93	2.79	0.07	0.00	24.53	24.46	0.92	0.02	0.01	27.70	27.69	28.70	HGL OK
4	I-4	I-5	0.3200	0.3200	0.60	1.00	0.60	0.1920	0.1920	15.00	1.33	10.38	1.99	60	1	18	0	1.7671	0.22	0.013	4.71	2.67	0.12	0.00	24.55	24.43	1.13	0.04	0.02	27.69	27.67	28.37	HGL OK
5	I-5	MH-1	0.5500	4.5800	0.60	1.00	0.60	0.3300	2.7480	16.84	2.16	9.81	26.96	34	1	30	0	4.9087	0.18	0.013	17.28	3.52	0.06	0.00	23.26	23.20	5.49	0.43	0.15	27.67	27.52	28.37	HGL OK
MH-1	MH-1	I-7			0.60	1.00	0.60						18.13	208	1	30	0	4.9087	0.20	0.013	18.26	3.72	0.41	0.00	23.20	22.79	3.69	0.19	0.40	27.52	27.12		HGL OK
6	I-6	I-7	0.9400	0.9400	0.60	1.00	0.60	0.5640	0.5640	15.00	3.90	10.38	5.85	32	1	18	0	1.7671	0.22	0.013	4.93	2.79	0.07	0.00	24.53	24.46	3.31	0.31	0.10	27.12	27.02	28.47	HGL OK
7	I-7	I-10	0.2500	5.7700	0.60	1.00	0.60	0.1500	3.4620	18.12	0.95	9.46	32.76	78	1	36	0	7.0686	0.19	0.013	29.33	4.15	0.15	0.00	22.79	22.64	4.64	0.24	0.19	27.02	26.83	28.47	HGL OK
8	I-8	I-9	1.1400	1.1400	0.60	1.00	0.60	0.6840	0.6840	15.00	4.73	10.38	7.10	32	1	24	0	3.1416	0.19	0.013	9.82	3.13	0.06	0.00	24.54	24.48	2.26	0.10	0.03	26.83	26.80	28.37	HGL OK
9	I-9	I-10	1.1000	2.2400	0.60	1.00	0.60	0.6600	1.3440	15.17	4.54	10.32	13.87	207	1	30	0	4.9087	0.22	0.013	18.39	3.75	0.41	0.00	24.48	24.07	2.83	0.11	0.24	26.80	26.57	28.37	HGL OK
10	I-10	OUT	0.4300	8.4400	0.60	1.00	0.60	0.2580	5.0640	18.52	1.61	9.36	47.41	175	1	42	0	9.6211	0.19	0.013	44.47	4.62	0.34	1.43	22.64	22.30	4.93	0.22	0.39	26.39	26.00	28.67	HGL OK
11	I-11	I-12	0.4600	0.4600	0.60	1.00	0.60	0.2760	0.2760	15.00	1.91	10.38	2.86	68	1	18	0	1.7671	0.22	0.013	4.71	2.67	0.14	-24.83	24.83	24.69	1.62	0.07	0.05	26.55	26.50	28.67	HGL OK
12	I-12	I-14	0.4200	0.8800	0.60	1.00	0.60	0.2520	0.5280	15.33	1.72	10.27	5.42	98	1	18	0	1.7671	0.22	0.013	4.71	2.67	0.20	0.39	24.30	24.10	3.07	0.26	0.26	26.50	26.24	28.67	HGL OK
13	I-13	I-14	0.1700	0.1700	0.60	1.00	0.60	0.1020	0.1020	15.00	0.71	10.38	1.06	68	1	18	0	1.7671	0.22	0.013	4.71	2.67	0.14	0.00	24.83	24.69	0.60	0.01	0.01	26.24	26.24	28.67	HGL OK
14	I-14	OUT	0.5000	1.5500	0.60	1.00	0.60	0.3000	0.9300	15.83	2.02	10.11	9.40	137	1	24	0	3.1416	1.28	0.013	25.71	8.18	1.76	0.00	24.16	22.40	2.99	0.17	0.24	26.24	26.00	28.67	HGL OK

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/7/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS — DOUGLAS B. ROESLER — 56739 — LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN: 1" = 40'
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

WINDSTORM DATA
I-1 THRU I-14

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 Jpena

16182 SHEET SET SEC 1B.DWG

AUSTIN COLONY
FUTURE SECTION
PROP 1,050 LF 4 STRAND BARBED WIRE FENCE
EXIST 24" SAN
PROP 20 LF WIDE GAP FENCE
PROP REMOVE 960 LF BARBED WIRE FENCE
TIGNER STREET
EXIST 60" RCP
FL EL(N) =23.10
FL EL(S) =23.44
(TO BE REMOVED)
EXIST TY. "C" INLET
STA 6+16, 32.1' LT
RIM EL =28.29
FL EL 36"(S)=21.84
FL EL 36"(NE)=23.79
EXIST 36" STM
EXIST GRATE INLET
STA 6+75.34, 67.6' LT
TOP EL =29.45
FL EL 36"(SW)=24.65
FL EL 36"(N)=24.65
EXIST 8'X4' BOX
EXIST 36" STM
EXIST STM MH
STA 6+20, 0.4' RT
RIM EL =28.29
FL EL 36"(S)=21.78
FL EL 36"(N)=21.78
FL EL 96"(W)=21.78
FL EL 96"(E)=21.78
EXIST 8'X4' BOX
EXIST SAN MH
STA 3+45, 34.7' RT
RIM EL=30.44
FL EL 10"(W)=15.35
FL EL 24"(N)=15.20
FL EL 24"(S)=15.10
EXIST TY. "C" INLET
STA 6+17, 31.8' RT
RIM EL =28.30
FL EL 36"(N)=21.95
EXIST 10" SAN
EXIST 24" SAN
0 25 50 100
SCALE : 1" = 50'
CROCKETT STREET
EXIST 8" WL
EXIST SAN MH
EXIST 8" SAN
SECTION 1B AREA = 10.680 AC.
MOSES AUSTIN ST.
MOSES AUSTIN ST.
EXIST SAN MH
STA 3+50, 369.7' RT
RIM EL=30.74
FL EL 24"(N)=15.86
EXIST 18" HDPE
FL EL(W) =26.45
FL EL(E) =21.71
(TO BE REMOVED)
AUSTIN COLONY
SECTION 1A
EXIST 18" HDPE
FL EL(W) =26.68
FL EL(E) =21.56
(TO BE REMOVED)
EXIST 36" HDPE
FL EL(W) =24.63
FL EL(E) =25.67
EXIST SAN SEW MH
RIM=29.67'
FL. EL. 24"(N&E) =16.32'±
EXIST 24" SAN SEW
Phase 1b only includes 1 boring location as noted in the geotech report by Intertek PSI dated 3/28/21. Verify and include additional borings per spacing found in the Angleton Construction Manual (CoSL Design Manual 1.21)
F.M. 523
PROJECT LOCATION
S.H. 288
COUNTY ROAD 44
ANGLETON
VICINITY MAP
BORING LOCATION PLAN
APPROXIMATE BORING LOCATION
Proposed Tigner Tract, Anchor Road, Angleton, Texas
PSI Project No.: 286-2371
3730 Dacoma Street
Houston, Texas 77092
(713) 224-2047
intertek psi

NO.	DATE	DESCRIPTION	APPROVED

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4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
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5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN: 1" = 50'
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

EXISTING CONDITION

PROJECT NO. 16182

5

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 Jpena

AUSTIN COLONY
FUTURE SECTION

Street jogs (off-sets). Street off-sets less than 150 feet, measured centerline to centerline, are prohibited (Angleton LDC Sec. 23-12 F.4.

15'-1/4"

AUSTIN COLONY
SECTION 1A

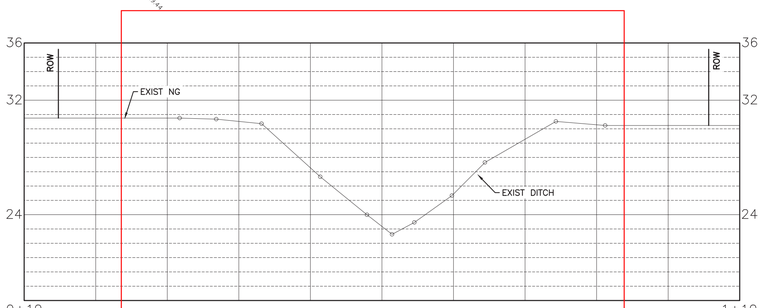
SEC 1A PROPOSED GRADES

MATCH EXIST

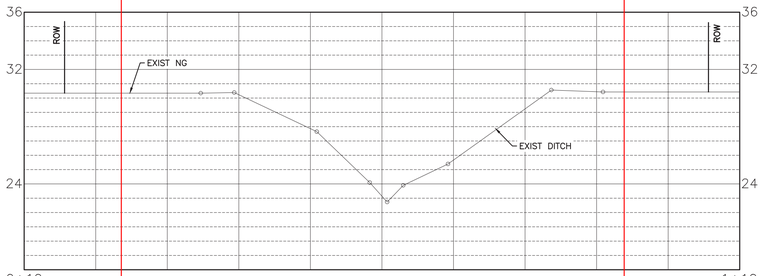
0 25 50 100
SCALE : 1" = 50'

SYMBOLS LEGEND

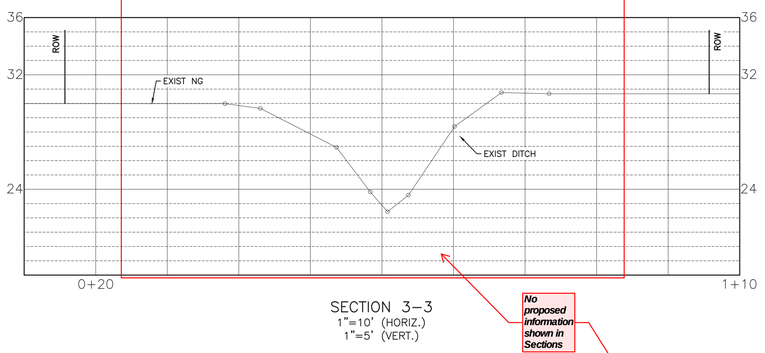
- 80.66 EXIST NATURAL GROUND ELEVATION
- x 88.57 PROP GRADE ELEVATION
- x 81.35 PROP TOP OF 4" CURB ELEVATION



SECTION 1–1
1"=10' (HORIZ.)
1"=5' (VERT.)



SECTION 2–2
1"=10' (HORIZ.)
1"=5' (VERT.)



SECTION 3–3
1"=10' (HORIZ.)
1"=5' (VERT.)

No proposed information shown in Sections

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

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DATE 3/7/2025

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REG. NO. F-825

STATE OF TEXAS
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PLAN: 1" = 50'
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

PROPOSED GRADING

PROJECT NO. 16182

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16182 SHEET SET SEC 1B.DWG

AUSTIN COLONY
FUTURE SECTION

250' RADIUS
FIRE HYDRANT COVERAGE
(TYP.)

PROP 1-8" PLUG
1-2" BOV

PROP 1-10"X8" TEE
1-8" GV W/BOX
1-12" GV W/BOX
1-10"X12" RED

PROP 1-8"X12" TEE
1-8" GV W/BOX

PROP 1-12" PLUG
1-2" BOV

PROP 65 LF 8" WL
W/4' COVER

PROP 145 LF 8" SAN @ 0.33%
W/ PLUG FL EL= 16.32

EXIST 24" SAN

PROP 513 LF 10" WL
W/4' COVER

PROP 1-10" WET CONNECTION

EXIST 10" WL

TIGNER STREET

PROP SAN MH-1
STA 1+50, 40.1' RT
RIM EL =30.00
FL EL 8"(N)=15.84
FL EL 10"(W)=15.84
FL EL 10"(E)=15.84

PROP 196 LF 10" SAN @ 0.25%

EXIST SAN MH
STA 3+45, 34.7' RT
RIM EL=30.44
FL EL 10"(W)=15.35 (PROP CONNECTION)
FL EL 24"(N)=15.20
FL EL 24"(S)=15.10

EXIST SAN MH

EXIST 10" SAN

PROP 130 LF 10" SAN @ 0.25%
W/ PLUG FL EL= 16.17

PROP 215 LF 8" WL
W/4' COVER

PROP 8"X6" TEE
1-6 LF 6" FH LEAD
1-6" GV W/BOX
1-8" GV W/ BOX
1-FH

PROP 613 LF 8" WL
W/4' COVER

PROP 8"X6" TEE
1-6 LF 6" FH LEAD
1-6" GV W/BOX
1-FH

PROP 8"X8" TEE
2-8" GV W/BOX

PROP SAN MH-2
STA 8+31, 25.0' RT
RIM EL =29.70
FL EL 6"(S)=23.28

EXIST 24" SAN

PROP 130 LF 6" SAN @ 0.50%

CROCKETT STREET

PROP 1-8" WET CONNECTION

PROP SAN MH-9
STA 2+89, 25.1' RT
RIM EL =28.75
FL EL 6"(W)=24.37

PROP SAN MH-8
STA 3+85, 25.1' RT
RIM EL =28.75
FL EL 6"(E)=24.22

PROP 315 LF 6" SAN @ 0.50%

PROP SAN MH-3
STA 7+01, 25.0' RT
RIM EL =29.45
FL EL 6"(N)=22.63
FL EL 6"(W)=22.63
FL EL 8"(S)=22.63

EXIST 8" WL

EXIST SAN MH

EXIST 8" SAN
FL EL = 23.44

PROP SAN MH-10
STA 1+57, 25.1' RT
RIM EL =29.49
FL EL 6"(E)=23.75
FL EL 8"(SW)=23.75

PROP 125 LF 6" SAN @ 0.50%

PROP 95 LF 8" SAN @ 0.33%

EXIST 8" SAN

MOSES AUSTIN ST.

PROP 685 LF 8" WL
W/4' COVER

PROP 226 LF 8" SAN @ 0.33%

EXIST SAN MH
STA 3+50, 369.7' RT
RIM EL=30.74
FL EL 24"(N)=15.86

PROP 8"X6" TEE
1-6 LF 6" FH LEAD
1-6" GV W/BOX
1-FH

PROP 1-45° BEND

PROP SAN MH-5
STA 4+10, 24.2' LT
RIM EL =29.80
FL EL 8"(E)=21.64
FL EL 8"(W)=21.64
FL EL 8"(S)=21.64

PROP SAN MH-4
STA 4+75, 25.1' RT
RIM EL =29.30
FL EL 8"(N)=21.88
FL EL 8"(W)=21.88

PROP SAN MH-7
STA 0+47, 25.6' LT
RIM EL =29.70
FL EL 8"(E)=22.83
FL EL 6"(W)=22.83

PROP 358 LF 8" SAN @ 0.33%

PROP 72 LF 8" SAN @ 0.33%

MOSES AUSTIN ST.

AUSTIN COLONY
SECTION 1A

PROP 1-8" PLUG
1-2" BOV

PROP 8"X6" TEE
1-6 LF 6" FH LEAD
1-8" GV W/BOX
1-FH

PROP 1-45° BEND

PROP 188 LF 8" SAN @ 0.33%

PROP SAN MH-6
STA 3+99, 163.1' RT
RIM EL =28.90
FL EL 8"(W)=17.58
FL EL 8"(N)=21.02
FL EL 8"(E)=17.58

Fire hydrant placement/spacing to include intersections as noted in the Angleton ACM - CoSL Des. Std. 2.8.1 Fire Hydrant Spacing, C.

Label existing utilities and sizes

0 25 50 100
SCALE : 1" = 50'

NO.	DATE	DESCRIPTION	APPROVED

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DATE 3/7/2025

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REG. NO. F-825

STATE OF TEXAS
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waynerea@swbell.net (713) 993-6453

PLAN: 1" = 50'
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

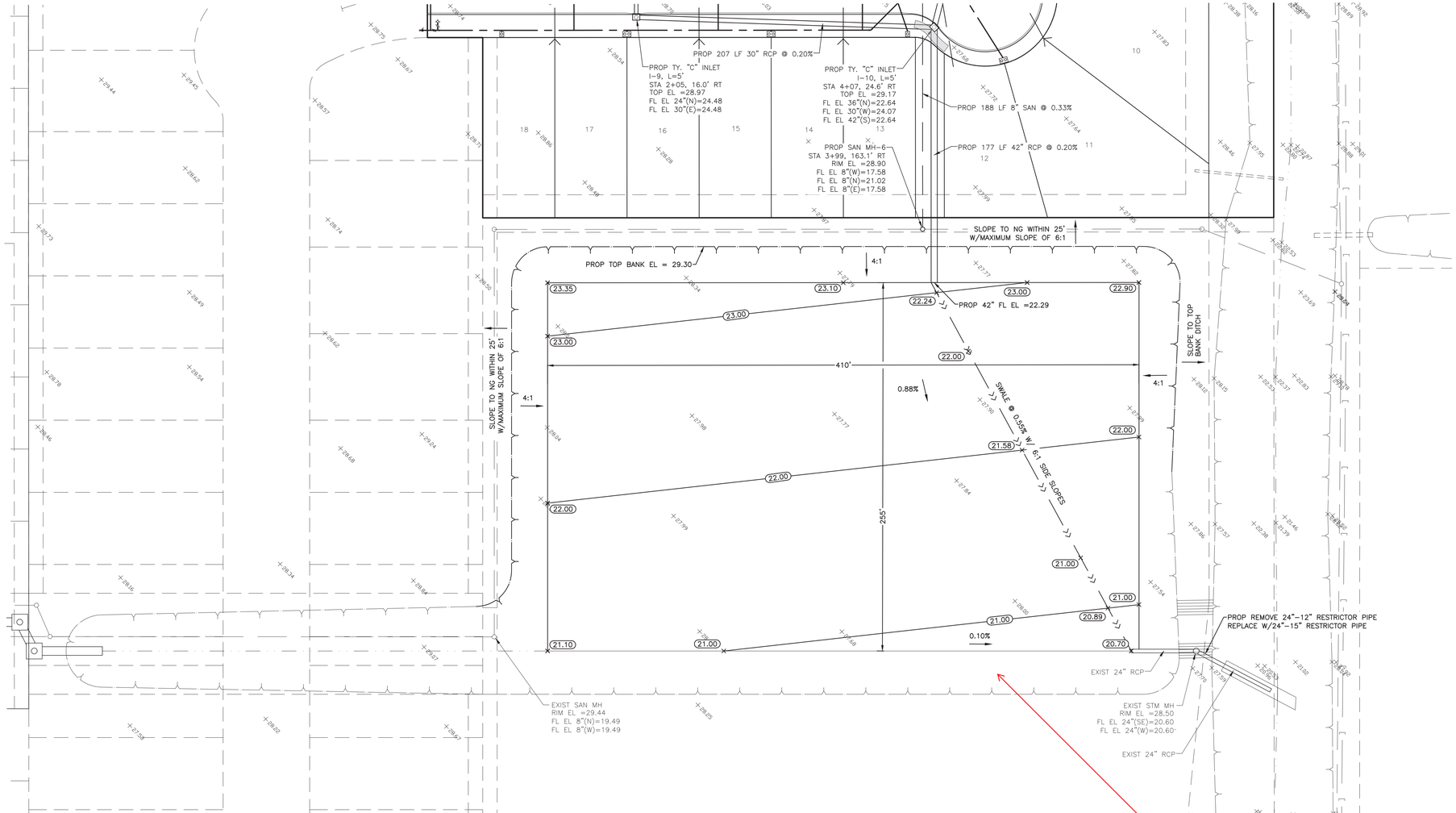
UTILITY LAYOUT

PROJECT NO. 16182

7

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jpena

16182 SHEET SET SEC 1B.DWG



0 20 40 80
SCALE : 1" = 40'

SEC 1A & 1B DETENTION VOLUME REQUIRED = 17.037 AC-FT

DETENTION PROVIDED:

TOP EL. 29.30 = (306 x 460) = 3.231 AC

TOP 12" FREEBOARD 28.30 = (298 x 452) = 3.029 AC

BOTTOM AVG. EL. 22.0 = (255 x 410) = 2.400 AC

AVG. AREA (28.3 TO 22) = 2.74 AC

AVG. DEPTH = 6.3'

STORAGE PROVIDED = 17.26 AC-FT

Please include the cross sections for the proposed pond as noted

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

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DATE 3/7/2025

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4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
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03-07-2025

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Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN: 1" = 40'
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

DETENTION POND LAYOUT AND CROSS SECTIONS

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jpena

16182 SHEET SET SEC 1B.DWG

AUSTIN COLONY
FUTURE SECTION

DA I-14
0.69 AC

DA I-15
0.81 AC

DA I-12
0.38 AC

DA I-11
0.26 AC

DA I-13
0.32 AC

DA I-3
0.64 AC

DA I-4
0.84 AC

DA I-16
0.81 AC

DA I-1
2.00 AC

DA I-2
1.45 AC

DA I-5
0.55 AC

DA I-8
1.14 AC

DA I-7
0.25 AC

DA I-6
0.94 AC

DA I-10
0.43 AC

DA I-9
1.10 AC

AUSTIN COLONY
SECTION 1A

PROP TY. "C" INLET
I-12, L=5'
STA 0+68, 34.0' LT
TOP EL =29.17
FL EL 18"(E)=24.30
FL EL 18"(S)=24.69

PROP 137 LF 24" RCP @ 1.24%

PROP TY. "C" INLET
I-14, L=5'
STA 1+66, 34.0' LT
TOP EL =29.17
FL EL 18"(S)=24.69
FL EL 18"(W)=24.10
FL EL 24"(E)=24.10

PROP STM JB-2
STA 3+23, ℄
RIM EL =30.10
FL EL 48"(E)=21.36
FL EL 48"(E)=21.36
FL EL 48"(S)=21.36
FL EL 48"(S)=21.36

PROP 98 LF 18" RCP @ 0.20%

PROP 68 LF 18" RCP @ 0.21%

PROP 68 LF 18" RCP @ 0.21%

PROP 275 LF 48" RCP @ 0.09%

PROP 275 LF 48" RCP @ 0.09%

PROP 43 LF 48" RCP @ 0.09%

PROP 43 LF 48" RCP @ 0.09%

PROP TY. "C" INLET
I-11, L=5'
STA 0+68, 34.1' RT
TOP EL =29.17
FL EL 18"(N)=24.83

PROP TY. "C" INLET
I-13, L=5'
STA 1+66, 34.1' RT
TOP EL =29.17
FL EL 18"(N)=24.83

PROP TY. "C" INLET
JB-1, L=12'
STA 5+98, 0.0' T
TOP EL =28.37
FL EL 96"(E)=21.60
FL EL 48"(W)=21.60
FL EL 48"(W)=21.60

PROP 86 LF 2-48" RCP'S
℄ STA. 3+09
(N)FL.EL.=21.48
(S)FL.EL.=21.32
SLOPE= 0.19%

PROP TY. "C" INLET
I-1, L=5'
STA 3+40, 16.1' LT
TOP EL =28.87
FL EL 24"(S)=24.53

PROP TY. "C" INLET
I-3, L=5'
STA 6+34, 16.1' LT
TOP EL =28.87
FL EL 18"(S)=24.53

PROP TY. "C" INLET
I-4, L=5'
STA 7+26, 16.0' RT
TOP EL =28.97
FL EL 18"(W)=24.55

PROP 32 LF 24" RCP @ 0.20%

PROP 291 LF 30" RCP @ 0.20%

PROP 32 LF 18" RCP @ 0.20%

PROP 62 LF 18" RCP @ 0.20%

PROP 36 LF 30" RCP @ 0.20%

PROP TY. "C" INLET
I-2, L=5'
STA 3+40, 16.0' RT
TOP EL =28.87
FL EL 24"(N)=24.46
FL EL 30"(E)=24.46

PROP TY. "C" INLET
I-5, L=10'
STA 6+31, 16.0' RT
TOP EL =28.87
FL EL 18"(E)=24.43
FL EL 30"(W)=23.89
FL EL 18"(N)=24.46
FL EL 30"(SE)=23.27

PROP STM MH-1
STA 6+87, 16.1' LT
RIM EL =29.60
FL EL 30"(NW)=23.20
FL EL 30"(S)=23.20

PROP 208 LF 30" RCP @ 0.20%

PROP TY. "C" INLET
I-8, L=5'
STA 2+05, 16.0' LT
TOP EL =28.97
FL EL 24"(S)=24.54

PROP TY. "C" INLET
I-7, L=5'
STA 4+78, 16.1' LT
TOP EL =28.97
FL EL 30"(N)=22.79
FL EL 18"(E)=24.46
FL EL 36"(S)=22.79

PROP 32 LF 18" RCP @ 0.20%

PROP TY. "C" INLET
I-6, L=5'
STA 4+80, 16.0' RT
TOP EL =28.97
FL EL 18"(W)=24.53

PROP 78 LF 36" RCP @ 0.20%

PROP 32 LF 24" RCP @ 0.20%

Are these wall penetration s feasible at the inlets noted (I-10, I-5)

Recommend updating to provide an alignment to avoid traversing pipe in the ROW.

PROP 207 LF 30" RCP @ 0.20%

PROP TY. "C" INLET
I-9, L=5'
STA 2+05, 16.0' RT
TOP EL =28.97
FL EL 24"(N)=24.48
FL EL 30"(E)=24.48

PROP TY. "C" INLET
I-10, L=5'
STA 4+07, 24.6' RT
TOP EL =29.17
FL EL 36"(N)=22.64
FL EL 30"(W)=24.07
FL EL 42"(S)=22.64

PROP 177 LF 42" RCP @ 0.20%

SCALE : 1" = 50'
0 25 50 100

SYMBOLS LEGEND

- EXIST NATURAL GROUND ELEVATION
- 80.20 PROP GRADE ELEVATION
- 81.35 PROP TOP OF 4" CURB ELEVATION
- TC=81.00 PROP RIM ELEVATION OF CURB INLET
- GUT=81.50 PROP GUTTER LINE ELEVATION
- TG=81.50 PROP TOP OF GRATE INLET
- DOUBLE WATER METER
- SINGLE WATER METER
- FIRE HYDRANT
- WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- TOP BANK
- STORM SEWER LINE (REINFORCED CONCRETE PIPE, ASTM C76)
- SANITARY SEWER LINE (D3034, SDR 26, 160 PR)
- WATERLINE (AWWA C900, CLASS 150, DR18)

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DRAWN BT
CHECKED DR
DATE 3/7/2025

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ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net *(713) 993-6453*

PLAN: 1" = 50'
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

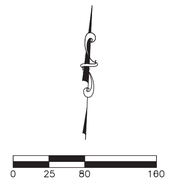
DRAINAGE MAP

PROJECT NO. 16182

9

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jperna

16182 SHEET SET SEC 1B.DWG



Off-Site Walmart Area Drainage Calculations

To Determine Size of Culvert to Extend the Exist. 8' x 4' Box

Based on Atlas 14 Rainfall

10-Year Strom Calculations for 8' x 4' Box Culvert Extension

Q = C* I * Cf * A Where: C= 0.90 Cf = 1.0 A= 24.7 Ac

I : e= 0.676, b=57.515, d=7.777

I = 6.154 for TC= 19.5 Minutes

Q - 10 Yr = 0.90 * 6.154 * 1.0 * 24.7 = 136.8 cfs

Analysis is based on 6.154 " of rain in one hour

ORIFICE EQUATION		
Q = Cd * A * (2 * G * H)^0.5		
Where:		
Q =	Varies (cfs)	136.8
Cd =	Coefficient	0.8
A =	Area (s.f.)	?
G =	Gravity (fps)	32.2
H =	Varies (ft)	0.7
A =	**25.47**	**2 - 48"**

2-48" Pipes = 25 s.f.

100 - Year Strom Calculations for 8' x 4' Box Culvert Extension

Q = C* I * Cf * A Where: C= 0.90 Cf = 1.25 A= 24.7 Ac

I : e= 0.533, b=46.316, d=1.555

I = 9.128 for TC= 19.5 Minutes

Q - 100 Yr = 0.90 * 9.128 * 1.25 * 24.7 = 253.6 cfs

Analysis is based on 9.128" of rain in one hour

ORIFICE EQUATION		
Q = Cd * A * (2 * G * H)^0.5		
Where:		
Q =	Varies (cfs)	253.6
Cd =	Coefficient	0.8
A =	Area (s.f.)	?
G =	Gravity (fps)	32.2
H =	Varies (ft)	2.5
A =	**24.98**	**2 - 48"**

2-48" Pipes = 25 s.f.

USE 2 - 48" RCP CULVERTS

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Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

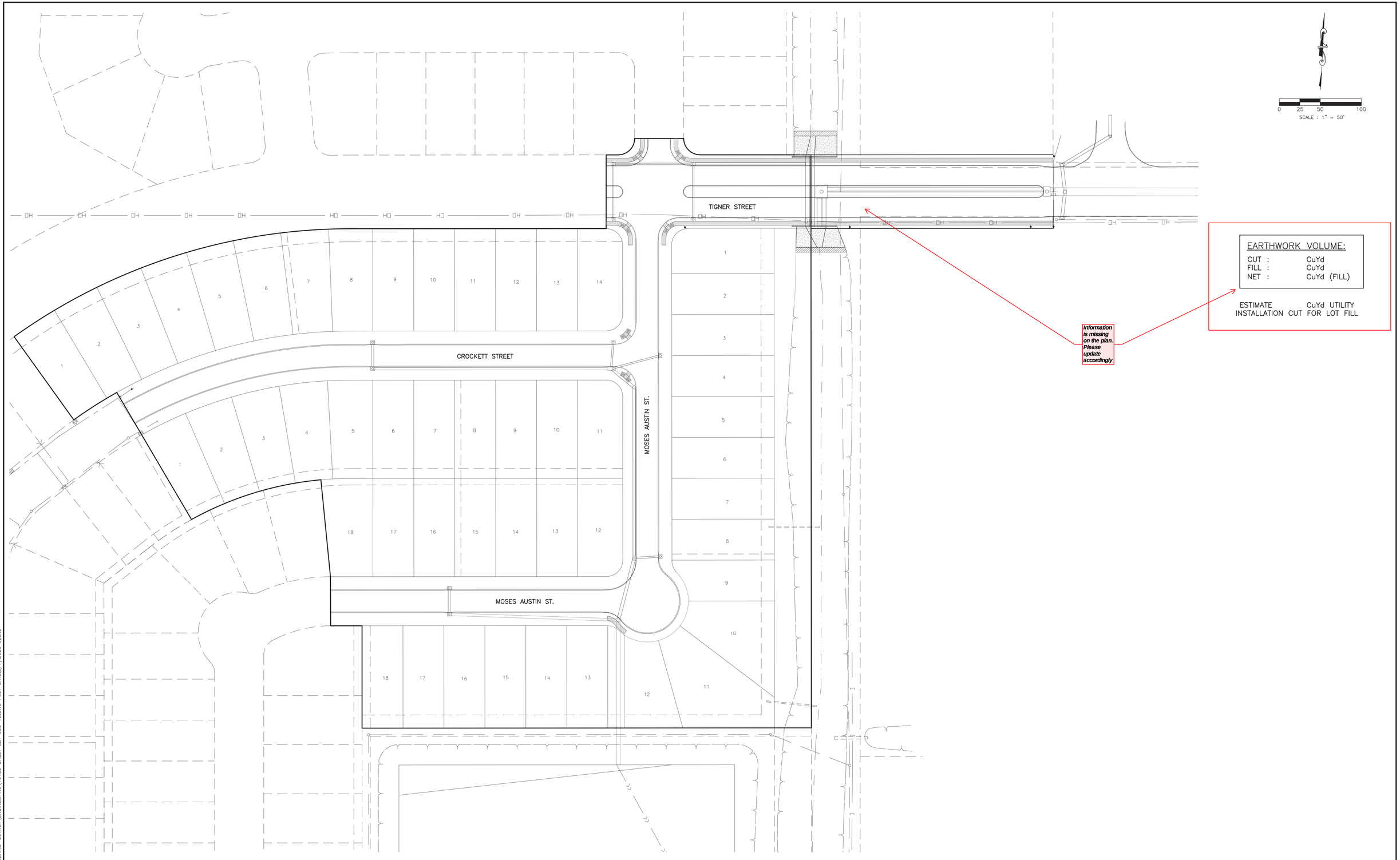
OFF-SITE DRAINAGE AREA CALCULATIONS

PROJECT NO. 16182

9A

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 Blayler

16182 SHEET SET SEC 1B.DWG



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CUT AND FILL

PROJECT NO. 16182

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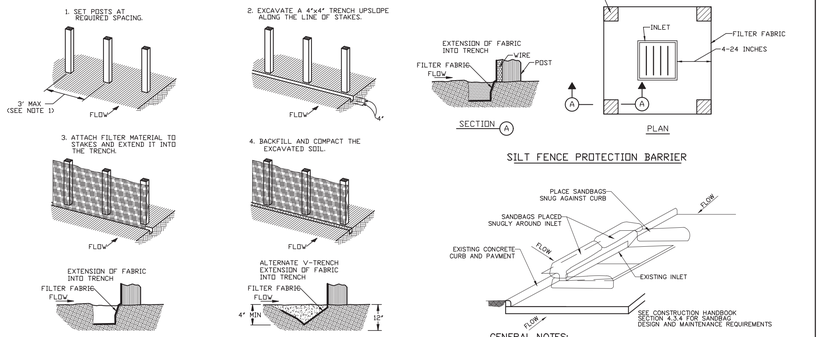


CONSTRUCTION NOTES:

1. 1 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC FENCE SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.

FILTER FABRIC FENCE

SILT FENCE PROTECTION BARRIER

GENERAL NOTES:

1. BAGS OR WATTLES CAN BE USED FOR THIS APPLICATION.
2. REMOVODE WOVEN OR UNWOVEN GEOTEXTILE FILTER FABRIC FOR BAGS
3. PROVIDE COARSE SAND AND AGGREGATE MIX FOR FILL MATERIAL FOR BAGS. USE ONLY. PARTICLES CONSISTING OF CLEAN, HARD, DURABLE MATERIALS FREE FROM ADHERENT COATINGS,SALT,ALKALI,DIRT,CLAY,LOAM,SHALE, OR FLAKY MATERIALS, OR ORGANIC AND INJURIOUS MATTER.
4. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.

INLET PROTECTION BARRIERS FOR STAGE II INLETS

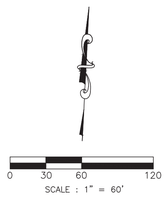
N.T.S

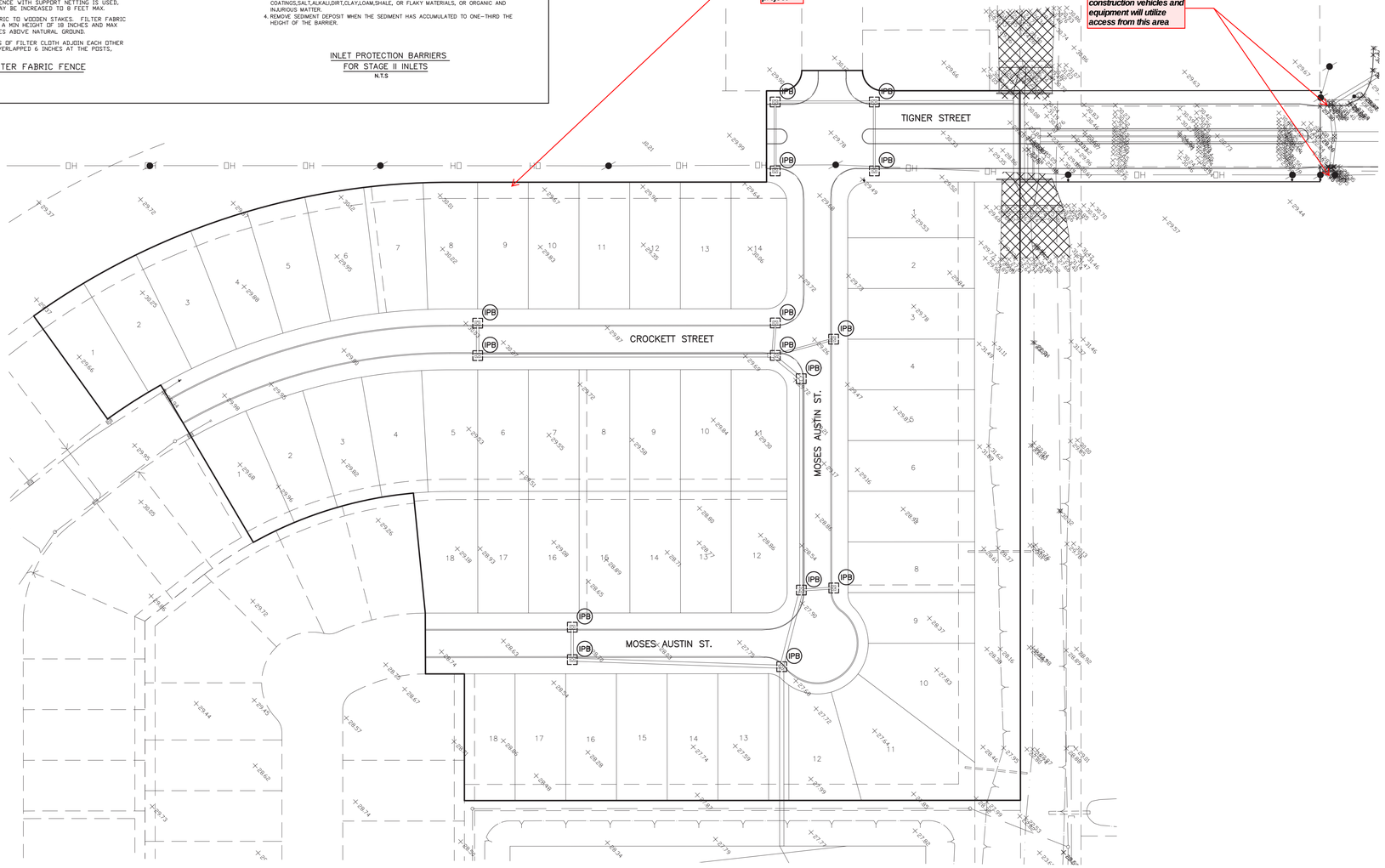
LEGEND

- (IPB) SILT FENCE AROUND STRUCTURE UNDER CONSTRUCTION
- (FF) SILT FENCE ACROSS EXISTING DITCH REINFORCED FILTER BARRIER
- HYDROMULCH SEED

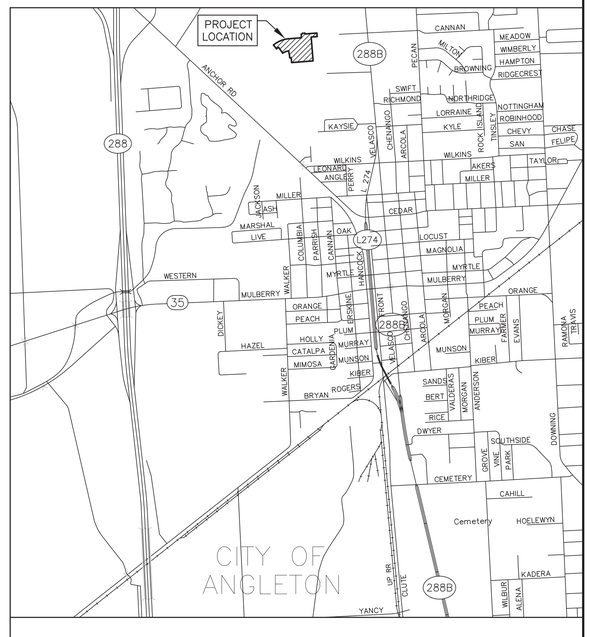
Update plan to show location of silt fencing for the project

Verify use of IPB here if construction vehicles and equipment will utilize access from this area





GENERAL LOCATION MAP



PROJECT/SITE INFORMATION

PROJECT NAME: AUSTIN COLONY SUBDIVISION SECTION 1B

PROJECT ADDRESS/LOCATION: NE SIDE OF CR 44 (ANCHOR RD.) AND 1,000' SE OF CR 340 (CARR RD.)

CITY: ANGLETON STATE: TX. ZIP CODE: 77515

LATITUDE: 95°25'34.9" LONGITUDE: 29°11'19.2" COUNTY: BRAZORIA

NAME OF RECEIVING WATERS: GULF OF MEXICO

02/01/2025 MONTH/DAY/YEAR ESTIMATED CONSTRUCTION START DATE

02/01/2026 MONTH/DAY/YEAR ESTIMATED COMPLETION DATE

ESTIMATE OF AREA TO BE DISTURBED: 10.7 ACRES

ESTIMATE OF LIKELYHOOD OF DISCHARGE:

☐ UNLIKELY ☐ ONCE PER WEEK ☐ CONTINUAL
☒ ONCE PER MONTH ☐ ONCE PER DAY

ARE THERE ANY LISTED ENDANGERED OR THREATENED SPECIES, OR DESIGNATED CRITICAL HABITAT IN THE PROJECT AREA?

☐ YES ☒ NO

ELIGIBILITY WITH REGARD TO PROTECTION OF ENDANGERED SPECIES HAS BEEN SATISFIED THROUGH THE INDICATED SECTION OF PART 1.B.3.e.(2) OF THE PERMIT.

(a) ☒ (b) ☐ (c) ☐ (d) ☐

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CHECKED DR
DATE 3/7/2025

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REG. NO. F-825

STATE OF TEXAS 56739 DOUGLAS B. ROESLER LICENSED PROFESSIONAL ENGINEER

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VERTICAL:

PROJECT:

Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

SWPPP LAYOUT

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jperry

16182 SHEET SET SEC 1B.DWG

1. SITE DESCRIPTION

A. NATURE OF THE CONSTRUCTION ACTIVITY:
AUSTIN COLONY SUBDIVISION SECTION 1B, ANGLETON, BRAZORIA COUNTY, TEXAS. BEING A 15.9 ACRE WHICH WILL BE DEVELOPED INTO A RESIDENTIAL SUBDIVISION OF 50 Lots (50' & 60' WIDE). CONSTRUCTION WILL INCLUDE UNDERGROUND UTILITIES, STORM SEWERS, CONCRETE ROADWAYS WITH CURBS AND DETENTION POND EXCAVATION WITH MATERIAL SPREAD FOR LOT GRADING.

B. INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
STREET RIGHT OF WAY AND LOT AREAS WILL BE STRIPPED OF ALL VEGETATIVE MATTER. THIS MATERIAL WILL BE STOCKPILED ADJACENT TO THE WORK TO BE SPREAD ON DEVELOPED LOTS AFTER FINAL GRADING. UTILITY AND STORM SEWER CONSTRUCTION WILL REQUIRE TRENCHING. EXCAVATION FOR ROADWAY SUBGRADE AND DETENTION POND WILL INVOLVE SPREADING EXCAVATED MATERIAL ON ADJACENT LOTS. RAINFALL RUNOFF WILL BE DIRECTED TO THE STREET GUTTERS AND TO THE CONSTRUCTED STORM SEWER SYSTEM. TRUCKS WILL BE USED TO DELIVER MATERIAL TO THE PROJECT INCLUDING LIME, CONCRETE, UTILITY AND STORM SEWER MATERIALS AND OTHER CONSTRUCTION MATERIALS. TRUCKS WILL ALSO BE USED TO HAUL CONSTRUCTION DEBRIS AWAY FROM THE SITE. THESE TRUCKS WILL BE ROUTED ALONG CR 44 (ANCHOR RD.) FOR INGRESS AND EGRESS. RUTTING DURING WET WEATHER WILL PROVIDE POTENTIAL FOR TRACKING MUD ALONG THE ROUTE.

C. TOTAL PROJECT AREA: 10.7 ACRES

D. TOTAL AREA TO BE DISTURBED: 10.7 ACRES

WEIGHTED RUNOFF COEFFICIENT (BEFORE CONSTRUCTION): 0.25 (AFTER CONSTRUCTION): 0.60

E. REFER TO GENERAL LOCATION MAP AND SITE MAP FOR DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER MAJOR GRADING ACTIVITIES; AREAS OF SOIL DISTURBANCE; AREAS WHICH WILL NOT BE DISTURBED; LOCTIONS OF MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS; LOCATIONS WHERE STABILIZATION PRACTICES ARE EXPECTED TO OCCUR; LOCATION OF OFF-SITE MATERIAL, WASTE, BORROW OR EQUIPMENT STORAGE AREAS; SURFACE WATERS (INCLUDING WETLANDS); AND LOCATIONS WHERE STORM WATER DISCHARGES TO A SURFACE WATER.

F. LOCATION AND DESCRIPTION OF ANY DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION:

G. NAME OF RECEIVING WATERS:
RUNOFF WILL BE COLLECTED IN THE STORM SEWER SYSTEM AND ROUTED TO THE DETENTION POND. THE POND OUTFALLS INTO ANGLETON DRAINAGE DISTRICT DITCH 10 WHICH FLOWS TO OYSTER CREEK AND THEN TO THE GULF OF MEXICO.

AREAL EXTENT AND DESCRIPTION OF WETLAND OR SPECIAL AQUATIC SITE AT OR NEAR THE SITE WHICH WILL BE DISTURBED OR WHICH WILL RECEIVE DISCHARGES FROM DISTURBED AREAS OFTHE PROJECT.

NONE

H. REFER TO FEDERAL REGISTER, VOLUME 63, NO.128, MONDAY JULY 6, 1998, PAGES 36497 TO 36515 FOR REQUIREMENTS OF NPDES GENERAL PERMITS FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES IN REGION 6.

I. LISTED ENDANGERED OR THREATENED SPECIES OR CRITICAL HABITAT FOUND IN PROXIMITY TO THE CONSTRUCTION ACTIVITY:

NONE

J. PROPERTY LISTED OR ELIGIBLE FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES:

NONE

2. CONTROLS

NARRATIVE – SEQUENCE OF CONSTRUCTION ACTIVITIES AND APPROPRIATE CONTROL MEASURES DURING CONSTRUCTION

THE ORDER OF CONSTRUCTION WILL BEGIN WITH STRIPPING OF ALL VEGETATION FROM THE WORK AREA.

1. INSTALL SILT FENCE AROUND THE PERIMETER OF THE AREA TO BE DISTURBED. THE ORDER OF ACTIVITIES WILL BEGIN WITH THE COMPLETE STRIPPING OF ALL AREAS TO RECEIVE FILL MATERIAL. REMOVED VEGETATION TO BE STOCKPILED ADJACENT TO THE WORK TO BE SPREAD AFTER LOT GRADING IS COMPLETE TO FACILITATE VEGETATIVE GROWTH.

2. INSTALL WATER LINES, SANITARY SEWER LINES AND MANHOLES AND STORM SEWER PIPES, INLETS AND MANHOLES. INSTALL INLET PROTECTION BARRIERS AROUND ALL INLETS.

3. ROADWAY EXCAVATION, LIME STABILIZATION AND CONCRETE PAVING WILL FOLLOW UNDERGROUND UTILITY AND STORM SEWER CONSTRUCTION. DURING ROADWAY WORK, THE DETENTION POND WILL BE EXCAVATED AND MATERIAL SPREAD ON LOTS. INSTALL SILT FENCE IN THE BOTTOM OF THE POND UPSTREAM OF THE RESTRICTIVE OUTFALL CULVERT.

4. AS SOON AS CONCRETE CURBS ARE INSTALLED, PLACE 16" WIDE SOLID SOD BEHIND ALL CURBS.

5. THE DETENTION POND SHALL BE SEEDED AND FERTILIZED UPON COMPLETION OF THE EXCAVATION. ALL SEEDED AND FERITLIZED AREAS TO BE IRRIGATED TO ENSURE GROWTH.

A. EROSION AND SEDIMENT CONTROLS: EROSION AND SEDIMENT CONTROLS SHALL RETAIN SEDIMENT ON SITE TO THE EXTENT PRACTICABLE. CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS (WHERE APPLICABLE) AND GOOD ENGINEERING PRACTICES. OFFSITE SEDIMENT ACCUMULATIONS MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS WHEN CAPACITY HAS BEEN REDUCED BY 50%. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WALL SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.

SOIL STABILIZATION PRACTICES:	OWNER/ DEVELOPER	GENERAL CNTRTR.	BUILDER	OTHER
TEMPORARY SEEDING				
PERMANENT PLANTING, SODDING, OR SEEDING		X		
MULCHING– WHERE INDICATED		X		
SOIL RETENTION BLANKET				
VEGETATIVE BUFFER STRIPS				
PRESERVATION OF NATURAL RESOURCES				
OTHER:				

THE FOLLOWING RECORDS SHALL BE MAINTAINED AND ATTACHED TO THIS SWPPP:
DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED.

STRUCTURAL PRACTICES:	OWNER/ DEVELOPER	GENERAL CNTRTR.	BUILDER	OTHER
SILT FENCES		X		
HAY BALES				
ROCK BERMS				
DIVERSION, INTERCEPTOR, OR PERIMETER DIKES				
DIVERSION, INTERCEPTOR, OR PERIMETER SWALES				
DIVERSION DIKE AND SWALE COMBINATIONS				
PIPE SLOPE DRAINS				
ROCK BEDDING AT CONSTRUCTION EXIT				
TIMBER MATTING AT CONSTRUCTION EXIT				
SEDIMENT TRAPS				
SEDIMENT BASINS				
STORM INLET PROTECTION				
STONE OUTLET STRUCTURES				
OTHER:				

B. STORM WATER MANAGEMENT MEASURES INSTALLED DURING CONSTRUCTION TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION:
CURBS & GUTTERS STORM SEWERS

C. OTHER CONTROLS

NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO WATERS OF THE UNITED STATES, EXCEPT AS AUTHORIZED BY A PERMIT ISSUED UNDER SECTION 404 OF THE CLEAN WATER ACT.

WASTE MATERIALS: ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL CONTAINER. THE CONTAINER SHALL MEET ALL STATE AND CITY SOLID WASTE MANAGEMENT REGULATIONS. THE CONTAINER SHALL BE EMPTIED AS NECESSARY AND THE TRASH HAULED TO AN APPROPRIATE DUMP SITE. NO CONSTRUCTION MATERIALS WILL BE BURIED ON SITE.

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES ARE CONSIDERED TO BE HAZARDOUS: PAINT, CLEANING SOLVENTS, ASPHALT PRODUCTS, PETROLEUM PRODUCTS, CHEMICAL ADDITIVES FOR SOIL STABILIZATION, AND CONCRETE CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE SPILL COORDINATOR SHOULD BE CONTACTED IMMEDIATELY.

SANITARY WASTE: PORTABLE SANITARY FACILITIES WILL BE PROVIDED BY THE CONTRACTOR. ALL SANITARY WASTES WILL BE COLLECTED FROM PORTABLE UNITS AND SERVICED BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

OFFSITE VEHICLE TRACKING SHALL BE MINIMIZED BY:
___ HAUL ROADS DAMPENED FOR DUST CONTROL LOADED
_X_ HAUL TRUCKS TO BE COVERED WITH TARPAULIN
_X_ EXCESS DIRT ON ROAD REMOVED DAILY STABILIZED
___ CONSTRUCTION ENTRANCE

OTHER: TRUCKS HAULING VEGETATION AND DEBRIS WILL BE MONITORED AND SHALL BE COVERED WITH TARPAULINS IF REQUIRED TO PREVENT DUST OR OTHER PARTICLES FROM BLOWING OR FALLING FROM TRUCK.

