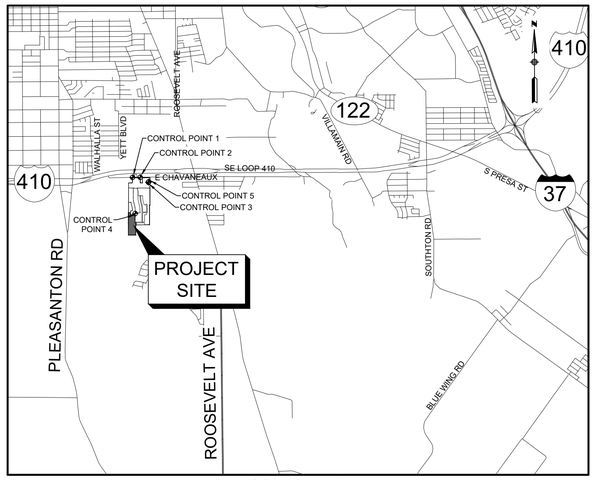
CHAVANEAUX SUBDIVISION UNIT 5

PAVING, DRAINAGE, WATER, AND WASTEWATER IMPROVEMENTS

LAND-PLAT-21-11800506

SAN ANTONIO, TEXAS 78221

BEXAR COUNTY



LOCATION MAP

(N.T.S.)

SHEET NO.	DESCRIPTION
1	COVER
2	GENERAL NOTES
3	UTILITY LAYOUT
4	WATER LAYOUT
5	WASTEWATER LAYOUT
6	EXISTING WASTEWATER LINE 'A' PLAN & PROFILE STA. 1+50.00 TO STA. 10+50.00
7	EXISTING WASTEWATER LINE 'A' PLAN & PROFILE STA. 10+50.00 TO 14+00.00
8	GRADING
9	EXISTING DRAINAGE AREA MAP
10	PROPOSED DRAINAGE AREA MAP
11	ULTIMATE DRAINAGE AREA MAP
12	INTERCEPTOR CHANNEL 'A' PLAN & PROFILE STA. 1+00.00 TO END
13	CHANNEL 'A' & 'B' PLAN & PROFILE STA. 1+00.00 TO END
14	DETENTION POND PLAN & DETAILS
15	DETENTION POND PROFILE STA. 1+00.00 TO END
16	FORESTIER GRN PLAN & PROFILE STA. 9+74.92 TO STA. 19+50.00
17	FORESTIER GRN PLAN & PROFILE STA. 27+50.00 TO END
18	BONNET PASS PLAN & PROFILE STA. 1+00.00 TO END
19	SIGNAGE SHEET
20	TRAFFIC SIGN STANDARDS
21	DRIVEWAY AND WHEELCHAIR RAMP DETAILS
22	STORMWATER POLLUTION PREVENTION PLAN
23	STORMWATER POLLUTION PREVENTION DETAILS
24	CPS ENERGY DETAILS

SUBMITTAL DATE: SEPTEMBER 2021

PROPERTY DESCRIPTION

12.97 ACRES OUT OF A 91.05 ACRE TRACT, NEW CITY BLOCK 14850, IN THE JUAN MANUEL URRIEGAS SURVEY NO. 32, ABSTRACT 759, SAN ANTONIO, BEXAR COUNTY, TEXAS, INCLUSIVE OF 0.22 ACRES OF RIGHT OF WAY DEDICATION, THAT SAME PROPERTY CONVEYED TO MARY ELLEN NAIZER BY WARRANTY DEED RECORDED IN VOLUME 7659, PAGE 334 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS.

BENCHMARK INFORMATION:

CONTROL POINT 1: CP MAG
EASTING: 2131136.4460'
NORTHING: 13664592.1200'
POINT NUMBER: 11
ELEVATION = 610.37'

CONTROL POINT 2: CP MAG
EASTING:2131605.5350 '
NORTHING:13664600.2300 '
POINT NUMBER: 7
ELEVATION = 617.27'

CONTROL POINT 3: CONTROL
EASTING:2132109.7940 '
NORTHING: 13664292.1490'
POINT NUMBER: 7059
ELEVATION= 616.21'

VERTICAL DATUM: NAVD-88 / NAD-83 SPC-SOUTH CENTRAL
THIS INFORMATION PROVIDED BY: ATWELL, LLC

BENCHMARK INFORMATION:

CONTROL POINT 4 (CP60D):
EASTING: 2131279.6370'
NORTHING: 13662345.4100'
ELEVATION = 596.35'

CONTROL POINT 5 (CP IRON ROD):
EASTING: 2132109.9600'
NORTHING:13664292.6000'
ELEVATION = 616.58'

VERTICAL DATUM: NAVD-88 / NAD-83 SPC-SOUTH CENTRAL
THIS INFORMATION PROVIDED BY: TOTAL GEO DATA SURVEYING LLC

REVISIONS			
NO.	DESCRIPTION	BY	DATE

DEVELOPER: CENTURY COMMUNITIES
CONTACT: RUDY MUNOZ
3619 PAESANOS PKWY, STE 304
SAN ANTONIO, TX 78231
PHONE: (210) 405-0195

ENGINEER : LJA ENGINEERING, INC.
1100 NE LOOP 410, SUITE 850
SAN ANTONIO, TEXAS 78209
CONTACT PERSON: PRISCILLA FLORES, P.E.
PHONE # (210) 503-2700
FAX # (210) 503-2749

SURVEYOR : ATWELL, LLC.
10100 REUNION PLACE, SUITE 700
SAN ANTONIO, TEXAS 78216
CONTACT PERSON: JERRY D. WILKIE, JR., R.P.L.S.
PHONE # (210) 861-0733

CONTOUR DATA : FIELD SURVEY BY ATWELL, LLC.

LJA JOB NO. SA199-0402A.426

02/07/22
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED
PROFESSIONAL ENGINEER
Priscilla G Flores

LJA Engineering, Inc.

1100 NE Loop 410
Suite 850
San Antonio, Texas 78209

Phone 210.503.2700
Fax 210.503.2749
FRN-F-1386

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.
2. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
3. THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES, EXISTING WOODEN FENCES, ORNAMENTAL STONE PLANTERS, OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE 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.
6. IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. 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.
8. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
9. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:

SAN ANTONIO WATER SYSTEM (SAWS)	233-2010
COSA DRAINAGE	207-8048
COSA SIGNAL OPERATIONS	207-7720 / 207-7765
TEXAS STATE WIDE ONE CALL LOCATOR	1-800-344-8377
-CITY PUBLIC SERVICE ENERGY	
-SPECTRUM (TIME WARNER)	
-AT&T	
-MCI	

10. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGES AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
11. ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
12. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
13. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND / OR TRACKED CONSTRUCTION MATERIALS AND / OR DEBRIS.
14. IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 207-7306 OR 207-3327 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY. IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT. IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.
15. IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND / OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND / OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A APPROVAL. THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.
16. CONTRACTOR IS TO INCLUDE A MAILBOX POST BLOCKOUT FOR VACANT LOTS AND ALL RESIDENCES WHICH DO NOT HAVE MAILBOXES AT THE CURB. BLOCKOUTS ARE PROVIDED FOR FUTURE USE BY THE POST OFFICE.
17. CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STOP POLES OR ANY OTHER VIA FACILITIES THAT MAY BE PRESENT. PLEASE PROVIDE THIRTY DAYS PRIOR NOTICE FOR SHELTER REMOVAL (TELEPHONE NOS: (210) 362-2155 OR (210) 362-2096). THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.

TREE PROTECTION AND PRESERVATION GENERAL NOTES

1. NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
2. TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. DURING CONSTRUCTION ACTIVITY, AT LEAST A SIX-INCH LAYER OF COARSE MULCH SHALL BE PLACED AND MAINTAINED OVER THE ROOT PROTECTION ZONE (NO SEPARATE PAY ITEM).
3. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.
4. ROOTS WILL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.
5. ALL CURB AND SIDEWALK WORK SHALL USE ALTERNATIVE CONSTRUCTION METHODS TO MINIMIZE EXTENSIVE ROOT DAMAGE TO TREES (REFER TO DETAILS).
6. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH, OR WET BURLAP.
7. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. ROOT PROTECTION ZONE IS 1 FOOT OF RADIUS PER INCH OF TREE'S DIAMETER. A 10-INCH DIAMETER TREE WOULD HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. OAK WOUNDS SHALL BE PAINTED OVER WITHIN 30 MINUTES TO PREVENT OAK WILT.
8. SAPLINGS, SHRUBS OR BUSHES TO BE CLEARED FROM THE PROTECTED ROOT ZONE AREA OF A LARGE TREE SHALL BE REMOVED BY HAND AS DESIGNATED BY THE INSPECTOR.
9. NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.
10. TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROPERLY PRUNED FOLLOWING THE ANSI A-300 STANDARDS FOR PRUNING. ALL TREE PRUNING SHALL BE COMPLETED BY A CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED CONTRACTOR (ARTICLE 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.
11. NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.
12. ALL DEBRIS GENERATED BY THE PRUNING AND TRIMMING OF THE TREES AND / OR BUSHES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY (NO SEPARATE PAY ITEM).
13. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE, BUT NOT LIMITED TO: WATERING THE ROOT PROTECTION ZONE, WASHING FOLIAGE, FERTILIZATION, PRUNING, ADDITIONAL MULCH APPLICATIONS AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT.
14. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST. (210) 207-0278
15. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.
16. TREE PLANTING FOR MITIGATION OR ENHANCEMENT: ALL PLANTED TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. THIS INCLUDES IRRIGATION, FERTILIZING, PRUNING AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT. TREES THAT DIE WITHIN TWELVE (12) MONTHS SHALL BE REPLACED WITH A TREE OF EQUAL SIZE AND SPECIES.

ACCESSIBILITY REQUIREMENTS

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO LOCAL RESIDENCES AND BUSINESSES.
2. WHEN THE WORK REQUIRES THE EXCAVATION OF THE STREET AND THE REMOVAL OF THE EXISTING DRIVEWAY APPROACHES AND SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ALL-WEATHER ACCESS TO THE BUSINESSES AND RESIDENCES. THE TEMPORARY DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH FLEXIBLE BASE OR GRAVEL MATERIAL AT NO SEPARATE COST TO THE CITY.
3. PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.
4. FOR BUSINESSES WITH MORE THAN ONE DRIVEWAY, AT LEAST ONE DRIVEWAY SHALL REMAIN OPEN WHILE THE OTHER NEW DRIVEWAY APPROACHES ARE CONSTRUCTED. FOR BUSINESSES WITH ONLY ONE DRIVEWAY, THE NEW DRIVEWAY APPROACH SHALL BE CONSTRUCTED IN HALF WIDTHS, UNLESS A TEMPORARY ASPHALT DRIVEWAY IS FIRST INSTALLED AT NO SEPARATE COST TO THE CITY.

REVISED JULY 2017

SAWS CONSTRUCTION NOTES COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT

GENERAL SECTION

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
   A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.
   B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
   C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION".
   D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
   E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
2. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
3. THE CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS WEBSITE, HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN THE DESIGN PLANS.
4. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.
5. LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
6. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
   - SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
   - COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
   - COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480
   - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
   - TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.
8. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
9. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
10. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
11. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

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

    ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
12. COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
13. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

WATER SECTION

1. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
   - FOR WATER MAINS 12" OR HIGHER: SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014
2. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".
3. VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)
4. SUITABLE ANCHORAGE/THRUST BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, TEES, CROSSES, VALVES, AND BENDS, IN ACCORDANCE WITH THE STANDARD DRAWINGS DD-839 SERIES AND ITEM NO. 839, IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.
5. ALL VALVES SHALL READ "OPEN RIGHT".
6. PRVS REQUIRED: CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 605 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 605 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF "PRV IS/ARE REQUIRED FOR SUCH LOT(S). ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. "NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).
7. PIPE DISINFECTION WITH DRY HTH FOR PROJECTS LESS THAN 800 LINEAR FEET. (ITEM NO. 847.3): MAINS SHALL BE DISINFECTED WITH DRY HTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. THE CONTRACTOR SHALL UTILIZE ALL APPROPRIATE SAFETY MEASURE TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.
8. BACKFLOW PREVENTION DEVICES:
   - ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS ARE REQUIRED TO HAVE BACKFLOW PREVENTION DEVICES.
   - ALL COMMERCIAL BACKFLOW PREVENTION DEVICES MUST BE APPROVED BY SAWS PRIOR TO INSTALLATION.
9. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.

SEWER NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:
   A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT (210) 233-2014. PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.
   B. ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
   C. CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
   D. CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
   E. CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.
   F. MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.

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

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

2. IF BYPASS PUMPING IS REQUIRED, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING".
3. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973 AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
4. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241, TAC 217.53 AND TCEQ 290.44(E)(4)(B). CONTRACTOR SHALL CENTER A 20' JOINT OF 160 PSI PRESSURE RATED PVC AT THE PROPOSED WATER CROSSING.
5. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS. (NSPI)
6. SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER: ALL SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, RECYCLED WATER, PETROLEUM PRODUCTS, OR CHEMICALS MUST BE REPORTED IMMEDIATELY TO THE SAWS INSPECTOR ASSIGNED TO THE COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP). THIS REQUIREMENT APPLIES TO EVERY SPILL, OVERFLOW, OR DISCHARGE REGARDLESS OF SIZE.
7. MANHOLE AND ALL PIPE TESTING (INCLUDING THE TV INSPECTION) MUST BE PERFORMED AND PASSED PRIOR TO FINAL FIELD ACCEPTANCE BY SAWS CONSTRUCTION INSPECTION DIVISION, AS PER THE SAWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.
8. ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
GENERAL NOTES

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 9/17/2021
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sa_General Notes.dwg

09/17/21
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER
Priscilla G. Flores

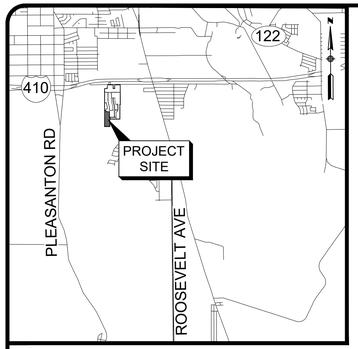
LJA Engineering, Inc.
1100 NE Loop 410
Suite 850
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426

SAWS JOB NUMBER:

SHEET NO. 2
OF 24 SHEETS

K:\SA199_Century Communities\0402A_Chavaneaux US Construction\426_Site Development Plans\DWG-Sheets\sh_General Notes.dwg
User: smotorland
Last Modified: Sep 17, 21 - 14:44
Plot Only/Time: Sep 17, 21 - 14:45:05



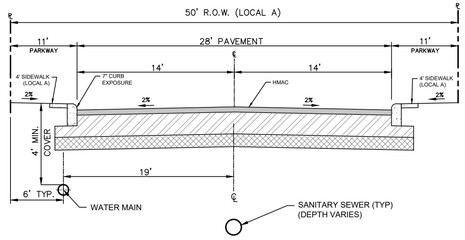
LOCATION MAP
N.T.S.

SAWS: WEST SEWERSHED, LEON CREEK

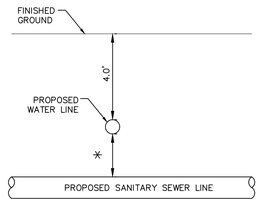
DEVELOPER'S NAME: CENTURY COMMUNITIES
DEVELOPER'S ADDRESS: 3619 PAESANOS PKWY, STE 304
CITY SAN ANTONIO STATE TEXAS ZIP 78231
PHONE # 210-405-0195 FAX #
SAWS BLOCK MAP # 162534 TOTAL EDU'S 52 TOTAL ACREAGE 12.97 AC.
TOTAL LINEAR FOOTAGE OF PIPE: N/A PLAT NO. LAND-PLAT-21-11800506
NUMBER OF LOTS: 52 SAWS JOB NO. 21-1702

SAWS PRESSURE ZONE: 790

DEVELOPER'S NAME: CENTURY COMMUNITIES
DEVELOPER'S ADDRESS: 3616 PAESANOS PKWY, STE 304
CITY SAN ANTONIO STATE TEXAS ZIP 78231
PHONE # 210-405-0195 FAX #
SAWS BLOCK MAP # 130664, 132664 TOTAL EDU'S 52 TOTAL ACREAGE 12.97 AC.
TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1,192 LF, 2" - 300 LF PLAT NO. LAND-PLAT-21-11800506
NUMBER OF LOTS: 52 SAWS JOB NO. 21-1239

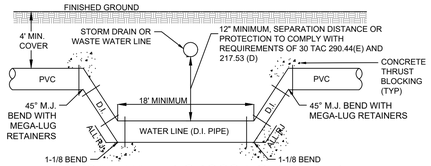


STANDARD STREET SECTION (UTILITIES)
N.T.S.



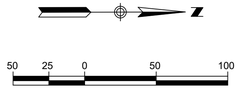
* SEPARATION DISTANCE TO COMPLY WITH TCEQ REGULATION 30 TAC 290.44 (E) APPENDIX E AND 30 TAC 217.53(D) – SEPARATION DISTANCE

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NTS



TYPICAL WATER CROSSING DETAIL B
NTS

NOTE:
1. 18' MINIMUM WATER PIPE SEGMENT TO BE CENTERED UNDER WASTEWATER LINE.
2. WASTEWATER PIPE WITHIN NINE FEET OF WATER PIPE ON EITHER SIDE SHALL BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE RATED PIPE.
3. STEEL CASING TO BE USED UNDER STORM DRAIN.



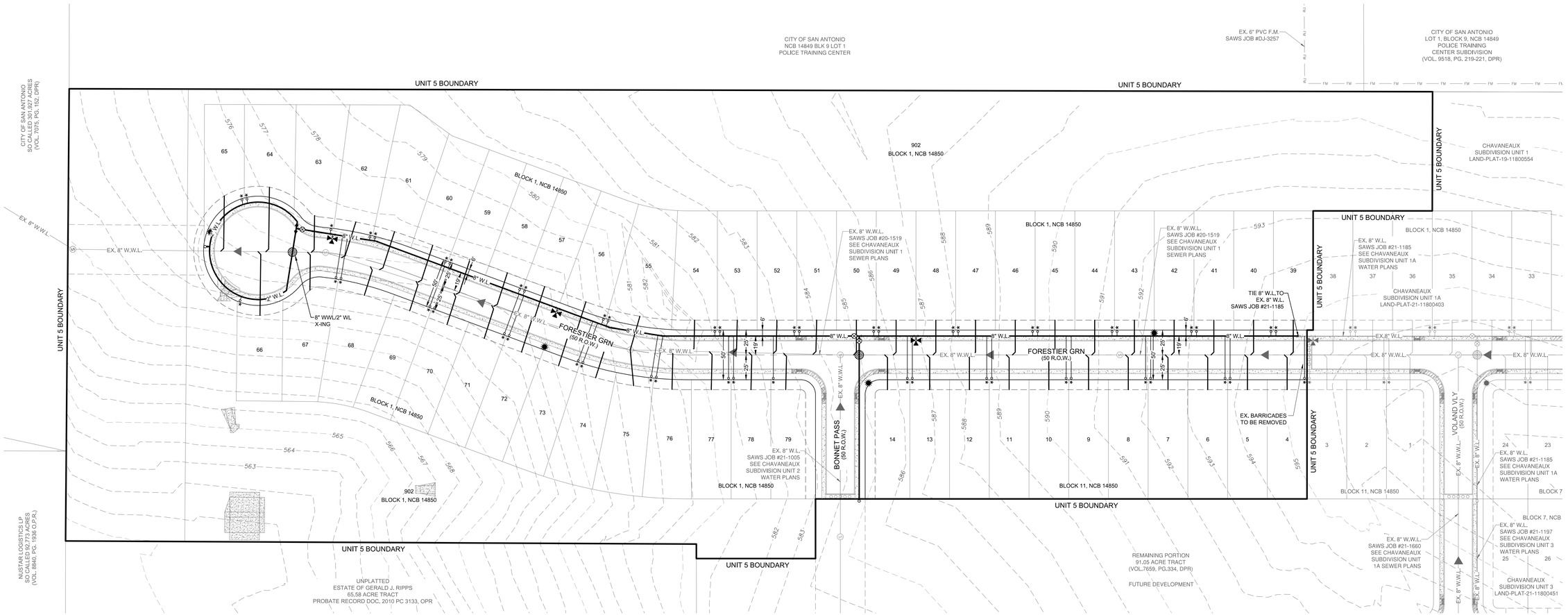
SCALE IN FEET
SCALE: 1"=50'

GENERAL NOTES

1. FIRE HYDRANT SHALL BE LOCATED BEHIND SIDEWALK IN ACCORDANCE WITH THE FIRE HYDRANT INSTALLATION DETAIL DD-834-01.
2. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
3. ALL VALVES SHALL READ "OPEN RIGHT".
4. ALL FIRE HYDRANTS SHALL BE PAINTED APPROPRIATE SAWS COLORS.
5. FIRE HYDRANTS AND VALVE BOXES TO BE RAISED TO THE PROPOSED TOP OF PAVEMENT OR GROUND ELEVATION.
6. ALL WATER PIPE TO BE C-900, DR-18, CLASS 150 UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL VERIFY GRAVITY INVERTS PRIOR TO CONSTRUCTION AND NOTIFY CIVIL ENGINEER IN WRITING OF ANY DISCREPANCIES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
9. REFER TO CPS ENERGY DETAILS FOR DRY UTILITY CONDUITS. CONTRACTOR SHALL COORDINATE WITH CPS ENERGY TO VERIFY CONDUIT CROSSING PRIOR TO STREET CONSTRUCTION.

LEGEND

PROPOSED	EXISTING	
S	S	SANITARY SEWER MANHOLE
8"WW	8"WW	SANITARY SEWER LINE
	WL	WATER LINE
		SANITARY SEWER LATERAL
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
*		PRESSURE REDUCING VALVE
		1"-6" (CPS) 2-4" CONDUITS (ATT/SPECTRUM)
		WATER METER
		GAS VALVE
G	G	GAS LINE
D	D	STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
	OU	OVERHEAD ELECTRIC
		BENCHMARK
	EX.	EXISTING
	G,E,,T,CA	GAS, ELEC, TELE & CABLE TV ESM'T.
	ESM'T.	EASEMENT
	VOL	VOLUME
	PG	PAGE



CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
UTILITY LAYOUT

NO.	DESCRIPTION	BY	DATE

DATE: 2/7/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_Utility Layout.dwg

02/07/22
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER

LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:

SHEET NO. 3
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux US Construction\426 Site Development Plans\DWG-Sheets\sh_Utility Layout.dwg
User: pflorigutz
Last Modified: Feb. 07, 22 - 14:30
Plot Date/Time: Feb. 07, 22 - 15:34

CHAVANEAUX SUBDIVISION UNIT 5

WATER CONSTRUCTION PLANS

LAND-PLAT-21-11800506

SAN ANTONIO, TEXAS 78221

BEXAR COUNTY

Revised July 2017

SAWS CONSTRUCTION NOTES
COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT

General Section

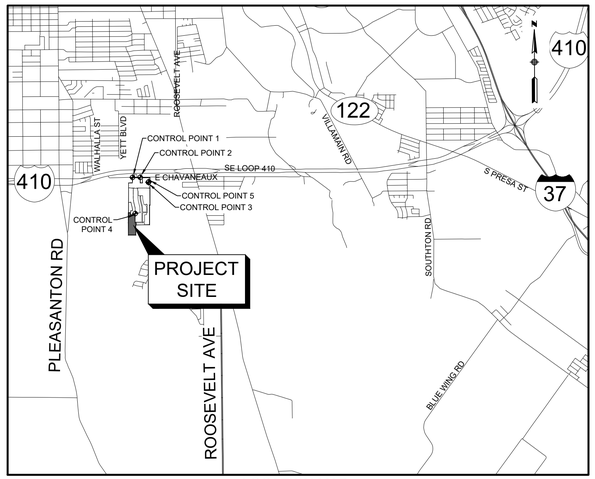
1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
   A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
   B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
   C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
   D. Current City of San Antonio "Standard Specifications for Public Works Construction".
   E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
2. The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.
3. The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
5. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
6. The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
   - SAWS Utility Locates: http://www.saws.org/Service/Locates
   - COSA Drainage (210) 207-0724 or (210) 207-6026
   - COSA Traffic Signal Operations (210) 206-8480
   - COSA Traffic Signal Damages (210) 207-3951
   - Texas State Wide One Call Locator 1-800-545-6005 or 811
7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
8. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to constworkreq@saws.org.

    Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org.

    Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
12. Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

Water Section

1. Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.
   - For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014
2. Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Such work is to be made under Special Specification Item No. 3000, "Special Specification for Handling Asbestos Cement Pipe".
3. Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug. (NSPI)
4. Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
5. All valves shall read "open right".
6. PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of 605 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below 605 feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if "PRV is/are required for such lot(s), only single service connections shall be allowed. "Note: A pressure regulator is also known as a pressure reducing valve (PRV).
7. Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection operations.
8. Backflow Prevention Devices:
   - All irrigation services within residential areas are required to have backflow prevention devices.
   - All commercial backflow prevention devices must be approved by SAWS prior to installation.
9. Final connection to the existing water main shall not be made until the water main has been pressure tested, chlorinated, and SAWS has released the main for tie-in and use.



LOCATION MAP

(N.T.S.)

SHEET NO.	DESCRIPTION
1	COVER
2	GENERAL NOTES
3	UTILITY LAYOUT
4	WATER LAYOUT
5	WASTEWATER LAYOUT
6	EXISTING WASTEWATER LINE 'A' PLAN & PROFILE STA. 1+50.00 TO STA. 10+50.00
7	EXISTING WASTEWATER LINE 'A' PLAN & PROFILE STA. 10+50.00 TO 14+00.00
8	GRADING
9	EXISTING DRAINAGE AREA MAP
10	PROPOSED DRAINAGE AREA MAP
11	ULTIMATE DRAINAGE AREA MAP
12	INTERCEPTOR CHANNEL 'A' PLAN & PROFILE STA. 1+00.00 TO END
13	CHANNEL 'A' & 'B' PLAN & PROFILE STA. 1+00.00 TO END
14	DETENTION POND PLAN & DETAILS
15	DETENTION POND PROFILE STA. 1+00.00 TO END
16	FORESTIER GRN PLAN & PROFILE STA. 9+74.92 TO STA. 19+50.00
17	FORESTIER GRN PLAN & PROFILE STA. 27+50.00 TO END
18	BONNET PASS PLAN & PROFILE STA. 1+00.00 TO END
19	SIGNAGE SHEET
20	TRAFFIC SIGN STANDARDS
21	DRIVEWAY AND WHEELCHAIR RAMP DETAILS
22	STORMWATER POLLUTION PREVENTION PLAN
23	STORMWATER POLLUTION PREVENTION DETAILS
24	CPS ENERGY DETAILS

SUBMITTAL DATE: SEPTEMBER 2021

PROPERTY DESCRIPTION

12.97 ACRES OUT OF A 91.05 ACRE TRACT, NEW CITY BLOCK 14850, IN THE JUAN MANUEL URRIEGAS SURVEY NO. 32, ABSTRACT 759, SAN ANTONIO, BEXAR COUNTY, TEXAS, INCLUSIVE OF 0.22 ACRES OF RIGHT OF WAY DEDICATION. THAT SAME PROPERTY CONVEYED TO MARY ELLEN NAIZER BY WARRANTY DEED RECORDED IN VOLUME 7659, PAGE 334 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS.

BENCHMARK INFORMATION:

CONTROL POINT 1: CP MAG
EASTING: 2131136.4460'
NORTHING: 13664592.1200'
POINT NUMBER: 11
ELEVATION = 610.37'

CONTROL POINT 2: CP MAG
EASTING:2131605.5350 '
NORTHING:13664600.2300 '
POINT NUMBER: 7
ELEVATION = 617.27'

CONTROL POINT 3: CONTROL
EASTING:2132109.7940 '
NORTHING: 13664292.1490'
POINT NUMBER: 7059
ELEVATION= 616.21'

VERTICAL DATUM: NAVD-88 / NAD-83 SPC-SOUTH CENTRAL
THIS INFORMATION PROVIDED BY: ATWELL, LLC

BENCHMARK INFORMATION:

CONTROL POINT 4 (CP60D):
EASTING: 2131279.6370'
NORTHING: 13662345.4100'
ELEVATION = 596.35'

CONTROL POINT 5 (CP IRON ROD):
EASTING: 2132109.9600'
NORTHING:13664292.6000'
ELEVATION = 616.58'

VERTICAL DATUM: NAVD-88 / NAD-83 SPC-SOUTH CENTRAL
THIS INFORMATION PROVIDED BY: TOTAL GEO DATA SURVEYING LLC

REVISIONS			
NO.	DESCRIPTION	BY	DATE

02/07/22
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED
PROFESSIONAL ENGINEER
Priscilla G Flores

DEVELOPER: CENTURY COMMUNITIES
CONTACT: RUDY MUNOZ
3619 PAESANOS PKWY, STE 304
SAN ANTONIO, TX 78231
PHONE: (210) 405-0195

ENGINEER : LJA ENGINEERING, INC.
1100 NE LOOP 410, SUITE 850
SAN ANTONIO, TEXAS 78209
CONTACT PERSON: PRISCILLA FLORES, P.E.
PHONE # (210) 503-2700
FAX # (210) 503-2749

SURVEYOR : ATWELL, LLC.
10100 REUNION PLACE, SUITE 700
SAN ANTONIO, TEXAS 78216
CONTACT PERSON: JERRY D. WILKIE, JR., R.P.L.S.
PHONE # (210) 861-0733

CONTOUR DATA : FIELD SURVEY BY ATWELL, LLC.

