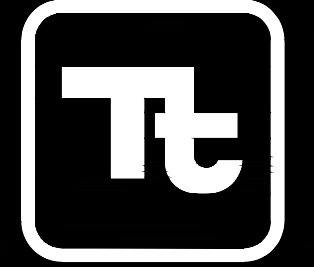


GATEWAY SERVICES DISTRICT GATEWAY BLVD AT COMMERCE LAKES DR UTILITY RELOCATION

10600 CHEVROLET WAY, SUITE 102
ESTERO, FLORIDA 33928
Ph: 239-390-1467 Fax: 239-390-1467



TETRA TECH

www.tetrattech.com

PROJECT LOCATION:

CLIENT INFORMATION:

GATEWAY SERVICES DISTRICT
13240 GRIFFIN DRIVE
FORT MYERS, FLORIDA 33913

Tt PROJECT No.:
200-37678-20002

CLIENT PROJECT No.:

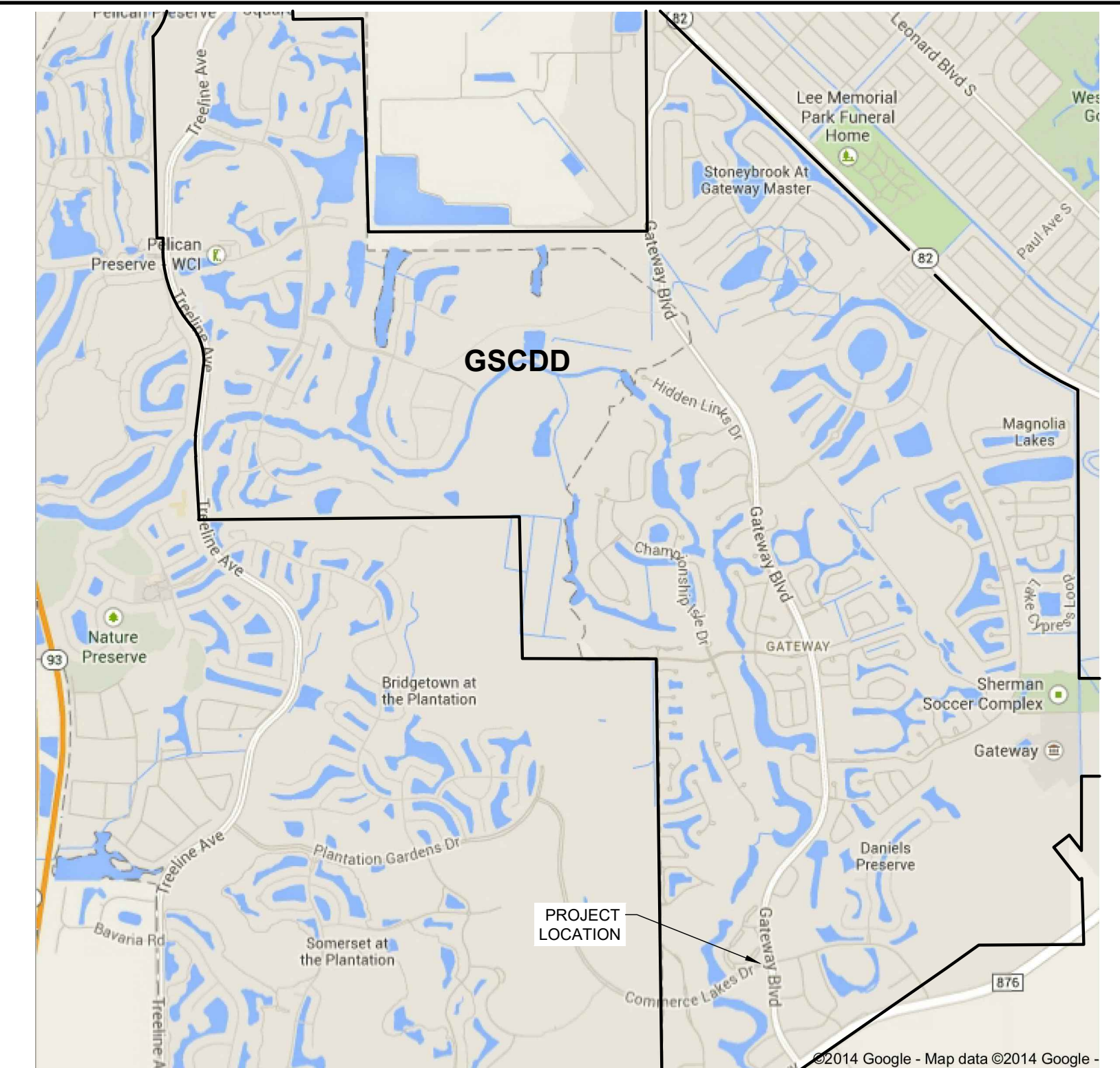
PROJECT DESCRIPTION / NOTES:

THE WORK CONSISTS OF REPLACING POTABLE WATER, IRRIGATION WATER, AND WASTEWATER MAINS AT THE GATEWAY BOULEVARD AT COMMERCE LAKES DR INTERSECTION. THE WORK INCLUDES OPEN TRENCH CONSTRUCTION OF: 16-INCH DIP WATER MAIN WITH 30-INCH STEEL CASING; 10-INCH PVC IRRIGATION MAIN; 12-INCH PVC IRRIGATION MAIN WITH 24-INCH STEEL CASING; 6-INCH PVC WASTEWATER FORCE MAIN; 12-INCH PVC WASTEWATER FORCE MAIN WITH 24-INCH STEEL CASING.

ISSUED:

1/30/2020 - BIDDING PLANS

VICINITY MAP:



PREPARED FOR

GATEWAY SERVICES DISTRICT

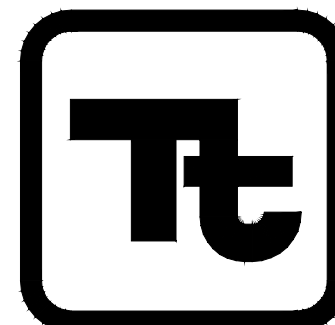
13240 GRIFFIN DRIVE
FORT MYERS, FLORIDA 33913

SHEET INDEX	
Sheet Number	Sheet Title
G-000	COVER
G-001	GENERAL NOTES & LOCATION MAP
G-002	LEGENDS AND ABBREVIATIONS
V-100	EXISTING CONDITIONS
V-101	EXISTING CONDITIONS WITH AERIAL
C-100	OVERALL SITE PLAN
C-101	COMMERCE LAKES DRIVE SITE PLAN
C-102	GATEWAY BLVD CROSSING PLAN
C-201	UTILITY PROFILES
C-202	UTILITY PROFILES
C-203	FORCE MAIN AND CASING TABLES
C-204	IRRIGATION AND WATER MAIN TABLES
C-501	STANDARD DETAILS
C-502	STANDARD DETAILS

PREPARED BY

TETRA TECH, INC.

Infrastructure Offices Throughout Florida
Orlando * Estero

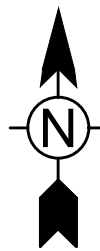
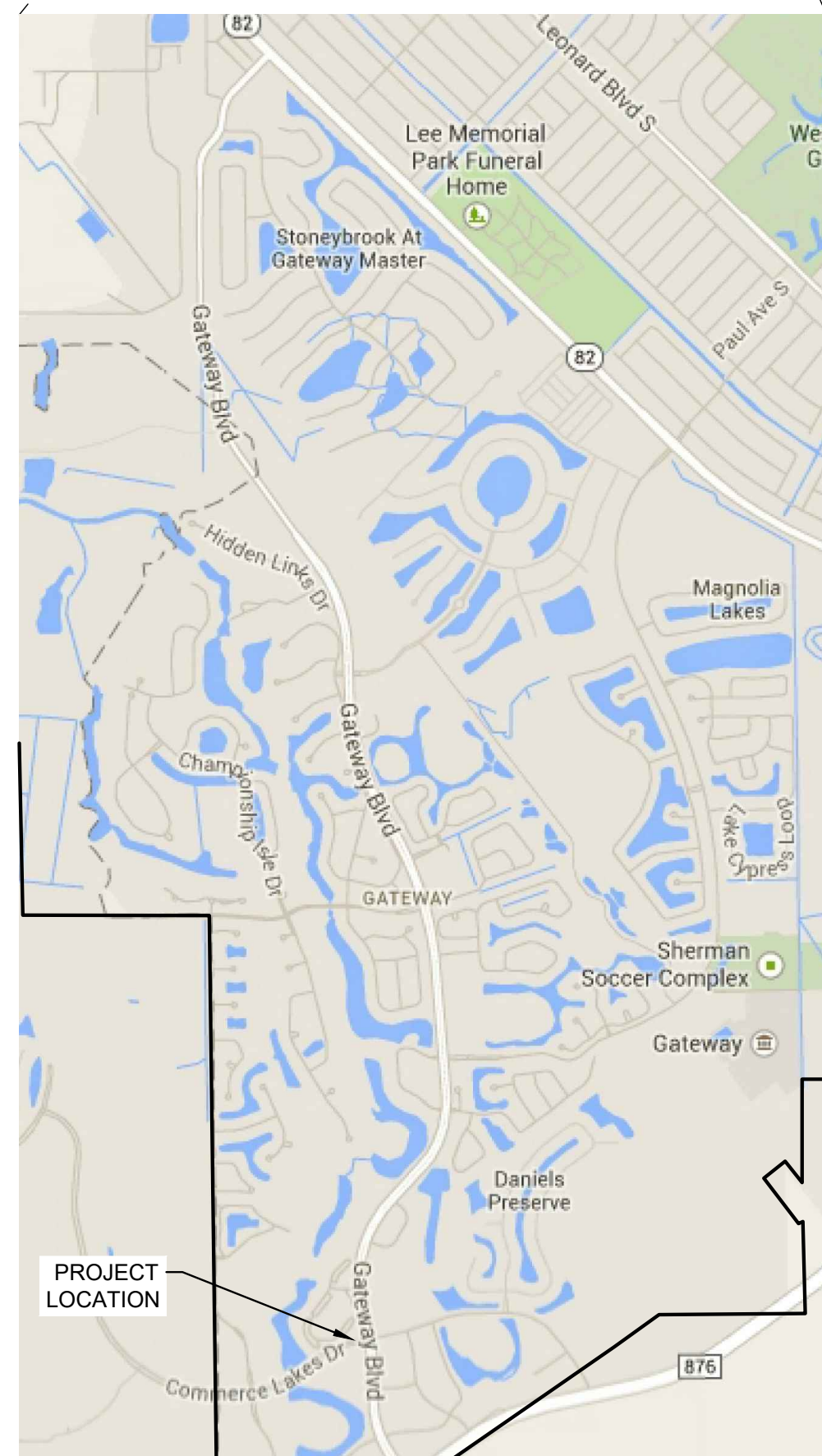
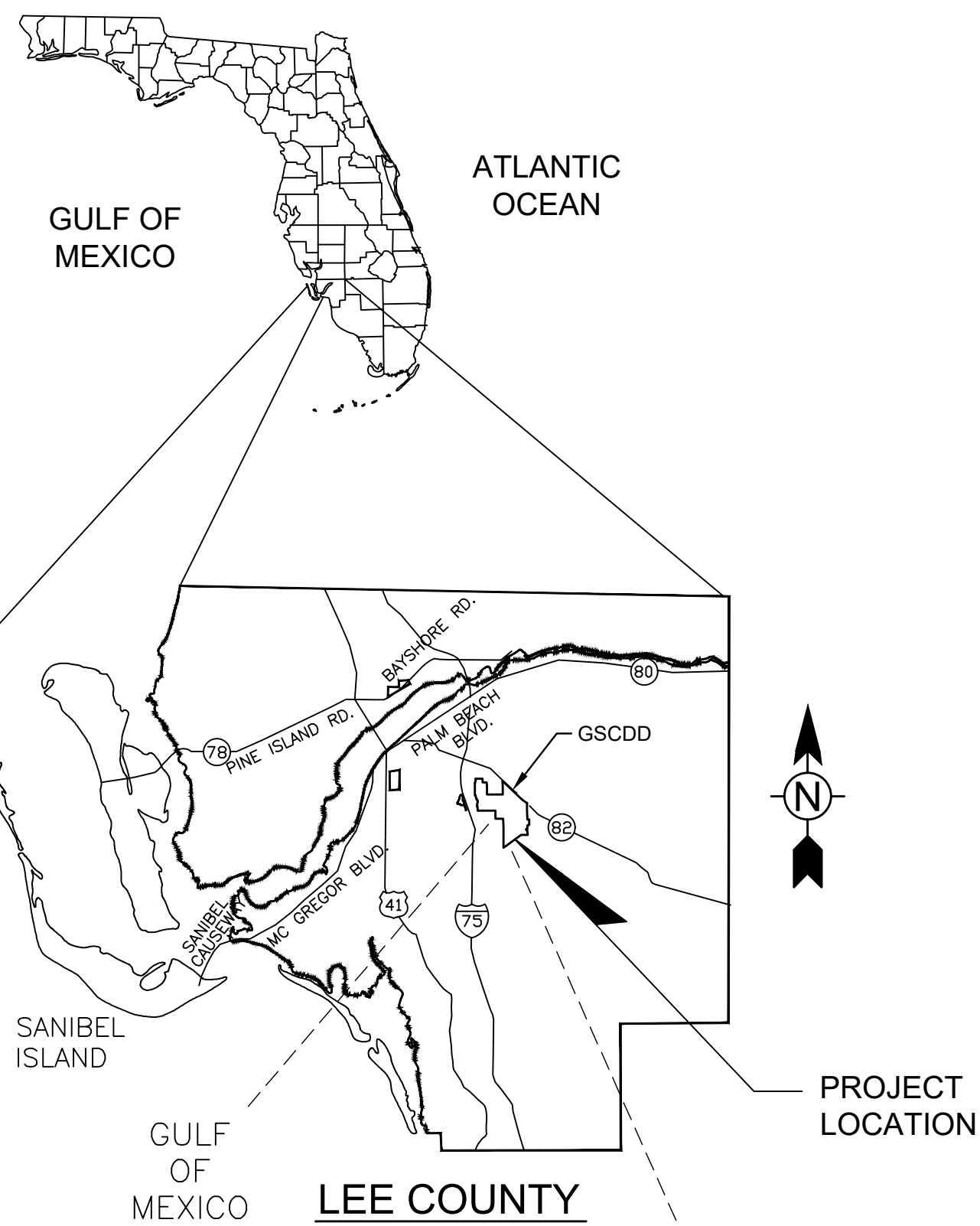


