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FIRST AMENDED INTERLOCAL AGREEMENT BETWEEN WILLIAMSON COUNTY AND CITY OF HUTTO REGARDING THE CITY/COUNTY PARTICIPATION IN THE DESIGN AND CONSTRUCTION COSTS RELATED TO SEGMENT 3 OF THE SOUTHEAST LOOP (FM 3349) CONSTRUCTION PROJECT

THE STATE OF TEXAS §
§
COUNTY OF WILLIAMSON §

This First Amended Interlocal Agreement (the "Amended Agreement") is entered into as of this 10th day of February, 2023, by and between Williamson County, a political subdivision of the state of Texas (the "County") and the City of Hutto, a Texas municipal corporation (the "City") (collectively, the "Parties").

RECITALS

WHEREAS, on the 7th day of December, 2021, the City and the County entered into an Interlocal Agreement (the "Agreement") regarding design and construction of Segment 3 of the Southeast Loop along existing FM3349 from CR 404 to CR 395 (the "County Project"); and

WHEREAS, since the approval of the Agreement, the City is and has been in the process of designing proposed casings for the waterline utility adjustments or improvements associated with the County Project, and City has requested that the Agreement be amended to add additional waterline pipe and casing facilities scope to the project at the City's cost (the "City Project"), the location, scope, specifications and plan design of which is identified in Exhibit **"A-1"** attached hereto and incorporated herein; and

WHEREAS, V.T.C.A., Government Code, Chapter 791, cited as the Texas Interlocal Cooperation Act, provides that any one or more local governments may contract with each other for the performance of governmental functions or services for the promotion and protection of the health and welfare of the inhabitants of this State and the mutual benefit of the parties; and

WHEREAS, the City and County continue to desire to commence construction of the County Project and City Project since all of the necessary right-of-way or other property rights have been acquired;

Now therefore, in consideration of the mutual covenants and agreements herein contained, the City and the County agree to the following amendment to the Agreement:

A.

That **Section II., CONSTRUCTION OF COUNTY PROJECT**, is hereby amended to read as follows:

2.01 County and City General Obligations and Payment. The County shall be responsible for all costs associated with the preliminary and final design, construction bidding and management, right of way acquisitions, utility relocations, and all other costs related to the

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construction of the County Project. The County shall be responsible for the expense and construction of the improvements which constitute the City Project, subject to the reimbursement of 100% of the construction costs (estimated at $1,617,893) as set out below. The City shall be responsible for all costs associated with the preliminary and final design for the City Project.

The City's 100% share of the actual construction costs for the City Project (estimated at $1,617,893) shall be due and payable to the County 30 days after the City provides written acceptance of the completed City Project, and otherwise in accordance with the provisions of the Texas Prompt Payment Act, Chapter 2251 of the Texas Government Code. After acceptance, the City will own and maintain the facilities included within the City Project.

2.02 **Construction Plans**. The County will submit the plans and specifications related to the County Project to the City. The City has submitted the plans and specifications for the City Project, which are identified in Exhibit "**A-1**" attached hereto, to the County.

2.03 **Inspection**. The City may inspect all aspects of the County Project that are within the City Limits, and all aspects of the City Project, during construction. Upon receipt of notification from the City that the City's inspectors determine the construction by the County is not in accordance with the approved project plans, the County shall cease construction until the deficiency can be identified, and a corrective plan of construction implemented with the agreement of the City.

2.04. **Permits**. The County shall be responsible for obtaining permits, if any, required for the construction of the County Project. The City shall be responsible for obtaining permits, if any, required for the construction of the City Project.

2.05. **Insurance, Bonds and Warranties**. The County shall require the contractor for the Project to name the City as an additional insured on any policies related to the County Project that lie within the City limits, and for any portion of the City Project. The County shall require the contractor to provide performance bonds, and maintenance bonds in favor of the City for the County Project and City Project in amounts satisfactory to the City. The County shall transfer any warranties for portions of the County Project within the city limits, and for the City Project, to the City upon final completion and acceptance of the Projects.

B.

All other terms and conditions of the Agreement shall remain in full force and effect.

C.

MISCELLANEOUS PROVISIONS

1. **Execution.** This Agreement may be simultaneously executed in any number of counterparts, each of which will serve as an original and will constitute one and the same instrument.

2. **Governing Law.** This Agreement will be governed by the Constitution and laws of the State of Texas.

3. **Waiver.** Any waiver by any party of its rights with respect to a default or requirement under this Agreement will not be deemed a waiver of any subsequent default or other matter.

4. **Amendments.** This First Amended Agreement may be amended or modified only by written agreement duly authorized and executed by the duly authorized representatives of the Parties.

5. **Cooperation.** Each Party agrees to execute and deliver all such other and further instruments and undertake such actions as are or may become necessary or convenient to effectuate the purposes and intent of this Agreement.

6. **Venue.** All obligations of the Parties are performable in Williamson County, Texas and venue for any action arising hereunder will be in Williamson County.

7. **Third Party Beneficiaries.** Except as otherwise expressly provided herein, nothing in this Agreement, express or implied, is intended to confer upon any person, other than the Parties, any rights, benefits, or remedies under or by reason of this Agreement.

8. **Entire Agreement.** This Agreement, including any attached exhibits, contains the entire agreement between the Parties with respect to the subject matter and supersedes all previous communications, representations, or agreements, either verbal or written, between the Parties with respect to such matters.

IN WITNESS WHEREOF, the Parties hereto have caused this instrument to be signed, sealed and attested in duplicate by their duly authorized officers, as of the Effective Date.

(signatures on the following pages)

CITY OF HUTTO, TEXAS

By: DocuSigned by: _____
BEB500A4D5F0477...
James R. Earp, City Manager

Date: February 10, 2023

Attest:

DocuSigned by:
Angela Lewis
296DAAB08383420...
_____
Angela Lewis, City Secretary

APPROVED AS TO FORM:

By:_____

Name:_____

Its:_____

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WILLIAMSON COUNTY

By: Bill Gravell Jr.
Bill Gravell (Mar 22, 2023 11:17 CDT)
Bill Gravell, Jr., County Judge

Date: Mar 22, 2023

Attest:

Nancy E. Rister
Nancy Rister, County Clerk

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EXHIBIT "A-1"
CITY PROJECT PLAN SHEETS FOLLOWS

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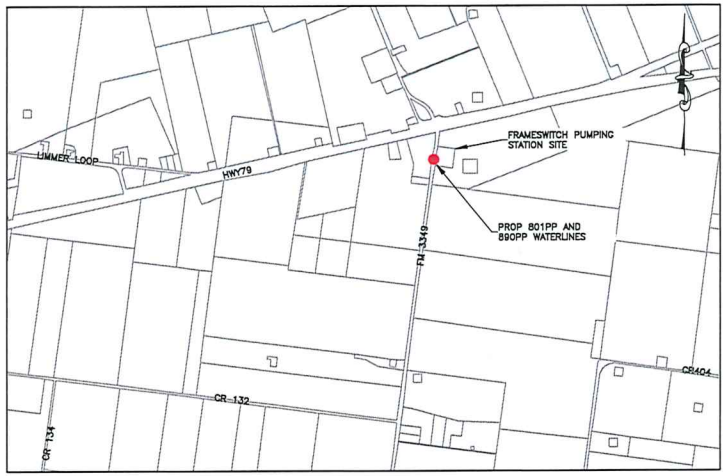
CONTRACT DRAWINGS FOR

CITY OF HUTTO, TEXAS

SE LOOP 801 PP AND 890 PP WATERLINES
JULY 2022



SITE LOCATION
N.T.S.

UTILITY CONTACTS

ELECTRIC
ONCOR ELECTRIC
350 TEXAS AVE
ROUND ROCK, TX 78664
(512) 244-5606

GAS
ATMOS MIDTX
3110 IH35
ROUND ROCK, TX 78681
(512) 310-3801

GAS
ENTERPRISE SEMINOLE PIPELINE
1100 LOUISIANA STREET, 10TH FLOOR
HOUSTON, TX 77002-5227
(979) 337-7830

WATER/WASTEWATER
CITY OF HUTTO
500 W. LIVE OAK STREET
HUTTO, TX 78634
(512) 759-4022

WATER
JONAH WATER S.U.D
(512) 759-1286

WATER
MANVILLE WATER SERVICE CORPORATION
108 N. COMMERCE
PO BOX 248
COUPLAND, TX 78615
(512) 856-2488

PHONE/CABLE/INTERNET
CENTURYLINK
1214 DOGWOOD BLVD.
KILLEEN, TX 76543
(254) 690-9370

PHONE/CABLE/INTERNET
SPECTRUM
12012 N MOPAC EXPRESSWAY
AUSTIN, TX 78758
(512) 682-8577

PHONE/CABLE/INTERNET
AT&T
(254) 715-7869

PHONE/CABLE/INTERNET
SUDDENLINK COMMUNICATIONS EAST TEXAS
(512) 931-2972

UTILITY LOCATING SERVICES ONE CALL
1-800-344-8377

TXDOT
EMERGENCY CONTACT
RICHARD GARCIA
1001 E PARMER LANE
AUSTIN, TX 78761
(512) 997-2216

DRAWING INDEX

SERIES 000 – GENERAL

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00G-02 GENERAL NOTES – SHEET NO. 1
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01C-01 EXISTING SITE AND DEMOLITION PLAN
01C-02 EROSION SEDIMENTATION AND CONTROL PLAN
01C-03 801 PP AND 890 PP WATERLINES PLAN & PROFILE – STA -0+25 TO 5+03

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02C-01 EROSION CONTROL DETAILS
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CITY COUNCIL

MAYOR
MIKE SNYDER

COUNCIL PLACE 1
ROBIN SUTTON

COUNCIL PLACE 2
DAN THORNTON

COUNCIL PLACE 3
RANDAL CLARK

MAYOR PRO TEM, COUNCIL PLACE 4
PETER GORDON

COUNCIL PLACE 5
KRYSTAL KINSEY

COUNCIL PLACE 6
AMBERLEY KOLAR

INTERIM CITY MANAGER
ISAAC TURNER

DCS ENGINEERING, LLC
1101 S. Capital of Texas Highway,
Building G-100
Austin, Texas 78746
Phone (512) 614-6171
T.B.P.E. FIRM NO. F-13162

STATE OF TEXAS
JORDAN T. HURTA
143332
LICENSED
PROFESSIONAL ENGINEER
7/11/2022

REV. NO.	DATE	DESCRIPTION	PROJECT MANAGER:	WWW
			DESIGNED BY:	JPGR
			CHECKED BY:	JTH
			DRAWN BY:	JPGR
			DCS PROJECT NO:	20101499

FILENAME: Z:\Projects 1400-1499\20101499 - COH PO #3 - FY 2022 On Demand Engineering\200 - Planning_Study\235 - Prelim Design 801 PP & 890 PP Waterline with Casing Pipe\01 - Drawings\Sheet Files\00G-01.dwg, LAST SAVED ON: Jul 09 2022 2:20pm, PLOTTED BY: PCALHOON, ON: Jul 09 2022 2:46pm, CFG:

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GENERAL CONSTRUCTION NOTES – HUTTO (UPDATED: MARCH 2019)

1. THE CONTRACTOR IS TO CONTACT ONE OF THE FOLLOWING:
   TEXAS811 811
   LONE STAR 1-800-669-8344
   FOR LOCATION OF EXISTING FACILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
2. PRIOR TO ANY CONSTRUCTION, THE DESIGN ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF HUTTO, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE. IF CONSTRUCTION IS NOT STARTED ON THE SITE WITHIN 30 CALENDAR DAYS AFTER THE PRE-CONSTRUCTION CONFERENCE, THE ENGINEER SHALL CONVENE A NEW PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF HUTTO, HIMSELF, AND ALL THE ABOVE MENTIONED ENTITIES.
3. PRIOR TO ANY CHANGES TO THE CONSTRUCTION SITE, VIDEO OF THE SITE MUST BE TAKEN AND PROVIDED TO THE CITY BEFORE CONSTRUCTION COMMENCES.
4. ALL CONSTRUCTION OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF HUTTO ENGINEERING MANUAL AND STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS. IF CITY OF HUTTO ENGINEERING MANUAL UNAVAILABLE, OR NOT APPLICABLE, REFER TO TXDOT AND/OR CITY OF GEORGETOWN MANUAL, STANDARDS AND/OR SPECIFICATIONS.
5. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 E. 6TH STREET, AUSTIN, TEXAS.
6. CONTRACTOR SHALL TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE INCURRED TO EXISTING FACILITIES AS A RESULT OF CONSTRUCTION OPERATIONS TO BE REPAIRED IMMEDIATELY BY THE CONTRACTOR, AT NO ADDITIONAL COST TO OWNER.
7. CONTRACTOR TO GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS OR PERSONS IN CHARGE OF PUBLIC AND PRIVATE UTILITIES AFFECTED BY HIS OPERATIONS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
8. CONTRACTOR TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIAL, INCLUDING METHODS OF HANDLING AND DISPOSAL.
9. CONTRACTOR TO COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.
10. WHEN UN-LOCATED OR INCORRECTLY LOCATED, A BREAK IN UTILITY LINES, OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING SITE WORK OPERATIONS, CONTRACTOR SHALL NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. CONTRACTOR SHALL COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.
11. CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO OWNER.
12. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE ENGINEER.
13. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. ACCURATE "RECORD" DRAWINGS WILL BE PROVIDED TO THE CITY OF HUTTO, ALONG WITH A LETTER CERTIFICATION FROM A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS, STATING THAT SAID PROJECT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THESE PLANS.
14. THE CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. IN THE EVENT THAT A FENCE MUST BE REMOVED, THE CONTRACTOR SHALL REPLACE SAID FENCE OR PORTION THEREOF WITH THE SAME TYPE OF FENCING TO A QUALITY OF EQUAL OR BETTER THAN THE ORIGINAL FENCE.
15. UPON COMPLETION OF THE PROJECT, THE SITE(S) AS DEFINED HEREIN SHALL BE CLEANED OF ALL DEBRIS AND LEFT IN A NEAT AND PRESENTABLE CONDITION.
16. ALL ADJOINING PAVEMENT SECTIONS SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION AND ANY DAMAGES INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE.
17. CONTRACTOR TO CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES (NO SEPARATE PAY).
18. TRAFFIC CONTROLS TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT TXDOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND TXDOT BARRICADE AND CONSTRUCTION STANDARDS.
19. REVEGETATE ALL DISTURBED AREAS UPON COMPLETION OF THE WORK PER CITY OF GEORGETOWN CONSTRUCTION STANDARDS.
20. CONTRACTOR TO EXERCISE CAUTION DURING CONSTRUCTION NEAR AND AROUND GAS LINES AND POWER LINES.
21. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION VERTICALLY AND HORIZONTALLY OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK, AND SHALL NOTIFY THE ENGINEER AND THE CITY IF THE EXISTING UTILITY LOCATION AND DEPTHS ARE DIFFERENT FROM WHAT IS SHOWN ON THE PLANS. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
22. DETECTABLE TAPE SHALL BE USED FOR ALL UNDERGROUND UTILITIES. TAPE MUST BE 12" WIDE 5 MIL WITH APPLICABLE COLOR AND LABEL.
23. CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL, SEDIMENT AND DEBRIS. CONTRACTOR WILL NOT REMOVE SOIL, SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER, ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PRIVATE PROPERTY WHICH OCCURS AS A RESULT OF ANY PORTION OF THIS PROJECT. ANY DAMAGE TO PRIVATE PROPERTY SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. THE CONTRACTOR SHALL PAY AND/OR SETTLE WITH PRIVATE PROPERTY OWNER(S) FOR ALL COST RELATED TO DAMAGE. THE CITY WILL NOT PROVIDE SEPARATE PAY FOR REPAIR OF DAMAGES, REIMBURSEMENTS OR SETTLEMENTS.

