

# GATES TRACT OFF-SITE SEWER

## SAN ANTONIO, TEXAS

### SANITARY SEWER IMPROVEMENTS

SAWS STANDARD GENERAL CONSTRUCTION NOTES ASSOCIATED WITH 2021 SAWS STANDARD SPECS

UPDATED DECEMBER 14, 2021

#### 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:
  - 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
  - CURRENT TxDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE"
  - CURRENT SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION."
  - CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR CONSTRUCTION."
  - CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).

- THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE: [HTTPS://APPS.SAWS.ORG/BUSINESS\\_CENTER/SPECS/CONSTSPECS/](https://apps.saws.org/business_center/specs/constspecs/), UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.

- THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 (DURING REGULAR SAWS WORKING HOURS) AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS TWO (2) WEEKS PRIOR TO EXCAVATION. OUTSIDE OF REGULAR SAWS WORKING HOURS THE SAWS EOC SHOULD BE CONTACTED AT 210-704-7297.
- IF NECESSARY, CONTRACTOR WILL COORDINATE USE OF SAWS PREMISES AT NO ADDITIONAL COST TO SAWS. SUCH EFFORTS INCLUDE, BUT ARE NOT LIMITED TO, OBTAINING SECURITY IDENTIFICATION BADGES REQUIRED FOR ACCESS TO SAWS FACILITIES.

- LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR 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 PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. AS-BUILTS FOR SAWS INFRASTRUCTURE CAN BE OBTAINED AT WEBSITE BELOW. CONTRACTOR SHALL COORDINATE PHYSICAL LOCATES FOR SAWS INFRASTRUCTURE THROUGH THE SAWS INSPECTOR. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS INFRASTRUCTURE. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:

SAN ANTONIO WATER SYSTEM:  
REQUEST AS-BUILTS: [HTTPS://WWW.SAWS.ORG/SERVICE/LOCATES-SERVICE/](https://www.saws.org/service/locates-service/)  
COSA DRAINAGE 210-206-8433  
COSA TRAFFIC SIGNAL OPERATIONS 210-207-7720  
TEXAS STATEWIDE ONE CALL LOCATOR 1-800-945-6005 OR 811

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

- CONTRACTOR SHALL NOT MAKE USE OF DUMPSTERS OR WASTE BINS THAT ARE INTENDED TO SERVE RESIDENTS AND/OR BUSINESSES.

- ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.

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

- ALL WORK WITHIN THE 100-YEAR FLOODPLAIN SHALL BE DONE IN ACCORDANCE WITH FLOODPLAIN DEVELOPMENT PERMIT.

- ANY WORK COMPLETED WITHOUT PRIOR WRITTEN AUTHORIZATION WHICH IS NOT INCLUDED IN THESE PLANS AND SPECIFICATIONS WILL NOT BE COMPENSATED BY THE SAN ANTONIO WATER SYSTEM.

- HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS.

WEEKEND WORK: CONTRACTORS ARE REQUIRED TO SUBMIT REQUEST TO THE SAWS INSPECTION CONSTRUCTION DEPARTMENT BY 12:00PM ON THE WEDNESDAY PRIOR TO THE WEEKEND BEING REQUESTED. REQUEST SHOULD BE SENT TO [CONSTWORKREQ@SAWS.ORG](mailto:CONSTWORKREQ@SAWS.ORG)

ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION AT NO COST TO SAWS.

- PRE-CON SITE VIDEO: BEFORE THE START OF ANY CONSTRUCTION, THE SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO SAWS INSPECTIONS. A PRE-SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF THE EXISTING CONDITIONS (NSP).

- POWER POLE BRACING: CONTRACTORS SHOULD BE ADVISED THAT THERE ARE EXISTING OVERHEAD UTILITY POLES ALONG THE PROJECT CORRIDOR. CONTRACTORS SHOULD FURTHER BE ADVISED THAT IF THE DISTANCE FROM THE OUTSIDE FACE OF A UTILITY TRENCH TO THE FACE OF A UTILITY POLE IS LESS THAN 8 FEET, SAID UTILITY POLE IS SUBJECT TO BRACING, BASED ON A DETERMINATION MADE BY UTILITY POLE OWNER. COSTS INCURRED BY CONTRACTOR FOR BRACING OF THESE UTILITY POLES IS SUBORDINARY TO THAT RESPECTIVE UTILITY COMPANY'S WORK. IT IS ADVISABLE FOR THE CONTRACTOR TO REVIEW THE CONSTRUCTION DOCUMENTS AND VISIT THE CONSTRUCTION SITE TO DETERMINE POTENTIAL IMPACTS.

- CONSTRUCTION SEQUENCING: IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SCHEDULE SEQUENCING FOR REMOVAL AND INSTALLATION OF EXISTING AND PROPOSED SAWS UTILITIES IN CONJUNCTION WITH GENERAL PROJECT CONSTRUCTION. SEQUENCE OF CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED IN ORDER TO MINIMIZE THE EXTENT AND DURATION OF DISTURBANCES.

- CONTRACTOR SHALL COMPLY WITH APPLICABLE REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE OVERSEEN BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA INFORMATION AND RELATED MATERIALS MAY BE OBTAINED AT [HTTPS://WWW.OSHA.GOV/](https://www.osha.gov/) OR AT THE OSHA SAN ANTONIO OFFICE LOCATED AT FOUNTAINHEAD TOWER, SUITE 605 6200 W. INTERSTATE 10 SAN ANTONIO, TX 78233 WHICH IS ALSO REACHABLE BY PHONE AT (210) 472-5240.

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

- COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION ON POINT. TESTS WILL BE DONE AT ONE LOCATION ON POINT. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

#### WATER

- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS INSPECTION 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.  
SAWS PRODUCTION CONTROL, CENTER 210-233-2016

- ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE 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. PAYMENT FOR SUCH WORK IS TO BE MADE UNDER ITEM NO. 3000, "HANDLING ASBESTOS CEMENT PIPE".

- AC PIPE REMOVED ON CONSTRUCTION PROJECTS FOR TIE-INS SHOULD BE IN LENGTH OF 26 LINEAR FEET (LF). LENGTHS OF 13 LF SHOULD BE REMOVED WHERE AC PIPE IS BEING REMOVED AND CROSSING PIPES, CONDUITS, OR BOXES.

- 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 CAPPLUG. (NSP)

- 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 ID 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.

#### SEWER

- 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:

- IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT 210-704-SAWS (210-704-7297). PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.
- ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
- CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
- CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
- CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.
- 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.

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.

- THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED, IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION ITEM NO. 865, "BYPASS PUMPING SMALL DIAMETER SANITARY SEWER MAINS" AND STANDARD SPECIFICATION ITEM NO. 864, "BYPASS PUMPING LARGE DIAMETER SANITARY SEWER MAINS" AS APPLICABLE. PAYMENT FOR SUCH WORK WILL BE MADE UNDER THE APPROPRIATE BID ITEM ASSOCIATED WITH SANITARY SEWER BYPASS PUMPING IN ACCORDANCE WITH SAWS STANDARD SPECIFICATIONS 865 AND 864.

- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 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.

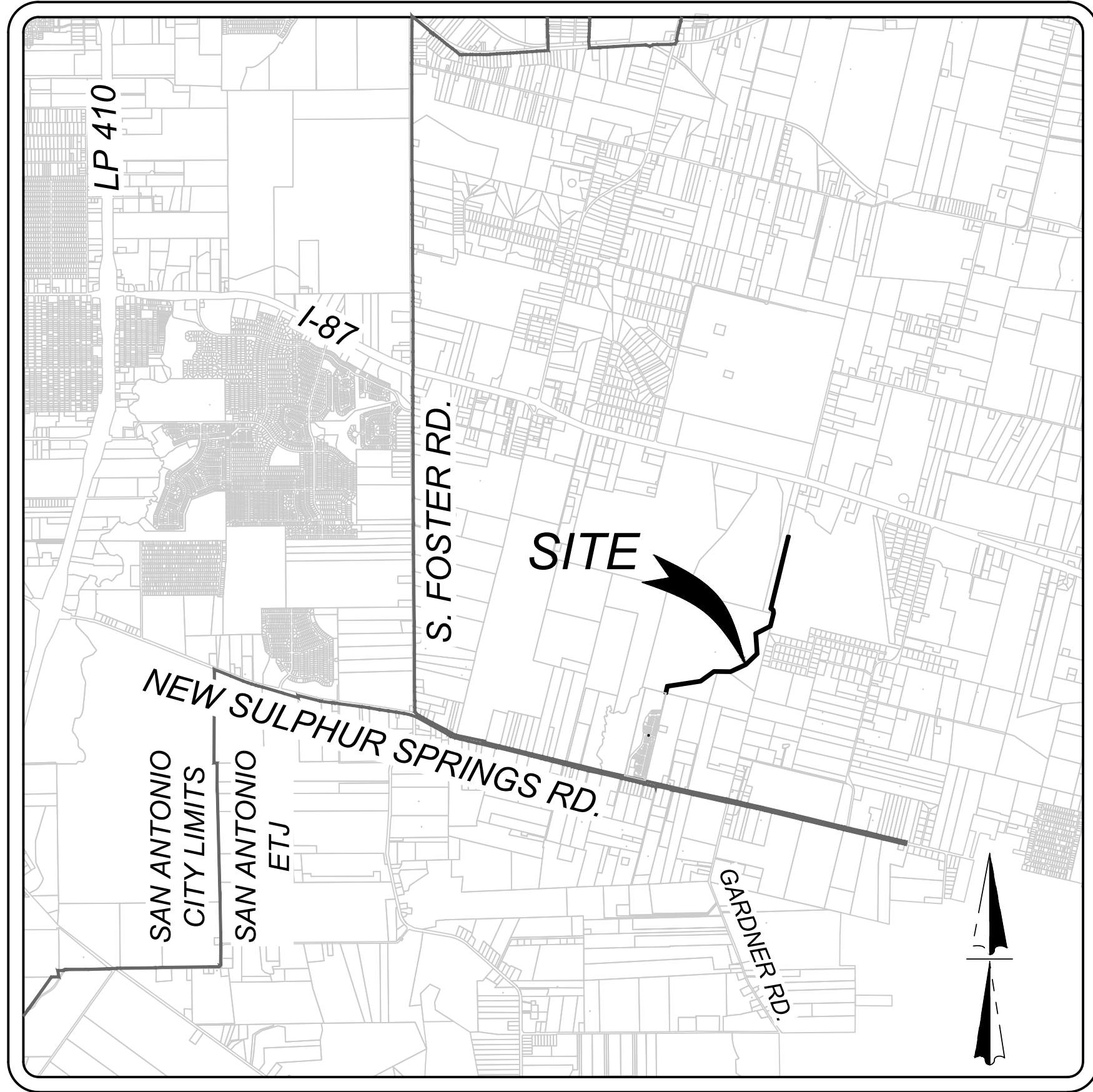
- ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS (NSP).

- MANHOLE REMOVAL: WHERE EXISTING MANHOLES ARE TO BE REPLACED BY THE CONTRACTOR, THE EXISTING MANHOLES SHALL BE REMOVED. (NSP)

- SMART MANHOLE COVERS: THE CONTRACTOR SHALL NOTIFY SAWS EOC AT 210-704-SAWS (210-233-7297) AND EITHER AMERICA ESPINOZA AT 210-233-2934 OR JOSE A. MARTINEZ AT 210-233-3071 A MINIMUM OF 72 HOURS, NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE. IN ORDER TO HAVE SAWS REMOVE THE SMART COVER, ANY DAMAGE DONE TO THE SMART COVER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.

- FLOW METERS IN MANHOLES: THE CONTRACTOR SHALL NOTIFY BOBBY JOHNSON AT 210-233-3493 OR ABEL BORUNDA AT 210-233-3704 A MINIMUM OF 72 HOURS, NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE. IN ORDER TO HAVE SAWS REMOVE THE FLOW METER IN THE MANHOLE, ANY DAMAGE DONE TO THE FLOW METER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.

OWNER/DEVELOPER:  
MEH HOLDING COMPANY, LTD.  
5210 THOUSAND OAKS, SUITE 1318  
SAN ANTONIO, TEXAS 78233



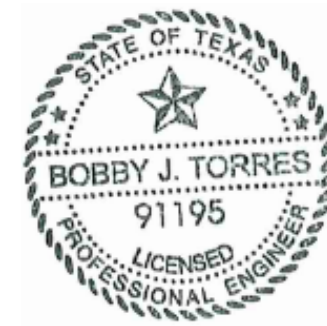
## LOCATION MAP

### NOT-TO-SCALE

Figure: 30 TAC §217.53(d)(3)

Table C.1.

Case	Protection Requirement
Parallel pipes within nine feet, where the collection system pipe is above the water supply pipe	Encased in a casing pipe according to paragraph (4) of this subsection
Crossing pipes within nine feet, where the collection system pipe is above the water supply pipe	Encased in a casing pipe according to paragraph (5)(A) of this subsection -OR- Constructed using 150 per square inch (psi) pressure class pipe according to paragraph (5)(B) of this subsection
Parallel pipes within nine feet, where the collection system pipe is below the water supply pipe	Constructed using 150 psi pressure class pipe according to paragraph (6)(A) of this subsection -OR- Encased in a casing pipe according to paragraph (6)(B) of this subsection
Crossing pipes within nine feet, where the collection system pipe is below the water supply pipe	Constructed using 150 psi pressure class pipe according to paragraph (7)(A) of this subsection -OR- Encased in cement-stabilized sand according to paragraph (7)(B) of this subsection -OR- Encased in a casing pipe according to paragraph (7)(C) of this subsection
Manhole within nine feet of a water supply pipe	No measurable leakage according to paragraph (8)(A) of this subsection -OR- Encased in cement-stabilized sand according to paragraph (8)(B) of this subsection



12/16/2022

SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.			
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78233	
PHONE#:	FAX#:	TOTAL ACREAGE: <u>N/A</u>	
SAWS BLOCK MAP#: <u>210556, 212556, 212558, 214550, 214560</u>		TOTAL EDUS#: <u>N/A</u>	
TOTAL LINEAR FOOTAGE OF PIPE: <u>7066.41</u> L.F. ~ 12" PVC Pipe PLAT NO.: <u>N/A</u>			
NUMBER OF LOTS: <u>N/A</u>		SAWS JOB#: <u>22-1683</u>	

GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

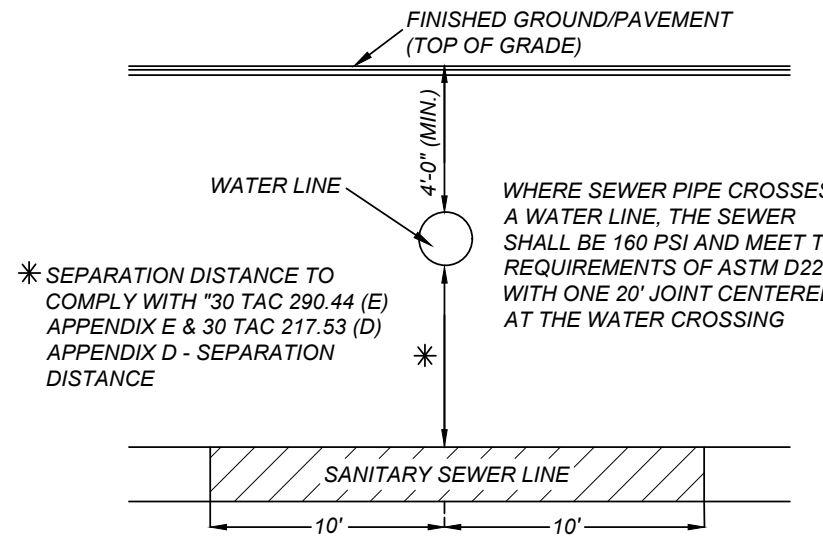
THIS DOCUMENT IS  
RELEASED BY AUTHORITY  
OF BOBBY J. TORRES, P.E.  
#91195 FOR INTERIM  
REVIEW ONLY AND NOT TO  
BE USED FOR  
CONSTRUCTION.

**KFW**  
ENGINEERS + SURVEYING  
2421 Piedras Drive, Suite 200, San Antonio, TX 78237  
Phone #: (210) 978-8444 • Fax #: (210) 978-8441  
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

SHEET 0.0



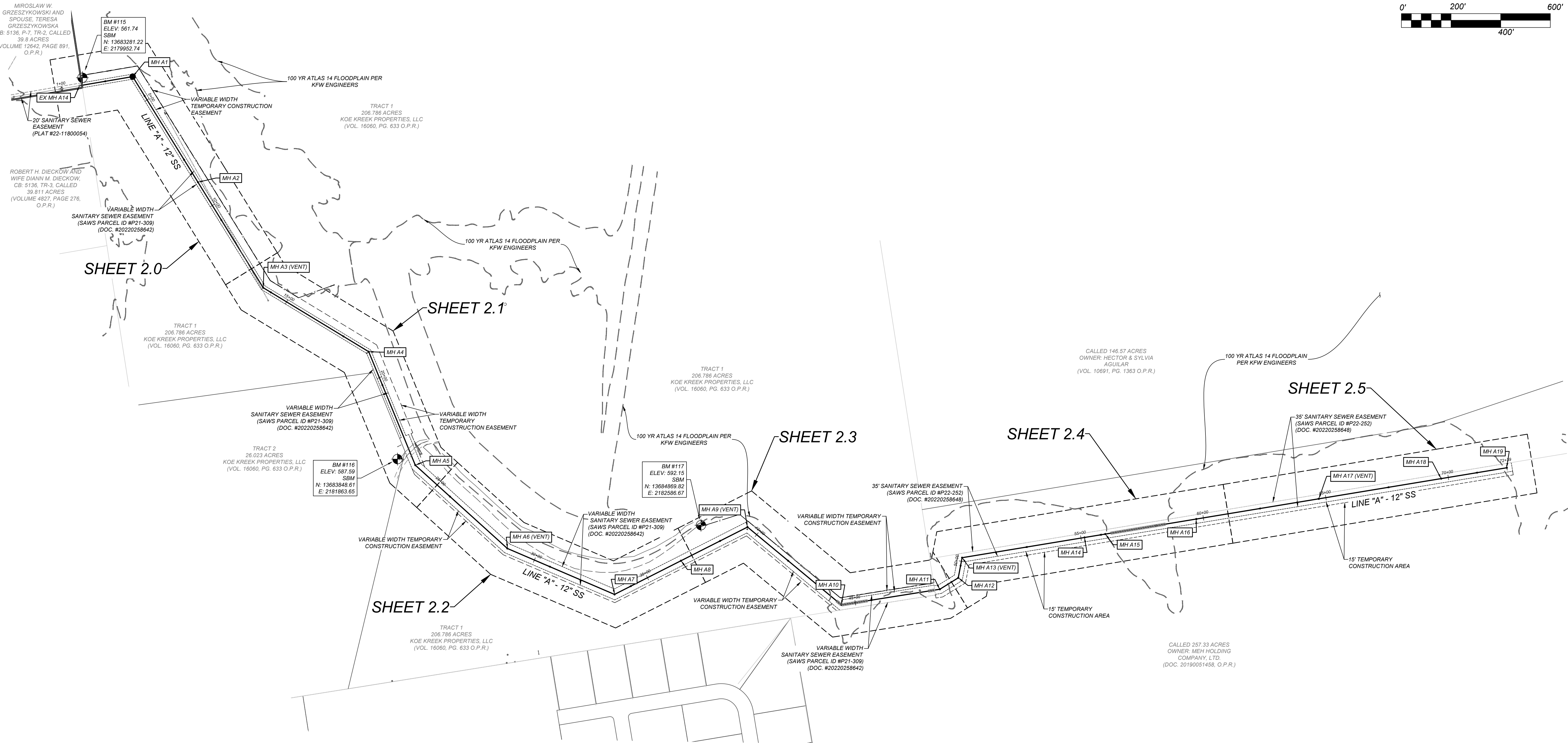
**CAUTION!**  
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY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



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL  
(SEE SAWS SPECIFICATION ITEM 612 FOR MORE DETAIL.)

MIROSLAW W. GRZESZYKOWSKI AND SPOUSE, TERESA GRZESZYKOWSKA  
CB: 5136, P-7, TR-2, CALLED 39.8 ACRES (VOLUME 12642, PAGE 891, O.P.R.)

ROBERT H. DIECKOW AND WIFE DIANN M. DIECKOW  
CB: 5136, TR-3, CALLED 39.811 ACRES (VOLUME 4927, PAGE 276, O.P.R.)



- NOTE:**
1. MANHOLES MUST BE VENTED AT LEAST EVERY 1,500 FEET TO COMPLY WITH "30 TAC 217.55(n)."
  2. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
  3. WHERE SEWER CROSSES A WATER LINE IT SHALL COMPLY WITH "30 TAC 217.53(d)(3)."
  4. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM, REFERENCE SHEET 0.0, TABLE C.1 FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS).
  5. SEE SHEET 1.0 FOR BENCHMARK INFORMATION.
  6. ALL GRAVITY MAIN PIPE TYPE SHALL BE SDR 35 PVC.
  7. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET 3.0 FOR DETAILS.
  8. WHERE EXCAVATION IS WITHIN 5' OF A UTILITY POLE, THE POLE SHALL BE BRACED. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL PURVEYOR, (NSPI).
  9. ALL LENGTHS SHOWN (PROFILE AND PLAN VIEW) ARE CENTER TO CENTER LENGTHS UNLESS OTHERWISE NOTED.
  10. EXISTING DRIVEWAY AND FENCING SHALL BE REPAIRED TO AN "EQUAL" OR "BETTER" CONDITION WITH LIKE MATERIAL AS EXISTING. THIS WILL BE CONSIDERED TO BE INCLUDED WITH THE COST OF THE PROJECT (N.S.P.I.).

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

**EXISTING UTILITY NOTE:**  
THE EXISTING UTILITIES SHOWN ARE BASED ON THE BEST RECORDS AVAILABLE AT THE TIME OF DESIGN AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. CONTRACTOR TO FIELD VERIFY THE LOCATION (BOTH HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO START OF CONSTRUCTION.

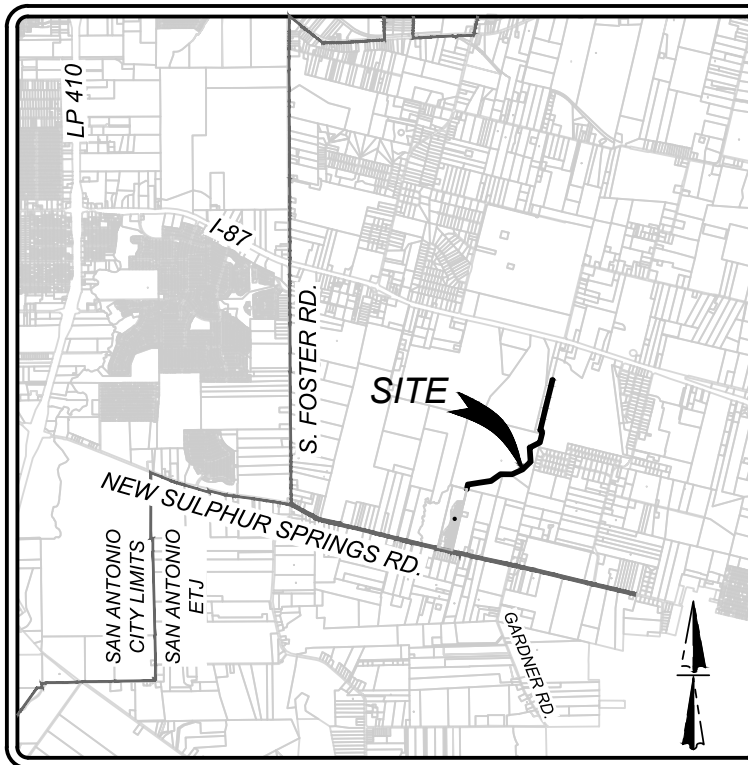
**MANHOLE NOTE:**  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS.

- LEGEND**
- PROPOSED GRAVITY SEWER MAIN AND MANHOLE
  - EXISTING GRAVITY SEWER LINE AND MANHOLE
  - EXISTING WATER LINE
  - EXISTING WATER SERVICE (APPROXIMATE LOCATIONS)
  - EXISTING WATER METER
  - EXISTING WATER METER
  - CL = CENTER LINE
  - PP = POWER POLE
  - WS = WATER SERVICE
  - ROW = RIGHT OF WAY
  - EX = EXISTING

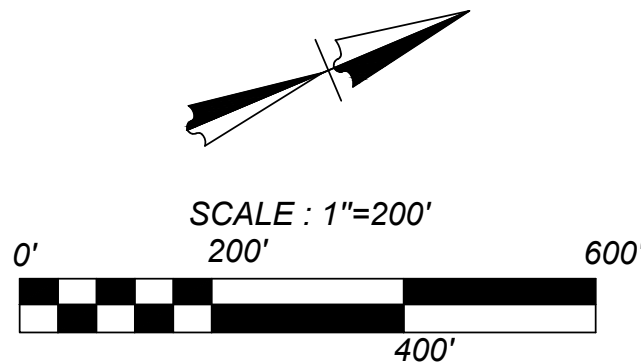
SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.  
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233  
PHONE#: FAX#: TOTAL ACRES: N/A  
SAWS BLOCK MAP#: 210556, 212556, 212558, 214558, 214560 TOTAL EDUS: N/A  
TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. - 12" PVC Pipe PLAT NO.: N/A  
NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683



LOCATION MAP  
NOT-TO-SCALE



**KFW**  
ENGINEERS + SURVEYING  
PRACTICE # 21018796444 - P.O. Box # 21018796444  
TBBE Firm # 9513 • TBBE.S Firm # 10122303

ISSUE DATE  
REVISIONS

BOBBY J. TORRES  
91195  
Professional Engineer  
12/16/2022

GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS  
SANITARY SEWER SHEET INDEX AND SURVEY CONTROL

JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

1.0



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

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

**EXISTING UTILITY NOTE:**  
THE EXISTING UTILITIES SHOWN ARE BASED ON THE BEST RECORDS AVAILABLE AT THE TIME OF DESIGN AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. CONTRACTOR TO FIELD VERIFY THE LOCATION (BOTH HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO START OF CONSTRUCTION.

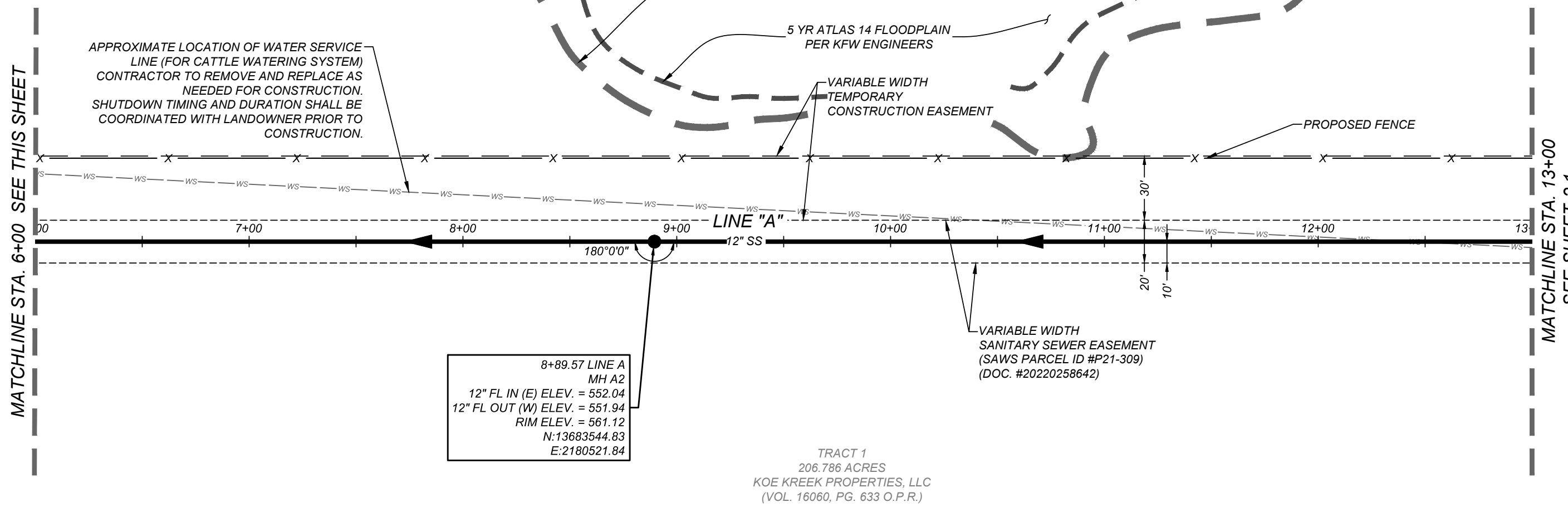
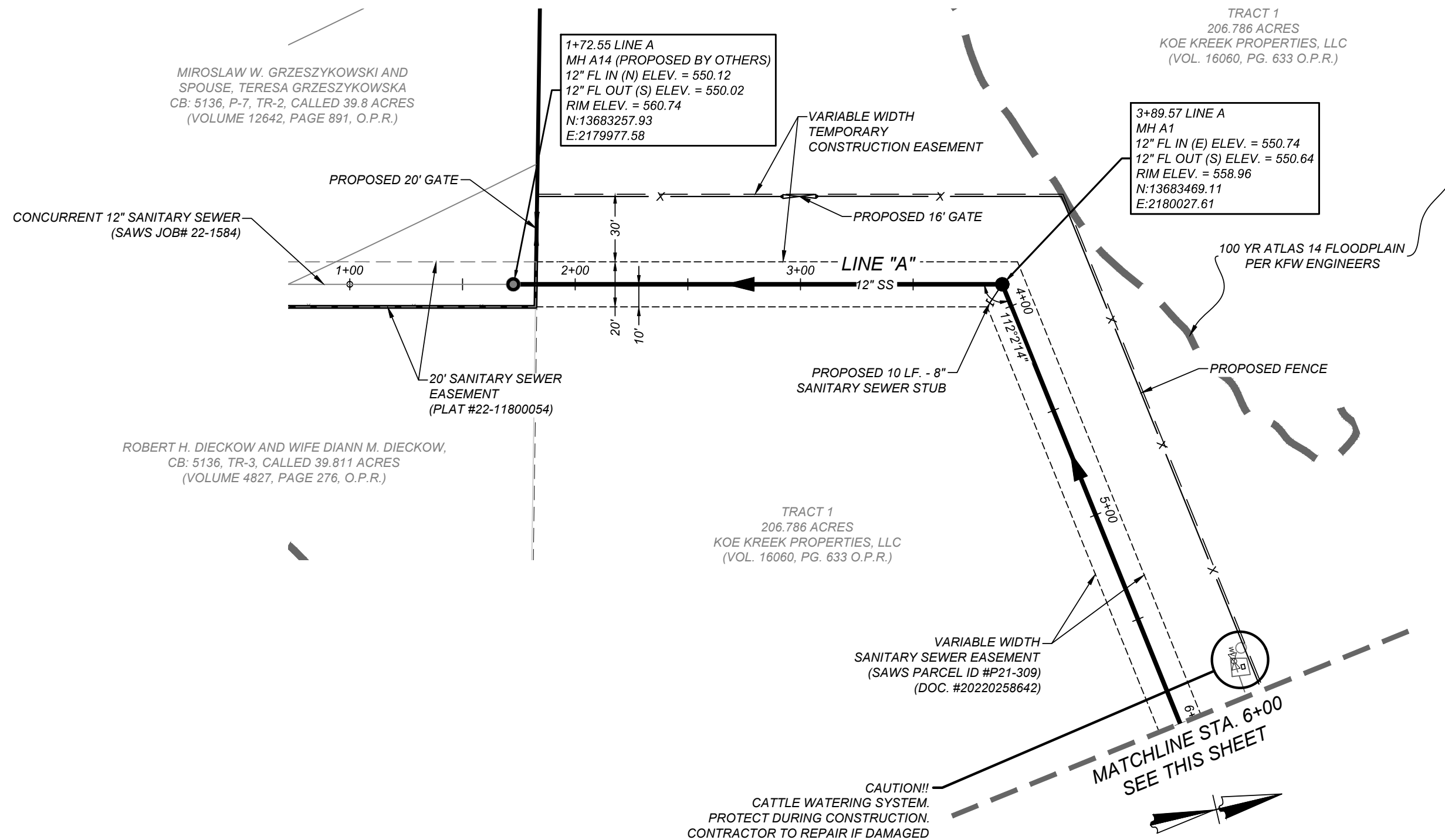
- NOTE:**
1. MANHOLES MUST BE VENTED AT LEAST EVERY 1,500 FEET TO COMPLY WITH "30 TAC 217.35(1)".
  2. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
  3. WHERE SEWER CROSSES A WATER LINE IT SHALL COMPLY WITH "30 TAC 217.33(d)(3)". CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 0.0, SANITARY SEWER GENERAL NOTES. S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
  4. SEE SHEET 1.0 FOR BENCHMARK INFORMATION.
  5. ALL GRAVITY MAIN PIPE TYPE SHALL BE SDR 26 PVC.
  6. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASUREMENT AND A WATER TIGHT RING AND COVER. SEE SHEET 3.0 FOR DETAILS.
  7. WHERE EXCAVATION IS WITHIN 5' OF A UTILITY POLE, THE POLE SHALL BE BRACED. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL PURVEYOR. (NSPI)
  8. ALL LENGTHS SHOWN (PROFILE AND PLAN VIEW) ARE CENTER TO CENTER LENGTHS UNLESS OTHERWISE NOTED.
  9. EXISTING DRIVEWAY AND FENCING SHALL BE REPAIRED TO AN "EQUAL" OR "BETTER" CONDITION WITH LIKE MATERIAL AS EXISTING. THIS WILL BE CONSIDERED TO BE INCLUDED WITH THE COST OF THE PROJECT (N.S.P.I.).

SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.  
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233  
PHONE#: FAX#: TOTAL ACREAGE: N/A  
SAWS BLOCK MAP#: 210556,212556,212558,214558,214560 TOTAL EDUS: N/A  
TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. ~ 12" PVC PIPE PLAT NO.: N/A  
NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

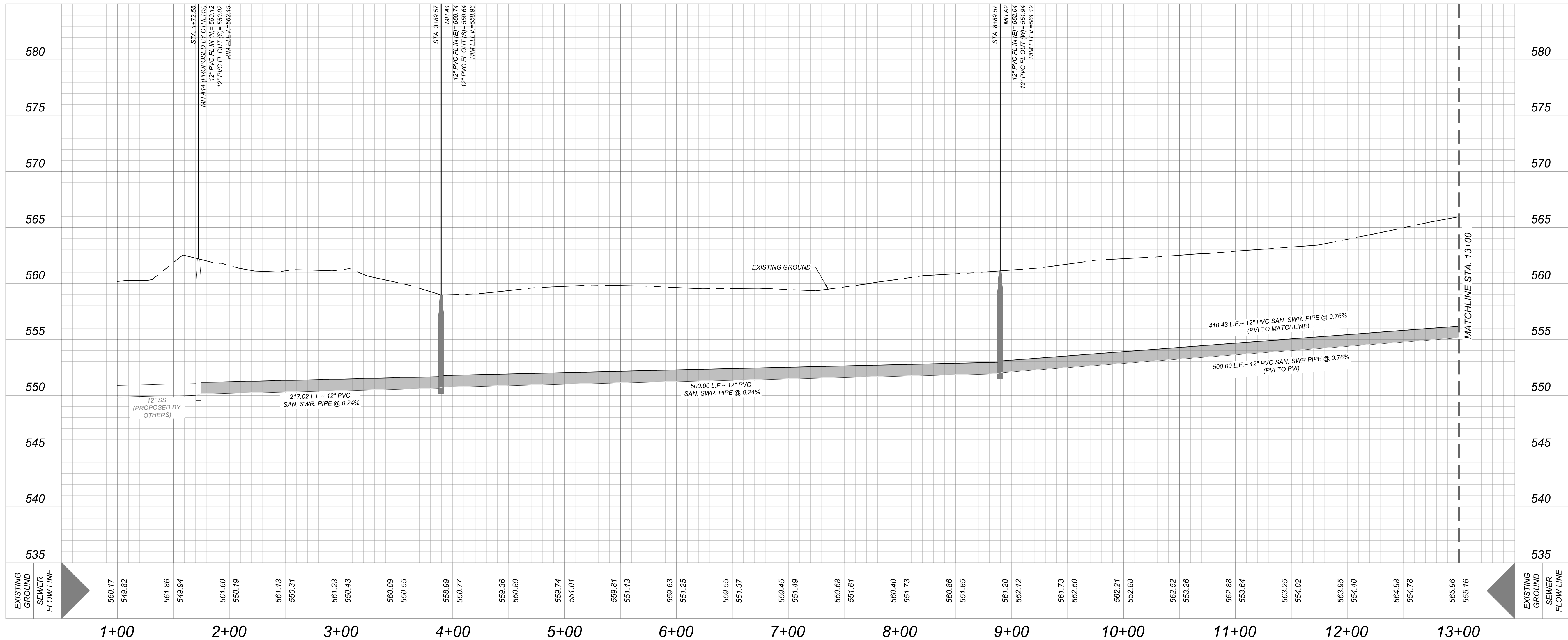
GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

MANHOLE NOTE:  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS.



SEWER LINE A STA. 1+00 - 13+00

HORZ SCALE: 1" = 50'  
VERT SCALE: 1" = 5'



GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS

SEWER LINE A STA. 1+00 - 13+00

JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

2.0



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

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

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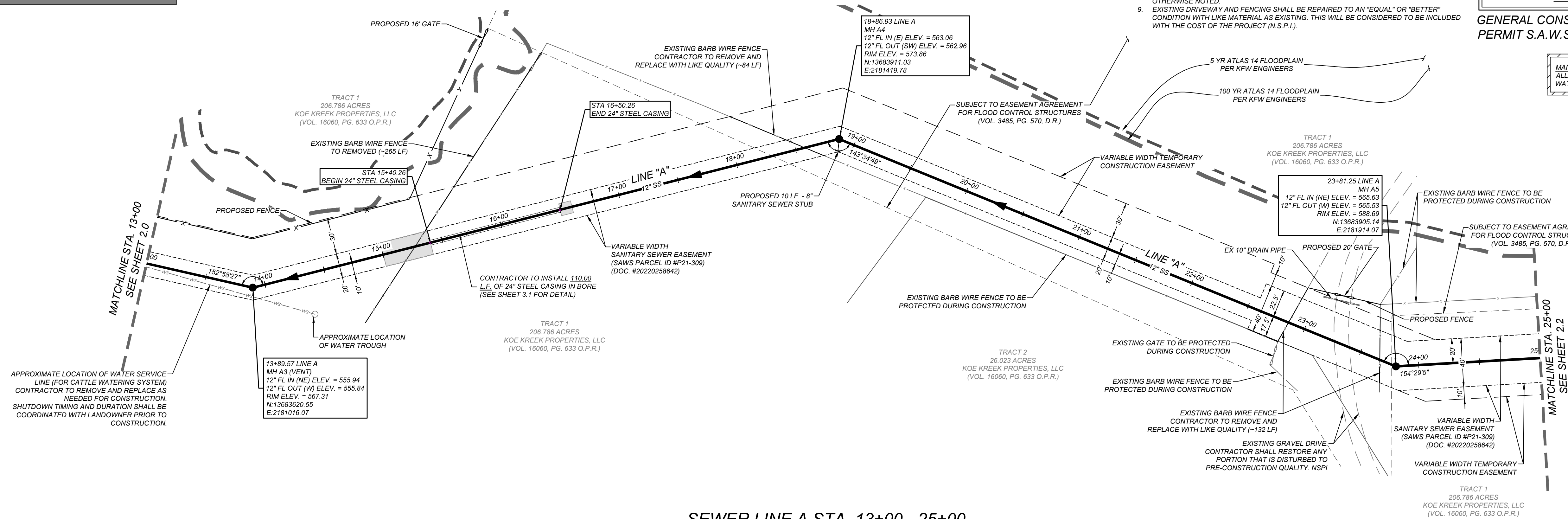
- NOTE:**
1. MANHOLES MUST BE VENTED AT LEAST EVERY 1,500 FEET TO COMPLY WITH "30 TAC 217.55(n)".
  2. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
  3. WHERE SEWER CROSSES A WATER LINE IT SHALL COMPLY WITH "30 TAC 217.53(d)(3)". CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 0.0, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
  4. SEE SHEET 1.0 FOR BENCHMARK INFORMATION.
  5. ALL GRAVITY MAIN PIPE TYPE SHALL BE SDR 26 PVC.
  6. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASUREMENT AND A WATER TIGHT RING AND COVER. SEE SHEET 3.0 FOR DETAILS.
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  8. ALL LENGTHS SHOWN (PROFILE AND PLAN VIEW) ARE CENTER TO CENTER LENGTHS UNLESS OTHERWISE NOTED.
  9. EXISTING DRIVEWAY AND FENCING SHALL BE REPAIRED TO AN "EQUAL" OR "BETTER" CONDITION WITH LIKE MATERIAL AS EXISTING. THIS WILL BE CONSIDERED TO BE INCLUDED WITH THE COST OF THE PROJECT (IN S.P.I.).

SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.  
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233  
PHONE: FAX: TOTAL ACREAGE: N/A  
SAWS BLOCK MAP#: 210556, 212556, 212558, 214558, 214560 TOTAL EDU'S: N/A  
TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. ~ 12" PVC PIPE PLAT NO.: N/A  
NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

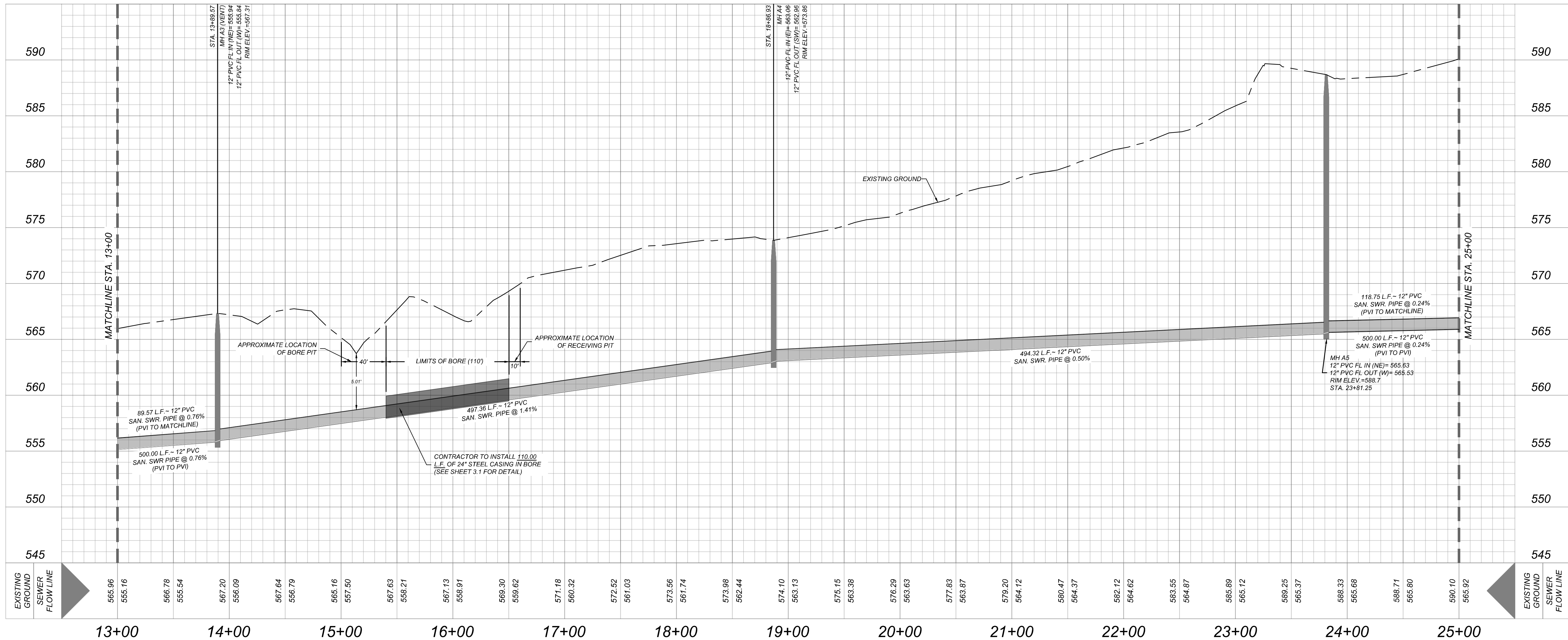
GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

**MANHOLE NOTE:**  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS.



SEWER LINE A STA. 13+00 - 25+00

HORZ SCALE: 1" = 50'  
VERT SCALE: 1" = 5'



GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS

SEWER LINE A STA. 13+00 - 25+00

JOB NO. 205-43-06  
DATE: November 6, 2023  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:



**TRENCH EXCAVATION SAFETY PROTECTION**  
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SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.  
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233  
PHONE#: FAX#: TOTAL ACREAGE: N/A  
SAWS BLOCK MAP#: 210556, 212556, 212558, 214558, 214560 TOTAL EDU'S: N/A  
TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. ~ 12" PVC PIPE PLAT NO.: N/A  
NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

**MANHOLE NOTE:**  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS.

- NOTE:**
1. MANHOLES MUST BE VENTED AT LEAST EVERY 1,500 FEET TO COMPLY WITH "30 TAC 217.53(n)."
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  4. SEE SHEET 1.0 FOR BENCHMARK INFORMATION.
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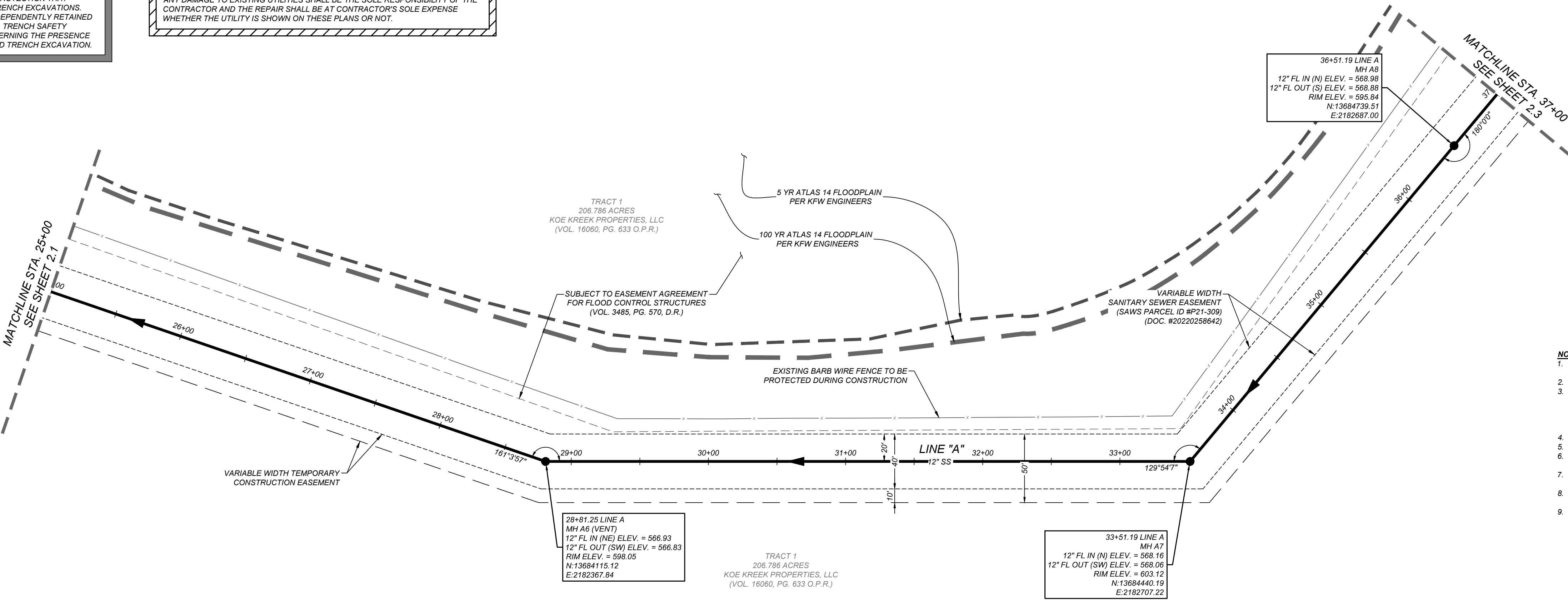
**KFW**  
**ENGINEERS + SURVEYING**  
Bobby J. Torres  
Professional Engineer  
No. 91195  
State of Texas  
12/16/2022

STATE OF TEXAS  
BOBBY J. TORRES  
91195  
Professional Engineer  
12/16/2022

GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS  
SEWER LINE A STA. 25+00 - 37+00

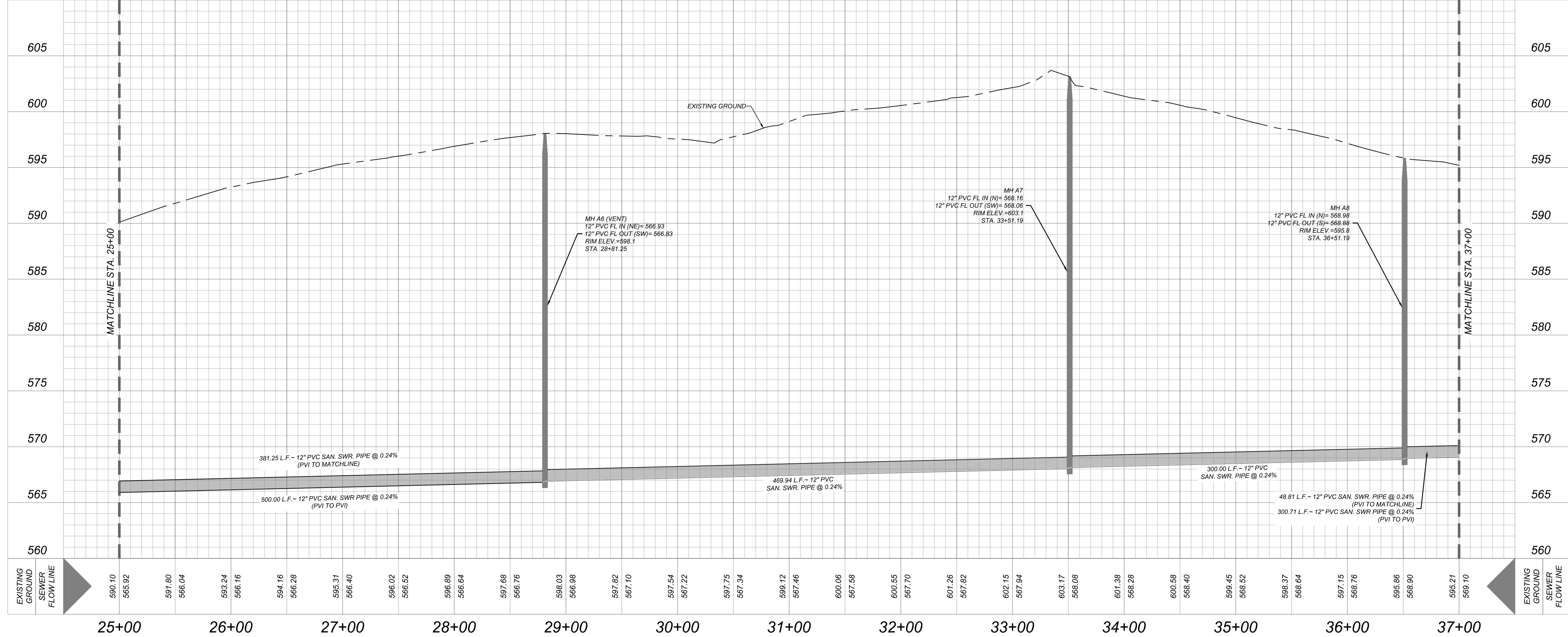
JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

2.2



SEWER LINE A STA. 25+00 - 37+00

HORZ SCALE: 1" = 50'  
VERT SCALE: 1" = 5'





**TRENCH EXCAVATION SAFETY PROTECTION**  
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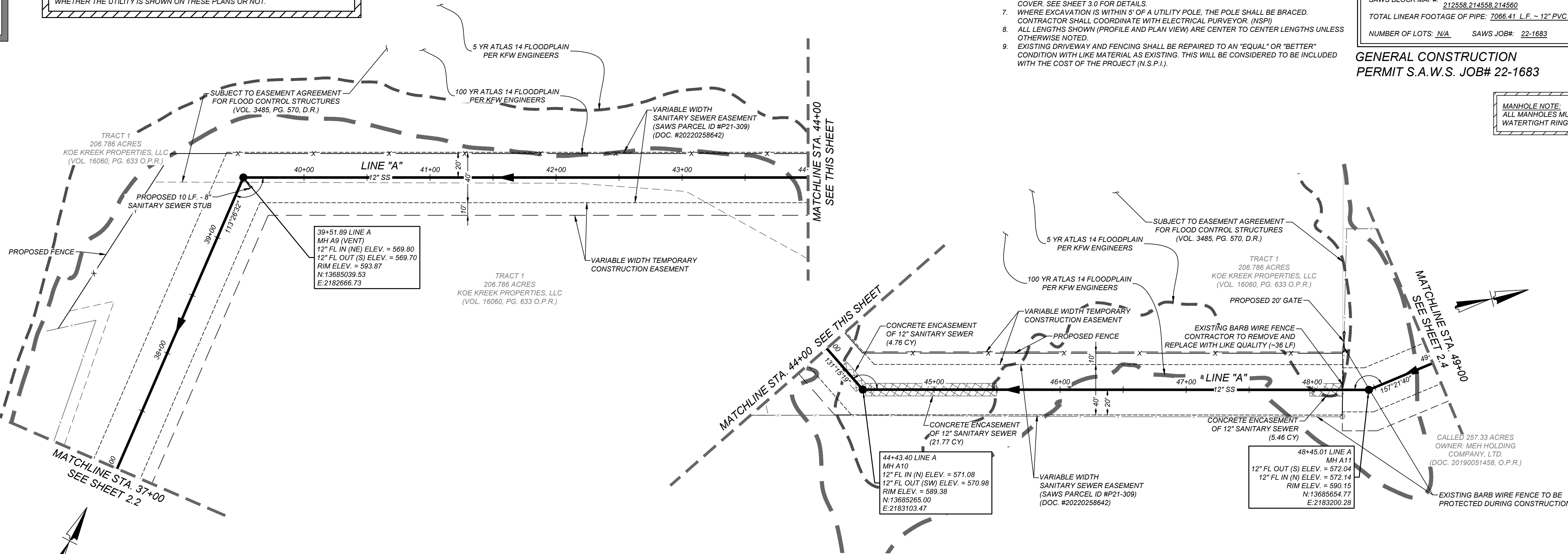
- NOTE:**
1. MANHOLES MUST BE VENTED AT LEAST EVERY 1,500 FEET TO COMPLY WITH "30 TAC 217.55(n)".
  2. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
  3. WHERE SEWER CROSSES A WATER LINE IT SHALL COMPLY WITH "30 TAC 217.53(d)(3)". CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 180 P.S.I. PRESSURE RATED P-V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 0.0, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
  4. SEE SHEET 1.0 FOR BENCHMARK INFORMATION.
  5. ALL GRAVITY MAIN PIPE TYPE SHALL BE SDR 26 PVC.
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SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.  
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233  
PHONE#: FAX#: TOTAL ACREAGE: N/A  
SAWS BLOCK MAP#: 210556,212556,212558,214558,214560 TOTAL EDUS: N/A  
TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. ~ 12" PVC PIPE PLAT NO: N/A  
NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

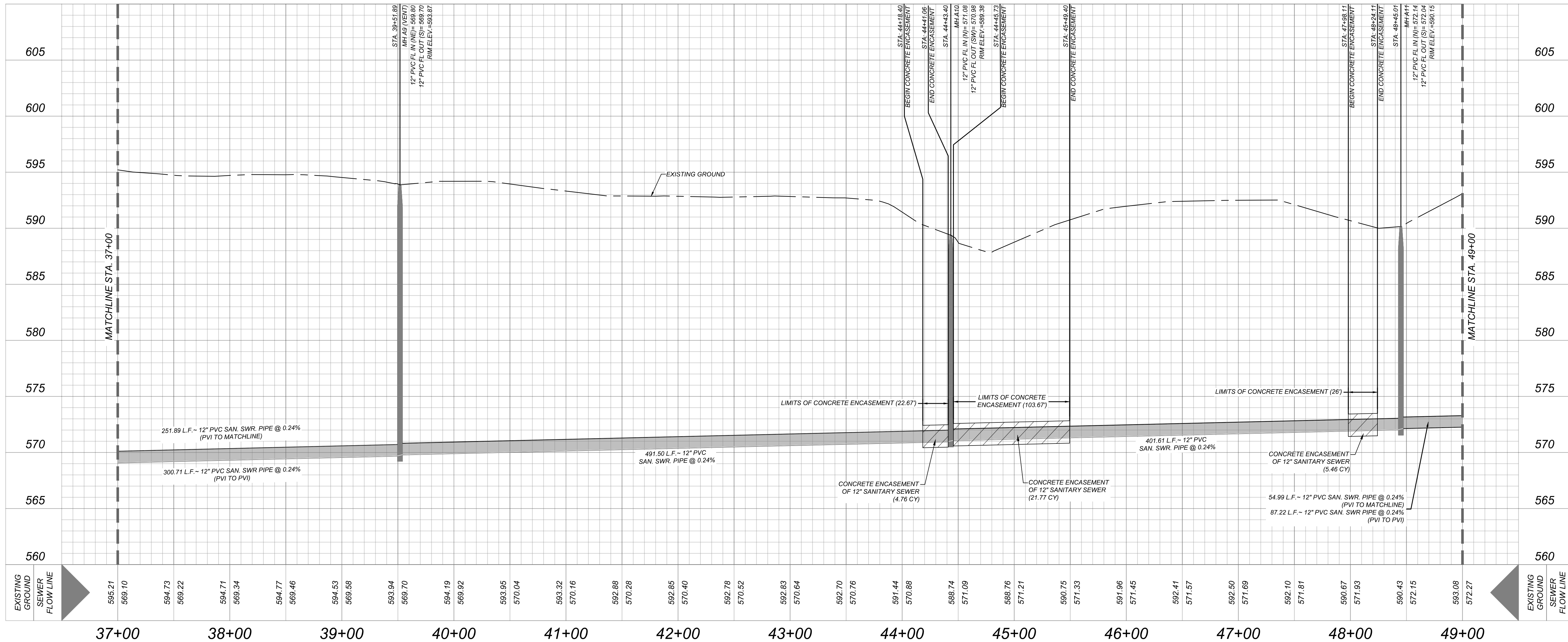
GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

**MANHOLE NOTE:**  
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SEWER LINE A STA. 37+00 - 49+00

HORZ SCALE: 1" = 50'  
VERT SCALE: 1" = 5'



GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS  
SEWER LINE A STA. 37+00 - 49+00

JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

2.3



**TRENCH EXCAVATION SAFETY PROTECTION**  
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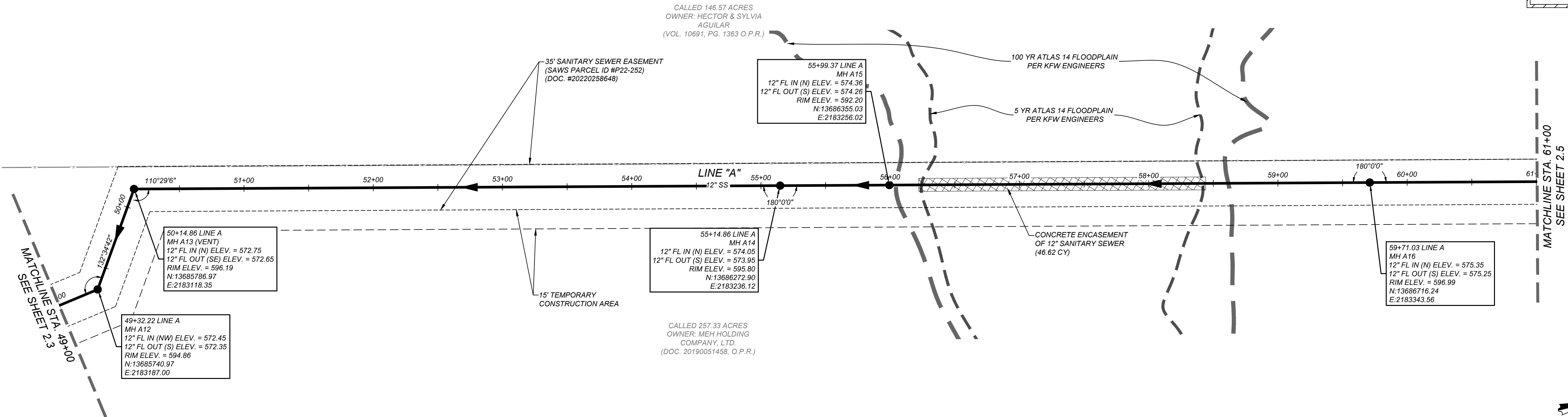
- NOTE:**
1. MANHOLES MUST BE VENTED AT LEAST EVERY 1,500 FEET TO COMPLY WITH "30 TAC 217.55(i)"
  2. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
  3. WHERE SEWER CROSSES A WATER LINE IT SHALL COMPLY WITH "30 TAC 217.53(i)(3)." CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 0.0, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
  4. SEE SHEET 1.0 FOR BENCHMARK INFORMATION.
  5. ALL GRAVITY MAIN PIPE TYPE SHALL BE SDR 26 PVC.
  6. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASUREMENT AND A WATER TIGHT RING AND COVER. SEE SHEET 3.0 FOR DETAILS.
  7. WHERE EXCAVATION IS WITHIN 8' OF A UTILITY POLE, THE POLE SHALL BE BRACED. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL PURVEYOR (NSPI).
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SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.  
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233  
PHONE#: FAX#: TOTAL ACREAGE: N/A  
SAWS BLOCK MAP#: 210556,212556, 212558,214558,214560 TOTAL EDUS: N/A  
TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. ~ 12" PVC Pipe PLAT NO.: N/A  
NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

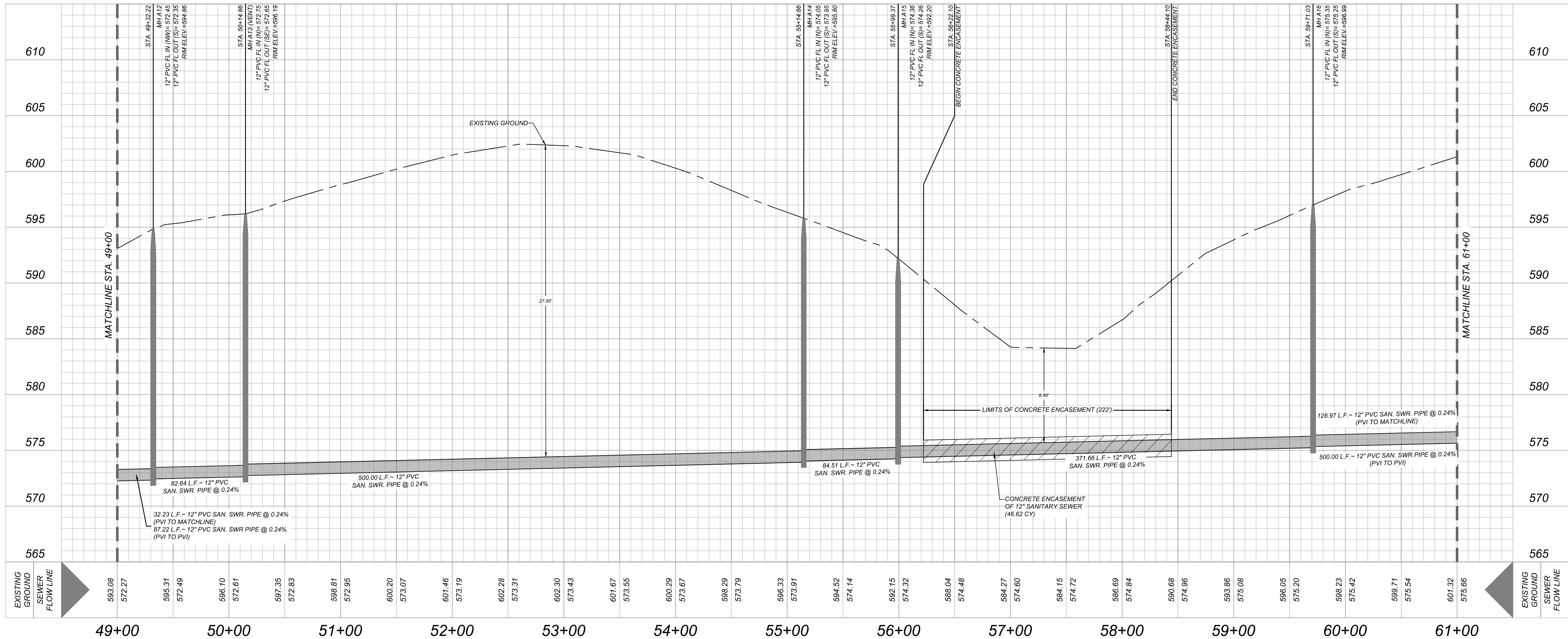
GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

MANHOLE NOTE:  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS.



SEWER LINE A STA. 49+00 - 61+00

HORZ SCALE: 1" = 50'  
VERT SCALE: 1" = 5'



GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS  
SEWER LINE A STA. 49+00 - 61+00

JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:



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

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

**EXISTING UTILITY NOTE:**  
THE EXISTING UTILITIES SHOWN ARE BASED ON THE BEST RECORDS AVAILABLE AT THE TIME OF DESIGN AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. CONTRACTOR TO FIELD VERIFY THE LOCATION (BOTH HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO START OF CONSTRUCTION.

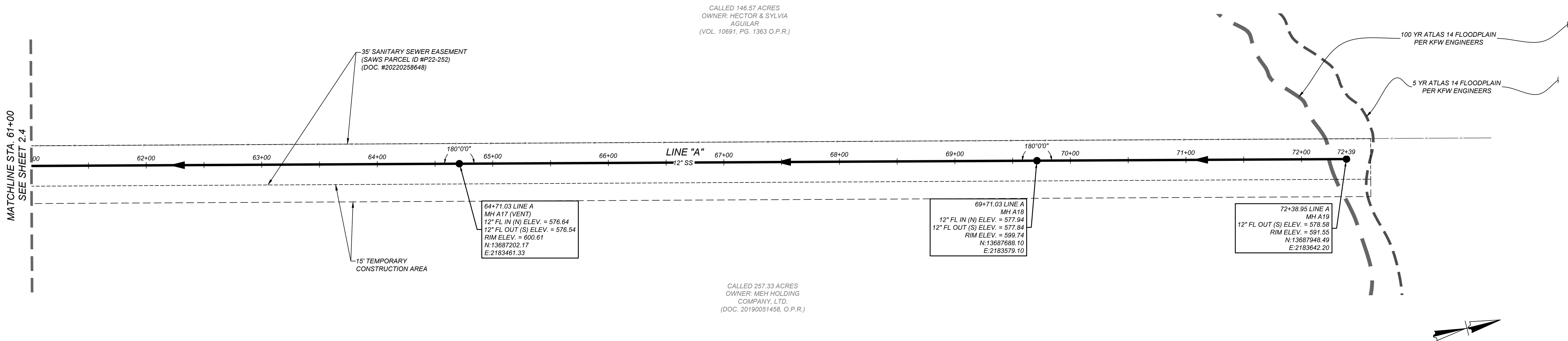
- NOTE:**
1. MANHOLES MUST BE VENTED AT LEAST EVERY 1,500 FEET TO COMPLY WITH "30 TAC 217.55(h)1."
  2. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
  3. WHERE SEWER CROSSES A WATER LINE IT SHALL COMPLY WITH "30 TAC 217.53(d)(3)."
  4. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 0.0, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
  5. SEE SHEET 1.0 FOR BENCHMARK INFORMATION.
  6. ALL GRAVITY MAIN PIPE TYPE SHALL BE SDR 26 PVC.
  7. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASUREMENT AND A WATER TIGHT RING AND COVER. SEE SHEET 3.0 FOR DETAILS.
  8. WHERE EXCAVATION IS WITHIN 5' OF A UTILITY POLE, THE POLE SHALL BE BRACED. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL PURVEYOR. (NSPI)
  9. ALL LENGTHS SHOWN (PROFILE AND PLAN VIEW) ARE CENTER TO CENTER LENGTHS UNLESS OTHERWISE NOTED.
  10. EXISTING DRIVEWAY AND FENCING SHALL BE REPAIRED TO AN "EQUAL" OR "BETTER" CONDITION WITH LIKE MATERIAL AS EXISTING. THIS WILL BE CONSIDERED TO BE INCLUDED WITH THE COST OF THE PROJECT (N.S.P.I.).

SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.  
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233  
PHONE#: FAX#: TOTAL ACREAGE: N/A  
SAWS BLOCK MAP#: 210556,212556,212558,214558,214560 TOTAL EDUS: N/A  
TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. ~ 12" PVC Pipe PLAT NO.: N/A  
NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

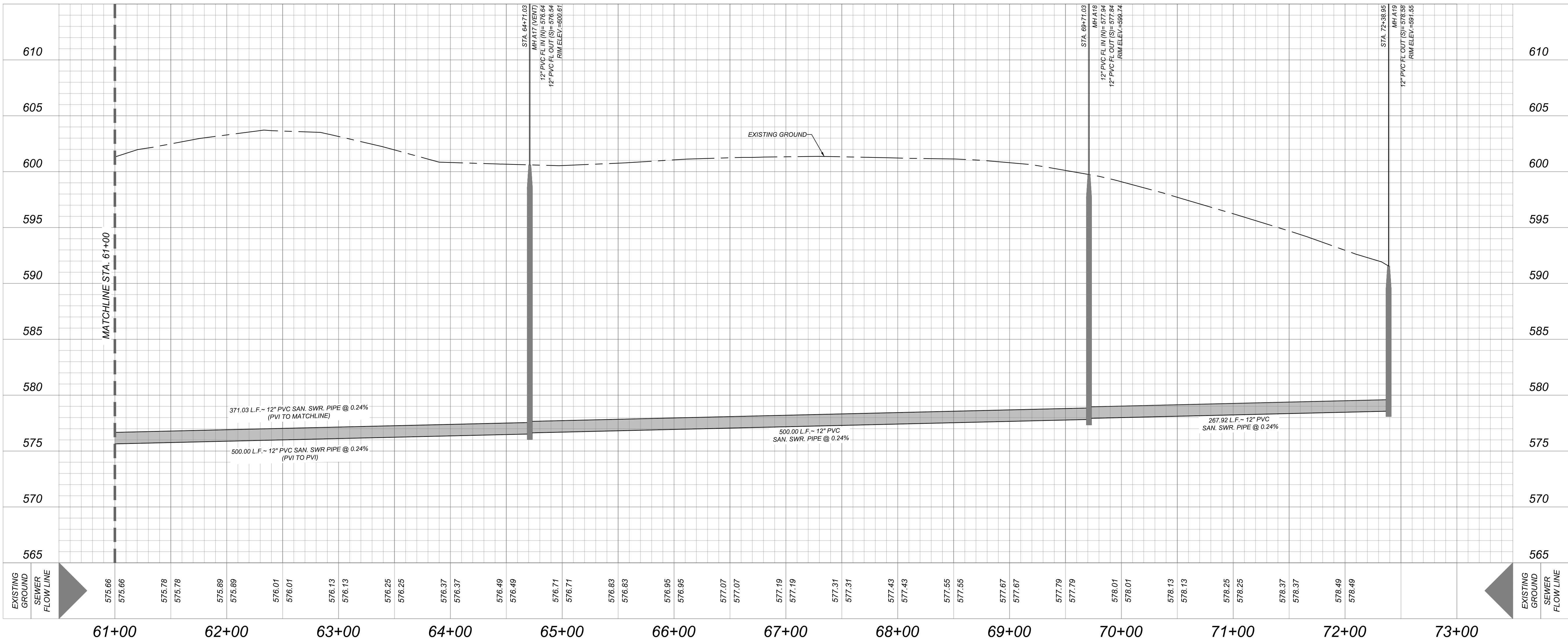
GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

MANHOLE NOTE:  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS.



SEWER LINE A STA. 61+00 - END

HORZ SCALE: 1" = 50'  
VERT SCALE: 1" = 5'



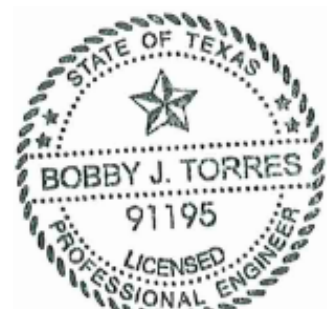
GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS

SEWER LINE A STA. 61+00 - END

JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

ISSUE DATE

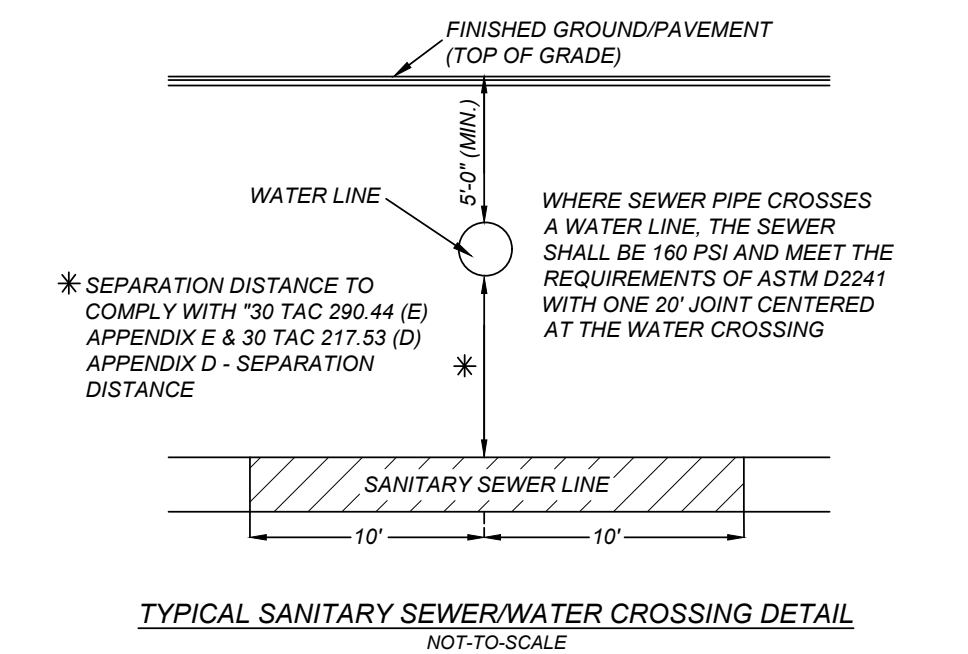
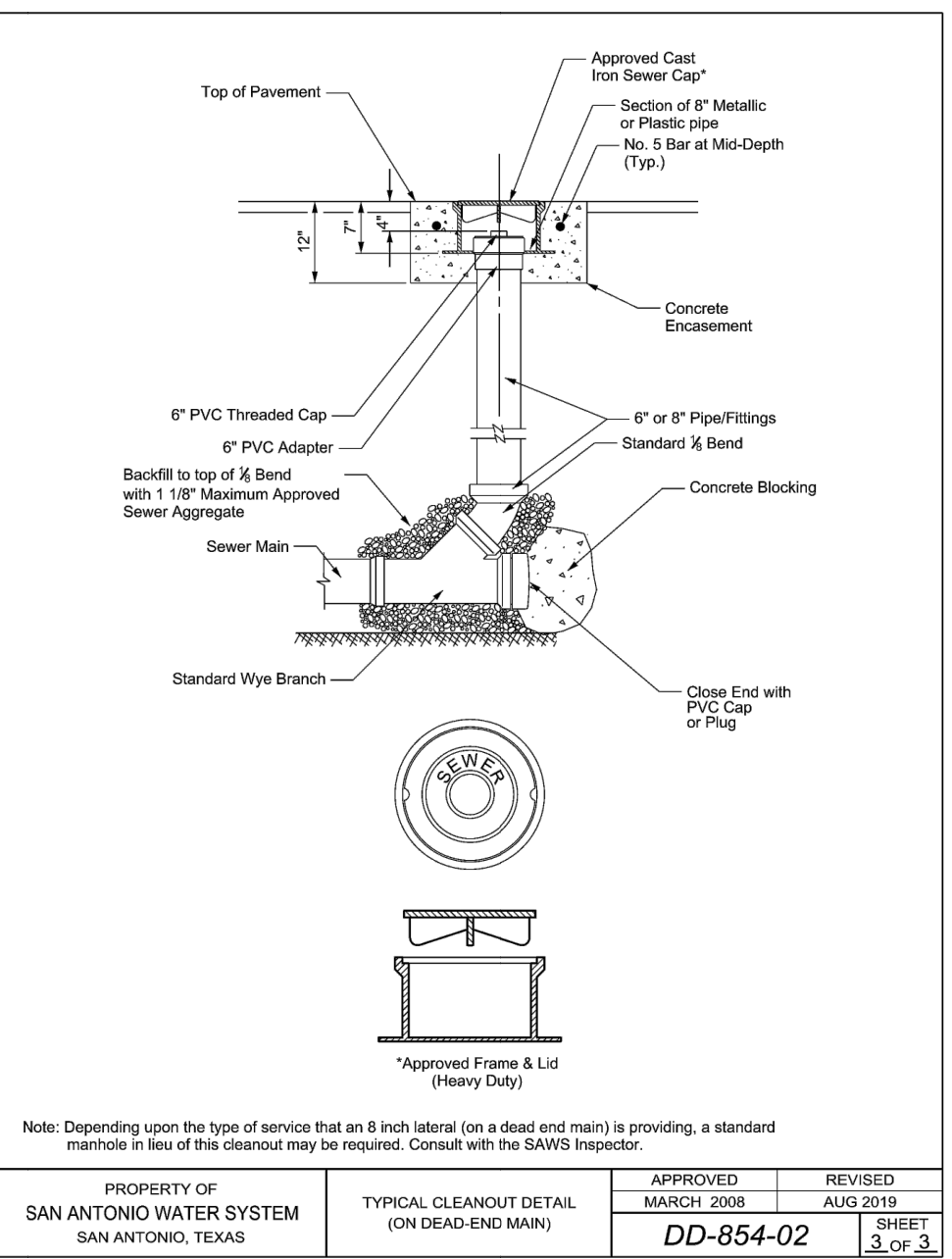
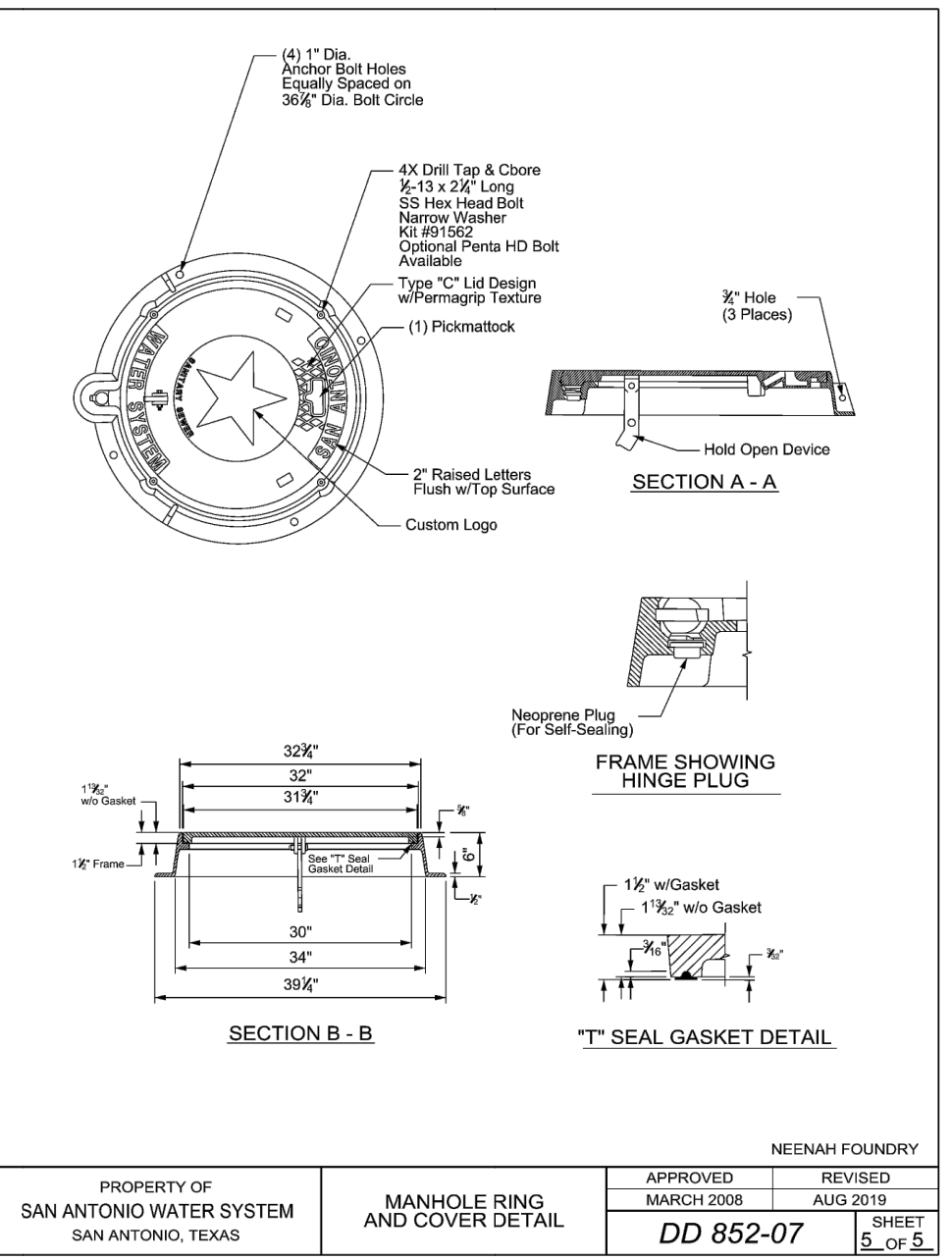
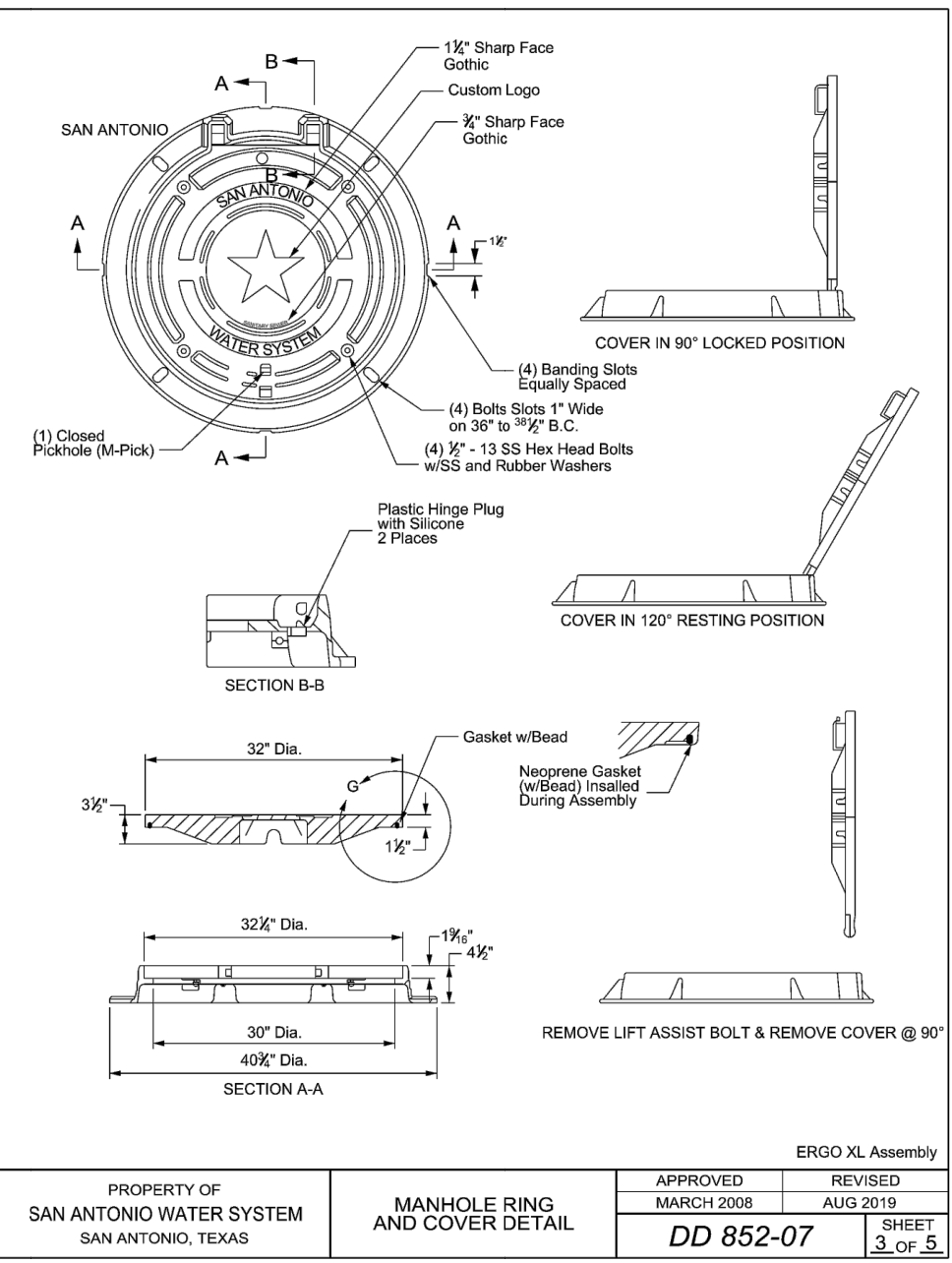
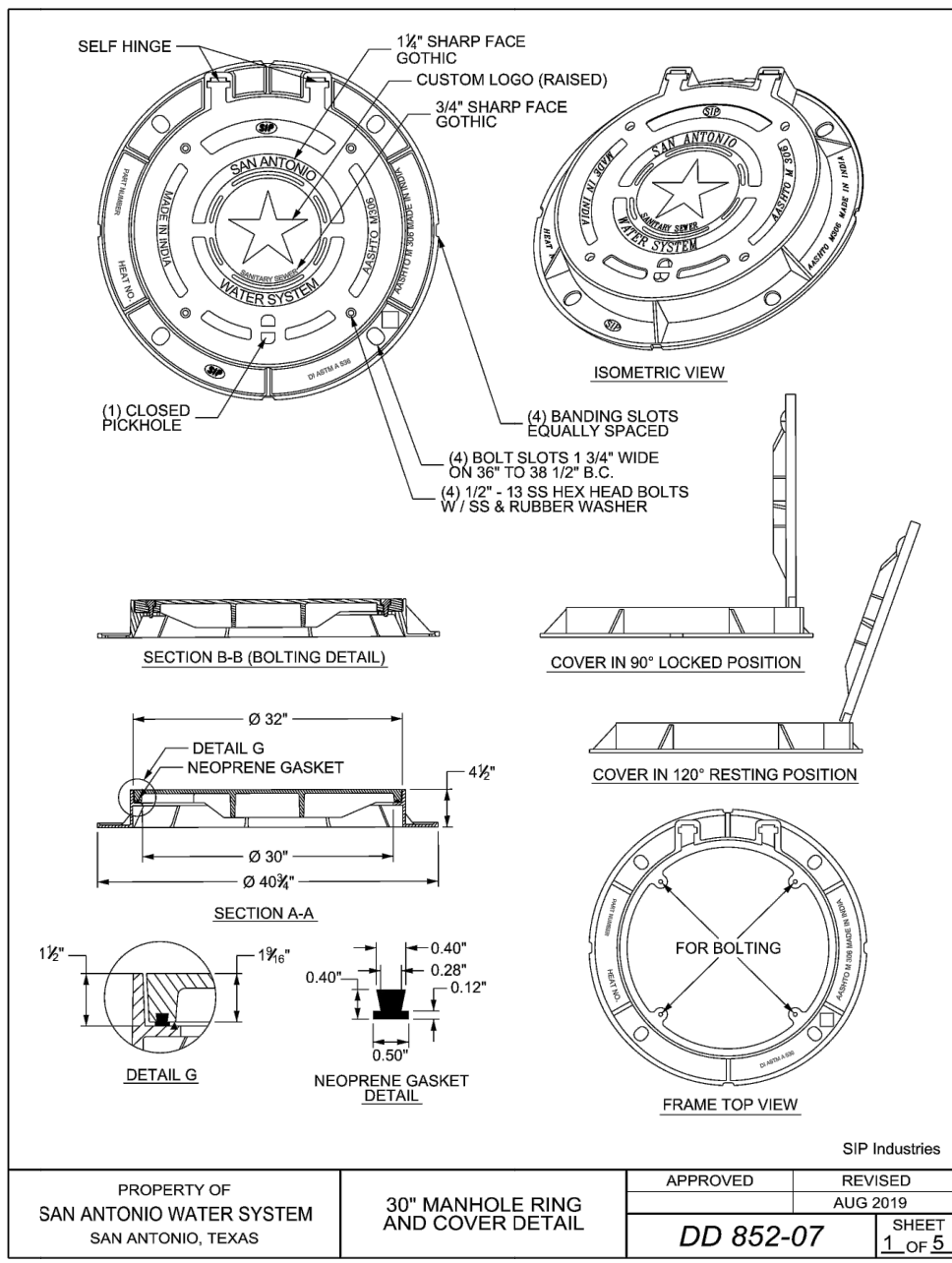
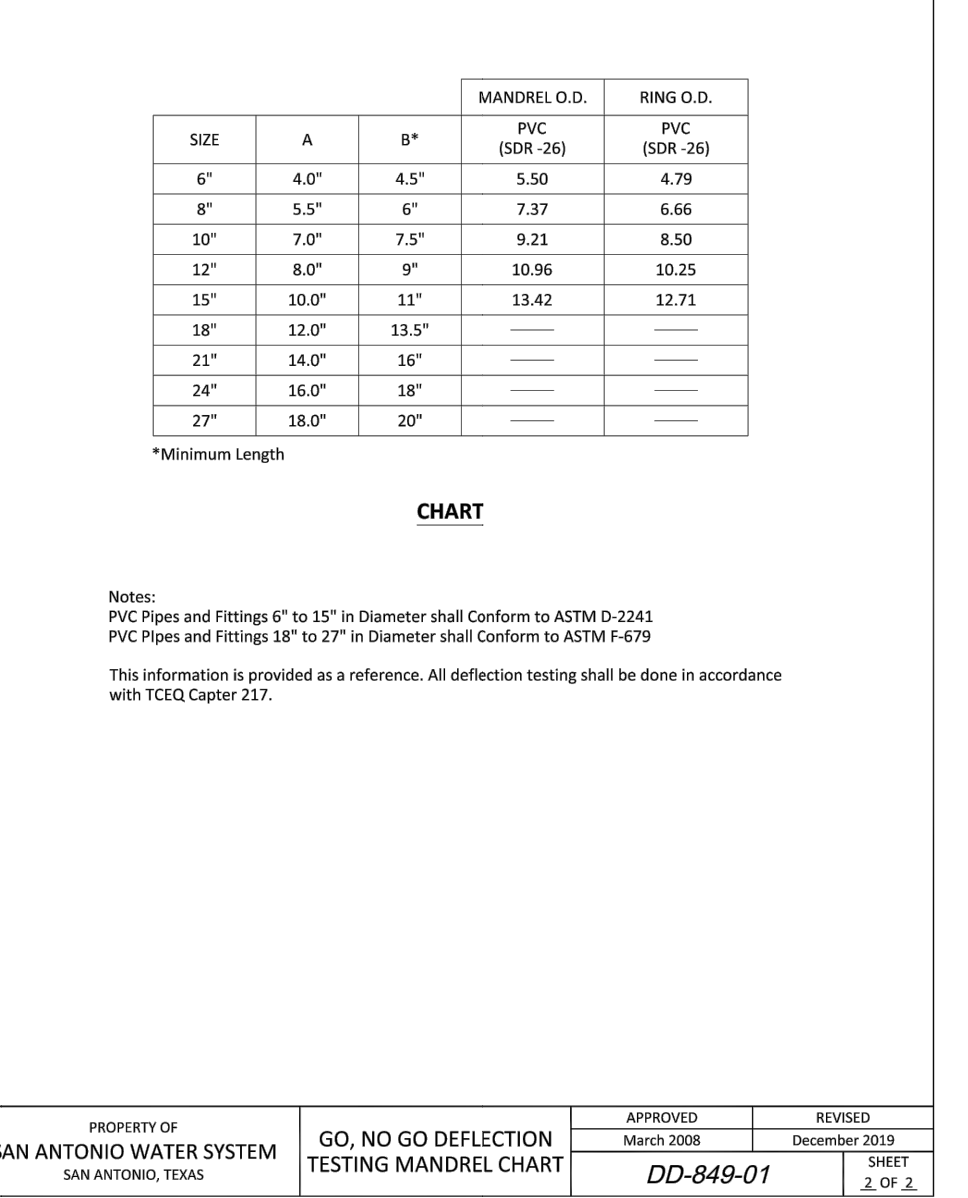
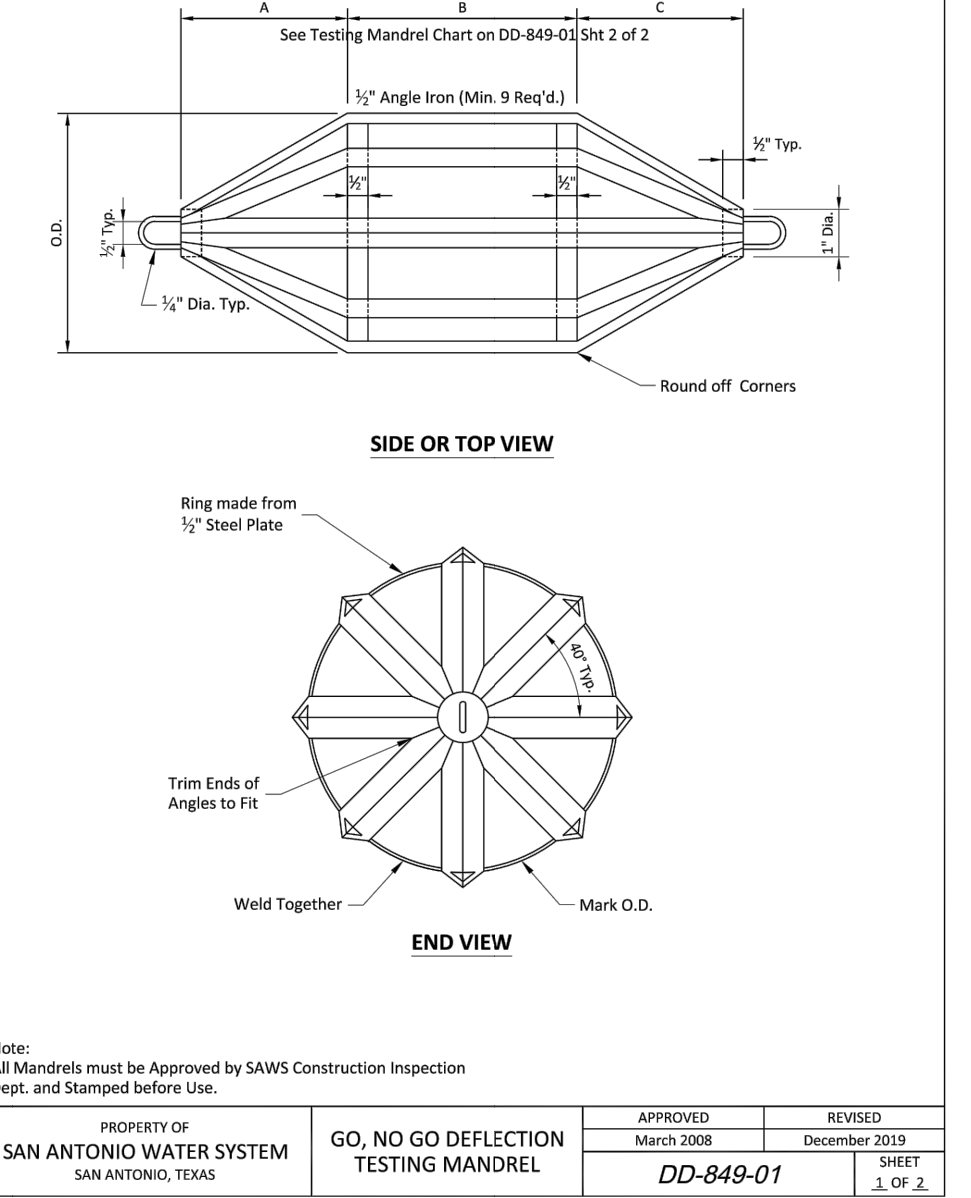
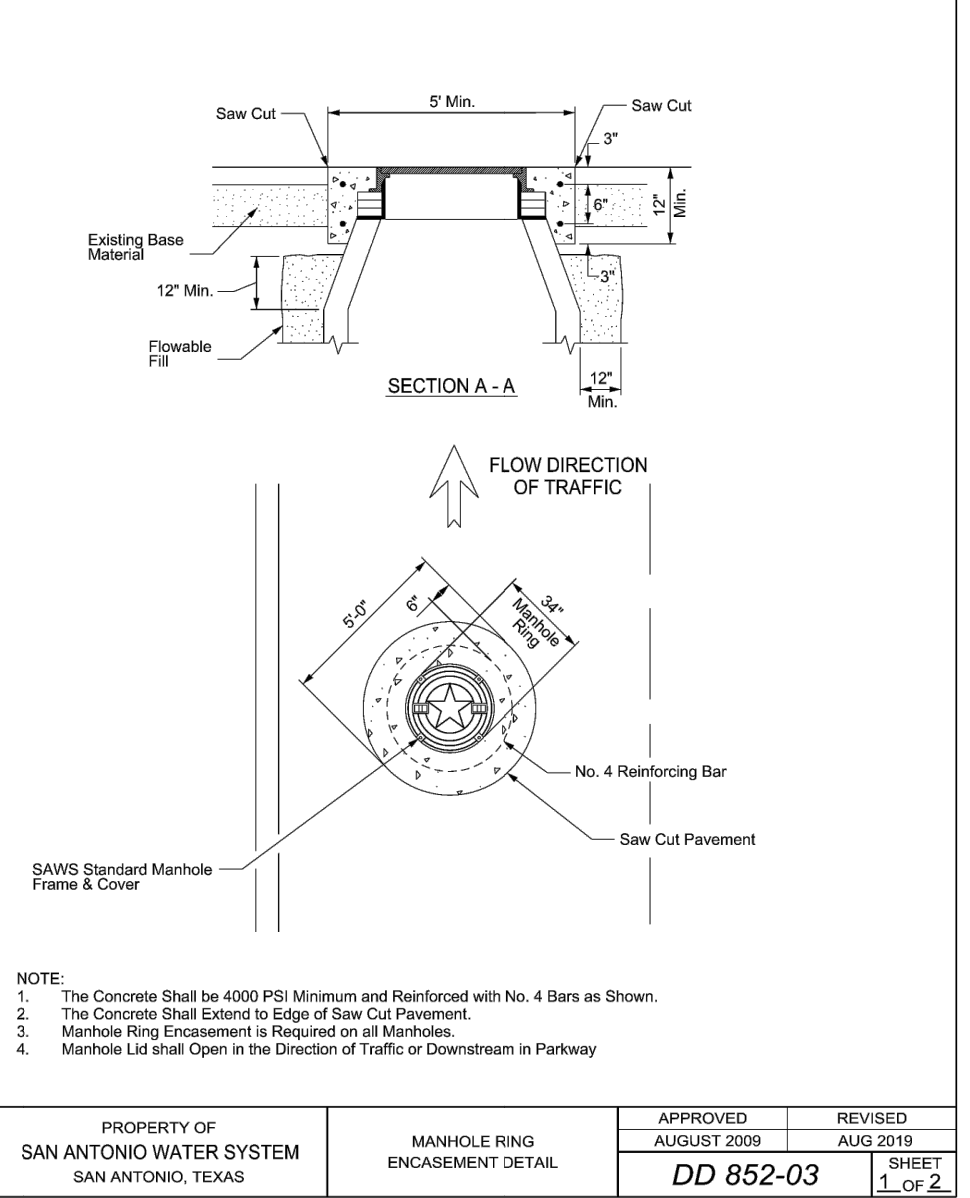
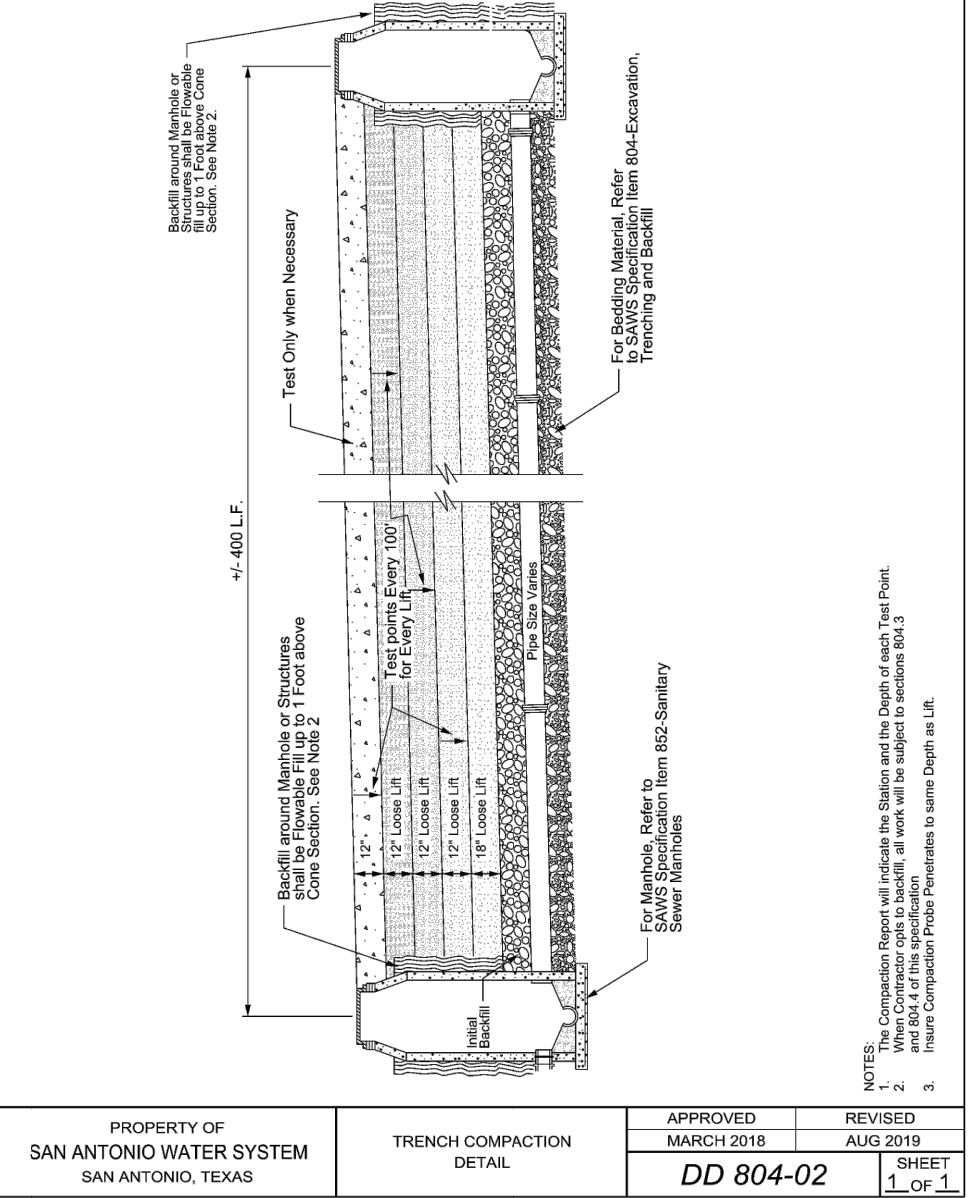
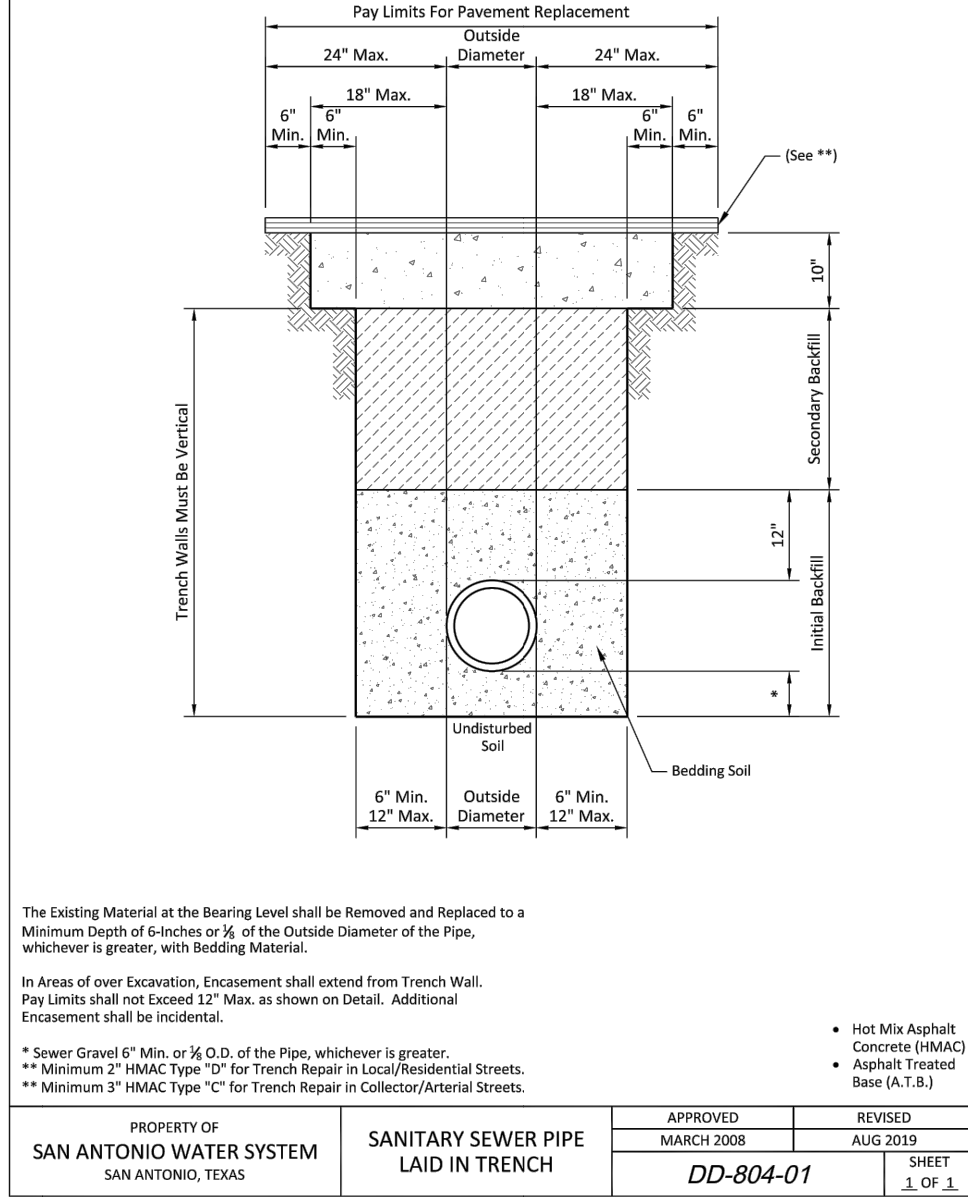
REVISIONS



Bobby J. Torres  
12/16/2022

**KFW**  
**ENGINEERS + SURVEYING**  
P.L.L.C.  
P.O. Box 100000, San Antonio, TX 78210  
Phone: (210) 878-8441 Fax: (210) 878-8441  
TBE Firm #: 9513 • TBE-S Firm #: 10122300





SEWER: EAST SEWERSHED - DOS RIOS W.R.C.	
DEVELOPER'S NAME:	MEH HOLDING COMPANY, LTD.
DEVELOPER'S ADDRESS:	5210 THOUSAND OAKS, SUITE 1318
CITY:	SAN ANTONIO
STATE:	TEXAS
ZIP:	78233
PHONE#:	210556.212556
FAX#:	212558.214558
SAWS BLOCK MAP#:	7086.41
TOTAL LINEAR FOOTAGE OF PIPE:	7086.41 L.F. ~ 12" PVC PIPE
NUMBER OF LOTS:	N/A
SAWS JOB#:	22-1683

GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS  
SANITARY SEWER DETAILS

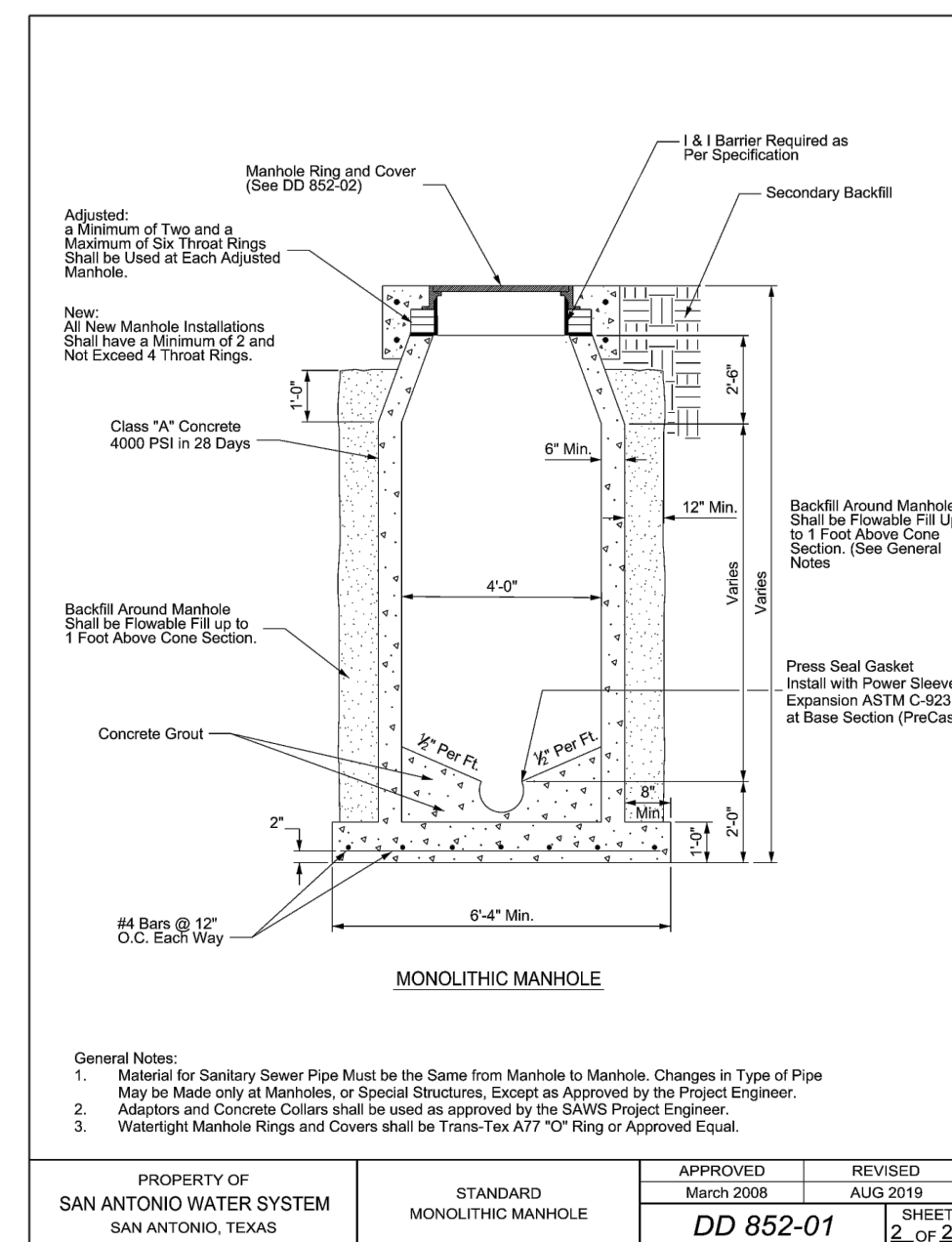
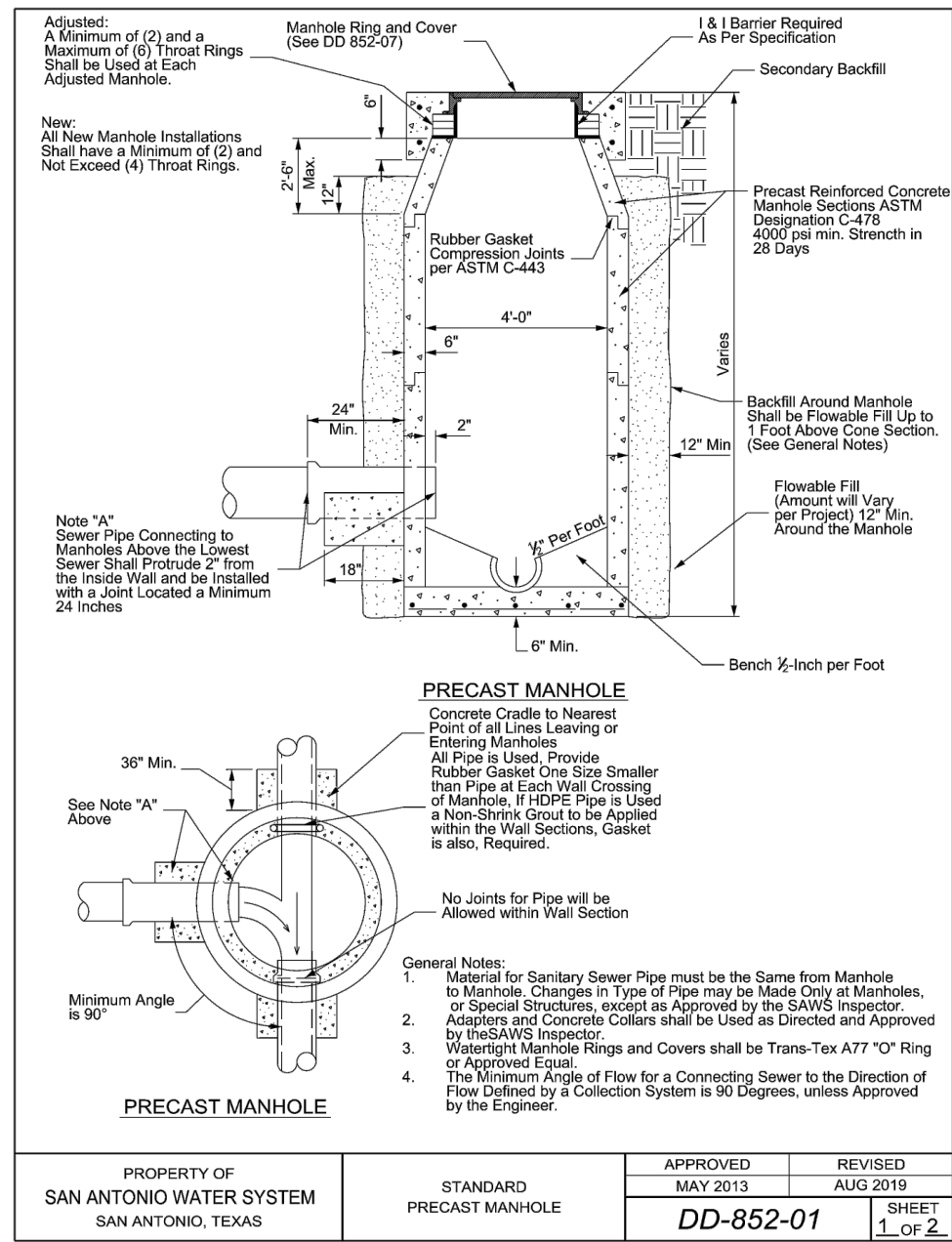
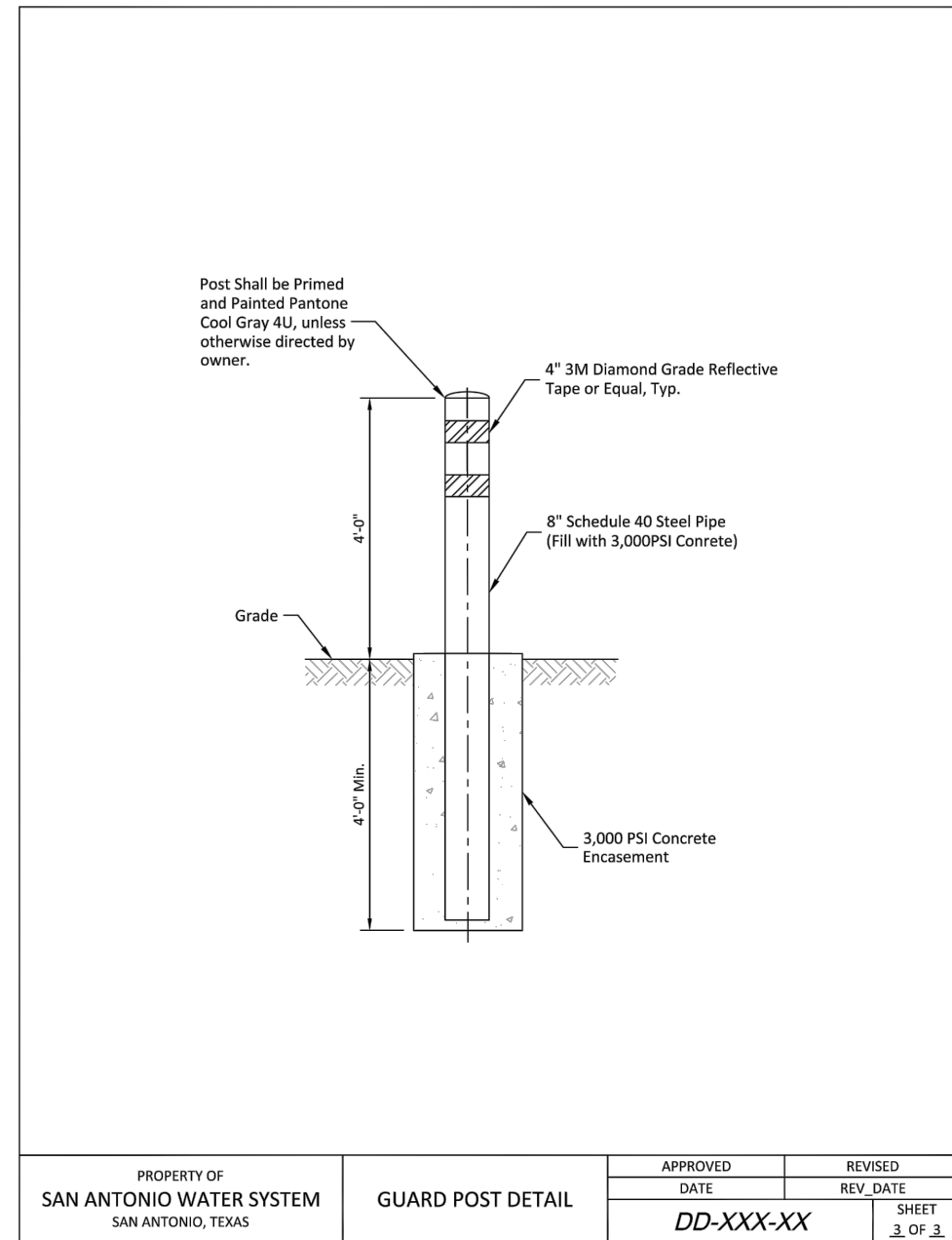
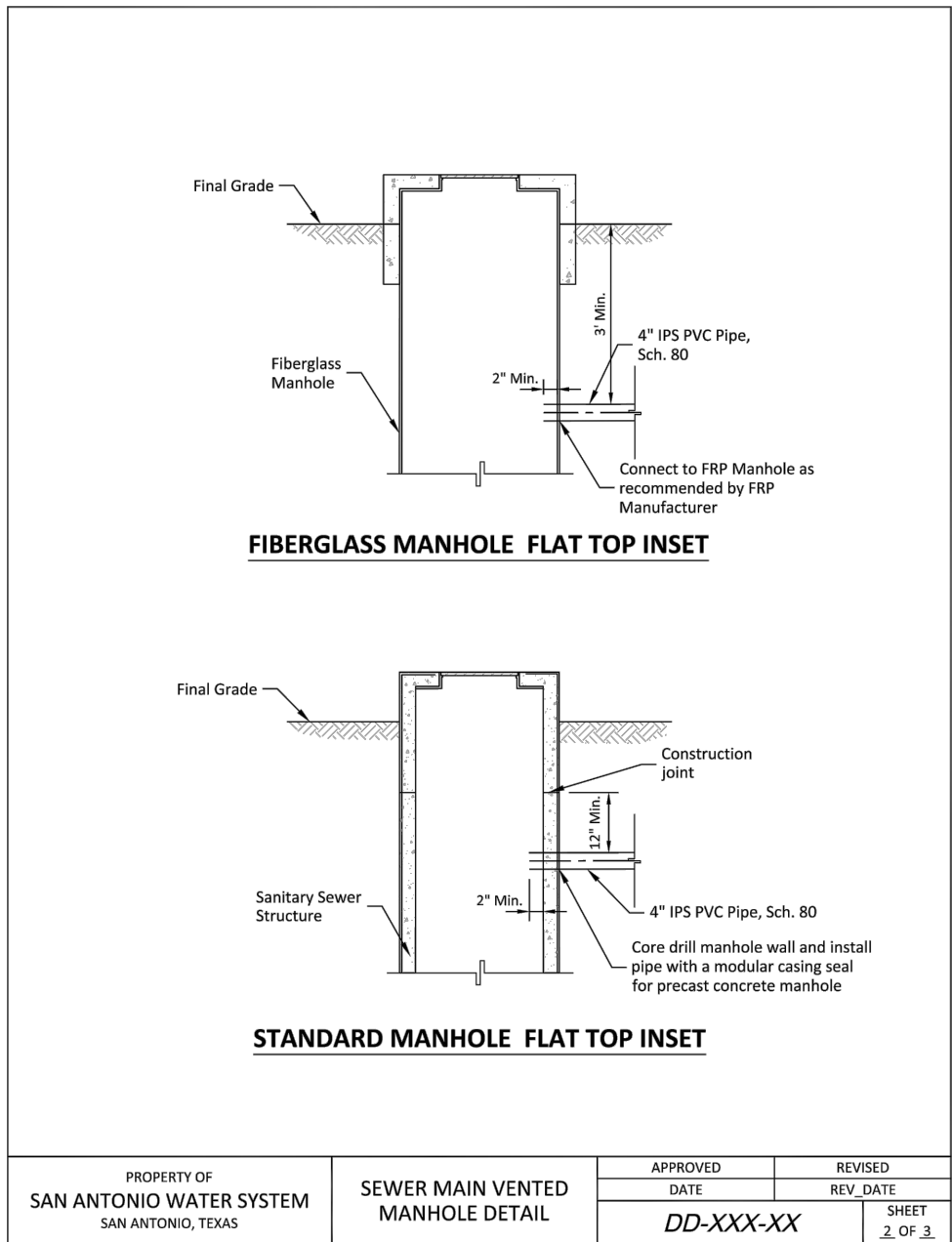
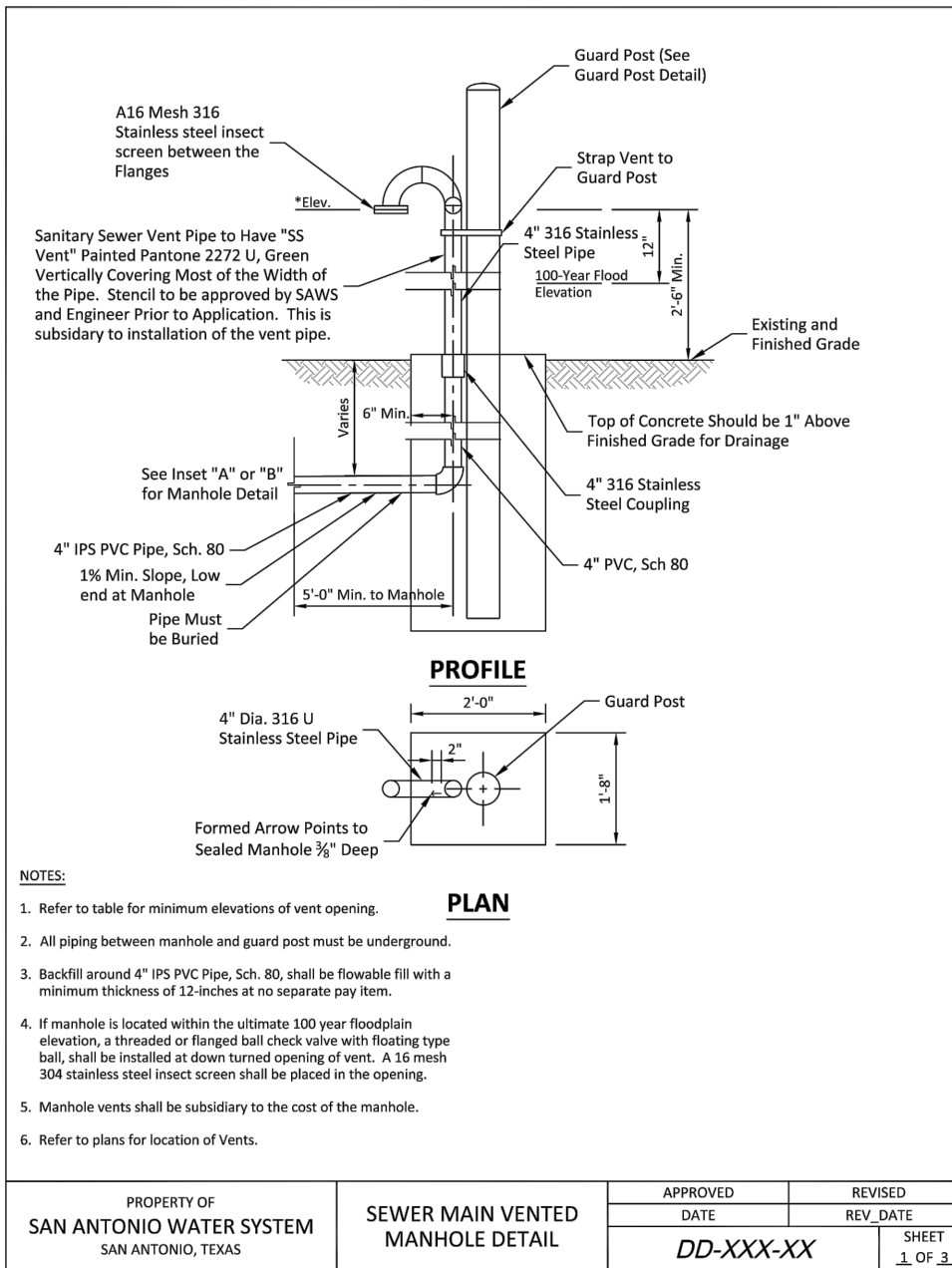
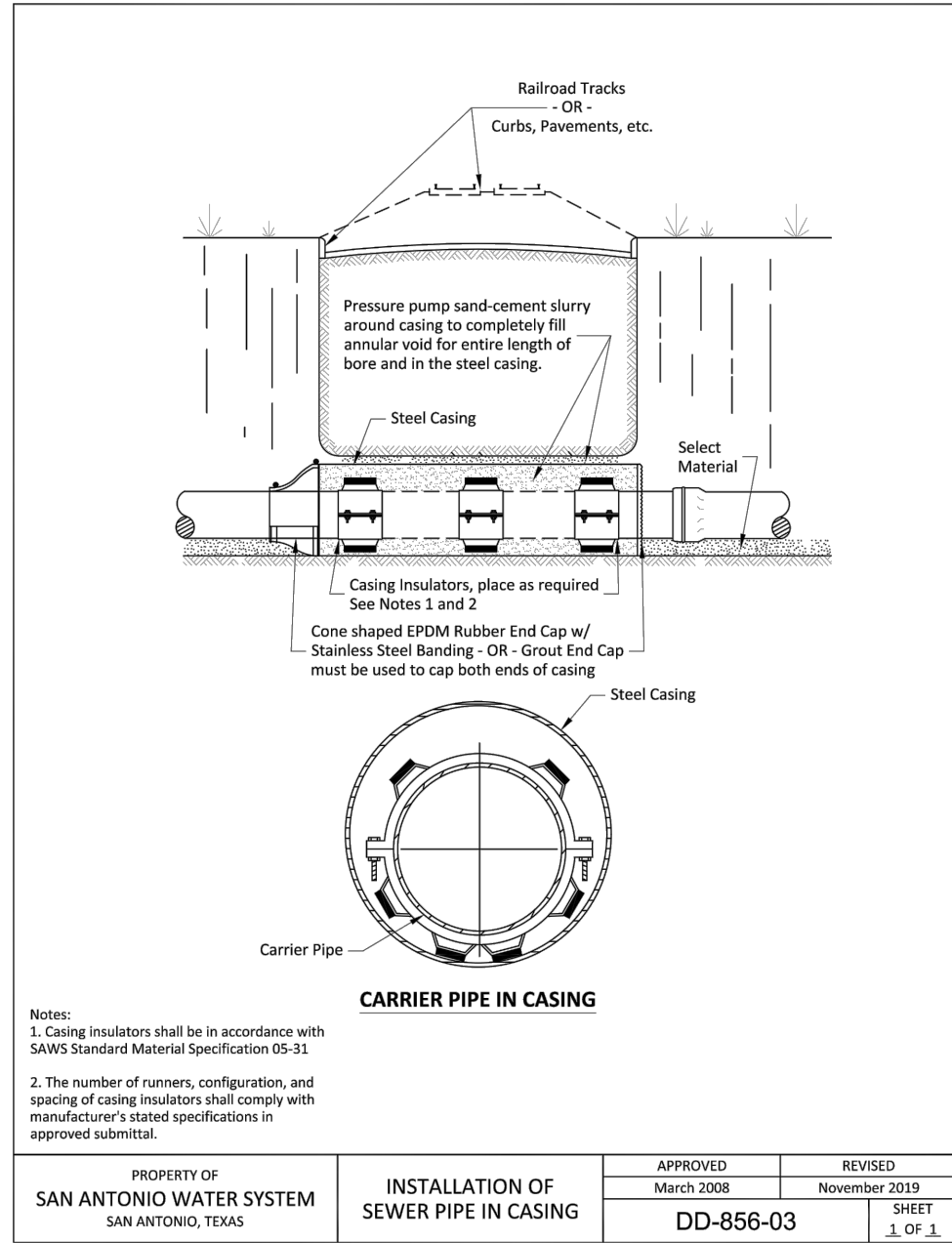
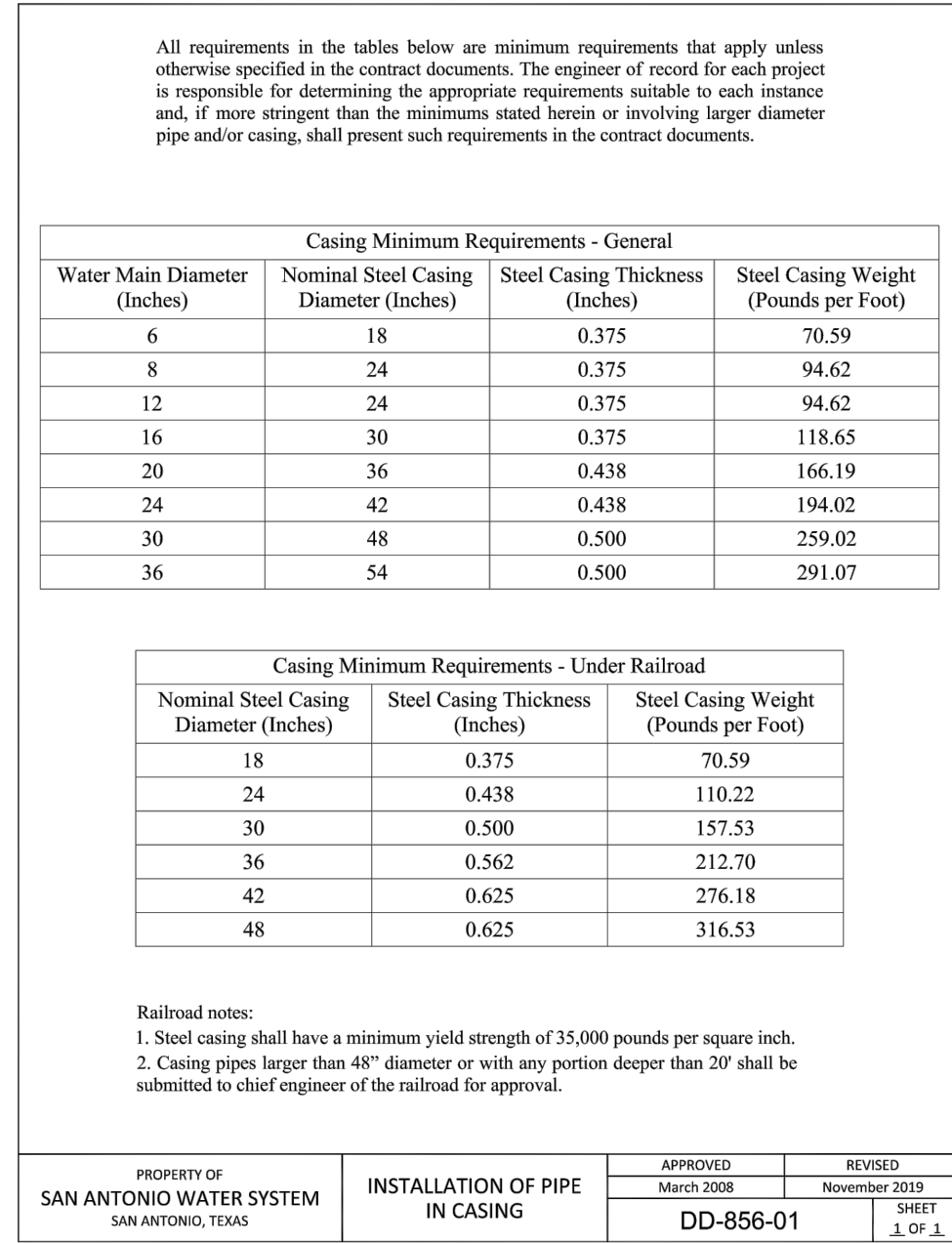
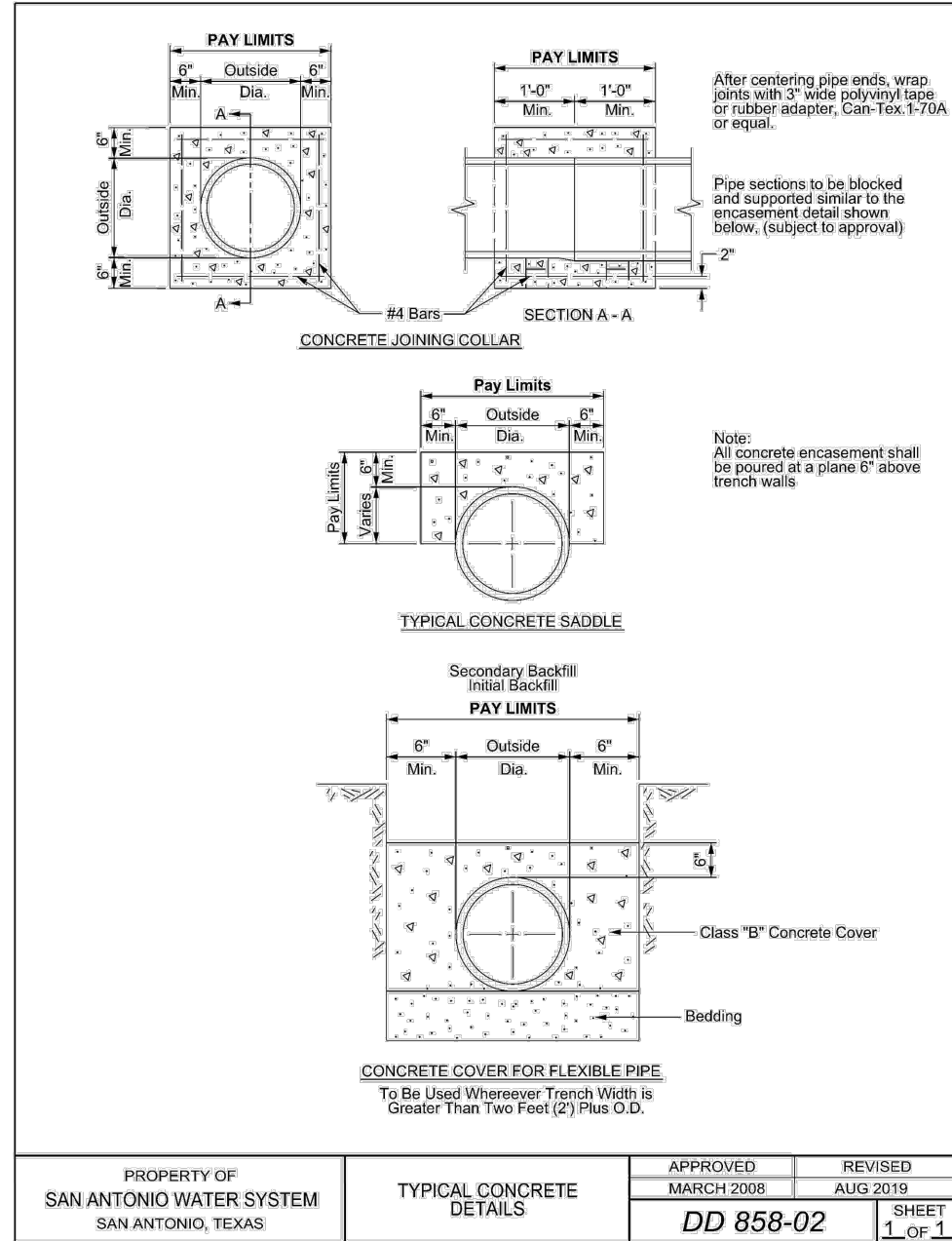
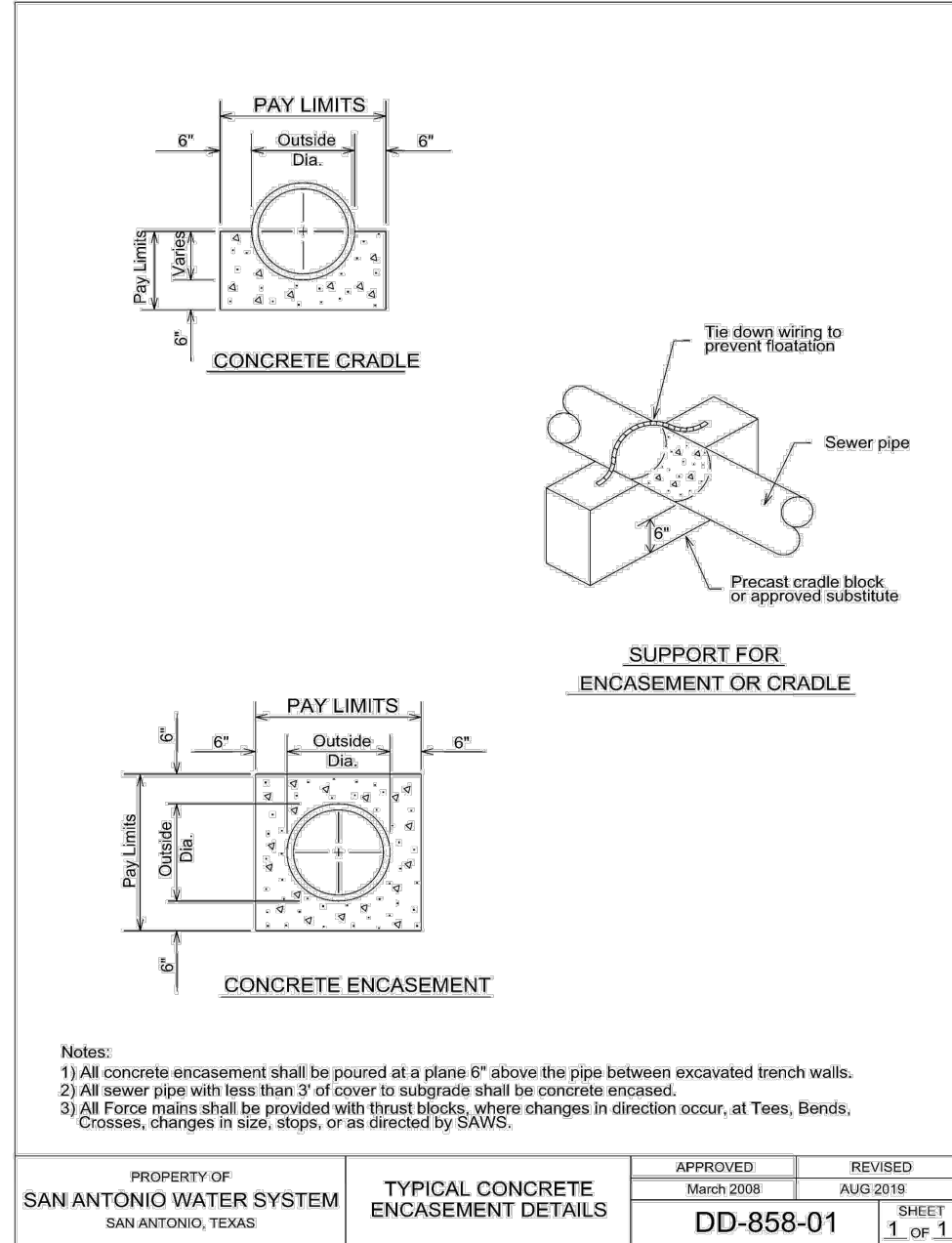
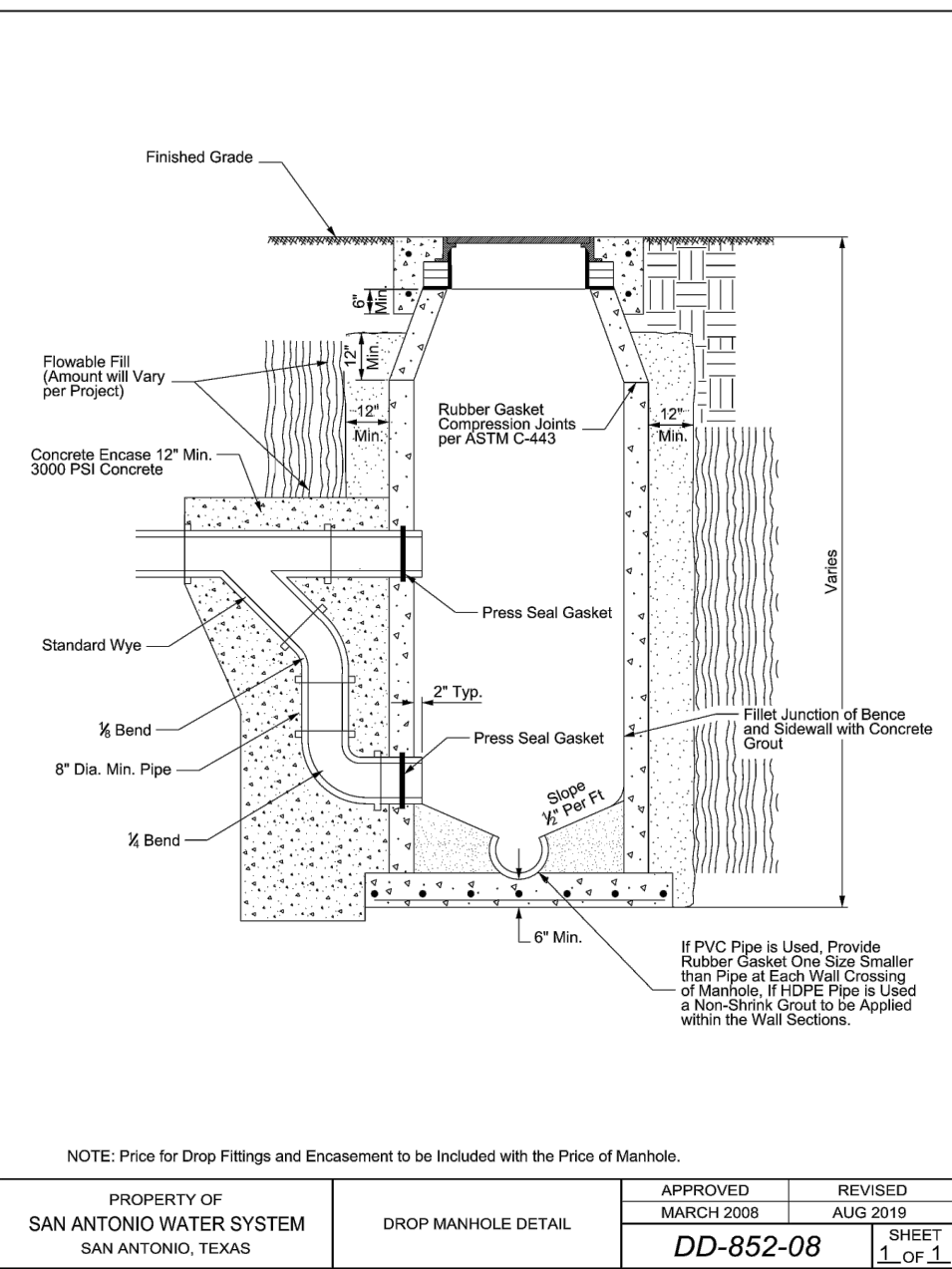
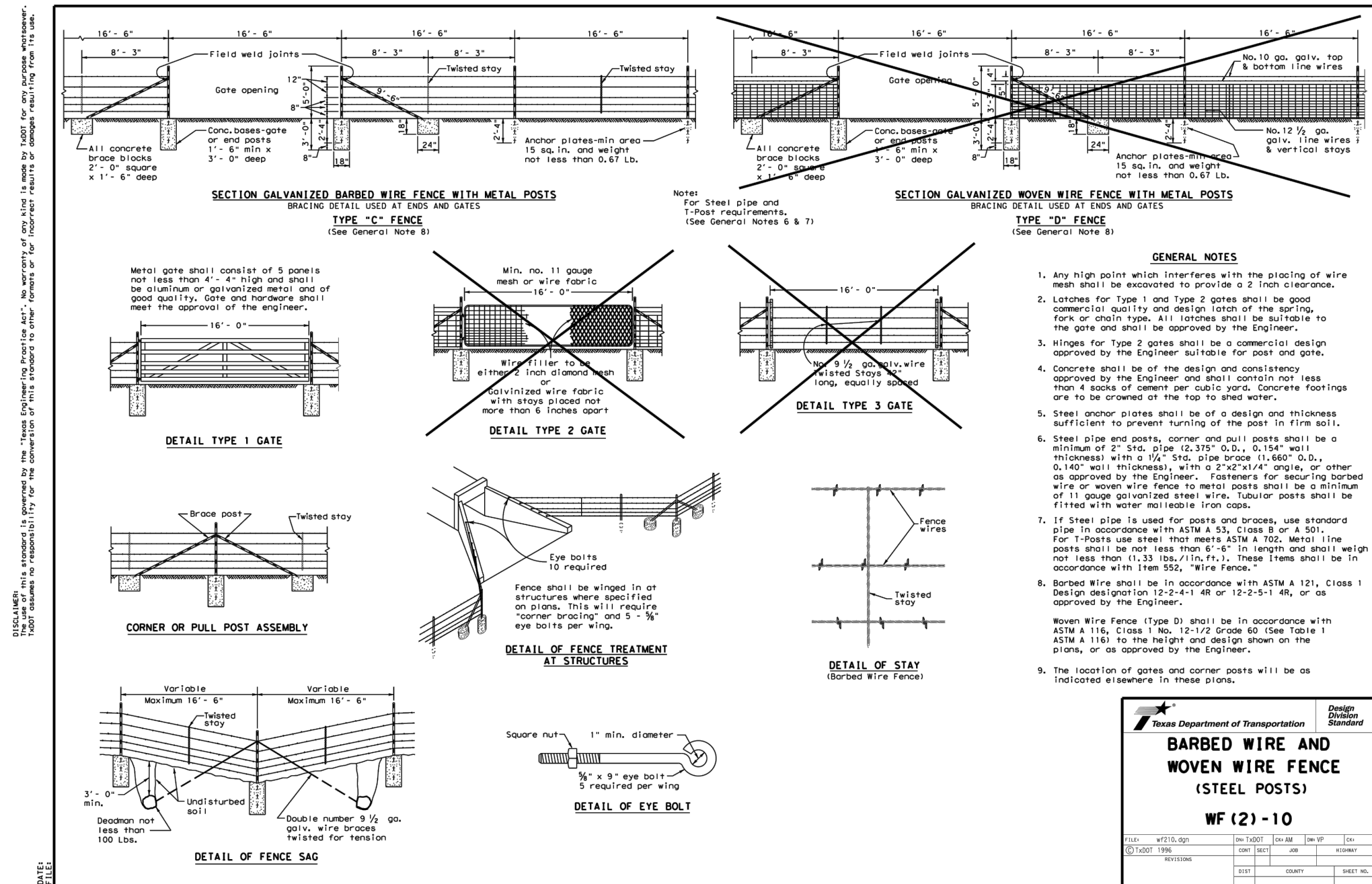
JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

3.0

BOBBY J. TORRES  
91195  
12/16/2022

KFW  
ENGINEERS + SURVEYING  
2025  
PACIFIC E. (210) 878-8444 F. (210) 878-8441  
TBPE Firm #: 9513 • TBPE.S Firm #: 1012300





SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.

DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318

CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233

PHONE#: 210556.212556 FAX#: 210558.214560

SAWS BLOCK MAP#: 210556.212556 TOTAL ACRES: N/A

TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. ~ 12" PVC Pipe PLAT NO.: N/A

NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683JOB NO: 205-43-06  
DATE: November 6, 2023  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

3.1

GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS  
SANITARY SEWER DETAILSK&W  
ENGINEERS + SURVEYING  
3421 Pasadena Pkwy, Suite 200, San Antonio, TX 78231  
Tel: 210-556-2125 Fax: 210-558-2145  
TBP# E-9519 • TBP# E-1022300

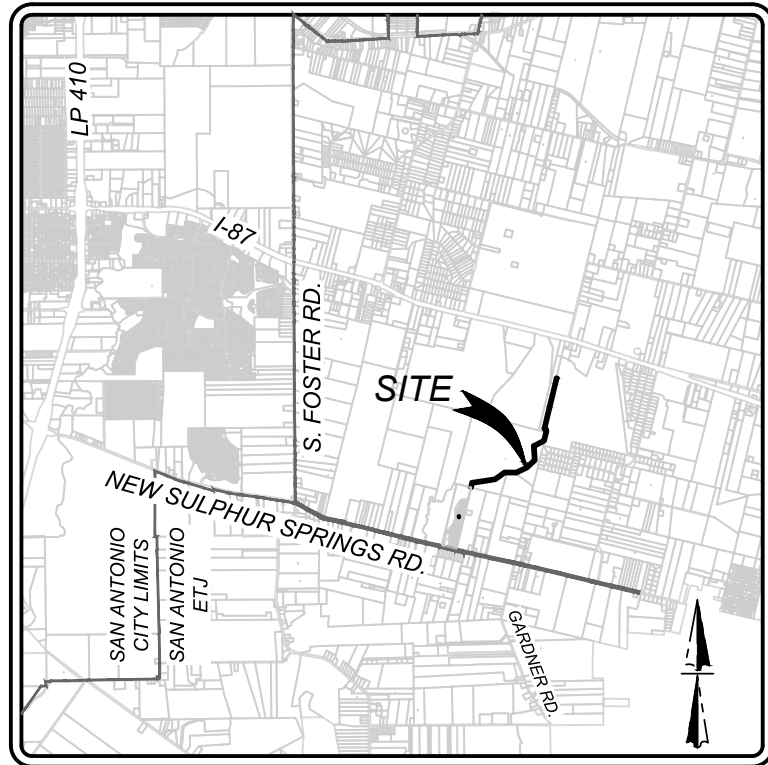
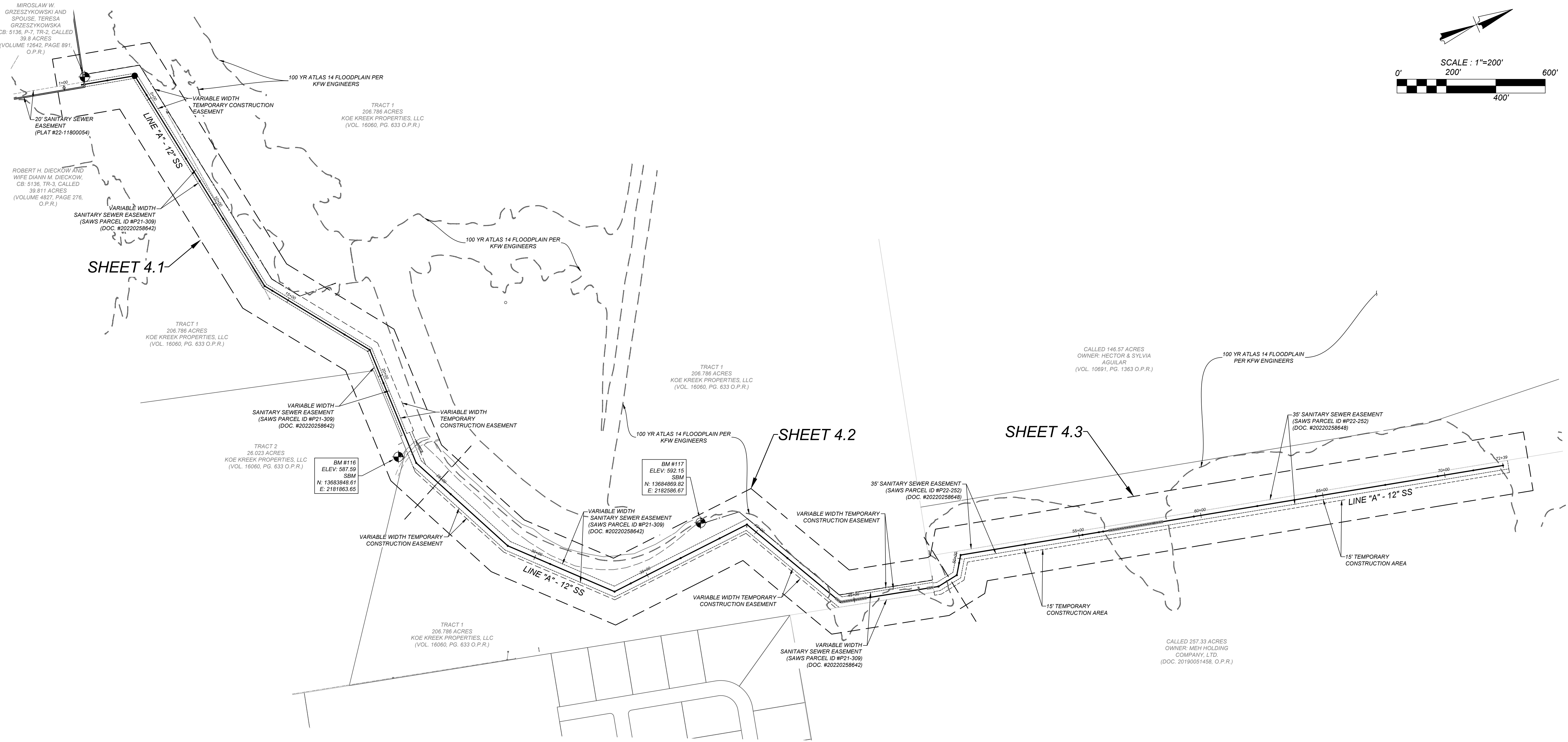


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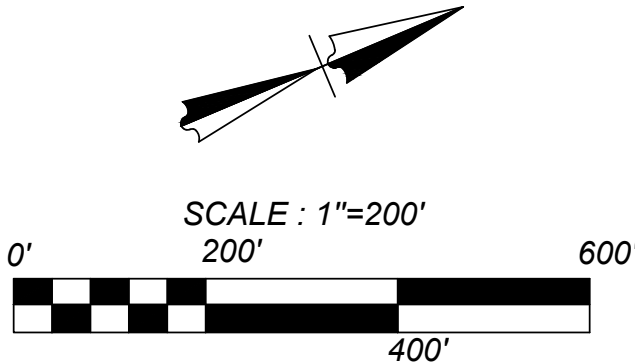
SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.  
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233  
PHONE#: \_\_\_\_\_ FAX#: \_\_\_\_\_ TOTAL ACREAGE: N/A  
SAWS BLOCK MAP#: 210556, 212556, 212558, 214558, 214560 TOTAL EDU'S: N/A  
TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. ~ 12" PVC Pipe PLAT NO.: N/A  
NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683



LOCATION MAP  
NOT-TO-SCALE



GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS  
STORM WATER POLLUTION PREVENTION PLAN SHEET INDEX

JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

4.0



*Bobby J. Torres*  
12/16/2022

ISSUE DATE

REVISIONS

**KFW**  
**ENGINEERS + SURVEYING**  
18251  
SAN ANTONIO, TEXAS 78251  
PHONE: (210) 879-4444 • FAX: (210) 879-4441  
TBE Firm #: 9513 • TBE S Firm #: 1012300



INSTALLATION:

1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UPGRADEMENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

MAINTENANCE AND INSPECTION:

1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

PROJECT COMPLETION:

1. ALL DISTURBED AREAS ARE NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADEMENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

GENERAL:

1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.
2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORMWATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.
3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.

COORDINATION NOTE:

1. CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS FOR INSPECTION. (210) 353-2246
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928
4. CONTRACTOR TO COORDINATE WITH CPS PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
5. CONTRACTOR TO COORDINATE WITH SAWS TO PLAN WATER AND SANITARY SEWER SERVICES (210) 704-7297
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

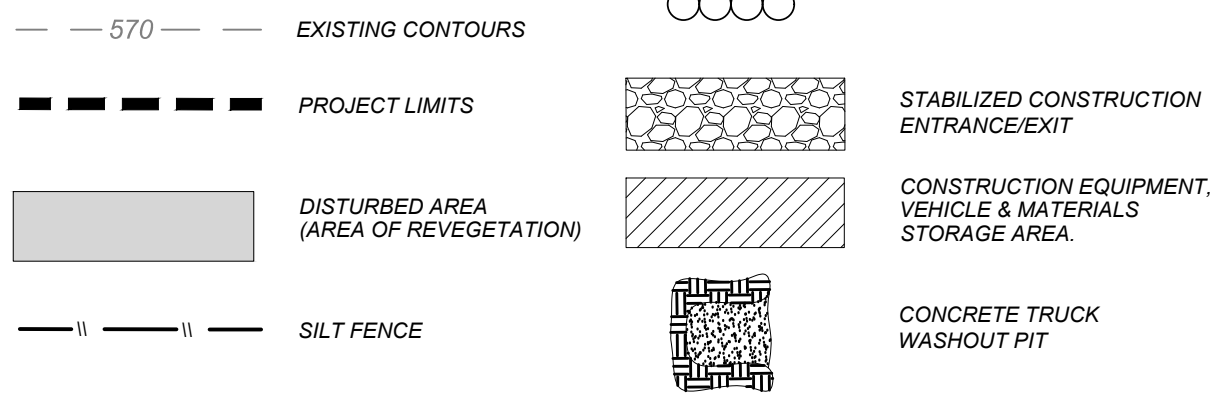
TRENCH EXCAVATION SAFETY PROTECTION:

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

REVEGETATION NOTE:

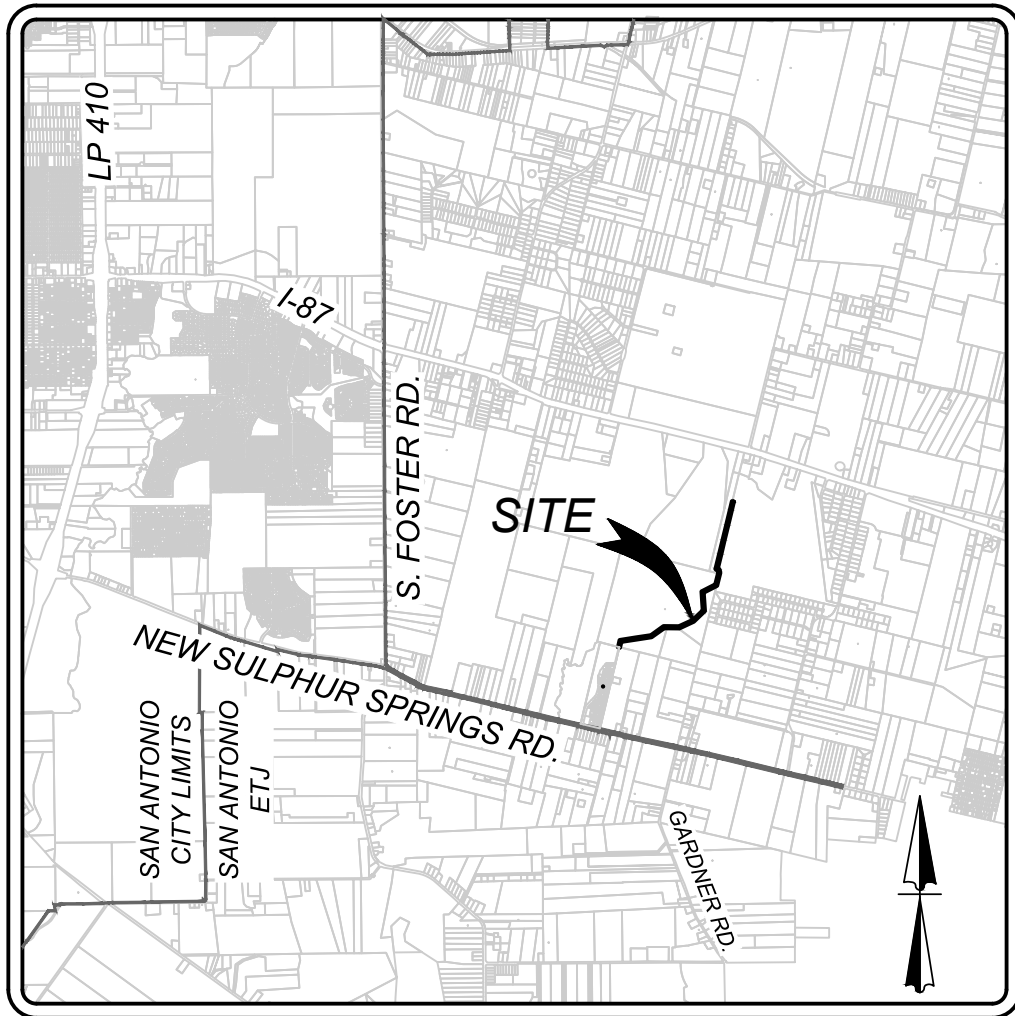
CONTRACTOR TO REESTABLISH VEGETATION FOR ANY NATURAL GROUND THAT IS DISTURBED DURING CONSTRUCTION. VEGETATION SHALL HAVE AN OVERALL COVERAGE OF 85% AND BE SIGNED OFF BY CITY INSPECTOR BEFORE JOB IS COMPLETE.

