DWELLING AT BRAUNFELS - PHASE II

NEW BRAUNFELS, TEXAS

DRAINAGE, WATER AND SANITARY SEWER IMPROVEMENT PROJECT

LOCATED ON ORION DR, NORTH OF GOODWIN LN

OWNER/DEVELOPER:
YES ! COMMUNITIES
5050 S SYRACUSE ST, SUITE 1200
DENVER, CO 80237
(303) 483-7300

ENGINEER/SURVEYOR:
INK CIVIL
JAMES INGALLS, P.E. - ENGINEER
2021 SH 46 W. STE 105.
NEW BRAUNFELS, TX. 78130
(830) 358-7127

D.A. MAWYER LAND SURVEYING, INC.
DREW MAWYER, R.P.L.S. - SURVEYOR
5151 W. SH46
NEW BRAUNFELS, TEXAS 78132
(210) 325-0858

CONTROL POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
1	CP IRSC	684.960	13818892.7990	2260114.9770
2	CP IRSC	684.960	13818401.7990	2260114.9770
7	CP	688.954	13820143.5000	2259088.1100
8	CP	0.000	13819967.7400	2259265.8900
10	CP	679.450	13820381.8380	2261411.1240
11	CP	687.580	13821106.5360	2260638.7790
22	CP SMAG	692.678	13821016.3470	2259244.9170
23	CP SMAG	690.808	13820486.0290	2259778.5080
10002	TBM-A	684.180	13818905.3130	2260087.5870

PERMITS OR APPROVALS:

AGENCY	PERMIT NO.	STATUS
CITY OF NEW BRAUNFELS	PI2024-0078	PENDING
CITY OF NEW BRAUNFELS FIRE DEPARTMENT	PI2024-0078	PENDING
NEW BRAUNFELS UTILITIES	W-215541/WW-215542	PENDING
TCEQ	N/A	
TXDOT	N/A	
UNION PACIFIC RAILROAD	N/A	
CENTERPOINT ENERGY	N/A	

DESIGN SPEED = 30 MPH

NBU NOTES:

1. *ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, NEW BRAUNFELS UTILITIES MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.*
2. *THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER OR WASTEWATER IMPROVEMENTS MUST COMPLY WITH CRITERIA FROM THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THE CITY OF NEW BRAUNFELS, NBU W & WW DESIGN CRITERIA, ANY OTHER GOVERNING ENTITY ORDINANCES OR CODES, AND SOUND ENGINEERING JUDGEMENT.*
3. *THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR NBU WATER SYSTEM IS THE MAIN SIDE OF THE SERVICE/ LATERAL/ LEAD FROM THE CUSTOMER'S METER, BACKFLOW PREVENTER OR EASEMENT EDGE. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, PERMITTING, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OF ITS INSTALLATION.*
4. *THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR AN NBU WASTEWATER SYSTEM IS THE MAIN SIDE OF THE SERVICE LATERAL FROM THE CUSTOMER'S CLEAN OUT OR PROPERTY LINE, WHICHEVER IS NEARER. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER ITS INSTALLATION.*
5. *WATER IS A PRECIOUS COMMODITY IN THE STATE OF TEXAS AND NEW BRAUNFELS UTILITIES (NBU) IS PASSIONATE ABOUT PROTECTING THE LOCAL RESOURCE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ACQUIRING A FIRE HYDRANT METER SO THAT ALL WATER USED FOR CONSTRUCTION OR TESTING PURPOSES IS PROPERLY ACCOUNTED FOR. NBU WILL NOT TOLERATE ANY WATER THEFT, REGARDLESS OF THE AMOUNT. IF WATER THEFT IS DISCOVERED, THE CONTRACTOR SHALL BE SUBJECT TO MONETARY PENALTIES, CRIMINAL CHARGES, AND STOPPAGE OF ALL CONSTRUCTION ACTIVITIES RELATED TO THE PROJECT. COSTS ASSOCIATED WITH ANY WORK STOPPAGE RESULTING FROM WATER THEFT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR.*

PLEASE NOTE: NBU REQUIRES GPS POINTS FOR CERTAIN ELECTRIC, WATER AND WASTEWATER ATTRIBUTES, SOME OF WHICH MUST BE TAKEN PRIOR TO BACKFILL DURING CONSTRUCTION.

GPS POINTS ARE REQUIRED FROM THE DEVELOPER'S CONTRACTOR OR ENGINEER. A MINIMUM OF THREE (3) COORDINATE POINTS FOR GEOREFERENCING ARE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE AND ELECTRIC GPS POINTS SHALL BE MEASURED TO MAP GRADE. PLEASE REFERENCE NBU'S WATER CONNECTION POLICY FOR ADDITIONAL CAD DELIVERABLE REQUIREMENTS

REQUIRED MEASUREMENTS FOR THE WATER SYSTEM INCLUDE:
VERTICAL BENDS AND EDGE OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL
HORIZONTAL BENDS PRIOR TO BACKFILL
TEES PRIOR TO BACKFILL
FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL
FIRE HYDRANTS (TOP OF FLANGE)
VALVES
METERS (TOP CENTER OF BOX)
BLOW OFF ASSEMBLY
CORNER SLAB OF WATER TANK & GATE VALVE ON WATER TANK

REQUIRED MEASUREMENTS FOR THE WASTEWATER SYSTEM
MANHOLES
CLEANOUTS
CORNER SLAB OF LIFT STATION

REQUIRED MEASUREMENTS FOR THE ELECTRIC SYSTEM
POLES
TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)
PULL BOXES
STREET LIGHTS

COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

GENERAL NOTES:

1. IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY OF NEW BRAUNFELS AND NEW BRAUNFELS UTILITIES (NBU) APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
2. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
3. NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN THE EXISTED SPECIAL FLOOD HAZARD ZONE A, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE COMAL COUNTY, TEXAS COMMUNITY PANEL NUMBER 48091C0455G, REVISED MAY 08, 2024 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
4. THIS PROJECT IS NOT LOCATED WITHIN THE EAA JURISDICTIONAL BOUNDARY AND IS NOT LOCATED WITHIN ANY EDWARDS AQUIFER RECHARGE ZONES.
5. THIS PROJECT IS A RESIDENTIAL SUBDIVISION, DEVELOPMENT TYPE 3.
6. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS (CONB) AND NEW BRAUNFELS UTILITIES (NBU) TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED.
   - 6.1. ALL CONB INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 (PHONE)
   - 6.2. FAXED IN AT 830-608-2117 (FAX)
   - 6.3. NBU INSPECTIONS ARE TO BE EMAILED AT wtropsinsp@nbtexas.com (EMAIL).
7. THE MOST CURRENT EDITION OF THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
8. GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.

NOTE TO CONTRACTOR:

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH OF THE INDIVIDUAL UTILITIES FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.



LOCATION MAP
SCALE: 1" = 2000'

SHEET LIST TABLE

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1	GENERAL NOTES
2	SUBDIVISION PLAT I
3	SUBDIVISION PLAT II
4	SUBDIVISION PLAT III
5	AERIAL EXHIBIT
6	CHAMBER PKWY PLAN & PROFILE STA 20+94.10 TO END
7	CABIN ST. PLAN & PROFILE STA 16+36 TO STA 23+60
8	LONE RD PLAN & PROFILE STA 10+00 TO STA 18+22
9	ROOST RD PLAN & PROFILE STA 10+00 TO STA 15+60
10	STREET SECTIONS AND DETAILS I
11	STREET SECTIONS AND DETAILS II
12	TRAFFIC SIGNAGE & SIDEWALK PLAN
13	TRAFFIC SIGNAGE & SIDEWALK DETAILS
14	EXISTING DRAINAGE AREA MAP
15	PROPOSED DRAINAGE AREA MAP SCS METHOD
16	PROPOSED DRAINAGE AREA MAP RATIONAL METHOD
17	OVERALL DRAINAGE MAP AND MAINTENANCE ACCESS
18	CHANNEL A1 PLAN & PROFILE
19	CHANNEL A2 BEGIN TO STA 20+00 PLAN & PROFILE
20	CHANNELS A3 & A5 PLAN & PROFILE
21	CHANNEL A6 PLAN & PROFILE
22	DETENTION POND PLAN & NOTES
23	DETENTION POND CROSS-SECTIONS
24	DETENTION POND DETAILS
25	DRAINAGE DETAILS I
26	DRAINAGE DETAILS II
27	GRADING PLAN
28	OVERALL UTILITY PLAN
29	WATER DISTRIBUTION PLAN
30	OVERALL SANITARY SEWER PLAN
31	SANITARY SEWER LINE A
32	SANITARY SEWER LINE F & G
33	SANITARY SEWER LINE H
34	SANITARY SEWER LINE J
35	WATER DETAILS I
36	WATER DETAILS II
37	SANITARY SEWER DETAILS I
38	SANITARY SEWER DETAILS II
39	EROSION CONTROL PLAN
40	EROSION CONTROL DETAILS

PRIVATE STREETS NOTE:

ALL STREETS IN THIS PROJECT ARE PRIVATE AND ARE TO BE MAINTAINED BY THE DEVELOPER. HOWEVER, SINCE THE STREETS ARE BEING CONSTRUCTED ACCORDING TO THE CITY OF NEW BRAUNFELS STANDARDS FOR LOCAL STREETS, THEY ARE BEING REFERRED TO AS "STREETS"

HOMESITE NOTE:

THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES

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STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
03/06/2025

SUBMITTAL DATE: 11-25-2024

NO	DATE	ISSUES AND REVISIONS
1	1-3-2025	REVISED PER NBU COMMENTS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS
3	3-6-2025	REVISED PER NBU COMMENTS

DWELLING AT BRAUNFELS - PHASE II
PERMIT SET

Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\0 COVER SHEET.dwg User: catherinehogelin Mar 06, 2025 - 8:45am

STANDARD ABBREVIATIONS

AC	ASBESTOS CONCRETE	HMAC	HOT MIX ASPHALTIC CONCRETE	PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
AH	AHEAD	HRS	HOURS	PL	PROPERTY LINE
ASPH	ASPHALT	IAW	IN ACCORDANCE WITH	R	RADIUS
B-B	BACK TO BACK	I.D.	INSIDE DIAMETER	RR	RAILROAD
BC	BACK OF CURB	IP	IRON PIN	RCP	REINFORCED CONCRETE PIPE
BK	BACK	LF	LINEAR FEET	REQ'D	REQUIRED
BSL	BUILDING SETBACK LINE	LT	LEFT	RT	RIGHT
CI	CAST IRON	L	LENGTH	ROW	RIGHT-OF-WAY
CL	CENTERLINE	LP	LIGHT POLE	RWL	RECYCLE WATER LINE
CONC	CONCRETE	MH	MANHOLE	S	SLOPE
CP	CONTROL PANEL	MAX	MAXIMUM	SS	SANITARY SEWER
CSC	CONCRETE STEEL CYLINDER PIPE	MJ	MECHANICAL JOINT	SE	SOUTHEAST
CORP	CORPORATION	MIN	MINIMUM	SW	SOUTHWEST
CMP	CORRUGATED METAL PIPE	N	NORTH	STA	STATION
CPL	COUPLING	NE	NORTHEAST	STD	STANDARD
DWG	DRAWING	NW	NORTHWEST	SD	STORM SEWER/DRAINAGE
DI	DUCTILE IRON	NA	NOT APPLICABLE	T	TANGENT
E	EAST	NTS	NOT TO SCALE	T/P	TOP OF PIPE
ELEV / EL	ELEVATION	OC	ON CENTER	T/G	TOP OF GROUND
EP	EDGE OF PAVEMENT				
EX / EXIST	EXISTING	OD	OUTER DIAMETER	TEL	TELEPHONE
EW	EACH WAY	OHE	OVERHEAD ELECTRICAL	TBM	TEMPORARY BENCHMARK
EWEF	EACH WAY EACH FACE	OHT	OVERHEAD TELEPHONE	THD	THREADED
FC	FACE OF CURB	OHETC	OVERHEAD ELECTRICAL/TELEPHONE/CABLE	TYP	TYPICAL
FO	FIBER OPTIC	PVMT	PAVEMENT	UG	UNDERGROUND
FH	FIRE HYDRANT	+/-	PLUS OR MINUS	UN	UNLESS NOTED
FL	FLOWLINE	PC	POINT OF CURVATURE	UNK	UNKNOWN
FND	FOUND	PE	PLAIN END	VERT	VERTICAL
GA	GAUGE	PI	POINT OF INTERSECTION	VPI	VERTICAL POINT OF INFLECTION
GI	GALVANIZED IRON	PT	POINT OF TANGENCY	VPC	VERTICAL POINT OF CURVATURE
GPS	GLOBAL POSITION STATION	PVC	POLYVINYL CHLORIDE PIPE	VPT	VERTICAL POINT OF TANGENCY
GRND	GROUND	PSI	POUNDS PER SQUARE INCH	WWF	WELDED WIRE FABRIC
HDPE	HIGH DENSITY POLYETHYLENE PIPE	PP	POWER POLE	TS	TEST STATION
HORZ	HORIZONTAL	PVI	POINT OF VERTICAL INTERSECTION		

SEQUENCE OF CONSTRUCTION:

1. OBTAIN CITY APPROVED SITE PREPARATION PLANS, AND TPDES PERMIT (NOT A COPY OF THE TPDES APPLICATION TO TCEQ), IF APPLICABLE.
2. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
3. BEGIN DEMOLITION ACTIVITIES, IF APPLICABLE.
4. BEGIN SITE CLEARING AND GRADING.
5. INSTALL DRAINAGE IMPROVEMENTS
6. INSTALL SEWER AND WATER IMPROVEMENTS.
7. INSTALL ELECTRIC IMPROVEMENTS.
8. INSTALL ROADWAY IMPROVEMENTS (ASPHALT, CURBS, SIDEWALKS, ETC.)
9. RESTORE AND REVEGETATE ALL DISTURBED AREAS NOT UNDER IMPERMEABLE IMPROVEMENTS.
10. COMPLETE ANY REMAINING "PUNCH LIST" ITEMS.
11. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROLS AFTER PERMANENT STABILIZATION IS AT LEAST 70% EVENLY ESTABLISHED. RYE IS NOT ACCEPTED.

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION. AT 1-800-545-6005,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

CITY OF NEW BRAUNFELS – CONSTRUCTION NOTES – (REV 3-2020)

1. IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
2. THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SCHEDULE A PRECONSTRUCTION MEETING.

   FOR PUBLIC INFRASTRUCTURE PERMIT (SC) OR SITE PREP PERMIT (SD) PROJECTS:
   4.1 FOR INSPECTIONS, YOU MUST CALL BEFORE 12:00 P.M., 48 HOURS PRIOR TO YOUR INSPECTION REQUEST.
   4.2 EACH INSPECTION WILL BE ALLOTTED 1 HOUR UNLESS YOU REQUEST FOR MORE TIME.
   4.3 ONCE YOUR REQUEST HAS BEEN ACCEPTED, YOU WILL RECEIVE A CALL FROM THE CITY OF NEW BRAUNFELS INSPECTOR.

   FOR COMMERCIAL PERMIT (CP) PROJECTS:
   4.4 ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
   4.5 FAXED IN AT 830-608-2117 OR,
   4.6 E-MAILED AT WTROPSINSP@NBTEXAS.ORG.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IN THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
6. A TXDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TXDOT MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS.

GROUNDWATER

7. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT ENGINEER TO IMMEDIATELY NOTIFY THE OFFICE OF THE CITY ENGINEER AND PROJECT ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE CITY ENGINEER SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS UPON RECEIPT OF THE MITIGATION PLAN. ALL CONSTRUCTION ACTIVITY, IMPACTED BY THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.

RECORD DRAWINGS

8. AS PER PLATTING ORDINANCE SECTION 118-38M.: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWING" PLANS, AND A DIGITAL COPY OF ALL PLANS (PDF COPY) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

CONSTRUCTION NOTE

9. ENGINEER OF RECORD IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL SUFFICIENT TO MITIGATE OFF SITE IMPACTS ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.

DRAINAGE NOTE

10. DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE THE IMPACT OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ADDING IMPERVIOUS COVER.

FINISHED FLOOR ELEVATIONS

11. THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.

SOILS TESTING

12. PROCTORS SHALL BE SAMPLED FROM ON-SITE MATERIAL (ON-SITE IS DEFINED AS LIMITS OF CONSTRUCTION FOR THIS -PLAN SET) AND A COPY OF THE PROCTOR RESULTS SHALL BE DELIVERED TO THE CITY OF NEW BRAUNFELS STREET INSPECTOR PRIOR TO ANY DENSITY TESTS.

ROADWAY

13. ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/EMBANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT. UPON COMPLETION OF TESTING, THE GEOTECHNICAL ENGINEER WILL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, AND FILL MATERIAL, AND SUBGRADE HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

ITEM 340

14. ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TXDOT'S STANDARD SPECIFICATIONS FOR CURRENT TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.
15. THE CITY OF NEW BRAUNFELS WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS. ANY DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY OF NEW BRAUNFELS.
16. THE ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE 'D' MEETING THE SPECIFICATION REQUIREMENTS OF TXDOT ITEM 340. THE ASPHALTIC CONCRETE PAVEMENT SUB-SURFACE COURSES SHALL BE PLANT MIXED, HOT LAID TYPE 'B' MEETING THE SPECIFICATION REQUIREMENTS OF TXDOT ITEM 340. THE MIXTURE SHALL BE DESIGNED PER THE DESIGN REQUIREMENTS SPECIFIED IN TXDOT ITEM 340 AND SHALL BE COMPACTED TO BETWEEN 91 AND 95 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TXDOT TEST METHOD TEX-227-F. PLACE THE MIXTURE WHEN THE ROADWAY SURFACE TEMPERATURE IS AT OR ABOVE 60°F. COMPLETE ALL COMPACTION OPERATIONS BEFORE THE PAVEMENT TEMPERATURE DROPS BELOW 160°F. THE ASPHALT CEMENT CONTENT BY PERCENT OF TOTAL MIXTURE WEIGHT SHALL FALL WITHIN A TOLERANCE OF +0.5 PERCENT FROM A SPECIFIC MIX DESIGN.

UTILITY TRENCH COMPACTION

17. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

CURB CUT DUE TO CONSTRUCTION OF NEW RIGHT-OF-WAY CONSTRUCTION

18. CURB CUTS SHALL BE THE FOLLOWING METHODS AND INDICATED ON THE PLANS IN DETAIL WHERE APPLICABLE.
    18.1 SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
    18.2 SAWCUT EXISTING CURB TO TIE INTO EXISTING CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE

19. SAWCUT CURB FOR CONSTRUCTION ENTRANCE.
20. STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3"X5" ROCK TO BE PLACED A MINIMUM LENGTH OF 25-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHT-OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

SIGNING AND PAVEMENT MARKING PLAN NOTES

21. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CITY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.
22. THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.
23. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

SEEDING AND ESTABLISHMENT OF VEGETATION WITHIN EARTHEN CHANNELS, STORMWATER BASINS AND DISTURBED AREAS

24. SEEDING FOR THE PURPOSE OF ESTABLISHING VEGETATION WITHIN CONSTRUCTED EARTHEN CHANNELS, BASINS AND DISTURBED AREAS SHALL BE CONDUCTED IN ACCORDANCE WITH ITEM 164 (SEEDING FOR EROSION CONTROL) OF TXDOT'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES MANUAL. ONLY SEED TYPES AND MIXES SPECIFIED FOR THE SAN ANTONIO DISTRICT (DISTRICT 15) IN TABLES 1 AND 2 UNDER ITEM 164 SHALL BE UTILIZED. DURING THE COOL SEASON (SEPT 1 - NOV 30), CEREAL RYE AND SEED SPECIES SPECIFIED FOR THE SAN ANTONIO DISTRICT IN TABLE 3 MAY BE USED. FOR COOL SEASON SEEDING APPLICATIONS, COOL SEASON SEED MIXES SHALL BE USED IN CONJUNCTION WITH SEED MIXES FOR THE SAN ANTONIO DISTRICT AS SPECIFIED IN TABLE 1 AND 2 UNDER ITEM 164.
25. IT MAY BE DEEMED NECESSARY TO INCORPORATE TOPSOIL AND SOIL AMENDMENTS (I.E. COMPOST/ FERTILIZER) INTO EXISTING SOIL IN ORDER TO FACILITATE VEGETATION GROWTH. TOPSOIL, COMPOST AND FERTILIZER ADDITIONS SHALL BE CONDUCTED ACCORDING TO ITEMS 160, 161 AND 166 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL, RESPECTIVELY.
26. AREAS REQUIRING PERMANENT VEGETATION (EARTHEN CHANNELS, PONDS, ETC.) ARE REQUIRED TO MEET TXDOT SPECIFICATIONS FOR ITEM 160 TOPSOIL. TESTING PER TEX-128-E WILL BE REQUIRED AT THE CITY'S REQUEST.
27. WATERING MAY ALSO BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. ITEM 168 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL SHALL BE ADHERED TO FOR VEGETATIVE WATERING.
28. IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACT/ DEVELOPER SHALL PROVIDE A PLAN TO THE CITY OF NEW BRAUNFELS DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN GROWING CONDITIONS BECOME MORE FAVORABLE.

NEW BRAUNFELS UTILITIES – GENERAL NOTES (REV 1-1-2024)

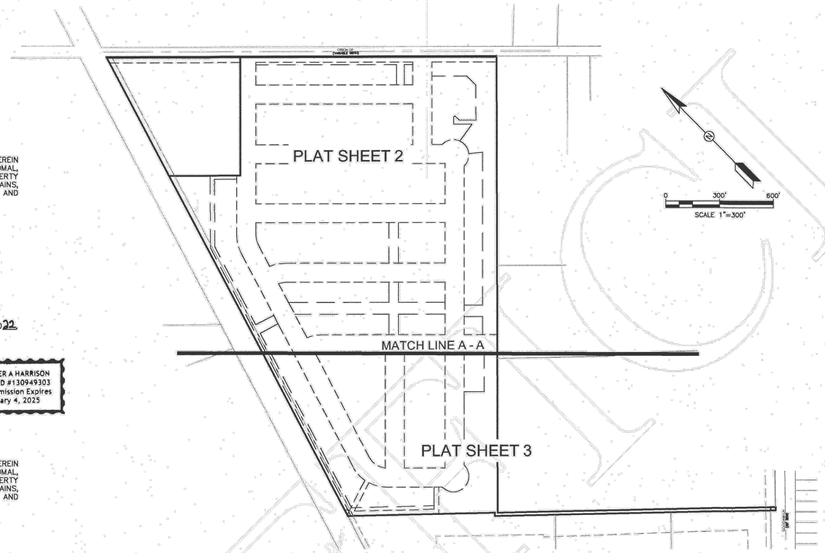
1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT "NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY".
2. CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBU WATER SYSTEMS ENGINEERING AT 830-608-8971 WITH AT LEAST TWO (2) WORKING DAYS (48 HOURS) NOTICE. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
3. THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEM. NBU WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).
4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS OFFICERS, DIRECTORS, OR CONSULTANTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.
5. CONTRACTOR TO CONTACT THE ENGINEER-OF-RECORD (EOR) FOR ANY FIELD CHANGES. ANY REVISIONS OR CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL REQUIRE ADDITIONAL APPROVAL BY NBU IN WRITING.
6. 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.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJUSTED ON PLANS). COST OF RESTORATIONS, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.
8. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE (1) INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
9. CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES AND TAXES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
10. 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.
11. 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.
12. THE CONTRACTOR SHALL NOT PLACE ANY MATERIALS ON THE RECHARGE ZONE OF THE EDWARDS AQUIFER WITHOUT AN APPROVED WATER POLLUTION ABATEMENT PLAN FROM THE TCEQ 31 TAC 313.4 AND 31 TAC 313.9.
13. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (TMUTCD) AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
14. CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM 'MATCH EXISTING' SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.
15. THE LOCATION OF UTILITIES, EITHER UNDERGROUND OR OVERHEAD, SHOWN WITHIN THE RIGHT OF WAY ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION OPERATIONS.
16. OSHA REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN 10 FEET OF AN ENERGIZED LINE. WHERE WORKMEN AND/OR EQUIPMENT HAVE TO WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.
17. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION. CONTRACTORS SHALL CALL THE ONE CALL SYSTEM FOR WATER/WASTEWATER LOCATION.
18. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192 (8), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
19. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGERS. THE CONSTRUCTION METHODS SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC. THE CONTINUOUS MOVEMENT OF THE TRAFFIC IN ONE DIRECTION,AT MINIMUM, SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE WORK AREA ANY LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS AT THE END OF EACH WORKDAY.
20. PRIOR TO ORDERING MATERIALS TO BE USED IN CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FOUR (4) COPIES OF THE SOURCE, TYPE, GRADATION, MATERIAL SPECIFICATION DATA AND / OR SHOP DRAWINGS, AS APPLICABLE, TO SATISFY THE REQUIREMENTS OF THE FOLLOWING ITEMS AND ALL MATERIAL ITEMS REFERRED TO IN THESE LISTED ITEMS:
    20.1. WATER MAINS AND SERVICES
    20.2. WASTEWATER MAINS AND SERVICES
21. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. WASTEWATER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO NBU CONNECTION AND CONSTRUCTION POLICY MANUAL.
22. 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. 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

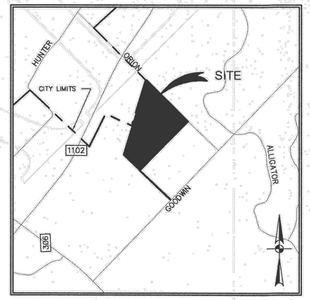
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FINAL PLAT ESTABLISHING

THE DWELLING AT BRAUNFELS SUBDIVISION

BEING A 50.450 ACRE TRACT OF LAND SITUATED IN THE ORILLA RUSSELL LEAGUE SURVEY NO. 2, ABSTRACT NO. 485, IN THE CITY OF NEW BRAUNFELS, COMAL COUNTY, TEXAS, AND BEING OUT OF THOSE SAME CERTAIN TRACTS OF LAND REFERRED TO AS TRACT TWO AND TRACT THREE, AS CONVEYED TO LORINE M. SCHMIDT, AS INDEPENDENT EXECUTRIX OF THE ESTATE OF BENNIE LEE SCHMIDT, AND RECORDED IN DOCUMENTS NO. 200906033825, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS





LOCATION MAP
SCALE: 1"=2,000'

STATE OF TEXAS
COUNTY OF COMAL

I, THE UNDERSIGNED OWNER OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE DWELLING AT BRAUNFELS, TO THE CITY OF NEW BRAUNFELS, COUNTY OF COMAL, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

OWNER:
KENNETH W SCHMIDT
10312 HABERSANG LANE
NEW BRAUNFELS, TX 78132

STATE OF TEXAS
COUNTY OF COMAL

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS 24 DAY OF June 2022

BY Kenneth W Schmidt

NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES: 01-04-2025

JENNIFER A HARRISON
Notary ID #130949103
My Commission Expires
January 4, 2025

STATE OF COLORADO
COUNTY OF Denver

I, THE UNDERSIGNED OWNER OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE DWELLING AT BRAUNFELS, TO THE CITY OF NEW BRAUNFELS, COUNTY OF COMAL, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

OWNER:
YES! ACQUISITIONS, LLC
ATTN: JULIE ELKINS, CFO
5050 S SYRACUSE ST, SUITE 1200
DENVER, COLORADO 80237

STATE OF COLORADO
COUNTY OF Denver

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS 26TH DAY OF May 2022

BY Julie Elkins

NOTARY PUBLIC, STATE OF TEXAS Colorado
MY COMMISSION EXPIRES: 02-26-2023

SHANNON ZOHN
Notary Public
State of Colorado
Notary ID # 20194007963
My Commission Expires 02-26-2023

KNOW ALL MEN BY THESE PRESENTS:

I, THE UNDERSIGNED, DREW A. MAWYER, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE UNDER MY SUPERVISION AND IN COMPLIANCE WITH CITY AND STATE SURVEY REGULATIONS AND LAWS AND MADE ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

DREW A. MAWYER
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5348
D.A. MAWYER LAND SURVEYING, INC.
5151 W. SH46
NEW BRAUNFELS, TEXAS 78132
FIRM #10191500

STATE OF TEXAS
REGISTERED
DREW A. MAWYER
5348
PROFESSIONAL
LAND SURVEYOR

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX, 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

LEGEND:

P.O.B.	= POINT OF BEGINNING
B.L.	= BUILDING SETBACK LINE
D.E.	= DRAINAGE EASEMENT
U.E.	= UTILITY EASEMENT
R.O.W.	= RIGHT-OF-WAY
O.S.	= OPEN SPACE LOT
	= PAGE MATCH LINE
○	= 1/2" IRON PIN SET
●	= IRON PIN FOUND

NOTES:

1. ALL LOTS WITHIN THE SUBDIVISION WILL BE PROVIDED A PUBLIC WATER SUPPLY, SANITARY SEWER AND ELECTRIC SERVICES BY NEW BRAUNFELS UTILITIES.
2. THE SUBDIVISION IS WITHIN THE COMAL INDEPENDENT SCHOOL DISTRICT.
3. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE IN GRID BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983. DISTANCES SHOWN HEREON ARE SURFACE USING COMBINED SCALE FACTOR OF 1.00015.
4. MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND MARKERS WILL BE SET WITH 1/2" IRON PIN WITH PLASTIC CAP STAMPED "DAM #5348 PROP. COR." IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
5. THE DWELLING AT BRAUNFELS SUBDIVISION, DOES FALL WITHIN THE CITY LIMITS OF THE CITY OF NEW BRAUNFELS.
6. THE PROPOSED USE OF LOT 1 IS MANUFACTURED HOME COMMUNITY AS APPROVED WITH CITY ORDINANCE NO. 2020-03 FOR A SPECIAL USE PERMIT AND THE PROPOSED USE FOR LOT 2 IS COMMERCIAL.
7. THE DWELLING AT BRAUNFELS, ESTABLISHING A TOTAL OF 2 LOTS, WITH 2 BEING BUILDABLE.
8. THIS SUBDIVISION IS SUBJECT TO THE 2018 CITY OF NEW BRAUNFELS PARK LAND AND DEDICATION ORDINANCE. THIS PLAT IS APPROVED FOR 266 DWELLING UNITS ON LOT 1, AT SUCH TIME THAT ADDITIONAL DWELLING UNITS ARE CONSTRUCTED, THE OWNER OF THE LOT SHALL CONTACT THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH NEW DWELLING UNIT.
9. SIDEWALK NOTES:
   - 9.1. THE DEVELOPER IS REQUIRED TO CONSTRUCT FOUR (4) FOOT WIDE SIDEWALKS FROM GOODWIN LANE UP TO THE NORTHWESTERN DEVELOPMENT ENTRY ALONG BOTH SIDES OF ORION DRIVE THAT WILL BE COMPLETED AS A COMPONENT OF PUBLIC IMPROVEMENTS TO ORION DRIVE.
   - 9.2. SIX (6) FOOT WIDE SIDEWALK ALONG GOODWIN LANE WILL BE CONSTRUCTED BY THE DEVELOPER AT TIME OF LOT 1 SUBDIVISION CONSTRUCTION.
   - 9.3. FOUR (4) WIDE SIDEWALK WILL BE CONSTRUCTED ON BOTH SIDES OF ALL INTERNAL STREETS IN LOT 1 AT TIME OF LOT 1 SUBDIVISION CONSTRUCTION.
   - 9.4. THE TEN (10) FOOT WIDE HIKE AND BIKE TRAIL WILL BE CONSTRUCTED TO CITY STANDARDS BY THE DEVELOPER ADJACENT TO THE RAILROAD RIGHT-OF-WAY WITHIN A 20-FOOT WIDE BIKE AND BIKE TRAIL EASEMENT AT TIME OF SUBDIVISION CONSTRUCTION.
10. NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASES THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS AND GUADALUPE COUNTY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTORS ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.
11. THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE A FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE AND SHALL PREVENT WATER FROM LEAVING THE STREET.
12. NO STRUCTURES IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC WATER AND SEWER SYSTEM WHICH HAS BEEN APPROVED BY NEW BRAUNFELS UTILITIES.
13. MAINTENANCE OF DRAINAGE EASEMENTS AND ACCESS EASEMENTS DESIGNATED WITHIN A LOT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
14. ALL ACCESS EASEMENTS ARE ALSO UTILITY AND DRAINAGE EASEMENTS.
15. NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN THE EXISTING SPECIAL FLOOD HAZARD ZONE A, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE COMAL COUNTY, TEXAS COMMUNITY PANEL NUMBER 48091C0290F AND 48091C0455F, REVISED NOVEMBER 02, 2009 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
16. EACH LOT OWNER SHALL BE RESPONSIBLE FOR VERIFYING THE DEPTH OF THE SEWER SERVICE STUB OUT AND DETERMINING THE MINIMUM SERVICEABLE FINISH FLOOR ELEVATION.
17. FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS, AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.
18. NO PORTION OF THIS PROPERTY IS WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
19. THIS SUBDIVISION IS LOCATED WITHIN THE OUTER PRECISION APPROACH ZONE OF THE AIRPORT HAZARD ZONING OVERLAY DISTRICT.

NEW BRAUNFELS UTILITIES NOTES:

1. MAINTENANCE OF DEDICATED UTILITY EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNER. ANY USE OF AN EASEMENT, OR ANY PORTION OF IT, INCLUDING LANDSCAPING OR DRAINAGE FEATURES, IS SUBJECT TO AND SHALL NOT CONFLICT WITH THE TERMS AND CONDITIONS IN THE EASEMENT, MUST NOT ENDANGER OR INTERFERE WITH THE RIGHTS GRANTED BY THE EASEMENT TO NEW BRAUNFELS UTILITIES, ITS SUCCESSORS AND ASSIGNS, AND SHALL BE SUBJECT TO APPLICABLE PERMIT REQUIREMENTS OF THE CITY OF NEW BRAUNFELS OR ANY OTHER GOVERNING BODY. THE PROPERTY OWNER MUST OBTAIN, IN ADVANCE, WRITTEN AGREEMENT WITH THE UTILITIES TO UTILIZE THE EASEMENT, OR ANY PART OF IT.
2. UTILITIES WILL POSSESS A 5' WIDE SERVICE EASEMENT TO THE BUILDING STRUCTURE ALONG THE SERVICE LINE TO THE SERVICE ENTRANCE. THIS EASEMENT WILL VARY DEPENDING UPON LOCATION OF DWELLING AND SERVICE.
3. UTILITIES SHALL HAVE ACCESS TO THE METER LOCATIONS FROM THE FRONT YARD AND METER LOCATIONS SHALL NOT BE LOCATED WITHIN A FENCED AREA.
4. EACH LOT MUST HAVE ITS OWN WATER AND SEWER SERVICE AT THE OWNER'S/DEVELOPER'S EXPENSE.
5. DO NOT COMBINE ANY NEW UTILITY EASEMENTS (U.E.) WITH DRAINAGE EASEMENTS (D.E.) OR MAKE CHANGES IN GRADE WITHIN THE UTILITY EASEMENTS (U.E.) WITHOUT WRITTEN APPROVAL FROM NEW BRAUNFELS UTILITIES.

APPROVED THIS THE 5th DAY OF April 2022 BY THE PLANNING COMMISSION OF THE CITY OF NEW BRAUNFELS, TEXAS.

CHAIRMAN

APPROVED FOR ACCEPTANCE

1/13/2023 DATE — PLANNING DIRECTOR

1/13/2023 DATE — FOR CITY ENGINEER

1/6/2023 DATE — NEW BRAUNFELS UTILITIES

STATE OF TEXAS
COUNTY OF COMAL

I, Bobbie Koepp, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT WAS FILED FOR RECORD IN THE MAP AND PLAT RECORDS, DOC# 202306003533, OF COMAL COUNTY ON THE 30th DAY OF January 2023, AT 11:25 A.M. WITNESS MY HAND OFFICIAL SEAL, THIS THE 30th DAY OF January, A.D. 2023

COUNTY CLERK, COMAL COUNTY, TEXAS

Tracey Tech
DEPUTY

COUNTY COURT OF COMAL COUNTY, TEXAS

PLAT NOTE:
SUBDIVISION PLAT RECORDED ON JANUARY 30, 2023.

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

SUBDIVISION PLAT I

SHEET 2 OF 40

NO	DATE	ISSUES AND REVISIONS
1		

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
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PREPARED: May 20, 2022

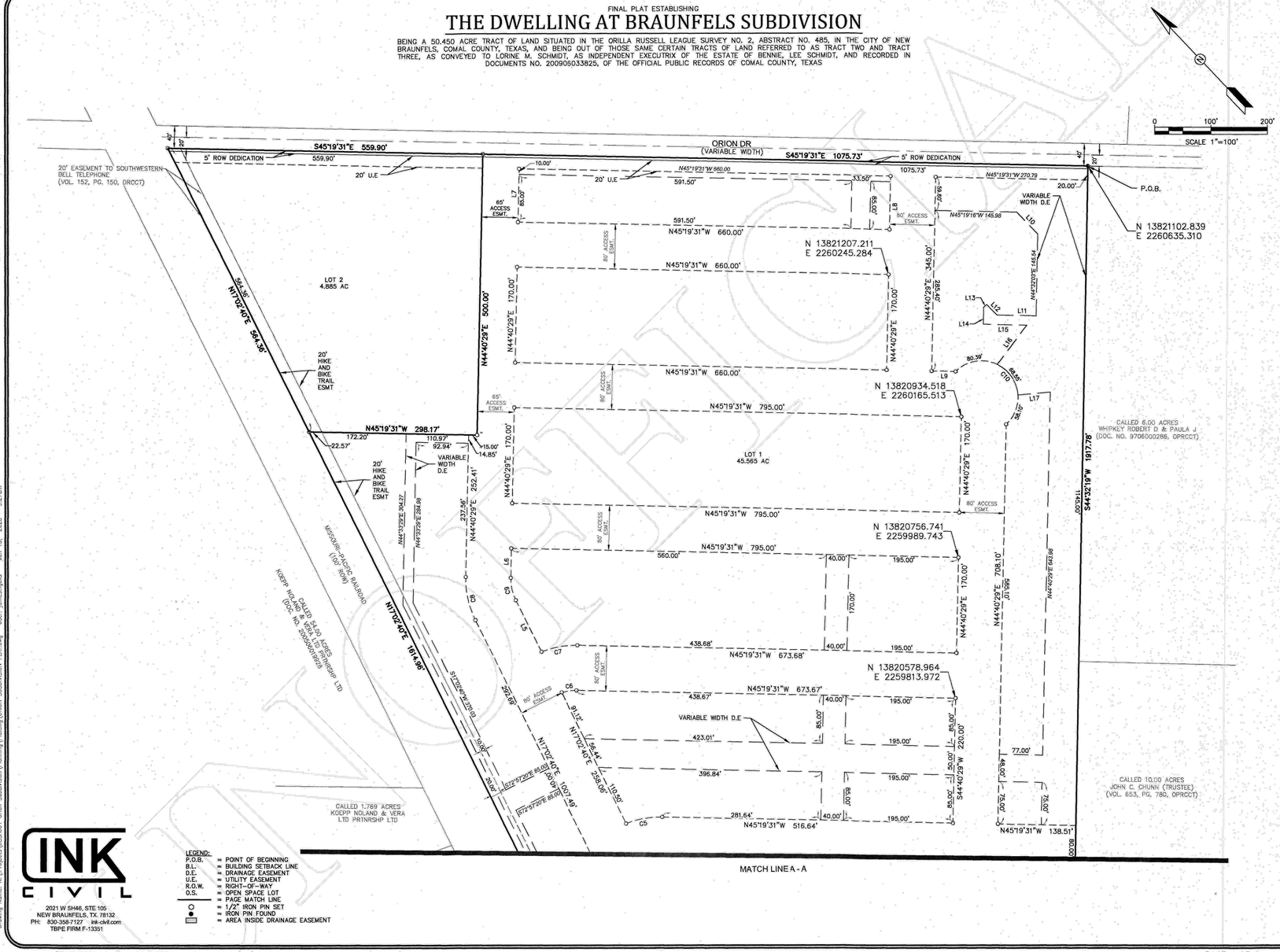
Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\1 SUBDIVISION PLAT III.dwg User: cathorneberger Feb 06, 2023 - 12:46pm
Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\Platting\DRAFT SUBDIVISION PLAT.dwg User: BrittanyBassett May 20, 2022 - 9:14am

#202306003033

FINAL PLAT ESTABLISHING

THE DWELLING AT BRAUNFELS SUBDIVISION

BEING A 50.450 ACRE TRACT OF LAND SITUATED IN THE ORILLA RUSSELL LEAGUE SURVEY NO. 2, ABSTRACT NO. 485, IN THE CITY OF NEW BRAUNFELS, COMAL COUNTY, TEXAS, AND BEING OUT OF THOSE SAME CERTAIN TRACTS OF LAND REFERRED TO AS TRACT TWO AND TRACT THREE, AS CONVEYED TO LORINE M. SCHMIDT, AS INDEPENDENT EXECUTRIX OF THE ESTATE OF BENNIE, LEE SCHMIDT, AND RECORDED IN DOCUMENTS NO. 200905033825, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS



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LEGEND:

P.O.B.	=	POINT OF BEGINNING
B.L.	=	BUILDING SETBACK LINE
D.E.	=	DRAINAGE EASEMENT
U.E.	=	UTILITY EASEMENT
R.O.W.	=	RIGHT-OF-WAY
O.S.	=	OPEN SPACE LOT
	=	PAGE MATCH LINE
○	=	1/2" IRON PIN SET
●	=	IRON PIN FOUND
▭	=	AREA INSIDE DRAINAGE EASEMENT

PREPARED: January 13, 2023

PLAT NOTE:
SUBDIVISION PLAT RECORDED ON JANUARY 30, 2023.

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

SUBDIVISION PLAT II

SHEET 3 OF 40

NO	DATE	ISSUES AND REVISIONS
△		

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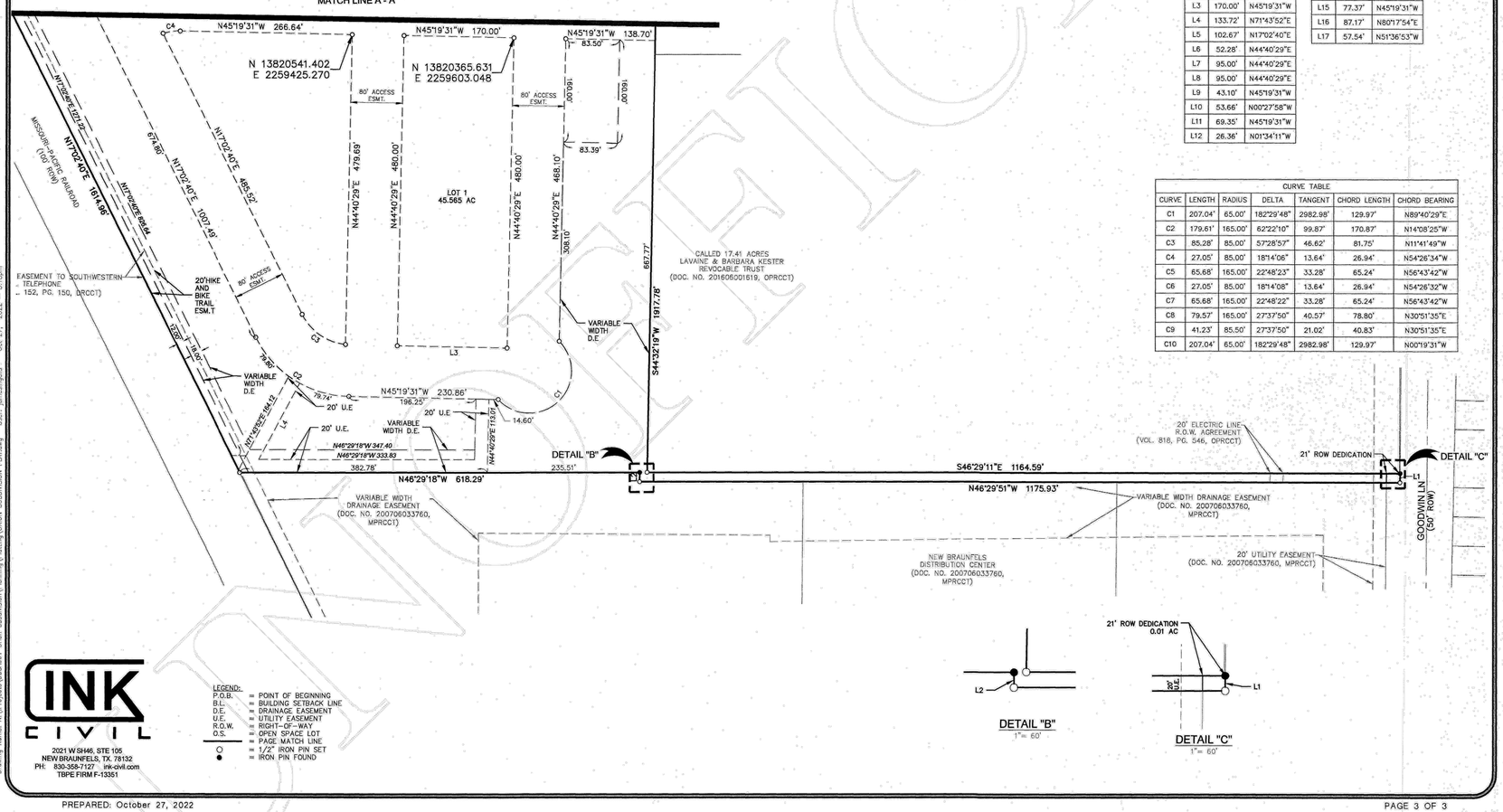
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Drawing Name: N:\Projects\VES001 Dwelling Phase 2\Civil\Construction Drawings\4 SUBDIVISION PLAT II.dwg User: jamesingalls Jan 13, 2023 - 9:27am

#20230603033

FINAL PLAT ESTABLISHING

THE DWELLING AT BRAUNFELS SUBDIVISION

BEING A 50.450 ACRE TRACT OF LAND SITUATED IN THE ORILLA RUSSELL LEAGUE SURVEY NO. 2, ABSTRACT NO. 485, IN THE CITY OF NEW BRAUNFELS, COMAL COUNTY, TEXAS, AND BEING OUT OF THOSE SAME CERTAIN TRACTS OF LAND REFERRED TO AS TRACT TWO AND TRACT THREE, AS CONVEYED TO LORINE M. SCHMIDT, AS INDEPENDENT EXECUTRIX OF THE ESTATE OF BENNIE, LEE SCHMIDT, AND RECORDED IN DOCUMENTS NO. 200906033825, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS



LINE TABLE		
LINE	LENGTH	BEARING
L1	14.00'	S43°53'47"W
L2	14.00'	N43°54'09"E
L3	170.00'	N45°19'31"W
L4	133.72'	N71°43'52"E
L5	102.67'	N17°02'40"E
L6	52.28'	N44°40'29"E
L7	95.00'	N44°40'29"E
L8	95.00'	N44°40'29"E
L9	43.10'	N45°19'31"W
L10	53.66'	N00°27'58"W
L11	69.35'	N45°19'31"W
L12	26.36'	N01°34'11"W

LINE TABLE		
LINE	LENGTH	BEARING
L13	7.56'	N89°03'38"W
L14	30.00'	N44°40'29"E
L15	77.37'	N45°19'31"W
L16	87.17'	N80°17'54"E
L17	57.54'	N51°36'53"W

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C1	207.04'	65.00'	182°29'48"	2982.98'	129.97'	N89°40'29"E
C2	179.61'	165.00'	62°22'10"	99.87'	170.87'	N14°08'25"W
C3	85.28'	85.00'	57°28'57"	46.62'	81.75'	N11°41'49"W
C4	27.05'	85.00'	18°14'06"	13.64'	26.94'	N54°26'34"W
C5	65.68'	165.00'	22°48'23"	33.28'	65.24'	N56°43'42"W
C6	27.05'	85.00'	18°14'08"	13.64'	26.94'	N54°26'32"W
C7	65.68'	165.00'	22°48'22"	33.28'	65.24'	N56°43'42"W
C8	79.57'	165.00'	27°37'50"	40.57'	78.80'	N30°51'35"E
C9	41.23'	85.50'	27°37'50"	21.02'	40.83'	N30°51'35"E
C10	207.04'	65.00'	182°29'48"	2982.98'	129.97'	N00°19'31"W

0 100' 200'

SCALE 1"=100'

LEGEND:
P.O.B. = POINT OF BEGINNING
B.L. = BUILDING SETBACK LINE
D.E. = DRAINAGE EASEMENT
U.E. = UTILITY EASEMENT
R.O.W. = RIGHT-OF-WAY
O.S. = OPEN SPACE LOT
= PAGE MATCH LINE
○ = 1/2" IRON PIN SET
● = IRON PIN FOUND

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

PREPARED: October 27, 2022

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

SUBDIVISION PLAT III

SHEET 4 OF 40

NO	DATE	ISSUES AND REVISIONS
1		

PLAT NOTE:
SUBDIVISION PLAT RECORDED ON JANUARY 30, 2023.

