

SUMMARY NOTES:

DEVELOPER/OWNER: ADRIAN TAMES
HYG HOMES
84 NE LOOP 410,
SUITE 242
SAN ANTONIO, TX 78216

ENGINEER: BGE, INC., TBPE-1046
CONTACT: DAVID BABINEAUX, P.E.
EMAIL: DBABINEAUX@BGEINC.COM
7330 SAN PEDRO AVENUE SUITE 202
SAN ANTONIO, TEXAS 78216
PHONE: (210) 469-3285

SURVEYOR: BGE, INC., TBPE F1046
CONTACT: DION ALBERTSON
EMAIL: DALBERTSON@BGEINC.COM
7330 SAN PEDRO AVENUE SUITE 202
SAN ANTONIO, TEXAS 78216
PHONE: (210) 581-3600

FLOODPLAIN INFORMATION

NO PORTION OF THE LOT IN THIS TRACT IS WITHIN THE BOUNDARIES OF THE 100 YEAR FLOODPLAIN OF ANY WATERWAY THAT IS WITHIN THE LIMITS OF THE FEDERAL FLOOD INSURANCE ADMINISTRATION FIRM PANEL.

FEMA PANEL: 48029C0220G EFF. 9/29/2010
TRACT SIZE: 7.36 ACRES
TYPE: SINGLE FAMILY RESIDENTIAL

GENERAL NOTES

ALL CONSTRUCTION SHALL CONFORM TO THE LATEST SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.

STREETS - CITY OF SAN ANTONIO
WATER - SAN ANTONIO WATER SYSTEM - SAWS
DRAINAGE - CITY OF SAN ANTONIO
WASTEWATER - SAN ANTONIO WATER SYSTEM - SAWS

CONTACT INFORMATION FOR COORDINATION AND EMERGENCY

CITY OF SAN ANTONIO: (210) 207-1111
ELECTRIC UTILITY: CPS ENERGY (210) 353-4357
WATER UTILITY: SAN ANTONIO WATER SYSTEM-SAWS (210) 704-7297
WASTEWATER UTILITY: SAN ANTONIO WATER SYSTEM-SAWS (210) 704-7297

Digitally Approved by COSA DSD
Streets and Traffic Plat Review

Courtesy Street Plan Review:

By: Abel Barraza AB

Date: 7.8.2025



CIVIL CONSTRUCTION DRAWINGS: HERON VALLEY PHASE 1 CITY OF SAN ANTONIO

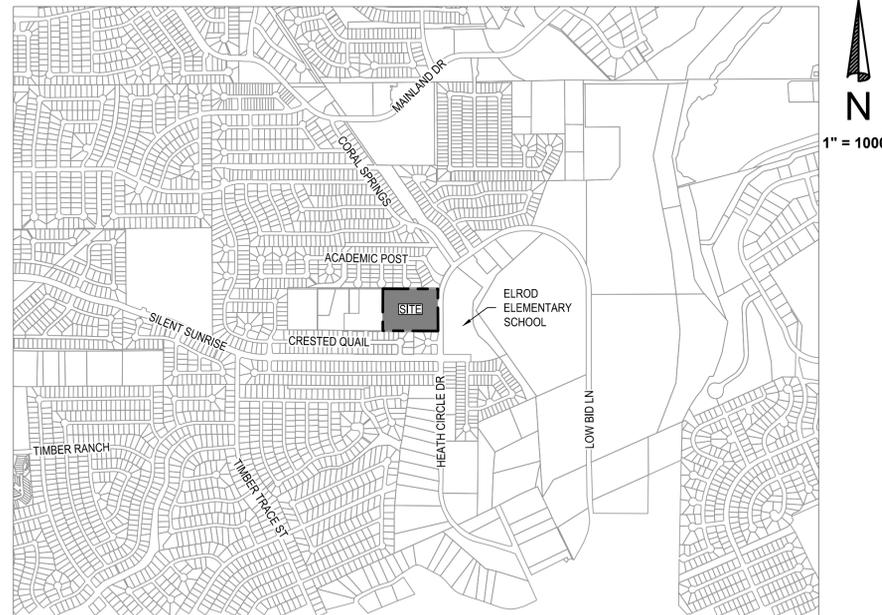
WATER, SEWER, STREET & DRAINAGE IMPROVEMENTS

JUNE 2025

HERON VALLEY PHASE 1

Sheet Number	Sheet Title
C00.00	COVER SHEET
C01.00	CIVIL GENERAL NOTES
C01.10	EXISTING CONDITIONS PLAN
C01.11	DEMOLITION PLAN
C02.00	EROSION & SEDIMENTATION CONTROL PLAN
C02.10	EROSION & SEDIMENTATION CONTROL DETAILS
C02.20	TREE PROTECTION PLAN
C02.21	DETAILED TREE PROTECTION PLAN (SHEET 1 OF 4)
C02.22	DETAILED TREE PROTECTION PLAN (SHEET 2 OF 4)
C02.23	DETAILED TREE PROTECTION PLAN (SHEET 3 OF 4)
C02.24	DETAILED TREE PROTECTION PLAN (SHEET 4 OF 4)
C02.30	TREE PROTECTION TABLES (SHEET 1 OF 2)
C02.31	TREE PROTECTION TABLES (SHEET 2 OF 2)
C02.32	TREE PROTECTION CALCULATIONS
C02.40	TREE PROTECTION PLAN DETAILS
C03.00	OVERALL GRADING PLAN
C03.20	DETENTION POND PLAN
C04.00	UTILITY PLAN
C05.00	OVERALL WASTEWATER PLAN
C05.10	WASTEWATER LINE A PLAN & PROFILE STA 1+00 TO 6+50
C05.11	WASTEWATER LINE A PLAN & PROFILE STA 6+50 TO END
C05.12	WASTEWATER LINE B PLAN & PROFILE
C06.00	WATER DISTRIBUTION PLAN
C06.01	WATER CROSSING DETAIL
C07.00	PARROT VALLEY PLAN AND PROFILE
C07.01	CONDOR VALLEY PLAN AND PROFILE
C07.02	CANARY VALLEY PLAN AND PROFILE
C07.03	FLAMINGO VALLEY PLAN AND PROFILE
C07.04	ROBIN VALLEY PLAN AND PROFILE
C07.10	KNUCKLE DETAILS
C08.00	STORM DRAIN COLLECTION PLAN
C08.10	STORM LINE A PLAN AND PROFILE
C08.11	STORM LINE B PLAN AND PROFILE
C08.20	STREET & DRAINAGE DETAILS (SHEET 1 OF 5)
C08.21	STREET & DRAINAGE DETAILS (SHEET 2 OF 5)
C08.22	STREET & DRAINAGE DETAILS (SHEET 3 OF 5)
C08.23	STREET & DRAINAGE DETAILS (SHEET 4 OF 5)
C08.24	STREET & DRAINAGE DETAILS (SHEET 5 OF 5)
C09.00	SIGNAGE PLAN
C09.01	SIGNAGE DETAILS (SHEET 1 OF 2)
C09.02	SIGNAGE DETAILS (SHEET 2 OF 2)

VICINITY MAP



REVISIONS/CORRECTIONS					
SHEET LIST	DESCRIPTION	DATE	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	ACCEPTED BY	APPROVAL DATE

NOT FOR CONSTRUCTION

SUBMITTED BY



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TBPE Registration No. F-1046

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BGE, INC. TBPE NO. F-1046
7330 SAN PEDRO AVENUE SUITE 202
SAN ANTONIO, TEXAS 78216
PHONE: (210) 469 - 3285

DATE: _____

REVIEWED BY THE
SAN ANTONIO WATER SYSTEM

THIS DOES NOT RELIEVE THE DESIGNING ENGINEER,
CONTRACTOR OR SUB-CONTRACTOR OF THE
RESPONSIBILITY FOR COMPLYING WITH ALL OF THE
SAN ANTONIO WATER SYSTEM AND T.C.E.Q. RULES
AND REGULATIONS

BY: *Antonio D. Rivera*
DATE: 11/15/2024

REVIEWED BY THE
SAN ANTONIO WATER SYSTEM

THIS DOES NOT RELIEVE THE DESIGNING ENGINEER,
CONTRACTOR OR SUB-CONTRACTOR OF THE
RESPONSIBILITY FOR COMPLYING WITH ALL OF THE
SAN ANTONIO WATER SYSTEM AND T.C.E.Q. RULES
AND REGULATIONS

BY: Michael Nguyen
DATE: 2024.12.06
11:11:07-0600

SAWS PRESSURE ZONE: 1111

DEVELOPER NAME:	HYG HOMES
DEVELOPER ADDRESS:	84 NE LOOP 410, SUITE 242
CITY:	SAN ANTONIO
STATE:	TX
ZIP:	78216
PHONE:	(210)-968-2025
FAX:	N/A
SAWS BLOCK MAP #:	N/A
TOTAL EDU'S:	42
TOTAL ACREAGE:	7.361
TOTAL LINEAR FOOTAGE OF PIPE:	2,078
PLAT NO.:	24-11800389
NUMBER OF LOTS:	40
SAWS JOB NO.:	24-1154

MIDDLE COLLECTION AND TREATMENT AREA (MCTA)

DEVELOPER NAME:	HYG HOMES
DEVELOPER ADDRESS:	84 NE LOOP 410, SUITE 242
CITY:	SAN ANTONIO
STATE:	TX
ZIP:	78216
PHONE:	(210)-968-2025
FAX:	N/A
SAWS BLOCK MAP #:	N/A
TOTAL EDU'S:	40
TOTAL ACREAGE:	7.361
TOTAL LINEAR FOOTAGE OF PIPE:	2,078
PLAT NO.:	24-11800389
NUMBER OF LOTS:	40
SAWS JOB NO.:	24-1625



Know what's below.
Call before you dig.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



C00.00

GENERAL CONSTRUCTION :

- 1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST. 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.
2. THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
3. 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 OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
4. 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.
5. IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
6. 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.
7. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY-FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
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 ATLEAST FORTY - EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:
SAN ANTONIO WATER SYSTEM (SAWS) 233-2010
BEXAR METROPOLITAN WATER DISTRICT (BEXAR MET) 364-6538 / 357-5741
COOSA DRAINAGE 207-9049
COOSA SIGNAL OPERATIONS 207-7720 / 207-7765
TEXAS STATEWIDE ONE CALL LOCATOR 1-800-344-8377
- CITY PUBLIC SERVICE ENERGY
- 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 DAMAGE TO 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 207-7308 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 SOIL 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 CoSA APPROVAL.
THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE CoSA 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 THIRTEEN 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) 362-2086). THE CONTRACT 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 CLEARLY ACCORDING TO PROPER PRUNING METHODS. OAK WOUNDS SHALL BE PAINTED OVER WITHIN 30 MINUTES TO PREVENT OAK WILT.
8. PLINGS, 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. (207 - 8053)
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, AND 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.

UTILITY GENERAL NOTES :

- 1. FOR PURPOSES OF RECORD DRAWINGS FOR THE OWNER, THE CONTRACTOR SHALL FURNISH THE OWNER WITH ALL THE FINAL MEASUREMENTS, TAPS, AND LENGTH OF SERVICE CONNECTIONS.
2. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
3. ALL GARBAGE OR SOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
5. ALL ITEMS NOT SPECIFICALLY CALLED FOR ON THE PLANS, OR IN THE SPECIFICATIONS, BUT NECESSARY TO REASONABLY CONSTRUCT THE FACILITY OR IMPROVEMENT, SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT AND NO SEPARATE PAYMENTS WILL BE MADE FOR THESE ITEMS.
6. CONTRACTOR TO GRADE SITE TO WITHIN +0.10' BEFORE THE INSTALLATION OF UTILITIES TO ENSURE PROPER COVER IS ACHIEVED.
7. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT.
8. THE CONTRACTOR SHALL NOTIFY THE GOVERNMENTAL AND/OR UTILITY COMPANIES REGARDING THE LOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
9. THE CONTRACTOR SHALL EXCAVATE AROUND EXISTING UTILITIES WHICH INTERSECT THE PROPOSED ALIGNMENT OF THE SERVICES AND NOTIFY THE ENGINEER OF POTENTIAL CONFLICTS, PRIOR TO ANY CONSTRUCTION IN THE AREA.
10. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST CONSTRUCTION STANDARDS OF T.C.E.Q. UTILITIES.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.
12. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
13. CONTRACTOR SHALL ESTABLISH VEGETATION IN ALL DISTURBED AREAS INCLUDING RIGHT-OF-WAY, STEEP SLOPES, AND DRAINAGE DITCHES WHERE SOIL SUBGRADE IS ENCOUNTERED.

EROSION CONTROL NOTES :

- 1. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASHOUT PIT AND CONSTRUCTION EQUIPMENT STORAGE AREA ARE TO BE DETERMINED IN THE FIELD. THEY ARE SHOWN ON THIS PLAN FOR ILLUSTRATIVE PURPOSES ONLY. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AROUND CONCRETE WASH PIT AND MATERIAL STORAGE AREA BASED ON FINAL LOCATION AND SIZE.
2. CONTRACTOR MAY MODIFY STORM WATER CONTROLS TO ACHIEVE THE DESIRED INTENT. ANY CHANGES ARE TO BE NOTED, SIGNED AND DATED BY THE RESPONSIBLE PARTY IN THE TPDES BOOK (NO SEPARATE PAY ITEM).
3. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL STORM WATER CONTROLS.
4. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY QUESTIONS REGARDING THE INTENT OF THIS PLAN.
5. IF REQUIRED, CONTRACTOR SHALL FILE NOTS (NOTICE OF INTENT) AND NOTS (NOTICE OF TERMINATION) FOR THIS PROJECT. REFER TO TPDES FOR PROPER POSTING REQUIREMENTS AND DOCUMENTS.
6. CONTRACTOR SHALL PERFORM INSPECTIONS OF CONTROLS ONCE EVERY FOURTEEN (14) DAYS AND WITHIN TWENTY-FOUR (24) HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER OR AS AN ALTERNATIVE METHOD CONTRACTOR SHALL PERFORM INSPECTIONS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS.
7. A COPY OF THIS PLAN, TPDES BOOK AND INSPECTION REPORTS MUST REMAIN AT THE CONSTRUCTION SITE AT ALL TIMES.
8. EROSION CONTROL AND STABILIZATION MEASURES MUST BE INITIATED IMMEDIATELY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION MEASURES THAT PROVIDE A PROTECTIVE COVER MUST BE INITIATED IMMEDIATELY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED. THE TERM "IMMEDIATELY" IS USED TO DEFINE THE DEADLINE FOR INITIATING STABILIZATION MEASURES. IN THE CONTEXT OF THIS REQUIREMENT, "IMMEDIATELY" MEANS AS SOON AS PRACTICABLE, BUT NO LATER THAN THE END OF THE NEXT WORK DAY, FOLLOWING THE DAY WHEN THE EARTH-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.
9. ALL DEBRIS AND CONSTRUCTION MATERIALS SHALL BE REMOVED PRIOR TO FINAL INSPECTION AND THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY. SAN ANTONIO RETAINS THE RIGHT TO REQUIRE THE PLACEMENT OF A COMMERCIAL DUMPSTER FOR COLLECTION OF DEBRIS IF THE SITE IS NOT PROPERLY MAINTAINED. THE COST ASSOCIATED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND/OR OWNER.
10. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM PRODUCTS BASED UPON TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
11. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ADJACENT ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
12. REFER TO THE TPDES BOOK FOR THIS PROJECT FOR MORE INFORMATION/ DETAILS.

GRADING NOTES :

- 1. ALL GRADES AND CONTOURS SHOWN ARE FINAL, TOP OF FINISH SURFACE ELEVATIONS, UNLESS OTHERWISE NOTED.
2. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR TO TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
3. CONTRACTOR TO OBTAIN GRADES SHOWN HEREON ± TO ONE-TENTH (0.10) FOOT.
4. ALL DISTURBED AREAS SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
5. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 SIDESLOPES.
6. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT WHERE NOT SPECIFICALLY COVERED IN THE PROJECT SPECIFICATIONS SHALL CONFORM TO ALL APPLICABLE LOCAL CODES AND TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (LATEST EDITION).
7. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER, CONDITION ANY DAMAGES DONE TO EXISTING BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS.
8. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
9. TREE PROTECTION SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT PLANS.
10. CONTRACTOR SHALL GRADE AREAS OUTSIDE SITE BASED ON MAXIMUM SLOPES OF 3:1 UNLESS OTHERWISE NOTED.
11. ALL EXCAVATION IS UNCLASSIFIED.
12. SITE AREAS REQUIRING FILL PLACEMENT SHALL BE SCARIFIED AND MOISTURE ADJUSTED TO WITHIN ± 3% OF OPTIMUM MOISTURE CONTENT. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY.
13. CONTRACTOR TO REFERENCE GEOTECHNICAL REPORT AS PROVIDED BY OWNER.
14. CONTRACTOR IS REQUIRED TO HAVE A TCEQ TPDES PERMIT ISSUED BY TCEQ. A COPY OF THE PERMIT SHALL BE POSTED ON THE JOBSITE PER TCEQ REQUIREMENTS.
15. CONTRACTOR SHALL HYDRO MULCH ALL DISTURBED AREAS NOT INCLUDED IN LANDSCAPE PLANS AND GUARANTEE COVERAGE ACCORDING TO CONSTRUCTION SPECIFICATIONS.
16. ALL LOTS WITH FILL SHALL BE COMPACTED IN ACCORDANCE WITH THE 79G PROCEDURE THAT MEETS THE REQUIREMENTS OF THE FHA DATA SHEET. DOCUMENTATION AND EVIDENCE OF COMPACTION SHALL BE FURNISHED TO THE ENGINEER & OWNER.

GENERAL NOTES :

- 1. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
2. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION, ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAN ALL STORM DRAIN STRUCTURES, PIPES, CULVERTS, ETC. PRIOR TO THE FINAL PAYMENT.
4. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. RE-VEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF RE-VEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION, UNLESS OTHERWISE REQUESTED BY THE PROPERTY OWNER.
5. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN THE EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE ENGINEER.
6. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROJECT PERMITS FROM THE APPROPRIATE AUTHORITIES.
7. WHERE DISCREPANCIES ARISE BETWEEN PLANS AND SPECIFICATIONS, PLANS GOVERN UNLESS OTHERWISE NOTED.

SEQUENCE OF CONSTRUCTION :

- 1. CALL ALL AFFECTED PARTIES AT LEAST 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE AND SECURE ALL REQUIRED PERMITS.
2. INSTALL TEMPORARY EROSION CONTROLS AND TREE PROTECTION FENCING PRIOR TO ANY CLEARING AND GRUBBING, NOTIFY SAN ANTONIO REVIEWED BY THE SAN ANTONIO WATER SYSTEM
3. INSTALL ALL STORM DRAINAGE SYSTEMS.
4. COMPLETE ALL CONSTRUCTION AND INSTALLATIONS WITHIN THE SITE.
5. COMPLETE PERMANENT EROSION CONTROL AND RESTORATION OF SITE VEGETATION.
6. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROL AND TREE PROTECTION.
7. CONTRACTOR TO SCHEDULE FINAL WALK-THROUGH WITH SAN ANTONIO OFFICIAL.
8. COMPLETE ANY NECESSARY FINAL DRESS-UP.
9. FINAL ACCEPTANCE.

SAWS PRESSURE ZONE: 1111

Table with 2 columns: Field Name and Value. Fields include DEVELOPER NAME (HYG HOMES), DEVELOPER ADDRESS (84 NE LOOP 410, SUITE 242), CITY (SAN ANTONIO), STATE (TX), ZIP (78216), SAWS BLOCK MAP #, TOTAL EDU'S 42, TOTAL ACREAGE 2.361, TOTAL LINEAR FOOTAGE OF PIPE 2,078, PLAT NO. 24-11800389, NUMBER OF LOTS 40, SAWS JOB NO. 24-1154.

MIDDLE COLLECTION AND TREATMENT AREA (MCTA)

Table with 2 columns: Field Name and Value. Fields include DEVELOPER NAME (HYG HOMES), DEVELOPER ADDRESS (84 NE LOOP 410, SUITE 242), CITY (SAN ANTONIO), STATE (TX), ZIP (78216), PHONE (210) 202-2925, FAX (210) 202-2925, SAWS BLOCK MAP #, N/A, TOTAL EDU'S 40, TOTAL ACREAGE 2.361, TOTAL LINEAR FOOTAGE OF PIPE 2,078, PLAT NO. 24-11800389, NUMBER OF LOTS 40, SAWS JOB NO. 24-1625.

SAWS GENERAL CONSTRUCTION :

- 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 CONSTRUCTION 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 SAWS STANDARD DETAILS FROM SAWS WEBSITE. HTTPS://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN 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 LOCATION SAND 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 WHENEVER 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
COOSA DRAINAGE (210) 207-9724 OR (210) 207-6026
COOSA TRAFFIC SIGNAL OPERATIONS 210-206-8480
COOSA 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 BY 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 CONSTWORKEQ@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 CONSTWORKEQ@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 TRANCH 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.

SAWS WATER NOTES :

- 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.

- 2. FOR WATER MAINS 12" OR HIGHER, SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014
3. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSTE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAYBE 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".
4. 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)
5. SUITABLE ANCHORAGE/TRUST 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.
6. ALL VALVES SHALL BE LEAD "OPEN RIGHT".
7. PRVS REQUIRED: CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 926 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSF. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 926 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).
8. 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 MEASURES TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.
9. 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.
10. 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.
DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

SAWS 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 IMMEDIATELY AT 210-704-SAWS (210-704-7287). 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 TELEVISIONING 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 FUGE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 AND/OR SAWS PRODUCTION GROUPS AT LEAST TWO WEEKS OR MORE 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 REQUIREMENTS OF ASTM D2241, TAC 217.53 AND TCEQ 280.44(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) 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.
6. 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 SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION.
7. ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

PLAT NUMBER 24-11800389

Table with 2 columns: DATE and DESCRIPTION. Includes a grid for tracking revisions.

DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC

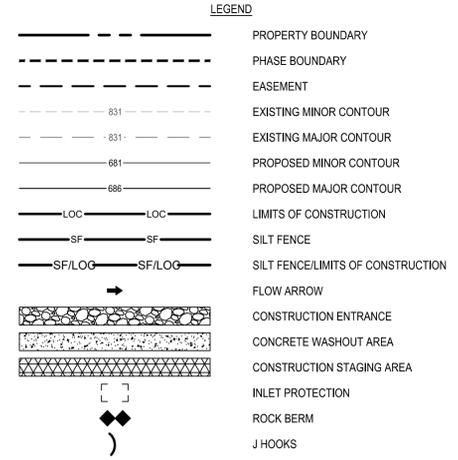
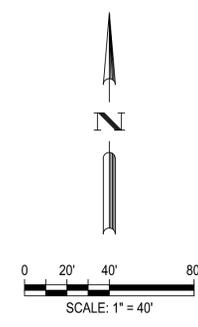


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HERON VALLEY PHASE 1
CIVIL GENERAL NOTES



SHEET C01.00



EROSION AND SEDIMENTATION NOTES:

1. ALL SWPPP AND BEST MANAGEMENT PRACTICES (BMPs) SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.
2. SWPPP SIGN SHALL BE DISPLAYED AT ENTRANCE/EXIT LOCATION. ENTRANCE/EXIT, CONCRETE WASHOUT PIT AND CONSTRUCTION EQUIPMENT STORAGE AREA ARE TO BE DETERMINED IN THE FIELD.
3. CONTRACTOR MAY MODIFY STORM WATER CONTROLS TO ACHIEVE THE DESIRED INTENT. ANY CHANGES ARE TO BE NOTED, SIGNED AND DATED BY THE RESPONSIBLE PARTY IN THE SWPPP BOOK.
4. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL STORM WATER CONTROLS.
5. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY QUESTIONS REGARDING THE INTENT OF THIS PLAN.
6. CONTRACTOR IS REQUIRED TO FILE NOTICES (NOTICE OF INTENT) AND NOTICES (NOTICE OF TERMINATION) FOR THIS PROJECT. REFER TO NPDES FOR PROPER POSTING REQUIREMENTS AND DOCUMENTS.
7. CONTRACTOR SHALL PERFORM INSPECTIONS OF CONTROLS ONCE EVERY FOURTEEN (14) DAYS AND WITHIN TWENTY-FOUR (24) HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER OR AS AN ALTERNATIVE METHOD CONTRACTOR SHALL PERFORM INSPECTIONS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS.
8. A COPY OF THIS PLAN, SWPPP BINDER AND INSPECTION REPORTS MUST REMAIN AT THE CONSTRUCTION SITE AT ALL TIMES.
9. BARE SOILS SHALL HAVE STABILIZATION MEASURES INSTALLED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED FOR MORE THAN 21 DAYS.
10. ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH FOR TEMPORARY VEGETATIVE COVER. NO AREA, SUBJECT TO EROSION SHALL BE LEFT DISTURBED AND UNSUITABLE FOR PERIODS LONGER THAN IS ABSOLUTELY NECESSARY TO CARRY OUT THAT PORTION OF THE CONSTRUCTION WORK, OR 1 WEEK AFTER THE SOIL HAS BEEN DISTURBED, WHICHEVER IS LESS.
11. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM PRODUCTS BASED UPON TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
12. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ADJACENT ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
13. INSTALL SILT FENCES AS SHOWN ON THE PLANS AND WHEREVER STORM WATER COLLECTS OR EXITS THE PROJECT. INSTALL ROCK BERM DIKES AT ALL CURB INLETS AS SHOWN ON THE PLANS.
14. BACKFILL THE UTILITY TRENCHES IN A TIMELY MANNER TO MINIMIZE EROSION.
15. SOIL STOCKPILES LEFT OVER A PERIOD OF SEVEN DAYS SHALL BE COVERED WITH SOIL RETENTION BLANKETS AND SILT FENCE SHALL BE ERRECTED AROUND THE PERIMETER OF STOCKPILE MATERIAL.
16. WHEN THE PROJECT AREA HAS STABILIZED AND ALL CONSTRUCTION IS COMPLETED AND ACCEPTED, REMOVE ALL CONTROLS.
17. FINAL STABILIZATION IS ACCOMPLISHED WHEN VEGETATION AT THE DISTURBED AREAS HAS ACHIEVED 70% OF THE BACKGROUND NATIVE VEGETATION.
18. CONTRACTOR TO COORDINATE WITH THE OWNER'S REPRESENTATIVE FOR LOCATION OF STAGING AREA.
19. ACCESSIBLE SYMBOL IS FOR REFERENCE ONLY. DO NOT PROVIDE MARKING ON SPACE.