REMARKS: ALL OPERATIONS WILL BE CONDUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNTS OF SEDIMENT THAT MAY ENTER THE RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY, OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS.

3. MAINTENANCE

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. IF A REPAIR IS NECESSARY IT SHALL BE DONE AT THE EARLIEST TIME POSSIBLE, BUT NO LATER THAN SEVEN CALENDAR DAYS AFTER THE GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. THE AREAS ADJACENT TO DRAINAGE WAYS SHALL HAVE PRIORITY, FOLLOWED BY DEVICES PROTECTING STORM SEWER INLETS. MAINTENANCE SHALL BE PERFORMED BEFORE THE NEXT ANTICIPATED STORM EVENT OR AS SOON AS PRACTICABLE.

4. INSPECTION

AN INSPECTION WILL BE PERFORMED BY THE PERMITEE EVERY FOURTEEN DAYS AS WELL AS AFTER EVERY ONE-HALF INCH OR GREATER RAINFALL EVENT. AN INSPECTION AND RAINFALL REPORT WILL BE MADE AFTER EACH INSPECTION. ANY DEFICIENCIES WILL BE NOTED AND APPROPRIATE CHANGES SHALL BE MADE TO THE SYSTEM TO COMPLY WITH REQUIREMENTS.

5. NON-STORMWATER DISCHARGES

___ FIRE HYDRANT FLUSHING
_X_ BUILDING WASHDOWN WITHOUT DETERGENTS
_X_ PAVEMENT WASHDOWN WITHOUT DETERGENTS
_X_ CONDENSATE
___ UNCONTAMINATED GROUNDWATER
___ UNCONTAMINATED FOUNDATION DRAINS

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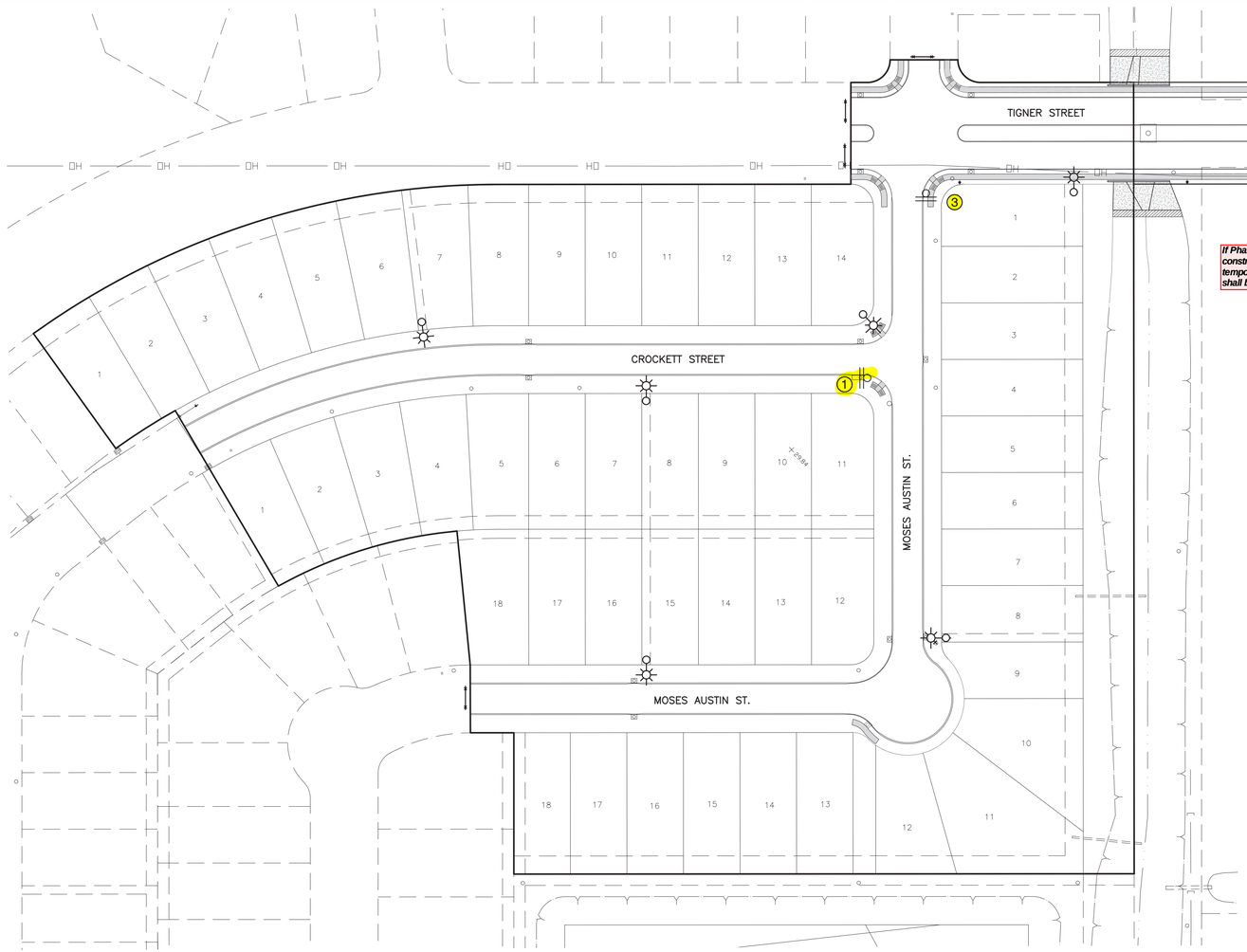
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

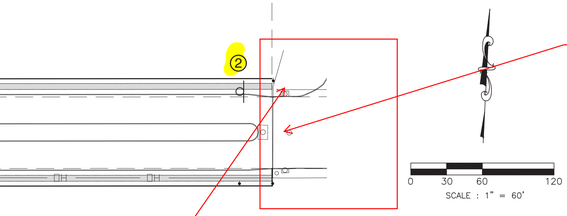
SWPPP NARRATIVE

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jpena

16182 SHEET SET SEC 1B.DWG





Striping and signage to be provided for beginning of boulevard section (e.g. gores, median ahead, do not enter,

If Phase 1b is being constructed first, a temporary No Outlet Sign shall be provided

LEGEND:
S.L.E. = STREET LIGHT EASEMENT

STREET SIGNS

1. STOP - FACING CROCKETT STREET
   CROCKETT STREET / MOSES AUSTIN STREET
   W/"NO OUTLET" SIGN ATTACHED
2. SPEED LIMIT 30 MPH
3. STOP - FACING MOSES AUSTIN STREET
   MOSES AUSTIN STREET / TIGNER STREET

TYPE III BARRICADE (4 LOCATIONS)

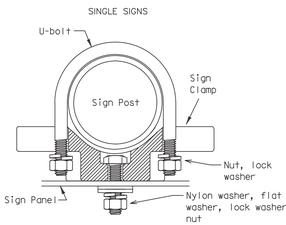
STREET AREA LIGHTING (9 LOCATIONS)

STREET SIGNS (2 LOCATIONS)
2-STREET NAMES
1-STOP SIGN

STREET SIGNS (1 LOCATION)
30 MPH

LIGHTING PLAN PROVIDED IS SHOWN AS RECOMMENDED. FINAL LOCATIONS AND QUANTITIES ARE DETERMINED BY TEXAS NEW MEXICO POWER (TNMP).

SINGLE SIGNS



PIPE DIAMETER	APPROXIMATE BOLT LENGTH	
	SPECIFIC CLAMP	UNIVERSAL CLAMP
2" NOMINAL	3"	3 OR 3 1/2"
2 1/2" NOMINAL	3 OR 3 1/2"	3 1/2 OR 4"
3" NOMINAL	3 1/2 OR 4"	4 1/2"

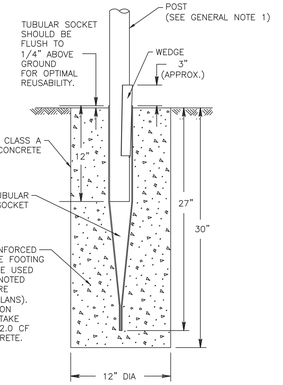
GENERAL CONSTRUCTION NOTE:

BOLTS USED TO MOUNT SIGN PANELS TO THE CLAMP ARE 5/16-18 UNC GALVANIZED SQUARE HEAD WITH NUT, NYLON WASHER, FLAT WASHER AND LOCK WASHER. THE BOLT LENGTH IS 1 INCH FOR ALUMINUM.

WHEN TWO SIGN CLAMPS ARE USED TO MOUNT SIGNS BACK-TO-BACK, USE A 5/16-18 UNC GALVANIZED HEX HEAD PER ASTM A307 WITH NUT AND HELICAL-SPRING LOCK WASHER. THE APPROXIMATE BOLT LENGTHS FAR VARIOUS PAST SIZES AND SIGN CLAMP TYPES ARE GIVEN IN THE TABLE AT RIGHT. THE BOLT LENGTH MAY NEED TO BE ADJUSTED DEPENDING UPON FIELD CONDITIONS.

SIGN CLAMPS MAY BE EITHER THE SPECIFIC SIZE CLAMP OR THE UNIVERSAL CLAMP.

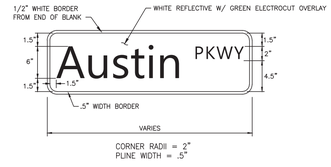
TYPICAL SIGN ATTACHMENT DETAIL "A"
NTS



GENERAL CONSTRUCTION NOTE:

1. MATERIAL USED AS POST WITH THIS SYSTEM SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

   13 BWG TUBING C2.375" OUTSIDE DIAMETER) (TWT)
   0.095" NOMINAL WALL THICKNESS
   SEAMLESS OR ELECTRIC-RESISTANCE WELDED STEEL TUBING
   STEEL SHALL BE HSLAS GR 55 PER ASTM A1011 OR ASTM A1008
   OTHER STEELS MAY BE USED IF THEY MEET THE FOLLOWING:
   55,000 PSI MINIMUM YIELD STRENGTH
   70,000 PSI MINIMUM TENSILE STRENGTH
   18¾ MINIMUM ELONGATION IN 2"
   WALL THICKNESS (UNCOATED) SHALL BE WITHIN THE RANGE OF .083" TO .099"
   OUTSIDE DIAMETER (UNCOATED) SHALL BE WITHIN THE RANGE OF 2,369" TO 2,381"
   GALVANIZATION PER ASTM 123 OR ASTM A653 G210. FOR PRECOATED STEEL TUBING (ASTM A653), RECOAT TUBE OUTSIDE DIAMETER WELD SEAM BY METALLIZING WITH ZINC WIRE PER ASTM B833.



GENERAL CONSTRUCTION NOTE:

1. SIGN TEXT: HELVETICA BOLD, MEDIUM STYLE; WITH 9" UPPER CASE LETTERS AND 6" LOWER CASE LETTERS.
2. THE FIRST LETTER OF EACH WORD SHALL BE UPPER CASE, SUBSEQUENT LETTERS SHALL BE LOWER CASE, ALL INDIVIDUAL LETTERS FOR EXAMPLE "F.M." SHALL BE UPPER CASE. STREET SUFFIXES & "NO OUTLET" SHALL BE UPPER CASE.
3. ALL SHEETING SHALL BE "DIAMOND GRADE" OR APPROVED EQUAL.
4. USE ANODIZED BLANKS ONLY.
5. STREET SIGN FONTS SHALL BE HELVETICA BOLD, MEDIUM STYLE
6. MINIMUM SIGN THICKNESS: 9" SIGNS = .125'
7. ATTACH SIGNAGE TO 2" SIGN POST WITH 12" BLADE MOUNT BRACKET.

STREET SIGN DETAIL "B"
NTS

TYPICAL STREET SIGN
NTS

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/7/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN: 1" = 60'
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:

Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

PAVEMENT MARKING, STREET SIGN AND ROADWAY LIGHTING LAYOUT

PROJECT NO. 16182

13

DISCLAIMER:
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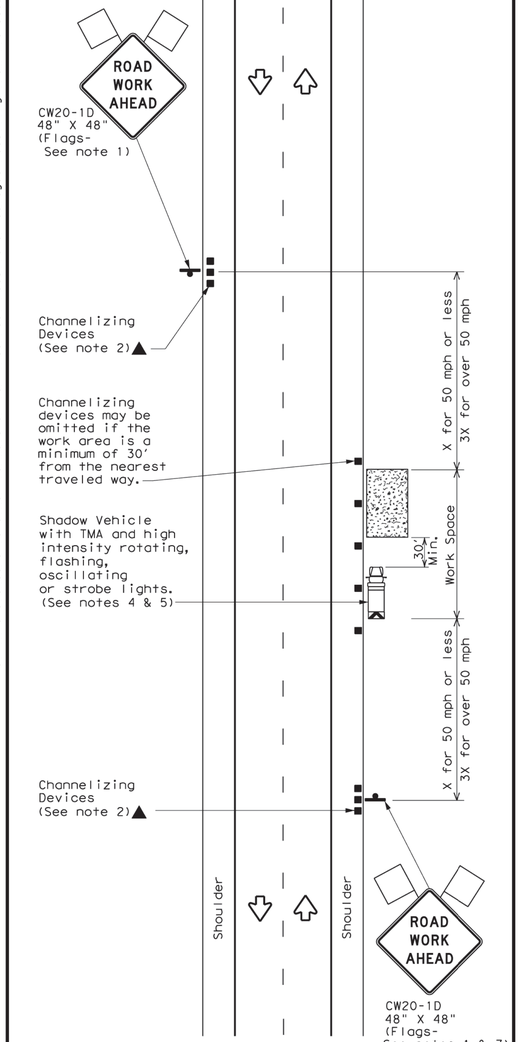
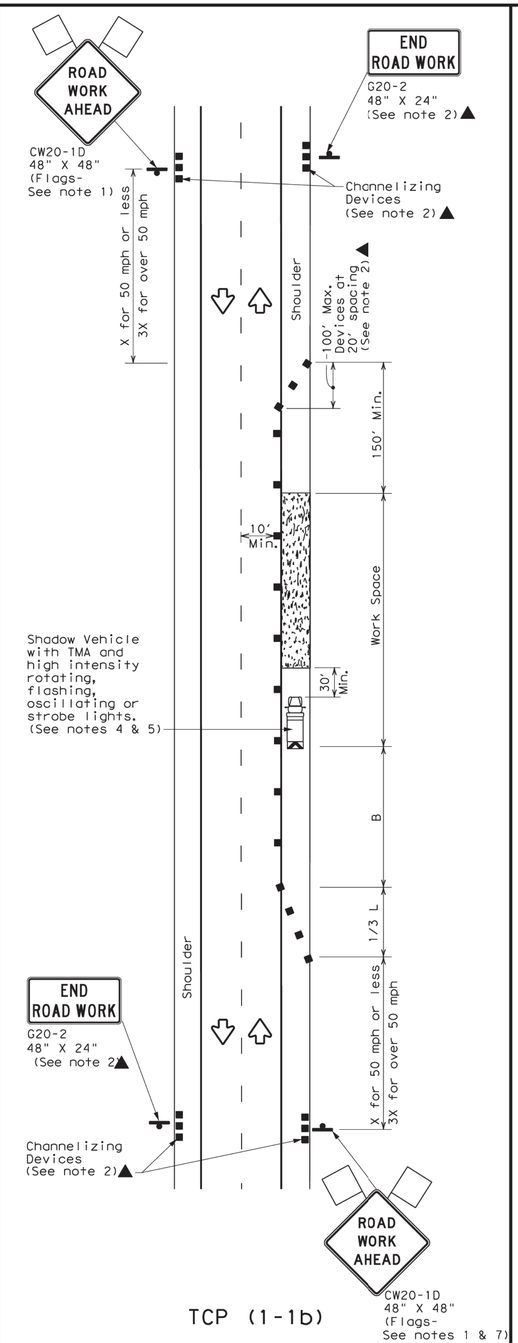


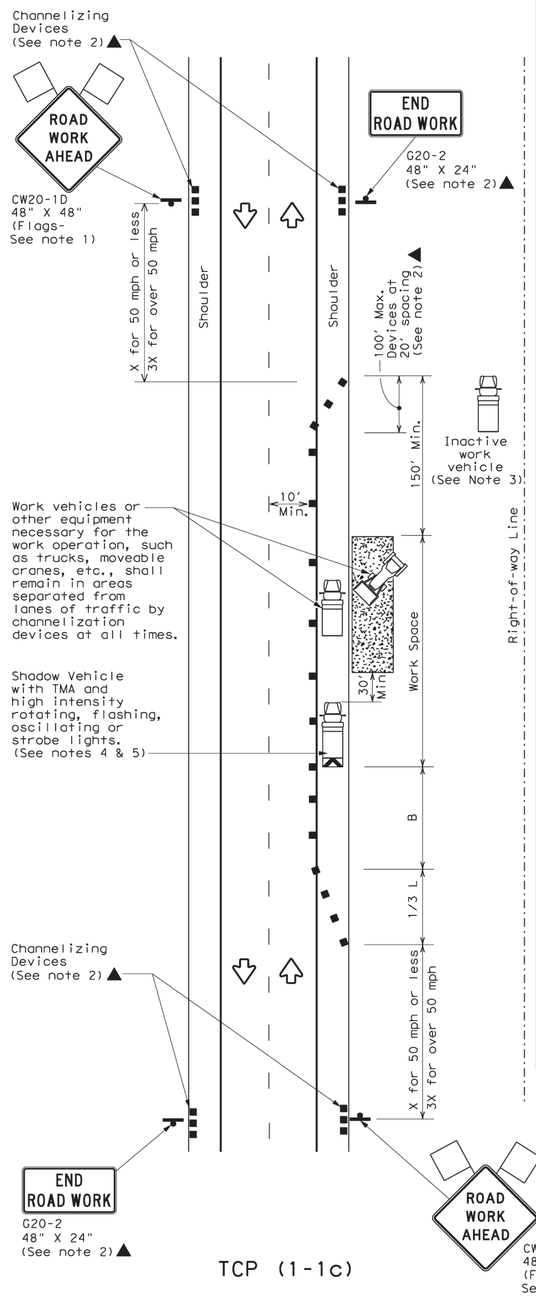
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

DATE:
FILE:

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1)for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation — Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-18

FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-94 4-98 8-95 2-12 1-97 2-18	DIST	COUNTY		SHEET NO.
151				

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/7/2025

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Houston, Texas 77081
waynerea@swbell.net *(713) 993-6453*

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

TRAFFIC CONTROL PLAN
TCP (1-1)-18

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jpena

16182 SHEET SET SEC 1B.DWG

Verify what the purpose of the bends are here near STA. 0+60 and remove if not needed.

Provide junction box at this location or consider other option such as discharge to south

Verify and incorporate use of a pedestrian handrail along the culvert crossing area

Evaluate proposed water line (10"-12") for incorporation of air release valves

PROP 1-8" PLUG
1-2" BOV

PROP 55 LF 8" WL
W/4' COVER

PROP 1-12"X8" TEE
1-8" GV W/BOX
1-12" GV W/BOX
1-10"X12" RED

PROP 1-8"X12" TEE
1-8" GV W/BOX

PROP 1-12" PLUG
1-2" BOV

PROP TY "C" INLET I-12

PROP 75 LF 12" WL
W/4' COVER

PROP 2-12" 45° BENDS
W/RESTRAINED JOINTS

PROP 2-25 LF CONC PVMT HEADERS

PROP 10" SAN PLUG
FL EL=16.17

PROP TY "C" INLET I-11

PROP 130 LF 10" SAN @ 0.25%

PROP 215 LF 8" WL
W/4' COVER

PROP 8" SAN PLUG
FL EL=16.32

PROP 28 LF CONC PVMT HEADER

PROP 145 LF 8" SAN @ 0.33%

PROP 2-10" 45° BENDS
W/RESTRAINED JOINTS

PROP 513 LF 10" WL
W/4' COVER

PROP TY "C" INLET I-14

PROP 98 LF 18" RCP @ 0.20%

PROP 68 LF 18" RCP @ 0.21%

PROP 68 LF 18" RCP @ 0.21%

PROP TY "C" INLET I-13

POWER POLES AND OHE TO BE RELOCATED BY OTHERS

PROP SAN MH-1

PROP 137 LF 24" RCP @ 1.24%

PROP 196 LF 10" SAN @ 0.25%

PROP CONC HEADWALL CH-PW-0 (55' LONG) (42' RT)

PROP SLOPE PAVING (25'X54'±)

RESHAPE 6' WIDE AREA OF DITCH

STUB PROP 24" RCP (FL.EL.=22.40)
INTO RCP 48" RCP. GROUT
WATER TIGHT INSIDE AND OUT.
CUT FLUSH W/ID OF 48" RCP.

PROP 2-10" 45° BENDS
W/RESTRAINED JOINTS

RESHAPE 6' WIDE AREA OF DITCH

PROP SLOPE PAVING (25'X52')

PROP CONC HEADWALL CH-PW-0 (55' LONG) (42' LT)

PROP 2-10" 45° BENDS
W/RESTRAINED JOINTS

PROP 86 LF 2-48" RCP'S
℄ STA. 3+09
(N)FL.EL.=21.48
(S)FL.EL.=21.32
SLOPE= 0.19%

PROP STM JB-2

PROP 43 LF 48" RCP @ 0.09%

PROP 43 LF 48" RCP @ 0.09%

PROP FL EL =21.32

PROP 275 LF 48" RCP @ 0.09%

PROP 275 LF 48" RCP @ 0.09%

EXIST SAN MH
STA 3+45, 34.7' RT
RIM EL=30.44
FL EL 10"(W)=15.35 (PROP CONNECTION)
FL EL 24"(N)=15.20
FL EL 24"(S)=15.10

Provide steel encasement for proposed sanitary sewer crossing under existing channel

TIGNER STREET

MOSES AUSTIN STREET

MATCH LINE STA. 5+00

90' ROW

24' F-F CONC PVMT

15'

15'

0+00 1+00 2+00 3+00 4+00 5+00

10+00 9+00

SCALE : 1" = 20'

Street gradient is less than 0.35 %

BEGIN TIGNER STREET
VIP STA 0+60
TC EL (LT&RT)=29.10

VIP STA 0+68
TC EL (LT&RT)=29.00

VIP STA 0+86
TC EL (LT)=29.20

VIP STA 1+49
TC EL (RT)=29.20

VIP STA 1+66
TC EL (LT&RT)=29.00

VIP STA 3+15
TC EL (LT&RT)=29.50

PROP TC LT&RT @ -1.18%

PROP TC LT @ +1.16%

PROP TC RT @ -1.16%

PROP TC LT&RT @ +0.34%

EXIST NG

PROP TC RT @ -0.38%

PROP TC LT @ -0.39%

PROP 8"WL

PROP 10"X12" RED

PROP 8"WL

PROP 2-12" 45° BENDS
W/RESTRAINED JOINTS

PROP 98 LF 18" RCP @ 0.20%

PROP 137 LF 24" RCP @ 1.24%

PROP 2-10" 45° BENDS
W/RESTRAINED JOINTS

PROP 2-10" 45° BENDS
W/RESTRAINED JOINTS

PROP 513 LF 10" WL
W/4' COVER

EXIST DITCH FL

STUB PROP 24" RCP (FL.EL.=22.40)
INTO RCP 48" RCP. GROUT
WATER TIGHT INSIDE AND OUT.
CUT FLUSH W/ID OF 48" RCP.

PROP 86 LF 2-48" RCP'S
℄ STA. 3+09
(N)FL.EL.=21.48
(S)FL.EL.=21.32
SLOPE= 0.19%

PROP 275 LF 2-48" RCP @ 0.09%

PROP 10" SAN PLUG
FL EL=16.17

PROP 130 LF 10" SAN @ 0.25%

PROP 196 LF 10" SAN @ 0.25%

PROP TY "C" INLET
I-11, L=5'
STA 0+68, 34.1' RT
TOP EL=29.17
FL EL 18"(N)=24.83

PROP TY "C" INLET
I-12, L=5'
STA 0+68, 34.0' LT
TOP EL=29.17
FL EL 18"(E)=24.30
FL EL 18"(S)=24.69

PROP SAN MH-1
STA 1+50, 40.1' RT
RIM EL=30.00
FL EL 8"(W)=15.84
FL EL 10"(E)=15.84
FL EL

PROP TY "C" INLET
I-13, L=5'
STA 1+66, 34.1' RT
TOP EL=29.17
FL EL 18"(N)=24.83

PROP TY "C" INLET
I-14, L=5'
STA 1+66, 34.0' LT
TOP EL=29.17
FL EL 18"(W)=24.10
FL EL 24"(E)=24.10

PROP STM JB-2
STA 3+24, 0.0' ℄
RIM EL=30.00
FL EL 48"(E)=21.36
FL EL 48"(E)=21.36
FL EL 48"(S)=21.36
FL EL 48"(S)=21.36

EXIST SAN MH
STA 3+45, 34.7' RT
RIM EL=30.44
FL EL 10"(W)=15.35
FL EL 24"(N)=15.20
FL EL 24"(S)=15.10
PROP FL EL 8"(W)=15.20

Reevaluate proposed water line offset and include steel casing for portion crossing within the culvert/channel crossing. Proposed pipe does not meet minimum cover requirements.

Provide symbol for sanitary sewer service (typical)

NOTE:
TOP OF CURB ELEVATION CALL OUTS ARE FOR 4" CURBS. ALL CURBS ALONG TIGNER STREET ARE 6" CURBS. RAISE CALL OUTS 0.17'. CURBS ALONG INTRRSECTION RADII ARE 6" CURBS RAISE CALL OUTS 0.17'.

SYMBOLS LEGEND

- EXIST NATURAL GROUND ELEVATION
- PROP GRADE ELEVATION
- PROP TOP OF 4" CURB ELEVATION
- PROP RIM ELEVATION OF CURB INLET
- PROP GUTTER LINE ELEVATION
- PROP TOP OF GRATE INLET
- DOUBLE WATER METER
- SINGLE WATER METER
- FIRE HYDRANT
- WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- TOP BANK
- STORM SEWER LINE (REINFORCED CONCRETE PIPE, ASTM C76)
- SANITARY SEWER LINE (D3034, SDR 26, 160 PR)
- WATERLINE (AWWA C900, CLASS 150, DR18)

NO.	DATE	DESCRIPTION	APPROVED

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DRAWN BT
CHECKED DR
DATE 3/7/2025

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PLAN: 1" = 20'
PROFILE:
HORIZONTAL: 1" = 2'
VERTICAL: 1" = 20'

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

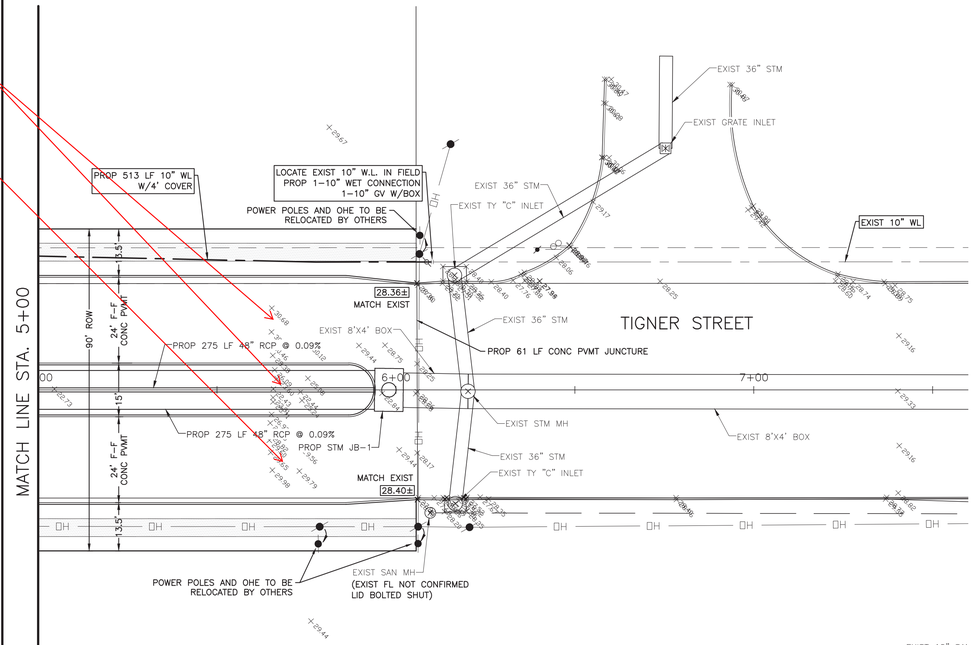
PLAN & PROFILE
TIGNER STREET
STA. 0+00 TO 5+00

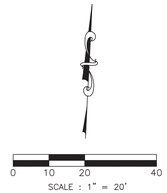
PROJECT NO. 16182

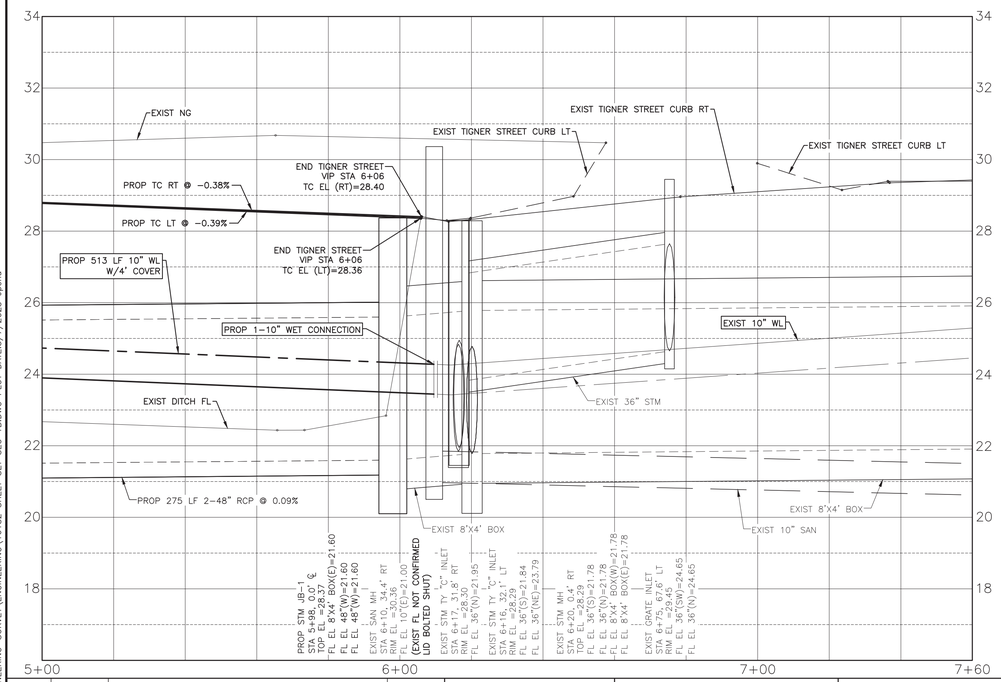
A:\16000S\16160\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 Jperna

16182 SHEET SET SEC 1B.DWG

Show existing ditch highbank and flowline in plan







NOTE:
TOP OF CURB ELEVATION CALL OUTS ARE FOR 4" CURBS. ALL CURBS ALONG TIGNER STREET ARE 6" CURBS. RAISE CALL OUTS 0.17'. CURBS ALONG INTRRSECTION RADII ARE 6" CURBS RAISE CALL OUTS 0.17'.

SYMBOLS LEGEND

- EXIST NATURAL GROUND ELEVATION
- 80.20 PROP GRADE ELEVATION
- 81.35 PROP TOP OF 4" CURB ELEVATION
- TC=81.00 PROP RIM ELEVATION OF CURB INLET
- GUT=81.50 PROP GUTTER LINE ELEVATION
- TG=81.50 PROP TOP OF GRATE INLET
- DOUBLE WATER METER
- SINGLE WATER METER
- FIRE HYDRANT
- WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- TOP BANK
- STORM SEWER LINE (REINFORCED CONCRETE PIPE, ASTM C76)
- SANITARY SEWER LINE (D3034, SDR 26, 160 PR)
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VERTICAL: 1" = 20'

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Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

PLAN & PROFILE
TIGNER STREET
STA. 5+00 TO 5+60

PROJECT NO. 16182

16

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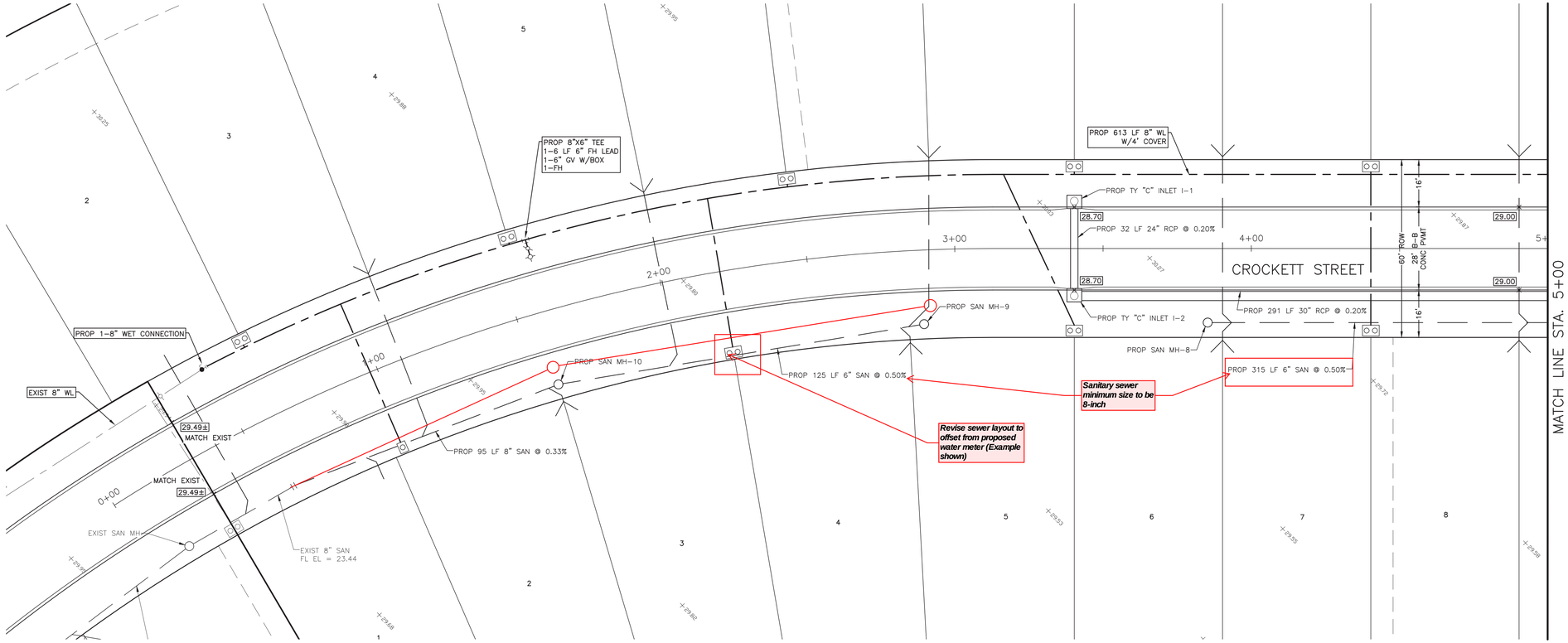
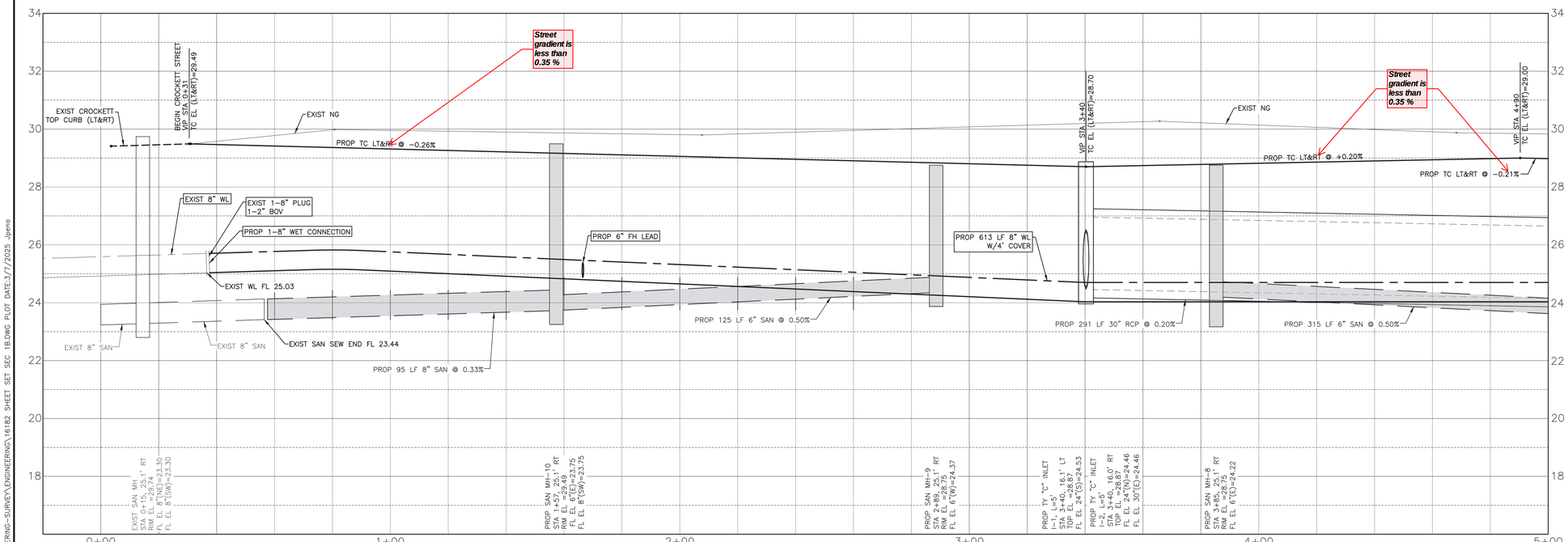
16182 SHEET SET SEC 1B.DWG





0 10 20 40
SCALE : 1" = 20'

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- SANITARY SEWER LINE (D3034, SDR 26, 160 PR)
- WATERLINE (AWWA C900, CLASS 150, DR18)

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/7/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN: 1" = 20'
PROFILE:
HORIZONTAL: 1" = 2'
VERTICAL: 1" = 20'

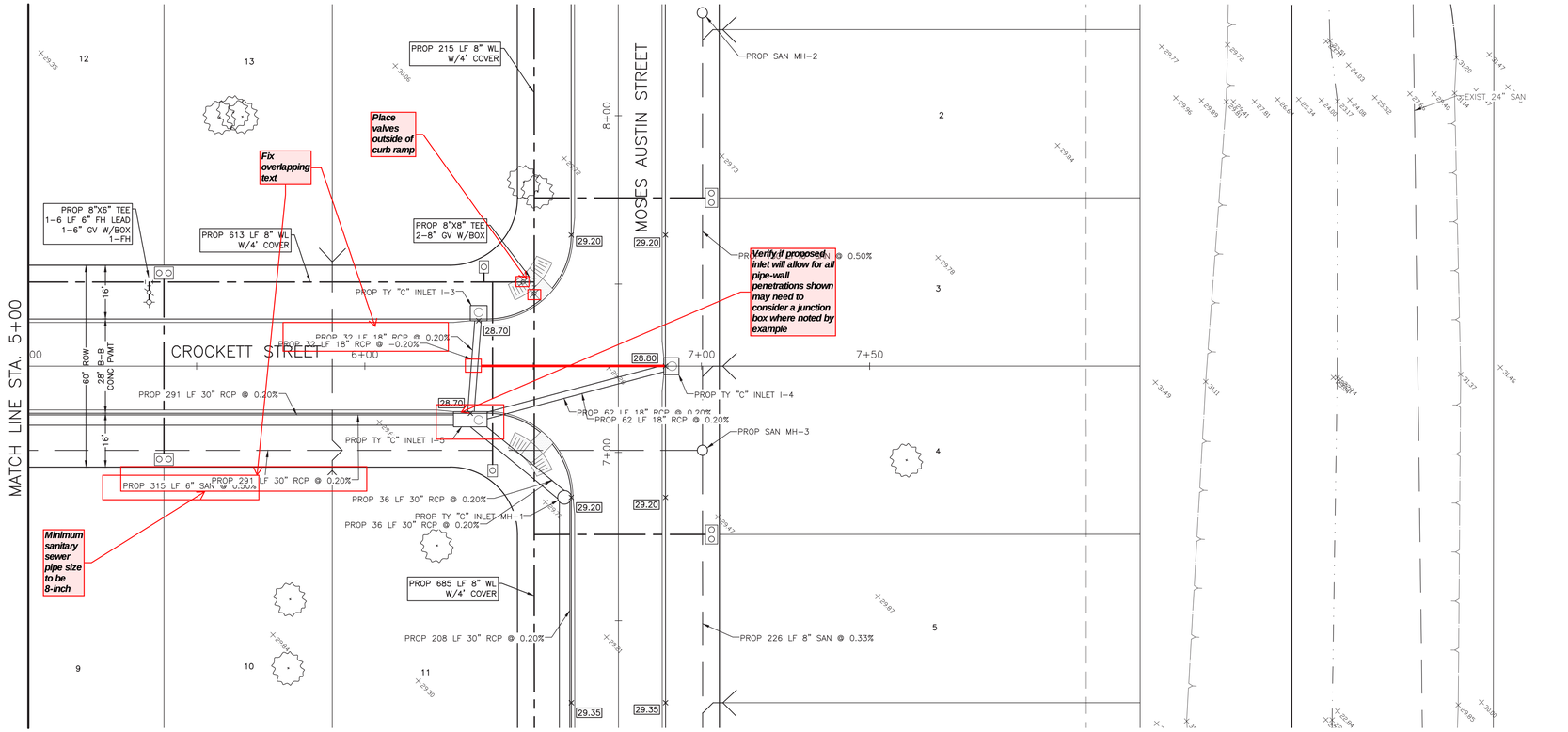
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

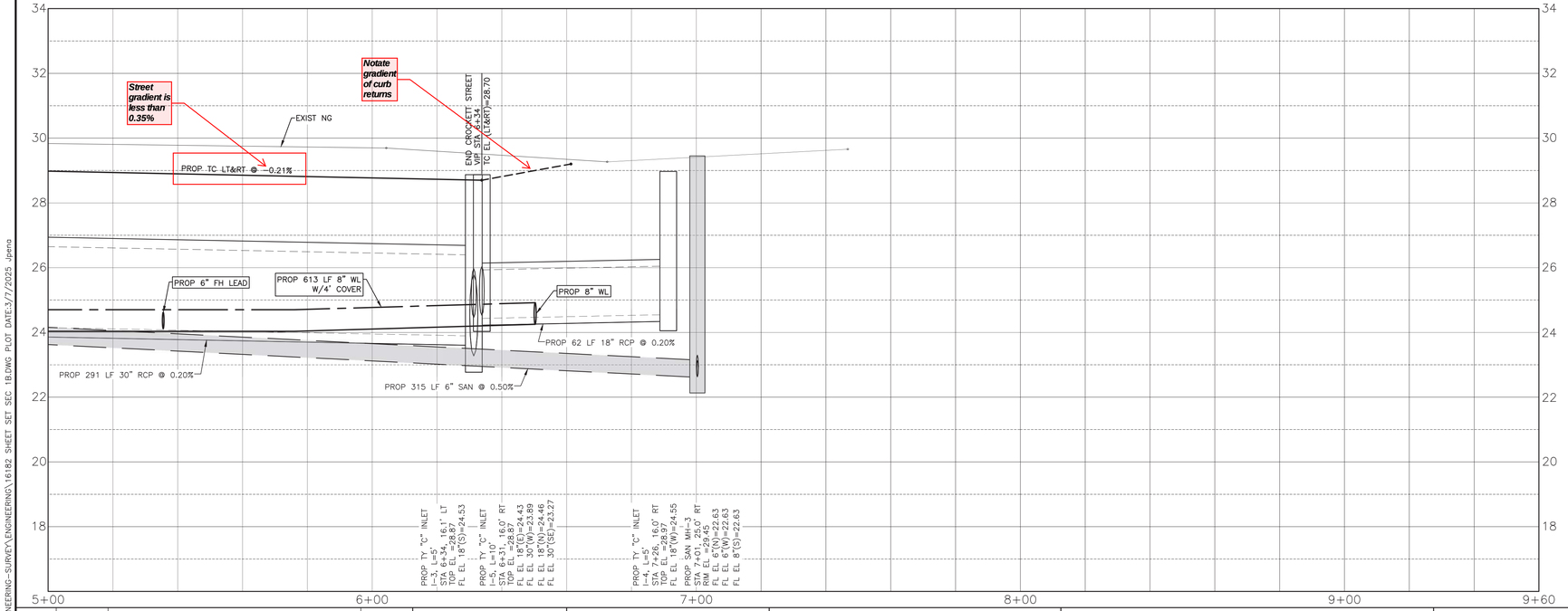
PLAN & PROFILE
CROCKETT STREET
STA. 0+00 TO 5+00

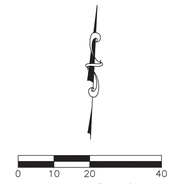
PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jpena

16182 SHEET SET SEC 1B.DWG







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Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

PLAN & PROFILE
CROCKETT STREET
STA. 5+00 TO 7+50

PROJECT NO. 16182

18

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jpena

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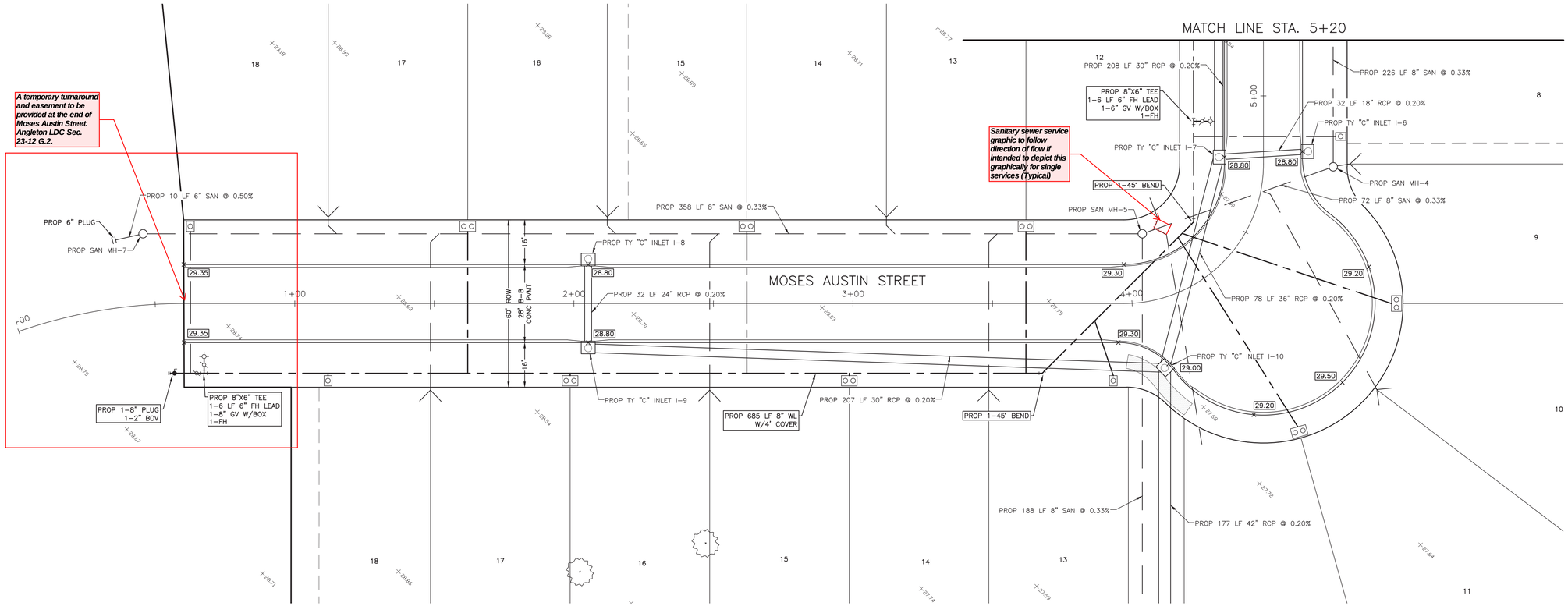

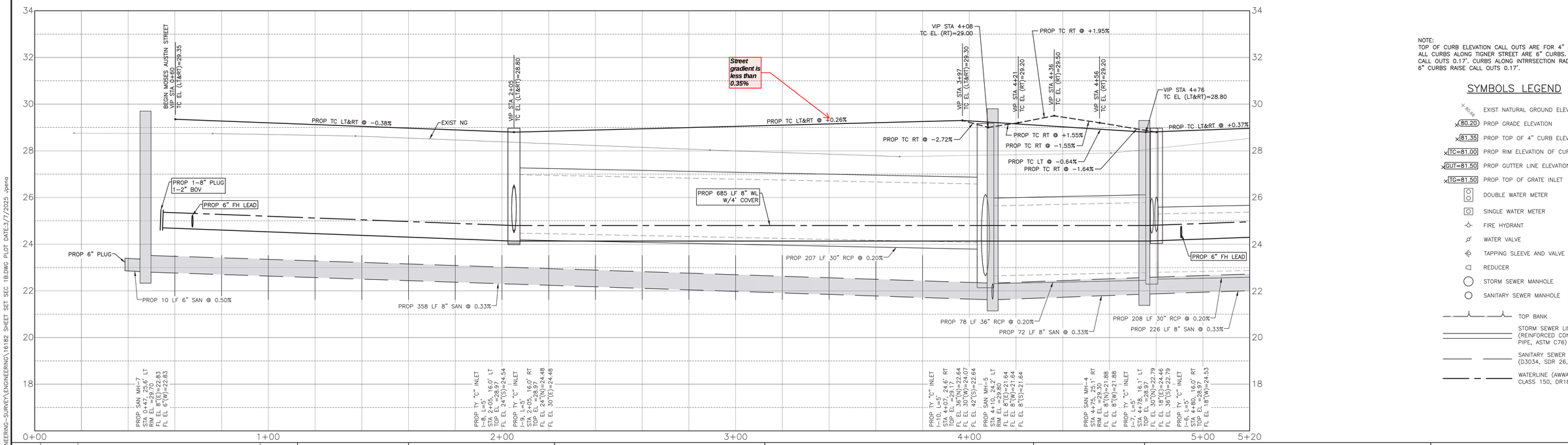

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Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