10600 CHEVROLET WAY - SUITE 102 - ESTERO - FL 33928
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P.E. No. 59913, FL
Tetra Tech Inc.
10600 Chevrolet Way, Suite 102
Estero, Florida 33928
Engineering Business No. 2429

DATE _____





GENERAL NOTES

1. CONTRACTOR SHALL REPLACE ALL UTILITY BOXES/COVERS DAMAGED DURING CONSTRUCTION.
2. OFFSET MEASUREMENTS ARE TO CENTER OF STRUCTURE OR GRATE, UNLESS OTHERWISE NOTED.
3. EXISTING DRAINAGE STRUCTURES AND UTILITIES WITHIN THE CONSTRUCTION LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR, AND REPAIR, ALL DAMAGES TO BUILDINGS, TELEPHONE OR OTHER CABLES, SEWER AND WATER PIPES, PAVEMENT, DRIVEWAYS, WALLS, SPRINKLER SYSTEMS, SURVEY MARKERS, OR OTHER STRUCTURES WHICH MAY BE ENCOUNTERED WHETHER OR NOT SHOWN ON THE PLANS. CONTRACTOR TO REPORT ANY DAMAGES TO EXISTING ITEMS TO REMAIN PRIOR TO BEGINNING CONSTRUCTION.
5. PRIOR TO ANY CONSTRUCTION OR FABRICATION, THE CONTRACTOR SHALL SUBMIT FIVE (5) SETS OF SHOP DRAWINGS FOR ALL MATERIALS, PIPE AND APPURTENANCES. CONSTRUCTION MAY PROCEED ONCE THE SHOP DRAWINGS HAVE BEEN APPROVED BY THE ENGINEER.
6. AREAS AFFECTED BY THIS PROJECT SHALL BE REGRADED TO MATCH PROPOSED CONDITIONS AS DIRECTED BY THE ENGINEER. SOD WILL BE INSTALLED AT AREAS AS DIRECTED BY THE ENGINEER.
7. ANY DISCREPANCY BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO COMMENCING ANY CONSTRUCTION WORK.
8. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
9. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE PUBLIC HEALTH AND ENSURE JOB SAFETY. THE CONTRACTOR SHALL CONFORM TO ALL APPLICABLE OCCUPATIONAL SAFETY & HEALTH AGENCY (OSHA) STANDARDS AND FEDERAL, STATE AND LOCAL GOVERNMENT SAFETY REQUIREMENTS.
10. ALL DEFECTIVE WORK NOT ACCEPTED BY THE ENGINEER, OR BY THE OWNERS REPRESENTATIVE SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
11. ANY PUBLIC LAND CORNER OR BENCHMARK WITHIN THE LIMITS OF THE CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
12. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING DRIVEWAYS UNLESS OTHERWISE APPROVED BY THE ENGINEER. WHENEVER CONSTRUCTION INTERFERES WITH AN EXISTING DRIVEWAY, THE CONTRACTOR SHALL PROVIDE AN ALTERNATE MEANS OF ACCESS TO THE PROPERTY.
13. CONTRACTOR SHALL PROVIDE SUFFICIENT PERSONNEL AND EQUIPMENT ON THE JOB AT ALL TIMES DURING CONSTRUCTION TO SATISFY THE SPECIFICATIONS AND TO COMPLETE WORK.
14. CONTRACTOR SHALL VERIFY ALL QUANTITIES SHOWN ON THE PLANS. IF ANY DISCREPANCY IN QUANTITIES IS FOUND, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND OWNER.
15. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
16. ALL FIELD LAYOUT SURVEYING FOR CONSTRUCTION AND LOCATING EASEMENTS, ROW, AND PROPERTY LINES FOR THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR AT THEIR EXPENSE, UNDER THE DIRECTION OF A LICENSED PROFESSIONAL LAND SURVEYOR.
17. BENCH MARK DATUM IS NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD 88). COORDINATE SYSTEM FOR THIS PROJECT SHALL BE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST; NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT).
18. THE COST OF SAW CUTTING SHALL BE INCIDENTAL TO THE WORK BEING PERFORMED.
19. ALL LANES MUST BE ABLE TO BE RE-OPENED IN 12 HOURS FOR TRAFFIC DURING AN EVACUATION NOTICE OF A HURRICANE OR OTHER EMERGENCY EVENTS AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT AS DIRECTED BY THE PROJECT ENGINEER.
20. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED. CONTRACTOR SHALL LOCATE AND VERIFY THE SIZE, LOCATION, AND DEPTH OF ALL EXISTING UTILITIES IN THE FIELD.
21. CONTRACTOR SHALL VERIFY ALL UTILITIES AND PROVIDE AT LEAST 48 HOURS NOTICE TO THE INDIVIDUAL UTILITY COMPANIES AND LCDOT PRIOR TO CONSTRUCTION

UTILITY/AGENCY OWNERS:	COMPANY CONTACT	TELEPHONE NUMBERS
CENTURYLINK	EZEKIEL REID	239-336-2030
MCAST CABLE	STEVE HUTSON	754-221-1254
FLORIDA POWER AND LIGHT	JUAN CRUZ	941-423-4842
GATEWAY SERVICES DISTRICT	CHRIS SHOEMAKER	239-561-1313
LEE COUNTY UTILITIES	ALLAN MAKAU	239-533-8598
TECO PEOPLES GAS (FT. MYERS)	ANTHONY BAUBLITZ	941-342-4025
22. IN ANY EXCAVATION WORK IT SHOULD BE NOTED THAT THE WATER TABLE IS HIGH IN THIS AREA.
23. ALL CONSTRUCTION IN THE COUNTY RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE CURRENT LEE COUNTY DEPARTMENT OF TRANSPORTATION STANDARDS. ALL REQUIRED INSPECTIONS SHALL BE PERFORMED AS REQUIRED BY THESE STANDARDS. CONTRACTOR SHALL PROVIDE BOND AND PERMIT FEE AS REQUIRED.
24. ALL MATERIALS AND WORKMANSHIP UNDER THIS PROJECT SHALL BE IN ACCORDANCE WITH THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF LEE COUNTY DEVELOPMENT STANDARDS, LEE COUNTY DEPARTMENT OF TRANSPORTATION (LCDOT) AND FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2019-20, UNLESS OTHERWISE NOTED.
25. ALL PERVIOUS AREAS WITHIN THE PROJECT CONSTRUCTION LIMITS SHALL BE GRASSED, SODDED, MULCHED OR LANDSCAPED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN IF INCLUDED WITH THIS PLAN SET OR PROVIDED SEPARATELY AS PART OF CONTRACT. EXISTING SOD IS MOSTLY SAINT AUGUSTINE.
26. ALL REGULATORY AND PERMITTING AGENCIES' REQUIREMENTS SHALL BE COMPLIED WITH.
27. APPROPRIATE TURBIDITY CONTROL DEVICES SUCH AS SILT FENCES WILL BE UTILIZED DURING ALL PHASES OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE NPDES NOTICE OF INTENT, NOTICE OF TERMINATION, AND LEE COUNTY RIGHT-OF-WAY PERMITS. NOI MUST BE FILED WITH FDEP IN ACCORDANCE WITH DEP DOCUMENT NO. 62-621 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND MAINTAINING AN EFFECTIVE STORMWATER POLLUTION PREVENTION PLAN.
28. ALL EXISTING PIPES THAT ARE TO REMAIN IN SERVICE WITHIN THE RIGHT-OF-WAY CORRIDOR ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED IN THE PLANS.
29. ALL EXISTING DRAINAGE STRUCTURES ARE TO REMAIN UNLESS NOTED ON THE ROADWAY PLANS.

30. BURIED PHONE LINES EXIST THROUGHOUT THE LIMITS OF WORK BUT MAY NOT BE IDENTIFIED ON THE DRAWINGS. PROCEED WITH CAUTION TO MAINTAIN THE PHONE SERVICES. DAMAGES TO, OR RELOCATION OF PHONE LINES DURING CONSTRUCTION SHALL BE REPORTED IMMEDIATELY TO AND/OR COORDINATED WITH CENTURYLINK TELEPHONE AND REPAIRED OR RELOCATED AT THE CONTRACTOR'S EXPENSE.
31. WATER, SEWER, AND IRRIGATION SERVICES MAY EXIST WITHIN THE LIMITS OF WORK BUT MAY NOT BE IDENTIFIED ON THE DRAWINGS. PROCEED WITH CAUTION TO MAINTAIN THE WATER SERVICES. DAMAGES TO, OR RELOCATION OF WATER SERVICES DURING CONSTRUCTION SHALL BE REPORTED IMMEDIATELY TO AND/OR COORDINATED WITH GSCDD AND REPAIRED OR RELOCATED AT THE CONTRACTOR'S EXPENSE.
32. OVERHEAD AND UNDERGROUND ELECTRIC LINES EXIST THROUGHOUT THE LIMITS OF WORK BUT MAY NOT BE SHOWN ON THE DRAWINGS. PROCEED WITH CAUTION TO PROTECT THE ELECTRIC LINES AND DAMAGES TO, OR RELOCATION OF ELECTRIC LINES OR POLES SHALL BE REPORTED IMMEDIATELY TO AND/OR COORDINATED WITH POWER COMPANY AND REPAIRED OR RELOCATED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL UTILITY POLE BRACING REQUIRED BY HIS OPERATIONS.
33. BURIED CABLE AND FIBER OPTIC LINES EXIST THROUGHOUT THE LIMITS OF WORK BUT MAY NOT BE SHOWN ON THE DRAWINGS. PROCEED WITH CAUTION TO PROTECT THE BURIED CABLE AND FIBER OPTIC LINES. DAMAGES TO OR RELOCATION OF CABLE AND FIBER OPTIC LINES SHALL BE REPORTED IMMEDIATELY TO AND/OR COORDINATED WITH THE CABLE COMPANY AND REPAIRED OR RELOCATED AT THE CONTRACTOR'S EXPENSE.
34. DISRUPTION OR DAMAGE TO EXISTING UTILITY LINES SHALL BE REPORTED TO THE UTILITY OWNER, GSCDD AND ENGINEER IMMEDIATELY.
35. CONTRACTOR SHALL EXCAVATE TEST PITS FOR THE PURPOSE OF PROTECTING AND CONFIRMING LOCATION AND DEPTH OF EXISTING UTILITIES OR STRUCTURES IN ADVANCE OF CONSTRUCTION. TEST PITS SHALL BE DUG BY HAND AND BACKFILLED IMMEDIATELY AFTER THEIR PURPOSE HAS BEEN SATISFIED AND SHALL NOT REMAIN OPEN DURING NONWORKING HOURS.
36. HORIZONTAL AND VERTICAL SEPARATION OF WATER, SANITARY SEWER AND OTHER UTILITIES SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) AND THE SPECIFIC REQUIREMENTS OF THE PROJECT PERMITS.
37. LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES EXPOSED DURING CONSTRUCTION SHALL BE ACCURATELY RECORDED ON THE CONSTRUCTION DRAWINGS. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY CONFLICTS WITH THE PROPOSED CONSTRUCTION.
38. CONTRACTOR SHALL PROVIDE SUPPLEMENTAL PHYSICAL SUPPORT FOR EXISTING UTILITIES THAT ARE EXPOSED BY EXCAVATION AS DIRECTED BY THE ENGINEER. THERE SHALL BE NO VISIBLE DEFLECTION ON EXISTING UTILITIES AS THEY ARE UNDERMINED FOR TRENCHING.
39. ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION ACTIVITIES SHALL BE COMPLETELY RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING PRIOR TO CONSTRUCTION.
40. THE CONTRACTOR SHALL OBTAIN THE NECESSARY TESTING TO ASSURE THAT THE PROPER COMPACTION HAS BEEN ACHIEVED PER THE PLANS AND SPECS. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH TESTING AND RETESTING OF THE AREAS AND SHALL PROVIDE THE OWNER AND THE ENGINEER WITH COPIES OF THE CERTIFICATION OF COMPACTION FROM THE TESTING COMPANY.
41. ALL EXCESS FILL FROM SITE SHALL BE STOCKPILED BY THE CONTRACTOR, IN A LOCATION DETERMINED BY THE OWNER OR THE OWNER'S REPRESENTATIVE AND THE ENGINEER.

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GATEWAY SERVICES DISTRICT

Alfred J. Miller, P.E.
P.E. No. 58913, FL
Tetra Tech Inc., Suite 102
10600 Chevrolet Way, Suite 102
Estero, Florida 33928
Engineering Business No. 2429

MARK	DATE	DESCRIPTION	BY

GATEWAY SERVICES DISTRICT
LOCATION MAP & GENERAL NOTES

Project No.:	200-37678-20002
Designed By:	TW
Drawn By:	GM
Checked By:	TW

G-001

Bar Measures 1 inch

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1/30/2020 10:57:12 AM - P:\PROJECTS\ORLANDO\IER3\78200-37678-20002\CAD\SHEETFILES\G-002 LEGENDS & ABBREVIATIONS.DWG - VITTTTIOE, DEAN

LIST OF STANDARD ABBREVIATIONS

Table listing standard abbreviations for various engineering terms, organized in columns with letters A through Z. Includes terms like AAP (Alarm Annunciator Panel), AAV (Automatic Air Release), and many others.