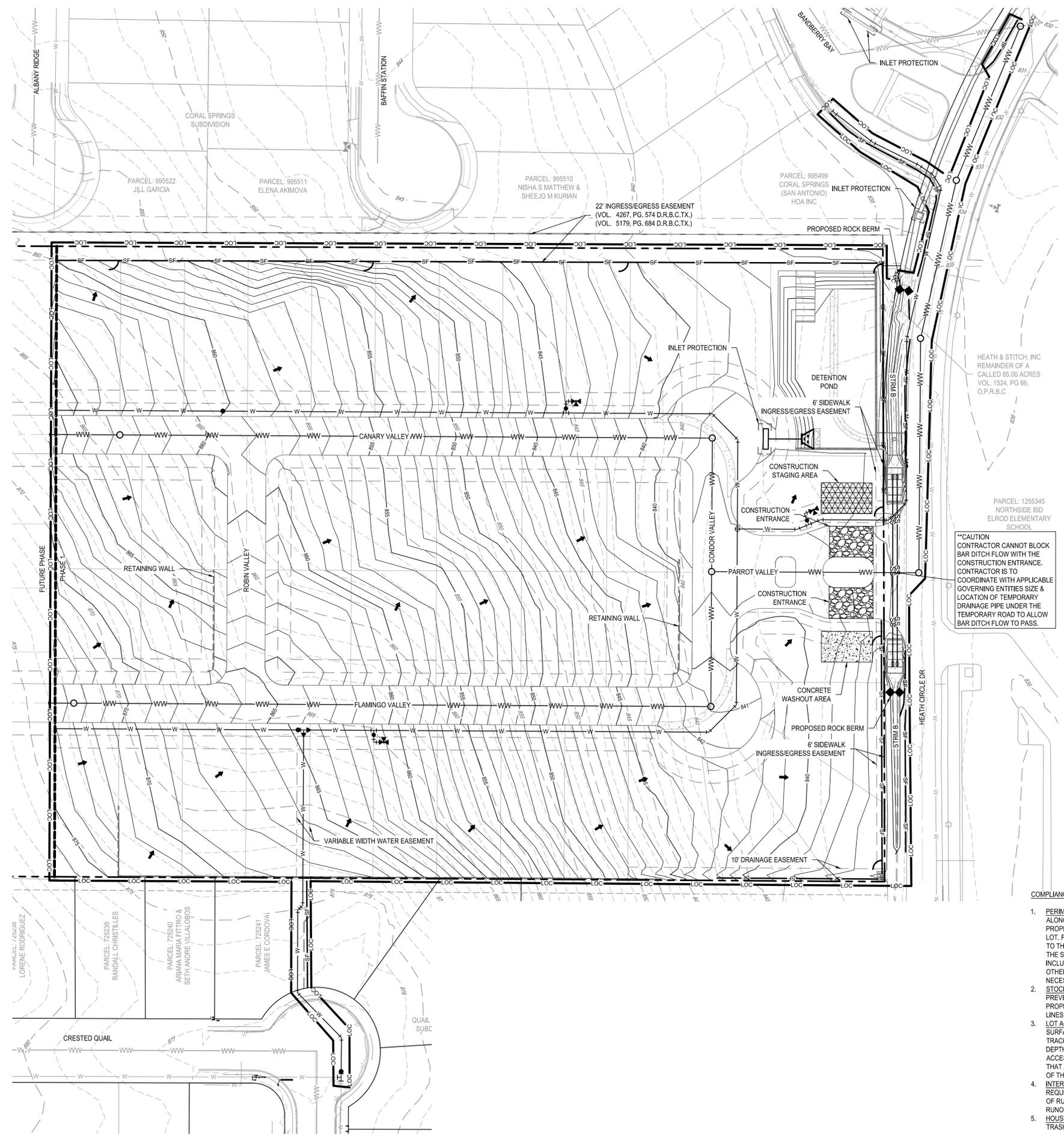
CONTRACTOR/BUILDERS RESPONSIBILITY:

1. INSTALL NEEDED EROSION AND SEDIMENT CONTROL PRACTICES PRIOR TO ANY LAND DISTURBANCE TO PREVENT EXCESSIVE SEDIMENT FROM LEAVING THE SITE.
2. CONTACT A T.C.E.Q. INSPECTOR TO ANSWER ANY QUESTIONS REGARDING SITE PLAN AND TO REVIEW A COMPLETED WORKSHEET.
3. PERIODIC INSPECTION AND MAINTENANCE ARE VITAL TO THE PERFORMANCE OF EROSION AND SEDIMENT CONTROLS. IT IS RECOMMENDED THAT ALL TEMPORARY EROSION CONTROLS BE INSPECTED WEEKLY AND AFTER EVERY RAINFALL.
4. MAINTENANCE: ESC (EROSION SEDIMENT CONTROLS) SHOULD BE ROUTINELY INSPECTED AND MAINTAINED UNTIL SITE IS PERMANENTLY VEGETATED. SOMETIMES ROUTINE INSPECTIONS MAY SHOW A NEED FOR ADJUSTMENTS OR ADDITIONAL ESCS.
5. CONTACT A T.C.E.Q. INSPECTOR WHEN CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN STABILIZED WITH PERMANENT VEGETATION OR OTHER APPROVED METHODS.
6. REVEGETATE THE SITE: PREVENT EROSION ON INDIVIDUAL LOTS WITH GROUND COVER. EXISTING TREES AND VEGETATION SHOULD BE PROTECTED TO HELP MAINTAIN A STABLE GROUND SURFACE AND PREVENT LOSS OF VALUABLE TOPSOIL. EROSION CONTROL BLANKETS, MATTING AND MULCHES CAN HELP STABILIZE THE AREA UNTIL PERMANENT VEGETATION IS ESTABLISHED. THE SITE NEEDS TO HAVE AT LEAST 80 PERCENT COVER OF PERMANENT VEGETATION BEFORE ESCS CAN BE REMOVED.

ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDDED OR OTHERWISE STABILIZED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHERE TEMPORARY CONSTRUCTION ACTIVITY HAS CEASED FOR MORE THAN 21 DAYS

COMPLIANCE CHECKLIST:

1. PERIMETER CONTROLS: INSTALL ESCS (EROSION SEDIMENT CONTROLS) ALONG THE BACK OF THE CURB AND ALONG THE LOT LINE OF ADJACENT PROPERTIES, WHICH ARE DOWNHILL AND RECEIVE RUNOFF FROM YOUR LOT. FOLLOWING SIDEWALK INSTALLATION, ESCS SHOULD BE REMOVED TO THE BACK OF THE SIDEWALK TO PREVENT SEDIMENT FROM REACHING THE SIDEWALK. MAINTAIN ESCS TO ENSURE PROPER FUNCTION, INCLUDING REPAIR OR REPLACEMENT OF TORN, DEGRADED OR OTHERWISE INEFFECTIVE MATERIALS. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE PROTECTION.
2. STOCKPILES: INSTALL SEDIMENT CONTROLS AROUND STOCKPILES TO PREVENT SEDIMENT FROM REACHING THE STREET AND ADJACENT PROPERTIES. LOCATE STOCKPILES AWAY FROM THE STREET, PROPERTY LINES AND DRAINAGE WAYS.
3. LOT ACCESS: REQUIRED FOR EACH INDIVIDUAL LOT. MAINTAIN A SURFACE SUITABLE FOR PARKING AND UNLOADING TO PREVENT THE TRACKING OF MUD AND ROCK ONTO THE STREET. A MINIMUM 6-INCH DEPTH OF 3- TO 5-INCH AGGREGATE IS SUGGESTED. ALL VEHICLES THAT ACCESS THE LOT MUST USE THE CONSTRUCTION ENTRANCE. ANY SOILS THAT ARE TRUCKED ONTO THE STREET MUST BE REMOVED BY THE END OF THE DAY.
4. INTERMEDIATE CONTROL: LONG OR STEEP DRAINAGE PATHS MAY REQUIRE INTERMEDIATE OR INTERIOR ESCS TO HELP SLOW THE FLOW OF RUNOFF. FAILURE OF PERIMETER CONTROLS DUE TO THE FORCE OF RUNOFF OFTEN DETERMINE THE NEED FOR INTERMEDIATE CONTROLS.
5. HOUSEKEEPING: PROVIDE ADEQUATE SANITARY FACILITIES AND TRASH/REFUSE BINS.



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01 - Unit 103_CADD\01 - Shis\02.00 EROSION & SEDIMENTATION CONTROL PLAN.dwg Layout: EROSION & SEDIMENTATION CONTROL PLAN By: Orodriguez

HERON VALLEY PHASE 1

EROSION & SEDIMENTATION CONTROL PLAN

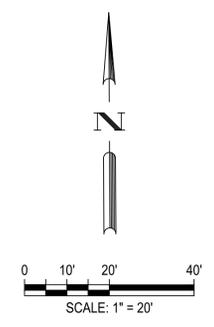
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San Antonio, TX 78216
Tel: 214-358-3360 www.bgeinc.com
EPA Registration No. P-1049

BGE INC.

STATE OF TEXAS
DAVID R. BARNHART
127935
LICENSED PROFESSIONAL ENGINEER

SHEET
C02.00

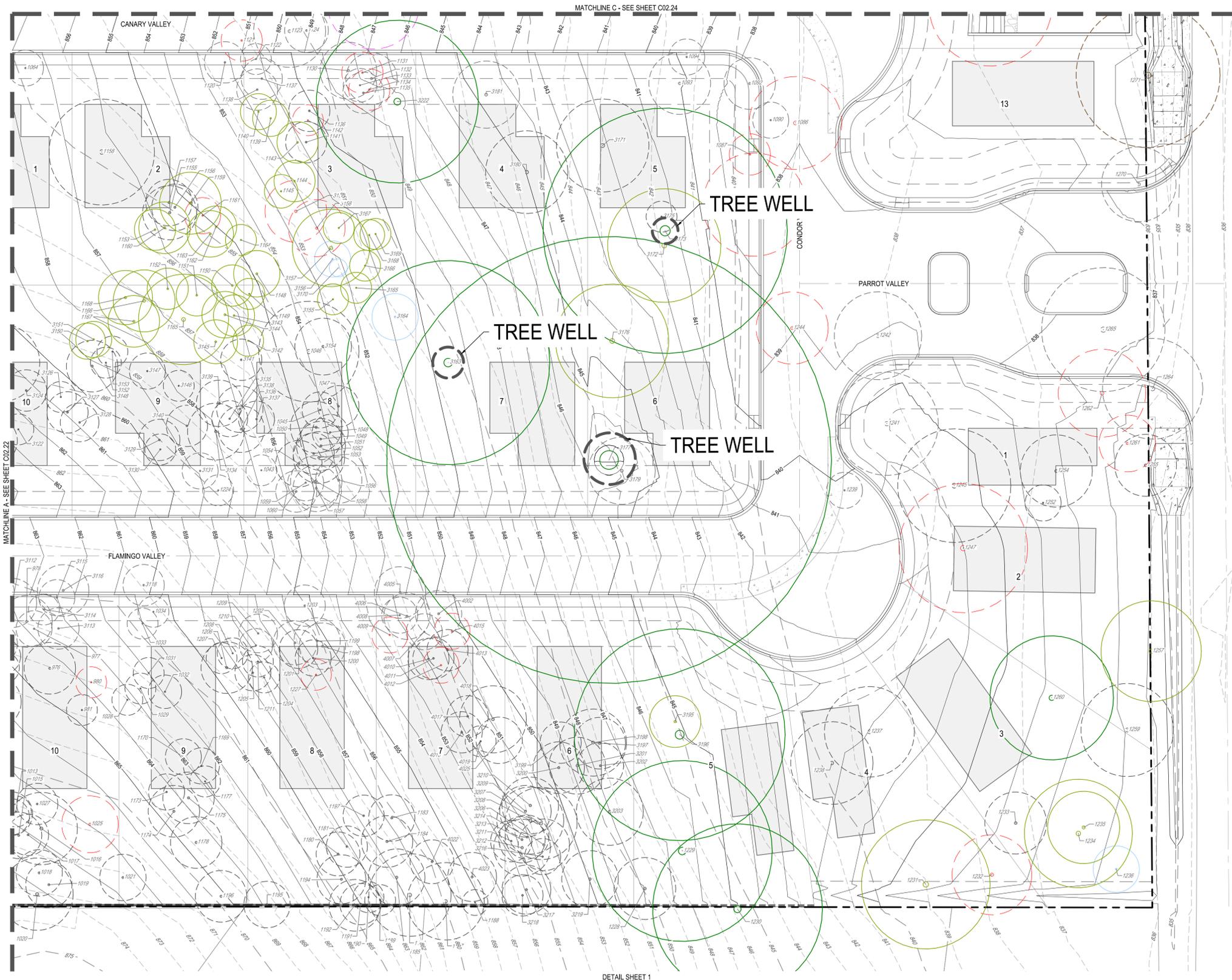
DATE	APR
REV	
DESCRIPTION	



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED LOT LINES
	PROPOSED EASEMENT
	LOT NUMBER
	PRESERVED HERITAGE TREE
	PRESERVED SIGNIFICANT TREE
	REMOVED SIGNIFICANT TREE
	EXEMPT - REMOVED HERITAGE TREE
	EXEMPT - REMOVED SIGNIFICANT TREE
	PRESERVED UNPROTECTED TREE
	REMOVED TREE IN POOR CONDITION
	REMOVED INVASIVE TREE

- GENERAL NOTES**
- BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE 4204, NAD-83. DISTANCES SHOWN ARE SURFACE VALUES.
 - NO CONSTRUCTION (CLEARING, CUTTING, FILLING, TRENCHING, ETC.) SHALL TAKE PLACE WITHIN THE 1/2 ROOT PROTECTION ZONE (RPZ). CONTRACTOR TO ENSURE TREE PROTECTION FULLY ENCAPSULATES 1/2 RPZ AND SHALL NOTIFY TO OWNER/ENGINEER IMMEDIATELY IF THIS AREA IS ENCRoACHED. PLEASE REFERENCE THE COSA TREE PRESERVATION AND PROTECTION DETAILS.
 - PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.
- MITIGATION NOTES**
- HOME BUILDER WILL BE REQUIRED TO PLANT 3 - 2" (MIN) CALIPER TREES WITH A SHADE VALUE OF 875 PER LOT. A TOTAL OF 192 TREES WILL BE PLANTED ON THE SITE BASED ON THE TABLE. LOTS 1-9 (BLOCK B) WILL HAVE ONE ADDITIONAL 2" TREE PLANTED (REFERENCE APPENDIX D FOR LIST OF APPROVED TREE SPECIES).
 - A TOTAL OF 200 MITIGATION INCHES WERE REQUIRED FROM THE SITE. 201 INCHES WILL BE MITIGATED BY PLANTING TREES.
 - TREE WELLS HAVE A MINIMUM SPACING OF 5' FROM THE TREE TRUNK.



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit 1\03_CADD\01_Shis\C02.70 TREE PROTECTION PLAN.dwg Layout: 10/29/2024 11:06:28 AM By: Callider

HERON VALLEY PHASE 1
DETAILED TREE PROTECTION PLAN
(SHEET 1 OF 4)

NOT FOR CONSTRUCTION

SHEET
C02.21



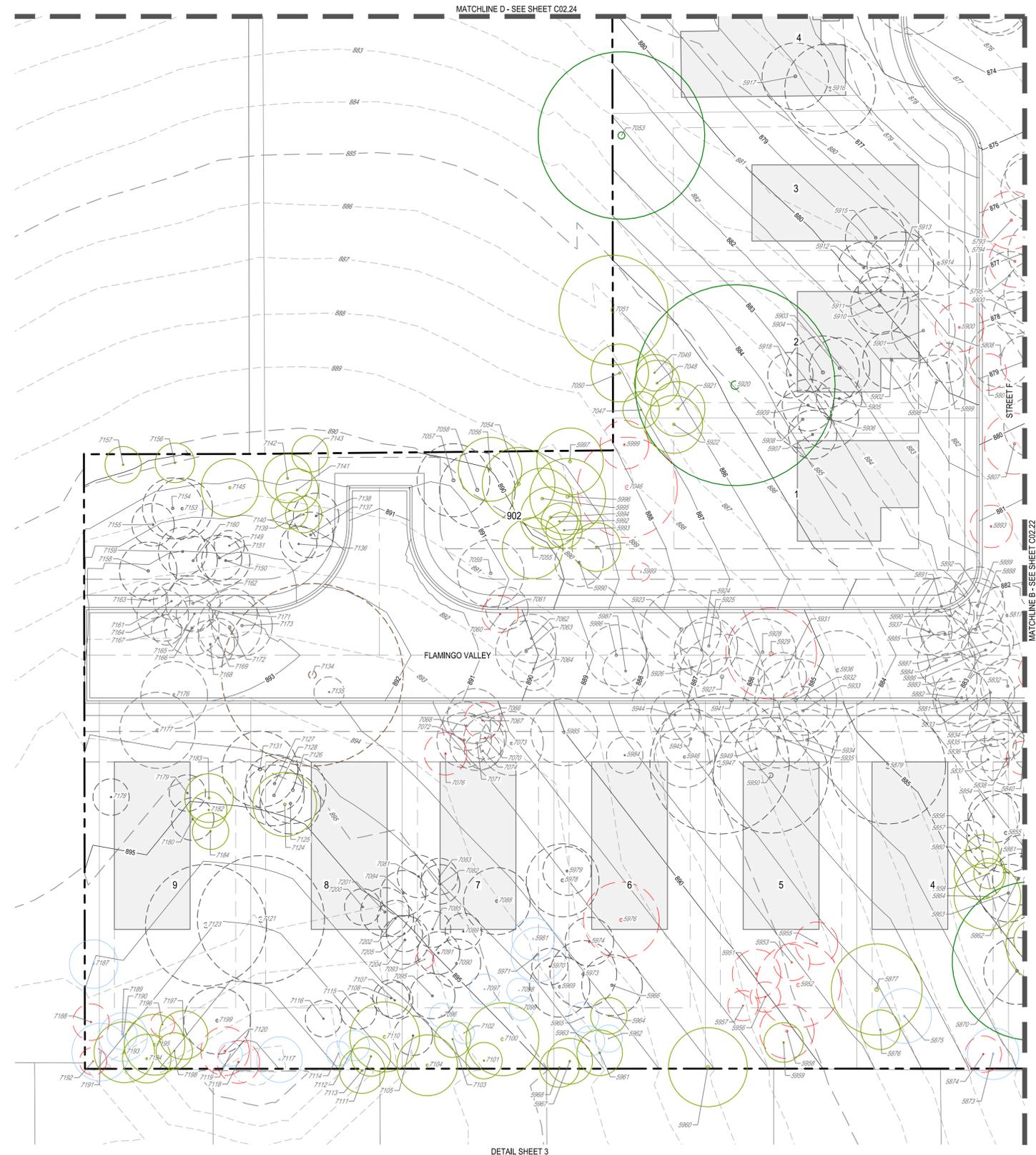
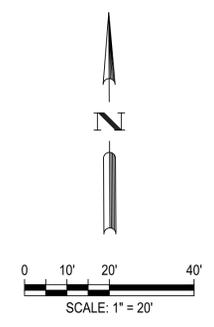
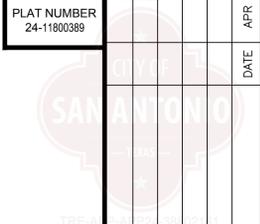
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-358-3300 www.bgeenergy.com
TXPE Registration No. P-1046

DETAIL SHEET 1

G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\03_CADD\01_Shis\C02.20 TREE PROTECTION PLAN.dwg Layout: DETAILED TREE PROTECTION PLAN (SHEET 3 OF 4) Plotted: 10/29/2024 11:06:37 AM By: Callidon

PLAT NUMBER
24-11800389

DATE	APR
REV	
DESCRIPTION	



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED LOT LINES
	PROPOSED EASEMENT
	LOT NUMBER
	PRESERVED HERITAGE TREE
	PRESERVED SIGNIFICANT TREE
	REMOVED SIGNIFICANT TREE
	EXEMPT - REMOVED HERITAGE TREE
	EXEMPT - REMOVED SIGNIFICANT TREE
	PRESERVED UNPROTECTED TREE
	REMOVED TREE IN POOR CONDITION
	REMOVED INVASIVE TREE

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HERON VALLEY PHASE 1
 DETAILED TREE PROTECTION PLAN
 (SHEET 3 OF 4)

NOT FOR CONSTRUCTION

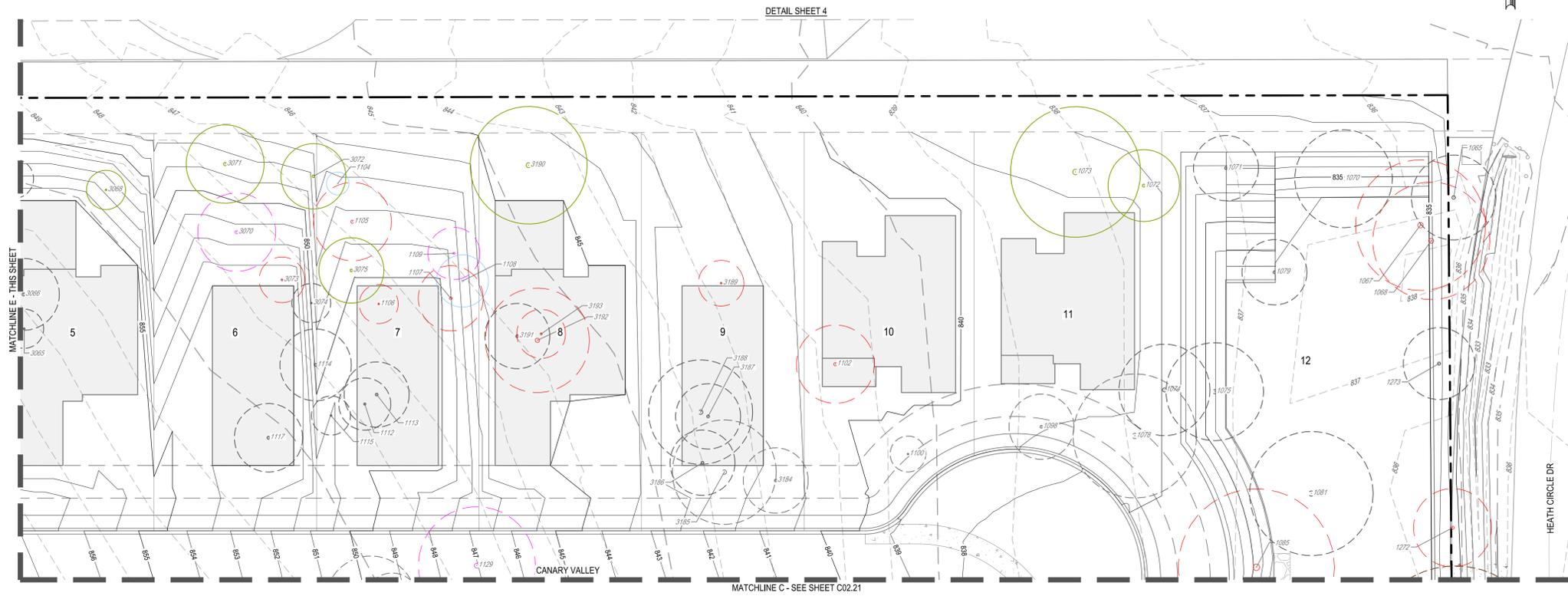
SHEET
 C02.23

BGE, INC.
 7330 San Pedro, Suite 202
 San Antonio, TX 78216
 TEL: 214-591-3600 www.bgeny.com
 TPE Registration No. P-1046

DESIGNED BY: JDC
 REVIEWED BY: OR
 DRAWN BY: JDC

DETAIL SHEET 3

DATE	REV	DESCRIPTION



LEGEND

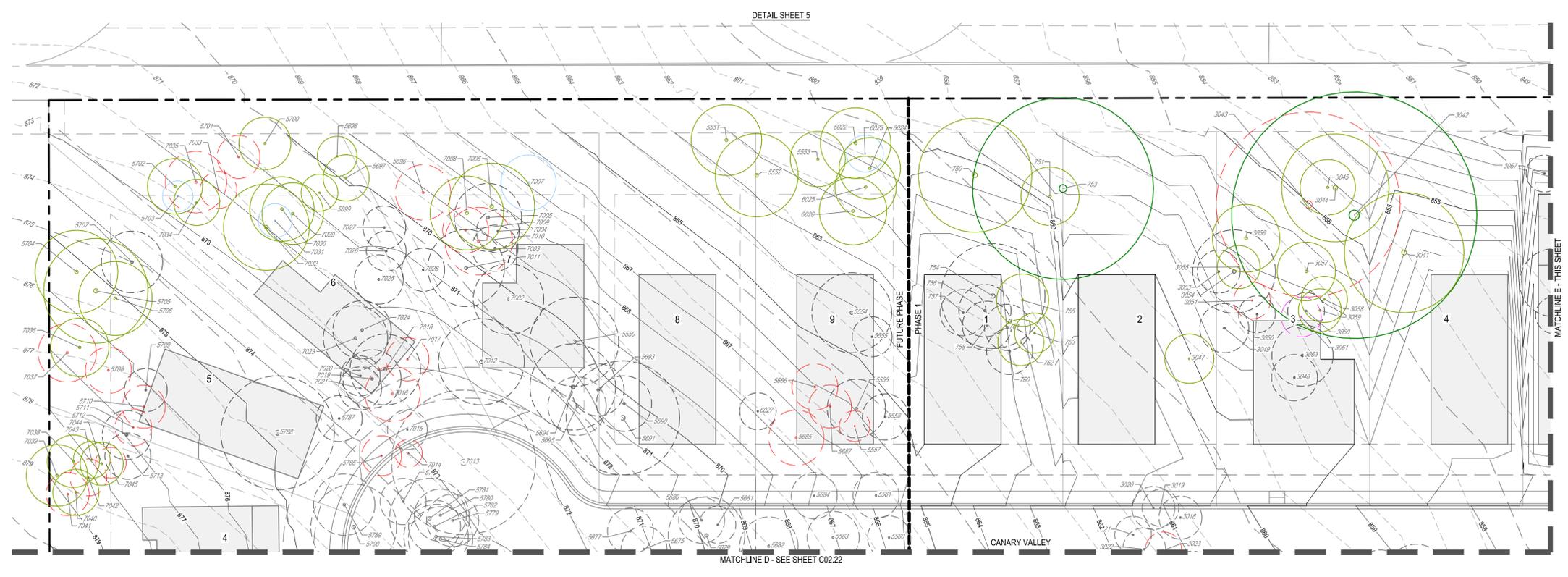
	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED LOT LINES
	PROPOSED EASEMENT
	LOT NUMBER
	PRESERVED HERITAGE TREE
	PRESERVED SIGNIFICANT TREE
	REMOVED SIGNIFICANT TREE
	EXEMPT - REMOVED HERITAGE TREE
	EXEMPT - REMOVED SIGNIFICANT TREE
	PRESERVED UNPROTECTED TREE
	REMOVED TREE IN POOR CONDITION
	REMOVED INVASIVE TREE

GENERAL NOTES

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3. PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.