LEGEND

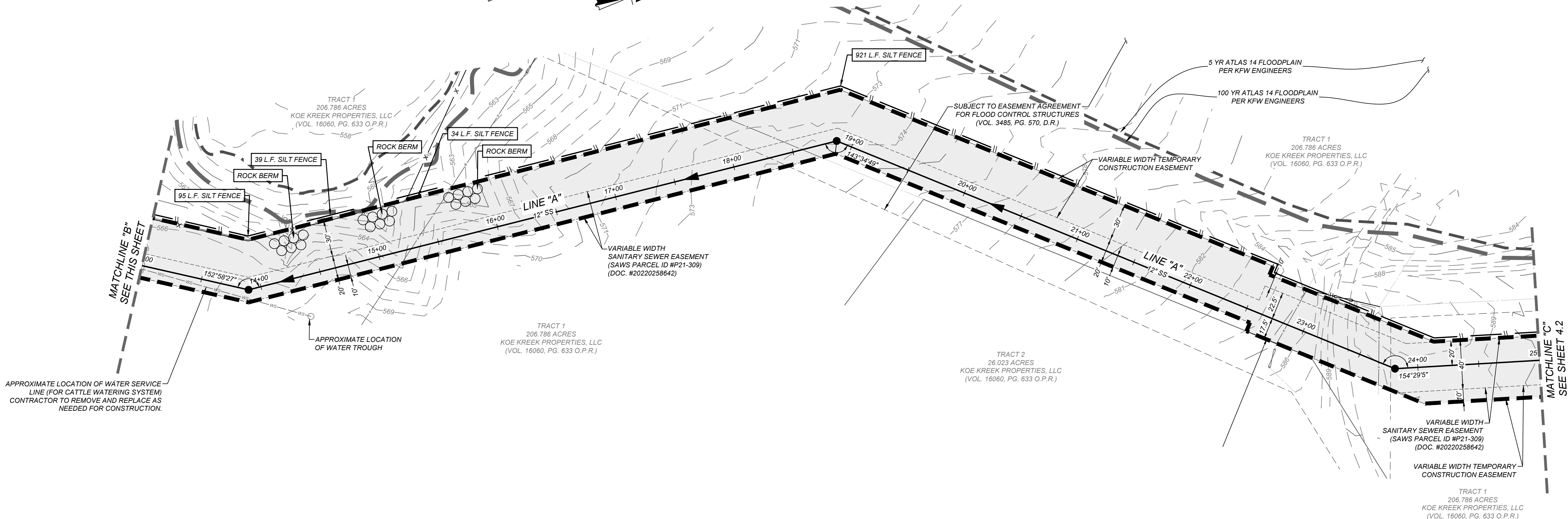
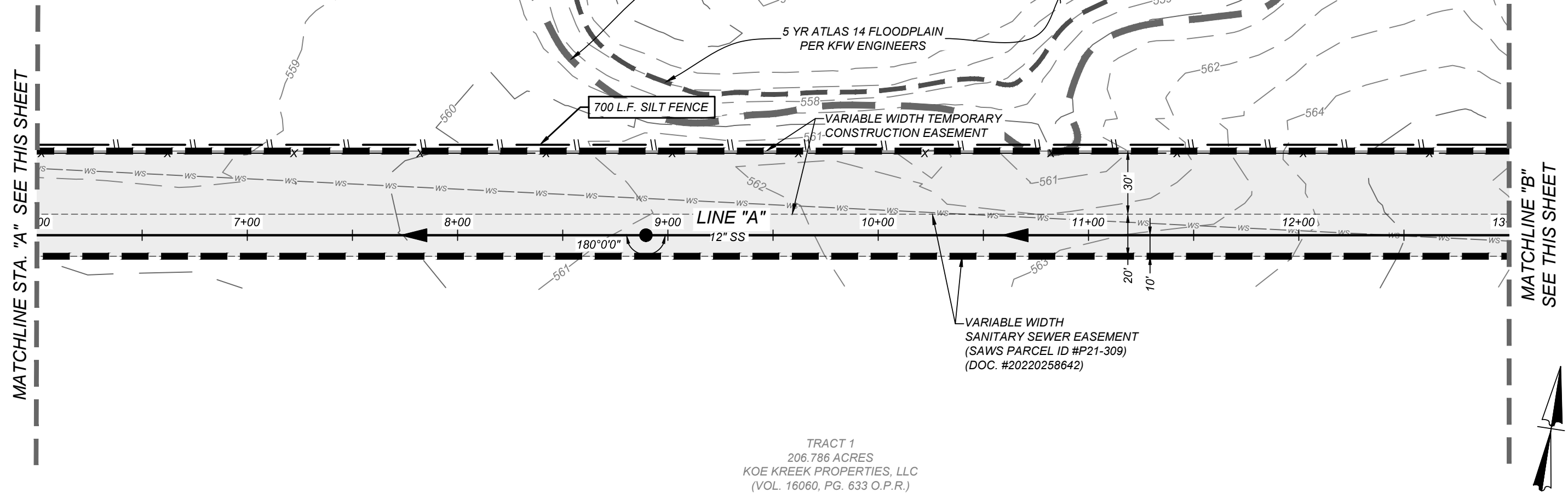
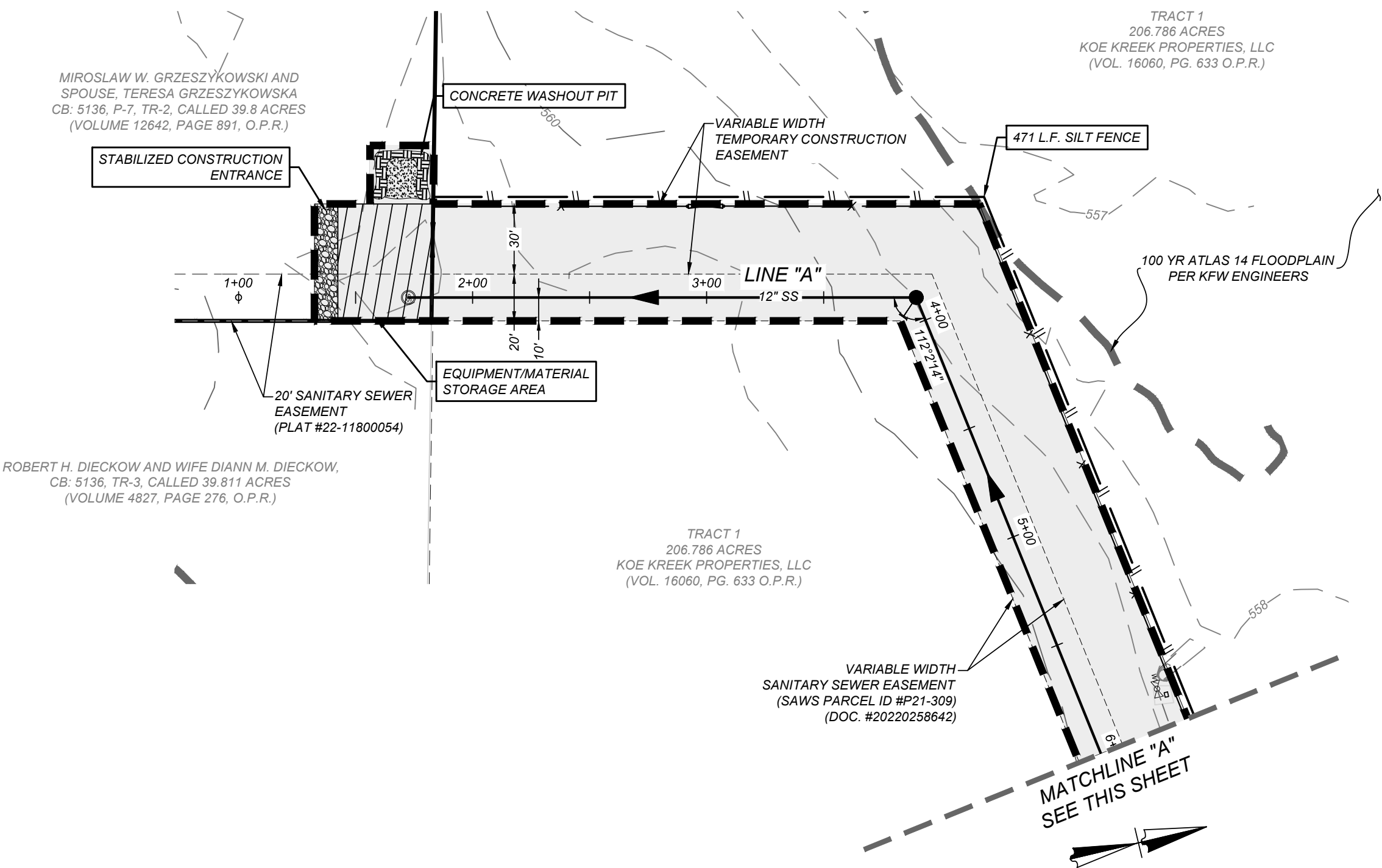
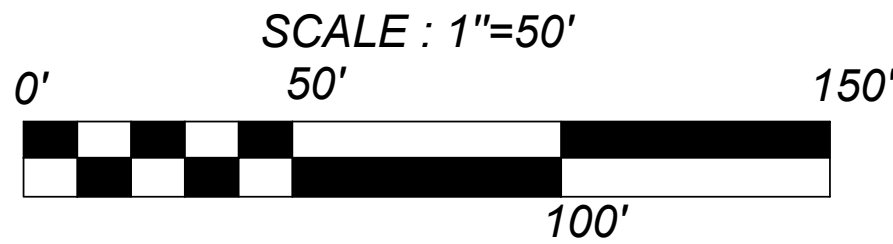


SW3P MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION



LOCATION MAP  
NOT-TO-SCALE



SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: MEH HOLDING COMPANY, LTD.  
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233  
PHONE: FAX: TOTAL ACREAGE: N/A  
SAWS BLOCK MAP#: 210556.212556 TOTAL EDU'S: N/A  
SAWS PARCEL ID #P21-309 212558.214558.214560  
TOTAL LINEAR FOOTAGE OF PIPE: 7066.41 L.F. ~ 12" PVC Pipe PLAT NO.: N/A  
NUMBER OF LOTS: N/A SAWS JOB#: 22-1683

GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN SHEET 1 OF 3

JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

4.1



Date: Dec 15, 2022, 10:05am User ID: jacobfinner  
File: P:\2025\43\06\_Design\Civil\SW3P\20254306.dwg

**INSTALLATION:**

1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UPGRADEMENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

**MAINTENANCE AND INSPECTION:**

1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

**PROJECT COMPLETION:**

1. ALL DISTURBED AREAS ARE NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADEMENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

**GENERAL:**

1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.
2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORMWATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.
3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.

**COORDINATION NOTE:**

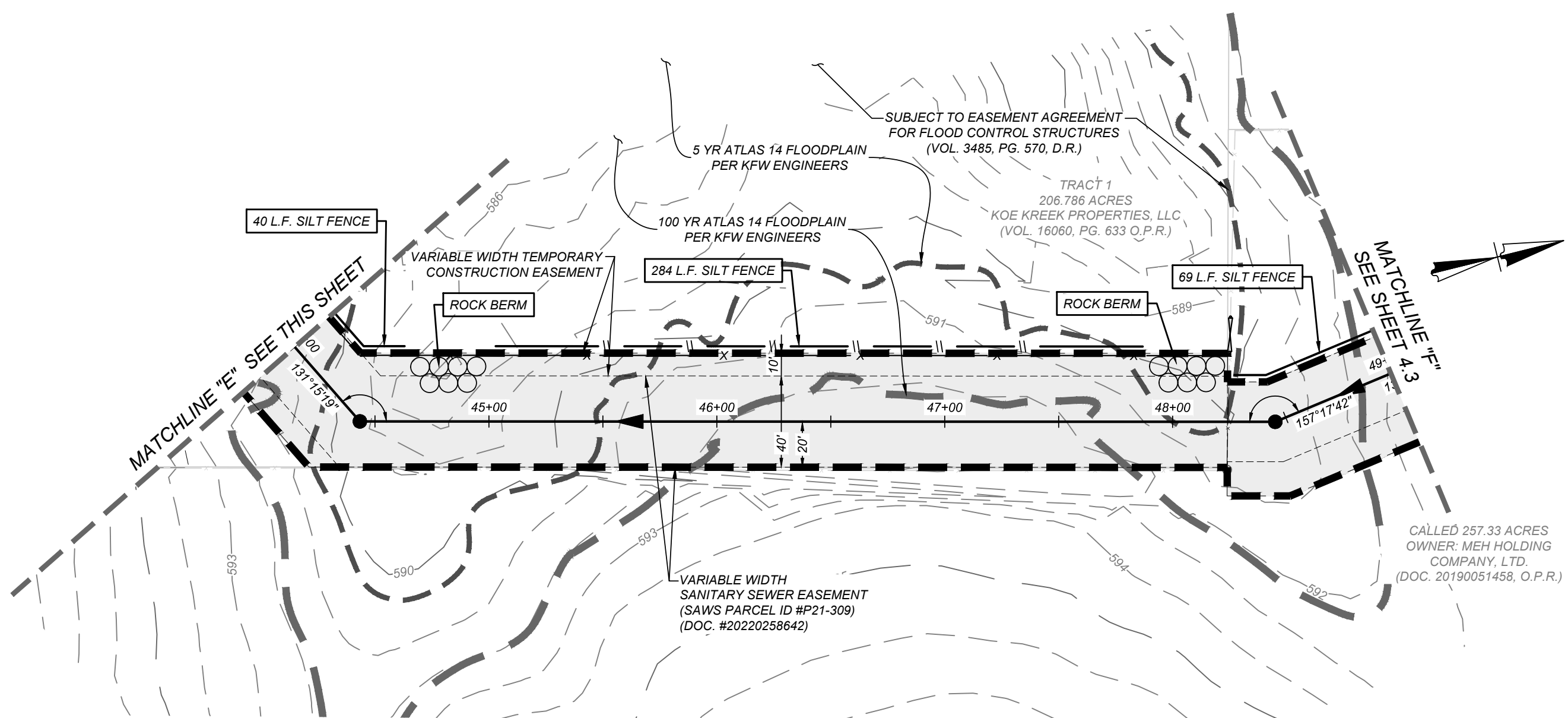
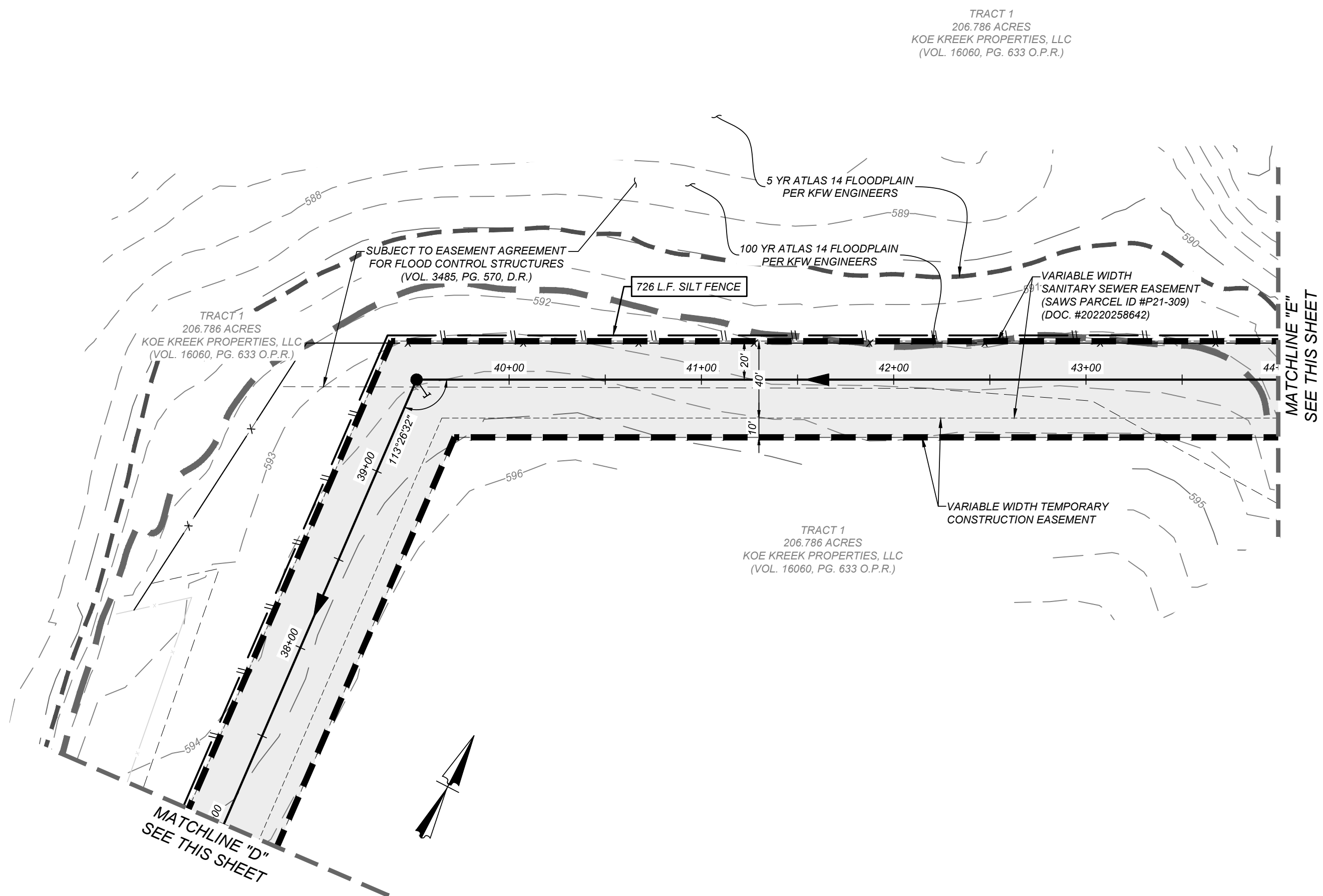
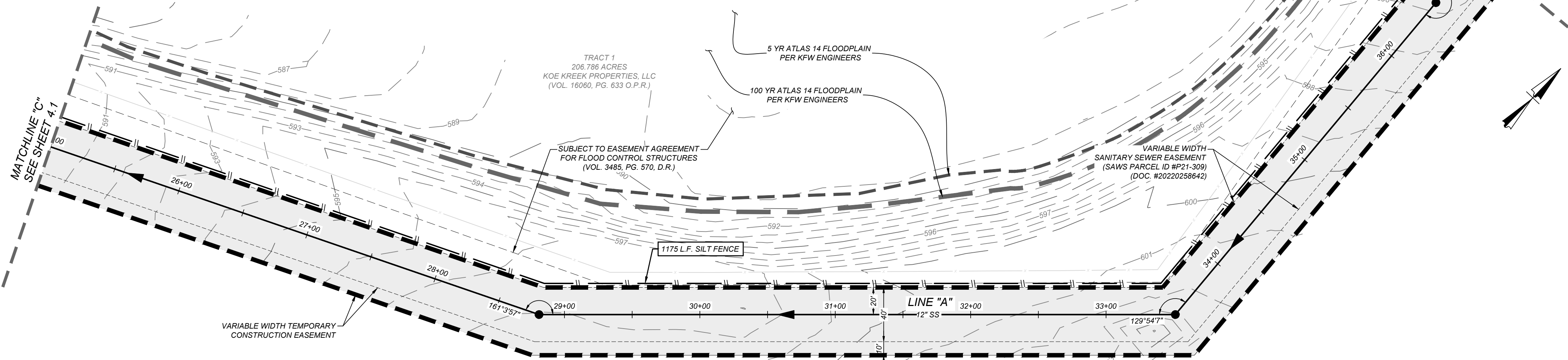
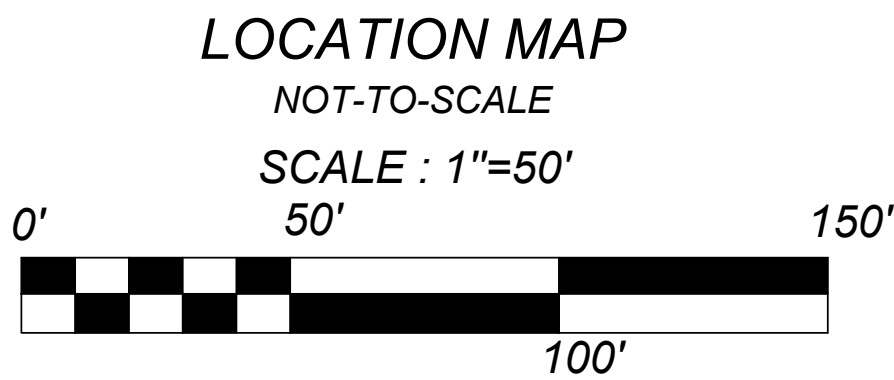
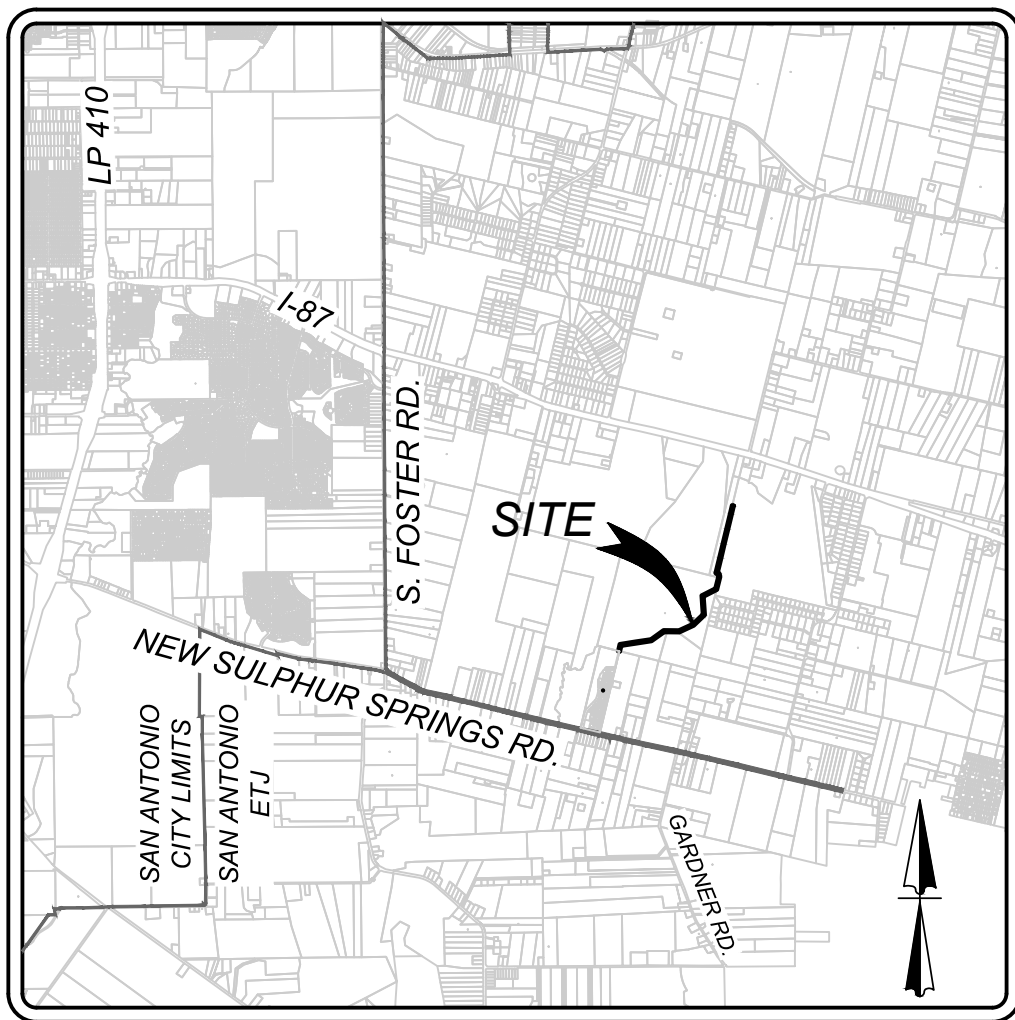
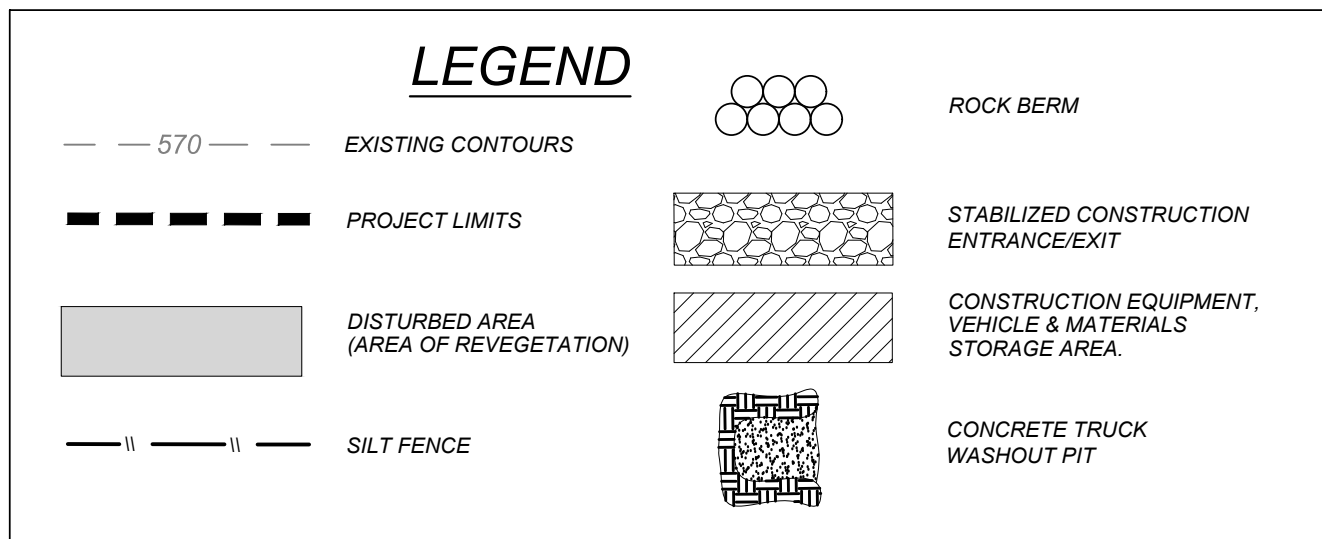
1. CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS FOR INSPECTION. (210) 353-2246
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928
4. CONTRACTOR TO COORDINATE WITH CPS PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
5. CONTRACTOR TO COORDINATE WITH SAWS TO PLAN WATER AND SANITARY SEWER SERVICES (210) 704-7297
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

**TRENCH EXCAVATION SAFETY PROTECTION:**

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

**REVEGETATION NOTE:**

CONTRACTOR TO REESTABLISH VEGETATION FOR ANY NATURAL GROUND THAT IS DISTURBED DURING CONSTRUCTION. VEGETATION SHALL HAVE AN OVERALL COVERAGE OF 85% AND BE SIGNED OFF BY CITY INSPECTOR BEFORE JOB IS COMPLETE.



**SW3P MODIFICATIONS**

DATE	SIGNATURE	DESCRIPTION

**SEWER: EAST SEWERSHED - DOS RIOS W.R.C.**

DEVELOPER'S NAME: <u>MEH HOLDING COMPANY, LTD.</u>			
DEVELOPER'S ADDRESS: <u>5210 THOUSAND OAKS, SUITE 1318</u>			
CITY: <u>SAN ANTONIO</u>	STATE: <u>TEXAS</u>	ZIP: <u>78233</u>	
PHONE#: _____	FAX#: _____	TOTAL ACREAGE: <u>N/A</u>	
SAWS BLOCK MAP#: <u>210556.212556</u> <u>212558.214558.214560</u>		TOTAL EDUS: <u>N/A</u>	
TOTAL LINEAR FOOTAGE OF PIPE: <u>7066.41 L.F. ~ 12" PVC Pipe</u> PLAT NO.: <u>N/A</u>			
NUMBER OF LOTS: <u>N/A</u>		SAWS JOB#: <u>22-1683</u>	

**GENERAL CONSTRUCTION**  
PERMIT S.A.W.S. JOB# 22-1683

**GATES TRACT OFF-SITE SEWER**  
SAN ANTONIO, TEXAS

**STORM WATER POLLUTION PREVENTION PLAN SHEET 2 OF 3**

ISSUE DATE

REVISIONS



12/16/2022

JOB NO. 205-43-06

DATE: December 15, 2022

DRAWN: JS CHECKED: BT

SHEET NUMBER:



INSTALLATION:

1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

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PROJECT COMPLETION:

1. ALL DISTURBED AREAS ARE NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
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COORDINATION NOTE:

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6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

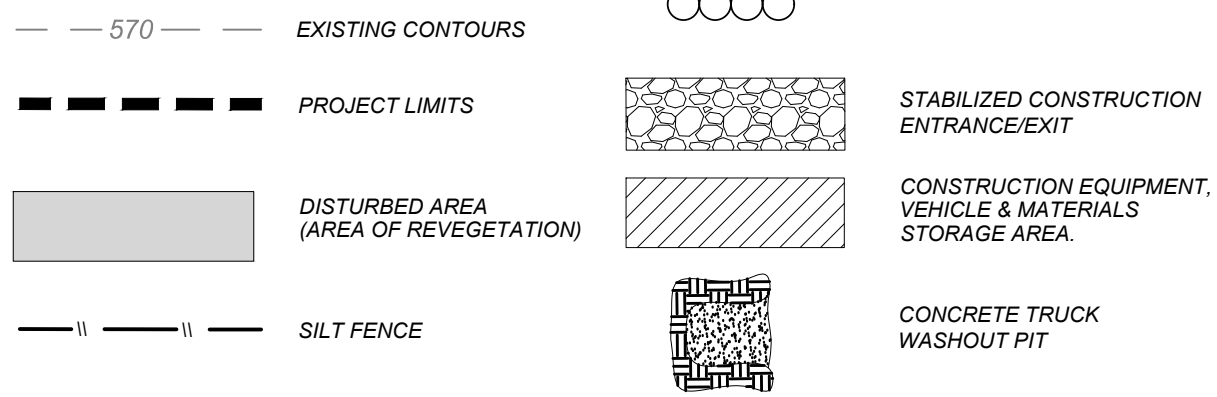
TRENCH EXCAVATION SAFETY PROTECTION

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REVEGETATION NOTE:

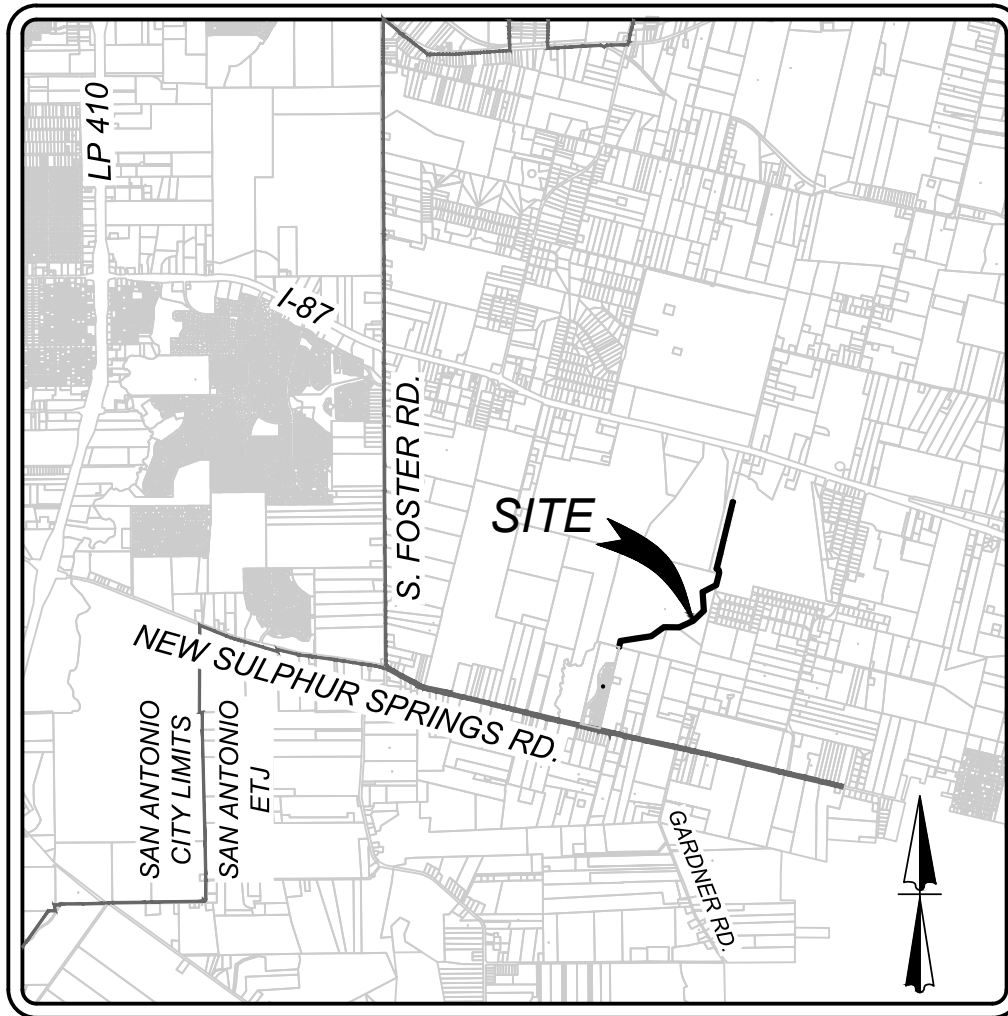
CONTRACTOR TO REESTABLISH VEGETATION FOR ANY NATURAL GROUND THAT IS DISTURBED DURING CONSTRUCTION. VEGETATION SHALL HAVE AN OVERALL COVERAGE OF 85% AND BE SIGNED OFF BY CITY INSPECTOR BEFORE JOB IS COMPLETE.

LEGEND



SW3P MODIFICATIONS

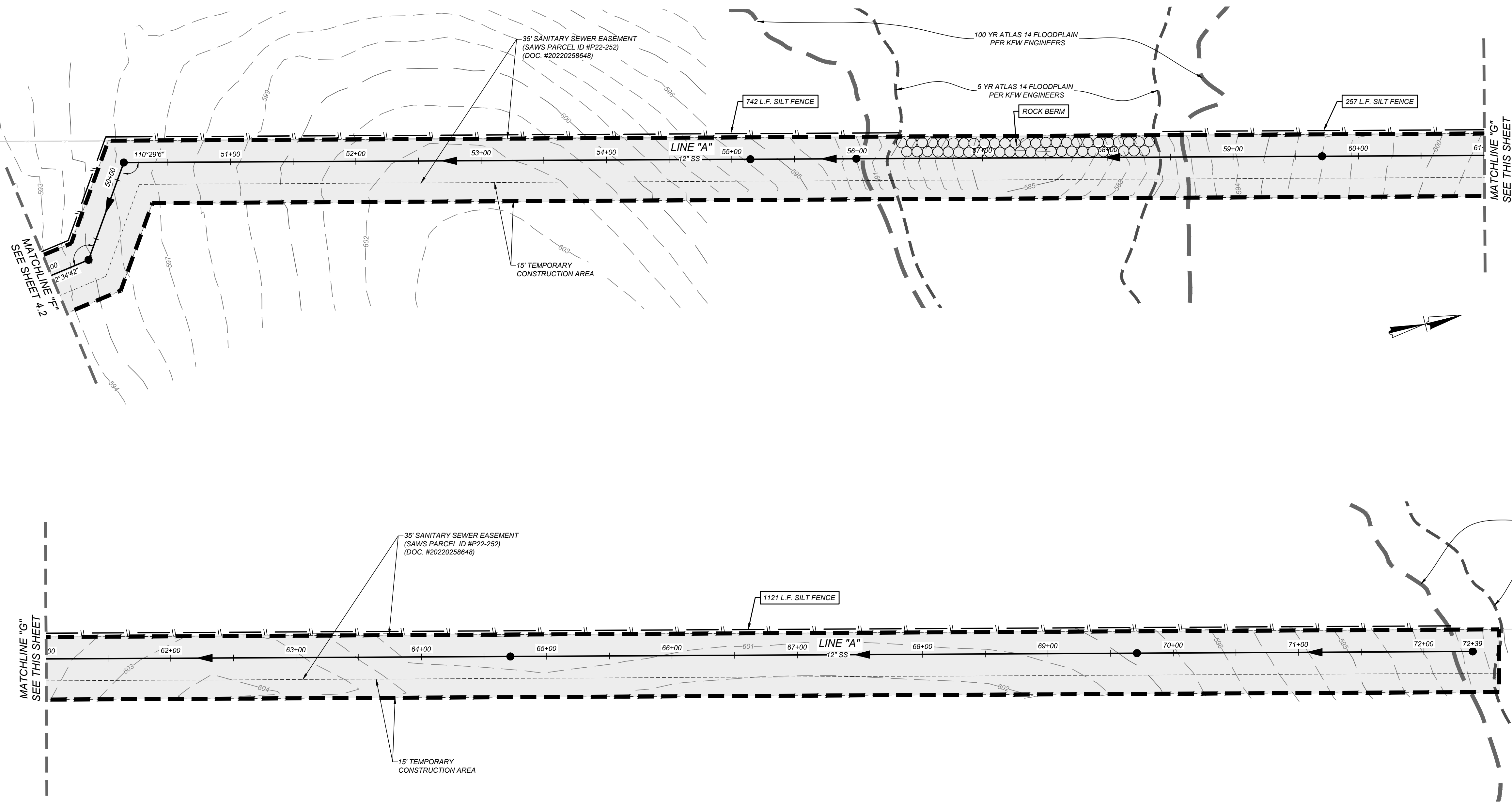
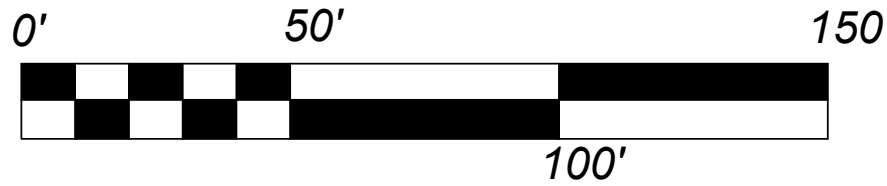
DATE	SIGNATURE	DESCRIPTION



LOCATION MAP

NOT-TO-SCALE

SCALE : 1"=50'



SEWER: EAST SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: <u>MEH HOLDING COMPANY, LTD.</u>			
DEVELOPER'S ADDRESS: <u>5210 THOUSAND OAKS, SUITE 1318</u>			
CITY: <u>SAN ANTONIO</u>	STATE: <u>TEXAS</u>	ZIP: <u>78233</u>	
PHONE#:	FAX#:	TOTAL ACREAGE: <u>N/A</u>	
SAWS BLOCK MAP#: <u>210556.212556</u>		TOTAL EDU'S: <u>N/A</u>	
<u>212558.214558.214560</u>			
TOTAL LINEAR FOOTAGE OF PIPE: <u>7066.41 L.F. ~ 12" PVC Pipe</u>			
NUMBER OF LOTS: <u>N/A</u>		SAWS JOB#: <u>22-1683</u>	PLAT NO.: <u>N/A</u>

GENERAL CONSTRUCTION  
PERMIT S.A.W.S. JOB# 22-1683

GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN SHEET 3 OF 3

JOB NO. 205-43-06  
DATE: December 15, 2022  
DRAWN: JS CHECKED: BT  
SHEET NUMBER:

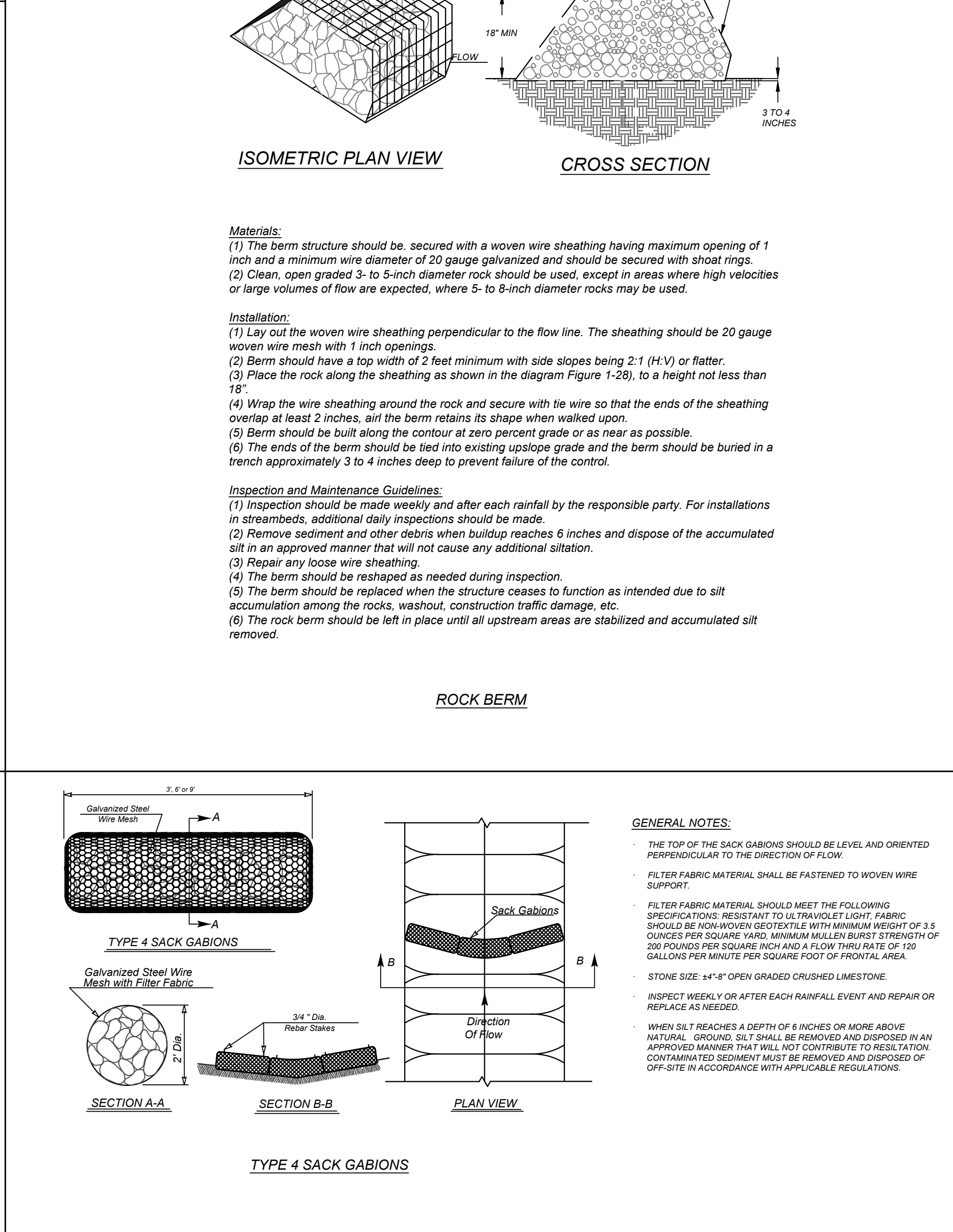
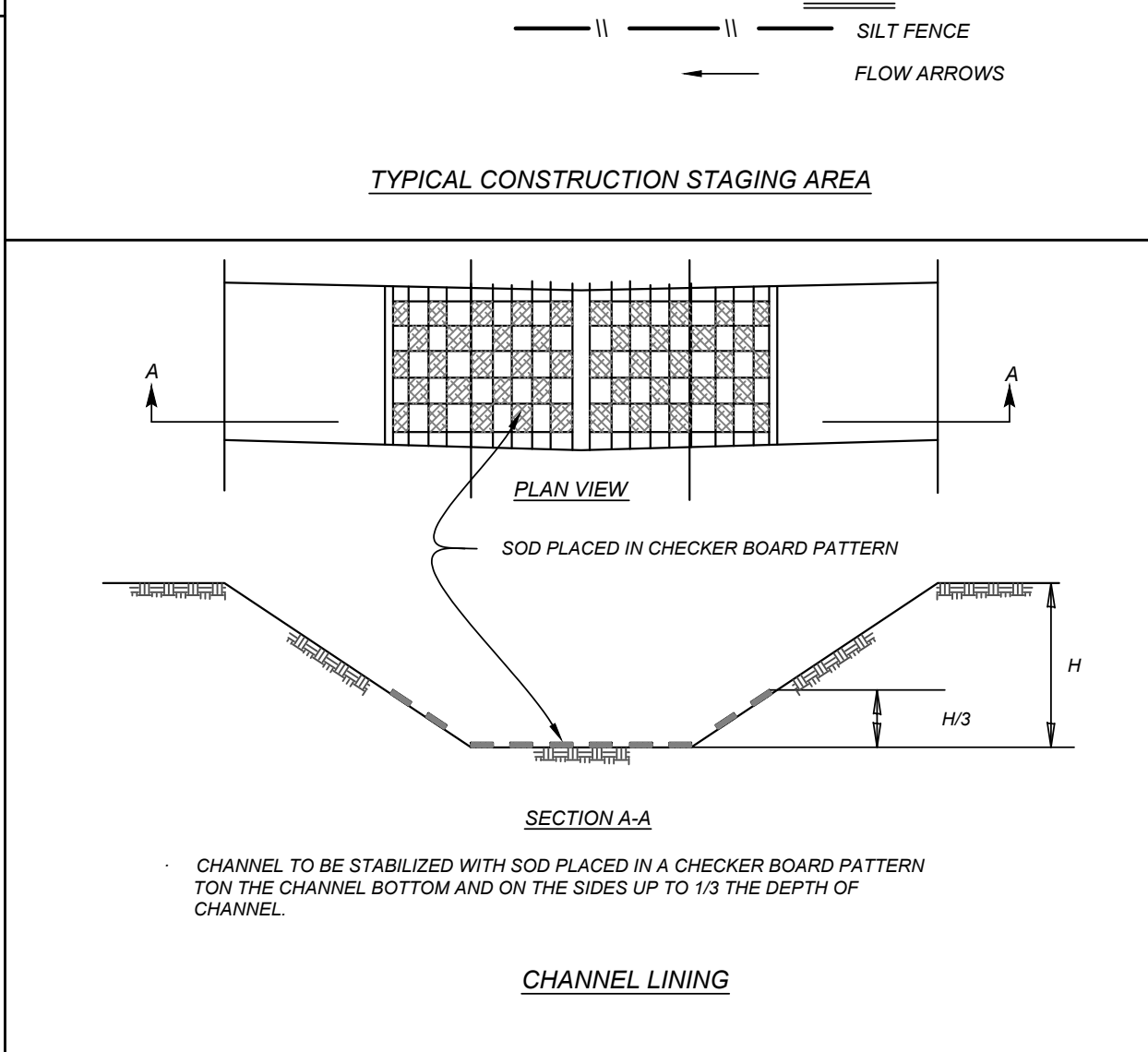
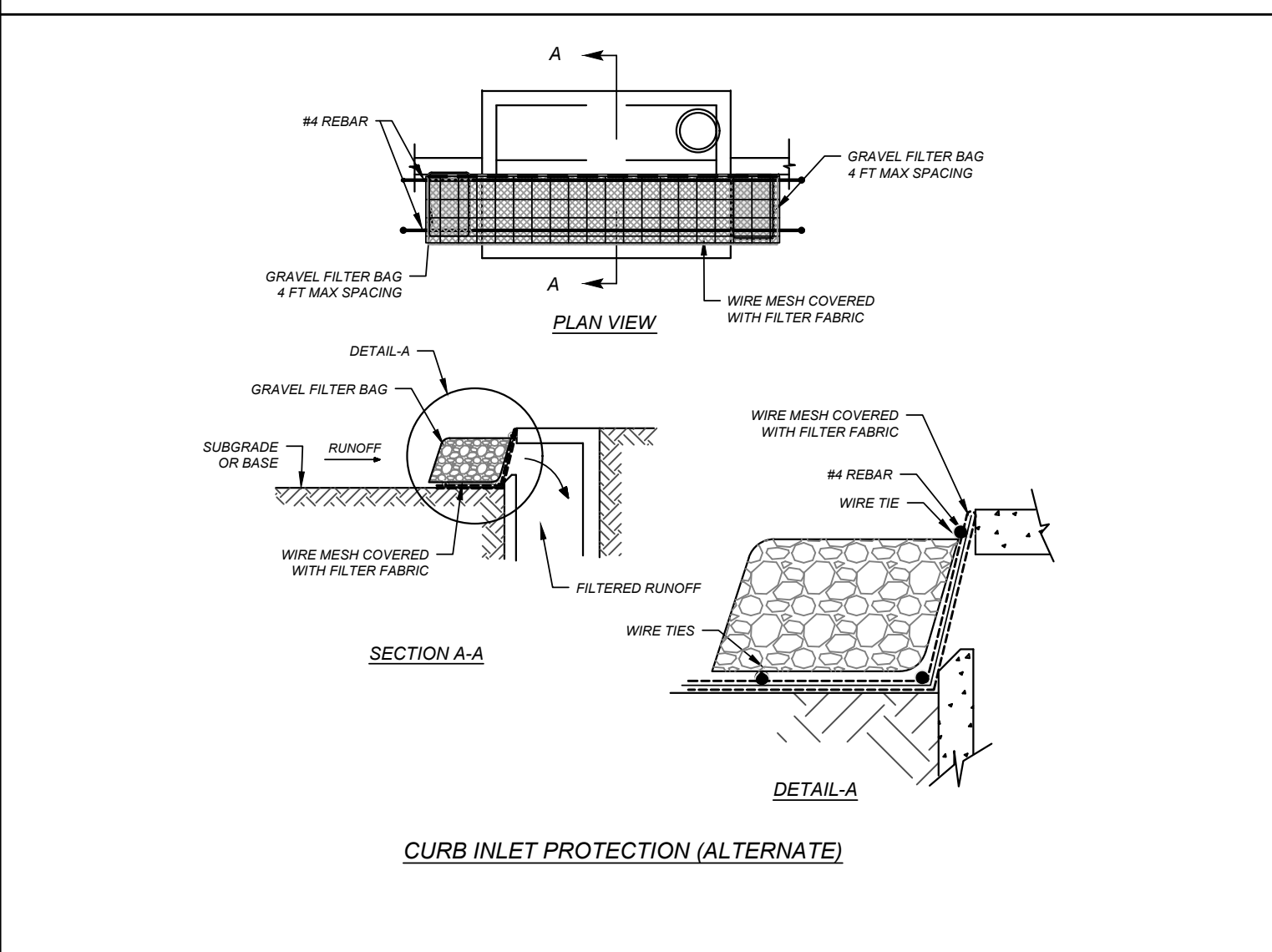
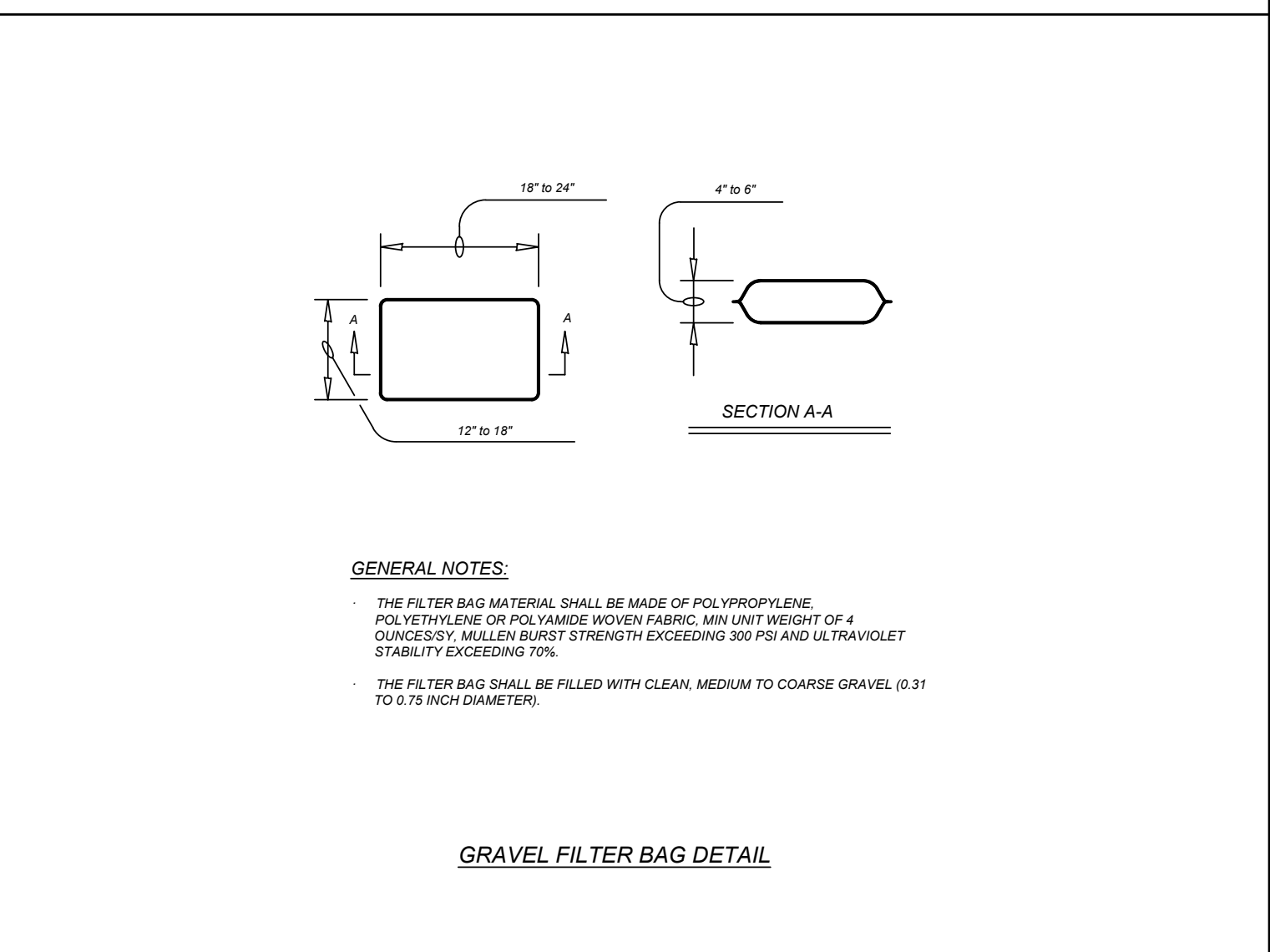
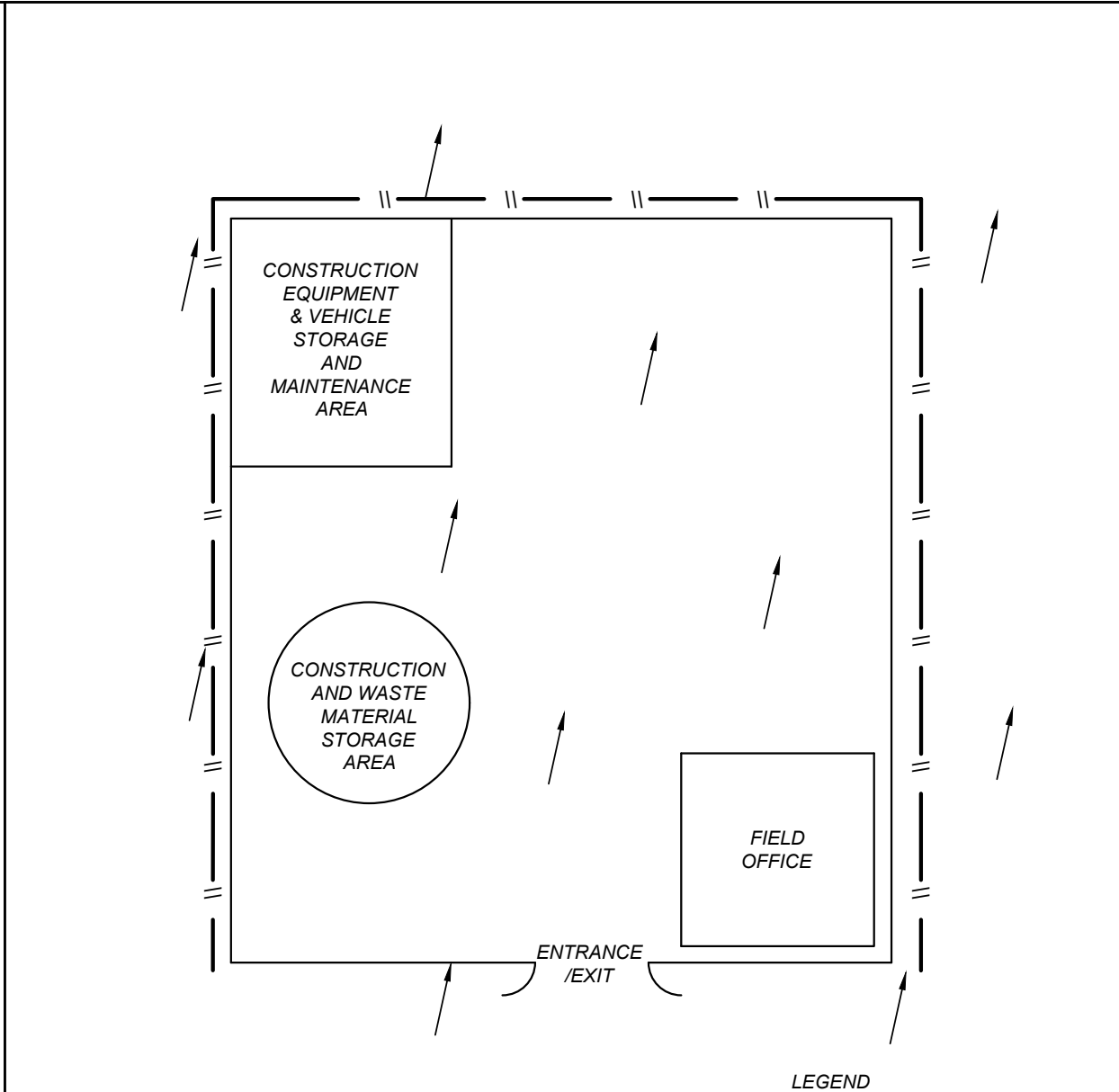
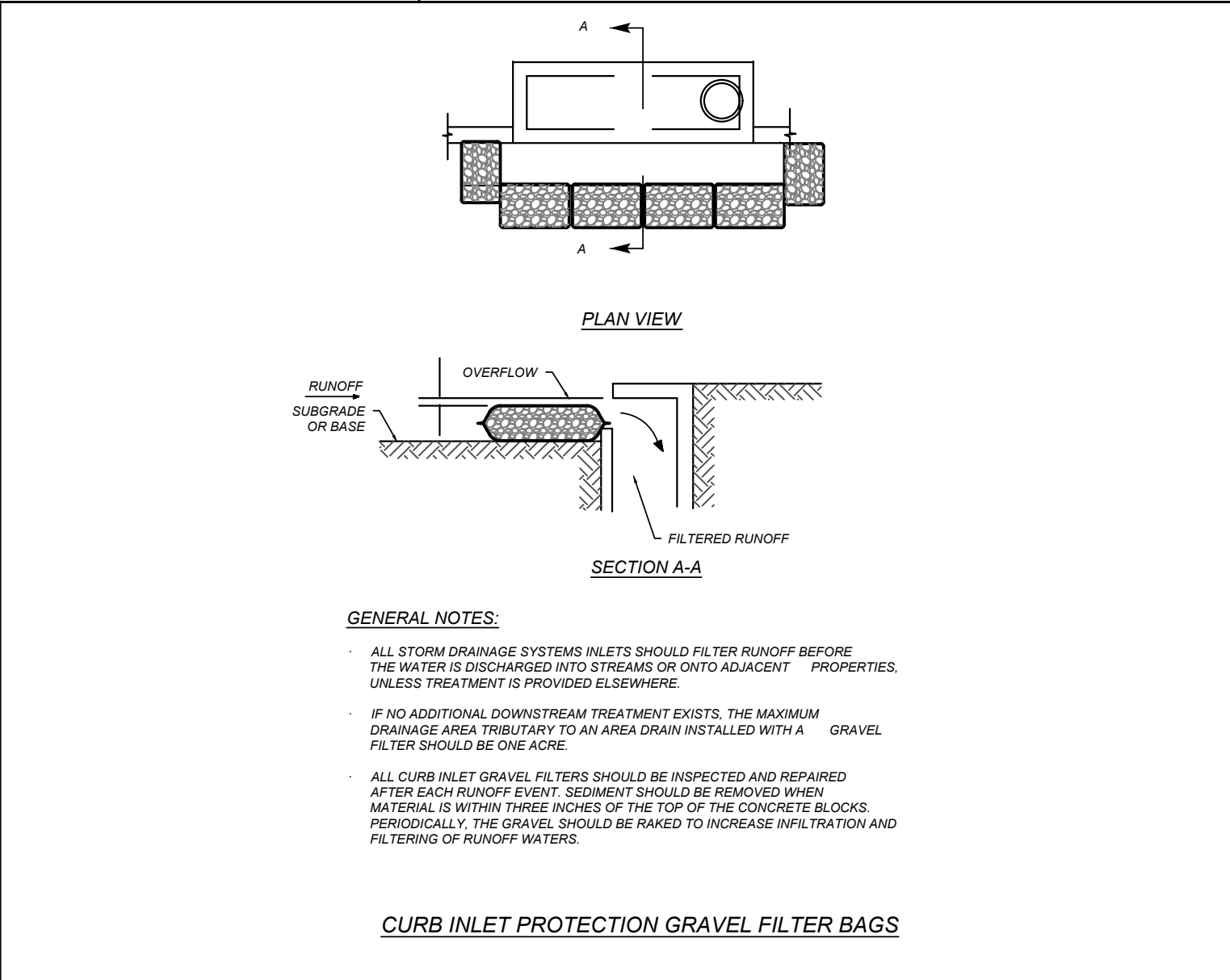
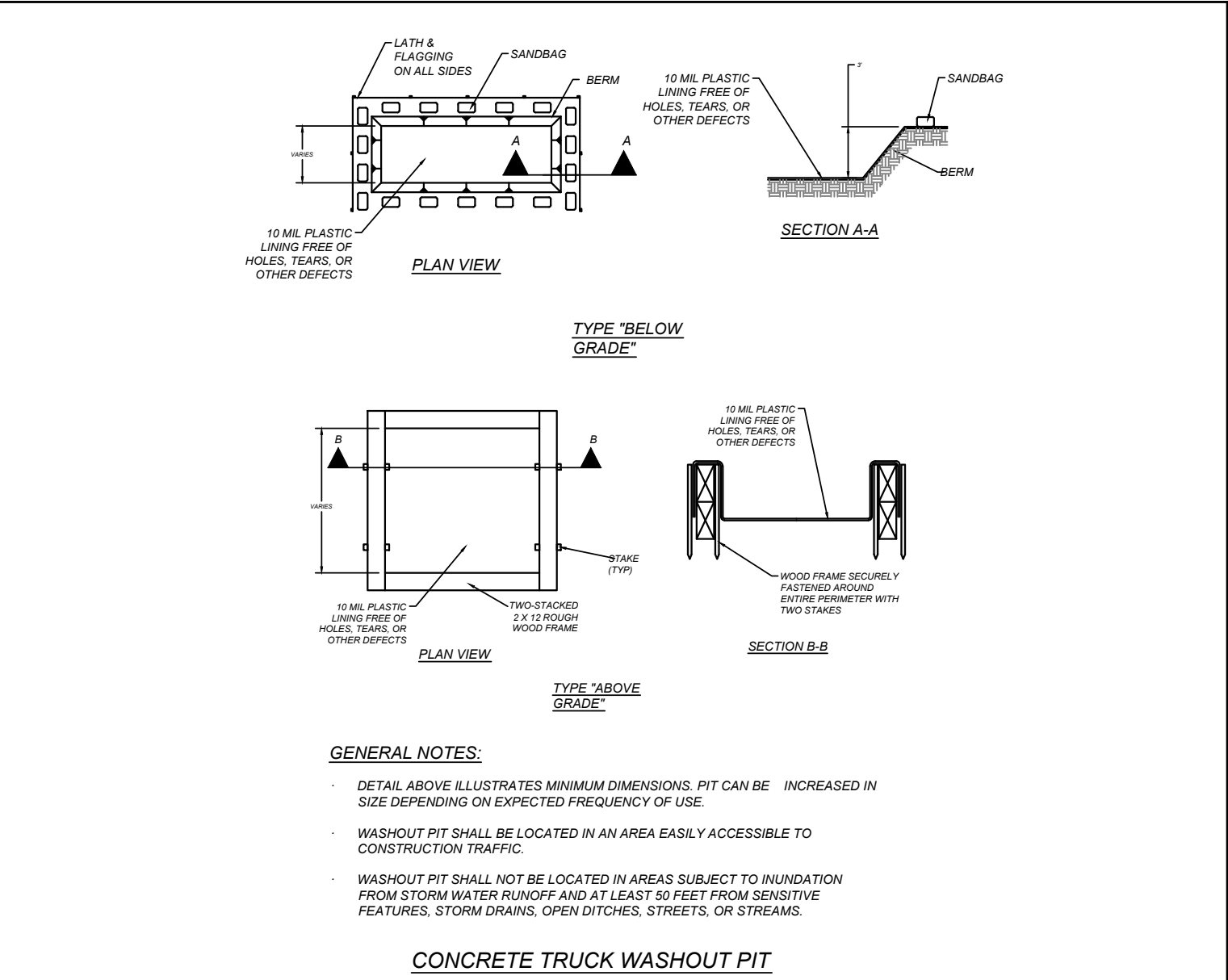
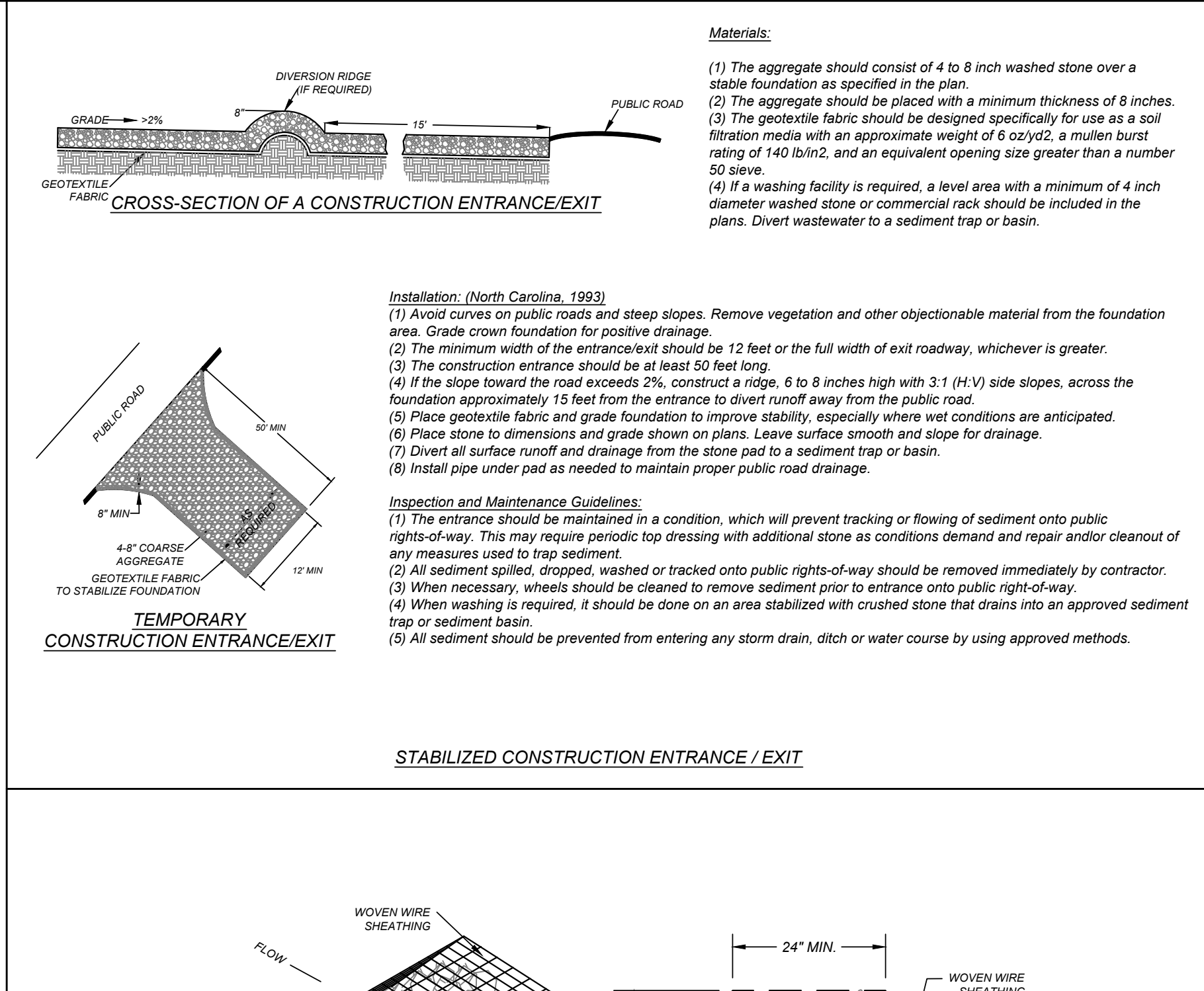
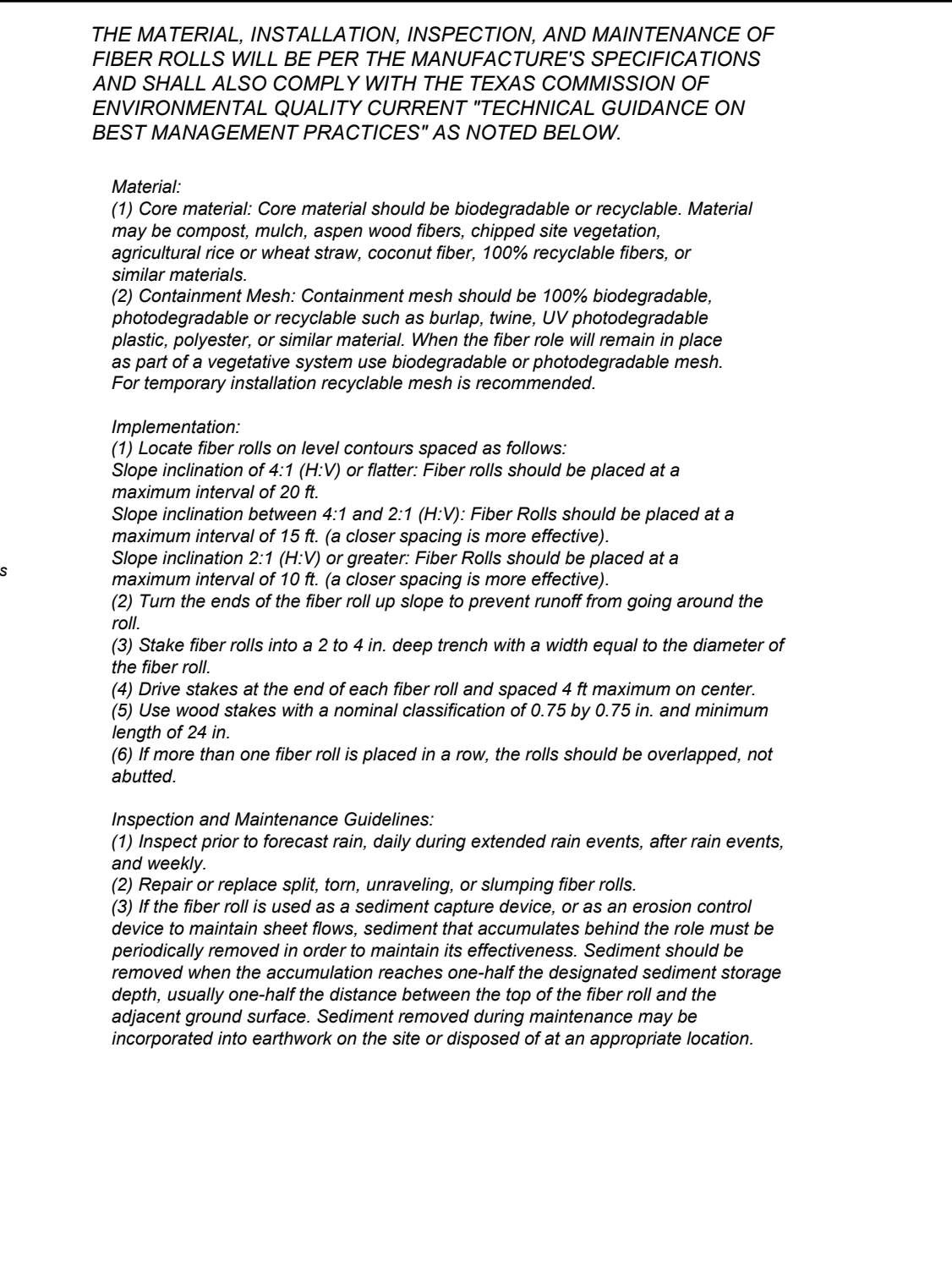
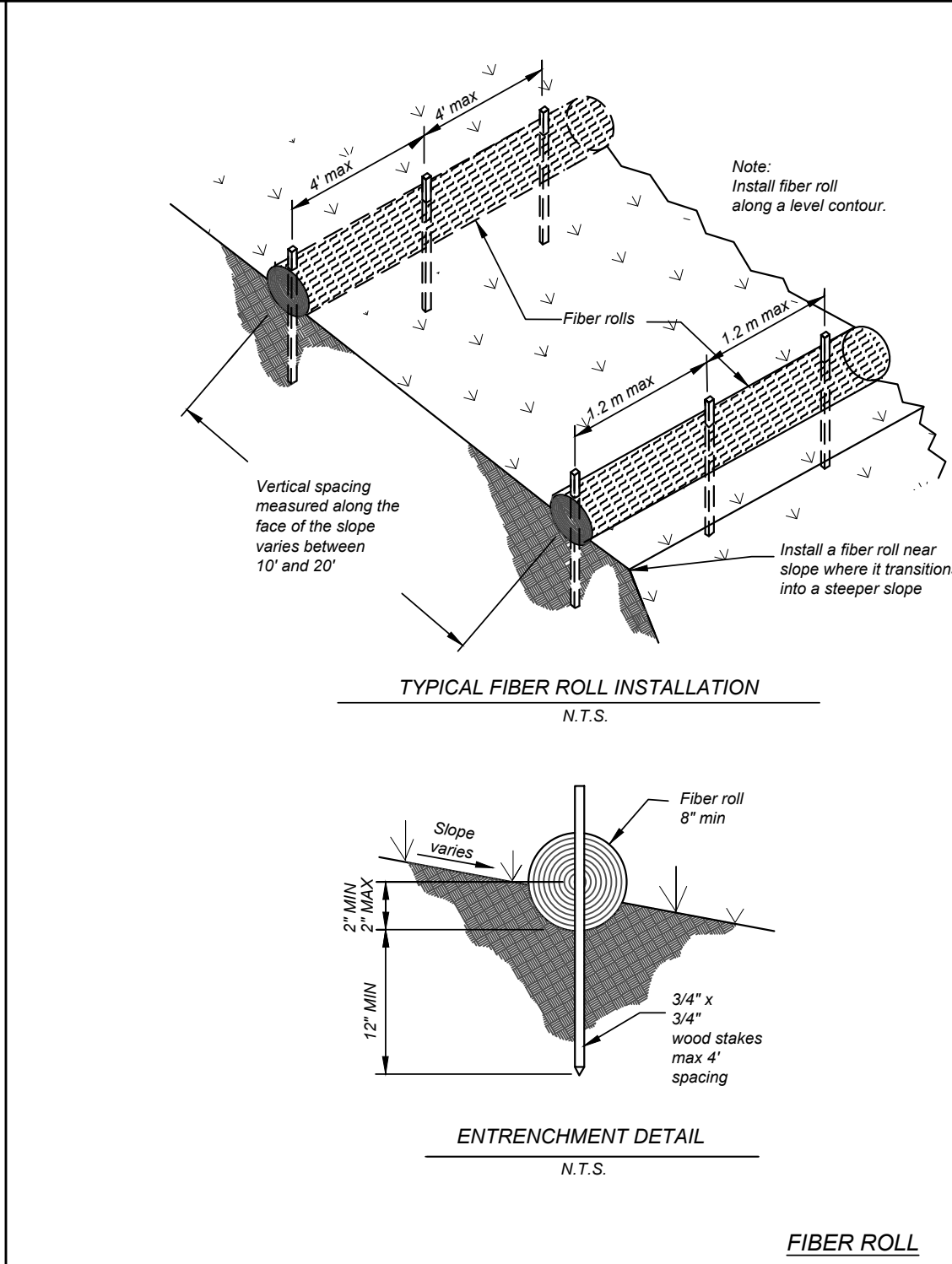
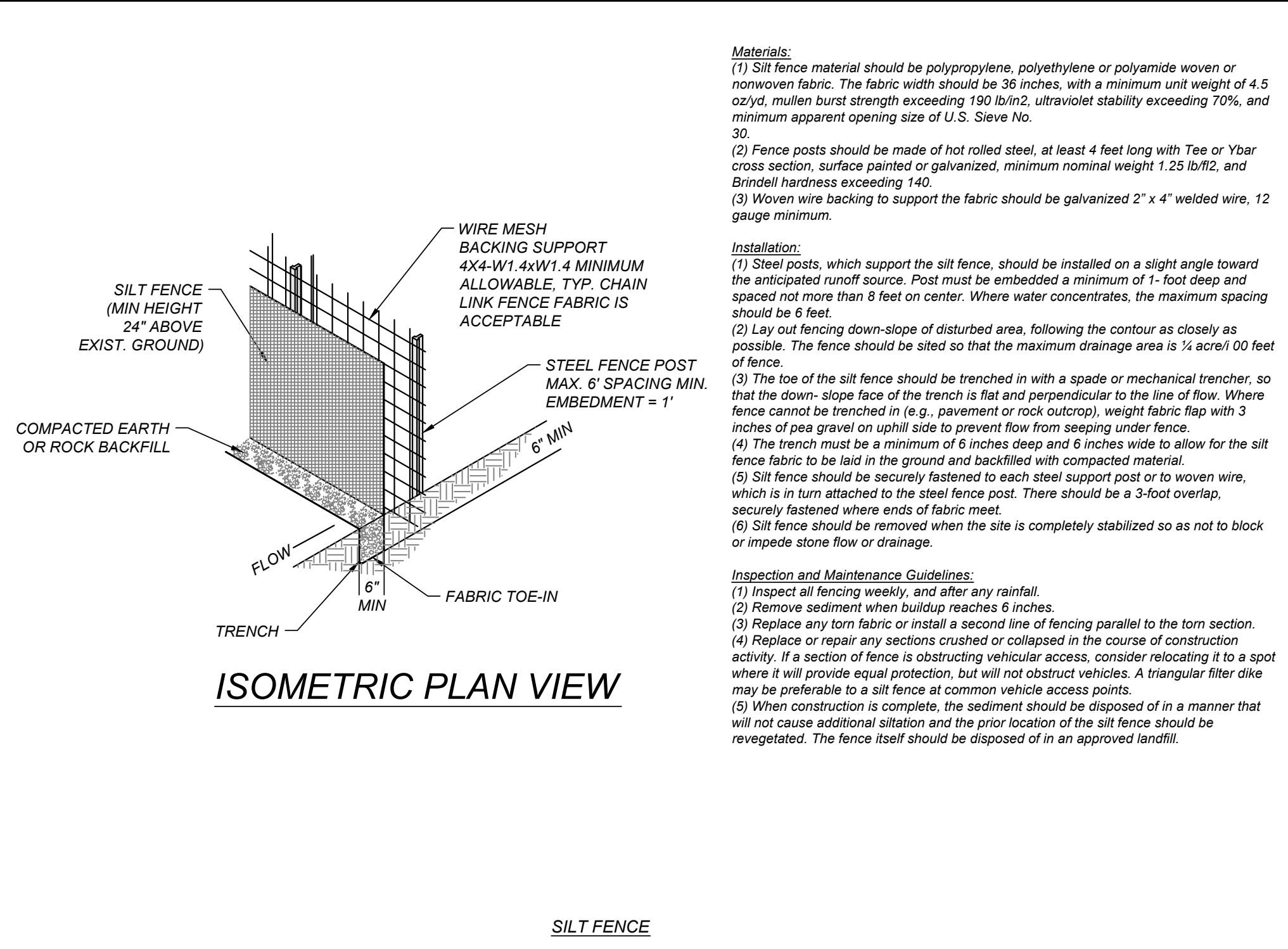
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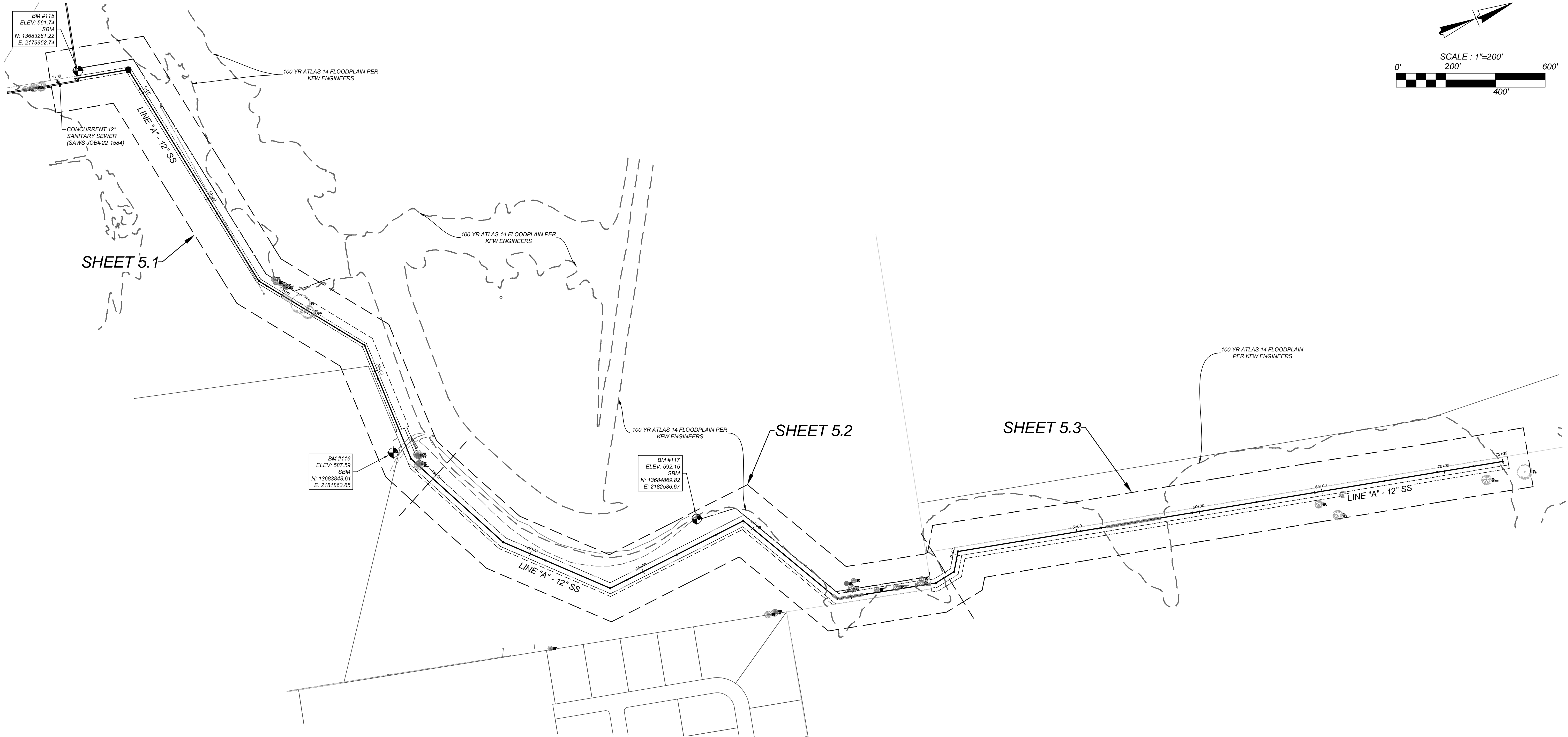
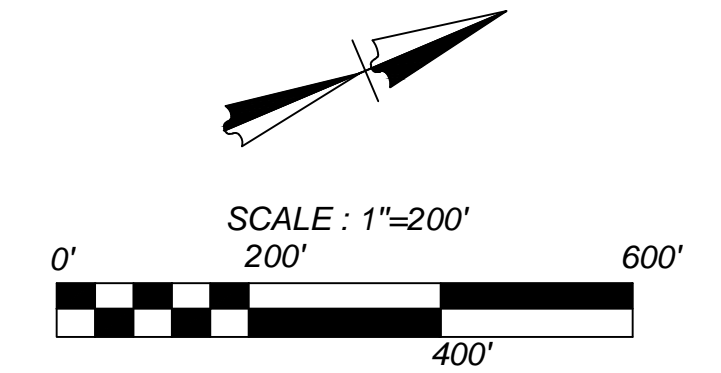
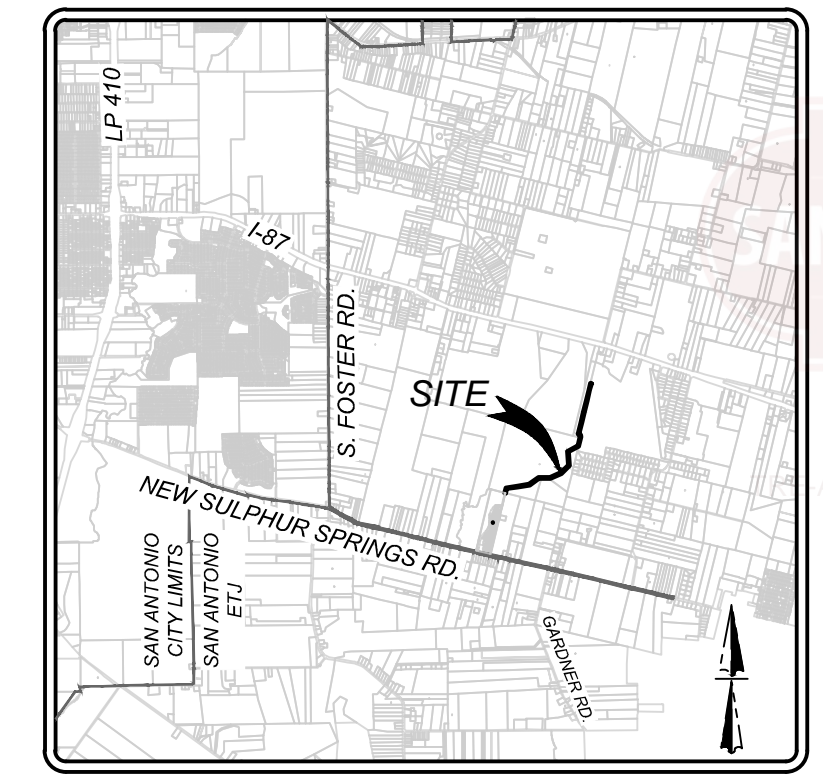
Bobby J. Torres  
12/16/2022