LJA JOB NO. SA199-0402A.426

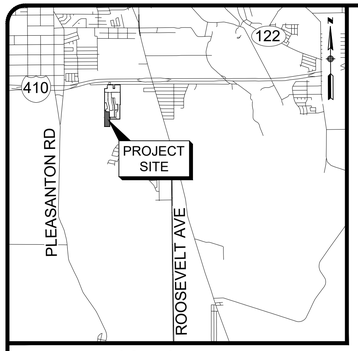
SAWS PRESSURE ZONE: 790

DEVELOPER'S NAME: CENTURY COMMUNITIES
DEVELOPER'S ADDRESS: 3616 PAESANOS PKWY, STE 304
CITY SAN ANTONIO STATE TEXAS ZIP 78231
PHONE # 210-405-0195 FAX #
SAWS BLOCK MAP # 130664, 132664 TOTAL EDU'S 52 TOTAL ACREAGE 12.97 AC
TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1,192 LF, 2" - 300 LF PLAT NO. LAND-PLAT-21-11800506
NUMBER OF LOTS: 52 SAWS JOB NO. 21-1239

LJA Engineering, Inc.

1100 NE Loop 410
Suite 850
San Antonio, Texas 78209

Phone 210.503.2700
Fax 210.503.2749
FRN-F-1386



LOCATION MAP
N.T.S.

SAWS PRESSURE ZONE: 790

DEVELOPER'S NAME: CENTURY COMMUNITIES

DEVELOPER'S ADDRESS: 3616 PAESANOS PKWY, STE 304

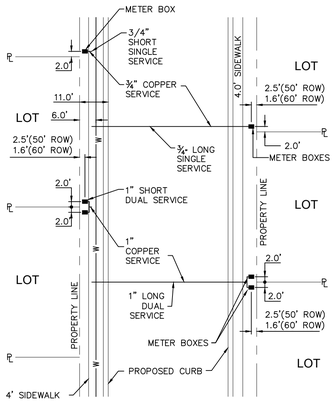
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78231

PHONE #: 210-405-0195 FAX #:

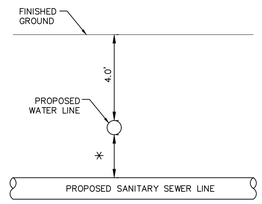
SAWS BLOCK MAP #: 130664, 132664 TOTAL EDU'S: 52 TOTAL ACREAGE: 12.97 AC.

TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1,192 LF, 2" - 300 LF PLAT NO.: LAND-PLAT-21-11800506

NUMBER OF LOTS: 52 SAWS JOB NO.: 21-1239

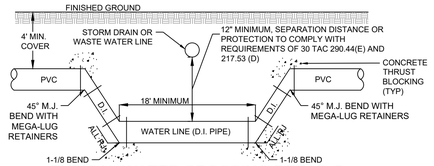


WATER SERVICE DETAILS
NTS



* SEPARATION DISTANCE TO COMPLY WITH TCEQ REGULATION 30 TAC 290.44 (E) APPENDIX E AND 30 TAC 217.53(D) – SEPARATION DISTANCE

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NTS



TYPICAL WATER CROSSING DETAIL B
NTS

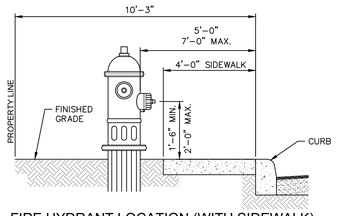
NOTE:
1. 18' MINIMUM WATER PIPE SEGMENT TO BE CENTERED UNDER WASTEWATER LINE.
2. WASTEWATER PIPE WITHIN NINE FEET OF WATER PIPE ON EITHER SIDE SHALL BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE RATED PIPE.
3. STEEL CASING TO BE USED UNDER STORM DRAIN.

GENERAL NOTES

1. FIRE HYDRANT SHALL BE LOCATED BEHIND SIDEWALK IN ACCORDANCE WITH THE FIRE HYDRANT INSTALLATION DETAIL DD-834-01.
2. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
3. ALL VALVES SHALL READ "OPEN RIGHT".
4. ALL FIRE HYDRANTS SHALL BE PAINTED APPROPRIATE SAWS COLORS.
5. FIRE HYDRANTS AND VALVE BOXES TO BE RAISED TO THE PROPOSED TOP OF PAVEMENT OR GROUND ELEVATION.
6. ALL WATER PIPE TO BE C-900, DR-18, CLASS 235 UNLESS OTHERWISE NOTED.
7. UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE ¾" WITH ⅝" METER.

50 25 0 50 100

SCALE IN FEET
SCALE: 1"=50'



FIRE HYDRANT LOCATION (WITH SIDEWALK)
NTS

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

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOIN RESTRAINING HARNESS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL ENSURE THAT ALL TEE'S, BEND'S, VALVE'S, ETC. HAVE A MINIMUM OF 5' OF PIPE WITH NO JOINTS AT EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY THE DEVELOPER'S ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE JOINT RESTRAINTS WITH THE DEVELOPER'S ENGINEER.

CAUTION: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

811 Know what's below. Call before you dig.

LEGEND

PROPOSED	EXISTING	
S	S	SANITARY SEWER MANHOLE
8"WW	8"WW	SANITARY SEWER LINE
	WL	WATER LINE
		SANITARY SEWER LATERAL
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PRESSURE REDUCING VALVE
		1"-6" (CPS) 2-4" CONDUITS (ATT/SPECTRUM)
		WATER METER
		GAS VALVE
G	G	GAS LINE
D	D	STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
	OU	OVERHEAD ELECTRIC
		BENCHMARK
	EX.	EXISTING
	G,E,,T,CA	GAS, ELEC, TELE & CABLE TV ESM'T.
	ESM'T.	EASEMENT
	VOL	VOLUME
	PG	PAGE

CITY OF SAN ANTONIO
NCB 14849 BLK 9 LOT 1
POLICE TRAINING CENTER

CITY OF SAN ANTONIO
LOT 1, BLOCK 9, NCB 14849
POLICE TRAINING
CENTER SUBDIVISION
(VOL. 9518, PG. 219-221, DPR)

CITY OF SAN ANTONIO
SO CALLED 301.927 ACRES
(VOL. 7075, PG. 152, DPR)

NUSTAR LOGISTICS LP
SO CALLED 192.773 ACRES
(VOL. 8644, PG. 1926, O.P.R.)

UNPLATTED
ESTATE OF GERALD J. RIPPS
65.58 ACRE TRACT
PROBATE RECORD DOC. 2010 PC 3133, OPR

REMAINING PORTION
91.05 ACRE TRACT
(VOL.7659, PG.334, DPR)
FUTURE DEVELOPMENT

REMAINING PORTION
91.05 ACRE TRACT
(VOL.7659, PG.334, DPR)
FUTURE DEVELOPMENT

CHAVANEAUX SUBDIVISION UNIT 1
LAND-PLAT-19-11800554

CHAVANEAUX SUBDIVISION UNIT 1A
LAND-PLAT-21-11800403

CHAVANEAUX SUBDIVISION UNIT 3
LAND-PLAT-21-11800451

UNIT 5 BOUNDARY

INSTALL: 1-8" TEE, M.J.
INSTALL: 1-8" GATE VALVE, M.J.
INSTALL: 1-6" VALVE BOX, COMPLETE
INSTALL: 2-8"x2" REDUCER, M.J.

1-STANDARD FIRE HYDRANT COMPLETE
1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. WATER PIPE CUT AS REQ'D.
SEE SAWS DETAIL DD-834-01

229.86 LF 2" W.L.
37.45 LF 8" W.L.
43.70 LF 8" W.L.
195.33 LF 8" W.L.
56.15 LF 8" W.L.
53.88 LF 8" W.L.
254.85 LF 8" W.L.
385.00 LF 8" W.L.
166.08 LF 8" W.L.

INSTALL: 1-8" 11.25° BEND, M.J.

INSTALL: 1-2" PERMANENT BLOW-OFF ASSEMBLY

EX. 8" WWL/2" WL X-ING
CONTRACTOR TO FLEXIBLE ENCASE WATER MAIN 18' MIN. CENTERED ON EX. WW MAIN (SEE SAWS WATER ITEM 812)

EX. 8" WWL/8" WL X-ING
CONTRACTOR TO FLEXIBLE ENCASE WATER MAIN 18' MIN CENTERED ON EX. WW MAIN (SEE SAWS WATER ITEM 812)

EX. 8" W.W.L. SAWS JOB #20-1519 SEE CHAVANEAUX SUBDIVISION UNIT 1 SEWER PLANS

EX. 8" W.W.L. SAWS JOB #21-1507 SEE CHAVANEAUX SUBDIVISION UNIT 2 SEWER PLANS

EX. 8" W.W.L. SAWS JOB #21-1185 SEE CHAVANEAUX SUBDIVISION UNIT 1A WATER PLANS

EX. 8" W.W.L. SAWS JOB #20-1519 SEE CHAVANEAUX SUBDIVISION UNIT 1 SEWER PLANS

10' G.E.T.CA. ESM'T

FORESTIER GRN (50 R.O.W.)

BONNET PASS (60 R.O.W.)

VOLAND VLY (50' R.O.W.)

EX. BARRICADES TO BE REMOVED

BLOCK 1, NCB 14850

BLOCK 11, NCB 14850

BLOCK 7, NCB

902 BLOCK 1, NCB 14850

CONTRACTOR TO REMOVE EXIST. 2" PERMANENT BLOW-FF ASSEMBLY AND CONNECT TO EXISTING 8" PVC WATER MAIN (SAWS JOB NO. 21-1185) AFTER DISINFECTION IS COMPLETE AND WATER IS ACCEPTED BY SAWS.

INSTALL FOR TIE-IN
1-8" COUPLING

FOR CHLORINATION INJECTION:
2-1" CORPORATION STOP, C.C. X I.P.
2- COPPER TUBING, CUT AS REQ'D
2-1 ¼" THD SOLID CAPS, THR.
1-2" TEMP. BLOWOFF
SEE SAWS DETAIL DD-847-01/DD-844-01

CONTRACTOR SHALL PROVIDE A 2" JUMPER CONNECTION TO LOAD NEW MAIN.

INSTALL: 1-8"x8" TEE, M.J.
INSTALL: 2-8" GATE VALVES, M.J.
INSTALL: 2-6" VALVE BOXES, COMPLETE

INSTALL: 1-2" BLOW OFF ASSEMBLY (PERM.) SEE SAWS DETAIL DD-844-02

EX. OFF-LOT 50' DRAINAGE & UTILITY ESM'T TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY CHAVANEAUX UNIT 2 LAND-PLAT NUMBER-20-11800535

EX. 50' DRAINAGE & UTILITY ESM'T TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. CHAVANEAUX UNIT 1 LAND-PLAT-19-11800554

R.O.W. DEDICATION TO CITY OF SAN ANTONIO

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
WATER LAYOUT

NO.	DESCRIPTION	BY	DATE

DATE: 2/10/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: ah_Water Layout.dwg

02/07/22
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER

LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426

SAWS JOB NUMBER:

SHEET NO. 4 OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux US Construction\426 Site Development Plans\DWG-Sheets\ah_Water Layout.dwg
User: mperez
Last Modified: Feb 10, 22 - 14:23
Plot Style/Time: Feb 10, 22 - 14:23:39

CHAVANEAUX SUBDIVISION UNIT 5

WASTEWATER CONSTRUCTION PLANS

LAND-PLAT-21-11800506

SAN ANTONIO, TEXAS 78221

BEXAR COUNTY

Revised July 2017

SAWS CONSTRUCTION NOTES
COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT

General Section

1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
   A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
   B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
   C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
   D. Current City of San Antonio "Standard Specifications for Public Works Construction".
   E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
2. The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.
3. The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
5. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
6. The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
   - SAWS Utility Locates: http://www.saws.org/Service/Locates
   - COSA Drainage (210) 207-0724 or (210) 207-6026
   - COSA Traffic Signal Operations (210) 206-8480
   - COSA Traffic Signal Damages (210) 207-3951
   - Texas State Wide One Call Locator 1-800-545-6005 or 811
7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
8. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to constworkreq@saws.org.

    Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org.

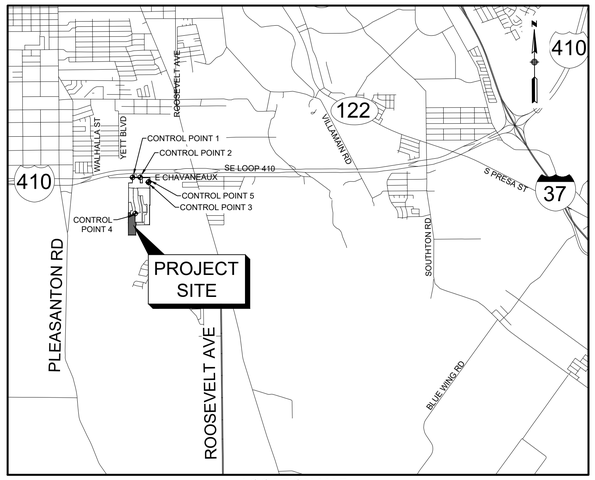
    Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
12. Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

Sewer Notes

1. The Contractor is responsible for ensuring that no Sanitary Sewer Overflow (SSO) occurs as a result of their work. All contractor personnel responsible for SSO prevention and control shall be trained on proper response. Should an SSO occur, the contractor shall:
   A. Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at (210) 233-2014. Provide the address of the spill and an estimated volume or flow.
   B. Attempt to eliminate the source of the SSO.
   C. Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.
   D. Clean up spill site (return contained sewage to the collection system if possible) and properly dispose of contaminated soil/materials.
   E. Clean the affected sewer mains and remove any debris.
   F. Meet all post-SSO requirements as per the EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours.

   Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all costs incurred by SAWS, including any fines from EPA, TCEQ and/or any other Federal, State or Local Agencies.

   No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the TCEQ and SAWS.
2. If bypass pumping is required, the Contractor shall perform such work in accordance with SAWS Standard Specification for Water and Sanitary Sewer Construction, Item No. 864, "Bypass Pumping".
3. Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-2973 at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.
4. Sewer pipe where water line crosses shall be 160 psi and meet the requirements of ASTM D2241, TAC 217.53 and TCEQ 290.44(e)(4)(B). Contractor shall center a 20' joint of 160 psi pressure rated PVC at the proposed water crossing.
5. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: It shall be the responsibility of the Contractor to make allowances and adjustments for top of manholes to match the finished grade of the project's improvements. (NSPI)
6. Spills, Overflows, or Discharges of Wastewater: All spills, overflows, or discharges of wastewater, recycled water, petroleum products, or chemicals must be reported immediately to the SAWS Inspector assigned to the Counter Permit or General Construction Permit (GCP). This requirement applies to every spill, overflow, or discharge regardless of size.
7. Manhole and all pipe testing (including the TV inspection) must be performed and passed prior to Final Field Acceptance by SAWS Construction Inspection Division, as per the SAWS Specifications For Water and Sanitary Sewer Construction.
8. All PVC pipe over 14 feet of cover shall be extra strength with minimum pipe stiffness of 115 psi.



LOCATION MAP

(N.T.S.)

SHEET NO.	DESCRIPTION
1	COVER
2	GENERAL NOTES
3	UTILITY LAYOUT
4	WATER LAYOUT
5	WASTEWATER LAYOUT
6	EXISTING WASTEWATER LINE 'A' PLAN & PROFILE STA. 1+50.00 TO STA. 10+50.00
7	EXISTING WASTEWATER LINE 'A' PLAN & PROFILE STA. 10+50.00 TO 14+00.00
8	GRADING
9	EXISTING DRAINAGE AREA MAP
10	PROPOSED DRAINAGE AREA MAP
11	ULTIMATE DRAINAGE AREA MAP
12	INTERCEPTOR CHANNEL 'A' PLAN & PROFILE STA. 1+00.00 TO END
13	CHANNEL 'A' & 'B' PLAN & PROFILE STA. 1+00.00 TO END
14	DETENTION POND PLAN & DETAILS
15	DETENTION POND PROFILE STA. 1+00.00 TO END
16	FORESTIER GRN PLAN & PROFILE STA. 9+74.92 TO STA. 19+50.00
17	FORESTIER GRN PLAN & PROFILE STA. 27+50.00 TO END
18	BONNET PASS PLAN & PROFILE STA. 1+00.00 TO END
19	SIGNAGE SHEET
20	TRAFFIC SIGN STANDARDS
21	DRIVEWAY AND WHEELCHAIR RAMP DETAILS
22	STORMWATER POLLUTION PREVENTION PLAN
23	STORMWATER POLLUTION PREVENTION DETAILS
24	CPS ENERGY DETAILS

SUBMITTAL DATE: SEPTEMBER 2021

PROPERTY DESCRIPTION

12.97 ACRES OUT OF A 91.05 ACRE TRACT, NEW CITY BLOCK 14850, IN THE JUAN MANUEL URRIEGAS SURVEY NO. 32, ABSTRACT 759, SAN ANTONIO, BEXAR COUNTY, TEXAS, INCLUSIVE OF 0.22 ACRES OF RIGHT OF WAY DEDICATION, THAT SAME PROPERTY CONVEYED TO MARY ELLEN NAIZER BY WARRANTY DEED RECORDED IN VOLUME 7659, PAGE 334 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS.

02/07/22
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED
PROFESSIONAL ENGINEER
Priscilla G Flores

BENCHMARK INFORMATION:

CONTROL POINT 1: CP MAG
EASTING: 2131136.4460'
NORTHING: 13664592.1200'
POINT NUMBER: 11
ELEVATION = 610.37'

CONTROL POINT 2: CP MAG
EASTING:2131605.5350 '
NORTHING:13664600.2300 '
POINT NUMBER: 7
ELEVATION = 617.27'

CONTROL POINT 3: CONTROL
EASTING:2132109.7940 '
NORTHING: 13664292.1490'
POINT NUMBER: 7059
ELEVATION= 616.21'

VERTICAL DATUM: NAVD-88 / NAD-83 SPC-SOUTH CENTRAL
THIS INFORMATION PROVIDED BY: ATWELL, LLC

BENCHMARK INFORMATION:

CONTROL POINT 4 (CP60D):
EASTING: 2131279.6370'
NORTHING: 13662345.4100'
ELEVATION = 596.35'

CONTROL POINT 5 (CP IRON ROD):
EASTING: 2132109.9600'
NORTHING:13664292.6000'
ELEVATION = 616.58'

VERTICAL DATUM: NAVD-88 / NAD-83 SPC-SOUTH CENTRAL
THIS INFORMATION PROVIDED BY: TOTAL GEO DATA SURVEYING LLC

REVISIONS			
NO.	DESCRIPTION	BY	DATE

DEVELOPER: CENTURY COMMUNITIES
CONTACT: RUDY MUNOZ
3619 PAESANOS PKWY, STE 304
SAN ANTONIO, TX 78231
PHONE: (210) 405-0195

ENGINEER : LJA ENGINEERING, INC.
1100 NE LOOP 410, SUITE 850
SAN ANTONIO, TEXAS 78209
CONTACT PERSON: PRISCILLA FLORES, P.E.
PHONE # (210) 503-2700
FAX # (210) 503-2749

SURVEYOR : ATWELL, LLC.
10100 REUNION PLACE, SUITE 700
SAN ANTONIO, TEXAS 78216
CONTACT PERSON: JERRY D. WILKIE, JR., R.P.L.S.
PHONE # (210) 861-0733

CONTOUR DATA : FIELD SURVEY BY ATWELL, LLC.

LJA JOB NO. SA199-0402A.426

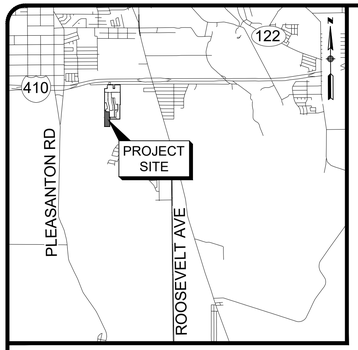
SAWS: WEST SEWERSHED, LEON CREEK

DEVELOPER'S NAME: CENTURY COMMUNITIES
DEVELOPER'S ADDRESS: 3619 PAESANOS PKWY, STE 304
CITY SAN ANTONIO STATE TEXAS ZIP 78231
PHONE # 210-405-0195 FAX #
SAWS BLOCK MAP # 162534 TOTAL EDU'S 52 TOTAL ACREAGE 12.97 AC
TOTAL LINEAR FOOTAGE OF PIPE: N/A PLAT NO. LAND-PLAT-21-11800506
NUMBER OF LOTS: 52 SAWS JOB NO. 21-1702

LJA Engineering, Inc.

1100 NE Loop 410
Suite 850
San Antonio, Texas 78209

Phone 210.503.2700
Fax 210.503.2749
FRN-F-1386



LOCATION MAP
N.T.S.

SAWS: WEST SEWERSHED, LEON CREEK

DEVELOPER'S NAME: CENTURY COMMUNITIES
DEVELOPER'S ADDRESS: 3619 PAESANOS PKWY, STE 304
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78231
PHONE #: 210-405-0195 FAX #:
SAWS BLOCK MAP #: 162534 TOTAL EDU'S: 52 TOTAL ACREAGE: 12.97 AC.
TOTAL LINEAR FOOTAGE OF PIPE: N/A PLAT NO.: LAND-PLAT-21-11800506
NUMBER OF LOTS: 52 SAWS JOB NO.: 21-1702

SAWS CONSTRUCTION NOTES
CONTRACTOR SHALL REFERENCE THE CURRENT SAWS CONSTRUCTION SPECIFICATIONS & DETAILS AT THE TIME OF THE DATED PLAN SHEET. SEE BELOW FOR REFERENCED SPECIFICATIONS.

SAWS SEWER ITEM NUMBERS:

804 EXCAVATION TRENCHING AND BACKFILL

848 SANITARY SEWER

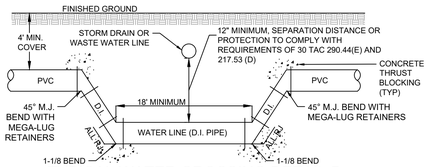
850 POLYMER CONCRETE SANITARY SEWER STRUCTURES

852 SANITARY SEWER MANHOLES

854 SANITARY SEWER LATERALS

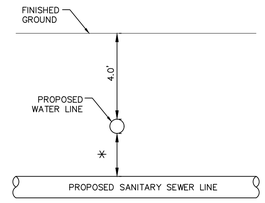
858 CONCRETE ENCASEMENT CRADLES SADLES & COLLARS

860 VERTICAL STACKS



TYPICAL WATER CROSSING DETAIL B
NTS

NOTE:
1. 18' MINIMUM WATER PIPE SEGMENT TO BE CENTERED UNDER WASTEWATER LINE.
2. WASTEWATER PIPE WITHIN NINE FEET OF WATER PIPE ON EITHER SIDE SHALL BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE RATED PIPE.
3. STEEL CASING TO BE USED UNDER STORM DRAIN.

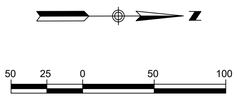


SEPARATION DISTANCE TO COMPLY WITH TCEQ REGULATION 30 TAC 290.44 (E) APPENDIX E AND 30 TAC 217.53(D) – SEPARATION DISTANCE

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NTS

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING AND TESTING THE SANITARY SEWER SYSTEM IN ACCORDANCE WITH 30 TAC 217 [AND 213.5 FOR PROJECTS IN THE ERZD], THE DESIGN PLANS AND SAWS SPECIFICATIONS.
3. THE CONTRACTOR MUST PROVIDE CERTIFICATION UPON REQUEST OF THE ENGINEER THAT ALL MATERIALS FOR THE CONSTRUCTION OF THE SANITARY SEWER SYSTEM MEET TCEQ AND SAWS SPECIFICATIONS.
4. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST THREE (3) DAYS PRIOR TO ALL TESTING ON THE SANITARY SEWER SYSTEM.
5. ANY TESTING PERFORMED WITHOUT THE PRESENCE OF THE ENGINEER WILL BE REDONE AT THE CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR MUST PROVIDE THE ENGINEER WITH COPIES OF TV-VIDEO INSPECTIONS WHEN COMPLETED AND COMPACTION TESTING RESULTS PRIOR TO FINAL TESTING OBSERVATION BY THE ENGINEER.
7. AFTER ALL SANITARY SEWER CONSTRUCTION HAS BEEN COMPLETED, FINAL STABILIZATION OF THE CONSTRUCTION AREA ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES SHALL BE COMPLETED BY EVENLY DISTRIBUTING SEEDING AND WATERING TO A MINIMUM OF 70% OF THE NATIVE BACKGROUND VEGETATIVE COVER.
8. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND 35 FEET FOR 50 FEET ROW, 40 FT. FOR 60 FEET ROW IN LENGTH UNLESS NOTED OTHERWISE.
9. ALL RESIDENTIAL SEWER SERVICE LATERALS SHALL BE EXTENDED TO THE 10' G.E.T.TV.E. EASEMENT AND CAPPED AND SEALED.
10. LATERALS TO LOTS THAT SLOPE AWAY FROM STREET SHALL BE SLOPED FROM THE TEE OR STACK AT 1% TO THE PROPERTY LINE.
11. CONTRACTOR TO FIELD VERIFY ALL MATCH EXISTING ELEVATIONS, SEWER MANHOLE INVERTS, STORM DRAIN INVERTS, AND ALL OTHER UTILITIES PRIOR TO UTILITY WORK AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES.



SCALE IN FEET
SCALE: 1"=50'

LEGEND

PROPOSED	EXISTING	
S	S	SANITARY SEWER MANHOLE
8"WW	8"WW	SANITARY SEWER LINE
	WL	WATER LINE
		SANITARY SEWER LATERAL
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PRESSURE REDUCING VALVE
		1"-6" (CPS) 2-4" CONDUITS (ATT/SPECTRUM)
		WATER METER
		GAS VALVE
G	G	GAS LINE
D	D	STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
	OU	OVERHEAD ELECTRIC
		BENCHMARK
	EX. G,E,T,CA	EXISTING GAS, ELEC, TELE & CABLE TV ESM'T.
	ESM'T. VOL PG	EASEMENT VOLUME PAGE

TRENCH EXCAVATION SAFETY PROTECTION
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CAUTION: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

811 Know what's below. Call before you dig.

CITY OF SAN ANTONIO
NCB 14849 BLK 9 LOT 1
POLICE TRAINING CENTER

EX. 6" PVC F.M.
SAWS JOB #DJ-3257

CITY OF SAN ANTONIO
LOT 1, BLOCK 9, NCB 14849
POLICE TRAINING CENTER SUBDIVISION
(VOL. 9518, PG. 219-221, DPR)

CITY OF SAN ANTONIO
SO CALLED 301.927 ACRES
(VOL. 7075, PG. 152, DPR)

UNIT 5 BOUNDARY

EX. 8" WWL/2" WL X-ING CONTRACTOR TO FLEXIBLE ENCASE WATER MAIN 18' MIN CENTERED ON EX. WW MAIN (SEE SAWS WATER ITEM 812)

EX. 50' DRAINAGE & UTILITY ESM'T TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. CHAVANEAUX UNIT 1 LAND-PLAT-19-11800554

EX. 8" W.W.L.

EX. 8" W.W.L. SAWS JOB #20-1519 SEE CHAVANEAUX SUBDIVISION UNIT 1 SEWER PLANS

EX. MH A1 (SAWS JOB #20-1519) STA:3+54.64 EX. W.W.L 'A' TMH:575.07 INV IN (N):563.97 (8" EX.) INV OUT (S):563.87 (8" EX.)

EX. MH A2 (SAWS JOB #20-1519) STA:6+76.67 EX. W.W.L 'A' TMH:577.76 INV IN (N):565.36 (8" EX.) INV IN (W):573.21 (6") INV IN (E):573.20 (6") INV OUT (S):565.26 (8" EX.)

EX. MH A3 (SAWS JOB #20-1519) STA:8+88.29 EX. W.W.L 'A' TMH:584.51 INV IN (N):576.59 (8" EX.) INV IN (E):566.34 (8" EX.) INV OUT (S):566.21 (8" EX.)

EX. MH A4 (SAWS JOB #20-1519) STA:11+69.80 EX. W.W.L 'A' TMH:591.43 INV IN (N):582.41 (8" EX.) INV OUT (S):582.31 (8" EX.)