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Drawing Name: N:\Projects\0854001 Orion Subdivision\Planning\Platting\ORION SUBDIVISION PLAT.dwg User: jamesingalls Oct 27, 2022 - 3:18pm



N

0 500' 1000'

SCALE: 1"=500'

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

AERIAL EXHIBIT

SHEET 5 OF 40

NO	DATE	ISSUES AND REVISIONS
1		

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Drawing Name: N:\Projects\VE0001 Dwelling Phase 2\Civil\Construction Drawings\5 AERIAL EXHIBIT.dwg User: catherinehaggin Feb 06, 2025 - 12:46pm

CONSTRUCTION NOTES:

1. DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
2. SEE SHEET 10 FOR STREET SECTIONS AND DETAILS.
3. SEE SHEET 12 FOR STREET SIGNAGE.
4. SEE SHEET 11 FOR SIDEWALK RAMP DETAILS.
5. SEE SHEET 25 FOR SIDEWALK BRIDGE DETAILS.
6. SIDEWALKS AND SIDEWALK RAMPS SHOWN SHALL BE CONSTRUCTED WITH STREET CONSTRUCTION.
7. ALL CURB & GUTTER IS CATCH CURB UNLESS OTHERWISE NOTED.
8. ALL RAMPS AND ANY SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH STREET CONSTRUCTION.

PRIVATE STREETS NOTE:

ALL STREETS IN THIS PROJECT ARE PRIVATE AND ARE TO BE MAINTAINED BY THE DEVELOPER. HOWEVER, SINCE THE STREETS ARE BEING CONSTRUCTED ACCORDING TO THE CITY OF NEW BRAUNFELS STANDARDS FOR LOCAL STREETS, THEY ARE BEING REFERRED TO AS "STREETS"

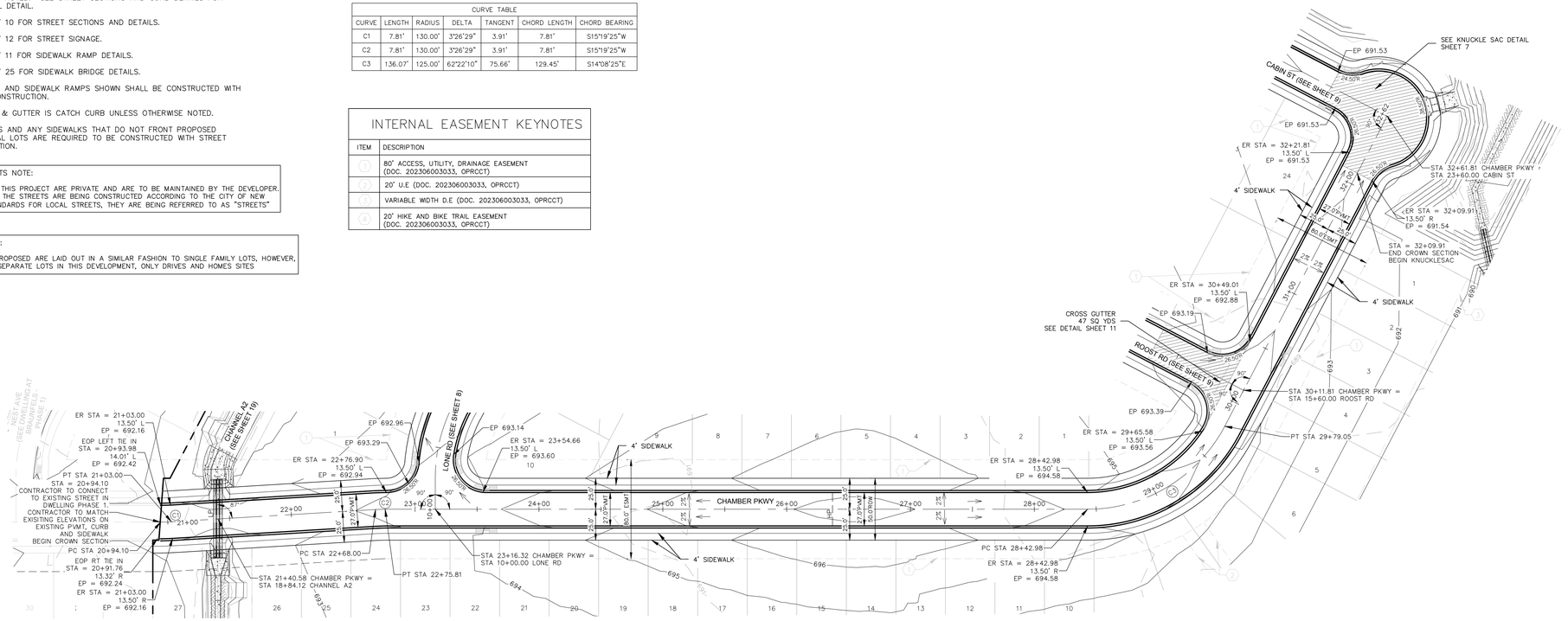
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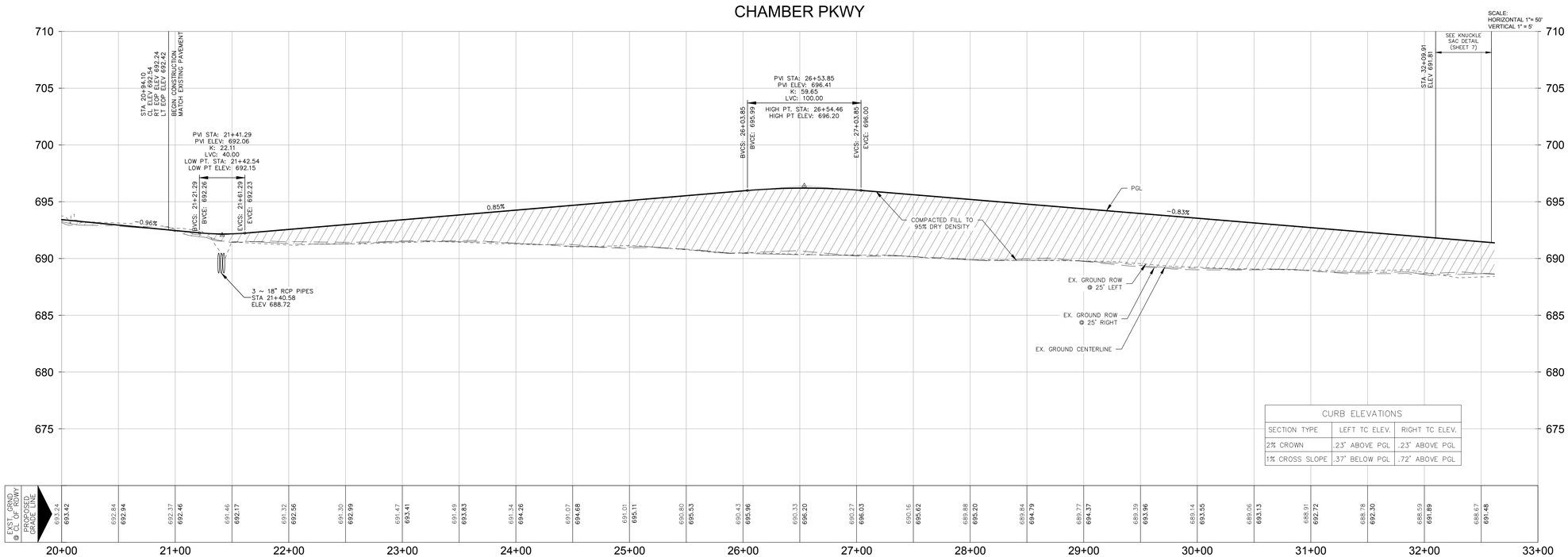
THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C1	7.81'	130.00'	3°26'29"	3.91'	7.81'	S15°19'25"W
C2	7.81'	130.00'	3°26'29"	3.91'	7.81'	S15°19'25"W
C3	136.07'	125.00'	62°22'10"	75.66'	129.45'	S14°08'25"E

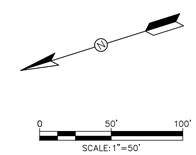
INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)





CURB ELEVATIONS		
SECTION TYPE	LEFT TC ELEV.	RIGHT TC ELEV.
2% CROWN	.23' ABOVE PGL	.23' ABOVE PGL
1% CROSS SLOPE	.37' BELOW PGL	.72' ABOVE PGL



LEGEND

- VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)
- VALLEY GUTTER
- LP — LOW POINT
- HP — HIGH POINT
- DRAINAGE FLOW ARROW



YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

CHAMBER PKWY PLAN & PROFILE
STA 20+94.10 TO END

SHEET 6 OF 40

NO	DATE	ISSUES AND REVISIONS
1	2-6-2025	REVISED PER CONB & NBU COMMENTS

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NEW BRAUNFELS, TX. 78132
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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\8 CHAMBER PKWY PLAN & PROFILE STA 20+94.10 TO END.dwg User: catherinehaeglin Feb 06, 2025 - 12:47pm

CONSTRUCTION NOTES:

1. DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
2. SEE SHEET 10 FOR STREET SECTIONS AND DETAILS.
3. SEE SHEET 12 FOR STREET SIGNAGE.
4. SEE SHEET 11 FOR SIDEWALK RAMP DETAILS.
5. SEE SHEET 25 FOR SIDEWALK BRIDGE DETAILS.
6. SIDEWALKS AND SIDEWALK RAMPS SHOWN SHALL BE CONSTRUCTED WITH STREET CONSTRUCTION.
7. ALL CURB & GUTTER IS CATCH CURB UNLESS OTHERWISE NOTED.
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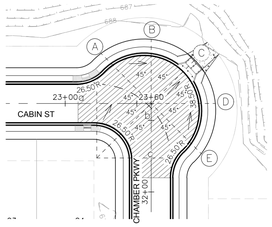
HOMESITE NOTE:

THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES

INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

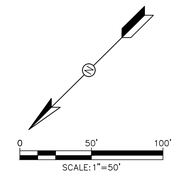
KNUCKLE SAC HUB ELEV	
HUB	EP
A	691.39
B	691.25
C	691.14
D	691.23
E	691.37
a	691.50
b	691.25
c	691.52



KNUCKLE SAC

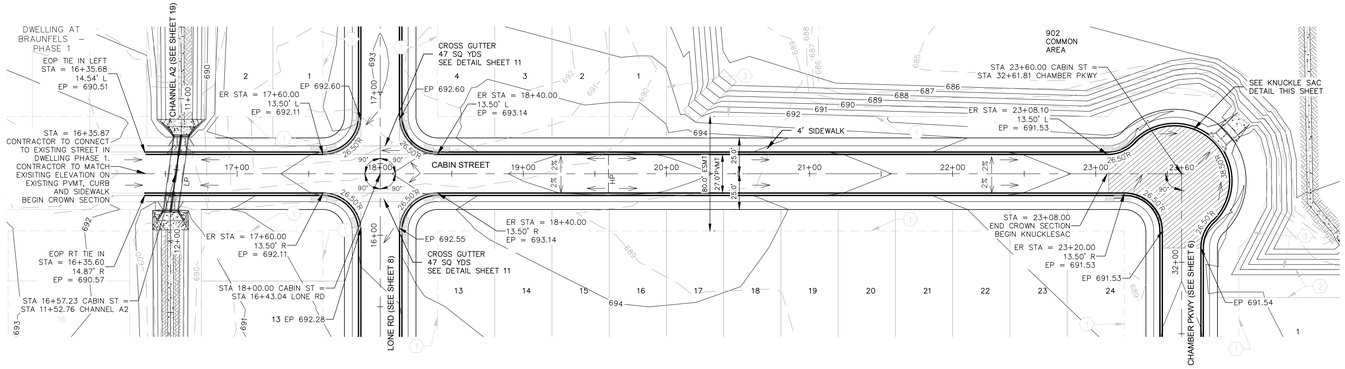
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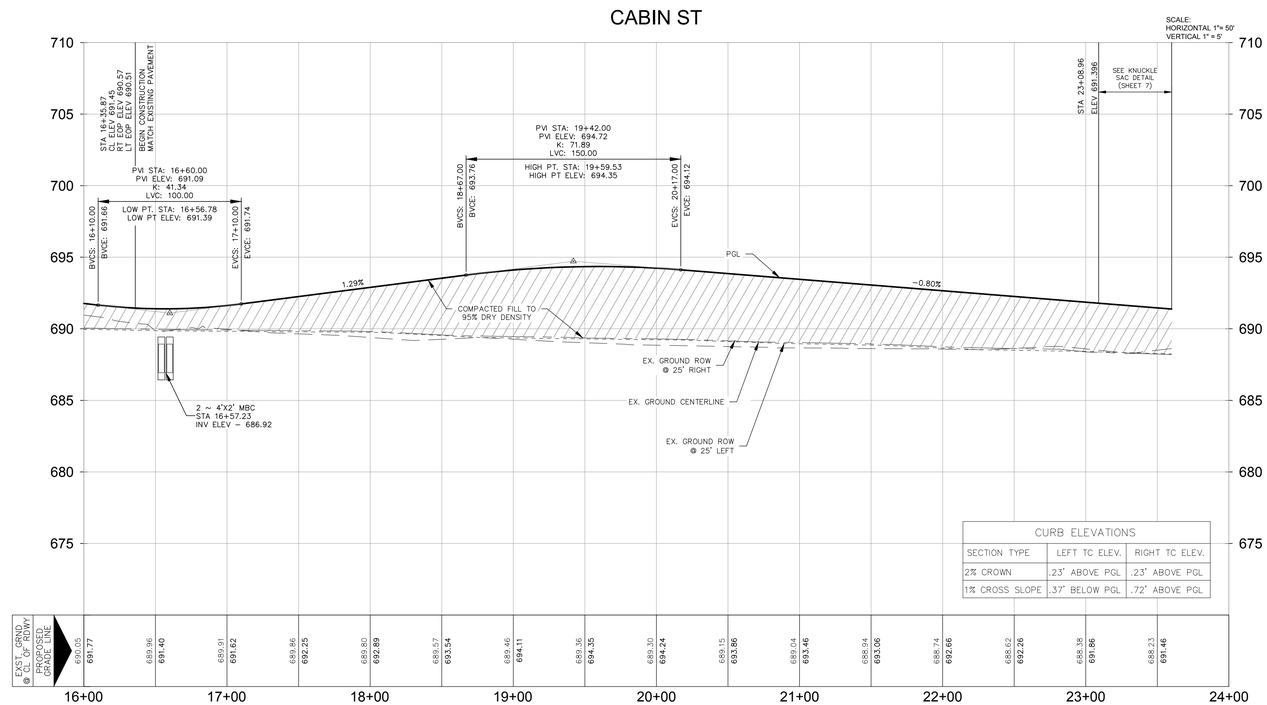
ALL CURB LABELS TAG AND DESCRIBE THE GUTTER. FACE OF CURB SHOULD HAVE TWENTY FIVE FOOT (25') RADIUS.



LEGEND

- VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)
- VALLEY GUTTER
- LP — LOW POINT
- HP — HIGH POINT
- DRAINAGE FLOW ARROW





CURB ELEVATIONS		
SECTION TYPE	LEFT TC ELEV.	RIGHT TC ELEV.
2% CROWN	.23" ABOVE PGL	.23" ABOVE PGL
1% CROSS SLOPE	.37" BELOW PGL	.72" ABOVE PGL

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

CABIN ST. PLAN & PROFILE
STA 16+36 TO STA 23+60

SHEET 7 OF 40

NO	DATE	ISSUES AND REVISIONS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\7 CABIN ST. PLAN & PROFILE STA 16+36 TO STA 23+60.dwg User: catherinehaegelin Feb 06, 2025 - 12:47pm

CONSTRUCTION NOTES:

1. DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
2. SEE SHEET 10 FOR STREET SECTIONS AND DETAILS.
3. SEE SHEET 12 FOR STREET SIGNAGE.
4. SEE SHEET 11 FOR SIDEWALK RAMP DETAILS.
5. SEE SHEET 25 FOR SIDEWALK BRIDGE DETAILS.
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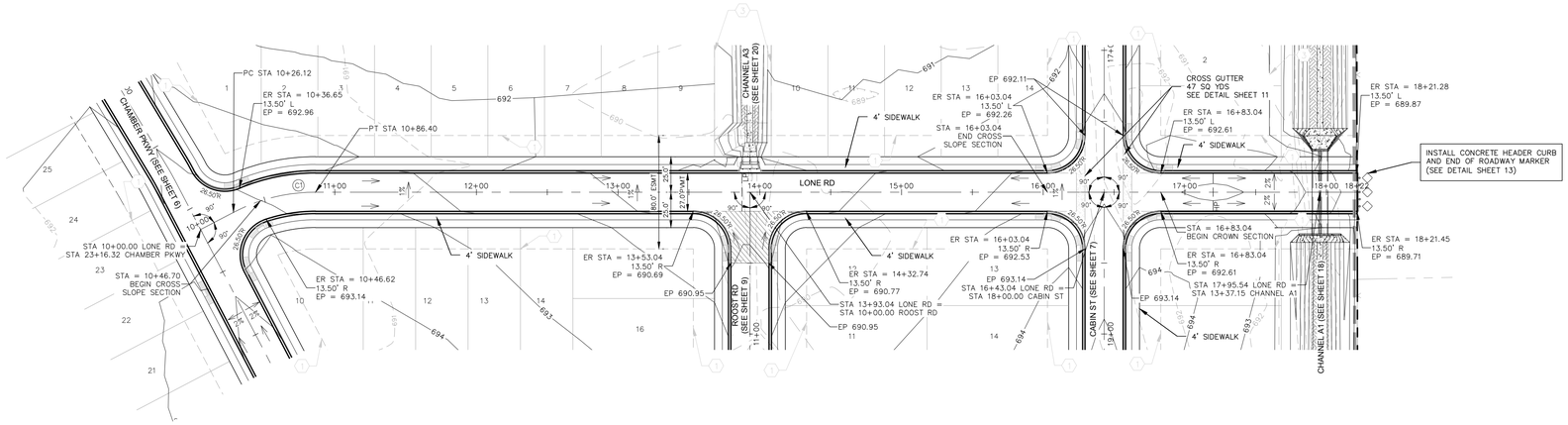
HOMESITE NOTE:

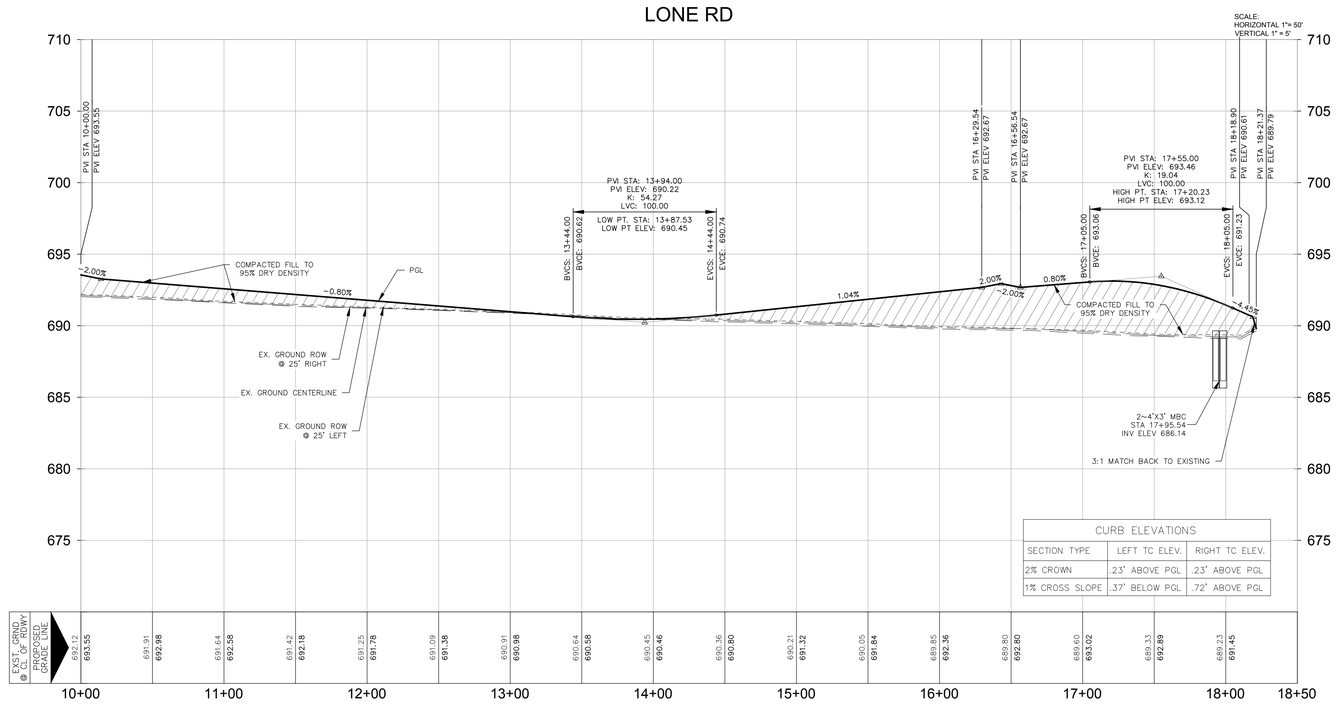
THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C1	60.28'	125.00'	27°37'50"	30.74'	59.70'	N59°08'25"W

INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)





CURB ELEVATIONS		
SECTION TYPE	LEFT TC ELEV.	RIGHT TC ELEV.
2% CROWN	.23' ABOVE PGL	.23' ABOVE PGL
1% CROSS SLOPE	.37' BELOW PGL	.72' ABOVE PGL

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

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Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

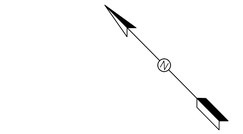
TELEPHONE LOCATOR

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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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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LEGEND

VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)

VALLEY GUTTER

LP LOW POINT

HP HIGH POINT

PROPERTY LINE

DRAINAGE FLOW ARROW

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

LONE RD PLAN & PROFILE
STA 10+00 TO STA 18+22

SHEET 8 OF 40

NO	DATE	ISSUES AND REVISIONS
1	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\8 LONE RD PLAN & PROFILE STA 10+00 TO STA 18+22.dwg User: catherinehaggin Feb 06, 2025 - 12:48pm

CONSTRUCTION NOTES:

1. DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
2. SEE SHEET 10 FOR STREET SECTIONS AND DETAILS.
3. SEE SHEET 12 FOR STREET SIGNAGE.
4. SEE SHEET 11 FOR SIDEWALK RAMP DETAILS.
5. SEE SHEET 25 FOR SIDEWALK BRIDGE DETAILS.
6. SIDEWALKS AND SIDEWALK RAMPS SHOWN SHALL BE CONSTRUCTED WITH STREET CONSTRUCTION.
7. ALL CURB & GUTTER IS CATCH CURB UNLESS OTHERWISE NOTED.
8. ALL RAMPS AND ANY SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH STREET CONSTRUCTION.

PRIVATE STREETS NOTE:

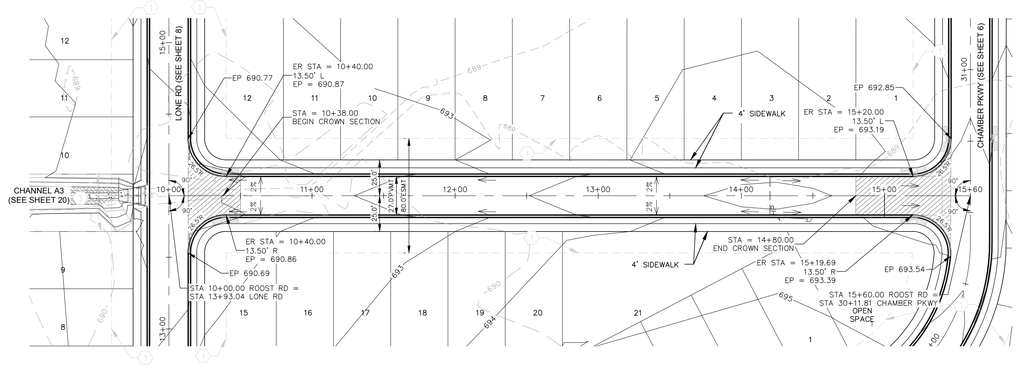
ALL STREETS IN THIS PROJECT ARE PRIVATE AND ARE TO BE MAINTAINED BY THE DEVELOPER. HOWEVER, SINCE THE STREETS ARE BEING CONSTRUCTED ACCORDING TO THE CITY OF NEW BRAUNFELS STANDARDS FOR LOCAL STREETS, THEY ARE BEING REFERRED TO AS "STREETS"

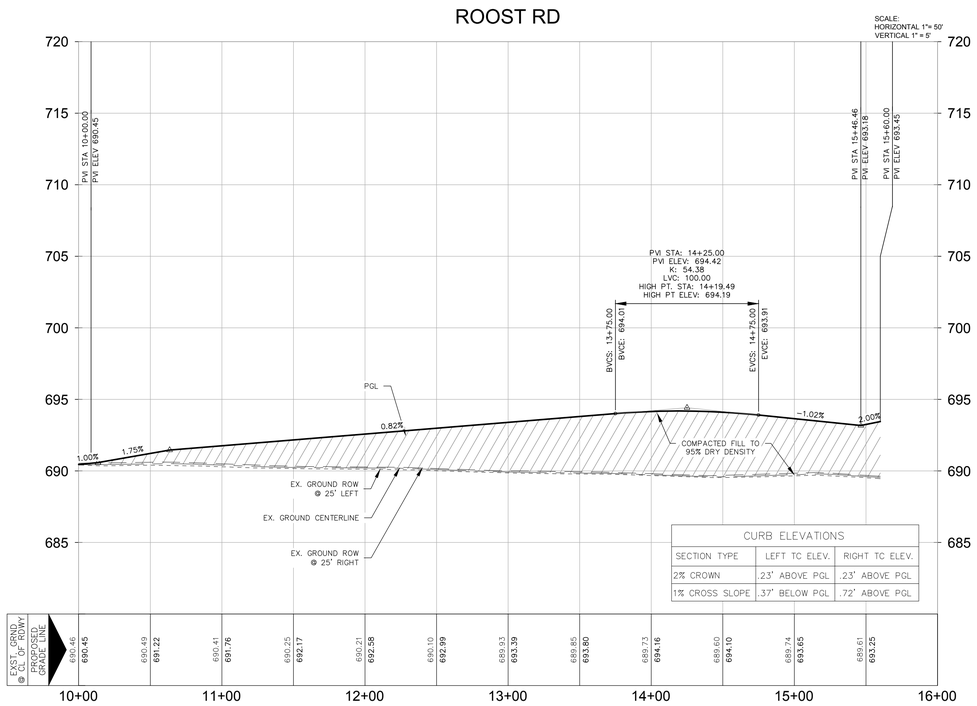
HOMESITE NOTE:

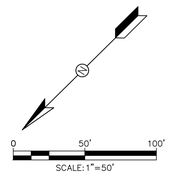
THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES

INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)







LEGEND

- VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)
- VALLEY GUTTER
- DRAINAGE FLOW ARROW
- LP — LOW POINT
- HP — HIGH POINT

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

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5050 S. SYRACUSE ST, SUITE 1200
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ROOST RD PLAN & PROFILE
STA 10+00 TO STA 15+60

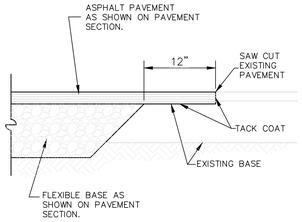
SHEET 9 OF 40

NO	DATE	ISSUES AND REVISIONS
1		

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2021 W SH46, STE 105
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PH: 830-358-7127 ink-civil.com
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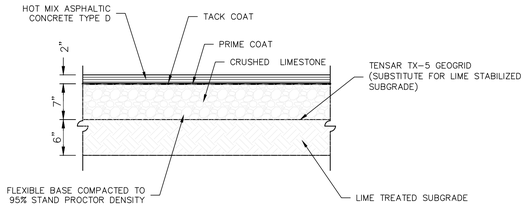
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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\9 ROOST RD PLAN & PROFILE STA 10+00 TO STA 15+60.dwg User: cotherretegglin Feb 06, 2025 - 12:49pm



NEW PAVEMENT TO EXISTING

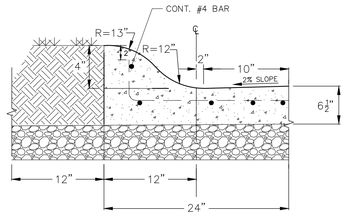
SCALE: NTS



TYPICAL PAVEMENT SECTION - LOCAL TYPE A

NOTE: PAVEMENT SECTION MEETS THE MINIMUM REQUIREMENTS AS PER CITY OF NEW BRAUNFELS

Scale: NTS



CONCRETE CURB AND CONCRETE GUTTER PAVEMENT

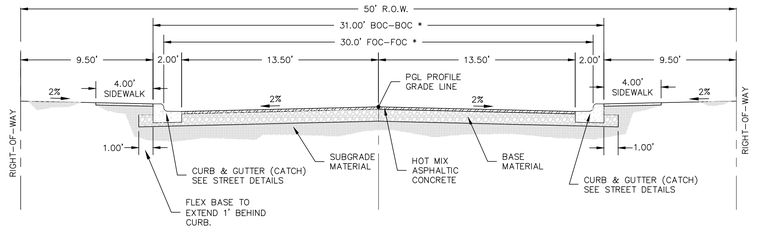
NOT TO SCALE

NOTE:

1. RESIDENTIAL LOCAL PAVEMENT SECTION LIMITS
   – ALL STREETS
2. CONTRACTOR TO REFERENCE PRELIMINARY GEOTECHNICAL ENGINEERING STUDY "ORION SUBDIVISION ROADWAYS" PREPARED BY ROCK ENGINEERING & TESTING LABORATORY, INC. PROJECT NO.: 220270 DATED: JUNE 15, 2020.

   ACCORDING TO THE PRELIMINARY GEOTECHNICAL ENGINEERING STUDY "ORION SUBDIVISION ROADWAYS" PREPARED BY ROCK ENGINEERING & TESTING LABORATORY, INC. PROJECT NO.: 220270 DATED: JUNE 15, 2020. THE SUBGRADE SOILS SHALL BE TESTED AT TIME OF CONSTRUCTION TO DETERMINE THE LIME REQUIREMENT TO ACHIEVE A PH VALUE OF 12.4 OR GREATER.
3. SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULFATE CONTENT PRIOR TO TREATMENT.

"ONE AND TWO FAMILY RESIDENTIAL" (Required AASHTO 18-KIP ESAL = 58,000)				
Hot Mix Asphaltic Concrete	--	2"	--	--
Crushed Limestone Base Material (TxDOT Item 247 Type A; Gr. 2)	--	7"	--	--
TENSAR Geogrid		TX-5		] 3
Lime Stabilized Subgrade		---	--	--
Moisture Conditioned Subgrade		6"		
Calculated AASHTO 18-kip ESAL	--	71,000	--	--

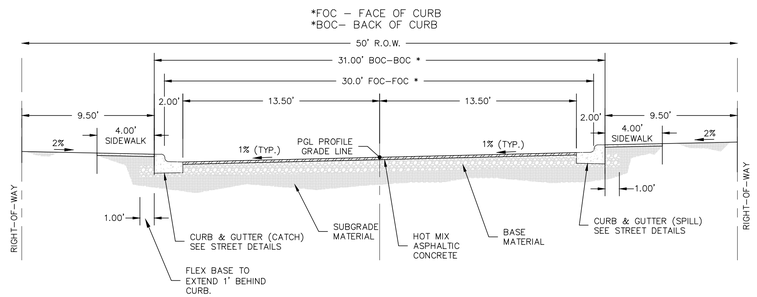


CROWN SECTION 50' R.O.W.

Scale: 1" = 5'

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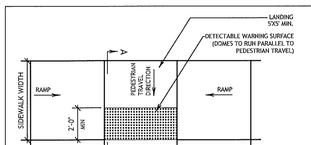
CROSS SLOPE SECTION 50' R.O.W.

Scale: 1" = 5'

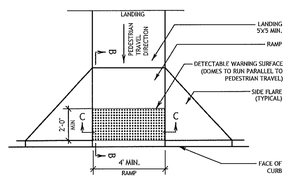
TYPICAL STREET CROSS SECTIONS

STREET SECTION NOTES:

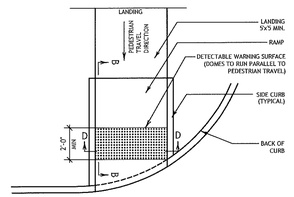
1. ALL CONCRETE CURBING SHALL BE CONCRETE CURB AND GUTTER, (I.E. CATCH OR SPILL) UNLESS OTHERWISE SPECIFIED ON THE PLANS (I.E. RIBBON CURB)
2. CROSS SLOPE VARIES WITHIN VERTICAL TRANSITIONS. THE TYPICAL CROSS SLOPE SHALL BE 1% UNLESS OTHERWISE SPECIFIED ON PLANS.
3. BASE MATERIAL SHALL EXTEND 12" BEHIND BACK OF CURB.
4. SEE GRADING PLAN FOR LOT GRADING BEYOND RIGHT OF WAY LINE.



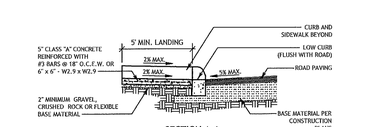
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING FOR PARALLEL CURB RAMP.



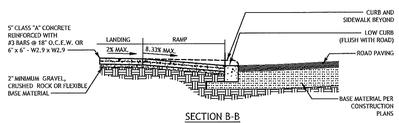
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE FOR PERPENDICULAR CURB RAMP.



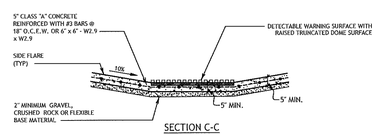
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN FOR DIRECTIONAL CURB RAMP.



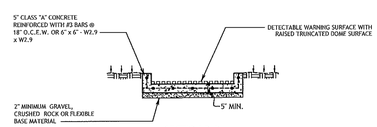
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

CURB RAMP NOTES

1. ALL SLOPES ARE MAXIMUM ALLOWABLE, THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED.
2. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF CURB RAMPS ARE TO BE SHOWN ON THE CONSTRUCTION PLANS. ALL ACCESSIBLE WALK WAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE AMERICAN'S WITH DISABILITIES ACT (ADA) AND TEXAS ACCESSIBILITY STANDARDS (TAS). CITY ENGINEER OR BUILDING OFFICIAL MAY ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
3. THE MINIMUM STANDARD SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 118-49 OF THE NEW BRAUNFELS CODE OF ORDINANCES.
4. ALL LANDINGS WHERE REQUIRED SHALL BE 5'X 5' (60"X60") MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
5. RAMP LENGTHS SHALL BE SUFFICIENT TO MAINTAIN A MAXIMUM SLOPE OF 8.33% (1V:12H). MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2% (1V:50H).
6. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY, ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE GRADE OF THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS, AND LANDINGS IN ACCORDANCE WITH CURRENT ADA AND TAS REQUIREMENTS.
7. PROVIDE FLARED RAMP SIDES WITH A MAXIMUM SLOPE OF 10% (1V:10H) MEASURED ALONG THE CURB LINE. CURB RETURNS MAY BE USED IN-LIEU OF SIDE FLARES IN AREAS NOT NORMALLY WALKED ACROSS BY PEDESTRIANS, BECAUSE THE ADJACENT SURFACE IS VEGETATION OR OTHER NON-WALKING SURFACE OR WHERE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
8. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X 4' (48"X48") WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
9. 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 BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
10. EXISTING FEATURES THAT COMPLY WITH CURRENT TAS REQUIREMENTS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
11. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. PROVIDE CURB RAMPS WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
12. SEPARATE CURB RAMP AND LANDINGS FROM ADJACENT SIDEWALK AND ANY OTHER ELEMENTS WITH PRE-MOLD OR BOARD JOINT OF 1/2" UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
13. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
14. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33-(-2.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
15. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
16. ADA RAMP SHALL BE CONSTRUCTED WITH 5" CLASS "A" CONCRETE WITH 2" MINIMUM GRAVEL/CRUSHED ROCK OR FLEXIBLE BASE MATERIAL. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6"x6" - W2.9 X W2.9 WIRE MESH.
17. THE EXTENTS OF ADA COMPLIANCE IN ALTERATIONS SHALL BE WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT AND AS DETERMINED BY THE CITY BUILDING OFFICIAL.

DETECTABLE WARNING NOTES

1. CURB RAMPS OR LANDINGS ABUTTING THE CROSSWALK MUST HAVE A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH SECTION 705 OF THE TEXAS ACCESSIBILITY STANDARDS (TAS). THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACES, INCLUDING SIDE FLARES. FURNISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCOLORED CONCRETE, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
2. DETECTABLE WARNING SURFACES MUST BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.
3. ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
4. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" 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.
5. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS AT THE BACK OF CURB. ALIGN THE ROWS OF DOMES TO BE PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
6. 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.
7. DETECTABLE WARNING PAVERS SHALL NOT BE PERMITTED WITHOUT THE APPROVAL BY THE PUBLIC WORKS DEPARTMENT.

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the City of New Braunfels for any purpose whatsoever.

City of New Braunfels

ENGINEERING DIVISION
550 LANDA STREET
NEW BRAUNFELS, TEXAS 78130
PHONE: 830 221 4020
FAX: 830 629 3600

CURB RAMP STANDARDS			
APPROVED DATE: 05/18/2017	DWG. NO.: ST-019	SCALE: AS NOTED	
DRAWN BY: RC	CONTACT: GF	SHEET: 1 OF 1	

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

STREET SECTIONS AND DETAILS I

SHEET 10 OF 40

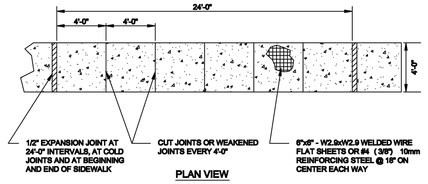
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PH: 830-358-7127 ink-civil.com
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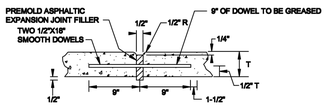
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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\11 STREET SECTIONS AND DETAILS II.dwg User: cotherlandagelin Feb 06, 2025 - 12:49pm

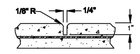
SIDEWALK
(RESIDENTIAL)



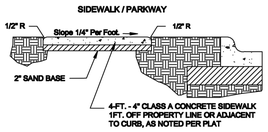
PLAN VIEW



EXPANSION JOINT



WEAKENED PLANE JOINT



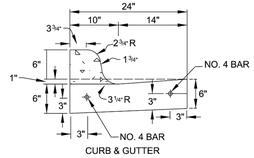
TYPICAL SECTION

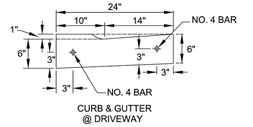
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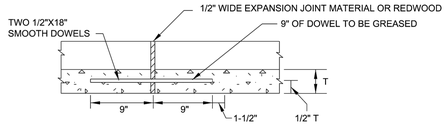
1. **EXPANSION JOINTS ARE TO BE USED BETWEEN CONCRETE DRIVEWAY AND SIDEWALK.**
2. **SCORED JOINTS DENOTE SIDEWALK ACROSS THE DRIVEWAY AND ARE TO BE PLACED AT LEAST 1/3 rd. THROUGH THE SLAB THICKNESS.**
3. **ALL SIDEWALK AND DRIVEWAY CONSTRUCTION SHALL MEET A.D.A. SPECIFICATIONS.**

DATE APPROVED: 7/08	DWG. NO: ST-016	SCALE: N.T.S.	ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 1 OF 1		
FILENAME: SIDEWALK (Residential)			
P:\CURRENT NEW BRAUNFELS DETAILS\2009\			

CURB AND GUTTER







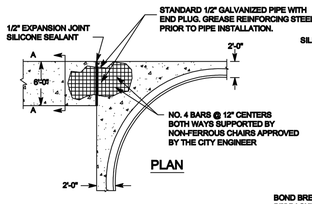
LONGITUDINAL SECTION THRU CURB AND GUTTER
SHOWING TYPICAL EXPANSION JOINT DETAILS.
REINFORCING STEEL SHALL NOT CROSS EXPANSION JOINTS.
STEEL SHALL BE TERMINATED 3" (+ OR -) 1" FROM FACE OF THE JOINT.

NOTES:

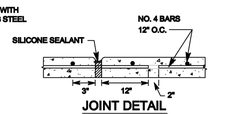
1. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 18".
2. CURB AND GUTTER SHALL HAVE FORMED TOOLED OR SAWED CONTRACTION JOINTS AT ± 10'. THE DEPTH OF THESE JOINTS SHALL BE SUFFICIENT TO ENSURE CRACKING AT THE JOINTS.
3. CURB OR CURB AND GUTTER SHALL HAVE EXPANSION JOINTS AT POINTS OF CURVATURE, AT INTERVALS NO GREATER THAN 100' AND AT ALL ADJACENT STRUCTURES.
4. UNLESS OTHERWISE SHOWN, TRANSITIONS BETWEEN CURBS OR CURBS AND GUTTER OF DIFFERING CROSS SECTION SHALL BE ACCOMPLISHED OVER A 10' LENGTH OR AS APPROVED BY THE CITY ENGINEER.
5. ALL CONCRETE TO BE CLASS "A" 3000 PSI CONCRETE.
6. ALL EXPOSED CONCRETE SURFACES TO BE BRUSHED SMOOTH AND UNIFORM.