GENERAL CONSTRUCTION NOTES – DCS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY STANDARD SPECIFICATIONS MANUAL.
2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS AS APPROPRIATE.
4. MANHOLE FRAME, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
5. THE CONTRACTOR SHALL GIVE THE CITY 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.
7. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.
8. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND AVOIDING ALL EXISTING UTILITIES BY CALLING THE 'ONE CALL' LOCATOR SERVICE AT (800) 344-8377 (DIG-TESS) OR (800) 245-4545 (TEXAS ONE CALL) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION..

9. WHEN SHOWN ON THE PLANS, CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORKING HOURS OR PROVIDE DETOURS AROUND CONSTRUCTION SITE, AND USE UNIFORMED POLICE TO CONTROL TRAFFIC WHEN REQUIRED BY OWNER.
10. CONTRACTOR SHALL COVER OPEN EXCAVATIONS IN PUBLIC STREETS AND PRIVATE DRIVES WITH ANCHORED STEEL PLATES DURING NONWORKING HOURS.
11. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.
12. ALIGNMENT, CENTERLINE CURVE DATA AND STATIONING TO BE VERIFIED BY ON-THE-GROUND SURVEY FROM PROJECT CONTROL POINTS AND ELEVATIONS OF ALL CONNECTIONS TO EXISTING FACILITIES TO BE CONFIRMED PRIOR TO WORK START. NO SEPARATE PAY. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
13. CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES OR RAILROADS AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK.
14. CONTRACTOR SHALL ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS THAT CAN BE ISSUED TO CONTRACTOR WILL BE OBTAINED AT HIS EXPENSE.
15. ANY REFERENCE TO CODES OR SPECIFICATIONS SHALL BE WITH RESPECT TO CURRENT EDITIONS OF THE SAME.
16. PRIOR TO CONSTRUCTION, CONTRACTOR TO UNCOVER AND VERIFY THE DEPTHS AND HORIZONTAL LOCATION OF EXISTING LINES AND UTILITIES TO BE EXTENDED, CONNECTED TO, OR CROSSED (BY THIS PROJECT).

WATER NOTES – HUTTO (UPDATED: MARCH 2019)

1. WATER SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF HUTTO ENGINEERING MANUAL, STANDARD SPECIFICATIONS AND STANDARD DETAILS.
2. FIRE HYDRANTS ON MAINS UNDER CONSTRUCTION SHALL BE SECURELY WRAPPED WITH A POLY WRAP BAG AND TAPED INTO PLACE. THE POLY WRAP SHALL BE REMOVED WHEN THE MAINS ARE ACCEPTED AND BROUGHT INTO SERVICE. ALL FIRE LINES SHALL BE DUCTILE. IRON
3. ALL WATER SERVICE, WASTEWATER SERVICE, AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:
   A. WATER SERVICE "W" ON TOP OF CURB
   B. VALVE "V" ON TOP OF CURB OR VALVE SIGN AS INSTRUCTED BY CITY ENGINEER
4. TOOLS FOR MARKING CURBS SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF MARKING SHALL BE SPECIFIED BY THE ENGINEER AND APPROVED BY THE CITY OF HUTTO.
5. THRUST BLOCKING AND RESTRAINTS SHALL BE IN ACCORDANCE WITH CITY OF HUTTO STANDARD SPECIFICATIONS.
6. HYDROSTATIC PRESSURE AND LEAKAGE TESTS SHALL BE PERFORMED ON ALL PRESSURE PIPELINES CARRYING WATER.
7. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
8. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C900/C905, MIN. DR 14), OR DUCTILE IRON (AWWA C151, MIN. CLASS 350). WATER SERVICES (2" OR SMALLER) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9).
9. ALL DUCTILE IRON PIPE (D.I.P) SHALL BE WRAPPED WITH EIGHT (8) MIL, BLACK VIRGIN POLYETHYLENE WRAP AS SPECIFIED IN ANSI/AWWA C105/A21.5.
10. ALL D.I.P. SHALL BE LINED WITH VIRGIN POLYETHYLENE CONFORMING TO ASTM D-1248: 40 MIL THICKNESS (NOMINAL), 35 MILS (MINIMUM). LINER TO BE POLYBOND OR EQUAL. AT ANY POINT WHERE D.I.P. CANNOT BE WRAPPED IN POLYETHYLENE, COAT THE EXTERIOR WITH POLYBOND OR APPROVED EQUAL.
11. ALL PVC PIPE (ALL TYPES AND SDR/DR WALL THICKNESS TO BE USED) SHALL HAVE RUBBER GASKET EQUIPPED BELL AND SPIGOT JOINTS CONFORMING TO ASTM D-3212. THE GASKET MATERIAL SHALL CONFORM TO ASTM F-477. SOLVENT WELDED JOINTS <u>WILL NOT</u> BE APPROVED FOR THIS PROJECT.
12. ALL POTABLE WATERLINES AND SANITARY SEWER FACILITIES MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OF CLEARANCE IN ANY DIRECTION BETWEEN THEM. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, FOLLOW THESE SPECIAL PROCEDURES.
   A. IF A COLLECTION SYSTEM PIPE PARALLELS A PUBLIC WATER SUPPLY PIPE THE FOLLOWING REQUIREMENTS APPLY:
      - A COLLECTION SYSTEM PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC MEETING ASTM SPECIFICATIONS WITH AT LEAST 150 POUNDS PER SQUARE INCH (PSI) PRESSURE RATING FOR BOTH THE PIPE AND JOINTS.
      - VERTICAL SEPARATION MUST BE AT LEAST TWO FEET BETWEEN THE OUTSIDE DIAMETERS OF THE PIPES.
      - HORIZONTAL SEPARATION MUST BE AT LEAST FOUR FEET BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
      - COLLECTION SYSTEM PIPE MUST BE BELOW WATER SUPPLY PIPE.
   B. IF A COLLECTION SYSTEM PIPE CROSSES A PUBLIC WATER SUPPLY PIPE, THE FOLLOWING REQUIREMENTS APPLY:
      - IF A COLLECTION SYSTEM IS CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, THE FOLLOWING REQUIREMENTS APPLY:
        a. A MINIMUM DISTANCE OF SIX (6) INCHES BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
        b. A COLLECTION SYSTEM PIPE MUST BE BELOW A PUBLIC WATER SUPPLY PIPE.
        c. COLLECTION SYSTEM PIPE JOINTS MUST BE LOCATED AS FAR AS POSSIBLE FROM AN INTERSECTION WITH A PUBLIC WATER SUPPLY LINE.
      - IF A COLLECTION SYSTEM CROSSES OVER A PUBLIC WATER SUPPLY PIPE, EACH PORTION OF A COLLECTION SYSTEM PIPE WITHIN NINE FEET OF A PUBLIC WATER SUPPLY PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS.
13. THE CONTRACTOR MUST OBTAIN A TEMPORARY WATER METER FROM THE CITY OF HUTTO UTILITY BILLING DEPARTMENT FOR ALL WATER USED DURING CONSTRUCTION.
14. CONTRACTOR TO SCHEDULE WATER VALVE CLOSURE THROUGH CITY OF HUTTO: DEPARTMENT OF PUBLIC WORKS – UTILITY DIVISION WITH ADVANCE NOTICE OF 7 DAYS. CONTRACTOR TO CONTACT PUBLIC WORKS AT PHONE # 512-759-4016 AND NOTIFY CONSTRUCTION INSPECTOR. WATER VALVE CLOSURE WILL ONLY BE SCHEDULED FOR TUESDAY THROUGH THURSDAY. CONTRACTOR TO NOTIFY ALL BUSINESSES AND RESIDENTS AFFECTED BY VALVE CLOSURES. CLOSURES MUST BE COORDINATED TO MINIMIZE EFFECTS ON EXISTING CUSTOMERS WITH CONSIDERATIONS GIVEN TO BUSINESSES THAT REQUIRE WATER TO MAINTAIN OPERATIONS.
15. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE SCHEDULED WITH THE CITY OF HUTTO. CONTRACTOR WILL BE RESPONSIBLE FOR TRACKING THE AMOUNT OF WATER USED DURING FLUSHING AND BE REQUIRED TO REIMBURSE THE CITY FOR WATER USE, IF NOT ALREADY METERED.
16. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM STERILIZATION OF ALL POTABLE WATER LINES AND SHALL PROVIDE ALL EQUIPMENT NECESSARY (INCLUDING TEST GAGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTION MATERIAL) AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY THE ENGINEER AND A CITY OF HUTTO CONSTRUCTION INSPECTOR. WATER SAMPLES WILL BE COLLECTED TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM.
17. AN INDEPENDENT QUALIFIED LAB, AT THE CONTRACTOR'S EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAGES), SUPPLIES, AND LABOR NECESSARY TO PERFORM THE TESTS. A CITY OF HUTTO CONSTRUCTION INSPECTOR MUST BE PRESENT FOR ALL TESTING.
18. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND THE CITY NOT LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING, OR PRESSURE TESTING.
19. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF HUTTO.
20. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON PER CITY OF HUTTO STANDARD DETAILS.
21. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF PAVEMENT SHALL HAVE BOLTED AND GASKETED COVERS. CONCRETE MANHOLES TO BE COATED PER STANDARD DETAIL AND CONSTRUCTION SPECIFICATIONS. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE PERMITTED.
22. ALL FIRE LINES SHALL BE DUCTILE IRON PIPE (AWWA C-100, CLASS 200).
23. ALL FIRE HYDRANTS SHALL BE SILVER IN COLOR INCLUDING BONNET AND INSTALLED PER CITY OF HUTTO STANDARD DETAIL.
24. ALL WATER PIPING AND FITTINGS SHALL BE VIRGIN STOCK.
25. ALL MECHANICAL RESTRAINTS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
26. ALONG STATE HIGHWAYS, WATER LINES ARE REQUIRED ON BOTH SIDES OF THE ROADWAY. NEW WATER LINES CROSSING EXISTING STREETS SHALL BE PLACED BY BORING. A STEEL CASING SHALL BE REQUIRED UNDER MAJOR AND MINOR COLLECTOR ROADWAYS, ARTERIAL ROADWAYS AND STATE HIGHWAY. OPEN CUT EXCAVATION WILL NOT BE ALLOWED TO CROSS EXISTING STREETS, UNLESS APPROVED BY THE CITY ENGINEER.
27. ALL NEW WATER PIPES MUST HAVE DETECTABLE TAPE PER CITY OF HUTTO STANDARD DETAIL.
28. ALL AUTOMATIC FLUSH VALVES MUST USE A METER TO MEASURE WATER LOSS.
29. TRACER WIRE WILL BE TESTED AND MUST WORK CORRECTLY BEFORE CITY ACCEPTANCE OF INFRASTRUCTURE. TRACER WIRER MUST BE ENCASED IN PIPE.
30. ALL REDUCED SIZE TAPS SHALL BE MADE USING AN EPOXY COATED FABRICATED STEEL TAPPING SLEEVE WITH STANLESS STEEL BOLTS, OR A STAINLESS STEEL FULL CIRCLE TAPPING SLEEVE WITH DUCTILE IRON FLANGE.

REV. NO.	DATE	DESCRIPTION	PROJECT MANAGER:	WWW
			DESIGNED BY:	JPGR
			CHECKED BY:	JTH
			DRAWN BY:	JPGR
			DCS PROJECT NO:	20101499

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING C-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

CITY OF HUTTO
SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS — JORDAN T. HURTA — 143332 — LICENSED PROFESSIONAL ENGINEER
7/11/2022

GENERAL
GENERAL NOTES - SHEET NO. 1

DATE: JULY 2022
SCALE: AS NOTED
DRAWING: 00G-02

FILENAME: Z:\Projects 1400-1499\20101488 - COH IPO #3 - FY 2022 On Demand Engineering\200 - Planning-Study\225 - Prelim Design 801 PP & 890 PP Waterline with Casing Pipes\2.1 - Drawings\Sheet Files\00G-02-03.dwg, LAST SAVED ON: JUL 07 2022 2:29pm, PLOTTED BY: PGALINDO, ON: JUL 08 2022 2:37pm, CFC

DocuSign Envelope ID: C284B1D2-701C-4C8C-8FFB-E9E5E07AC504

EROSION, SEDIMENTATION AND TREE PROTECTION NOTES – HUTTO (UPDATED AUGUST 2018)

1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF THE PROJECT AND GRASS RESTORATION.
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
3. ALL PLANTING SHALL BE DONE BETWEEN MAY 1st AND SEPTEMBER 15th EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING. IF PLANTING IS AUTHORIZED TO BE DONE OUTSIDE THE DATE SPECIFIED, THE SEED SHALL BE PLANTED WITH THE ADDITION OF WINTER FESCUE (KENTUCKY 31) AT A RATE OF 100 LBS/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE (A) RECENT CROP, CLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
4. ALL DISTURBED AREAS TO BE RESTORED AS NOTED IN THE WATER POLLUTION ABATEMENT PLAN.
5. THE PLANTED AREA TO BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF FOUR INCHES (4"). THE IRRIGATION TO OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS. RAINFALL OCCURRENCES OF ONE HALF AND INCH (1/2") OR GREATER TO POSTPONE THE WATER SCHEDULE ONE WEEK.
6. RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST ONE AND ONE HALF INCHES (1.5") HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN TWENTY-FIVE SQUARE FEET EXIST.
7. A MINIMUM OF FOUR INCHES (4") OF TOPSOIL TO BE PLACE IN ALL AREA DISTURBED BY CONSTRUCTION.
8. THE CONTRACTOR TO HYDRO MULCH OR SOD (AS SHOWN ON PLANS) ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION.
9. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIP LINE.
10. TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIP LINE AREA.
11. WHERE A FENCE IS CLOSER THAN FOUR FEET (4') TO A TREE TRUCK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT FEET (8'), OR THE LIMITS OF LOWER BRANCHING, IN ADDITION TO THE FENCING.
12. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
13. ANY ROOT EXPOSED BY THE CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREA WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATTER IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
14. CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURE, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES").
15. THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING ONE-QUARTER INCH (1/4") TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL SITE. THE CONTRACTOR TO CONDUCT PERIODIC INSPECTIONS OF ALL EROSION/SEDIMENTATION CONTROLS AND TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
16. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR FEET (2'-4') BEHIND THE AREA IN QUESTION.
17. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES TO BE STORED ON THE PROJECT SITE.
18. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVE AND THE CONTRACTOR TO EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONSTRUCTION. ANY DAMAGE TO PREEXISTING EROSION AND SEDIMENTATION CONTROLS NOTED TO BE REPAIRED AT OWNER'S EXPENSE.
19. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

WILLIAMSON COUNTY NOTES:

1. CONTRACTOR SHALL PERFORM ALL APPLICABLE TASKS FOR THIS PROJECT WHICH ARE LISTED UNDER THESE WILLIAMSON COUNTY NOTES AND PAY ALL ASSOCIATED FEES.
2. CONTRACTOR SHALL NOTIFY THE WILLIAMSON COUNTY UNIFIED ROAD SYSTEM AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION AT (512)930-3330.
3. ALL WORK IN THE RIGHT-OF-WAY WILL BE DONE BETWEEN THE HOURS OF 8:30 A.M. AND 4:30 P.M. ON MONDAY THROUGH FRIDAY ONLY.
4. CUTS WILL BE OPENED FOR ONE-HALF THE ROADWAY ONLY, WITH FLAGMEN ON BOTH SIDES OF THE WORK AREA, ALLOWING ONE-WAY TRAFFIC THROUGH. THIS TYPE OF OPERATION WILL BE HELD TO A MINIMUM AND ALL ADVANCE WARNING SIGNS AND BARRICADES SHALL BE AS SPECIFIED IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THESE CUTS WILL ALSO BE FILLED AND ENTIRE ROADWAY OPENED AT NIGHT AND ON WEEKENDS.
5. ROADSIDE WORK IN DITCHES ALONGSIDE THE TRENCHED SURFACE MAY BE LEFT OPENED AT NIGHT, ONLY IF THEY CAN BE BARRICADED SOLIDLY BETWEEN OPEN DITCH AND TRAVELED ROADWAY LEAVING A MINIMUM 6' OF ROAD SHOULDER BETWEEN THE PAVEMENT EDGE AND THE BARRICADES. THE BARRICADES MUST BE REFLECTIVE AND LIGHTED WITH WARNING LIGHTS AND CONFORM TO THE REQUIREMENTS OF THE T.M.U.T.C.D. FOR NIGHTTIME USE.
6. ANY CONSTRUCTION AREA TO BE MAINTAINED FROM DUSK TO DAWN SHALL HAVE TYPE B HIGH INTENSITY STEADY BURN WARNING LIGHTS TO DELINEATE THE TRAVELED WAY THROUGH AND AROUND OBSTRUCTIONS IN A CONSTRUCTION OR MAINTENANCE AREA. ALL WARNING LIGHTS SHALL BE INSTALLED TO A MINIMUM MOUNTING HEIGHT OF 36" TO THE BOTTOM OF THE LENS.
7. CONSTRUCTION WORK AND ROAD REPAIR ON COUNTY RIGHT-OF-WAY WILL BE DONE TO WILLIAMSON COUNTY STANDARDS/SPECIFICATIONS AND TO THE APPROVAL OF THE WILLIAMSON COUNTY UNIFIED ROAD SYSTEM.
8. CONTRACTOR SHALL NOTIFY THE WILLIAMSON COUNTY UNIFIED ROAD SYSTEM AND OBTAIN APPROVAL PRIOR TO ANY CHANGES IF REQUIRED DUE TO SOIL CONDITIONS OR OTHER PROBLEMS.
9. A PERFORMANCE BOND IN THE AMOUNT OF $500 MINIMUM, EXECUTED BY A SURETY COMPANY OR SURETY COMPANIES AUTHORIZED TO EXECUTE SURETY BONDS UNDER AND IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS. EXACT AMOUNT OF THE BOND IS TO BE DETERMINED BY WILLIAMSON COUNTY DEPENDING ON THE EXTENT OF THE PROJECT.
10. CONTRACTOR SHALL FILE A "CONTRACTOR' S LIABILITY AGREEMENT" PRIOR TO ISSUANCE OF PERMIT (ATTACHED IN SPECIFICATION BOOK).
11. FRANCHISED UTILITIES (CITY OF AUSTIN, SOUTHERN UNION GAS, SOUTHWESTERN BELL, ETC.) ARE NOT REQUIRED TO PROVIDE A BOND OR PAY A PERMIT FEE IF THEY DO THE WORK WITH THEIR OWN WORK FORCES. CONTRACTORS WILL PAY A FEE OF $120.00.
12. WILLIAMSON COUNTY WILL ATTEND THE PRECONSTRUCTION MEETING WITH THE ENGINEER, CITY ENGINEER, CONTRACTOR, AND CITY INSPECTOR. WILLIAMSON COUNTY WILL DISCUSS TRAFFIC CONTROL CONCERNS.
13. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR MAINTAINING A MINIMUM OF ONE LANE OF TRAFFIC (MIN) AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL DETAIL STAGING/SEQUENCING IN AREAS WHERE INTERCEPTOR IS OPEN CUT ACROSS PAVEMENT. WILLIAMSON COUNTY WILL ISSUE PERMIT UPON ACCEPTANCE OF THIS PLAN AFTER THE PRECONSTRUCTION MEETING.

TXDOT NOTES:

1. A 48 HOUR WORK START NOTICE SHALL BE SUBMITTED BY THE CONTRACTOR USING TXDOT'S UIR SYSTEM BEFORE WORK BEGINS. COORDINATE WITH ENGINEER ON SUBMITTAL.

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT WILL BE PROVIDED BY THE CONTRACTOR.
2. IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4-FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET ON DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE CONTRACTOR NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY. THE CONTRACTOR SHALL PROVIDE A TRENCH SAFETY PLAN PRIOR TO BEGINNING CONSTRUCTION.
4. CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET, AS A MINIMUM, THE REQUIREMENTS OF OSHA SAFETY AND HEALTH REGULATION, PART 1926, SUBPART P AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989

CONSTRUCTION SEQUENCE

THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED BY THE CONTRACTOR:

1. PRECONSTRUCTION MEETING WITH ALL APPLICABLE CITY DEPARTMENTS, OWNER, ENGINEER, AND OTHER REQUIRED ENTITIES INCLUDING TXDOT, AND OTHER CONSTRUCTION CONTRACTORS WORKING IN THE AREA. CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS IN THE AREA PRIOR TO AND DURING CONSTRUCTION. NO SEPARATE PAY.
2. CONTRACTOR SHALL PREPARE AND SUBMIT A CONSTRUCTION SCHEDULE BASED ON THIS CONSTRUCTION SEQUENCE DETAILING HOW AND WHEN THE WATERLINES AND PRVS WILL BE CONSTRUCTED TIED IN/BROUGHT INTO PERMANENT OPERATION FOR APPROVAL BY ENGINEER.
3. THE SWP3 SITE NOTEBOOK MUST BE PREPARED AND COMPLETED NO LATER THAN THE TIME WHEN THE CONSTRUCTION SITE NOTICE IS REQUIRED TO BE POSTED OR NOTICE OF INTENT IS REQUIRED TO BE SUBMITTED TO TCEQ. CONTRACTOR SHALL SUBMIT SWP3 PLAN TO THE CITY PRIOR TO SITE DISTURBANCE.
4. INSTALLATION OF EROSION CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCING. PLACE TREE PROTECTION AS SHOWN ON PLAN AND PROFILE DRAWINGS. DEVIATION MUST BE APPROVED BY ENGINEER.
5. CLEAR AND GRUB PERMANENT OR TEMPORARY EASEMENTS.
6. CONSTRUCT AND CAP 36" WATERLINES.
7. REPAIR ROADWAY AND SIDEWALKS INCLUDING STREET SIGNS.
8. INSTALL REVEGETATION, SODDING (WHERE SPECIFIED) AND WATER AS REQUIRED BY CONTRACT DOCUMENTS.
9. CONDUCT SUBSTANTIAL COMPLETION WALK-THROUGH WITH ENGINEER AND CITY INSPECTOR.
10. COMPLETE ENGINEER AND CITY CLOSE-OUT PROCEDURES INCLUDING CITY CIP DEPARTMENT AND WILLIAMSON COUNTY.
11. CONDUCT FINAL WALK THROUGH.
12. PROJECT CLOSE-OUT AFTER REVEGETATION HAS BEEN ACHIEVED PER CITY REQUIREMENTS INCLUDING ISSUANCE OF WARRANTY BOND.

NOTES APPLICABLE TO DRAWINGS ALL PLAN AND PROFILE DRAWINGS:

1. FINISH GRADE SHALL MATCH EXISTING GROUND. RESTORE ALL DRAINAGE FLOWLINES AND FACILITIES DISTURBED BY CONSTRUCTION TO PRECONSTRUCTION CONDITION AND LOCATION.
2. CONTRACTOR SHALL MAINTAIN STORMWATER RUNOFF THROUGH OR AROUND WORK AT ALL TIMES.
3. CONTRACTOR SHALL IMPLEMENT TRAFFIC CONTROL PER SPECIFICATIONS AND DRAWINGS.
4. EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL CONFIRM LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO PIPELINE EXCAVATION.
5. CONTRACTOR SHALL DISPOSE OF ALL EXCESS MATERIAL AT OFF-SITE LOCATION. ANY MATERIAL TAKEN OFF-SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
6. WHERE LAWN AREAS ARE DISTURBED BY CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL REVEGITATE THESE AREAS USING SOD MATCHING THE TYPE DISTURBED. CONTRACTOR SHALL WATER ALL SOD UNTIL ESTABLISHED.
7. CONTRACTOR SHALL PLACE 6" MIN. OF TOPSOIL AND HYDROMULCH SEED ALL AREAS DISTURBED BY CONSTRUCTION SHOWN IN THE ACREAGE WITHIN THE LIMITS OF CONSTRUCTION, WITH THE EXCEPTION OF FARMED AREAS, PER THE BID FORM QUANTITY. CONTRACTOR IS REQUIRED TO WATER THESE LOCATIONS UNTIL THE HYDROMULCH SPROUTS.
8. CITY SHALL PROVIDE AND INSTALL WATER METER(S) FOR CONTRACTOR TO UTILIZE CITY WATER FOR CONSTRUCTION AND REVEGETATION.
9. CONTRACTOR SHALL CLEAR AND GRUB WITHIN THE LIMITS OF CONSTRUCTION TO ACCOMMODATE HIS WORK.
10. CONTRACTOR SHALL REPAIR ANY DAMAGE TO PRIVATE IRRIGATIONS SYSTEMS DUE TO HIS CONSTRUCTION ACTIVITIES INCLUDING TEMPORARY PLUGGING OF BROKEN LINES. COORDINATE WITH ENGINEER PRIOR TO PERFORMING WORK.
11. CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT AND MAKE HIMSELF AWARE OF RELEVANT DETAILS INCLUDING THE DEPTH OF COVER.
12. CONTRACTOR'S LIMITS OF CONSTRUCTION SHALL BE DEFINED AS WATER, WASTEWATER, PUBLIC UTILITY, AND TEMPORARY CONSTRUCTION EASEMENTS; AND PUBLIC ROAD RIGHT OF WAYS AS SHOWN ON THE PLANS.
13. RESTORE EXISTING INFRASTRUCTURE AND/OR UTILITIES THAT IS DAMAGED BY DEMOLITION/CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN EXISTING CONDITIONS.
14. CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN AREA OF CONSTRUCTION AT ALL TIMES. CONTRACTOR SHALL PROVIDE A FLAGGER AT BOTH ENDS OF LANE CLOSURE TO DIRECT TRAFFIC IN ACCORDANCE WITH TRAFFIC CONTROL PLAN.
15. ALL TRENCHES IN PAVED AREA SHALL BE COVERED WITH STEEL PLATES OR BACKFILLED AT THE END OF EACH DAY. SAFETY FENCE SHALL BE ADDED TO BARRICADE ALL TRENCHES LEFT OPEN OVERNIGHT. WHERE TRENCH OR BORE PIT IS LOCATED WITHIN 15' OF THE ROAD, CONCRETE BARRICADES SHALL BE INSTALLED TO PROTECT TRENCH AREA.
16. CONTRACTOR TO INSTALL TEMPORARY FENCING TO PROTECT EXISTING LIVESTOCK AS REQUIRED. ALL TEMPORARY GATES OR OPENINGS SHALL REMAIN CLOSED WHEN NOT IN USE.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN ANY OTHER CONTRACTORS AND/OR PARTIES WORKING WITHIN THE PROJECT LIMITS OF CONSTRUCTION.
18. WHEN CATTLE OR LIVESTOCK ARE PRESENT ALONG THE PIPELINE ROUTE, CONTRACTOR SHALL INSTALL ORANGE SAFETY FENCING WITH T-POSTS AROUND OPEN EXCAVATION/TRENCHES AT THE END OF EACH WORK DAY TO PREVENT CATTLE FROM FALLING INTO EXCAVATIONS/TRENCHES. FENCING SHALL BE REMOVED UPON BACKFILLING OF TRENCH.
19. ALL STEEL AND IRON MATERIALS MUST COMPLY WITH 23 CFR 635.410 PROVISIONS OF BUY AMERICA. FORM 1818 (MATERIAL STATEMENT), ALONG WITH ALL REQUIRED ATTACHMENTS MUST BE SUBMITTED AND APPROVED PRIOR TO THE COMMENCEMENT OF ANY INSTALLATION, AS EVIDENCE OF COMPLIANCE WITH AFOREMENTIONED PROVISIONS.

SURVEY NOTES:

COORDINATES ARE SURFACE VALUES BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, CENTRAL ZONE 4203.

TO CONVERT COORDINATES AND DISTANCES TO GRID VALUES MULTIPLY BY A COMBINED SURFACE ADJUSTMENT FACTOR OF 0.99987650. ELEVATIONS REPORTED ARE NAVD88 ORTHOMETRIC GPS HEIGHTS.

PT#	NORTHING	EASTING	ELEV.	DESC.
200	10177084.5724	3194178.4180	634.68	TPT-BOD/W
552	10170600.8323	3191972.8074	635.63	TPT-IRSC-ALUM
553	10170463.9674	3192993.2414	629.73	TPT-IRSC-ALUM
554	10166249.4379	3195027.1256	615.76	TPT-IRSC-ALUM
555	10166465.1996	3193074.9345	619.63	TPT-IRSC-ALUM
556	10166561.4354	3192510.0407	626.72	TPT-IRSC-ALUM
557	10177571.3712	3192542.6408	635.96	TPT-IRSC-ALUM
558	10176891.9673	3193963.5963	639.16	TPT-MON-3349S
559	10176475.3878	3193870.5708	643.13	TPT-BOD
560	10172005.3168	3193234.5922	630.53	TPT-BOD
561	10167867.4137	3192756.2531	615.12	TPT-BOD/W
570	10177828.6290	3193692.3928	626.82	TPT-BOD/W
595	10169948.9488	3193268.8805	629.99	TPT-BOD
701	10177978.3655	3194053.1543	630.27	TPT-IRFC-WILCO
702	10178633.7064	3193323.0861	638.68	TPT-IRSC-WILCO
800	10177103.2534	3193996.4473	634.25	TPT-BOD

TEXT LEGEND

BASIN.......TEXT – EXISTING FACILITIES ——— LINE WEIGHT – EXISTING FACILITIES — BASIN.......TEXT – EXISTING CALL OUTS

BASIN.......TEXT – PROPOSED FACILITIES ——— LINE WEIGHT – PROPOSED FACILITIES — **BASIN.......TEXT** – PROPOSED CALL OUTS

DRAWING CROSS REFERENCE SYSTEM

1. DETAILS & SECTIONS

(A) DETAIL 1 IS SHOWN ON DRAWING 01M-02

1 / 01M-02 — DETAIL NUMBER; DRAWING NUMBER ON WHICH DETAIL APPEARS

(B) DETAIL 4 IS SHOWN ON SAME SHEET

4 — DETAIL NUMBER

FLOOD PLAIN NOTE:

AS PER FIRM PANEL NO. 48491C0540F, DATED DECEMBER 20, 2019 THIS TRACT IS NOT WITHIN THE 100-YEAR FLOOD PLAIN.

