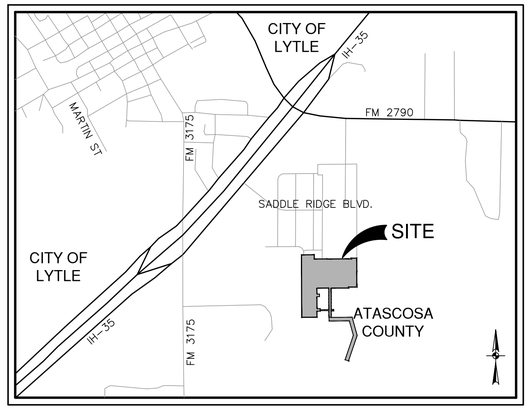
SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

CIVIL CONSTRUCTION PLANS

SHEET INDEX

SHEET INDEX



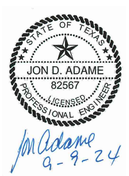
LOCATION MAP

NOT-TO-SCALE

PREPARED FOR:

RAUSCH COLEMAN HOMES SAN ANTONIO, LLC
4058 NORTH COLLEGE AVE. SUITE 300, BOX 9
FAYETTEVILLE, ARKANSAS 72703

SEPTEMBER 2024

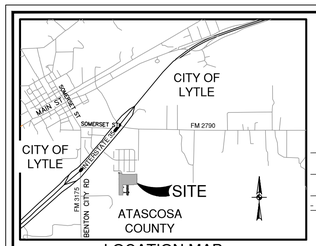


PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

SHEET C0.00

PLAT NO. N/A PD JOB NO. 11100-26 SADDLE RIDGE ESTATES PHASE 3



LOCATION MAP

SCALE: 1" = 4000'

LEGEND

AC	ACRE(S)	VOL	VOLUME
BLK	BLOCK	PG	PAGE(S)
BSL	BUILDING SETBACK LINE	ROW	RIGHT-OF-WAY
CB	COUNTY BLOCK	VAR WID	VARIABLE WIDTH
DPR	DEED AND PLAT RECORDS OF ATASCOSA COUNTY, TEXAS	● (SURVEYOR)	FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
		○	SET 1/2" x 2' IRON ROD (PD)
OPR	OFFICIAL PUBLIC RECORDS (OFFICIAL PUBLIC RECORDS OF REAL PROPERTY) OF ATASCOSA COUNTY, TEXAS	INT	INTERSECTION
		1140	EXISTING CONTOURS
		1140	PROPOSED CONTOURS
		℄	CENTERLINE
PR	PLAT RECORDS OF ATASCOSA COUNTY, TEXAS		

1. 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 20' SANITARY SEWER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W./LOT (0.112 ACRE OFF-LOT)
3. 10' SANITARY SEWER EASEMENT
4. 50'X50' WATER, SEWER, GRADING AND DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. (0.172 ACRE OFF-LOT)
5. 40' OFF-SITE DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W./LOT (0.525 ACRE OFF-LOT)
6. PROPOSED 75' DRAINAGE EASEMENT (BY-SEPERATE-INSTRUMENT) (2.288 ACRES OFF-LOT)
7. EXISTING 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202100013 OPR)
8. EXISTING 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202300030 OPR)
9. EXISTING VARIABLE WIDTH (MIN. 10') GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202100013 OPR)
10. EXISTING 20' TEMPORARY SANITARY SEWER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED RIGHT-OF-WAY/LOTS (DOC. NO. 216135 OPR)
11. EXISTING 30' PERMANENT DRAINAGE EASEMENT (DOC. NO. 227383, OPR)
12. EXISTING 14' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 242491 OPR)
1. SADDLE RIDGE ESTATES, PHASE 1 (DOC. NO. 202100013 OPR)
2. SADDLE RIDGE ESTATES, PHASE 2&5 (DOC. NO. 202300030 OPR)
3. MEADOWBROOK ESTATES, UNIT 3 (VOL. 1, PG. 193A DPR)
4. ABBE FAMILY - 59.50 ACRE TRACT (VOL. 24, PGS. 130-133 OPR)
5. EXCELITE DEVELOPMENT 87.855 ACRE TRACT (DOC. NO. 222827)
6. SAN ANTONIO LD, LLC. REMAINING PORTION OF 27.635 ACRES (DOC. NO. 217149)
7. CITY OF LYTLE 61.582 ACRE TRACT (VOL. 424, POS. 406-409 DR)

SURVEYOR'S NOTES:

1. MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION AS NOTED. MONUMENTS AND LOT MARKERS WILL BE SET WITH 2" IRON ROD WITH CAP MARKED "PAPE-DAWSON" OR MAG NAIL WITH DISK MARKED "PAPE-DAWSON" AFTER THE COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
2. COORDINATES SHOWN ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 NAD83 (NA2011) EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE DISPLAYED IN GRID VALUES DERIVED FROM THE NGS COOPERATIVE CORS NETWORK.
3. DIMENSIONS SHOWN ARE SURFACE WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017.
4. BEARINGS ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 NAD83 (NA2011) EPOCH 2010.00. FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE.

STATE OF TEXAS
COUNTY OF BEXAR

I HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN THIS PLAT TO THE MATTERS OF STREETS, LOTS, AND DRAINAGE LAYOUT.

JON D. ADAME, P.E.
REGISTERED PROFESSIONAL ENGINEER #82567
PAPE-DAWSON CONSULTING ENGINEERS, LLC.
2000 NW LOOP 410
SAN ANTONIO, TX 78213

SWORN TO AND SUBSCRIBED BEFORE ME THIS THE ____ DAY OF _____, A.D., 20___.

NOTARY PUBLIC IN AND FOR BEXAR COUNTY, TEXAS

STATE OF TEXAS
COUNTY OF BEXAR

I HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT AND WAS PREPARED FROM AN ACTUAL SURVEY OF THIS PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND.

TOM H. MILO, RPLS
REGISTERED PROFESSIONAL LAND SURVERYOR #6527
PAPE-DAWSON CONSULTING ENGINEERS, LLC.
2000 NW LOOP 410
SAN ANTONIO, TX 78213

SWORN TO AND SUBSCRIBED BEFORE ME THIS THE ____ DAY OF _____, A.D., 20___.

NOTARY PUBLIC IN AND FOR BEXAR COUNTY, TEXAS

CPS ENERGY/CITY OF LYTLE/UTILITY:

1. THE CITY OF LYTLE AS PART OF ITS ELECTRIC, GAS, WATER, AND WASTEWATER SYSTEMS – CITY PUBLIC SERVICE BOARD (CPS ENERGY) - IS HEREBY DEDICATED EASEMENTS AND RIGHTS-OF-WAY FOR UTILITY, TRANSMISSION AND DISTRIBUTION INFRASTRUCTURE AND SERVICE FACILITIES IN THE AREAS DESIGNATED ON THIS PLAT AS "ELECTRIC EASEMENT," "ANCHOR EASEMENT," "SERVICE EASEMENT," "OVERHANG EASEMENT," "UTILITY EASEMENT," "GAS EASEMENT," "TRANSFORMER EASEMENT," "WATER EASEMENT," "SANITARY SEWER EASEMENT" AND/OR "RECYCLED WATER EASEMENT" FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, RECONSTRUCTING, MAINTAINING, REMOVING, INSPECTING, PATROLLING, AND ERECTING UTILITY INFRASTRUCTURE AND SERVICE FACILITIES FOR THE REASONS DESCRIBED ABOVE. CPS ENERGY AND THE CITY OF LYTLE SHALL ALSO HAVE THE RIGHT TO RELOCATE SAID INFRASTRUCTURE AND SERVICE FACILITIES WITHIN EASEMENT AND RIGHT-OF-WAY AREAS, TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT LANDS FOR THE PURPOSE OF ACCESSING SUCH INFRASTRUCTURE AND SERVICE FACILITIES AND THE RIGHT TO REMOVE FROM SAID LANDS ALL TREES OR PARTS THEREOF, OR OTHER OBSTRUCTIONS WHICH ENDANGER OR MAY INTERFERE WITH THE EFFICIENCY OF WATER, SEWER, GAS, AND/OR ELECTRIC INFRASTRUCTURE AND SERVICE FACILITIES. NO BUILDINGS, STRUCTURES, CONCRETE SLABS, OR WALLS WILL BE PLACED WITHIN EASEMENT AREAS WITHOUT AN ENCROACHMENT AGREEMENT WITH THE RESPECTIVE UTILITY.
2. ANY CPS ENERGY OR CITY OF LYTLE MONETARY LOSS RESULTING FROM MODIFICATIONS REQUIRED OF CPS ENERGY OR CITY OF LYTLE INFRASTRUCTURE AND SERVICE FACILITIES, LOCATED WITHIN SAID EASEMENTS, DUE TO GRADE CHANGES OR GROUND ELEVATION ALTERATIONS SHALL BE CHARGED TO THE PERSON OR PERSONS DEEMED RESPONSIBLE FOR SAID GRADE CHANGES OR GROUND ELEVATION ALTERATIONS.
3. THIS PLAT DOES NOT AMEND, ALTER, RELEASE OR OTHERWISE AFFECT ANY EXISTING ELECTRIC, GAS, WATER, SEWER, DRAINAGE, TELEPHONE, CABLE TV EASEMENTS OR ANY OTHER EASEMENTS FOR UTILITIES UNLESS THE CHANGES TO SUCH EASEMENTS ARE DESCRIBED HEREON.
4. CONCRETE DRIVEWAY APPROACHES ARE ALLOWED WITHIN THE FIVE (5) AND TEN (10) FOOT WIDE ELECTRIC AND GAS EASEMENTS WHEN LOTS ARE SERVED ONLY BY UNDERGROUND ELECTRIC AND GAS FACILITIES.
5. ROOF OVERHANGS ARE ALLOWED WITHIN THE FIVE (5) AND TEN (10) FOOT WIDE ELECTRIC AND GAS EASEMENTS WHEN ONLY UNDERGROUND ELECTRIC AND GAS FACILITIES ARE PROPOSED OR EXISTING WITHIN THOSE FIVE (5) AND TEN (10) FOOT WIDE EASEMENTS.

NOTE:
SEE SHEET 2 OF 2 FOR PLAT NOTES AND CURVE & LINE TABLES.

NOTE:
PLAT LEGEND APPLIES TO EVERY PAGE OF THIS MULTIPLE PAGE PLAT.

NOTE:
LOT NUMBER 59 IN BLOCK F WAS INTENTIONALLY SKIPPED BECUASE LOT NUMBER 59 WAS PREVIOUSLY USED IN PLATTED SUBDIVISION SADDLE RIDGE ESTATES, PHASE 1.

PRELIMINARY
SUBDIVISION PLAT OF
SADDLE RIDGE ESTATES
PHASE 3

BEING A TOTAL OF 17.570 ACRES OUT OF A 27.635 ACRE TRACT OF LAND RECORDED IN DOCUMENT NUMBER 217149 OF THE OFFICIAL PUBLIC RECORDS OF ATASCOSA COUNTY, TEXAS, OUT OF THE BAUMGARTNER SURVEY NO. 513, ABSTRACT 87, IN THE CITY OF LYTLE, ATASCOSA COUNTY, TEXAS.

SCALE: 1"= 100'

0' 100' 200' 300'

PAPE-DAWSON ENGINEERS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

DATE OF PREPARATION: September 23, 2024

STATE OF ARKANSAS
COUNTY OF WASHINGTON

OWNER OF LAND SHOWN ON THIS PLAT, AND WHOSE NAME IS SUBSCRIBED HERETO, AND IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, DEDICATES TO THE CITY, FOR THE USE OF THE PUBLIC FOREVER, ALL STREETS, ALLEYS, PARKS, WATER COURSES, DRAINS, EASEMENTS, AND THE WATER AND SEWER LINES IN ALL OF THE AFORESAID PUBLIC PLACES AND ALL OTHER PUBLIC PLACES THEREON SHOWN FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED.

OWNER/DEVELOPER: SCOTT A. PETERS
SAN ANTONIO LD, LLC
4358 N COLLEGE AVE, STE 300, BOX 9
FAYETTEVILLE, ARKANSAS 72703
(479) 455-9090

STATE OF ARKANSAS
COUNTY OF WASHINGTON

BEFORE ME, THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED SCOTT A. PETERS _____ KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, A.D. 20____.

NOTARY PUBLIC, WASHINGTON COUNTY, ARKANSAS

CERTIFICATE OF APPROVAL

THE CITY ENGINEER OF THE CITY OF LYTLE, TEXAS HEREBY CERTIFIES THAT THIS SUBDIVISION PLAT CONFORMS TO ALL REQUIREMENTS OF THE SUBDIVISION REGULATIONS OF THE CITY AS TO WHICH HIS APPROVAL IS REQUIRED.

CITY ENGINEER

THIS PLAT OF SADDLE RIDGE ESTATES PHASE 3 HAS BEEN SUBMITTED TO AND CONSIDERED BY THE CITY COUNCIL OF THE CITY OF LYTLE, TEXAS, AND IS HEREBY APPROVED BY SUCH COUNCIL.

BY: _____
MAYOR

BY: _____
SECRETARY

STATE OF TEXAS
COUNTY OF ATASCOSA

I, _____, COUNTY CLERK OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE ____ DAY OF _____, A.D. 20___ AT ____M. AND DULY RECORDED THE ____ DAY OF _____, A.D. 20___ AT ____M. IN THE RECORDS OF DEEDS AND PLATS OF SAID COUNTY, IN BOOK VOLUME _____, ON PAGE _____, IN TESTIMONY WHEREOF, WITNESS MY HAND AND OFFICIAL SEAL OF OFFICE THIS ___ DAY OF _____, A.D. 20___.

COUNTY CLERK, ATASCOSA COUNTY, TEXAS

BY: _____
DEPUTY

TYPICAL LOT LAYOUT

NOT-TO-SCALE

SHEET 1 OF 2

Date: Sep 23, 2024, 2:07pm User ID: JFarias
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NO.	REVISION	DATE

PAPE-DAWSON ENGINEERS
SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

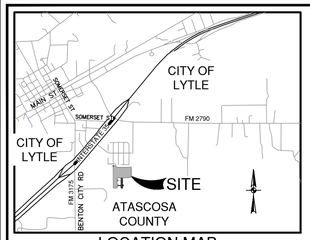
SADDLE RIDGE ESTATES PHASE 3

Civil Job No. 11100-26

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS
PLAT

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C0.10

Date: Sep 27, 2024, 3:34pm User ID: crodriguez
File: P:\1111\00\26\Design\Civil\CV-1110026.dwg



LOCATION MAP

SCALE: 1" = 4000'

CURVE TABLE					
CURVE #	RADIUS	DELTA	CHORD BEARING	CHORD	LENGTH
C1	125.00'	6°36'43"	N86°47'45"W	14.42'	14.42'
C2	75.00'	11°03'50"	S84°34'11"E	14.46'	14.48'
C3	125.00'	12°22'26"	S83°54'53"E	26.94'	27.00'
C4	25.00'	39°19'41"	S82°36'30"W	16.83'	17.16'
C5	60.00'	143°50'46"	S45°07'58"E	114.08'	150.64'
C6	25.00'	39°19'41"	N7°07'34"E	16.83'	17.16'
C7	125.00'	12°22'26"	S6°21'03"E	26.94'	27.00'
C8	25.00'	89°56'16"	S45°07'58"E	35.34'	39.24'
C9	25.00'	89°53'23"	N44°57'12"E	35.32'	39.22'
C10	25.00'	90°06'37"	N45°02'48"W	35.39'	39.32'
C11	25.00'	90°03'44"	S44°52'02"W	35.37'	39.30'
C12	25.00'	89°56'16"	S45°07'58"E	35.34'	39.24'
C13	25.00'	90°03'44"	S44°52'02"W	35.37'	39.30'
C14	75.00'	89°56'16"	S45°07'58"E	106.01'	117.73'
C15	25.00'	90°03'44"	S44°52'02"W	35.37'	39.30'
C16	25.00'	89°56'16"	S45°07'58"E	35.34'	39.24'
C17	25.00'	89°53'23"	N44°57'12"E	35.32'	39.22'
C18	25.00'	90°06'37"	N45°02'48"W	35.39'	39.32'

LINE TABLE		
LINE #	BEARING	LENGTH
L1	S0°09'50"E	82.86'
L2	S89°59'30"E	50.00'
L3	N0°00'30"E	14.69'
L4	N90°00'00"E	109.86'
L5	S73°24'38"E	5.25'
L6	S0°54'20"W	37.36'
L7	N90°00'00"W	114.58'
L8	S0°27'55"W	50.00'
L9	N89°32'05"W	50.00'
L10	N0°27'55"E	30.31'
L11	N90°00'00"E	49.42'
L12	S0°06'06"E	20.00'
L13	N90°00'00"W	49.42'
L14	S89°53'39"W	40.00'
L15	S0°06'06"E	9.84'
L16	S89°53'54"W	50.00'
L17	N89°53'54"E	50.00'
L18	S0°06'06"E	20.16'

LINE TABLE		
LINE #	BEARING	LENGTH
L19	N0°06'06"W	120.00'
L20	N89°53'54"E	50.00'
L21	S0°06'06"E	50.00'
L22	S89°53'54"W	50.00'
L23	N89°53'54"E	35.87'
L24	S0°06'06"E	50.00'
L25	N89°53'54"E	35.76'
L26	S0°06'06"E	50.00'
L27	S0°27'55"W	39.59'
L28	N89°32'05"W	50.00'
L29	N0°27'55"E	39.49'
L30	N0°00'32"E	35.78'
L31	S89°53'54"W	40.00'
L32	S89°53'54"W	9.86'
L33	S50°28'26"E	16.90'
L34	N90°00'00"E	96.81'
L35	N90°00'00"E	109.85'

CPS ENERGY/CITY OF LYTLE/UTILITY:

1.THE CITY OF LYTLE AS PART OF ITS ELECTRIC, GAS, WATER, AND WASTEWATER SYSTEMS – CITY PUBLIC SERVICE BOARD (CPS ENERGY) - IS HEREBY DEDICATED EASEMENTS AND RIGHTS-OF-WAY FOR UTILITY, TRANSMISSION AND DISTRIBUTION INFRASTRUCTURE AND SERVICE FACILITIES IN THE AREAS DESIGNATED ON THIS PLAT AS "ELECTRIC EASEMENT," "ANCHOR EASEMENT," "SERVICE EASEMENT," "OVERHANG EASEMENT," "UTILITY EASEMENT," "GAS EASEMENT," "TRANSFORMER EASEMENT," "WATER EASEMENT," "SANITARY SEWER EASEMENT" AND/OR "RECYCLED WATER EASEMENT" FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, RECONSTRUCTING, MAINTAINING, REMOVING, INSPECTING, PATROLLING, AND ERECTING UTILITY INFRASTRUCTURE AND SERVICE FACILITIES FOR THE REASONS DESCRIBED ABOVE, CPS ENERGY AND THE CITY OF LYTLE SHALL ALSO HAVE THE RIGHT TO RELOCATE SAID INFRASTRUCTURE AND SERVICE FACILITIES WITHIN EASEMENT AND RIGHT-OF-WAY AREAS, TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT LANDS FOR THE PURPOSE OF ACCESSING SUCH INFRASTRUCTURE AND SERVICE FACILITIES AND THE RIGHT TO REMOVE FROM SAID LANDS ALL TREES OR PARTS THEREOF, OR OTHER OBSTRUCTIONS WHICH ENDANGER OR MAY INTERFERE WITH THE EFFICIENCY OF WATER, SEWER, GAS, AND/OR ELECTRIC INFRASTRUCTURE AND SERVICE FACILITIES. NO BUILDINGS, STRUCTURES, CONCRETE SLABS, OR WALLS WILL BE PLACED WITHIN EASEMENT AREAS WITHOUT AN ENCROACHMENT AGREEMENT WITH THE RESPECTIVE UTILITY.
2. ANY CPS ENERGY OR CITY OF LYTLE MONETARY LOSS RESULTING FROM MODIFICATIONS REQUIRED OF CPS ENERGY OR CITY OF LYTLE INFRASTRUCTURE AND SERVICE FACILITIES, LOCATED WITHIN SAID EASEMENTS, DUE TO GRADE CHANGES OR GROUND ELEVATION ALTERATIONS SHALL BE CHARGED TO THE PERSON OR PERSONS DEEMED RESPONSIBLE FOR SAID GRADE CHANGES OR GROUND ELEVATION ALTERATIONS.
3. THIS PLAT DOES NOT AMEND, ALTER, RELEASE OR OTHERWISE AFFECT ANY EXISTING ELECTRIC, GAS, WATER, SEWER, DRAINAGE, TELEPHONE, CABLE TV EASEMENTS OR ANY OTHER EASEMENTS FOR UTILITIES UNLESS THE CHANGES TO SUCH EASEMENTS ARE DESCRIBED HEREON.
4. CONCRETE DRIVEWAY APPROACHES ARE ALLOWED WITHIN THE FIVE (5) AND TEN (10) FOOT WIDE ELECTRIC AND GAS EASEMENTS WHEN LOTS ARE SERVED ONLY BY UNDERGROUND ELECTRIC AND GAS FACILITIES.
5. ROOF OVERHANGS ARE ALLOWED WITHIN THE FIVE (5) AND TEN (10) FOOT WIDE ELECTRIC AND GAS EASEMENTS WHEN ONLY UNDERGROUND ELECTRIC AND GAS FACILITIES ARE PROPOSED OR EXISTING WITHIN THOSE FIVE (5) AND TEN (10) FOOT WIDE EASEMENTS.

OPEN SPACE:

LOT 502 BLK F IS DESIGNATED AS OPEN SPACE AND INGRESS/EGRESS ACCESS EASEMENT FOR THE CITY OF LYTLE. THIS LOT WILL BE DEDICATED TO THE CITY OF LYTLE AT THE TIME OF PLAT RECORDATION. LOT 501 BLK L IS DESIGNATED AS OPEN SPACE AND AS A GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT. LOT 505 BLK F, LOT 501 BLK M AND LOT 501 BLK N ARE DESIGNATED AS OPEN SPACE AND AS A DRAINAGE EASEMENT. THESE OPEN SPACE LOTS ARE TO BE DEDICATED TO THE HOMEOWNER'S ASSOCIATION AT THE TIME OF RECORDATION.

COMMON AREA MAINTENANCE:

THE MAINTENANCE OF OPEN SPACE LOT 502 BLK F SHALL BE THE RESPONSIBILITY OF THE CITY OF LYTLE OR ITS SUCCESSORS OR ASSIGNS. THE MAINTENANCE OF OPEN SPACE INCLUDING LOT 505 BLOCK F, LOT 501 BLOCK L, LOT 501 BLOCK M AND LOT 501 BLOCK N, DRAINAGE EASEMENTS AND EASEMENTS OF ANY OTHER NATURE WITHIN THIS SUBDIVISION SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER(S), OR THE PROPERTY OWNER'S ASSOCIATION, OR ITS SUCCESSORS OR ASSIGNS AND NOT THE RESPONSIBILITY OF THE CITY OF LYTLE OR ATASCOSA COUNTY.

RESIDENTIAL FIRE FLOW:

THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1500 GPM AT 25 PSI RESIDUAL PRESSURE TO MEET THE CITY OF LYTLE'S FIRE FLOW REQUIREMENTS FOR THE RESIDENTIAL DEVELOPMENT. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED PRIOR TO BUILDING PERMIT APPROVAL IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE DIRECTOR OF PUBLIC WORKS AND THE FIRE DEPARTMENT FIRE MARSHAL.

CITY OF LYTLE IMPACT FEES:

WATER & SANITARY SEWER IMPACT FEES WERE NOT PAID AT THE TIME OF PLATTING FOR THIS SUBDIVISION PLAT, ALL IMPACT FEES MUST BE PAID BY THE OWNER/DEVELOPER PRIOR TO WATER METERS BEING SET AND/OR SANITARY SEWER SERVICE CONNECTIONS.

CITY OF LYTLE DEDICATION:

THE OWNER/DEVELOPER DEDICATES THE WATER & SANITARY SEWER SYSTEMS TO THE CITY OF LYTLE UPON COMPLETION BY THE OWNER/DEVELOPER AND ACCEPTANCE BY THE CITY OF LYTLE.

RESIDENTIAL FINISHED FLOOR:

RESIDENTIAL FINISHED FLOOR ELEVATIONS MUST BE A MINIMUM OF EIGHT (8) INCHES ABOVE FINAL ADJACENT GRADE.

BUILDING SETBACK:

BUILDING SETBACKS WILL BE ENFORCED ON THIS SUBDIVISION PLAT PER CITY CODE AND AS SHOWN ON THE TYPICAL LOT LAYOUT DETAIL.

ZONING:

THE EXISTING ZONING FOR THIS PROPERTY AT THE TIME OF PLATTING IS R-1 SINGLE FAMILY DWELLING DISTRICT. NO ZONING CHANGE IS BEING PROPOSED WITH THIS PLAT.

ANNEXATION:

A PORTION OF LAND WITHIN THE LIMITS OF THIS PLAT WAS FORMALLY ANNEXED BY THE CITY OF LYTLE ON JANUARY 24, 2024.

DEDICATION OF WATER RIGHTS:

THIS PLAT IS SUBJECT TO THE DEDICATION OF WATER RIGHTS AS REQUIRED UNDER SECTION 42-205 OF THE CITY OF LYTLE CODE OF ORDINANCES. THIS CODE REQUIRES THE DEDICATION OF PERMANENT UNCONTESTED PERMITTED EDWARDS AQUIFER WATER ALLOTMENTS BY THE OWNER/DEVELOPER AT A RATE OF 1/3 OF AN ACRE-FOOT PER LOT.

SUBDIVISION NOTES:

1. THIS PLAT INCLUDES APPROXIMATELY 3,165 LF OF STREET THAT WILL BE DEDICATED TO THE CITY OF LYTLE UPON COMPLETION AND ACCEPTANCE. ALL STREET RIGHT-OF-WAYS ARE 50 FT MINIMUM WIDTH.
2. IN ORDER TO PROMOTE SAFE USE OF ROADWAYS AND PRESERVE THE CONDITIONS OF PUBLIC ROADWAYS, NO DRIVEWAY CONSTRUCTED ON ANY LOT WITHIN THIS SUBDIVISION SHALL BE PERMITTED ACCESS ONTO A PUBLICLY DEDICATED ROADWAY UNLESS A DRIVEWAY PERMIT HAS BEEN APPROVED BY THE CITY OF LYTLE OR ITS DESIGNATED REPRESENTATIVE, OR TEXAS DEPARTMENT OF TRANSPORTATION FOR DRIVEWAYS ENTERING ONTO STATE ROADS, AND THE DRIVEWAY SHALL BE DESIGNATED AND CONSTRUCTED IN ACCORDANCE WITH THE CITY OF LYTLE AND ATASCOSA COUNTY ROAD STANDARDS OR TX DOT STANDARDS, AS APPLICABLE.
3. NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC WATER SYSTEM OR AN INDIVIDUAL WATER SYSTEM. DUE TO DECLINING WATER SUPPLY, PROSPECTIVE PROPERTY OWNERS ARE CAUTIONED BY THE CITY OF LYTLE TO QUESTION THE SELLER CONCERNING GROUND WATER AVAILABILITY. RAIN WATER COLLECTION IS ENCOURAGED AND IN SOME AREAS MAY OFFER THE BEST RENEWABLE WATER RESOURCE; AND NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC SEWER SYSTEM OR TO AN ON-SITE WASTEWATER SYSTEM THAT HAS BEEN APPROVED AND PERMITTED BY THE CITY OF LYTLE.
4. NO STRUCTURE OR DEVELOPMENT WITHIN THE SUBDIVISION MAY BEGIN UNTIL FINAL APPROVAL OF THE PLAT BY ATASCOSA COUNTY AND RECORDING OF THE APPROVED PLAT BY THE COUNTY CLERK.

NOTE:
PLAT NOTES AND CURVE & LINE TABLES APPLY TO EVERY PAGE OF THIS MULTIPLE PAGE PLAT

PRELIMINARY
SUBDIVISION PLAT OF
SADDLE RIDGE ESTATES
PHASE 3

BEING A TOTAL OF 17.570 ACRES OUT OF A 27.635 ACRE TRACT OF LAND RECORDED IN DOCUMENT NUMBER 217149 OF THE OFFICIAL PUBLIC RECORDS OF ATASCOSA COUNTY, TEXAS, OUT OF THE BAUMGARTNER SURVEY NO. 513, ABSTRACT 67, IN THE CITY OF LYTLE, ATASCOSA COUNTY, TEXAS.

PAPE-DAWSON ENGINEERS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

DATE OF PREPARATION: September 23, 2024

STATE OF ARKANSAS
COUNTY OF WASHINGTON

OWNER OF LAND SHOWN ON THIS PLAT, AND WHOSE NAME IS SUBSCRIBED HERETO, AND IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, DEDICATES TO THE CITY, FOR THE USE OF THE PUBLIC FOREVER, ALL STREETS, ALLEYS, PARKS, WATER COURSES, DRAINS, EASEMENTS, AND THE WATER AND SEWER LINES IN ALL OF THE AFORESAID PUBLIC PLACES AND ALL OTHER PUBLIC PLACES THEREON SHOWN FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED.

OWNER/DEVELOPER: SCOTT A. PETERS
SAN ANTONIO LD, LLC
4058 N COLLEGE AVE, STE 300, BOX 9
FAYETTEVILLE, ARKANSAS 72703
(479) 455-9090

STATE OF ARKANSAS
COUNTY OF WASHINGTON

BEFORE ME, THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED SCOTT A. PETERS KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, A.D. 20_____.

_____
NOTARY PUBLIC, WASHINGTON COUNTY, ARKANSAS

CERTIFICATE OF APPROVAL

THE CITY ENGINEER OF THE CITY OF LYTLE, TEXAS HEREBY CERTIFIES THAT THIS SUBDIVISION PLAT CONFORMS TO ALL REQUIREMENTS OF THE SUBDIVISION REGULATIONS OF THE CITY AS TO WHICH HIS APPROVAL IS REQUIRED.

_____
CITY ENGINEER

THIS PLAT OF SADDLE RIDGE ESTATES PHASE 3 HAS BEEN SUBMITTED TO AND CONSIDERED BY THE CITY COUNCIL OF THE CITY OF LYTLE, TEXAS, AND IS HEREBY APPROVED BY SUCH COUNCIL.

BY: _____
MAYOR

BY: _____
SECRETARY

STATE OF TEXAS
COUNTY OF ATASCOSA

I, _____, COUNTY CLERK OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE ____ DAY OF _____, A.D. 20__ AT _____M. AND DULY RECORDED THE ____DAY OF _____, A.D. 20__ AT _____M. IN THE RECORDS OF DEEDS AND PLATS OF SAID COUNTY, IN BOOK VOLUME_____, ON PAGE _____, IN TESTIMONY WHEREOF, WITNESS MY HAND AND OFFICIAL SEAL OF OFFICE THIS____ DAY OF_____, A.D. 20___ .

COUNTY CLERK, ATASCOSA COUNTY, TEXAS

BY: _____
DEPUTY

NO.	REVISION	DATE

PAPE-DAWSON ENGINEERS
SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

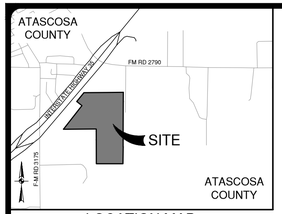
Civil Job No. 11100-26

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS
PLAT

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C0.11

Date: Sep 23, 2024, 2:07pm User ID: JFortes
File: P:\111\00\28\Design\Civil\Plat\Pk-1110028.dwg

Date: Sep 27, 2024, 3:34pm User ID: crodriguez
File: P:\111\00\28\Design\Civil\Cv-1110026.dwg



MDP SUMMARY TABLE

PHASE NO.	AREA (ACRES)	LOTS (DWELLINGS)	DENSITY (UNITS/ACRE)	OPEN SPACE (ACRE)	*LAND USE	DOCUMENT NO. (RECORD)	PHASING SEQUENCE
1	24.27	69	2.84	8.22	SFR	202100013	MAY 2020
2	11.04	54	4.89	0.00	SFR		SEPT. 2022
3	13.91	75	5.39	0.17	SFR		MARCH 2023
4	13.47	72	5.34	0.22	SFR		OCT. 2023
5	9.69	50	5.15	0.30	SFR		FEB. 2022
6	15.54	72	4.63	2.45	SFR, COM		JULY 2021
TOTAL	87.92	392	4.45	11.36			

*SFR = SINGLE FAMILY RESIDENTIAL
*COM = COMMERCIAL

LOCATION MAP

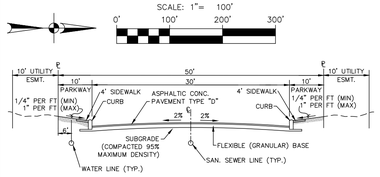
NOT-TO-SCALE

SCALE: 1"= 100'

0' 100' 200' 300'

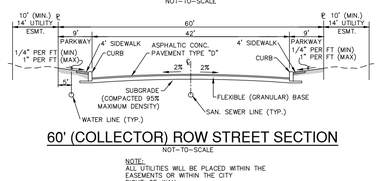
LOT SIZE SUMMARY

MIN. LOT SIZE	MIN. SQ. FT.	LOTS	TOTAL %
50'X120'	6,000	291	74.3
55'X110'	6,050	59	15.0
50'X125'	6,250	42	10.7
TOTAL	6,035	392	100.0



50' (MINOR RESIDENTIAL) ROW STREET SECTION

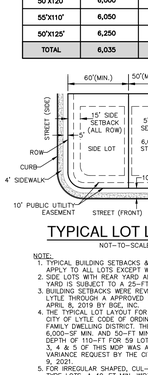
NOT-TO-SCALE



60' (COLLECTOR) ROW STREET SECTION

NOT-TO-SCALE

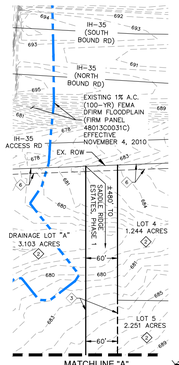
NOTE:
ALL UTILITIES WILL BE PLACED WITHIN THE EASEMENTS OR WITHIN THE CITY RIGHT-OF-WAY.

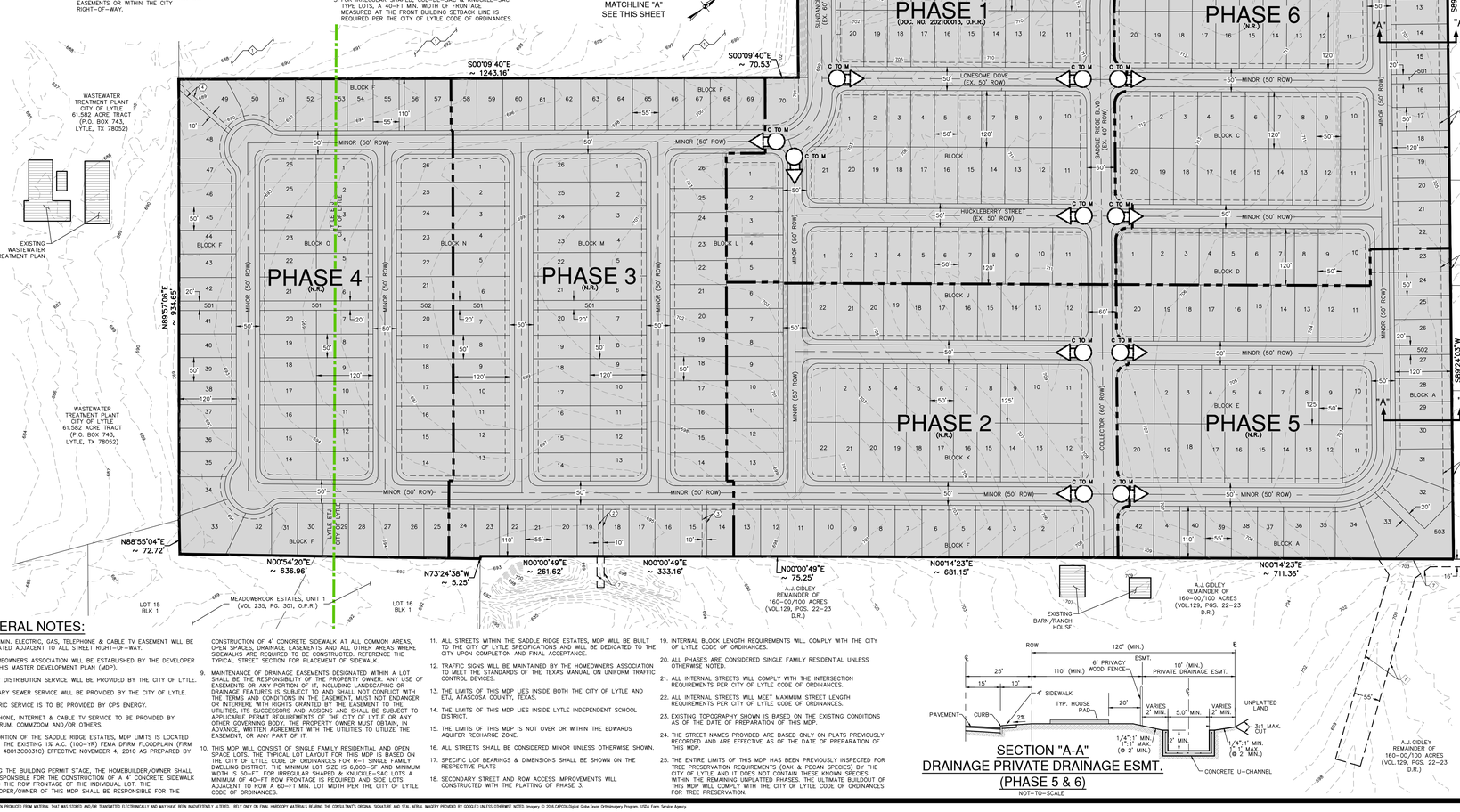


TYPICAL LOT LAYOUT

NOT-TO-SCALE

NOTE:
1. TYPICAL BUILDING SETBACKS & UTILITY EASEMENTS APPLY TO ALL LOTS EXCEPT WHERE NOTED OTHERWISE.
2. SIDE LOTS WITH REAR YARD ADJACENT TO A FRONT YARD IS SUBJECT TO A 25-FT SIDE BUILDING SETBACK.
3. BUILDING SETBACKS WERE REVISED BY THE CITY OF LYTLE THROUGH A APPROVED VARIANCE REQUEST ON APRIL 9, 2019 BY BGE, INC.
4. THE TYPICAL LOT LAYOUT FOR THIS MDP IS BASED ON CITY OF LYTLE CODE OF ORDINANCES FOR R-1 SINGLE FAMILY DWELLING DISTRICT. THE LOT AREA INCLUDES 6,000-SF MIN. AND 50-FT MIN. WIDTH. A MINIMUM DEPTH OF 110-FT FOR 59 LOTS LOCATED IN PHASES 2, 3, 4 & 5 OF THIS MDP WAS APPROVED THROUGH VARIANCE REQUEST BY THE CITY OF LYTLE ON AUGUST 9, 2021.
5. FOR IRREGULAR SHAPED, CUL-DE-SAC & KNUCKLE-SAC TYPE LOTS, A 40-FT MIN. WIDTH OF FRONTAGE MEASURED AT THE APPROVED BUILDING SETBACK LINE IS REQUIRED PER THE CITY OF LYTLE CODE OF ORDINANCES.





LEGEND

MDP BOUNDARY	
PHASE BOUNDARY	
EXISTING CONTOUR	1005
EXISTING 100-YR FEMA FLOODPLAIN	
CITY OF LYTLE LIMITS (APPROX.)	
ATASCOSA COUNTY, TEXAS DEED RECORDS	A.C.D.R.
OFFICIAL PUBLIC RECORDS OF ATASCOSA, COUNTY	O.P.R.
SET BACK LINE	S.B.
R-1 SINGLE FAMILY RESIDENTIAL DISTRICT	SFRD
PLAT NOT RECORDED AT TIME OF MDP	(NR)
ROAD SECTION TRANSITION (COLLECTOR TO MINOR)	C TO M

KEYNOTE LEGEND

1. MICHAEL R. ABBE AN UNDIVIDED ONE SIXTH (⅙) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND (VOL. 24, PGS. 130-133 O.P.R.)
   MICHAEL R. ABBE AN UNDIVIDED ONE SIXTH (⅙) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND (VOL. 856, PGS. 284-286 O.P.R.)
   LAURA J. ABBE AN UNDIVIDED ONE SIXTH (⅙) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND (VOL. 24, PGS. 134-137 O.P.R.)
   LAURA J. ABBE AN UNDIVIDED ONE SIXTH (⅙) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND (VOL. 856, PGS. 281-283 O.P.R.)
   ALAN G. ABBE, II AN UNDIVIDED ONE SIXTH (⅙) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND (VOL. 24, PGS. 126-129 O.P.R.)
   ALAN G. ABBE, II AN UNDIVIDED ONE SIXTH (⅙) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND (VOL. 856, PGS. 287-289 O.P.R.)
2. SADDLE RIDGE ESTATES, COMMERCIAL (DOC NO. 201600013, O.P.R.)
3. EX. 60' ACCESS, UTILITY & DRAINAGE EASEMENT TO BE DEDICATED AS FUTURE RIGHT-OF-WAY (DOC. NO. 201600013, O.P.R.)
4. EX. 10' PUBLIC UTILITY EASEMENT (DOC. NO. 201600013, O.P.R.)
5. LYTLE LODGING, LLC, 1.761 ACRE TRACT (DOC. NO. 100860, O.P.R.)
6. EX. VARIABLE WIDTH PUBLIC UTILITY EASEMENT (DOC. NO. 125005, O.P.R.)
7. EX. VARIABLE WIDTH DRAINAGE EASEMENT (DOC. NO. 216134, O.P.R.)
1. PROP. 10' ONSITE PRIVATE DRAINAGE EASEMENT TO BE PLATTED WITH PHASE 5 & 6
2. PROP. 10' ONSITE PRIVATE DRAINAGE EASEMENT TO BE PLATTED WITH PHASE 3
3. PROP. 10' ONSITE SANITARY SEWER EASEMENT TO BE PLATTED WITH PHASE 3
4. PROP. 10' ONSITE SANITARY SEWER EASEMENT TO BE PLATTED WITH PHASE 4

ZONING

EXISTING R-1 SINGLE FAMILY DWELLING DISTRICT
PROPOSED R-1 SINGLE FAMILY DWELLING DISTRICT

UTILITY PURVEYORS

SANITARY SEWER: CITY OF LYTLE
WATER DISTRIBUTION: CITY OF LYTLE
GAS & ELECTRIC: CPS ENERGY
INTERNET/TELE./CA.TV: COMMZOOM & SPECTRUM

PROPERTY LEGAL DESCRIPTION

A 87.920 ACRE TRACT OF LAND OUT OF THAT 102.56 ACRE TRACT DESCRIBED IN DOCUMENT NUMBER 174207 OF THE OFFICIAL PUBLIC RECORDS OF ATASCOSA COUNTY, TEXAS, OUT OF THE BAUMGARTNER SURVEY 513, ABSTRACT 87 OF THE CITY OF LYTLE, ATASCOSA COUNTY, TEXAS.