DATE APPROVED: 07/2008	DWG. NO: ST-013	SCALE: N.T.S.	ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 1 OF 1		
FILENAME: CURB & GUTTER			

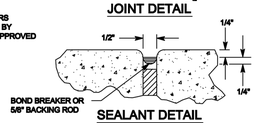
CROSS GUTTER



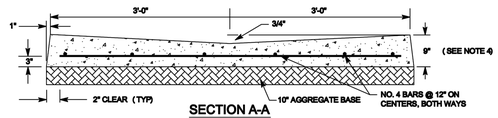
PLAN



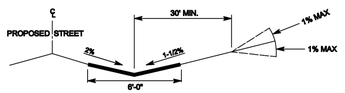
JOINT DETAIL



SEALANT DETAIL



SECTION A-A



TYPICAL PROFILE AT LOCAL RESIDENTIAL STREET INTERSECTION

NOTES:

1. **ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI.**
2. **FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.**
3. **CONSTRUCTION OF CROSS GUTTER IS NOT ALLOWED ACROSS MAJOR COLLECTOR OR ARTERIAL STREETS.**
4. **ADJACENT SPANDREL SHALL BE 9" THICK CLASS "A" 3,000 PSI CONCRETE.**

DATE APPROVED: 7/08	DWG. NO: ST-020	SCALE: N.T.S.	ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 1 OF 1		
FILENAME: CROSS GUTTER			
P:\CURRENT NEW BRAUNFELS DETAILS\2009\			

Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\N11 STREET SECTIONS AND DETAILS II.dwg User: cothersmahegalm Feb 06, 2025 - 12:49pm

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

STREET SECTIONS AND DETAILS II

SHEET 11 OF 40

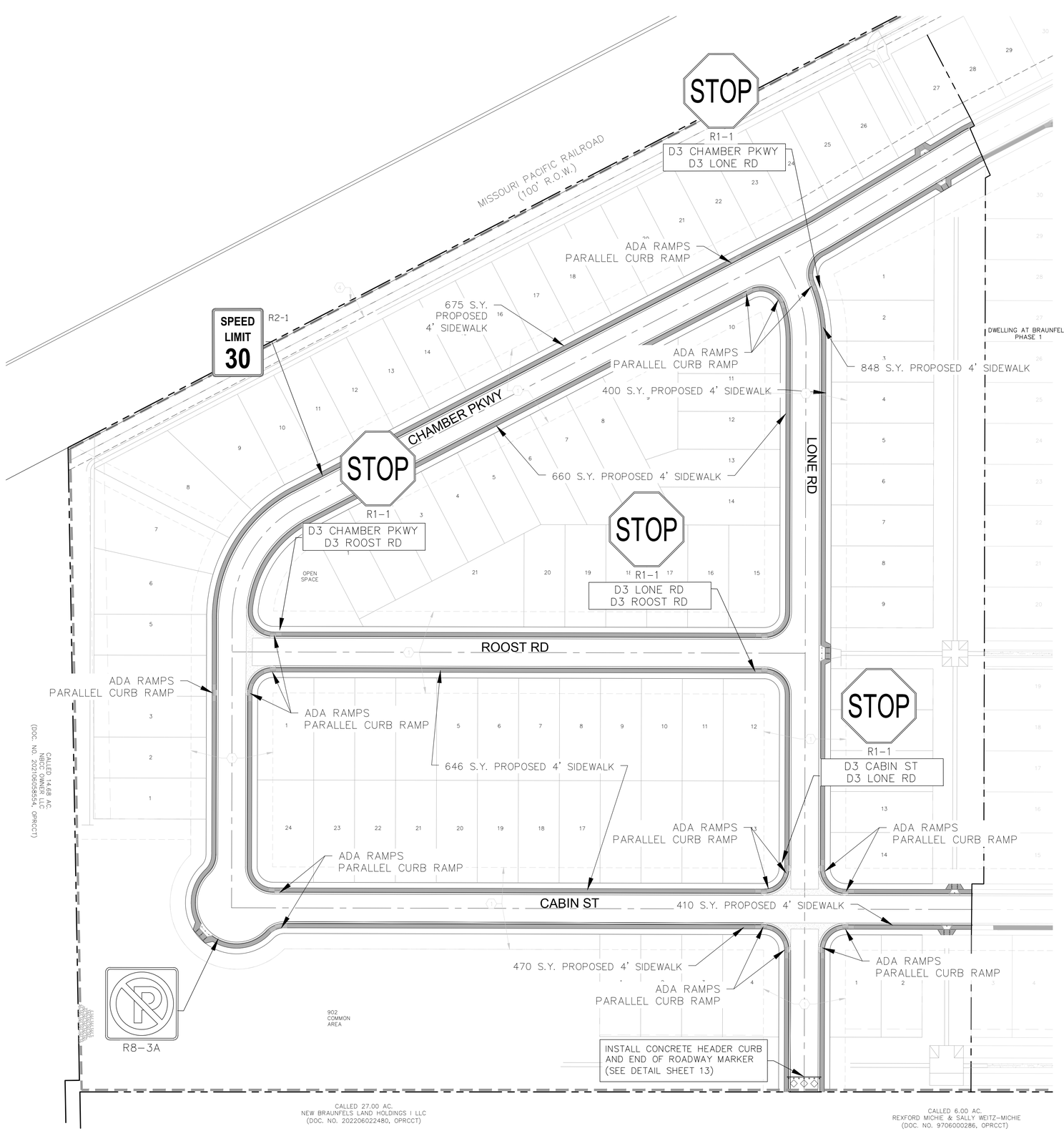
NO	DATE	ISSUES AND REVISIONS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

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NEW BRAUNFELS, TX. 78132
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INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)



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

LEGEND

4' SIDEWALK TO BE INSTALLED BY THE HOME DEVELOPER

PROPERTY LINE

PER THE MUTCD SEC. 3B.16, PROVIDE STOP SIGNS IN ADVANCE OF PEDESTRIAN RAMPS AND CROSSINGS.

ALL PROPOSED SIDEWALKS ARE 4' IN WIDTH.

NOTE:
THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CITY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

ALL RAMPS AND ANY PROPOSED SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH THE STREET CONSTRUCTION.

PRIVATE STREETS NOTE:

ALL STREETS IN THIS PROJECT ARE PRIVATE AND ARE TO BE MAINTAINED BY THE DEVELOPER. HOWEVER, SINCE THE STREETS ARE BEING CONSTRUCTED ACCORDING TO THE CITY OF NEW BRAUNFELS STANDARDS FOR LOCAL STREETS, THEY ARE BEING REFERRED TO AS "STREETS".

HOMESITE NOTE:

THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES.

SEE ADA RAMP DETAILS (SHEET 13).

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

TRAFFIC SIGNAGE & SIDEWALK PLAN

SHEET 12 OF 40

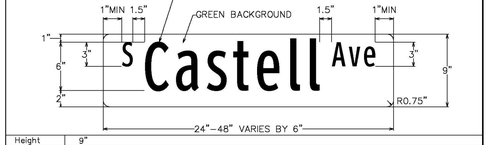
NO	DATE	ISSUES AND REVISIONS
1		

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NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
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STREET SIGN DETAIL - GROUND MOUNT



Height	9"
Length	24" min 48" max 6" increments in length
Thickness	0.080"
Substrate	Flat aluminum sheeting with ¾" radius circular fillets at corners conforming to the requirements of ASTM B 209, Alloys 6061–T–6, or 5052–H38.
Sign Face Materials	Green film over High Intensity Prismatic sheeting
Legend	Legends shall be Clearview 1–W font style. Reduced spacing between the letters or words should not be used as a means of reducing the overall size of a street name sign unless approved by the City Traffic Engineer.
Color	White legend on green background

Notes:

1. Street name signs shall be double sided when center mounted on top of sign post. Only one street name sign should be installed on top of sign post with STOP or YIELD sign.
2. When two sets of street name signs are required (e.g. at "T" intersections), one double-sided street name sign shall be mounted on sign post. The sign assembly shall meet minimum height requirements as required in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). When required, DEAD END (W14-1a) or NO OUTLET (W14-2a) signs shall also be mounted on the sign post.
3. Street name signs greater than 36" long and center mounted on top of sign post shall be mounted on post top bracket with 12" slot. All other street name signs center mounted on top of sign post shall be mounted on post top bracket with 5 ½" slot.
4. Street name signs mounted on sign post shall be mounted with double-sided round pole brackets. Two holes should be punched in the center of the 9" street name sign blank 1" from edge of the blank with 7"spacing between holes.
5. The lettering for names of streets shall be composed of a combination of lower-case letters with initial upper-case letters. Acceptable abbreviations per TMUTCD may be used except for the street name itself.
6. Red background (red film over High Intensity Prismatic) should be used for private street name signs.

Street Sign Detail - Ground Mount			ENGINEERING DIVISION
ISSUE DATE: February 2013	DWG. NO: ST-024	SCALE: N.T.S.	City of New Braunfels
DRAWN BY: RAS	CONTACT: GF	SHEET: 1 OF 1	424 S. CASTELL AVE. NEW BRAUNFELS, TEXAS 78130 PHONE: 830 221 4020 FAX: 830.620.3800

P:\2010 ENGINEERING-AUTOCAD\DETAILS\NB-PUBLIC WORKS DETAILS\NB-UNAPPROVED DETAILS-2013\ST-2013.024 STREET SIGN DETAIL - GROUND MOUNT.DWG

HEADER CURB

Scale: NTS

PER THE MUTCD SEC. 3B.16, PROVIDE STOP SIGNS IN ADVANCE OF PEDESTRIAN RAMPS AND CROSSINGS.

ALL PROPOSED SIDEWALKS ARE 4' IN WIDTH.

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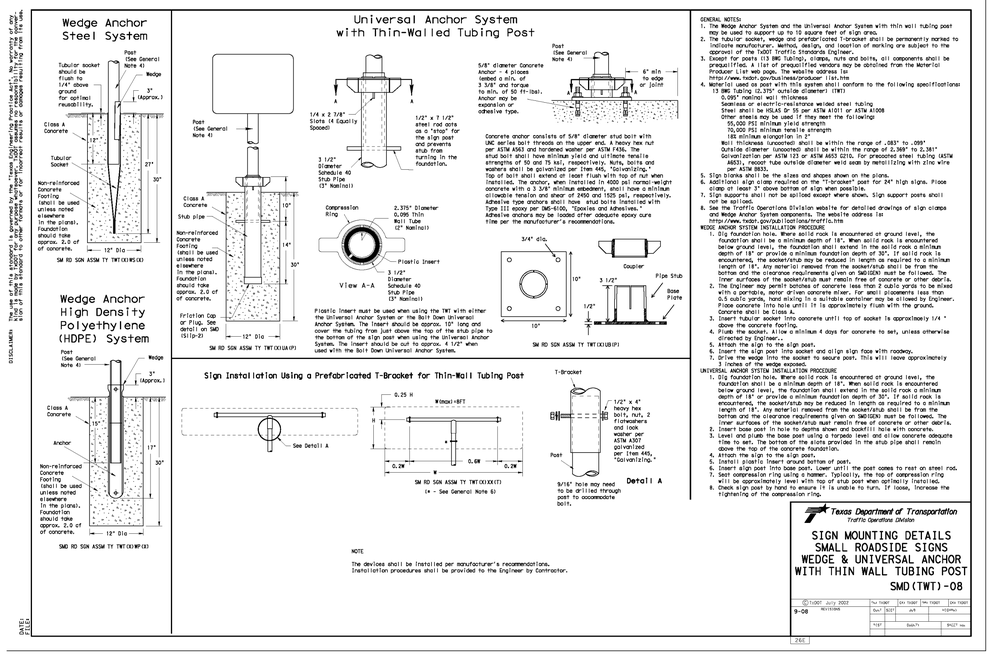
TELEPHONE LOCATOR

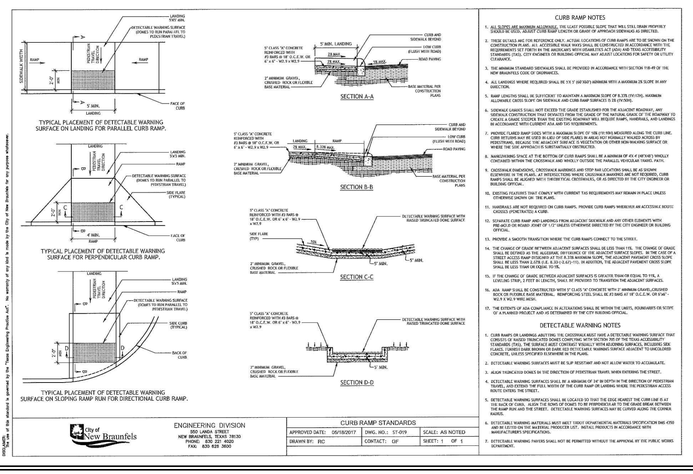
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SIGN REQUIREMENTS

1. TRAFFIC SIGNS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND WHERE JUSTIFIED BY ENGINEERING JUDGMENT OR STUDY. TRAFFIC SIGNS INCLUDE REGULATOR SIGNS, WARNING SIGNS, STREET NAME SIGNS AND OBJECT MARKERS.
2. ALL SIGNS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN AND PROFILE SHEET OR SEPARATE SIGNING AND PAVEMENT MARKING LAYOUT SHEET. THE ENGINEERING PLANS SHALL INCLUDE SIGN LOCATION, NAME, DESIGNATION AND SIZE. SIGN STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.

INSTALLATION

1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

MOUNTING

1. THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD(GEN)-08 AND SMD(TWT)-08.
2. THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS SMD(GEN)-08 AND SMD(SLIP-1-3)-08.
3. OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D&OM(1-5)-10.

MATERIALS

1. SIGN MATERIALS INCLUDING ALUMINUM SING BLANKS AND SIGN FACE MATERIALS SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS TSR(1-5)-08 AND DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-7110 AND DMS-8300.
2. THE CITY OF NEW BRAUNFELS WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

PAVEMENT MARKING REQUIREMENTS

1. PAVEMENT MARKINGS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND WHERE JUSTIFIED BY ENGINEERING JUDGMENT OR STUDY.
2. ALL PAVEMENT MARKINGS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN AND PROFILE SHEET OR SEPARATE SIGNING AND PAVEMENT MARKING LAYOUT SHEET. DESIGN, MATERIALS AND INSTALLATION SHOULD FOLLOW TXDOT TRAFFIC STANDARDS PM(1-4)-12. CITY OF SAN ANTONIO TRAFFIC ENGINEERING STANDARDS FOR PAVEMENT MARKINGS DESIGNATING TRAFFIC LANES, LANE USAGE AND LANE REGULATIONS AND PEDESTRIAN/BICYCLIST ACCOMMODATIONS MAY BE USED FOR ADDITIONAL STANDARD DESIGN DETAILS. MARKING STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.
3. ALL PAVEMENT MARKINGS SHALL BE TYPE I HOT APPLIED THERMOPLASTIC AND MEET TXDOT DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-8200.
4. THE CONTRACTOR SHALL NOTIFY THE CITY OF NEW BRAUNFELS AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CONTRACTOR MAY BE RESPONSIBLE FOR PLACING SPOT TABS BEFORE MARKING APPLICATION. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.



YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

TRAFFIC SIGNAGE & SIDEWALK DETAILS

SHEET 13 OF 40

NO	DATE	ISSUES AND REVISIONS
1		

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\13 TRAFFIC SIGNAGE & SIDEWALK DETAILS.dwg User: cotherinehoegin Feb 06, 2025 - 12:49pm

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Texas One Call	830-545-6005

C.P.E. LOCATOR

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TELEPHONE LOCATOR

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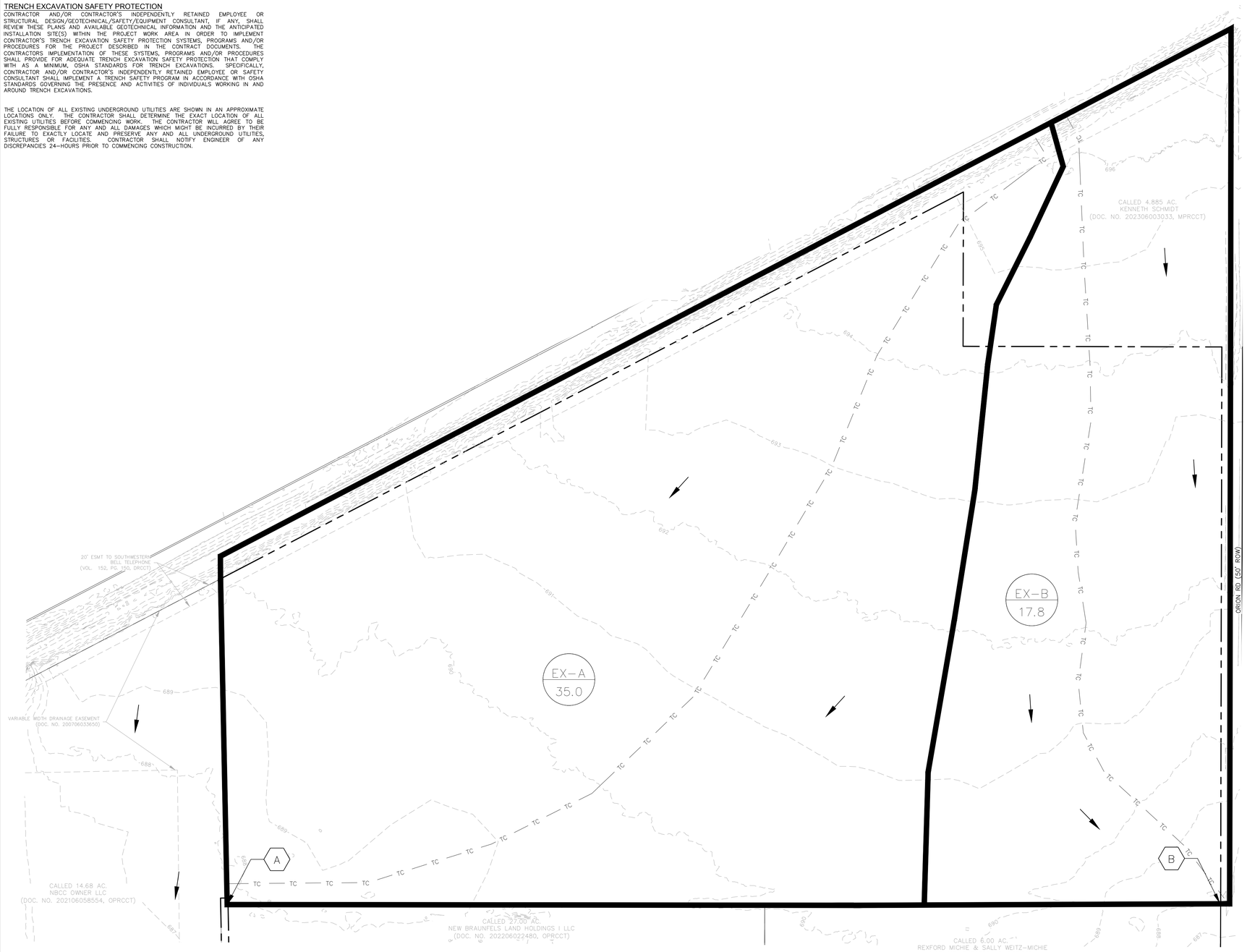
TRENCH EXCAVATION SAFETY PROTECTION

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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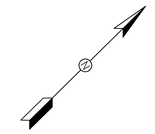
Orion Subdivision - Existing Conditions - Hydrology SCS Calculations

Point	AREA ID	Area (ac)	CN	T_c (min)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
A	EX-A	35.0	78.0	50	15.83	43.41	65.09	86.03	111.87
B	EX-B	17.8	78.0	39	9.40	25.62	38.36	50.62	65.76



EXISTING CONDITIONS

SCALE: 1"=100'



LEGEND

- LIMITS OF DRAINAGE AREA
- PROPERTY LINE
- TC — TC — TIME OF CONCENTRATION
- 900 — EXISTING CONTOURS
- FLOW ARROWS
- EX-XX / XX.XX — DRAINAGE BASIN LABEL / BASIN AREA (AC)
- XX — ANALYSIS POINT LABEL

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

EXISTING DRAINAGE AREA MAP

SHEET 14 OF 40

NO	DATE	ISSUES AND REVISIONS
1		

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
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CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
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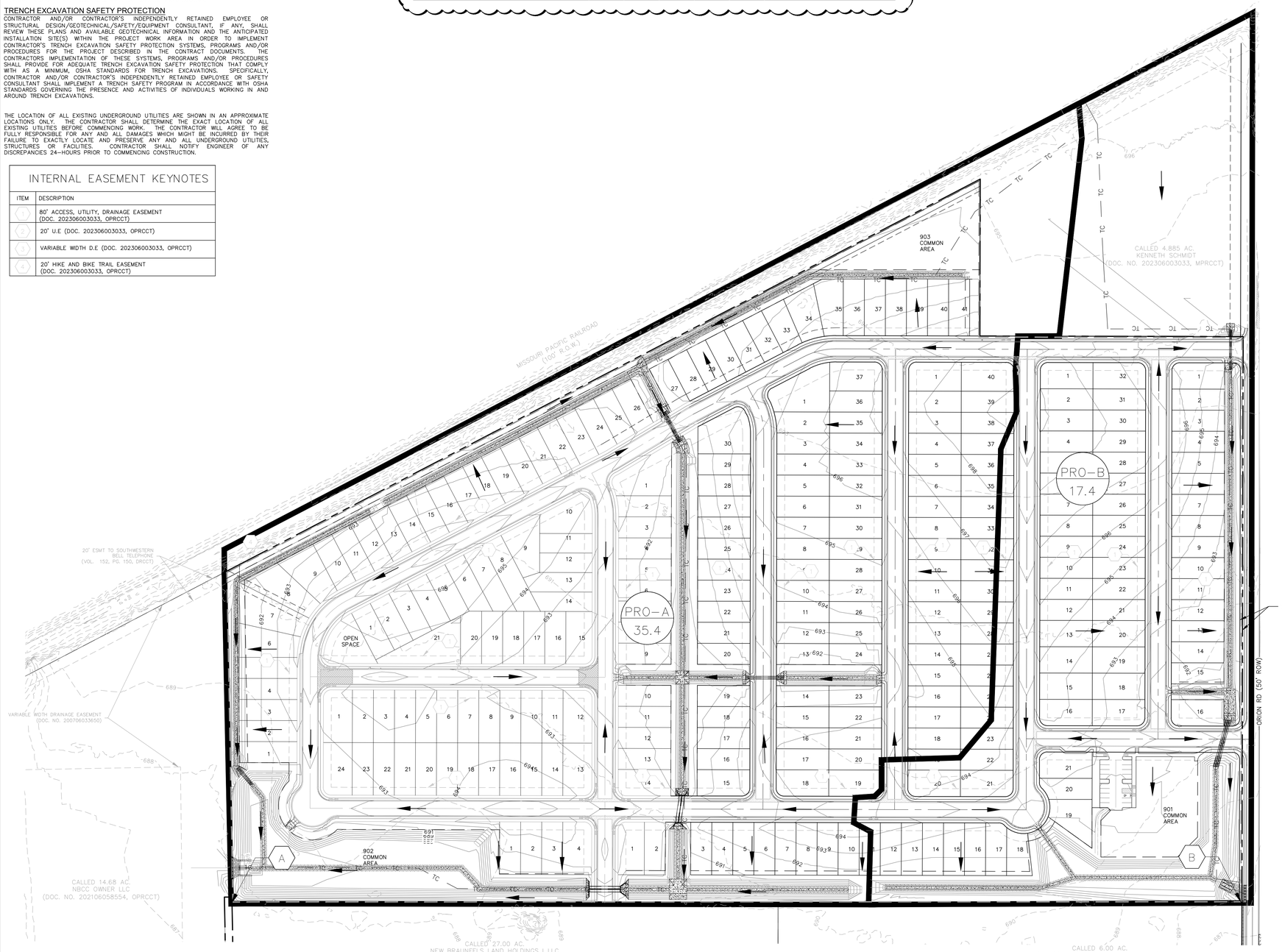
INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

△2

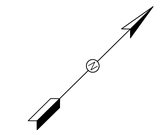
Dwelling at Braunfels - Proposed Conditions - Hydrology SCS Calculations

Point	AREA ID	Area (ac)	CN	T_c (min)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)	Location
A	PRO-A	35.4	89.5	43	29.97	63.19	87.48	110.36	138.35	Detention Pond A
Detained Flow					15.15	42.18	64.78	85.65	110.32	Detention Pond A Outlet
B	PRO-B	17.4	88.2	36	15.68	33.79	47.06	59.58	74.88	Detention Pond B
Detained Flow					3.65	23.80	37.84	50.48	65.13	Detention Pond B Outlet



PROPOSED CONDITIONS

SCALE: 1"=100'



LEGEND

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- XX ANALYSIS POINT LABEL
- PROPERTY LINE



YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

PROPOSED DRAINAGE AREA MAP SCS METHOD

SHEET 15 OF 40

NO	DATE	ISSUES AND REVISIONS
△2	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
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NEW BRAUNFELS, TX. 78132
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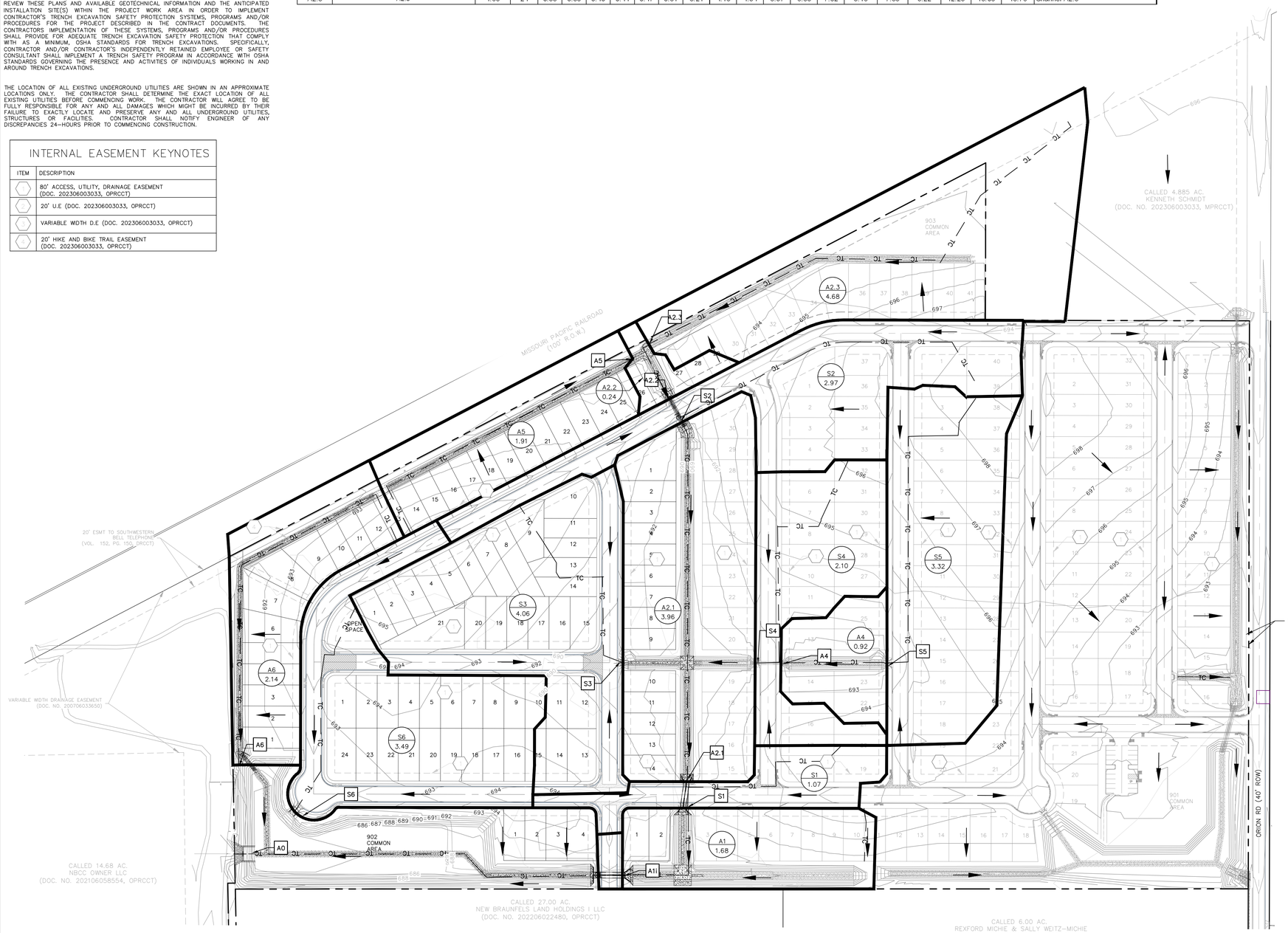
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Dwelling at Braunfels - Proposed Conditions - Rational Hydrology Calculations

Point	AREA ID	Area (ac)	T_c (min)	C_2	C_5	C_{10}	C_{25}	C_{50}	C_{100}	I_2 (in/hr)	I_5 (in/hr)	I_{10} (in/hr)	I_{25} (in/hr)	I_{50} (in/hr)	I_{100} (in/hr)	Q_2 (cfs)	Q_5 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)	Location
A0i	*All but A6 & S6*	27.80	36													30.84	44.40	54.72	73.20	88.48	110.04	Channel A0
A1i	*All but A0, A6 & S6*	26.89	33													31.34	44.98	55.41	74.02	89.45	111.22	Channel A1 & Culvert A1
A2.1i	*A2.1+A2.2+A2.3+A4+A5+S1+S2+S3+S4+S5*	24.15	31													29.29	41.93	51.63	68.90	83.24	103.49	Channel A2.1 & Culvert A2
A2.2i	*A2.2+A2.3+A5*	6.83	25													7.71	11.16	13.85	18.34	22.37	27.69	Channel A2.2 & Culvert A3
A2.3	*A2.3*	4.68	24													5.18	7.38	9.22	12.29	15.08	18.76	Channel A2.3
A4i	*A4+S5*	4.24	10													10.34	14.38	17.93	23.23	28.19	34.58	Channel A4 & Culvert A4
A5	*A5*	1.91	11													3.72	5.21	6.54	8.58	10.49	12.98	Channel A5
A6	*A6*	2.14	11													3.86	5.42	6.80	8.96	10.97	13.62	Channel A6
S1	*S1*	1.07	11													2.89	4.00	4.97	6.40	7.73	9.44	Sidewalk Bridge S1
S2	*S2*	2.97	15													6.74	9.36	11.59	14.98	18.10	22.11	Sidewalk Bridge S2
S3	*S3*	4.06	15													8.33	11.60	14.38	18.67	22.61	27.69	Sidewalk Bridge S3
S4	*S4*	2.10	20													4.14	5.77	7.12	9.22	11.13	13.56	Sidewalk Bridge S4
S5	*S5*	3.32	11													8.17	11.35	14.11	18.24	22.09	27.04	Sidewalk Bridge S5
S6	*S6*	3.49	11													8.81	12.21	15.18	19.60	23.72	29.01	Sidewalk Bridge S6
A2.3	*A2.3*	4.68	24	0.35	0.38	0.40	0.44	0.47	0.51	3.21	4.18	4.94	5.97	6.83	7.82	5.18	7.38	9.22	12.29	15.08	18.76	Channel A2.3



PROPOSED CONDITIONS

SCALE: 1"=100'

0 100' 200'

SCALE: 1"=100'

LEGEND

- LIMITS OF DRAINAGE AREA
- PROPERTY LINE
- LIMITS OF SUB-DRAINAGE AREA
- TC — TC — TIME OF CONCENTRATION
- 900 EXISTING CONTOURS
- 900 PROPOSED CONTOURS
- FLOW ARROWS
- XX / X.X SUB-DRAINAGE AREA LABEL / SUB-DRAINAGE AREA (AC)
- A1 INLET LABEL
- A1 ANALYSIS POINT LABEL

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

PROPOSED DRAINAGE AREA MAP RATIONAL METHOD

SHEET 16 OF 40

NO	DATE	ISSUES AND REVISIONS
1	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
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DETENTION POND NOTES:

CONSTRUCTION SPECIFICATION – TOP SOIL

1. VEGETATION OF POND BOTTOM – THE WORK CONSISTS OF PLACEMENT OF TOP SOIL ON NEW EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS.

2. MATERIAL – THE TOPSOIL SHALL BE FERTILE SOIL, CONSISTING PRIMARILY OF CLAY AND CLAYEY MATERIALS, WITH A PLASTICITY INDEX GREATER THAN 15, AND SHALL BE FREE OF LARGE ORGANIC OR ROCK MATERIAL.

3. APPLICATION – TOPSOIL SHALL BE PLACED AT GRADES INDICATED ON THE PLANS AND ROLLED TO REDUCE EROSION. PERIODIC INSPECTION ARE REQUIRED AND ADDITIONAL TOPSOIL ADDED AS NEEDED UNTIL VEGETATION HAS ESTABLISHED

CONSTRUCTION SPECIFICATION – VEGETATION

1. VEGETATION OF EMBANKMENT – THE WORK CONSISTS OF ESTABLISHING VEGETATION ON NEW EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS.

2. MATERIAL – VEGETATION SHALL CONSIST OF "NATIVE SUN TURF GRASS" AS SUPPLIED BY NATIVE AMERICAN SEED IN JUNCTION, TX, CONSISTING OF 34% BLUE GRAMA AND 64% BUFFALO GRASS, OR ENGINEER APPROVED EQUAL. SEED MIXTURE SHALL CONSIST OF A PURE LIVE SEED OF 90-95%.

3. APPLICATION – THE SEED MIXTURE SHALL BE INSTALLED PER DISTRIBUTORS RECOMMENDATIONS AT A RATE OF 1 LB PER 400 SQFT. SEED MIXTURE SHALL BE WATERED AS REQUIRED UNTIL VEGETATION IS ESTABLISHED.

DRAINAGE INFRASTRUCTURE MAINTENANCE AND MONITORING GUIDELINES

- ACCESS – DRIVE OVER TOP OF CURB FOR MOWING AND MAINTENANCE OF DETENTION POND AND CHANNELS. SEE THIS SHEET FOR MAINTENANCE ACCESS LOCATIONS.
- INSPECTION – BMP FACILITIES MUST BE INSPECTED WEEKLY (ONCE DURING OR IMMEDIATELY FOLLOWING WET WEATHER) TO EVALUATE FACILITY OPERATION. DURING EACH INSPECTION, EROSION AREAS INSIDE AND DOWNSTREAM OF THE BMP MUST BE IDENTIFIED AND REPAIRED OR REVEGETATED IMMEDIATELY. WITH EACH INSPECTION, ANY DAMAGE TO THE STRUCTURAL ELEMENTS OF THE SYSTEM (PIPES, CONCRETE DRAINAGE STRUCTURES, RETAINING WALLS, AERATOR, PUMPS, ETC.) MUST BE IDENTIFIED AND REPAIRED IMMEDIATELY. CRACKS, VOIDS AND UNDERMINING SHOULD BE PATCHED/FILLED TO PREVENT ADDITIONAL STRUCTURAL DAMAGE. TREES AND ROOT SYSTEMS SHOULD BE REMOVED TO PREVENT GROWTH IN CRACKS AND JOINTS THAT CAN CAUSE STRUCTURAL DAMAGE. ANY DRAINAGE STRUCTURES CONSISTING OF GRASS COVER WILL REQUIRE MORE FREQUENT INSPECTIONS DURING THE FIRST FEW YEARS AFTER ESTABLISHMENT TO DETERMINE IF ANY PROBLEMS ARE DEVELOPING, AND TO PLAN FOR LONG-TERM RESTORATIVE MAINTENANCE NEEDS. BARE SPOTS AND AREAS OF EROSION IDENTIFIED DURING SEMI-ANNUAL INSPECTIONS MUST BE REPLANTED AND RESTORED TO MEET SPECIFICATIONS.
- SEDIMENT REMOVAL – REMOVE SEDIMENT FROM THE INLET STRUCTURE, SEDIMENTATION CHAMBER, OR POND BOTTOM WHEN SEDIMENT BUILDUP REACHES A DEPTH OF 6 INCHES OR WHEN THE PROPER FUNCTIONING OF INLET AND OUTLET STRUCTURES IS IMPAIRED. SEDIMENT SHOULD BE CLEARED FROM THE INLET STRUCTURE AT LEAST EVERY YEAR AND FROM THE SEDIMENTATION BASIN EVERY YEAR.
- DEBRIS AND LITTER REMOVAL – DEBRIS AND LITTER WLL ACCUMULATE NEAR THE SEDIMENTATION BASIN OUTLET DEVICE AND SHOULD BE REMOVED DURING REGULAR MOWING OPERATIONS AND INSPECTIONS. PARTICULAR ATTENTION SHOULD BE PAID TO FLOATING DEBRIS THAT CAN EVENTUALLY CLOG THE CONTROL DEVICE OR RISER.TRASH TENDS TO ACCUMULATE IN VEGETATED AREAS, PARTICULARLY ALONG ROADWAYS. ANY FILTER STRIP STRUCTURES (I.E. LEVEL SPREADERS) OR VEGETATED AREAS SHOULD BE KEPT FREE OF OBSTRUCTIONS TO REDUCE FLOATABLES BEING FLUSHED DOWNSTREAM, AND FOR AESTHETIC REASONS. THE NEED FOR THIS PRACTICE IS DETERMINED THROUGH PERIODIC INSPECTION, BUT SHOULD BE PERFORMED NO LESS THAN 4 TIMES PER YEAR.
- MOWING – GRASS AREAS IN AND AROUND SAND FILTERS, INLETS, OUTLETS, DETENTION PONDS, CHANNELS AND VEGETATIVE FILTER STRIPS MUST BE MOWED AT LEAST TWCE ANNUALLY TO LIMIT VEGETATION HEIGHT TO 18 INCHES. MORE FREQUENT MOWING TO MAINTAIN AESTHETIC APPEAL MAY BE NECESSARY IN LANDSCAPED AREAS. VEGETATION ON THE POND EMBANKMENTS SHOULD BE MOWED AS APPROPRIATE TO PREVENT THE ESTABLISHMENT OF WOODY VEGETATION. IF NATIVE GRASSES ARE USED THEY MAY REQUIRE LESS FREQUENT MOWING, BUT A MINIMUM OF TWCE ANNUALLY. GRASS CLIPPINGS AND BRUSH DEBRIS SHOULD NOT BE DEPOSITED ON GRASS COVERED DRAINAGE STRUCTURES. REGULAR MOWING SHOULD ALSO INCLUDE WEED CONTROL PRACTICES, HOWEVER HERBICIDE USE SHOULD BE KEPT TO A MINIMUM (URBONAS ET AL., 1992). HEALTHY GRASS CAN BE MAINTAINED WITHOUT USING FERTILIZERS BECAUSE RUNOFF USUALLY CONTAINS SUFFICIENT NUTRIENTS. IRRIGATION OF THE SITE CAN HELP ASSURE A DENSE AND HEALTHY VEGETATIVE COVER.
- GRASS RESEADING AND MULCHING – A HEALTHY DENSE GRASS SHOULD BE MAINTAINED. IF AREAS ARE ERODED, THEY SHOULD BE FILLED, COMPACTED, AND RESEEDED SO THAT THE FINAL GRADE IS LEVEL. GRASS DAMAGED DURING THE SEDIMENT REMOVAL PROCESS SHOULD BE PROMPTLY REPLACED USING THE SAME SEED MIX USED DURING ESTABLISHMENT. IF POSSIBLE, FLOW SHOULD BE DIVERTED FROM THE DAMAGED AREAS UNTIL THE GRASS IS FIRMLY ESTABLISHED. BARE SPOTS AND AREAS OF EROSION IDENTIFIED DURING SEMI-ANNUAL INSPECTIONS MUST BE REPLANTED AND RESTORED TO MEET SPECIFICATIONS. CORRECTIVE MAINTENANCE, SUCH AS WEEDING OR REPLANTING SHOULD BE DONE MORE FREQUENTLY IN THE FIRST TWO TO THREE YEARS AFTER INSTALLATION TO ENSURE STABILIZATION. DENSE VEGETATION MAY REQUIRE IRRIGATION IMMEDIATELY AFTER PLANTING, AND DURING PARTICULARLY DRY PERIODS, PARTICULARLY AS THE VEGETATION IS INITIALLY ESTABLISHED.
- POND DRAINING – THE PONDS WILL NEED TO BE DRAINED IN THE CASE THAT SEDIMENT DEPTH AT THE BOTTOM OF THE POND HAS REACHED 18" INCHES. THE MEASURED POND BOTTOM OF POND A IS 680.5 AND THE MEASURED POND BOTTOM OF POND B IS 679.5. THE PONDS MAY BE DRAINED WITH A PORTABLE PUMP WITH A FLEXIBLE SUCTION AND DISCHARGE HOSE. THE PORTABLE PUMP WILL BE PLACED IN A LOCATION WHERE THE PUMP CAN OPERATE PER MANUFACTURER SPECIFICATIONS. THE PORTABLE PUMP WILL LIKELY NEED TO BE MOVED INWARDS WITHIN THE POND AS THE WATER LEVEL LOWERS.

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Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 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 CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

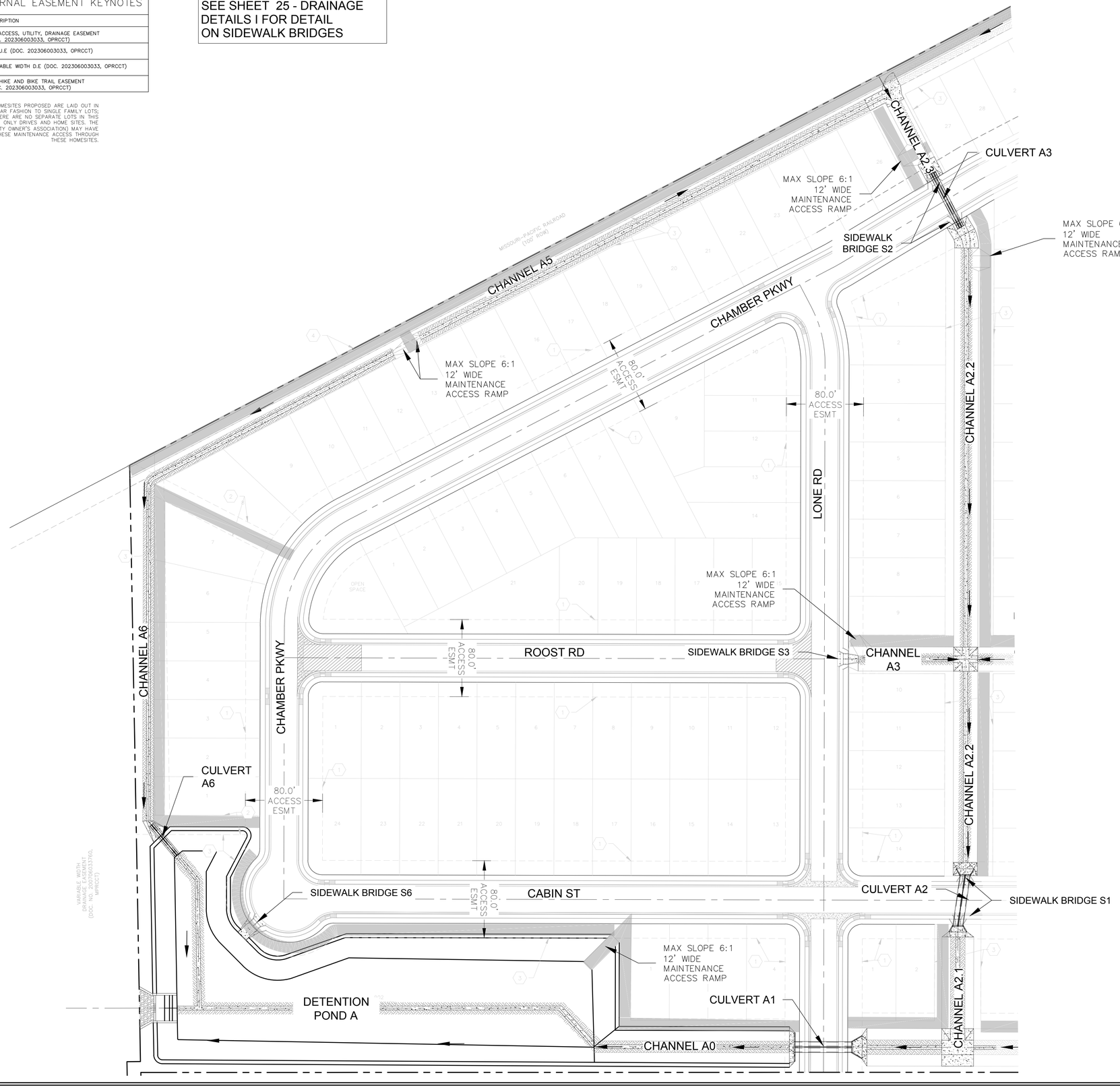
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WLL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

NOTE: THE HOMESITES PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS; HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOME SITES. THE POA (PROPERTY OWNER'S ASSOCIATION) MAY HAVE ACCESS TO THESE MAINTENANCE ACCESS THROUGH THESE HOMESITES.

