

GATES SUBDIVISION UNIT 2
BEXAR COUNTY, TX
SANITARY SEWER IMPROVEMENTS

GENERAL SEWER NOTES (REVISED JULY 2017)

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 Waste water System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.

B. Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".

C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".

D. Current City of San Antonio "Standard Specifications for Public Works Construction".

E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).

2. The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.

3. The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business\_center/specs. Unless otherwise noted within the design plans.

4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.

5. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.

6. The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:

SAWS Utility Locates: http://www.saws.org/Service/Locates

COSA Drainage (210) 207-0724 or (210) 207-6026

COSA Traffic Signal Operations (210) 206-8480

COSA Traffic Signal Damages (210) 207-3651

Texas State Wide One Call Locator 1-800-645-6005 or 811

7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.

8. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.

9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.

10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.

11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to constworkreq@saws.org. Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org. Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.

12. Compaction note (Item 804). The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.

13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

Sewer Notes:

1. The Contractor is responsible for ensuring that no Sanitary Sewer Overflow (SSO) occurs as a result of their work. All contractor personnel responsible for SSO prevention and control shall be trained on proper response. Should an SSO occur, the contractor shall:

A. Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at (210) 233-2014. Provide the address of the spill and an estimated volume or flow.

B. Attempt to eliminate the source of the SSO.

C. Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.

D. Clean up spill site (return contained sewage to the collection system if possible) and properly dispose of contaminated soil/materials.

E. Clean the affected sewer mains and remove any debris.

F. Meet all post-SSO requirements as per the EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours.

Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all cost 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 TCEQ and SAWS.

2. If bypass pumping is required, the Contractor shall perform such work in accordance with SAWS Standard Specification for Water and Sanitary Sewer Construction, Item No. 864, "Bypass Pumping".

3. Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-2973 at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins: this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor sequence the work accordingly.

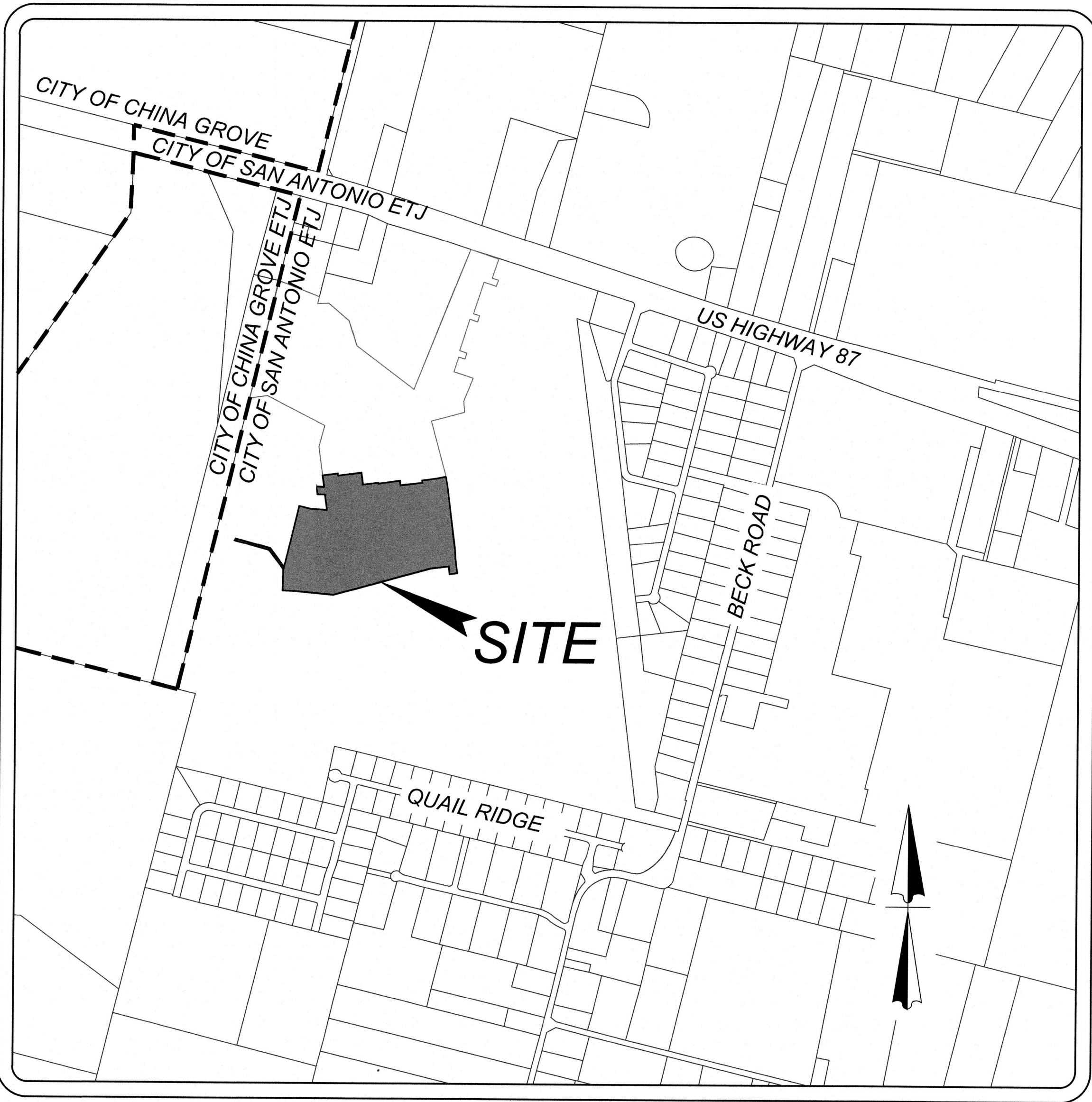
4. Sewer pipe where water line crosses shall be 160 psi and meet the requirements of ASTM D2241, TAC 217.53 and TCEQ 290.44(Ee)(4)(B). Contractor shall center a 20' joint of 160 psi pressure rated PVC at the proposed water crossing.

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. (NGP).

6. Spills, Overflows, or Discharges of Wastewater: All Spills, overflows, or discharges of wastewater, recycled water, petroleum products, or chemicals must be reported immediately to the SAWS Inspector assigned to the Counter Permit or General Construction Permit (GCP). This requirement applies to every spill, overflow, or discharge regardless of size.

7. Manhole and all pipe testing (including the TV inspection) must be performed and passed prior to Final Field Acceptance by SAWS Construction Inspection Division, as per SAWS Specifications For Water and Sanitary Sewer Construction.

8. All PVC pipe over 14 feet of cover shall be extra strength with minimum pipe stiffness of 115 psi.



SHEET LIST TABLE

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LINE "C", "D", & "E" PLAN & PROFILE	6.5
LINE "F" & "G" PLAN & PROFILE	6.6

LOCATION MAP
NOT-TO-SCALE

OWNER INFORMATION
MEH HOLDING COMPANY LTD
5210 THOUSAND OAKS, SUITE 1318
SAN ANTONIO, TX 78233

DEVELOPER'S NAME: MEH HOLDING COMPANY LTD
DEVELOPER'S ADDRESS: 1202 W. BITTERS RD. BUILDING 1, SUITE 1200
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78258
PHONE#: FAX#: TOTAL ACREAGE: 22.38 AC.
SAWS BLOCK MAP#: 216562, 216560, 214560 TOTAL EDU'S: 123
TOTAL LINEAR FOOTAGE OF PIPE: 3,827.5 L.F. ~ 8" SDR 26 PLAT NO.: 22-11800017
NUMBER OF LOTS: 123 SAWS JOB#: 22-1547



KFW
ENGINEERS + SURVEYING
has joined Colliers Engineering & Design
3421 Paesanos Pkwy., Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

SHEET REVISION LOG

DATE	SHEET NO.	REVISION NO.	DESCRIPTION
10/17/2023	6.1, 6.3	1	REVISED SEWER MAIN & ADDED MANHOLE



**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 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 CONTRACTORS 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:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAVING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

**DRY UTILITY CONDUIT NOTE:**  
CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYOR'S SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYOR'S PLAN.

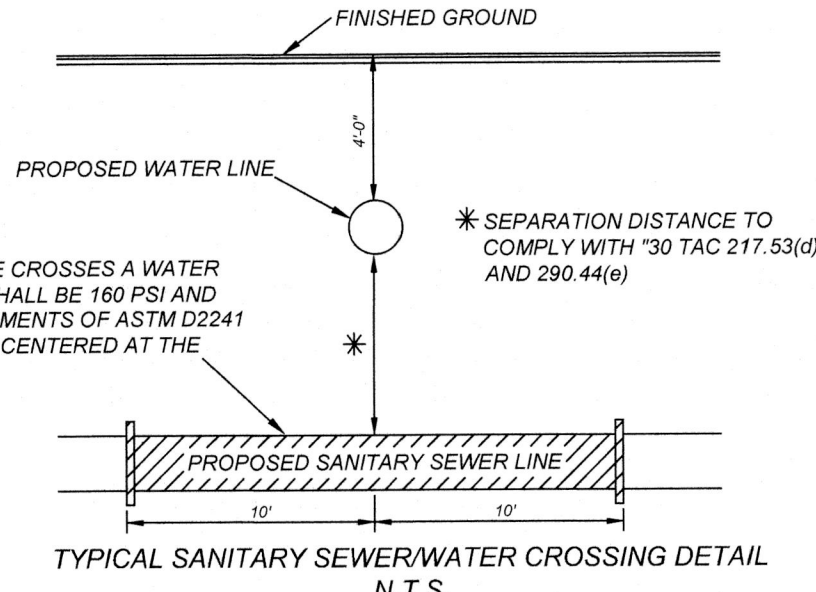
**REFERENCE S.A.W.S. DETAILS**

DD-804-01 SANITARY SEWER PIPE LAIN IN TRENCH  
DD-804-02 TRENCH COMPACTION DETAIL  
DD-848-01 GO, NO GO DEFLECTION TESTING MANDREL  
DD-852-01 STANDARD PRECAST MANHOLE  
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**OPEN SPACE NOTE:**  
LOT 80 IS DESIGNATED AS A PRIVATE DRAINAGE AND SANITARY SEWER EASEMENT. LOT 809 BLOCK 6 IS DESIGNATED AS OPEN SPACE, PRIVATE DRAINAGE AND SANITARY SEWER EASEMENT. LOT 802 BLOCK 6 IS DESIGNATED AS OPEN SPACE AND AS A COMMON AREA AND A DRAINAGE, SEWER, WATER, ELECTRIC, GAS, TELEPHONE AND CABLE TV EASEMENT.

