

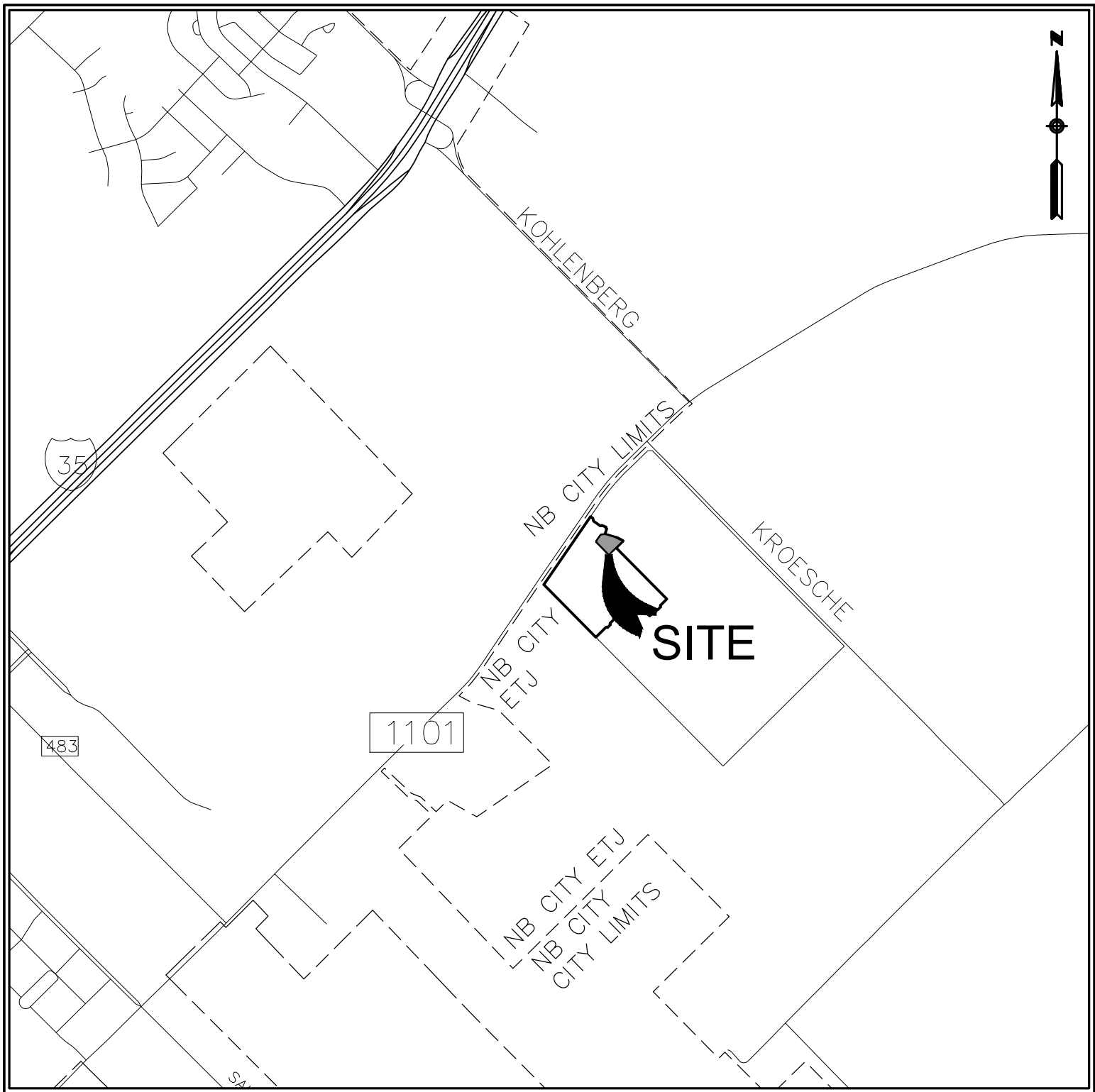
# HEATHERFIELD UNIT 1

## NEW BRAUNFELS, TEXAS CIVIL SITE CONSTRUCTION PLANS

PULTE GROUP

1718 DRY CREEK WAY, SUITE 120

SAN ANTONIO, TX 78259



PROJECT LOCATION MAP

SCALE: N.T.S.

### PROJECT BENCHMARK

SITE TBM #1  
SET 1/2" IRON  
N: 13816093.7333  
E: 2269847.3552  
ELEV: 681.71

SITE TBM #2  
SET 1/2" IRON  
N: 13814200.6966  
E: 2272169.8524  
ELEV: 656.55

### LEGAL DESCRIPTION

BEING 23.80 ACRES OF LAND OUT OF THE ANTONIO M. ESNAURIZAR ELEVEN LEAGUE GRANT, ABSTRACT NO. 1, COMAL COUNTY, TEXAS, BEING A PORTION OF A CALLED 62.585 ACRE TRACT, RECORDED IN DOCUMENT NO. 201806029958 AND A OF A CALLED 1.592 ACRE TRACT, RECORDED IN DOCUMENT NO. 201806029959, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS.

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

GPS POINTS SHALL BE REQUIRED FROM THE DEVELOPER'S CONTRACTOR OR ENGINEER. A MINIMUM OF THREE COORDINATE POINTS FOR GEOREFERENCING SHALL BE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE. THE ELECTRIC GPS POINTS SHALL BE TO MAP GRADE.

#### WATER

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

#### WASTEWATER

MANHOLES  
CLEANOUTS  
CORNER SLAB OF LIFT STATION

#### ELECTRIC

POLES  
TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)  
PULL BOXES  
STREET LIGHTS

COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

### GENERAL NOTES:

- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER IN RECORD.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED FOR ALL INSPECTION REQUESTS.
  - ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
  - 4.2 FAXED IN AT 830-608-2117 OR,
  - 4.3 E-MAILED AT INSPECTIONS@NBTEXAS.ORG.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- THIS DEVELOPMENT IS A TYPE III DEVELOPMENT.
- NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE COMAL COUNTY, TEXAS, FIRM PANEL NUMBER 48091C0460F EFFECTIVE DATE 09/02/2009, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- THIS PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
- GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.



ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.

*Timothy A. Gorena*  
Timothy A. Gorena  
P.E. Registration No. 129271

PREPARED BY:



410 N. SEGUIN AVE.  
NEW BRAUNFELS, TX 78130  
HMTNB.COM  
P(830)625-8555 • F(830)625-8556  
TBPE FIRM F-10961  
TBPLS FIRM 10153600

### RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Gorena*  
HMT ENGINEERING AND SURVEYING

### NOTE TO CONTRACTOR:

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

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

HEATHERFIELD UNIT 1  
CIVIL SITE CONSTRUCTION PLANS

HMT # 266.07



CITY OF NEW BRAUNFELS GENERAL NOTES

ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL COMPLY WITH:

A. CURRENT CITY OF NEW BRAUNFELS CONSTRUCTION SPECIFICATIONS AND STANDARDS AS OF THE DATE OF THIS CONTRACT

B. THE MOST CURRENT EDITION OF TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES".

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES," ALONG WITH CURRENT CITY OF NEW BRAUNFELS AND COMAL COUNTY SPECIFICATIONS. ANY DISCREPANCIES BETWEEN SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES, AND TAXES AREA AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.

ANY EXISTING OFF-SITE IMPROVEMENTS THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE OWNER OF THE EXISTING IMPROVEMENT AT THE CONTRACTOR'S EXPENSE. (NO SEPARATE PAY ITEM)

WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR CONSENT OF THE OWNER OR ENGINEER WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100YR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.

CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.

WHEN MATCHING EXISTING PAVEMENTS, CURBS, DRIVES, AND WALKS, THEY SHALL BE SAW CUT FULL DEPTH AND REMOVED TO ALLOW FOR PROPOSED CONSTRUCTION. IF ANY EXISTING JOINT IS ENCOUNTERED, PRECAUTION SHALL BE TAKEN DURING REMOVAL OF CONCRETE SO AS NOT TO DAMAGE EXISTING DOWELS. ALL EXISTING DOWELS SHALL BE EXPOSED AND CLEANED.

ITEM OF WORK DESIGNATED "BY OTHERS" SHALL NOT BE CONSIDERED PART OF THIS CONTRACT.

ALL "COMPACTED SUBGRADE" SHALL CONSIST OF NATIVE MATERIAL SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES AND COMPACTED TO 95% DENSITY ACCORDING TO DENSITY TEST METHOD TEX-115E OR ACCORDING TO ASTM D-698 AND TESTED BY ASTM D-2922.

ALL "FLEXIBLE BASE" SHALL BE TYPE "A", GRADE 4, ACCORDING TO TxDOT ITEM 247, COMPACTED TO 95% MODIFIED DENSITY AT A MOISTURE CONTENT BETWEEN -2 AND +3 OF OPTIMUM PERCENT MOISTURE ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR) AND TESTED BY ASTM D-2922.

ASPHALT PAVEMENT SHALL BE THE TYPE SPECIFIED ON THE PLANS AND ACCORDING TO TxDOT ITEM 340 "HOT MIX ASPHALT CONCRETE PAVEMENT".

PRIME COAT USING MC-30 AT A RATE OF 0.2 GALLONS PER SQUARE YARD SHALL BE PLACED OVER PREPARED BASE AT LEAST ONE DAY PRIOR TO LAYING ASPHALTIC CONCRETE PAVEMENT. ANY NECESSARY TACK COAT SHALL BE MC-30 AT 0.05 GALLONS PER SQUARE YARD. IT IS REQUIRED THAT BOTH THE PRIME COAT AND THE TACK COAT BE APPLIED AT THE TEMPERATURE SPECIFIED UNDER TxDOT ITEM 300.3.

CONCRETE SHALL BE CLASS "A" ACCORDING TO TxDOT ITEM 421 UNLESS OTHERWISE ON PLANS.

REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL CONFORM TO TxDOT ITEM 440. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS EXCEPT WHEN REFERRING TO CLEARANCE.

ALL SAWED JOINTS SHALL BE SAWED WITHIN 24 HOURS OF POURING,

ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT THE SPECIFIC APPROVAL OF THE ENGINEER.

ORDINARY COMPACTION CONTROL IS REQUIRED ON THIS PROJECT.

ALL ROLLING FOR COMPACTION OF ASPHALTIC CONCRETE PAVEMENT SHALL BE COMPLETED BEFORE THE MIXTURE TEMPERATURE DROPS BELOW 175 DEG. (F).

ALL FILL MATERIAL SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL.

CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS, OFFICERS, DIRECTORS, OR CONSULTANTS, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.

ALL CMP (CORRUGATED METAL PIPE) USED ON THIS PROJECT SHALL HAVE A MANNING'S "N" VALUE OF 0.024, UNLESS OTHERWISE SHOWN ON PLANS.

CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTING PER CURRENT CITY OF NEW BRAUNFELS REQUIREMENTS. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ENGINEER AND OWNER RESERVE THE RIGHT TO HAVE THE CONTRACTOR REMOVE AND REPLACE ANY MATERIAL THAT WAS NOT TESTED OR FAILED TESTING. ALL COST ASSOCIATED WITH THE REMOVAL, REPLACEMENT AND TESTING SHALL BE PAID BY THE CONTRACTOR.

ALL PVC SLEEVES SHALL BE INSTALLED 3 FEET BELOW FINISHED GRADE AND ENDS SHALL BE MARKED SO THAT LOCATIONS OF SLEEVES CAN BE EASILY IDENTIFIED.

PRE-CONSTRUCTION CONFERENCE IS REQUIRED. ENGINEER WILL ARRANGE SUCH CONFERENCE IN COORDINATION WITH CITY OF NEW BRAUNFELS STREET INSPECTOR & NEW BRAUNFELS UTILITIES INSPECTOR. NO CONSTRUCTION MAY BEGIN PRIOR TO THE PRE-CONSTRUCTION CONFERENCE.

CONTRACTOR SHALL COORDINATE WITH DRY UTILITY INSTALLERS AND SHARED TRENCHING SHALL BE UTILIZED. CUTTING THE STREETS AFTER COMPLETION BY DRY UTILITIES SHALL NOT BE ACCEPTABLE.

AS PER PLATTING ORDINANCE SECTION 118--38M.: WHEN ALL IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWINGS" PLANS, AND A DIGITAL COPY OF ALL PLANS (AUTOCAD 2000 MINIMUM) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

EROSION / SEDIMENTATION CONTROL

AT A MINIMUM, THESE CONTROLS SHALL CONSIST OF ROCK BERMS AND/OR SILT FENCES CONSTRUCTED PARALLEL TO AND DOWN GRADIENT FROM THE TRENCHES. THE ROCK BERM OR SILT FENCES SHALL BE INSTALLED IN A MANNER SUCH THAT ANY RAINFALL RUNOFF SHALL BE FILTERED. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROLS.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CONTROLS WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED {31 TAC 313.5 (C)(12)}. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER/ENGINEER.

PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS, BUT WILL BE VERIFIED BY THE ENGINEER/INSPECTOR IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE DISTURBANCE OF THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN ENGINEER APPROVED DESIGNATED DISPOSAL AREA.

CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT NO EROSION CONTROL MEASURES BLOCK THE DRAINAGE SYSTEM FROM WORKING AS DESIGNED.

UTILITIES

THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5-FOOT UN DEPTH LOCATION IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION, INCLUDING THOSE NOT SHOWN ON THE DRAWINGS.

ANY EXISTING UTILITIES, ON OR OFF THE SITE, THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE RESPECTIVE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.

CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION AT:

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

NEW BRAUNFELS UTILITIES (WATER AND SEWER) (830) 608-8971

NEW BRAUNFELS UTILITIES (ELECTRIC) (830) 608-8951

TIME WARNER CABLE (830) 625-3408

CENTERPOINT ENERGY (GAS) (830) 643-6434

AT&T (830) 303-1333

TEXAS ONE CALL SYSTEM (800) 245-4545

ENERGY TRANSFER (PETROLEUM PIPELINE) (210) 262-2486

CONTRACTOR SHALL REFERENCE NEW BRAUNFELS UTILITIES PLANS FOR FINAL ELECTRICAL LINE DESIGNS AND LAYOUT.

WASTEWATER NOTES

REVISION DATE: 3/31/11

1. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING CONSTRUCTION.
2. A MINIMUM OF 8" WASTEWATER PIPE AND FITTING (P.V.C. SDR--26, ASTM, D-3034, D-3212, F-477) ARE REQUIRED ON NEW INSTALLATION.
3. ALL RESIDENTIAL WASTEWATER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND A CLEANOUT SHALL BE INSTALLED AT THE PROPERTY LINE. SERVICES TO LOTS WILL EXTEND FOUR (4) FEET PAST THE UNDERGROUND ELECTRIC CONDUIT IF ELECTRIC IS INSTALLED IN THE FRONT EASEMENT.
4. PIPE BEDDING OF WASTEWATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
5. SECONDARY BACKFILL OF WASTEWATER LINES SHALL GENERALLY CONSIST OF MATERIALS REMOVED FROM THE TRENCH AND SHALL BE FREE FROM BRUSH, DEBRIS AND TRASH, NO ROCKS OR STONES HAVING ANY DIMENSION LARGER THAN 6 INCHES AT THE LARGEST DIMENSION.
6. ALL WASTEWATER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS AS PER 30 TAC §217.53 (c) (2).
7. FOR WASTEWATER LINES LESS THAN 24" IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS.
  - 7.1. THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID POINT OR SPRING LINE OF THE PIPE.
  - 7.2. 8.2. THE SECOND LIFT SHALL BE PLACED TO A DEPTH AS SHOWN ON THE PIPE BACKFILL DETAIL. FOR PIPES LARGER THAN 24", 12" MAXIMUM LIFTS SHALL BE USED.
8. ALL MANHOLES MUST BE WATER TIGHT, EITHER MONOLITHIC, CAST-IN-PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY NBU. THE MANHOLES SHALL HAVE WATER-TIGHT RINGS AND COVERS. WHEREVER THEY ARE WITHIN THE 100 YEAR FLOODPLAIN, THE MANHOLE COVERS SHALL BE BOLTED. EVERY THIRD MANHOLE IN SEQUENCE SHALL HAVE AN ALTERNATE MEANS OF VENTING. 30 TAC §213.5 (C)(3)(A) AND 30 TAC §217.55 (O).
9. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS TWO INCHES (2") ABOVE SURROUNDING GROUND EXCEPT WHEN LOCATED IN PAVED AREA. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.
10. ALL NEW MANHOLES, UNLESS APPROVED BY NBU ENGINEERING, ARE TO HAVE COVERS WITH 32" OPENINGS.
11. WASTEWATER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS OR MECHANICAL "BOOT" TYPE JOINT AS APPROVED BY NBU.
12. WASTEWATER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE.
13. IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER SYSTEM, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TEST THE EXISTING MANHOLES BEFORE CONSTRUCTION. AFTER THE PROPOSED MANHOLE(S) HAS BEEN BUILT, THE CONTRACTOR SHALL RE-TEST THE EXISTING SYSTEM TO THE SATISFACTION OF THE CONSTRUCTION INSPECTOR. (NO SEPARATE PAY ITEM).
14. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING THE ASTM SPECIFICATION FOR BOTH PIPES AND JOINTS OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC §217.53 (D) (3) (A).
15. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM COMPLETE INSTALLATION OF THE WASTEWATER LINES. THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO:
  - 15.1. PULL MANDREL
  - 15.2. PERFORM AIR TEST
  - 15.3. CLEANING OF ANY DEBRIS
  - 15.4. FLUSHING OF SYSTEM
  - 15.5. TV INSPECTION (WITHIN 72 HOURS OF FLUSHING)
16. A MINIMUM OF FEET OF COVER IS TO BE MAINTAINED OVER THE WASTEWATER MAIN AND LATERALS AT SUBGRADE. OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.
17. WASTEWATER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLE IN ACCORDANCE WITH NBU CONNECTION & CONSTRUCTION POLICY MANUAL.
18. TCEQ AND EPA REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF WASTEWATER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY NBU WATER SYSTEMS.
19. ALL MANHOLES NOT WITHIN PAVED AREAS SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBU DETAIL DRAWING §329.
20. ALL MANHOLES OVER THE EDWARDS AQUIFER RECHARGE ZONE SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBU DETAIL DRAWING §329.

WATER NOTES

REVISED 9/12/14

7. ALL WATER MAINS SHALL BE AWWA C900 (CLASS 150 OR GREATER).
8. WATER SERVICES SHALL BE SINGLE 1" COPPER TUBING.
9. WATER LINE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE NBU SYSTEMS CONNECTION & CONSTRUCTION POLICY.
10. WATER MAIN SHALL HAVE A MINIMUM OF 42 INCHES OF COVER, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.
11. EACH UNIT IN A DUPLEX, TRIPLEX, FOURPLEX, OR CONDOMINIUM SHALL BE PROVIDED WITH AN INDIVIDUAL WATER METER. A MASTER METER CAN BE CONSIDERED FOR SEPARATE BUILDINGS, HOWEVER, THOSE BUILDINGS MUST BE PLUMBED TO ALLOW SEPARATE METERS FOR FUTURE CONSIDERATION.
12. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBU SYSTEMS CONNECTION & CONSTRUCTION POLICY.
14. SECONDARY BACKFILL OF WATER LINES SHALL GENERALLY CONSIST OF MATERIAL REMOVED FROM THE TRENCH AND SHALL BE FREE FROM BRUSH, DEBRIS AND TRASH OR STONES HAVING ANY DIMENSION LARGER THAN 6" INCHES AT THE LARGEST DIMENSION.
15. HYDROSTATIC TESTING IS DONE FROM VALVE TO VALVE.
16. NO METER BOXES TO BE SET IN DRIVEWAYS OR SIDEWALKS. ANY METER BOXES SET IN DRIVEWAYS OR SIDEWALKS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
17. METER BOXES MUST BE SET AT THE PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE ARE TO BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
18. ACCEPTABLE METER BOXES ARE D13-BAMR AND D15-BAMR. NEW RESIDENTIAL LOTS ARE REQUIRED TO USE THE D15-BAMR METER BOXES (DOUBLE AMR). COMMERCIAL LOTS SHOULD CHOOSE WHICH BOX APPLIES TO THE DOMESTIC AND/OR IRRIGATION METER LAYOUT.
19. THRUST BLOCKS WILL NOT BE ALLOWED ON THE SYSTEM WITHOUT SPECIAL APPROVAL. JOINTS WILL BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBU AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBU AT THE TIME OF PLAN SUBMITTAL.
20. CONTRACTOR SHALL PLACE TRACER WIRE ON TOP OF THE WATER MAINS. TRACER WIRE SHOULD RUN FROM VALVE TO VALVE AND EXIT AT THE VALVE BOX. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE. EXCESS WIRE SHOULD BE LEFT WITHIN VALVE BOXES TO BE PLACED WITHIN LID OF COVER.

RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*

HMT ENGINEERING AND SURVEYING

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES

REVISED 11/2016

IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID. THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.

PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SET A PRECONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED FOR ALL INSPECTION AND MEETING REQUESTS.

- ALL INSPECTIONS ARE TO BE CALLED IN AT 830--221--4068 OR,
- FAXED IN AT 830-608-2117 OR,
- E-MAILED AT INSPECTIONS@NEWBRAUNFELS.ORG.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONTRACTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

A TxDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TxDOT MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS.

GROUNDWATER

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

RECORD DRAWINGS

AS PER PLATTING ORDINANCE SECTION 118--38M.: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWING" PLANS, AND A DIGITAL COPY OF ALL PLANS (AUTOCAD 2000 MINIMUM AND PDF) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

CONSTRUCTION NOTE

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

DRAINAGE NOTE

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

FINISHED FLOOR ELEVATIONS

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

SOILS TESTING

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

ROADWAY

ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FLEXIBLE BASE OR FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED SIX-INCHES (6") COMPACTED. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER WILL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, AND FILL MATERIAL, AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

ITEM 340 ASPHALTIC CONCRETE PAVEMENT SHALL BE TYPE "D" HOT MIX ASPHALT AS DEFINED IN TxDOT'S STANDARD SPECIFICATIONS FOR TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.

THE CITY OF NEW BRAUNFELS WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS. ANY DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY OF NEW BRAUNFELS.

THE ASPHALTIC CONCRETE SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE "D" MEETING THE SPECIFICATION REQUIREMENTS OF TxDOT ITEM 340. THE MIX SHALL BE DESIGNED FOR A STABILITY OF AT LEAST 35 AND SHALL BE COMPACTED TO BETWEEN 91 AND 95 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TxDOT TEST METHOD TEX-227-F. THE ASPHALT CEMENT CONTENT BY PERCENT OF TOTAL MIXTURE WEIGHT SHALL FALL WITHIN A TOLERANCE OF +0.5 PERCENT FROM A SPECIFIC MIX DESIGN.

UTILITY TRENCH COMPACTION (ADDED TO THE CONSTRUCTION PLANS ON ALL UTILITY PLAN SHEETS).

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

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

(INDICATE THE 2 OPTIONS ON THE CONSTRUCTION PLANS).

1. SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
2. SAWCUT EXISTING CURB TO THE INTO EXISTING CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE

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

(NOTES TO BE PLACED ON ALL WW PLAN & DETAIL SHEETS)

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

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

SIGNING AND PAVEMENT MARKING PLAN NOTES

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

THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

SIGNAGE NOTES

INSTALLATION

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

MOUNTING

THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWT) - 08.

THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (SLIP-1-3) - 08.

OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS D & OM (1 - 5) - 10.

MATERIALS

SIGN MATERIALS INCLUDING ALUMINUM SIGN BLANKS AND SIGN FACE MATERIALS SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS TSR (1 - 5) - 08 AND DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-7110 AND DMS-8300.

THE CITY OF NEW BRAUNFELS WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

SEQUENCE OF CONSTRUCTION

1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS. AND AFTER RAINFALL EVENTS, AS NEEDED, CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
7. INSTALL STREETScape AND/OR LANDSCAPING IMPROVEMENTS.
8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION
9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
10. TPDES REQUIREMENTS - DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY WILL BEGIN AGAIN WITHIN 21 DAYS

GENERAL NBU NOTES

REV. DATE 3/31/11

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT "NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY".
2. CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBU WATER SYSTEMS ENGINEERING AT 830-608-8971 WITH AT LEAST TWO (2) WORKING DAYS (48 NOTICE. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
3. THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEM. NBU WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).
4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS OFFICERS, DIRECTORS, OR CONSULTANTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR



Drawing Name: M:\\_Projects\366 - Heatherfield Unit 1\Draw\266.002\_C0.2 - Plat.dwg User: andrewm May 26, 2020 - 5:54pm

RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Gorena*  
HMT ENGINEERING AND SURVEYING

PLAT NOTES:

- ALL LOTS WITHIN THE SUBDIVISION WILL BE PROVIDED WATER, SEWER AND ELECTRIC SERVICE BY NEW BRAUNFELS UTILITIES. TELEPHONE AND CABLE SERVICES FOR THE SUBDIVISION WILL BE PROVIDED BY AT&T COMMUNICATIONS AND/OR SPECTRUM.
- ALL BEARINGS AND COORDINATES SHOWN HEREON ARE BASED UPON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983. GRID. DISTANCES SHOWN HEREON ARE BASED UPON SURFACE MEASUREMENTS. TO CONVERT SURFACE DISTANCES TO GRID, APPLY A COMBINED SCALE FACTOR OF 1.00015.
- MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND LOT MARKERS WILL BE SET WITH 1/2" IRON PINS WITH PLASTIC CAP STAMPED "HMT" IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
- THIS SUBDIVISION IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
- THIS SUBDIVISION IS WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF NEW BRAUNFELS, TEXAS.
- THIS SUBDIVISION IS WITHIN THE COMAL INDEPENDENT SCHOOL DISTRICT.
- NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE COMAL COUNTY, TEXAS, FLOOD INSURANCE RATE MAP NUMBER 4801C0460F, EFFECTIVE DATE: SEPTEMBER 2, 2009 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASE THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT PROPERTY TO REMOVE OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.
- FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.
- SIX (6) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ALONGSIDE AND ADJACENT TO THE PROPERTY LINE BY THE DEVELOPER AT THE TIME OF SUBDIVISION UNIT STREET CONSTRUCTION ALONG:
  - FM 1101.
- FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ADJACENT TO THE CURB BY THE DEVELOPER AT THE TIME OF STREET CONSTRUCTION ALONG:
  - WINDFLOWER - LOT 901, BLOCK 1; LOT 903, BLOCK 4; AND OPPOSITE LOT 901, BLOCK 1.
  - WILD IRIS - LOT 901, BLOCK 1; AND LOT 903, BLOCK 4.
  - STEEPLEBUSH - LOT 903, BLOCK 4.
  - PALM SEDGE - LOT 902, BLOCK 1; AND OPPOSITE LOTS 34 AND 902, BLOCK 1.
- FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ADJACENT TO THE CURB BY THE HOME BUILDER AT THE TIME OF BUILDING CONSTRUCTION ALONG:
  - WINDFLOWER, WILD IRIS, CRESTED IRIS, PALM SEDGE, SWEETGRASS, WILD INDIGO, STEEPLEBUSH AND HYACINTH.
- THE ELEVATION OF THE LOWEST FLOOR OF A STRUCTURE SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE A FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE AND SHALL PREVENT WATER FROM LEAVING THE STREET.
- THIS SUBDIVISION IS SUBJECT TO THE 2006 CITY OF NEW BRAUNFELS PARK LAND DEDICATION AND DEVELOPMENT ORDINANCE. THIS PLAT IS APPROVED FOR ONE (1) DWELLING UNIT PER BUILDABLE LOT WHERE FEES ARE DUE AT THE TIME OF RECORDATION. AT SUCH TIME THAT ADDITIONAL DWELLING UNITS ARE CONSTRUCTED, THE OWNER OF THE LOT SHALL CONTACT THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.
- THIS UNIT CONTAINS 120 BUILDABLE RESIDENTIAL LOTS.
- ALL DRAINAGE EASEMENTS WITHIN THE LOTS WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER.
- PERMANENT WATER QUALITY CONTROLS ARE REQUIRED FOR THIS SUBDIVISION PLAT IN ACCORDANCE WITH THE CITY OF NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL.
- LOT 901, BLOCK 1 IS A NON-RESIDENTIAL COMMON SPACE LOT FOR SUBDIVISION LANDSCAPING, ENTRY SIGNAGE AND UTILITY EASEMENTS, TO BE OWNED AND MAINTAINED BY THE SUBDIVISION PROPERTY OWNER, ITS SUCCESSORS AND/OR ASSIGNS.
- LOT 902, BLOCK 1 (DRAINAGE) AND 903, BLOCK 4 (AMENITY CENTER) WILL BE OWNED AND MAINTAINED BY THE SUBDIVISION PROPERTY OWNER, ITS SUCCESSORS AND/OR ASSIGNS.

KNOW ALL MEN BY THESE PRESENTS:

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

DOROTHY J. TAYLOR  
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6295  
290 S. CASTELL AVE., SUITE 100, NEW BRAUNFELS, TEXAS 78130

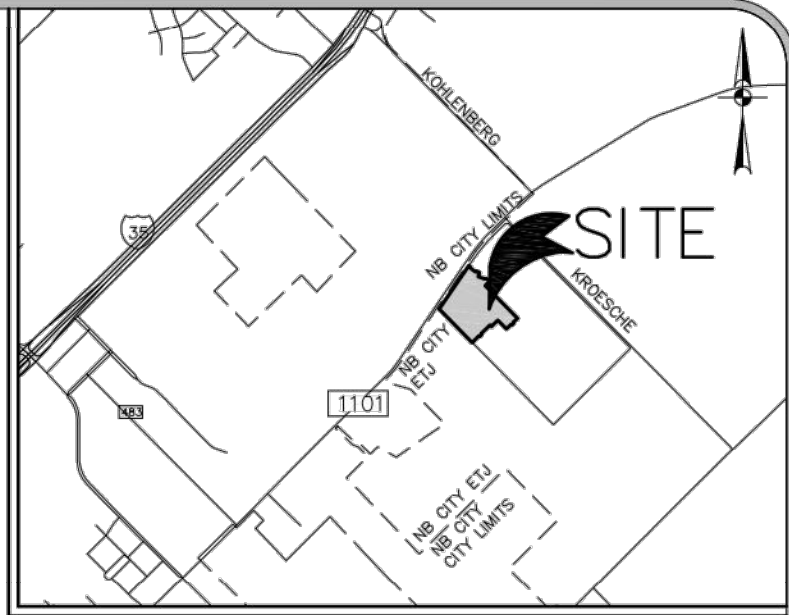
PLAT REVISED AUGUST 5, 2019  
PLAT REVISED JUNE 18, 2019  
PLAT PREPARED MAY 20, 2019



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 10153600

FINAL PLAT ESTABLISHING  
HEATHERFIELD, UNIT 1

BEING 23.53 ACRES OF LAND OUT OF THE ANTONIO M. ESNAURIZAR ELEVEN LEAGUE GRANT, ABSTRACT NO. 1, COMAL COUNTY, TEXAS, BEING A PORTION OF A CALLED 62.565 ACRE TRACT, RECORDED IN DOCUMENT NO. 201806029958 AND A PORTION OF A CALLED 1.592 ACRE TRACT, RECORDED IN DOCUMENT NO. 201806029959, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS.



LOCATION MAP  
NOT TO SCALE

TXDOT NOTES:

- FOR RESIDENTIAL DEVELOPMENT DIRECTLY ADJACENT TO STATE RIGHT-OF-WAY, THE DEVELOPER SHALL BE RESPONSIBLE FOR ADEQUATE SETBACK AND/OR SOUND ABATEMENT MEASURES FOR FUTURE NOISE MITIGATION.
- OWNER/DEVELOPER IS RESPONSIBLE FOR PREVENTING ANY ADVERSE IMPACT TO THE EXISTING DRAINAGE SYSTEM WITHIN THE HIGHWAY RIGHT-OF-WAY. FOR PROJECTS IN THE EDWARDS AQUIFER RECHARGE OR CONTRIBUTING ZONES, OUTFALLS FOR WATER QUALITY AND/OR DETENTION PONDS TREATING IMPERVIOUS COVER RELATED TO THE DEVELOPMENT, WILL NOT ENROACH BY STRUCTURE OR GRADING INTO STATE R.O.W. PLACEMENT OF PERMANENT STRUCTURAL BEST MANAGEMENT PRACTICE DEVICES OR VEGETATIVE FILTER STRIPS WITHIN STATE R.O.W. WILL NOT BE ALLOWED.
- MAXIMUM ACCESS POINTS TO STATE HIGHWAY FROM THIS PROPERTY WILL BE REGULATED AS DIRECTED BY TXDOTS "ACCESS MANAGEMENT MANUAL". THIS PROPERTY IS ELIGIBLE FOR ONE (1) POINT OF ACCESS TO F.M. 1101 BASED ON AN APPROXIMATE OVERALL FRONTAGE OF 995.27 FEET. WHERE TOPOGRAPHY OR OTHER EXISTING CONDITIONS MAKE IT INAPPROPRIATE OR NOT FEASIBLE TO CONFORM TO THE CONNECTION SPACING INTERVALS, THE LOCATION OF REASONABLE ACCESS WILL BE DETERMINED WITH CONSIDERATION GIVEN TO TOPOGRAPHY, ESTABLISHED PROPERTY OWNERSHIPS, UNIQUE PHYSICAL LIMITATIONS, AND/OR PHYSICAL DESIGN CONSTRAINTS. THE SELECTED LOCATION SHOULD SERVE AS MANY PROPERTIES AND INTERESTS AS POSSIBLE TO REDUCE THE NEED FOR ADDITIONAL DIRECT ACCESS TO THE HIGHWAY. IN SELECTING LOCATIONS FOR FULL MOVEMENT INTERSECTIONS, PREFERENCE WILL BE GIVEN TO PUBLIC ROADWAYS THAT ARE ON LOCAL THOROUGHFARE PLANS.
- IF SIDEWALKS ARE REQUIRED BY APPROPRIATE CITY ORDINANCE, A SIDEWALK PERMIT MUST BE APPROVED BY TXDOT, PRIOR TO CONSTRUCTION WITHIN STATE RIGHT-OF-WAY. LOCATIONS OF SIDEWALKS WITHIN STATE RIGHT-OF-WAY SHALL BE AS DIRECTED BY TXDOT.
- ANY TRAFFIC CONTROL MEASURES (LEFT-TURN LANE, RIGHT-TURN LANE, SIGNAL, ETC.) FOR ANY ACCESS FRONTING A STATE MAINTAINED ROADWAY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNER.

APPROVED THIS THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_  
BY THE PLANNING COMMISSION OF THE CITY OF NEW BRAUNFELS, TEXAS.

CHAIRMAN

APPROVED FOR ACCEPTANCE

\_\_\_\_ DATE \_\_\_\_\_ PLANNING DIRECTOR \_\_\_\_\_  
\_\_\_\_ DATE \_\_\_\_\_ CITY ENGINEER \_\_\_\_\_  
\_\_\_\_ DATE \_\_\_\_\_ NEW BRAUNFELS UTILITIES \_\_\_\_\_

STATE OF TEXAS  
COUNTY OF COMAL

I, \_\_\_\_\_ DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT WAS FILED FOR RECORD IN THE MAP AND PLAT RECORDS, DOC# \_\_\_\_\_ OF COMAL COUNTY ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_, AT \_\_\_\_\_ M.

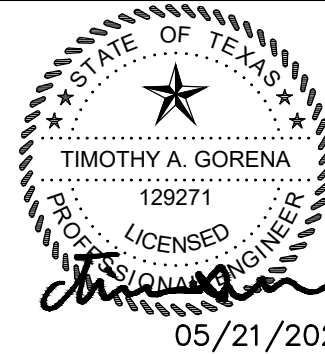
WITNESS MY HAND AND OFFICIAL SEAL, THIS THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

COUNTY CLERK, COMAL COUNTY, TEXAS

DEPUTY

SHEET 1 OF 2

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P1210562-3844 • F1210562-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600



PLAT (1 OF 2)

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/15/2019
2	FIRE ACCESS REV	03/29/2019
3	BASE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEEPLEBUSH STATION REVISION	07/29/2019
5	BASE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42	08/13/2019
7	ADJACENT DRAINAGE REV	09/21/2019
8	WILD IRIS ZON KAMP	07/01/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.:  
266.02

SHEET  
C0.2



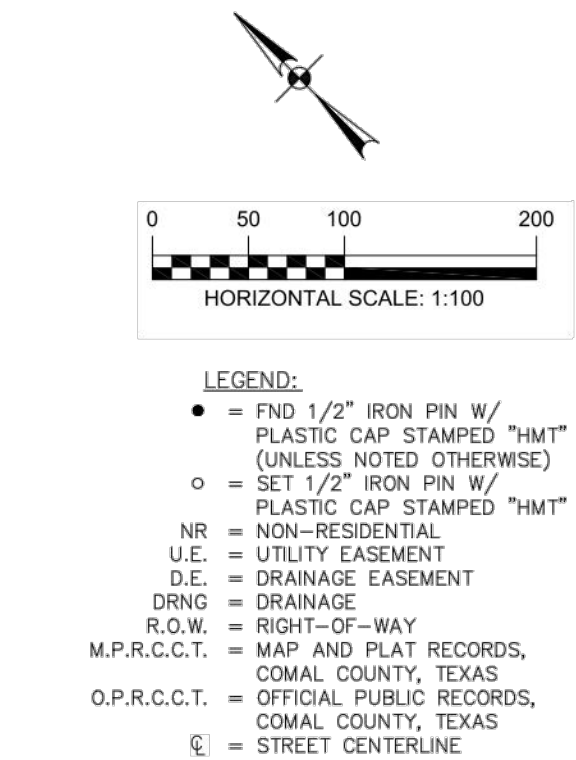
RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Gorena*  
HMT ENGINEERING AND SURVEYING

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C1	20.28'	170.00'	006°50'06"	10.15'	20.27'	S58°57'58"E
C2	21.77'	15.00'	083°09'54"	13.31'	19.91'	N76°02'02"E
C3	30.89'	15.00'	117°58'40"	24.95'	25.71'	S24°32'15"E
C4	23.59'	15.00'	090°06'41"	15.03'	21.23'	S00°19'51"W
C5	23.53'	15.00'	089°53'19"	14.97'	21.19'	N89°40'09"W
C6	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°36'48"W
C7	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°23'12"W
C8	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°36'48"W
C9	102.15'	170.00'	034°25'38"	52.67'	100.62'	N66°18'46"W
C10	17.20'	230.00'	004°17'08"	8.61'	17.20'	S81°23'01"E
C11	17.36'	15.00'	066°18'28"	9.80'	16.41'	S67°36'19"W
C12	20.73'	15.00'	079°10'34"	12.40'	19.12'	S05°08'12"E
C13	23.53'	15.00'	089°53'19"	14.97'	21.19'	S89°40'09"E
C14	23.59'	15.00'	090°06'41"	15.03'	21.23'	N00°19'51"E
C15	23.53'	15.00'	089°53'19"	14.97'	21.19'	N89°40'09"W
C16	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°23'12"W
C17	26.40'	15.00'	100°49'26"	18.14'	23.12'	S84°51'48"W
C18	23.59'	15.00'	090°06'48"	15.03'	21.23'	N00°19'51"E
C19	10.19'	15.00'	038°55'23"	5.30'	10.00'	N64°50'53"E
C20	146.37'	50.00'	167°43'33"	465.02'	99.43'	S00°22'43"W
C21	10.18'	15.00'	038°52'14"	5.29'	9.98'	N64°02'56"W
C22	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°23'12"E
C23	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°36'48"E
C24	20.70'	15.00'	079°03'53"	12.38'	19.10'	S05°04'52"E
C25	9.82'	15.00'	037°29'55"	5.09'	9.64'	N53°12'02"E
C26	134.44'	50.00'	154°03'43"	217.11'	97.45'	S05°04'52"E
C27	9.82'	15.00'	037°29'55"	5.09'	9.64'	N63°21'46"W
C28	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°23'12"E
C29	24.69'	15.00'	094°19'05"	16.18'	22.00'	N12°42'28"W
C30	17.33'	230.00'	004°19'05"	8.67'	17.33'	S57°42'28"E

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	35.01'	S55°32'19"E
L2	49.50'	S10°32'55"E
L3	71.55'	N55°32'55"W
L4	30.68'	S34°27'05"W
L5	50.00'	N55°32'55"W
L6	50.00'	S45°27'12"W
L7	22.75'	N44°36'48"W
L8	50.00'	S45°23'12"W
L9	34.91'	S83°31'35"E
L10	60.00'	N06°28'25"E
L11	97.82'	S83°31'35"E
L12	49.53'	N79°26'50"E
L13	5.00'	S44°36°53"E
L14	64.04'	S83°31'35"E
L15	71.55'	S55°32'55"E
L16	50.00'	S45°23'12"W



- LEGEND:
- = FND 1/2" IRON PIN W/ PLASTIC CAP STAMPED "HMT" (UNLESS NOTED OTHERWISE)
  - = SET 1/2" IRON PIN W/ PLASTIC CAP STAMPED "HMT"
  - NR = NON-RESIDENTIAL
  - U.E. = UTILITY EASEMENT
  - D.E. = DRAINAGE EASEMENT
  - DRNG = DRAINAGE
  - R.O.W. = RIGHT-OF-WAY
  - M.P.R.C.C.T. = MAP AND PLAT RECORDS, COMAL COUNTY, TEXAS
  - O.P.R.C.C.T. = OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS
  - ⊙ = STREET CENTERLINE

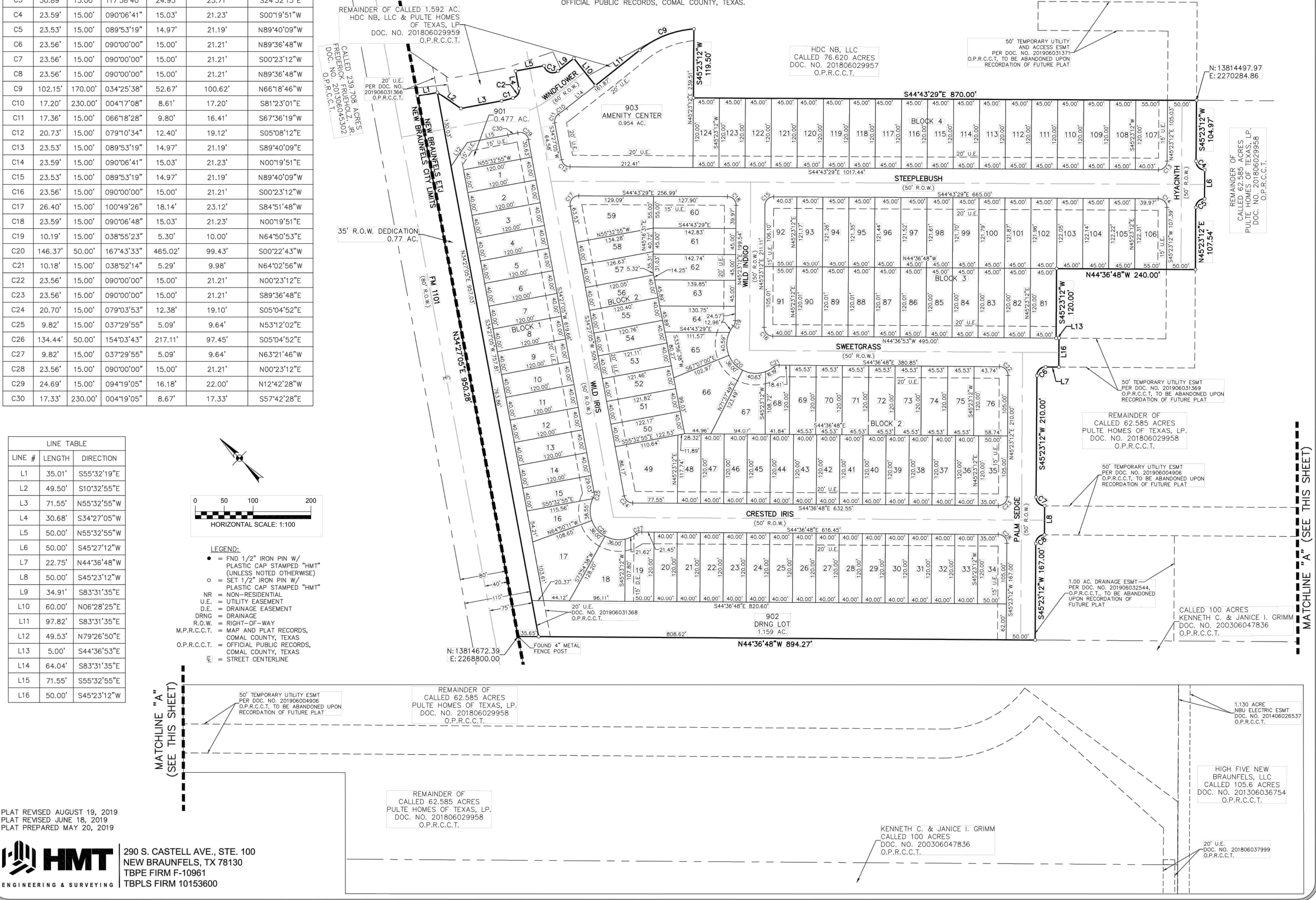
PLAT REVISED AUGUST 19, 2019  
PLAT REVISED JUNE 18, 2019  
PLAT PREPARED MAY 20, 2019



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 10153600

FINAL PLAT ESTABLISHING  
HEATHERFIELD, UNIT 1

BEING 23.53 ACRES OF LAND OUT OF THE ANTONIO M. ESNAURIZAR ELEVEN LEAGUE GRANT, ABSTRACT NO. 1, COMAL COUNTY, TEXAS, BEING A PORTION OF A CALLED 62.585 ACRE TRACT, RECORDED IN DOCUMENT NO. 201806029958 AND A PORTION OF A CALLED 1.592 ACRE TRACT, RECORDED IN DOCUMENT NO. 201806029959, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS.



SHEET 2 OF 2

PLAT (2 OF 2)

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION	DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV		02/15/2019
2	FIRE ACCESS REV		03/29/2019
3	BASE UNDER FM 101 AND LOT REV		05/29/2019
4	STEPPLEBUSH STATION REVISION		07/29/2019
5	BASE UNDER FM 101 REV		08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42		08/13/2019
7	ADJUSTED DRAINAGE REV		09/21/2019
8	WED REV FOR WAMP		07/29/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

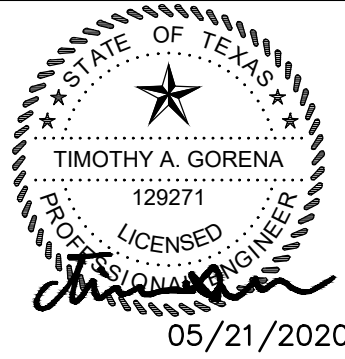
HMT PROJECT NO.:

266.02

SHEET

C0.3

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P12105623844-F1210562-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600

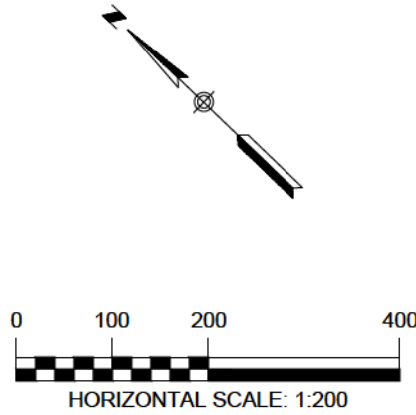




RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY:   
HMT ENGINEERING AND SURVEYING



- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - DRAINAGE AREA
  - TIME OF CONCENTRATION
  - POINT OF CONCENTRATION
  - DRAINAGE FLOW DIRECTION
  - DRAINAGE AREA LABEL

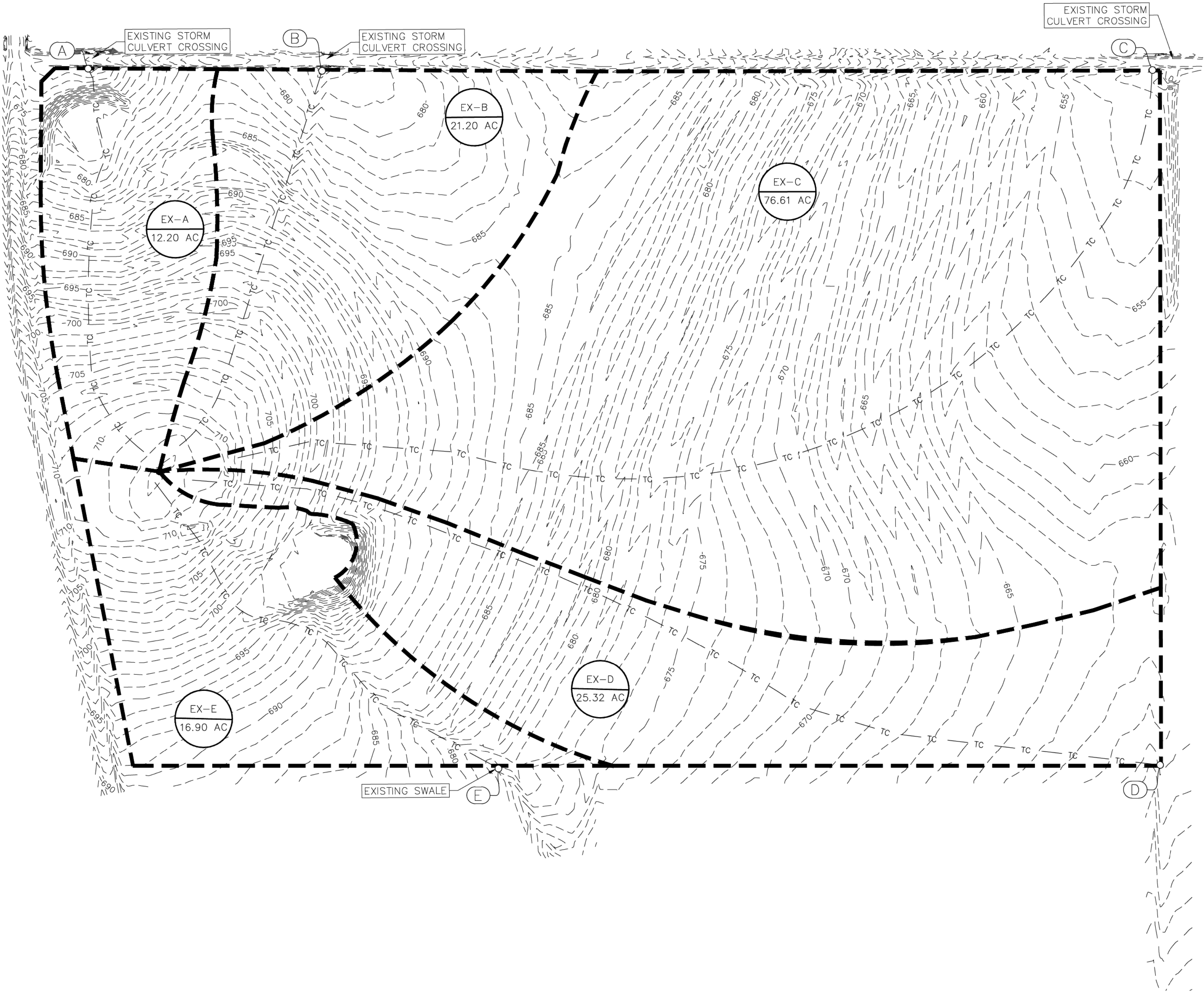
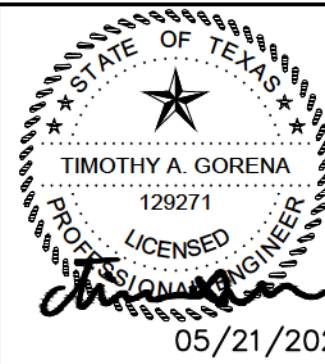


Table 1 - Existing Heatherfield Hydrology Calculations <sup>1</sup>												
Point of Concentration	Area ID	Area (ac)	T <sub>c</sub> (min)	CN	P <sub>1</sub> (in)	P <sub>10</sub> (in)	P <sub>2</sub> (in)	P <sub>100</sub> (in)	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
A	EX-A	12.20	17.70	81	3.34	6.06	8.06	12.30	15.77	39.30	57.26	95.26
B	EX-B	21.20	22.00	81	3.34	6.06	8.06	12.30	27.40	68.29	99.51	165.54
C	EX-C	76.61	36.20	81	3.34	6.06	8.06	12.30	75.54	189.16	275.62	458.60
D	EX-D	25.32	27.90	81	3.34	6.06	8.06	12.30	27.58	69.04	100.51	167.07
E	EX-E	16.90	17.90	81	3.34	6.06	8.06	12.30	21.84	54.44	79.33	131.96

<sup>1</sup>Existing hydrology calculations are in accordance to the City of New Braunfels Drainage and Erosion Control Design Manual 2016, Revised 2018.

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)865-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600



EXISTING DRAINAGE  
AREA MAP  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/13/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPHENBURGH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42	08/13/2019
7	ADJUSTED DRAINAGE RT	09/21/2019
8	REV RED DATA MAP	07/29/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.:  
266.07

SHEET  
C1.0



Drawing Name: M:\\_Projects\266 - Pulte Group\002 - Heatherfield Unit 1 - Dwg\266.002\_C1.0 - Dwg.dwg User: andrewn May 26, 2020 - 11:00am

Table 17 - Proposed Detention/Water Quality Basin Summary			
	Basin A	Basin B	Basin E.2*
Watershed Area (acres)	14.38	20.15	19.82
Impervious Cover (sf)	375,836	526,640	518,016
Required WQ Volume (cuft) = Impervious Cover * (1/2" * 1.20)	18,792	26,332	25,901
Provided Water Quality Volume (cuft)	22,761	34,560	32,940
Orifice Outlet Size (in)	3	4	3.5
Average Flowrate (cfs)	0.18	0.31	0.28
Time to Empty SWQ Pond (hrs)	35.1	31.0	32.7
1/2 Provided Water Quality Volume (cuft)	11,381	17,280	16,470
Average Flowrate of First 1/2 of SWQ Pond (cfs)	0.23	0.40	0.36
Time to Empty First 1/2 of SWQ Pond (hrs)	13.7	12.0	12.7
Water Quality Depth (ft)	1.5	1.5	1.9
Detention Pond Length (ft)	250	275	1,076
Detention Pond Width (ft)	121	123	146
Length to Width Ratio	2.1	2.2	7.4

\*Basin E.2 is treating the stormwater quality runoff for both drainage areas E.1 and E.2.

RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*

HMT ENGINEERING AND SURVEYING

LEGEND

700

EXISTING CONTOURS

700

PROPOSED CONTOURS

B.L.

BUILDING SETBACK LINE

U.E.

UTILITY EASEMENT

D.E.

DRAINAGE EASEMENT

DRAINAGE AREA

TC TC

TIME OF CONCENTRATION

(A)

POINT OF CONCENTRATION

DRAINAGE FLOW DIRECTION

DA

ACRES

DRAINAGE AREA LABEL

0

100

200

400

HORIZONTAL SCALE: 1:200

Table 2 - Pre Detention Summary Table													
Point of Concentration	Area ID	Area (ac)	T <sub>c</sub> (min)	CN	P <sub>2</sub> (in)	P <sub>10</sub> (in)	P <sub>25</sub> (in)	P <sub>100</sub> (in)	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)	
A (Proposed/Ultimate)	DA A	14.38	14.70	87	3.34	6.06	8.06	12.30	25.48	55.82	78.04	124.55	
B (Proposed)	DA B	20.52	15.10	85	3.34	6.06	8.06	12.30	33.50	76.58	108.43	175.21	
B (Ultimate)	DA B	20.15	15.10	87	3.34	6.06	8.06	12.30	35.70	78.22	109.36	174.53	
C (Proposed)	DA C	76.02	34.20	81	3.34	6.06	8.06	12.30	74.96	187.71	273.49	455.07	
C (Ultimate)*	DA C	97.94	-	-	3.34	6.06	8.06	12.30	-	-	-	-	
D (Proposed)**	DA D	21.55	22.30	81	3.34	6.06	8.06	12.30	26.43	65.93	95.91	159.73	
E.1 (Proposed/Ultimate)	DA E.1	8.26	17.70	87	3.34	6.06	8.06	12.30	13.81	30.33	42.44	67.79	
E.2 (Proposed)	DA E.2	11.56	17.00	86	3.34	6.06	8.06	12.30	18.58	41.63	58.62	94.20	
E.2 (Ultimate)	DA E.2	11.56	17.00	87	3.34	6.06	8.06	12.30	19.33	42.45	59.40	94.87	
E.1+E.2 (Proposed)	DA E.1+DA E.2	19.82	-	-	3.34	6.06	8.06	12.30	32.38	71.96	101.06	161.99	
E.1+E.2 (Ultimate)	DA E.1+DA E.2	19.82	-	-	3.34	6.06	8.06	12.30	33.14	72.78	101.84	162.66	

\*DA C will have a detention/storm water quality basin designed in a future unit per the master drainage report

\*\*Drainage area DA D in ultimate conditions will drain to area DA C, therefore there is no DA D ultimate.

Table 3 - Post Detention Summary Table													
Point of Concentration	Area ID	Area (ac)	T <sub>c</sub> (min)	CN	P <sub>2</sub> (in)	P <sub>10</sub> (in)	P <sub>25</sub> (in)	P <sub>100</sub> (in)	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)	
A (Proposed/Ultimate)	DA A	14.38	14.70	87	3.34	6.06	8.06	12.30	15.77	38.96	56.46	93.73	
B (Proposed)	DA B	20.52	15.10	85	3.34	6.06	8.06	12.30	17.89	47.75	71.17	120.06	
B (Ultimate)	DA B	20.15	15.10	87	3.34	6.06	8.06	12.30	19.43	49.08	72.00	119.72	
E.1 (Proposed/Ultimate)	DA E.1	8.26	17.70	87	3.34	6.06	8.06	12.30	12.79	19.66	22.83	28.45	
E.2 (Proposed)	DA E.1+DA E.2	19.82	17.00	86	3.34	6.06	8.06	12.30	21.03	53.59	73.59	112.38	
E.2 (Ultimate)	DA E.1+DA E.2	19.82	17.00	87	3.34	6.06	8.06	12.30	21.60	54.38	74.35	113.00	

TABLE 18 - CN BREAKDOWN		
DRAINAGE AREA A PROP/ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	14.38	87

DRAINAGE AREA B PROP*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	13.88	87
GOOD CONDITION CONTOURED ROW CROP	6.64	81
WEIGHTED CN	20.52	85

DRAINAGE AREA B ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	20.15	87

DRAINAGE AREA C PROP*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	5.26	87
GOOD CONDITION CONTOURED ROW CROP	70.76	81
WEIGHTED CN	76.02	81

DRAINAGE AREA C ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	97.94	87

DRAINAGE AREA D PROP*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	21.55	81

DRAINAGE AREA E.1 PROP/ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	8.26	87

DRAINAGE AREA E.2 PROP*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	9.84	87
GOOD CONDITION CONTOURED ROW CROP	1.72	81
WEIGHTED CN	11.56	86

DRAINAGE AREA E.2 ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	11.56	87

\*FOR EXISTING CN VALUES, SEE TR-55 TABLE 2-2B OF GOOD CONDITION CONTOURED ROW CROPS.FOR PROPOSED CONDITIONS, SEE TABLE 4-4 OF THE CITY OF NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL FOR SINGLE FAMILY HOMES (R-1/R-1A)

Table 4 - POCA Proposed/Ultimate Comparison Table							
Point of Concentration	Area ID	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)	
A	EX-A	Pre-Development Flowrates	15.77	39.30	57.26	95.26	
A	POND A	Post-Development Post-Detention Flowrates	15.77	38.96	56.46	93.73	
Δ			0.00	(0.34)	(0.80)	(1.53)	
Δ (%)			0.00%	-0.87%	-1.40%	-1.61%	

Table 5 - POCB Proposed Comparison Table							
Point of Concentration	Area ID	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)	
B	EX-B	Pre-Development Flowrates	27.40	68.29	99.51	165.54	
B	POND B	Post-Development Post-Detention Flowrates	17.89	47.75	71.17	120.06	
Δ			(9.51)	(20.54)	(28.34)	(45.48)	
Δ (%)			-34.71%	-30.08%	-28.48%	-27.47%	

Table 6 - POCB Ultimate Comparison Table							
Point of Concentration	Area ID	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)	
B	EX-B	Pre-Development Flowrates	27.40	68.29	99.51	165.54	
B	POND B	Post-Development Post-Detention Flowrates	19.43	49.08	72.00	119.72	
Δ			(7.97)	(19.21)	(27.51)	(45.82)	
Δ (%)			-29.09%	-28.13%	-27.65%	-27.68%	

Table 7 - POC C Proposed Comparison Table							
Point of Concentration	Area ID	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)	
C	EX C	Pre-Development Flowrates	75.54	189.16	275.62	458.60	
C	DA C	Post-Development Post-Detention Flowrates	74.96	187.71	273.49	455.07	
Δ			(0.58)	(1.45)	(2.13)	(3.53)	
Δ (%)			-0.77%	-0.77%	-0.77%	-0.77%	

Table 8 - POC D Proposed Comparison Table							
Point of Concentration	Area ID	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)	
D	EX-D	Pre-Development Flowrates	27.58	69.04	100.51	167.07	
D	DA D	Post-Development Post-Detention Flowrates	26.43	65.93	95.91	159.73	
Δ			(1.15)	(3.11)	(4.60)	(7.34)	
Δ (%)			-4.17%	-4.50%	-4.58%	-4.39%	

Table 9 - POCE1+E2 Proposed Comparison Table							
Point of Concentration	Area ID	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)	
E	EX-E	Pre-Development Flowrates	21.84	54.44	79.33	131.96	
E	DA E	Post-Development Post-Detention Flowrates	21.03	53.59	73.59	112.38	
Δ			(0.81)	(0.85)	(5.74)	(19.58)	
Δ (%)			-3.71%	-1.56%	-7.24%	-14.84%	

Table 10 - POC E1+E2 Ultimate Comparison Table							
Point of Concentration	Area ID	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)	
E.1+E.2	DA E.2	Pre-Development Flowrates	21.84	54.44	79.33	131.96	
E.1+E.2	DA E.2	Post-Development Post-Detention Flowrates	21.60	54.38	74.35	113.00	
Δ			(0.24)	(0.06)	(4.98)	(18.96)	
Δ (%)			-1.10%	-0.11%	-6.28%	-14.37%	

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P(210)562-3844 • F(210)562-3236  
T(210)562-3844 • F(210)562-3236  
T(210)562-3844 • F(210)562-3236

HMT

ENGINEERING & SURVEYING

STATE OF TEXAS

TIMOTHY A. GOREN

129271

PROFESSIONAL ENGINEER

05/21/2020

PROPOSED DRAINAGE

AREA MAP

HEATHERFIELD SUBDIVISION

UNIT 1

NO.	REVISION	DESCRIPTION	DATE
1	WATER AND WASTEWATER REV		02/18/2019
2	FIRE ACCESS REV		03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV		05/29/2019
4	STEPHENSON STATION REVISION		07/29/2019
5	BEFORE UNDER FM 1101 REV		08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+48.42		08/13/2019
7	PAYMENT GRADING REV		09/21/2019
8	WED RES ADA RAMP		01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.: 266.001

SHEET


C1.1




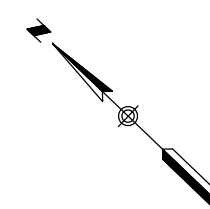
Table 17 - Proposed Detention/Water Quality Basin Summary			
	Basin A	Basin B	Basin E.2
Impervious Cover (sf)	375,836	526,640	518,016
Required WQ Volume (cuft) = Impervious Cover * (1/2" * 1.5)	18,792	26,332	25,901
Provided Water Quality Volume (cuft)	22,761	34,560	32,940
Orifice Outlet Size (in)	3	4	3.5
Average Flowrate (cfs)	0.18	0.31	0.28
Time to Empty SWQ Pond (hrs)	35.1	31.0	32.7
1/2 Provided Water Quality Volume (cuft)	11,381	17,280	16,470
Average Flowrate of First 1/2 of SWQ POND (cfs)	0.23	0.40	0.36
Time to Empty First 1/2 of SWQ Pond (hrs)	13.7	12.0	12.7
Water Quality Depth (ft)	1.5	1.5	1.9
Detention Pond Length (ft)	250	275	1,076
Detention Pond Width (ft)	121	123	146
Length to Width Ratio	2.1	2.2	7.4

RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: 

HMT ENGINEERING AND SURVEYING



LEGEND

700

EXISTING CONTOURS

700

PROPOSED CONTOURS

B.L.

BUILDING SETBACK LINE

U.E.

UTILITY EASEMENT

D.E.

DRAINAGE EASEMENT

DA

DRAINAGE AREA

TC

TIME OF CONCENTRATION

(A)

POINT OF CONCENTRATION

DA

ACRES

DRAINAGE FLOW DIRECTION

DA

DRAINAGE AREA LABEL

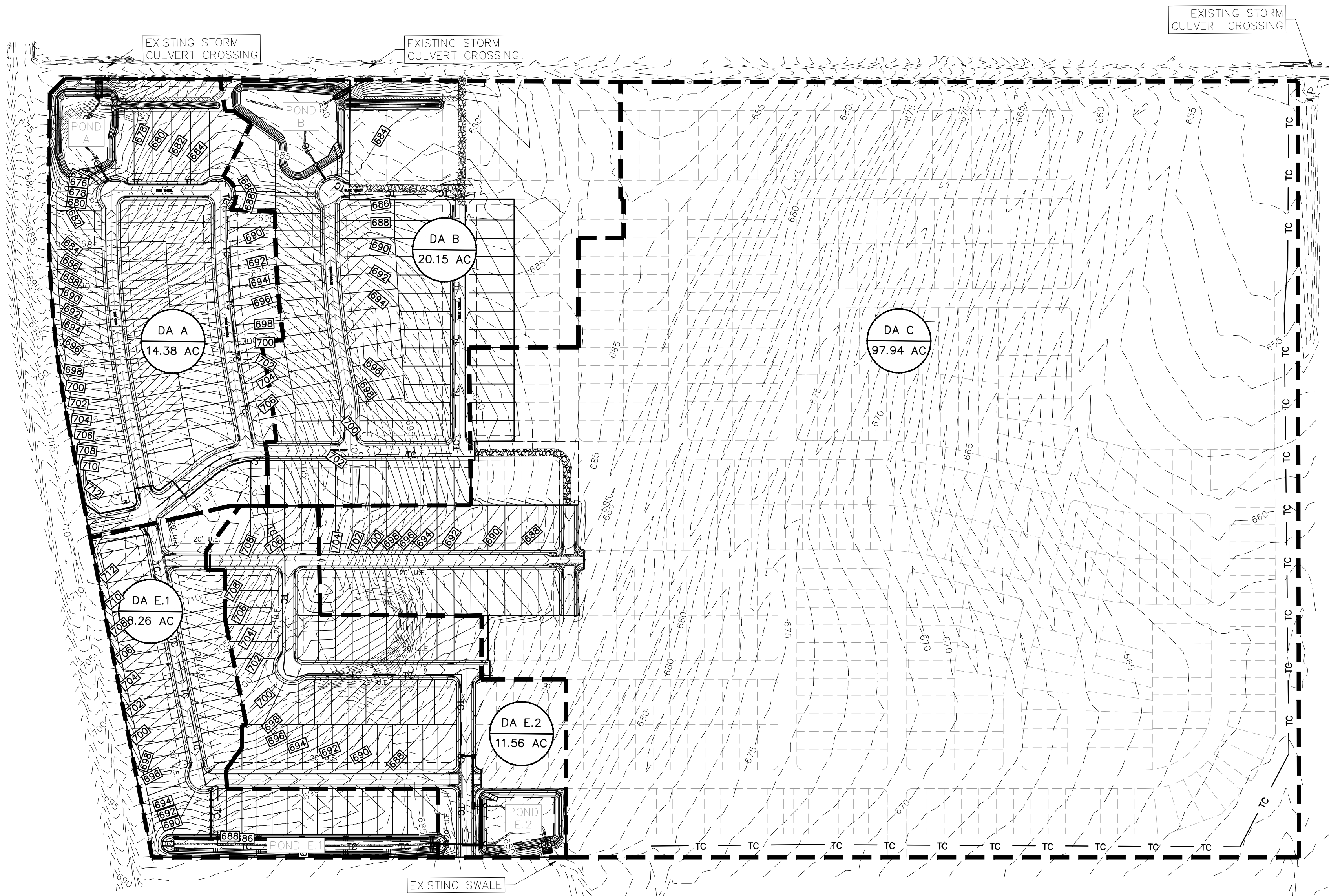


Table 2 - Pre Detention Summary Table												
Point of Concentration	Area ID	Area (ac)	Tc (min)	CN	P2(in)	P10(in)	P25(in)	P100(in)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
A (Proposed/Ultimate)	DA A	14.38	14.70	87	3.34	6.06	8.06	12.30	25.48	55.82	78.04	124.55
B (Proposed)	DA B	20.52	15.10	85	3.34	6.06	8.06	12.30	33.50	76.58	108.43	175.21
B (Ultimate)	DA B	20.15	15.10	87	3.34	6.06	8.06	12.30	35.70	78.22	109.36	174.53
C (Proposed)	DA C	76.02	34.20	81	3.34	6.06	8.06	12.30	74.96	187.71	273.49	455.07
C (Ultimate)*	DA C	97.94	-	-	3.34	6.06	8.06	12.30	-	-	-	-
D (Proposed)**	DA D	21.55	22.30	81	3.34	6.06	8.06	12.30	26.43	65.93	95.91	159.73
E.1 (Proposed/Ultimate)	DA E.1	8.26	17.70	87	3.34	6.06	8.06	12.30	13.81	30.33	42.44	67.79
E.2 (Proposed)	DA E.2	11.56	17.00	86	3.34	6.06	8.06	12.30	18.58	41.63	58.62	94.20
E.2 (Ultimate)	DA E.2	11.56	17.00	87	3.34	6.06	8.06	12.30	19.33	42.45	59.40	94.87
E.1+E.2 (Proposed)	DA E.1+DA E.2	19.82	-	-	3.34	6.06	8.06	12.30	32.38	71.96	101.06	161.99
E.1+E.2 (Ultimate)	DA E.1+DA E.2	19.82	-	-	3.34	6.06	8.06	12.30	33.14	72.78	101.84	162.66

\*DA C will have a detention/storm water quality basin designed in a future unit per the master drainage report  
\*\*Drainage area DA D in ultimate conditions will drain to area DA C, therefore there is no DA D ultimate.

