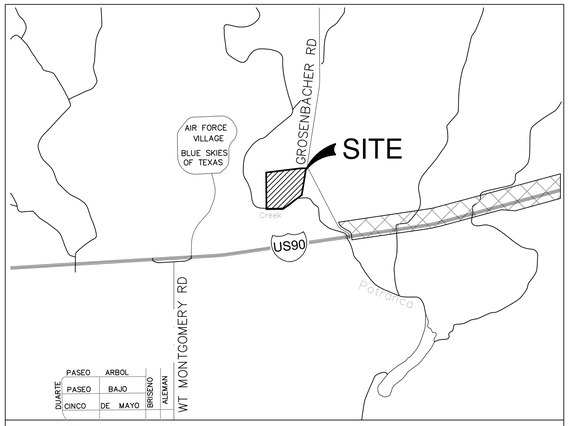
CONSTRUCTION PLANS

FOR

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS



LOCATION MAP
NOT-TO-SCALE

SAN ANTONIO CITY LIMITS

ENGINEER:

CDS MUERY
ATTN: BRIAN CROWELL, P.E.
100 NE LOOP 410, STE. 300
SAN ANTONIO, TEXAS 78216
TEL: (210) 581-1111
FAX: (210) 581-5555

OWNER/DEVELOPER:

PATRICK FLANAGIN, CONTROLLER
MEDINA VILLAGE, LLC
4007 McCULLOUGH AVE, SUITE 231
SAN ANTONIO, TX 78212

BENCHMARK INFORMATION		
NO.	DESCRIPTION	ELEVATION
TBM #1 PNT#2784 N: 13688791.76 E: 2055689.94	CHISELED "□" ON THE SOUTHWEST SIDE OF CONCRETE HEADWALL OF A CONCRETE WATER DRAIN, ON THE NORTHEAST RIGHT-OF-WAY OF GROSENBACHER ROAD,	709.85
TBM #2 PNT#6000 N: 13687927.97 E: 2054861.14	CHISELED "□" ON THE NORTH SIDE OF A CONCRETE MANHOLE.	693.08

SITE INFORMATION:

BEING A TOTAL OF 21.095 ACRES, LYING IN THE T.S. COOKE SURVEY 65 1/4, COUNTY BLOCK 4342, ABSTRACT 1076, BEXAR COUNTY TEXAS, SAME BEING ALL OF A 20.53 ACRE TRACT OF LAND DESCRIBED IN DEED TO CARLOS MEDINA JR. AND PORFIRIA MEDINA AND RECORDED IN VOL. 8307, PG. 596 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS.

OVERALL SITE MAP



CIVIL SHEET INDEX	
SHT NO.	TITLE
C0.0	COVER SHEET
C1.0	SUBDIVISION PLAT
C1.1	SUBDIVISION PLAT
C2.0	STORMWATER POLLUTION PREVENTION PLAN
C2.1	STORMWATER POLLUTION PREVENTION DETAILS
C2.2	GRADING PLAN
C2.2A	GRADING PLAN
C3.0	UTILITY COVER SHEET
C3.1	UTILITY PLAN
C3.2	FINAL CPS DESIGN
C3.3	FINAL CPS DESIGN
C4.0	SANITARY SEWER COVER SHEET
C4.1	SANITARY SEWER GENERAL NOTES
C4.2	OVERALL SANITARY SEWER PLAN
C4.3	SANITARY SEWER LINE A
C4.4	SANITARY SEWER LINE B
C4.5	SANITARY SEWER LINE C
C4.6	SANITARY SEWER LINE D
C4.7	SANITARY SEWER LINE E
C5.0	WATER COVER SHEET
C5.1	WATER GENERAL NOTES
C5.2	WATER PLAN
C5.3	WATER LINE BORE PLAN
C6.0	STREET COVER SHEET
C6.1	STREET SIGNAGE AND PAVEMENT MARKINGS
C6.2	SAN ANTONIO SIGN DETAILS
C6.3	TxDOT SIGN DETAILS
C6.4	BEXAR COUNTY SIGN DETAILS
C6.5	BROOKHAVEN WOODS
C6.6	ELMWOOD BROOK
C6.7	CANTABRIA SPRINGS
C6.8	WILDROSE PASS
C6.9	SPICEWOOD RUN
C6.10	DRAIN A
C6.11	DRAIN A DETAILS
C6.11A	DRAIN A DETAILS
C6.12	DRAIN B P&P
C6.13	DRAIN C P&P
C6.14	DETENTION POND
C6.15	DETENTION POND OUTFLOW
C6.16	DEVELOPER SIDEWALK PLAN
C6.17	STANDARD STREET DETAILS I
C6.18	STANDARD STREET DETAILS II
C6.19	STANDARD STREET DETAILS III
C7.0	TREE PRESERVATION COVER SHEET
C7.1	TREE PRESERVATION PLAN
C7.2	TREE PRESERVATION PLAN
C7.3	TREE TABLES
C7.4	TREE TABLES
C7.5	TREE PRESERVATION DETAILS

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

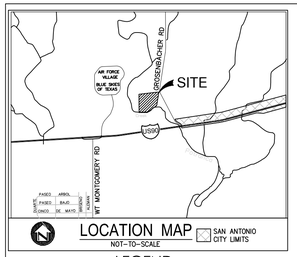
PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
COVER SHEET

SHEET C0.0

Date: Oct 13, 2025, 2:53pm User ID: joe.marcos
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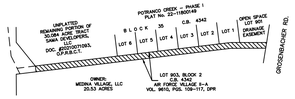


LOCATION MAP
NOT-TO-SCALE

SAN ANTONIO CITY LIMITS

LEGEND

AC	ACRE(S)	ROW	RIGHT-OF-WAY
BLK	BLOCK	VAR WD	VARIABLE WIDTH
BSL	BUILDING SETBACK LINE	VNAE	VEHICULAR NON-ACCESS EASEMENT
CATV	CABLE TELEVISION	℄	STREET CENTERLINE
CB	COUNTY BLOCK	OPR	OFFICIAL PUBLIC RECORDS (OFFICIAL PUBLIC RECORDS OF REAL PROPERTY) OF BEXAR COUNTY, TEXAS
DED	DEDICATION		
DOC	DOCUMENT NUMBER		
DPRBC	DEED & PLAT RECORDS OF BEXAR COUNTY, TEXAS		
ESMT	EASEMENT	○	SET 1/2" IRON ROD WITH PLASTIC CAP STAMPED "CDS/MUERY S.A. TX." (UNLESS OTHERWISE NOTED.)
ETJ	EXTRATERRITORIAL JURISDICTION		
VOL	VOL.		
PG	PG.(S)		FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
1140	EXISTING CONTOURS	(SURVEYOR)	
		"SARA BAM"	SAN ANTONIO RIVER AUTHORITY BEST AVAILABLE MODEL



AREA BEING REPLATTED THROUGH PUBLIC HEARING WITH WRITTEN NOTIFICATION

SCALE: 1"= 300'

0.547 ACRES BEING REPLATTED WAS PREVIOUSLY PLATTED ON PLAT AIR FORCE VILLAGE II-A, RECORDED IN VOL. 9610, PGS. 109-117, OF THE PLAT RECORDS OF BEXAR COUNTY, TEXAS, AS A VARIABLE WIDTH ACCESS EASEMENT

STATE OF TEXAS)
COUNTY OF BEXAR)

I (WE), THE OWNER(S) OF THE PROPERTY SHOWN ON THIS REPLAT HEREBY CERTIFY THAT THIS REPLAT DOES NOT AMEND OR REMOVE ANY COVENANTS OR RESTRICTIONS. I (WE) FURTHER CERTIFY THAT THE AREA OF THIS REPLAT WAS DESIGNATED OR RESERVED FOR OTHER THAN SINGLE OR DUPLEX FAMILY RESIDENTIAL USE BY NOTATION ON THE LAST LEGALLY RECORDED PLAT OR IN THE LEGALLY RECORDED RESTRICTIONS APPLICABLE TO THE PLAT.

OWNER / DEVELOPER:
PATRICK FLANAGIN, CONTROLLER
MEDINA VILLAGE, LLC
4007 McCULLOUGH AVE, SUITE 231
SAN ANTONIO, TX 78212

OWNER'S DULY AUTHORIZED AGENT

SWORN AND SUBSCRIBED BEFORE ME THIS _____ DAY OF

_____, A.D. 20_____.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

SURVEYOR'S NOTES:

1. COORDINATES SHOWN ARE BASED ON TEXAS COORDINATE SYSTEM, NAD 83 (2011) EPOCH: 2010 TEXAS SOUTH CENTRAL ZONE 4204.
2. DISTANCES SHOWN HEREON ARE SURFACE AND COORDINATES SHOWN HEREON ARE GRID.
   SURFACE=GRID X 1.00017
3. MONUMENTATION AS SHOWN. IT IS THE PRACTICE OF COSMUERY TO MONUMENT ALL CORNERS (IF PRACTICAL) IN THE SUBDIVISION WITH 1/2" IRON RODS WITH A YELLOW CAP STAMPED COSMUERY UPON COMPLETION OF CONSTRUCTION.

COUNTY OF BEXAR)

I HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN THIS PLAT TO THE MATTERS OF STREETS, LOTS, AND DRAINAGE LAYOUT. TO THE BEST OF MY KNOWLEDGE THIS PLAT CONFORMS TO ALL THE REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE, EXCEPT FOR THOSE VARIANCES GRANTED BY THE SAN ANTONIO PLANNING COMMISSION.

LICENSED PROFESSIONAL ENGINEER

STATE OF TEXAS)
COUNTY OF BEXAR)

I HEREBY CERTIFY THAT THE ABOVE PLAT CONFORMS TO THE MINIMUM STANDARDS SET FORTH BY THE TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS ACCORDING TO AN ACTUAL SURVEY MADE ON THE GROUND BY: JUSTIN B. MOCZYGEMBA

REGISTERED PROFESSIONAL LAND SURVEYOR

EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
5. 40' SANITARY SEWER & ACCESS EASEMENT
6. VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8. VARIABLE WIDTH TREE SAVE AREA

1. VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109–117, O.P.R.B.C.
2. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3. VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, O.P.R.B.C.
4. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

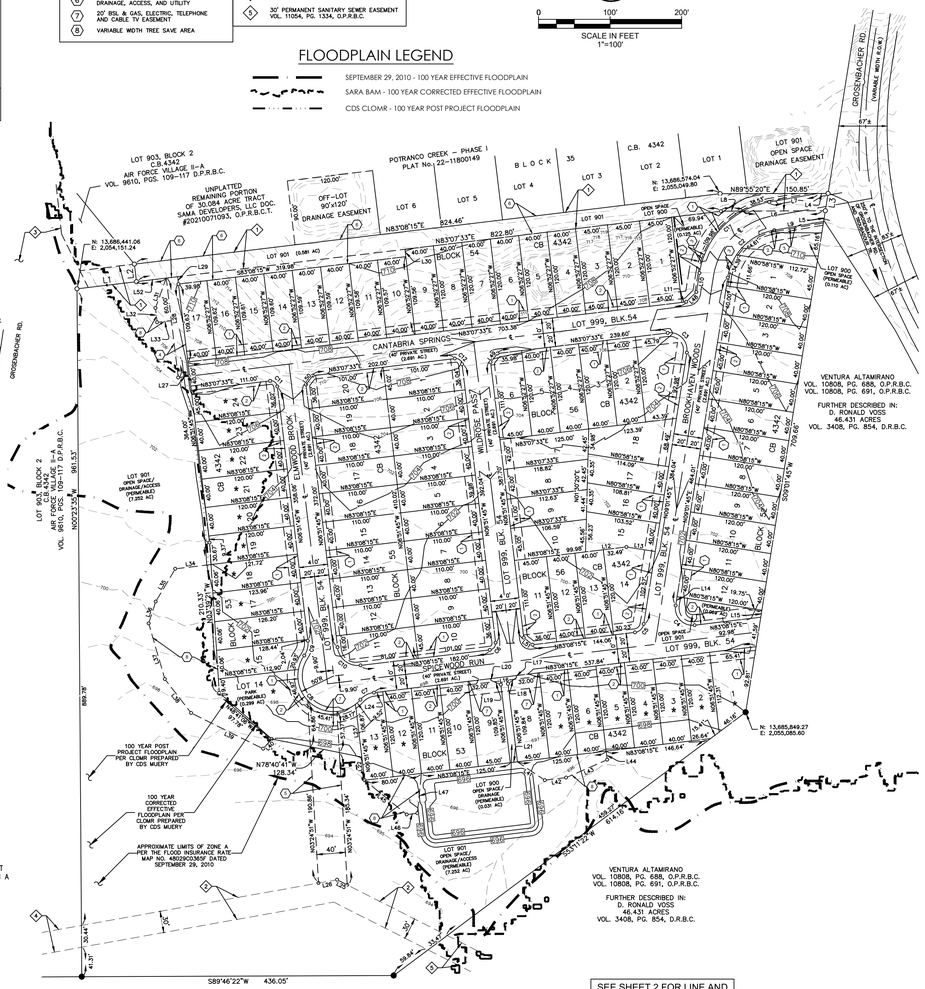
SCALE IN FEET
1"=100'

FLOODPLAIN LEGEND

SEPTEMBER 29, 2010 - 100 YEAR EFFECTIVE FLOODPLAIN

SARA BAM - 100 YEAR CORRECTED EFFECTIVE FLOODPLAIN

CDS CLOMR - 100 YEAR POST PROJECT FLOODPLAIN



SEE SHEET 2 FOR LINE AND CURVE TABLES

PLAT NOTES APPLY TO EVERY PAGE OF THIS MULTIPLE PAGE PLAT.

90 RESIDENTIAL LOTS

SHEET 1 OF 2

PLAT NO. 24-11800321

REPLAT AND SUBDIVISION PLAT
ESTABLISHING
WESTWOOD OAKS
P.U.D.

BEING A TOTAL OF 21.095 ACRES, LYING IN THE T.S. COOKE SURVEY 65 1/4, COUNTY BLOCK 4342, ABSTRACT 1076, BEXAR COUNTY, TEXAS, SAME BEING ALL OF A 20.53 ACRE TRACT OF LAND DESCRIBED IN DEED TO CARLOS MEDINA JR. AND PORFIRIA MEDINA AND RECORDED IN VOL. 8307, PG. 596 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS. AND A PORTION OF 182.249 ACRES AIR FORCE VILLAGE II, INC., RECORDED IN DEED RECORDS DOCUMENT NO. 20240104358, BEXAR COUNTY, TEXAS.

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

DATE OF PREPARATION: August 7, 2024
CDS MUERY JOB 124142.00

STATE OF TEXAS
COUNTY OF BEXAR

THE OWNER OF LAND SHOWN ON THIS PLAT, IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, DEDICATES TO THE USE OF THE PUBLIC, EXCEPT AREAS IDENTIFIED AS PRIVATE OR PART OF AN ENCLAVE OR PLANNED UNIT DEVELOPMENT, FOREVER ALL STREETS, ALLEYS, PARKS, WATERCOURSES, DRAINS, EASEMENTS AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED.

OWNER / DEVELOPER:
PATRICK FLANAGIN, CONTROLLER
MEDINA VILLAGE, LLC
4007 McCULLOUGH AVE, SUITE 231
SAN ANTONIO, TX 78212

STATE OF TEXAS
COUNTY OF BEXAR

BEFORE ME, THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED PATRICK FLANAGIN
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, BEXAR COUNTY, TEXAS

THIS PLAT OF WESTWOOD OAKS P.U.D. HAS BEEN SUBMITTED TO AND CONSIDERED BY THE PLANNING COMMISSION OF THE CITY OF SAN ANTONIO, TEXAS, IS HEREBY APPROVED BY SUCH COMMISSION IN ACCORDANCE WITH STATE OR LOCAL LAWS AND REGULATIONS; AND/OR WHERE ADMINISTRATIVE EXCEPTION(S) AND/OR VARIANCE(S) HAVE BEEN GRANTED.

DATED THIS _____DAY OF_____, A.D. 20 _____.

BY: _____
CHAIRMAN

BY: _____
SECRETARY

CERTIFICATE OF APPROVAL

THE UNDERSIGNED, COUNTY JUDGE OF BEXAR COUNTY, TEXAS AND PRESIDING OFFICER OF THE COMMISSIONERS COURT OF BEXAR COUNTY, DOES HEREBY CERTIFY THAT THE ATTACHED PLAT WAS DULY FILED WITH THE COMMISSIONERS COURT OF BEXAR COUNTY, TEXAS AND THAT AFTER EXAMINATION IT APPEARED THAT SAID PLAT IS IN CONFORMITY WITH THE STATUTES, RULES AND REGULATIONS GOVERNING SAME, AND THIS PLAT WAS APPROVED BY THE SAID COMMISSIONERS COURT.

DATED THIS _____ DAY OF _____ A.D. 20

COUNTY JUDGE, BEXAR COUNTY, TEXAS

COUNTY CLERK, BEXAR COUNTY, TEXAS

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

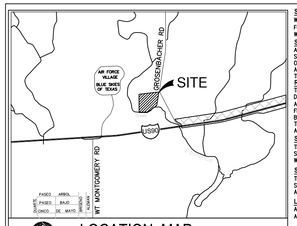
WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS
SUBDIVISION PLAT

SHEET C1.0

Date: Oct 10, 2025, 3:50pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grossenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\Subdivision Plat\124142_C1-0-Subdivision Plat.dwg

Date: Oct 10, 2025, 3:50pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grossenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\Subdivision Plat\124142_C1-0-Subdivision Plat.dwg



LOCATION MAP
NOT-TO-SCALE
SAN ANTONIO CITY LIMITS

LEGEND

AC	ACRE(S)	ROW	RIGHT-OF-WAY
BLK	BLOCK	VAR WID	VARIABLE WIDTH
BSL	BUILDING SETBACK LINE	VNAE	VEHICULAR NON-ACCESS EASEMENT
CATV	CABLE TELEVISION	℄	STREET CENTERLINE
CB	COUNTY BLOCK	OPR	OFFICIAL PUBLIC RECORDS (OFFICIAL PUBLIC RECORDS OF REAL PROPERTY) OF BEXAR COUNTY, TEXAS
DED	DEDICATION		
DOC	DOCUMENT NUMBER		
DPRBC	DEED & PLAT RECORDS OF BEXAR COUNTY, TEXAS		
ESMT	EASEMENT	○	SET 1/2" IRON ROD WITH PLASTIC CAP STAMPED "CDS/MUERY S.A. TX." (UNLESS OTHERWISE NOTED.)
ETJ	EXTRATERRITORIAL JURISDICTION		
VOL	VOL.		
PG	PG.(S)		
— 1140 —	EXISTING CONTOURS	● (SURVEYOR)	FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
		"SARA BAM"	SAN ANTONIO RIVER AUTHORITY BEST AVAILABLE MODEL

SAWS IMPACT FEE:
WATER AND/OR WASTEWATER IMPACT FEES WERE NOT PAID AT THE TIME OF PLATTING FOR THIS PLAT. ALL IMPACT FEES MUST BE PAID PRIOR TO WATER METER SET AND/OR WASTEWATER SERVICE CONNECTION.

SAWS HIGH PRESSURE NOTE:
A PORTION OF THE TRACT IS BELOW THE GROUND ELEVATION OF 745 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT SUCH LOCATIONS, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMERS SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO.

RESIDENTIAL FIRE FLOW NOTE:
THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1000 GPM AT 25 PSI RESIDUAL PRESSURE TO MEET THE CITY OF SAN ANTONIO'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 CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

SAWS WASTEWATER EDU:
THE NUMBER OF WASTEWATER EQUIVALENT DWELLING UNITS (EDU'S) PAID FOR THIS SUBDIVISION PLAT ARE KEPT ON FILE UNDER THE PLAT NUMBER AT THE SAN ANTONIO WATER SYSTEM.

SAWS DEDICATION:
THE OWNER DEDICATES THE SANITARY SEWER AND/OR WATER MAINS TO THE SAN ANTONIO WATER SYSTEM UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE SAN ANTONIO WATER SYSTEM.

LEGAL INSTRUMENT
A LEGAL INSTRUMENT ESTABLISHING A PLAN FOR USE AND PERMANENT MAINTENANCE OF COMMON AREAS/FACILITIES DESIGNATED ON THIS PLAT IS BEING RECORDED ON THE SAME DATE AS THIS PLAT.

LAND USE NOTE:
THE FUTURE LAND USE PLAN DESIGNATES THIS PROPERTY AS "MEDIUM DENSITY RESIDENTIAL USE" ALLOWABLE LAND USES SHALL BE DEFINED IN THE UNIFIED DEVELOPMENT CODE FOR ANY PROPERTY ZONED "R-3, R-4, RM-4, RM-5, RM-6, MF-18, MF-25, MF-33, MH, MHC, AND MHP.

SETBACK NOTE:
THE SETBACKS IMPOSED ON THIS PLAT ARE AT THE DISCRETION OF THE DEVELOPER OR BEXAR COUNTY AND ARE NOT SUBJECT TO ENFORCEMENT BY THE CITY OF SAN ANTONIO.

PRIVATE STREET DESIGNATION:
LOT 999, BLOCK 54, IS A PRIVATE STREET AND IS DESIGNATED AS AN UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE CABLE TELEVISION, DRAINAGE, PEDESTRIAN, PUBLIC WATER, WASTEWATER, AND RECYCLED WATER MAINS.

OPEN SPACE:
LOTS 900 & 901, BLOCK 52, LOTS 900 & 901, BLOCK 53, LOTS 900 & 901, BLOCK 54, CB 4342 ARE DESIGNATED AS OPEN SPACE, DRAINAGE, (PERMEABLE), LOT 901, BLOCK 53, IS DESIGNATED AS OPEN SPACE, DRAINAGE, ACCESS (PERMEABLE).

COMMON AREA MAINTENANCE:
THE MAINTENANCE OF ALL PRIVATE STREETS, OPEN SPACE, GREENBELTS, PARKS, TREE SAVE AREAS, (INCLUDING LOTS 900 & 901, BLOCK 52, LOTS 14, 900 & 901, BLOCK 53, LOTS 900 & 901, BLOCK 54, AND LOT 999, BLOCK 54, CB 4342) DRAINAGE IN ACCESS EASEMENTS AND EASEMENTS OF ANY OTHER NATURE WITHIN THIS SUBDIVISION SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS, OR THE PROPERTY OWNERS' ASSOCIATION, OR ITS SUCCESSORS OR ASSIGNS AND NOT THE RESPONSIBILITY OF THE CITY OF SAN ANTONIO OR BEXAR COUNTY.

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

DRAINAGE EASEMENT ENCROACHMENTS
NO STRUCTURE, FENCES, WALLS OR OTHER OBSTRUCTIONS THAT IMPEDE DRAINAGE SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING OR OTHER TYPE OF MODIFICATIONS, WHICH ALTER THE CROSS-SECTIONS OF THE DRAINAGE EASEMENTS, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE DIRECTOR OF TCI OR DIRECTOR OF PUBLIC WORKS. THE CITY OF SAN ANTONIO AND BEXAR COUNTY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT PROPERTY TO REMOVE ANY IMPEDING OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.

TREE NOTE:
THIS SUBDIVISION IS SUBJECT TO A MASTER TREE PLAN 24-38802035 WHICH REQUIRES COMPLIANCE BY THE OWNERS OF ALL PROPERTY WITHIN THE PLAT BOUNDARY, AND THEIR EMPLOYEES AND CONTRACTORS, AND SHALL BE BINDING ON ALL SUCCESSORS IN TITLE EXCEPT FOR OWNERS OF SINGLE-FAMILY RESIDENTIAL LOTS SUBDIVIDED HEREUNDER FOR WHICH CONSTRUCTION OF A RESIDENTIAL STRUCTURE HAS BEEN COMPLETED. THE MASTER TREE PLAN IS ON FILE AT THE CITY OF SAN ANTONIO ARBORIST OFFICE PER 35-477(V).

INGRESS/EGRESS NOTE:
NO STRUCTURES, FENCES, WALLS, OR OTHER OBSTRUCTIONS SHALL BE PLACED WITHIN THE LIMITS OF THE INGRESS/EGRESS EASEMENT SHOWN ON THIS PLAT.

CLEAR VISION NOTE:
CLEAR VISION AREAS MUST BE FREE OF VISUAL OBSTRUCTIONS IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, OR LATEST REVISION THEREOF.

CPS/SAWS/COSA UTILITY (RESIDENTIAL):
1. THE CITY OF SAN ANTONIO AS PART OF ITS ELECTRIC, GAS, WATER, AND WASTEWATER SYSTEMS -CITY PUBLIC SERVICE BOARD (CPS ENERGY) AND SAN ANTONIO WATER SYSTEM (SAWS) – 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 READING DESCRIBED ABOVE. CPS ENERGY AND SAWS 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, OBJECTS OR LOOSE MATERIALS SHALL BE PLACED WITHIN EASEMENT AREAS WITHOUT AN EXECUTED AGREEMENT WITH THE RESPECTIVE UTILITY.
2. ANY CPS ENERGY OR SAWS MONETARY LOSS RESULTING FROM MODIFICATIONS REQUIRED OF CPS ENERGY OR SAWS 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.

FLOODPLAIN NOTES:
THE DRAINAGE EASEMENTS WERE DELINEATED TO CONTAIN THE LESSER OF THE BOUNDARIES OF THE 1% ANNUAL CHANCE (100-YEAR) FLOOD ZONE ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) IN ACCORDANCE WITH DFIRM PANEL 48029C0305F, DATED SEPTEMBER 29, 2010, OR THE 1% ANNUAL CHANCE (100-YEAR) ULTIMATE DEVELOPMENT CONDITION WATER SURFACE ELEVATION; OR THE 4% CHANCE (25-YEAR) ULTIMATE DEVELOPMENT FLOODPLAIN PLUS FREEBOARD. CONSTRUCTION, IMPROVEMENTS, OR STRUCTURES WITHIN THE DRAINAGE EASEMENTS AND FLOODPLAIN ARE PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL FROM THE FLOODPLAIN ADMINISTRATOR OF THE CITY OF SAN ANTONIO OR BEXAR COUNTY.

FINISHED FLOOR ELEVATIONS FOR STRUCTURES ON LOTS CONTAINING FLOODPLAIN OR ADJACENT TO THE FLOODPLAIN (INDICATED WITH AN ★) SHALL BE IN COMPLIANCE WITH THE FLOODPLAIN REGULATION IN EFFECT AT TIME OF CONSTRUCTION. CONTACT BEXAR COUNTY PUBLIC WORKS FOR MORE INFORMATION.

STORM WATER DETENTION IS REQUIRED FOR PROPERTY WITHIN THE BOUNDARY OF THIS PLAT. BUILDING PERMITS SHALL BE ISSUED ONLY IN CONJUNCTION WITH NECESSARY STORM WATER DETENTION APPROVED BY THE CITY OF SAN ANTONIO FLOODPLAIN ADMINISTRATOR. THE PROPERTY MAY BE ELIGIBLE TO POST A FEE IN LIEU OF DETENTION (FILO) IF OFFSITE DRAINAGE CONDITIONS ALLOW BUT ONLY WHEN APPROVED BY THE CITY OF SAN ANTONIO FLOODPLAIN ADMINISTRATOR. MAINTENANCE OF ON-SITE STORM WATER DETENTION SHALL BE THE SOLE RESPONSIBILITY OF HE PROPERTY OWNERS AND/OR THE PROPERTY OWNER'S ASSOCIATION AND ITS SUCCESSORS OR ASSIGNS AND IS NOT THE RESPONSIBILITY OF THE CITY OF SAN ANTONIO OR BEXAR COUNTY.

LOT 901, BLOCK 53, C.B. 4342 LIES WITHIN THE FEMA 1% ANNUAL CHANCE (100-YEAR) FLOODPLAIN AS DEPICTED ON THE FEMA FLOOD INSURANCE RATE MAP OF BEXAR COUNTY, TEXAS, DFIRM PANEL NUMBER 48029C0305F, DATED SEPTEMBER 29, 2010. A FEMA CLOMR FLOODPLAIN STUDY HAS BEEN PREPARED BY AND WAS APPROVED BY THE CITY OF SAN ANTONIO AND BEXAR COUNTY. THE FLOODPLAIN STUDY (FEMA CASE NO. XXXXXX) IS PENDING APPROVAL BY FEMA. FLOODPLAIN INFORMATION IS SUBJECT TO CHANGE AS A RESULT OF FUTURE FEMA MAP REVISIONS AND/OR AMENDMENTS.

EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
5. 40' SANITARY SEWER & ACCESS EASEMENT
6. VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8. VARIABLE WIDTH TREE SAVE AREA
1. VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109-117, O.P.R.B.C.
2. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3. VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, O.P.R.B.C.
4. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

LINE TABLE		
LINE	LENGTH	BEARING
L1	83.71'	N83°07'33"E
L2	24.64'	S6°52'27"E
L3	24.42'	N9°01'45"E
L4	15.10'	N89°55'20"E
L5	15.13'	N9°01'45"E
L6	114.53'	N89°46'23"E
L7	68.09'	N79°56'09"E
L8	31.21'	N89°46'23"E
L9	70.02'	N79°56'09"E
L10	26.86'	N9°01'45"E
L11	6.62'	S83°07'33"W
L12	57.51'	N83°08'15"E
L13	40.85'	S80°58'15"E
L14	12.35'	N9°01'45"E
L15	9.97'	S9°01'45"W
L16	36.00'	N83°08'15"E
L17	2.66'	S6°51'45"E
L18	15.01'	S53°09'31"W
L19	15.01'	S66°51'15"E
L20	2.65'	S6°51'45"E
L21	10.00'	N83°08'15"E
L22	32.68'	N6°51'45"W
L23	74.19'	N6°51'45"W
L24	12.43'	N83°08'15"E
L25	16.03'	S63°08'13"E
L26	419.01'	N79°51'47"E
L27	16.00'	N83°08'15"E
L28	140.00'	S6°51'45"E
L29	10.37'	N6°51'45"W
L30	10.44'	N6°52'27"W
L31	44.47'	N19°52'01"E
L32	20.29'	S6°51'45"E
L33	20.00'	N83°08'15"E
L34	50.24'	N83°08'15"E
L35	53.42'	N32°51'05"E

LINE TABLE		
LINE	LENGTH	BEARING
L36	31.97'	N17°57'04"E
L37	81.00'	N16°12'19"W
L38	60.00'	N37°44'23"W
L39	112.41'	N83°35'14"W
L40	18.19'	N41°18'54"E
L41	46.10'	N56°15'35"W
L42	30.00'	S83°08'15"W
L43	82.64'	S66°26'19"W
L44	12.00'	N6°51'45"W
L45	75.87'	S50°51'51"E
L46	15.00'	N83°08'15"E
L47	55.94'	N5°49'49"E
L48	19.68'	N44°04'39"E
L49	15.80'	N38°07'54"E
L50	15.80'	N38°07'54"E
L51	15.80'	S51°51'45"E
L52	41.88'	N83°07'33"E

CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	DELTA	CHORD	CHORD BEARING
C1	148.51'	120.00'	85.45'	70°54'24"	139.21'	S44°28'57"W
C2	99.00'	80.00'	56.97'	70°54'24"	92.81'	S44°28'57"W
C3	44.36'	24.00'	31.79'	105°54'12"	38.31'	N43°55'21"W
C4	44.36'	24.00'	31.79'	105°53'30"	38.31'	S43°55'00"E
C5	18.11'	14.00'	10.57'	74°08'30"	16.87'	N48°05'00"E
C6	14.14'	9.00'	9.00'	90°00'00"	12.73'	N38°08'15"E
C7	21.74'	30.00'	11.37'	41°31'06"	21.27'	S62°23'42"W
C8	151.00'	50.00'	821.81'	173°02'12"	99.82'	S5°51'45"E
C9	21.74'	30.00'	11.37'	41°31'06"	21.27'	N13°53'48"E
C10	45.55'	29.00'	29.00'	90°00'00"	41.01'	S51°51'45"E
C11	14.14'	9.00'	9.00'	90°00'42"	12.73'	N51°52'06"W
C12	14.14'	9.00'	9.00'	90°00'42"	12.73'	N51°52'06"W

SURVEYOR'S NOTES:

1. COORDINATES SHOWN ARE BASED ON TEXAS COORDINATE SYSTEM, NAD 83 (2011) EPOCH: 2010 TEXAS SOUTH CENTRAL ZONE 4204.
2. DISTANCES SHOWN HEREON ARE SURFACE AND COORDINATES SHOWN HEREON ARE GRID.
   SURFACE=GRID X 1.00017
3. MONUMENTATION AS SHOWN, IT IS THE PRACTICE OF CDSMUERY TO MONUMENT ALL CORNERS (IF PRACTICAL) IN THE SUBDIVISION WITH 1/2" IRON RODS WITH A YELLOW CAP STAMPED CDSMUERY UPON COMPLETION OF CONSTRUCTION.

COUNTY OF BEXAR)

I HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN THIS PLAT TO THE MATTERS OF STREETS, LOTS, AND DRAINAGE LAYOUT, TO THE BEST OF MY KNOWLEDGE THIS PLAT CONFORMS TO ALL THE REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE, EXCEPT FOR THOSE VARIANCES GRANTED BY THE SAN ANTONIO PLANNING COMMISSION.

_____
LICENSED PROFESSIONAL ENGINEER

STATE OF TEXAS)
COUNTY OF BEXAR)

I HEREBY CERTIFY THAT THE ABOVE PLAT CONFORMS TO THE MINIMUM STANDARDS SET FORTH BY THE TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS ACCORDING TO AN ACTUAL SURVEY MADE ON THE GROUND BY: JUSTIN B. MOCZYGEMBA

_____
REGISTERED PROFESSIONAL LAND SURVEYOR

PLAT NOTES APPLY TO EVERY PAGE OF THIS MULTIPLE PAGE PLAT.

90 RESIDENTIAL LOTS

SHEET 2 OF 2

PLAT NO. 24-11800321

REPLAT AND SUBDIVISION PLAT ESTABLISHING

WESTWOOD OAKS P.U.D.

BEING A TOTAL OF 21.095 ACRES, LYING IN THE T.S. COOKE SURVEY 65 1/4, COUNTY BLOCK 4342, ABSTRACT 1076, BEXAR COUNTY TEXAS, SAME BEING ALL OF A 20.53 ACRE TRACT OF LAND DESCRIBED IN DEED TO CARLOS MEDINA JR. AND PORFIRIA MEDINA AND RECORDED IN VOL. 8307, PG. 596 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS, AND A PORTION OF 182.249 ACRES AIR FORCE VILLAGE II, INC., RECORDED IN DEED RECORDS DOCUMENT NO. 20240104358, BEXAR COUNTY, TEXAS.

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

DATE OF PREPARATION: August 7, 2024
CDS MUERY JOB 124142.00

STATE OF TEXAS
COUNTY OF BEXAR

THE OWNER OF LAND SHOWN ON THIS PLAT, IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, DEDICATES TO THE USE OF THE PUBLIC, EXCEPT AREAS IDENTIFIED AS PRIVATE OR PART OF AN ENCLAVE OR PLANNED UNIT DEVELOPMENT, FOREVER ALL STREETS, ALLEYS, PARKS, WATERCOURSES, DRAINS, EASEMENTS AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED.

OWNER / DEVELOPER:
PATRICK FLANAGIN, CONTROLLER
MEDINA VILLAGE, LLC
4007 McCULLOUGH AVE, SUITE 231
SAN ANTONIO, TX 78212

STATE OF TEXAS
COUNTY OF BEXAR

BEFORE ME, THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED PATRICK FLANAGIN
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, BEXAR COUNTY, TEXAS

THIS PLAT OF WESTWOOD OAKS P.U.D. HAS BEEN SUBMITTED TO AND CONSIDERED BY THE PLANNING COMMISSION OF THE CITY OF SAN ANTONIO, TEXAS, IS HEREBY APPROVED BY SUCH COMMISSION IN ACCORDANCE WITH STATE OR LOCAL LAWS AND REGULATIONS; AND/OR WHERE ADMINISTRATIVE EXCEPTION(S) AND/OR VARIANCE(S) HAVE BEEN GRANTED.

DATED THIS _____DAY OF_____, A.D. 20 _____.

BY: _____
CHAIRMAN

BY: _____
SECRETARY

CERTIFICATE OF APPROVAL

THE UNDERSIGNED, COUNTY JUDGE OF BEXAR COUNTY, TEXAS AND PRESIDING OFFICER OF THE COMMISSIONERS COURT OF BEXAR COUNTY, DOES HEREBY CERTIFY THAT THE ATTACHED PLAT WAS DULY FILED WITH THE COMMISSIONERS COURT OF BEXAR COUNTY, TEXAS AND THAT AFTER EXAMINATION IT APPEARED THAT SAID PLAT IS IN CONFORMITY WITH THE STATUTES, RULES AND REGULATIONS GOVERNING SAME, AND THIS PLAT WAS APPROVED BY THE SAID COMMISSIONERS COURT.

DATED THIS _____ DAY OF _____ A.D. 20

_____
COUNTY JUDGE, BEXAR COUNTY, TEXAS

_____
COUNTY CLERK, BEXAR COUNTY, TEXAS

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
SUBDIVISION PLAT

SHEET C1.1

Date: Oct 10, 2025, 3:50pm User ID: pablo.delunaFile: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\Subdivision Plat\124142_C1-0-Subdivision Plat.dwg

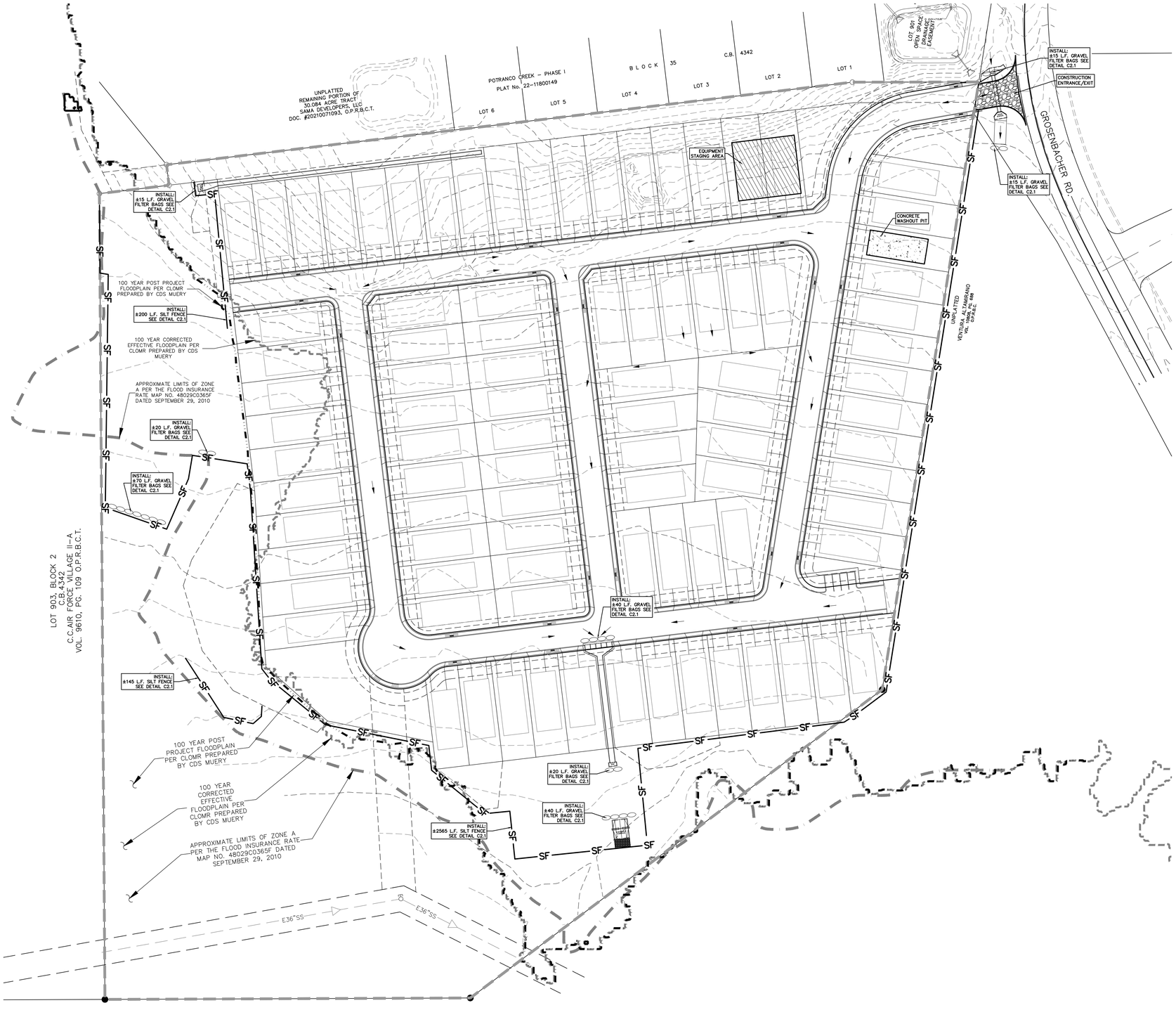
TRENCH EXCAVATION SAFETY PROTECTION:
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

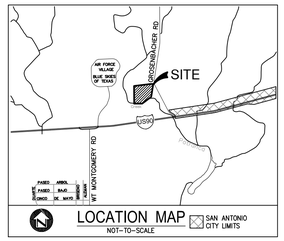
PRIVATE STREET DESIGNATION NOTE:
LOT 999, BLOCK 54, IS A PRIVATE STREET AND IS DESIGNATED AS AN UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE CABLE TELEVISION, DRAINAGE, PEDESTRIAN, PUBLIC WATER, WASTEWATER, AND RECYCLED WATER MAINS.

CAUTION:
THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

TREE PROTECTION NOTE:
CONTRACTOR SHALL REFERENCE THE TREE PROTECTION PLAN AND LANDSCAPE PLAN FOR TREES TO BE SAVED OR REMOVED AND INSTALL PROTECTIVE MEASURES AS NECESSARY FOR TREES TO REMAIN. (SEE SHEETS C7.0 – C7.2)

BEXAR COUNTY FLOODPLAIN GENERAL CONSTRUCTION NOTE:
NO CONSTRUCTION AND/OR WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING NATURAL DRAINAGE OR PLACED WITHIN THE LIMITS OF EXISTING FLOODPLAIN.







0 60' 120'
SCALE IN FEET
1"=60'

LEGEND

EXISTING CONTOURS	-885-
FLOW ARROW	
PROPERTY BOUNDARY	
STABILIZED CONSTRUCTION ENTRANCE/EXIT	
SILT FENCE AND/OR APPROPRIATE SUBSTITUTE	—SF—SF—
*CONCRETE WASH OUT PIT	
*EQUIPMENT STAGING AREA	
BAGGED GRAVEL INLET FILTER AND/OR APPROPRIATE SUBSTITUTE	

* NOTE: ACTUAL LAYOUT DETERMINED IN FIELD, SHOULD BE PLACED IN THE PROXIMITY OF THE CONSTRUCTION ENTRANCE/EXIT AND NOT LOCATED NEAR A WELL, FLOODPLAIN, OR OTHER POTENTIAL SOURCES OF CONTAMINATION.

GENERAL NOTES:

1. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASHOUT PIT AND CONSTRUCTION EQUIPMENT AND STORAGE AREA ARE TO BE DETERMINED IN THE FIELD. THEY ARE SHOWN ON THIS PLAN FOR ILLUSTRATION PURPOSES ONLY.
2. IF NECESSARY, CONTRACTOR MAY MODIFY STORMWATER CONTROLS TO ACHIEVE THE DESIRED INTENT. ANY CHANGES ARE TO BE NOTED, SIGNED AND DATED BY THE RESPONSIBLE PARTY IN THE TPDES BOOK.
3. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL STORMWATER CONTROLS.
4. REFER TO TPDES BOOK FOR THIS PROJECT FOR MORE INFORMATION/DETAILS.
5. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY QUESTIONS REGARDING THE INTENT OF THIS PLAN.
6. CONTRACTOR IS REQUIRED TO FILE NOI'S (NOTICE OF INTENT) AND NOT'S (NOTICE OF TERMINATION) FOR THIS PROJECT. REFER TO TPDES FOR PROPER POSTING REQUIREMENTS AND DOCUMENTS.
7. A COPY OF THIS PLAN AND THE TPDES BOOK MUST REMAIN AT THE CONSTRUCTION SITE AT ALL TIMES.
8. BARE SOILS SHOULD BE HYDRO MULCHED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED FOR MORE THAN 21 DAYS.
9. ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH FOR TEMPORARY VEGETATIVE COVER. NO AREA SUBJECT TO EROSION SHALL BE LEFT DISTURBED AND UNSUITABLE FOR PERIODS LONGER THAN IS ABSOLUTELY NECESSARY TO CARRY OUT THAT PORTION OF THE CONSTRUCTION WORK, OR 1 WEEK AFTER SOIL HAS BEEN DISTURBED, WHICHEVER IS LESS.
10. CONTRACTOR TO PROVIDE A COPY OF THE SIGNED AND CERTIFIED CONSTRUCTION SITE NOTICE TO THE OPERATOR OF THE MUNICIPAL SEPARATE STORM SEWER SYSTEM RECEIVING THE DISCHARGE AT LEAST TWO DAYS PRIOR TO COMMENCING OF CONSTRUCTION ACTIVITY.

OWNER'S CERTIFICATION
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY SUPERVISION IN ACCORDANCE WITH SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE (OWNER) DATE

CONTRACTOR'S CERTIFICATION
I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION PLAN.

SIGNATURE (CONTRACTOR) DATE

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

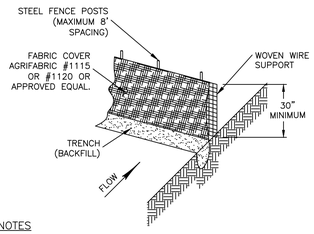
PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
STORMWATER POLLUTION PREVENTION PLAN

SHEET C2.0

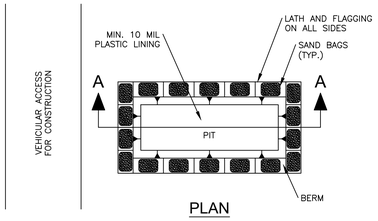
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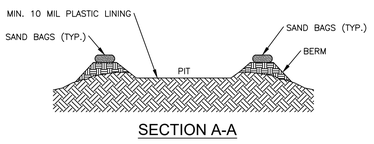
GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND 4–8 INCHES WIDE TO ALLOW FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES AND DISPOSED OF IN AN APPROVED SPOIL SITE OR AS IN NO. 6 ABOVE.

SILT FENCE
NOT TO SCALE



PLAN



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.

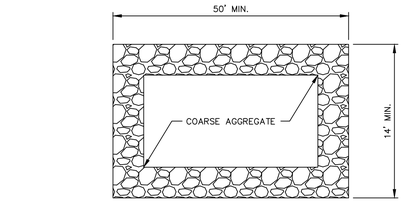
MATERIALS

1. 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.

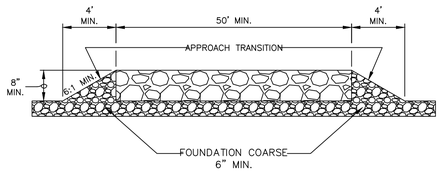
MAINTENANCE

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
NOT TO SCALE



PLAN

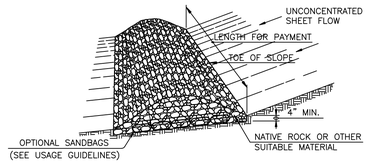


PROFILE

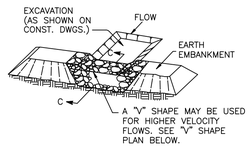
GENERAL NOTES

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

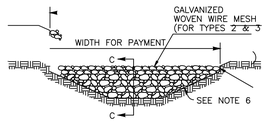
CONSTRUCTION EXIT (TYPE 1)
NOT TO SCALE



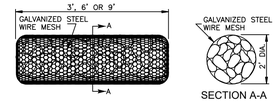
FILTER DAM AT TOE OF SLOPE
NOT TO SCALE



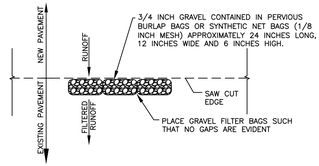
FILTER DAM AT SEDIMENT TRAP
NOT TO SCALE



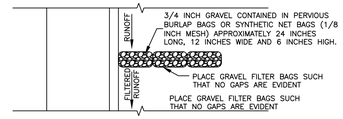
FILTER DAM AT CHANNEL SECTIONS
NOT TO SCALE



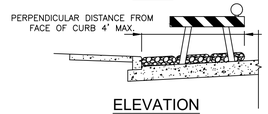
TYPE 4 (SACK GABIONS)



GRAVEL FILTER BAGS
NOT TO SCALE



PLAN



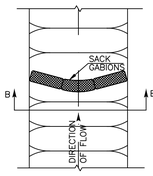
ELEVATION

NOTE:
STRADDLE GRAVEL FILTER BAGS WITH TYPE 1 BARRICADES MOUNTED WITH TYPE "A" FLASHING WARNING LIGHT. SEE BARRICADE CONSTRUCTION SIGN DETAILS. PLACE FLASHING LIGHTS AWAY FROM GUTTER. FLUSH WITH OUTSIDE EDGE OF BAG CONFIGURATION.

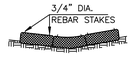
GRAVEL FILTER BAGS
NOT TO SCALE

ROCK FILTER DAM USAGE GUIDELINES

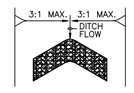
1. ROCK FILTER DAMS SHOULD BE CONSTRUCTED DOWNSTREAM FROM DISTURBED AREAS TO INTERCEPT SEDIMENT FROM OVERLOAD RUNOFF AND/OR CONCENTRATED FLOW. THE DAMS SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THROUGH RATE OF 60 GPM/FT OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.
2. TYPE 1 (18" HIGH WITH NO WIRE MESH): TYPE 1 MAY BE USED AT THE TOE OF SLOPES, AROUND INLETS, IN SMALL DITCHES, AND AT DIKE OR SWALE OUTLETS. THIS TYPE OF DAM IS RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA OF 5 ACRES OR LESS. TYPE 1 MAY NOT BE USED IN CONCENTRATED HIGH VELOCITY FLOWS (APPROX. 8 FT./SEC. OR MORE) IN WHICH AGGREGATE WASH OUT MAY OCCUR. SANDBAGS MAY BE USED AT THE EMBEDDED FOUNDATION (4" DEEP MIN.) FOR BETTER FILTERING EFFICIENCY OF LOW FLOWS IF CALLED FOR ON THE PLANS OR DIRECTED BY THE ENGINEER.
3. TYPE 2 (18" HIGH WITH WIRE MESH): TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.
4. TYPE 3 (36" HIGH WITH WIRE MESH): TYPE 3 MAY BE USED IN STREAM FLOW AND SHOULD BE SECURED TO THE STREAM BED.
5. TYPE 4 (SACK GABIONS): TYPE 4 MAY BE USED IN DITCHES AND SMALLER CHANNELS TO FORM AN EROSION CONTROL DAM.



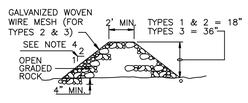
PLAN VIEW



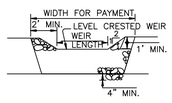
SECTION B-B



PLAN VIEW "V" SHAPE



SECTION C-C

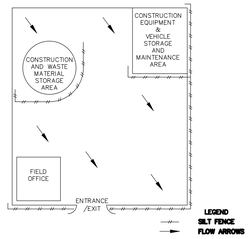


PROFILE

PLANS SHEET LEGEND

TYPE 1 ROCK FILTER DAM — RFD1
TYPE 2 ROCK FILTER DAM — RFD2
TYPE 3 ROCK FILTER DAM — RFD3

ROCK FILTER DAM
NOT TO SCALE



EQUIPMENT STAGING AREA
NOT TO SCALE

GENERAL NOTES

1. IF SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, FILTER DAMS SHOULD BE PLACED NEAR THE TOE OF SLOPES WHERE EROSION IS ANTICIPATED, UPSTREAM AND/OR DOWNSTREAM AT DRAINAGE STRUCTURES, AND IN ROADWAY DITCHES AND CHANNELS TO COLLECT SEDIMENT.
2. MATERIALS (AGGREGATE, WIRE MESH, SANDBAGS, ETC.) SHALL BE AS INDICATED BY THE SPECIFICATION FOR ROCK FILTER DAMS FOR EROSION AND SEDIMENTATION CONTROL.
3. THE ROCK FILTER DAM DIMENSIONS SHALL BE AS INDICATED ON THE SW3P PLANS.
4. SIDE SLOPES SHOULD BE 2:1 OR FLATTER. DAMS WITHIN THE SAFETY ZONE SHALL HAVE SIDESLOPES OF 6:1 OR FLATTER.
5. MAINTAIN A MINIMUM OF 1' BETWEEN TOP OF ROCK FILTER DAM WEIR AND TOP OF EMBANKMENT FOR FILTER DAMS AT SEDIMENT TRAPS.
6. FILTER DAMS SHOULD BE EMBEDDED A MINIMUM OF 4' INTO EXISTING GROUND.
7. THE SEDIMENT TRAP FOR PONDING OF SEDIMENT LADEN RUNOFF SHALL BE OF THE DIMENSIONS SHOWN ON THE PLANS.
8. ROCK FILTER DAM TYPES 2 & 3 SHALL BE SECURED WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1" DIAMETER HEXAGONAL OPENINGS. THE AGGREGATE SHALL BE PLACED ON THE MESH TO THE HEIGHT AND SLOPES SPECIFIED. THE MESH SHALL BE FOLDED AT THE UPSTREAM SIDE OVER THE AGGREGATE AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS. IN STREAM USE, THE MESH SHOULD BE SECURED OR STAKED TO THE STREAM BED PRIOR TO AGGREGATE PLACEMENT.
9. SACK GABIONS SHOULD BE STAKED DOWN WITH 3/4" DIA. REBAR STAKES.
10. FLOW OUTLET SHOULD BE ONTO A STABILIZED AREA (VEGETATION, ROCK,ETC.).
11. DETAILS SHOWN ARE TYPICAL, SUBJECT TO CONTRACTOR'S SW3P PLAN REQUIREMENTS.
12. SEE SHEET C5.7 FOR EROSION CONTROL MATTING DETAILS.