LEGEND:

FG=660.38 — PROPOSED FINISHED GRADE

FL=653.99 — PROPOSED FLOW LINE

STATION 1+00

ONCOR ELECTRIC

1. OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL THE ELECTRIC SERVICE PROVIDER.

REV. NO.	DATE	DESCRIPTION		
			PROJECT MANAGER:	WWW
			DESIGNED BY:	JPGR
			CHECKED BY:	JTH
			DRAWN BY:	JPGR
			DCS PROJECT NO:	20101499

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-5171
T.B.P.E. FIRM NO. F-13162

CITY OF HUTTO

SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS — JORDAN T. HURTA — 143332 — LICENSED PROFESSIONAL ENGINEER

7/11/2022

GENERAL

GENERAL NOTES - SHEET NO. 2

DATE:	JULY 2022
SCALE:	AS NOTED
DRAWING:	00G-03

FILENAME: Z:\Projects 1400-1459\20101499 - COH IPO #11 - SE Loop 801 PP & 890 PP Waterlines\500 - Final_Design\31 - Drawings\Sheet Files\00G-02-03.dwg, LAST SAVED ON: Jul 07 2022 2:29pm, PLOTTED BY: PGALINDO, ON: Jul 14 2022 11:22am, CFG

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A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
A	ARCHITECTURAL (DWG DISCIPLINE), AMP
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ABAN	ABANDON
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
ACP	ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT
ACST	ACOUSTIC
AD	ADDENDUM, AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGGR	AGGREGATE
AI	AREA INLET
AIC	AMPS INTERRUPTING CAPACITY
ALIG	ALIGNMENT
ALUM	ALUMINUM
ALT	ALTERNATE, ALTITUDE
AM	ACOUSTICAL MATERIAL
AMB	AMBIENT
ANC	ANCHOR
AP	ACCESS PANEL
APRX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
ARV	AIR RELEASE VALVE
ASSY	ASSEMBLY
AT	AMP TRIP
ATC	ACOUSTICAL TILE CEILING
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
AWT	ACOUSTICAL WALL TILE
B/B	BACK TO BACK
BAL	BALANCE
BBD	BULLETIN BOARD
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE
BD	BOARD
BE	BOTH ENDS, BELL END
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET
BITUM	BITUMINOUS
BKG	BACKING
BL	BASELINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOC	BACK OF CURB
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOL	BOTTOM OF LOUVER
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF REGISTER
BOT	BOTTOM
BOU	BOTTOM OF UNIT
BP	BASE PLATE
BRG	BEARING
BRGP	BEARING PLATE
BRKT	BRACKET
BS	BOTH SIDES
BTU	BRITISH THERMAL UNIT
BTW	BETWEEN
BTWLD	BUTT WELD
BU	BELL UP, BUILT UP
BUR	BUILT-UP ROOFING
BV	BALL VALVE
BW	BOTH WAYS, BACKWASH (SLUDGE)
BYP	BYPASS
C TO C	CENTER TO CENTER
C&G	CURB & GUTTER
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT, CIVIL (DRAWING DISCIPLINE)
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG
CAV	CAVITY, COMBINATION AIR/VACUUM RELEASE VALVE
CB	CATCH BASIN
CCB	CONCRETE BLOCK
CCW	COUNTER CLOCKWISE
CDF	CONTROLLED DENSITY FILL
CE	CONCRETE EDGE, CLARIFIED EFFLUENT
CER	CERAMIC
CF	CUBIC FEET (FOOT)
CFL	COUNTER FLASHING
CHFR	CHAMFER
CHBD	CHALKBOARD
CHD	CHORD
CHH	COMMUNICATION HANDHOLD
CI	CURB INLET
CIP	CLEAN IN PLACE, CAST-IN-PLACE
CIPB	CONCRETE INTERLOCKING PAVER BALLAST
CIRC	CIRCULATION, CIRCULAR
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTERLINE, CLASS, CLOSE
CLG	CEILING
CLJ	CONTROL JOINT
CLKG	CAULKING
CLR	CLEAR
CMH	COMMUNICATION MANHOLE
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CONC	CONCENTRIC, CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COOR	COORDINATE
CORR	CORROSIVE, CORRUGATED
CP	CHECKER PLATE, CONTROL POINT
CPLG	COUPLING
CPVC	POLYVINYL CHLORIDE
CRL	CORROSION RESISTANT LINING
CS	CHLORINE SOLUTION
CSC	COMPRESSION SLEEVE COUPLING
CSK	COUNTERSINK
CSS	CLINIC SERVICE SINK
CT	CERAMIC TILE
CTR	CENTER
CTRL	CONTROL
CVAC	CHLORINE VACUUM
CVT	CULVERT
CU	COPPER, CUBIC
CW	CLOCKWISE
CY	CUBIC YARD
d	PENNY (NAIL MEASURE)
D	DEEP, DIFFUSER
DB	DUCT BANK, DECIBEL, DRY BULB
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEG C	DEGREE CENTIGRADE
DEG F	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DEP	DEPRESSED
DEPT	DEPARTMENT
DET	DETAIL
DH	DISCHARGE HEADER
DI	DROP INLET, DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL, DIAGRAM
DIFF	DIFFERENTIAL, DIFFERENCE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE, DISTRIBUTION
DIV	DIVISION
DL	DEAD LOAD
DMJ	DOUBLE MECHANICAL JOINT
DMPF	DAMP PROOFING
DN	DOWN
DO	DISSOLVED OXYGEN, DITTO
DP	DEPTH
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DR	DRAIN
DS	DOWN SPOUT
DT	DOUBLE TEE, DRIP TRAP ASSEMBLY
DUP	DUPLICATE
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
E	EAST, ELECTRICAL (DWG DISCIPLINE)
EA	EACH, EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
ED	EQUIPMENT DRAIN
EDB	ELECTRICAL DUCT BANK
EE	EACH END
EF	EACH FACE
EFF	EFFLUENT, EFFICIENCY
EHH	ELECTRICAL HANDHOLE
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELBOW
ELEC	ELECTRICAL
ELEV	ELEVATION
EMBD	EMBEDDED
EMER	EMERGENCY
EMH	ELECTRICAL MANHOLE
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER
ESEW	EMERGENCY SHOWER AND EYE WASH
EST	ESTIMATE, ELEVATED STORAGE TANK
EW	EACH WAY, EMERGENCY EYE/FACE WASH
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATION
EXH	EXHAUST
EXST	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR, EXTERNAL, EXTENSION
F&B	FACE & BYPASS
F TO F	FACE TO FACE
FAB	FABRICATE
FB	FLOOR BEAM
FBD	FIBERBOARD
FBG	FIBERGLASS
FBM	BOARD FOOT MEASURE
FBO	FURNISHED BY OWNER
FC	FLUSHING CONNECTION, FERRIC CHLORIDE
FCA	FLANGED COUPLING ADAPTOR
FD	FLOOR DRAIN
FDC	FLEXIBLE DUCT CONNECTION
FDTN	FOUNDATION
FDR	FEEDER
FE	FLANGED END
FEC	FIRE EXTINGUISHER CABINET
FES	FLARED AND SECTION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE, FACTORY FINISH, FLAT FACE, FINISH FLOOR
FG	FINISH GRADE
FIG	FIGURE
FH	FIRE HYDRANT
FIN	FINISH
FJT	FLUSH JOINT
FL	FLOW, FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLOR	FLUORESCENT
FLR	FLOOR
FLS	FLASHING, FLUSH
FO	FINISHED OPENING, FIBER OPTIC
FM	FORCE MAIN
FN	FENCE
FOB	FLAT ON BOTTOM
FOC	FACE OF CONCRETE, FACE OF CURB
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOT	FLAT ON TOP
FPT	FEMALE PIPE THREAD
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRTM	FIRE RETARDANT TREATED MATERIAL
FS	FLOOR SINK, FAR SIDE
FT	FEET, FOOT
FTG	FOOTING, FITTING
FUR	FURRED, FURRING
FURN	FURNITURE, FURNISH
FUT	FUTURE
FV	FACE VELOCITY
FW	FIELD WELD, FIRE WALL
FWD	FORWARD
FWE	FURNISH WITH EQUIPMENT
FXTR	FIXTURE
G	GRILLE, GROUND, GENERAL (DWG DISCIPLINE)
GA	GAGE (METAL THICKNESS)
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR, GRADE BREAK
GC	GROOVED COUPLING
GD	GUARD
GEN	GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFMU	GROUND FACE MASONRY UNIT
GG	GUTTER GRADE
GJ	GROOVED JOINT
GL	GLASS
GLB	GLASS BLOCK
GND	GROUND
GP	GUY POLE
GR	GRADE
GRTG	GRATING
GSB	GYPSUM SHEATHING BOARD
GST	GROUND STORAGE TANK
GT	GREASE TRAP
GVL	GRAVEL
GWB	GYPSUM WALLBOARD
GYP	GYPSUM HEADBOARD
H	HIGH
HB	HOSE BIBB
HBD	HARDBOARD
HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE
HC	HORIZONTAL CENTERLINE
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSEPOWER
HPC	HORIZONTAL POINT OF CURVATURE
HPS	HIGH PRESSURE SODIUM
HPT	HORIZONTAL POINT OF TANGENCY
HR	HOSE REEL, HOUR
HS	HEADED STUD, HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HTG	HEATING
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
HWD	HARDWOOD
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
HZ	HERTZ, CYCLES PER SECOND
I	INSTRUMENTATION (DWG DISCIPLINE)
ID	INSIDE DIAMETER, INTERIOR DIMENSION
IE	INVERT ELEVATION
IF	INSIDE FACE
IH	INTAKE HOOD
IMP	IMPACT
IN	INCH
INC	INCLUDE, INCANDESCENT
INF	INFLUENT
INSTR	INSTRUMENTATION
INSUL	INSULATION
INT	INTERIOR, INTERSECTION
INTR	INTERMEDIATE, INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
IPT	INTERNAL PIPE THREAD
IR	INSIDE RADIUS
IRR	IRRIGATION
ISO	ISOMETRIC
JB	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JST	JOIST
JT	JOINT
K	KIP
KB	KNEE BRACE
KCMIL	THOUSAND CIRCULAR MILS
KD	KNOCK DOWN
KO	KNOCK OUT
KSI	KIPS PER SQUARE INCH
L	ANGLE, LENGTH, LAVATORY
LAD	LADDER
LAM	LAMINATE
LATL	LATERAL
LB	LAG BOLT, POUND
LCTB	LIQUID CHALK AND TACK BOARD
LDG	LANDING
LDR	LEADER
LE	LIFTING EYE
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LIN	LINEAR
LIQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMLU	LIQUID MARKER LECTURE UNIT
LNG	LONGITUDINAL
LOC	LOCATION
LP	LOW POINT
LPA	LOW PRESSURE AIR
LPS	LOW PRESSURE SODIUM
LR	LONG RADIUS
LT	LEFT
LTD	LIMITED
LTG	LIGHTING
LTL	LINTEL
LTNG	LIGHTING
LV	LOW VOLTAGE
LVR	LOUVER
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
M	MECHANICAL (DWG DISCIPLINE)
MA	MIXED AIR
MACH	MACHINED
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBER
MC	MECHANICAL CONTRACTOR, MECHANICAL COUPLING
MCB	METAL CORNER BEAD
MCJ	MASONRY CONTROL JOINT
MDMJ	MODIFIED DOUBLE MECHANICAL JOINT
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MIXED LIQUOR
MLO	MAIN LUGS ONLY
MMB	MEMBRANE
MO	MASONRY OPENING
MOD	MODULAR, MODIFY
MON	MONUMENT
MPT	MALE PIPE THREAD
MRGWB	MOISTURE RESISTANT GYPSUM WALLBOARD
MS	MOP SINK
MSL	MEAN SEA LEVEL
MT	MOUNT
MU	MASONRY UNIT
MULL	MULLION
MV	MEDIUM VOLTAGE
MW	MONITORING WELL
N	NORTH, NEUTRAL
NA	NOT APPLICABLE
NAT	NATURAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NF	NEAR FACE, NON-FUSED
NFV	NOT FIELD VERIFIED
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPW	NON-POTABLE WATER
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
O TO O	OUT-TO-OUT
OA	OUTSIDE AIR, OVERALL
OC	ON CENTER
OCPD	OVER CURRENT PROTECTION DEVICE
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OF	OUTSIDE FACE, OFFICE FURNISHING
OG	ORIGINAL GROUND
OH	OVERHEAD
OHP	OVERHEAD POWER
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OR	OUTSIDE RADIUS
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OUT	OUTFALL
OVFL	OVERFLOW
OVHG	OVERHANG
OZ	OUNCE
P	PAINT, PROCESS (DWG DISCIPLINE)
PA	PUBLIC ADDRESS, PRESSURIZED AIR
PAR	PARALLEL, PARAPET
PB	PANIC BAR, PULL BOX
PBD	PARTICLE BOARD
PC	POINT OF CURVE, PIECE, PRECAST
PCC	POINT OF COMPOUND CURVATURE
PCF	POUNDS PER CUBIC FOOT
PCT	PERCENT
PE	PLAIN END
PED	PEDESTAL
PEN	PENETRATION
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PF	POWER FACTOR
PFMU	PREFACED MASONRY UNIT
PFS	POLYMER FEED SOLUTION
PH	PHASE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PLATE, PROPERTY LINE
PLAS	PLASTER
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUND PER LINEAR FOOT
PNEU	PNEUMATIC
POL	POLISH
POS	POSITIVE, POSITION
PP	POLYPROPYLENE, POWER POLE
PRC	POINT OF REVERSE CURVATURE
PREF	PREFINISHED
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PREP	PREPARE
PRES	PRESSURE
PRI	PRIMARY
PROP	PROPERTY
PROT	PROTECTION
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PST	PRESTRESSED
PT	POINT, POINT OF TANGENCY
PTN	PARTITION
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PW	POTABLE WATER
PWD	PLYWOOD
PWJ	PLYWOOD WEB JOIST
PZ	PIEZOMETER
Q	RATE OF FLOW
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R&R	REMOVE AND REPLACE
R&S	REMOVE AND SALVAGE
R	RADIUS, REGISTER, RISER
RA	RETURN AIR
RAS	RETURN ACTIVATED SLUDGE
RB	RESILIENT BASE, ROCK BERM
RCP	REINFORCED CONCRETE PIPE
RCPT	RECEPTACLE
RD	ROOF DRAIN
REC	RECESS
RECD	RECEIVED
RECT	RECTANGULAR
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING
REM	REMOVE
REQD	REQUIRED
RESIL	RESILIENT
RET	RETAINING, RETURN
REV	REVISION, REVERSE
RF	RESILIENT FLOORING
RFG	ROOFING
RFL	REFLECTED, REFLECTOR
RGH	ROUGH
RGS	RIGID GALVANIZED STEEL
RGS-PVC	PVC COATED RGS
RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY
RL	REQUIRED LAP
RLFA	RELIEF AIR
RND	ROUND
RNG	RUNNING
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RS	RAW SEWAGE
RSG	ROUND SLIDE GATE
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RVT	RESILIENT VINYL TILE
RW	RECLAIMED WATER LINE
RWL	RE-USE WATER LINE
RY	READY
S	SOUTH, SINK, STRUCTURAL (DWG)
SA	SUPPLY AIR
SAMU	SOUND ABSORBING MASONRY UNIT
SAN	SANITARY
SB	SPLASH BLOCK, SODIUM BISULFATE
SC	SOLID CORE, SCUM
SCBA	SELF CONTAINED BREATHING APPARATUS
SCH	SCHEDULE
SCHEM	SCHEMATIC
SCN	SCREEN
SE	STEEL/ALUMINUM EDGE
SEC	SECONDARY, SECONDS
SECT	SECTION
SEP	SEPARATE
SF	SQUARE FOOT
SG	SHEET GLASS, SEALANT GROOVE, SLIDE GATE (SQUARE/RECTANGULAR)
SH	SHOWER, SUCTION HEADER
SHT	SHEET
SHTG	SHEATHING
SIL	SILENCE
SIM	SIMILAR
SL	SLUDGE LINE
SLTD	SLOTTED
SLV	SLEEVE
SMLS	SEAMLESS
SN	SUPERNATANT
SOG	SLAB ON GRADE
SP	SOUNDPROOF, STANDPIPE
SPA	SPACING
SPEC	SPECIFICATION
SPLY	SUPPLY
SPST	SINGLE POLE SINGLE THROW
SPT	SET POINT
SQ	SQUARE
SR	SHORT RADIUS
SS	SERVICE SINK
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STM	STORM SEWER
STOR	STORAGE
STR	STRUCTURAL, STRAIGHT
SUB	SUBSTITUTE
SUC	SUCTION
SUSP	SUSPENDED
SWD	SIDEWATER DEPTH
SY	SQUARE YARD
SYM	SYMBOL
SYMM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T	TILE, TREAD
TA	TOILET ACCESSORY, TEMPERED AIR
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEF	TROWELED EPOXY FLOORING
TEMP	TEMPORARY, TEMPERATURE
THD	THREAD
THK	THICK
THRESH	THRESHOLD
THRU	THROUGH
TKBD	TACK BOARD
TOB	TOP OF BOLT, TOP OF BANK, TOP OF BEAM
TOC	TOP OF CURB, TOP OF CONCRETE
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOL	TOLERANCE, TOP OF LEDGER
TOM	TOP OF MASONRY
TOP	TOP OF PLATE
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB, TOP OF STEEL
TW	TOP OF WALL
TP	TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TREE PROTECTION, TRAP PRIMER
TPD	TOILET PAPER DISPENSER
TPG	TOPPING
TR	TRANSOM
TRANS	TRANSITION
TRD	TRENCH DRAIN
TS	THICKENED SLUDGE
TYP	TYPICAL
U	URINAL
UG	UNDERGROUND
ULT	ULTIMATE
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	VENT, VELOCITY, VOLT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARNISH, VARIABLE, VOLT AMPERES REACTIVE
VB	VAPOR BARRIER, VINYL BASE, VALVE BOX
VC	VERTICAL CURVE
VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VG	VERTICAL GRAIN
VIF	VERIFY IN FIELD
VIN	VINYL
VS	VERSUS, VAPOR SEAL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/	WITH
W/O	WITHOUT
W	WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM, POTABLE WATER LINE
WAS	WASTE ACTIVATED SLUDGE
WB	WOOD BASE
WC	WATER CLOSET, WATER COLUMN, WELL COLLECTION LINE
WD	WOOD, WIDTH
WF	WIDE FLANGE, WASH FOUNTAIN
WG	WIRE GLASS, WATER GAGE, WEIR GATE
WH	WALL HYDRANT, WEEP HOLE
WI	WROUGHT IRON
WL	WATER LEVEL, POTABLE WATERLINE
WLD	WELDED
WM	WIRE MESH
WP	WATERPROOF, WORKING POINT
WTHP	WEATHERPROOF
WS	WATERSTOP, WATER SURFACE
WSCT	WAINSCOT
WT	WEIGHT, WATER TIGHT
WW	SANITARY SEWER
WWF	WELDED WIRE FABRIC
XP	EXPLOSION PROOF
XS	EXTRA STRONG
XXS	DOUBLE EXTRA STRONG
XSECT	CROSS SECTION
YH	YARD HYDRANT
YS	YIELD STRENGTH