SEE SHEET 25 - DRAINAGE DETAILS I FOR DETAIL ON SIDEWALK BRIDGES



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

LEGEND

- 12' MAINTENANCE ACCESS
- FLOW ARROWS
- PROPERTY LINE

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

OVERALL DRAINAGE MAP AND MAINTENANCE ACCESS

SHEET 17 OF 40

NO	DATE	ISSUES AND REVISIONS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\YE1001 Dwelling Phase 2\Civil\Construction Drawings\17 OVERALL DRAINAGE MAP AND MAINTENANCE ACCESS.dwg User: catherinehagen Feb 06, 2025 - 12:52pm

CHANNEL "A0" HYDRAULICS								
Drainage Area: SCS-A (detention area)								
Q_2 (CFS)	S (%)	n	V_2 (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
29.97	0.25	0.034	2.15	1.67	13.45	0.07	1.67	5.00
Q_{25} (CFS)	S (%)	n	V_{25} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
87.48	0.25	0.036	2.72	2.76	19.98	0.12	3.01	5.00
Q_{100} (CFS)	S (%)	n	V_{100} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
138.35	0.25	0.037	3.02	3.39	23.73	0.14	3.53	5.00

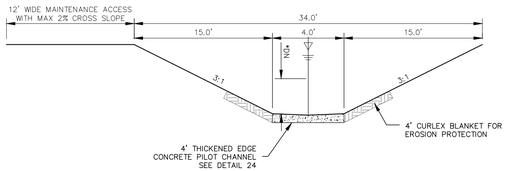
CHANNEL "A1" HYDRAULICS								
Drainage Area: A1i								
Q_2 (CFS)	S (%)	n	V_2 (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
44.98	0.25	0.037	2.01	1.29	22.16	0.06	1.29	4.00
Q_{25} (CFS)	S (%)	n	V_{25} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
74.02	0.25	0.037	2.34	1.69	24.53	0.09	2.19	4.00
Q_{100} (CFS)	S (%)	n	V_{100} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
111.22	0.25	0.037	2.64	2.10	26.99	0.11	2.10	4.00

CULVERT A1								
STORM EVENT	CULVERT SIZE	H.W. ELEV	T.W. ELEV	CULVERT Q (CFS)	WEIR Q (CFS)	CULVERT V (FT/S)	TOTAL Q (CFS)
2-YEAR	2~4'X3' MBC	687.61	687.37	31.34	0.00	2.99	31.34
25-YEAR		690.04	689.46	74.02	0.00	3.08	74.02
50-YEAR		690.85	690.01	89.45	0.00	3.73	89.45
100-YEAR		691.65	690.60	99.07	12.21	4.13	111.28

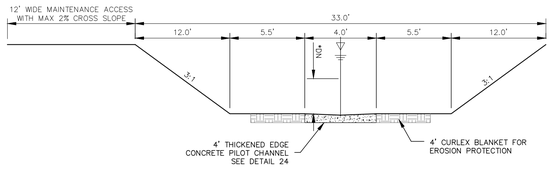
Tailwater based off Detention Pond Depth

INTERNAL EASEMENT KEYNOTES

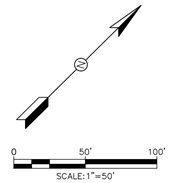
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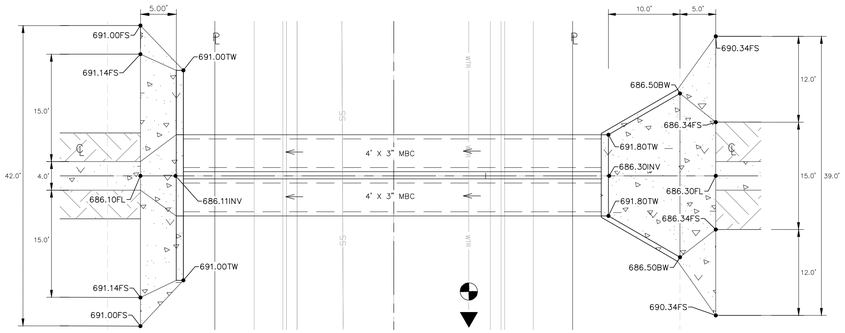


SECTION AO-AO



SECTION A1-A1



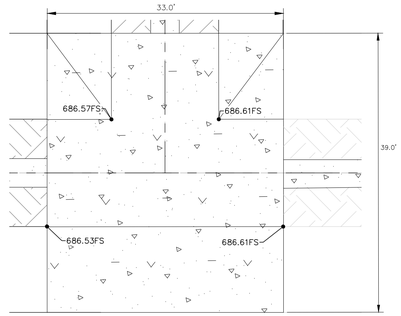


CULVERT A1 DOWNSTREAM CONCRETE RIP RAP DETAIL

SCALE: 1" = 10'

CULVERT A1 UPSTREAM CONCRETE RIP RAP DETAIL

SCALE: 1" = 10'

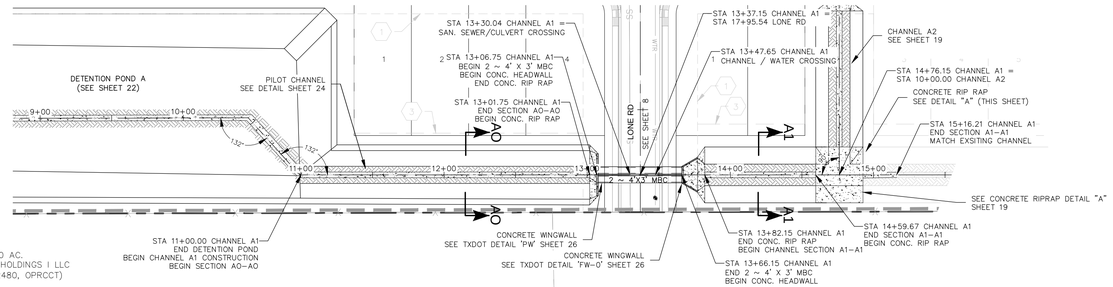


CONCRETE RIP RAP DETAIL "A"

SCALE: 1" = 10'

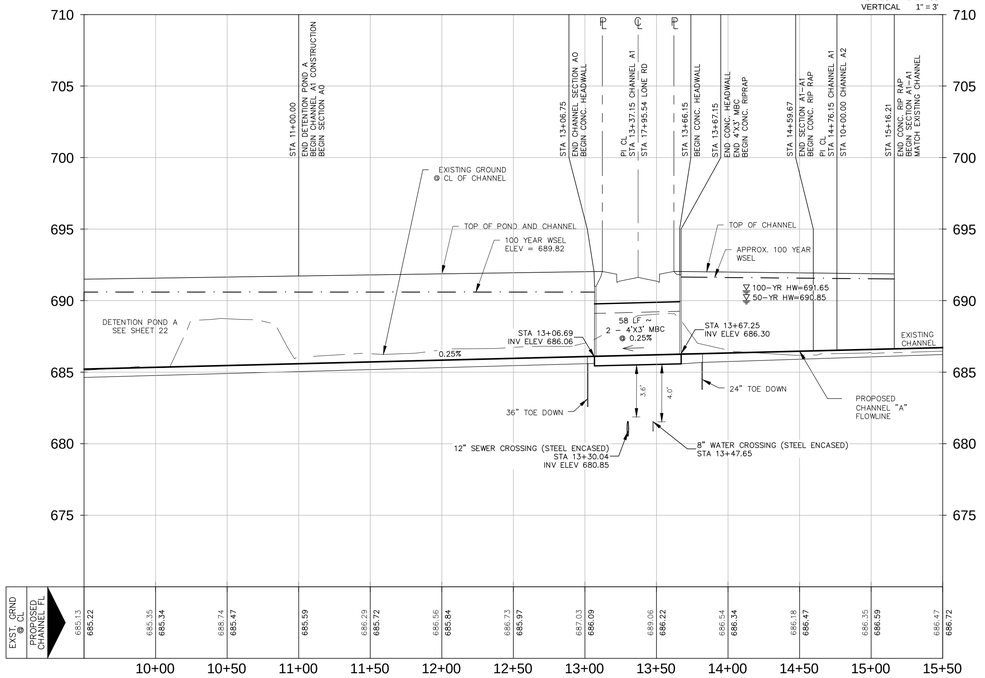
LEGEND

- COMPACTED FILL
- CONCRETE
- ROCK RIP-RAP
- PROPERTY LINE
- CHANNEL CENTERLINE
- EXISTING WIRE FNCE
- SS — PROPOSED SANITARY SEWER
- WTR — PROPOSED WATER SERVICE
- PROPOSED FENCE LINE
- 633.86FS — PROPOSED FINISHED SURFACE SPOT ELEVATION
- 633.86TW — PROPOSED TOP OF WALL ELEVATION
- 633.86BW — PROPOSED BOTTOM OF WALL ELEVATION
- 633.86INV — PROPOSED INVERT ELEVATION
- 633.86FL — PROPOSED FLOW LINE ELEVATION
- 629.76FS — EXISTING FINISHED SURFACE SPOT ELEVATION



CHANNEL A1 STA 9+50.00 TO STA 15+50.00

SCALE:
HORIZONTAL 1"= 30'
VERTICAL 1"= 3'



CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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TELEPHONE LOCATOR

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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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING 8" SANITARY SEWER MAIN AND REPORT ANY DISCREPANCIES TO ENGINEER

PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITES AND REPORT ANY DISCREPANCIES TO ENGINEER

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

CHANNEL A1 PLAN & PROFILE

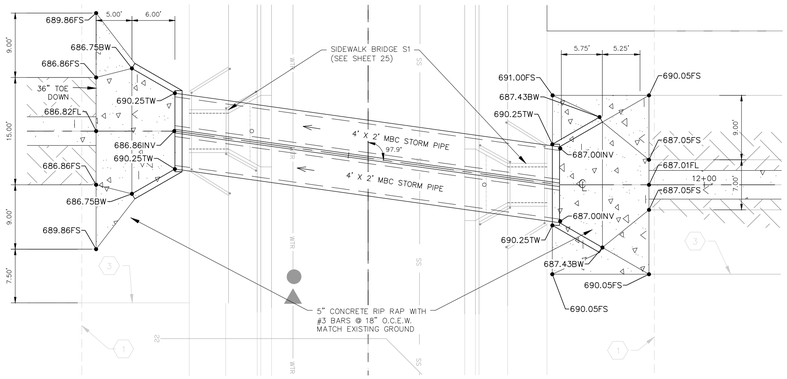
SHEET 18 OF 40

NO	DATE	ISSUES AND REVISIONS
1	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

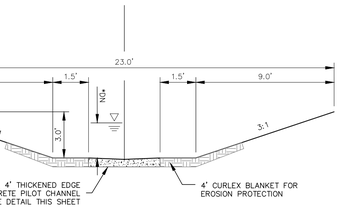
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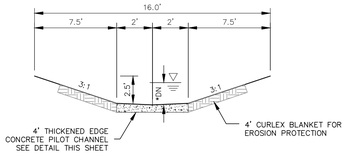
CULVERT A2 DOWNSTREAM CONCRETE RIP RAP DETAIL

SCALE: 1" = 10'



SECTION A2.1-A2.1

NOT TO SCALE

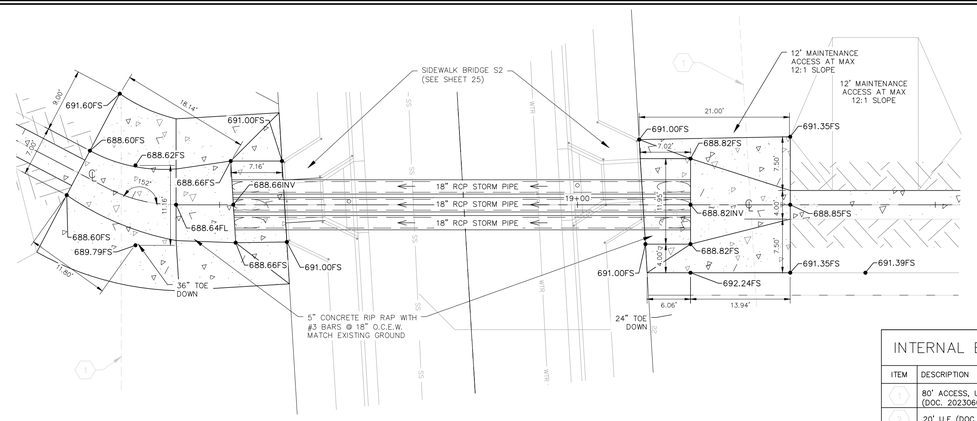


SECTION A2.2-A2.2

NOT TO SCALE

CULVERT A2 UPSTREAM CONCRETE RIP RAP DETAIL

SCALE: 1" = 10'



DOWNSTREAM CONCRETE RIP RAP DETAIL

SCALE: 1" = 10'

UPSTREAM CONCRETE RIP RAP DETAIL

SCALE: 1" = 10'

CULVERT A3

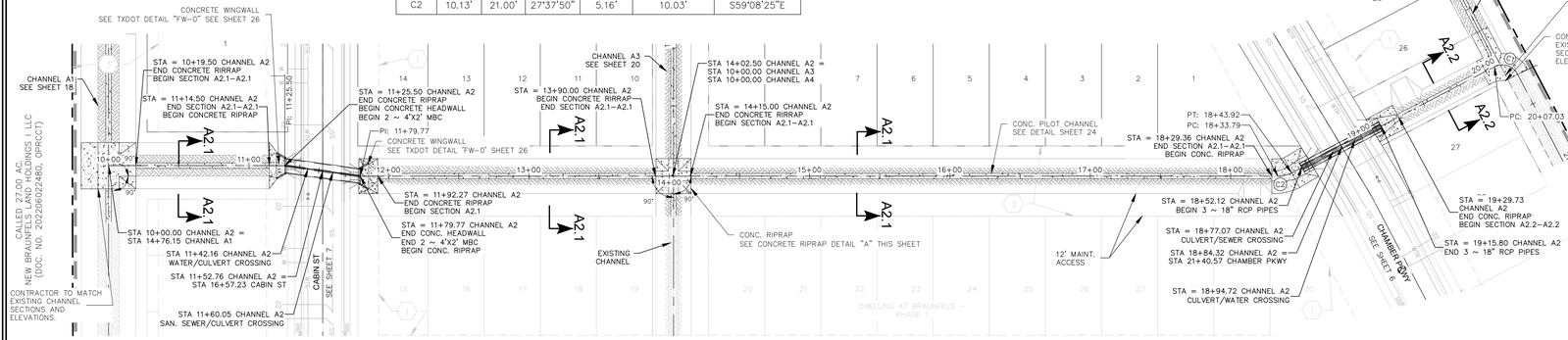
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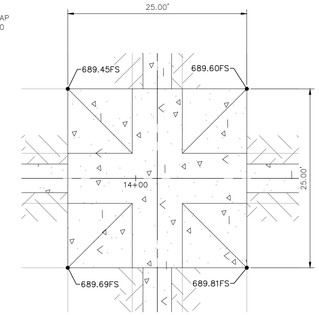
SCALE: 1"=50'

INTERNAL ESMT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C1	19.29'	12.00'	92°02'37"	12.44'	17.28'	N26°57'04"W
C2	10.13'	21.00'	27°37'50"	5.16'	10.03'	S59°08'25"E





CONCRETE RIP RAP DETAIL "A"

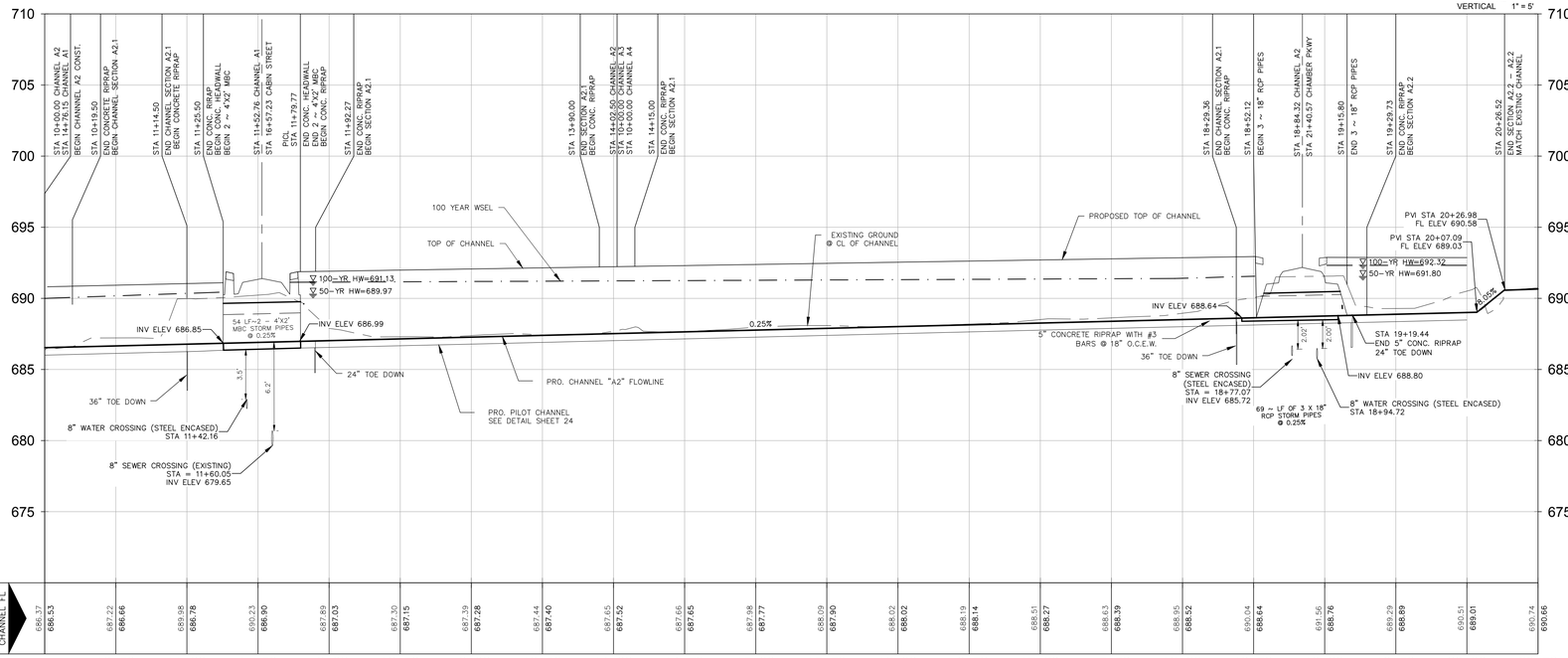
SCALE: 1" = 10'

LEGEND

- COMPACTED FILL
- CONCRETE
- PROPERTY LINE
- CHANNEL CENTERLINE
- SS — PROPOSED SANITARY SEWER
- WTR — PROPOSED WATER SERVICE
- PROPOSED FENCE LINE
- 633.86FS — PROPOSED FINISHED SURFACE SPOT ELEVATION
- 633.86TW — PROPOSED TOP OF WALL ELEVATION
- 633.86BW — PROPOSED BOTTOM OF WALL ELEVATION
- 633.86INV — PROPOSED INVERT ELEVATION
- 633.86FL — PROPOSED FLOW LINE ELEVATION
- 629.76FS — EXISTING FINISHED SURFACE SPOT ELEVATION

CHANNEL A2 STA 10+00.00 TO STA 20+50.00

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



PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING 8" SANITARY SEWER MAIN AND REPORT ANY DISCREPANCIES TO ENGINEER

PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES AND REPORT ANY DISCREPANCIES TO ENGINEER

CHANNEL "A2.1" HYDRAULICS

Drainage Area: A2.1i

Q_2 (CFS)	S (%)	n	V_2 (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
29.45	0.25	0.035	2.04	1.41	14.84	0.06	1.47	3.00
Q_{25} (CFS)	S (%)	n	V_{25} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
69.00	0.25	0.036	2.51	2.16	19.39	0.10	2.76	3.00
Q_{100} (CFS)	S (%)	n	V_{100} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
103.60	0.25	0.037	2.78	2.64	22.24	0.12	2.76	3.00

CHANNEL "A2.2" HYDRAULICS

Drainage Area: A2.2i

Q_2 (CFS)	S (%)	n	V_2 (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
7.92	0.25	0.031	1.62	0.85	8.50	0.04	0.85	2.50
Q_{25} (CFS)	S (%)	n	V_{25} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
18.82	0.25	0.034	1.94	1.34	11.41	0.06	1.84	2.50
Q_{100} (CFS)	S (%)	n	V_{100} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
28.41	0.25	0.033	2.12	1.64	13.22	0.07	1.64	2.50

CULVERT A2

STORM EVENT	CULVERT SIZE	H.W. ELEV	T.W. ELEV	CULVERT Q (CFS)	WEIR Q (CFS)	CULVERT V (FT/S)	TOTAL Q (CFS)
2-YEAR	2~4'x2' MBC	688.27	687.61	29.29	0.00	4.88	29.29
25-YEAR		689.32	690.04	68.90	0.00	4.68	68.90
50-YEAR		689.97	690.85	83.24	0.00	5.21	83.24
100-YEAR		691.13	690.02	97.05	6.49	6.07	103.54

**Tailwater based off Culvert A1 headwater*

CULVERT A3

STORM EVENT	CULVERT SIZE	H.W. ELEV	T.W. ELEV	CULVERT Q (CFS)	WEIR Q (CFS)	CULVERT V (FT/S)	TOTAL Q (CFS)
2-YEAR	3~18" RCP	690.16	690.05	7.71	0.00	1.49	7.71
25-YEAR		691.40	690.80	18.34	0.00	3.46	18.34
50-YEAR		691.80	690.90	22.37	0.00	4.22	22.37
100-YEAR		692.32	691.40	22.63	5.08	4.27	27.69

**Tailwater based off Channel A2 depth*

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

CHANNEL A2 BEGIN TO STA 20+00
PLAN & PROFILE

SHEET 19 OF 40

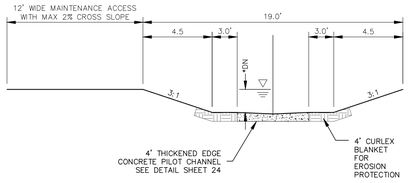
NO	DATE	ISSUES AND REVISIONS
1	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\19 CHANNEL A2 BEGIN TO STA 20+00 PLAN & PROFILE.dwg User: cotherwhegelin Feb 06, 2025 - 12:54pm

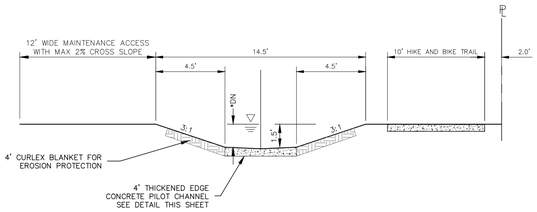
CHANNEL "A3" HYDRAULICS								
Drainage Area: S3								
Q_2 (CFS)	S (%)	n	V_2 (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
8.33	0.50	0.032	1.88	0.60	9.99	0.05	0.60	3.00
Q_{25} (CFS)	S (%)	n	V_{25} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
18.67	0.50	0.034	2.35	0.92	11.91	0.09	1.42	3.00
Q_{100} (CFS)	S (%)	n	V_{100} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
27.69	0.50	0.034	2.61	1.13	13.19	0.11	1.13	3.00



SECTION A3-A3

NOT TO SCALE

CHANNEL "A5" HYDRAULICS								
Drainage Area: A5								
Q_2 (CFS)	S (%)	n	V_2 (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
3.72	0.25	0.028	1.36	0.53	6.55	0.03	0.53	1.50
Q_{25} (CFS)	S (%)	n	V_{25} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
8.58	0.25	0.031	1.64	0.89	8.73	0.04	1.39	1.50
Q_{100} (CFS)	S (%)	n	V_{100} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
12.98	0.25	0.033	1.79	1.10	10.03	0.05	1.10	1.50



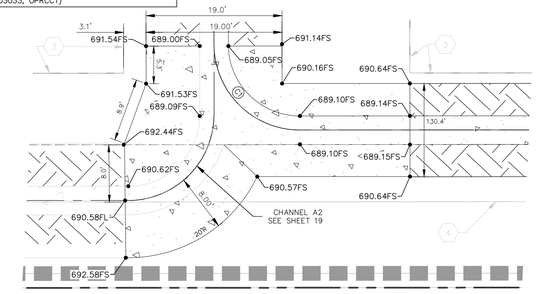
SECTION A5 - A5

NOT TO SCALE

INTERNAL EASEMENT KEYNOTES

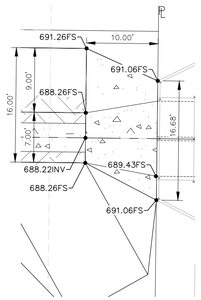
ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

Curve Table						
Curve #	Radius	Length	Delta	Tangent	Chord Length	Chord Direction
C1	12.00	18.85	89°59'54"	12.00'	16.97'	S62° 02' 50.71"W



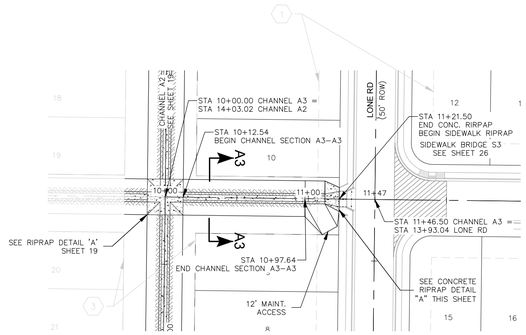
CONCRETE RIP RAP DETAIL "B"

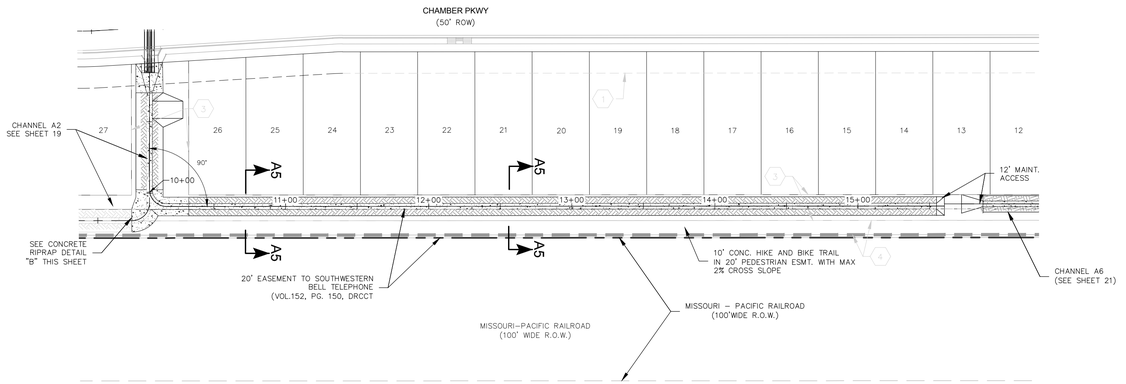
SCALE: 1" = 10'

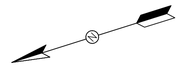


CONCRETE RIP RAP DETAIL "A"

SCALE: 1" = 10'







0 50' 100'

SCALE:1"=50'

LEGEND

- COMPACTED FILL
- CONCRETE
- ROCK RIP-RAP
- PROPERTY LINE
- CHANNEL CENTERLINE
- SS — PROPOSED SANITARY SEWER
- WTR — PROPOSED WATER SERVICE
- PROPOSED FENCE LINE
- 633.86FS — PROPOSED FINISHED SURFACE SPOT ELEVATION
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- 633.86FL — PROPOSED FLOW LINE ELEVATION
- 629.76FS — EXISTING FINISHED SURFACE SPOT ELEVATION

PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING 8" SANITARY SEWER MAIN AND REPORT ANY DISCREPANCIES TO ENGINEER

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CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

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AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

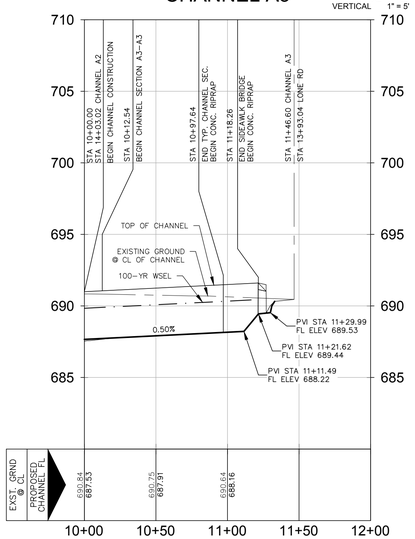
TRENCH EXCAVATION SAFETY PROTECTION

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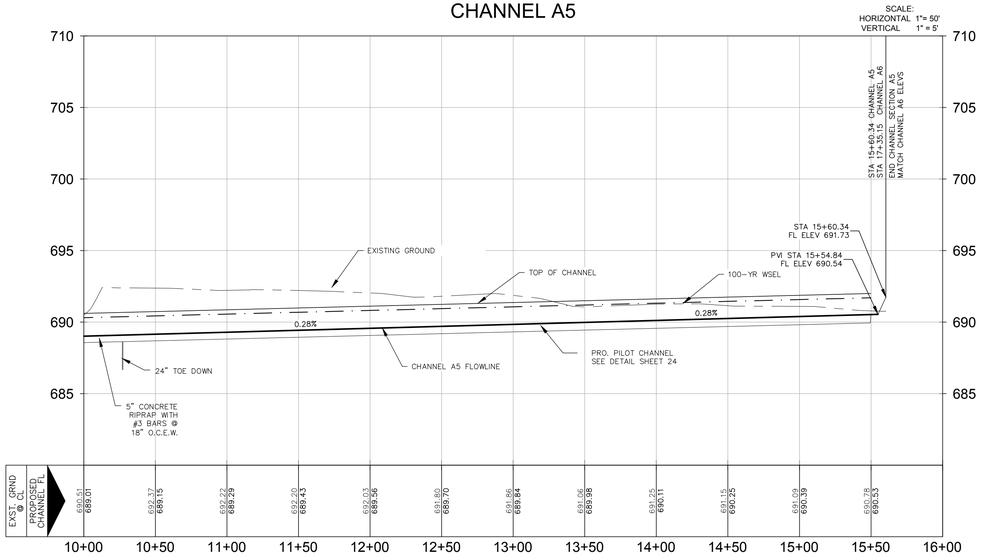
CHANNEL A3

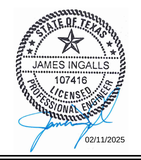
SCALE: HORIZONTAL 1"= 50' VERTICAL 1" = 5'



CHANNEL A5

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





YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

CHANNELS A3 & A5 PLAN & PROFILE

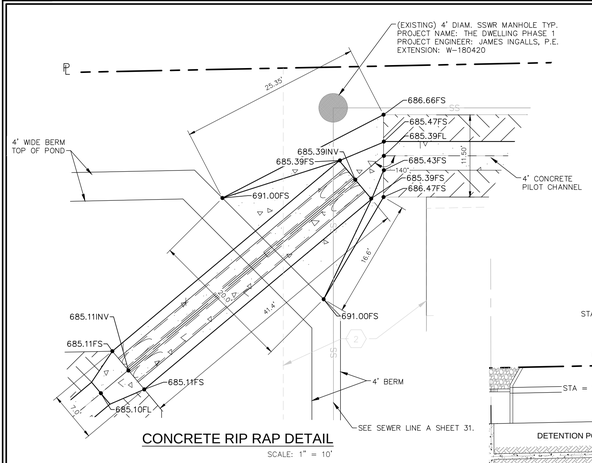
SHEET 20 OF 40

NO	DATE	ISSUES AND REVISIONS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

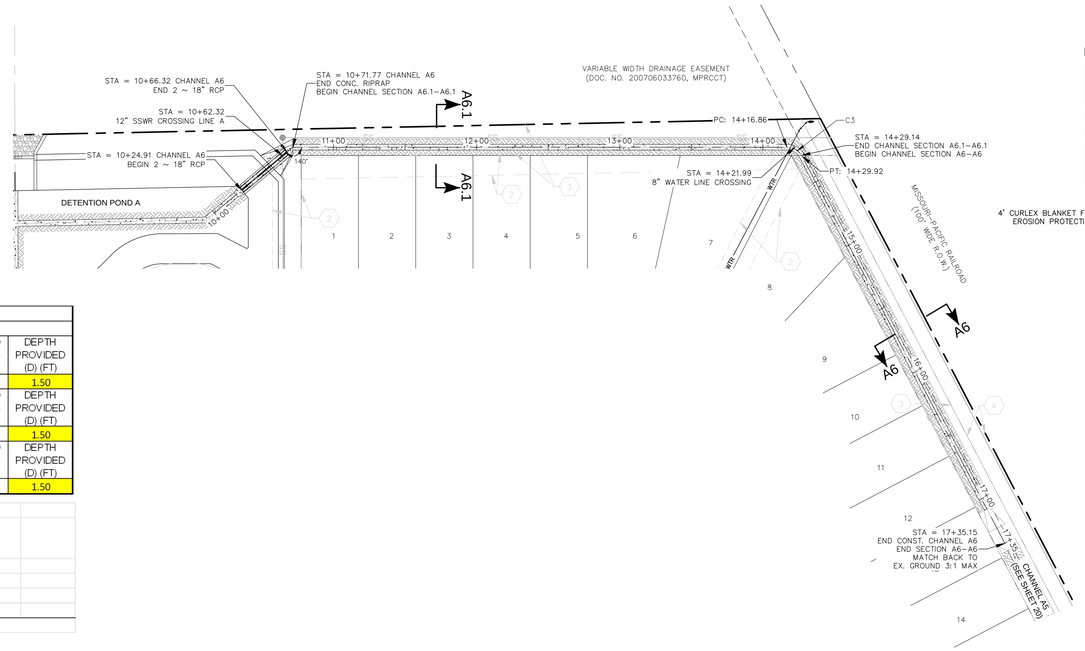
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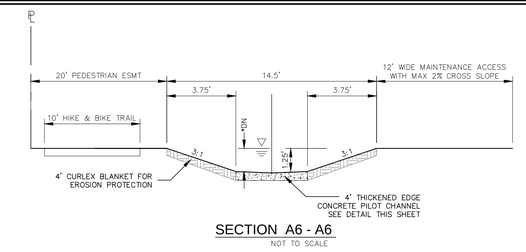
Drawing Name: N:\Projects\YE2001 Dwelling Phase 2\Civil\Construction Drawings\20 CHANNELS A3 & A5 PLAN & PROFILE.dwg User: cstherenewgelin Feb 06, 2025 - 12:59pm



CONCRETE RIP RAP DETAIL

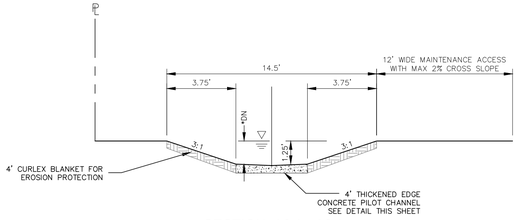
SCALE: 1" = 10'





SECTION A6 - A6

NOT TO SCALE



SECTION A6.1 - A6.1

NOT TO SCALE

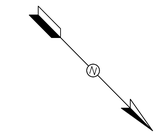
CHANNEL "A6" HYDRAULICS								
Q_2 (CFS)	S (%)	n	V_2 (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
3.89	0.30	0.028	1.51	0.55	6.67	0.04	0.59	1.50
Q_{25} (CFS)	S (%)	n	V_{25} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
9.04	0.30	0.031	1.79	0.87	8.62	0.05	1.37	1.50
Q_{100} (CFS)	S (%)	n	V_{100} (FT/S)	dn (FT)	Tw (FT)	ΔH (FT)	REQUIRED DEPTH (dr) (FT)	DEPTH PROVIDED (D) (FT)
13.74	0.30	0.033	1.95	1.09	9.91	0.06	1.15	1.50

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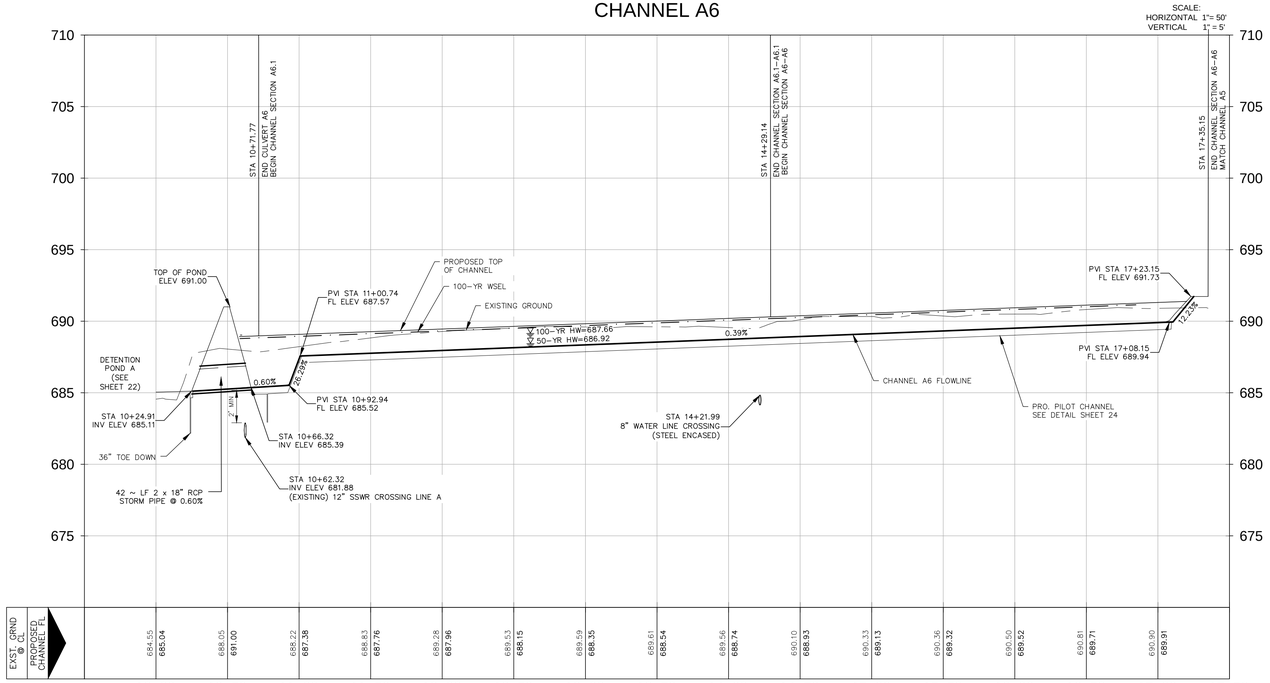


LEGEND

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- CONCRETE
- ROCK RIP–RAP
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- CHANNEL CENTERLINE
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CHANNEL A6

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DWELLING AT BRAUNFELS - PHASE II
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NEW BRAUNFELS, TX , 78130

CHANNEL A6
PLAN & PROFILE

SHEET 21 OF 40

NO	DATE	ISSUES AND REVISIONS
1	2–6–2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830–358–7127 ink–civil.com
TBPE FIRM F–13351

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Drawing Name: N:\Projects\YE1001 Dwelling Phase 2\Civil\Construction Drawings\07 CHANNEL A6 PLAN & PROFILE.dwg User: chadstephenson Feb 07, 2025 - 8:36am

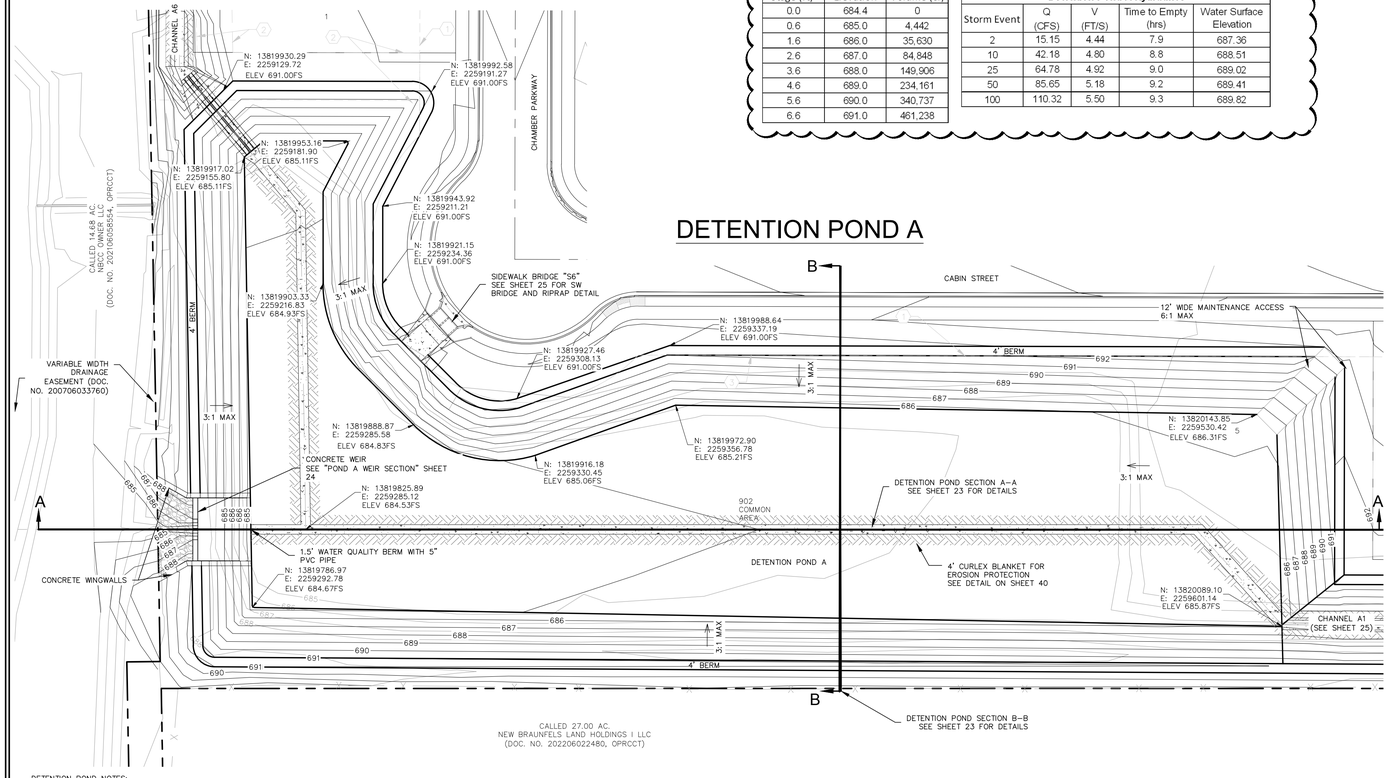
NOTE:

COMPACTION OF ALL EARTHEN EMBANKMENTS SHALL HAVE A NON-PERMEABLE CORE, SHALL BE BASED ON A GEOTECHNICAL INVESTIGATION OF THE SITE, AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR.

RETENTION POND NOTES

PROPOSED PONDS SHOWN ARE TO BE DETENTION/RETENTION BASINS IN ORDER TO MITIGATE THE INCREASE IN STORMWATER RUNOFF DOWN STREAM, AS WELL AS PROVIDE THE WATER QUALITY COMPONENT VIA EXTENDED DETENTION. THESE PONDS ARE PROPOSED TO HOLD WATER AND WILL BE UTILIZED AS AMENITY PONDS FOR THE SUBDIVISION.

REFERENCE THE LANDSCAPE PLANS FOR THE PROPOSED IMPROVEMENTS FOR THE VEGETATION, HARDSCAPE, AND POND AERATION IMPROVEMENTS.



Outlet Point A		
Storm	Exist Flow	Pro Flow
2-YR	15.8	15.2
10-YR	43.4	42.2
25-YR	65.1	64.8
100-YR	111.9	110.3

Overflow Weir A Calculations	Q(cfs)
Proposed 25-yr Flow	87.48
26.50' Rect Overflow Weir	113.11
Detained Outfall @ 100yr WSEL	110.32
Total Outfall Flow to Top of Berm	223.43

Detention Pond A Storage Summary		
Stage (ft)	Elevation	Volume (cf)
0.0	684.4	0
0.6	685.0	4,442
1.6	686.0	35,630
2.6	687.0	84,848
3.6	688.0	149,906
4.6	689.0	234,161
5.6	690.0	340,737
6.6	691.0	461,238

Detention Pond A Hydraulics				
Storm Event	Q (CFS)	V (FT/S)	Time to Empty (hrs)	Water Surface Elevation
2	15.15	4.44	7.9	687.36
10	42.18	4.80	8.8	688.51
25	64.78	4.92	9.0	689.02
50	85.65	5.18	9.2	689.41
100	110.32	5.50	9.3	689.82

DETENTION POND NOTES:

CONSTRUCTION SPECIFICATION – TOP SOIL

1. VEGETATION OF POND BOTTOM – THE WORK CONSISTS OF PLACEMENT OF TOP SOIL ON NEW EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS.

2. MATERIAL – THE TOPSOIL SHALL BE FERTILE SOIL, CONSISTING PRIMARILY OF CLAY AND CLAYEY MATERIALS, WITH A PLASTICITY INDEX GREATER THAN 15, AND SHALL BE FREE OF LARGE ORGANIC OR ROCK MATERIAL.

3. APPLICATION – TOPSOIL SHALL BE PLACED AT GRADES INDICATED ON THE PLANS AND ROLLED TO REDUCE EROSION. PERIODIC INSPECTION ARE REQUIRED AND ADDITIONAL TOPSOIL ADDED AS NEEDED UNTIL VEGETATION HAS ESTABLISHED

CONSTRUCTION SPECIFICATION – VEGETATION

1. VEGETATION OF EMBANKMENT – THE WORK CONSISTS OF ESTABLISHING VEGETATION ON NEW EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS.

2. MATERIAL – VEGETATION SHALL CONSIST OF "NATIVE SUN TURF GRASS" AS SUPPLIED BY NATIVE AMERICAN SEED IN JUNCTION, TX, CONSISTING OF 34% BLUE GRAMA AND 64% BUFFALO GRASS, OR ENGINEER APPROVED EQUAL. SEED MIXTURE SHALL CONSIST OF A PURE LIVE SEED OF 90-95%.

3. APPLICATION – THE SEED MIXTURE SHALL BE INSTALLED PER DISTRIBUTORS RECOMMENDATIONS AT A RATE OF 1 LB PER 400 SQFT. SEED MIXTURE SHALL BE WATERED AS REQUIRED UNTIL VEGETATION IS ESTABLISHED.