REVISION HISTORY

MDP NO.	ENGINEER/ DESIGNER	PREPARATION DATE	APPROVED DATE
–	BGE, INC.	12/17/2018	04/08/2019
2021-01	PAPE-DAWSON ENGINEERS, INC.	07/29/2021	08/09/2021

REVISION STATEMENT:
THIS MDP REVISES THE PREVIOUSLY APPROVED MDP PREPARED BY BGE, INC. AND APPROVED BY THE CITY OF LYTLE ON APRIL 8, 2019. THE REVISIONS INCLUDE THE FOLLOWING:

1. ADDED MDP REVISION CHART AND REVISION NOTES.
2. REVISED TOTAL LOT COUNT FROM 375 TO 392.
3. REVISED 59 TOTAL LOTS IN PHASE 2, 3, 4 & 5 TO INCLUDE A MIN. DEPTH OF 110-FT AND MIN. WIDTH OF 55-FT.
4. REVISED PHASE BOUNDARIES FOR PHASE 3 & 4.
5. REVISED THE MDP SUMMARY TABLE WITH ACREAGE, DENSITIES, LOT COUNTS, RECORDATION INFO. AND PHASE SEQUENCE.
6. UPDATED THE EXISTING CONTOURS AND LABELS.
7. ADDED SIGNATURE BLOCKS FOR THE CITY MAYOR, CITY ENGINEER, DEVELOPER/OWNER, AND CIVIL ENGINEER.
8. ADDED ADJACENT PROPERTY OWNER INFORMATION, EXISTING EASEMENTS, STRUCTURES/BUILDINGS ETC.
9. REMOVED DETENTION PONDS FROM PHASE 4 & 5.
10. ADDED DRAINAGE EASEMENT ON PHASE 5 & 6 AND CROSS SECTION DETAIL.
11. REVISED ROW CONFIGURATION AND ADDED KNUCKLE-SACS TO PHASE 4.
12. REVISED LOT NUMBERS AND ADDED LOT SIZE SUMMARY CHART.
13. MDP NUMBER ADDED FOR REFERENCE.
14. UPDATED THE DETAIL/NOTES FOR THE TYPICAL LOT LAYOUT.
15. ADDED KEYNOTE LEGEND, ZONING, UTILITY PURVEYORS AND LOCATION MAP.
16. UPDATED, ADDED, RE-ORGANIZED & REFORMATTED THE PLAN SHEET LAYOUT, LEGEND, NOTES, DETAILS, CHARTS, FONT, LABELS ETC.

GENERAL NOTES:

1. A 10' MIN. ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT WILL BE DEDICATED ADJACENT TO ALL STREET RIGHT-OF-WAY.
2. A HOMEOWNERS ASSOCIATION WILL BE ESTABLISHED BY THE DEVELOPER FOR THIS MASTER DEVELOPMENT PLAN (MDP).
3. WATER DISTRIBUTION SERVICE WILL BE PROVIDED BY THE CITY OF LYTLE.
4. SANITARY SEWER SERVICE WILL BE PROVIDED BY THE CITY OF LYTLE.
5. ELECTRIC SERVICE IS TO BE PROVIDED BY CPS ENERGY.
6. TELEPHONE, INTERNET & CABLE TV SERVICE TO BE PROVIDED BY SPECTRUM, COMMZOOM AND/OR OTHERS.
7. NO PORTION OF THE SADDLE RIDGE ESTATES, MDP LIMITS IS LOCATED WITHIN THE EXISTING 1% A.C. (100-YR) FEMA DFIRM FLOODPLAIN (FIRM PANEL 48013C0031C) EFFECTIVE NOVEMBER 4, 2010 AS PREPARED BY FEMA.
8. DURING THE BUILDING PERMIT STAGE, THE HOMEBUILDER/OWNER SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF A 4' CONCRETE SIDEWALK ALONG THE ROW FRONTAGE OF THE INDIVIDUAL LOT. THE DEVELOPER/OWNER OF THIS MDP SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF 4' CONCRETE SIDEWALK AT ALL COMMON AREAS, OPEN SPACES, DRAINAGE EASEMENTS AND ALL OTHER AREAS WHERE SIDEWALKS ARE REQUIRED TO BE CONSTRUCTED. REFERENCE THE TYPICAL STREET SECTION FOR PLACEMENT OF SIDEWALK.
9. MAINTENANCE OF DRAINAGE EASEMENTS DESIGNATED WITHIN A LOT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. ANY USE OF EASEMENTS OR ANY PORTION OF IT, INCLUDING LANDSCAPING OR DRAINAGE FEATURES IS SUBJECT TO AND SHALL NOT CONFLICT WITH THE TERMS AND CONDITIONS IN THE EASEMENT. MUST NOT ENDANGER OR INTERFERE WITH RIGHTS GRANTED BY THE EASEMENT TO THE UTILITIES, ITS SUCCESSORS AND ASSIGNS AND SHALL BE SUBJECT TO APPLICABLE PERMIT REQUIREMENTS OF THE CITY OF LYTLE OR ANY OTHER GOVERNING BODY. THE PROPERTY OWNER MUST OBTAIN, IN ADVANCE, WRITTEN AGREEMENT WITH THE UTILITIES TO UTILIZE THE EASEMENT, OR ANY PART OF IT.
10. THIS MDP WILL CONSIST OF SINGLE FAMILY RESIDENTIAL AND OPEN SPACE LOTS. THE TYPICAL LOT LAYOUT FOR THIS MDP IS BASED ON THE CITY OF LYTLE CODE OF ORDINANCES FOR R-1 SINGLE FAMILY DWELLING DISTRICT. THE MINIMUM LOT SIZE IS 6,000-SF AND MINIMUM WIDTH IS 50-FT. FOR IRREGULAR SHAPED & KNUCKLE-SAC LOTS A MINIMUM OF 40-FT ROW FRONTAGE IS REQUIRED AND SIDE LOTS ADJACENT TO ROW A 60-FT MIN. LOT WIDTH PER THE CITY OF LYTLE CODE OF ORDINANCES.
11. ALL STREETS WITHIN THE SADDLE RIDGE ESTATES, MDP WILL BE BUILT TO THE CITY OF LYTLE SPECIFICATIONS AND WILL BE DEDICATED TO THE CITY UPON COMPLETION AND FINAL ACCEPTANCE.
12. TRAFFIC SIGNS WILL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION TO MEET THE STANDARDS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
13. THE LIMITS OF THIS MDP LIES INSIDE BOTH THE CITY OF LYTLE AND ETJ, ATASCOSA COUNTY, TEXAS.
14. THE LIMITS OF THIS MDP LIES INSIDE LYTLE INDEPENDENT SCHOOL DISTRICT.
15. THE LIMITS OF THIS MDP IS NOT OVER OR WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
16. ALL STREETS SHALL BE CONSIDERED MINOR UNLESS OTHERWISE SHOWN.
17. SPECIFIC LOT BEARINGS & DIMENSIONS SHALL BE SHOWN ON THE RESPECTIVE PLATS
18. SECONDARY STREET AND ROW ACCESS IMPROVEMENTS WILL CONSTRUCTED WITH THE PLATTING OF PHASE 3.
19. INTERNAL BLOCK LENGTH REQUIREMENTS WILL COMPLY WITH THE CITY OF LYTLE CODE OF ORDINANCES.
20. ALL PHASES ARE CONSIDERED SINGLE FAMILY RESIDENTIAL UNLESS OTHERWISE NOTED.
21. ALL INTERNAL STREETS WILL COMPLY WITH THE INTERSECTION REQUIREMENTS PER CITY OF LYTLE CODE OF ORDINANCES.
22. ALL INTERNAL STREETS WILL MEET MAXIMUM STREET LENGTH REQUIREMENTS PER CITY OF LYTLE CODE OF ORDINANCES.
23. EXISTING TOPOGRAPHY SHOWN IS BASED ON THE EXISTING CONDITIONS AS OF THE DATE OF PREPARATION OF THIS MDP.
24. THE STREET NAMES PROVIDED ARE BASED ONLY ON PLATS PREVIOUSLY RECORDED AND ARE EFFECTIVE AS OF THE DATE OF PREPARATION OF THIS MDP.
25. THE ENTIRE LIMITS OF THIS MDP HAS BEEN PREVIOUSLY INSPECTED FOR TREE PRESERVATION REQUIREMENTS (OAK & PECAN SPECIES) BY THE CITY OF LYTLE AND IT DOES NOT CONTAIN THESE KNOWN SPECIES WITHIN THE REMAINING UNPLATTED PHASES. THE ULTIMATE BUILDOUT OF THIS MDP WILL COMPLY WITH THE CITY OF LYTLE CODE OF ORDINANCES FOR TREE PRESERVATION.

SECTION "A-A"
DRAINAGE PRIVATE DRAINAGE ESMT.
(PHASE 5 & 6)
NOT-TO-SCALE

ACKNOWLEDGED BY:

OWNER/DEVELOPER — DATE
RAUSCH COLEMAN HOMES SAN ANTONIO, LLC.
ATTN: JUSTIN COX, VP OF LAND – TEXAS
4058 N. COLLEGE AVE. SUITE 300, BOX 9
FAYETTEVILLE, ARKANSAS 72703
(479) 455–9090
justin.cox@rch.com

CIVIL ENGINEER/DESIGNER — DATE
PAPE–DAWSON ENGINEERS, INC
ATTN: JW WELCH, P.E., VICE PRESIDENT
2000 NW LOOP 410
SAN ANTONIO, TEXAS 78213
(210) 375–9000
jwelch@pape-dawson.com

APPROVED BY:

CITY OF LYTLE — DATE
ATTN: JOSE CAMPA, CITY SECRETARY
14916 MAIN ST.
LYTLE, TEXAS 78052
(210) 897–6507
josie.campa@lytletx.org

CITY OF LYTLE — DATE
TRC COMPANIES, INC.
ATTN: JEFF DAHM, P.E., CITY ENGINEER
505 E. HUNTLAND DR., SUITE 250
AUSTIN, TEXAS 78752
(979) 324–9999
JDahm@trccompanies.com

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Date: Aug 11, 2021, 9:54am User ID: crodriguez
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NO.	REVISION	DATE

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS
MASTER DEVELOPMENT PLAN
(MDP NO. 2021-01)

MDP NO. 2021-01
JOB NO. 11100-18
DATE AUGUST 2021
DESIGNER CR
CHECKED JA DRAWN CR
SHEET 1 OF 1

PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CR
CHECKED JA DRAWN CR
SHEET C0.20

MATCHLINE "A-A" SEE SHEET C1.01

MATCHLINE "A-A" SEE SHEET C1.01

MATCHLINE "B" SEE THIS SHEET

MATCHLINE "A" SEE THIS SHEET

RUNOFF FLOW PATH

UNPLATTED EXCELITE DEVELOPMENT VENTURES, LLC. (DOC. NO. 222827, OPR)

EST. RUNOFF FLOW PATH

FUTURE DEVELOPMENT LYTLE FARMS, PHASE 2 (CDS MUERY ENGINEERS)

FUTURE DETENTION BASIN (CDS MUERY ENGINEERS) (LYTLE FARMS, PHASE 2)

FUTURE DRAIN (LYTLE FARMS, PHASE 2)

EST. RUNOFF FLOW PATH

FUTURE BASIN OUTFALL (LYTLE FARMS, PHASE 2)

PROPOSED DRAIN "A" (SEE SHEET C1.02)

EXISTING 30' DRAINAGE ESMT. (DOC. NO. 227383, OPR.)

SADDLE RIDGE ESTATES PROPERTY LINE

BLOCK F

JOHN WAYNE ROAD

SADDLE RIDGE ESTATES, PHASE 2 & 5 (DOC. NO. 202300030, OPR)

BLOCK K

SADDLE RIDGE BLVD.

WYATT EARP WAY

BLOCK J

BLOCK I

OPEN RANGE ROAD

PHASE LIMITS

BLOCK L

BLOCK M

BLOCK N

WILD COLT WAY

CARTER LANE

PROPOSED DRAIN "B" (SEE SHEET C1.03-4)

SADDLE RIDGE ESTATES, PHASE 4 (CONCURRENT GRADING & FUTURE PLATTING)

ONSITE ESMT LINE

PROPERTY LINE

OFFSITE ESMT LINE

75' DRAINAGE ESMT. BY SEPARATE INSTRUMENT (CITY OF LYTLE)

UNPLATTED 8.73-ACRE JACK STEEL & BARBARA ETUX (DOC. NO. 876-148823)

MEADOWBROOK ESTATES, UNIT 1 (VOL 235, PG. 301, O.P.R.)

LOT 17

LOT 16

LOT 15, BLK 1

LOT 14

CITY OF LYTLE 61.582 ACRES (VOL. 424, PG 460, OPR.)

CITY OF LYTLE EX. WASTEWATER TREATMENT PLANT

EXISTING PAVED ROAD.

HUCKLEBERRY STREET

LONESOME DOVE

DOC HOLIDAY DRIVE

SUNDANCE PATH

KROEGER AVENUE

BLOCK H

BLOCK G

BLOCK F

BLOCK O

SADDLE RIDGE ESTATES, PHASE 1 (DOC NO. 202100013, OPR)

SADDLE RIDGE ESTATES PROPERTY LINE

EX. CURB INLET DRAINS (PHASE 1)

EX. DRAIN RCP PIPE (PHASE 1)

EX. EARTHEN TRAP CHANNEL (PHASE 1)

EXISTING DETENTION BASIN

SADDLE RIDGE PROPERTY LINE

SADDLE RIDGE ESTATES – SECONDARY ACCESS RD (OFF-SITE) (CONCURRENT CONSTRUCTION & PERMITTING)

UNPLATTED 59.5 ACRE TRACT ABBE FAMILY (VOL. 24, POS. 130-133 O.P.R.)

LYTLE PROPERTY LINE

EXISTING 1% A.C. (100-YR) FEMA DFIRM FLOODPLAIN (FIRM PANEL 48013C0031C) EFFECTIVE NOVEMBER 4, 2010

WEST PRONG ATASCOSA RIVER

CREEK FLOWLINE

CITY OF LYTLE

CITY OF LYTLE

FM 2790

RIVERSIDE DR

SITE

FM 3175

ATASCOSA COUNTY

LOCATION MAP

NOT-TO-SCALE

SCALE: 1"= 100'

0' 100' 200' 300'

DRAINAGE LEGEND

- PROJECT LIMITS
- EXISTING CONTOUR — 690 —
- EXISTING 1% A.C. (100-YR) FEMA FLOODPLAIN (DFIRM)
- RUNOFF FLOW PATH
- DRAINAGE AREA BOUNDARY
- FHA LOT GRADING TYPE — A
- PROPOSED DIRECTION OF FLOW
- DRAINAGE CALCULATION POINT — 11
- DRAINAGE AREA — A

DRAINAGE & GRADING NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
2. ALL CONCRETE FOR TXDOT DRAINAGE STRUCTURES SHALL MEET TXDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
3. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
4. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
5. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF LYTLE WILL ACCEPT.
6. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

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

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

OVERALL DRAINAGE PLAN

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C1.00

Date: Sep 09, 2024, 3:36pm User ID: JForios
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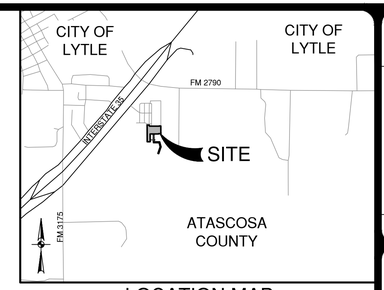
HYDROLOGY SUMMARY TABLE

POINT*	STRUCTURE	WATERSHED*	TOTAL AREA (ACRES)	COMPOSITE C VALUE	OVERLAND FLOW		SHALLOW		CHANNEL FLOW (6 FPS)		TIME OF CONCENTRATION	INTENSITY				FLOW				REFERENCE BY-PASS FLOW CALC'S	POINT
					LENGTH	TRAVEL TIME	LENGTH	TRAVEL TIME	LENGTH	TRAVEL TIME		I_2	I_{10}	I_{25}	I_{100}	Q_2	Q_{10}	Q_{25}	Q_{100}		
					FEET	MINUTES	FEET	MINUTES	FEET	MINUTES	MINUTES	IN/HR	IN/HR	IN/HR	IN/HR	CFS	CFS	CFS	CFS		
10		I1	3.94	0.67	136	14	588	4	0	0	18	3.91	5.53	6.57	8.17	10.31	14.59	**17.35**	21.57	NO	10
		J1	4.65	0.67	101	11	586	4	0	0	15	4.26	6.03	7.18	8.92	13.28	18.80	**22.36**	27.80	NO	
11		I1+J1	8.59	0.67	HYDROLOGIC CALCULATIONS SEE STORMWATER MANAGEMENT REPORT FOR SADDLE RIDGE ESTATES PHASE 3											21.87	30.96	**36.81**	45.77	NO	11
		K1	1.52	0.67	129	13	233	2	0	0	15	4.26	6.03	7.17	8.92	4.34	6.14	**7.30**	9.08	NO	
12	DRAIN A	I1+J1+K1	10.11	0.67	HYDROLOGIC CALCULATIONS SEE STORMWATER MANAGEMENT REPORT FOR SADDLE RIDGE ESTATES PHASE 3											26.21	37.10	**44.12**	54.86	NO	12
13	DRAIN B	L1	5.16	0.67	137	14	257	2	0	0	16	4.14	5.85			14.30	20.23	**24.06**	29.92	NO	13
14	DRAIN B	M1	4.80	0.67	173	17	309	3	0	0	20	3.71	5.24	6.23	7.75	11.92	16.86	**20.05**	24.93	NO	14
15		L1+M1	9.96	0.67	HYDROLOGIC CALCULATIONS SEE STORMWATER MANAGEMENT REPORT FOR SADDLE RIDGE ESTATES PHASE 3											23.83	33.72	**40.10**	49.86	NO	15
16	DRAIN B	N1	4.90	0.67	166	16	308	3	0	0	19	3.80	5.38	6.40	7.95	12.48	17.66	**21.00**	26.11	NO	16
17		L1+M1+N1	14.86	0.67	HYDROLOGIC CALCULATIONS SEE STORMWATER MANAGEMENT REPORT FOR SADDLE RIDGE ESTATES PHASE 3											35.42	50.12	**59.59**	74.10	NO	17
	DRAIN B	O1	4.16	0.67	126	13	1364	12	0	0	25	3.29	4.66	5.55	6.90	9.17	13.00	**15.46**	19.23	NO	
	DRAIN B	P1	4.31	0.67	99	11	1082	11	0	0	22	3.53	4.99	5.94	7.38	10.18	14.41	**17.14**	21.31	NO	
18	DRAIN B	O1+P1	8.47	0.67	HYDROLOGIC CALCULATIONS SEE STORMWATER MANAGEMENT REPORT FOR SADDLE RIDGE ESTATES PHASE 3											18.25	25.85	**30.74**	38.24	NO	18
19		L1+M1+N1+O1+P1	23.33	0.67	HYDROLOGIC CALCULATIONS SEE STORMWATER MANAGEMENT REPORT FOR SADDLE RIDGE ESTATES PHASE 3											51.19	72.45	**86.14**	107.12	NO	19
		Q1	2.44	0.67	91	10	0	0	0	0	10	5.05	7.20	8.57	10.67	8.26	11.77	**14.01**	17.44	NO	
20	FUTURE LTYLE FARMS	R1	4.44	0.50	168	16	853	6	0	0	22	4.73	6.69	7.95	9.89	10.49	14.85	**17.65**	21.96	NO	20
21	FUTURE LTYLE FARMS	S1	9.82	0.67	245	20	844	6	0	0	26	3.22	4.57	5.43	6.76	21.19	30.04	**35.73**	44.46	NO	21
22	FUTURE LTYLE FARMS	T1	3.45	0.67	141	14	456	3	0	0	17	4.01	5.68	6.76	8.41	9.28	13.14	**15.62**	19.43	NO	22
	FUTURE LTYLE FARMS	U1	4.04	0.57	300	20	98	2	0	0	22	3.52	4.99	5.94	7.38	8.11	11.49	**13.67**	17.00	NO	
23	FUTURE LTYLE FARMS	I1+J1+K1+R1+S1+T1+U1	31.86	0.67	HYDROLOGIC CALCULATIONS SEE STORMWATER MANAGEMENT REPORT FOR SADDLE RIDGE ESTATES PHASE 3											63.04	89.26	**106.14**	132.01	NO	23
24	FUTURE BASIN**	I1+J1+K1+R1+S1+T1+U1	31.86	0.65	HYDROLOGIC CALCULATIONS SEE STORMWATER MANAGEMENT REPORT FOR SADDLE RIDGE ESTATES PHASE 3											13.62	21.82	**27.48**	33.32	NO	24
		V1	21.55	0.55	300	20	1813	19	542	2	41	2.46	3.53	4.20	5.24	29.20	41.79	**49.76**	62.08	NO	
25	DRAIN B	I1+J1+K1+L1+M1+N1+O1+P1+R1+S1+T1+U1+V1	76.74	0.67	HYDROLOGIC CALCULATIONS SEE STORMWATER MANAGEMENT REPORT FOR SADDLE RIDGE ESTATES PHASE 3											71.79	103.65	**124.43**	156.74	NO	25

HYDROLOGY CALCULATIONS INCLUDE THE NOAA ATLAS-14 (A-14) RAINFALL DATA FOR PA-5 INTENSITIES FOR BEXAR COUNTY, TX. REFERENCE THE BYPASS FLOW TABLE FOR COMPUTATION POINT 3.

(*) REFERENCE SADDLE RIDGE ESTATES PHASE 2 & 5 FOR HYDROLOGY CALCULATION POINTS 1-9 AND WATERSHEDS A1-H1.

(**) FUTURE LYTLE FARMS DETENTION BASIN CALCULATIONS WERE BASED ON PRELIMINARY BASIN DESIGN VALUES PROVIDED BY CDS MUERY ENGINEERS (I.E. ACRE-FT, BASIN TOP ELEV, BASIN FL ELEV, WATERSHED ACRES, FLOW RATES ETC.). CALCULATIONS ARE SUBJECT TO CHANGE WITH ACTUAL DESIGN BY CDS MUERY.



LOCATION MAP

NOT-TO-SCALE

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DRAINAGE LEGEND

PROJECT LIMITS

EXISTING CONTOUR 690

EXISTING 1% A.C. (100-YR) FEMA FLOODPLAIN (DFIRM)

RUNOFF FLOW PATH

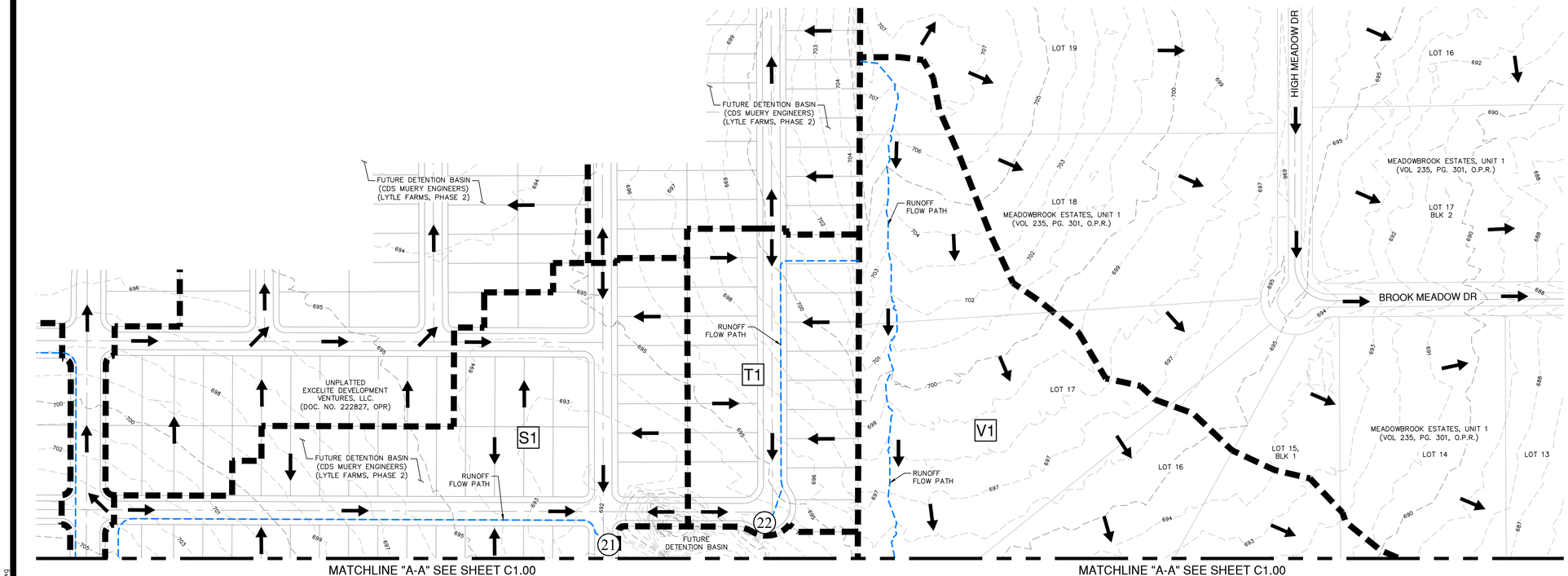
DRAINAGE AREA BOUNDARY

FHA LOT GRADING TYPE A

PROPOSED DIRECTION OF FLOW

DRAINAGE CALCULATION POINT 11

DRAINAGE AREA A



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NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
5-28-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

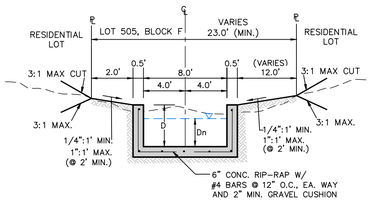
OVERALL DRAINAGE PLAN & CALCULATIONS

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN CR
SHEET C1.01

Date: May 28, 2024, 3:48pm User ID: crodriguez
File: P:\11\00\26\Design\Civil\SDOA-111026.dwg

CAUTION !!!

EXISTING UTILITIES ARE WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH OF PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

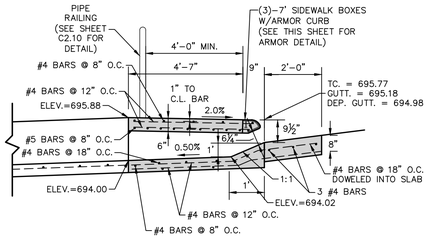


DRAIN A - SECTION "B-B" CONCRETE U-CHANNEL

NOT-TO-SCALE

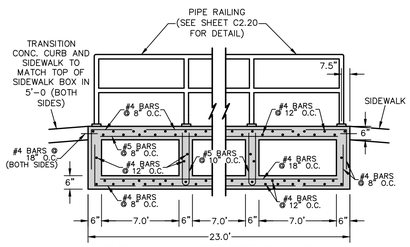
TYPICAL DRAINAGE CURB OPENING

NOT-TO-SCALE



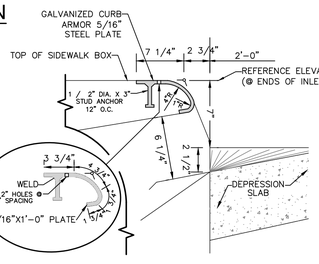
DRAIN A - SECTION "D-D" SIDEWALK BOX DETAIL

NOT-TO-SCALE



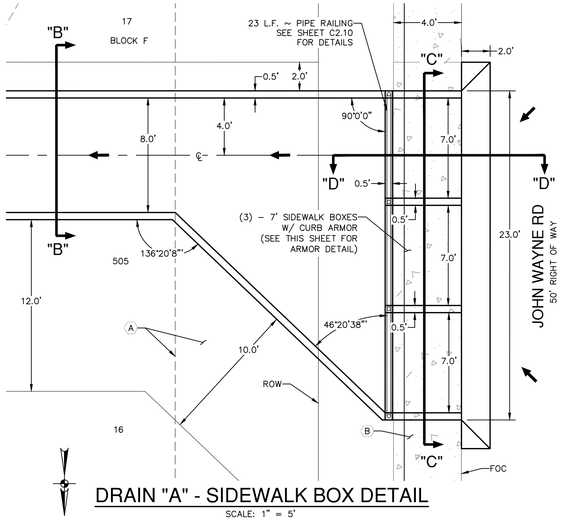
DRAIN A - SECTION "C-C" SIDEWALK BOX DETAIL SECTION

NOT-TO-SCALE



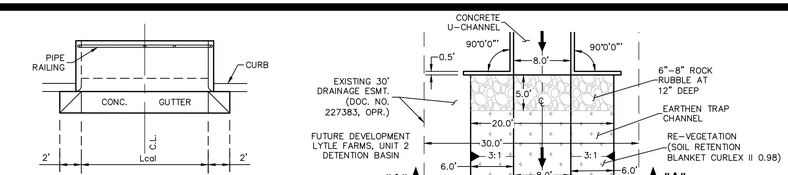
CURB ARMOR DETAIL

NOT-TO-SCALE



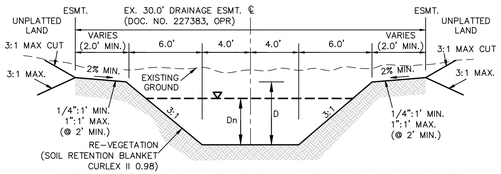
DRAIN A - SIDEWALK BOX DETAIL

SCALE: 1" = 5'



DRAIN "A" - OUTFALL DETAIL

SCALE: 1" = 10'



SECTION "A-A" - EARTHEN TRAP. CHANNEL

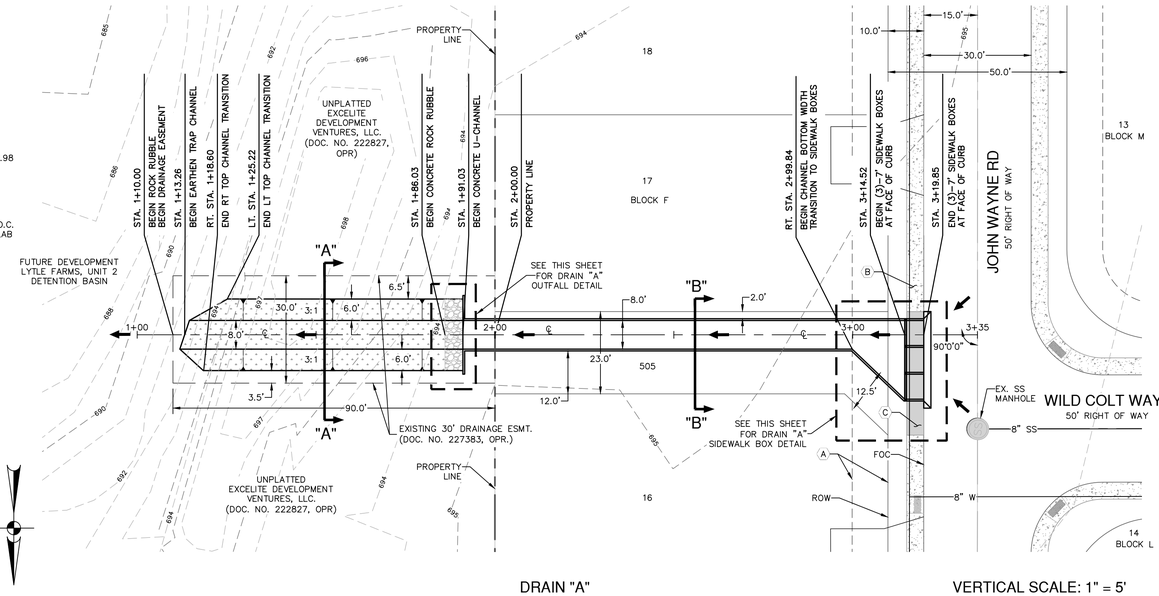
NOT-TO-SCALE

KEY LEGEND

- (A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT
- (B) 4' SIDEWALK
- (C) 4' DEVELOPER SIDEWALK

DRAINAGE LEGEND

- PROJECT LIMITS
- EXISTING CONTOUR — 690 —
- PROPOSED WATER — W —
- PROPOSED SEWER — SS —
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW



SCALE: 1"= 20'

0' 20' 40' 60'

HYDRAULIC CALCULATIONS SIDEWALK BOXES

(SECTION "B-B")
(STA: 3+19.84)

Q25 = 44.12 CFS (COMP. POINT 12)

Q = C X L X h^(3/2)

C = 3.087

h = 0.79 FT

$C = \frac{Q}{C \times h^{(3/2)}}$

$L = \frac{44.12 \text{ CFS}}{(3.087)(0.79 \text{ FT})^{(3/2)}}$

L (REQ'D.) = 20.35 FT

L (DESIGN) = 21.00 FT; USE (3)-7' SIDEWALK BOXES

HYDRAULIC CALCULATIONS EARTHEN TRAP CHANNEL

(SECTION "A-A")
STA. 1+25.22 TO 1+91.03

Q_{100} = 54.86 CFS
Bw = 8.0 FT
n = 0.035
S = 0.50%
D = VARIES 2.0 FT (MIN.)
dn = 1.45 FT
V = 3.06 FT/S

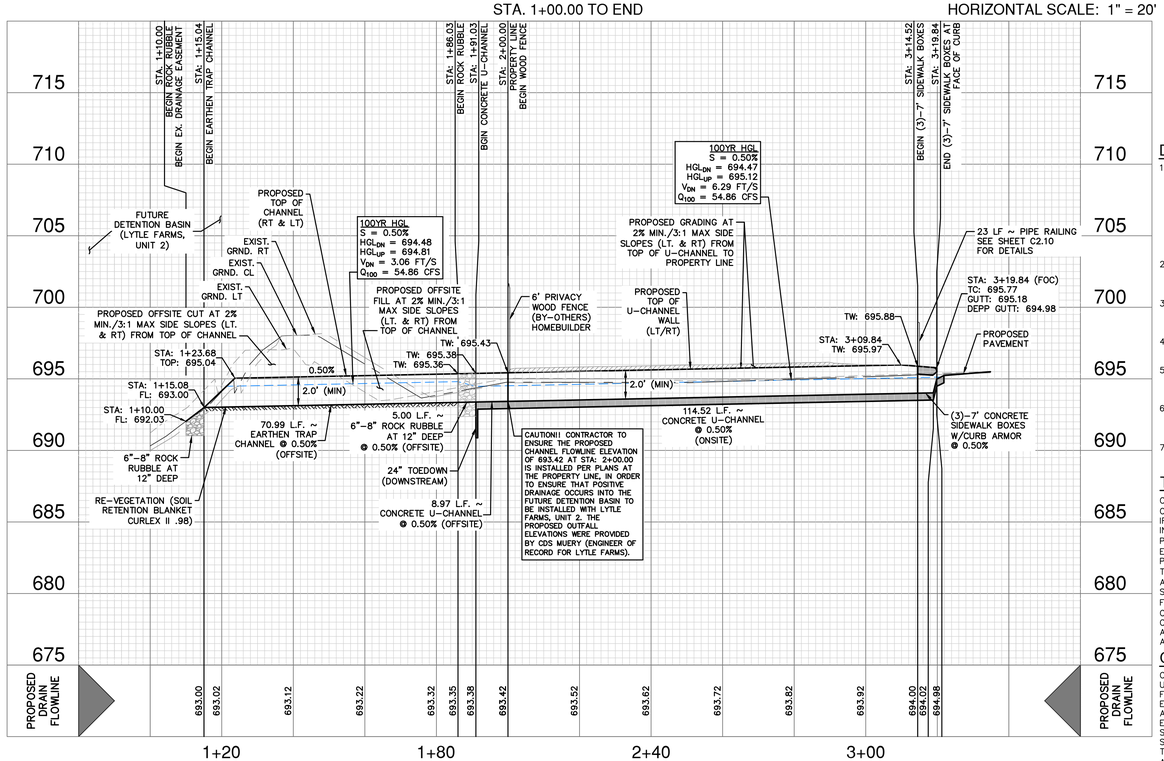
HYDRAULIC CALCULATIONS CONCRETE U-CHANNEL

(SECTION "B-B")
STA. 1+91.03 TO 2+99.84

Q_{100} = 54.86 CFS
Bw = 8.0 FT
n = 0.015
S = 0.50%
D = 2.0 FT (MIN.)
dn = 1.09 FT
V = 6.29 FT/S

DRAIN "A"
STA. 1+00.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



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6. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.
7. THE MAINTENANCE OF ALL PRIVATE DRAINS WILL BE THE RESPONSIBILITY OF THE HOMEOWNERS ASSOCIATION FOR SADDLE RIDGE ESTATES.

TRENCH EXCAVATION SAFETY PROTECTION:

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

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
2-29-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

DRAIN A - PLAN & PROFILE
STA. 1+00.00 TO END

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN CR
SHEET C1.02

Date: Feb 29, 2024, 1:39pm User ID: crodriguez
File: P:\111\001\26\Design\Civil\SDA1-1100026.dwg

TRENCH EXCAVATION SAFETY PROTECTION:

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CAUTION!!

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DRAINAGE & GRADING NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
2. ALL CONCRETE FOR TXDOT DRAINAGE STRUCTURES SHALL MEET TXDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
3. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
4. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
5. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF LYTLE WILL ACCEPT.
6. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.
7. THE MAINTENANCE OF ALL PRIVATE DRAINS WILL BE THE RESPONSIBILITY OF THE HOMEOWNERS ASSOCIATION FOR SADDLE RIDGE ESTATES.

HYDRAULIC CALCULATIONS EARTHEN TRAP CHANNEL	HYDRAULIC CALCULATIONS EARTHEN TRAP CHANNEL	HYDRAULIC CALCULATIONS ROCK TRAP CHANNEL	HYDRAULIC CALCULATIONS CONC. TRAP CHANNEL
STA. 2+16.89 TO 10+50.00 DRAIN B – (SECTION "A–A")	STA. 10+50.00 TO 13+39.99 DRAIN B – (SECTION "A–A")	STA. 13+39.99 TO 13+49.99 DRAIN B – (SECTION "A–A")	STA. 13+49.99 TO 13+87.14 DRAIN B – (SECTION "A–A")
Q_{100} = 156.74	Q_{100} = 156.74	Q_{100} = 156.74	Q_{100} = 156.74
Bw = 20.00 FT	Bw = 20.00 FT	Bw = 20.00 FT	Bw = 20.00 FT
n = 0.035	n = 0.035	n = 0.040	n = 0.015
S = 0.60%	S = 0.50%	S = 0.50%	S = 0.50%
dn = 1.60 FT	dn = 1.69 FT	dn = 1.82 FT	dn = 1.04 FT
VN = 3.95 FT/S	VN = 3.70 FT/S	VN = 3.38 FT/S	VN = 6.52 FT/S
D = VARIES (6.0' TYP.)	D = VARIES (6.0' TYP.)	D = VARIES (6.0' TYP.)	D = VARIES (6.0' TYP.)

(*) REFERENCE OVERALL DRAINAGE PLAN C1.00–C1.01 FOR HYDROLOGY CALCULATIONS.

KEY LEGEND

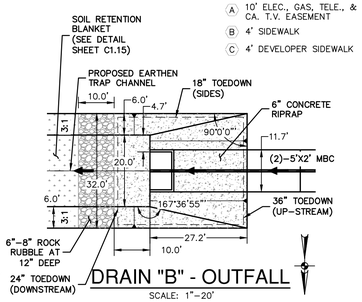
- (A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT
- (B) 4' SIDEWALK
- (C) 4' DEVELOPER SIDEWALK

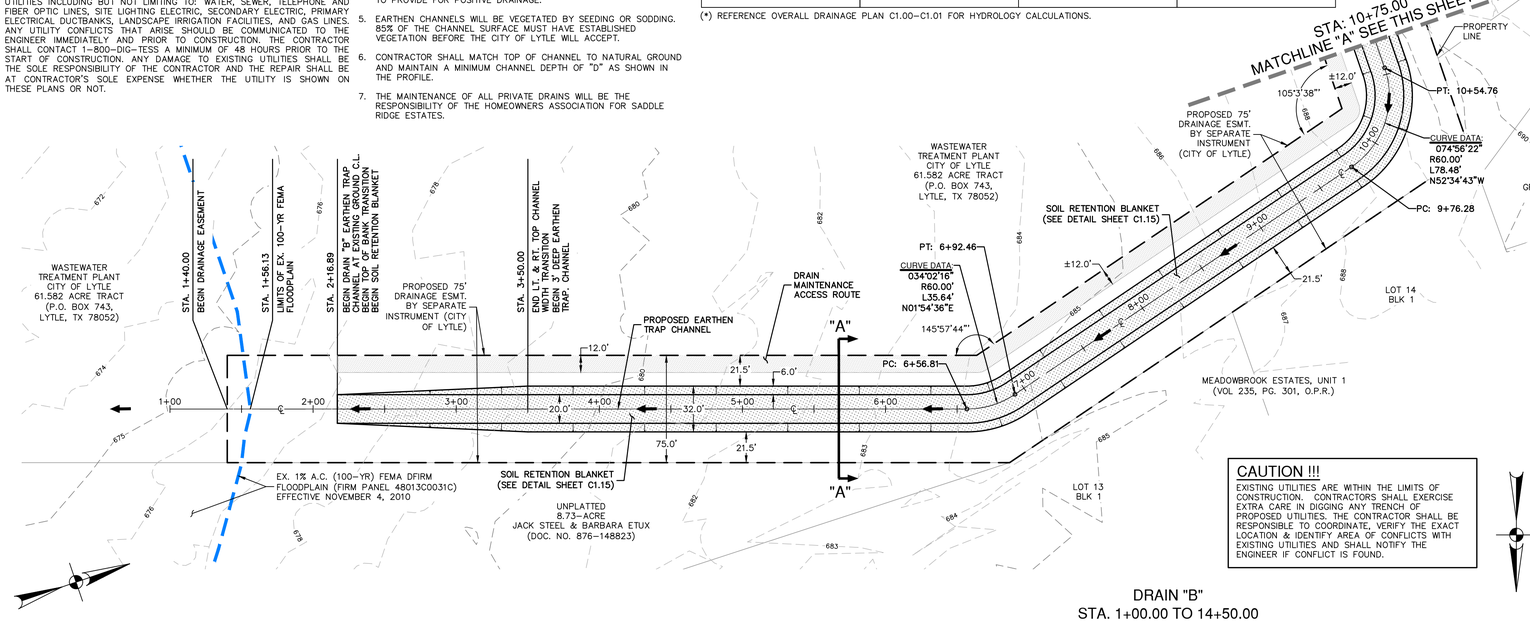
DRAINAGE LEGEND

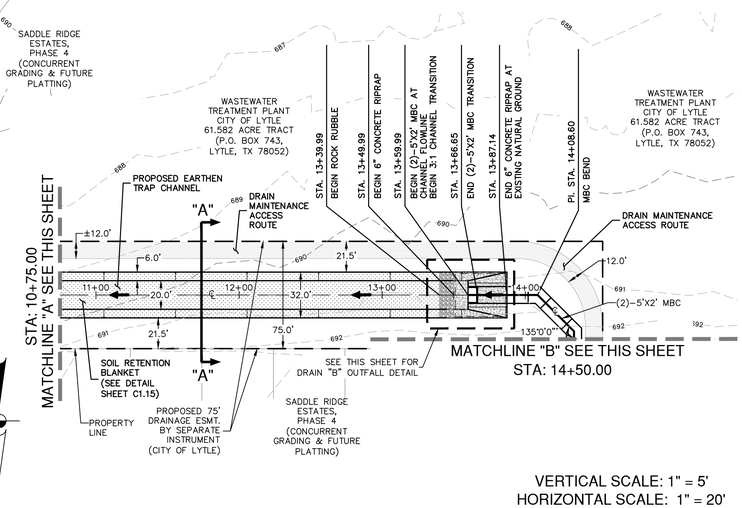
- PROJECT LIMITS
- EXISTING 100-YR FEMA FLOODPLAIN
- EXISTING CONTOUR (690)
- PROPOSED WATER (W)
- PROPOSED SEWER (SS)
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW

SCALE: 1"= 50'

0' 50' 100' 150'

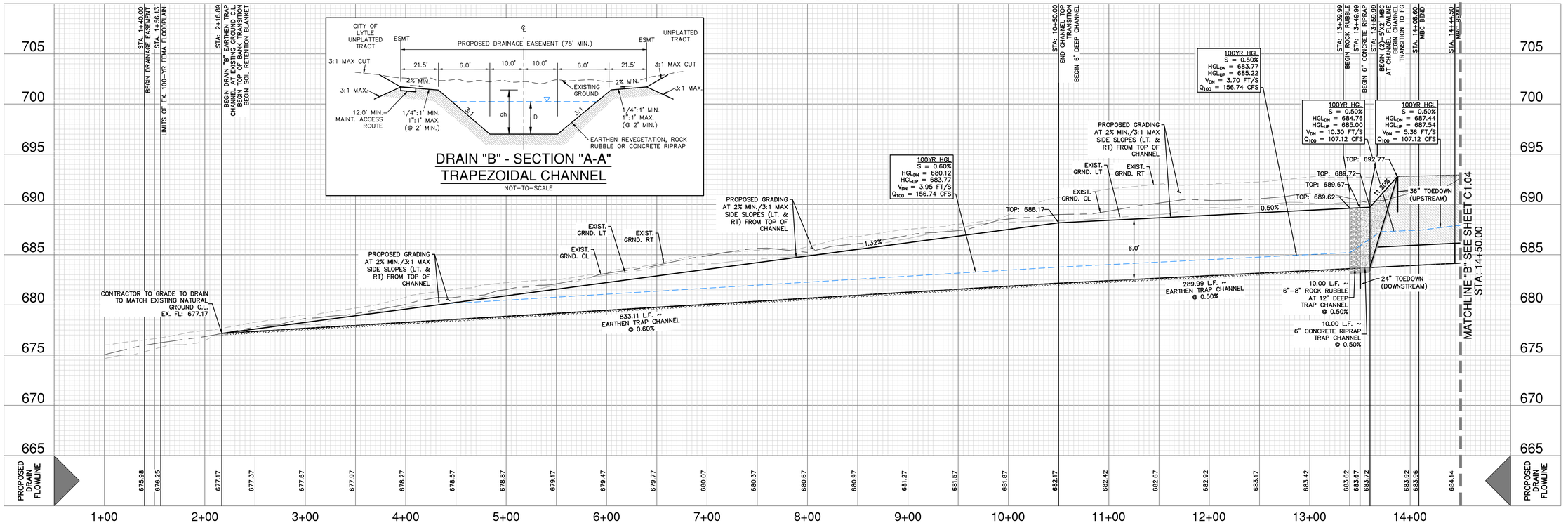






DRAIN "B"
STA. 1+00.00 TO 14+50.00

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



NO.	REVISION	DATE

STATE OF TEXAS
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SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

DRAIN B - PLAN & PROFILE
STA. 1+00.00 TO 14+50.00

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN CR
SHEET C1.03

Date: May 28, 2024, 4:49pm User ID: crodriguez
File: P:\11\00\26\Design\Civil\SDA2-1100026.dwg

TRENCH EXCAVATION SAFETY PROTECTION:

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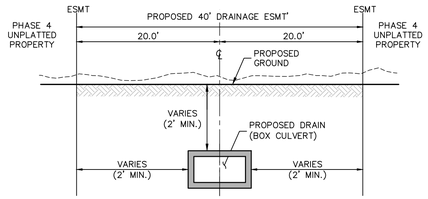
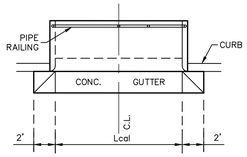


DRAIN B - SECTION "B-B"
STORM DRAIN CULVERT
NOT-TO-SCALE



TYPICAL DRAINAGE
CURB OPENING
NOT-TO-SCALE

CAUTION !!!