**MANHOLE NOTE:**  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

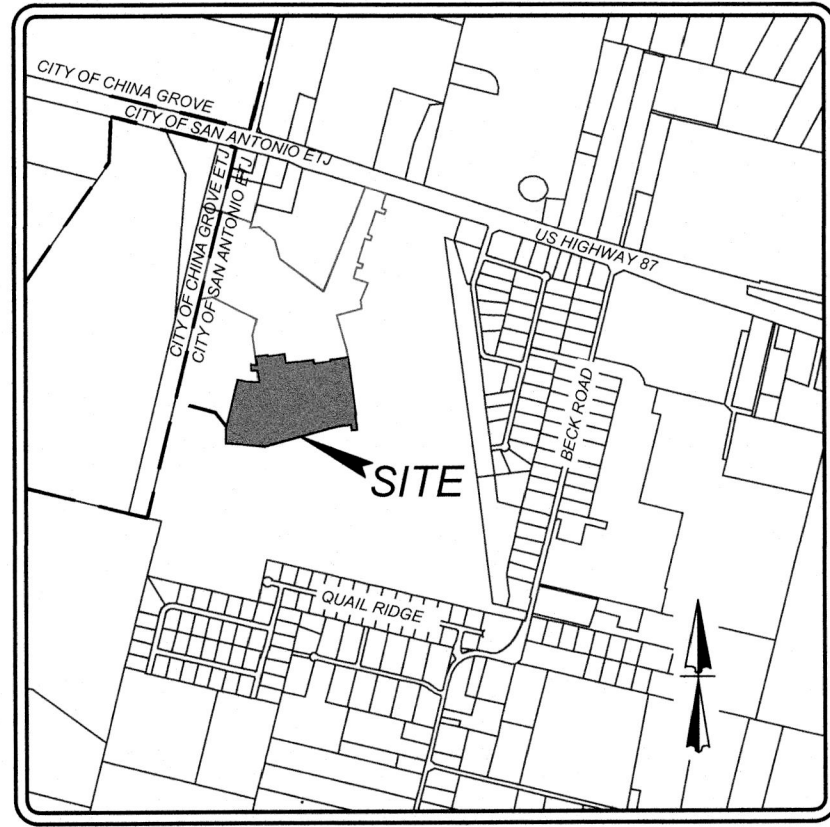
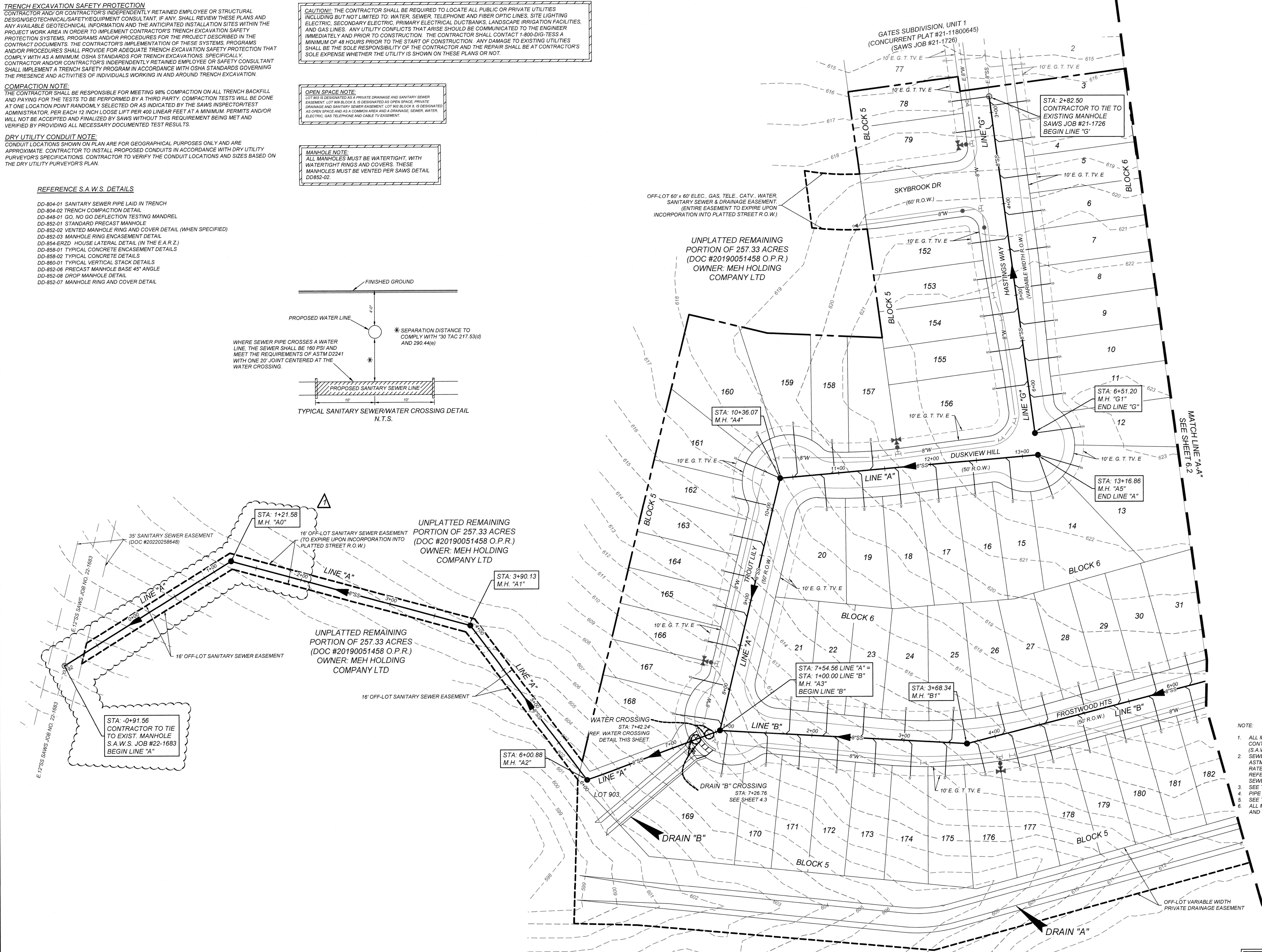


OFF-LOT 60' x 80' ELEC. GAS, TELE. CATV, WATER, SANITARY SEWER & DRAINAGE EASEMENT (ENTIRE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED STREET R.O.W.)

UNPLATTED REMAINING PORTION OF 257.33 ACRES (DOC #20190051458 O.P.R.) OWNER: MEH HOLDING COMPANY LTD

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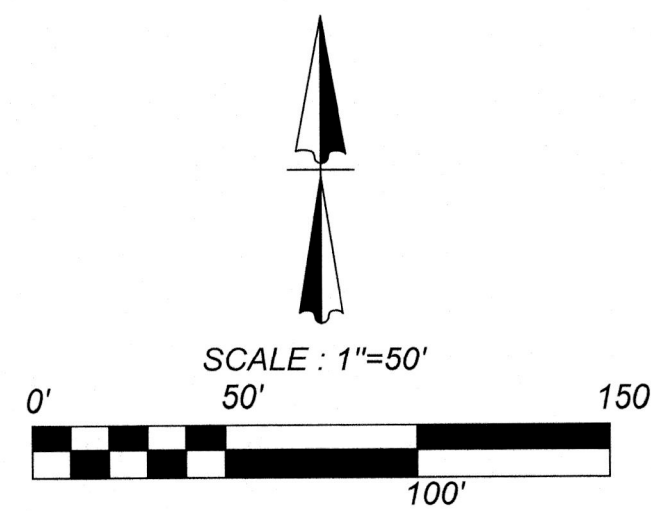
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**LOCATION MAP NOT-TO-SCALE**

**LEGEND**

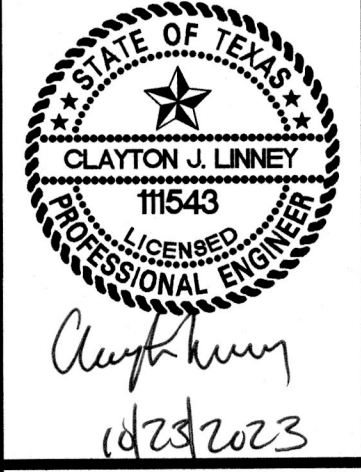
- PROPOSED WATER MAIN = W
- PROPOSED WATER SERVICE & METER BOX = W/M
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- EXISTING WATER MAIN = E-W
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- EXISTING OVERHEAD ELECTRIC W/POWER POLE = OHE
- EXISTING GUY WIRE/OVERHEAD ELECTRIC = G



- NOTE:**
- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
  - SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. 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).
  - SEE THIS SHEET FOR BENCHMARK INFORMATION.
  - PIPE TYPE DESIGNATIONS ARE SDR 26.
  - SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
  - ALL MANHOLES SHALL HAVE CONCRETE RING ENCASUREMENT AND A WATER TIGHT RING AND COVER.

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NUMBER OF LOTS: 123 SAWS JOB#: 22-1547