MITIGATION NOTES

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HERON VALLEY PHASE 1
DETAILED TREE PROTECTION PLAN
(SHEET 4 OF 4)

NOT FOR CONSTRUCTION

SHEET
C02.24



BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-368-3360 www.bgeenergy.com
TXPE Registration No. P-1046

DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 750-933.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 940-1102.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1104-1238.

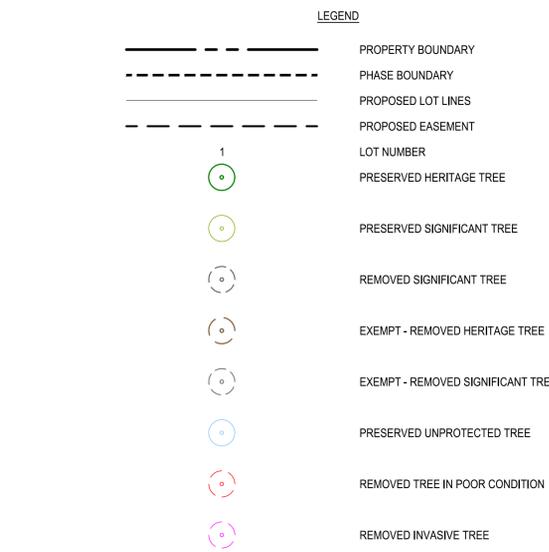
TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1239-1316.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1317-1564.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1565-1812.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1813-2060.

TOTAL INCHES BY CATEGORY table with categories like SIGNIFICANT-NON-EXEMPT TO REMAIN, HERITAGE-3:1 TO REMAIN, etc.



- GENERAL NOTES: 1. BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM... 2. NO CONSTRUCTION (CLEARING, CUTTING, FILLING, TRENCHING, ETC.) SHALL TAKE PLACE WITHIN THE 1/2 ROOT PROTECTION ZONE (RPZ)... 3. PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.
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PLAT NUMBER 24-1180389

Project information including BGE INC. logo, address (7330 San Pedro, Suite 202, San Antonio, TX 78216), phone, fax, and registration number. Includes a vertical title 'HERON VALLEY PHASE 1 TREE PROTECTION TABLES (SHEET 1 OF 2)' and a 'NOT FOR CONSTRUCTION' stamp.

DATE	APR
DESCRIPTION	
REV	
DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC

TREE SURVEY METHOD PRESERVATION REQUIREMENTS AND CALCULATIONS			
	VALUE	UNIT	COMMENTS
Overall Preservation			
Total	8,399.50	in.	
(Non-exempt) Removed	3,764.00	in.	
Preserved	4,635.50	in.	55.19%
100 yr Floodplain			
Significant			
Total	-	in.	
Removed	-	in.	
Preserved	-	in.	80.00%
Required 80%			0.00% Mitigation
Heritage			
Total	-	in.	
Removed	-	in.	
Preserved	-	in.	100.00%
Required 100%			0.00% Mitigation
Environmentally Sensitive Areas			
Significant			
Total	-	in.	
Removed	-	in.	
Preserved	-	in.	80.00%
Required 80%			0.00% Mitigation
Heritage			
Total	-	in.	
Removed	-	in.	
Preserved	-	in.	100.00%
Required 100%			0.00% Mitigation
Outside of Floodplain & ESA			
Significant			
Total (Non-Exempt)	5,493.00	in.	
Removed (Non-Exempt)	3,764.00	in.	
Preserved (Non-Exempt)	1,729.00	in.	31.48%
Required 35%			3.52% Mitigation
Total (Exempt)	2,314.50	in.	
Removed (Exempt)	2,314.50	in.	
Preserved (Exempt)	-	in.	
Required (n/a)			0.00% Mitigation
Heritage			
Total	534.00	in.	
Removed	-	in.	
Preserved	534.00	in.	100.00%
Required 100%			0.00% Mitigation
Total (Exempt)	58.00	in.	
Removed (Exempt)	58.00	in.	
Preserved (Exempt)	-	in.	
Required (n/a)			0.00% Mitigation
PRESERVATION MITIGATION REQUIRED			
100 yr Floodplain - Protected Required Mitigation	-	in.	(removed)
100 yr Floodplain - Heritage Required Mitigation	-	in.	(removed)
<small>(All tree species of Ash, Hackberry, Huisache, Ashe Juniper and Mesquite will be mitigated at 1:1.)</small>	-	in.	(removed x 1)
<small>(All other heritage trees to be mitigated at 3:1)</small>	-	in.	(removed x 3)
Environmentally Sensitive Areas - Protected Required Mitigation	-	in.	(removed)
Environmentally Sensitive Areas - Heritage Required Mitigation	-	in.	(removed)
<small>(All tree species of Ash, Hackberry, Huisache, Ashe Juniper and Mesquite will be mitigated at 1:1.)</small>	-	in.	(removed x 1)
<small>(All other heritage trees to be mitigated at 3:1)</small>	-	in.	(removed x 3)
Outside of Floodplain - Protected Required Mitigation	194.00	in.	
Outside of Floodplain - Heritage Required Mitigation	-	in.	(removed)
<small>(All tree species of Ash, Hackberry, Huisache, Ashe Juniper and Mesquite will be mitigated at 1:1.)</small>	-	in.	(removed x 1)
<small>(All other heritage trees to be mitigated at 3:1)</small>	-	in.	(removed x 3)
Total - Protected Mitigation Required	194.00	in.	
Total - Heritage Mitigation Required	-	in.	
TOTAL MITIGATION REQUIRED	194.00	in.	
PRESERVATION MITIGATION PROVIDED			
Total Inches Planted	201.00	in.	
<small>TOTAL MITIGATION (IN.) FROM THE "TOTAL PLANTED TREES" TABLE</small>			
Total Inches to be Paid	-	in.	
	\$	-	(\$200 per inch)
POST CONSTRUCTION TREE CANOPY REQUIRED			
Total Area Outside of Floodplain	11.34	Ac.	
Number of Residential Lots	61	Lots	
Required Canopy (38%)	187,708.75	Sq. Ft.	
Preserved Canopy (ESA & Outside of Floodplain)	1,729.00	in.	
**Assumed M-L trees from Appendix E	90,628.30	Sq. Ft.	=(Dia. In / Radius) * Shade Value=(Dia.in/16.7)*8.75
Heritage Canopy (ESA & Outside of Floodplain)	534.00	in.	
**Assumed M-L trees from Appendix E	27,990.46	Sq. Ft.	=(Dia. In / Radius) * Shade Value=(Dia.in/16.7)*8.75
Required Canopy to be Planted	69,089.99	Sq. Ft.	
POST CONSTRUCTION TREE CANOPY MITIGATION PROVIDED			
Total Canopy Planted	175,218.75	Sq. Ft.	
<small>TOTAL MITIGATION (SQ. FT.) FROM THE "TOTAL PLANTED TREES" TABLE</small>			
Total inches to be paid	-	in.	
	\$	-	(\$200 per inch)
TOTAL MITIGATION			
Total inches to be paid	-	in.	
	\$	-	

LEGEND

-----	PROPERTY BOUNDARY
-----	PHASE BOUNDARY
-----	PROPOSED LOT LINES
-----	PROPOSED EASEMENT
1	LOT NUMBER
○	PRESERVED HERITAGE TREE
○	PRESERVED SIGNIFICANT TREE
○	REMOVED SIGNIFICANT TREE
○	EXEMPT - REMOVED HERITAGE TREE
○	EXEMPT - REMOVED SIGNIFICANT TREE
○	PRESERVED UNPROTECTED TREE
○	REMOVED TREE IN POOR CONDITION
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TOTAL PLANTED TREES										
Description	Total Number of Trees	Diameter (in.)	Required Diameter (in.)	Extra Diameter (in.)	Shade Value	(Sq. Ft.)	Energy Credit	Total Planted Diameter (in.)	TOTAL MITIGATION (in.)	TOTAL MITIGATION (Sq. Ft.)
Required 2 trees per lot (NON-E.C.)	122	2.0	1.5	0.5		875.0	-	244	61	96,075.00
Number of extra trees on lots (E.C.)	61	2.0	-	2.0		875.0	1.5	122	122	72,056.25
Number of extra trees	9	2.0	-	2.0		875.0	-	18	18	7,087.50
TOTAL	192							384	201	175,218.75

HERON VALLEY PHASE 1
TREE PROTECTION CALCULATIONS



BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-368-3600 www.bgeenergy.com
TREE Registration No. F-1046

DATE	DESCRIPTION
APR	

STRM QVD (25 YEAR) TABLE

PIPE	EXISTING Q(CFS)	Q (CFS)	V (F/S)	D (FT)
POND OUTFALL	25.17	22.95	9.62	1.75

STRM QVD (100 YEAR) TABLE

PIPE	EXISTING Q(CFS)	Q (CFS)	V (F/S)	D (FT)
POND OUTFALL	31.10	29.74	11.64	1.75



LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EASEMENT
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED CURB INLET
- PROPOSED WASTEWATER LINE
- PROPOSED WATER LINE
- PROPOSED ELECTRIC
- PROPOSED GAS LINE
- PROPOSED WASTEWATER SERVICES
- PROPOSED WATER SERVICES
- DIRECTION OF FLOW
- PROPOSED SWALE FLOWLINE
- JURISDICTIONAL WATERS

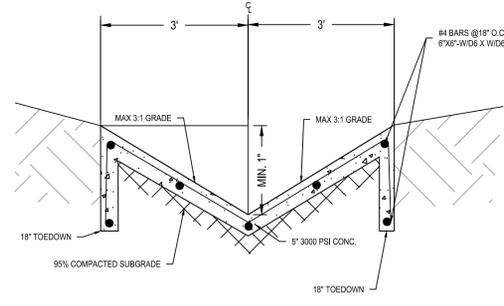
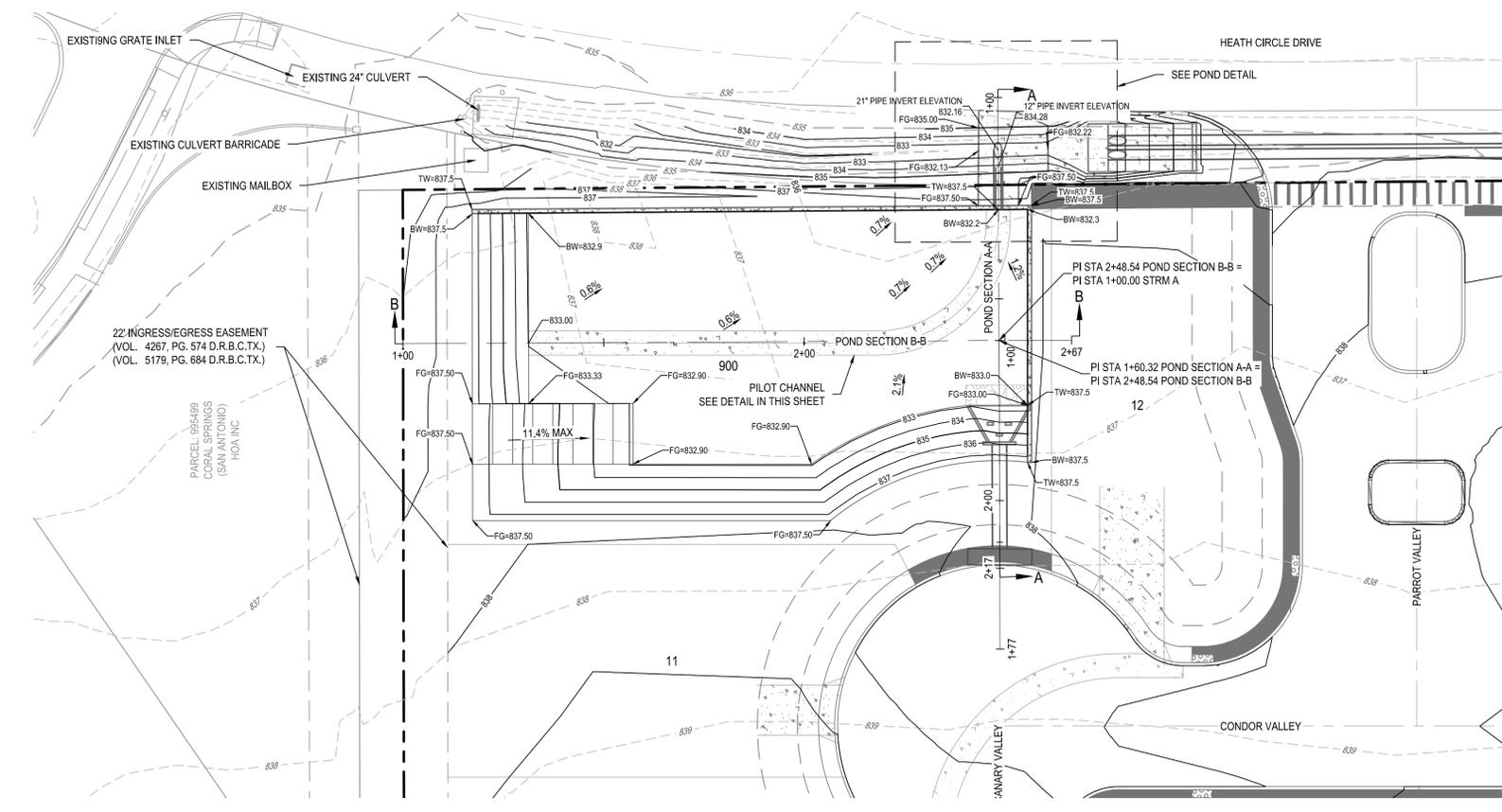
PROFILE LEGEND

- PROPOSED STORM PIPE
- WATER SURFACE ELEVATION
- PROPOSED GRADE
- EXISTING GRADE

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

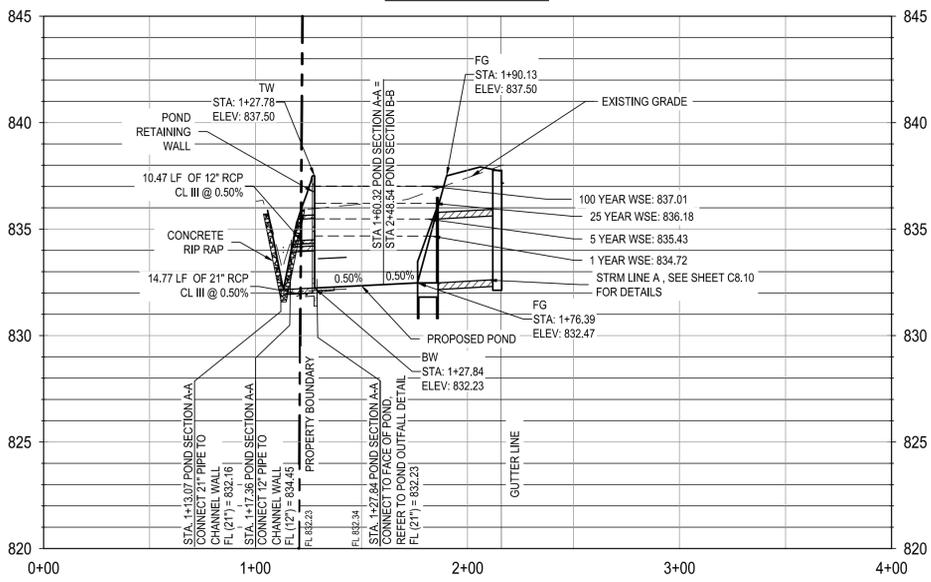
NOTES:

- 1) CONTRACTOR TO CONNECT PROPOSED STORM SEWER OUTFALL TO POND.
- 2) EARTHEN DETENTION FACILITY SHALL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT (85%) OF THE DISTURBED SURFACE AREA MUST BE ESTABLISHED VEGETATION PRIOR TO FINAL POND ACCEPTANCE.
- 3) VEGETATION SHALL BE DROUGHT RESISTANT, LOW GROWTH, NATIVE SPECIES GRASSES WHICH WILL ALLOW UNOBSTRUCTED PASSAGE OF FLOODWATERS IN ACCORDANCE WITH CITY OF SAN ANTONIO STORM WATER DESIGN CRITERIA MANUAL.
- 4) CONTRACTOR SHALL PHASE CONSTRUCTION AND/OR PROVIDE NECESSARY BMPs TO MITIGATE INTERM CONDITIONS RUNOFF DURING CONSTRUCTION DUE TO CLEARING, GRADING, SUBGRADE PREPARATION, PAVING, BUILDINGS, ETC., AND TO PREVENT ADVERSE IMPACTS TO OTHER PROPERTY, STRUCTURES, AND INFRASTRUCTURE DURING CONSTRUCTION.
- 5) DETENTION POND EXCAVATION AND/OR EMBANKMENT NECESSARY FOR PROVIDING STORAGE MUST BE SUBSTANTIALLY COMPLETE PRIOR TO CITY INSPECTION OF STREET SUBGRADE, CURB, FLEX BASE, AND PAVEMENT WITHIN THE WATERSHED DRAINING TO THE DETENTION POND.
- 6) DETENTION POND WALLS DESIGN BY OTHERS. PLEASE REFERENCE ROSCH STRUCTURAL PLANS DATED 3/17/2025. CONTRACTOR TO PERMIT STRUCTURAL WALLS AND COORDINATE WITH STRUCTURAL ENGINEER FOR INSPECTIONS & TESTS.

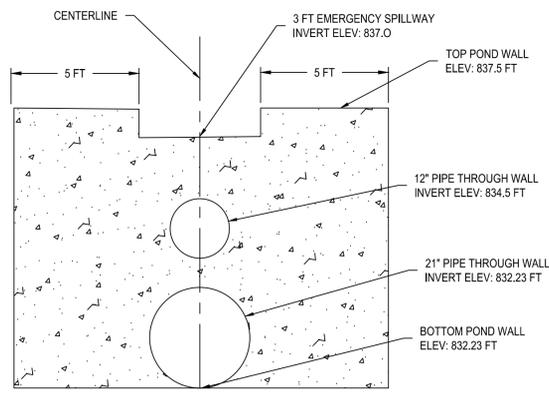
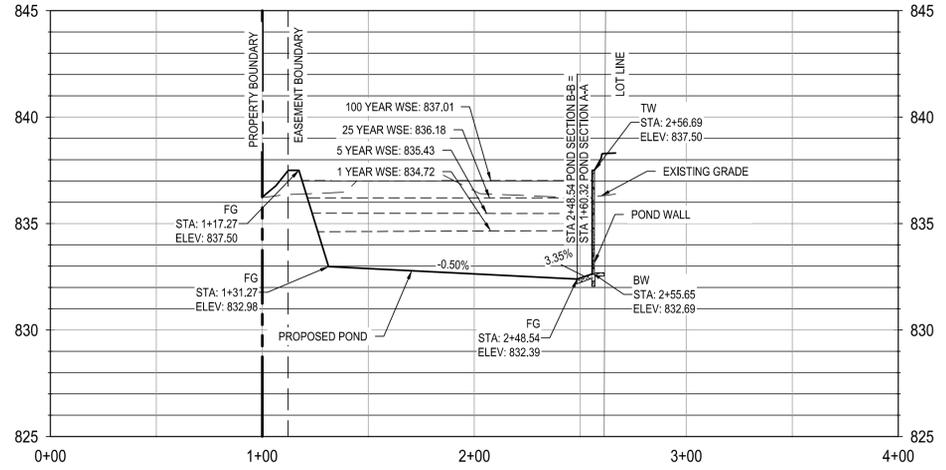


TYPICAL PILOT CHANNEL
N.T.S.

POND SECTION A-A



POND SECTION B-B



POND OUTFALL DETAIL
N.T.S.

POND HEADWATER ELEVATIONS

ULTIMATE STORM EVENT	ELEV.
1 YEAR	834.72
5 YEAR	835.43
25 YEAR	836.18
100 YEAR	837.01

Approved by COSA Public Works
By:
Date: 6/25/2025

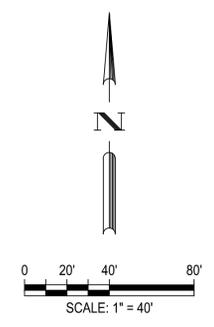
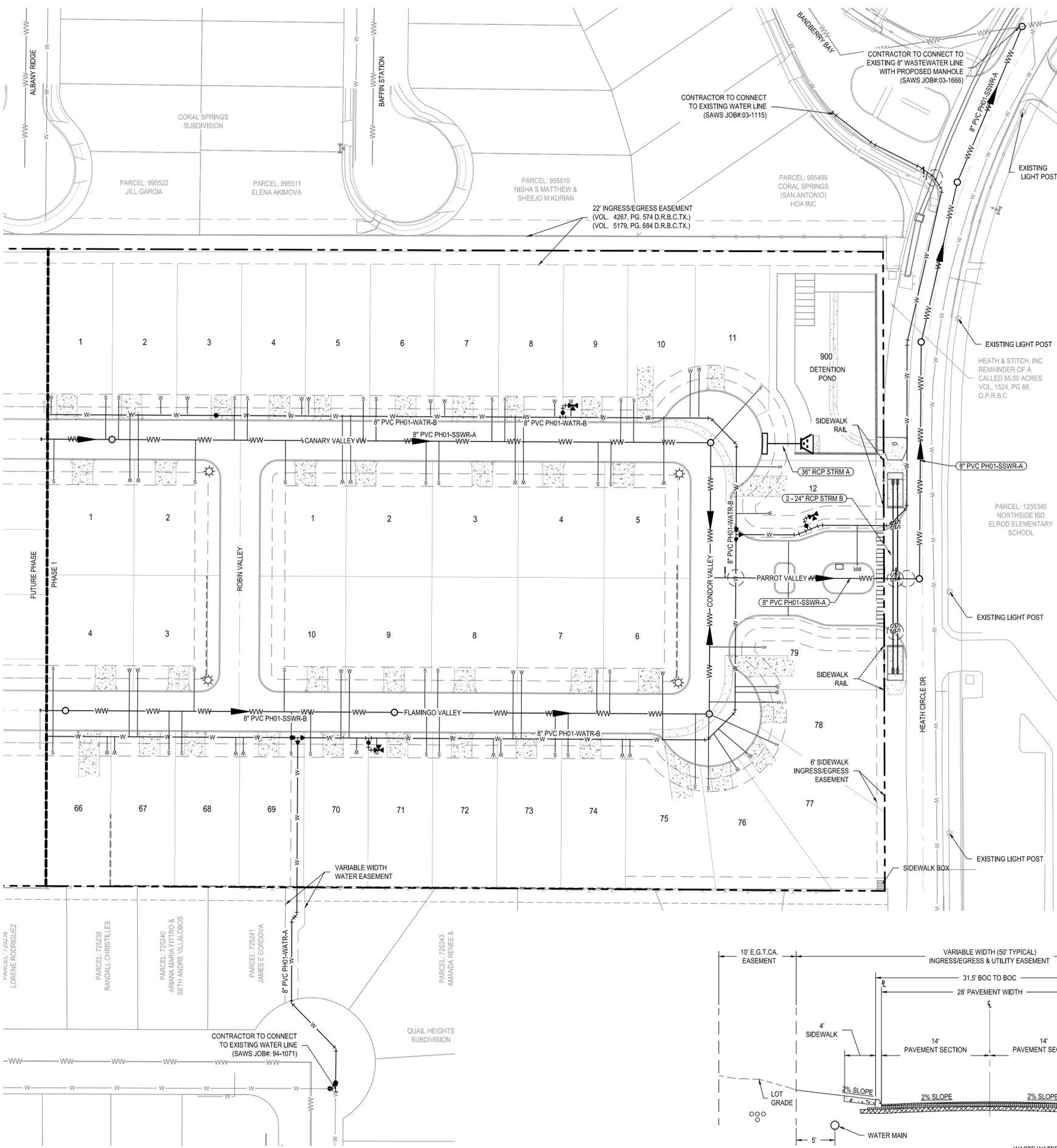
POND TABLE

ELEVATION (FT)	POND DEPTH (FT)	STAGE (FT)	SURFACE AREA (SF)	VOLUME (CF)	CUMULATIVE VOLUME (CF)
832.23	0	0	119	0	0
832.5	0.27	0.27	1,474	181	181
833.0	0.5	0.5	6,780	873	1,054
833.5	0.5	1.0	7,196	3,488	4,542
834.0	0.5	1.5	7,512	3,676	8,219
834.5	0.5	2.0	7,841	3,838	12,056
835.0	0.5	2.5	8,183	4,005	16,061
835.5	0.5	3.0	8,539	4,180	20,241
836.0	0.5	3.5	8,908	4,361	24,602
836.5	0.5	4.0	9,288	4,548	29,150
837.0	0.5	4.5	9,680	4,741	33,892
837.5	0.5	5.0	10,081	4,939	38,831

HERON VALLEY PHASE 1
DETENTION POND PLAN



DATE	APR
DESCRIPTION	
REV	
DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	BUILDING SETBACK
	PROPOSED LOT LINES
	PROPOSED EASEMENT
	PROPOSED WATER MAIN
	DUAL/SINGLE WATER SERVICES
	PROPOSED FIRE HYDRANT
	PROPOSED GATE VALVE
	PROPOSED WASTEWATER MAIN
	WASTEWATER SERVICES
	PROPOSED STORM LINE WITH MANHOLE
	PROPOSED CURB INLET
	PROPOSED STREET LIGHT
	RAISED REFLECTIVE HYDRANT MARKER
	EXISTING WATER MAIN
	EXISTING WASTEWATER MAIN
	UTILITY CROSSING

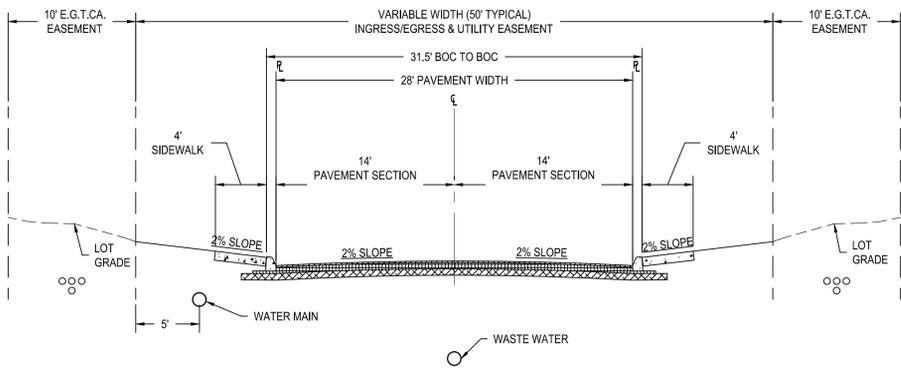
NOTE:
1. ELECTRIC/GAS/TELECOMM PLANS SHOWN FOR SCHEMATIC PURPOSES ONLY. REFER TO APPLICABLE UTILITY PLANS FOR FULL APPROVED LAYOUT.