EXISTING UTILITIES ARE WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH OF PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

KEY LEGEND

- (A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT
- (B) 4' SIDEWALK
- (C) 4' DEVELOPER SIDEWALK

DRAINAGE LEGEND

- PROJECT LIMITS
- EXISTING CONTOUR (690)
- PROPOSED WATER (W)
- PROPOSED SEWER (SS)
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW

SCALE: 1"= 50'
0' 50' 100' 150'

HYDRAULIC CALCULATIONS CURB INLET IN SUMP	HYDRAULIC CALCULATIONS CURB INLET IN SUMP
STA. 15+87.30 – FUTURE PHASE 4 (DRAIN B – INLET "B-1")	STA. 16+18.64 – FUTURE PHASE 4 (DRAIN B – INLET "B-2")
Q25 = 15.37 CFS*	Q25 = 15.37 CFS*
Bw = C X L X h^(3/2)	Bw = C X L X h^(3/2)
h = 3.087	h = 3.087
C = Q / C X h^(3/2)	C = Q / C X h^(3/2)
L = 15.37 CFS / (3.087)(0.79 FT)^(3/2)	L = 15.37 CFS / (3.087)(0.79 FT)^(3/2)
L = 7.09 FT	L = 7.09 FT
Lcal = USE (1)–10 CURB INLET	Lcal = USE (1)–10 CURB INLET

(*) REFERENCE OVERALL DRAINAGE PLAN C1.00–C1.01 FOR HYDROLOGY CALCULATIONS. Q25 FLOWS ARE BASED ON 50% OF COMPUTATION POINT 18 FOR EACH INLET.

HYDRAULIC CALCULATIONS CURB INLET IN SUMP	HYDRAULIC CALCULATIONS CURB INLET IN SUMP
STA. 18+77.30 – FUTURE PHASE 4 (DRAIN B – INLET "B-3")	STA. 19+08.64 – FUTURE PHASE 4 (DRAIN B – INLET "B-4")
Q25 = 10.50 CFS*	Q25 = 10.50 CFS*
Bw = C X L X h^(3/2)	Bw = C X L X h^(3/2)
h = 3.087	h = 3.087
C = Q / C X h^(3/2)	C = Q / C X h^(3/2)
L = 10.50 CFS / (3.087)(0.79 FT)^(3/2)	L = 10.50 CFS / (3.087)(0.79 FT)^(3/2)
L = 4.84 FT	L = 4.84 FT
Lcal = USE (1)–10 CURB INLET	Lcal = USE (1)–10 CURB INLET

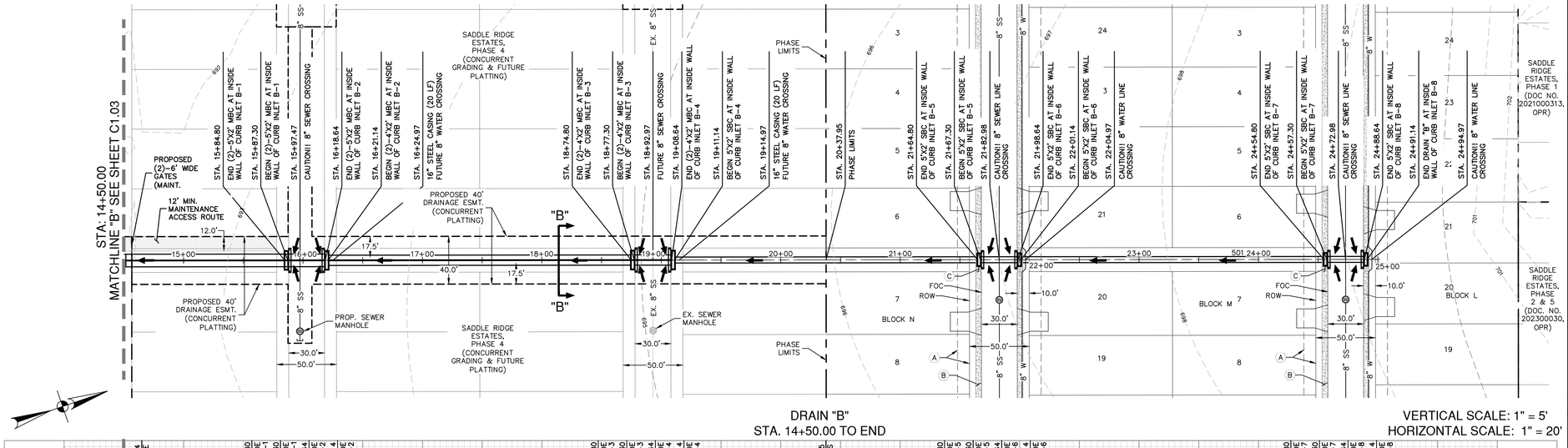
(*) REFERENCE OVERALL DRAINAGE PLAN C1.00–C1.01 FOR HYDROLOGY CALCULATIONS. Q25 FLOWS ARE BASED ON 50% OF COMPUTATION POINT 16 FOR EACH INLET.

HYDRAULIC CALCULATIONS CURB INLET IN SUMP	HYDRAULIC CALCULATIONS CURB INLET IN SUMP
STA. 21+67.30 – PHASE 3 (DRAIN B – INLET "B-5")	STA. 21+98.64 – PHASE 3 (DRAIN B – INLET "B-6")
Q25 = 10.02 CFS*	Q25 = 10.02 CFS*
Bw = C X L X h^(3/2)	Bw = C X L X h^(3/2)
h = 3.087	h = 3.087
C = Q / C X h^(3/2)	C = Q / C X h^(3/2)
L = 10.02 CFS / (3.087)(0.79 FT)^(3/2)	L = 10.02 CFS / (3.087)(0.79 FT)^(3/2)
L = 4.62 FT	L = 4.62 FT
Lcal = USE (1)–10 CURB INLET	Lcal = USE (1)–10 CURB INLET

(*) REFERENCE OVERALL DRAINAGE PLAN C1.00–C1.01 FOR HYDROLOGY CALCULATIONS. Q25 FLOWS ARE BASED ON 50% OF COMPUTATION POINT 14 FOR EACH INLET.

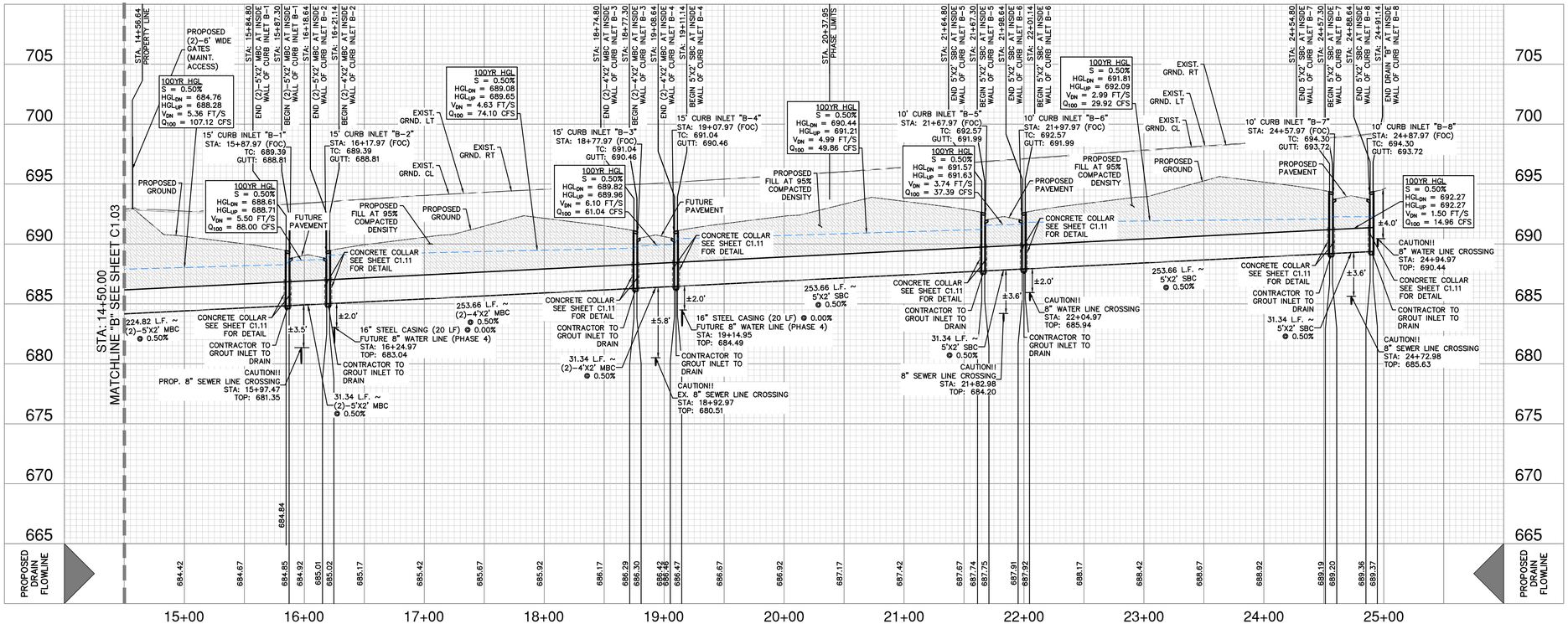
HYDRAULIC CALCULATIONS CURB INLET IN SUMP	HYDRAULIC CALCULATIONS CURB INLET IN SUMP
STA. 24+57.30 – PHASE 3 (DRAIN B – INLET "B-7")	STA. 24+88.64 – PHASE 3 (DRAIN B – INLET "B-8")
Q25 = 12.03 CFS*	Q25 = 12.03 CFS*
Bw = C X L X h^(3/2)	Bw = C X L X h^(3/2)
h = 3.087	h = 3.087
C = Q / C X h^(3/2)	C = Q / C X h^(3/2)
L = 12.03 CFS / (3.087)(0.79 FT)^(3/2)	L = 12.03 CFS / (3.087)(0.79 FT)^(3/2)
L = 5.54 FT	L = 5.54 FT
Lcal = USE (1)–10 CURB INLET	Lcal = USE (1)–10 CURB INLET

(*) REFERENCE OVERALL DRAINAGE PLAN C1.00–C1.01 FOR HYDROLOGY CALCULATIONS. Q25 FLOWS ARE BASED ON 50% OF COMPUTATION POINT 13 FOR EACH INLET.



DRAIN "B"
STA. 14+50.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
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SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
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SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

DRAIN B - PLAN & PROFILE
STA. 14+50.00 TO END

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN CR
SHEET C1.04

Date: May 28, 2024, 4:23pm User ID: crodriguez
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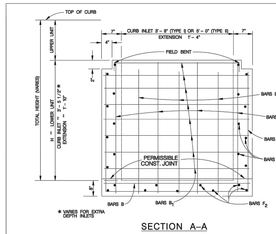
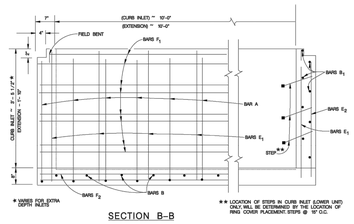


SECTION A–A



SECTION B–B

* VARIES FOR EXTRA DEPTH INLETS

* * LOCATION OF STEPS IN CURB INLET (LOWER UNIT) ONLY WILL BE DETERMINED BY THE LOCATION OF RING COVER PLACEMENT. STEPS @ 12" O.C.

REINFORCING STEEL

LOWER UNIT 10'X 3'– 8" (TYPE I)				
BAR	NO.	SIZE	SPAC.	LENGTH
A	12	#4	12"	VARIES
B	11	#4	12"	4'-4"
B_1	VARIES	#4	12"	4'-4"
E_1	20	#4	9"±	VARIES
E_2	6	#4	9"±	VARIES
F_1	VARIES	#4	12"±	10'-10"
F_2	9	#4	—	10'-10"

LOWER UNIT 10'X 5'– 0" (TYPE II)				
BAR	NO.	SIZE	SPAC.	LENGTH
A	12	#4	12"	VARIES
B	11	#4	12"	5'-10"
B_1	VARIES	#4	12"	5'-10"
E_1	22	#4	9"±	VARIES
E_2	8	#4	9"±	VARIES
F_1	VARIES	#4	12"±	10'-10"
F_2	11	#4	—	10'-10"

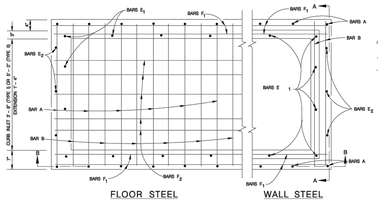
GENERAL NOTES

1. 9" INLETS AND 5' EXTENSIONS MUST BE IN ACCORDANCE WITH THE LATEST TXDOT CURB INLET TYPE "C" AND EXTENSION TYPE E (L–C).
2. TYPE C-9 INLET TO BE USED ONLY WHEN STORM DRAIN PIPE IS IN-LINE WITH CURB INLET AND APPROVED BY THE ENGINEER.
3. QUANTITIES SHOWN ARE FOR CONTRACTORS INFORMATION ONLY.
4. CONCRETE FOR STRUCTURES SHALL BE CLASS "A", 3000 PSI IN 28 DAYS.
5. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
6. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 1 1/2".
7. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615, GRADE 60 REQUIREMENTS.
8. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3 / 4".
9. DEPRESSION SLAB SHALL RECEIVE A WOOD FLOAT FINISH.
10. FACE OF INLET TO CONFORM TO FACE OF CURB LINE.
11. ALL BARS INTERCEPTING MANHOLE RING & COVER SHALL BE CUT OR BENT.
12. PAYMENT FOR ALL EXCAVATION, BACK-FILLING, CONCRETE, REINFORCING STEEL, RING AND COVER, CURB ARMOR AND STEPS SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 "STORM SEWER JUNCTION BOXES AND INLETS".
13. CAST IRON MANHOLE RING AND COVER TO BE PLACED NEXT TO OUTLET PIPE, EXCEPT FOR VERTICAL OUTLET PIPE IN WHICH CASE MANHOLE RING AND COVER WILL BE OFFSET.
14. GALVANIZED BOLTS, NUTS, WASHERS, PLATES AND GASKETS ARE SUBSIDIARY TO INLETS.
15. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MEANS TO LIFT AND PLACE THE INLETS WHEN USING PRECAST UNITS.
16. ALL BARS AT PIPE BLOCKOUT LOCATIONS SHALL BE CUT OR BENT.
17. ALL LOWER UNITS SHALL RECEIVE INVERT MORTAR SHAPING.
18. PIPE BLOCKOUTS IN INLET WALLS SHOULD NOT EXCEED 9" BEYOND THE OUTER SHELL OF THE PIPE, TAKING INTO ACCOUNT THE SLOPE OF THE PIPE AS NECESSARY. CONSTRUCTION JOINT MAY BE RAISED A MAXIMUM OF 6".

PHASE CONSTRUCTION

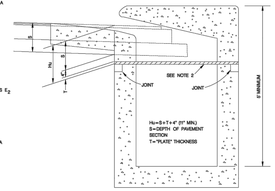
NOTES FOR PHASE CONSTRUCTION (WHEN DIRECTED BY THE ENGINEER):

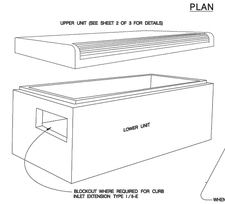
1. THE CURB INLET AND EXTENSION SHALL BE CONSTRUCTED TO THE FULL HEIGHT AT THE TIME THE INLET AND EXTENSION OUTER LINE ELEVATION.
2. CAP THE CURB INLET AND EXTENSION WITH A STEEL PLATE APPROVED BY THE ENGINEER AND CONSTRUCT THE ROADWAY OVER THE PLATE.
3. AFTER THE ROADWAY IS COMPLETED, BUT PRIOR TO THE FINAL HMAC OVERLAY, SAW CUT THE PAVEMENT, REMOVE THE PLATE AND COMPLETE THE UPPER PORTION OF THE CURB INLET AND / OR EXTENSION.



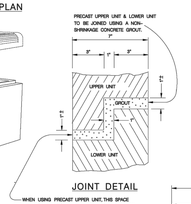
FLOOR STEEL

WALL STEEL



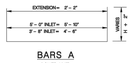


PLAN



JOINT DETAIL

WHEN USING PRECAST UPPER UNIT, THIS SPACE IS FOR MAKING MINOR HORIZONTAL AND VERTICAL ADJUSTMENTS TO ACCOMODATE A FIT BETWEEN THE UPPER AND LOWER UNIT THAT ALLOWS FOR A MATCH LINE AND GRADE BETWEEN THE ROADWAY CURB AND THE UPPER UNIT OF THE INLET.



BARS A
(LOWER UNIT)

CONCRETE INLET BOX CONFIGURATIONS (LOWER UNITS)

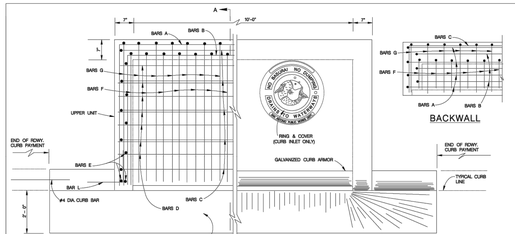
CONCRETE INLET LID CONFIGURATIONS (UPPER UNITS)

TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS

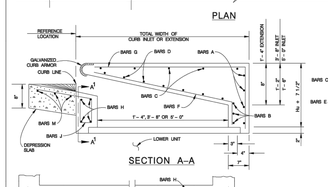
SHEET 1 OF 3

% SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY: V. VASQUEZ	DESIGN BY: L.E. MALTOS, P.E.	CHKD. BY: R.S. HOSSEINI, P.E.

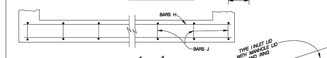
SHEET NO.: OF



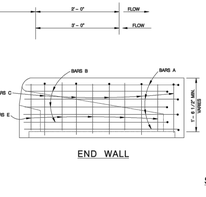
PLAN

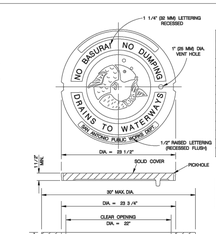


SECTION A–A



SECTION A1 – A1



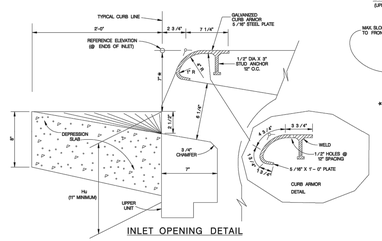


MANHOLE LID & RING DETAIL (ITEM 409)

NOTES FOR MANHOLE LID AND RING

1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT.".
2. CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
3. LOAD BEARING CAPABILITY OF HS-20 MINIMUM.
4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 280 LBS.

SEE SHEET 1 OF 3 FOR GENERAL NOTES.



INLET OPENING DETAIL

REINFORCING STEEL (FOR Hu=11")

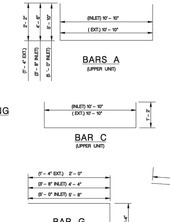
UPPER UNIT 10'X 3'-8" (TYPE I)					
BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
A	6	#4	——	9'-10"	33
B	3	#4	——	9'-6"	10
C	5	#4	11"	10'-0"	34
D	7	#4	6"	10'-10"	51
E	12	#4	11"	1'-4"	9
F	25	#6	6"	4'-8"	147
G	22	#6	6"	5'-0"	157
H	4	#4	——	10'-10"	29
J	10	#4	12"	3'-6"	23
L	4	#4	——	2'-0"	5
M	3	#4	——	14'-8"	29
TOTAL WEIGHT					620 LBS.

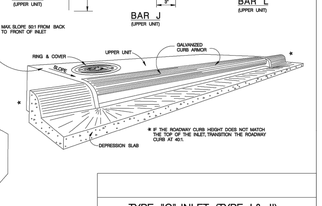
UPPER UNIT 10'X 5'-0" (TYPE II)					
BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
A	6	#4	——	22'-6"	60
B	3	#4	——	21'-6"	43
C	7	#4	11"	12'-0"	62
D	11	#4	6"	10'-10"	80
E	16	#4	11"	1'-4"	13
F	25	#6	6"	5'-4"	179
G	20	#6	6"	5'-0"	201
H	4	#4	——	10'-10"	29
J	12	#4	12"	3'-6"	28
L	4	#4	——	2'-0"	5
M	3	#4	——	14'-8"	29
TOTAL WEIGHT					759 LBS.

CLASS "A" CONCRETE QUANTITIES (FOR Hu = 11")

DEPRESSION SLAB	C.Y.
10' INLET	0.7
10' EXTENSION	0.7

UPPER UNIT (ONLY)	C.Y.
10'X 3'-8" CURB INLET	1.9
10'X 5'-0" CURB INLET	2.7
10' EXTENSION	1.0



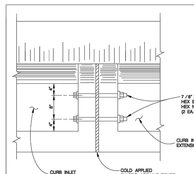


TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS

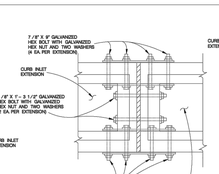
SHEET 2 OF 3

% SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY: V. VASQUEZ	DESIGN BY: L.E. MALTOS, P.E.	CHKD. BY: R.S. HOSSEINI, P.E.

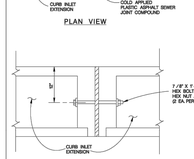
SHEET NO.: OF



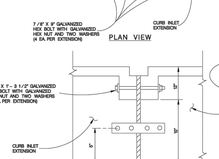
PLAN VIEW



PLAN VIEW

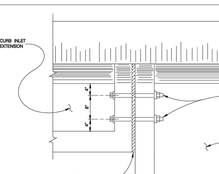


ELEVATION

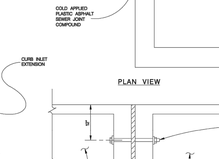


ELEVATION

UPPER UNIT



PLAN VIEW



ELEVATION

LOWER UNIT

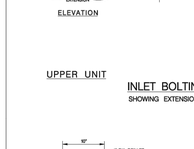
INLET BOLTING DETAILS
SHOWING EXTENSION TO EXTENSION

UPPER UNIT EXTENSION (FOR Hu = 11")					
BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
A	6	#4	——	9'– 2"	28
B	3	#4	——	14'– 2"	28
C	3	#4	11"	10'– 0"	20
D	3	#4	6"	10'– 10"	22
E	8	#4	11"	1'– 2"	6
F	21	#6	6"	4'– 6"	63
G	22	#6	6"	5'– 4"	110
H	4	#4	——	10'– 10"	29
J	10	#4	12"	3'– 6"	23
L	4	#4	——	2'– 0"	5
M	3	#4	——	14'– 8"	29
REINFORCING STEEL				LBS.	367
CLASS "A" CONCRETE				C.Y.	1.0

LOWER UNIT EXTENSION					
BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
A	12	#4	12"	8'– 2"	49
B	11	#4	12"	2'– 2"	16
B_1	3	#4	12"	2'– 2"	4
E_1	18	#4	9"±	2'– 2"	27
E_2	4	#4	9"±	2'– 1"	6
F_1	18	#4	12"±	10'– 10"	118
F_2	5	#4	——	10'– 10"	36
REINFORCING STEEL				LBS.	254
CLASS "A" CONCRETE				C.Y.	1.4

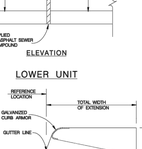
GENERAL NOTES

1. WHEN INLET EXTENSIONS ARE REQUIRED FOR ON GRADE INLETS THE EXTENSION(S) SHALL BE PLACED ON THE UPSTREAM END OF THE INLET.
2. FOR CURB INLET EXTENSION REINFORCING STEEL NOTES & VARIOUS OTHER APPLICABLE DETAILS NOT FOUND ON THIS SHEET, REFER TO SHEETS 1 & 2.



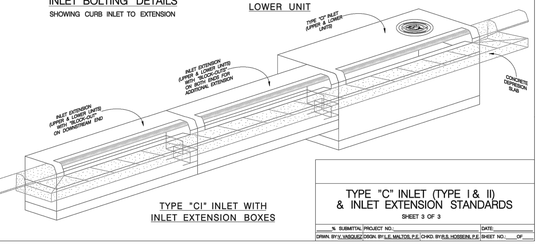
PLATES

HATCHED AREA INDICATES PORTION OF CURB INLET (LOWER UNIT) TO BE BLOCKED OUT FOR CURB INLET EXTENSION



SECTION A–A CURB INLET EXTENSION TYPE E

INLET BOLTING DETAILS
SHOWING CURB INLET TO EXTENSION



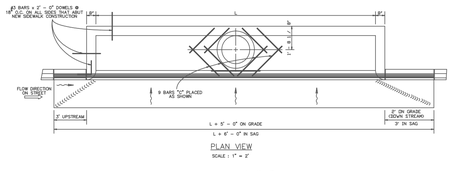
TYPE "CI" INLET WITH INLET EXTENSION BOXES

TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS

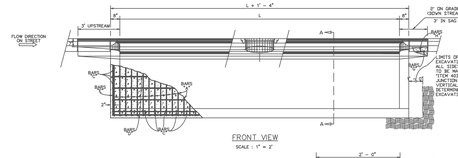
SHEET 3 OF 3

% SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY: V. VASQUEZ	DESIGN BY: L.E. MALTOS, P.E.	CHKD. BY: R.S. HOSSEINI, P.E.

SHEET NO.: OF



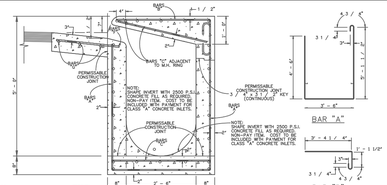
PLAN VIEW
SCALE : 1" = 2"

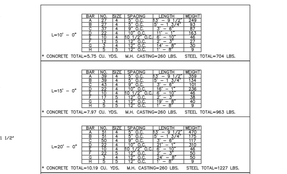


FRONT VIEW
SCALE : 1" = 2"

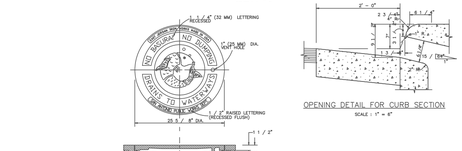
SECTION "A–A"
SCALE : 1" = 1"

SCALE : 1" = 1"





* THESE FIGURES DO NOT EXCLUDE CONCRETE & STEEL INTERCEPTED BY MANHOLE AND REINFORCED CONC. PIPE.
* INCLUDES CONCRETE GUTTER FOR ON GRADE INLET. REDUCE BY .85 C.Y. FOR INLETS IN SUMP.



SECTION A–A

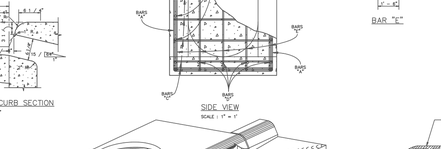
SECTION A1 – A1

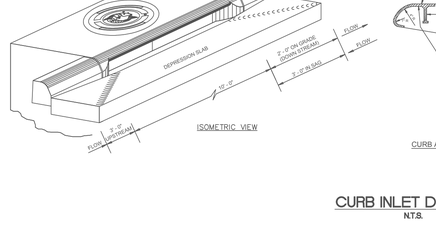
MANHOLE LID & RING DETAIL (ITEM 409)
SCALE : 1" = 8"

NOTES FOR MANHOLE LID AND RING

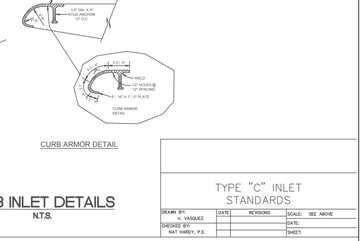
1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE " SAN ANTONIO PUBLIC WORKS DEPT.".
2. CASTING NUMBER AND MANUFACTOR'S I.D. ON LID AND RING.
3. LOAD BEARING CAPABILITY OF HS–20 MINIMUM.
4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 280 LBS.

OPENING DETAIL FOR CURB SECTION
SCALE : 1" = 8"





ISOMETRIC VIEW



CURB INLET DETAILS

N.T.S.

TYPE "C" INLET STANDARDS

DRAWN BY:	DATE:	REVISIONS	SCALE: SEE ABOVE
V. VASQUEZ			DATE:
CHECKED BY:			SHEET:
NAT HARDY, P.E.			

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

DRAINAGE DETAILS (CURB INLETS)

NO.	REVISION	DATE

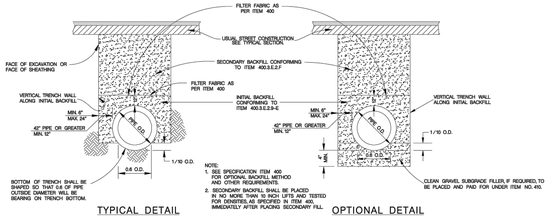
PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
11-13-23

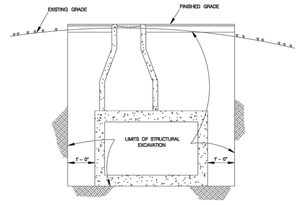
PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CR
CHECKED JA DRAWN CR
SHEET C1.10

Date: Nov 13, 2023, 3:26pm User ID: JForlos
File: P:\111\00\26\Design\Civil\SSDT-110026.dwg



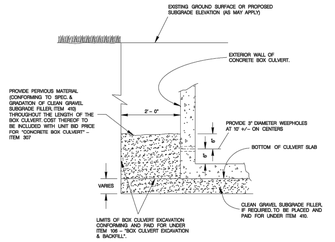
TYPICAL DETAIL OPTIONAL DETAIL

PIPE BEDDING & BACKFILL DETAILS

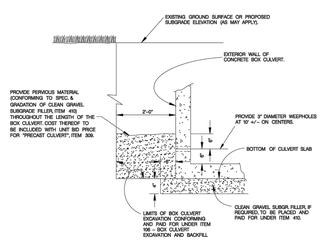


STRUCTURAL EXCAVATION AT JUNCTION BOXES

NO SCALE

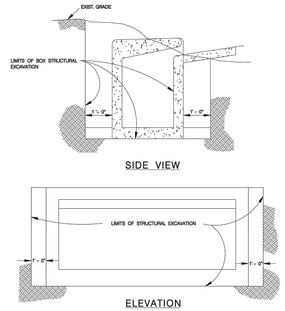


CAST-IN-PLACE BOX CULVERT



PRECAST BOX CULVERT

CONCRETE BOX CULVERT



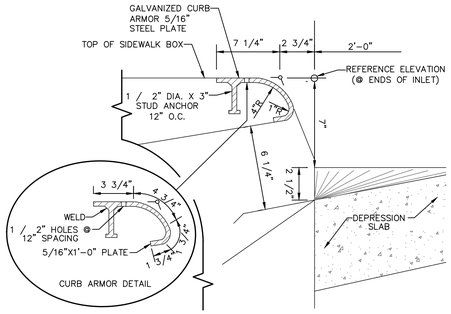
COST OF STRUCTURAL EXCAVATION TO BE INCLUDED WITH UNIT BID PRICE FOR INLETS - ITEM 465.

STRUCTURAL EXCAVATIONS AT DRAINAGE INLETS

NO SCALE

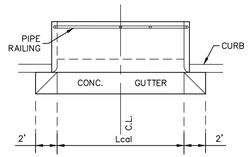
PIPE BEDDING & MISCELLANEOUS DRAINAGE DETAILS

% SUBMITTAL | PROJECT NO.: | DATE:
DRWN. BY: | DSGN. BY: | CHKD. BY: | SHEET NO.: OF



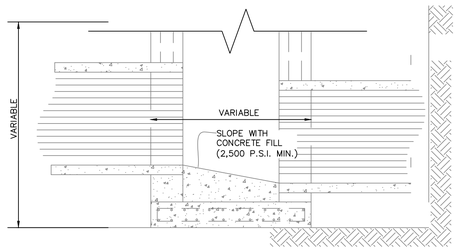
CURB ARMOR DETAIL

NOT-TO-SCALE



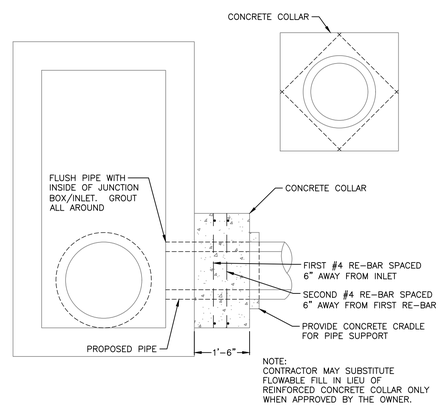
TYPICAL DRAINAGE CURB OPENING

NOT-TO-SCALE



GROUTED INVERT DETAIL

NOT-TO-SCALE



CONCRETE COLLAR DETAIL

NOT-TO-SCALE

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED PROFESSIONAL ENGINEER
11-13-23

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

DRAINAGE DETAILS (BEDDING & MISC.)

PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C1.11

Date: Nov 13, 2023, 3:27pm User ID: JFarias
File: P:\111\00\26\Design\Civil\SDD\1-1110026.dwg

DATE:
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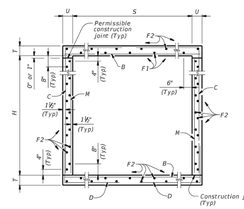
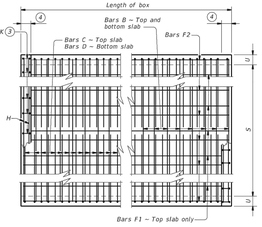
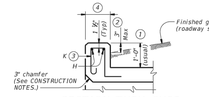


TYPICAL SECTION



PLAN OF REINF STEEL



SECTION THRU CURB

(1) 0" Min to 3'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-0", refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Rail Anchorage Curb (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.

(2) For vehicle safety, the following requirements must be met:
- For structures without bridge rail, construct curbs no more than 3" above finished grade.
- For structures with bridge rail, construct curbs flush with finished grade.

Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(3) For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted.

(4) 1'-0" typical. 2'-3" when the Rail Anchorage Curb (RAC) standard sheet is referred to elsewhere in the plans.

The Contractor may replace Bars B, C, D, E, F1, F2, H, Y, and/or Z with deformed welded wire reinforcement (WWR) meeting the requirements of ASTM A1064. The area of required reinforcement may be reduced by the ratio of 60 ksi / 70 ksi. Spacing of WWR is limited to 4" Min and 18" Max. When required, provide lap splices in the WWR of the same length required for the equivalent bar size, rounded up for wire sizes between conventional bar sizes. The lap length required for WWR is never less than the lap length required for uncoated #4 bars.

Example conversion: Replacing No. 6 Gr 60 at 6" Spacing with WWR.
Required WWR = (0.44 sq. in. per 0.5 ft.) x (60 ksi / 70 ksi) = 0.755 sq. in. per ft.
If D30.6 wire is used to meet the 0.755 sq. in. per ft. requirement in this example, the required spacing = (0.306 sq. in.) / (0.755 sq. in. per ft.) x (12 in. per ft.) = 4.86" Max spacing. Required lap length for the provided D30.6 wire is 2'-1" (the same minimum lap length required for uncoated #5 bars, as listed under MATERIAL NOTES).

CONSTRUCTION NOTES:
Do not use permanent forms.
Chamfer the bottom edge of the top slab 3" at the entrance.
Optionally, raise construction joints shown at the flow line by a maximum of 6". If this option is taken, Bars M may be cut off or raised, Bars C and D may be reversed.

MATERIAL NOTES:
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
Provide Class C concrete (f'c = 3,600 psi) for culvert barrel and curb, with the following exceptions: provide Class S concrete (f'c = 4,000 psi) for top slabs of:
- culverts with overlay,
- culverts with 1-to-2 course surface treatment, or
- culverts with the top slab as the final riding surface.

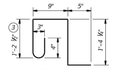
Provide bar laps, where required, as follows:
- Uncoated or galvanized – #4 = 1'-8" Min
- Uncoated or galvanized – #5 = 2'-1" Min

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications for the range of fill heights shown.
See the Single Box Culverts Cast-In-Place Miscellaneous Detail (SCC-MD) standard sheet for details pertaining to skewed ends, angle sections, and lengthening.

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

BARS C

BARS D



BARS K (#4)
(Spa = 1'-0" Max)
(Length = 4'-2")

HL93 LOADING SHEET 1 OF 2

Texas Department of Transportation | Bridge Division Standard

SINGLE BOX CULVERTS CAST-IN-PLACE
0' TO 30' FILL

SCC-3 & 4

FILE: scc3to4-21.dgn	DN: TBE	CK: BWP	DW: TxDOT	CK: TxDOT
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REVISIONS	DIST	COUNTY		SHEET NO.
04.2021 Updated X values.				

SECTION DIMENSIONS

BILLS OF REINFORCING STEEL (For Box Length = 40 feet)

QUANTITIES

S	H	T	U	Fill Height (5)	Bars B No.	Bars B Size	Bars B Spa	Bars B Length	Bars B Weight	Bars C No.	Bars C Size	Bars C Spa	Bars C Length	Bars C Weight	Bars C "X"	Bars C "Y"	Bars D No.	Bars D Size	Bars D Spa	Bars D Length	Bars D Weight	Bars D "Y"	Bars D "Z"	Bars M – #4 No.	Bars M – #4 Spa	Bars M – #4 Length	Bars M – #4 Weight	Bars F1 – #4 at 18" Spa No.	Bars F1 – #4 at 18" Spa Length	Bars F1 – #4 at 18" Spa Wt	Bars F2 – #4 at 18" Spa No.	Bars F2 – #4 at 18" Spa Length	Bars F2 – #4 at 18" Spa Wt	Bars H 4 – #4 Length	Bars H 4 – #4 Wt	Bars K No.	Bars K Wt	Per Foot of Barrel Conc (CY)	Per Foot of Barrel Reinf (Lb)	Curb Conc (CY)	Curb Reinf (Lb)	Total Conc (CY)	Total Reinf (Lb)
3'-0"	2'-0"	8"	7"	30"	108	#5	9"	3'-11"	441	108	#4	9"	5'-4"	385	2'-6"	2'-10"	108	#4	9"	5'-1"	367	2'-10"	2'-3"	108	9"	2'-0"	144	3	3'-9"	80	19	3'-9"	505	3'-11"	10	10	28	0.292	48.1	0.3	38	12.0	1,960
3'-0"	3'-0"	8"	7"	30"	108	#5	9"	3'-11"	441	108	#4	9"	6'-4"	457	3'-6"	2'-10"	108	#4	9"	5'-1"	367	2'-10"	2'-3"	108	9"	3'-0"	216	3	3'-9"	80	23	3'-9"	611	3'-11"	10	10	28	0.335	54.3	0.3	38	13.7	2,210
4'-0"	2'-0"	8"	7"	30"	108	#5	9"	4'-11"	554	162	#4	6"	5'-8"	613	2'-0"	3'-2"	162	#4	6"	5'-5"	586	3'-2"	2'-3"	108	9"	2'-0"	144	3	3'-9"	80	21	3'-9"	558	4'-11"	13	12	33	0.342	63.4	0.4	46	14.1	2,581
4'-0"	3'-0"	8"	7"	30"	108	#5	9"	4'-11"	554	162	#4	6"	6'-8"	721	3'-6"	3'-2"	162	#4	6"	5'-5"	586	3'-2"	2'-3"	108	9"	3'-0"	216	3	3'-9"	80	25	3'-9"	664	4'-11"	13	12	33	0.385	70.5	0.4	46	15.8	2,867
4'-0"	4'-0"	8"	7"	30"	108	#5	9"	4'-11"	554	162	#4	6"	7'-8"	830	4'-6"	3'-2"	162	#4	6"	5'-5"	586	3'-2"	2'-3"	108	9"	4'-0"	289	3	3'-9"	80	25	3'-9"	664	4'-11"	13	12	33	0.428	75.1	0.4	46	17.5	3,049

(5) For direct traffic culverts (fill height ≤ 2 ft.), identify the required box size and select the option with the minimum fill height.