EX. 8" WWL/8" WL X-ING CONTRACTOR TO FLEXIBLE ENCASE WATER MAIN 8' MIN CENTERED ON EX. WW MAIN (SEE SAWS WATER ITEM 812)

EX. 8" W.W.L. SAWS JOB #20-1519 SEE CHAVANEAUX SUBDIVISION UNIT 1 SEWER PLANS

EX. BARRICADES TO BE REMOVED

EX. 8" W.W.L. SAWS JOB #21-1185 SEE CHAVANEAUX SUBDIVISION UNIT 1A WATER PLANS

EX. 8" W.W.L. SAWS JOB #21-1660 SEE CHAVANEAUX SUBDIVISION UNIT 1A SEWER PLANS

EX. 8" W.W.L. SAWS JOB #21-1507 SEE CHAVANEAUX SUBDIVISION UNIT 2 SEWER PLANS

EX. OFF-LOT 50' DRAINAGE & UTILITY ESM'T TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (LAND-PLAT NUMBER-20-11800535)

R.O.W. DEDICATION TO CITY OF SAN ANTONIO

FORESTIER GRN (50 R.O.W.)

BONNET PASS (50 R.O.W.)

VOLAND VLY (50 R.O.W.)

10' G.E.T.CA. ESM'T

EX. 8" W.W.L.

BLOCK 1, NCB 14850

902 BLOCK 1, NCB 14850

BLOCK 11, NCB 14850

BLOCK 7, NCB

CHAVANEAUX SUBDIVISION UNIT 1 LAND-PLAT-19-11800554

CHAVANEAUX SUBDIVISION UNIT 1A LAND-PLAT-21-11800403

CHAVANEAUX SUBDIVISION UNIT 3 LAND-PLAT-21-11800451

NUSTAR LOGISTICS LP
SO CALLED 192.773 ACRES
(VOL. 8644, PG. 1926 O.P.R.)

UNPLATTED
ESTATE OF GERALD J. RIPPS
65.58 ACRE TRACT
PROBATE RECORD DOC. 2010 PC 3133, OPR

REMAINING PORTION
91.05 ACRE TRACT
(VOL.7659, PG.334, DPR)
FUTURE DEVELOPMENT

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
WASTEWATER LAYOUT

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 2/7/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: wh_Sewer Layout.dwg

02/07/22
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER

LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:

SHEET NO. 5
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux US Construction\426 Site Development Plans\DWG-Sheets\sh_Sewer Layout.dwg
User: pfrodriguez
Last Modified: Feb. 07, 22 – 14:33
Plot Date/Time: Feb. 07, 22 – 15:37:40

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL UTILITY TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PREFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTER, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SARA WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING AND TESTING THE SANITARY SEWER SYSTEM IN ACCORDANCE WITH 30 TAC 217 (AND 213.5 FOR PROJECTS IN THE ERZD), THE DESIGN PLANS AND SARA SPECIFICATIONS.
3. THE CONTRACTOR MUST PROVIDE CERTIFICATION UPON REQUEST OF THE ENGINEER THAT ALL MATERIALS FOR THE CONSTRUCTION OF THE SANITARY SEWER SYSTEM MEET TCEQ AND SARA SPECIFICATIONS.
4. THE CONTRACTOR IS TO NOTIFY THE ENGINEER AT LEAST THREE (3) DAYS PRIOR TO BEGINNING CONSTRUCTION AND TESTING SCHEDULE.
5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST THREE (3) DAYS PRIOR TO ALL TESTING ON THE SANITARY SEWER SYSTEM.
6. ANY TESTING PERFORMED WITHOUT THE PRESENCE OF THE ENGINEER WILL BE REDONE AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR MUST PROVIDE THE ENGINEER WITH COPIES OF TV-VIDEO INSPECTIONS WHEN COMPLETED AND COMPACTION TESTING RESULTS PRIOR TO FINAL TESTING OBSERVATION BY THE ENGINEER.
8. AFTER ALL SANITARY SEWER CONSTRUCTION HAS BEEN COMPLETED, FINAL STABILIZATION OF THE CONSTRUCTION AREA ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES SHALL BE COMPLETED BY EVENLY DISTRIBUTING SEEDING AND WATERING TO A MINIMUM OF 70% OF THE NATIVE BACKGROUND VEGETATIVE COVER.
9. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND 35 FEET IN LENGTH UNLESS NOTED OTHERWISE.
10. ALL RESIDENTIAL SEWER SERVICE LATERALS SHALL BE EXTENDED TO THE 10' G.E.T.CA. EASEMENT AND CAPPED AND SEALED.
11. LATERALS TO LOTS THAT SLOPE AWAY FROM STREET SHALL BE SLOPED FROM THE TEE OR STACK AT 1% TO THE 10' G.E.T.CA.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING SAWS STANDARD SPECIFICATION 804 FOR EXCAVATION, TRENCHING, AND BACKFILLING REQUIREMENTS AND STANDARD SPECIFICATION 812 FOR WATER/SEWER SEPARATION REQUIREMENTS.

SAWS CONSTRUCTION NOTES
CONTRACTOR SHALL REFERENCE THE CURRENT SAWS CONSTRUCTION SPECIFICATIONS & DETAILS AT THE TIME OF THE DATED PLAN SHEET. SEE BELOW FOR REFERENCED SPECIFICATIONS.

SAWS SEWER ITEM NUMBERS:

804 EXCAVATION TRENCHING AND BACKFILL

848 SANITARY SEWER

850 POLYMER CONCRETE SANITARY SEWER STRUCTURES

852 SANITARY SEWER MANHOLES

854 SANITARY SEWER LATERALS

858 CONCRETE ENCASEMENT CRADLES SADLES & COLLARS

860 VERTICAL STACKS

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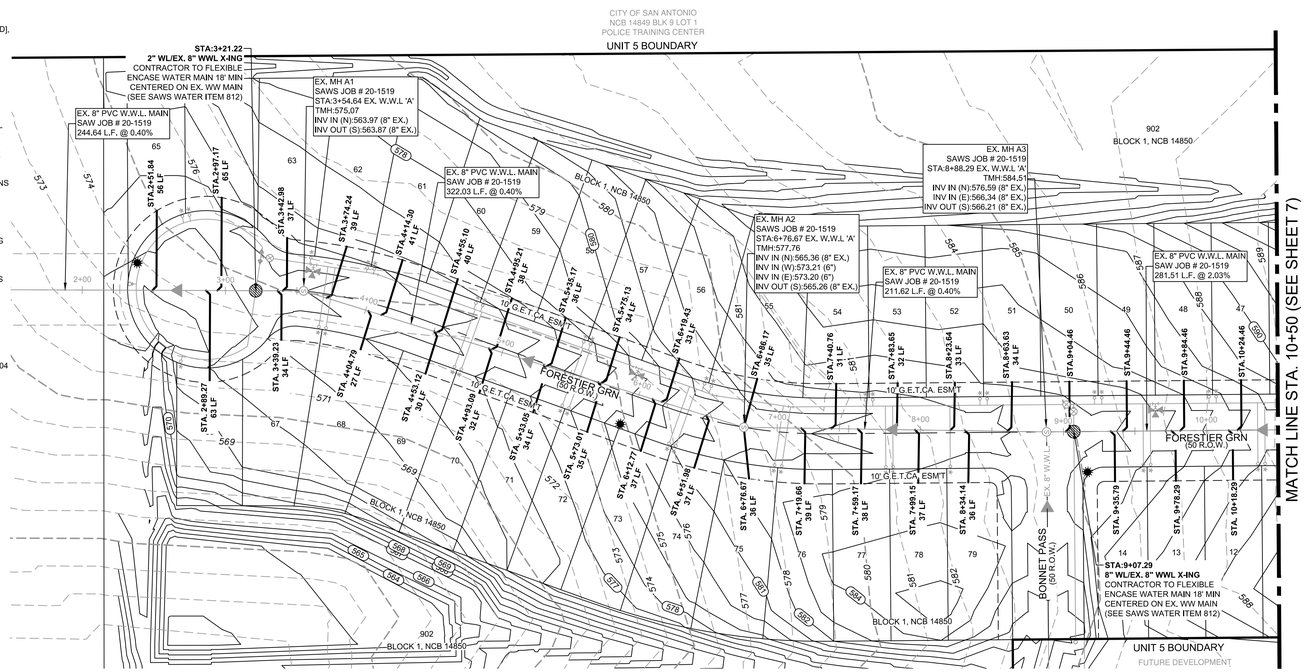

EXISTING WASTEWATER LINE 'A' STA. 1+50.00 TO STA. 10+50.00

LEGEND

50 25 0 50 100

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

PROPOSED	EXISTING	
S	S	SANITARY SEWER MANHOLE
8"WW	8"WW	SANITARY SEWER LINE
	WL	WATER LINE
		SANITARY SEWER LATERAL
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PRESSURE REDUCING VALVE
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		WATER METER
		GAS VALVE
G	G	GAS LINE
D	D	STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
OU	OU	OVERHEAD ELECTRIC
		BENCHMARK
	EX. G,E,,T,CA	EXISTING GAS, ELEC, TELE & CABLE TV ESM'T.
	ESM'T. VOL PG	EASEMENT VOLUME PAGE

SAWS: WEST SEWERSHED, LEON CREEK

DEVELOPER'S NAME: CENTURY COMMUNITIES
DEVELOPER'S ADDRESS: 3619 PAESANOS PKWY, STE 304
CITY SAN ANTONIO STATE TEXAS ZIP 78231
PHONE # 210-405-0195 FAX #
SAWS BLOCK MAP # 162534 TOTAL EDU'S 52 TOTAL ACREAGE 12.97 AC.
TOTAL LINEAR FOOTAGE OF PIPE: N/A PLAT NO. LAND-PLAT-21-11800506
NUMBER OF LOTS: 52 SAWS JOB NO. 21-1702

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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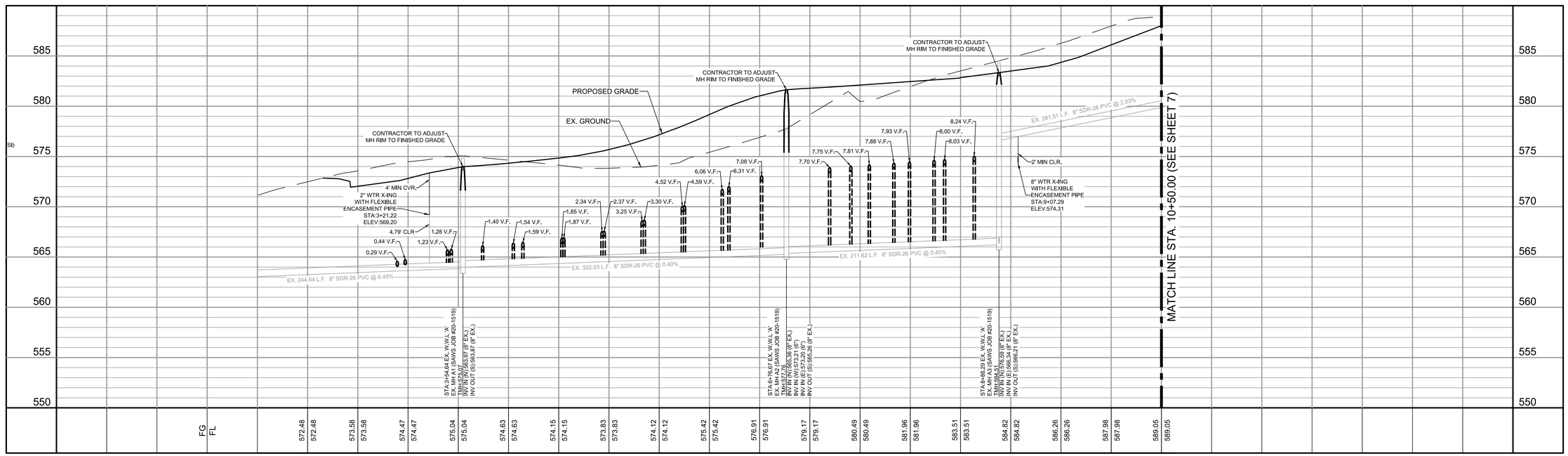

NO.	DESCRIPTION	BY	DATE		
REVISIONS					

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
EXISTING WASTEWATER LINE 'A'
PLAN & PROFILE STA. 1+50.00 TO STA. 10+50.00

DATE: 2/7/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: 06_EX. WWL 'A' P&P.dwg

02/07/22
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER

LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:

SHEET NO. 6
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux US Construction\438 Site Development Plans\DWG-Sheets\06_EX. WWL 'A' P&P.dwg
User: pfloriqnez
Last Modified: Feb. 07, 22 - 15:22
Plot Style/Time: Feb. 07, 22 - 15:36:10

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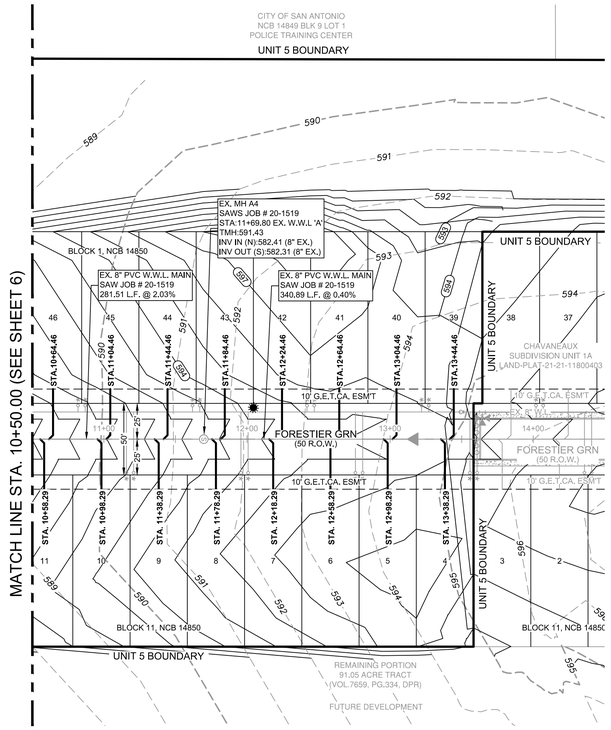
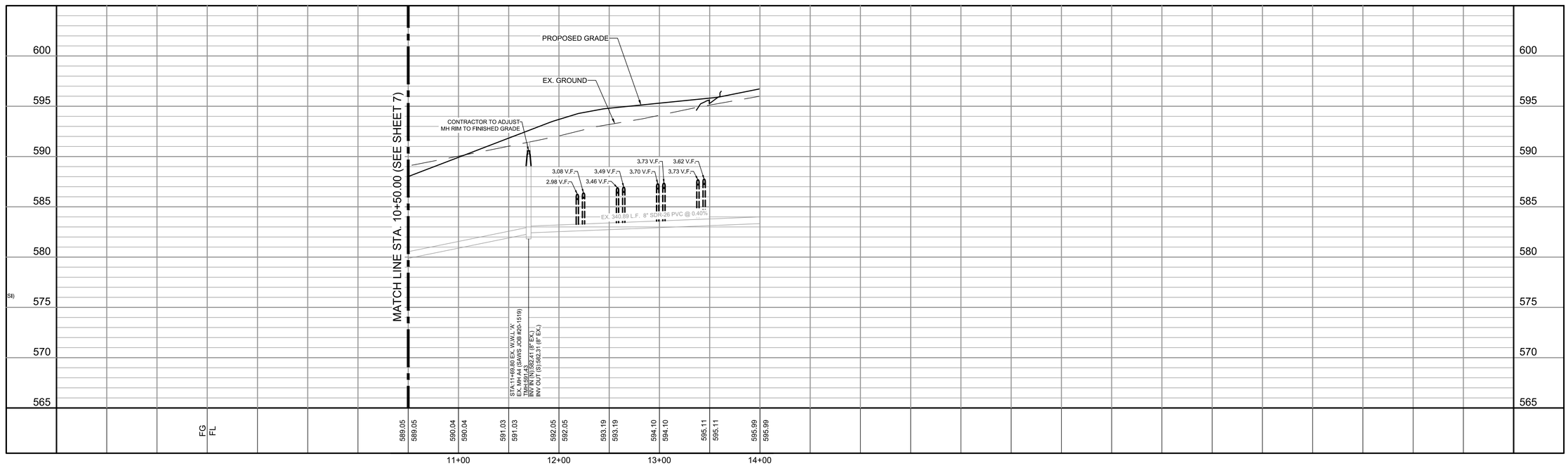


EXISTING WASTEWATER LINE 'A' STA. 10+50.00 TO 14+00.00



LEGEND

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

PROPOSED	EXISTING	
S	S	SANITARY SEWER MANHOLE
8"WW	8"WW	SANITARY SEWER LINE
	WL	WATER LINE
		SANITARY SEWER LATERAL
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PRESSURE REDUCING VALVE
		1"-6" (CPS) 2-4" CONDUITS (ATT/SPECTRUM)
		WATER METER
		GAS VALVE
G	G	GAS LINE
D	D	STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
OU	OU	OVERHEAD ELECTRIC
		BENCHMARK
	EX. G,E,T,CA	EXISTING GAS, ELEC, TELE & CABLE TV ESM'T.
	ESM'T.	EASEMENT
	VOL	VOLUME
	PG	PAGE

SAWS: WEST SEWERSHED, LEON CREEK

DEVELOPER'S NAME: CENTURY COMMUNITIES
DEVELOPER'S ADDRESS: 3619 PAESANOS PKWY, STE 304
CITY SAN ANTONIO STATE TEXAS ZIP 78231
PHONE # 210-405-0195 FAX #
SAWS BLOCK MAP # 162534 TOTAL EDU'S 52 TOTAL ACREAGE 12.97 AC.
TOTAL LINEAR FOOTAGE OF PIPE: N/A PLAT NO. LAND-PLAT-21-11800506
NUMBER OF LOTS: 52 SAWS JOB NO. 21-1702

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
EXISTING WASTEWATER LINE 'A'
PLAN & PROFILE STA. 10+50.00 TO 14+00.00

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 2/7/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
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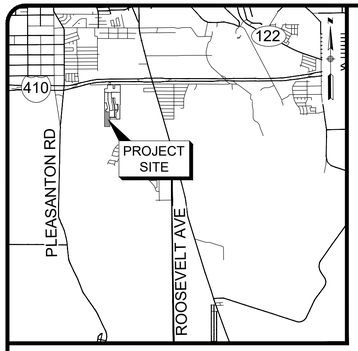
02/07/22
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED
PROFESSIONAL ENGINEER

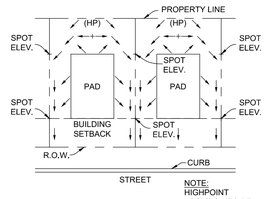
LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:
SHEET NO. 7
OF 24 SHEETS

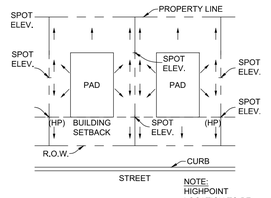
K:\SA199 Century Communities\0402A Chavaneaux US Construction\430 Site Development Plans\DWG-Sheets\Ex_Ex. WWL 'A' P&P.dwg
User: pjrodriguez
Last Modified: Feb. 07, 22 - 15:22
Plot Date/Time: Feb. 07, 22 - 15:35:17



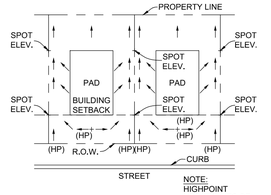
LOCATION MAP
N.T.S.



TYPICAL "A" LOT GRADING
N.T.S.



TYPICAL "B" LOT GRADING
N.T.S.



TYPICAL "C" LOT GRADING
N.T.S.

GENERAL NOTES:

1. CONTRACTOR SHALL PROVIDE OWNER ALL NECESSARY DENSITY TESTS FOR FILL LOTS AS REQUIRED BY HUD SPECIFICATIONS.
2. THE HOMEBUILDER WILL BE RESPONSIBLE FOR DETAILED GRADING ON EACH INDIVIDUAL LOT TO INCLUDE MINOR GRADING ON THE LOTS AND ANY SIDE OR BACK-LOT SWALES REQUIRED TO MEET THE DEPICTED DRAINAGE PATTERNS (SEE OVERALL MASTER DRAINAGE PLAN).
3. HOMEBUILDER SHALL REFER TO THE APPROVED SUBDIVISION PLAT TO CONFIRM ALL BUILDING SETBACKS PRIOR TO ANY FOUNDATION WORK.
4. AS SOON AS PRACTICAL HOMEBUILDER SHALL ESTABLISH VEGETATION (HYDROMULCH, SEEDING, SODDING, ETC...) TO PREVENT EROSION FROM OCCURRING.
5. CONTRACTOR SHALL CONTACT ENGINEER REGARDING ANY QUESTIONS ON THE INTENT OF THIS PLAN.
6. ELEVATIONS IN STREET ARE FINISHED GRADE AT PROPERTY LINE.
7. FINISHED FLOOR ELEVATIONS FOR EACH LOT SHALL BE A MINIMUM OF 8 INCHES ABOVE THE FINISHED ADJACENT GRADE.
8. EXISTING TOPOGRAPHIC CONTOURS SHOWN BASED ON FIELD SURVEY PROVIDED BY D.A. MAWYER LAND SURVEYING (210-325-0858).
9. CONTRACTOR TO VERIFY ALL EXISTING GRADES PRIOR TO CONSTRUCTION AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.

GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION

THE ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TO 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 IS TO BE PLACED, AND SURFACE SHALL THEN 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 THE 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 CURRENT THD-TEX-113-E COMPACTION PROCEDURE.

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. THE MAXIMUM LOOSE DEPTH FOR ANY MATERIAL SHALL NOT EXCEED TWELVE INCHES (12").

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. NO LARGE ROCKS WILL BE PERMITTED WITHIN EIGHTEEN INCHES (18") OF THE FINISHED GRADE.

COMPACTION OF FILL LAYER

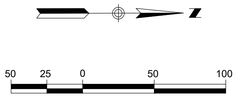
COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

DENSITY TEST

FIELD DENSITY TESTS SHALL BE PERFORMED ON LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE EIGHTEEN INCHES (18"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE TESTING LAB PERFORMS ALL TEST REQUIRED BY FHA SPECIFICATION.

LOT GRADING

ALL LOT GRADING SHALL BE IN ACCORDANCE WITH H.U.D.- F.H.A. DATA SHEET 79G.



SCALE IN FEET
SCALE: 1"=50'

LEGEND

PROPOSED	EXISTING	
800	800	CONTOUR
2%	2%	FLOW ARROW
		GRASSED DRAIN FLOW
706.41	801.33	GROUND ELEVATION
706.41 ME		MATCH EXISTING GROUND
A		LOT DRAINS TO FRONT
B		LOT DRAINS 1/2 TO FRONT AND 1/2 TO REAR
C		LOT DRAINS TO REAR
Am		LOT TYPE A MODIFIED
Bm		LOT TYPE B MODIFIED
Cm		LOT TYPE C MODIFIED
	TMH	TOP OF MANHOLE
	EX.	EXISTING
	G,E,T,CA	GAS, ELEC, TELE & CABLE TV ESM'T.
	ESM'T.	EASEMENT
	VOL	VOLUME
	PG	PAGE

CITY OF SAN ANTONIO
NCB 14849 BLK 9 LOT 1
POLICE TRAINING CENTER

CITY OF SAN ANTONIO
LOT 1, BLOCK 9, NCB 14849
POLICE TRAINING
CENTER SUBDIVISION
(VOL. 9518, PG. 219-221, DPR)

CITY OF SAN ANTONIO
SO CALLED 301.927 ACRES
(VOL. 7075, PG. 152, DPR)

NUSTAR LOGISTICS LP
SO CALLED 92.773 ACRES
(VOL. 5644, PG. 1569 O.P.R.)

UNIT 5 BOUNDARY

BEGIN WALL 575.62
BEGIN WALL 571.04
END WALL 577.67
END WALL 582.68

DETENTION POND
REFER TO
SHEETS 14-15

FORESTIER GRN
(50 R.O.W.)

BONNET PASS
(50 R.O.W.)

VOLAND VLY
(60 R.O.W.)

EX. BARRICADES
TO BE REMOVED

EXISTING OFF-LOT 50' DRAINAGE & UTILITY ESM'T TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (LAND-PLAT NUMBER-20-11800535)

CHAVANEAUX
SUBDIVISION UNIT 1
LAND-PLAT-19-11800554

CHAVANEAUX
SUBDIVISION UNIT 1A
LAND-PLAT-21-11800403

CHAVANEAUX
SUBDIVISION UNIT 3
LAND-PLAT-21-XXXXXXXX

REMAINING PORTION
91.05 ACRE TRACT
(VOL.7659, PG.334, DPR)
FUTURE DEVELOPMENT

BLOCK 1, NCB 14850
BLOCK 11, NCB 14850
BLOCK 7
BLOCK 7, NCB

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
GRADING

NO.	REVISIONS DESCRIPTION	BY	DATE
1	POND ELEVATION RAISED AND OFF-LOT GRADING UPDATED	STM	9/7/2022
2	LOT GRADING, RETAINING WALLS, & BERM GRADING ADDED	STM	7/17/2026

DATE: 7/21/2026
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: s5_Grading Plan.dwg

STATE OF TEXAS
SEAMUS MACFARLAND
152120
LICENSED PROFESSIONAL ENGINEER
7/21/26

LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:

SHEET NO. 8
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux US Construction\426 Site Development Plans\DWG-Sheets\s5_Grading Plan.dwg
User: smacfarland
Last Modified: Jul. 21, 26 - 10:56
Plot Date/Time: Jul. 21, 26 - 11:16:21

Time of Concentration Worksheet

			Point	EXIST	EXIST
			Areas	SITE	SITE
				EX1	EX2
Time of Concentration					
Overland	Length	ft		300	300
(1st Area)	n			0.240	0.240
	slope	ft/ft		0.019	0.019
	Tc	min		15.46	15.42
		hr		0.26	0.26
Overland	Length	ft		0	0
(2nd Area)	n			0.020	0.020
	slope	ft/ft		0.025	0.025
	Tc	min		0.00	0.00
		hr		0.00	0.00
Concentrated	Length	ft		840	82
(Unpaved)	Slope	ft/ft		0.034	0.014
	Velocity	ft/sec		2.96	1.91
	Tt	min		4.73	0.72
		hr		0.08	0.01
Concentrated	Length	ft		0	0
(Paved)	Slope	ft/ft		0.014	0.014
	Velocity	ft/sec		2.41	2.41
	Tt	min		0.00	0.00
		hr		0.00	0.00
Channel	Length	ft		205	0
	Velocity	ft/sec		6.00	6.00
	Tt	min		0.57	0.00
		hr		0.01	0.00
Total Time of Concentration		**min**		**20.75**	**16.14**
		hr		**0.35**	**0.27**

Equations

Kerby Method for Overland Flow

Tc = {(0.67*n*length)/(sqrt of the slope)}^0.467

SCS TR-55 Method for Concentrated Flow

V = 16.1345*(sqrt of the slope) {unpaved}

V = 20.3282*(sqrt of the slope) {paved}

Tt = length/3600*V

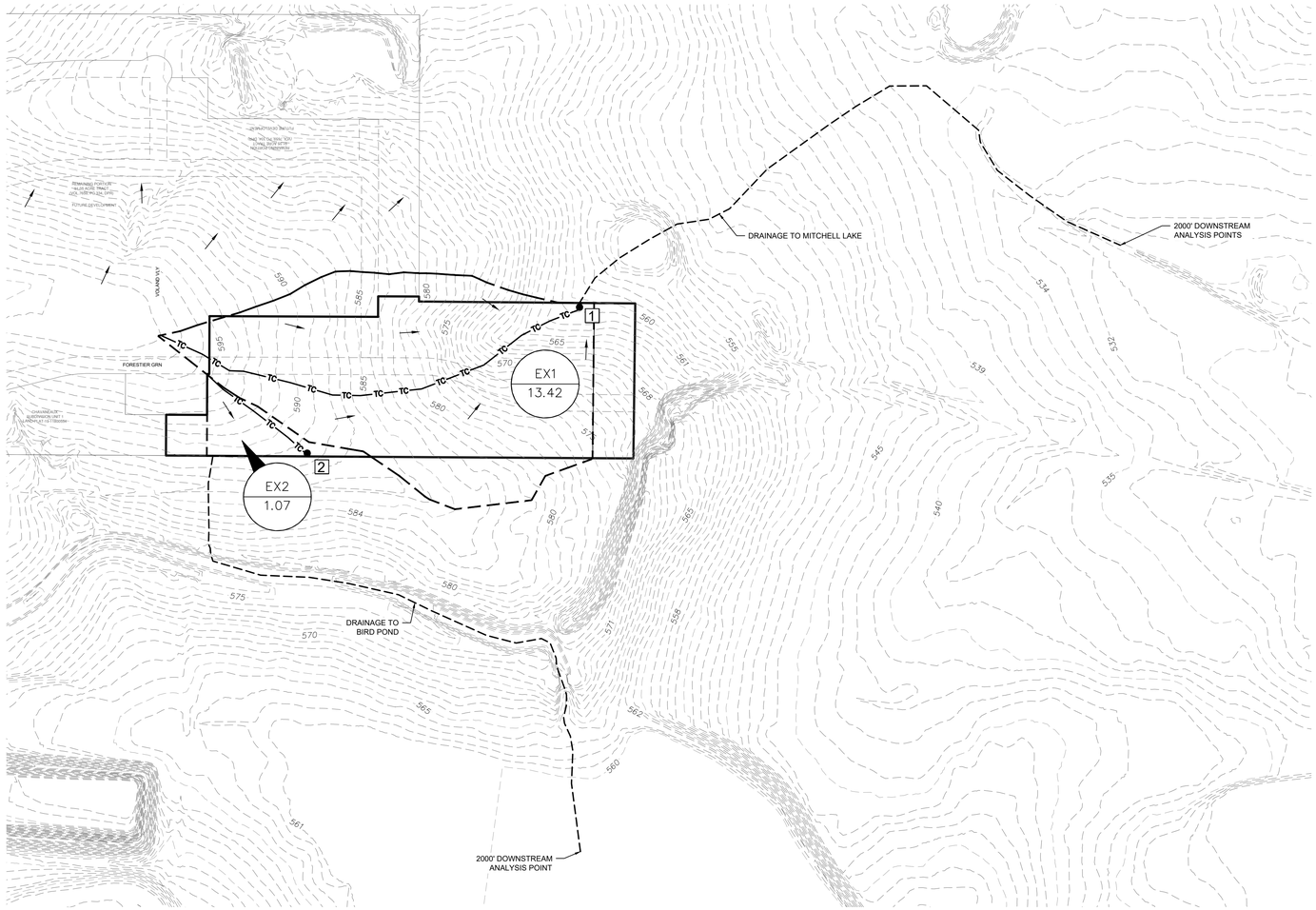
Channel Flow

Tt = Length/3600*V

Tc (Total) = Tc (overland) + Tt (concentrated) + Tt (channel)

Existing Runoff Flow Rates

REFERENCE POINT	Drainage Areas	C	Drainage Area (ac)	Tc (min)	I(5) (in/hr)	I(10) (in/hr)	I(25) (in/hr)	I(100) (in/hr)	Q(5) (cfs)	Q(10) (cfs)	Q(25) (cfs)	Q(100) (cfs)
1	EX1	0.41	13.42	20.75	4.43	5.12	6.09	7.57	24.38	28.17	33.50	41.63
2	EX2	0.41	1.07	16.14	5.04	5.84	6.96	8.67	2.21	2.56	3.05	3.80
Rainfall Intensities Referenced from ATLAS 14, Rainfall Intensities, PA-4												
Runoff Coefficients Referenced from San Antonio UDC Table 5.5.3A												



100 50 0 100 200

SCALE IN FEET

SCALE: 1"=100'

LEGEND

A / X.X	AREA (BASIN) ACREAGE
620	EXISTING CONTOUR
620	PROPOSED CONTOUR
	DRAINAGE AREA LIMITS
TC TC	TIME OF CONCENTRATION PATH
	FLOW ARROWS
	PROPOSED BOUNDARY
	EXISTING LOT LINES
	PROPOSED LOT LINES
A	REFERENCE POINT

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
EXISTING DRAINAGE AREA MAP AND CALCULATIONS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 2/7/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_DAM Exist.dwg

02/07/22

STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER

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Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426

SAWS JOB NUMBER:

SHEET NO. 9

OF 24 SHEETS

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User: pfrodriguez
Last Modified: Feb 07, 22 - 15:03
Plot Date/Time: Feb 07, 22 - 15:38:54

LEGEND

GENERAL NOTES:

1) ALL CONCRETE LINING SHALL BE A MINIMUM OF FIVE (5) INCHES THICK AND REINFORCED WITH NO. 4 ROUND BARS @ 18 INCHES ON CENTER EACH WAY OR WELDED WIRE FABRIC OF 6" x 6"-W/D6 x W/D6. ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH STRENGTH OF NOT LESS THAN THREE THOUSAND (3,000) POUNDS PER SQUARE INCH IN TWENTY EIGHT (28) DAYS. THE DEPTH OF ALL TOEDOWNS SHALL BE 36 INCHES UPSTREAM, 24 INCHES DOWNSTREAM, AND 18 INCHES FOR SIDE SLOPES.

2) IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE.

A / X.X — AREA (BASIN) / ACREAGE

740 — EXISTING CONTOUR

DRAINAGE AREA LIMITS

TC — TC — TIME OF CONCENTRATION PATH

FLOW ARROWS

PROPOSED BOUNDARY

EXISTING LOT LINES

A — REFERENCE POINT

100 50 0 100 200
SCALE IN FEET
SCALE: 1"=100'

Proposed Runoff Flow Rates (Valid for TC<=60 Minutes)

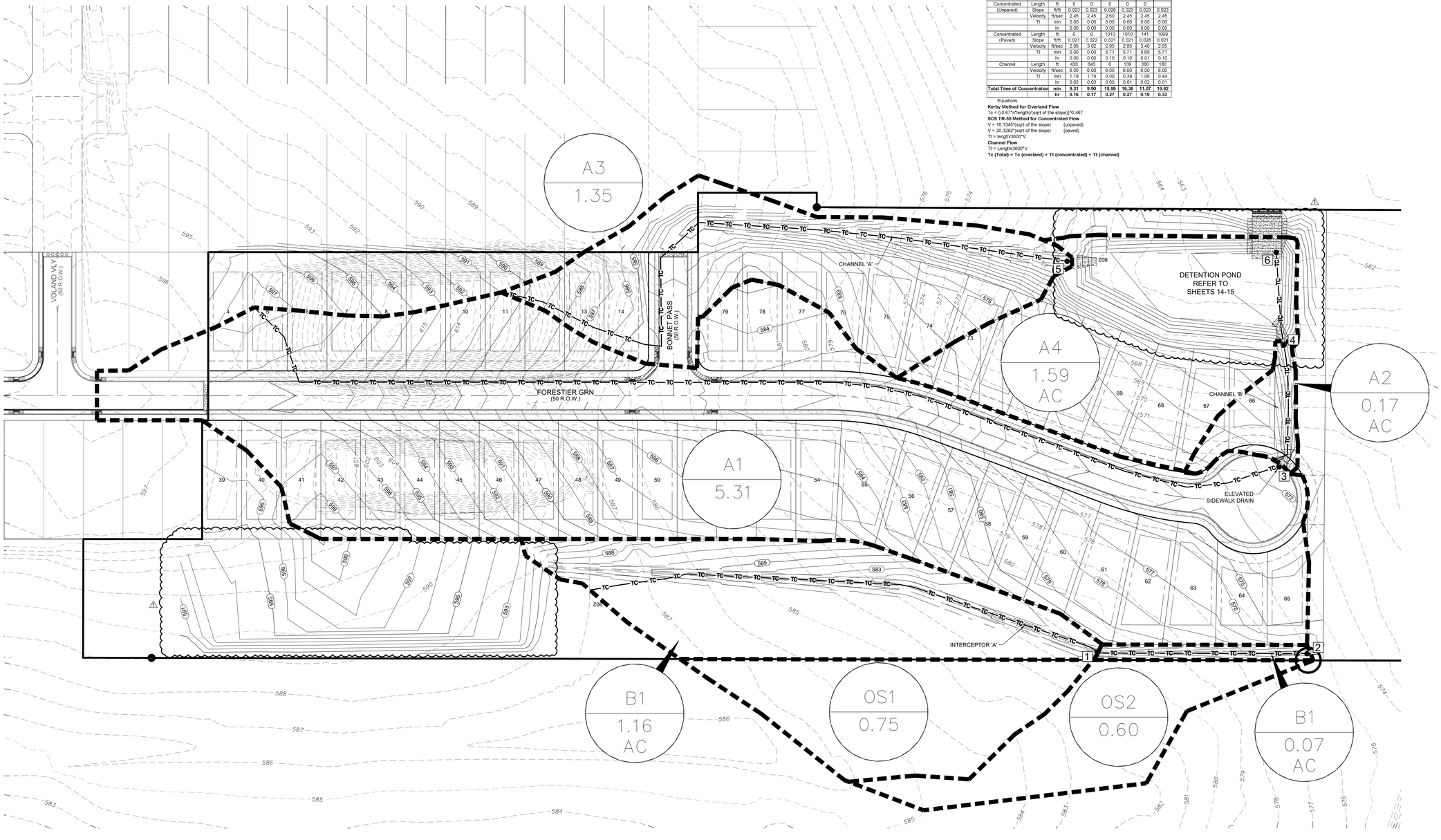
REFERENCE POINT	Drainage Areas	C	Drainage Area (ac)	Tc (min)	I(5) (in/hr)	I(10) (in/hr)	I(25) (in/hr)	I(100) (in/hr)	Q(5) (cfs)	Q(10) (cfs)	Q(25) (cfs)	Q(100) (cfs)
3	A1	0.77	5.31	15.98	5.07	5.88	6.99	8.71	20.72	24.02	28.60	35.63
4	A1+A2	0.77	5.48	16.36	5.01	5.80	6.91	8.60	21.13	24.48	29.14	36.30
5	A3	0.77	1.35	11.57	5.40	6.90	8.25	10.31	5.61	7.18	8.58	10.72
6	A1-A4	0.77	8.42	19.62	4.56	5.27	6.27	7.79	29.56	34.17	40.64	50.53
2	B1+B2 (BYPASS)	0.41	1.23	9.90	6.26	7.35	8.79	10.99	3.16	3.71	4.43	5.54
1	B1+OS1	0.41	1.91	9.31	6.41	7.52	9.00	11.25	5.02	5.89	7.05	8.81
2	B1+OS1+B2+OS2	0.41	2.58	9.90	6.26	7.35	8.79	10.99	6.63	7.77	9.30	11.63

Rainfall Intensities Referenced from ATLAS 14, Rainfall Intensities, PA-4
Runoff Coefficients Referenced from San Antonio UDC Table 5.5.3A

Time of Concentration Worksheet

			Point Areas	PROP SITE B1	PROP SITE B1+B2	PROP SITE A1	PROP SITE A1+A2	PROP SITE A3	PROP SITE A1-A4
Time of Concentration									
Overland	Length	ft		103	103	91	91	172	163
(1st Area)	n			0.240	0.240	0.240	0.240	0.240	0.240
	slope	ft/ft		0.035	0.035	0.010	0.010	0.043	0.010
	Tc	min		8.12	8.12	10.26	10.26	9.83	13.47
		hr		0.14	0.14	0.17	0.17	0.16	0.22
Overland	Length	ft		0	0	0	0	0	0
(2nd Area)	n			0.020	0.020	0.020	0.020	0.020	0.020
	slope	ft/ft		0.025	0.025	0.025	0.025	0.020	0.025
	Tc	min		0.00	0.00	0.00	0.00	0.00	0.00
		hr		0.00	0.00	0.00	0.00	0.00	0.00
Concentrated	Length	ft		0	0	0	0	0	
(Unpaved)	Slope	ft/ft		0.023	0.023	0.026	0.023	0.023	0.023
	Velocity	ft/sec		2.45	2.45	2.60	2.45	2.45	2.45
	Tt	min		0.00	0.00	0.00	0.00	0.00	0.00
		hr		0.00	0.00	0.00	0.00	0.00	0.00
Concentrated	Length	ft		0	0	1010	1010	141	1009
(Paved)	Slope	ft/ft		0.021	0.022	0.021	0.021	0.028	0.021
	Velocity	ft/sec		2.95	3.02	2.95	2.95	3.40	2.95
	Tt	min		0.00	0.00	5.71	5.71	0.69	5.71
		hr		0.00	0.00	0.10	0.10	0.01	0.10
Channel	Length	ft		430	643	0	139	380	160
	Velocity	ft/sec		6.00	6.00	6.00	6.00	6.00	6.00
	Tt	min		1.19	1.79	0.00	0.39	1.06	0.44
		hr		0.02	0.03	0.00	0.01	0.02	0.01
Total Time of Concentration		**min**		**9.31**	**9.90**	**15.98**	**16.36**	**11.57**	**19.62**
		hr		**0.16**	**0.17**	**0.27**	**0.27**	**0.19**	**0.33**

Equations
Kerby Method for Overland Flow
Tc = ((0.67*n*length)/(sqrt of the slope))^0.467
SCS TR-55 Method for Concentrated Flow
V = 16.1345*(sqrt of the slope) (unpaved)
V = 20.3282*(sqrt of the slope) (paved)
Tt = length/3600*V
Channel Flow
Tt = Length/3600*V
Tc (Total) = Tc (overland) + Tt (concentrated) + Tt (channel)



CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
PROPOSED DRAINAGE AREA MAP
AND CALCULATIONS

REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	POND ELEVATION RAISED AND OFF-LOT GRADING UPDATED	STM	9/7/2022

DATE: 4/27/2026
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_DAM Prop.dwg

4/27/26
STATE OF TEXAS
SEAMUS MACFARLAND
152120
LICENSED
PROFESSIONAL ENGINEER
Seamus Macfarland

LJA Engineering, Inc.
1100 NE Loop 410
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TBPE No. F-1386

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:
SHEET NO. 10
OF 24 SHEETS

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User: smacfarland
Last Modified: Apr. 27, 26 - 11:22
Plot Date/Time: Apr. 27, 26 - 11:33:28

Ultimate Runoff Flow Rates (Valid for TC<=60 Minutes)

REFERENCE POINT	Drainage Areas	C	Drainage Area (ac)	Tc (min)	I(5) (in/hr)	I(10) (in/hr)	I(25) (in/hr)	I(100) (in/hr)	Q(5) (cfs)	Q(10) (cfs)	Q(25) (cfs)	Q(100) (cfs)
1	A1	0.77	46.02	27.73	3.83	4.42	5.25	6.51	135.75	156.46	185.97	230.66
2	A2	0.77	1.20	10.50	6.13	7.19	8.60	10.74	5.66	6.64	7.94	9.93
3	B1 (BYPASS)	0.57	7.76	10.05	5.21	6.04	7.20	8.97	23.04	26.72	30.17	39.68
4	B2	0.77	20.90	26.98	3.88	4.48	5.32	6.60	62.50	72.04	85.63	106.22
5	C1	0.77	0.57	15.48	5.15	5.98	7.12	8.87	2.26	2.62	3.12	3.89
6	D1	0.77	0.79	13.07	5.60	6.53	7.80	9.73	3.41	3.97	4.74	5.92
7	D2	0.96	1.06	13.36	5.54	6.46	7.71	9.63	5.64	6.58	7.85	9.80
8	D3	0.77	0.46	9.45	6.37	7.48	8.95	11.19	2.26	2.65	3.17	3.96
13	D4	0.96	1.06	14.70	5.30	6.15	7.33	9.14	5.39	6.26	7.46	9.30
9	E1+E2	0.77	11.56	19.62	4.56	5.27	6.27	7.79	40.58	46.92	55.80	69.37
14	E2	0.77	4.49	17.37	5.40	5.62	6.69	8.32	18.67	19.43	23.12	28.78
12	E3 (BYPASS)	0.41	1.23	9.90	6.26	7.35	8.79	10.99	3.16	3.71	4.43	5.54
15	E4 (BYPASS)	0.77	0.47	10.05	6.23	7.31	8.74	10.93	2.25	2.64	3.16	3.95
10	OS1	0.65	0.89	16.74	4.95	5.73	6.82	8.49	2.86	3.32	3.95	4.91
11	OS2	0.67	13.76	28.44	3.78	4.36	5.18	6.42	34.87	40.18	47.76	59.23
12	OS3+E3	0.56	2.58	9.90	6.26	7.35	8.79	10.99	9.08	10.65	12.75	15.93
4	B2+OS1	0.72	21.79	26.98	3.88	4.48	5.32	6.60	64.75	74.63	88.71	110.03
1	A1+A2+OS2	1.75	60.98	27.73	3.83	4.42	5.25	6.51	174.61	201.25	239.20	296.68

Rainfall Intensities Referenced from ATLAS 14, Rainfall Intensities, PA-4

Runoff Coefficients Referenced from San Antonio UDC Table 5.5.3A

Time of Concentration Worksheet

CHAVANEAUX		Point	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT	ULT
ULT DRN		Areas	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE	SITE
			A1	A2	B1	B2	C1	D1	D2	D3	D4	E1+E2	E2	E3	E4	OS1	OS2	OS3	
Time of Concentration																			
Overland	Length	ft	300	145	123	300	85	40	90	35	65	163	203	103	123	201	240	225	
(1st Area)	n		0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	
	slope	ft/ft	0.010	0.023	0.020	0.015	0.019	0.015	0.022	0.015	0.015	0.010	0.022	0.035	0.020	0.006	0.004	0.020	
	Tc	min	17.91	10.50	10.05	16.29	8.56	6.36	8.49	5.97	7.98	13.47	12.42	8.12	10.05	16.74	19.99	13.32	
		hr	0.30	0.18	0.17	0.27	0.14	0.11	0.14	0.10	0.13	0.22	0.21	0.14	0.17	0.28	0.33	0.22	
Overland	Length	ft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(2nd Area)	n		0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	
	slope	ft/ft	0.010	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.020	0.025	0.025	0.010	0.025	0.010	
	Tc	min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
		hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Concentrated	Length	ft	190	0	0	0	0	140	512	0	460		0	0	0	0	1035	0	
(Unpaved)	Slope	ft/ft	0.020	0.012	0.023	0.025	0.014	0.009	0.014	0.005	0.005	0.023	0.023	0.023	0.025	0.016	0.190		
	Velocity	ft/sec	2.28	1.77	2.45	2.55	1.91	1.53	1.91	1.14	1.14	2.45	2.45	2.45	2.45	2.55	2.04	7.03	
	Tt	min	1.39	0.00	0.00	0.00	0.00	1.52	4.47	0.00	6.72	0.00	0.00	0.00	0.00	0.00	8.45	0.00	
		hr	0.02	0.00	0.00	0.00	0.00	0.03	0.07	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.14	0.00	
Concentrated	Length	ft	810	0	0	1020	80	600	70	300	0	1009	634	0	0	0	0	0	
(Paved)	Slope	ft/ft	0.017	0.013	0.022	0.012	0.005	0.009	0.021	0.005	0.005	0.021	0.018	0.022	0.022	0.010	0.025	0.050	
	Velocity	ft/sec	2.65	2.32	3.02	2.23	1.44	1.93	2.95	1.44	1.44	2.95	2.73	3.02	3.02	2.03	3.21	4.55	
	Tt	min	5.09	0.00	0.00	7.63	0.93	5.19	0.40	3.48	0.00	5.71	3.87	0.00	0.00	0.00	0.00	0.00	
		hr	0.08	0.00	0.00	0.13	0.02	0.09	0.01	0.06	0.00	0.10	0.06	0.00	0.00	0.00	0.00	0.00	
Channel	Length	ft	1200	0	0	1100	2160	0	0	0	0	160	390	643	0	0	0	0	
	Velocity	ft/sec	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	
	Tt	min	3.33	0.00	0.00	3.06	6.00	0.00	0.00	0.00	0.00	0.44	1.08	1.79	0.00	0.00	0.00	0.00	
		hr	0.06	0.00	0.00	0.05	0.10	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.00	0.00	0.00	0.00	
Total Time of Concentration		**min**	**27.73**	**10.50**	**10.05**	**26.98**	**15.48**	**13.07**	**13.36**	**9.45**	**14.70**	**19.62**	**17.37**	**9.90**	**10.05**	**16.74**	**28.44**	**27.70**	
		hr	**0.46**	**0.18**	**0.17**	**0.45**	**0.26**	**0.22**	**0.22**	**0.16**	**0.24**	**0.33**	**0.29**	**0.17**	**0.17**	**0.28**	**0.47**	**0.46**	

Equations

Kerby Method for Overland Flow
Tc = ((0.67*(*length))/(sqrt of the slope))^0.467

SCS TR-55 Method for Concentrated Flow
V = 16.1345*(sqrt of the slope) {unpaved}
V = 20.3282*(sqrt of the slope) {paved}
Tt = length/3600*V

Channel Flow
Tt = Length/3600*V

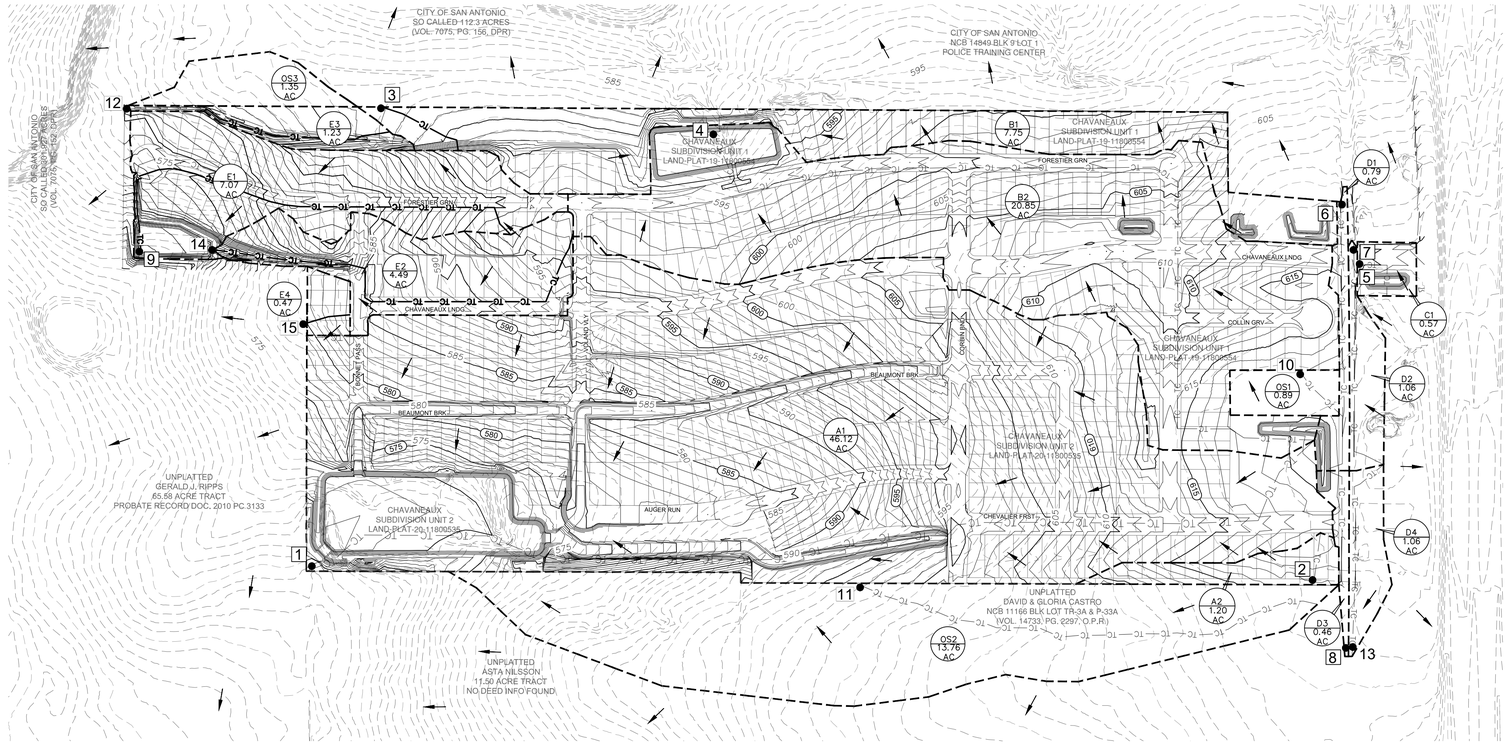
Tc (Total) = Tc (overland) + Tt (concentrated) + Tt (channel)

LEGEND

A / X.X	AREA (BASIN) ACREAGE
620	EXISTING CONTOUR
620	PROPOSED CONTOUR
	DRAINAGE AREA LIMITS
TC — TC	TIME OF CONCENTRATION PATH
	FLOW ARROWS
	PROPOSED BOUNDARY
	EXISTING LOT LINES
	PROPOSED LOT LINES
A	REFERENCE POINT

200 100 0 200 400

SCALE IN FEET
SCALE: 1"=100'



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Last Modified: Mar. 29, 22 - 17:02
Plot Date/Time: Mar. 30, 22 - 15:21:15

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
ULTIMATE DRAINAGE AREA MAP AND CALCULATIONS

NO.	DESCRIPTION	BY	DATE

REVISIONS

DATE: 3/30/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_DAM US.dwg

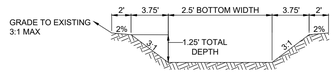
03/30/22
STATE OF TEXAS
PRISCILLA G FLORES
109874
LICENSED PROFESSIONAL ENGINEER
Priscilla G Flores

LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

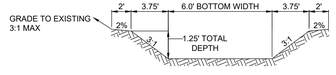
JOB NUMBER: SA199-0402A.426

SAWS JOB NUMBER:

SHEET NO. 11
OF 24 SHEETS



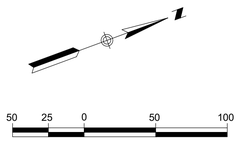
EARTHEN INTERCEPTOR CHANNEL SECTION
N.T.S. STA. 1+12.51 TO 3+50.00



EARTHEN INTERCEPTOR CHANNEL SECTION
STA. 3+55.00 TO 9+00.00

LEGEND

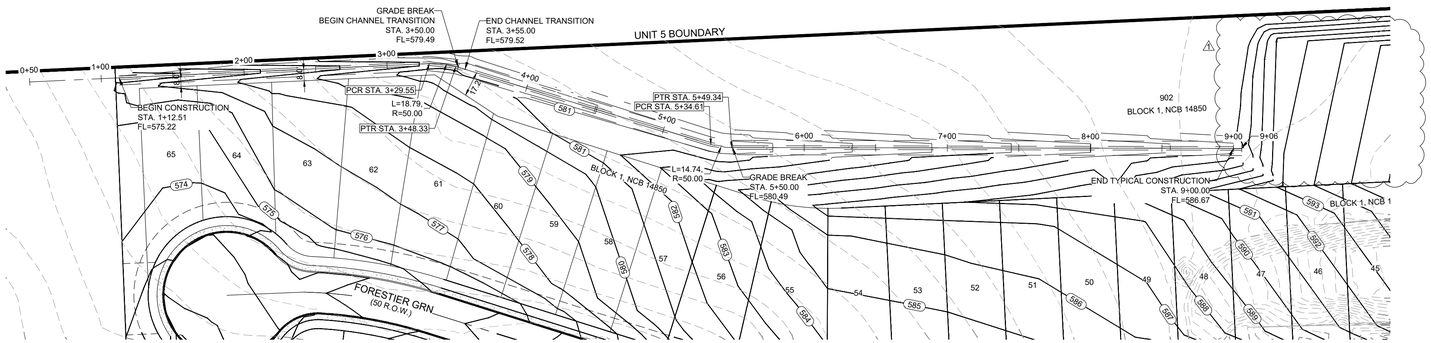
800	PROPOSED CONTOUR
2%	FLOW ARROW
	GRASSED DRAIN FLOW
	PROPOSED STREET GRADE
	EXISTING GROUND LEFT
	EXISTING GROUND CENTERLINE
	EXISTING GROUND RIGHT
	SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
	SIDEWALK (DEVELOPER'S RESPONSIBILITY)
G,E,T,CA	GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT
BSL	BUILDING SETBACK LINE
ESM'T.	EASEMENT
LT.	LEFT
RT.	RIGHT



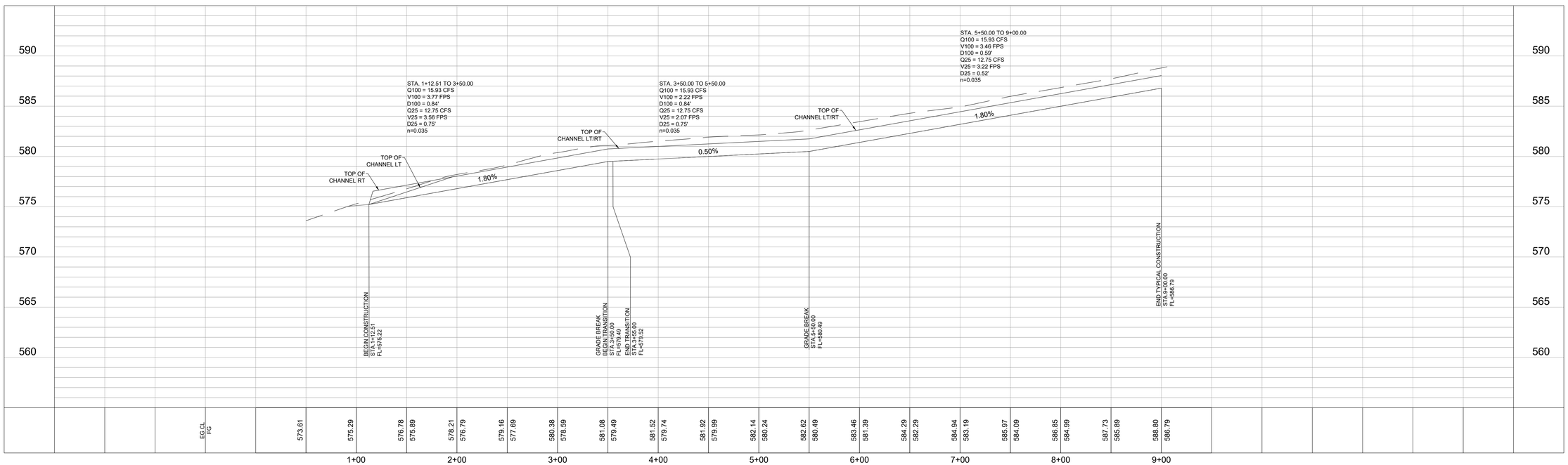
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'

GENERAL NOTES:

1) IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE.