UTILITY GENERAL NOTES:

- ALL MAINS SHALL BE FLUSHED, HYDROSTATICALLY TESTED, AND DISINFECTED BY THE CONTRACTOR.
- THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
- ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT THEIR EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
- ALL ITEMS NOT SPECIFICALLY CALLED FOR ON THE PLANS, OR IN THE SPECIFICATIONS, BUT NECESSARY TO REASONABLY CONSTRUCT THE FACILITY OR IMPROVEMENT, SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT AND NO SEPARATE PAYMENTS WILL BE MADE FOR THESE ITEMS.
- DEPTH OF BURY FOR ALL PIPING SHALL BE A MINIMUM OF 4' UNLESS OTHERWISE NOTED OR APPROVED BY SAWS.
- CONTRACTOR TO GRADE SITE TO WITHIN +/- 0.10' BEFORE THE INSTALLATION OF UTILITIES TO ENSURE PROPER COVER IS ACHIEVED.
- THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES REGARDING THE LOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL EXCAVATE AROUND EXISTING UTILITIES WHICH INTERSECT THE PROPOSED ALIGNMENT OF THE SERVICES AND NOTIFY THE ENGINEER OF POTENTIAL CONFLICTS, PRIOR TO ANY CONSTRUCTION IN THE AREA.
- ALL DISTURBED AREAS WITHIN EASEMENTS AND CITY OF SAN ANTONIO RIGHT-OF-WAY SHALL BE HYDRO-MULCHED IN ACCORDANCE WITH THE CITY OF SAN ANTONIO SUBDIVISION ORDINANCE AND TxDOT SPECIFICATIONS.
- SITE FALLS BELOW ELEVATION OF 926 FEET THEREFORE PVR'S WILL BE REQUIRED AT EACH WATER METER. PVR INSTALLATION IS THE RESPONSIBILITY OF THE HOME BUILDER ON THE PRIVATE SIDE OF THE METER.
- DRIVEWAY LOCATIONS AND DIMENSIONS ARE FOR REFERENCE ONLY. CONTRACTOR IS TO CONFIRM DRIVEWAY LOCATIONS WITH HOME BUILDER PRIOR TO INSTALLATION OF THE UTILITIES.

UTILITY TRENCH COMPACTION
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF SAN ANTONIO STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF SAN ANTONIO STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

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



BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-336-0000 www.bgeenergy.com
TXPE Registration No. P-1040

HERON VALLEY PHASE 1
UTILITY PLAN



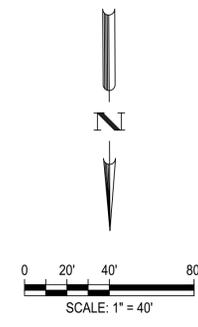
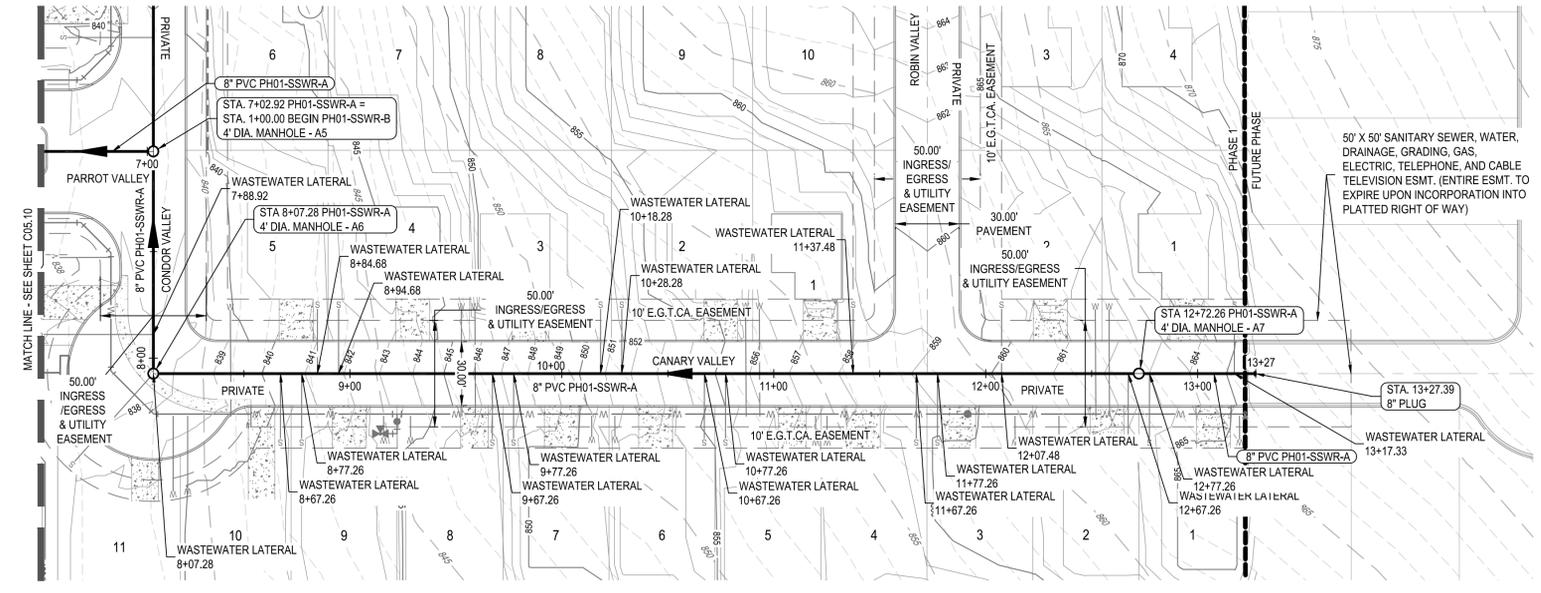
REVIEWED BY THE
SAN ANTONIO WATER SYSTEM

THIS DOES NOT RELIEVE THE DESIGNING ENGINEER,
CONTRACTOR OR SUB-CONTRACTOR OF THE
RESPONSIBILITY FOR COMPLYING WITH ALL OF THE
SAN ANTONIO WATER SYSTEM AND T.C.E.O. RULES
AND REGULATIONS

BY: *Antonio D. Rivas*
DATE: 11/15/2024

MIDDLE COLLECTION AND TREATMENT AREA (MCTA)			
DEVELOPER NAME:	HYG HOMES		
DEVELOPER ADDRESS:	84 NE LOOP 410, SUITE 242		
CITY:	SAN ANTONIO	STATE:	TX
ZIP:	78216		
PHONE:	(210) 986-2025	FAX:	N/A
SAWS BLOCK MAP #:	N/A	TOTAL EDUS:	40
TOTAL ACRES:	2.361		
TOTAL LINEAR FOOTAGE OF PIPE:	11,142.00	PLAT NO.:	24-11800389
NUMBER OF LOTS:	40	SAWS JOB NO.:	24-1625

PLAT NUMBER
24-11800389



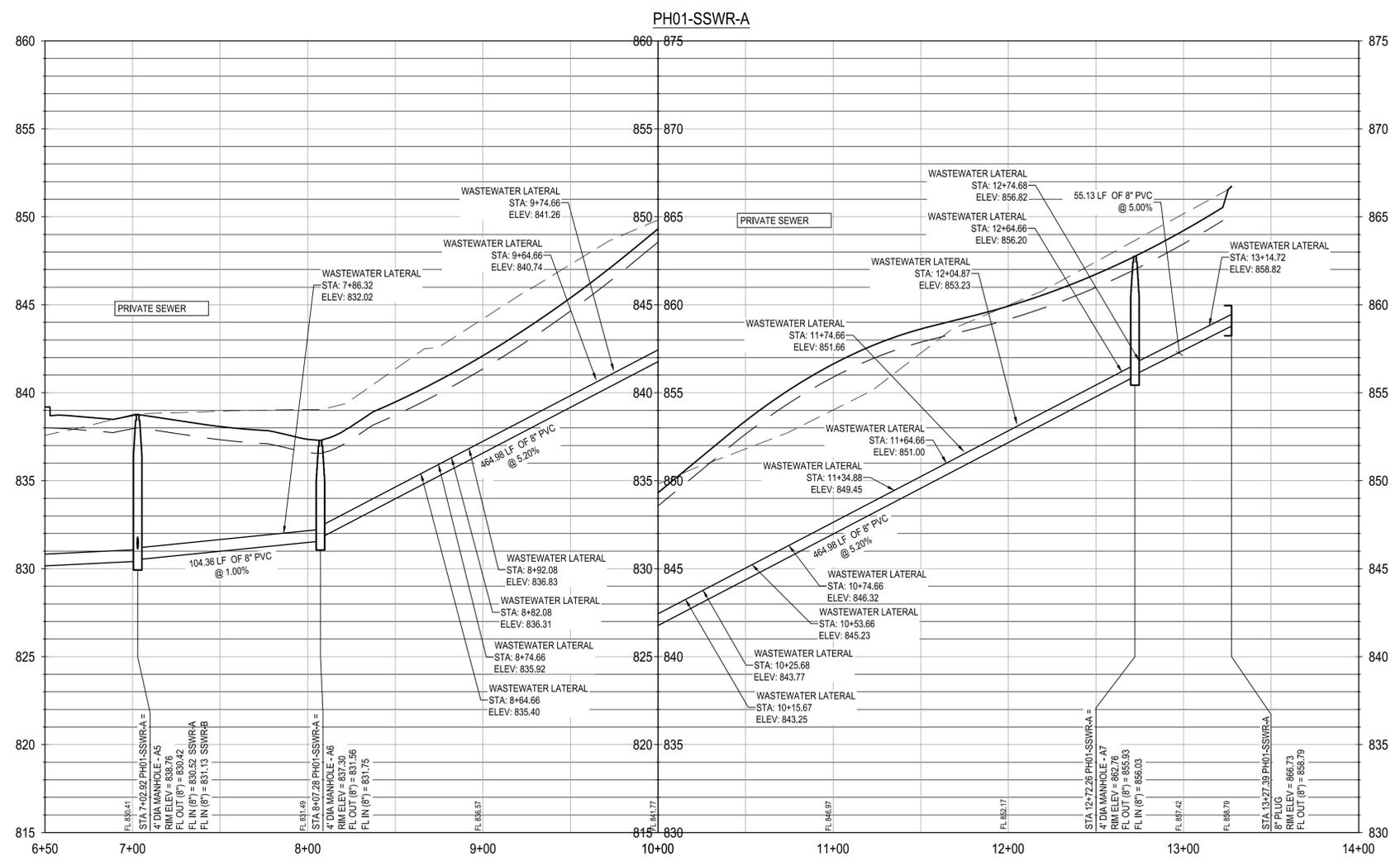
LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED WASTEWATER LINE w/MANHOLE
	PROPOSED WASTEWATER CLEANOUT
	PROPOSED WATER LINE
	PROPOSED SINGLE/DOUBLE WATER SERVICE
	PROPOSED STORM LINE
	PROPOSED ELECTRIC
	PROPOSED GAS
	DIRECTION OF FLOW
	UTILITY CROSSING

PROFILE LEGEND

	PROPOSED WASTEWATER MAIN
	EXISTING SURFACE
	PROPOSED SURFACE
	PROPOSED SUBGRADE

G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01 - Unit 103_CADD\01 - Shis\05.10 WASTEWATER LINE A PLAN & PROFILE.dwg Layout: 11/14/2024 3:56:30 PM By: Calderon



SEWER GENERAL NOTE:
WASTEWATER PIPES SHALL BE SDR21 PVC.
NOTE:
UTILITY SYMBOLS ARE NOT TO SCALE, AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.

TRENCH EXCAVATION SAFETY PROTECTION

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

NOTES:

- ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND WILL BE ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND WILL BE CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PROTECT ALL EXISTING TREES, FENCES, CONTRACTOR SHALL PROTECT ALL EXISTING TREES, FENCES, RETAINING WALLS AND STRUCTURES UNLESS OTHERWISE NOTED.
- WATER LINES 3" AND SMALLER SHALL BE SCH 40 PVC OR CLASS WATER LINES 3" AND SMALLER SHALL BE SCH 40 PVC OR CLASS 200 PVC WATER PIPE. WATER LINES 4" THROUGH 12" SHALL BE AWWA C-909. ALL WATER MAINS 14" THROUGH 36" SHALL BE C-909.
- GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE SHOWN FOR INSTALLATION LOCATION PURPOSES. NOT ALL FITTINGS ARE NOTED, SHOWN, OR INDICATED.
- REFER TO GENERAL NOTES SHEET OR SPECIFIC DETAIL SHEET IN THIS SET FOR FURTHER INSTRUCTIONS. FOR ANY DISCREPANCIES THE MORE STRINGENT WILL APPLY.
- REFER TO PLAN AND PROFILE SHEETS IN THIS SET FOR SANITARY REFER TO PLAN AND PROFILE SHEETS IN THIS SET FOR SANITARY SEWER AND STORM SEWER DESIGN INFORMATION.
- RADIUS WATERLINE PIPE SHALL BE LAID IN 20 FT INCREMENTS AT 1" RADIUS WATERLINE PIPE SHALL BE LAID IN 20 FT INCREMENTS AT 1" DEFLECTIONS.
- COMPACTION OF TRENCH UNDER PROPOSED PAVING SHOULD USE COMPACTION OF GRANULAR MATERIAL IF UNSUITABLE SOIL IS EXCAVATED FROM TRENCH.
- ALL OTHER UTILITIES SHALL BE INSTALLED BELOW THE WATER LINE ALL OTHER UTILITIES SHALL BE INSTALLED BELOW THE WATER LINE WITH AT LEAST 1' SEPARATION.

PRIVATE STREET DESIGNATION:

LOT 999, BLOCK 9, IS A PRIVATE STREET AND IS DESIGNATED AS AN IRREVOCABLE UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE, CABLE TELEVISION, DRAINAGE, PEDESTRIAN, PUBLIC WATER, WASTEWATER, AND RECYCLED WATER MAINS.

FINISHED FLOOR ELEVATIONS

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

DATE	APR
DESCRIPTION	
DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC

BGE

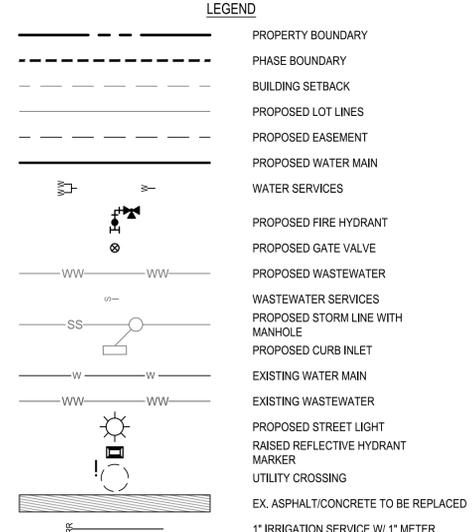
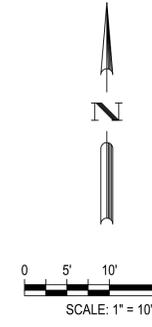
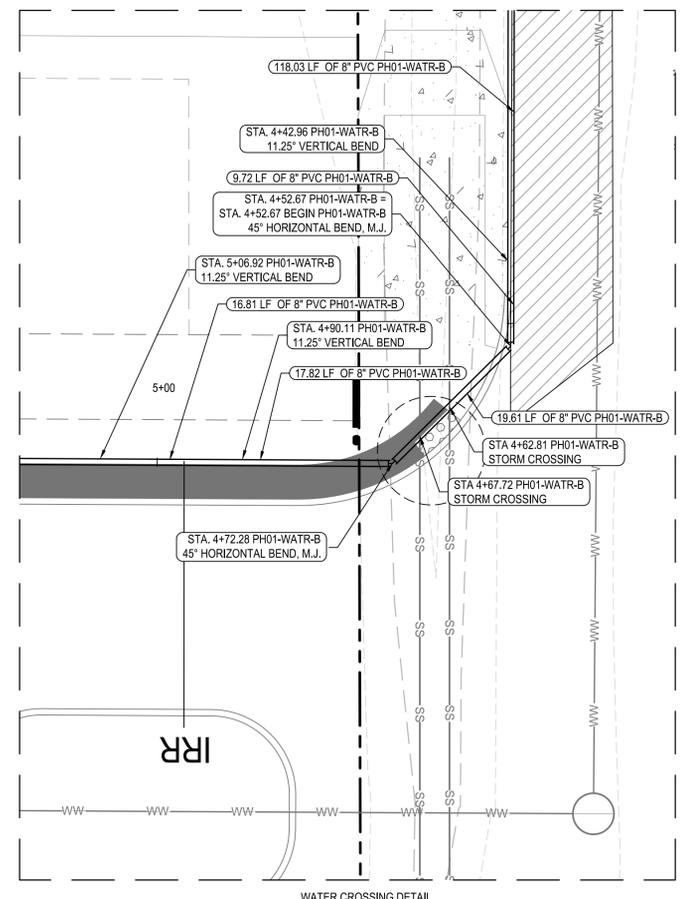
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 210-360-9999
www.bgeinc.com
TXE Registration No. F-1040

HERON VALLEY PHASE 1
WASTEWATER LINE A PLAN & PROFILE
STA 6+50 TO END

NOT FOR CONSTRUCTION

STATE OF TEXAS
JAVIER CASTELLO
122170
Professional Engineer
11/14/2024
SHEET
C05.11

DATE	DESCRIPTION
APR	



SAWS PRESSURE ZONE: 1111

DEVELOPER NAME: HYG HOMES
 DEVELOPER ADDRESS: 84 NE LOOP 410, SUITE 242
 CITY: SAN ANTONIO STATE: TX ZIP: 78216
 PHONE: (210) 966-2025 FAX: N/A
 SAWS BLOCK MAP # TOTAL EDUS: 42 TOTAL ACREAGE: 7.361
 TOTAL LINEAR FOOTAGE OF PIPE: 2,078 PLAT NO.: 24-11800389
 NUMBER OF LOTS: 40 SAWS JOB NO.: 24-1154

NOTE:
1. ELECTRIC/GAS/TELECOMM PLANS SHOWN FOR SCHEMATIC PURPOSES ONLY. REFER TO APPLICABLE UTILITY PLANS FOR FULL APPROVED LAYOUT.

NOTE:
IF THE MAXIMUM STATIC PRESSURE EXCEEDS 80 PSI, A PRV WILL BE REQUIRED ON THE PROPERTY OWNER'S SIDE OF THE WATER METER.

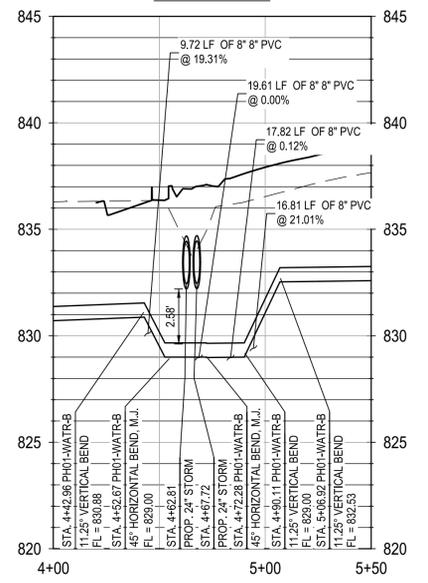
SAWS GENERAL CONSTRUCTION:

- 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 211 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 CONSTRUCTION PUBLIC WORKS CONSTRUCTION."
 - E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM). 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.
- THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE: [HTTPS://WWW.SAWS.ORG/BUSINESS_CENTERS/SPECS](https://www.saws.org/business_centers/specs), UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.
- THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973. NO NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.
- LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATION 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.
- 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/SERVICES/LOCATES](http://www.saws.org/services/locates)
 - COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
 - COSA TRAFFIC SIGNAL OPERATIONS (210) 266-8448
 - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
 - TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-4005 OR 811
- 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 BY THE PROJECT'S CONSTRUCTION. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) AND/OR BEAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) AND/OR BEAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSWORKREQ@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 CONSWORKREQ@SAWS.ORG.
- ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
- COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRANCH 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 THE REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

SAWS WATER NOTES:

- 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
- 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. 300, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".
- 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).
- SUITABLE ANCHORAGE/THRUST BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, TIEES, CROSSES, VALVES, AND BENDS. IN ACCORDANCE WITH THE STANDARD DRAWINGS DD-839 SERIES AND ITEM NO. 839 IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- ALL VALVES SHALL READ "OPEN RIGHT".
- PRIVATE CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 926 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 926 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).
- PIPE DISINFECTION WITH DRY HYTH FOR PROJECTS LESS THAN 800 LINEAR FEET, (ITEM NO. 847.3); MAINS SHALL BE DISINFECTED WITH DRY HYTH 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.
- 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.
- 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.
- DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