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility and shall not be liable for any damages resulting from its use.

DATE:
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HL93 LOADING SHEET 2 OF 2

Texas Department of Transportation | Bridge Division Standard

SINGLE BOX CULVERTS CAST-IN-PLACE
0' TO 30' FILL

SCC-3 & 4

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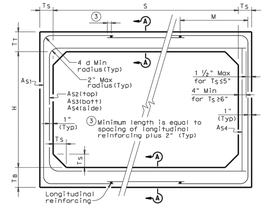
BOX DATA

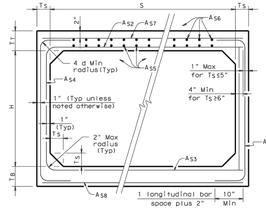
SECTION DIMENSIONS S (ft)	H (ft)	T_S (in)	T_B (in)	T_E (in)	Fill Height (ft)	M (Min) (in)	REINFORCING (in²/ft) (2) A_{S1}	A_{S2}	A_{S3}	A_{S4}	A_{S5}	A_{S6}	A_{S7}	A_{S8}	(1) Lift Weight (tons)
4	2	7.5	6	5	<2	-	0.18	0.27	0.15	0.12	0.18	0.18	0.18	0.14	4.5
4	2	5	5	5	2<3	38	0.18	0.19	0.17	0.12	-	-	-	-	3.6
4	2	5	5	5	3-5	38	0.13	0.13	0.13	0.12	-	-	-	-	3.6
4	2	5	5	5	10	38	0.12	0.12	0.12	0.12	-	-	-	-	3.6
4	2	5	5	5	15	38	0.14	0.16	0.16	0.12	-	-	-	-	3.6
4	2	5	5	5	20	38	0.18	0.20	0.21	0.12	-	-	-	-	3.6
4	2	5	5	5	25	38	0.23	0.25	0.25	0.12	-	-	-	-	3.6
4	2	5	5	5	30	38	0.28	0.30	0.30	0.12	-	-	-	-	3.6
4	3	7.5	6	5	<2	-	0.18	0.31	0.18	0.12	0.18	0.18	0.18	0.14	5.0
4	3	5	5	5	2<3	38	0.15	0.23	0.20	0.12	-	-	-	-	4.1
4	3	5	5	5	3-5	38	0.12	0.16	0.16	0.12	-	-	-	-	4.1
4	3	5	5	5	10	38	0.12	0.14	0.14	0.12	-	-	-	-	4.1
4	3	5	5	5	15	38	0.12	0.18	0.18	0.12	-	-	-	-	4.1
4	3	5	5	5	20	38	0.14	0.23	0.24	0.12	-	-	-	-	4.1
4	3	5	5	5	25	38	0.17	0.29	0.29	0.12	-	-	-	-	4.1
4	3	5	5	5	30	38	0.21	0.35	0.35	0.12	-	-	-	-	4.1
4	4	7.5	6	5	<2	-	0.18	0.33	0.20	0.12	0.18	0.18	0.18	0.14	5.5
4	4	5	5	5	2<3	38	0.12	0.26	0.23	0.12	-	-	-	-	4.6
4	4	5	5	5	3-5	38	0.12	0.18	0.18	0.12	-	-	-	-	4.6
4	4	5	5	5	10	38	0.12	0.15	0.15	0.12	-	-	-	-	4.6
4	4	5	5	5	15	38	0.12	0.19	0.20	0.12	-	-	-	-	4.6
4	4	5	5	5	20	38	0.12	0.25	0.25	0.12	-	-	-	-	4.6
4	4	5	5	5	25	38	0.14	0.31	0.31	0.12	-	-	-	-	4.6
4	4	5	5	5	30	38	0.17	0.37	0.37	0.12	-	-	-	-	4.6

(1) For Box Length = 8'-0"

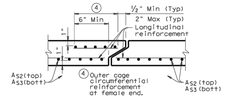
(2) A_{S1} thru A_{S4}, A_{S7} and A_{S8} are minimum required areas of reinforcement per linear foot of box length. A_{S5} and A_{S6} are minimum required areas of reinforcement per linear foot of box width.



FILL HEIGHT 2 FT AND GREATER



FILL HEIGHT LESS THAN 2 FT



SECTION A-A
(TOP AND BOTTOM SLAB JOINT REINFORCEMENT)

GENERAL NOTES:
Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.
All concrete shall be Class "H" Concrete with a minimum compressive strength of 5,000 psi.
See SCP-MD standard sheet for miscellaneous details and notes not shown.
In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Shop plans for alternate designs shall be submitted in accordance with Item "Precast Concrete Structural Members (Fabrication)".

HL93 LOADING

Texas Department of Transportation | Bridge Division Standard

SINGLE BOX CULVERTS PRECAST
4'-0" SPAN

SCP-4

FILE: scp04std.dgn	DN: GAF	CK: LRW	DW: BWH/TxDOT	CK: GAF
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STATE OF TEXAS
JON D. ADAME
82567
LICENSED PROFESSIONAL ENGINEER
11-13-23

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

DRAINAGE DETAILS (BOX CULVERTS)

PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C1.12

Date: Nov 13, 2023, 3:27pm User ID: JFarias
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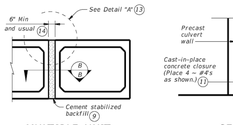
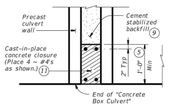
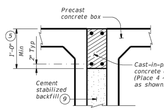


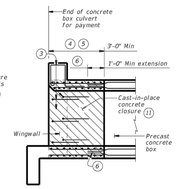
MULTIPLE UNIT PLACEMENT



SECTION B-B

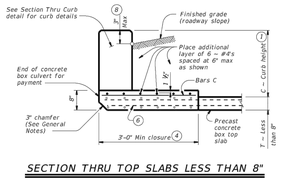


DETAIL "A" (13)

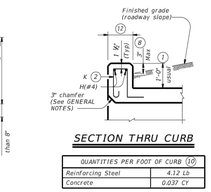


WINGWALL CONNECTION

(Also applies to safety end treatment.)



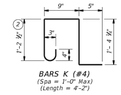
SECTION THRU TOP SLABS LESS THAN 8"



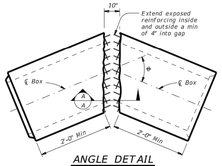
SECTION THRU CURB

QUANTITIES PER FOOT OF CURB (10)	
Reinforcing Steel	4.12 Lb
Concrete	0.037 CY

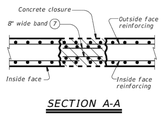
BARS C (#4)
(Spa = 1'-0" Max)



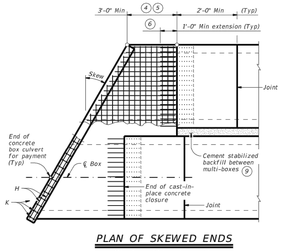
BARS K (#4)
(Spa = 1'-0" Max)
(Length = 4'-2")



ANGLE DETAIL



SECTION A-A



PLAN OF SKEWED ENDS

(Showing multi-box placement.)

1. 0" Min to 3'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail, or curbs taller than 1'-0, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CH) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
2. For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted.
3. Extend curb, wingwall, or safety end treatment reinforcing into concrete closure. Bend or trim, as necessary, any reinforcing that does not fit into closure area.
4. Provide a 3'-0" Min cast-in-place concrete closure. Break back boxes in the field or cast boxes short. Provide bands of reinforcing in the closure that are the same or smaller spacing as the precast box section. Provide #4 longitudinal reinforcement at 12" max spacing Max within the closure. Except where shown otherwise, construct the cast-in-place closure flush with the inside and outside faces of the precast box section.
5. For multiple unit placements, adjust the length of the closure for the interior walls as necessary. Provide a 3'-0" Min cast-in-place closure in the top slab, bottom slab, and exterior wall. See Section B-B detail when interior walls are cast full length.
6. Extend precast box reinforcing a minimum of 1'-0" into concrete closure (Typ).
7. Place bands of reinforcing matching the inside and outside face reinforcing in the gaps of the top and bottom slabs. Place a band matching the outside face reinforcing of the wall in the gaps of the walls (placed on the outside face only). Tack weld the bands to the exposed reinforcing at each point of contact.
8. For vehicle safety, the following requirements must be met:
   - For structures without bridge rail, construct curbs no more than 3" above finished grade.
   - For structures with bridge rail, construct curbs flush with finished grade.

   Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
9. Cement stabilized backfill between boxes is considered part of the box culvert for payment.
10. All curb concrete and reinforcing is considered part of the box culvert for payment.
11. Any additional concrete and reinforcing required for the closures will be considered subsidiary to the box culvert for payment.
12. 1'-0" typical. 2'-3" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elsewhere in the plans.
13. For multiple unit placement with overlay, with 1 to 2 course surface treatment, or with the top slab as the final riding surface, provide wall closure as shown in Detail "A".
14. This dimension may be increased with approval of the Engineer to allow the precast boxes to be tunneled or jacked in accordance with Item 476, "Jacking, Boring, or Tunneling Pipe or Box". No payment will be made for any additional material in the gap between adjacent boxes.

MATERIAL NOTES:

Provide Grade 60 reinforcing steel.
Provide ASTM A1064 welded wire reinforcement.
Provide Class C concrete (f'_c = 3,600 psi) for the closures.
Provide cement stabilized backfill meeting the requirements of Item 400, "Excavation and Backfill for Structures".
Any additional concrete required for the closures will be considered subsidiary to the box culvert.

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.
Refer to the Single Box Culverts Precast (SCP) standard sheets for details and notes not shown.
Chamfer the bottom edge of the top slab closure 3 inches at culvert closure ends.

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

HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

BOX CULVERTS PRECAST MISCELLANEOUS DETAILS

SCP-MD

FILE:	scpmdstv-20.dgn	DN: GAI	CK: LRW	DW: BWH/TxDOT	CK: GAF
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REVISIONS		DIST	COUNTY		SHEET NO.

DISCLAIMER:
The use of this standard is governed by the Texas Engineering Practice Act. No warranty of any kind is made by the Texas Department of Transportation for any purpose whatsoever. TxDOT disclaims responsibility for any modifications of this standard, or any use of it by others. In no event will TxDOT be liable for damages resulting from its use.

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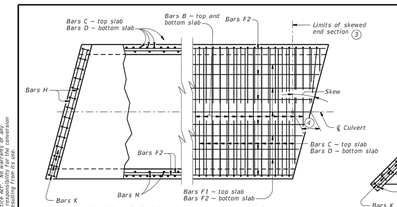
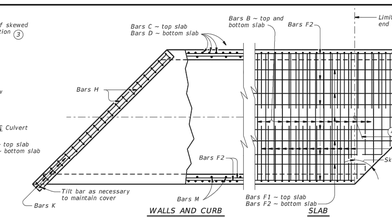


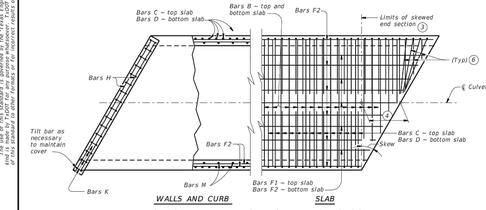
WALLS AND CURB — SLAB

PLAN OF SKEWED ENDS ~ FROM 0° TO 15° (7)



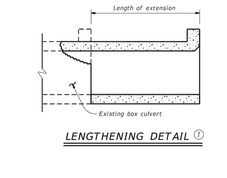
WALLS AND CURB — SLAB

PLAN OF SKEWED ENDS ~ OVER 30° TO 45°

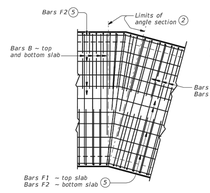


WALLS AND CURB — SLAB

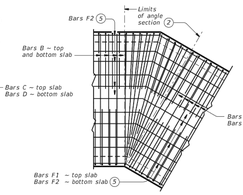
PLAN OF SKEWED ENDS ~ OVER 15° TO 30°



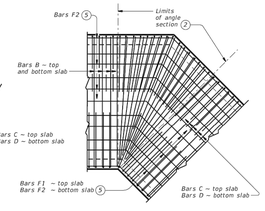
LENGTHENING DETAIL (7)



PLAN OF ANGLE SECTION ~ FROM 0° TO 15°



PLAN OF ANGLE SECTION ~ OVER 15° TO 30°



PLAN OF ANGLE SECTION ~ OVER 30° TO 45°

(7) For skewed box culverts with less than 2'-0" of fill, break back the top slab to provide a 1'-10" minimum lap of the existing longitudinal bars with the longitudinal bars in the extension.
   For non-skewed box culverts with less than 2'-0" of fill and for skewed or non-skewed culverts with a fill depth of 2'-0" or greater, break back the top slab to provide a 1'-10" minimum lap of the existing longitudinal bars with the longitudinal bars in the extension. Alternatively, if the box is non-skewed, embed #6 anchor bars with a Type III, C, D , E, or F anchor adhesive into the existing walls, top and bottom slab at 1'-6" center-to-center spacing. Minimum embedment depth is 8". Anchor adhesive chosen must be able to achieve a basic bond strength in tension, f_{bd}, of 26.4 kips. Submit signed and sealed calculations or the manufacturer's published literature showing the proposed anchor adhesive's ability to develop this load to the Engineer for approval prior to use. Anchor installation, including hole size, drilling, and clean out, must be in accordance with Item 450, "Railing." Test adhesive anchors in accordance with Item 450.3.3.
   Break back the top slab to form a 2'-0" minimum
   Break back wing and apron as necessary to install the extension. Clean and extend the exposed wingwall and apron reinforcing into the extension. When lengthening existing box culverts with dimensions different than current standard dimensions, form horizontal and vertical transitions as directed by the Engineer. Match bottom slabs to maintain an uninterrupted flow line. Field bend existing and new reinforcing into transitions and maintain specified cover requirements. For top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface, adjust the 'H' dimension to provide a smooth riding surface.
(2) When the spacing between Bars B becomes less than half of the normal spacing, cut bars to avoid conflict.
(3) The length of Bars B vary in the skewed end sections.
(4) [One half of overall width] x [tangent of the skew angle]
(5) Place Bars F1 and F2 continuously through the angle section. Bend Bars F1 and F2 to remain parallel to the walls of the box culvert.
(6) When necessary to avoid conflict in acute corners, shorten the slab extension leg of Bars C and Bars D to a minimum of 1'-6" for skews of 30° thru 45°.
(7) At the Contractor's option, for skews of 15° or less, place Bars B, C, and D parallel to the skewed end while maintaining spacing along centerline of box. Increase lengths of Bars B shown on the Single Box Culverts Cast-In-Place (SCC) standards sheets to accommodate the skew.

CONSTRUCTION NOTES:

Do not use permanent forms.
When required, lap Bars H 1'-8" for uncoaxed or galvanized bars.
Provide a minimum of 1 ½ clear cover.

MATERIAL NOTES:

Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel, if required elsewhere in the plans.
Provide Class C concrete (f'_c = 3,600 psi) with these exceptions:
provide Class S concrete (f'_c = 4,000 psi) for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface.

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.
Refer to Single Box Culverts Cast-in-Place (SCC) standard sheets for details of straight sections of culvert.
For skewed sections and angle sections, refer to Single Box Culverts Cast-in-Place (SCC) standard sheets for slab and wall dimensions, bar sizes, maximum bar spacing, and any other details not shown.
For skewed ends with curbs, adjust length of Bars H, number of Bars K, curb concrete volume, and reinforcing steel weight by dividing the values shown on the culvert Single Box Culverts Cast-In-Place (SCC) standards by the cosine of the skew angle.

Cover dimensions are clear dimensions, unless noted otherwise.

HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

SINGLE BOX CULVERTS CAST-IN-PLACE MISCELLANEOUS DETAILS

SCC-MD

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

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
11-13-23

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

DRAINAGE DETAILS (BOX CULVERTS)

PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C1.13

Curlex® Blankets

Product Description

Excelsior Erosion Control Blankets

American Excelsior Company is the inventor of biodegradable erosion control blankets. Developed in the early 60's, Curlex excelsior blankets are specifically designed to actually promote ideal growing conditions for grass seed, while simultaneously protecting topsoil from wind and water erosion. Curlex excelsior blankets have long passed the test of time. By design, Curlex blankets have a built-in swell factor - wet curled excelsior fibers sightly expand in thickness and interlock to form a strong, fiber matrix. This allows the fibers to provide intimate contact with local terrain. Water flow is trained to follow the curled fiber matrix. The roughness of the curled excelsior matrix slows the velocity to a point where gravity takes over, which allows moisture to slowly seep into the topsoil to promote ideal growing conditions.

Material Characteristics

Curlex blankets consist of unique softly barbed, interlocking, curled, Aspen excelsior fibers. They are weed seed free. Curlex blankets are available with a variety of environmentally sensitive and/or stronger netting types to match job site requirements. We offer a green color-coded plastic netting for applications requiring UV resistance strength and longevity. Our photodegradable QuickMow™ netting is recommended for urban, golf course, and certain roadside projects. It is color-coded white to identify it as a rapid break-down, polypropylene netting designed for use in areas to be mowed. Also available is our FibreNet™ - 100% biodegradable netting - for use in critical environmentally sensitive areas.

Most straight-line fiber blankets draw the line at 270 g/m^2 (.50 lb/yd^2), but not Curlex. At just under 400 g/m^2 (.75 lb/yd^2) Curlex blankets bring 50% more erosion control fibers to your job site. Curlex blankets are available in natural Aspen or QuickGRASS® (green). Combine that with a roll that's wider than conventional blankets and you have today's most effective and efficient, multi-purpose degradable erosion control blanket. Curlex excelsior blankets are available individually wrapped or in master packs to allow for mechanical unloading and stacking.

Performance Capabilities

Product	Slopes	Shear Stress Rating
Curlex I	2H:1V & flatter	84 Pa (1.75 lb/ft^2)
Curlex II	1.5H:1V & flatter	108 Pa (2.25 lb/ft^2)

Typical Applications

- Highway embankments, ditch bottoms and slopes, bridges, approaches and medians
- Residential, commercial, & industrial developments
- Urban drainage, stream banks, and waterways
- Golf course fairways, roughs, waterways, & drop structures
- Landfill caps, side slopes, and let down structures
- Pipeline right-of-ways

American Excelsior Company®
Earth Science Division
Arlington, Texas (800) 777-SOIL • www.curlex.com

MADE IN THE U.S.A.

American Excelsior Company®
Earth Science Division

Curlex® Blankets

Excelsior Erosion Control Blankets

SUGGESTED SPECIFICATIONS

Curlex Single Net (Curlex I)

A specific cut of Great Lakes Aspen curled wood excelsior with 80% six-inch fibers or greater fiber length. It shall be of consistent thickness, with fibers evenly distributed throughout the entire area of the blanket. The top of each blanket shall be covered with photodegradable or biodegradable netting. Material shall not contain any weed seed or chemical additives.

Specifications

Recommended Use:	Slopes to 2:1, Channel to 7 ft/s, shear stress to 1.75 lb/ft^2
Roll Sizes:	4' x 112.5' (50 yd^2), 8' x 112.5' (100 yd^2), 16' x 112.5' (200 yd^2)
Standard Weight*:	.73 lb/yd^2
Netting Options:	Green, QuickMow White (90 day), FibreNet
Color:	Natural Aspen or QuickGRASS Green

Curlex Double Net (Curlex II)

A specific cut of Great Lakes Aspen curled wood excelsior with 80% six-inch fibers or greater fiber length. It shall be of consistent thickness, with fibers evenly distributed throughout the entire area of the blanket. The top and bottom of each blanket shall be covered with photodegradable or biodegradable netting. Material shall not contain any weed seed or chemical additives.

Specifications

Recommended Use:	Slopes to 1.5:1, Channels to 9 ft/s, shear stress to 2.25 lb/ft
Roll Sizes:	4' x 112.5' (50 yd^2), 8' x 112.5' (100 yd^2), 16' x 112.5' (200 yd^2)
Standard Weight*:	.73 lb/yd^2
Netting Options:	Green, QuickMow White (90 day), FibreNet
Color:	Natural Aspen or QuickGRASS Green

*Weight is based on a dry fiber weight basis at time of manufacture. Baseline moisture content of Great Lakes Aspen Excelsior is 22%.

Installation

Before installing Curlex blankets, the seedbed shall be inspected by the Owner's Representative to ensure it has been properly compacted and fine graded to remove any existing rills. It shall be free of obstructions, such as tree roots, projections such as stones, and other foreign objects. Grass seed shall match soil conditions to allow for maximum germination, dense vegetation, and a structural root system. Contractor shall proceed when satisfactory conditions are present. After the area has been properly shaped, seeded, fertilized, and compacted, locate the start of the roll, making sure the roll is facing toward the area to be covered, and then roll out the blanket. Blankets shall be rolled out flat, even, and smooth without stretching the material then anchored to the subgrade.

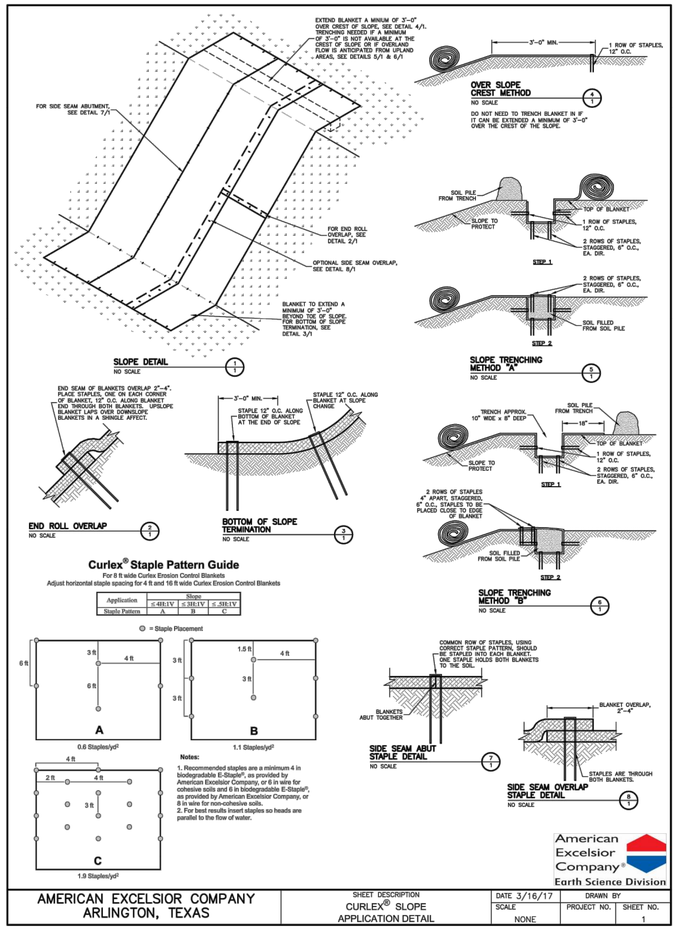
Slopes: It is recommended that the blankets be installed in the same direction as the water flow; however, on short slopes it may be more practical to install horizontally across the width of the application. If more than one width is required, simply abut the edges together and secure the blankets with a common row of biodegradable staples, steel staples, or stakes. Overlapping of Curlex excelsior blankets is not required or recommended. An exception is waterway slopes.

Channels: Curlex blankets shall be centered to offset a seam in the middle of the waterway. They shall be installed in the same direction as the water flow. The adjoining blankets shall be installed away from the center of channel and concentrated water flow. They shall be secured by a common row of staples. It is usually not necessary to overlap Curlex blankets; however, a 2" shingle type installation shall be used in waterway slopes applications. Curlex blanket installation should continue up the side slopes 3' above the anticipated high water elevation. Flanks exposed to runoff, or sheet flow, must be protected by a check slot or trenched. Curlex blankets shall be trenched at the start of the channel and anchored using a staggered staple pattern at end of roll overlaps and end of roll terminations.

MADE IN THE U.S.A.

If you would like to receive more information or consult with one of our Customer Care Center Specialists, please call us toll free at (888-352-9582)
PDF download specifications available in the Technical Support Library at www.curlex.com

Form#235/092013E



NOTES:

SOIL RETENTION BLANKET TO BE INSTALLED ALONG INVERT AND SIDE SLOPES OF CHANNEL. SIDE SLOPES TO BE PROTECTED TO A HEIGHT OF 2'. SOIL RETENTION BLANKET TO HAVE THE FOLLOWING CHARACTERISTICS AS A MINIMUM:

- FOR USE ON 3:1 SIDE SLOPES
- FOR USE WITH VELOCITIES > 6 FPS

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
11-13-23

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

DRAINAGE DETAILS (SOIL RETENTION BLANKET)

PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C1.14

Date: Nov 13, 2023, 3:27pm User ID: JForbis
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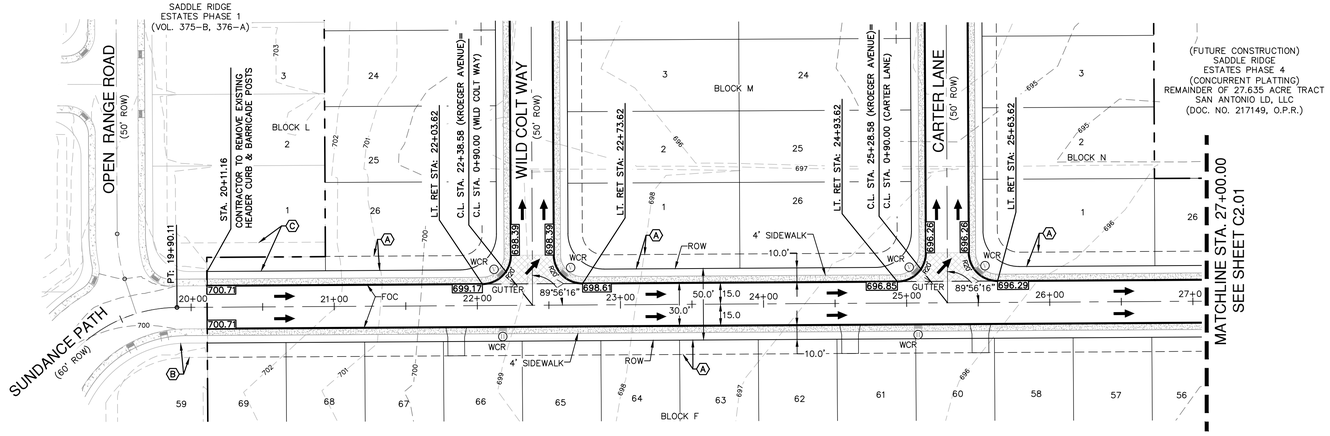
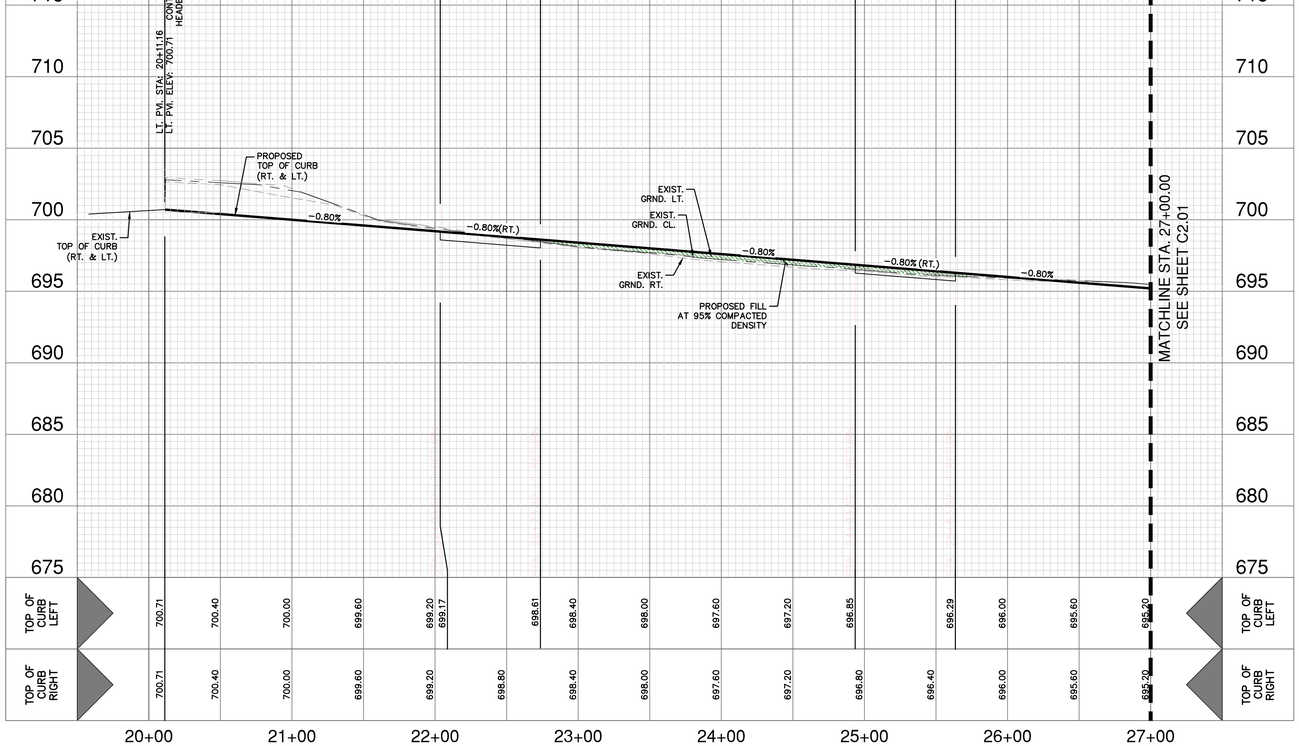


KROEGER AVENUE
STA. 20+11.16 TO STA. 27+00.00

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
DRIVEWAY	

KEY LEGEND:

Ⓐ 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

Ⓑ EXISTING 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT SADDLE RIDGE ESTATES PHASES 2 & 5 (DOC. NO. 202300030, OPR)

Ⓒ EXISTING VARIABLE WIDTH (MIN. 10') GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 201600013, OPR)

STREET NOTES:

1. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
2. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
3. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
4. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
5. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
6. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN SIDEWALKS ARE NOT SHOWN ADJACENT TO ALL PRIVATE STREETS. REFER TO SHEET C3.00 FOR LOCATIONS OF SIDEWALK CONSTRUCTION.
7. FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.5 AND A PI MAXIMUM OF 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME APPLICATION RATE SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

KROEGER AVENUE ~ STA. 20+11.16 TO STA. 27+00.00
STREET PLAN AND PROFILE

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CB
CHECKED CR DRAWN CB
SHEET C2.00

Date: Sep 09, 2024, 3:37pm User ID: JForbis
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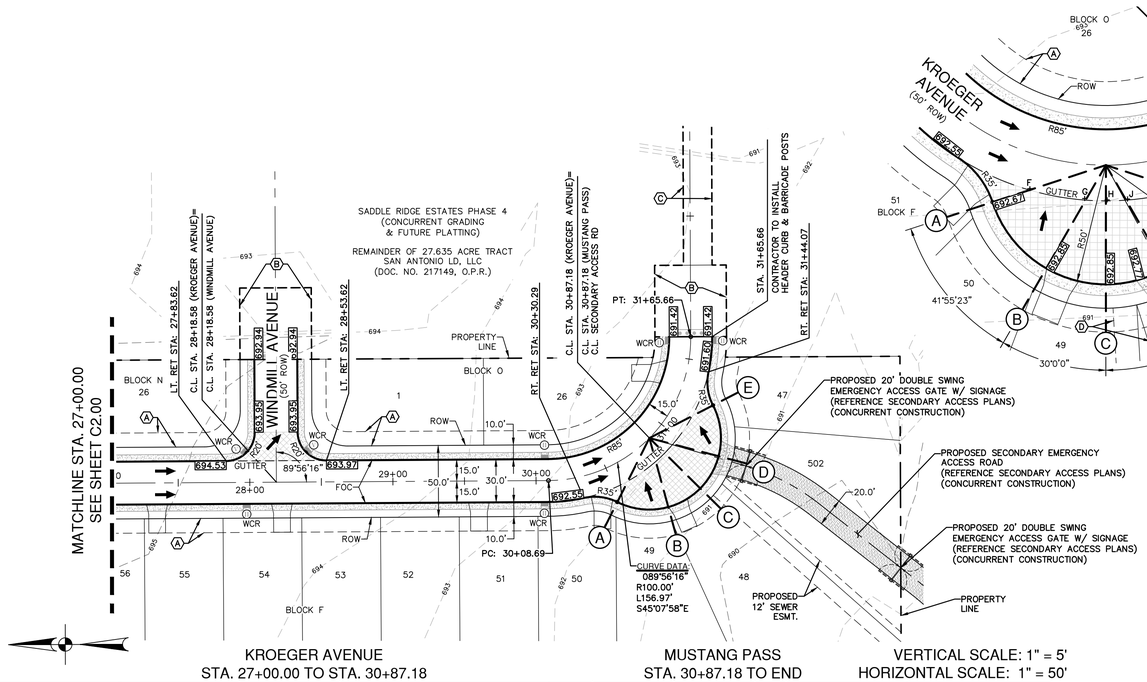


STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
DRIVEWAY	

KEY LEGEND:

(A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

(B) 50'X50' WATER, SEWER, GRADING AND DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W.

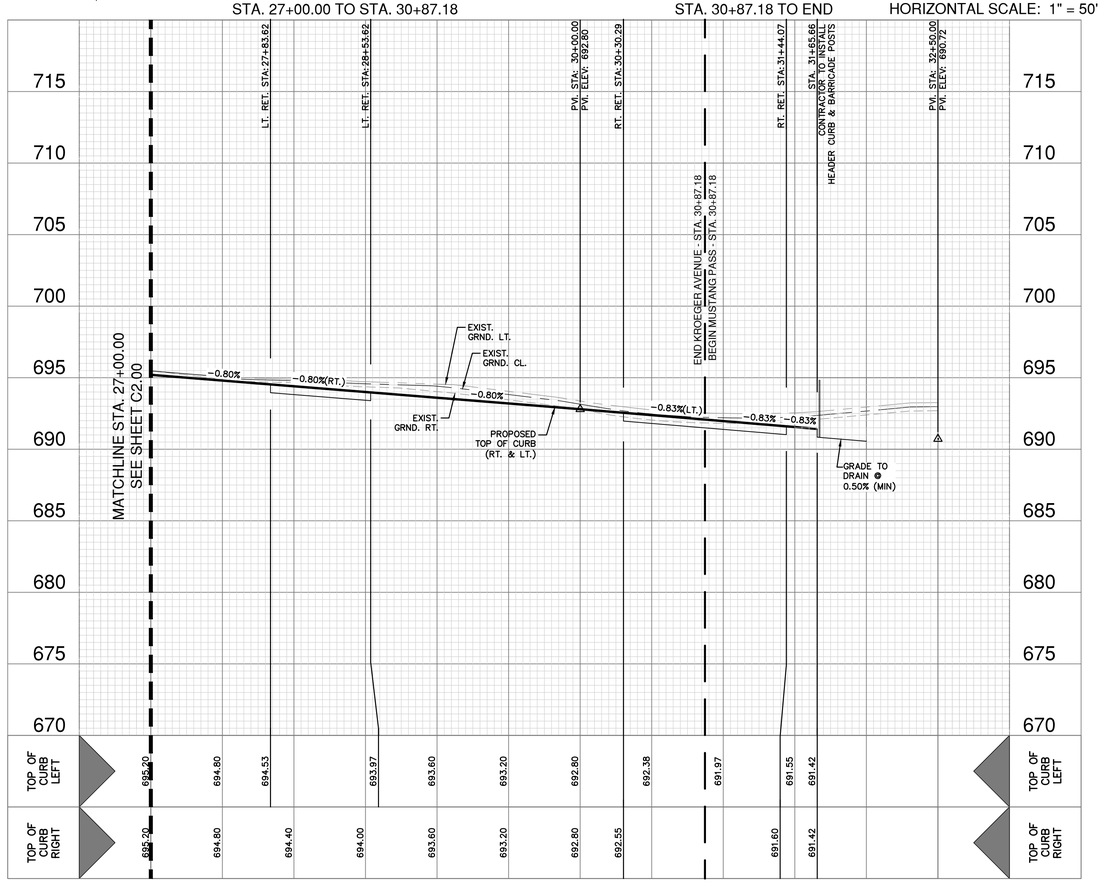
(C) 20' SANITARY SEWER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W.

(D) 12' SANITARY SEWER EASEMENT

KROEGER AVENUE
STA. 27+00.00 TO STA. 30+87.18

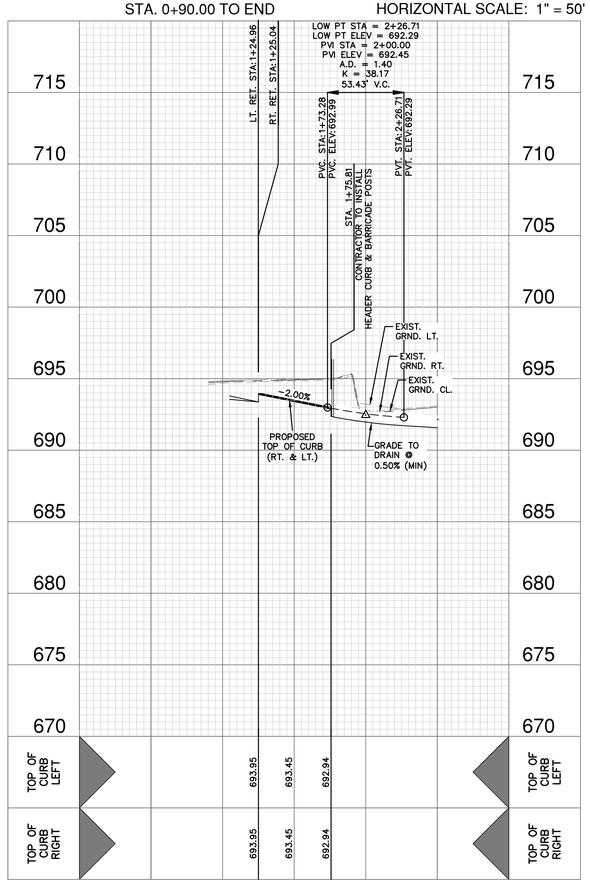
MUSTANG PASS
STA. 30+87.18 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



WINDMILL AVENUE
STA. 0+90.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



STREET NOTES:

1. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
2. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
3. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
4. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
5. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
6. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN SIDEWALKS ARE NOT SHOWN ADJACENT TO ALL PRIVATE STREETS. REFER TO SHEET C3.00 FOR LOCATIONS OF SIDEWALK CONSTRUCTION.
7. FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.5 AND A PI MAXIMUM OF 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME APPLICATION RATE SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
9-9-24

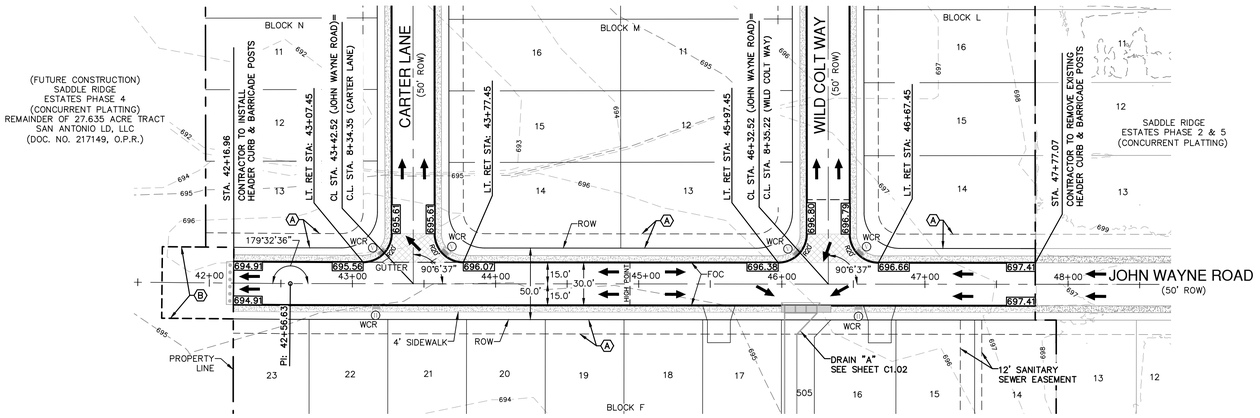
PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

KROEGER AVENUE ~ STA. 27+00.00 TO STA. 30+87.18
MUSTANG PASS ~ STA. 30+87.18 TO END
WINDMILL AVENUE ~ STA. 0+90.00 TO END

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C2.01



SCALE: 1"= 50'

0' 50' 100' 150'

STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	Ⓘ
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
DRIVEWAY	

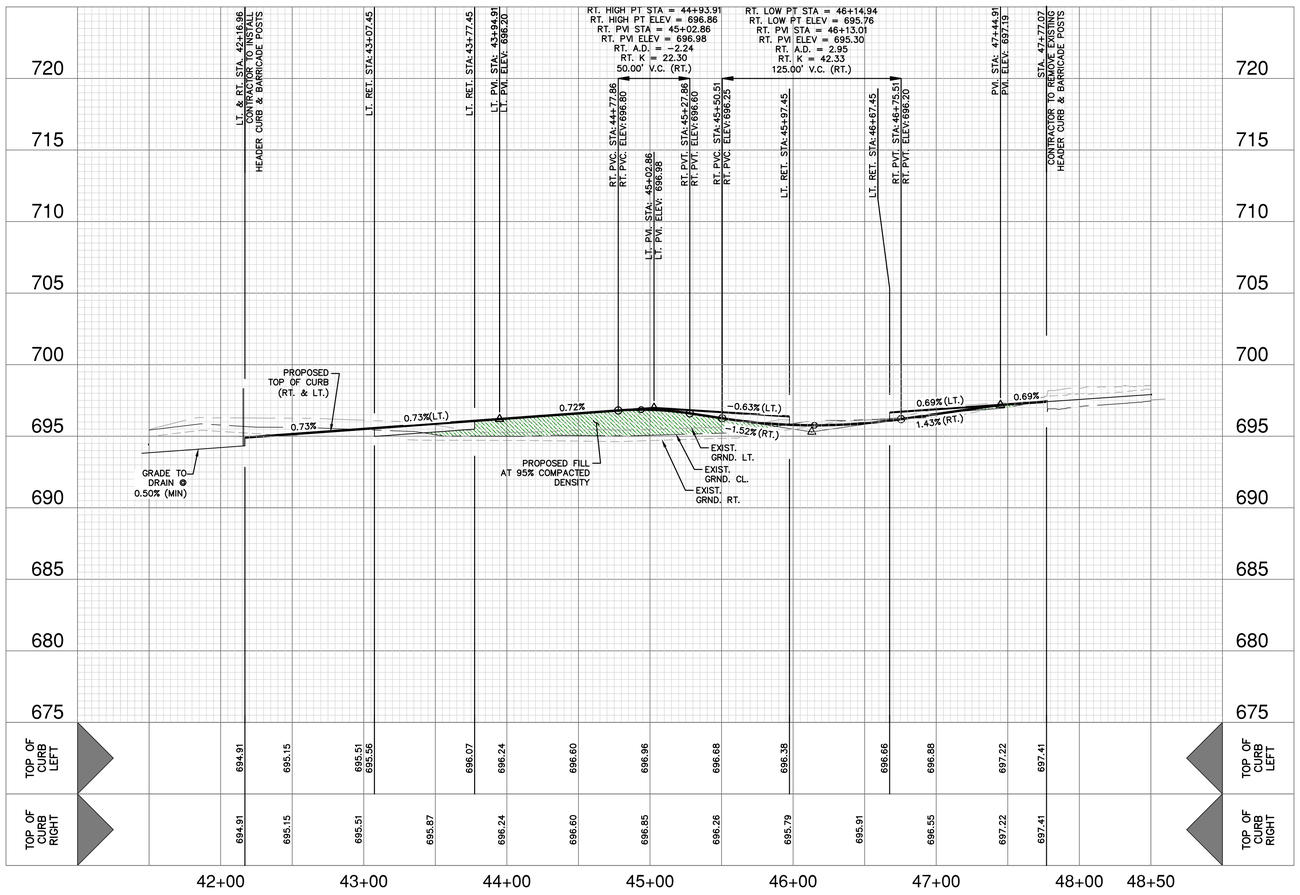
KEY LEGEND:

Ⓐ 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

Ⓑ 50'X50' WATER, SEWER, GRADING AND DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W.