PLAN & PROFILE
MOSES AUSTIN STREET
STA. 0+00 TO 5+20

PROJECT NO. 16182

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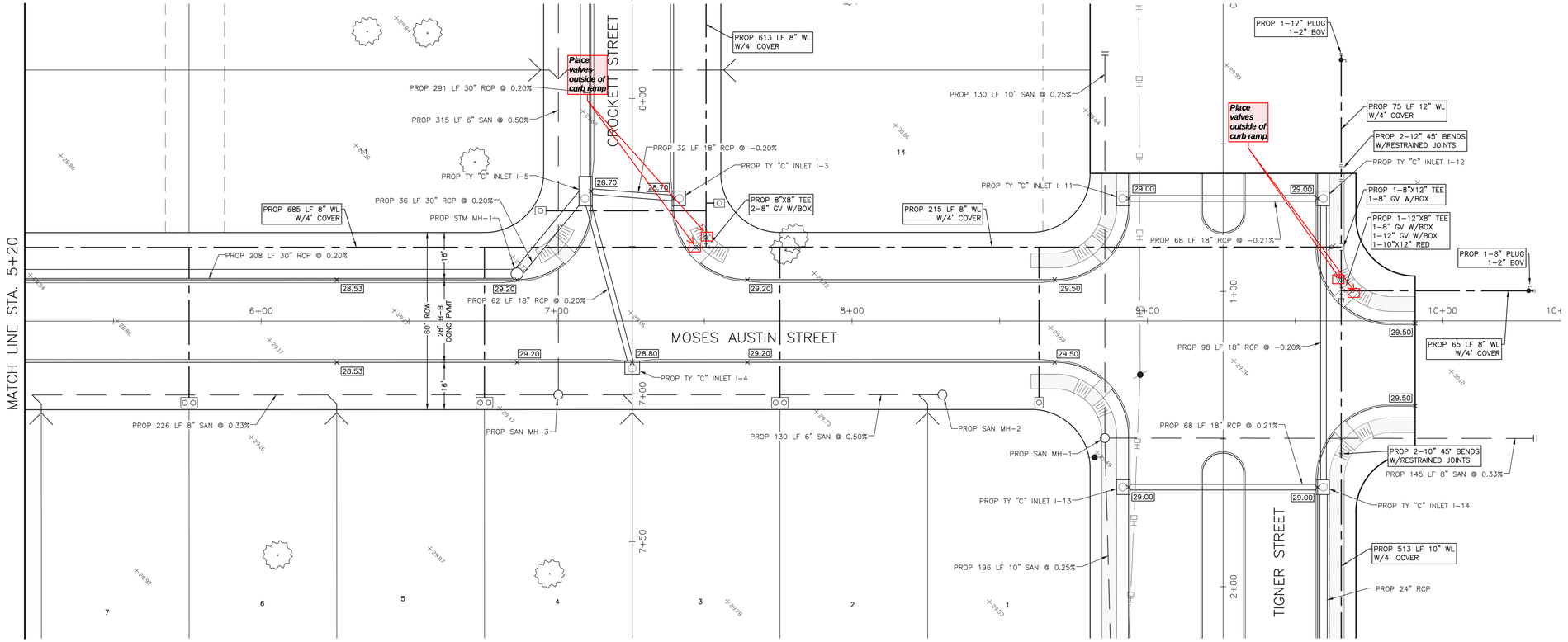

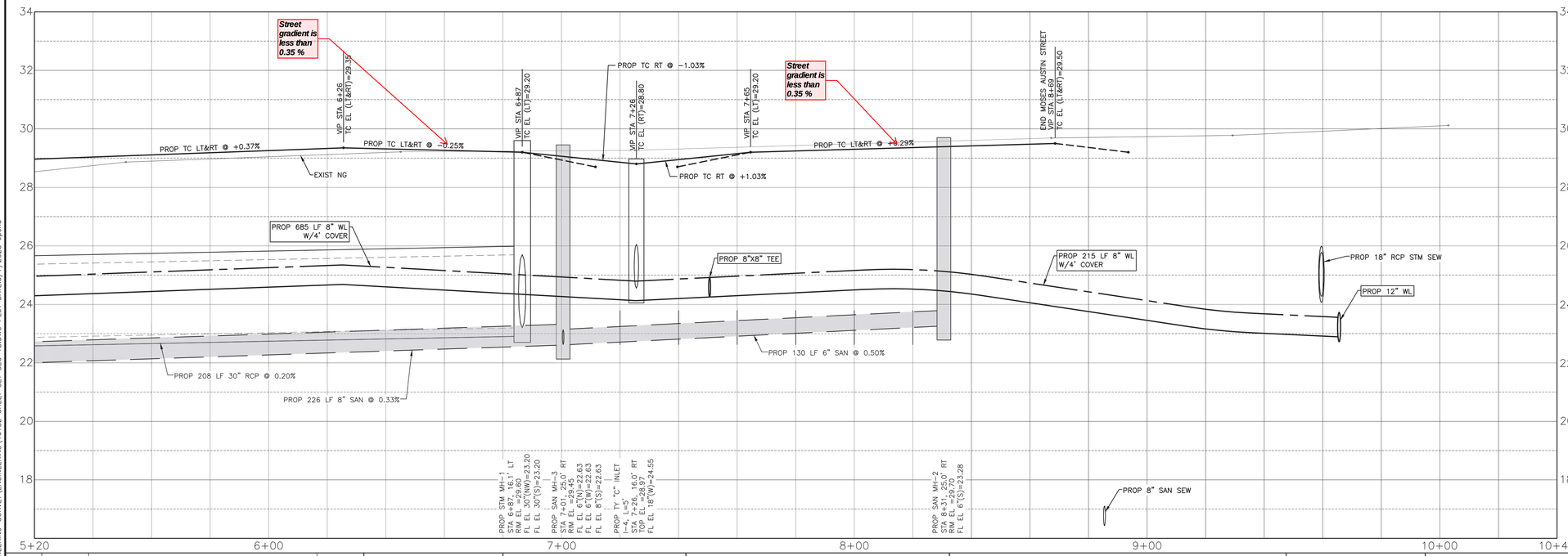

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DRAWN BT
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DATE 3/7/2025

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REG. NO. F-825

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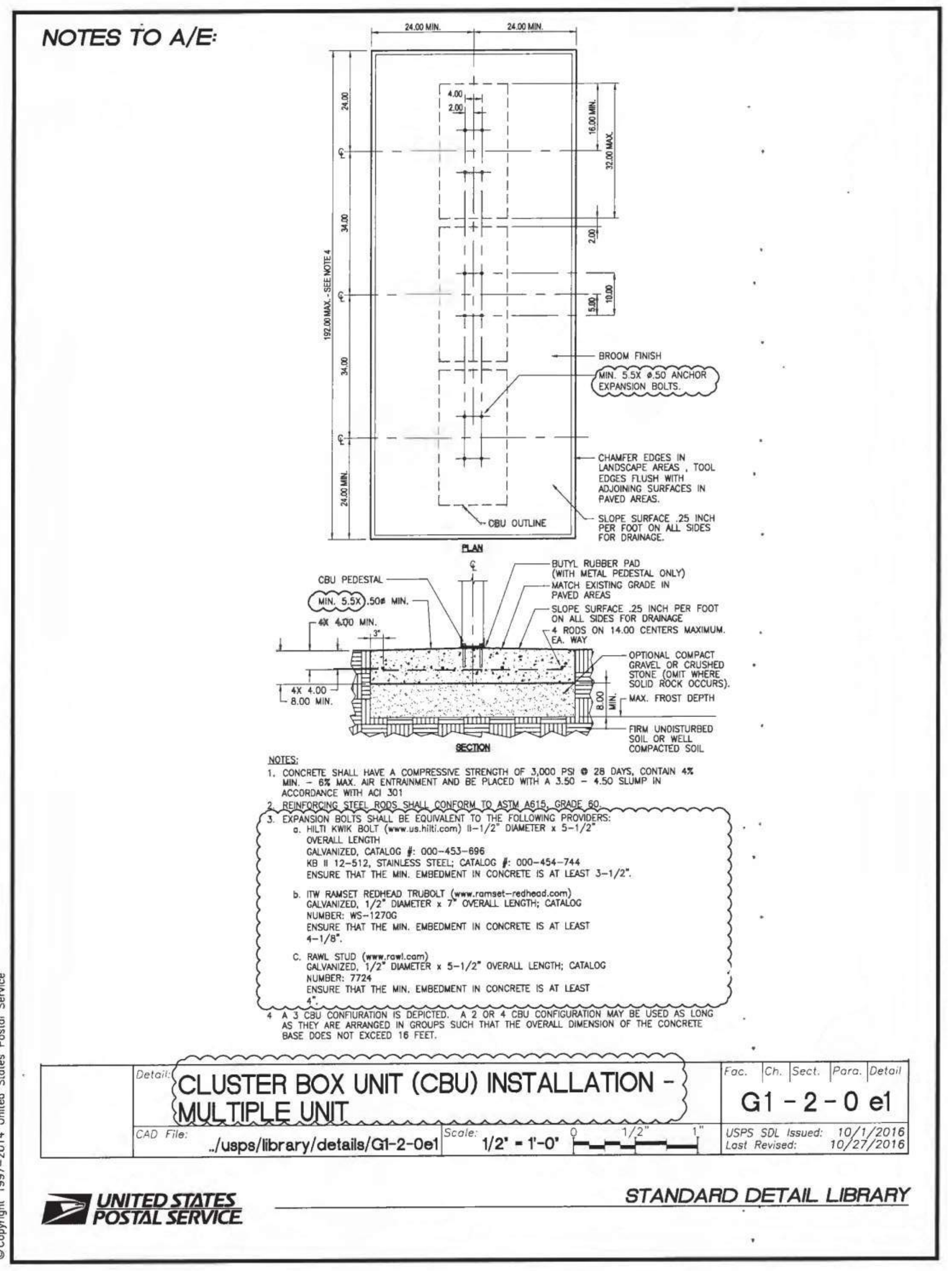
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

PLAN & PROFILE
MOSES AUSTIN STREET
STA. 5+20 TO 10+40

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 SHEET SET SEC 1B.DWG PLOT DATE:3/7/2025 jpena

16182 SHEET SET SEC 1B.DWG


NOTES TO A/E:
PLAN
SECTION
CBU OUTLINE
BROOM FINISH
CBU PEDESTAL
CLUSTER BOX UNIT (CBU) INSTALLATION - MULTIPLE UNIT
G1 - 2 - 0 e1
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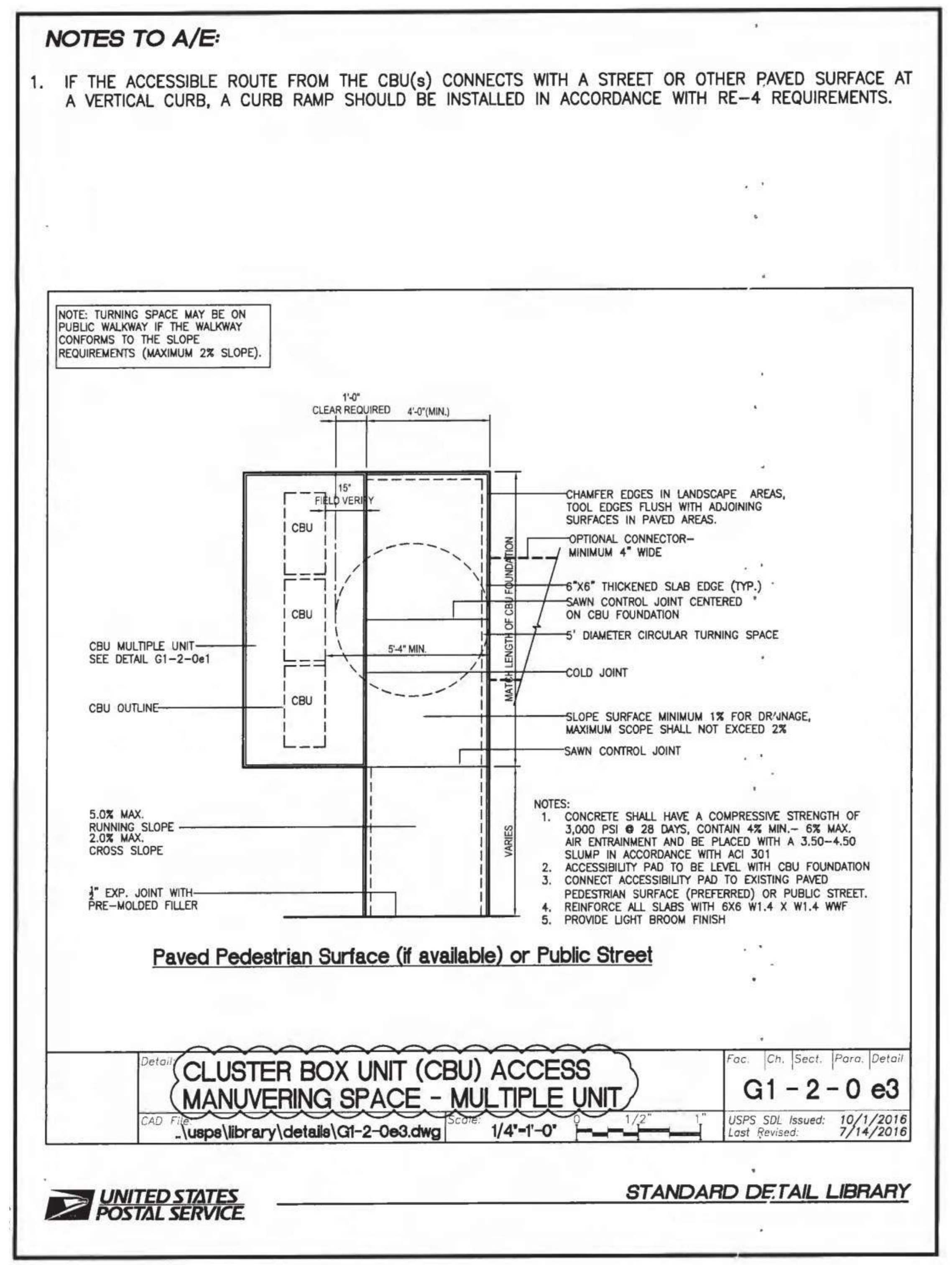
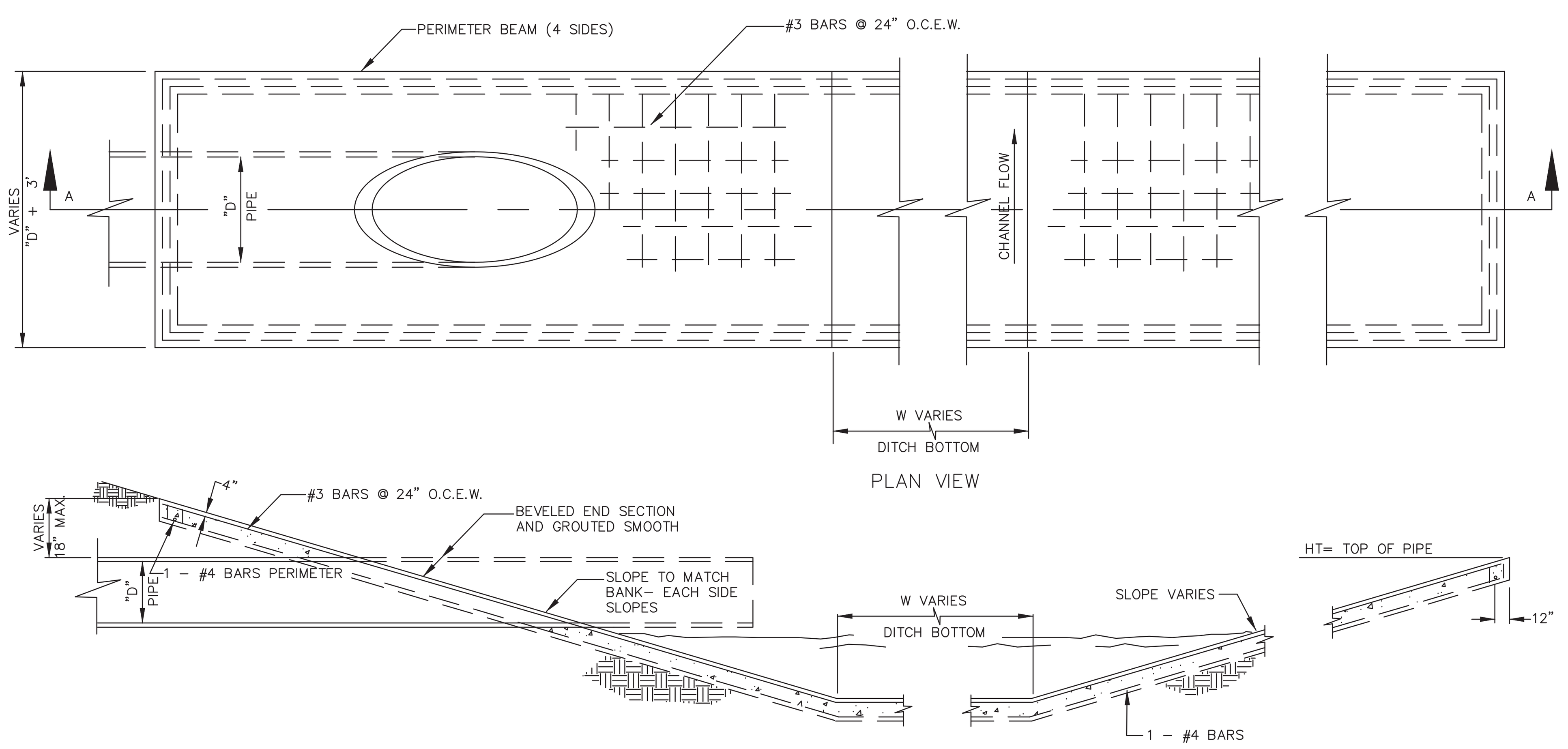
1/2" = 1'-0"
USPS SDL Issued: 10/1/2016
Last Revised: 10/27/2016
UNITED STATES POSTAL SERVICE
STANDARD DETAIL LIBRARY


NOTES TO A/E:
1. IF THE ACCESSIBLE ROUTE FROM THE CBU(s) CONNECTS WITH A STREET OR OTHER PAVED SURFACE AT A VERTICAL CURB, A CURB RAMP SHOULD BE INSTALLED IN ACCORDANCE WITH RE-4 REQUIREMENTS.
NOTE: TURNING SPACE MAY BE ON PUBLIC WALKWAY IF THE WALKWAY CONFORMS TO THE SLOPE REQUIREMENTS (MAXIMUM 2% SLOPE).
CBU MULTIPLE UNIT- SEE DETAIL G1-2-0e1
CBU OUTLINE
CHAMFER EDGES IN LANDSCAPE AREAS, TOOL EDGES FLUSH WITH ADJOINING SURFACES IN PAVED AREAS.
OPTIONAL CONNECTOR- MINIMUM 4' WIDE
5' DIAMETER CIRCULAR TURNING SPACE
COLD JOINT
SAWN CONTROL JOINT
5.0% MAX. RUNNING SLOPE
2.0% MAX. CROSS SLOPE
NOTES:
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS, CONTAIN 4% MIN.- 6% MAX. AIR ENTRAINMENT AND BE PLACED WITH A 3.50-4.50 SLUMP IN ACCORDANCE WITH ACI 301
2. ACCESSIBILITY PAD TO BE LEVEL WITH CBU FOUNDATION
3. CONNECT ACCESSIBILITY PAD TO EXISTING PAVED PEDESTRIAN SURFACE (PREFERRED) OR PUBLIC STREET.
4. REINFORCE ALL SLABS WITH 6X6 W1.4 X W1.4 WWF
5. PROVIDE LIGHT BROOM FINISH
Paved Pedestrian Surface (if available) or Public Street
CLUSTER BOX UNIT (CBU) ACCESS MANUVERING SPACE - MULTIPLE UNIT
G1 - 2 - 0 e3
..\usps\library\details\G1-2-0e3.dwg
1/4"=1'-0"
USPS SDL Issued: 10/1/2016
Last Revised: 7/14/2016
UNITED STATES POSTAL SERVICE
STANDARD DETAIL LIBRARY

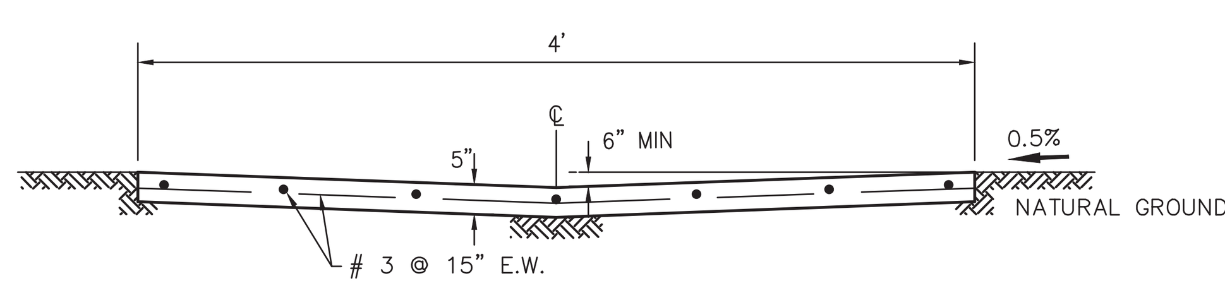


W= WIDTH PER PLAN
D= PIPE DIAMETER PER PLAN
S= SLOPE PER PLAN/FIELD

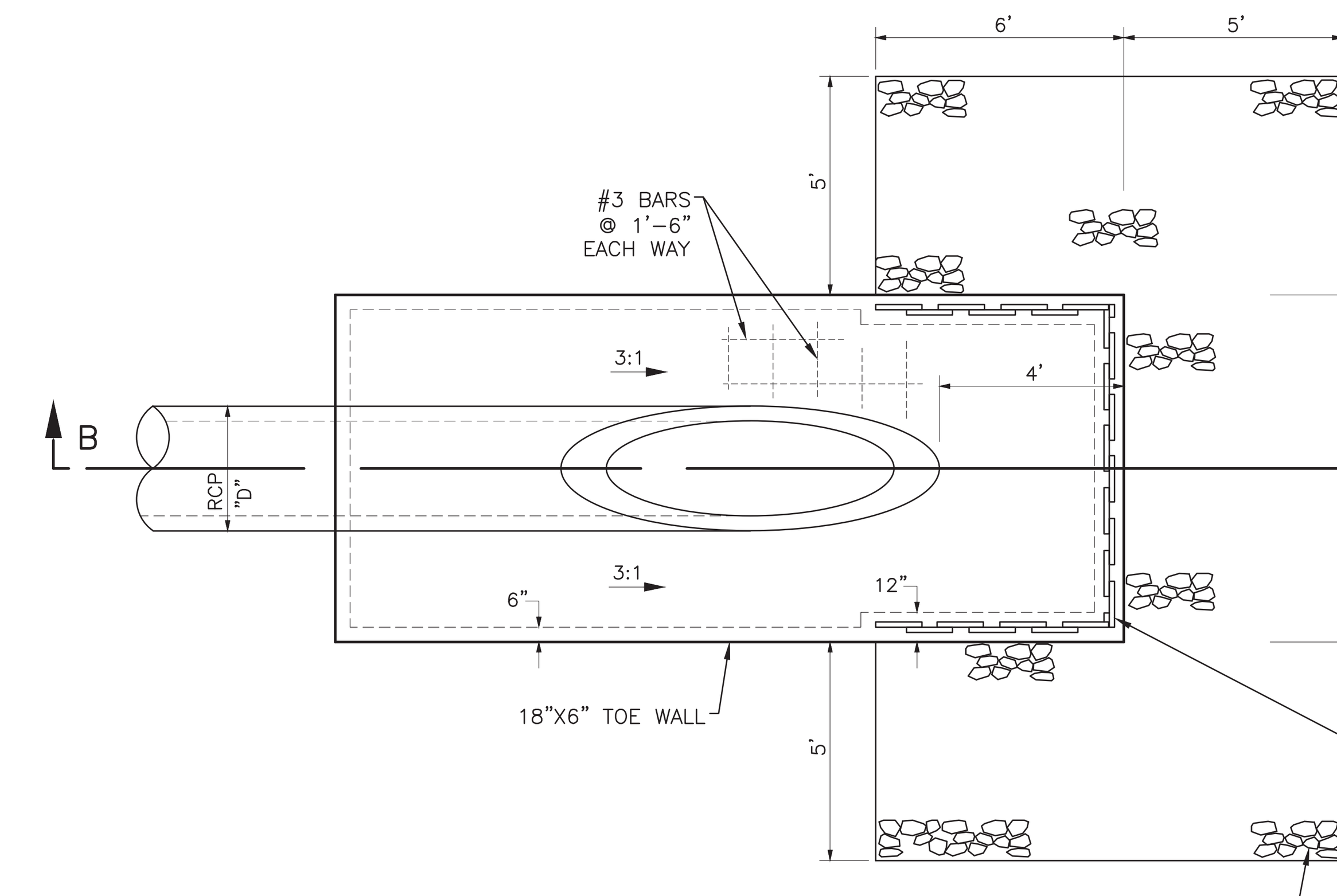
SECTION "A-A"

TYPE (B)
TYPICAL DRAINAGE OUTFALL CHANNEL
NTS

DETAIL
4' CONCRETE PILOT CHANNEL
N.T.S.



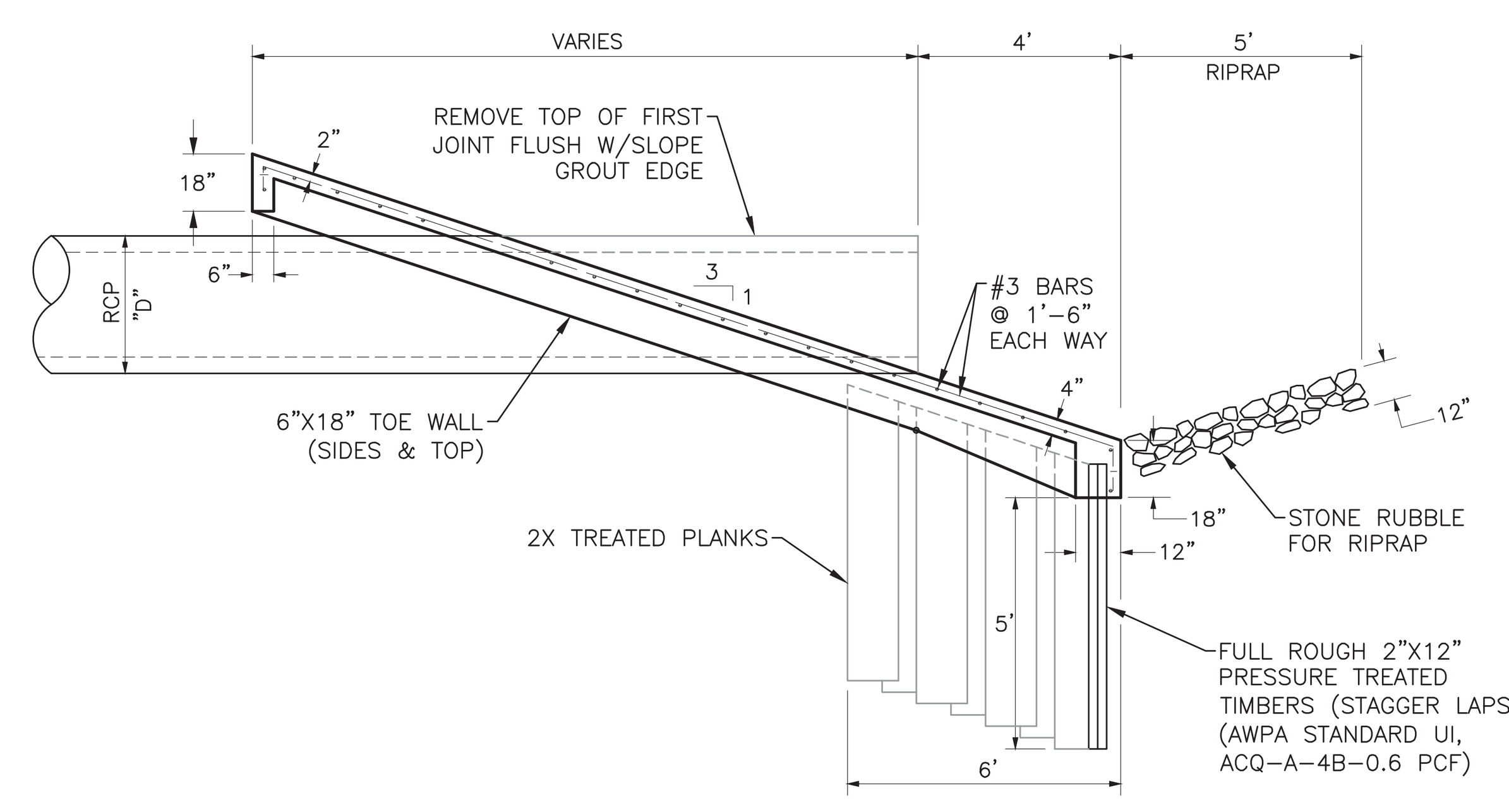
NOTES:
1. 1" DEPRESSION FOR EACH 1' OF WIDTH.
2. WIDTH TO BE AT LEAST 1' WIDER THAN PIPE ENTERING POND.



PLAN VIEW

NOTES:
1. RIP-RAP SHALL BE BROKEN CONCRETE OR NATURAL STONE:
SPEC. GRAVITY – 2.4
SIZE – 0.25 TO 1.25 CF (40-190#)
DIMENSION – >3 IN.
WIDTH – <2.5 X THICKNESS
LENGTH – <3 X THICKNESS

2. ALL PLANKING FOR CUT-OFF WALLS AND RUBBLE RIPRAP TO BE INCIDENTAL TO THE ITEM–CONCRETE FOR STRUCTURES, CLASS "B" RIPRAP.



SECTION B-B

TYPE (A)
STANDARD CONCRETE SLOPE PAVING PIPE OUTFALL
NTS

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

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DATE 3/6/2025

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STATE OF TEXAS — DOUGLAS B. ROESLER — 56739 — PROFESSIONAL ENGINEER — LICENSED

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VERTICAL:

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MISCELLANEOUS DETAILS

PROJECT NO. 16182

21

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 Jpena

16182 DETAIL SET.DWG

PLOT TIME:

GENERAL NOTES:

1. CONTACT THE ENGINEERING INSPECTORS WITH THE CITY'S ENGINEERING DEPARTMENT AT (281) 275-2780 PRIOR TO STARTING WORK TO SCHEDULE A PRE-CONSTRUCTION MEETING.
2. CONTRACTOR IS RESPONSIBLE FOR HAVING ALL BURIED UTILITIES IDENTIFIED, PROTECTED, REPLACED AND/OR PROPERLY REPAIRED IF DAMAGED. REPAIRS/REPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
3. CONTRACTOR SHALL OBTAIN AND MAINTAIN ON SITE ALL APPLICABLE PERMITS AND AN APPROVED COPY OF THE PLANS AND SPECIFICATIONS. NOTIFY THE CITY'S ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
4. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE CITY'S ENGINEERING DEPARTMENT 24 HOURS PRIOR TO WEEKDAY WORK REQUIRING INSPECTION INCLUDING, BUT NOT LIMITED TO, LIMING, PAVING OPERATIONS, CONCRETE PLACEMENT, FORMING AND SET-UP, DENSITIES, PIPE INSTALLATION, AND ANY TESTING BY LABORATORIES. THE ENGINEERING DEPARTMENT MAY BE REACHED AT 281-275-2780 OR BY CONTACTING THE ASSIGNED INSPECTOR.
5. ALL SATURDAY WORK SHALL BE REQUESTED, IN WRITING, WITH THE CITY'S ENGINEERING DEPARTMENT AT LEAST 48-HOURS IN ADVANCE. SUNDAY AND HOLIDAY WORK REQUIRES 72 HR. WRITTEN REQUESTS AND MUST BE APPROVED BY THE CITY ENGINEER. FAXES MAY BE SENT TO (281) 275-2771. REQUIRED INSPECTIONS MAY BE SUBJECT TO INSPECTION FEES. NON-NOTIFICATIONS MAY RESULT IN NON-COMPLIANCE, WORK ORDERED STOPPAGE AND DOUBLE INSPECTION FEES.
6. FULL-TIME RESIDENT INSPECTION BY THE PROJECT ENGINEER'S REPRESENTATIVE SHALL BE PROVIDED AT ALL CRITICAL POINTS OF CONSTRUCTION OR AS DEEMED NECESSARY BY THE CITY OF SUGAR LAND.
7. FOLLOW-UP INSPECTIONS OF ALL PUBLIC INFRASTRUCTURE SHALL BE SCHEDULED WITHIN 60 DAYS OF THE INITIAL INSPECTION. a COMPLETE RE-INSPECTION AND A NEW PUNCH LIST MAY BE REQUIRED AFTER THE 60 DAY PERIOD.
8. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS, THE CITY OF SUGAR LAND DESIGN MANUAL (ISSUED 2007), AND THE CITY OF SUGAR LAND STANDARD DETAIL SHEETS. THE CITY OF SUGAR LAND DESIGN STANDARDS SHALL BE ACQUIRED (AND USED) FROM THE ENGINEERING DEPARTMENT, THE LATEST REVISIONS AND/OR AMENDMENTS SHALL BE OBSERVED. WHERE CONFLICT MAY ARISE BETWEEN INFORMATION ON APPROVED CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS AND CITY OF SUGAR LAND STANDARDS, THEN THE CITY DESIGN STANDARDS SHALL GOVERN
9. ALL STATIONS ARE CENTERLINE OF STREET RIGHT-OF-WAY UNLESS OTHERWISE NOTED ON THE PLANS EXCEPT IN SIDE OR BACK LOT EASEMENTS WHERE CENTERLINE IS CENTER OF PIPE. IN EASEMENTS WHERE SANITARY AND STORM SEWER ARE PRESENT PARALLEL, STATIONS SHALL BE BASED ON CENTERLINE OF STORM SEWER PIPING.
10. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. ANY DRAINAGE AREA OR STRUCTURE DISTURBED, DURING CONSTRUCTION, SHALL BE RESTORED TO THE SATISFACTION OF THE CITY OF SUGAR LAND. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF SUGAR LAND DESIGN STANDARDS. IF NON-COMPLIANCE OCCURS, CONTRACTOR SHALL REMEDY IMMEDIATELY AT HIS OWN EXPENSE.
11. ANY POLLUTION CONTROL DEVICE, SOD, OR SEEDED AREA DAMAGED, DISTURBED, OR REMOVED SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR WATERING ANY SEED OR SOD WHICH HE HAS INSTALLED UNTIL ADEQUATE GROWTH IS ACHIEVED TO PREVENT EROSION.
12. STORM WATER POLLUTION PROTECTION SHALL BE DESIGNED, CONSTRUCTED, MAINTAINED AND SHALL BE IN TOTAL COMPLIANCE WITH THE STORM WATER QUALITY MANUAL OF THE CITY OF SUGAR LAND.
13. ANY MATERIALS OR WORKMANSHIP NOT MEETING OR EXCEEDING CITY OF SUGAR LAND STANDARDS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
14. THE CONTRACTOR SHALL KEEP THE STREETS, RIGHT-OF-WAY, AND WORK AREA CLEAN OF DIRT, MUD, AND DEBRIS AS NEEDED OR AS REQUIRED BY CITY STAFF.
15. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL REQUIRED TRAFFIC SAFETY CONTROL DEVICES UP TO AND INCLUDING FLAGMEN OR POLICE OFFICERS, IF DEEMED NECESSARY BY THE CITY OF SUGAR LAND.
16. THE CONTRACTOR SHALL CONTACT THE CITY OR LOCAL MUD AS APPROPRIATE TO OPERATE EXISTING UTILITIES AND PRIOR TO MAKING TIE-INS.
17. ALL BACKFILL WITHIN PUBLIC RIGHTS-OF-WAY OR EASEMENTS SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY (IN 8 INCH LIFTS) AND TESTED FOR ±2% OPTIMUM MOISTURE BY AN APPROVED LAB.
18. IT IS PERMISSIBLE TO USE A BACKHOE FOR TRENCH EXCAVATION IN LIEU OF A TRENCHING MACHINE.
19. THE CONTRACTOR SHALL NEVER UNLOAD ANY TRACK-TYPE VEHICLE OR EQUIPMENT ON ANY EXISTING PAVEMENT OR CROSS OVER ANY EXISTING PAVEMENT OR CURB.
20. ALL FINISH GRADES ARE TO CONFORM TO A MINIMUM SLOPE OF 6" PER 100 FT. POSITIVE DRAINAGE IS DEPICTED BY ARROWS.
21. CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT ALL "POINTS OF CROSSING" TO DETERMINE IF CONFLICTS EXIST BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICT.
22. ALL FINISHED GRADES SHALL VARY UNIFORMLY BETWEEN FINISHED ELEVATIONS.
23. ALL TESTING PROCEDURES SHALL CONFORM TO THE CITY OF SUGAR LAND STANDARDS. THE INITIAL TESTING EXPENSE SHALL BE BORNE BY THE OWNER. IF ANY OF THE TESTS DO NOT MEET THE TESTING STANDARDS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR REPLACE SUCH MATERIAL SO THE TESTING STANDARDS CAN BE MET. ADDITIONAL TESTING TO MEET COMPLIANCE SHALL BE AT THE CONTRACTOR'S EXPENSE.
24. CONTRACTOR SHALL PROVIDE SHEETING, SHORING, AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION AS PER O.S.H.A. REQUIREMENTS.
25. ALL MATERIALS AND WORKMANSHIP NOT GOVERNED BY CITY STANDARDS SHALL CONFORM TO THE LATEST VERSION OF THE TXDOT STANDARD SPECIFICATIONS AND THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND ANY REVISIONS THERETO.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIALS AND EQUIPMENT STORED ON THE JOBSITE IN A SAFE AND WORKMAN-LIKE MANNER (DURING AND AFTER WORKING HOURS), UNTIL JOB COMPLETION.
27. THE LOADING AND UNLOADING OF ALL PIPE, VALVES, HYDRANTS, MANHOLES, AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PRACTICES AND SHALL BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIAL. THE CONTRACTOR SHALL LOCATE AND PROVIDE THE NECESSARY STORAGE AREAS FOR MATERIAL AND EQUIPMENT.
28. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR FOR EXCAVATION, INSTALLATION, AND COMPLETION OF THE PROJECT AS SHOWN ON THE PLANS AND SPECIAL PROVISIONS TO COMPLY WITH CITY OF SUGAR LAND STANDARDS.
29. NO PRIVATE UTILITIES (I.E., PHONE, CABLE T.V., ELECTRICITY, ETC.) SHALL BE INSTALLED WITHIN 4 FEET BACK OF CURB.
30. PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THE PLANS. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING CURRENT OSHA STANDARDS FOR TRENCH SAFETY SYSTEMS, SEALED BY A LICENSED PROFESSIONAL ENGINEER. APPROPRIATE TRENCH SAFETY PLANS SHALL BE SUBMITTED BY THE CONTRACTOR PRIOR TO EXECUTION OF A CONTRACT FOR HIS WORK.
31. FOR TRAFFIC SIGNAL CONSTRUCTION, CONTACT THE CITY OF SUGAR LAND INFORMATION TECHNOLOGY DEPARTMENT TO OBTAIN IP ADDRESSES FOR SIGNAL CABINET EQUIPMENT. ALLOW 5 WORKING DAYS FOR THE ADDRESS. ONCE EQUIPMENT HAS BEEN INSTALLED AND COMMUNICATIONS ESTABLISHED WITH THE TRAFFIC MANAGEMENT CENTER, IT WILL COMMISSION THE COMMUNICATION LINK. ALLOW 10 WORKING DAYS FOR COMMISSIONS.

CONCRETE/PAVING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND AUTHORIZATION REQUIRED BY CITY OF SUGAR LAND.
2. CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED PRIOR TO CONSTRUCTION AND WILL REPAIR OR REPLACE ANY DAMAGE AT CONTRACTOR'S EXPENSE.
3. PAVING CONTRACTOR SHALL PROTECT WATER, SEWER, AND DRAINAGE FACILITIES AND WILL REPLACE ANY DAMAGED FACILITIES AT HIS OWN EXPENSE. ALL MANHOLES AND VALVES WITHIN THE PAVEMENT AREA SHALL BE ADJUSTED TO FINISH GRADE BY THE PAVING CONTRACTOR WITH THE USE OF APPROVED BLOCKOUTS.
4. WHEN THE TOP OF CURB OR BOTTOM OF SIDEWALK SLAB ELEVATION VARIES FROM THE NATURAL GROUND, THE PAVING CONTRACTOR SHALL BACKFILL IN LAYERS NOT EXCEEDING 8-INCHES IN DEPTH. EACH LAYER WILL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY. THE DISTURBED AREA SHALL BE SEEDED, SODDED, FERTILIZED, AND/OR SILT BARRIER FENCED WITHIN 10 WORKING DAYS. THE TYPE OF POLLUTION CONTROL WILL BE DETERMINED BY THE APPROVED PLANS AND/OR THE CITY OF SUGAR LAND CITY ENGINEER.
5. ALL PAVING SHALL BE IN ACCORDANCE WITH THE CITY OF SUGAR LAND DESIGN STANDARDS, APPROVED PLANS AND SPECIFICATIONS WITH THE LATEST REVISIONS OR AMENDMENTS. IN THE EVENT OF A CONFLICT, THE CITY OF SUGAR LAND DESIGN STANDARDS GOVERNS.
6. PAVING CONTRACTOR SHALL PROVIDE AND MAINTAIN SILT PROTECTION FENCES ON ALL STAGE I CURB INLETS. THE PAVING CONTRACTOR SHALL MAINTAIN ANY OTHER POLLUTION CONTROLS ESTABLISHED, I.E., ADDITIONAL SILT BARRIERS, SAND BAGS, ETC., FOR THE DURATION OF THE PROJECT. ANY DAMAGED OR MISSING DEVICES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
7. EXISTING PAVEMENTS, CURBS, SIDEWALKS, DRIVEWAYS, ETC., DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO THE CITY OF SUGAR LAND STANDARDS AT THE CONTRACTOR'S EXPENSE.
8. CONDITION OF THE WORK AREA (INCLUDING ROADS, RIGHT-OF-WAYS, ETC.) UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN THE CONDITION PRIOR TO STARTING THE WORK.
9. ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.
10. REDWOOD AND KEYWAYS SHALL NOT INTERSECT WITHIN 2 FEET OF AN INLET.
11. AT INITIAL AND FINAL INSPECTIONS THE PAVEMENT WILL BE FLOODED TO CHECK FOR BIRDBATHS AND CRACKS. FLOODING OF STREETS SHALL OCCUR 1 HOUR PRIOR TO INSPECTION.
12. ALL CONCRETE PLACED SHALL BE UNIFORMLY SPRAYED WITH A MEMBRANE CURING COMPOUND AS DESCRIBED IN ITEM 526 IN THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. IMPROPER APPLICATION WILL RESULT IN THE REJECTION OF THE CONCRETE.
13. SIX (6) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 REBAR, 24" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE CONSTRUCTION FOR LOCAL STREETS
14. SEVEN (7) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 REBAR, 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR COLLECTOR STREETS.
15. EIGHT (8) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.
16. WHEN CONCRETE PAVEMENT INTERSECTS THICKER PAVEMENT, THE THICKER PAVEMENT SHALL BE CONSTRUCTED TO THE ENDS OF ALL CURB RETURNS.
17. ALL RETURNS SHALL HAVE A MIN. 25 FT. RADIUS AT THE FACE OF CURB UNLESS OTHERWISE NOTED.
18. ALL INTERSECTIONS SHALL BE CONSTRUCTED WITH WHEELCHAIR RAMPS IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARD, THE AMERICAN DISABILITIES ACT, AND THE CITY OF SUGAR LAND STANDARDS (LATEST REVISIONS). (NO BLOCKOUTS)
19. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED WITHIN EACH STREET RIGHT-OF-WAY IN ACCORDANCE WITH CITY OF SUGAR LAND, THE A.D.A., AND THE T.A.S. STANDARDS (LATEST REVISIONS).
20. CRACKS LARGER THAN 1/16-INCH ARE NOT ACCEPTABLE IN NEW PAVEMENT. CRACKS 1/16-INCH OR LESS SHALL BE ADDRESSED ON AN INDIVIDUAL BASIS BY DRILL AND EPOXY INJECTION, SUBJECT TO APPROVAL OR REJECTION.
21. PROPER TESTING AND LAB DOCUMENTATION IS REQUIRED. FAILURE TO MEET THE MINIMUM PAVEMENT REQUIREMENTS WILL RESULT IN THE REJECTION OF SAID PAVEMENT. IMMEDIATE REMOVAL AND REPLACEMENT OF SUBSTANDARD PAVEMENT SECTIONS WILL BE NECESSARY TO SATISFY THESE REQUIREMENTS.
22. 4-CONCRETE CYLINDERS, SLUMP, AND AIR ENTRAINMENT TESTS ARE REQUIRED FOR EACH 100 CUBIC YARDS OF CONCRETE PAVING WITH A MINIMUM OF ONE SET OF 4 PER PLACEMENT. THE CITY OF SUGAR LAND RESERVES THE RIGHT TO REQUEST ANY ADDITIONAL TESTS AT THE CONTRACTOR'S EXPENSE, IF ANY MATERIAL APPEARS BELOW STANDARDS.
23. NO. 3 REBAR, 18-INCH C.C. E.W. IS THE MINIMUM ACCEPTABLE FOR SIDEWALKS. NUMBER 4-REBAR, 24-INCH C-C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR COMMERCIAL APPROACHES, HANDICAP RAMPS, RESIDENTAL APPROACHES AND DRIVEWAYS.
24. COLD WEATHER PRECAUTIONS. CONCRETE PAVEMENT SHALL NOT BE PLACED WHEN THE AMBIENT TEMPERATURE IS 40°F AND FALLING. CONCRETE MAY BE PLACED IF THE AMBIENT TEMPERATURE IS 35° AND RISING. CONTRACTOR SHALL PROVIDE AN APPROVED COVERING MATERIAL (COTTON MATS, POLYETHYLENE SHEETING, ETC.) IN THE EVENT TEMPERATURE SHOULD FALL BELOW 32°F. NO SALT OR OTHER CHEMICALS SHALL BE ADDED TO CONCRETE TO PREVENT FREEZING.
25. HOT WEATHER. NO CONCRETE PAVEMENT MIXTURE SHALL BE PLACED IF THE MIXTURE TEMPERATURE IS ABOVE 95°F. AIR AND WATER REDUCER ARE REQUIRED IF MIXTURE TEMPERATURE REACHES 85°F OR ABOVE.
26. IF NO AIR AND WATER REDUCER HAS BEEN ADDED, NO CONCRETE SHALL BE PLACED IF MORE THAN 60 MINUTES PAST BATCH TIME. IF AIR AND WATER REDUCER HAS BEEN ADDED, NO CONCRETE SHALL BE PLACED IF MORE THAN 90 MINUTES PAST BATCH TIME.
27. STRUCTURE TEMPERATURES AND TIMING FOR CONCRETE PLACEMENT MAY VARY. REFER TO TXDOT STANDARDS ITEM 420 FOR DETAILS.
28. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS. MAXIMUM SPACING SHALL BE 200' AND BE SEALED WITH SEALANT CONFORMING TO TXDOT ITEM 360 (& ITEM 438) AND TXDOT DMS-6310, CLASS-2.
29. CONTROL JOINTS SHALL BE PLACED AT 20' C-C.
30. EXPANSION JOINT LAYOUT FOR INTERSECTIONS SHALL BE PROVIDED BY ENGINEER FOR CITY APPROVAL.
31. NO WIRE MESH IS ALLOWED IN ANY CONCRETE WITHIN THE CITY LIMITS OR ETJ.
32. ALL REBAR SHALL BE 100% TIED. OVERLAPS SHALL BE DOUBLE TIED MINIMUM. REINFORCED STEEL BE A MINIMUM 60% COVERAGE.
33. ALL NEW CURB REQUIRES 3,000 P.S.I. @ 28-DAYS. 4 CONCRETE CYLINDERS, SLUMP, AND AIR ENTRAINMENT TESTS ARE REQUIRED FOR EACH 50 CUBIC YARDS OF CONCRETE CURB WITH A MINIMUM OF ONE SET OF 4 PER PLACEMENT.
34. A CITY INSPECTOR MUST BE PRESENT ON ALL PROOF ROLLS, LIME DEPTH CHECKS AND DENSITY TESTS AND MUST BE CONTACTED AT LEAST 24 HOURS PRIOR TO THE TEST.
35. CONCRETE MIX DESIGN MUST BE SENT TO THE CITY FOR APPROVAL A MINIMUM 72 HOURS BEFORE THE FIRST CONCRETE POUR
36. FOR A REGULAR MIX, SLUMP SHALL BE A MAXIMUM OF 5". FOR A MIX WITH A WATER REDUCER, SLUMP SHALL BE A MAXIMUM OF 6".
37. VEHICLES OF ALL TYPES ARE PROHIBITED FROM DRIVING ON NEW PAVEMENTS SEVEN (7) DAYS AFTER THE CONCRETE POUR AND UNTIL THE CONCRETE HAS REACHED A MINIMUM OF 3,000 PSI. PAVEMENT PROTECTION SUCH AS A DIRT LAYER OF AT LEAST 12" IS REQUIRED FOR TRACK EQUIPMENT AT PAVEMENT CROSSINGS.
38. IN LIEU OF MECHANICALLY CONTROLLED VIBRATORS CONTROLLED BY A SLIP-FORM PAVING MACHINE, HAND MANIPULATED MECHANICAL VIBRATORS SHALL BE USED FOR PROPER CONSOLIDATION OF CONCRETE IN ALL PAVEMENT AREAS (ALONG FORMS, AT JOINTS, ETC.)
39. ALL CONCRETE STREETS AND BRIDGE SURFACES SHALL HAVE A "BAKER BROOM" FINISH, WHILE ALL OTHER CONCRETE PLACEMENT SHALL HAVE A MEDIUM BROOM FINISH.
40. ALL PAVEMENT MARKINGS TO BE DONE IN CONFORMANCE WITH THE LATEST VERSION OF TMUTCD AND TXDOT STANDARD SPECIFICATIONS AND ANY REVISIONS THERETO.
41. REFER TO GENERAL NOTES.

CEMENT STABILIZED SAND:

1. ALL STABILIZED SAND SHALL BE A MINIMUM OF 1.5 SK PER CUBIC YARD.
2. CEMENT STABILIZED SAND (C.S.S.) SHALL ACHIEVE A MINIMUM OF 100 PSI WITHIN 48 HOURS.
3. A MINIMUM OF 2 RANDOM SAMPLES SHALL BE TAKEN EACH WEEK. (FOR SMALLER PROJECTS, ONE SAMPLE MAY SUFFICE WITH CITY OF SUGAR LAND APPROVAL.) THE CITY OF SUGAR LAND RESERVES THE RIGHT TO REQUIRE ADDITIONAL TESTS, AT THE CONTRACTORS EXPENSE IF IT IS DEEMED NECESSARY.
4. ANY C.S.S. NOT MEETING CITY OF SUGAR LAND STANDARDS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
5. BOTH CEMENT CONTENT AND COMPRESSIVE TESTS SHALL BE CONDUCTED ON C.S.S. SAMPLES.
6. ALL C.S.S. SHALL BE COMPACTED IN MAXIMUM OF 8-INCH LIFTS AND REQUIRED TO REACH A MINIMUM DENSITY OF 95%. 7. REFER TO GENERAL NOTES.