CIVIL LEGEND

Civil Legend containing four sub-sections: SITE SYMBOLS, UTILITY SYMBOLS, MISCELLANEOUS, and TYPICAL LINETYPES. Includes symbols for features like signs, utility markers, and various line types for easements and boundaries.

REFERENCE SYMBOLS

Reference Symbols section explaining symbols for SECTION REFERENCE, SECTION, SECTION TITLE, DETAIL REFERENCE, DETAIL, and SECTION VIEW EVERY ±100'. Includes diagrams for section and detail identification.

HATCHING LEGEND

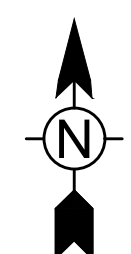
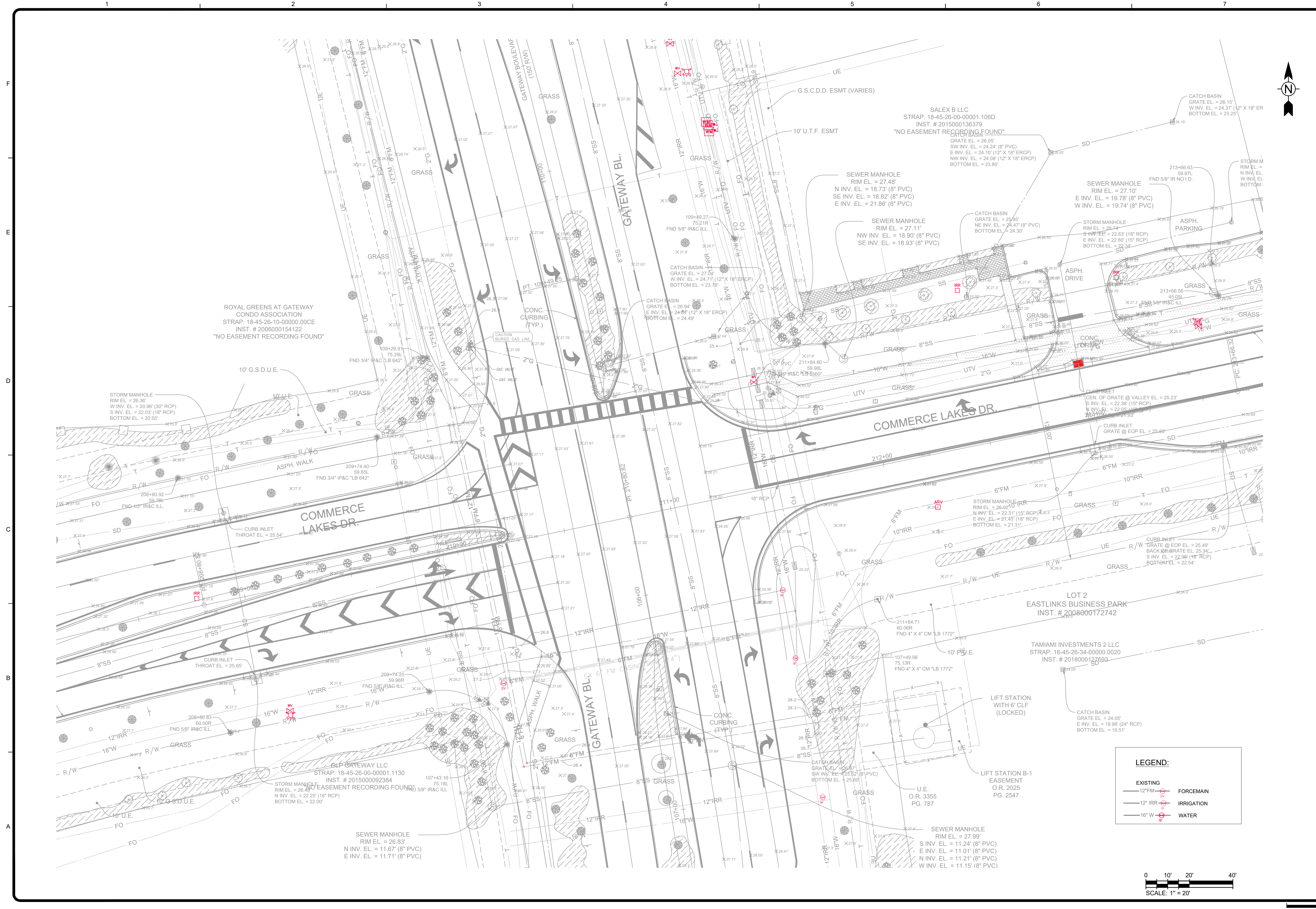
Hatching Legend table showing patterns for materials like Asphalt or Concrete Surface, Roadway/Sidewalk, Earth, Existing Pipes, and Cast-in-place Concrete.

MECHANICAL/DRAFTING LEGEND

Mechanical/Drafting Legend table showing line types for Visible Line, Hidden Line, Center Line, Phantom Line, Matchline, Break Line, and Dimension Lines and Leaders.

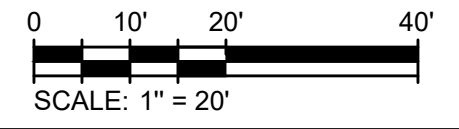
Project information block including Tetra Tech logo, company address (10800 Chevrolet Way, Suite 102, Estero, Florida 33928), contact info, and project details (Project No.: 200-37678-20002, Design By: FM, Drawn By: WV, Checked By: TW). Includes 'G-002' sheet identifier and 'Bar Measures 1 inch' note.

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LEGEND:

- EXISTING
- 12" FM — FORCEMAIN
- 12" IRR — IRRIGATION
- 16" W — WATER



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GATEWAY SERVICES DISTRICT

BY	DATE	DESCRIPTION

GATEWAY SERVICES DISTRICT

EXISTING CONDITIONS

Project No.: 200-37678-20002

Designed By: TW

Drawn By: GM

Checked By: TW

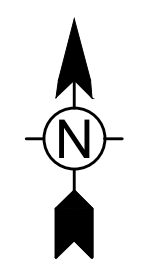
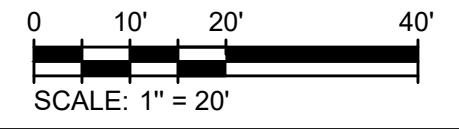
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LEGEND:

12" FM	FORCE MAIN
12" IRR	IRRIGATION
16" W	WATER



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GATEWAY SERVICES DISTRICT

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P.E. No. 59913, FL
10600 Chevrolet Way, Suite 102
Estero, Florida 33928
Engineering Business No. 2429

DATE _____

MARK	DATE	DESCRIPTION

EXISTING CONDITIONS WITH AERIAL

Project No.: 200-37678-20002

Designed By: TW

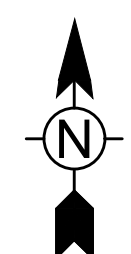
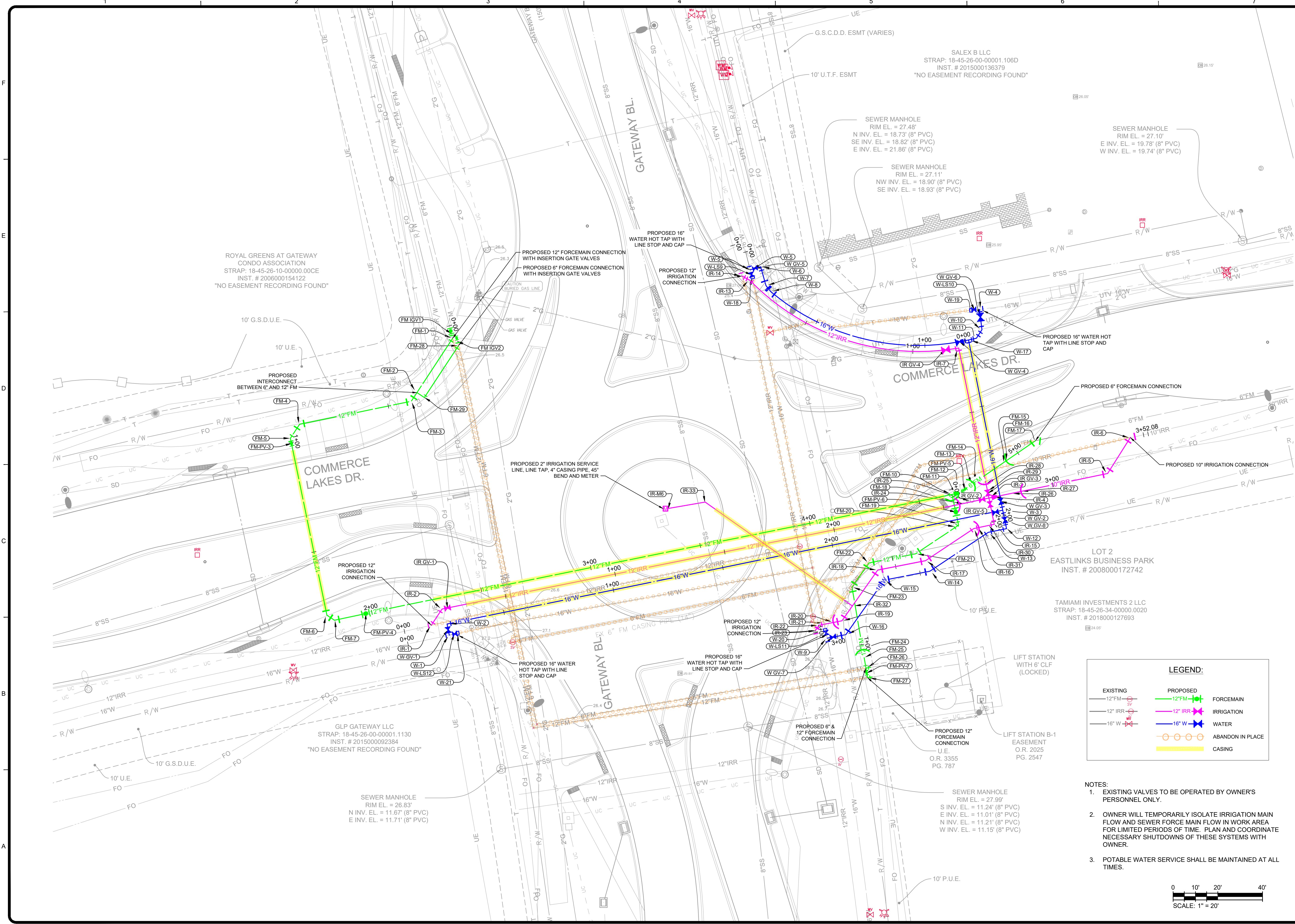
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Checked By: TW

V-101

Bar Measures 1 inch

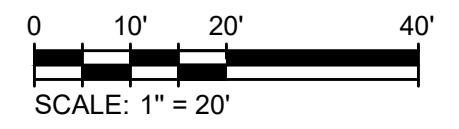
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LEGEND:

Existing 12" FM	Proposed 12" FM	Forcemain
Existing 12" IRR	Proposed 12" IRR	Irrigation
Existing 16" W	Proposed 16" W	Water
Abandon in Place		
Casing		

- NOTES:**
- EXISTING VALVES TO BE OPERATED BY OWNER'S PERSONNEL ONLY.
 - OWNER WILL TEMPORARILY ISOLATE IRRIGATION MAIN FLOW AND SEWER FORCE MAIN FLOW IN WORK AREA FOR LIMITED PERIODS OF TIME. PLAN AND COORDINATE NECESSARY SHUTDOWNS OF THESE SYSTEMS WITH OWNER.
 - POTABLE WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.