GENERAL NOTES:

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS DRAWING INCLUDE VARIATION OF THE WORD, FOR EXAMPLE, "MOD: MAY MEAN MODIFY OR MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING; "REINF" MAY MEAN EITHER REINFORCE OR REINFORCING.
4. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH DRAWING FOR USAGE.

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CHECKED BY:	JTH
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DCS PROJECT NO:	20101499

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CITY OF HUTTO

SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS
JORDAN T. HURTA
143332
LICENSED
PROFESSIONAL ENGINEER

7/11/2022

GENERAL

ABBREVIATIONS

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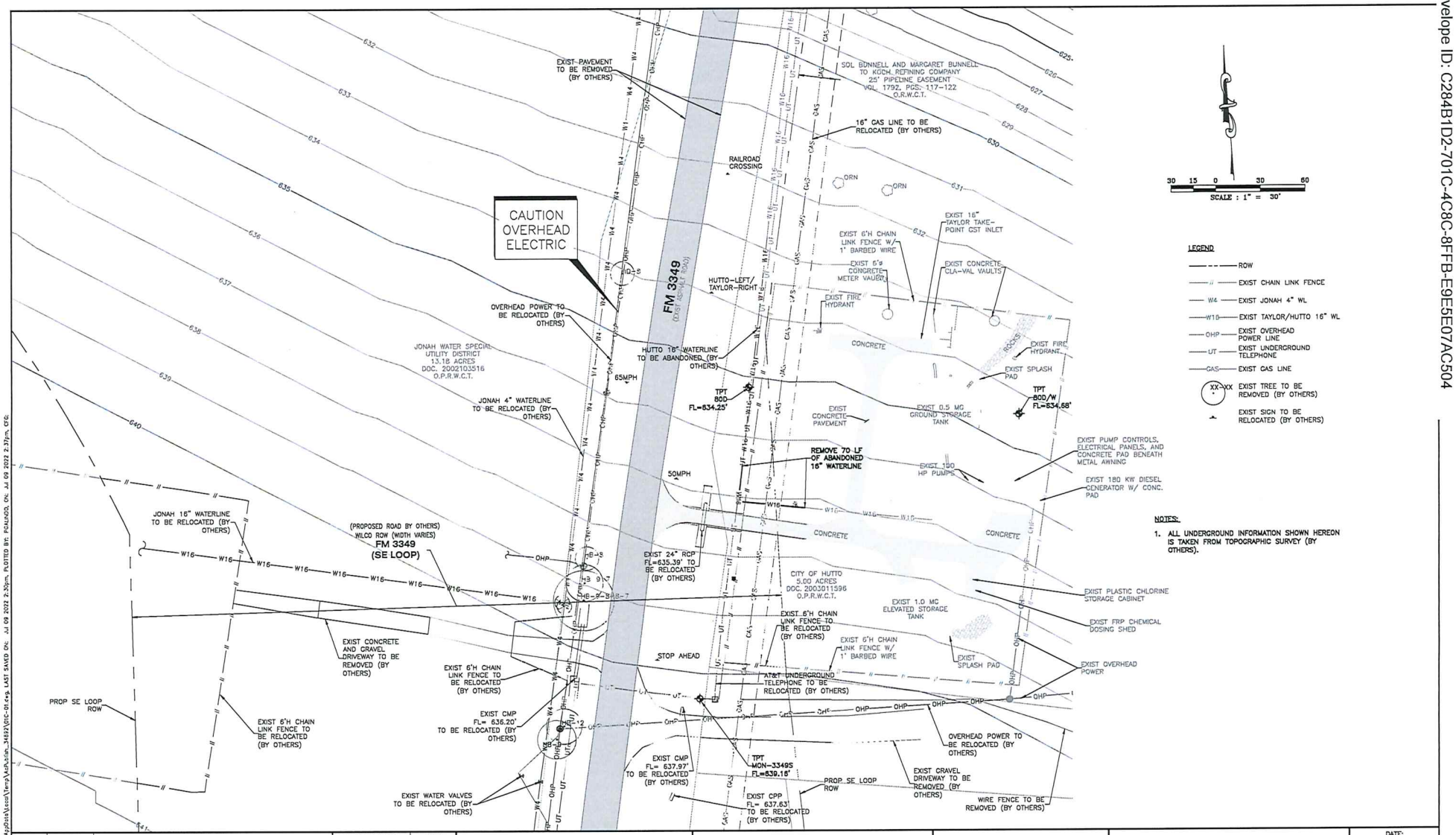

NOTES:

1. ALL UNDERGROUND INFORMATION SHOWN HEREON IS TAKEN FROM TOPOGRAPHIC SURVEY (BY OTHERS).

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REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	WWW
DESIGNED BY:	JPGR
CHECKED BY:	JTH
DRAWN BY:	JPGR
DCS PROJECT NO:	20101499

DCS ENGINEERING, LLC

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING C-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

CITY OF HUTTO

SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS
JORDAN T. HURTA
143332
LICENSED PROFESSIONAL ENGINEER
7/11/2022

801PP AND 890PP WATERLINES

EXISTING SITE AND DEMOLITION PLAN

DATE: JULY 2022

SCALE: 1" = 30'

DRAWING: 01C-01

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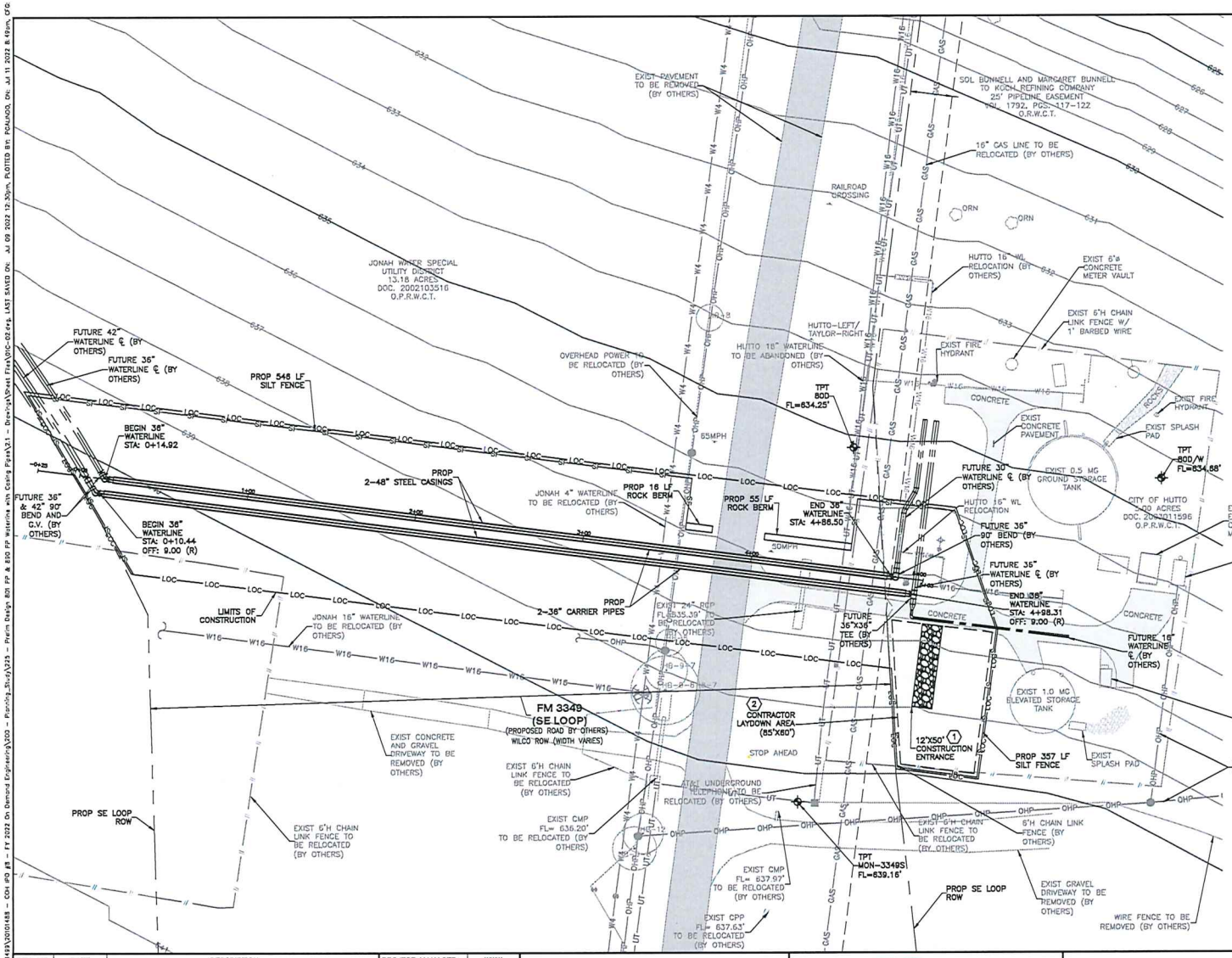

30 15 0 30 60
SCALE : 1" = 30'

LEGEND

- EXIST ROW
- EXIST CHAIN LINK FENCE
- W4 — EXIST JONAH 4" WL
- W16 — EXIST TAYLOR/HUTTO 16" WL
- OHP — EXIST OVERHEAD POWER LINE
- UT — EXIST UNDERGROUND TELEPHONE
- GAS — EXIST GAS LINE
- SF — PROP SILT FENCE
- LOC — PROP LIMITS OF CONSTRUCTION

EROSION CONTROL NOTES:

1. THE LOCATION OF THE CONCRETE WASHOUTS WILL BE DETERMINED ONCE CONSTRUCTION HAS BEGUN AND WILL BE PROPERLY NOTATED ON THE SITE MAP AT THAT TIME.
2. ALL REQUIRED NOTICES AND PERMITS MUST BE PLACED IN A HIGHLY VISIBLE LOCATION ONSITE BEFORE THE COMMENCEMENT OF CONSTRUCTION.
3. ALL EROSION AND SEDIMENTATION CONTROLS (ESC) MUST BE INSTALLED PRIOR TO ANY DISTURBANCE TO THE PROJECT SITE.
4. INSTALL SILT FENCE ACCORDINGLY FOR RUN-ON DIVERSION OR OFFSITE SEDIMENT CONTROL DEPENDING ON UP OR DOWN SLOPE. FACING POST SIDE ON THE DOWN GRADIENT SIDE.
5. ALL ESC USED ONSITE MUST BE REGULARLY MONITORED AND MAINTAINED AS NEEDED.
6. MUD AND OR DIRT TRACKED INTO THE ROADWAY MUST BE IMMEDIATELY REMOVED UPON DISCOVERY.
7. EXCESS MATERIALS THAT WILL BE TRANSPORTED TO AN OFFSITE LOCATION MUST HAVE THAT LOCATION CLEARED BY CITY INSPECTOR.
8. LOOSE TRASH AND DEBRIS MUST BE DISPOSED OF PROPERLY ONSITE.
9. CONTRACTOR SHALL MAINTAIN AND UTILIZE DUST CONTROL FOR THE DURATION OF THE PROJECT.
10. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING ONTO THE PUBLIC ROADWAY ON AN ONGOING/REGULAR BASIS.
11. INITIATE TEMPORARY STABILIZATION WHEN CONSTRUCTION CEASES IN A DISTURBED AREA FOR 14 DAYS.
12. CITY INSPECTOR MAY REQUEST ADDITIONAL CONTROLS BE INSTALLED ONSITE AS NEEDED.
13. CONTRACTOR MUST REMOVE SEDIMENT FROM ALL STORM SEWER INLET BOXES, LINES, PIPES AND CULVERTS BEFORE CONDITIONAL/FINAL ACCEPTANCE CAN OBTAINED.
14. PERMITTEE SHALL INSPECT ALL INLET PROTECTION DEVICES AS PART OF THE WEEKLY SWP3 REPORT, UPON RECEIVING A FORECAST CALLING FOR A RAIN EVENT FOR AN EXTENDED PERIOD, MODIFICATION OF INLET PROTECTION SHOULD BE MADE TO PREVENT FLOODING OR PONDING OF WATER IF TRAFFIC OR PROPERTY CONCERNS ARISE.
15. ANY DE-WATERING OPERATIONS MUST BE APPROVED BY THE CITY ENVIRONMENTAL INSPECTOR BEFORE DE-WATERING OCCURS. THE DE-WATERING METHOD MUST MINIMIZE THE DISCHARGE OF SUSPENDED SEDIMENTS TO THE GREATEST EXTENT FEASIBLE.

KEY NOTES:

1. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL REMOVE CONSTRUCTION ACCESS ROAD. RESTORE ROADSIDE DITCH TO EXIST GRADE.
2. CONTRACTOR SHALL INSTALL 4'H ORANGE SAFETY FENCING AROUND LAYDOWN AREA WHERE LOCATED WITHIN PUMPING STATION FENCING.