BANK SAND:

1. BANK SAND IS DEFINED AS A WELL-GRADED SAND, FREE OF SILT, CLAY, FRIABLE OR SOLUBLE MATERIALS AND ORGANIC MATER, MEETING THE UNIFIED SOILS CLASSIFICATIONS SYSTEM GROUP SYMBOL SW CRITERIA WITH A PLASTICITY INDEX OF LESS THAN 10. NO MORE THAN 12% OF MATERIAL CAN PASS THE No. 200 SIEVE.

ASPHALT – OILS AND EMULSIONS:

1. CONTRACTOR SHALL VERIFY LINES AND GRADES AND THAT COMPACTED BASE IS READY TO SUPPORT LOADS.
2. BASE MATERIAL SHALL BE DRY AND THOROUGHLY CLEAN OF LOOSE MATERIAL PRIOR TO APPLICATION.
3. OILS & EMULSION SHALL BE DISTRIBUTED EVENLY AND SMOOTHLY UNDER PRESSURE NECESSARY FOR PROPER DISTRIBUTION.
4. MAINTAIN REQUIRED SURFACE CONDITIONS UNTIL ACCEPTED BY THE CITY OF SUGAR LAND.
5. PRIME COAT SHALL BE M.C.-30, M.C.-70 OR E.P.R.1 PRIME AND SHALL COMPLY WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES (1993) AND ITS LATEST REVISIONS.
6. TACK COAT SHALL BE SS-1 AND SHALL COMPLY TO TXDOT, S.S.C.H.S. & B. (1993) AND ITS LATEST REVISIONS.
7. M.C.-30 AND M.C.-70 AND EPR-1 PRIME SHALL BE DISTRIBUTED AT A RATE OF .25 TO .35 GALLONS PER SQUARE YARD. AND MAY NOT BE APPLIED WHEN AMBIENT TEMPERATURE IS 50°F AND FALLING. (NOTICE: CUTBACK ASPHALTS MAY NOT BE USED DURING THE PERIOD OF APRIL 16 THROUGH SEPT. 15 AS PER ASTM D-244).
8. EPR-1 MAXIMUM WATER DILUTION IS 3 PARTS WATER TO ONE PART EPR-1.
9. SS-1 TACK COAT SHALL BE APPLIED AT A RATE NOT TO EXCEED 0.06 GAL. PER SQUARE YARD OF SURFACE AREA. CONTACT JOINTS, CURBS, ETC. SHALL BE PAINTED WITH AN EVEN THIN COAT APPLIED BY BRUSH OR BROOM. COATING MATERIAL SHALL BE HEATED TO 125°F TO 180°F WHEN APPLIED. TACK COAT MAY BE APPLIED WHEN AMBIENT TEMPERATURES ARE 40°F AND RISING. TACK COAT MAY NOT BE APPLIED IF AMBIENT AIR IS 50°F AND FALLING.

LIMING SUBGRADE:

1. LIME SHALL BE A "SLURRY" AS PER TXDOT 260 UNLESS SPECIFICALLY RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY ENGINEER.
2. ALL LIME SLURRIES SHALL BE FURNISHED AT OR ABOVE THE MINIMUM "DRY SOLIDS" CONTENTS AS APPROVED BY THE ENGINEER.
3. SUBGRADES SHALL BE STABILIZED WITH A MINIMUM SIX PERCENT (6%) LIME BY WEIGHT, EIGHT INCHES (8") THICK THE INITIAL MIX TO REDUCE PLASTICITY INDEX (PI) TO 20 OR LESS AS DETERMINED BY THE LIME SERIES. THE FINAL MIX SHALL BE AT SIX INCHES (6") THICK.
4. LIME DRY SOLID CONTENT TESTS SHALL BE CONDUCTED ON SITE, ONCE PER ONE-HUNDRED (100) TONS OF MATERIAL DISTRIBUTED, UNLESS OTHERWISE NOTED.
5. THE SUBGRADE SHALL BE SHAPED AND GRADED TO CONFORM TO THE TYPICAL SECTIONS, AS SHOWN ON THE PLANS, PRIOR TO TREATING THE EXISTING MATERIAL.
6. UNLESS APPROVED BY THE CITY ENGINEER, LIME OPERATIONS SHALL NOT BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS BELOW 40°F. AND FALLING. LIMING MAY, WITH APPROVAL, BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS 35°F AND RISING. LIME SHALL NOT BE PLACED WHEN WEATHER CONDITIONS, IN THE ENGINEER'S OPINION, ARE UNSUITABLE.
7. THE SUBGRADE MATERIAL AND SLURRY SHALL BE THOROUGHLY MIXED, BROUGHT TO THE PROPER MOISTURE CONTENT (±2) AND LEFT TO CURE USUALLY 3 DAYS (72 HRS.) MINIMUM AS APPROVED BY THE CITY ENGINEER.
8. AFTER CURING, THE SUBGRADE SHALL BE REMIXED UNTIL PULVERIZATION REQUIREMENTS ARE MET, AS PER TXDOT.
   TEX-101-E, PART III.
   PERCENT MINIMUM PASSING 1-3/4" SIEVE............100
   PERCENT MINIMUM PASSING 3/4" SIEVE.............85
   PERCENT MINIMUM PASSING No.4 SIEVE..............60
9. SIEVE TESTS SHALL BE CONDUCTED EVERY 150 LF ON ALTERNATING LANES OF TRAFFIC OR EVERY 300 LF ON SINGLE LANES AS REQUIRED. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY OR CUL-DE-SAC.
10. THE MATERIAL SHALL BE AERATED OR MOISTENED TO + OR -2% OPTIMUM PRIOR TO COMPACTION. COMPACTION TO A MINIMUM 95% DENSITY SHALL BEGIN IMMEDIATELY AFTER ALL PULVERIZATION AND MOISTURE REQUIREMENTS ARE MET. THROUGHOUT THIS ENTIRE OPERATION, THE SURFACE SHALL BE SMOOTH AND IN CONFORMITY WITH THE LINES AND GRADES ON THE PLANS.
11. WHEN THE SUBGRADE FAILS TO MEET DENSITY REQUIREMENTS OR SHOULD IT LOSE THE REQUIRED STABILITY, DENSITY OR FINISH, IT SHALL BE REWORKED IN ACCORDANCE WITH TXDOT SUBARTICLE 260.4(7) "REWORKING A SECTION", WHICH MAY REQUIRE AN ADDITIONAL 25% OF THE SPECIFIED LIME AMOUNT.
12. THE TREATED SUBGRADE SHALL BE KEPT MOIST AND PREVENTED FROM DRYING. IN THE EVENT OF A ONE-HALF (1/2) INCH RAINFALL AND/OR IF THE MATERIAL BECOMES DRY AND IS NOT IN COMPLIANCE WITH THE ±2% OPTIMUM MOISTURE, DENSITY AND MOISTURE TESTS SHALL BE RETAKEN.
13. LIME DEPTH DETERMINATIONS WILL BE CONDUCTED AT EACH LOCATION OF DENSITY TESTING, LIME-STABILIZED SUBGRADE SHALL BE A MINIMUM OF 6% AT 8" UNLESS OTHERWISE DIRECTED BY CITY ENGINEER. DENSITY TESTING SHALL BE DONE IMMEDIATELY PRIOR TO PLACEMENT OF REINFORCING STEEL, AND SHALL BE COMPACTED TO A MINIMUM OF 95%. LIME DEPTH TESTS SHALL BE CONDUCTED AT EVERY 150 LF OF ROADWAY ON ALTERNATING LANES OR EVERY 300 LF OF SINGLE LANE. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY AND/OR CUL-DE-SAC.
14. NO SUBGRADE SHALL BE COVERED WITH ANOTHER MATERIAL UNLESS APPROVED BY THE CITY OF SUGAR LAND AND LIME DEPTH TESTS HAVE BEEN COMPLETED.

HOT MIX ASPHALTIC BASE COURSE:

1. NO HOT MIX ASPHALTIC BASE MAY BE INSTALLED UNTIL THE SUBGRADE HAS BEEN PROPERLY PREPARED AND TESTED AS PER THE PLANS AND SPECIFICATIONS. THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY THE CITY OF SUGAR LAND BEFORE ANY BASE MATERIALS ARE INSTALLED.
2. HOT MIX ASPHALTIC BASE MATERIALS, HANDLING, AND INSTALLATION SHALL COMPLY WITH TXDOT STANDARDS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES 1995 (SECTION 02711) AND ITS LATEST REVISIONS.
3. HOT MIX ASPHALTIC MATERIALS SHALL BE AT TEMPERATURES BETWEEN 250°F AND 325°F, WHEN PLACED.
4. MATERIALS MAY NOT BE PLACED IN WET CONDITIONS OR IF THE AMBIENT TEMPERATURE IS BELOW 50°F AND FALLING. MATERIALS MAY BE INSTALLED IF THE AMBIENT TEMPERATURE IS TAKEN IN THE SHADE AND IS 40°F AND RISING.
5. PLACE BASE COURSES 4 INCHES OR GREATER IN THICKNESS IN TWO OR MORE LAYERS, EACH HAVING A COMPACTED THICKNESS OF NOT GREATER THAN 4 INCHES.
6. BASE MATERIAL MAY ONLY BE PLACED AGAINST CLEAN, STRAIGHT EDGES. SAW CUTTING, FULL DEPTH, IS REQUIRED IF EXISTING EDGES ARE ROUGH OR UNEVEN.
7. COMPACTION SHALL BEGIN WHILE MATERIAL IS STILL HOT AND AS SOON AS IT WILL BEAR THE ROLLER OR COMPACTOR WEIGHT WITHOUT UNDUE DISPLACEMENT OR HAIR CRACKING.
8. COMPACT SURFACE UNIFORMLY WITH ROLLERS OR TAMPERS IN LOCATIONS NOT READILY ACCESSIBLE (I.E., ALONG CURBS, WALLS, ETC.).
9. UNLESS OTHERWISE SPECIFIED, COMPACT DENSITY TO NOT LESS THAN 95% OF MAXIMUM POSSIBLE DENSITY.
10. A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS.
11. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY TO A.S.T.M. ASPHALT INSTITUTE AND CITY OF SUGAR LAND REQUIREMENTS. FAILURE TO COMPLY WILL RESULT IN REJECTION OF SAID MATERIALS AND SUCH SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
12. DO NOT OPEN BASE TO TRAFFIC UNTIL IT CAN BE MAINTAINED IN GOOD CONDITION AND IS CAPABLE OF SUPPORTING VEHICLE WEIGHT WITHOUT DAMAGE OR DEGRADATION.
13. DENSITIES SHALL BE TAKEN AT A MINIMUM OF AT LEAST ONCE PER 300 LF OF DRIVE LANE OR ONCE PER 250 SQ. YD., WHICHEVER MAY APPLY AND SHALL BE STAGGERED RELATIVE TO TESTING SITES IN ABUTTING TRAFFIC LANES. FAILURE TO MEET MINIMUM REQUIREMENTS SHALL RESULT IN THE REPLACEMENT OF SAID MATERIAL AT CONTRACTOR'S EXPENSE.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: DATE

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

GENERAL CONSTRUCTION NOTES I

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-01
SHEET OF

CAD FILE PATH:
PLOT DATE:

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 Jpena

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

GENERAL CONSTRUCTION NOTES – 1
SL-01

PROJECT NO. 16182

16182 DETAIL SET.DWG

PLOT TIME:

ASPHALTIC CONCRETE PAVEMENT:

1. ASPHALTIC MATERIAL AND WORKMANSHIP SHALL COMPLY WITH ASTM C 33, ASTM C 131, ASTM C 136, AND TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES (1993) AND ITS LATEST REVISIONS. ASPHALT SHALL BE TYPE D–100 UNLESS SPECIFICALLY NOTED AND APPROVED BY CITY OF SUGAR LAND ENGINEER.
2. CONTRACTOR SHALL VERIFY ELEVATIONS AND GRADES AND THAT BASE COURSE IS READY TO SUPPORT IMPOSED LOADS.
3. APPLY A PRIME COAT AS PER CITY OF SUGAR LAND AND TXDOT STANDARDS. DO NOT APPLY TACK COAT UNTIL PRIMED BASE COURSE HAS CURED AND IS APPROVED BY THE CONSTRUCTION INSPECTOR.
4. TACK COAT SHALL COMPLY TO CITY OF SUGAR LAND AND TXDOT STANDARDS.
5. DO NOT USE CUTBACK ASPHALT APRIL 16 THROUGH SEPTEMBER 15.
6. DO NOT PLACE ASPHALT WHEN AMBIENT TEMPERATURE IS BELOW 50°F AND FALLING. MIXTURE MAY BE PLACED WHEN AMBIENT TEMPERATURE IS 40°F AND RISING.
7. ON PUBLIC ROADS, STREETS, AND RIGHT–OF–WAY, ASPHALT SHALL BE PLACED IN MAXIMUM 2–INCH LIFTS. IN THE EVENT MORE THAN ONE LIFT IS REQUIRED, EACH LIFT SHALL BE COMPACTED, TESTED, AND GIVEN ADEQUATE TIME FOR THE PREVIOUS LIFT TO CURE AND DRY BEFORE THE NEXT LIFT IS PLACED. IF COMPLETELY CURED AND DRIED, A TACK COAT WILL BE REQUIRED BETWEEN LIFTS.
8. A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS.
9. ROLLING PATTERNS SHALL BE ESTABLISHED BY THE CONTRACTOR, AS RECOMMENDED BY THE LAB, TO ACHIEVE THE MAXIMUM COMPACTION. THE SELECTED ROLL PATTERN SHALL BE FOLLOWED UNLESS CHANGES IN THE PLACEMENT OR MIXTURE OCCUR, WHICH AFFECT COMPACTION. COMPACTION OF 95% SHALL BE ACHIEVED.
10. ASPHALT SHALL NOT BE PLACED ON WET BASE.
11. NO "BIRDBATHS" ARE ALLOWED.
12. IF THE SURFACE RAVELS (SEPARATES), FLUSHES, RUTS, OR DETERIORATES IN ANY MANNER PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR WILL CORRECT THIS CONDITION AT HIS EXPENSE TO THE SATISFACTION OF THE CITY OF SUGAR LAND ENGINEER.
13. THE CONTRACTOR SHALL PROTECT THE PAVEMENT UNTIL DIRECTED BY THE CITY ENGINEER TO OPEN SAID PAVEMENT TO TRAFFIC.
14. RIDE QUALITY SHALL COMPLY WITH TXDOT ITEM 585, "RIDE QUALITY FOR PAVEMENT SURFACES".
15. SPECIAL NOTE: CONTRACTOR, WHILE MAXIMIZING COMPACTION, SHALL USE CAUTION NOT TO "OVER–ROLL" ASPHALT. PAVEMENT STRETCHED OR OVER–ROLLED, WHERE COMPACTION IS BROKEN, SHALL NOT BE ACCEPTED AND SHALL BE REPAIRED OR REPLACED TO THE CITY ENGINEER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
16. CORE SAMPLES SHALL BE TAKEN RANDOMLY AT A MINIMUM OF EVERY 300 LF PER LANE OF ROADWAY OR ONE PER EVERY 250 SQ. YD., WHICHEVER IS APPLICABLE AND SHALL BE STAGGERED RELATIVE TO TESTING SITES IN ABUTTING TRAFFIC LANES.
17. ALL ASPHALTIC CONCRETE PAVEMENT REPAIRS SHALL BE SAW CUT TO FULL ASPHALT DEPTH. REFER TO ASPHALT, STABILIZED BASE, FLEXIBLE BASE, ASPHALT BASE, AND OIL AND EMULSION NOTES. ALL DAMAGED BASE AND SUBGRADES SHALL BE REMOVED AND REPLACED TO THE CITY ENGINEER'S SATISFACTION, AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AREA DAMAGED DURING CONSTRUCTION, INCLUDING AREAS OUTSIDE THE DESIGNATED REPAIR.

STABILIZED CRUSHED CONCRETE:

1. TEST AND ANALYSIS OF AGGREGATE AND BINDER MATERIALS WILL BE PERFORMED IN ACCORDANCE WITH ASTMD 1557 AND ASTMD 4318. CEMENT SHALL BE ASTMC 150 TYPE I.
2. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES (1993) AND ITS LATEST REVISIONS AND CITY OF SUGAR LAND STANDARDS.
3. PRIME COAT SHALL BE M.C. 30 OR EPR–1 PRIME.
4. DESIGN MIX FOR MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 200 PSI IN 48 HRS. PROVIDE MINIMUM CEMENT CONTENT OF 2 SK PER TON OF MIX. CEMENT CONTENT MAY BE RAISED AT THE CONTRACTOR'S EXPENSE IF TESTS ON FIELD SAMPLES FALL BELOW 200 PSI.
5. THREE SAMPLES SHALL BE MOLDED EACH DAY FOR EACH 300 TONS OF PRODUCTION. COMPRESSIVE STRENGTH SHALL BE THE AVERAGE OF THREE TESTS FOR EACH PRODUCTION LOT. CONTRACTOR SHALL REPLACE, AT HIS OWN EXPENSE, ANY MATERIAL BELOW MINIMUM REQUIREMENTS.
6. CONTRACTOR SHALL VERIFY LINES, GRADES, AND COMPACTED SUBGRADING AS READY TO RECEIVE MATERIALS PRIOR TO ITS PLACEMENT.
7. CEMENT STABILIZED BASE MAY NOT BE PLACED IF AMBIENT TEMPERATURE IS 40°F AND FALLING. BASE MATERIAL MAY BE PLACED IF AMBIENT TEMPERATURE IS 35°F AND RISING.
8. MATERIAL MAY NOT BE PLACED IN LIFTS EXCEEDING 6 INCHES IN DEPTH. EACH LIFT SHALL HAVE DENSITIES TAKEN.
9. CEMENT STABILIZED BASE MAY NOT BE STORED FOR LONG PERIODS. DELIVERY OF MATERIAL AND UTILIZATION SHOULD BE TIMED ACCORDINGLY. MAXIMUM TIME ALLOWED 3 HRS. FROM BATCH TIME TO HAVING BEEN INSTALLED.
10. CEMENT STABILIZED BASE SHALL NOT BE INSTALLED IN WET OR SOFT AREAS.
11. COMPACT TO MINIMUM DENSITY OF 95% OF MAXIMUM DRY DENSITY. UNLESS OTHERWISE INDICATED ON DRAWINGS, MOISTURE SHALL BE BETWEEN + OR –2% OPTIMUM AS DETERMINED BY ASTMD 698.
12. AFTER COMPACTING FINAL COURSE, BLADE SURFACE TO FINAL GRADE. ANY IRREGULARITIES, WEAK SPOTS, AREAS OF EXCESSIVE WETNESS, OR SURFACE HAIR LINE CRACKING SHALL BE REPAIRED AND/OR REPLACED AT CONTRACTOR'S EXPENSE.
13. A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS.
14. COMPACTION TESTING WILL BE PERFORMED IN ACCORDANCE WITH ASTM D 1556 OR ASTM D 2922 AND ASTM D 3017 AT RANDOMLY SELECTED LOCATIONS AS DIRECTED BY CITY OF SUGAR LAND CONSTRUCTION INSPECTOR.
15. A MINIMUM OF ONE CORE SHALL BE TAKEN AT RANDOM LOCATIONS PER 300 LF PER LANE OF ROADWAY OR ONE PER 250 SQ. YD., WHICHEVER MAY APPLY AND SHALL BE STAGGERED RELATIVE TO TESTING SITES IN ABUTTING TRAFFIC LANES.
16. CURE FOR A MINIMUM OF 7 DAYS BEFORE ADDING ASPHALT PAVEMENT COURSES.
17. COVER SURFACE WITH CURING MEMBRANES AT THE FOLLOWING RATES: MC–30:.01 GAL. PER SQ. YD., OR EPR–1 PRIME:0.15 GAL. PER SQ. YD. DO NOT USE CUTBACK ASPHALT APRIL 16 TO SEPTEMBER 15. PROTECT THE MEMBRANE BY ALLOWING MEMBRANE TO FULLY CURE PRIOR TO PERMITTING TRAFFIC TO DRIVE ON IT.
18. UNSTABILIZED CRUSHED CONCRETE MAY NOT BE USED ON PUBLIC STREETS, ROADS, OR RIGHTS–OF–WAY,
19. STABILIZED LIMESTONE BASE MAY BE SUBSTITUTED FOR STABILIZED CRUSHED CONCRETE IF SUBMITTED AND APPROVED BY THE CITY ENGINEER.

STORM SEWER NOTES:

1. STORM SEWERS SHALL BE DESIGNED AND CONSTRUCTED WITH CITY OF SUGAR LAND'S STANDARD CONSTRUCTION SPECIFICATIONS AND IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD DETAILS SHEET AND LATEST REVISIONS.
2. ALL PIPE STORM SEWERS SHALL BE INSTALLED, BEDDED, AND BACKFILLED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD DETAIL DRAWINGS.
3. ALL CEMENT STABILIZED SAND (C.S.S.) SHALL BE 1–1/2 SK PER CUBIC YD. AND MEET MINIMUM C.S.S. STANDARDS COMPACTED TO 95%.
4. ALL STORM SEWERS UNDER AND WITHIN TWO (2) FOOT OF PROPOSED OR FUTURE PAVEMENTS SHALL BE BACKFILLED AND COMPACTED WITH 1–1/2 SK C.S.S. TO BOTTOM OF SUBGRADE.
5. ALL PROPOSED PIPE STUB–OUTS FROM MANHOLES OR INLETS ARE TO BE PLUGGED WITH 8" BRICK WALLS WITH FULL MORTAR HEAD AND BED JOINTS AND GROUTED WITH A MINIMUM OF 1/2–INCH NON–SHRINK GROUT INSIDE AND OUTSIDE, UNLESS OTHERWISE NOTED.
6. AVOID TO MAXIMUM EXTENT, MANHOLES IN HANDICAP RAMPS.
7. ALL STORM SEWER MANHOLES SHALL BE OF SUGAR LAND TYPE "C" UNLESS OTHERWISE NOTED AND SHALL BE LOCATED A MINIMUM OF THREE (3) FEET BACK OF CURB. IF CONFLICT EXISTS, RACK OVER MANHOLE TO MISS PROPOSED CURB.
8. RIM ELEVATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. UTILITY CONTRACTOR SHALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE THE FINISH GRADE AT EACH LOCATION AFTER CONTRACTOR HAS COMPLETED FINAL GRADING. SLOPED FILL SHALL BE ADDED FOR STORM WATER DRAINAGE AWAY FROM RIM.
9. RIM ELEVATIONS SHALL BE PROPERLY ADJUSTED TO GRADE IN PAVEMENT AND SIDEWALKS. APPROVED BLOCKOUTS SHALL BE USED IN PAVEMENT.
10. ALL STORM SEWER MANHOLE COVERS MUST INCLUDE "STORM SEWER" AND "DUMP NO WASTE", "DRAINS TO WATERWAYS" WITH CITY OF SUGAR LAND EMBLEM AS DEPICTED IN THE DETAIL SHEETS.
11. MINIMUM STORM SEWER SIZE SHALL BE 24–INCH DIAMETER. ALL STORM SEWER PIPES 24" AND LARGER ARE TO BE REINFORCED CONCRETE PIPE ASTM C–76 CLASS III, INCLUDING INLET LEADS CROSSING UNDER EXISTING OR PROPOSED PAVEMENTS. ALL INLET LEADS SHALL BE 24" R.C.P. OR LARGER. ALL STORM SEWER PIPE SHALL BE RUBBER GASKETED. ALL CMP PIPE SHALL BE IN ACCORDANCE WITH C.O.S.L. APPROVED PRODUCT LIST AND STANDARD DETAILS.
12. CONTRACTOR SHALL VERIFY NATURAL GROUND SHOTS PRIOR TO MANHOLE CONSTRUCTION.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR OTHER CONSTRUCTION, CONTRACTOR SHALL ENSURE THAT STORM DRAINAGE PATHWAYS ARE MAINTAINED AND REMAIN OPEN TO ENSURE POSITIVE DRAINAGE AND THAT SUCH CONVEYANCES ARE NOT IMPEDED OR BLOCKED IN ANY WAY. STORM SEWER INLETS SHALL BE PROTECTED FROM ENTRY OF SILT, TRASH, DEBRIS AND ANY SUBSTANCES DELETERIOUS TO THE STORM SEWER SYSTEM AND/OR WATERWAYS RECEIVING STORM WATER RUNOFF. CONTRACTOR SHALL AT COMPLETION OF WORK, FILL LOW SPOTS AND GRADE ALL RIGHTS–OF–WAY AND UTILITY EASEMENTS AND REGRADE/RESTORE DITCHES AS NECESSARY TO MAINTAIN AND/OR ESTABLISH POSITIVE DRAINAGE.
11. CONTRACTOR TO PROVIDE A MINIMUM OF 6–INCHES CLEARANCE AT UTILITY CROSSINGS AND A MINIMUM OF TWELVE (12) INCHES AT SANITARY SEWER CROSSING.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACKSLOPE DRAINAGE SYSTEM DISTURBED AS A RESULT OF HIS WORK.
13. ALL DITCHES SHALL BE RESTORED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE COMPACTED AND ALL DISTURBED AREAS SHALL BE RESEEDED OR RESODDED WITHIN 10 WORKING DAYS OF EACH OCCURRENCE (NO SEPARATE PAY).
14. THE UTILITY CONTRACTOR SHALL ROUGH CUT ALL ROADSIDE SWALES IN PROPER ALIGNMENT AND SLOPE TO WITHIN 0.2 FT. OF FINISH GRADE. THE PAVING CONTRACTOR, UPON COMPLETION OF PAVING, SHALL COMPLETE FINAL GRADING ALIGNMENT OF SWALES AND RESTORE ALL AREAS WITHIN RIGHT–OF–WAY FOR SEEDING OR SODDING AND FERTILIZATION.
15. ALL STORM SEWERS MUST BE CLEAN/FREE OF DIRT AND DEBRIS AT THE TIME AND INITIAL AND FINAL ACCEPTANCE
16. REFER TO GENERAL NOTES AND C.S.S. NOTES.

SANITARY SEWER NOTES:

1. SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL BE DESIGNED AND CONSTRUCTED AS PER THE REQUIREMENTS OF THE CITY OF SUGAR LAND DESIGN STANDARDS AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS AND AS PER THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY "DESIGN CRITERIA FOR SEWERAGE SYSTEMS". SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND/OR INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL GOVERN.
2. ALL MATERIALS AND PRODUCTS USED IN THE CONSTRUCTION OF SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL COMPLY WITH THE CITY OF SUGAR LAND DESIGN STANDARDS AND THE CURRENT APPROVED PRODUCTS LIST.
3. STACKS SHALL BE BUILT IN ACCORDANCE WITH THE CITY OF SUGAR LAND STANDARD DETAIL DRAWING REQUIREMENTS. EXACT LOCATION OF THE STACK SHALL BE SUPPLIED TO THE CITY ENGINEER OF SUGAR LAND BY THE PROJECT ENGINEER ON SEALED AS–BUILT DRAWINGS AT COMPLETION OF CONSTRUCTION. ALL STACKS SHALL BE INSTALLED WITHIN 3% OF PLUMB RELATIVE TO VERTICAL PLANE AND WILL BE CAPPED AND TERMINATED AT A DEPTH OF 4 FEET BELOW FINISHED GRADE, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
4. EACH SANITARY SEWER SERVICE LEAD STUB, PLUGGED WYE BRANCH OUTLET AND STACK SHALL BE MARKED IN ACCORDANCE WITH THE DETAILS AT THE TIME OF CONSTRUCTION. BEGINNING AT THE INVERT ELEVATION OF THE STUB OR WYE AND AT AN ELEVATION TWO FEET BELOW THE CAPPED TERMINATION POINT OF THE STACK AND EXTENDING TWO FEET ABOVE FINISHED GRADE.
5. SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED AS PER DRAWINGS INCORPORATED IN CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS. SUCH MANHOLES SHALL BE CONSTRUCTED A MINIMUM OF ONE FOOT FROM BACK OF CURB ON CURB AND GUTTER ROADWAYS AND THREE FEET FROM EDGE OF TRAVELED ROADWAY ON THOSE THOROUGHFARES HAVING NO CURBING. MEASURED FROM OUTSIDE DIAMETER OF MANHOLE. ALL SANITARY SEWER MANHOLES SHALL INCORPORATE INFLOW PROTECTORS. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED BENEATH STREET PAVING EXCEPT WHERE SPECIFICALLY AUTHORIZED BY CITY ENGINEER AND SO DESIGNATED ON APPROVED CONSTRUCTION DRAWINGS. BRICK MANHOLES AND FIBERGLASS MANHOLES ARE PROHIBITED. MANHOLES DEEPER THAN EIGHT FEET SHALL HAVE ECCENTRIC CONES.
6. SANITARY SEWER MANHOLE COVERS SHALL BE MINIMUM OF 32 INCHES IN DIAMETER. ALL SUCH MANHOLE COVERS SHALL HAVE THE CITY OF SUGAR LAND EMBLEM AND THE WORDS "SUGAR LAND" AND "SANITARY SEWER" CAST IN RAISED RELIEF AS DEPICTED IN CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS.
7. MANHOLE RIM ELEVATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY. UTILITY CONTRACTORS SHALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE FINISHED GRADE, AND 0.5 FEET ABOVE NATURAL GROUND WITHIN RIGHTS–OF–WAY AND EASEMENTS AT EACH MANHOLE LOCATION AFTER PAVEMENT CONTRACTOR HAS COMPLETED FINAL GRADING. THE AREA ADJACENT TO SANITARY SEWER MANHOLE LOCATIONS SHALL BE GRADED AWAY FROM SUCH MANHOLES SO AS PREVENT ENTRY OF STORM WATER RUNOFF TO THE SANITARY SEWER SYSTEM.
8. MINIMUM SEPARATION DISTANCES AS REQUIRED BY TCEQ SECTION 317.13, APPENDIX E MUST BE MAINTAINED BETWEEN POTABLE WATER LINES AND SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS. INSTALLATION OF FIRE HYDRANTS WITHIN NINE FEET OF A SANITARY SEWER SYSTEM IS PROHIBITED. REFER TO THE CITY OF SUGAR LAND INFRASTRUCTURE STANDARDS AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS FOR CONSTRUCTION REQUIREMENTS OF OTHER INSTALLATIONS WHERE SEPARATION DISTANCES OF GREATER THAN NINE FEET CANNOT BE MAINTAINED.
9. TESTING OF SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL BE CONDUCTED AS NOTED IN SANITARY SEWER CHAPTER OF THE CITY OF SUGAR LAND DESIGN STANDARDS AND AS PER THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY "DESIGN CRITERIA FOR SEWERAGE SYSTEMS".
10. ALL SANITARY SEWER PIPING AND BEDDING SHALL BE INSPECTED BY CITY CONSTRUCTION INSPECTOR FOR CONFORMANCE WITH CITY DESIGN STANDARDS PRIOR TO BACKFILLING OF PIPING IN TRENCH. CONTRACTOR SHALL NOT COVER PIPING UNTIL SUCH TIME AS INSPECTOR HAS NOTIFIED CONTRACTOR THAT RESULTS OF PIPING INSPECTION ARE SATISFACTORY AND THAT BACKFILLING MAY BE ACCOMPLISHED. ANY PIPING INSTALLED AND/OR BACKFILLED WITHOUT INSPECTOR'S SPECIFIC APPROVAL SHALL BE UNCOVERED AT INSPECTOR'S DIRECTION AND INSPECTED ACCORDINGLY. CONTRACTOR SHALL NOTIFY INSPECTOR 24–HOURS PRIOR TO INSPECTION.
11. ALL COMMERCIAL DEVELOPMENTS WITH A FAR SIDE SANITARY SERVICE LEAD ACROSS THE STREET SHALL PROVIDE A SIX (6) INCH RISER AND CLEARNOUT ON THE PROPERTY SIDE. PUBLIC MAINTENANCE OF THE FAR SIDE LEAD SHALL END AT THIS RISER.

WATER DISTRIBUTION NOTES:

1. WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE DESIGNED AND CONSTRUCTED AS PER REQUIREMENTS OF THE CITY OF SUGAR LAND DESIGN STANDARDS AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS AND AS PER THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND/OR INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL GOVERN.
2. ALL MATERIALS AND PRODUCTS USED IN THE CONSTRUCTION OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL COMPLY WITH THE CITY OF SUGAR LAND DESIGN STANDARDS AND THE CURRENT APPROVED PRODUCTS LIST AS MAINTAINED BY THE CITY'S ENGINEERING DEPARTMENT.
3. ALL GATE VALVES INSTALLED BELOW GRADE SHALL BE OF NON–RISING STEM DESIGN.
4. ALL FIRE HYDRANTS SHALL BE PAINTED AND/OR REPAINTED WITH GEO–GLEN 301 BRIGHT SILVER POLYURETHANE ENAMEL MANUFACTURED BY GEO–GLEN ENTERPRISES, INC. SURFACE PREPARATION SHALL INCLUDE REMOVAL OF OIL, GREASE AND MOISTURE, FOLLOWED BY MEDIA BLASTING TO SSPC–SP15–10–63 SPECIFICATIONS (NEAR WHITE METAL) AS PER MANUFACTURER'S RECOMMENDATIONS. PRIME BARE METAL WITH TP–251 EPOXY PRIMER EPOXY PRIMER OR WITH TP–221, TP–231 OR TP–241 UNIVERSAL PRIMER. 80°F AND 50% RELATIVE HUMIDITY ARE OPTIMAL CONDITIONS FOR APPLICATION OF PRIMER AND OF PAINT. DO NOT APPLY PRIMER AND/OR PAINT WHEN SURFACE TO BE PAINTED IS LESS THAN 5° ABOVE THE DEW POINT IN ORDER TO PREVENT MOISTURE FROM CONDENSING ON THE SURFACE TO BE PRIMED AND/OR PAINTED. A BLUE TRAFFIC BUTTON SHALL BE INSTALLED ON THE STREET 12" OFF THE CENTER LINE FOR EACH HYDRANT
5. MINIMUM SEPARATION DISTANCES AS REQUIRED BY TCEQ SECTION 317.13, 290. APPENDIX E MUST BE MAINTAINED BETWEEN POTABLE WATER LINES AND SANITARY SEWERS, FORCE MAINS, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS. INSTALLATION OF FIRE HYDRANTS WITHIN 9' (FT) OF A SANITARY SEWER SYSTEM IS PROHIBITED. REFER TO C.O.S.L. STANDARDS FOR CONSTRUCTION REQUIREMENTS OF OTHER INSTALLATIONS WHERE DISTANCES ARE GREATHER THAN 9' (NINE) FT. CANNOT BE MAINTAINED.
6. EACH WATER SERVICE LEAD STUB SHALL BE MARKED WITH A PRESSURE TREATED 4 X 4 TIMBER OR PVC PIPE AT THE TIME OF CONSTRUCTION, BEGINNING AT THE INVERT ELEVATION OF THE STUB AND EXTENDING TWO FEET ABOVE FINISHED GRADE. EACH TIMBER MARKER SHALL BE PAINTED BLUE AND LABELED "POTABLE WATER" WITH PIPE SIZE NOTED.
7. TESTING OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF AWWA C605–94.
8. DISINFECTION OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF AWWA C651 AND TCEQ. NO CONNECTIONS SHALL BE MADE TO EXISTING WATER LINES UNTIL NEWLY CONSTRUCTED WATER LINES HAVE BEEN THOROUGHLY DISINFECTED, TESTED, FLUSHED, AND SAMPLED AND CONNECTION HAS BEEN AUTHORIZED BY THE CITY ENGINEER.
9. ALL WATER PIPING AND BEDDING SHALL BE INSPECTED BY THE CITY INSPECTOR FOR CONFORMANCE TO DESIGN STANDARDS PRIOR TO BACKFILLING OF PIPING IN TRENCH. CONTRACTOR SHALL NOT COVER PIPING UNTIL SUCH TIME AS INSPECTOR HAS NOTIFIED CONTRACTOR THAT RESULTS OF PIPING INSPECTION ARE SATISFACTORY AND THAT BACKFILLING MAY BE ACCOMPLISHED. ANY PIPING INSTALLED AND/OR BACKFILLED WITHOUT INSPECTOR'S SPECIFIC APPROVAL SHALL BE UNCOVERED AT INSPECTOR'S DIRECTION AND INSPECTED ACCORDINGLY. 24–HOUR NOTICE REQUIRED.
10. ALL MECHANICALLY RESTRAINED FITTINGS MUST BE MEGALUG RESTRAINED JOINTS OR APPROVED EQUAL.
11. THE CITY OF SUGAR LAND MUST HAVE A COPY OF THE BACTERIALOGICAL TEST RESULTS AT LEAST 24 HOURS PRIOR TO THE INITIAL INSPECTION. IF NOT, THEN THE INSPECTION WILL BE RESCHEDULED.

No.	DATE	REVISION

SEAL:

DATE

DESIGN ENGINEER:

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

GENERAL CONSTRUCTION NOTES II

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–02

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849–6681
REG. NO. F–825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

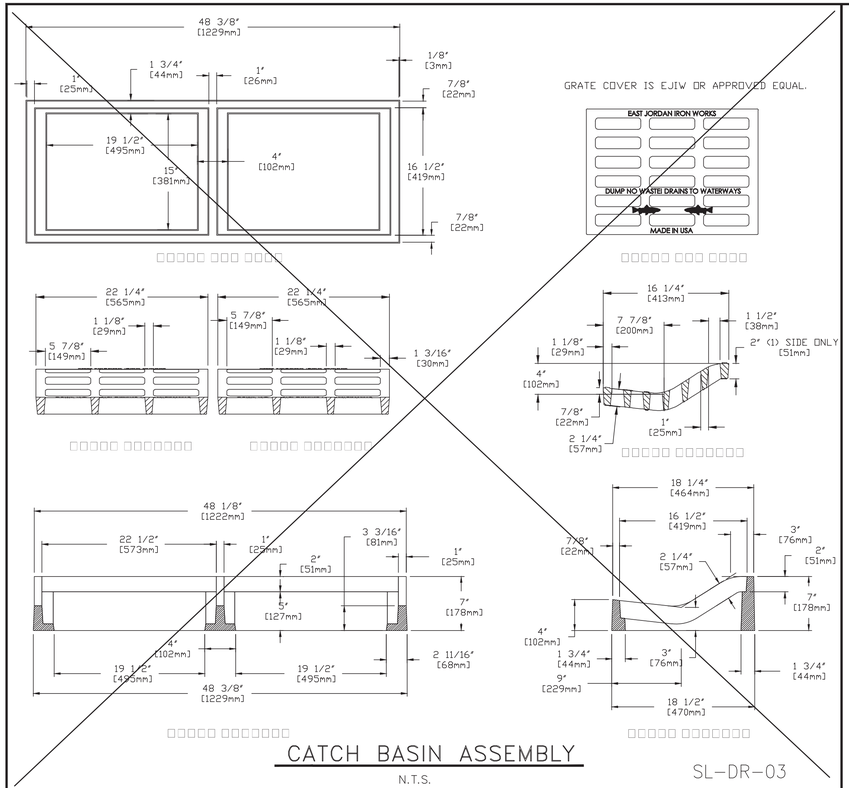
GENERAL CONSTRUCTION NOTES – II
SL–02

PROJECT NO. 16182

23

J:\16000S\16100\16182\ENGINEERING–SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jpena

16182 DEFAIL SET.DWG

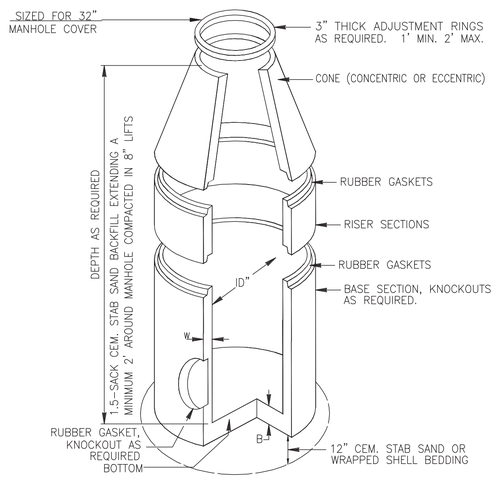


GRATE COVER IS EJIW OR APPROVED EQUAL.

CATCH BASIN ASSEMBLY

N.T.S.

SL-DR-03



DIMENSIONS AND WEIGHTS			
I.D. SIZE (in)	W (in)	B (in)	RISER WT/LF (lb)
48	5	6	868
60	6	8	1300
72	7	8	1811
96	9	8	3090

NOTES

1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED WITH APPROVED RUBBER GASKET
3. STRUCTURE TO BE PLACED ON 12" STABILIZED BASE.
4. C.S.S. SHALL BE BROUGHT TO WITHIN 2-FT OF TOP OF MANHOLE.

SPECIFICATIONS:

CONCRETE: CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. RATES FOR H-20 LOADING.

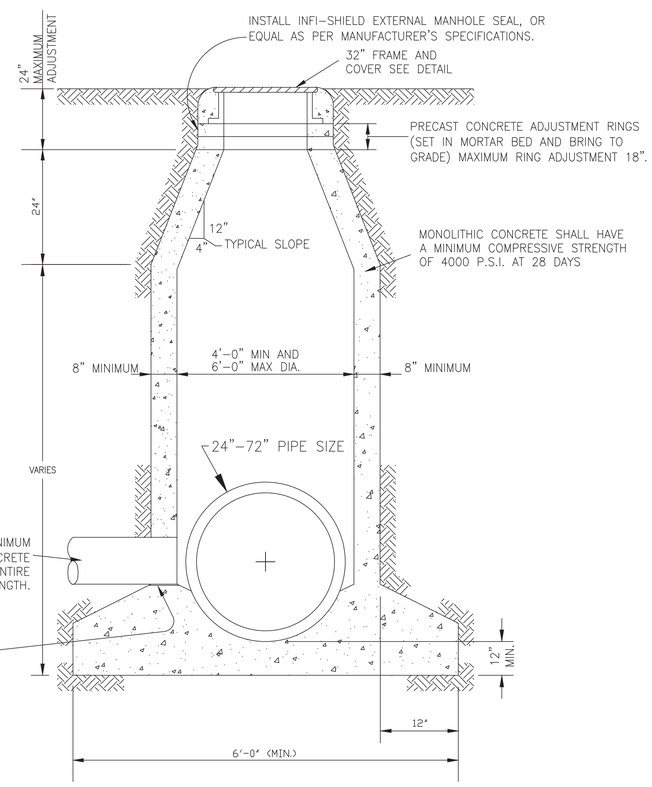
REINFORCEMENT: STRUCTURAL REINFORCEMENT CONFORMING TO ASTM-C-478.

C.I. CASTINGS: CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 35.

PRECAST CONCRETE MANHOLE

N.T.S.

SL-DR-02



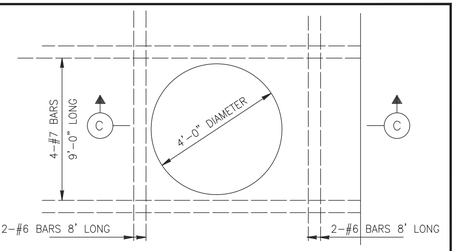
TYPE "C" CAST-IN-PLACE MANHOLE

N.T.S.

NOTES:

1. CONCRETE SHALL BE A MONOLITHIC POUR.
2. #4 REBAR TO BE PLACED IN BASE AND WALLS @ 12" C-C EW.
3. 1-1/2" C.S.S. BACKFILL TO BE PLACED AROUND MANHOLE COMPACTED IN 8" LIFTS (MAX).

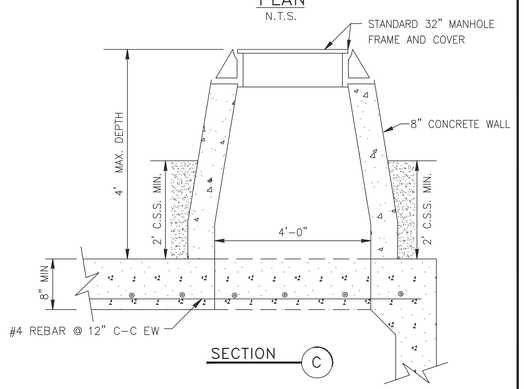
SL-DR-01



STANDARD TYPE "E" INLET MAY BE USED AT TOP OF MANHOLE.

PLAN

N.T.S.



MANHOLE FOR BOX SEWER

N.T.S.

SL-DR-04

GENERAL CONSTRUCTION NOTES:

1. ALL CAST CONCRETE BASES AND WALLS SHALL HAVE # 4 REBAR @ 12" C-C EW
2. CONCRETE SHALL BE 3000 PSI MIN.
3. USE C.S.S. BEDDING AS PER DETAILS 1 1/2 SK, COMPACTED 8" LIFTS (MAX.). TO 95% STANDARD.

REFER TO:

1. *GENERAL NOTES, C.S.S & CONCRETE NOTES.*
2. *STORM SEWER NOTES*

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER MANHOLE CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-03

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

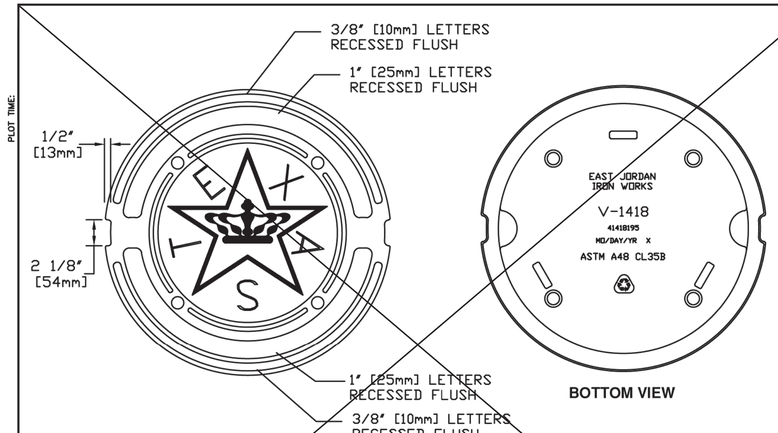
STORM SEWER MANHOLE CONSTRUCTION DETAILS
SL-03

PROJECT NO. 16182

24

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jpena

16182 DETAIL SET.DWG



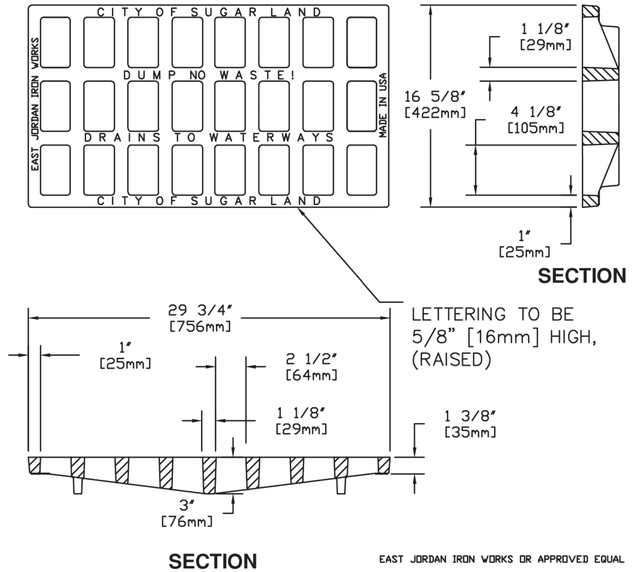
NOTE: 24" MANHOLE COVERS TO BE USED ON INLETS ONLY

EAST JORDAN IRON WORKS OR APPROVED EQUAL

24" MANHOLE COVER

N.T.S.

SL-DR-05



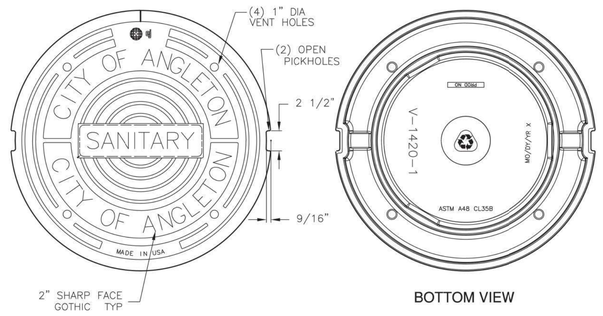
EAST JORDAN IRON WORKS OR APPROVED EQUAL

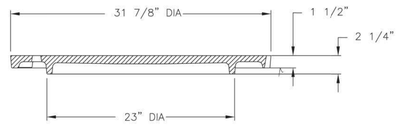
CATCH BASIN GRATE

N.T.S.

SL-DR-07

V1420-1 Cover

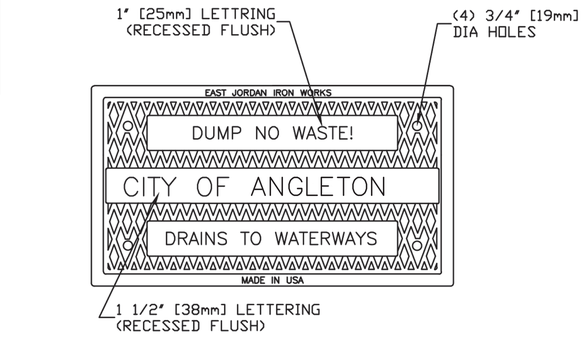


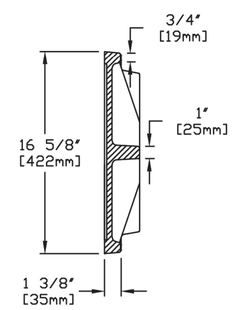


NOTES

1. MATERIAL SPECIFICATION SHALL BE ASTM A-48 CLASS 35B.
2. COVER TO BE SOLID, WITHOUT HOLES AND WITH NON-PENETRATION RIM ACCESS RECESSES ONLY.
3. HORIZONTAL BEARING SURFACES TO BE MACHINED AND SEALED AT INSTALLATION WITH WATERPROOF GREASE COATING.
4. LOAD RATING TO BE HEAVY-DUTY.
5. MANHOLE FRAMES AND COVERS SET IN FARM TO MARKET ROADS OR HIGHWAYS SHALL FOLLOW TXDOT SPECIFICATIONS. (UNLESS OTHERWISE NOTED BY ANGLETON)

1 32" Manhole Cover and Frame
Scale: NTS





EAST JORDAN IRON WORKS OR APPROVED EQUAL

ANGLETON COVER

N.T.S.