MATERIAL NOTES

1. ALL AGGREGATE USED FOR THE CONSTRUCTION OF THE ROCK FILTER DAMS SHALL BE HARD, DURABLE, CLEAN, OPEN-GRADED, AND SHALL NATURALLY RESIST CRUMBLING, FLAKING AND ERODING. AGGREGATE GRADATION SHALL BE 3 TO 6 INCHES FOR ROCK FILTER DAMS TYPES 1, 2 AND 4 AND SHALL BE 4 TO 8 INCHES FOR TYPE 3.
2. THE GALVANIZED STEEL WIRE MESH AND TIE WIRES FOR TYPES 2 AND 3 SHALL BE A MINIMUM 20 GAUGE UNLESS SPECIFIED ON THE PLANS.
3. FOR TYPE 4: STEEL WIRE MESH SHALL UTILIZE A DOUBLE TWISTED HEXAGONAL WEAVE; MESH OPENING SHALL BE A NOMINAL 2.50 X 3.25 INCH, STEEL WIRE FOR NETTING SHALL BE 0.0866 INCH MINIMUM; STEEL WIRE FOR SELVEDGES AND CORNERS SHALL BE 0.1063 INCH (U.S. GAUGE NO. 11) MINIMUM; AND BINDING OR TIE WIRE SHALL BE 0.0866 INCH (U.S. GAUGE NO. 13) MINIMUM.
4. UNLESS OTHERWISE SPECIFIED, THE SANDBAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OUNCES PER SQUARE YARD, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT. THE SANDBAG SIZE SHALL BE 24 TO 30 INCHES IN LENGTH, 16 TO 18 INCHES IN WIDTH, 6 TO 8 INCHES THICK AND WEIGH 90 TO 125 POUNDS. THE SAND SHALL BE COARSE GRADE.

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

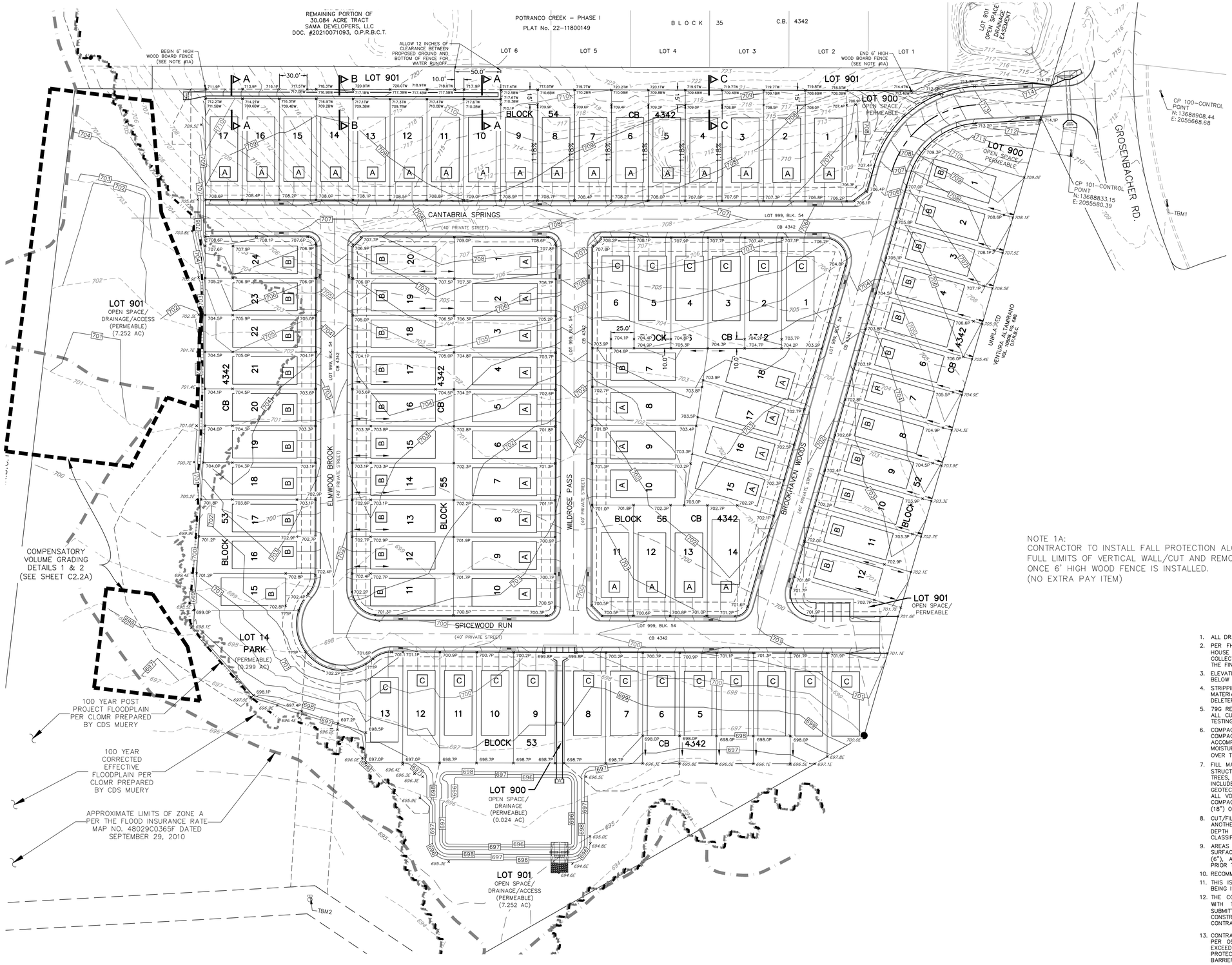
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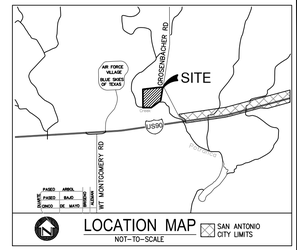
JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
STORMWATER POLLUTION PREVENTION DETAILS

SHEET C2.1

Date: Oct 10, 2025, 3:38pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwgs\Engineering\124142_C2.0-C2.2-SW3P.dwg





LOCATION MAP
NOT-TO-SCALE
SAN ANTONIO CITY LIMITS

LEGEND

EXISTING CONTOUR	718
PROPOSED CONTOUR	716
TYPE OF LOT GRADE	A, B, OR C
EXISTING SPOT ELEVATION	718.5E
PROPOSED SPOT ELEVATION	708.2P
TOP OF WALL ELEVATION	705.2TW
BOTTOM OF WALL ELEVATION	702.6BW
GRADING WALL	
NATURAL CUT WALL (IN PARK LOT 900)	

N

0 50' 100'
SCALE IN FEET
1"=50'

EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
5. 40' SANITARY SEWER & ACCESS EASEMENT
6. VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8. VARIABLE WIDTH TREE SAVE AREA
1. VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109-117, O.P.R.B.C.
2. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3. VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, O.P.R.B.C.
4. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11196, PG. 1915, O.P.R.B.C.
5. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

NOTE 1A:
CONTRACTOR TO INSTALL FALL PROTECTION ALONG FULL LIMITS OF VERTICAL WALL/CUT AND REMOVE ONCE 6' HIGH WOOD FENCE IS INSTALLED. (NO EXTRA PAY ITEM)

1. ALL DRAINAGE SWALES SHALL BE AN ABSOLUTE MINIMUM OF 1.0%.
2. PER FHA CRITERIA, THE PROTECTIVE DRAINAGE SWALES ADJACENT TO THE HOUSE (AND DENOTED BY FLOW ARROWS HERE-ON) MUST AT ALL POINTS COLLECTING APPRECIABLE RUNOFF BE AT LEAST 1.2 VERTICAL FEET BELOW THE FINISHED FLOOR ELEVATION.
3. ELEVATION OF FINISHED GROUND AT SLAB SHALL BE A MINIMUM OF 8 INCHES BELOW FINISH FLOOR ELEVATION.
4. STRIPPINGS TO BE WASTED ON LOTS IN NON-BUILDABLE AREAS. FILL MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH, AND RUBBISH.
5. 79G REQUIREMENT FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE MET. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR 79G COMPACTION TESTING.
6. COMPACTION OF FILL LAYER, COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIALS IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT, COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA. (BENEATH PROPOSED STRUCTURES)
7. FILL MATERIALS USED OUTSIDE THE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES) SHALL BE FREE FROM DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH, RUBBISH, TREE BRANCHES, AND MULCH. FILL MATERIAL THAT INCLUDE ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED. NO LARGE ROCKS WILL BE PERMITTED WITHIN EIGHTEEN INCHES (18") OF FINISHED GRADE.
8. CUT/FILL LOTS, AREAS INVOLVING CUT ON THE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6 INCHES (6") LIFT AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT DENSITY.
9. AREAS TO BE FILLED, ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE, SURFACE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"), ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED PRIOR TO FIELD.
10. RECOMMEND DRIVEWAY PLACEMENT ON THE HIGH SIDE OF THE LOTS.
11. THIS IS NOT A DETAILED GRADING PLAN FOR HOME CONSTRUCTION AND IS BEING ISSUED ONLY FOR BIDDING.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING ITEMS ASSOCIATED WITH THE PROJECT'S RETAINING WALLS: DESIGN, PERMITS, FEES, WALL SUBMITTAL FOR OWNER'S REVIEW AND APPROVAL, ALL MATERIALS AND CONSTRUCTION. RETAINING WALLS TO BE FIELD ADJUSTED IF NECESSARY. CONTRACTOR TO NOTIFY ENGINEER WITH ANY REVISIONS TO DESIGN.
13. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY FALL PROTECTION PER OSHA STANDARDS FOR PROPOSED ROCK CUTS AND RETAINING WALLS EXCEEDING 2-FEET IN HEIGHT AS SHOWN IN THESE PLANS. TEMPORARY FALL PROTECTION SHALL REMAIN IN PLACE UNTIL A PERMANENT PROTECTIVE BARRIER IS INSTALLED.

NO.	REVISION	DATE
1	20' X 8' TAP CONNECTIONS	5/1/24

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

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DATE JANUARY 2025
DRAFTED J.M.
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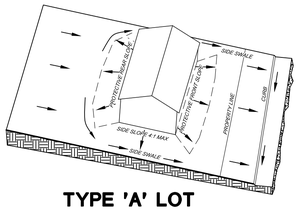
WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

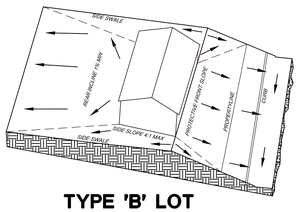
GRADING PLAN

SHEET C2.2

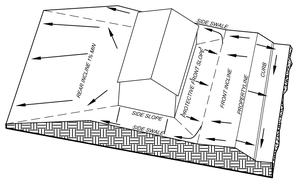
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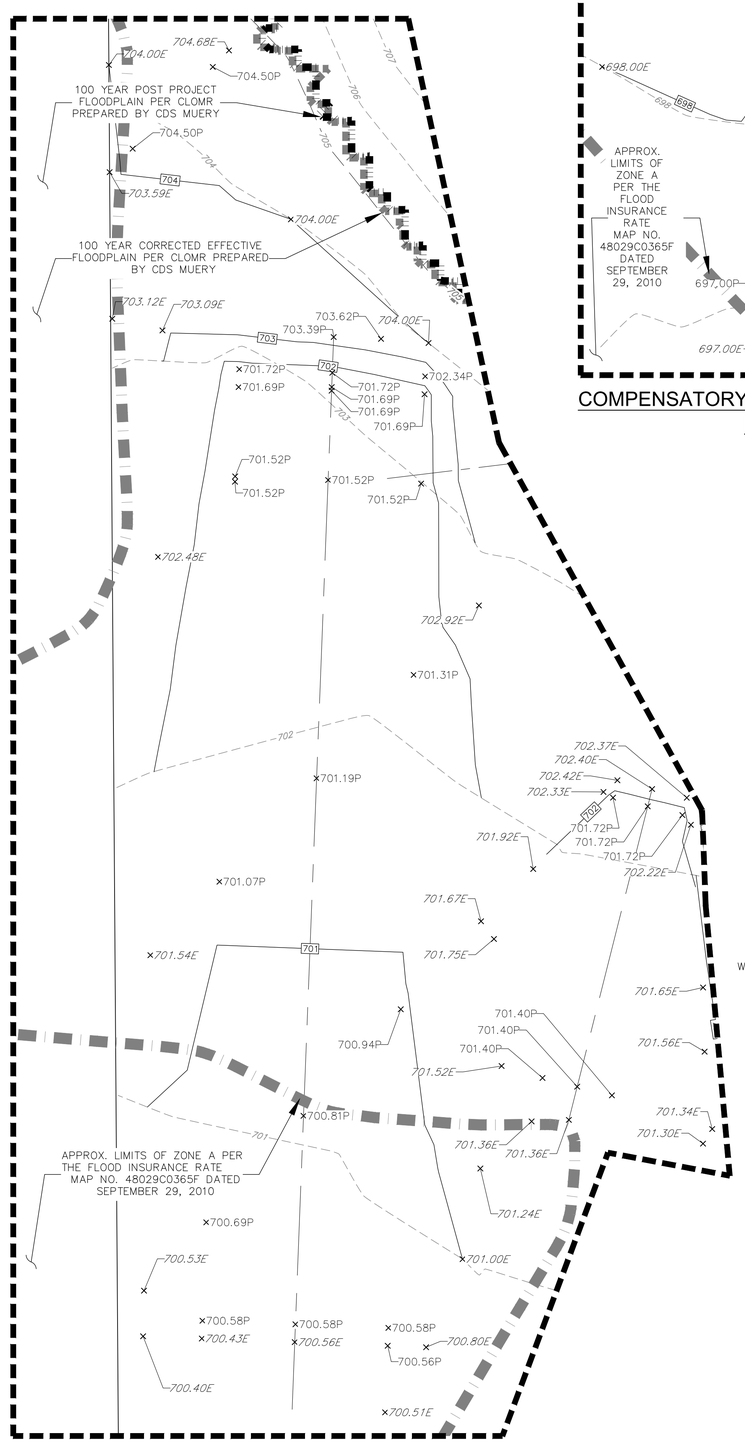
TYPE 'A' LOT GRADING



TYPE 'B' LOT GRADING

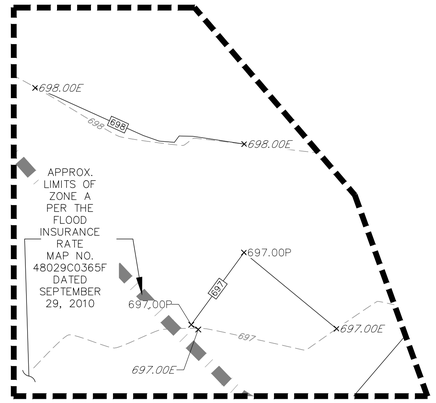


TYPE 'C' LOT GRADING



COMPENSATORY VOLUME GRADING AREA
DETAIL 1

SCALE: 1" = 20'



COMPENSATORY VOLUME GRADING AREA
DETAIL 2

SCALE: 1" = 20'

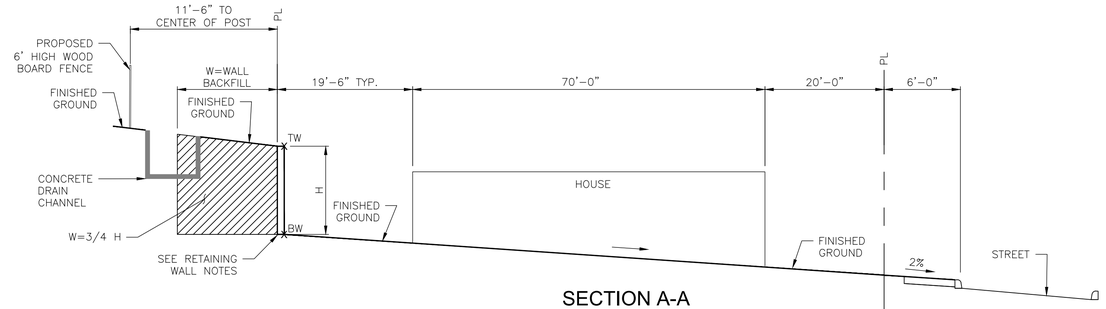


LEGEND

EXISTING CONTOUR	718
PROPOSED CONTOUR	716
EXISTING SPOT ELEVATION	718.50E
PROPOSED SPOT ELEVATION	708.20P
COMPENSATORY VOLUME GRADING CENTERLINE	

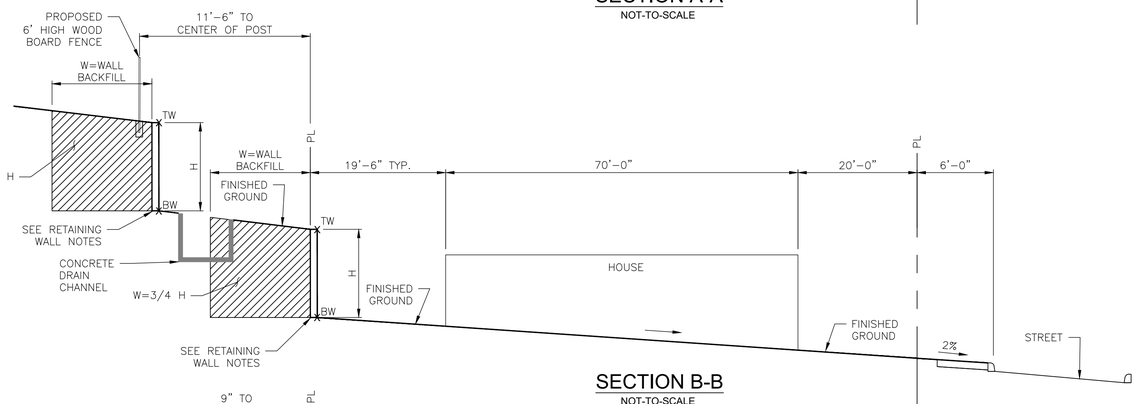
NOTES:

1. CONTRACTOR TO COORDINATE DESIGN OF WALL AND ALL PERMITTING APPROVAL OF WALLS. INCLUDES WALL CONSTRUCTION & ANY TESTING AS REQUIRED BY PERMIT.
2. PRIOR TO DESIGN, CONTRACTOR TO COORDINATE WITH CLIENT APPROVAL, OF COLOR AND TYPE OF WALL.
3. TW=TOP OF FINISHED WALL ELEVATION
   BW=BOTTOM OF FINISHED WALL ELEVATION
4. ALL SLOPES SHOWN ARE MAXIMUM.
5. X-SPOT ELEVATION SHOWN ON GRADING PLAN
6. BACKFILL WIDTH ON WALL IS PART OF WALL COST/CONSTRUCTION NOT INCLUDED IN LOT CUT/FILL QUANTITY.



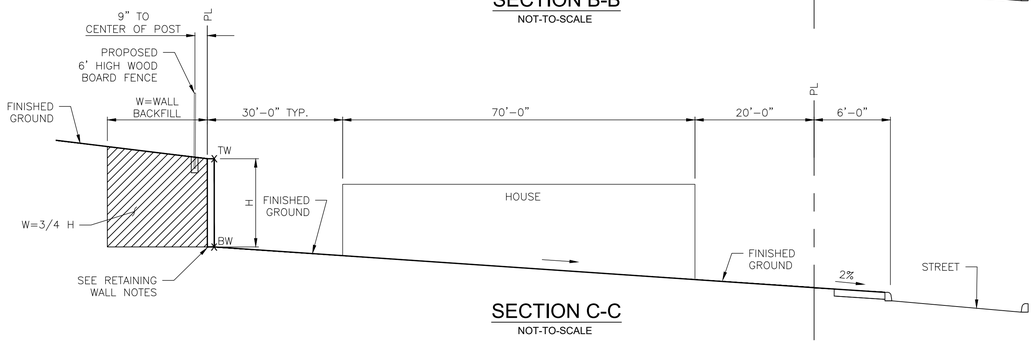
SECTION A-A

NOT-TO-SCALE



SECTION B-B

NOT-TO-SCALE



SECTION C-C

NOT-TO-SCALE

HORIZONTAL CONTROL			
POINT NO.	NORTHING	EASTING	DESCRIPTION
100	13,688,908.44	2,055,668.68	CP SET 1/2"RWRC
101	13,688,833.15	2,055,580.39	CP SET1/2"RWRC
102	13,688,533.57	2,055,741.99	CP SET 1/2"RWRC
103	13,689,386.78	2,055,690.23	CP SET 1/2"RWRC

BENCHMARKS				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
2784	13,688,791.7570	2,055,689.9390	709.850	TBM1
6000	13,687,927.9700	2,054,861.1400	693.080	TBM2

HORIZONTAL DATUM= NAD83(2011)EPOCH:2010
TEXAS STATE PLANE COORDINATE SYSTEM, ZONE 4204 (US SURVEY FT)
VERTICAL DATUM = NAVD88 OPUS GEOID12A
SURFACE ADJUSTMENT FACTOR=1.00017
SURFACE = GRID X 1.00017
PROJECT COORDINATES DATA IS BASED ON CONTROL POINT #100
N. 13,688,908.44 E. 2,055668.68 (SURFACE)
JOB #123162.01, FB #9286, PGS. 55-51

TBM #1
CHISELED SQUARE IN CONCRETE DRAINAGE STRUCTURE, ALONG THE EAST RIGHT OF WAY OF GROSENBACHER ROAD.
ELEV.= 709.85'

TBM #2
CHISELED SQUARE IN CONCRETE STRUCTURE FOR SANITARY SEWER MANHOLE, AT THE SOUTHWEST END OF THE PROJECT.
ELEV.= 693.08'

NO.	REVISION	DATE
1.	20' X 8" TAP CONNECTIONS	5/1/24

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

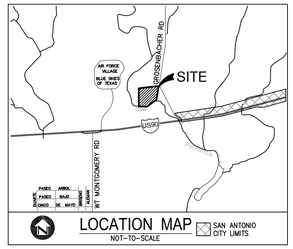
WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

GRADING PLAN

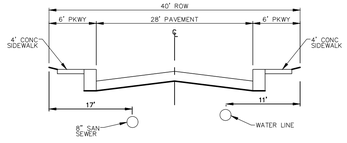
SHEET C2.2A

Date: Oct 10, 2025, 3:38pm User ID: pablo.delvino
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C2.2-C2.2A-Grading-Plan.dwg



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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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 LOCAL "A" STREET SECTION
N.T.S.

PRIVATE STREET DESIGNATION NOTE:

LOT 999, BLOCK 54, IS A PRIVATE STREET AND IS DESIGNATED AS AN UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE CABLE TELEVISION, DRAINAGE, PEDESTRIAN, PUBLIC WATER, WASTEWATER, AND RECYCLED WATER MAINS.

CAUTION:

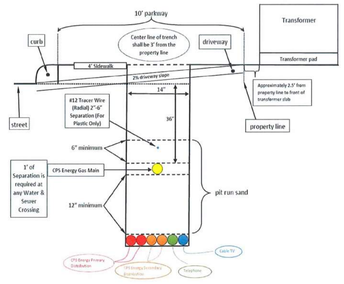
THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

TREE PROTECTION NOTE:

CONTRACTOR SHALL REFERENCE THE TREE PROTECTION PLAN AND LANDSCAPE PLAN FOR TREES TO BE SAVED OR REMOVED AND INSTALL PROTECTIVE MEASURES AS NECESSARY FOR TREES TO REMAIN. (SEE SHEETS C7.0 – C7.2)

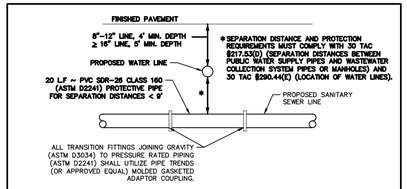
DS-1

Gas & Electric Trench Joint with Other Utilities



LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
—W— EX. 6"W	—W— 8"W	WATER LINE
—SS— EX. 6"SS	—SS— 6"SS	SANITARY SEWER
—G— EX. 2"G	—G— 2"G	GAS LINE
UGE	UGE	UNDERGROUND ELECTRIC
		FIRE HYDRANT
		WATER METER, VALVE
		CLEAN OUT
		POWER POLE, W/TRANSFORMER (PP) POWER POLE (R) RISER POLE
		LIGHT POLE
		GAS VALVE, GAS METER
		BOLLARD/GUARD POST
		SIGN, DOUBLE SIGN
		IRRIGATION VALVE
		TREE
		BENCHMARK
		CONTROL SYMBOL
		EXISTING STRUCTURE



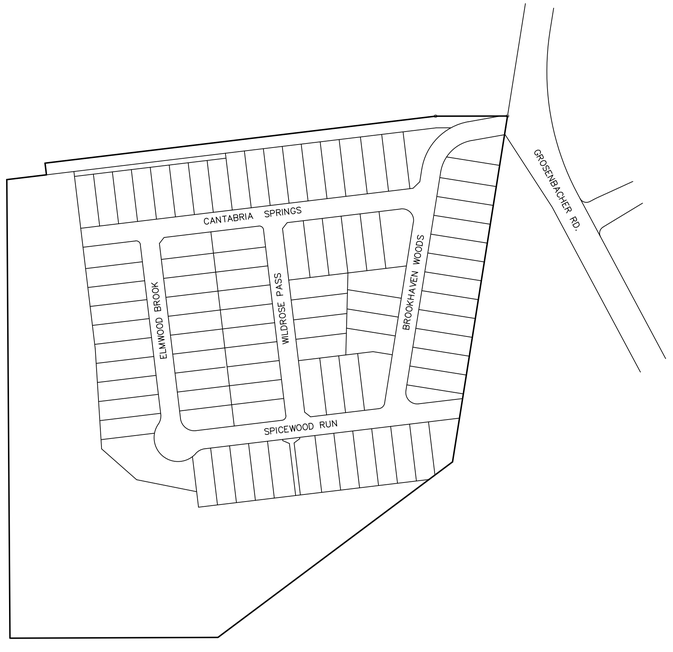
TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL
N.T.S.

UTILITY PLANS

FOR

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS



OVERALL SITE MAP

UTILITY GENERAL NOTES

1. UTILITIES SHOWN ON THE PLANS ARE FROM THE BEST INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN, BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR SHALL UNCOVER ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM THE PLANS OR UPON THE DISCOVERY OF ADDITIONAL UTILITIES NOT SHOWN ON THE PLANS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO STAKE OUT UTILITIES, ESTABLISH ALL LINES AND LEVELS, AND PROVIDE BENCHMARKS FOR USE BY THE CRAFTS. ALL LINES AND GRADES MUST CONFORM WITH THE PLANS UNLESS DIRECTED OTHERWISE BY THE OWNER'S REPRESENTATIVE.
3. LOCATION AND DEPTH OF EXISTING UTILITIES, INCLUDING SERVICE LATERAL AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.

TEXAS STATE WIDE ONE CALL LOCATOR:	1-800-545-6005
SAN ANTONIO WATERS SYSTEM (SAWS)	1-210-704-7297
CPS ENERGY	1-210-353-3333
AT&T	1-877-438-0041
SPECTRUM	1-800-222-5355

4. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED UNDERGROUND UTILITIES. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY RECORD DRAWING. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.
5. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL CONFORM TO ALL APPLICABLE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER WORKS CONSTRUCTION, CITY BUILDING CODE AND REGULATIONS AS WELL AS OTHER SAFETY CODES AND INSPECTION PROVISIONS APPLICABLE TO THE PROJECT AND REQUIREMENTS OF THE BEXAR COUNTY FIRE AND THE SAN ANTONIO RIVER AUTHORITY SEWER SPECIFICATIONS.
6. DOMESTIC WATER LINES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH SAN ANTONIO WATER SYSTEM REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH SAN ANTONIO WATER SYSTEM FOR PERMITTING, INSPECTION, AND CONSTRUCTION OPERATIONS.
7. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL TRAFFIC CONTROL DEVICES, LIGHTING, OR WARNING CONTROL DEVICES USED OR REQUIRED TO COMPLETE WORK.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL CONDITION, OR BETTER, ANY DAMAGES DONE TO EXISTING BUILDINGS, RETAINING WALLS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEM).
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS, AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
10. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
11. DEPTHS OF BURY FOR ALL PIPES SHALL BE A MINIMUM OF 4' UNLESS NOTED OTHERWISE.
12. THE CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT AT NEW PAVEMENT AND CURB JUNCTURES. NO JAGGED OR IRREGULAR CUTS IN PAVEMENT WILL BE ALLOWED OR ACCEPTED.
13. DUE TO THE FEDERAL REGULATIONS TITLE 49, PART 192.181, CITY PUBLIC SERVICE (CPS) MUST MAINTAIN ACCESS TO ALL GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
14. ALL SPOIL AND OTHER UNSUITABLE MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT HIS/HER EXPENSE IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.

CONDUIT / CLEARING NOTE:

1. 6" P.V.C. SCHEDULE 80 WILL BE REQUIRED FOR C.P.S. UTILITIES CROSSINGS WHEN DRAIN OR STREET CONSTRUCTION PRECEDES UTILITY INSTALLATION. CONTRACTOR SHALL COORDINATE WITH C.P.S. PRIOR TO PERMANENT INSTALLATION OF DRAINS AND STREETS TO AVOID LOSS OF WORK OR REINSTALLATION.
2. 4" P.V.C. SCHEDULE 40 WILL BE REQUIRED FOR UNDERGROUND TELEPHONE AND CABLE T.V. IF ABOVE APPLIES.
3. CONTRACTOR SHALL INSTALL BURIED WATER, & DRAINAGE PIPES, CORRIDOR TO PROPOSED GRADING AND ACCOMPLISH VEGETATION CLEARING PRIOR TO C.P.S. MOBILIZATION AND PREPARE R.O.W. & EASEMENTS.

CAUTION

CONTRACTOR TO USE EXTREME CAUTION WHEN WORKING NEAR AND AROUND EXISTING UTILITIES CONTRACTOR TO VERIFY VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITIES WITHIN AREA OF CONSTRUCTION AND REPORT FINDINGS TO ENGINEER.

TRENCH EXCAVATION SAFETY PROTECTION

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EASEMENT KEYNOTES

1	15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2	5' WATER EASEMENT
3	1' PEDESTRIAN EASEMENT
4	16' WATER EASEMENT
5	40' SANITARY SEWER & ACCESS EASEMENT
6	VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7	20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8	VARIABLE WIDTH TREE SAVE AREA
1	VARIABLE WIDTH ACCESS EASEMENT, VOL. 9610, PGS. 109-117, O.P.R.B.C.
2	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3	VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, O.P.R.B.C.
4	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

ENGINEER:

CDS MUERY
ATTN: BRIAN CROWELL, P.E.
100 NE LOOP 410, STE. 300
SAN ANTONIO, TEXAS 78216
TEL: (210) 581-1111
FAX: (210) 581-5555

OWNER/DEVELOPER:

PATRICK FLANAGIN, CONTROLLER
MEDINA VILLAGE, LLC
4007 McCULLOUGH AVE, SUITE 231
SAN ANTONIO, TX 78212

BENCHMARK INFORMATION		
NO.	DESCRIPTION	ELEVATION
TBM #1 PNT#2784 N: 13688791.76 E: 2055689.94	CHISELED "□" ON THE SOUTHWEST SIDE OF CONCRETE HEADWALL OF A CONCRETE WATER DRAIN, ON THE NORTHEAST RIGHT-OF-WAY OF GROSENBACHER ROAD,	709.85
TBM #2 PNT#6000 N: 13687927.97 E: 2054861.14	CHISELED "□" ON THE NORTH SIDE OF A CONCRETE MANHOLE.	693.08

SITE INFORMATION:

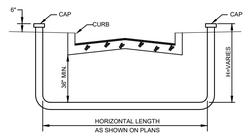
BEING A TOTAL OF 21.095 ACRES, LYING IN THE T.S. COOKE SURVEY 65 1/4, COUNTY BLOCK 4342, ABSTRACT 1076, BEXAR COUNTY TEXAS, SAME BEING ALL OF A 20.53 ACRE TRACT OF LAND DESCRIBED IN DEED TO CARLOS MEDINA JR. AND PORFIRIA MEDINA AND RECORDED IN VOL. 8307, PG. 596 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS.

CONTRACTOR / CPS CONSTRUCTION NOTE:

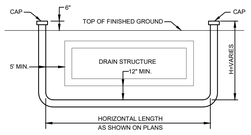
1. IT'S THE CONTRACTOR'S RESPONSIBILITY TO INSURE CONSTRUCTION SEQUENCE WITH C.P.S. ON AVOIDING ANY/ALL CONSTRUCTION RELATED ISSUES ON SITE.
2. ANY DISCREPANCY BETWEEN C.P.S. AND CONTRACTOR SHALL BE RESOLVED BETWEEN SAID PARTIES. OWNER/DEVELOPER IS NOT RESPONSIBLE AND SHARES NO EXPENSE.
3. IF CPS INSTALLS CROSSINGS, CONTRACTOR SHALL GRADE SUB-GRADE AND NOT COMPACT OR LIME. CONTRACTOR SHALL COORDINATE WITH CPS.

CIVIL SHEET INDEX

SHEET NO.	SHEET TITLE
C3.0	UTILITY COVER SHEET
C3.1	UTILITY PLAN
C3.2	FINAL CPS DESIGN
C3.3	FINAL CPS DESIGN

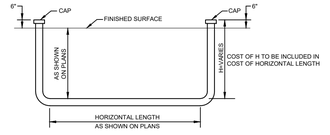


CONDUITS AT ROADWAYS



CONDUITS AT DRAINS

CONDUIT SLEEVE DETAILS (TYPICAL)
NTS



TYPICAL PRIVATE CONDUIT SLEEVE DETAIL
NTS

NOTES:

1.) CONTRACTOR SHALL INSTALL ELECTRIC, GAS, ATT & TV CONDUIT SLEEVES AT DEPTH AND VERTICAL SPACING REQUIRED PER CPS ENERGY.

2.) LOCATION OF SLEEVES SHOWN ARE FOR ILLUSTRATION. SLEEVES SHALL HAVE A MINIMUM 6.0-FEET SEPARATION FROM WATER SERVICES.

3.) COST OF H TO BE INCLUDED IN COST OF HORIZONTAL LENGTH.

NOTE:
PRIVATE CONDUITS TO INCLUDE LONG-SWEEP 90°.
CONDUIT TO EXTEND MIN. 6" ABOVE FINISHED SURFACE.

UTILITY NOTES:

1. OVERALL UTILITY PLAN IS PROVIDED AS A LOCATION REFERENCE FOR THE PURPOSE OF DRY UTILITY TRENCHING, CONDUIT PLACEMENT, AND TRANSFORMER / ENCLOSURE PAD INSTALLATION. CONTRACTOR SHALL REFER TO APPROPRIATE UTILITY PROVIDER CONSTRUCTION PLANS FOR DRY UTILITY CONSTRUCTION.
2. TELEPHONE AND CABLE LINES TO GO IN JOINT TRENCH WITH CPS ENERGY.

CPS/SAWS/COSA UTILITY (RESIDENTIAL):

1. THE CITY OF SAN ANTONIO AS PART OF ITS ELECTRIC, GAS, WATER, AND WASTEWATER SYSTEMS - CITY PUBLIC SERVICE BOARD (CPS ENERGY) AND SAN ANTONIO WATER SYSTEM (SAWS) - 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 SAWS 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 SAWS MONETARY LOSS RESULTING FROM MODIFICATIONS REQUIRED OF CPS ENERGY OR SAWS 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.

DATE
NO. REVISION

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED J.M. DESIGN ----

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
UTILITY COVER SHEET

SHEET C3.0

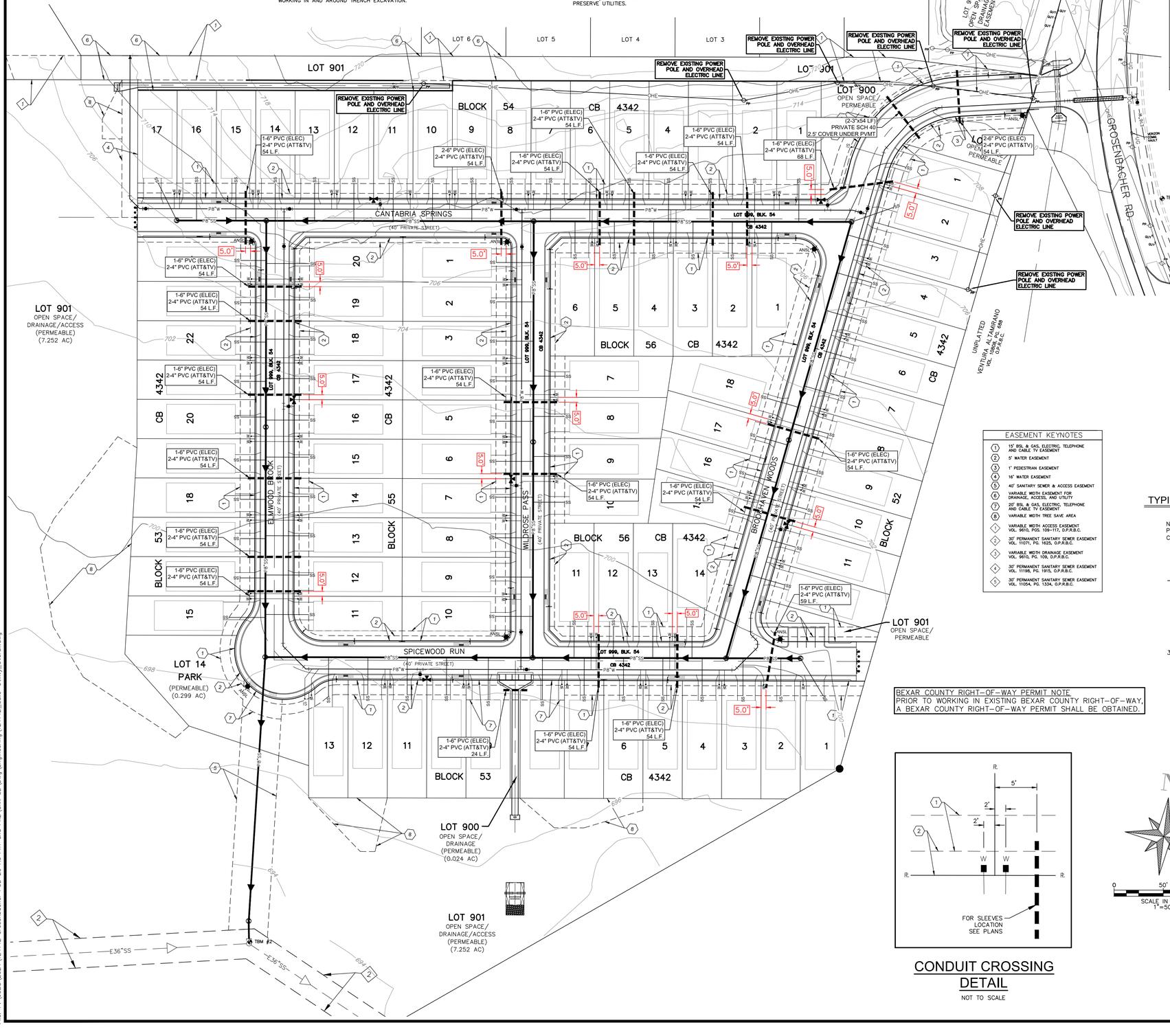
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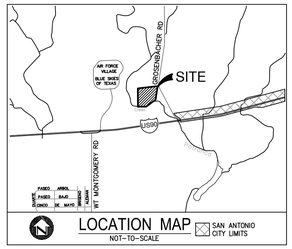
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CAUTION!!
EXISTING UNDERGROUND & OVERHEAD UTILITIES, CONTRACTOR TO VERIFY LOCATION & PROTECT.

NOTE:
SEE SANITARY SEWER PLANS FOR DESIGN SPECIFIC INFORMATION.

STREET LIGHT LEGEND

ANSL PROPOSED 100 WATT STREET LIGHT

LEGEND

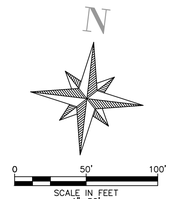
EXISTING	PROPOSED	
		PROPERTY LINE
-W- EX. 6"W-	-W- 8"W	WATER LINE
-SS- EX. 6"SS-	-SS- 6"SS	SANITARY SEWER
-G- EX. 2"G-	-G- 2"G	GAS LINE
UGE	UGE	UNDERGROUND ELECTRIC
		FIRE HYDRANT
W	W	WATER METER, VALVE
CO	CO	CLEAN OUT
PP	PP	POWER POLE, W/TRANSFORMER (PP) POWER POLE (R) RISER POLE
		LIGHT POLE
G	G	GAS VALVE, GAS METER
		BOLLARD/GUARD POST
		SIGN, DOUBLE SIGN
IV		IRRIGATION VALVE
		TREE
		BENCHMARK
		CONTROL SYMBOL
		EXISTING STRUCTURE

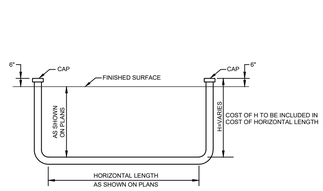
EASEMENT KEYNOTES

1. 10' BSL & GAS, ELECTRIC TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
5. 40' SANITARY SEWER & ACCESS EASEMENT
6. VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8. VARIABLE WIDTH TREE SAVE AREA
1. VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109-117, D.P.R.B.C.
2. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, D.P.R.B.C.
3. VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, D.P.R.B.C.
4. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, D.P.R.B.C.
5. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, D.P.R.B.C.

BEXAR COUNTY RIGHT-OF-WAY PERMIT NOTE
PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT-OF-WAY, A BEXAR COUNTY RIGHT-OF-WAY PERMIT SHALL BE OBTAINED.

CONDUIT CROSSING DETAIL
NOT TO SCALE





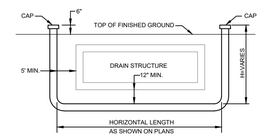
CONDUITS AT ROADWAYS

TYPICAL PRIVATE CONDUIT SLEEVE DETAIL
NTS

NOTE:
PRIVATE CONDUITS TO INCLUDE LONG-SWEEP 90°.
CONDUIT TO EXTEND MIN. 6" ABOVE FINISHED SURFACE.

CONTRACTOR / CPS CONSTRUCTION NOTE:

1. IT'S THE CONTRACTOR'S RESPONSIBILITY TO INSURE CONSTRUCTION SEQUENCE WITH C.P.S. ON AVOIDING ANY/ALL CONSTRUCTION RELATED ISSUES ON SITE.
2. ANY DISCREPANCY BETWEEN C.P.S. AND CONTRACTOR SHALL BE RESOLVED BETWEEN SAID PARTIES. OWNER/DEVELOPER IS NOT RESPONSIBLE AND SHARES NO EXPENSE.
3. IF CPS INSTALLS CROSSINGS, CONTRACTOR SHALL GRADE SUB-GRADE AND NOT COMPACT OR LIME. CONTRACTOR SHALL COORDINATE WITH CPS.



CONDUITS AT DRAINS

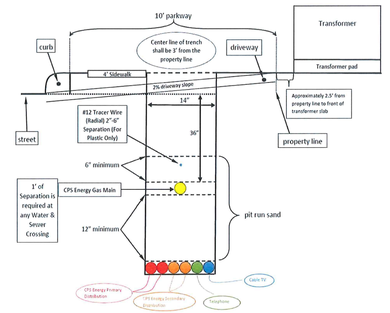
CONDUIT SLEEVE DETAILS (TYPICAL)
N.T.S.

NOTES:
1.) CONTRACTOR SHALL INSTALL ELECTRIC, GAS, ATT & TV CONDUIT SLEEVES AT DEPTH AND VERTICAL SPACING REQUIRED PER CPS ENERGY.
2.) LOCATION OF SLEEVES SHOWN ARE FOR ILLUSTRATION. SLEEVES SHALL HAVE A MINIMUM 6.0-FEET SEPARATION FROM WATER SERVICES.
3.) COST OF H TO BE INCLUDED IN COST OF HORIZONTAL LENGTH.

CPS ENERGY

DS-1

Gas & Electric Trench Joint with Other Utilities



NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED J.M. DESIGN -----

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

UTILITY PLAN

SHEET C3.1

Date: Oct 13, 2025, 1:42pm User ID: joe.macias
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C3.0-Utility_Overall.dwg

CUSTOMER ENGINEERING RESIDENTIAL DEVELOPMENT

CPS ENERGY

CONSTRUCTION COMPLETED BY:	
DATE:	
CONST CTR:	

FERG MAP PAGE 645, E3

ANSL DESIGN — PROJ # A-0006

WORK REQUEST NO: 40952385 — WORK REQUEST TITLE / ADDRESS: WESTWOOD OAKS / 100W ANSL

PLANNED BY	PHONE	CELL	DATE PLANNED	NOTES
D DAVIS	6121	210-218-2729	04/29/25	7: ANSL STLTS
REVIEWED BY	PHONE	CELL	DATE REVIEWED	
S BLAIN	6867	210-415-8573	04/30/25	

PAGE

SERVICE CENTER: SWD — PD13519-62_JH

X,Y GRID COORDINATES		CIRCUIT NO	SCALE
X 2054801.000000	Y 13686251.000000	R422	1 " = 100 '

BURIED FACILITIES: CLEAR ☐ / NOTED ON SKETCH ☐ — CATV ☐ WATER ☐ TELEPHONE ☐ SEWER ☐ ELECTRIC ☐ GAS ☐ OTHER ☐

COPIES — TOTAL

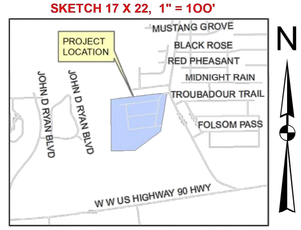
STATE OF TEXAS — DANA L. CUTTER — 97400 — LICENSED PROFESSIONAL ENGINEER

5/7/2025

PAPE-DAWSON ENGINEERS FIRM REGISTRATION #470

ASSOCIATED WITH:
OH REMOVAL WR# 40950263
OH WR# 40950264
URD WR# 40949366

SKETCH 17 X 22, 1" = 100'



LOCATION MAP

NOTE TO DEVELOPER:

1. DEVELOPER IS RESPONSIBLE FOR COORDINATING WITH CPS PRIOR TO THE INSTALLATION OF DRAINAGE STRUCTURES TO ENSURE PROPER COVERAGE REQUIREMENTS CAN BE MAINTAINED FOR CPS FACILITIES. SLEEVES AND/OR CONCRETE ENCASEMENT MAY ALSO BE A REQUIREMENT OF THE DEVELOPER.

2. SEE CIVIL ENGINEERING OVERALL UTILITY AND DRAINAGE PLANS FOR THE LOCATION OF UTILITIES AND DRAINS IN THE CONSTRUCTION AREA.

3. FOREMAN TO LOCATE ALL BURIED UTILITIES.

FOR MISSING PINS CALL ENGINEER

ENGINEER: CDS MUERY ENGINEERS
ADDRESS: 100 NE LOOP 410 STE. 300
PHONE: 210-581-1111
CONTACT: BRIAN CROWELL

DEVELOPER: MEDINA VILLAGE, LLC.
ADDRESS: 4007 MCCULLOUGH AVE. STE. 231
PHONE: 210-444-2040
CONTACT: PATRICK FLANAGIN

"ATTENTION FOREMAN"
PLEASE CONTACT SUPERVISOR PRIOR TO ENERGIZING!!

A STORMWATER PERMIT IS ACTIVE FOR THIS CONSTRUCTION SITE. PLEASE CALL STORMCON ENVIRONMENTAL AT LEAST 48 HOURS PRIOR TO ANY SOIL DISTURBANCE.

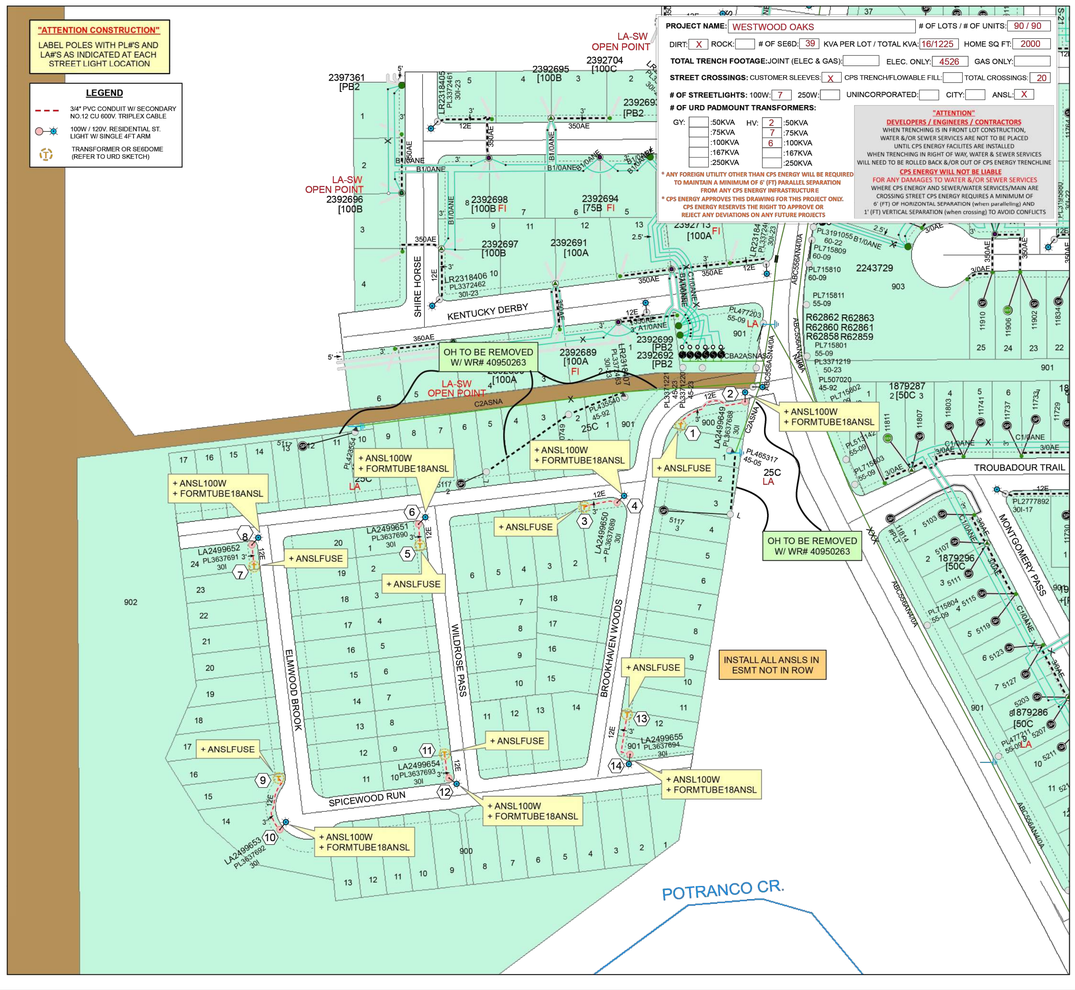
STORMCON POC: BRANDON BAXTER
210-771-1221 (CELL) brandon@stormcon.us

JOINT TRENCH & COMM'S

Joint Trench Participants:
☐ NONE
☐ Astound Broadband: (Footage)
☐ Centric Fiber: (Footage)
☒ GVTC: (Footage)
☒ Spectrum: 5,504' (Footage)

Other COMM's (Non-J.T.): ☒ ATT ☐ Hotwire

ATTENTION: DEVELOPERS / ENGINEERS / CONTRACTORS IF NOT A JOINT TRENCH PARTICIPANT:
* Must be in separate trench
* Must maintain a 6oc parallel separation from CPS Energy underground infrastructure
* Street corssings & developer installed cndult bundles must maintain a 6 foot parallel separation



DOCUMENT IS SCALED BY FACTOR OF 0.9

CUSTOMER ENGINEERING RESIDENTIAL DEVELOPMENT

CPS ENERGY

CONSTRUCTION COMPLETED BY:	
DATE:	
CONST CTR:	

FERG MAP PAGE 645, E3

OH DESIGN — PROJ # A-0011

WORK REQUEST NO: 40950264 — WORK REQUEST TITLE / ADDRESS: WESTWOOD OAKS / OH

PLANNED BY	PHONE	CELL	DATE PLANNED	NOTES
D DAVIS	6121	210-218-2729	04/29/25	+2: POLES +2: CUTOUTS
REVIEWED BY	PHONE	CELL	DATE REVIEWED	
S BLAIN	6867	210-415-8573	04/30/25	

PAGE

SERVICE CENTER: SWD — PD13519-62_JH

X,Y GRID COORDINATES		CIRCUIT NO	SCALE
X 2054801.000000	Y 13686251.000000	R422	1 " = 100 '

BURIED FACILITIES: CLEAR ☐ / NOTED ON SKETCH ☐ — CATV ☐ WATER ☐ TELEPHONE ☐ SEWER ☐ ELECTRIC ☐ GAS ☐ OTHER ☐

COPIES — TOTAL

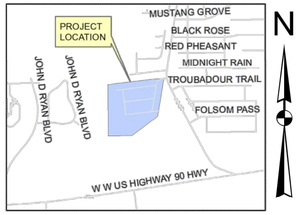
STATE OF TEXAS — DANA L. CUTTER — 97400 — LICENSED PROFESSIONAL ENGINEER

5/7/2025

PAPE-DAWSON ENGINEERS FIRM REGISTRATION #470

ASSOCIATED WITH:
OH REMOVAL WR# 40950263
URD WR# 40949366
ANSL WR# 40952385

SKETCH 17 X 22, 1" = 100'



LOCATION MAP

NOTE TO DEVELOPER:

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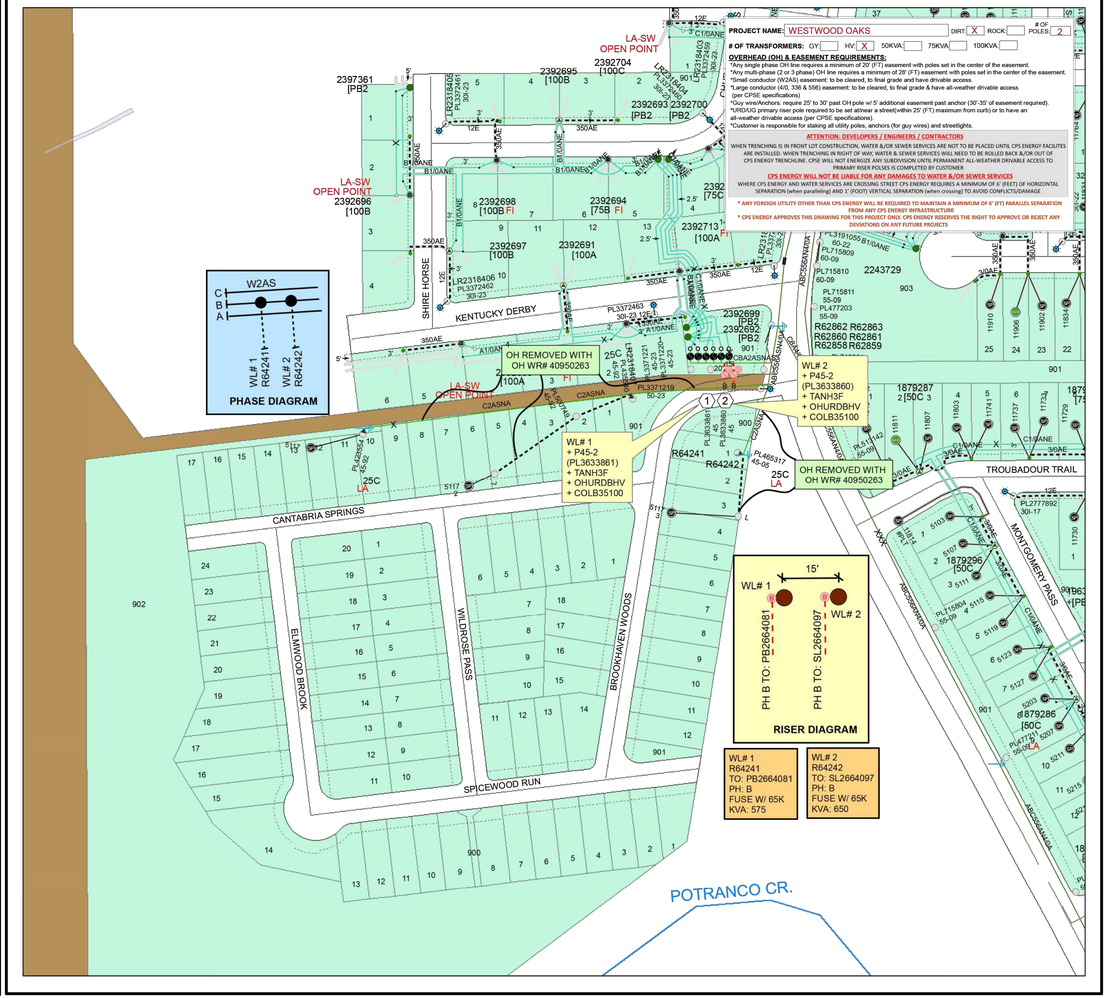
ENGINEER: CDS MUERY ENGINEERS
ADDRESS: 100 NE LOOP 410 STE. 300
PHONE: 210-581-1111
CONTACT: BRIAN CROWELL

DEVELOPER: MEDINA VILLAGE, LLC.
ADDRESS: 4007 MCCULLOUGH AVE. STE. 231
PHONE: 210-444-2040
CONTACT: PATRICK FLANAGIN

"ATTENTION FOREMAN"
PLEASE CONTACT SUPERVISOR PRIOR TO ENERGIZING!!