PH01-WATR-B



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



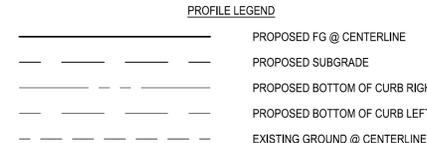
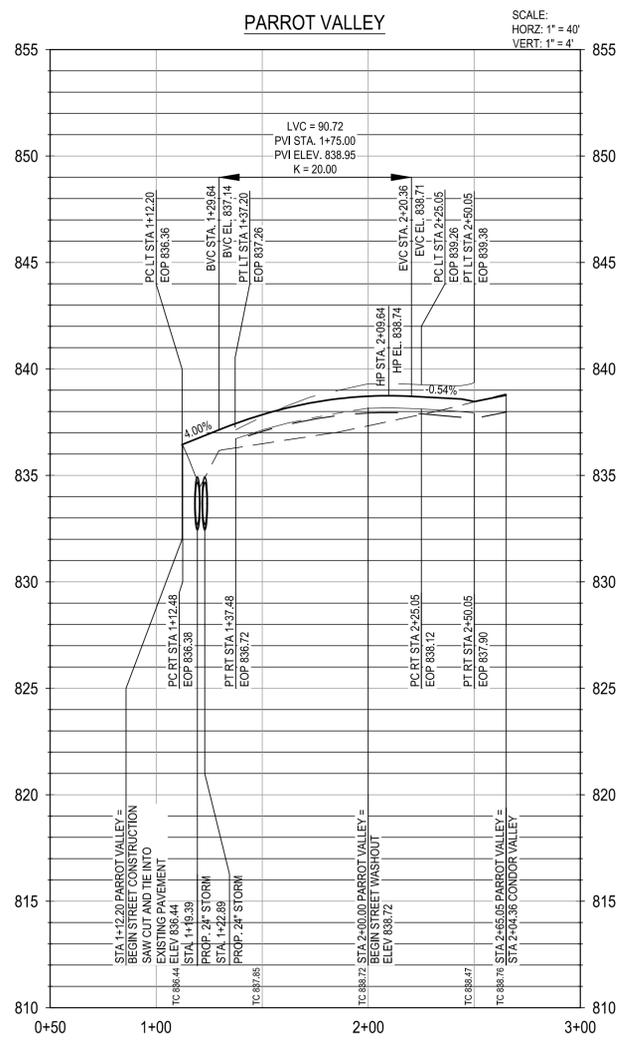
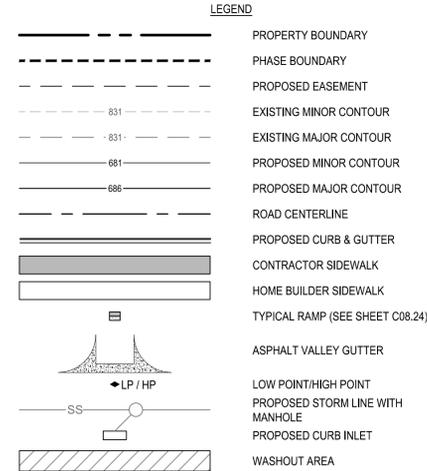
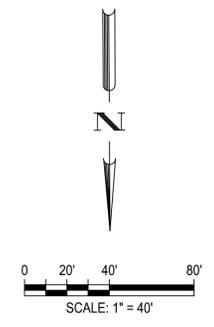
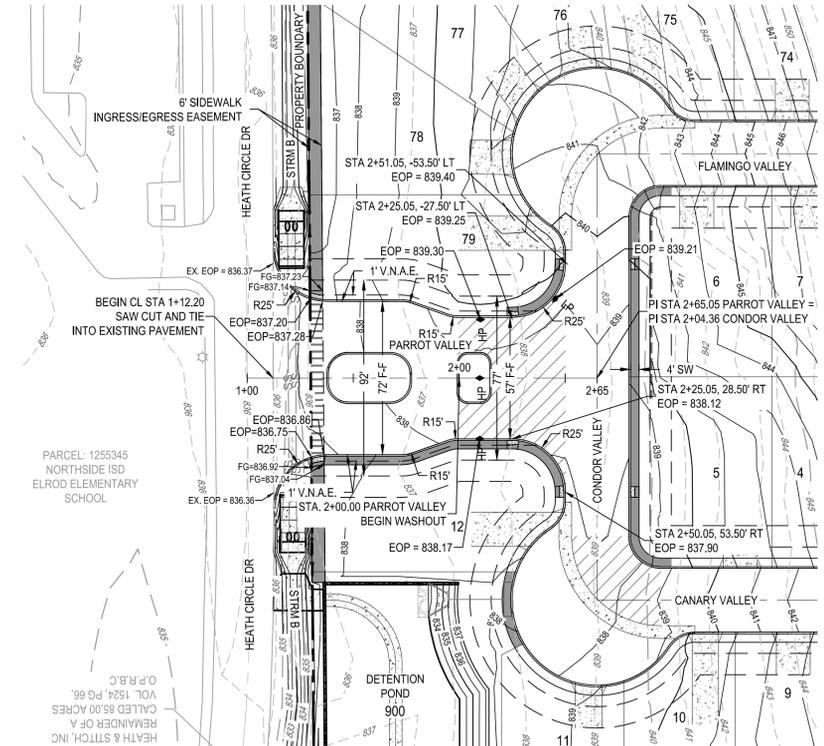
BGE, INC.
 7330 San Pedro, Suite 202
 San Antonio, TX 78216
 TEL: 210-361-3600 www.bge.com
 TSP# Registration No. P-1046

HERON VALLEY PHASE 1
 WATER CROSSING DETAIL

NOT FOR CONSTRUCTION

STATE OF TEXAS
 JAVIER CASTELLO
 122170
 PROFESSIONAL ENGINEER
 12/05/24
 SHEET
 C06.01

DATE	REV	DESCRIPTION



NOTE: CONTRACTOR SHALL ENSURE THAT PROPOSED A.D.A. RAMPS AND ACCESSIBLE ROUTES ALONG ROAD CROSSING COMPLY WITH SPECIFICATIONS FOR BOTH RUNNING SLOPE AND CROSS SLOPE.

* CONTRACTOR TO FIELD VERIFY AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

TRENCH EXCAVATION SAFETY PROTECTION

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

- NOTES:**
- CONTRACTOR TO SEE DETAIL SHEET FOR TYPICAL ROAD CROSS-SECTIONS.
 - CONTRACTOR SHALL CLEAR AND GRUB THE ENTIRE STREET RIGHT OF WAY WITH THE EXCEPTION OF TREES TO REMAIN AND COORDINATE WITH OWNER AND ENGINEER TO SELECT CLEAR P.U.E. WHERE APPLICABLE FOR DRY UTILITY INSTALLATION.
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 - SIDEWALKS ADJACENT TO SINGLE FAMILY LOTS ARE TO BE CONSTRUCTED CONCURRENTLY WITH EACH SINGLE FAMILY HOUSE BY THE HOME BUILDER.

PRIVATE STREET DESIGNATION:

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DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC

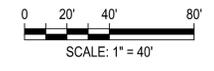
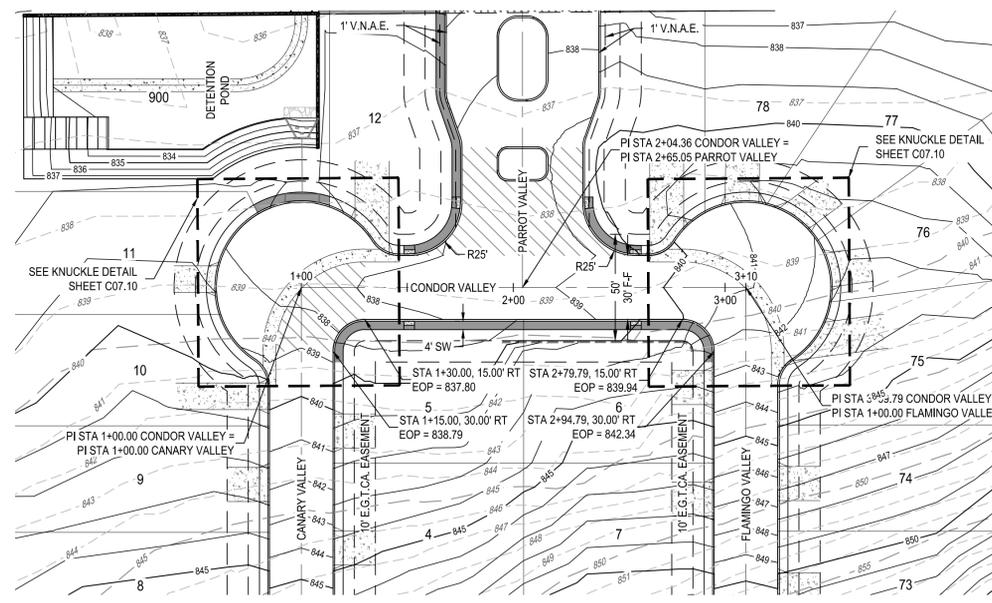


BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
Tel: 214-360-0000 www.bgeenergy.com
EPE Registration No. P-1049

HERON VALLEY PHASE 1
PARROT VALLEY PLAN AND PROFILE

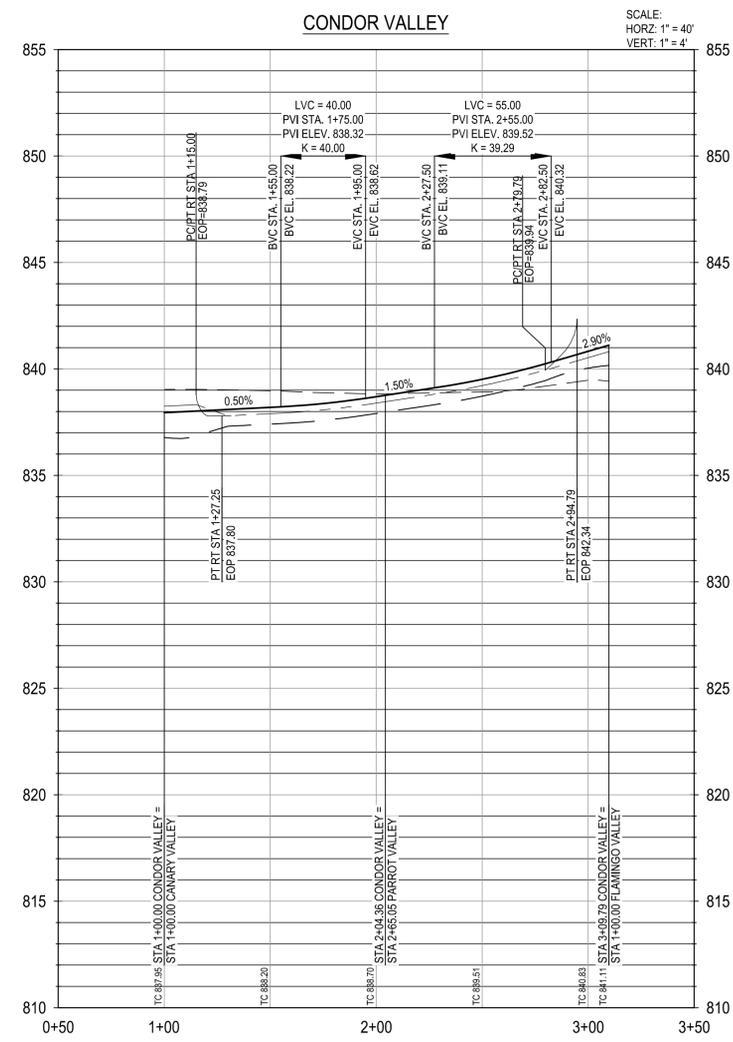


DATE	REV	DESCRIPTION
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	10	



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	ROAD CENTERLINE
	PROPOSED CURB & GUTTER
	CONTRACTOR SIDEWALK
	HOME BUILDER SIDEWALK
	TYPICAL RAMP (SEE SHEET C08.24)
	ASPHALT VALLEY GUTTER
	LOW POINT/HIGH POINT
	PROPOSED STORM LINE WITH MANHOLE
	PROPOSED CURB INLET
	WASHOUT AREA



PROFILE LEGEND

	PROPOSED FG @ CENTERLINE
	PROPOSED SUBGRADE
	PROPOSED BOTTOM OF CURB RIGHT
	PROPOSED BOTTOM OF CURB LEFT
	EXISTING GROUND @ CENTERLINE

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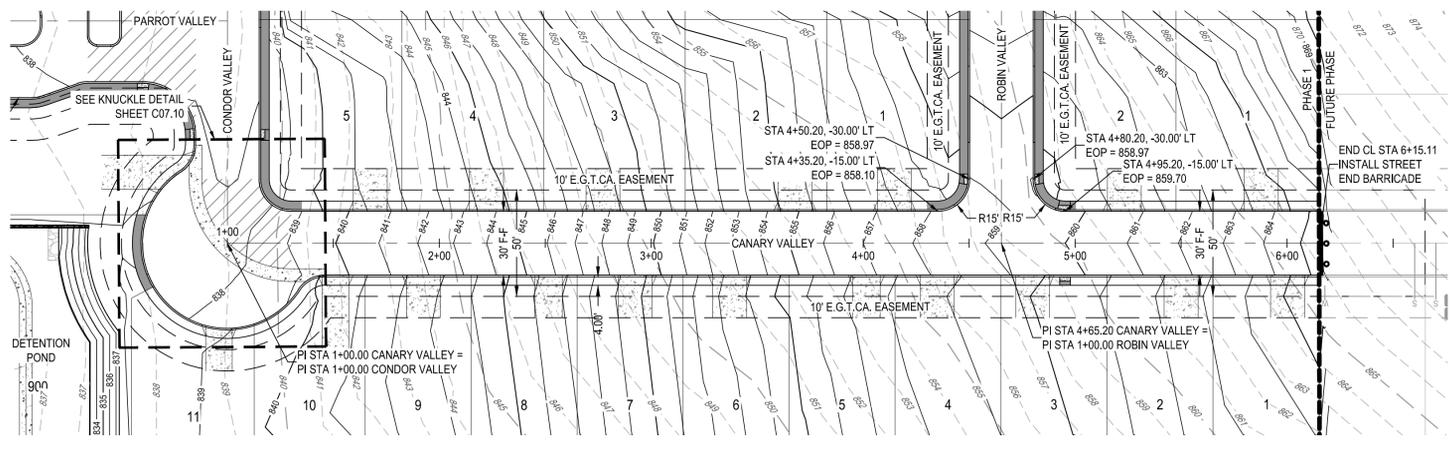
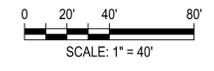
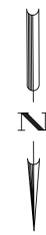
DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC



HERON VALLEY PHASE 1
CONDOR VALLEY PLAN AND PROFILE

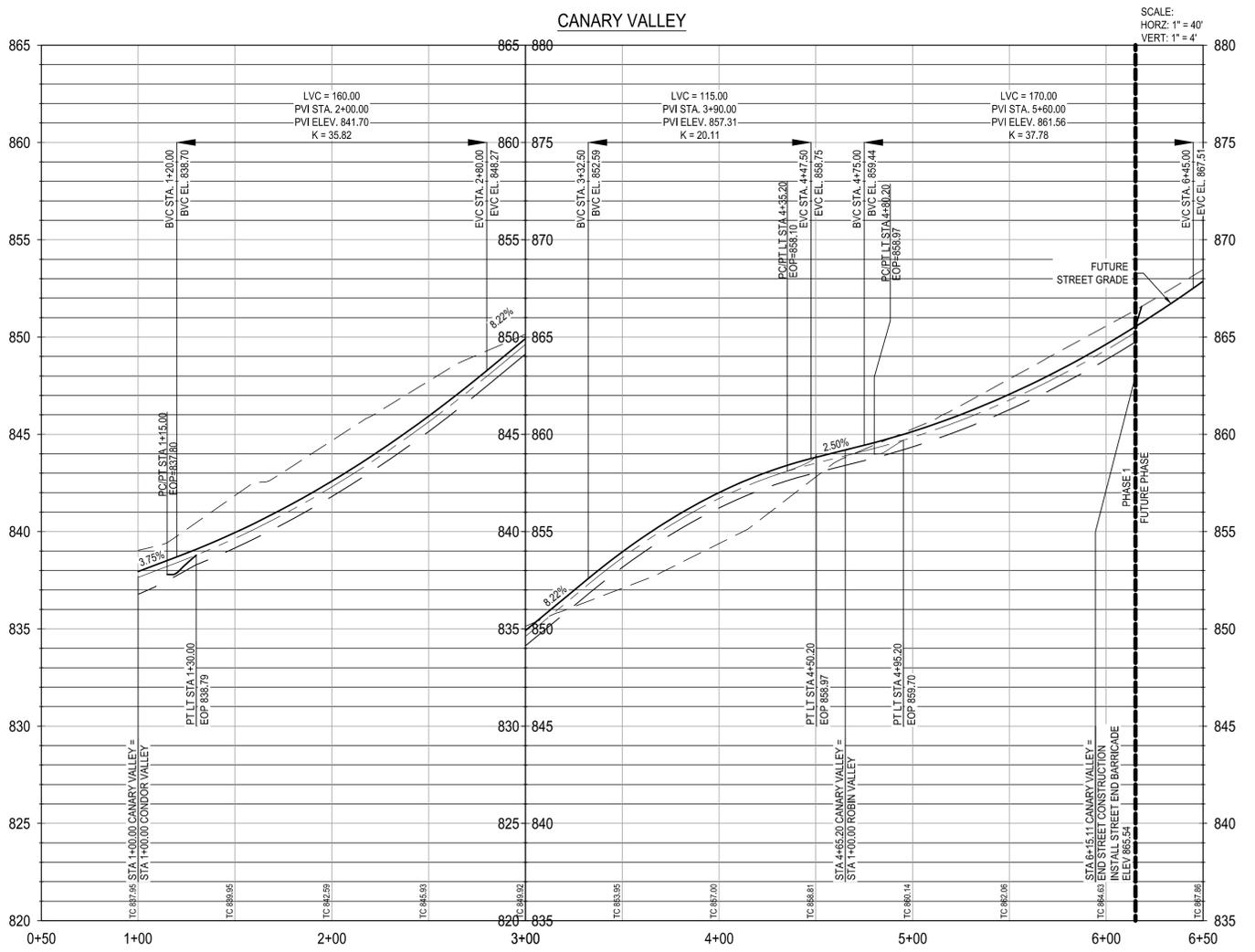


DATE	REV	DESCRIPTION



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED EASEMENT
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	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
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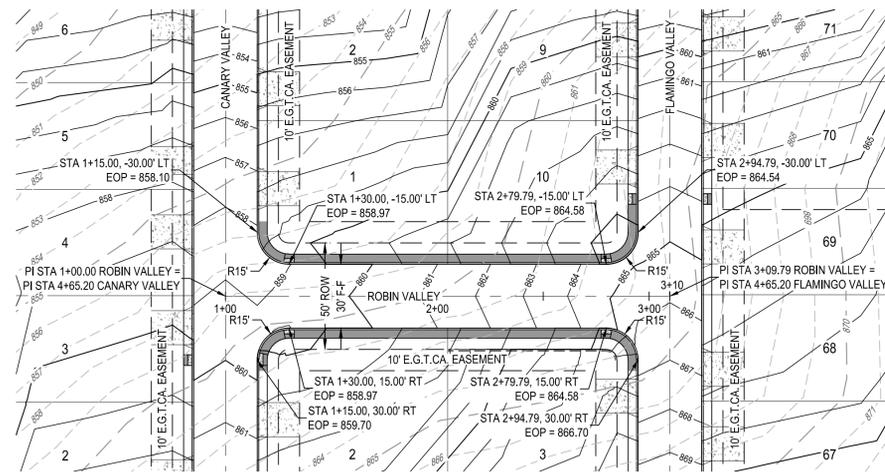
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G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01 - Unit 1\03_CADD\01 - Unit 1\03_CADD\01.dwg - Heron Valley Phase 1 - Canary Valley Plan and Profile.dwg

HERON VALLEY PHASE 1
CANARY VALLEY PLAN AND PROFILE

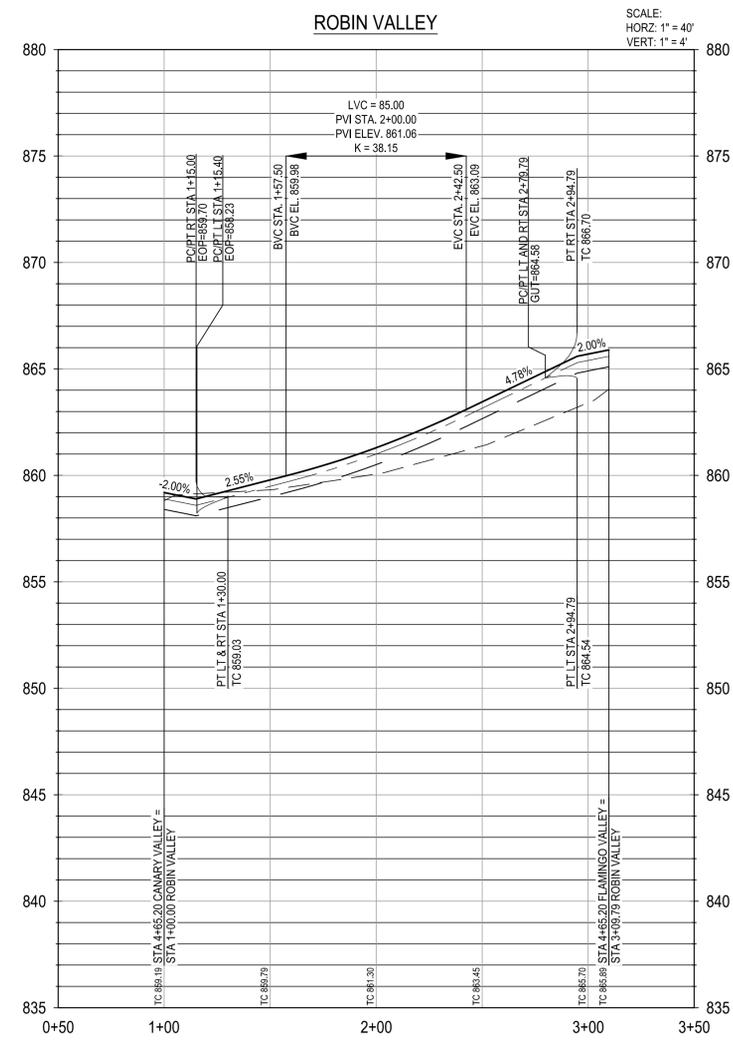


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HERON VALLEY PHASE 1
ROBIN VALLEY PLAN AND PROFILE

6/24/25

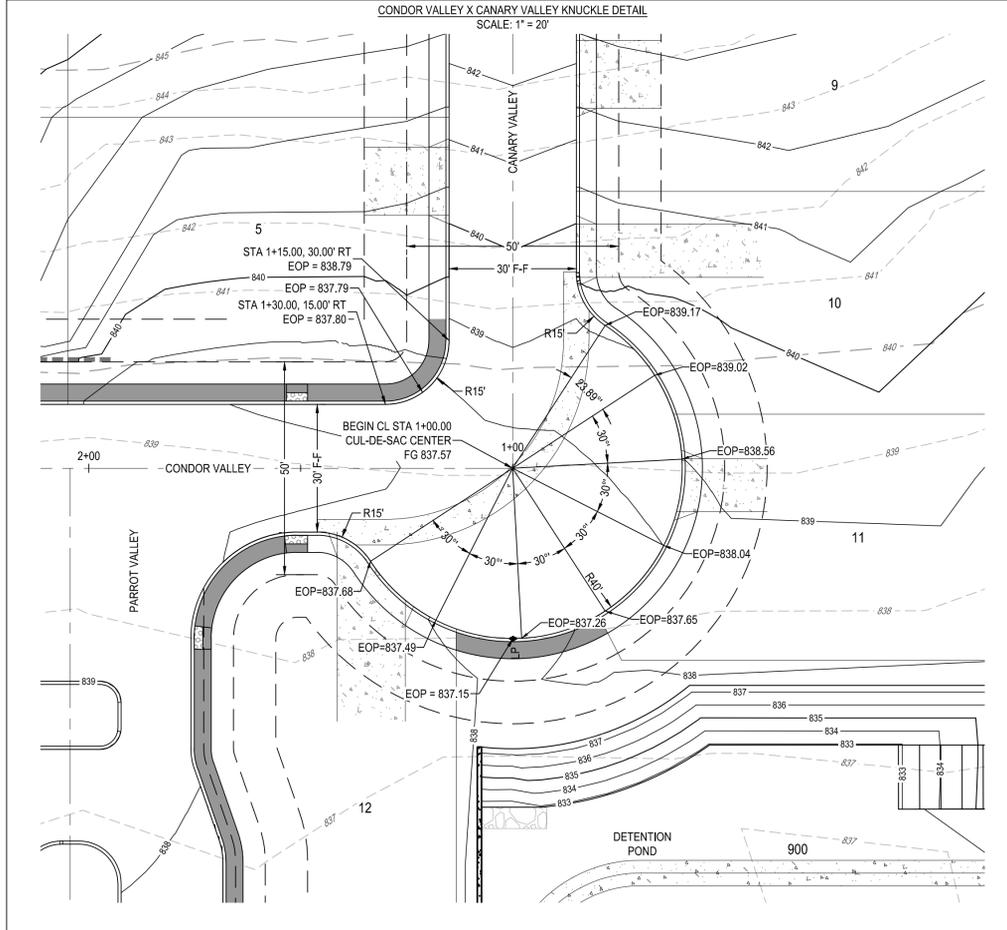
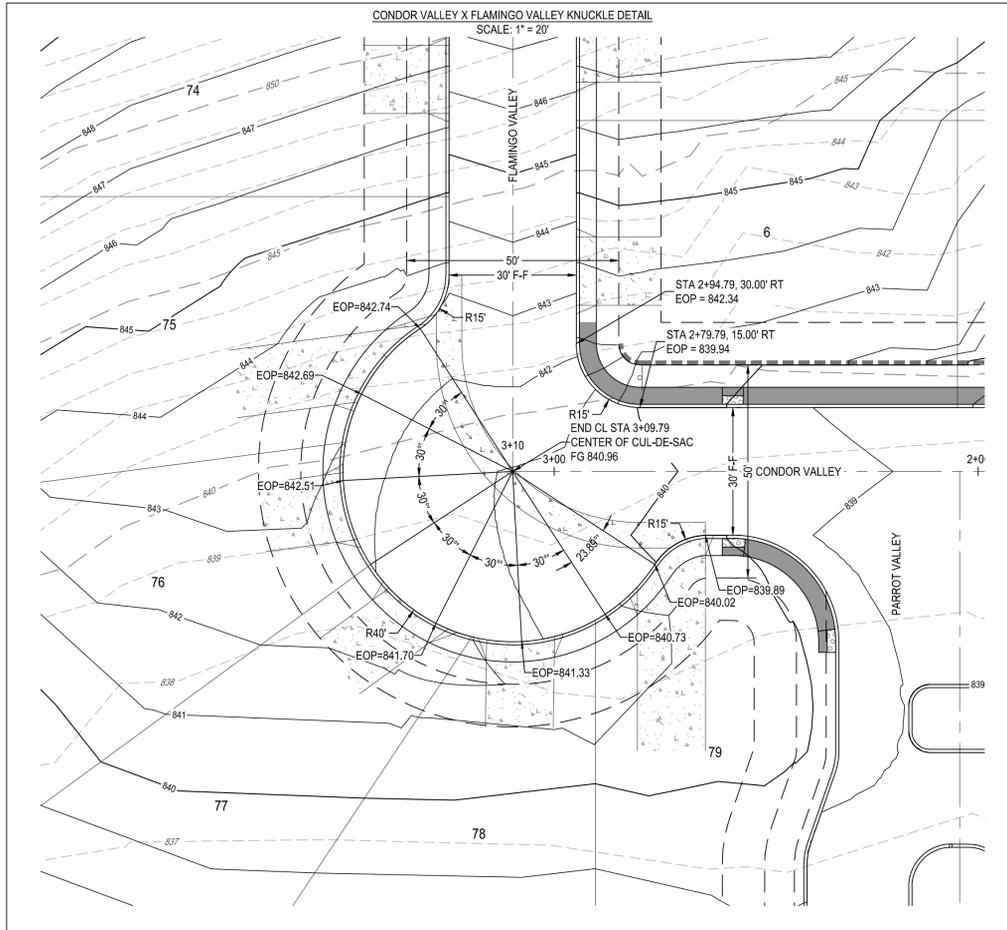
DAVID R. BABIN
127935
LICENSED PROFESSIONAL ENGINEER