**K&W**  
**ENGINEERS + SURVEYING**  
CLAYTON J. LINNEY  
PROFESSIONAL ENGINEER  
11543  
10/17/2023



**GATES SUBDIVISION UNIT 2**  
**BEXAR COUNTY, TX**  
**OVERALL SANITARY SEWER PLAN (SHEET 1 OF 2)**

PLAT NO. 22-11800017  
JOB NO. 206-43-05  
DATE: NOVEMBER 2021  
DRAWN: OM CHECKED: CL  
SHEET NUMBER: 6.1



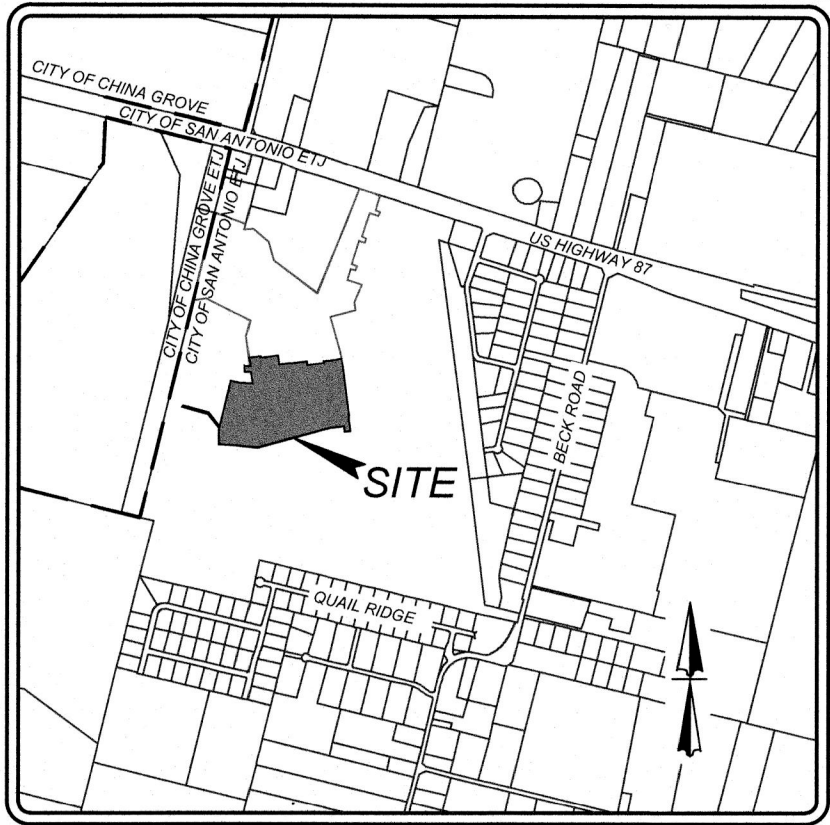
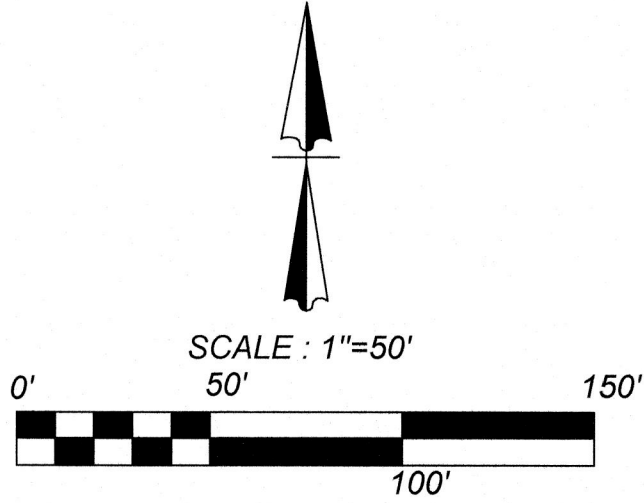
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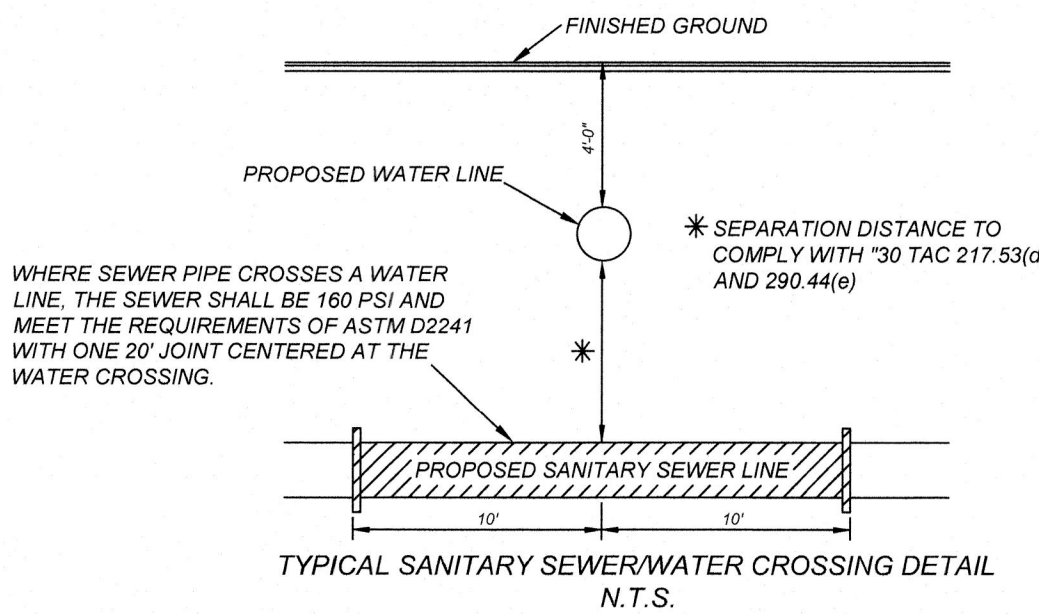
**LOCATION MAP  
NOT-TO-SCALE**

**LEGEND**

PROPOSED WATER MAIN	=	— W —
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PROPOSED WATER VALVE	=	— V —
PROPOSED SANITARY SEWER MAIN	=	— SS —
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EXISTING GUY WIRE/OVERHEAD ELECTRIC	=	— OHE —

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**GATES SUBDIVISION UNIT 2  
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OVERALL SANITARY SEWER PLAN (SHEET 2 OF 2)**

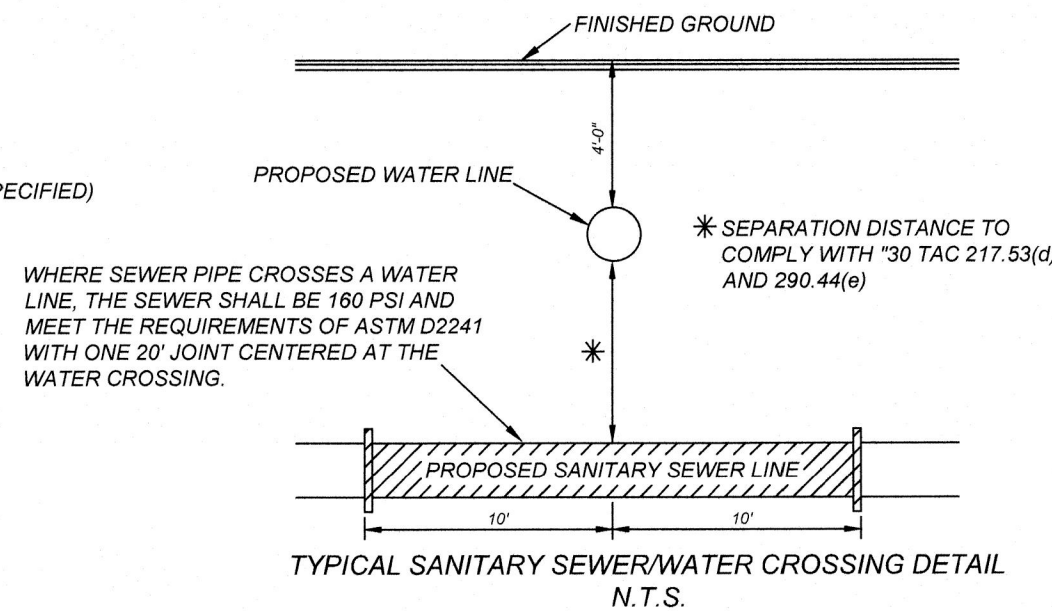
PLAT NO.  
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REFERENCE S.A.W.S. DETAILS	
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DD-852-02 VENTED MANHOLE RING AND COVER DETAIL (WHEN SPECIFIED)	
DD-852-03 MANHOLE RING ENGAGEMENT DETAIL	
DD-852-04 HOUSE CONNECTION (IN THE E.A.R.Z.)	
DD-858-01 TYPICAL CONCRETE ENCASEMENT DETAILS	
DD-858-02 TYPICAL CONCRETE DETAILS	WHERE
DD-860-01 TYPICAL VERTICAL STACK DETAILS	LINE,
DD-852-06 PRECAST MANHOLE BASE 45° ANGLE	MEET
DD-852-08 DROP MANHOLE	WITH
DD-852-07 MANHOLE RING AND COVER DETAIL	WATER



**CAUTION:** THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO WATER, SEWER, TELEPHONE AND GAS OPTIC LINES, SITE LIGHTING, ELECTRIC SECONDARY DISTRIBUTION, PRIVATE FIRE HYDRANTS, 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-TESTS 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 WHENEVER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

**OPEN SPACE:**  
LOT 903 IS DESIGNATED AS A PRIVATE DRAINAGE AND SANITARY SEWER EASEMENT. LOT 909 BLOCK 8, IS DESIGNATED AS OPEN SPACE, PRIVATE DRAINAGE AND SANITARY SEWER EASEMENT. LOT 902 BLOCK 8, IS DESIGNATED AS OPEN SPACE AND AS A COMMON AREA AND A DRAINAGE, SEWER, WATERSUPPLY, GAS, TELEPHONE AND CABLE TV EASEMENT.

**MANHOLE NOTE:**  
ALL MANHOLES MUST BE WATERTIGHT, WITH  
WATERTIGHT RINGS AND COVERS. THESE  
MANHOLES MUST BE VENTED PER SAWS DETAIL  
DD852-02

DEVELOPER'S NAME: MEH HOLDING COMPANY LTD

DEVELOPER'S ADDRESS: 1202 W. BITTERS RD, BUILDING 1, SUITE 1200

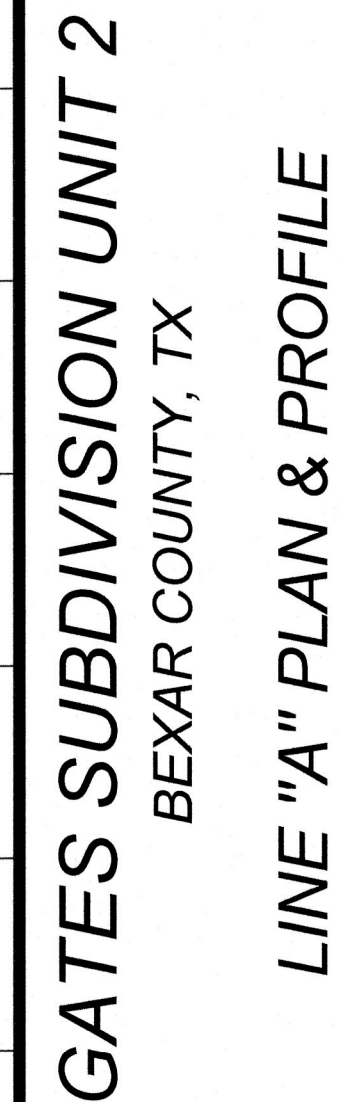
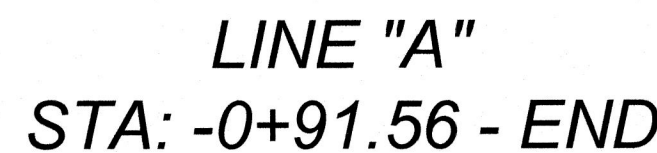
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78258

PHONE#: \_\_\_\_\_ FAX#: \_\_\_\_\_ TOTAL ACREAGE: 22.38 AC.

SAWS BLOCK MAP#: 216562 216560 214560 TOTAL EDU'S: 123

TOTAL LINEAR FOOTAGE OF PIPE: 3,827.5 L.F. - 8" SDR 26 PLAT NO.: 22-11800017

NUMBER OF LOTS: 123 SAWS JOB#: 22-1547



PLAT NO.  
22-11800017

JOB NO. 205-43-05  
DATE: NOVEMBER 2021  
DRAWN: OM CHECKED: CL

SHEET NUMBER  
6.3



# 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 GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

## COMPACTION NOTE:

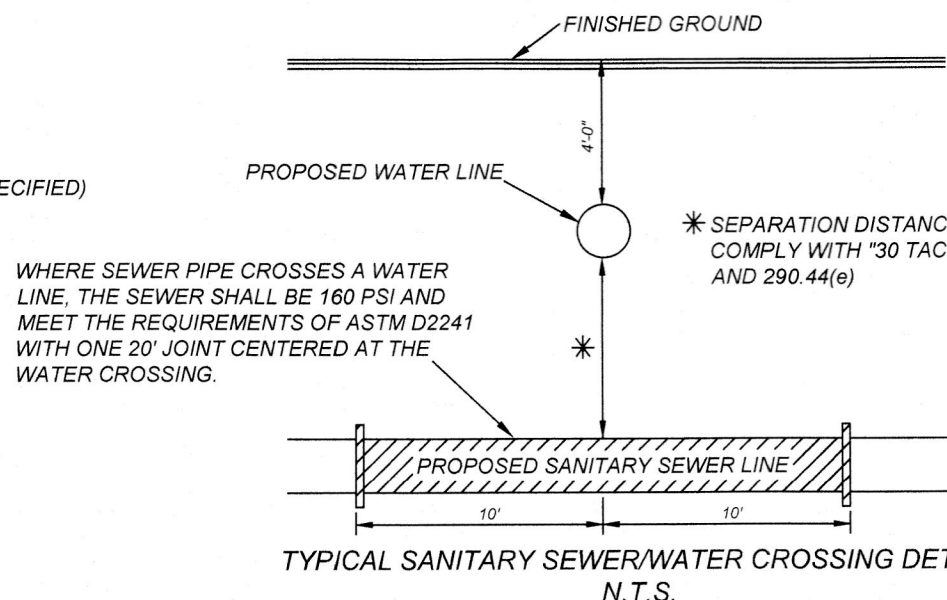
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