JOHN WAYNE ROAD
STA. 42+16.96 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



STREET NOTES:

1. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
2. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
3. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
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NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

JOHN WAYNE ROAD ~ STA. 42+16.96 TO END
STREET PLAN AND PROFILE

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CB
CHECKED CR DRAWN CB
SHEET C2.02

Date: Sep 09, 2024, 2:13pm User ID: JFortes
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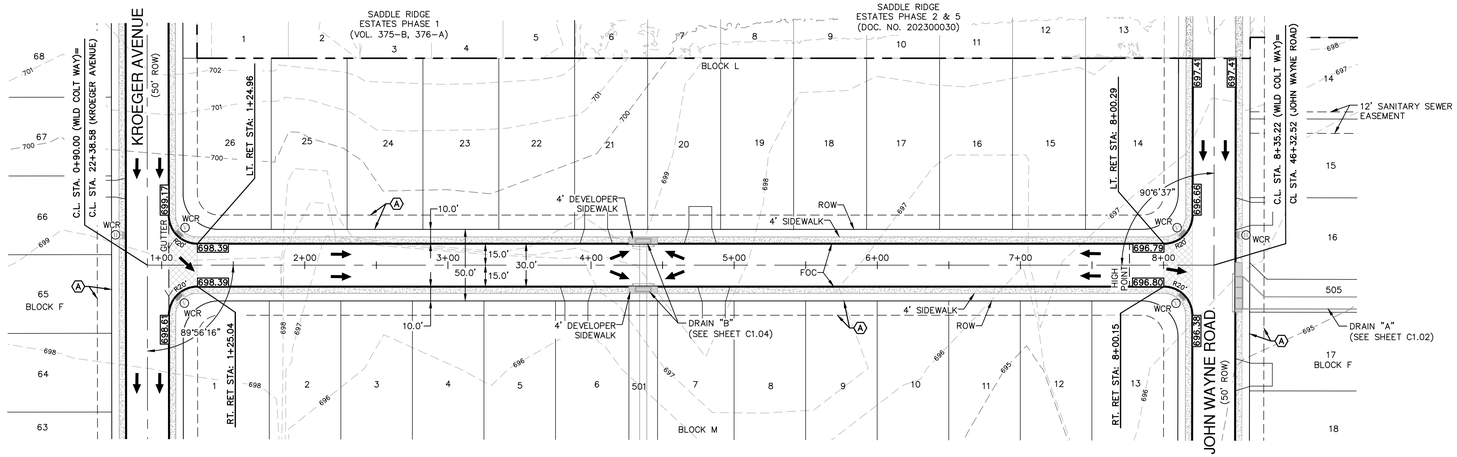

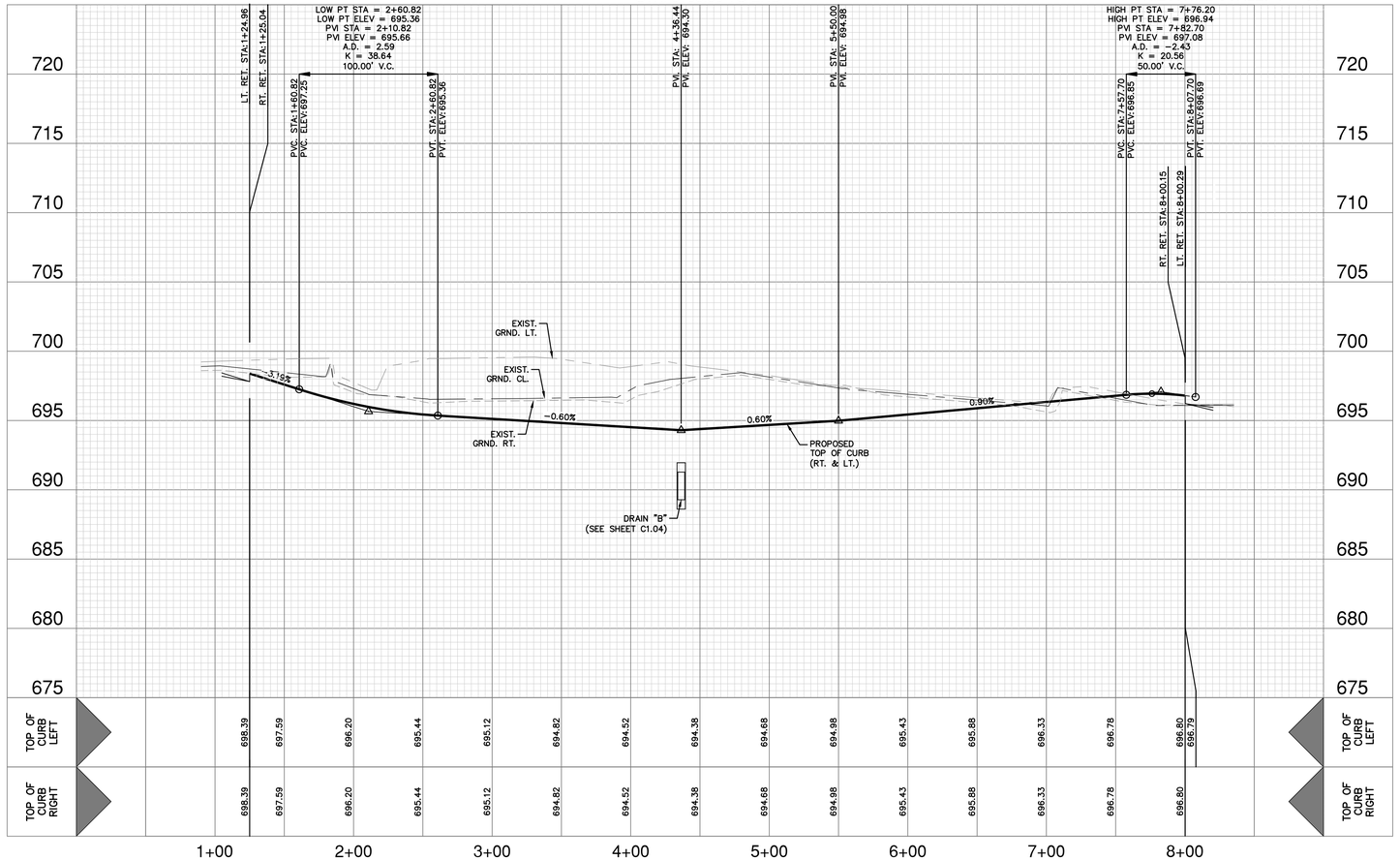

SCALE: 1"= 50'

0' 50' 100' 150'

STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
DRIVEWAY	

KEY LEGEND:

Ⓐ 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

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NO.	REVISION	DATE

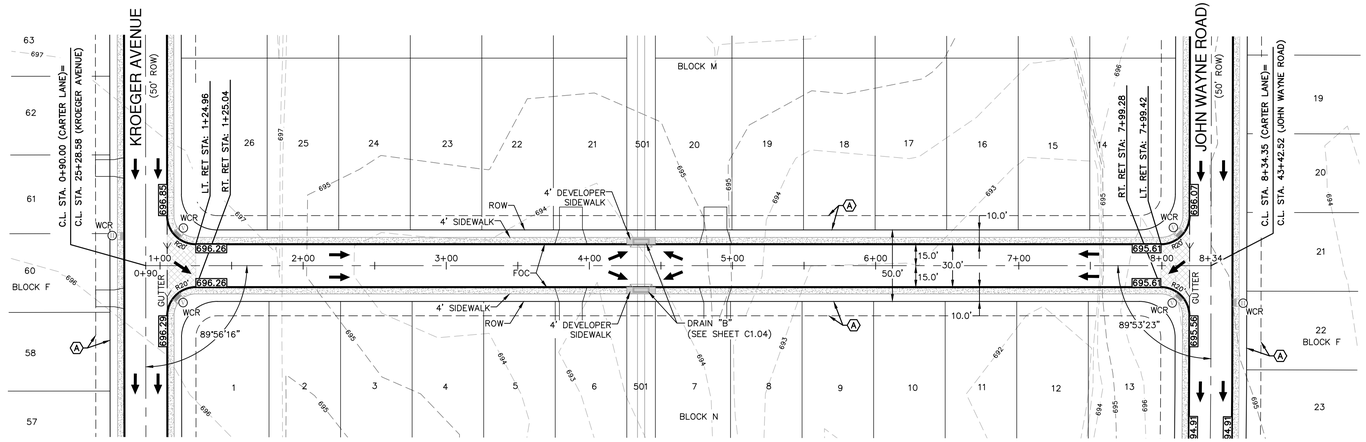
STATE OF TEXAS
JON D. ADAME
82567
LICENSED PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

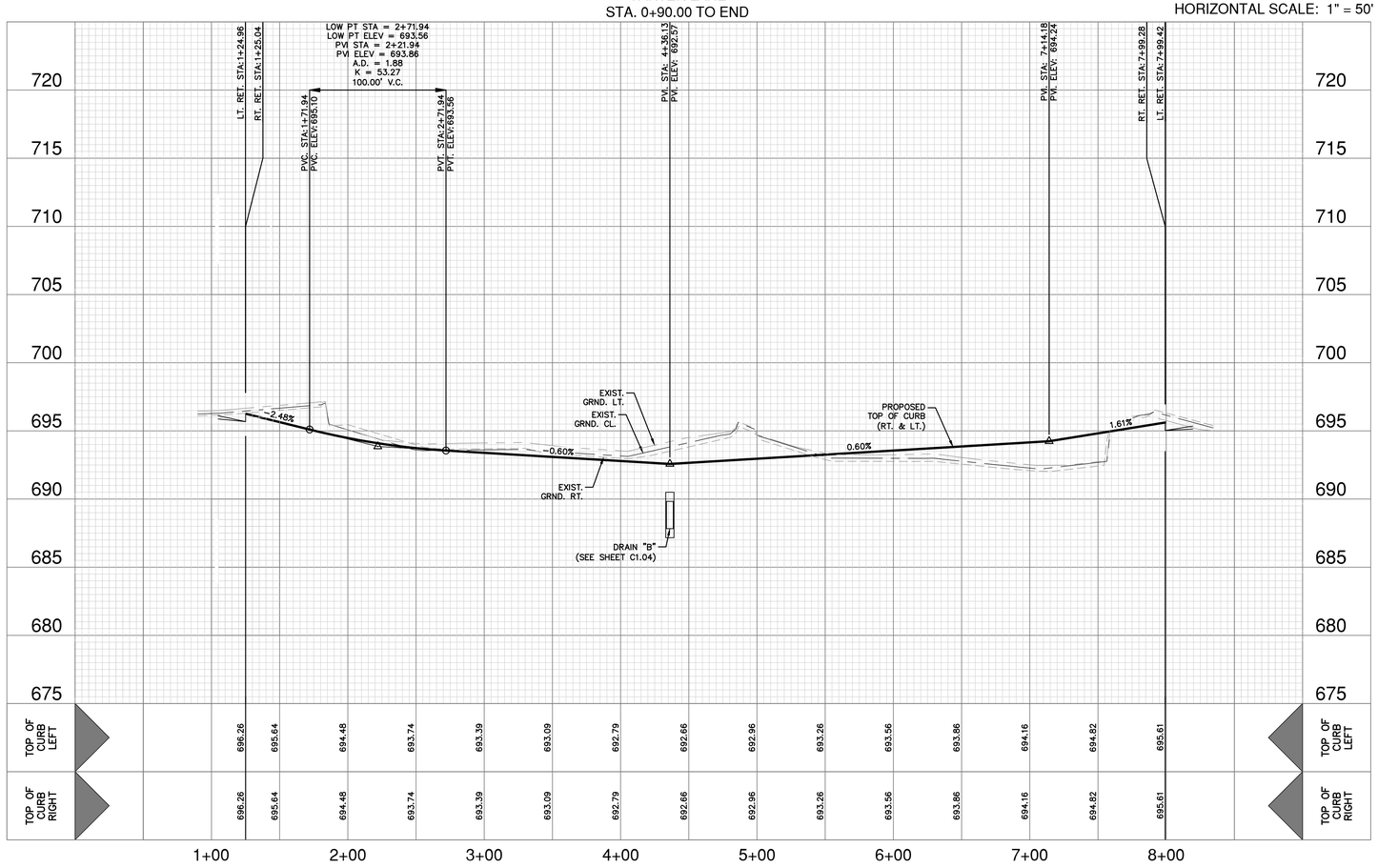
WILD COLT WAY ~ STA. 0+90.00 TO END
STREET PLAN AND PROFILE

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CB
CHECKED CR DRAWN CB
SHEET C2.03



CARTER LANE
STA. 0+90.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



SCALE: 1"= 50'

0' 50' 100' 150'

STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
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DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
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WASHOUT CROWN SECTION	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
DRIVEWAY	

KEY LEGEND:

Ⓐ 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

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STATE OF TEXAS
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PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
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SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

CARTER LANE ~ STA. 0+90.00 TO END
STREET PLAN AND PROFILE

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CB
CHECKED CR DRAWN CB
SHEET C2.04

Date: Sep 09, 2024, 2:13pm User ID: JFortes
File: P:\111\00\26\Design\Civil\STA1-111OO26.dwg

PAVEMENT SECTION DETAIL							
STREET NAME	STATION	TYPE "D" HMAC	FLEXIBLE BASE	LIME STABILIZED SUBGRADE	GEOGRID (TENSAR TRIAX TX5)	CBR	STRUCTURAL NUMBER
KROEGER AVENUE	20+11.16 TO 30+87.18	2"	8"	6"	NO	4.00	2.0
MUSTANG PASS	30+87.18 TO END	2"	8"	6"	NO	4.00	2.0
JOHN WAYNE ROAD	42+16.96 TO 47+77.07	2"	8"	6"	NO	4.00	2.0
WILD COLT WAY	0+90.00 TO END	2"	8"	6"	NO	4.00	2.0
CARTER LANE	0+90.00 TO END	2"	8"	6"	NO	4.00	2.0
WINDMILL AVENUE	0+90.00 TO END	2"	8"	6"	NO	4.00	2.0

GENERAL NOTES:

1. CONTRACTOR SHALL REFERENCE THE PROJECT PAVEMENT DESIGN REPORT PREPARED BY BURGE ENGINEERING & ASSOCIATES, INC. DATED MAY 30, 2018.
2. CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEER TO VERIFY THE SUB GRADE CONDITION PRIOR TO PLACING ANY BASE MATERIAL. GEOTECHNICAL ENGINEER SHALL DETERMINE THE SUB GRADE CONDITION AND IF LIME STABILIZATION IS REQUIRED.
3. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE.
4. THE FLEXIBLE BASE COURSE SHOULD BE CRUSHED LIMESTONE CONFORMING TO TXDOT STANDARD SPECIFICATIONS, ITEM 247, TYPE A, GRADES 1 OR 2.
5. THE MOISTURE CONTENT OF THE FILL SHOULD BE MAINTAINED WITHIN THE RANGE OF OPTIMUM WATER CONTENT TO 3 PERCENTAGE POINTS ABOVE THE OPTIMUM WATER CONTENT UNTIL PERMANENTLY COVERED.
6. IN THE EVENT THAT THE CLAY FILL USED IS DIFFERENT THAN THE EXISTING SUBGRADE, THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT COULD BE INVALIDATED AND THE DESIGN ENGINEER MUST BE CONSULTED TO DETERMINE IF ADDITIONAL CBR TESTING AND THICKER PAVEMENT SECTIONS ARE REQUIRED.
7. WHERE PAVEMENT SUBGRADE IS LOCATED WITHIN 2-FEET OF THE EXISTING GROUND SURFACE (STRATUM 1 CLAYS), MOISTURE CONDITIONED SUBGRADE WILL BE REQUIRED. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE TO DETERMINE WHERE THE MOISTURE CONDITIONED SUBGRADE IS NEEDED. REFERENCE GEOTECHNICAL ENGINEERING REPORT FOR MORE INFORMATION.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL MATERIAL TESTING WITH THE PROJECT GEOTECHNICAL ENGINEER. TESTING SHALL BE PAID FOR BY THE OWNER.
9. FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2 AND A PI WITHIN RANGE OF 5 AND 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME OR CEMENT APPLICATION RATES SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES. CONTRACTOR TO VERIFY EXACT SPECIFICATIONS WITH PROJECT GEOTECHNICAL ENGINEERING REPORT.

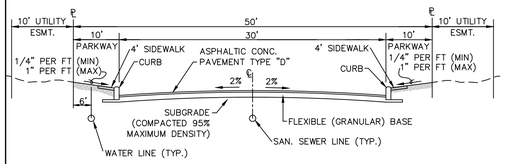
SUBGRADE NOTES:

1. IF THE STREET SUBGRADE PLASTICITY INDEX VALUE IS GREATER THAN 20, SUBGRADE STABILIZATION IS NEEDED.
2. IF THE SUBGRADE PLASTICITY INDEX VALUE IS 20 OR LESS. SUBGRADE STABILIZATION IS NOT NEEDED. THE SUBGRADE SHOULD BE MOISTURE CONDITIONED (COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AT A MINIMUM MOISTURE CONTENT OF OPTIMUM PLUS 2 PERCENT (TEX114E)).
3. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER FOR THE LIME APPLICATION RATE IF LIME STABILIZATION IS REQUIRED.
4. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO STABILIZATION. IF THE SOIL SULFATE CONTENT IS HIGH, AN ALTERNATE PROCEDURE / RECOMMENDATION WILL BE NEEDED.
5. APPROVED FILL MATERIAL SHOULD BE USED TO RAISE THE GRADE. THE FILL SHOULD BE FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.0. LIME APPLICATION RATES SHOULD BE RE-EVALUATED AND TESTED FOR SULFATE CONTENT PRIOR TO USE OF THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.
6. THE SUBGRADE SHOULD BE PROOF ROLLED TO IDENTIFY SOFT AREAS BEFORE STABILIZATION.

LIME STABILIZATION NOTES:

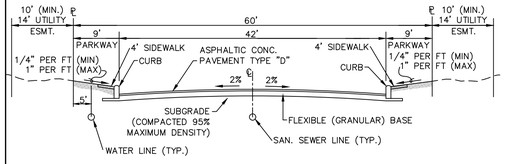
FOR LIME STABILIZATION CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED ON THE FIELD:

1. AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2-3) DAYS. MAINTAIN MOISTURE DURING MELLOWING.
2. AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE $\frac{3}{4}$ INCH SIEVE FROM THE SAMPLE):
   - MINIMUM PASSING $1\frac{1}{2}$" SIEVE 100
   - MINIMUM PASSING $\frac{3}{4}$" SIEVE 85
   - MINIMUM PASSING NO. 4 SIEVE 60
3. SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH PROCEDURE OUTLINED IN THE BEXAR COUNTY FLEXIBLE PAVEMENT DESIGN CRITERIA GUIDE FOR MIXTURE DESIGN.
4. COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED).
5. CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
6. VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN +/- 1.0 INCH.



50' (MINOR RESIDENTIAL) ROW STREET SECTION

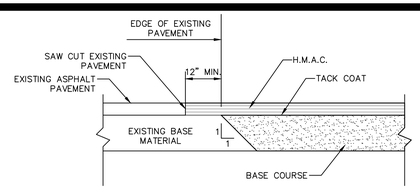
NOT-TO-SCALE



60' (COLLECTOR) ROW STREET SECTION

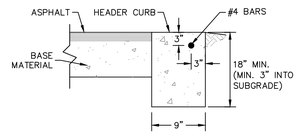
NOT-TO-SCALE

NOTE:
ALL UTILITIES WILL BE PLACED WITHIN THE EASEMENTS OR WITHIN THE CITY RIGHT-OF-WAY.



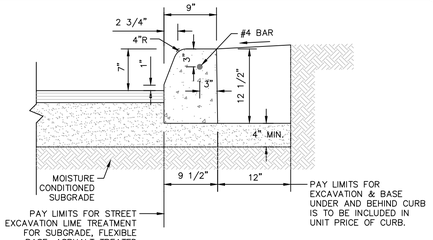
ASPHALT/ASPHALT JUNCTURE DETAIL

NOT-TO-SCALE



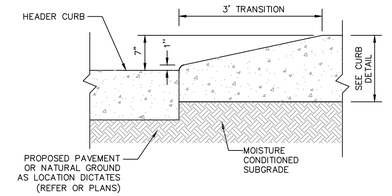
HEADER CURB DETAIL

NOT-TO-SCALE



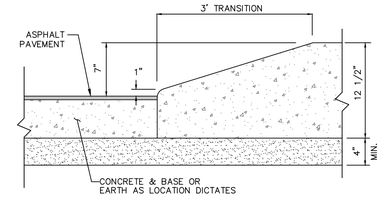
CONCRETE CURB DETAIL

NOT-TO-SCALE



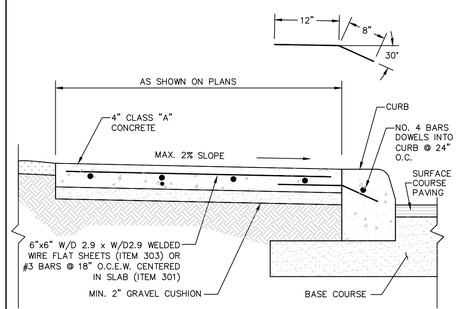
CURB TRANSITION DETAIL (FROM HEADER CURB TO STANDARD CURB)

NOT-TO-SCALE



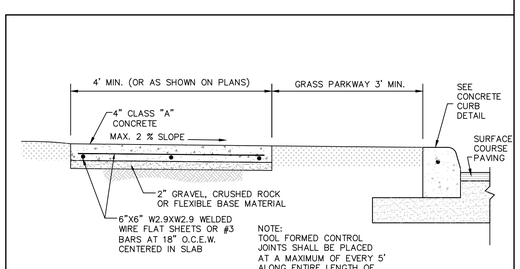
CURB TRANSITION DETAIL (FROM PAVEMENT TO STANDARD CURB)

NOT-TO-SCALE



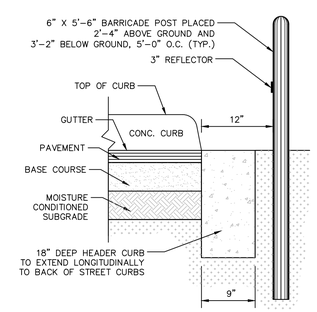
SIDEWALK DETAIL

NOT-TO-SCALE



OFFSET SIDEWALK DETAIL

NOT-TO-SCALE



HEADER CURB & BARRICADE POST DETAIL

NOT-TO-SCALE

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
11-13-23

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

STREET DETAILS

PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CB
CHECKED CR DRAWN CB
SHEET C2.10

Date: Nov 13, 2023, 3:29pm User ID: JForias
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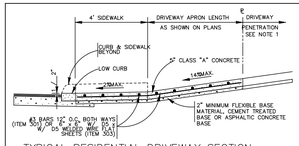
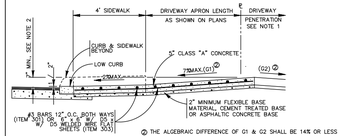


TYPICAL RESIDENTIAL DRIVEWAY SECTION

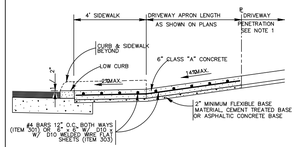
WITH SIDEWALK ABUTTING CURB
ITEM 503.1



② THE ALGEBRAIC DIFFERENCE OF G1 & G2 SHALL BE 14% OR LESS

TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB
ITEM 503.1



TYPICAL COMMERCIAL DRIVEWAY SECTION

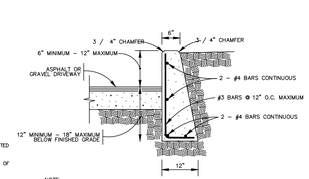
WITH SIDEWALK ABUTTING CURB
ITEM 503.2

CONCRETE DRIVEWAY NOTES

1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:
   A.) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2.
   B.) ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE 'D' & 6" FLEXIBLE BASE
   C.) GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE
2. 1" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
3. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL – ONE WAY	12'	20'
COMMERCIAL – TWO WAY	24'	30'

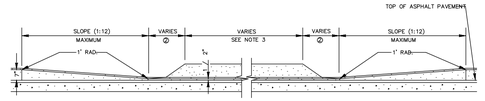
4. FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
5. FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
6. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
7. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3 /8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
8. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
9. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



NOTE:
1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

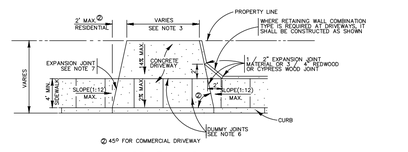
DRIVEWAY – CONCRETE RETAINING WALL

ON COMPACTED SUBGRADE
ITEM 307.1



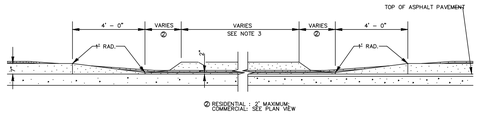
CURB PROFILE AT DRIVEWAY

WITH SIDEWALK ABUTTING CURB



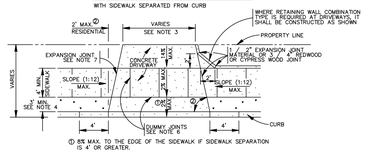
TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK ABUTTING CURB



CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB



TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK SEPARATED FROM CURB

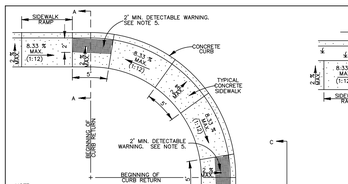
MAY 2009

CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

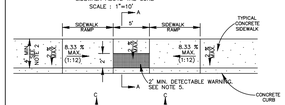
CONCRETE DRIVEWAY STANDARDS

% SUBMITTAL	PROJECT NO.		DATE:
DRWN. BY: _S_ESQUIVEL	DSGN. BY:	CHKD. BY: _R.S. HOSSEIN, P.E.	SHEET NO. ___ OF ___



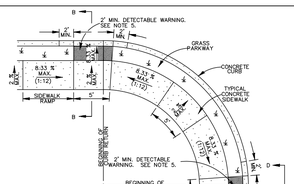
TYPICAL SIDEWALK RAMP – TYPE I

SIDEWALK ABUTS THE CURB
SCALE : 1"=10'



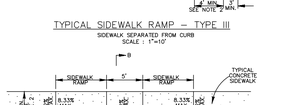
TYPICAL SIDEWALK RAMP – TYPE II

USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB
SCALE : 1"=10'



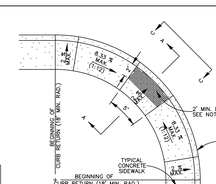
TYPICAL SIDEWALK RAMP – TYPE III

SIDEWALK SEPARATED FROM CURB
SCALE : 1"=10'



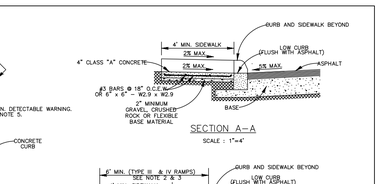
TYPICAL SIDEWALK RAMP – TYPE IV

USED AT TEE INTERSECTIONS WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=10'



TYPICAL SIDEWALK RAMP – TYPE V

SIDEWALK ABUTS CURB
SCALE : 1"=10'

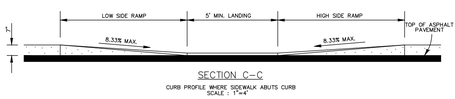


SECTION A–A

SCALE : 1"=4'

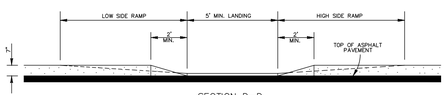
SECTION B–B

SCALE : 1"=4'



SECTION C–C

CURB PROFILE WHERE SIDEWALK ABUTS CURB
SCALE : 1"=4'

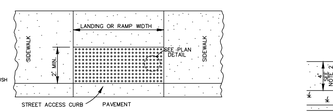


SECTION D–D

CURB PROFILE WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=4'

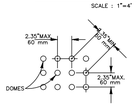
GENERAL NOTES

1. WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
2. FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
3. FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
4. SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE.
5. ALL CURB-RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP (IN THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. THE DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES, ALIGNED IN A GRID PATTERN, HAVING A BASE DIAMETER OF 0.9 INCHES (23 MM), A TOP DIAMETER OF 0.45 INCHES (11 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 MM). THE DETECTABLE WARNING SURFACE SHALL BE PAVERS CONFORMING TO TXDOT STANDARD PED-05, PEDESTRIAN FACILITIES.
6. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
7. SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.
8. CONSTRUCTION OF ALL WHEELCHAIR RAMPS TO BE INCLUDED UNDER ITEMS "500 – CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER" AND / OR "502 – CONCRETE SIDEWALKS". RAMP SURFACE SHALL BE BRUSH FINISHED.
9. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
11. WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
12. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" – W2.9 x W2.9 WIRE MESH.
13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK WITH A GRADE THAT IS STEEPER THAN 5% OR WITH A CROSS SLOPE THAT IS STEEPER THAN 2% OR STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.
14. SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
15. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33–(–2.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
16. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
17. ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE

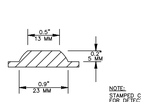


DETECTABLE WARNING SURFACE

SCALE : 1"=4'

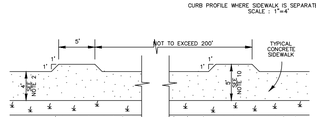


PLAN DETAIL



DOME SECTION

NOTE:
STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED. THE CONTRACTOR SHALL SUBMIT A SAMPLE OF THE DETECTABLE WARNING SURFACE PRODUCT THAT IS LISTED HOME NATIONAL PLAN TO BE INSTALLED ON WHEELCHAIR RAMPS TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.



SIDEWALK PASSING SPACE

SCALE : 1"=10'

TABLE 1 (SEE NOTE 4)		
GUTTER SLOPE	SIDEWALK RAMP LENGTH (1:12)	
	LOW SIDE	HIGH SIDE
1%	5'–6"	7'–2"
2%	5'–0"	8'–4"
3%	4'–8"	10'–0"
4%	4'–2"	12'–6"
5%	3'–10"	16'–8"

MAY 2009

CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

WHEELCHAIR RAMP STANDARDS

PROJECT NO.			DATE:
DSGN. BY:		CHKD. BY: _R.S. HOSSEIN, P.E.	SHEET NO. ___ OF ___

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
Jon Adame
11-13-23

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

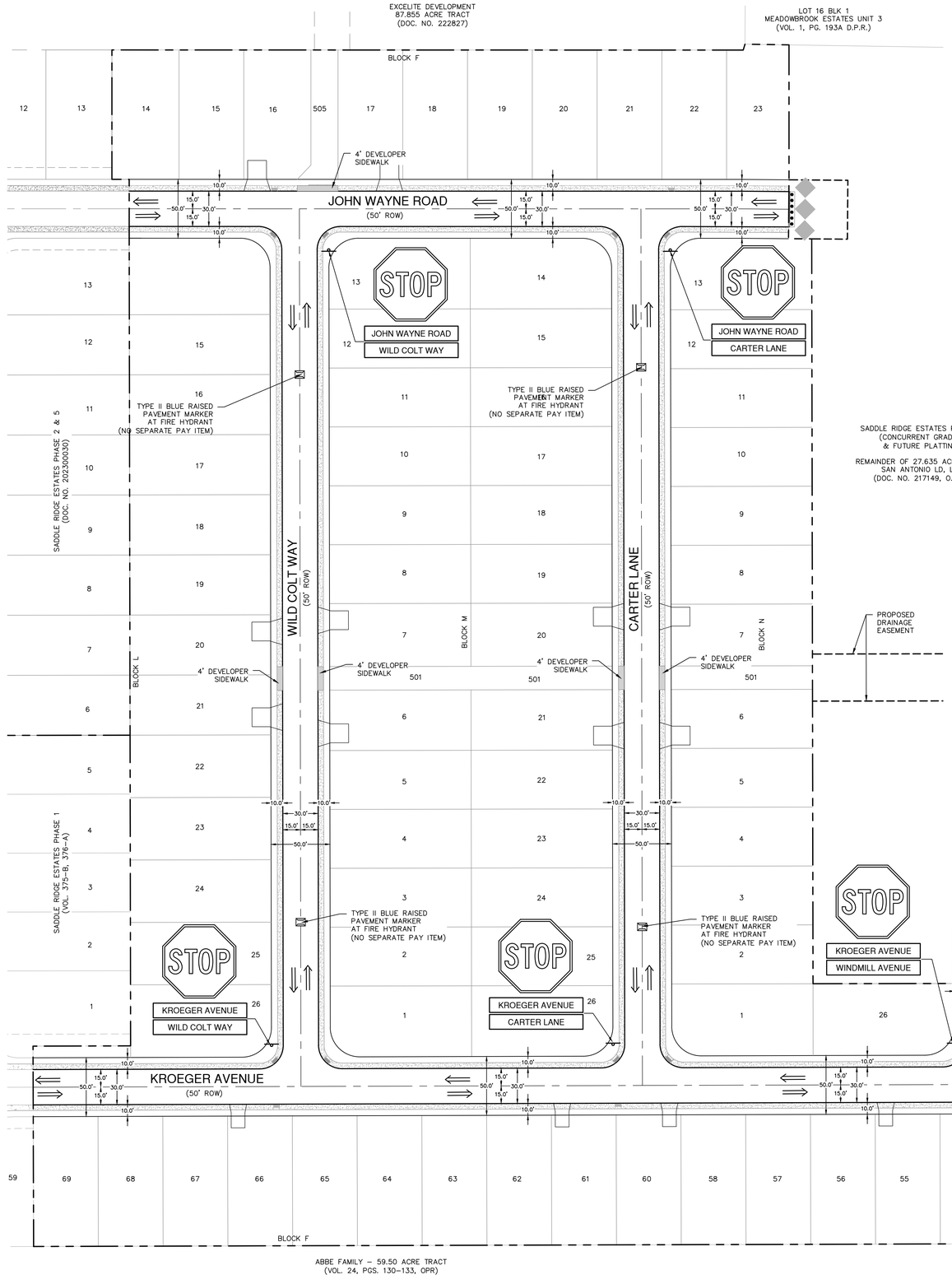
SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

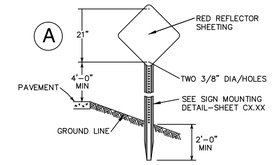
STREET DETAILS

PLAT NO. –
JOB NO. 11100–26
DATE NOVEMBER 2023
DESIGNER CR
CHECKED JA DRAWN JA
SHEET C2.11

Date: Nov 13, 2023, 3:29pm User ID: JFords
File: P:\11\00\26\Design\Civil\STDT-111026.dwg



SYMBOL	
	UNIT BOUNDARY
	SIDEWALK (HOMEBUILDER RESPONSIBILITY)
	SIDEWALK (SITEWORK CONTRACTOR RESPONSIBILITY)
	TYPE II BLUE RAISED PAVEMENT MARKERS – NO SEPARATE PAY ITEM (N.T.S.)
	END OF ROAD MARKER OM4-3
	HEADER CURB W/ BARRICADE POSTS
STREET NAME	STREET SIGN
STOP	R1-1 30"X30"

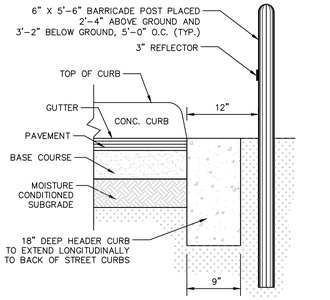


UNITS MOUNTED ON 0.080" THICK SHEET ALUMINUM CONFORMING WITH ASTM B-209 ALLOY 6061-T6.

TYPE 4 OM4-3
18" x 18"

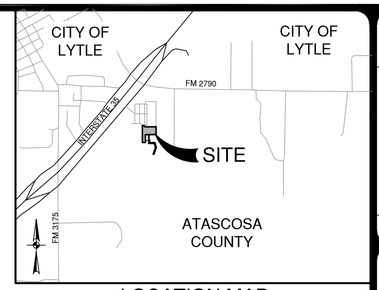
OBJECT MARKER TYPE 4

NOT-TO-SCALE



HEADER CURB & BARRICADE POST DETAIL

NOT-TO-SCALE



LOCATION MAP

NOT-TO-SCALE

SCALE: 1"= 50'

0' 50' 100' 150'

SIGNAGE NOTES:

1. UNDERGROUND UTILITIES EXIST WITHIN THE PROJECT. CONTRACTOR SHALL HAVE THE UTILITIES MARKED PRIOR TO INSTALLATION OF THE SIGN POST. SIGN LOCATIONS ILLUSTRATED ON THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL LOCATE SIGNS TO AVOID UTILITIES. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES BEFORE COMMENCING WORK.

2. IN ACCORDANCE WITH THE UNDERGROUND FACILITY DAMAGE PREVENTION ACT THE TELEPHONE NUMBER FOR A UTILITY LOCATOR IS 1-800-545-6005. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS FOR UTILITY LOCATORS, AS NEEDED.

3. WHEN PREPARING HOLES FOR POSTS, CARE SHALL BE TAKEN SO AS NOT TO RUPTURE EXISTING DRAINAGE STRUCTURES, SPRINKLER SYSTEMS, TELECOMMUNICATIONS FACILITIES, ELECTRICAL CONDUITS AND PUBLIC UTILITIES.

4. ALL SIGNS SHALL COMPLY WITH THE SIGN DESIGNS PRESENTED IN STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS.

5. SIGN LOCATIONS ILLUSTRATED ON THE PLANS ARE APPROXIMATE. SIGNS SHALL BE LOCATED IN THE FIELD TO PROVIDE APPROPRIATE FUNCTIONALITY. SIGN LOCATIONS SHALL COMPLY WITH GUIDELINES AND REQUIREMENTS PRESENTED IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

6. CONTRACTOR SHALL FURNISH AND MAINTAIN ALL TRAFFIC CONTROL DEVICES, LIGHTING, OR WARNING DEVICES REQUIRED TO COMPLETE THE WORK. ALL CONSTRUCTION SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

7. THREE (3) COPIES OF EQUIPMENT SUBMITTALS FOR ALL TRAFFIC SIGN COMPONENTS SHALL BE SENT TO THE ENGINEER. SUBMITTALS SHALL CONSIST OF THE APPROPRIATE COMBINATION OF CATALOG SHEETS, MATERIAL LISTS, MANUFACTURER'S BROCHURES, TECHNICAL BULLETINS, SPECIFICATIONS, DIAGRAMS, OR PRODUCT SAMPLES NECESSARY TO DESCRIBE A SYSTEM, PRODUCT, OR ITEM. SPECIFIC ITEM NUMBERS AND PRODUCT CODES WILL BE CLEARLY IDENTIFIED WHEN MULTIPLE PRODUCTS ARE LISTED ON THE SAME SHEET.

8. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL CONFORM TO APPLICABLE TEXAS DOT STANDARD SPECIFICATIONS, CITY BUILDING CODE AND REGULATIONS AS WELL AS PROVISIONS APPLICABLE TO THE PROJECT AND AS OTHER SAFETY CODES AND INSPECTION REQUIREMENTS OF THE FIRE DEPARTMENT.

9. MATERIALS FURNISHED BY THE CONTRACTOR SHALL BE NEW, UN-DEPRECIATED STOCK. ALL EQUIPMENT SHALL BE NEW, UNLESS NOTED OTHERWISE ON THE PLANS.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL CONDITION, OR BETTER, ANY DAMAGE DONE TO EXISTING BUILDINGS, RETAINING WALLS, UTILITIES, FENCES, PAVEMENT, CURBS OR DRIVEWAYS (NO SEPARATE PAY ITEM). CONTRACTOR SHALL RESTORE THE CONSTRUCTION AREA TO ORIGINAL CONDITION, OR BETTER, PRIOR TO FINAL INSPECTION.

11. ANY CONFLICT BETWEEN ANY DEFINITION, MATERIAL SPECIFICATION, CONSTRUCTION SPECIFICATION, MEASUREMENT AND PAYMENT PROCEDURE, ETC., SHOWN IN THIS PLAN SET AND ANY TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION SHALL BE RESOLVED ONLY BY THE ENGINEER AND THE ENGINEER'S DECISION SHALL BE FINAL AND BINDING.

GENERAL NOTES:

THE PROJECT GENERAL NOTES MAY SPECIFY A PARTICULAR SIGN SUPPORT. SUPPORT AND DESIGN SHALL CONFORM WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS OF HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS WITH A DESIGN WIND SPEED OF 70 MPH. STEEL PIPE SHALL BE GALVANIZED IN ACCORDANCE TO ASTM DESIGNATION A123. WHERE SOLID ROCK IS ENCOUNTERED AT GROUND LEVEL, THE FOUNDATION SHALL BE A MINIMUM DEPTH OF 18 INCHES. WHEN SOLID ROCK IS ENCOUNTERED BELOW GROUND LEVEL, THE FOUNDATION SHALL EXTEND INTO THE SOLID ROCK A MINIMUM DEPTH OF 18 INCHES OR PROVIDE A MINIMUM FOUNDATION DEPTH OF 30 INCHES. ONLY CONCRETE FOUNDATIONS SHALL BE USED IN ROCK.

WHEEL CHAIR RAMP NOTES:

WHEEL CHAIR RAMPS (WCR) TO BE CENTERED ON STATION AS NOTED ON THE STREET PLAN & PROFILE SHEETS C2.00-C2.03. REFERENCE THESE PLAN SHEETS FOR WCR TYPES AND LOCATIONS.