SHEET
C07.04

G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\103_CADD\01_Shis\07_10_KNUCKLE DETAILS.dwg Layout: KNUCKLE DETAILS Plotted: 6/24/2025 4:03:09 PM By: Jefferson

PLAT NUMBER
24-1180389

DATE	REV	DESCRIPTION



SCALE: 1" = 20'

LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- PROPOSED EASEMENT
- - - - - EXISTING MINOR CONTOUR
- - - - - EXISTING MAJOR CONTOUR
- - - - - PROPOSED MINOR CONTOUR
- - - - - PROPOSED MAJOR CONTOUR
- ROAD CENTERLINE
- PROPOSED CURB & GUTTER
- CONTRACTOR SIDEWALK
- HOME BUILDER SIDEWALK
- TYPICAL RAMP (SEE SHEET C08.24)
- ASPHALT VALLEY GUTTER
- ▲ LP / HP
- SS
- PROPOSED STORM LINE WITH MANHOLE
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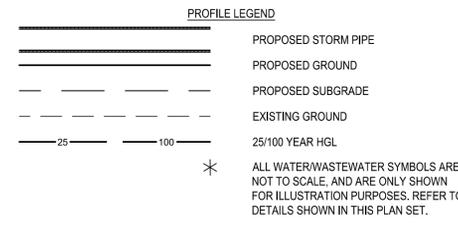
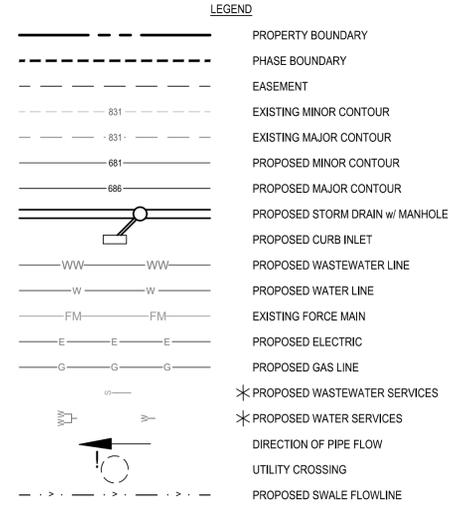
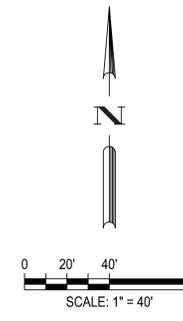
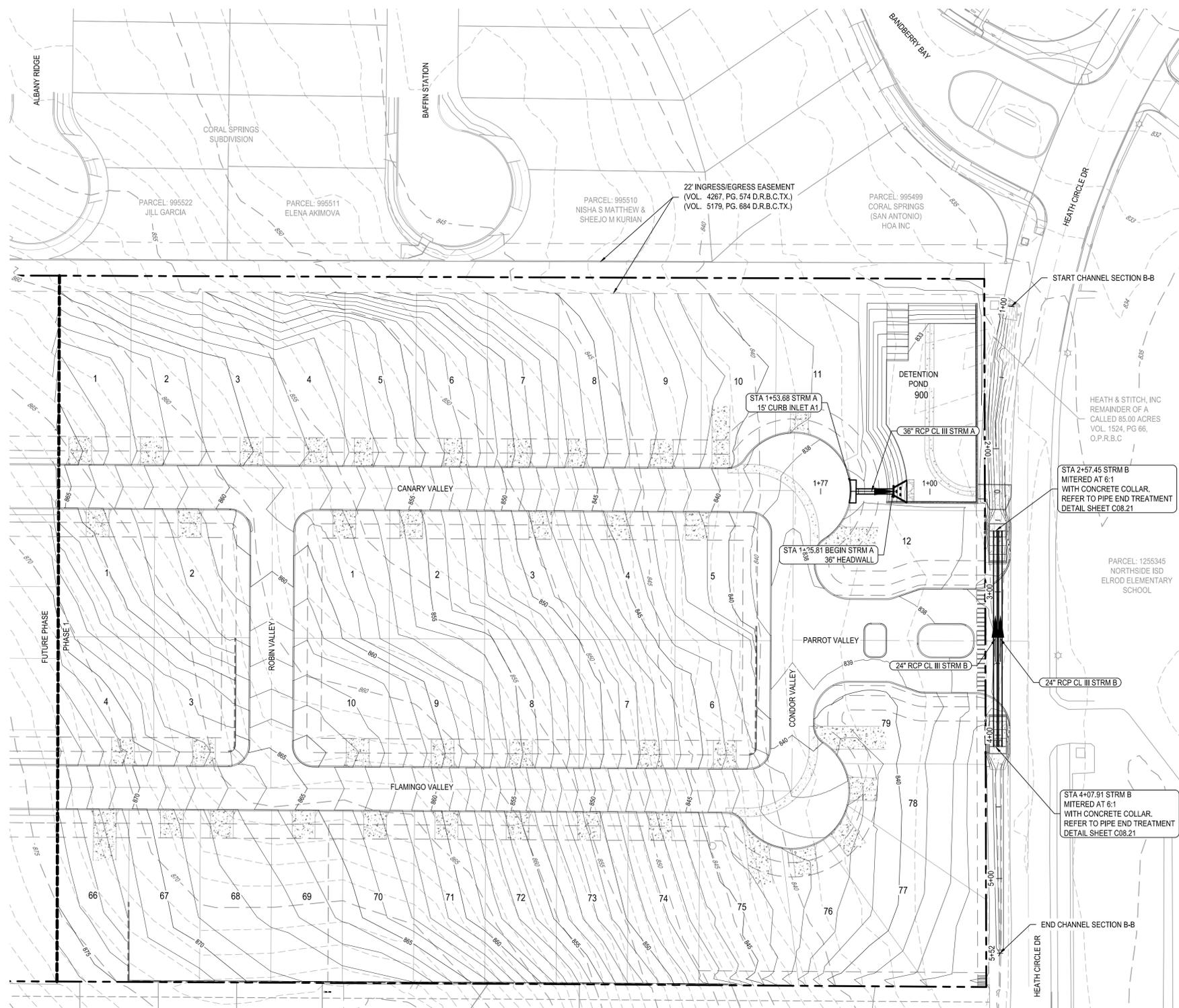
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
Tel: 210-336-0000 www.bgeenergy.com
P.E. Registration No. P-1046

HERON VALLEY PHASE 1
KNUCKLE DETAILS



SHEET
C07.10

G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\03_CADD\01_Shis\08.00 STORM DRAIN COLLECTION PLAN.dwg Layout: STORM DRAIN COLLECTION PLAN By: Calderon



- NOTES:**
- IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SIDING. EIGHTY FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE
 - ALL CONCRETE LINING SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS
 - FOR NORMAL CONDITIONS, THE 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"x6" - WID6 X WID6, WHERE SURCHARGE, NATURE OF GROUND, HEIGHT AND STEEPNESS OF SLOPE, ETC., BECOME CRITICAL. DESIGN SHALL BE IN ACCORDANCE WITH LATEST STRUCTURAL STANDARDS. ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN THREE THOUSAND (3,000) POUNDS PER SQUARE INCH IN TWENTY-EIGHT (28) DAYS. THE DEPTH OF ALL TOE DOWNS SHALL BE 36 INCHES UPSTREAM, 24 INCHES DOWNSTREAM, AND 18 INCHES FOR SIDE SLOPES. THE CITY'S CONSTRUCTION INSPECTOR MAY PERMIT AN 18" TOE DOWN IN ROCK SUB GRADE IN LIEU OF THE ABOVE TOE DOWN REQUIREMENTS. THE HORIZONTAL DIMENSIONS OF TOE DOWNS SHALL NOT BE LESS THAN SIX (6) INCHES.
 - CONCRETE COLLARS ARE TO BE USED TO CONNECT STORM PIPE SEGMENTS. PLEASE REFER TO SHEET C06.022 FOR CONCRETE COLLAR DETAIL.

TRENCH EXCAVATION SAFETY PROTECTION

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

Approved by COSA Public Works
By: *EO*
Date: 6/25/2025

PLAT NUMBER
24-11800389

DATE	REV	DESCRIPTION

DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC



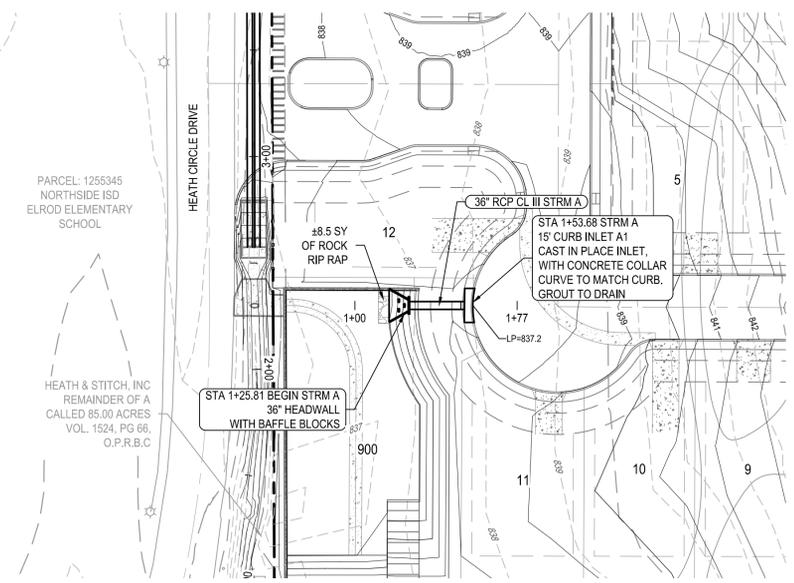
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
Tel: 214-336-0000 www.bgeenergy.com
EPA Registration No. P-1046

HERON VALLEY PHASE 1
STORM DRAIN COLLECTION PLAN



SHEET
C08.00

DATE	REV	DESCRIPTION

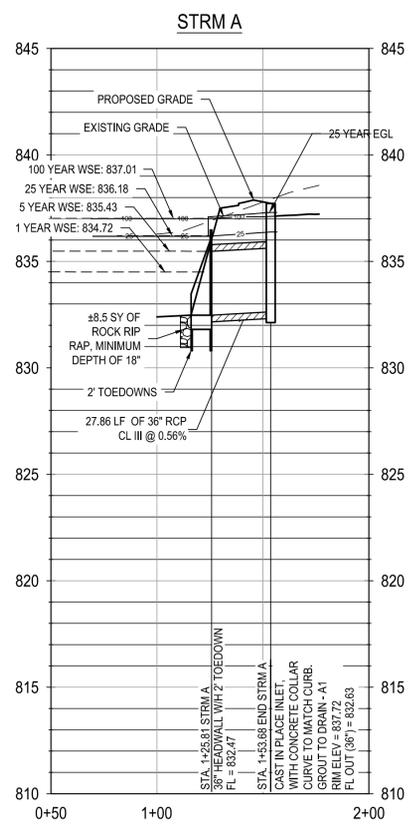
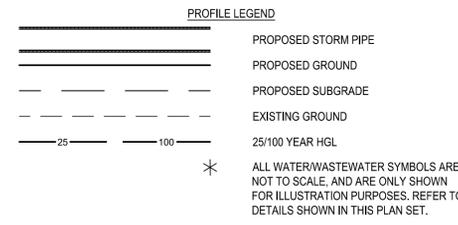
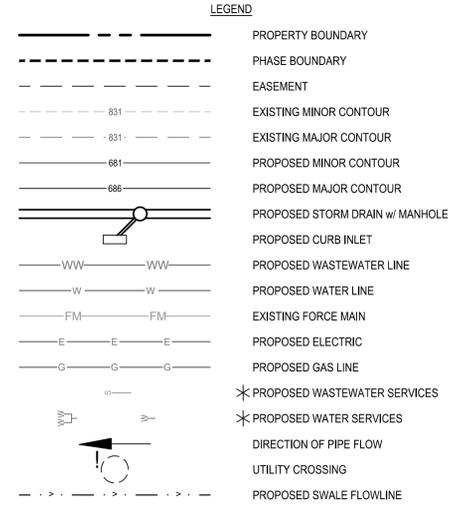
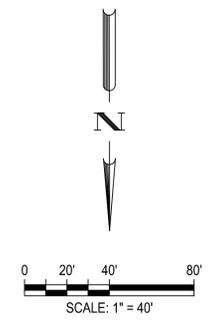


STRM QVD (25 YEAR) TABLE

PIPE	Q (CFS)	V (F/S)	D (FT)
STRM A	29.10	7.66	3.70

STRM QVD (100 YEAR) TABLE

PIPE	Q (CFS)	V (F/S)	D (FT)
STRM A	35.62	9.56	3.70



HERON VALLEY
STRM A (25 YR Storm Event)

Q =	29.1	cfs	
V ₁ =	7.66	fps	
g =	32.2		
y ₁ =	1	ft	height of blocks
F ₁ =	$V/(g \cdot y_1)^{0.5} = 1.35$		
y ₂ =	$0.5 \cdot (-1 + \sqrt{1 + 8(F_1)^2})^{0.5} \cdot y_1 = 1.47$		subcritical flow depth
L _B =	$4.5(y_2)/F_1^{0.76} = 5.28$		length of basin
L _W /3 =	1.76		min. dimension from pipe outfall to first row blocks
Spacing =	0.75 (y ₁) = 0.75		min. separation between rows of blocks
Sidewall =	3(y ₁)/8 = 0.38		Min. separation from block to edge of riprap
y ₂ ' =	$(1.10 \cdot F_1^2 / 120)y_2 = 1.60$		(1.7 < F ₁ < 5.5)
y ₂ ' =	0.85 y ₂ = 1.25		(5.5 < F ₁ < 11)
y ₂ ' =	$(1.00 \cdot F_1^2 / 800)y_2 = 0.00$		(11 < F ₁ < 17)
z =	y ₂ ' / 3 = 0.49		
Wingwall	y ₂ ' + z = 2.09		(1.7 < F ₁ < 5.5) (square area)
V ₂ = Q/A ₂	Q = 29.1		
	A ₂ = 20.895		(wingwall x outfall width)
Therefore:	V ₂ = 1.39		

NOTE: VELOCITY LEAVING 24" HEADWALL EXCEEDS 6 FPS, BAFFLE BLOCKS ARE REQUIRED, PLEASE REFER TO DETAIL ON SHEET C08.21. BAFFLE BLOCKS WILL REDUCE VELOCITY ENTERING THE POND TO BELOW 6FPS.

Approved by COSA Public Works
By: [Signature]
Date: 6/25/2025

- NOTES:
- IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SIDING. EIGHTY FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE
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 - CONCRETE COLLARS ARE TO BE USED TO CONNECT STORM PIPE SEGMENTS, PLEASE REFER TO SHEET C06.022 FOR CONCRETE COLLAR DETAIL.

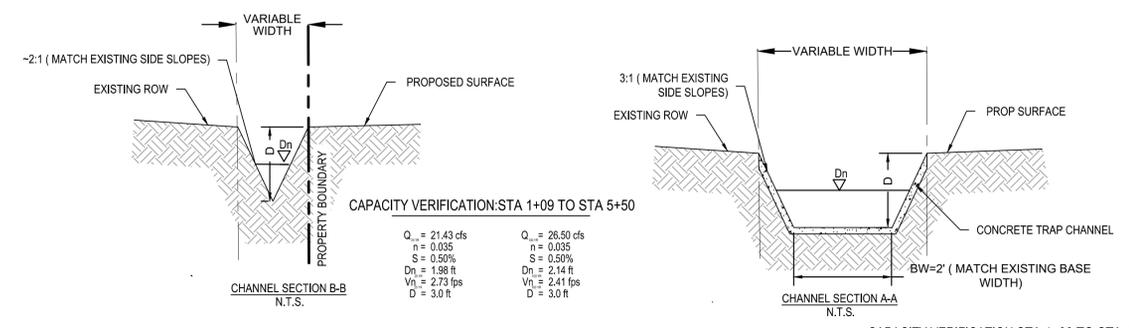
TRENCH EXCAVATION SAFETY PROTECTION

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HERON VALLEY PHASE 1
STORM LINE A PLAN AND PROFILE



DATE	DESCRIPTION
APR	

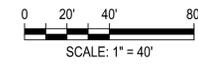


CAPACITY VERIFICATION: STA 1+09 TO STA 5+50

$Q_c = 21.43$ cfs	$Q_c = 26.50$ cfs
$n = 0.035$	$n = 0.035$
$S = 0.54\%$	$S = 0.54\%$
$D_n = 1.98$ ft	$D_n = 2.14$ ft
$V_n = 2.73$ fps	$V_n = 2.41$ fps
$D = 3.0$ ft	$D = 3.0$ ft

CAPACITY VERIFICATION: STA 1+00 TO STA 1+09

$Q_c = 21.43$ cfs	$Q_c = 26.50$ cfs
$n = 0.013$	$n = 0.013$
$S = 0.54\%$	$S = 0.54\%$
$D_n = 0.77$ ft	$D_n = 0.86$ ft
$V_n = 5.37$ fps	$V_n = 5.63$ fps
$D = 3.0$ ft	$D = 3.0$ ft

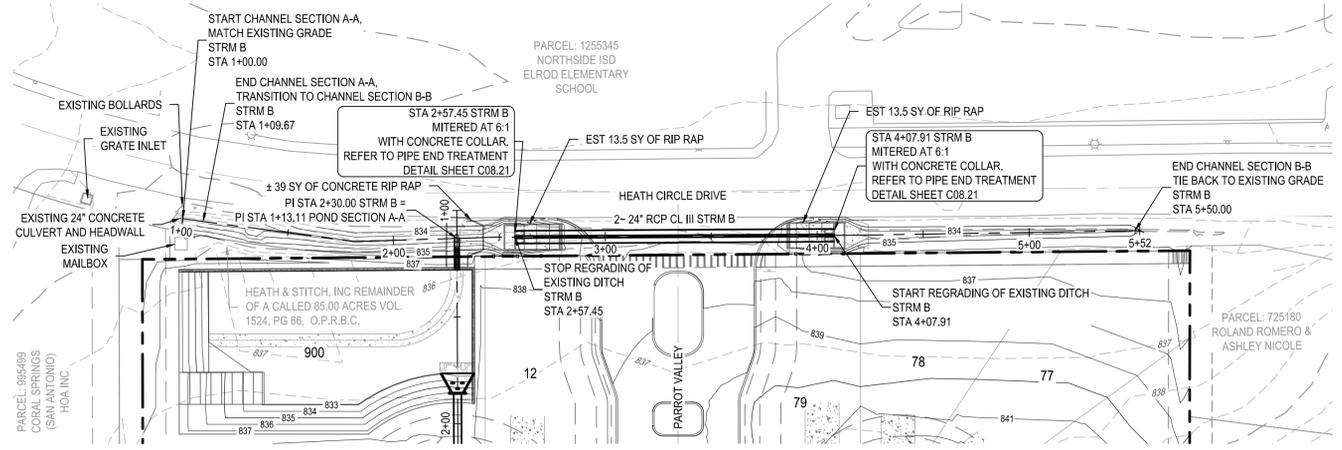


LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EASEMENT
- - - - - EXISTING MINOR CONTOUR
- - - - - EXISTING MAJOR CONTOUR
- - - - - PROPOSED MINOR CONTOUR
- - - - - PROPOSED MAJOR CONTOUR
- PROPOSED STORM DRAIN w/ MANHOLE
- PROPOSED CURB INLET
- PROPOSED WASTEWATER LINE
- PROPOSED WATER LINE
- FM --- FM --- EXISTING FORCE MAIN
- E --- E --- PROPOSED ELECTRIC
- G --- G --- PROPOSED GAS LINE
- * PROPOSED WASTEWATER SERVICES
- * PROPOSED WATER SERVICES
- DIRECTION OF PIPE FLOW
- UTILITY CROSSING
- PROPOSED SWALE FLOWLINE

PROFILE LEGEND

- PROPOSED STORM PIPE
- PROPOSED GROUND
- PROPOSED SUBGRADE
- EXISTING GROUND
- 25 --- 100 --- 25/100 YEAR HGL
- * ALL WATER/WASTEWATER SYMBOLS ARE NOT TO SCALE, AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES. REFER TO DETAILS SHOWN IN THIS PLAN SET.



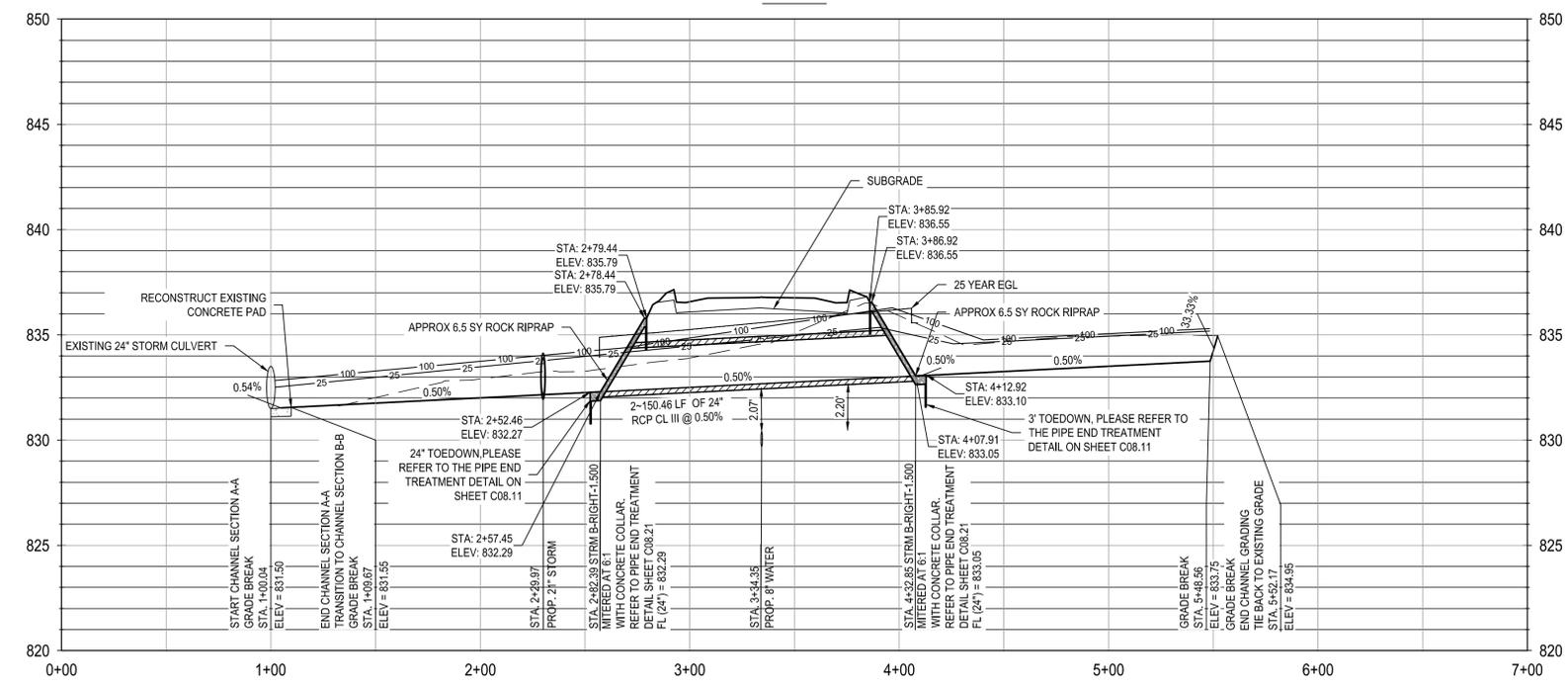
STRM QVD (25 YEAR) TABLE

PIPE	EXISTING Q(CFS)	Q (CFS)	V (F/S)	D (FT)
STRM B	21.86	21.43	7.00	1.68

STRM QVD (100 YEAR) TABLE

PIPE	EXISTING Q(CFS)	Q (CFS)	V (F/S)	D (FT)
STRM B	27.04	26.50	8.73	1.82

STRM B



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TRENCH EXCAVATION SAFETY PROTECTION

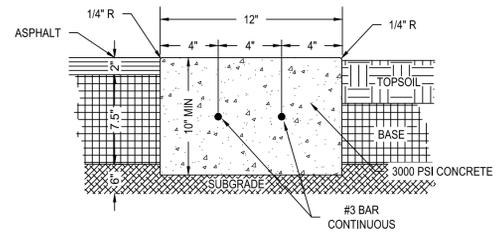
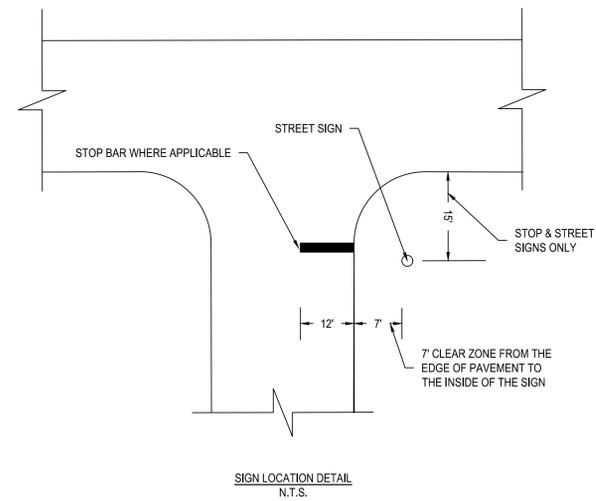
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Approved by COSA Public Works
By: *EL*
Date: 6/25/2025

HERON VALLEY PHASE 1
STORM LINE B PLAN AND PROFILE

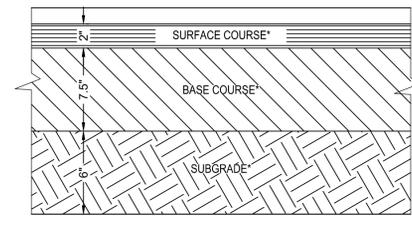
6/24/25
STATE OF TEXAS
DAVID R. BABINEUX
127935
LICENSED PROFESSIONAL ENGINEER
SHEET
C08.11

REV	DATE	DESCRIPTION



- NOTES:**
1. REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BARS CONFORMING TO ASTM A 615/A 615M OR ASTM A 706/A 706M.
 2. WIRE TIES SHALL BE 16 GAUGE OR HEAVIER BLACK ANNEALED STEEL WIRE.