DRAINAGE INFRASTRUCTURE MAINTENANCE AND MONITORING GUIDELINES

- SEASONAL MOWING AND LAWN CARE – IF THE DETENTION POND IS MADE UP OF TURF GRASS, IT SHOULD BE MOWED AS NEEDED TO LIMIT VEGETATION HEIGHT TO 18 INCHES, USING A MULCHING MOWER (OR REMOVAL OF CLIPPINGS). IF NATIVE GRASSES ARE USED, THE POND MAY REQUIRE LESS FREQUENT MOWING, BUT A MINIMUM OF TWICE ANNUALLY. REGULAR MOWING SHOULD ALSO INCLUDE WEED CONTROL PRACTICES, HOWEVER HERBICIDE USE SHOULD BE KEPT TO A MINIMUM. HEALTHY GRASS CAN BE MAINTAINED WITHOUT USING FERTILIZERS BECAUSE RUNOFF USUALLY CONTAINS SUFFICIENT NUTRIENTS. IRRIGATION OF THE SITE CAN HELP ASSURE A DENSE AND HEALTHY VEGETATIVE COVER.
- INSPECTION – INSPECT DETENTION POND AT LEAST TWICE ANNUALLY FOR EROSION OR DAMAGE TO VEGETATION; HOWEVER, ADDITIONAL INSPECTION AFTER PERIODS OF HEAVY RUNOFF IS MOST DESIRABLE. MORE FREQUENT INSPECTIONS OF THE GRASS COVER DURING THE FIRST FEW YEARS AFTER ESTABLISHMENT WILL HELP TO DETERMINE IF ANY PROBLEMS ARE DEVELOPING, AND TO PLAN FOR LONG-TERM RESTORATIVE MAINTENANCE NEEDS. BARE SPOTS AND AREAS OF EROSION IDENTIFIED DURING SEMI-ANNUAL INSPECTIONS MUST BE REPLANTED AND RESTORED TO MEET SPECIFICATIONS.
- DEBRIS AND LITTER REMOVAL – THE DETENTION POND SHOULD BE KEPT FREE OF OBSTRUCTIONS TO REDUCE FLOATABLES BEING FLUSHED DOWNSTREAM, AND FOR AESTHETIC REASONS. THE NEED FOR THIS PRACTICE IS DETERMINED THROUGH PERIODIC INSPECTION, BUT SHOULD BE PERFORMED NO LESS THAN 2 TIMES PER YEAR.
- SEDIMENT REMOVAL – SEDIMENT MAY ACCUMULATE WITHIN THE DETENTION POND, PREVENTING UNIFORM OVERLAND FLOW. SEE ATTACHED EXHIBIT FOR SEDIMENT MARKER LOCATION NEAR THE POND OUTFALL. SEDIMENT IS TO BE REMOVED WHEN THE ACCUMULATED OR AT LEAST EVERY 10 YEARS.

INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

DETENTION POND NOTES

EARTHFILL

1. SCOPE
THE WORK CONSISTS OF THE CONSTRUCTION OF EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS.

EARTHFILL IS COMPOSED OF NATURAL EARTH MATERIALS THAT CAN BE PLACED AND COMPACTED BY CONSTRUCTION EQUIPMENT OPERATED IN A CONVENTIONAL MANNER.

EARTH BACKFILL IS COMPOSED OF NATURAL EARTH MATERIAL PLACED AND COMPACTED IN CONFINED SPACES OR ADJACENT TO STRUCTURES (INCLUDING PIPES) BY HAND TAMPING, MANUALLY DIRECTED POWER TAMPERS OR VIBRATING PLATES, OR THEIR EQUIVALENT.

2. MATERIAL
FILL MATERIALS SHALL CONTAIN NO FROZEN SOIL, SOD, BRUSH, ROOTS, OR OTHER PERISHABLE MATERIAL. UNLESS OTHERWISE NOTED ON THE PLANS, ROCK PARTICLES LARGER THAN 6" SHALL BE REMOVED PRIOR TO COMPACTION OF THE FILL.

THE TYPES OF MATERIAL USED IN THE VARIOUS FILLS SHALL BE AS LISTED AND DESCRIBED IN THE SPECIFICATIONS AND DRAWINGS.

3. FOUNDATION PREPARATION
FOUNDATIONS FOR EARTHFILL SHALL BE STRIPPED TO REMOVE VEGETATION AND OTHER UNSUITABLE MATERIAL OR SHALL BE EXCAVATED AS SPECIFIED.

EXCEPT AS OTHERWISE SPECIFIED, EARTH FOUNDATION SURFACES SHALL BE GRADED TO REMOVE SURFACE IRREGULARITIES AND SHALL BE SCARIFIED PARALLEL TO THE AXIS OF THE FILL OR OTHERWISE ACCEPTABLY SCORED AND LOOSENED TO A MINIMUM DEPTH OF 2 INCHES. THE MOISTURE CONTENT OF THE LOOSENED MATERIAL SHALL BE CONTROLLED AS SPECIFIED FOR THE EARTHFILL, AND THE SURFACE MATERIAL OF THE FOUNDATION SHALL BE COMPACTED AND BONDED WITH THE FIRST LAYER OF EARTHFILL AS SPECIFIED OR SUBSEQUENT LAYERS OF EARTHFILL.

EARTH ABUTMENT SURFACES SHALL BE FREE OF LOOSE, UNCOMPACTED EARTH IN EXCESS OF 2 INCHES IN DEPTH NORMAL TO THE SLOPE AND SHALL BE AT SUCH A MOISTURE CONTENT THAT THE EARTHFILL CAN BE COMPACTED AGAINST THEM TO PRODUCE A GOOD BOND BETWEEN THE FILL AND THE ABUTMENTS.

ROCK FOUNDATION AND ABUTMENT SURFACES SHALL BE CLEARED OF ALL LOOSE MATERIAL BY HAND OR OTHER EFFECTIVE MEANS AND SHALL BE FREE OF STANDING WATER WHEN FILL IS PLACED UPON THEM. OCCASIONAL ROCK OUTCROPS IN EARTH FOUNDATIONS FOR EARTHFILL, EXCEPT IN DAMS AND OTHER STRUCTURES DESIGNED TO RESTRAIN THE MOVEMENT OF WATER, SHALL NOT REQUIRE SPECIAL TREATMENT IF THEY DO NOT INTERFERE WITH COMPACTION OF THE FOUNDATION AND INITIAL LAYERS OF THE FILL OR THE BOND BETWEEN THE FOUNDATION AND THE FILL.

FOUNDATION AND ABUTMENT SURFACES SHALL BE NO STEEPER THAN ONE HORIZONTAL TO ONE VERTICAL UNLESS OTHERWISE SPECIFIED. TEST PITS OR OTHER CAVITIES SHALL BE FILLED WITH COMPACTED EARTHFILL CONFORMING TO THE SPECIFICATIONS FOR THE EARTHFILL TO BE PLACED UPON THE FOUNDATION.

4. PLACEMENT
EARTHFILL SHALL BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS. THE THICKNESS OF EACH LAYER BEFORE COMPACTION SHALL NOT EXCEED THE MAXIMUM THICKNESS SPECIFIED AS SHOWN ON THE DRAWINGS. MATERIALS PLACED BY DUMPING IN PILES OR WINDOWS SHALL BE SPREAD UNIFORMLY TO NOT MORE THAN THE SPECIFIED THICKNESS BEFORE BEING COMPACTED.

HAND COMPACTED EARTH BACKFILL SHALL BE PLACED IN LAYERS WHOSE THICKNESS BEFORE COMPACTION DOES NOT EXCEED THE MAXIMUM THICKNESS SPECIFIED FOR LAYERS OF EARTH BACKFILL COMPACTED BY MANUALLY DIRECTED POWER TAMPERS.

EARTH BACKFILL SHALL BE PLACED IN A MANNER THAT PREVENTS DAMAGE TO THE STRUCTURES AND ALLOWS THE STRUCTURES TO ASSUME THE LOADS FROM THE EARTH BACKFILL GRADUALLY AND UNIFORMLY. THE HEIGHT OF THE EARTH BACKFILL ADJACENT TO A STRUCTURE SHALL BE INCREASED AT APPROXIMATELY THE SAME RATE ON ALL SIDES OF THE STRUCTURE.

EARTHFILL AND EARTH BACKFILL IN DAMS, LEVEES, AND OTHER STRUCTURES DESIGNED TO RESTRAIN THE MOVEMENT OF WATER SHALL BE PLACED TO MEET THE FOLLOWING ADDITIONAL REQUIREMENTS:

(a) THE DISTRIBUTION OF MATERIALS THROUGHOUT EACH ZONE SHALL BE ESSENTIALLY UNIFORM, AND THE EARTHFILL SHALL BE FREE FROM LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFERING SUBSTANTIALLY IN TEXTURE, MOISTURE CONTENT, OR GRADATION FROM THE SURROUNDING MATERIAL. ZONE EARTHFILLS SHALL BE CONSTRUCTED CONCURRENTLY UNLESS OTHERWISE SPECIFIED.

(b) IF THE SURFACE OF ANY LAYER BECOMES TOO HARD AND SMOOTH FOR PROPER BOND WITH THE SUCCEEDING LAYER, IT SHALL BE SCARIFIED PARALLEL TO THE AXIS OF THE FILL TO A DEPTH OF NOT LESS THAN 2 INCHES BEFORE THE NEXT LAYER IS PLACED.

(c) THE TOP SURFACE OF EMBANKMENTS SHALL BE MAINTAINED APPROXIMATELY LEVEL DURING CONSTRUCTION WITH TWO EXCEPTIONS: A CROWN OR CROSS-SLOPE OF ABOUT 2 PERCENT SHALL BE MAINTAINED TO ENSURE EFFECTIVE DRAINAGE, OR AS OTHERWISE SPECIFIED FOR DRAINFILL OR SECTIONAL ZONES.

(d) DAM EMBANKMENTS SHALL BE CONSTRUCTED IN CONTINUOUS LAYERS FROM ABUTMENT TO ABUTMENT, EXCEPT WHERE OPENINGS TO FACILITATE CONSTRUCTION OR TO ALLOW THE PASSAGE OF STREAM FLOW DURING CONSTRUCTION ARE SPECIFICALLY AUTHORIZED IN THE CONTRACT.

(e) EMBANKMENTS BUILT AT DIFFERENT LEVELS AS DESCRIBED UNDER (C) OR (D) ABOVE SHALL BE CONSTRUCTED SO THAT THE SLOPE OF THE BONDING SURFACES BETWEEN EMBANKMENT IN PLACE AND EMBANKMENT TO BE PLACED IS NOT STEEPER THAN 3 FEET HORIZONTAL TO 1 FOOT VERTICAL. THE BONDING SURFACE OF THE EMBANKMENT IN PLACE SHALL BE STRIPPED OF ALL MATERIAL NOT MEETING THE REQUIREMENTS OF THIS SPECIFICATION AND SHALL BE SCARIFIED, MOISTENED, AND RECOMPACTED WHEN THE NEW EARTHFILL IS PLACED AGAINST IT. THIS ENSURES A GOOD BOND WITH THE NEW EARTHFILL AND OBTAINS THE SPECIFIED MOISTURE CONTENT AND DENSITY AT THE CONTACT OF THE INPLACE AND NEW EARTHFILLS.

(f) THE FILL MATERIAL SHALL BE FREE OF ORGANIC MATTER AND OTHER OBJECTIONABLE MATERIAL. PLACING AND SPREADING OF FILL SHALL BEGIN ON THE LOWEST PART OF THE WORKING AREA AND CONTINUE IN HORIZONTAL LAYERS OF APPROXIMATE UNIFORM THICKNESS, NOT EXCEEDING 9 INCHES BEFORE COMPACTION. WHERE THE BORROW YIELDS MATERIALS OF VARYING TEXTURE AND GRADATION, THE MORE IMPERVIOUS MATERIAL SHALL BE PLACED TOWARD THE WATERSIDE OF THE BERM. THE CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER THE AREA OF EACH LAYER IN A MANNER TO BREAK UP LARGE CLODS AND OBTAIN COMPACTION.

5. CONTROL OF MOISTURE CONTENT
DURING PLACEMENT AND COMPACTION OF EARTHFILL AND EARTH BACKFILL, THE MOISTURE CONTENT OF THE MATERIAL BEING PLACED SHALL BE MAINTAINED WITHIN THE SPECIFIED RANGE.

THE APPLICATION OF WATER TO THE EARTHFILL MATERIAL SHALL BE ACCOMPLISHED AT THE BORROW AREAS INSOFAR AS PRACTICABLE. WATER MAY BE APPLIED BY SPRINKLING THE MATERIAL AFTER PLACEMENT ON THE EARTHFILL, IF NECESSARY. UNIFORM MOISTURE DISTRIBUTION SHALL BE OBTAINED BY DISKING.

MATERIAL THAT IS TOO WET WHEN DEPOSITED ON THE EARTHFILL SHALL EITHER BE REMOVED OR BE DRIED TO THE SPECIFIED MOISTURE CONTENT PRIOR TO COMPACTION.

IF THE TOP SURFACE OF THE PRECEDING LAYER OF COMPACTED EARTHFILL OR A FOUNDATION OR ABUTMENT SURFACE IN THE ZONE OF CONTACT WITH THE EARTHFILL BECOMES TOO DRY TO PERMIT SUITABLE BOND, IT SHALL EITHER BE REMOVED OR SCARIFIED AND MOISTENED BY SPRINKLING TO AN ACCEPTABLE MOISTURE CONTENT BEFORE PLACEMENT OF THE NEXT LAYER OF EARTHFILL.

6. COMPACTION
EARTHFILL – EARTHFILL SHALL BE COMPACTED ACCORDING TO THE FOLLOWING REQUIREMENTS FOR THE CLASS OF COMPACTION SPECIFIED:

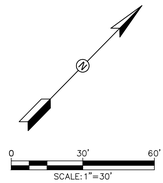
CLASS A COMPACTION – EACH LAYER OF EARTHFILL SHALL BE COMPACTED AS NECESSARY TO PROVIDE THE DENSITY OF THE EARTHFILL MATRIX NOT LESS THAN THE MINIMUM DENSITY SPECIFIED ON THE DRAWINGS. THE EARTHFILL MATRIX IS DEFINED AS THE PORTION OF THE EARTHFILL MATERIAL FINER THAN THE MAXIMUM PARTICLE SIZE USED IN THE COMPACTION TEST METHOD SPECIFIED.

COMPACTION OF ALL EARTHEN EMBANKMENTS SHALL HAVE A NON-PERMEABLE CORE, SHALL BE BASED ON A GEOTECHNICAL INVESTIGATION OF THE SITE, AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR.

7. REWORKING OR REMOVAL AND REPLACEMENT OF DEFECTIVE EARTHFILL
EARTHFILL PLACED AT DENSITIES LOWER THAN THE SPECIFIED MINIMUM DENSITY OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED ACCEPTABLE RANGE OF MOISTURE CONTENT OR OTHERWISE NOT CONFORMING TO THE REQUIREMENTS OF THE SPECIFICATIONS SHALL BE REWORKED TO MEET THE REQUIREMENTS OR REMOVED AND REPLACED BY ACCEPTABLE EARTHFILL. THE REPLACEMENT EARTHFILL AND THE FOUNDATION, ABUTMENT, AND EARTHFILL SURFACES UPON WHICH IT IS PLACED SHALL CONFORM TO ALL REQUIREMENTS OF THIS SPECIFICATION FOR FOUNDATION PREPARATION, APPROVAL, PLACEMENT, MOISTURE CONTROL, AND COMPACTION.

8. TESTING
DURING THE COURSE OF THE WORK, THE CONTRACTOR WILL PERFORM QUALITY CONTROL TEST REQUIRED TO IDENTIFY MATERIAL; DETERMINE COMPACTION CHARACTERISTICS; DETERMINE MOISTURE CONTENT; AND DETERMINE DENSITY OF EARTHFILL IN PLACE. TESTS PERFORMED WILL BE SUBMITTED TO THE ENGINEER OF RECORD TO VERIFY THAT THE EARTHFILLS CONFORM TO CONTRACT REQUIREMENTS OF THE SPECIFICATIONS.

DENSITIES OF EARTHFILL REQUIRING CLASS A COMPACTION WILL BE DETERMINED IN ACCORDANCE WITH ASTM D 698, D 1556, D 2167, D 2922, OR D 2937 EXCEPT THAT THE VOLUME AND MOIST WEIGHT OF INCLUDED ROCK PARTICLES LARGER THAN THOSE USED IN THE COMPACTION TEST METHOD SPECIFIED FOR THE TYPE OF FILL WILL BE DETERMINED AND DEDUCTED FROM THE VOLUME AND MOIST WEIGHT OF THE TOTAL SAMPLE BEFORE COMPUTATION OF DENSITY OR, IF USING THE NUCLEAR GAUGE, ADDED TO THE SPECIFIED DENSITY TO BRING IT TO THE MEASURE OF EQUIVALENT COMPOSITION FOR COMPARISON (SEE ASTM D 4718). THE DENSITY SO COMPUTED IS USED TO DETERMINE THE PERCENT COMPACTION OF THE EARTHFILL MATRIX. UNLESS OTHERWISE SPECIFIED, MOISTURE CONTENT IS DETERMINED BY ONE OF THE FOLLOWING METHODS: ASTM D 2216, D 3017, D 4643, D 4944, OR D 4959.



LEGEND

- 900 — EXISTING CONTOUR
- 900 — PROPOSED CONTOUR
- DRAINAGE FLOW ARROW
- GRADE BREAK/SWALE
- CONCRETE
- ROCK RIP-RAP
- 4' CURLEX BLANKET

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

DETENTION POND PLAN & NOTES

SHEET 22 OF 40

NO	DATE	ISSUES AND REVISIONS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

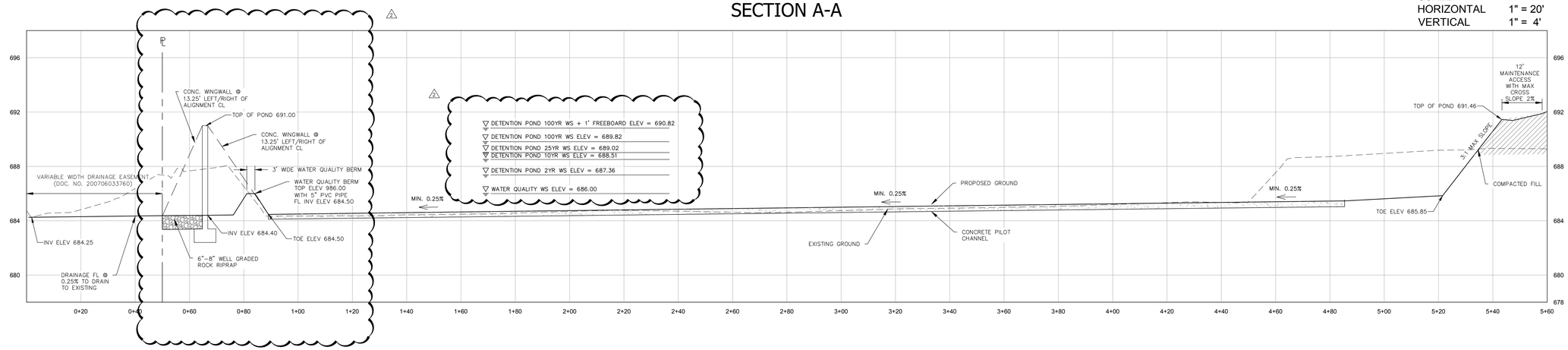
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SECTION A-A

SCALE:
HORIZONTAL 1" = 20'
VERTICAL 1" = 4'



SECTION B-B

SCALE:
HORIZONTAL 1" = 20'
VERTICAL 1" = 4'

SEE SHEET 22 FOR SECTION MARKER LOCATIONS

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

DETENTION POND
CROSS-SECTIONS

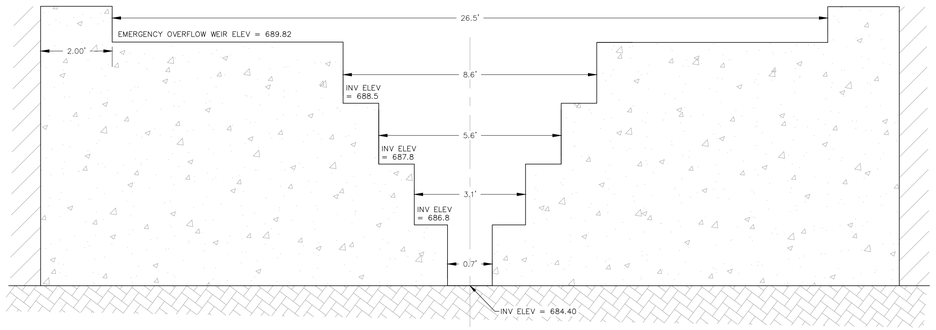
SHEET 23 OF 40

NO	DATE	ISSUES AND REVISIONS
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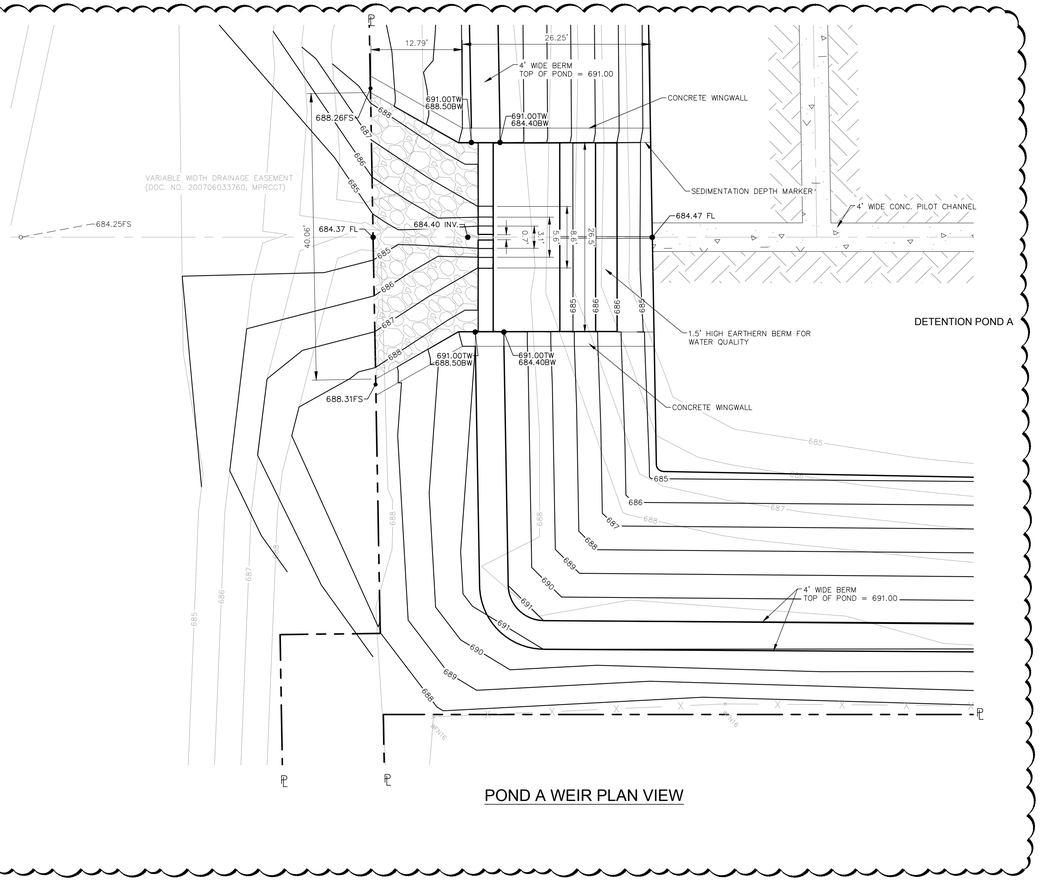
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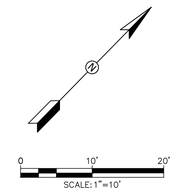
POND A WEIR SECTION FRONT VIEW

NOT TO SCALE

CONCRETE NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" (3000 PSI).
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. ALL REINFORCING SHALL HAVE A MINIMUM COVER OF 2 INCHES.
4. UNLESS OTHERWISE NOTED, ALL BARS SHALL BE CENTERED WITHIN CONCRETE THICKNESS.
5. NON-SHRINKING GROUT OR APPROVED EPOXY SHALL BE USED WITH DOWEL BARS. IN LIEU OF DRILLING AND GROUTING, DOWELS MAY BE PLACED WITH FIRST STRUCTURE OR APRON CONSTRUCTED.



POND A WEIR PLAN VIEW



PROPERTY LINE

633.86FS — PROPOSED FINISHED SURFACE SPOT ELEVATION

633.86TW — PROPOSED TOP OF WALL ELEVATION

633.86BW — PROPOSED BOTTOM OF WALL ELEVATION

633.86INV — PROPOSED INVERT ELEVATION

633.86FL — PROPOSED FLOW LINE ELEVATION

629.76FS — EXISTING FINISHED SURFACE SPOT ELEVATION

COMPACTED FILL

CONCRETE

ROCK RIP-RAP

CHANNEL CENTERLINE

Water Quality Summary Table			
Ex Imp Cover (SF)	Pro Imp Cover (Streets) (SF)	Pro Imp Cover (Rooftops and Conc) (SF)	Imp Cover Increase (SF)
0	346,437	505,400	851,837
		Water Quality Volume Required* (CF)	35,493
		Water Quality Volume Required (CF) + 20%	42,592

**WQV Required is based off Eq. 13-1 WQV (cf) = 0.5inches/12 x (IC Area Post Construction - IC Area Pre Construction)*

Water Quality Pond A	
Water Quality Volume %	100%
Water Quality Volume Needed	*42,592*
WQ Basin Width	88
WQ Basin Length Required (Inlet to Outlet)	*176*
WQ Basin Length Provided (Inlet to Outlet)	410
Water Quality Volume Provided (CF)	54120
Flow to Empty WQV in 24 hr (cfs)	0.626
5" Opening	0.51

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

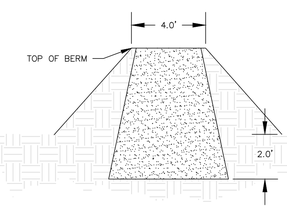
TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



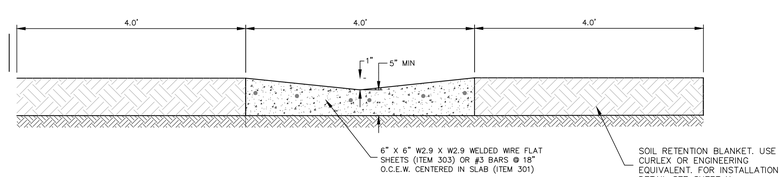
FILL BERM SECTION (TYP)

Scale: NTS

IMPERVIOUS CORE COMPACTION NOTE

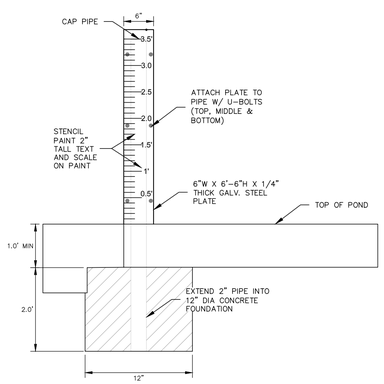
COMPACTED CLAY CORE TO BE PLACED A MINIMUM OF 2' BELOW EXISTING GRADE ALONG THE ENTIRE LENGTH OF THE BERM. MATERIAL TO HAVE A PI OF 30 OR GREATER, MINIMUM COMPACTED DRY DENSITY OF 90% AND GROUND CONTENT NO MORE THAN 5% BY WEIGHT LARGER THAN NO.4 SIEVE.

NOTE: IMPERVIOUS CLAY BERM CORE AND CLAY LINER SHOWN ARE TO BE CONSIDERED SUBSIDIARY TO POND EXCAVATION. (NO SEPARATE PAY ITEM)



PILOT CHANNEL DETAIL

NOT TO SCALE



SEDIMENTATION DEPTH MARKERS

NOT TO SCALE



YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

DETENTION POND DETAILS

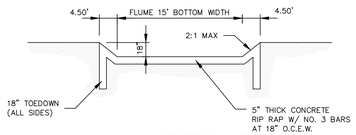
SHEET 24 OF 40

NO	DATE	ISSUES AND REVISIONS
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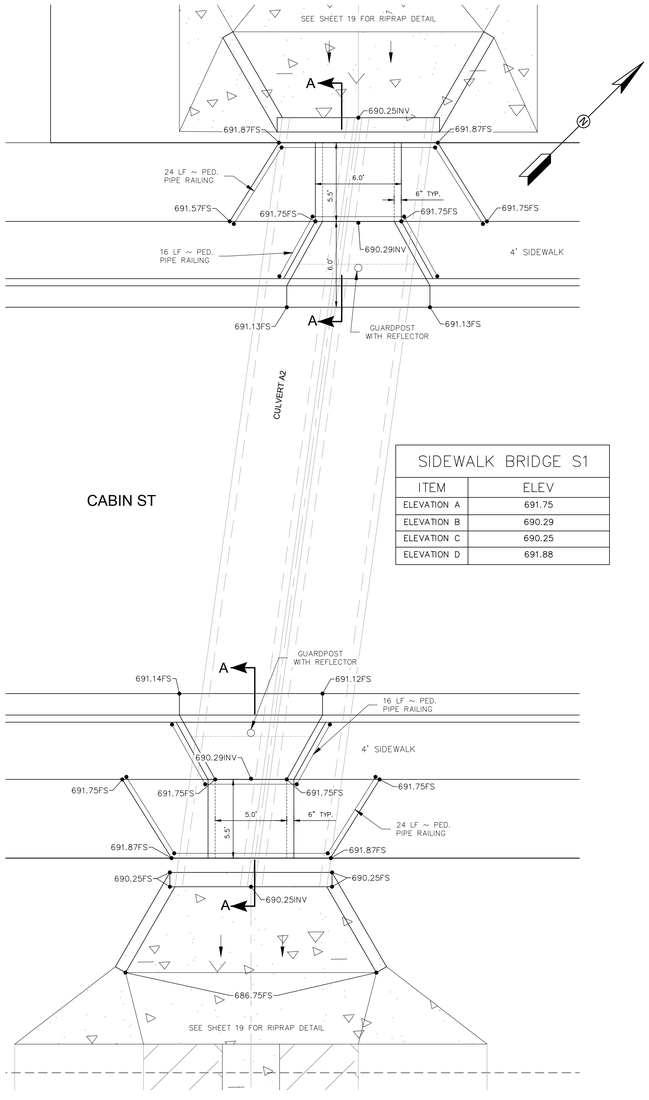
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SECTION B-B

SCALE: NTS

SIDEWALK BRIDGE "S1" SUMMARY						
STORM EVENT	CULVERT SIZE	H.W. ELEV	CULVERT Q (CFS)	CULVERT V (FT/S)	WEIR Q (CFS)	TOTAL Q (CFS)
10-YEAR	1 - 5'x1'	690.79	4.97	3.78	0.00	4.97
100-YEAR		691.06	9.44	4.60	0.00	9.44



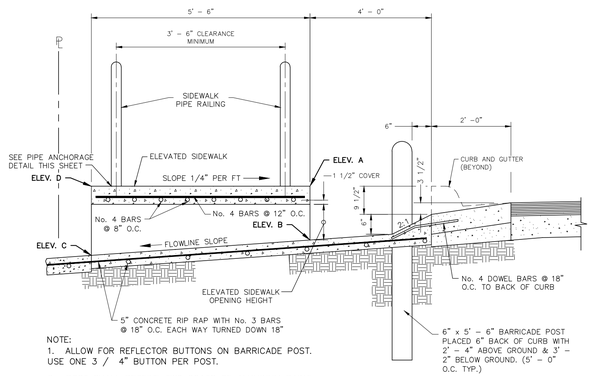
SIDEWALK BRIDGE S1	
ITEM	ELEV
ELEVATION A	691.75
ELEVATION B	690.29
ELEVATION C	690.25
ELEVATION D	691.88

SIDEWALK BRIDGE "S1" DETAIL

SCALE – 1"= 5'

NOTE: SIDEWALK BRIDGE SEE SECTION A–A THIS SHEET

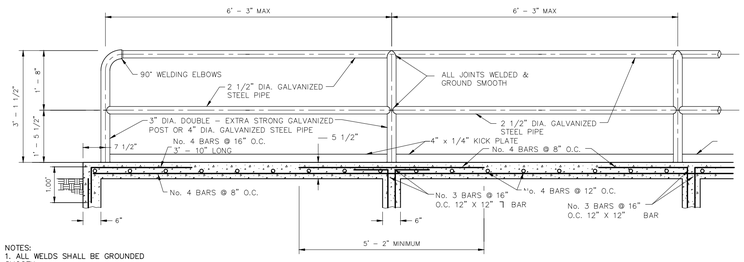
NOTE: DETAIL IS FOR BOTH LEFT AND RIGHT SIDEWALK BRIDGES ON STREET A



NOTE:
1. ALLOW FOR REFLECTOR BUTTONS ON BARRICADE POST. USE ONE 3 / 4" BUTTON PER POST.
2. POST SHALL RECEIVE TWO COATS OF ALUMINUM PAINT.

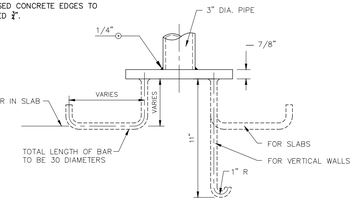
SECTION A-A ELEVATED SIDEWALK

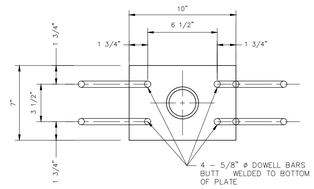
NOT TO SCALE



NOTES:
1. ALL WELDS SHALL BE GROUNDED SMOOTH.
2. HANDRAIL SHALL BE PRIMED W/RED OXIDE AND PAINTED W/(2) COATS OF AN EXTERIOR RATED LATEX ENAMEL. COLOR TO BE DETERMINED BY OWNER.
3. ALL EXPOSED CONCRETE EDGES TO BE CHAMFERED 1".

TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION

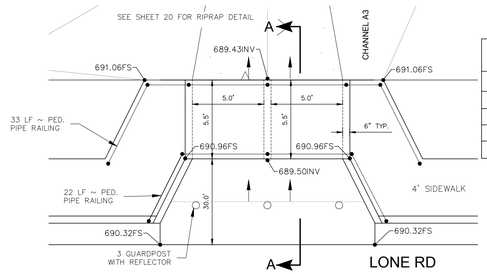




PIPE ANCHORAGE DETAILS

NOT TO SCALE

SIDEWALK BRIDGE "S3" SUMMARY						
STORM EVENT	CULVERT SIZE	H.W. ELEV	CULVERT Q (CFS)	CULVERT V (FT/S)	WEIR Q (CFS)	TOTAL Q (CFS)
10-YEAR	2 - 5'x1'	690.66	14.38	4.23	0.00	14.38
100-YEAR		691.01	27.69	5.17	0.00	27.69



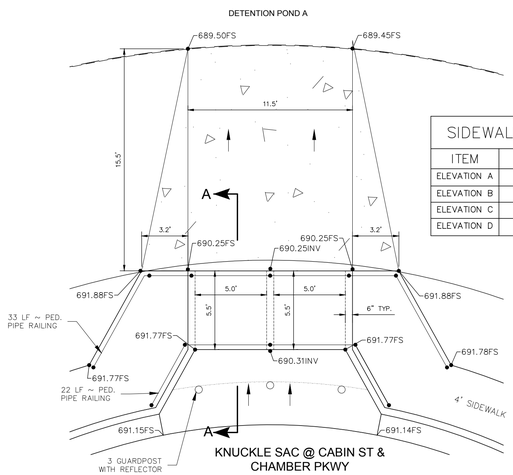
SIDEWALK BRIDGE S3	
ITEM	ELEV
ELEVATION A	690.96
ELEVATION B	689.50
ELEVATION C	689.43
ELEVATION D	691.06

SIDEWALK BRIDGE "S3" DETAIL

SCALE – 1"= 5'

NOTE: SIDEWALK BRIDGE SEE SECTION A–A THIS SHEET

SIDEWALK BRIDGE "S6" SUMMARY						
STORM EVENT	CULVERT SIZE	H.W. ELEV	CULVERT Q (CFS)	CULVERT V (FT/S)	WEIR Q (CFS)	TOTAL Q (CFS)
10-YEAR	2 - 5'x1'	690.83	15.18	4.44	0.00	15.18
100-YEAR		691.19	29.01	5.37	0.00	29.01



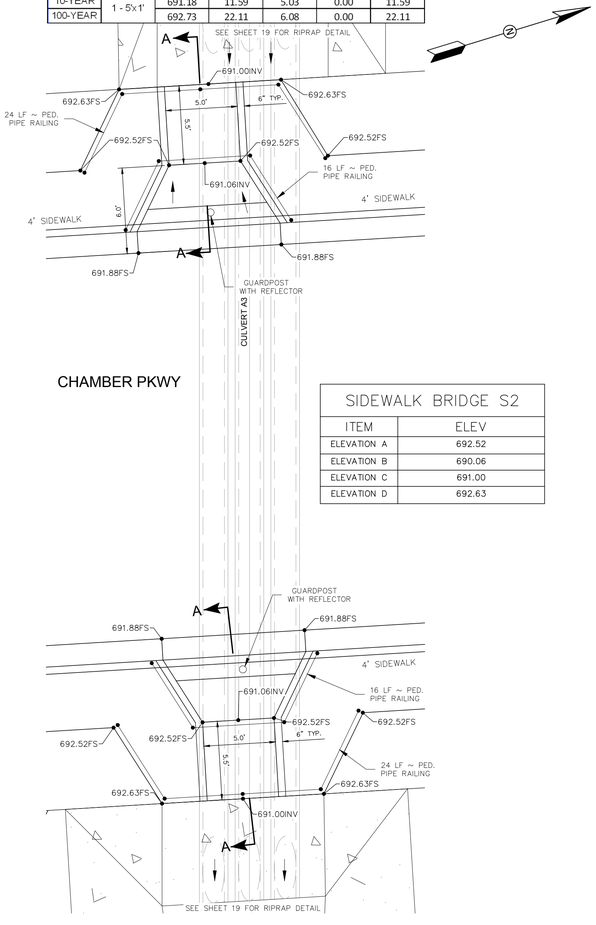
SIDEWALK BRIDGE S6	
ITEM	ELEV
ELEVATION A	691.77
ELEVATION B	690.31
ELEVATION C	690.25
ELEVATION D	691.88

SIDEWALK BRIDGE "S6" DETAIL

SCALE – 1"= 5'

NOTE: SIDEWALK BRIDGE SEE SECTION A–A THIS SHEET

SIDEWALK BRIDGE "S2" SUMMARY						
STORM EVENT	CULVERT SIZE	H.W. ELEV	CULVERT Q (CFS)	CULVERT V (FT/S)	WEIR Q (CFS)	TOTAL Q (CFS)
10-YEAR	1 - 5'x1'	691.18	11.59	5.03	0.00	11.59
100-YEAR		692.73	22.11	6.08	0.00	22.11



SIDEWALK BRIDGE S2	
ITEM	ELEV
ELEVATION A	692.52
ELEVATION B	690.06
ELEVATION C	691.00
ELEVATION D	692.63

SIDEWALK BRIDGE "S2" DETAIL

SCALE – 1"= 5'

NOTE: SIDEWALK BRIDGE SEE SECTION A–A THIS SHEET

NOTE: DETAIL IS FOR BOTH LEFT AND RIGHT SIDEWALK BRIDGES ON CHAMBER PKWY

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

DRAINAGE DETAILS I

SHEET 25 OF 40

NO	DATE	ISSUES AND REVISIONS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\25 DRAINAGE DETAILS I.dwg User: cotherwisehogelin Feb 06, 2025 - 12:57pm

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

Maximum Wingwall Height Hw	Dimensions W	X	Y	Z	Variable Reinforcing Bars J1 Size	Bars J1 Spa	Bars J2 Size	Bars J2 Spa	Estimated Quantities per ft of wing length (2-wings) ④ Reinf (Lb/Ft)	Conc (CY/Ft)	Estimated Quantities per ft of Toewall (1-toewall) Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	33.73	0.248		
3'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.07	0.261		
3'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.74	0.273		
4'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	38.41	0.285		
4'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	41.75	0.330		
5'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.09	0.343		
5'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.75	0.355		
6'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	46.42	0.367		
7'-0"	3'-8"	1'-9"	1'-3"	7"	#4	1'-0"	#4	1'-0"	52.77	0.414		
8'-0"	4'-2"	2'-0"	1'-6"	8"	#5	1'-0"	#4	1'-0"	60.19	0.486		
9'-0"	4'-8"	2'-3"	1'-9"	8"	#4	6"	#4	6"	81.49	0.535		
10'-0"	5'-2"	2'-6"	2'-0"	8"	#5	6"	#4	6"	97.25	0.584		
11'-0"	5'-8"	2'-9"	2'-3"	8"	#6	6"	#5	6"	133.65	0.634		
12'-0"	6'-2"	3'-0"	2'-6"	9"	#7	6"	#5	6"	162.29	0.721		
13'-0"	6'-8"	3'-3"	2'-9"	11"	#7	6"	#5	6"	178.80	0.856		
14'-0"	7'-2"	3'-6"	3'-0"	1'-0"	#8	6"	#5	6"	216.78	0.959		
15'-0"	7'-8"	3'-9"	3'-3"	1'-1"	#9	6"	#6	6"	283.06	1.068		
16'-0"	8'-2"	4'-0"	3'-0"	1'-3"	#9	6"	#6	6"	297.02	1.234		

TABLE OF WINGWALL REINFORCING (2-wings)

Bar	Size	No.	Spa
D	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

Bar	Size	No.	Spa
L	#4	~	1'-0"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

WING DIMENSION FORMULAS:
(All values are in Feet.)

Hw = Height of wingwall
SL:1 = Side slope ratio (horizontal:1 vertical)
Lw = Length of wingwall
Ltw = Culvert toewall length
N = Number of culvert spans

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

Hw = H + T + C − 0.250
A = (Hw − 0.333') (SL)
B = (A) tangent (30°)
Lw = (A) ÷ cosine (30°)

For cast-in-place culverts:
Ltw = (N) (S) + (N + 1) (U)

For precast culverts:
Ltw = (N) (2U + S) + (N − 1) (0.5') + cosine (θ)
Total Wingwall Area (two wings − SF) = (Hw + 0.333') (Lw)

① Extend Bars P 3'-0" minimum into bottom slab of box culvert.

② Adjust as necessary to maintain 1 1/2" clear cover and 4" minimum between bars.

③ Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings, multiply the tabulated values by Lw.

④ Recommended values of side slope are: 2:1, 3:1, 4:1, and 6:1.

⑤ When shown elsewhere on the plans, construct 5" deep concrete riprap. Payment for riprap is as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, provide a 6' wide by 1'-0" deep reinforced concrete riprap channel at the toe of the riprap adjacent to natural ground; reinforce the toewall by extending typical riprap reinforcing into the toewall; and extend construction joints or grooved joints oriented in the direction of flow across the full distance of the riprap at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B will not be required.

⑥ At Contractor's option, culvert toewall may be ended flush with wingwall toewall. Adjust reinforcing as needed.

⑦ 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.

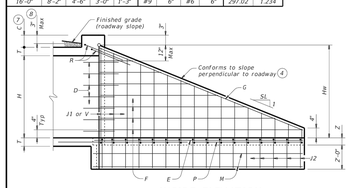
⑧ For vehicle safety, the following requirements must be met:
- For structures without bridge rail, construct curbs no more than 3" above finished grade.
- For structures with bridge rail, construct curbs flush with finish grade.

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.

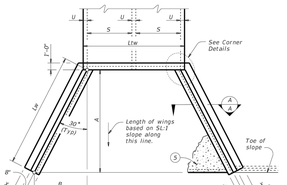
MATERIAL NOTES:
Provide Class C concrete (f'c=3,600 psi).
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
In riprap concrete synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing unless noted otherwise.

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.
See Box Culvert Supplement (BCS) standard sheet for additional dimensions and information.
The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

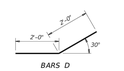
Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

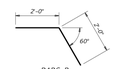


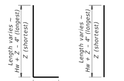
INSIDE ELEVATION
(Showing reinforcing. Culvert and culvert toewall reinforcing not shown for clarity.)

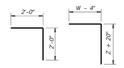


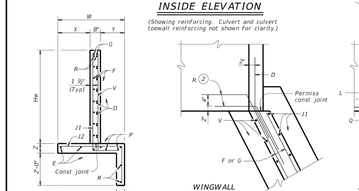
PLAN
(Showing dimensions.)


BARS D


BARS R

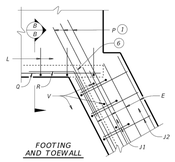

BARS J1 BARS V

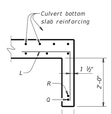

BARS L BARS J2



SECTION A-A

CORNER DETAILS
(Culvert and culvert toewall reinforcing not shown for clarity.)





SECTION B-B ⑤

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS
WITH FLARED WINGS FOR
0° SKEW BOX CULVERTS

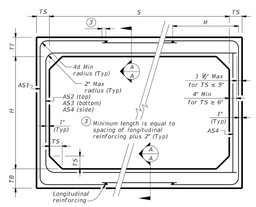
FW-0

FILE:	fw0ddn20.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: TxDOT
©TxDOT	February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS		DIST	COUNTY		SHEET NO.