DRIVEWAY NOTE:

DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

TRENCH EXCAVATION SAFETY PROTECTION:

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

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
Jon Adame
2-29-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

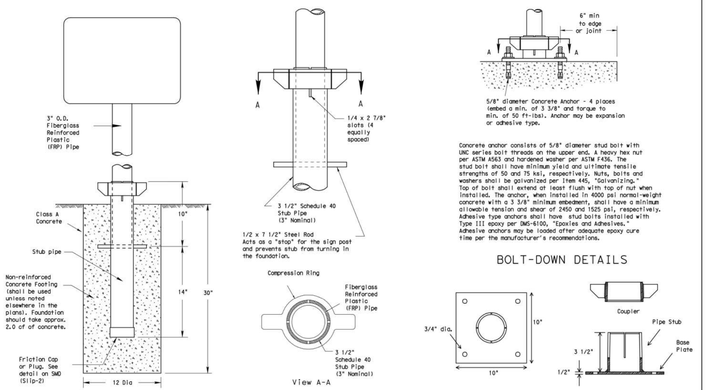
LYTLE, TEXAS

OVERALL SIGNAGE PLAN

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C3.00

Date: Feb 29, 2024, 1:42pm User ID: crodriguez
File: P:\11\00\26\Design\Civil\SIGNA-111026.dwg

Universal Anchor System with Fiberglass Reinforced Plastic (FRP) Post



SM RD SGN ASSM TY FRP(XX)UA(P)

BOLT-DOWN DETAILS

SM RD SGN ASSM TY FRP(XX)UB(P)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations.

GENERAL NOTES:

1. FRP sign supports for a single type sign support may be used for signs up to and including 16 square feet. Dual post installation may be used for signs up to and including 32 square feet.
2. All nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing."
3. See the Traffic Operations Division website for detailed drawings of sign clamps. The website address is: http://www.txdot.gov/publications/traffic.htm

FRP POST REQUIREMENTS

1. Materials shall conform to the requirements of Departmental Material Specification DMS-4410 and will be furnished in a yellow or gray color as specified elsewhere in the plans.
2. Thickness of FRP sign support is 0.125" + 0.031", - 0.0".
3. FRP sign supports are prequalified by the Traffic Operations Division.
   Prequalification procedures are detailed by writing:
   Texas Department of Transportation
   Traffic Operations Division
   125 East 11th Street
   Austin, Texas 78701-2483

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURES

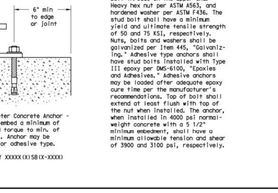
1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
3. Insert base post in foundation hole to depths shown and fill hole with concrete. Cut base post from bottom and ensure a minimum of 18" embedment if installed in solid rock.
4. Level and plumb the base post with coupler using a torpedo level and let concrete set a minimum of 4 days, unless otherwise directed by Engineer. Bottom of base post slots shall be above the concrete footing.
5. Attach sign to FRP post.
6. Insert sign post into base post. Lower until the post comes to rest on the steel rod.
7. Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
8. Check sign to ensure there is no twist. If loose, increase the tightening of coupler.

BOLT DOWN SIGN SUPPORT

1. Position base plate with coupler on existing concrete.
2. Drill holes into concrete and insert the 5/8" diameter bolts with wedge anchors, and tighten nuts.
3. Attach sign to FRP post.
4. Insert bottom of sign post into pipe stub.
5. Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
6. Check sign to ensure there is no twist. If loose, increase the tightening of coupler.

Typical Sign Mounting Detail for FRP Support with Single Sign

Typical Sign Mounting Detail for FRP Support with Back-to-Back Signs



Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS UNIVERSAL ANCHOR SYSTEM WITH FRP POST

SMD (FRP) -08

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26F

SIGN SUPPORT DESCRIPTIVE CODES

(Descriptive Codes correspond to project estimate and quantities sheets)

SM RD SGN ASSM TY XXXXX(X)XX(X-XXXX)

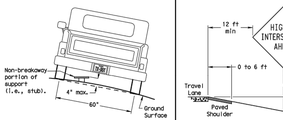
Post Type
- FRP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))
- TWT = Thin-Walled Tubing (see SMD(TWT))
- 10BWG = 10 BWG Tubing (see SMD(SLIP-1) to (SLIP-3))
- SB0 = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

Number of Posts (1 or 2)

Anchor Type
- UA = Universal Anchor - Concreted (see SMD(FRP) and (TWT))
- UB = Universal Anchor - Bolted down (see SMD(FRP) and (TWT))
- WS = Wedge Anchor Steel - (see SMD(TWT))
- WP = Wedge Anchor Plastic (see SMD(TWT))
- SA = Slipbase - Concreted (see SMD(SLIP-1) to (SLIP-3))
- SB = Slipbase - Bolted Down (see SMD(SLIP-1) to (SLIP-3))

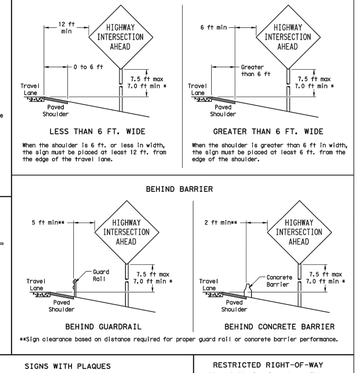
Sign Mounting Designation
- P = Prefab. "Plain" (see SMD(SLIP-1) to (SLIP-3), (TWT), (FRP))
- T = Prefab. "T" (see SMD(SLIP-1) to (SLIP-3), (TWT))
- U = Prefab. "U" (see SMD(SLIP-1) to (SLIP-3))
- IF REQUIRED
- 1EXT or 2EXT = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TWT))
- BM = Extruded Wind Beam (see SMD(SLIP-1) to (SLIP-3))
- MC = 1.12 #/ft Wing Channel (see SMD(SLIP-1) to (SLIP-3))
- EXAL = Extruded Aluminum Sign Panels (see SMD(SLIP-3))

REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel pathsl.

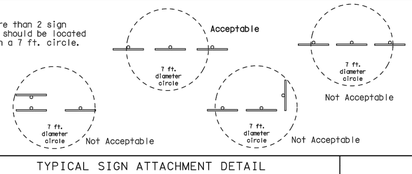
SIGN LOCATION



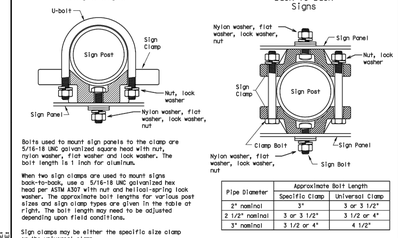
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.

* Signs shall be mounted using the following condition that results in the greatest sign elevations:
(1) a minimum of 7 ft to a maximum of 7.5 feet above the edge of the travel lane or
(2) a minimum of 7 ft to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.
The maximum values may be increased when directed by the Engineer.
See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.
The website address is: http://www.txdot.gov/publications/traffic.htm

No more than 2 sign posts should be located within a 7 ft. circle.



TYPICAL SIGN ATTACHMENT DETAIL



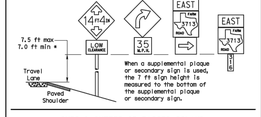
Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

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 for various post 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.

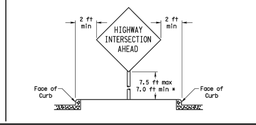
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



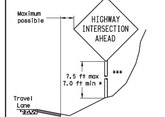
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

CURB & GUTTER OR RAISED ISLAND



RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

SMD (GEN) -08

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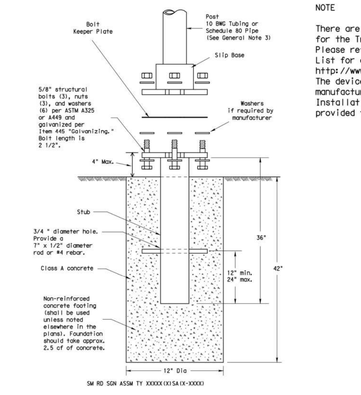
26A

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



SM RD SGN ASSM TY XXXXX(XX)SA(X-XXXX)

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. https://www.txdot.gov/business/producer_list.htm The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

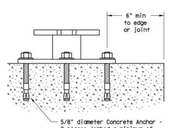
1. Slip base shall be permanently marked to indicate manufacturer, Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
2. Material used as post with this system shall conform to the following specifications:
   10 BWG Tubing (2.875" outside diameter)
   0.134" nominal wall thickness
   Seamless or electric-resistance welded steel tubing or pipe
   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
   20% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
   Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
   Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
   Schedule 80 Pipe (2.875" outside diameter)
   0.276" nominal wall thickness
   Steel tubing per ASTM A500 Gr C
   Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
   46,000 PSI minimum yield strength
   62,000 PSI minimum tensile strength
   21% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
   Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
   Galvanization per ASTM A123
3. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is:
   http://www.txdot.gov/publications/traffic.htm
4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation
1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
3. Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
4. Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
5. The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support
1. Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the traveiway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the traveiway. The cut shall be plumb and straight.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(XX)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD (SLIP-1) -08

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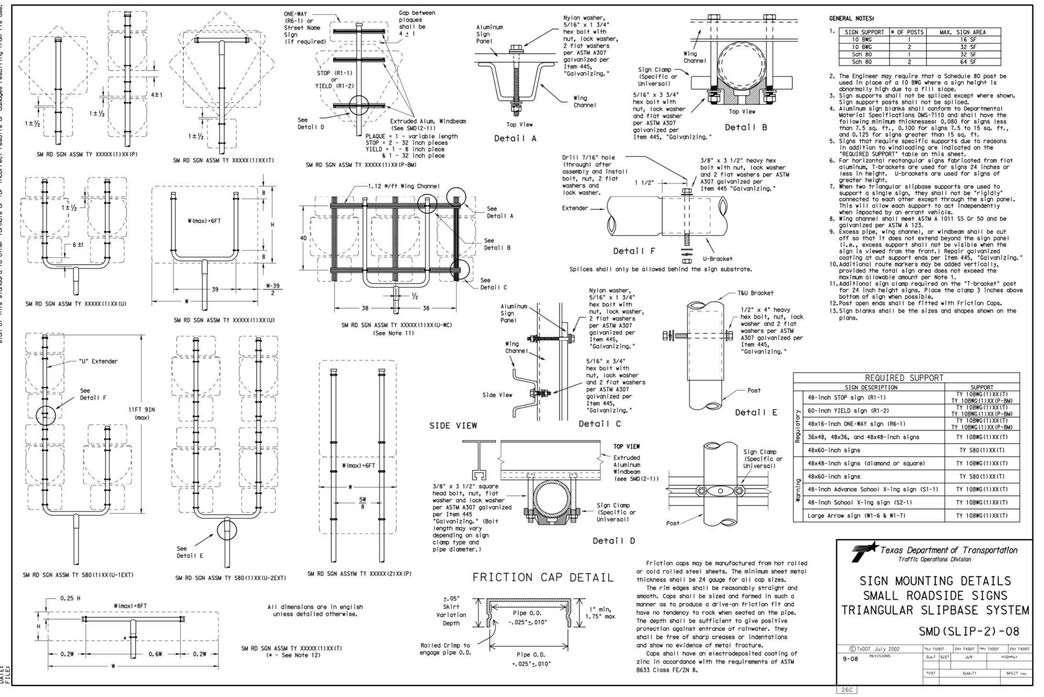
26B



FRICTION CAP DETAIL

Friction caps may be manufactured from hot rolled or cold rolled steel sheets. The minimum sheet metal thickness shall be 24 gauge for all cap sizes.

The rim edges shall be reasonably straight and smooth. Caps shall be sized and formed in such a manner as to produce a drive-on friction fit and have no tendency to rock when seated on the pipe. The depth shall be sufficient to give positive protection against entrance of rainwater. They shall be free of sharp creases or indentations and show no evidence of metal fracture.

Caps shall have an electrodeposited coating of zinc in accordance with the requirements of ASTM B633 Class FE/ZN 8.

GENERAL NOTES:

1.

SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than or equal to 100 sq. ft. and 0.100 for 100 sq. ft. to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24" or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. All steel shall conform to ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
11. Additional sign clamp required on the "T-bracket" post for 24 inch height signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.
13. Sign blanks shall be the sizes and shapes shown on the plans.

REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY SB0(1)XX(T)
	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY SB0(1)XX(T)
Warning	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD (SLIP-2) -08

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26C

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
11-13-23

NO.	REVISION	DATE

SADDLE RIDGE ESTATES PHASE 3

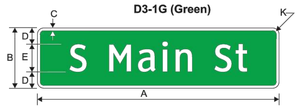
LYTLE, TEXAS

SIGNAGE DETAILS

PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CR
CHECKED JA DRAWN CR
SHEET C3.10

Date: Nov 13, 2023, 3:30pm User ID: JFarias
File: P:\111\00\26\Design\Civil\SGD1-1110026.dwg

D3-1G (Green)



A	B	C	D	E	F	G	H	J	K	L	M	N
VAR	6*	.375	1.5	3CV-3W	2CV-3W	2.5	1.5	2.25	.75	1.25	1.75	2.25
VAR	8	.375	2	4CV-3W	3CV-3W	3	2.25	3	1	1.75	2.25	2.75
VAR	12	.5	3	6CV-3W	4CV-3W	5	3	4.5	1.5	2.75	3.25	4.75
VAR	18	.5	5	8CV-3W	6CV-3W	7	4.5	6	1.5	5	5	7

* For bicycle use

NOTES:

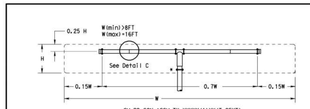
1. Street name signs for signalized intersections mounted on mast arms or span wires.
2. Border can be eliminated and spacing can be adjusted when there is a conflict with descenders and ascenders.
3. See special arrow designed for D1-1.
4. Supplementary lettering is optional.
5. 12" letter height and CV-3W letter are considered the desirable minimum.
   a) 10" letter height may be used when space limitations restrict overall size of sign
   b) 8" letter height and CV-2W should be limited only to dual street names at intersection

(**REFERENCE TXDOT 2012 STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS – REVISION 3)

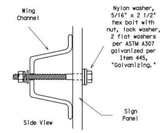
SIGNAGE DETAIL

NOT-TO-SCALE

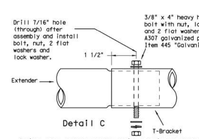
DATE:
FILE:



SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)
(+ - See Note 12)



Detail B

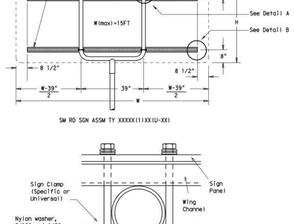


Detail C

Splices shall only be allowed behind the sign substrate.

GENERAL NOTES:

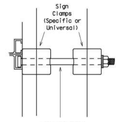
1. | SIGN SUPPORT | # OF POSTS | MAX. SIGN AREA |
   |---|---|---|
   | 10 BWG | 1 | 16 SF |
   | 10 BWG | 2 | 32 SF |
   | Sch 80 | 1 | 32 SF |
   | Sch 80 | 2 | 64 SF |
2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specification DMS-8300 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected by the sign panel, through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Sign blanks shall be the sizes and shapes shown on the plans.
11. Additional sign clamp required on the "T-bracket" post for 24" high signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.



Typical Sign Mount
SM RD SGN ASSM TY SB(2)XX(P-EXAL)

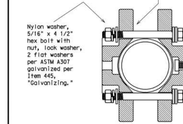
* Additional stiffener placed at approximate center of signs when sign width is greater than 10'.

See Detail E for clamp installation

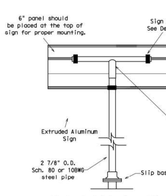


Detail E

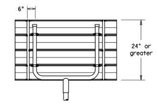
REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-Inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-2W)
	60-Inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-2W)
	48x16-Inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-2W)
	36x48, 48x36, and 48x48-Inch signs	TY 10BWG(1)XX(T)
	48x60-Inch signs	TY 58D(1)XX(T)
	48x48-Inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-Inch signs	TY 58D(1)XX(T)
Warning	48-Inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-Inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)



Detail D
EXTRUDED ALUMINUM SIGN WITH T BRACKET



Extruded Aluminum Sign
With T Bracket



Use Extruded Alum. Windbeam as stiffeners
See SMD (2-1) for additional details
See Detail E for clamp installation

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM
SMD(SLIP-3)-08

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9-08 REVISIONS		DIST	SECT	JCR	HIGHWAY
		FILE:		DATE:	SHEET No.

240

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

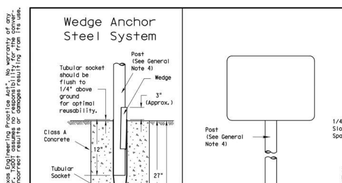
SIGNAGE DETAILS

NO.	REVISION	DATE

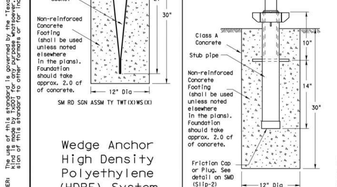
STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
11-13-23

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CR
CHECKED JA DRAWN CR
SHEET C3.11

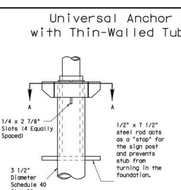


SM RD SGN ASSM TY TWT(XX)WS(XX)

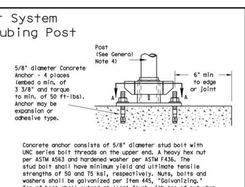


SMD RD SGN ASSM TY TWT(XX)MP(XX)

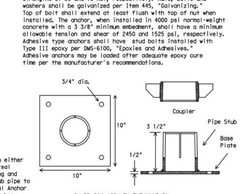
SM RD SGN ASSM TY TWT(XX)UA(P)



Plastic insert must be used when using the TWT with either the Universal Anchor System or the Bolt Down Universal Anchor System. The insert should be approx. 10" long and cover the tubing from just above the top of the stub pipe to the bottom of the sign post when using the Universal Anchor System. The insert should be cut to approx. 4 1/2" when used with the Bolt Down Universal Anchor System.

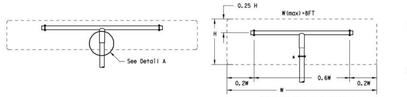


Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563 and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations.

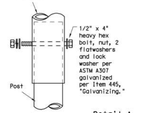


SM RD SGN ASSM TY TWT(XX)UB(P)

Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post



SM RD SGN ASSM TY TWT(XX)X(T)
(+ - See General Note 6)



Detail A

NOTE

The devices shall be installed per manufacturer's recommendations.
Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

1. The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
2. The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer, Method, design, and location of marking are subject to the approval of the TxDOT Traffic Standards Engineer.
3. Except for posts (13 BWG Tubing), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Producer List web page. The website address is: http://www.txdot.gov/business/producer list.htm
4. Material used as post with this system shall conform to the following specifications:
   13 BWG Tubing (2.375" 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 followings
   55,000 PSI minimum yield strength
   70,000 PSI minimum tensile strength
   18% 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.
5. Sign blanks shall be the sizes and shapes shown on the plans.
6. Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
7. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
8. See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: http://www.txdot.gov/publications/traffic.htm

WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
3. Insert tubular socket into concrete until top of socket is approximately 1/4 " above the concrete footing.
4. Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer.
5. Attach the sign to the sign post.
6. Insert the sign post into socket and align sign face with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 3 inches of the wedge exposed.

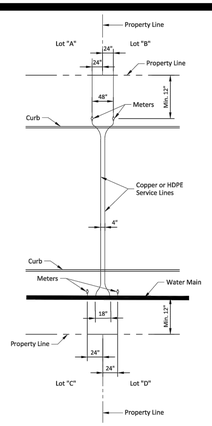
UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. Insert base post in hole to depths shown and backfill hole with concrete.
3. Level and plumb the base post using a torpedo level and allow concrete adequate time to set. The bottom of the slots provided in the stub pipe shall remain above the top of the concrete foundation.
4. Attach the sign to the sign post.
5. Install plastic insert around bottom of post.
6. Insert sign post into base post. Lower until the post comes to rest on steel rod.
7. Seat compression ring using a hamper. Typically, the top of compression ring will be approximately level with top of stub post when optimally installed.
8. Check sign post by hand to ensure it is unable to turn. If loose, increase the tightening of the compression ring.

Texas Department of Transportation
Traffic Operations Division

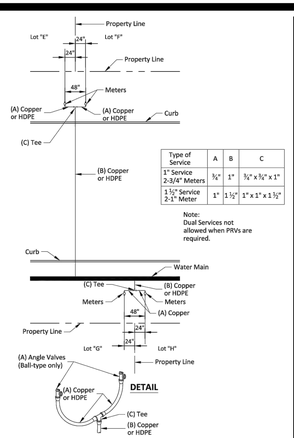
SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
WEDGE & UNIVERSAL ANCHOR
WITH THIN WALL TUBING POST
SMD(TWT)-08

©TxDOT July 2002		Tec TXDOT	DIV TXDOT	TPP TXDOT	DIV TXDOT
9-08 REVISIONS		DIST	SECT	JCR	HIGHWAY
		FILE:		DATE:	SHEET No.



SINGLE SERVICE LINE - SINGLE METER

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL NEW DEVELOPMENT SERVICE ARRANGEMENT	March 2008	December 2018
		DD-824-05	SHEET 1 OF 3



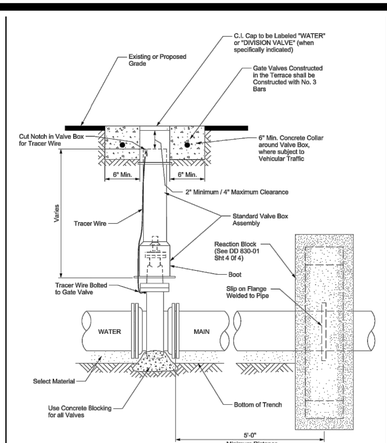
Type of Service	A	B	C
1" Service 2-3/4" Meters	¾"	1"	¾" x ¾" x 1"
1 ½" Service 2-1" Meter	1"	1 ½"	1" x 1" x 1 ½"

Note:
Dual Services not allowed when PRVs are required.

DETAIL

SINGLE SERVICE LINE - DUAL METER

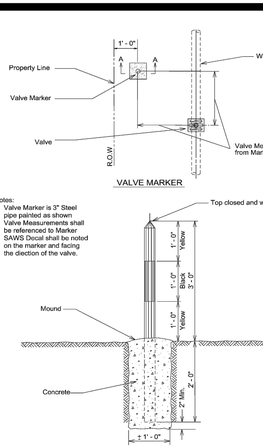
PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL SERVICE ARRANGEMENT	March 2008	December 2018
		DD-824-05	SHEET 2 OF 3



NOTE: Tracer Wire for PVC (Typ. for PVC & HDPE)
NOTE: All Concrete to be 3,000 psi

Note: For all work associated with Recycled Water Valves, refer to DD 110-10, Sht. 1 of 1

INSTALLATION OF NON-GEARED GATE VALVE WITH VALVE BOX AND EXTENSION	APPROVED	REVISED
	MARCH 2008	AUG 2019
	DD 828-01	SHEET 1 OF 1



VALVE MARKER

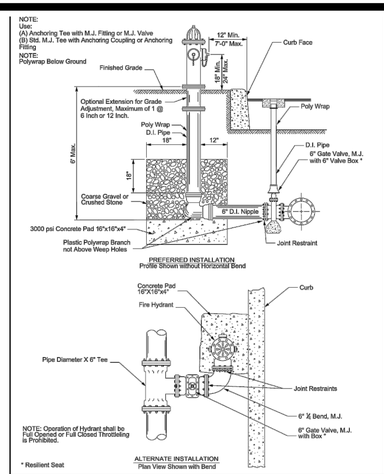
Notes:
1. Valve Marker is 3" Steel pipe painted as shown
2. Valve Measurements shall be referenced to Marker
3. SAWS Decal shall be noted on the marker and facing the diection of the valve.

SECTION A-A

VALVE MARKER	APPROVED	REVISED
	MARCH 2008	AUG 2019
	DD-828-04	SHEET 1 OF 1

NOTE:
Use:
(A) Anchoring Tee with M.J. Fitting or M.J. Valve
(B) Std. M.J. Tee with Anchoring Coupling or Anchoring Fitting

NOTE:
Polywrap Below Ground



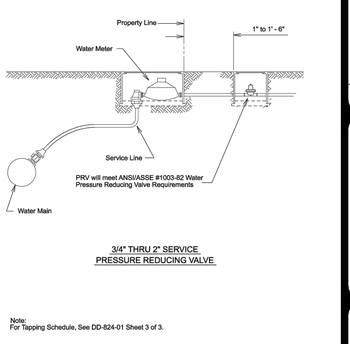
PREFERRED INSTALLATION
Profile Shown without Horizontal Bend

NOTE: Operation of Hydrant shall be Full Opened or Full Closed Throttleing is Prohibited.

* Resilient Seat

ALTERNATE INSTALLATION
Plan View Shown with Bend

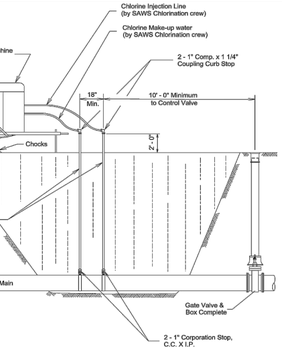
FIRE HYDRANT INSTALLATION (JOINT RESTRAINT)	APPROVED	REVISED
	MAY 2013	AUG 2019
	DD-834-01	SHEET 1 OF 2



3/4" THRU 2" SERVICE PRESSURE REDUCING VALVE

Note:
For Tapping Schedule, See DD-824-01 Sheet 3 of 3.

SERVICE INSTALLATION WITH PRESSURE REDUCING VALVE	APPROVED	REVISED
	MARCH 2008	APRIL 2014
	DD-833-03	SHEET 1 OF 1



RESTRAINED LENGTH FOR TEES

PIPE SIZE (inch)	BRANCH SIZE (inch)	LENGTH OF RUN (ft.)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	4	0	42	31
6	4	5	1	1
6	4	10	1	1
6	6	0	59	44
6	6	5	35	20
6	6	10	11	1
8	4	0	42	31
8	4	5	1	1
8	6	0	59	44
8	6	5	28	13
8	6	10	1	1
8	8	0	77	58
8	8	5	53	34
8	8	10	30	11
8	8	15	6	1

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe.The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR TEES	March 2008	AUG 2019
		DD-839-04	SHEET 1 OF 2

RESTRAINED LENGTH FOR TEES (Cont'd)

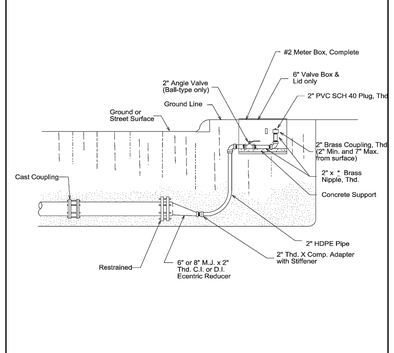
PIPE SIZE (inch)	BRANCH SIZE (inch)	LENGTH OF RUN (ft.)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
12	4	0	42	31
12	4	5	1	1
12	6	0	59	44
12	6	5	13	1
12	6	10	1	1
12	8	0	77	58
12	8	5	42	23
12	8	10	7	1
12	8	15	1	1
12	12	0	109	82
12	12	5	86	59
12	12	10	63	35
12	12	15	39	12

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe.The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

RESTRAINED LENGTHS FOR TEES	APPROVED	REVISED
	MARCH 2008	AUG 2019
	DD-839-04	SHEET 2 OF 2



L=LENGTH TO BE RESTRAINED

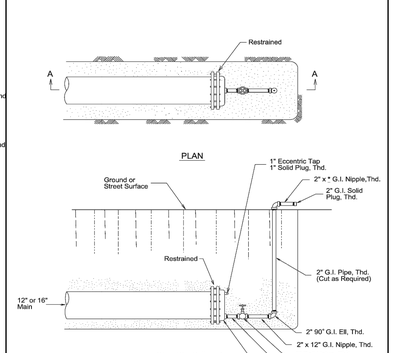
PIPE SIZE (inch)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	59	44
8	77	58
10	93	69
12	109	82

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provide for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

RESTRAINED LENGTHS FOR DEAD ENDS / INLINE VALVES	APPROVED	REVISED
	MARCH 2008	AUG 2019
	DD-839-05	SHEET 1 OF 1

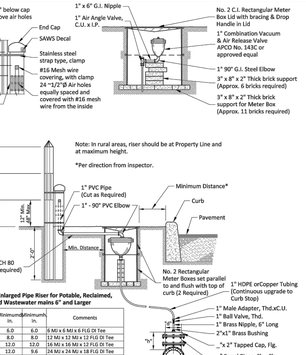


PIPE SIZE (inch)	BEND ANGLE (deg.)	LOW SIDE DEPTH	UPPER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 200 psi	LOWER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 200psi	UPPER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 150 psi	LOWER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 150 psi
6	45	5	24	8	18	6
6	22.5	5	12	4	9	3
6	11.25	5	6	2	4	1
6	45	10	24	5	18	4
6	22.5	10	12	2	9	2
6	11.25	10	6	1	4	1
8	45	5	32	11	24	8
8	22.5	5	15	5	11	4
8	11.25	5	8	3	6	2
8	45	10	32	7	24	5
8	22.5	10	15	3	11	2
8	11.25	10	8	2	6	1
12	45	5	45	16	34	12
12	22.5	5	22	7	16	6
12	11.25	5	11	4	8	3
12	45	10	45	10	34	7
12	22.5	10	22	5	16	3
12	11.25	10	11	2	8	2

RESTRAINED LENGTH DESIGN
Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

RESTRAINED LENGTHS VERTICAL OFFSETS	APPROVED	REVISED
	MARCH 2008	AUG 2019
	DD-839-06	SHEET 1 OF 1



PIPE SIZE (inch)	SMALL SIZE (inch)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
8	4	30	23
8	6	55	42
8	8	32	24
12	4	95	71
12	6	80	60
12	8	58	43

RESTRAINED LENGTH DESIGN
Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. Th restrained length shall be designed based upon the conditions encountered during the installation.

RESTRAINED LENGTHS FOR REDUCERS	APPROVED	REVISED
	MARCH 2008	AUG 2019
	DD-839-07	SHEET 1 OF 1

PIPE SIZE (inch)	BEND ANGLE (deg)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	90	17	17
6	45	9	7
6	22.5	5	3
6	11.25	2	2
8	90	30	22
8	45	12	9
8	22.5	6	4
8	11.25	3	2
12	90	43	32
12	45	18	13
12	22.5	8	6
12	11.25	4	3

RESTRAINED LENGTH DESIGN
Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

RESTRAINED LENGTHS FOR HORIZONTAL BENDS	APPROVED	REVISED
	MARCH 2008	AUG 2019
	DD-839-08	SHEET 1 OF 1

Note:
2 - 1 1/4" Solid Cap, Thd. to be installed on Corporation Stop after chlorination

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	STANDARD CHLORINATION INSTALLATION	March 2008	AUG 2019
		DD-847-01	SHEET 1 OF 1

* Cut as required to extend beyond excavation

2" TEMPORARY BLOW-OFF ASSEMBLY ON 6" & 8" MAINS	APPROVED	REVISED
	MARCH 2008	AUG 2019
	DD-844-01	SHEET 1 OF 4

* Cut to fit in meter box.

2" PERMANENT BLOW-OFF ASSEMBLY ON 6" & 8" MAINS	APPROVED	REVISED
	MARCH 2008	AUG 2019
	DD-844-02	SHEET 3 OF 5

* Cut as required to extend beyond excavation.

2" TEMPORARY BLOW-OFF ASSEMBLY ON 12" & 16" MAINS	APPROVED	REVISED
	March 2008	AUG 2019
	DD-844-01	SHEET 2 OF 4

Note: In rural areas, riser should be at Property Line and at maximum height.

*Per direction from inspector.

TABLE 1 - Enlarged Pipe Riser for Potable, Reclaimed, and Wastewater mains 6" and Larger

D, Nominal Diameter of Main, in.	Minimum A, in.	Minimum B, in.	Comments
6	6.0	6.0	6 MJ x 6 MJ x 6 FLG Of Tee
8	8.0	8.0	12 MJ x 12 MJ x 12 FLG Of Tee
12	12.0	12.0	16 MJ x 16 MJ x 12 FLG Of Tee
16	12.0	9.6	24 MJ x 24 MJ x 18 FLG Of Tee
24	18.0	14.4	30 MJ x 30 MJ x 18 FLG Of Tee
30	18.0	18.0	36 MJ x 36 MJ x 24 FLG Of Tee
36	24.0	21.6	42 MJ x 42 MJ x 24 FLG Of Tee
42	24.0	25.2	48 MJ x 48 MJ x 24 FLG Of Tee
48	24.0	28.8	Welded-on FLG Outlet
54	30.0	32.4	Welded-on FLG Outlet
60	36.0	36.0	Welded-on FLG Outlet
66	24.0	23.1	Welded-on FLG Outlet
72	24.0	25.2	Welded-on FLG Outlet

Air Collection Traps in Air Valve Piping Notes:
1. Dimensions derived from AWWA Manual 2nd Edition: Chapter 6 M51 Air Valves: Air-Release, Air/Vacuum & Combination

INSTALLATION OF 1" AIR RELEASE VALVE	APPROVED	REVISED
	March 2008	August 2019
	DD-846-01	SHEET 1 OF 1

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
11-13-23

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

WATER DISTRIBUTION PLAN DETAILS

PLAT NO.
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C4.10

Date: Nov 13, 2023, 4:13pm User ID: JForlos
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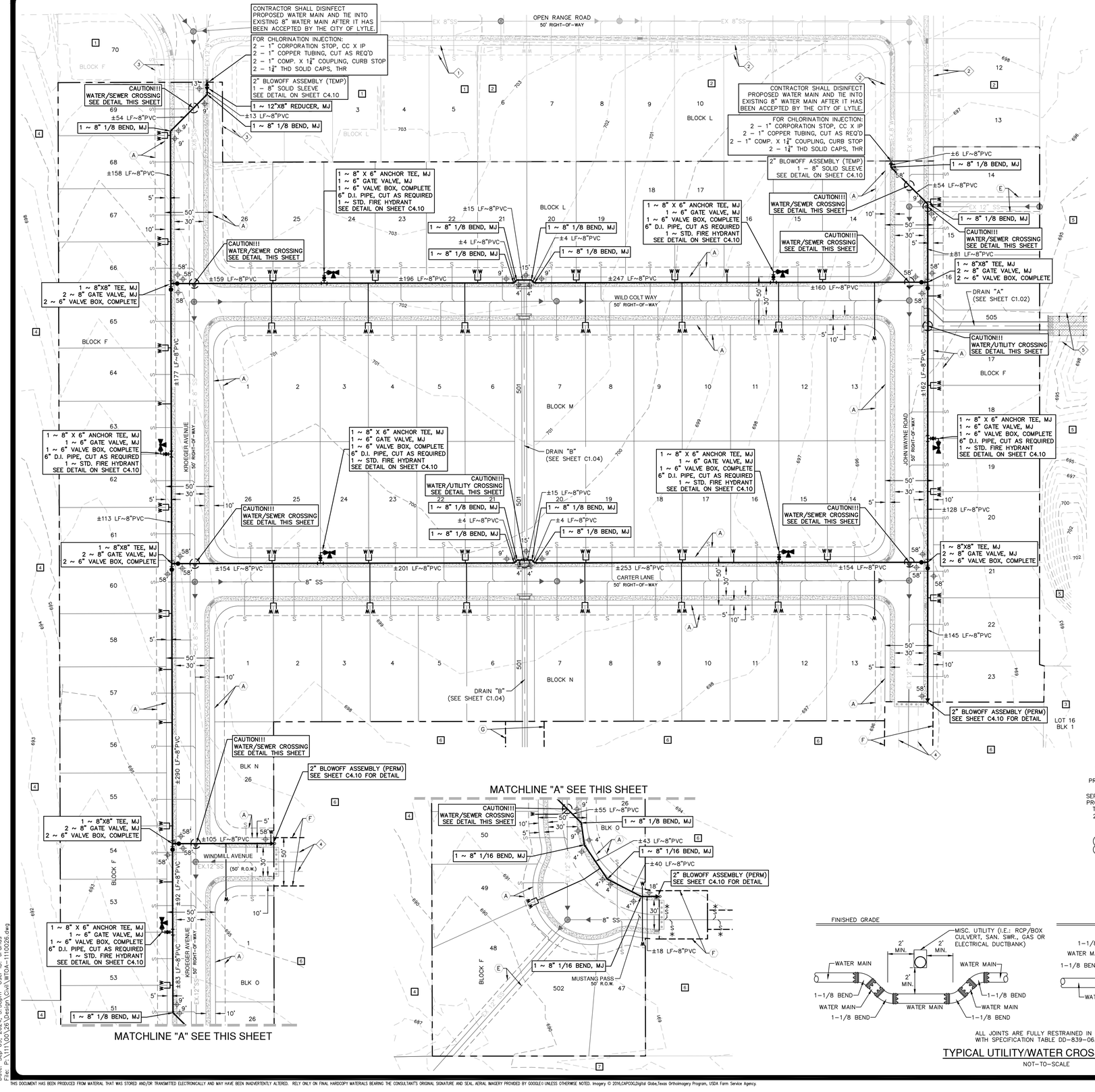
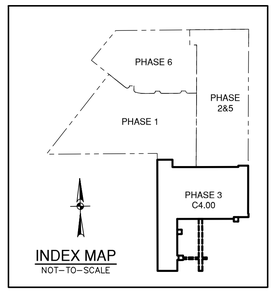
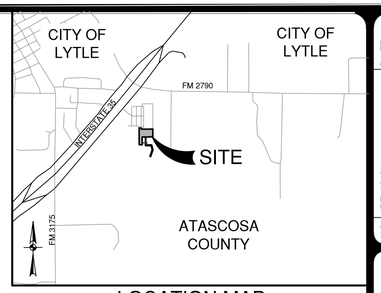




INDEX MAP
NOT-TO-SCALE



LOCATION MAP
NOT-TO-SCALE

SCALE: 1"= 50'
0' 50' 100' 150'

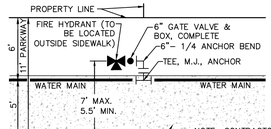
KEY LEGEND

- (A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT
- (E) 15' SANITARY SEWER EASEMENT
- (F) 50'X50' WATER, SEWER, GRADING AND DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. (OFF-LOT)
- (G) 40' OFF-SITE DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W./LOT (OFF-LOT)
- (1) EXISTING 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202100013, OPR)
- (2) EXISTING 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202300030 OPR)
- (3) EXISTING VARIABLE WIDTH (MIN. 10') GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202100013, OPR)
- (4) EXISTING 20' TEMPORARY SANITARY SEWER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED RIGHT-OF-WAY/LOTS (DOC NO. 216135, OPR)
- (5) EXISTING 30' PERMANENT DRAINAGE EASEMENT (DOC NO. 227383, O.P.R.)

1. SADDLE RIDGE ESTATES, PHASE 1 (DOC. NO. 202100013 OPR)
2. SADDLE RIDGE ESTATES, PHASE 2&5 (DOC. NO. 202300030 OPR)
3. MEADOWBROOK ESTATES, UNIT 3 (VOL. 1, PG. 193A DPR)
4. ABBE FAMILY – 59.50 ACRE TRACT (VOL. 24, PGS. 130–133, OPR)
5. EXCELITE DEVELOPMENT 87.855 ACRE TRACT (DOC. NO. 222827)
6. SAN ANTONIO LD, LLC REMAINING PORTION OF 27.64 ACRE TRACT (DOC. NO. 217149 OPR)
7. CITY OF LYTLE 61.582 ACRE TRACT (VOL. 424, PGS. 406–409 DR)

WATER LEGEND

- PROJECT LIMITS
- EXISTING WATER — FIRE HYDRANT
- EXISTING SEWER — MANHOLE
- PROPOSED SEWER
- PROPOSED WATER — FIRE HYDRANT
- PROPOSED 3/4" SINGLE SERVICE WITH 5/8" METER
- PROPOSED 1" DUAL SERVICE WITH 5/8" METER
- SINGLE IRRIGATION SERVICE (REF. PLAN VIEW FOR SIZE) — IRR
- JOINT RESTRAINT



REFER TO DETAIL DD-834-01 ON SHEET C4.10

FIRE HYDRANT INSTALLATION
NOT-TO-SCALE

98% COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE CITY OF LYTLE INSPECTOR/TEST ADMINISTER, PER EACH 12–INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY CITY OF LYTLE WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

FIRE FLOW NOTE:

IN AN EFFORT TO MEET THE CITY OF LYTLE'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1500 GPM AT 20 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF LYTLE DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE LYTLE FIRE DEPARTMENT FIRE MARSHAL.

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER JOINT RESTRAINING HARNESSES AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

PRESSURE REDUCING VALVE NOTE:

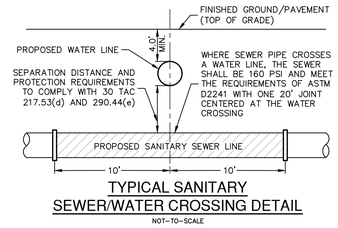
PRESSURE REDUCING VALVE TO BE INSTALLED ON CUSTOMER'S SIDE OF METER BY HOMEBUILDER.

PRESSURE NOTE:

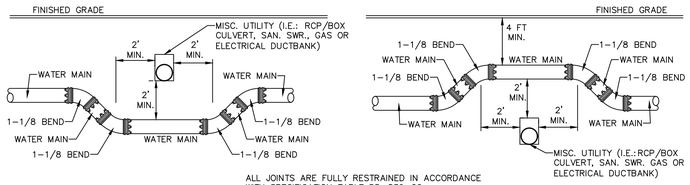
CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW MINIMUM GROUND ELEVATION WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS THIS ELEVATION, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF LYTLE. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF *PRV IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED.
*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).

TRENCH EXCAVATION SAFETY PROTECTION:

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



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE



ALL JOINTS ARE FULLY RESTRAINED IN ACCORDANCE WITH SPECIFICATION TABLE DD-839-06.

TYPICAL UTILITY/WATER CROSSING DETAIL
NOT-TO-SCALE

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

OVERALL WATER DISTRIBUTION PLAN

PLAT NO.
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C4.00

Date: Sep 09, 2024, 3:38pm User ID: JFarias
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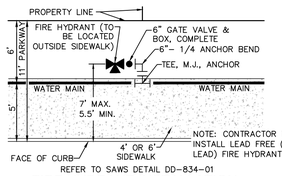
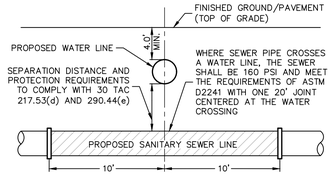
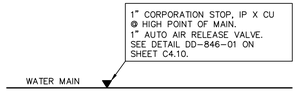


FIRE HYDRANT INSTALLATION
NOT-TO-SCALE



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE

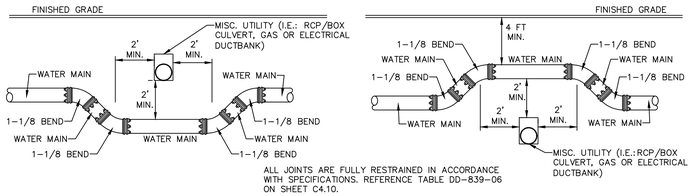


ONLY INSTALL IF REQUIRED BY INSPECTOR CONTRACTOR TO NOTIFY ENGINEER BEFORE INSTALLATION.

NOTE: CONTRACTOR MUST COMPLY WITH MANUFACTURE'S INSTALLATION OF PROPER RESTRAINTS. IF PROPER THRUST BLOCKING IS NOT INSTALLED, CONTRACTOR MUST INSTALL JOINT RESTRAINTS PER MANUFACTURER'S SPECIFICATION.

* DOUBLE NUT ALL RESTRAINING BOLTS.
* ANY TYPE OF JOINT RESTRAINT MUST BE BI-DIRECTIONAL.