## NOTE:

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. 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 ---, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
- SEE THIS SHEET FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 26.
- SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

# REFERENCE S.A.W.S. DETAILS

DD-804-01 SANITARY SEWER PIPE LAID IN TRENCH  
DD-804-02 TRENCH COMPACTION DETAIL  
DD-849-01 GO, NO GO DEFLECTION TESTING MANDREL  
DD-852-01 STANDARD PRECAST MANHOLE  
DD-852-02 VENTED MANHOLE RING AND COVER DETAIL (WHEN SPECIFIED)  
DD-852-03 MANHOLE RING ENCASEMENT DETAIL  
DD-854-ER2D HOUSE LATERAL DETAIL (IN THE E.A.R.Z.)  
DD-858-01 TYPICAL CONCRETE ENCASEMENT DETAILS  
DD-858-02 TYPICAL CONCRETE DETAIL  
DD-860-01 TYPICAL VERTICAL STACK DETAILS  
DD-852-06 PRECAST MANHOLE BASE 45° ANGLE  
DD-852-08 DROP MANHOLE DETAIL  
DD-852-07 MANHOLE RING AND COVER DETAIL

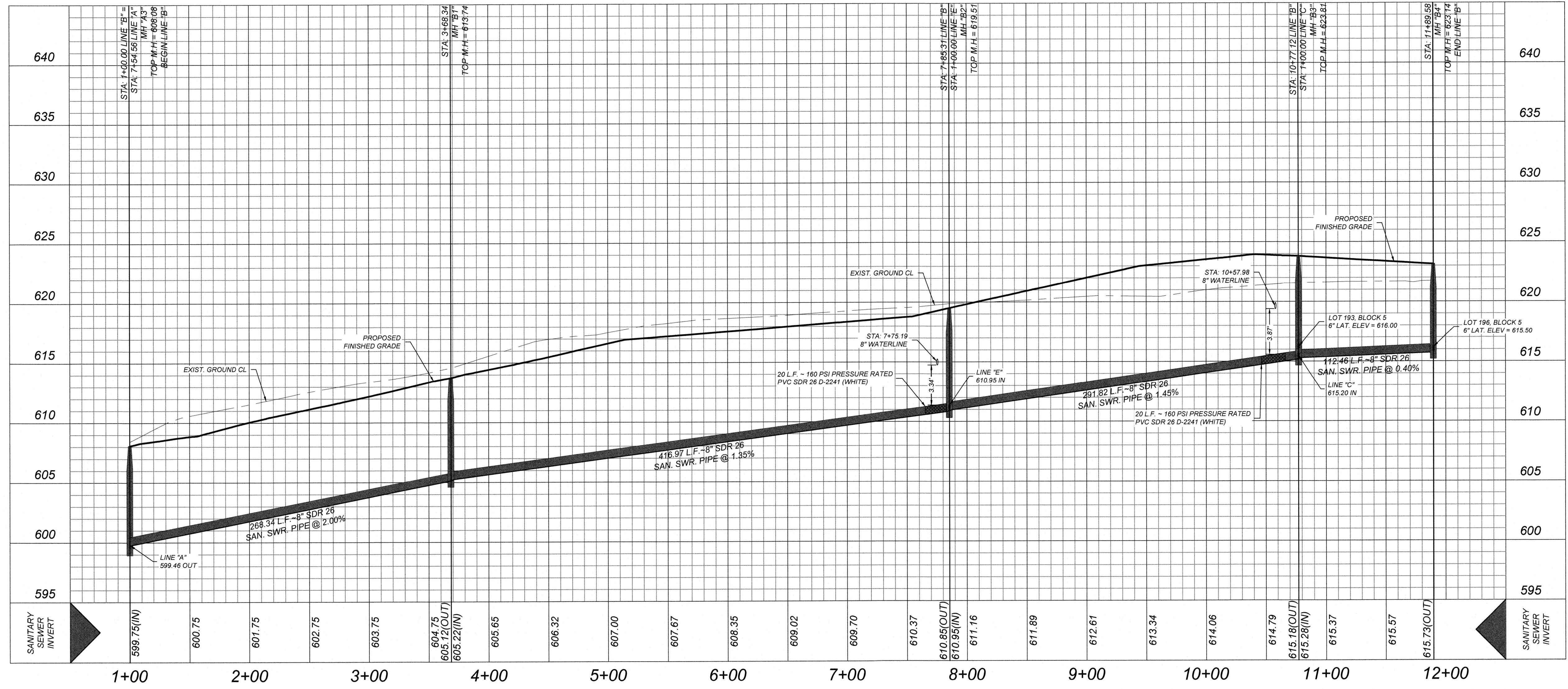
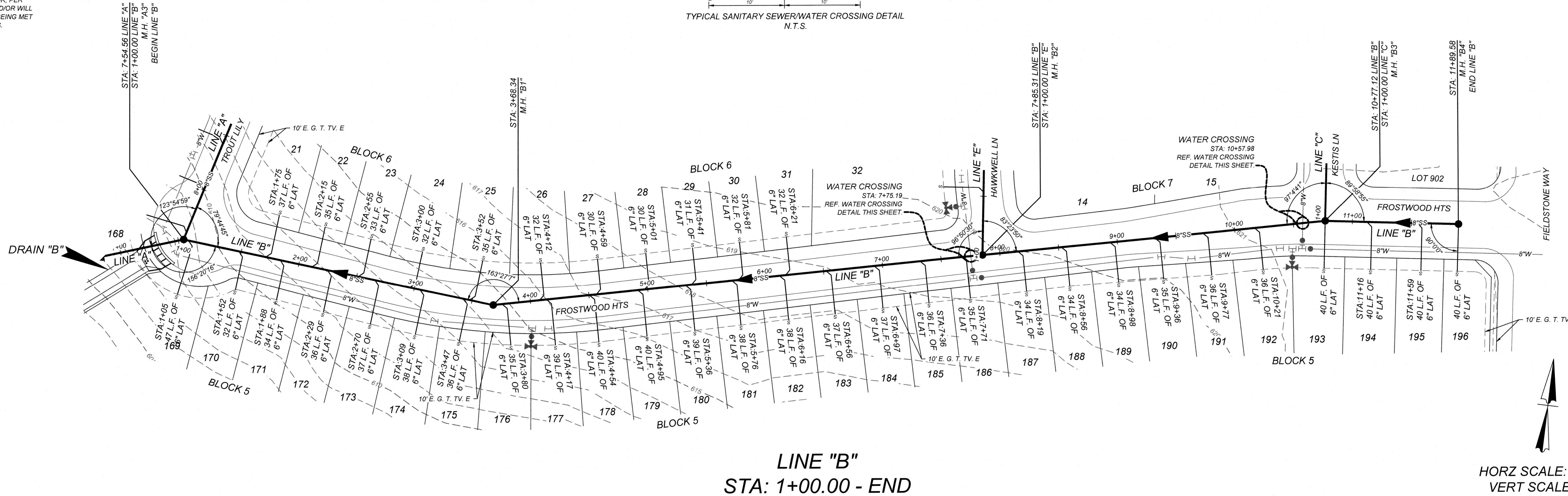


CAUTION!! THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING, ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS 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.

OPEN SPACE  
LOT 903 IS DESIGNATED AS A PRIVATE DRAINAGE AND SANITARY SEWER EASEMENT. LOT 904 BLOCK 6 IS DESIGNATED AS OPEN SPACE, PRIVATE DRAINAGE AND SANITARY SEWER EASEMENT. LOT 905 BLOCK 6 IS DESIGNATED AS OPEN SPACE AND AS A COMMON AREA AND A DRAINAGE, SEWER, WATER, ELECTRIC, GAS TELEPHONE AND CABLE TV EASEMENT.

MANHOLE NOTE:  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

DEVELOPER'S NAME: MEH HOLDING COMPANY LTD  
DEVELOPER'S ADDRESS: 1202 W. BITTERS RD, BUILDING 1, SUITE 1200  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78258  
PHONE#: FAX#: TOTAL ACREAGE: 22.38 AC.  
SAWS BLOCK MAP#: 216562, 216560, 214560 TOTAL EDU'S: 123  
TOTAL LINEAR FOOTAGE OF PIPE: 3,827.5 L.F. ~ 8" SDR 26 PLAT NO.: 22-11800017  
NUMBER OF LOTS: 123 SAWS JOB#: 22-1547



GATES SUBDIVISION UNIT 2  
BEXAR COUNTY, TX  
LINE "B" PLAN & PROFILE

PLAT NO.  
22-11800017  
JOB NO: 205-43-05  
DATE: NOVEMBER 2021  
DRAWN: OM CHECKED: CL  
SHEET NUMBER:

6.4



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

## COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

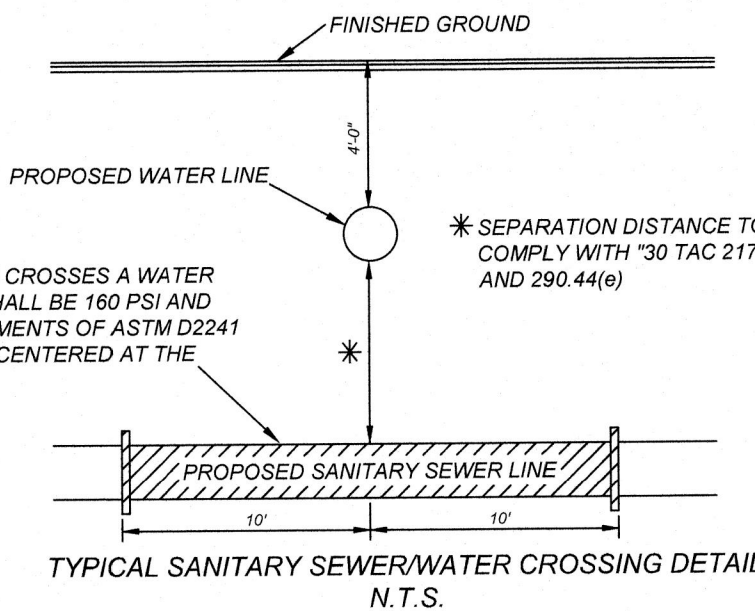
## NOTE:

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. 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).
3. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
4. PIPE TYPE DESIGNATIONS ARE SDR 26.
5. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
6. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