INTERCEPTOR CHANNEL 'A' STA. 1+00.00 TO END



CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
INTERCEPTOR CHANNEL 'A'
PLAN & PROFILE STA. 1+00.00 TO END

REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	OFF-LOT GRADING UPDATED	STM	9/7/2022

DATE: 4/27/2026
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_Interceptors.dwg

4/27/26
STATE OF TEXAS
SEAMUS MACFARLAND
152120
LICENSED PROFESSIONAL ENGINEER
Seamus MacFarland

LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:

SHEET NO. 12
OF 24 SHEETS

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User: smacfarland
Last Modified: Apr. 27, 26 - 11:23
Plot Style Table: Apr. 27, 26 - 10:44:13

GENERAL NOTES:

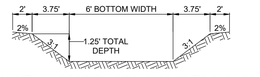
1) IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE.

LEGEND

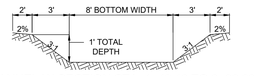
800	PROPOSED CONTOUR
2%	FLOW ARROW
	GRASSED DRAIN FLOW
	PROPOSED STREET GRADE
	EXISTING GROUND LEFT
	EXISTING GROUND CENTERLINE
	EXISTING GROUND RIGHT
	SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
	SIDEWALK (DEVELOPER'S RESPONSIBILITY)
G,E,T,CA	GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT
BSL	BUILDING SETBACK LINE
ESM'T.	EASEMENT
LT.	LEFT
RT.	RIGHT

50 25 0 50 100

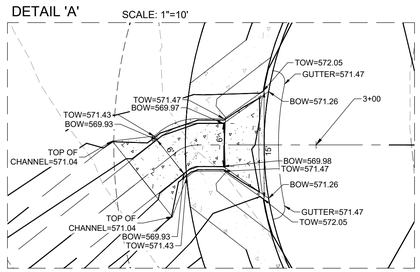
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'

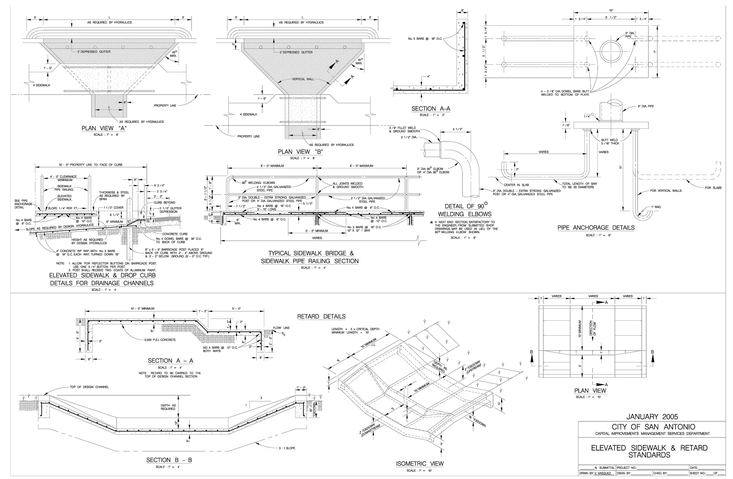


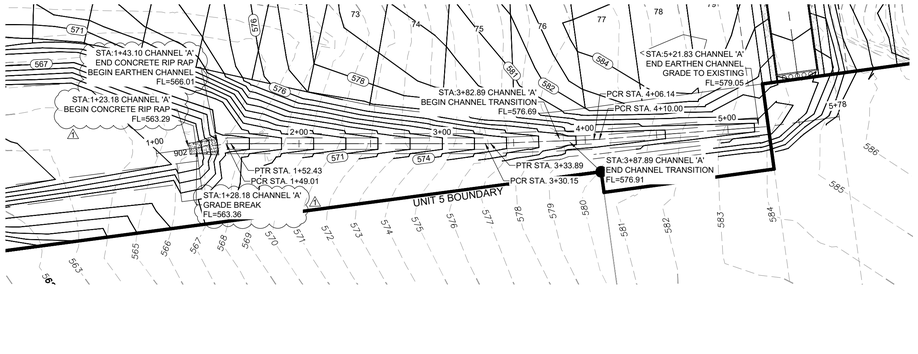
CHANNEL 'A' SECTION STA. 3+87.89 TO 5+21.83
N.T.S.

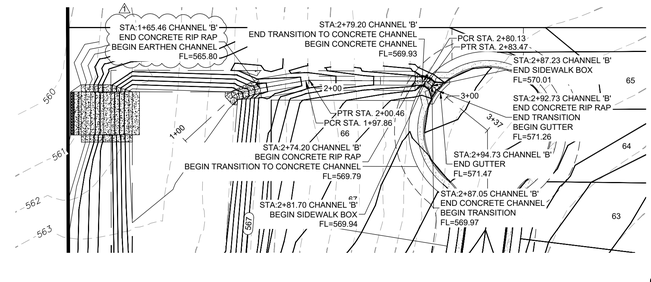


CHANNEL 'A' SECTION STA. 1+43.10 TO 3+82.89
N.T.S.







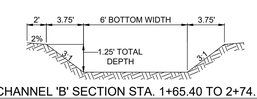


15' WEIR CALCULATIONS

$Q = CL(H^{3/2})$
Q(25)= 28.60 CFS
C = 3.087
H = 0.792 FT
L (REQUIRED) = 13.14 FT
L (PROVIDED) = 15 FT

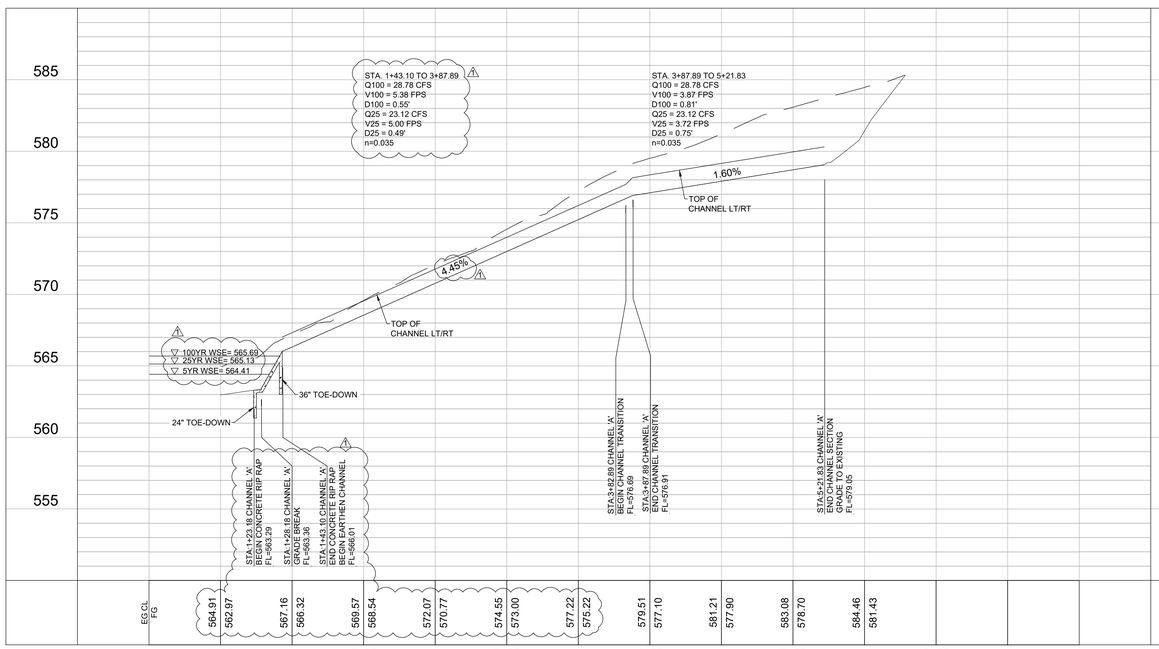
SIDWALK BOX DRAIN 'A' CALCULATIONS

Q(25)= 28.60 CFS		Q(100) = 35.63 CFS	
n =	0.013	n =	0.013
s =	0.50%	s =	0.50%
v =	5.95 fps	v =	6.42 fps
d(req) =	0.80 ft	d(req) =	0.93 ft
d(prov)=	1.50 ft	d(prov)=	1.50 ft
Bw =	6 ft	Bw =	6 ft

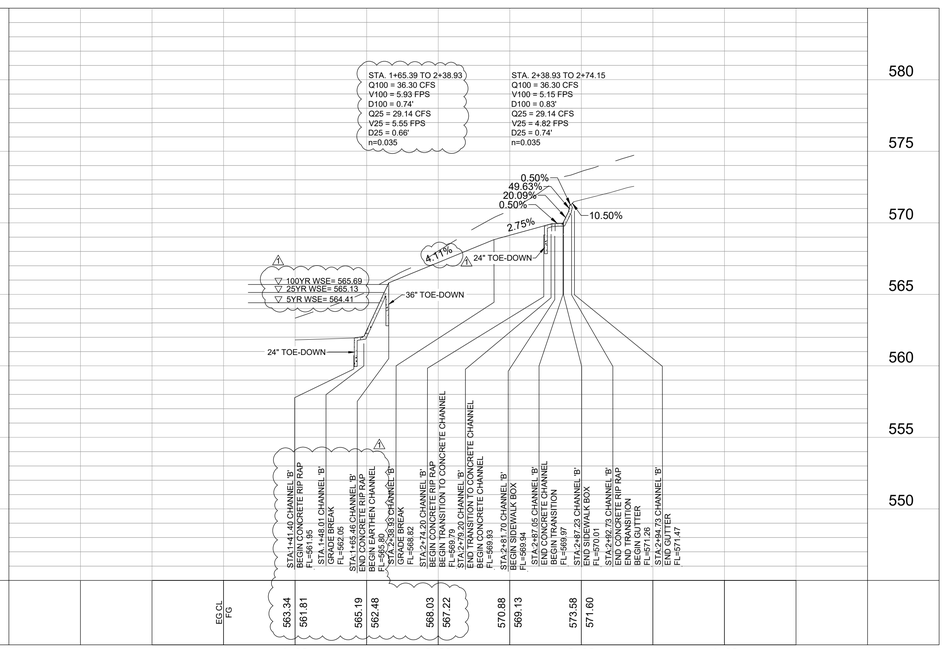


CHANNEL 'B' SECTION STA. 1+65.40 TO 2+74.14
N.T.S.

CHANNEL 'A' STA. 1+00.00 TO END



CHANNEL 'B' STA. 1+00.00 TO END



CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
CHANNEL 'A' & 'B' PLAN & PROFILE
STA. 1+00.00 TO END

NO.	DESCRIPTION	BY	DATE
1	CHANNEL OUTFALL RAISED AND CALCULATIONS UPDATED	STM	9/7/2022

DATE: 4/27/2026
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_Channel A & B.dwg

STATE OF TEXAS
SEAMUS MACFARLAND
152120
LICENSED PROFESSIONAL ENGINEER
9/7/2026
Seamus MacFarland

LJA Engineering, Inc.
1100 NE Loop 410
Suite 850
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:

SHEET NO. 13
OF 24 SHEETS

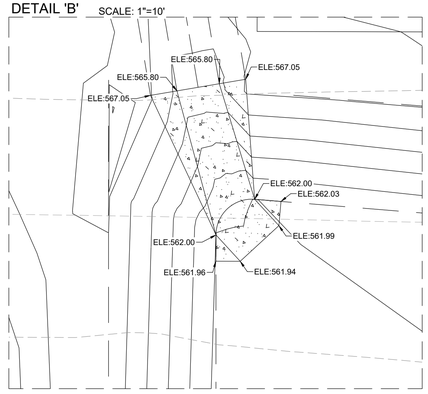
K:\SA199 Century Communities\0402A Chavaneaux US Construction\426 Site Development Plans\DWG-Sheets\sh_Channel A & B.dwg
User: smacfarland
Last Modified: Apr. 27, 26 - 17:23
Plot Only: Apr. 27, 26 - 10:36:47

GENERAL NOTES:

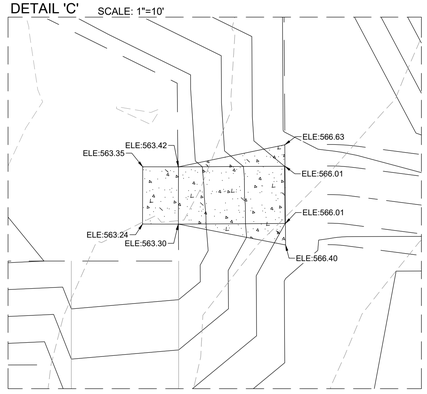
1) ALL CONCRETE LINING SHALL BE A MINIMUM OF FIVE (5) INCHES THICK AND REINFORCED WITH NO. 4 ROUND BARS @ 18 INCHES ON CENTER EACH WAY OR WELDED WIRE FABRIC OF 6" x 6"-W/D6 x W/D6. ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH STRENGTH OF NOT LESS THAN THREE THOUSAND (3,000) POUNDS PER SQUARE INCH IN TWENTY EIGHT (28) DAYS. THE DEPTH OF ALL TOEDOWNS SHALL BE 36 INCHES UPSTREAM, 24 INCHES DOWNSTREAM, AND 18 INCHES FOR SIDE SLOPES.

2) IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE.

DETAIL 'B' SCALE: 1"=10'



DETAIL 'C' SCALE: 1"=10'

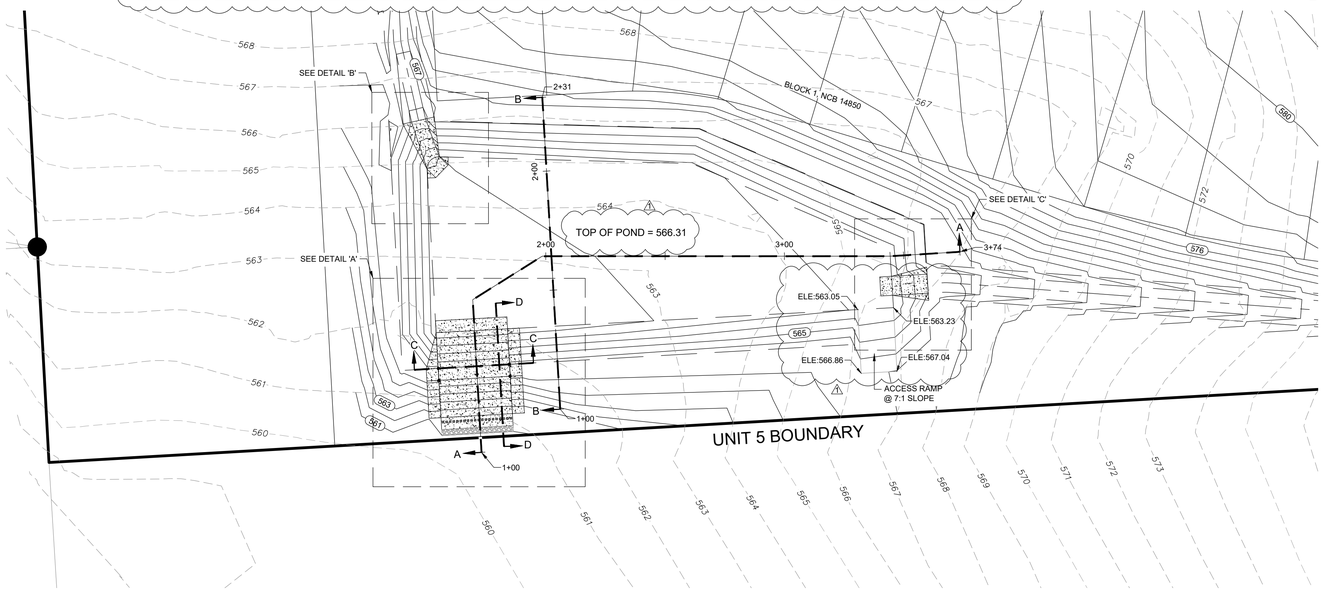


LEGEND

PROPOSED	EXISTING	
766	766	CONTOUR
2%	2%	FLOW ARROW
		GRASSED DRAIN FLOW
766.67	768.81	GROUND ELEVATION

50 25 0 50 100

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



Stage	Elevation	Contour Area	Incremental Storage	Total Storage	Total Discharge
(ft)	(ft)	(sqft)	(cuft)	(cuft)	(cfs)
0.00	561.35	0	0.000	0.000	0.017
0.65	562.00	3,172	687	687	3.111
1.65	563.00	10,409	6,442	7,129	9.093
2.65	564.00	13,896	12,109	19,238	14.80
3.65	565.00	15,780	14,827	34,065	22.32
4.65	566.00	18,000	16,876	50,941	40.07
5.00	566.35	18,000	6,299	57,240	73.85

○ 2-Yr ○ 3-Yr ◉ 5-Yr ○ 10-Yr ○ 25-Yr ○ 50-Yr ○ 100-Yr

Hydrograph type	Peak flow	Time interval	Time of conc. Tc	Time to peak	Volume	Inflow hyd(s)	Maximum Elevation	Maximum Storage	Hydrograph description
(origin)	(cfs)	(min)	(min)	(min)	(cuft)		(ft)	(cuft)	
Rational	40.79	1	20.00	20.00	48,949				Chav U5 Proposed
Reservoir	17.93	1		31.00	51,826	1	564.41	26,342	Chav U5 Pond

○ 2-Yr ○ 3-Yr ○ 5-Yr ○ 10-Yr ◉ 25-Yr ○ 50-Yr ○ 100-Yr

Hydrograph type	Peak flow	Time interval	Time of conc. Tc	Time to peak	Volume	Inflow hyd(s)	Maximum Elevation	Maximum Storage	Hydrograph description
(origin)	(cfs)	(min)	(min)	(min)	(cuft)		(ft)	(cuft)	
Rational	55.71	1	20.00	20.00	66,847				Chav U5 Proposed
Reservoir	24.04	1		31.00	69,516	1	565.13	36,242	Chav U5 Pond

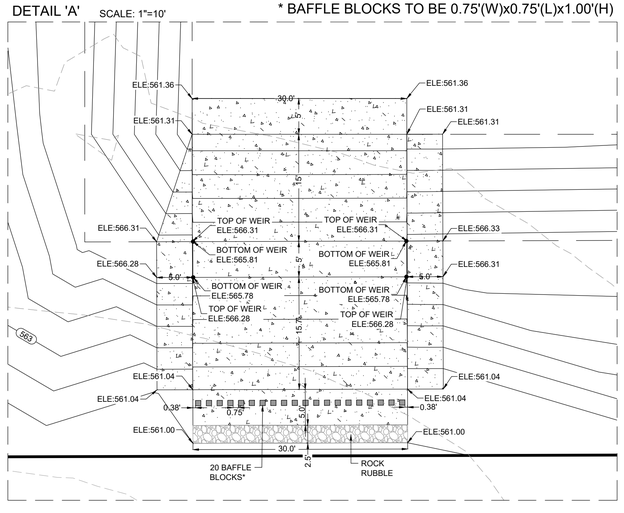
○ 2-Yr ○ 3-Yr ○ 5-Yr ○ 10-Yr ○ 25-Yr ○ 50-Yr ◉ 100-Yr

Hydrograph type	Peak flow	Time interval	Time of conc. Tc	Time to peak	Volume	Inflow hyd(s)	Maximum Elevation	Maximum Storage	Hydrograph description
(origin)	(cfs)	(min)	(min)	(min)	(cuft)		(ft)	(cuft)	
Rational	68.94	1	20.00	20.00	82,725				Chav U5 Proposed
Reservoir	29.43	1		31.00	85,388	1	565.69	45,723	Chav U5 Pond

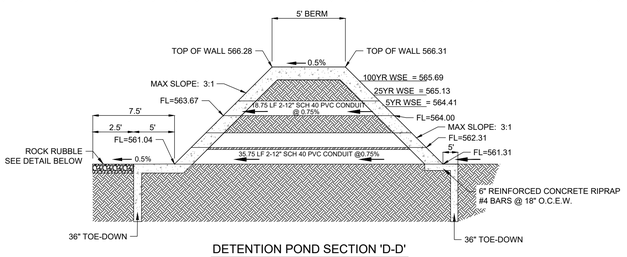
DETENTION POND RELEASE RATES				
STORM EVENT	EXISTING FLOW	BYPASS FLOW	ALLOWABLE RELEASE	POND RELEASE
5 YEAR	24.38	5.41	18.97	17.93
25 YEAR	33.50	7.60	25.90	24.04
100 YEAR	41.63	9.50	32.13	29.43

DETAIL 'A' SCALE: 1"=10'

* BAFFLE BLOCKS TO BE 0.75'(W)x0.75'(L)x1.00'(H)



CHAVANEAUX 5 DETENTION DISSIPATER CALCULATIONS			
Q (cfs)=	29.43	Wb (Basin Width)	30.00
Froud Number (Fr)=	1.30	Lb (Length of Basin)	4.38
Culvert Span or Bottom Width of Channel (ft)	30.00	Bw (Width of Baffle Block)	0.75
Culvert Rise or Top of Channel (ft)	1.00	Space Between Blocks	0.75
Number of Barrels	1.00	Nb (Number Of Blocks)	20.00
n	0.013	Height of Blocks	1.00
Slope (ft/ft)	0.0050	Distance to Floor Blocks	1.46
Velocity (ft/s)	7.39	Depth of Tail Water above the Stilling Basin Floor	1.40
Y1 (Depth Before Jump)	1.00	Height of Max Tail Water	1.83
Y2 (Sequent Depth Downstream)	1.29	Velocity after Baffle Blocks (fps)	0.70
C	1.09		
Y2'	1.40		
z	0.43	C=1.1-((Fr)^2/120)	When 1.7< Fr<5.5
		C=0.85	When 5.5< Fr<11
		C=1.0-((Fr)^2/800)	When 11< Fr<17



DETENTION POND SECTION 'D-D'
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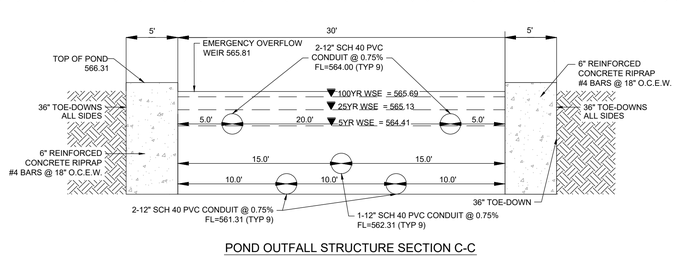
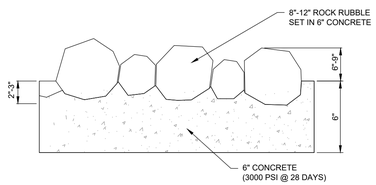


POND OUTFALL STRUCTURE SECTION C-C
N.T.S.



ROCK RUBBLE DETAIL
N.T.S.

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
DETENTION POND PLAN & DETAILS

NO.	DESCRIPTION	BY	DATE
1	POND ELEVATION RAISED 0.5' AND CALCULATIONS UPDATED	STM	9/7/2022

DATE: 4/27/2026
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sht_Detention Pond.dwg

STATE OF TEXAS
SEAMUS MACFARLAND
152120
LICENSED PROFESSIONAL ENGINEER
04/27/26
Seamus Macfarland

LJA Engineering, Inc.
1100 NE Loop 410
Suite 850
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426

SAWS JOB NUMBER:

SHEET NO. 14
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux U5 Construction\426 Site Development Plans\DWG-Sheets\sh_Detention Pond.dwg
User: smacfarland
Last Modified: Apr 27, 26 - 17:22
Plot Date/Time: Apr 27, 26 - 10:36:17

GENERAL NOTES:

1) ALL CONCRETE LINING SHALL BE A MINIMUM OF FIVE (5) INCHES THICK AND REINFORCED WITH NO. 4 ROUND BARS @ 18 INCHES ON CENTER EACH WAY OR WELDED WIRE FABRIC OF 6" x 6"-W/D6 x W/D6. ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH STRENGTH OF NOT LESS THAN THREE THOUSAND (3,000) POUNDS PER SQUARE INCH IN TWENTY EIGHT (28) DAYS. THE DEPTH OF ALL TOEDOWNS SHALL BE 36 INCHES UPSTREAM, 24 INCHES DOWNSTREAM, AND 18 INCHES FOR SIDE SLOPES.

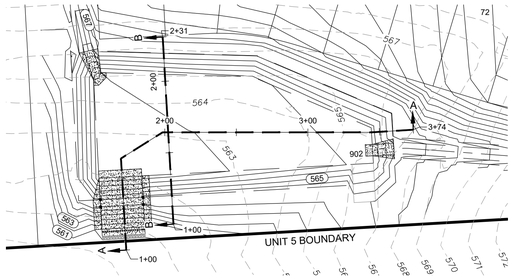
2) IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE.

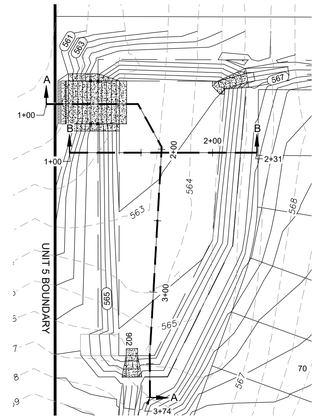
50 25 0 50 100

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

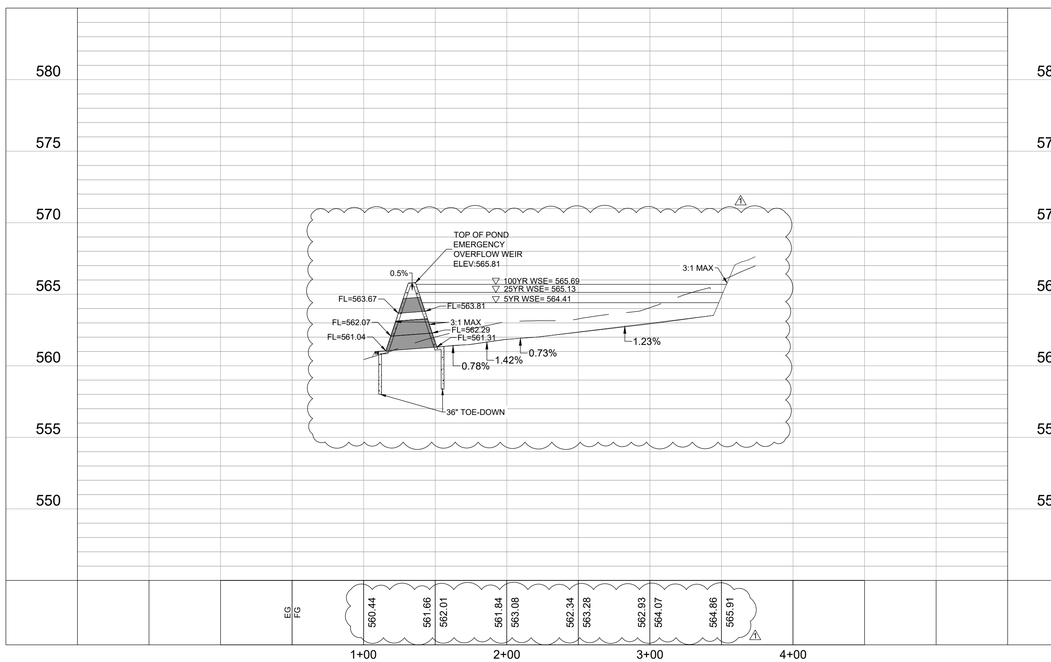
LEGEND

PROPOSED	EXISTING	
766	766	CONTOUR
2%	2%	FLOW ARROW
		GRASSED DRAIN FLOW
766.67	768.81	GROUND ELEVATION

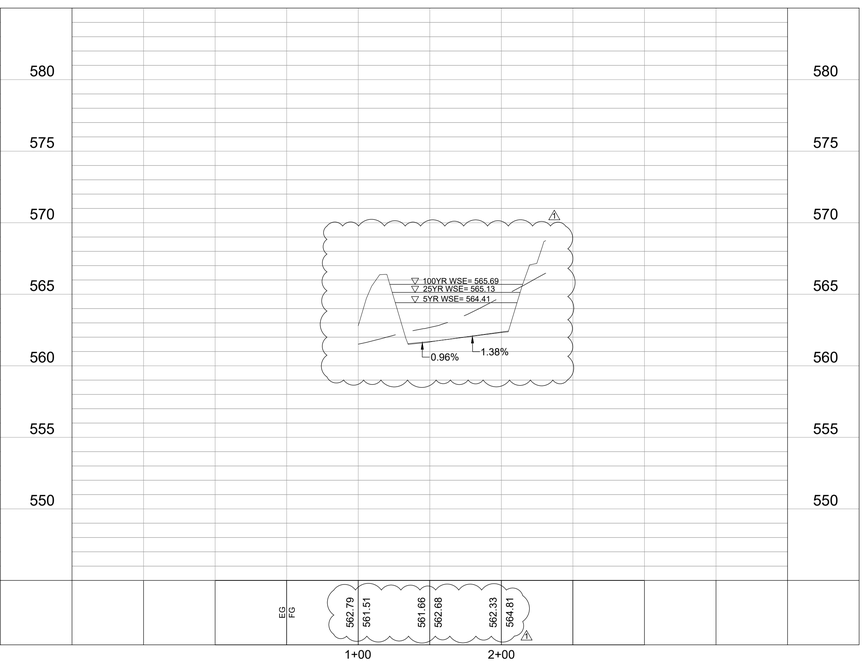




CROSS-SECTION A-A



CROSS-SECTION B-B



CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
DETENTION POND PROFILE
STA. 1+00.00 TO END