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GATEWAY SERVICES DISTRICT

Alfred J. Mittl, P.E.
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10600 Chevrolet Way, Estero, Florida 33928
Engineering Business No. 2429

DATE	
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MARK	DATE	DESCRIPTION

GATEWAY SERVICES DISTRICT

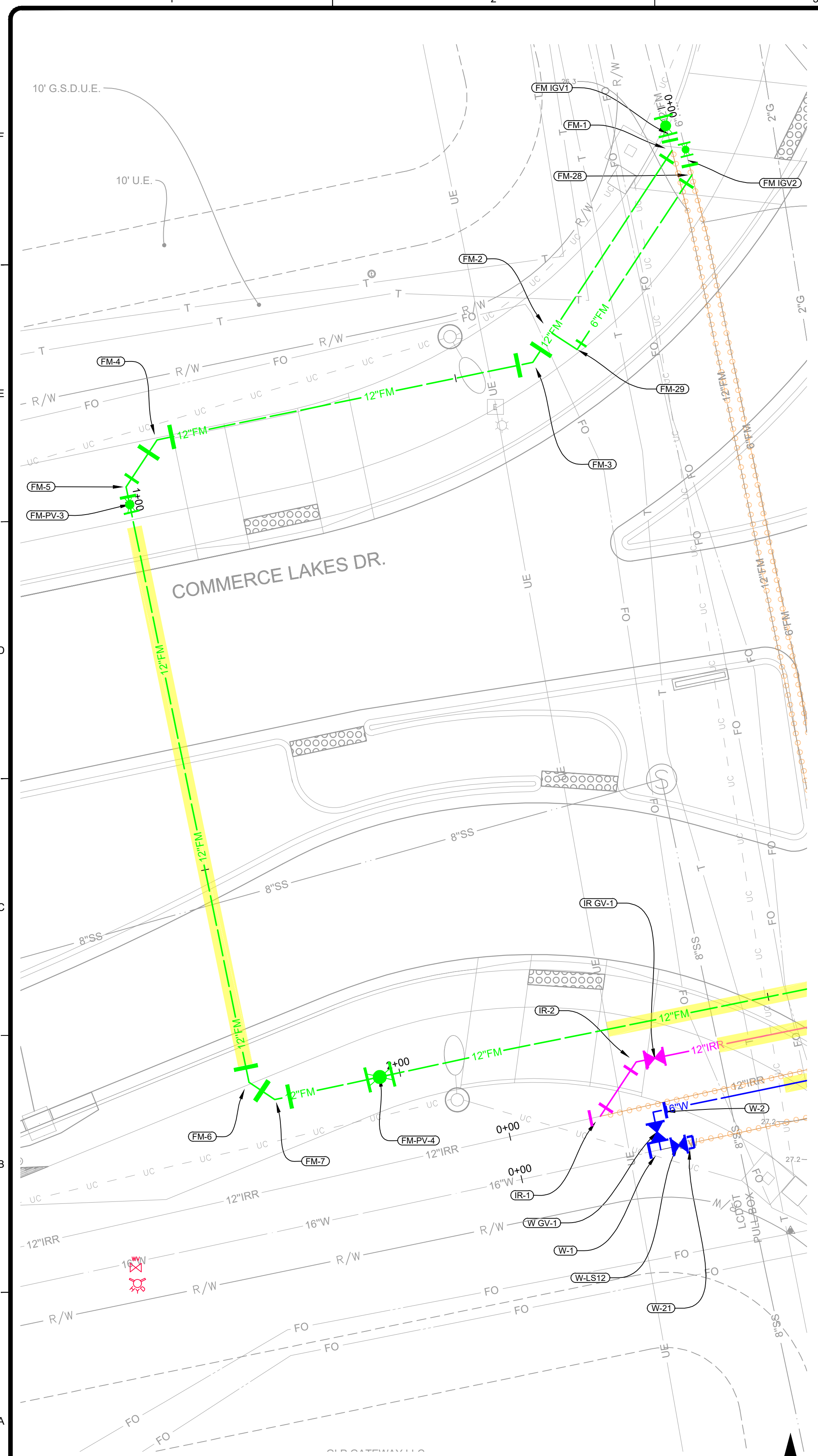
OVERALL SITE PLAN

Project No.: 200-37678-20002
Designed By: TW
Drawn By: GM
Checked By: TW

C-100

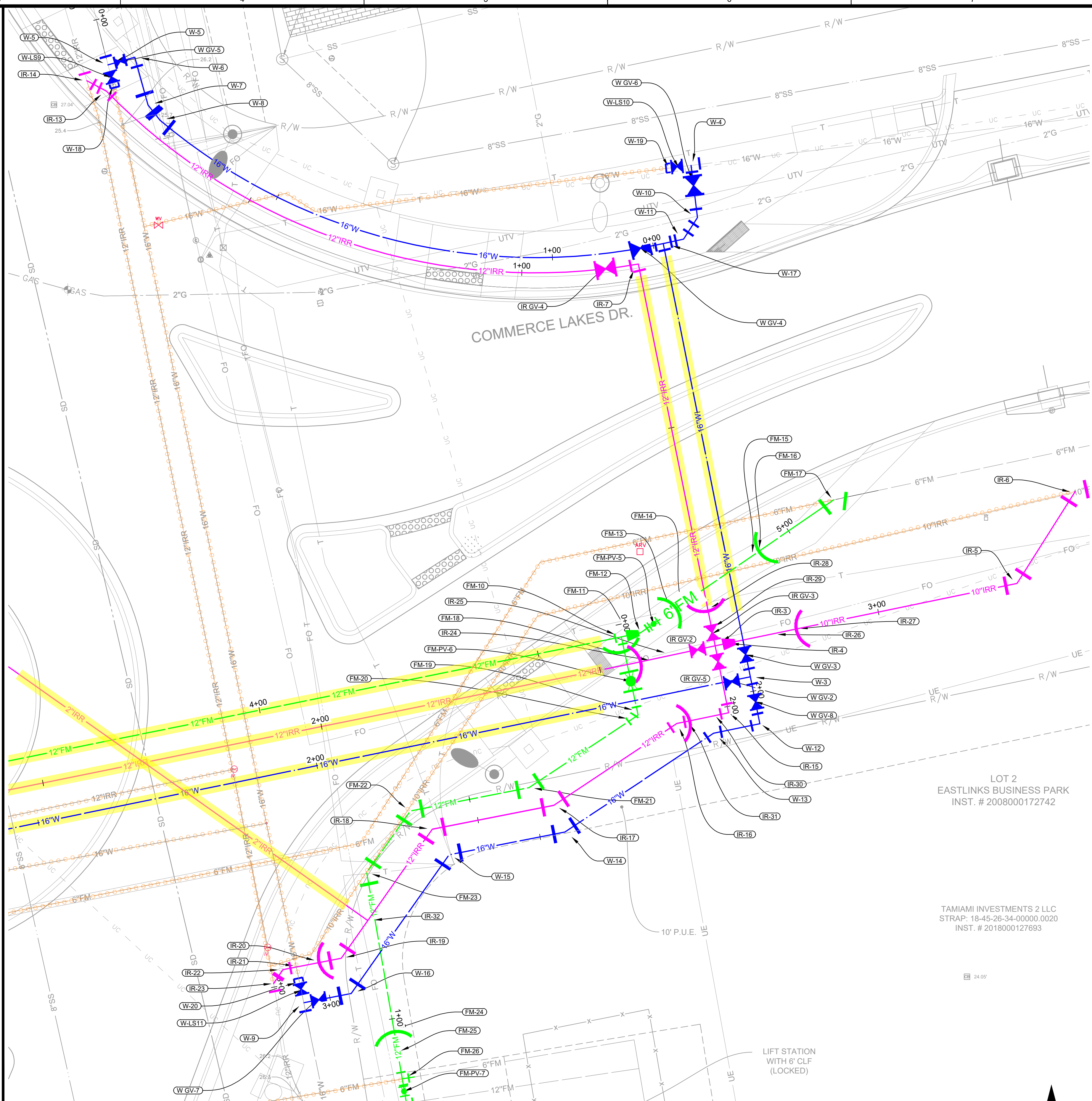
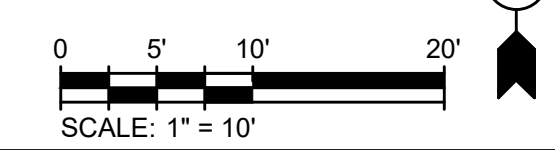
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Bar Measures 1 inch

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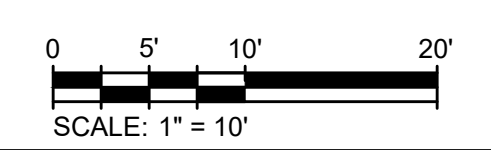
EASTERN COMMERCE LAKES DR FORCEMAIN CROSSING PLAN

SCALE: 1"=10'



WESTERN COMMERCE LAKES DR CROSSING PLAN

SCALE: 1"=10'



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GATEWAY SERVICES DISTRICT

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 10600 Chevrolet Way, Suite 102
 Estero, Florida 33928
 Engineering Business No. 2429

BY	DATE	DESCRIPTION

GATEWAY SERVICES DISTRICT
COMMERCE LAKES DRIVE
SITE PLAN

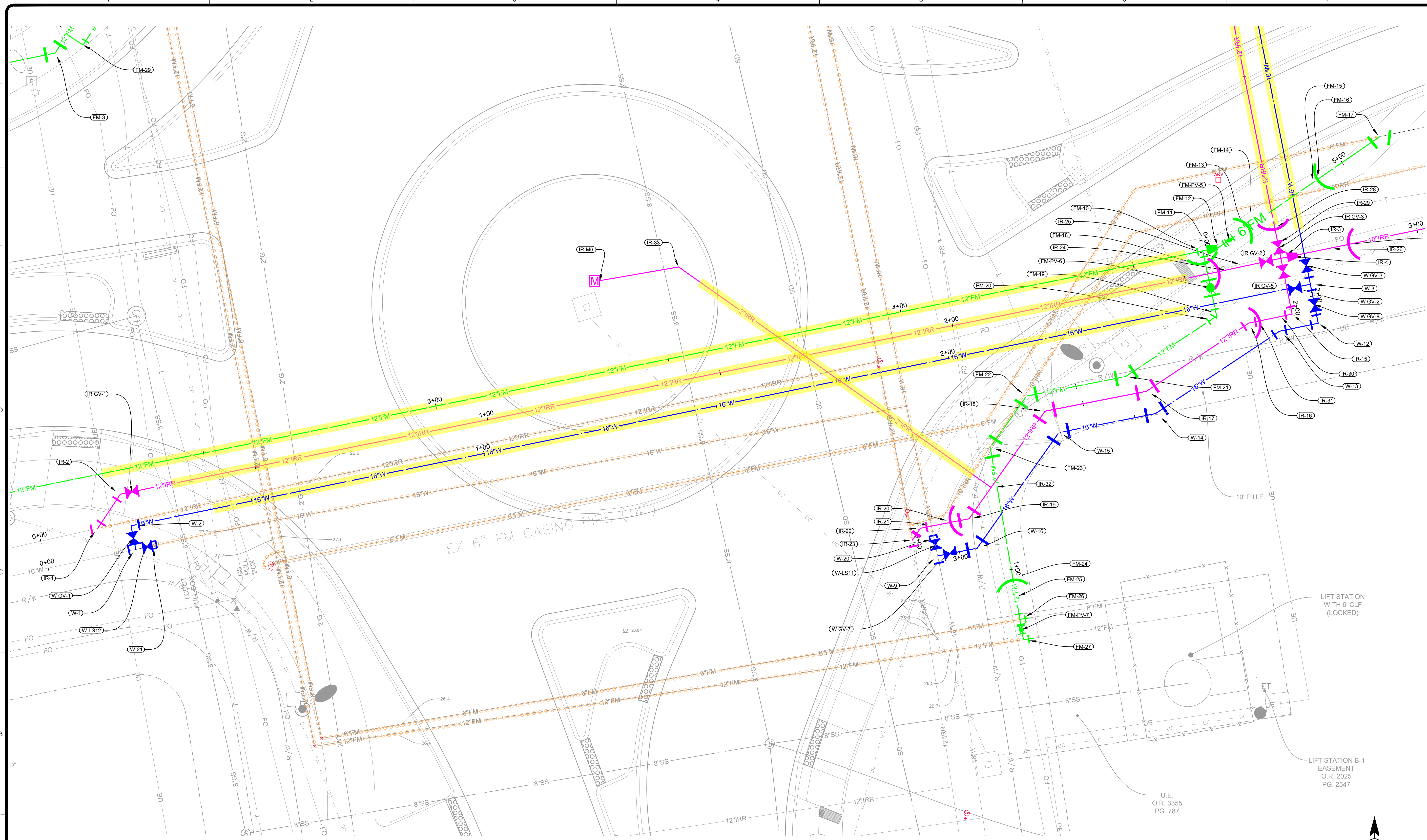
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 Drawn By: GM
 Checked By: TW

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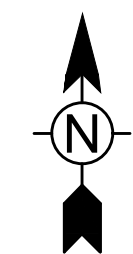
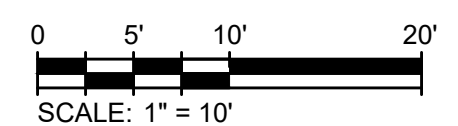
Bar Measures 1 inch


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GATEWAY BLVD CROSSING PLAN
SCALE: 1"=10'





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10600 Chevrolet Way, Suite 102
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Engineering Business No. 2429