## REFERENCE S.A.W.S. DETAILS

DD-804-01 SANITARY SEWER PIPE LAID IN TRENCH  
DD-804-02 TRENCH COMPACTION DETAIL  
DD-849-01 GO, NO GO DEFLECTION TESTING DETAIL  
DD-852-01 STANDARD PRECAST MANHOLE  
DD-852-02 VENTED MANHOLE RING AND COVER DETAIL (WHEN SPECIFIED)  
DD-852-03 MANHOLE RING ENCASEMENT DETAIL  
DD-854-ER2D HOUSE LATERAL DETAIL (IN THE E.A.R.Z.)  
DD-858-01 TYPICAL CONCRETE ENCASEMENT DETAILS  
DD-858-02 TYPICAL CONCRETE DETAILS  
DD-860-01 TYPICAL VERTICAL STACK DETAILS  
DD-853-06 PRECAST MANHOLE BASE 45° ANGLE  
DD-852-08 DROP MANHOLE DETAIL  
DD-852-07 MANHOLE RING AND COVER DETAIL

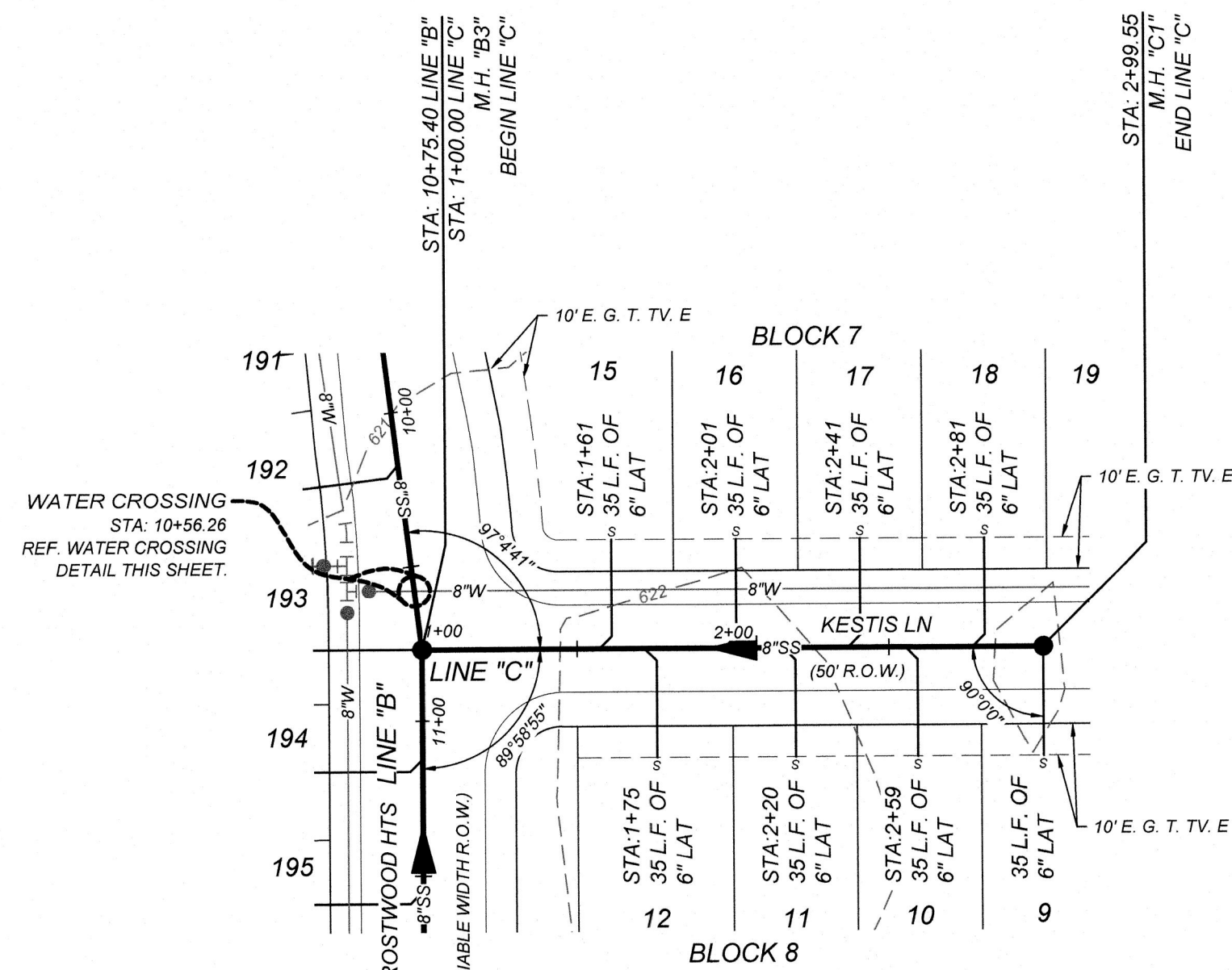
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20" JOINT CENTERED AT THE WATER CROSSING.



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.

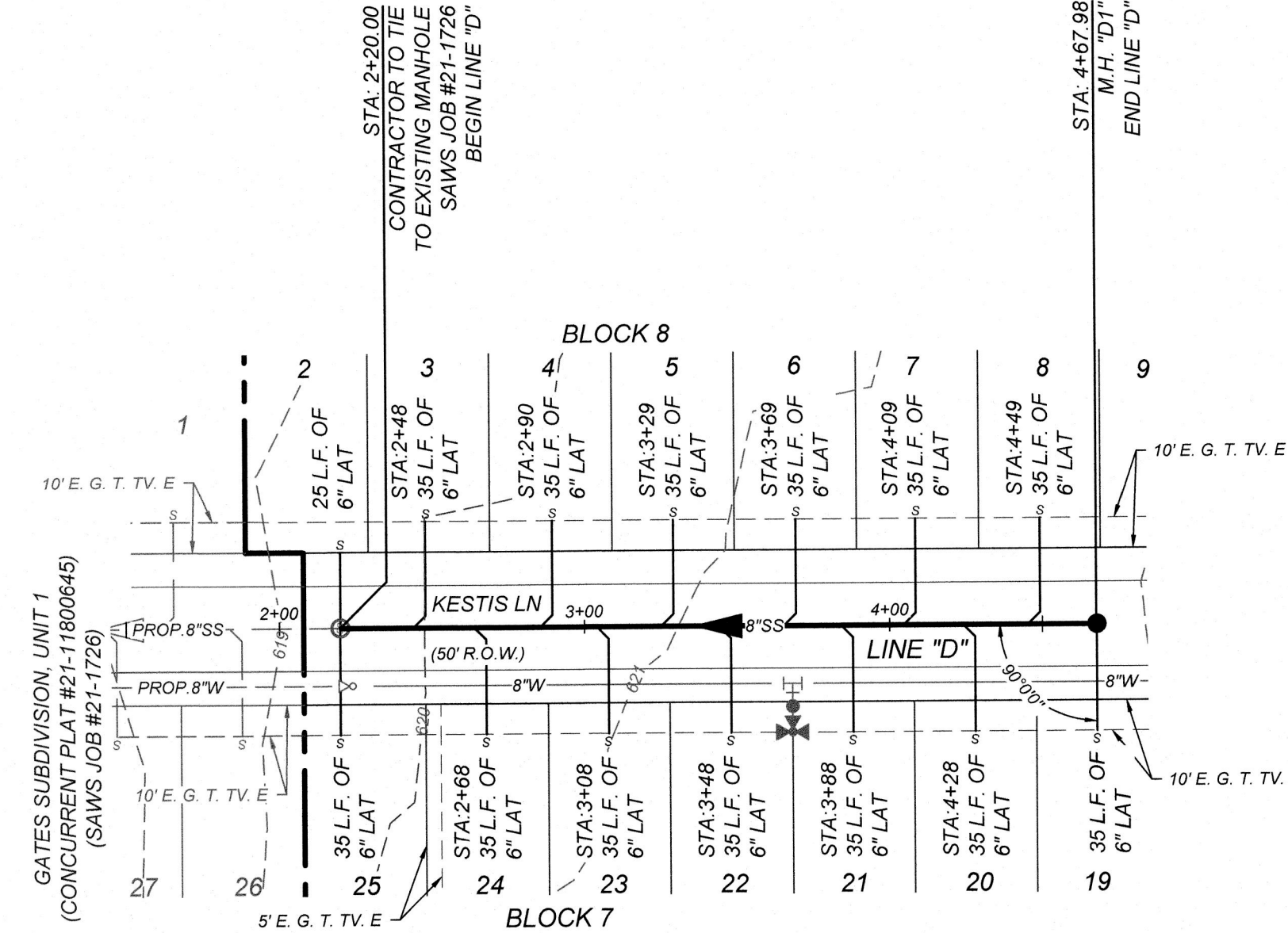
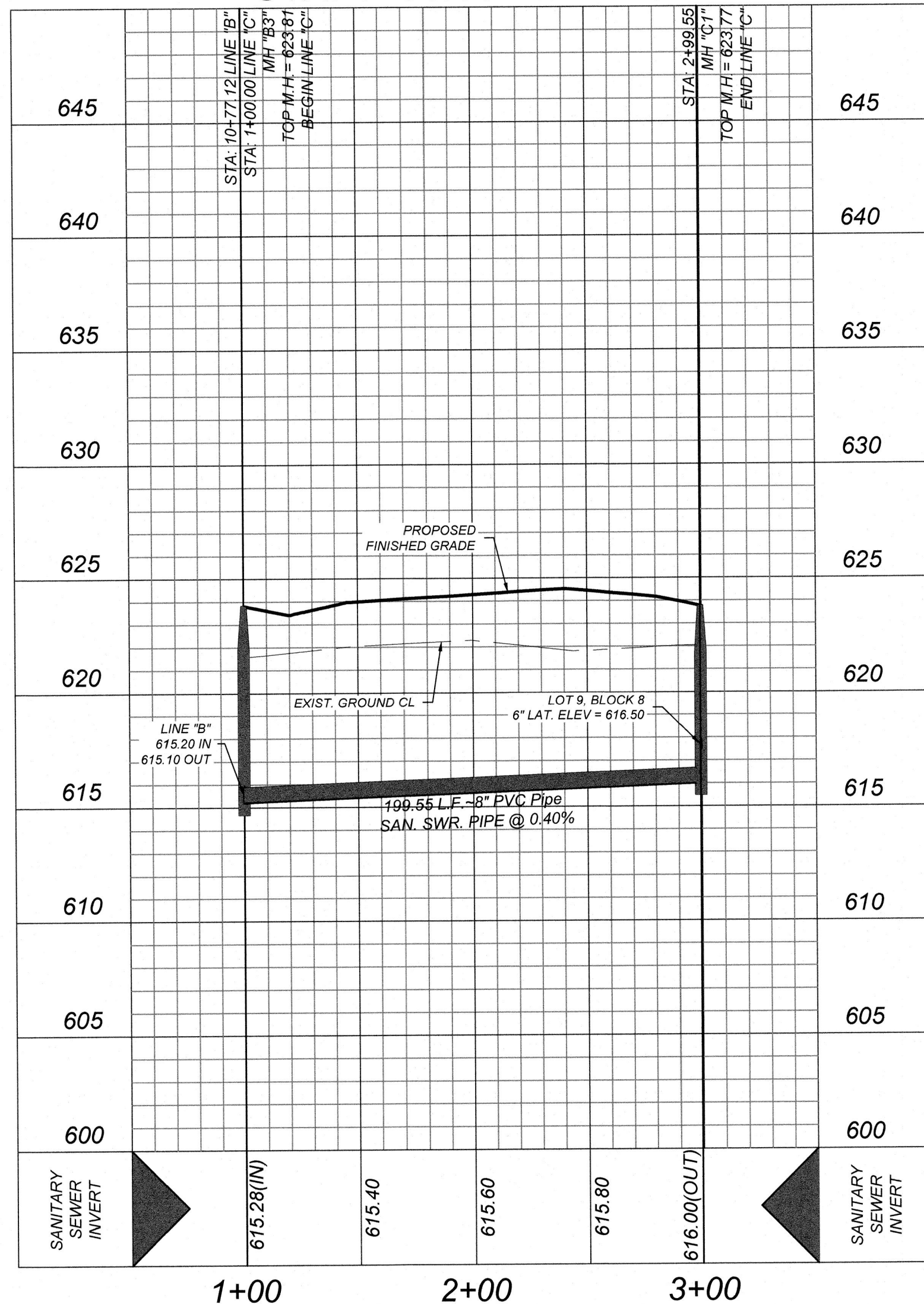
MANHOLE NOTE  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