NO.	DESCRIPTION	BY	DATE
1	POND ELEVATION RAISED 0.5' AND CALCULATIONS UPDATED	STM	9/7/2022

DATE: 4/27/2026
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: 9b_Detention Pond.dwg

STATE OF TEXAS
SEAMUS MACFARLAND
152120
PROFESSIONAL ENGINEER
4/27/26

LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426

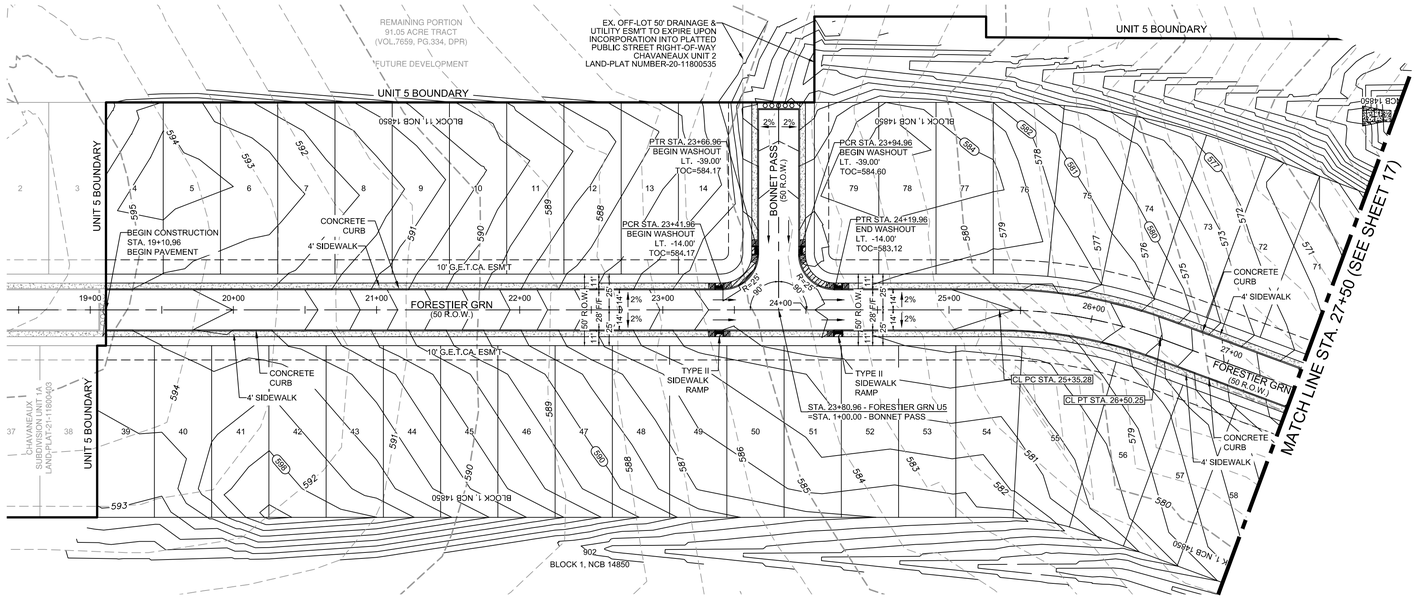
SAWS JOB NUMBER:

SHEET NO. 15
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chaveneaux US Construction\426 Site Development Plans\DWG-Sheets\9b_Detention Pond.dwg
User: smacfarland
Last Modified: Apr. 27, 26 - 11:23
Plot Only/Time: Apr. 27, 26 - 11:25:27

GENERAL NOTES:

1. ALL HANDICAP RAMPS TO BE TYPE I UNLESS OTHERWISE NOTED, REFER TO SHEET 21.
2. ALL ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED.
3. WHERE SIDEWALK IS SEPARATED FROM THE CURB, THE SEPARATION DISTANCE SHALL BE A MINIMUM 3' BETWEEN THE BACK OF CURB AND EDGE OF SIDEWALK.
4. PROPOSED STREET LIGHTS SHALL BE LOCATED BEHIND THE BACK OF SIDEWALK AND INSTALLED PER THE CPS DESIGN.
5. STREETS AND DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
6. REFER TO SHEET 19 FOR STREET AND PAVEMENT SECTION DETAIL, CONCRETE CURB DETAIL, AND SIDEWALK DETAIL.
7. CONTRACTOR TO FIELD VERIFY ALL MATCH EXISTING ELEVATIONS, SEWER MANHOLE INVERTS, STORM DRAIN INVERTS,AND ALL OTHER UTILITIES PRIOR TO UTILITY WORK AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES.
8. CONTRACTOR IS TO MATCH EXISTING PAVEMENT, SIDEWALK, AND CURB ELEVATIONS.



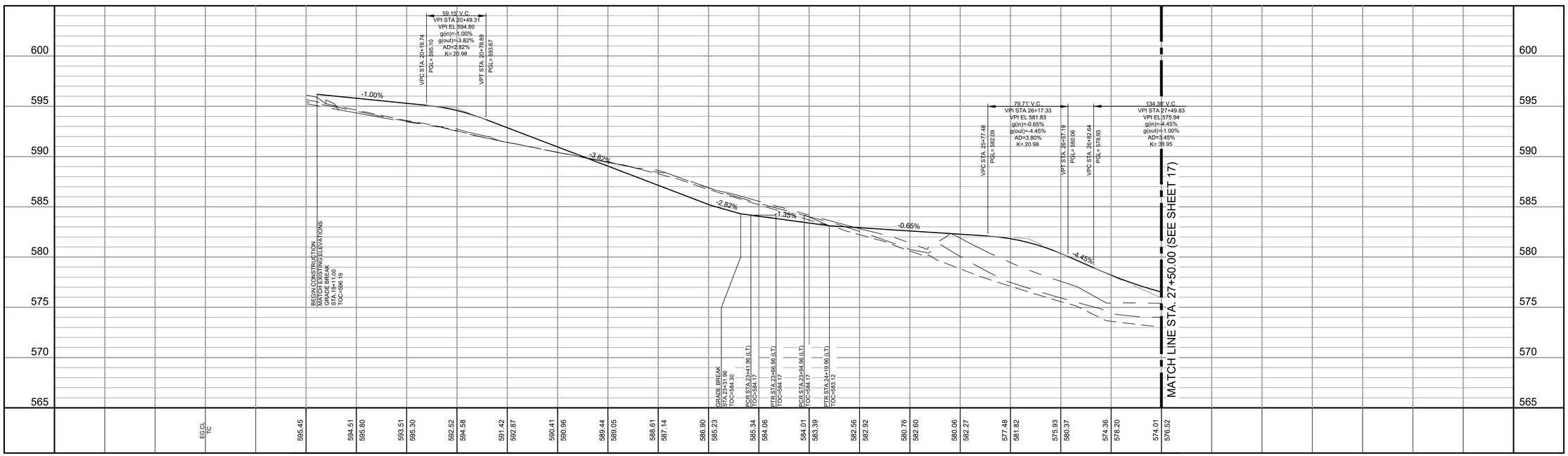
50 25 0 50 100

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

LEGEND

800	PROPOSED CONTOUR
2%	FLOW ARROW
	GRASSED DRAIN FLOW
	PROPOSED STREET GRADE
	EXISTING GROUND LEFT
	EXISTING GROUND CENTERLINE
	EXISTING GROUND RIGHT
	SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
	SIDEWALK (DEVELOPER'S RESPONSIBILITY)
G,E,T,CA	GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT
BSL	BUILDING SETBACK LINE
ESM'T.	EASEMENT
LT.	LEFT
RT.	RIGHT
	WASHOUT CROWN
	WASHOUT FLOW ARROW
EG CL	EXISTING GRADE CENTER LINE
TOC	TOP OF CURB
	TYPE I ADA RAMPS
	TYPE II ADA RAMPS
	TYPE III ADA RAMPS
	TYPE IV ADA RAMPS

FORESTIER GRN STA. 19+10.96 TO 27+50.00



LJA Engineering, Inc.
1100 NE Loop 410
Suite 850
San Antonio, Texas 78209
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Fax 210.503.2749
TBPE No. F-1386

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
FORESTIER GRN PLAN & PROFILE
STA. 19+10.96 TO 27+50.00

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 2/23/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_Forestier P&P.dwg

12/23/22
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED
PROFESSIONAL ENGINEER

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:

SHEET NO. 16
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux US Construction\426 Site Development Plans\DWG-Sheets\sh_Forestier P&P.dwg
User: smoorland
Last Modified: Feb. 23, 22 - 11:03
Plot Only/Time: Feb. 23, 22 - 16:32:32

GENERAL NOTES:

1. ALL HANDICAP RAMPS TO BE TYPE I UNLESS OTHERWISE NOTED, REFER TO SHEET 21.
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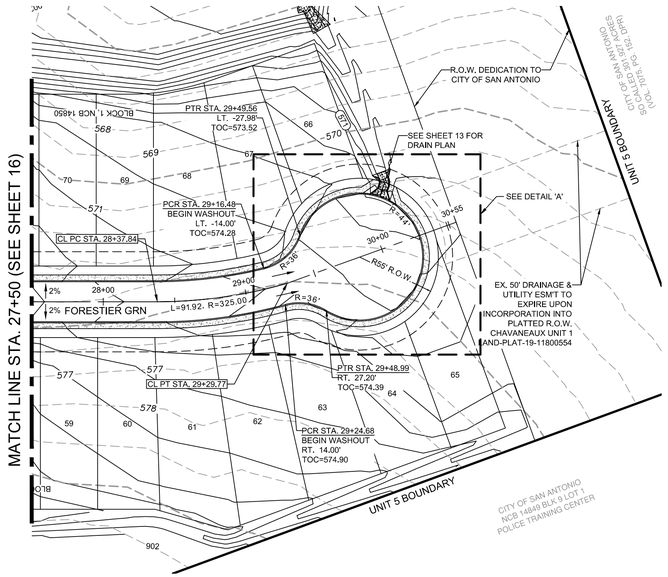
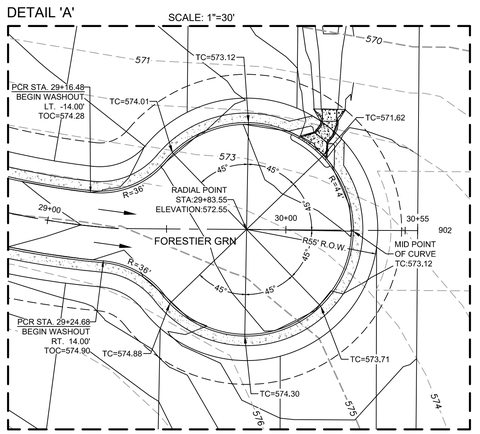
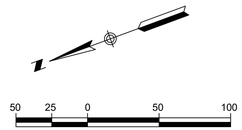


DETAIL 'A'

SCALE: 1"=30'



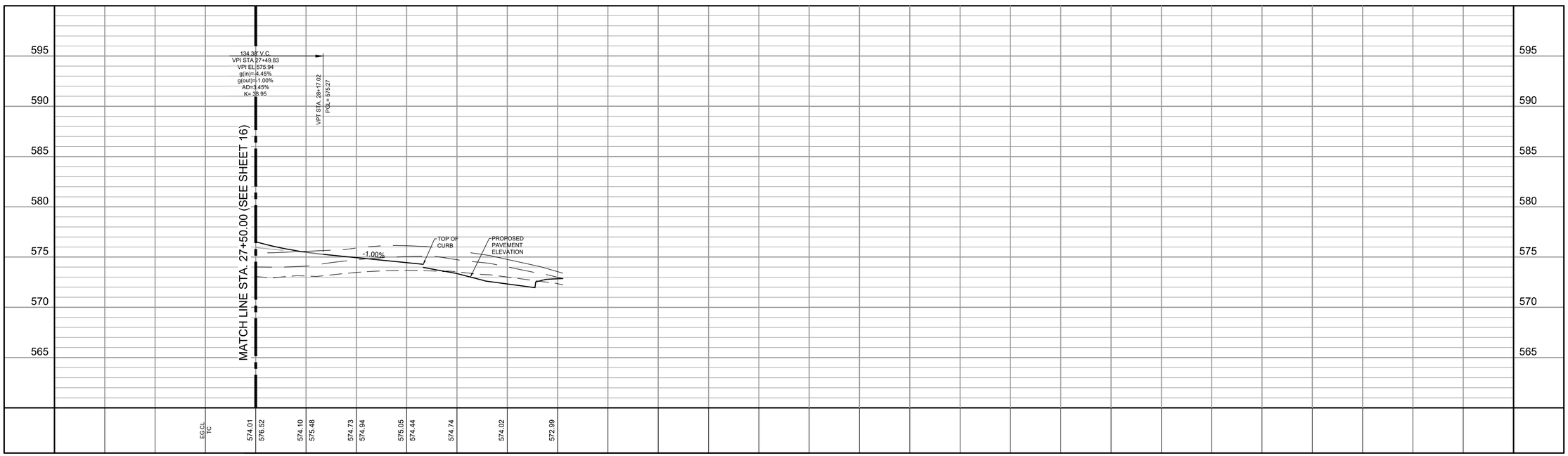


HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'

LEGEND

800	PROPOSED CONTOUR
2%	FLOW ARROW
	GRASSED DRAIN FLOW
	PROPOSED STREET GRADE
	EXISTING GROUND LEFT
	EXISTING GROUND CENTERLINE
	EXISTING GROUND RIGHT
	SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
	SIDEWALK (DEVELOPER'S RESPONSIBILITY)
G,E,T,CA	GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT
BSL	BUILDING SETBACK LINE
ESM'T.	EASEMENT
LT.	LEFT
RT.	RIGHT
	WASHOUT CROWN
	WASHOUT FLOW ARROW
EG CL	EXISTING GRADE CENTER LINE
TOC	TOP OF CURB
	TYPE I ADA RAMPS
	TYPE II ADA RAMPS
	TYPE III ADA RAMPS
	TYPE IV ADA RAMPS

FORESTIER GRN STA. 27+50.00 TO END



CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
FORESTIER GRN PLAN & PROFILE
STA. 27+50.00 TO END

NO.	DESCRIPTION	BY	DATE
	REVISIONS		

DATE: 2/23/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_Forestier P&P.dwg

12/23/22
STATE OF TEXAS
PRISCILLA G FLORES
109874
LICENSED PROFESSIONAL ENGINEER
Priscilla G Flores

LJA Engineering, Inc.
1100 NE Loop 410
Suite 850
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:

SHEET NO. 17
OF 24 SHEETS

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User: smoreland
Last Modified: Feb. 23, 22 - 11:03
Plot Style/Time: Feb. 23, 22 - 11:33:26

GENERAL NOTES:

1. ALL HANDICAP RAMPS TO BE TYPE I UNLESS OTHERWISE NOTED, REFER TO SHEET 21.
2. ALL ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED.
3. WHERE SIDEWALK IS SEPARATED FROM THE CURB, THE SEPARATION DISTANCE SHALL BE A MINIMUM 3' BETWEEN THE BACK OF CURB AND EDGE OF SIDEWALK.
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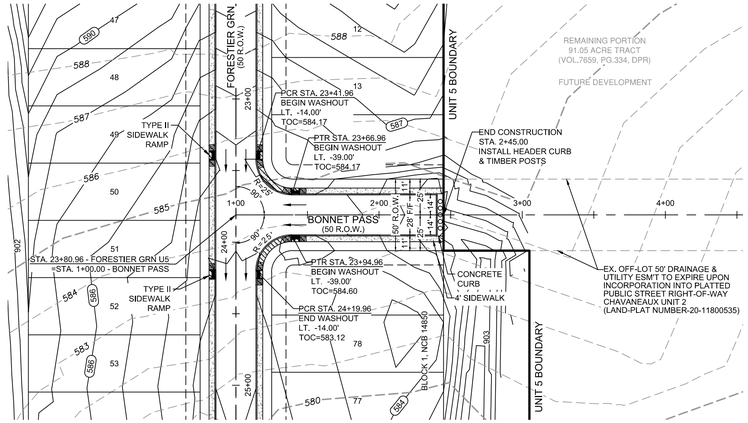
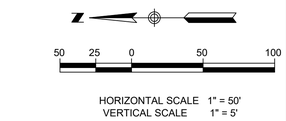
8. CONTRACTOR IS TO MATCH EXISTING PAVEMENT, SIDEWALK, AND CURB ELEVATIONS.





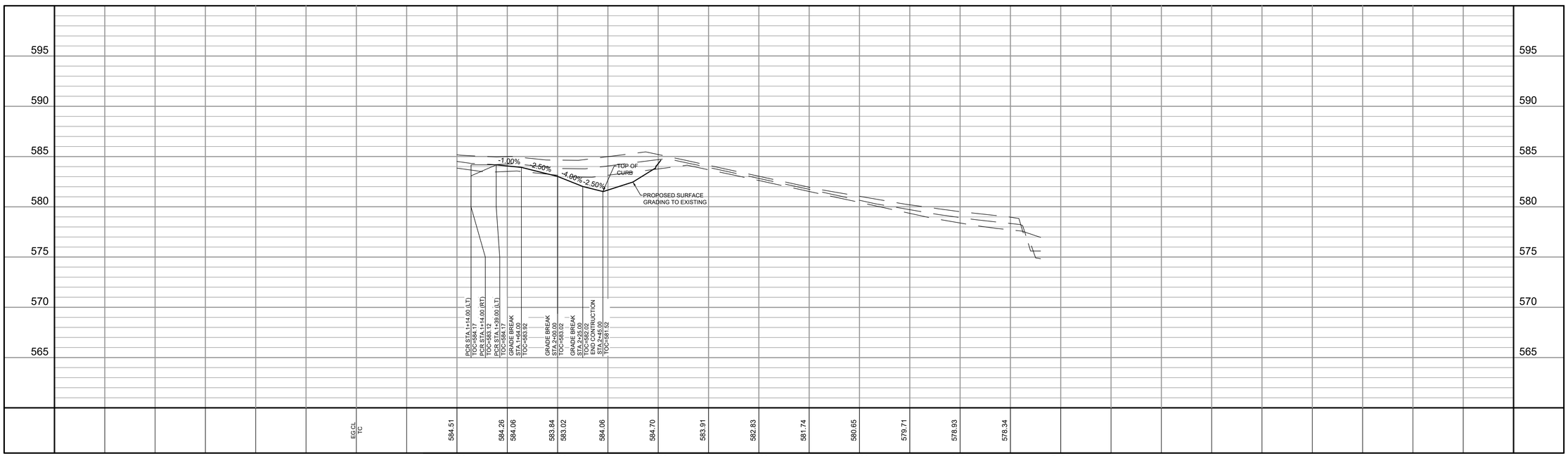
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'

LEGEND

- PROPOSED CONTOUR
- FLOW ARROW
- GRASSED DRAIN FLOW
- PROPOSED STREET GRADE
- EXISTING GROUND LEFT
- EXISTING GROUND CENTERLINE
- EXISTING GROUND RIGHT
- SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
- SIDEWALK (DEVELOPER'S RESPONSIBILITY)
- G,E,T,CA — GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT
- BSL — BUILDING SETBACK LINE
- ESM'T. — EASEMENT
- LT. — LEFT
- RT. — RIGHT
- WASHOUT CROWN
- WASHOUT FLOW ARROW
- EG CL — EXISTING GRADE CENTER LINE
- TOC — TOP OF CURB
- TYPE I ADA RAMPS
- TYPE II ADA RAMPS
- TYPE III ADA RAMPS
- TYPE IV ADA RAMPS

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
BONNET PASS PLAN & PROFILE
STA. 1+00.00 TO END

BONNET PASS STA. 1+00.00 TO END



NO.	DESCRIPTION	BY	DATE
	REVISIONS		

DATE: 2/23/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_Street A P&P.dwg

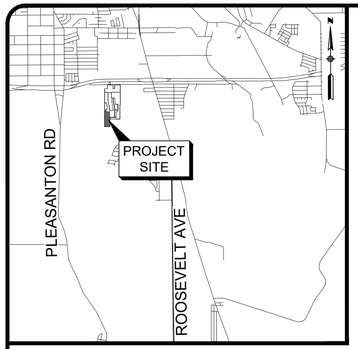
2/23/22
STATE OF TEXAS
PRISCILLA G FLORES
109874
LICENSED PROFESSIONAL ENGINEER
Priscilla G Flores

LJA Engineering, Inc.
1100 NE Loop 410
Suite 850
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

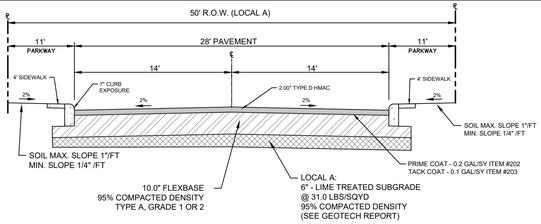
JOB NUMBER: SA199-0402A.426
SAWS JOB NUMBER:

SHEET NO. 18
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux US Construction\426 Site Development Plans\DWG-Sheets\sh_Street A P&P.dwg
User: smoreland
Last Modified: Feb. 22, 22 - 18:04
Plot Only/Time: Feb. 23, 22 - 16:43:47



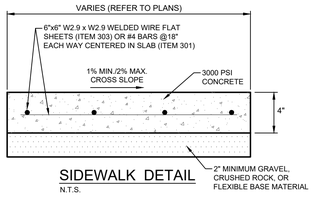
LOCATION MAP
N.T.S.



LOCAL TYPE 'A' STREET
N.T.S.

FORESTIER GRN STA. 19+10.96 TO END

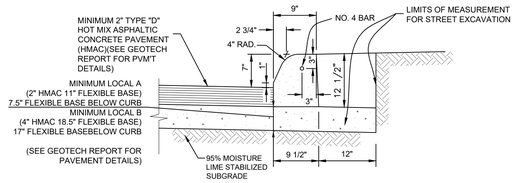
PAVEMENT SECTION
2.0 " HMAC Type "D"
10.0" Aggregate Base (Type A, Grade 1 or 2)
6.0" Lime Stabilization Subgrade
Total: 18.0"
Structural No: 2.76
C.B.R.: 2.5



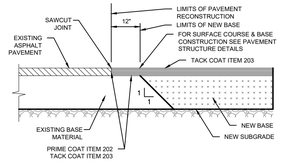
SIDEWALK DETAIL
N.T.S.

GENERAL NOTES FOR CONCRETE SIDEWALKS:

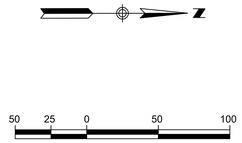
1. ALL SIDEWALKS SHALL BE A MINIMUM 3000 PSI CONCRETE WITH NO. 3 BARS AT 18" INCHES ON CENTER.
2. SLOPE SIDEWALKS AWAY FROM BLDG. AS INDICATED ON DRAWINGS OR AT 2% MAX.
3. PROVIDE SIDEWALK WITH A HORIZONTAL (CROSS) BRUSH FINISH ON ALL SURFACES.
4. GROOVE CONTRACTION JOINTS SHALL BE SPACED 5 FT. ON CENTER.
5. PROVIDE A 1/2" ELASTOMERIC ISOLATION JOINT ALONG NEW BUILDING BETWEEN ALL NEW SIDEWALK



7" MACHINE LAID CURB DETAIL
N.T.S.



PAVEMENT TIE-IN DETAIL
N.T.S.



SCALE IN FEET
SCALE: 1"=50'

1. CONTRACTOR TO REFER TO SUBSURFACE EXPLORATION AND PAVEMENT ANALYSIS FOR CHAVANEAUX SUBDIVISION, UNIT 1A, 3, 5, INTEC PROJECT NO. S211389, SEPTEMBER 21, 2021.
2. STRUCTURAL NUMBER PROVIDED BY INTEC.
3. MINIMUM OF 4" FLEXIBLE BASE OR 2" OF ASPHALT TREATED BASE IS REQUIRED UNDERNEATH THE CURB (REFER TO PAVEMENT & CURB DETAILS).
4. HYDRATED LIME SHOULD BE MIXED WITH THE SUBGRADE SOILS IN ACCORDANCE WITH TXDOT ITEM 260. LIME STABALIZED TO A DEPTH OF 6 AS NOTED ABOVE ON AN APPLICATION RATE OF 6 PERCENT OF THE DRY WEIGHT OF THE SOIL TO BE TREATED. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO STABALIZATION. IF THE SOIL SULFATE CONTENT IS HIGH, AND ALTERNATE PROCEDURE WILL BE NEEDED. LIME APPLICATION RATE OF 31.0 LBS PER SQ YARD FOR 6-INCH DEPTH OF STABALIZATION IS RECOMMENDED.
5. GEOTECHNICAL ENGINEER TO BE ON SITE TO MAKE FINAL SUBGRADE DETERMINATION. CHANGES TO THIS PAVEMENT DESIGN SHALL BE SUBMITTED TO COSA-DSD PRIOR TO PLACEMENT OF BASE MATERIAL.

CITY OF SAN ANTONIO
NCB 14849 BLK 9 LOT 1
POLICE TRAINING CENTER

CITY OF SAN ANTONIO
NCB 14849 BLK 9 LOT 1
POLICE TRAINING CENTER

CITY OF SAN ANTONIO
LOT 1, BLOCK 9, NCB 14849
POLICE TRAINING
CENTER SUBDIVISION
(VOL. 9518, PG. 219-221, DPR)

CITY OF SAN ANTONIO
SO CALLED 301.927 ACRES
(VOL. 7075, PG. 152, DPR)

UNIT 5 BOUNDARY

902
BLOCK 1, NCB 14850

BLOCK 1, NCB 14850

10' G.E.T.C.A. ESM'T

50'

25'

FORESTIER GRN
(50 R.O.W.)

EX. 50' DRAINAGE & UTILITY ESM'T TO EXPIRE UPON INCORPORATION INTO PLATTED R.O.W. CHAVANEAUX UNIT 1 LAND-PLAT-19-11800554

R.O.W. DEDICATION TO CITY OF SAN ANTONIO

CHAVANEAUX SUBDIVISION UNIT 1A LAND-PLAT-21-11800403

EX. BARRICADES TO BE REMOVED

D3 - 9" [229 mm] FORESTIER GRN
D3 - 9" [229 mm] BONNET PASS
R1-1 STOP SIGN
W14-1A DEAD END SIGN
SEE COSA SPECIFICATION ITEM 531.3

BONNET PASS
(50 R.O.W.)

OM4-3 END OF ROAD HEADER CURB W/ BARRICADE SEE COSA SPECIFICATION ITEM 531.56

VOLAND VLY
(50 R.O.W.)

BLOCK 11, NCB 14850

BLOCK 7, NCB

CHAVANEAUX SUBDIVISION UNIT 3 LAND-PLAT-21-21-11800451

NUSTAR LOGISTICS LP
SO CALLED 0.167 ACRES
(VOL. 8644, PG. 1926, O.P.R.)

UNPLATTED
ESTATE OF GERALD J. RIPPS
65.58 ACRE TRACT
PROBATE RECORD DOC. 2010 PC 3133, OPR

EX. OFF-LOT 50' DRAINAGE & UTILITY ESM'T TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY CHAVANEAUX UNIT 2 LAND-PLAT NUMBER-20-11800535

REMAINING PORTION
91.05 ACRE TRACT
(VOL.7659, PG.334, DPR)

FUTURE DEVELOPMENT

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
SIGNAGE SHEET

NO.	DESCRIPTION	BY	DATE

DATE: 2/23/2022
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_Signage.dwg

STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER
2/23/22

LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426

SAWS JOB NUMBER:

SHEET NO. 19
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux US Construction\426 Site Development Plans\DWG-Sheets\sh_Signage.dwg
User: smasterson
Last Modified: Feb. 22, 2022 - 18:32
Plot Style Table: Full.ctb
Plot Date/Time: Feb. 23, 2022 - 16:34:15

GENERAL NOTES

1.) THE EXISTING SIGNS LOCATED ON THE JOBSITE ARE THE PROPERTY OF THE CITY OF SAN ANTONIO. THROUGHOUT THE PERIOD OF THE CONTRACT, THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN THE COURSE OF CONSTRUCTION ACTIVITY. SUCH PROTECTION SHALL INCLUDE THE PERIOD AFTER SIGNS ARE REMOVED FROM INSTALLATION AND STORED BY THE CONTRACTOR OR DELIVERED TO TRAFFIC OPERATIONS. THE ASSISTANT TRAFFIC SUPERINTENDENT (207-7765) MUST BE NOTIFIED 48 HOURS IN ADVANCE PRIOR TO DELIVERY.

2.) AFTER SIGNS ARE REMOVED FROM INSTALLATION AND ARE BEING STORED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS SECTION OF THE PUBLIC WORKS DEPARTMENT (207-7765) AND ARRANGE FOR A CONVENIENT TIME TO DELIVER CITY SIGNS AND POLES.

3.) PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE TRAFFIC ENGINEERING (207-7720) CONSTRUCTION INSPECTION AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIGN SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.

4.) ALL GROUND MOUNTED SIGNS SHALL USE HIGH INTENSITY REFLECTIVE SHEETING.