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STORMCON POC: BRANDON BAXTER
210-771-1221 (CELL) brandon@stormcon.us



DOCUMENT IS SCALED BY FACTOR OF 0.9

NO.	REVISION	DATE

STATE OF TEXAS — BRIAN A. CROWELL — 82619 — LICENSED PROFESSIONAL ENGINEER — 10/10/2025

CDS muery ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED J.M. DESIGN ----

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

FINAL CPS DESIGN

SHEET C3.2

Date: Oct 10, 2025, 3:39pm User ID: pablo.deluna
File: P:\SBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C3_0-Utility_Overall.dwg

CUSTOMER ENGINEERING RESIDENTIAL DEVELOPMENT

CPS ENERGY

CONSTRUCTION COMPLETED

BY:

DATE:

CONST CTR:

FERG MAP PAGE 645, E3

OH DESIGN				PROJ #	A-0010
WORK REQUEST NO	WORK REQUEST TITLE / ADDRESS				
40950263	WESTWOOD OAKS / OH REMOVAL				
PLANNED BY	PHONE	CELL	DATE PLANNED	NOTES	
D. DAVIS	6121	210-218-2729	04/29/25	5: EX. POLES - 5: POLES - 3: 25KVA XFRM	
REVIEWED BY	PHONE	CELL	DATE REVIEWED		
S BLAIN	6867	210-415-8573	04/30/25		
PAGE					
SERVICE CENTER					
SWD				PD_13519-62_JH	
X,Y GRID COORDINATES			CIRCUIT NO	SCALE	
X 2054801.000000	Y 13686251.000000		R422	1 " = 100 '	
BURIED FACILITIES					
CATV	WATER	TELEPHONE	SEWER	ELECTRIC	GAS	OTHER
CLEAR ☐ NOTED ON SKETCH ☐	☐	☐	☐	☐	☐	☐	☐
COPIES						TOTAL

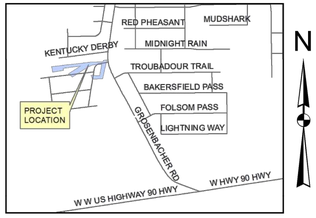
STATE OF TEXAS
DANA L. CUTTER
97400
LICENSED
PROFESSIONAL ENGINEER

5/7/2025

PAPE-DAWSON ENGINEERS
FIRM REGISTRATION #470

ASSOCIATED WITH:
URD WR# 40949366
OH WR# 40950264
ANSL WR# 40952385

SKETCH 17 X 22, 1" = 100'



LOCATION MAP

NOTE TO DEVELOPER:

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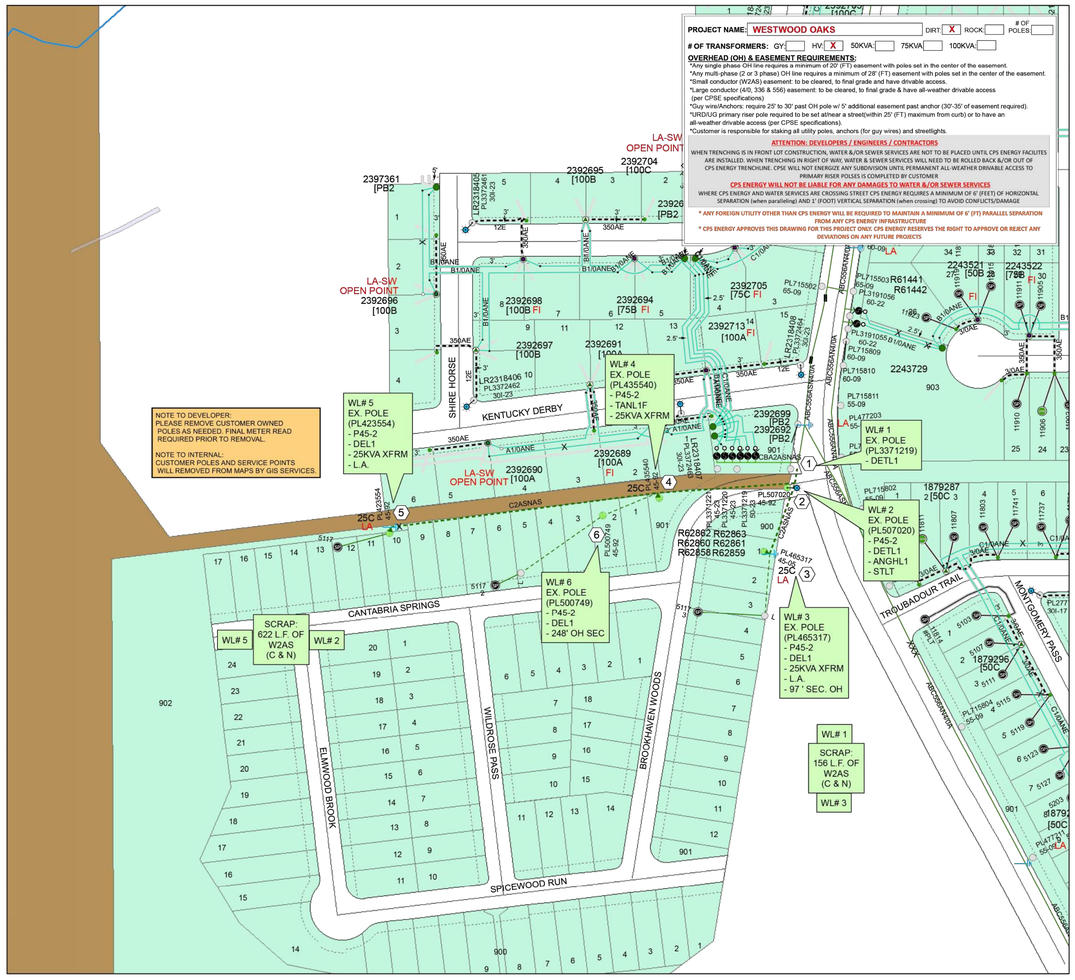
ENGINEER: CDS MUERY ENGINEERS
ADDRESS: 100 NE LOOP 410 STE. 300
PHONE: 210-581-1111
CONTACT: BRIAN CROWELL

DEVELOPER: MEDINA VILLAGE, LLC
ADDRESS: 4007 MCCULLOUGH AVE. STE. 231
PHONE: 210-444-2040
CONTACT: PATRICK FLANAGIN

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STORMCON POC: BRANDON BAXTER
210-771-1221 (CELL) brandon@stormcon.us



DOCUMENT IS SCALED BY FACTOR OF 0.9

URD ELECTRIC DESIGN				PROJ #	A-0012
WORK REQUEST NO	WORK REQUEST TITLE / ADDRESS				
40949366	WESTWOOD OAKS / URD				
PLANNED BY	PHONE	CELL	DATE PLANNED	NOTES	
D DAVIS	6121	210-218-2729	04/29/25		
REVIEWED BY	PHONE	CELL	DATE REVIEWED		
S BLAIN	6867	210-415-8573	04/30/25	90 LOTS	
PAGE					
SERVICE CENTER					
SWD				PD13519-62_JH	
X,Y GRID COORDINATES			CIRCUIT NO	SCALE	
X 2054801.000000	Y 13686251.000000		R422	1 " = 100 '	
BURIED FACILITIES					
CATV	WATER	TELEPHONE	SEWER	ELECTRIC	GAS	OTHER
CLEAR ☐ NOTED ON SKETCH ☐	☐	☐	☐	☐	☐	☐	☐
COPIES						TOTAL

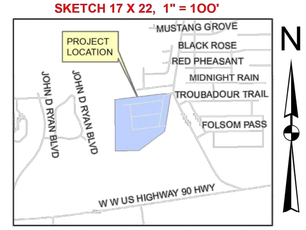
STATE OF TEXAS
DANA L. CUTTER
97400
LICENSED
PROFESSIONAL ENGINEER

5/7/2025

PAPE-DAWSON ENGINEERS
FIRM REGISTRATION #470

ASSOCIATED WITH:
OH REMOVAL WR# 40950263
OH WR# 40950264
ANSL WR# 40952385

SKETCH 17 X 22, 1" = 100'



LOCATION MAP

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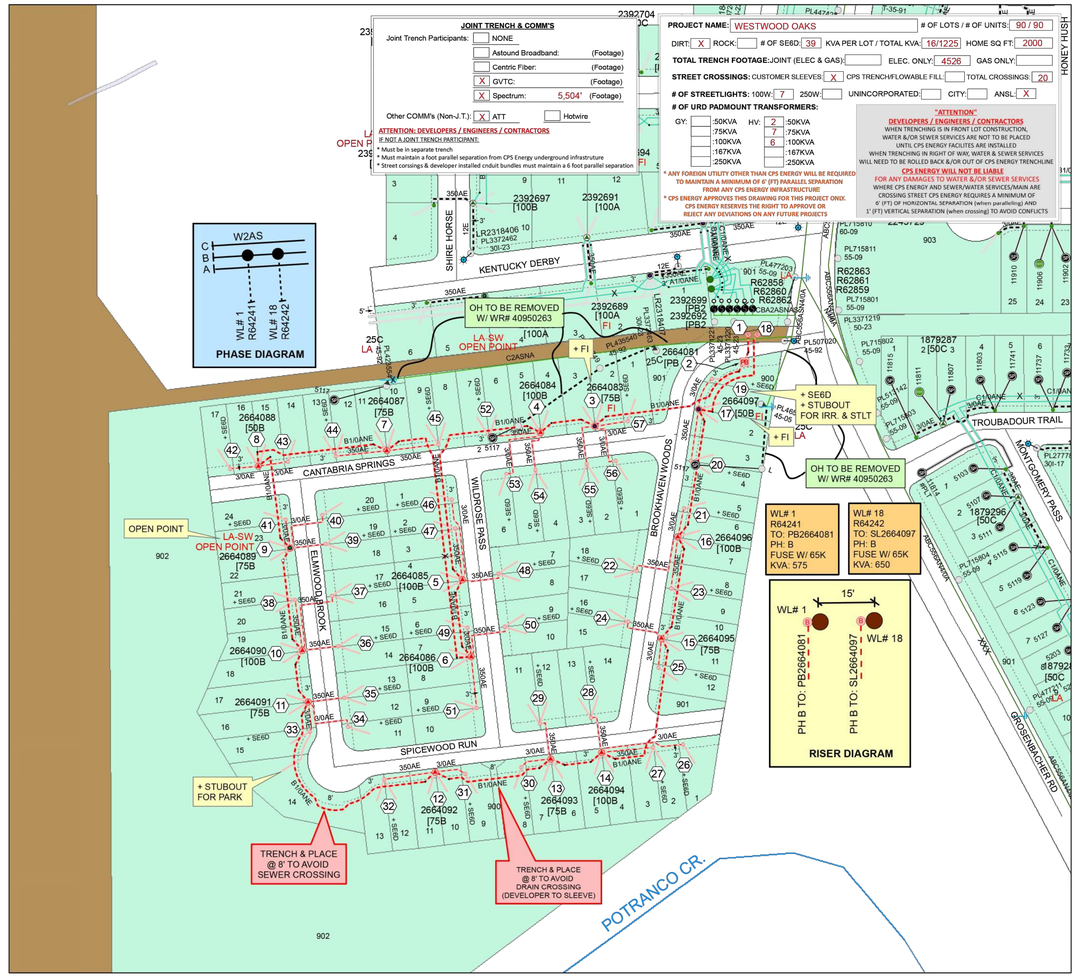
ENGINEER: CDS MUERY ENGINEERS
ADDRESS: 100 NE LOOP 410 STE. 300
PHONE: 210-581-1111
CONTACT: BRIAN CROWELL

DEVELOPER: MEDINA VILLAGE, LLC.
ADDRESS: 4007 MCCULLOUGH AVE. STE. 231
PHONE: 210-444-2040
CONTACT: PATRICK FLANAGIN

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STORMCON POC: BRANDON BAXTER
210-771-1221 (CELL) brandon@stormcon.us



DOCUMENT IS SCALED BY FACTOR OF 0.9

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED J.M. DESIGN ----

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS
FINAL CPS DESIGN

SHEET C3.3

Date: Oct 10, 2025, 3:39pm User ID: pablo.delunja
File: P:\JOBS\2024\124142 Grossenbacher PUD 20 Ac Ph1 and Ph2\Civil 30\Dwg\Engineering\124142_C3.0-Utility_Overall.dwg

SAN ANTONIO
WATER SYSTEM

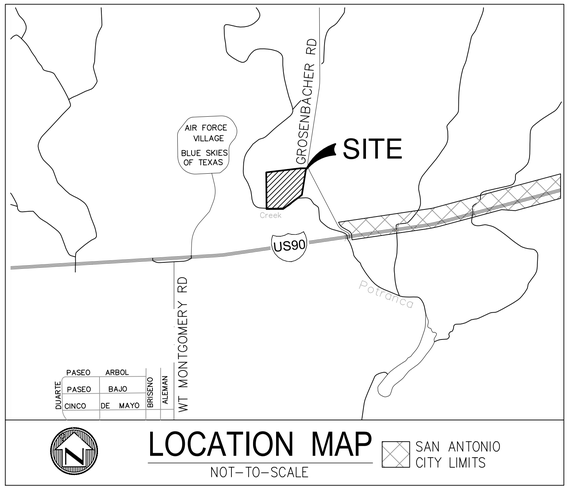
SAWS JOB NO. 24-1635

SANITARY SEWER PLANS

FOR

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS



ITEM	DESCRIPTION	UNIT	QUANTITIY
1	6" SANITARY SEWER LATERALS, INCLUDES WYES (SDR-26)	LF	3,346
2	8" SANITARY SEWER PIPE SDR-26 (0'-6')	LF	49
3	8" SANITARY SEWER PIPE SDR-26 (6'-8')	LF	1,719
4	8" SANITARY SEWER PIPE SDR-26 (6'-8') *	LF	80
5	8" SANITARY SEWER PIPE SDR-26 (8'-10')	LF	961
6	8" SANITARY SEWER PIPE SDR-26 (8'-10') *	LF	40
6	8" SANITARY SEWER PIPE SDR-26 (12'-14')	LF	18
7	WATERTIGHT RING & COVER SEWER MANHOLES (0'-6')	EA	11
8	WATERTIGHT RING & COVER SEWER MANHOLES (DROP MANHOLE)	EA	1
9	CONNECT TO EXISTING 8" STUB (LINE A)	EA	1
10	EXTRA DEPTH MANHOLE (>6')	VF	42
11	CLEANOUT - INCLUDES HEAVY DUTY RATED COVER/FRAME	EA	90
12	SEWER MAIN T.V. INSPECTION	LF	2,867
13	TRENCH EXCAVATION PROTECTION	LF	6,213

* MINIMUM 160 PSI PIPE

ENGINEER:
CDS MUERY
ATTN: BRIAN CROWELL, P.E.
100 NE LOOP 410, STE. 300
SAN ANTONIO, TEXAS 78216
TEL: (210) 581-1111
FAX: (210) 581-5555

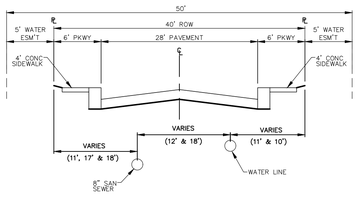
OWNER/DEVELOPER:
PATRICK FLANAGIN, CONTROLLER
MEDINA VILLAGE, LLC
4007 McCULLOUGH AVE, SUITE 231
SAN ANTONIO, TX 78212

BENCHMARK INFORMATION		
NO.	DESCRIPTION	ELEVATION
TBM #1 PNT#2784 N: 13688791.76 E: 2055689.94	CHISELED "□" ON THE SOUTHWEST SIDE OF CONCRETE HEADWALL OF A CONCRETE WATER DRAIN, ON THE NORTHEAST RIGHT-OF-WAY OF GROSENBACHER ROAD,	709.85
TBM #2 PNT#6000 N: 13687927.97 E: 2054861.14	CHISELED "□" ON THE NORTH SIDE OF A CONCRETE MANHOLE.	693.08

SITE INFORMATION:

BEING A TOTAL OF 21.095 ACRES, LYING IN THE T.S. COOKE SURVEY 65 1/4, COUNTY BLOCK 4342, ABSTRACT 1076, BEXAR COUNTY TEXAS, SAME BEING ALL OF A 20.53 ACRE TRACT OF LAND DESCRIBED IN DEED TO CARLOS MEDINA JR. AND PORFIRIA MEDINA AND RECORDED IN VOL. 8307, PG. 596 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS.

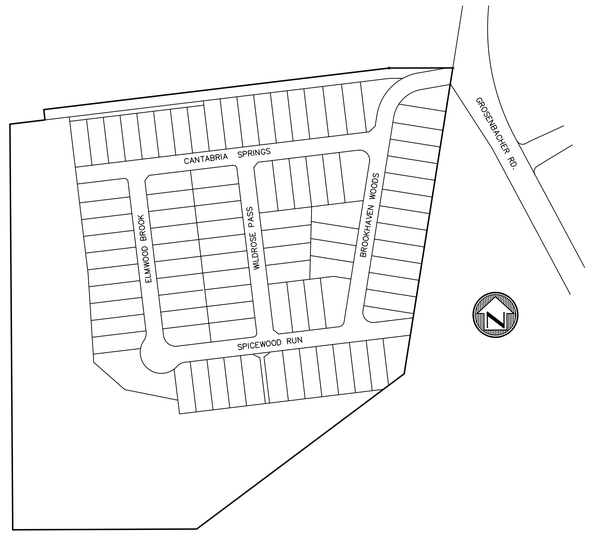
CONTRACTOR TO USE EXTREME CAUTION WHEN WORKING NEAR AND AROUND EXISTING UTILITIES CONTRACTOR TO VERIFY VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITIES WITHIN AREA OF CONSTRUCTION AND REPORT FINDINGS TO ENGINEER.



TYPICAL LOCAL 'A' STREET SECTION
N.T.S.



TYPICAL LOCAL 'B' STREET SECTION
N.T.S.



OVERALL SITE MAP

EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
5. 40' SANITARY SEWER & ACCESS EASEMENT
6. VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8. VARIABLE WIDTH TREE SAVE AREA
1. VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109-117, D.P.R.B.C.
2. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3. VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, D.P.R.B.C.
4. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

CIVIL SHEET INDEX	
SHT NO.	TITLE
C4.0	SANITARY SEWER COVER SHEET
C4.1	SANITARY SEWER GENERAL NOTES
C4.2	OVERALL SANITARY SEWER PLAN
C4.3	SANITARY SEWER LINE A
C4.4	SANITARY SEWER LINE B
C4.5	SANITARY SEWER LINE C
C4.6	SANITARY SEWER LINE D
C4.7	SANITARY SEWER LINE E

SEWER:
UPPER MEDINA SEWERSHED

Developer's Name MEDINA VILLAGE, LLC
Developer's Address 4007 MCCULLOUGH AVE, STE 231
City SAN ANTONIO State TEXAS Zip 78212
Phone # 210-254-6447 Fax # ----
SAWS Block Maps 086562 Total EDU's 90 Total Acreage 21.095
Total Linear Footage of Pipe 2,867 L.F. ~ 8"SDR-26 Plat No. LAND-PLAT-24-11800321
Number of Lots 90 SAWS Job No. 24-1635

SAWS JOB NO. 24-1635

DATE | NO. | REVISION

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
SANITARY SEWER
COVER SHEET

SHEET C4.0

Date: Oct 10, 2025, 3:39pm User ID: pablo.deluna
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SAWS CONSTRUCTION NOTES COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT JANUARY 2022

GENERAL SECTION

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) 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 SAWS 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 SAWS CONSTRUCTION INSPECTION DIVISION AT

   (210) 233-2973, 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 SAWS.

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 SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
   - SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
   - COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
   - COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480
   - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
   - 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 BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.

9. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO 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 SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

    WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

    ANY AND ALL SAWS 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 SAWS 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 SAWS CONSTRUCTION INSPECTION DIVISION.

SEWER SECTION

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 SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT (210) 233-2014. 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 SAWS DIRECTION) WITHIN 24 HOURS.

   SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, 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 SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973 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 SAWS 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 SAWS 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 DEFLECTION (MANDREL) TESTING AND THE TV INSPECTION MUST BE PERFORMED AND PASSED PRIOR TO FINAL FIELD ACCEPTANCE BY SAWS CONSTRUCTION INSPECTION DIVISION.

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

GENERAL UTILITY NOTES

1. THERE ARE UTILITY CROSSINGS ON THIS PROJECT. THE CONTRACTOR SHALL VERIFY ALL GRAVITY LINE CROSSINGS (SANITARY SEWER, STORM SEWER, WALL DRAINS, ETC.) TO ENSURE NO CONFLICTS OCCUR PRIOR TO UTILITY LINE CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IF GRAVITY LINE VERTICAL ADJUSTMENTS ARE NECESSARY. CONTRACTOR IS EXPECTED TO MAKE ADJUSTMENT OF NON-GRAVITY UTILITY LINES AS NECESSARY TO AVOID CONFLICTS AND MAINTAIN THE MINIMUM BURY DEPTHS OF EACH UTILITY AS SPECIFIED.

2. WHEN SANITARY SEWER LINES ARE INSTALLED IN THE VICINITY OF POTABLE WATER MAINS, SUCH INSTALLATION OF SANITARY SEWER AND WATER FACILITIES SHALL BE IN STRICT COMPLIANCE WITH TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) CHAPTER 290 – "PUBLIC DRINKING WATER", SUBCHAPTER D, "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" AND CHAPTER 217 – "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS".

3. FITTINGS FOR WATER SHOWN ON THE DRAWINGS REPRESENT GENERAL ALIGNMENT AND INSTALLATION INTENTION AND DO NOT REPRESENT ALL FITTINGS REQUIRED FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL INCIDENTAL FITTINGS AND APPURTENANCES FOR HORIZONTAL AND VERTICAL ALIGNMENT ADJUSTMENTS, MATERIAL ADAPTERS, PIPE SIZE REDUCTION, TIE-INS TO EXISTING MAINS, INSTALLATION SPECIALTIES, ETC.

EXCAVATION, SHORING, AND RESTORATION

1. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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 OF ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

2. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

3. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. SANITARY SEWER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION, ITEM NO. 550 & 804.

4. PROTECTION OF EXISTING BUILDING STRUCTURES ALONG THE PIPELINE ROUTE SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND ACCOMPLISHED IN ACCORDANCE WITH SPECIFICATION ITEM 804. THERE WILL BE NO SEPARATE PAYMENT FOR STRUCTURE PROTECTION (SHEETING, SHORING, ETC.). THE COST FOR THIS WORK MUST BE INCLUDED IN THE APPROPRIATE BID ITEM(S).

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES. NO SEPARATE PAYMENT SHALL BE MADE FOR REQUIRED RESTORATIONS, UNLESS OTHERWISE SHOWN.

6. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CITY PUBLIC SERVICE MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND GAS VALVES THAT ARE IN THE PROJECT AREAS.

7. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.

8. WHENEVER POWER POLES ARE ADJACENT TO THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PROPER SHORING, BRACING, AND/OR OTHER SUITABLE SUPPORT FOR THE POLES DURING CONSTRUCTION.

9. THE CONTRACTOR SHALL PROVIDE EMERGENCY VEHICLES, RESIDENTS AND BUSINESSES WITH ACCESS TO AND FROM THEIR HOMES AND ESTABLISHMENTS AND ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE. (NO SEPARATE PAY ITEM.)

10. CONTRACTOR TO NOTIFY CUSTOMERS 24 HOURS PRIOR TO ANY SERVICE OUTAGE.

11. CONTRACTOR SHALL NOTIFY BEXAR COUNTY RIGHT-OF-WAY DEPT. AT LEAST 24 HOURS BEFORE TEMPORARY ROAD CLOSURES.

12. CONTRACTOR SHALL PROTECT ROADWAY PAVEMENTS USED FOR STORAGE OF PIPE MATERIALS AND EQUIPMENT. BEXAR COUNTY RIGHT-OF-WAY DEPT. WILL DETERMINE LEVEL OF REPAIR REQUIRED FOR ANY PAVEMENT DAMAGED BY CONTRACTOR. NO SEPARATE PAYMENT WILL BE MADE FOR REPAIR OF DAMAGED PAVEMENT CAUSED BY CONTRACTOR.

13. CONTRACTOR TO PLACE 4-INCHES OF FLEXIBLE BASE MATERIAL AT TRENCH SURFACE PER SPECIFICATION ITEM NO. 804 (NSPI).

1. CONTRACTOR WILL BE PROVIDED WITH GROUND CONTROL POINTS ESTABLISHING LAYOUT "CONTROL LINES" AS SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL OTHER LAYOUT AND GRADE CONTROL SURVEYING FOR CONSTRUCTION OF THE PROJECT.

2. EXISTING UNDERGROUND UTILITIES ARE SHOWN FROM AVAILABLE UTILITY RECORDS AND OBSERVABLE SURFACE FEATURES. ACTUAL LOCATIONS MAY VERY AND UTILITIES NOT SHOWN ON THESE PLANS MY EXIST. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANIES AND OWNER PERSONNEL FOR ASSISTANCE IN LOCATING ALL UNDERGROUND FACILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND GRADE OF UNDERGROUND FACILITIES WELL AHEAD OF CONSTRUCTION OPERATIONS AND SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND REPLACEMENT OF ALL DAMAGED UTILITIES AND FOR DAMAGES CAUSED TO OWNER OR OTHER PARTIES ARISING FROM SERVICE INTERRUPTION OR LOSS OF USE.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR PERMANENT SERVICE TERMINATION ASSOCIATED WITH UTILITY LINES TO BE REMOVED OR ABANDONED.

4. WHERE NECESSARY, CONTRACTOR SHALL PROVIDE FOR BARRICADES AND TRAFFIC CONTROL DEVICES AS PER THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).

5. AS APPLICABLE, TREES ON SITE ARE TO REMAIN IN UNDAMAGED CONDITION UNLESS REMOVAL OR TRIMMING IS IDENTIFIED ON THE PLANS OR IS NECESSARY FOR CONSTRUCTION OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF ARCHITECT/LANDSCAPE ARCHITECT IF UNIDENTIFIED REMOVAL OR TRIMMING BECOMES NECESSARY. RESPONSE TO SUCH NOTIFICATION IS REQUIRED BEFORE TREE REMOVAL OR TRIMMING MAY PROCEED.

6. UNLESS OTHERWISE SPECIFIED BY THE ARCHITECT OR IN THE LANDSCAPE PLANS/SPECIFICATIONS THE FOLLOWING STATEMENT SHALL APPLY TO TOPSOIL SALVAGE, PLACEMENT AND SUPPLY: TOPSOIL SHALL BE STRIPPED AND STOCKPILED SEPARATELY FROM ALL OTHER MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS. STOCKPILED TOPSOIL MATERIAL SHALL BE SPREAD AND COMPACTED TO A DEPTH OF 6" TO ESTABLISH FINISHED GRADE IN ALL AREAS THAT ARE NOT TO BE PAVED. SHOULD STOCKPILED TOPSOIL FAIL TO COVER ALL AREAS TO A COMPACTED DEPTH OF 6", CONTRACTOR SHALL SUPPLY ADDITIONAL TOPSOIL FROM APPROVED OFF SITE SOURCES TO ESTABLISH FINISHED GRADE WITHOUT ADDITIONAL COMPENSATION.

7. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ROCK AND ALL OTHER MATERIALS ENCOUNTERED REGARDLESS OF THEIR NATURE OR THE MANNER IN WHICH THEY ARE REMOVED.

8. CONTRACTOR IS RESPONSIBLE FOR GRADING ALL DISTURBED AREAS TO PREVENT PONDING OR BLOCKAGE OF SURFACE DRAINAGE.

9. CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES AS NECESSARY TO PREVENT DAMAGE TO ADJACENT PROPERTIES AND TO CONFORM TO LOCAL JURISDICTIONAL AUTHORITY REQUIREMENTS.

10. WHERE FINISHED CONTOURS ARE SHOWN TO MATCH EXISTING CONTOURS ON THE GRADING PLANS, NO GRADE SEPARATION IS ALLOWABLE. CONTRACTOR SHALL ADJUST FINISHED CONTOURS AS NECESSARY TO ACCOMPLISH THIS REQUIREMENT.

11. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) 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 CONTRACTORS 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 ACTIVITY OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

12. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON COMPLETION.

TRAFFIC CONTROL PLAN NOTES:

CONTRACTOR IS RESPONSIBLE FOR DESIGNING, COORDINATING CITY APPROVAL FOR/AND IMPLEMENTING THE TRAFFIC CONTROL PLAN FOR SEWER CONSTRUCTION OF THIS PROJECT.

SEWER:
UPPER MEDINA SEWERSHED

Developer's Name MEDINA VILLAGE, LLC
Developer's Address 4007 MCCULLOUGH AVE, STE 231
City SAN ANTONIO State TEXAS Zip 78212
Phone # 210-254-6447 Fax # ----
SAWS Block Maps 086562 Total EDU's 90 Total Acreage 21.095
Total Linear Footage of Pipe 2,867 L.F. ~ 8"SDR-26 Plat No. LAND-PLAT-24-11800321
Number of Lots 90 SAWS Job No. 24-1635

SAWS JOB NO. 24-1635

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
SANITARY SEWER
GENERAL NOTES

SHEET C4.1

Date: Oct 10, 2025, 3:39pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Groesbeckner PUD 20 Ac Ph1 and Ph2\Civil 30\Dwg\Engineering\124142_C4.0-Sewer_Overall.dwg

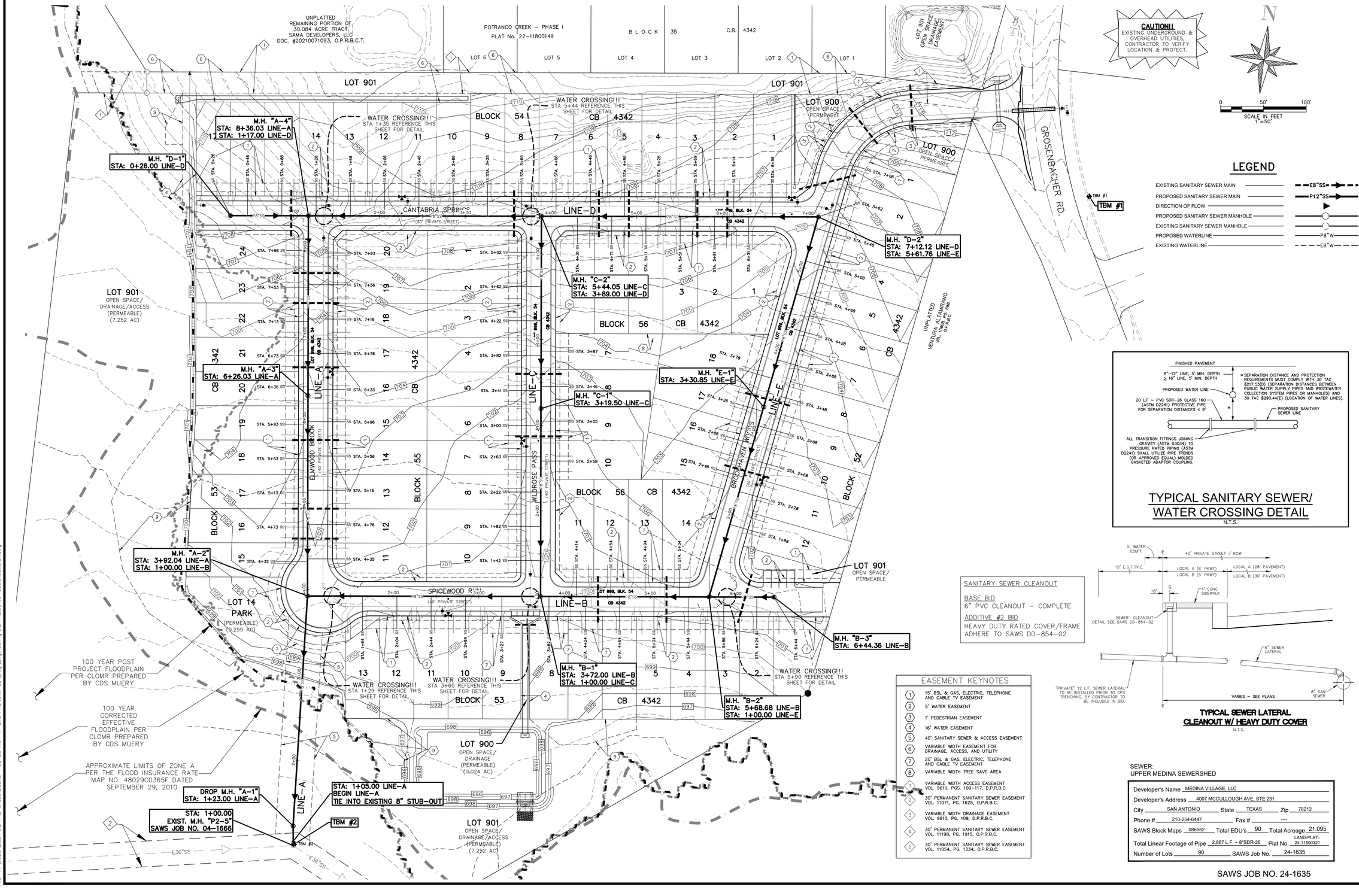
TRENCH EXCAVATION SAFETY PROTECTION:
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

PRIVATE STREET DESIGNATION NOTE:
LOT 999, BLOCK 54, IS A PRIVATE STREET AND IS DESIGNATED AS AN UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE CABLE TELEVISION, DRAINAGE, PEDESTRIAN, PUBLIC WATER, WASTEWATER, AND RECYCLED WATER MAINS.

CAUTION:
THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

TREE PROTECTION NOTE:
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LEGEND

EXISTING SANITARY SEWER MAIN	E8"SS
PROPOSED SANITARY SEWER MAIN	P12"SS
DIRECTION OF FLOW	
PROPOSED SANITARY SEWER MANHOLE	
EXISTING SANITARY SEWER MANHOLE	
PROPOSED WATERLINE	P8"W
EXISTING WATERLINE	E8"W

TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL
N.T.S.

SANITARY SEWER CLEANOUT

BASE BID
6" PVC CLEANOUT – COMPLETE

ADDITIVE #2 BID
HEAVY DUTY RATED COVER/FRAME ADHERE TO SAWS DD-854-02

TYPICAL SEWER LATERAL CLEANOUT W/ HEAVY DUTY COVER
N.T.S.

EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
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4. 16' WATER EASEMENT
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Phone # 210-254-6447 Fax # ---
SAWS Block Maps 086562 Total EDU's 90 Total Acreage 21.095
Total Linear Footage of Pipe 2,867 L.F. ~ 8"SDR-26 Plat No. 24-11800321 (LAND-PLAT-)
Number of Lots 90 SAWS Job No. 24-1635

SAWS JOB NO. 24-1635

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
OVERALL SANITARY SEWER PLAN

SHEET C4.2

Date: Oct 10, 2025, 3:39pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\dwg\Engineering\124142_C4.0-Sewer_Overall.dwg

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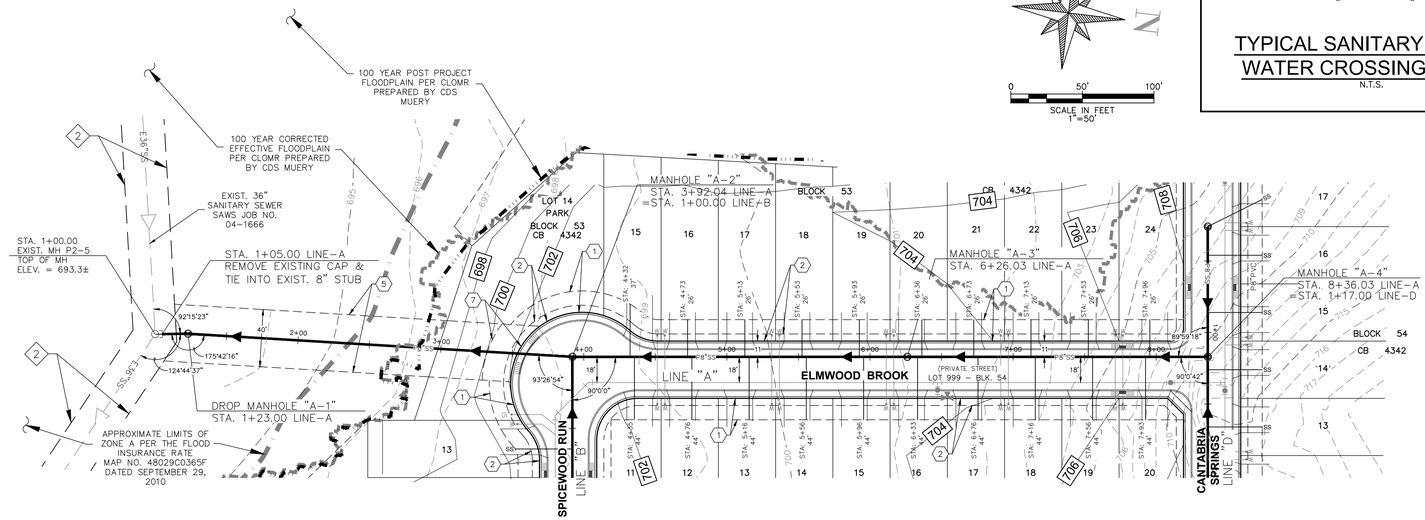
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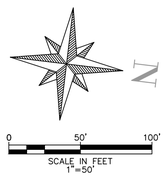
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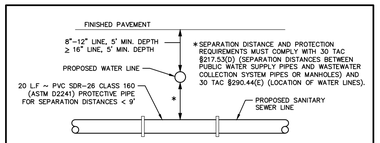
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SCALE IN FEET
1"=50'





TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

N.T.S.

LEGEND

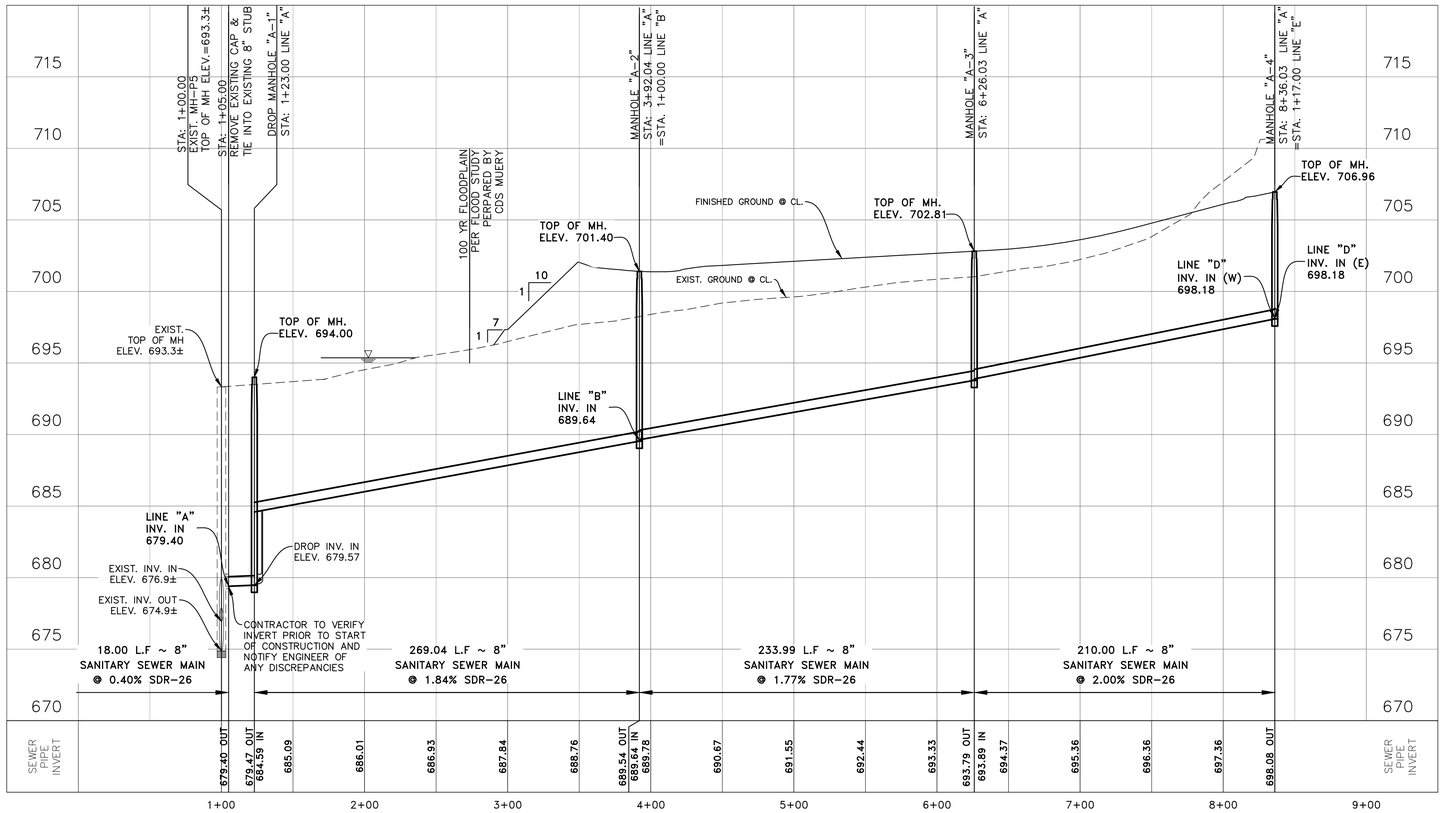
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LINE-A

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UPPER MEDINA SEWERSHED

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DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

SANITARY SEWER LINE A

SHEET C4.3

Date: Oct 10, 2025, 3:39pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Crosenbacher PUD 20 Ac Ph1 and Ph2\Civil 30\Dwg\Engineering\124142_C4.3-C4.7-Sewer_Profiles.dwg

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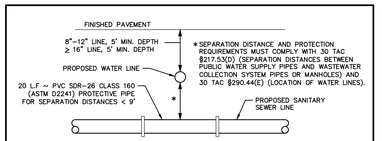
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TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

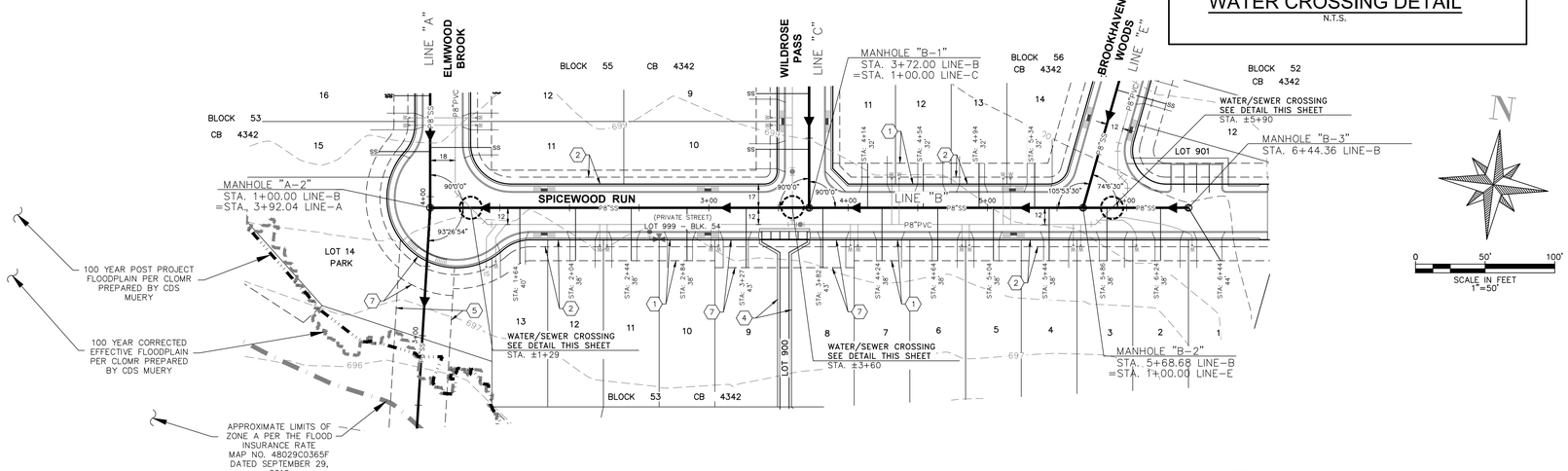
N.T.S.

LEGEND

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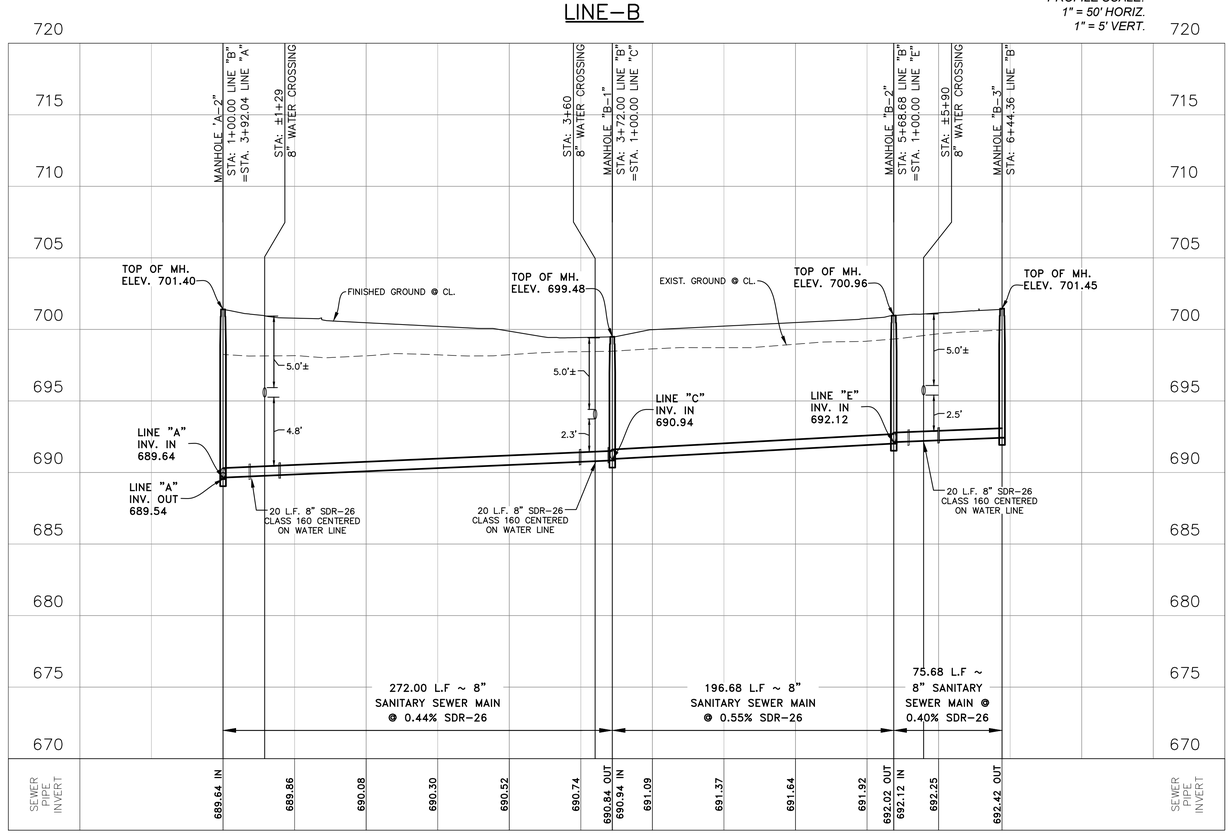
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LINE-B

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SEWER:
UPPER MEDINA SEWERSHED

Developer's Name	MEDINA VILLAGE, LLC
Developer's Address	4007 MCCULLOUGH AVE, STE 231
City	SAN ANTONIO
State	TEXAS
Zip	78212
Phone #	210-254-6447
Fax #	---
SAWS Block Maps	086562
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Plat No.	LAND-PLAT-24-11800321
Number of Lots	90
SAWS Job No.	24-1635

SAWS JOB NO. 24-1635

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
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JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

SANITARY SEWER LINE B

SHEET C4.4

Date: Oct 10, 2025, 3:39pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C4.3-C4.7-Sewer_Profiles.dwg

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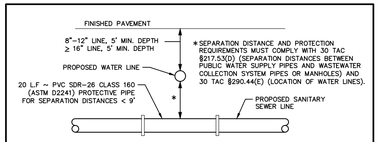
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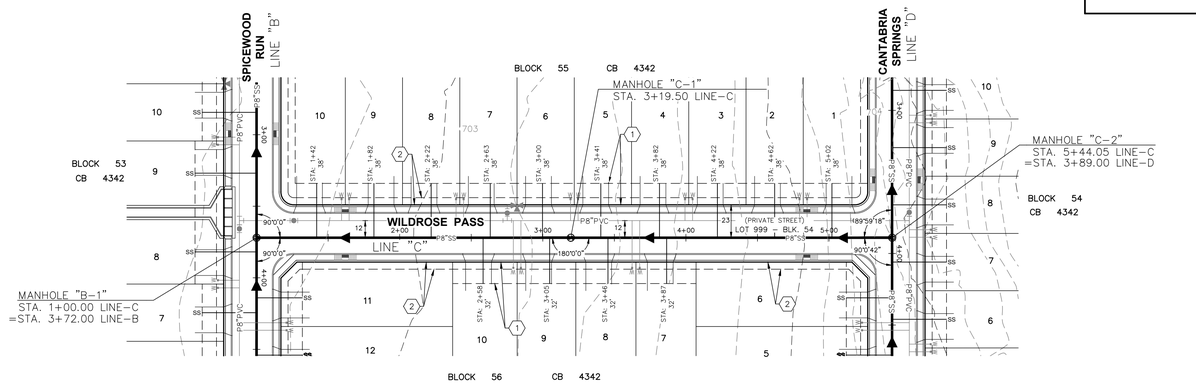
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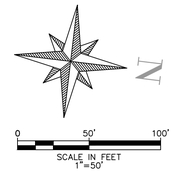
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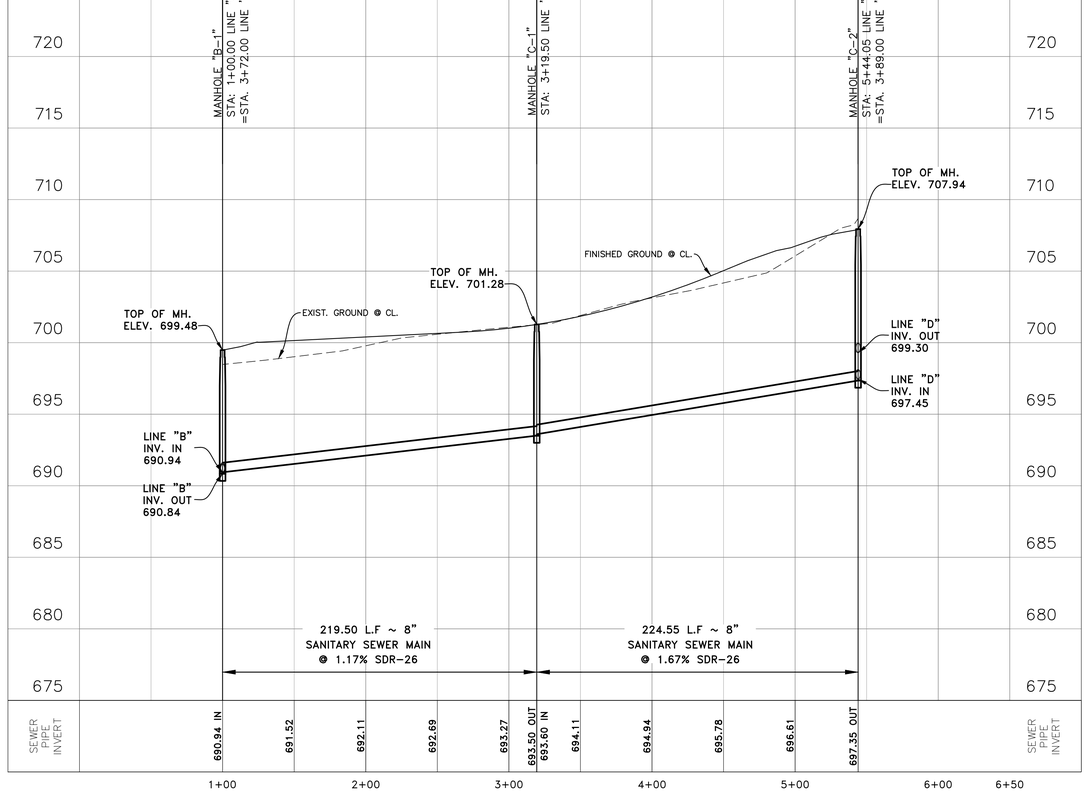
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LINE-C

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SANITARY SEWER LINE C

SHEET C4.5

Date: Oct 10, 2025, 3:40pm User ID: pablo.delunaFile: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 30\Dwg\Engineering\124142_C4.3-C4.7-Sewer_Profiles.dwg

COMPACTION NOTE

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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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

PRIVATE STREET DESIGNATION NOTE:

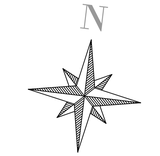
LOT 999, BLOCK 54, IS A PRIVATE STREET AND IS DESIGNATED AS AN UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE CABLE TELEVISION, DRAINAGE, PEDESTRIAN, PUBLIC WATER, WASTEWATER, AND RECYCLED WATER MAINS.