DEVELOPER'S NAME: MEH HOLDING COMPANY LTD  
DEVELOPER'S ADDRESS: 1202 W. BITTERS RD, BUILDING 1, SUITE 1200  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78228  
PHONE#: FAX#: TOTAL ACREAGE: 22.38 AC.  
SAWS BLOCK MAP#: 216562, 216560, 214560 TOTAL EDUS: 123  
TOTAL LINEAR FOOTAGE OF PIPE: 3,827.5 L.F. ~ 8" SDR 26 PLAT NO.: 22-1180017  
NUMBER OF LOTS: 123 SAWS JOB#: 22-1547



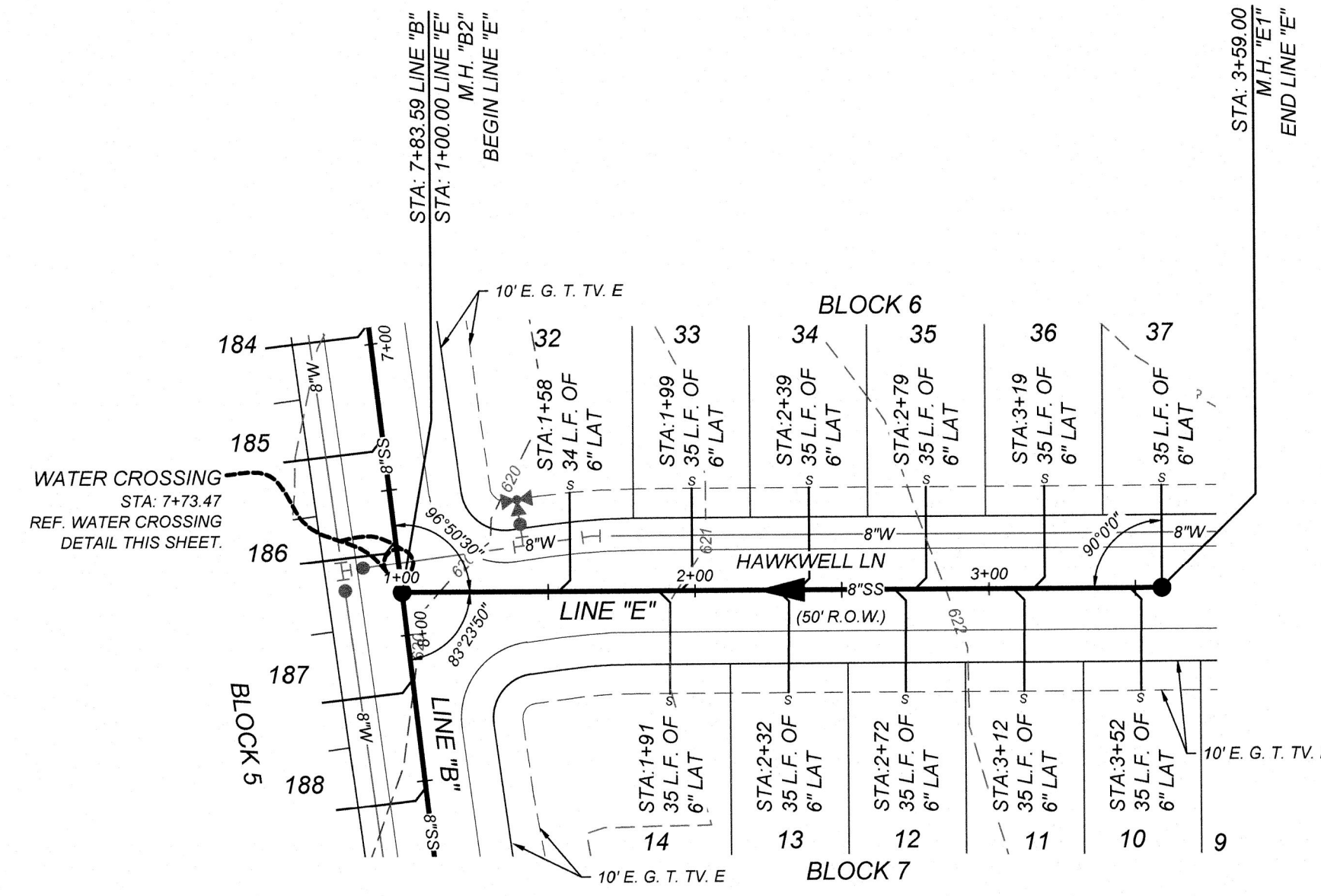
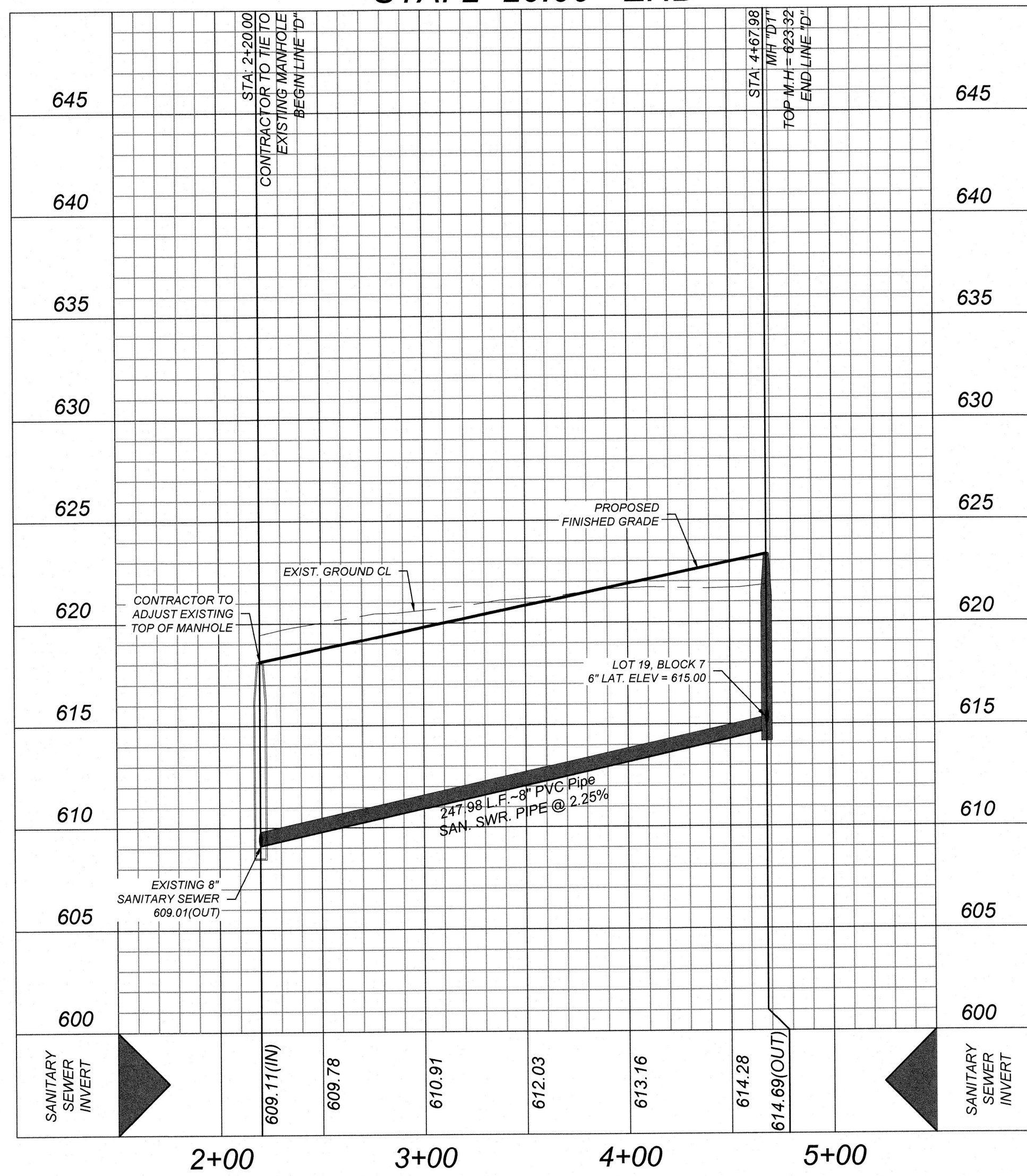
LINE "C"  
STA: 1+00.00 - END