5.) ALL OVERHEAD SIGNS SHALL USE DIAMOND GRADE REFLECTIVE SHEETING.

6.) ALL BLANKS TO BE ALUMINUM ALLOY NO. 5052-H38.

7.) "T" DENOTES THICKNESS OF SIGN BLANKS.

8.) ALL HOLES SHALL BE 3 /8" DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND /OR ROUGH EDGES.

9.) SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH DETAIL.

10.) ALL SIGN BLANK TO BE ETCHED, DEGREASED, AND HAVE AN ALODINE FINISH PRIOR TO APPLICATION OF LEGENDS.

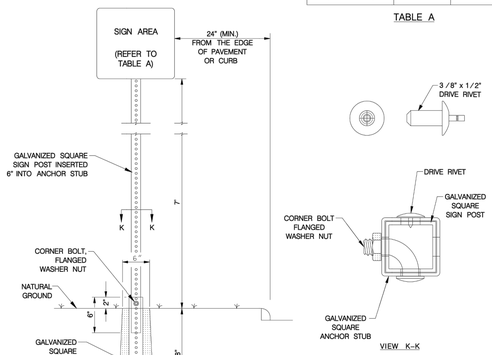
11.) ALL DETAILS ARE NOT TO SCALE.

12.) ALL DIMENSIONS ARE IN INCHES.

13.) ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND STANDARD HIGHWAY SIGNS (FHWA) LATEST EDITION.

14.) REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE REQUIRED BY THE CITY TRAFFIC ENGINEER, SHALL BE AT THE CONTRACTOR'S EXPENSE.

TYPICAL GROUND SIGN INSTALLATION



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

TABLE A

FEBRUARY 2006

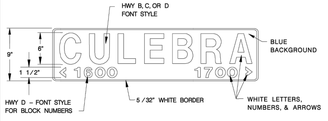
CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS
GENERAL NOTES AND GROUND SIGN MOUNTING
SHEET 1 OF 4

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD N. MERY, P.E., #58698 ON 02.06.06 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

N. SUBMITTAL PROJECT NO.: DATE:
DRWN BY: A.F.G. DSGN BY: E.N.M. CHKD BY: JDF/E.N.M. SHEET NO.: OF

9" D3 – STREET NAME SIGN



NEW 9" D3 W / DEAD END OR NO OUTLET SIGNAGE

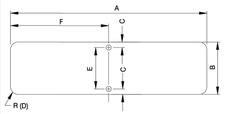
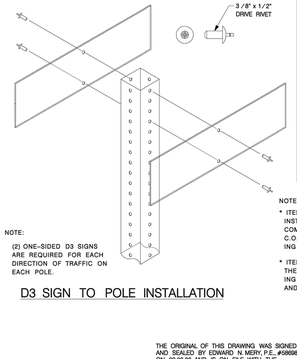


TABLE – D3 SIGNS

A	B	C	D	E	F	T
24"	9"	1 /2"	3 /4"	8"	12"	0.125"
30"	9"	1 /2"	3 /4"	8"	15"	0.125"
36"	9"	1 /2"	3 /4"	8"	18"	0.125"
42"	9"	1 /2"	3 /4"	8"	21"	0.125"
48"	9"	1 /2"	3 /4"	8"	24"	0.125"
54"	9"	1 /2"	3 /4"	8"	27"	0.125"

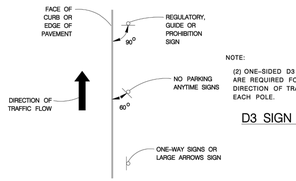
NOTE: A 30" LONG OR GREATER PLATE SHALL BE USED WHEN A "DEAD END" OR "NO OUTLET" SUPPLEMENT IS REQUIRED.



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

D3 SIGN TO POLE INSTALLATION

HEIGHT	9" (228 mm)
LENGTH	24" (600 MM) MIN. 54 (1350 MM) MAX. 6" (150 MM) INCREMENTS OF LENGTH
THICKNESS	0.125" (3MM)
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER HIGH INTENSITY FP-85, SECTION 718 AND L-S-300C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	10%



TYPICAL GROUND MOUNTED SIGN PLACEMENT

STREET SIGN ASSEMBLY EXAMPLES	PAY ITEMS			
	ITEM	UNIT	DESCRIPTION	QUANTITY
STOP SIGN WITH 2 STREET NAMES	531.3	EA.	R1-1 STOP	1
	531.57-P	EA.	9-IN STREET NAME PLATE (4 PLATES)	2
YIELD SIGN WITH 1 STREET NAME	531.4	EA.	R1-2 YIELD	1
	531.57-P	EA.	9-IN STREET NAME PLATE (2 PLATES)	1
2 STREET SIGNS	531.57	EA.	9-IN STREET NAME SIGN (2 PLATES)	1
	531.57-P	EA.	9-IN STREET NAME PLATE (2 PLATES)	1

NOTE:
* ITEM 531.57 "9-INCH STREET NAME" SIGN (1-EA.) INCLUDES THE INSTALLATION OF (2) ONE-SIDED D3 SIGNS. THIS SHALL BE FULL COMPENSATION FOR MATERIALS AND LABOR AS DESCRIBED IN C.O.S.A. STANDARD SPECIFICATIONS AND GROUND SIGN MOUNTING STANDARD DETAIL.
* ITEM 531.57-P "9-INCH STREET NAME PLATE" (1-EA.) INCLUDES THE INSTALLATION OF (2) ONE-SIDED D3 SIGNS ON TOP OF EXISTING SIGN (I.E., STOP SIGN OR YIELD SIGN), EXTRA LENGTH POLE AND APPURTENANCES REQUIRED TO MEET SPECIFICATIONS.

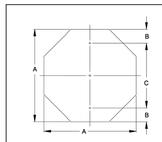
THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD N. MERY, P.E., #58698 ON 02.06.06 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

JULY 2010

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

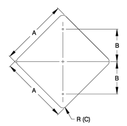
TRAFFIC SIGN STANDARDS
D3 STREET NAME SIGN AND SIGN MOUNTING
SHEET 2 OF 4

N. SUBMITTAL PROJECT NO.: DATE:
DRWN BY: A.F.G. DSGN BY: E.N.M. CHKD BY: JDF/E.N.M. SHEET NO.: OF



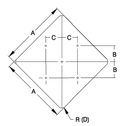
OCTAGONAL

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



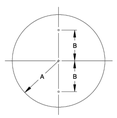
DIAMOND (A)

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



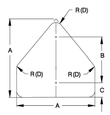
DIAMOND (B)

A	B	C	D	T
48	15	15	3	0.100



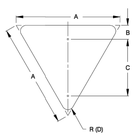
CIRCLE

A	B	T
18	15	0.100



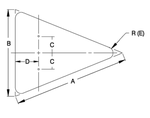
PENTAGON (SCHOOL)

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



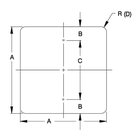
EQUILATERAL TRIANGLE

A	B	C	D	T
36	2	24	2	0.100



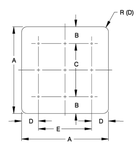
ISOSCELES TRIANGLE

A	B	C	D	E	T
40	30	7 1/2	12	1 7 /8	0.100
48	36	9	15	2 1/4	0.100



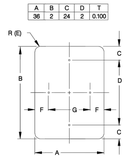
SQUARE (A)

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



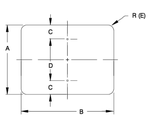
SQUARE (B)

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



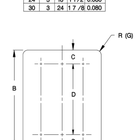
VERTICAL / HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	T
12	18	1 1/2	15	1 1/2	1 1/2	9	0.080
12	36	3	30	1 1/2	1 1/2	9	0.090
18	24	1 1/2	21	1 1/2	1 1/2	15	0.090
24	30	3	24	1 1/2	3	18	0.080
24	36	3	30	1 1/2	3	18	0.080
24	48	6	36	1 7 /8	3	18	0.080
30	36	3	30	1 7 /8	3	24	0.080



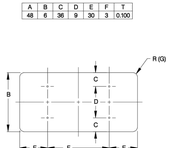
HORIZONTAL RECTANGLE

A	B	C	D	E	T
6	12	1	4	1 /4	0.080
6	18	1	4	1 /4	0.080
20	36	1 1/2	17	1 1/2	0.080



VERTICAL RECTANGLE

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



HORIZONTAL RECTANGLE

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

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD N. MERY, P.E., #58698 ON 02.06.06 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

FEBRUARY 2006

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS
GROUND MOUNTED SIGN SIZES
SHEET 3 OF 4

N. SUBMITTAL PROJECT NO.: DATE:
DRWN BY: A.F.G. DSGN BY: E.N.M. CHKD BY: JDF/E.N.M. SHEET NO.: OF

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
TRAFFIC SIGN STANDARDS

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 9/17/2021
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_Traffic Details.dwg

09/17/21
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER
Priscilla G. Flores

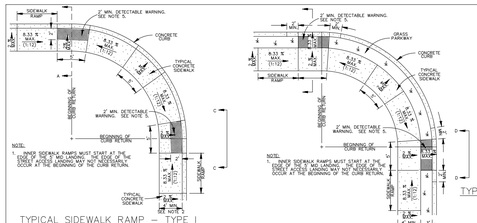
LJA Engineering, Inc.
1100 NE Loop 410
Suite 650
San Antonio, Texas 78209
Phone 210.503.2700
Fax 210.503.2749
TBPE No. F-1386

JOB NUMBER: SA199-0402A.426

SAWS JOB NUMBER:

SHEET NO. 20
OF 24 SHEETS

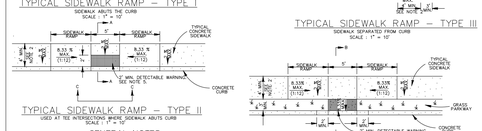
K:\SA199 Century Communities\0402A Chaveneaux US Construction\426 Site Development Plans\DWG-Sheets\sh_Traffic Details.dwg
User: smasterland
Last Modified: Sep 16, 21 - 14:25
Plot Style/Time: Sep 17, 21 - 14:45:55



TYPICAL SIDEWALK RAMP – TYPE I

SIDEWALK ABUTS THE CURB

SCALE : 1" = 10'



TYPICAL SIDEWALK RAMP – TYPE II

USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB

SCALE : 1" = 10'

TYPICAL SIDEWALK RAMP – TYPE III

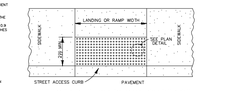
SIDEWALK SEPARATED FROM CURB

SCALE : 1" = 10'

TYPICAL SIDEWALK RAMP – TYPE IV

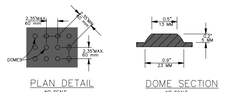
USED AT TEE INTERSECTIONS WHERE SIDEWALK IS SEPARATED FROM CURB

SCALE : 1" = 10'



DETECTABLE WARNING SURFACE

SCALE : 1" = 4'



PLAN DETAIL

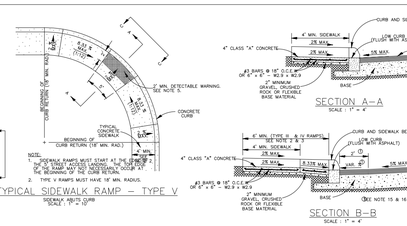
NO SCALE

DOME SECTION

NO SCALE

GENERAL NOTES

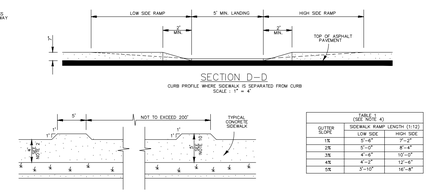
1. WHEN POSSIBLE, SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER. DEVIATION FROM THIS STANDARD IS STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
2. TYPE I, TYPE II, TYPE III, AND TYPE IV SIDEWALK RAMPS SHALL BE A MINIMUM OF 4' AND 6' SEPARATED FROM THE CURB. THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
3. FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR AS IS OPTION. THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
4. SIDEWALK RAMP LOCATIONS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MEET THE SLOPE LIMITATIONS SHOWN IN TABLE 1.
5. ALL CURB RAMPS OR BLENDED TRANSITIONS THE DRIVEWAY SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP ON THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. THE DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES, ALIGNED IN A GRID PATTERN WITH A DIAMETER OF A NOMINAL 0.9 INCHES (23 MM) AT THE BASE AND A NOMINAL 0.5 INCHES (13 MM) AT THE TOP, AND A NOMINAL HEIGHT OF 0.2 INCHES (5 MM). THE DETECTABLE WARNING SURFACE SHALL BE A CAST-IN-PLACE TILE CONFORMING TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS OR PAVERS CONFORMING TO TXDOT STANDARD PED-120, PEDESTRIAN FACILITIES.
6. SIDEWALK RAMPS SHALL BE CONSTRUCTED OF CONCRETE, BRICK PAVERS, OR OTHER HARD SURFACE MATERIAL THAT IS FIRM, STABLE AND SLIP-RESISTANT UNDER WET AND DRY CONDITIONS. GRATES SHALL NOT BE LOCATED WITHIN THE LIMITS OF THE SIDEWALK RAMP OR ANY PART OF THE BUILDING SURFACE.
7. SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.
8. CONSTRUCTION OF ALL WHEELCHAIR RAMPS TO BE INCLUDED UNDER ITEM "TCP – CONCRETE CURB, GUTTER, AND CONCRETE CURB & GUTTER" AND/OR "TCG – CONCRETE SIDEWALK". RAMP SURFACE SHALL BE BROOM FINISHED.
9. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
11. WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
12. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" – W2.9 x W2.9 WIRE MESH.
13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK CONSTRUCTED ON A GRADE EXCEEDING 5% OR WITH A CROSS SLOPE EXCEEDING 2% SHALL BE CONSIDERED MORE THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.
14. SIDEWALK CROSS SLOPE SHALL HAVE A MAXIMUM SLOPE OF 2% LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
15. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AT THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A DIRECT ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (2.67 + 8.33 = 11%). THE CHANGE OF GRADE SHALL BE DEFINED AT THE TOP OF THE RAMP AND AT THE BACK OF CURB.
16. IF THE CHANGE OF SPACE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11% A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
17. ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.



SECTION C–C

CURB PROFILE WHERE SIDEWALK ABUTS CURB

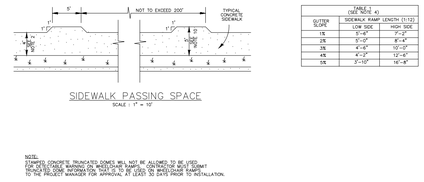
SCALE : 1" = 4'



SECTION D–D

CURB PROFILE WHERE SIDEWALK IS SEPARATED FROM CURB

SCALE : 1" = 4'



SIDEWALK PASSING SPACE

SCALE : 1" = 10'

GUTTER SLOPE	SIDEWALK RAMP LENGTH (1:12) LOW SIDE	HIGH SIDE
1%	5'–0"	7'–3"
2%	5'–0"	8'–4"
3%	4'–9"	10'–0"
4%	4'–3"	12'–4"
5%	3'–10"	14'–8"

TABLE 1
(SEE NOTE 4)

SECTION A–A

SCALE : 1" = 4'

SECTION B–B

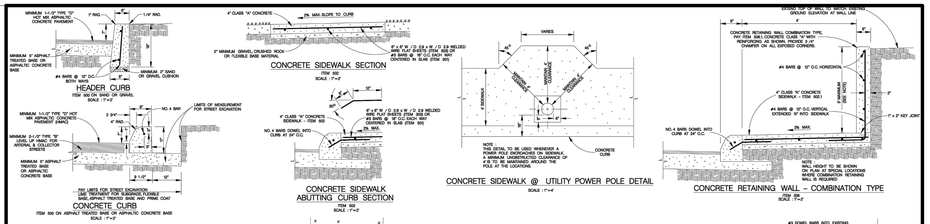
SCALE : 1" = 4'

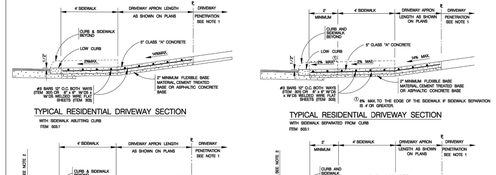
TYPICAL SIDEWALK RAMP – TYPE V

SIDEWALK ABUTS CURB

SCALE : 1" = 10'

NOTE:
1. SINCE SIDEWALK RAMPS MUST START AT THE EDGE OF CURB & END AT BEGINNING OF CURB RETURN, THE RAMP MAY NOT BE INSTALLED, DEPENDING ON THE BEGINNING OF THE CURB RETURN.
2. TYPE V RAMPS MUST HAVE 18" MIN. RADIUS.


MINIMUM 1-1/4" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT
1" MIN.
1-1/4" RAD.
MINIMUM ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
#4 BARS @ 18" O.C. BOTH WAYS WITH HOOKS
MINIMUM 2" SAND OR GRAVEL CUSHION
4" CLASS "A" CONCRETE
3% MAX SLOPE TO CURB
6" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL
CONCRETE SIDEWALK SECTION
ITEM 500
SCALE : 1"=4'
#3 BARS @ 12" O.C.E.W. OR 6" x 6" – W2.9 x W2.9 WELDED WIRE MESH
#3 BARS @ 18" O.C. EACH WAY EMBEDDED 18" IN SLAB ITEM 305
HEADER CURB
ITEM 502.4 OR 502.5 OR GRAVEL
SCALE : 1"=4"
LIMITS OF MEASUREMENT FOR STREET EXCAVATION
NO. 4 BAR
2" RAD.
MINIMUM 6-1/4" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT (BASE)
MINIMUM 8-1/4" TYPE "B" LEVEL UP MIXES FOR ARTERIAL & COLLECTOR STREETS
MINIMUM 8" ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
PAY LIMITS FOR STREET EXCAVATION
USE "SECONDARY FOR SUBGRADE FLEXIBLE BASE, ASPHALT TREATED BASE AND PRIME COAT
CONCRETE CURB
ITEM 500 ON FLEXIBLE BASE MATERIAL
SCALE : 1"=4"
CONCRETE SIDEWALK ABUTTING CURB SECTION
ITEM 500
SCALE : 1"=4"
MINIMUM 1-1/2" TYPE "D" HOT MIX ASPHALT PAVEMENT
MINIMUM 6" FLEXIBLE BASE MATERIAL
MOUNTABLE CURB
ITEM 500 ON COMPACTED SUBGRADE
SCALE : 1"=4"
2'-3 1/2" – 3'-3 1/2"
4" MIN.
NO. 4 BARS DOWEL INTO CURB OR GUTTER AT 24" O.C.
SIDEWALK AS SHOWN ON PLANS
TRANSITION
#4 BARS AS SHOWN WITH #4 TIES AT 24" O.C. AS PER ITEM 500
NOTE: CURB TRANSITIONS SHALL NOT BE USED FOR DEPRESSED CURB BUT SHALL BE INCLUDED IN ITEM 500 CONCRETE CURBING
CONCRETE SIDEWALK
#4 BARS AS SHOWN WITH #4 TIES AT 24" O.C. AS PER ITEM 500
CONCRETE CURB
SEE NOTE 1
CONCRETE SIDEWALK DRAIN DETAIL
SCALE : 1"=4"
PROPERTY LINE
#4 BARS @ 18" O.C. EACHWAY OR EQUIVALENT WELDED WIRE FABRIC
#3 BARS @ 18" O.C. EACHWAY OR EQUIVALENT WELDED WIRE FABRIC
1-1/2" EXPANSION JOINT
STEP SIDE TYPE
SIDE WALL DOWEL BARS
CONCRETE CURB
PLAN VIEW
SCALE : 1"=4"
CONCRETE STEPS
ITEM 504
SCALE : 1"=4"
#3 DOWEL BARS INTO EXISTING, OR PROPOSED WALK
2" MIN. 4" MAX.
#3 BARS 18" O.C. EACHWAY OR EQUIVALENT WELDED WIRE FLAT SHEETS
1-1/2" EXPANSION JOINT
2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL
CLASS "A" CONCRETE
SECTION "C–C"
SCALE : 1"=2"
1-1/2" DIA GALVANIZED STEEL PIPE HANDRAIL
CONCRETE STEPS
PIPE HANDRAIL DETAIL
SCALE : 1"=2"
SECTION "D–D"
SCALE : 1"=2"
NOTES
1. PLACE STEPS TO CONFORM WITH PROPOSED PAVEMENT GRADING.
2. INSTALL HANDRAIL STEEL PIPE HANDRAIL SECTIONS ON BACK SIDE OF RAMP WHEN 3 OR MORE RISERS ARE USED ON STEPS. HANDRAIL TO BE AS PER UNDER ITEM 462
HANDRAIL FOR CONCRETE STEPS
ITEM 462
SCALE : 1"=4"
TOP OF STEPS
1 – 3 1/2" EXPANSION JOISTS
1 – 3/4" BUTT HINGE
4" x 4" x 1/4" STEEL ANGLE
DETAIL 2
SCALE : 1 : 8
1 – 3 1/2"
1/4"
3 1/2" x 3 1/4" BAR
1/4" CHECKERED PLATE
#3 BARS WELDED TO ANGLE @ 18" O.C.
3" X 2" X 1/4" ANGLE
DETAIL 1
SCALE=1:1
MINIMUM 1-1/2" TYPE "D" HOT MIX ASPHALT PAVEMENT
ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
PAY LIMITS FOR STREET EXCAVATION
USE "SECONDARY" FOR SUBGRADE FLEXIBLE BASE, ASPHALT TREATED BASE AND PRIME COAT
TYPICAL CURB & GUTTER DETAIL
ITEM 500 ON ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
SCALE : 1"=4"
SEE DETAIL 1
10 – 3 3/4" TO 28 – 3 3/4"
1/4" CHECKERED PLATE
EXPANSION JOINT
6" x 4" W12X9 x W12X9 WELDED WIRE MESH
SECTION A–A
SCALE=1 1/2"
CURB
1/4" CHECKERED PLATE
HMAC
BASE
SECTION B
SCALE : 1"=2"
VARIES
PROPERTY LINE
#4 BARS @ 18" O.C. EACHWAY OR EQUIVALENT WELDED WIRE FABRIC
#3 BARS @ 18" O.C. EACHWAY OR EQUIVALENT WELDED WIRE FABRIC
1-1/2" EXPANSION JOINT
STEP SIDE TYPE
SIDE WALL DOWEL BARS
CONCRETE CURB
PLAN VIEW
SCALE : 1"=4"
CONCRETE STEPS
ITEM 504
SCALE : 1"=4"
#3 DOWEL BARS INTO EXISTING, OR PROPOSED WALK
2" MIN. 4" MAX.
#3 BARS 18" O.C. EACHWAY OR EQUIVALENT WELDED WIRE FLAT SHEETS
1-1/2" EXPANSION JOINT
2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL
CLASS "A" CONCRETE
SECTION "C–C"
SCALE : 1"=2"
1-1/2" DIA GALVANIZED STEEL PIPE HANDRAIL
CONCRETE STEPS
PIPE HANDRAIL DETAIL
SCALE : 1"=2"
SECTION "D–D"
SCALE : 1"=2"
NOTES
1. PLACE STEPS TO CONFORM WITH PROPOSED PAVEMENT GRADING.
2. INSTALL HANDRAIL STEEL PIPE HANDRAIL SECTIONS ON BACK SIDE OF RAMP WHEN 3 OR MORE RISERS ARE USED ON STEPS. HANDRAIL TO BE AS PER UNDER ITEM 462
HANDRAIL FOR CONCRETE STEPS
ITEM 462
SCALE : 1"=4"
VARIES
PROPERTY LINE
#4 BARS @ 18" O.C. EACHWAY OR EQUIVALENT WELDED WIRE FABRIC
#3 BARS @ 18" O.C. EACHWAY OR EQUIVALENT WELDED WIRE FABRIC
1-1/2" EXPANSION JOINT
STEP SIDE TYPE
SIDE WALL DOWEL BARS
CONCRETE CURB
PLAN VIEW
SCALE : 1"=4"
CONCRETE STEPS
ITEM 504
SCALE : 1"=4"
#3 DOWEL BARS INTO EXISTING, OR PROPOSED WALK
2" MIN. 4" MAX.
#3 BARS 18" O.C. EACHWAY OR EQUIVALENT WELDED WIRE FLAT SHEETS
1-1/2" EXPANSION JOINT
2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL
CLASS "A" CONCRETE
SECTION "C–C"
SCALE : 1"=2"
1-1/2" DIA GALVANIZED STEEL PIPE HANDRAIL
CONCRETE STEPS
PIPE HANDRAIL DETAIL
SCALE : 1"=2"
SECTION "D–D"
SCALE : 1"=2"
NOTES
1. PLACE STEPS TO CONFORM WITH PROPOSED PAVEMENT GRADING.
2. INSTALL HANDRAIL STEEL PIPE HANDRAIL SECTIONS ON BACK SIDE OF RAMP WHEN 3 OR MORE RISERS ARE USED ON STEPS. HANDRAIL TO BE AS PER UNDER ITEM 462
HANDRAIL FOR CONCRETE STEPS
ITEM 462
SCALE : 1"=4"
MINIMUM 1-1/2" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT
1" MIN.
1-1/4" RAD.
MINIMUM ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
#4 BARS @ 18" O.C. BOTH WAYS WITH HOOKS
MINIMUM 2" SAND OR GRAVEL CUSHION
4" CLASS "A" CONCRETE
3% MAX SLOPE TO CURB
6" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL
CONCRETE SIDEWALK SECTION
ITEM 500
SCALE : 1"=4"
#3 BARS @ 12" O.C.E.W. OR 6" x 6" – W2.9 x W2.9 WELDED WIRE MESH
#3 BARS @ 18" O.C. EACH WAY EMBEDDED 18" IN SLAB ITEM 305
HEADER CURB
ITEM 502.4 OR 502.5 OR GRAVEL
SCALE : 1"=4"
LIMITS OF MEASUREMENT FOR STREET EXCAVATION
NO. 4 BAR
2" RAD.
MINIMUM 6-1/4" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT (BASE)
MINIMUM 8-1/4" TYPE "B" LEVEL UP MIXES FOR ARTERIAL & COLLECTOR STREETS
MINIMUM 8" ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
PAY LIMITS FOR STREET EXCAVATION
USE "SECONDARY FOR SUBGRADE FLEXIBLE BASE, ASPHALT TREATED BASE AND PRIME COAT
CONCRETE CURB
ITEM 500 ON FLEXIBLE BASE MATERIAL
SCALE : 1"=4"
CONCRETE SIDEWALK ABUTTING CURB SECTION
ITEM 500
SCALE : 1"=4"
MINIMUM 1-1/2" TYPE "D" HOT MIX ASPHALT PAVEMENT
MINIMUM 6" FLEXIBLE BASE MATERIAL
MOUNTABLE CURB
ITEM 500 ON COMPACTED SUBGRADE
SCALE : 1"=4"
2'-3 1/2" – 3'-3 1/2"
4" MIN.
NO. 4 BARS DOWEL INTO CURB OR GUTTER AT 24" O.C.
SIDEWALK AS SHOWN ON PLANS
TRANSITION
#4 BARS AS SHOWN WITH #4 TIES AT 24" O.C. AS PER ITEM 500
NOTE: CURB TRANSITIONS SHALL NOT BE USED FOR DEPRESSED CURB BUT SHALL BE INCLUDED IN ITEM 500 CONCRETE CURBING
CONCRETE SIDEWALK
#4 BARS AS SHOWN WITH #4 TIES AT 24" O.C. AS PER ITEM 500
CONCRETE CURB
SEE NOTE 1
CONCRETE SIDEWALK DRAIN DETAIL
SCALE : 1"=4"
10 – 3 3/4" TO 28 – 3 3/4"
1/4" CHECKERED PLATE
EXPANSION JOINT
SEE DETAIL 1
6" x 4" W12X9 x W12X9 WELDED WIRE MESH
SECTION A–A
SCALE=1 1/2"
CURB
1/4" CHECKERED PLATE
HMAC
BASE
SECTION B
SCALE : 1"=2"
1 – 3 1/2" EXPANSION JOISTS
1 – 3/4" BUTT HINGE
4" x 4" x 1/4" STEEL ANGLE
DETAIL 2
SCALE = 1 : 8
1 – 3 1/2"
1/4"
3 1/2" x 3 1/4" BAR
#3 BARS WELDED TO ANGLE @ 18" O.C.
3" X 2" X 1/4" ANGLE
DETAIL 1
SCALE=1:1
MINIMUM 1-1/2" TYPE "D" HOT MIX ASPHALT PAVEMENT
ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
PAY LIMITS FOR STREET EXCAVATION
USE "SECONDARY" FOR SUBGRADE FLEXIBLE BASE, ASPHALT TREATED BASE AND PRIME COAT
TYPICAL CURB & GUTTER DETAIL
ITEM 500 ON ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
SCALE : 1"=4"
SEE BRICK RESTRAINER DETAIL
EXISTING BRICK PAVERS
MATCH EXISTING MATERIAL
HMAC TYPE "B" (BW) COMPACTED DENSITY (SAC A) 96% OF ELDORADO 7 (COMPACTED) CHERT
FILTER FABRIC AS PER ITEM 432
INITIAL BACKFILL AS PER ITEM 402.3.2.e
4" MIN.
UNDISTURBED SUBGRADE
VARIES
CUT WITH NEAT LINE TO BOTTOM OF EXISTING MATERIAL
VARIES
EXISTING SAND CUSHION
UNDISTURBED SUBGRADE
SECONDARY BACKFILL AS PER ITEM 402.3.2.f
WHEN NECESSARY FILLER MATERIAL TO ACHIEVE GRADE
TYPICAL BASE REPLACEMENT FOR BRICK SURFACED STREET SECTION
ITEM 454
SCALE : 1"=4"
PAY LIMITS
EXISTING PAVEMENT
SAW-CUT EXISTING PAVEMENT
EXISTING BASE MATERIAL
NEW BASE MATERIAL
12"
6"
FILTER FABRIC AS PER ITEM 432
INITIAL BACKFILL AS PER ITEM 402.3.2.e
4" MIN.
PIPE TRENCH
SECONDARY BACKFILL AS PER ITEM 402.3.2.f
UNDISTURBED SUBGRADE
VARIES
WHEN NECESSARY FILLER MATERIAL TO ACHIEVE GRADE
TYPICAL PAVEMENT REPLACEMENT
ITEM 351
SCALE : 1"=4"
NOTES
1. FOR LOCAL TYPE "A" & "B" STREETS (RESIDENTIAL) USE 8" ASPHALT CONCRETE MATERIAL (TYPE "D" SAC A OR TYPE "C" SAC B) OVER 6" ASPHALTIC CONCRETE PAVEMENT.
2. FOR ARTERIAL & SECONDARY STREETS (COMMERCIAL) USE 10" TYPE "B" HOT MIX ASPHALTIC CONCRETE PAVEMENT (SUBCOURSE) & 1-1/2" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE.
TYPICAL PAVEMENT REPLACEMENT
ITEM 351
SCALE : 1"=4"
MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
MISCELLANEOUS CONSTRUCTION STANDARDS I
% SUBMITTAL | PROJECT NO.: | DATE:
DRAWN BY: A. MIGUEZ | CKD BY: | CHKD BY:S.S. HOSSEINI, P.E. | SHEET NO.: | OF