SL-DR-08

REFER TO:

1. *GENERAL NOTES, C.S.S & CONCRETE NOTES.*
2. *STORM SEWER NOTES*

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER MANHOLE CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-04

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

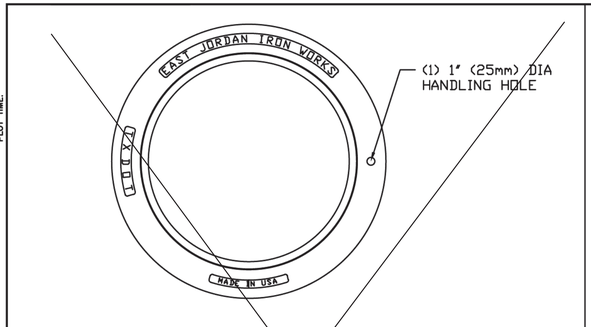
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

STORM SEWER MANHOLE CONSTRUCTION DETAILS
SL-04

PROJECT NO. 16182

PLOT TIME:

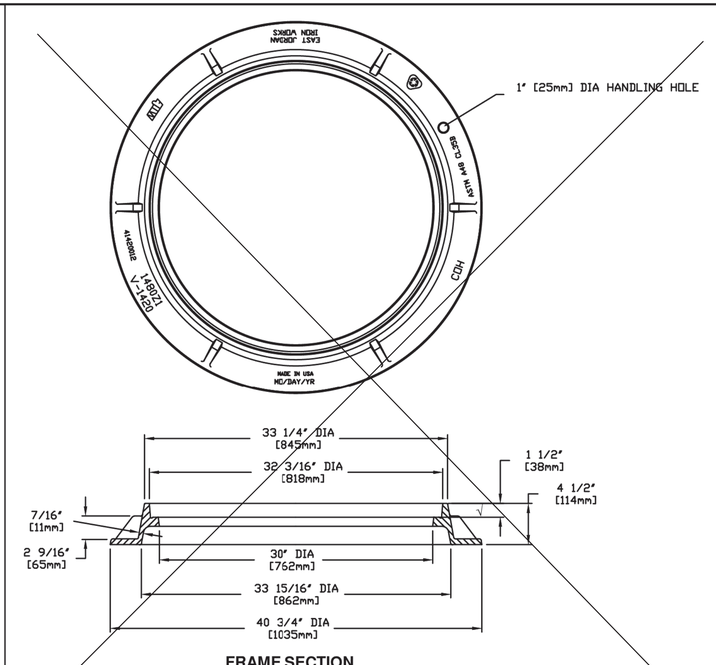


EAST JORDAN IRON WORKS OR APPROVED EQUAL

24" MANHOLE FRAME

N.T.S.

SL-DR-09



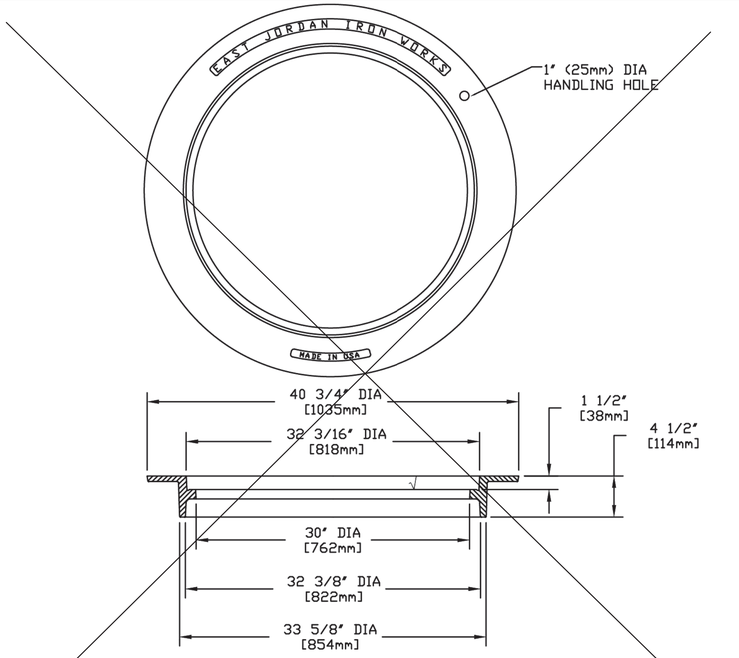
FRAME SECTION

EAST JORDAN IRON WORKS OR APPROVED EQUAL

32" MANHOLE FRAME W/O MUD RING

N.T.S.

SL-DR-10

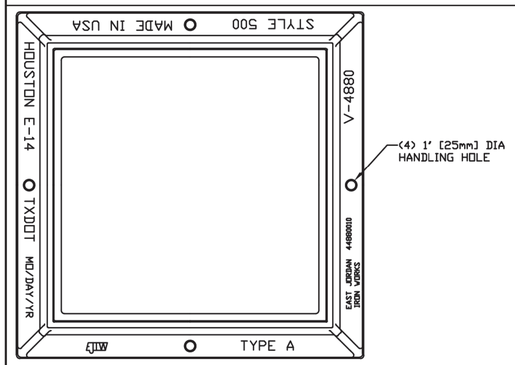


EAST JORDAN IRON WORKS OR APPROVED EQUAL

32" MANHOLE FRAME

N.T.S.

SL-DR-11



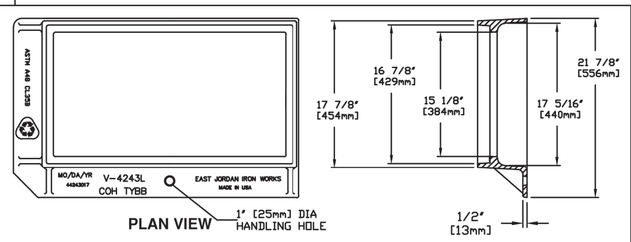
FRAME SECTION

EAST JORDAN IRON WORKS OR APPROVED EQUAL

TYPE A INLET FRAME

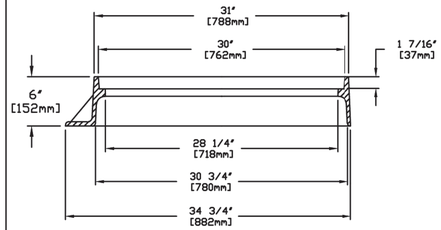
N.T.S.

SL-DR-12



PLAN VIEW

SECTION VIEW



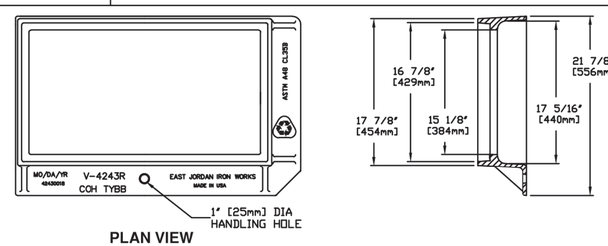
SECTION VIEW

EAST JORDAN IRON WORKS OR APPROVED EQUAL

LEFT FRAME

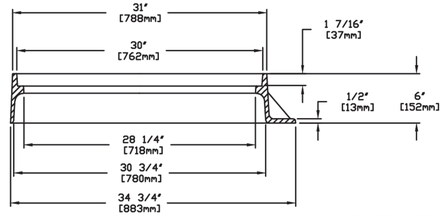
N.T.S.

SL-DR-13



PLAN VIEW

SECTION VIEW



SECTION VIEW

EAST JORDAN IRON WORKS OR APPROVED EQUAL

RIGHT FRAME

N.T.S.

SL-DR-14

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-05

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · LICENSED PROFESSIONAL ENGINEER

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03-07-2025

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Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

STORM SEWER
CONSTRUCTION DETAILS
SL-05

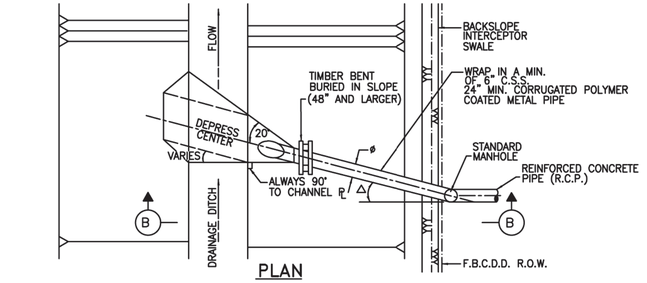
PROJECT NO. 16182

26

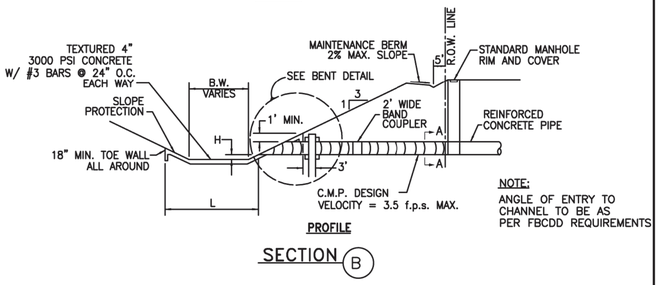
J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jpena

16182 DETAIL SET.DWG

PLOT TIME:



PLAN



PROFILE

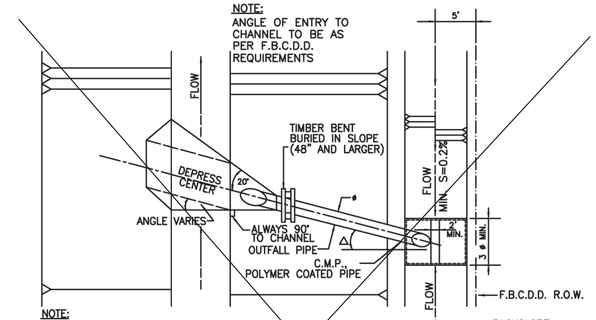
SECTION (B)

NOTE:
ANGLE OF ENTRY TO CHANNEL TO BE AS PER FBCDD REQUIREMENTS

STORM SEWER OUTFALL

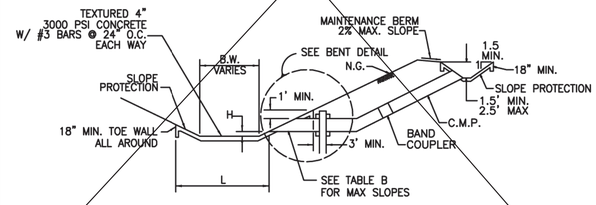
N.T.S.

SL–DR–15



NOTE:
MAXIMUM BACKSLOPE DRAIN SPACING SHALL BE 800' (FEET) OR 400' (FEET) TO THE SWALE HIGH POINT.

PLAN

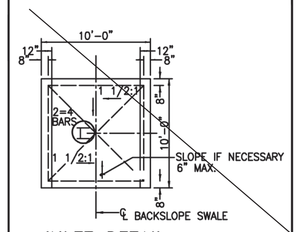


PROFILE

BACKSLOPE INLET & OUTFALL

N.T.S.

SL–DR–16



INLET DETAIL

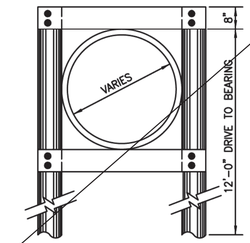
TABLE A

SIZE 2 2/3" X 1/2" CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE	SIZE 3'X1' & 5'X1' CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE
24"	12	16			
30"	12	16			
36"	12	16			
42"	12	16			
48"	12	16	48"	16	18
54"	12	14	54"	16	18
60"	12	14	60"	16	18
66"	10	12	66"	16	18
72"	10	12	72"	16	18
78"	8	10	78"	14	16
84"	8	10	84"	14	16

TABLE B

PIPE DIA.	SLOPE	VELOCITY
24"	0.6%	3.25 f.p.s
36"	0.3%	3.00 f.p.s
42"	0.2%	2.75 f.p.s
48"	0.2%	3.00 f.p.s
54"	0.2%	3.25 f.p.s

SL–DR–19



PIPING CUTOFF SUBJECT TO APPROVAL BY CITY
PILING & TIMBER TO BE TREATED WITH AN APPROVED PRESERVATIVE

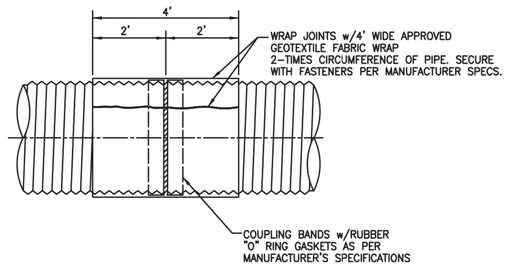
END VIEW

CONSTRUCTION NOTES:

B.W. / PIPE ø ≤ 7'–6" ⇒ LENGTH WILL EXTEND ONE–HALF PIPE ø ABOVE ℄ ON OPPPOSITE BANK (MIN. 36") OR A MINIMUM OF 6–PIPE ø TOWARDS OPPOSITE BANK OF CHANNEL. WHICH EVER IS THE LESSER.

△ :PROP. 24" TO 42" △= 15°
PROP. 48" AND LARGER △= 30°

H : FOR PIPE SIZES 24" TO 42" H=3' MAX., AND 1' MIN.
FOR PIPE SIZES 48" AND LARGER H=1' MAX. AND MIN.



NOTES:

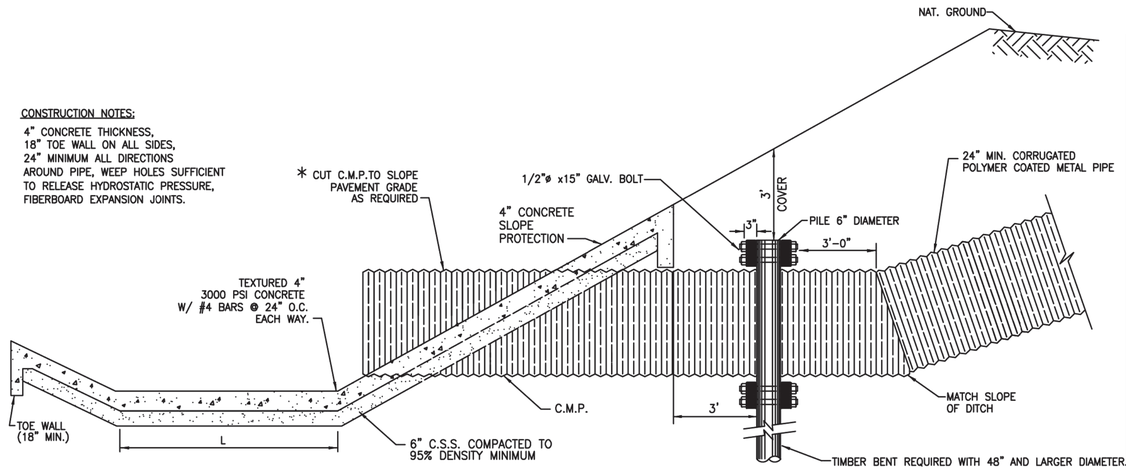
1. ANY PIPE DEFLECTED MORE THAN 2% SHALL BE REJECTED AND REPLACED AT CONTRACTOR'S EXPENSE.
2. INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS INCLUDING ITEMS AS DETAILED IN INSTALLATION MANUAL FOR CORRUGATED STEEL DRAINAGE STRUCTURES.

STORM SEWER JOINT WRAP DETAIL

N.T.S.

SL–DR–17

CAD FILE PATH:
PLOT DATE:



NOTES:

1. OUTFALL PIPE SHALL BE POLYMER–COATED, CORRRUGATED, METAL PIPE. ALUMINIMUM PIPE OR ALUMINIZED COAT IS NOT ALLOWED.
2. STONE RIP RAP IS NOT ALLOWED.
3. SEE GENERAL, C.S.S. AND CONCRETE NOTES.
4. SEE END VIEW DETAIL (THIS SHEET).
5. ALL CONNECTING BANDS MUST HAVE AN APPROVED RUBBER GASKET.

PROFILE

TIMBER BENT FOR CORRUGATED METAL PIPE OUTFALL

N.T.S.

SL–DR–18

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER OUTFALL CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–06

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

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BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849–6681
REG. NO. F–825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

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03-07-2025

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Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

STORM SEWER OUTFALL CONSTRUCTION DETAILS
SL–06

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jpena

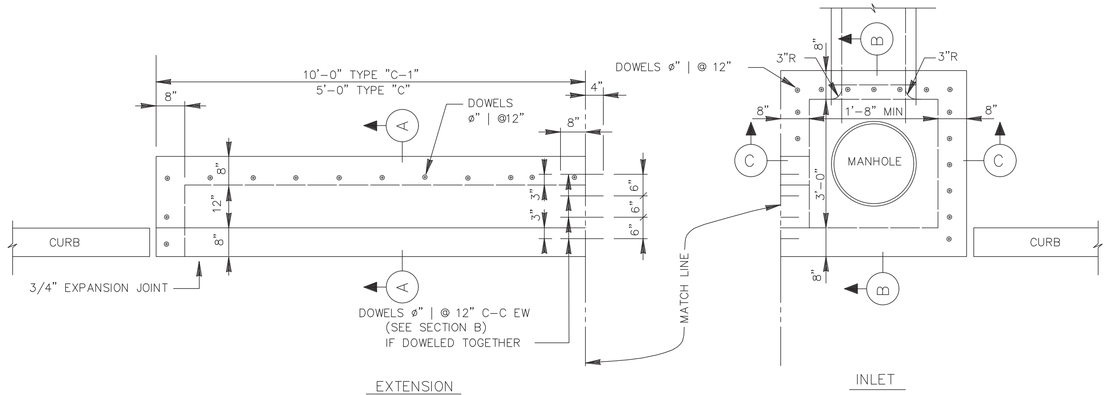
16182 DETAIL SET.DWG

GENERAL NOTES:

TYPE "C" INLET WITH ONE EXTENSION
TYPE "C-1" INLET WITH DOUBLE EXTENSION
TYPE "C-2" INLET WITH EXTEN. ON EACH SIDE
TYPE "C-2A" INLET WITH NO EXTENSION

NOTES:

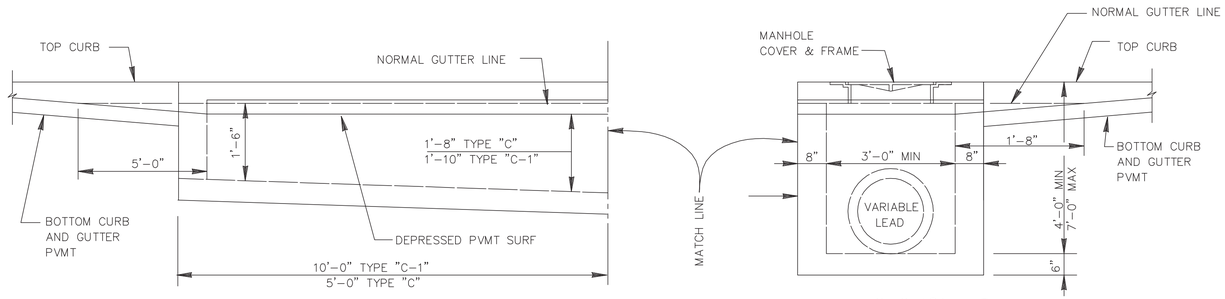
1. FOR TYPE "C-1" INLETS PROVIDE A CENTER 6"X6" COLUMNS IN THE CURB LINE BETWEEN ALL EXTENSIONS.
2. WALLS TO BE 8" IF BUILT WITH REINFORCED CONCRETE. BRICK WALLS ARE NOT ALLOWED.



EXTENSION

INLET

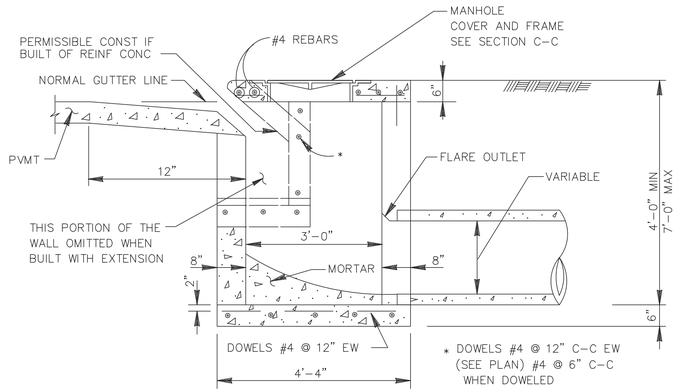
PLAN



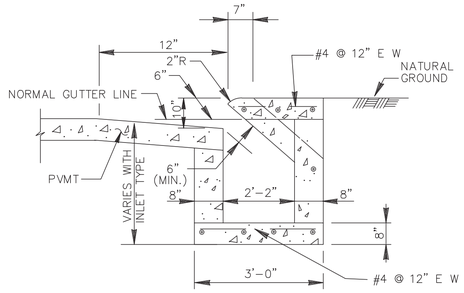
PLAN

SECTION (C)

SL-DR-27



SECTION (B)



SECTION (A)

TYPE "C" INLET

N.T.S.

SL-DR-28

REFER TO:

1. GENERAL NOTES
2. STORM SEWER NOTES

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER INLET
CONSTRUCTION DETAILS III

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-09

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

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BAKER & LAWSON, INC.
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ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
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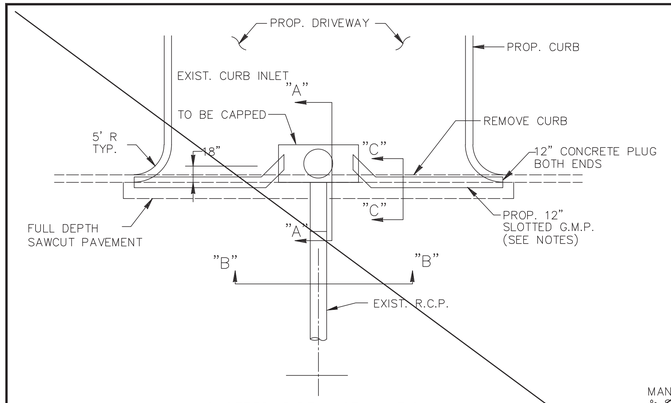
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

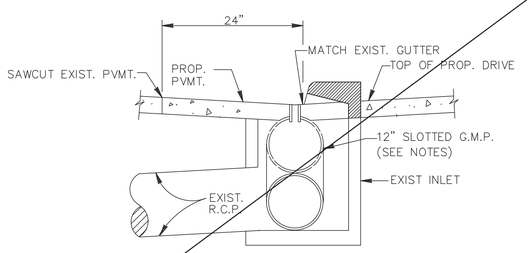
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

STORM SEWER INLET
CONSTRUCTION DETAILS III
SL-09

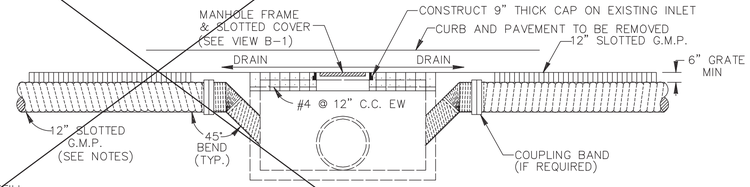
PROJECT NO. 16182



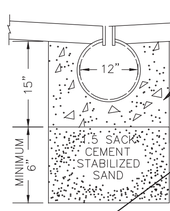
SLOTTED PIPE INSTALLATION
FOR DRIVEWAY CONSTRUCTION



SECTION A–A



SECTION B–B



SECTION C–C

NOTES

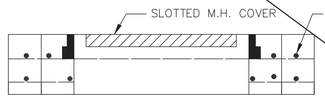
1.) 30 FEET OF SLOT IS THE MINIMUM REQUIREMENT TO REPLACE A TYPE B–B INLET.

2.) CONCRETE MIN. 3000 P.S.I.

3.) PIPE TO BE GALVANIZED TYPE II WITH GALVANIZED SLOT

4.) CONDITIONS MAY VARY. CONTRACTOR TO ROLL FITTING AND ENTER BOX BELOW 9" CAP.

5.) SEE C.S.S. NOTES.

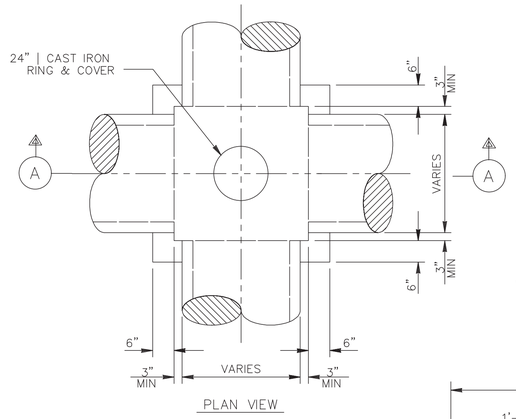


VIEW B–1

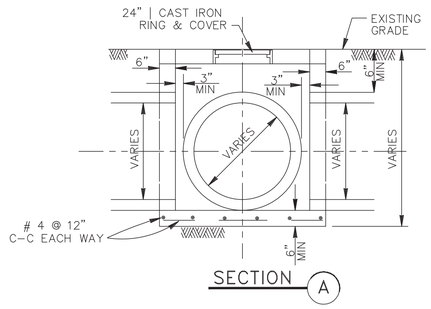
SLOTTED DRAIN DETAIL

N.T.S.

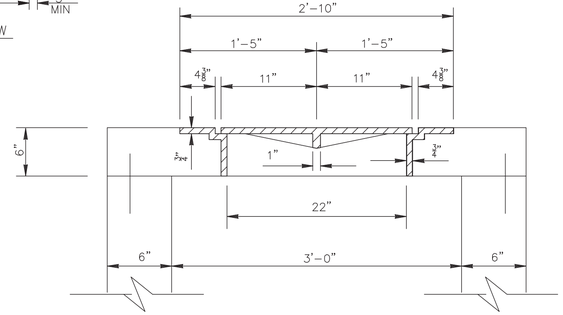
SL–DR–29



PLAN VIEW



SECTION A

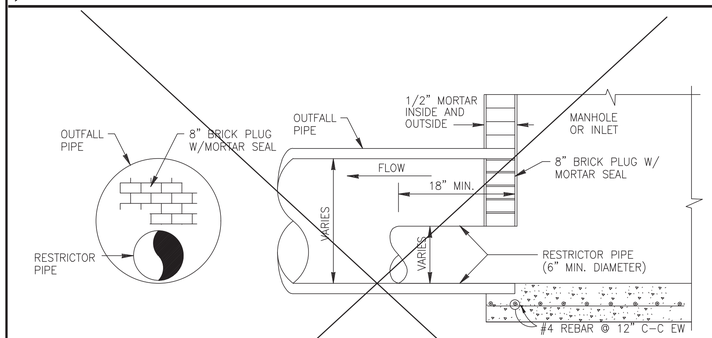


FRAME AND COVER SECTION

JUNCTION BOX

N.T.S.

SL–DR–30



CHOKE OUTFALL RESTRICTOR DETAIL

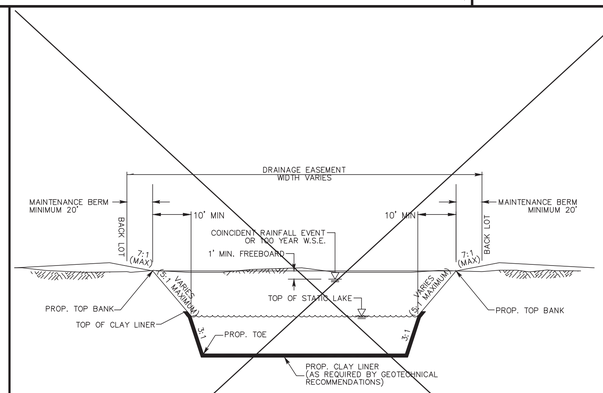
STORM SEWER CHOKE RESTRICTOR

N.T.S.

SL–DR–31

REFER TO:

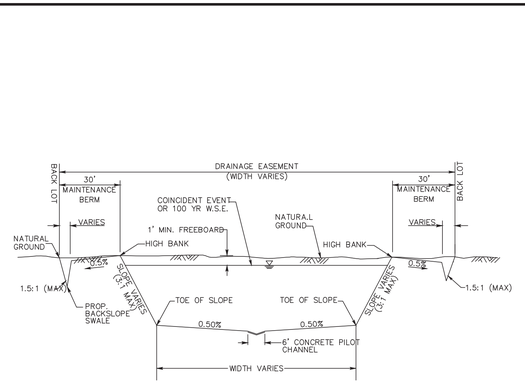
1. *GENERAL NOTES*
2. *STORM SEWER NOTES*



WET DETENTION POND/AMENITY LAKE

N.T.S.

SL–DR–32



DRY DETENTION POND

N.T.S.

SL–DR–33

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER
CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–10

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN: _____
PROFILE:
HORIZONTAL: _____
VERTICAL: _____

PROJECT:

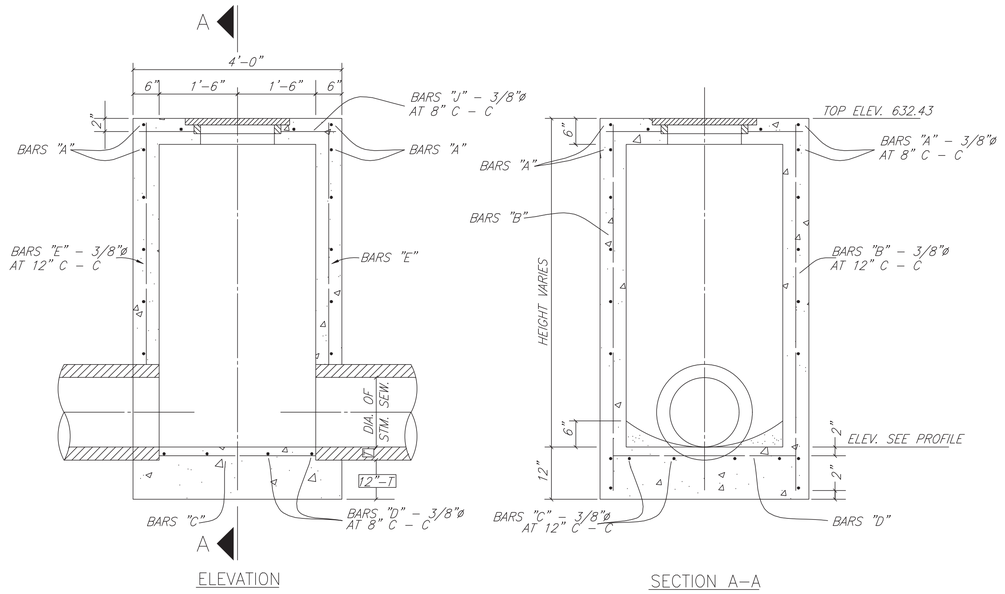
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

STORM SEWER
CONSTRUCTION DETAILS
SL–10

PROJECT NO. 16182

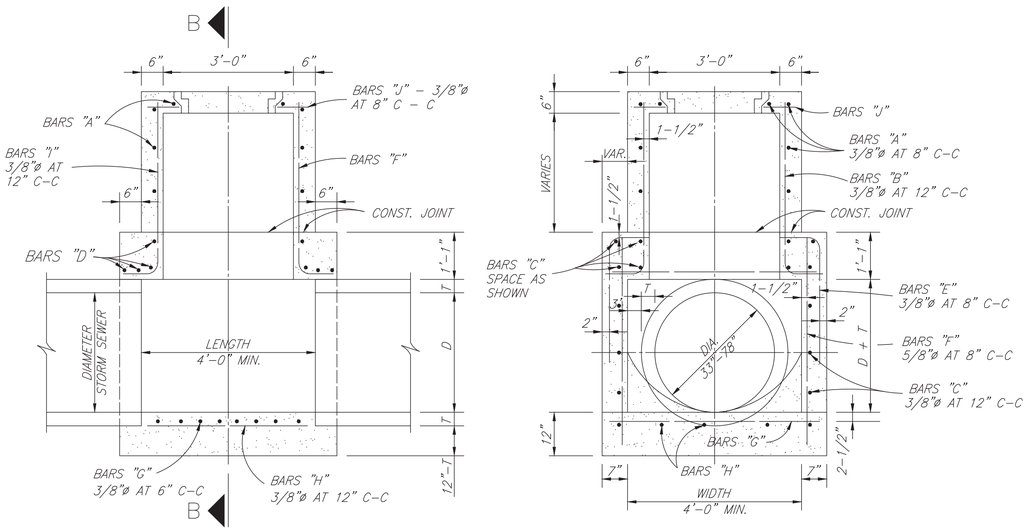
J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jpena

16182 DETAIL SET.DWG



STORM SEWER TYPE A MANHOLE

MAX. PIPE SIZE 30" - N.T.S.



TYPE B STORM SEWER MANHOLE

MAX. PIPE SIZE 78" - N.T.S.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEEREING DEPARTMENT

CONSTRUCTION PLANS FOR:

JUNCTION BOX MANHOLES

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-11

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
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PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

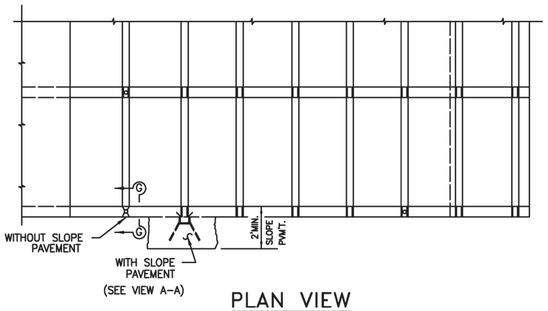
JUNCTION BOX MANHOLES SL-11

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jperro

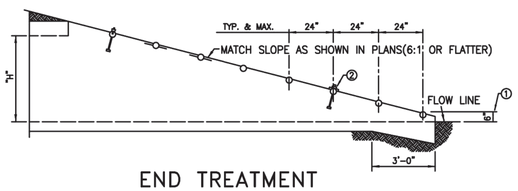
16182 DETAIL SET.DWG

PLOT TIME:



PLAN VIEW

SL-DR-34

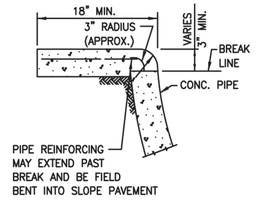


END TREATMENT
SINGLE & MULTIPLE
BOX CULVERTS

N.T.S.

SL-DR-36

①TOP OF SAFETY PIPE RUNNER(TYP.)
②THIRD PIPE RUNNER TO HAVE BOLTED CONNECTION FOR CLEANOUT ACCESS.



SECTION (D)

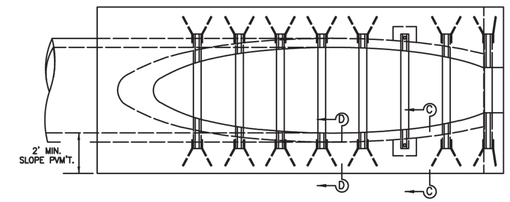
SL-DR-35

NOTES:

1. THESE DETAILS ARE TO BE USED AS A GUIDE FOR INSTALLATION OF SAFETY PIPE RUNNERS FOR CROSS-DRAINAGE STRUCTURES WHERE OUT OF CONTROL VEHICLES MAY TRAVERSE THE OPENING APPROXIMATELY PERPENDICULAR TO THE SAFETY PIPE RUNNER. SOME INSTALLATIONS MAY REQUIRE THE PREPARATION OF SPECIAL DETAILS. IN GENERAL, SAFETY PIPE RUNNERS ARE INSTALLED ON CROSS-DRAINAGE STRUCTURES AT MAXIMUM SPACINGS OF APPROXIMATELY 24 INCHES.
   SINGLE AND MULTIPE 24" (IN.) OR SMALLER DIAMETER PIPES ARE PERMISSIBLE WITHOUT PIPE RUNNERS. SINGLE OR MULTIPLE BOX CULVERTS WITH SPANS OF 24" OR LESS ARE ALSO PERMISSIBLE WITHOUT SAFETY PIPE RUNNERS.
   DESIGN: SAFETY PIPE RUNNERS ARE DESIGNED FOR A TRAVERSING LOAD OF 1,800 POUNDS AT YIELD AS RECOMMENDED BY RESEARCH REPORT 280-J, SAFETY TREATMENT OF ROADSIDE CROSS-DRAINAGE STRUCTURES, TEXAS TRANSPORTATION INSTITUTE, MARCH 1981.
2. SEE STORM OUTFALL DETAILS FOR SLOPE PAVEMENT REQUIREMENTS.

DIA.	WALL	O.D.	SLOPE	PIPE LGTH	TYPE	A INCH	B INCH	C INCH	D INCH	L	LENGTH END SEC FT.
24"	3"	30"	3:1	2-6"	2	3	9	36	54	7'-6"	11.27
			4:1	2-6"	2	3	9	24	48	5'-3"	12.33
			6:1	3-6"	3	3	9	36	72	12'-2"	18.23
36"	4"	44"	3:1	2-7"	2	4	10	36	54	10'-8"	14.75
			4:1	3-6"	3	4	10	26	60	13'-0"	18.21
			6:1	4-6"	4	4	10	36	72	18'-0"	25.36
42"	4"	51"	3:1	2-7"	2	4	10	27	45	11'-3"	15.81
			4:1	3-7"	3	4	10	51	75	16'-5"	21.9
			6:1	4-7"	4	4	10	54	90	22'-6"	30.41
48"	5"	58"	3:1	3-6"	3	5	11	36	54	13-6"	18.44
			4:1	3-7"	3	5	11	39	63	17'-3"	23.27
			6:1	4-7"	4	5	11	36	72	24'-0"	32.44
54"	5"	65"	3:1	3-6"	3	5	11	27	45	14'-3"	19.5
			4:1	4-6"	4	5	11	36	60	19-0"	25.43
			6:1	5-7"	5	5	11	63	99	29-3"	38.27
60"	6"	72"	3:1	3-7"	3	6	12	45	63	17'-3"	22.64
			4:1	4-7"	4	6	12	60	84	23'-0"	29.98
			6:1	5-7"	5	6	12	45	81	30'-9"	40.28

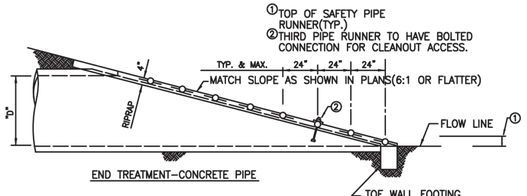
SL-DR-39



PLAN VIEW
CONCRETE PIPE

NOTE:
24" (IN.) TREATMENT REQUIRES NO BARS.
36" (IN.) AND LARGER REQUIRES BARS.
ALL BOLTED BARS ARE ACCEPTABLE

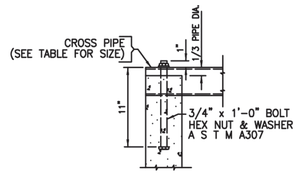
SL-DR-34



END TREATMENT
CONCRETE PIPE

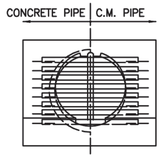
N.T.S.

SL-DR-36

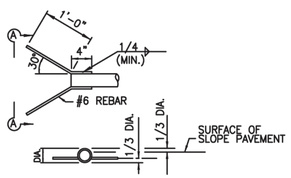


SECTION (G)

SL-DR-35

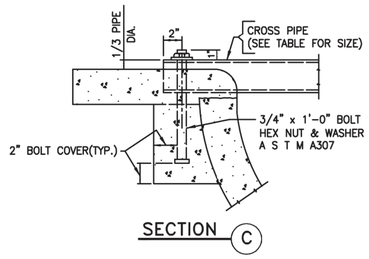


END VIEW
CONCRETE



VIEW A-A

SL-DR-37



SECTION (C)

DEEPEN AND WIDEN SLOPE PAVEMENT AROUND END OF CROSS PIPE AND PROVIDE BOLTED CONNECTION TO ALLOW CLEANOUT ACCES..

SL-DR-35

REQUIRED PIPE SIZES FOR GIVEN PIPE YIELD

CULVERT SIZE	PIPE RUNNER LENGTH	35 KS: ASTM A53, TX E & S GR. B			42 KS: ASTM A500, GR. B			52 KS: API 5LX52		
		NOM.	O.D.	I.D.	NOM.	O.D.	I.D.	NOM.	O.D.	I.D.
36"	48"	3" XXS 3 1/2" XS	3.500 4.000	2.300 3.364	3" x S 3 1/2" STD.	3.500 4.000	2.900 3.548	3' STD.	3.500	3.068
42"	54"	3" XXS 3 1/2" XS 4" STD.	3.500 4.000 4.500	2.300 3.364 4.026	3" XXS 3 1/2" XS 4" STD.	3.500 4.000 4.500	2.300 3.364 4.026	3" XS 3 1/2" STD.	3.500 4.000	2.900 3.548
48"	60"	3" XXS 4" XS	3.500 4.500	2.300 3.826	3" XXS 3 1/2" XS 4" STD.	3.500 4.000 4.500	2.300 3.364 4.026	3" XXS 3 1/2" STD.	3.500 4.000	2.300 3.548
54"	66"	4" XS 5" STD.	4.500 5.563	3.826 5.047	3" XXS 4" STD.	3.500 4.500	2.300 4.026	3" XXS 3 1/2" XS 4" STD.	3.500 4.000 4.500	2.300 3.364 4.026
60"	72"	4" XS 5" STD.	4.500 5.563	3.826 5.047	4" XS 5" STD.	4.500 5.563	3.826 5.047	3" XXS 3 1/2" XS 4" STD.	3.500 4.000 4.500	2.300 3.364 4.026

SL-DR-38

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEEREING DEPARTMENT

CONSTRUCTION PLANS FOR:

SLOPE END TREATMENT

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-12

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED
PROFESSIONAL ENGINEER

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03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

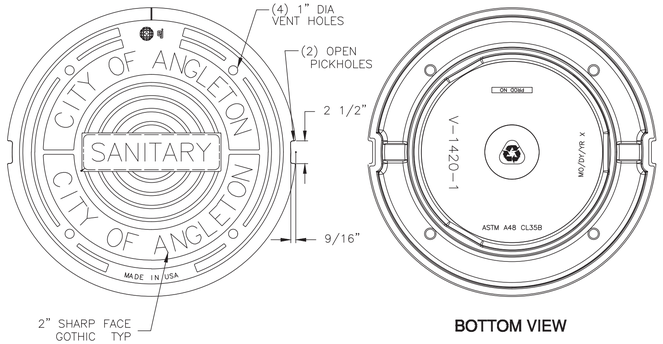
SLOPE END TREATMENT
SL-12

PROJECT NO. 16182

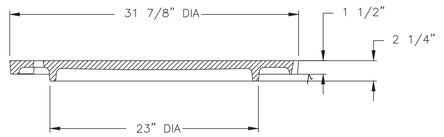
J:\16000S\16160\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 Jenna

16182 DETAIL SET.DWG

V1420-1 Cover



BOTTOM VIEW



COVER SECTION

NOTES

1. MATERIAL SPECIFICATION SHALL BE ASTM A-48 CLASS 35B.
2. COVER TO BE SOLID, WITHOUT HOLES AND WITH NON-PENETRATION RIM ACCESS RECESSES ONLY.
3. HORIZONTAL BEARING SURFACES TO BE MACHINED AND SEALED AT INSTALLATION WITH WATERPROOF GREASE COATING.
4. LOAD RATING TO BE HEAVY-DUTY.
5. MANHOLE FRAMES AND COVERS SET IN FARM TO MARKET ROADS OR HIGHWAYS SHALL FOLLOW TXDOT SPECIFICATIONS. (UNLESS OTHERWISE NOTED BY ANGLETON)

1 32" Manhole Cover and Frame
Scale: NTS

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

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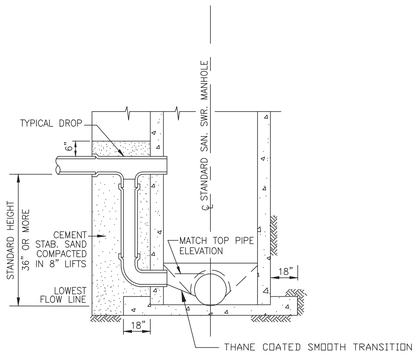
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

SANITARY SEWER MANHOLE CONSTRUCTION DETAILS

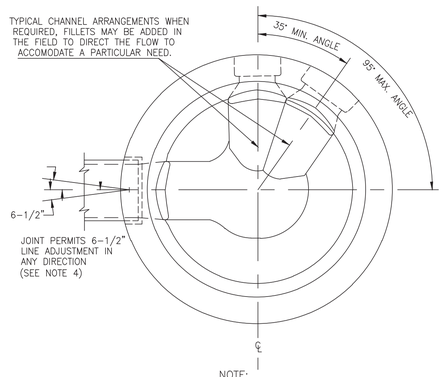
PROJECT NO. 16182



STANDARD DROP DETAIL

(SEE C.S.S. NOTES)

SL-SS-05



PIPING CONNECTIONS DETAIL

SL-SS-05

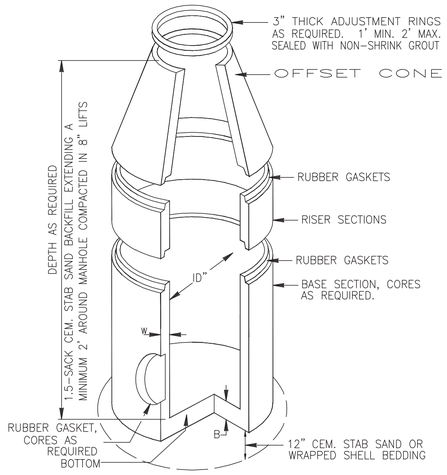
NOTE:

1. INFLUENT AND EXFLUENT PIPING CONNECTIONS TO MANHOLE SHALL BE ALIGNED TO PREVENT REVERSE FLOW.
2. INFLUENT AND EXFLUENT CONNECTIONS ARE LIMITED TO A MAXIMUM 90° INCLUDED ANGLE OF CONVERGENCE.
3. MINIMUM 35° AND MAXIMUM 90° INCLUDED ANGLES MUST BE PROVIDED BETWEEN MULTIPLE INFLUENT CONNECTIONS.
4. ANGLE OF DEFLECTION AT PIPING JOINTS AS PER MANUFACTURE'S RECOMMENDATIONS.

NOTES:

1. CONTRACTOR SHALL CONTACT CITY OF SUGAR LAND ENGINEERING DEPARTMENT AT (281) 275-2780 IF WET SAND OR OTHER UNSTABLE SOIL CONDITIONS, HIGH WATER TABLE AND/OR UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED.
2. SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL GOVERN.
3. SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED A MINIMUM OF FOUR FOOT FROM BACK OF CURB ON CURB AND GUTTER ROADWAYS AND THREE FEET FROM EDGE OF TRAVELLED ROADWAY ON THOSE THOROUGHFARES HAVING NO CURBING, MEASURED FROM OUTSIDE DIAMETER OF MANHOLE. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED BENEATH STREET PAVING EXCEPT WHERE SPECIFICALLY AUTHORIZED BY CITY ENGINEER AND SO DESIGNATED ON APPROVED CONSTRUCTION DRAWINGS.
4. ALL SUCH MANHOLE COVERS SHALL HAVE THE CITY OF SUGAR LAND EMBLEM AND THE WORDS "SUGAR LAND" AND "SANITARY SEWER" CAST IN RAISED RELIEF AS DEPICTED IN CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS. ALL SANITARY SEWER MANHOLES SHALL INCORPORATE INFLOW PROTECTORS.
5. MANHOLE RIM ELEVATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY. CONTRACTORS SHALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE FINISHED GRADE WITHIN RIGHTS-OF-WAY AND EASEMENTS AT EACH MANHOLE LOCATION AFTER FINAL GRADING. ADJUSTMENTS TO MANHOLE RIM ELEVATIONS SHALL BE ACCOMPLISHED BY THE USE OF THROAT RINGS ONLY (MAX. OF 24 INCHES PERMITTED). THE AREA ADJACENT TO SANITARY SEWER MANHOLE LOCATIONS SHALL BE GRADED AWAY FROM SUCH MANHOLES SO AS PREVENT ENTRY OF STORM WATER RUNOFF TO THE SANITARY SEWER SYSTEM.
6. DROP CONNECTIONS ARE REQUIRED WHEN INVERT ELEVATION OF SEWER LINE TO BE CONNECTED EXCEEDS 36 INCHES DISTANCE ABOVE INVERT ELEVATION OF MANHOLE BASE. ALL DROP CONNECTIONS SHALL BE CONSTRUCTED OF SAME MATERIALS AS SEWER AND SHALL BE CONSTRUCTED EXTERIOR TO MANHOLE. PIPE CONNECTIONS TO MANHOLES SHALL BE SO CONSTRUCTED AS TO BE WATERTIGHT AND TO ALIGN UPPER INSIDE PIPE WALL ELEVATIONS OF ALL PIPING CONNECTED TO BASE OF MANHOLE UNIFORMLY, REGARDLESS OF PIPE DIAMETERS. DROP ASSEMBLIES SHALL BE BEDDED IN CEMENT STABILIZED SAND. CEMENT STABILIZED SAND SHALL EXTEND A MINIMUM OF SIX INCHES PAST PIPING LATERALLY FROM BASE OF MANHOLE UPWARD TO A POINT SIX INCHES (MINIMUM) ABOVE THE HORIZONTAL SEWER PIPING WHERE CONNECTED TO THE MANHOLE ABOVE THE VERTICAL DROP.
7. CONNECTIONS TO EXISTING AND/OR NEW SANITARY SEWER MANHOLES CONSTRUCTED OF PRECAST CONCRETE NOT HAVING PRECORED HOLES OF CORRECT DIAMETER, LOCATION AND FIELD CORING ONLY SHALL ACCOMPLISH INVERT ELEVATION. IN NO INSTANCE WILL EITHER MANUAL OR PNEUMATIC CHISELS AND/OR HAMMER DRILLS BE UTILIZED TO BREAK HOLES IN PRECAST CONCRETE MANHOLES, PIPE SEGMENTS OR OTHER PRECAST STRUCTURES SUCH AS LIFT STATIONS.
8. BEDDING AND BACKFILL OF SANITARY SEWER PIPING AND MANHOLES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH CITY OF SUGAR LAND DESIGN STANDARDS. A 1.5-SACK MIX IS REQUIRED FOR ALL CEMENT STABILIZED SAND BEDDING AND SUCH BEDDING SHALL BE INSTALLED IN LIFTS OF EIGHT INCHES MAXIMUM.
9. SOLVENT WELDED JOINTS ARE NOT AN ACCEPTABLE JOINING METHOD FOR SANITARY SEWERS CONSTRUCTED OF PVC PIPING MATERIALS AND LOCATED WITHIN RIGHTS-OF-WAY OR EASEMENTS. RUBBER GASKETED BELL AND SPIGOT SANITARY SEWER JOINTS ARE MANDATORY. BELL (FEMALE) ENDS OF PIPE SHALL BE INSTALLED ON UPSTREAM SIDE WITH SPIGOT (MALE) ENDS ORIENTED DOWNSTREAM.
10. SANITARY SEWER SERVICE LEADS SHALL BE EXTENDED TO RIGHTS-OF-WAY AND/OR EASEMENT LINES AS APPLICABLE AND CAPPED/PLUGGED FOR FUTURE CONNECTIONS. SERVICE LEADS ARE TO BE INSTALLED SO AS TO PASS UNDER POTABLE WATER PIPING AT CROSSINGS WHERE POSSIBLE.
11. EACH SANITARY SEWER SERVICE LEAD STUB, PLUGGED WYE BRANCH OUTLET AND STACK SHALL BE MARKED WITH A PRESSURE TREATED 4 X 4 TIMBER AT THE TIME OF CONSTRUCTION, BEGINNING AT THE INVERT ELEVATION OF THE STUB OR WYE AND AT AN ELEVATION TWO FEET BELOW THE CAPPED TERMINATION POINT OF THE STACK AND EXTENDING TWO FEET ABOVE FINISHED GRADE. EACH TIMBER MARKER SHALL BE PAINTED RED AND LABELED "SANITARY SEWER STUB", "SANITARY SEWER WYE" OR "SANITARY SEWER STACK" AS APPROPRIATE WITH STUB, WYE BRANCH OUTLET OR STACK SIZE NOTED.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION, DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR OTHER CONSTRUCTION, CONTRACTOR SHALL ENSURE THAT STORM DRAINAGE PATHWAYS ARE MAINTAINED AND REMAIN OPEN TO ENSURE POSITIVE DRAINAGE AND THAT SUCH CONVEYANCES ARE NOT IMPEDED OR BLOCKED IN ANY WAY. STORM SEWER INLETS SHALL BE PROTECTED FROM ENTRY OF SILT, TRASH, DEBRIS AND ANY SUBSTANCES DELETERIOUS TO THE STORM SEWER SYSTEM AND/OR WATERWAYS RECEIVING STORM WATER RUNOFF. CONTRACTOR SHALL AT COMPLETION OF WORK, FILL LOW SPOTS AND GRADE ALL RIGHTS-OF-WAY AND UTILITY EASEMENTS AND REGRADE/RESTORE DITCHES AS NECESSARY TO MAINTAIN AND/OR ESTABLISH POSITIVE DRAINAGE.
13. ALL SANITARY SEWER PIPING AND BEDDING SHALL BE INSPECTED BY CITY CONSTRUCTION INSPECTOR FOR CONFORMANCE WITH CITY INFRASTRUCTURE STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY NOTIFY THE CITY OF ALL CONSTRUCTION ACTIVITIES AND TO CONFORM TO CITY OF SUGAR LAND PUBLIC WORKS DEPARTMENT INSPECTION POLICY.
14. C.S.S. 1' ABOVE PIPE AND 6" BELOW PIPE MINIMUM.
15. SEE GENERAL NOTES AND C.S.S. NOTES.