Table 3 - Post Detention Summary Table												
Point of Concentration	Area ID	Area (ac)	Tc (min)	CN	P2(in)	P10(in)	P25(in)	P100(in)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
A (Proposed/Ultimate)	DA A	14.38	14.70	87	3.34	6.06	8.06	12.30	15.77	38.96	56.46	93.73
B (Proposed)	DA B	20.52	15.10	85	3.34	6.06	8.06	12.30	17.89	47.75	71.17	120.06
B (Ultimate)	DA B	20.15	15.10	87	3.34	6.06	8.06	12.30	19.43	49.08	72.00	119.72
E.1 (Proposed/Ultimate)	DA E.1	8.26	17.70	87	3.34	6.06	8.06	12.30	12.79	19.66	22.83	28.45
E.2 (Proposed)	DA E.1+DA E.2	19.82	17.00	86	3.34	6.06	8.06	12.30	21.03	53.59	73.59	112.38
E.2 (Ultimate)	DA E.1+DA E.2	19.82	17.00	87	3.34	6.06	8.06	12.30	21.60	54.38	74.35	113.00

TABLE 18 - CN BREAKDOWN		
DRAINAGE AREA A PROP/ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	14.38	87

DRAINAGE AREA B PROP*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	13.88	87
GOOD CONDITION CONTOURED ROW CROP	6.64	81
WEIGHTED CN	20.52	85

DRAINAGE AREA B ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	20.15	87

DRAINAGE AREA C PROP*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	5.26	87
GOOD CONDITION CONTOURED ROW CROP	70.76	81
WEIGHTED CN	76.02	81

DRAINAGE AREA C ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	97.94	87

DRAINAGE AREA D PROP*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	21.55	81

DRAINAGE AREA E.1 PROP/ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	8.26	87

DRAINAGE AREA E.2 PROP*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	9.84	87
GOOD CONDITION CONTOURED ROW CROP	1.72	81
WEIGHTED CN	11.56	86

DRAINAGE AREA E.2 ULT*		
USE	ACRES	CN
ZONE R-1/R-1A SINGLE FAMILY	11.56	87

\*FOR EXISTING CN VALUES, SEE TR-55 TABLE 2-28 OF GOOD CONDITION CONTOURED ROW CROPS. FOR PROPOSED CONDITIONS, SEE TABLE 4-4 OF THE CITY OF NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL FOR SINGLE FAMILY HOMES (R-1/R-1A)

Table 4 - POCA Proposed/Ultimate Comparison Table						
Point of Concentration	Area ID	Description	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
A	EX-A	Pre-Development Flowrates	15.77	39.30	57.26	95.26
A	POND A	Post-Development Post-Detention Flowrates	15.77	38.96	56.46	93.73
Δ			0.00	(0.34)	(0.80)	(1.53)
Δ (%)			0.00%	-0.87%	-1.40%	-1.61%

Table 5 - POCB Proposed Comparison Table						
Point of Concentration	Area ID	Description	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
B	EX-B	Pre-Development Flowrates	27.40	68.29	99.51	165.54
B	POND B	Post-Development Post-Detention Flowrates	17.89	47.75	71.17	120.06
Δ			(9.51)	(20.54)	(28.34)	(45.48)
Δ (%)			-34.71%	-30.08%	-28.48%	-27.47%

Table 6 - POCB Ultimate Comparison Table						
Point of Concentration	Area ID	Description	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
B	EX-B	Pre-Development Flowrates	27.40	68.29	99.51	165.54
B	POND B	Post-Development Post-Detention Flowrates	19.43	49.08	72.00	119.72
Δ			(7.97)	(19.21)	(27.51)	(45.82)
Δ (%)			-29.09%	-28.13%	-27.65%	-27.68%


Table 7 - POCC Proposed Comparison Table						
Point of Concentration	Area ID	Description	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
C	EX C	Pre-Development Flowrates	75.54	189.16	275.62	458.60
C	DA C	Post-Development Post-Detention Flowrates	74.96	187.71	273.49	455.07
Δ			(0.58)	(1.45)	(2.13)	(3.53)
Δ (%)			-0.77%	-0.77%	-0.77%	-0.77%

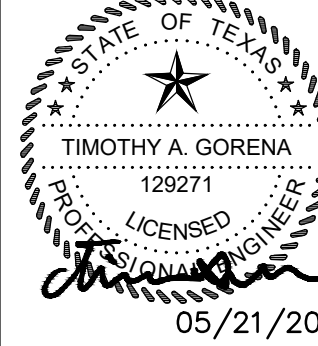
Table 8 - POCD Proposed Comparison Table						
Point of Concentration	Area ID	Description	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
D	EX-D	Pre-Development Flowrates	27.58	69.04	100.51	167.07
D	DA D	Post-Development Post-Detention Flowrates	26.43	65.93	95.91	159.73
Δ			(1.15)	(3.11)	(4.60)	(7.34)
Δ (%)			-4.17%	-4.50%	-4.58%	-4.39%

Table 9 - POCE1+E2 Proposed Comparison Table						
Point of Concentration	Area ID	Description	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
E	EX-E	Pre-Development Flowrates	21.84	54.44	79.33	131.96
E	DA E	Post-Development Post-Detention Flowrates	21.03	53.59	73.59	112.38
Δ			(0.81)	(0.85)	(5.74)	(19.58)
Δ (%)			-3.71%	-1.56%	-7.24%	-14.84%

Table 10 - POCE1+E2 Ultimate Comparison Table							
Point of Concentration	Area ID	Description	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)	
E.1+E.2	DA E.2	Pre-Development Flowrates	21.84	54.44	79.33	131.96	
E.1+E.2	DA E.2	Post-Development Post-Detention Flowrates	21.60	54.38	74.35	113.00	
Δ			(0.24)	(0.06)	(4.98)	(18.96)	
Δ (%)			-1.10%	-0.11%	-6.28%	-14.37%	

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P1210562-3844-F1210562-3236  
TBP1 FIRM F-10961  
TBP1 FIRM 1015360





05/21/2020

ULTIMATE DRAINAGE  
AREA MAP  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION	DESCRIPTION	DATE
1	WATER AND WASTEWATER REV		02/18/2019
2	FIRE ACCESS REV		03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV		05/29/2019
4	STEPHENSON STATION REVISION		07/29/2019
5	BEFORE UNDER FM 1101 REV		08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+48.42		08/13/2019
7	PAYMENT DRAWING REV		09/21/2019
8	WED RES ADA RAMP		01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

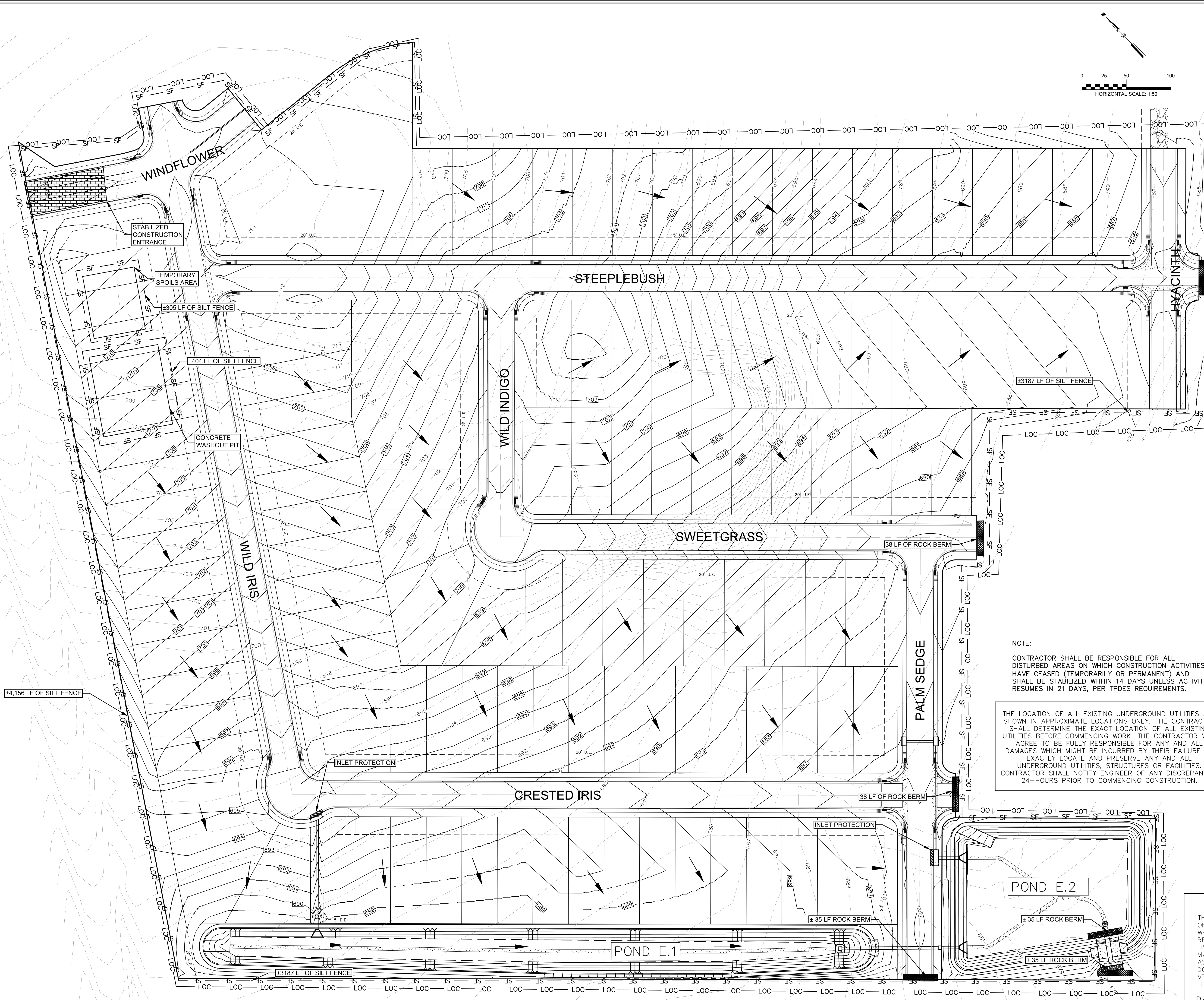
REVIEWED BY: CC/SWH

HMT PROJECT NO.: 266.07

SHEET  
C1.2



Drawing Name: M:\\_Projects\266 - Heatherfield Unit 1\CDs\266.002\_C2.0 - EROSION.dwg User: andrewm May 26, 2020 - 11:10am



**LEGEND**

— 700 —	EXISTING CONTOURS
— 700 —	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
— SF —	SILT FENCE
— LOC —	LIMIT OF CONSTRUCTION
[Brick Pattern]	STABILIZED CONSTRUCTION ENTRANCE
[Hatched Pattern]	FILTER DIKE CURB INLET PROTECTION
[Solid Black]	ROCK BERM

- SEQUENCE OF CONSTRUCTION**
1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
  2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
  3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
  4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
  5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
  6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
  7. INSTALL STREETSCAPE AND/OR LANDSCAPING IMPROVEMENTS.
  8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION. PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
  9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
  10. TPDES REQUIREMENTS - DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY WILL BEGIN AGAIN WITHIN 21 DAYS.

**NOTE:**  
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENT) AND SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES IN 21 DAYS, PER TPDES REQUIREMENTS.

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

**RECORD DRAWING**

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*

HMT ENGINEERING AND SURVEYING

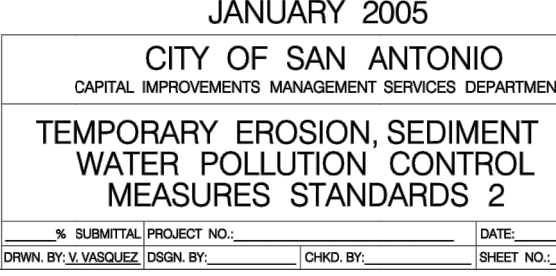
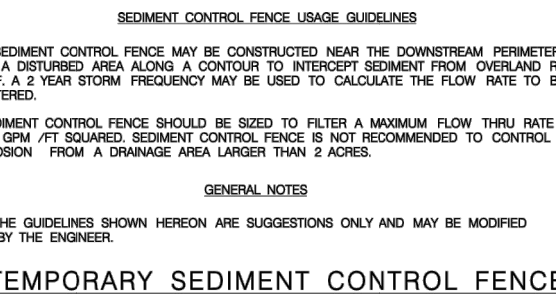
<b>EROSION CONTROL PLAN</b>	
HEATHERFIELD SUBDIVISION UNIT 1	
<b>REVISION</b>	<b>DATE</b>
NO.	NO.
1	02/18/2019
2	03/29/2019
3	05/29/2019
4	07/29/2019
5	08/13/2019
6	09/21/2019
7	01/29/2020
DATE: FEBRUARY 2020	
DRAWN BY: HM	
DESIGNED BY: TG	
REVIEWED BY: CC/SWH	
HMT PROJECT NO.: 266.07	
<b>SHEET</b>	
<b>C2.0</b>	

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPB FIRM F-10961  
TBPB FIRM 10153600

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
TIMOTHY A. GOREN  
129271  
LICENSED PROFESSIONAL ENGINEER  
*Timothy A. Goren*  
05/21/2020

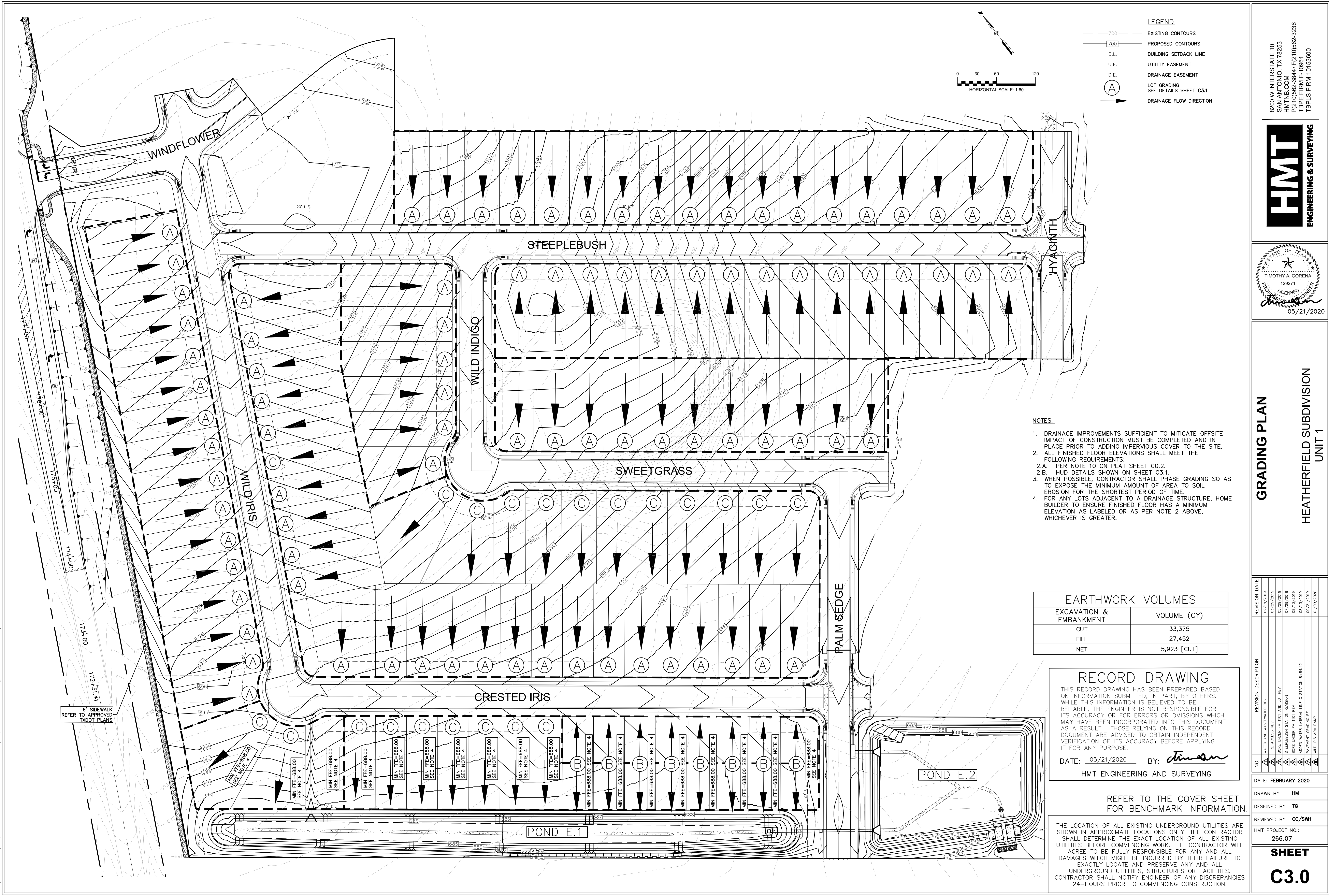




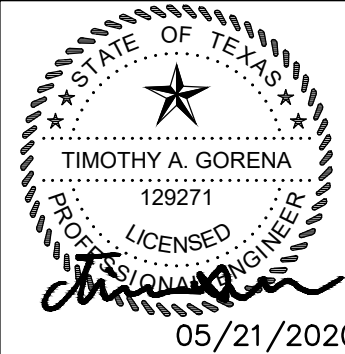
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE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



Drawing Name: M:\\_Projects\266 - Heatherfield Unit 1\CDs\266.002\_C3.0 - 090.dwg User: mndwrm May 26, 2020 - 11:11am



8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P12101562-3844 • F12101562-3236  
TBPB FIRM F-10961  
TBPB FIRM 1015360



GRADING PLAN

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEEPLEBUSH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+44.42	08/13/2019
7	PAYMENT GRADING REV	09/21/2019
8	WILD IRIS ADA RAMP	01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

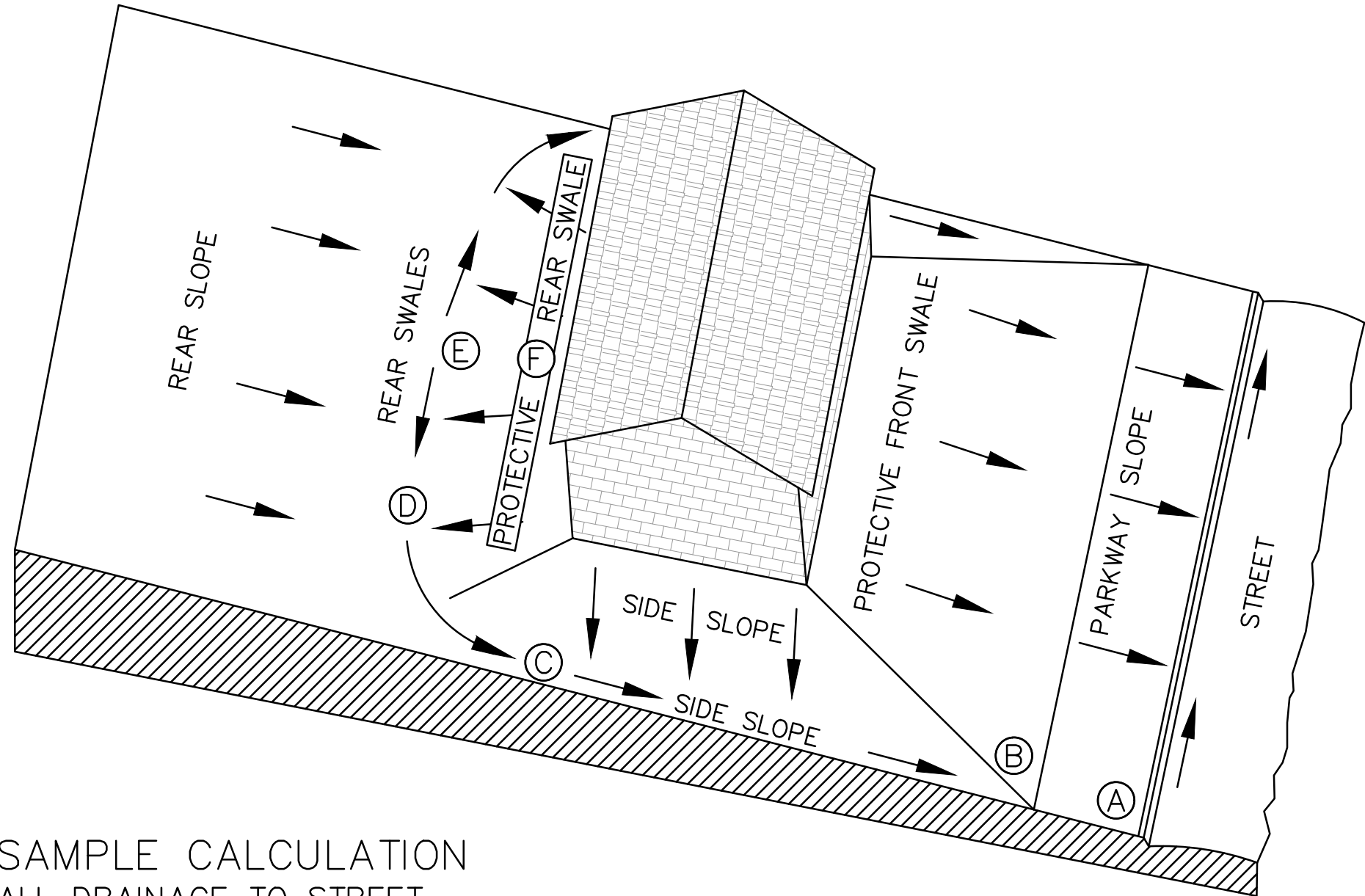
HMT PROJECT NO.: 266.07

**SHEET**

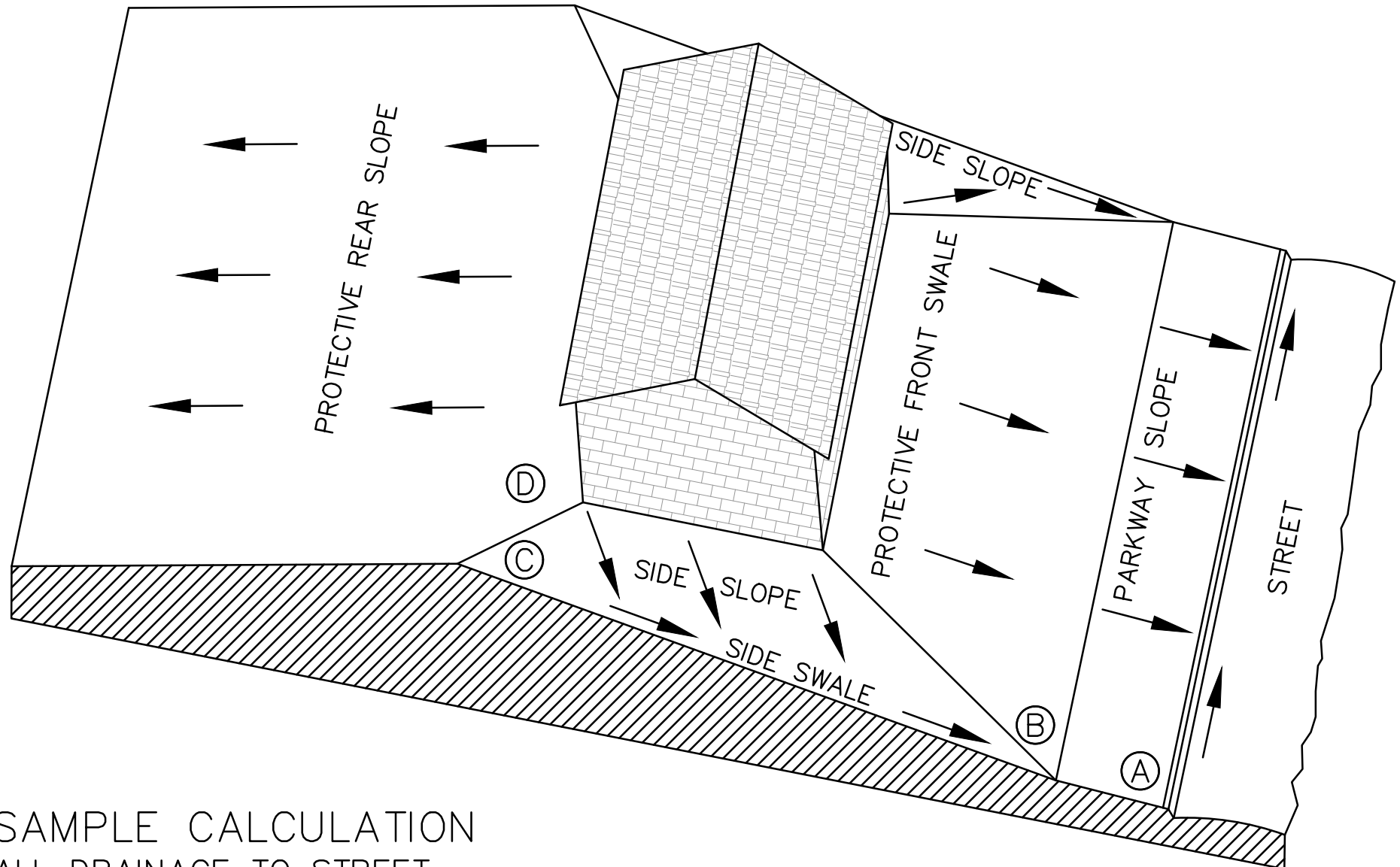
**C3.0**



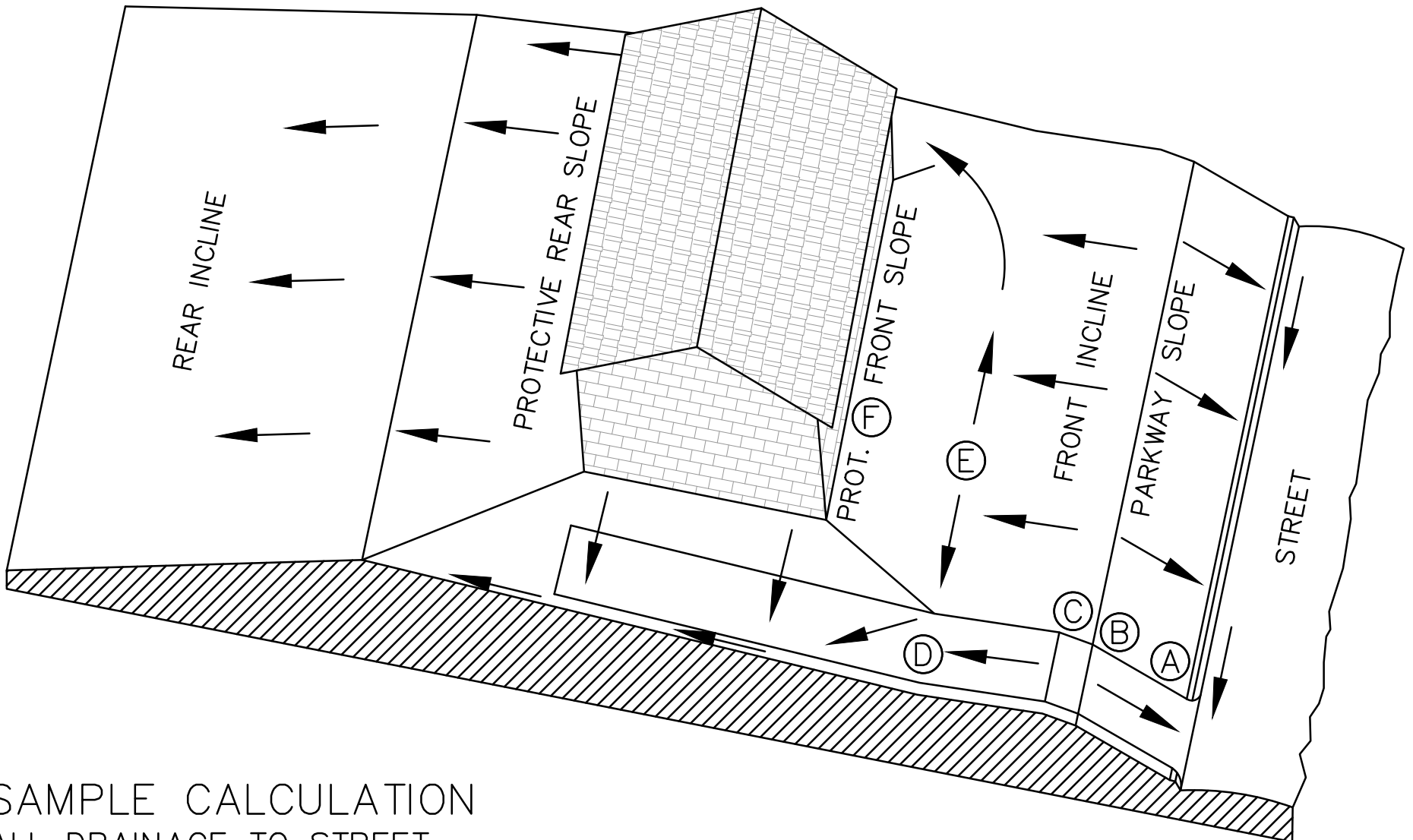
Drawing Name: M:\\_Projects\266 - Heatherfield Unit 1\CDs\266.002\_C3.1 - GRAD DETAILS.dwg User: andrewm May 26, 2020 - 11:11am



SAMPLE CALCULATION  
ALL DRAINAGE TO STREET



SAMPLE CALCULATION  
ALL DRAINAGE TO STREET



SAMPLE CALCULATION  
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES	
A	CURB-TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER				
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
BC	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21" (1.8')	11" (0.9')		
CD	SWALE TURN WITH 10' RADIUS:16' GRASS AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
DE**	REAR SWALE: 13' GRASS AT 1/4"/FT. (2%)	3" (0.3')	2" (0.2')		
EF*	PROTECTIVE REAR SLOPE UP FROM HIGH POINT OF SWALES	3" (0.3')	3" (0.3')		
SUB-TOTAL AF FROM CURB TOP TO GROUND AT REAL BLDG WALL		35" (3.0')	20" (1.7')		
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 35" + 8"		43" (3.6')	28" (2.3')		
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		54" (4.5')	39" (3.3')		
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.					
** LENGTH DE = [1/2(LOT WIDTH - (2x SWALE TURN RADIUS))] - [LOT WIDTH x (STREET GRADIENT x SWALE GRADIENT)]					

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES	
A	CURB-TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER				
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
BC	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21" (1.8')	11" (0.9')		
CD*	PROTECTIVE SIDE SLOPE @ REAR BLDG. WALL EXTENSION	3" (0.3')	3" (0.3')		
SUB-TOTAL AD FROM CURB TOP TO GROUND AT REAL BLDG WALL		27" (2.4')	16" (1.4')		
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 27" + 8"		35" (2.9')	24" (2.0')		
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		46" (3.8')	35" (2.9')		
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.					

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 13.5% DRIVEWAY, AND 16' FRONT SWALE DE AT 2.0%.				RESULTS OF 1% SWALES	
A	CURB-TOP HIGH SIDE OF DRIVE NEAR LOW LOT CORNER				
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
BC	DRIVEWAY GRADE CHANGE: 4' VERTICAL CURVE FROM UP- GRADE DRIVE IN STREET TO DOWN-GRADE DRIVE ON LOT	0" (0.0')	0" (0.0')		
CD	DRIVEWAY DOWN-GRADE TO POINT 10 FEET OUT FROM FRONT OF BUILDING: -11' AT 1 8"/FT (13.5%)	-18" (-1.5')	-18" (-1.5')		
DE	FRONT SWALE: 16' GRASS AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
EF*	PROT. FRONT SLOPE UP FROM HIGH POINT OF SWALES	3" (0.3')	3" (0.3')		
SUB-TOTAL AF FROM CURB TOP TO GROUND AT FRONT BLDG WALL		-7" (-1.0')	-11" (1.3')		
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: -7" + 8"		1" (-0.3')	-3" (0.7')		
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: -7" + 19"		12" (-0.6')	8" (0.3')		
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.					

LOT TYPE A

LOT TYPE B

LOT TYPE C

GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION

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

SCARIFYING THE AREA TO BE FILLED

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

COMPACTING THE AREA TO BE FILLED

FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLOUDS. THE AREA SHALL BE BROUGHT TO ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE TMD-TEX-113-E COMPACTION PROCEDURE. ALL AREAS EXCEEDING (6") SIX INCHES IN DEPTH, MUST MEET WITH FHWA/HUD HANDBOOK 4140.30 SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79G.

FILL MATERIALS

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

DEPTH AND MIXING OF FILL LAYERS

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

ROCK

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

COMPACTION OF FILL LAYER

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

COMPACTION OF SLOPES

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

DENSITY TEST

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

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

CUT/FILL LOTS

AREAS INVOLVING CUT ON THE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6 IN., AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.

HUD 79-G

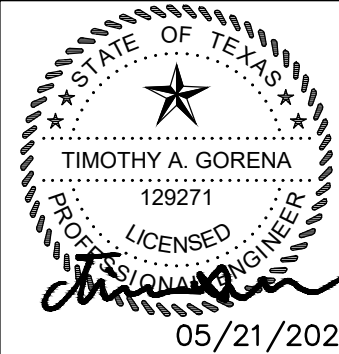
HUD 79-G REQUIREMENT FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79-G COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79-G. AFTER SITE GRADING IS COMPLETED, GEO-TECHNICAL ENGINEER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

DRAINAGE NOTE

FINISHED FLOOR ELEVATIONS

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

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPE FRM F-10961  
TBPLS FRM 1015360



GRADING DETAILS

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPHENBURGH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+48.42	08/13/2019
7	PERMIT GRADING REV	09/21/2019
8	WED RES ADA RAMP	07/29/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.:

266.07

SHEET

C3.1

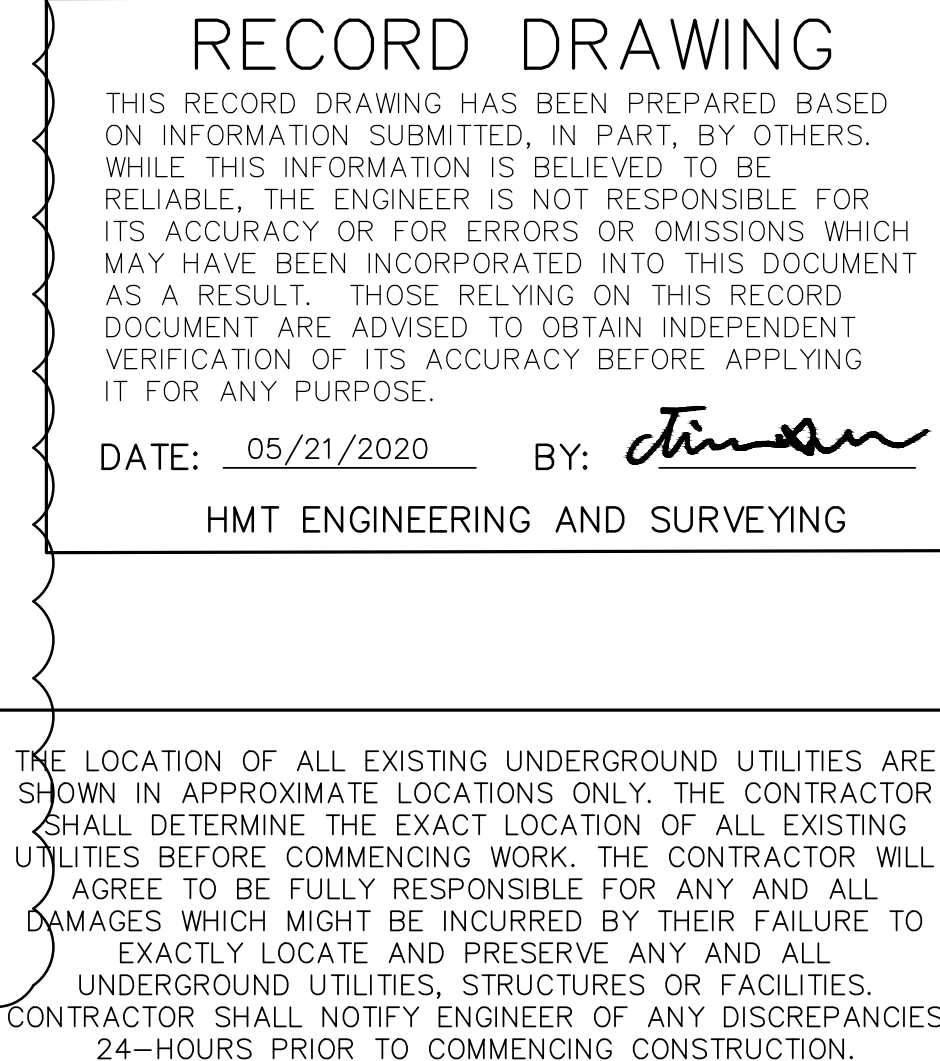
RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*

HMT ENGINEERING AND SURVEYING





# STEEPLEBUSH PLAN & PROFILE

## HEATHERFIELD SUBDIVISION UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/12/2019
2	ACCESS PM 1102 AND LOT REV	05/27/2019
3	REVISIONS TO PAVEMENT	06/27/2019
4	STEPPED SHIM STATION REVISION	07/22/2019
5	REVISIONS TO PAVEMENT	08/13/2019
6	REVISIONS TO PAVEMENT	08/13/2019
7	ADDED WATER LATERAL LINE C STATION 8+84.42	08/13/2019
8	PAVEMENT GRADING RFI	09/21/2019
9	WLD R/S ADA RAMP	01/09/2020

**SHEET**  
**C4.0**

8200 W. INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT INC.  
P(210)562-3244 • F(210)562-3236  
TAPES FIRM F-10961  
TBPLS FIRM 10153600

---

**HMT**

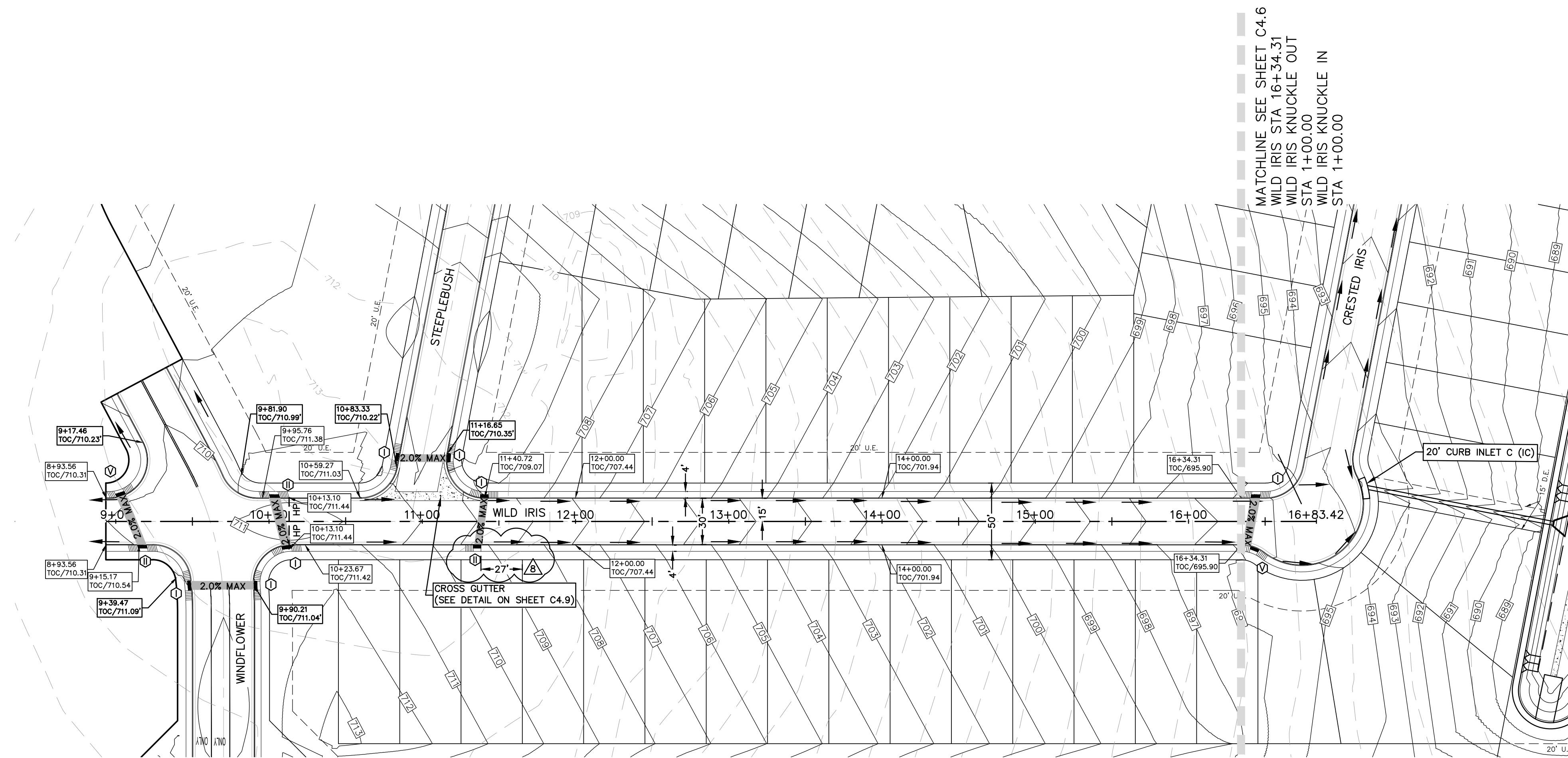
**ENGINEERING & SURVEYING**



STATE OF TEXAS  
★  
TIMOTHY A. GOREN  
125271  
LICENSED PROFESSIONAL ENGINEER  
*Timothy A. Goren*

05/21/2020

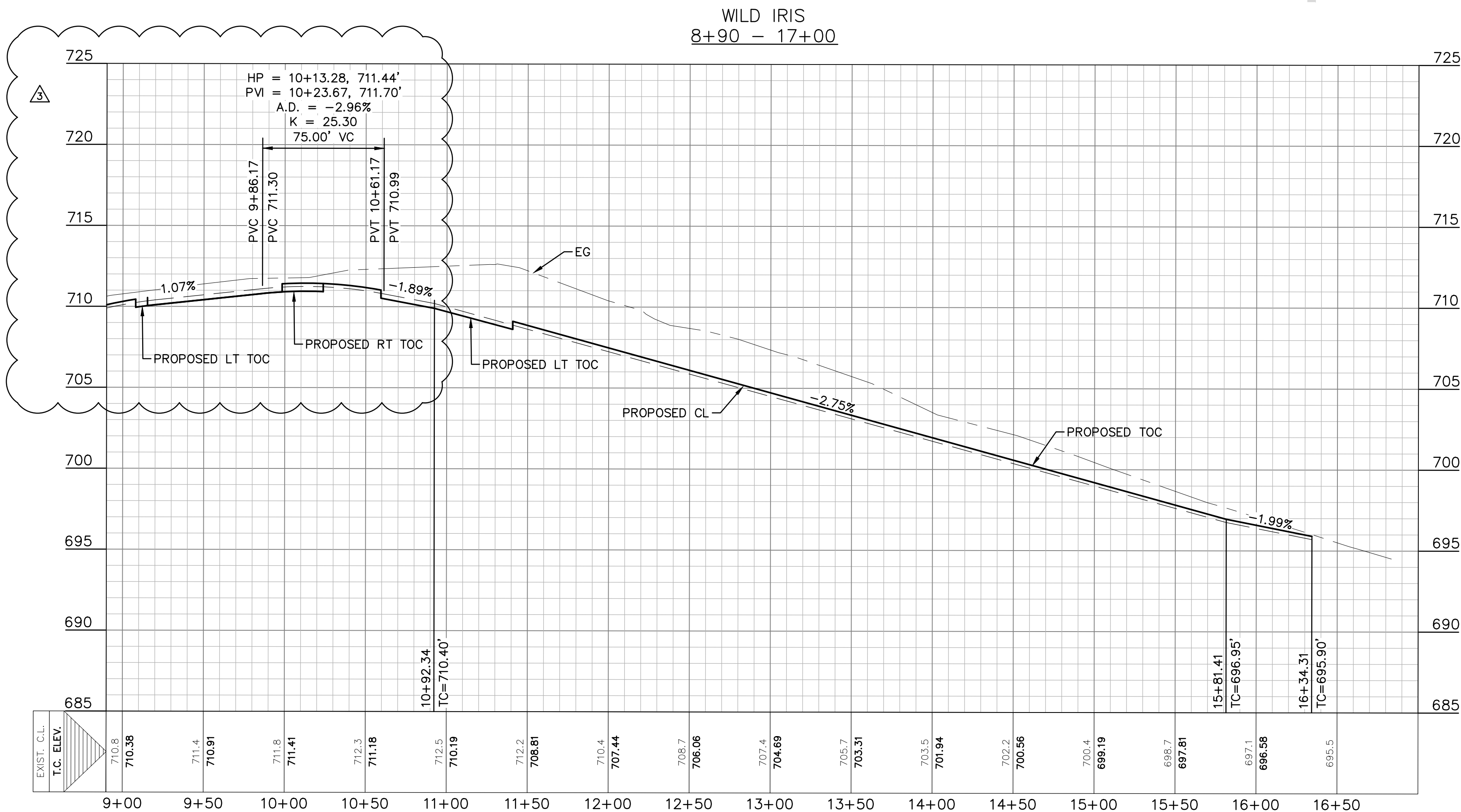
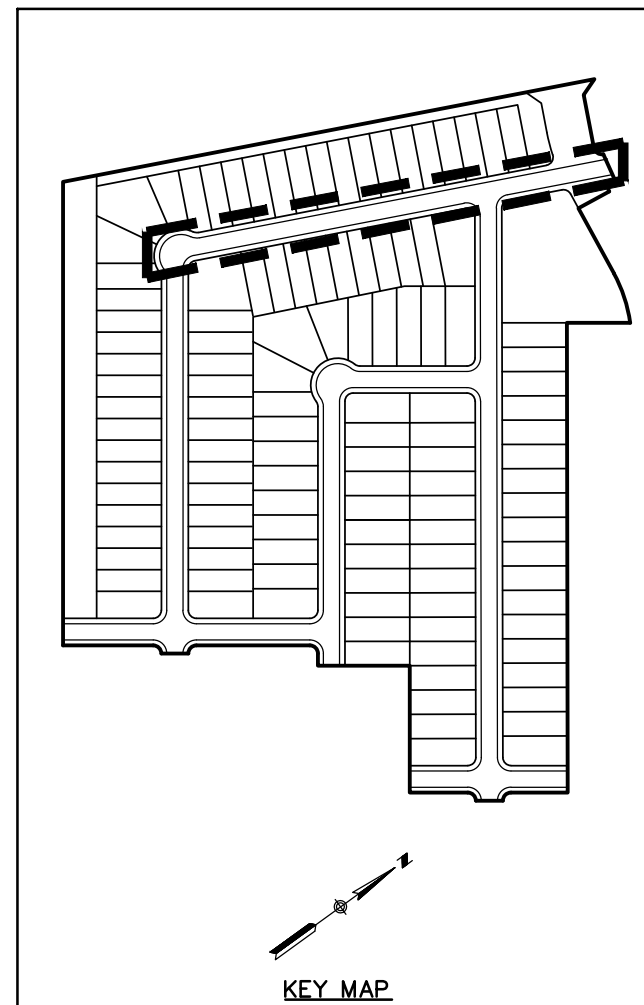
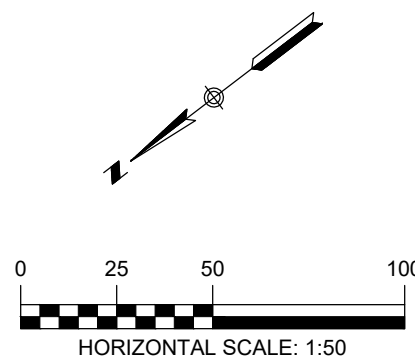




- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - A.D.A. RAMP
  - FLOW ARROW
  - WASHOUT CROWN AREAS
  - EXISTING GROUND (EG CL)
  - FINISHED GROUND TOP OF CURB (FG TOC)
  - ACCESSIBLE CROSSING AREA  
CONTRACTOR TO ENSURE MAX 2%  
CROSS SLOPE IN THESE AREAS
  - 2.0% MAX
  - SIDEWALK RAMP TYPE  
(SEE DETAIL SHEET C3.10)
  - SIDEWALK TO BE CONSTRUCTED  
BY SITE DEVELOPMENT CONTRACTOR

**NOTES**

- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.



**RECORD DRAWING**

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*  
HMT ENGINEERING AND SURVEYING

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

**WILD IRIS PLAN &  
PROFILE**  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPPED BUSH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42	08/13/2019
7	PAYMENT GRADING REV	09/21/2019
8	WILD IRIS ADA RAMP	01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

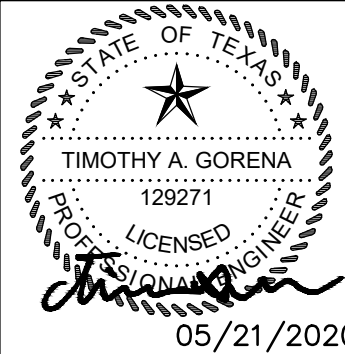
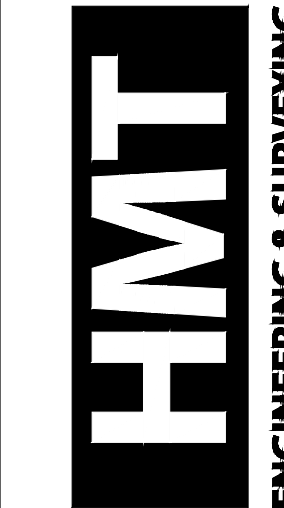
HMT PROJECT NO.:

266.07

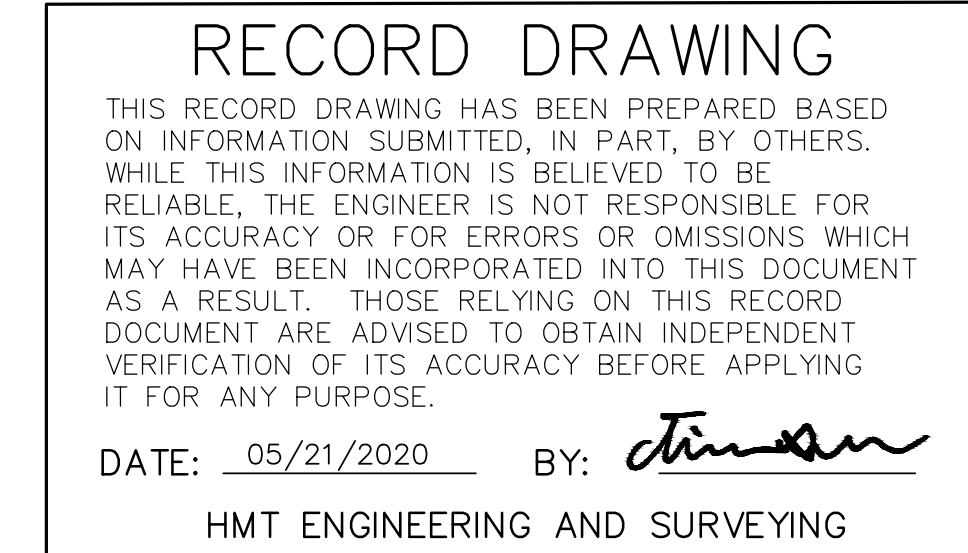
**SHEET**

**C4.1**


8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600



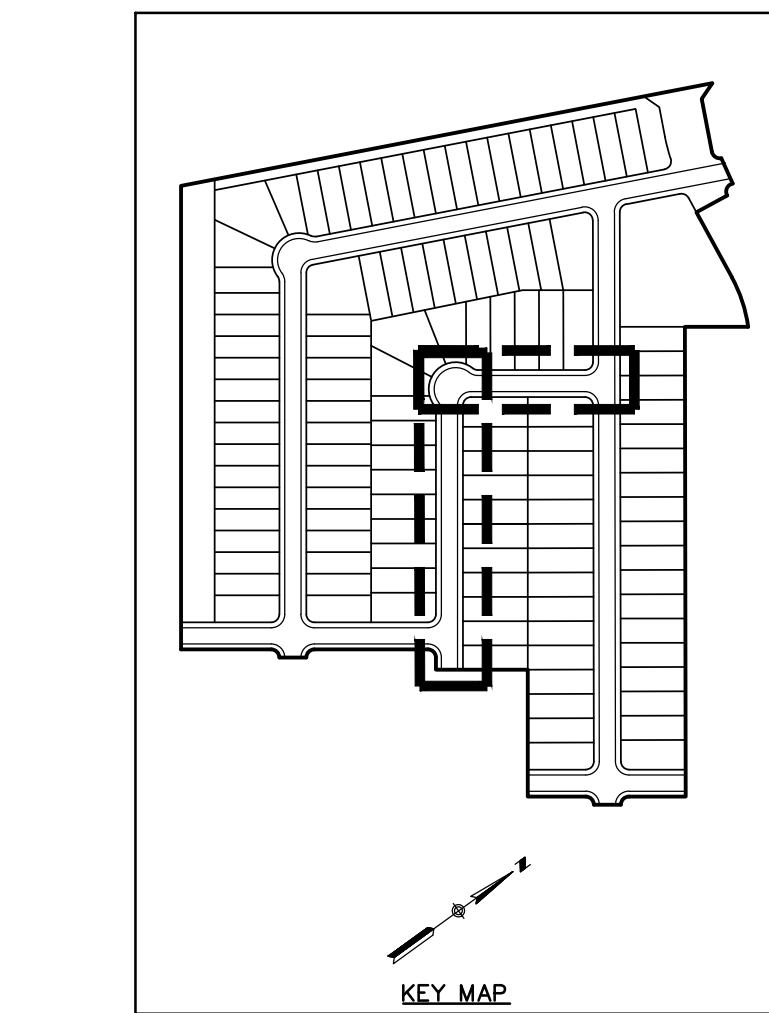
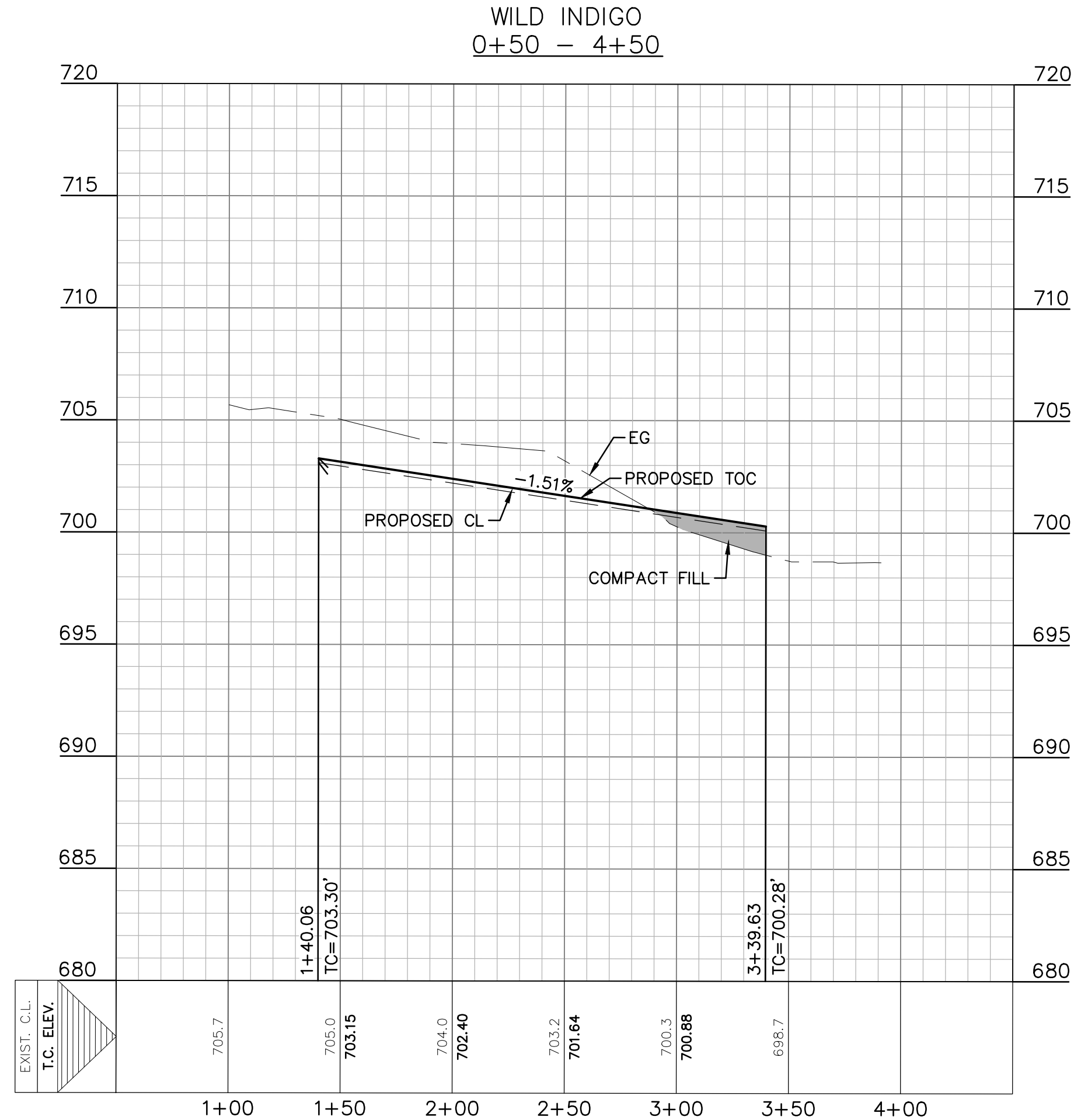
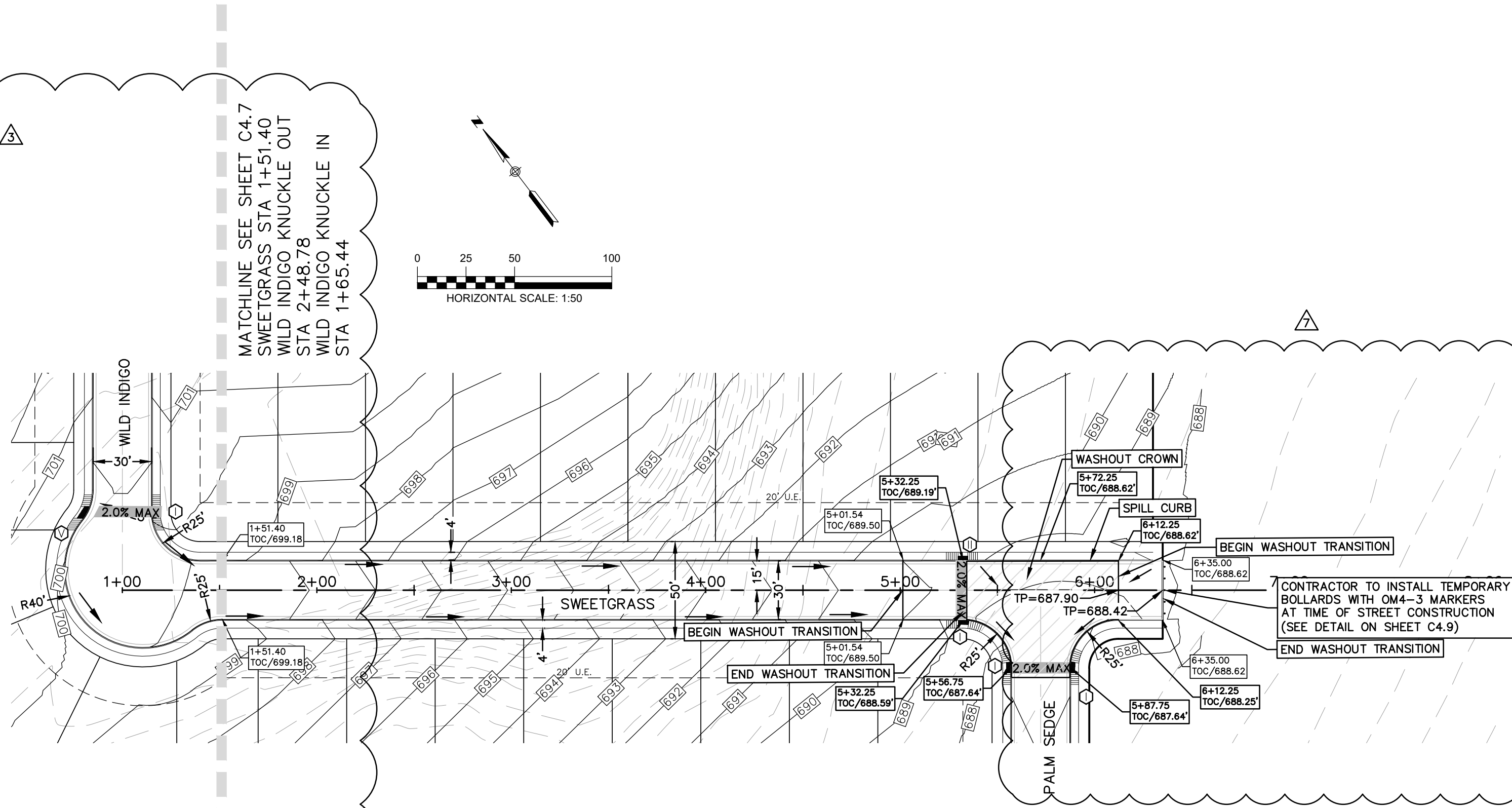
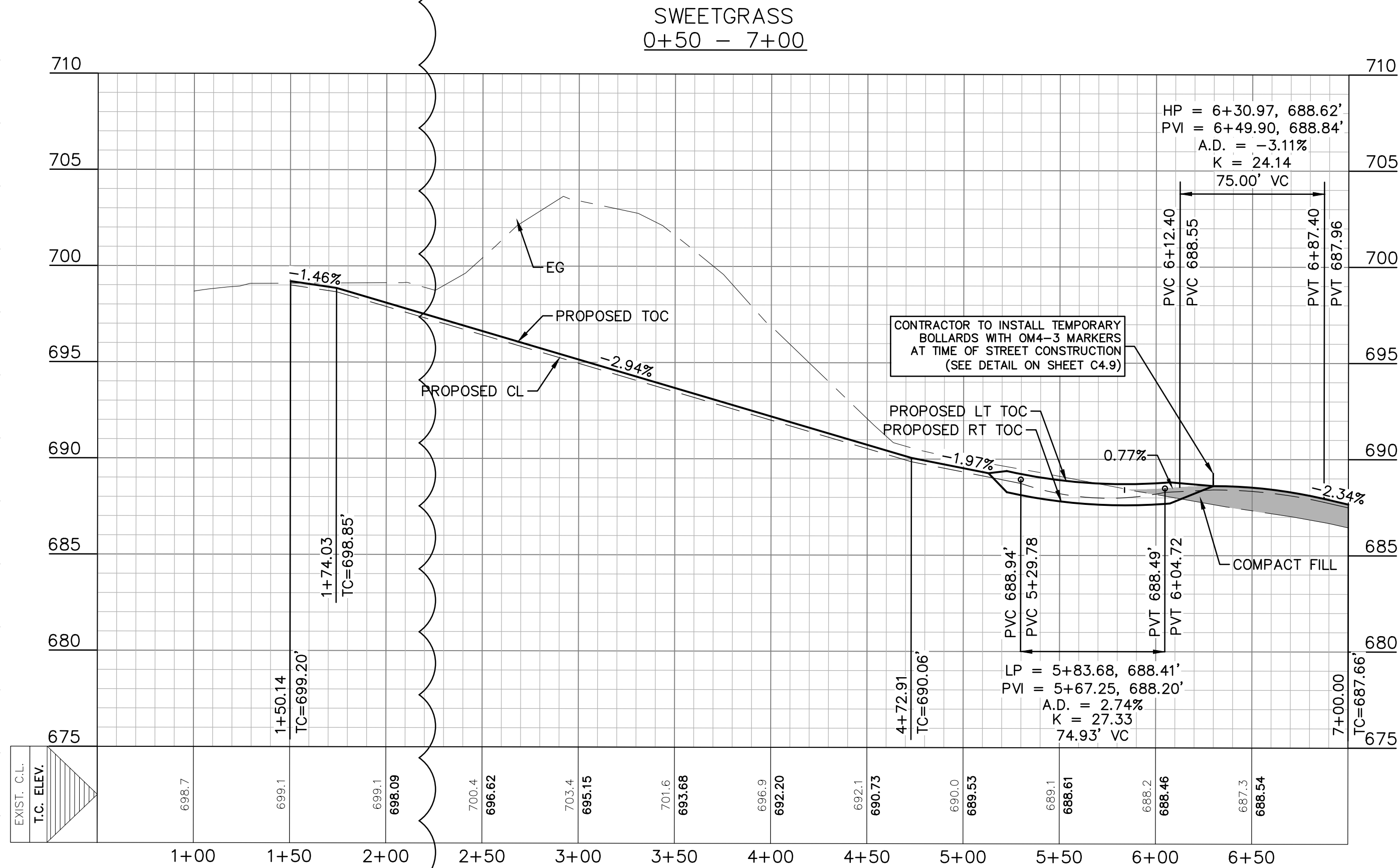




**SHEET**  
**C4.2**

<div>8200 W INTERSTATE 10 SAN ANTONIO, TX 78253 HMT.NB.COM P12101562-3844 • F12101562-3236 TBPE FIRM F-10961 TBPLS FIRM 10153600</div>	
<div><div><div>HMT</div><div>ENGINEERING &amp; SURVEYING</div></div></div>	
<div><div><div><div><div>STATE OF TEXAS</div><div>TIMOTHY A. GORENA</div><div>192721</div><div>REGISTERED PROFESSIONAL ENGINEER</div></div><div></div><div>05/21/2020</div></div></div></div>	
<div><div><div>CRESTED IRIS PLAN &amp; PROFILE</div><div>HEATHERFIELD SUBDIVISION</div><div>UNIT 1</div></div></div>	
REVISION DATE	NO. REVISION DESCRIPTION
02/18/2019	1 WATER AND WASTEWATER REV
03/29/2019	2 FIRE ACCESS REV
05/29/2019	3 BORNE UNDER FM 1101 AND LOT REV
07/29/2019	4 STEPHENBURGH STATION REVISION
08/13/2019	5 BORNE UNDER FM 1101 REV
08/13/2019	6 ADDED WATER LATERAL LINE C STATION 8+84.42
09/21/2019	7 PAYMENT GRADING RFI
01/09/2020	8 WILD IRIS ADA RAMP
DATE: <b>FEBRUARY 2020</b>	
DRAWN BY: <b>HM</b>	
DESIGNED BY: <b>TC</b>	
REVIEWED BY: <b>CC/SWH</b>	
HMT PROJECT NO.: <b>266.07</b>	
<div><div>SHEET</div><div>C4.2</div></div>	





## RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*

HMT ENGINEERING AND SURVEYING

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

## NOTES

- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.

- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - A.D.A. RAMP
  - FLOW ARROW
  - WASHOUT CROWN AREAS
  - EXISTING GROUND (EG CL)
  - FINISHED GROUND TOP OF CURB (FG TOC)
  - ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
  - SIDEWALK RAMP TYPE (SEE DETAIL SHEET C3.10)
  - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR

## SWEETGRASS & WILD INDIGO PLAN & PROFILE HEATHERFIELD SUBDIVISION UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM TIT AND LOT REV	05/29/2019
4	STEEPLEBUSH STATION REVISION	07/29/2019
5	BEFORE UNDER FM TIT REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42	08/13/2019
7	PAYMENT GRADING REV	09/21/2019
8	WILD RES ADA RAMP	01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.:

266.07

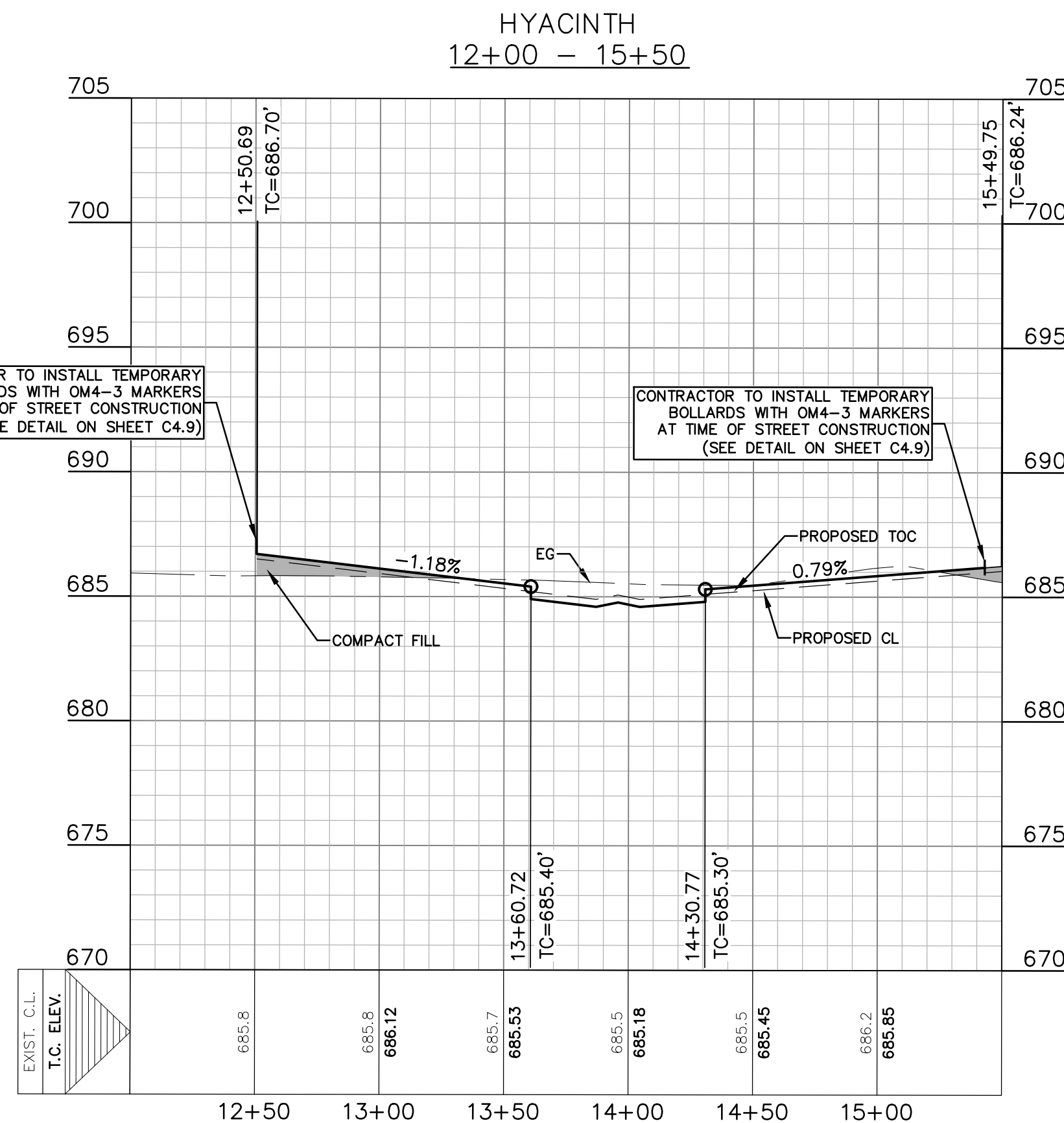
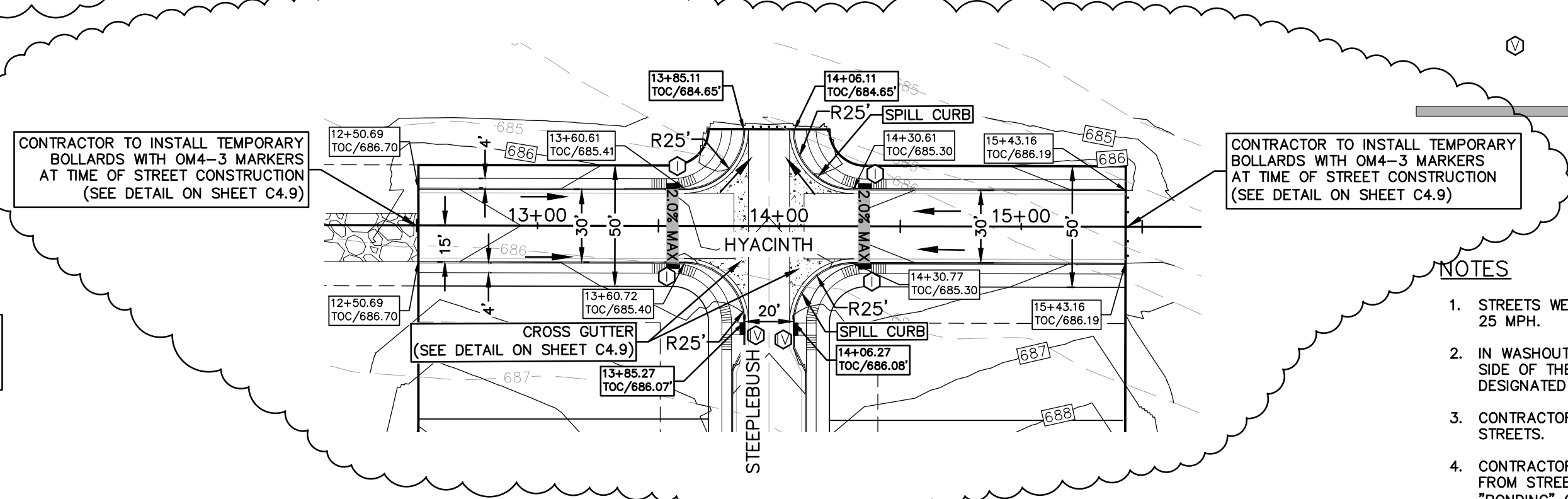
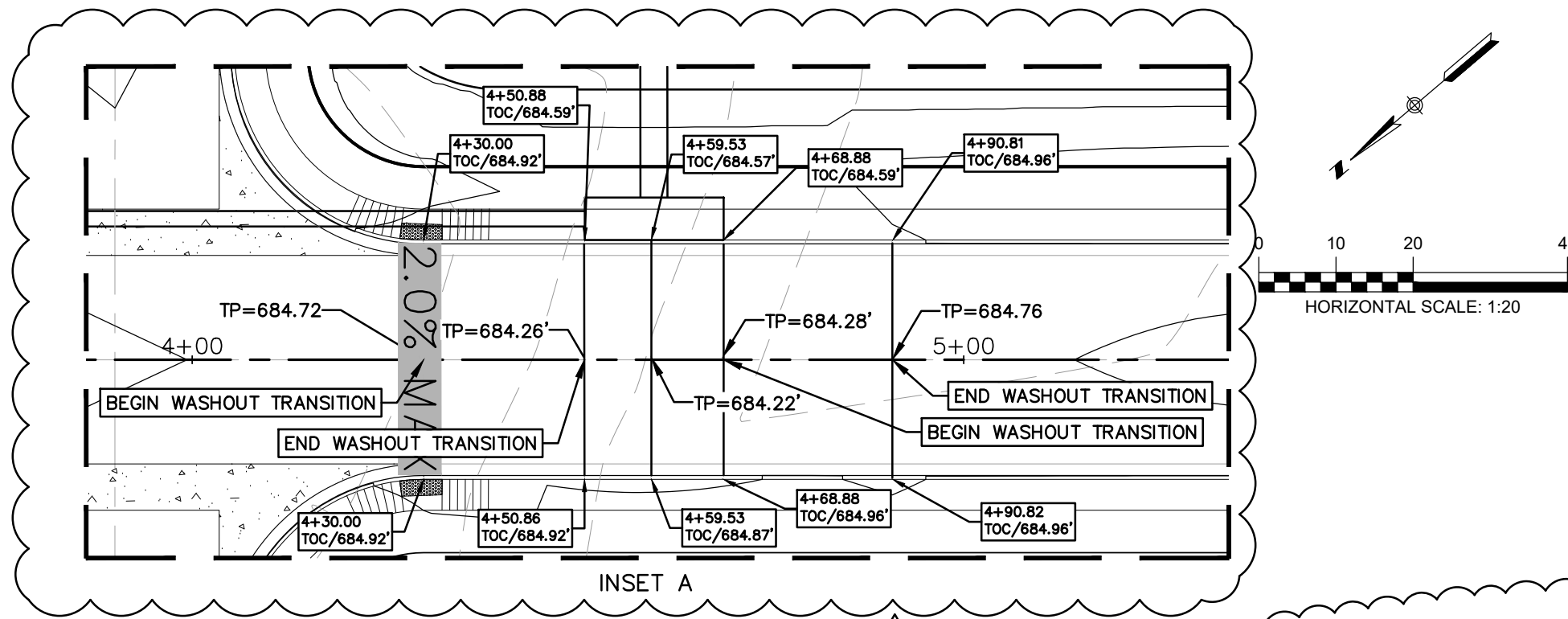
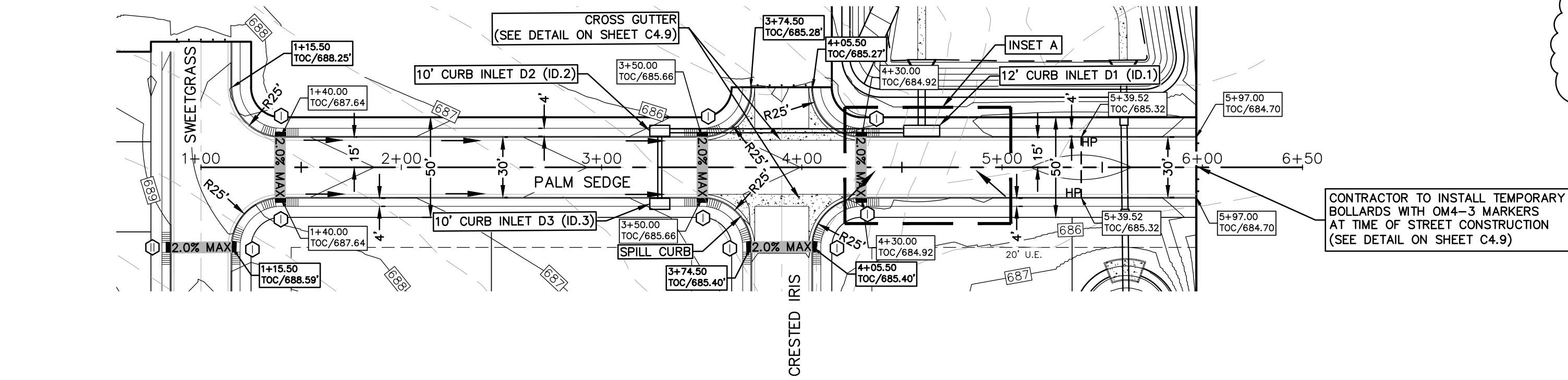
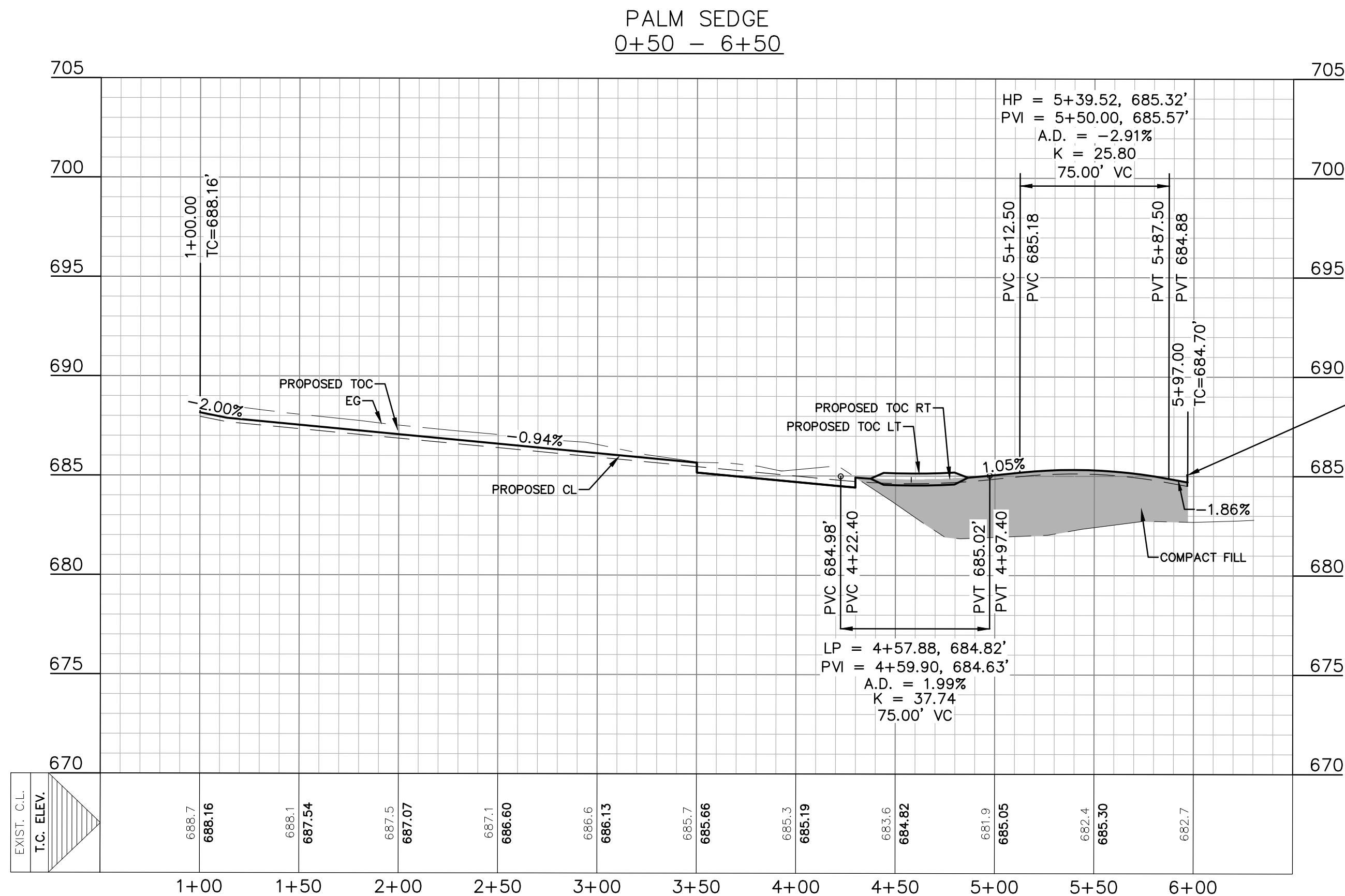
SHEET

C4.3

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P(210)562-3844 • F(210)562-3236  
TBP# FRM F-10961  
TBP# FRM 10153600







**RECORD DRAWING**

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

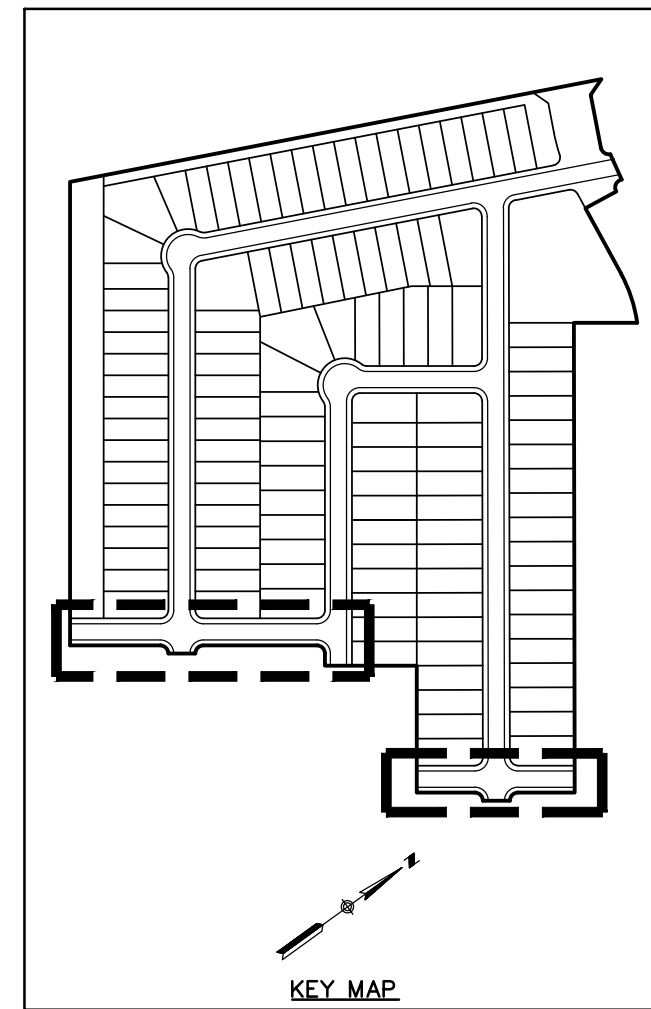
DATE: 05/21/2020 BY: *Timothy A. Goren*

HMT ENGINEERING AND SURVEYING

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

- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - A.D.A. RAMP
  - FLOW ARROW
  - WASHOUT CROWN AREAS
  - EXISTING GROUND (EG CL)
  - FINISHED GROUND TOP OF CURB (FG TOC)
  - ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
  - 2.0% MAX
  - SIDEWALK RAMP TYPE (SEE DETAIL SHEET C3.10)
  - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR

- NOTES**
- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
  - IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
  - CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
  - CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.



**HYACINTH & PALM SEDGE  
PLAN & PROFILE**

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPPED/SHOULDER STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+44.42	08/13/2019
7	PAYMENT DRAWING REV	09/21/2019
8	REV 855 ADA RAMP	01/09/2020

DATE: FEBRUARY 2020
DRAWN BY: HM
DESIGNED BY: TG
REVIEWED BY: CC/SWH
HMT PROJECT NO.: 266.07

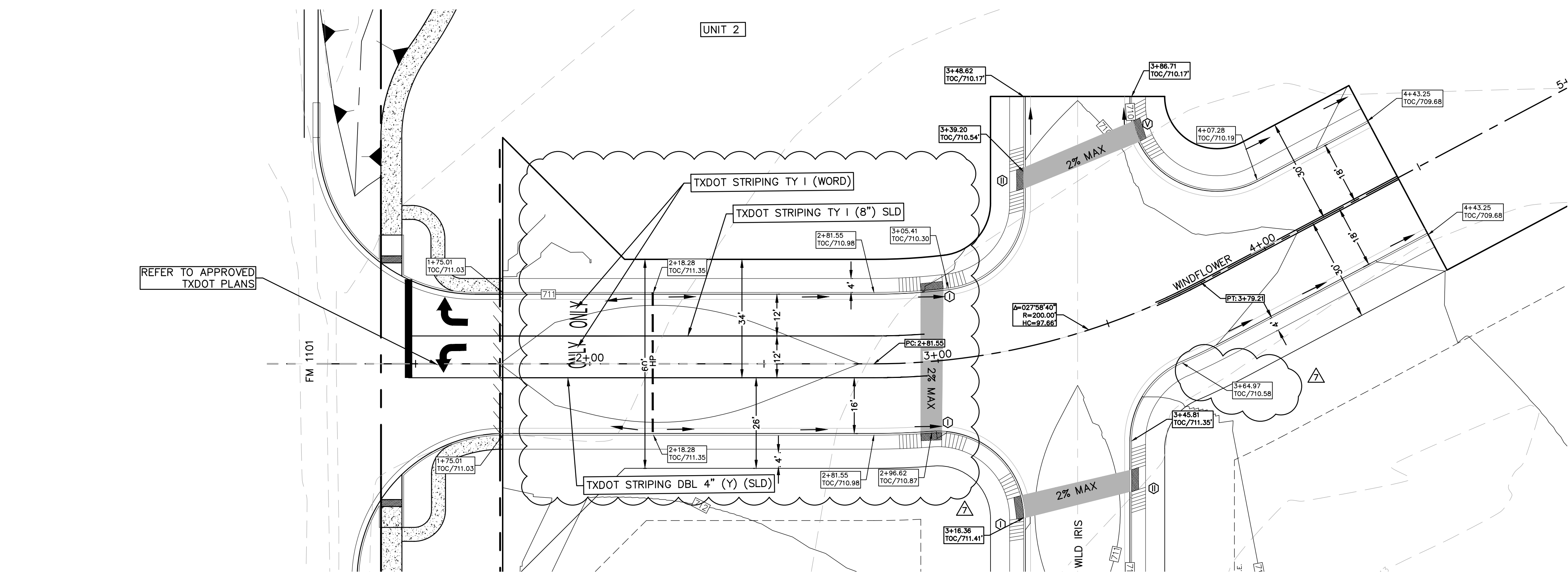
**SHEET  
C4.4**

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P(210)562-3844 • F(210)562-3236  
TBP# FIRM F-10961  
TBP# FIRM 10153600

**HMT  
ENGINEERING & SURVEYING**

STATE OF TEXAS  
TIMOTHY A. GOREN  
129271  
LICENSED PROFESSIONAL ENGINEER  
05/21/2020

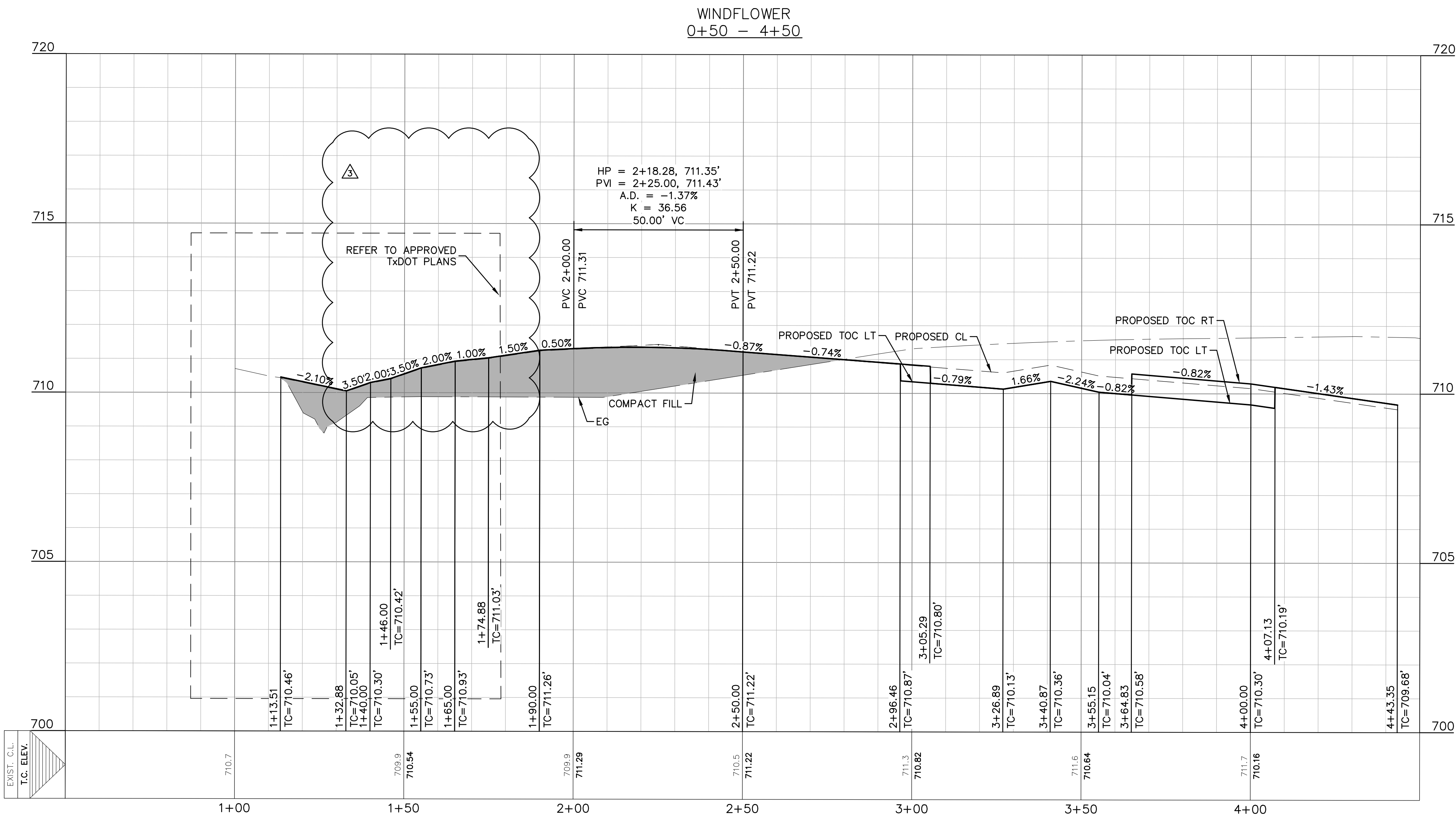
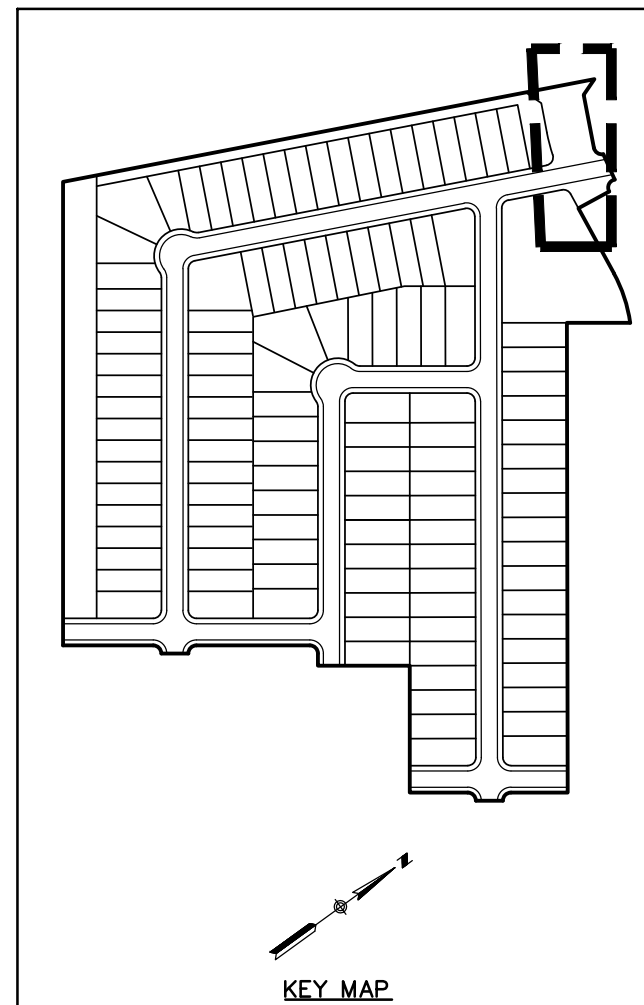
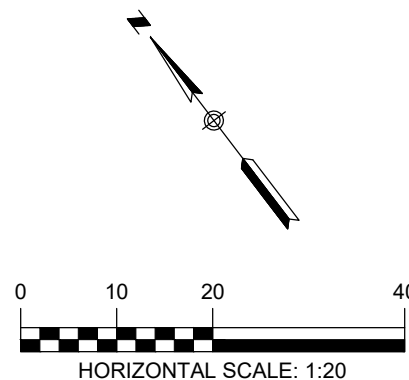




- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - A.D.A. RAMP
  - FLOW ARROW
  - WASHOUT CROWN AREAS
  - EXISTING GROUND (EG CL)
  - FINISHED GROUND TOP OF CURB (FG TOC)
  - ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
  - SIDEWALK RAMP TYPE (SEE DETAIL SHEET C3.10)
  - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR

**NOTES**

- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.



**RECORD DRAWING**

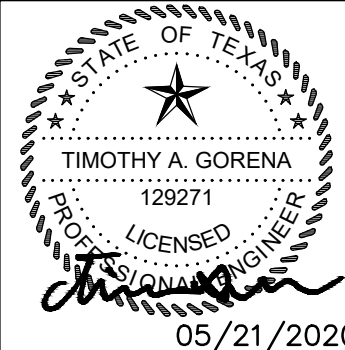
THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*

HMT ENGINEERING AND SURVEYING

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

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P(210)562-3844 • F(210)562-3236  
TBPB FIRM F-10961  
TBPB FIRM 10153600



**WINDFLOWER PLAN &  
PROFILE**  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPHEN BUSH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+44.42	08/13/2019
7	PAYMENT GRADING REV	09/21/2019
8	WILD IRIS ADA RAMP	07/29/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

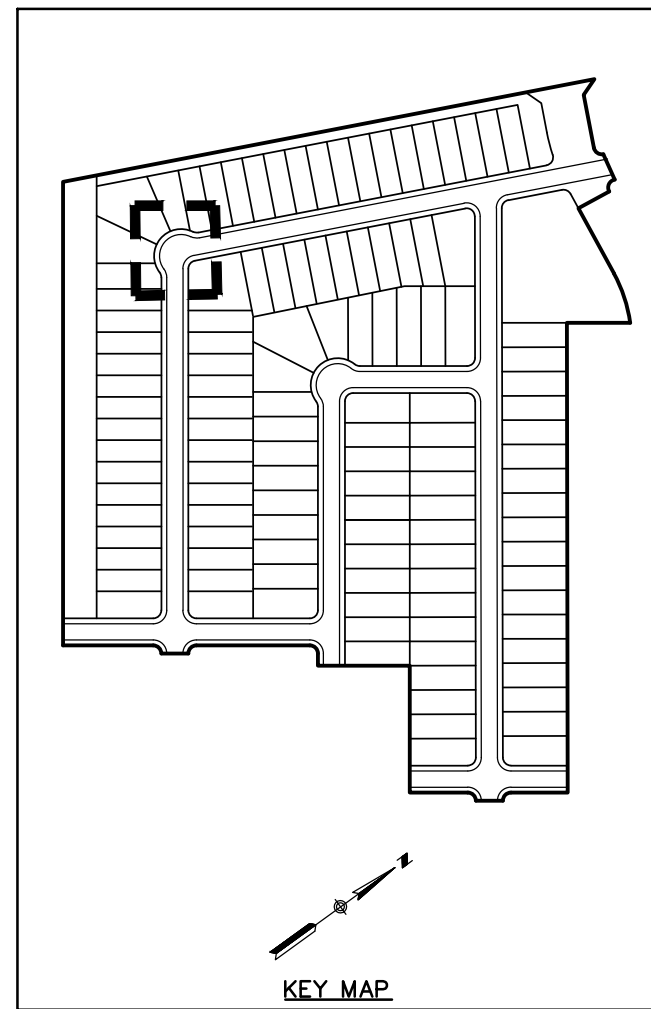
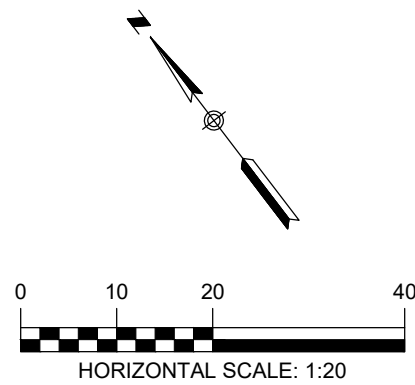
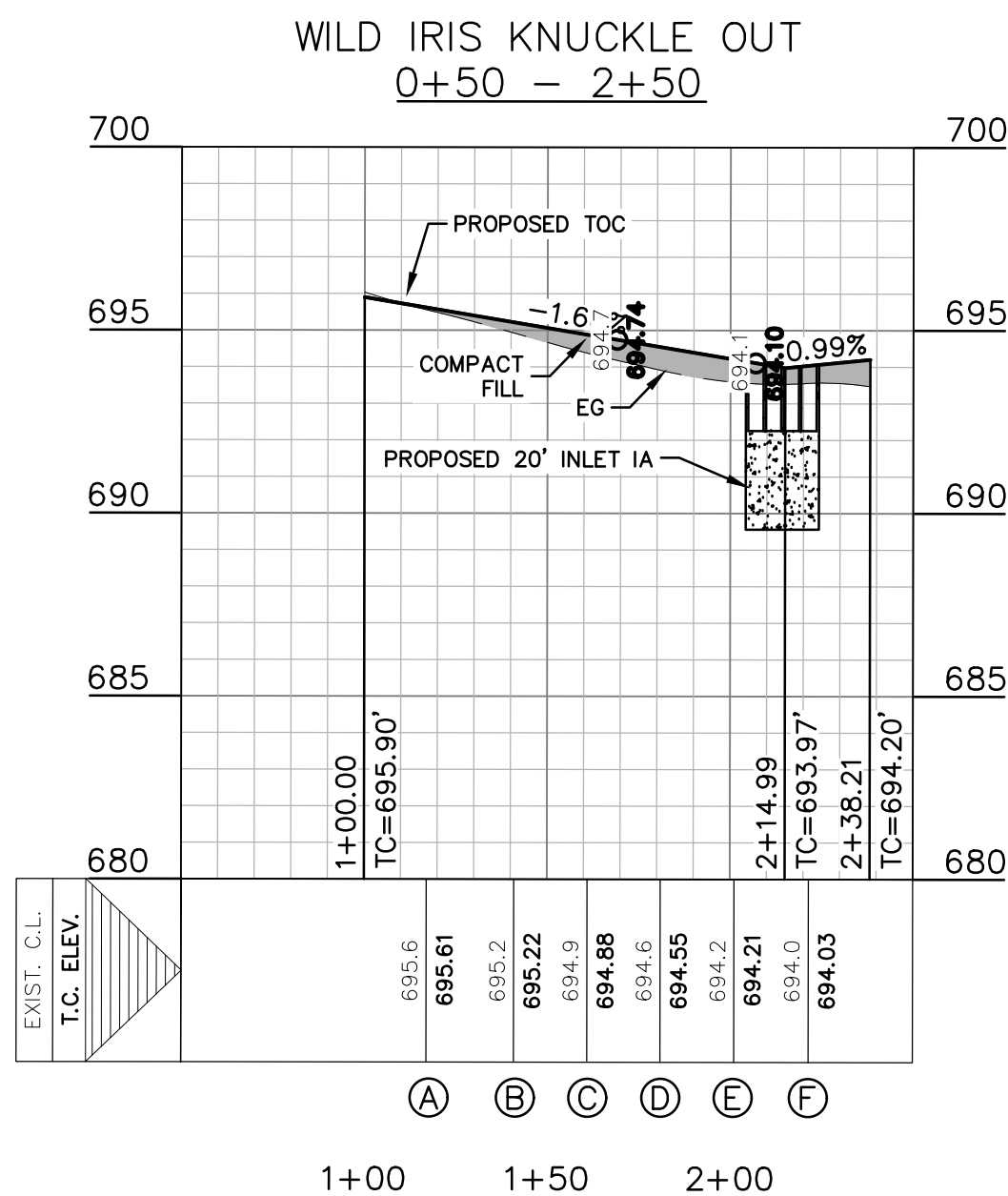
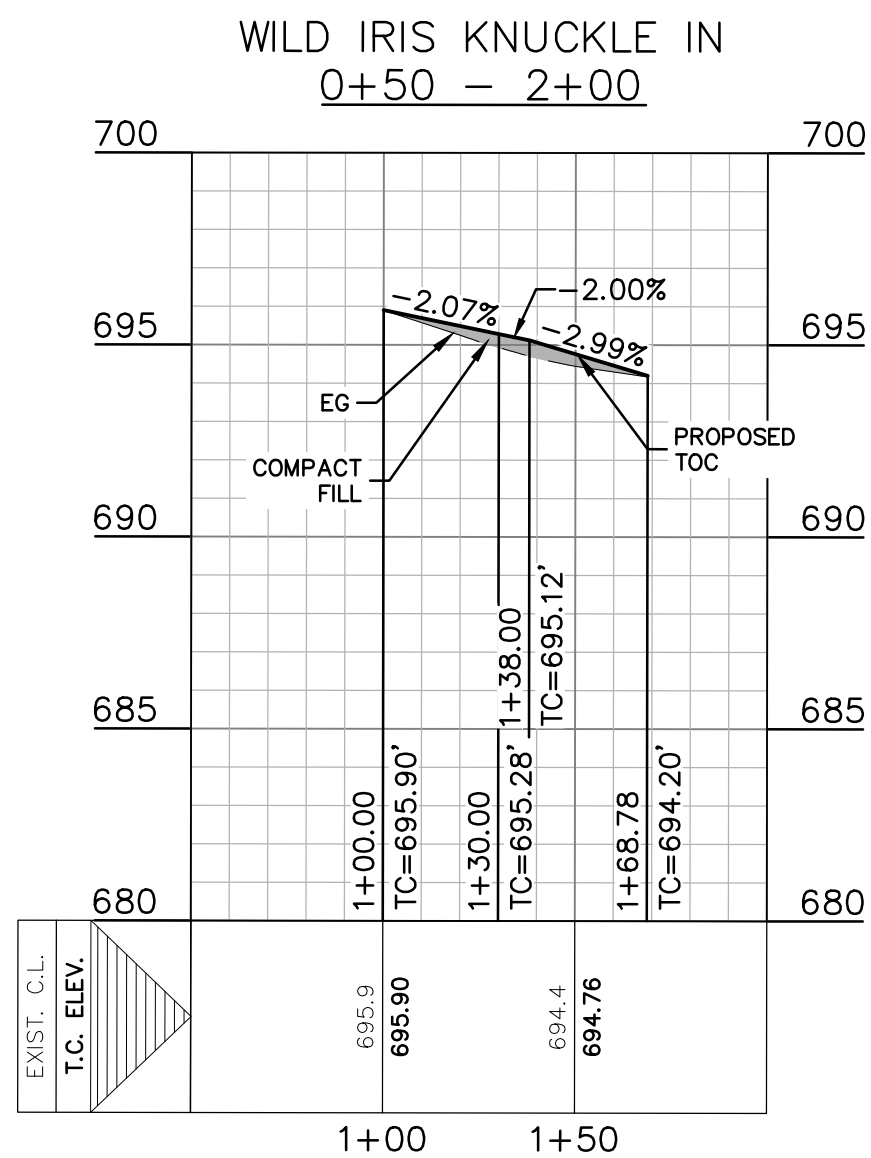
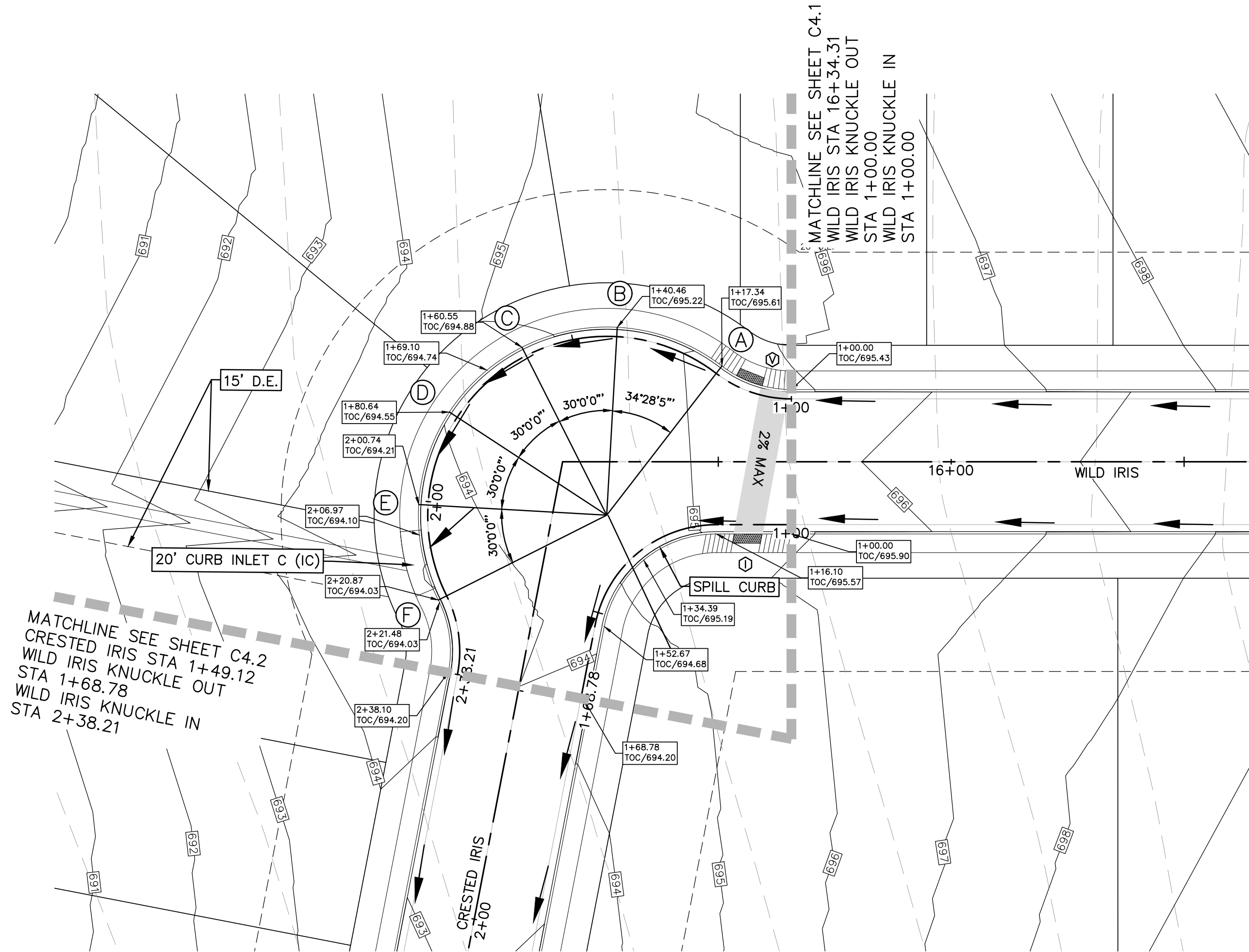
HMT PROJECT NO.:

266.07

**SHEET**

**C4.5**





- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - A.D.A. RAMP
  - FLOW ARROW
  - WASHOUT CROWN AREAS
  - EXISTING GROUND (EG CL)
  - FINISHED GROUND TOP OF CURB (FG TOC)
  - 2.0% MAX
  - SIDEWALK RAMP TYPE (SEE DETAIL SHEET C3.10)
  - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR

**NOTES**

- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.

**RECORD DRAWING**

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*

HMT ENGINEERING AND SURVEYING

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

**WILD IRIS KNUCKLE  
PLAN AND PROFILE**

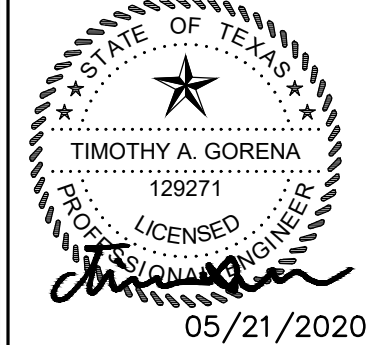
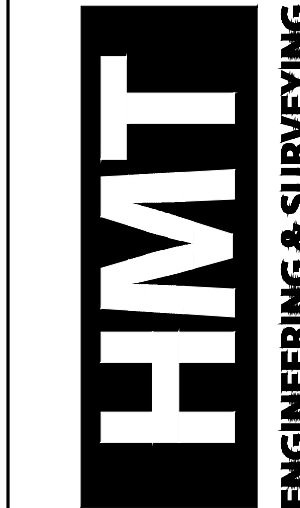
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPHENSON STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42	09/21/2019
7	PAYMENT GRADING REV	01/21/2020
8	WILD IRIS ADA RAMP	07/29/2020

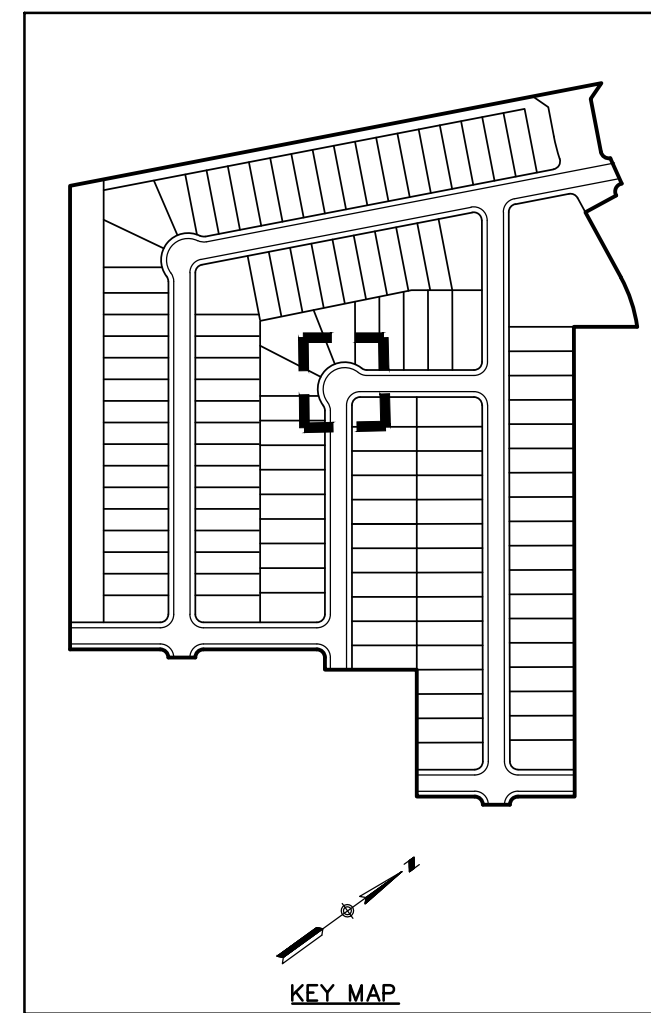
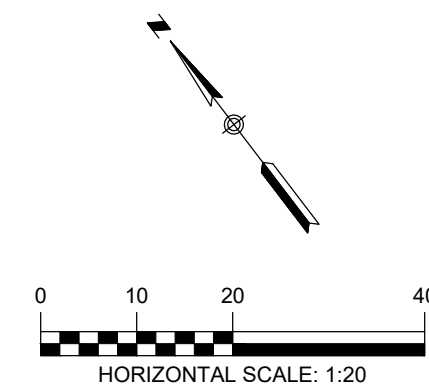
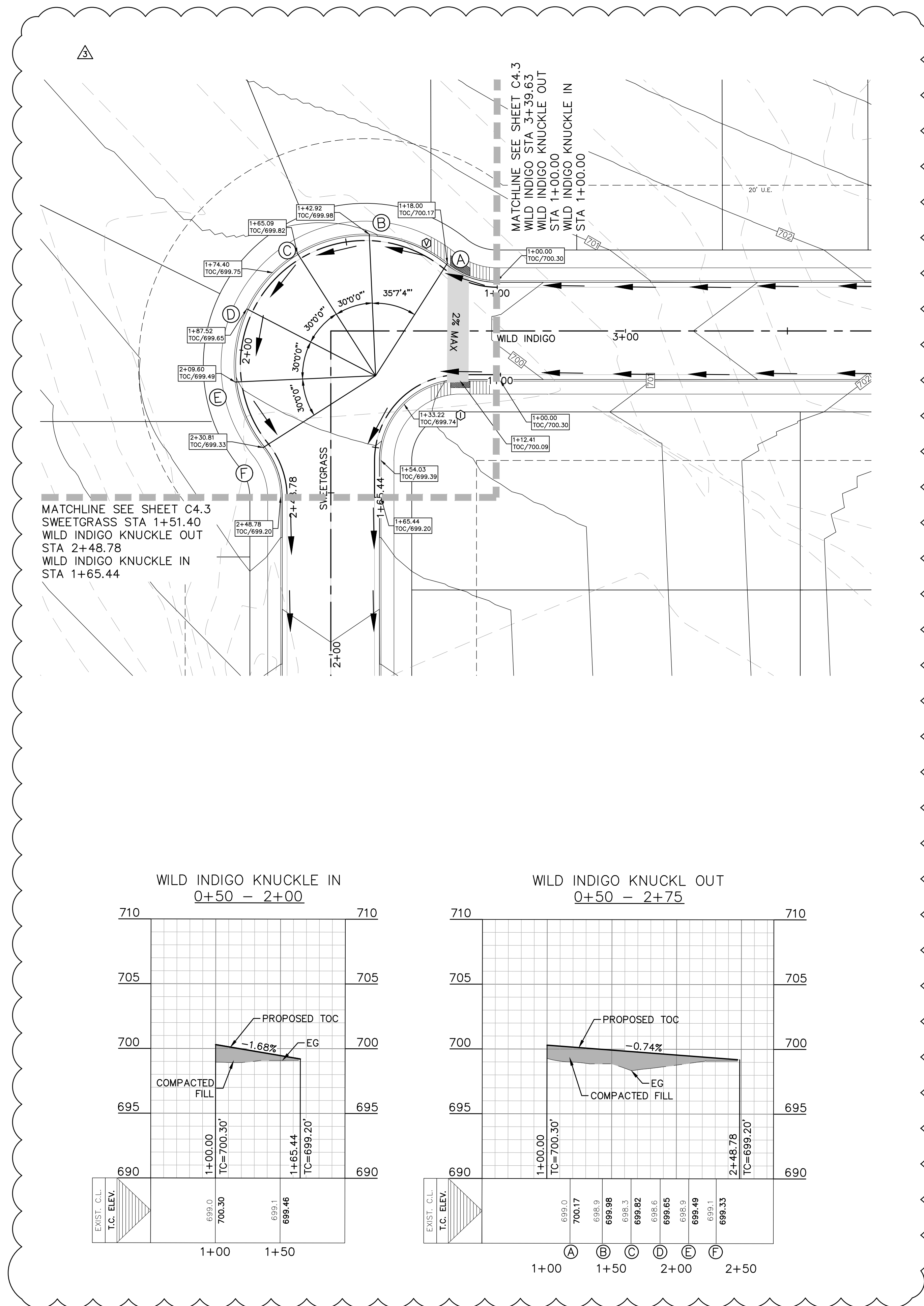
DATE: FEBRUARY 2020
DRAWN BY: HM
DESIGNED BY: TG
REVIEWED BY: CC/SWH
HMT PROJECT NO.: 266.07

**SHEET  
C4.6**

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P(210)562-3844 • F(210)562-3236  
TBP E FIRM F-10961  
TBP L FIRM 10153600








1. STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.

EXISTING CONTOURS  
- PROPOSED CONTOURS  
BUILDING SETBACK LINE  
UTILITY EASEMENT  
DRAINAGE EASEMENT  
A.D.A. RAMP  
FLOW ARROW

EXISTING GROUND (EG CL)  
FINISHED GROUND TOP OF CURB (FG TOC)

 SIDEWALK RAMP TYPE  
(SEE DETAIL SHEET C3.10)

1. STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020

HMT ENGINEERING AND SURVEYING

# WILD INDIGO KNUCKLE PLAN AND PROFILE

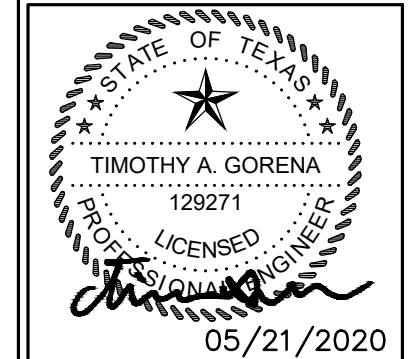
HEATHERFIELD SUBDIVISION  
UNIT 1

REVISION DESCRIPTION	REVISION DATE
WATER AND WASTEWATER REV	02/16/2019
FIRE ACCESS REV	03/29/2019
BORE UNDER FM 101 AND LOT REV	05/29/2019
STEPPED/SHOULDER STATION REVISION	07/29/2019
BORE UNDER FM 101 REV	08/12/2019
ADDED WATER LATERAL LINE C STATION 8+84.42	08/12/2019
PAVEMENT GRADING PFI	09/27/2019
WILD RIS ADJ RAMP	01/09/2020

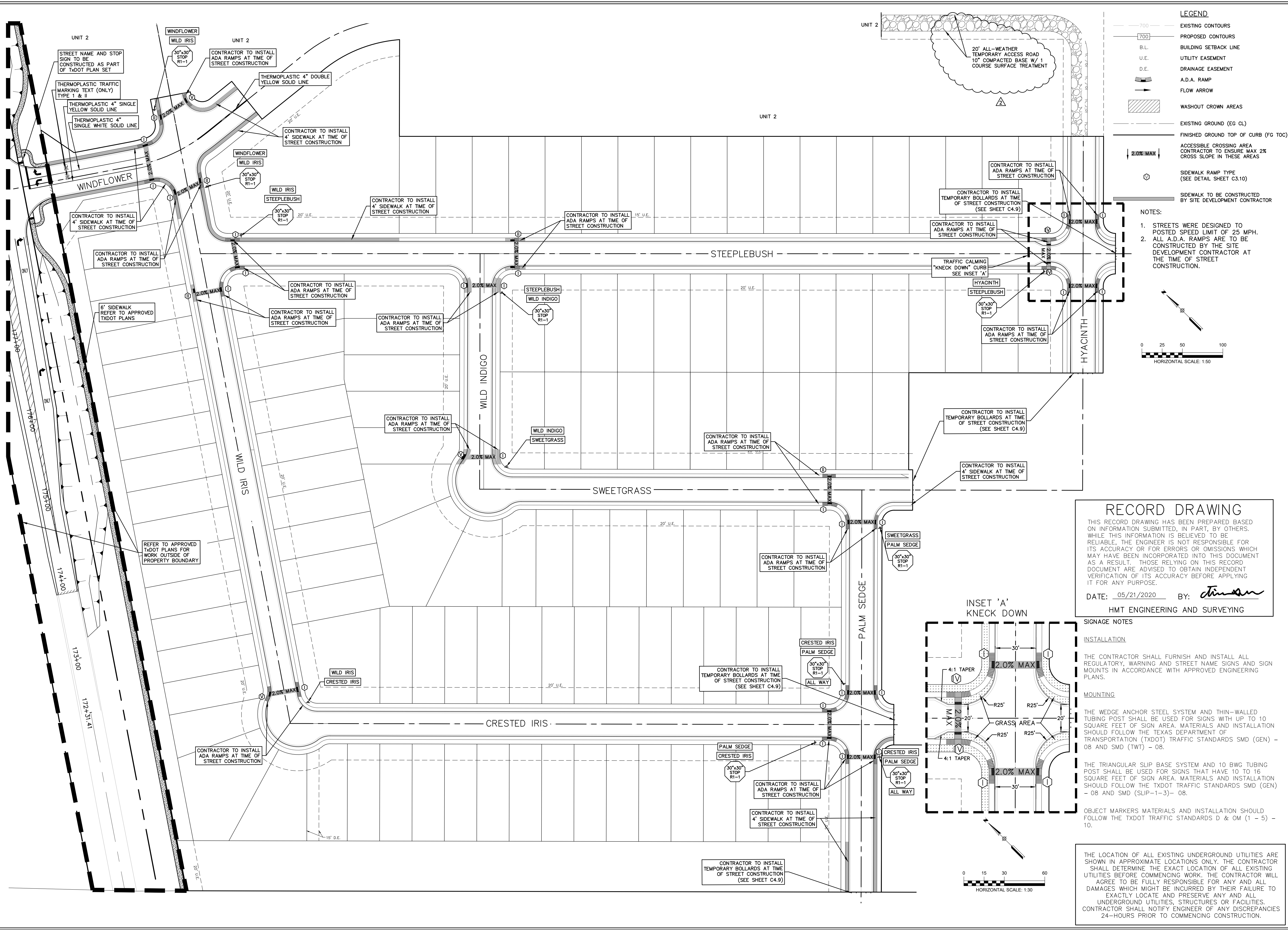
HMT PROJECT NO.:  
266.07

**SHEET**  
**C4.7**

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600







- NOTES:
- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
  - ALL A.D.A. RAMPS ARE TO BE CONSTRUCTED BY THE SITE DEVELOPMENT CONTRACTOR AT THE TIME OF STREET CONSTRUCTION.

**RECORD DRAWING**

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Gorena*

HMT ENGINEERING AND SURVEYING

**SIGNAGE NOTES**

**INSTALLATION**

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

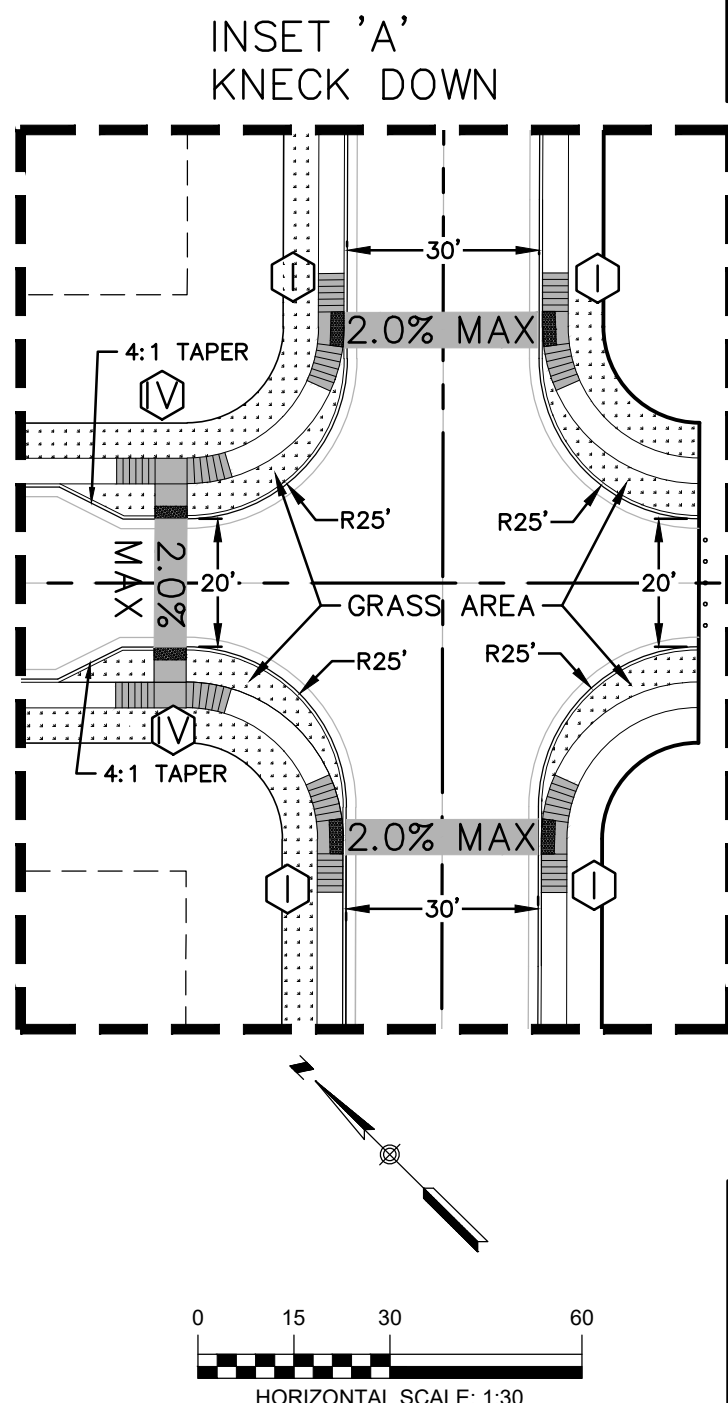
**MOUNTING**

THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWT) - 08.

THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (SLIP-1-3) - 08.

OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D & OM (1 - 5) - 10.