BY	MARK	DATE	DESCRIPTION

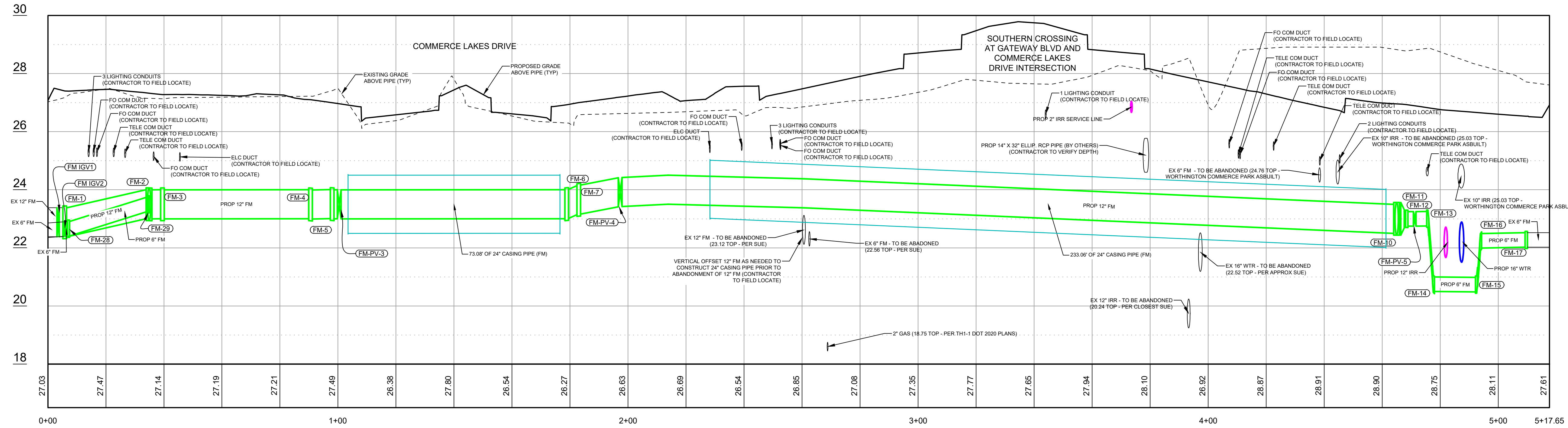
GATEWAY SERVICES DISTRICT

GATEWAY BLVD CROSSING PLAN

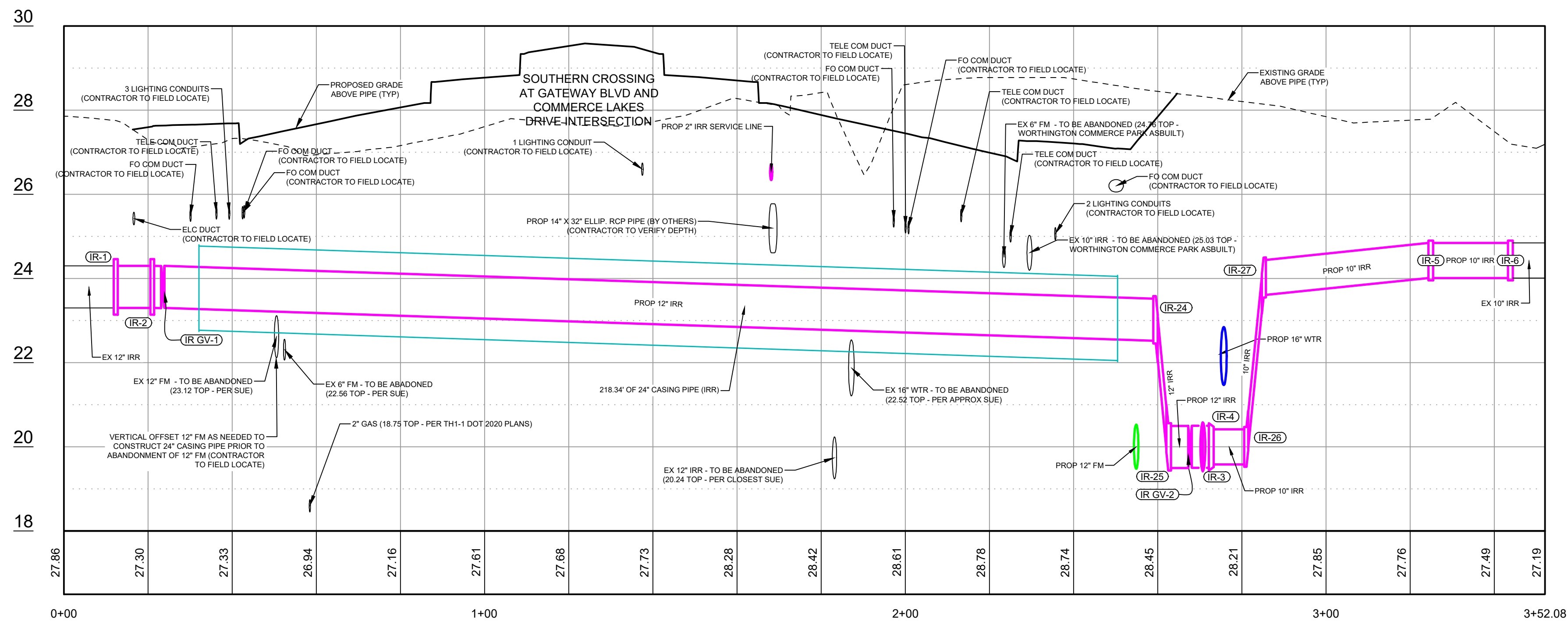
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Checked By: TW

C-102

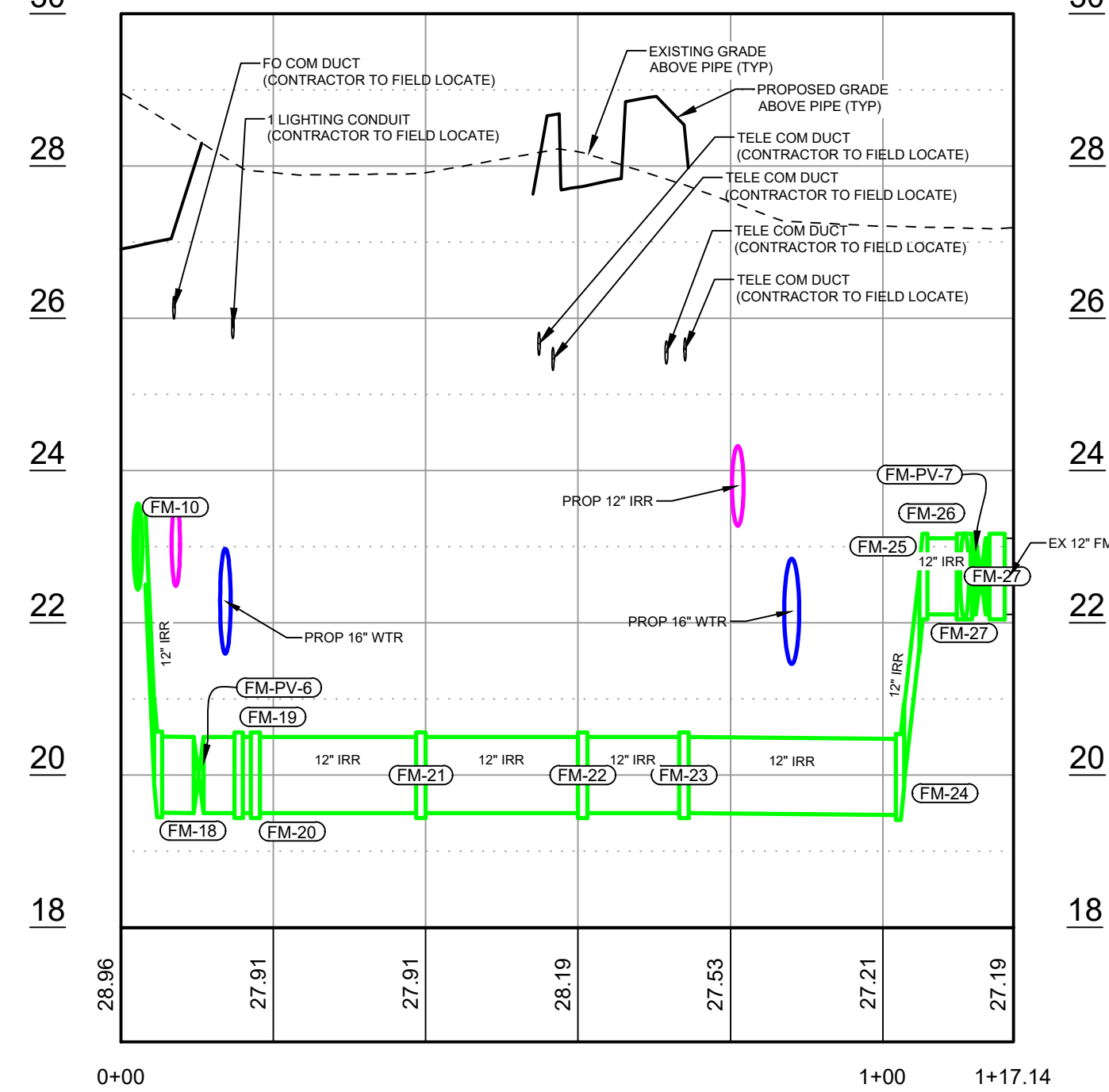
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Bar Measures 1 inch



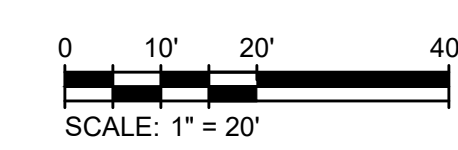
PROP 6 12 FM (ACROSS BOTH ROADS) PROFILE
SCALE: HORIZ: 1"= 20' VERT: 1"= 2'



PROP 10 12 IRR (ACROSS GATEWAY) PROFILE
SCALE: HORIZ: 1"= 20' VERT: 1"= 2'



PROP 12 FM (PS) PROFILE
SCALE: HORIZ: 1"= 20' VERT: 1"= 2'



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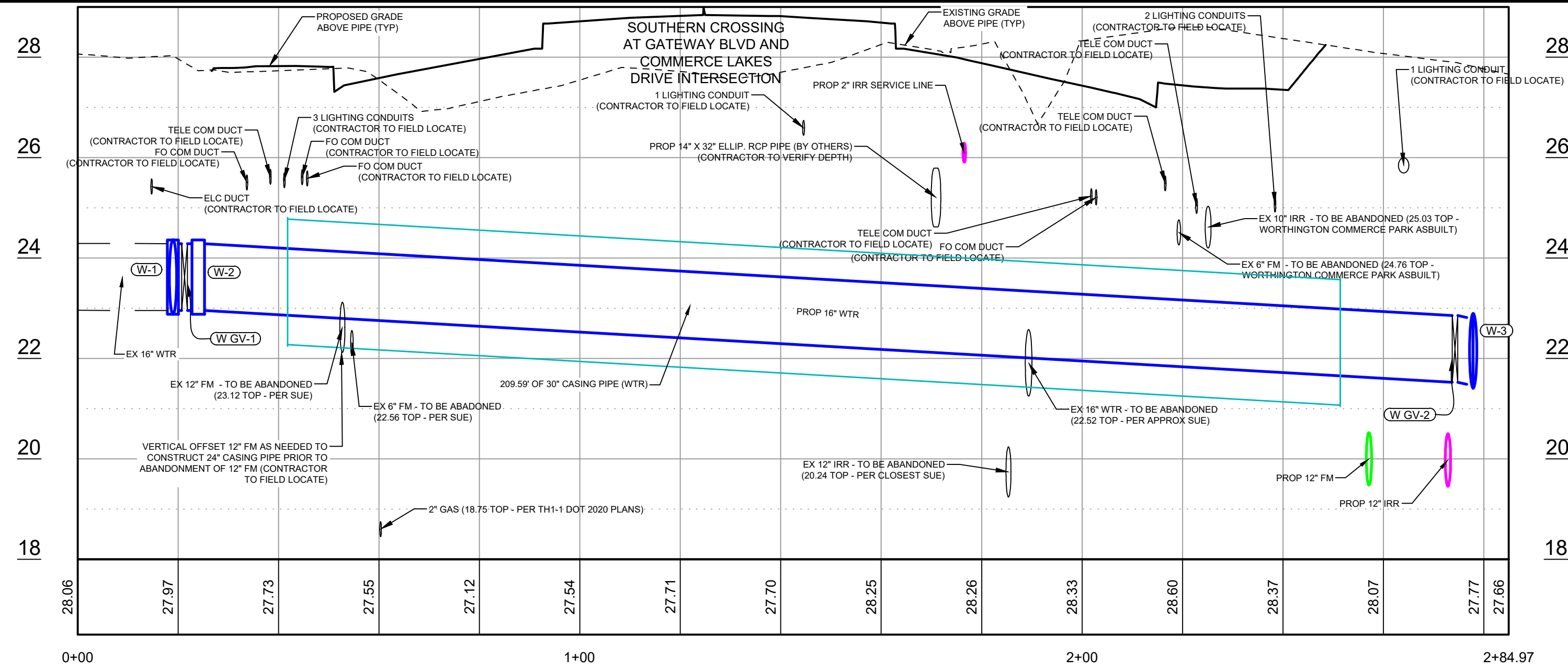
Alfred J. Mill, P.E.
P.E. No. 55913, FL
Tetra Tech Inc., Suite 102
10600 Chevrolet Way, Estero, Florida 33928
Engineering Business No. 2429