BOX DATA

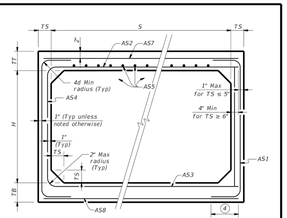
SECTION DIMENSIONS S (ft.)	H (ft.)	TT (in.)	TB (in.)	TS (in.)	Fill Height (ft.)	H (Min) (in.)	REINFORCING (sq. in. / ft.) ② AS1	AS2	AS3	AS4	AS5	AS7	AS8	① Unit Weight (tons)
4	2	7.5	6	5	< 2	~	0.18	0.27	0.15	0.12	0.18	0.18	0.14	4.5
4	2	5	5	5	2 < 3	38	0.18	0.19	0.17	0.12	-	-	-	3.6
4	2	5	5	5	3 - 5	38	0.13	0.13	0.13	0.12	-	-	-	3.6
4	2	5	5	5	10	38	0.12	0.12	0.12	0.12	-	-	-	3.6
4	2	5	5	5	15	38	0.14	0.16	0.16	0.12	-	-	-	3.6
4	2	5	5	5	20	38	0.18	0.20	0.21	0.12	-	-	-	3.6
4	2	5	5	5	25	38	0.23	0.25	0.25	0.12	-	-	-	3.6
4	2	5	5	5	30	38	0.28	0.30	0.30	0.12	-	-	-	3.6
4	2	7.5	6	5	< 2	~	0.18	0.31	0.18	0.12	0.18	0.18	0.14	5.0
4	3	5	5	5	2 < 3	38	0.15	0.23	0.20	0.12	-	-	-	4.1
4	3	5	5	5	3 - 5	38	0.12	0.16	0.16	0.12	-	-	-	4.1
4	3	5	5	5	10	38	0.12	0.14	0.14	0.12	-	-	-	4.1
4	3	5	5	5	15	38	0.12	0.18	0.18	0.12	-	-	-	4.1
4	3	5	5	5	20	38	0.14	0.23	0.24	0.12	-	-	-	4.1
4	3	5	5	5	25	38	0.17	0.29	0.29	0.12	-	-	-	4.1
4	3	5	5	5	30	38	0.21	0.35	0.35	0.12	-	-	-	4.1
4	4	7.5	6	5	< 2	~	0.18	0.33	0.20	0.12	0.18	0.18	0.14	5.5
4	4	5	5	5	2 < 3	38	0.12	0.26	0.23	0.12	-	-	-	4.6
4	4	5	5	5	3 - 5	38	0.12	0.18	0.18	0.12	-	-	-	4.6
4	4	5	5	5	10	38	0.12	0.15	0.15	0.12	-	-	-	4.6
4	4	5	5	5	15	38	0.12	0.19	0.20	0.12	-	-	-	4.6
4	4	5	5	5	20	38	0.12	0.25	0.25	0.12	-	-	-	4.6
4	4	5	5	5	25	38	0.14	0.31	0.31	0.12	-	-	-	4.6
4	4	5	5	5	30	38	0.17	0.37	0.37	0.12	-	-	-	4.6

① For box length = 8'-0"
② AS1 thru AS4, AS7 and AS8 are minimum required areas of reinforcement per linear foot of box length. AS5 is minimum required area of reinforcement per linear foot of box width.



CORNER OPTION "A" CORNER OPTION "B"

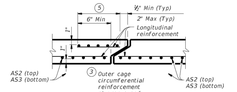
FILL HEIGHT 2 FT AND GREATER



CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT LESS THAN 2 FT

④ Length is equal to spacing of longitudinal reinforcing plus 2". (10" Min) (Typ)



SECTION A-A
(Showing top and bottom slab joint reinforcement.)

MATERIAL NOTES:
Provide 0.03 sq. in./ft. minimum longitudinal reinforcement at each face in slabs and walls. This minimum requirement may be met by the transverse wires when wire mesh reinforcement is used.
Provide Class H concrete (f'c = 5,000 psi).

GENERAL NOTES:
Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.
See Box Culverts Precast Miscellaneous Details (SCP-MD) standard sheet for details and notes not shown.
In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design f'c/f height in the table. Submit shop plans for alternate designs in accordance with Item "Precast Concrete Structural Members (Fabrication)".

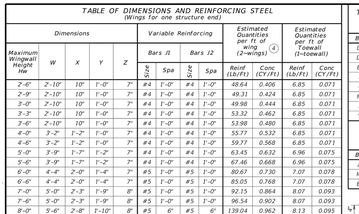
HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

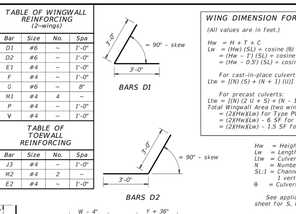
SINGLE BOX CULVERTS
PRECAST
4'-0" SPAN

SCP-4

FILE:	scp04ddn20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT	February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS		DIST	COUNTY		SHEET NO.



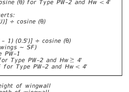
INSIDE ELEVATION
(Showing reinforcing. Culvert and culvert toewall reinforcing not shown for clarity.)



PLAN
(Showing dimensions.)

BARS D1


BARS D2


BARS J1 BARS J2 BARS J3 BARS V


BARS L BARS J2

WING DIMENSION FORMULAS:
(All values are in feet.)

Hw = H + T + C
Lw = (Hw) (SL) + cosine (θ) for Type PW-1
= (Hw − 1) (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) (S) + (N + 1) (U) + 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-2 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 finish grade.

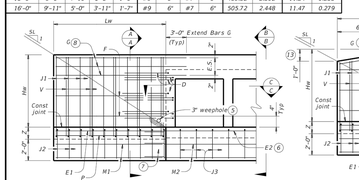
Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
⑪ 1'-0" typical. 2'-3" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elsewhere in the plans.
⑫ 3'-0" for Hw < 4'.
⑬ 6" for Hw < 4'.

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.

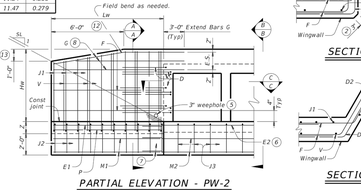
MATERIAL NOTES:
Provide Class C concrete (f'c=3,600 psi).
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.

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.

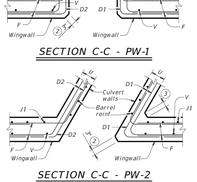
Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.



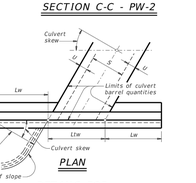
PARTIAL ELEVATION - PW-1



PARTIAL ELEVATION - PW-2



SECTION C-C - PW-1



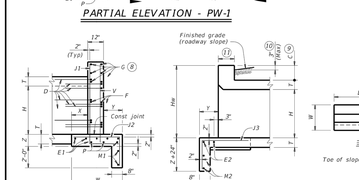
SECTION C-C - PW-2

Texas Department of Transportation — Bridge Division Standard

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

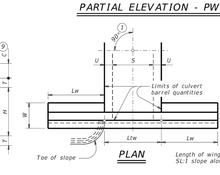
PW

FILE:	pw01ddn20.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: TxDOT
©TxDOT	February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS		DIST	COUNTY		SHEET NO.



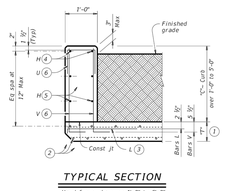
SECTION A-A
(Showing wing reinforcement.)

SECTION B-B
(Showing wing reinforcement.)

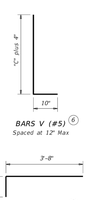


DETAILS FOR
NON-SKEWED BOX CULVERTS

DETAILS FOR
SKEWED BOX CULVERTS
(Skewed 30° skew.)



TYPICAL SECTION
Used for curbs over 1'-0" to 5'-0"



① "T" is equal to the culvert top slab thickness. For precast boxes with slabs less than 8" thick, see SCP-MD standard for additional details.
② Adjust normal culvert slab bars as necessary to clear obstructions.
③ Place bars L as shown. Tilt hook as necessary to maintain cover.
④ Place normal culvert curb bars H(#4) as shown. Adjust as necessary to clear obstructions.
⑤ Additional bars H(#4) as required to maintain 12" Max spacing.
⑥ Replace normal culvert curb bars K with one bar U and two bars V as shown spaced at 12" Max. Adjust length of bars V as necessary to maintain clear cover.
⑦ Optional bars L are to be used only for precast box culverts with 7'-0" closure pour.
⑧ Quantities shown are for Contractor's information only. Quantities are per linear foot of curb length. The value in table can be interpolated for intermediate values of curb height, "C". Quantity includes bars K (when applicable).

TABLE OF ESTIMATED CURB QUANTITIES ⑧

Curb Height "C"	Conc (CY/LF)	Reinf Steel (LB/LF)
1'-0"	0.037	10.4
1'-6"	0.056	14.5
2'-0"	0.074	15.6
2'-6"	0.093	18.0
3'-0"	0.111	19.0
3'-6"	0.130	21.3
4'-0"	0.148	22.4
4'-6"	0.167	24.8
5'-0"	0.185	25.9

CONSTRUCTION NOTES:
Adjust reinforcing steel as necessary to provide 1 ½" cover.
For vehicle safety, top of the curb must not project more than 3" above the finished grade.

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) minimum for curbs.
Provide bar laps, where required, as follows:
• Uncoated or galvanized − #4 = 1'-8" Min

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
These extended curb details have sufficient strength to allow the use of railing on top of the curb if desired. These details are suitable for use with PR11, PR22 and PR3 type rails. These details are not suitable for the mounting of other rail types. For new construction using T631 or T631LS railing, use the T631-CM standard.
This Curb is considered as part of the Box Culvert for payment.

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

Texas Department of Transportation — Bridge Division Standard

EXTENDED CURB DETAILS
FOR BOX CULVERTS WITH
CURBS OVER 1'-0" TO 5'-0" TALL

ECD

FILE:	ecdddn20.dgn	DN: GAF	CK: TxDOT	DW: TxDOT	CK: GAF
©TxDOT	February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS		DIST	COUNTY		SHEET NO.

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

DRAINAGE DETAILS II

SHEET 26 OF 40

NO	DATE	ISSUES AND REVISIONS
1		

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830−358−7127 ink−civil.com
TBPE FIRM F−13351

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\ck\BRAINAGE DETAILS 1.dwg User: cotherin Feb 06, 2025 - 12:57pm

GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION
THIS ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TOO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTION TESTING AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

SCARIFYING THE AREA TO BE FILLED
ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL MATERIAL
IS TO BE PLACED, AND SURFACE SHALL BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"). ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED PRIOR TO FIELD DENSITY TESTING.

COMPACTING THE AREA TO BE FILLED
FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS. THE AREA SHALL BE BROUGHT TO ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE THD-TEX-113-E COMPACTION PROCEDURE. ALL AREAS EXCEEDING (6") SIX INCHES IN DEPTH, MUST MEET WITH FHA/HUD HANDBOOK 4140.3D SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79G.

FILL MATERIALS
THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH.

DEPTH AND MIXING OF FILL LAYERS
THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THE STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON THE COMPACTION EQUIPMENT OF THE DEMONSTRATED CAPABILITY.

ROCK
WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED.

COMPACTION OF FILL LAYER
COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

COMPACTION OF SLOPES
THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTING OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TOO DENSE FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACE MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT AS THIS FILL PROGRESSES OR AFTER THE FILL HAS BEEN BROUGHT TO ITS TOTAL HEIGHT.

DENSITY TEST
FIELD DENSITY TESTS SHALL BE PERFORMED ON ALL LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE TWELVE INCHES (12"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR TO CONDUCT TESTS SHALL BE AT LEAST THE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL AND APPROXIMATE DESIRED TIME OF TESTING. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL REQUIRED THE RETESTING. GENERALLY, THE SPECIFIC TESTING WILL BE AS FOLLOWS AND CONDUCTED BY A GEOTECHNICAL ENGINEER OR STAFF.

1. THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
2. THE FIRST LIFT OF COMPACTED FILL (GENERALLY 8-12 IN.) SHALL BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. ANY AREAS SUPPORTING THE PROPOSED STRUCTURES REQUIRING FILL SHALL BE TESTED FOR DENSITY COMPLIANCE.
3. FILL AREAS SHALL BE TESTED AT A MAXIMUM OF EACH TWELVE INCHES (12") OF FILL.
4. TEST RESULTS WILL BE PROVIDED BY THE FIELD TECHNICIAN TO THE CONTRACTOR WHEN POSSIBLE: HOWEVER, ALL TEST RESULTS ARE TO BE REVIEWED BY THE GEOTECHNICAL ENGINEER FOR COMPLIANCE. THE ENGINEER WILL NOTIFY THE CONTRACTOR OF ALL TEST RESULTS.

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 IN., AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.

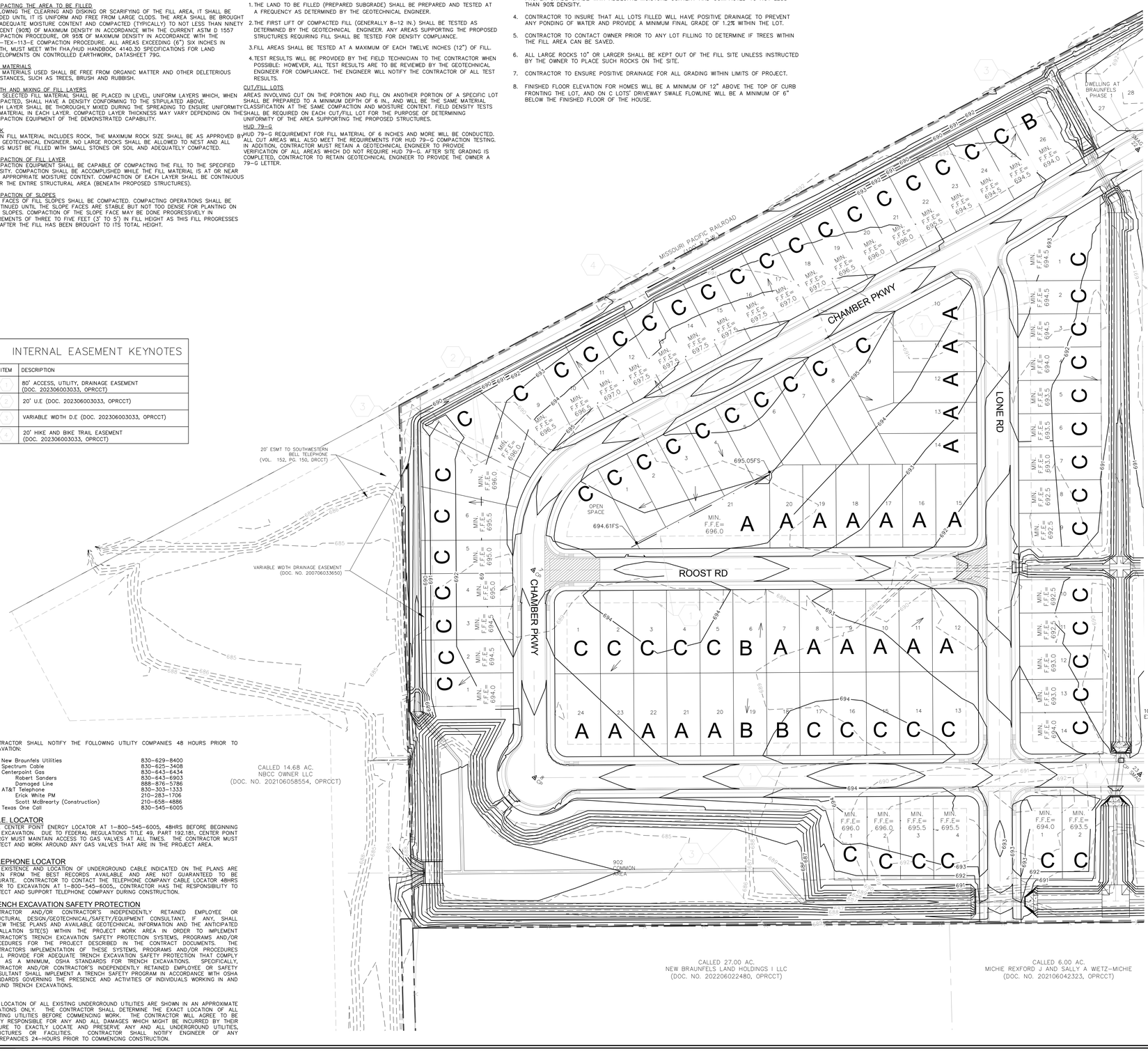
HUD 79-G
HUD 79-G REQUIREMENT FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79-G COMPACTION TESTING. IN ADDITION, CONTRACTOR MUST RETAIN A GEOTECHNICAL ENGINEER TO PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79-G. AFTER SITE GRADING IS COMPLETED, CONTRACTOR TO RETAIN GEOTECHNICAL ENGINEER TO PROVIDE THE OWNER A 79-G LETTER.

GRADING NOTES:

1. STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC.12.2(N).
2. GRADING SHOWN ON THIS GRADING PLAN IS FOR MASS GRADING PURPOSES ONLY. FINAL GRADING AROUND HOMES, SETTING FINISHED FLOOR ELEVATIONS, ETC. WILL BE DONE AS PART OF EACH BUILDING PERMIT PROCESSED FOR THE INDIVIDUAL HOMES.
3. IN ALL FILL AREAS, LOOSE OR ORGANIC MATTER SHALL BE STRIPPED AND REMOVED FROM THE SITE UPON WHICH THE FILL IS TO BE PLACED AND THE AREA SHALL BE BROUGHT TO THE PROPER GRADE GRADE WITH ADEQUATE MOISTURE CONTENT AND COMPACTED TO NOT LESS THAN 90% DENSITY.
4. CONTRACTOR TO INSURE THAT ALL LOTS FILLED WILL HAVE POSITIVE DRAINAGE TO PREVENT ANY PONDING OF WATER AND PROVIDE A MINIMUM FINAL GRADE OF 1.2% WITHIN THE LOT.
5. CONTRACTOR TO CONTACT OWNER PRIOR TO ANY LOT FILLING TO DETERMINE IF TREES WITHIN THE FILL AREA CAN BE SAVED.
6. ALL LARGE ROCKS 10" OR LARGER SHALL BE KEPT OUT OF THE FILL SITE UNLESS INSTRUCTED BY THE OWNER TO PLACE SUCH ROCKS ON THE SITE.
7. CONTRACTOR TO ENSURE POSITIVE DRAINAGE FOR ALL GRADING WITHIN LIMITS OF PROJECT.
8. FINISHED FLOOR ELEVATION FOR HOMES WILL BE A MINIMUM OF 12" ABOVE THE TOP OF CURB FRONTING THE LOT, AND ON C LOTS' DRIVEWAY SWALE FLOWLINE WILL BE A MINIMUM OF 6" BELOW THE FINISHED FLOOR OF THE HOUSE.

INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)



CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

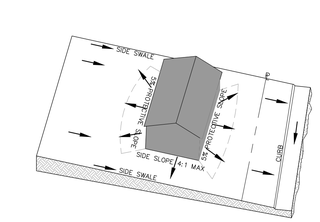
New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

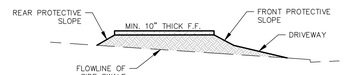
C.P.E. LOCATOR
CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

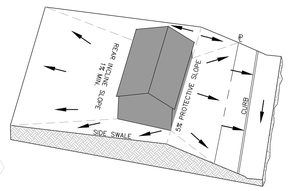
TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

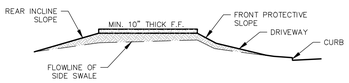
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



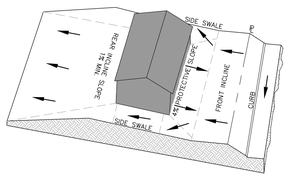


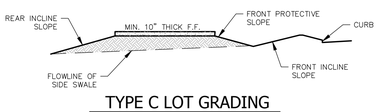
TYPE A LOT GRADING
NOT TO SCALE



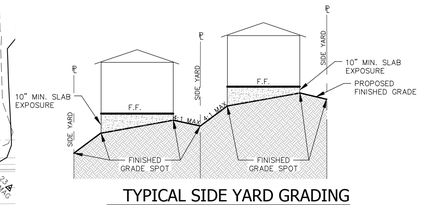


TYPE B LOT GRADING
NOT TO SCALE

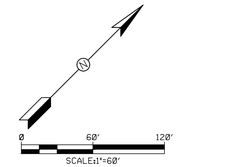




TYPE C LOT GRADING
NOT TO SCALE



TYPICAL SIDE YARD GRADING
NOT TO SCALE



LEGEND

- PROPOSED CONTOUR
- 900 PROPOSED CONTOUR
- 900 EXISTING CONTOUR
- DRAINAGE FLOW ARROW
- GRADE BREAK/SWALE
- CONTROL POINT

CONTROL POINT TABLE

POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
1	CP IRSC	684.960	13818892.7990	2260114.9770
2	CP IRSC	684.960	13818401.7990	2260114.9770
7	CP	688.954	13820143.5000	2259088.1100
8	CP	0.000	13819967.7400	2259265.8900
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23	CP SMAG	690.808	13820486.0290	2259778.5080
10002	TBM-A	684.180	13818905.3130	2260087.5870



YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

GRADING PLAN

SHEET 27 OF 40

NO	DATE	ISSUES AND REVISIONS
1	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\27 GRADING PLAN.dwg User: catherinehagelin Feb 06, 2025 - 12:58pm

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

CONTROL POINT TABLE

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TCEQ (CSI) CUSTOMER SERVICE INSPECTION WILL BE COMPLETED BY NBU WATER PROTECTION SPECIALIST PERSONNEL WHERE ADDITIONAL BACKFLOW PREVENTION ASSEMBLIES MAY BE REQUIRED TO BE INSTALLED PER WATER SERVICE(S) AND/OR WATER USING EQUIPMENT. ANY QUESTIONS REGARDING BACKFLOW PREVENTION AND CROSS CONNECTION CONTROL, CONTACT NBU BACKFLOW PREVENTION SPECIALIST AT 830.608.8880

EXISTING 8" PVC WATER MAIN
PROJECT NAME: THE DWELLING PHASE 1
PROJECT ENGINEER: JAMES INGALLS, P.E.
EXTENSION: W-180420

CONTRACTOR TO REMOVE EXISTING TEMP. BLOWOFF AND CONNECT TO EXISTING 8" PVC WATER MAIN

CONTRACTOR TO LOCATE HORIZONTAL AND VERTICAL POSITION PRIOR TO CONSTRUCTION OF PROPOSED WATER MAIN.

CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF CONDITIONS IN THE FIELD DIFFER FROM DESIGN SHOWN.

CONTRACTOR TO COORDINATE WITH NBU OPERATIONS ON ISOLATION OF EXISTING WATER MAIN

CONTRACTOR TO CORE EXISTING 4' MANHOLE AND INSTALL ONE (1) 6" SANITARY SEWER LATERAL FOR BLOCK 9 LOT 30.
PROJECT NAME: THE DWELLING PHASE 1
PROJECT ENGINEER: JAMES INGALLS, P.E.
EXTENSION: W-180420

EXISTING 8" SEWER LINE

CONTRACTOR TO INSTALL MIN. 16' GATE CENTERED ON EASEMENT. GATE MUST COMPLY WITH NBU STANDARDS. LOOK TO BE FURNISHED BY NBU.

20' ESMT TO SOUTHWESTERN BELL TELEPHONE (VOL. 152, PG. 150, DRCCT)

VARIABLE WIDTH DRAINAGE ESMT (DOC. NO. 200706033650)

CONTRACTOR TO CONNECT TO EXISTING MANHOLE "A 11"
PROJECT NAME: THE DWELLING PHASE 1
PROJECT ENGINEER: JAMES INGALLS, P.E.
EXTENSION: WW-180421

CONTRACTOR TO CONNECT TO EXISTING MANHOLE "A 9"
PROJECT NAME: THE DWELLING PHASE 1
PROJECT ENGINEER: JAMES INGALLS, P.E.
EXTENSION: WW-180421

EXISTING 8" PVC WATER MAIN
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CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
5. UTILITY SERVICES TO HAVE A MINIMUM A 3' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINALE GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
16. CONTRACTOR TO UTILIZE WATER LINE STOPPERS TO MINIMIZE OUTAGES. USE OF LINE STOPPERS, INSTEAD OF EXISTING VALVES, MUST BE APPROVED BY NBU INSPECTIONS PRIOR TO INSTALLATION.
17. SIZES ON SIZE WATER TAPS ARE ACCEPTABLE ONLY IF SOLID TAPS ARE USED.
18. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
19. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
20. METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
21. EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
22. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL
23. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
24. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
25. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPURTENANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
26. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
27. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
28. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
29. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 42 INCHES, IF COVER IS LESS 42 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
30. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS, DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.

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

LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED MANHOLE
- PROPOSED SEWER LATERAL
- PROPOSED 8" PVC WATER MAIN
- PROPOSED SINGLE 5/8" METERED 1" DOMESTIC WATER SERVICE (UNLESS OTHERWISE NOTED FOR IRRIGATION)
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE
- EXISTING 12" PVC SANITARY SEWER
- EXISTING 8" PVC SANITARY SEWER
- EXISTING SEWER LATERAL
- EXISTING 8" PVC WATER MAIN
- EXISTING SINGLE WATER SERVICE
- CONTROL POINT

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

OVERALL UTILITY PLAN

SHEET 28 OF 40

NO	DATE	ISSUES AND REVISIONS
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2	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\28 OVERALL UTILITY PLAN.dwg User: cathrinerodgers Feb 06, 2025 - 12:58pm

PRIVATE STREETS NOTE:

ALL STREETS IN THIS PROJECT ARE PRIVATE AND ARE TO BE MAINTAINED BY THE DEVELOPER. HOWEVER, SINCE THE STREETS ARE BEING CONSTRUCTED ACCORDING TO THE CITY OF NEW BRAUNFELS STANDARDS FOR LOCAL STREETS, THEY ARE BEING REFERRED TO AS "STREETS"

HOMESITE NOTE:

THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES

CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
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5. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
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7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. ALL UTILITIES SHALL BE CONSTRUCTED PRIOR TO STREETS.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO VALVES, FIRE HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
11. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
12. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5-FEET IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
13. THE POINT OF DELIVERY IS WATER METER. NBU IS RESPONSIBLE FROM WATER MAIN TO WATER METER. CUSTOMER IS RESPONSIBLE FOR LINE FROM THE METER TO PRIVATE PLUMBING, INCLUDING DESIGN, CONSTRUCTION, OPERATION, AND COMPLIANCE WITH CITY CODES.
14. MINIMUM DEPTH OF COVER FOR THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES. ADD CONCRETE CAP OR ENCASEMENT IF COVER IS LESS THAN 48 INCHES.
15. GATE VALVES ON FIRE HYDRANT LEADS SHALL BE RESTRAINED AT THE TEE. SEE THIS SHEET FOR CALLOUTS FOR ANCHOR TEES FOR FIRE HYDRANTS.
16. THE MAIN SUPPLY LINE THAT SUPPLIES ALL DOMESTIC METERS WITHIN THIS PROJECT SHALL REQUIRE AN RP BACKFLOW PREVENTION.
17. ALL IRRIGATION METERS SHALL HAVE AN RP BACKFLOW PREVENTION.
18. STATIONING FOR 8" WATER MAINS ARE BASED ON ROAD ALIGNMENTS.
19. STATIONING FOR WATERLINE "A" IS BASED ON WATERLINE A ALIGNMENT. ⚠1

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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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

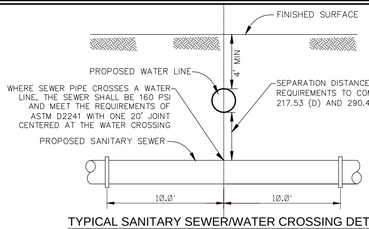
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DWELLING AT BRAUNFELS	
ITEM	QTY.
WATER MAIN (8" PVC C-900)	3491 LF
1" DOMESTIC WATER SERVICES	91 EA.
1" IRRIGATION SERVICES	2 EA.
5/8" WATER METERS	91 EA.
5/8" IRRIGATION METERS	2 EA.
FIRE HYDRANTS	6 EA.
FIRE LINES	60 LF
8" GATE VALVE	23 EA.
6" GATE VALVE	6 EA.
2" BLOWOFF ASSEMBLY	2 EA.

NBU APPROVED PRV SHALL BE PROVIDED ON THE CUSTOMER SIDE OF THE METER

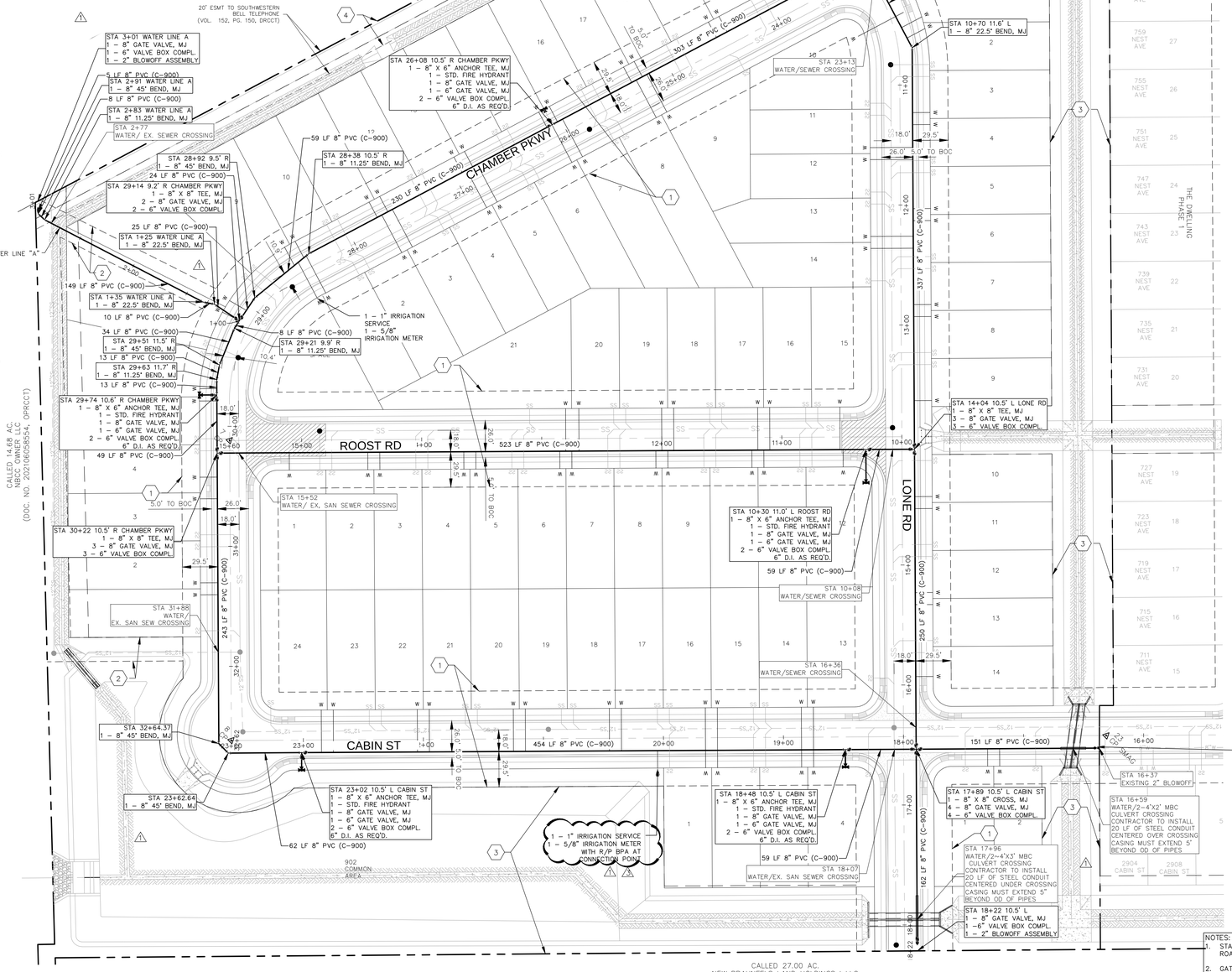
INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

(NOT TO SCALE)



EXISTING 8" PVC WATER MAIN
PROJECT NAME: DWELLING AT BRAUNFELS PHASE 1

PROJECT ENGINEER: JAMES INGALLS, P.E.
EXTENSION: W-180420

CONTRACTOR TO REMOVE EXISTING TEMP. BLOWOFF AND CONNECT TO EXISTING 8" PVC WATER MAIN

CONTRACTOR TO LOCATE HORIZONTAL AND VERTICAL POSITION PRIOR TO CONSTRUCTION OF PROPOSED WATER MAIN.

CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF CONDITIONS IN THE FIELD DIFFER FROM DESIGN SHOWN.

CONTRACTOR TO COORDINATE WITH NBU OPERATIONS ON ISOLATION OF EXISTING WATER MAIN

EXISTING 8" PVC WATER MAIN
PROJECT NAME: DWELLING AT BRAUNFELS PHASE 1

PROJECT ENGINEER: JAMES INGALLS, P.E.
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CONTRACTOR TO REMOVE EXISTING TEMP. BLOWOFF AND CONNECT TO EXISTING 8" PVC WATER MAIN

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CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF CONDITIONS IN THE FIELD DIFFER FROM DESIGN SHOWN.

CONTRACTOR TO COORDINATE WITH NBU OPERATIONS ON ISOLATION OF EXISTING WATER MAIN

LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER
- PROPOSED MANHOLE
- PROPOSED SEWER LATERAL
- PROPOSED 8" PVC WATER MAIN
- PROPOSED SINGLE 5/8" METERED 1" DOMESTIC WATER SERVICE (UNLESS OTHERWISE NOTED FOR IRRIGATION) ⚠2
- PROPOSED FIRE HYDRANT
- EXISTING OVERHEAD ELECTRIC
- EXISTING WOOD FENCE
- EXISTING BARBWIRE FENCE
- EXISTING TRAFFIC GUARDRAIL
- EXISTING SIGN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- EXISTING GUY
- EXISTING 12" PVC SANITARY SEWER
- EXISTING 8" PVC WATER MAIN
- EXISTING SINGLE WATER SERVICE
- CONTROL POINT

NOTE:
SEE JOINT RESTRAINT TABLE SHEET 36 ⚠1

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

TCEQ (CSI) CUSTOMER SERVICE INSPECTION WILL BE COMPLETED BY NBU WATER PROTECTION SPECIALIST PERSONNEL WHERE ADDITIONAL BACKFLOW PREVENTION ASSEMBLIES MAY BE REQUIRED TO BE INSTALLED PER WATER SERVICE(S) AND/OR WATER USING EQUIPMENT. ANY QUESTIONS REGARDING BACKFLOW PREVENTION AND CROSS CONNECTION CONTROL, CONTACT NBU BACKFLOW PREVENTION SPECIALIST AT 830.608.8880 ⚠1

NOTES:
1. STATIONING FOR 8" WATER MAINS ARE BASED ON ROAD ALIGNMENTS.
2. GATE VALVES ON FIRE HYDRANT LEADS SHALL BE RESTRAINED AT THE TEE. SEE THIS SHEET FOR CALLOUTS FOR ANCHOR TEES FOR FIRE HYDRANTS.

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED PROFESSIONAL ENGINEER
03/06/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

WATER DISTRIBUTION PLAN

SHEET 29 OF 40

NO	DATE	ISSUES AND REVISIONS
⚠1	1-3-2025	REVISED PER NBU COMMENTS
⚠2	2-6-2025	REVISED PER CONB & NBU COMMENTS
⚠3	3-6-2025	REVISED PER NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

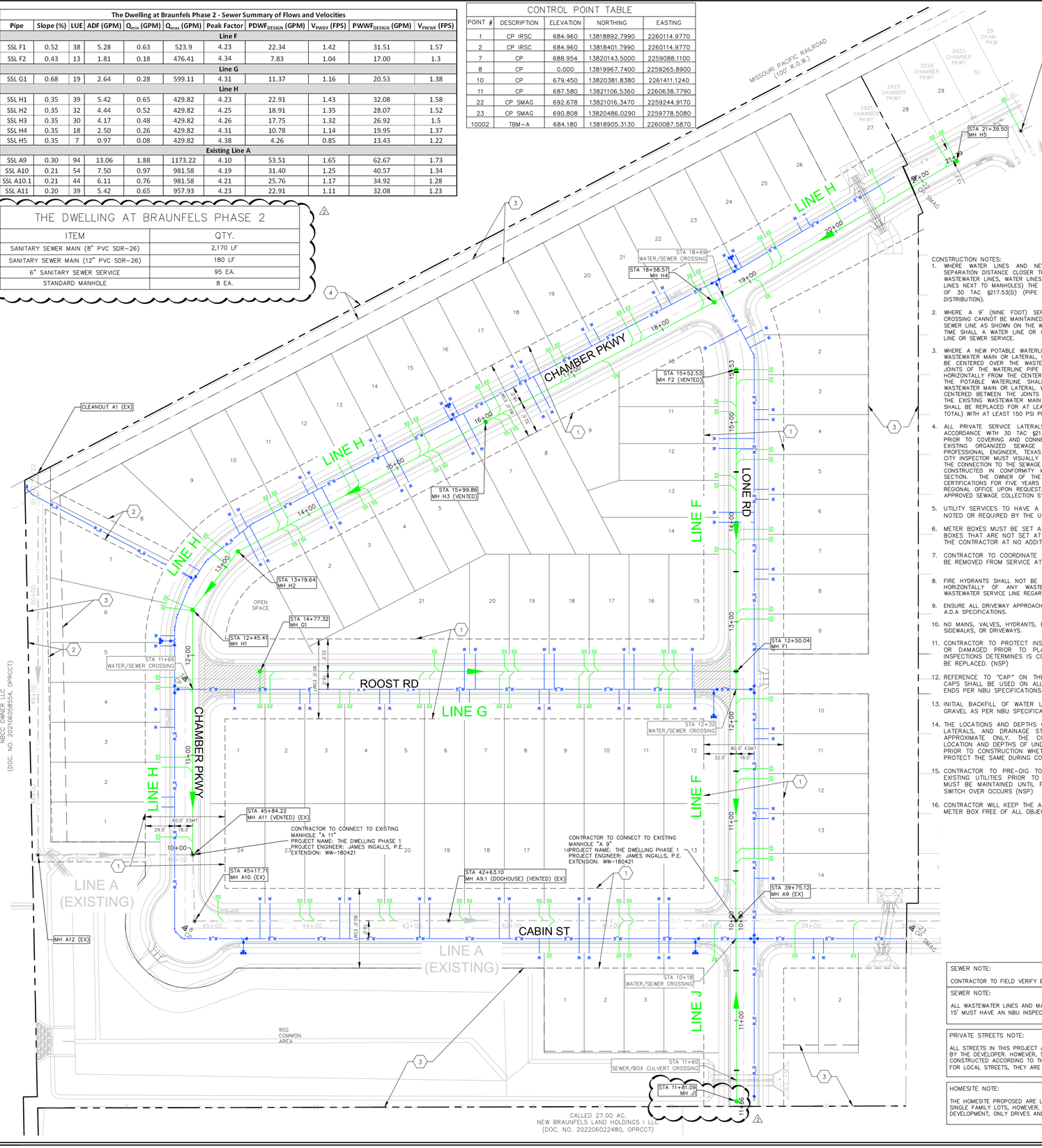
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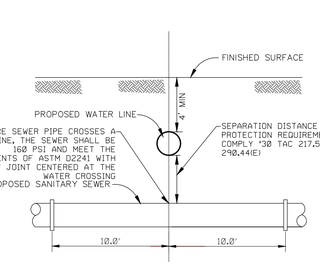
Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\09 WATER DISTRIBUTION PLAN.dwg User: catherinehagelin Mar 06, 2025 - 8:38am

The Dwelling at Braunfels Phase 2 - Sewer Summary of Flows and Velocities										
Pipe	Slope (%)	LUE	ADF (GPM)	Q_{min} (GPM)	Q_{max} (GPM)	Peak Factor	$PDWF_{DESIGN}$ (GPM)	V_{PWDS} (FPS)	$PWWF_{DESIGN}$ (GPM)	V_{PWWF} (FPS)
Line F										
SSL F1	0.52	38	5.28	0.63	523.9	4.23	22.34	1.42	31.51	1.57
SSL F2	0.43	13	1.81	0.18	476.41	4.34	7.83	1.04	17.00	1.3
Line G										
SSL G1	0.68	19	2.64	0.28	599.11	4.31	11.37	1.16	20.53	1.38
Line H										
SSL H1	0.35	39	5.42	0.65	429.82	4.23	22.91	1.43	32.08	1.58
SSL H2	0.35	32	4.44	0.52	429.82	4.25	18.91	1.35	28.07	1.52
SSL H3	0.35	30	4.17	0.48	429.82	4.26	17.75	1.32	26.92	1.5
SSL H4	0.35	18	2.50	0.26	429.82	4.31	10.78	1.14	19.95	1.37
SSL H5	0.35	7	0.97	0.08	429.82	4.38	4.26	0.85	13.43	1.22
Existing Line A										
SSL A9	0.30	94	13.06	1.88	1173.22	4.10	53.51	1.65	62.67	1.73
SSL A10	0.21	54	7.50	0.97	981.58	4.19	31.40	1.25	40.57	1.34
SSL A10.1	0.21	44	6.11	0.76	981.58	4.21	25.76	1.17	34.92	1.28
SSL A11	0.20	39	5.42	0.65	957.93	4.23	22.91	1.11	32.08	1.23

CONTROL POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
1	CP IRSC	684.960	1.3818892.7990	2260114.9770
2	CP IRSC	684.960	1.3818401.7990	2260114.9770
7	CP	688.954	1.3820143.5000	2259088.1100
8	CP	0.000	1.3819967.7400	2259265.8900
10	CP	679.450	1.3820381.8380	2261411.1240
11	CP	687.580	1.3821106.5360	2260638.7790
22	CP SMAG	692.678	1.3821016.3470	2259244.9170
23	CP SMAG	690.808	1.3820486.0290	2259778.5080
10002	TBM-A	684.180	1.3818905.3130	2260087.5870

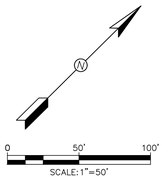
THE DWELLING AT BRAUNFELS PHASE 2	
ITEM	QTY.
SANITARY SEWER MAIN (8" PVC SDR-26)	2,170 LF
SANITARY SEWER MAIN (12" PVC SDR-26)	180 LF
6" SANITARY SEWER SERVICE	95 EA.
STANDARD MANHOLE	8 EA.





TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

(NOT TO SCALE)



LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER
- NEW MANHOLE
- PROPOSED SEWER LATERAL
- PROPOSED 8" PVC WATER MAIN
- PROPOSED SINGLE 5/8" METERED 1" DOMESTIC WATER SERVICE (UNLESS OTHERWISE NOTED FOR IRRIGATION) (2)
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE
- EXISTING 12" PVC SANITARY SEWER
- EXISTING 8" PVC SANITARY SEWER
- EXISTING SEWER LATERAL
- EXISTING 8" PVC WATER MAIN
- EXISTING SINGLE WATER SERVICE
- CONTROL POINT

INTERNAL EASEMENT KEYNOTES	
ITEM	DESCRIPTION
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3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
5. UTILITY SERVICES TO HAVE A MINIMUM A 4' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO MAINS, VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
16. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
17. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
18. METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
19. EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
20. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL
21. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
22. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
23. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPERTUNANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
24. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
25. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
26. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
27. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES, IF COVER IS LESS 48 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
28. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS, DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
29. NEW MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL OR POLYMER CONCRETE PER MANUFACTURERS APPROVED ON THE NBU SPL. POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER OR LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL. WHERE NEW CONSTRUCTION TIES INTO AN EXISTING MANHOLE, THE EXISTING MANHOLES MUST BE LINED, COATED OR REPLACED WITH A CORROSION RESISTANT MATERIAL.
30. MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%
31. IN ALL NEW SYSTEMS, GRADE BREAKS EXCEEDING ALLOWABLE JOINT DEFLECTION MUST BE MADE WITH APPROVED FITTINGS AND SHALL NOT EXCEED CUMULATIVE TOTAL OF 45 DEGREES.
32. WASTEWATER SERVICE LINES, BETWEEN THE MAIN AND PROPERTY LINE, SHALL HAVE AN INSIDE DIAMETER NOT LESS THAN SIX (6) INCHES.

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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SEWER NOTE:

CONTRACTOR TO FIELD VERIFY EXISTING SANITARY SEWER INVERTS

SEWER NOTE:

ALL WASTEWATER LINES AND MANHOLES WITH A DEPTH GREATER THAN 15' MUST HAVE AN NBU INSPECTOR PRESENT DURING INSTALLATION

PRIVATE STREETS NOTE:

ALL STREETS IN THIS PROJECT ARE PRIVATE AND ARE TO BE MAINTAINED BY THE DEVELOPER. HOWEVER, SINCE THE STREETS ARE BEING CONSTRUCTED ACCORDING TO THE CITY OF NEW BRAUNFELS STANDARDS FOR LOCAL STREETS, THEY ARE BEING REFERRED TO AS "STREETS"

HOMESITE NOTE:

THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES



02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

OVERALL SANITARY SEWER PLAN

SHEET 30 OF 40

NO	DATE	ISSUES AND REVISIONS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\YE1001 Dwelling Phase 2\Civil\Construction Drawings\30 OVERALL SANITARY SEWER PLAN.dwg User: cotherehagelin Feb 06, 2025 - 12:59pm

CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
5. UTILITY SERVICES TO HAVE A MINIMUM A 4' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO MAINS, VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
16. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
17. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
18. METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
19. EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
20. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL
21. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
22. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
23. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPURTENANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
24. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
25. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
26. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
27. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES, IF COVER IS LESS 48 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
28. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS, DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
29. NEW MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL OR POLYMER CONCRETE PER MANUFACTURERS APPROVED ON THE NBU SPL POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER OR LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL. WHERE NEW CONSTRUCTION TIES INTO AN EXISTING MANHOLE, THE EXISTING MANHOLES MUST BE LINED, COATED OR REPLACED WITH A CORROSION RESISTANT MATERIAL.
30. MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%
31. IN ALL NEW SYSTEMS, GRADE BREAKS EXCEEDING ALLOWABLE JOINT DEFLECTION MUST BE MADE WITH APPROVED FITTINGS AND SHALL NOT EXCEED CUMULATIVE TOTAL OF 45 DEGREES.
32. WASTEWATER SERVICE LINES, BETWEEN THE MAIN AND PROPERTY LINE, SHALL HAVE AN INSIDE DIAMETER NOT LESS THAN SIX (6) INCHES.