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



8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P1210562-3844-F(210)562-3236  
TBPB FRM F-10961  
TBPB FRM 10153600

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
TIMOTHY A. GORENA  
129271  
LICENSED PROFESSIONAL ENGINEER  
05/21/2020

**SIGNAGE PLAN**

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION	DESCRIPTION	DATE
1	WATER AND WASTEWATER REV		02/15/2019
2	FIRE ACCESS REV		03/29/2019
3	BASE UNDER FM 101 AND LOT REV		05/29/2019
4	STEEPLEBUSH STATION REVISION		07/29/2019
5	BASE UNDER FM 101 REV		08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42		08/13/2019
7	ADJUSTED GRADELINE RFI		09/21/2019
8	WILD IRIS ADA RAMP		07/29/2020

DATE: **FEBRUARY 2020**

DRAWN BY: **HM**

DESIGNED BY: **TG**

REVIEWED BY: **CC/SWH**

HMT PROJECT NO.:  
**266.07**

**SHEET**  
**C4.8**




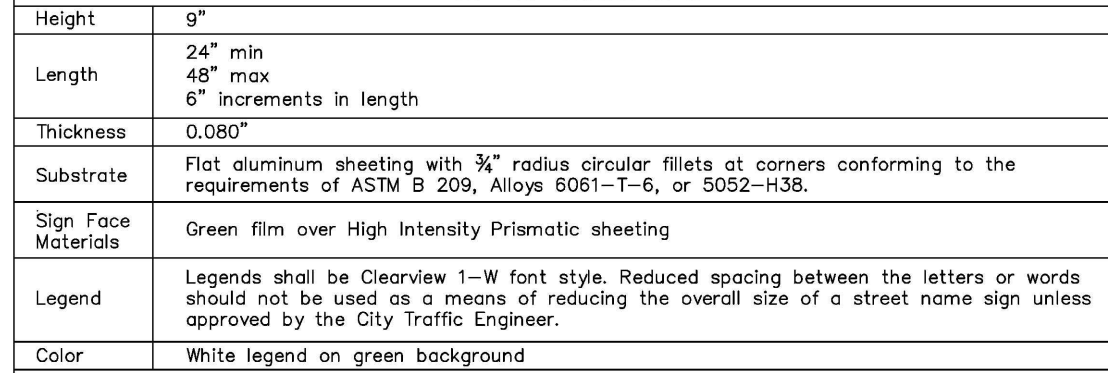
THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

HMT ENGINEERING AND SURVEYING




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

DATE APPROVED: 7/08	DWG. NO: ST-010	SCALE: N.T.S.		<b>ENGINEERING DEPARTMENT</b>
DRAWN BY: RAB	SHEET: 1 OF 1			
FILENAME: SIDEWALK ( Residential)				
P:\CURRENT NEW BRAUNFELS DETAILS\2008				




Notes:

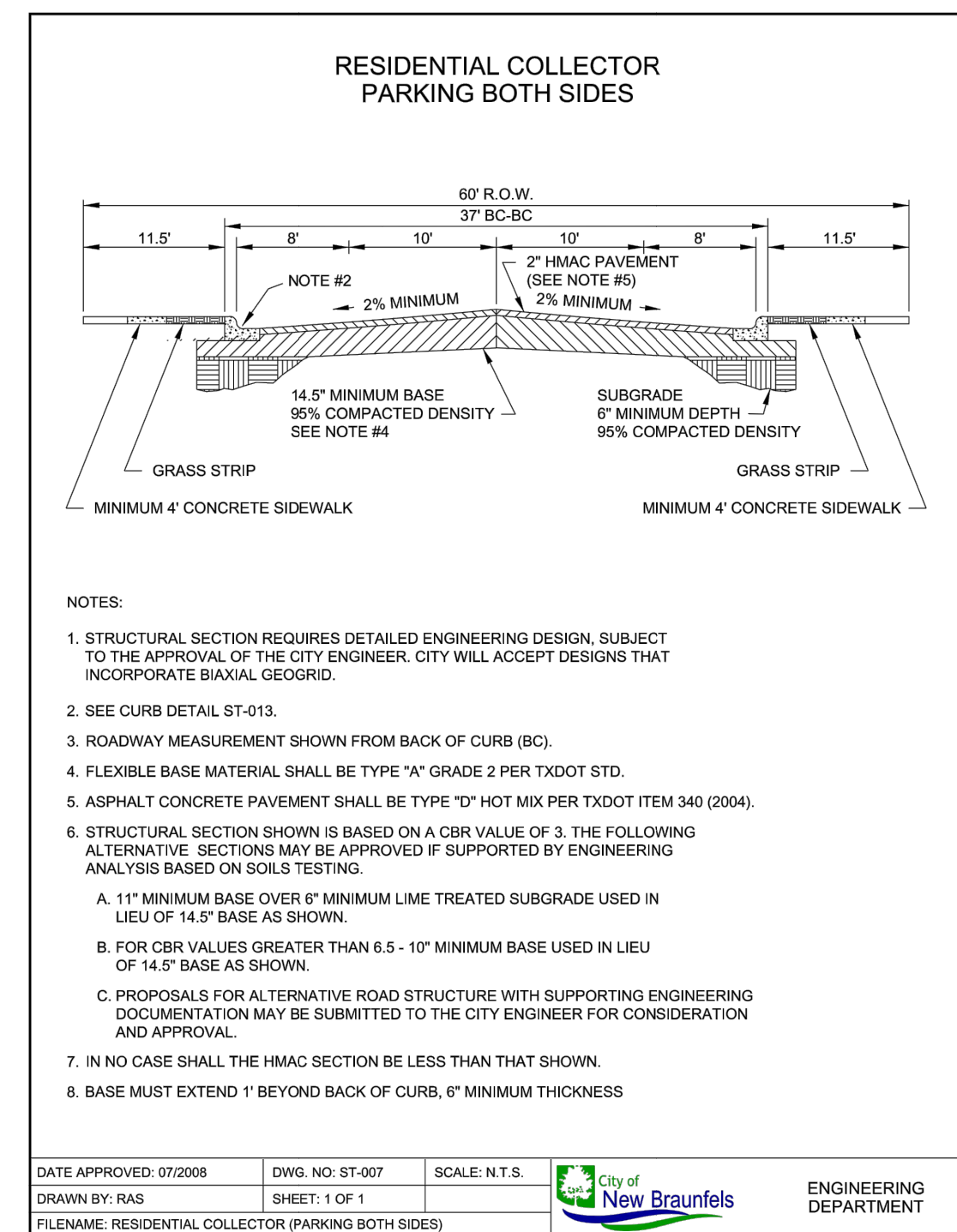
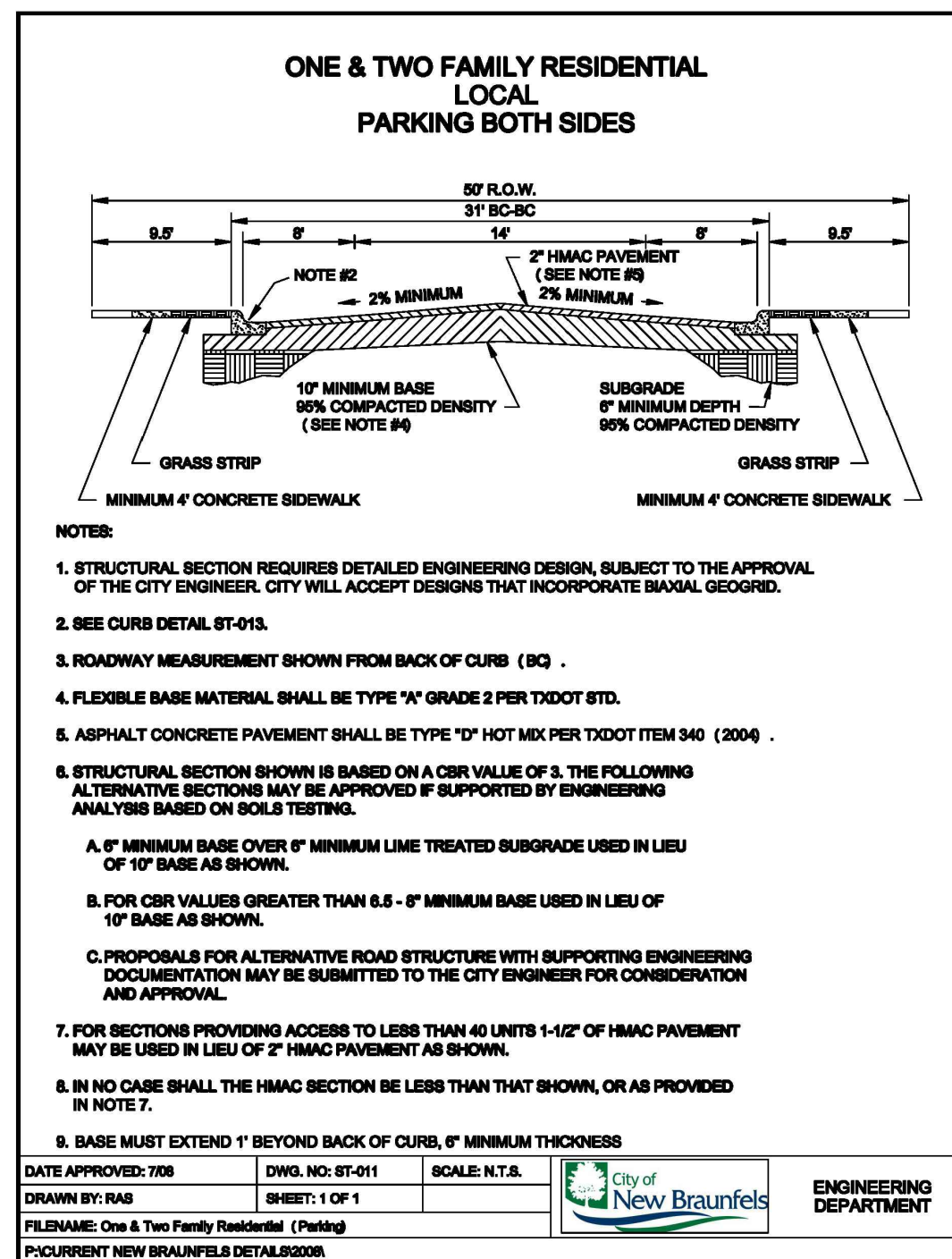
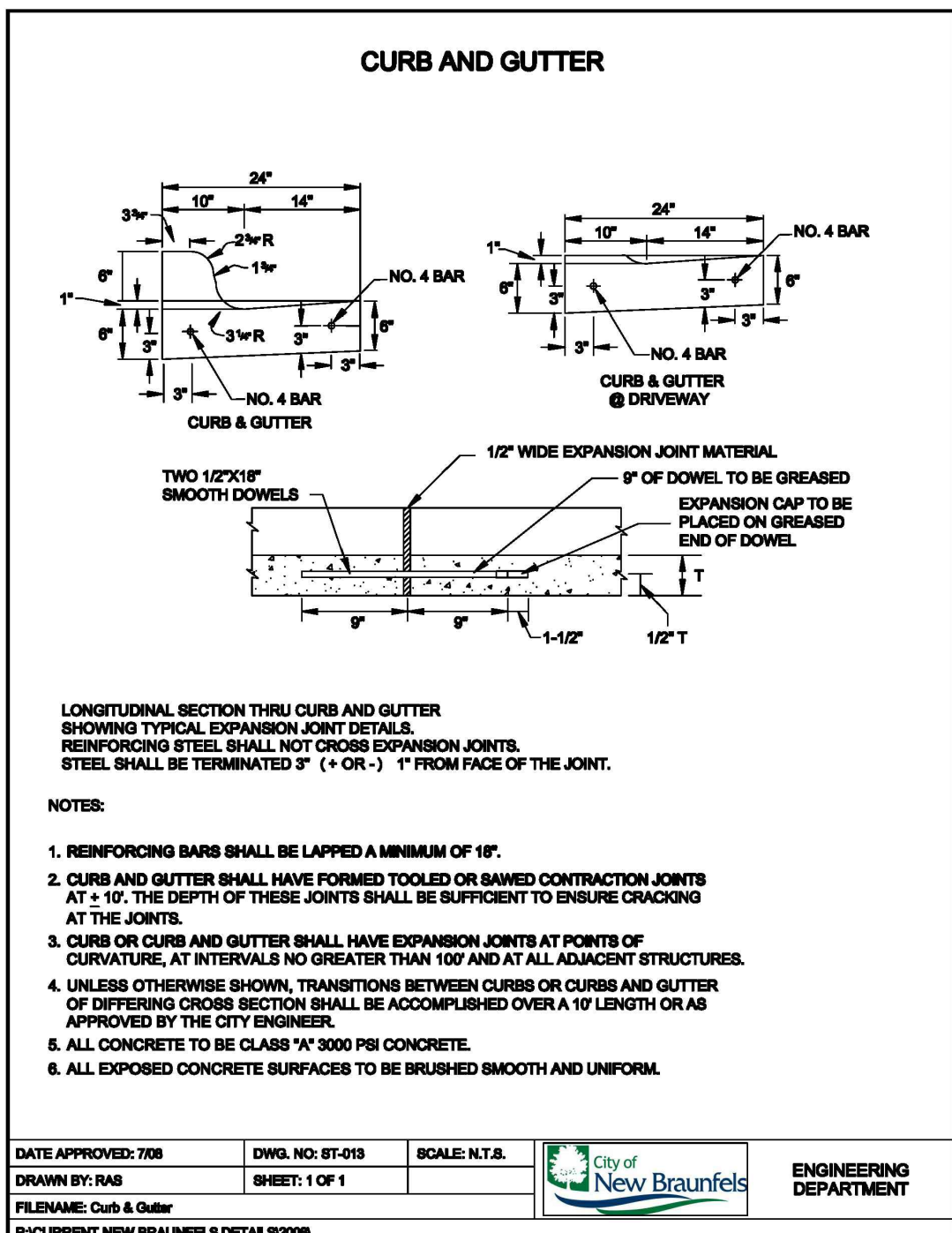
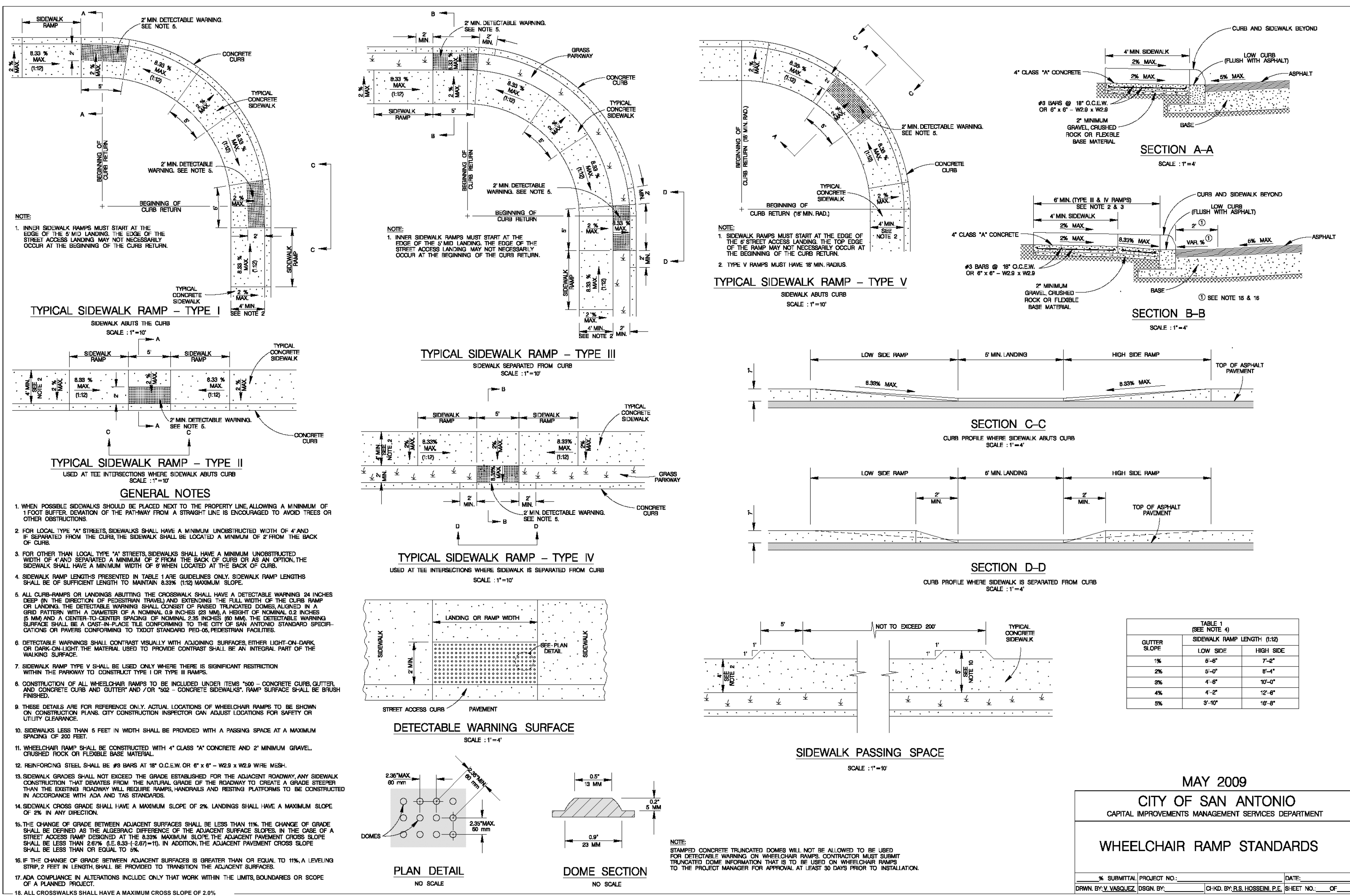
1. Street name signs shall be double sided when centered mounted on post of sign post. Only one street name sign shall be installed on post of sign post with STOP or YIELD sign.
2. When two sets of street name signs are required (e.g. at "T" intersections), one double-sided street name sign shall be mounted on sign post. The sign assembly shall meet minimum height requirements as required in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). When required, DEAD END (W14-14) or NO OUTLET (W14-2a) signs shall also be mounted on the sign post.
3. Street name signs greater than 36" long and center mounted on post of sign post shall be mounted on post top bracket with 12" slot. All other street name signs center mounted on post of sign post shall be mounted on post top bracket with 5 1/2" slot.
4. Other street name signs shall be mounted with double-sided round pole brackets. Two holes should be punched in the center of the "T" street name sign blank 7" from edge of the blank with 73 spacing between holes.
5. The lettering for names of streets shall be composed of combination of lower-case letters with initial upper-case letters. Acceptable abbreviations per TMUTCD may be used except for the street name itself.
6. Red background (red film over High Intensity Prismatic) should be used for private street name signs.

Street Sign Detail - Ground Mount				 <b>City of New Braunfels</b>	<b>ENGINEERING DIVISION</b> 424 S. CASTELL AVE. NEW BRAUNFELS, TEXAS 78130 PHONE: 830.221.4020
ISSUE DATE:	February 2013	DWG. NO: ST-024	SCALE: N.T.S.		
DRAWN BY: DLF		CONTACT: CR	SHEET: 1 OF 1		

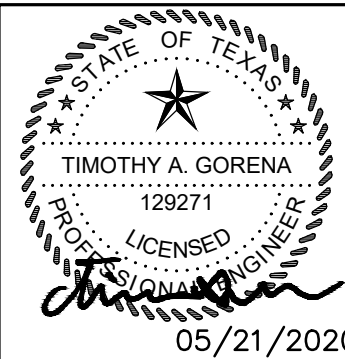


1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI.
2. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
3. CONSTRUCTION OF CROSS GUTTER IS NOT ALLOWED ACROSS MAJOR COLLECTOR OR ARTERIAL STREETS.
4. ADJACENT SPANDREL SHALL BE 6" THICK CLASS "A" 3,000 PSI CONCRETE.

DATE APPROVED: 7/08	DWG. NO: ST-020	SCALE: N.T.S.		<b>ENGINEERING DEPARTMENT</b>
DRAWN BY: RAS	SHEET: 1 OF 1			
FILENAME: CROSS GUTTER P:\CURRENT NEW BRAUNFELS DETAILS\ST0208				



8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600



05/21/2020

## STREET DETAILS (1 OF 6)

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
A	WATER AND WASTEWATER REV	02/18/2019
A	FIRE ACCESS REV	03/29/2019
A	BORE UNDER FM 1101 AND LOT REV	05/29/2019
A	STEPPED/SHOULDER STATION REVISION	07/09/2019
A	BORE UNDER FM 1101 REV	08/13/2019
A	ADDED WATER LATERAL LINE C STATION 8+84.2	08/13/2019
A	PAVEMENT GRADING (PI)	09/21/2019
A	WILD IRIS ADO RAMP	01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC.

HMT PROJECT NO.:

266.07

**SHEET**

## C4.9





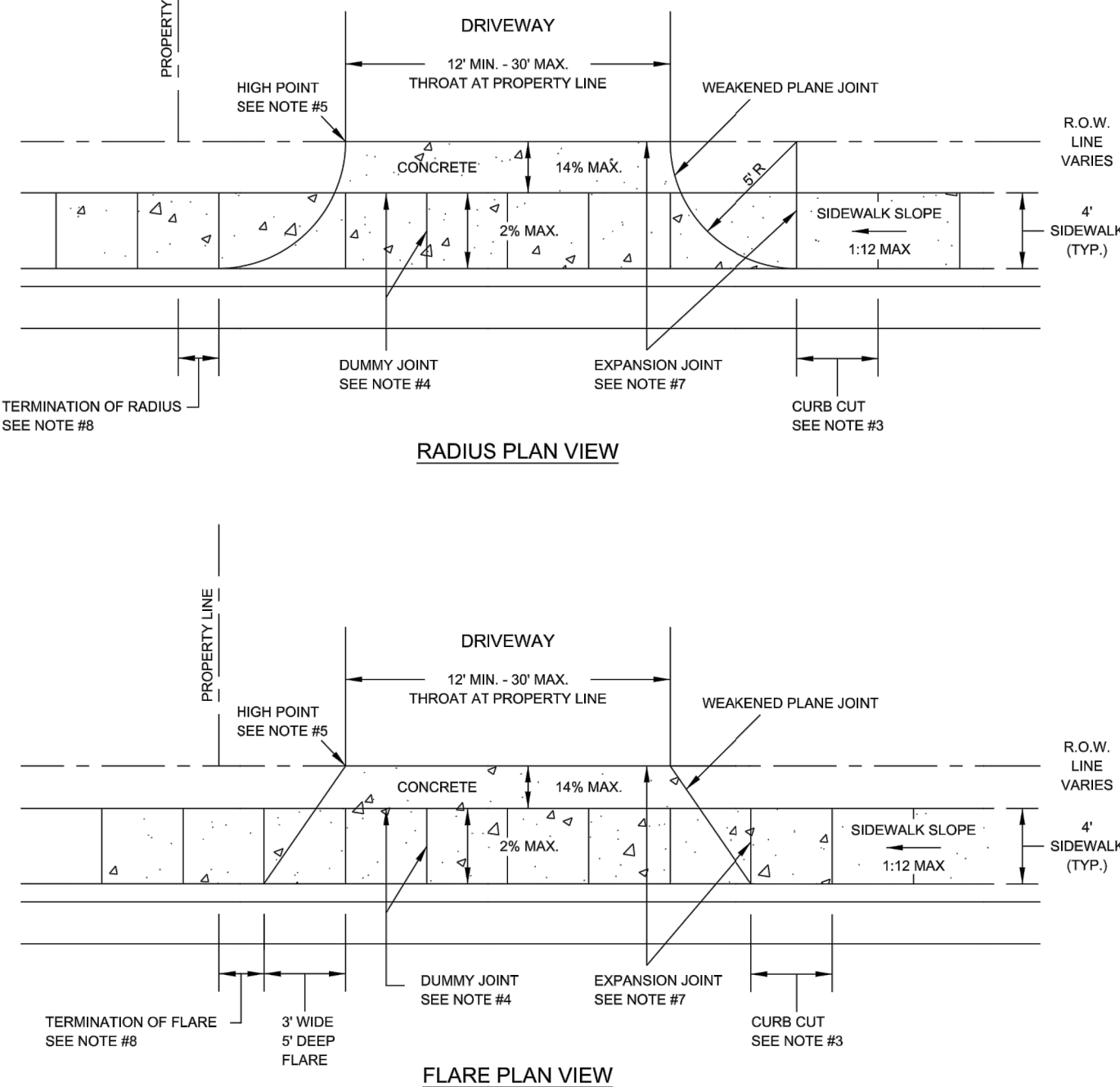
Subgrade Notes (\*)

- We recommend the following option for treating the subgrade:
  1. Lime stabilizing the subgrade to a depth of 6 inches. Based on the laboratory tests performed, approximately 8 percent of lime resulted in pH value of 12.4. We recommend lime application rate of 8 percent - for 6-inch depth of treatment – 35 lbs per sq yard. The final cut subgrade soils should be tested for soluble sulfate content prior to treatment.

NOTE:

1. ALL PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE TO THE "SUBSURFACE EXPLORATION AND PAVEMENT ANALYSIS, PROPOSED NEW STREETS, ROLLING VALLEY UNIT 12", BY INTEC OF SAN ANTONIO, LP, DATED JANUARY 23, 2013.
2. THE SUBGRADE SHOULD BE STABILIZED USING LIME TO A DEPTH OF 6 INCHES. LIME CONTENT OF 8.0 PERCENT OF THE DRY WEIGHT OF THE SOIL TO BE TREATED IS RECOMMENDED; A UNIT WEIGHT OF THE CLAY OF 100 LBS PER CUBIC FEET MAY BE USED.
3. LIME CONTENT FOR 6 INCH STABILIZATION - 35 LBS PER SQ YARD
2. THE SUBGRADE SHOULD BE STABILIZED USING LIME IN ACCORDANCE WITH THE GEOTECHNICAL REPORT IN ORDER TO ACHIEVE THE FOLLOWING:
  - 3.1. PLASTICITY INDEX OF 20 OR LESS
  - 3.2. PH OF 12.4 OR GREATER
4. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF THE LIME OR CEMENT.

## TYPICAL PAVEMENT SECTION



DATE APPROVED: 04/2016

DRAWN BY: RAS

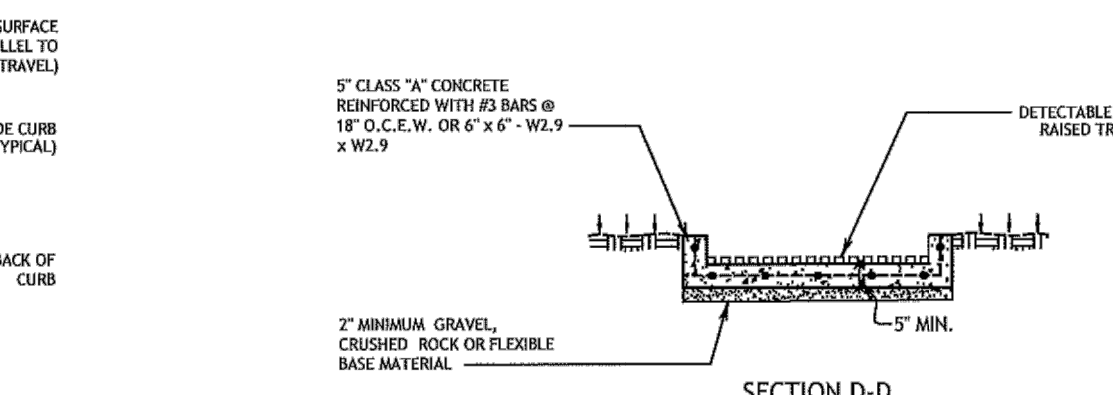
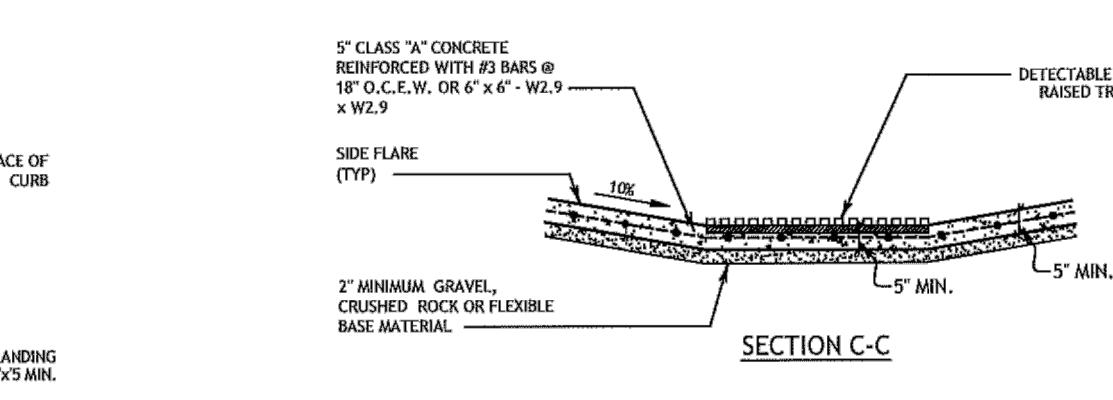
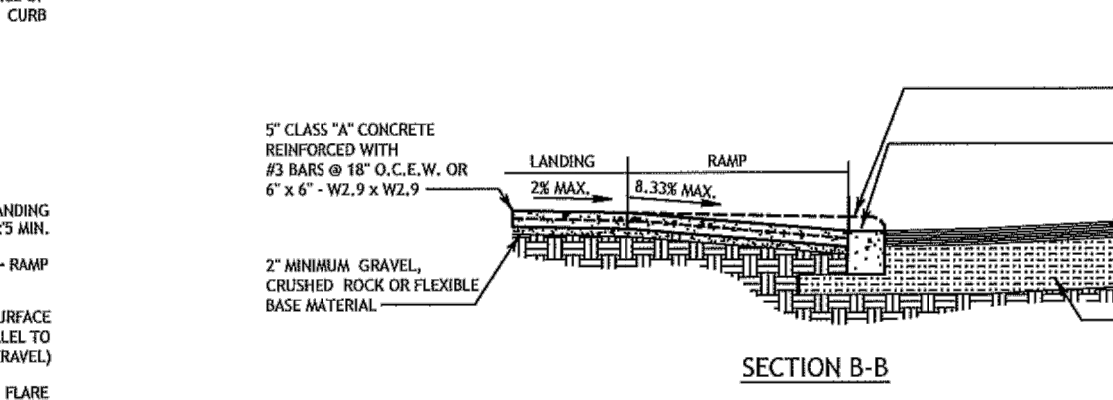
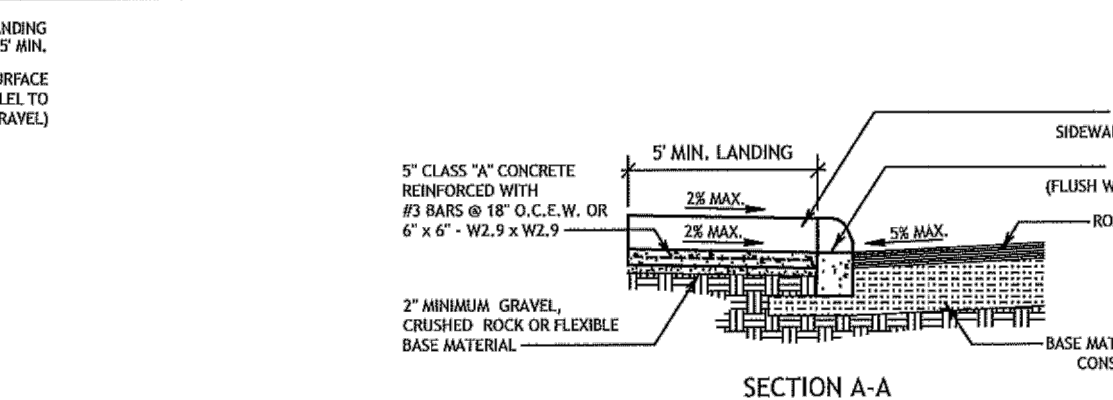
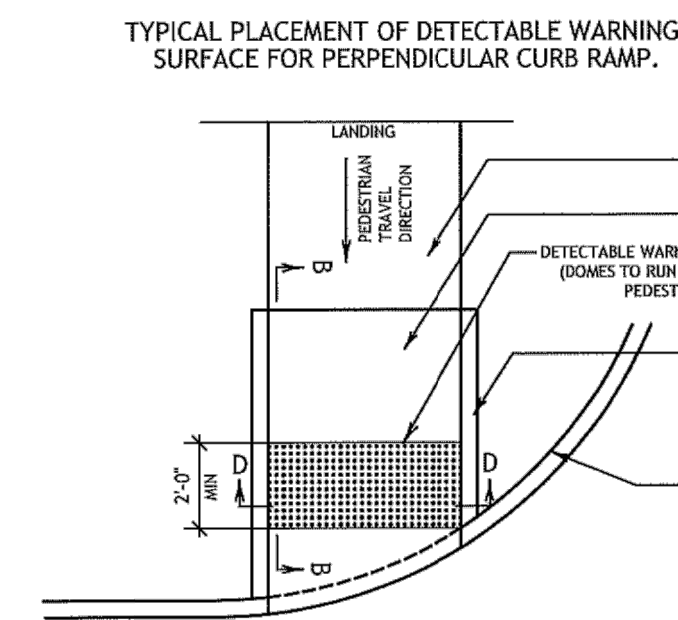
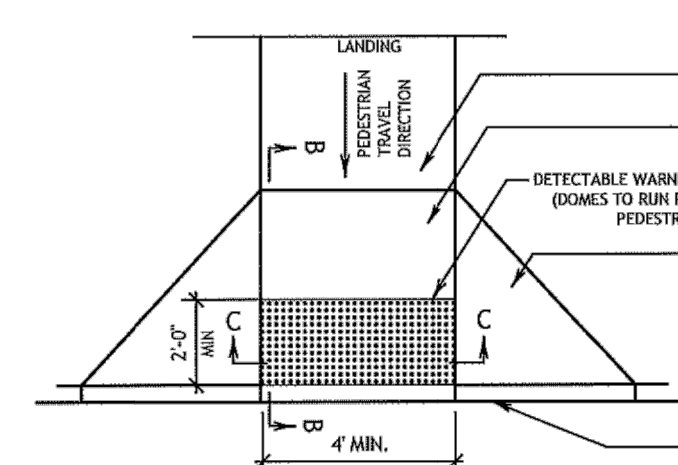
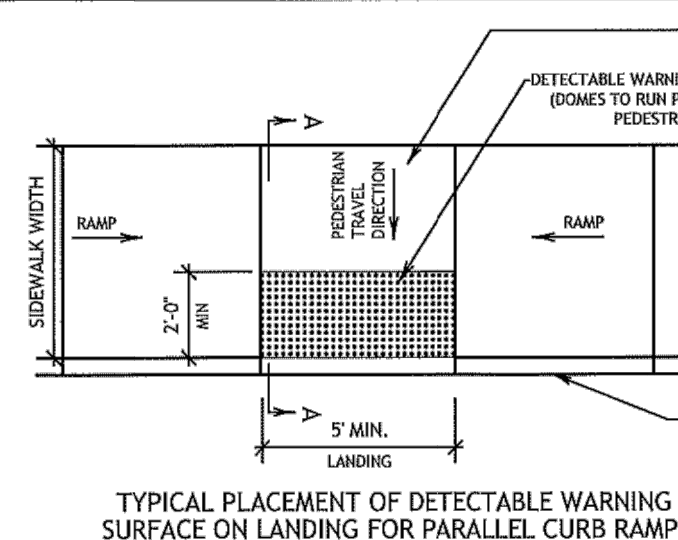
FILENAME: DRIVEWAY (RESIDENTIAL - ONE OR TWO FAMILY



---

ENGINEERING  
DEPARTMENT

FILENAME: DRIVEWAY (RESIDENTIAL - ONE OR TWO FAMILY



## CURB RAMP NOTES

1. ALL SLOPES ARE MAXIMUM ADJUSTABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED.
2. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF CURB RAMPS ARE TO BE SHOWN ON THE CONSTRUCTION DOCUMENTS. ALL ACCESSIBLE WALKWAYS SHALL BE CONSTRUCTED TO ACCOMMODATE THE REQUIREMENTS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA) AND TEXAS ACCESSIBILITY STANDARDS (TAS). CITY ENGINEER OR BUILDING OFFICIAL MAY ALLOW LOCATIONS FOR SLOPE OR UTILITY CHANGES.
3. THE MINIMUM STANDARD SIDEWALK SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 118-07 OF THE NEW BRAUNFELS CODE OF ORDINANCES.
4. ALL LANDINGS WHERE REQUIRED SHALL BE 5'x5' (6'x6') WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
5. RAMP LENGTH SHALL BE SUFFICIENT TO MAINTAIN A MAXIMUM SLOPE OF 1:15 (1V-12H). MAXIMUM ALLOWABLE SLOPE OF SIDEWALK AND CURB RAMPS SHALL BE 3.3% (1V-30H).
6. SIDEWALK GRADIENTS SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY, ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE GRADE OF THE NATURAL GRADE OF THE ROADWAY TO MAINTAIN THE MINIMUM SLOPE SHALL BE CONSIDERED AS A NEW SIDEWALK. SIDEWALKS, HANDRAILS, AND LANDINGS IN ACCORDANCE WITH CURRENT ADA AND TAS REQUIREMENTS.
7. PROVIDED FLARED RAMPS SHALL WITH A MAXIMUM SLOPE OF 10% (1V-10H) MEASURED ALONG THE CURB LINE. CURB RETURNS MAY BE USED IN AREAS OF SIDE FLARES IN AREAS NOT NORMALLY WALKED ACROSS BY PEDESTRIANS. REUSE THE EXISTING SIDEWALK SURFACE, SLOPE, VEGRETATION OR OTHER NON-WALKING SURFACE WHERE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
8. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'x4' (4'6"X6") WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
9. CROSSWALK DIRECTIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THIS SPECIFICATION. WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
10. EXISTING FEATURES THAT COMPLY WITH CURRENT TAS REQUIREMENTS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLAN.
11. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. PROVIDE CURB RAMPS WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A RAMP.
12. SEPARATE CURB RAMP AND LANDINGS FROM ADJACENT SIDEWALK AND ANY OTHER ELEMENTS WITH PRE-CAST OR BOARD JOINT 1/2" UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
13. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
14. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 1/8". THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACES. IN THE CASE OF A STREET ADJACENT TO A SIDEWALK, THE CHANGE OF GRADE SHALL BE THE DIFFERENCE BETWEEN THE STREET SURFACE AND THE SIDEWALK SURFACE. THE CHANGE OF GRADE SHALL BE LESS THAN 2.0% (E.G. 1.5%+2.67=1.17%). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO .5%.
15. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 1/16", A CURB STREET TRANSITION SHALL BE PROVIDED TO FACILITATE THE CURB RAMP TRANSITION.
16. ADA RAMP SHALL BE CONSTRUCTED WITH "S" CLASS "S" CONCRETE WITH AGRICULTURAL CRUSHED ROCK OR FLEXIBLE BASE MATERIAL. REINFORCING STEEL SHALL BE #3BARS AT 18" O.C.W. OR #36" x W2.9 x 9.2 WIRE MESH.
17. THE EXTENTS OF ADA COMPLIANCE IN ALTERATIONS SHALL BE WITHIN THE LIMITS, BOUNDARIES OR SCOPE

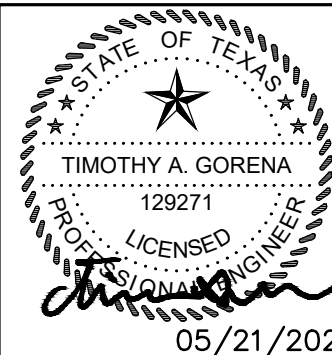
## DETECTABLE WARNING NOTES

1. CURB RAMPS OR LANDINGS ADJACENT THE CROSSWALK MUST HAVE A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRIPPLE SURFACING WITH SECTION 505 OF THE TEXAS ACCESSIBILITY GUIDELINES. THE DETECTABLE SURFACING MUST CONTRAST VISUALLY WITH ADJACING SURFACES, INCLUDING FLANKS, FURNISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCOLORED CONCRETE, UNLESS SURFACING IS NOT AVAILABLE. DETECTABLE WARNING SURFACING SHALL BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.
3. ALTERN ROUTES TRAVELING IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
4. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN WIDTH IN THE DIRECTION OF PEDESTRIAN TRAVEL AND SHALL BE ALIGNED WITH THE WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
5. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS AT THE CURB LINE. DETECTABLE WARNING SURFACES SHALL BE LOCATED TO THE OUTSIDE OF THE CURB LINE OF THE RAMP RUN AND THE STREET. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RAMP.
6. DETECTABLE WARNING MATERIALS MUST MEET TYPICAL DEPARTMENTAL MATERIALS SPECIFICATION ENR 450 AND BE LISTED ON THE MATERIAL PRODUCER LOG. INITIAL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
7. DETECTABLE WARNING PAVEMENTS SHALL NOT BE VOTED WITH THE APPROVAL BY THE PUBLIC WORKS COMMISSION.

3200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
F(210)562-3844 • F(210)562-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600



**HMT**  
ENGINEERING & SURVEYING



## STREET DETAILS (2 OF 6)

HEATHERFIELD SUBDIVISION  
UNIT 1

# UNIT 1

NO.	REVISION	REVISION DESCRIPTION	REVISION DATE
A	1	WATER AND WASTEWATER REV	02/18/2019
A	2	PIRE ACCESS REV	03/29/2019
A	3	DOSE UNDER PM 100 AND LOT REV	05/29/2019
A	4	STEPHENBURGH STATION REVISION	07/29/2019
A	5	DOSE UNDER PM 100 REV	08/13/2019
A	6	ADDED WATER LATERAL LINE C STATION 8+84.2	08/13/2019
A	7	PAVEMENT GRADING RFI	09/17/2019
A	8	WILD RIES ADA RAMP	01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY TO

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2818

人々が、

---

266.07

**SHEET**

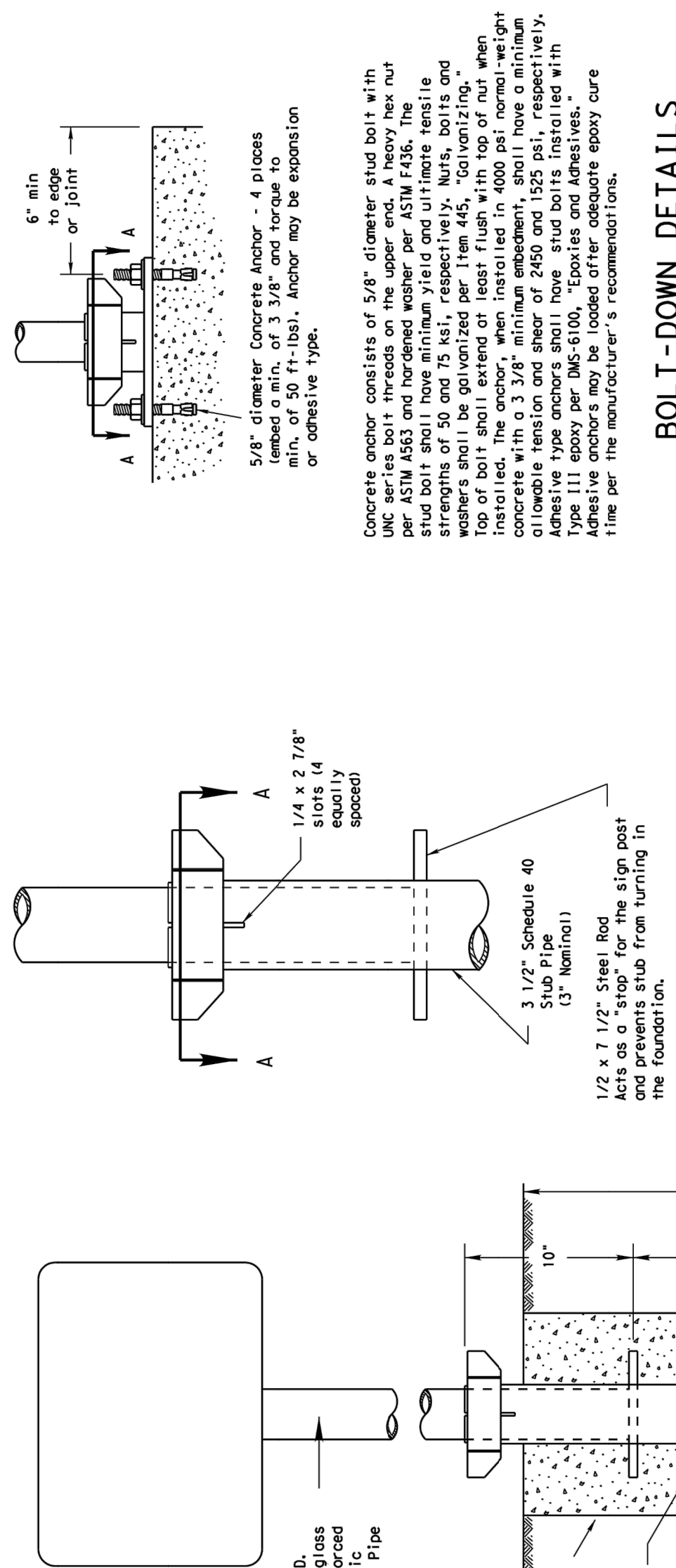
## C4.10



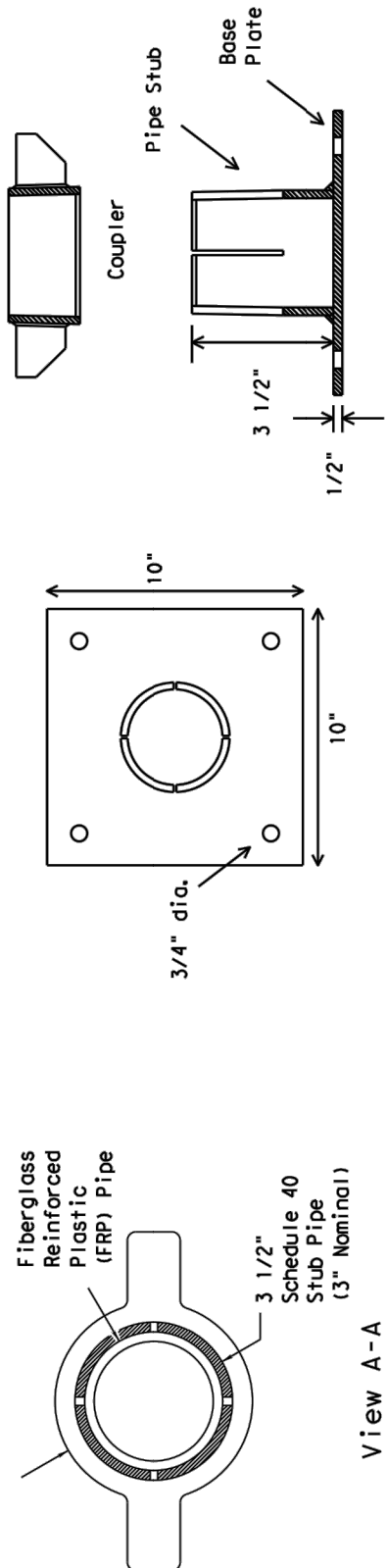




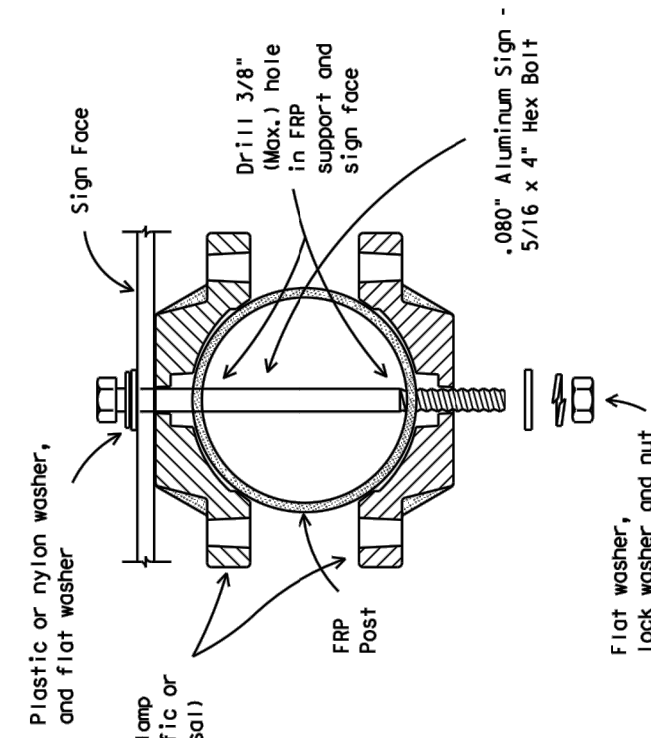
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by Ixdtl for any purpose whatsoever. Ixdtl assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

Universal Anchor System  
with Fiberglass Reinforced Plastic (FRP) Post

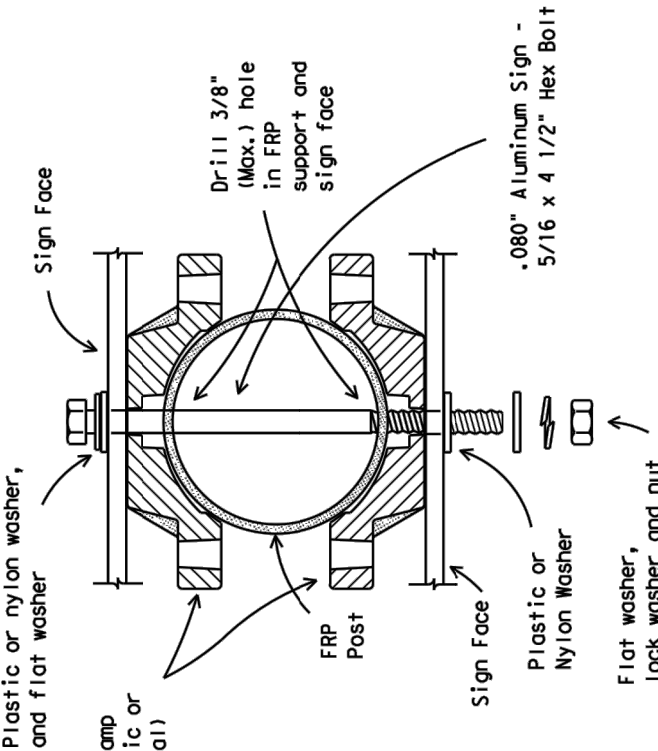
## BOLT-DOWN DETAILS



### Typical Sign Mounting Detail for FRP Support with Single Sign



### Typical Sign Mounting Detail for FRP Support with Back-to-Back Signs



**GENERAL NOTES:**

1. FRP sign supports for a single type sign support may be used for signs up to and including 16 square feet. Dual post installation may be used for signs up to and including 32 square feet.
2. All nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing."
3. See the Traffic Operations Division website for detailed drawings of sign clamps. The website address is: <https://www.txdot.gov/publications/traffic.htm>

## FRP POST REQUIREMENTS

1. Materials shall conform to the requirements of Departmental Material Specification DMS-4410 and will be furnished in a yellow or gray color as specified elsewhere in the plans.
2. Thickness of FRP sign support is  $0.125" \pm 0.031"$ , - 0.0".
3. FRP sign supports are prequalified by the Traffic Operations Division.

125 East 11th Street  
Austin, Texas 78701-2483

## UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURES

- 1g. Foundation hole, where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered, the contractor shall be required to drill down to a depth of 30". If solid rock is at a depth of 18" or provide minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMO (GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete

2. The Engineer may per

- mixed with a portable, motor driven concrete mixer. For small placements less than 10 cu. cubic yards, hand mixing in a portable compactor may be used.
1. Insert base post in foundation hole to depth shown and fill hole with concrete. Cure base post from bottom and ensure a minimum of 18" embedment if installed in soil rock.
  2. Insert base post with coupler using a tapered level and let concrete set a minimum of 4 days, unless otherwise directed by engineer.
  3. Bottom of base post starts shall be above the concrete footing.
  4. Insert steel post into base post. Lower until the post comes to rest on the steel rod.
  5. Use hammer to ensure the coupler is firmly seated. Top of coupler should be 1/2" above the base post.
  6. The top of base post is not to be less than 12" above the footing. If these checks are not met, the footing is to be redigged, increase the heightening of coupler.

**BOLT DOWN SIGN SUPPORT**

1. Position base plate with coupler on existing concrete.
2. Drill holes into concrete and insert the 5/8" diameter bolts with wedge anchors, and tighten nuts.
3. Attach sign to FRP post.
4. Insert bottom of sign post into pipe stub.
5. Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
6. Check sign to ensure there is no twist. If loose, increase the tightening of coupler.



**SIGN MOUNTING DETAILS  
SMALL ROADSIDE SIGNS  
UNIVERSAL ANCHOR SYSTEM  
WITH FRP POST**

**SMD (FRP) - 08**

9-08	© TxDOT July 2002 REVISIONS	DN1 TxDOT	DN1 TxDOT	DN1 TxDOT	DN1 TxDOT	DN1 TxDOT	
		CONT	SECT	JOB	HIGHWAY		
		DIST		COUNTY	SHEET NO.		

265

RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020

BY: dimeth

HMT ENGINEERING AND SURVEYING

NO.	REVISION DESCRIPTION	REVISION DATE
A	WATER AND WASTEWATER REV	02/10/2019
A	FIRE ACCESS REV	03/29/2019
A	BOPE UNDER PM 110D AND LOT REV	03/29/2019
A	STEPHENBURGH STATION REVISION	07/29/2019
A	BOPE UNDER PM 110I REV	08/13/2019
A	ADDED WATER LATERAL LINE C STATION 8+84.42	08/13/2019
A	PACEMANT GRADING RFI	09/27/2019
A	MILD IRS ADA RAMP	01/09/2020

DATE: FEBRUARY 2020

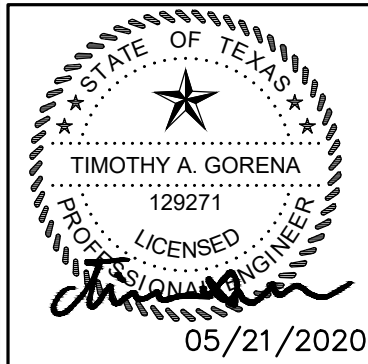
DRAWN BY: HM

DESIGNED BY: TG  
REVIEWED BY: CC/SWH

HMT PROJECT NO.	266.07
-----------------	--------

**SHEET**

## C4.12



## STREET DETAILS (4 OF 6)

HEATHERFIELD SUBDIVISION  
UNIT 1

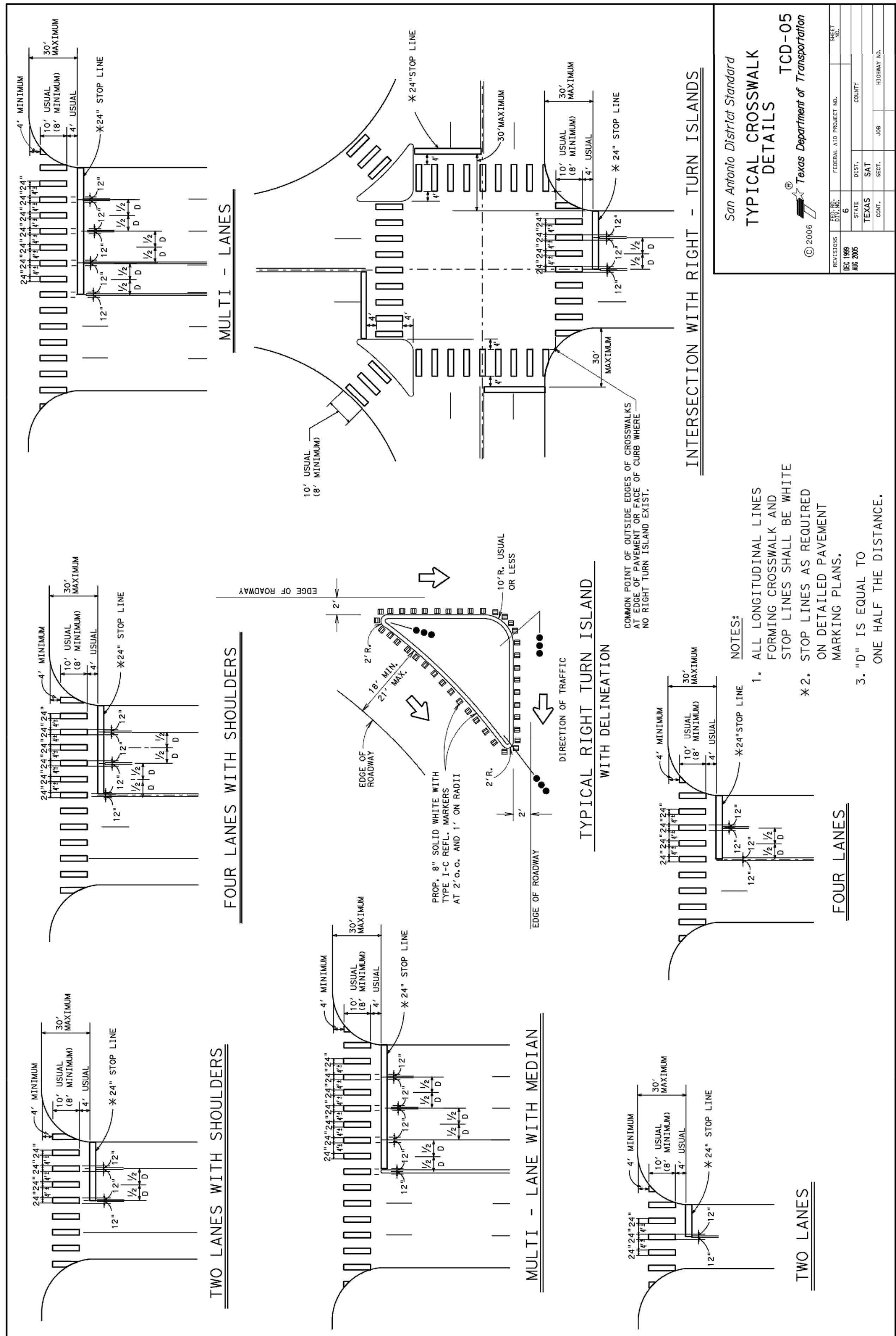
8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600









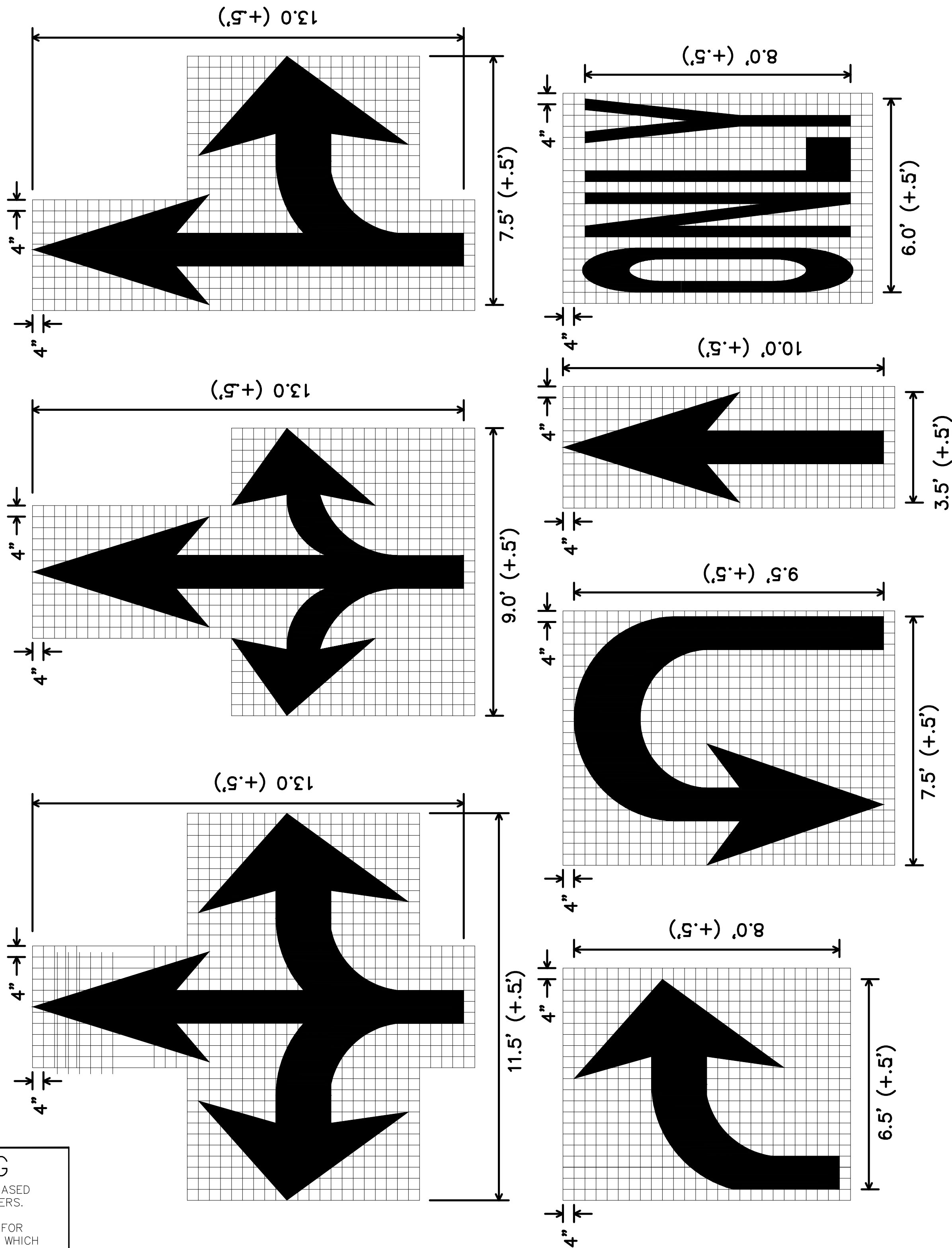


## HMT ENGINEERING AND SURVEYING

OF PAVEMENT MARKINGS	
MPH	SPACING
≤45	MINIMUM 4 TIMES THE LETTER HEIGHT
>45	MINIMUM – 4 TIMES THE LETTER HEIGHT MAXIMUM – 10 TIMES THE LETTER HEIGHT

PAVEMENT MARKINGS  
(ARROWS)

© TADOT March 2001	FEDERAL AID PROJECT	PR - 008	PR-008 (6) - 01
REGIONS	COUNTY	CONTRACT	SECTION
			AND
			GR - CAL
			SHEET
			INVENTORY

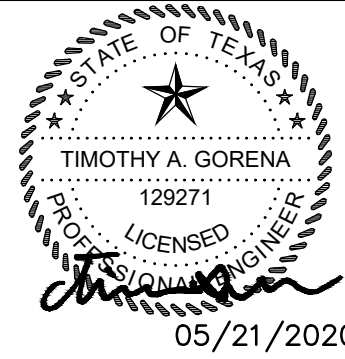


HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	WATER AND WASTEWATER REV	REVISION DESCRIPTION	REVISION DATE
1	PRE ACCESS REV		02/18/2019
2	BORE UNDER PM 11D1 AND LOT REV		03/29/2019
3	STEPPED/FLAT STATION REVISION		07/29/2019
4	BORE UNDER PM 11D1 REV		06/13/2019
5	ADDED WATER LATERAL LINE C STATION 81+64.2		06/13/2019
6	PAVEMENT GRADING SPT		09/21/2019
7	FIELD RDS RAMP		01/29/2020

**SHEET**

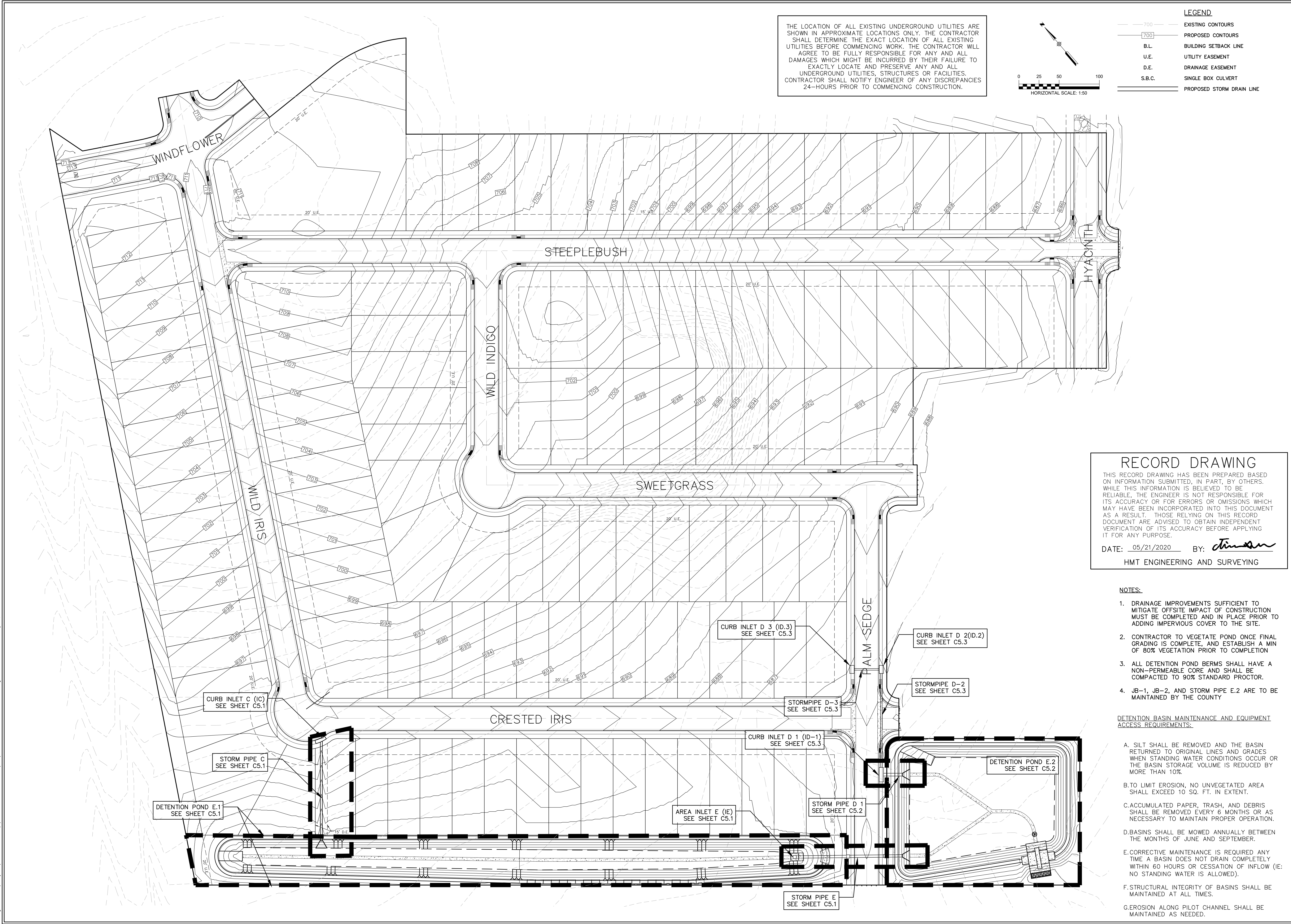
**SHEET**



8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600







8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPE FIRM 1-10961  
TBPLS FIRM 10153600

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
TIMOTHY A. GORENA  
129271  
LICENSED PROFESSIONAL ENGINEER  
05/21/2020

**OVERALL STORMWATER PLAN**

**HEATHERFIELD SUBDIVISION**

**UNIT 1**

**REVISION**

NO.	REVISION DESCRIPTION	DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEEPLEBUSH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+44.42	08/13/2019
7	PAYMENT GRADING REV	09/21/2019
8	WILD IRIS AREA RAMP	01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

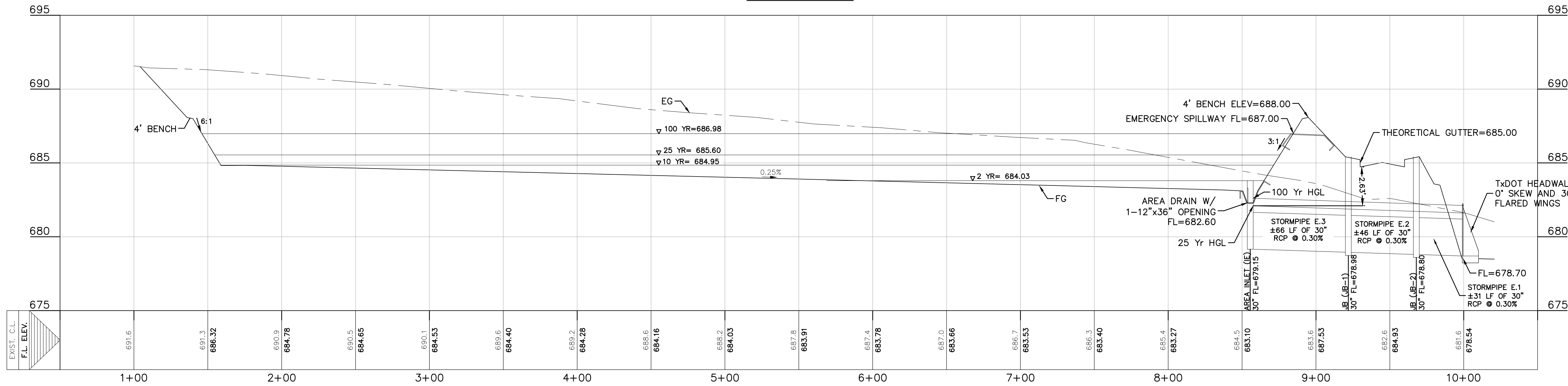
HMT PROJECT NO.: 266.07

**SHEET**

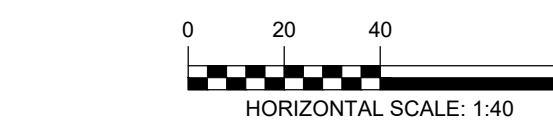
**C5.0**



Alignment A-A  
0+50 - 10+50



- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - S.B.C. SINGLE BOX CULVERT
  - PROPOSED STORM DRAIN LINE
  - WQ WATER QUALITY PATH

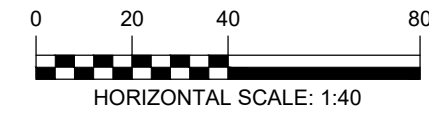
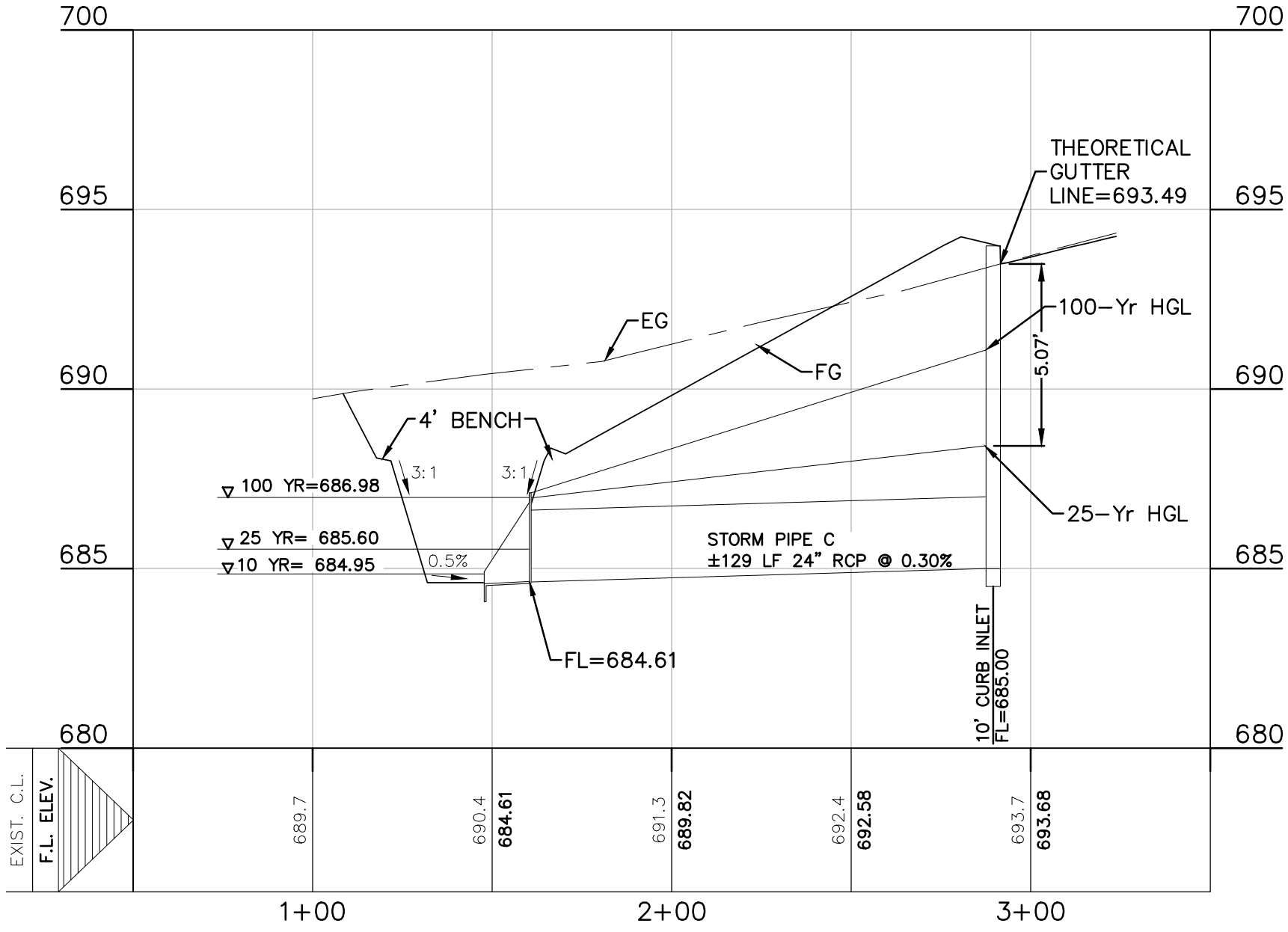


- NOTES:**
- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
  - CONTRACTOR TO VEGETATE POND ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 80% VEGETATION PRIOR TO COMPLETION
  - ALL DETENTION POND BERMS SHALL HAVE A NON-PERMEABLE CORE AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR.
  - JB-1, JB-2, AND STORM PIPE E.2 ARE TO BE MAINTAINED BY THE COUNTY. ALL OTHER STORM DRAINS WITHIN DRAINAGE LOTS TO BE MAINTAINED BY THE HOA.