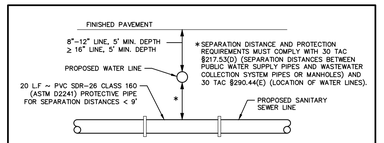
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TREE PROTECTION NOTE:

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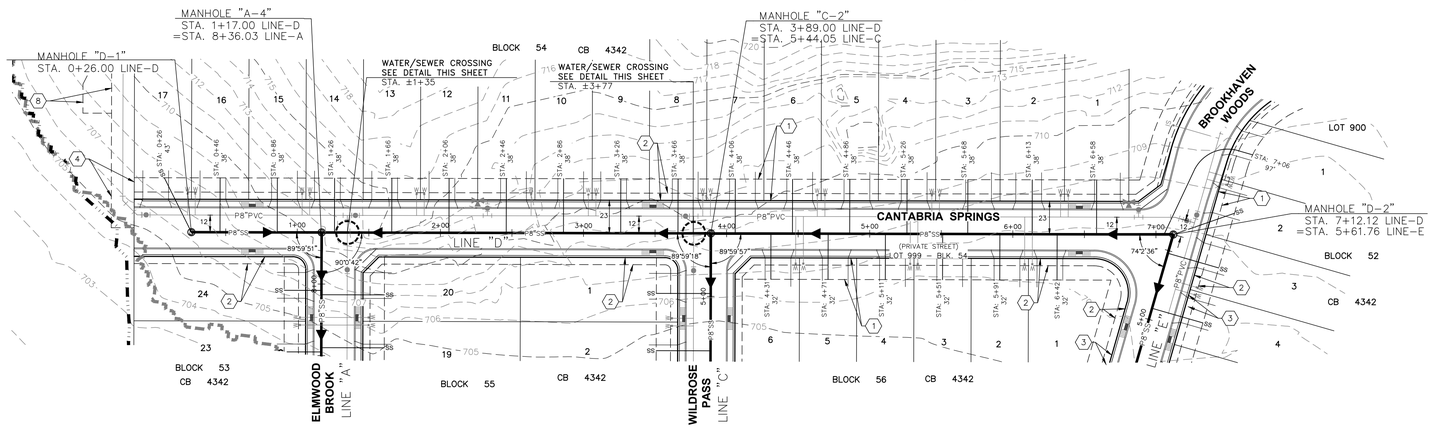
TYPICAL SANITARY SEWER/
WATER CROSSING DETAIL
N.T.S.

LEGEND

- EXISTING SANITARY SEWER MAIN — E8"SS
- PROPOSED SANITARY SEWER MAIN — P8"SS
- DIRECTION OF FLOW
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
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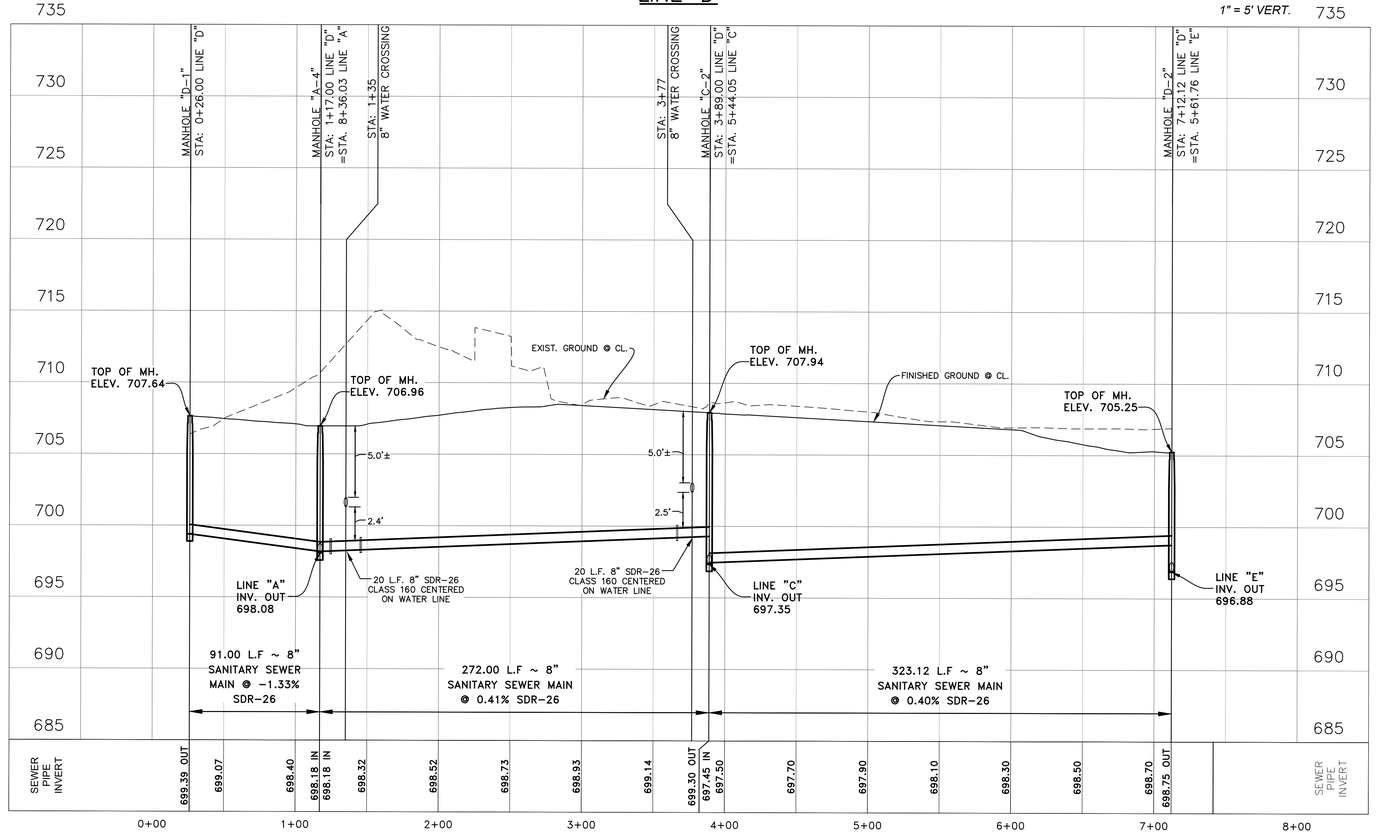
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LINE-D

PROFILE SCALE:
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SEWER:
UPPER MEDINA SEWERSHED

Developer's Name MEDINA VILLAGE, LLC
Developer's Address 4007 MCCULLOUGH AVE, STE 231
City SAN ANTONIO State TEXAS Zip 78212
Phone # 210-254-6447 Fax # ---
SAWS Block Maps 086562 Total EDU's 90 Total Acreage 21.095
Total Linear Footage of Pipe 2,867 L.F. ~ 8"SDR-26 Plat No. LAND-PLAT-24-11800321
Number of Lots 90 SAWS Job No. 24-1635

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NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE JANUARY 2025 OCTOBER 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

SANITARY SEWER LINE D

SHEET C4.6

Date: Oct 10, 2025, 3:40pm User ID: pablo.deluna
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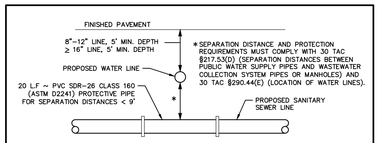
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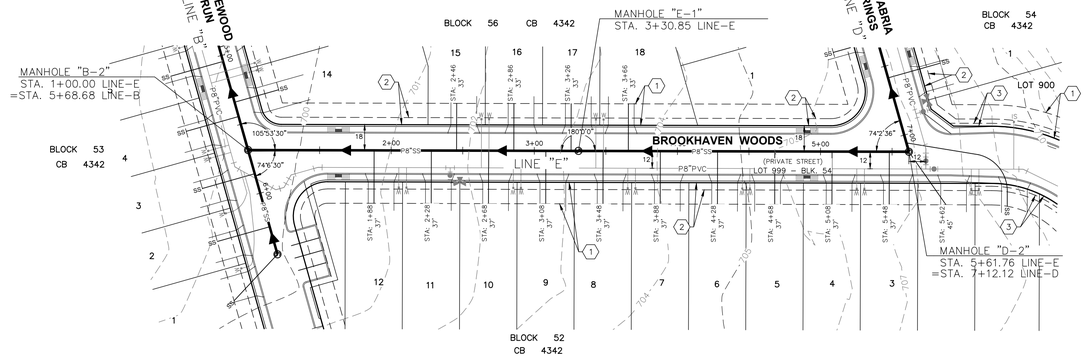
LEGEND

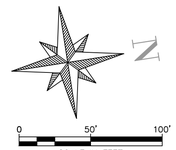
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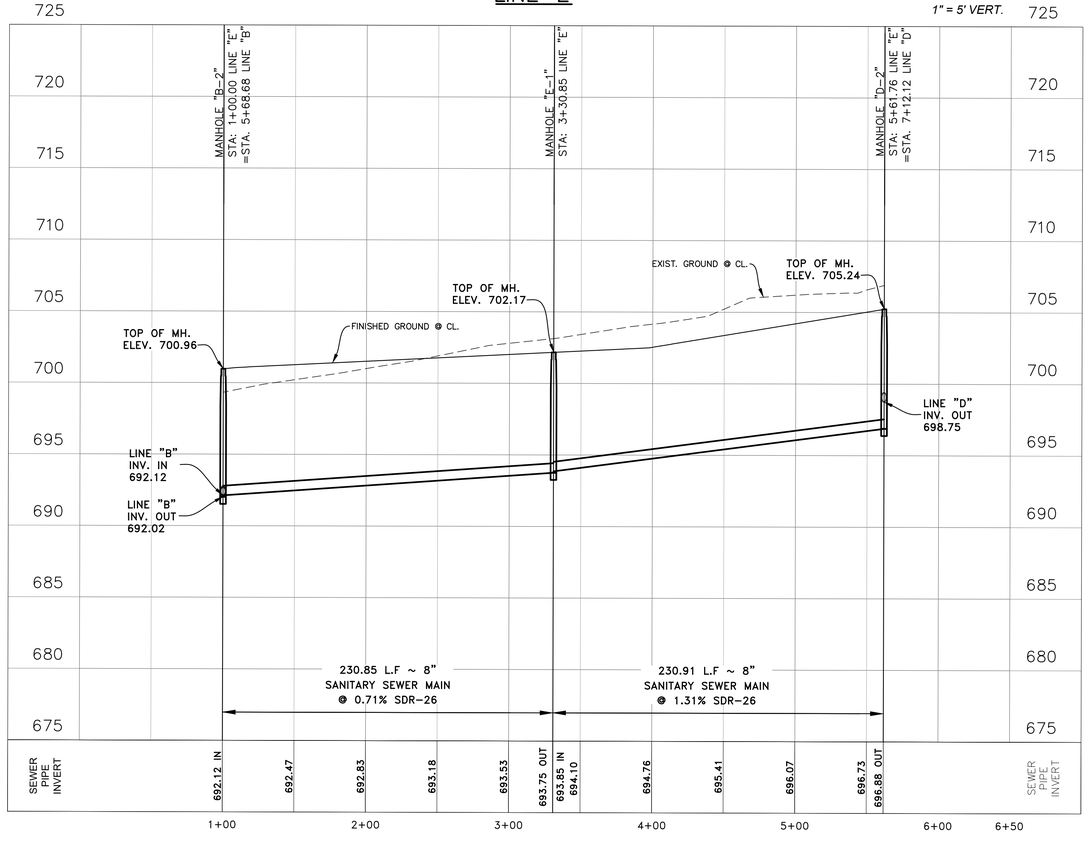
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Phone # 210-254-6447 Fax # ----
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STATE OF TEXAS
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WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

SANITARY SEWER LINE E

SHEET C4.7

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SAN ANTONIO
WATER SYSTEM

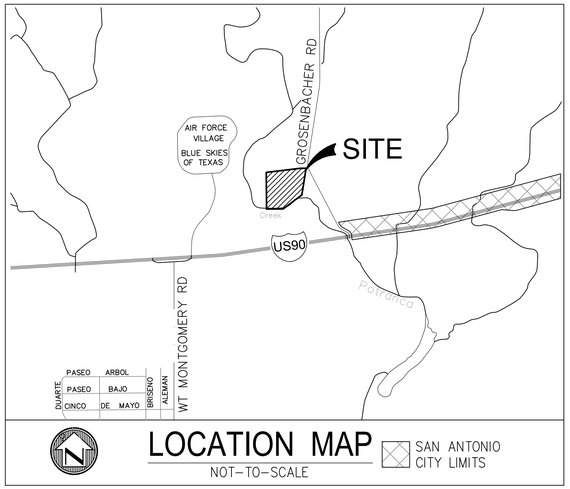
SAWS JOB NO. 24-1164

WATERLINE PLANS

FOR

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS



ITEM	DESCRIPTION	UNIT	QUANTITY
	PHASE I		
1	8" WATERLINE PVC, C-900 (Class 235, DR 18)	L.F.	3,065
2	BORING, JACKING OR TUNNELING 24"	L.F.	50
3	8" CARRIER PIPE	L.F.	50
4	24" STEEL CASING	L.F.	50
5	16" GATE VALVE, MJ W/ VALVE BOX	EA.	1
6	8" GATE VALVE, MJ W/ VALVE BOX	EA.	10
7	2" BLOWOFF (PERMANENT)	EA.	1
8	2" BLOWOFF (TEMPORARY)	EA.	1
9	STANDARD FIRE HYDRANT	EA.	6
10	3/4" SINGLE SERVICE (DOMESTIC): SHORT *	EA.	60
11	3/4" SINGLE SERVICE (DOMESTIC): LONG *	EA.	30
12	3/4" SINGLE SERVICE (IRRIGATION): SHORT * - (5/8" METER)	EA.	1
13	3/4" SINGLE SERVICE (IRRIGATION): LONG * - (5/8" METER)	EA.	1
14	DUCTILE IRON FITTINGS	TON	1.24
15	TRENCH PROTECTION	L.F.	3,065
16	HYDROSTATIC TEST	EA.	1
17	16"X8" CUT IN TEE, (COMPLETE) (TIE-IN TO E16" PVC)	EA.	1
	PHASE II		
1	METER BOX	EA.	92

ENGINEER:

CDS MUERY
ATTN: BRIAN CROWELL, P.E.
100 NE LOOP 410, STE. 300
SAN ANTONIO, TEXAS 78216
TEL: (210) 581-1111
FAX: (210) 581-5555

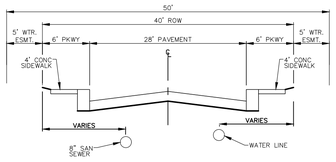
OWNER/DEVELOPER:

PATRICK FLANAGIN, CONTROLLER
MEDINA VILLAGE, LLC
4007 McCULLOUGH AVE, SUITE 231
SAN ANTONIO, TX 78212

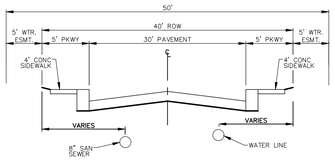
BENCHMARK INFORMATION		
NO.	DESCRIPTION	ELEVATION
TBM #1 PNT#2784 N:13688791.76 E:2055689.94	CHISELED "□" ON THE SOUTHWEST SIDE OF CONCRETE HEADWALL OF A CONCRETE WATER DRAIN, ON THE NORTHEAST RIGHT-OF-WAY OF GROSENBACHER ROAD,	709.85
TBM #2 PNT#6000 N:13687927.97 E:2054861.14	CHISELED "□" ON THE NORTH SIDE OF A CONCRETE MANHOLE.	693.08

SITE INFORMATION:

BEING A TOTAL OF 21.095 ACRES, LYING IN THE T.S. COOKE SURVEY 65 1/4, COUNTY BLOCK 4342, ABSTRACT 1076, BEXAR COUNTY TEXAS, SAME BEING ALL OF A 20.53 ACRE TRACT OF LAND DESCRIBED IN DEED TO CARLOS MEDINA JR. AND PORFIRIA MEDINA AND RECORDED IN VOL. 8307, PG. 596 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS.



TYPICAL LOCAL "A" STREET SECTION
N.T.S.



TYPICAL LOCAL "B" STREET SECTION
N.T.S.

CONTRACTOR TO USE EXTREME CAUTION WHEN WORKING NEAR AND AROUND EXISTING UTILITIES CONTRACTOR TO VERIFY VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITIES WITHIN AREA OF CONSTRUCTION AND REPORT FINDINGS TO ENGINEER.

EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
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OVERALL SITE MAP

CIVIL SHEET INDEX	
SHT NO.	TITLE
C5.0	WATER COVER SHEET
C5.1	WATER GENERAL NOTES
C5.2	WATER PLAN
C5.3	WATER LINE BORE PLAN

THIS DEVELOPMENT IS ENTIRELY IN PRESSURE ZONE 930 (HIGH PRESSURE SYSTEM) ALL WATER PIPE TO BE C-900, CLASS 235 (DR-18) UNLESS NOTED OTHERWISE.

Developer's Name MEDINA VILLAGE, LLC
Developer's Address 4007 MCCULLOUGH AVE, STE 231
City SAN ANTONIO State TEXAS Zip 78212
Phone # 210-254-6447 Fax # ---
SAWS Block Maps 086562 Total EDU's 92 Total Acreage 21.095
Total Linear Footage of Pipe 3,064 L.F.- 8"PVC Plat No. LAND-PLAT-24-11800321
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WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
WATER COVER SHEET

SHEET C5.0

Date: Oct 10, 2025, 3:40pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 30\Dwg\Engineering\124142_C5.0-C5.2-Water_Overall.dwg

SAWS CONSTRUCTION NOTES
COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT
JANUARY 2022

GENERAL SECTION

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) 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 SAWS 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 SAWS CONSTRUCTION INSPECTION DIVISION AT

   (210) 233-2973, 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 SAWS.

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 SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
   - SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
   - COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
   - COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480
   - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
   - 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 PROJECTS CONSTRUCTION.

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

9. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO 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 SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

    WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

    ANY AND ALL SAWS 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 SAWS 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 SAWS CONSTRUCTION INSPECTION DIVISION.

WATER SECTION

1. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION 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 SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
   - FOR WATER MAINS 12" OR HIGHER: SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014

2. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".

3. VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)

4. SUITABLE ANCHORAGE/THRUST BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, TEES, CROSSES, VALVES, AND BENDS, IN ACCORDANCE WITH THE STANDARD DRAWINGS DD-839 SERIES AND ITEM NO. 839, IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.

5. ALL VALVES SHALL READ "OPEN RIGHT".

6. PRVs REQUIRED: CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 745 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 745 FEET, THE DEVELOPER OF BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AND APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF "PRV IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICES CONNECTIONS SHALL BE ALLOWED. "NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV)."

7. PIPE DISINFECTION WITH DRY HTH FOR PROJECTS LESS THAN 800 LINEAR FEET. (ITEM NO. 847.3): MAINS SHALL BE DISINFECTED WITH DRY HTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. THE CONTRACTOR SHALL UTILIZE ALL APPROPRIATE SAFETY MEASURE TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.

8. BACKFLOW PREVENTION DEVICES:
   - ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS ARE REQUIRED TO HAVE BACKFLOW PREVENTION DEVICES.
   - ALL COMMERCIAL BACKFLOW PREVENTION DEVICES MUST BE APPROVED BY SAWS PRIOR TO INSTALLATION.

9. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.

10. DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWENTY-FIVE (25) CALENDAR DAYS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

GENERAL UTILITY NOTES

1. THERE ARE UTILITY CROSSINGS ON THIS PROJECT. THE CONTRACTOR SHALL VERIFY ALL GRAVITY LINE CROSSINGS (SANITARY SEWER, STORM SEWER, WALL DRAINS, ETC.) TO ENSURE NO CONFLICTS OCCUR PRIOR TO UTILITY LINE CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IF GRAVITY LINE VERTICAL ADJUSTMENTS ARE NECESSARY. CONTRACTOR IS EXPECTED TO MAKE ADJUSTMENT OF NON-GRAVITY UTILITY LINES AS NECESSARY TO AVOID CONFLICTS AND MAINTAIN THE MINIMUM BURY DEPTHS OF EACH UTILITY AS SPECIFIED.

2. WHEN SANITARY SEWER LINES ARE INSTALLED IN THE VICINITY OF POTABLE WATER MAINS, SUCH INSTALLATION OF SANITARY SEWER AND WATER FACILITIES SHALL BE IN STRICT COMPLIANCE WITH TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) CHAPTER 290 – "PUBLIC DRINKING WATER", SUBCHAPTER D, "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" AND CHAPTER 217 – "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS".

3. FITTINGS FOR WATER SHOWN ON THE DRAWINGS REPRESENT GENERAL ALIGNMENT AND INSTALLATION INTENTION AND DO NOT REPRESENT ALL FITTINGS REQUIRED FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL INCIDENTAL FITTINGS AND APPURTENANCES FOR HORIZONTAL AND VERTICAL ALIGNMENT ADJUSTMENTS, MATERIAL ADAPTERS, PIPE SIZE REDUCTION, TIE-INS TO EXISTING MAINS, INSTALLATION SPECIALTIES, ETC.

EXCAVATION, SHORING, AND RESTORATION

1. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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 OF ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

2. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

3. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. SANITARY SEWER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION, ITEM NO. 550 & 804.

4. PROTECTION OF EXISTING BUILDING STRUCTURES ALONG THE PIPELINE ROUTE SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND ACCOMPLISHED IN ACCORDANCE WITH SPECIFICATION ITEM 804. THERE WILL BE NO SEPARATE PAYMENT FOR STRUCTURE PROTECTION (SHEETING, SHORING, ETC.). THE COST FOR THIS WORK MUST BE INCLUDED IN THE APPROPRIATE BID ITEM(S).

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES. NO SEPARATE PAYMENT SHALL BE MADE FOR REQUIRED RESTORATIONS, UNLESS OTHERWISE SHOWN.

6. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CITY PUBLIC SERVICE MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND GAS VALVES THAT ARE IN THE PROJECT AREAS.

7. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.

8. WHENEVER POWER POLES ARE ADJACENT TO THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PROPER SHORING, BRACING, AND/OR OTHER SUITABLE SUPPORT FOR THE POLES DURING CONSTRUCTION.

9. THE CONTRACTOR SHALL PROVIDE EMERGENCY VEHICLES, RESIDENTS AND BUSINESSES WITH ACCESS TO AND FROM THEIR HOMES AND ESTABLISHMENTS AND ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE. (NO SEPARATE PAY ITEM.)

10. CONTRACTOR TO NOTIFY CUSTOMERS 24 HOURS PRIOR TO ANY SERVICE OUTAGE.

11. CONTRACTOR SHALL NOTIFY BEXAR COUNTY RIGHT-OF-WAY DEPT. AT LEAST 24 HOURS BEFORE TEMPORARY ROAD CLOSURES.

12. CONTRACTOR SHALL PROTECT ROADWAY PAVEMENTS USED FOR STORAGE OF PIPE MATERIALS AND EQUIPMENT. BEXAR COUNTY RIGHT-OF-WAY DEPT. WILL DETERMINE LEVEL OF REPAIR REQUIRED FOR ANY PAVEMENT DAMAGED BY CONTRACTOR. NO SEPARATE PAYMENT WILL BE MADE FOR REPAIR OF DAMAGED PAVEMENT CAUSED BY CONTRACTOR.

13. CONTRACTOR TO PLACE 4-INCHES OF FLEXIBLE BASE MATERIAL AT TRENCH SURFACE PER SPECIFICATION ITEM NO. 804 (NSPI).

RESIDENTIAL FIRE FLOW NOTE

THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1000 GPM AT 25 PSI RESIDUAL PRESSURE TO MEET THE CITY OF SAN ANTONIO'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 CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

GENERAL SITE NOTES

1. CONTRACTOR WILL BE PROVIDED WITH GROUND CONTROL POINTS ESTABLISHING LAYOUT "CONTROL LINES" AS SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL OTHER LAYOUT AND GRADE CONTROL SURVEYING FOR CONSTRUCTION OF THE PROJECT.

2. EXISTING UNDERGROUND UTILITIES ARE SHOWN FROM AVAILABLE UTILITY RECORDS AND OBSERVABLE SURFACE FEATURES. ACTUAL LOCATIONS MAY VERY AND UTILITIES NOT SHOWN ON THESE PLANS MY EXIST. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANIES AND OWNER PERSONNEL FOR ASSISTANCE IN LOCATING ALL UNDERGROUND FACILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND GRADE OF UNDERGROUND FACILITIES WELL AHEAD OF CONSTRUCTION OPERATIONS AND SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND REPLACEMENT OF ALL DAMAGED UTILITIES AND FOR DAMAGES CAUSED TO OWNER OR OTHER PARTIES ARISING FROM SERVICE INTERRUPTION OR LOSS OF USE.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR PERMANENT SERVICE TERMINATION ASSOCIATED WITH UTILITY LINES TO BE REMOVED OR ABANDONED.

4. WHERE NECESSARY, CONTRACTOR SHALL PROVIDE FOR BARRICADES AND TRAFFIC CONTROL DEVICES AS PER THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).

5. AS APPLICABLE, TREES ON SITE ARE TO REMAIN IN UNDAMAGED CONDITION UNLESS REMOVAL OR TRIMMING IS IDENTIFIED ON THE PLANS OR IS NECESSARY FOR CONSTRUCTION OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF ARCHITECT/LANDSCAPE ARCHITECT IF UNIDENTIFIED REMOVAL OR TRIMMING BECOMES NECESSARY. RESPONSE TO SUCH NOTIFICATION IS REQUIRED BEFORE TREE REMOVAL OR TRIMMING MAY PROCEED.

6. UNLESS OTHERWISE SPECIFIED BY THE ARCHITECT OR IN THE LANDSCAPE PLANS/SPECIFICATIONS THE FOLLOWING STATEMENT SHALL APPLY TO TOPSOIL SALVAGE, PLACEMENT AND SUPPLY: TOPSOIL SHALL BE STRIPPED AND STOCKPILED SEPARATELY FROM ALL OTHER MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS. STOCKPILED TOPSOIL MATERIAL SHALL BE SPREAD AND COMPACTED TO A DEPTH OF 6" TO ESTABLISH FINISHED GRADE IN ALL AREAS THAT ARE NOT TO BE PAVED. SHOULD STOCKPILED TOPSOIL FAIL TO COVER ALL AREAS TO A COMPACTED DEPTH OF 6", CONTRACTOR SHALL SUPPLY ADDITIONAL TOPSOIL FROM APPROVED OFF SITE SOURCES TO ESTABLISH FINISHED GRADE WITHOUT ADDITIONAL COMPENSATION.

7. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ROCK AND ALL OTHER MATERIALS ENCOUNTERED REGARDLESS OF THEIR NATURE OR THE MANNER IN WHICH THEY ARE REMOVED.

8. CONTRACTOR IS RESPONSIBLE FOR GRADING ALL DISTURBED AREAS TO PREVENT PONDING OR BLOCKAGE OF SURFACE DRAINAGE.

9. CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES AS NECESSARY TO PREVENT DAMAGE TO ADJACENT PROPERTIES AND TO CONFORM TO LOCAL JURISDICTIONAL AUTHORITY REQUIREMENTS.

10. WHERE FINISHED CONTOURS ARE SHOWN TO MATCH EXISTING CONTOURS ON THE GRADING PLANS, NO GRADE SEPARATION IS ALLOWABLE. CONTRACTOR SHALL ADJUST FINISHED CONTOURS AS NECESSARY TO ACCOMPLISH THIS REQUIREMENT.

11. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) 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 CONTRACTORS 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 ACTIVITY OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

12. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON COMPLETION.

MISCELLANEOUS NOTES

1. JUMPER CONNECTIONS TO EXISTING WATER SERVICE TO BE PROVIDED AS REQUIRED OR DIRECTED BY THE SAWS INSPECTOR.

2. ALL MAINS ARE ON-SITE.

3. FITTINGS WEIGHT IS BASED ON M.J. DUCTILE IRON FITTINGS (COMPACT) ITEM 836, SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION ~ MARCH 2008.

4. CONTRACTOR TO OBTAIN STREET CUT PERMITS AS NECESSARY FOR WATER MAIN INSTALLATION. REPLACEMENT OF CURB, SIDEWALKS, BASE, AND PAVEMENT WILL BE SUBSIDIARY TO THE ITEMS THAT THE STREET CUT WAS NEEDED FOR.

5. CONTRACTOR MUST COMPLY WITH MANUFACTURER'S INSTALLATION OF PROPER RESTRAINTS IF PROPER THRUST BLOCKING IS NOT INSTALLED, CONTRACTOR MUST INSTALL JOINT RESTRAINTS PER MANUFACTURER'S SPECIFICATIONS. RESTRAINTS AND TRUST BLOCKING ARE CONSIDERED SUBSIDIARY TO WATER MAIN INSTALLATION. NO SEPARATE PAYMENT FOR THIS WORK.
   *DOUBLE NUT ALL RESTRAINING BOLTS.
   *ANY TYPE OF JOINT RESTRAINT MUST BE BI-DIRECTIONAL

6. MINIMUM COVER OVER WATER MAIN BASED ON FINISHED GROUND.

WATER LINE DIA.	MIN. DEPTH
8"-12"	5'
≥ 16"	5'

7. USE AWWA C-900 PVC PIPE, CLASS 235 (DR-18) FOR WATER MAIN CONSTRUCTION UNLESS NOTED OTHERWISE ON PLANS

8. SAWS REQUIRES GCPs AND COUNTER PERMITS TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS.

THIS DEVELOPMENT IS ENTIRELY IN PRESSURE ZONE 930 (HIGH PRESSURE SYSTEM) ALL WATER PIPE TO BE C-900, CLASS 235 (DR-18) UNLESS NOTED OTHERWISE.

Developer's Name MEDINA VILLAGE, LLC
Developer's Address 4007 MCCULLOUGH AVE, STE 231
City SAN ANTONIO State TEXAS Zip 78212
Phone # 210-254-6447 Fax # ----
SAWS Block Maps 086562 Total EDU's 92 Total Acreage 21.095
Total Linear Footage of Pipe 3,064 L.F.- 8"PVC Plat No. LAND-PLAT-24-11800321
Number of Lots 90 SAWS Job No. 24-1164

SAWS JOB NO. 24-1164

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

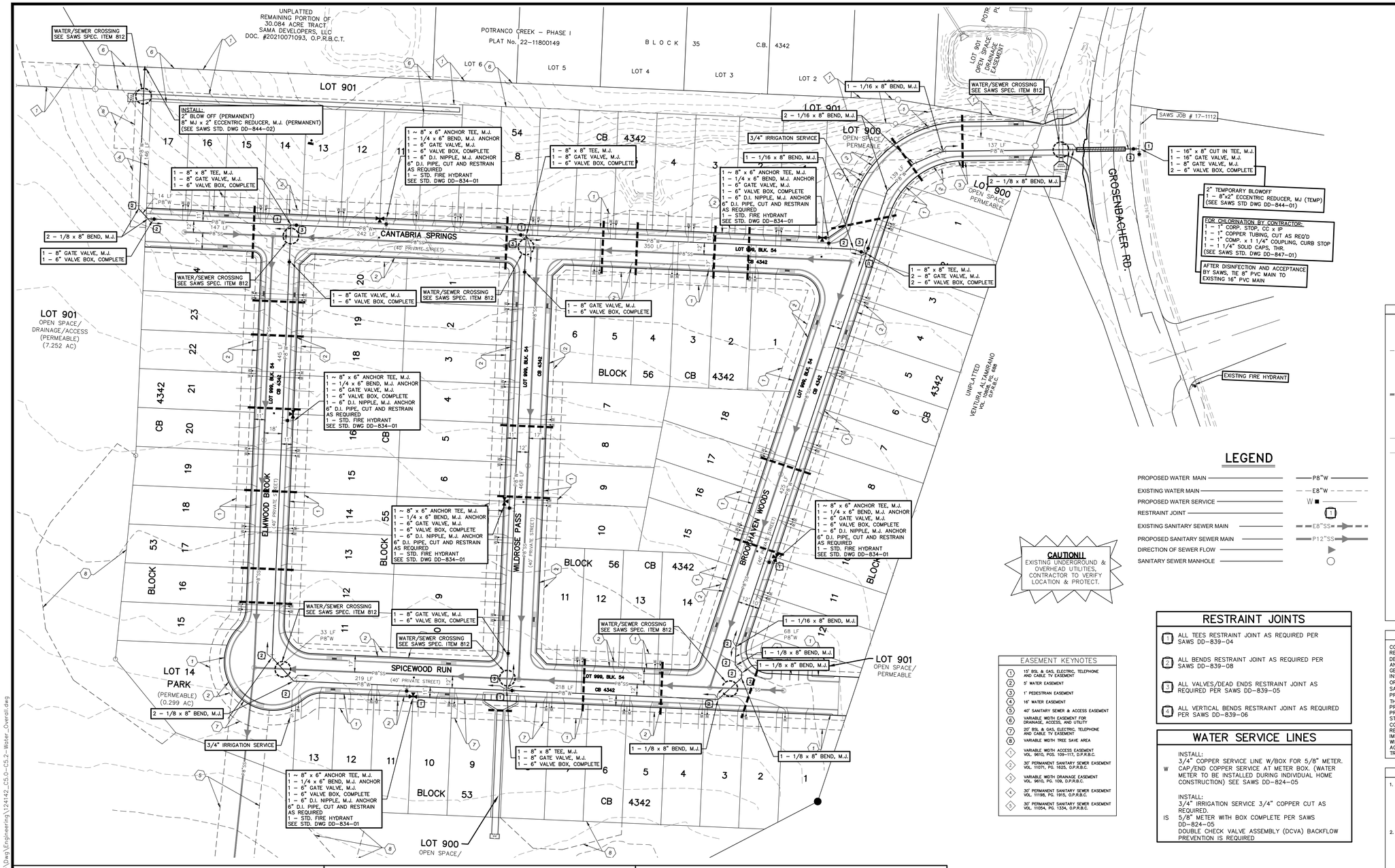
CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
WATER GENERAL NOTES

SHEET C5.1

Date: Oct 10, 2025, 3:40pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C5.0-C5.2-Water_Overall.dwg



LEGEND

PROPOSED WATER MAIN	P8"W
EXISTING WATER MAIN	E8"W
PROPOSED WATER SERVICE	W
RESTRAINT JOINT	1
EXISTING SANITARY SEWER MAIN	E8"SS
PROPOSED SANITARY SEWER MAIN	P12"SS
DIRECTION OF SEWER FLOW	
SANITARY SEWER MANHOLE	

CAUTION!!
EXISTING UNDERGROUND & OVERHEAD UTILITIES. CONTRACTOR TO VERIFY LOCATION & PROTECT.

LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
E8"W	P8"W	WATER MAIN
	W	WATER SERVICE
	1	RESTRAINT JOINT
E8"SS	P8"SS	SANITARY SEWER
		DIRECTION OF SEWER FLOW
		SANITARY SEWER MANHOLE
G EX. 2"G	G 2"G	GAS LINE
UG	UG	UNDERGROUND ELECTRIC
		FIRE HYDRANT
		WATER METER, VALVE
		POWER POLE, W/TRANSFORMER (PP) POWER POLE, (R) RISER POLE
		LIGHT POLE, PROPOSED 100 WATT STREET LIGHT
		GAS VALVE, GAS METER
		BOLLARD/GUARD POST
		SIGN, DOUBLE SIGN
		IRRIGATION VALVE
		TREE
		BENCHMARK
		CONTROL SYMBOL

RESTRAINT JOINTS

1. ALL TEES RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-04
2. ALL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-08
3. ALL VALVES/DEAD ENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-05
4. ALL VERTICAL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-06

WATER SERVICE LINES

W — INSTALL:
3/4" COPPER SERVICE LINE W/BOX FOR 5/8" METER. CAP/END COPPER SERVICE AT METER BOX. (WATER METER TO BE INSTALLED DURING INDIVIDUAL HOME CONSTRUCTION) SEE SAWS DD-824-05

IS — INSTALL:
3/4" IRRIGATION SERVICE 3/4" COPPER CUT AS REQUIRED.
5/8" METER WITH BOX COMPLETE PER SAWS DD-824-05
DOUBLE CHECK VALVE ASSEMBLY (DCVA) BACKFLOW PREVENTION IS REQUIRED

EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
5. 40' SANITARY SEWER & ACCESS EASEMENT
6. VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8. VARIABLE WIDTH TREE SAVE AREA
1. VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109-117, O.P.R.B.C.
2. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3. VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, O.P.R.B.C.
4. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

TRENCH EXCAVATION SAFETY NOTE

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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 PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

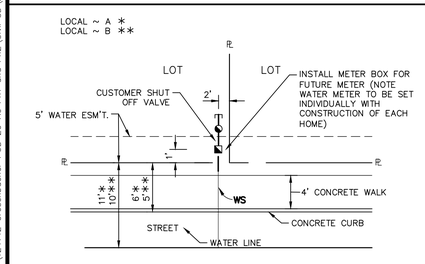
EXISTING UTILITIES – ONE CALL NOTICE

1. 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 SAWS.
2. 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 SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
   - SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
   - COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
   - COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480
   - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
   - TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811 DIVISION.

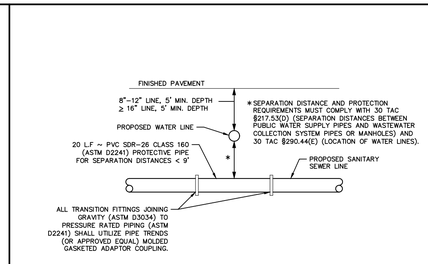
THIS DEVELOPMENT IS ENTIRELY IN PRESSURE ZONE 930 (HIGH PRESSURE SYSTEM) ALL WATER PIPE TO BE C-900, CLASS 235 (DR-18) UNLESS NOTED OTHERWISE.

Developer's Name MEDINA VILLAGE, LLC
Developer's Address 4007 MCCULLOUGH AVE, STE 231
City SAN ANTONIO State TEXAS Zip 78212
Phone # 210-254-6447 Fax # ---
SAWS Block Maps 086562 Total EDU's 92 Total Acreage 21.095
Total Linear Footage of Pipe 3,064 L.F.~ 8"PVC Plat No. LAND-PLAT-24-11800321
Number of Lots 90 SAWS Job No. 24-1164

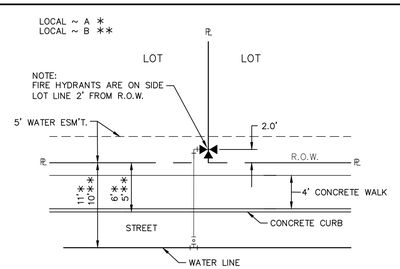
SAWS JOB NO. 24-1164



TYPICAL WATER METER DETAIL
N.T.S.



TYPICAL SANITARY SEWER/
WATER CROSSING DETAIL
N.T.S.



VALVE / FIRE HYDRANT DETAIL
N.T.S.

NO.	REVISION	DATE
1	20" X 8" TAP CONNECTIONS	5/1/24

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

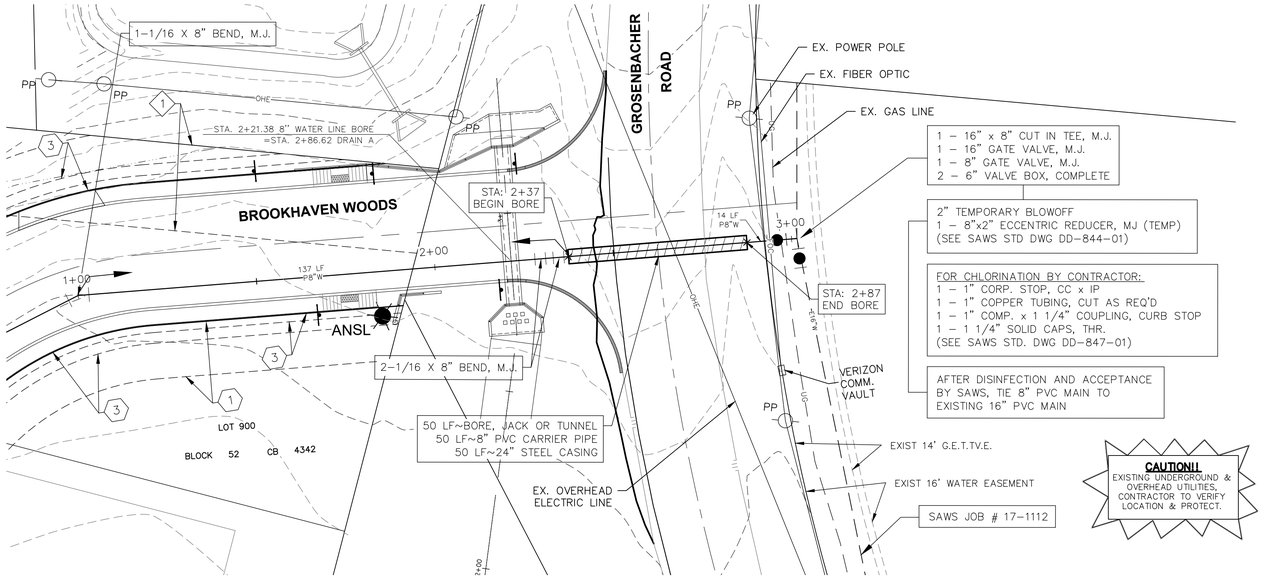
WATER PLAN

SHEET C5.2

Date: Oct 10, 2025, 3:40pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C5.0-C5.2-Water_Overall.dwg

COMPACTION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND 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 SAWS INSPECTOR AND/OR 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.



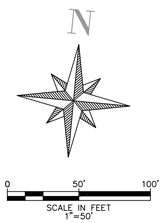
1 - 16" x 8" CUT IN TEE, M.J.
1 - 16" GATE VALVE, M.J.
1 - 8" GATE VALVE, M.J.
2 - 6" VALVE BOX, COMPLETE

2" TEMPORARY BLOWOFF
1 - 8"x2" ECCENTRIC REDUCER, MJ (TEMP)
(SEE SAWS STD DWG DD-844-01)

FOR CHLORINATION BY CONTRACTOR:
1 - 1" CORP. STOP, CC x IP
1 - 1" COPPER TUBING, CUT AS REQ'D
1 - 1" COMP. x 1 1/4" COUPLING, CURB STOP
1 - 1 1/4" SOLID CAPS, THR.
(SEE SAWS STD. DWG DD-847-01)

AFTER DISINFECTION AND ACCEPTANCE BY SAWS, TIE 8" PVC MAIN TO EXISTING 16" PVC MAIN

CAUTION!!
EXISTING UNDERGROUND & OVERHEAD UTILITIES, CONTRACTOR TO VERIFY LOCATION & PROTECT.



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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

NOTE:
1.) COMPACTION OF FILL MATERIAL (95%) WITHIN R.O.W. SHALL COMPLY WITH ITEM 107 EMBANKMENT (COSA)

CONTRACTOR TO USE EXTREME CAUTION WHEN WORKING NEAR AND AROUND EXISTING UTILITIES CONTRACTOR TO VERIFY VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITIES WITHIN AREA OF CONSTRUCTION AND REPORT FINDINGS TO ENGINEER.

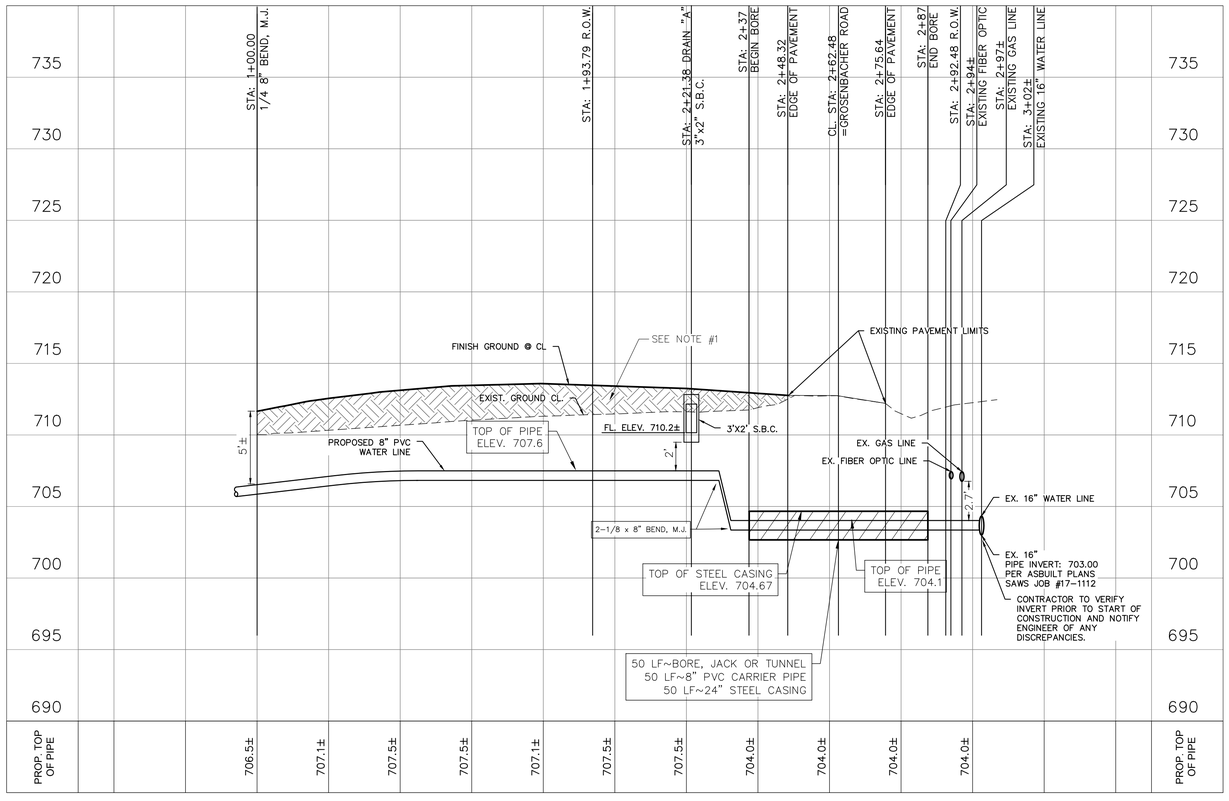
CAUTION!!!!
CONTRACTOR TO LOCATE ALL EXISTING UTILITIES (HORIZONTAL & VERTICAL) INCLUDING GAS LINE AND FIBER OPTIC PRIOR TO CONSTRUCTION.

EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
5. 40' SANITARY SEWER & ACCESS EASEMENT
6. VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8. VARIABLE WIDTH TREE SAVE AREA
- 1 VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109-117, D.P.R.B.C.
- 2 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
- 3 VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, D.P.R.B.C.
- 4 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
- 5 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

8" WATER LINE BORE

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



THIS DEVELOPMENT IS ENTIRELY IN PRESSURE ZONE 930 (HIGH PRESSURE SYSTEM) ALL WATER PIPE TO BE C-900, CLASS 235 (DR-18) UNLESS NOTED OTHERWISE.

Developer's Name MEDINA VILLAGE, LLC
Developer's Address 4007 MCCULLOUGH AVE, STE 231
City SAN ANTONIO State TEXAS Zip 78212
Phone # 210-254-6447 Fax # ---
SAWS Block Maps 086562 Total EDU's 92 Total Acreage 21.095
Total Linear Footage of Pipe 3,064 L.F.- 8"PVC Plat No. LAND-PLAT-24-11800321
Number of Lots 90 SAWS Job No. 24-1164

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS

WATER LINE BORE PLAN

SHEET C5.3

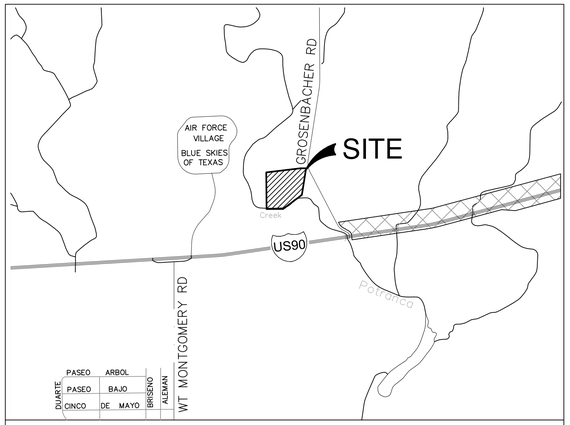
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STREET CONSTRUCTION PLANS

FOR

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS



LOCATION MAP
NOT-TO-SCALE
SAN ANTONIO CITY LIMITS

ENGINEER:

CDS MUERY
ATTN: BRIAN CROWELL, P.E.
100 NE LOOP 410, STE. 300
SAN ANTONIO, TEXAS 78216
TEL: (210) 581-1111
FAX: (210) 581-5555

OWNER/DEVELOPER:

PATRICK FLANAGIN, CONTROLLER
MEDINA VILLAGE, LLC
4007 McCULLOUGH AVE, SUITE 231
SAN ANTONIO, TX 78212

BENCHMARK INFORMATION		
NO.	DESCRIPTION	ELEVATION
TBM #1 PNT#2784 N: 13688791.76 E: 2055689.94	CHISELED "□" ON THE SOUTHWEST SIDE OF CONCRETE HEADWALL OF A CONCRETE WATER DRAIN, ON THE NORTHEAST RIGHT-OF-WAY OF GROSENBACHER ROAD,	709.85
TBM #2 PNT#6000 N: 13687927.97 E: 2054861.14	CHISELED "□" ON THE NORTH SIDE OF A CONCRETE MANHOLE.	693.08

SITE INFORMATION:

BEING A TOTAL OF 21.095 ACRES, LYING IN THE T.S. COOKE SURVEY 65 1/4, COUNTY BLOCK 4342, ABSTRACT 1076, BEXAR COUNTY TEXAS, SAME BEING ALL OF A 20.53 ACRE TRACT OF LAND DESCRIBED IN DEED TO CARLOS MEDINA JR. AND PORFIRIA MEDINA AND RECORDED IN VOL. 8307, PG. 596 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS.