SL-SS-07



SPECIFICATIONS:

CONCRETE: CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. RATES FOR H-20 LOADING.

REINFORCEMENT: STRUCTURAL REINFORCEMENT CONFORMING TO ASTM-C-478.

C.I. CASTINGS: CAST IRON FRAMES AND LIDS ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 35.

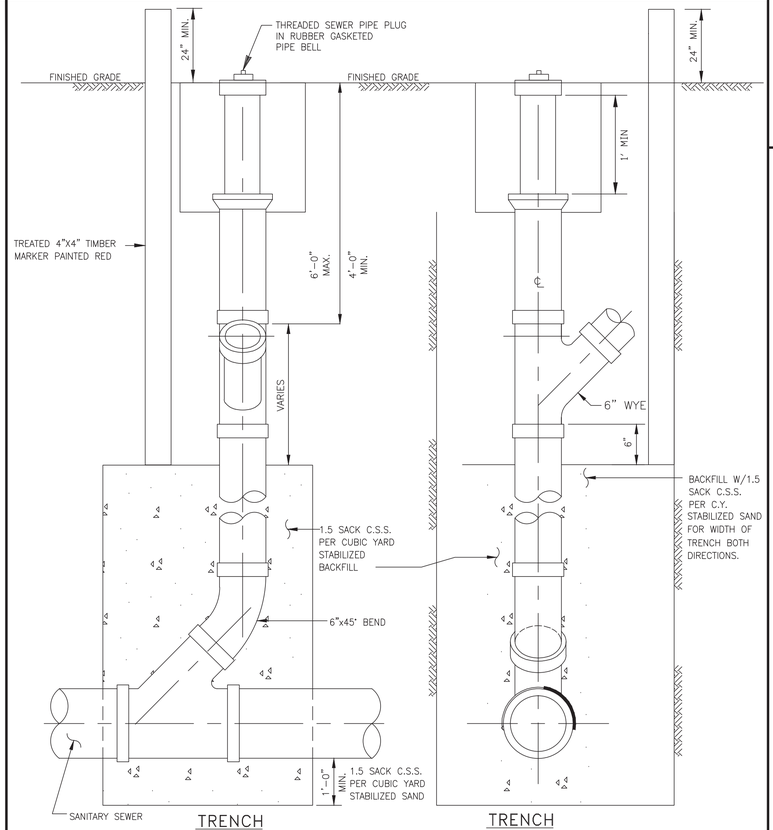
NOTES

1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED WITH APPROVED RUBBER GASKET
3. STRUCTURE TO BE PLACED ON 12" STABILIZED BASE.
4. C.S.S. SHALL BE BROUGHT TO WITHIN 2-FT OF TOP OF MANHOLE.
5. PRE-CAST MANHOLE SHALL BE IN COMPLIANCE APPROVED PRODUCT LIST.
6. THANE COAT SHALL BE IN COMPLANCE WITH APPROVED PRODUCT LIST.
7. INVERTS SHALL COMPLY WITH C.O.S.L., DESIGN MANUAL SPECIFICATIONS.
8. INFLOW PROTECTORS REQUIRED ON ALL SANITARY MANHOLES.
9. REFER TO SANITARY MANHOLE LIDS, C.S.S. NOTES, MODIFIED BEDDING DETAILS AND NOTES.

PRECAST SANITARY MANHOLE

N.T.S.

SL-SS-03



TRENCH SIDE VIEW

TRENCH END VIEW

STACK DETAIL

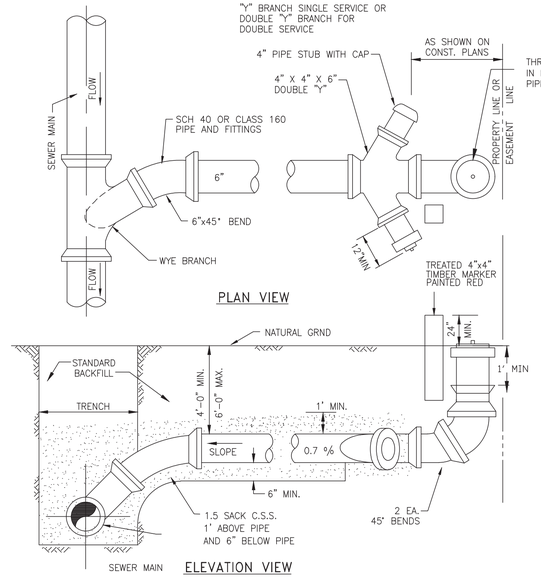
N.T.S.

NOTES;

A.) NO STACKS ON MAINS OVER 16' DEEP OR IN WET SAND CONDIITIONS.

B.) ALL STACK CONNECTIONS SHALL BE IN-LINE FITTINGS.

SL-SS-04



SANITARY SEWER SERVICE CONNECTION

N.T.S.

SL-SS-06

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

SANITARY SEWER CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-14

SHEET OF

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jperra

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

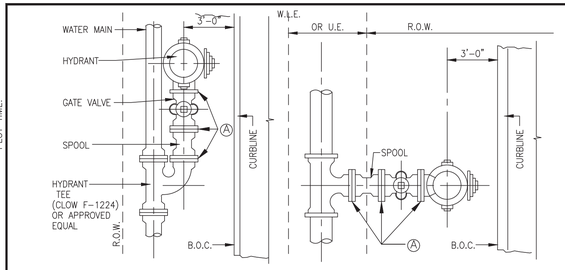
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

SANITARY SEWER CONSTRUCTION DETAILS SL-14

PROJECT NO. 16182

33

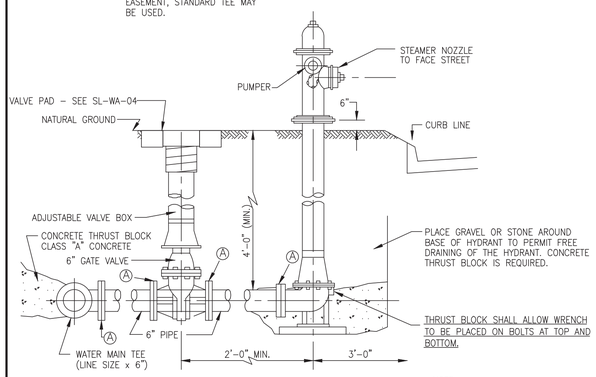
16182 DETAIL SET.DWG



R.O.W. INSTALLATION
N.T.S.

EASEMENT INSTALLATION
N.T.S.

NOTE:
WHEN WATER LINE IS LOCATED IN EASEMENT, STANDARD TEE MAY BE USED.



FLUSHING VALVE COLOR CODE

MAIN LINE DIAMETER	BONNET, PUMPER CAP AND STEAMER CAP
6 INCHES (AND LESS)	YELLOW
8 INCHES	WHITE
12 TO 16 INCHES	GREEN
GREATER THAN 16 INCHES	ORANGE

FIRE HYDRANT BODY TO BE PAINTED GEO-GLEN 301 BRIGHT SILVER ALUMINUM POLYURETHANE ENAMEL, BY GEO-GLEN ENTERPRISES OR APPROVED EQUAL.

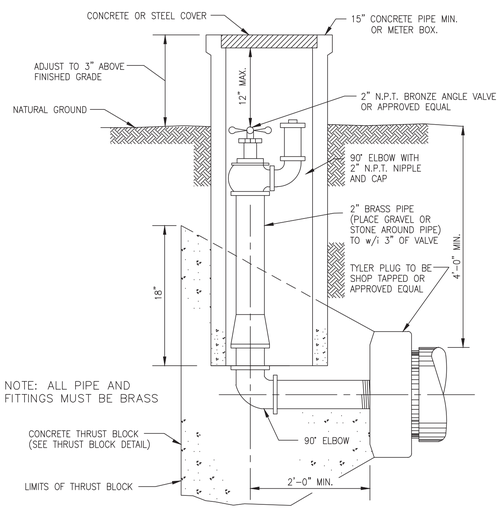
NOTE:
ALL FIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION 250 W/ STORZ INTEGRAL CONNECTOR STEAMER NOZZLE SIZE 5-1/4" TWO PUMPER 2-1/2" N.S.T.

ALL FLUSHING VALVES TO BE SAND BLASTED AND PAINTED AS PER C.O.S.L. DESIGN STANDARDS.

Ⓐ =RESTRAINED JOINT

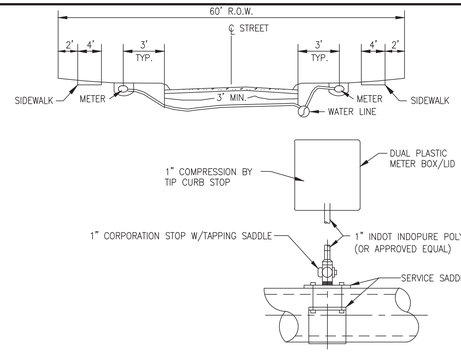
TYPICAL GATE & FIRE HYDRANT INSTALLATION
N.T.S.

SL-WA-01



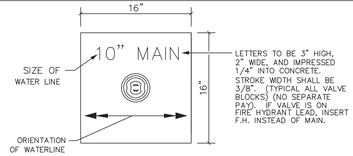
2" BLOW OFF VALVE ASSEMBLY
N.T.S.

SL-WA-02



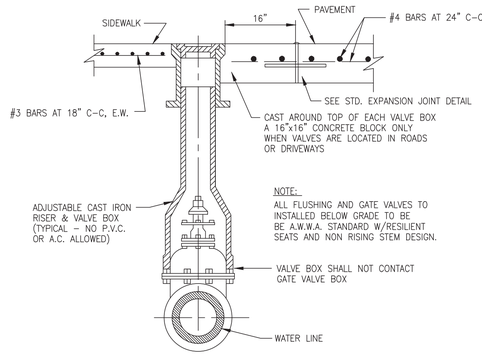
WATER SERVICE CONNECTION AND WATER SERVICE TAPPING ASSEMBLY DETAIL
N.T.S.

SL-WA-03



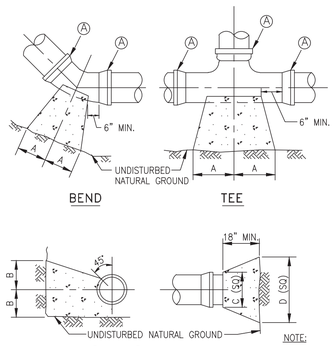
CONCRETE PAD
N.T.S.

NOTE: ALL VALVES MUST HAVE CONCRETE PAD



VALVE BOX INSTALLATION DETAIL
N.T.S.

SL-WA-04

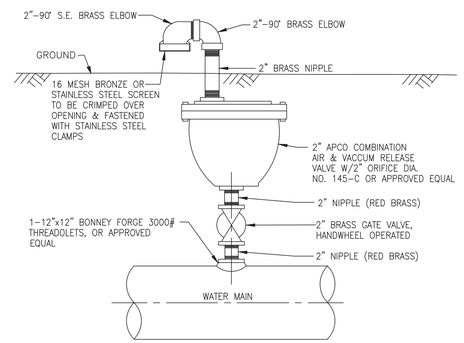


NOTE:
THRUST BLOCKS AT TRENCH FACE MUST HAVE A MINIMUM BEARING SURFACE OF 10 SQ. FEET AND SHALL BE NO SMALLER THAN 1.5 TIMES PIPE DIAMETER.
ALL CONCRETE SHALL BE 5 SACK MIN., 3000 P.S.I.

THRUST BLOCK DETAIL
N.T.S.

Ⓐ =RESTRAINED JOINT

SL-WA-05

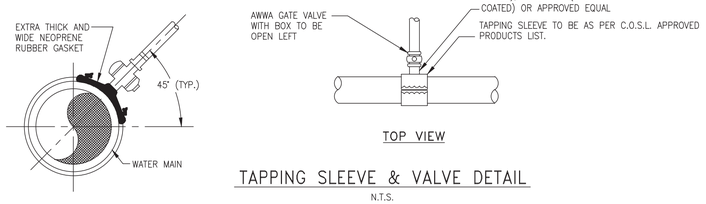


WATER MAIN

AIR RELEASE VALVE DETAIL
N.T.S.

SL-WA-06

NOTE:
EXTEND 2" NIPPLE TO ALLOW 2"-90° S.E. BRASS ELBOW TO BE ABOVE GROUND. COVER EXPOSED WITH CONCRETE PIPE WITH STEEL COVER. (SEE SL-WA-02)



TOP VIEW

TAPPING SLEEVE & VALVE DETAIL
N.T.S.

SL-WA-07

NOTES: POLYETHYLENE WRAP FOR IRON PIPE

NOTE:

1. POLYETHYLENE FILM SHALL BE USED AS A WRAP TO PROTECT CAST IRON AND OTHER METALS IN A CORROSIVE SOIL ENVIRONMENT.
2. AN 8 MIL POLYETHYLENE FILM WRAP SHALL BE REQUIRED AROUND ALL METAL PIPE AND APPURTENANCES (EXCEPT FIRE HYDRANTS).
3. POLYETHYLENE FILM SHALL BE FURNISHED AND INSTALLED EITHER IN TUBULAR FORM PRIOR TO LOWERING THE PIPE IN TRENCH OR IN SHEET FORM.
4. POLYETHYLENE TUBE ENCASEMENT SHALL CONFORM WITH THE MINIMUM REQUIREMENTS OF "POLYETHYLENE ENCASEMENT FOR GRAY AND DUCTILE CAST-IRON PIPING FOR WATER AND OTHER LIQUIDS", ANSI/AWWA C105, CURRENT REVISION. SOILS WITHIN A PROJECT SHALL BE TESTED IN ACCORDANCE WITH APPENDIX A OF ANSI/AWWA C105 TO ADEQUATELY DETERMINE THE REQUIREMENTS FOR ENCASEMENT.
5. ALL FITTINGS AND PIPE JOINTS WITHIN 10' OF A FITTING SHALL HAVE RESTRAINT JOINTS

SIZE	90° BEND		45° BEND		22 1/2° BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	A	B
2 1/2"	12"	7"	6"	7"	6"	6"	7"	8"	8"	14"
6"	16"	10"	9"	10"	6"	12"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"
20"	50"	40"	30"	40"	18"	30"	30"	40"	30"	*78"
24"	50"	40"	30"	40"	18"	30"	30"	40"	30"	*78"
30"	60"	48"	36"	48"	20"	36"	36"	48"	36"	*96"

BENDS, TEES & PLUGS FOR PIPE OF VARIOUS SIZES

SL-WA-08

CONSTRUCTION NOTES:

1. WATER LINES 12" (IN.) AND LESS SHALL BE AWWA C-900 DR18 WATER LINE GREATER THAN 12" (IN.) IN ø SHALL BE AWWA C-905 DR 18
2. ALL FLUSHING VALVES AND GATE VALVES TO BE AMERICAN WATER WORKS ASSOC. (AWWA) STANDARD COUNTERCLOCKWISE OPENING WITH NON-RISING STEM DESIGN.
3. ALL DUCTILE IRON PIPE SHALL BE CLASS 50 MORTAR LINED. NO A.C. PIPE WILL BE ALLOWED AND ALL DUCTILE IRON FITTINGS SHALL BE MORTAR LINED PUSHON OR MECHANICAL JOINTS.
4. ALL BACKFILL WITHIN THE R.O.W. SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
5. MINIMUM SPACING BETWEEN TAPS SHALL BE 2' AT ALTERNATING TAP ANGLES.

SL-WA-08

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-15

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net *(713) 993-6453*

PLAN: _____
PROFILE:
HORIZONTAL: _____
VERTICAL: _____

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

WATER LINE CONSTRUCTION DETAILS SL-15

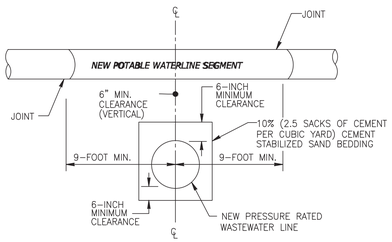
PROJECT NO. 16182

PLOT DATE: J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jpena

16182 DETAIL SET.DWG

I

NEW POTABLE WATERLINE CROSSING NEW PRESSURE RATED WASTEWATER LINE WITH SEGMENT LENGHTS OF EIGHTEEN (18) FEET OR GREATER, HAVING 6 INCHES OF VERTICAL CLEARANCE AND 4 FEET OF HORIZONTAL CLEARANCE

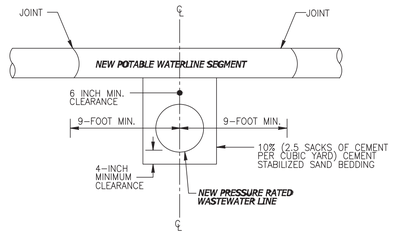


- WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN JOINTS OF THE WASTEWATER LINE.
- MINIMUM WASTEWATER PIPE STIFFNESS OF 115 PSI AT 5% DEFLECTION.
- EMBED WASTEWATER LINE IN CEMENT STABILIZED SAND TO AT LEAST 12" INCHES BEYOND EACH JOINT OF CROSSED SECTION OF PIPE.

SL-WA-09

II

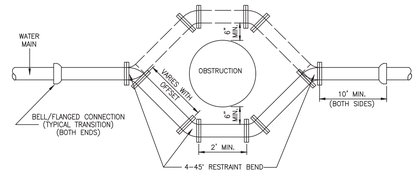
NEW POTABLE WATERLINE CROSSING NEW PRESSURE RATED WASTEWATER LINE



- WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN JOINTS OF THE WASTEWATER LINE.
- MINIMUM WASTEWATER PIPE STIFFNESS OF 115 PSI AT 5% DEFLECTION.
- EMBED WASTEWATER LINE IN CEMENT STABILIZED SAND TO AT LEAST 12" INCHES BEYOND EACH JOINT OF CROSSED SECTION OF PIPE.

SL-WA-10

III



FOR A LINE TO PASS OVER AN OBSTRUCTION RATHER THAN UNDER, IT MUST HAVE ADEQUATE COVER AND BE APPROVED BY THE ENGINEERING DEPARTMENT.

NOTES:

1. PIPE MATERIAL SHALL BE AWWA C900 PVC, DR-14, 200 PSI WITH INTEGRAL PVC RESTRAINED JOINTS.
2. OFFSET ASSEMBLY MUST PASS OVER THE OBSTRUCTION AS LONG AS THE MINIMUM CLEARANCE IS MAINTAINED. SPECIFIC APPROVAL FROM THE UTILITES DEPARTMENT MUST BE GRANTED FOR THE OFFSET TO PASS UNDER THE OBSTRUCTION.
3. MATERIAL AND COATINGS SHALL BE IN ACCCORDANCE WITH WATER MAIN STANDARD SPECIFICATIONS.
4. RESTRAIN EXISTING PIPING BEYOND OFFSET SECTION AS REQUIRED TO PREVENT MOVEMENT.
5. ALL PVC PRODUCTS MUST BE LISTED ON CITY OF SUGAR LAND'S APPROVED PRODUCTS LIST.

MIN. PIPE WALL THICKNESS	
4"	– 0.250"
6"	– 0.280"
8"	– 0.322"
12" AND LARGER	– 0.375"

PVC WATER PIPE OFFSET ASSEMBLY

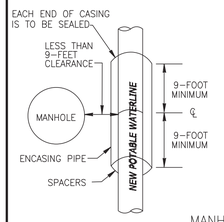
SL-WA-11

GENERAL NOTES:

1. CONTRACTOR SHALL CONTACT CITY OF SUGAR LAND ENGINEERING DEPARTMENT AT (281) 275-2780 IF WET SAND OR OTHER UNSTABLE SOIL CONDITIONS, HIGH WATER TABLE AND/OR UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED.
2. SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL GOVERN.
3. ALL NEW POTABLE WATER LINES AND SANITARY SEWER FORCE MAINS SHALL BE BEDDED IN COMPACTED BANK SAND A MINIMUM OF 6 INCHES BELOW, ABOVE AND TO EITHER SIDE OF SUCH PIPING.
4. ALL NEW SANITARY SEWER GRAVITY DRAIN LINES SHALL BE BEDDED IN CEMENT STABILIZED SAND CONFORMING TO THE REQUIREMENTS FOR EITHER CLASS "A" STANDARD BEDDING OR CLASS "A-A" BEDDING AS APPLICABLE. USE OF MODIFIED "A" OR MODIFIED "A-A" BEDDING FOR SANITARY SEWER INSTALLATIONS WHERE WET SAND CONDITIONS ARE ENCOUNTERED AND SEPARATION DISTANCE TO POTABLE WATER LINES IS LESS THAN 9 FEET REQUIRES APPROVAL BY CITY ENGINEER.
5. CEMENT STABILIZED BEDDING SHALL BE A MINIMUM 1.5 SACK PER CUBIC YARD C.S.S., INSTALLED IN MAXIMUM LIFTS OF 8 INCHES AND MECHANICALLY TAMPED TO 95% PROCTOR.
6. WHERE REQUIRED, SLEEVING (ENCASEMENT) OF POTABLE WATER PIPING AND/OR SANITARY SEWER GRAVITY DRAIN LINES AND FORCE MAINS SHALL BE PROVIDED. SUCH SLEEVING (ENCASEMENT) SHALL BE CONSTRUCTED OF APPROVED PIPING MATERIALS HAVING A MINIMUM PRESSURE RATING OF 150 PSI AND ANNULAR SPACES AT EACH END SHALL BE SEALED WITH A MATERIAL APPROVED FOR SUCH USE.
7. ALL NEW POTABLE WATER LINES SHALL BE SLEEVED (ENCASED) WHERE A MINIMUM OF 9 FEET SEPARATION DISTANCE TO EXISTING OR PROPOSED SANITARY SEWER MANHOLE, LIFT STATION OR WASTEWATER TREATMENT PLANT CANNOT BE MAINTAINED. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CLOSEST PROXIMITY.
8. ALL NEW POTABLE WATER LINES SHALL BE SLEEVED (ENCASED) WHERE LESS THAN 2 FEET VERTICAL OR 4 FEET HORIZONTAL CLEARANCE TO EXISTING OR PROPOSED SANITARY SEWER GRAVITY LINES OR FORCE MAINS CANNOT BE MAINTAINED. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING. WHERE PIPING IS LAID PARALLEL AND MINIMUM SEPARATION DISTANCES CANNOT BE MAINTAINED, SLEEVING SHALL EXTEND AT LEAST 9 FEET PAST THE POINT WHERE MINIMUM SEPARATION DISTANCES ARE ACHIEVED.
9. ALL NEW POTABLE WATER LINES SHALL BE CONSTRUCTED ABOVE EXISTING OR PROPOSED SANITARY SEWER GRAVITY LINES OR FORCE MAINS WHERE POSSIBLE. WHERE INSTALLATION BENEATH SANITARY SEWER GRAVITY LINES OR FORCE MAINS IS UNAVOIDABLE AT POINTS OF CROSSING, SLEEVING (ENCASEMENT) IS REQUIRED FOR ALL NEW POTABLE WATER LINES CONSTRUCTED OF PVC PIPING MATERIALS, REGARDLESS OF SEPARATION DISTANCE. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING.
10. ALL NEW SANITARY SEWER GRAVITY LINES AND/OR FORCE MAINS CONSTRUCTED OF PVC PIPING MATERIALS SHALL BE SLEEVED (ENCASED) WHERE LESS THAN 2 FEET VERTICAL OR 4 FEET HORIZONTAL CLEARANCE TO EXISTING POTABLE WATER PIPING CANNOT BE MAINTAINED. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CLOSEST PROXIMITY.
11. ALL NEW SANITARY SEWER GRAVITY LINES AND/OR FORCE MAINS SHALL BE CONSTRUCTED BELOW EXISTING POTABLE WATER LINES WHERE POSSIBLE. WHERE INSTALLATION ABOVE POTABLE WATER LINES IS UNAVOIDABLE, SLEEVING (ENCASEMENT) IS REQUIRED FOR ALL SUCH SANITARY SEWER LINES CONSTRUCTED OF PVC PIPING MATERIALS, REGARDLESS OF SEPARATION DISTANCE. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING.
12. WHERE NEW SANITARY SEWER SIZING (24 INCH AND GREATER) PRECLUDES THE USE OF PVC PIPING MATERIALS AND SLEEVING (ENCASEMENT) OF THE SANITARY SEWER WOULD OTHERWISE BE REQUIRED BUT IS IMPRACTICAL, THE EXISTING POTABLE WATER PIPING SHALL EITHER BE OFFSET TO PROVIDE THE REQUIRED MINIMUM CLEARANCES OR SLEEVED (ENCASED) IN LIEU OF SLEEVING (ENCASING) THE SANITARY SEWER LINE. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING.
13. IN NO INSTANCE SHALL A FIRE HYDRANT BE INSTALLED WITHIN 9 LINEAR FEET OF A SANITARY SEWER SYSTEM.
14. NOTE: SEPARATION DISTANCES ARE MEASURED FROM THE OUTSIDE DIAMETERS OF EACH PIPE AND FROM THE EXTERIOR SURFACES OF MANHOLES, LIFT STATIONS, WASTEWATER TREATMENT PLANTS AND ASSOCIATED APPURTENANCES.
15. REFER TO GENERAL SANITARY, WATER AND C.S.S. NOTES.

SL-WA-18

DETAIL OF WATER LINE CROSSING WASTEWATER FACILITIES WHERE SEPARATION IS LESS THAN 9' (NINE FEET)

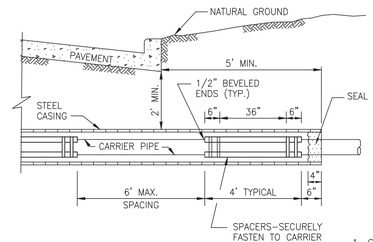


ENCASING PIPE

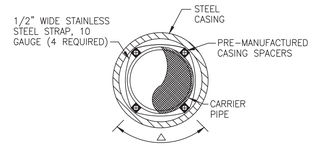
- 150 PSI PRESSURE CLASS PIPE MINIMUM 18 FEET LONG DIAMETER = 2 X WATERLINE DIAMETER
- SPACE AROUND CARRIER PIPE SHALL BE SUPPORTED AT FIVE (5) FOOT (OR LESS INTERVALS WITH SPACERS)
- CENTERED ON CROSSING
- BOTH ENDS SEALED WITH CEMENT GROUT OR A MANUFACTURED WATER TIGHT SEAL.

MANHOLE CLEARANCE

SL-WA-12



ELEVATION



CASING SCHEDULE		
CARRIER PIPE	NOMINAL CASING	MIN. WALL THICKNESS (IN.)
6"	12"	0.11
8"	14"	0.15
10"	16"	0.18
12"	18"	0.20

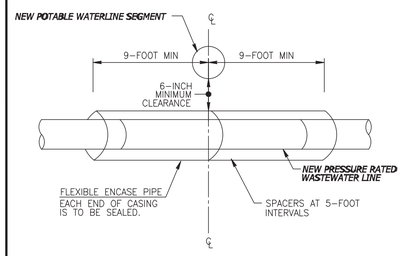
1. CASING SIZE AND THICKNESS SHALL CONFORM TO THE MINIMUM REQUIREMENTS AS SHOWN ON CASING SCHEDULE, OTHER PERMITS AS REQUIRED.
2. MAINTAIN 1" MINIMUM CLEARANCE BETWEEN THE MAXIMUM OUTSIDE DIAMETER OF CARRIER PIPE AND CASING AT ALL LOCATIONS.
3. DIMENSIONS ARE APPROXIMATE ONLY. CONTRACTOR SHALL INSTALL ADEQUATELY SIZED CASING TO ACCOMMODATE THE CARRIER PIPE.

SL-WA-13

IV

ENCASED WASTEWATER LINE

NEW POTABLE WATERLINE CROSSING NEW PRESSURE RATED WASTEWATER LINE WITH SEGMENT LENGHTS OF OF LESS THAN EIGHTEEN (18) FEET

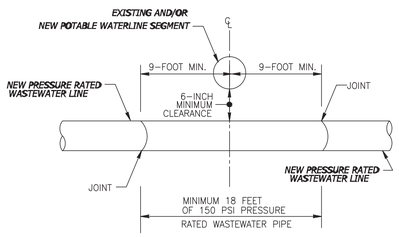


- MINIMUM CASING PIPE STIFFNEESS OF 115 PSI AT 5% DELECTION.
- MINIMUM CASING PIPE DIAMETER * 2 X WASTEWATER LINE DIAMETER.
- THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE (F) FOOT (OR LESS). INTERVALS WITH SPACERS
- EACH END CASING IS TO BE SEALED WITH WATER TIGHT NO-SHRINK GROUT OR MANUFACTURED WATER TIGHT SEAL.

SL-WA-17

ALTERNATIVE A:

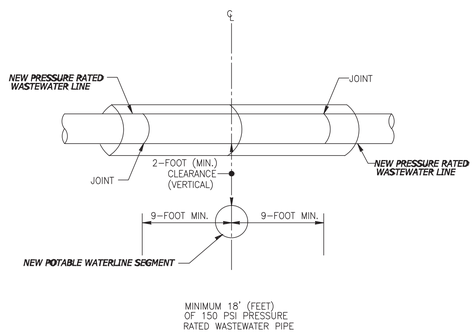
PRESSURE RATED WASTEWATER PIPE



SL-WA-14

ALTERNATIVE B:

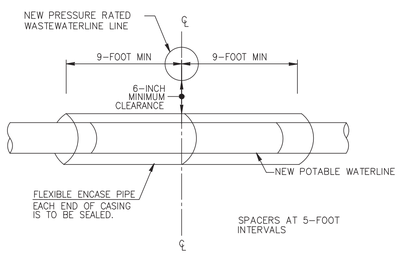
EXISTING POTABLE WATERLINE CROSSING EXISTING PRESSURE RATED WASTEWATER LINE



SL-WA-15

ALTERNATIVE C:

ENCASE NEW POTABLE WATERLINE UNDER A NEW PRESSURE RATED WASTEWATER LINE



- SAME ENCASEMENT CRITERIA AS "ALTERNATIVE B" OR
- NEW WATERLINE (WITHOUT CASING) TO BE CONSTRUCTED OF PVC C-900 (DR-18), DUCTILE IRON WITH MECHANICAL JOINT OR STEEL PIPE WITH WITH WELDED JOINTS.
- BOTH WATERLINE AND WASTEWATER LINE MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS.

SL-WA-16

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE CROSSING DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-16

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

B&L BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

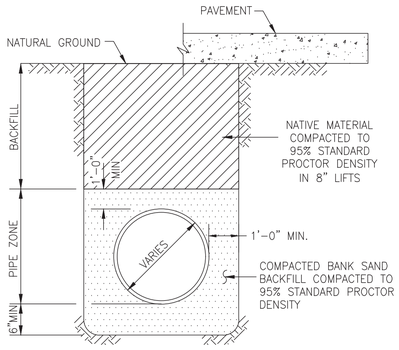
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

WATER LINE CROSSING DETAILS SL-16

PROJECT NO. 16182

A:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jperna

16182 DETAIL SET.DWG



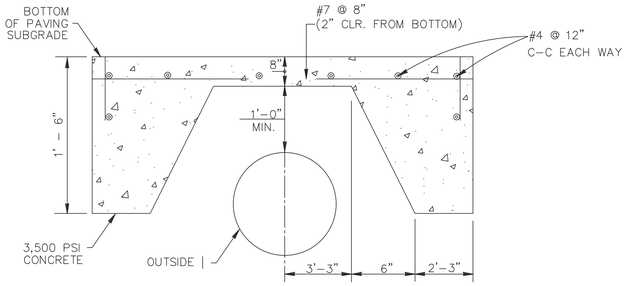
P.V.C. PIPE BEDDING & BACKFILL

N.T.S.

*SEE CONSTRUCTION NOTES

SANITARY FORCE MAIN & WATER LINE BEDDING AND BACKFILL

SL-BB-01



PROTECTIVE SLAB DETAIL

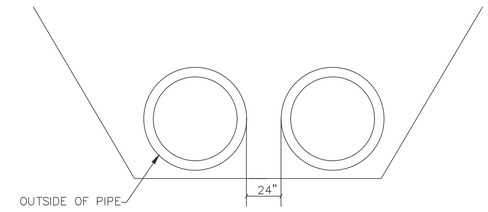
ZERO LOAD TRANSFER CONCRETE SLAB

SL-BB-04

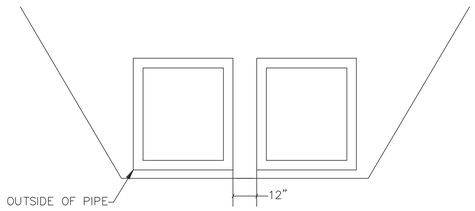
CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONTACT SUGAR LAND ENGINEERING DEPARTMENT IMMEDIATELY IF WET SAND CONDITIONS ARE ENCOUNTERED.
2. LIMESTONE AND RECYCLED CONCRETE DIMENSIONS SHOWN ARE TYPICAL BUT MAY BE VARIED BY ORDER OF CITY ENGINEER.
3. LIMESTONE OR RECYCLED CONCRETE SHALL BE IN ACCORDANCE WITH TXDOT SPECIFICATION No. 248 FLEXIBLE BASE, TYPE A, GRADE 2 AGGREGATE.
4. NO BEDDING SHALL BE INSTALLED IN WET CONDITIONS. WHEN WELL POINTING OR IN WET SAND CONDITIONS, MAINTAIN GROUND WATER 1 (FT) BELOW BOTTOM OF TRENCH FOR A MINIMUM OF 24-HRS AFTER BEDDING AND BACKFILL IS IN PLACE.
5. ALL MATERIALS SHALL BE FROM THE APPROVED PRODUCTS LIST UNLESS SPECIFICALLY APPROVED BY THE CITY ENGINEER.
6. SANITARY SEWER BEDDING FOR WET SAND CONDITIONS SHALL BE AS PER MODIFIED "A".
7. ALL SAND BEDDING FOR WATER LINES SHALL BE CLEAN, MECHANICALLY COMPACTED BANK SAND.
8. REFER TO: MANHOLE DETAILS, SANITARY, C.S.S., GENERAL, WATER CROSSING, WATER DISTRIBUTION DETAILS AND NOTES.
9. ALL BEDDING WILL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
10. A GEOTECHNICAL REPORT MAY BE REQUIRED TO ANALYZE THE BEARING CAPACITY OF EXISTING SOILS AND MAKE A DETERMINATION IF ADDITIONAL BEDDING AND BACKFILL IS APPROPRIATE.

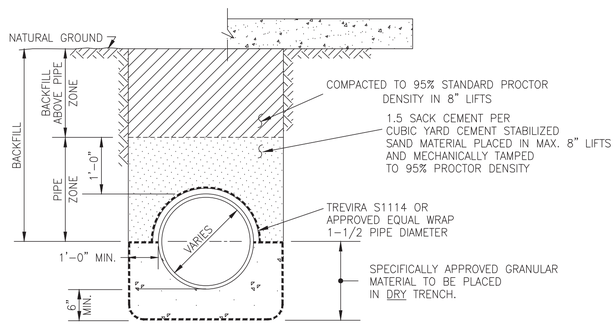
SL-BB-05



PIPE SEPARATION



RCB SEPARATION



MODIFIED "A"

N.T.S.

NOTE: C.S.S. SHALL BE INSTALLED A MIN. 1' ABOVE TOP OF PIPE.

SANITARY SEWER BEDDING AND BACKFILL

SL-BB-03

REFER TO:

1. *GENERAL NOTES*
2. *C.S.S. NOTES*

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE, SANITARY SEWER FORCE MAIN BEDDING DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-19

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

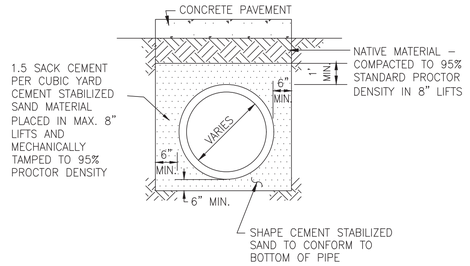
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

WATER LINE, SANITARY SEWER FORCE MAIN BEDDING DETAILS SL-19

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jpena

16182 DETAIL SET.DWG

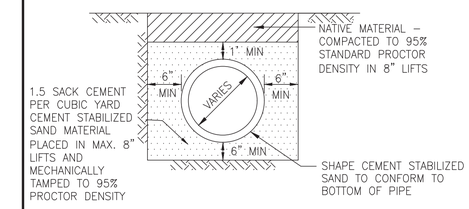


BEDDING DETAIL FOR
CONCRETE CULVERT USED
UNDER ROADWAY PAVEMENT

CLASS "A-A"

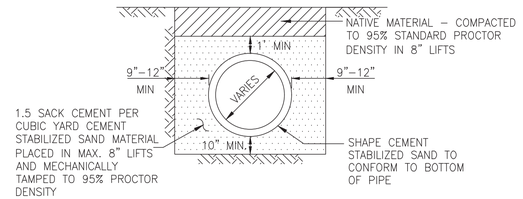
N.T.S.

SL-BB-06



BEDDING DETAIL FOR
REINFORCED CONCRETE PIPE
STORM SEWER
36" DIAMETER & SMALLER

SL-BB-07

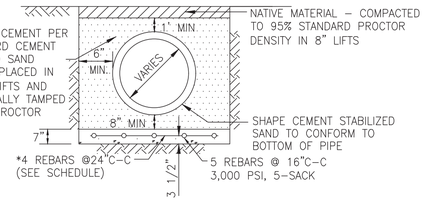


NOTES

1. 1.5-SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (10" MINIMUM FOR 42" TO 60", 14" MINIMUM FOR 66" TO 108")

BEDDING DETAIL FOR
REINFORCED CONCRETE PIPE
STORM SEWER
42" TO 108" DIAMETER
WHERE SATISFACTORY SOIL CONDITIONS EXIST

SL-BB-08

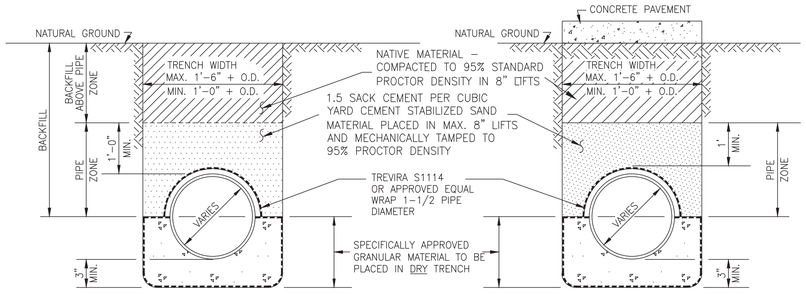


NOTES

1. 1.5-SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (8" MINIMUM FOR 42" TO 60", 12" MINIMUM FOR 66" TO 108").

SEAL SLAB
BEDDING DETAIL FOR
REINFORCED CONCRETE PIPE
STORM SEWER
42" TO 108" DIAMETER
WHERE UNSATISFACTORY SOIL CONDITIONS EXIST

SL-BB-09



MODIFIED "A"

N.T.S.

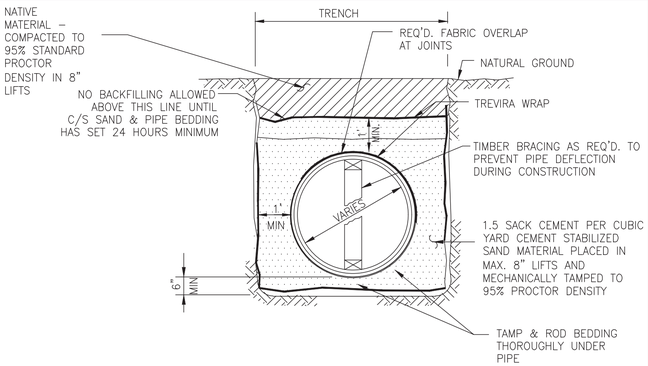
USE FOR SEWERS UNDER EXISTING OR FUTURE ROADS, STREETS, DRIVEWAYS OR OTHER PVM'T.

MODIFIED "A-A"

N.T.S.

1. MODOFIED BEDDING TO BE USED IN WET GROUND CONDITIONS FOR NON=COHESIVE MATERIALS WITH A SHEAR STRENGTH LESS THAN 1000 PSI.

SL-BB-10



BEDDING DETAIL FOR STORM SEWER-
CORREGATED METAL PIPE

N.T.S.

SL-BB-11

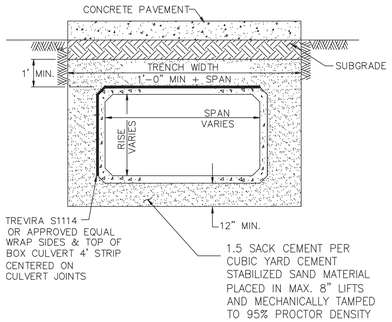
CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONTACT SUGAR LAND ENGINEERING DEPARTMENT IMMEDIATELY IF WET SAND CONDITIONS ARE ENCOUNTERED.
2. SPECIFICALLY APPROVED GRANULAR MATERIAL DIMENSIONS SHOWN ARE TYPICAL BUT MAY BE VARIED BY ORDER OF CITY ENGINEER.
3. SPECIFICALLY APPROVED GRANULAR MATERIAL SHALL BE IN ACCORDANCE WITH TXDOT SPECIFICATION No. 247 FLEXIBLE BASE, TYPE A, GRADE 2 AGGREGATE.
4. NO BEDDING SHALL BE INSTALLED IN WET CONDITIONS. WHEN WELL POINTING OR IN WET SAND CONDITIONS, MAINTAIN GROUND WATER 1' (FT.) BELOW BOTTOM OF TRENCH FOR A MINIMUM OF 24-HRS AFTER BEDDING AND BACKFILL IS IN PLACE.
5. R.C.P. AND BOX CULVERTS SHALL BE INSTALLED WITH APPROVED GASKETS ONLY.
6. MANHOLES SHALL BE PROVIDED WHERE MODIFIED "A" OR MODIFIED "A-A" BEDDING IS USED. STACKS ARE NOT ALLOWED.
7. REFER TO: MANHOLE DETAILS, INLETS, OUTFALL AND END TREATMENT DETAILS, C.S.S., GENERAL NOTES, AND STORM NOTES.
8. SPECIFIC DESIGNS MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER FOR MANHOLE ACCESS TO BOX CULVERTS AS REQUIRED.
9. ALL BACKFILL WITHIN THE R.O.W. SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
10. A GEOTECHNICAL REPORT MAY BE REQUIRED TO ANALYZE THE BEARING CAPACITY OF EXISTING SOILS AND MAKE A DETERMINATION IF ADDITIONAL BEDDING AND BACKFILL IS APPROPRIATE.

TYPICAL SEAL SLAB
BAR SCHEDULE
(OR AS DIRECTED BY ENGINEER)

PIPE SIZE	LGT LAT #4 BARS	NO. LONGIT #5 BARS
42"	5'4"	5
48"	6'8"	6
54"	6'8"	6
60"	8'0"	7
66"	8'0"	7
72"	9'4"	8
78"	9'4"	8
84"	9'4"	8
90"	10'8"	9
96"	10'8"	9
102"	12'0"	10
108"	12'0"	10

SL-BB-15

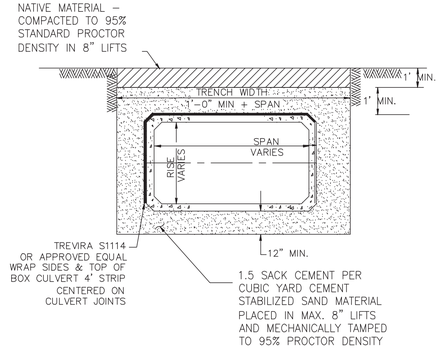


BEDDING DETAIL FOR
REINFORCED CONCRETE BOX
CULVERT UNDER ROADWAY PAVEMENT

NOTES

1. 1.5-SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (8" MINIMUM FOR 42" TO 60", 12" MINIMUM FOR 66" TO 108").

SL-BB-12

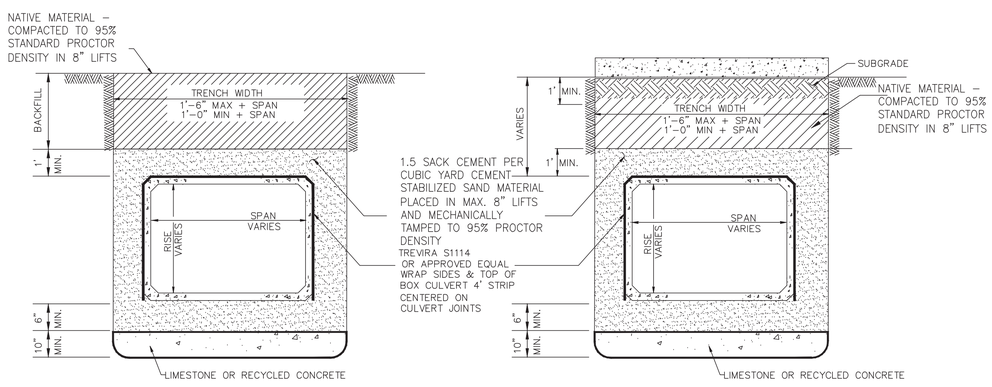


BEDDING DETAIL FOR
REINFORCED CONCRETE BOX
PLACED IN EASEMENT

NOTES

1. 1.5-SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (8" MINIMUM FOR 42" TO 60", 12" MINIMUM FOR 66" TO 108").

SL-BB-13



BEDDING DETAIL FOR
REINFORCED CONCRETE BOX CULVERT
W/MODIFIED BEDDING

BEDDING DETAIL FOR
REINFORCED CONCRETE BOX CULVERT
W/MODIFIED BEDDING
UNDER ROADWAY PAVEMENT

SL-BB-14

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER PIPE BEDDING AND BACKFILL DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-20

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

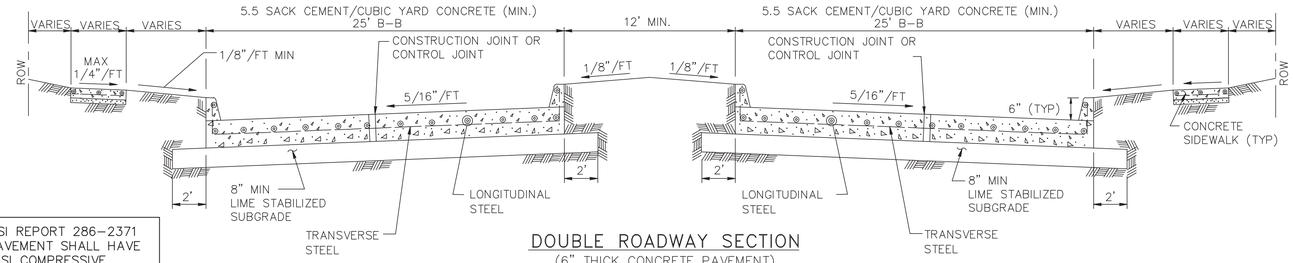
STORM SEWER PIPE
BEDDING AND BACKFILL
DETAILS
SL-20

PROJECT NO. 16182

37

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 -jpena

16182 DETAIL SET.DWG



BASED ON INTERTEK PSI REPORT 286-2371
6" THICK CONCRETE PAVEMENT SHALL HAVE A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH @ 28 DAYS AND BE CONSTRUCTED ON 8" LIME STABILIZED SUBGRADE WITH LIME CONTENT OF 6% TO 8%.

DOUBLE ROADWAY SECTION
(6" THICK CONCRETE PAVEMENT)
N.T.S.

SL-ST-01

CONSTRUCTION NOTES:

1. 6 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, E.W. IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR LOCAL STREETS

2. 7 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 18 INCHES C-C, IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR COLLECTOR STREETS

3. EIGHT (8) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.

4. HARD AGGREGATE IS NOT ALLOWED IN STREET PAVEMENT MIX. ADMIXTURES REQUIRE CITY OF SUGAR LAND PUBLIC WORKS DEPARTMENT APPROVAL.

5. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS. MAXIMUM SPACING SHALL BE 200' AND BE SEALED WITH SEALANT CONFORMING TO TXDOT ITEM 360 (& ITEM 436) AND TXDOT DMS-6310, CLASS-2.

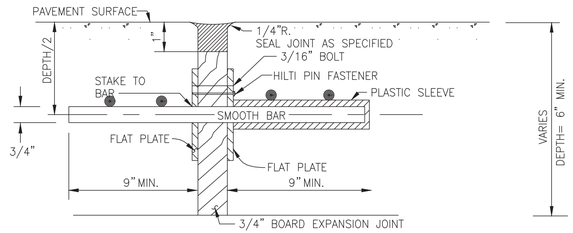
6. TRANSVERSE CONTROL JOINTS ARE REQUIRED AT MAXIMUM SPACING OF 20'-0" C-C, AND VERTICAL CURB JOINTS TO BE SEALED WITH SPECIAL JOINT SEALANT ASTM-D-1190-74 OR AASHTO-M173-60 FOR PAVEMENT 8" THICK AND GREATER. (ELASTONETRIC TYPE HOT POURED)

7. PAVEMENT FINISH SHALL BE BAKER BROOM FINISH. CURING COMPOUND REQUIRED ON ALL CONCRETE.

8. STORM WATER POLLUTION PROTECTION SHALL BE DESIGNED, CONSTRUCTED, MAINTAINED AND SHALL BE IN TOTAL COMPLIANCE WITH THE STORM QUALITY MANUAL OF THE CITY OF SUGAR LAND, CITY ENGINEER'S APPROVAL.

9. REFER TO GENERAL, C.S.S., AND PAVEMENT NOTES.

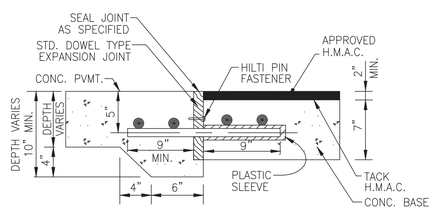
SL-ST-12



STEEL TO MEET ASTM STD. SPEC. FOR CONC. REBAR UNIT TO BE 24" C.-C., AND 10" MIN.