1" AIR RELEASE VALVE DETAIL
NOT-TO-SCALE

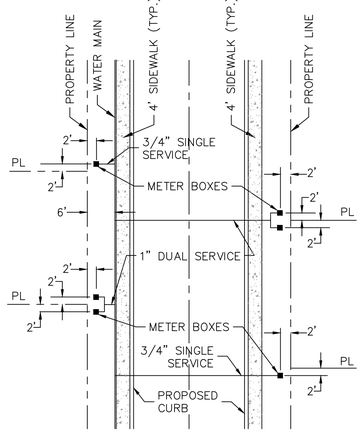


ALL JOINTS ARE FULLY RESTRAINED IN ACCORDANCE WITH SPECIFICATIONS. REFERENCE TABLE DD-839-06 ON SHEET C4.10.

TYPICAL UTILITY/WATER CROSSING DETAIL
NOT-TO-SCALE

ALL JOINTS ARE FULLY RESTRAINED IN ACCORDANCE WITH SAWS SPECIFICATION TABLE DD-839-06.

DRAIN/WATER CROSSING DETAIL
NOT-TO-SCALE



METER BOX LOCATION
NOT-TO-SCALE

WATER NOTES

1. CHLORINATION SHALL BE COMPLETED WITH HTH. PRESSURE TESTING WILL FOLLOW THE SAWS CRITERIA (150 PSI FOR 4 HOURS). THE CITY OF LYTLE MUST BE PRESENT DURING THE PRESSURE TEST AND RECEIVE A COPY OF THE BACTERIOLOGICAL TEST. CONTACT THE CITY OF LYTLE PUBLIC WORKS DEPARTMENT AT 830.709.3692
2. ALL 8" AND 12" PIPE SHALL BE A MINIMUM OF P.V.C. C-900 CLASS 200 DR 21. IF AVAILABLE AND IF IN PRESSURE ZONE 8 OR BELOW, THE CONTRACTOR MAY USE C-900 CLASS 150 DR 27.5 AS AN ALTERNATIVE.
3. ALL 16" AND GREATER PIPE SHALL BE P.V.C. C-900 CLASS 235 DR 18.
4. ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR, AS PROVIDED FOR IN THE SPECIAL CONDITIONS.
5. THE WATER LINES WILL BE SET FROM THE STREET HUBS BEFORE THIS CONTRACT BEGINS. STREET CUT SHEETS WILL BE SUPPLIED TO THE CONTRACTOR. THERE SHOULD BE NO ADDITIONAL STAKES REQUIRED, AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE SITE AND VERIFY THAT ALL STAKES REQUIRED FOR HIS WORK ARE IN PLACE AT THE TIME THE CONSTRUCTION BEGINS. IF ANY STAKES ARE MISSING THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY. AFTER CONSTRUCTION BEGINS, ALL CONSTRUCTION STAKES, MARKS, ETC., SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR, AND IN CASE OF DESTRUCTION OR REMOVAL BY THE CONTRACTOR, HIS EMPLOYEE OR ANY OTHER MEANS, SUCH STAKES, MARKS, ETC., SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS AND LENGTH OF SERVICE CONNECTIONS.
7. THE LOT CORNERS WILL BE SET BY THE ENGINEER FOR INSTALLATION OF ALL WATER SERVICES. THESE LOT CORNERS SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR SO THE METER BOXES CAN BE SET IN PHASE II. ANY LOT CORNER DESTROYED OR REMOVED BY THE CONTRACTOR, HIS EMPLOYEES, OR BY ANY OTHER MEANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
8. STREETS WILL HAVE BEEN EXCAVATED DOWN TO SUBGRADE AND THE PARKWAY WILL BE CUT DOWN TO TOP OF CURB BY THE STREET CONTRACTOR, PRIOR TO CONSTRUCTION OF THE WATER MAINS. IT WILL BE THE UTILITY CONTRACTOR'S RESPONSIBILITY TO PROVIDE A PAD FOR HIS EQUIPMENT.
9. WATER METER BOXES IF APPLICABLE SHALL BE INSTALLED TWO FEET FROM ROW (PROPERTY LINE) TO CENTER OF THE METER BOX.
10. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
11. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE CITY OF LYTLE RELEASES THE MAIN FOR TIE-IN AND USE.
12. UNIT PRICE BID FOR "STANDARD FIRE HYDRANT ASSEMBLY" SHALL INCLUDE FIRE HYDRANT, 6-INCH GATE VALVE AND 6-INCH VALVE BOX COMPLETE, ANCHOR BEND, AND ALL 6-INCH DI PIPE REQUIRED (DI PIPE REQUIRED SHALL INCLUDE ALL PIPE FROM THE TEE ON THE MAIN LINE TO THE FIRE HYDRANT).
13. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).
14. A CLEAR SPACE SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. THIS AREA SHOULD HAVE A MINIMUM DIAMETER OF 3.0' AND BE CLEAN OF VERTICAL OBSTRUCTIONS, VALVES, AND METER BOXES.
15. SINGLE SERVICES SHALL BE ¾" WITH ⅝" METER. DUAL SERVICES SHALL BE 1" SERVICE TO A TEE WHERE A ¾" WILL CONTINUE TO A ⅝" METER.

NO.	REVISION	DATE

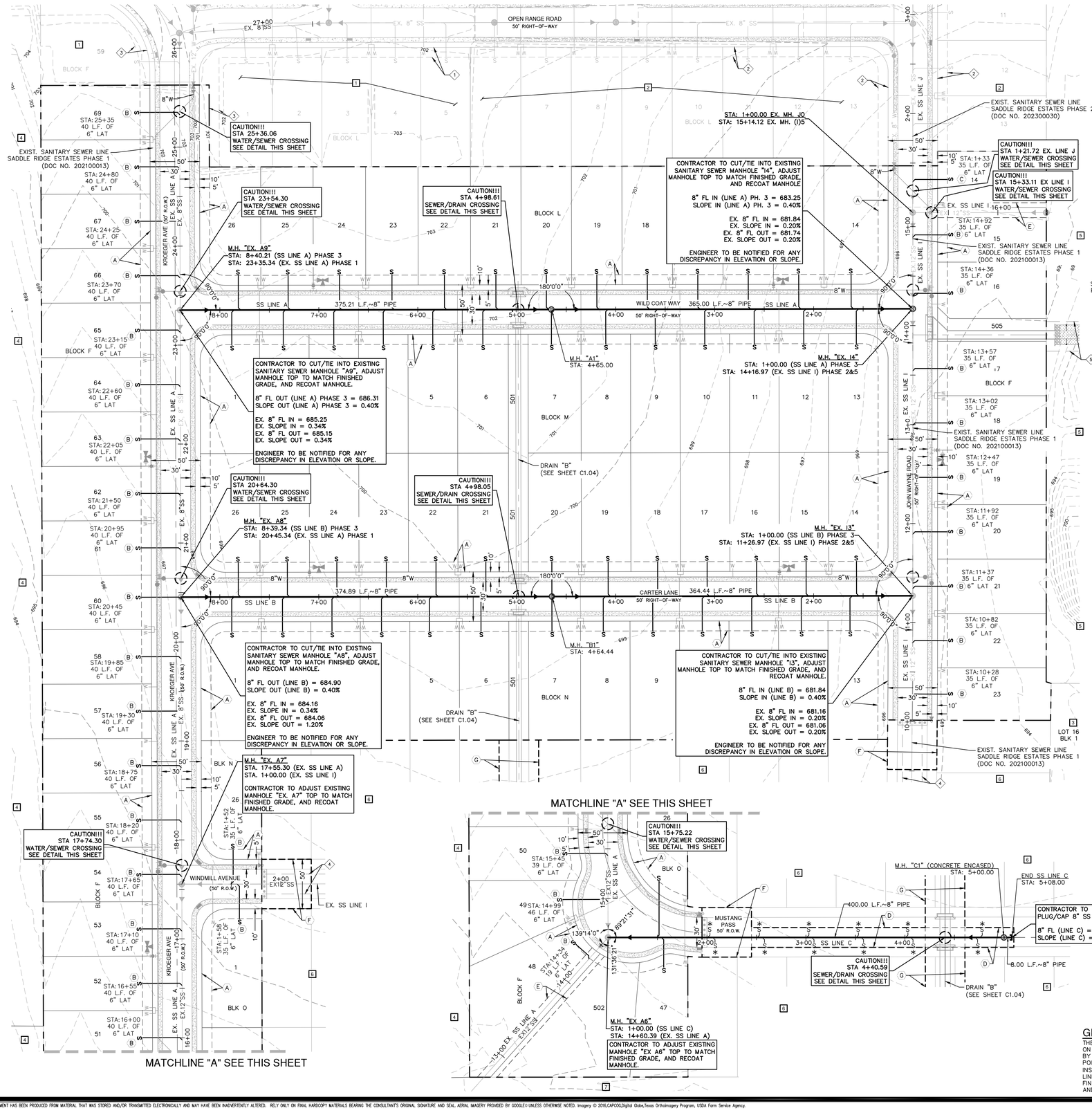
STATE OF TEXAS
JON D. ADAME
82567
LICENSED PROFESSIONAL ENGINEER
Jon Adame 11-13-23

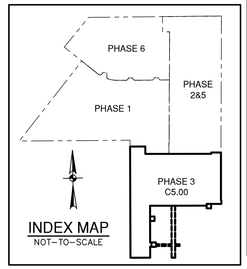
PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

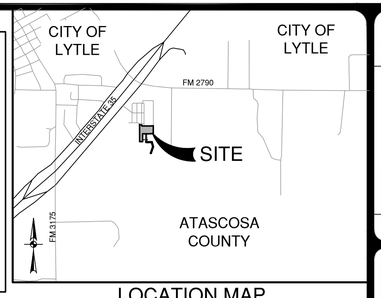
WATER DISTRIBUTION PLAN NOTES

PLAT NO.
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C4.11



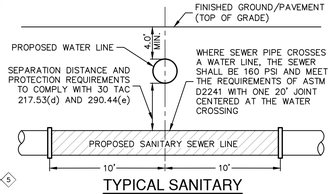


INDEX MAP
NOT-TO-SCALE

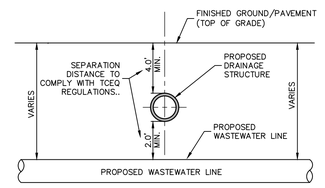


LOCATION MAP
NOT-TO-SCALE

SCALE: 1"= 50'
0' 50' 100' 150'



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE



SEWER/DRAIN CROSSING DETAIL
NOT-TO-SCALE

SEWER LEGEND

PROJECT LIMITS
EXISTING WATER
EXISTING SEWER
PROPOSED SEWER
PROPOSED WATER
PROPOSED SEWER LATERAL
PROPOSED WYE FOR FUTURE UNIT (CAPPED)
MANHOLE
FIRE HYDRANT

KEY LEGEND

- (A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT
- (B) CONTRACTOR TO INSTALL SERVICE LATERAL USING LATERAL SADDLE ONTO EXISTING MAIN (SADDLE RIDGE ESTATES PHASE 1 (DOC NO. 202100013 OPR)
- (C) CONTRACTOR TO INSTALL SERVICE LATERAL USING LATERAL SADDLE ONTO EXISTING MAIN (SADDLE RIDGE ESTATES PHASE 2 & 5 (DOC. NO. 202300030 OPR)
- (D) 20' SANITARY SEWER EASEMENT (OFF-LOT)
- (E) 15' SANITARY SEWER EASEMENT
- (F) 50'X50' WATER, SEWER, GRADING AND DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. (OFF-LOT)
- (G) 40' OFF-SITE DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W./LOT (OFF-LOT)
- (1) EXISTING 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202100013 OPR)
- (2) EXISTING 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202300030 OPR)
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- [7] CITY OF LYTLE 61.582 ACRE TRACT (VOL. 424, POS. 406-409 OR)

NOTES:

ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED PER TCEQ-0596.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

CAUTION !!!

EXISTING UTILITIES ARE WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH OF PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

GENERAL COMPACTION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE CITY OF LYTLE FOR INSPECTOR/TEST ADMINISTER, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY THE CITY OF LYTLE WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

TRENCH EXCAVATION SAFETY PROTECTION:

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NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

OVERALL SANITARY SEWER PLAN

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C5.00

Date: Sep 09, 2024, 3:39pm User ID: JForlos
File: P:\1111\00\26\Design\Civil\SSOA-111026.dwg

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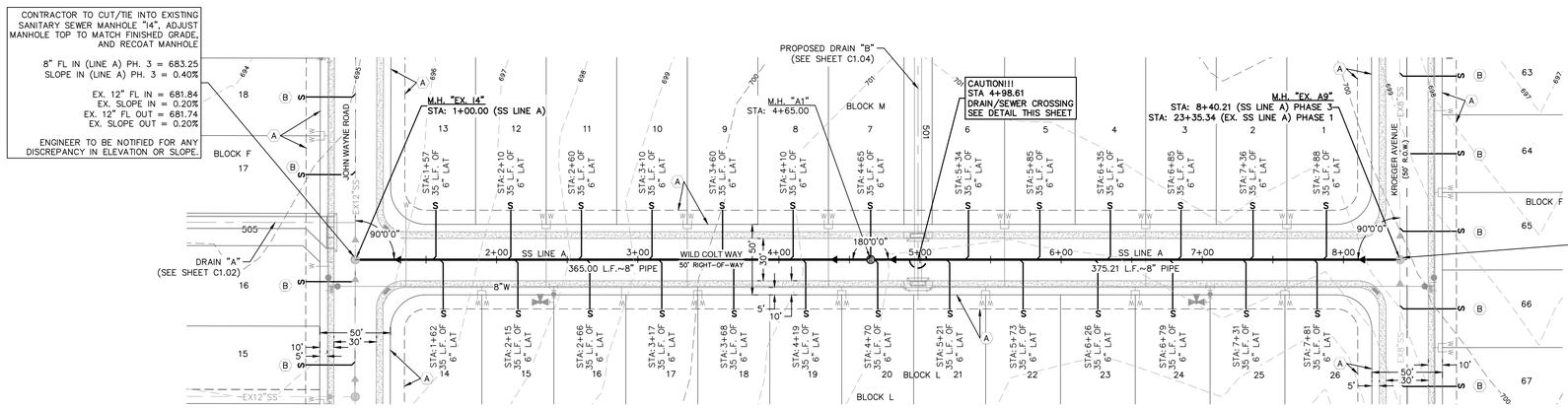


SCALE: 1"= 50'

0' 50' 100' 150'

SEWER LEGEND

- PROJECT LIMITS
- EXISTING WATER
- EXISTING SEWER
- PROPOSED SEWER
- PROPOSED WATER
- PROPOSED SEWER LATERAL

MANHOLE, FIRE HYDRANT

KEY LEGEND

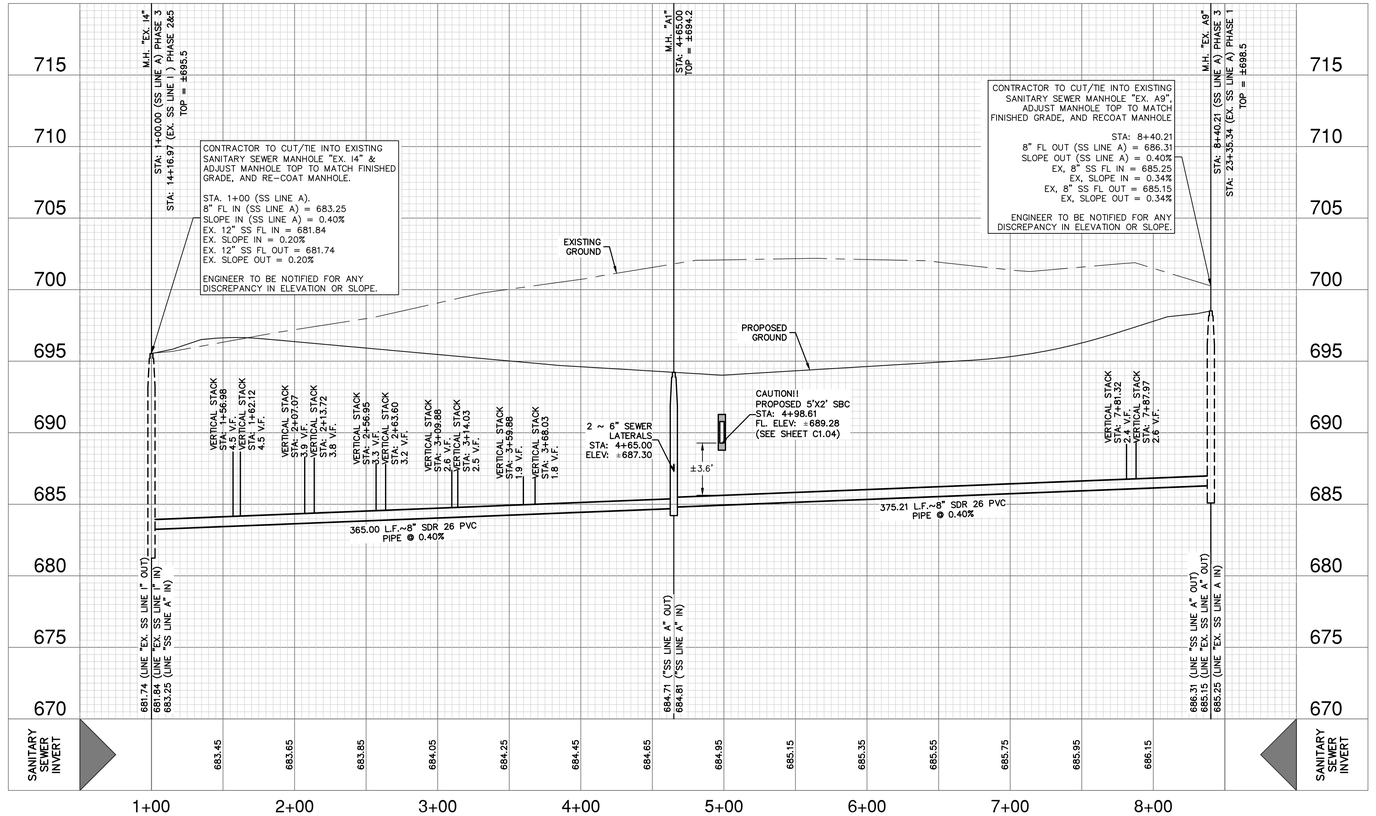
(A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

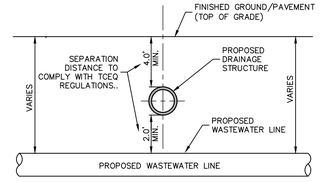
(B) CONTRACTOR TO INSTALL SERVICE LATERAL USING LATERAL SADDLE ONTO EXISTING MAIN (SADDLE RIDGE ESTATES PHASE 1 [DOC NO. 202100013, PGS. 375-B, 376-A]) SEE OVERALL SANITARY SEWER PLAN SHEET C5.00 FOR STATIONING

- REFERENCE C5.10 FOR SANITARY SEWER DETAILS
- REFERENCE C5.11 FOR SANITARY SEWER NOTES

SANITARY SEWER LINE "A"
STA. 1+00.00 TO END

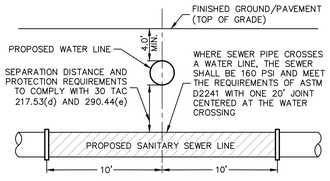
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'





SEWER/DRAIN CROSSING DETAIL

NOT-TO-SCALE



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

GENERAL COMPACTION NOTE

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CAUTION!!

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NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

SEWER LINE "A" ~ STA. 1+00 TO END;
SANITARY SEWER PLAN & PROFILE

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C5.01

Date: Sep 09, 2024, 2:17pm User ID: JForlas
Files: P:\111\00\26\Design\Civil\SSA1-111026.dwg

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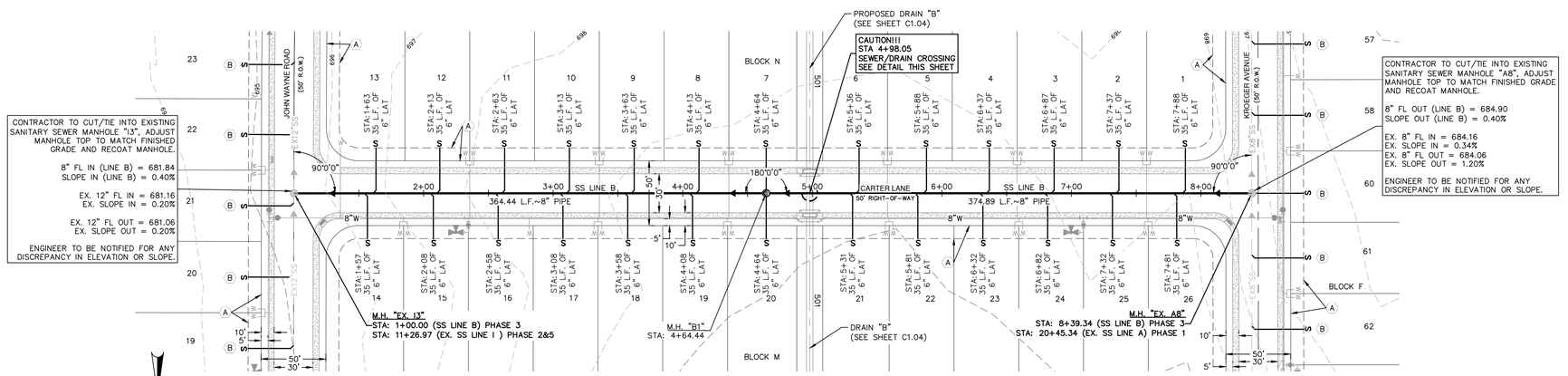

SCALE: 1"= 50'

0' 50' 100' 150'

SEWER LEGEND

PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

PROPOSED WATER

PROPOSED SEWER LATERAL

MANHOLE

FIRE HYDRANT

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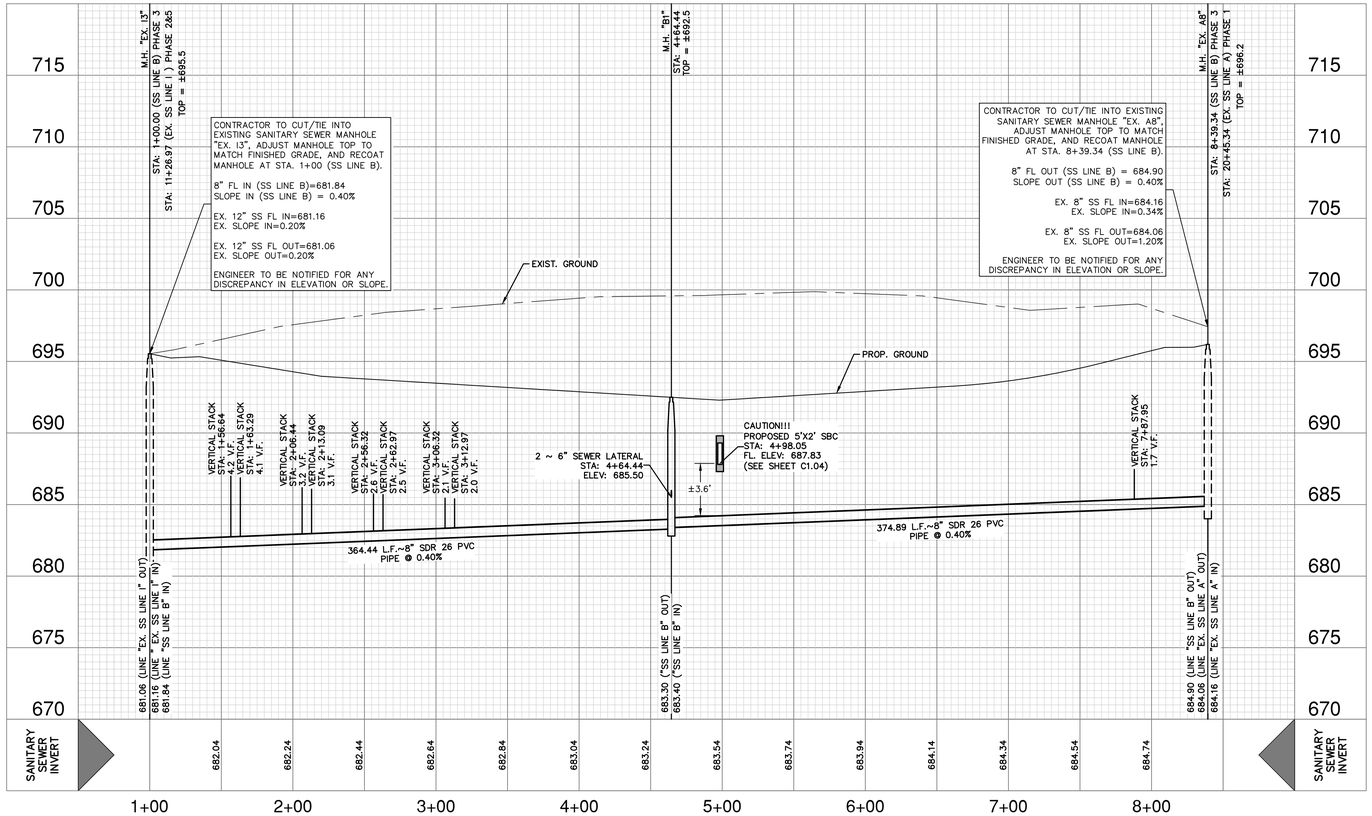
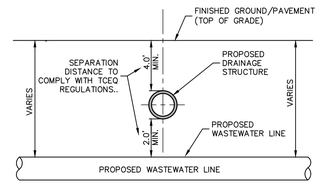
SANITARY SEWER LINE "B"
STA. 1+00.00 TO END

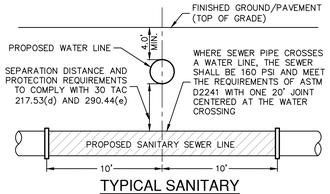
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'





SEWER/DRAIN CROSSING DETAIL

NOT-TO-SCALE



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

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NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
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LICENSED
PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

SEWER LINE "B" ~ STA. 1+00 TO END;
SANITARY SEWER PLAN & PROFILE

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C5.02

CAUTION !!!

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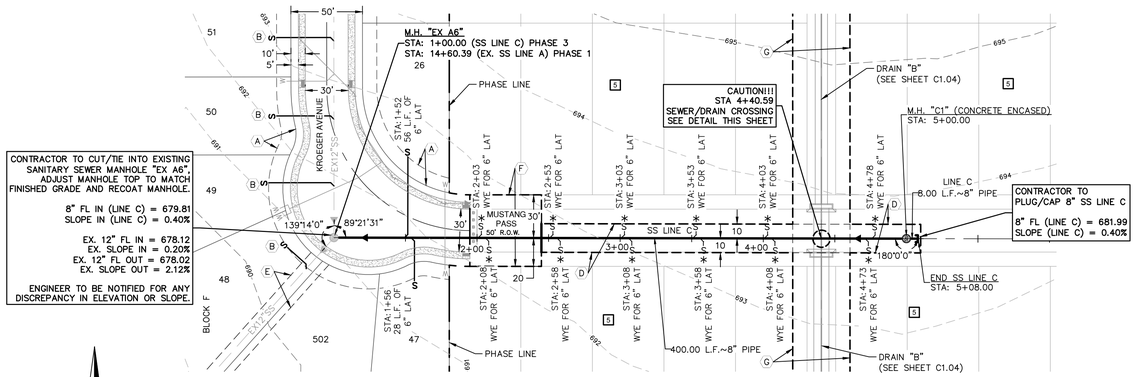
* REFERENCE C5.11 FOR SANITARY SEWER NOTES

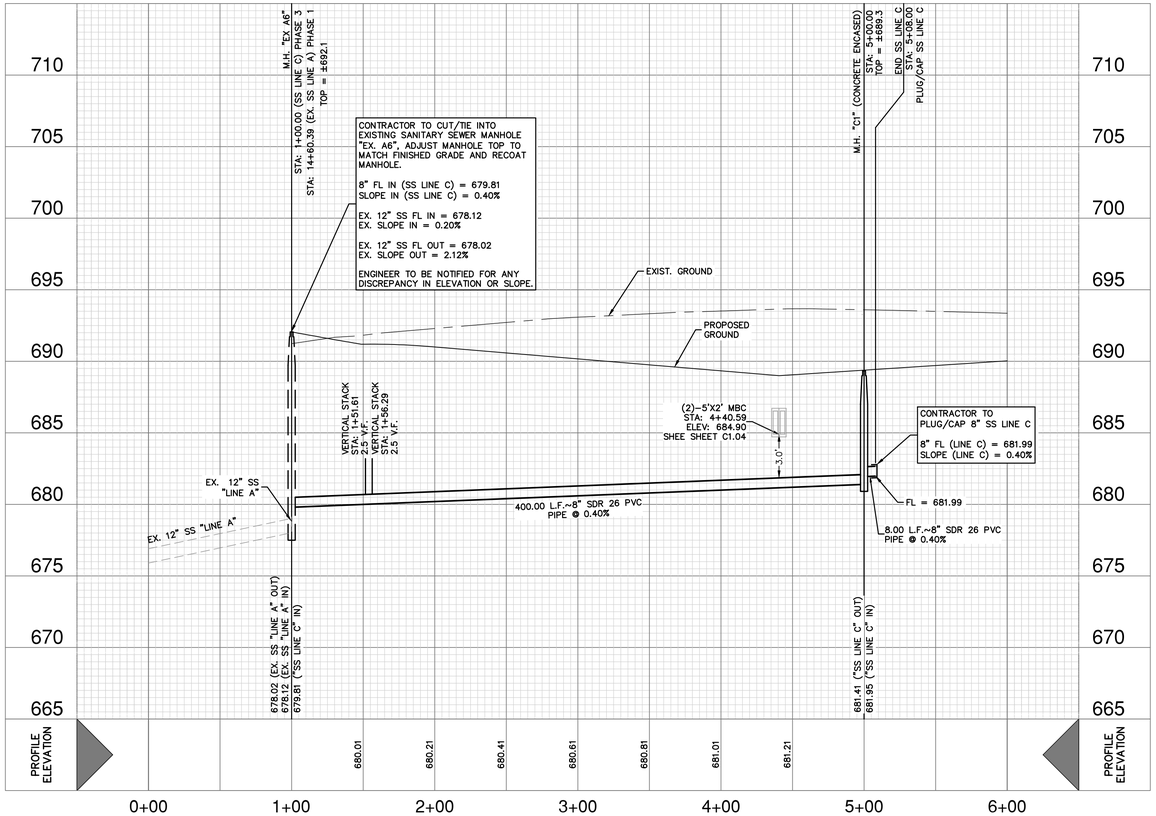
SCALE: 1"= 50'

0' 50' 100' 150'



SANITARY SEWER LINE "C"
STA. 1+00.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



SEWER LEGEND

PROJECT LIMITS
EXISTING WATER
EXISTING SEWER
PROPOSED SEWER
MANHOLE
PROPOSED WATER
FIRE HYDRANT
PROPOSED SEWER LATERAL
PROPOSED WYE FOR FUTURE UNIT (CAPPED)

KEY LEGEND

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(B) CONTRACTOR TO INSTALL SERVICE LATERAL USING LATERAL SADDLE ONTO EXISTING MAIN (SADDLE RIDGE ESTATES PHASE 1 [DOC NO. 202100013, PGS. 375-B, 376-A]) SEE OVERALL SANITARY SEWER PLAN SHEET C5.00 FOR STATIONING

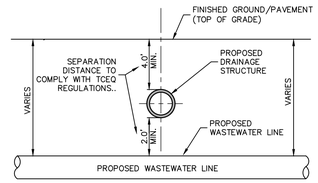
(D) 20' SANITARY SEWER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. (OFF-LOT)

(E) 15' SANITARY SEWER EASEMENT

(F) 50'X50' WATER, SEWER, GRADING AND DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. (OFF-LOT)

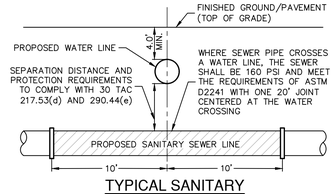
(G) 40' OFF-SITE DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W./LOT (OFF-LOT)

[5] SAN ANTONIO LD, LLC REMAINING PORTION OF 27.64 ACRE TRACT (DOC. NO. 217149 OPR)



SEWER/DRAIN CROSSING DETAIL

NOT-TO-SCALE



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

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NO.	REVISION	DATE

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JON D. ADAME
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9-9-24

PAPE-DAWSON ENGINEERS
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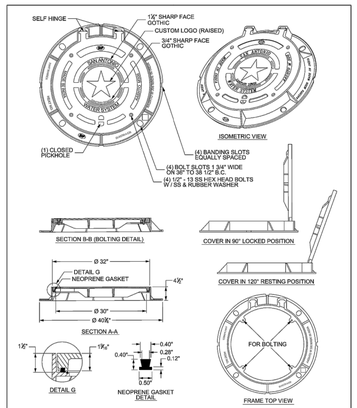
SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

SEWER LINE C ~ STA. 1+00.00 TO END
SANITARY SEWER PLAN & PROFILE

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C5.03

Date: Sep 09, 2024, 2:17pm User ID: JForlas
File: P:\1111\00\26\Design\Civil\SSA1-111026.dwg

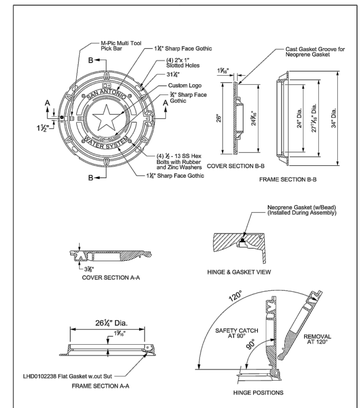
NOTE!: MANHOLE LID SHALL HAVE A GENERIC FACE THAT READS "WASTEWATER".



SIP Industries

	APPROVED	REVISED
30" MANHOLE RING AND COVER DETAIL		
	DD 852-07	SHEET 1 OF 5

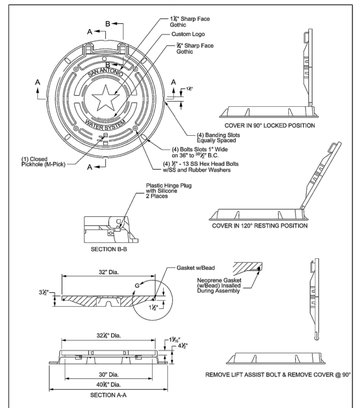
NOTE!: MANHOLE LID SHALL HAVE A GENERIC FACE THAT READS "WASTEWATER".



ERGO Assembly

	APPROVED	REVISED
MANHOLE RING AND COVER DETAIL		
	DD 852-07	SHEET 2 OF 5

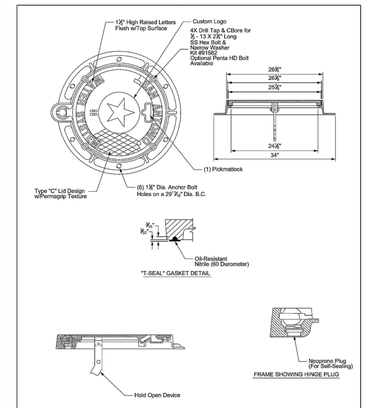
NOTE!: MANHOLE LID SHALL HAVE A GENERIC FACE THAT READS "WASTEWATER".



ERGO XL Assembly

	APPROVED	REVISED
MANHOLE RING AND COVER DETAIL		
	DD 852-07	SHEET 3 OF 5

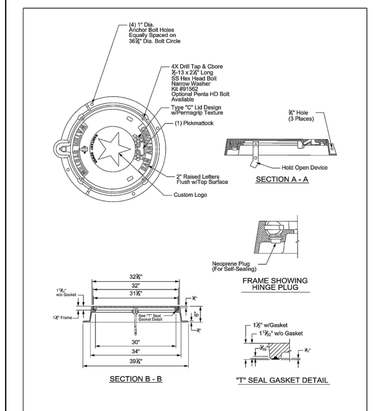
NOTE!: MANHOLE LID SHALL HAVE A GENERIC FACE THAT READS "WASTEWATER".



NEENAH FOUNDRY

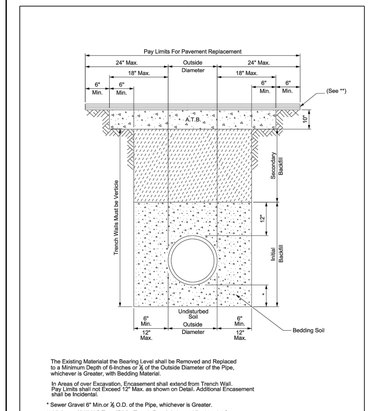
	APPROVED	REVISED
MANHOLE RING AND COVER DETAIL		
	DD 852-07	SHEET 4 OF 5

NOTE!: MANHOLE LID SHALL HAVE A GENERIC FACE THAT READS "WASTEWATER".



NEENAH FOUNDRY

	APPROVED	REVISED
MANHOLE RING AND COVER DETAIL		
	DD 852-07	SHEET 5 OF 5

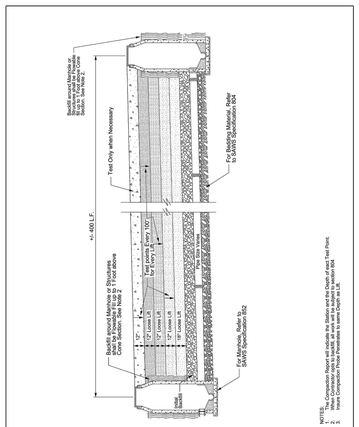


The Existing Material at the Bearing Level shall be Removed and Replaced to a Minimum Depth of 6-inches or ¼ of the Outside Diameter of the Pipe, whichever is Greater, with Bedding Material.

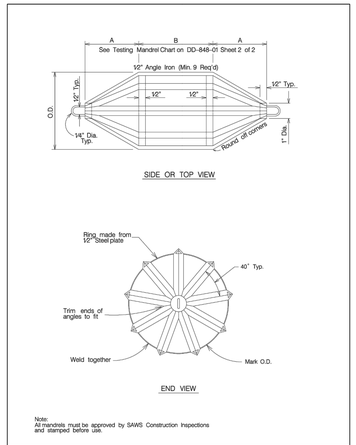
In Areas of over Excavation, Encasement shall extend from Trench Wall. Pay Limits shall not Exceed 12" Max. as shown on Detail. Additional Encasement shall be Incidental.

* Sewer Gravel 6" Min.or ¼ O.D. of the Pipe, whichever is Greater.
** Minimum 2" HMAC Type "D" for Trench Repair in Local / Residential Streets.
** Minimum 2" HMAC Type "C" for Trench Repair in Collector / Arterial Streets.

	APPROVED	REVISED
SANITARY SEWER PIPE LAID IN TRENCH		
	DD-804-01	SHEET 1 OF 1



	APPROVED	REVISED
TRENCH COMPACTION DETAIL		
	DD 804-02	SHEET 1 OF 1



Note:
All mandrels must be approved by SAWS Construction Inspections and stamped before use.

	APPROVED	REVISED
GO, NO GO DEFLECTION TESTING MANDREL		
	DD-848-01	SHEET 1 OF 2

SIZE	A	B*	MANDREL O.D. PVC (SDR-26)	RING O.D. PVC (SDR-26)
6"	4.0"	4.5"	5.50	4.79
8"	5.5"	6"	7.37	6.66
10"	7.0"	7.5"	9.21	8.50
12"	8.0"	9"	10.96	10.25
14"	10.0"	11"	13.42	12.71
18"	12.0"	13.5"	——	——
21"	14.0"	16"	——	——
24"	16.0"	18"	——	——
27"	18.0"	20"	——	——

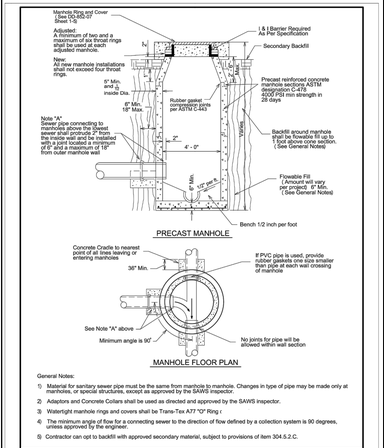
* Minimum Length

CHART

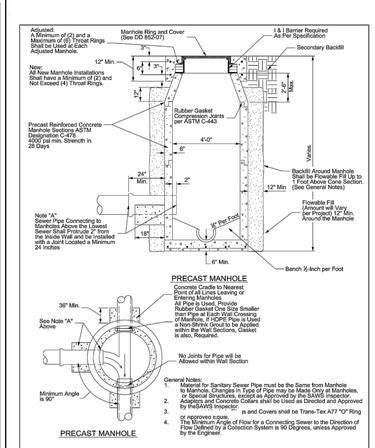
Notes:
PVC pipes and fittings 6" to 15" in diameter shall conform to ASTM D-3034-08.
PVC pipes and fittings 18" to 27" in diameter shall conform to ASTM F-679-08.

This information is provided as a reference. All deflection testing shall be done in accordance with TCEQ Chapter 217.

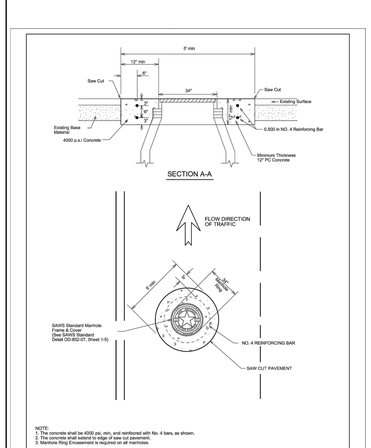
	APPROVED	REVISED
GO, NO GO DEFLECTION TESTING MANDREL CHART		
	DD-848-01	SHEET 2 OF 2



	APPROVED	REVISED
STANDARD PRECAST MANHOLE		
	DD-852-01	SHEET 1 OF 2

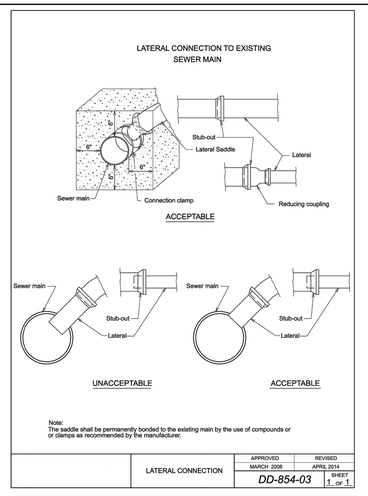


	APPROVED	REVISED
STANDARD PRECAST MANHOLE		
	DD-852-01	SHEET 2 OF 2



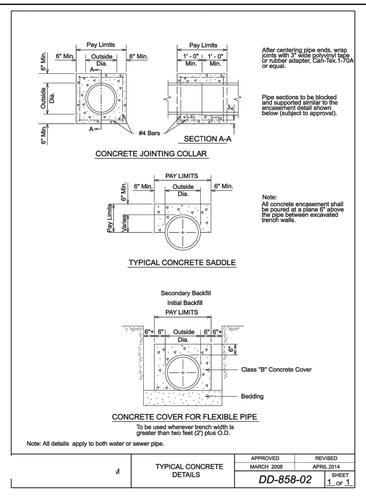
NOTE
1. The concrete shall be 4000 psi, min, and reinforced with No. 4 bars, as shown.
2. The concrete shall extend to edge of saw cut pavement.
3. Manhole Ring Encasement is required on all manholes.