OVERALL SITE MAP



CIVIL SHEET INDEX	
SHT NO.	TITLE
C6.0	STREET COVER SHEET
C6.1	STREET SIGNAGE AND PAVEMENT MARKINGS
C6.2	SAN ANTONIO SIGN DETAILS
C6.3	TxDOT SIGN DETAILS
C6.4	BEXAR COUNTY SIGN DETAILS
C6.5	BROOKHAVEN WOODS
C6.6	ELMWOOD BROOK
C6.7	CANTABRIA SPRINGS
C6.8	WILDROSE PASS
C6.9	SPICEWOOD RUN
C6.10	DRAIN A
C6.11	DRAIN A DETAILS
C6.11A	DRAIN A DETAILS
C6.12	DRAIN B P&P
C6.13	DRAIN C P&P
C6.13A	DRAIN D P&P
C6.14	DETENTION POND
C6.15	DETENTION POND OUTFLOW
C6.16	DEVELOPER SIDEWALK PLAN
C6.17	STANDARD STREET DETAILS I
C6.18	STANDARD STREET DETAILS II
C6.19	STANDARD STREET DETAILS III

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
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10/10/2025

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100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

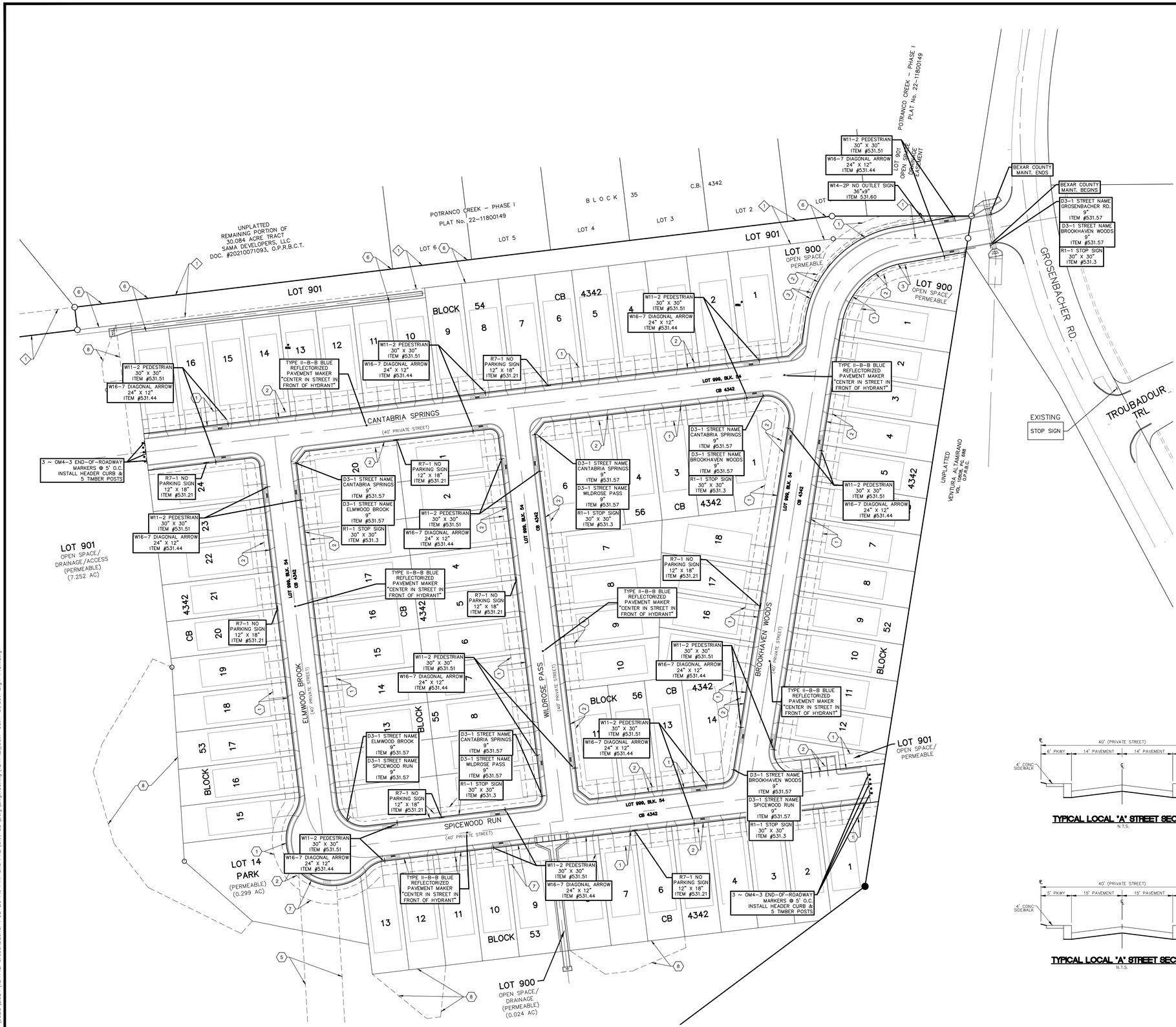
PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

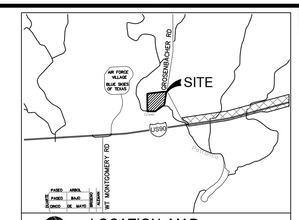
WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
STREET COVER SHEET

SHEET C6.0

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File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.0-Street Cover.dwg







LOCATION MAP ☒ SAN ANTONIO CITY LIMITS
NOT-TO-SCALE

LEGEND

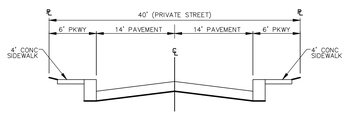
EXISTING	PROPOSED	
		PROPERTY LINE
—W—EX. 6"W—	—W 8"W—	WATER LINE
—SS—EX. 6"SS—	—SS 6"SS—	SANITARY SEWER
—G—EX. 2"G—	—G 2"G—	GAS LINE
—UGE—	—UGE—	UNDERGROUND ELECTRIC
		FIRE HYDRANT
		WATER METER, VALVE
		CLEAN OUT
		POWER POLE, W/TRANSFORMER (PP) POWER POLE, (R) RISER POLE
		LIGHT POLE, PROPOSED 100 WATT STREET LIGHT
		GAS VALVE, GAS METER
		BOLLARD/GUARD POST
		SIGN, DOUBLE SIGN
		IRRIGATION VALVE
		TREE
		BENCHMARK
		CONTROL SYMBOL

EASEMENT KEYNOTES

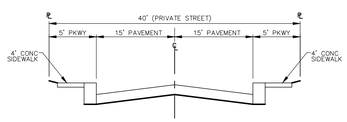
1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
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6. VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
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- 5. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

BEXAR COUNTY R.O.W. NOTE:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY R.O.W.



TYPICAL LOCAL "A" STREET SECTION
N.T.S.



TYPICAL LOCAL "A" STREET SECTION
N.T.S.

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
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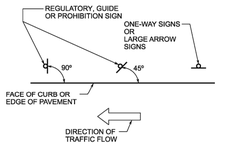
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DRAFTED J.M.
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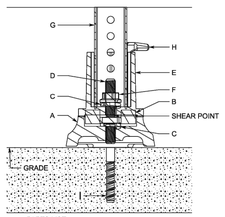
WESTWOOD OAKS PUD
BEXAR COUNTY, TEXAS
STREET SIGNAGE AND PAVEMENT MARKINGS

SHEET C6.1

Date: Oct 10, 2025, 3:46pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.1-C6.4-Street-Sign-Plan.dwg



TYPICAL GROUND MOUNTED SIGN ORIENTATION

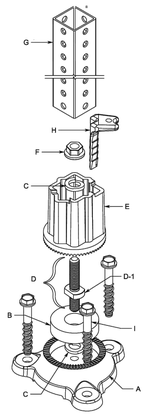


PARTS LIST

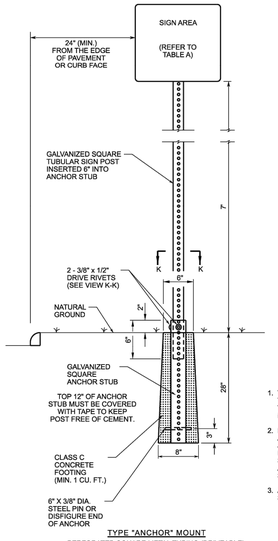
A	SURFACE MOUNT ANCHOR BASE
B	3" O.D. x 1.3" I.D. x 0.625" RUBBER BUSHING
C	LOCK WASHER
D	5/8"-11 x 4" SHEAR BOLT
D-1	SHOULDER
E	TOP HALF COUPLER
F	5/8"-11 SERRATED FLANGE NUT
G	SIGN SUPPORT 2" SQUARE POST
H	SIGN SUPPORT LOCKING WEDGE
I	CONCRETE MOUNTING FASTENER (NOT INCLUDED)

TYPE SURFACE / FLANGE MOUNT

NOTE:
ACESSORIES SQUARED DEVELOPMENT KLEEN BREAK MODEL 425 OR APPROVED EQUIVALENT AS APPROVED BY THE ENGINEER.



TYPE SURFACE / FLANGE MOUNT EXPANDED VIEW

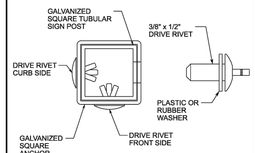


TYPE "ANCHOR" MOUNT
PERFORATED SQUARE METAL TUBING (DRIVEABLE)

TYPICAL GROUND SIGN INSTALLATION

TABLE A		
METAL TUBING	SIGN AREA	
	≤ 10 SQ. FT.	> 10 SQ. FT.
GALVANIZED SQUARE TUBULAR SIGN POST (PERFORATED)	1-3/4" x 1-3/4" (14 GAUGE)	2" x 2" (12 GAUGE)
GALVANIZED SQUARE ANCHOR STUB (PERFORATED)	2" x 2" (12 GAUGE)	2-1/4" x 2-1/4" (12 GAUGE)

NOTE:
1. A MINIMUM OF TWO (2) DRIVE RIVETS SHALL BE USED; ONE ON THE FRONT SIDE AND ONE ON THE CURB SIDE OF THE POLE.

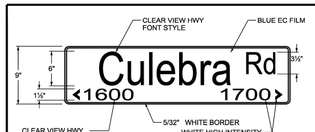


VIEW K-K

GENERAL NOTES:

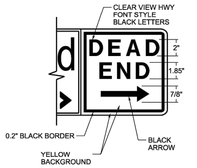
1. THE EXISTING SIGNS LOCATED ON THE JOBSITE ARE THE PROPERTY OF THE CITY OF SAN ANTONIO. THROUGHOUT THE PERIOD OF THE CONTRACT, THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN THE COURSE OF CONSTRUCTION ACTIVITY.
2. PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE CONSTRUCTION INSPECTOR AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.
3. ALL GROUND MOUNTED SIGNS SHALL USE HIGH INTENSITY REFLECTIVE SHEETING.

SEPTEMBER 2024
CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING AND OPERATIONS STANDARDS
GENERAL NOTES AND SIGN MOUNTING
SHEET 01 OF 04
SM(1)-24



9" D3 - STREET NAME SIGN





9" D3 WITH DEAD END OR NO OUTLET SIGNAGE

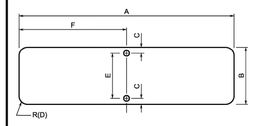
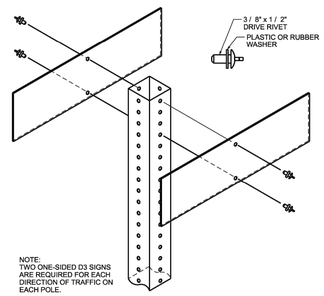


TABLE - D3 SIGNS

A	B	C	D	E	F	T
24"	9"	1 / 2"	1 / 2"	8"	12"	1 / 8"
30"	9"	1 / 2"	1 / 2"	8"	15"	1 / 8"
36"	9"	1 / 2"	1 / 2"	8"	18"	1 / 8"
42"	9"	1 / 2"	1 / 2"	8"	21"	1 / 8"
48"	9"	1 / 2"	1 / 2"	8"	24"	1 / 8"
54"	9"	1 / 2"	1 / 2"	8"	27"	1 / 8"

NOTE:
A 30" LONG OR GREATER PLATE SHALL BE USED WHEN A "DEAD END" OR "NO OUTLET" SUPPLEMENT IS REQUIRED.

HEIGHT	9" (228 mm)
LENGTH	24" (600 MM) MIN. 54" (1350 MM) MAX. 6" (150 MM) INCREMENTS OF LENGTH
THICKNESS	1 / 8" (3MM)
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER HIGH INTENSITY FP-85, SECTION 718 AND L-S-300C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	STREET NAME 0% BLOCK NUMBERS 25%



NOTE:
TWO ONE-SIDED D3 SIGNS ARE REQUIRED FOR EACH DIRECTION OF TRAFFIC ON EACH POLE.

D3 SIGN TO POLE INSTALLATION

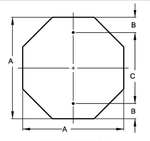
STREET SIGN ASSEMBLY EXAMPLES	DESCRIPTION	UNIT	QUANTITY
STOP SIGN WITH 2 STREET NAMES	R1-1 STOP	EA.	1
	9-IN STREET NAME PLATE	EA.	4
YIELD SIGN WITH 2 STREET NAMES	R1-2 YIELD	EA.	1
	9-IN STREET NAME PLATE	EA.	4
2 STREET SIGNS	9-IN STREET NAME SIGN	EA.	2
	9-IN STREET NAME PLATE	EA.	2

GENERAL NOTES:

"9-INCH STREET NAME" SIGN (1-EA.) INCLUDES THE INSTALLATION OF (2) ONE-SIDED D3 SIGNS. THIS SHALL BE FULL COMPENSATION FOR MATERIALS AND LABOR AS DESCRIBED IN C.O.S.A. STANDARD SPECIFICATIONS AND GROUND SIGN MOUNTING STANDARD DETAIL.

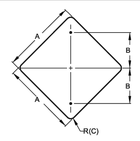
"9-INCH STREET NAME PLATE" (1-EA.) INCLUDES THE INSTALLATION OF (2) ONE-SIDED D3 SIGNS ON TOP OF EXISTING SIGN (I.E., STOP - SIGN OR YIELD SIGN), EXTRA LENGTH POLE AND APPURTENANCES REQUIRED TO MEET SPECIFICATIONS.

SEPTEMBER 2024
CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING AND OPERATIONS STANDARDS
D3 STREET NAME SIGN MOUNTING
SHEET 02 OF 02
SM(2)-24



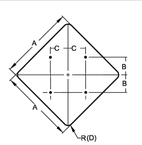
OCTAGONAL

A	B	C	T
18	3	18	0.080
30	3	24	0.080
36	3	30	0.100
48	3	36	0.100



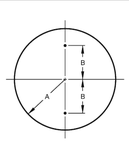
DIAMOND (A)

A	B	C	T
18	9	1 1/2	0.080
24	12	1 1/2	0.080
30	15	1 7/8	0.080
36	18	2 1/4	0.100



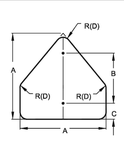
DIAMOND (B)

A	B	C	D	T
48	15	15	3	0.100



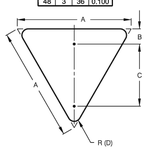
CIRCLE

A	B	T
18	15	0.100



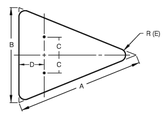
PENTAGON (SCHOOL)

A	B	C	D	T
30	*	3	*	0.100
36	24	3	2 1/4	0.100
48	*	*	3	0.100



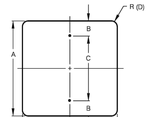
EQUILATERAL TRIANGLE

A	B	C	D	T
18	2	18	2	0.100
30	2	24	2	0.100
36	2	24	2	0.100
48	2	24	2	0.100
60	2	24	2	0.100



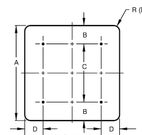
ISOSCELES TRIANGLE

A	B	C	D	E	T
40	30	7 1/2	12	17 7/8	0.100
48	36	9	15	21 1/4	0.100
64	48	10 1/2	18	12 3/4	0.100



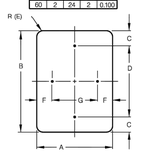
SQUARE (A)

A	B	C	D	T
18	1 1/2	15	11 1/2	0.080
24	3	18	11 1/2	0.080
30	3	24	17 7/8	0.080



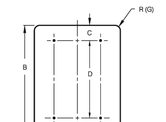
SQUARE (B)

A	B	C	D	E	F	T
36	*	*	*	*	*	0.100
48	6	36	9	30	3	0.100



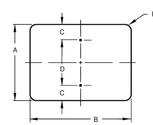
VERTICAL / HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	T	
12	18	1 1/2	15	1 1/2	1 1/2	9	0.080	
12	36	3	30	1 1/2	1 1/2	9	0.080	
18	24	1 1/2	21	1 1/2	1 1/2	15	0.080	
24	30	3	24	1 1/2	3	18	0.080	
24	36	3	30	1 1/2	3	18	0.080	
24	48	6	36	1 7/8	3	18	0.080	
30	36	3	30	1 7/8	3	24	0.080	
36	48	3	30	1 7/8	3	24	0.080	
48	60	3	30	1 7/8	3	24	0.080	



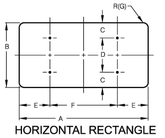
VERTICAL RECTANGLE

A	B	C	D	E	F	G	T
5	7 3/4	1 1/2	6 3/4	1 1/2	4	1 1/4	0.100
48	60	6	48	9	30	3	0.100



HORIZONTAL RECTANGLE

A	B	C	D	E	T
6	12	1	4	1/4	0.080
6	18	1	4	1/4	0.080
20	36	1 1/2	17	1 1/2	0.080
21	15	1 1/2	12	1 1/2	0.080
24	12	1 1/2	9	1 1/2	0.080
24	18	3	12	1 1/2	0.080
30	15	1 1/2	12	1 1/2	0.080
30	24	3	18	1 1/2	0.080
36	12	1 1/2	9	1 1/2	0.080



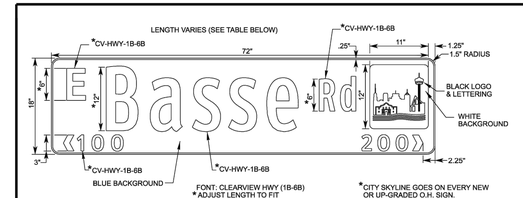
HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	T
36	24	3	18	6	24	1 1/2	0.100
48	24	3	18	9	30	1 7/8	0.100
48	36	6	24	9	30	2 1/4	0.100
48	24	2	20	2	44	1 7/8	0.100
48	36	3	30	3	42	2 1/4	0.100
48	36	6	24	12	36	2 1/4	0.100
60	30	3	24	3	42	1 7/8	0.100
60	24	2	20	2	56	1 1/2	0.100
60	36	3	30	3	54	2 1/4	0.100
60	24	3	18	12	36	1 1/2	0.100
60	30	3	24	3	54	1 1/8	0.100

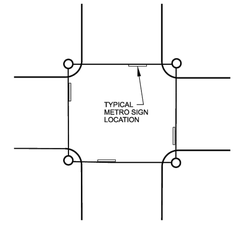
GENERAL NOTES:

1. ALL BLANKS TO BE ALUMINUM ALLOY NO. 5052-H38.
2. "T" DENOTES THICKNESS OF SIGN BLANKS.
3. ALL HOLES SHALL BE 3/8" DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND OR ROUGH EDGES.
4. SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH DETAIL.
5. ALL SIGN BLANK TO BE ETCHED, DEGREASED, AND HAVE AN ALODINE FINISH PRIOR TO APPLICATION OF LEGENDS.
6. ALL DETAILS ARE NOT TO SCALE.
7. ALL DEMENSIONS ARE IN INCHES.
8. * HOLE PLACEMENT AS INDICATED ON THE PLANS.

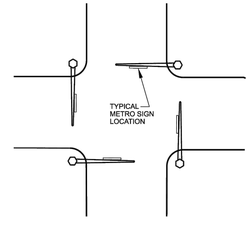
SEPTEMBER 2024
CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING AND OPERATIONS STANDARDS
BLANK SIGN DETAILS
SHEET 03 OF 04
SM(3)-24



18" METRO - STREET NAME SIGNS



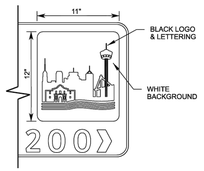
SPAN WIRE INSTALLATION



MAST ARM INSTALLATION

TYPICAL METRO SIGN PLACEMENT

18" METRO WITH CITY SKY LINE



HEIGHT	18" (457 MM)
LENGTH	48" (1200 MM) MIN. 72" (1800 MM) MAX.** 1' (300 MM) INCREMENTS OF LENGTH
THICKNESS	0.125" (3 MM)
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER DIAMOND GRADE FP-85, SECTION 718 AND L-S-300C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	17% (USUAL) 10% (MIN.)

** SIGN PLATE LONGER THAN 72" MUST BE APPROVED BY THE CITY TRAFFIC ENGINEER

SEPTEMBER 2024
CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING AND OPERATIONS STANDARDS
METRO STREET NAME SIGN AND SIGN PLACEMENT
SHEET 04 OF 04
SM(4)-24

NO. REVISION DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-7733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
SAN ANTONIO SIGN DETAILS

SHEET C6.2

Date: Oct 10, 2025, 3:40pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwgs\Engineering\124142_C6.1--C6.4-Street--Sign--Plan.dwg

SIGN SUPPORT DESCRIPTIVE CODES

Descriptive Codes correspond to project estimate and quantities sheets

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

Post Type

- TP = Telescoping Reinforced Plastic Pipe (see SMD(TPP))
- 10BWG = 10 BWG Tubing (see SMD(SLIP-1) to (SLIP-3))
- SCH = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

Number of Posts (1 or 2)

Anchor Type

- UA = Universal Anchor - Concreted (see SMD(TPP) and (TMT))
- UB = Universal Anchor - Bolted Down (see SMD(TPP) and (TMT))
- BS = Wedge Anchor Steel - (see SMD(TMT))
- BH = Wedge Anchor HDPE - (see SMD(TMT))
- 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), (TMT), (FRP))
- I = Prefab, "I" (see SMD(SLIP-1) to (SLIP-3), (TMT))
- U = Prefab, "U" (see SMD(SLIP-1) to (SLIP-3))
- XXX = Custom
- (01 or 02) = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TMT))
- SM = Extruded Mid Beam (see SMD(SLIP-1) to (SLIP-3))
- WC = 1-12 WFR 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 members of a breakaway support, such as the shaft, that are located at more than 4 inches above a 60 inch chord (i.e., typical space between wheel pairs).

SIGN LOCATION

PAVED SHOULDERS

LESS THAN 6 FT. WIDE

When the shoulder is 6 ft. or less in width, the edge of the sign shall be at least 12 ft. from the edge of the travel lane.

GREATER THAN 6 FT. WIDE

When the shoulder is greater than 6 ft in width, the edge of the sign shall be at least 6 ft. from the edge of the shoulder.

BEHIND BARRIER

BEHIND GUARDRAIL

•Align clearance based on distance required for proper guard rail or concrete barrier performance.

BEHIND CONCRETE BARRIER

T-INTERSECTION

When this sign is needed on 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 elevation:

(1) a minimum of 7 ft a maximum of 7.5 feet above the edge of the travel lane, or

(2) a minimum of 5 ft a maximum of 7.5 feet above the grade of the base of the support when sign is installed on the backslope.

The minimum 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/trafficfile.htm

TYPICAL SIGN ATTACHMENT DETAIL

Bolts used to mount sign panels to the clamps are 5/16-18 UNC galvanized hex head cap screws, 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 cap screw, nylon washer, flat washer, lock washer and nut. The bolt length should be adjusted for signs 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 clamps.

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

SIGNS WITH PLAQUES

When a supplementary plaque or secondary sign is mounted below the primary sign, the 7 ft sign height is measured to the bottom of the lowest sign, plaque or secondary sign.

CURB & GUTTER OR RAISED ISLAND

RESTRICTED RIGHT-OF-WAY (When 6 ft min. is not possible.)

Sign-offset restrictions may be created by ramps, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from being obtained, the sign offset distance 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

FILE:	dn_tot	dn_sht	ck_tot	ck_sht
©TxDOT July 2002	CONT	SECT	JOB	HIGHWAY
9-08 REVISIONS	DIST	COUNTY		SHEET NO.

254

DISCLAIMER: The use of this standard is governed by the "Specific Agreement Between User and TxDOT" which includes but is not limited to the following provisions: TxDOT standards are for the use of qualified and experienced professionals who understand the risks inherent in the design of highway facilities. TxDOT does not consent to the use of these standards by anyone who is not qualified to evaluate the significance and limitations of its contents. TxDOT disclaims responsibility for the use of these standards and assumes no responsibility for anyone's use of the standards or for the design they represent. TxDOT standards may be updated, revised, or withdrawn at any time without notice. Users are responsible for obtaining the most current standards.

DATED: 10/1/2025

Friction caps may be manufactured from hot rolled or cold rolled sheet steels. 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 uniform friction fit and have no tendency to rock when seated on the pipe. Caps shall be coated with a uniform protective coating for protection against exposure of surfaces. They shall be free of sharp crosses or indentations and show no evidence of metal fractures.

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

REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
a	48-Inch STOP sign (R1-1)	TY 10BWG(1)(2)(T) TY 10BWG(1)(2)(P,SM)
b	60-Inch YIELD sign (R1-2)	TY 10BWG(1)(2)(P,SM) TY SB01(1)(2)(T)
c	48x16-Inch ONE-WAY sign (R6-1)	TY 10BWG(1)(2)(T) TY 10BWG(1)(2)(P,SM)
d	36x48, 48x36, and 48x48-Inch signs	TY 10BWG(1)(2)(T)
e	48x60-Inch signs	TY SB01(1)(2)(T)
f	48x48-Inch signs (diamond or square)	TY 10BWG(1)(2)(T)
g	48x60-Inch signs	TY SB01(1)(2)(T)
h	48-Inch Advance School X-ing sign (S1-1)	TY 10BWG(1)(2)(T)
i	48-Inch School X-ing sign (S2-1)	TY 10BWG(1)(2)(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)(2)(T)

GENERAL NOTES:

1. Sign support for a single type sign support may be used for signs up to and including 12 square feet. Dual post installation may be used for signs up to and including 32 square feet.
2. All steel hardware and fittings 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/trafficfile.htm

FRP POST REQUIREMENTS

1. Materials shall conform to the requirements of Departmental Material Specification DMS-7110 and shall be furnished in a yellow or gray color as specified elsewhere in the plans.
2. Thickness of FRP sign support is 0.175" + 0.031", - 0.0".
3. FRP posts shall be installed according to the Traffic Operations Division, Project Construction procedures as directed 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/rock may be reduced in length as required to a minimum length of 18", any material removed from the socket/rock shall be free from the concrete and the clearance requirements given on SMD(GEN) must be provided between the inner surfaces of the socket/rock must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be hand mixed. Place concrete into hole until it is approximately 4 inches less than finish ground line. Provide existing or suitable substitute may be allowed by Engineer. Concrete shall be Class A.
3. Insert tubular socket into concrete until top of socket is approximately 1/4" below finish ground line.
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.
5. Remove the plug from the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer.
6. Insert sign post into socket and align sign face with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 1/2" of wedge exposed.

GENERAL NOTES:

SIGN SUPPORT (# OF POSTS)	MAX. SIGN AREA	
10 BWG	1	15 SF
10 BWG	2	32 SF
SCH 80	1	32 SF
SCH 80	2	50 SF

1. The Engineer may require that a Schedule 80 post be used in lieu of a 10 BWG tubing if sign height is determined to high due to wind loading.
2. Sign supports shall not be spliced except where shown.
3. Aluminum sign brackets shall conform to Departmental Material Specifications DMS-7110 and shall have the minimum yield strength of 35,000 PSI for material less than 0.5 in., 33,000 PSI for 0.5 in. to 1.0 in., and 30,000 PSI for 1.0 in. to 2.0 in.
4. Aluminum sign brackets shall conform to Departmental Material Specifications DMS-7110 and shall have the minimum yield strength of 35,000 PSI for material less than 0.5 in., 33,000 PSI for 0.5 in. to 1.0 in., and 30,000 PSI for 1.0 in. to 2.0 in.
5. Sign supports require assembly and installation as required in "REQUIRED SUPPORT" table on this sheet.
6. Slip base shall be fabricated from 1/4" thick aluminum plate for signs 24 inches or less in height. U-brackets are used for signs of greater than 24 inches.
7. When two 10 gauge or 3 gauge supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel, connected to each supports. Provide slip base when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS or SS and be galvanized after fabrication.
9. Extruded aluminum sign panels are used to support a single sign, wing channel, or windscreen 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 installed). Provide a minimum of 6 inches of post inserted in the ground for each support ends per Item 445, "Galvanizing."
10. Sign bracket shall be the sizes and shapes shown on the plans.
11. Additional sign clamps required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.

REQUIRED SUPPORT	
SIGN DESCRIPTION	SUPPORT
48-Inch STOP sign (R1-1)	TY 10BWG(1)(2)(T) TY 10BWG(1)(2)(P,SM)
60-Inch YIELD sign (R1-2)	TY 10BWG(1)(2)(P,SM) TY SB01(1)(2)(T)
48x16-Inch ONE-WAY sign (R6-1)	TY 10BWG(1)(2)(T) TY 10BWG(1)(2)(P,SM)
36x48, 48x36, and 48x48-Inch signs	TY 10BWG(1)(2)(T)
48x60-Inch signs	TY SB01(1)(2)(T)
48x48-Inch signs (diamond or square)	TY 10BWG(1)(2)(T)
48x60-Inch signs	TY SB01(1)(2)(T)
48-Inch Advance School X-ing sign (S1-1)	TY 10BWG(1)(2)(T)
48-Inch School X-ing sign (S2-1)	TY 10BWG(1)(2)(T)
Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)(2)(T)

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM SMD(SLIP-2)-08

FILE:	dn_tot	dn_sht	ck_tot	ck_sht
©TxDOT July 2002	CONT	SECT	JOB	HIGHWAY
9-08 REVISIONS	DIST	COUNTY		SHEET NO.

252

DISCLAIMER: The use of this standard is governed by the "Specific Agreement Between User and TxDOT" which includes but is not limited to the following provisions: TxDOT standards are for the use of qualified and experienced professionals who understand the risks inherent in the design of highway facilities. TxDOT does not consent to the use of these standards by anyone who is not qualified to evaluate the significance and limitations of its contents. TxDOT disclaims responsibility for the use of these standards and assumes no responsibility for anyone's use of the standards or for the design they represent. TxDOT standards may be updated, revised, or withdrawn at any time without notice. Users are responsible for obtaining the most current standards.

DATED: 10/1/2025

GENERAL NOTES:

1. FRP sign supports for a single type sign support may be used for signs up to and including 12 square feet. Dual post installation may be used for signs up to and including 32 square feet.
2. All steel hardware and fittings 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/trafficfile.htm

FRP POST REQUIREMENTS

1. Materials shall conform to the requirements of Departmental Material Specification DMS-7110 and shall be furnished in a yellow or gray color as specified elsewhere in the plans.
2. Thickness of FRP sign support is 0.175" + 0.031", - 0.0".
3. FRP posts shall be installed according to the Traffic Operations Division, Project Construction procedures as directed 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/rock may be reduced in length as required to a minimum length of 18", any material removed from the socket/rock shall be free from the concrete and the clearance requirements given on SMD(GEN) must be provided between the inner surfaces of the socket/rock must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be hand mixed. Place concrete into hole until it is approximately 4 inches less than finish ground line. Provide existing or suitable substitute may be allowed by Engineer. Concrete shall be Class A.
3. Insert tubular socket into concrete until top of socket is approximately 1/4" below finish ground line.
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.
5. Remove the plug from the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer.
6. Insert sign post into socket and align sign face with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 1/2" of wedge exposed.

BOLT DOWN SIGN SUPPORT

1. Position base plate with coupler on existing concrete.
2. Drill holes into concrete and insert the 3/4" diameter bolts with wedge anchors, and tighten nuts.
3. Insert plug into coupler.
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.

REQUIRED SUPPORT	
SIGN DESCRIPTION	SUPPORT
48-Inch STOP sign (R1-1)	TY 10BWG(1)(2)(T) TY 10BWG(1)(2)(P,SM)
60-Inch YIELD sign (R1-2)	TY 10BWG(1)(2)(P,SM) TY SB01(1)(2)(T)
48x16-Inch ONE-WAY sign (R6-1)	TY 10BWG(1)(2)(T) TY 10BWG(1)(2)(P,SM)
36x48, 48x36, and 48x48-Inch signs	TY 10BWG(1)(2)(T)
48x60-Inch signs	TY SB01(1)(2)(T)
48x48-Inch signs (diamond or square)	TY 10BWG(1)(2)(T)
48x60-Inch signs	TY SB01(1)(2)(T)
48-Inch Advance School X-ing sign (S1-1)	TY 10BWG(1)(2)(T)
48-Inch School X-ing sign (S2-1)	TY 10BWG(1)(2)(T)
Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)(2)(T)

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS UNIVERSAL ANCHOR SYSTEM WITH FRP POST SMD(FRP)-08

FILE:	dn_tot	dn_sht	ck_tot	ck_sht
©TxDOT July 2002	CONT	SECT	JOB	HIGHWAY
9-08 REVISIONS	DIST	COUNTY		SHEET NO.

253

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DATED: 10/1/2025

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS

SM RD SGN ASSM TY XXXX(1)(2)(A-U)-XXXX

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. http://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. Wedge anchor system shall conform to the following specifications:
   10 BWG tubing (2.375" outside diameter)
   0.134" nominal wall thickness
   Seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used.
   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 (unspecified) shall be within the range of 0.122" to 0.138".
   Schedule 80 pipe (2.375" outside diameter) shall be within the range of 0.204" to 0.218".
   Pipe shall conform to ASTM A53 GR.B, A572 GR.50, A595 GR.A, or A1085.
   Tubing (2.375" outside diameter) shall conform to ASTM A500 GR.B, A513 GR.1 TY.E, or A1085.
   Schedule 80 Pipe (2.875" outside diameter)
   0.276" nominal wall thickness
   65,000 PSI minimum yield strength
   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:
   65,000 PSI minimum yield strength
   85,000 PSI minimum tensile strength
   20% minimum elongation in 2"
   Wall thickness (unspecified) shall be within the range of 0.268" to 0.304".
   Outside diameter (unspecified) shall be within the range of 2.855" to 2.895".
   Steel tubing per ASTM A500
3. See the Traffic Operations Division website for detailed drawings of slip clamps and Texas Universal Triangular Slipbase System components. The website address is: http://www.txdot.gov/publications/trafficfile.htm
4. Slip supports shall not be spliced except where shown. Slip support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation

1. Provide 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the hole 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, mortar-type 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. Place anchor bolt assembly into concrete while concrete is still workable. Level and plumb the anchor bolt assembly. 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. Check 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 slip will be 7 to 7.5 feet above the edge of the travelway (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 travelway. The cut shall be plumb and square.
2. Attach sign to support using connections shown. When multiple signs are fastened 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 XXXX(1)(2)(A-U)-(XXXX)

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 a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least 1 inch with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 2 1/2" minimum embedment, shall have a minimum allowable tension and shear of 2400 and 1525 psi, respectively. Adhesive anchors may be loaded either adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least 1 inch with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 2 1/2" minimum embedment, shall have a minimum allowable tension and shear of 2400 and 1525 psi, respectively. Adhesive anchors may be loaded either adequate epoxy cure time per the manufacturer's recommendations.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM SMD(SLIP-1)-08

FILE:	dn_tot	dn_sht	ck_tot	ck_sht
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9-08 REVISIONS	DIST	COUNTY		SHEET NO.

251

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DATED: 10/1/2025

GENERAL NOTES:

SIGN SUPPORT (# OF POSTS)	MAX. SIGN AREA	
10 BWG	1	15 SF
10 BWG	2	32 SF
SCH 80	1	32 SF
SCH 80	2	50 SF

1. The Engineer may require that a Schedule 80 post be used in lieu of a 10 BWG tubing if sign height is determined to high due to wind loading.
2. Sign supports shall not be spliced except where shown.
3. Aluminum sign brackets shall conform to Departmental Material Specifications DMS-7110 and shall have the minimum yield strength of 35,000 PSI for material less than 0.5 in., 33,000 PSI for 0.5 in. to 1.0 in., and 30,000 PSI for 1.0 in. to 2.0 in.
4. Aluminum sign brackets shall conform to Departmental Material Specifications DMS-7110 and shall have the minimum yield strength of 35,000 PSI for material less than 0.5 in., 33,000 PSI for 0.5 in. to 1.0 in., and 30,000 PSI for 1.0 in. to 2.0 in.
5. Sign supports require assembly and installation as required in "REQUIRED SUPPORT" table on this sheet.
6. When two 10 gauge or 3 gauge supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel, connected to each supports. Provide slip base when impacted by an errant vehicle.
7. Wing channel shall meet ASTM A 1011 SS or SS and be galvanized after fabrication.
8. Extruded aluminum sign panels are used to support a single sign, wing channel, or windscreen 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 installed). Provide a minimum of 6 inches of post inserted in the ground for each support ends per Item 445, "Galvanizing."
9. Sign bracket shall be the sizes and shapes shown on the plans.
10. Additional sign clamps required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
11. Post open ends shall be fitted with Friction Caps.

REQUIRED SUPPORT	
SIGN DESCRIPTION	SUPPORT
48-Inch STOP sign (R1-1)	TY 10BWG(1)(2)(T) TY 10BWG(1)(2)(P,SM)
60-Inch YIELD sign (R1-2)	TY 10BWG(1)(2)(P,SM) TY SB01(1)(2)(T)
48x16-Inch ONE-WAY sign (R6-1)	TY 10BWG(1)(2)(T) TY 10BWG(1)(2)(P,SM)
36x48, 48x36, and 48x48-Inch signs	TY 10BWG(1)(2)(T)
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48-Inch Advance School X-ing sign (S1-1)	TY 10BWG(1)(2)(T)
48-Inch School X-ing sign (S2-1)	TY 10BWG(1)(2)(T)
Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)(2)(T)

Texas Department of Transportation
Traffic Operations Division

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

FILE:	dn_tot	dn_sht	ck_tot	ck_sht
©TxDOT July 2002	CONT	SECT	JOB	HIGHWAY
9-08 REVISIONS	DIST	COUNTY		SHEET NO.

255

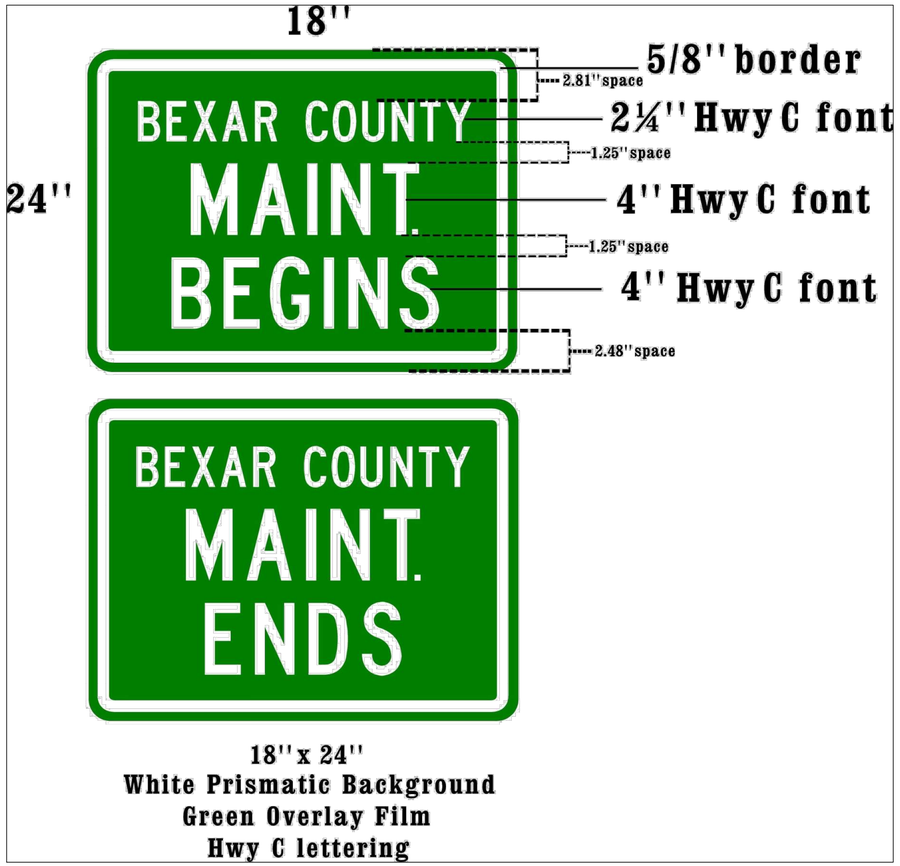
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DATED: 10/1/2025

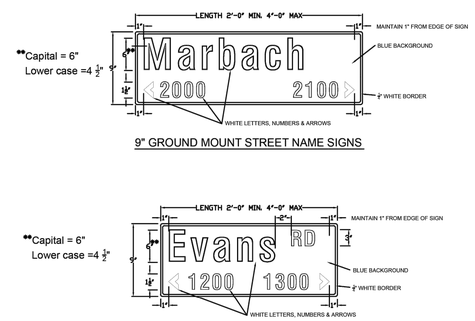
Wedge Anchor Steel System

SM RD SGN ASSM TY TMT(XX)(X)(S)

Wedge Anchor High Density Polyethylene (HDPE) System

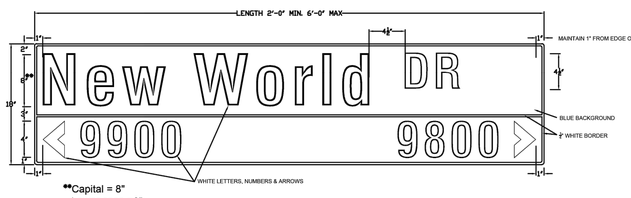


18'' x 24''
White Prismatic Background
Green Overlay Film
Hwy C lettering



9" GROUND MOUNT STREET NAME SIGNS

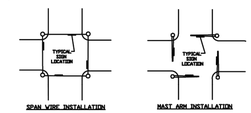
9" GROUND MOUNT STREET NAME SIGNS
WITH STREET DESIGNATION



18" OVERHEAD STREET NAME SIGNS

	18" OVERHEAD SIGN	9" GROUND MOUNT SIGNS
HEIGHT	18" (381 mm)	9" (228 mm)
LENGTH	48" (1200 mm) MIN. 72" (1800 mm) MAX. 1" (305mm) INCREMENTS OF LENGTH	24" (600 mm) MIN. 48" (1200 mm) MAX. 6" (150mm) INCREMENTS OF LENGTH
THICKNESS	0.125" (3 mm)	
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209 GOLD CHROMATE FINISH	
SIGN FACE MATERIALS	BLUE FILM ✱ OVER DIAMOND GRADE - ASTM Type XI Non-Fluorescent	BLUE FILM ✱ OVER HIGH INTENSITY PRISMATIC- ASTM Type IV
LEGENDS AND SYMBOLS	SERIES D, B OR C IF NAME OTHERWISE EXCEEDS MAXIMUM SIGN LENGTH	
COLOR	WHITE LEGEND ON BLUE BACKGROUND	
LETTER TRACKING	17% (USUAL) 10% (MIN.)	10%

✱ ACRYLIC ELECTRONIC CUTTABLE FILM



SPAN WIRE INSTALLATION | MAST ARM INSTALLATION

SIGN FACE MATERIALS SHALL CONFORM TO:

1. STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS & BRIDGES ON FEDERAL HIGHWAY PROJECTS - FP-03 U.S. CUSTOMARY UNITS SECTION 718
2. GENERAL SERVICES ADMINISTRATION FEDERAL SPECIFICATIONS L-S-300C
3. ASTM D 4956 - 09e1

Bexar County Public Works

Street Name Sign Details

SHEET 1

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS

BEXAR COUNTY SIGN DETAILS

SHEET C6.4

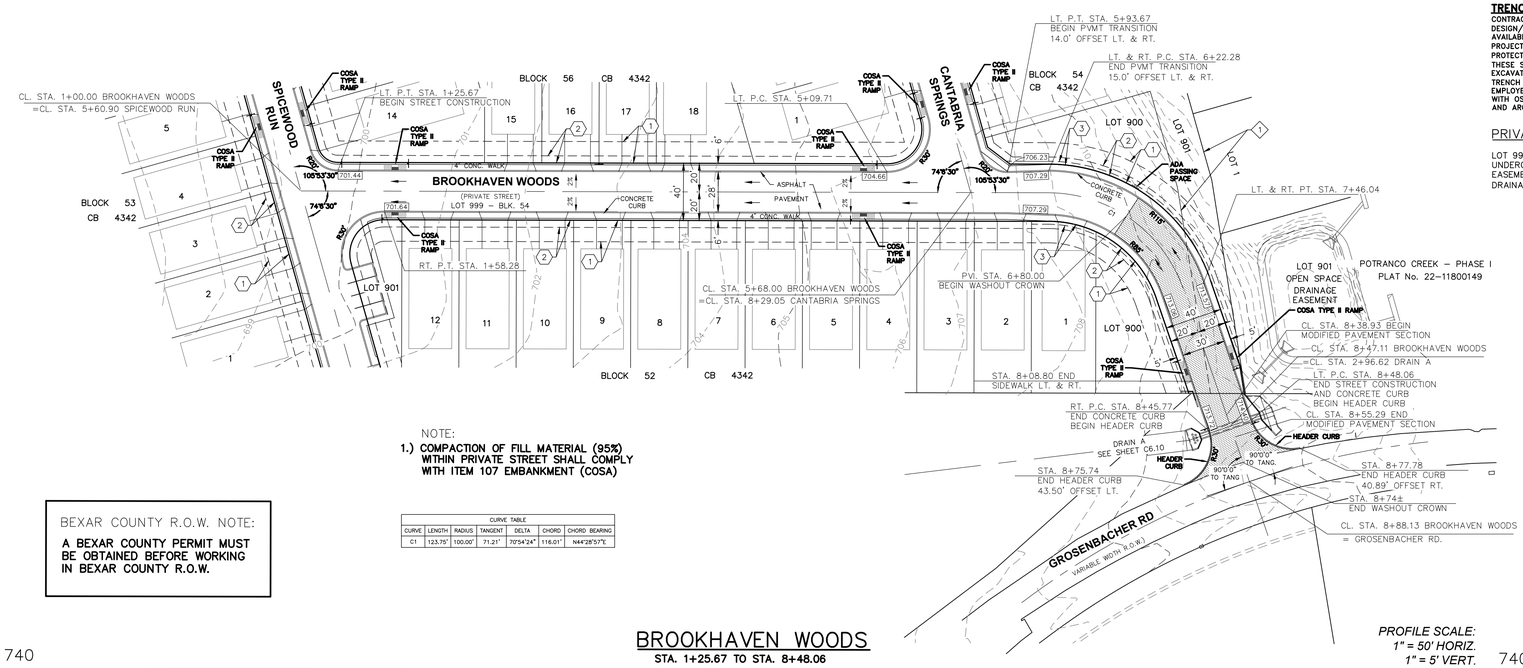
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COMPACTION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND 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 SAWS INSPECTOR AND/OR 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.

EASEMENT KEYNOTES

1	15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2	5' WATER EASEMENT
3	1' PEDESTRIAN EASEMENT
4	16' WATER EASEMENT
5	40' SANITARY SEWER & ACCESS EASEMENT
6	VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7	20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8	VARIABLE WIDTH TREE SAVE AREA
1	VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109-117, D.P.R.B.C.
2	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3	VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, D.P.R.B.C.
4	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.



NOTE:
1.) COMPACTION OF FILL MATERIAL (95%) WITHIN PRIVATE STREET SHALL COMPLY WITH ITEM 107 EMBANKMENT (COSA)

CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	DELTA	CHORD	CHORD BEARING
C1	123.75'	100.00'	71.21'	70°54'24"	116.01'	N44°28'57"E

BEXAR COUNTY R.O.W. NOTE:

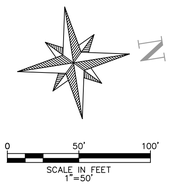
A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY R.O.W.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

PRIVATE STREET DESIGNATION NOTE

LOT 999, BLOCK 54, IS A PRIVATE STREET AND IS DESIGNATED AS AN UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE CABLE TELEVISION, DRAINAGE, PEDESTRIAN, "PUBLIC WATER AND PUBLIC WASTEWATER".



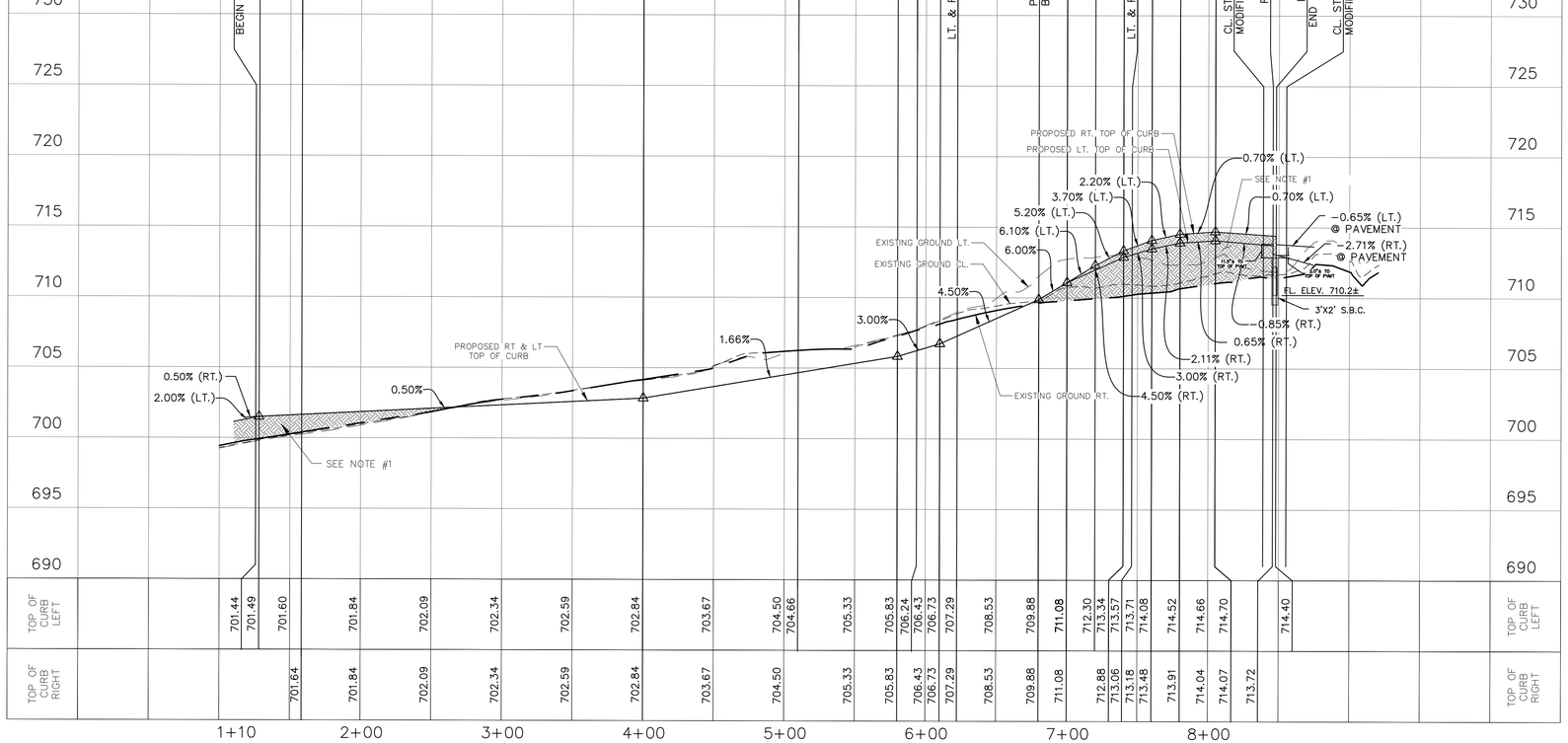
LEGEND

- WASHOUT CROWN
- DIRECTION OF FLOW
- 616.26 PROPOSED TOP OF CURB ELEVATION
- 618.38 P PROPOSED TOP OF PAVEMENT ELEVATION
- EX. 617.38 EXISTING PAVEMENT ELEVATION
- ADA RAMP
- DRIVEWAY

BROOKHAVEN WOODS

STA. 1+25.67 TO STA. 8+48.06

PROFILE SCALE:
1" = 50' HORIZ.
1" = 5' VERT.



CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

NO.	REVISION	DATE

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS

BROOKHAVEN WOODS

SHEET C6.5

Date: Oct 10, 2025, 3:41pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.5-C6.9-Street_Profiles.dwg

COMPACTION NOTE

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TRENCH EXCAVATION SAFETY PROTECTION

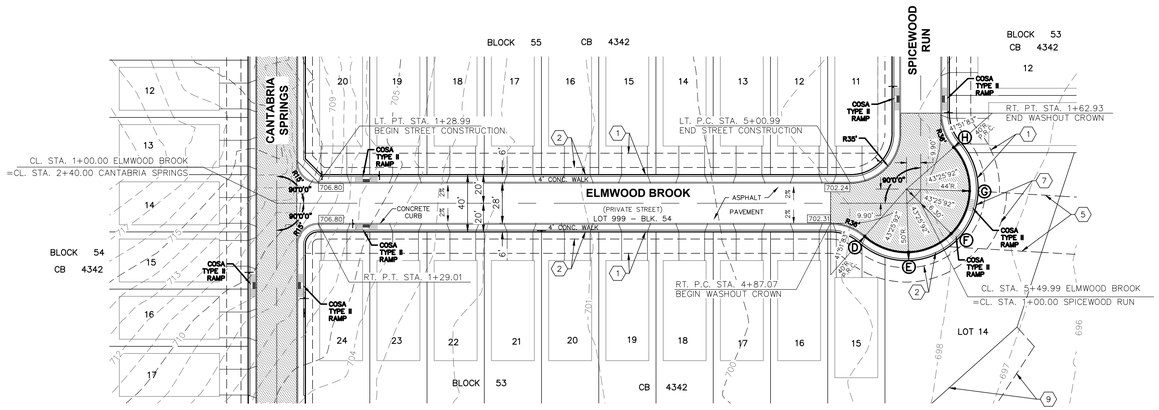
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PRIVATE STREET DESIGNATION NOTE

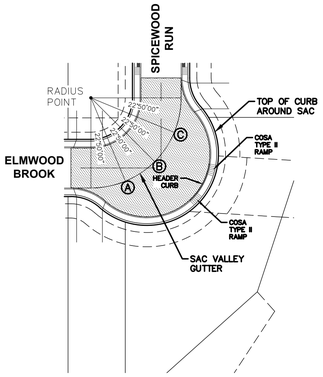
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EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
5. 40' SANITARY SEWER & ACCESS EASEMENT
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NOTE:
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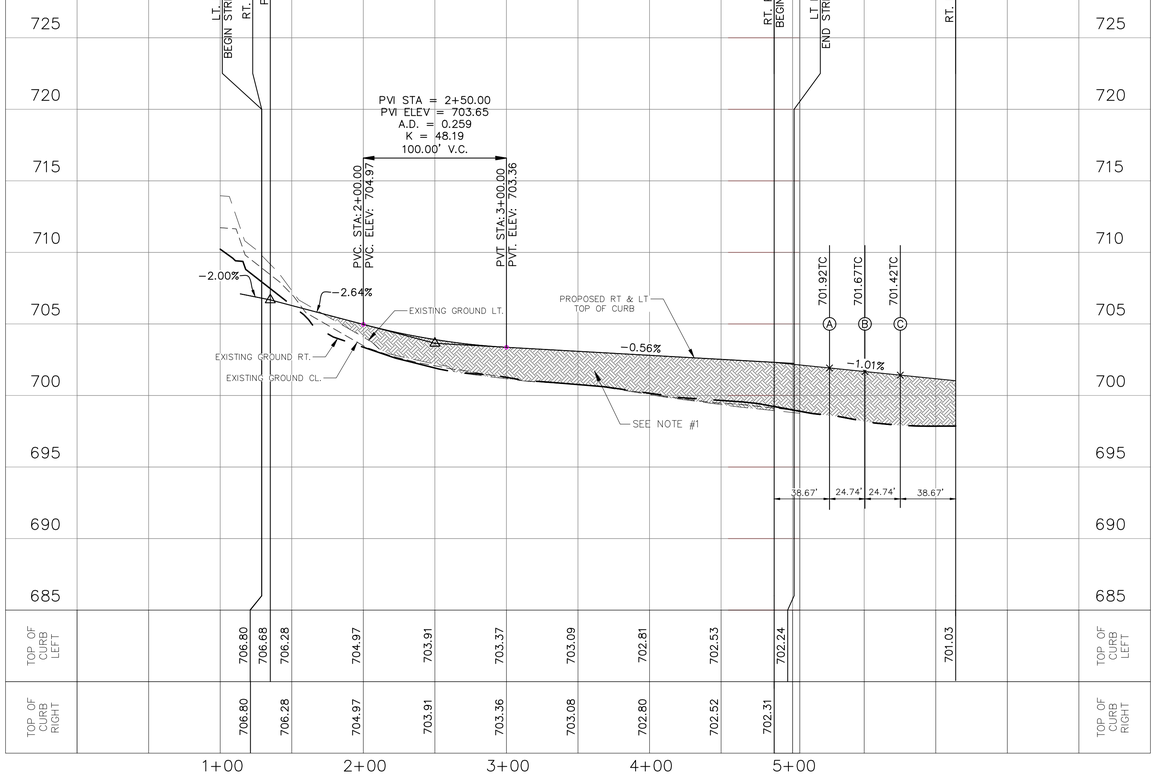
DETAIL 1 ~ SAC VALLEY GUTTER POINTS

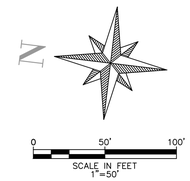
ELMWOOD BROOK

STA. 1+28.99 TO STA. 5+00.99

PROFILE SCALE:
1" = 50' HORIZ.
1" = 5' VERT.

ELMWOOD BROOK VG





LEGEND

- WASHOUT CROWN
- DIRECTION OF FLOW
- 616.26 PROPOSED TOP OF CURB ELEVATION
- 618.38 P PROPOSED TOP OF PAVEMENT ELEVATION
- EX. 617.38 EXISTING PAVEMENT ELEVATION
- ADA RAMP
- DRIVEWAY

NO. | REVISION | DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.

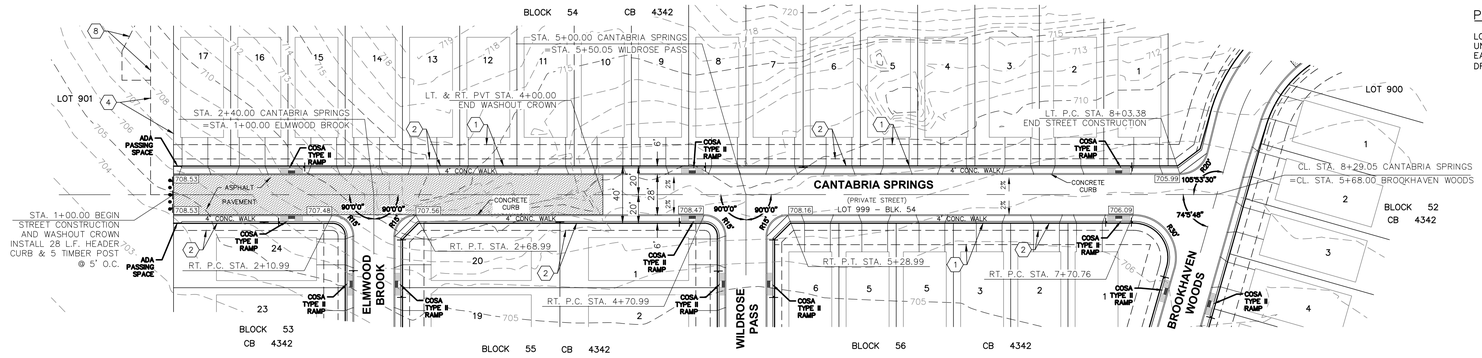
BEXAR COUNTY, TEXAS
STREET AND DRAIN PLANS
ELMWOOD BROOK

SHEET C6.6

Date: Oct 10, 2025, 3:41pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.5-C6.9-Street_Profiles.dwg

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NOTE:

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TRENCH EXCAVATION SAFETY PROTECTION

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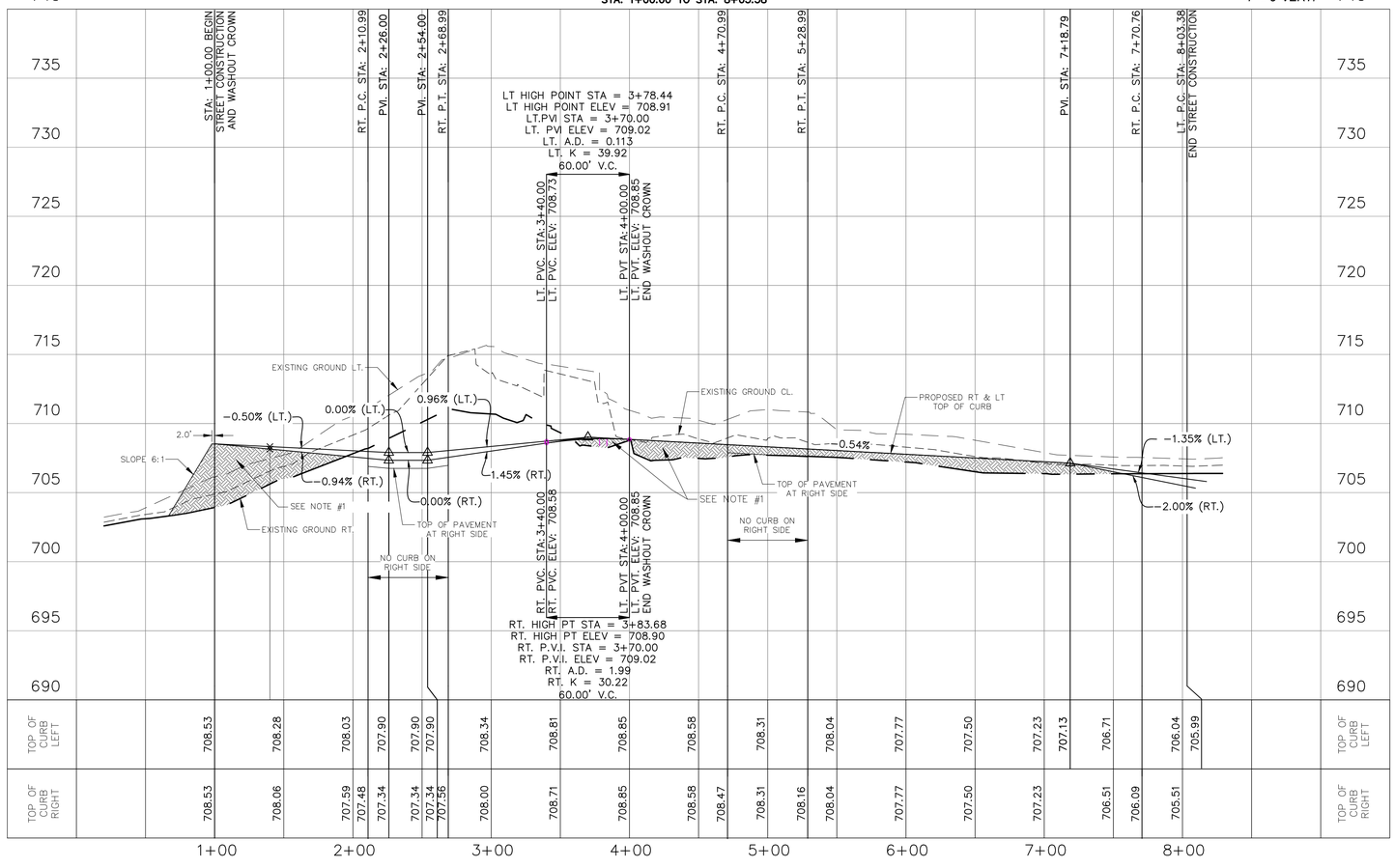
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CANTABRIA SPRINGS

STA. 1+00.00 TO STA. 8+03.38

PROFILE SCALE:
1" = 50' HORIZ.
1" = 5' VERT.



EASEMENT KEYNOTES

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LEGEND

- WASHOUT CROWN
- DIRECTION OF FLOW
- 616.26 PROPOSED TOP OF CURB ELEVATION
- 618.38 P PROPOSED TOP OF PAVEMENT ELEVATION
- EX. 617.38 EXISTING PAVEMENT ELEVATION
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NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
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WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

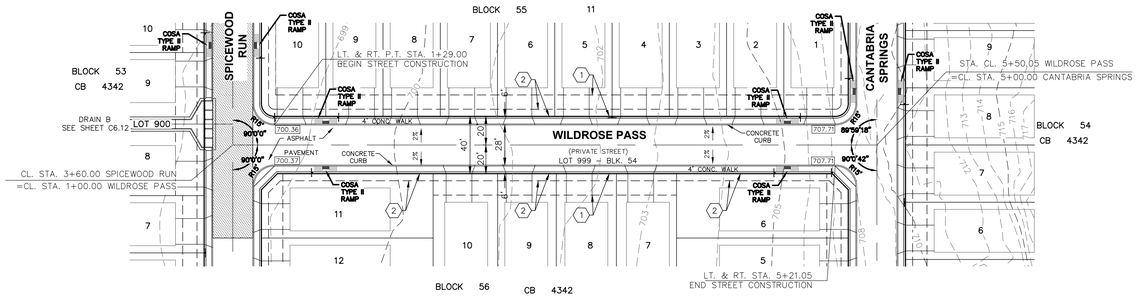
CANTABRIA SPRINGS

SHEET C6.7

Date: Oct 10, 2025, 3:41pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.5-C6.9-Street_Profiles.dwg

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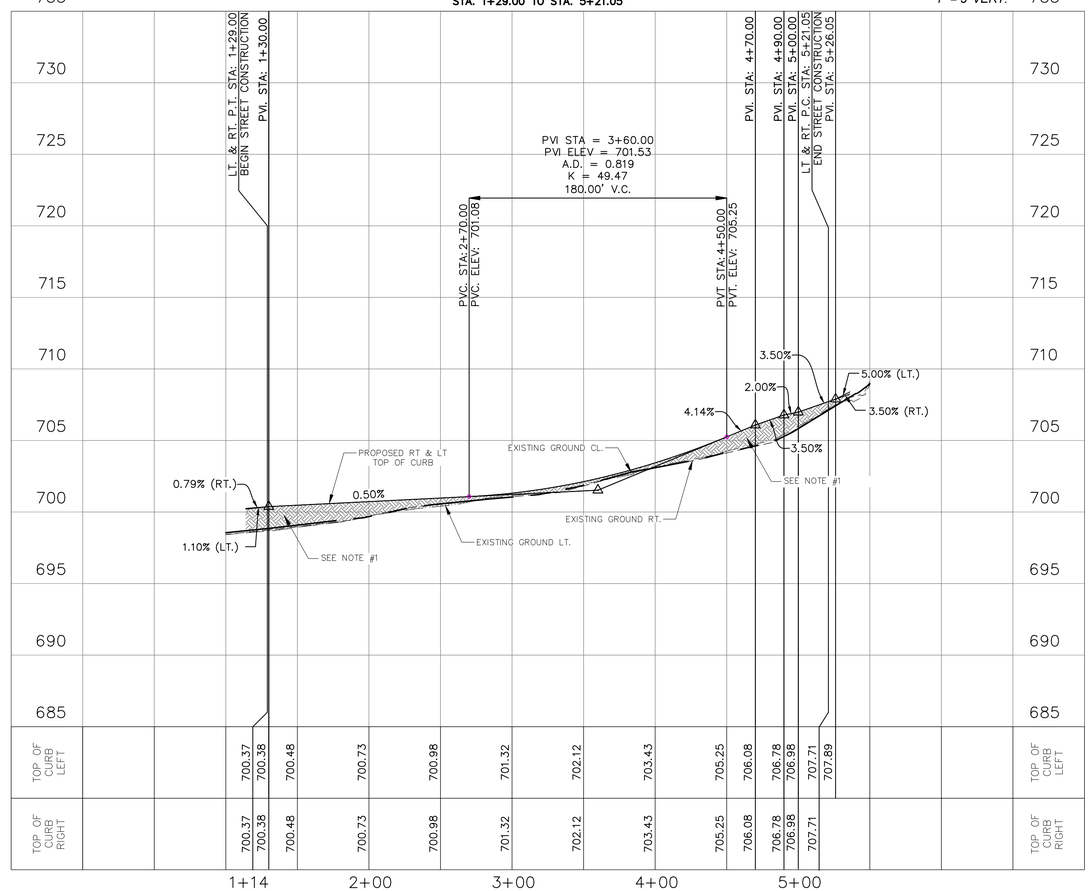
NOTE:

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WILDROSE PASS

STA. 1+29.00 TO STA. 5+21.05

PROFILE SCALE:
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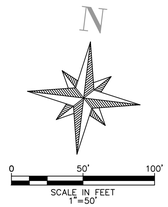


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LEGEND

- WASHOUT CROWN
- DIRECTION OF FLOW
- 616.26 — PROPOSED TOP OF CURB ELEVATION
- 618.38 P — PROPOSED TOP OF PAVEMENT ELEVATION
- EX. 617.38 — EXISTING PAVEMENT ELEVATION
- ADA RAMP
- DRIVEWAY

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NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
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PLAT NO. 24-11800321

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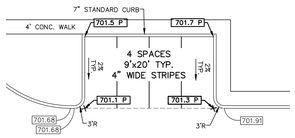
BEXAR COUNTY, TEXAS
STREET AND DRAIN PLANS
WILDROSE PASS

SHEET C6.8

Date: Oct 10, 2025, 3:41pm User ID: pablo.delvino
File: P:_JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.5-C6.9-Street_Profiles.dwg

COMPACTION NOTE

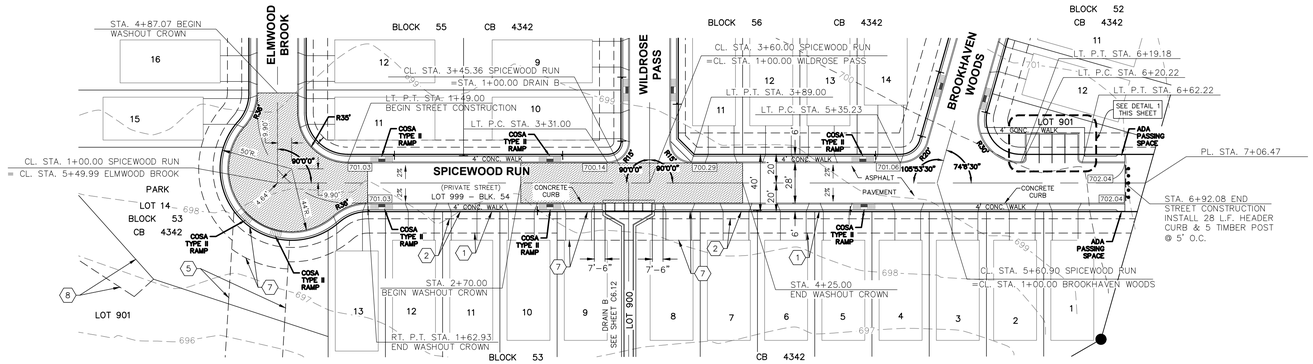
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SPICEWOOD RUN

DETAIL 1

N.T.S.



NOTE:

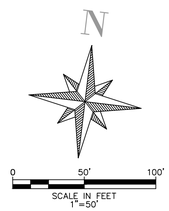
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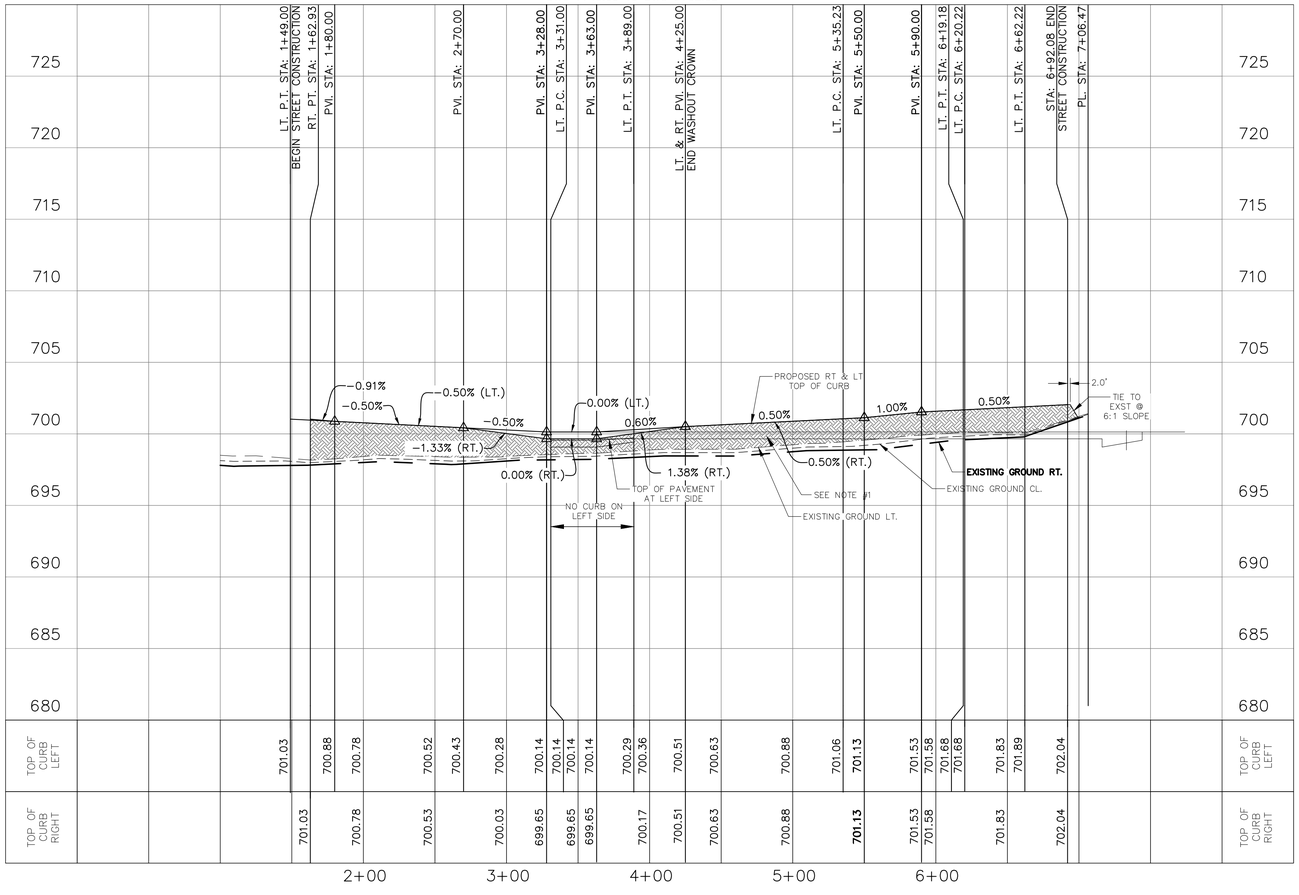
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SPICEWOOD RUN

STA. 1+49.00 TO STA. 6+92.08

PROFILE SCALE:
1" = 50' HORIZ.
1" = 5' VERT.



LEGEND

- WASHOUT CROWN
- DIRECTION OF FLOW
- 616.26 PROPOSED TOP OF CURB ELEVATION
- 618.38 P PROPOSED TOP OF PAVEMENT ELEVATION
- EX. 617.38 EXISTING PAVEMENT ELEVATION
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NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
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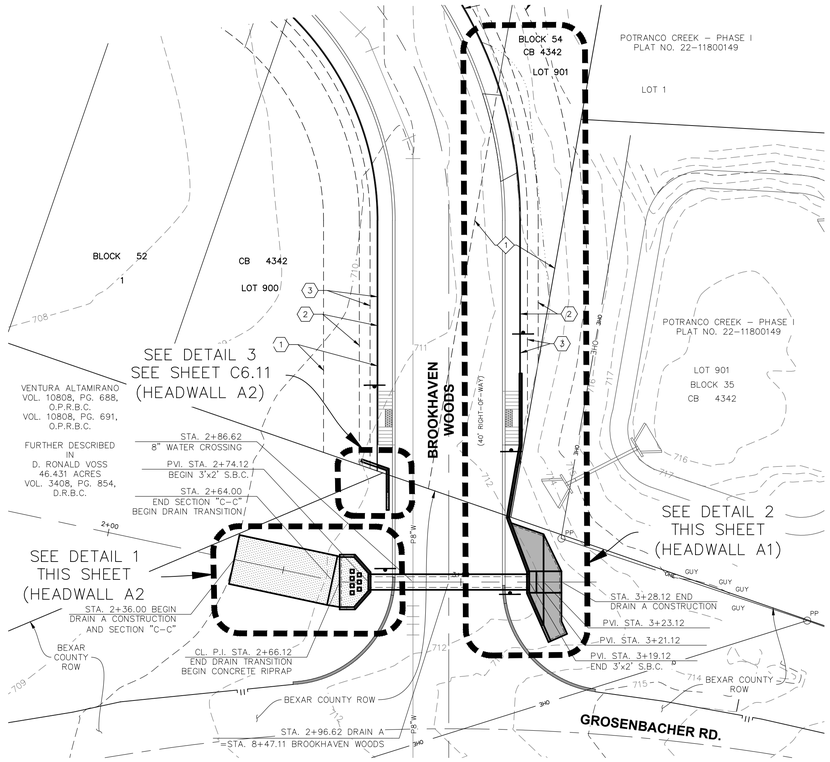
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CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS
STREET AND DRAIN PLANS
SPICEWOOD RUN

SHEET C6.9

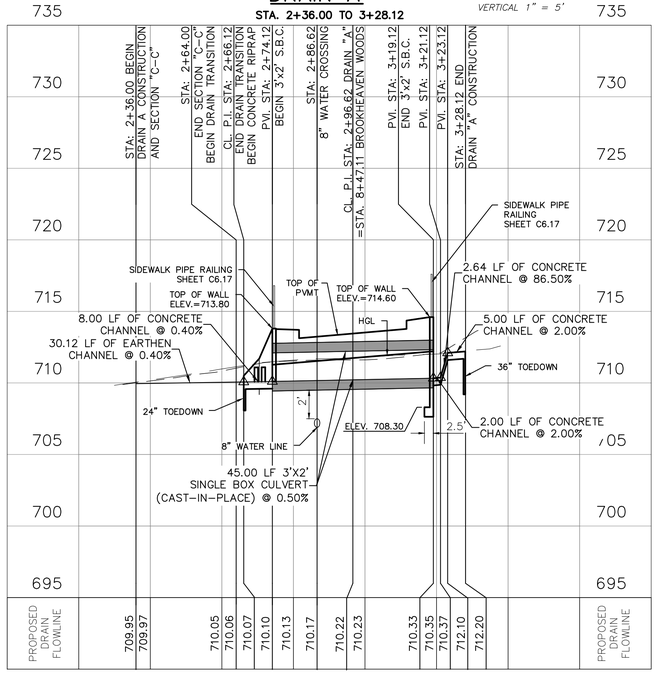
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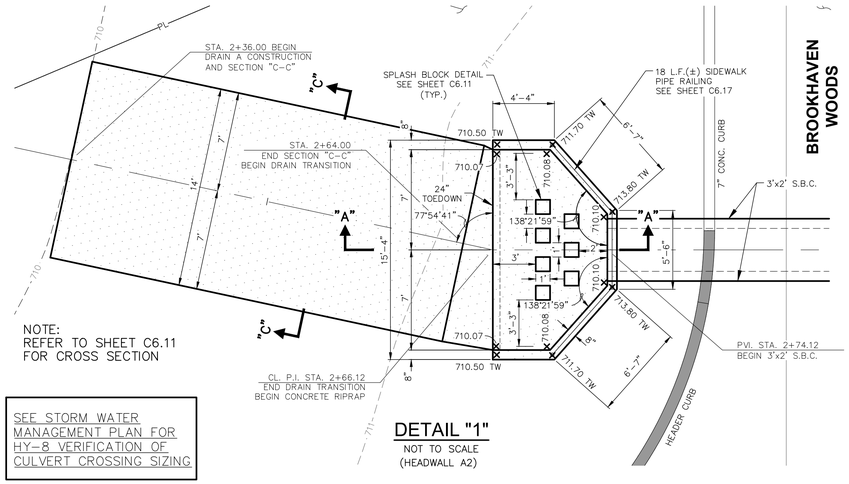


DRAIN A

STA. 2+36.00 TO 3+28.12

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





NOTE:
REFER TO SHEET C6.11
FOR CROSS SECTION

DETAIL "1"

NOT TO SCALE
(HEADWALL A2)

SEE STORM WATER MANAGEMENT PLAN FOR HY-8 VERIFICATION OF CULVERT CROSSING SIZING

BEXAR COUNTY R.O.W. NOTE:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY R.O.W.

0 20' 40'
SCALE IN FEET
1"=20'

LEGEND

HEADWALL A1

HEADWALL A2

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

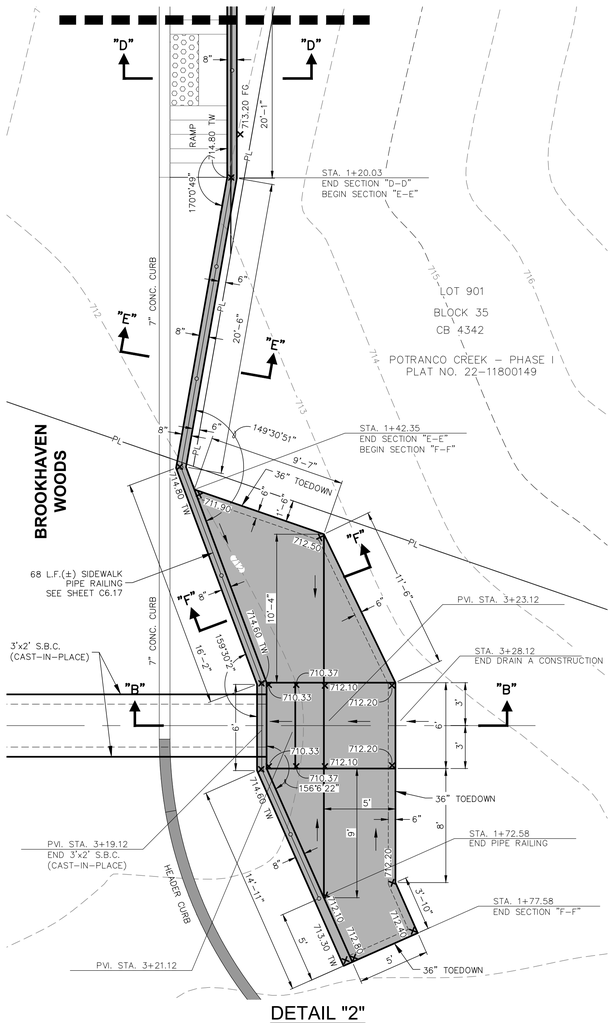
PRIVATE STREET DESIGNATION NOTE

LOT 999, BLOCK 2, IS A PRIVATE STREET AND IS DESIGNATED AS AN UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE CABLE TELEVISION, DRAINAGE, PEDESTRIAN, "PUBLIC WATER AND PUBLIC WASTEWATER".

EASEMENT KEYNOTES

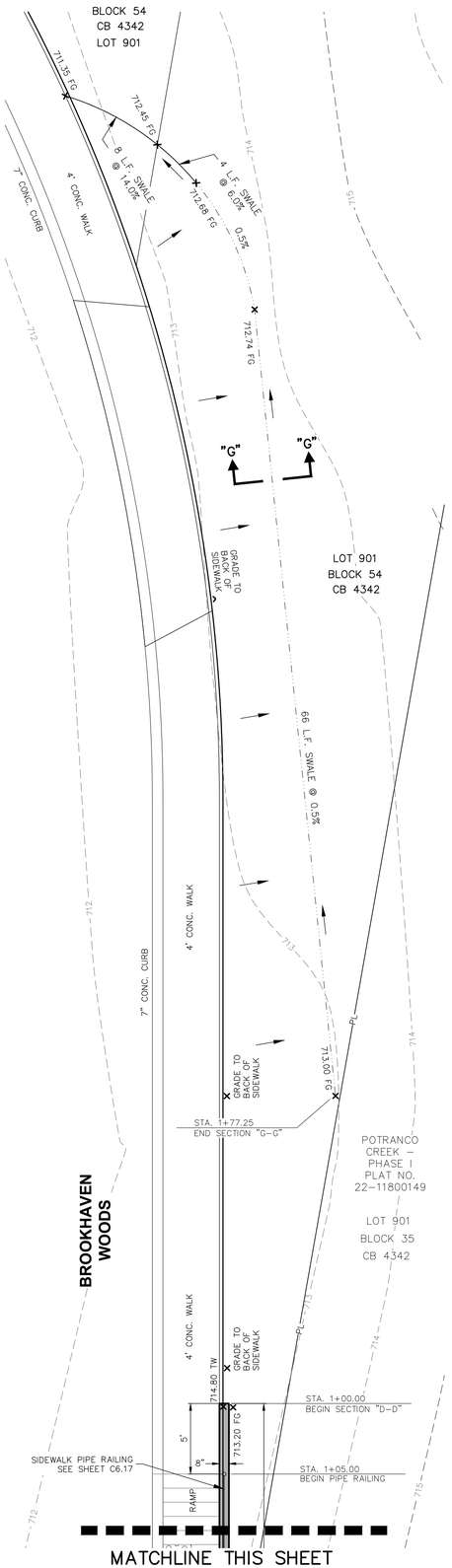
1	15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2	5' WATER EASEMENT
3	1' PEDESTRIAN EASEMENT
4	16' WATER EASEMENT
5	40' SANITARY SEWER & ACCESS EASEMENT
6	VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7	20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8	VARIABLE WIDTH TREE SAVE AREA
1	VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109-117, D.P.R.B.C.
2	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3	VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, D.P.R.B.C.
4	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

MATCHLINE THIS SHEET



DETAIL "2"

NOT TO SCALE
(HEADWALL A1)



MATCHLINE THIS SHEET

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

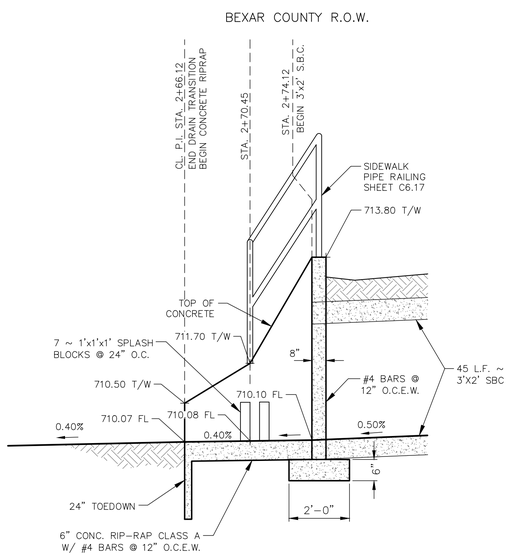
JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS
STREET AND DRAIN PLANS
DRAIN A

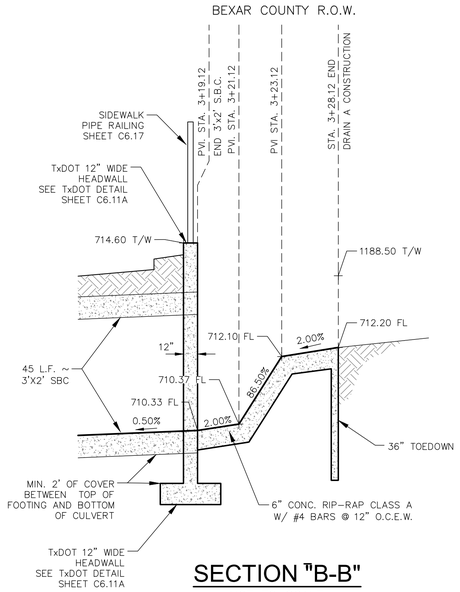
SHEET C6.10

Date: Oct 10, 2025, 3:41pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.10-C6.11 & C6.11A Drain A_Profile.dwg



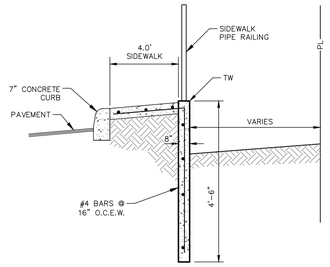
SECTION "A-A"

NOT TO SCALE
STA. 2+66.12 – STA. 2+74.12
(HEADWALL A2)



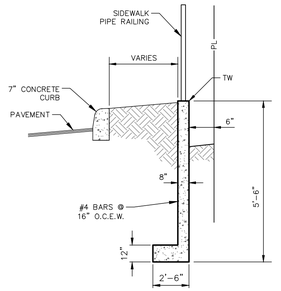
SECTION "B-B"

NOT TO SCALE
STA. 3+19.12 – STA. 3+28.02
(HEADWALL A1)



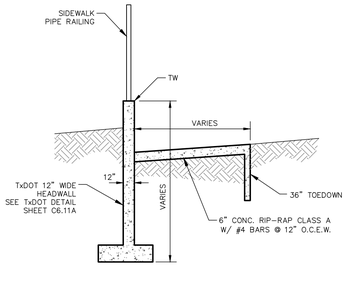
SECTION "D-D"

NOT TO SCALE
STA. 1+00.00 – STA. 1+20.03
(HEADWALL A1)



SECTION "E-E"

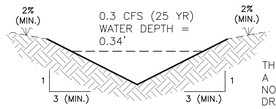
NOT TO SCALE
STA. 1+20.03 – STA. 1+42.35
(HEADWALL A1)



SECTION "F-F"

NOT TO SCALE
STA. 1+42.35 – STA. 1+77.58
(HEADWALL A1)

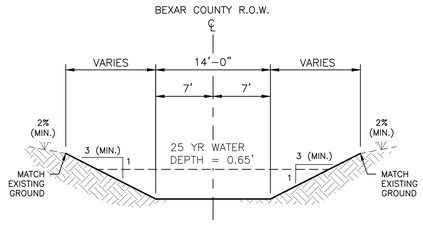
LOT 901 BLOCK 54



SECTION "G-G"

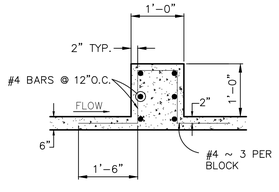
NOT TO SCALE
STA. 1+07.41 – STA. 1+77.25
(HEADWALL A1)

THIS SWALE (SECTION "G-G") WAS SIZED FOR A MINIMAL AREA OF 0.03 ACRES TO ENSURE NO STANDING WATER AND MAINTAIN POSITIVE DRAINAGE WITHIN OUR PROPERTY. LININGS SHOULD COMPLY WITH RETARDANCE CLASS B.
(SEE SHEET C2.2 FOR PROPOSED GRADING)
(SEE SWMP FOR SHEAR STRESS CALCULATION)



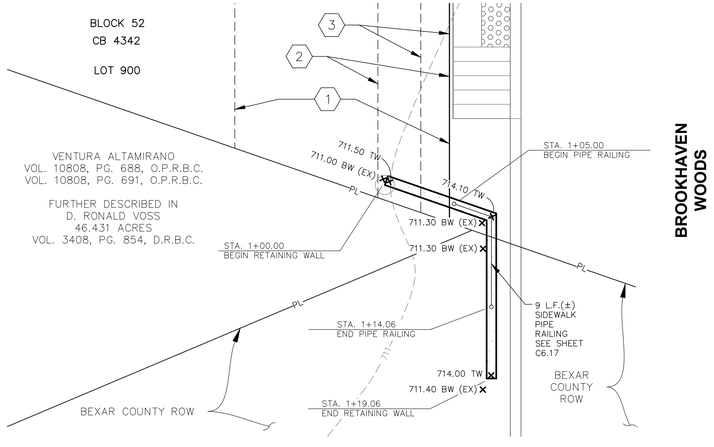
SECTION "C-C"

NOT TO SCALE
STA. 2+36.00 – STA. 2+64.00
(HEADWALL A2)



SPLASH BLOCK DETAIL

NOT TO SCALE
(HEADWALL A2)



DETAIL "3"

NOT TO SCALE
(HEADWALL A2)

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.

BEXAR COUNTY, TEXAS

STREET AND DRAIN PLANS

DRAIN A DETAILS

SHEET C6.11

Date: Oct 10, 2025, 3:42pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.10-C6.11 & C6.11A Drain A_Profile.dwg

PAVING NOTE:

FOR CULVERT CONSTRUCTION, THE CONTRACTOR SHALL REFERENCE THE SUBSURFACE EXPLORATION & PAVEMENT ANALYSIS REPORT ADDENDUM: MODIFIED PAVEMENT SECTION OVER CULVERT, 20 ACRE TRACT GROSENBACHER ROAD, BY INTEC, DATED AUGUST 18, 2025.

TABLE OF DIMENSIONS AND REINFORCING STEEL
(Wings for one structure end)

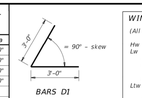
Dimensions					Variable Reinforcing				Estimated Quantities per ft of wing (2-wings) (4)		Estimated Quantities per ft of Toewall (1-toewall)	
Maximum Wingwall Height Hw	W	X	Y	Z	Bars J1 Size	Bars J1 Spa	Bars J2 Size	Bars J2 Spa	Reinf (Lb/Ft)	Conc (CY/Ft)	Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	48.64	0.406	6.85	0.071
2'-9"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	49.31	0.424	6.85	0.071
3'-0"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	49.98	0.444	6.85	0.071
3'-3"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	53.32	0.462	6.85	0.071
3'-6"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	53.98	0.480	6.85	0.071
4'-0"	3'-2"	1'-2"	1'-0"	7"	#4	1'-0"	#4	1'-0"	55.77	0.532	6.85	0.071
4'-6"	3'-2"	1'-2"	1'-0"	7"	#4	1'-0"	#4	1'-0"	59.77	0.568	6.85	0.071
5'-0"	3'-9"	1'-7"	1'-2"	7"	#4	1'-0"	#4	1'-0"	63.45	0.632	6.96	0.075
5'-6"	3'-9"	1'-7"	1'-2"	7"	#4	1'-0"	#4	1'-0"	67.46	0.668	6.96	0.075
6'-0"	4'-4"	2'-0"	1'-4"	7"	#5	1'-0"	#5	1'-0"	80.67	0.730	7.07	0.078
6'-6"	4'-4"	2'-0"	1'-4"	7"	#5	1'-0"	#5	1'-0"	85.05	0.768	7.07	0.078
7'-0"	5'-0"	2'-3"	1'-9"	8"	#5	1'-0"	#5	1'-0"	92.15	0.864	8.07	0.093
7'-6"	5'-0"	2'-3"	1'-9"	8"	#5	1'-0"	#5	1'-0"	96.54	0.902	8.07	0.093
8'-0"	5'-6"	2'-8"	1'-10"	8"	#5	6"	#5	6"	139.04	0.962	8.13	0.095
8'-6"	5'-6"	2'-8"	1'-10"	8"	#5	6"	#5	6"	144.47	1.000	8.13	0.095
9'-6"	6'-0"	2'-10"	2'-2"	9"	#5	6"	#5	6"	156.93	1.136	8.41	0.110
10'-6"	6'-5"	3'-0"	2'-5"	9"	#6	6"	#5	6"	196.27	1.234	8.57	0.117
11'-6"	7'-2"	3'-6"	2'-8"	11"	#6	6"	#6	6"	230.13	1.438	9.52	0.140
12'-6"	7'-8"	3'-9"	2'-11"	1'-0"	#7	6"	#6	6"	283.41	1.592	9.74	0.157
13'-6"	8'-2"	4'-0"	3'-2"	1'-2"	#8	6"	#6	6"	348.72	1.804	10.02	0.186
14'-6"	8'-10"	4'-5"	3'-5"	1'-4"	#9	6"	#6	6"	432.94	2.046	10.30	0.218
15'-6"	9'-6"	4'-10"	3'-8"	1'-6"	#9	6"	#7	6"	489.52	2.302	11.24	0.253
16'-0"	9'-11"	5'-0"	3'-11"	1'-7"	#9	6"	#7	6"	505.72	2.448	11.47	0.279

TABLE OF WINGWALL REINFORCING
(2-wings)

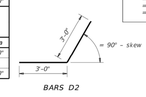
Bar	Size	No.	Spa
D1	#6	~	1'-0"
D2	#6	~	1'-0"
E1	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	~	8"
H1	#4	4	~
P	#4	~	1'-0"
V	#4	~	1'-0"

TABLE OF TOEWALL REINFORCING

Bar	Size	No.	Spa
J3	#4	~	1'-0"
M2	#4	2	~
E2	#4	~	1'-0"



BARS D1



BARS D2

WING DIMENSION FORMULAS:

(All values are in feet.)

Hw = H + T + C
Lw = (Hw) (SL) + cosine (θ) for Type PW-1
= (Hw - T) (SL) + cosine (θ) for Type PW-2 and Hw ≥ 4'
= (Hw - 0.5') (SL) + cosine (θ) for Type PW-2 and Hw < 4'

For cast-in-place culverts:
Ltw = [(N) (2 U + S) + (N - 1) (0.5)] + cosine (θ)

For precast culverts:
Ltw = [(N) (2 U + S) + (N - 1) (0.5)] + cosine (θ)
Total Wingwall Area (two wings) = SF)
= (2)(Hw)(Lw) for Type PW-1
= (2)(Hw)(Lw) - 6 SF for Type PW-2 and Hw ≥ 4'
= (2)(Hw)(Lw) - 1.5 SF for Type PW-2 and Hw < 4'

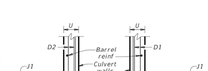
Hw = Height of wingwall
Lw = Length of wingwall
Ltw = Culvert toewall length
N = Number of culvert spans
SL:1 = Channel slope ratio. (horizontal: 1 vertical, usual value is 2:1)
θ = Culvert skew

See applicable box culvert standard sheet for S, H, T, and U values.

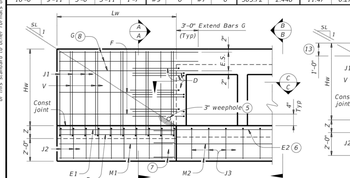
1. Skew = 0°
2. At discharge end, chamfer may be ¾" minimum.
3. For 15° skew – 1'
   For 30° skew – 2'
   For 45° skew – 3'
4. Quantities shown are for two Type PW-1 wings. Adjust concrete volume for Type PW-2 wings. To determine estimated quantities for two wings, multiply the tabulated values by Lw. Quantities shown do not include weight of Bars D.
5. Provide weepholes for Hw = 5'-0" and greater. Fill around weepholes with coarse gravel.
6. Extend Bars E2 1'-6" minimum into the wingwall footing.
7. Lap Bars M1 1'-6" minimum with Bars M2.
8. Place Bars G as shown, equally spaced at 8" maximum. Provide at least two pairs of Bars G per wing.
9. 0" Min to 5'-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 Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
10. 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.
11. 1'-0" typical. 2'-3" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elswhere in the plans.
12. 3'-0" for Hw < 4'.
13. 6" for Hw < 4'.

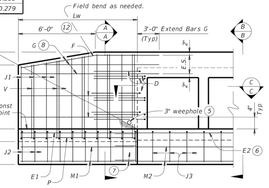




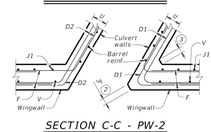
SECTION C-C - PW-1



PARTIAL ELEVATION - PW-1



PARTIAL ELEVATION - PW-2



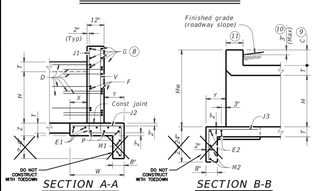
SECTION C-C - PW-2

DESIGNER NOTES:
Type PW-1 can be used for all applications and must be used if railing is to be mounted to the wingwall.
Type PW-2 can only be used for applications without a railing mounted to the wingwall.

MATERIAL NOTES:
Provide Class C concrete (f'c=3,600 psi).
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.

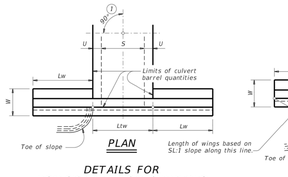
GENERAL NOTES:
Designed in accordance with AASHTO LRFD Bridge Design Specifications.
Depth of toewalls for wingwalls and culverts may be reduced or eliminated when founded on solid rock, when directed by the Engineer.
See Box Culvert Supplement (BCS) standard sheet for wingwall type and additional dimensions and information.
Quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for the Contractor's information only.

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

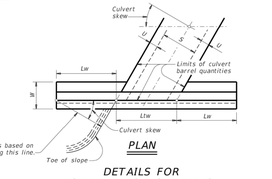


SECTION A-A
(Showing wing reinforcement.)

SECTION B-B
(Showing wing reinforcement.)



PLAN
DETAILS FOR NON-SKEWED BOX CULVERTS



PLAN
DETAILS FOR SKEWED BOX CULVERTS
(Showing 30° skew.)

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS
WITH PARALLEL WINGS FOR
BOX CULVERTS
TYPES PW-1 AND PW-2

PW

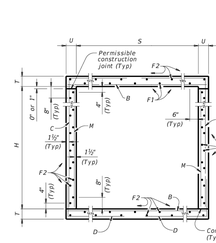
FILE: pwsted1-20.dgn	ck: GAF	ck: CAT	ck: TxDOT	ck: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the completion of this standard or any modifications thereof by any party other than TxDOT.

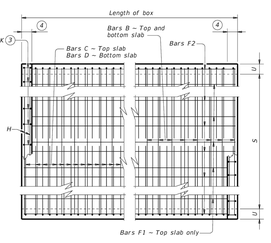
DATE:
FILE:

1. 0" Min to 5'-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 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.



TYPICAL SECTION



PLAN OF REINF STEEL

The Contractor may replace Bars B, C, D, E, F1, F2, M, 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 #3 bars, as listed under MATERIAL NOTES).

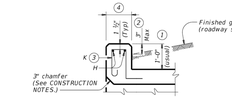
CONSTRUCTION NOTES:
Do not use permanent forms.
Chamfer the bottom edge of the top slab 3" at the entrance.
Optionally, raise construction joints shown at the flow line by a maximum of 6". If this option is taken, Bars M may be cut off or raised, Bars C and D may be reversed.

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 overfill,
- 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.



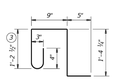
SECTION THRU CURB



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

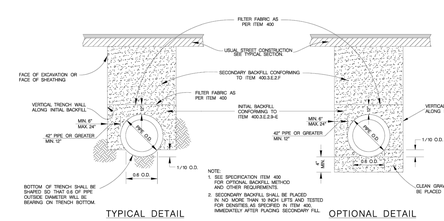
FILE: CD-SCC34-21.dgn	ck: TBE	ck: BKP	ck: TxDOT	ck: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS				
04/2021 Updated X values.	DIST	COUNTY		SHEET NO.

DISCLAIMER:
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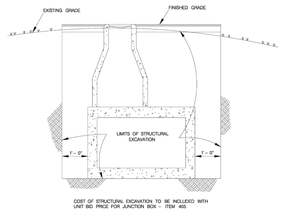
DATE:
FILE:

SECTION DIMENSIONS				FILL HEIGHT (5)	BILLS OF REINFORCING STEEL (For Box Length = 40 feet)																						QUANTITIES					
					Bars B				Bars C				Bars D				Bars M – #4			Bars F1 – #4 at 18" Spa		Bars F2 – #4 at 18" Spa		Bars H 4 – #4		Bars K		Per Foot of Barrel		Curb		Total	
S	H	T	U		No.	Size	Spa	Length	Weight	No.	Size	Spa	Length	Weight	No.	Size	Spa	Length	Weight	" X "	" Y "	No.	Size	Spa	Length	Weight	No.	Size	Spa	Length	Wt.	No.	Length	Wt.	No.	Length	Wt.	No.	Wt.	Conc (CY)	Reinf (Lb)	Conc (CY)	Reinf (Lb)	Conc (CY)	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	39'-9"	80	19	39'-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"	2'-0"	216	3	39'-9"	80	23	39'-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'-6"	3'-2"	162	#4	6"	5'-5"	586	3'-2"	2'-3"	108	9"	2'-0"	144	3	39'-9"	80	21	39'-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	39'-9"	80	25	39'-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	39'-9"	80	25	39'-9"	664	4'-11"	13	12	33	0.428	75.1	0.4	46	17.5	3,049

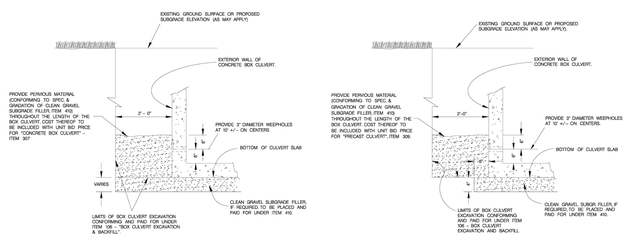
(5) For direct traffic culverts (fill height ≤ 2 ft.), identify the required box size and select the option with the minimum fill height.

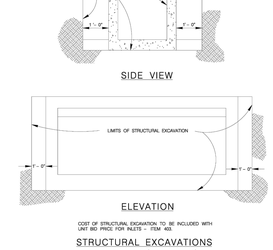


PIPE BEDDING & BACKFILL DETAILS



STRUCTURAL EXCAVATION AT JUNCTION BOXES
NO SCALE





STRUCTURAL EXCAVATIONS AT DRAINAGE INLETS
NO SCALE

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

PIPE BEDDING & MISCELLANEOUS DRAINAGE DETAILS

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

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

FILE: CD-SCC34-21.dgn	ck: TBE	ck: BKP	ck: TxDOT	ck: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS				
04/2021 Updated X values.	DIST	COUNTY		SHEET NO.

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DATE:
FILE:

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/6/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

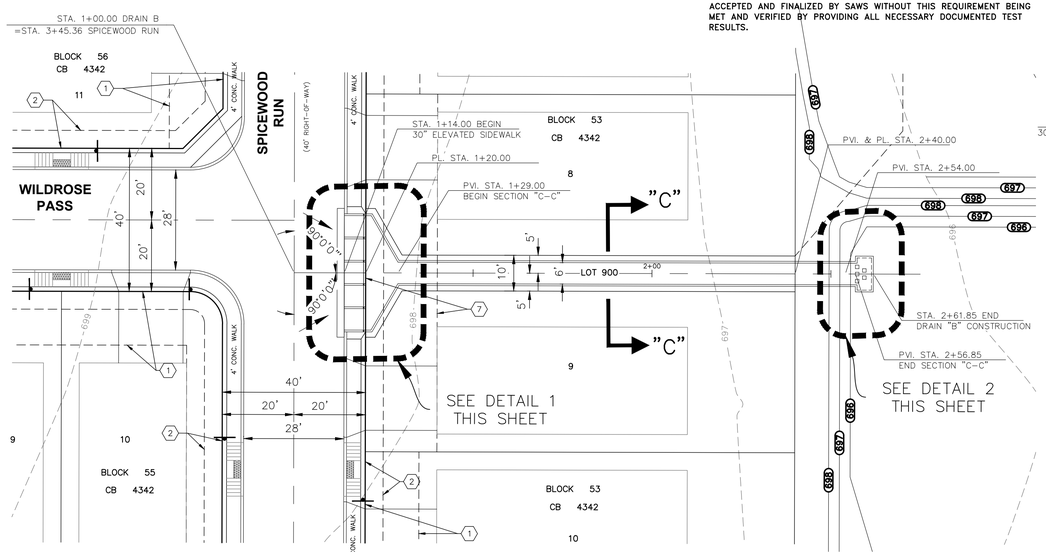
WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
STREET AND DRAIN PLANS
DRAIN A DETAILS

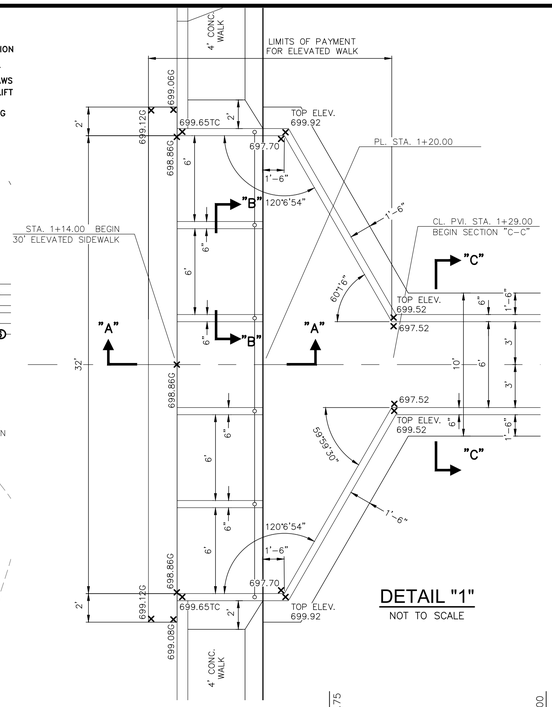
SHEET C6.11A

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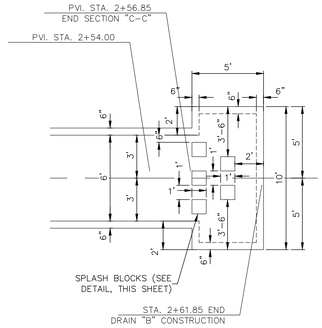
COMPACTION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND 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 SAWS INSPECTOR AND/OR 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.