NOTE:
ALL EXISTING SANITARY SEWER LINE A MANHOLES WITHIN PROPOSED STREET TO BE BROUGHT TO PROPOSED RIM ELEVATION.
EXISTING RIM ELEVATIONS:
MH A9 – 691.13
MH A9.1 – 690.22
MH A10 – 690.69
MH A11 – 690.90

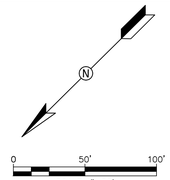
NOTE:
ALL LINE A SANITARY SEWER MANHOLES, GRAVITY MAIN, AND WYES WERE CONSTRUCTED WITH DWELLING AT BRAUNFELS PHASE 1. SEWER SERVICES TO BE CONSTRUCTED WITH PHASE 2

SEWER NOTE:
ALL WASTEWATER LINES AND MANHOLES WITH A DEPTH GREATER THAN 15' MUST HAVE AN NBU INSPECTOR PRESENT DURING INSTALLATION

PRIVATE STREETS NOTE:
ALL STREETS IN THIS PROJECT ARE PRIVATE AND ARE TO BE MAINTAINED BY THE DEVELOPER. HOWEVER, SINCE THE STREETS ARE BEING CONSTRUCTED ACCORDING TO THE CITY OF NEW BRAUNFELS STANDARDS FOR LOCAL STREETS, THEY ARE BEING REFERRED TO AS "STREETS"

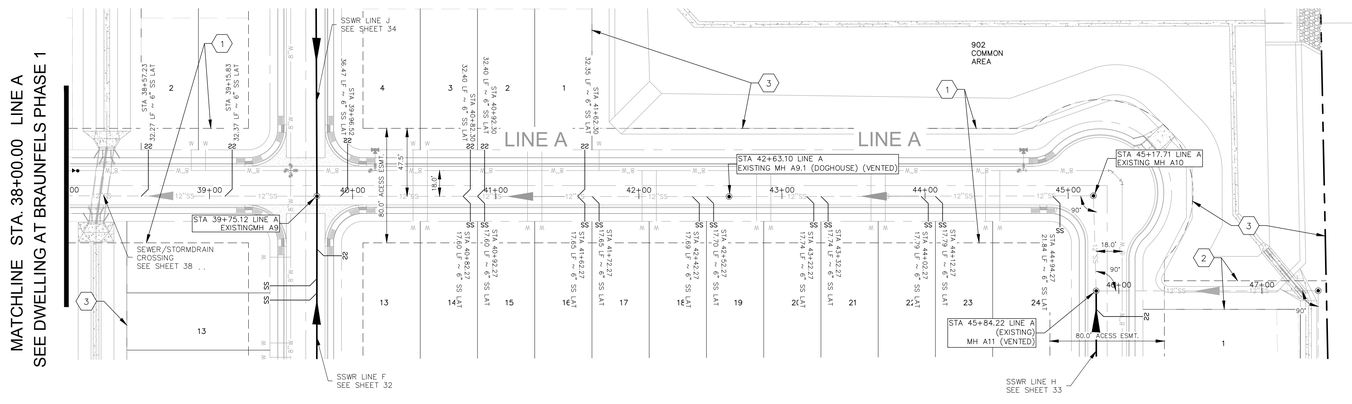
HOMESITE NOTE:
THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES

SEWER NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING SANITARY SEWER INVERTS



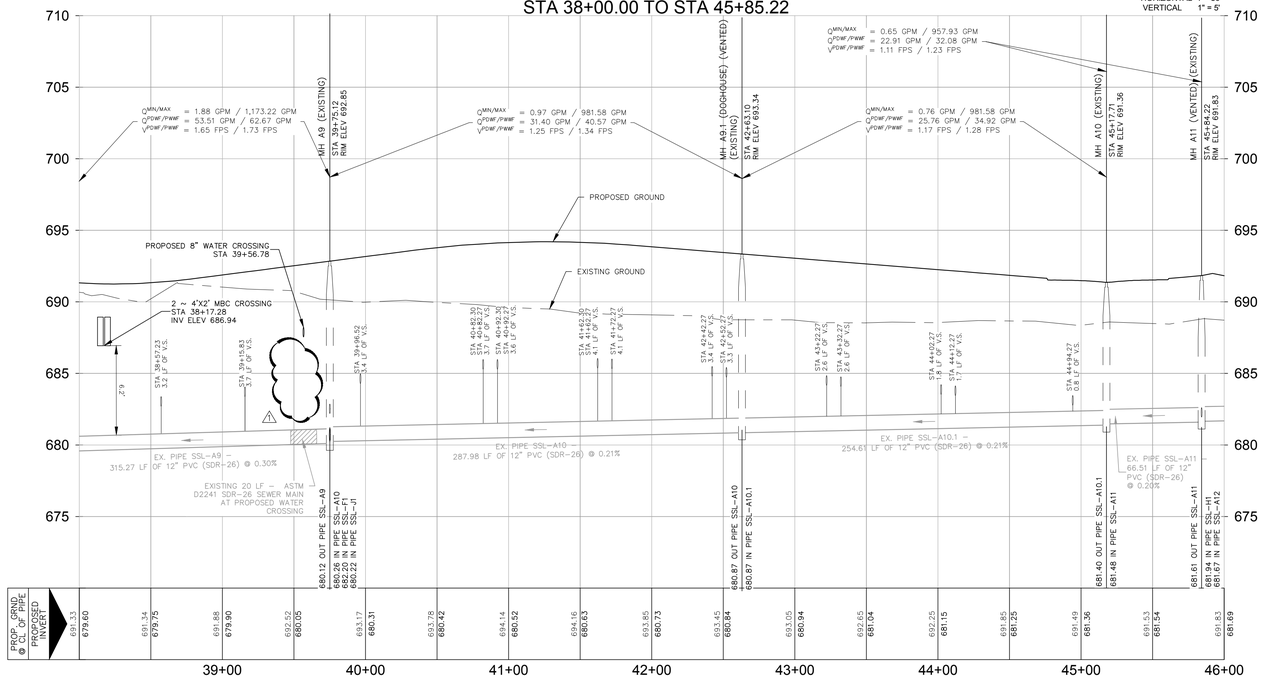
LEGEND

- EXISTING 12" PVC SANITARY SEWER
- PROPOSED SEWER LATERAL
- PROPOSED 8" PVC WATER MAIN
- PROPOSED SINGLE WATER SERVICE
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE
- PROPOSED 8" PVC SANITARY SEWER
- FLOW DIRECTION



LINE A
STA 38+00.00 TO STA 45+85.22

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



INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Time Warner Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005,,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

SANITARY SEWER LINE A
STA 38+00 TO END

SHEET 31 OF 40

NO	DATE	ISSUES AND REVISIONS
1	1-3-2025	REVISED PER NBU COMMENTS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
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NEW BRAUNFELS, TX. 78132
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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\31 SANITARY SEWER LINE A.dwg User: cotherinebaggett Feb 06, 2025 - 1:09pm

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3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
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SEWER NOTE:

CONTRACTOR TO FIELD VERIFY EXISTING SANITARY SEWER INVERTS

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THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES

SEWER NOTE:

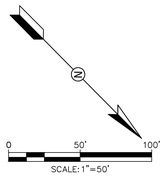
ALL WASTEWATER LINES AND MANHOLES WITH A DEPTH GREATER THAN 15' MUST HAVE AN NBU INSPECTOR PRESENT DURING INSTALLATION

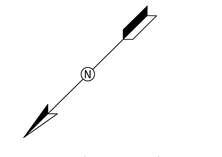
INTERNAL EASEMENT KEYNOTES

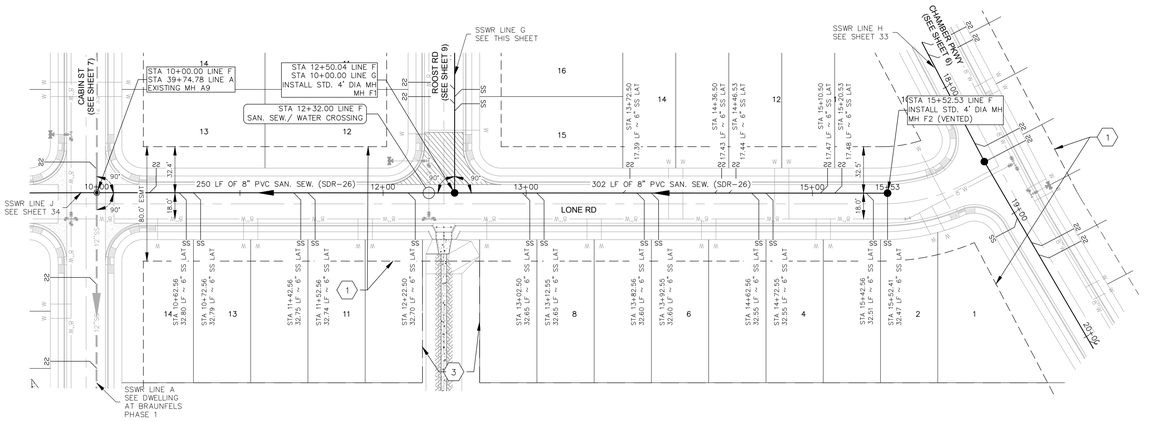
ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

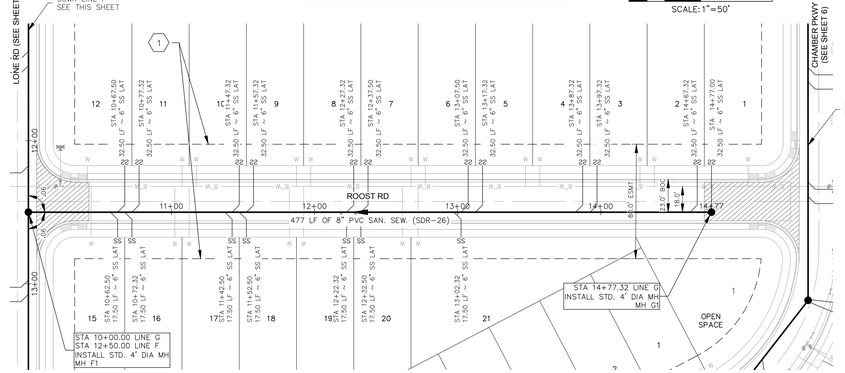
LEGEND

- NEW SANITARY SEWER
- NEW MANHOLE
- PROPOSED SEWER LATERAL
- PROPOSED 8" PVC WATER MAIN
- PROPOSED SINGLE WATER SERVICE
- EXISTING SINGLE WATER SERVICE
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE
- EXISTING 8" PVC SANITARY SEWER
- EXISTING 12" PVC SANITARY SEWER
- EXSITING SEWER LATERAL
- EXISTING 8" PVC WATER MAIN
- FLOW DIRECTION



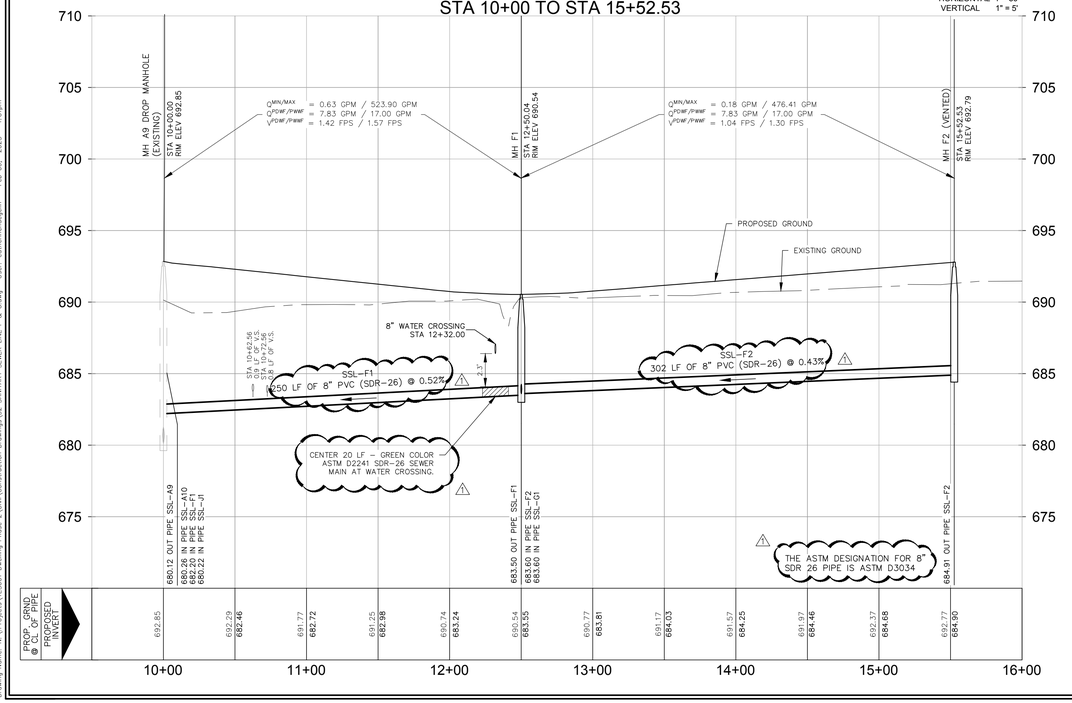






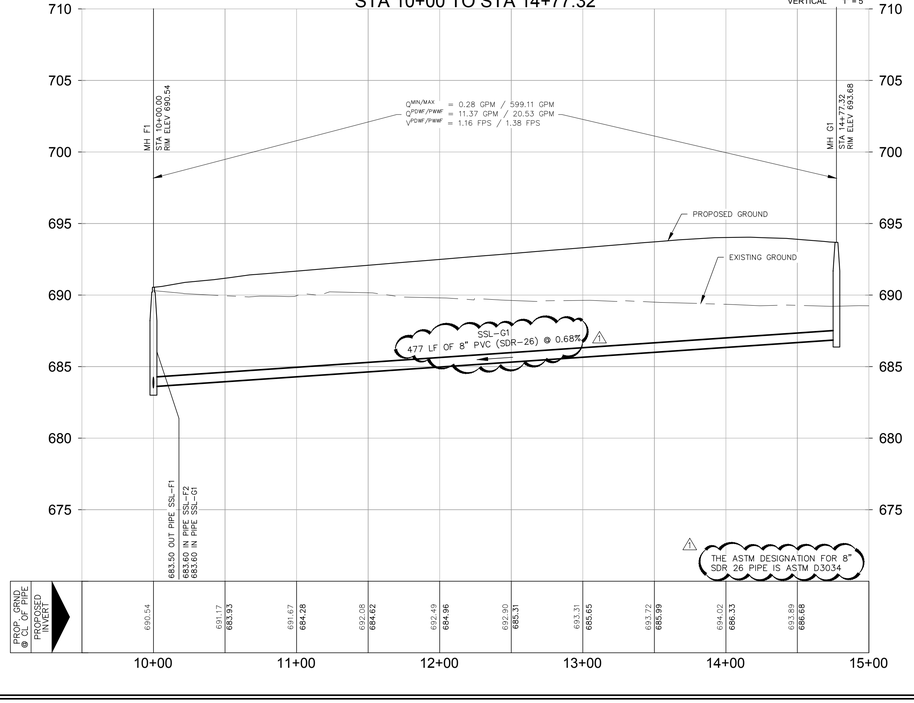
SANITARY SEWER LINE F
STA 10+00 TO STA 15+52.53

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



SANITARY SEWER LINE G
STA 10+00 TO STA 14+77.32

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



CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Time Warner Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
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Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

SANITARY SEWER LINE F & G

SHEET 32 OF 40

NO	DATE	ISSUES AND REVISIONS
1	1-3-2025	REVISED PER NBU COMMENTS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\32 SANITARY SEWER LINE F & G.dwg User: catherinehaegelin Feb 06, 2025 - 1:01pm

CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).

2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.

3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.

4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

5. UTILITY SERVICES TO HAVE A MINIMUM A 4' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.

6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.

7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.

8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.

9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.

10. NO MAINS, VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.

11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)

12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.

13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.

14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.

15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)

16. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.

17. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.

18. METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.

19. EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.

20. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL

21. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

22. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

23. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPERTUNANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.

24. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.

25. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.

26. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.

27. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES, IF COVER IS LESS 48 INCHES ADD A CONCRETE CAP OR ENCASEMENT.

28. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS, DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.

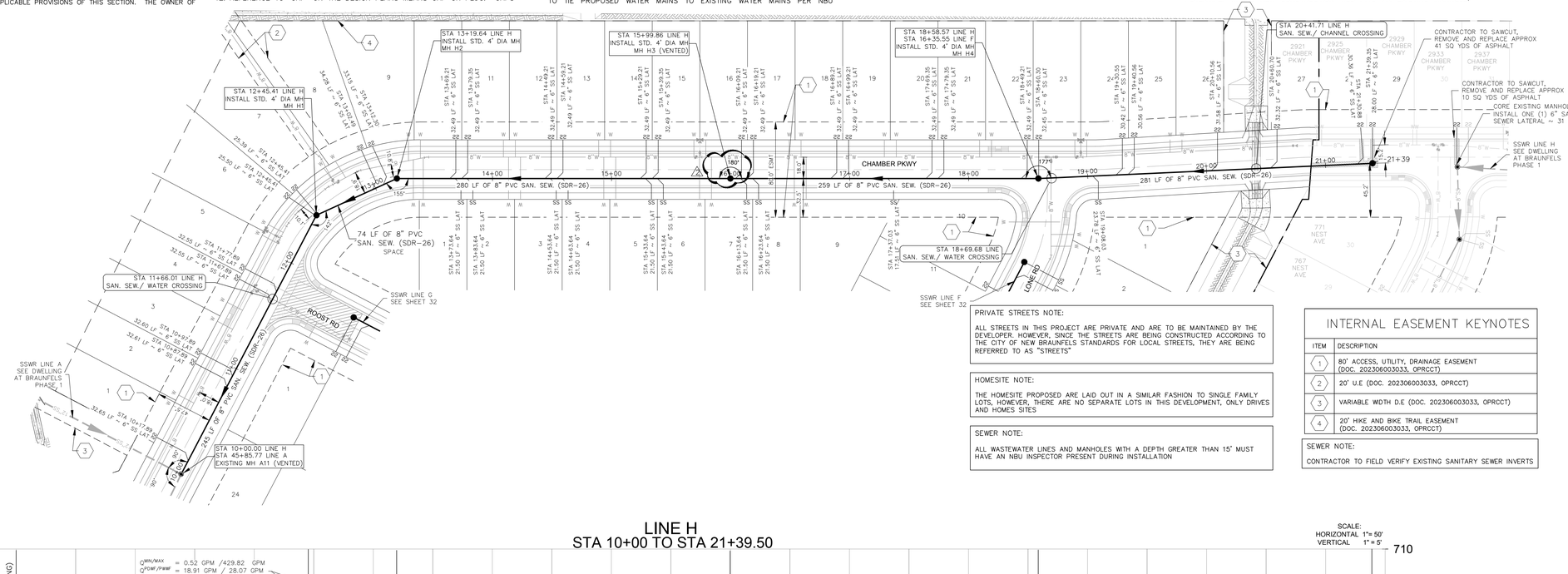
29. NEW MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL OR POLYMER CONCRETE PER MANUFACTURERS APPROVED ON THE NBU SPL POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER OR LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL. WHERE NEW CONSTRUCTION TIES INTO AN EXISTING MANHOLE, THE EXISTING MANHOLES MUST BE LINED, COATED OR REPLACED WITH A CORROSION RESISTANT MATERIAL.

30. MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%

31. IN ALL NEW SYSTEMS, GRADE BREAKS EXCEEDING ALLOWABLE JOINT DEFLECTION MUST BE MADE WITH APPROVED FITTINGS AND SHALL NOT EXCEED CUMULATIVE TOTAL OF 45 DEGREES.

32. WASTEWATER SERVICE LINES, BETWEEN THE MAIN AND PROPERTY LINE, SHALL HAVE AN INSIDE DIAMETER NOT LESS THAN SIX (6) INCHES.

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INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

PRIVATE STREETS NOTE:

ALL STREETS IN THIS PROJECT ARE PRIVATE AND ARE TO BE MAINTAINED BY THE DEVELOPER. HOWEVER, SINCE THE STREETS ARE BEING CONSTRUCTED ACCORDING TO THE CITY OF NEW BRAUNFELS STANDARDS FOR LOCAL STREETS, THEY ARE BEING REFERRED TO AS "STREETS"

HOMESITE NOTE:

THE HOMESITE PROPOSED ARE LAID OUT IN A SIMILAR FASHION TO SINGLE FAMILY LOTS, HOWEVER, THERE ARE NO SEPARATE LOTS IN THIS DEVELOPMENT, ONLY DRIVES AND HOMES SITES

SEWER NOTE:

ALL WASTEWATER LINES AND MANHOLES WITH A DEPTH GREATER THAN 15' MUST HAVE AN NBU INSPECTOR PRESENT DURING INSTALLATION

SEWER NOTE:

CONTRACTOR TO FIELD VERIFY EXISTING SANITARY SEWER INVERTS

N

0 50' 100'

SCALE:1"=50'

LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED MANHOLE
- PROPOSED SEWER LATERAL
- PROPOSED 8" PVC WATER MAIN
- PROPOSED SINGLE WATER SERVICE
- EXISTING SINGLE WATER SERVICE
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CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

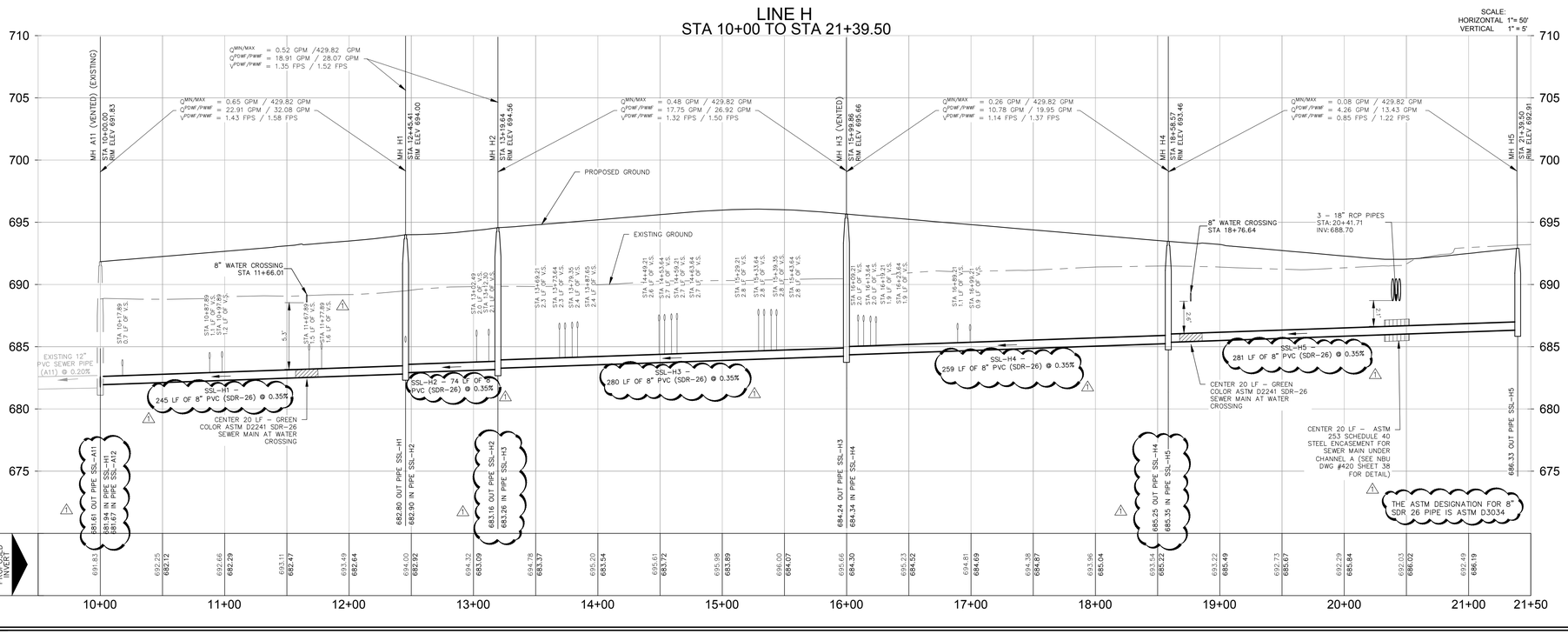
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JAMES INGALLS
107416
LICENSED PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

SANITARY SEWER LINE H

SHEET 33 OF 40

NO	DATE	ISSUES AND REVISIONS
1	1-3-2025	REVISED PER NBU COMMENTS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\33 SANITARY SEWER LINE H.dwg User: catherinehagelin Feb 06, 2025 - 1:02pm

CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL WHENEVER POSSIBLE. THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
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8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO MAINS, VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
16. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
17. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
18. METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
19. EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
20. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL
21. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
22. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
23. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPERTUNANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
24. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
25. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
26. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
27. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES, IF COVER IS LESS 48 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
28. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS, DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
29. NEW MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL OR POLYMER CONCRETE PER MANUFACTURERS APPROVED ON THE NBU SPL POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER OR LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL. WHERE NEW CONSTRUCTION TIES INTO AN EXISTING MANHOLE, THE EXISTING MANHOLES MUST BE LINED, COATED OR REPLACED WITH A CORROSION RESISTANT MATERIAL.
30. MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%
31. IN ALL NEW SYSTEMS, GRADE BREAKS EXCEEDING ALLOWABLE JOINT DEFLECTION MUST BE MADE WITH APPROVED FITTINGS AND SHALL NOT EXCEED CUMULATIVE TOTAL OF 45 DEGREES.
32. WASTEWATER SERVICE LINES, BETWEEN THE MAIN AND PROPERTY LINE, SHALL HAVE AN INSIDE DIAMETER NOT LESS THAN SIX (6) INCHES.

SEWER NOTE:

CONTRACTOR TO FIELD VERIFY EXISTING SANITARY SEWER INVERTS

INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

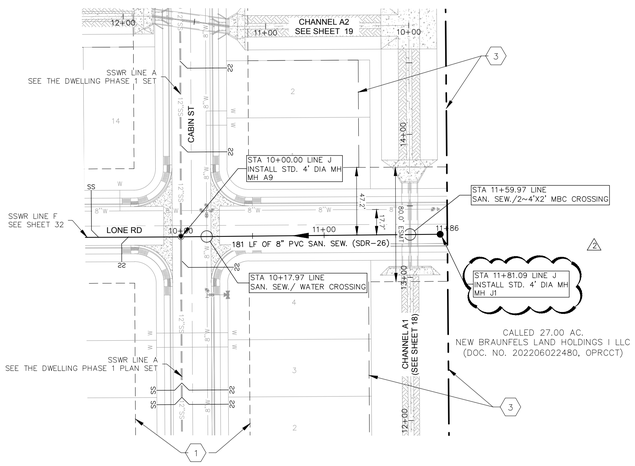
TELEPHONE LOCATOR

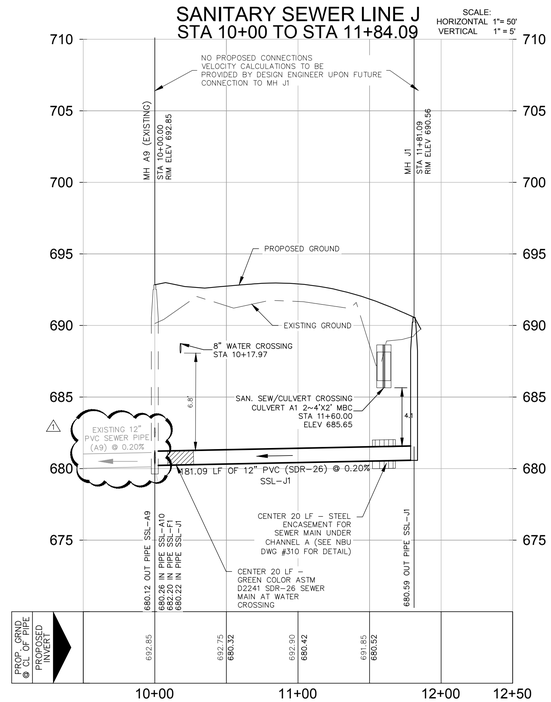
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005,. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

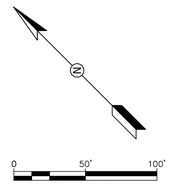
TRENCH EXCAVATION SAFETY PROTECTION

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 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.







LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER
- PROPOSED MANHOLE
- PROPOSED SEWER LATERAL
- 8"W — PROPOSED 8" PVC WATER MAIN
- PROPOSED SINGLE WATER SERVICE
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE
- EXISTING 12" PVC SANITARY SEWER

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

SANITARY SEWER LINE J

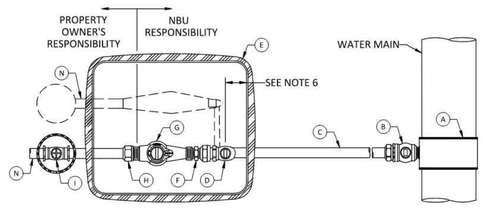
SHEET 34 OF 40

NO	DATE	ISSUES AND REVISIONS
1	1-3-2025	REVISED PER NBU COMMENTS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

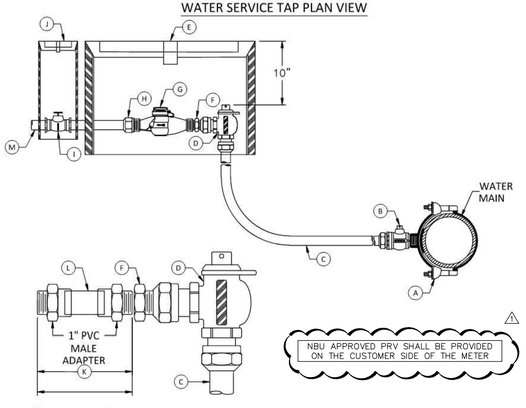
INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\34 SANITARY SEWER LINE J.dwg User: catherinebaggett Feb 06, 2025 - 1:02pm



WATER SERVICE TAP PLAN VIEW



⅝" METER = 7 ¾"
1" METER = 11"

WATER SERVICE TAP PROFILE VIEW

NBU	DRAWN BY: EWL	STANDARD DRAWING: STANDARD INSTALLATION DETAIL FOR 5/8" & 1" METER				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 2	DRAWING NO. 202

MATERIALS LIST:

A. 1" SERVICE CLAMP

B. 1" CORPORATION STOP

C. 1" TYPE "K" COPPER WATER SERVICE PIPE

D. 1" X 1" ANGLE METER

E. METER BOX AND LID - PER SPL W-11.0

MATERIALS TO BE INSTALLED BY PLUMBER:

F. BRASS METER BUSHING - SIZE AS REQUIRED TO CONNECT ANGLE METER STOP TO METER. A 1" X 3/4" METER BUSHING IS REQUIRED AT THE ANGLE STOP FOR ALL 5/8" METERS.

G. WATER METER PURCHASED FROM NBU

H. BRASS WATER METER COUPLING MAKE IPT x SWIVEL COUPLING NUT

I. PROPERTY OWNER'S CUT OFF VALVE - 1" BRASS GATE VALVE

J. PROPERTY OWNER'S CUT OFF VALVE BOX AND LID - NDS #D109-G

K. TEMPORARY METER SPACER (REQUIRED TO ASSURE METER WILL FIT APPROPRIATELY)

L. 1" WOODEN DOWEL (SHOW ADDRESS ON DOWEL USING WATERPROOF MARKER)

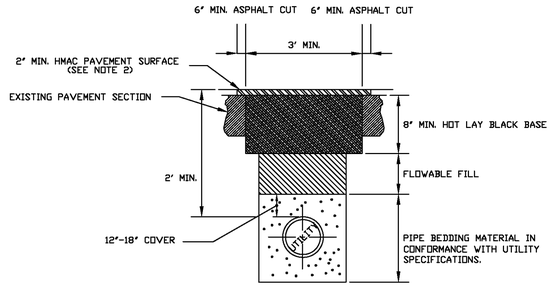
M. 1" PIPE MEETING CITY OF NEW BRAUNFELS PLUMBING CODE REQUIREMENTS

N. FUTURE IRRIGATION CONNECTION (SEE NOTE 8)

NOTES:

1. SERVICE PIPE SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS. PIPE SHALL BE PLACED IN A STRAIGHT HORIZONTAL ALIGNMENT AND ALLOWED TO RELAX AND "SNAKE" LOOSELY IN THE TRENCH.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 8 MIL POLYETHYLENE FILM.
3. TOP OF BOXES MUST BE 2" ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
4. BEDDING AND BACKFILL FOR ALL PIPING, TUBING, AND APPURTENANCES SHALL BE PER NBU SPECIFICATIONS.
5. METER BOX LOCATIONS SHALL BE AS PER DETAILS 402 THROUGH 409, UTILITY LAYOUTS. METER BOXES SHALL NOT BE PLACED IN SIDEWALKS, DRIVEWAYS, OR VEHICULAR TRAFFIC AREAS.
6. ANGLE STOP TO BE PLACED A MAXIMUM OF 4" FROM BACK OF BOX THAT FACES CURB. TOP OF ANGLE STOP SHOULD BE A MINIMUM OF 10" FROM THE TOP OF METER BOX.
7. METER SIZES TO BE SHOWN ON PLANS.
8. APPROPRIATE BACKFLOW PREVENTION ASSEMBLY REQUIRED AS DETERMINED BY NBU WATER PROTECTION SPECIALIST. BACKFLOW PREVENTION ASSEMBLY SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE NBU IRRIGATION WATER METER WITH NO TEES OR CONNECTION BETWEEN THE TWO. CONTACT A WATER PROTECTION SPECIALIST AT BACKFLOW@NBUTEXAS.COM.

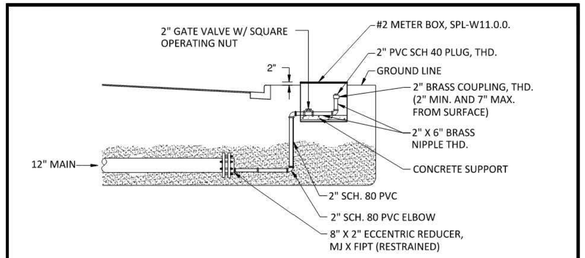
NBU	DRAWN BY: EWL	STANDARD DRAWING: STANDARD INSTALLATION DETAIL FOR 5/8" & 1" METER				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 2 OF 2	DRAWING NO. 202



NOTES:

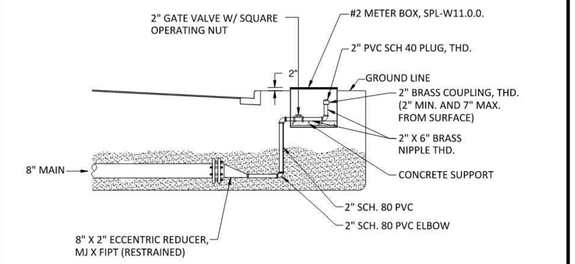
1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE AT A MINIMUM OF 12" WIDER THAN UNDISTURBED SIDES OF THE TRENCH SYMMETRICAL ABOUT THE CENTERLINE OF THE EXCAVATION.
2. REPLACEMENT HMAC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   A) MIN. 2"HMAC TYPE "D"FOR TRENCH REPAIRS IN LOCAL/RESIDENTIAL STREETS.
   B) MIN. 3"HMAC TYPE "C"FOR TRENCH REPAIRS IN COLLECTOR/ARTERIAL STREETS.
3. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED
4. PRIME AND TACK COAT ALL EXPOSED EDGES AND SURFACES.
5. HOT LAY BLACK BASE LAYED IN 8"LIFTS @ 95% COMPACTION.
6. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMAC.
7. CALICHE OR EXISTING MATERIAL SHALL NOT BE USED TO BACKFILL THE UTILITY EXCAVATION.

TRENCH REPAIR DETAIL		CITY OF NEW BRAUNFELS ENGINEERING DIVISION
ISSUE DATE: APRIL 2015	SCALE: N.T.S	424 E. CASTELL AVE. NEW BRAUNFELS, TEXAS 78130 PHONE: 830 221 4000 FAX: 830 626 3600
DRAWN BY: AMF	CONTACT: GF	



ELEVATION

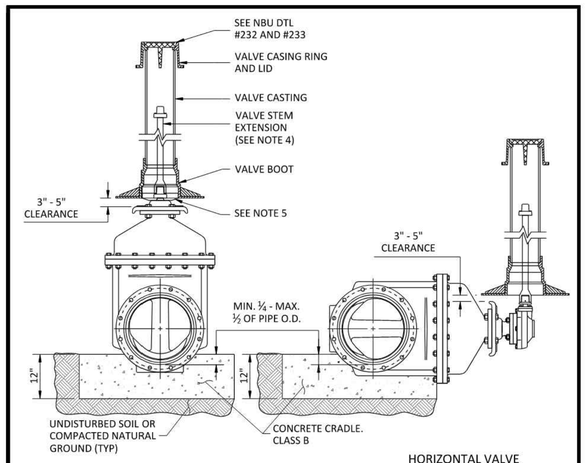
2" BLOW OFF ASSEMBLY
ON 12" P.V.C. OR D.I. MAINS



ELEVATION

2" BLOW OFF ASSEMBLY
ON 8" P.V.C. OR D.I. MAINS

NBU	DRAWN BY: EWL	STANDARD DRAWING: 2" BLOW OFF ASSEMBLY ON 8" & 12" P.V.C. OR D.I. MAINS				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 251



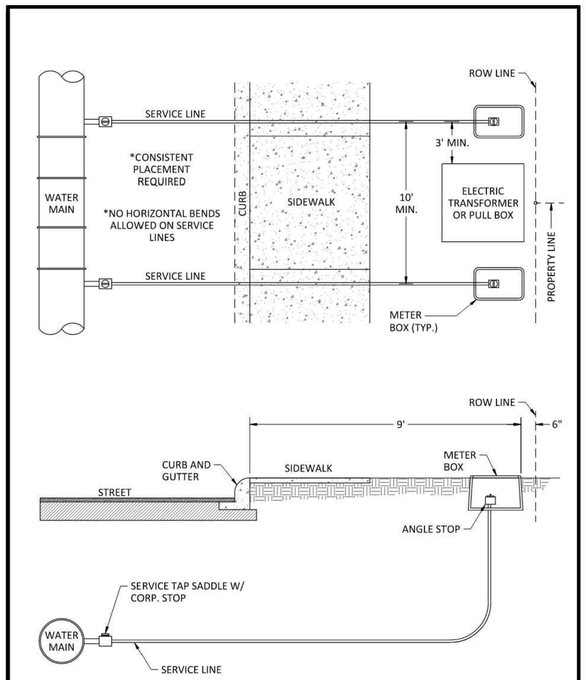
VERTICAL VALVE

HORIZONTAL VALVE
USE ONLY WHEN SPECIFIED IN DRAWINGS AND WITH NBU STAFF APPROVAL

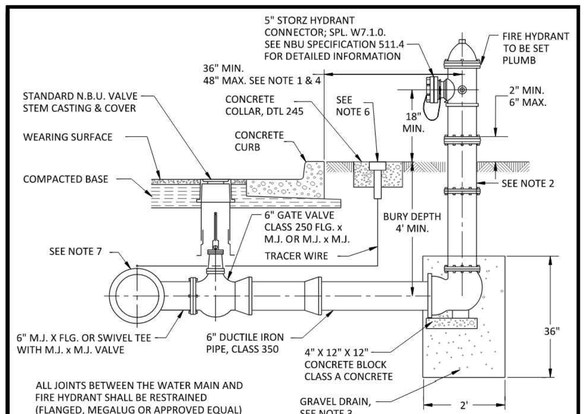
NOTES:

1. WELD SOCKET 2 ½" X 2" DEEP TO 1" SCH, 40 CARBON STEEL ROUND STEM EXTENSION, FITTED ON OPERATING NUT. [SCH.80 FOR LENGTHS OVER 10'.]
2. VALVE CASTING SHALL BE 6" DI PIPE WITH BELL OR COLLAR CENTERED OVER VALVE BOOT.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 2" LONG WELDED TO TOP OF ROD.
4. VALVE STEM EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 12" AND 18" FROM FINISHED GRADE.
5. TRUMBULL VALVE BOX ALIGNMENT DEVICE OR APPROVED EQUAL.

NBU	DRAWN BY: EWL	STANDARD DRAWING: TYPICAL GATE VALVE				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 230



NBU	DRAWN BY: EWL	STANDARD DRAWING: SERVICE TAP: METER BOX PLACEMENT BETWEEN: SIDEWALK AND PROPERTY LINE				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 244

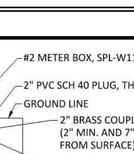


ALL JOINTS BETWEEN THE WATER MAIN AND FIRE HYDRANT SHALL BE RESTRAINED (FLANGED, MEGALUG OR APPROVED EQUAL)

NOTES:

1. DIMENSIONS SHOWN ARE APPLICABLE FOR HYDRANTS INSTALLED BETWEEN CURB AND SIDEWALK. WHERE SIDEWALK ABUTS CURB, IN PUBLIC OR COMMERCIAL AREAS, THE OFFSET FROM BACK OF CURB SHALL BE 6' TO 9'. HYDRANTS ARE NOT TO BE PLACED IN SIDEWALK AREAS. SEE NEW BRAUNFELS UTILITIES STANDARD SPECIFICATIONS FOR LOCATION OF HYDRANT.
2. FOR BURY DEPTHS GREATER THAN 5', ONE BARREL EXTENSION NOT EXCEEDING 2' LENGTH SHALL BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT. NO MORE THAN ONE EXTENSION IS PERMITTED.
3. CRUSHED STONE OR GRAVEL SHALL BE PLACED AROUND THE BOTTOM OF THE HYDRANT FOR A RADIUS OF AT LEAST 12" AND EXTEND AT LEAST 12" ABOVE THE OUTLET. DO NOT BLOCK DRAIN HOLES.
4. PROVIDE MINIMUM CLEARANCE TO OBSTRUCTIONS AROUND FIRE HYDRANT PER NBU STANDARD DETAIL 242.
5. FIRE HYDRANTS SHALL MEET THE REQUIREMENTS OF NBU SPL W7.0.0.
6. TEST STATION SHALL MEET THE REQUIREMENTS OF NBU SPL W18.1.0. MAX DISTANCE BETWEEN TEST KITS SHALL BE 600 LF. CONCRETE COLLAR SHALL HAVE 1' MINIMUM CLEARANCE TO FIRE HYDRANT ASSEMBLY.
7. PROVIDE THRUST RESTRAINT ON WATER MAIN IN BOTH DIRECTIONS FROM TEE. RESTRAINT LENGTH SHALL BE PER THRUST RESTRAINT CALCULATIONS WITH SAFETY FACTOR NOT LESS THAN 1.5.