STORM SEWER AND DETENTION BASIN AND MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

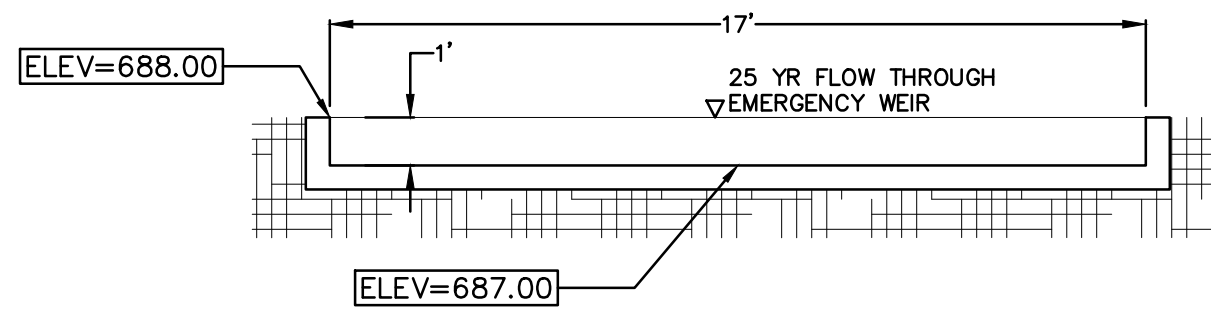
- A. SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.
- B. TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- C. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- D. BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- E. CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- F. STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
- G. EROSION ALONG PILOT CHANNEL SHALL BE MAINTAINED AS NEEDED.
- H. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ENSURE PROPER FUNCTION OF THE STORM SEWER SYSTEM.

Alignment B-B  
0+50 - 3+50

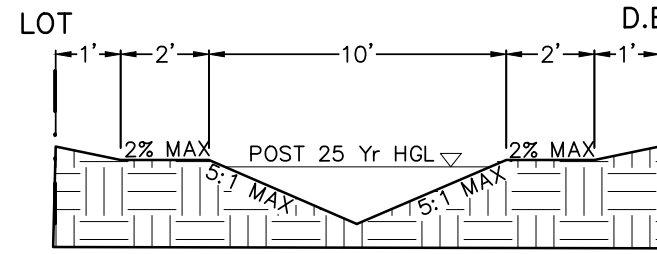


STORMPIPE C  
25 YEAR EVENT  
DIA: 24"  
Q25: 27.34 CFS  
V25: 8.70 FPS  
n: 0.0013  
S: 0.3%  
HGL IN: 688.42'

STORMPIPE C  
100 YEAR EVENT  
DIA: 24"  
Q100: 40.40 CFS  
V100: 12.86 FPS  
n: 0.0013  
S: 0.3%  
HGL IN: 691.09'



POND E.1 EMERGENCY WEIR DETAIL

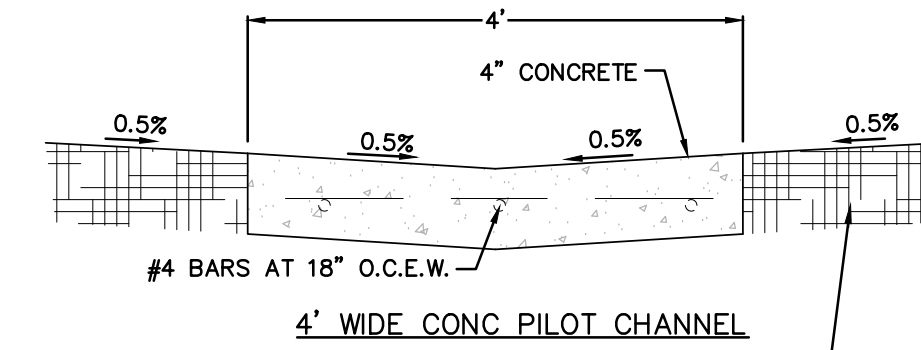


CROSS SECTION K EMERGENCY SPILLWAY

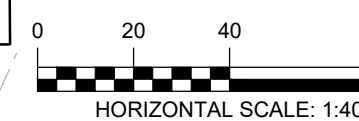
N.T.S.

EMERGENCY SPILLWAY  
25 YEAR EVENT  
Q25: 27.34 CFS  
V25: 5.93 FPS  
n: 0.035  
S: 5.50%  
Dn: 0.96'

Table 14 - Detention Basin E.1 Prop/Ultimate Summary				
	2-YEAR	10-YEAR	25-YEAR	100-YEAR
Peak Storage Volume (includes SWQ Volume) (cf)	3,263	16,228	30,268	65,696
Pond Release Rate (cfs)	12.79	19.66	22.83	28.45
Water Surface Elevation (ft)	684.03	684.95	685.60	686.98
Water Depth (ft)	1.03	1.95	2.60	3.98
Time to Drain (hrs)	26.5	26.6	26.6	26.7
Freeboard (ft)	3.97	3.05	2.40	1.02
Discharge Velocity (fps)	2.94	4.01	4.65	5.80



CONTRACTOR TO REVEGETATE 4' TO EITHER SIDE OF PILOT CHANNEL



RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timon*  
HMT ENGINEERING AND SURVEYING

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

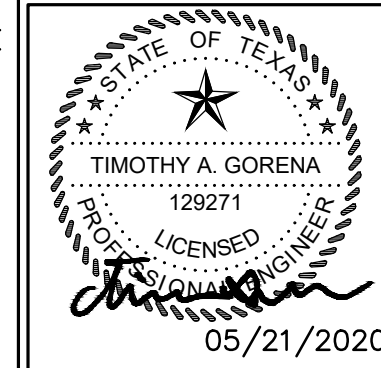
POND E.1

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION	DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPHENSON STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+44.42	08/13/2019
7	PAYMENT GRADING REV	09/21/2019
8	WED RES ADA RAMP	07/29/2020

DATE: FEBRUARY 2020  
DRAWN BY: HM  
DESIGNED BY: TG  
REVIEWED BY: CC/SWH  
HMT PROJECT NO.: 266.07

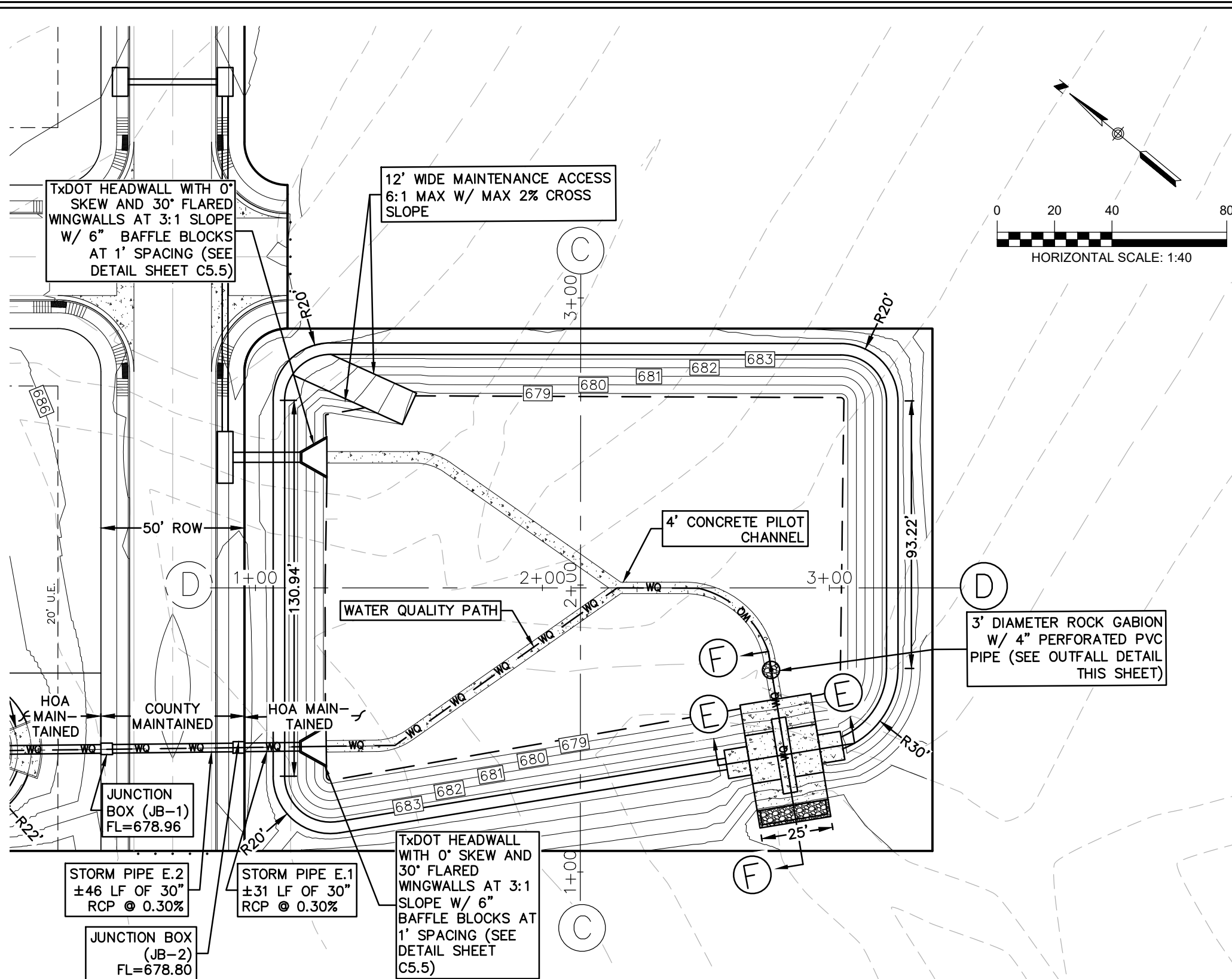
SHEET  
C5.1



**HMT**  
ENGINEERING & SURVEYING

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P2101052-3844-F2101052-3236  
TBE FIRM F-10961  
TBE FIRM F-1015360





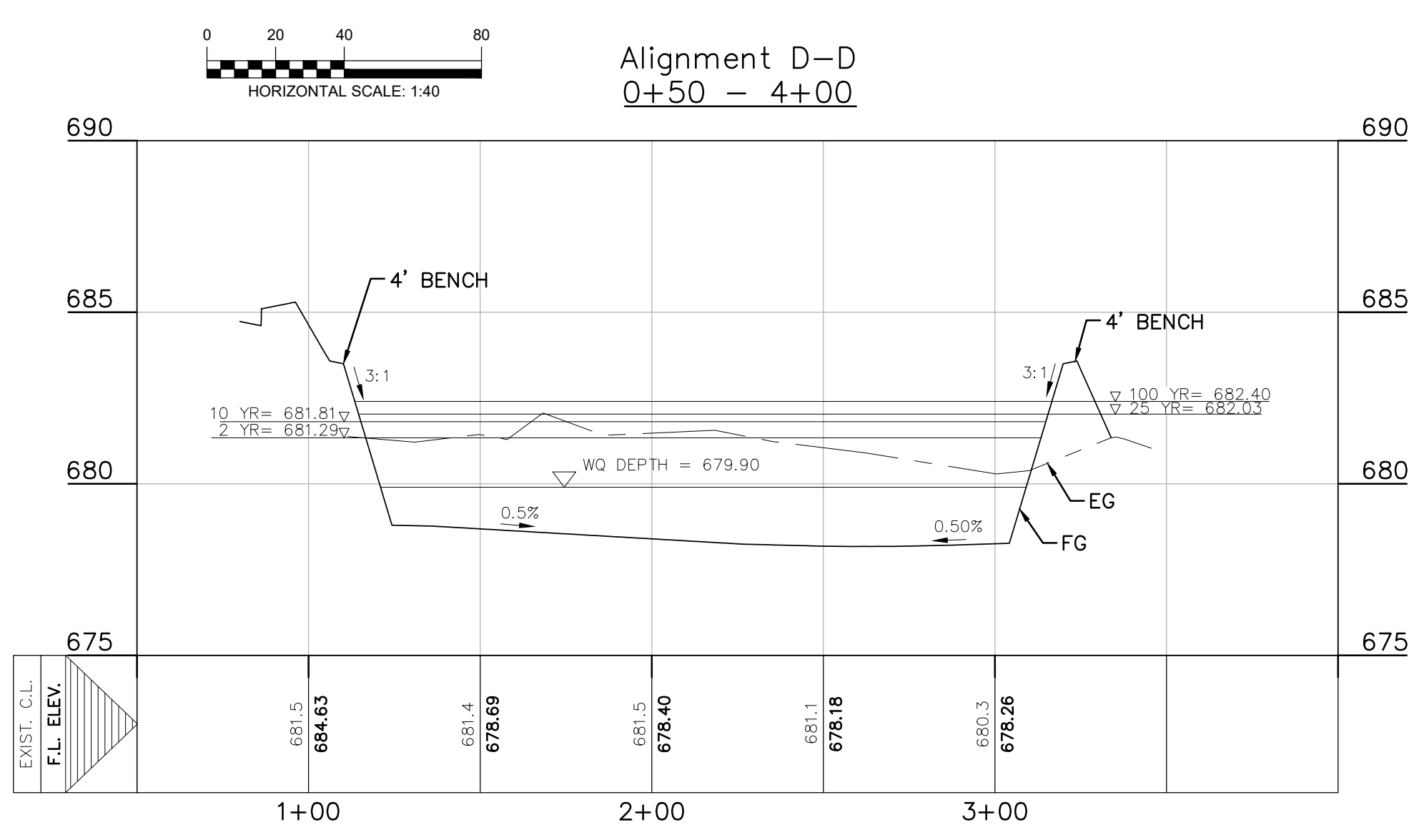
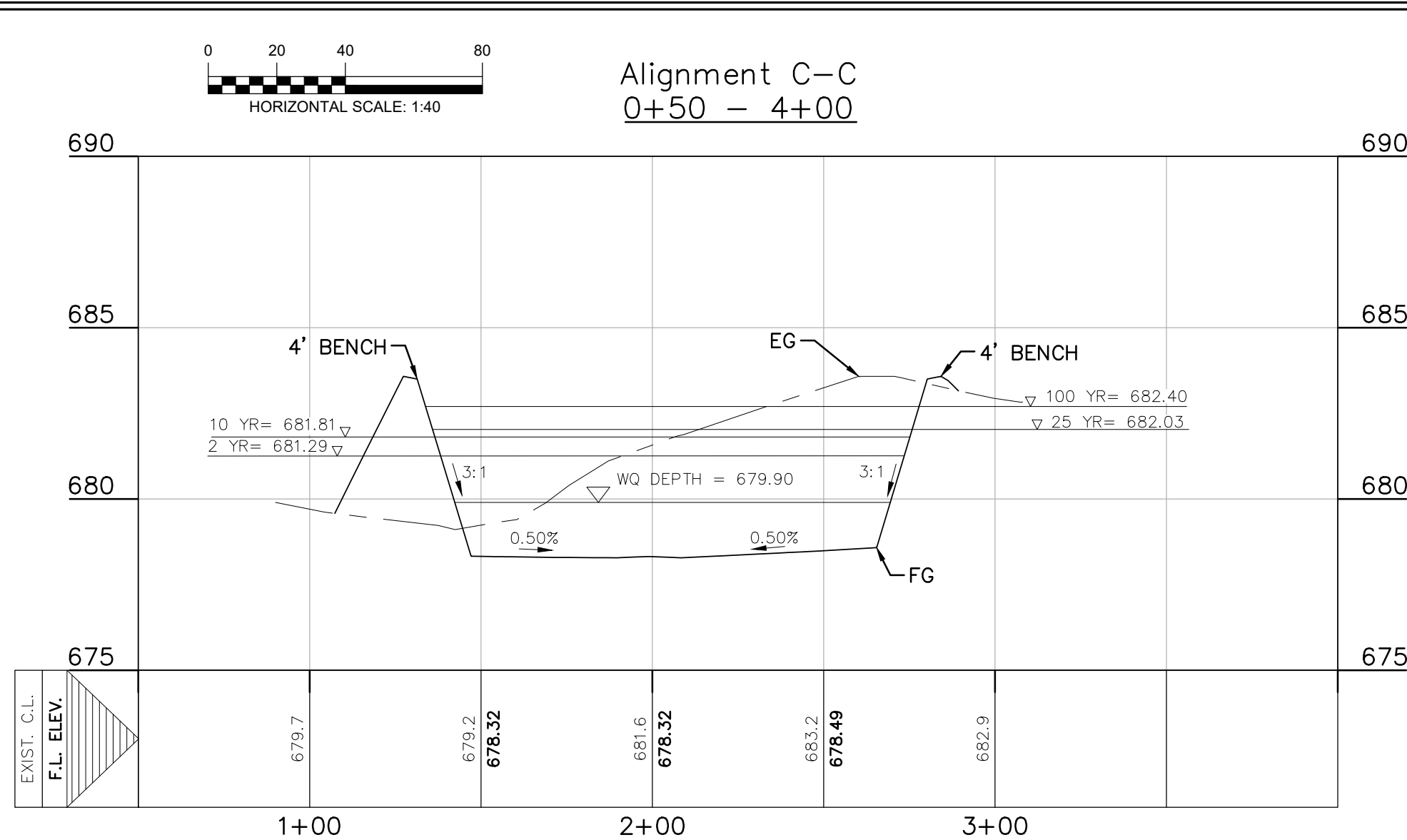
DETENTION/STORM WATER QUALITY BASIN E.2

Table 15 - Detention/Water Quality Basin E2 Prop Summary				
	2-YEAR	10-YEAR	25-YEAR	100-YEAR
Peak Storage Volume (includes SWQ Volume) (cf)	34,366	48,808	54,773	65,365
Pond Release Rate (cfs)	21.03	53.59	73.59	112.38
Water Surface Elevation (ft)	681.26	681.80	682.03	682.39
Water Depth (ft)	3.26	3.80	4.03	4.39
Time to Drain (hrs)	28.80	29.20	29.30	29.50
Freeboard (ft)	2.24	1.70	1.47	1.11
Discharge Velocity (fps)	1.29	2.75	2.91	3.28

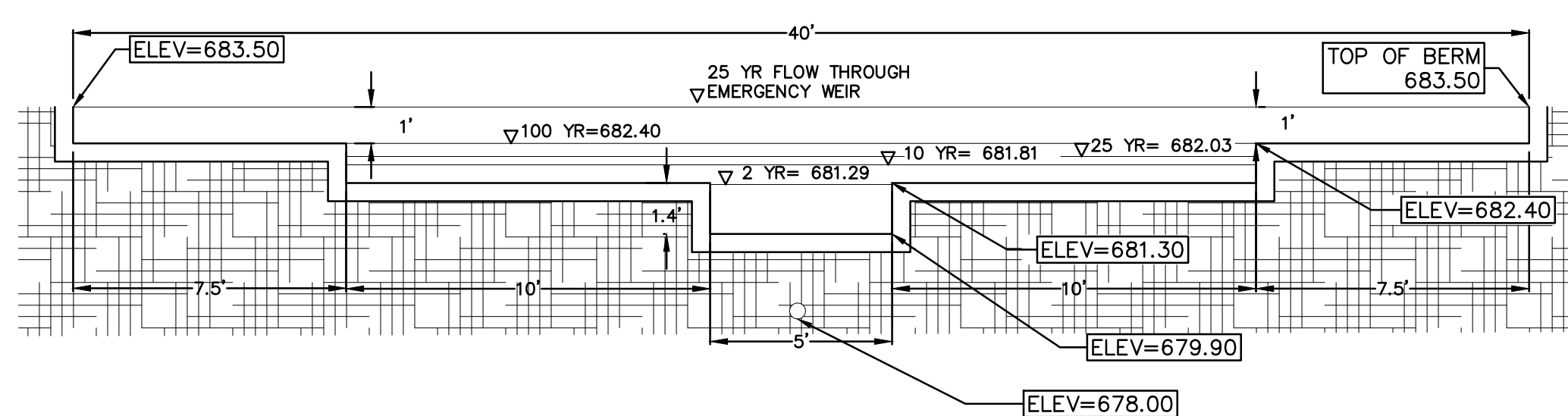
Table 16 - Detention/Water Quality Basin E2 Ultimate Summary				
	2-YEAR	10-YEAR	25-YEAR	100-YEAR
Peak Storage Volume (includes SWQ Volume) (cf)	35,029	49,054	54,998	65,523
Pond Release Rate (cfs)	21.60	54.38	74.35	113.00
Water Surface Elevation (ft)	681.29	681.81	682.03	682.40
Water Depth (ft)	3.29	3.81	4.03	4.40
Time to Drain (hrs)	28.80	29.20	29.30	29.50
Freeboard (ft)	2.21	1.69	1.47	1.10
Discharge Velocity (fps)	1.31	2.75	2.94	3.28

Table 17 - Proposed Detention/Water Quality Basin Summary			
	Basin A	Basin B	Basin E.2*
Watershed Area (acres)	14.38	20.15	19.82
Impervious Cover (sf)	375,836	526,640	518,016
Required WQ Volume (cuft) = Impervious Cover * (1/2" * 1.20)	18,792	26,332	25,901
Provided Water Quality Volume (cuft)	22,761	34,560	32,940
Orifice Outlet Size (in)	3	4	3.5
Average Flowrate (cfs)	0.18	0.31	0.28
Time to Empty SWQ Pond (hrs)	35.1	31.0	32.7
1/2 Provided Water Quality Volume (cuft)	11,381	17,280	16,470
Average Flowrate of First 1/2 of SWQ POND (cfs)	0.23	0.40	0.36
Time to Empty First 1/2 of SWQ Pond (hrs)	13.7	12.0	12.7
Water Quality Depth (ft)	1.5	1.5	1.9
Detention Pond Length (ft)	250	275	1,076
Detention Pond Width (ft)	121	123	146
Length to Width Ratio	2.1	2.2	7.4

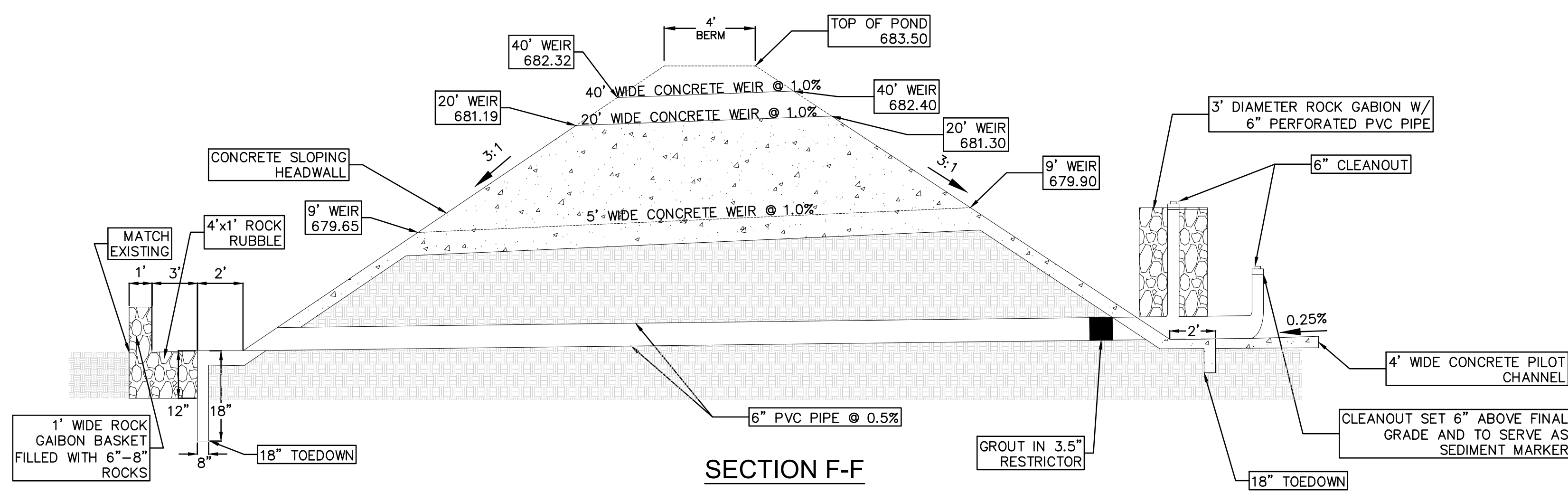
\*Basin E.2 is treating the stormwater quality runoff for both drainage areas E.1 and E.2.



SECTION E-E



SECTION F-F



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

LEGEND

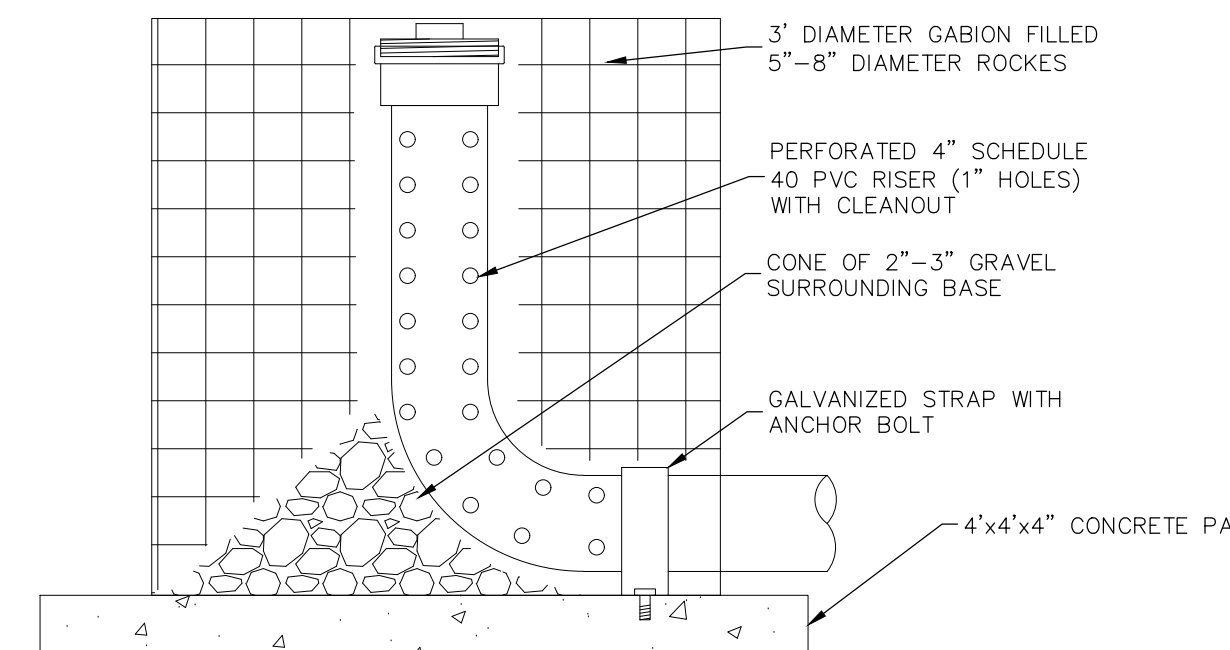
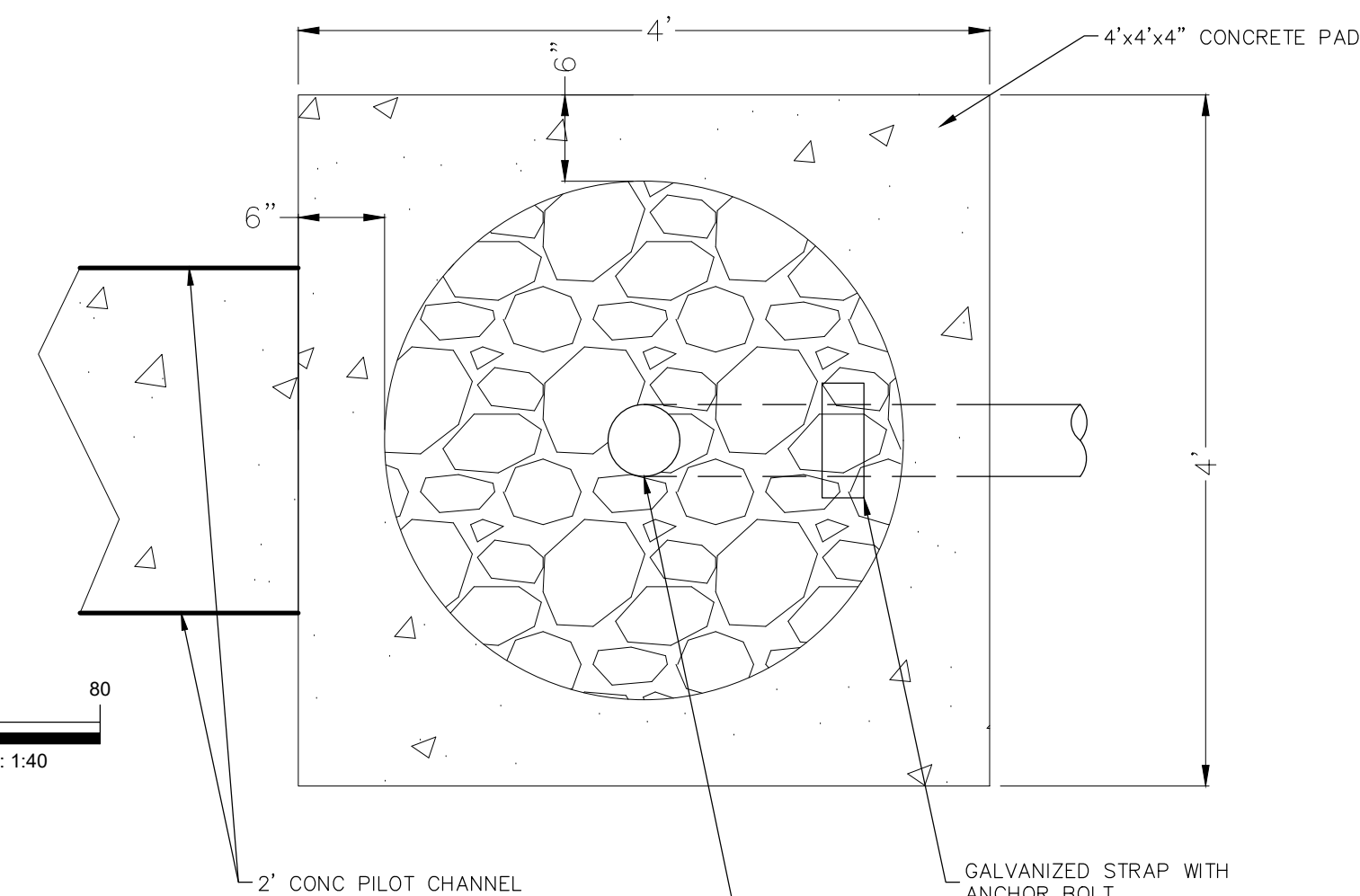
- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- S.B.C. SINGLE BOX CULVERT
- PROPOSED STORM DRAIN LINE
- WQ WATER QUALITY PATH

NOTES:

- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- CONTRACTOR TO VEGETATE POND ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 80% VEGETATION PRIOR TO COMPLETION
- ALL DETENTION POND BERMS SHALL HAVE A NON-PERMEABLE CORE AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR.
- JB-1, JB-2 AND STORM PIPE E.2 ARE TO BE MAINTAINED BY THE COUNTY.

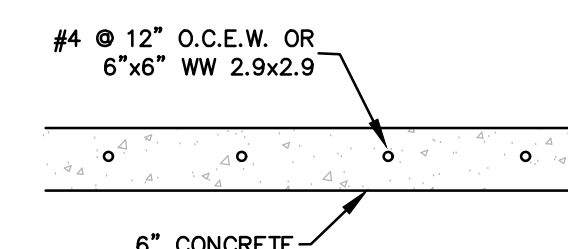
STORM SEWER AND DETENTION BASIN AND MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

- SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.
- TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
- EROSION ALONG PILOT CHANNEL SHALL BE MAINTAINED AS NEEDED.
- IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ENSURE PROPER FUNCTION OF THE STORM SEWER SYSTEM.



PERFORATED PIPE IN ROCK GABION

NOT-TO-SCALE



RIP-RAP CROSS SECTION

N.T.S.

ROCK GABION BASKET DETAIL

N.T.S.

RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*  
HMT ENGINEERING AND SURVEYING

POND E.2 (1 OF 2)

HEATHERFIELD SUBDIVISION  
UNIT 1

REVISION	DATE	DESCRIPTION
1	02/18/2019	WATER AND WASTEWATER REV
2	03/29/2019	FIRE ACCESS REV
3	05/29/2019	BEFORE UNDER FM 1101 AND LOT REV
4	07/29/2019	STEPHENSON STATION REVISION
5	08/13/2019	BEFORE UNDER FM 1101 REV
6	08/13/2019	ADDED WATER LATERAL LINE C STATION 8+48.42
7	09/21/2019	PAYMENT GRADING REV
8	01/09/2020	WED RES ADA RAMP

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

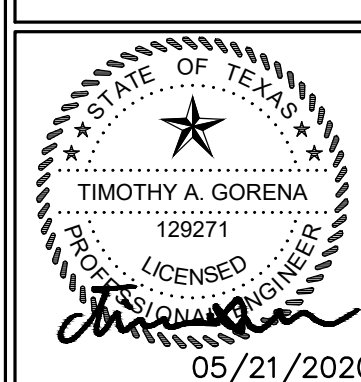
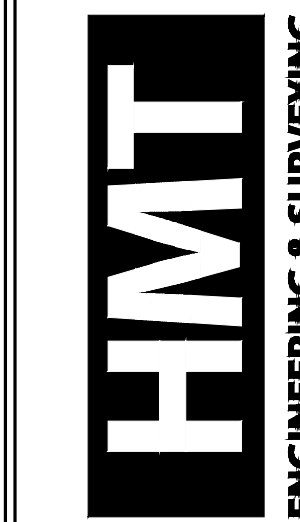
REVIEWED BY: CC/SWH

HMT PROJECT NO.: 266.07

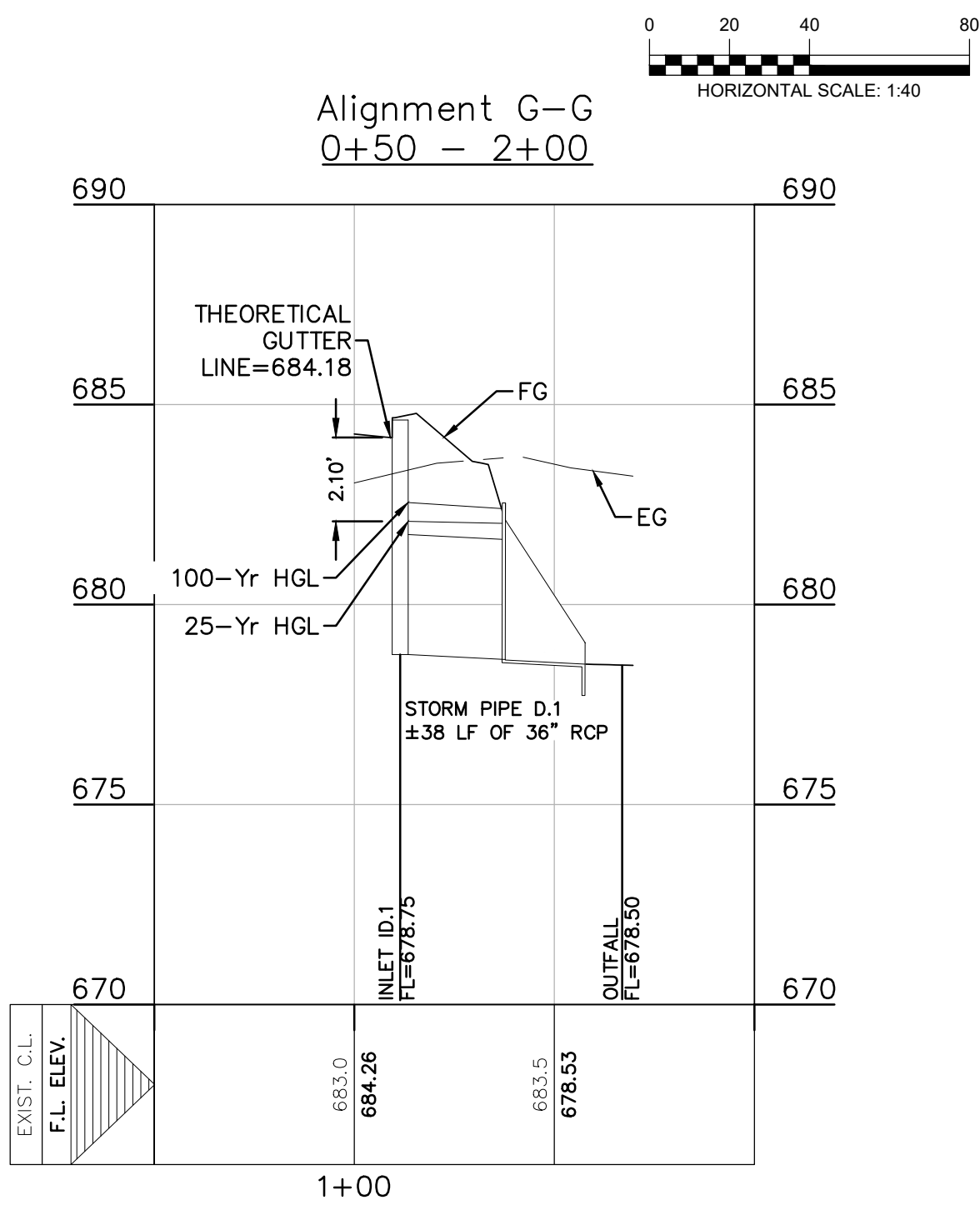
SHEET

C5.2

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P121010562-3844-F121010562-3236  
TBPB FIRM F-10961  
TBPB FIRM 10153600

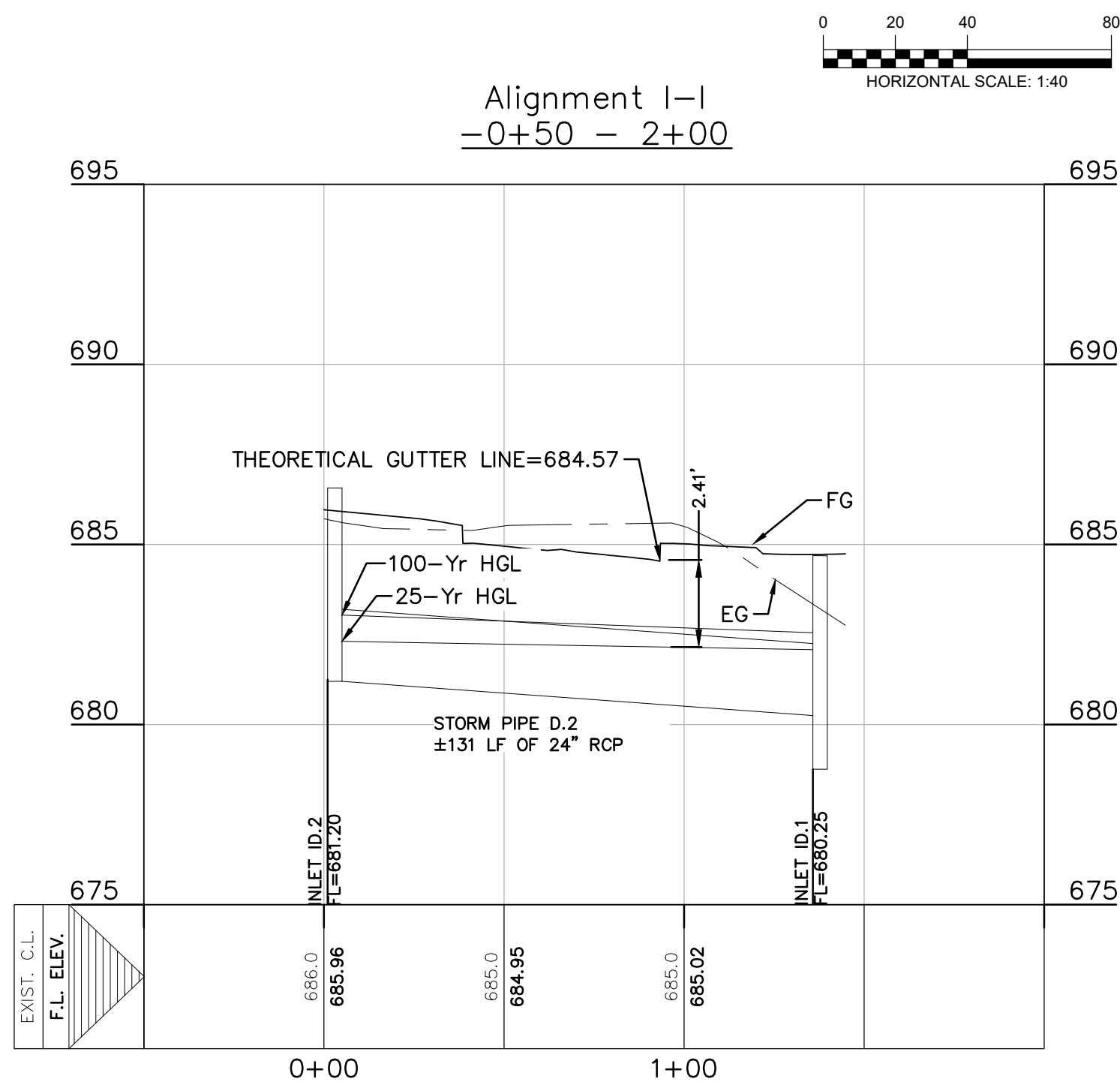






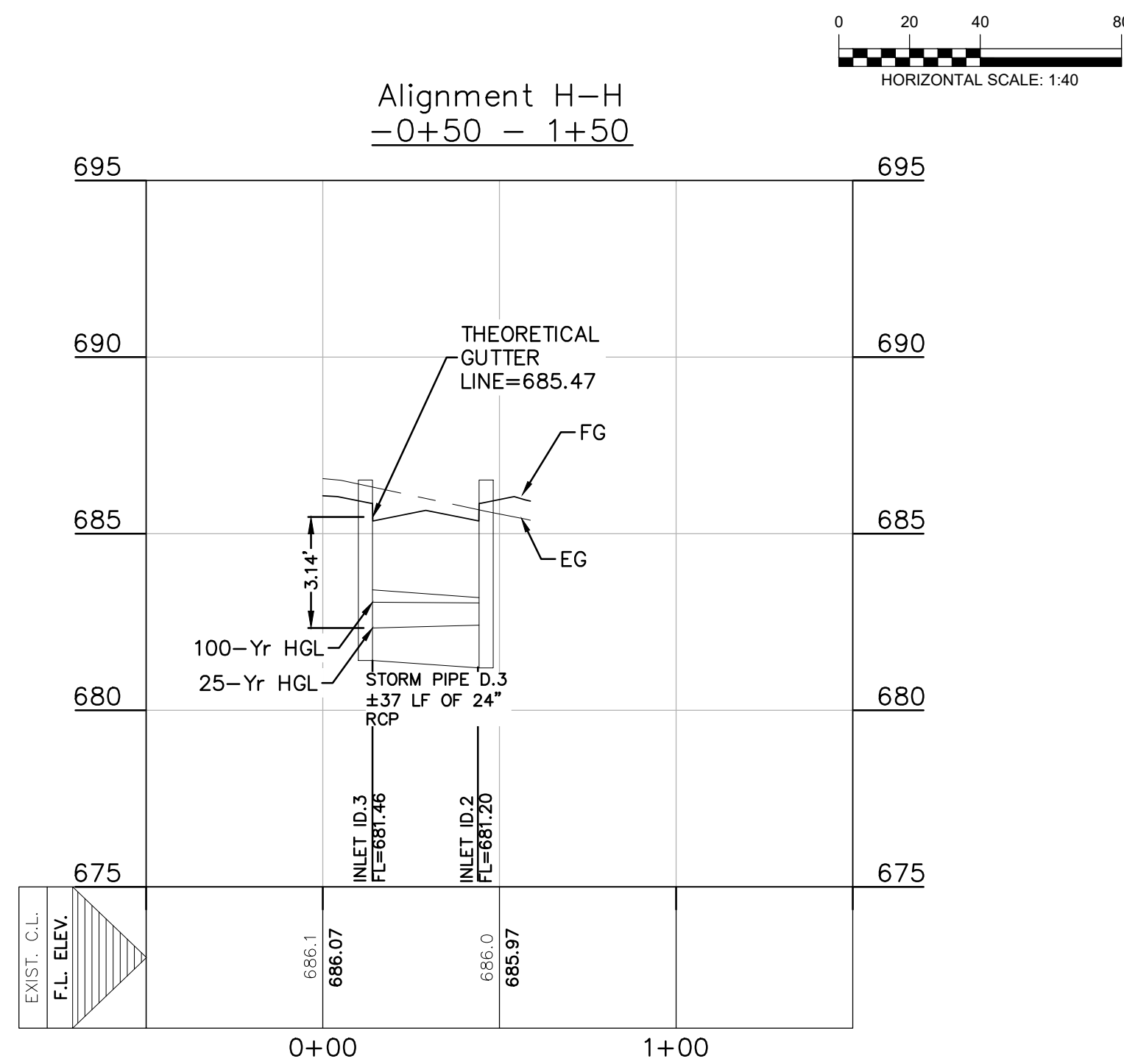
STORMPIPE D.1  
25 YEAR EVENT  
DIA: 36"  
Q25: 42.47 CFS  
V25: 8.57 FPS  
n: 0.0013  
S: 0.7%  
HGL IN: 682.08'

STORMPIPE D.1  
100 YEAR EVENT  
DIA: 36"  
Q100: 62.56 CFS  
V100: 6.50 FPS  
n: 0.0013  
S: 0.7%  
HGL IN: 682.55'



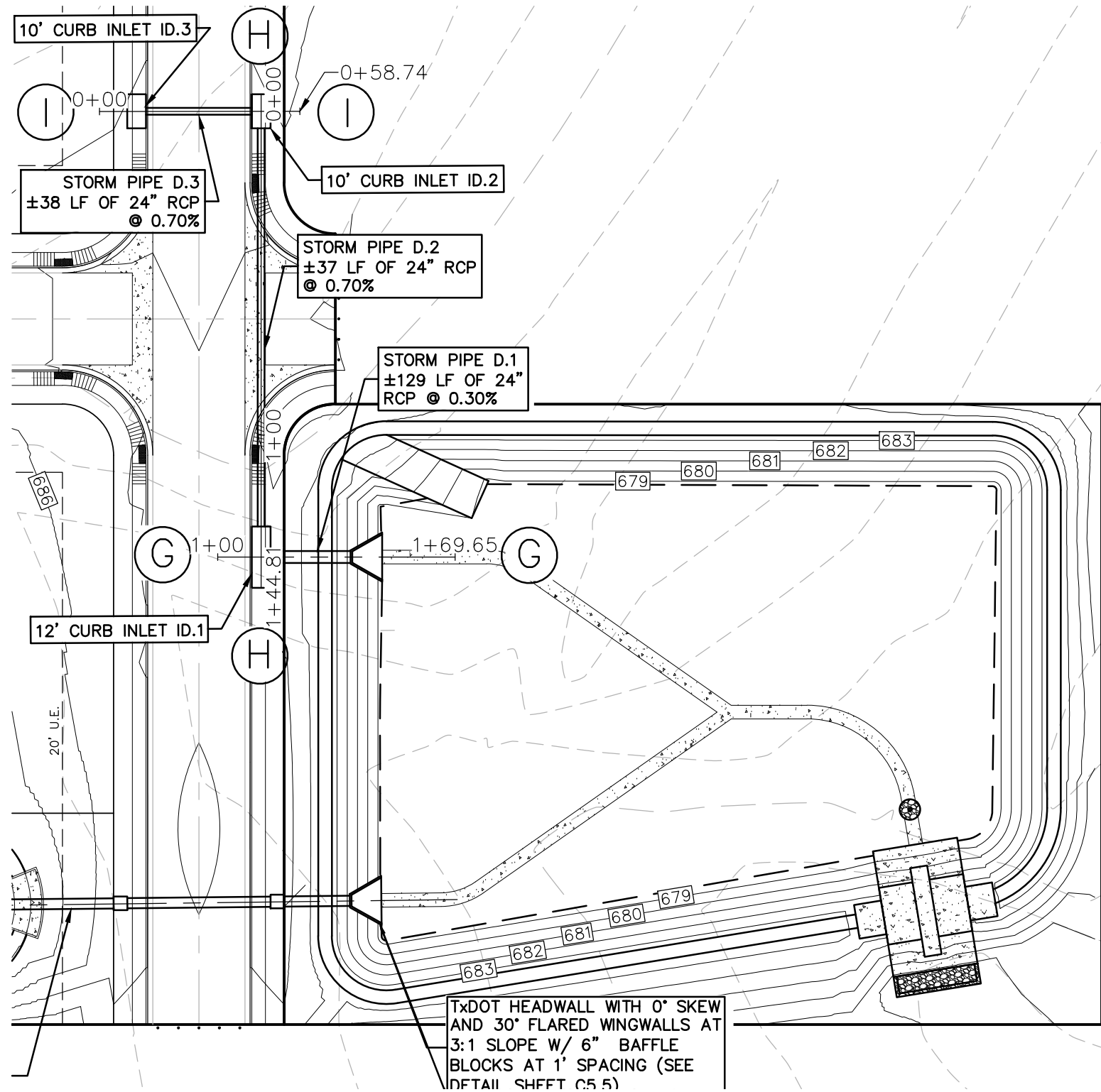
STORMPIPE D.2  
25 YEAR EVENT  
DIA: 24"  
Q25: 11.42 CFS  
V25: 6.39 FPS  
n: 0.0013  
S: 0.7%  
HGL IN: 682.41'

STORMPIPE D.2  
100 YEAR EVENT  
DIA: 24"  
Q100: 14.44 CFS  
V100: 6.73 FPS  
n: 0.0013  
S: 0.7%  
HGL IN: 683.04'

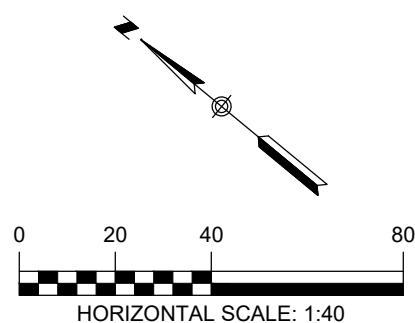


STORMPIPE D.3  
25 YEAR EVENT  
DIA: 24"  
Q25: 5.71 CFS  
V25: 5.28 FPS  
n: 0.0013  
S: 0.7%  
HGL IN: 682.33'

STORMPIPE D.3  
100 YEAR EVENT  
DIA: 24"  
Q100: 7.22 CFS  
V100: 5.63 FPS  
n: 0.0013  
S: 0.7%  
HGL IN: 683.06'



STORM NETWORK D



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

LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS
	BUILDING SETBACK LINE
	UTILITY EASEMENT
	DRAINAGE EASEMENT
	SINGLE BOX CULVERT
	PROPOSED STORM DRAIN LINE

NOTES:

- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- CONTRACTOR TO VEGETATE POND ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 80% VEGETATION PRIOR TO COMPLETION
- ALL DETENTION POND BERMS SHALL HAVE A NON-PERMEABLE CORE AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR.
- JB-1, JB-2 AND STORM PIPE E.2 ARE TO BE MAINTAINED BY THE COUNTY.

STORM SEWER AND DETENTION BASIN AND MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

- SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.
- TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
- EROSION ALONG PILOT CHANNEL SHALL BE MAINTAINED AS NEEDED.
- IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ENSURE PROPER FUNCTION OF THE STORM SEWER SYSTEM.

POND E.2 (2 OF 2)

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPHENBUSH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+48.42	09/21/2019
7	PAYMENT GRADING REV	01/29/2020
8	WED RES ADA RAMP	01/29/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.:  
266.07

SHEET  
C5.3

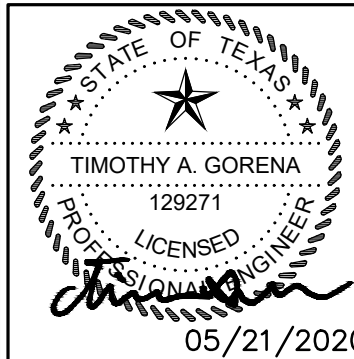
RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

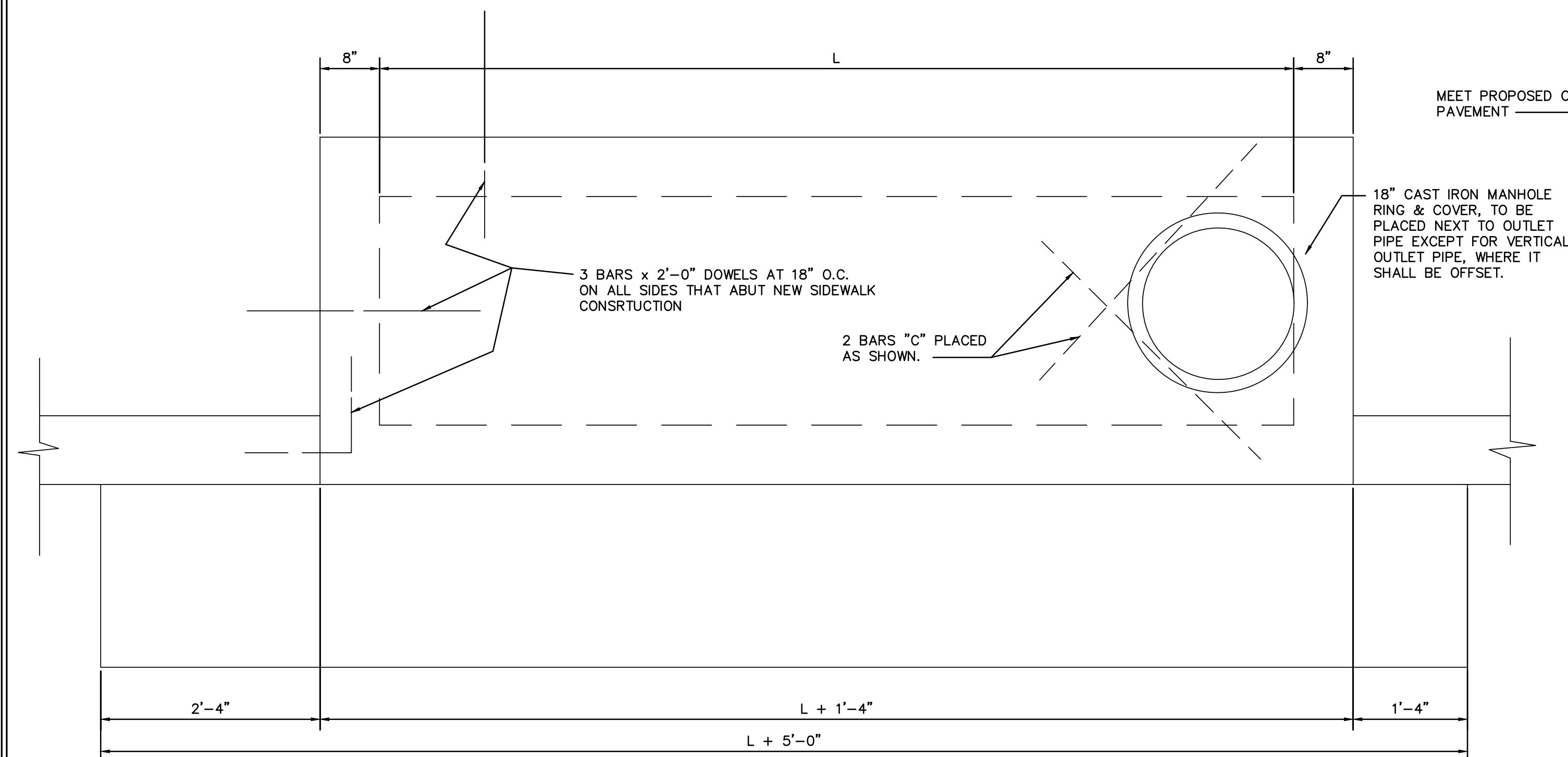
DATE: 05/21/2020 BY:   
HMT ENGINEERING AND SURVEYING

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPB FIRM F-10961  
TBPB FIRM 10153600

HMT  
ENGINEERING & SURVEYING

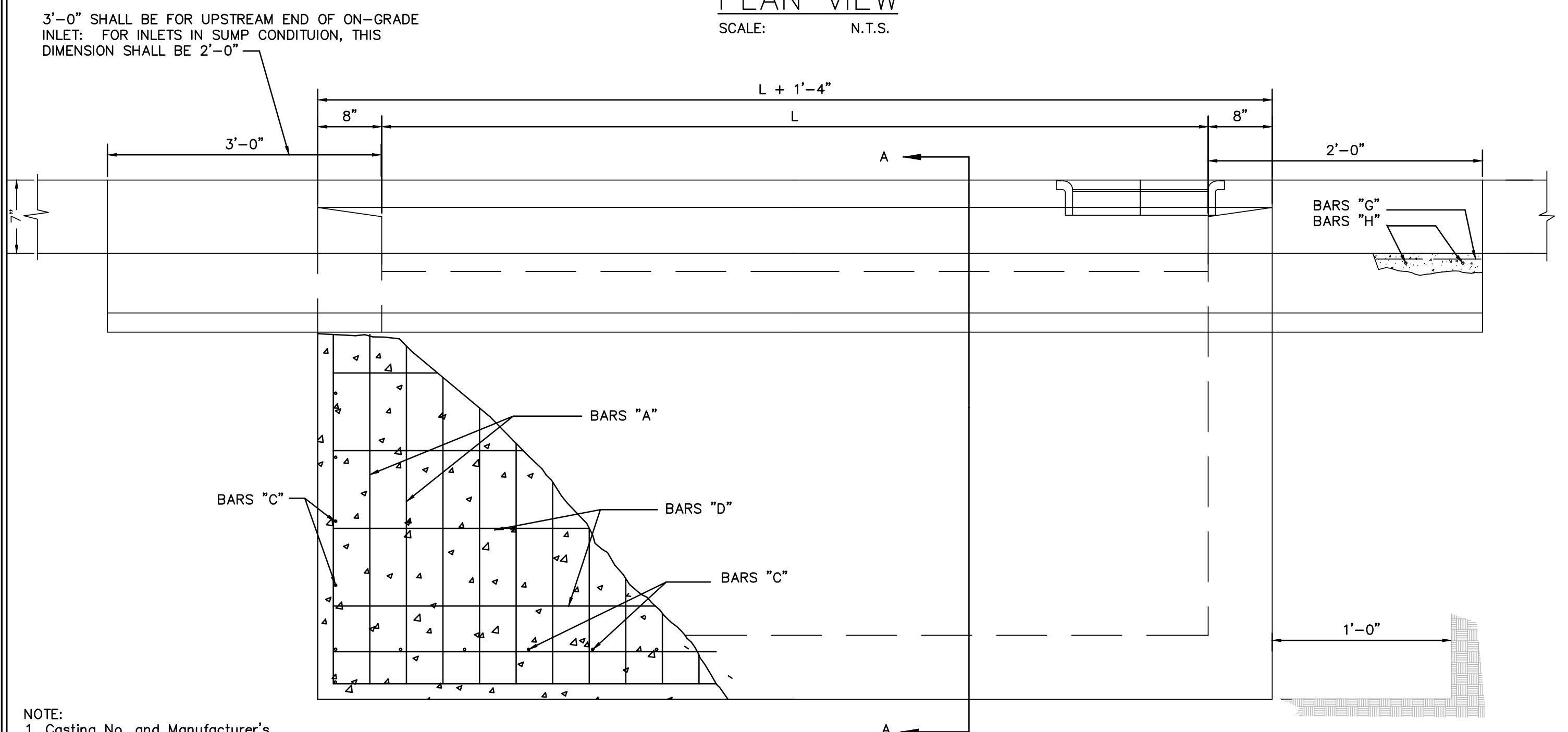






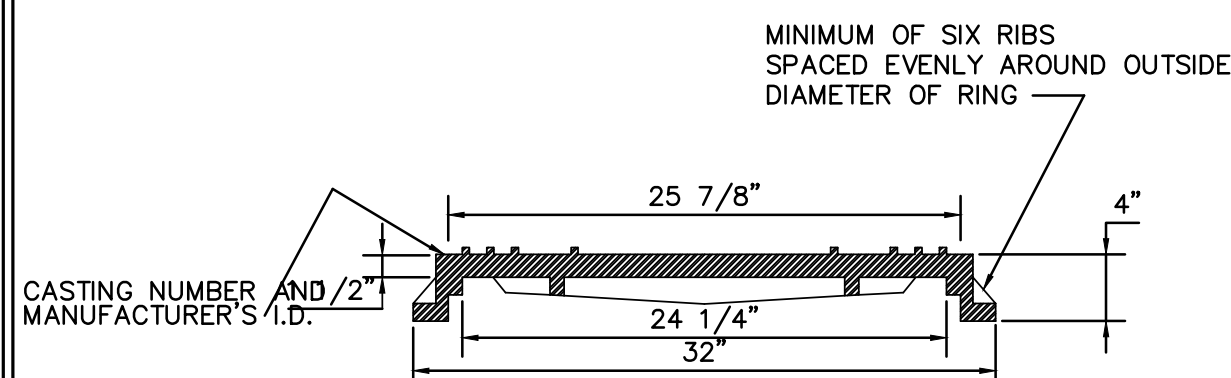
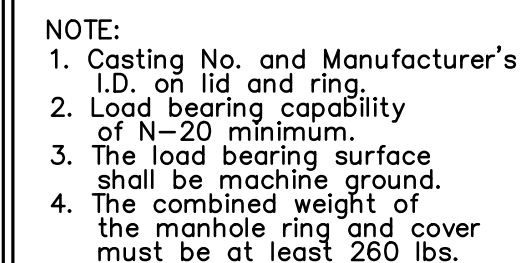
PLAN VIEW

SCALE: N.T.S.

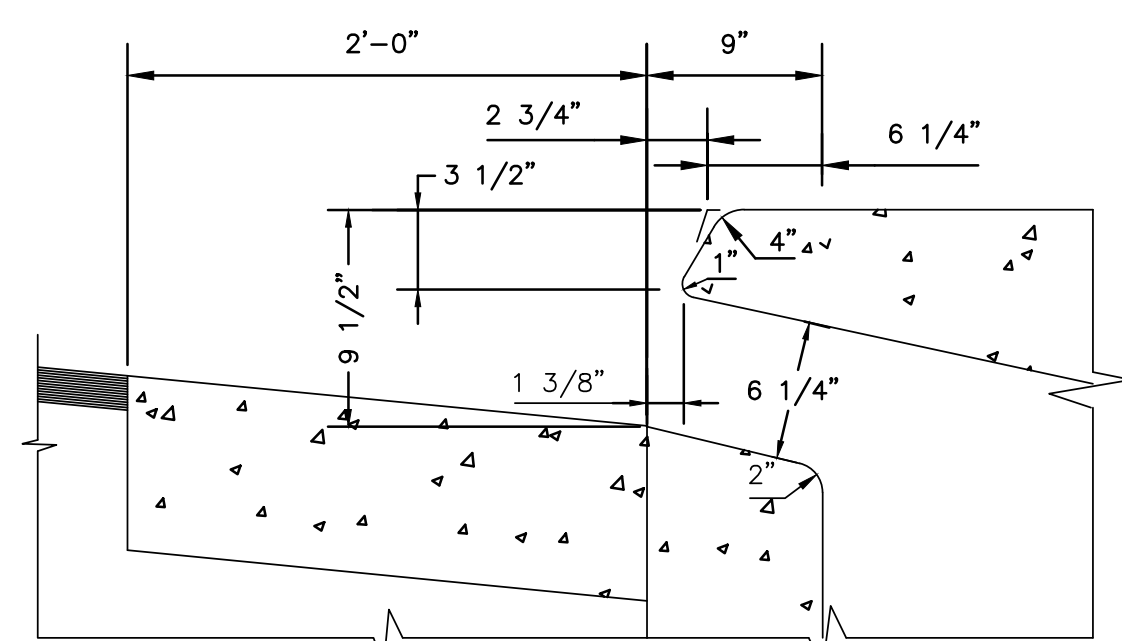
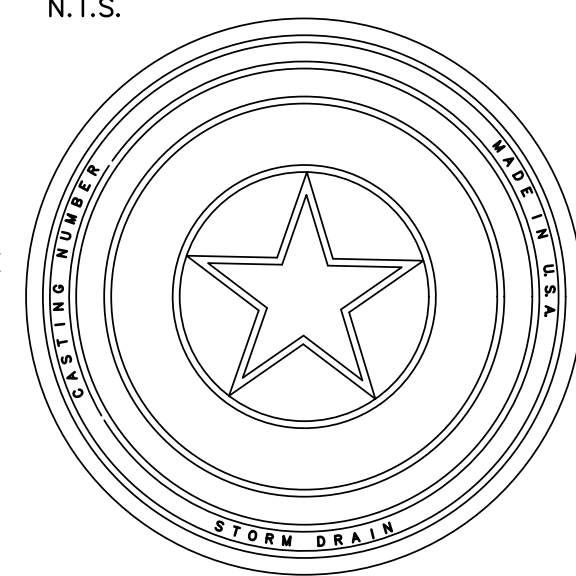


FRONT VIEW

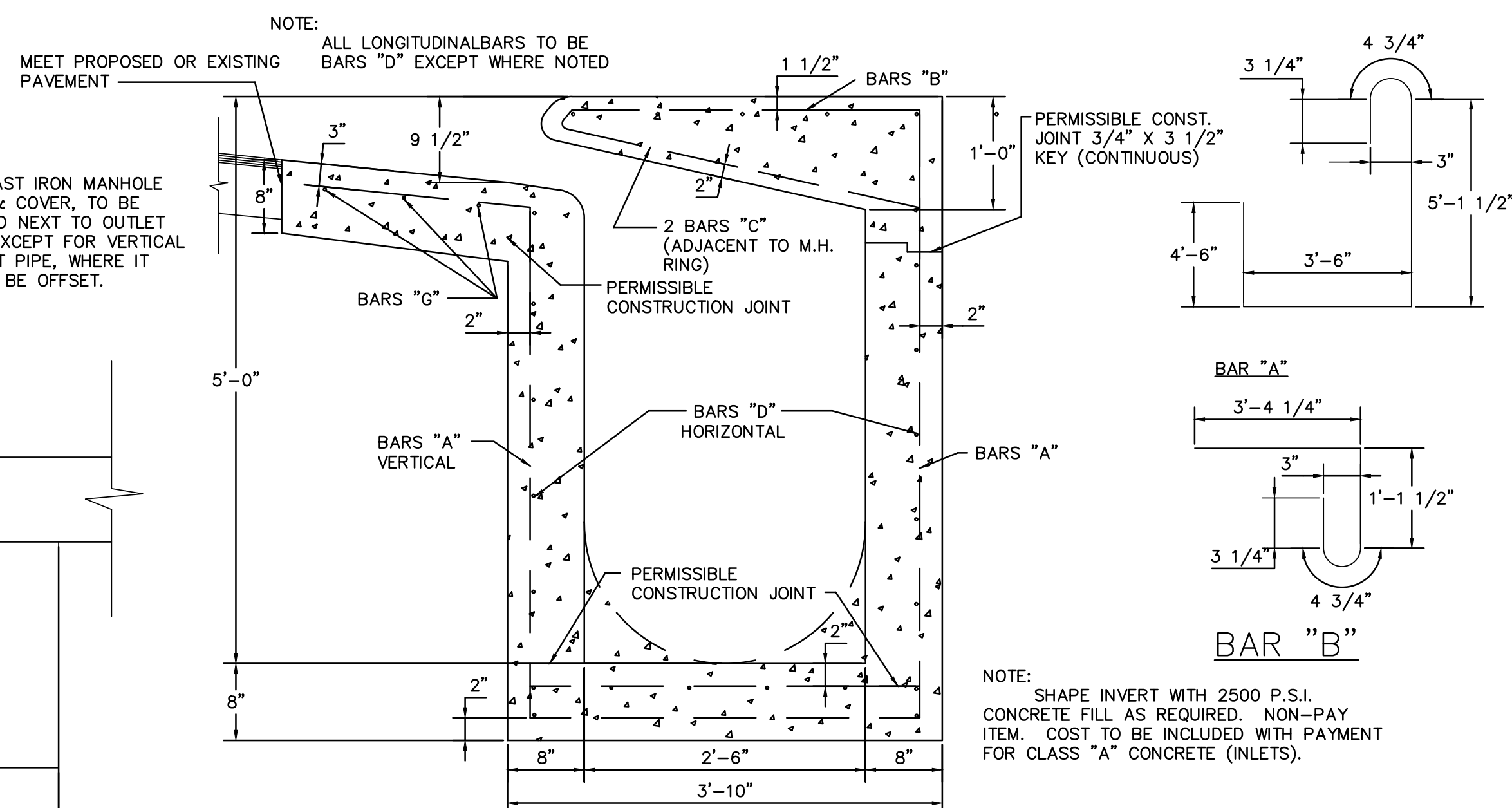
SCALE: N.T.S.



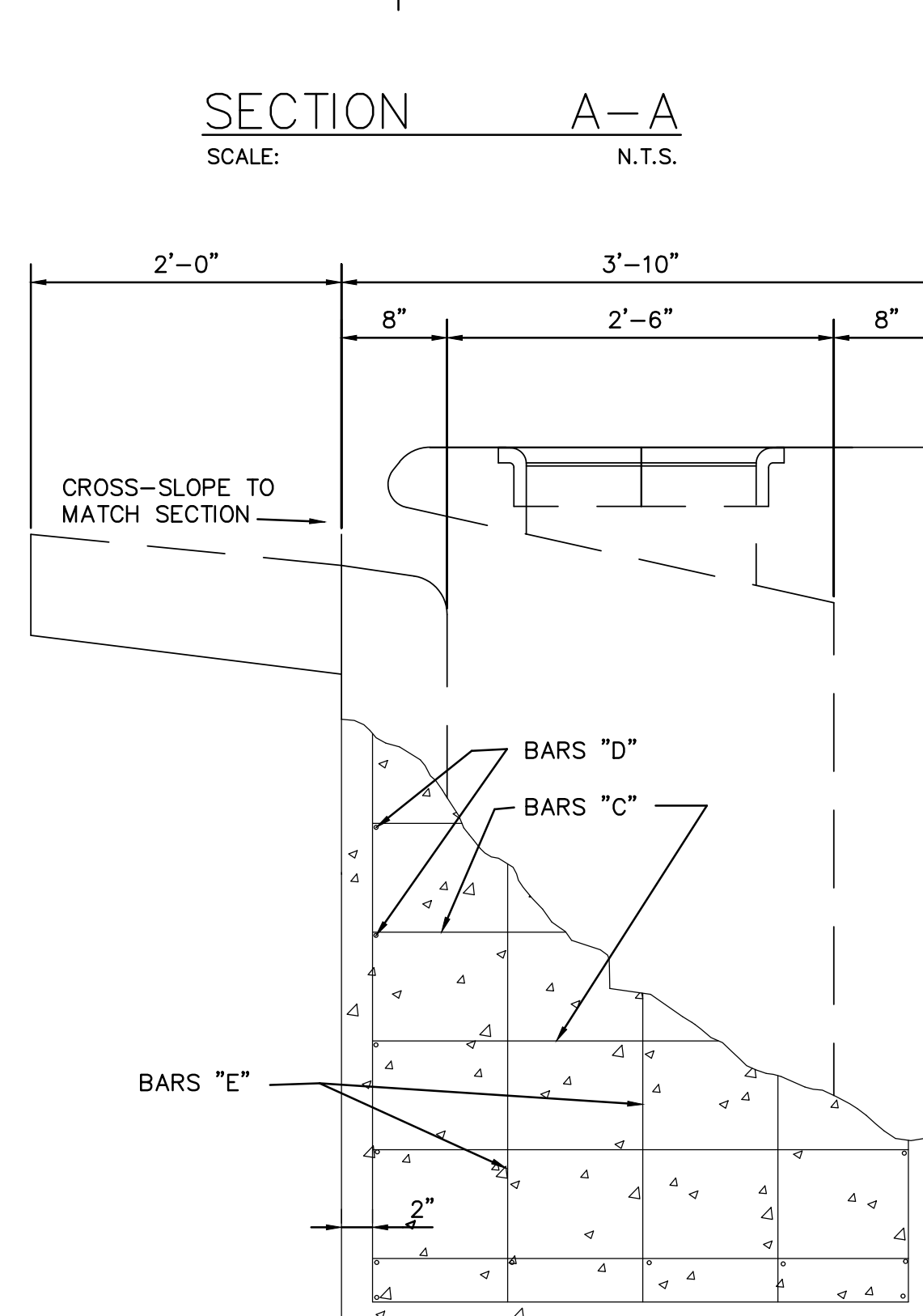
## MANHOLE RING & COVER DETAILS



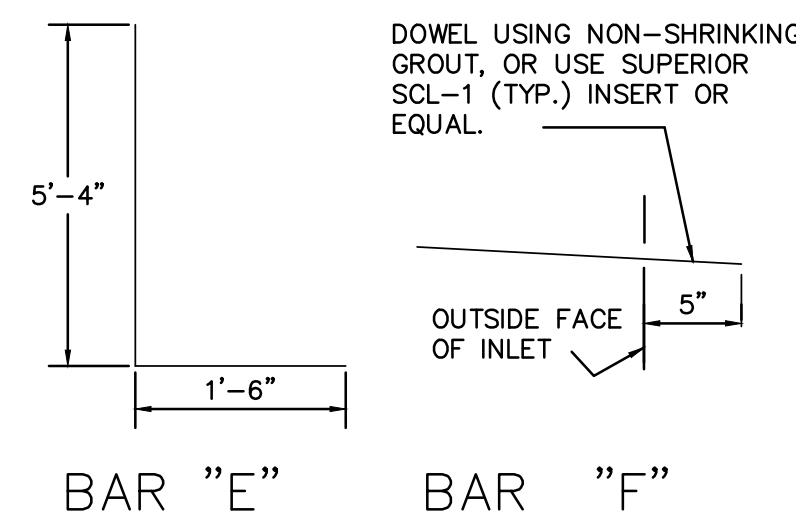
OPENING DETAIL FOR CURB SECTION



SECTION A-A  
SCALE: N.T.S.

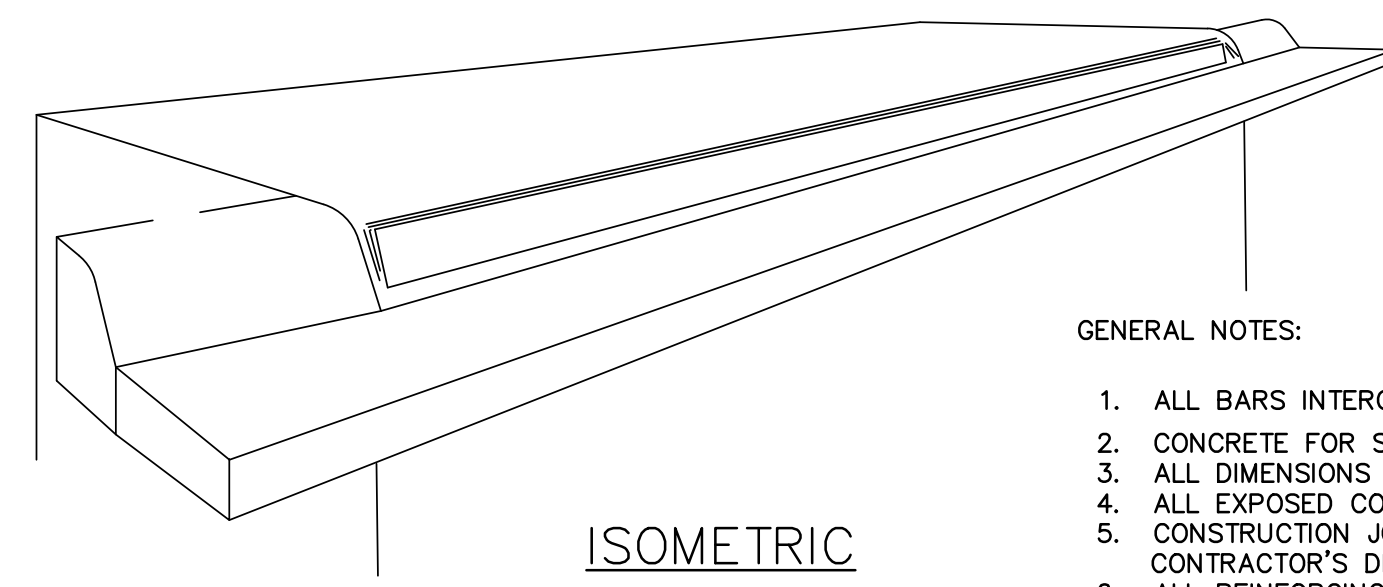


SIDE VIEW  
SCALE: N.T.S.



BAR "E"

BAR "F"



ISOMETRIC

GENERAL NOTES:

1. ALL BARS INTERCEPTING MANHOLE RING & REINFORCING CONCRETE PIPE SHALL BE FIELD CUT.
2. CONCRETE FOR STRUCTURES SHALL BE CLASS "A", 3000 P.S.I. IN 28 DAYS.
3. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED TO 3/4"
5. CONSTRUCTION JOINT SHOWN AT FLOWLINE MAY BE RAISED A MAXIMUM OF 6" AT THE CONTRACTOR'S DISCRETION. ADJUST LENGTH OF VERTICAL STEEL AS REQUIRED.
6. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-615, GRADE 60.

Reinforcing Steel Schedule						
	BAR	NO.	SIZE	SPA.	LENGTH	WEIGHT
L=5'-00"	A	15	4	5"OC	13'-9 1/2"	138
	B	15	4	5"	5'-1"	52
	C	23	4	9"	3'-6"	54
	D	22	4	10"	6'-1"	89
	E	10	4	10 1/2"	6'-10"	46
	F	6	5	12"	2'-3"	14
	G	3	4	12"	9'-8"	20
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=353 CY. MANHOLE CASTING=100 LBS. STEEL TOTAL=422 LBS.						
10'	A	27	4	5"OC	13'-9 1/2"	249
	B	27	4	5"	5'-1"	93
	C	30	4	9"	3'-6"	70
	D	22	4	10"	11'-1"	163
	E	10	4	10 1/2"	6'-10"	46
	F	12	5	12"	2'-3"	27
	G	3	4	12"	14'-8"	30
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=675CY MANHOLE CASTING=100LBS. STEEL TOTAL=687LBS						
15'	A	39	4	5"OC	13'-9 1/2"	359
	B	39	4	5"	5'-1"	134
	C	36	4	9"	3'-6"	84
	D	22	4	10"	16'-1"	236
	E	10	4	10 1/2"	6'-10"	46
	F	17	5	12"	2'-3"	38
	G	3	4	12"	19'-8"	40
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=797CY. MANHOLE CASTING=100LBS. STEEL TOTAL=946LBS						
20'	A	51	4	5"OC	13'-9 1/2"	470
	B	51	4	5"	5'-1"	175
	C	43	4	9"	3'-6"	101
	D	22	4	10"	6'-1"	310
	E	10	4	10 1/2"	6'-10"	46
	F	22	5	12"	2'-3"	50
	G	3	4	12"	9'-8"	50
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=1018CY MANHOLE CASTING=100LBS. STEEL TOTAL=1211LBS						
25'	A	63	4	5"OC	13'-9 1/2"	580
	B	63	4	5"	5'-1"	217
	C	50	4	9"	3'-6"	117
	D	22	4	10"	6'-1"	383
	E	10	4	10 1/2"	6'-10"	46
	F	27	5	12"	2'-3"	61
	G	3	4	12"	9'-8"	60
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=1241CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1473LB						
30'	A	75	4	5"OC	13'-9 1/2"	691
	B	75	4	5"	5'-1"	258
	C	56	4	9"	3'-6"	131
	D	22	4	10"	6'-1"	457
	E	10	4	10 1/2"	6'-10"	46
	F	32	5	12"	2'-3"	72
	G	3	4	12"	9'-8"	70
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=1463CY MANHOLE CASTING=100LBS. STEEL TOTAL=1734LB						

\*Includes concrete gutter for on-grade inlet. Reduce by .05 cy for inlet in sump.

## RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020

BY: Timson

HMT ENGINEERING AND SURVEYING

## STORM DETAILS (1 OF 2)

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/08/2019
2	THE ACCESS REV	03/29/2019
3	BURK UNDER FM 1101 AND LOT REV	05/29/2019
4	SILVERDALE STATION REVISION	07/29/2019
5	BURK UNDER FM 1101 REV	08/13/2019
6	ADDED UNDER LATERAL LINE C STATION 8+84.42	08/21/2019
7	ADDED UNDER LATERAL LINE C STATION 8+85.91	08/21/2019
8	RED RAIL FOR RAMP	09/29/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

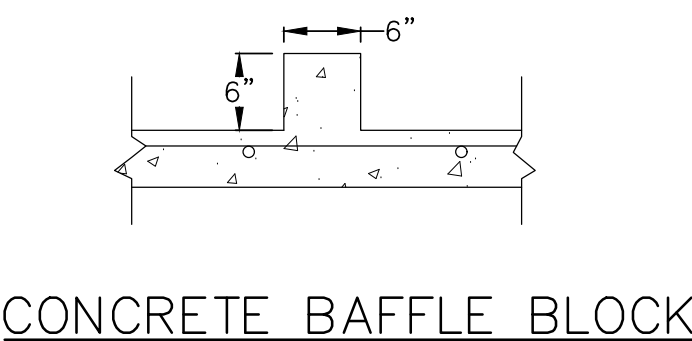
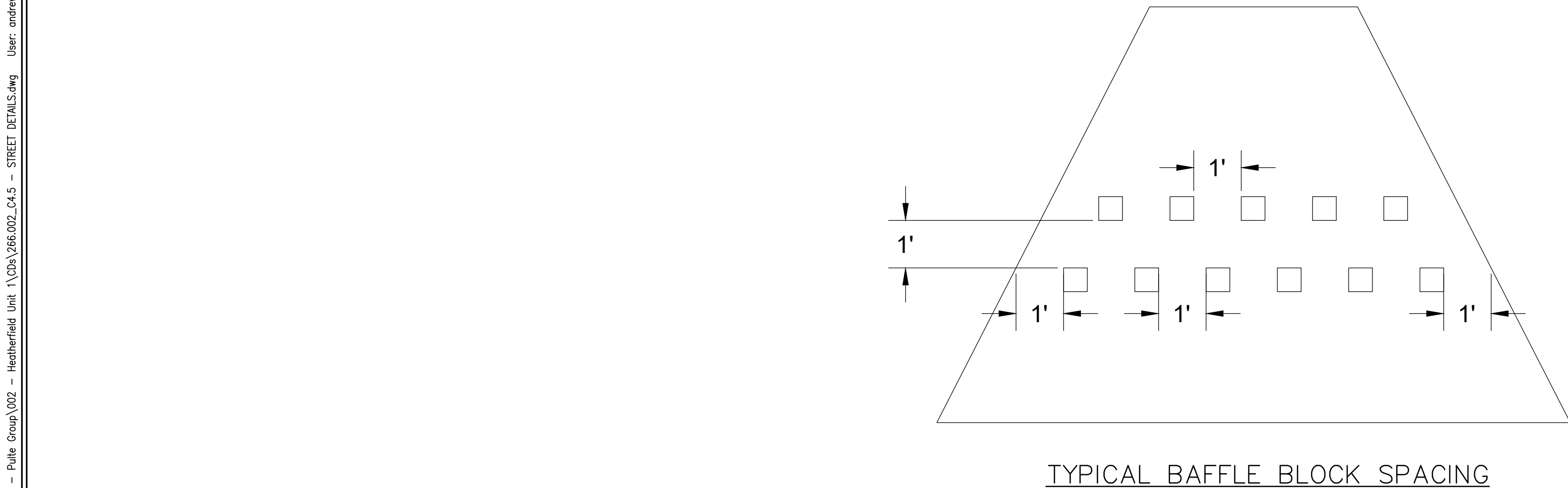
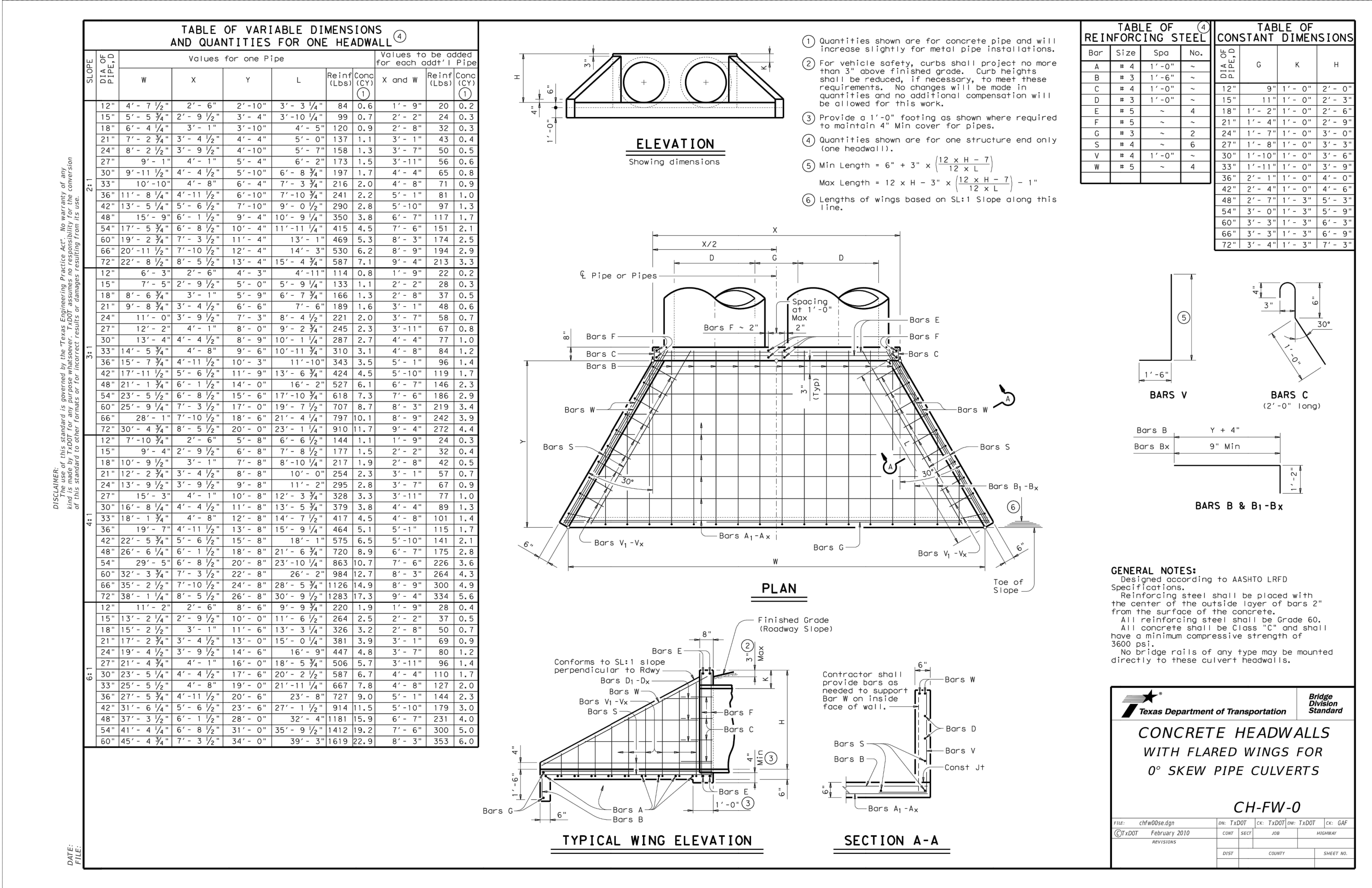
DESIGNED BY: TG

HMT PROJECT NO.:

**SHEET**

## C5.4





RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *thomas*

HMT ENGINEERING AND SURVEYING

STORM DETAILS (2 OF 2)

HEATHERFIELD SUBDIVISION UNIT 1

REVISION DATE

NO. DESCRIPTION

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.: 266.07

SHEET C5.5

HMT ENGINEERING & SURVEYING

TIMOTHY A. GORENA 129271

05/21/2020

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P210562-3844 • F210562-3236  
TBPE FRM F-10961  
TBPLS FRM 1015360



## UTILITY TRENCH COMPACTION

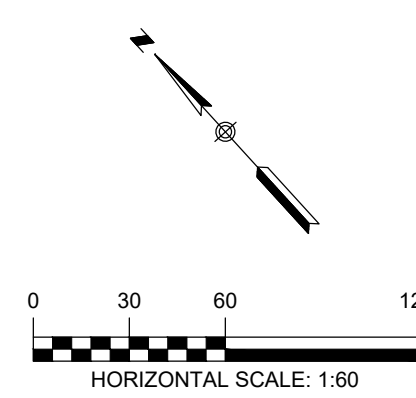
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND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

## DEEP TRENCH COMPACTION TESTING

CITY REQUIREMENTS FOR TESTING SHALL BE ADHERED TO, IN CASES WHERE TRENCH DEPTHS DO NOT ALLOW TECHNICIANS ACCESS, METHODS FOR TESTING SHALL BE PROPOSED AND APPROVED PRIOR TO CONSTRUCTION COMMENCING.

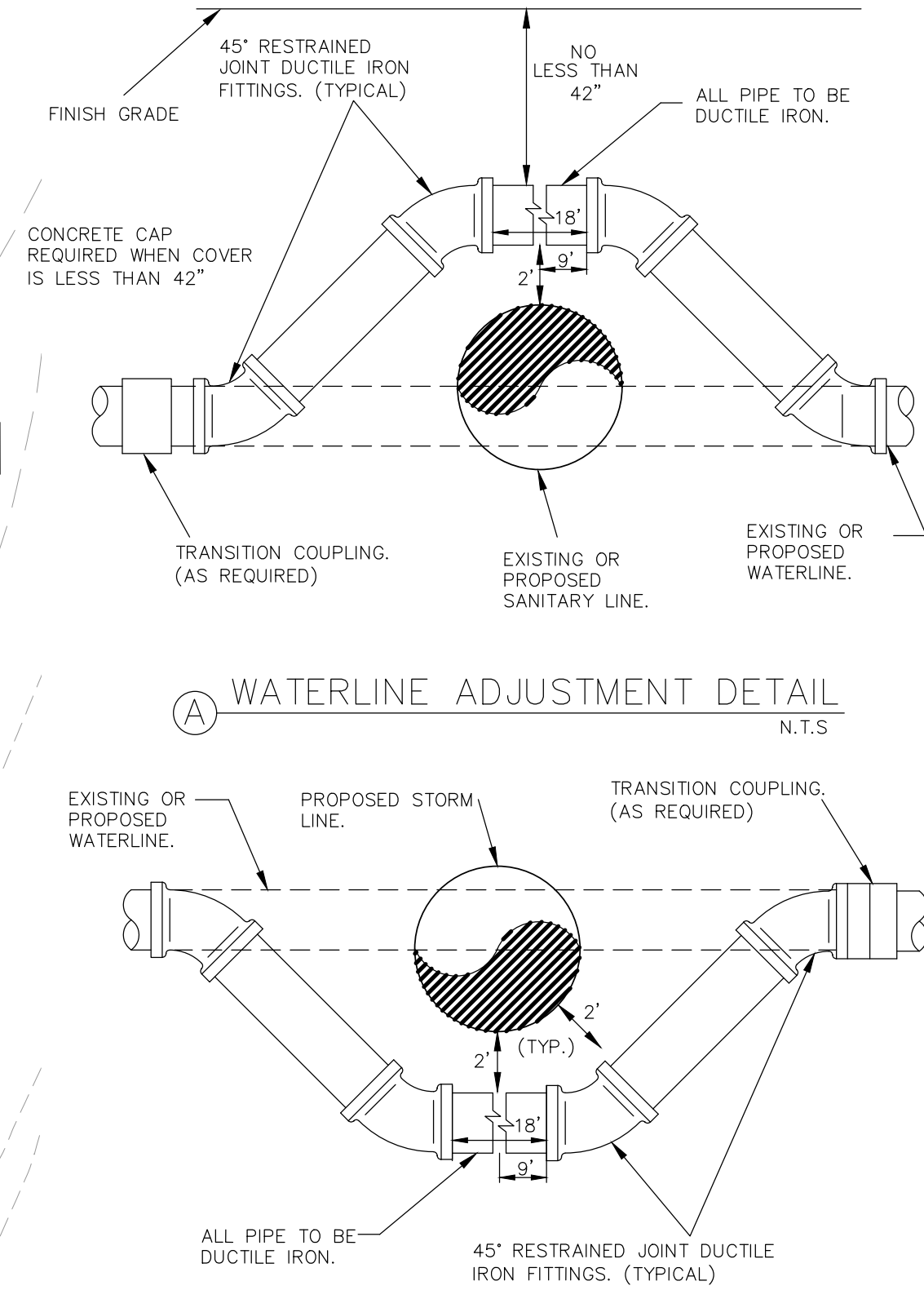
## NOTE:

- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS
- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
- ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.



## LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING WATER LINE
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
- UTILITY CROSSING
- ELECTRICAL BOX (REFER TO NBU ELECTRICAL DESIGN)



PIPE INSIDE DIAMETER	MATERIAL	HORIZONTAL BENDS					VERTICAL BENDS				DEAD END/ INCLINE VALVES
		90°	45°	22.5°	11.25°	45°	UPPER	11.25°	45°	LOWER	
8"	PVC	29	13	6	3	34	16	8	8	4	80
8"	DUCTILE IRON	25	10	5	3	22	11	6	8	4	52
12"	PVC	41	17	9	4	47	23	12	13	6	114

## NOTES:

- LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:
- SAFETY FACTOR = 1.5 TO 1
  - TEST PRESSURE = 200psi
  - SOIL DESIGNATION = MANUFACTURED SAND
  - DEPTH OF COVER = 3.5 FEET (TYPICAL AND UPPER BEND)
  - DEPTH OF COVER = 5 FEET (LOWER BEND)
  - LENGTH ALONG RUN = 2 FEET

WATER STRUCTURE TOTALS					
PIPE SIZE	PIPE LENGTH	DOMESTIC METER SIZE	DOMESTIC METERS	FIRE HYDRANTS	FIRE LINES
8"	3724'	5/8"	121	10	0

## RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT OF THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timson*  
HMT ENGINEERING AND SURVEYING

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT  
P210562-3844-F(210)562-3236  
TPE FRM 1-10961  
TBL FRM 1015360

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
TIMOTHY A. GORENA  
129271  
LICENSED PROFESSIONAL ENGINEER  
05/21/2020

## OVERALL WATER

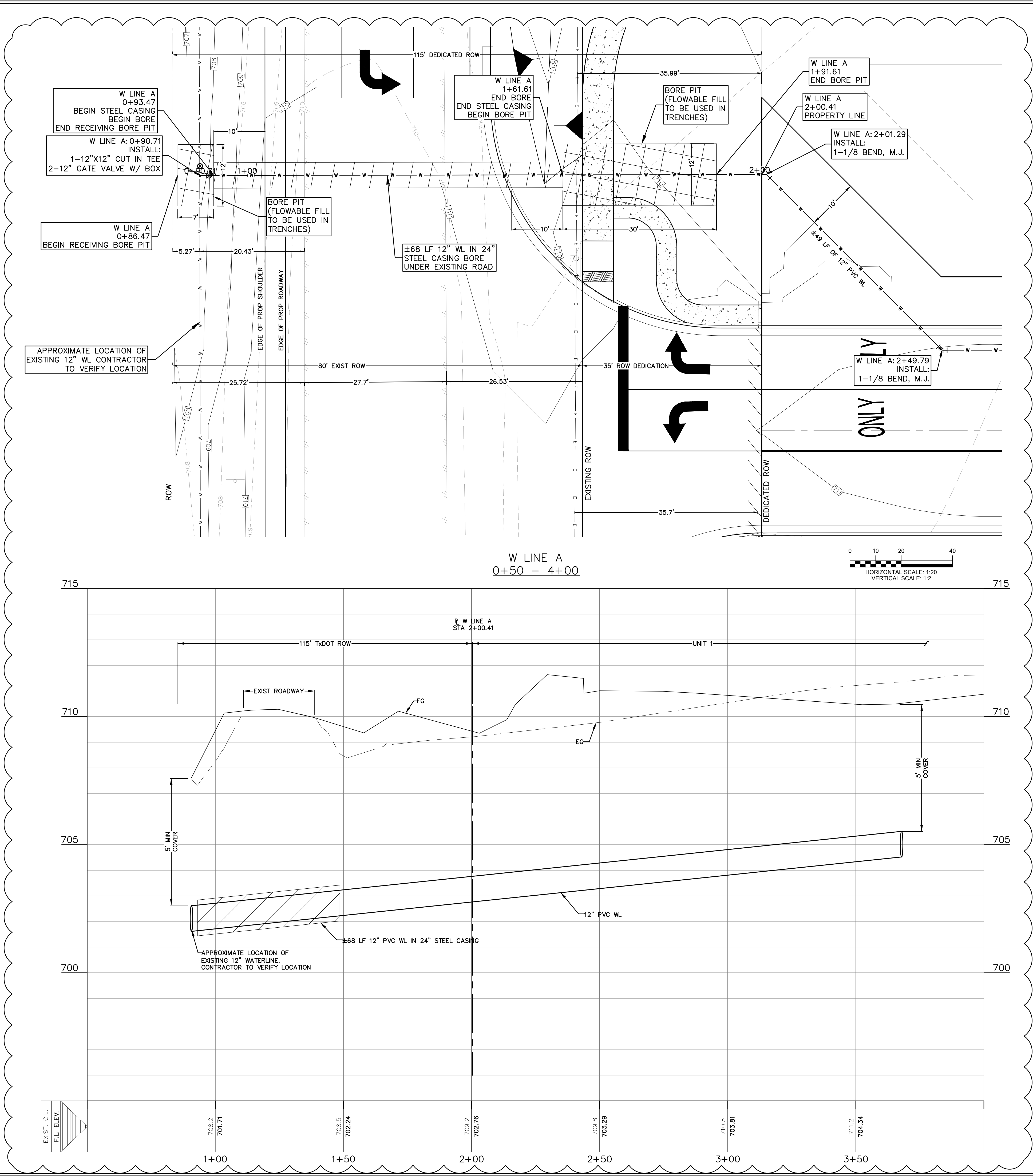
## HEATHERFIELD SUBDIVISION UNIT 1

NO.	REVISION	DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPHENSON STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+44.42	08/21/2019
7	PAYMENT DRAWING REV	09/21/2019
8	WED RES ADA RAMP	01/09/2020

DATE: FEBRUARY 2020  
DRAWN BY: HM  
DESIGNED BY: TG  
REVIEWED BY: CC/SWH  
HMT PROJECT NO.: 266.07  
**SHEET**  
**C6.0**



Drawing Name: M:\\_Projects\266 - Rule Group\002 - Heatherfield Unit 1\02s\266.002\_C6.0 - OVERALL WATER.dwg User: andrewm Date: May 26, 2020 - 11:19am



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING WATER LINE
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
- UTILITY CROSSING
- ELECTRICAL BOX (REFER TO NBU ELECTRICAL DESIGN)

NOTE:

ANY DIGGING WITHIN 10' OF PROPOSED PAVEMENT WILL REQUIRE FLOWABLE FILL.

3 5

RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*

HMT ENGINEERING AND SURVEYING

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPE FRM F-10961  
TBPLS FRM 10153600

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
TIMOTHY A. GOREN  
129271  
LICENSED PROFESSIONAL ENGINEER  
05/21/2020

**FM 1101 WATER LINE CROSSING  
PLAN & PROFILE**

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPENBUSH STATION REVISION	07/29/2019
5	BORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+48.42	08/13/2019
7	PAYMENT GRADING REV	09/21/2019
8	WED RES ADA RAMP	01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: **HM**

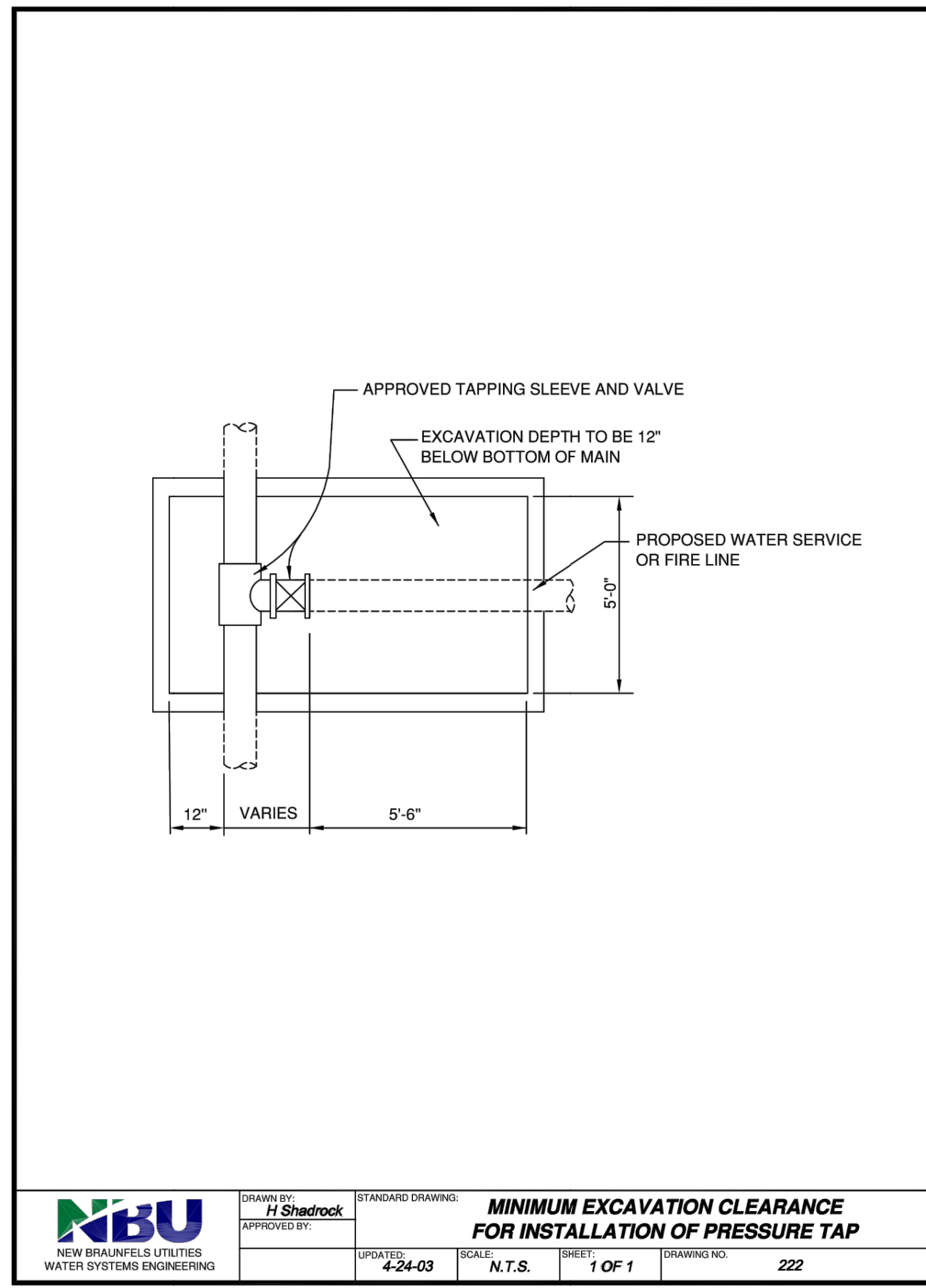
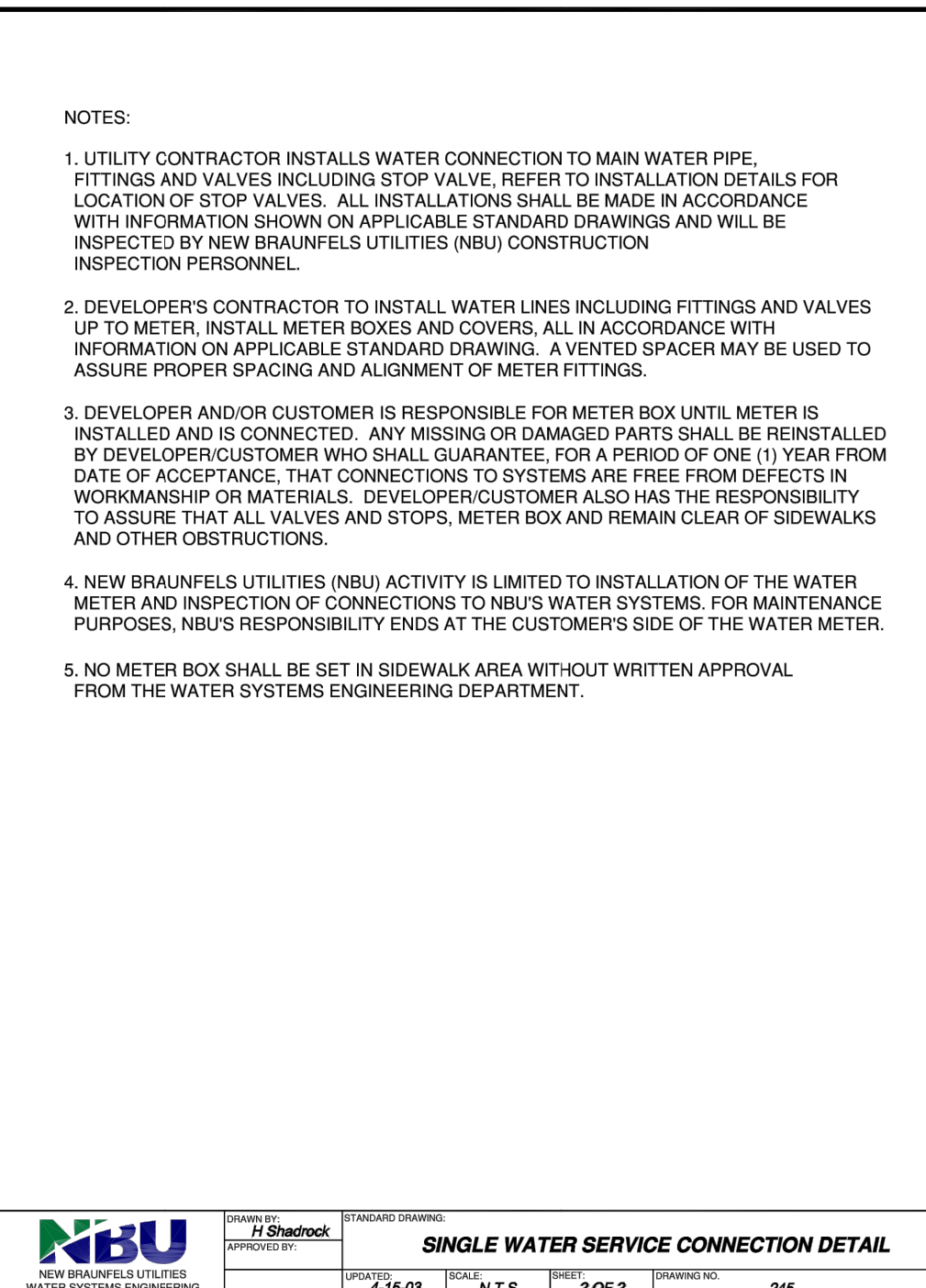
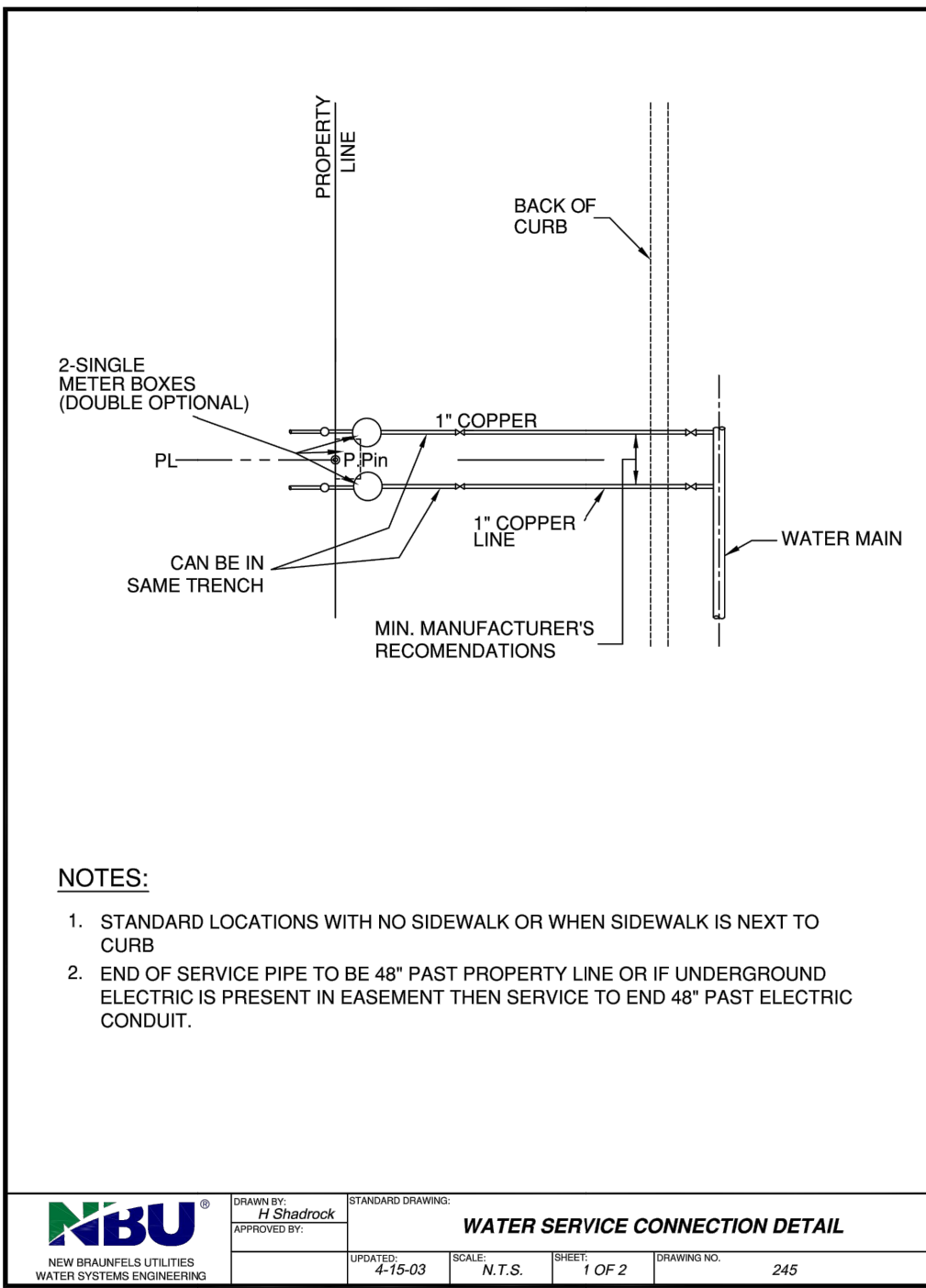
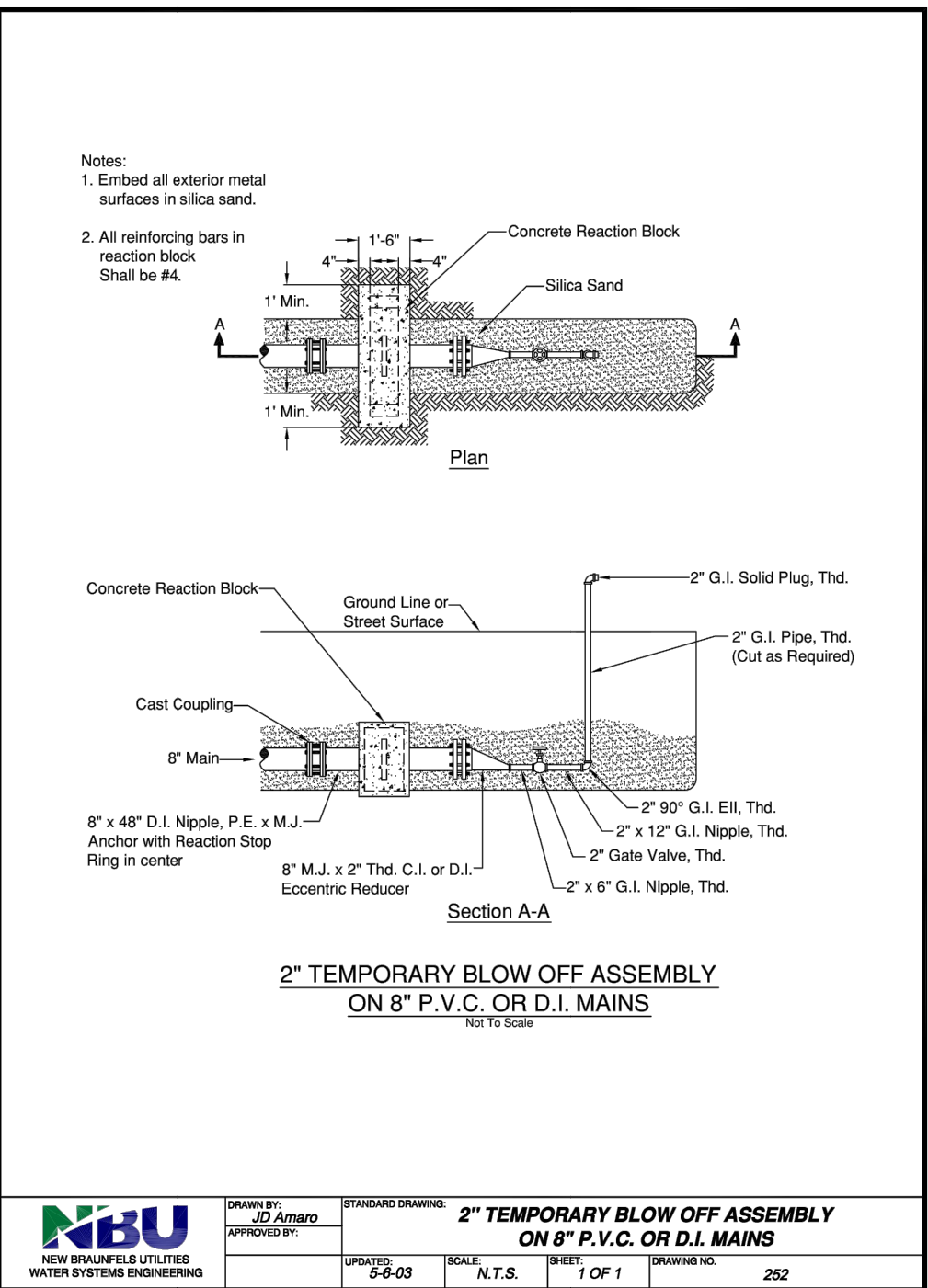
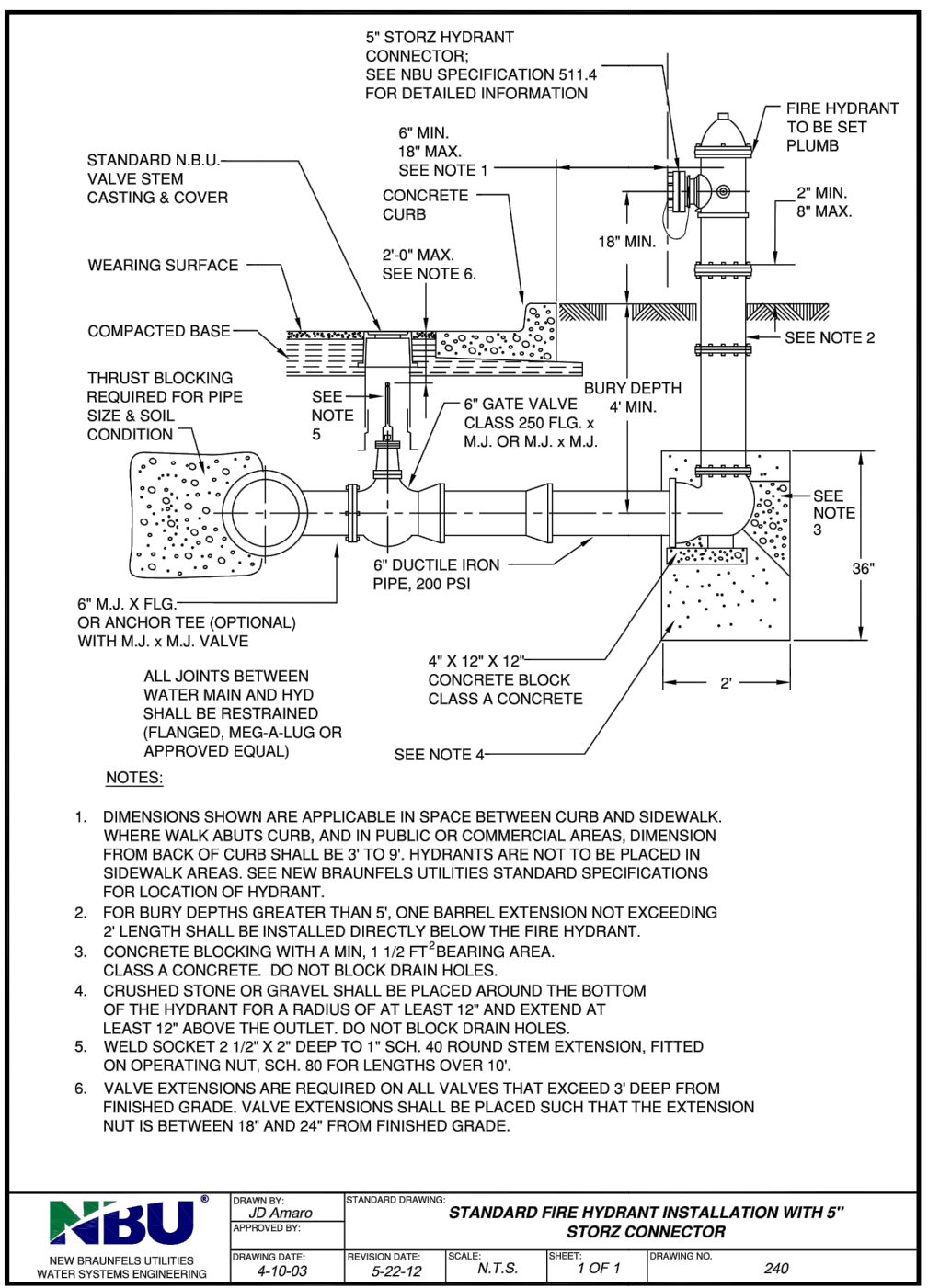
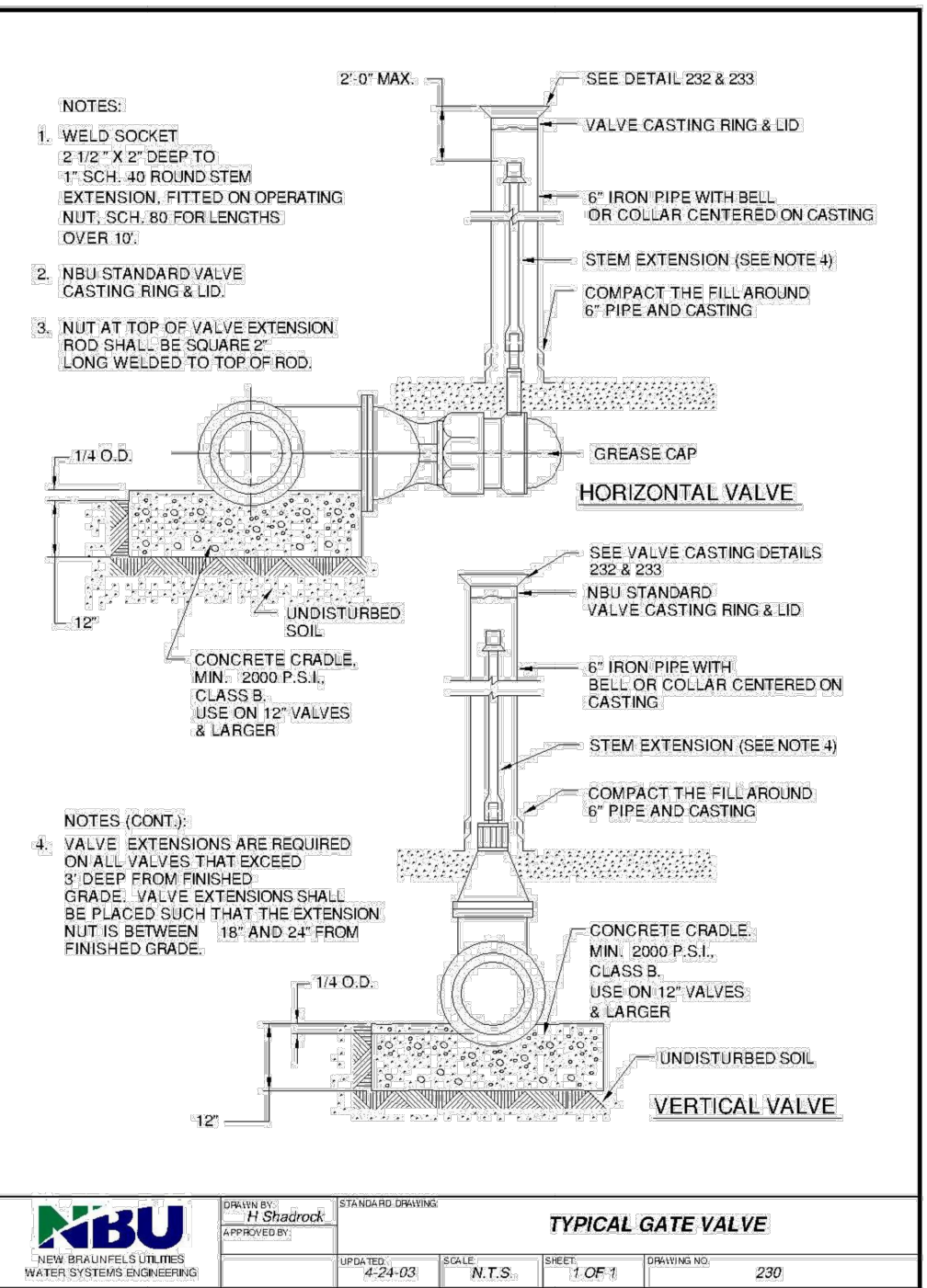
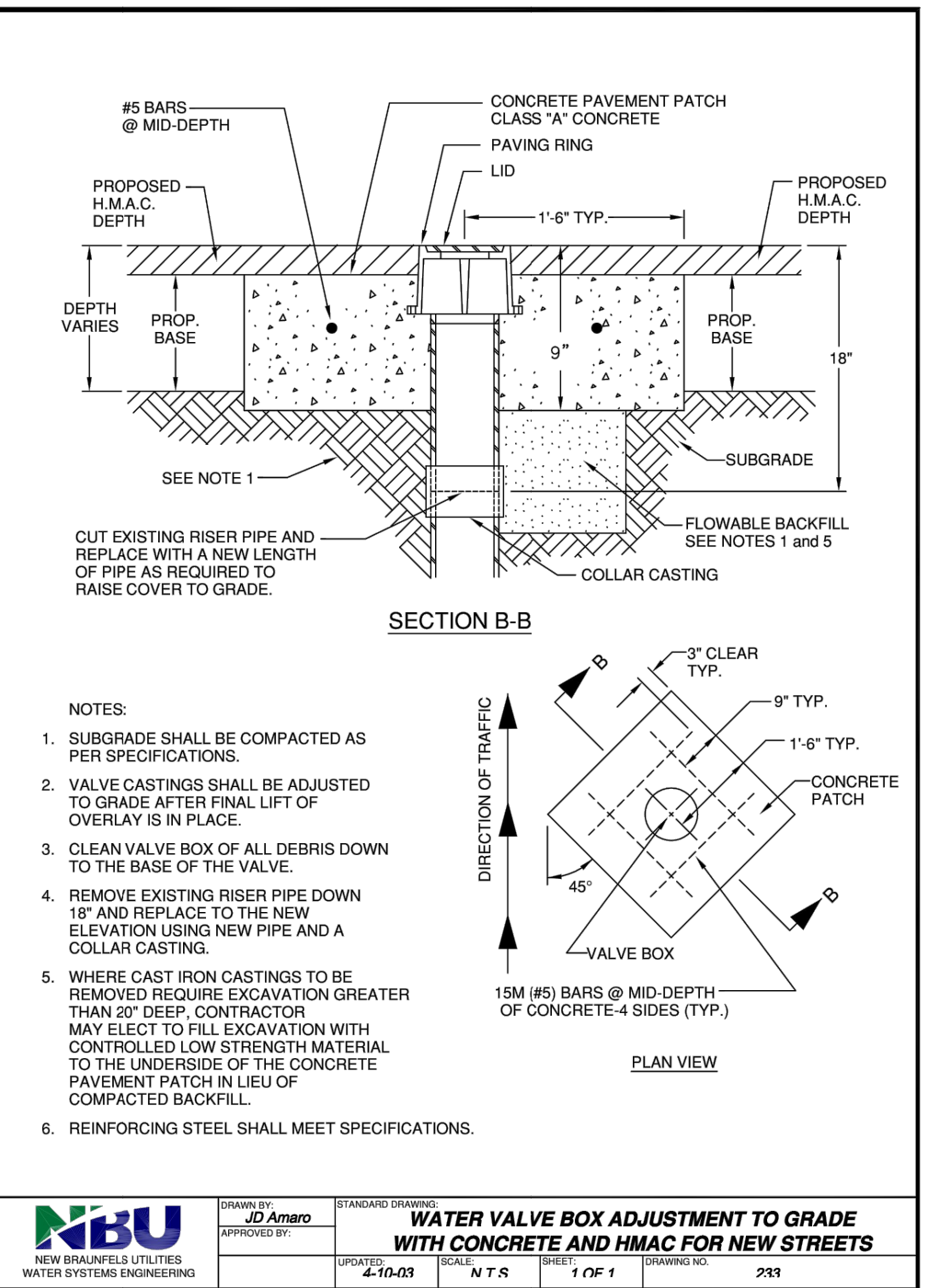
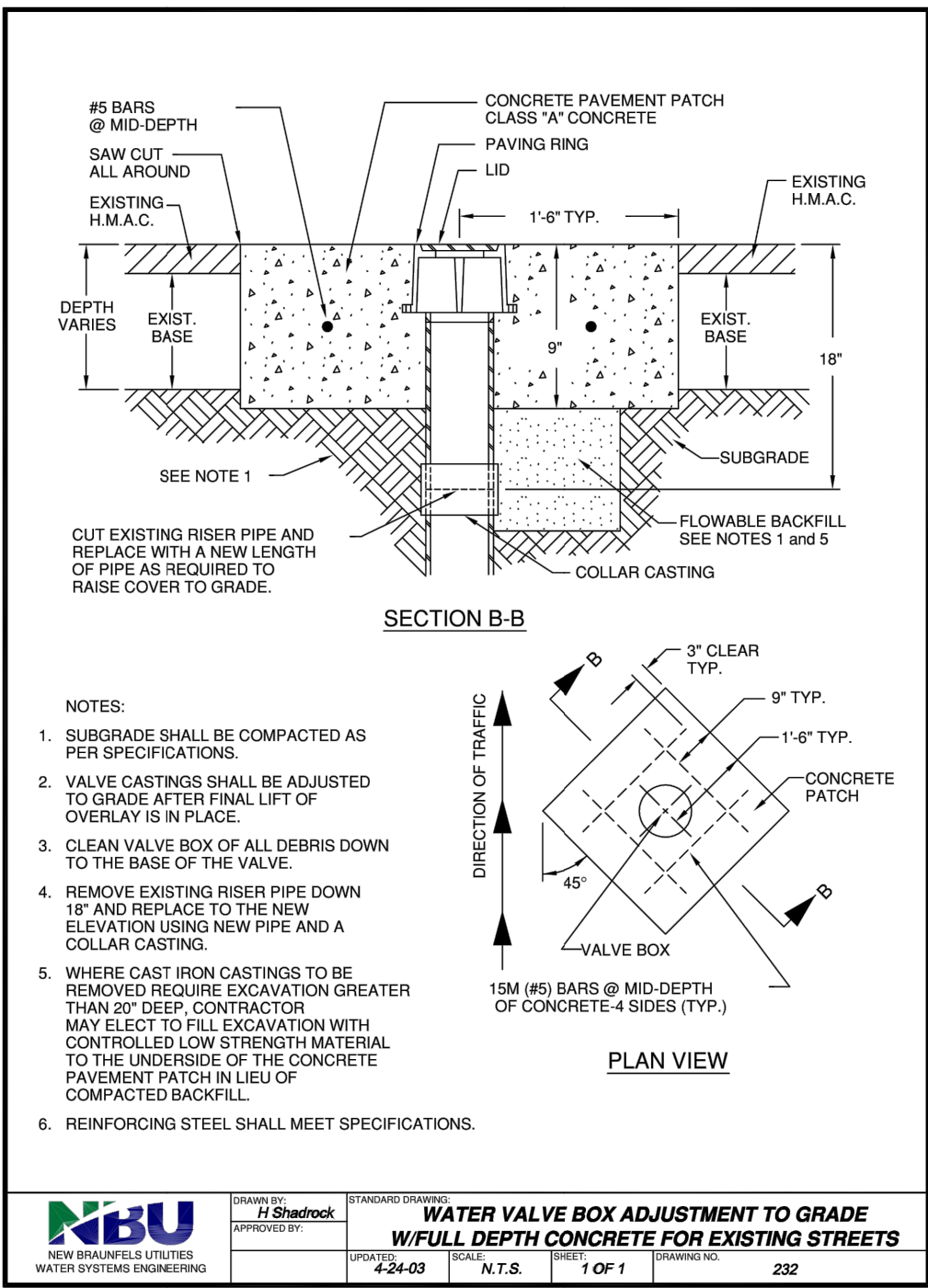
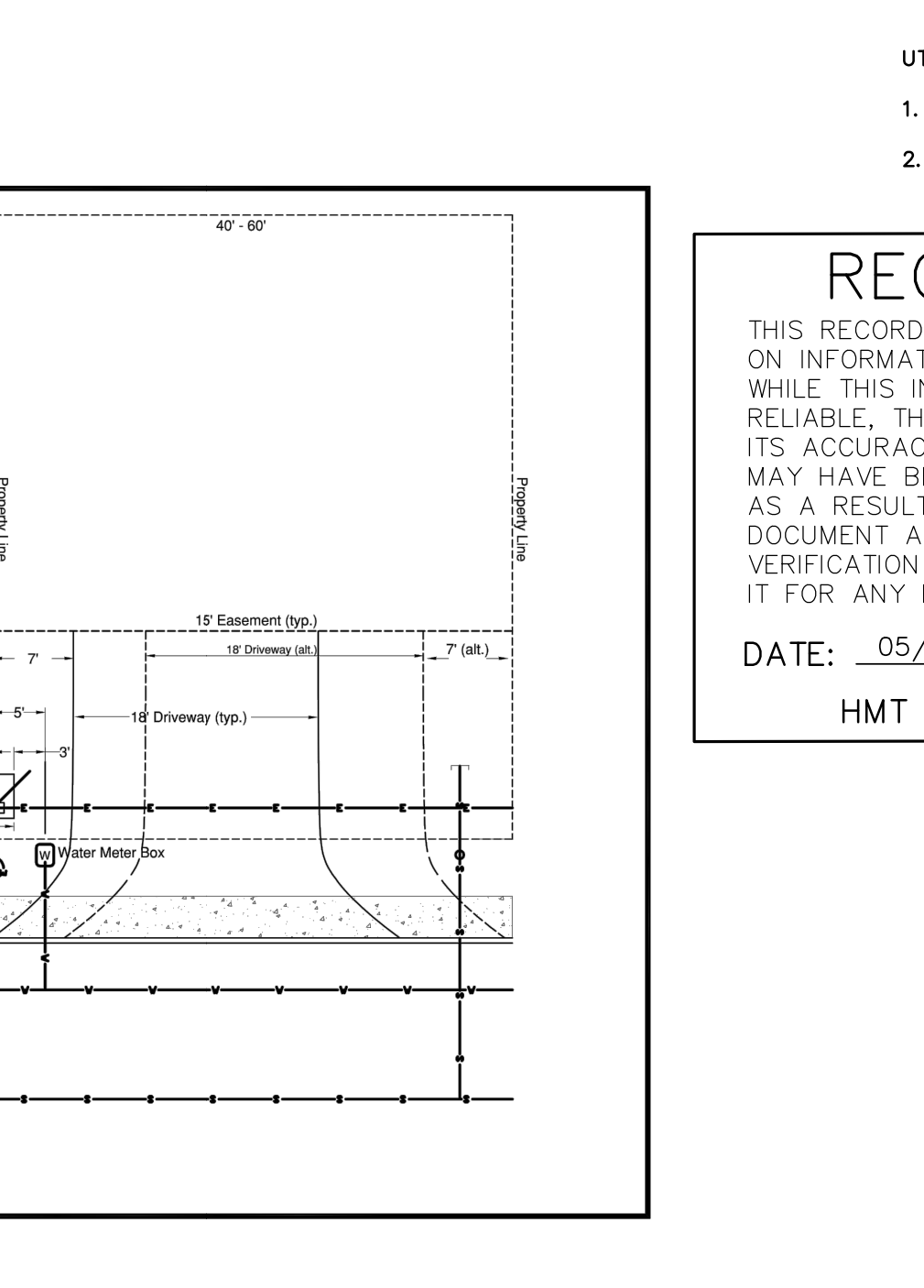
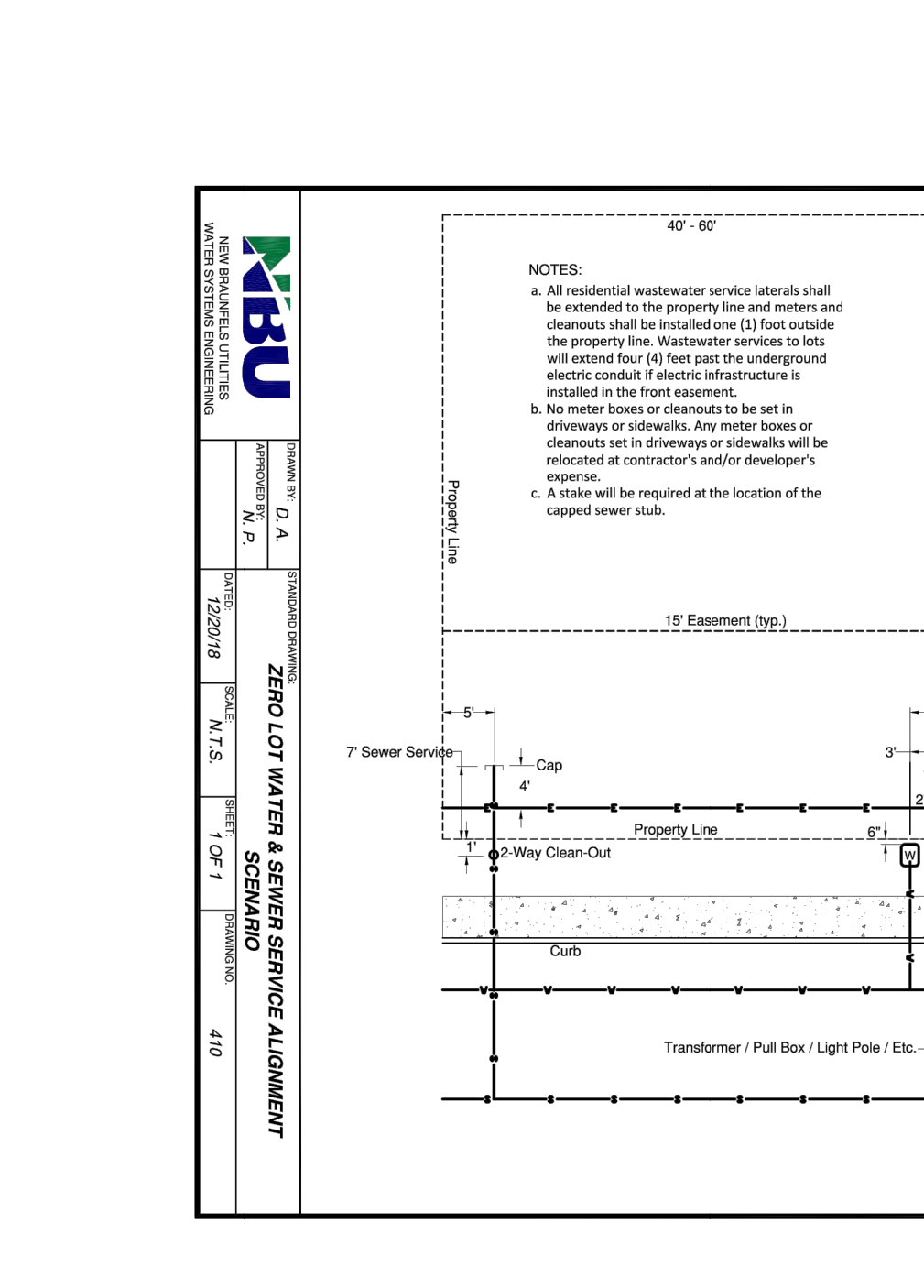
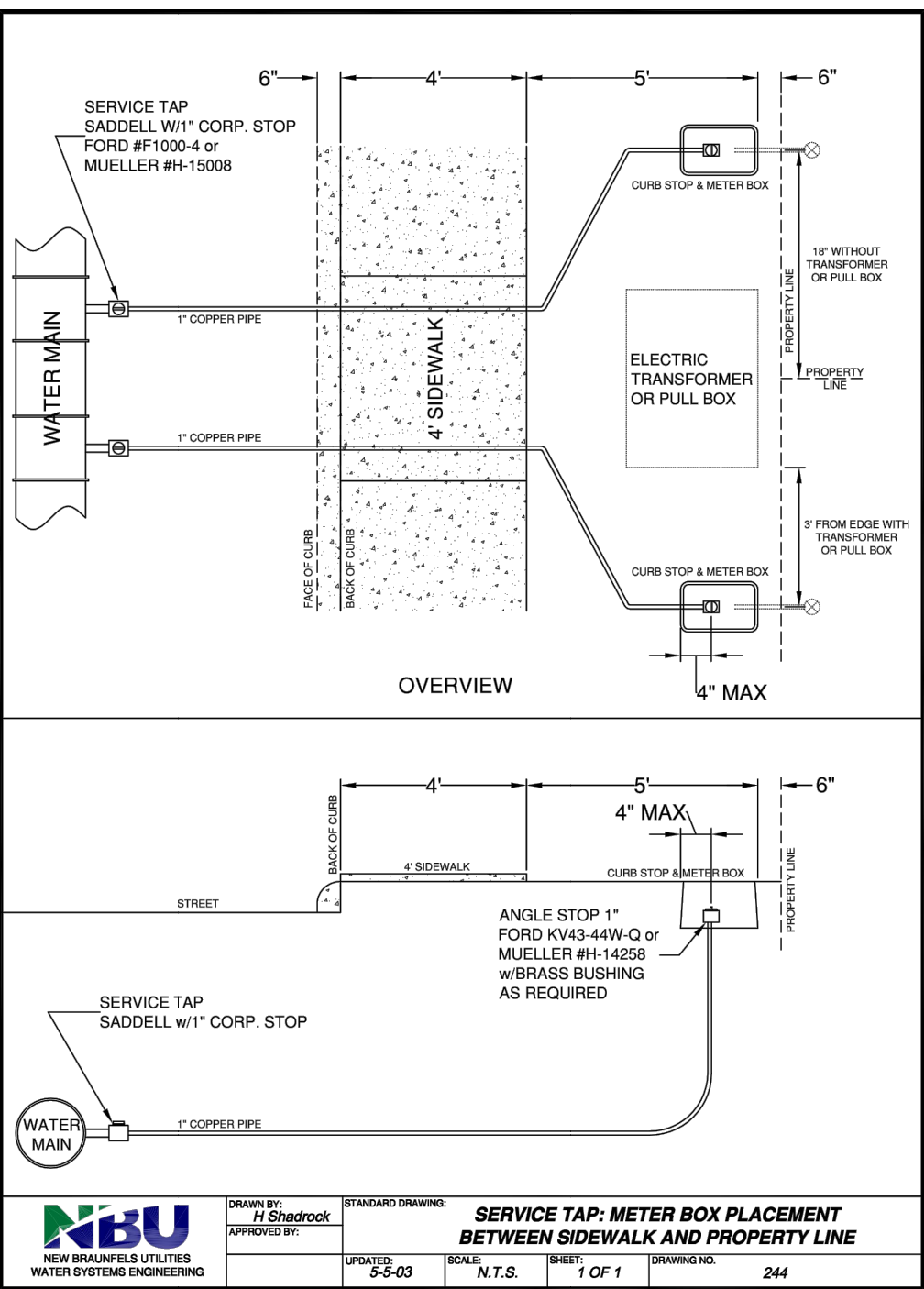
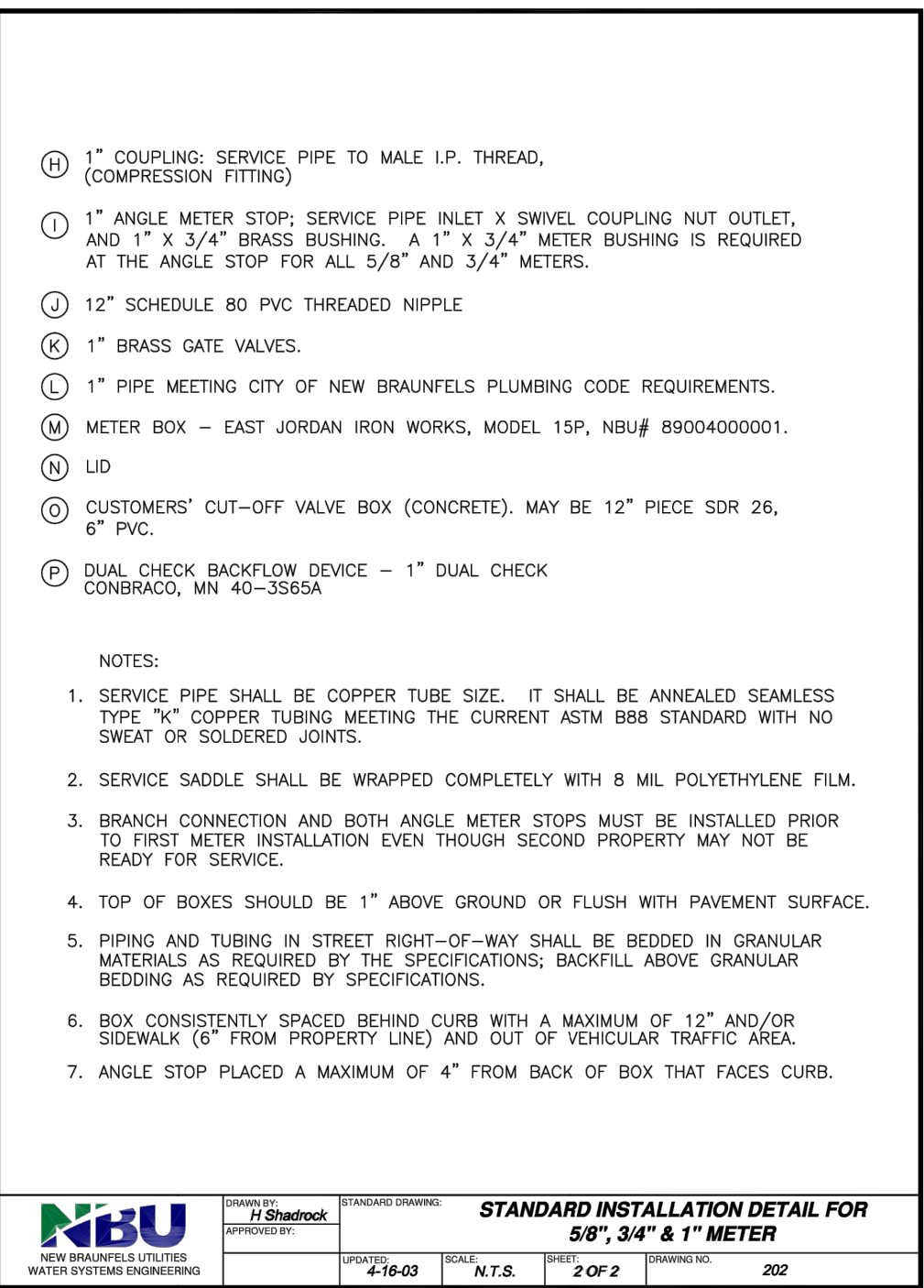
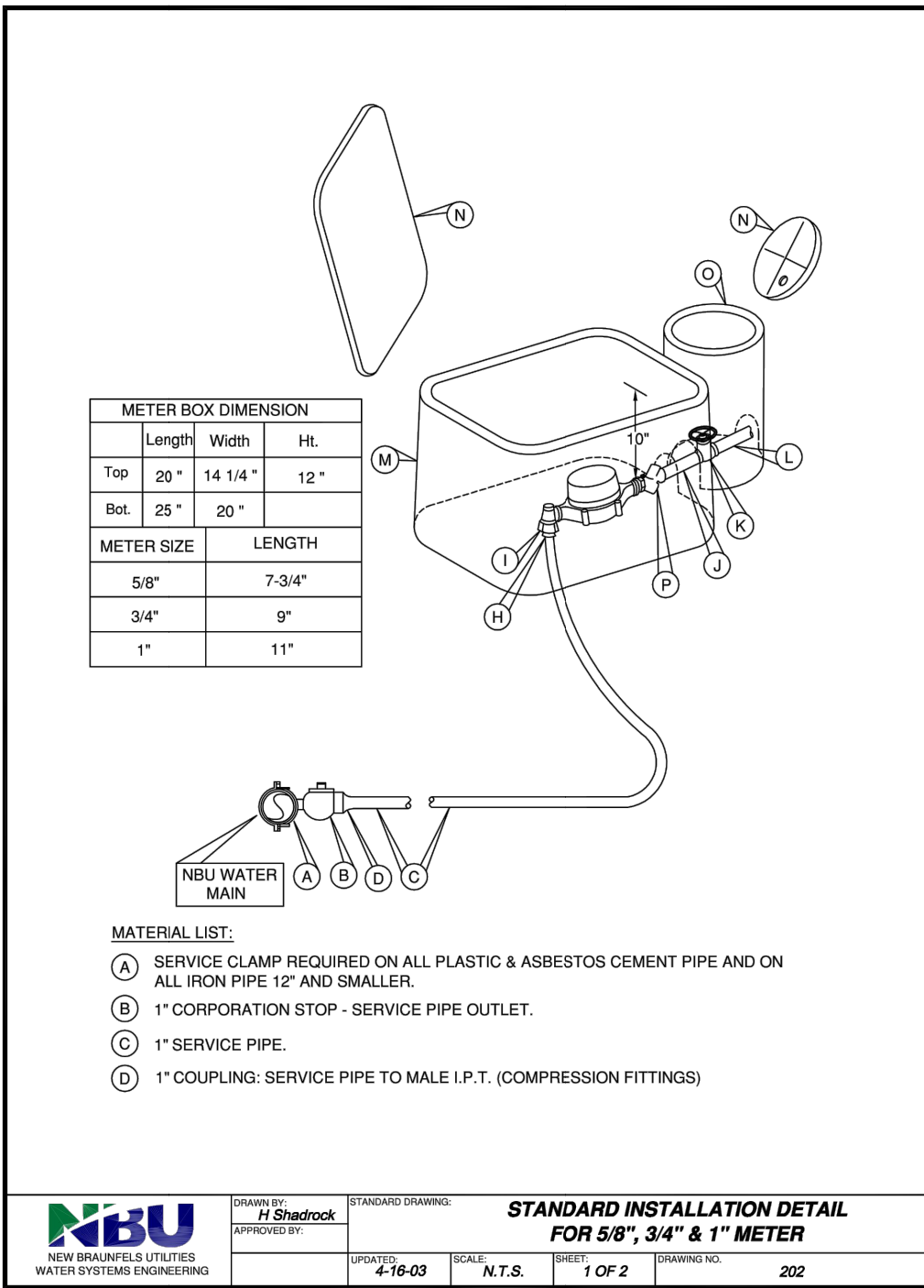
DESIGNED BY: **TG**