BY	DATE	DESCRIPTION

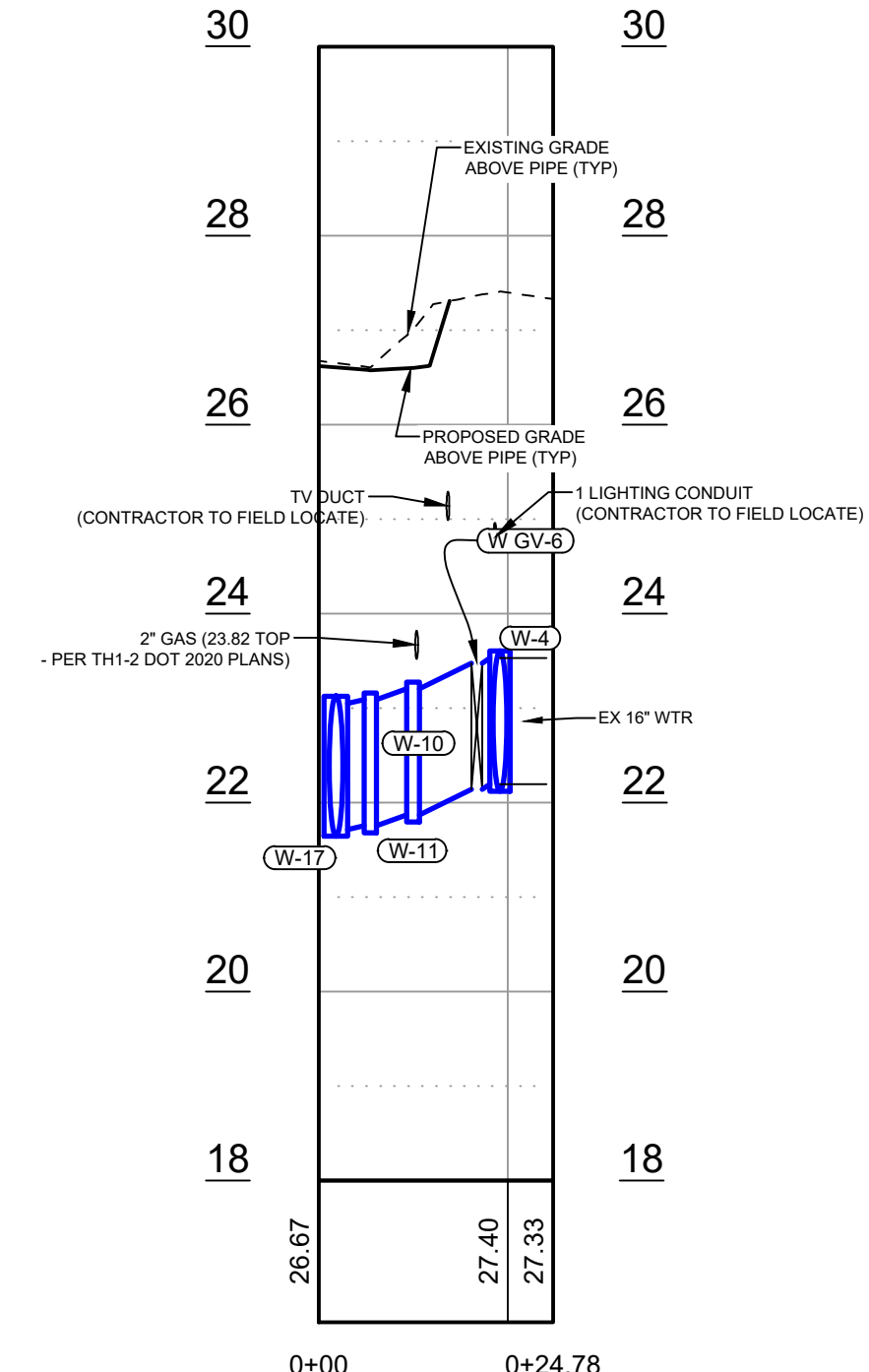
MARK	DATE	DESCRIPTION

Project No.: 200-37678-20002
Designed By: TW
Drawn By: GM
Checked By: TW

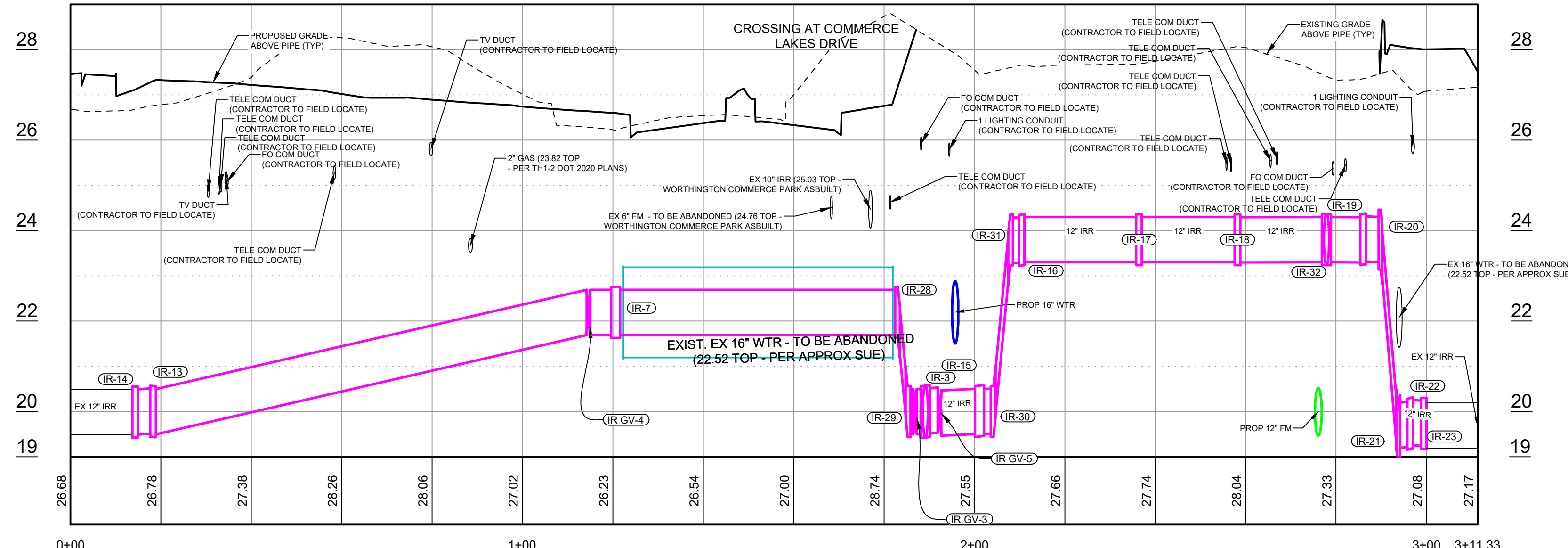
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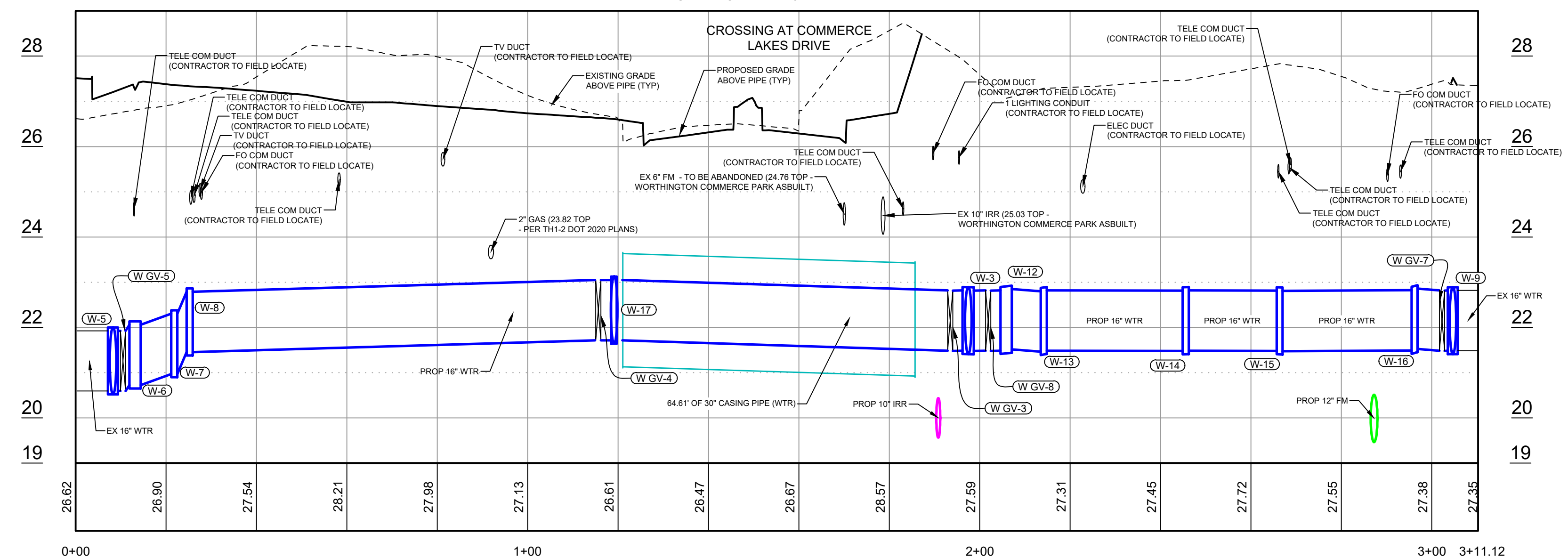
PROP 16 WTR (ACROSS GATEWAY) PROFILE
SCALE: HORIZ: 1"= 20' VERT: 1"= 2'



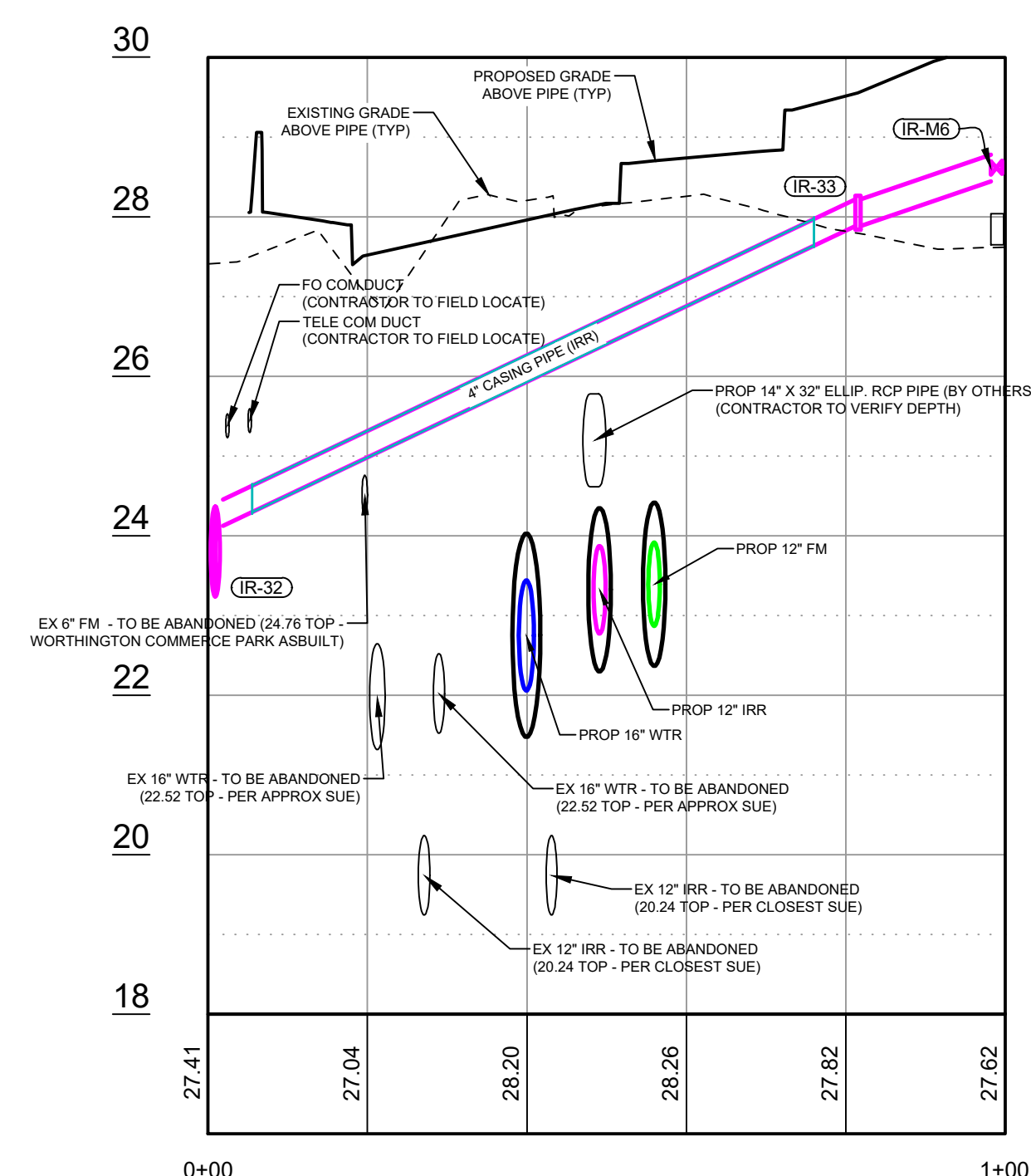
PROP 16 WTR (NE) PROFILE
SCALE: HORIZ: 1"= 20' VERT: 1"= 2'



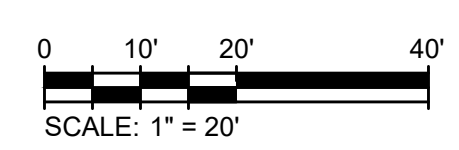
PROP 12 IRR (ACROSS COMMERCE) PROFILE
SCALE: HORIZ: 1"= 20' VERT: 1"= 2'



PROP 16 WTR (ACROSS COMMERCE) PROFILE
SCALE: HORIZ: 1"= 20' VERT: 1"= 2'



PROP 2 IRR SERVICE LINE PROFILE
SCALE: HORIZ: 1"= 20' VERT: 1"= 2'



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GATEWAY SERVICES DISTRICT

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Engineering Business No. 2429

DATE

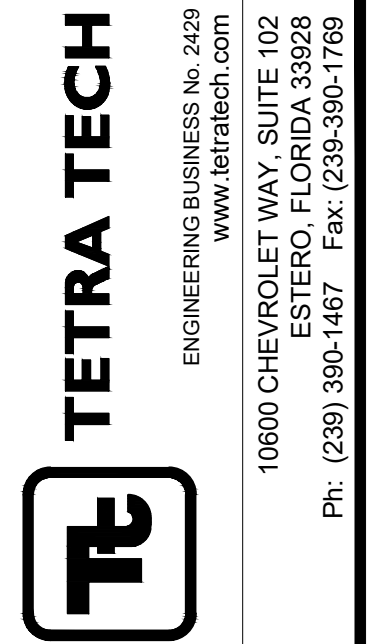
MARK	DATE	DESCRIPTION

GATEWAY SERVICES DISTRICT

UTILITY PROFILES

Project No.: 200-37678-20002
Designed By: TW
Drawn By: GM
Checked By: TW

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 Estero, Florida 33928
 Engineering Business No. 2429