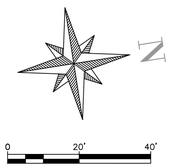
DETAIL "1"
NOT TO SCALE



DETAIL "2"
NOT TO SCALE

EASEMENT KEYNOTES

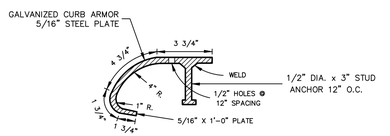
1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. 16' WATER EASEMENT
5. 40' SANITARY SEWER & ACCESS EASEMENT
6. VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8. VARIABLE WIDTH TREE SAVE AREA
1. VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109–117, D.P.R.B.C.
2. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3. VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, D.P.R.B.C.
4. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5. 30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.



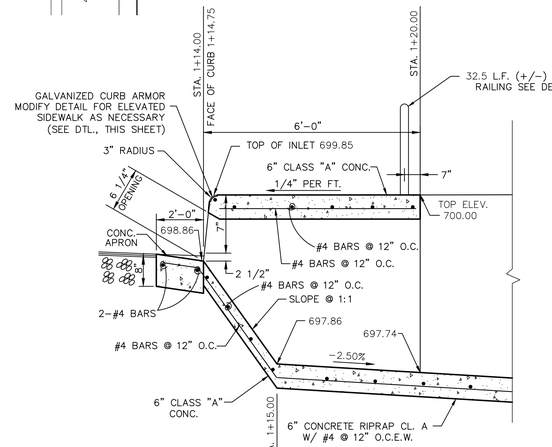
CURB OPENING HYDRAULIC CALCULATION:

L = Q25 / (C * (h^3/2))
L = (52.7) / (3.087 * (0.79^3/2))
L = 24.31 LF

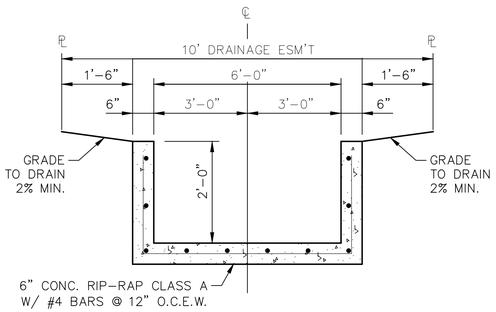
USE 30 LF CURB OPENING



CURB ARMOR
NOT TO SCALE



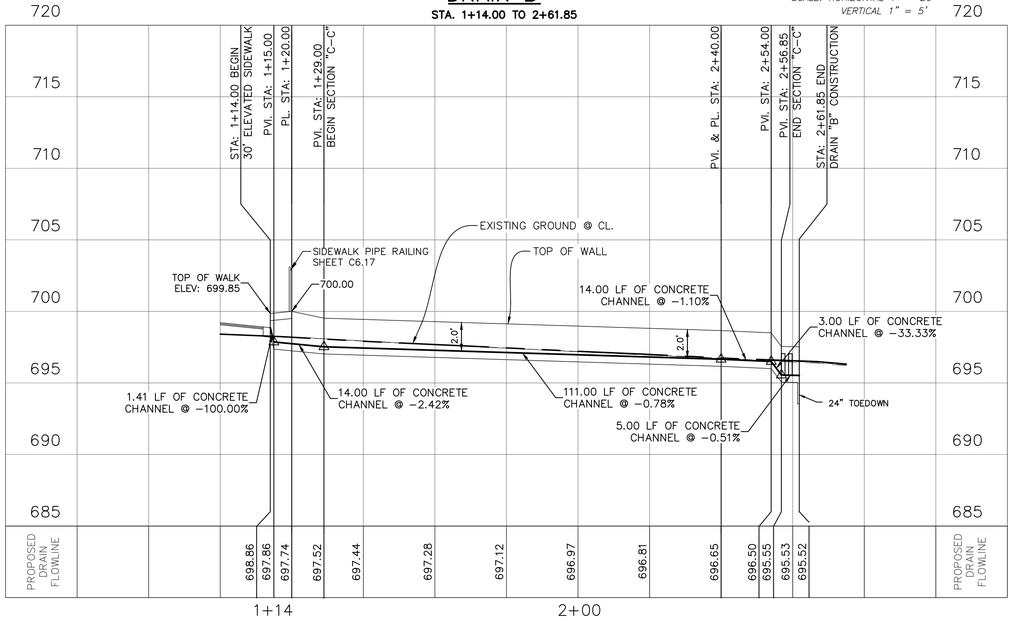
SECTION "A - A"
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STA. 1+14.00 – STA. 1+29.00

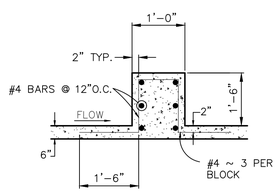


SECTION "C-C"
NOT TO SCALE
STA. 1+29.00 – STA. 2+56.85

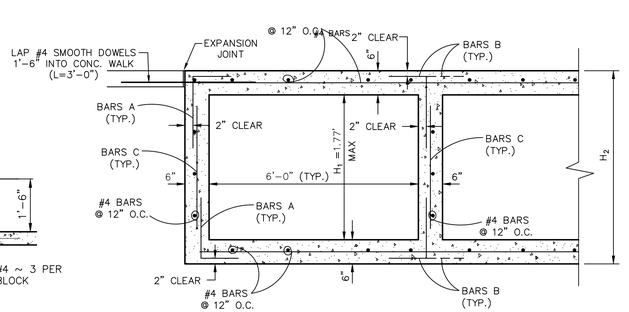
DRAIN B
STA. 1+14.00 TO 2+61.85

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

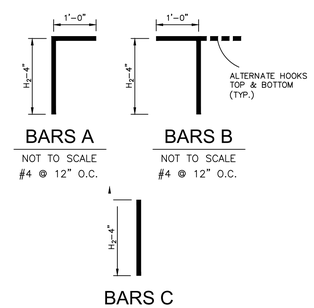




SPLASH BLOCK DETAIL
NOT TO SCALE



SECTION "B-B"
NOT TO SCALE
STA. 1+14.00 – STA. 1+20.00



Date: Oct 10, 2025, 3:42pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 30\Dwg\Engineering\124142_C6.12 Drain B_Profile.dwg

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
STREET AND DRAIN PLANS
DRAIN B P&P

SHEET C6.12

COMPACTION NOTE

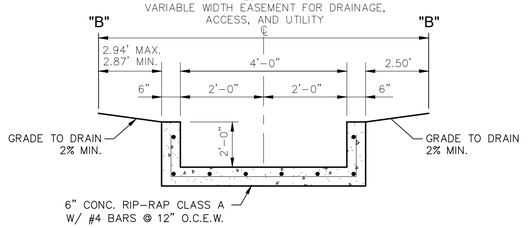
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR TEST ADMINISTRATOR, PER EACH 12-INCH 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.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

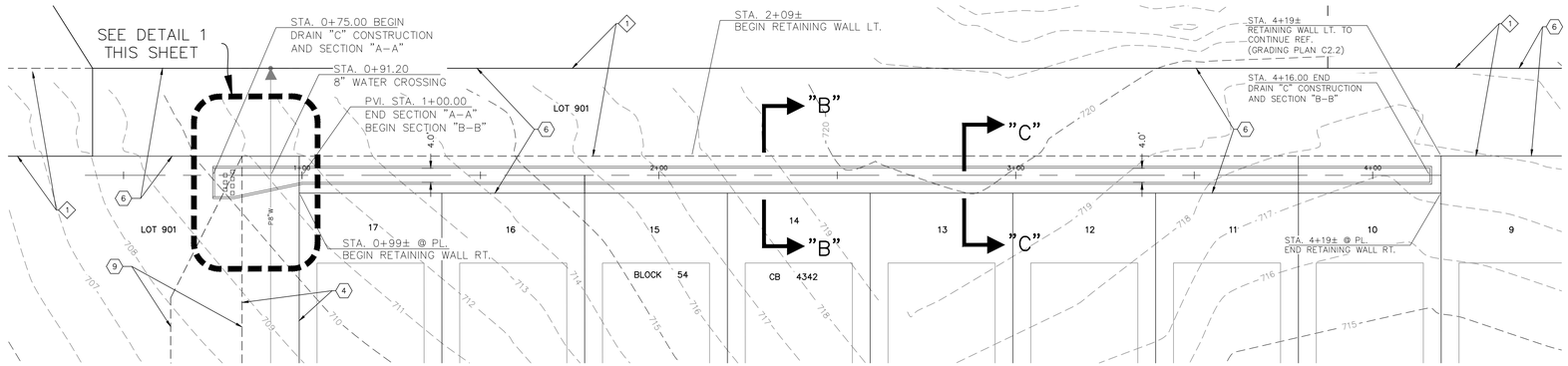
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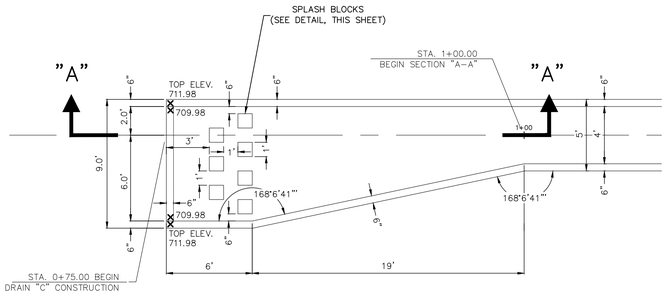
0 20' 40'
SCALE IN FEET
20'



SECTION "B-B"

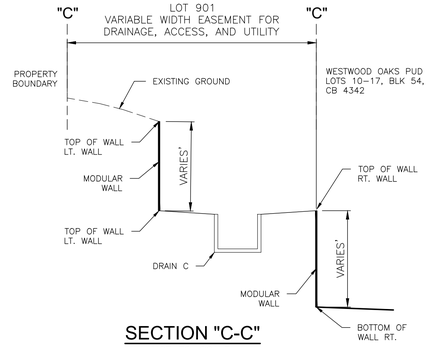
NOT TO SCALE
STA. 1+00.00 – STA. 4+16.00





DETAIL "1"

NOT TO SCALE



SECTION "C-C"

NOT-TO-SCALE

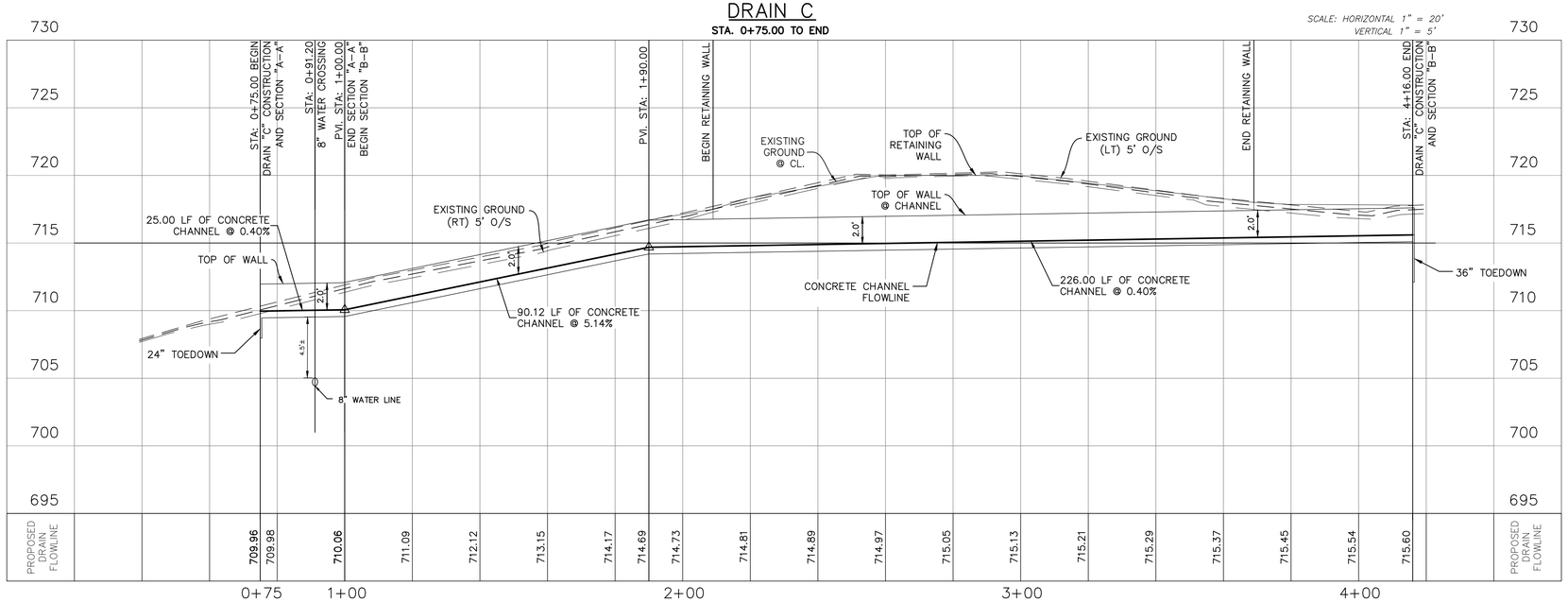
EASEMENT KEYNOTES

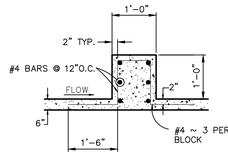
1	15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2	5' WATER EASEMENT
3	1' PEDESTRIAN EASEMENT
4	16' WATER EASEMENT
5	40' SANITARY SEWER & ACCESS EASEMENT
6	VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7	20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8	VARIABLE WIDTH TREE SAVE AREA
1	VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109–117, D.P.R.B.C.
2	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3	VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, D.P.R.B.C.
4	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

DRAIN C

STA. 0+75.00 TO END

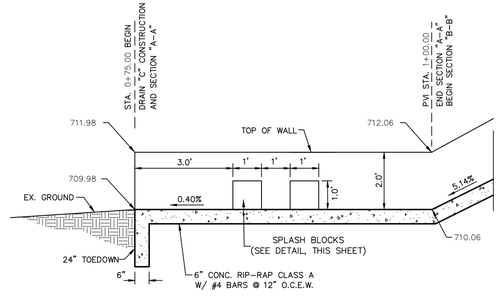
SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 5'





SPLASH BLOCK DETAIL

NOT TO SCALE



SECTION "A-A"

NOT TO SCALE
STA. 0+75.00 – STA. 1+00.00

NO.	REVISION	DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

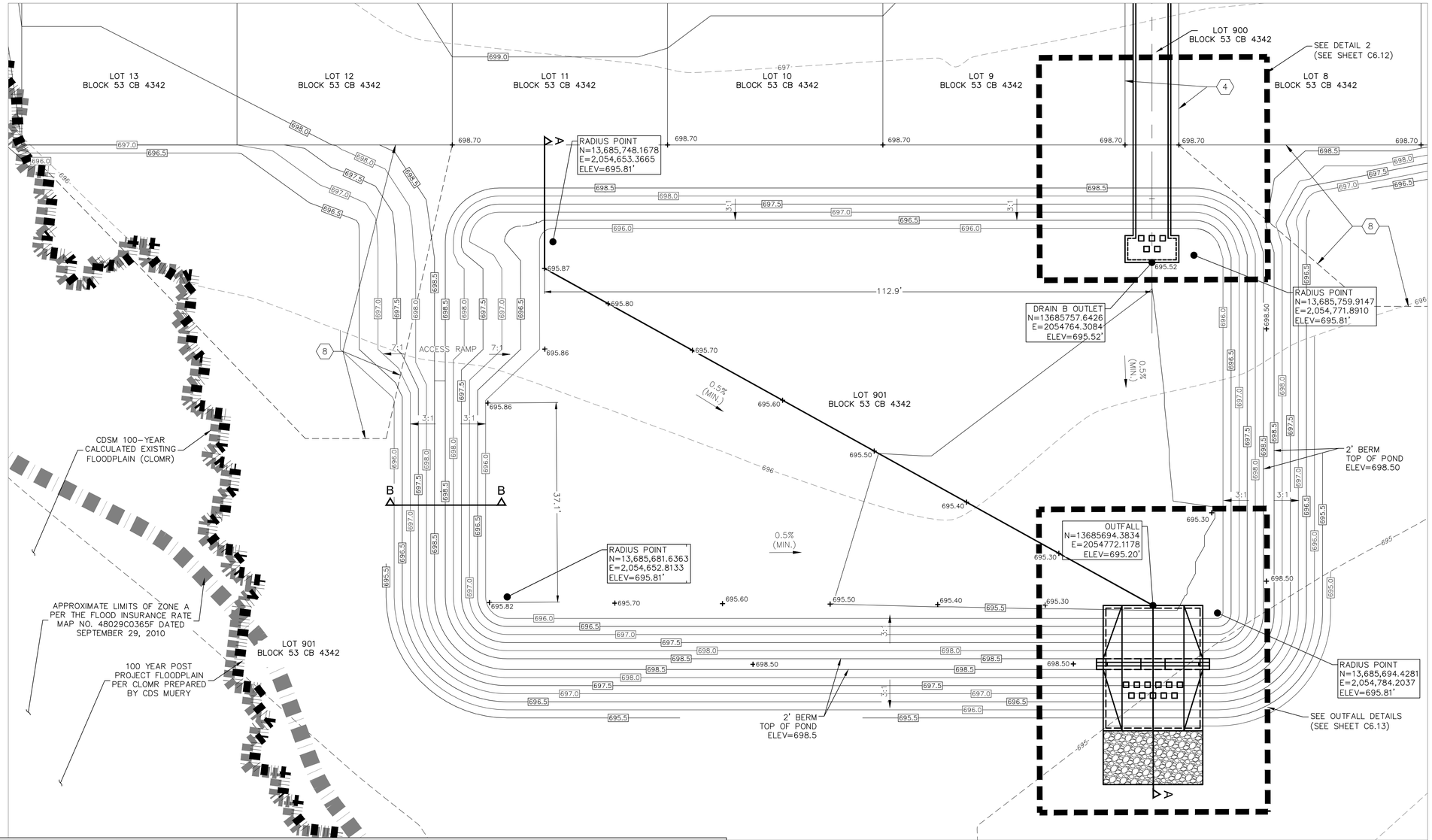
JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.

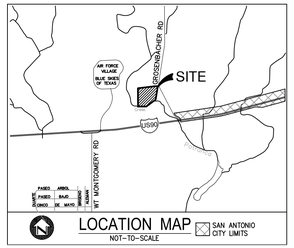
BEXAR COUNTY, TEXAS
STREET AND DRAIN PLANS
DRAIN C P&P

SHEET C6.13

Date: Oct. 10, 2025, 3:42pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.13 Drain C_Profile.dwg



POND DETAIL
SCALE: 1" = 10'



EASEMENT KEYNOTES

1	15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2	5' WATER EASEMENT
3	1' PEDESTRIAN EASEMENT
4	16' WATER EASEMENT
5	40' SANITARY SEWER & ACCESS EASEMENT
6	VARIABLE WIDTH EASEMENT FOR DRAINAGE, ACCESS, AND UTILITY
7	20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8	VARIABLE WIDTH TREE SAVE AREA
1	VARIABLE WIDTH ACCESS EASEMENT VOL. 9610, PGS. 109–117, D.P.R.B.C.
2	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3	VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, D.P.R.B.C.
4	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

NOTES:

1. CONTRACTOR TO PLACE TOP SOIL AND REVEGETATE DISTURBED AREAS IN ACCORDANCE WITH COSA STANDARD ITEM 515 (TOP SOIL) AND ITEM 520 (HYDROMULCHING).

UDC AMENDMENTS, CHAPTER 35, APPENDIX H, SUBAPPENDIX A, STORM WATER MANAGEMENT PLAN CHECKLIST:

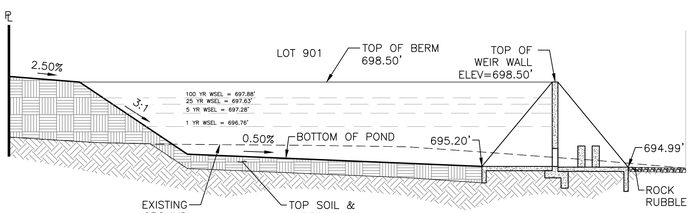
1. CONTRACTOR SHALL PHASE CONSTRUCTION AND/OR PROVIDE NECESSARY BMPs TO MITIGATE INTERIM CONDITIONS RUNOFF DURING CONSTRUCTION DUE TO CLEARING, GRADING, SUBGRADE PREPARATION, PAVING, BUILDINGS, ETC., AND TO PREVENT ADVERSE IMPACTS TO OTHER PROPERTY, STRUCTURES, AND INFRASTRUCTURE DURING CONSTRUCTION.

2. DETENTION POND EXCAVATION AND/OR EMBANKMENT NECESSARY FOR PROVIDING STORAGE MUST BE SUBSTANTIALLY COMPLETE PRIOR TO CONSTRUCTION OF FLEX BASE, PAVEMENT, POURING BUILDING SLABS, OR CONSTRUCTING OTHER IMPERVIOUS COVER WITHIN THE WATERSHED DRAINING TO THE DETENTION POND(s). CONTACT (PUBLIC WORKS) FOR A SITE INSPECTION.

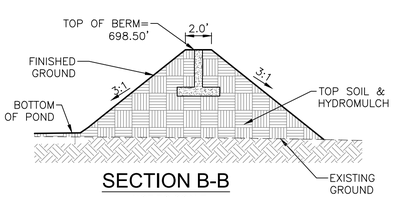
TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

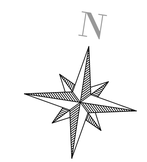
	ACRES	1 YR	5 YR	25 YR	100 YR
A – EXISTING CONDITIONS (POINT D) (CFS)	14.46	INFO NOT AVAILABLE	43.20	59.86	75.61
PROPOSED CONDITIONS W/O DETENTION (POINT J-POND) (CFS)	13.34	29.74	42.77	58.65	72.76
B – POND BYPASS (PART OF DA 6 AND POINTS 8 & 9) (CFS)	1.18	3.37	4.90	6.78	8.45
DETENTION POND DESIGN	**ACRES**	**1 YR**	**5 YR**	**25 YR**	**100 YR**
MAX. WATER SURFACE ELEVATION (FT)		696.76	697.28	697.63	697.88
MAX. POND STORAGE VOLUME (AC-FT)		0.248	0.381	0.475	0.544
C – TOTAL POND DISCHARGE (CFS)	13.34	19.83	33.28	49.13	62.77
SUMMARY	**ACRES**	**1 YR**	**5 YR**	**25 YR**	**100 YR**
(B + C) – POND BYPASS + POND DISCHARGE (CFS)	14.52	23.20	38.18	55.91	71.22
A – EXISTING CONDITIONS (POINT D) (CFS)	14.46	INFO NOT AVAILABLE	43.20	59.86	75.61
DESIGN CHECK	(B + C) ≤ A		YES ✓	YES ✓	YES ✓



SECTION A-A
NOT-TO-SCALE



SECTION B-B
NOT-TO-SCALE



LEGEND

900	EXISTING CONTOUR
900	PROPOSED CONTOUR
× 67.54	EXISTING SPOT ELEV
+ 67.54	PROPOSED SPOT ELEV
TW	TOP OF WALL
RT	RIGHT SIDE OF WALL
LT	LEFT SIDE OF WALL
TB	TOP OF BERM

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PLAT NO. 24-11800321
JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS

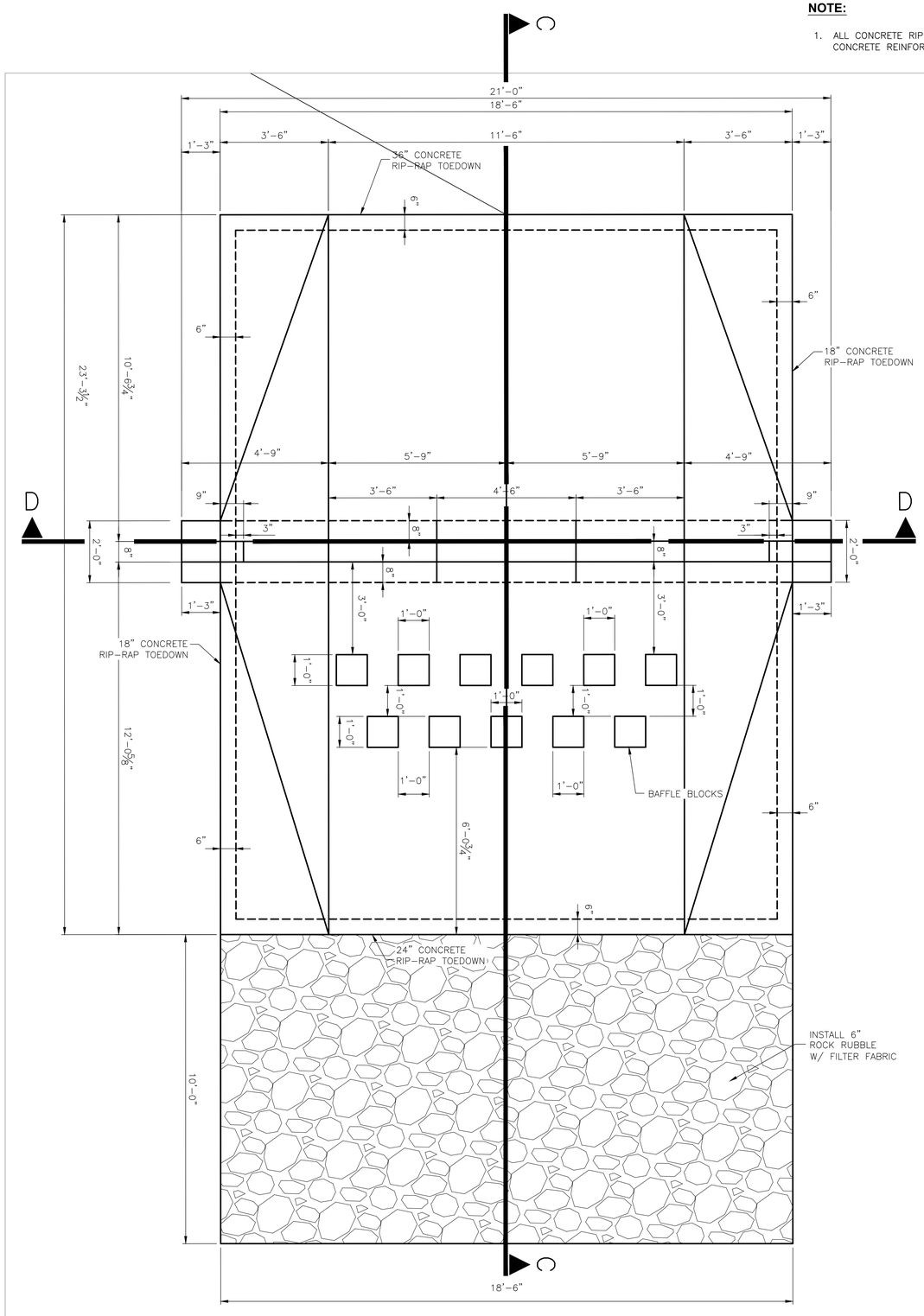
DETENTION POND

SHEET C6.14

Date: Oct 10, 2025, 3:42pm User ID: pablo.deluna
File: ...\4--C6.15 Detention Pond.dwg

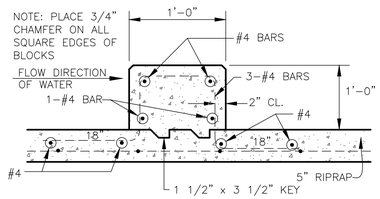
NOTE:

1. ALL CONCRETE RIP-RAP SHALL BE MIN. 4,000 PSI. 5" THICK CONCRETE REINFORCED WITH #4 BARS @ 12" O.C.E.W.



OUTFALL PLAN VIEW

SCALE: 1" = 2'

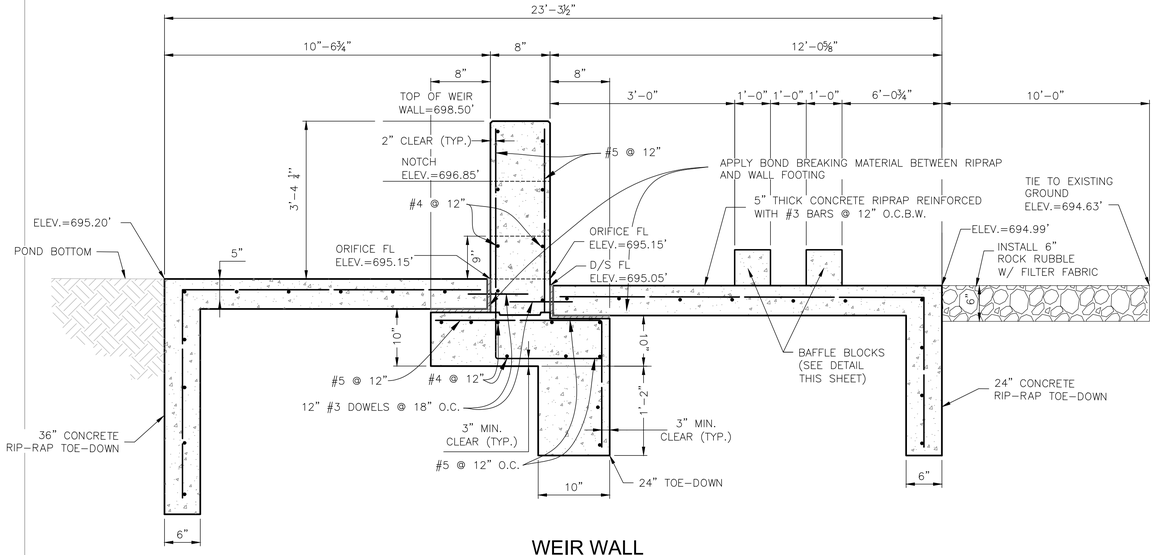


BAFFLE BLOCK REBAR DETAIL

N.T.S.

ABBREVIATIONS:

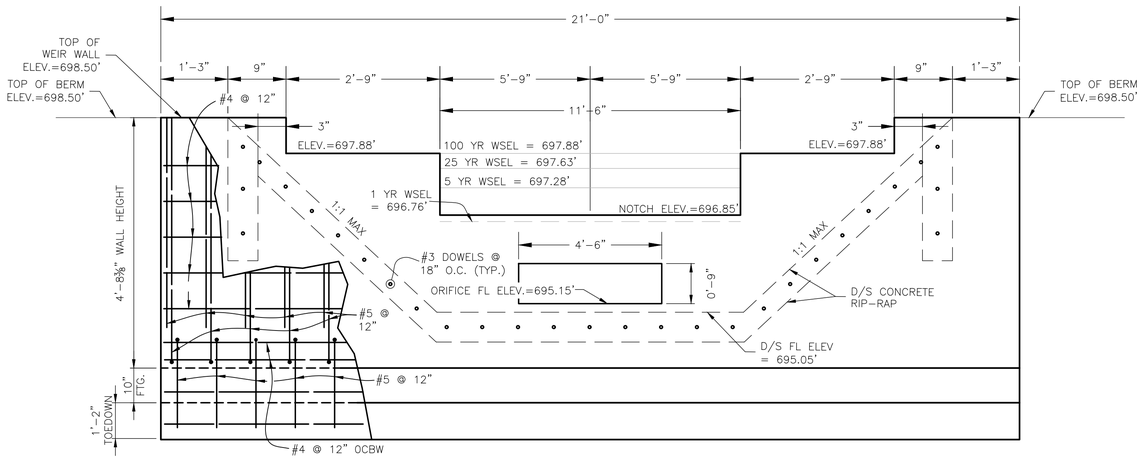
CL = CENTERLINE
D/S = DOWNSTREAM
ELEV = ELEVATION
FL = FLOWLINE
FTG = FOOTING
O.C. = ON CENTER
O.C.B.W. = ON CENTER BOTH WAYS
WSEL = WATER SURFACE ELEVATION



WEIR WALL
SECTION "C-C"

N.T.S.

NOTE:
MODIFY (FIELD CUT) LENGTH OF BARS AS REQUIRED TO FIT ALL ELEVATIONS AT CENTERLINE OF WALL.



WEIR WALL
HALF ELEVATION (DOWNSTREAM VIEW)
SECTION "D-D"

N.T.S.

NO.	REVISION	DATE

STATE OF TEXAS
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PLAT NO. 24-11800321

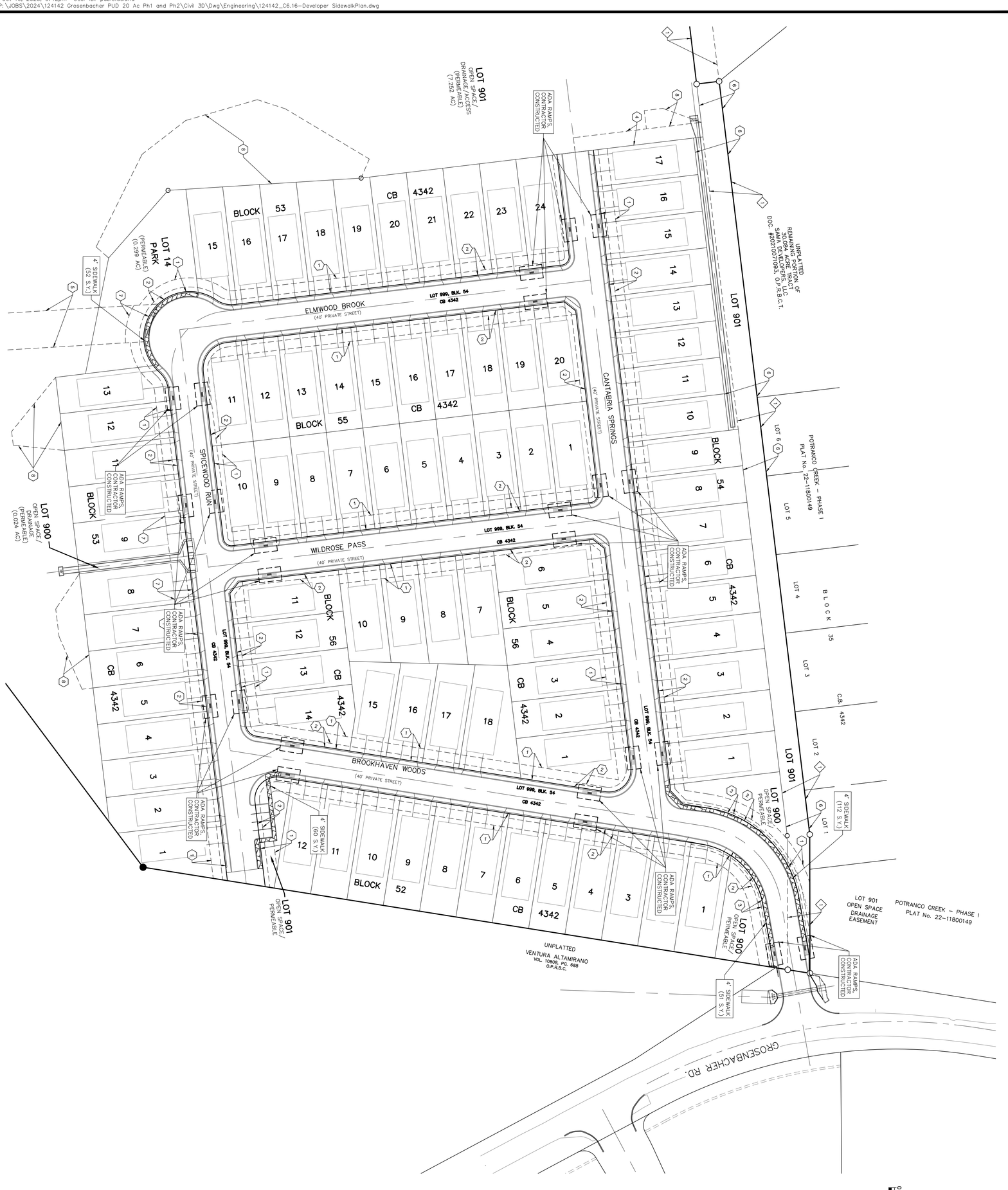
JOB NO. 124142.00
DATE JANUARY 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS

DETENTION POND OUTFLOW

SHEET C6.15

Date: Oct 10, 2025, 3:42pm User ID: pablo.delumo
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.14-C6.15 Detention Pond.dwg





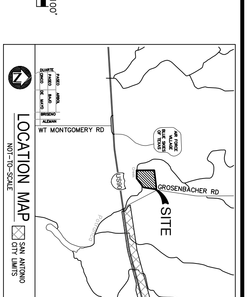
EASEMENT KEYNOTES

1	15' ERL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
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4	16' WATER EASEMENT
5	40' SANITARY SEWER & ACCESS EASEMENT
6	VARIABLE WIDTH EASEMENT FOR DRAINAGE, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
7	20' ERL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
8	VARIABLE WIDTH TREE SAVE AREA
9	VARIABLE WIDTH ACCESS EASEMENT
10	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
11	VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9610, PG. 109, O.P.R.B.C.
12	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.

LEGEND

4' WIDE SIDEWALK CONTRACTOR CONSTRUCTED

24 – ADA RAMPS CONTRACTOR CONSTRUCTED



WESTWOOD OAKS PUD

BEXAR COUNTY, TEXAS

DEVELOPER SIDEWALK PLAN

SHEET C6.16

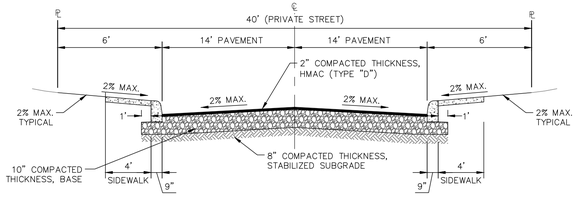
JOB NO. 124142.00
DATE APRIL 2025
DRAFTED JJM
CHECKED BC DESIGN BAC

PLAT NO. 24-11800321

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ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

BRIAN A. CROWELL 82619 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
10/10/2025

NO.	REVISION	DATE



LOCAL "A" W/OUT BUS TRAFFIC

NOT-TO-SCALE

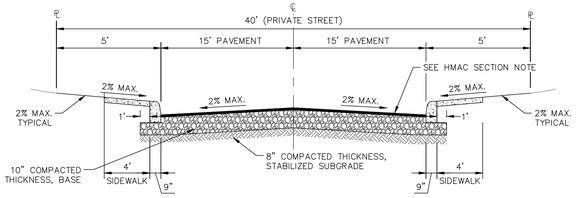
BROOKHAVEN WOODS
STA. 1+25.67 TO STA. 5+93.67

ELMWOOD BROOK
STA. 1+28.99 TO STA. 5+00.99

CANTABRIA SPRINGS
STA. 1+00.00 TO STA. 8+03.38

WILDROSE PASS
STA. 1+29.00 TO STA. 5+21.05

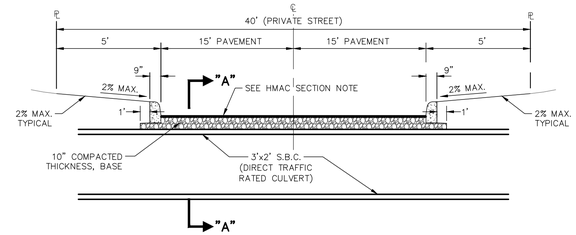
SPICEWOOD RUN
STA. 1+49.00 TO STA. 6+92.08



LOCAL "A" W/OUT BUS TRAFFIC

NOT-TO-SCALE

BROOKHAVEN WOODS
STA. 6+22.28 TO STA. 8+38.93



MODIFIED PAVEMENT SECTION

NOT-TO-SCALE

TRAFFIC RATED CULVERT

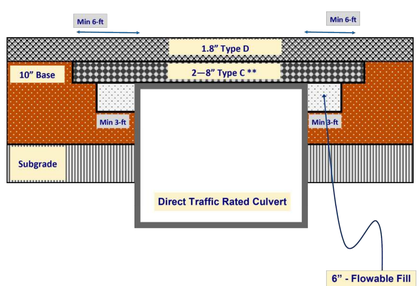
BROOKHAVEN WOODS
STA. 8+38.93 TO STA. 8+55.29

PAVING NOTES:

1. FOR STREET CONSTRUCTION, THE CONTRACTOR SHALL REFERENCE THE SUBSURFACE EXPLORATION & PAVEMENT ANALYSIS REPORT PROPOSED NEW STREETS, 20 ACRE TRACT GROSENBACHER ROAD, BY INTEC, DATED JULY 11, 2024. ADDENDUM: MODIFIED PAVEMENT SECTION OVER CULVERT, BY INTEC, DATED AUGUST 18, 2025.
2. PAVEMENT SUBGRADE SHALL BE LIME STABILIZED IF P.I. IS GREATER THAN 20.
3. CONCRETE DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF SAN ANTONIO DETAIL AND SPECIFICATIONS.
4. THE LIME STABILIZED SUBGRADE SHALL BE TESTED TO CONFIRM APPLICATION RATE (39 LBS/SY) FOR 8" DEPTH OF TREATMENT.
5. STATIONING DOES NOT INCLUDE CURB TRANSITIONS OR ADA RAMPS.
6. PAY LIMITS OF BASE AND SUBGRADE ARE 1.0' BEHIND BACK OF CURB.
7. FOR CULVERT CONSTRUCTION, THE CONTRACTOR SHALL REFERENCE THE SUBSURFACE EXPLORATION & PAVEMENT ANALYSIS REPORT ADDENDUM: MODIFIED PAVEMENT SECTION OVER CULVERT, 20 ACRE TRACT GROSENBACHER ROAD, BY INTEC, DATED AUGUST 18, 2025.

HMAC SECTION NOTE:
1.8" COMPACTED THICKNESS, HMAC (TYPE "D") &
** 2"-8" COMPACTED THICKNESS, HMAC (TYPE "C")

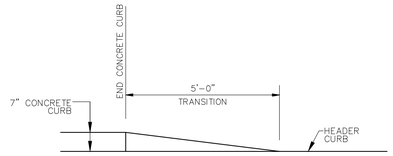
** COVER THICKNESS OVER CULVERT IS EXPECTED TO VARY BETWEEN 3.8 AND 9.8 INCHES. RECOMMENDED USING TYPE D AND TYPE C ASPHALT.



SECTION "A-A"

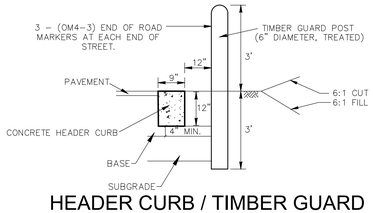
NOT TO SCALE

NOTE: REFERENCE SECTION ADDENDUM: MODIFIED PAVEMENT SECTION OVER CULVERT, BY INTEC, DATED AUGUST 18, 2025. Plate No. 3.



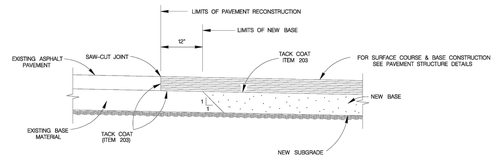
TRANSITION CURB DETAIL

NOT TO SCALE



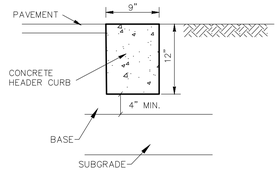
HEADER CURB / TIMBER GUARD

N.T.S.



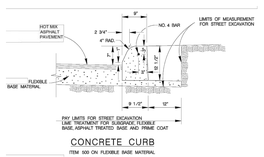
PAVEMENT JUNCTION DETAILS

SCALE : 1"=2'



HEADER CURB DETAIL

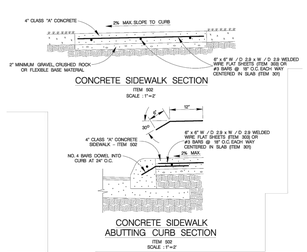
NOT TO SCALE

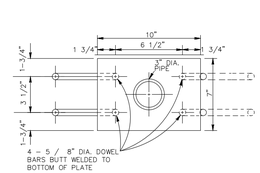


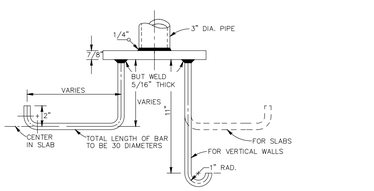
CONCRETE CURB

ITEM 500 ON FLEXIBLE BASE MATERIAL
SCALE : 1"=2'

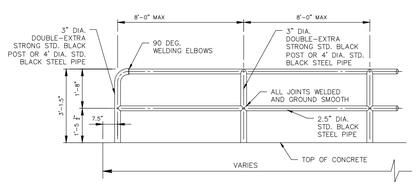
CURB DETAIL NOTE:
CURB DETAIL SHOWN ARE FOR CURB DIMENSION/REFERENCE, AS PER COSA DETAIL SHEET "MISCELLANEOUS CONSTRUCTION STANDARDS I". REFER TO STREET SECTIONS THIS SHEET FOR ASPHALT & BASE & SUBGRADE INFORMATION.

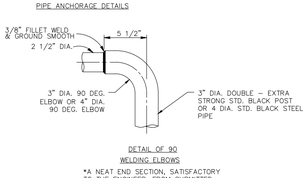






PIPE ANCHORAGE DETAILS





DETAIL OF 90 WELDING ELBOWS

*A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90 DEG. WELDING ELBOW SHOWN.

TYPICAL COSA SIDEWALK PIPE RAILING SECTION

N.T.S.

NO.	REVISION	DATE

STATE OF TEXAS
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LICENSED
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(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

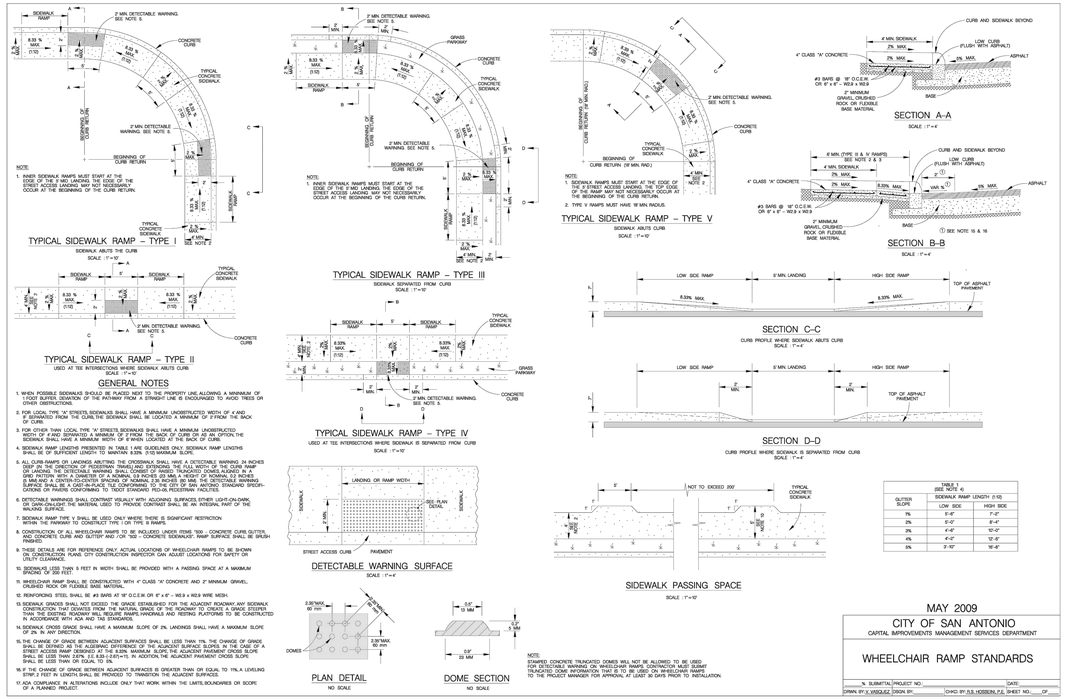
JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

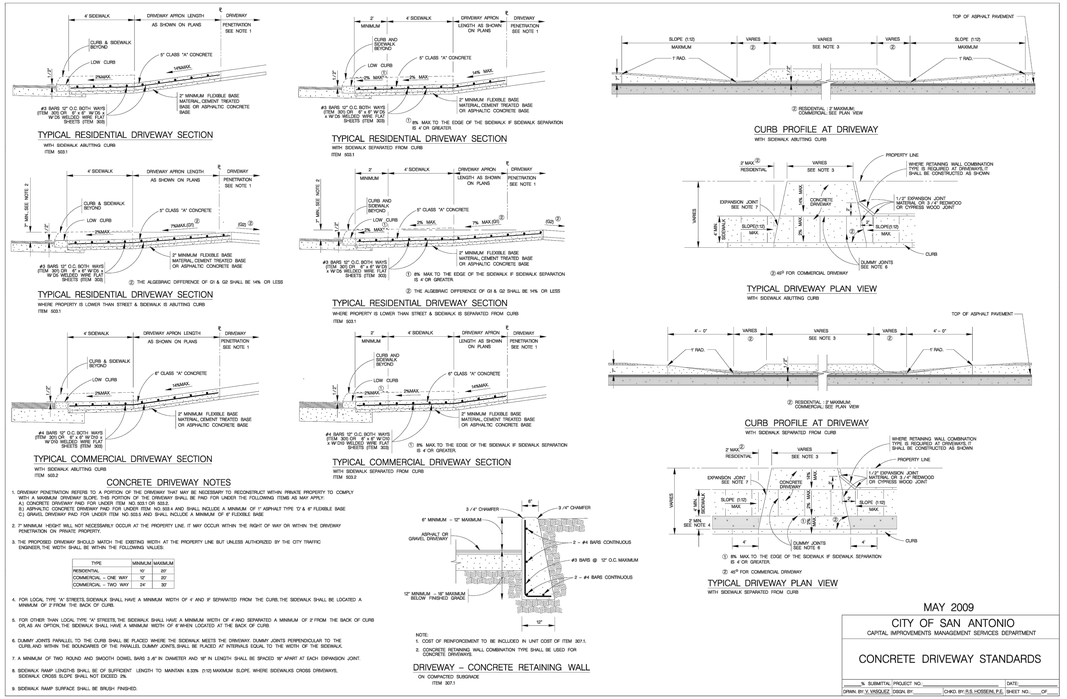
WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS

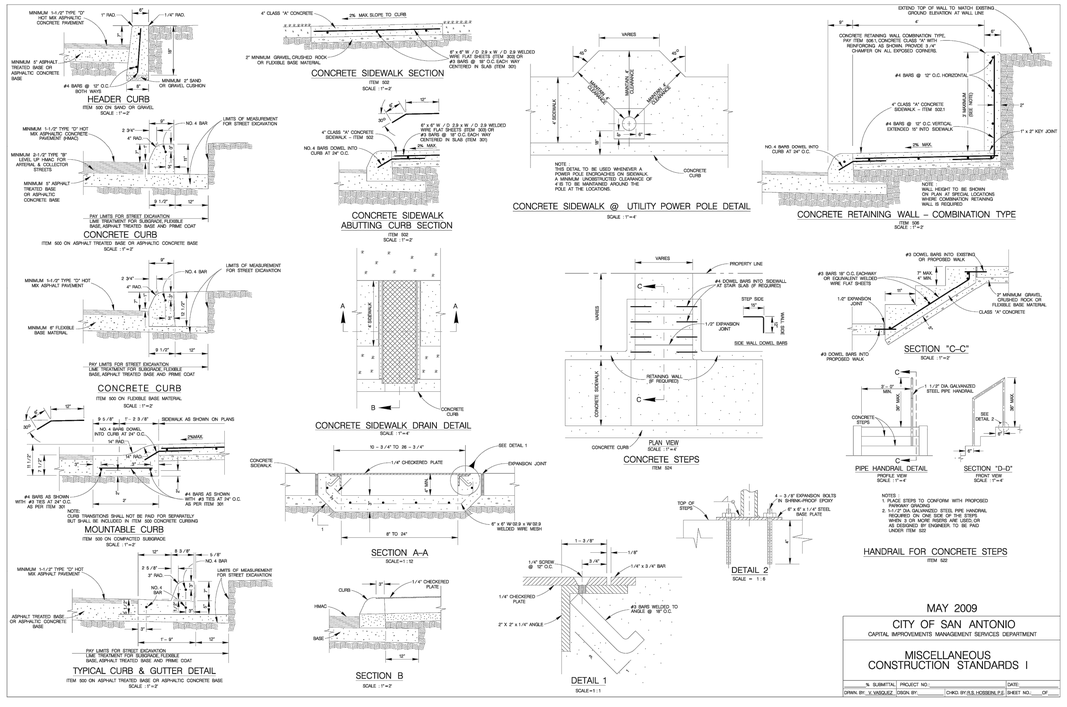
STANDARD STREET DETAILS I

SHEET C6.17

Date: Oct 10, 2025, 3:42pm User ID: pablo.deluna
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Civil 30\dwg\Engineering\124142_C6.17-C6.19-Standard Street Details.dwg







NO. REVISION DATE

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/6/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321
JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS
STANDARD STREET DETAILS II

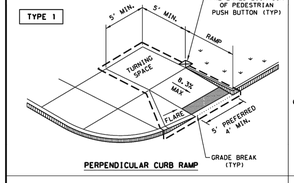
SHEET C6.18

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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 FOR THE COMPILATION OF THIS STANDARD TO OTHER FORMATS OR FOR INCORRECT RESULTS OR ANY DAMAGES FROM ITS USE.