TYPICAL RESIDENTIAL DRIVEWAY SECTION

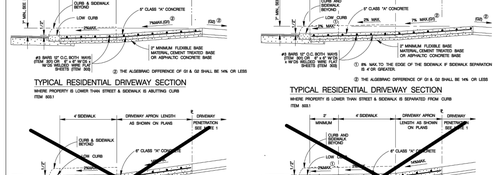
WITH SIDEWALK ABUTTING CURB

ITEM 550.1

TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB

ITEM 550.1



TYPICAL RESIDENTIAL DRIVEWAY SECTION

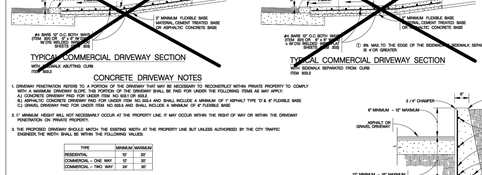
WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB

ITEM 550.1

TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB

ITEM 550.1



TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB

ITEM 550.2

TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB

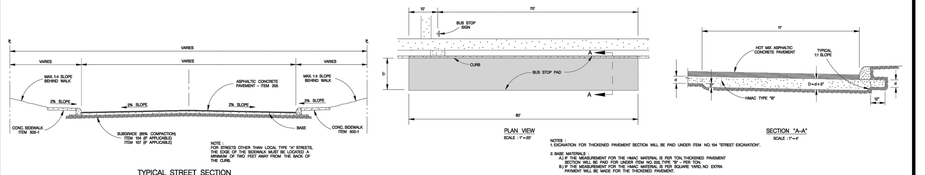
ITEM 550.2

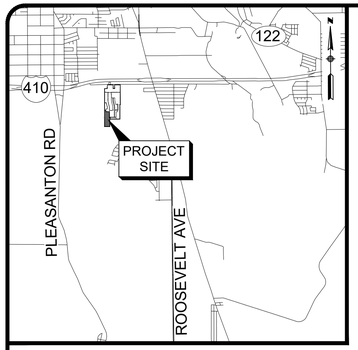
CONCRETE DRIVEWAY NOTES

1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH THE MAXIMUM SLOPE ALLOWED. THE DRIVEWAY PENETRATION SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:
   a.) CONCRETE DRIVEWAY PAD FOR UNDER ITEM NO.585.CP, 585.2.
   b.) ASPHALTIC CONCRETE DRIVEWAY PAD FOR UNDER ITEM NO.585.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE "D" & 6" FLEXIBLE BASE.
   c.) GRAVEL DRIVEWAY PAD FOR UNDER ITEM NO.585.6 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE.
2. 6" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE, IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
3. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	30'
COMMERCIAL – ONE WAY	12'	30'
COMMERCIAL – TWO WAY	24'	60'

4. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
5. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 5 8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
6. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
7. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.





LOCATION MAP
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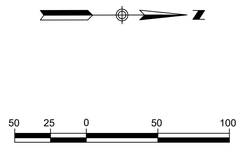
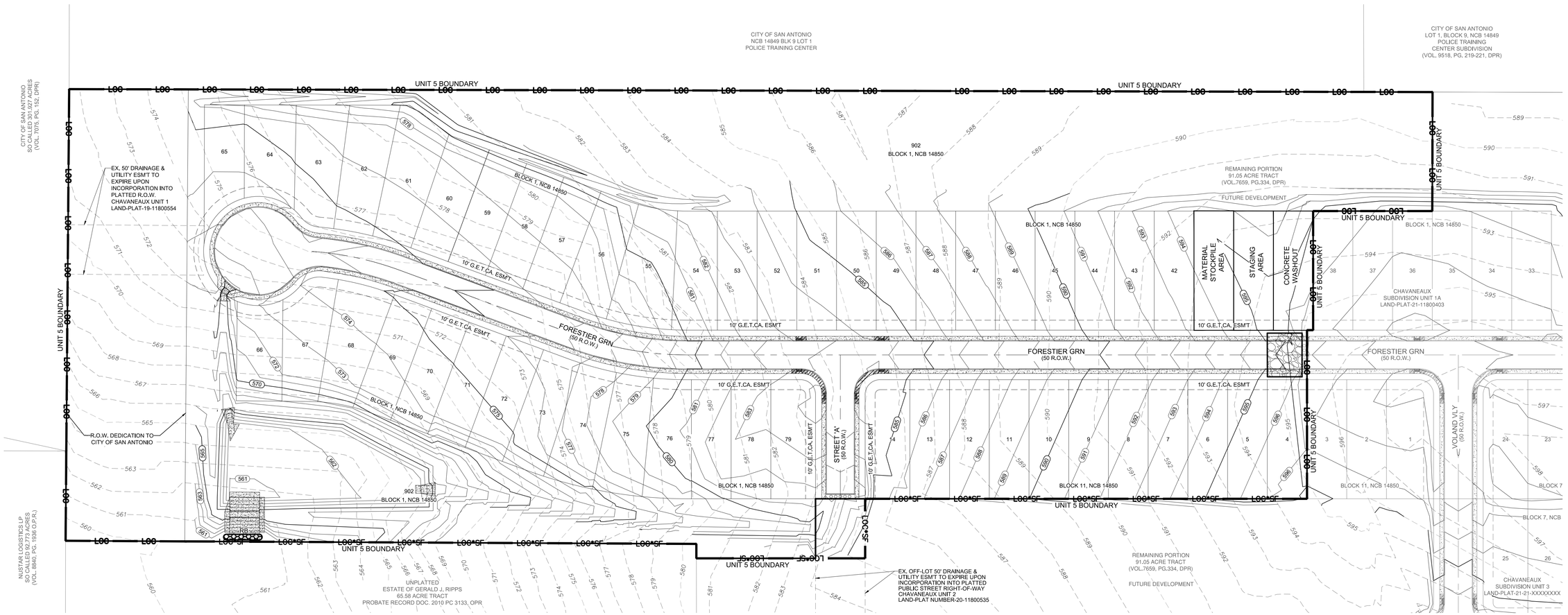


LEGEND

- GRASSED DRAIN FLOW
- PAVEMENT DRAIN FLOW
- 800 EXISTING CONTOUR
- 800 PROPOSED CONTOUR
- CONCRETE WASHOUT PIT
- STABILIZED CONSTRUCTION EXIT
- SF SILT FENCE
- LOC LIMITS OF CONSTRUCTION
- RB ROCK BERM
- I.P. INLET PROTECTION SEE DETAIL 23.04, SHEET 23
- TREE (PRESERVE)
- TREE (REMOVE)
- HERITAGE TREE (PRESERVE)
- HERITAGE TREE (REMOVE)



CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
STORMWATER POLLUTION PREVENTION PLAN

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 9/17/2021
DESIGNED BY: PCF
DRAWN BY: SM / MAP
CHECKED BY: PCF
DRAWING NAME: sh_SWPPP.dwng

9/17/21
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER

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San Antonio, Texas 78209
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TBPE No. F-1386

JOB NUMBER: SA199-0402A.426

SAWS JOB NUMBER:

SHEET NO. 22
OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux U5 Construction\426 Site Development Plans\UMD-Sheets\sh_SWPPP.dwg
User: smotorland
Last Modified: Sep 17, 21 - 11:28
Plot Date/Time: Sep 17, 21 - 11:45:27

SEDIMENTATION AND EROSION CONTROLS

A. SILT FENCE

1. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR YBAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS EXCEEDING 140.
2. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2' X 4" WELDED WIRE, 12 GAUGE MINIMUM.
3. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES,THE MAXIMUM SPACING SHOULD BE 6 FEET.
4. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.
5. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
6. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
7. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
8. INSPECT ALL FENDING WEEKLY, AND AFTER ANY RAINFALL. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

B. TRIANGULAR SEDIMENT FILTER DIKE

1. THE DIKE STRUCTURE SHALL BE CONSTRUCTED OF 6' X 6", 6 GAUGE WELDED WIRE MESH, 18 INCHES PER SIDE, AND WRAPPED WITH GEOTEXTILE FABRIC THE SAME COMPOSITION AS THAT USED FOR SILT FENCES.
2. FILTER FABRIC SHOULD LAP OVER ENDS SIX (6) INCHES TO COVER DIKE TO DIKE JUNCTION; EACH JUNCTION SHOULD BE SECURED BY SHOAT RINGS.
3. POSITION DIKE PARALLEL TO THE CONTOURS, WITH THE END OF EACH SECTION CLOSELY ABUTTING THE ADJACENT SECTIONS.
4. FASTENING - THE FABRIC SKIRT MAY BE TOED- IN WITH 6 INCHES OF COMPACTED MATERIAL, OR 12 INCHES OF THE FABRIC SKIRT SHOULD EXTEND UPHILL AND BE SECURED WITH A MINIMUM OF 3 INCHES OF OPEN GRADED ROCK, OR WITH STAPLES OR NAILS. IF THESE TWO OPTIONS ARE NOT FEASIBLE THE DIKE STRUCTURE MAY BE TRENCHED IN 4 INCHES.
5. TRIANGULAR SEDIMENT FILTER DIKES SHOULD BE INSTALLED ACROSS EXPOSED SLOPES DURING CONSTRUCTION WITH ENDS OF THE DIKE TIED INTO EXISTING GRADES TO PREVENT FAILURE AND SHOULD INTERCEPT NO MORE THAN ONE ACRE OF RUNOFF.
6. WHEN MOVED TO ALLOW VEHICULAR ACCESS, THE DIKES SHOULD BE REINSTALLED AS SOON AS POSSIBLE, BUT ALWAYS AT THE END OF THE WORKDAY.
7. INSPECTION SHOULD BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR. INSPECT AND REALIGN DIKES AS NEEDED TO PREVENT GAPS BETWEEN SECTIONS.
8. ACCUMULATED SILT SHOULD BE REMOVED AFTER EACH RAINFALL, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.

C. TEMPORARY CONSTRUCTION ENTRANCE/EXIT

1. AGGREGATE SIZE - 4 TO 8 INCHES WASHED, COARSE STONE.
2. LENGTH - AT LEAST 50 FEET.
3. THICKNESS - MINIMUM 8 INCHES.
4. WIDTH - MINIMUM WIDTH SHALL BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
5. WASHING - WHEN NECESSARY, IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM 4 INCH DIAMETER WASHED STONE OR COMMERCIAL RACK SHALL BE INSTALLED WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE - IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE 6 TO 8 INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.
8. FABRIC - PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.

D. INTERCEPTOR SWALE

1. MAXIMUM DEPTH OF FLOW IN THE SWALE SHALL BE 1 FOOT.
2. THE MINIMUM BOTTOM WIDTH OF THE SWALE SHALL BE 2 FEET.
3. SIDE SLOPES OF THE SWALE SHALL BE 3:1 OR FLATTER.
4. MINIMUM DESIGN CHANNEL FREEBOARD SHALL BE 6 INCHES
5. SWALES MUST MAINTAIN POSITIVE GRADE TO AN ACCEPTABLE OUTLET.
6. INTERCEPTOR SWALES MUST BE STABILIZED IMMEDIATELY UPON EXCAVATION SO AS NOT TO CONTRIBUTE TO THE EROSION PROBLEM THEY ARE ADDRESSING.
7. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
8. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROPRIATE SPOILS SITE.
9. INSPECTION MUST BE MADE AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE TO THE CHANNEL OR TO CLEAR DEBRIS OR OTHER OBSTRUCTIONS SO AS NOT TO DIMINISH FLOW CAPACITY. DAMAGES WHICH RESULT FROM NORMAL CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT THE END OF EACH WORK DAY.

E. ROCK BERMS

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM (FIGURE 1-28), TO A HEIGHT NOT LESS THAN 18".
4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE:
7. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.
8. REPAIR ANY LOOSE WIRE SHEATHING. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
9. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

F. SANDBAG BERMS

1. THE BAG LENGTH SHOULD BE 24 TO 30 INCHES, WIDTH SHOULD BE 16 TO 18 INCHES AND THICKNESS SHOULD BE 6 TO 8 INCHES. (3) SANDBAGS SHOULD BE FILLED WITH COARSE GRADE SAND, FREE FROM DELETERIOUS MATERIAL.ALL SAND SHOULD PASS THROUGH A NO. 10 SIEVE. THE FILLED BAG SHOULD HAVE AN APPROXIMATE WEIGHT OF 40 POUNDS.
2. THE BERM SHOULD BE A MINIMUM HEIGHT OF 18 INCHES, MEASURED FROM THE TOP OF THE EXISTING GROUND AT THE UPSLOPE TOE TO THE TOP OF THE BERM.
3. THE BERM SHOULD BE SIZED AS SHOWN IN THE PLANS BUT SHOULD HAVE A MINIMUM WIDTH OF 48 INCHES MEASURED AT THE BOTTOM OF THE BERM AND 16 INCHES MEASURED AT THE TOP OF THE BERM.
4. RUNOFF WATER SHOULD FLOW OVER THE TOPS OF THE SANDBAGS OR THROUGH 4-INCH DIAMETER PVC PIPES EMBEDDED BELOW THE TOP LAYER OF BAGS AS SHOWN.
5. SANDBAGS SHOULD BE STACKED IN AT LEAST THREE ROWS ABUTTING EACH OTHER, AND IN STAGGERED ARRANGEMENT.
6. THE BASE OF THE BERM SHOULD HAVE AT LEAST 3 SANDBAGS. THESE CAN BE REDUCED TO 2 AND 1 BAG IN THE SECOND AND THIRD ROWS RESPECTIVELY. FOR EACH ADDITIONAL 6 INCHES OF HEIGHT, AN ADDITIONAL SANDBAG MUST BE ADDED TO EACH ROW WIDTH.
7. THE SAND BAG BERM SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN. THE SANDBAGS SHOULD BE RESHAPED OR REPLACED AS NEEDED DURING INSPECTION.
8. WHEN THE SILT REACHES 6 INCHES, THE ACCUMULATED SILT SHOULD BE REMOVED AND DISPOSED OF AT AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

G. STONE OUTLET SEDIMENT TRAP

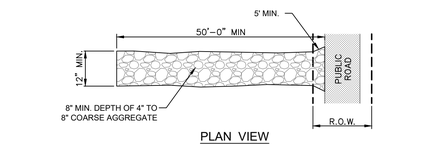
1. ALL AGGREGATE SHOULD BE AT LEAST 3 INCHES IN DIAMETER AND SHOULD NOT EXCEED A VOLUME OF 0.5 CUBIC FOOT.
2. EARTH EMBANKMENT: PLACE FILL MATERIAL IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE THE OPTIMUM MOISTURE CONTENT OF THE MATERIAL. COMPACT EACH LAYER TO 95 PERCENT STANDARD PROCTOR DENSITY. DO NOT PLACE MATERIAL ON SURFACES THAT ARE MUDDY OR FROZEN. SIDE SLOPES FOR THE EMBANKMENT ARE TO BE 3:1. THE MINIMUM WIDTH OF THE EMBANKMENT SHOULD BE 3 FEET.
3. A GAP IS TO BE LEFT IN THE EMBANKMENT IN THE LOCATION WHERE THE NATURAL CONFLUENCE OF RUNOFF CROSSES THE EMBANKMENT LINE. THE GAP IS TO HAVE A WIDTH IN FEET EQUAL TO 6 TIMES THE DRAINAGE AREA IN ACRES.
4. GEOTEXTILE COVERED ROCK CORE: A CORE OF FILTER STONE HAVING A MINIMUM HEIGHT OF 1.5 FEET AND A MINIMUM WIDTH AT THE BASE OF 3 FEET SHOULD BE PLACED ACROSS THE OPENING OF THE EARTH EMBANKMENT AND COVERED WITH GEOTEXTILE FABRIC.WHICH SHOULD EXTEND A MINIMUM DISTANCE OF 2 FEET IN EITHER DIRECTION FROM THE BASE OF THE FILTER STONE CORE.
5. FILTER STONE EMBANKMENT: FILTER STONE SHOULD BE PLACED OVER THE GEOTEXTILE AND IS TO HAVE A SIDE SLOPE WHICH MATCHES THAT OF THE EARTH EMBANKMENT OF 3:1 AND SHOULD COVER THE GEOTEXTILE/ROCK CORE A MINIMUM OF 6INCHES WHEN INSTALLATION IS COMPLETE. THE CREST OF THE OUTLET SHOULD BE AT LEAST 1 FOOT BELOW THE TOP OF THE EMBANKMENT.
6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
7. TRASH AND OTHER DEBRIS SHOULD BE REMOVED AFTER EACH RAINFALL TO PREVENT CLOGGING OF THE OUTLET STRUCTURE. SEDIMENT SHOULD BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF OF THE DESIGN DEPTH OF THE TRAP.

H. SEDIMENT BASINS

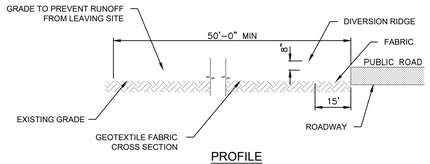
1. THE DRAINAGE AREA FOR A SEDIMENT BASIN SHALL BE LESS THAN 100 ACRES.
2. THE BASIN SHOULD INCLUDE A PERMANENT STAKE TO INDICATE THE SEDIMENT LEVEL IN THE POOL AND MARKED TO INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME (NOT THE TOP OF THE STAKE). SEDIMENT SHALL BE REMOVED WHEN SEDIMENT REACHES 50% STORAGE CAPACITY.
3. PLACE FILL MATERIAL IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE THE OPTIMUM MOISTURE CONTENT OF THE MATERIAL. COMPACT EACH LAYER TO 95 PERCENT STANDARD PROCTOR DENSITY. DO NOT PLACE MATERIAL ON SURFACES THAT ARE MUDDY OR FROZEN. SIDE SLOPES FOR THE EMBANKMENT SHOULD BE 3:1 (H:V). MINIMUM WIDTH OF THE EMBANKMENT AT THE TOP SHALL BE 8 FEET.
4. AN EMERGENCY SPILLWAY SHOULD BE INSTALLED ADJACENT TO THE EMBANKMENT ON UNDISTURBED SOIL AND SHOULD BE SIZED TO CARRY THE FULL AMOUNT OF FLOW GENERATED BYA 10-YEAR, 3-HOUR STORM WITH 1 FOOT OF FREEBOARD LESS THE AMOUNT WHICH CAN BE CARRIED BY THE PRINCIPAL OUTLET CONTROL DEVICE. THE EMERGENCY SPILLWAY SHOULD BE LINED WITH RIPRAP AS SHOULD THE SWALE LEADING FROM THE SPILLWAY TO THE NORMAL WATERCOURSE AT THE BASE OF THE EMBANKMENT.
5. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.TRASH AND OTHER DEBRIS SHOULD BE REMOVED AFTER EACH RAINFALL TO PREVENT CLOGGING OF THE OUTLET STRUCTURE.
6. ACCUMULATED SILT SHOULD BE REMOVED AND THE BASIN SHOULD BE RE- GRADED TO ITS ORIGINAL DIMENSIONS AT SUCH POINT THAT THE CAPACITY OF THE IMPOUNDMENT HAS BEEN REDUCED TO 75% OF ITS ORIGINAL STORAGE CAPACITY.

ADDITIONAL NOTES:

1. UPON COMPLETION OF CONSTRUCTION ALL DISTURBED AREAS SHALL BE REVEGETATED TO 70% OF EXISTING CONDITIONS IN ACCORDANCE WITH THE SWPPP AND TPDES REQUIREMENTS.
2. THIS SITE IS NOT LOCATED ADJACENT TO ANY SURFACE WATERS.
3. THIS SITE WILL NOT HAVE ANY LOCATIONS WHERE STORM WATER DISCHARGES DIRECTLY TO A SURFACE WATER BODY.



PLAN VIEW



PROFILE

23.01 STABILIZED CONSTRUCTION EXIT

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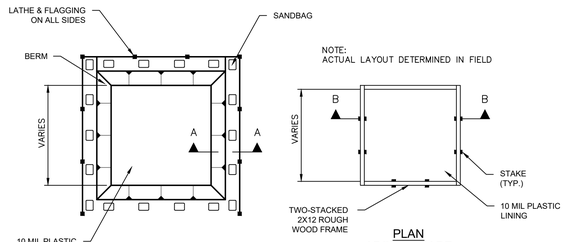
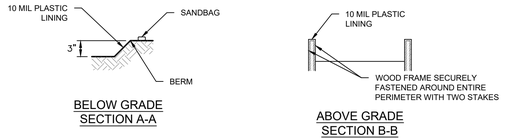


PLAN BELOW GRADE

PLAN ABOVE GRADE



BELOW GRADE SECTION A-A

ABOVE GRADE SECTION B-B

23.02 CONCRETE WASHOUT AREA

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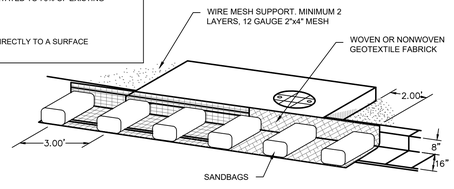
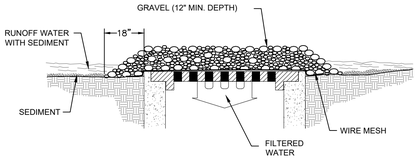


CURB INLET PROTECTION



GRATE INLET PROTECTION

NOTES:

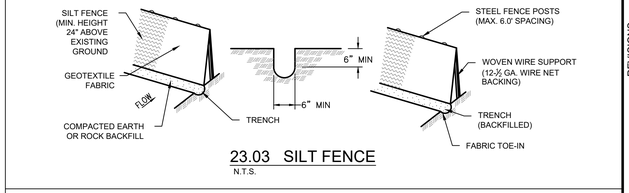
1. WHEN A SANDBAG IS FILLED WITH MATERIAL, THE OPEN END OF THE SANDBAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CHORD.
2. INLET PROTECTION SHALL BE PLACED OVER THE MOUTH OF THE INLET WITH A 2 FOOT OVERLAP ON EITHER SIDE.
3. THE FABRIC COVER AND SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE.
4. THE SKIRT SHALL BE WEIGHTED WITH ONE 18"x24"x6" SANDBAG EVERY 3 FEET.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF FOUR INCHES, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
7. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

NOTES:

1. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. WIRE MESH WITH½ INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
2. COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ABOVE. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
3. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS IT'S FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.

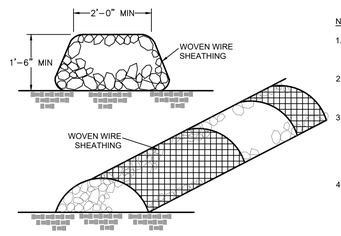
23.04 INLET PROTECTION

N.T.S.



23.03 SILT FENCE

N.T.S.



23.05 ROCK BERM

N.T.S.

NOTES:

1. USE ONLY OPEN GRADED ROCK 4-8 INCH DIAMETER FOR STREAMFLOW CONDITION; USE OPEN GRADED ROCK 3-5 INCHES DIAMETER FOR OTHER CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE - WOVEN WIRE SHEATHING, SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 8 INCHES.
6. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
STORMWATER POLLUTION PREVENTION DETAILS

NO.	DESCRIPTION	BY	DATE
	REVISIONS		

DATE: 9/17/2021
DESIGNED BY: PCF
DRAWN BY: SM / MAP
CHECKED BY: PCF
DRAWING NAME: sh_SWPPP.dwg

09/17/21
STATE OF TEXAS
PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER
Priscilla G Flores

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TBPE No. F-1386

JOB NUMBER: SA199-0402A.426

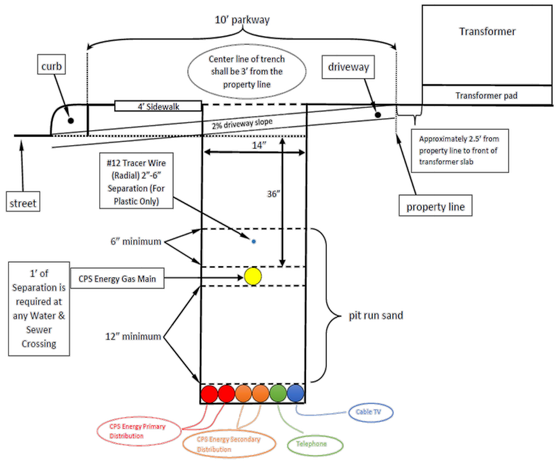
SAWS JOB NUMBER:

SHEET NO. 23 OF 24 SHEETS

K:\SA199 Century Communities\0402A Chavaneaux I/S Construction\426 Site Development Plans\DWG-Sheets\sh_SWPPP.dwg
User: smacfarland
Last Modified: Sep 17, 21 - 11:28
Plot Date/Time: Sep 17, 21 - 14:50:29

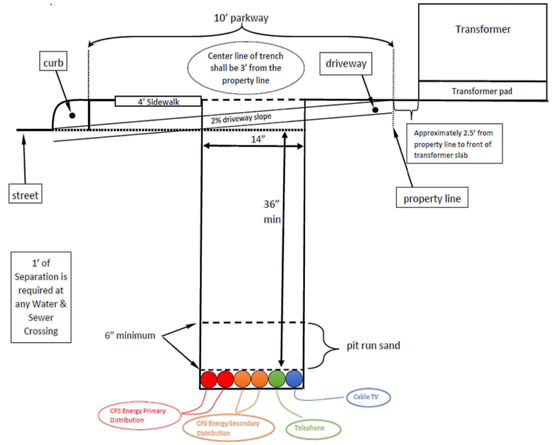
DS-1

Gas & Electric Trench Joint with Other Utilities



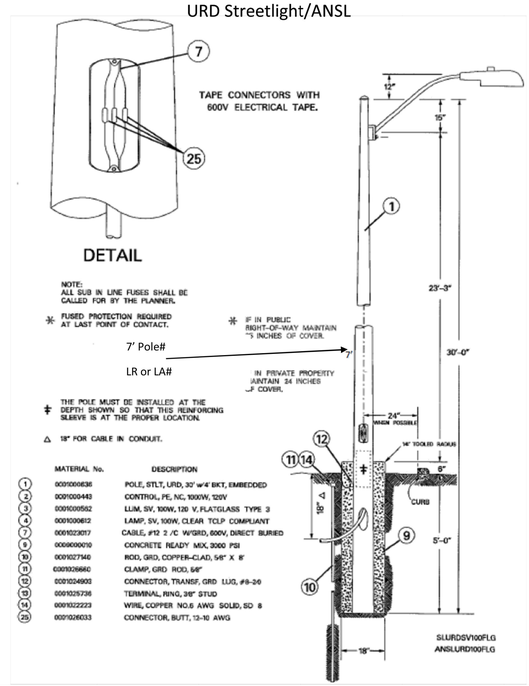
DS-2

Electric Trench with Joint Utilities



DS-9

URD Streetlight/ANSL



CHAVANEAUX SUBDIVISION UNIT 5
LAND-PLAT-21-11800506
CPS ENERGY DETAILS

NO.	DESCRIPTION	BY	DATE
	REVISIONS		

DATE: 9/17/2021
DESIGNED BY: PGF
DRAWN BY: SM / MAP
CHECKED BY: PGF
DRAWING NAME: sh_CPS Details.dwg

STATE OF TEXAS
PRISCILLA G FLORES
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9/17/21

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