MARK	DATE	DESCRIPTION

GATEWAY SERVICES DISTRICT

FORCE MAIN AND CASING TABLES

Project No.: 200-37678-20002
 Designed By: TW
 Drawn By: GM
 Checked By: TW

C-203

Bar Measures 1 inch

FORCE MAIN TABLES

ALIGNMENT	LENGTH	PIPE SIZE	DESCRIPTION
PROP 6 12 FM (ACROSS BOTH ROADS)	7.16'	6"	EX 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	3.10'	12"	EX 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	203.13'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	14.95'	6"	PROP 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	0.71'	6"	PROP 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	13.98'	6"	PROP 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	1.30'	6"	PROP 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	7.59'	6"	EX 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	1.10'	6"	EX 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	3.69'	6"	PROP 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	15.90'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	77.16'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	2.33'	6"	PROP 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	1.31'	6"	EX 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	1.24'	12"	EX 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	1.89'	6"	PROP 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	0.44'	6"	PROP 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	0.46'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	26.71'	6"	PROP 6" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	3.03'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	46.99'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	12.99'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	2.88'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	1.12'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	6.22'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	49.78'	12"	PROP 12" FM
PROP 6 12 FM (ACROSS BOTH ROADS)	27.45'	12"	PROP 12" FM
PROP 12 FM (PS)	2.00'	12"	PROP 12" FM
PROP 12 FM (PS)	3.85'	12"	PROP 12" FM
PROP 12 FM (PS)	4.14'	12"	PROP 12" FM
PROP 12 FM (PS)	1.10'	12"	EX 12" FM
PROP 12 FM (PS)	0.50'	12"	PROP 12" FM
PROP 12 FM (PS)	4.07'	12"	PROP 12" FM
PROP 12 FM (PS)	0.50'	12"	PROP 12" FM
PROP 12 FM (PS)	27.21'	12"	PROP 12" FM
PROP 12 FM (PS)	12.04'	12"	PROP 12" FM
PROP 12 FM (PS)	20.00'	12"	PROP 12" FM
PROP 12 FM (PS)	20.50'	12"	PROP 12" FM
PROP 12 FM (PS)	0.50'	12"	PROP 12" FM
PROP 12 FM (PS)	1.10'	12"	PROP 12" FM

ID	ALIGNMENT	DIAMETER	TYPE	COORDINATES	ELEV. (CENTER)
FM-1	PROP 6 12 FM (ACROSS BOTH ROADS)	12	45° BEND	N:809915.0030 E:737170.0776	22.88
FM-2	PROP 6 12 FM (ACROSS BOTH ROADS)	12 X 6	TEE	N:809890.7109 E:737154.1059	23.50
FM-3	PROP 6 12 FM (ACROSS BOTH ROADS)	12	45° BEND	N:809886.8228 E:737151.5495	23.50
FM-4	PROP 6 12 FM (ACROSS BOTH ROADS)	12	45° BEND	N:809876.4963 E:737101.5785	23.50
FM-5	PROP 6 12 FM (ACROSS BOTH ROADS)	12	45° BEND	N:809870.2520 E:737097.4730	23.50
FM-6	PROP 6 12 FM (ACROSS BOTH ROADS)	12	45° BEND	N:809791.0697 E:737113.8063	23.50
FM-7	PROP 6 12 FM (ACROSS BOTH ROADS)	12	45° BEND	N:809788.7799 E:737117.2483	23.65
FM-10	PROP 6 12 FM (ACROSS BOTH ROADS)	12 X 6	TEE - (45 DOWN)	N:809845.0841 E:737393.5246	23.00
FM-11	PROP 6 12 FM (ACROSS BOTH ROADS)	12 X 6	REDUCER	N:809845.5139 E:737395.5257	23.00
FM-12	PROP 6 12 FM (ACROSS BOTH ROADS)	6	22.5° BEND	N:809845.8172 E:737396.9373	23.00
FM-13	PROP 6 12 FM (ACROSS BOTH ROADS)	6	45° BEND	N:809849.7215 E:737402.6102	23.00
FM-14	PROP 6 12 FM (ACROSS BOTH ROADS)	6	45° BEND	N:809850.8620 E:737404.2676	21.09
FM-15	PROP 6 12 FM (ACROSS BOTH ROADS)	6	45° BEND	N:809850.2616 E:737416.4744	20.73
FM-16	PROP 6 12 FM (ACROSS BOTH ROADS)	6	45° BEND	N:809860.0766 E:737417.6589	21.86
FM-17	PROP 6 12 FM (ACROSS BOTH ROADS)	6	22.5° BEND	N:809869.1795 E:737430.8878	22.27
FM-18	PROP 12 FM (PS)	12	45° BEND	N:809841.9848 E:737394.1904	20.01
FM-19	PROP 12 FM (PS)	12	45° BEND	N:809832.0678 E:737396.3206	20.00
FM-20	PROP 12 FM (PS)	12	22.5° BEND	N:809830.5992 E:737395.3766	20.00
FM-21	PROP 12 FM (PS)	12	22.5° BEND	N:809818.5617 E:737377.2672	20.00
FM-22	PROP 12 FM (PS)	12	45° BEND	N:809814.4773 E:737356.4156	20.00
FM-23	PROP 12 FM (PS)	12	45° BEND	N:809803.6180 E:737348.7500	20.00
FM-24	PROP 12 FM (PS)	12	45° BEND	N:809776.1890 E:737353.4863	19.98
FM-25	PROP 12 FM (PS)	12	45° BEND	N:809772.1197 E:737354.1890	22.61
FM-26	PROP 12 FM (PS)	12 X 6	TEE	N:809767.3426 E:737355.0139	22.61
FM-27	PROP 12 FM (PS)	12	90° BEND	N:809763.0893 E:737355.7331	22.61
FM-28	PROP 6 12 FM (ACROSS BOTH ROADS)	6	45° BEND	N:809911.7325 E:737172.7176	22.66
FM-29	PROP 6 12 FM (ACROSS BOTH ROADS)	6	90° BEND	N:809888.5139 E:737157.4474	23.50

ID	ALIGNMENT	DIAMETER	TYPE	COORDINATES	ELEV. (CENTER)
FM-PV-3	PROP 6 12 FM (ACROSS BOTH ROADS)	12"	PLUG VALVE	N:809867.8964 E:737097.9591	23.50
FM-PV-4	PROP 6 12 FM (ACROSS BOTH ROADS)	12"	PLUG VALVE	N:809791.7724 E:737131.2052	23.92
FM-PV-5	PROP 6 12 FM (ACROSS BOTH ROADS)	6"	PLUG VALVE	N:809847.3775 E:737399.2037	23.00
FM-PV-6	PROP 12 FM (PS)	12"	PLUG VALVE	N:809837.2975 E:737395.1972	20.00
FM-PV-7	PROP 12 FM (PS)	12"	PLUG VALVE	N:809765.2145 E:737355.3813	22.61
FM IG V1	PROP 6 12 FM (ACROSS BOTH ROADS)	12"	FM INSERTION VALVE	N:809917.2108 E:737169.5381	22.88
FM IG V2	PROP 6 12 FM (ACROSS BOTH ROADS)	6"	FM INSERTION VALVE	N:809913.6690 E:737172.2426	22.65

CASING PIPE TABLES

ALIGNMENT	LENGTH	PIPE SIZE	DESCRIPTION	START CASING	ENDING CASING
PROP 2 IRR SERVICE LINE	70.49'	4"	4" CASING PIPE (IRR)	N:809838.5148 E:737287.5332 IE:27.64	N:809797.8613 E:737345.1245 IE:24.30
PROP 6 12 FM (ACROSS BOTH ROADS)	73.08'	24"	24" CASING PIPE (FM)	N:809793.3454 E:737113.3369 IE:22.50	N:809864.9162 E:737098.5663 IE:22.50
PROP 6 12 FM (ACROSS BOTH ROADS)	233.06'	24"	24" CASING PIPE (FM)	N:809844.3620 E:737389.9569 IE:22.01	N:809798.1259 E:737161.5316 IE:23.02
PROP 10 12 IRR (ACROSS GATEWAY)	218.34'	24"	24" CASING PIPE (IRR)	N:809795.9908 E:737176.2289 IE:22.77	N:809839.3293 E:737390.2239 IE:22.05
PROP 12 IRR (ACROSS COMMERCE)	59.63'	24"	24" CASING PIPE (IRR)	N:809908.9885 E:737396.8658 IE:21.19	N:809850.5236 E:737408.6140 IE:21.19
PROP 16 WTR (ACROSS COMMERCE)	64.61'	30"	30" CASING PIPE (WTR)	N:809849.5904 E:737413.9066 IE:20.93	N:809912.9314 E:737401.1734 IE:21.13
PROP 16 WTR (ACROSS GATEWAY)	209.59'	30"	30" CASING PIPE (WTR)	N:809832.7106 E:737390.3247 IE:21.07	N:809790.6581 E:737185.0009 IE:22.27

IRRIGATION TABLES

PIPE TABLE with columns: ALIGNMENT, LENGTH, PIPE SIZE, DESCRIPTION. Includes entries for PROP 2 IRR SERVICE LINE and PROP 10 12 IRR (ACROSS GATEWAY).

FITTING TABLE with columns: ID, ALIGNMENT, DIAMETER, TYPE, COORDINATES, ELEV. (CENTER). Lists various fittings like 45° BEND, CROSS, REDUCER, and 90° BEND.

APPURTENANCE TABLE with columns: ID, ALIGNMENT, DIAMETER, TYPE, COORDINATES, ELEV. (CENTER). Lists appurtenances like IRR METER, GATE VALVE, and TAPPING SLEEVE.

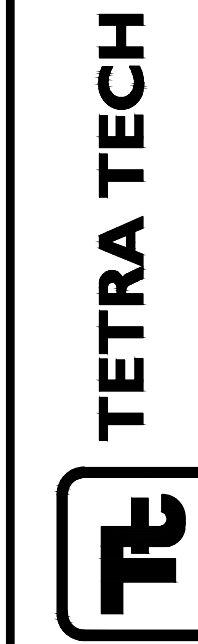
WATER TABLES

PIPE TABLE with columns: ALIGNMENT, LENGTH, PIPE SIZE, DESCRIPTION. Lists water table entries like PROP 16 WTR (ACROSS COMMERCE).

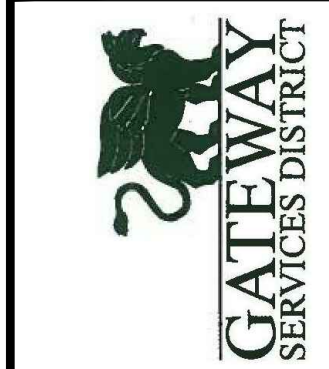
PIPE TABLE with columns: ALIGNMENT, LENGTH, PIPE SIZE, DESCRIPTION. Lists water table entries like PROP 16 WTR (ACROSS GATEWAY).

FITTING TABLE with columns: ID, ALIGNMENT, DIAMETER, TYPE, COORDINATES, ELEV. (CENTER). Lists fittings for water tables such as TAPPING SLEEVE, BEND, TEE, and CAP.

APPURTENANCE TABLE with columns: ID, ALIGNMENT, DIAMETER, TYPE, COORDINATES, ELEV. (CENTER). Lists appurtenances for water tables like TEMPORARY LINE STOP, GATE VALVE, and TAPPING GATE VALVE.



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Engineering Business No. 2429

Table with columns: BY, MARK, DATE, DESCRIPTION. Includes a row for DATE.

Table with columns: MARK, DATE, DESCRIPTION. Includes a row for DATE.

GATEWAY SERVICES DISTRICT
IRRIGATION AND WATER MAIN TABLES

Project No.: 200-37678-20002
Designed By: TW
Drawn By: GM
Checked By: TW

C-204

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DETAIL STANDARD DETAIL NO. 6.1 LEE COUNTY UTILITIES TAPPING SLEEVE AND VALVE

N.T.S.

1 CONCRETE PAD (SEE VALVE INSTALLATION DETAIL)
 2 SET TOP OF BOX FLUSH WITH FINISHED GRADE
 3 EXTENSION STEM IF TOP OF OPERATING NUT IS MORE THAN 30" BELOW FINISH GRADE
 4 VALVE BOX (SEE VALVE INSTALLATION DETAIL)
 5 OUTLET FOR TESTING
 6 MJ RESTRAINED
 7 MAIN SIZE VARIES
 8 TAPPING VALVE (SEE VALVE INSTALLATION DETAIL)
 9 LCU APPROVED ALL STAINLESS STEEL PRESSURE RATED TAPPING SLEEVE. FOR SIZE ON SIZE TAPS A FLANGED TAPPING SLEEVE IS REQUIRED. SPRING LOADED TAPPING SLEEVE IS REQUIRED WHEN CONNECTING TO HDPE (SEE APPROVED MATERIAL LIST).
 10 BRASS PLATE (SEE VALVE INSTALLATION DETAIL)
 11 CAST IRON DROP COVER MARKED "WATER," "SEWER," OR "REUSE"
 12 COMPACTED SUITABLE EARTH BACKFILL
 13 3/4" GRANULAR MATERIAL #57 STONE
 14 12 GAUGE DOUBLE INSULATED COPPER LOCATING WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

DETAIL STANDARD DETAIL NO. 6.2 LEE COUNTY UTILITIES VALVE INSTALLATION

N.T.S.