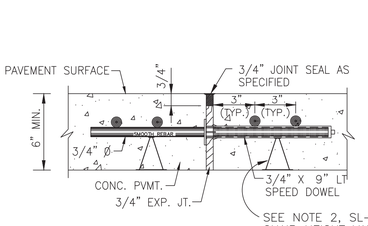
DOWEL TYPE EXPANSION JOINT
N.T.S.

SL-ST-03



DOWEL TYPE EXPANSION JOINT
N.T.S.
(CONC. PAVING TO CONC. BASE)

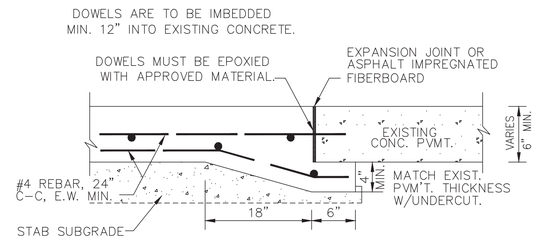
SL-ST-06



SEE NOTE 2, SL-22 CHAIR HEIGHT VARIES TO CONFORM TO NECESSARY HEIGHT TO MAINTAIN DOWEL IN HORIZONTAL POSITION.(TYP.)

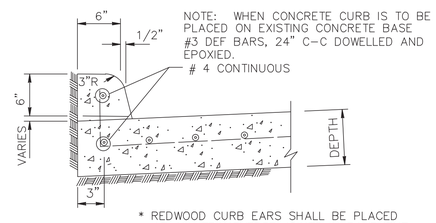
SPEED DOWEL EXPANSION JOINT
N.T.S.

SL-ST-08



UNDERCUT DETAIL WITH HEADER
N.T.S.

SL-ST-09

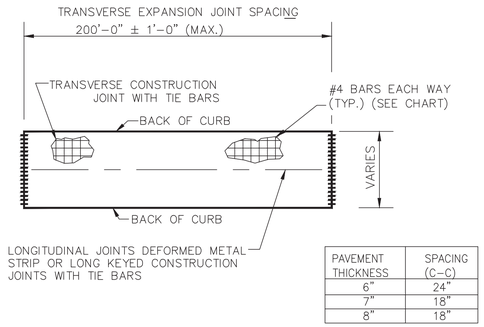


* REDWOOD CURB EARS SHALL BE PLACED AT ALL TRANSVERSE JOINTS IN PAVEMENT.

CONCRETE CURB
N.T.S.

CONSTRUCTION NOTE:
ALL NEW CURB REQUIRES 3,000 P.S.I. @ 28-DAYS.

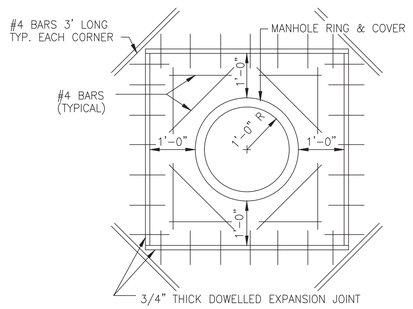
SL-ST-04



PAVEMENT THICKNESS	SPACING (C-C)
6"	24"
7"	18"
8"	18"

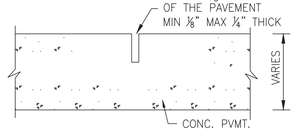
PAVING PANEL
N.T.S.

SL-ST-05



MANHOLE BLOCKOUT
N.T.S.
(STORM & SANITARY) IN PAVEMENT

SL-ST-10



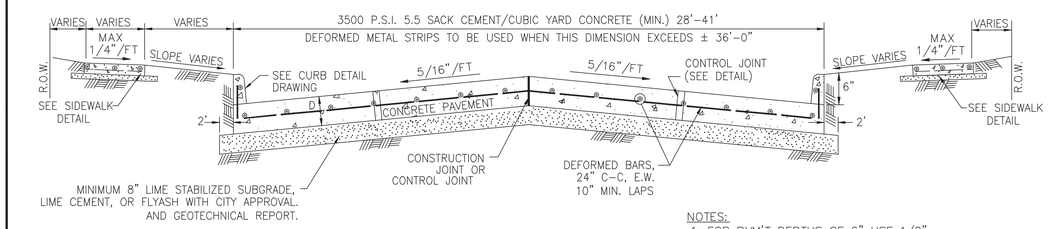
CONTROL JOINT
N.T.S.

SL-ST-11

No.	DATE	REVISION

SEAL:

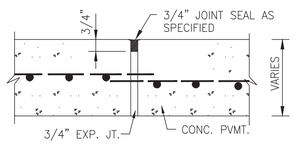
DESIGN ENGINEER: _____ DATE _____



SL-ST-02

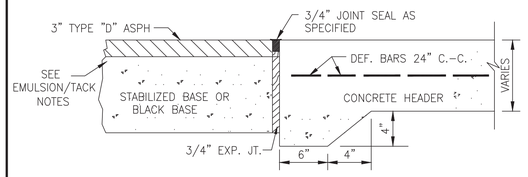
SINGLE ROADWAY SECTION
(6" THICK CONCRETE PAVEMENT)
N.T.S.

NOTES:
1. FOR PVM'T DEPTHS OF 6" USE 1/2" DEFORMED BARS, 24" C-C, 10" LAPS. ALL REINFORCING STEEL SHALL CONFORM TO GRADE 60, A.S.T.M. NO. A615. LAP SPLICES TO BE A MINIMUM OF 10 INCHES. STAGGER SPLICES IN ADJACENT BARS.



CONSTRUCTION JOINT SEAL
N.T.S.

SL-ST-12



PAVING HEADER
(FOR USE IN CONNECTING CONC. PVMT. TO ASPHALT PVMT.) (PROP. OR EXIST.)

SL-ST-07

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

CONCRETE PAVEMENT CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-21
SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

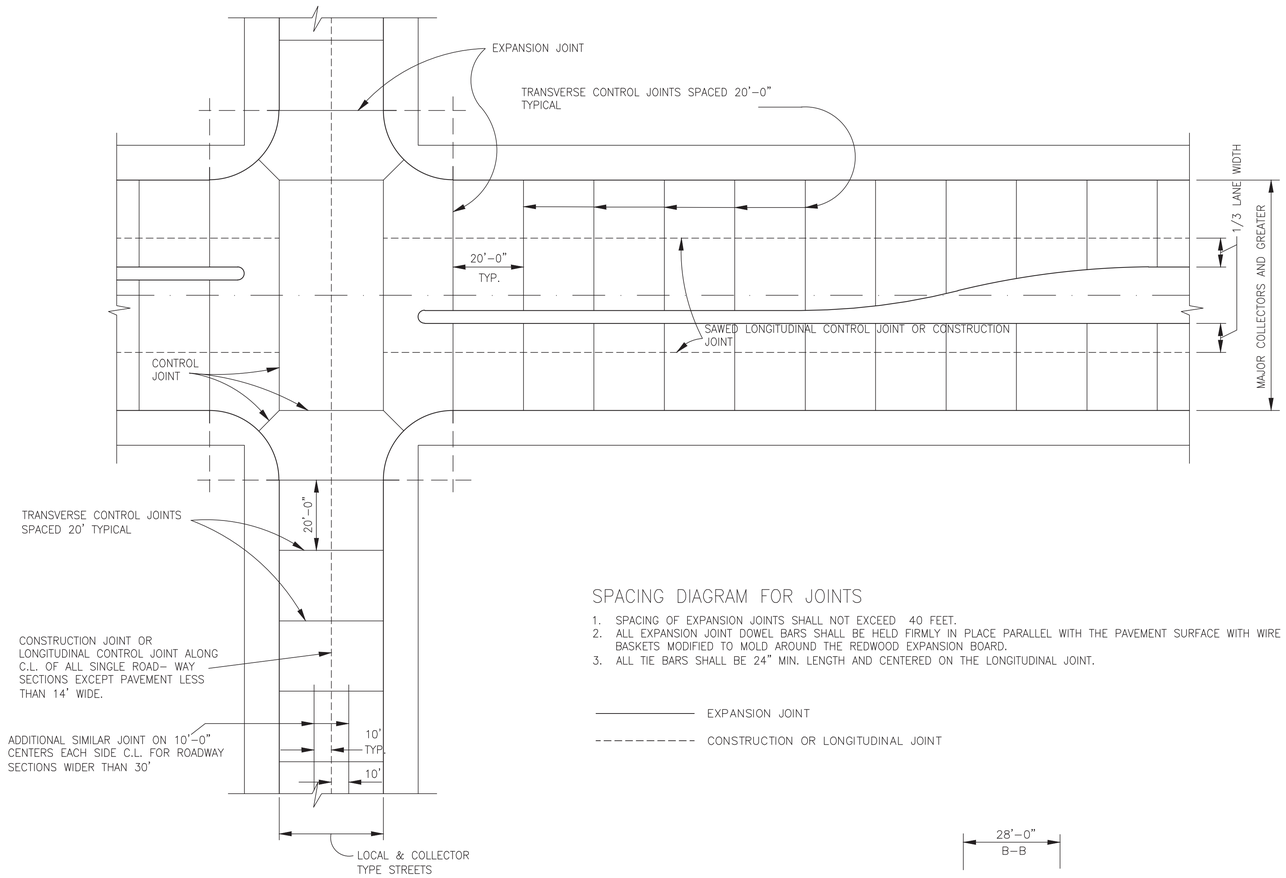
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

CONCRETE PAVEMENT CONSTRUCTION DETAILS
SL-21

PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jperna

16182 DETAIL SET.DWG

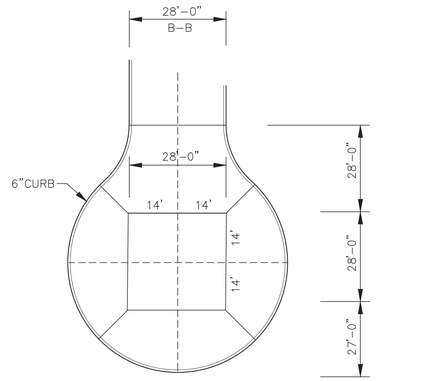


SPACING DIAGRAM FOR JOINTS

1. SPACING OF EXPANSION JOINTS SHALL NOT EXCEED 40 FEET.
2. ALL EXPANSION JOINT DOWEL BARS SHALL BE HELD FIRMLY IN PLACE PARALLEL WITH THE PAVEMENT SURFACE WITH WIRE BASKETS MODIFIED TO MOLD AROUND THE REDWOOD EXPANSION BOARD.
3. ALL TIE BARS SHALL BE 24" MIN. LENGTH AND CENTERED ON THE LONGITUDINAL JOINT.

———— EXPANSION JOINT

- - - - - - - - - - CONSTRUCTION OR LONGITUDINAL JOINT



———— EXPANSION JOINT

- - - - - - - - - - CONSTRUCTION OR LONGITUDINAL JOINT

TYPICAL JOINT LAYOUT
FOR CUL-DE-SAC

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

CONCRETE PAVEMENT
CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-22

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
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waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

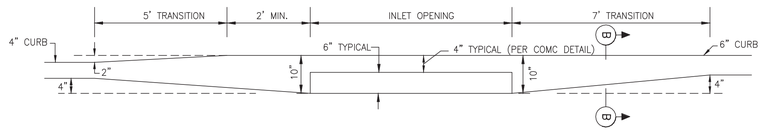
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

CONCRETE PAVEMENT
CONSTRUCTION DETAILS
SL-22

PROJECT NO. 16182

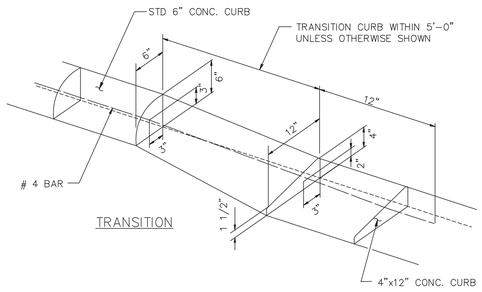
J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 djenna

16182 DETAIL SET.DWG



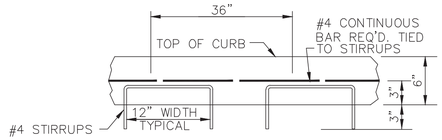
TYPICAL CURB TRANSITION FOR INLET INSTALLATION

SL-ST-13



TYPICAL CURB TRANSITION

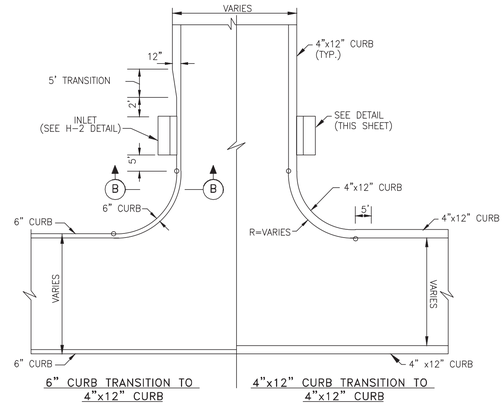
SL-ST-15



TYPICAL CONCRETE CURB REINFORCING

N.T.S.

SL-ST-16



TYPICAL 4"X12" CURB W/INLET TRANSITION FOR CURB RETURNS

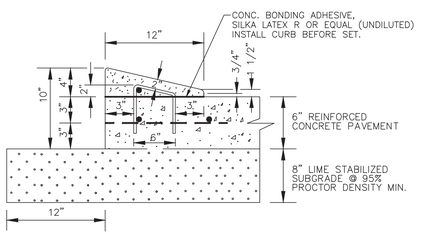
N.T.S.

SL-ST-14

CONSTRUCTION NOTES:

1. 6 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, E.W. IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR RESIDENTIAL STREETS.
2. 7 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR COLLECTOR STREETS
3. EIGHT (8) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.
4. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS MAXIMUM SPACING SHALL BE 200' AND BE SEALED CONFORMING TO TXDOT ITEM 360 (& ITEM 438) AND TXDOT DMS-6310, CLASS-2.
5. TRANSVERSE CONTROL JOINTS ARE REQUIRED AT MAXIMUM SPACING OF 20'-0" C-C, AND VERTICAL CURB JOINTS TO BE SEALED WITH SPECIAL JOINT SEALANT ASTM-D-1190-74 OR AASHTO-M173-60 FOR PAVEMENT 8" THICK AND GREATER. (ELASTONETRIC TYPE HOT POURED)
6. PAVEMENT FINISH SHALL BE BAKER BROOM FINISH. CURING COMPOUND ON ALL CONCRETE.
7. STORM WATER POLLUTION PROTECTION SHALL BE DESIGNED, CONSTRUCTED, MAINTAINED AND SHALL BE IN TOTAL COMPLIANCE WITH THE STORM WATER QUALITY MANUAL OF THE CITY OF SUGAR LAND.
8. UNSTABLE SUBGRADE SHALL BE EXCAVATED AND REPLACED WITH CEMENT STABILIZED SAND.
9. USE 1"x2" REDWOOD STAKES FOR HEADERS.
10. EDGE ALL SIDES WITH EDGING TOOL.
11. DOWEL SHALL BE 3/4" DIAMETER, WITH MINIMUM 8" PENETRATION (BOTH SIDES).
12. IT IS THE CONTRACTOR'S RESPONSIBLITY TO NOTIFY THE CITY OF SUGAR LAND OF ANY BIRDBATH PROBLEMS PRIOR TO CONSTRUCTION OF DRIVEWAY.
13. REFER TO GENERAL, C.S.S., AND PAVEMENT NOTES.
14. 1.0 LBS. OF APPROVED POLYPROPYLENE FIBER MESH PER C/Y IN 4"X12" CURBS REQUIRED.

SL-ST-20

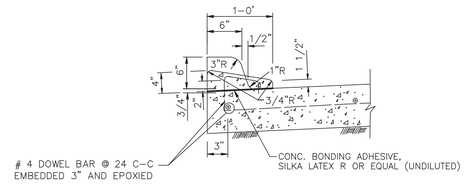


4"x12" MOUNTABLE CONCRETE CURB

NOTES:

1.) 1.0 LBS. OF APPROVED NON-METALLIC FIBER MESH PER C/Y IN 4"X12" CURBS.
2.) #3 RE-BAR STIRRUPS TO BE PLACED AT INTERVALS OF 2' (FT) C-C.
3.) #4 RE-BAR LONGITUDINAL SHALL BE TIED TO EACH STIRRUP
4.) MOUNTABLE CURB ONLY ALLOWED ON ≤ 41' (FT), UNDIVIDED, RESIDENTIAL ROADWAYS WITHIN SUBDIVISIONS.

SL-ST-17



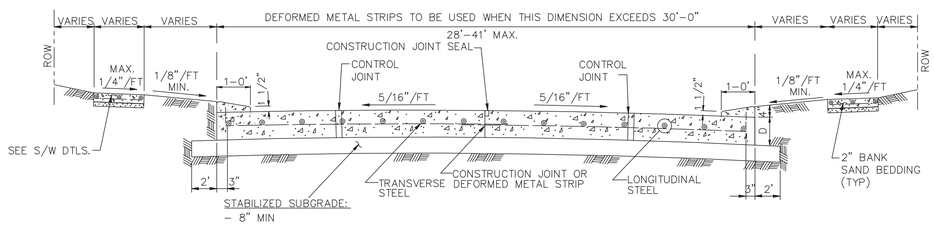
4-INCH x 12-INCH TRANSITION CURB

SL-ST-18

4"x12" MOUNTABLE CONCRETE CURB AND TRANSITION CURB NOTES:

1. 6-INCH CONCRETE CURB TO BE CONSTRUCTED ON ALL ESPLANADES, ISLANDS AND NON-RESIDENTIAL STREETS. RESIDENTIAL STREETS MAY BE CONSTRUCTED WITH EITHER 6-INCH CONCRETE CURB OR 4-INCH x 12-INCH CONCRETE CURB AS NOTED ON PLANS.
2. ALL 4-INCH x 12-INCH CONCRETE CURBS TO BE POURED SEPARATE FROM PROPOSED CONCRETE PAVEMENT.
3. TRANSITIONS FROM 6-INCH CONCRETE CURB TO 4-INCH x 12-INCH CONCRETE CURB TO BE ACCOMPLISHED WITHIN 5 FEET (TYP.), UNLESS OTHERWISE SHOWN. REINFORCING STEEL AS SHOWN IN "4-INCH x 12-INCH TRANSITION CURB" DETAIL IS TO BE INSTALLED.

SL-ST-20



TYPICAL SINGLE ROADWAY SECTION FOR CONCRETE PAVEMENT WITH 4"X12" CURB
(6" THICK CONCRETE PAVEMENT)

* SEE 4" x 12" MOUNTABLE CURB DETAIL (THIS SHEET)

SL-ST-19

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

RESIDENTIAL CURB CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-23

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

B&L BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · LICENSED PROFESSIONAL ENGINEER

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03-07-2025

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Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

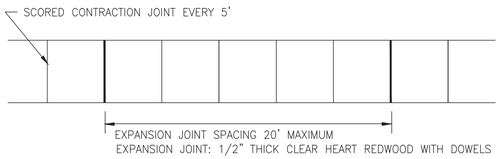
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

RESIDENTIAL CURB CONSTRUCTION DETAILS
SL-23

PROJECT NO. 16182

J:\160005\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jparra

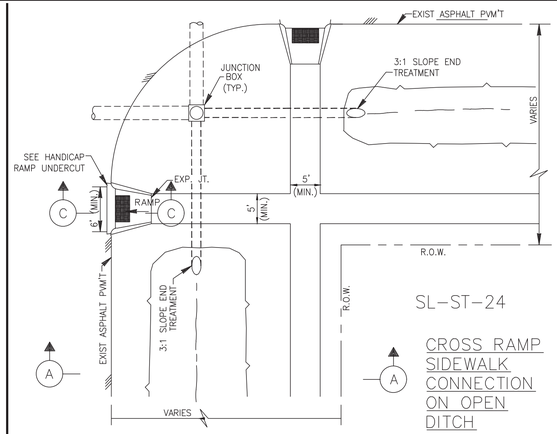
16182 DETAIL SET.DWG



SIDEWALK JOINT DETAILS

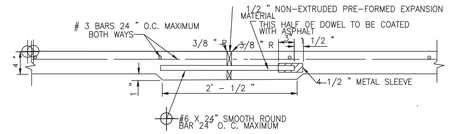
N.T.S.

SL-ST-23



SL-ST-24

CROSS RAMP SIDEWALK CONNECTION ON OPEN DITCH



B-B
EXPANSION JOINT DETAIL

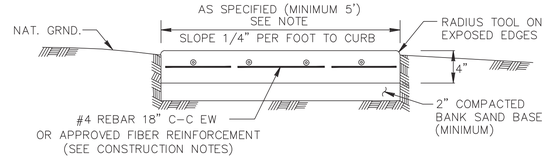
NOTES:

1. EXISTING CURB AND GUTTER TO BE SAW CUT, REMOVED AND REPLACED. DOWEL STEEL FOR MINIMUM REINFORCING OVERLAP OF 10 INCHES (10") DOWELS SHALL BE EIGHTEEN INCHES (18") LONG AND EPOXIED A MINIMUM OF (8") EIGHT INCHES INTO EXISTING PAVEMENT.
2. IF SIDEWALKS ARE NEITHER EXISTING NOR PROPOSED WHERE WHEELCHAIR RAMP ACCESS IS REQUIRED, CONCRETE SIDEWALKS SURFACE 4 1/2" THICK SHALL BE INSTALLED TO PROVIDE ACCESS TO THE PEDESTRIAN PUSH BUTTONS.
3. DETECTABLE WARNINGS REQUIRED BY T.A.S. SECTIONS 4.1 AND 4.7 SHALL COMPLY WITH T.A.S. SECTION 4.29
4. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACE SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE.
5. DETECTABLE WARNING SURFACE SHALL COVER THE ENTIRE WIDTH AND DEPTH OF RAMP.
6. DETECTABLE WARNINGS SHALL BE INSTALLED WITH PAVERS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
7. CONCRETE PAVER UNITS SHALL MEET ALL REQUIREMENTS OF ASTM C-935, C-33, AND SHALL BE PLACED IN A TWO BY TWO UNIT BASKET WEAVE PATTERN, UNLESS SHOWN OTHERWISE IN THE PLANS.
8. CONCRETE PAVER UNITS SHALL HAVE A TRUNCATED DOME TOP SURFACE FOR DETECTABLE WARNING TO PEDESTRIANS. DOMES SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL.
9. CONCRETE PAVER UNIT COLOR FOR THE RAMP SHALL BE A CONTRASTING COLOR THAT PROVIDES A LIGHT REFLECTIVE THAT SIGNIFICANTLY CONTRASTS WITH THE ADJACENT SURFACES. ADJACENT SURFACES INCLUDE SIDE FLARES.
10. CONCRETE PAVER UNITS SHALL BE SAW CUT ONLY, AND ANY CUT UNIT SHALL NOT BE LESS THAN 25% OF A FULL UNIT.

CONSTRUCTION NOTES:

1. THE MAXIMUM WIDTH BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 20'-0"
2. EXPANSION JOINT IS TO BE 1/2" THICK CLEAR HEART REDWOOD WITH DOWELS.
3. SCORED CONTRACTION JOINTS SHALL BE EVERY 5' OR EQUAL TO WIDTH OF SIDEWALK.
4. ALL EARTHEN AREAS ARE TO BE SODDED UNLESS SHOWN OTHERWISE ON DRAWINGS.
5. 4 INCH, 5 SACK CEMENT PER CUBIC YARD CONCRETE, 3000 PSI. REINFORCED CONCRETE WITH #3 BARS, 18 INCHES C-C, FOR SIDEWALKS, #4 BARS 18' C-C FOR WHEEL CHAIR RAMPS IS THE MINIMUM ACCEPTED. MINIMUM 3 LONGITUDINAL BARS. FIBER REINFORCING SIDEWALKS-STEEL AND POLYPROPYLENE BLENDED FIBER REINFORCEMENT SYSTEM SUCH AS NOVOMESH e3 AS MANUFACTURED BY S.I. CONCRETE SYSTEMS (OR PRE-APPROVED EQUAL) MAY BE USED AS AN ALTERNATE TO CONVENTIONAL REBAR REINFORCING AT A DOSAGE RATE OF 24 LBS. PER CUBIC YARD OF CONCRETE.
6. USE RADIUS TOOL ON ALL EXPOSED EDGES.
7. TOP OF THE SIDEWALK ELEVATION TO BE TOP OF CURB.
8. MEMBRANE CURING COMPOUND IS REQUIRED AS DESCRIBED IN ITEM 526 IN THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
9. REFER TO GENERAL NOTES AND CONCRETE/PAVING NOTES.
10. SIDEWALK EXPANSION JOINTS SHALL CONFORM TO STREET EXPANSION JOINT STANDARDS.

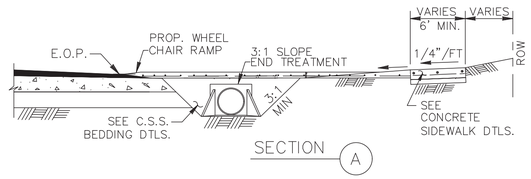
SL-ST-34



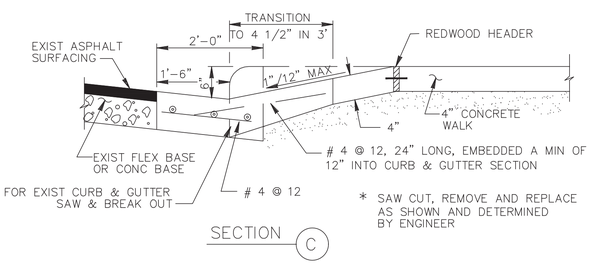
CONCRETE SIDEWALK

NOTE:
BANK SAND IS DEFINED AS A WELL-GRADED SAND, FREE OF SILT, CLAY, LOAM, FRIABLE OR SOLUBLE MATERIALS AND ORGANIC MATTER, MEETING THE UNIFIED SOILS CLASSIFICATION SYSTEM GROUP SYMBOL SW CRITERIA W/ A PLASTICITY INDEX OF ≤ 10. AND NO MORE THAN 12% OF MATERIAL CAN PASS THE No. 200 SIEVE.

SL-ST-29

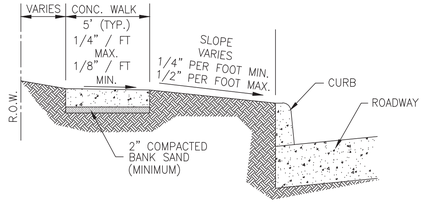


SL-ST-25



HANDICAP RAMP CURB & GUTTER*

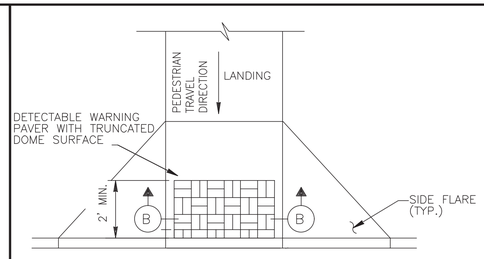
SL-ST-26



NOTE:
SEE SIDEWALK, CONC/PAVING, AND GENERAL NOTES

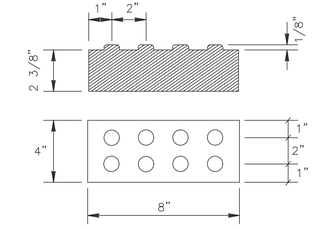
TYPICAL SINGLE ROADWAY SIDEWALK

SL-ST-28



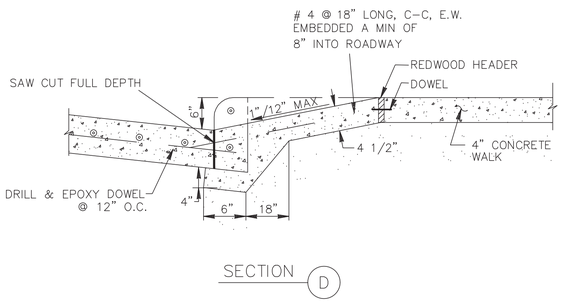
SL-ST-31

TRUNCATED DOME PATTERN CURB RAMP



CONCRETE PAVER WITH TRUNCATED DOME SURFACE

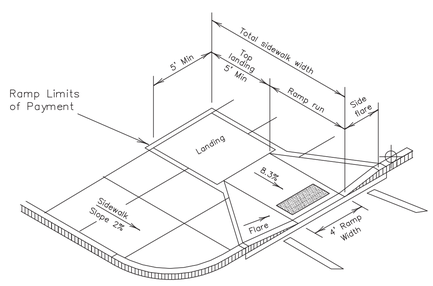
SL-ST-32



HANDICAP RAMP UNDERCUT

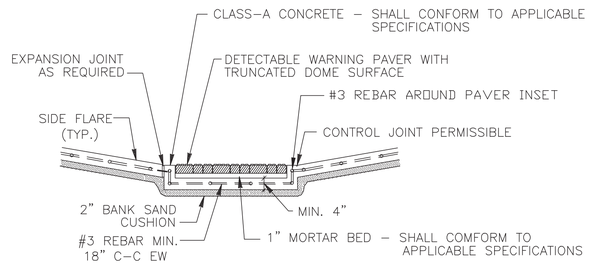
SL-ST-27

1. STANDARD FLARED SINGLE RAMPS ARE ALLOWED AT LOCAL/LOCAL STREET CROSSINGS



WHEELCHAIR RAMP SIDEWALK CONNECTION

SL-ST-30



SL-ST-33

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WHEEL CHAIR RAMP & SIDEWALK DETAILS I

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-25
SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

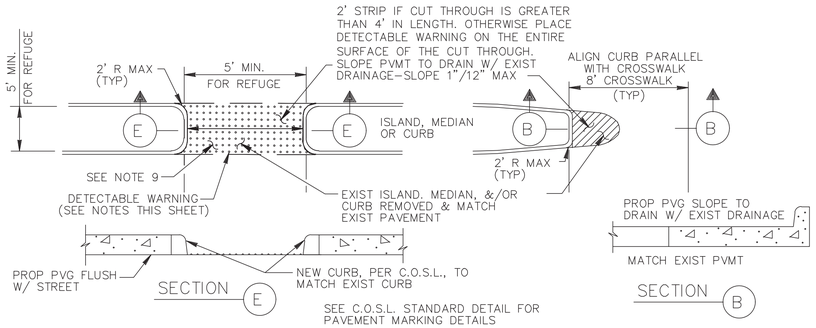
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

WHEEL CHAIR RAMP & SIDEWALK DETAILS I
SL-25

PROJECT NO. 16182

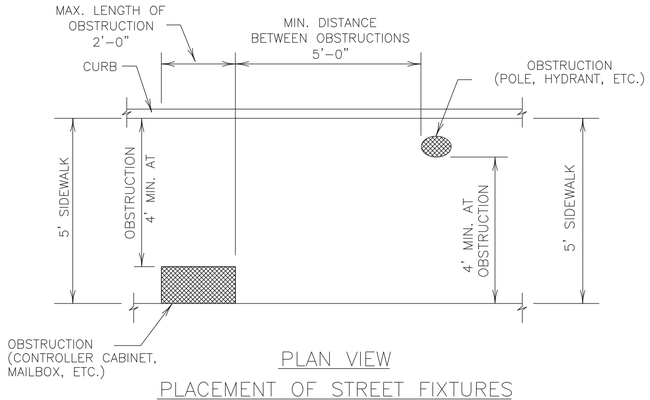
J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 rpena

16182 DEFAIL SET.DWG



FOR ISLAND, MEDIAN, OR CURB MODIFICATIONS FOR CROSSWALKS

SL–ST–35



PLAN VIEW

PLACEMENT OF STREET FIXTURES

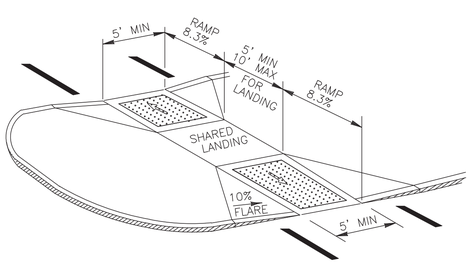
(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' x 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)

SL–ST–36

NOTES:

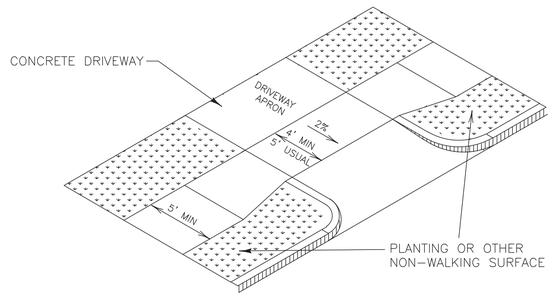
1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS MAY BE ADJUSTED AS DIRECTED
2. THE MINIMUM SIDEWALK WIDTH IS 5' (FEET). THE LANDING SHALL BE 5' x 5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND RAMP SURFACES IS 2%. USUAL SIDEWALK CROSS SLOPE EQUALS 1.5%. CHANGES IN LEVEL GREATER THAN 1/4" (IN.) ARE NOT PERMITTED.
3. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 5' x 5' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
4. ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP. IF A RAMP HAS A RISE GREATER THAN 6" (IN.) OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES, WITH THE FOLLOWING EXCEPTIONS:
   A.) HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
   B.) THE LEAST POSSIBLE GRADE SHOULD BE USED TO MAXIMIZE ACCESSIBILITY. WHERE STRUCTURALLY IMPRACTICAL TO ACHIEVE TEXAS ACCESSIBILITY STANDARDS (TAS) COMPLIANCE, THE RUNNING SLOPE OF SIDEWALKS AND CROSSWALKS, WITHIN THE PUBLIC R.O.W., MAY FOLLOW THE GRADE OF THE PARALLEL ROADWAY WITHOUT INVOKING TEXAS ACCESSIBILITY STANDARDS (TAS) VARIANCES FOR LANDINGS OR HANDRAILS. WHERE A CONTINUOUS GRADE GREATER THAN 5% MUST BE PROVIDED, HANDRAILS MAY BE DESIRABLE ON ONE OR BOTH SIDES OF THE SIDEWALK TO IMPROVE ACCESSIBILITY. HANDRAILS MAY ALSO BE NEEDED TO PROTECT PEDESTRIANS FROM POTENTIALLY HAZARDOUS CONDITIONS.
5. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED. ALL CONCRETE SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
6. RAMP TEXTURES MUST CONSIST OF TRUNCATED DOME SURFACES, IN ACCORDANCE WITH ADA AND TEXAS DEPARTMENT OF LICENSING AND REGULATIONS (TDLR), TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. TEXTURES ALSO SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
8. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. TO SERVE AS A REFUGE AREA, THE MEDIAN SHALL BE A MINIMUM OF 5' (FT.) WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR THROUGH THEM.
9. SMALL CHANNELIZATION ISLANDS, WHICH CAN NOT PROVIDE A MINIMUM 5' x 5' LANDING AT THE TOP OF RAMPS, SHALL BE CUT THROUGH LEVEL WITH THE SURFACE OF THE STREET.
10. CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE ENGINEER.
11. EXISTING FEATURES THAT COMPLY WITH T.A.S. MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
12. TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SHALL BE PLACED SO NOT TO OBSTRUCT THE ACCESSIBLE ROUTE.

SL–ST–40



CURB RAMPS AT MEDIAN ISLANDS

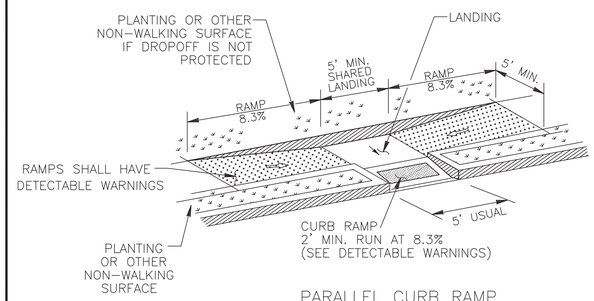
SL–ST–37



SETBACK SIDEWALK

SIDEWALK TREATMENT AT DRIVEWAYS

SL–ST–38



PARALLEL CURB RAMP

SL–ST–39

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WHEEL CHAIR RAMP & SIDEWALK DETAILS II

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–26

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

B&L BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849–6681
REG. NO. F–825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net *(713) 993-6453*

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

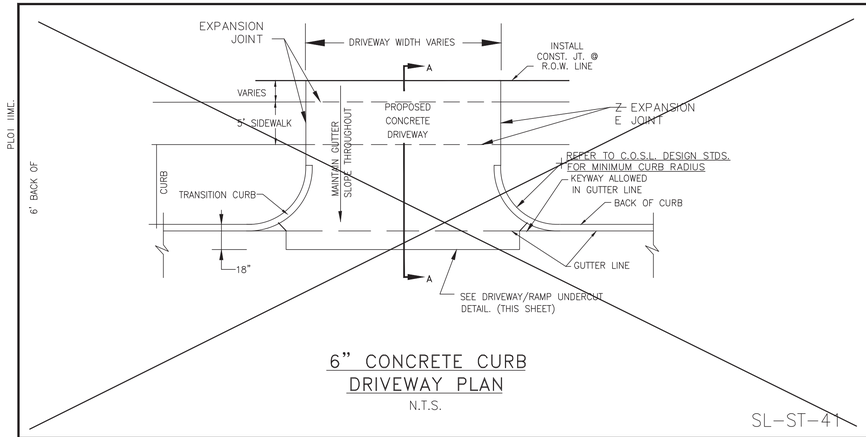
WHEEL CHAIR RAMP & SIDEWALK DETAILS II
SL–26

PROJECT NO. 16182

PLOT DATE:

J:\16000S\16100\16182\ENGINEERING–SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jpena

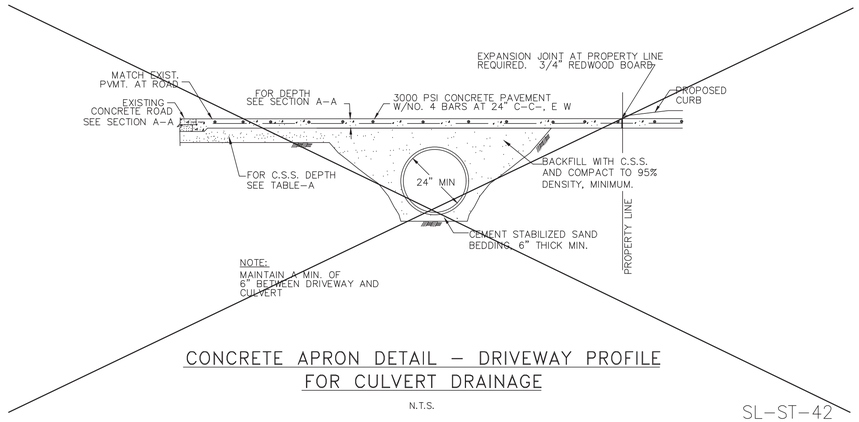
16182 DETAIL SET.DWG



6" CONCRETE CURB DRIVEWAY PLAN

N.T.S.

SL-ST-41



CONCRETE APRON DETAIL - DRIVEWAY PROFILE FOR CULVERT DRAINAGE

N.T.S.

SL-ST-42

NOTES:

SL-ST-49

1.) SAW CUT & BREAKOUT NO MORE THAN 72 HOURS PRIOR TO PROPOSED CONCRETE PLACEMENT. NOTIFY SUGAR LAND PRIOR TO CUT.

2.) UNSTABLE SUBGRADE SHALL BE OVER EXCAVATED & REPLACED WITH CONCRETE.

3.) IT IS CONTRACTOR'S RESPONSIBILITY TO NOTIFY SUGAR LAND OF ANY BIRD BATH PROBLEMS PRIOR TO CONSTRUCTION OF DRIVEWAY.

4.) USE 1"x2" TREATED REDWOOD FOR HEADER.

5.) EDGE ALL SIDES WITH EDGING TOOL AND BROOM FINISH

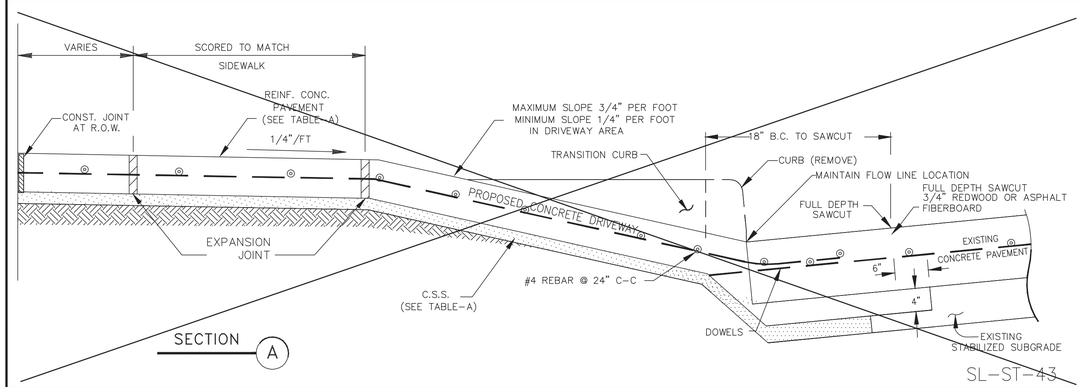
6.) FOR INDUSTRIAL DRIVES, PAVEMENT SHALL HAVE A DEPTH OF 8" (IN).

7.) EXPANSION JOINT AT PROPERTY LINE REQUIRED. 3/4" REDWOOD BOARD WITH No. 4 DOWELS MINIMUM.

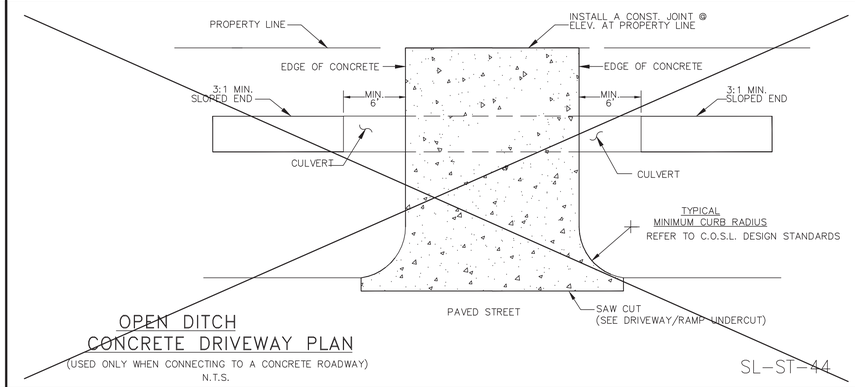
8.) MAXIMUM ALLOWABLE DRIVEWAY GRADE IN PULIC R.O.W. IS 5%

9.) DRIVEWAY GRADE MUST MEET A.D.A AND T.A.S. SIDEWALK SLOPE, SIDEWALKS MUST BE SCORED TO MATCH ADJACENT SIDEWALK. IF SLOPE IS CONTINUED THROUGH THE R.O.W. LINE, PROVIDE A 3/4" REDWOOD EXPANSION JOINT WITH DOWELS AT R.O.W. LINE.

10.) REFER TO GENERAL , C.S.S., ASPHALT, AND CONCRETE PAVEMENT NOTES.



SL-ST-43



OPEN DITCH CONCRETE DRIVEWAY PLAN

(USED ONLY WHEN CONNECTING TO A CONCRETE ROADWAY)

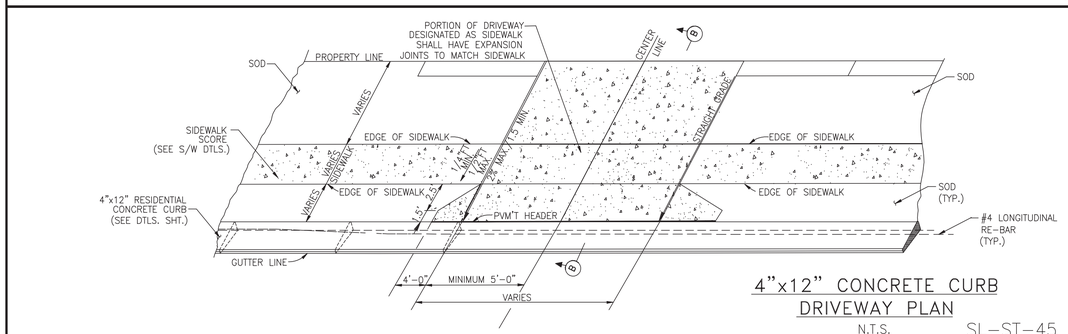
N.T.S.

SL-ST-44

TABLE-A

CEMENT STABILIZED SAND 2-SK/C.Y.	
RESIDENTIAL	4" MINIMUM
COMMERCIAL	6" MINIMUM
INDUSTRIAL	8" MINIMUM
REINFORCED CONCRETE PAVEMENT 3,000 PSI MIN	
RESIDENTIAL	4" MINIMUM
COMMERCIAL	6" MINIMUM
INDUSTRIAL	8" MINIMUM

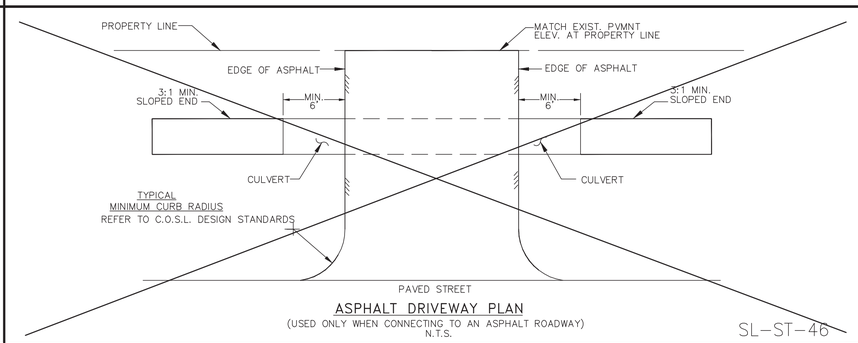
DRIVEWAY PAVEMENT CONSTRUCTION TABLE



4"x12" CONCRETE CURB DRIVEWAY PLAN

N.T.S.

SL-ST-45

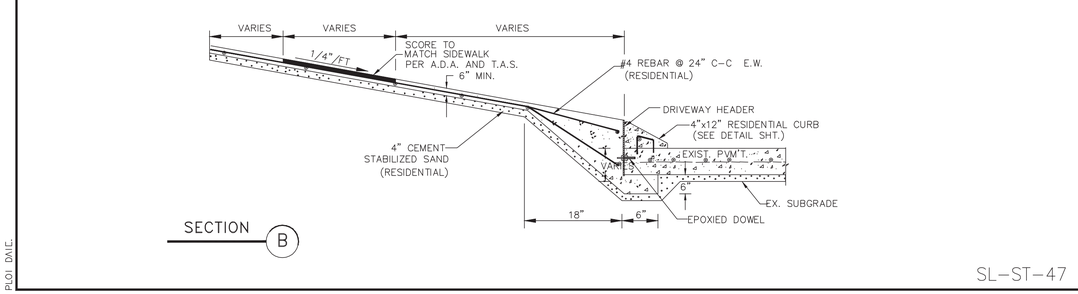


ASPHALT DRIVEWAY PLAN

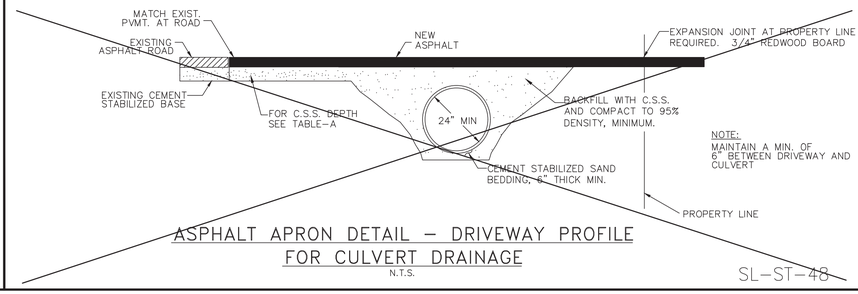
(USED ONLY WHEN CONNECTING TO AN ASPHALT ROADWAY)

N.T.S.

SL-ST-46



SL-ST-47



ASPHALT APRON DETAIL - DRIVEWAY PROFILE FOR CULVERT DRAINAGE

N.T.S.

SL-ST-48

No.	DATE	REVISION

SEAL:

DATE

DESIGN ENGINEER:

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

DRIVEWAY CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-27

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:

Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

DRIVEWAY CONSTRUCTION DETAILS SL-27

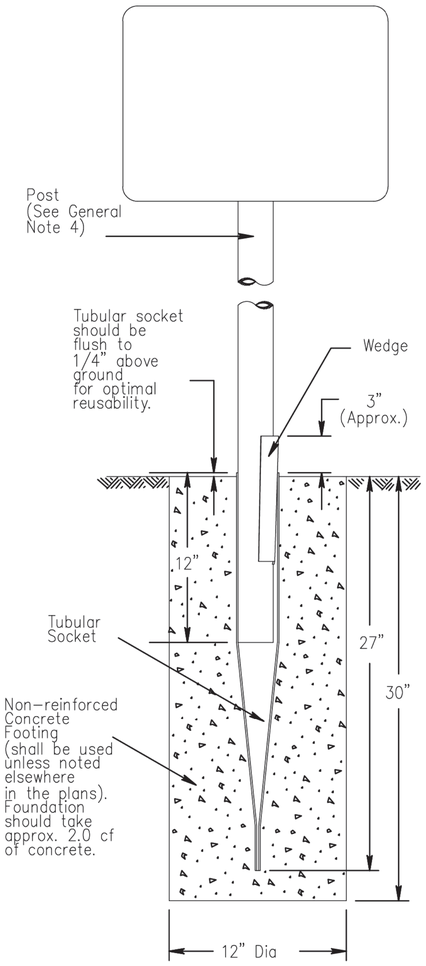
PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jparra

16182 DETAIL SET.DWG

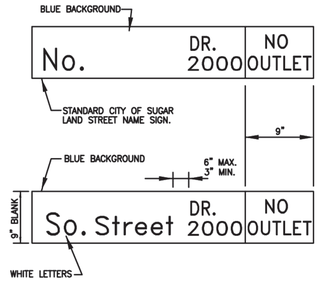
PLOT TIME:

Wedge Anchor System



SM RD SGN ASSM TY TWT(X)WA(P)

SL-ST-62



NOTES:

1. HELVETICA BOLD, MEDIUM STYLE; WITH 6" UPPER CASE LETTERS AND 4' LOWER CASE LETTERS.
2. REFER TO C.O.S.L. DESIGN STANDARDS FOR MORE INFO.