REV. NO.	DATE	DESCRIPTION		
			PROJECT MANAGER:	WWW
			DESIGNED BY:	JPGR
			CHECKED BY:	JTH
			DRAWN BY:	JPGR
			DCS PROJECT NO:	20101499

DCS ENGINEERING, LLC
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1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING C-100
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CITY OF HUTTO
SE LOOP 801 PP AND 890 PP WATERLINES

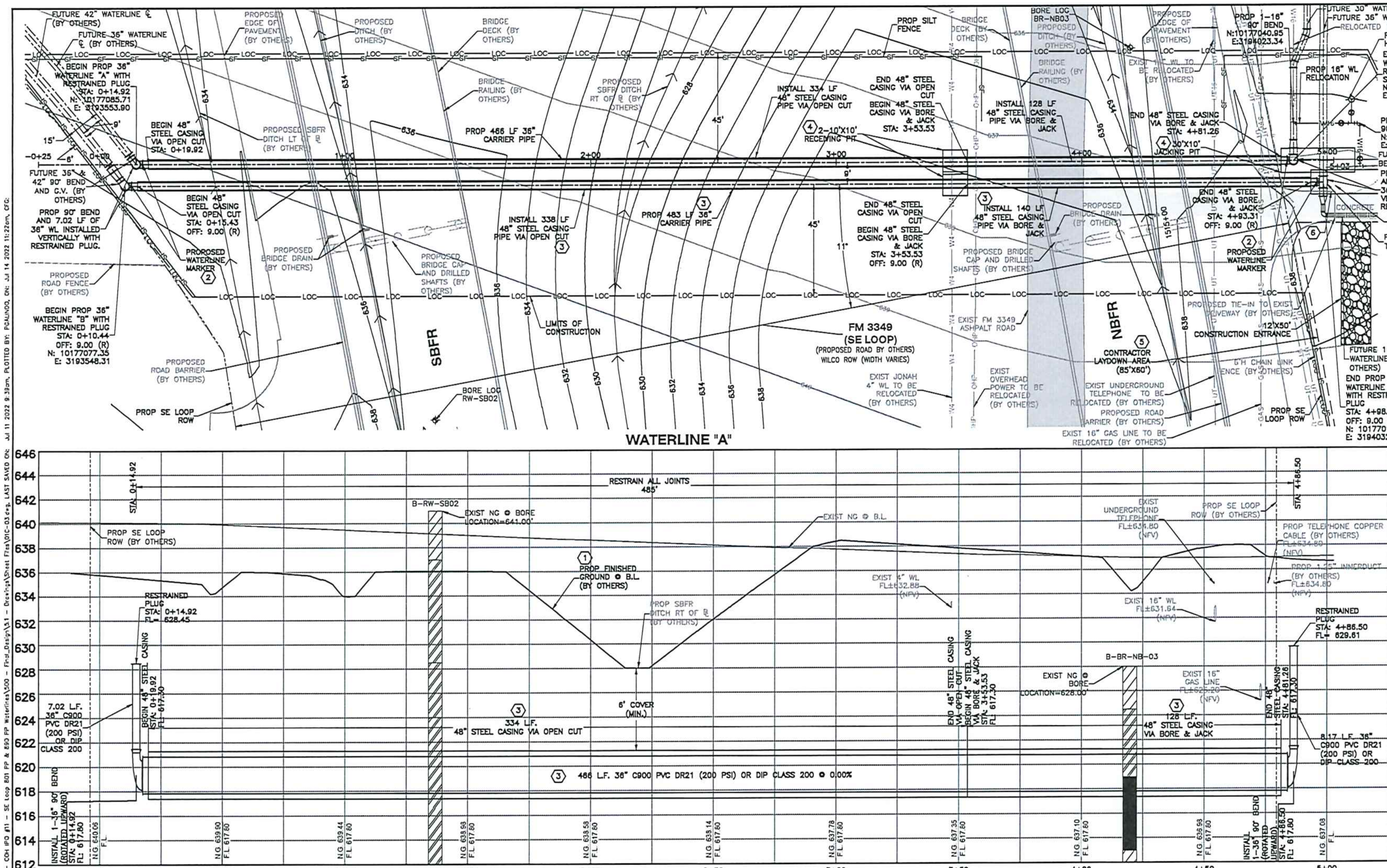
STATE OF TEXAS — JORDAN T. HURTA — 143332 — LICENSED PROFESSIONAL ENGINEER
7/11/2022

801PP AND 890PP WATERLINES
EROSION AND SEDIMENTATION CONTROL PLAN

DATE: JULY 2022
SCALE: 1" = 30'
DRAWING: 01C-02

FILENAME: Z:\Projects 1400-1499\20101499 - COH PO #3 - FY 2022 On Demand Engineering\000 - Planning_Study\25 - Precim Design 801 PP & 890 PP Waterline with Casing Figs\01 - Drawings\Sheet Files\01C-02.dwg, LAST SAVED ON: Jul 09 2022 12:30pm, PLOTTED BY: PCALNOD, ON: Jul 11 2022 8:49am, CFG:

DocuSign Envelope ID: C284B1D2-701C-4C8C-8FFB-E9E5E07AC504



NOTES:

1. NOTES ARE SHOWN ON 00G-03 FOR THIS DRAWING.
2. CONTRACTOR TO PROVIDE A 48-HOUR MINIMUM NOTICE TO FLINT HILLS RESOURCES REPRESENTATIVE PRIOR TO ANY CONSTRUCTION ACTIVITIES TAKING PLACE WITHIN 15' OF THE ENTERPRISE GAS LINES. CONTRACTOR TO COORDINATE WITH FLINT HILLS RESOURCES FIELD REPRESENTATIVE DURING CONSTRUCTION OF WATERLINE.

KEY NOTES:

1. FINISHED GROUND ELEVATIONS SHOWN IN PROFILE ARE APPROXIMATE BASED ON DATA FROM ROADWAY PLANS.
2. WATERLINE MARKER SHALL BE REPNET 3-RAIL 66" FIBERGLASS BLUE MARKER (PART #RFR66CBCD1333C) WITH CUSTOM ADDITIONAL LETTERING TO READ "COH 5124502150"
3. WATERLINE MATERIALS, FITTINGS, AND ELEVATIONS FOR WATERLINE "B" ARE IDENTICAL TO WATERLINE "A". QUANTITIES AND STATIONS FOR WATERLINE "A" AND "B" ARE AS SHOWN IN PLAN VIEW.
4. JACKING AND RECEIVING PIT DIMENSIONS AND LOCATIONS ARE APPROXIMATE. ACTUAL DIMENSIONS SHALL BE DETERMINED BY CONTRACTOR. LARGER PITS SHALL BE AT NO ADDITIONAL COST TO OWNER. INSTALL 4'H ORANGE SAFETY FENCING AROUND PITS. CONTRACTOR MAY ELECT TO REDUCE THE 9.0' DISTANCE FROM CASING CENTER TO CENTER PER HIS SELECTED MEANS AND METHODS OF BORE & JACK AND SUBSEQUENT OPEN CUT OPERATIONS. SUBMIT PROPOSED PLAN TO ENGINEER FOR APPROVAL. NO SEPARATE PAY.
5. CONTRACTOR SHALL MAINTAIN WATER PLANT SECURITY VIA CHAINLINK FENCING THROUGH THE DURATION OF CONSTRUCTION ACTIVITIES. PROVIDE TEMPORARY 6'H CHAIN LINK FENCE WITH 1-FT BARBWIRE AS NEEDED, NO SEPARATE PAY.
6. CONTRACTOR SHALL MAINTAIN ACCESS TO EXIST PUMPING STATION AT ALL TIMES DURING CONSTRUCTION
7. CONTRACTOR SHALL REMOVE ALL ROCK AND DEBRIS BY HAND PRIOR TO FINAL CLEANING AND FLUSHING. FOR CLEANING, FLUSHING AND PRESSURE TESTING, CONTRACTOR MAY ELECT TO USE WATER FROM RELOCATED FIRE HYDRANT AND CONNECT TO PROPOSED PIPELINE VIA TEMPORARY PIPING. TEMPORARY BLOW OFFS, AND TEMPORARY REDUCERS TO CONNECT 36" TO STANDARD HYDRANT CONNECTION. NO SEPARATE PAY.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	WWW
DESIGNED BY:	JPCR
CHECKED BY:	JTH
DRAWN BY:	JPCR
DCS PROJECT NO:	20101499

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CITY OF HUTTO

SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS — JORDAN T. HURTA — 143332 — LICENSED PROFESSIONAL ENGINEER

7/11/2022

801PP AND 890PP WATERLINES

801 PP AND 890 PP WATERLINES PLAN & PROFILE - STA 0+00 TO 4+78

DATE: JULY 2022

SCALE: HORIZ: 1"=20' VERT: 1"=4'

DRAWING: 01C-03

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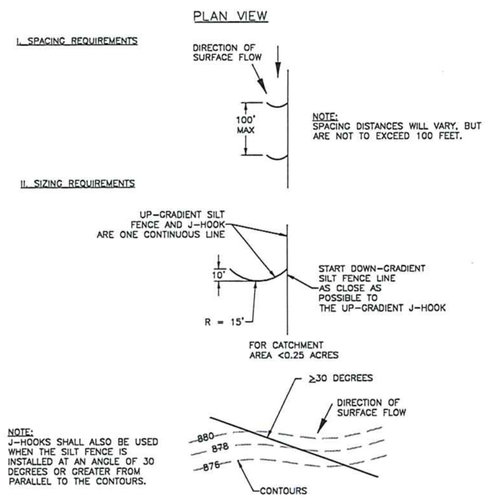
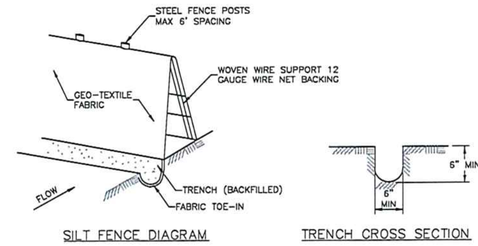


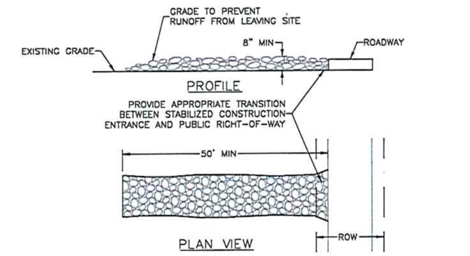
SILT FENCE J-HOOKS (2)
N.T.S.



SILT FENCE NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CAN NOT BE TRENCHED IN (EG PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

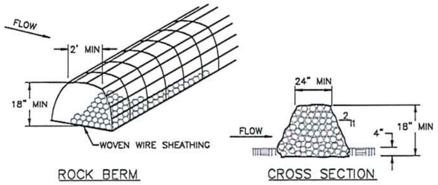
SILT FENCE DETAIL (2)
N.T.S.



CONSTRUCTION ENTRANCE NOTES:

1. STONE SIZE: 3"-5" OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 50 FEET.
3. THICKNESS: NOT LESS THAN 8 INCHES.
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE CONDITIONS DEMAND, AND REPAIR AND CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENTS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

STABILIZED CONSTRUCTION ENTRANCE DETAIL (3)
N.T.S.



ROCK BERM NOTES:

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

ROCK BERM DETAIL (4)
N.T.S.

REV. NO.	DATE	DESCRIPTION		
			PROJECT MANAGER:	WWW
			DESIGNED BY:	JPGR
			CHECKED BY:	JTH
			DRAWN BY:	JPGR
			DCS PROJECT NO:	20101499

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING C-100
AUSTIN, TX 78746
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CITY OF HUTTO
SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS — JORDAN T. HURTA — 143332 — LICENSED PROFESSIONAL ENGINEER
7/11/2022

MISCELLANEOUS DETAILS
EROSION CONTROL DETAILS

DATE: JULY 2022
SCALE: N.T.S.
DRAWING: 02C-01

FILENAME: Z:\Projects 1400-1499\20101499 - COH IPO #3 - FY 2022 On Demand Engineering\200 - Planning_Study\225 - Prelim Design 801 PP & 890 PP Waterline with Casing Pipes\2.1 - Drawings\Sheet Files\02C-01.dwg, LAST SAVED ON: Jul 02 2022 12:21pm, PLOTTED BY: FGALINDO, ON: Jul 09 2022 2:35pm, CFG:

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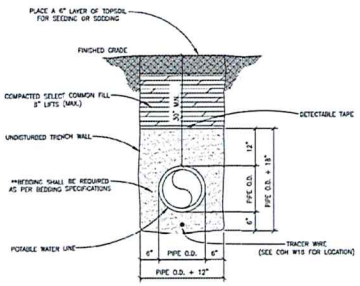
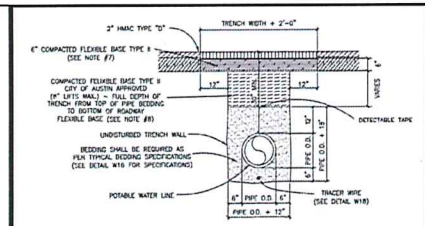


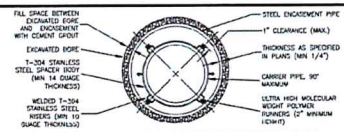
** TYPICAL BEDDING SPECIFICATIONS		
	¾" ≤	¾"
SIEVE SIZE	% RETAINED	% RETAINED
1/2"	0	0
3/8"	0–2	0–2%
4m	40–85	80–100
10m	95–100	98–100
3/4"	–	–

CITY OF HUTTO CONSTRUCTION STANDARDS AND DETAILS	DRAWING NO: W22 UPDATED: 04/01/2019 DRAWN BY: HB SCALE: N.T.S. FILE NAME: W22.DWG
TRENCH & EMBEDMENT UNDER NON-PAVED AREAS ENGINEERING & PUBLIC WORKS	

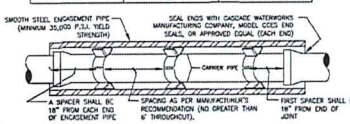


NOTES:
1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE.
2. BASE MATERIAL SHALL BE PLACED IN TWO OR THREE LAYERS AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO SPECIFIED MINIMUM DENSITY.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE.
5. A MINIMUM OF ONE DENSITY TEST SHALL BE TAKEN EVERY TWO HUNDRED (200) FEET FOR EACH EIGHT (8") INCH LIFT OF SUBGRADE, AND EACH OPEN CUT CROSSING. PROCTORS FOR MATERIALS USED IN BACKFILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY OR THE PERMITTEE'S CONSULTANTS. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AT THE TIME THE PERMIT WAS ISSUED. ALL DENSITY TESTS SHALL BE COMPLETED AND ACCEPTED ON EACH LAYER PRIOR TO ADDITIONAL BACKFILLING. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO CITY OF HUTTO.
6. GEOTECHNICAL REPORT MUST BE PROVIDED WITH THE ROAD/STREET DESIGN. THESE SPECIFICATIONS MAY BE SUPERSEDED BY THE CITY ENGINEER.
7. FLEXIBLE BASE TYPE B: (ROADWAY BASE) TxDOT TYPE A – GRADE 2 OR BETTER CRUSHED LIMESTONE BASE COMPACTED TO 95% OF TxDOT 113E AT OPTIMUM MOISTURE. PROCTOR TO BE PROVIDED BY THE CONTRACTOR TO THE CITY INSPECTOR.
8. FLEXIBLE BASE TYPE B: (TRENCH BACKFILL) TxDOT TYPE A – GRADE 2 OR BETTER CRUSHED LIMESTONE BASE COMPACTED TO 90% OF TxDOT 113E AT OPTIMUM MOISTURE. PROCTOR TO BE PROVIDED BY THE CONTRACTOR TO THE CITY INSPECTOR.
9. CONTRACTOR OR ENGINEER MAY REQUEST FOR USE OF ALTERNATE BACKFILL MATERIAL. ALTERNATE MATERIALS AND TESTING PROTOCOL MUST BE SUBMITTED TO AND APPROVED BY THE CITY ENGINEER PRIOR TO USE.
10. DETECTABLE MARKING TAPE SHALL BE USED FOR ALL WATER LINES. THE TAPE SHALL BE BLUE, 12" WIDE, 5 MIL. THE TAPE SHALL BE PLACED AT TOP OF BEDDING.