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



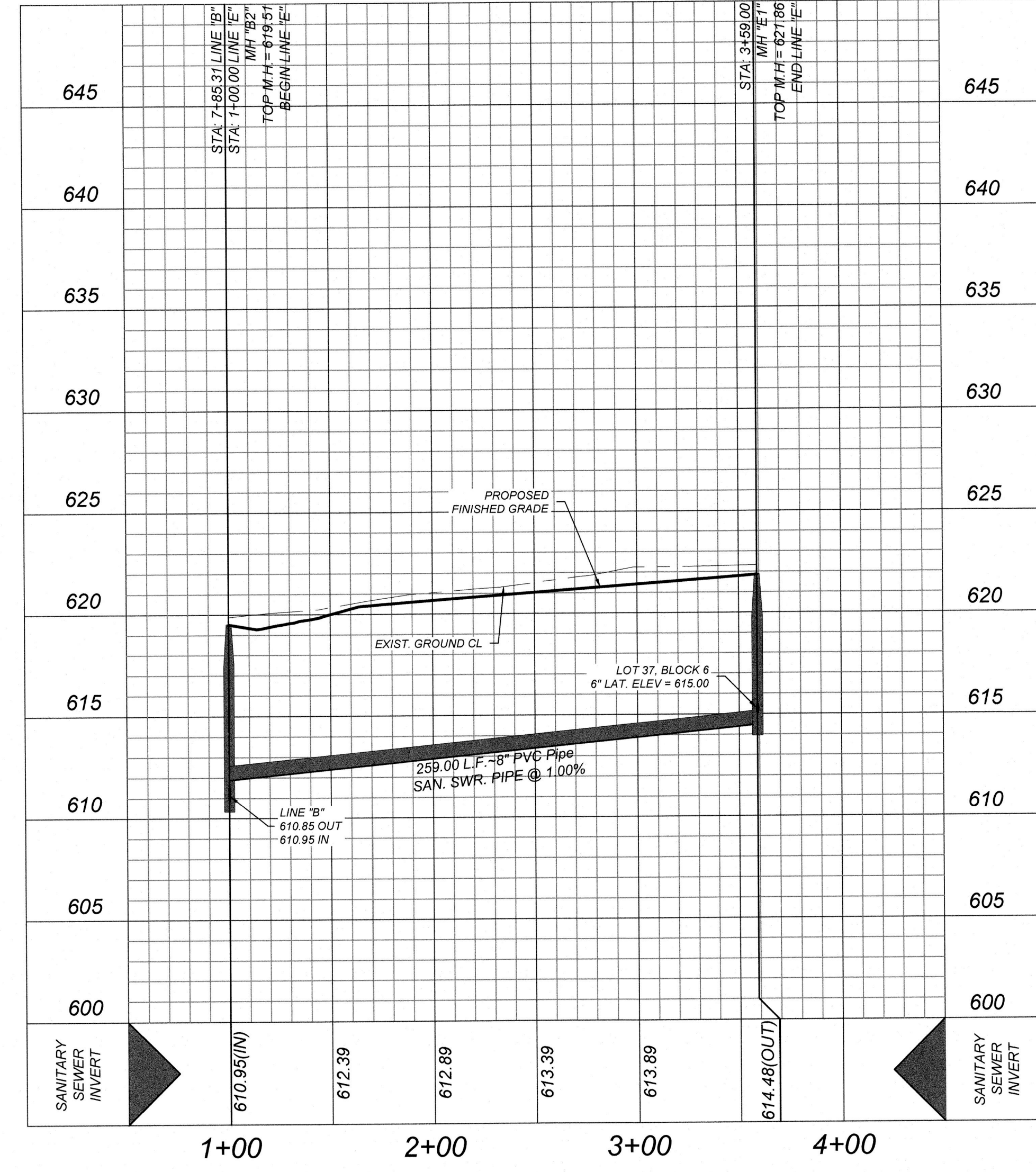
LINE "D"  
STA: 2+20.00 - END

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



LINE "E"  
STA: 1+00.00 - END

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



GATES SUBDIVISION UNIT 2  
BEXAR COUNTY, TX  
LINE "B" PLAN & PROFILE

PLAT NO.  
22-1180017  
JOB NO: 205-43-05  
DATE: NOVEMBER 2021  
DRAWN/OM CHECKED/CL  
SHEET NUMBER:

6.5



# TRENCH EXCAVATION SAFETY PROTECTION

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## COMPACTION NOTE:

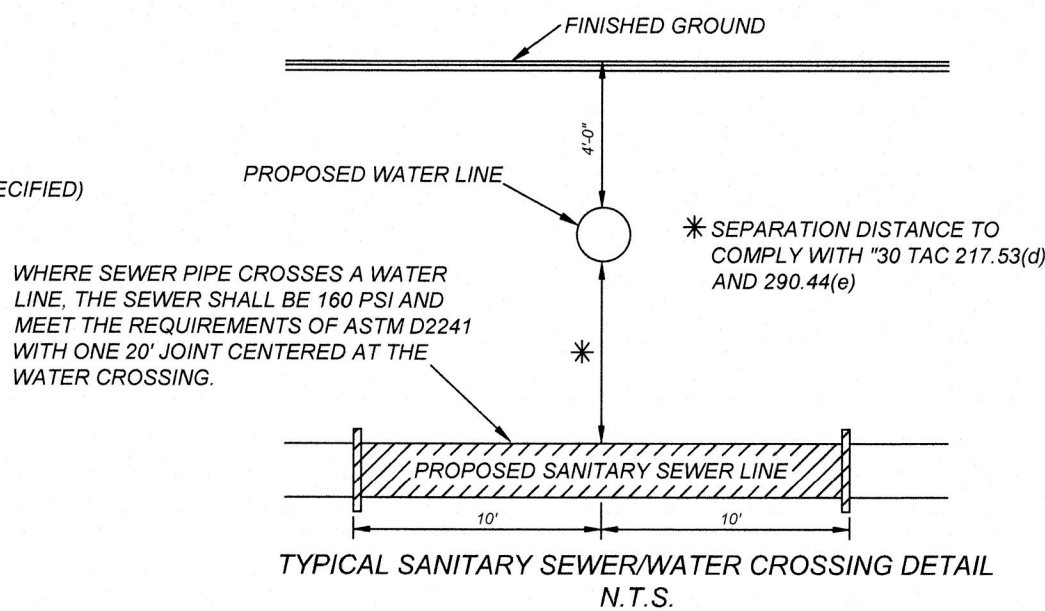
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- REFERENCE SHEET ---, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
- SEE THIS SHEET FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 26.
- SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

# REFERENCE S.A.W.S. DETAILS

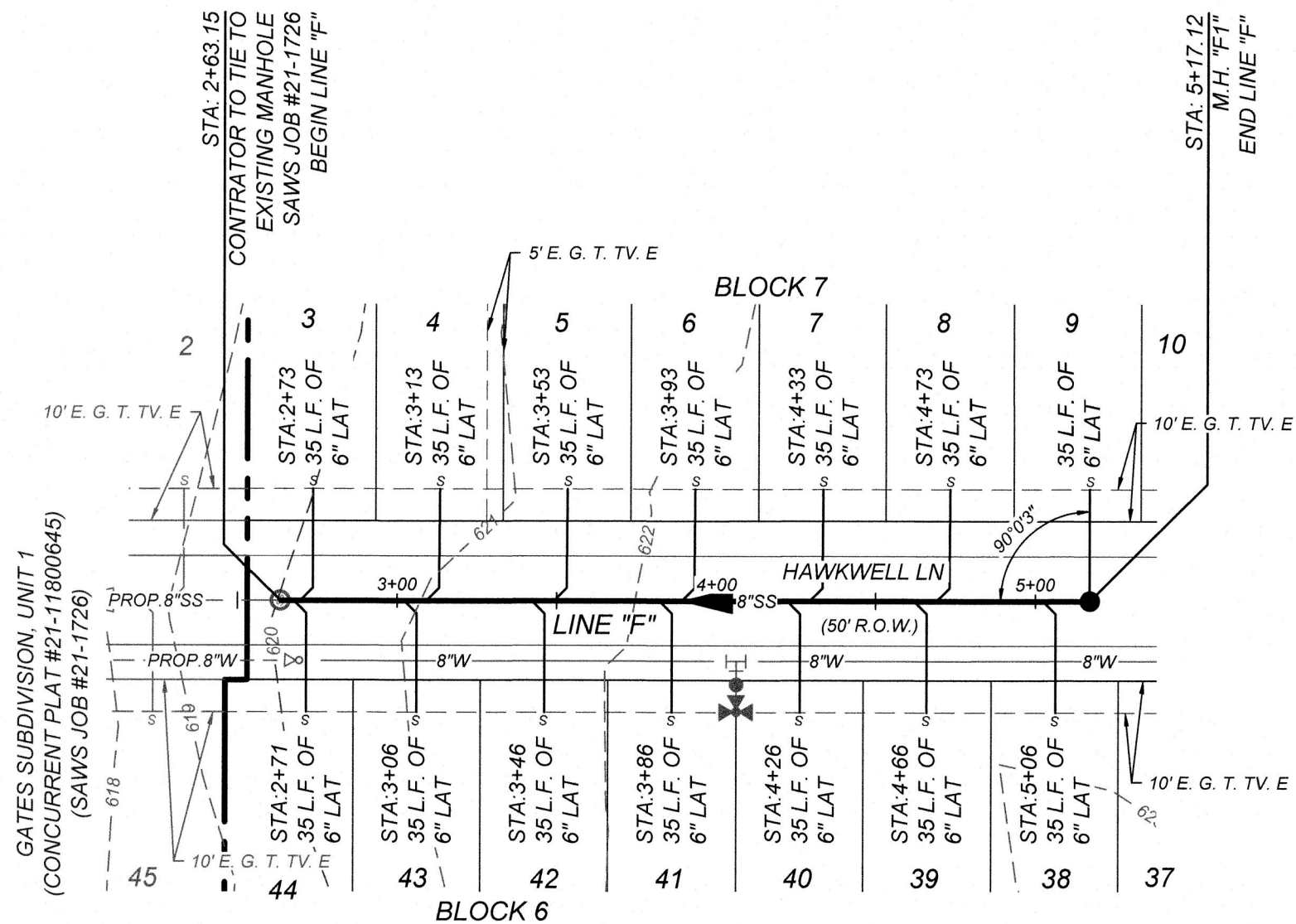
DD-804-01 SANITARY SEWER PIPE LAID IN TRENCH  
DD-804-02 TRENCH COMPACTION DETAIL  
DD-848-01 GO, NO GO DEFLECTION TESTING MANDREL  
DD-852-01 STANDARD PRECAST MANHOLE  
DD-852-02 VENTED MANHOLE RING AND COVER DETAIL (WHEN SPECIFIED)  
DD-852-03 MANHOLE RING ENCASEMENT DETAIL  
DD-854-ER2D HOUSE LATERAL DETAIL (IN THE E.A.R.Z.)  
DD-858-01 TYPICAL CONCRETE ENCASEMENT DETAILS  
DD-858-02 TYPICAL CONCRETE DETAILS  
DD-860-01 TYPICAL VERTICAL STACK DETAILS  
DD-852-06 PRECAST MANHOLE BASE 45° ANGLE  
DD-852-08 DROP MANHOLE DETAIL  
DD-852-07 MANHOLE RING AND COVER DETAIL