NBU	DRAWN BY: EWL	STANDARD DRAWING: STANDARD FIRE HYDRANT INSTALLATION WITH 5" STORZ CONNECTOR				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 240



YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

WATER DETAILS I

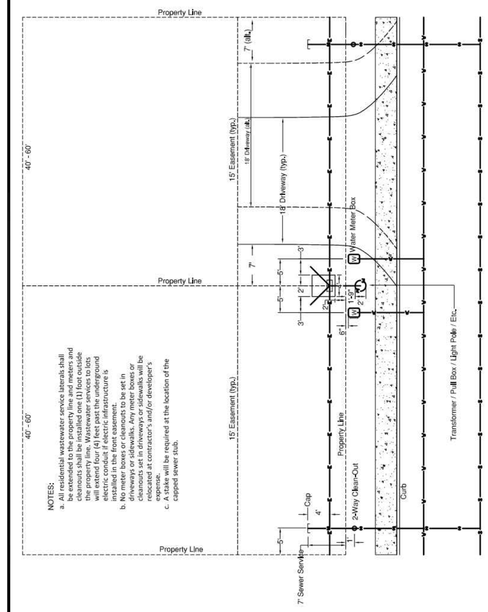
SHEET 35 OF 40

NO	DATE	ISSUES AND REVISIONS
1	1-3-2025	REVISED PER NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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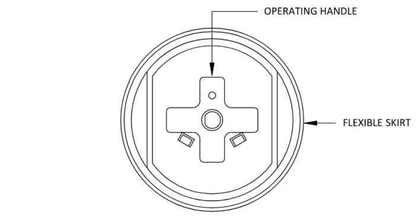
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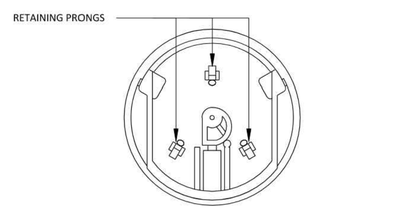
NOTES:
a. All electrical, wastewater, service, utensils shall be restricted to the property lines and meters and cleanouts shall be installed one (1) foot outside the property line. Water service pipe to this lot will extend four (4) feet past the underground electric conduit if electric infrastructure is installed in the front of the lot.
b. No meter boxes or cleanouts to be set in driveways or sidewalks. Any meter boxes or cleanouts set in driveways or sidewalks will be relocated at contractor's and/or developer's expense.
c. A stake will be required at the location of the capped sewer stub.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

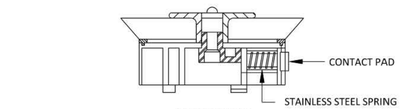
DRAWN BY:	D. A.	STANDARD DRAWING:	NARROW LOT WATER & SEWER SERVICE ALIGNMENT SCENARIO			
APPROVED BY:	N. P.					
DATE:	12/20/18	SCALE:	N.T.S.	SHEET:	1 OF 1	DRAWING NO. 410



TOP VIEW



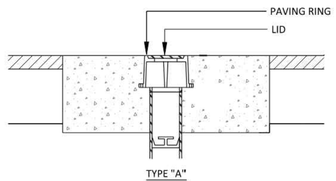
BOTTOM VIEW



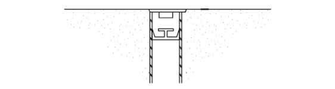
SECTION VIEW

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

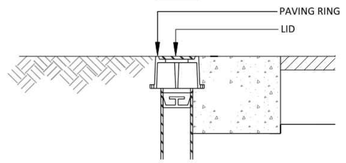
DRAWN BY:	EWL	STANDARD DRAWING:	DEBRIS CAP INSTALLATION			
APPROVED BY:	A. WILLARD					
DRAWING DATE:	2/1/24	UPDATED:	SCALE:	N.T.S.	SHEET:	1 OF 2 DRAWING NO. 234



TYPE "A"



TYPE "B"



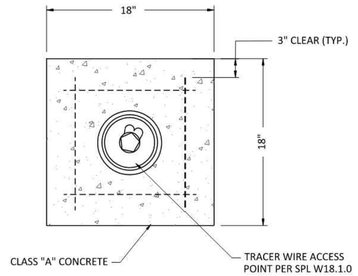
TYPE "C"

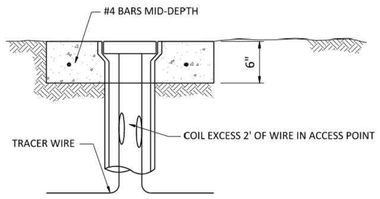
NOTES:

1. DEBRIS CAP SHALL BE INSTALLED AS CLOSE UNDER THE CAST IRON COVER WITHOUT INTERFERING WITH COVER OPERATION.
2. FLEXIBLE SKIRT SHALL BE TRIMMED TO PROVIDE A SMOOTH CONTACT WITH THE INTERIOR DIAMETER OF THE PIPE.
3. DEBRIS CAP SHALL MEET THE REQUIREMENTS OF NBU SPL W20.1.0.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

DRAWN BY:	EWL	STANDARD DRAWING:	DEBRIS CAP INSTALLATION			
APPROVED BY:	A. WILLARD					
DRAWING DATE:	2/1/24	UPDATED:	SCALE:	N.T.S.	SHEET:	2 OF 2 DRAWING NO. 234



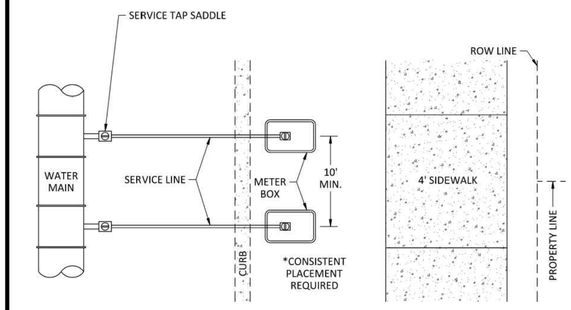


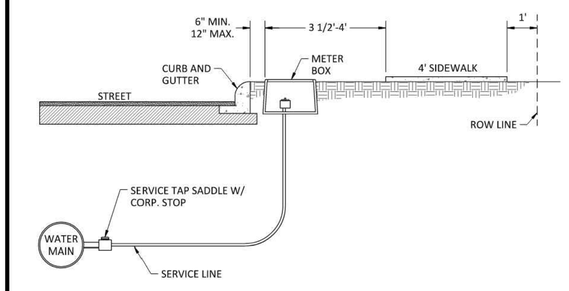
NOTES:

1. TRACER WIRE ACCESS POINTS SHALL BE INSTALLED PER SPECIFICATION ITEM NO. 512 "TRACER WIRE".
2. SEE DETAIL 240 FOR TYPICAL INSTALLATION.
3. TRACER WIRE ACCESS POINTS SHALL NOT BE INSTALLED IN SIDEWALKS, DRIVEWAYS, VALLEY GUTTERS, OR OTHER AREAS OF VEHICULAR TRAFFIC.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

DRAWN BY:	EWL	STANDARD DRAWING:	TRACER WIRE ACCESS POINT			
APPROVED BY:	A. WILLARD					
DRAWING DATE:	2/1/24	UPDATED:	SCALE:	N.T.S.	SHEET:	1 OF 1 DRAWING NO. 245



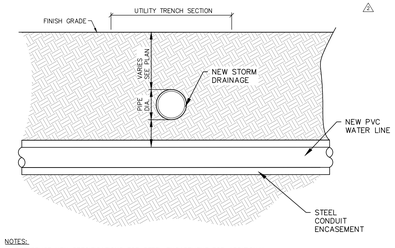


NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

DRAWN BY:	EWL	STANDARD DRAWING:	SERVICE TAP: METER BOX PLACEMENT BETWEEN: SIDEWALK AND CURB			
APPROVED BY:	A. WILLARD					
DRAWING DATE:	2/1/24	UPDATED:	SCALE:	N.T.S.	SHEET:	1 OF 1 DRAWING NO. 243

RESTRAINED LENGTH FOR PVC PIPE											
PIPE INSIDE DIA.	HORIZONTAL BENDS				VERTICAL BENDS						DEAD END/ INLINE VALVES
					UPPER			LOWER			
	90°	45°	22.5°	11.25°	45°	22.5°	11.25°	45°	22.5°	11.25°	
8"	19	8	4	2	25	12	6	7	4	2	60
12"	27	12	6	3	36	17	9	9	5	3	85

NOTES:
LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:
a. SAFETY FACTOR = 1.5 TO 1
b. TEST PRESSURE = 200 psi
c. SOIL DESIGNATION – WELL GRADED GRAVLES AND GRAVEL–SAND MIXTURES, LITTLE OR NO FINES (PEA GRAVEL)
d. DEPTH OF COVER = 4 feet (TYPICAL AND UPPER BEND)
e. DEPTH OF COVER = 5 feet (LOWER BEND)



NOTES:
1. REFERENCE NBU SPECIFICATIONS FOR STEEL ENCASEMENT FOR ADDITIONAL INFORMATION.
2. RECOMPACT ALL PIPE BEDDING AROUND NEW AND EXISTING PIPES AND REPAIR OR RECONSTRUCT FINISH GRADE MATERIAL.

WATER LINE / STORM DRAINAGE CROSSING DETAIL
(NOT TO SCALE)

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
02/11/2025

YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

WATER DETAILS II ⚠

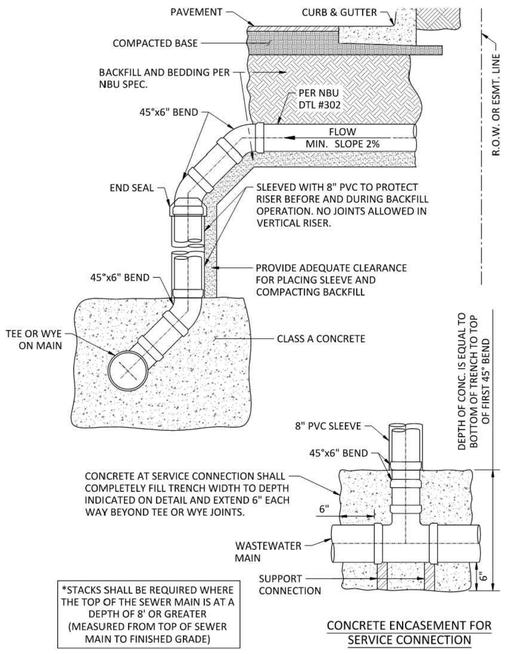
SHEET 36 OF 40

NO	DATE	ISSUES AND REVISIONS
⚠1	1–3–2025	REVISED PER NBU COMMENTS
⚠2	2–6–2025	REVISED PER CONB & NBU COMMENTS

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830–358–7127 ink–civil.com
TBPE FIRM F–13351

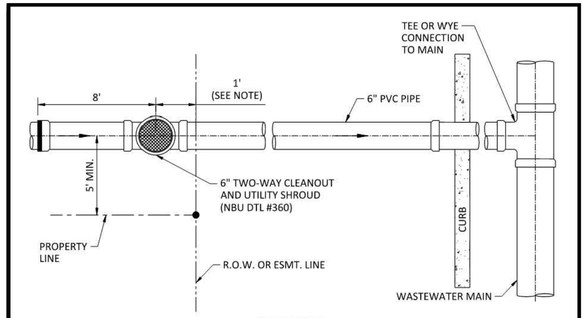
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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\36 WATER DETAILS II.dwg User: catherinehagopian Feb 06, 2025 - 1:02pm

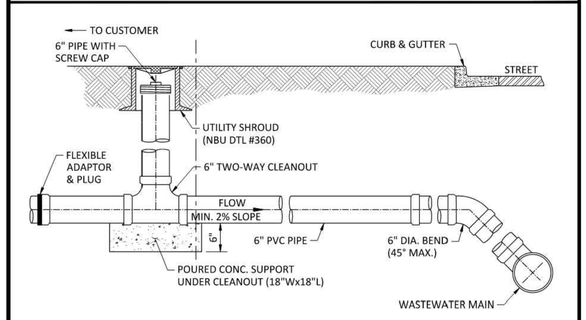


CONCRETE ENCASEMENT FOR SERVICE CONNECTION

NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: WASTWATER DEEP SERVICE CONNECTION DETAIL				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 301		



PLAN VIEW



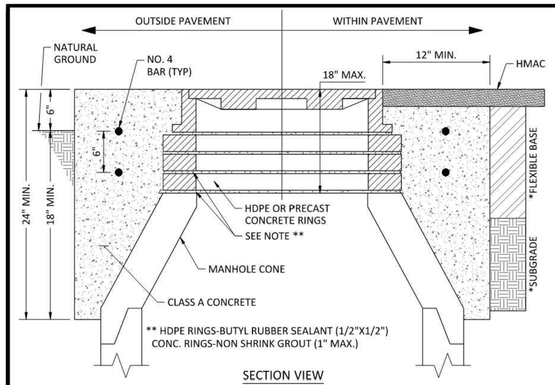
PROFILE VIEW

NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: SINGLE WASTWATER SERVICE CONNECTION DETAIL				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 2	DRAWING NO. 302		

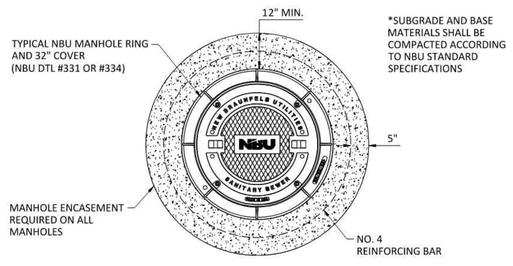
NOTES:

1. UTILITY CONTRACTOR, DURING SUBDIVISION CONSTRUCTION, SHALL INSTALL WASTEWATER CONNECTION TO MAIN, 6" STUB WITH 6" SERVICE BRANCH WITH 2-WAY CLEANOUT, CONCRETE SUPPORT (MIN. 18"Wx18"Lx6"H), RISER FOR CLEAN OUT (CAPPED), UTILITY SHROUD, 7' EXTENSION, AND PLUG. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SHALL SLOPE DOWNWARD TO MAIN AT A MINIMUM 2% SLOPE, ¼" PER FOOT, MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER OR DESIGNATED REPRESENTATIVE IF GREATER THAN 6', OTHERWISE, THE INSTALLED DEPTH WILL TYPICALLY BE 4' TO 6'. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 301. ALL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DRAWINGS AND WILL BE INSPECTED BY NBU CONSTRUCTION INSPECTION PERSONNEL.
2. CUSTOMER SHALL REMOVE PLUG, INSTALL 4" WASTEWATER LINE [EXTEND 4" PIPE 6" MINIMUM INTO 6" PIPE AND JOINT WITH FLEXIBLE ADAPTOR]. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF CUSTOMER'S WASTEWATER SYSTEM.
3. CUSTOMER IS RESPONSIBLE FOR PIPING SYSTEM UNTIL WASTEWATER IS CONNECTED. ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A PERIOD OF TWO (2) YEARS FROM DATE OF FINAL ACCEPTANCE, THAT CONNECTIONS TO NBU SYSTEMS ARE FREE FROM DEFECTS IN WORKMANSHIP OR MATERIALS. CUSTOMER MUST ENSURE THAT 2-WAY CLEANOUTS REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS.
4. NBU ACTIVITY IS LIMITED TO INSPECTION OF CONNECTIONS TO NBU'S WASTEWATER SYSTEM. NBU'S MAINTENANCE RESPONSIBILITY ENDS AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEANOUT OR THE PROPERTY LINE, WHICHEVER IS CLOSER TO WASTEWATER MAIN.
5. PIPING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AND BACKFILLED AS REQUIRED BY NBU STANDARD SPECIFICATIONS. SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 42"; ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY NBU WATER ENGINEERING.

NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: SINGLE WASTWATER SERVICE CONNECTION DETAIL				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 2 OF 2	DRAWING NO. 302		

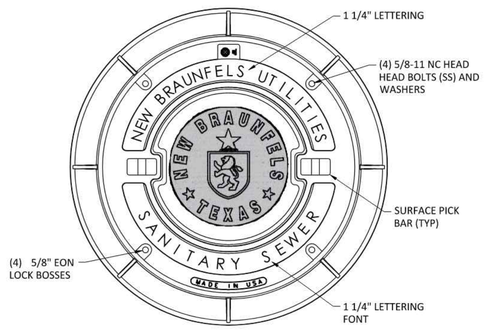


SECTION VIEW

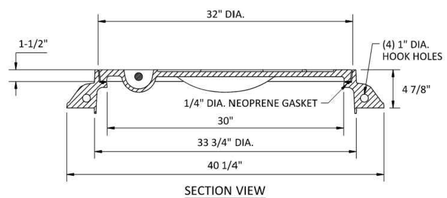


TOP VIEW

NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: NEW MANHOLE CONSTRUCTION AND MINOR MANHOLE ADJUSTMENT				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 322		



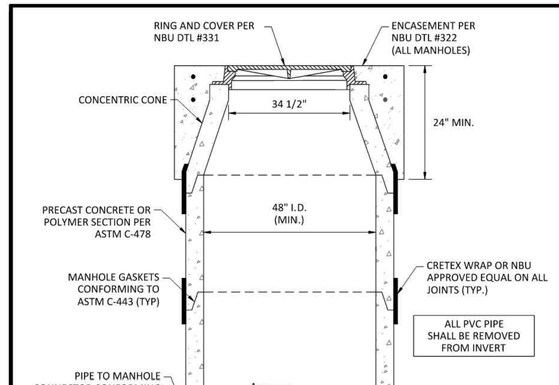
PLAN VIEW



SECTION VIEW

MATERIAL: DUCTILE IRON ASTM A536 GRADE 70-50-05

NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: SANITARY SEWER MANHOLE COVER				
	DRAWING DATE: 8/17/21	UPDATED: 2023-12-20	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 331		



SECTION A-A

*CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.

NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: WASTEWATER MANHOLE ON PRECAST BASE				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 328		



YES! COMMUNITIES
5050 S. SYRACUSE ST, SUITE 1200
DENVER, CO 80237

DWELLING AT BRAUNFELS - PHASE II
2984 BURROW WAY
NEW BRAUNFELS, TX , 78130

SANITARY SEWER DETAILS I

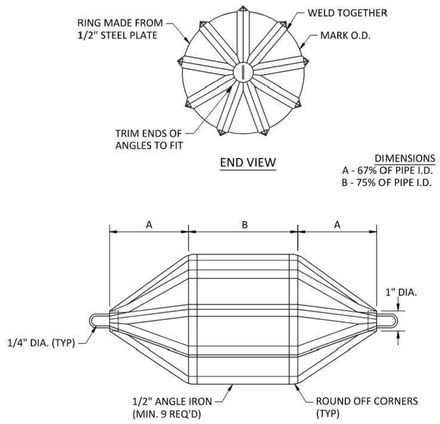
SHEET 37 OF 40

NO	DATE	ISSUES AND REVISIONS

INK CIVIL
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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\37 SANITARY SEWER DETAILS II.dwg User: cotherinehoegen Feb 06, 2025 - 1:03pm

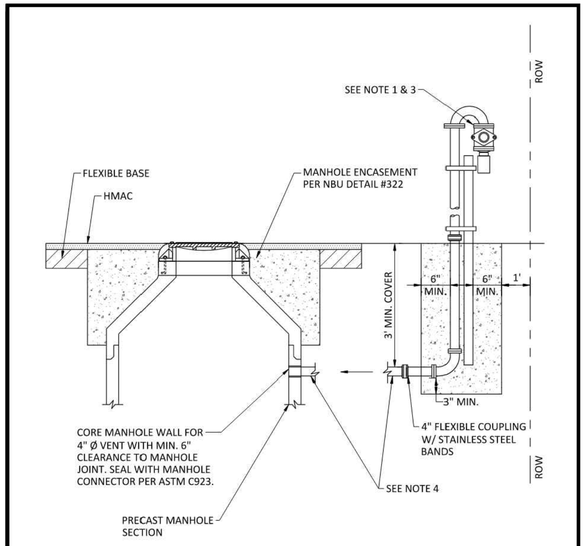


MANDREL REQUIREMENTS:

1. O.D. NOT LESS THAN 95% OF THE I.D. OF THE PIPE, AS SPECIFIED BY THE APPLICABLE ASTM, AWWA, UNI-BELL OR ANSI STANDARD.
2. ABLE TO WITHSTAND 200 PSI WITHOUT BEING DEFORMED.
3. ODD NUMBER OF RUNNERS OR LEGS.

*THIS INFORMATION IS PROVIDED AS A REFERENCE. ALL DEFLECTION TESTING SHALL BE DONE IN ACCORDANCE WITH TCEQ CHAPTER 217.

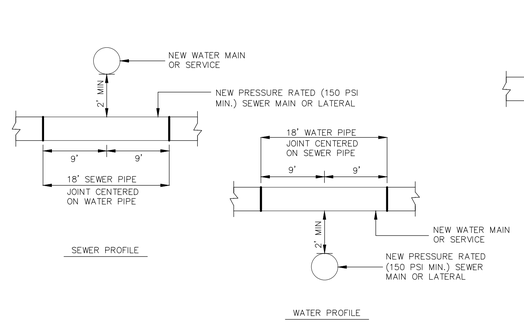
NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING: GO, NO GO DEFLECTION TESTING MANDREL	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 350



NOTES:

1. VENT PIPING AND COATINGS PER NBU DETAIL 334.
2. MANHOLE VENT AND SUPPORT PIPING SHALL NOT BE INSTALLED IN SIDEWALK, PARKING AREAS, OR DRIVE AISLES.
3. BOTTOM OF FLANGE SHALL BE MIN. 2'-6" ABOVE GRADE, 3'-6" MAX.
4. VENT PIPING FROM MANHOLE TO 90 DEG. VERTICAL BEND MUST BE LAID TO DRAIN TO THE MANHOLE AT MIN. 2% SLOPE.

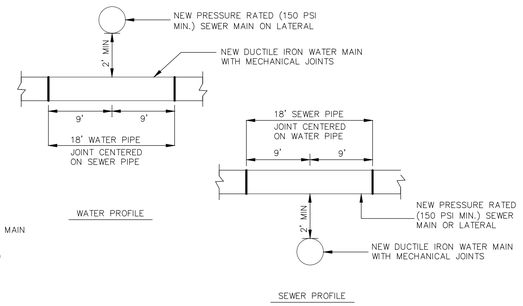
NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING: MANHOLE VENT PAVED AREAS	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 333



NEW WATER OVER NEW SEWER CROSSING DETAIL

Scale: NTS

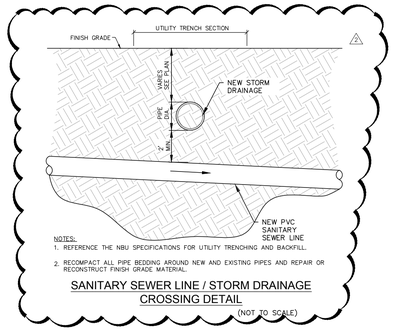
NOTE: PIPE SEPARATION DISTANCES AND CONSTRUCTION TO COMPLY WITH THE MOST RESTRICTIVE REQUIREMENT FROM TAC 290.44 & 217.53 AND NBU SPEC 510.3



NEW SEWER OVER NEW WATER CROSSING DETAIL

Scale: NTS

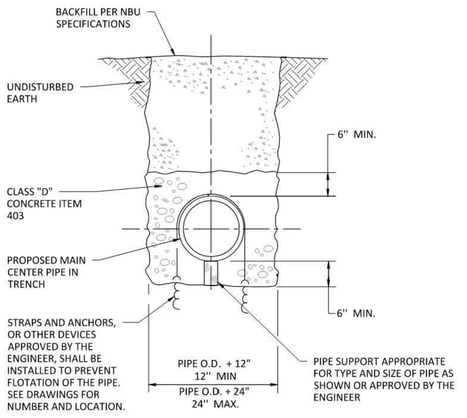
NOTE: PIPE SEPARATION DISTANCES AND CONSTRUCTION TO COMPLY WITH THE MOST RESTRICTIVE REQUIREMENT FROM TAC 290.44 & 217.53 AND NBU SPEC 510.3



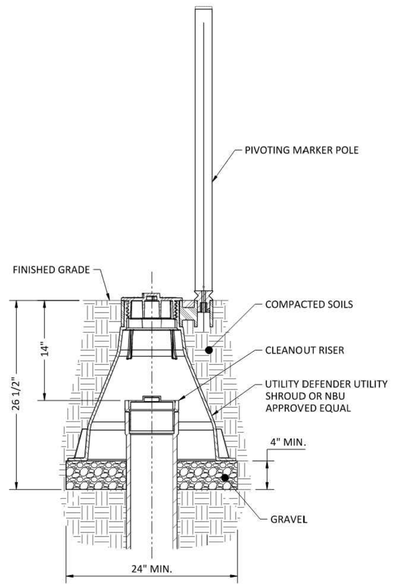
NOTES:
1. REFERENCE THE NBU SPECIFICATIONS FOR UTILITY TRENCHING AND BACKFILL.
2. RECOMPACT ALL PIPE BEDDING AROUND NEW AND EXISTING PIPES AND REPAIR OR RECONSTRUCT FINISH GRADE MATERIAL.

SANITARY SEWER LINE / STORM DRAINAGE CROSSING DETAIL

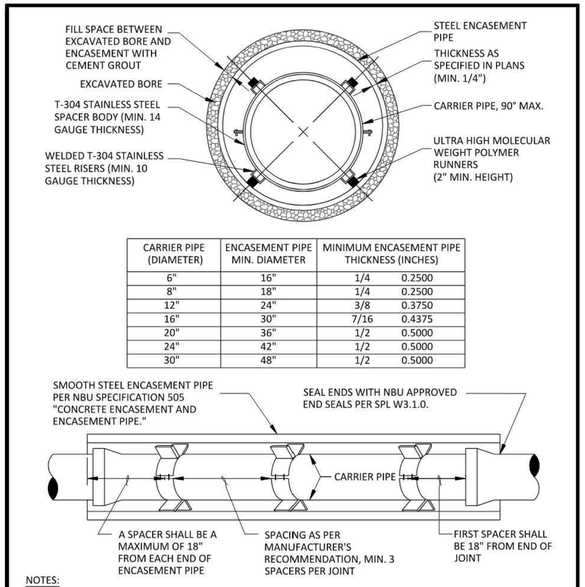
(NOT TO SCALE)



NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING: CONCRETE ENCASEMENT	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 310



NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING: UTILITY SHROUD FOR SEWER CLEANOUT ASSEMBLY	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 360



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

NOTES:

1. CASING SPACER CONFIGURATION AND SPACING SHALL BE AS SHOWN ON MANUFACTURER'S DRAWINGS FOR SPECIFIC WORK; THESE MUST BE ACCEPTABLE TO NEW BRAUNFELS UTILITIES.
2. CASING SPACERS SHALL BE AS APPROVED ON NBU STANDARD PRODUCTS LIST ITEM W17.0.0.
3. ALL WATER MAIN AND FORCE MAIN CARRIER PIPE JOINTS INSIDE ENCASEMENT MUST BE RESTRAINED WITH APPROVED JOINT RESTRAINTS PER NBU SPL W9.2.0.
4. PROPOSED ENCASEMENT DIAMETERS SHALL BE AS SHOWN ON THE CONSTRUCTION PLANS, BUT IN NO CASE SHALL THE ENCASEMENT DIAMETER BE LESS THAN SHOWN IN THE TABLE ABOVE. CASING PIPE SHALL BE SIZED PER PROJECT CONDITIONS, CARRIER PIPE MATERIAL, AND JOINT RESTRAINT SYSTEM.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING: ENCASEMENT DETAIL WITH CASING SPACERS	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 420



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SANITARY SEWER DETAILS III

SHEET 38 OF 40

NO	DATE	ISSUES AND REVISIONS
2	2-6-2025	REVISED PER CONB & NBU COMMENTS

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Drawing Name: N:\Projects\YES001 Dwelling Phase 2\Civil\Construction Drawings\37 SANITARY SEWER DETAILS II.dwg User: catherinehagelin Feb 06, 2025 - 1:03pm

HYDRAULIC MULCH

MATERIALS:

HYDRAULIC MULCHES: WOOD FIBER MULCH CAN BE APPLIED ALONE OR AS A COMPONENT OF HYDRAULIC MATRICES. WOOD FIBER APPLIED ALONE IS TYPICALLY APPLIED AT THE RATE OF 2,000 TO 4,000 LB/ACRE. WOOD FIBER MULCH IS MANUFACTURED FROM WOOD OR WOOD WASTE FROM LUMBER MILLS OR FROM URBAN SOURCES.

HYDRAULIC MATRICES: HYDRAULIC MATRICES INCLUDE A MIXTURE OF WOOD FIBER AND ACRYLIC POLYMER OR OTHER TACKIFIER AS BINDER. APPLY AS A LIQUID SLURRY USING A HYDRAULIC APPLICATION MACHINE (I.E., HYDRO SEEDER) AT THE FOLLOWING MINIMUM RATES, OR AS SPECIFIED BY THE MANUFACTURER TO ACHIEVE COMPLETE COVERAGE OF THE TARGET AREA: 2,000 TO 4,000 LB/ACRE WOOD FIBER MULCH, AND 5 TO 10% (BY WEIGHT) OF TACKIFIER (ACRYLIC COPOLYMER, GUAR, PSYLLIUM, ETC.)

BONDED FIBER MATRIX: BONDED FIBER MATRIX (BFM) IS A HYDRAULICALLY APPLIED SYSTEM OF FIBERS AND ADHESIVES THAT UPON DRYING FORMS AN EROSION RESISTANT BLANKET THAT PROMOTES VEGETATION, AND PREVENTS SOIL EROSION. BFMS ARE TYPICALLY APPLIED AT RATES FROM 3,000 LB/ACRE TO 4,000 LB/ACRE BASED ON THE MANUFACTURER'S RECOMMENDATION. A BIODEGRADABLE BFM IS COMPOSED OF MATERIALS THAT ARE 100% BIODEGRADABLE. THE BINDER IN THE BFM SHOULD ALSO BE BIODEGRADABLE AND SHOULD NOT DISSOLVE OR DISPERSE UPON RE-WETTING. TYPICALLY, BIODEGRADABLE BFMS SHOULD NOT BE APPLIED IMMEDIATELY BEFORE, DURING OR IMMEDIATELY AFTER RAINFALL IF THE SOIL IS SATURATED. DEPENDING ON THE PRODUCT, BFMS TYPICALLY REQUIRE 12 TO 24 HOURS TO DRY AND BECOME EFFECTIVE.

INSTALLATION:

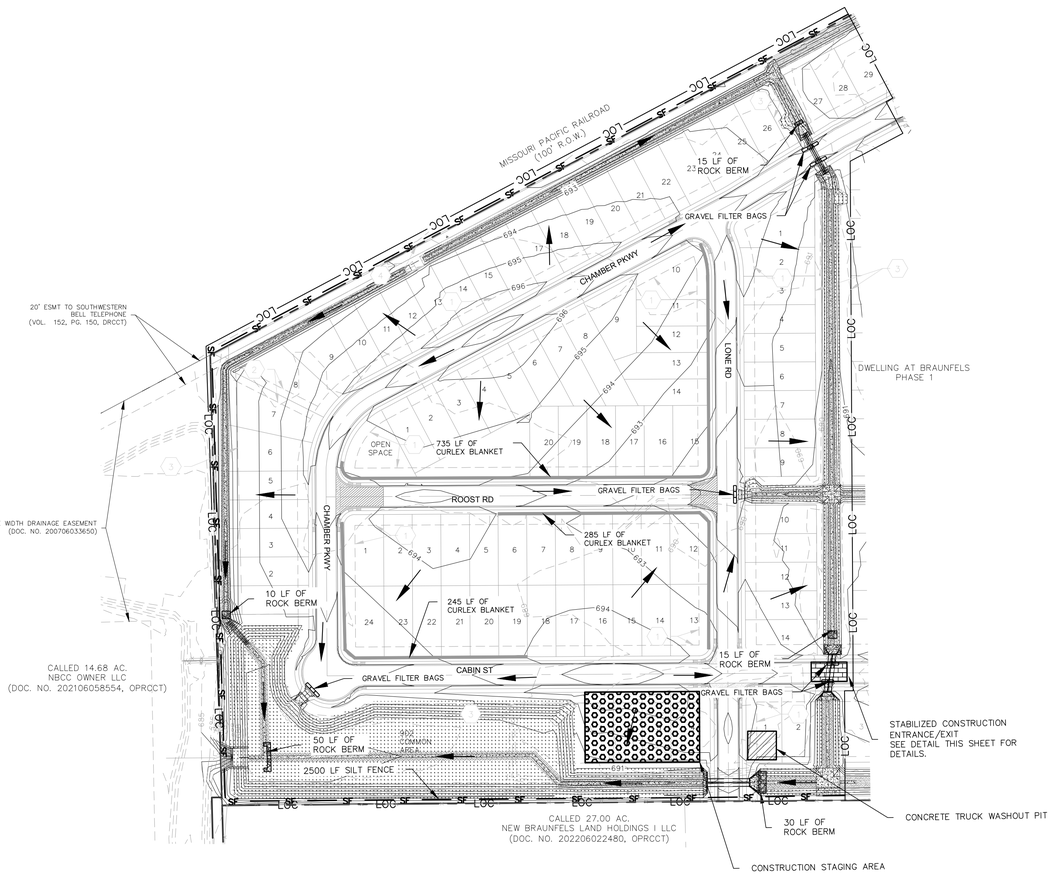
1. PRIOR TO APPLICATION, ROUGHEN EMBANKMENT AND FILL AREAS BY ROLLING WITH A CRIMPING OR PUNCHING TYPE ROLLER OR BY TRACK WALKING. TRACK WALKING SHALL ONLY BE USED WHERE OTHER METHODS ARE IMPRACTICAL.
2. TO BE EFFECTIVE, HYDRAULIC MATRICES REQUIRE 24 HOURS TO DRY BEFORE RAINFALL OCCURS.
3. AVOID MULCH OVER SPRAY ONTO ROADS, SIDEWALKS, DRAINAGE CHANNELS, EXISTING VEGETATION, ETC.
4. 4" OF TOP SOIL SHALL BE PLACED.

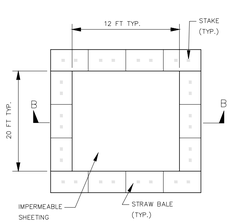
INSPECTION AND MAINTENANCE GUIDELINES:

1. MULCHED AREAS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.
2. AREAS DAMAGED BY STORMS OR NORMAL CONSTRUCTION ACTIVITIES SHOULD BE REGRADED AND HYDRAULIC MULCH REAPPLIED AS SOON AS PRACTICAL.

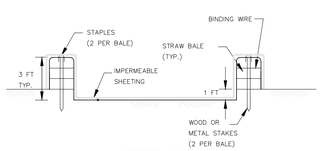
INTERNAL EASEMENT KEYNOTES

ITEM	DESCRIPTION
1	80' ACCESS, UTILITY, DRAINAGE EASEMENT (DOC. 202306003033, OPRCCT)
2	20' U.E (DOC. 202306003033, OPRCCT)
3	VARIABLE WIDTH D.E (DOC. 202306003033, OPRCCT)
4	20' HIKE AND BIKE TRAIL EASEMENT (DOC. 202306003033, OPRCCT)



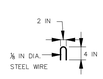


PLAN

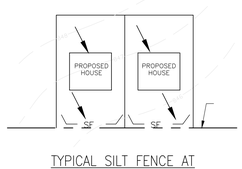


SECTION B–B

TYPICAL CONCRETE TRUCK WASHOUT PIT

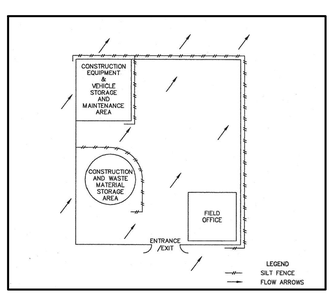


STAPLE DETAIL



TYPICAL SILT FENCE AT RESIDENTIAL LOT

NOTE:
RESIDENTIAL LOT CONSTRUCTION MUST MEET THE REQUIREMENTS OF THIS WPAP AS WELL AS WITH LOCAL, STATE, AND FEDERAL REGULATIONS. TEMPORARY BMPS MUST BE IN PLACE PRIOR TO ANY RESIDENTIAL LOTS CONSTRUCTION.



TYPICAL CONSTRUCTION STAGING AREA

SEQUENCE OF CONSTRUCTION:

1. OBTAIN CITY APPROVED SITE PREPARATION PLANS, AND TPDES PERMIT (NOT A COPY OF THE TPDES APPLICATION TO TCEQ), IF APPLICABLE.
2. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
3. BEGIN DEMOLITION ACTIVITIES, IF APPLICABLE.
4. BEGIN SITE CLEARING AND GRADING.
5. RESTORE AND REVEGETATE ALL DISTURBED AREAS NOT UNDER IMPERMEABLE IMPROVEMENTS.
6. COMPLETE ANY REMAINING "PUNCH LIST" ITEMS.
7. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROLS AFTER PERMANENT STABILIZATION IS AT LEAST 70% EVENLY ESTABLISHED. RYE IS NOT ACCEPTED.

EROSION CONTROL NOTES:

1. LIMITS OF CONSTRUCTION AND OTHER EROSION CONTROL IMPROVEMENTS SHOWN OUTSIDE THE PROPERTY ARE SHOWN FOR GRAPHICAL PURPOSE ONLY. IF NEAR PROPERTY LINE, THE INTENT IS TO BE PLACED NEAR THE PROPERTY LINE, NOT ON THE ADJACENT PROPERTY.

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

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

4. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED IN THE SWPPP DOCUMENTS AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.

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

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

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

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

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

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

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

12. STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 12.2(N).

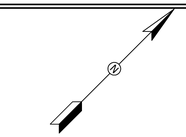
RESIDENTIAL LOT STABILIZATION

1. CURLEX BLANKET (I) (4' MIN WIDTH) OR ENGINEER APPROVED EQUAL
2. CURLEX MUST BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
3. MAX SLOPE FOR CURLEX (I) < 2H : 1V

SOIL STABILIZATION NOTE

PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.

SUBSTANTIAL GRADING IS PROPOSED WITH THIS UNIT. PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 13.2(N), STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE TIME.



0 100' 200'
SCALE: 1"=100'

LEGEND

- SF — SILT FENCE
- LOC — LIMITS OF CONSTRUCTION
- 900 — EXISTING CONTOURS
- 900 — PROPOSED CONTOURS
- EDGE OF PAVEMENT
- FLOW ARROWS
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING TREE
- STABLIZED CONSTRUCTION ENTRANCE/EXIT
- TRUCK WASH OUT PIT
- CONSTRUCTION STAGING AREA
- ROCK BERM
- GRAVEL FILTER BAGS
- CURLEX BLANKET
- HYDROMULCH (9,490 SQ. YD.)



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EROSION CONTROL PLAN

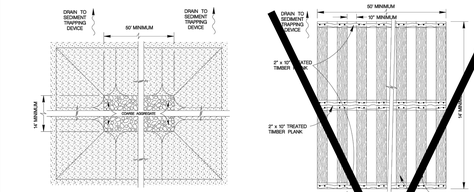
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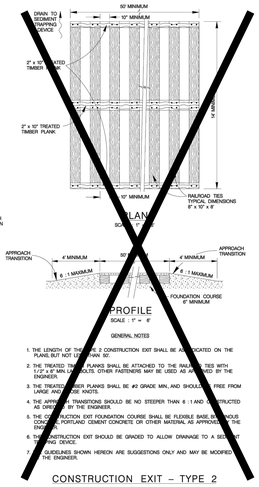
NO	DATE	ISSUES AND REVISIONS
1	2-6-2025	REVISED PER CONB & NBU COMMENTS

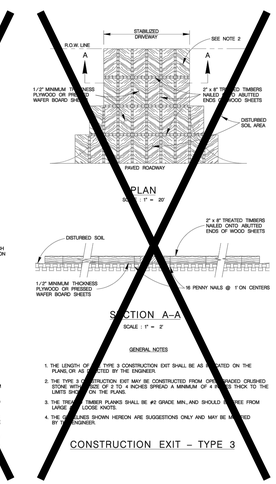
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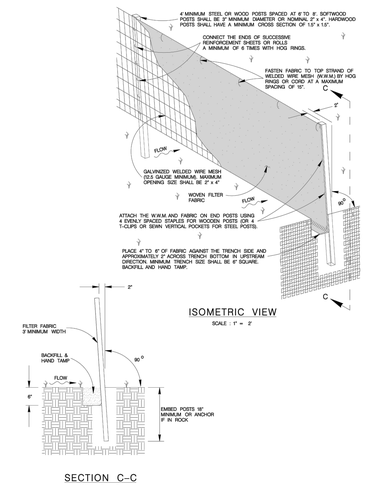
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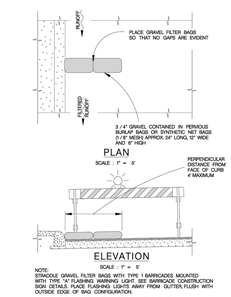
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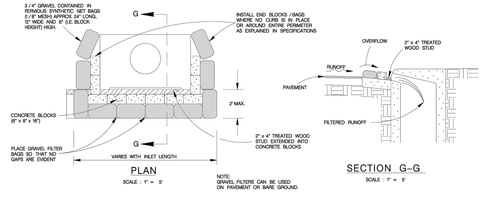












JANUARY 2005

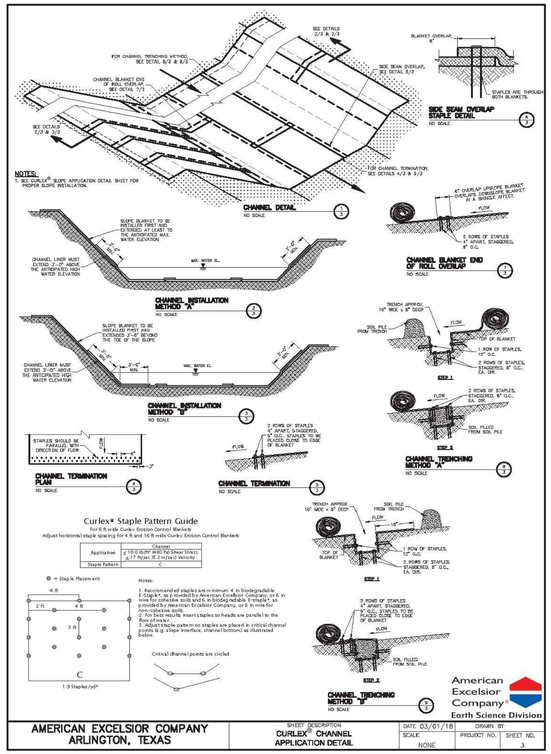
CITY OF SAN ANTONIO

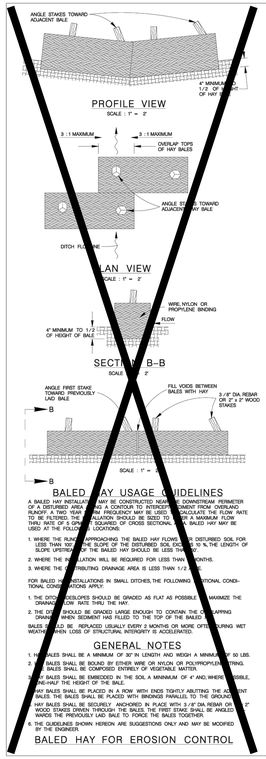
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

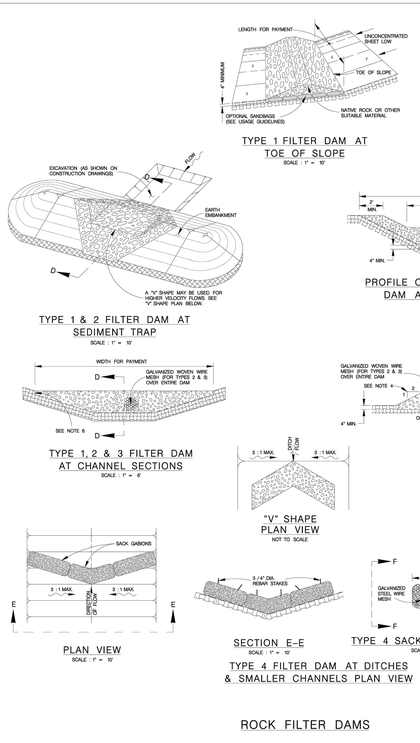
TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS 1

N. SUBMITTAL PROJECT NO.: _____ DATE: _____

DRAWN BY: V. VASQUEZ DSGN. BY: _____ CHKD. BY: _____ SHEET NO.: ___ OF ___







ROCK FILTER DAM USAGE GUIDELINES

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 THRU RATE OF 60 GPM / FT SQUARED OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.

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. TYPE 1 DAMS ARE NOT DESIGNED TO CONTROL EROSION FROM DRAINAGE AREAS LARGER THAN 2 ACRES, OR FLOWS FROM CONCENTRATED, HIGH VELOCITY FLOWS (APPROXIMATELY 8 FT./SEC OR MORE) BY 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 AS DIRECTED BY THE ENGINEER.

TYPE 2 (18" HIGH, WITH WIRE MESH.):

TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.

TYPE 3 (36" HIGH, WITH WIRE MESH.):

TYPE 3 MAY BE USED IN STREAM FLOW AND SHOULD BE SECURED TO THE STREAM BED.

TYPE 4 (SACK GABIONS):

TYPE 4 MAY BE USED IN DITCHES AND SMALLER CHANNELS TO FORM AN EROSION CONTROL DAM.

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(S), 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 STORM WATER POLLUTION PREVENTION PLANS.
4. SIDE SLOPES SHOULD BE 2 : 1 OR FLATTER. DAMS WITHIN THE SAFETY ZONE SHALL HAVE SIDE SLOPES 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 THE 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 HOOKIN 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. THE MESH SHALL BE FIRMLY ANCHORED AND 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. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

JANUARY 2005

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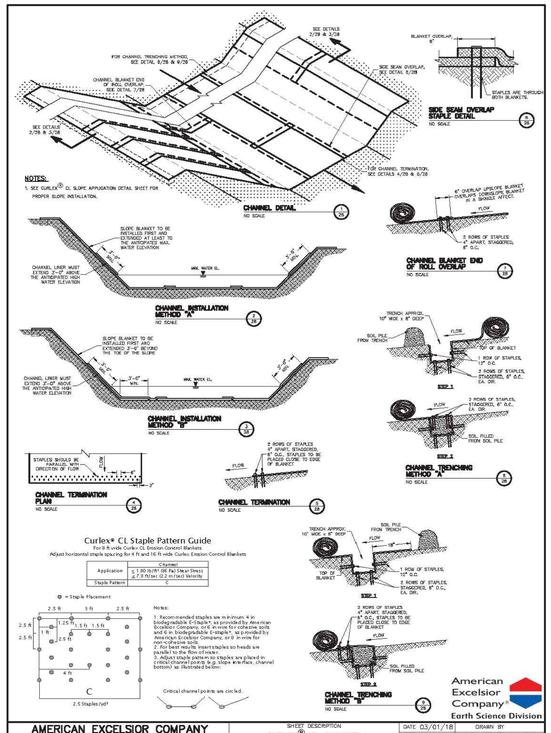
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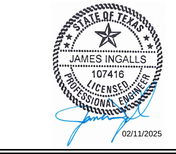
TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS 2

N. SUBMITTAL PROJECT NO.: _____ DATE: _____

DRAWN BY: V. VASQUEZ DSGN. BY: _____ CHKD. BY: _____ SHEET NO.: ___ OF ___

ROCK FILTER DAMS





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EROSION CONTROL DETAILS

SHEET 40 OF 40

NO	DATE	ISSUES AND REVISIONS
1		

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