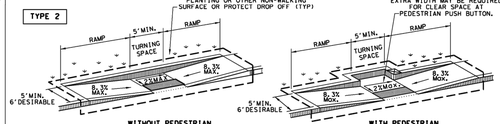
DATE:
FILE:

TYPE 1



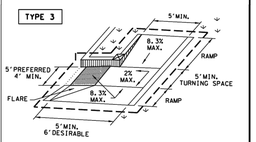
PERPENDICULAR CURB RAMP

TYPE 2

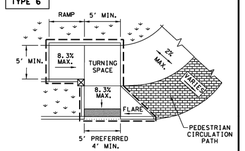


PARALLEL CURB RAMP

TYPE 3

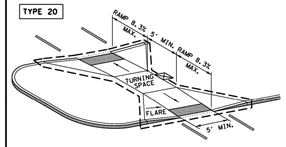


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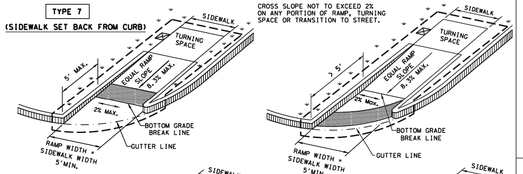
COMBINATION CURB RAMPS

TYPE 20

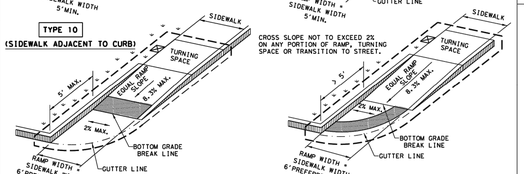


CURB RAMPS AT MEDIAN ISLANDS

TYPE 7
(SIDEWALK SET BACK FROM CURB)

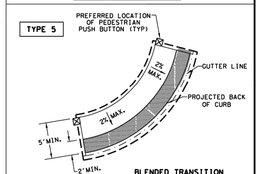


TYPE 10
(SIDEWALK ADJACENT TO CURB)



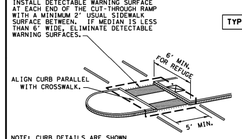
DIRECTIONAL RAMPS WITHIN RADIUS

TYPE 5



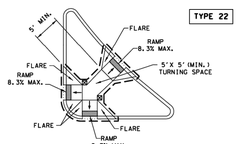
BLENDED TRANSITION
(FLUSH LANDING)

TYPE 21

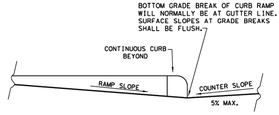


NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 22



COMBINATION ISLAND RAMPS



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

NOTES / LEGEND:

SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

DETECTABLE WARNING SURFACE

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.

GUTTER LINE

GRADE BREAK

RAMP LIMITS OF PAYMENT

SHEET 1 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES
CURB RAMPS
PED-18

FILE: ped18	DN: TxDOT	CK: VP	DW: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
REVISED 06.2010	DIST	COUNTY		SHEET NO.
REVISED 06.2013				
REVISED 05.2016				

GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
6. Clear space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

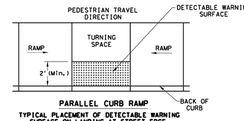
DETECTABLE WARNING PAVERS (IF USED)

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

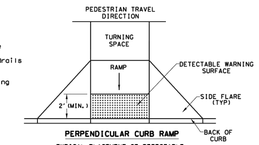
SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.

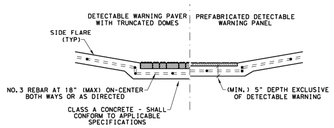
DETECTABLE WARNING SURFACE DETAILS



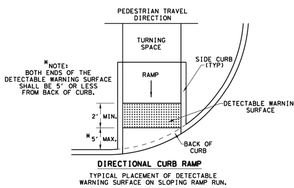
PARALLEL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS



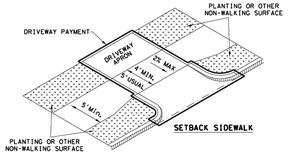
DIRECTIONAL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

SHEET 2 OF 4

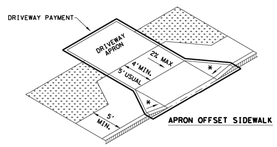
Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES
CURB RAMPS
PED-18

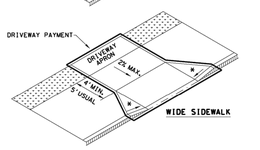
SIDEWALK TREATMENT AT DRIVEWAYS



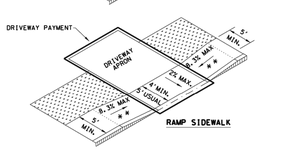
SETBACK SIDEWALK



APRON OFFSET SIDEWALK



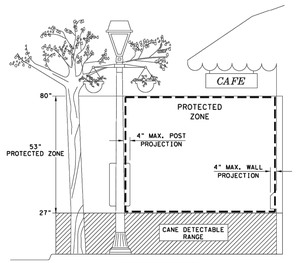
WIDE SIDEWALK



RAMP SIDEWALK

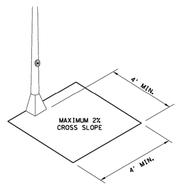
NOTES:
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

* * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.

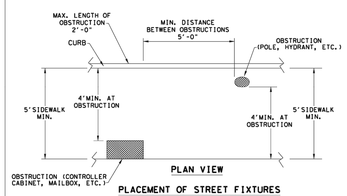


PROTECTED ZONE

NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.

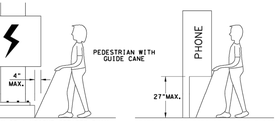


CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



PLAN VIEW
PLACEMENT OF STREET FIXTURES

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.

PROTRUDING OBJECTS OF A HEIGHT ≤27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.

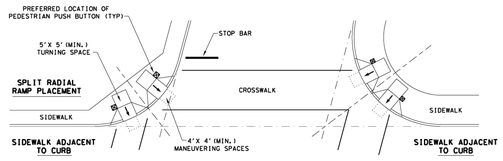
DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

SHEET 3 OF 4

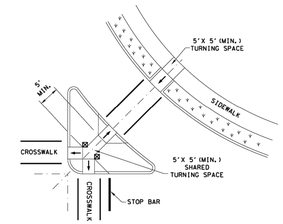
Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES
CURB RAMPS
PED-18

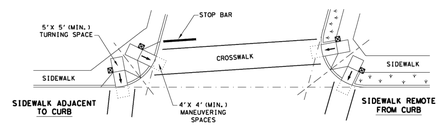
TYPICAL CROSSING LAYOUTS
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



SKEWED INTERSECTION WITH "LARGE" RADIUS



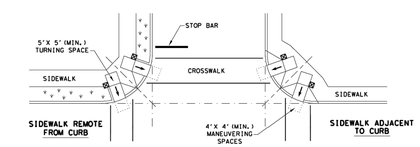
AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



SKEWED INTERSECTION WITH "SMALL" RADIUS



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS



NORMAL INTERSECTION WITH "SMALL" RADIUS

LEGEND:

SHOWS DOWNWARD SLOPE.

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE).

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

SHEET 4 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES
CURB RAMPS
PED-18

DATE | NO. | REVISION

STATE OF TEXAS
BRIAN A. CROWELL
82619
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-7733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS P.U.D.
BEXAR COUNTY, TEXAS

STANDARD STREET DETAILS III

SHEET C6.19

Date: Oct 10, 2025, 3:43pm User ID: pablo.deluna
File: P:\OBS\2024\124142 Groesbeckner PUD 20 Ac Ph1 and Ph2\Civil 3D\Dwg\Engineering\124142_C6.17-C6.19-Standard Street Details.dwg

DEVELOPMENT SERVICES
TREE PROTECTION SECTION
REVIEWED FOR COMPLIANCE

DEVELOPMENT SERVICES
Tree Pre-Construction Meeting
Required prior to Site Work

It shall be the responsibility of the permit holder to maintain a copy of the approved tree plans, approved tree permit and the conditions of approval readily available at all times.

Failure to schedule a fencing inspection prior to start of work may result in a stop Work order or a Penalty of $1,000.00 or both. UDC §35-523 (k)(2)

TREE PRESERVATION PLAN

FOR

WESTWOOD OAKS P.U.D. SUBDIVISION

SAN ANTONIO, TEXAS

TRE-APP-APP24-38802035
TREE PRESERVATION
APPROVED
DATE 8/14/2025
BY Eric Rodriguez
Amendment #1

ENGINEER:
CDS MUERY
ATTN: BRIAN CROWELL, P.E.
100 NE LOOP 410, STE. 300
SAN ANTONIO, TEXAS 78216
TEL: (210) 581-1111
FAX: (210) 581-5555

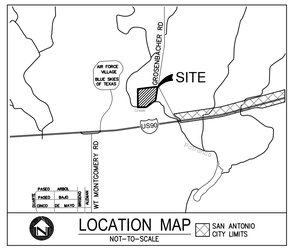
OWNER/DEVELOPER:
PATRICK FLANAGIN, CONTROLLER
MEDINA VILLAGE, LLC
4007 McCULLOUGH AVE, SUITE 231
SAN ANTONIO, TX 78212

BENCHMARK INFORMATION		
NO.	DESCRIPTION	ELEVATION
TBM #1 PNT#2784 N: 13688791.76 E: 2055689.94	CHISELED "□" ON THE SOUTHWEST SIDE OF CONCRETE HEADWALL OF A CONCRETE WATER DRAIN, ON THE NORTHEAST RIGHT-OF-WAY OF GROSENBACHER ROAD,	709.85
TBM #2 PNT#6000 N: 13687927.97 E: 2054861.14	CHISELED "□" ON THE NORTH SIDE OF A CONCRETE MANHOLE.	693.08

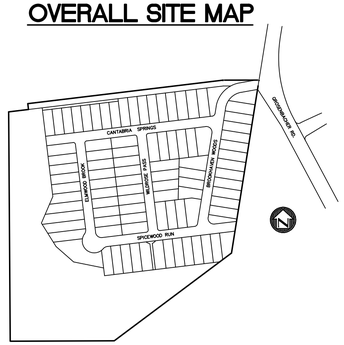
SITE INFORMATION:

BEING A TOTAL OF 21.095 ACRES, LYING IN THE T.S. COOKE SURVEY 65 1/4, COUNTY BLOCK 4342, ABSTRACT 1076, BEXAR COUNTY TEXAS, SAME BEING ALL OF A 20.53 ACRE TRACT OF LAND DESCRIBED IN DEED TO CARLOS MEDINA JR. AND PORFIRIA MEDINA AND RECORDED IN VOL. 8307, PG. 596 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS.

EASEMENT KEYNOTES	
1	15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2	5' WATER EASEMENT
3	1' PEDESTRIAN EASEMENT
4	PRIVATE 10' DRAINAGE EASEMENT
5	PRIVATE VARIABLE WIDTH DRAINAGE EASEMENT
6	16' WATER EASEMENT
7	40' SANITARY SEWER EASEMENT
8	VARIABLE WIDTH ACCESS EASEMENT
9	20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
10	5' PRIVATE DRAINAGE EASEMENT
11	VARIABLE WIDTH TREE SAVE AREA
1	VARIABLE WIDTH ACCESS EASEMENT VOL. 9810, PG. 116, O.P.R.B.C.
2	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11071, PG. 1625, O.P.R.B.C.
3	VARIABLE WIDTH DRAINAGE EASEMENT VOL. 9810, PG. 109, O.P.R.B.C.
4	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11198, PG. 1915, O.P.R.B.C.
5	30' PERMANENT SANITARY SEWER EASEMENT VOL. 11054, PG. 1334, O.P.R.B.C.



OVERALL SITE MAP



CIVIL SHEET INDEX	
SHT NO.	TITLE
C7.0	TREE PRESERVATION COVER SHEET
C7.1	TREE PRESERVATION PLAN
C7.2	TREE PRESERVATION PLAN
C7.3	TREE TABLES
C7.4	TREE TABLES
C7.5	TREE PRESERVATION DETAILS

TREE LEGEND

- 5001 = TREE PRESERVED
- 5002 = TREE REMOVED
- 5003 = TREE PRESERVED (EXEMPT)
- 5004 = TREE REMOVED (EXEMPT)
- 5005 = TREE PRESERVED (FLOODPLAIN)
- 5006 = TREE REMOVED (FLOODPLAIN)
- 5007 = TREE PRESERVED (RIPARIAN BUFFER)
- 5008 = TREE REMOVED (RIPARIAN BUFFER)
- 5009 = TREE IN DECLINE/DECAY

TRE-APP-APP24-38802035

NO.	REVISION	DATE

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS PUD
BEXAR COUNTY, TEXAS
TREE PRESERVATION COVER SHEET

City of San Antonio
Plan Reviewed
Development Services Dept

SHEET C7.0

Date: Jul 22, 2025, 3:59pm User ID: amo.turgeon
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Engineering\Trees\124142 Tree Plan.dwg



N

0 60' 120'

SCALE IN FEET
1"=60'

TREE LEGEND

- 5001 = TREE PRESERVED
- 5002 = TREE REMOVED
- 5003 = TREE PRESERVED (EXEMPT)
- 5004 = TREE REMOVED (EXEMPT)
- 5005 = TREE PRESERVED (FLOODPLAIN)
- 5006 = TREE REMOVED (FLOODPLAIN)
- 5007 = TREE PRESERVED (RIPARIAN BUFFER)
- 5008 = TREE REMOVED (RIPARIAN BUFFER)
- 5009 = TREE IN DECLINE/DECAY

DEVELOPMENT SERVICES
TREE PROTECTION SECTION
REVIEWED FOR COMPLIANCE

TREE FENCING INSPECTION
REQUIRED BEFORE SITE WORK
CALL 207-1111 TO SCHEDULE

TRE-APP-APP24-38802035

NO.	REVISION	DATE
1	REVISED TREES IN PLAN VIEW	07/21/25

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS PUD

BEXAR COUNTY, TEXAS

TREE PRESERVATION PLAN

City of San Antonio Plan Reviewed
Development Services Dept

SHEET C7.1

Date: Jul 22, 2025, 3:59pm User ID: anna.turgeon
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Engineering\Trees\124142 Tree Plan.dwg



TREE FENCING INSPECTION REQUIRED BEFORE SITE WORK CALL 207-1111 TO SCHEDULE

N

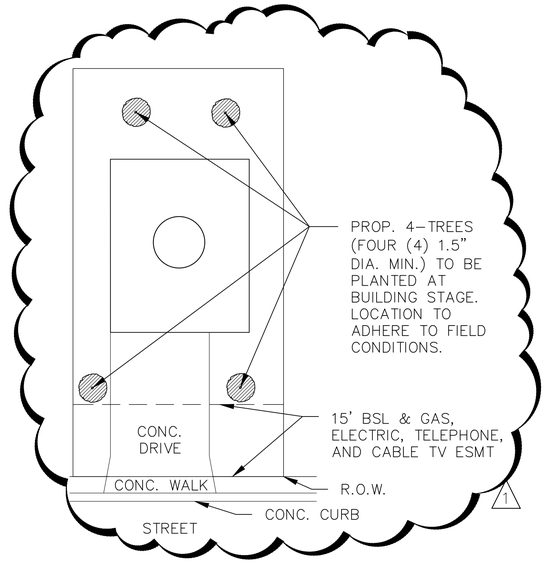
0 60' 120'
SCALE IN FEET
1"=60'

	ACRES
Total Area	21.0950
Floodplain Area	3.8700
Total Area - Floodplain Area	17.2250

EASEMENT KEYNOTES

1. 15' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 5' WATER EASEMENT
3. 1' PEDESTRIAN EASEMENT
4. PRIVATE 10' DRAINAGE EASEMENT
5. PRIVATE VARIABLE WIDTH DRAINAGE EASEMENT
6. 16' WATER EASEMENT
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8. VARIABLE WIDTH ACCESS EASEMENT
9. 20' BSL & GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
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11. VARIABLE WIDTH TREE SAVE AREA
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DEVELOPMENT SERVICES
TREE PROTECTION SECTION
REVIEWED FOR COMPLIANCE



TYPICAL LOT LAYOUT WITH PROPOSED TREES

NOT-TO-SCALE

TREE PLANTING REQUIREMENT:
TREE SPECIES TO BE MEDIUM TO LARGE APPENDIX E SHADE VALUE TREES AND NO SPECIES WILL BE MORE THAN 25% OF THE TOTAL.
LOTS WITH THE CIRCLE SYMBOL SHALL HAVE TWO (2) TREES IN THE FRONT YARD NOT RECEIVING ENERGY CREDIT AND TWO (2) TREES IN THE BACKYARD NOT RECEIVING ENERGY CREDIT.

TRE-APP-APP24-38802035

NO.	REVISION	DATE
1	REVISED PLANTING DETAIL	07/21/25

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS PUD

BEXAR COUNTY, TEXAS

TREE PRESERVATION PLAN

City of San Antonio Plan Reviewed
Development Services Dept

SHEET C7.2

Date: Jul 22, 2025, 3:59pm User ID: dma.turgeon
File: P:\JOBS\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Engineering\Trees\124142 Tree Plan.dwg

Tree Inventory Worksheet to Determine Preservation and Canopy Shade Coverage

Tag #	Size(dbh) & Species (P) = Preserved (R) = Removed (RB) = Riparian Buffer (FP) = Floodplain (FPR) = Floodplain Removed (INDC) = Removed (EXEMPT P) = Exempt Tree Preserved (EXEMPT R) = Exempt Tree Removed	Understory Species* 5.0" - 11.5"		Significant Tree 6" - 23.5"		Significant Tree** 10.0" - 23.5"		Heritage 3:1 HERITAGE TREES PRESERVED AT 100%		Heritage 1:1 HERITAGE TREES PRESERVED AT 100%		Riparian Buffer Trees PRESERVED AT 80%		FEMA Floodplain Trees PRESERVED AT 80%		In Decline	Existing Shade Value (SF)
		Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved
12388	15" LIVE OAK (R)			15													
12389	12" MESQUITE (R)					12											
12390	11.5" MESQUITE (R)					11.5											
12391	14" HACKBERRY (R)					14											
12392	14.5" MESQUITE (P)						14.5										550
12393	10" MESQUITE (FPR)														10		
12394	13" MESQUITE (RB)												13				550
12395	15" HACKBERRY (P)						15										875
12396	17" HACKBERRY (R)					17											
12397	19" HACKBERRY (RB)												19				875
12398	14" MESQUITE (R)					14											
12399	13" HACKBERRY (R)					13											
12501	17" MESQUITE (INDC)															17	
12502	10" HACKBERRY (R)					10											
12503	14.5" HACKBERRY (R)					14.5											
12504	12.5" MESQUITE (R)					12.5											
12505	11" MESQUITE (R)					11											
12506	19" HACKBERRY (R)					19											
12507	14" MESQUITE (EXEMPT R)																
12508	13.5" HACKBERRY (R)					13.5											
12509	16.5" HACKBERRY (R)					16.5											
12510	16.5" HACKBERRY (R)					16.5											
12511	12" HACKBERRY (R)					12											
12512	11.5" HACKBERRY (R)					11.5											
12513	12" HACKBERRY (R)					12											
12514	11.5" MESQUITE (R)					11.5											
12515	14" HACKBERRY (INDC)															14	
12516	12" HACKBERRY (P)						12										875
12517	15" HACKBERRY (P)						15										875
12518	12" HACKBERRY (P)						12										875
12519	11.5" HACKBERRY (P)						11.5										875
12520	10.5" MESQUITE (P)						10.5										550
12521	10" MESQUITE (RB)												10				550
12522	21.5" MESQUITE (FP)														21.5		
12523	10.5" MESQUITE (FP)														10.5		
12524	11.5" HACKBERRY (FP)														11.5		
12525	14" HACKBERRY (RB)												14				875
12526	14" HACKBERRY (RB)												14				875
12527	12" HACKBERRY (RB)												12				875
12528	12" HACKBERRY (P)						12										875
12529	15" HACKBERRY (P)						15										875
12530	11.5" HACKBERRY (P)						11.5										875
12531	14" HACKBERRY (P)						14										875
12532	12.5" HACKBERRY (P)						12.5										875
12533	14" HACKBERRY (R)					14											
12534	11.5" HACKBERRY (P)						11.5										875
12535	16.5" HACKBERRY (P)						16.5										875
12536	11" HACKBERRY (P)						11										875
12537	14.5" HACKBERRY (P)						14.5										875
12538	11" MESQUITE (P)						11										550
12539	10" MESQUITE (RB)												10				550
12540	10" MESQUITE (RB)												10				550
12541	10" MESQUITE (RB)												10				550
12542	12" HACKBERRY (FP)														12		
12543	15" HACKBERRY (FP)														15		
12544	10" HACKBERRY (FP)														10		
12545	18" HACKBERRY (INDC)															18	
12546	10.5" MESQUITE (FP)														10.5		
12547	10.5" MESQUITE (FP)														10.5		
12548	11.5" MESQUITE (FP)														11.5		
12549	10" HACKBERRY (FP)														10		
12550	13" MESQUITE (FP)														13		
12551	12" HACKBERRY (FP)														12		
12552	13" HACKBERRY (FP)														13		
12553	16" HACKBERRY (FP)														16		
12554	13" MESQUITE (FP)														13		
12555	14" HACKBERRY (FP)														14		
12556	11.5" MESQUITE (FP)														11.5		
12557	21.5" HACKBERRY (INDC)															21.5	
12558	11" MESQUITE (FP)														11		
12559	10.5" MESQUITE (FP)														10.5		
12560	11" MESQUITE (INDC)															11	
12561	10" MESQUITE (FP)														10		
12562	12" MESQUITE (FP)														12		
12563	12" MESQUITE (FP)														12		
12564	11" MESQUITE (FP)														11		
12565	12" MESQUITE (FP)														12		
12566	12" MESQUITE (RB)												12				550
12567	13" HACKBERRY (P)						13										875
12568	14" HACKBERRY (R)					14											
12569	10.5" HACKBERRY (R)					10.5											
12570	21" HACKBERRY (R)					21											
12571	11.5" HACKBERRY (R)					11.5											
12572	10" MESQUITE (R)					10											
12573	10.5" MESQUITE (R)					10.5											
12574	18" HACKBERRY (R)					18											
12575	10" MESQUITE (R)					10											
12576	11" MESQUITE (EXEMPT R)																
12577	20.5" HACKBERRY (EXEMPT R)																
12578	18" HACKBERRY (R)					18											
12579	11" MESQUITE (R)					11											
12580	10.5" MESQUITE (R)					10.5											
12581	12" HACKBERRY (EXEMPT R)																
12582	13" HACKBERRY (EXEMPT R)																
12583	14" MESQUITE (EXEMPT R)																
12584	13" HACKBERRY (R)					13											
12585	14" MESQUITE (EXEMPT R)																
12586	11" MESQUITE (EXEMPT R)																
12587	17" HACKBERRY (EXEMPT R)																
12588	11" MESQUITE (EXEMPT R)																
12589	15" HACKBERRY (EXEMPT R)																
12590	11.5" MESQUITE (EXEMPT R)																
12591	11" MESQUITE (EXEMPT R)																
12592	11" MESQUITE (EXEMPT R)																
12593	11" MESQUITE (R)					11											
12594	10" MESQUITE (R)					10											
12595	11" MESQUITE (R)					11											
12596	18" HACKBERRY (R)					18											
12597	10" MESQUITE (R)					10											
12598	10" MESQUITE (R)					10											
12599	10" MESQUITE (R)					10											
12600	14" MESQUITE (EXEMPT R)																
12601	12" MESQUITE (R)					12											
12602	10" MESQUITE (R)					10											
12603	11" MESQUITE (EXEMPT R)																
15839	13.5" MESQUITE (EXEMPT R)																
15840	16.5" MESQUITE (EXEMPT R)																
15841	15.5" MESQUITE (EXEMPT R)																
15842	14" LIVE OAK (R)			14													
15843	12.5" MESQUITE (EXEMPT R)																
15844	13.5" LIVE OAK (EXEMPT R)																
15845	12" HACKBERRY (EXEMPT R)																
15846	11.5" MESQUITE (EXEMPT R)																

Tree Inventory Worksheet to Determine Preservation and Canopy Shade Coverage

Tag #	Size(dbh) & Species (P) = Preserved (R) = Removed (RB) = Riparian Buffer (FP) = Floodplain (FPR) = Floodplain Removed (INDC) = Removed (EXEMPT P) = Exempt Tree Preserved (EXEMPT R) = Exempt Tree Removed	Understory Species* 5.0" - 11.5"		Significant Tree 6" - 23.5"		Significant Tree** 10.0" - 23.5"		Heritage 3:1 HERITAGE TREES PRESERVED AT 100%		Heritage 1:1 HERITAGE TREES PRESERVED AT 100%		Riparian Buffer Trees PRESERVED AT 80%		FEMA Floodplain Trees PRESERVED AT 80%		In Decline	Existing Shade Value (SF)
		Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved
15847	10" MESQUITE (EXEMPT R)																
15848	13" MESQUITE (EXEMPT R)																
15849	10.5" MESQUITE (EXEMPT R)																
15850	15" MESQUITE (R)					15											
15851	10.5" MESQUITE (R)					10.5											
15852	13.5" MESQUITE (R)					13.5											
15853	11" MESQUITE (R)					11											
15854	13" HACKBERRY (INDC)															13	
15855	13.5" MESQUITE (R)					13.5											
15856	20.5" LIVE OAK (EXEMPT R)																
15857	8.5" RED OAK (EXEMPT R)																
15858	14" LIVE OAK (R)			14													
15859	16.5" LIVE OAK (EXEMPT R)																
15860	19" LIVE OAK (EXEMPT R)																
15861	8" SOUTHERN MAGNOLIA (EXEMPT R)																
15862	20.5" LIVE OAK (R)			20.5													
15863	12" LIVE OAK (EXEMPT R)																
15864	5.5" CONDALIA (EXEMPT R)																
15865	11" MESQUITE (EXEMPT R)																
15866	13" LIVE OAK (EXEMPT R)																
15867	8" ARIZONA ASH (R)			8													
15868	16.5" ARIZONA ASH (R)			16.5													
15869	21" HACKBERRY (R)					21											
15870	11.5" HACKBERRY (R)					11.5											
15871	10.5" MESQUITE (R)					10.5											
15872	13.5" CRAPE MYRTLE (R)			13.5													
15873	12" BLACK LOCUST (R)			12													
15874	20.5" MESQUITE (INDC)															20.5	
15875	12.5" MESQUITE (EXEMPT R)																
15876	13" MONTERREY OAK (R)			13													
15877	10.5" MESQUITE (R)					10.5											
15878	16.5" MESQUITE (R)					16.5											
15879	14.5" CEDAR ELM (R)																
15880	11.5" CEDAR ELM (R)																
15881	13" CEDAR ELM (R)																
15882	16" MESQUITE (R)					16											
15883	7" LIVE OAK (R)			7													
15884	14" MESQUITE (R)					14											
15885	10" LIVE OAK (EXEMPT R)																
15886	16" MESQUITE (INDC)															16	
15887	16.5" HACKBERRY (INDC)															16.5	
15888	16.5" MESQUITE (R)					16.5											
15889	14.5" MESQUITE (R)					14.5											
15890	10" MESQUITE (EXEMPT R)																
15891	10.5" MESQUITE (EXEMPT R)																
15892	10.5" MESQUITE (EXEMPT R)																
15893	15.5" MESQUITE (EXEMPT R)																
15894	11" MESQUITE (R)					11											
15895	11.5" MESQUITE (R)					11.5											
15896	11" MESQUITE (EXEMPT R)																
15897	10" MESQUITE (R)					10											
15898	11" MESQUITE (R)					11											
15899	12.5" MESQUITE (R)					12.5											
15900	10.5" MESQUITE (R)					10.5											
15901	12.5" MESQUITE (R)					12.5											
15902	11" MESQUITE (R)					11											
15903	17.5" HACKBERRY (INDC)															17.5	
15904	16.5" HACKBERRY (INDC)															16.5	
15905	19.5" HACKBERRY (INDC)															19.5	
15906	10" MESQUITE (INDC)															10	
15907	17.5" MESQUITE (R)					17.5											
15908	10" MESQUITE (INDC)															10	
15909	10" MESQUITE (INDC)															10	
15910	10.5" MESQUITE (R)					10.5											
15911	10" MESQUITE (R)					10											
15912	15" MESQUITE (INDC)															15	
15913	10.5" MESQUITE (R)					10.5											
15914	10.5" MESQUITE (R)					10.5											
15915	14" MESQUITE (R)					14											
15916	14.5" MESQUITE (R)					14.5											
15917	17.5" MESQUITE (R)					17.5											
15918	11" MESQUITE (R)					11											
15919	11" MESQUITE (EXEMPT R)																
15920	10" MESQUITE (R)					10											
15921	11" MESQUITE (EXEMPT R)																
15922	10.5" MESQUITE (R)					10.5											
15923	12" MESQUITE (R)					12											
15924	14.5" MESQUITE (R)					14.5											
15925	11" MESQUITE (R)					11											
15926	10" MESQUITE (R)					10											
15927	10.5" MESQUITE (R)					10.5											
15928	13" MESQUITE (R)					13											
15929	14.5" MESQUITE (EXEMPT R)																
15930	11" MESQUITE (EXEMPT R)																
15931	11.5" HACKBERRY (R)					11.5											
15932	11" HACKBERRY (INDC)															11	
15933	10" HACKBERRY (EXEMPT R)																
15934	15" HACKBERRY (EXEMPT R)																
15935	10" HACKBERRY (INDC)															10	
15936	10.5" HACKBERRY (R)					10.5											
15937	10.5" HACKBERRY (R)					10.5											
15938	11" MESQUITE (R)					11											
15939	10" MESQUITE (R)					10											
15940	10" MESQUITE (EXEMPT R)																
15941	11" MESQUITE (EXEMPT R)																
19001	16" HACKBERRY (R)					16											
19002	10.5" HACKBERRY (EXEMPT R)																
19003	12" HACKBERRY (EXEMPT R)																
19004	10.5" HACKBERRY (EXEMPT R)																
19005	10" HACKBERRY (EXEMPT R)																
19006	14" MESQUITE (EXEMPT R)																
19007	21.5" MESQUITE (P)													21.5			550
19008	12" HACKBERRY (R)					12											
19009	18.5" HACKBERRY (R)					18.5											
19010	12.5" HACKBERRY (R)					12.5											
19011	15.5" HACKBERRY (R)					15.5											
19012	10" MESQUITE (P)													10			550
19013	12" MESQUITE (R)					12											
19014	10" MESQUITE (R)					10											
19015	10" HACKBERRY (R)					10											
19016	11" MESQUITE (R)					11											
19017	13.5" HACKBERRY (EXEMPT R)																
19018	13.5" MESQUITE (EXEMPT R)																
19019	10" HACKBERRY (R)					10											
19020	10.5" MESQUITE (EXEMPT R)																
19021	10" MESQUITE (EXEMPT R)																
19022	10" MESQUITE (EXEMPT R)																
19023	10" MESQUITE (R)					10											
19024	10" MESQUITE (R)					10											
19025	12.5" MESQUITE (R)					12.5											

TRE-APP-APP24-38802035

NO.	REVISION	DATE
1	REVISED TREES 12393, 12396, AND 12533 DESIGNATIONS	07/21/25

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS PUD

BEXAR COUNTY, TEXAS

TREE TABLES

City of San Antonio Plan Reviewed
Development Services Dept

SHEET C7.3

Date: Jul 22, 2025, 3:59pm User ID: alma.turgeon
File: P:\4985\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Engineering\Trees\124142 Tree Plan.dwg

Tree Inventory Worksheet to Determine Preservation and Canopy Shade Coverage

Tag #	Size(dbh) & Species (P) = Preserved (R) = Removed (RB) = Riparian Buffer (FP) = Floodplain (FPR) = Floodplain Removed (INDC) = Removed (EXEMPT P) = Exempt Tree Preserved (EXEMPT R) = Exempt Tree Removed	Understory Species* 5.0" - 11.5"		Significant Tree 6" - 23.5"		Significant Tree** 10.0" - 23.5"		Heritage 3:1 HERITAGE TREES PRESERVED AT 100%		Heritage 1:1 HERITAGE TREES PRESERVED AT 100%		Riparian Buffer Trees PRESERVED AT 80%		FEMA Floodplain Trees PRESERVED AT 80%		In Decline	Existing Shade Value (SF)
		Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved
19026	12" MESQUITE (EXEMPT R)																
19027	11" MESQUITE (R)					11											
19028	10" MESQUITE (R)					10											
19029	10" MESQUITE (EXEMPT R)																
19030	10" HACKBERRY (R)					10											
19031	10" MESQUITE (R)					10											
19032	12" HACKBERRY (R)					12											
19033	10" HACKBERRY (R)					10											
19034	12.5" HACKBERRY (R)					12.5											
19035	15" HACKBERRY (EXEMPT R)																
19036	13" HACKBERRY (EXEMPT R)																
19037	13" MESQUITE (INDC)															13	
19038	14.5" HACKBERRY (EXEMPT R)																
19039	15" HACKBERRY (R)					15											
19040	13.5" HACKBERRY (R)					13.5											
19041	10" MESQUITE (R)					10											
19042	14" MESQUITE (R)					14											
19043	16.5" HACKBERRY (R)					16.5											
19044	11" MESQUITE (R)					11											
19045	11.5" MESQUITE (R)					11.5											
19247	27" MESQUITE (P)										27						550
19248	12.5" CEDAR ELM (R)																
19249	18" HACKBERRY (INDC)															18	
19250	14" HACKBERRY (RB)												14				875
19251	12" HACKBERRY (FP)														12		
19252	17.5" HACKBERRY (FP)														17.5		
19253	11" HACKBERRY (FP)														11		
19254	11.5" HACKBERRY (INDC)															11.5	
19255	10" HACKBERRY (FP)														10		
19256	10" MESQUITE (FP)														10		
19257	13" HUISACHE (INDC)															13	
19258	10" MESQUITE (FP)														10		
19259	10" MESQUITE (FP)														10		
19260	12.5" MESQUITE (FP)														12.5		
19261	10" MESQUITE (FP)														10		
19262	10" MESQUITE (FP)														10		
19263	11.5" MESQUITE (FP)														11.5		
19264	10" MESQUITE (FP)														10		
19265	11.5" MESQUITE (FP)														11.5		
19266	10" MESQUITE (FP)														10		
19267	14" MESQUITE (FP)														14		

Tree Inventory Worksheet to Determine Preservation and Canopy Shade Coverage

Tag #	Size(dbh) & Species (P) = Preserved (R) = Removed (RB) = Riparian Buffer (FP) = Floodplain (FPR) = Floodplain Removed (INDC) = Removed (EXEMPT P) = Exempt Tree Preserved (EXEMPT R) = Exempt Tree Removed	Understory Species* 5.0" - 11.5"		Significant Tree 6" - 23.5"		Significant Tree** 10.0" - 23.5"		Heritage 3:1 HERITAGE TREES PRESERVED AT 100%		Heritage 1:1 HERITAGE TREES PRESERVED AT 100%		Riparian Buffer Trees PRESERVED AT 80%		FEMA Floodplain Trees PRESERVED AT 80%		In Decline	Existing Shade Value (SF)
		Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved
19268	10" MESQUITE (FP)														10		
19269	15" MESQUITE (FP)														15		
19270	12" MESQUITE (FP)														12		
19271	10" MESQUITE (FP)														10		
19272	16.5" HACKBERRY (FP)														16.5		
19273	13.5" HACKBERRY (FP)														13.5		
19274	13" HACKBERRY (FP)														13		
19275	11.5" MESQUITE (FPR)													11.5			
19276	16" HACKBERRY (INDC)															16	
19277	11" MESQUITE (FPR)													11			
19278	12.5" MESQUITE (FP)														12.5		
19279	12.5" MESQUITE (FP)														12.5		
19280	18" HACKBERRY (INDC)															18	
19281	11" MESQUITE (EXEMPT R)																
19282	14" MESQUITE (INDC)															14	
19283	13" HACKBERRY (INDC)															13	
19284	13.5" HACKBERRY (EXEMPT R)																
19285	19.5" HACKBERRY (R)					19.5											
19286	11.5" HACKBERRY (EXEMPT R)																
19287	10" HACKBERRY (EXEMPT R)																
19288	12" MESQUITE (EXEMPT R)																
19289	10" MESQUITE (R)					10											
19290	14" HACKBERRY (EXEMPT R)																
19291	13" HACKBERRY (R)					13											
19292	11" MESQUITE (R)					11											
19293	15" HACKBERRY (R)					15											
19294	13.5" HACKBERRY (R)					13.5											
19295	11" MESQUITE (R)					11											
19296	11" MESQUITE (P)						11										550
19297	13.5" HACKBERRY (EXEMPT R)																
19298	13.5" HACKBERRY (EXEMPT R)																
19299	10.5" HACKBERRY (EXEMPT R)																
19300	14.5" HACKBERRY (EXEMPT R)																
	Subtotal Inches	0	0	133.5	0	1481.5	275.5	0	0	0	27	0	138	32.5	579	383.5	24,650
	Preservation Percentage (%)			0		15.68				100		100		94.69			
	Total Shade Value Calculation of Trees to Remain																24,650
	Subtotal Inches (Combined Riparian Buffer and Upland Mitigation)	Preserved Inches:	413.5	Removed Inches:	1615	Preservation Percentage (%):	20.38										

TREE MITIGATION SUMMARY TABLE (RESIDENTIAL 35% PRESERVATION REQUIREMENT)

TREE TYPE	TOTAL (in)	MITIGATION REQ. (BY %) (in)	SAVED (in)	MITIGATION NEEDED (in)	COST ($)
UNDERSTORY SPECIES (35%)	0	0	0	0.0	N/A
SIGNIFICANT SPECIES (35%)	2028.5	710.0	413.5	296.5	N/A
FEMA FLOODPLAIN (80%)	611.5	489.2	579	0	N/A
HERITAGE 1:1 (100%)	27	0	27	0	N/A
RIPARIAN BUFFER (80%)	138	110.4	138	-27.6	N/A
ADDITIONAL INCHES PROVIDED (SEE TREE PLANTING SUMMARY TABLE)				-270	N/A
			TOTAL	-1.1	0
			= INPUT CELL VALUE		

TREE MITIGATION COST TABLE

= UNDERSTORY TREE MITIGATION FEE (in X $200)											
= SIGNIFICANT TREE MITIGATION FEE (in X $200)											
$0.00	= HERITAGE TREE MITIGATION FEE (in X $200)			0	= (in) OF HERITAGE TREES TO BE MITIGATED						
= TOTAL TREE MITIGATION FEE (in X $200)											
= AUTOMATIC FORMULA CALCULATED TOTAL											

TREE CANOPY SUMMARY TABLE

	A		REQUIRED CANOPY (38%)		PROPOSED CANOPY**	EXISTING SHADE VALUE
	LOTS	AREA (ac)*	AREA (ac)	AREA (sf)	AREA (sf)	AREA (sf)
TOTAL AREA	90	21.095				
TOTAL AREA - FLOODPLAIN AREA	90	17.225	6.546	285,122	283,500	24,650
CIRCLE LOTS	90				283,500	
					-	
ADDTL. TREES	0				-	
			B (sf)		C + D (sf)	
			285,122	<	308,150	= NO ADDITIONAL CANOPY IS REQUIRED

* = TOTAL PROJECT AREA

** = PROPOSED CANOPY CALCULATION (CIRCLE LOTS)

4	= REGULAR TREES TO BE PLANTED PER LOT (NON-SOLAR), FORMULA = AREA(ac) x 0.9 x 875 x TREES/LOT
	= SOLAR TREES TO BE PLANTED PER LOT (TREES FACING SOUTH & WEST), FORMULA = 1.5 x (AREA(ac) x 0.9 x 875 x TREES/LOT)

** = PROPOSED CANOPY CALCULATION

	= REGULAR TREES TO BE PLANTED PER LOT (NON-SOLAR), FORMULA = AREA(ac) x 0.9 x 875 x TREES/LOT
	= SOLAR TREES TO BE PLANTED PER LOT (TREES FACING SOUTH & WEST), FORMULA = 1.5 x (AREA(ac) x 0.9 x 875 x TREES/LOT)

** = PROPOSED CANOPY CALCULATION (ADDITIONAL TREES)

	= REGULAR TREES TO BE PLANTED, FORMULA = AREA(ac) x 0.9 x 875 x TREES
	= SOLAR TREES TO BE PLANTED (TREES FACING SOUTH & WEST), FORMULA = 1.5 x (AREA(ac) x 0.9 x 875 x TREES)
283,500	= PROPOSED CANOPY (sf), FORMULA = [AREA(ac) x 0.9 x 875 x TREES/LOT] + [1.5 x (AREA(ac) x 0.9 x 875 x TREES/LOT)]

TREE PLANTING SUMMARY TABLE

	A	B	C	D	A x B	A x D
	NUMBER OF RESIDENTIAL LOTS	TREES TO BE PLANTED / LOT (REQUIRED 2 - 1.5" TREES)	SIZE OF TREES TO BE PLANTED (INCHES)	ADDITIONAL INCHES / LOT (COUNTS FOR MITIGATION)	TOTAL TREES TO BE PLANTED	TOTAL INCHES OF MITIGATION TO BE PLANTED
	EA	EA	INCHES	INCHES	EA	INCHES
CIRCLE LOTS	90	4	1.5	3	360	270
ADDTL. TREES					0	0

Tree Preservation Calculation

Preservation by Category:	Percent Preserved	Did You Meet the Requirements of the City Tree Ordinance?
Understory Species 35% or Greater To Meet Requirement	100.0%	Yes
Combined Significant Trees 35% or Greater To Meet Requirement <20% Requires Administrative Exception/Variance Request (AEVR)	20.4%	No
Heritage Trees (3:1) 100% To Meet Requirement	100%	Yes
Heritage Trees (1:1) 100% To Meet Requirement	100%	Yes
Riparian Buffer Trees 80% To Meet Requirement	100%	Yes
FEMA Floodplain Trees 80% To Meet Requirement	95%	Yes

DEVELOPMENT SERVICES
TREE PROTECTION SECTION
REVIEWED FOR COMPLIANCE

TREE FENCING INSPECTION
REQUIRED BEFORE SITE WORK
CALL 207-1111 TO SCHEDULE

TRE-APP-APP24-38802035

NO.	REVISION	DATE
1	UPDATED CALCULATIONS	07/21/25

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

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DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS PUD

BEXAR COUNTY, TEXAS

TREE TABLES

City of San Antonio Plan Reviewed
Development Services Dept

SHEET C7.4

Date: Jul 22, 2025, 3:59pm User ID: alma.turgeon
File: P:\4985\2024\124142 Grosenbacher PUD 20 Ac Ph1 and Ph2\Engineering\Trees\124142 Tree Plan.dwg

GENERAL NOTES:

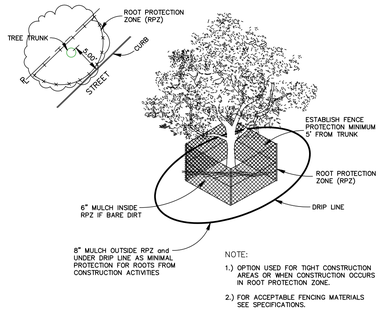
1. ALL PROTECTED SIZE TREES AFFECTED BY CONSTRUCTION SHALL HAVE THE LIMBS AND ROOTS TRIMMED AND PRUNED ACCORDING TO ITEM No. 802 (TREE PRUNING, SOIL AMENDING AND FERTILIZATION), UNLESS SPECIFIED TREES SHALL RECEIVE LEVEL 1 PROTECTION AS PER ITEM No. 801 (TREE AND LANDSCAPE PROTECTION) AND AS DETAILED IN 1.1.2.
2. ALL TREES SHALL REMAIN UNLESS NOTED ON THE CITY APPROVED PLANS.
3. NO SITE PREPARATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND PROTECTION MEASURES HAVE NOT BEEN COMPLETED AND APPROVED BY THE CITY ARBORIST OFFICE.
4. TREE PROTECTION FENCING SHALL BE MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.
5. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN THREE INCHES (3") IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR IF ROOTS LARGER THAN THREE (3") WITHIN THE FIVE FOOT (5') ROOT PROTECTION ZONE NEED TO BE PRUNED.
6. THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUCK IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS ONE FOOT (1') PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, TEN INCH (10") DIAMETER TREE WOULD HAVE A TEN FOOT (10') RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. OAK WOUNDS SHALL BE PAINTED OVER, WITHIN TWENTY (20) MINUTES TO PREVENT OAK WILT.
7. NO DISTURBANCE SHALL OCCUR CLOSER TO THE TRUNK THAN HALF THE ROOT PROTECTION ZONE AREA.
8. TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS SHALL BE REMOVED BY HAND.
9. TREES DAMAGED OR LOST DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED.
10. EXPOSED ROOTS SHALL BE COVERED AT THE END OF EACH DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
11. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST OFFICE PRIOR TO ITS REMOVAL.
12. TREE PLANTING AND MAINTENANCE: ALL PRESERVED AND PLANTED TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. THIS INCLUDES IRRIGATING, FERTILIZING, PRUNING, AND OTHER MAINTENANCE AS NEEDED. TREES THAT DIE WITHIN TWELVE MONTHS SHALL BE REPLACED WITH A TREE OF COMPARABLE SIZE AND SPECIES. REGARDING REPLACEMENT OF PRESERVED TREES, SIGNIFICANT TREES SHALL BE REPLACED AT A 1:1 RATIO (OR INCH-FOR-INCH) AND HERITAGE TREES SHALL BE REPLACED AT A 3:1 RATIO (OR THREE-TO-ONE INCHES).

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

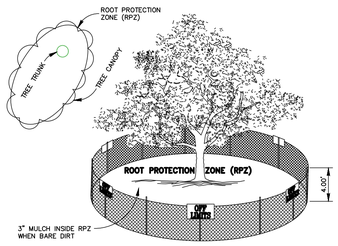
TREE PLANTING SOIL REQUIREMENT NOTE:

PER 35-523(M)(7): ALL TREE PLANTING SUBJECT TO SECTION 35-523(M) SHALL BE REQUIRED TO BE PLANTED IN SOIL THAT IS SUITABLE FOR ESTABLISHING AND SUSTAINING THE PLANTINGS, IN ADDITION TO CONTAINING SUITABLE SOIL PARTICLE SIZE AND DEPTH OF SOIL ZONE, THE SOIL MUST CONTAIN SUFFICIENT ORGANIC MATTER AND NUTRIENTS. TESTING AND CONFIRMATION BY A LANDSCAPE ARCHITECT, OR A TEXAS LICENSED SOIL TESTING FIRM SHALL BE COMPLETED TO ENSURE THE SOILS ARE SUITABLE. IN LIEU OF CONFIRMATION BY A LANDSCAPE ARCHITECT, OR A TEXAS LICENSED SOIL TESTING FIRM, SOIL MAY BE AMENDED WITH COMPOST BY ADDING THREE (3) INCHES OF COMPOST BLENDED INTO EVERY ONE (1) FOOT OF SOIL. FOR COMPLETE SOIL REPLACEMENT, SUCH AS TREE PLANTINGS, AN AMOUNT OF TWENTY-FIVE (25) PERCENT COMPOST MAY BE ADDED TO SEVENTY-FIVE (75) PERCENT NATIVE SOIL.



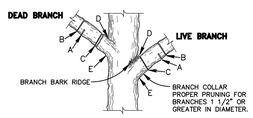
NOTE:
1.) OPTION USED FOR TIGHT CONSTRUCTION AREAS OR WHEN CONSTRUCTION OCCURS IN ROOT PROTECTION ZONE.
2.) FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

1 LEVEL II A FENCE PROTECTION
SCALE N.T.S.



NOTE:
1.) THE FENCING SHOWN ABOVE IS DIAGRAMATIC ONLY AND WILL CONFORM TO THE DRIP LINE AND LIMITED TO PROJECT BOUNDARY.
2.) FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

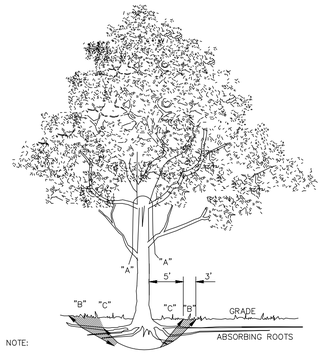
2 LEVEL I A FENCE PROTECTION
SCALE N.T.S.



NOTE:
DO NOT CUT FROM D to E.
A. FIRST CUT – TO PREVENT THE BARK FROM BEING PEELED WHEN THE BRANCH FALLS.
B. SECOND CUT – TO REDUCE THE WEIGHT OF BRANCH.
C. FINAL CUT – ALLOW FOR HEALING COLLAR BUT NO STUBS
D. BRANCH RIDGES – INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.

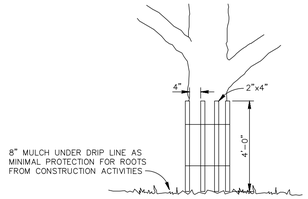
FOR OAKS ONLY:
FOR OAKS ONLY: PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITHIN 20 MINUTES TO PREVENT THE SPREAD OF OAK WILT.

3 BRANCH PRUNING
SCALE N.T.S.



NOTE:
"A" REMOVE BULKY TREE PARTS "SHRED" AND/OR HAUL SEPARATELY.
"B" BEGIN EXCAVATION APPROX. 8' FROM THE TRUNK – CUT THRU ANCHOR ROOTS AT AN ANGLE – 3' TO 4' DEEP
"C" USING TREE TRUNK AS A LEVER PUSH AT POINT "E" TO REMOVE TREE BOLE AND LARGE FEEDER ROOTS (4" TO 10" IN DIAM.)
"D" BACKFILL HOLE AND CLEAN UP.

5 TREE REMOVAL DIAGRAM
SCALE N.T.S.

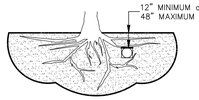


NOTE:
WRAP TREE TRUNK WITH 2"x4" STUDS and ROPE OR BAND IN PLACE AS NEEDED TO PROTECT TREES IN WORK AREAS.

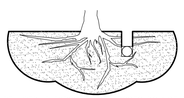
6 LEVEL II B FENCE PROTECTION
SCALE N.T.S.

TREES THAT ARE MARKED TO BE PRESERVED ON A SITE PLAN AND FOR WHICH UTILITIES MUST PASS TROUGH THEIR ROOT PROTECTION ZONES MAY REQUIRE TUNNELING AS OPPOSED TO OPEN TRENCHES. THE DICISION TO TUNNEL WILL BE DETERMINED ON A CASE BY CASE BASIS BY THE ENGINEER.

TUNNELS SHALL BE DUG THROUGH THE ROOT PROTECTION ZONE IN ORDER TO MINIMIZE ROOT DAMAGE.

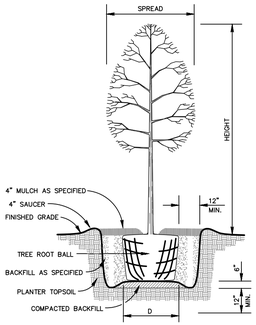


TUNNEL TO MINIMIZE ROOT DAMAGE (TOP) AS OPPOSED TO SURFACE-DUG TRENCHES IN ROOT PROTECTION ZONE WHEN THE 5' MINIMUM DISTANCE FROM TRUNCK CAN NOT BE ACHIEVED.



OPEN TRENCHING MAY BE USED IF EXPOSED TREE ROOTS DO NOT EXCEED 3" OR ROOTS CAN BE BENT BACK.

7 BORING THRU TREE ROOT ZONE
SCALE N.T.S.



4 NEW TREE PLANTING
SCALE N.T.S.

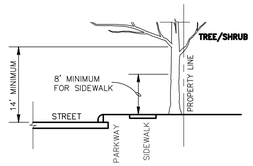


FIGURE No.2:
A MINIMUM BRANCH CLEARANCE OF 14 FEET ABOVE STREET ELEVATION MUST BE MAINTAINED FROM THE PROPERTY LINE TO THE CURB LINE AS PRESCRIBED BY PROJECT MANAGER.

8 BRANCH CLEARANCE
SCALE N.T.S.

DEVELOPMENT SERVICES
TREE PROTECTION SECTION
REVIEWED FOR COMPLIANCE

TREE FENCING INSPECTION REQUIRED BEFORE SITE WORK
CALL 207-1111 TO SCHEDULE

TRE-APP-APP24-38802035

NO.	REVISION	DATE

CDS muery
ENGINEERS | SURVEYORS
100 NE Loop 410, Ste. 300 | San Antonio, Texas 78216
(210) 581-1111 | TBPE No. F-1733 | TBPLS No. 100495-00

PLAT NO. 24-11800321

JOB NO. 124142.00
DATE APRIL 2025
DRAFTED J.M.
CHECKED BC DESIGN BAC

WESTWOOD OAKS PUD
BEXAR COUNTY, TEXAS
TREE PRESERVATION DETAILS

City of San Antonio Plan Reviewed
Development Services Dept

SHEET C7.5

Date: Jul 22, 2025, 3:59pm User ID: amo.turgeon
File: P:\JOBS\2024\124142 Groesbeckner PUD 20 Ac Ph1 and Ph2\Engineering\Trees\124142 Tree Plan.dwg