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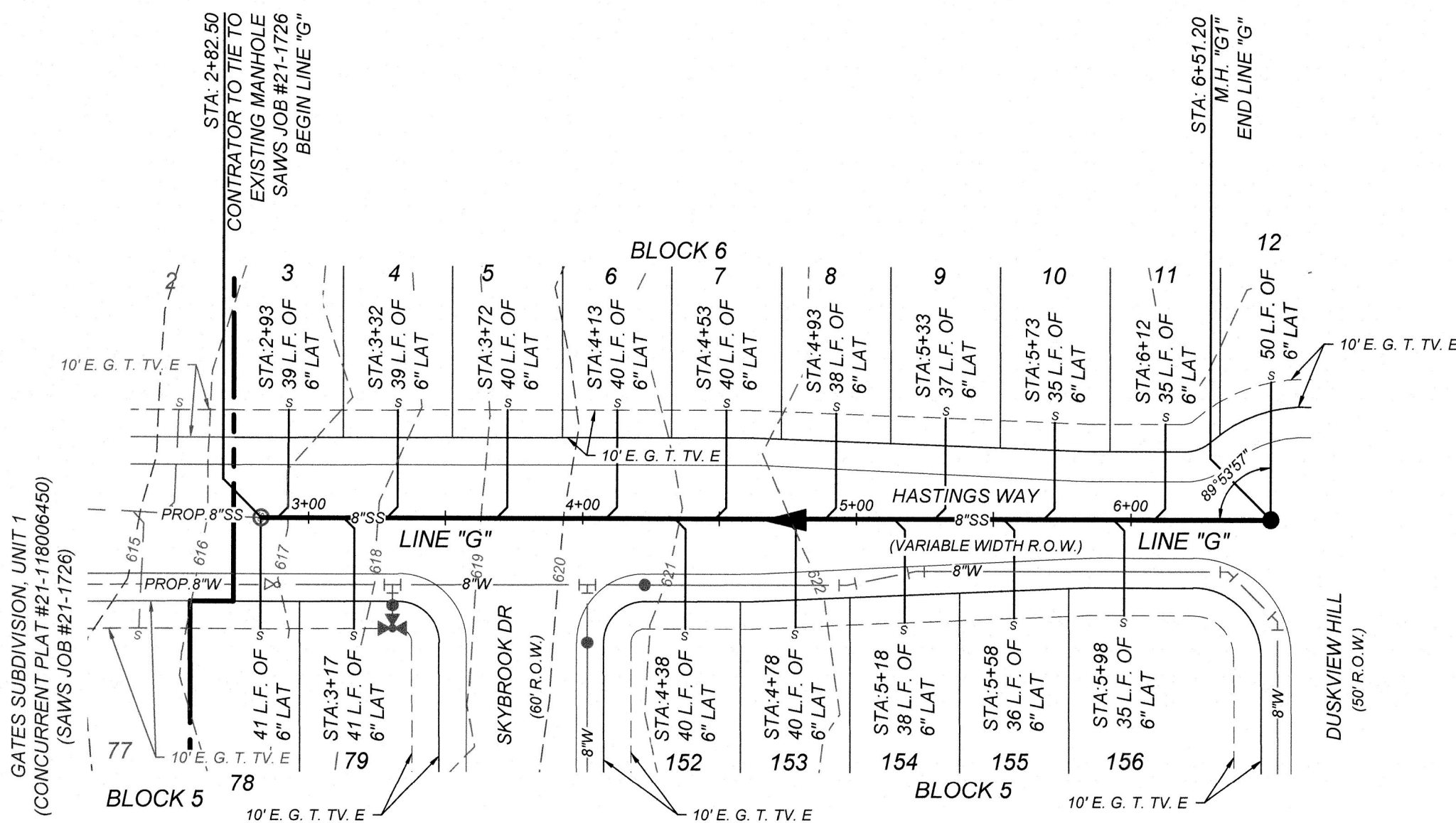
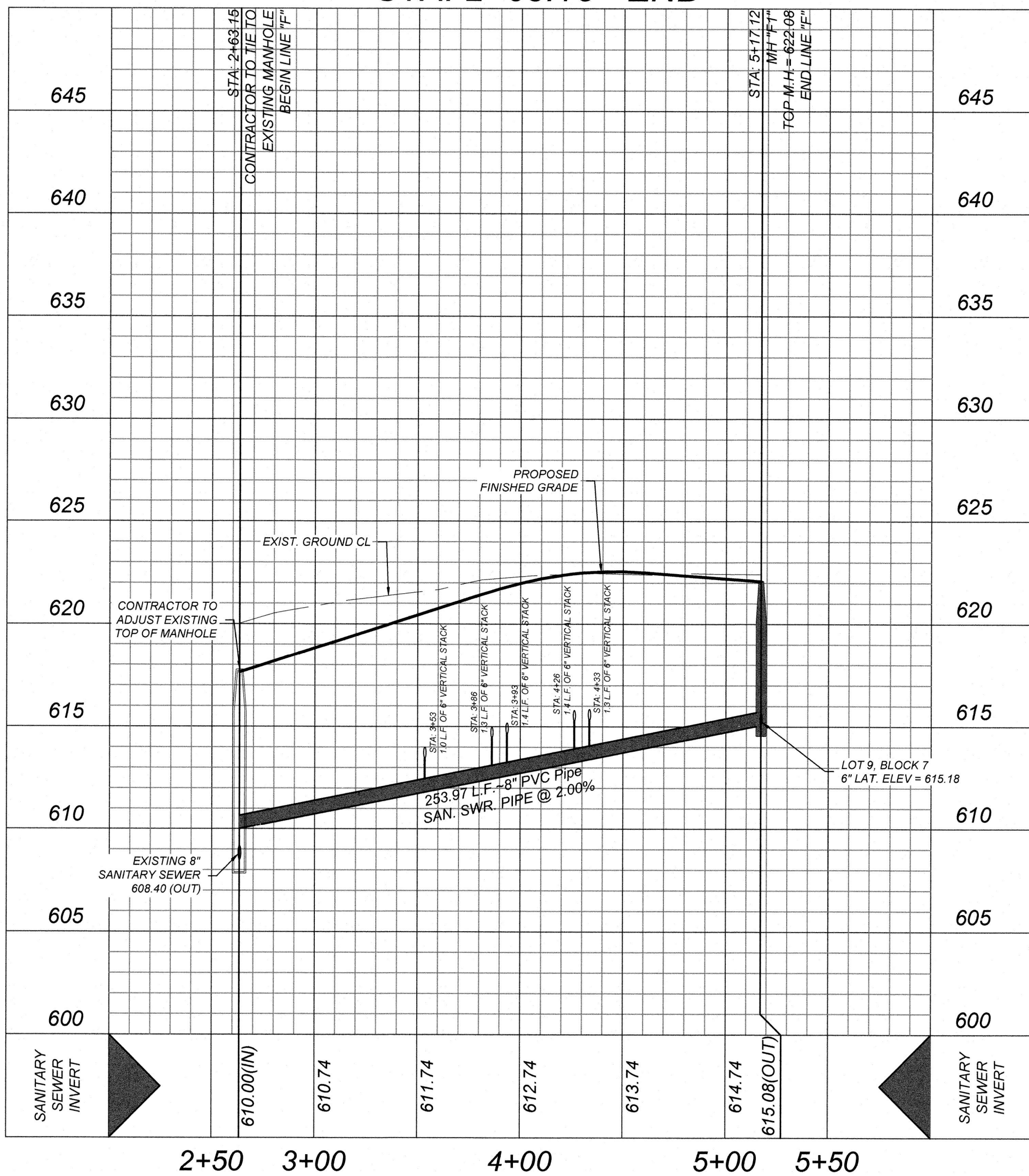
MANHOLE NOTE:  
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

DEVELOPER'S NAME: MEH HOLDING COMPANY LTD  
DEVELOPER'S ADDRESS: 1202 W. BITTERS RD. BUILDING 1, SUITE 1200  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78258  
PHONE#: FAX#: TOTAL ACREAGE: 22.38 AC.  
SAWS BLOCK MAP#: 216582, 216580, 214580 TOTAL EDU'S: 123  
TOTAL LINEAR FOOTAGE OF PIPE: 3,827.5 L.F. ~ 8" SDR 26 PLAT NO.: 22-11800017  
NUMBER OF LOTS: 123 SAWS JOB#: 22-1547



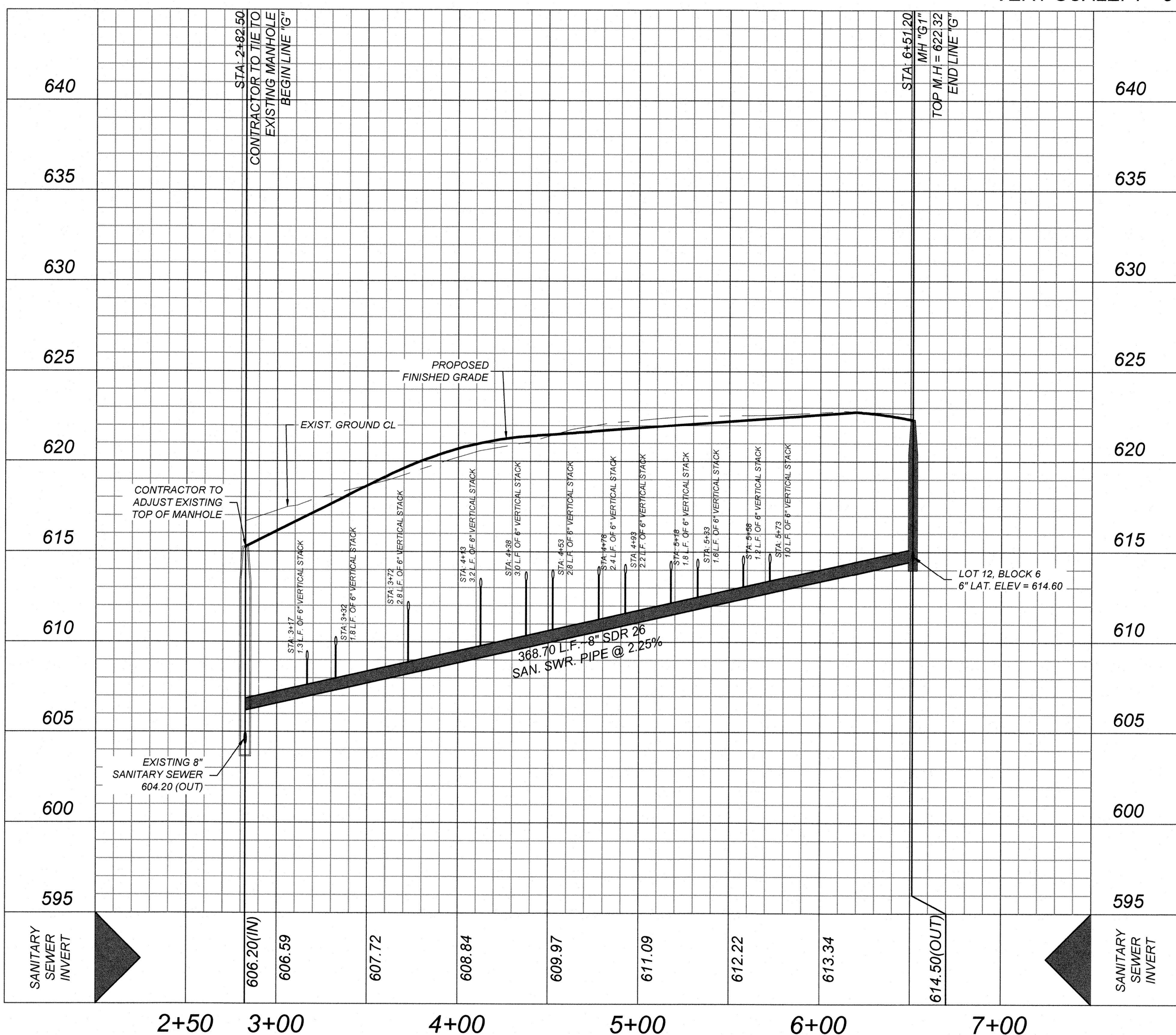
LINE "F"  
STA: 2+63.15 - END

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



LINE "G"  
STA: 2+82.50 - END

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



GATES SUBDIVISION UNIT 2  
BEXAR COUNTY, TX

LINE "C", "D", & "E" PLAN & PROFILE

PLAT NO.  
22-11800017  
JOB NO. 205-43-05  
DATE: NOVEMBER 2021  
DRAWN: OM CHECKED: CL  
SHEET NUMBER:

6.6