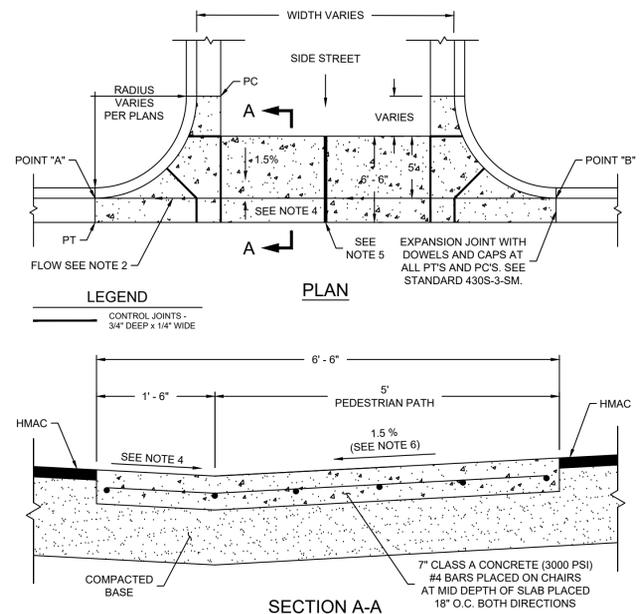
12" FLUSH CURB
N.T.S.



VALUES AND RECOMMENDATIONS THAT SHALL BE USED ARE FOUND IN THE ABOVE REFERENCED GEOTECHNICAL INVESTIGATION REPORT. CONTRACTOR SHALL REFERENCE THE RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL INVESTIGATION REPORTS PREPARED BY:

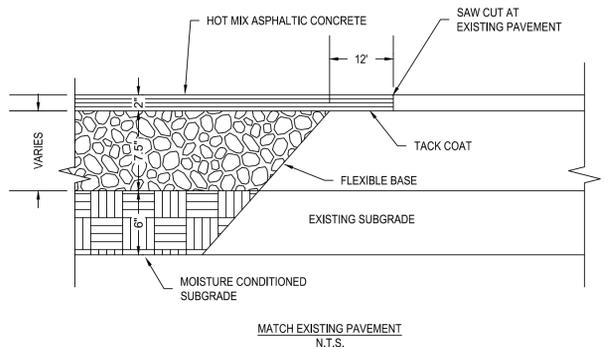
BEA
PROJECT NO. 12-22-0015
JANUARY 27, 2023

TYPICAL PAVEMENT DETAIL
N.T.S.

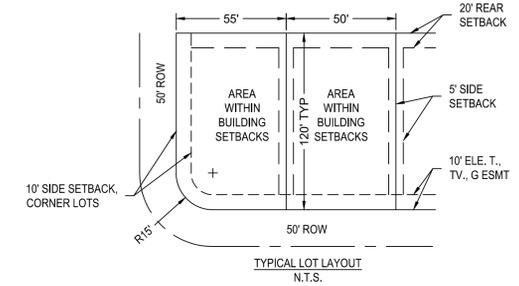


- NOTES:**
1. MONOLITHIC CURB AND GUTTER SHALL BE MEASURED BY PLAN QUANTITY PER SQUARE FEET AND PAID AS VALLEY GUTTER.
 2. MINIMUM SLOPE FROM POINT "A" TO POINT "B" SHALL BE 0.50%.
 3. ALL CONTROL JOINT WILL BE TOOL JOINT OR SAW CUT WITH WALK BEHIND SAW.
 4. MATCH CROSS-SLOPE OF ROAD 2% TYPICAL ~ 1.5% MIN. OR 3% MAX.
 5. INSTALL COLD JOINT IF NEEDED TO MAINTAIN TRAFFIC. SEE DETAIL 420S-3-SM.
 6. IF A PEDESTRIAN PATH IS NOT REQUIRED, THE SLOPE MAY BE ADJUSTED TO MATCH THE ROAD OR 6% MAX.

CONCRETE VALLEY GUTTER



MATCH EXISTING PAVEMENT
N.T.S.



TYPICAL LOT LAYOUT
N.T.S.

G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\03_CADD\01_Shis\009.21 STREET & DRAINAGE DETAILS (SHEET 2 OF 5).dwg Layout: STREET & DRAINAGE DETAILS (SHEET 1 OF 5) Plotted: 6/24/2025 4:11:03 PM By: Calderon

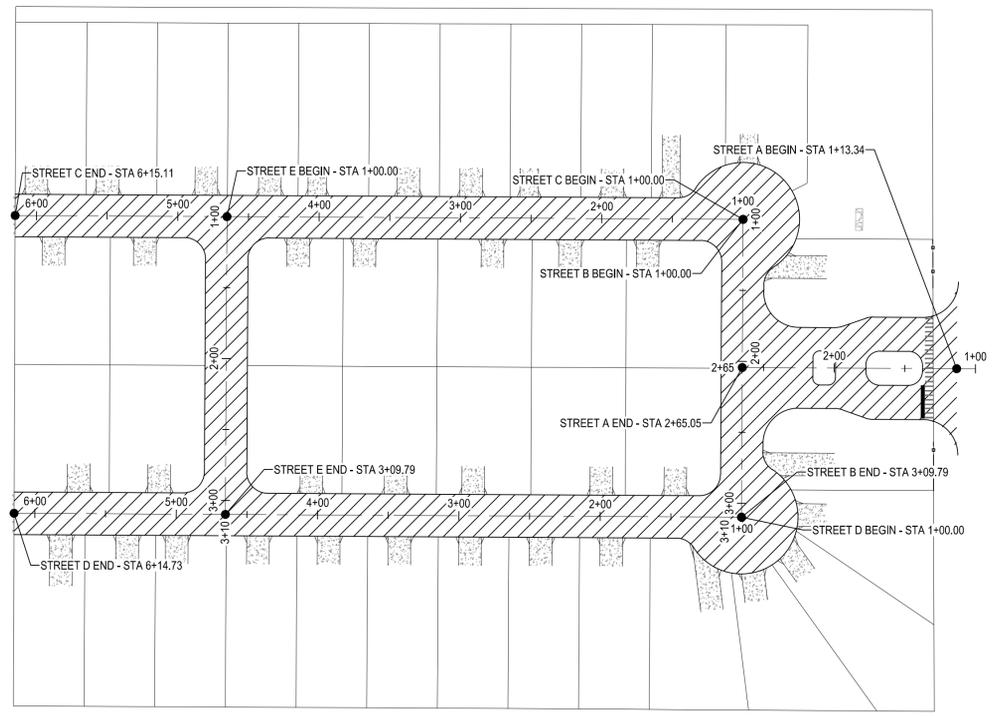
HERON VALLEY PHASE 1
STREET & DRAINAGE DETAILS
(SHEET 1 OF 5)

6/24/25
STATE OF TEXAS
DAVID R. BAINEAUX
127935
LICENSED PROFESSIONAL ENGINEER
SHEET
C08.20



BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-358-3360 www.bgeenergy.com
EPC Registration No. P-1040

HERON VALLEY PHASE 1
STREET & DRAINAGE DETAILS
(SHEET 2 OF 5)

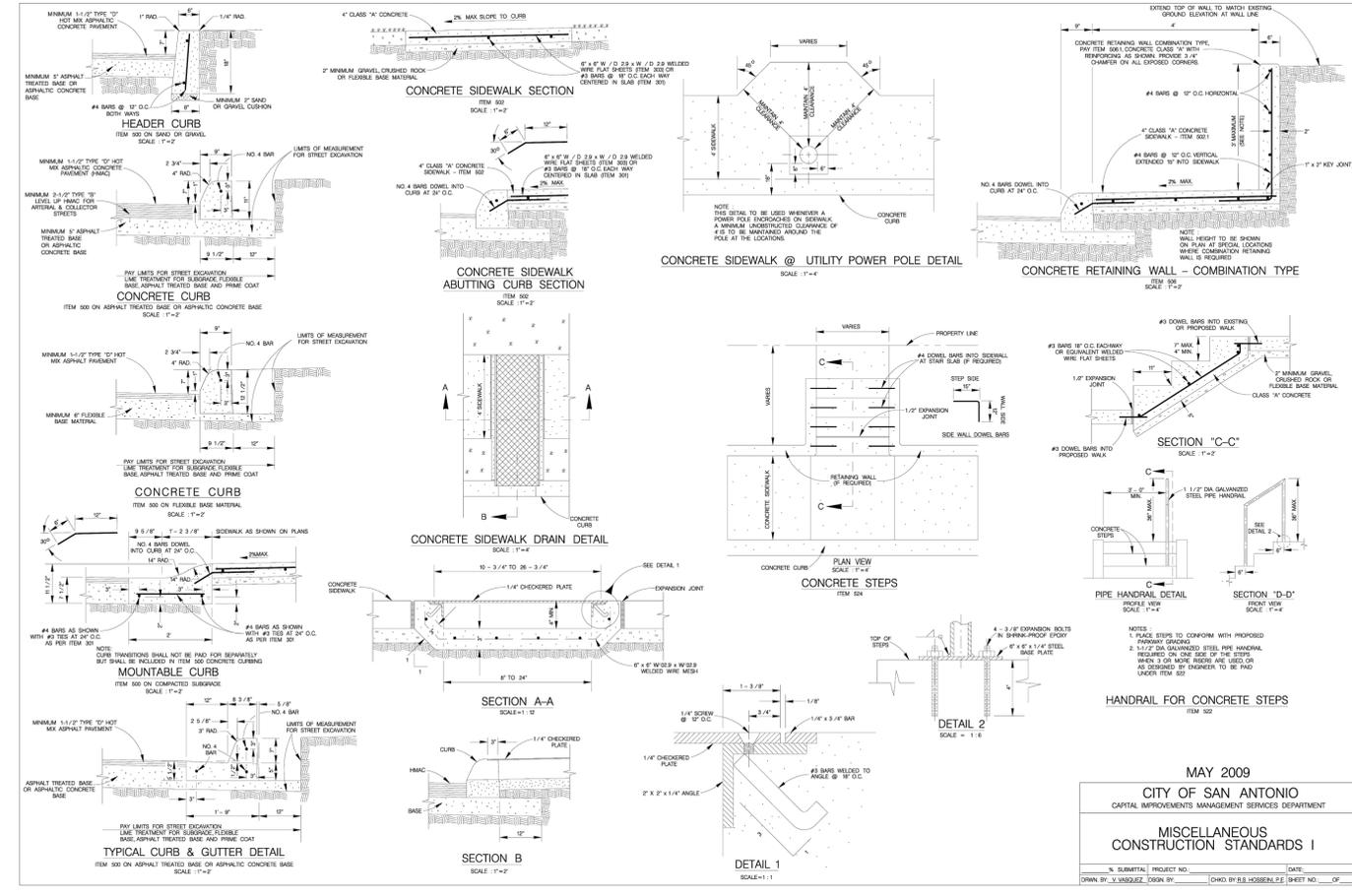


PAVEMENT DESIGN SCHEMATIC
1" = 60'

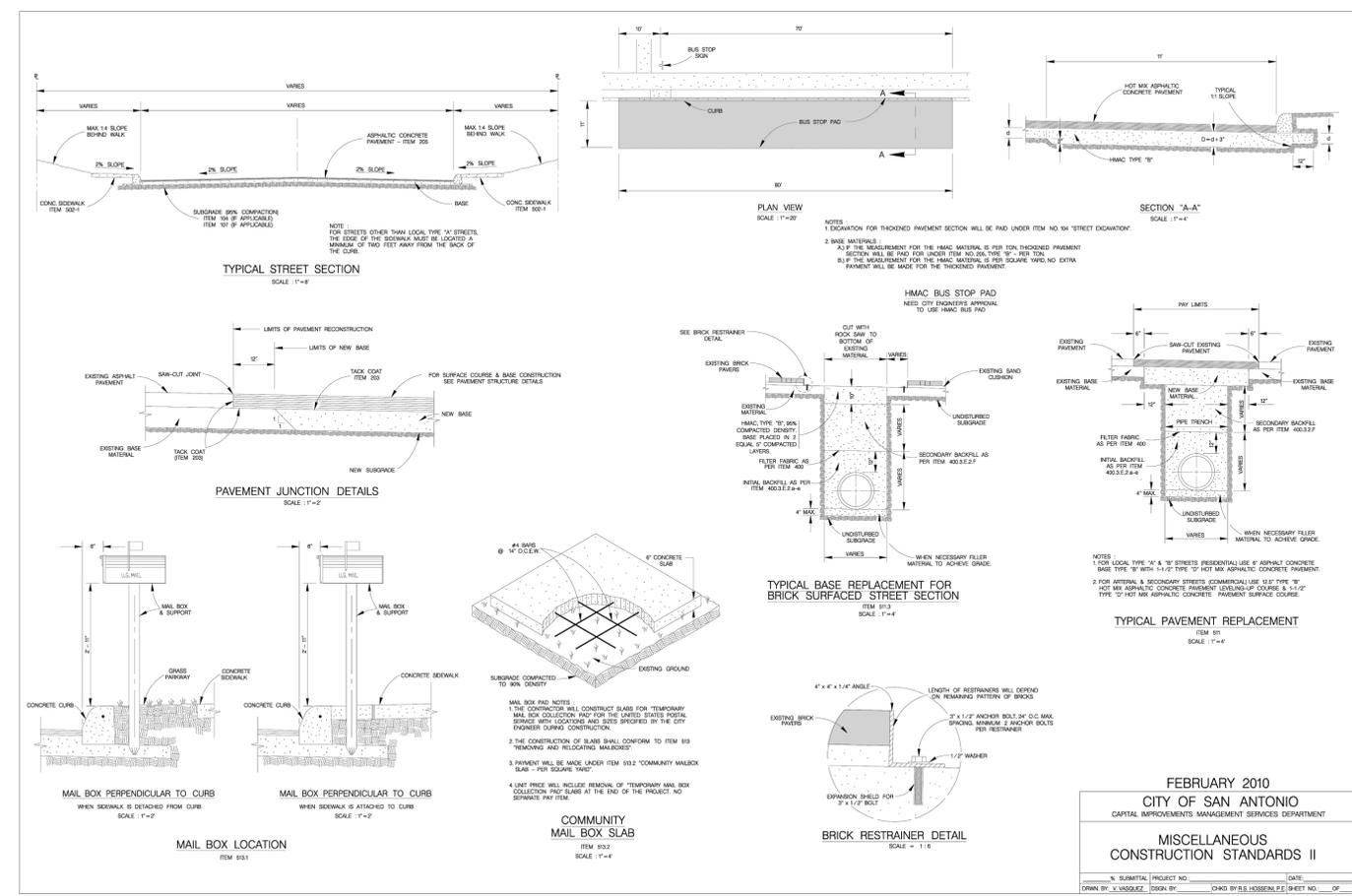
STREET CLASSIFICATION	ASPHALTIC CONCRETE TYPE D (IN)	ASPHALTIC CONCRETE TYPE B (IN)	LIMESTONE BASE (IN)	GEOGRID	SUBGRADE (IN)	STRUCTURAL NUMBER
LOCAL A STREET (NO BUS TRAFFIC)	2.00	-	7.50	NO	6	2.41

NOTE:
1. REFERENCE GEOTECHNICAL REPORT (BEA NO. P12-21-306R) FOR BORING INFORMATION AND CBR LOCATIONS.

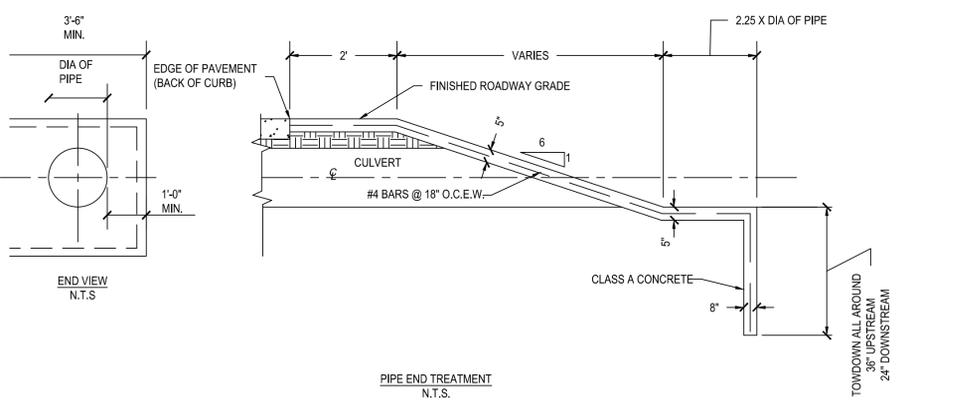
LEGEND:
 LOCAL A STREET* -
 STREET A: STA. 1+00 TO 2+65.05
 STREET B: STA. 1+00 TO 3+09.79
 STREET C: STA. 1+00 TO 6+15.11
 STREET D: STA. 1+00 TO 6+14.73
 STREET E: STA. 1+00 TO 3+09.79



MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
MISCELLANEOUS CONSTRUCTION STANDARDS I
DRAWN BY: V. VASQUEZ, DESIGNED BY: CHAD R. B. LOSSEN, SHEET NO. 01 OF 01



FEBRUARY 2010
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
MISCELLANEOUS CONSTRUCTION STANDARDS II
DRAWN BY: V. VASQUEZ, DESIGNED BY: CHAD R. B. LOSSEN, SHEET NO. 02 OF 01



PIPE END TREATMENT N.T.S.



DESIGNED BY: ###
REVIEWED BY: ###
DRAWN BY: ###

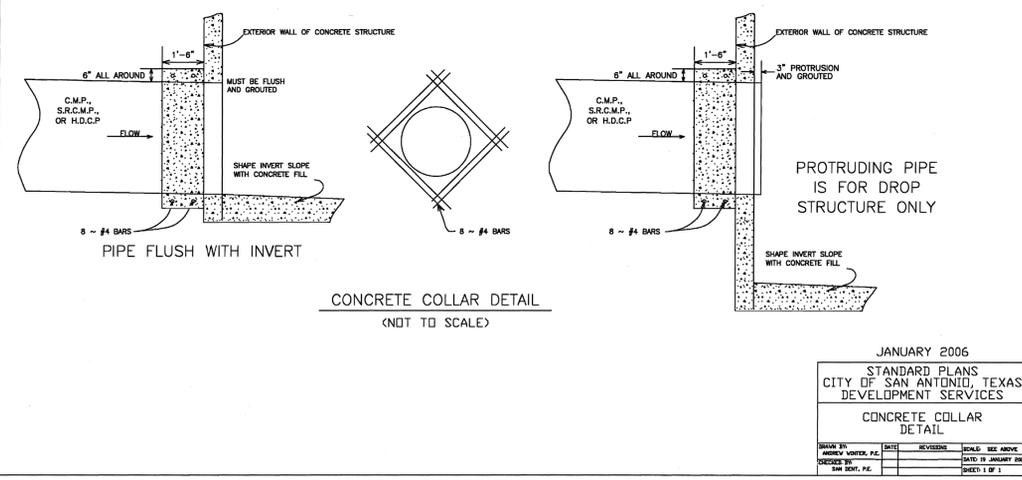


BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-358-0300 www.bge.com
EPC Registration No. P-1040

HERON VALLEY PHASE 1
STREET & DRAINAGE DETAILS
(SHEET 3 OF 5)

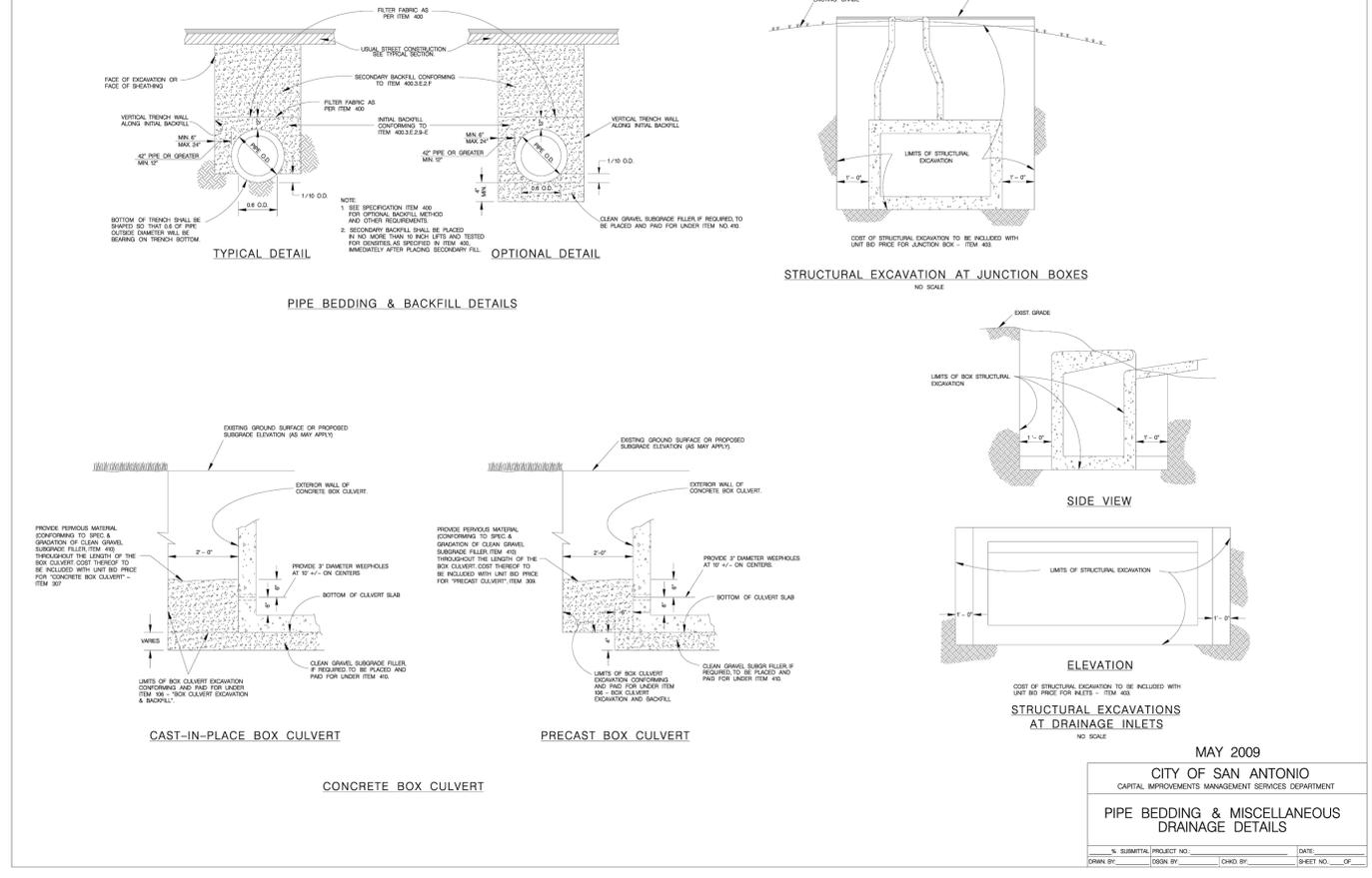


1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A," 3000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A-15. THE DEFORMATION SHALL CONFORM TO ASTM A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (3,000 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).