DETAIL OF STANDARD STREET NAME SIGN

SL-ST-66

NOTICE TO BE AFFIXED TO THE BACK OF ALL COSL STREET SIGNS

NO PERSON SHALL ATTEMPT TO, OR IN FACT ALTER, DEFACE, INJURE, KNOCK DOWN OR REMOVE ANY OFFICAL TRAFFIC CONTROL DEVICE, SIGN OR SIGNAL

MAXIMUM FINE $200.00

MONTH
1 2 3 4 5 6
7 8 9 10 11 12

YEAR
06 07 08
09 10 11

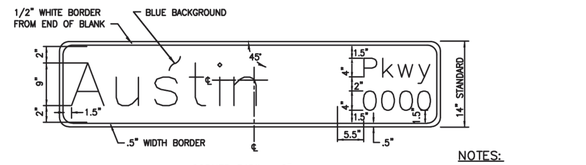
SIGN I.D. TAG DETAIL

SL-ST-68

GENERAL CONSTRUCTION NOTES:

1. SECURELY ATTACH STREET NAME SIGN TO TRAFFIC SIGNAL SUPPORT WIRES WITH MULTI-LEVELING, WIND DUMPING BRACKETS.
2. SUPPORT WIRES SHOULD NOT BE PROHIBITED FROM INDEPENDENT MOVEMENT.
3. INSTALL ONE STREET NAME SIGN APPROXIMATE 2' FROM POLE ABOVE ON-COMING TRAFFIC ON EACH TRAFFIC SIGNAL SPAN.
4. THE FIRST LETTER OF EACH WORD SHALL BE UPPER CASE, SUBSEQUENT LETTERS SHALL BE LOWER CASE, ALL INDIVIDUAL LETTERS FOR EXAMPLE "F.M." SHALL BE UPPER CASE. STREET SUFFIXES & "NO OUTLET" SHALL BE UPPER CASE.
5. ALL SHEETING SHALL BE "DIAMOND GRADE" OR APPROVED EQUAL.
6. USE ANODIZED BLANKS ONLY.
7. STREET SIGN FONTS SHALL BE HELVETICA BOLD, MEDIUM STYLE
8. MINIMUM SIGN TIHICKNESS: 9" SIGNS = .080", 14" SIGNS = .1875"

SL-ST-68



NOTES:

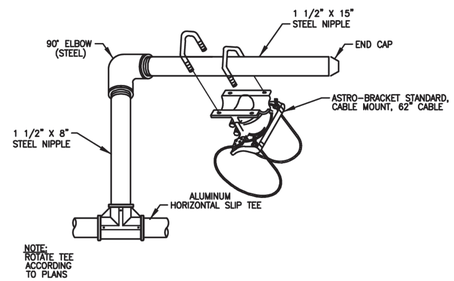
1. HELVETICA BOLD, MEDIUM STYLE; WITH 9" UPPER CASE LETTERS AND 6" LOWER CASE LETTERS.
2. REFER TO C.O.S.L. DESIGN STANDARDS FOR MORE INFO.

DETAIL OF SIGN FOR MAST ARM TRAFFIC SIGNAL POLES

SL-ST-67

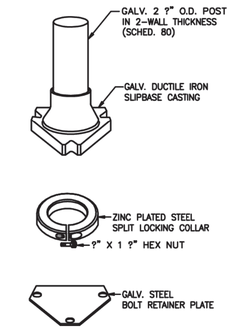
MAST ARM:

1. 2-EACH ASTRO FOR 4 SECTION AND LARGER TRAFFIC SIGNAL HEADS.



ASTRO BRACKET CABLE MOUNT DETAIL

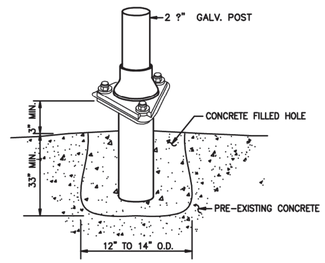
SL-ST-63



POZ-LOCK SLIPBASE SYSTEM

NTS

SL-ST-64



CONCRETE SIGN PEDESTAL

NTS

SL-ST-65

NOTES:

1.) FILL HOLE TO GROUND LEVEL.
2.) PRESS BASE INTO CENTER OF CONCRETE.
3.) LEVEL BASE 3" ABOVE GROUND.
4.) TIGHTEN (TORQUE) NUTS BETWEEN 60 TO 80 FT/LB MAX.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

SIGN CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-32

SHEET OF

CAD FILE PATH:
PLOT DATE:

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jpena

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

SIGN CONSTRUCTION DETAILS SL-32

PROJECT NO. 16182

16182 DEFAIL SET.DWG

HYPER–CHLORINATED WATER NOTES

1. HYPER–CHLORINATED WATER SHALL NOT BE DISCHARGED TO THE STORM SEWER OR DRAINAGE SYSTEM UNLESS THE CHLORINE CONCENTRATION IS REDUCED TO 4 PPM OR LESS BY CHEMICALLY TREATING THE DECHLORINATE OR BY ONSITE RETENTION UNTIL NATURAL ATTENUATION OCCURS.
2. DISCHARGE OF HIGH FLOW RATE AND VELOCITIES SHALL BE DIRECTED TO VELOCITY DISSIPATION DEVICES.
3. CHLORINE CAN BURN VEGETATION, SO IT SHOULD NOT BE USED TO WATER VEGETATION THAT IS BEING USED FOR STABILIZATION, VEGETATED FILTERS OR BUFFERS, OR OTHER VEGETATION TO BE PRESERVED.
4. HYPER–CHLORINATED WATER MAY BE DISCHARGED TO AN ONSITE RETENTION AREA UNTIL NATURAL ATTENUATION OCCURS. THE AREA MAY BE A DRY STORMWATER RETENTION BASIN, OR A PORTION OF THE SITE MAY BE GRADED TO FORM A TEMPORARY PIT OR BERMED AREA.
5. NATURAL ATTENUATION OF THE CHLORINE MAY BE AIDED BY AERATION. AIR CAN BE ADDED TO THE WATER BY DIRECTING THE DISCHARGE OVER A ROUGH SURFACE BEFORE IT ENTERS THE TEMPORARY RETENTION AREA OR AN AERATION DEVICE CAN BE PLACED IN THE RETENTION AREA.
6. ONSITE DISCHARGE MAY REQUIRE SEVERAL HOURS TO A FEW DAYS BEFORE THE WATER IS SAFE TO DISCHARGE. THE RATE AT WHICH CHLORINE WILL ATTENUATE IS AFFECTED BY SOIL CONDITIONS AND WEATHER CONDITIONS. ATTENUATION WILL OCCUR QUICKEST DURING WARM, SUNNY, AND DRY PERIODS.

SANITARY WASTE NOTES

1. THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE NUMBER OF PORTABLE TOILETS BASED ON THE NUMBER OF EMPLOYEES USING THE TOILETS AND THE HOURS THEY WILL WORK.
2. SANITARY FACILITIES SHALL BE PLACED ON A MINIMUM OF 50 FEET AWAY FROM STORM DRAIN INLETS, CONVEYANCE, CHANNELS OR SURFACE WATERS. IF UNABLE TO MEET THE 50 FOOT REQUIREMENT DUE TO SITE CONFIGURATION, PORTABLE TOILETS SHALL BE A MINIMUM OF 20 FEET AWAY FROM STORM DRAIN INLETS, CONVEYANCE CHANNELS OR SURFACE WATER AND SECONDARY CONTAINMENT SHALL BE PROVIDE IN CASE OF SPILLS.
3. THE LOCATION OF THE PORTABLE TOILETS SHALL BE ACCESSIBLE TO MAINTENANCE TRUCKS WITHOUT DAMAGING EROSION AND SEDIMENT CONTROLS OR CAUSING EROSION OR TRACKING PROBLEMS.
4. SANITARY FACILITIES SHALL BE FULLY ENCLOSED AND DESIGNED IN A MANNER THAT MINIMIZES THE EXPOSURE OF SANITARY WASTE TO PRECIPITATION AND STORMWATER RUNOFF.
5. WHEN HIGH WINDS ARE EXPECTED, PORTABLE TOILETS SHALL BE ANCHORED OR OTHERWISE SECURED TO PREVENT THEM FROM BEING BLOWN OVER.
6. THE COMPANY THAT SUPPLIES AND MAINTAINS THE PORTABLE TOILETS SHALL BE NOTIFIED IMMEDIATELY IF A TOILET IS TIPPED OVER OR DAMAGED IN A WAY THAT THE RESULTS IN A DISCHARGE. DISCHARGED SOLID MATTER SHALL BE VACUUMED INTO A SEPTIC TRUCK BY THE COMPANY THAT MAINTAINS THE TOILETS.
7. THE OPERATOR OF THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) SHALL BE NOTIFIED IF A DISCHARGE FROM THE PORTABLE TOILETS ENTERS THE MS4 OR A NATURAL CHANNEL.
8. SANITARY FACILITIES SHALL NOT BE PERMITTED ON PUBLIC SIDEWALKS, STREETS OR INLETS.

DEBRIS AND TRASH NOTES

1. ALL WASTE SOURCES AND STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS AND OTHER WATERS, IF THE SITE CONFIGURATION PROVIDES SUFFICIENT SPACE TO DO SO. IN NO CASE SHALL MATERIAL AND WASTE SOURCES BE CLOSER THAN 20 FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS, AND OTHER WATERS.
2. CONSTRUCTION WASTE AND TRASH SHALL BE STORED IN A MANNER THAT MINIMIZES ITS EXPOSURE TO PRECIPITATION AND STORMWATER RUNOFF.
3. WHENEVER POSSIBLE, MINIMIZE PRODUCTION OF DEBRIS AND TRASH.
4. INSTRUCT CONSTRUCTION WORKERS IN PROPER DEBRIS AND TRASH STORAGE AND HANDLING PROCEDURES.
5. SEGREGATE POTENTIAL HAZARDOUS WASTE FROM NON–HAZARDOUS CONSTRUCTION SITE DEBRIS.
6. PROHIBIT LITTERING BY WORKERS AND VISITORS.
7. POLICE SITE DAILY FOR LITTER AND DEBRIS.
8. ENFORCE SOLID WASTE HANDLING AND STORAGE PROCEDURES.
9. IF FEASIBLE, RECYCLE CONSTRUCTION AND DEMOLITION DEBRIS SUCH AS WOOD, METAL, AND CONCRETE.
10. TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AT REGULAR INTERVALS THAT ARE SCHEDULED TO EMPTY CONTAINERS WHEN THEY ARE 90 PERCENT FULL OR MORE FREQUENTLY.
11. GENERAL CONSTRUCTION DEBRIS MAY BE HAULED TO A LICENSED CONSTRUCTION DEBRIS LANDFILL.
12. USE WASTE AND RECYCLING HAULERS/FACILITIES APPROVED BY THE LOCAL MUNICIPALITY.
13. CHIPPING OF TREES AND BRUSH FOR USE SUCH AS MULCH IS PREFERRED ALTERNATIVE TO OFFSITE DISPOSAL.
14. NO WASTE, TRASH, OR DEBRIS SHALL BE BURIED, BURNED OR OTHER WISE DISPOSED OF ONSITE.
15. CLEARLY MARK ON ALL DEBRIS AND TRASH CONTAINERS WHICH MATERIALS ARE ACCEPTABLE. FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHALL MONITOR ONSITE SOLID WASTE STORAGE AND DISPOSAL PROCEDURES DAILY.

CONCRETE SAWCUTTING WASTE NOTES

1. DURING SAWCUTTING OPERATIONS, THE SLURRY AND CUTTINGS SHALL BE CONTINUOUSLY VACUUMED OR OTHERWISE RECOVERED AND NOT BE ALLOWED TO DISCHARGE FROM THE SITE.
2. IF THE PAVEMENT TO BE CUT IS NEAR A STORM DRAIN INLET, THE INLET SHALL BE BLOCKED BY SANDBAGS OR EQUIVALENT TEMPORARY MEASURES TO PREVENT THE SLURRY FROM ENTERING THE INLET. REMOVE THE SANDBAGS IMMEDIATELY AFTER COMPLETING SAWCUTTING OPERATIONS, SO THEY DO NOT CAUSE DRAINAGE PROBLEMS DURING STORM EVENTS.
3. SLURRY AND CUTTINGS SHALL NOT BE ALLOWED TO REMAIN ON THE PAVEMENT TO DRY OUT
4. DEVELOP PRE–DETERMINED, SAFE SLURRY DISPOSAL AREAS.
5. COLLECTED SLURRY AND CUTTINGS SHOULD BE IMMEDIATELY HAULED FROM THE SITE FOR DISPOSAL AT A WASTE FACILITY. IF THIS IS NOT POSSIBLE, THE SLURRY AND CUTTINGS SHALL BE DISCHARGED INTO ONSITE CONTAINMENT.
6. THE ONSITE CONTAINMENT MAY BE EXCAVATED OR BERMED PIT LINED WITH PLASTIC MINIMUM OF 10 MILIMETERS THICK. IF THE PROJECT INCLUDES PLACEMENT OF NEW CONCRETE, SLURRY FROM SAWCUTTING MAY BE DISPOSED OF IN FACILITIES DESIGNATED FOR THE WASHOUT OF CONCRETE TRUCKS INSTEAD CONSTRUCTING A SEPARATE CONTAINMENT.
7. THE CONTAINMENT SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS, AND OTHER WATERS, IF THE SITE CONFIGURATION PROVIDES SUFFICIENT SPACE TO DO SO. IN NO CASE SHALL THE COLLECTION AREA BE CLOSER THAN 20 FEET FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS AND OTHER WATERS.
8. SEVERAL, PORTABLE, PRE–FABRICATED, CONCRETE WASHOUT, COLLECTION BASINS ARE COMMERCIALLY AVAILABLE AND ARE AN ACCEPTABLE ALTERNATIVE TO AN ONSITE CONTAINMENT PIT.
9. REMOVE WASTER CONCRETE WHEN THE CONTAINMENT IS HALF FULL. ALWAYS MAINTAIN A MINIMUM OF ONE FOOT FREEBOARD.
10. ONSITE EVAPORATION OF SLURRY WATER AND RECYCLING OF THE CONCRETE WASTE IS THE PREFERRED DISPOSAL METHOD. WHEN THIS IS NOT FEASIBLE, DISCHARGE FROM THE COLLECTION AREA SHALL ONLY BE ALLOWED IF A PASSIVE TREATMENT SYSTEM IS USED TO REMOVE THE FINES. MECHANICAL MIXING IS REQUIRED IN THE COLLECTION AREA. THE pH MUST BE TESTED, AND DISCHARGED IS ALLOWED IN IF THE pH DOES NOT EXCEED 8.0. THE pH MAY BE LOWERED BY ADDING SULFURIC ACID TO THE SLURRY WATER.
11. CARE SHALL BE EXERCISED WHEN TREATING THE SLURRY WATER FOR DISCHARGE. MONITORING MUST BE IMPLEMENTED TO VERIFY THAT DISCHARGES FROM THE COLLECTION AREA DO NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY STANDARDS.
12. GEOTEXTILE FABRICS SUCH AS THOSE USED FOR SILT FENCE SHOULD NOT BE USED TO CONTROL SAWCUTTING WASTE, SINCE THE GRAIN SIZE IS SIGNIFICANTLY SMALLER THAN THE APPARENT OPENING SIZE OF THE FABRIC.

SPILL AND LEAK RESPONSE NOTES

1. RECORDS OF RELEASES THAT EXCEED THE REPORTABLE QUANTITY (RQ) FOR OIL AND HAZARDOUS SUBSTANCES SHOULD BE MAINTAINED IN ACCORDANCE WITH THE FEDRAL AND STATE REGULATIONS.
2. EMERGENCY CONTACT INFORMATION AND SPILL RESPONSE PROCEDURES SHALL BE POSTED IN A READILY AVAILABLE REA FOR ACCESS BY ALL EMPLOYEES AND SUBCONTRACTORS.
3. SPILL CONTAINMENT KITS SHOULD BE MAINTAINED FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS THAT ARE REGULARLY ONSITE. MATERIALS IN KITS SHOULD BE BASED ON CONTAINMENT GUIDELINES IN THE MATERIALS SAFETY AND DATA SHEETS (MSDSS) FOR THE SUBSTANCE MOST FREQUENTLY ONSITE.
4. SPILL KITS ARE INTENDED FOR RESPONSE TO SMALL SPILLS, TYPICALLY LESS THAN 5 GALLONS, OF SUBSTANCES THAT ARE NOT EXTREMELY HAZARDOUS.
5. SIGNIFICANT SPILLS OR OTHER RELEASES WARRANT IMMEDIATE RESPONSE BY TRAINED PROFESSIONALS.
6. SUSPECTED JOB–SITE CONTAMINATION SHOULD BE IMMEDIATELY REPORTED TO REGULATORY AUTHORITIES AND PROTECTIVE ACTIONS TAKEN.
7. THE CONTRACTOR SHOULD BE REQUIRED TO DESIGNATE A SITE SUPERINTENDENT, FOREMAN, SAFETY OFFICER, OR OTHER SENIOR PERSON WHO IS ONSITE DAILY TO BE THE SPILL AND LEAK RESPONSE COORDINATOR (SLRC) AND MUST HAVE KNOWLEDGE OF AND BE TRAINED IN CORRECT SPILL AND LEAK RESPONSE PROCEDURES.

SUBGRADE STABILIZATION NOTES

1. MINIMIZE THE DISCHARGE OF THE CHEMICAL STABILIZERS BY THE CONTRACTOR LIMITING THE AMOUNT OF STABILIZING AGENT ONSITE TO THAT WHICH CAN BE THOROUGHLY MIXED AND COMPACTED BY THE END OF EACH WORKDAY.
2. STABILIZERS SHALL BE APPLIED AT RATES THAT RESULT IN NO RUN OFF.
3. STABILIZATION SHALL NOT OCCUR IMMEDIATELY BEFORE AND DURING RAINFALL EVENTS.
4. NO TRAFFIC OTHER THAN WATER TRUCKS AND MIXING EQUIPMENT SHALL BE ALLOWED TO PASS OVER THE AREA BEING STABILIZED UNTIL AFTER COMPLETION OF MIXING THE CHEMICAL.
5. AREA ADJACENT AND DOWNSTREAM OF STABILIZED AREAS SHALL BE ROUGHENED TO INTERCEPT CHEMICAL RUNOFF AND REDUCE RUNOFF VELOCITY.
6. GEOTEXTILE FABRICS SUCH AS THOSE USED FOR SILT FENCE SHOULD NOT BE USED TO TREAT CHEMICAL RUNOFF, BECAUSE THE CHEMICALS ARE DISSOLVED IN THE WATER AND WON'T BE AFFECTED BY A BARRIER AND THE SUSPENDED SOLIDS ARE SIGNIFICANTLY SMALLER THAN THE APPARENT OPENING SIZE OF THE FABRIC.
7. IF SOIL STABILIZERS ARE STORED ONSITE, THEY SHALL BE CONSIDERED HAZARDOUS MATERIAL AND SHALL BE MANAGED ACCORDING TO THE CRITERIA OF CHEMICAL MANAGEMENT TO CAPTURE ANY ACCIDENTAL LIME OR CHEMICAL OVERFLOW.
8. THE CONTRACRTOR SHALL INSTALL BMP'S TO ALL INLETS AND OPENINGS CONNECTED TO THE STORM SEWER SYSTEMS TO PREVENT LIME FROM ENTERING THE MS4 SYSTEM.

SANDBLASTING WASTE NOTES

1. THE CONTRACTOR SHOULD BE REQUIRED TO DESIGNATE THE SITE SUPERINTENDENT, FOREMAN, OR OTHER PERSON WHO IS RESPONSIBLE FOR SANDBLASTING TO ALSO BE RESPONSIBLE FOR SANDBLASTING WASTE MANAGEMENT.
2. PROHIBIT THE DISCHARGE OF SANDBLASTING WASTE.
3. USE ONLY INERT, NON–DEGRADABLE SANDBLAST MEDIA.
4. USE APPROPRIATE EQUIPMENT FOR THE JOB; DO NOT OVER–BLAST.
5. WHENEVER POSSIBLE, BLAST IN A DOWNWARD DIRECTION.
6. CEASE BLASTING ACTIVITIES IN HIGH WINDS OR IF WIND DIRECTION COULD TRANSPORT GRIT TO DRAINAGE FACILITIES.
7. INSTALL DUST SHIELDING AROUND SANDBLASTING AREAS.
8. COLLECT AND DISPOSE OF ALL SPENT SANDBLAST GRIT, USE DUST CONTAINMENT FABRICS AND DUST COLLECTION HOPPERS AND BARRELS.
9. NON–HAZARDOUS SANDBLAST GRIT MAY BE DISPOSED IN PERMITTED CONSTRUCTION DEBRIS LANDFILLS OR PERMITTED SANITARY LANDFILLS.
10. IF SANDBLAST MEDIA CANNOT BE FULLY CONTAINED, CONSTRUCT SEDIMENT TRAPS DOWNSTREAM FROM BLASTING AREA WHERE APPROPRIATE.
11. USE SAND FENCING WHERE APPROPRIATE IN AREAS WHERE BLAST MEDIA CANNOT BE FULLY CONTAINED.
12. IF NECESSARY, INSTALL MISTING EQUIPMENT TO REMOVE SANDBLAST GRIT FROM THE AIR PREVENT RUNOFF FROM MISTING OPERATIONS FROM ENTERING DRAINAGE SYSTEMS.
13. USE VACUUM GRIT COLLECTION SYSTEMS WHERE POSSIBLE.
14. KEEP RECORDS OF SANDBLASTING MATERIALS, PROCEDURES, AND WEATHER CONDITIONS ON A DAILY BASIS.
15. TAKE ALL REASONABLE PRECAUTIONS TO ENSURE THAT SANDBLASTING GRIT IS CONTAINED AND KEPT AWAY FROM DRAINAGE STRUCTURES.
16. SAND BLASTING MEDIA SHOULD ALWAYS BE STORED UNDER COVER AWAY FROM DRAINAGE STRUCTURES.
17. ENSURE THAT STORED MEDIA OR GRIT IS NOT SUBJECTED TO TRANSPORT BY WIND.
18. ENSURE THAT ALL SANDBLASTING EQUIPMENT AND STORAGE CONTAINERS COMPLY WITH CURRENT LOCAL, STATE, AND FEDERAL REGULATIONS.
19. CAPTURE AND TREAT RUNOFF, WHICH COMES INTO CONTACT WITH SANDBLASTING MATERIALS OR WASTE.

No.	DATE	REVISION

SEAL:

DATE _____

DESIGN ENGINEER:

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

GENERAL EROSION CONTROL NOTES

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–33

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849–6681
REG. NO. F–825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

03-07-2025

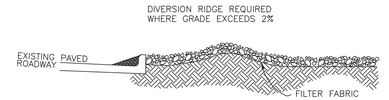
OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

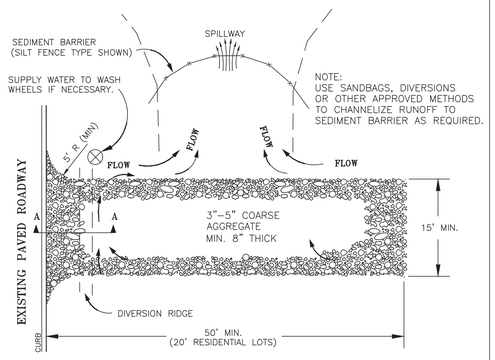
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

GENERAL EROSION CONTROL NOTES
SL–33

PROJECT NO. 16182

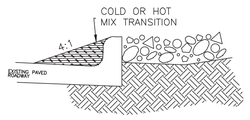


SECTION A – A



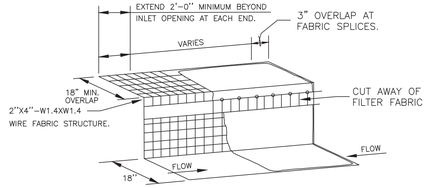
PLAN

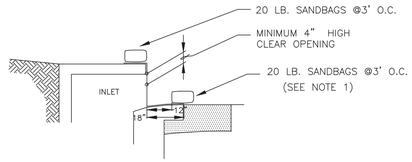
WHEN SEDIMENT HAS SUBSTANTIALLY CLOGGED THE VOID AREA BETWEEN THE ROCKS, THE AGGREGATE MAT MUST BE WASHED DOWN OR REPLACED. PERIODIC RE–GRADING AND TOP DRESSING WITH ADDITIONAL STONE MUST BE DONE TO KEEP THE EFFICIENCY OF THE ENTRANCE FROM DIMINISHING.

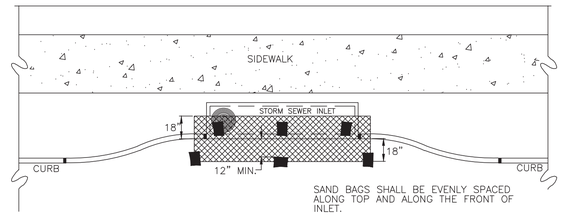


TRANSITION

TEMPORARY STONE CONSTRUCTION
ENTRANCE/EXIT
N.T.S.







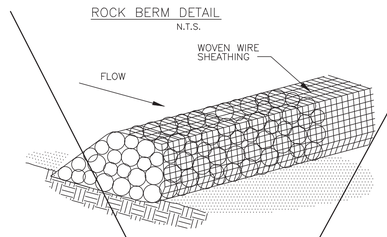
CURB INLET PROTECTION DETAIL
N.T.S.

NOTES:

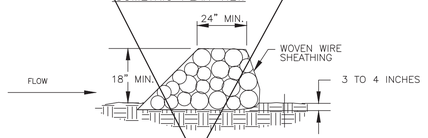
1. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL TO PROVIDE A 4" MINIMUM CLEAR OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION
2. INSPECTION SHALL BE MADE BY CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTION IF THE STORMWATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF THE SEDIMENT IS STABILIZED.

INLET OPENING	MINIMUM NUMBER OF SAND BAGS	
	TOP	FRONT
5'	2	3
10'	3	3
15'	3	4
20'	4	4

ROCK BERM DETAIL
N.T.S.



ISOMETRIC PLAN VIEW



CROSS SECTION
N.T.S.

ROCK BERM GENERAL NOTES

1. USE ONLY OPEN GRADED ROCK 4–8 INCHES IN DIAMETER FOR STREAM FLOW CONDITION. USE OPEN GRADED ROCK 3–5 INCHES IN DIAMETER FOR OTHER CONDITIONS.

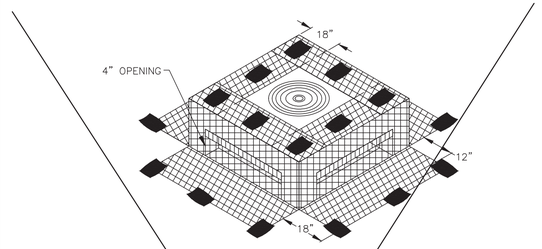
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING A MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE SIZE OF 20 GAUGE AND SHALL BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP.

3. THE ROCK BERM SHALL BE INSPECTED EVERY TWO WEEKS OR AFTER EACH 1/2" RAIN EVENT AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTEDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

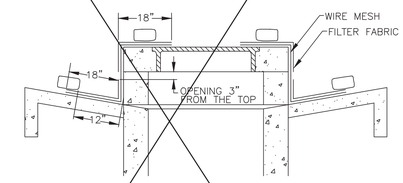
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE–THIRD OF THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.

5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

6. ROCK BERM SHOULD BE USED AS CHECK DAMS FOR CONCENTRATED FLOW AND ARE NOT INTENDED FOR USE IN PERIMETER PROTECTION.

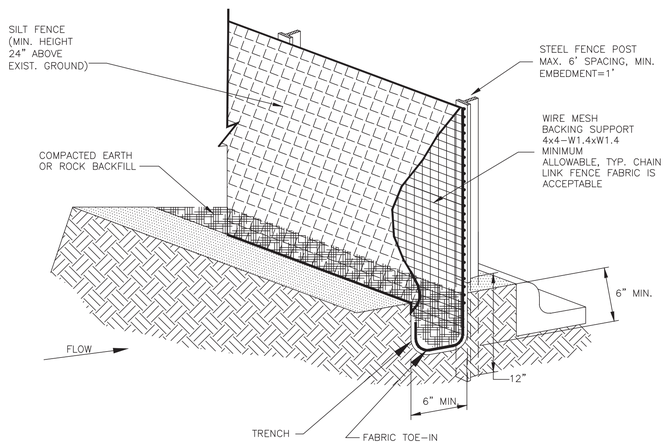


ISOMETRIC VIEW



SECTION

FILTER FABRIC WYE INLET PROTECTION
N.T.S.



ISOMETRIC PLAN VIEW
N.T.S.

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 DOWNSLOPE 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 UPHILL 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 LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

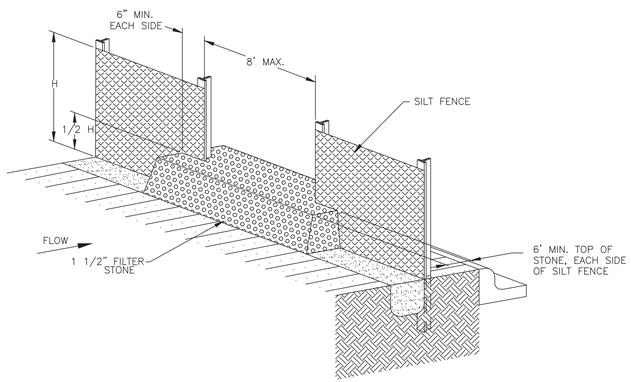
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

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 IMPEDE 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: STONE OVERFLOW STRUCTURES OF OTHER OUTLET CONTROL DEVICES SHALL BE INSTALLED AT ALL LOW POINTS ALONG THE FENCE OR EVERY 300 FEET IF THERE IS NO APPARENT LOW POINT



SILT FENCE
STONE OVERFLOW STRUCTURE
N.T.S.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

EROSION CONTROL DETAILS – 1

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–34
SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849–6681
REG. NO. F–825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
LICENSED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
03-07-2025

OWNER:
Wayne L. "Sandy" Rea, II
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN: _____
PROFILE:
HORIZONTAL: _____
VERTICAL: _____

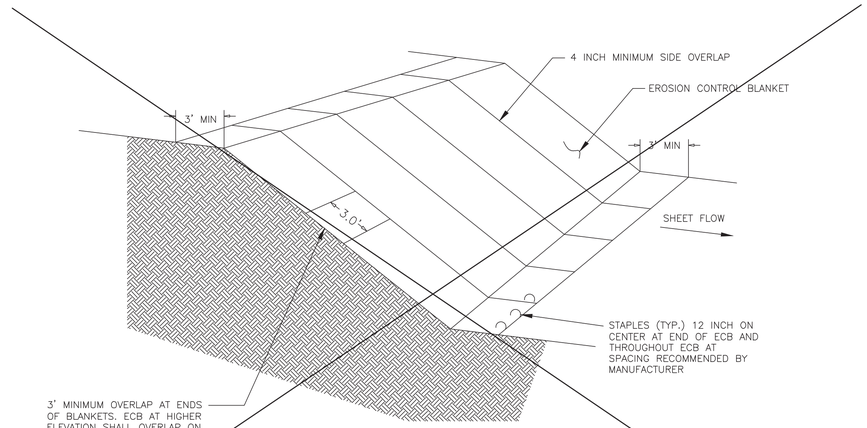
PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

EROSION CONTROL
DETAILS – 1
SL–34

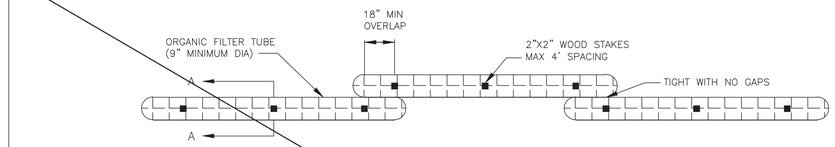
PROJECT NO. 16182

J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 jperro

16182 DETAIL SET.DWG



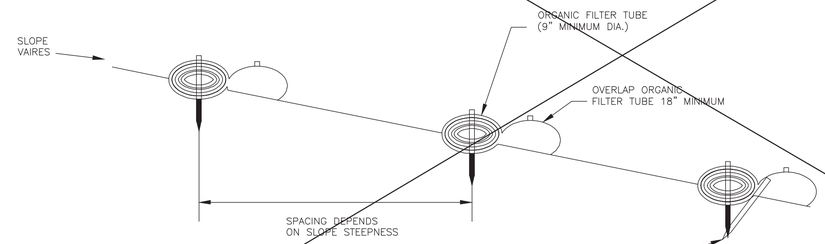
EROSION CONTROL BLANKETS
N.T.S.



ORGANIC FILTER TUBE PERIMETER CONTROL PLAN VIEW
N.T.S.

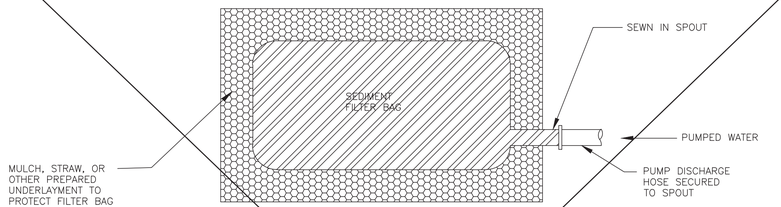
ORGANIC FILTER TUBES NOTES

1. TYPE OF NETTING, FILTER MATERIAL, DIAMETER OF TUBE, AND SPACING OF TUBES SHALL BE SPECIFIED BY THE DESIGNER BASED ON THE FOLLOWING SITE PARAMETERS:
   - SIZE OF CONTRIBUTING DRAINAGE AREA
   - STEEPNESS OF SLOPE
   - GROUND CONDITIONS (SOIL OR PAVEMENT)
2. DESIGNER SHALL SHOW ON THE DRAWINGS THE LOCATIONS WHERE TUBE ARE TO BE TURNED UPSLOPE. UPSLOPE LENGTHS SHALL BE MINIMUM OF 10 FEET.

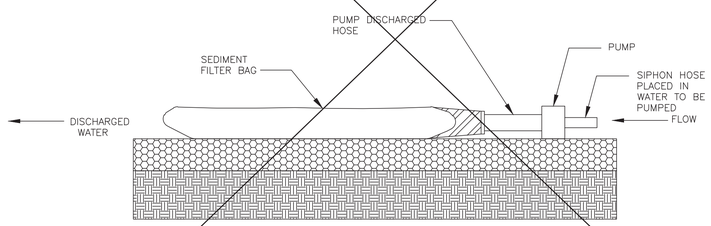


ORGANIC FILTER TUBE PERIMETER CONTROL PROFILE
N.T.S.

FILTER TUBE
N.T.S.



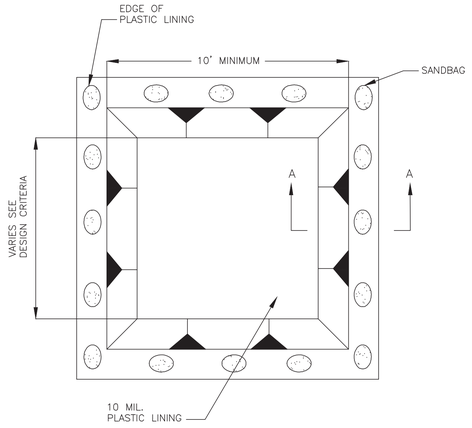
SEDIMENT FILTER BAG PLAN VIEW
N.T.S.



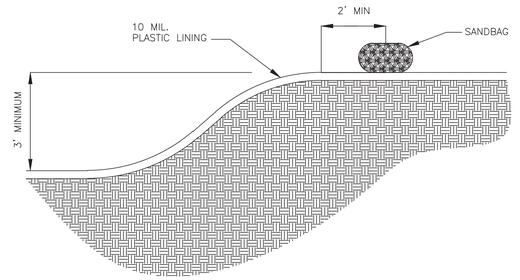
SEDIMENT FILTER BAG PROFILE
N.T.S.

NOTE: A FILTRATION BAG IS NOT REQUIRED IF IF THE DRAINAGE SYSTEM CAN BE ADEQUATELY PROTECTED

DEWATERING CONTROLS
N.T.S.



CONCRETE WASHOUT PLAN VIEW
N.T.S.



CONCRETE WASHOUT SECTION A–A
N.T.S.

CONCRETE WASHOUT NOTES

1. SANDBAGS MAYBE REPLACED BY A SOIL BERM TO ANCHOR THE PLASTIC BAG

CONCRETE WASHOUT AREA
N.T.S.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

EROSION CONTROL DETAILS – 2

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–35

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

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PLAN:
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HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

EROSION CONTROL DETAILS – 2
SL–35

PROJECT NO. 16182

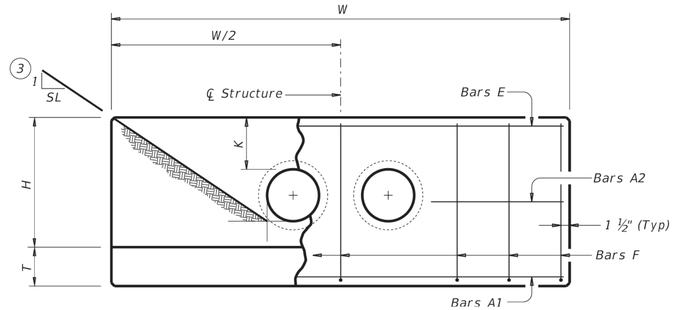
J:\16000S\16100\16182\ENGINEERING-SURVEY\ENGINEERING\16182 DETAIL SET.DWG PLOT DATE:3/7/2025 -jperna

16182 DEFAIL SET.DWG

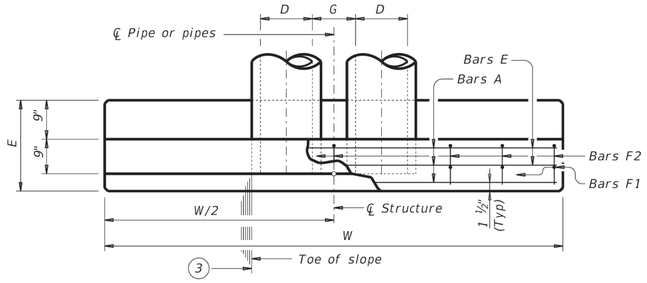
TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (5)

Slope	Dia of Pipe (D)	Values for One Pipe: W	Reinf (Lbs) (1)	Conc (CY) (2)	Values To Be Added for Each Addt'l Pipe: W	Reinf (Lbs) (1)	Conc (CY) (2)
2:1	12"	9' – 0"	122	1.1	1' – 9"	15	0.2
	15"	10' – 3"	136	1.3	2' – 2"	16	0.2
	18"	11' – 6"	163	1.5	2' – 8"	19	0.3
	21"	12' – 9"	200	1.8	3' – 1"	31	0.4
	24"	14' – 0"	217	2.1	3' – 7"	34	0.4
	27"	15' – 3"	254	2.4	3' – 11"	37	0.5
	30"	16' – 6"	272	2.7	4' – 4"	40	0.6
	33"	17' – 9"	314	3.1	4' – 8"	43	0.6
	36"	19' – 0"	371	3.9	5' – 1"	46	0.8
	42"	21' – 6"	442	4.9	5' – 10"	52	1.0
	48"	25' – 0"	569	6.4	6' – 7"	59	1.3
	54"	27' – 6"	701	7.5	7' – 6"	82	1.6
	60"	30' – 0"	794	8.8	8' – 3"	90	1.8
	66"	32' – 6"	894	10.2	8' – 9"	96	2.0
	72"	35' – 0"	1,055	11.7	9' – 4"	103	2.3
3:1	12"	13' – 0"	175	1.6	1' – 9"	14	0.2
	15"	14' – 9"	193	1.9	2' – 2"	17	0.2
	18"	16' – 6"	228	2.2	2' – 8"	19	0.3
	21"	18' – 3"	299	2.6	3' – 1"	31	0.4
	24"	20' – 0"	323	3.0	3' – 7"	33	0.4
	27"	21' – 9"	371	3.5	3' – 11"	37	0.5
	30"	23' – 6"	415	4.0	4' – 4"	40	0.5
	33"	25' – 3"	469	4.6	4' – 8"	43	0.6
	36"	27' – 0"	556	5.7	5' – 1"	46	0.8
	42"	30' – 6"	675	7.1	5' – 10"	52	1.0
	48"	35' – 6"	837	9.2	6' – 7"	59	1.3
	54"	39' – 0"	1,015	11.0	7' – 6"	84	1.6
	60"	42' – 6"	1,171	12.9	8' – 3"	91	1.8
	66"	46' – 0"	1,298	14.9	8' – 9"	98	2.0
	72"	49' – 6"	1,561	17.1	9' – 4"	103	2.3
4:1	12"	17' – 0"	229	2.0	1' – 9"	15	0.2
	15"	19' – 3"	266	2.4	2' – 2"	17	0.2
	18"	21' – 6"	308	2.9	2' – 8"	19	0.3
	21"	23' – 9"	382	3.5	3' – 1"	31	0.3
	24"	26' – 0"	430	3.9	3' – 7"	34	0.4
	27"	28' – 3"	486	4.7	3' – 11"	37	0.5
	30"	30' – 6"	539	5.2	4' – 4"	40	0.6
	33"	32' – 9"	603	6.0	4' – 8"	42	0.6
	36"	35' – 0"	738	7.5	5' – 1"	47	0.8
	42"	39' – 6"	881	9.3	5' – 10"	52	1.0
	48"	46' – 0"	1,102	12.1	6' – 7"	61	1.3
	54"	50' – 6"	1,364	14.4	7' – 6"	84	1.6
	60"	55' – 0"	1,547	16.9	8' – 3"	91	1.8
	66"	59' – 6"	1,741	19.5	8' – 9"	98	2.0
	72"	64' – 0"	2,077	22.4	9' – 4"	102	2.3
6:1	12"	25' – 0"	336	3.0	1' – 9"	14	0.2
	15"	28' – 3"	384	3.6	2' – 2"	17	0.2
	18"	31' – 6"	452	4.2	2' – 8"	19	0.3
	21"	34' – 9"	581	5.1	3' – 1"	31	0.4
	24"	38' – 0"	644	5.8	3' – 7"	34	0.4
	27"	41' – 3"	737	6.9	3' – 11"	37	0.5
	30"	44' – 6"	807	7.7	4' – 4"	39	0.6
	33"	47' – 9"	912	8.9	4' – 8"	44	0.6
	36"	51' – 0"	1,108	11.0	5' – 1"	48	0.8
	42"	57' – 6"	1,318	13.7	5' – 10"	54	1.0
	48"	67' – 0"	1,682	17.9	6' – 7"	59	1.3
	54"	73' – 6"	2,072	21.3	7' – 6"	83	1.6
	60"	80' – 0"	2,351	24.9	8' – 3"	89	1.8
	66"	86' – 6"	2,643	28.9	8' – 9"	96	2.0
	72"	93' – 0"	3,121	33.1	9' – 4"	101	2.3

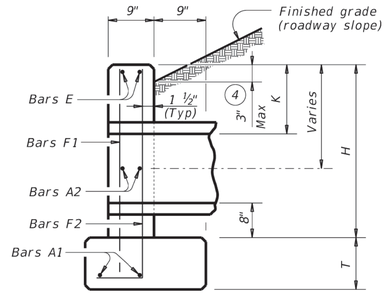
DATE:
FILE:



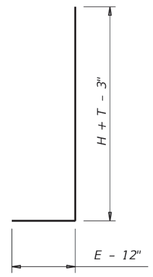
ELEVATION



PLAN OF NON-SKEWED PIPES



SECTION AT CENTER OF PIPE



BARS F2

(1) Total quantities include one 3'–1" lap for bars over 60' in length.

(2) Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.

(3) Indicated slope is perpendicular to centerline pipe or pipes.

(4) For vehicle safety, construct curbs no more than 3" above finished grade. Reduce curb heights, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(5) Dimensions shown are usual and maximum.

(6) Quantities shown are for one structure end only (one headwall).

TABLE OF CONSTANT DIMENSIONS

Dia of Pipe (D)	G	K (5)	H	T	E
12"	0' – 9"	1' – 0"	2' – 8"	0' – 9"	1' – 9"
15"	0' – 11"	1' – 0"	2' – 11"	0' – 9"	1' – 9"
18"	1' – 2"	1' – 0"	3' – 2"	0' – 9"	1' – 9"
21"	1' – 4"	1' – 0"	3' – 5"	0' – 9"	2' – 0"
24"	1' – 7"	1' – 0"	3' – 8"	0' – 9"	2' – 0"
27"	1' – 8"	1' – 0"	3' – 11"	0' – 9"	2' – 3"
30"	1' – 10"	1' – 0"	4' – 2"	0' – 9"	2' – 3"
33"	1' – 11"	1' – 0"	4' – 5"	0' – 9"	2' – 6"
36"	2' – 1"	1' – 0"	4' – 8"	1' – 0"	2' – 6"
42"	2' – 4"	1' – 0"	5' – 2"	1' – 0"	2' – 9"
48"	2' – 7"	1' – 3"	5' – 11"	1' – 0"	3' – 0"
54"	3' – 0"	1' – 3"	6' – 5"	1' – 0"	3' – 3"
60"	3' – 3"	1' – 3"	6' – 11"	1' – 0"	3' – 6"
66"	3' – 3"	1' – 3"	7' – 5"	1' – 0"	3' – 9"
72"	3' – 4"	1' – 3"	7' – 11"	1' – 0"	4' – 0"

TABLE OF REINFORCING STEEL (6)

Bar	Size	Spa	No.
A1	#5	~	2
A2	#5	1' – 6"	~
E	#5	~	2
F	#5	1' – 0"	~

MATERIAL NOTES:
Provide Grade 60 reinforcing steel.
Provide Class C concrete (f'c = 3,600 psi).

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
Do not mount bridge rails of any type directly to these culvert headwalls.
This standard may not be used for wall heights, H, exceeding the values shown.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

Texas Department of Transportation

Bridge Division Standard

CONCRETE HEADWALLS WITH PARALLEL WINGS FOR NON-SKEWED PIPE CULVERTS

CH-PW-0

FILE: CD-CH-PW0-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 3/6/2025

B&L BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
4005 TECHNOLOGY DRIVE, SUITE 1530
ANGLETON, TEXAS 77515 (979) 849-6681
REG. NO. F-825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · LICENSED PROFESSIONAL ENGINEER

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03-07-2025

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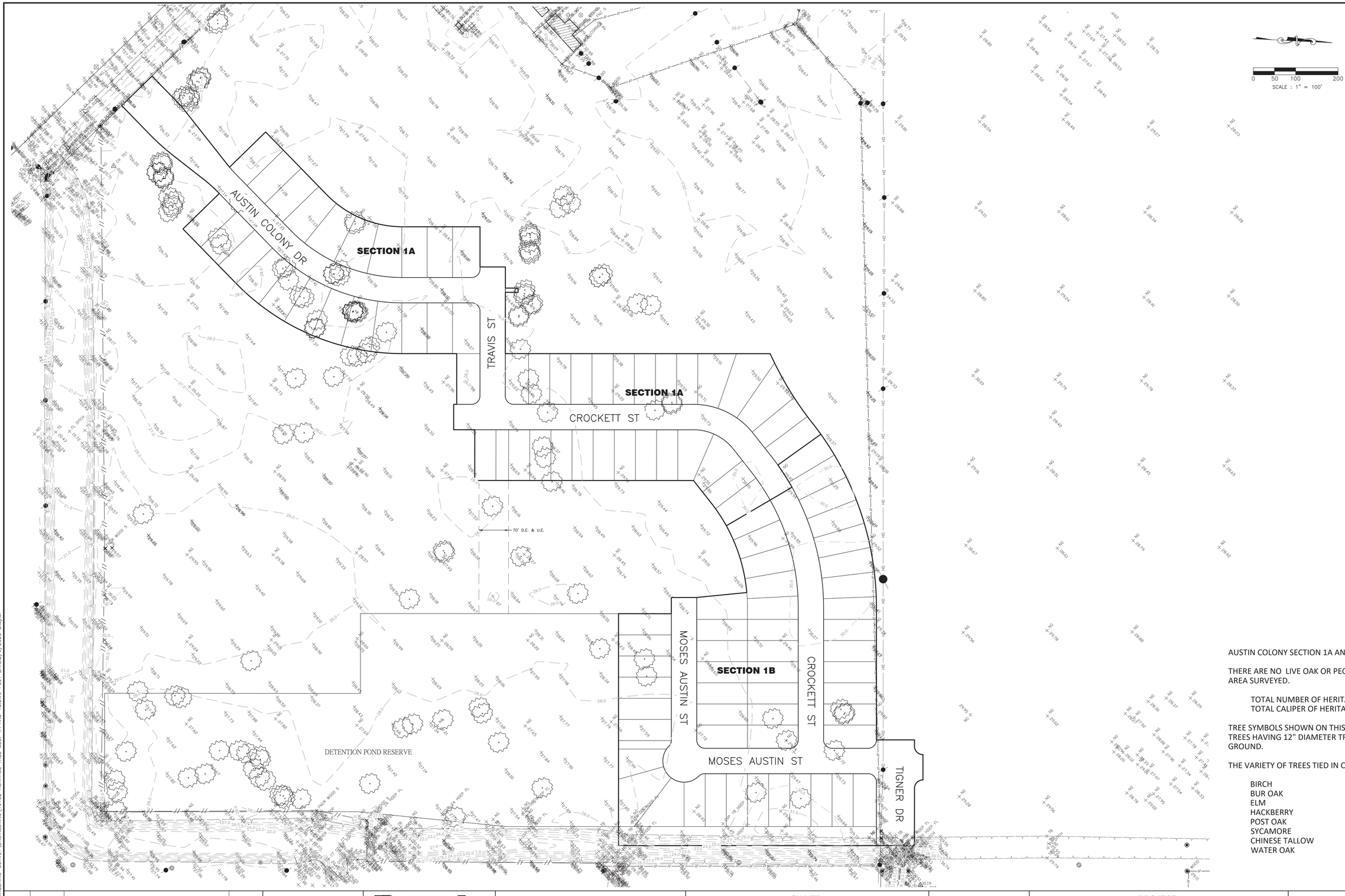
Tejas Viejo Land Company
5454 Newcastle Drive Unit# 1101
Houston, Texas 77081
waynerea@swbell.net (713) 993-6453

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

CONCRETE HEADWALLS
CH–PW–0

PROJECT NO. 16182



AUSTIN COLONY SECTION 1A AND 1B HERITAGE TREES

THERE ARE NO LIVE OAK OR PECAN TREES IN THE AREA SURVEYED.

TOTAL NUMBER OF HERITAGE TREES = 0
TOTAL CALIPER OF HERITAGE TREES = 0

TREE SYMBOLS SHOWN ON THIS DRAWING REPRESENT TREES HAVING 12" DIAMETER TRUNKS AT 4.5' ABOVE GROUND.

THE VARIETY OF TREES TIED IN CONSISTED OF:

BIRCH
BUR OAK
ELM
HACKBERRY
POST OAK
SYCAMORE
CHINESE TALLOW
WATER OAK

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED DR
DATE 2/5/2025

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PLAN: 1" = 100'
PROFILE:
HORIZONTAL:
VERTICAL:

PROJECT:
Austin Colony Subdivision
Section 1B - 50 Lots
CR 44 (Anchor Road), Angleton TX

HERITAGE TREE PRESERVATION PLAN

PROJECT NO. 16182

LS-1

A:\16000S\16160\16182\ENGINEERING-SURVEY\ENGINEERING\16182 HERITAGE TREE SEC. 1A AND 1B.DWG PLOT DATE:2/6/2025 Broylor

16182 HERITAGE TREE SEC. 1A AND 1B.DWG