1 BRASS PLATE: SIZE OF VALVE, VALVE TYPE No. OF TURNS & DIRECTION TO OPEN VALVE M.F.G. & YEAR INSTALL SYSTEM "WATER" OR "SEWER" OR "REUSE" OR "FIRE"
 2 ANCHOR
 3 EIGHT (8) #4 BARS OVERLAP EACH CORNER BY 2"
 4 30" SQ X 4" THK. CONC. PAD SURROUNDING BOX, MIN. 3,000 P.S.I. POURED IN PLACE
 5 SET TOP OF BOX FLUSH WITH FINISHED GRADE
 6 HEAVY DUTY TRAFFIC BEARING CAST IRON VALVE BOX, ADJUSTABLE SCREW TYPE, 5 1/4" DIAMETER SHAFT THAT IS LCU APPROVED
 7 EXTENSION STEM WITH 2" OPERATING NUT AS REQUIRED, IF NUT IS MORE THAN 30" BELOW FINISH GRADE
 8 RISER NOT TO BEAR ON VALVE OR PIPE
 9 CAST IRON DROP COVER MARKED "WATER" OR "SEWER" OR "REUSE OR "FIRE"
 10 COMPACTED SUITABLE EARTH BACKFILL
 11 3/4" GRANULAR MATERIAL #57 STONE
 12 12 GAUGE DOUBLE INSULATED COPPER LOCATING WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

DETAIL STANDARD DETAIL NO. 6.15 LEE COUNTY UTILITIES TEMPORARY CONSTRUCTION JUMPER WITH METER

N.T.S.

NOTES:
 CONTRACTOR/CUSTOMER SHALL APPLY AT LEE COUNTY UTILITIES FOR TEMPORARY WATER SERVICE FIVE DAYS PRIOR TO REQUIRED SERVICE DATE.
 THE METER ONLY WILL BE FURNISHED BY LEE COUNTY UTILITIES. ALL FITTINGS, PIPING, VALVES AND MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR/CUSTOMER. THE APPROVED BACKFLOW PREVENTION DEVICE SHALL BE TESTED AND CERTIFIED BY LEE COUNTY UTILITIES APPROVED CERTIFIED BACKFLOW PREVENTION TECHNICIAN (FURNISHED BY CONTRACTOR/CUSTOMER) AT TIME OF METER INSTALLATION. CONTRACTOR/CUSTOMER SHALL PROTECT THE ASSEMBLY FROM DAMAGE. TEMPORARY CONSTRUCTION JUMPER/METER ASSEMBLY SHALL NOT BE REMOVED UNTIL SYSTEM IS ACCEPTED AND DEPARTMENT OF HEALTH CERTIFICATION AND CLEARANCE FOR SERVICE FORM HAS BEEN RECEIVED BY LEE COUNTY UTILITIES. WHEN THE NEW SYSTEM IS ACCEPTED, THE TEMPORARY CONSTRUCTION JUMPER METER ASSEMBLY MUST BE COMPLETELY REMOVED DOWN TO CORP STOPS.

1 TAPPING SLEEVE AND VALVE TO BE FULLY RESTRAINED ON EXISTING MAIN (SEE LCU STANDARD DETAIL)
 2 GRADE
 3 PROPERTY LINE AND/OR RIGHT OF WAY LINE
 4 BRONZE BALL VALVE
 5 METER FURNISHED BY LEE COUNTY UTILITIES
 6 REDUCED PRESSURE BACKFLOW PREVENTER
 7 PIPE STAND (SEE LCU STANDARD DETAIL)
 8 2" DIA. HDPE DR9
 9 2" DIA. CORPORATION STOP
 10 2" DIA. CURB STOP

REV: 12/10/2015

DETAIL STANDARD DETAIL NO. 6.5 LEE COUNTY UTILITIES TRENCH CROSS SECTION

N.T.S.

1 EXCAVATED TRENCH
 2 FINISHED GRADE
 3 MARKING TAPE 12" DEPTH MAX.
 4 MATERIALS CLEAN DRY SAND, FINE LIME ROCK OR PIT SHELL MECHANICALLY COMPACTED IN 6" LIFTS TO AT LEAST 95% OF MAX. DENSITY, OR 98% IF UNDER PAVED AREA OF ROADWAY.
 5 #57 STONE LOCATED UNDER PIPE OR EXISTING UNDISTURBED SUITABLE MATERIAL
 6 SPRING LINE
 7 STANDARD 8" MIN TRENCH UNDERCUT AND BACKFILL WITH #57 STONE COMPACTED IN 6" LIFTS
 8 ADDITIONAL UNDERCUT AND CRUSHED ROCK BEDDING FOUNDATION WHEN DIRECTED BY L.C.U. THE CONTRACTOR IS TO REMOVE UNSTABLE MATERIAL FROM THE TRENCH FOUNDATION. THEN INSTALL STABILIZED CRUSHED ROCK BACKFILL WITH #57 STONE COMPACTED IN 6" LIFTS

REV: 12/10/2015

DETAIL STANDARD DETAIL NO. 6.13 LEE COUNTY UTILITIES WATER MAIN FLUSHING DETAIL

N.T.S.

1 45° MJ D.I.P. BEND
 2 TEMPORARY FLUSHING PIPE
 3 END OF WATER MAIN
 4 24" MIN.

NOTES:
 1. FLUSHING DETAIL TO BE USED ON WATER LINES 6" DIAMETER OR GREATER.
 2. FLUSHING PIPE SHALL BE THE SAME DIAMETER AS WATER MAIN.
 3. CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE FOR FLUSHED WATER.
 4. PROVIDE M.J. CAP IF ASSEMBLY IS LEFT IN PLACE UNATTENDED.
 5. 12 GAUGE DOUBLE INSULATED COPPER LOCATING WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

DETAIL STANDARD DETAIL NO. 6.10 LEE COUNTY UTILITIES WATER PRESSURE LINE VERTICAL OFFSET W/ DUCTILE IRON MJ FITTINGS & PIPE

N.T.S.

1 LCU APPROVED JOINT RESTRAINT FOR D.I. MJ PIPE AND FITTINGS PLACED IN ACCORDANCE WITH JOINT RESTRAINT SCHEDULE. (SEE DETAIL 6.12)
 2 CONFLICT PIPE
 3 LCU APPROVED DUCTILE IRON PIPING PRESSURE CLASS 350
 4 18" MIN. UNLESS OTHERWISE APPROVED BY LCU
 5 45° MECHANICAL JOINT FITTING, TYPICAL
 6 12 GAUGE DOUBLE INSULATED COPPER WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

DETAIL STANDARD DETAIL NO. 6.11 LEE COUNTY UTILITIES WASTE WATER FORCE MAIN VERTICAL OFFSET WITH FITTINGS. (P.V.C.)

N.T.S.

1 LCU APPROVED JOINT RESTRAINT FOR P.V.C., M.J. PIPE AND FITTINGS PLACED IN ACCORDANCE WITH JOINT RESTRAINT SCHEDULE. (SEE DETAIL 6.12)
 2 CONFLICT PIPE
 3 LCU APPROVED C-900 PVC DR 14
 4 18" MIN. UNLESS OTHERWISE APPROVED BY LCU
 5 45° MECHANICAL JOINT FITTING, TYPICAL
 6 12 GAUGE DOUBLE INSULATED COPPER WIRE (SEE LCU STANDARD DETAIL)

REV: 12/10/2015

DETAIL STANDARD DETAIL NO. 6.12 LEE COUNTY UTILITIES RESTRAINED LENGTH SCHEDULE

N.T.S.

PIPE SIZE (Inches)	DUCTILE IRON PIPE				
	MINIMUM RESTRAINED PIPE LENGTH (FEET)				HORIZONTAL TEE
	90°	45°	22-1/2°	11-1/4°	
4	17	7	4	2	29
6	23	10	5	2	40
8	29	12	6	3	53
10	35	14	7	4	63
12	41	17	8	4	74
16	51	21	11	5	94
24	69	29	14	7	131
30	81	34	17	8	156

PIPE SIZE (Inches)	PVC PIPE				
	MINIMUM RESTRAINED PIPE LENGTH (FEET)				HORIZONTAL TEE
	90°	45°	22-1/2°	11-1/4°	
4	20	8	4	2	45
6	29	12	6	3	63
8	36	15	8	4	83
10	44	18	9	5	99
12	51	21	11	5	116
16	63	26	13	7	149
24	87	36	18	9	208
30	102	42	21	10	248

A COMPLETE JOINT RESTRAINING SCHEDULE FOR ALL ENCOUNTERED VERTICAL & HORIZONTAL BENDS, VERTICAL OFFSETS, TEES, AND DEAD ENDS SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER.

LENGTH FIGURES BASED ON FOLLOWING:
 Pressure = 150 psi, FS = 1.5, trench type = 3, 30' cover
 on Bare pipe, Soil type = GP & SP

REV: 12/10/2015

TETRA TECH
 ENGINEERING BUSINESS No. 2629
 WWW.TETRA-TECH.COM
 10600 CHEVROLET WAY, SUITE 102
 ESTERO, FLORIDA 33928
 Ph: (239) 390-1467 Fax: (239) 390-1769

GATEWAY SERVICES DISTRICT

Alfred J. Mill P.E.
 P.E. No. 59913, FL
 Tetra Tech Inc. Suite 102
 10600 Chevrolet Way, Estero, Florida 33928
 Engineering Business No. 2429

DATE _____

BY _____

MARK _____

DATE _____

DESCRIPTION _____

GATEWAY SERVICES DISTRICT

STANDARD DETAILS

Project No.: 200-37678-20002
 Designed By: ##
 Drawn By: ##
 Checked By: ##

C-501
 Sheet

Copyright: Tetra Tech
 Bar Measures 1 inch

1/30/2020 11:00:13 AM - P:\PROJECTS\ORLANDO\IER37678\200-37678-2000\CAD\SHEETFILES\C-5XX STANDARD DETAILS.DWG - VITITTOE, DEAN

DETAIL

STANDARD DETAIL NO. 6.3
LEE COUNTY UTILITIES
LOCATING WIRE FOR PRESSURE MAINS

N.T.S.

TYPICAL LAYOUT

SPLICE DETAIL

VALVE DETAIL

NOTES

- 1 WIRE SHALL BE CONTINUOUS BETWEEN VALVE BOXES. THE PVC RISER PIPE SHALL BE NOTCHED AND THE WIRE ATTACHED TO THE RISER PIPE TO ALLOW FOR THE WIRE TO FIT INSIDE THE CAST IRON VALVE BOX WITHOUT SHEARING THE WIRE.
- 2 LOCATING WIRE SHALL BE LAID ON TOP OF THE MAIN AND SHALL BE TAPPED TO IT AT 10' INTERVALS AND TAPED AT ALL FITTINGS. TAPE SHALL BE 10 MIL POLYETHYLENE.
- 3 CONTRACTOR SHALL CONDUCT A CONTINUITY TEST ON ALL LOCATING WIRE SPLICES. PRIOR TO SCHEDULING THE OFFICIAL FINAL INSPECTION WITH LCU.
- 4 ALL SPLICES SHALL UTILIZE A DIRECT BURY WATERPROOF SPLICE KIT (SEE APPROVED MATERIAL LIST)

- 1 SPLICE RUN TOGETHER, KEEP CLEAR OF FITTING, TYPICAL
- 2 COVER SPLICE WITH 2 WRAPS OF 10 MIL POLYETHYLENE TAPE
- 3 8" LOOP OF BARE WIRE, 9" MAX. DEPTH TO TOP OF BARE WIRE
- 4 12 GAUGE DOUBLE INSULATED COPPER LOCATING WIRE
- 5 SPLICE (SEE DETAIL THIS SHEET)

REV: 12/10/2015

1 **DETAIL**
N.T.S.

DETAIL

STANDARD DETAIL NO. 6.8
LEE COUNTY UTILITIES
WATER AND SEWER CROSSING DETAIL

N.T.S.

SECTION CROSSINGS

PLAN PARALLEL

NOTES

- 1 WATER MAIN
- 2 SANITARY SEWER MAIN

NOTE: IF LESS THAN 18" CLEARANCE ENCASE WATER MAIN IN STEEL CASING

NOTE: IF LESS THAN 10" CLEARANCE ENCASE WATER MAIN IN STEEL CASING

REV: 12/10/2015

2 **DETAIL**
N.T.S.

DETAIL

STANDARD DETAIL NO. 6.17
LEE COUNTY UTILITIES
WATER SERVICE INSTALLATION 1-1/2" THROUGH 2"

N.T.S.

SECTION

SECTION

SECTION

NOTES

- 1 FINISHED GRADE
- 2 METER BOX WITH COVER TO BE LOCATED INSIDE R.O.W. @ PROPERTY LINE & CLEAR OF DRIVEWAYS.
- 3 POLYETHYLENE TUBING, PE 3408, 200PSI, SDR9 BLUE (SEE APPROVED MATERIAL LIST) WITH LOCATING WIRE
- 4 STRAIGHT CURB STOP WITH PADLOCK WINGS CONNECTED TO LEE COUNTY WATER METER (SEE APPROVED MATERIAL LIST)
- 5 MIN. 22 1/2" NOT TO EXCEED 45"
- 6 BALL CORPORATION STOP (SEE APPROVED MATERIAL LIST)
- 7 DOUBLE STRAP SERVICE SADDLE PROVIDE SPRING LOADED TAPPING SADDLE WHEN TAPPING HDPE (SEE APPROVED MATERIAL LIST)
- 8 WATER MAIN

NOTE: 1. TUBING UNDER ROADWAY SHALL BE ENCASED IN 4" P.V.C. PIPE SCHEDULE 40 MINIMUM AND EXTEND 4 FEET BEYOND THE EDGES OF PAVEMENT OR BACK OF CURB.

REV: 12/10/2015

3 **DETAIL**
N.T.S.

DETAIL NOT USED

DETAIL NOT USED

DETAIL NOT USED

DETAIL NOT USED

DETAIL NOT USED

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GATEWAY SERVICES DISTRICT

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DATE _____

MARK	DATE	DESCRIPTION	BY

GATEWAY SERVICES DISTRICT
STANDARD DETAILS

Project No.: 200-37678-20002
Designed By: #
Drawn By: #
Checked By: #

C-502
Sheet

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Bar Measures 1 inch