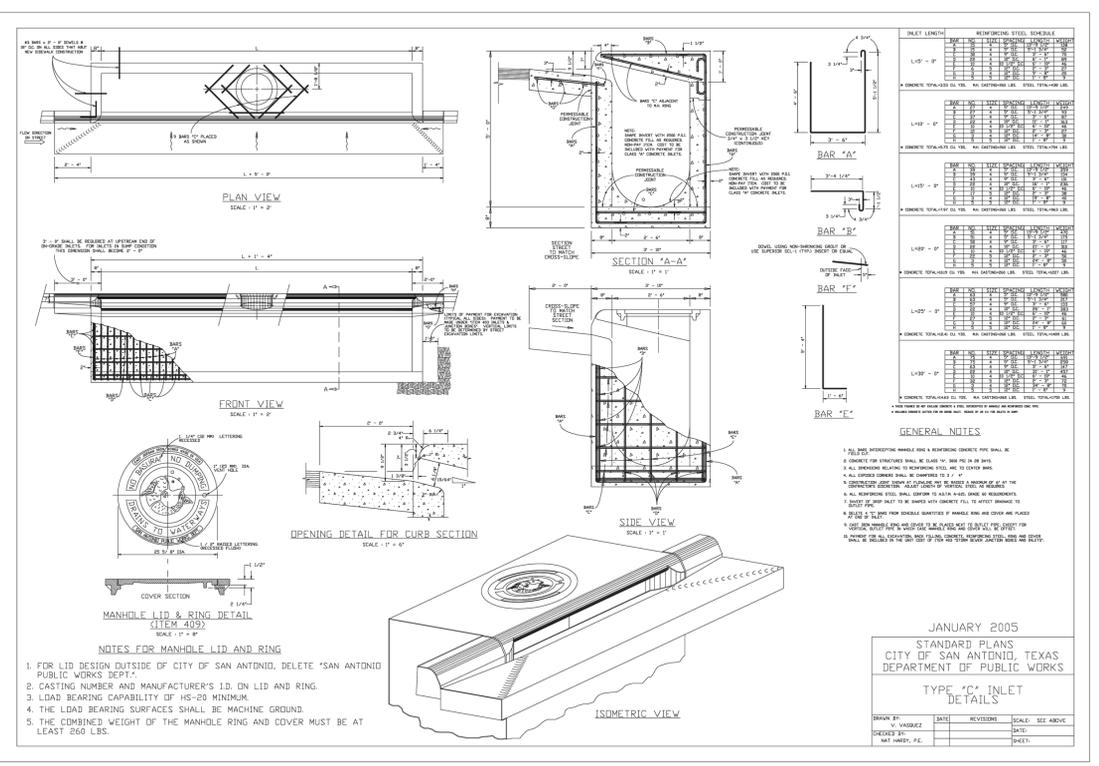
JANUARY 2006
STANDARD PLANS
CITY OF SAN ANTONIO, TEXAS
DEPARTMENT OF PUBLIC WORKS
CONCRETE COLLAR
DETAIL

DATE	REVISIONS	SCALE	SEE ABOVE
01/05/06	ISSUED	AS SHOWN	SHEET 3 OF 5



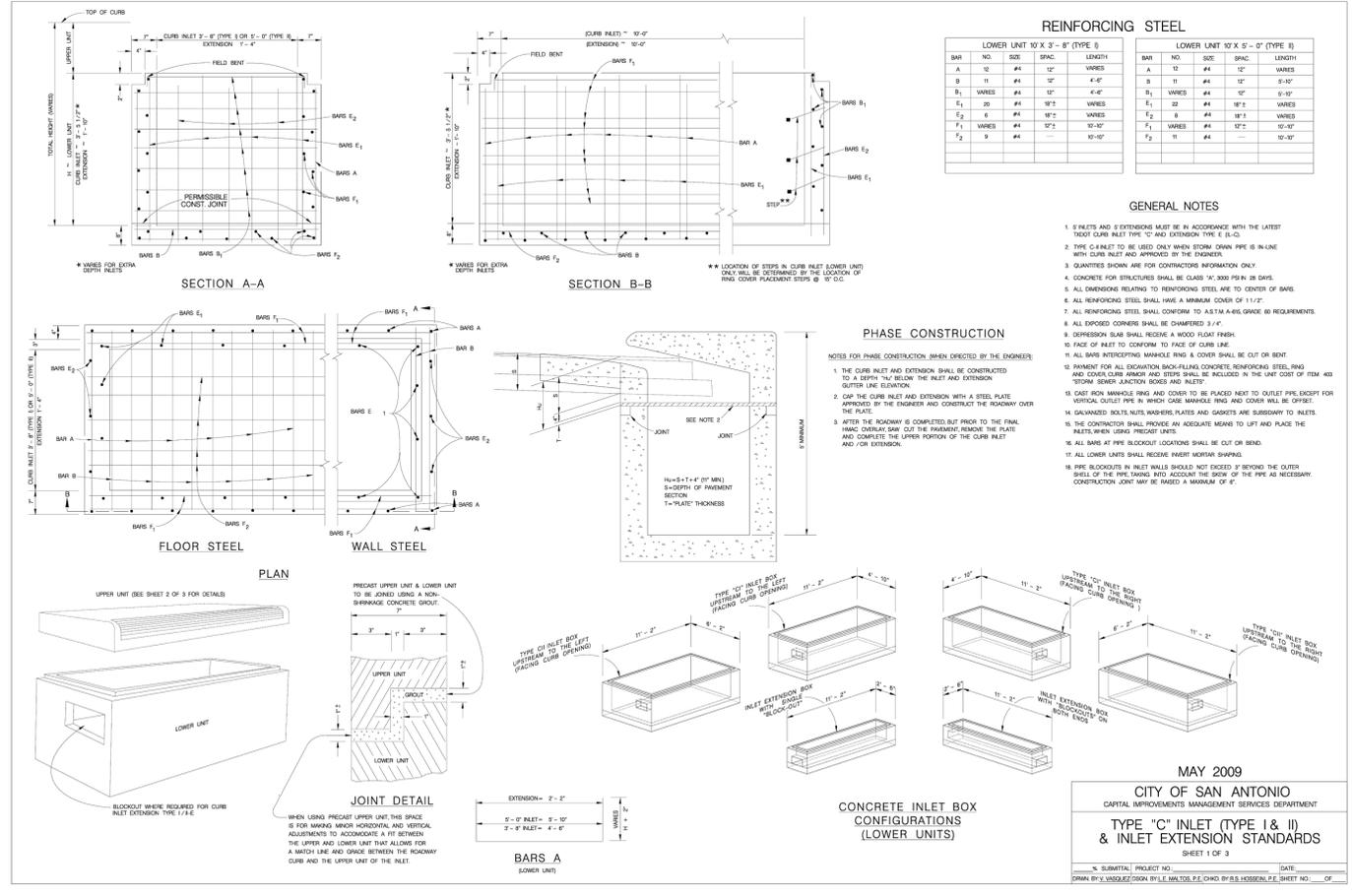
MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
PIPE BEDDING & MISCELLANEOUS
DRAINAGE DETAILS

DATE	REVISIONS	SCALE	SEE ABOVE
05/09/09	ISSUED	AS SHOWN	SHEET NO. 09



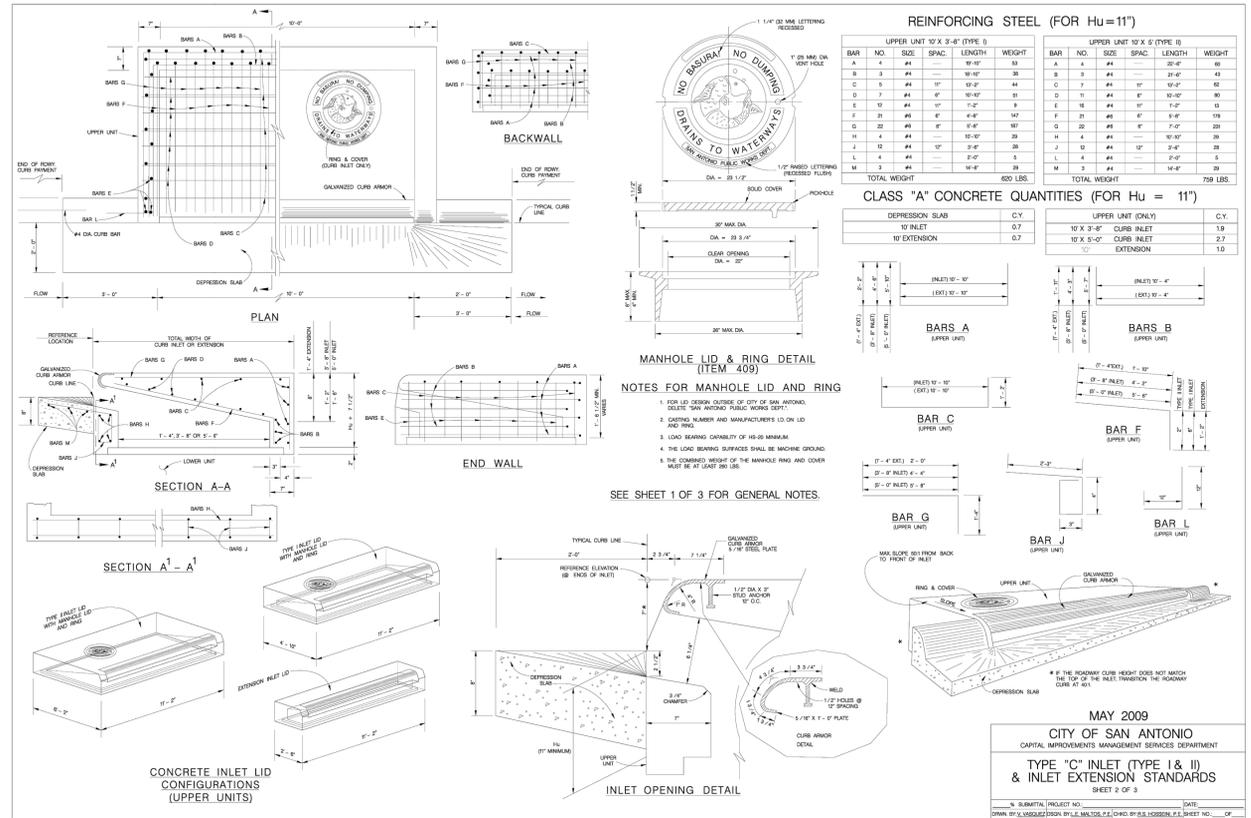
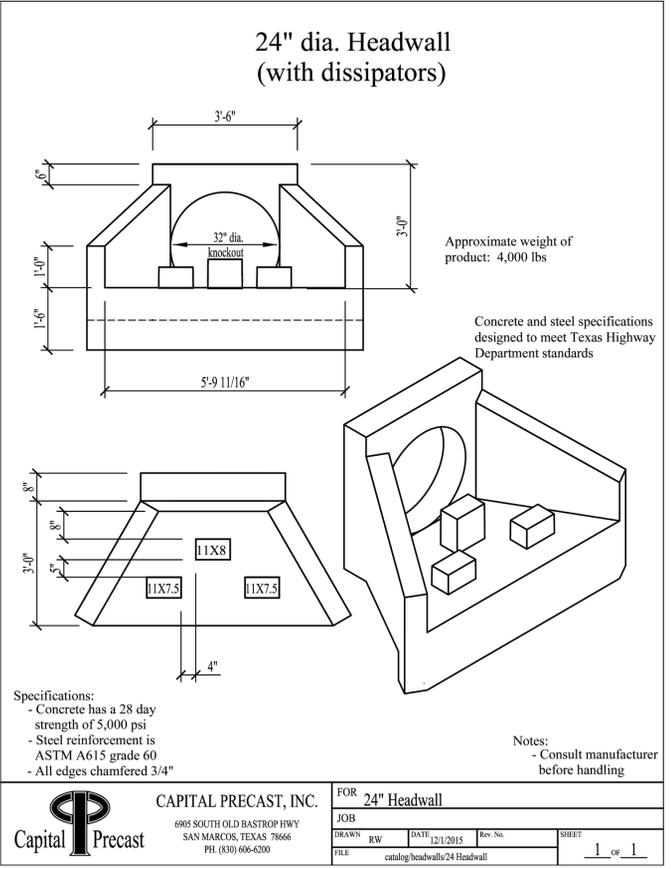
JANUARY 2005
STANDARD PLANS
CITY OF SAN ANTONIO, TEXAS
DEPARTMENT OF PUBLIC WORKS
TYPE 'C' INLET
DETAILS

DATE	REVISIONS	SCALE	SEE ABOVE
01/05/05	ISSUED	AS SHOWN	SHEET 3 OF 5

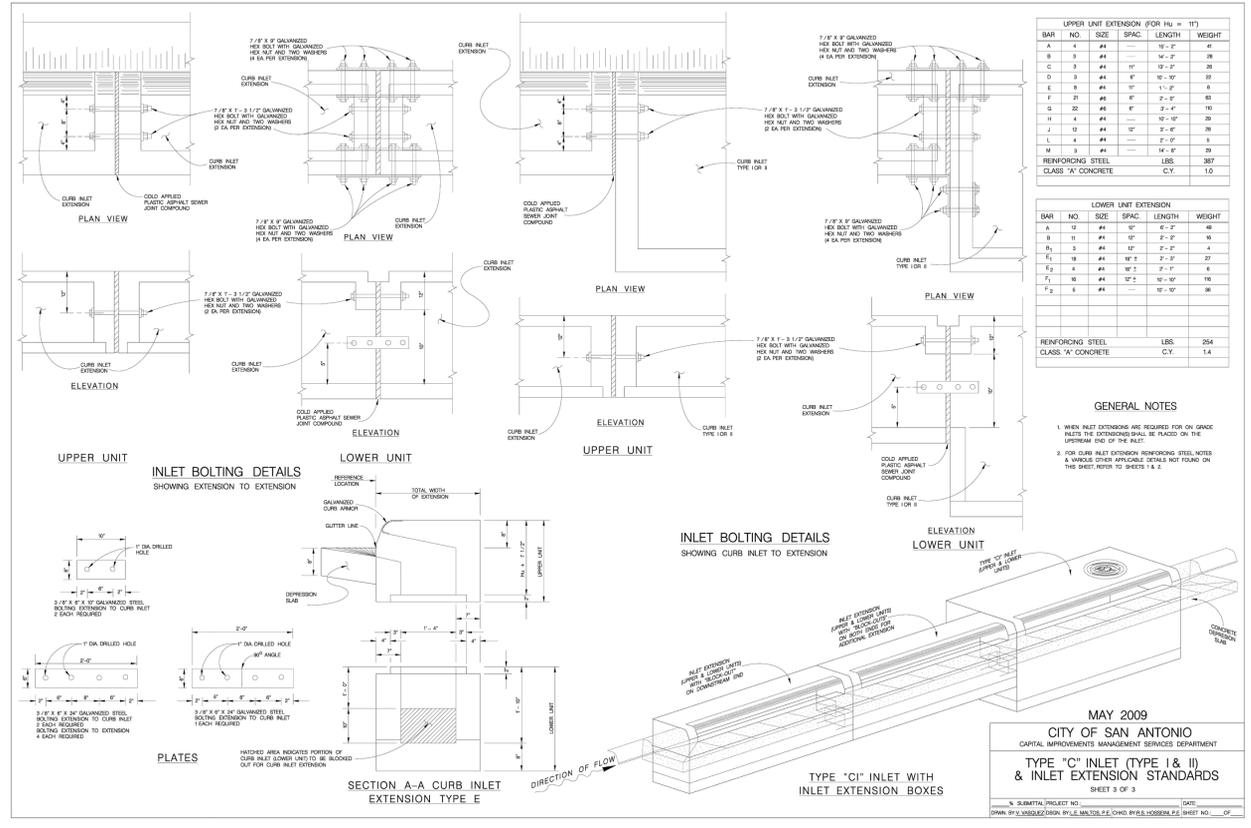
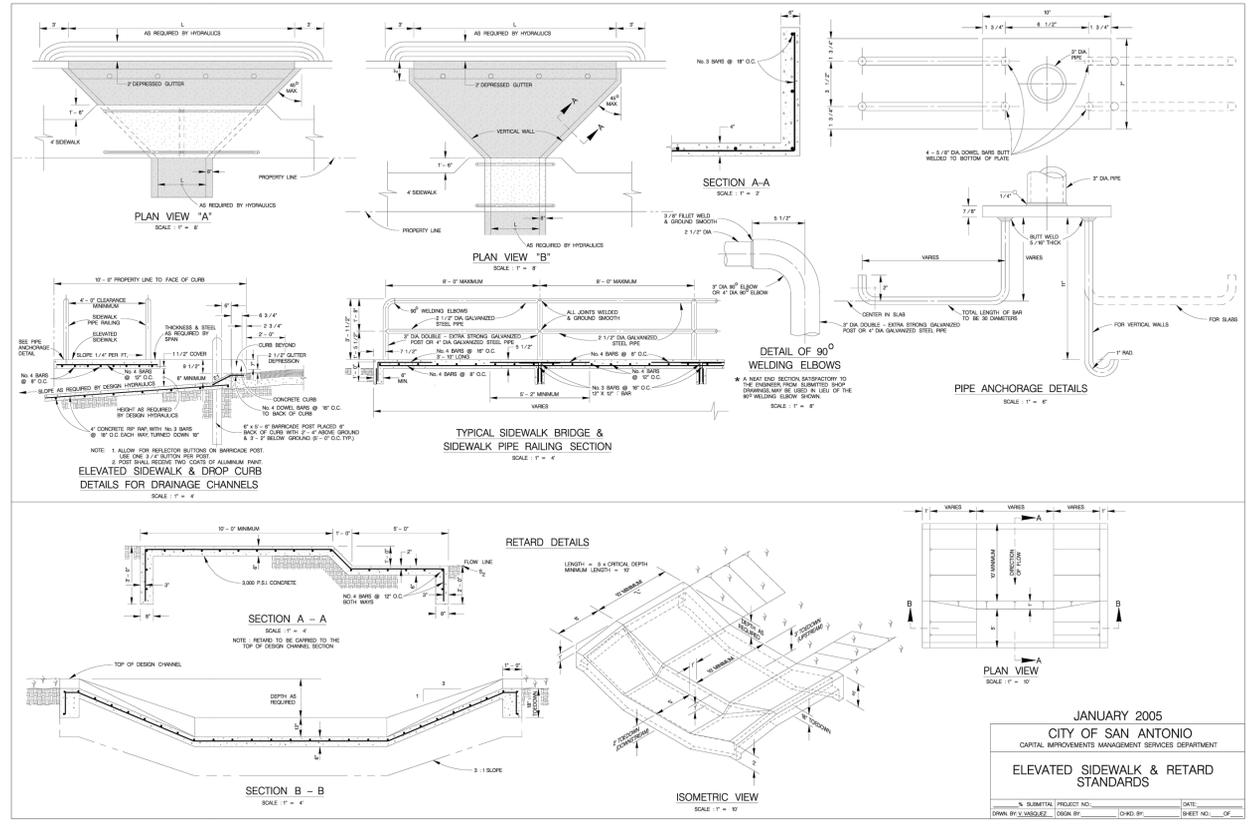


MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
TYPE 'C' INLET (TYPE 1 & II)
& INLET EXTENSION STANDARDS
SHEET 1 OF 3

DATE	REVISIONS	SCALE	SEE ABOVE
05/09/09	ISSUED	AS SHOWN	SHEET NO. 09



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit 103_CADD\01_Shts\C08.21 STREET & DRAINAGE DETAILS (SHEET 2 OF 5).dwg Layout: STREET & DRAINAGE DETAILS (SHEET 4 OF 5) Plotted: 6/24/2025 4:13:31 PM By: Calderon



HERON VALLEY PHASE 1
 STREET & DRAINAGE DETAILS
 (SHEET 4 OF 5)

BGE, INC.
 7330 San Pedro, Suite 202
 San Antonio, TX 78216
 TEL: 214.368.0000 www.bge.com
 TXE License Registration No. P-1046

DATE
APR

DAVID R. BENAUX
 LICENSED PROFESSIONAL ENGINEER
 STATE OF TEXAS
 127935

SHEET
C08.23

REV	DATE	DESCRIPTION

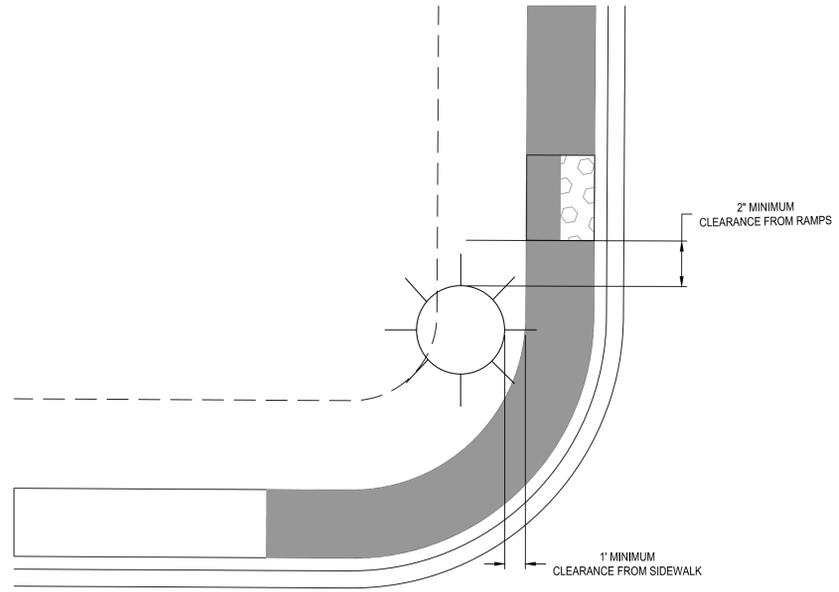
DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC



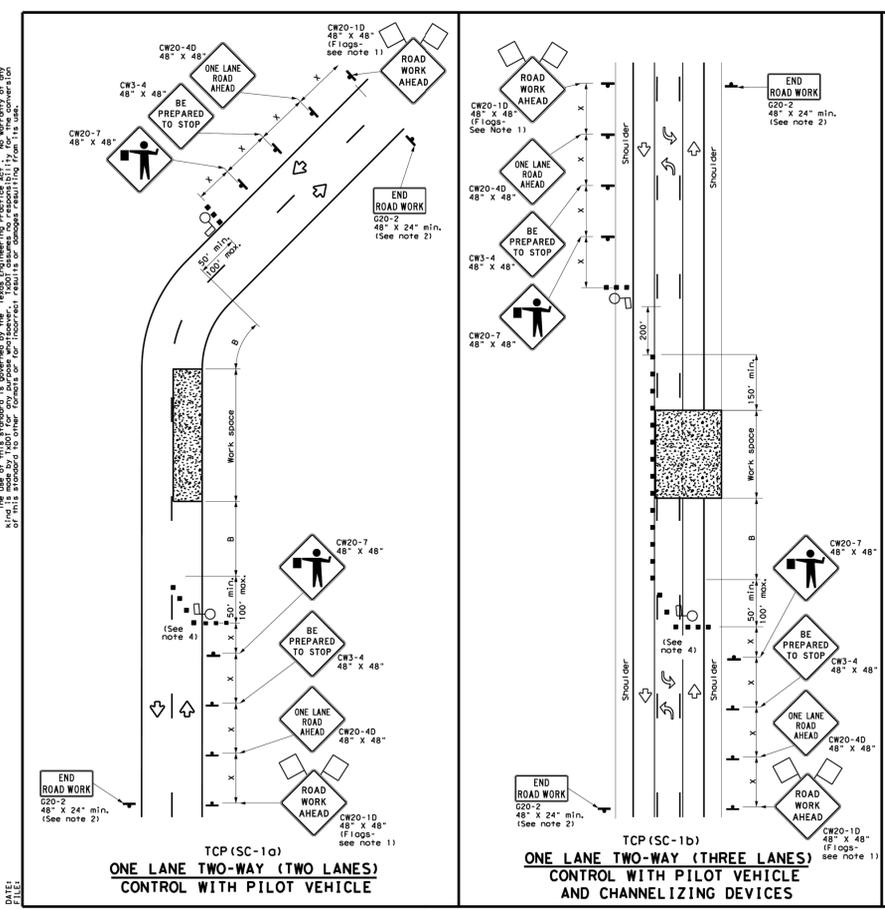
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-336-0000 www.bgeenergy.com
TX P.E. Registration No. P-1049

HERON VALLEY PHASE 1
SIGNAGE DETAILS (SHEET 1 OF 2)

DATE: 06/24/25
SHEET: C09.01



NOTE: LIGHT POST TO BE PLACED CLEAR OF ALL SIDEWALK, RAMPS, AND FIRE HYDRANTS.



LEGEND

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

Posted Speed (MPH)	Formula	Minimum desirable Taper Lengths (ft)	Suggested Maximum Spacing of Channelizing Devices (ft)	Minimum Sign Spacing Distance (ft)	Suggested Longitudinal Buffer Space (ft)	Stopping Sight Distance (ft)
30	L = 150'	10', 11', 12'	30'	60'	120'	90'
35	L = 165'	11', 12', 13'	30'	70'	160'	120'
40	L = 180'	12', 13', 14'	35'	80'	240'	150'
45	L = 195'	13', 14', 15'	40'	90'	320'	195'
50	L = 210'	14', 15', 16'	45'	100'	400'	240'
55	L = 225'	15', 16', 17'	50'	110'	500'	295'
60	L = 240'	16', 17', 18'	55'	120'	600'	350'
65	L = 255'	17', 18', 19'	60'	130'	700'	410'
70	L = 270'	18', 19', 20'	65'	140'	800'	475'
75	L = 285'	19', 20', 21'	70'	150'	900'	540'

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

TYPICAL USAGE

MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY

GENERAL NOTES

- Flags attached to signs where shown are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except if project signing is present, END ROAD WORK (G20-2) sign is optional with approval by the Engineer.
- Sign spacing may be increased or an additional ROAD WORK AHEAD (CW20-10) sign may be used if advance warning ahead of the flagger sign is less than 1500 feet.
- Flaggers should use two-way radios or other methods of communication at all times for traffic control coordination.
- Flaggers should use 24" STOP (CW20-8) / SLOW (CW20-8a) paddles to control traffic. Flags should be limited to emergency situations.
- If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
- If the seal coat operation crosses intersections, traffic in these areas must be controlled. Care must be taken to prevent vehicles from crossing the asphalt before the aggregate is placed. This may require positioning additional traffic control personnel (flaggers) at the intersection.
- Temporary rumble strips are not required on seal coat operations.
- The pilot car is used to guide vehicles through traffic control zone. The pilot car shall have an identification name displayed and PILOT CAR, FOLLOW ME (G20-4) sign or message board mounted in a conspicuous position on rear.

TCP (SC-1a)

- Channelizing devices on the centerline are not required when a pilot car is leading traffic, unless directed by the Engineer.

TCP (SC-1b)

TRAFFIC CONTROL PLAN SEAL COAT OPERATIONS ONE-LANE TWO-WAY TCP (SC-1) - 22

FILE: 10000-1-22.dwg
DATE: 10/01/2022
DRAWN BY: JDC
CHECKED BY: OR
JOB: HERON VALLEY
COUNTY: BEXAR
SHEET NO.: 127935