KFW  
ENGINEERS + SURVEYING  
PRACTICE # 21018798444 - P. 0001 - (210) 879-8441  
TX REG. # 91195  
TBP# Firm #: 6513 • TBP# S Firm #: 1012300











Date: Nov. 06, 2023, 2:59pm User ID: dbayer  
File: P:\205\43\06\Design\Civil\TREES\TIP2054306\_150.dwg

TREE PROTECTION NOTES

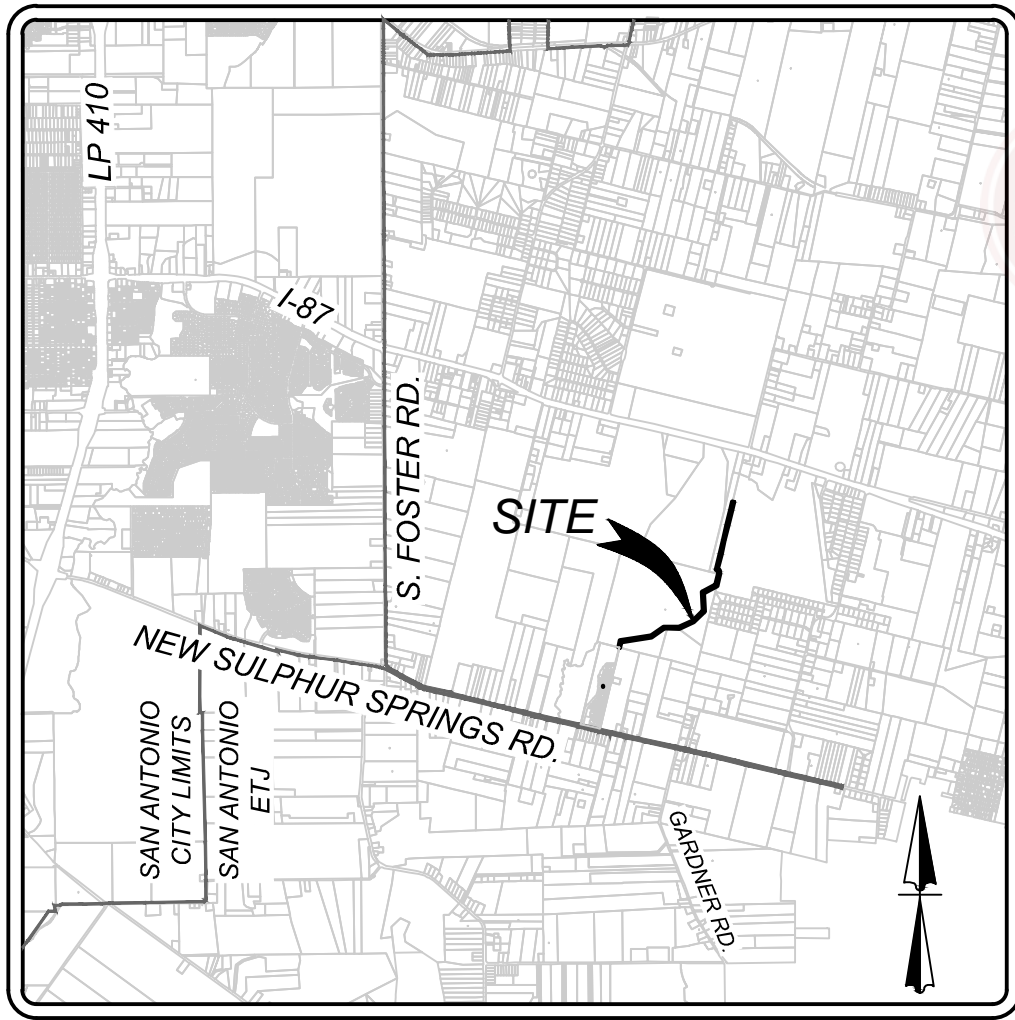
1. A ROOT PROTECTION ZONE WILL BE ESTABLISHED AROUND EACH TREE OR ANY VEGETATION TO BE PRESERVED TO MEET THE LANDSCAPE OR TREE PRESERVATION ORDINANCES. THE ROOT PROTECTION ZONE SHALL BE AN AREA DEFINED BY THE RADIUS EXTENDING OUTWARD FROM THE TRUNK OF THE TREE A DISTANCE OF ONE (1) LINEAR FOOT FOR EACH INCH DIAMETER INCH AT BREAST HEIGHT (4.5') OF THE TREE. A 10-INCH DIAMETER TREE WILL HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE.
2. NO WORK SHALL BEGIN WHERE TREE PROTECTION FENCING HAS NOT BEEN COMPLETED AND APPROVED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING CONSTRUCTION. THE FENCING WILL BE A MINIMUM OF 4' HEIGHT.
3. ALL ROOTS LARGER THAN ONE-INCH IN DIAMETER ARE TO BE CUT CLEANLY AND OAK WOUNDS PAINTED WITHIN 30 MINUTES.
4. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE WORK DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
5. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL BE OPERATED OR STORED WITHIN THE ROOT PROTECTION ZONE. NO CLEAN-OUT AREAS WILL BE CONSTRUCTED SO THAT THE MATERIAL WILL BE IN OR MIGRATE TO THE ROOT PROTECTION ZONE.
6. NO GRADE CHANGE MORE THAN 3" IS ALLOWED WITHIN THE ROOT PROTECTION ZONE.
7. ROOTS OR BRANCHES IN CONFLICT WITH CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. ALL OAK WOUNDS SHALL BE PAINTED WITHIN 30 MINUTES TO PREVENT OAK WILT INFECTION.
8. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST (207-8053).
9. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED.
10. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE WATERING THE ROOT PROTECTION ZONE AND OR WASHING FOLIAGE.
11. NO WIRES, NAILS OR OTHER MATERIALS MAY BE ATTACHED TO PROTECTED TREES.

CONTRACTOR NOTE:

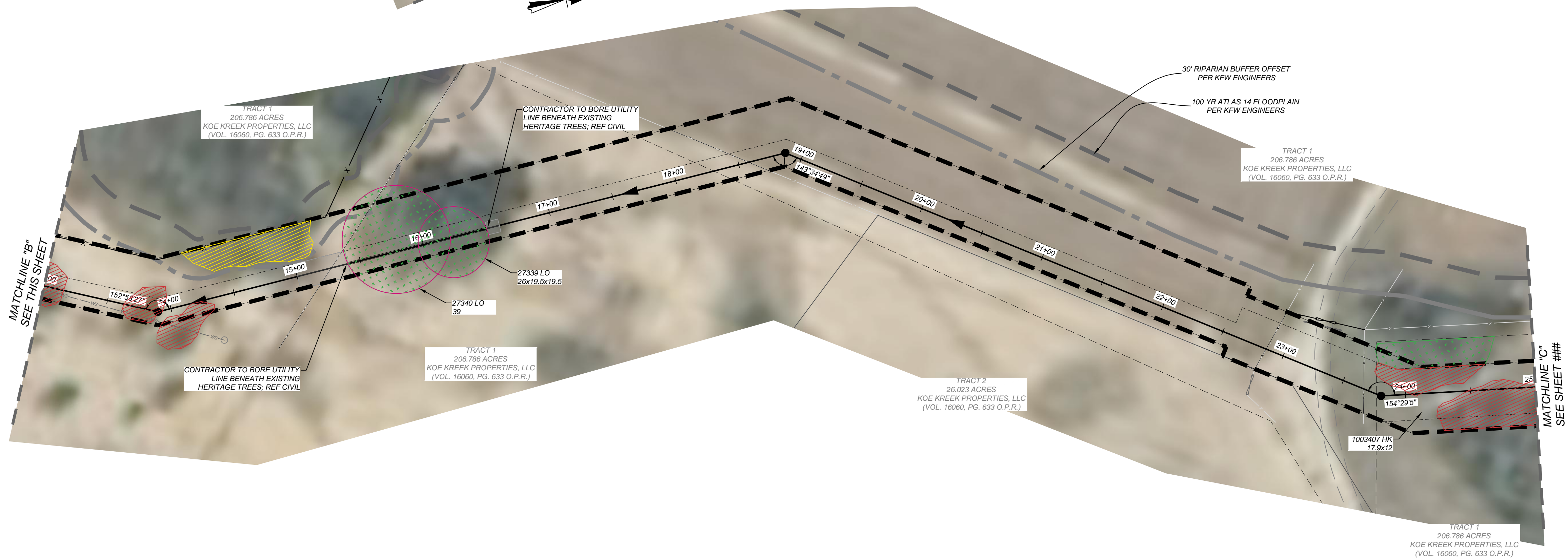
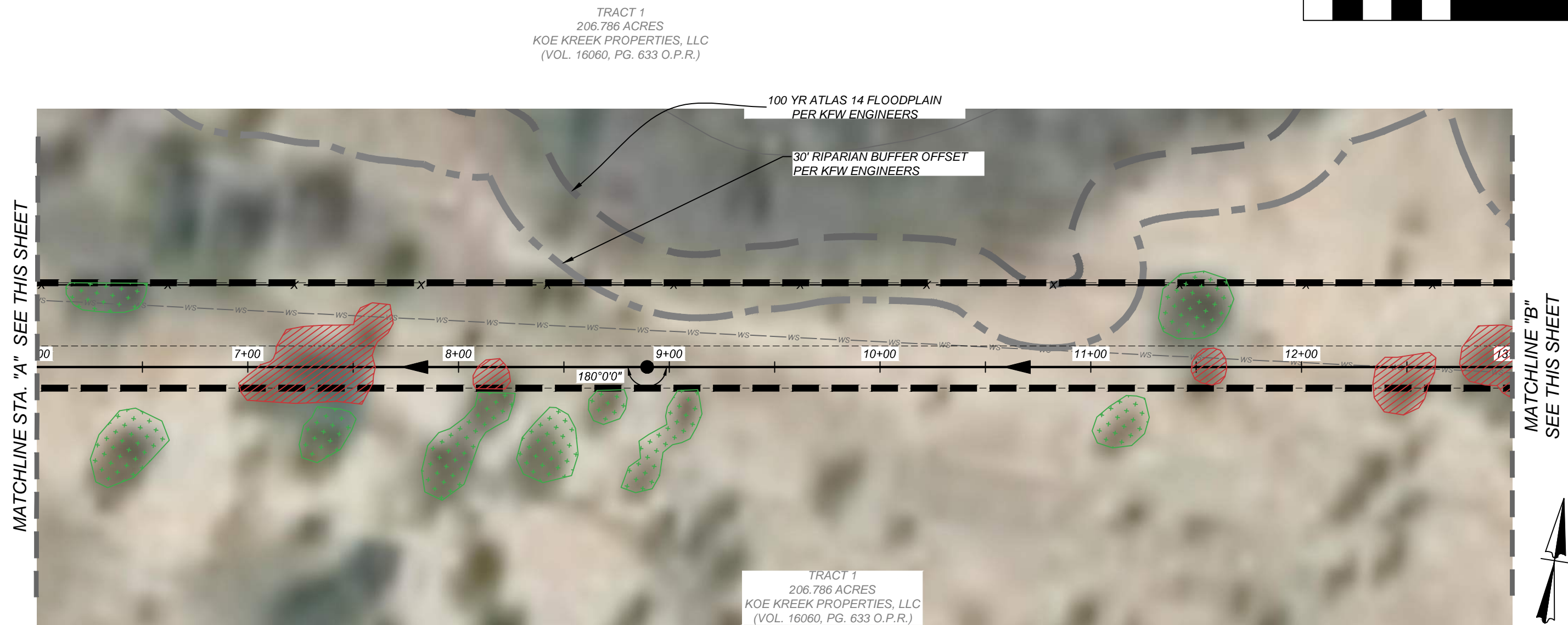
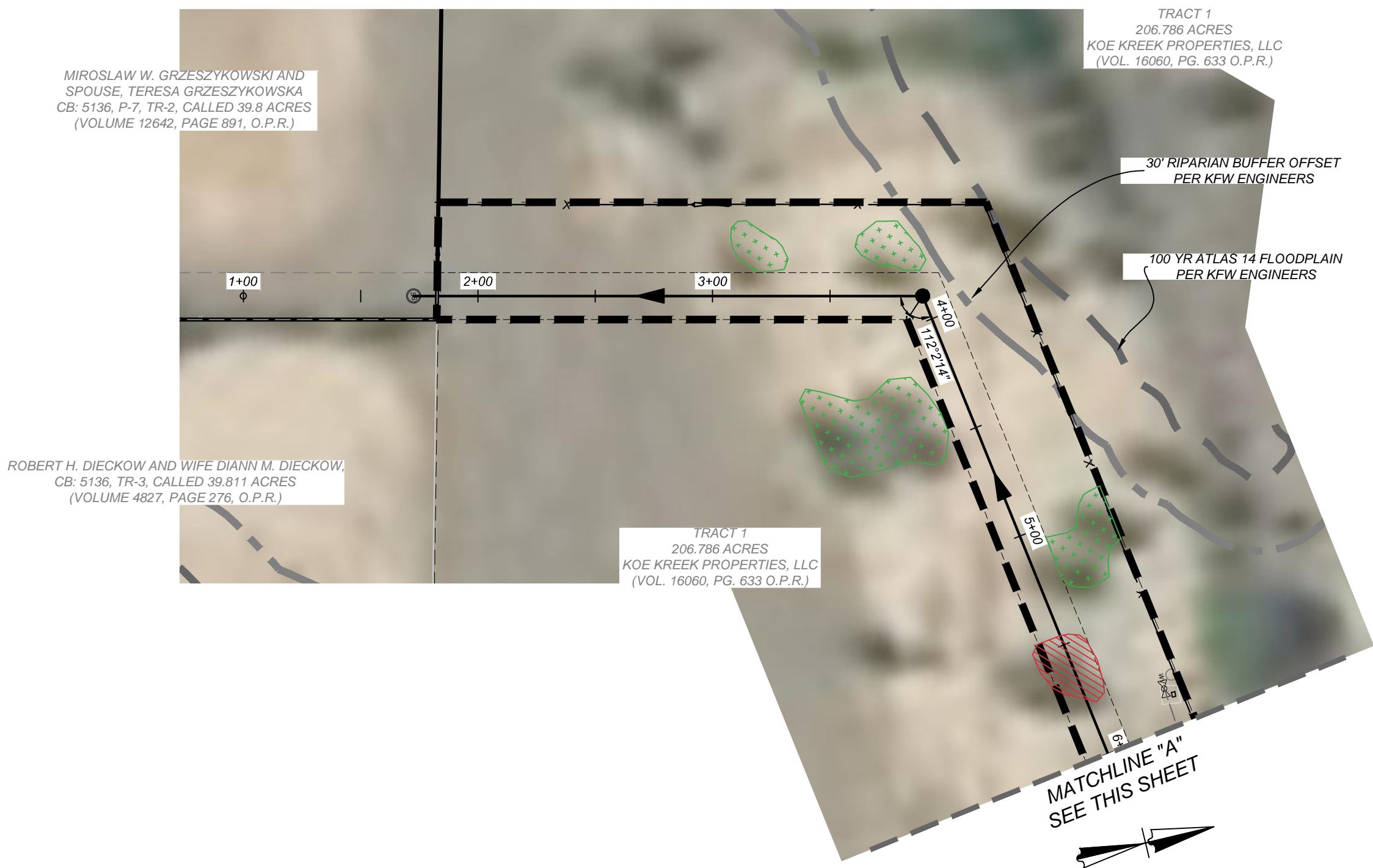
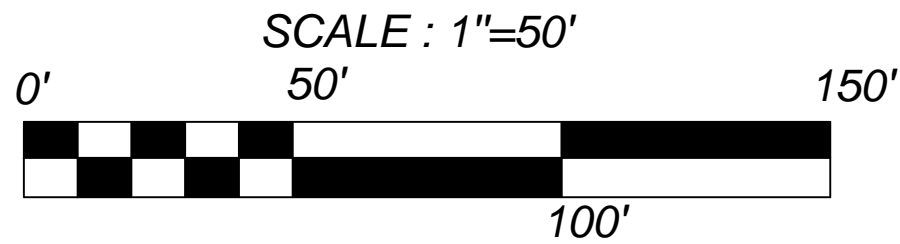
THE CONTRACTOR SHALL BE RESPONSIBLE TO SCHEDULE A PRE CONSTRUCTION MEETING PRIOR TO SITE DEVELOPMENT TO STAY IN COMPLIANCE WITH THE UNIFIED DEVELOPMENT CODE SECTION 35-477 (5) (C); WHICH STATES A PRE CONSTRUCTION MEETING IS REQUIRED TO REVIEW PROCEDURES FOR PROTECTION AND MANAGEMENT OF ALL SIGNIFICANT, HERITAGE OR MITIGATION TREES. THIS CAN BE SCHEDULED WITH FENCING INSPECTION, 207-2222.

LEGEND

- 100YR ATLAS 14 FLOODPLAIN PER KFW ENGINEERS
- RIPARIAN BUFFER
- TREE PLAN PROJECT LIMITS
- SIGNIFICANT TREE CANOPY TO BE PRESERVED
- FEMA TREE CANOPY TO BE PRESERVED
- RIPARIAN BUFFER TREE CANOPY TO BE PRESERVED
- SIGNIFICANT TREE CANOPY TO BE REMOVED
- FEMA TREE CANOPY TO BE REMOVED
- RIPARIAN BUFFER TREE CANOPY TO BE REMOVED
- HERITAGE TREE



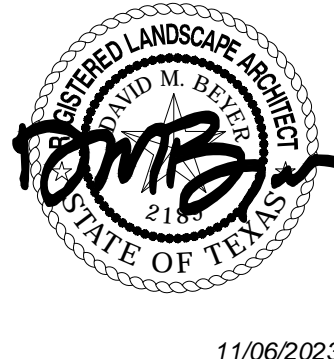
LOCATION MAP  
NOT-TO-SCALE



GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS  
TREE PRESERVATION PLAN SHEET 1 OF 3

JOB NO. 205-43-06  
DATE: November 6, 2023  
DRAWN: DB CHECKED: DB  
SHEET NUMBER:

5.1



11/06/2023

ISSUE DATE

REVISIONS

**KFW**  
ENGINEERS + SURVEYING  
P.O. Box 100000  
San Antonio, TX 78201  
Phone: (210) 878-4444 • Fax: (210) 878-4441  
TBE Firm #: 6513 • TBE S Firm #: 10122300

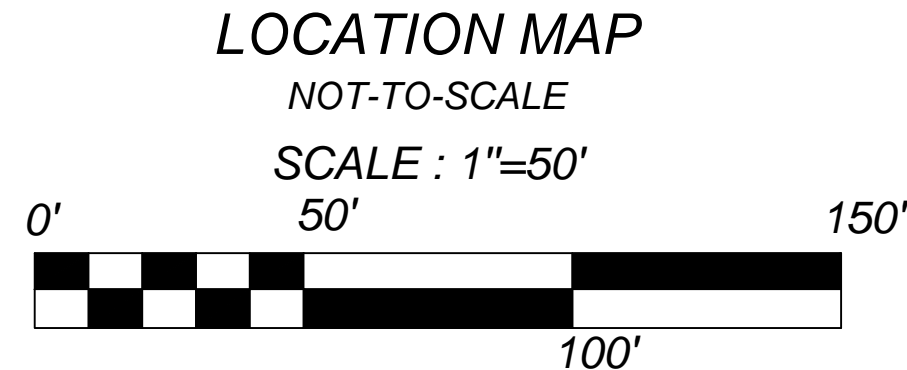
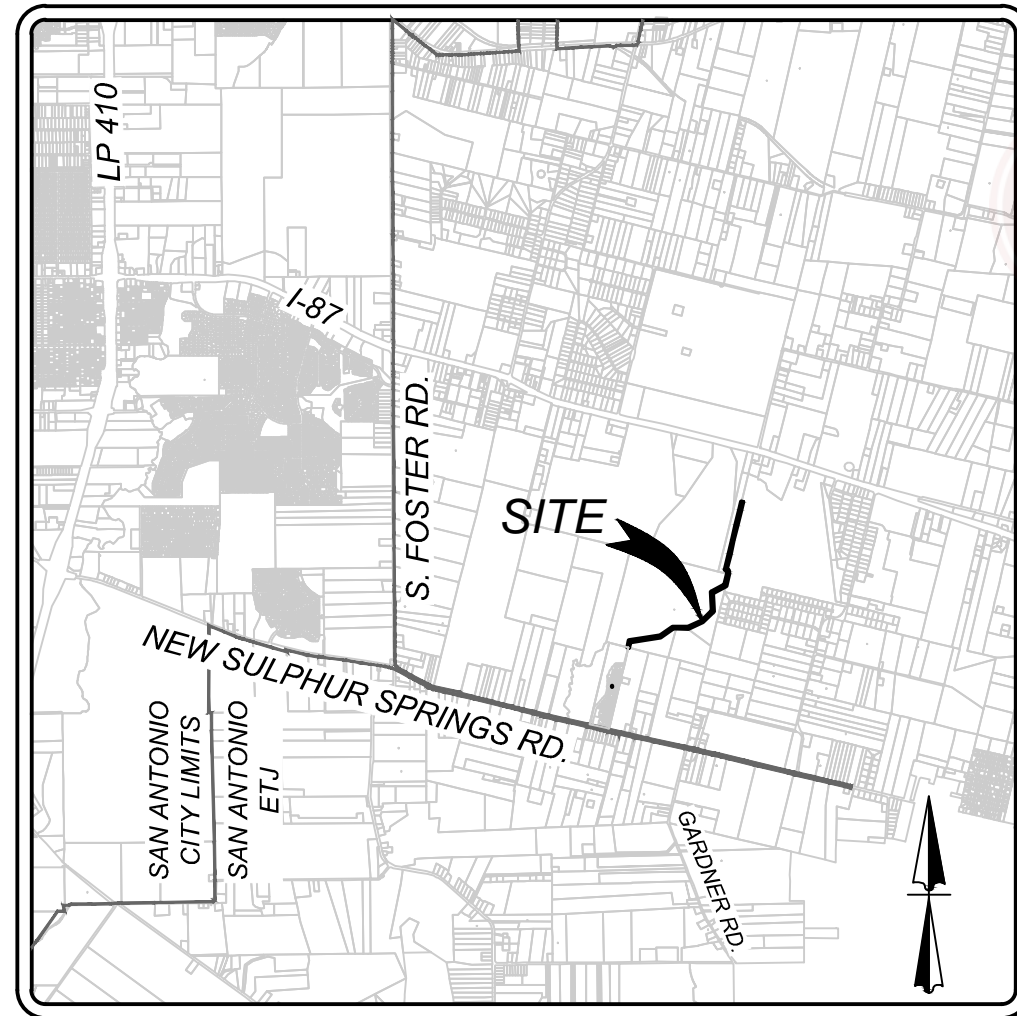
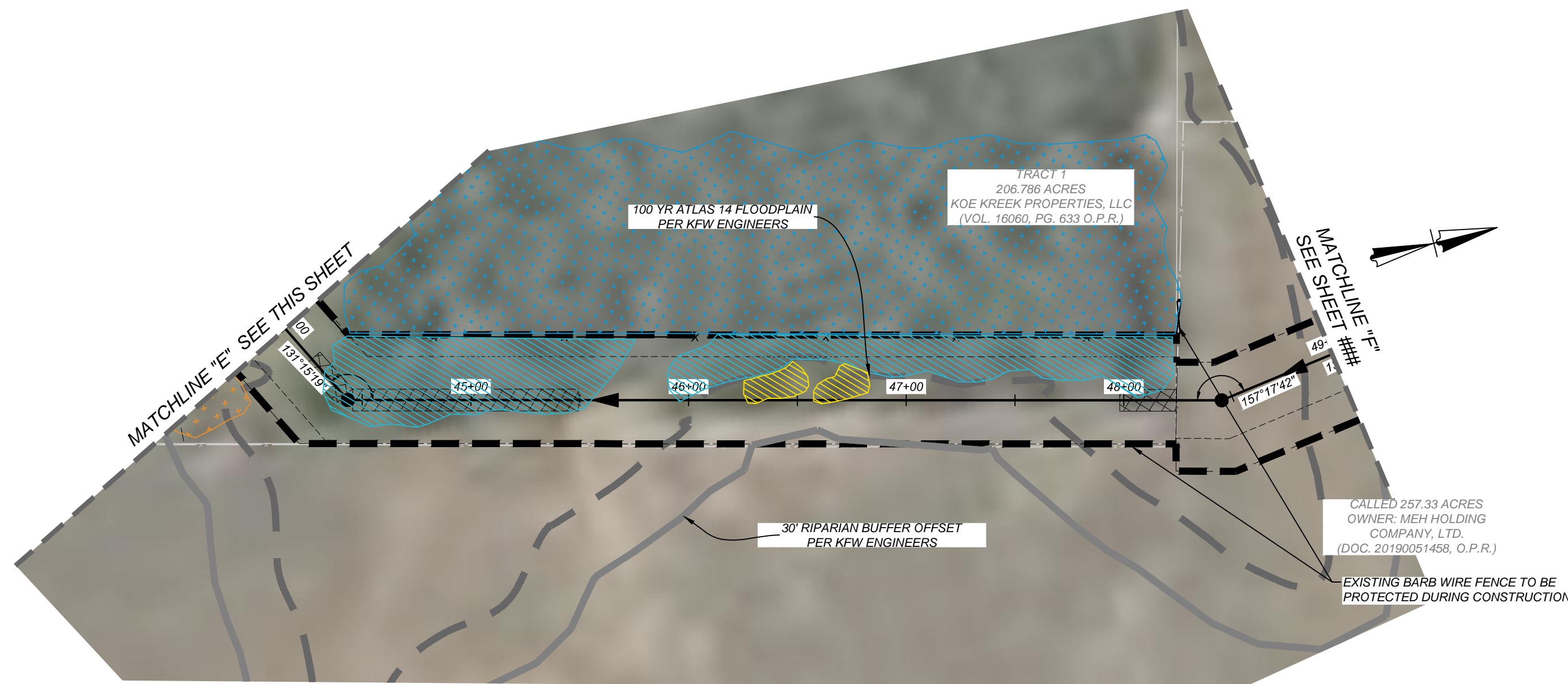
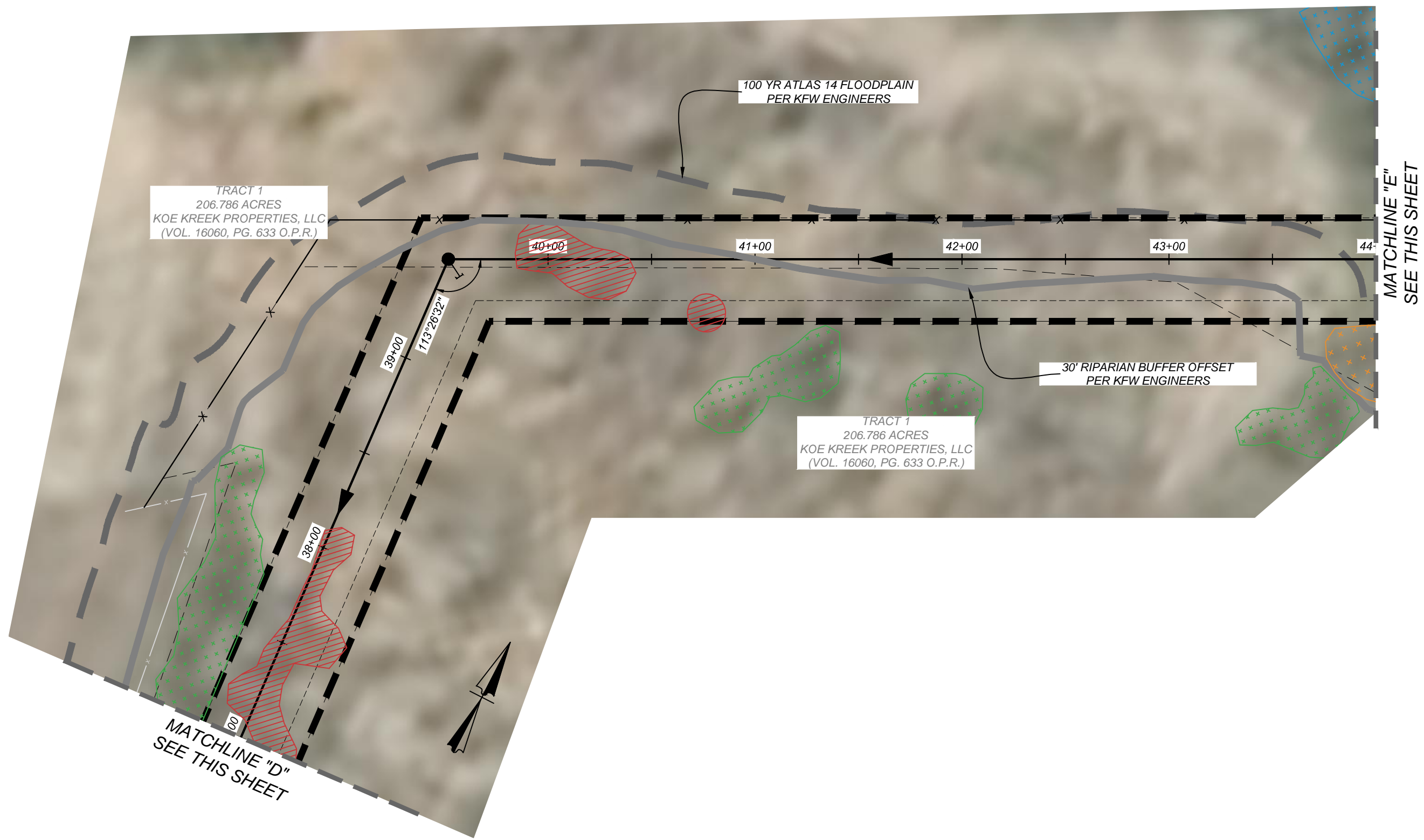
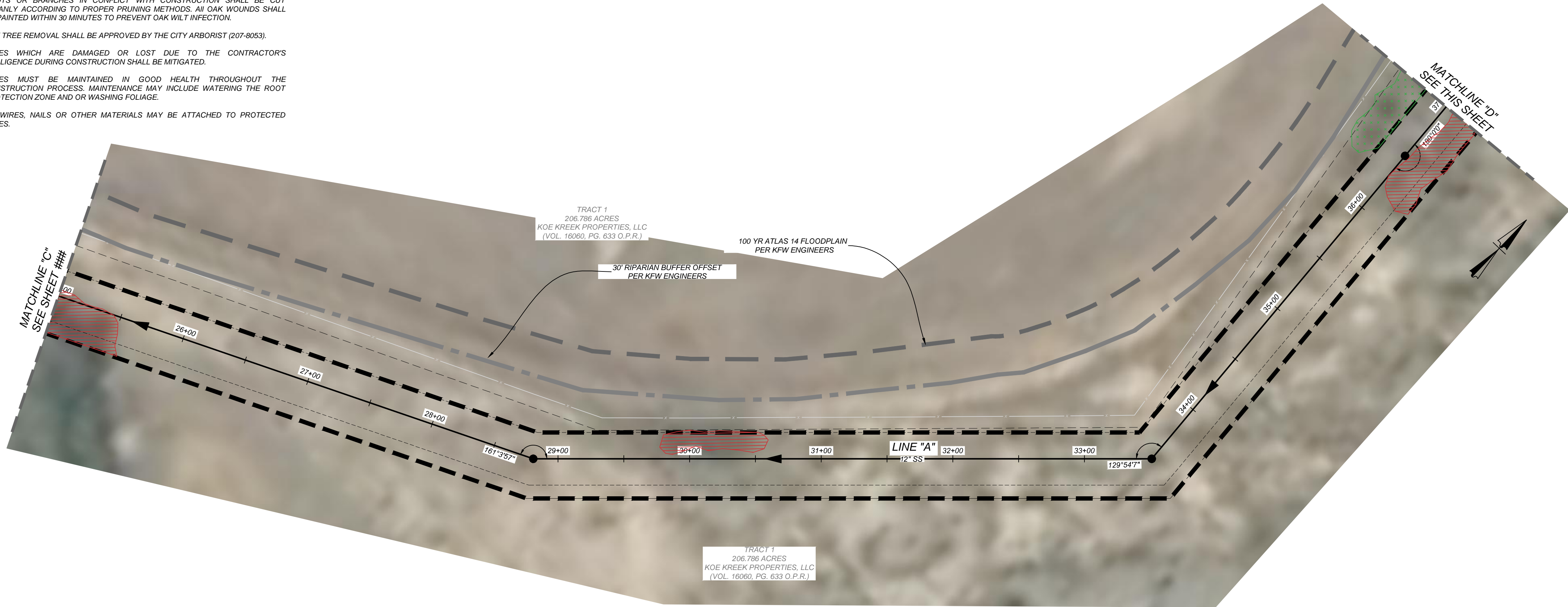


TREE PROTECTION NOTES

1. A ROOT PROTECTION ZONE WILL BE ESTABLISHED AROUND EACH TREE OR ANY VEGETATION TO BE PRESERVED TO MEET THE LANDSCAPE OR TREE PRESERVATION ORDINANCES. THE ROOT PROTECTION ZONE SHALL BE AN AREA DEFINED BY THE RADIUS EXTENDING OUTWARD FROM THE TRUNK OF THE TREE A DISTANCE OF ONE (1) LINEAR FOOT FOR EACH INCH DIAMETER INCH AT BREAST HEIGHT (4.5') OF THE TREE. A 10-INCH DIAMETER TREE WILL HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE.
2. NO WORK SHALL BEGIN WHERE TREE PROTECTION FENCING HAS NOT BEEN COMPLETED AND APPROVED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING CONSTRUCTION. THE FENCING WILL BE A MINIMUM OF 4' HEIGHT.
3. ALL ROOTS LARGER THAN ONE-INCH IN DIAMETER ARE TO BE CUT CLEANLY AND OAK WOUNDS PAINTED WITHIN 30 MINUTES.
4. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE WORK DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
5. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL BE OPERATED OR STORED WITHIN THE ROOT PROTECTION ZONE. NO CLEAN-OUT AREAS WILL BE CONSTRUCTED SO THAT THE MATERIAL WILL BE IN OR MIGRATE TO THE ROOT PROTECTION ZONE.
6. NO GRADE CHANGE MORE THAN 3" IS ALLOWED WITHIN THE ROOT PROTECTION ZONE.
7. ROOTS OR BRANCHES IN CONFLICT WITH CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. ALL OAK WOUNDS SHALL BE PAINTED WITHIN 30 MINUTES TO PREVENT OAK WILT INFECTION.
8. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST (207-8053).
9. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED.
10. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE WATERING THE ROOT PROTECTION ZONE AND OR WASHING FOLIAGE.
11. NO WIRES, NAILS OR OTHER MATERIALS MAY BE ATTACHED TO PROTECTED TREES.

CONTRACTOR NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE TO SCHEDULE A PRE CONSTRUCTION MEETING PRIOR TO SITE DEVELOPMENT TO STAY IN COMPLIANCE WITH THE UNIFIED DEVELOPMENT CODE SECTION 35-477 (5) (C); WHICH STATES A PRE CONSTRUCTION MEETING IS REQUIRED TO REVIEW PROCEDURES FOR PROTECTION AND MANAGEMENT OF ALL SIGNIFICANT, HERITAGE OR MITIGATION TREES. THIS CAN BE SCHEDULED WITH FENCING INSPECTION, 207-2222.



GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS  
TREE PRESERVATION PLAN SHEET 2 OF 3

JOB NO. 205-43-06  
DATE: November 6, 2023  
DRAWN: DB CHECKED: DB  
SHEET NUMBER:  
5.2



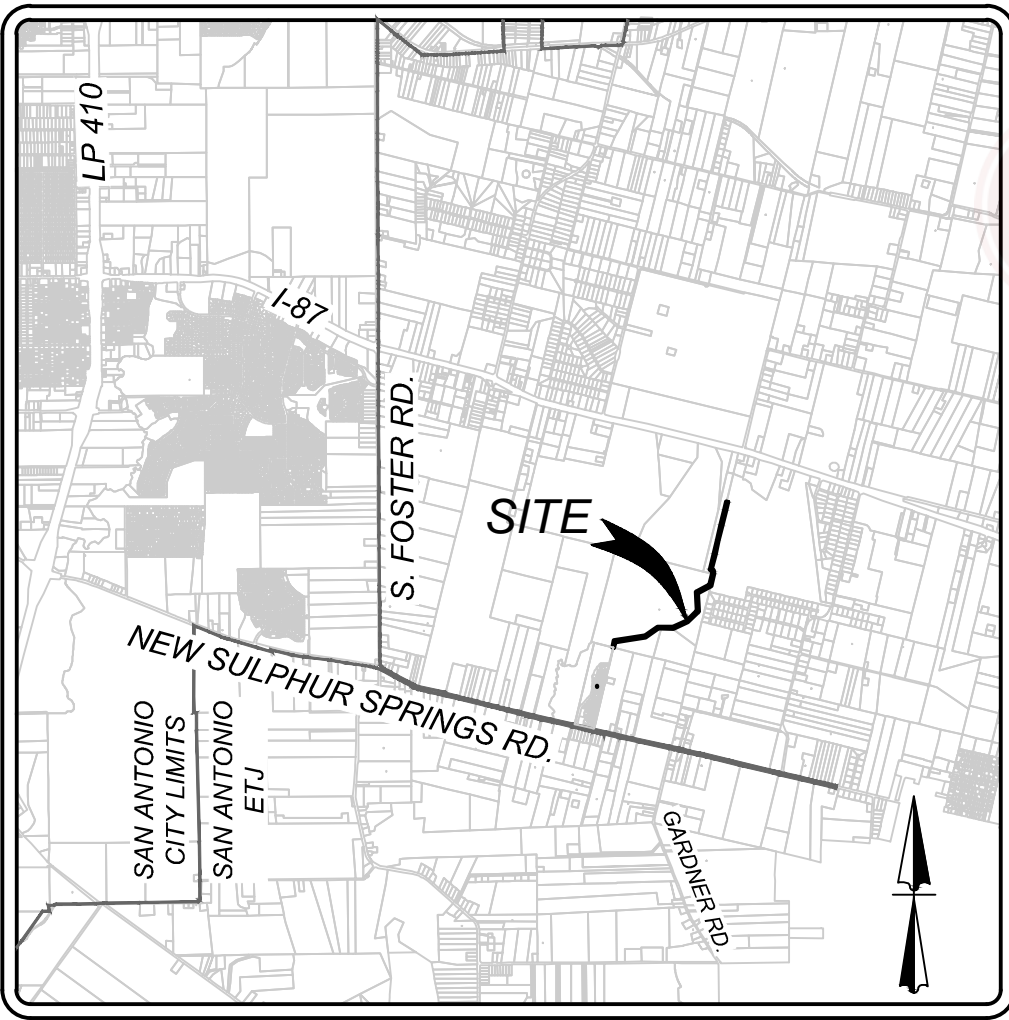
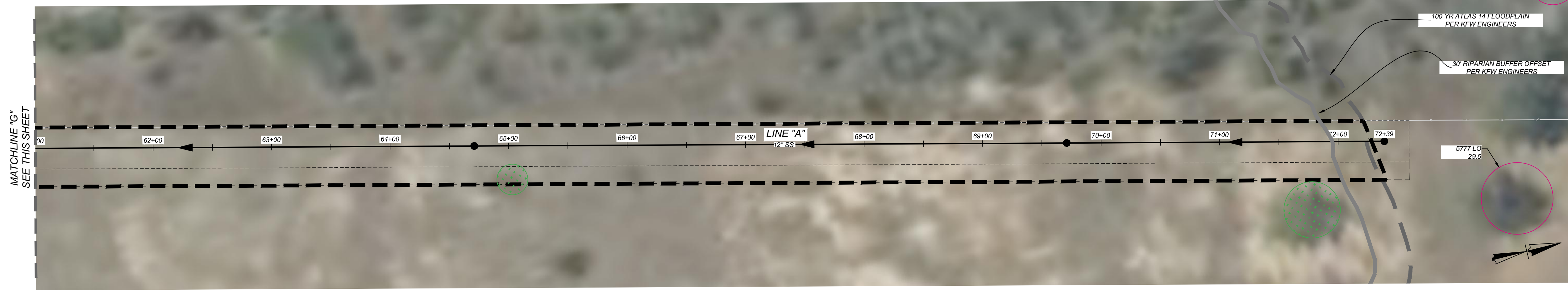
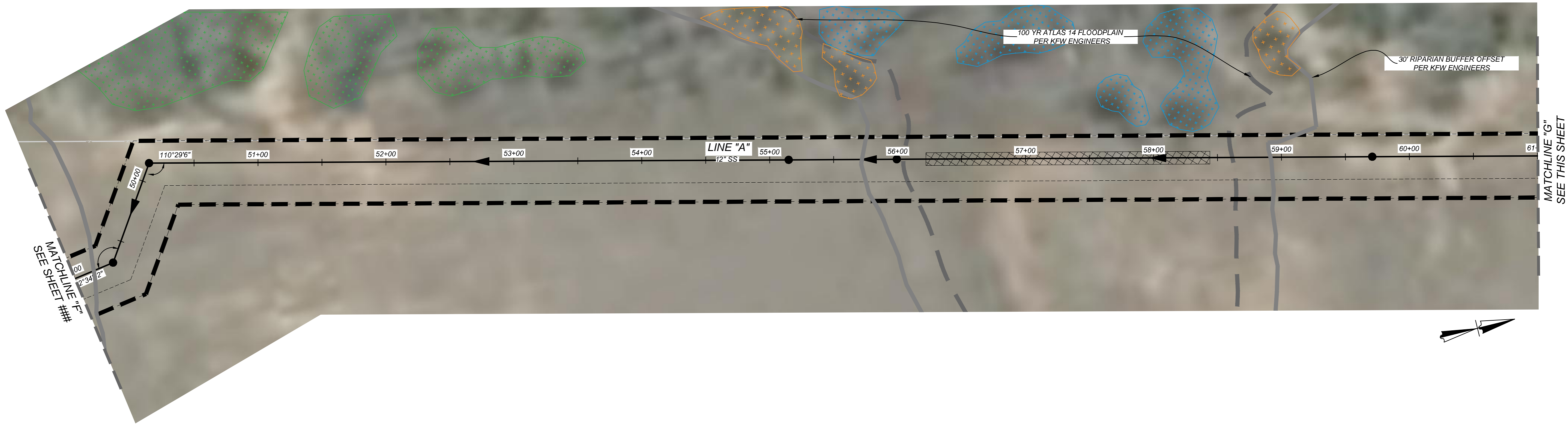
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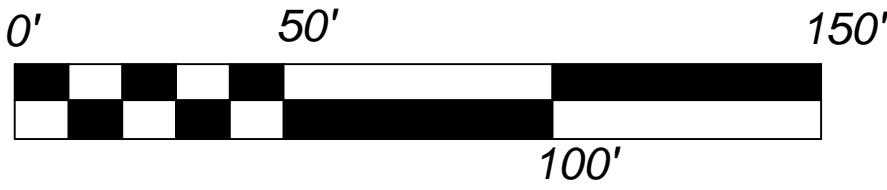
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LOCATION MAP

NOT-TO-SCALE

SCALE : 1"=50'



LEGEND

- 100YR ATLAS 14 FLOODPLAIN PER KFW ENGINEERS
- RIPARIAN BUFFER
- TREE PLAN PROJECT LIMITS
- SIGNIFICANT TREE CANOPY TO BE PRESERVED
- FEMA TREE CANOPY TO BE PRESERVED
- RIPARIAN BUFFER TREE CANOPY TO BE PRESERVED
- SIGNIFICANT TREE CANOPY TO BE REMOVED
- FEMA TREE CANOPY TO BE REMOVED
- RIPARIAN BUFFER TREE CANOPY TO BE REMOVED
- HERITAGE TREE

GATES TRACT OFF-SITE SEWER  
SAN ANTONIO, TEXAS

TREE PRESERVATION PLAN SHEET 3 OF 3

JOB NO. 205-43-06  
DATE: November 6, 2023  
DRAWN: DB CHECKED: DB  
SHEET NUMBER:

5.3



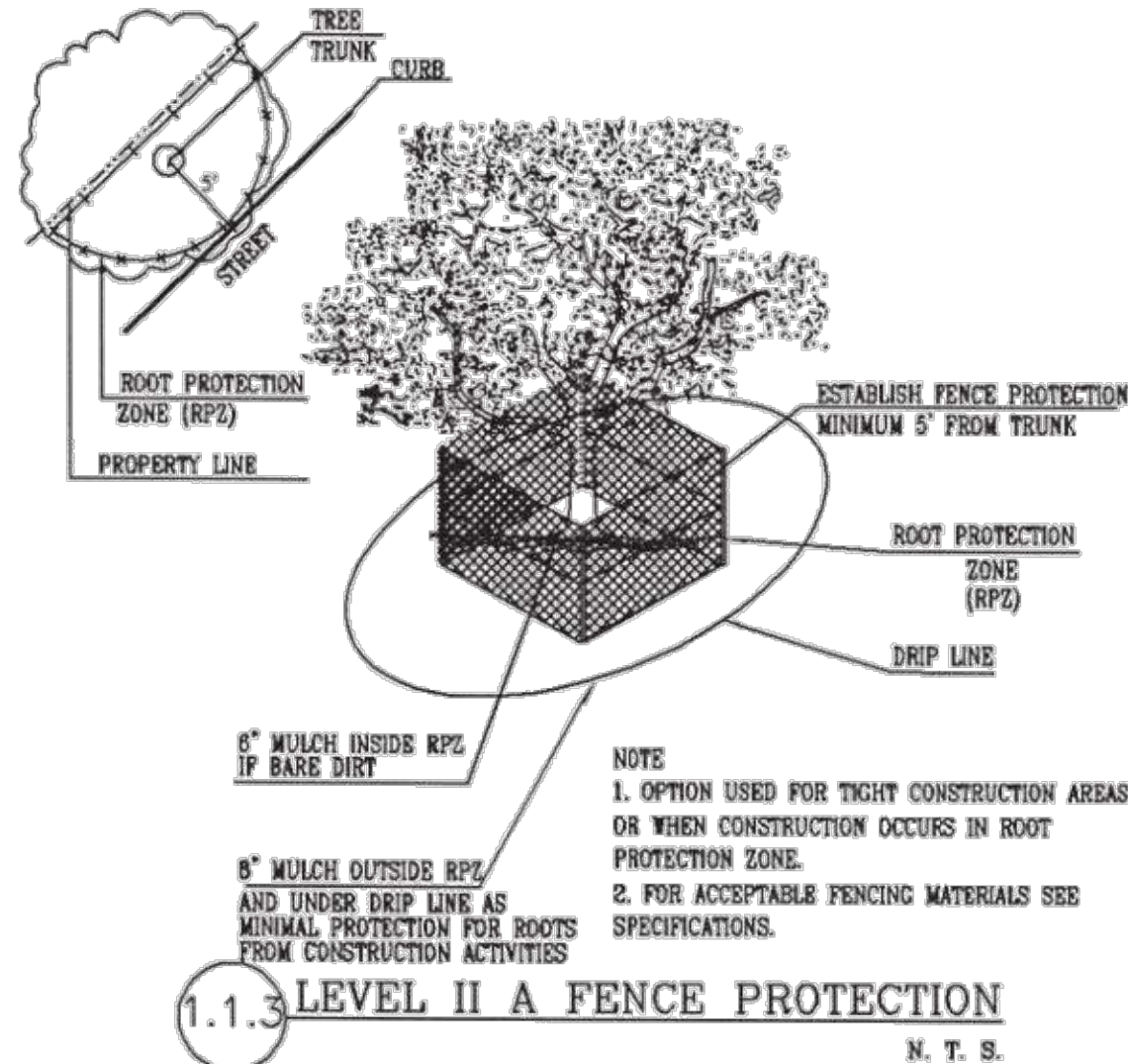
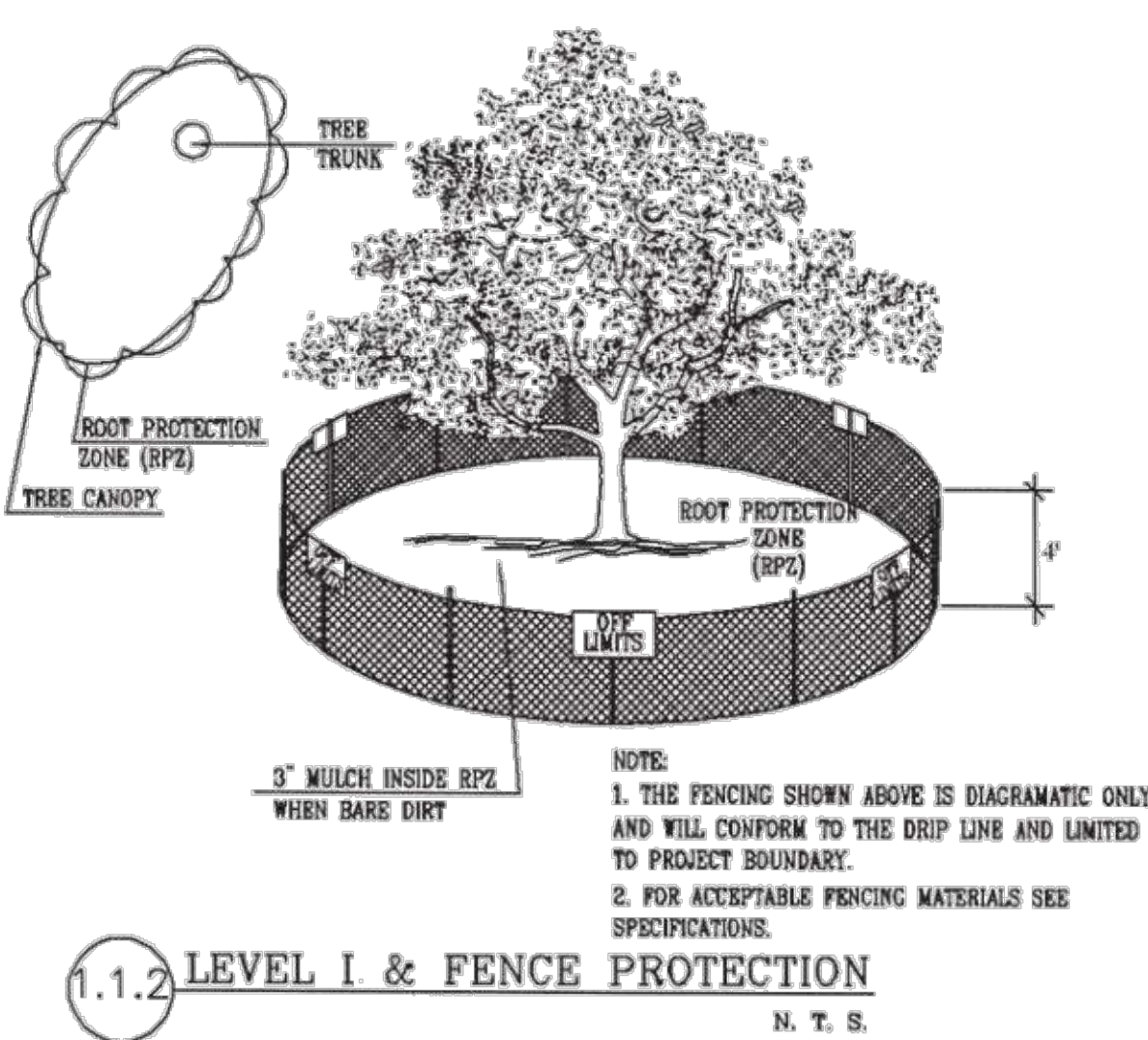
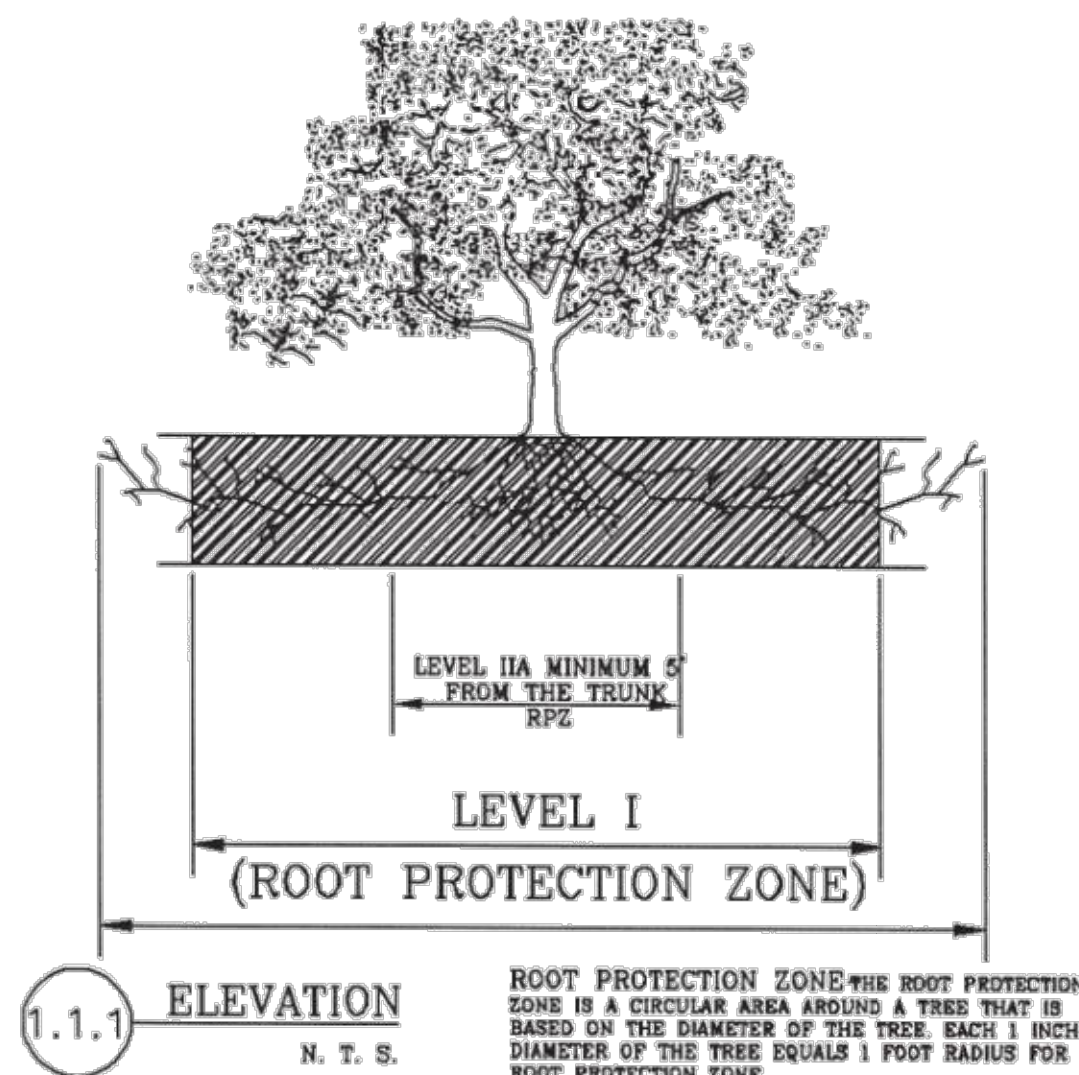
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ISSUE DATE

REVISIONS

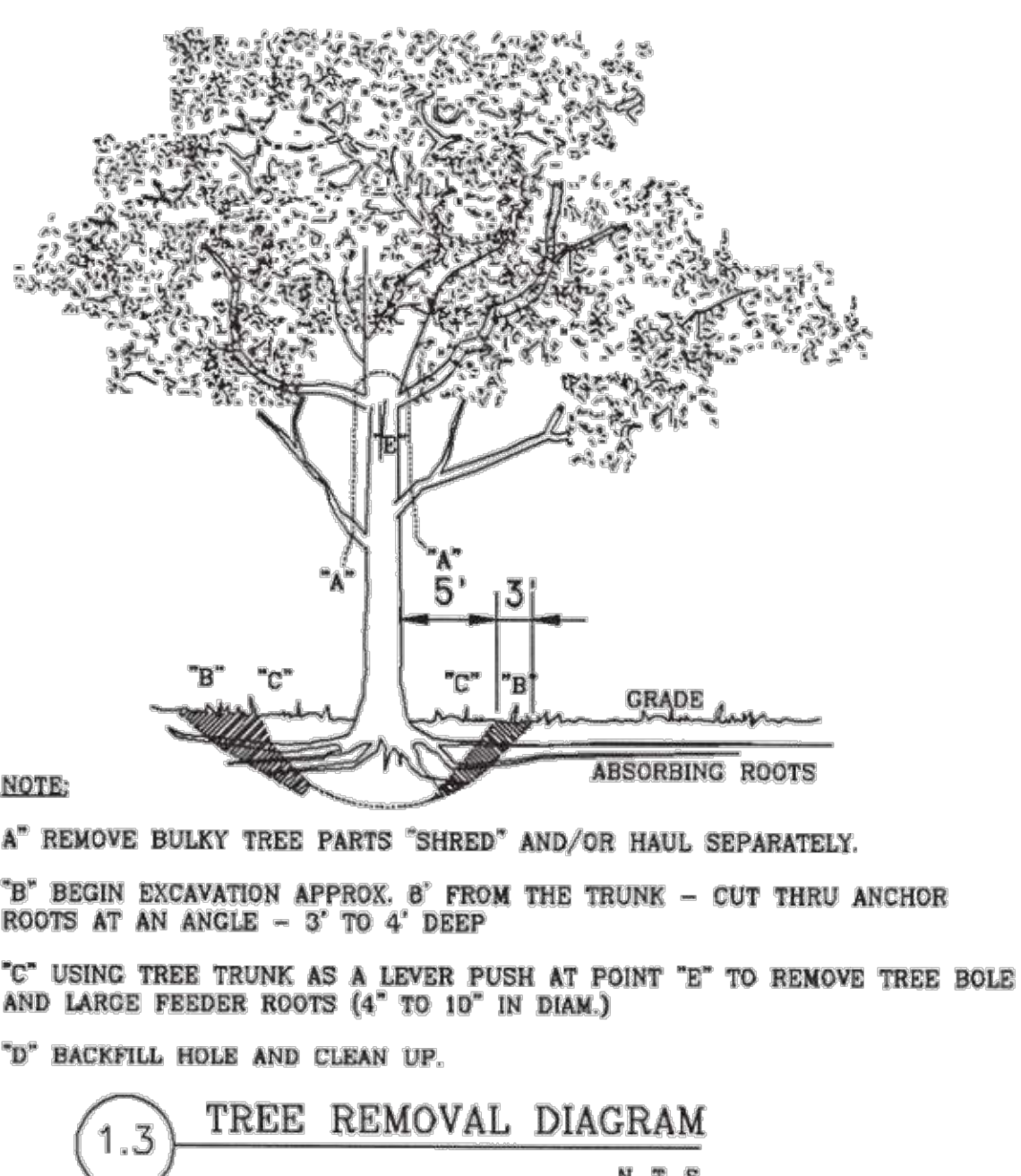
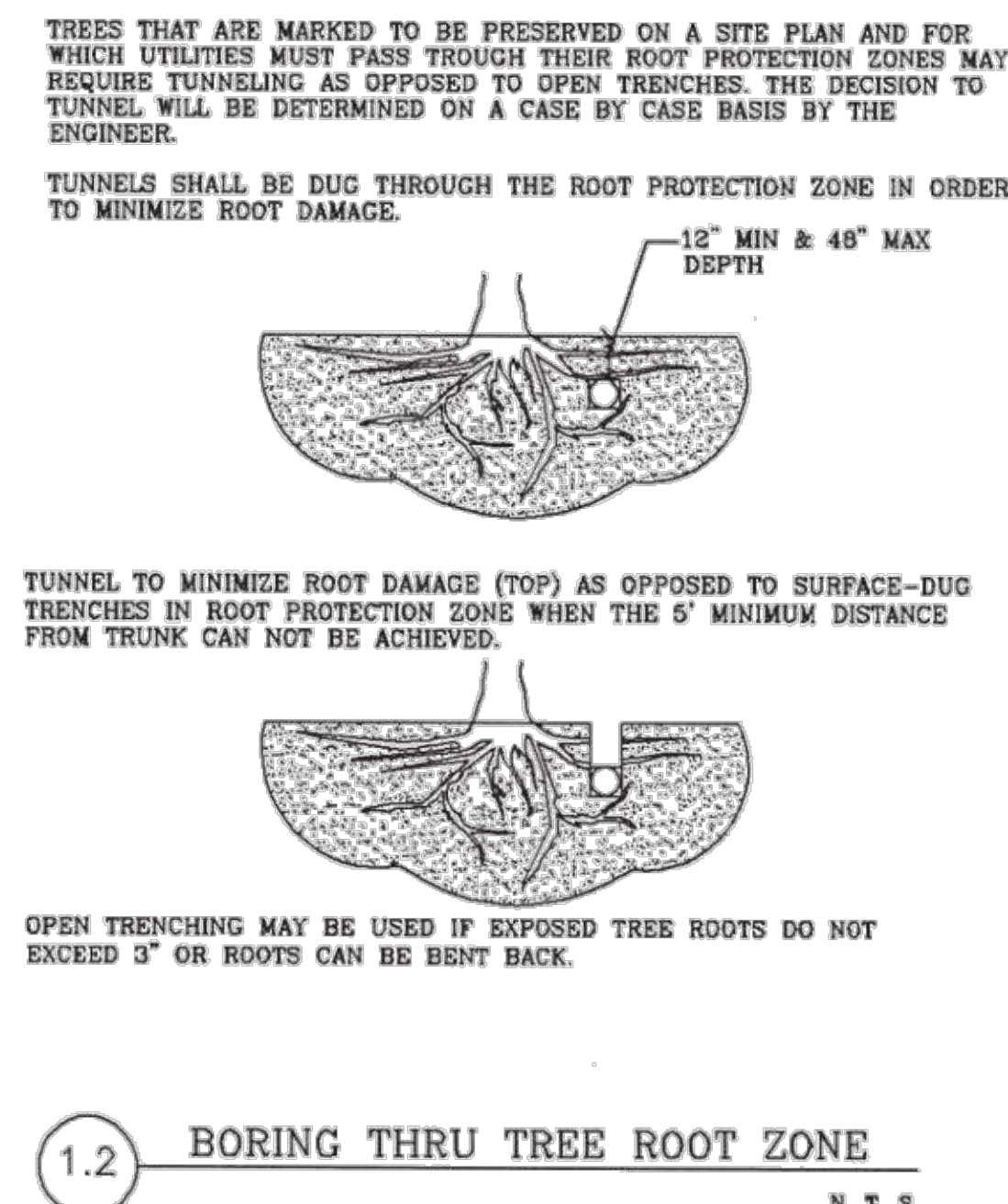
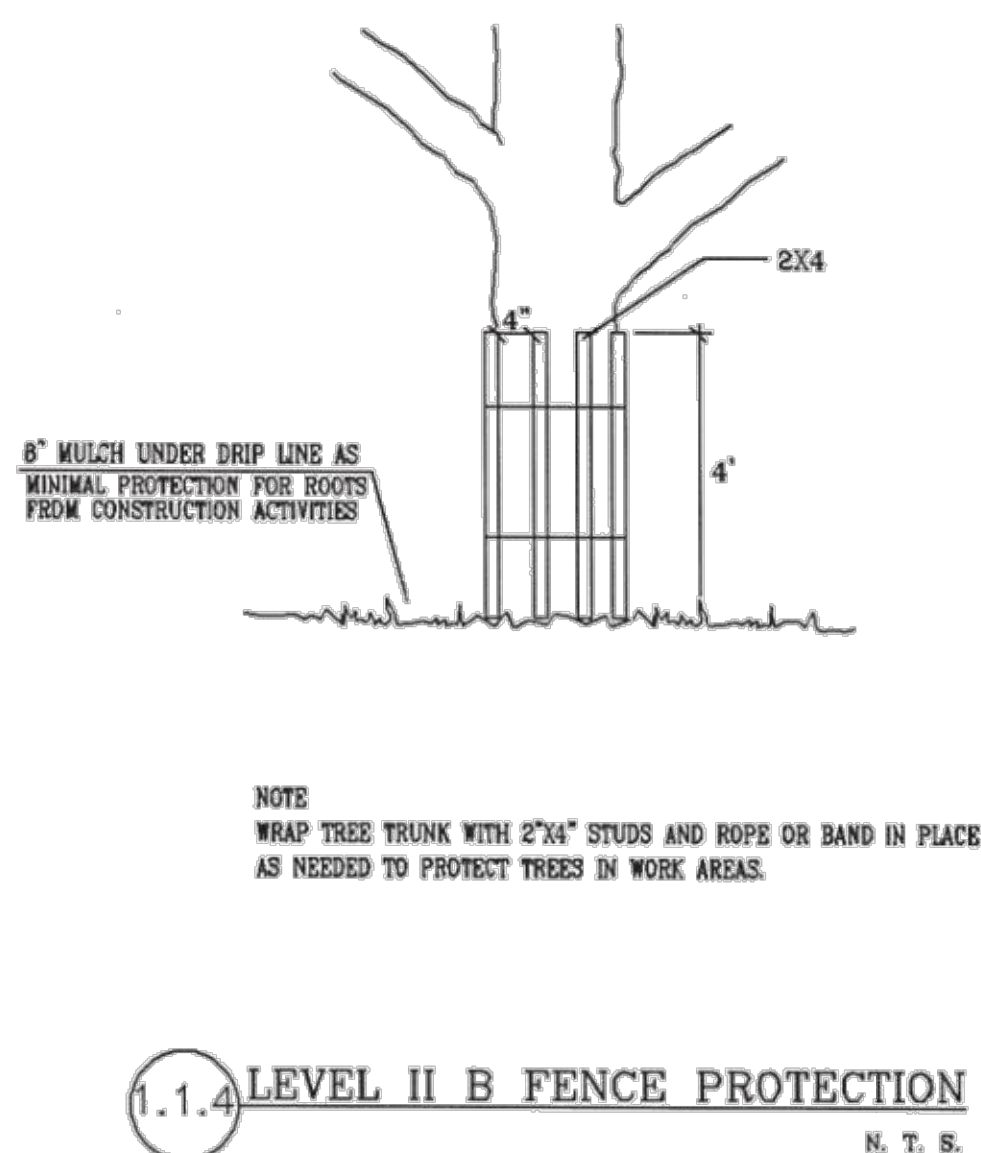
**Kew**  
ENGINEERS + SURVEYING  
P.O. Box 100000  
San Antonio, TX 78231  
Phone: (210) 878-4444 • Fax: (210) 878-4441  
TBE Firm #: 9513 • TBE S Firm #: 10122300



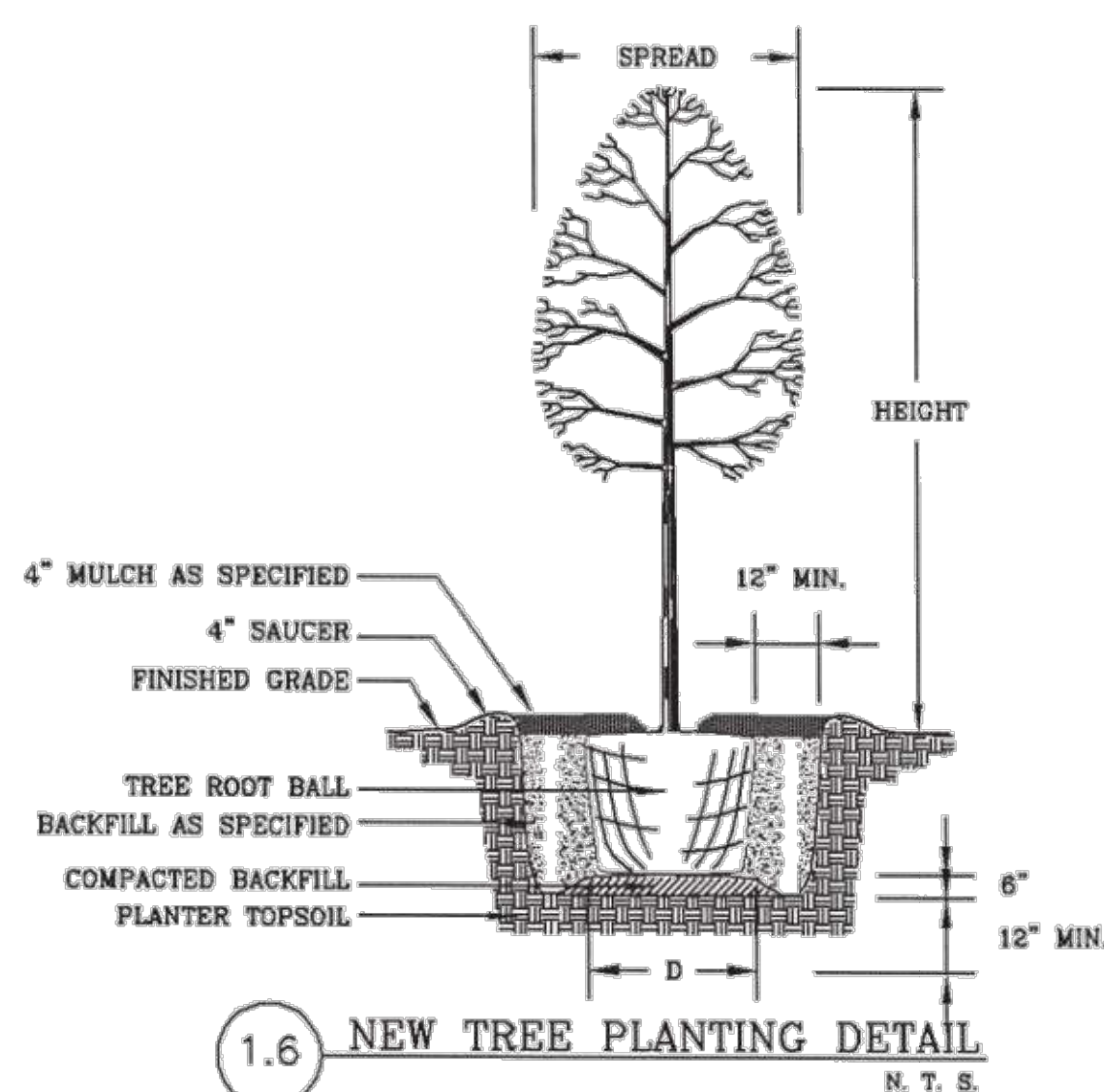
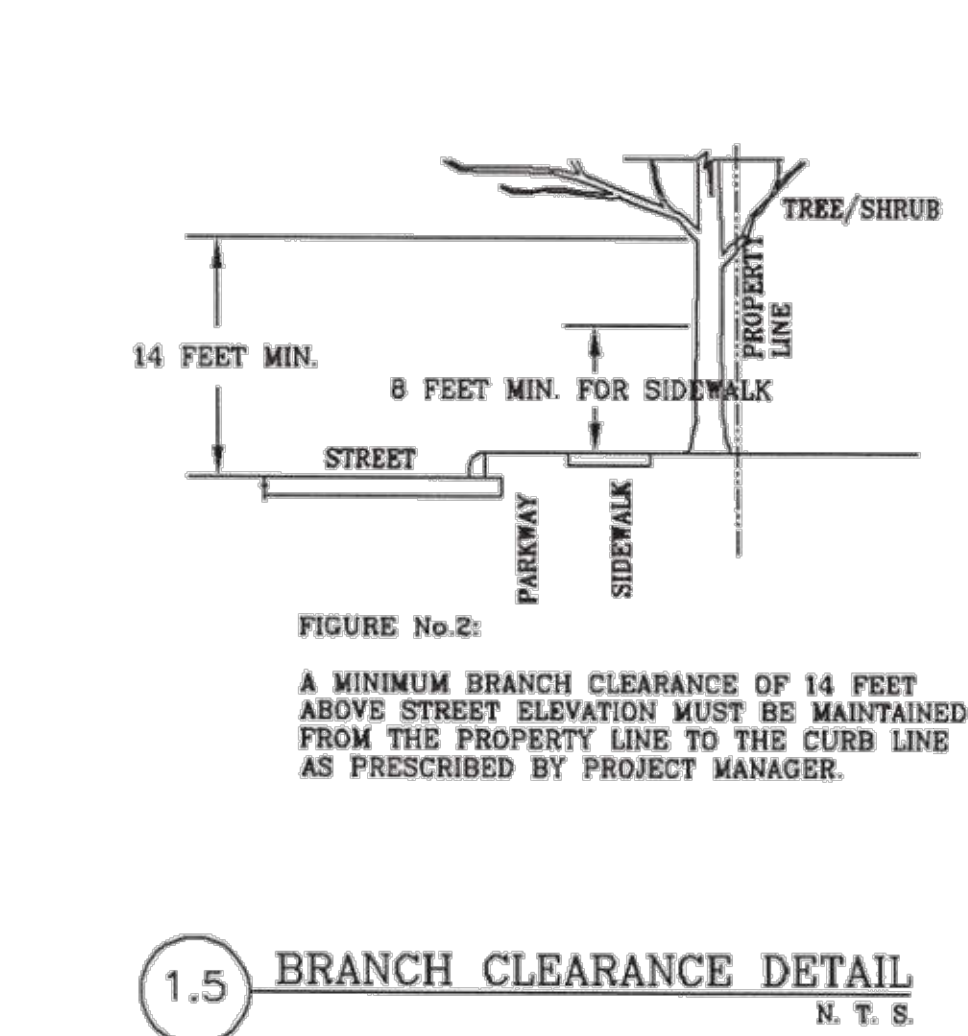
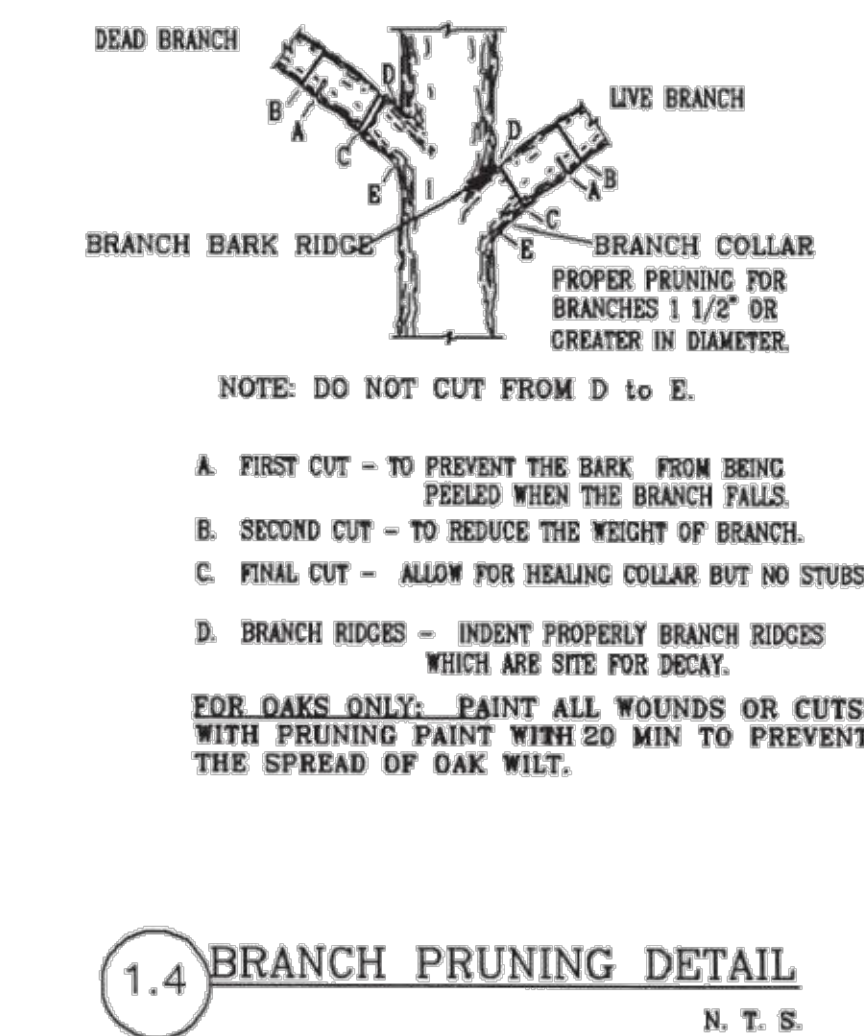


#### GENERAL NOTES

- ALL THE TREES WITH A DIAMETER GREATER THAN 3 INCHES AFFECTED BY CONSTRUCTION SHALL HAVE THE LIMBS AND ROOTS TRIMMED AND PRUNED ACCORDING TO ITEM No. 802. TREE PRUNING, SOIL AMENDING AND FERTILIZATION, UNLESS SPECIFIED TREES SHALL RECEIVE LEVEL 2 PROTECTION AS PER ITEM No. 802. TREES TO RECEIVE LEVEL 1 PROTECTION AS PER ITEM No. 802 ARE SHOWN ON TREE PROTECTION TABLE ON THIS SHEET.
- ALL TREES SHALL REMAIN UNLESS NOTED ON THE PLANS.
- NO SITE PREPARATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
- TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN THREE INCHES IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR.
- THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER, WITHIN 20 MINUTES TO PREVENT OAK WILT.
- ACCESS TO FENCED AREAS WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER OR CITY INSPECTOR.
- GRADING, IF REQUIRED, SHALL BE LIMITED TO A 3 INCH CUT OR FILL WITHIN THE FENCED ROOT ZONE AREAS.
- TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS SHALL BE REMOVED BY HAND AS DIRECTED BY THE PROJECT MANAGER OR CITY INSPECTOR.
- TREES DAMAGED OR LOST DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE ENGINEER'S SATISFACTION.
- EXPOSED ROOTS SHALL BE COVERED AT THE END OF EACH DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
- ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST PRIOR TO ITS REMOVAL.



TREE STAND DELINEATION CALCULATIONS - SEWER LINE		
TOTAL PROJECT AREA	8.12	ACRES
TOTAL EXISTING TREE CANOPY AREA	2.80	ACRES
SIGNIFICANT TREE CANOPY (25% MIN PRESERVATION)		
TOTAL CANOPY	65,759	SQ FT
PRESERVED	47,278	SQ FT
REMOVED	18,481	SQ FT
PERCENT PRESERVED	71.90%	
MITIGATION REQUIRED	-46.90%	
RIPARIAN BUFFER TREE CANOPY (80% MIN PRESERVATION)		
TOTAL CANOPY	6,171	SQ FT
PRESERVED	5,516	SQ FT
REMOVED	655	SQ FT
PERCENT PRESERVED	89.39%	
MITIGATION REQUIRED	-9.39%	
FEMA TREE CANOPY (80% MIN PRESERVATION)		
TOTAL CANOPY	50,083	SQ FT
PRESERVED	41,108	SQ FT
REMOVED	8,975	SQ FT
PERCENT PRESERVED	82.08%	
MITIGATION REQUIRED	-2.08%	
MITIGATION	SQ FT	# TREES
SIGNIFICANT TREE CANOPY (SF CANOPY / 787.5 x 1.5" TREE)	0.00	0
PAYMENT TO THE TREE MITIGATION FUND		\$0.00
RIPARIAN BUFFER TREE CANOPY (SF CANOPY / 787.5 x 1.5" TREE)	0.00	0.00
PAYMENT TO THE TREE MITIGATION FUND		\$0.00
FEMA TREE CANOPY (SF CANOPY / 787.5 x 1.5" TREE)	0.00	0.00
PAYMENT TO THE TREE MITIGATION FUND		\$0.00



UPLAND HERITAGE INVENTORY TABLE			
TAG #	SPECIES	REMOVED	PRESERVED
27339	LO		45.5
27340	LO		39
SUB. TOTAL INCHES			84.5
TOTAL INCHES BY CATEGORY			84.5
HERITAGE PRESERVATION PERCENTAGE			100%
REQUIRED PRESERVATION PERCENTAGE			100%
HERITAGE MITIGATION (INCHES)			N/A
HERITAGE MITIGATION (INCHES) @ 3:1			N/A

FEMA HERITAGE INVENTORY TABLE			
TAG #	SPECIES	REMOVED	PRESERVED
5777	LO		29.5
SUB. TOTAL INCHES		N/A	29.5
TOTAL INCHES BY CATEGORY			29.5
HERITAGE PRESERVATION PERCENTAGE			100%
REQUIRED PRESERVATION PERCENTAGE			100%
HERITAGE MITIGATION (INCHES)			N/A
HERITAGE MITIGATION (INCHES) @ 3:1			N/A