REVIEWED BY: **CC/SWH**

HMT PROJECT NO.:  
**266.07**

**SHEET**  
**C6.1**





UTILITY NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
2. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.

**RECORD DRAWING**

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*

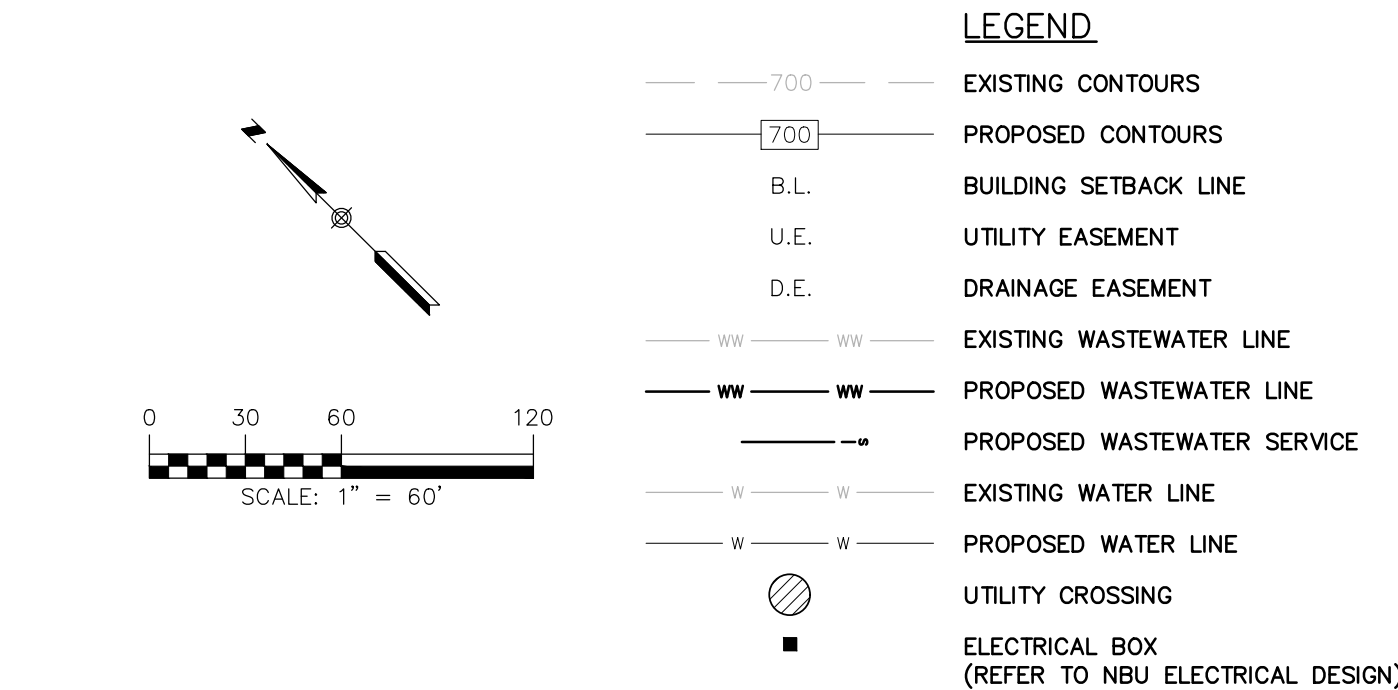
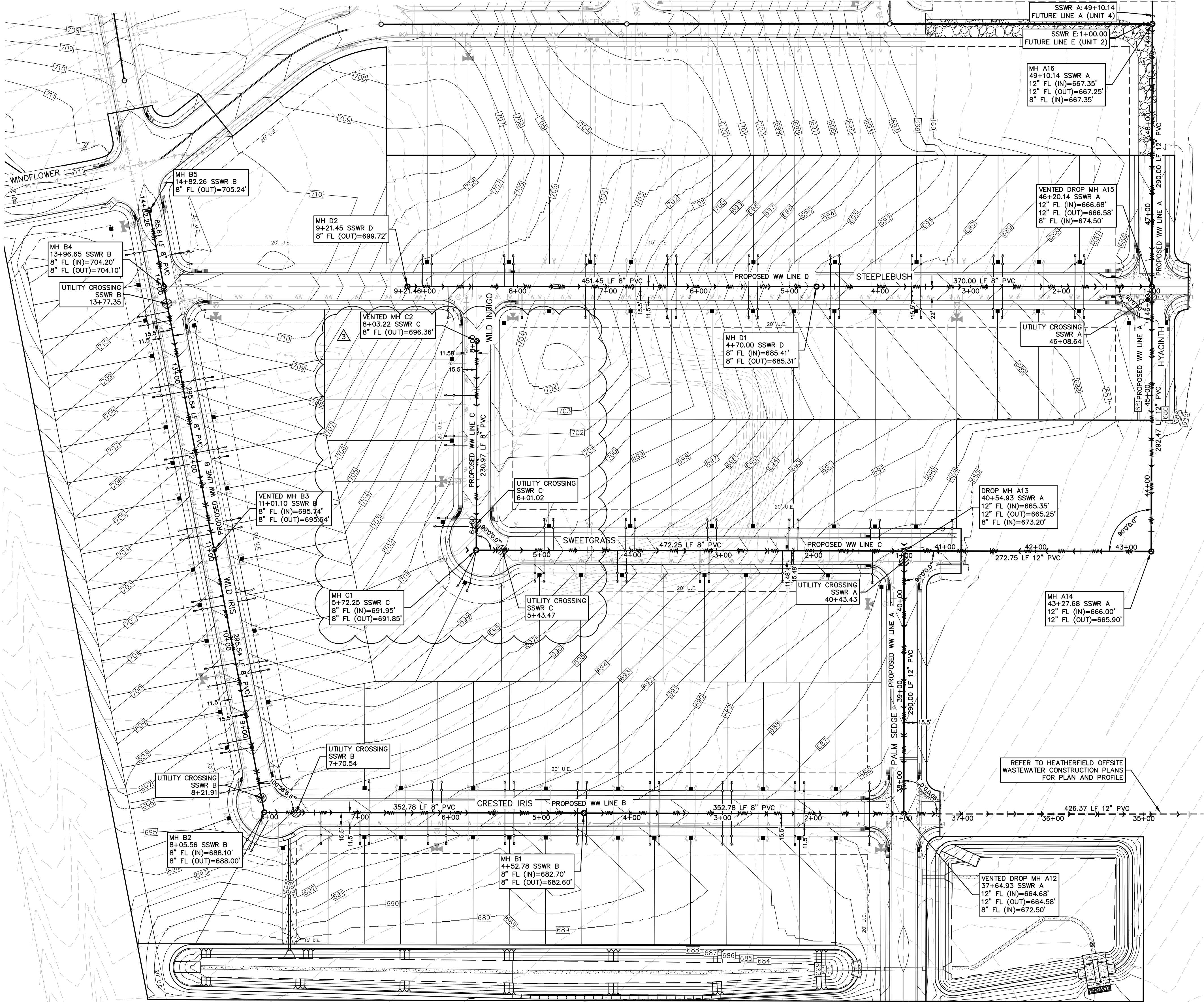
HMT ENGINEERING AND SURVEYING

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P21010562-3844 • F(210)562-3236  
TBE FRM F-10961  
TBE FRM 1015360

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS





CONSTRUCTION NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL SEWER PIPE ASTM 3034 (115 PSI)
4. ALL MANHOLES SHALL BE 48" DIAMETER.
5. ALL RING AND COVER SHALL BE 32" DIAMETER.
6. EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED NOVEMBER 11, 2017.
7. CONTRACTOR TO FIELD-VERIFY THE EXISTING SANITARY SEWER INVERT ELEVATIONS.

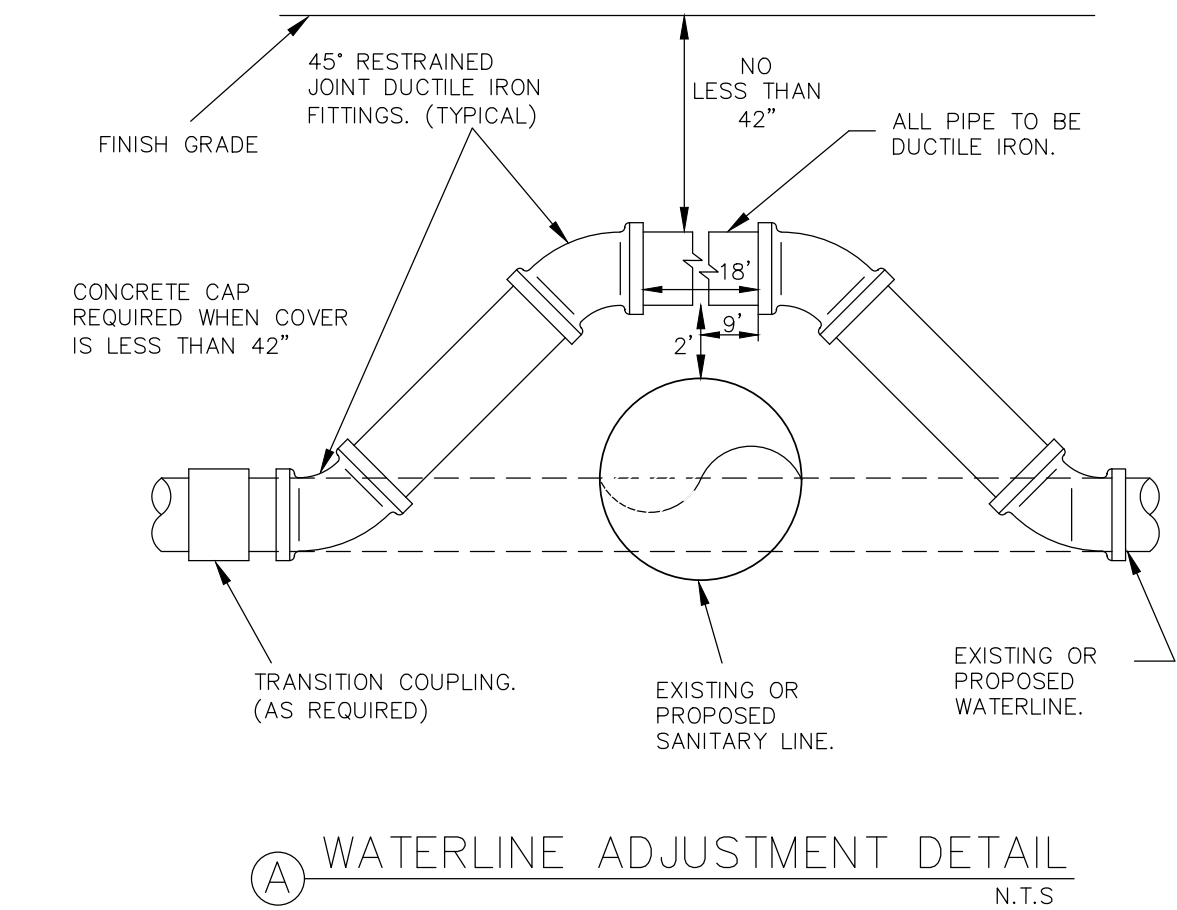
UTILITY TRENCH COMPACTION

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

DEEP TRENCH COMPACTION TESTING

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

WASTEWATER STRUCTURE TOTALS		
	QUANTITY	UNITS
8" PIPE	2902'	LF
12" PIPE	1145'	LF
48" MANHOLE	13	EA
6" LATERALS	121	EA



**TRENCH EXCAVATION SAFETY PROTECTION**

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

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

**RECORD DRAWING**

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timson*

HMT ENGINEERING AND SURVEYING

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBPB FIRM F-10961  
TBPB FIRM 1015360

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
TIMOTHY A. GORENA  
129271  
LICENSED PROFESSIONAL ENGINEER  
05/21/2020

**OVERALL WASTEWATER  
PLAN**

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPPLEBUSH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+44.42	08/13/2019
7	PAYMENT GRADING REV	09/21/2019
8	WED 805 ADA RAMP	01/09/2020

DATE: **FEBRUARY 2020**

DRAWN BY: **HM**

DESIGNED BY: **TG**

REVIEWED BY: **CC/SWH**

HMT PROJECT NO.:  
**266.07**

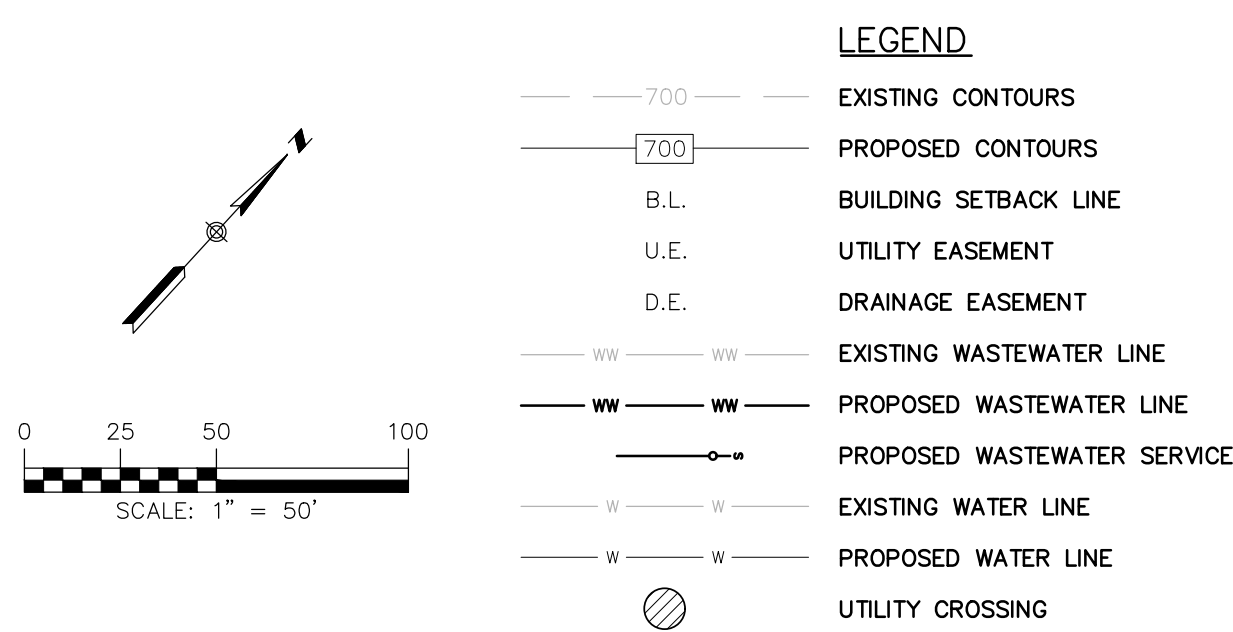
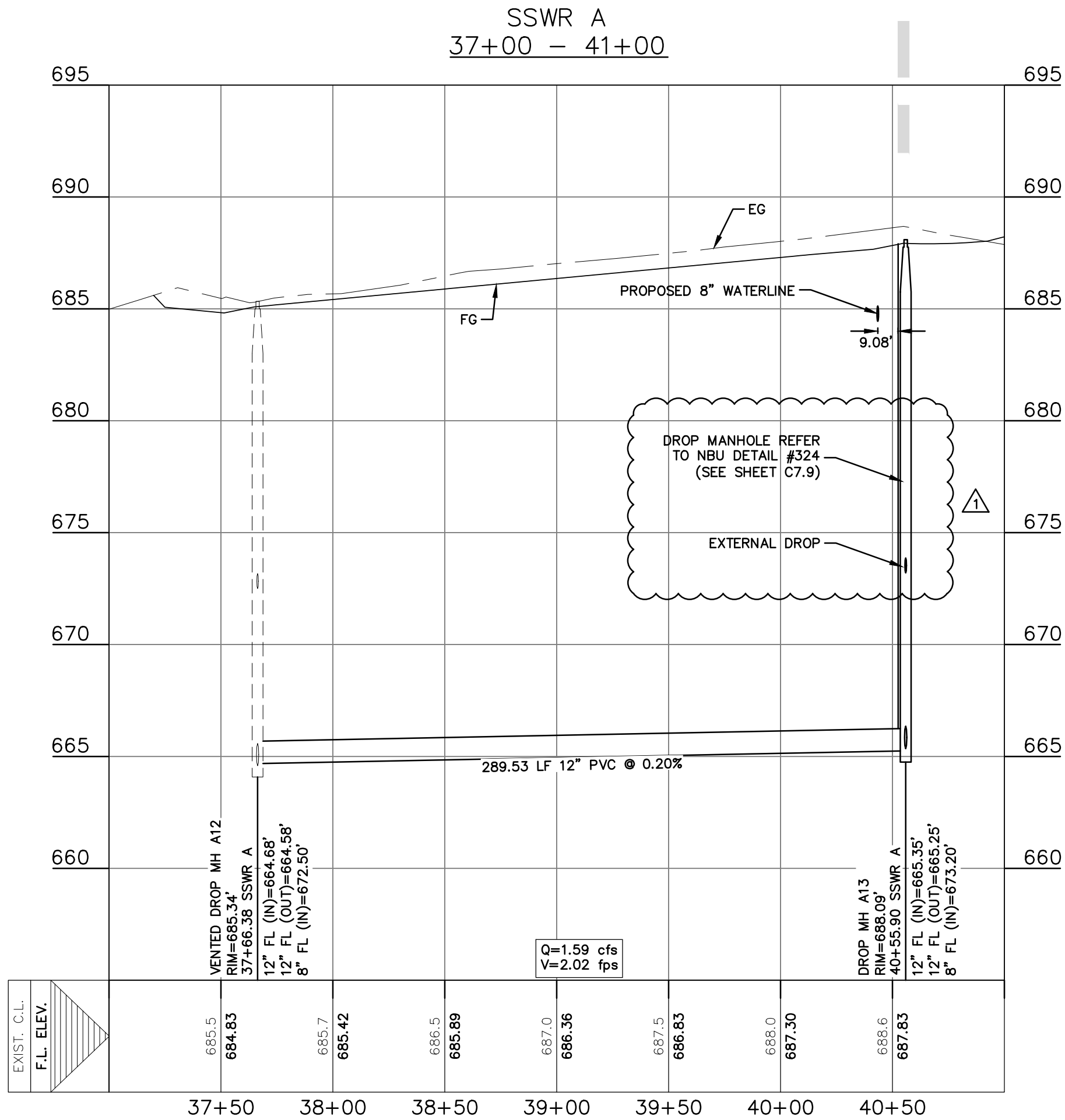
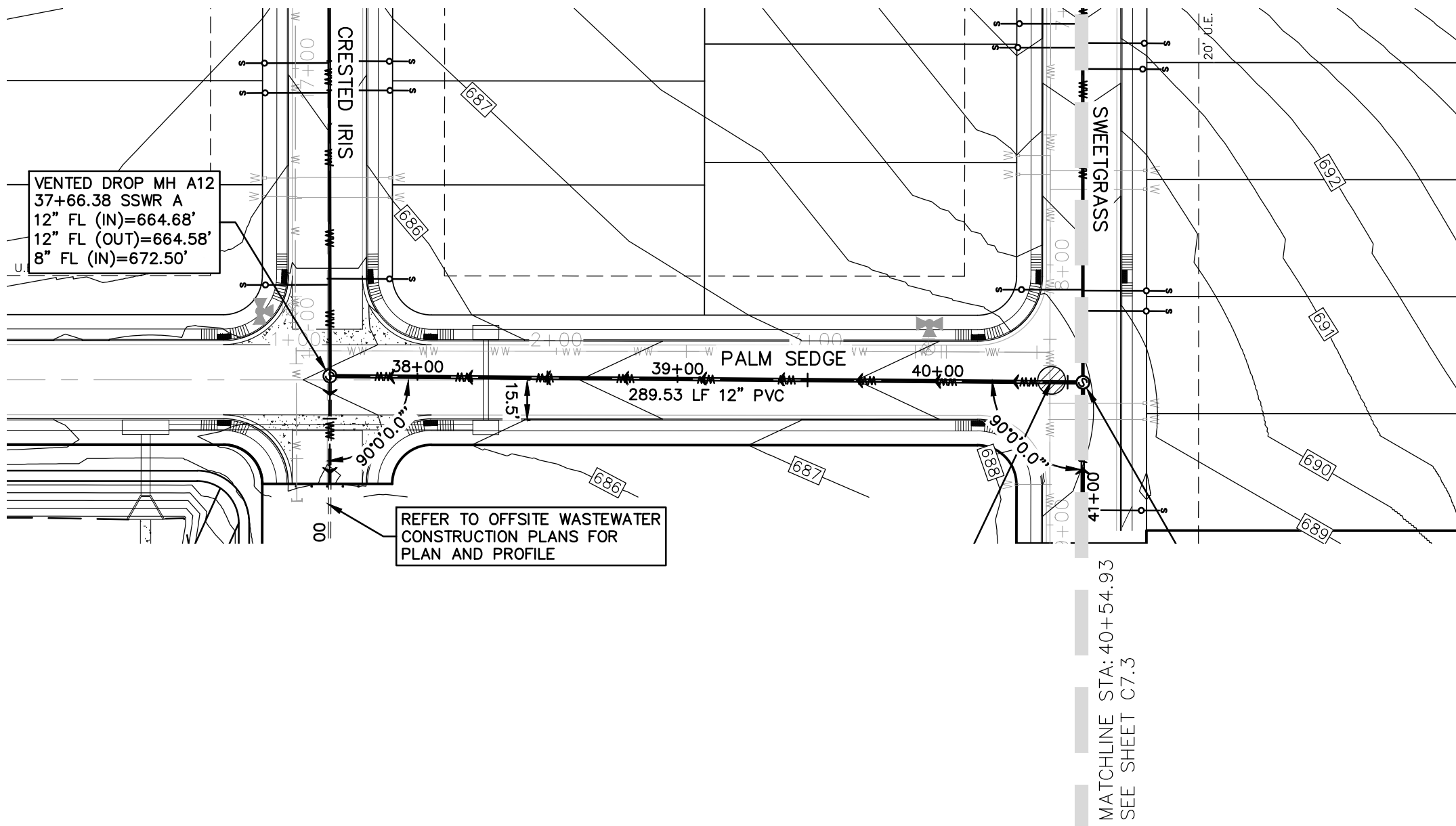
**SHEET**  
**C7.0**



RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*  
HMT ENGINEERING AND SURVEYING



UTILITY TRENCH COMPACTION

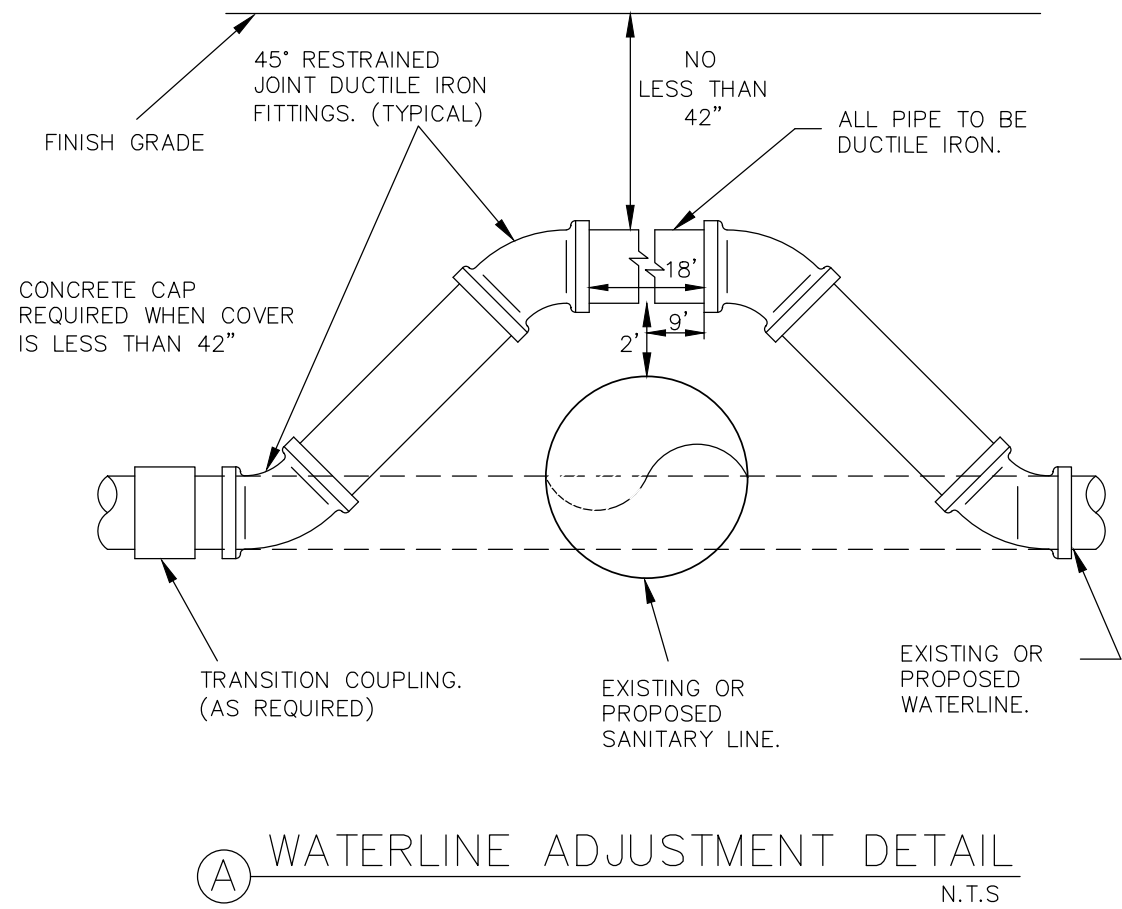
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND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

DEEP TRENCH COMPACTION TESTING

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

CONSTRUCTION NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL SEWER PIPE ASTM 3034 (115 PSI)
4. ALL MANHOLES SHALL BE 48" DIAMETER.
5. ALL RING AND COVER SHALL BE 32" DIAMETER.
6. EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED NOVEMBER 11, 2017.
7. CONTRACTOR TO FIELD-VERIFY THE EXISTING SANITARY SEWER INVERT ELEVATIONS.

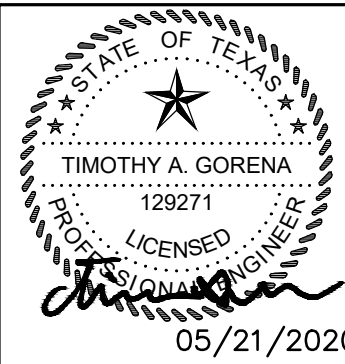


TRENCH EXCAVATION SAFETY PROTECTION

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

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

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBP E FIRM F-10961  
TBP L FIRM 10153600



WASTEWATER LINE A  
PLAN & PROFILE (1 of 3)  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION	DESCRIPTION	DATE
1	WASTE AND WASTEWATER	WATER	05/21/2020
2	REV	REV	05/21/2020
3	REV	REV	05/21/2020
4	REV	REV	05/21/2020
5	REV	REV	05/21/2020
6	REV	REV	05/21/2020
7	REV	REV	05/21/2020
8	REV	REV	05/21/2020
9	REV	REV	05/21/2020
10	REV	REV	05/21/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.:

266.07

SHEET

C7.1





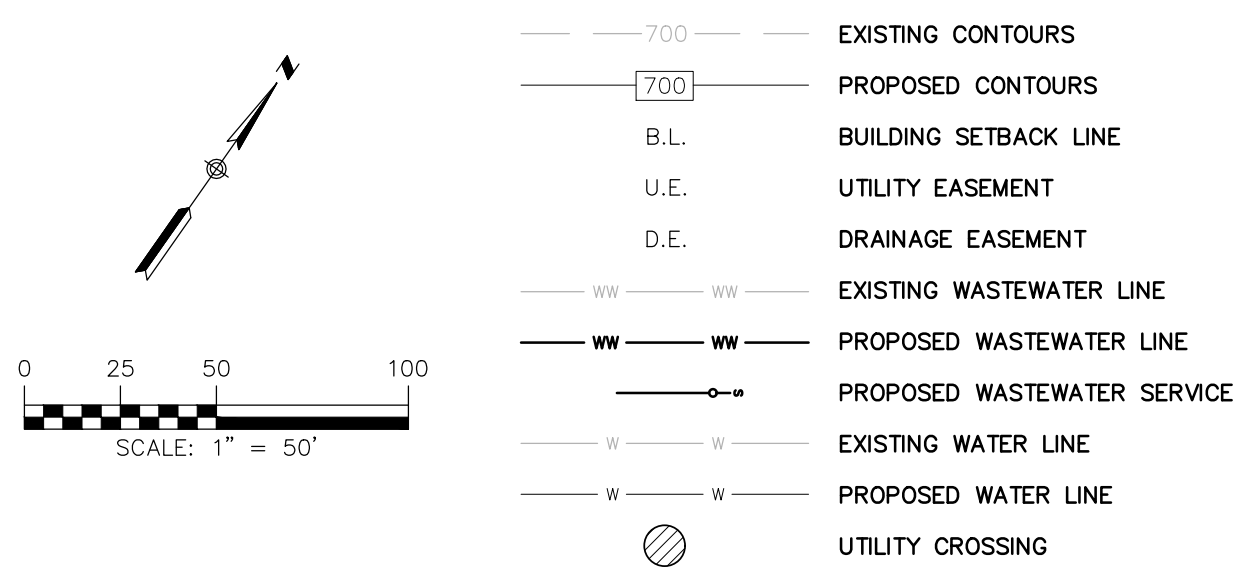


RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*  
HMT ENGINEERING AND SURVEYING

LEGEND



UTILITY TRENCH COMPACTION

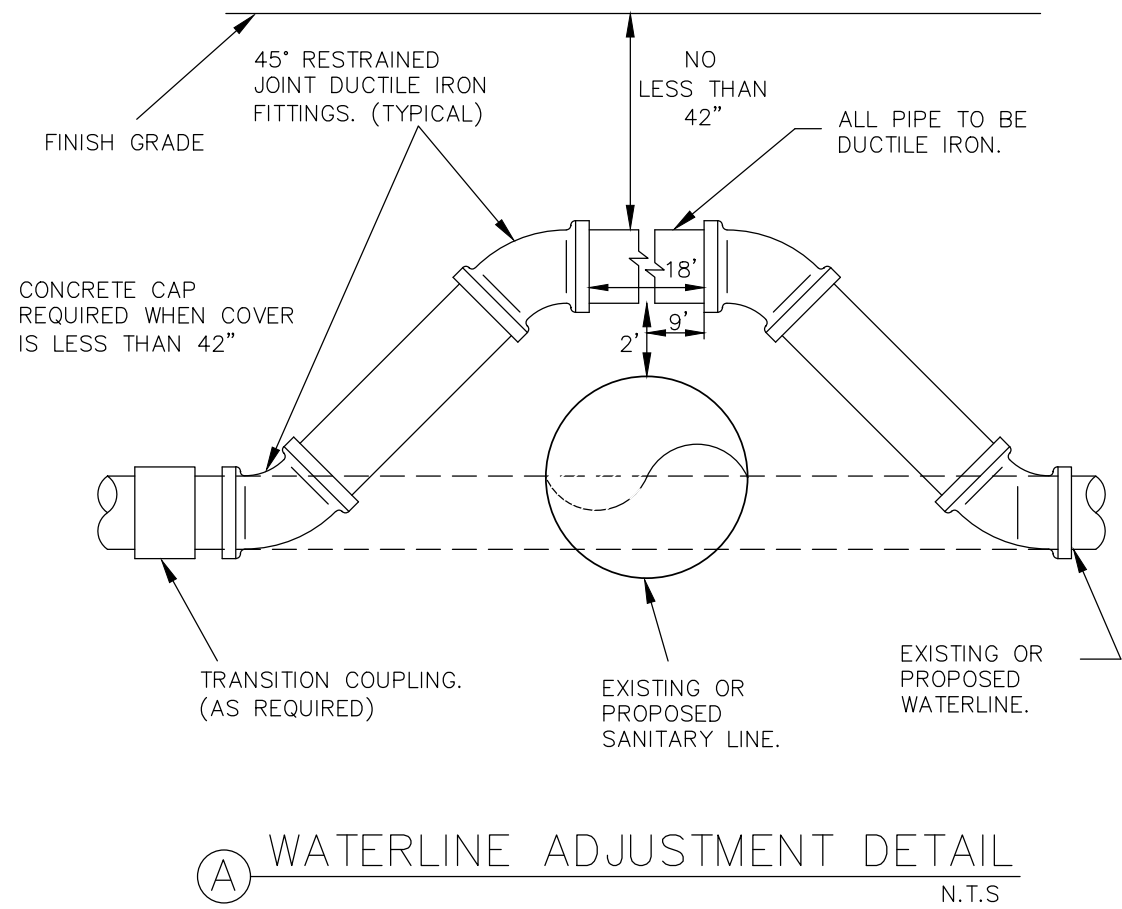
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND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

DEEP TRENCH COMPACTION TESTING

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

CONSTRUCTION NOTES:

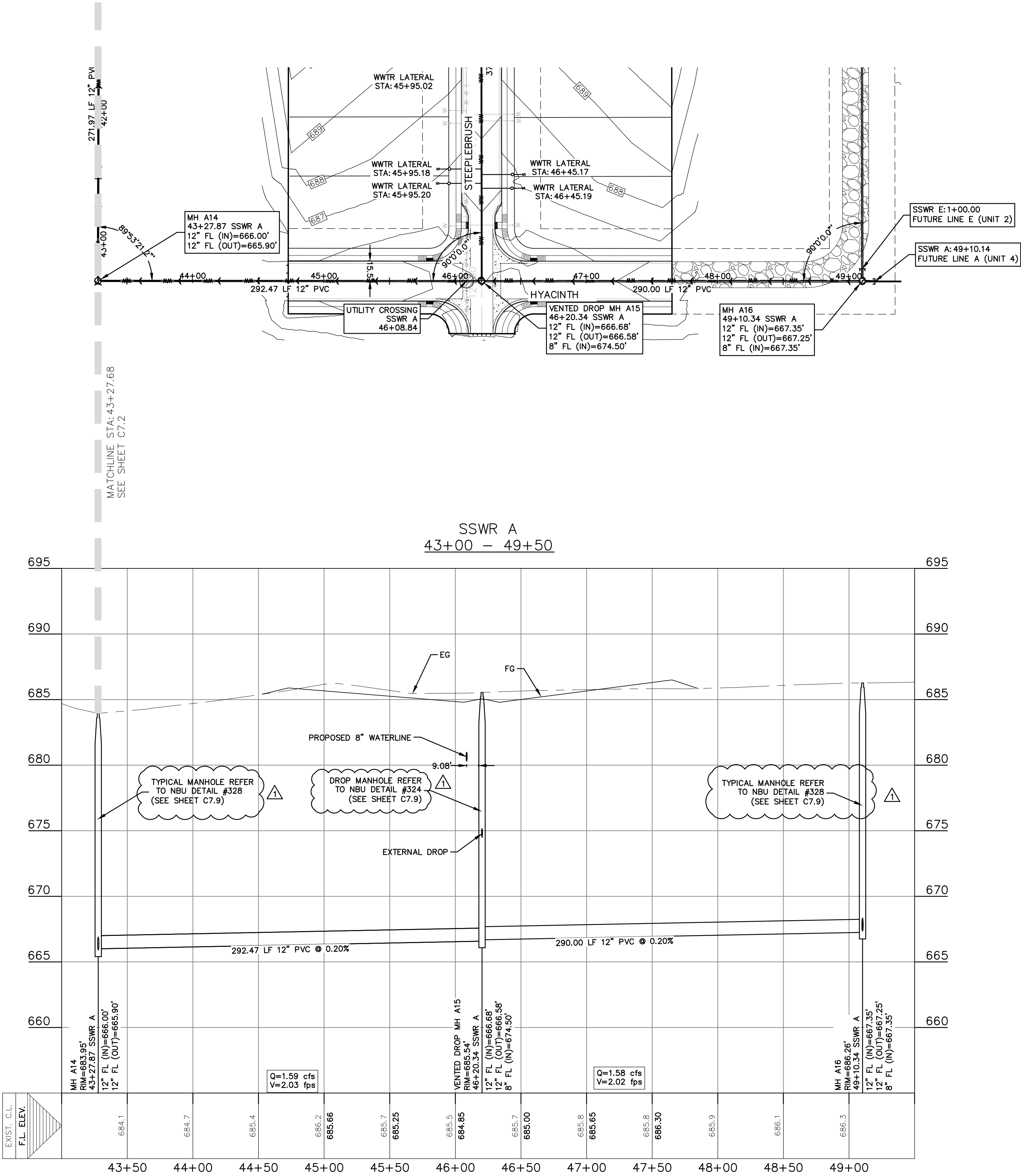
1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL SEWER PIPE ASTM 3034 (115 PSI)
4. ALL MANHOLES SHALL BE 48" DIAMETER.
5. ALL RING AND COVER SHALL BE 32" DIAMETER.
6. EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED NOVEMBER 11, 2017.
7. CONTRACTOR TO FIELD-VERIFY THE EXISTING SANITARY SEWER INVERT ELEVATIONS.



TRENCH EXCAVATION SAFETY PROTECTION

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

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



WASTEWATER LINE A  
PLAN & PROFILE (3 of 3)  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION	DESCRIPTION	DATE
1	WASTE WATER	WASTE WATER	05/21/2020
2	WASTE WATER	WASTE WATER	05/21/2020
3	WASTE WATER	WASTE WATER	05/21/2020
4	WASTE WATER	WASTE WATER	05/21/2020
5	WASTE WATER	WASTE WATER	05/21/2020
6	WASTE WATER	WASTE WATER	05/21/2020
7	WASTE WATER	WASTE WATER	05/21/2020
8	WASTE WATER	WASTE WATER	05/21/2020
9	WASTE WATER	WASTE WATER	05/21/2020
10	WASTE WATER	WASTE WATER	05/21/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

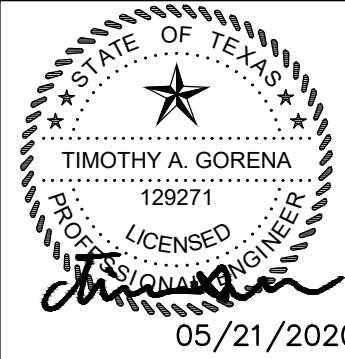
HMT PROJECT NO.:

266.07

SHEET

C7.3

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P1210562-3844 • F1210562-3236  
TBE FRM F-10961  
TBE FRM F-1015360

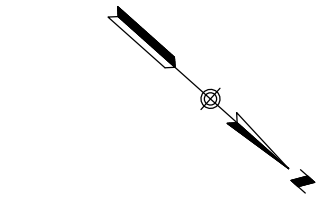
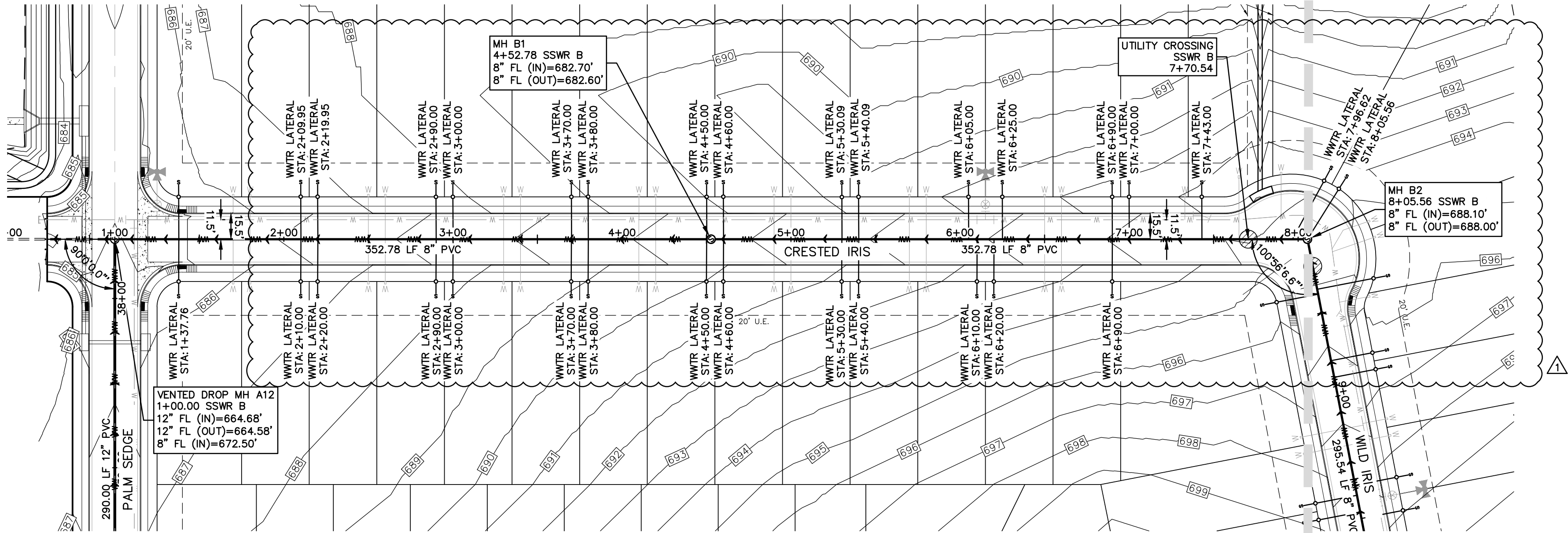




RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*  
HMT ENGINEERING AND SURVEYING



LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS
	BUILDING SETBACK LINE
	UTILITY EASEMENT
	DRAINAGE EASEMENT
	EXISTING WASTEWATER LINE
	PROPOSED WASTEWATER LINE
	PROPOSED WASTEWATER SERVICE
	EXISTING WATER LINE
	PROPOSED WATER LINE
	UTILITY CROSSING

UTILITY TRENCH COMPACTION

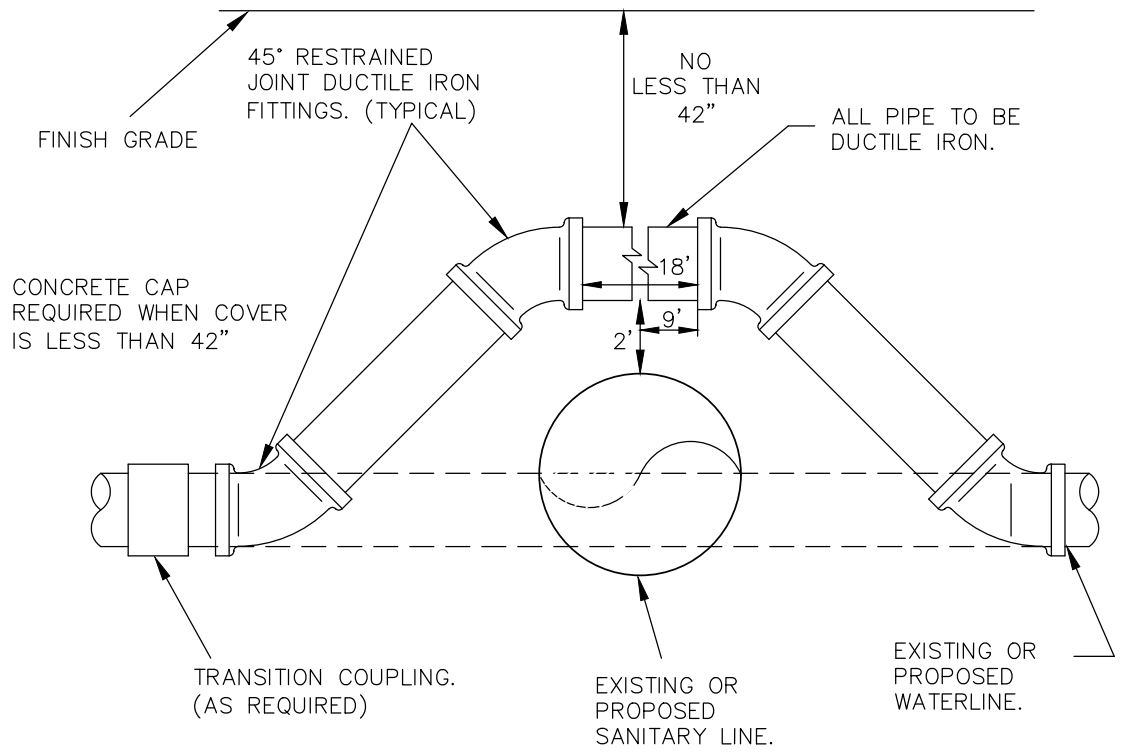
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND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

DEEP TRENCH COMPACTION TESTING

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

CONSTRUCTION NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL SEWER PIPE ASTM 3034 (115 PSI)
4. ALL MANHOLES SHALL BE 48" DIAMETER.
5. ALL RING AND COVER SHALL BE 32" DIAMETER.
6. EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED NOVEMBER 11, 2017.
7. CONTRACTOR TO FIELD-VERIFY THE EXISTING SANITARY SEWER INVERT ELEVATIONS.



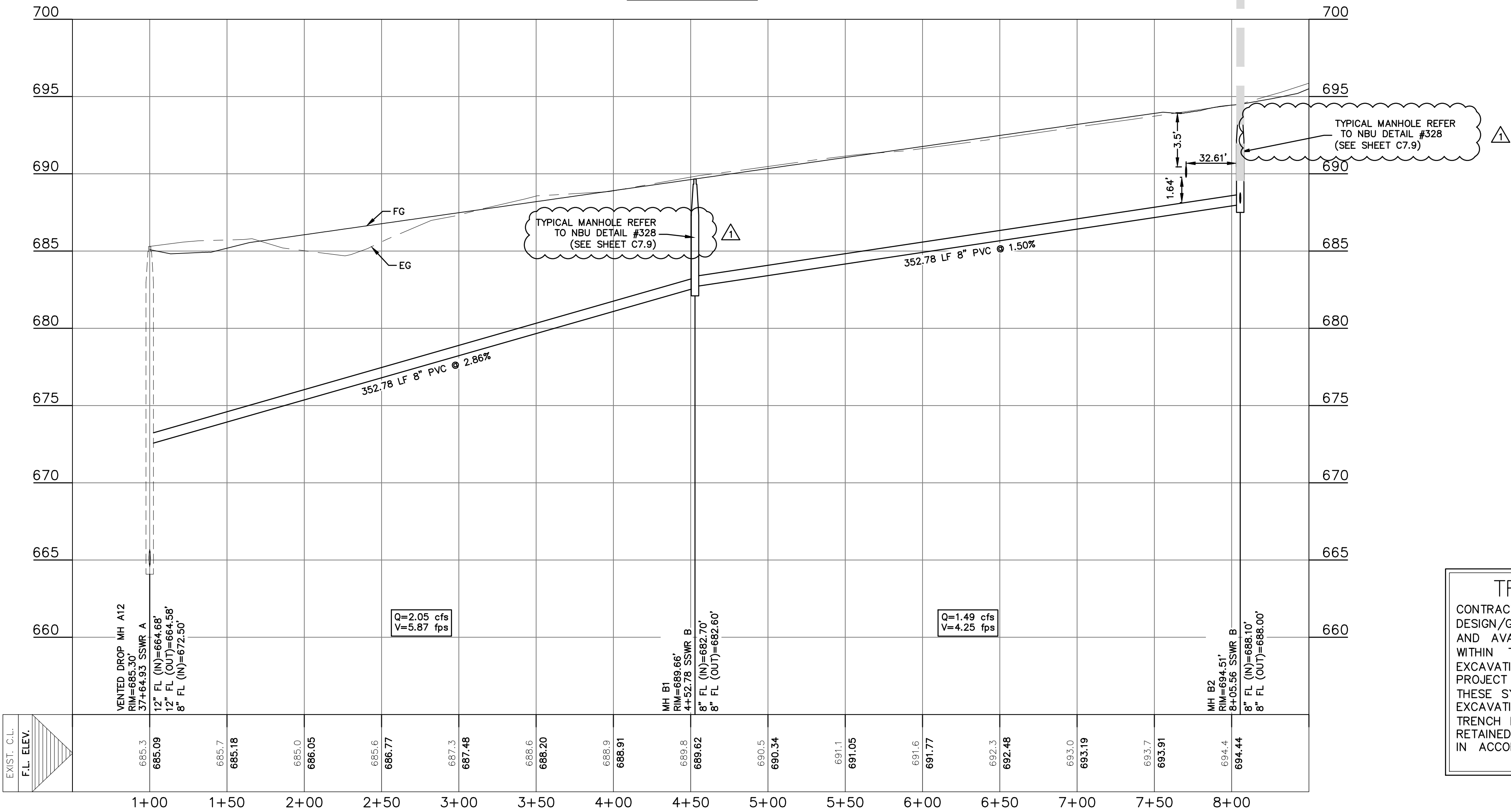
WATERLINE ADJUSTMENT DETAIL  
N.T.S.

TRENCH EXCAVATION SAFETY PROTECTION

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

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

SSWR B  
0+50 - 8+50



WASTEWATER LINE B  
PLAN & PROFILE (1 OF 2)

HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPHENSON STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+44.42	08/13/2019
7	PAVEMENT GRADING REV	09/21/2019
8	WED RES ADA RAMP	01/29/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

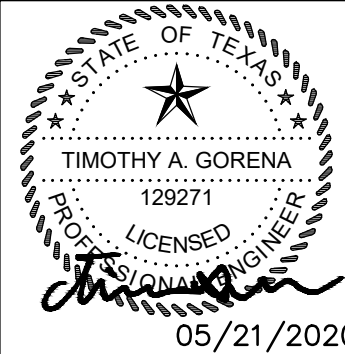
REVIEWED BY: CC/SWH

HMT PROJECT NO.: 266.07

SHEET  
C7.4

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
T(210)562-3844 • F(210)562-3236  
T(210)562-3844 • F(210)562-3236  
T(210)562-3844 • F(210)562-3236

HMT  
ENGINEERING & SURVEYING



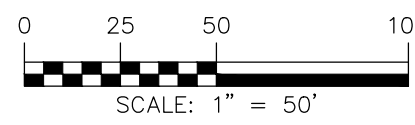
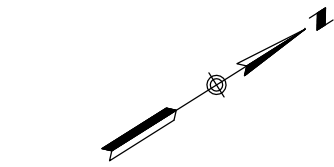
05/21/2020



RECORD DRAWING

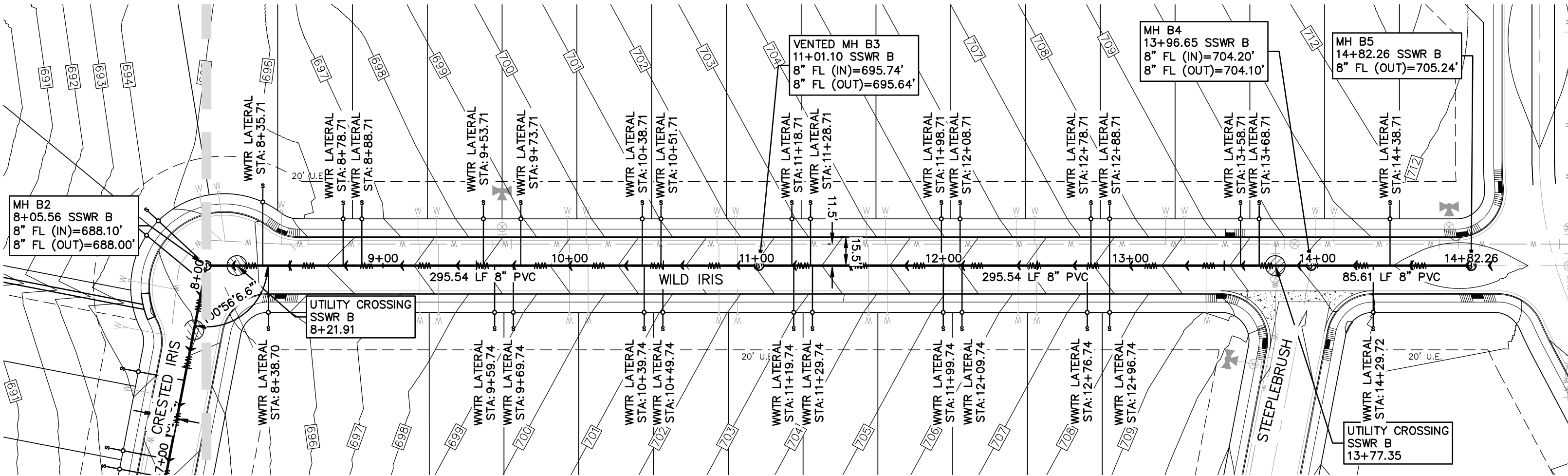
THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*  
HMT ENGINEERING AND SURVEYING

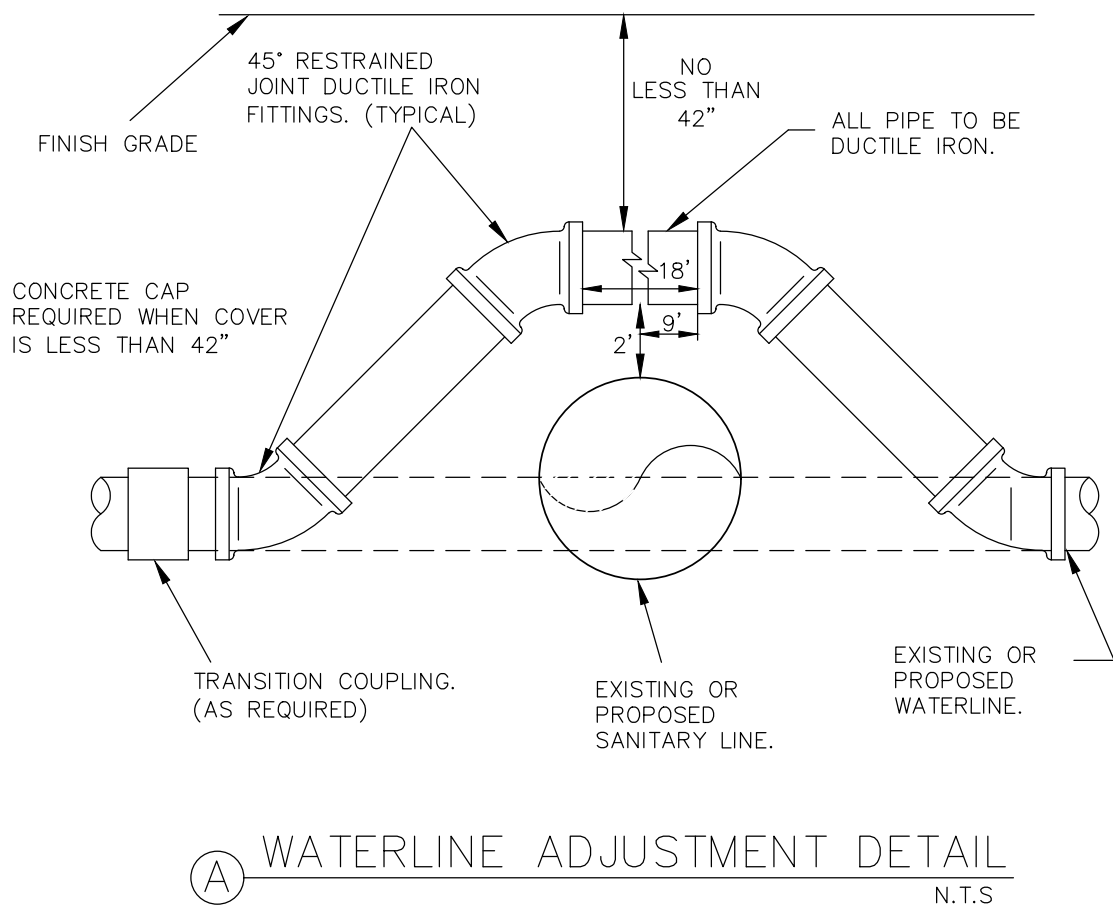
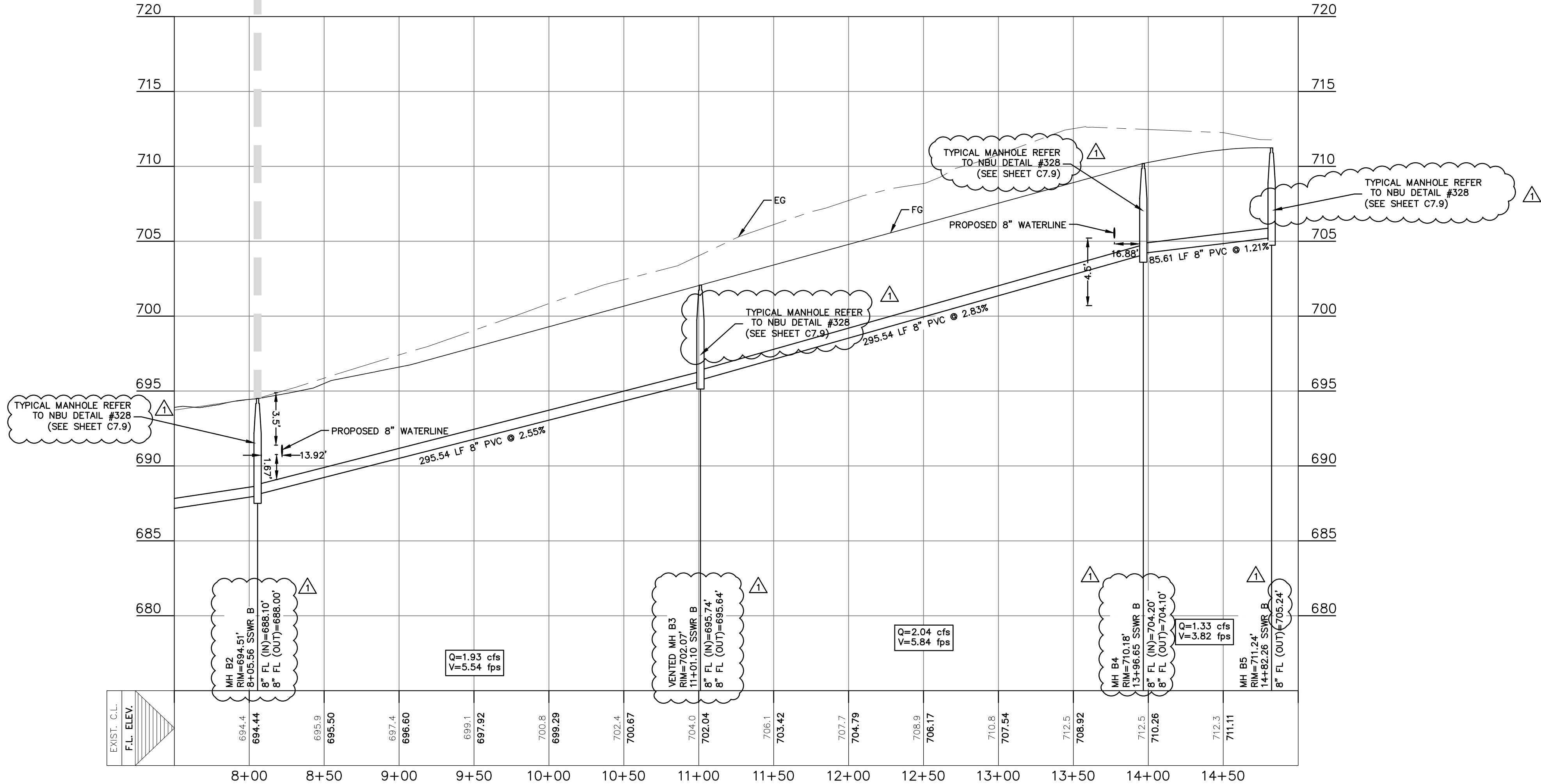


LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER SERVICE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- UTILITY CROSSING



SSWR B  
7+50 - 15+00

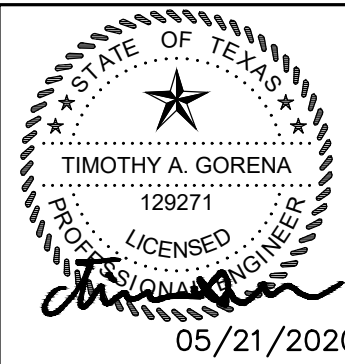


TRENCH EXCAVATION SAFETY PROTECTION

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

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

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P21010562-3844 • F21010562-3236  
TBE FIRM F-10961  
TBE FIRM 10153600



WASTEWATER LINE B  
PLAN & PROFILE (2 OF 2)  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPIEBRUSH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+44.42	08/13/2019
7	PAYMENT DRAWING REV	09/21/2019
8	WED RES ADA RAMP	01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.: 266.07

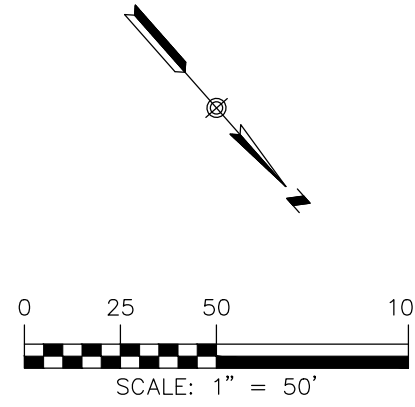
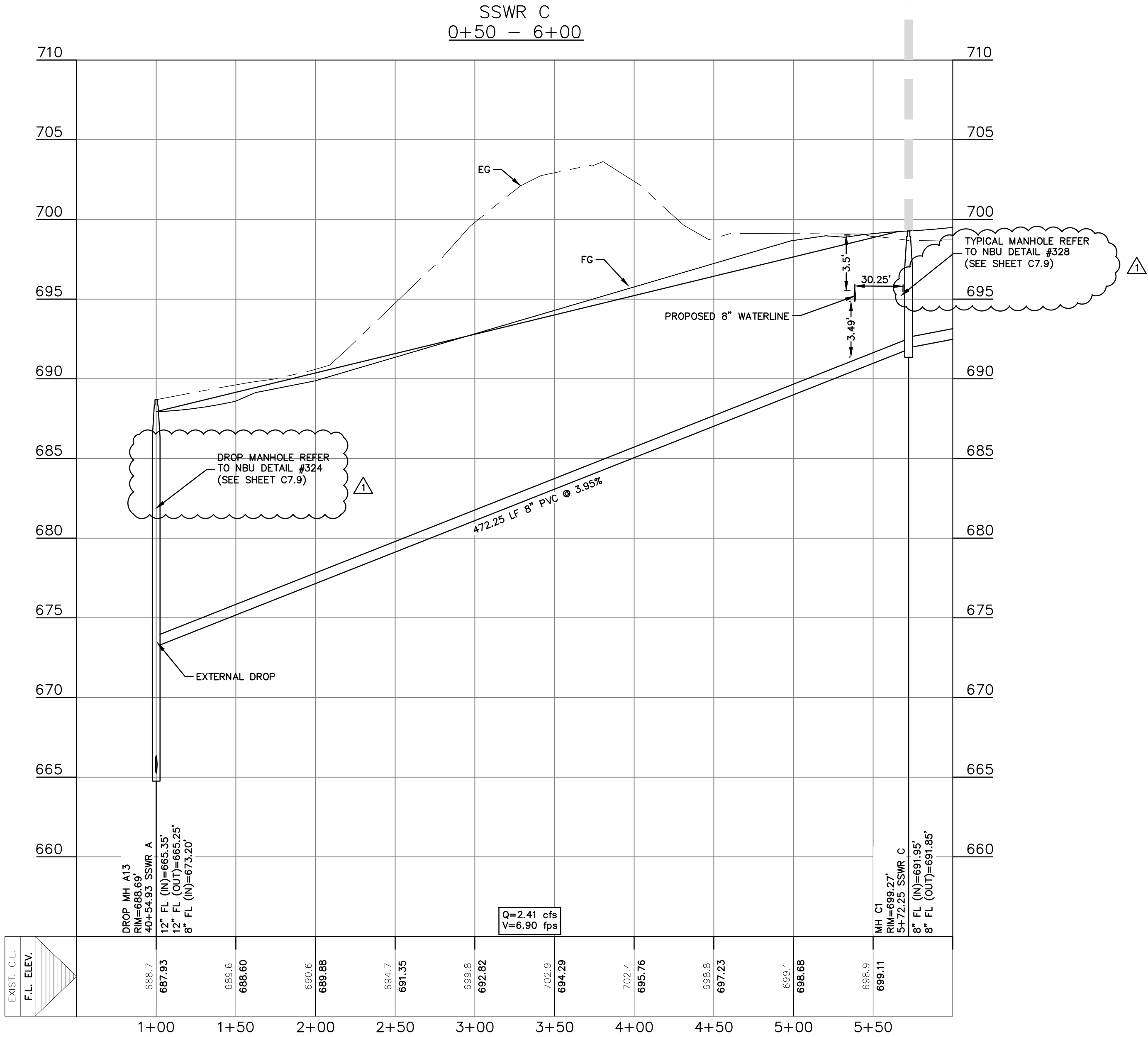
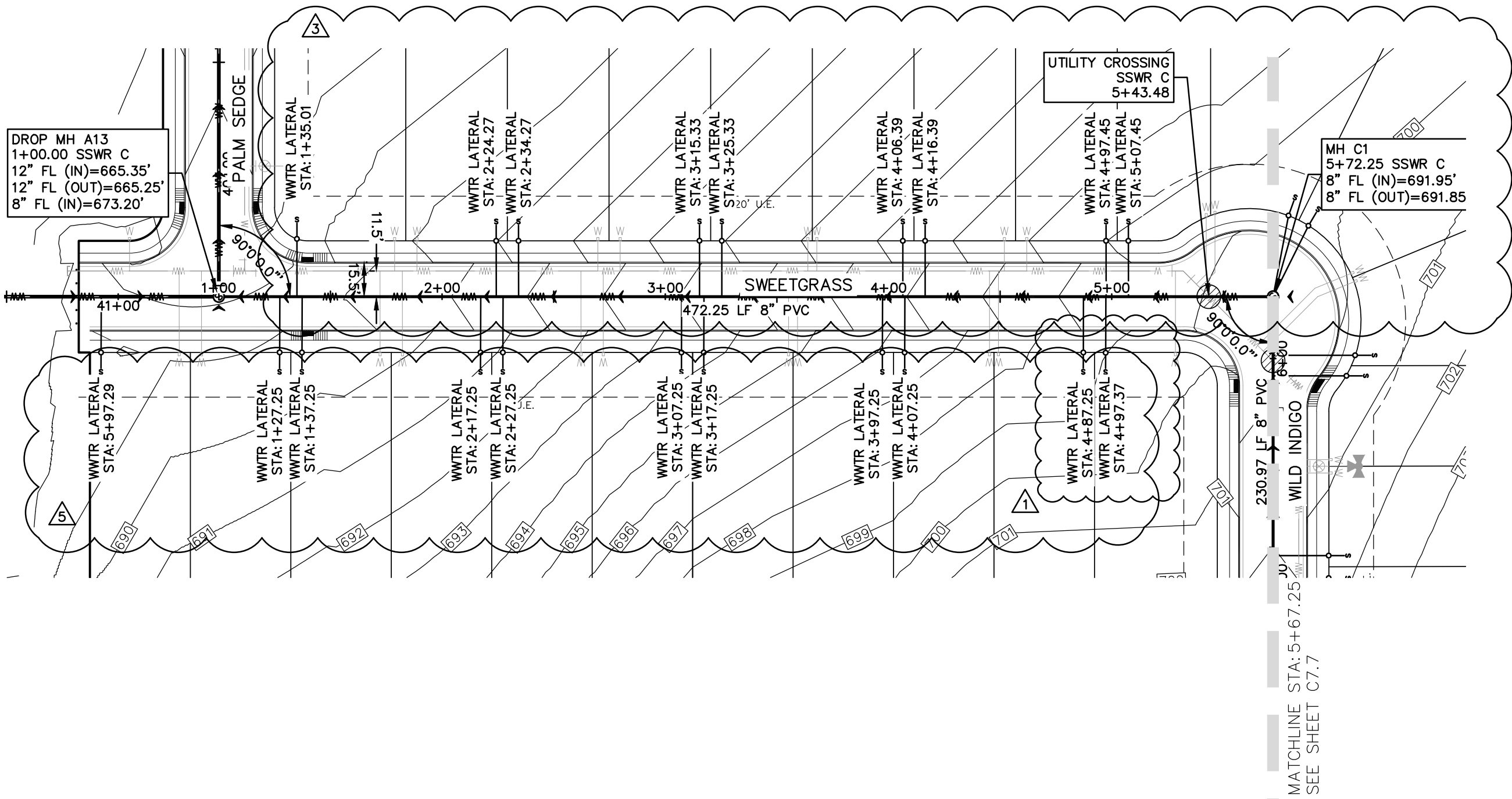
SHEET  
C7.5



RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*  
HMT ENGINEERING AND SURVEYING



LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS
	BUILDING SETBACK LINE
	UTILITY EASEMENT
	DRAINAGE EASEMENT
	EXISTING WASTEWATER LINE
	PROPOSED WASTEWATER LINE
	PROPOSED WASTEWATER SERVICE
	EXISTING WATER LINE
	PROPOSED WATER LINE
	UTILITY CROSSING

UTILITY TRENCH COMPACTION

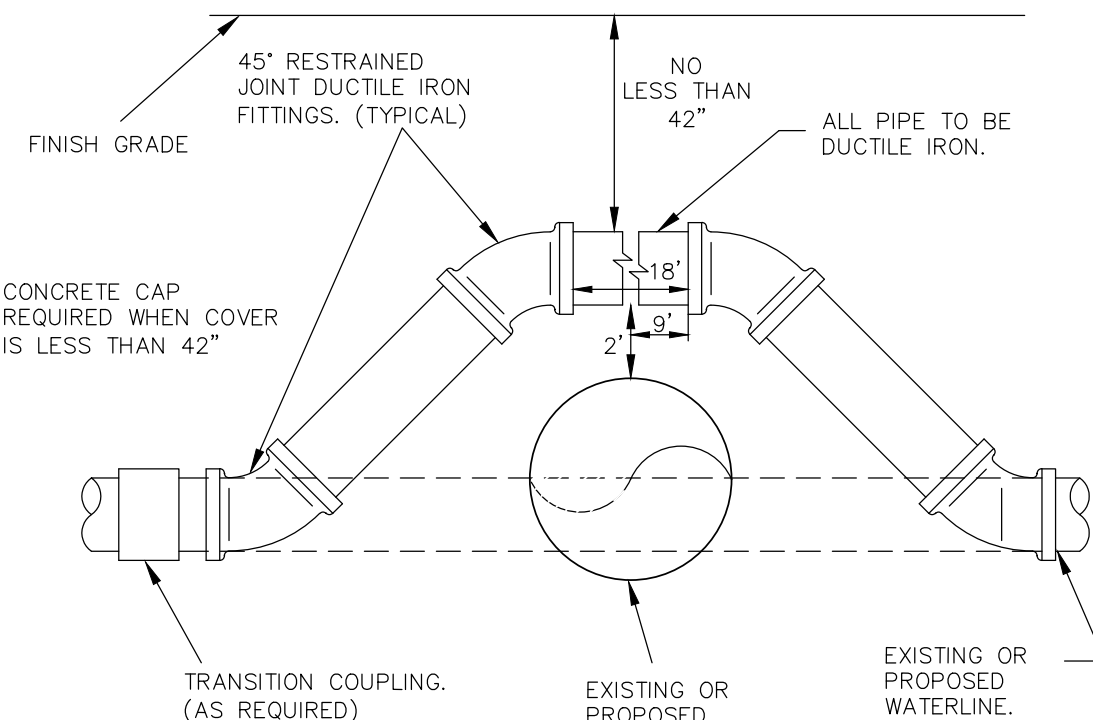
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND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

DEEP TRENCH COMPACTION TESTING

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

CONSTRUCTION NOTES:

- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
- NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
- ALL SEWER PIPE ASTM 3034 (115 PSI)
- ALL MANHOLES SHALL BE 48" DIAMETER.
- ALL RING AND COVER SHALL BE 32" DIAMETER.
- EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED NOVEMBER 11, 2017.
- CONTRACTOR TO FIELD-VERIFY THE EXISTING SANITARY SEWER INVERT ELEVATIONS.



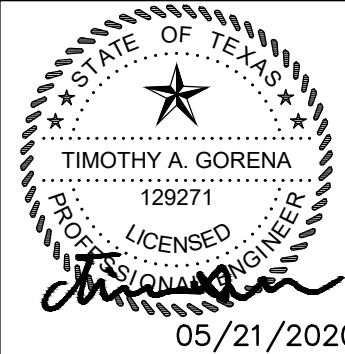
WATERLINE ADJUSTMENT DETAIL  
N.T.S.

TRENCH EXCAVATION SAFETY PROTECTION

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

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

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P(210)562-3844 • F(210)562-3236  
TBE FIRM F-10961  
TBE FIRM 1015360



WASTEWATER LINE C  
PLAN & PROFILE (1 OF 2)  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEPHENBURGH STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+48.42	08/13/2019
7	PAYMENT DRAWING REV	09/21/2019
8	WED RES ADA RAMP	01/29/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.: 266.07

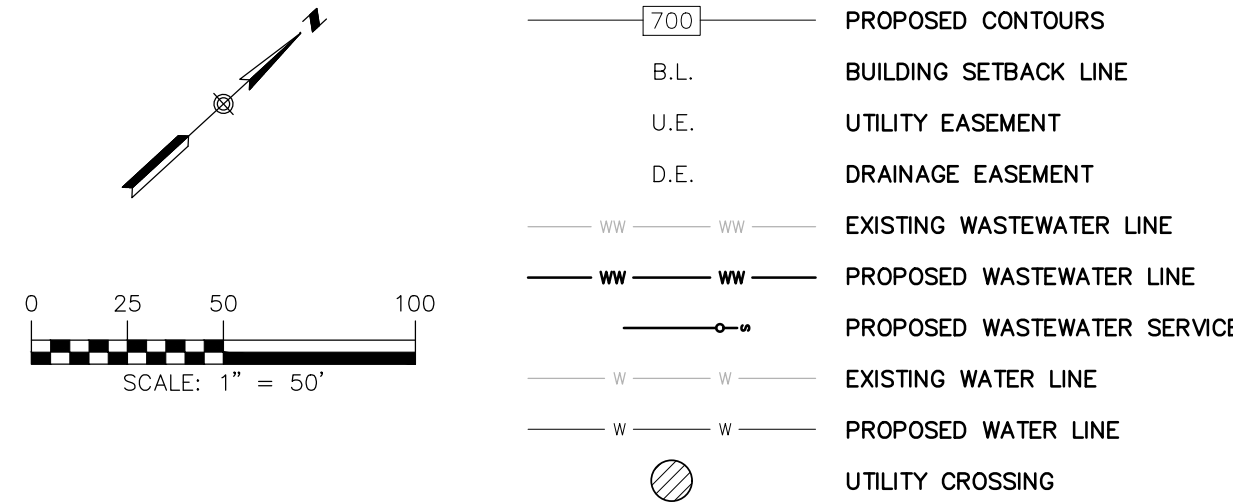
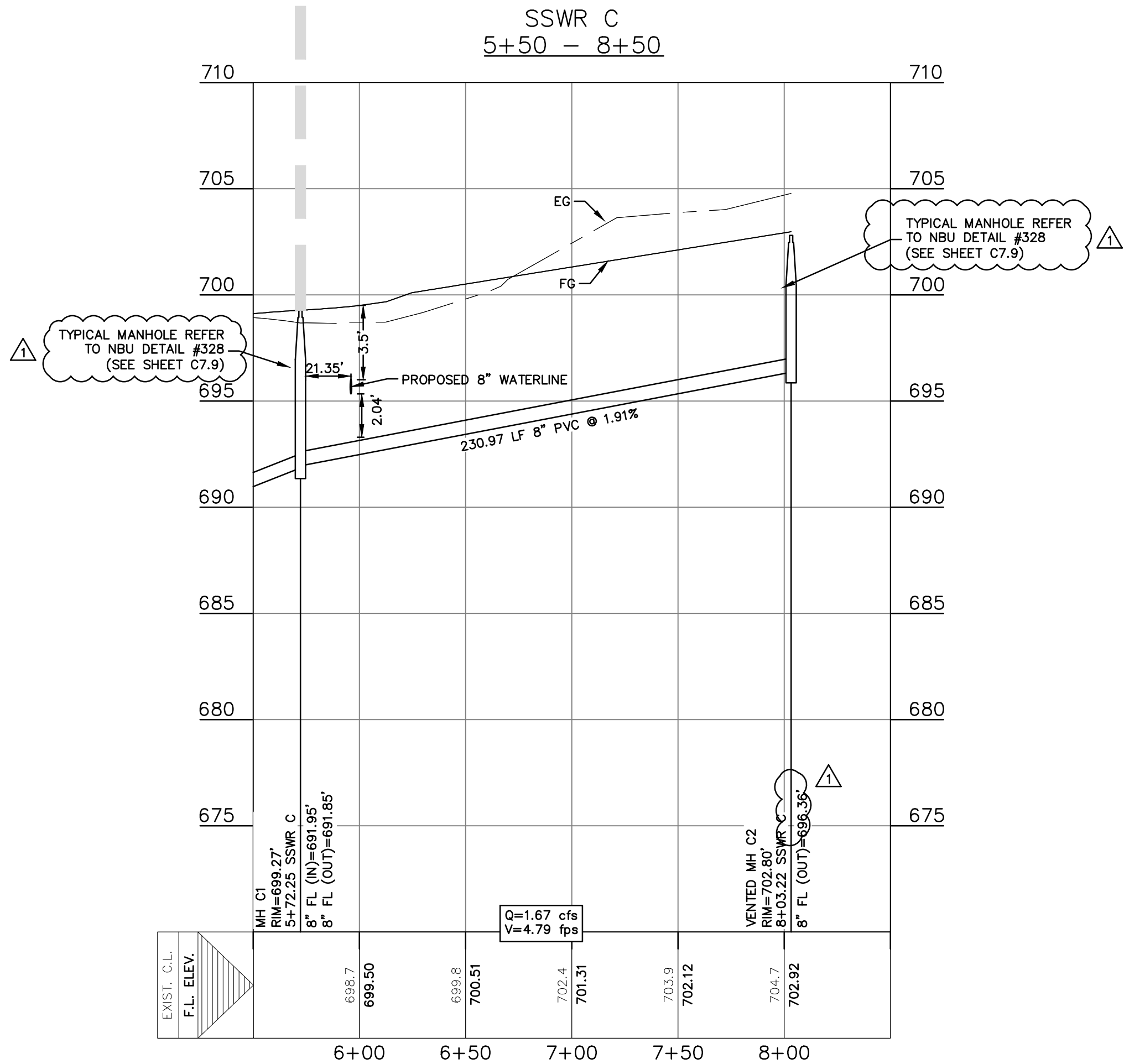
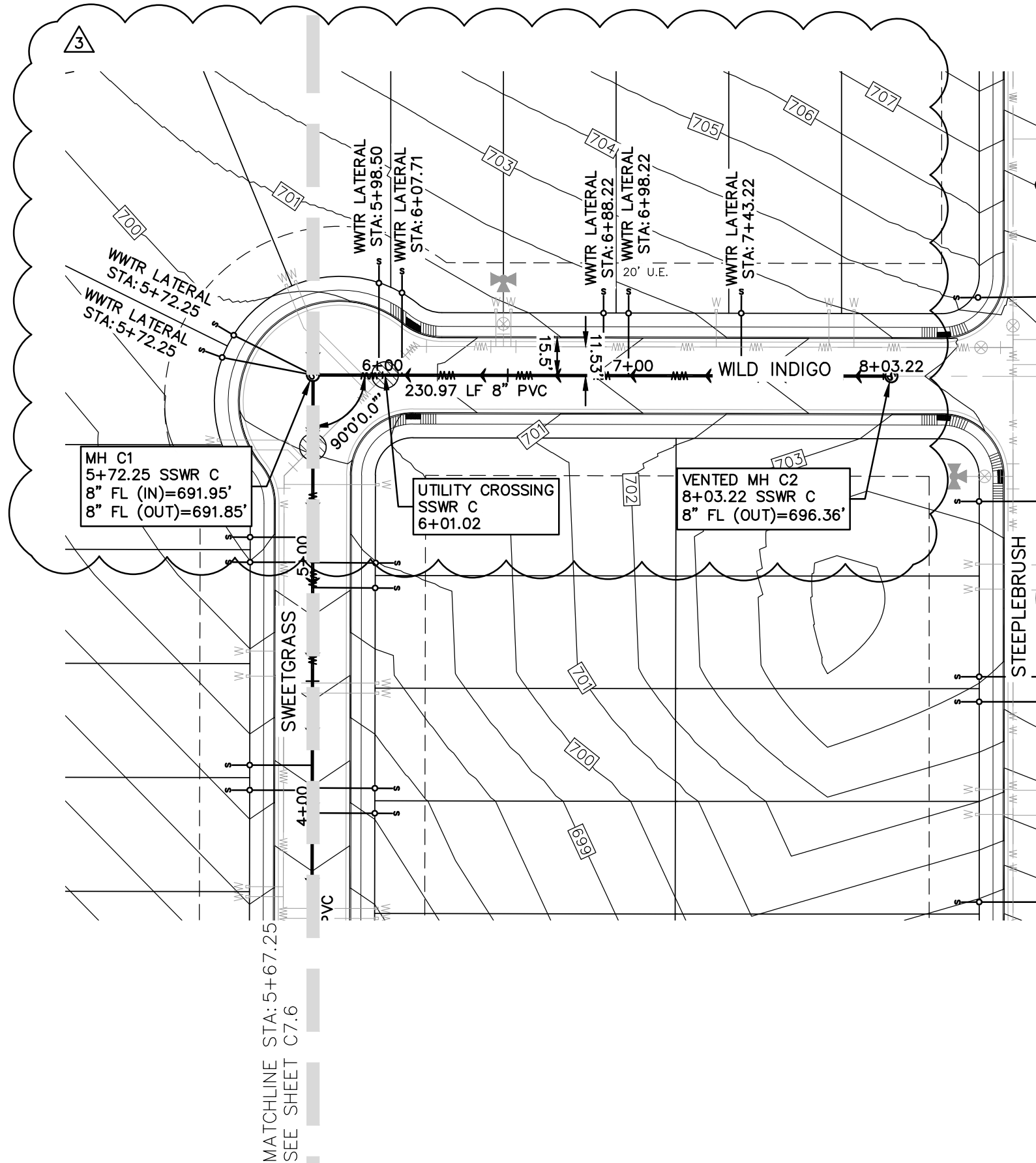
SHEET  
C7.6



RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: *Timothy A. Goren*  
HMT ENGINEERING AND SURVEYING



UTILITY TRENCH COMPACTION

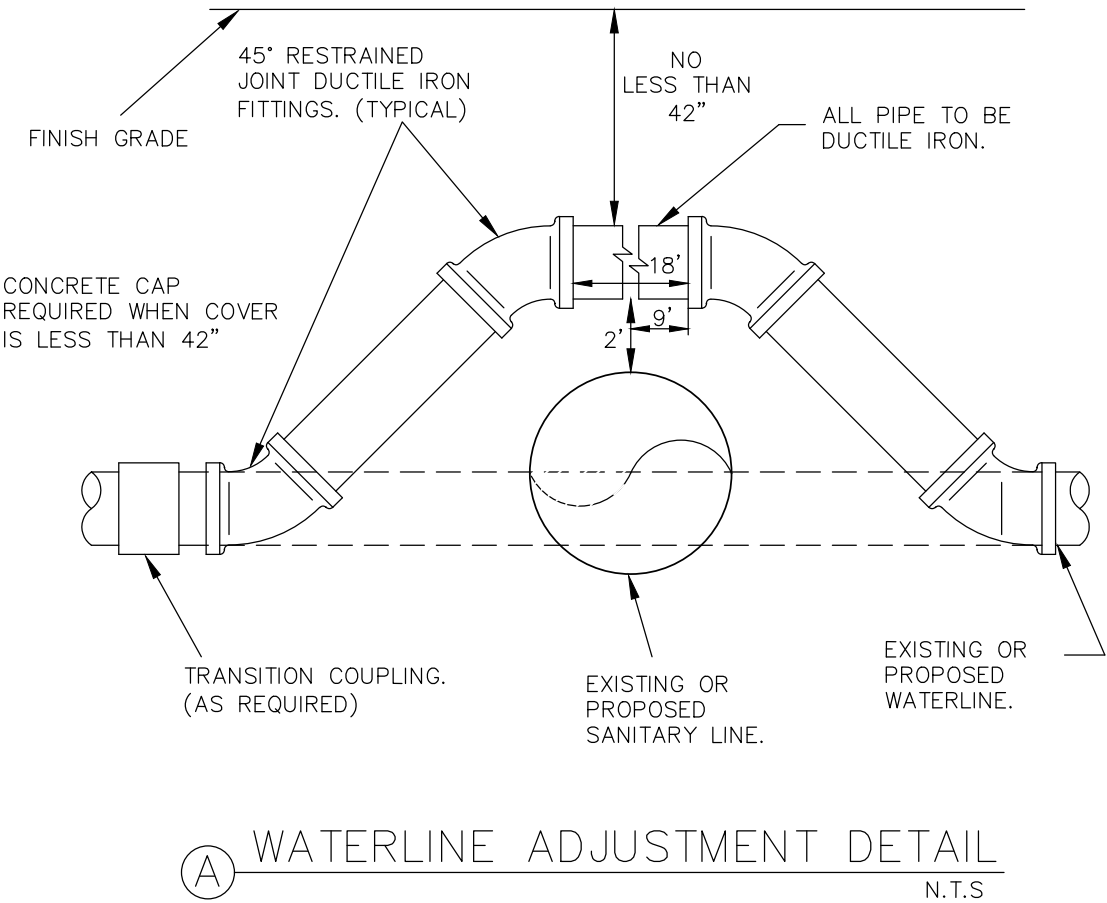
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND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

DEEP TRENCH COMPACTION TESTING

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

CONSTRUCTION NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL SEWER PIPE ASTM 3034 (115 PSI)
4. ALL MANHOLES SHALL BE 48" DIAMETER.
5. ALL RING AND COVER SHALL BE 32" DIAMETER.
6. EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED NOVEMBER 11, 2017.
7. CONTRACTOR TO FIELD-VERIFY THE EXISTING SANITARY SEWER INVERT ELEVATIONS.



TRENCH EXCAVATION SAFETY PROTECTION

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

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

WASTEWATER LINE C  
PLAN & PROFILE (2 OF 2)  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION	DESCRIPTION	DATE
1	WATER AND WASTEWATER REV		02/18/2019
2	FIRE ACCESS REV		03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV		05/29/2019
4	STEPPLEBRUSH STATION REVISION		07/29/2019
5	BEFORE UNDER FM 1101 REV		08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42		08/13/2019
7	PAVEMENT GRADING REV		09/21/2019
8	WED RES ADA RAMP		01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.:

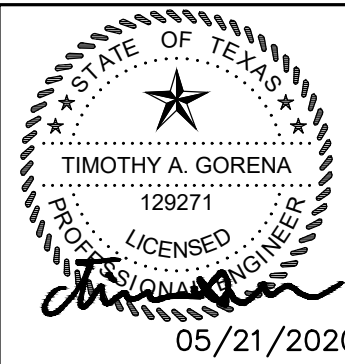
266.07

SHEET

C7.7

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P12101562-3844 • F12101562-3236  
TBP E FIRM F-10961  
TBP L FIRM 1015360

HMT  
ENGINEERING & SURVEYING

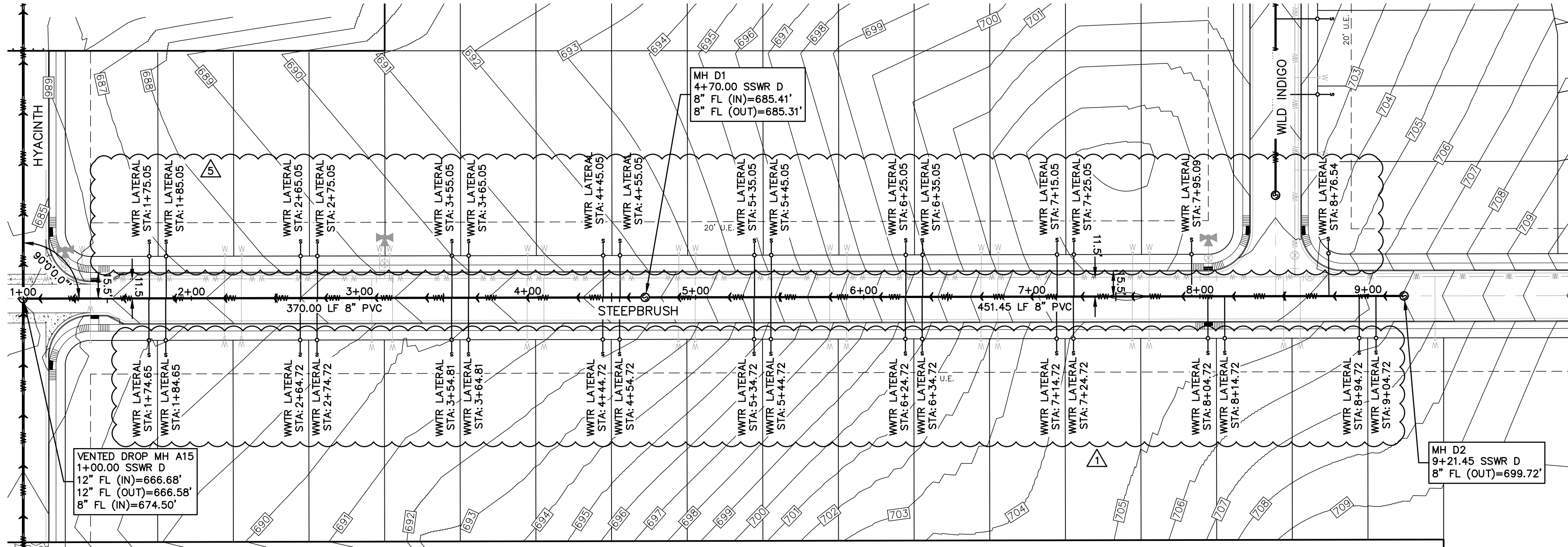




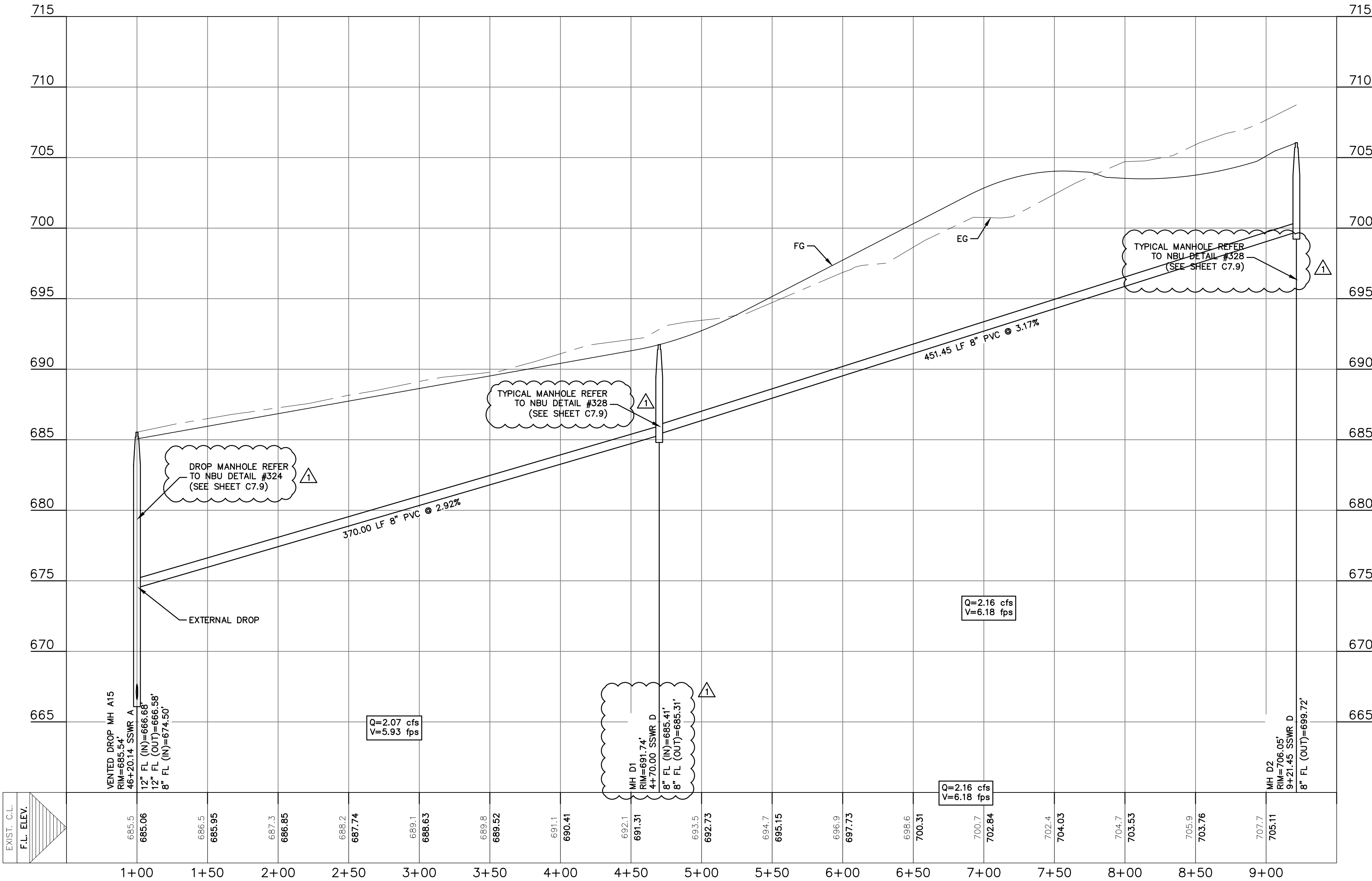
RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

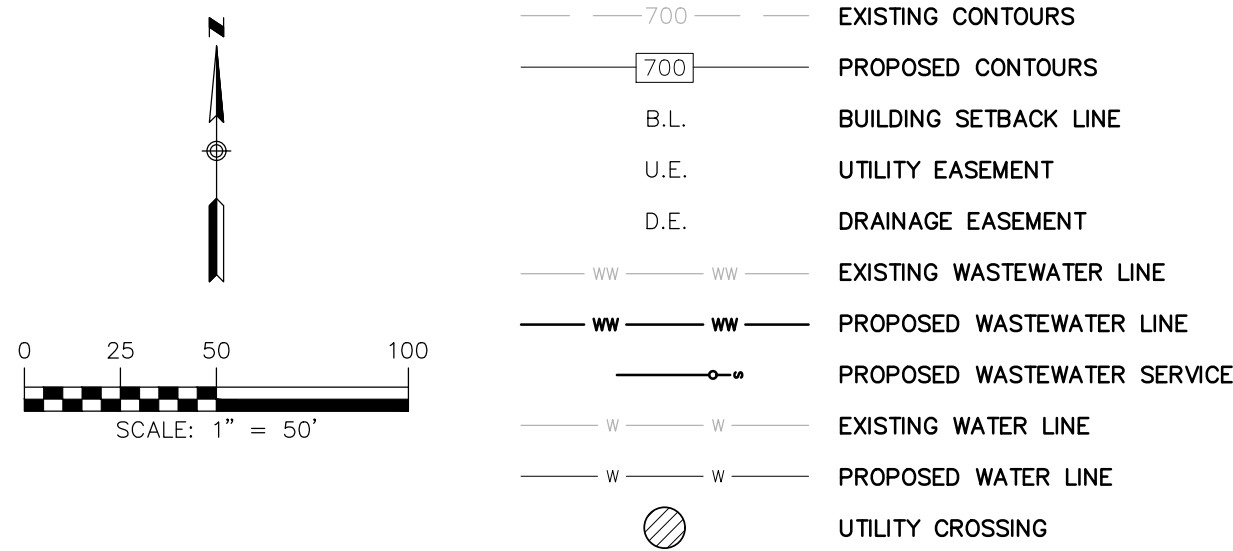
DATE: 05/21/2020 BY: *Timothy A. Goren*  
HMT ENGINEERING AND SURVEYING



SSWR D  
0+50 - 9+50



LEGEND



UTILITY TRENCH COMPACTION

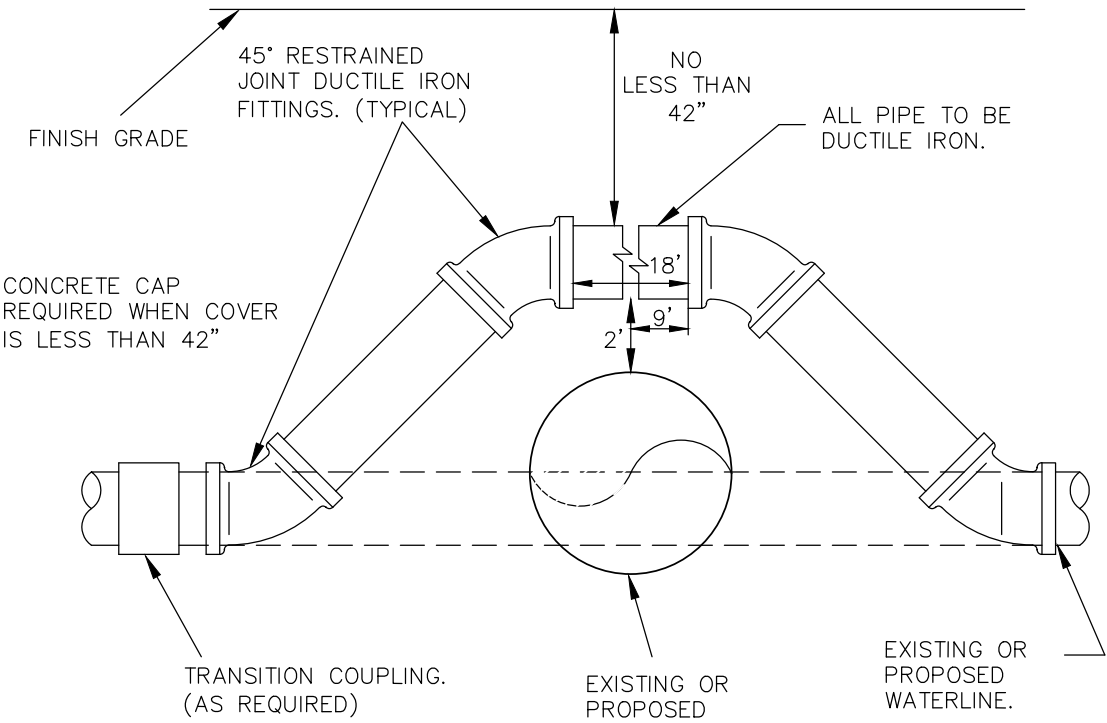
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UTILITY LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND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

DEEP TRENCH COMPACTION TESTING

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

CONSTRUCTION NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL SEWER PIPE ASTM 3034 (115 PSI)
4. ALL MANHOLES SHALL BE 48" DIAMETER.
5. ALL RING AND COVER SHALL BE 32" DIAMETER.
6. EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED NOVEMBER 11, 2017.
7. CONTRACTOR TO FIELD-VERIFY THE EXISTING SANITARY SEWER INVERT ELEVATIONS.



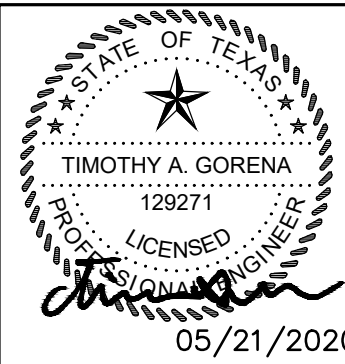
WATERLINE ADJUSTMENT DETAIL  
N.T.S.

TRENCH EXCAVATION SAFETY PROTECTION

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

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

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMTNB.COM  
P121010562-3844 • F121010562-3236  
TBE FIRM F-10961  
TBE FIRM F-1015360



WASTEWATER LINE D  
PLAN & PROFILE  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION	DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV		02/18/2019
2	FIRE ACCESS REV		03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV		05/29/2019
4	STEEPLEBRUSH STATION REVISION		07/29/2019
5	BEFORE UNDER FM 1101 REV		08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42		08/13/2019
7	PAVEMENT GRADING REV		09/21/2019
8	WED RES ADA RAMP		01/09/2020

DATE: FEBRUARY 2020

DRAWN BY: HM

DESIGNED BY: TG

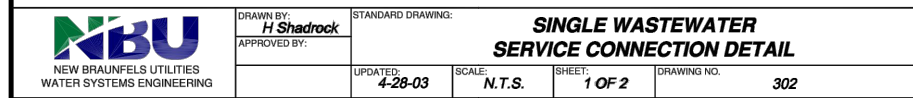
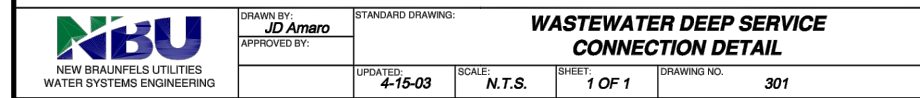
REVIEWED BY: CC/SWH


HMT PROJECT NO.:

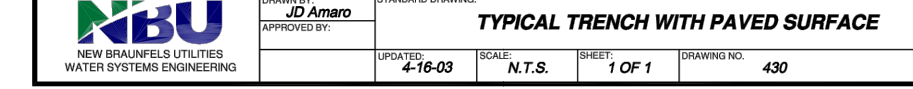
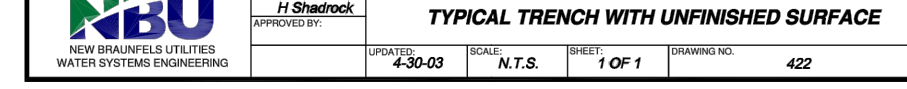
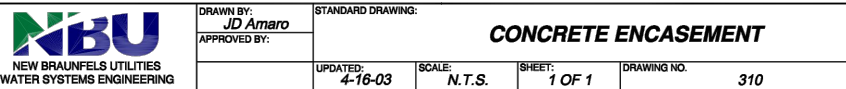
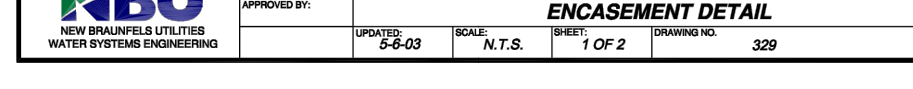
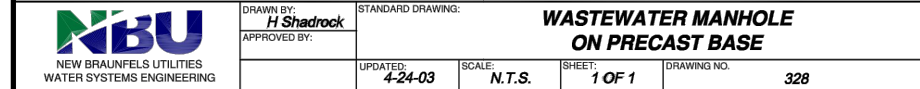
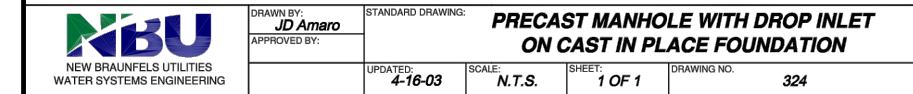
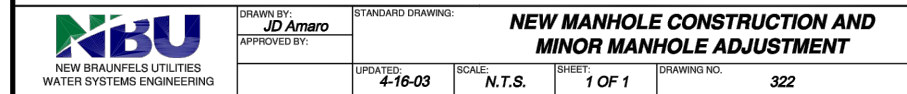
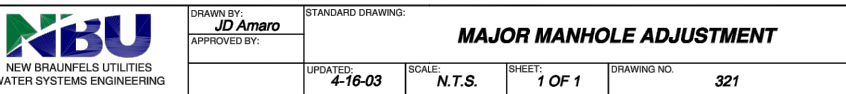
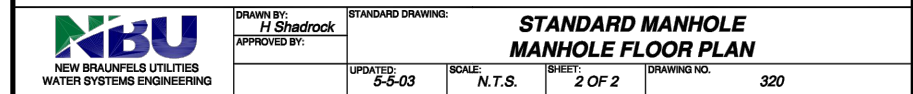
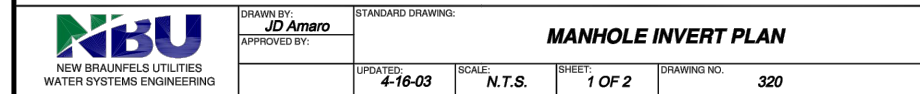
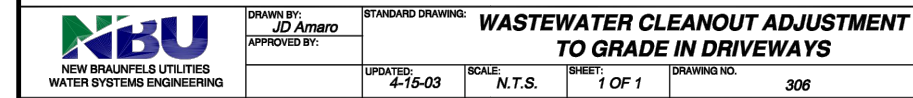
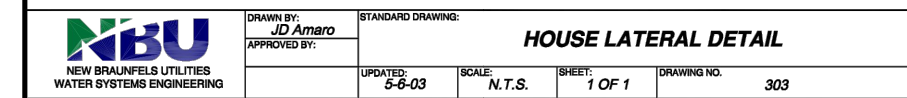
266.07

SHEET  
C7.8



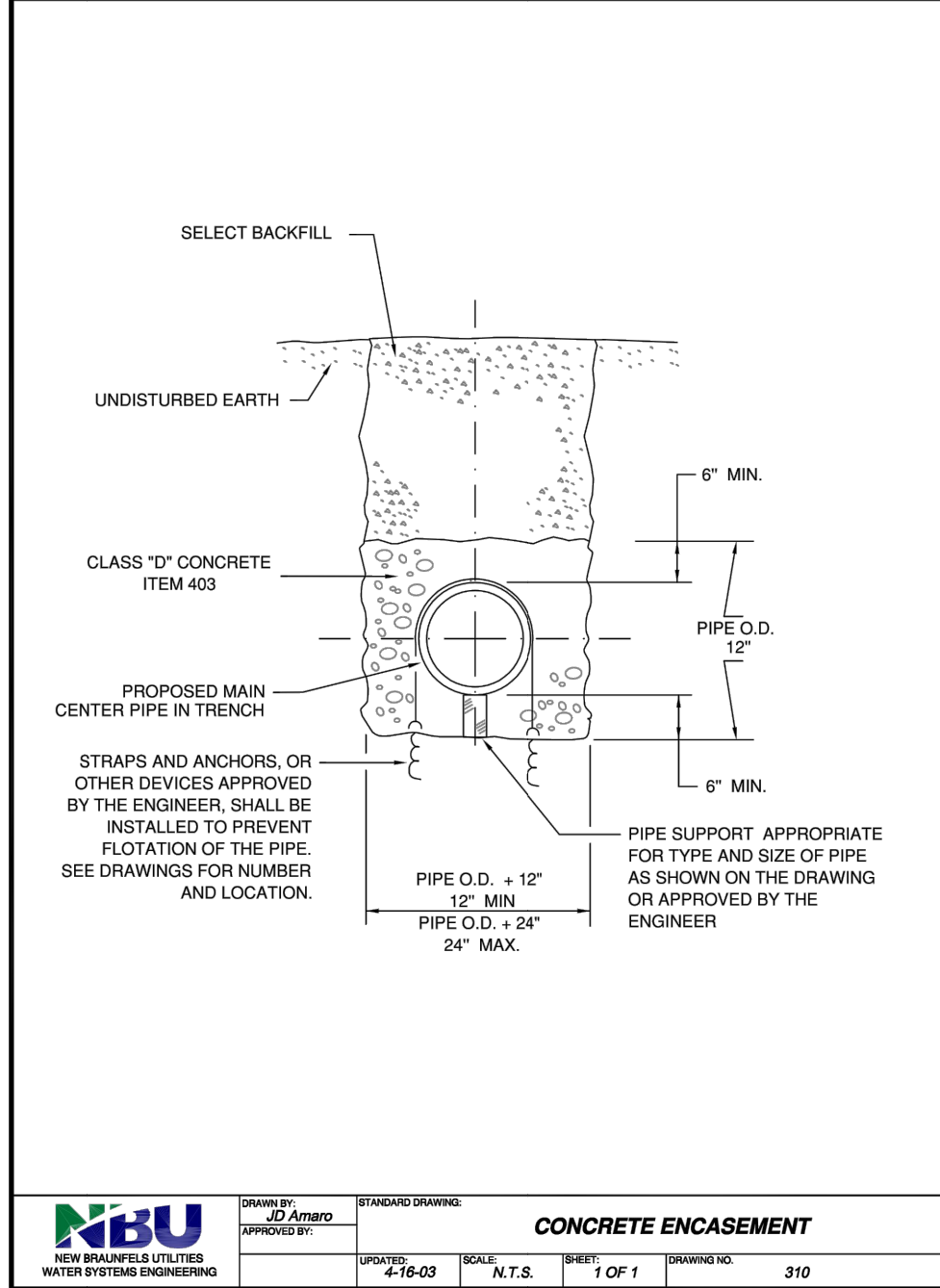
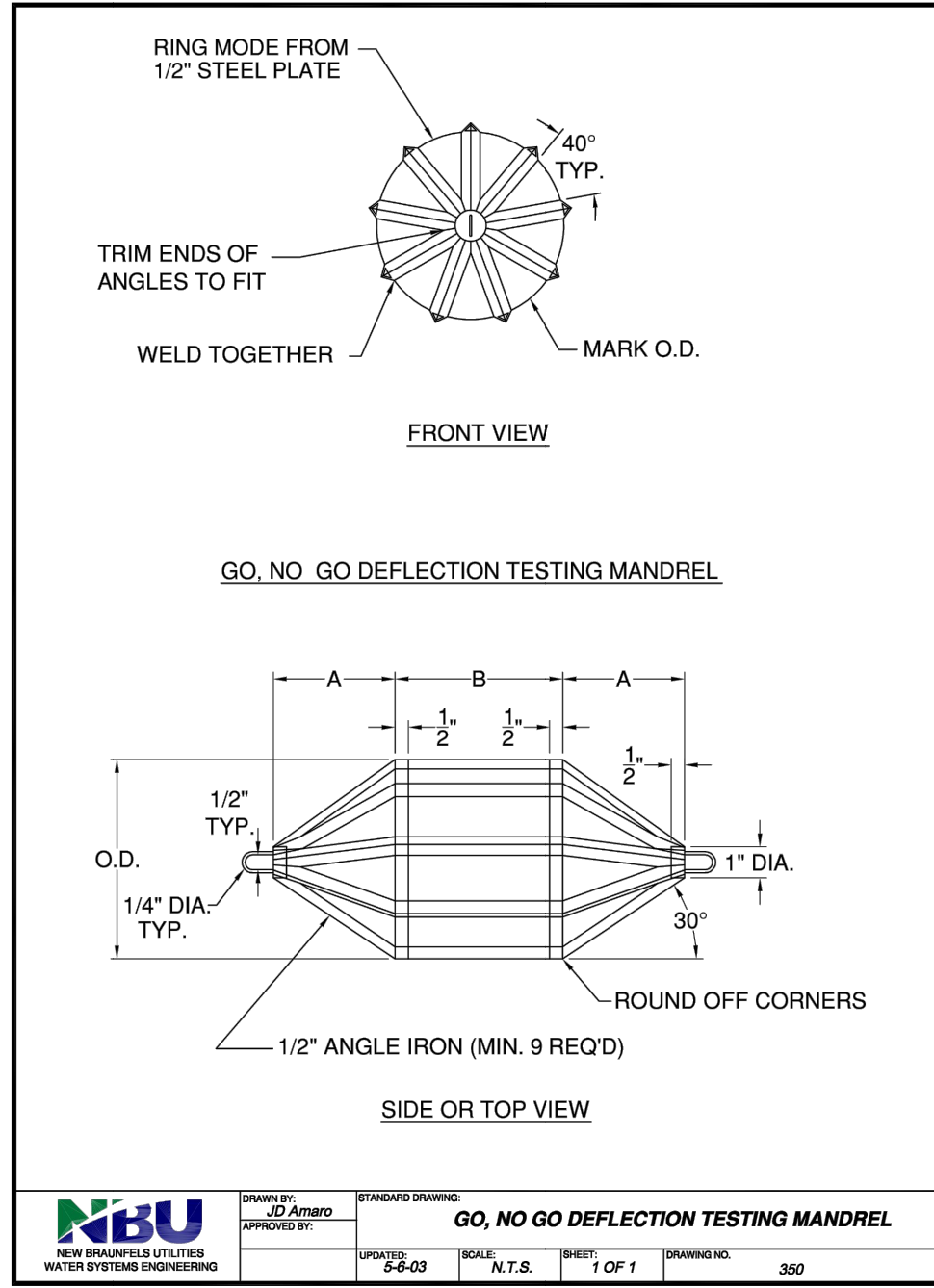
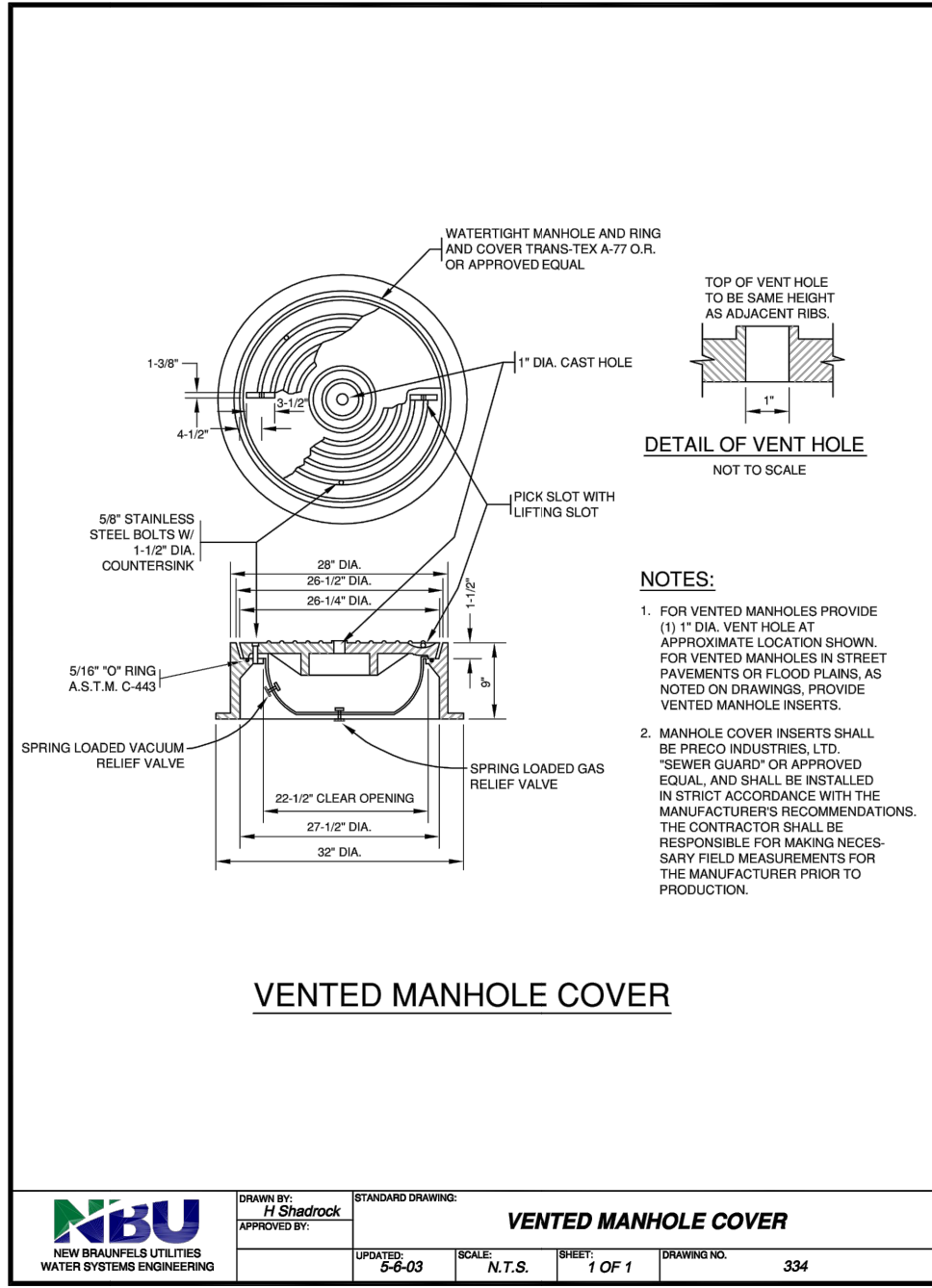
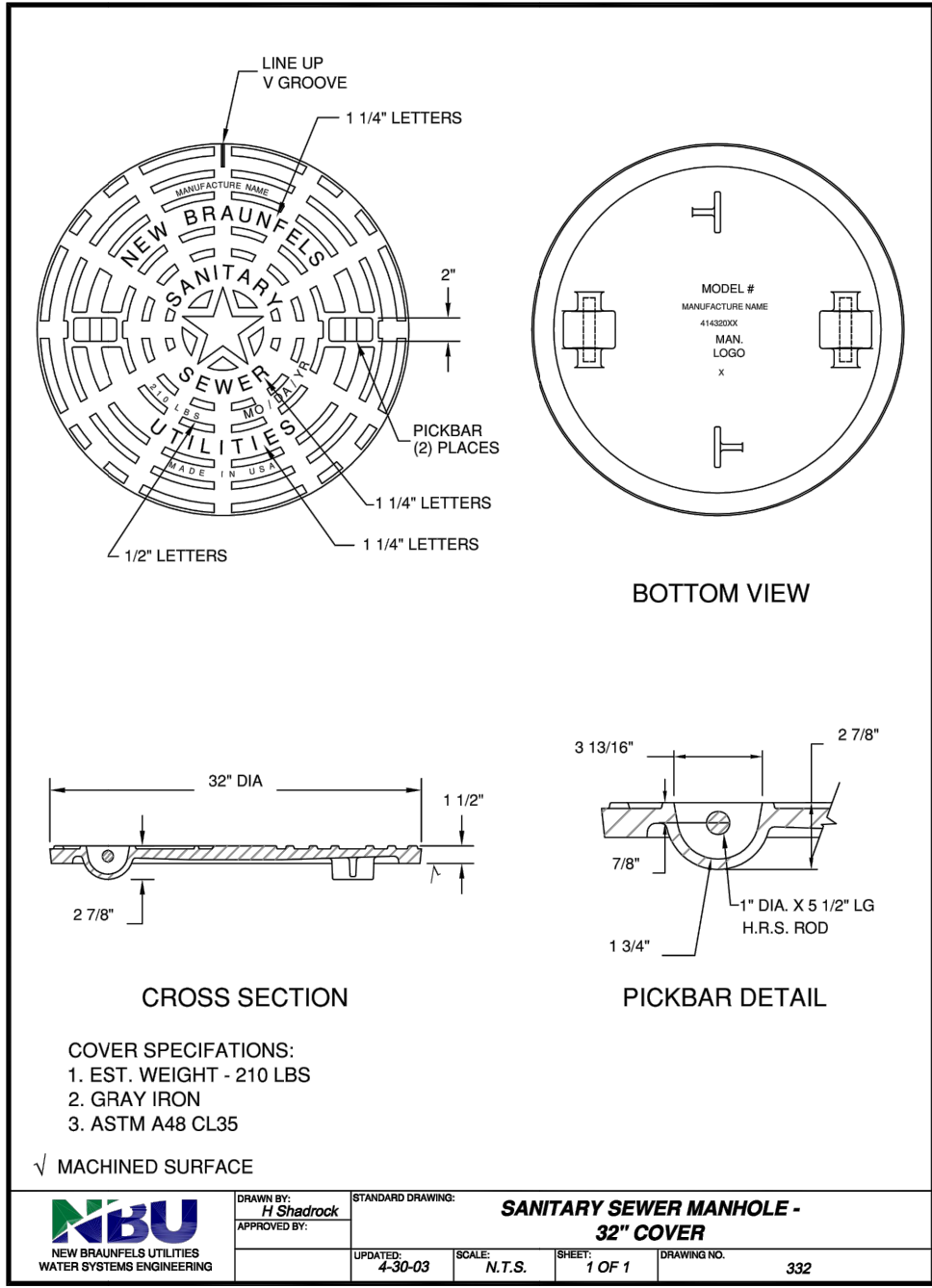
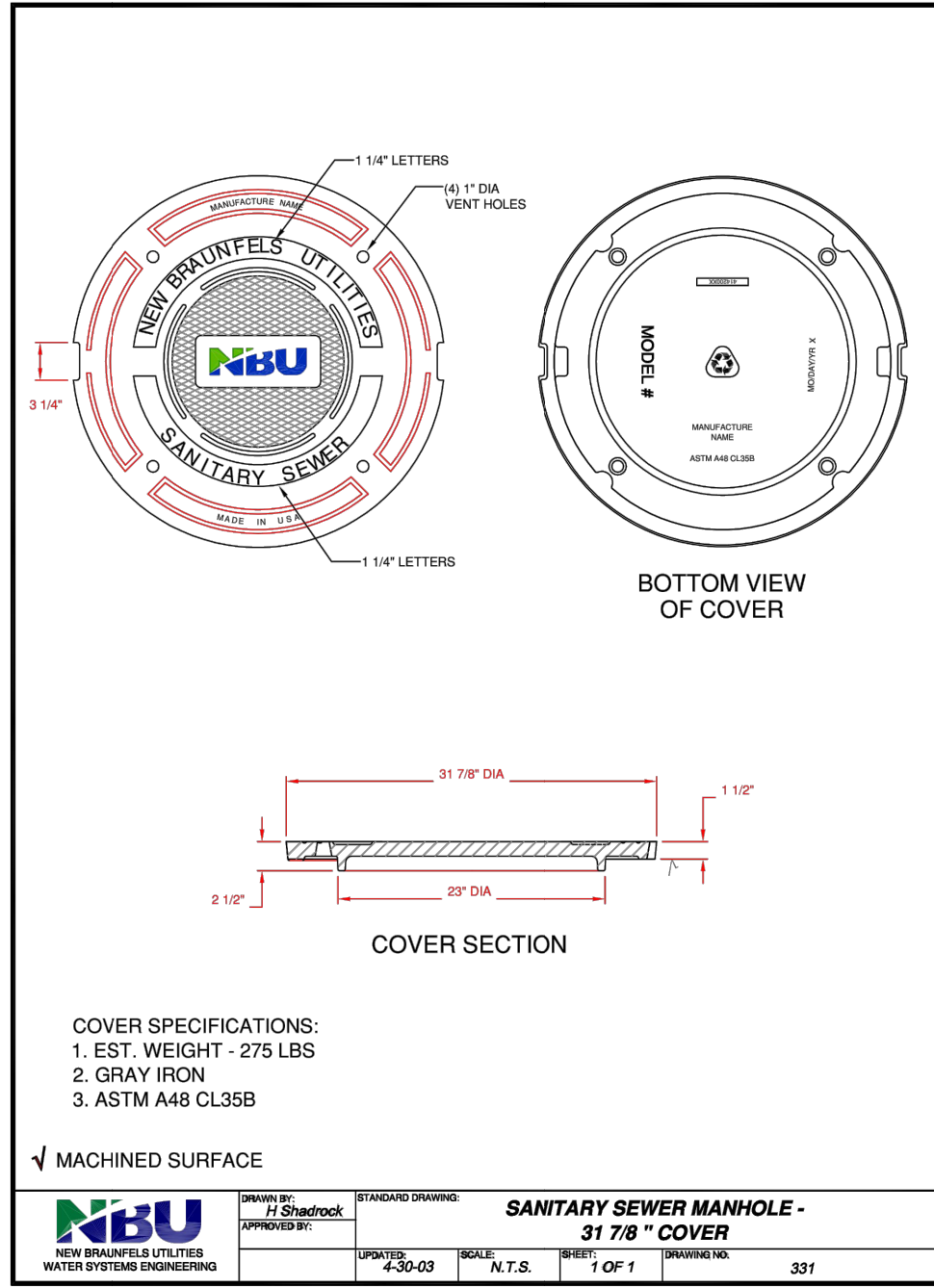


 <b>NBU</b> NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: <b>H Shadrock</b>	STANDARD DRAWING:		
	APPROVED BY:	<b>SINGLE WASTEWATER SERVICE          CONNECTION DETAIL</b>		
	UPDATED: <b>4-28-03</b>	SCALE: <b>N.T.S.</b>	SHEET: <b>2 OF 2</b>	DRAWING NO.: <b>302</b>




DATE: 05/21/2020 BY: *Timson*  
HMT ENGINEERING AND SURVEYING





RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: 05/21/2020 BY: 

HMT ENGINEERING AND SURVEYING

WASTEWATER  
DETAILS (2 OF 2)  
HEATHERFIELD SUBDIVISION  
UNIT 1

NO.	REVISION DESCRIPTION	REVISION DATE
1	WATER AND WASTEWATER REV	02/18/2019
2	FIRE ACCESS REV	03/29/2019
3	BEFORE UNDER FM 1101 AND LOT REV	05/29/2019
4	STEP/GRABER STATION REVISION	07/29/2019
5	BEFORE UNDER FM 1101 REV	08/13/2019
6	ADDED WATER LATERAL LINE C STATION 8+84.42	09/21/2019
7	PAYMENT GRADING REV	09/21/2019
8	WED RES ADA RAMP	01/09/2020

DATE: FEBRUARY 2020

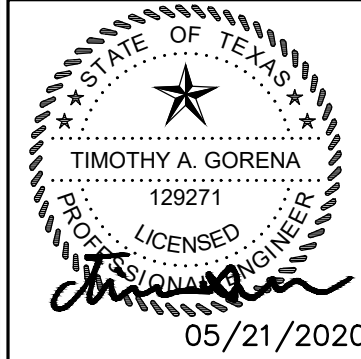
DRAWN BY: HM

DESIGNED BY: TG

REVIEWED BY: CC/SWH

HMT PROJECT NO.: 266.07

SHEET C7.10



HMT

ENGINEERING & SURVEYING

8200 W INTERSTATE 10  
SAN ANTONIO, TX 78253  
HMT@HMT.COM  
P(210)562-3844 • F(210)562-3236  
TBPE FIRM F-10961  
TBPLS FIRM 10153600