	APPROVED	REVISED
MANHOLE RING ENCASEMENT DETAIL		
	DD-852-03	SHEET 1 OF 2



Note:
The saddle shall be permanently bonded to the existing main by the use of compounds or or clamps as recommended by the manufacturer.

	APPROVED	REVISED
LATERAL CONNECTION		
	DD-854-03	SHEET 1 OF 1



After centering pipe ends, wrap joints with 3" wide polyvinyl tape or rubber adapter, Cam-Tex,T-10A or equal.

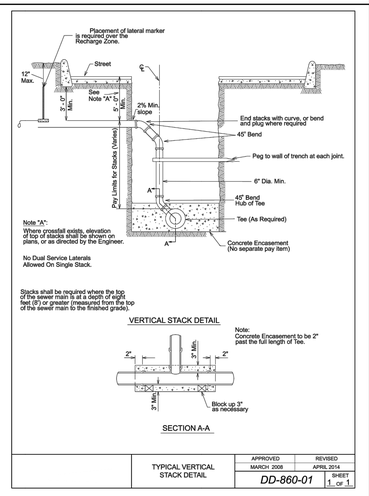
Pipe sections to be blocked and supported similar to the encasement detail shown below (subject to approval).

Note:
All concrete encasement shall be poured at a plane 6" above the pipe between excavated trench walls.

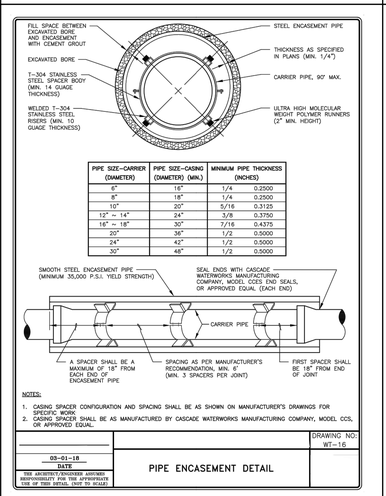
To be used whenever trench width is greater than two feet (2') plus O.D.

Note: All details apply to both water or sewer pipe.

	APPROVED	REVISED
TYPICAL CONCRETE DETAILS		
	DD-858-02	SHEET 1 OF 1



	APPROVED	REVISED
TYPICAL VERTICAL STACK DETAIL		
	DD-860-01	SHEET 1 OF 1

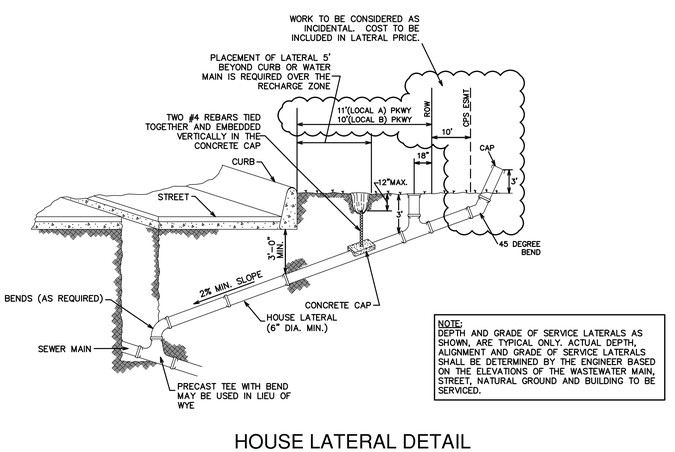


PIPE SIZE--CARRIER (DIAMETER)	PIPE SIZE--CASING (DIAMETER) (MIN.)	MINIMUM PIPE THICKNESS (INCHES)	
6"	16"	1/4	0.2500
8"	18"	1/4	0.2500
10"	20"	5/16	0.3125
12" -- 14"	24"	3/8	0.3750
16" -- 18"	30"	7/16	0.4375
20"	36"	1/2	0.5000
24"	42"	1/2	0.5000
30"	48"	1/2	0.5000

NOTES:
1. CASING SPACER CONFIGURATION AND SPACING SHALL BE AS SHOWN ON MANUFACTURER'S DRAWINGS FOR SPECIFIC WORK.
2. CASING SPACER SHALL BE AS MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING COMPANY, MODEL CCS, OR APPROVED EQUAL.

	DRAWING NO:
03-01-16 DATE	PIPE ENCASEMENT DETAIL
THIS ARCHITECT/ENGINEER ASSUMES NO RESPONSIBILITY FOR USE OF SPECIFICATIONS OTHER THAN THOSE PREPARED BY THIS OFFICE.	WT-16

WORK TO BE CONSIDERED AS INCIDENTAL. COST TO BE INCLUDED IN LATERAL PRICE.



NOTE:
DEPTH AND GRADE OF SERVICE LATERALS AS SHOWN, ARE TYPICAL ONLY. ACTUAL DEPTH, ALIGNMENT AND GRADE OF SERVICE LATERALS SHALL BE DETERMINED BY THE ENGINEER BASED ON THE ELEVATIONS OF THE WASTEWATER MAIN, STREET, NATURAL GROUND AND BUILDING TO BE SERVICED.

HOUSE LATERAL DETAIL

NOT-TO-SCALE

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
5-28-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

SANITARY SEWER DETAILS

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C5.10

Date: May 28, 2024, 3:50pm User ID: crodriguez
File: P:\11\00\26\Design\Civil\SSDT-11100026.dwg

CITY OF LYTLE CONSTRUCTION NOTES

(LAST REVISED JULY 2017)

CITY OF LYTLE GENERAL SECTION

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE CITY OF LYTLE AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:

   A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER"; TAC TITLE 30 PART 1 CHAPTER 290.
   B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
   C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION".
   D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
   E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).

2. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY CITY OF LYTLE CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.

3. THE CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS WEBSITE, HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN THE DESIGN PLANS.

4. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE CITY OF LYTLE CONSTRUCTION INSPECTION DIVISION ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.

5. LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO THE CITY OF LYTLE.

6. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1–2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES. REQUESTING PIPE LOCATION MARKERS ON CITY OF LYTLE FACILITIES FACILITIES. THE FOLLOWING CONTACT INFORMATION IS SUPPLIED FOR VERIFICATION PURPOSES:

   • TEXAS STATE WIDE ONE CALL LOCATOR 1–800–545–6005 OR 811

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.

8. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR ATASCOSA COUNTY RIGHT–OF–WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.

9. THE CONTRACTOR SHALL COMPLY WITH CITY OF LYTLE OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.

10. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100–YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.

11. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM CITY OF LYTLE WORK ON CITY OF LYTLE RECOGNIZED HOLIDAYS.

    WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE CITY OF LYTLE INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK.

    ANY AND ALL CITY OF LYTLE UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.

12. COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE CITY OF LYTLE INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12–INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

13. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO CITY OF LYTLE CONSTRUCTION INSPECTION DIVISION.

CITY OF LYTLE SEWER NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:

   A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY THE CITY OF LYTLE PUBLIC WORKS DIRECTOR IMMEDIATELY AT (830) 709–3692. PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.
   B. ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
   C. CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
   D. CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
   E. CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.
   F. MEET ALL POST–SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISING THE AFFECTED SEWER MAINS (AT CITY OF LYTLE DIRECTION) WITHIN 24 HOURS.

   SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO CITY OF LYTLE SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY CITY OF LYTLE, INCLUDING ANY FINES FROM EPA, TCEQ AND/OR ANY OTHER FEDERAL, STATE OR LOCAL AGENCIES.

   NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND SAWS.

2. IF BYPASS PUMPING IS REQUIRED, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING".

3. PRIOR TO TIE–INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE CITY OF LYTLE PUBLIC WORKS DEPARTMENT AT 830.709.3692 AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE–INS; THIS IS AT NO ADDITIONAL COST TO THE CITY OF LYTLE OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.

4. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241, TAC 217.53 AND TCEQ 290.44(E)(4)(B). CONTRACTOR SHALL CENTER A 20' JOINT OF 160 PSI PRESSURE RATED PVC AT THE PROPOSED WATER CROSSING.

5. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS. (NSPI)

6. SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER: ALL SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, RECYCLED WATER, PETROLEUM PRODUCTS, OR CHEMICALS MUST BE REPORTED IMMEDIATELY TO THE CITY OF LYTLE INSPECTOR ASSIGNED TO THE COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP). THIS REQUIREMENT APPLIES TO EVERY SPILL, OVERFLOW, OR DISCHARGE REGARDLESS OF SIZE.

7. MANHOLE AND ALL PIPE TESTING (INCLUDING THE TV INSPECTION) MUST BE PERFORMED AND PASSED PRIOR TO FINAL FIELD ACCEPTANCE BY THE CITY OF LYTLE PUBLIC WORKS DEPARTMENT, AS PER THE SAWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.

8. ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

PROJECT SEWER NOTES

1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO 10' PAST THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2" X 4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. NO SEPARATE PAY ITEM.
2. CONTRACTOR TO INSTALL PERMANENT MARKERS AT THE END OF ALL SEWER LATERALS, PER LATERAL DETAIL.
3. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
4. ALL 6" SEWER LATERALS WILL BE SET AT 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
5. WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9 FOOT OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 150 PSI (MIN) PRESSURE PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
6. CONTRACTOR SHALL ENSURE THAT MANHOLES OUTSIDE OF PAVED AREAS ARE SET WITH TOP ELEVATIONS 6" ABOVE FINISHED GRADE WITH CONCRETE RING ENCASEMENT.
7. ALL SEWER PIPES SHALL BE 8" AND 12" PVC (SDR 26), UNLESS OTHERWISE NOTED.
8. CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
9. CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. ANY FENCE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
10. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
11. CONCRETE RING ENCASEMENT TO BE INSTALLED ON ALL MANHOLES AND, WITHIN LIMITS OF PAVEMENT, BE INSTALLED TO THE TOP OF THE BASE LAYER WITH A MINIMUM OF 2" OF ASPHALT ON TOP OF THE RING ENCASEMENT.
12. MANHOLE OPENING INCREASED TO 30" AS PER TAC CHAPTER 217.55.
13. ALL SEWER PIPE LATERALS SHALL BE SDR 26 (CLASS 160) PVC PIPE.
14. IF THE GIVEN TOP OF MANHOLE ELEVATION DOES NOT AGREE ON ACTUAL GROUND SURFACE OR FINISH PAVEMENT, THE CONTRACTOR SHALL ADJUST ELEVATIONS SUCH THAT THE TOP OF MANHOLE SHALL BE 0.5' ABOVE EXISTING GROUND, OR FLUSH TO FINISH ASPHALT PAVEMENT.
15. ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHOULD BE WATERTIGHT.

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
11-13-23

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

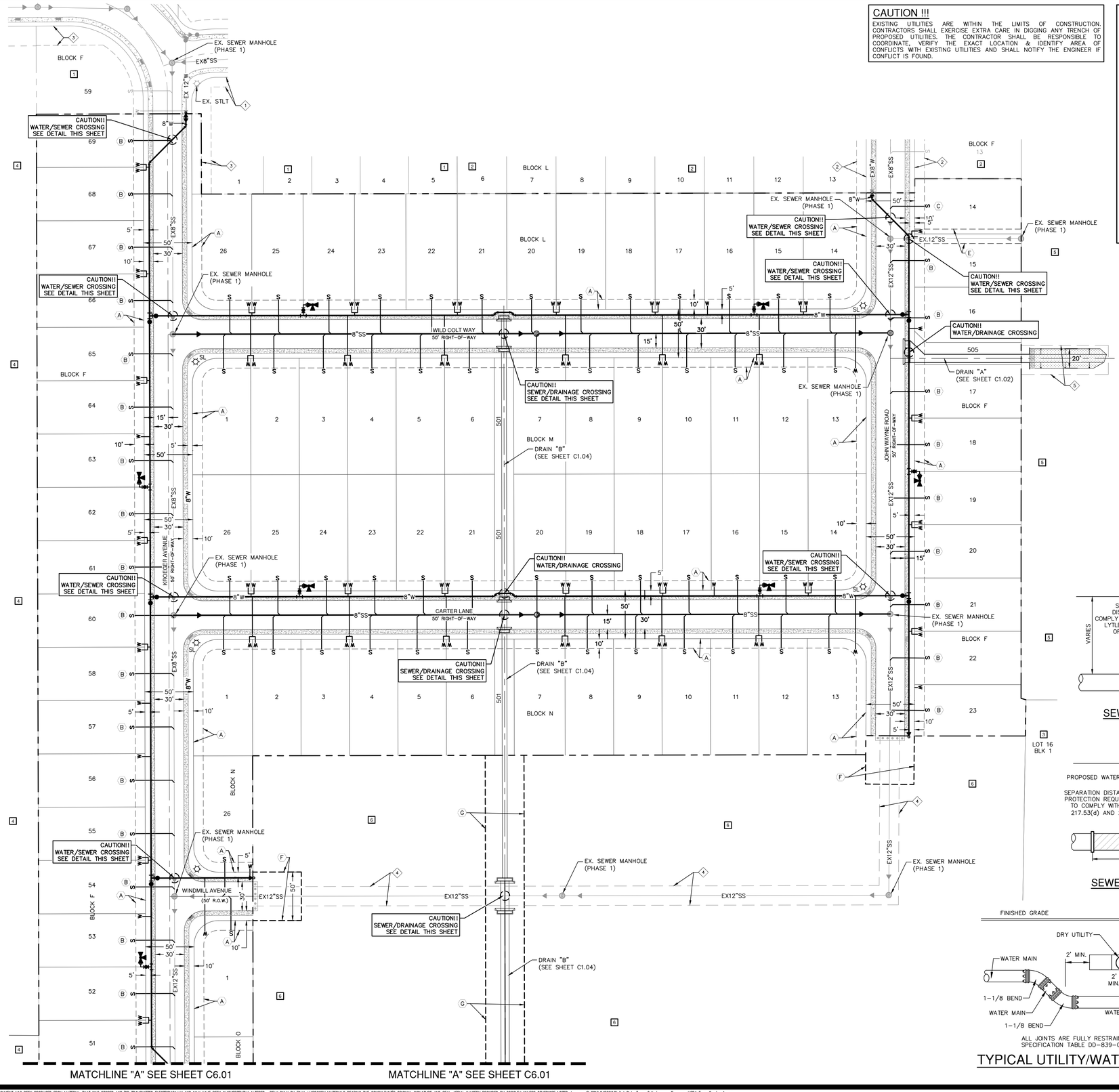
SANITARY SEWER NOTES

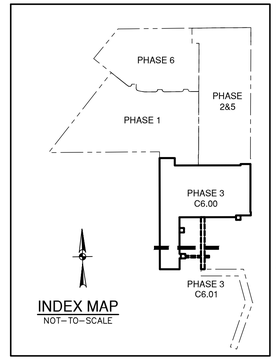
PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C5.11

Date: Nov 13, 2023, 4:14pm User ID: JForics
File: P:\11\00\26\Design\Civil\SS03-1100026.dwg

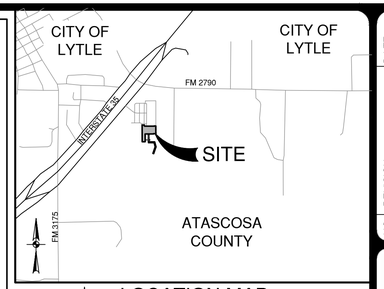
CAUTION !!!

EXISTING UTILITIES ARE WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH OF PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.





INDEX MAP
NOT-TO-SCALE



LOCATION MAP
NOT-TO-SCALE

0' 50' 100' 150'
SCALE: 1" = 50'

UTILITY LEGEND

- PROJECT LIMITS
- EXISTING WATER — EX.8"W
- EXISTING SEWER — EX.8"SS
- PROPOSED SEWER — MANHOLE — 8"SS
- PROPOSED WATER — FIRE HYDRANT — 8"W
- PROPOSED WYE & LATERAL
- PROPOSED WYE FOR FUTURE UNIT (CAPPED)
- SINGLE WATER SERVICE
- DUAL WATER SERVICE
- PROPOSED STREET LIGHT (100 WATT SINGLE ARM) — SL
- UTILITY CROSSING

KEY LEGEND

(A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

(B) CONTRACTOR TO INSTALL SERVICE LATERAL USING LATERAL SADDLE ONTO EXISTING MAIN (SADDLE RIDGE ESTATES PHASE 1 [DOC NO. 202100013, PGS. 375-B, 376-A])

(C) CONTRACTOR TO INSTALL SERVICE LATERAL USING LATERAL SADDLE ONTO EXISTING MAIN (SADDLE RIDGE ESTATES PHASE 2 & 5 [FUTURE CONSTRUCTION])

(E) 15' SANITARY SEWER EASEMENT

(F) 50'X50' WATER, SEWER, GRADING AND DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. (OFF-LOT)

(G) 40' OFF-SITE DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W./LOT (OFF-LOT)

(1) EXISTING 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202100013, OPR)

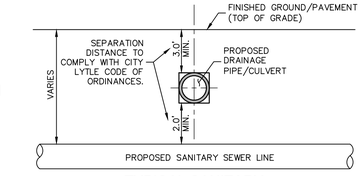
(2) EXISTING 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202300030 OPR)

(3) EXISTING VARIABLE WIDTH (MIN. 10') GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (DOC. NO. 202100013, OPR)

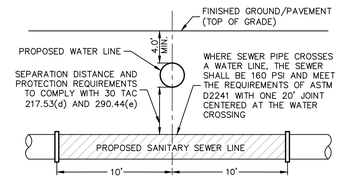
(4) EXISTING 20' TEMPORARY SANITARY SEWER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED RIGHT-OF-WAY/LOTS (DOC NO. 216135, OPR)

(5) EXISTING 30' PERMANENT DRAINAGE EASEMENT (DOC NO. 227383, O.P.R.)

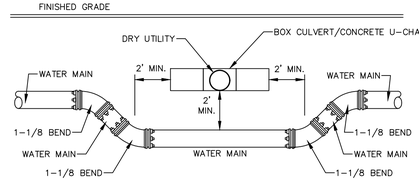
1. SADDLE RIDGE ESTATES, PHASE 1 (DOC. NO. 202100013 OPR)
2. SADDLE RIDGE ESTATES, PHASE 2&5 (DOC. NO. 202300030 OPR)
3. MEADOWBROOK ESTATES, UNIT 3 (VOL. 1, PG. 193A DPR)
4. ABBE FAMILY - 59.50 ACRE TRACT (VOL. 24, PGS. 130-133, OPR)
5. EXCELITE DEVELOPMENT 87.855 ACRE TRACT (DOC. NO. 222827)
6. SADDLE RIDGE ESTATES PHASE 4 (CONCURRENT GRADING & FUTURE PLATTING) REMAINDER OF 27.635 ACRE TRACT SAN ANTONIO LD, LLC. NO. 217149, O.P.R.)
7. CITY OF LYTLE 61.582 ACRE TRACT (VOL. 424, PGS. 406-409 DR)



TYPICAL SANITARY SEWER/DRAIN CROSSING DETAIL
NOT-TO-SCALE



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE



ALL JOINTS ARE FULLY RESTRAINED IN ACCORDANCE WITH SPECIFICATION TABLE DD-839-06. SEE SHEET C4.10

TYPICAL UTILITY/WATER CROSSING DETAIL
NOT-TO-SCALE

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

TRENCH EXCAVATION SAFETY PROTECTION:

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

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

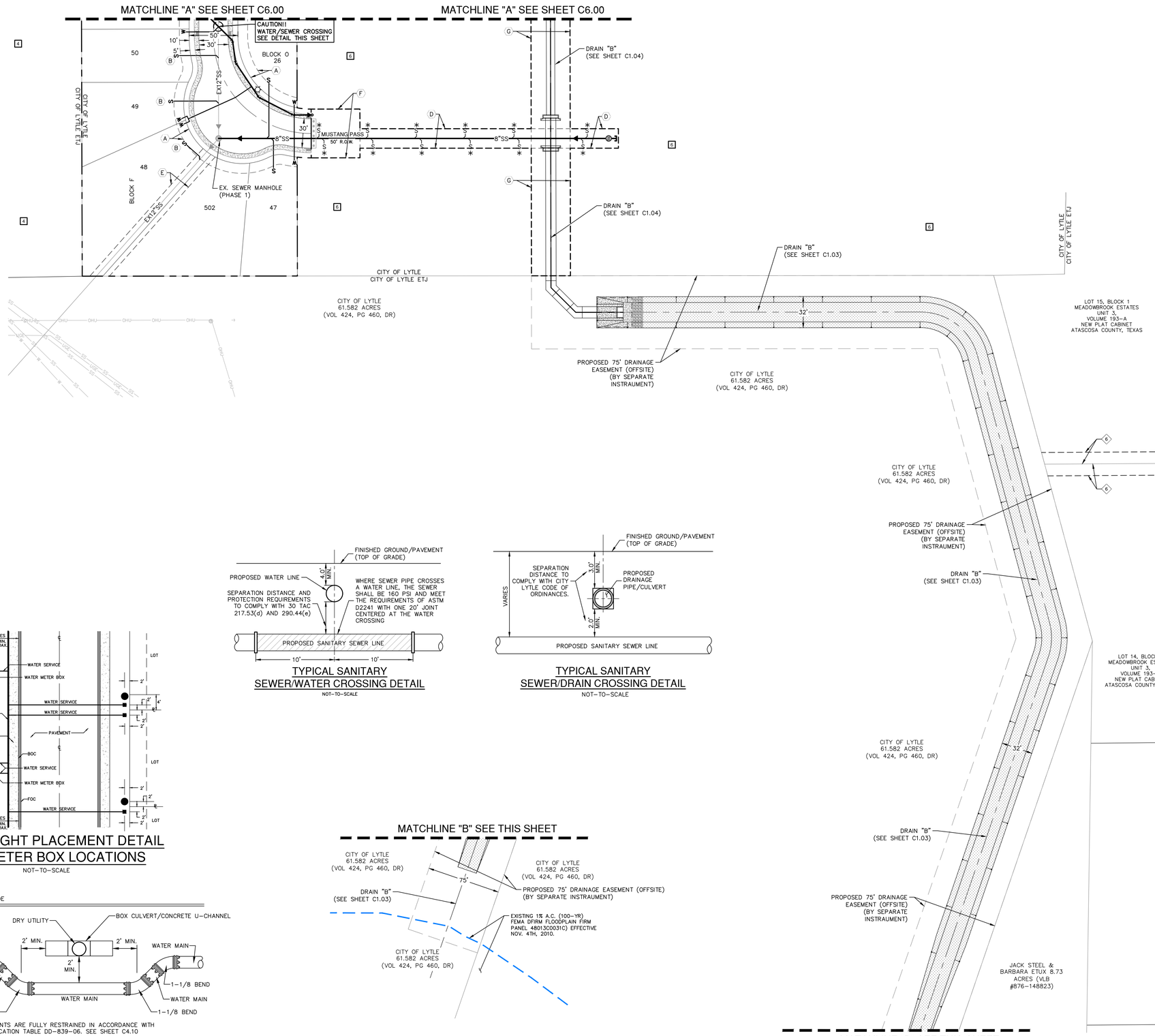
SADDLE RIDGE ESTATES PHASE 3

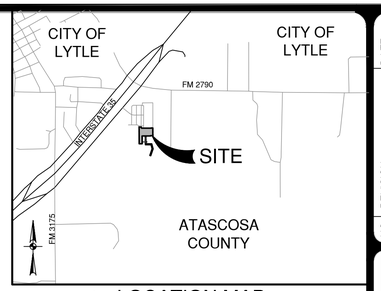
LYTLE, TEXAS

OVERALL UTILITY PLAN

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C6.00

Date: Sep 09, 2024, 3:40pm User ID: JForics
File: P:\111\00\26\Design\Civil\UTIOA-1110026.dwg





LOCATION MAP

NOT-TO-SCALE

0' 50' 100' 150'

SCALE: 1"= 50'

UTILITY LEGEND

- PROJECT LIMITS
- EXISTING WATER — EX.8"W
- EXISTING SEWER — EX.8"SS
- PROPOSED SEWER — MANHOLE — 8"SS
- PROPOSED WATER — FIRE HYDRANT — 8"W
- PROPOSED WYE & LATERAL — S
- PROPOSED WYE FOR FUTURE UNIT (CAPPED) — S*
- SINGLE WATER SERVICE — W
- DUAL WATER SERVICE — W W
- PROPOSED STREET LIGHT (100 WATT SINGLE ARM) — SL
- UTILITY CROSSING

KEY LEGEND

- (A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT
- (D) 20' SANITARY SEWER EASEMENT (OFF-LOT)
- (E) 15' SANITARY SEWER EASEMENT
- (F) 50'X50' WATER, SEWER, GRADING AND DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. (OFF-LOT)
- (G) 40' OFF-SITE DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W./LOT (OFF-LOT)
- (6) EXISTING 12' ELEC., TEL., & CATV ESMT. (VOL. 193-A NEW PLAT CABINET, ATASCOSA COUNTY, TEXAS
- [3] MEADOWBROOK ESTATES, UNIT 3 (VOL. 1, PG. 193A DPR)
- [4] ABBE FAMILY – 59.50 ACRE TRACT (VOL. 24, PGS. 130-133, OPR)
- [6] EXCELITE DEVELOPMENT 87.855 ACRE TRACT (DOC. NO. 222827)
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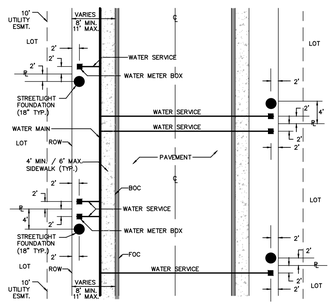


STREETLIGHT PLACEMENT DETAIL FOR METER BOX LOCATIONS

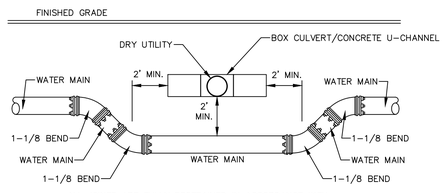
NOT-TO-SCALE

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

TYPICAL SANITARY SEWER/DRAIN CROSSING DETAIL

NOT-TO-SCALE



TYPICAL UTILITY/WATER CROSSING DETAIL

NOT-TO-SCALE

CAUTION !!!

EXISTING UTILITIES ARE WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH OF PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

CAUTION!!

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NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
Jon Adame 9-9-24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

OVERALL UTILITY PLAN

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CR
CHECKED JA DRAWN JF
SHEET C6.01

Date: Sep 09, 2024, 2:18pm User ID: JForbis
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CAUTION !!!

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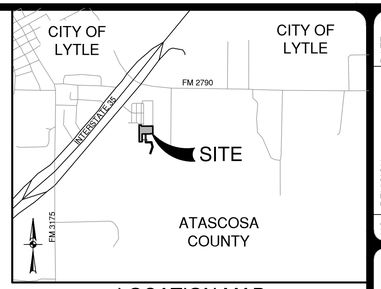
SWP3 MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION

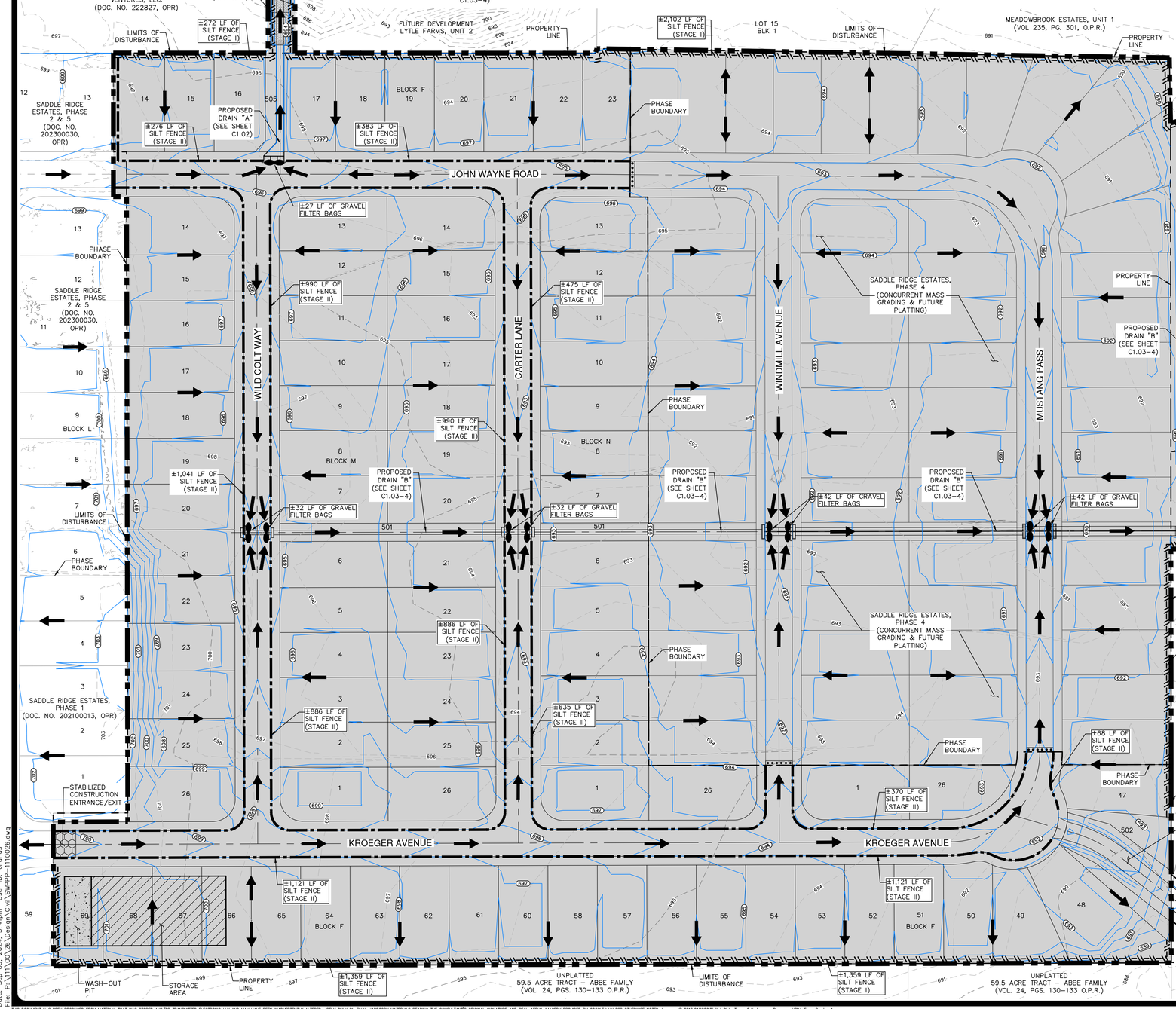


LOCATION MAP

NOT-TO-SCALE

SCALE: 1"= 60'

0' 60' 120' 180'



SWPPP LEGEND

- PROJECT LIMITS
- EXISTING CONTOUR — 976
- PROPOSED CONTOUR — 970
- EX. 100-YR FLOODPLAIN (DFIRM)
- FLOW ARROW
- SILT FENCE (STAGE I) – ±4,829 LF (CIVIL CONSTRUCTION)
- SILT FENCE (STAGE II) – ±6,245 LF (HOME CONSTRUCTION)
- ROCK BERM – ±136 LF
- GRAVEL FILTER BAGS – ±175 LF
- LIMITS OF DISTURBED AREA (±29.73 AC)
- STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)
- CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)
- CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)

GENERAL NOTES

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.

3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.

4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.

5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.

6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.

7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.

8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.

9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS.

10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.

11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.

12. WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP.

13. SHADED AREA ▭ DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.

14. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TXDOT RIGHT-OF-WAY WITH TXDOT.

15. CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES–STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 1

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED
PROFESSIONAL ENGINEER
9-9-24

PAPE-DAWSON ENGINEERS
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

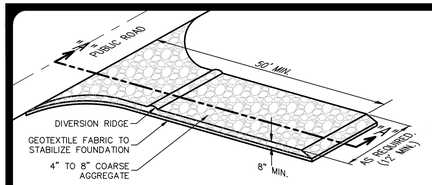
SADDLE RIDGE ESTATES PHASE 3

LYTLE, TEXAS

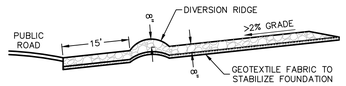
STORM WATER POLLUTION PREVENTION PLAN

PLAT NO. -
JOB NO. 11100-26
DATE FEBRUARY 2024
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C8.00

Date: Sep 09, 2024, 3:41pm User ID: JFarias
File: P:\1111\00\26\Design\Civil\SWPPP-11100026.dwg



SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT



SECTION "A-A" OF A CONSTRUCTION ENTRANCE/EXIT

MATERIALS

1. THE AGGREGATE SHOULD CONSIST OF 4–INCH TO 8–INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.

2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8–INCHES.

3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD², A MULLEN BURST RATING OF 140 LB/IN², AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.

4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4–INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION

1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.

2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.

3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.

4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6–INCHES TO 8–INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.

5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.

6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.

7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.

8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

COMMON TROUBLE POINTS

1. INADEQUATE RUNOFF CONTROL–SEDIMENT WASHES ONTO PUBLIC ROAD.

2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.

3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC–EXTEND PAD BEYOND THE MINIMUM 50–FOOT LENGTH AS NECESSARY.

4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.

5. UNSTABLE FOUNDATION – USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES

1. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.

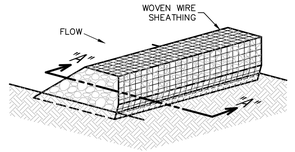
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF–WAY.

4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

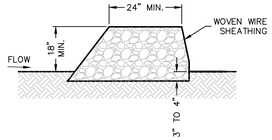
5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT–TO–SCALE



ISOMETRIC PLAN VIEW



SECTION "A-A"

ROCK BERMS

THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT–LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE. AS SUCH, ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.

2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.

3. REPAIR ANY LOOSE WIRE SHEATHING.

4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.

5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

MATERIALS

1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.

2. CLEAN, OPEN GRADED 3–INCH TO 5–INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5–INCH TO 8–INCH DIAMETER ROCKS MAY BE USED.

INSTALLATION

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.

2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.

3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 18".

4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.

5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.

6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

COMMON TROUBLE POINTS

1. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).

2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).

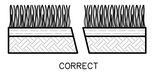
ROCK BERM DETAIL

NOT–TO–SCALE

LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.

BUTTING – ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED CORRECTLY.

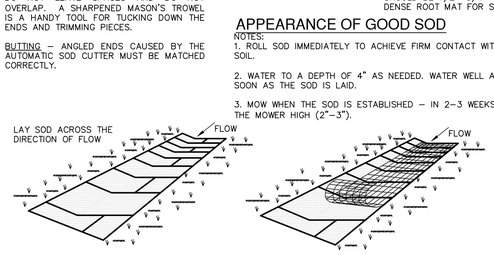
APPEARANCE OF GOOD SOD



NOTES:
1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

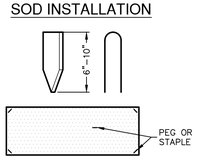
2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

3. MOW WHEN THE SOD IS ESTABLISHED – IN 2–3 WEEKS. SET THE MOWER HIGH (2"–3").



IN CRITICAL AREAS, SECURE SOD WITH NETTING. USE STAPLES.

SOD INSTALLATION



USE PEGS OR STAPLES TO FASTEN SOD FIRMLY – AT THE ENDS OF STRIPS AND IN THE CENTER, OR EVERY 3–4 FEET IF THE STRIPS ARE LONG. WHEN READY TO MOW, DRIVE PEGS OR STAPLES FLUSH WITH THE GROUND.

MATERIALS

1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH (± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SHOOT GROWTH AND THATCH.

2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%. TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.

3. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.

4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

SITE PREPARATION

1. PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.

2. THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

3. FERTILIZE ACCORDING TO SOIL TESTS. FERTILIZER NEEDS CAN BE DETERMINED BY A SOIL TESTING LABORATORY OR REGIONAL RECOMMENDATIONS CAN BE MADE BY COUNTY AGRICULTURAL EXTENSION AGENTS. FERTILIZER SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

INSTALLATION IN CHANNELS

1. SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY (SEE FIGURE ABOVE).

2. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL AREAS.

GENERAL INSTALLATION (VA. DEPT. OF CONSERVATION, 1992)

1. SOD SHOULD NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER. SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN.

2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND REDUCE ROOT BURNING AND DIEBACK.

3. THE FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH OTHER. LATERAL JOINTS SHOULD BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHOULD BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS (SEE FIGURE ABOVE).

4. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM, SOD SHOULD BE LAID WITH STAGGERED JOINTS AND SECURED BY STAPLING OR OTHER APPROVED METHODS. SOD SHOULD BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON CONTOUR).

5. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, SOD SHOULD BE ROLLED OR TAMPED TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL.

6. AFTER ROLLING, SOD SHOULD BE IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 INCHES BELOW THE SOD IS THOROUGHLY WET.

7. UNTIL SUCH TIME A GOOD ROOT SYSTEM BECOMES DEVELOPED, IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHOULD BE PERFORMED AS OFTEN AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4 INCHES.

8. THE FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY ROOTED, USUALLY 2–3 WEEKS. NOT MORE THAN ONE THIRD OF THE GRASS LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.

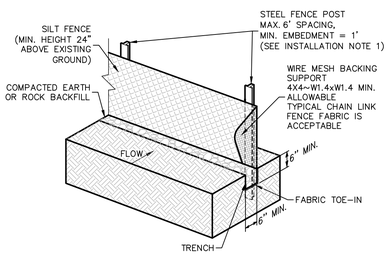
INSPECTION AND MAINTENANCE GUIDELINES

1. SOD SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.

2. DAMAGE FROM STORMS OR NORMAL CONSTRUCTION ACTIVITIES SUCH AS TIRE RUTS OR DISTURBANCE OF SWALE STABILIZATION SHOULD BE REPAIRED AS SOON AS PRACTICAL.

SOD INSTALLATION DETAIL

NOT–TO–SCALE



ISOMETRIC PLAN VIEW

SILT FENCE

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

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

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

MATERIALS

1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ./YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.

2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y–BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS EXCEEDING 140.

3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1–FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.

2. LAY OUT FENCING DOWN–SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.

3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN–SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

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

6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

COMMON TROUBLE POINTS

1. FENCE NOT INSTALLED ALONG THE CONTOUR CAUSING WATER TO CONCENTRATE AND FLOW OVER THE FENCE.

2. FABRIC NOT SEATED SECURELY TO GROUND (RUNOFF PASSING UNDER FENCE).

3. FENCE NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND SIDES).

4. FENCE TREATING TOO LARGE AN AREA, OR EXCESSIVE CHANNEL FLOW (RUNOFF OVERTOPS OR COLLAPSES FENCE).

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL.

2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

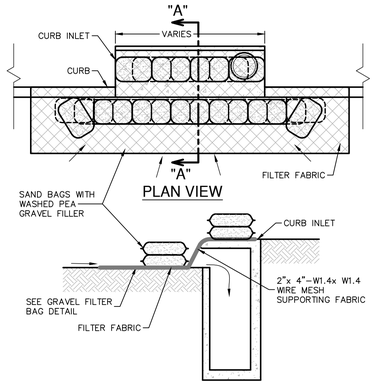
3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

4. REPLACE OR REPAIR SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.

5. WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.

SILT FENCE DETAIL

NOT–TO–SCALE



PLAN VIEW

SECTION "A-A"

GENERAL NOTES

1. CONTRACTOR TO INSTALL 2"x4"–W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE GUTTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.

2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

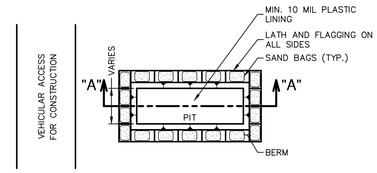
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.

4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.

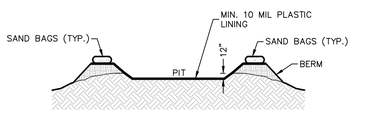
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT–TO–SCALE



PLAN VIEW



SECTION "A-A"

GENERAL NOTES

1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.

2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.

3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.

4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.

5. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

MATERIALS

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

MAINTENANCE

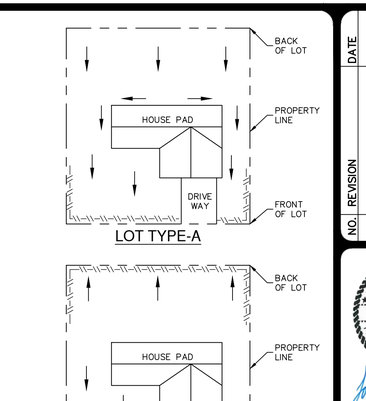
1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.

2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.

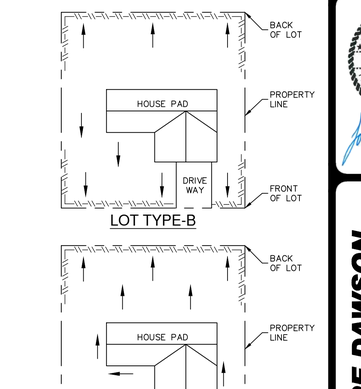
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

CONCRETE TRUCK WASHOUT PIT DETAIL

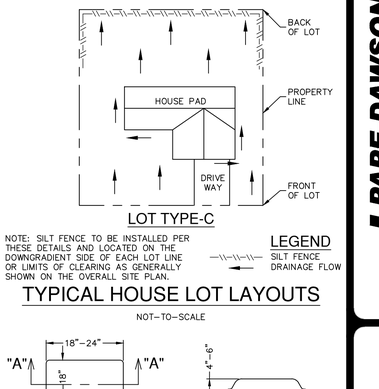
NOT–TO–SCALE



LOT TYPE-A



LOT TYPE-B



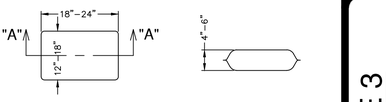
LOT TYPE-C

NOTE: SILT FENCE TO BE INSTALLED PER THESE DETAILS AND LOCATED ON THE DOWNGRADIENT SIDE OF EACH LOT LINE OR LIMITS OF CLEARING AS GENERALLY SHOWN ON THE OVERALL SITE PLAN.

LEGEND
SILT FENCE
DRAINAGE FLOW

TYPICAL HOUSE LOT LAYOUTS

NOT–TO–SCALE



PLAN VIEW

SECTION "A-A"

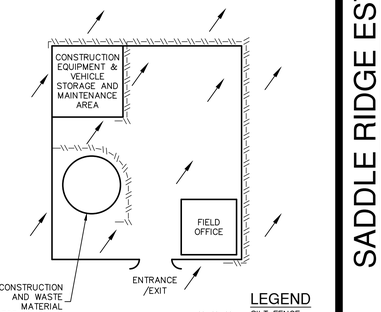
NOTES:
1. THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.

2. THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).

3. SAND SHALL NOT BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT–TO–SCALE



CONSTRUCTION STAGING AREA

NOT–TO–SCALE

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES–STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 2

NO.	REVISION	DATE

STATE OF TEXAS
JON D. ADAME
82567
LICENSED PROFESSIONAL ENGINEER
11-13-23

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SADDLE RIDGE ESTATES PHASE 3
LYTLE, TEXAS

STORM WATER POLLUTION PREVENTION DETAILS

PLAT NO. -
JOB NO. 11100-26
DATE NOVEMBER 2023
DESIGNER CB
CHECKED CR DRAWN CR
SHEET C8.10

Date: Nov 13, 2023, 3:35pm User ID: JForbis
File: P:\111\00\26\Design\Civil\SWPPP-11100026.dwg