CITY OF HUTTO CONSTRUCTION STANDARDS AND DETAILS	DRAWING NO: W21 UPDATED: 04/01/2019 DRAWN BY: HB SCALE: N.T.S. FILE NAME: W21.DWG
TRENCH AND EMBEDMENT UNDER EXISTING ROADWAY ENGINEERING & PUBLIC WORKS	

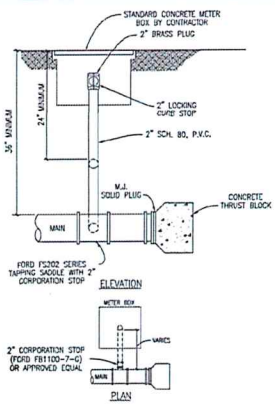


PIPE SIZE-CARRIER (DIAMETER, INCHES)	PIPE SIZE-CASING (MINIMUM DIAMETER, INCHES)	MINIMUM PIPE THICKNESS (INCHES)	
6	16	1 / 4	0.2500
8	18	1 / 4	0.2500
10	20	5 / 16	0.3125
12 ~ 14	24	3 / 8	0.3750
16 ~ 18	30	7 / 16	0.4375
20	36	1 / 2	0.5000
24	42	1 / 2	0.5000
30	48	1 / 2	0.5000



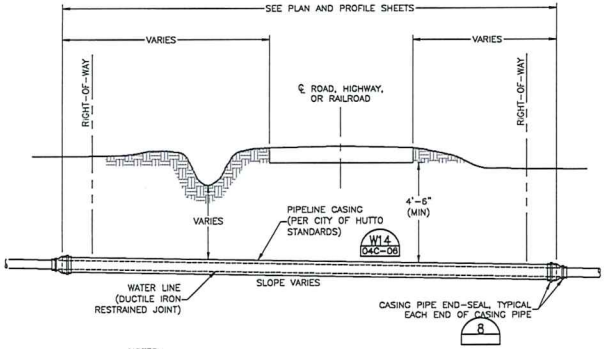
NOTES:
1. CASING SPACER CONFIGURATION AND SPACING SHALL BE AS SHOWN ON MANUFACTURER'S DRAWINGS FOR SPECIFIC WORK. THESE MUST BE ACCEPTABLE TO CITY ENGINEER.
2. CASING SPACER SHALL BE AS MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING COMPANY, MODEL CCS, OR APPROVED EQUAL.
3. CASING SPACERS SHALL NOT BE PAID DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE BID ITEM.
4. DO NOT USE WEDGES BETWEEN CARRIER PIPE AND CASING.
5. PRIOR TO INSERTING CARRIER PIPE, ANY WATER SHOULD BE PUMPED OUT OF CASING SO THAT NO MORE THAN A FEW INCHES OF WATER REMAINS.
6. ALL JOINTS IN ENCASEMENT SHALL BE RESTRAINED FOR WATER LINES ONLY UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

CITY OF HUTTO CONSTRUCTION STANDARDS AND DETAILS	DRAWING NO: W14 UPDATED: 04/01/2019 DRAWN BY: HB SCALE: N.T.S. FILE NAME: W14.DWG
PIPE ENCASEMENT ENGINEERING & PUBLIC WORKS	



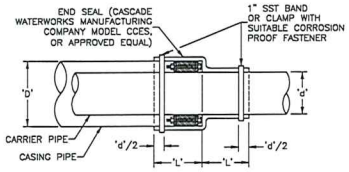
NOTES:
1. TRAFFIC BEARING METER BOXES WILL BE REQUIRED IN ALL PAVED AREAS AND AREAS WHICH MAY BE PAVED IN THE FUTURE.
2. TUBING SHALL BE CONTINUOUS FROM CORPORATION STOP TO CURB STOP. NO FITTINGS SHALL BE PERMITTED.

CITY OF HUTTO CONSTRUCTION STANDARDS AND DETAILS	DRAWING NO. W-09 UPDATED: 11/11/11 DRAWN BY: *** SCALE: N.T.S. FILE NAME: W09.DWG
STANDARD BLOW-OFF HUTTO UTILITY SYSTEMS	



NOTES:
1. TOP OF CASING PIPE SHALL BE FOUR FEET MINIMUM BELOW THE LOWEST LAND ELEVATION OR 4.5 FEET MINIMUM BELOW THE BASE OF THE RAIL, WHICHEVER YIELDS THE DEEPEST CASING DEPTH.
2. CASING DIAMETER SHALL BE IN ACCORDANCE WITH THE PLANS/BID FORM.

ROAD, HIGHWAY, OR RAILROAD PIPELINE UNDERCROSSING DETAIL 7
N.T.S.



NOTES:
1. 'L' = 'D', WITH 'L' MAX = 16".
2. BEVEL END OF CASING PIPE TO REMOVE ALL SHARP EDGES TO PREVENT DAMAGE TO THE LINER MATERIAL.
3. THE END-SEAL SHALL BE ATTACHED TO THE PIPE AND CASING SO AS TO PROVIDE A TIGHT END SEAL.
4. FOR CASINGS OVER 12 INCHES IN DIAMETER, PROVIDE TWO CLAMPS OR BANDS ON EACH END OF EACH SEAL.
5. DAMAGED OR DEFECTIVE END-SEALS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. CASING PIPE SHALL HAVE END-SEALS INSTALLED ON BOTH ENDS PRIOR TO BACKFILLING ADJACENT PIPE TRENCHES.

CASING PIPE END-SEAL DETAIL 8
N.T.S.

REV. NO.	DATE	DESCRIPTION	PROJECT MANAGER:	WWW
			DESIGNED BY:	JPGR
			CHECKED BY:	JTH
			DRAWN BY:	JPGR
			DCS PROJECT NO:	20101499

DCS ENGINEERING, LLC
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1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING C-100
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T.B.P.E. FIRM NO. F-13162

CITY OF HUTTO
SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS
JORDAN T. HURTA
143332
LICENSED PROFESSIONAL ENGINEER
7/11/2022

MISCELLANEOUS DETAILS

WATER DETAILS

DATE: JULY 2022
SCALE: N.T.S.
DRAWING: 02C-02

FILENAME: C:\Users\jgarcia\AppData\Local\Temp\AcPublish_34892\02C-02.dwg, LAST SAVED ON: Jul 09 2022 8:37am, PLOTTED BY: FGALINDO, ON: Jul 09 2022 2:36pm, CTG

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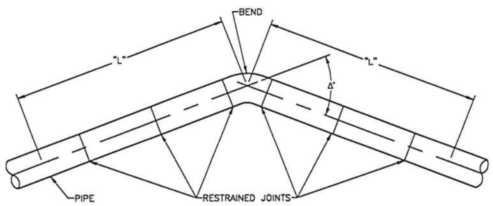
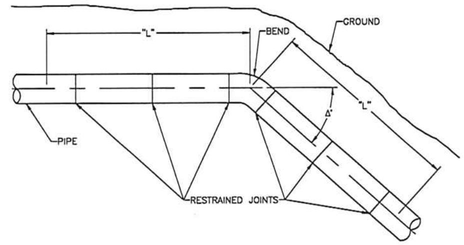


LENGTH "L" IN FEET (MIN)	
DUCTILE IRON PIPE (WORKING PRESSURE = 200 PSI)	
ANGLE (Δ°)	36" DIAMETER "L"
11.25	11
22.5	22
45	45
90	108

LENGTH "L" IN FEET (MIN)	
C-900 POLYVINYL CHLORIDE PIPE (WORKING PRESSURE = 200 PSI)	
ANGLE (Δ°)	36" DIAMETER "L"
11.25	14
22.5	27
45	56
90	135

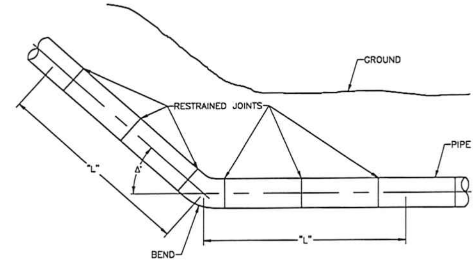
HORIZONTAL JOINT RESTRAINT (1)
N.T.S.



LENGTH "L" IN FEET (MIN)	
DUCTILE IRON PIPE (WORKING PRESSURE = 200 PSI)	
ANGLE (Δ°)	36" DIAMETER "L"
11.25	27
22.5	55
45	113

LENGTH "L" IN FEET (MIN)	
C-900 POLYVINYL CHLORIDE PIPE (WORKING PRESSURE = 200 PSI)	
ANGLE (Δ°)	36" DIAMETER "L"
11.25	49
22.5	98
45	204

VERTICAL DOWNWARD BENDS JOINT RESTRAINT (2)
N.T.S.



LENGTH "L" IN FEET (MIN)	
DUCTILE IRON PIPE (WORKING PRESSURE = 200 PSI)	
ANGLE (Δ°)	36" DIAMETER "L"
11.25	11
22.5	21
45	43

LENGTH "L" IN FEET (MIN)	
C-900 POLYVINYL CHLORIDE PIPE (WORKING PRESSURE = 200 PSI)	
ANGLE (Δ°)	36" DIAMETER "L"
11.25	17
22.5	35
45	72

VERTICAL UPWARD BENDS JOINT RESTRAINT (3)
N.T.S.

THRUST RESTRAINT SYSTEM GENERAL NOTES:

1. THRUST RESISTANT SYSTEMS HAVE BEEN DESIGNED FOR MAXIMUM LINE TEST PRESSURE PER SPECIFICATIONS.
2. BIDS SHALL BE PREPARED BASED ON USING RESTRAINED JOINTS TO RESIST THRUST LOADS AND THE RESTRAINED LENGTHS SHOWN ON THESE TABLES.
3. ALL PIPING SHALL UTILIZE RESTRAINED JOINTS FOR THE LENGTHS SPECIFIED AND FOR TEES, BENDS, AND PLUGS. THRUST BLOCKS MAY BE USED IN COMBINATION WITH JOINT RESTRAINTS ONLY AS APPROVED BY THE ENGINEER.
4. PIPE SHALL BE MANUFACTURED TO TRANSFER THRUST FORCES WITHOUT EXCEEDING ALLOWABLE STRESSES IN THE PIPE MATERIAL BY AWWA STANDARD SPECIFICATIONS.
5. WHERE THRUST BLOCKS ARE SPECIFICALLY SHOWN, THEY SHALL BE INSTALLED IN ADDITION TO MECHANICAL RESTRAINT ADAPTERS.
6. WHERE A CASED RUN OF PIPE IS LOCATED WITHIN THE LENGTH TO BE RESTRAINED, PROVIDE JOINT RESTRAINTS FROM BEND THROUGH CASING AND FOR A DISTANCE EQUAL TO THE RESTRAINED LENGTH PAST THE CASING.
7. FOR DEFLECTION ANGLES NOT SHOWN, USE THE NEXT LARGER DEFLECTION ANGLE.
8. CONCRETE FOR THRUST BLOCKS SHALL BE 3000 PSI READY-MIX CONCRETE WITH A MINIMUM OF 517 POUNDS PER CUBIC YARD TYPE 1 CEMENT AND A MAXIMUM SLUMP OF 4 INCHES.
9. WHERE JOINT RESTRAINT ZONE ENDS MID-JOINT, RESTRAIN NEXT JOINT BEYOND CASING PIPE END.

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CITY OF HUTTO

SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS
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143332
LICENSED
PROFESSIONAL ENGINEER

7/11/2022

MISCELLANEOUS DETAILS

JOINT RESTRAINT DETAILS

DATE: JULY 2022
SCALE: N.T.S.
DRAWING: 02C-03

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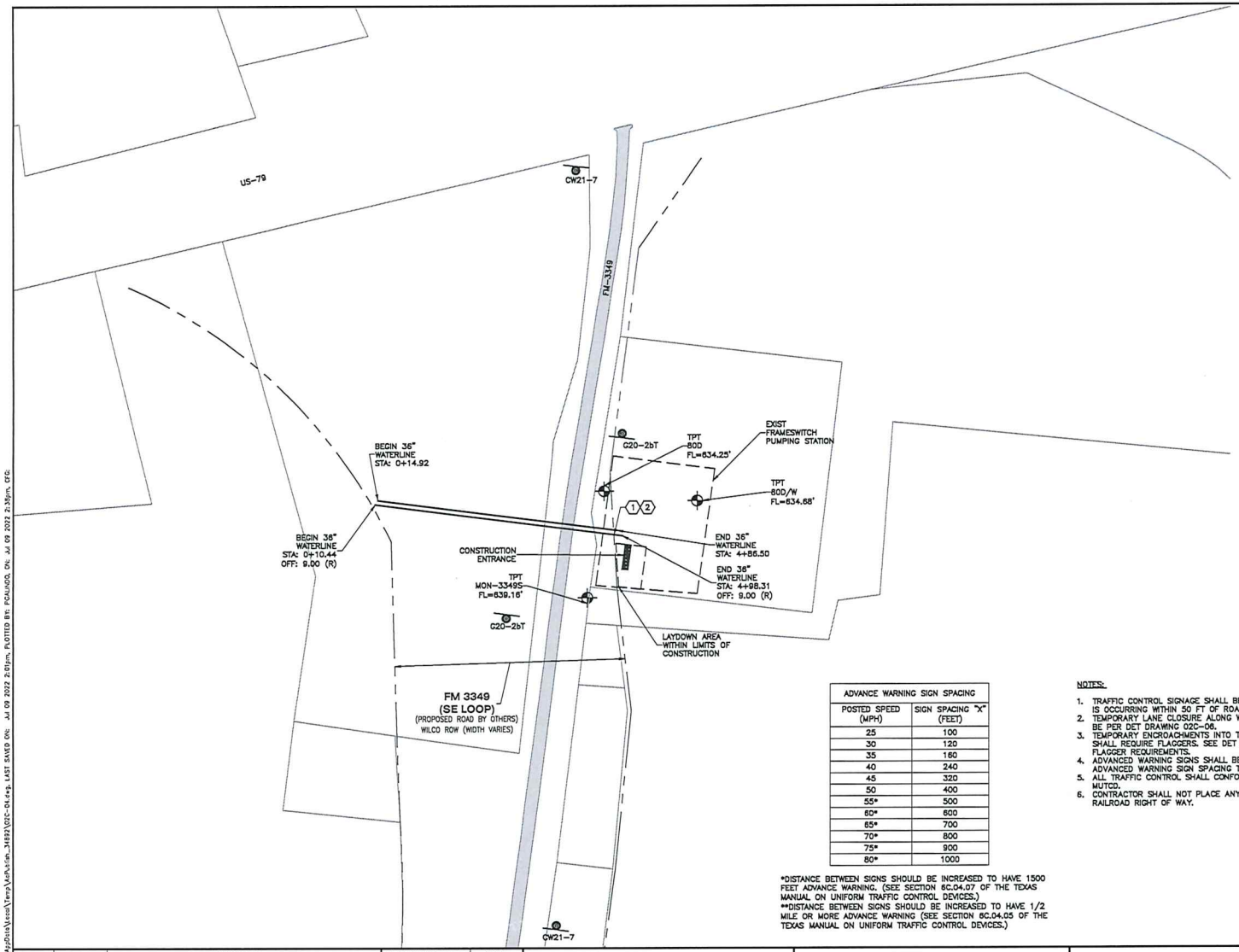

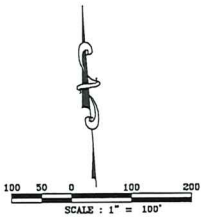

KEY NOTES:

1. CONTRACTOR SHALL MAINTAIN PUMPING STATION SITE SECURITY VIA CHAINLINK FENCING THROUGH THE DURATION OF CONSTRUCTION ACTIVITIES.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO EXIST PUMPING STATION AT ALL TIMES DURING CONSTRUCTION

ADVANCE WARNING SIGN SPACING	
POSTED SPEED (MPH)	SIGN SPACING "X" (FEET)
25	100
30	120
35	160
40	240
45	320
50	400
55*	500
60*	600
65*	700
70*	800
75*	900
80*	1000

*DISTANCE BETWEEN SIGNS SHOULD BE INCREASED TO HAVE 1500 FEET ADVANCE WARNING. (SEE SECTION 6C.04.07 OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.)
**DISTANCE BETWEEN SIGNS SHOULD BE INCREASED TO HAVE 1/2 MILE OR MORE ADVANCE WARNING (SEE SECTION 6C.04.05 OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.)

NOTES:

1. TRAFFIC CONTROL SIGNAGE SHALL BE PROVIDED WHEN WORK IS OCCURRING WITHIN 50 FT OF ROADWAY.
2. TEMPORARY LANE CLOSURE ALONG WATERLINE ROUTE SHALL BE PER DET DRAWING 02C-06.
3. TEMPORARY ENCROACHMENTS INTO THE RIGHT-OF-WAY SHALL REQUIRE FLAGGERS. SEE DET DRAWING 02C-06 FOR FLAGGER REQUIREMENTS.
4. ADVANCED WARNING SIGNS SHALL BE SPACED PER ADVANCED WARNING SIGN SPACING TABLE.
5. ALL TRAFFIC CONTROL SHALL CONFORM TO THE TEXAS MUTCD.
6. CONTRACTOR SHALL NOT PLACE ANY SIGNAGE WITHIN RAILROAD RIGHT OF WAY.

LEGEND

UTILITY WORK AHEAD	CW21-7
END WORK ZONE	G20-2bT
	SIGN

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CITY OF HUTTO

SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS
JORDAN T. HURTA
143332
LICENSED PROFESSIONAL ENGINEER
7/11/2022

MISCELLANEOUS DETAILS

TRAFFIC CONTROL PLAN

DATE: JULY 2022
SCALE: 1" = 100'
DRAWING: 02C-04

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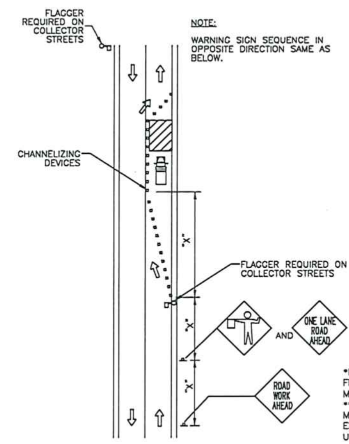
1. FOR DAYTIME WORK, THE FLAGGER SHALL WEAR AN APPROVED BRIGHTLY COLORED VEST. FOR NIGHTTIME WORK, THE VEST SHALL BE RETROFLECTIVE. THE RETRO-REFLECTIVE MATERIAL SHALL BE ORANGE, YELLOW, WHITE, SILVER, STRONG YELLOW-GREEN OR A FLOURESCENT VERSION OF THESE COLORS AND SHALL BE VISIBLE AT A MINIMUM DISTANCE OF 305 m (1,000').
2. FOR LOW-VOLUME APPLICATIONS, A SINGLE FLAGGER MAY BE ADEQUATE. WHERE ONE FLAGGER CAN BE USED, SUCH AS FOR SHORT WORK AREAS ON STRAIGHT ROADWAYS, THE FLAGGER MUST BE VISIBLE TO APPROACHING TRAFFIC FROM BOTH DIRECTIONS.
3. FLAGGERS SHALL USE ONLY STOP/SLOW PADDLE TO DIRECT TRAFFIC UNLESS WORKING IN A SIGNALIZED INTERSECTION WHERE DRIVERS MAY BE CONFUSED BY THE SIGN PADDLE. HAND SIGNAL MAY BE USED IN THESE SITUATIONS.
4. FLAGGERS SHALL ENSURE THAT ALL REQUIRED SIGNING IS IN PLACE PRIOR TO BEGINNING FLAGGING OPERATIONS.
5. FLAGGERS SHALL NOT PERFORM WORK THAT IS NOT RELATED TO FLAGGING WHILE ON DUTY.
6. FLAGGERS MAY CARRY AIR HORNS OR WHISTLES TO WARN WORKERS OF AN EMERGENCY CONDITION.
7. FLAGGERS SHALL BE REQUIRED TO USE TWO-WAY RADIOS WHEN OUT OF CLEAR VIEW OF EACH OTHER.
8. FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.

TAPER LENGTHS

SPEED (kmph)	SPEED* (mph)	LENGTH (meters)	LENGTH (feet)
30	20	11	35
40	25	17	55
50	30	26	85
55	35	36	120
65	40	51	170
70	45	66	220
80	50	84	280
90	55	101	335
95	60	125	415
105	65	146	485

*POSTED SPEED

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		FLAGGER SETUP FOR 2 LANE ROADWAY	
RECORD COPY SIGNED BY BILL GARDNER	03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	STANDARD NO 804S-2 3 OF 8



ADVANCE WARNING SIGN SPACING	
POSTED SPEED (MPH)	SIGN SPACING "X" (FEET)
25	100
30	120
35	160
40	240
45	320
50	400
55*	500
60*	600
65*	700
70*	800
75*	900
80*	1000

*DISTANCE BETWEEN SIGNS SHOULD BE INCREASED TO HAVE 1500 FEET ADVANCE WARNING. (SEE SECTION 6C.04.07 OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES)
**DISTANCE BETWEEN SIGNS SHOULD BE INCREASED TO HAVE 1/2 MILE OR MORE ADVANCE WARNING WHEN USED ON A FREEWAY OR EXPRESSWAY. (SEE SECTION 6C.04.05 OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES)

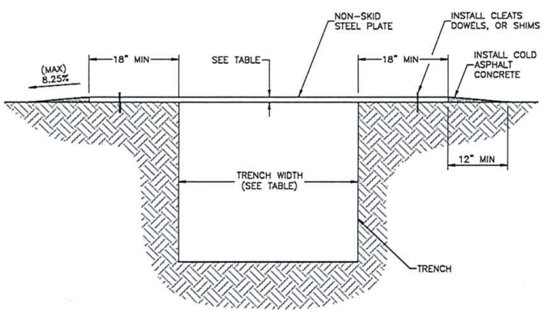
TYPICAL LANE CLOSURE (4)
N.T.S.

GENERAL NOTES:

1. TRAFFIC CONTROL SHALL BE PROVIDED WHEN WORK IS BEING PERFORMED WITHIN THE TRAVEL LANES.
2. WHEN WORK IS BEING PERFORMED WITHIN THE ROADWAY, ONE LANE SHALL REMAIN OPEN AND ACCESSIBLE TO THROUGH TRAFFIC AT ALL TIMES. NO OPEN TRENCHES WILL BE ALLOWED AT END OF WORK DAY. INSTALL STEEL PLATES PER CITY REGULATIONS WHEN WORK IN TRENCH IS NOT BEING CONDUCTED.
3. TEMPORARY LANE CLOSURES SHALL REQUIRE FLAGGER(S) AND SIGNAGE.

FLAGGER NOTES:

1. FOR DAYTIME WORK, THE FLAGGER SHALL WEAR AN APPROVED BRIGHTLY COLORED VEST. FOR NIGHTTIME WORK, THE VEST SHALL BE RETROFLECTIVE. THE RETRO-REFLECTIVE MATERIAL SHALL BE ORANGE, YELLOW, WHITE, SILVER, STRONG YELLOW-GREEN OR A FLUORESCENT VERSION OF THESE COLORS AND SHALL BE VISIBLE AT A MINIMUM DISTANCE OF (1,000').
2. FLAGGERS SHALL USE ONLY STOP/SLOW PADDLE TO DIRECT TRAFFIC.
3. FLAGGERS SHALL ENSURE THAT ALL REQUIRED SIGNING IS IN PLACE PRIOR TO BEGINNING FLAGGING OPERATIONS.
4. FLAGGERS SHALL NOT PERFORM WORK THAT IS NOT RELATED TO FLAGGING WHILE ON DUTY.
5. FLAGGERS MAY CARRY AIR HORNS OR WHISTLES TO WARN WORKERS OF AN EMERGENCY CONDITION.
6. FLAGGERS SHALL BE REQUIRED TO USE TWO-WAY RADIOS WHEN OUT OF CLEAR VIEW OF EACH OTHER.
7. FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.



TEMPORARY STEEL PLATE TRENCH COVER (3)
N.T.S.

NOTES:

1. STEEL PLATES USED FOR TEMPORARY TRENCH COVERS MUST EXTEND A MINIMUM 18" BEYOND THE EDGES OF THE TRENCH.
2. THE TRENCH SHALL BE ADEQUATELY SHORED TO SUPPORT THE BRIDGING AND TRAFFIC LOADS.
3. TEMPORARY PAVING WITH COLD ASPHALT CONCRETE SHALL BE USED TO FEATHER THE EDGES OF THE PLATES.
4. BRIDGING SHALL BE SECURED AGAINST DISPLACEMENT BY USING ADJUSTABLE CLEATS, SHIMS OR OTHER DEVICES.
5. APPROACH PLATE(S) AND ENDING PLATE (IF LONGITUDINAL PLACEMENT) SHALL BE ATTACHED TO THE ROADWAY BY A MINIMUM OF TWO DOWELS PRE-DRILLED INTO THE CORNERS OF THE PLATE AND DRILLED 2" INTO THE PAVEMENT. SUBSEQUENT PLATES ARE BUTTED TO EACH OTHER. FINE GRADED ASPHALT CONCRETE SHALL BE COMPACTED TO FORM RAMPS, MAXIMUM SLOPE 8.25% WITH A MINIMUM 12" TAPER TO COVER ALL EDGES OF STEEL PLATES. WHEN STEEL PLATES ARE REMOVED, THE DOWEL HOLES IN THE PAVEMENT SHALL BE BACKFILLED WITH EITHER GRADED FINES OF ASPHALT CONCRETE MIX, CONCRETE SLURRY OR AN EQUIVALENT SLURRY SATISFACTORY TO THE ENGINEER.
6. THE FOLLOWING TABLE SHOWS THE REQUIRED MINIMAL THICKNESS OF STEEL PLATE BRIDGING REQUIRED FOR A

GIVEN TRENCH WIDTH:	MINIMUM PLATE THICKNESS:
1.0 FOOT	1/2 INCH
1.5 FEET	3/4 INCH
2.0 FEET	7/8 INCH
3.0 FEET	1 INCH
4.0 FEET	1 1/4 INCH

NOTE: FOR SPANS GREATER THAT 4 FEET, A STRUCTURAL DESIGN SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS.
7. STEEL PLATE BRIDGING SHALL BE STEEL PLATE DESIGNED FOR HS20-44 TRUCK LOADING.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE STEEL PLATES, SHORING AND ASPHALT CONCRETE RAMPS.

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CITY OF HUTTO
SE LOOP 801 PP AND 890 PP WATERLINES

STATE OF TEXAS
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MISCELLANEOUS DETAILS
TRAFFIC CONTROL DETAILS

DATE: JULY 2022
SCALE: N.T.S.
DRAWING: 02C-05

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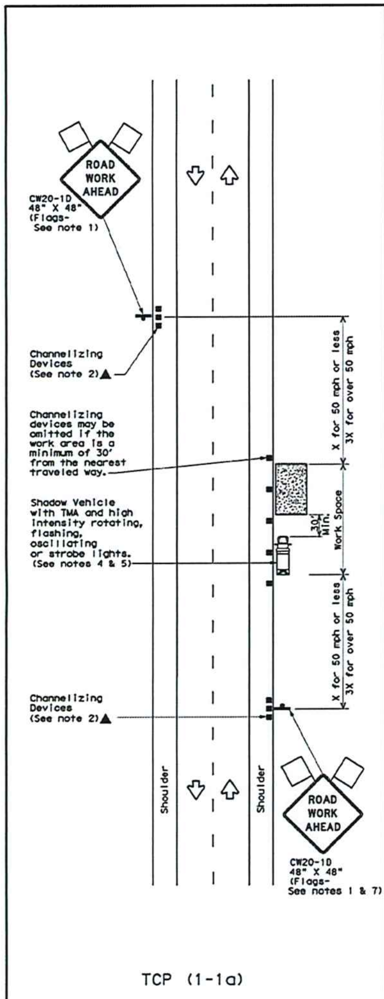
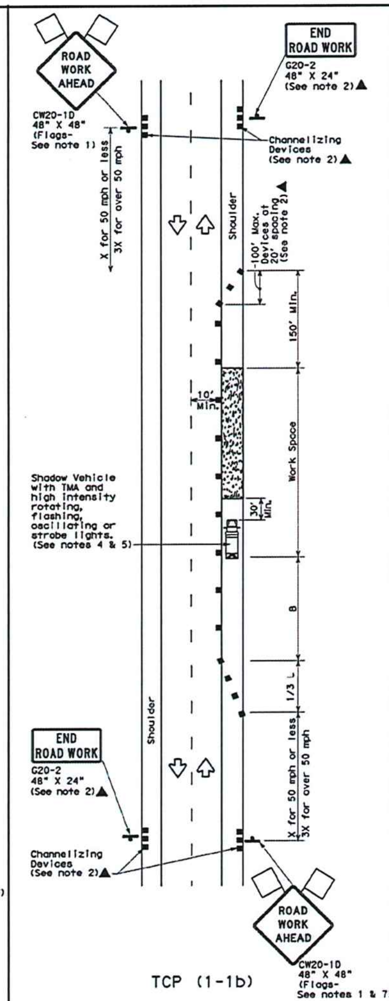


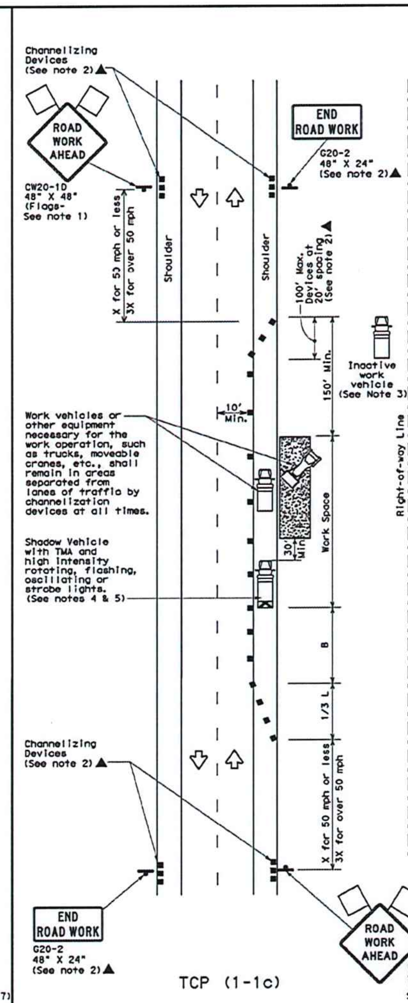
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

LEGEND

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

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

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

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1)for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-12

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DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
CONT	SECT	JOB	HIGHWAY
DIST	COUNTY		SHEET NO.

REVISIONS
2-94 2-12
8-95
1-97
4-98

151

DATE:
FILE:

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MISCELLANEOUS DETAILS
TXDOT TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

DATE: JULY 2022
SCALE: N.T.S.
DRAWING: 02C-06

FILENAME: Z:\Projects 1400-1499\20101499 - COH IPO #3 - FY 2022 On Demand Engineering\200 - Planning_Study\225 - Prelim Design 801 PP & 890 PP Waterline with Casing Pipes\2.1 - Drawings\Sheet Files\02C-06.dwg, LAST SAVED ON: Jul 02 2022 12:20pm, PLOTTED BY: PGALINDO, ON: Jul 09 2022 2:39pm, CFG: