

ADDENDUM NO. 2
Columbia Co Bid No. 2023-12
Ellisville to Fort White Water Main Extension

The following changes to Bid Documents

REPLACEMENT BID FORM

1. In Project Manual Volume 1, replace the Contractor Bid Form (Tables 1 and 2) with the attached revised Bid Form with some adjusted quantities, most of which resulted from the realignment of approximately 1,100 LF of proposed water main along SW Dortch St and SW Holstein Ave. Also note the addition of Clearing as a pay item.

REPLACEMENT DRAWING SHEETS

1. In Project Drawings, replace Sheets 18, 19, 20 and 65 with the attached revised Sheets 18, 19, 20 and 65. These sheet replacements resulted from the above-mentioned water main realignment.

REVISED DRAWING SHEETS

1. Note clouded revisions to the attached Sheets 1, 9, 15, 21, 23, 33, 48 and 81.

RESPONSES TO BIDDERS' QUESTIONS

- Q1. *Where do we include Clearing on the bid sheet? There is a decent amount of clearing to be done.*
- A1. A new pay item has been added for Clearing (new Line 37) on the replacement Bid Form included in this addendum.**
- Q2. *For the directional drill item – after field measuring for the wetland areas, our total is approximately 950 LF more than what is indicated on the bid sheet. Will the drills be paid by actual linear footage drilled?*
- A2. The HDD quantities have been adjusted on the replacement Bid Form included in this addendum. The quantities of HDPE pipe (both DR-11 and DR-13.5) have been adjusted as well. The HDD piping will be paid on a linear foot installed basis.**
- Q3. *Will water for flushing and pressure testing be provided by Owner or will Contractor be responsible for providing it?*
- A3. Yes, the Owner will coordinate with the Contractor to supply the water required for flushing and testing. The Contractor shall report to Owner the amount used.**

- Q4. *Is polyethylene (PE) encasement required for the DIP hydrant services?*
- A4. **Yes, PE encasement shall be used with all buried ductile iron pipe, fittings and valves. See Water and Sewer Notes 28 and 35.**
- Q5. *is there any kind of domestic spec? I didn't see any and I saw in the specs a note that if material is imported country of origin to be submitted.*
- A5. **If the bidder proposes to furnish any item of foreign make or product, he shall write "foreign" together with the name of the originating country opposite such item on a proposal. Otherwise, there are no known AIS or Buy American requirements for this project.**
- Q6. *Is there any detail on how the 12" clamp-on meter is connected?*
- A6. **The flowmeter installation, including wiring and termination requirements shall be coordinated with the equipment manufacturer and existing electrical components in the WTP control room.**
- Q7. *On Detail MS02, it calls out for an 8" x 84" spool piece, but on the other side of the detail it's an 8" x 24" spool. Is this correct?*
- A7. **The dimensions are correct as shown in Detail MS02 (note that the detail is not drawn to scale).**

PROJECT NAME: Ellisville Water Main Extension
COLUMBIA COUNTY BID NO: 2023-12

TABLE 1
CONTRACTOR BID FORM

Pay Item	Pay Item Description	Notes *	Bid Quantity	Unit	Unit Price	Extended Price
CONTRACTOR-FURNISHED ITEMS (CONTRACTOR TO FURNISH AND INSTALL):						
1	Mobilization		1	LS	\$	\$
2	Maintenance of Traffic	A	1	LS	\$	\$
3	Erosion Control	B	1	LS	\$	\$
4	Disinfection and Testing	C	1	LS	\$	\$
5	12" HDPE Pipe, PE4710, DR-13.5	D	8,500	LF	\$	\$
6	HDD 12" HDPE Pipe, PE4710, DR-11	D,E	4,800	LF	\$	\$
7	12" DIP Pipe, FLG, Class 50		20	LF	\$	\$
8	12" DIP Pipe, MJ, Class 50	F	300	LF	\$	\$
9	10" DIP Pipe, MJ, Class 50	F	10	LF	\$	\$
10	8" DIP Pipe, MJ, Class 50	F	20	LF	\$	\$
11	8" DIP Pipe, FLG, Class 50		40	LF	\$	\$
12	6" DIP Pipe, FLG, Class 50		20	LF	\$	\$
13	12" DI 90 Bend Fitting, FLG, C153	G	2	EA	\$	\$
14	12" DI 90 Bend Fitting, MJ, C153	G	7	EA	\$	\$
15	12" DI 45 Bend Fitting, MJ, C153	G	9	EA	\$	\$
16	12" x 12" DI Tee Fitting, MJ, C153	G	5	EA	\$	\$
17	12" x 10" DI Tee Fitting, MJ, C153	G	1	EA	\$	\$
18	12" x 8" DI Tee Fitting, MJ, C153	G	1	EA	\$	\$
19	6" DI 90 Bend Fitting, FLG, C153	G	2	EA	\$	\$
20	6" DI 90 Bend Fitting, MJ, C153	G	1	EA	\$	\$
21	6" x 6" DI Tee Fitting, MJ, C153	G	1	EA	\$	\$
22	12" x 8" DI Reducer Fitting, FLG, C153	G	2	EA	\$	\$
23	12" x 8" DI Reducer Fitting, MJ, C153	G	2	EA	\$	\$
24	12" x 6" DI Reducer Fitting, FLG, C153	G	1	EA	\$	\$
25	Dry Barrel Hydrant, 5-1/4" Barrel, MJ, Yellow		8	EA	\$	\$
26	Hydrant Accessories	H	8	EA	\$	\$
27	12" Gate Valve, Resilient Wedge, NRS, MJ	J	25	EA	\$	\$
28	10" Gate Valve, Resilient Wedge, NRS, MJ	J	1	EA	\$	\$
29	8" Gate Valve, Resilient Wedge, NRS, MJ	J	3	EA	\$	\$
30	6" Gate Valve, Resilient Wedge, NRS, FLG	J	2	EA	\$	\$
31	2" Combination Air Release Valve (ARV), NPT	K	10	EA	\$	\$
32	12" x 2" Tapping Saddle		10	EA	\$	\$
33	6" Pressure Control Altitude Valve, FLG	L	1	EA	\$	\$
34	8" Ultrasonic Flowmeter, Tube, FLG		2	EA	\$	\$
35	12" Ultrasonic Flowmeter, Clamp-On	M	1	EA	\$	\$
36	8" Static Mixer, 3-Element, FLG		1	EA	\$	\$
37	Clearing		550	SY	\$	\$
CHLORINE BOOSTER STATION (CBS)						
38	10'L x 12'W x 9'H CBS Building, Prefab Concrete	N	1	EA	\$	\$
39	Chlorine Feed System, Analyzers & Controls	P	1	LS	\$	\$
40	20 kW Generator and Diesel Fuel System	Q	1	LS	\$	\$
41	Web-Based Monitoring System		1	LS	\$	\$
42	6' Chain Link Security Fence	R	190	LF	\$	\$
43	10' Limerock Drive		120	SY	\$	\$
44	CBS Sitework, Piping & Accessories	S	1	LS	\$	\$

PROJECT NAME: Ellisville Water Main Extension
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TABLE 1 (continued)
CONTRACTOR BID FORM

Pay Item	Pay Item Description	Notes *	Bid Quantity	Unit	Unit Price	Extended Price
CONTRACTOR-FURNISHED ITEMS (CONTRACTOR TO FURNISH AND INSTALL) - Continued:						
45	Asphalt Restoration	T	1	LS	\$	\$
46	Concrete Restoration		1	LS	\$	\$
47	Seed and Mulch, Bahia		1	LS	\$	\$
OWNER-FURNISHED ITEMS (CONTRACTOR TO INSTALL ONLY):						
48	12" HDPE Pipe, PE4710, DR-13.5 (50' lengths)	U,D	37,800	LF	\$	\$
49	HDD 12" HDPE Pipe, PE4710, DR-11 (50' lengths)	U,D,E	1,200	LF	\$	\$
50	12" DI 90 Bend Fitting, MJ, C153	U,G	6	EA	\$	\$
51	12" DI 45 Bend Fitting, MJ, C153	U,G	2	EA	\$	\$
52	Dry Barrel Hydrant, 5-1/4" Barrel, MJ, Yellow	U	20	EA	\$	\$
53	Hydrant Accessories	U,H	20	EA	\$	\$
54	12" Gate Valve, Resilient Wedge, NRS, MJ	U,J	20	EA	\$	\$
55	2" Combination Air Release Valve (ARV), NPT	U,K	8	EA	\$	\$
56	12" x 2" Tapping Saddle	U	8	EA	\$	\$
TOTAL CONTRACTOR BID:						\$

*** Table 1 Notes :**

- A. Item includes all elements required for the temporary traffic control (TTC) plan, construction stakeout, and temporary centerline delineation and stop bars placed at all non-working times.
- B. Item includes synthetic bales, staked silt fence and other items necessary to minimize erosion and to prevent sediment transport to inlets, culverts, and/or directly beyond the Project limits.
- C. Item includes all requirements of AWWA, ASTM and FDEP.
- D. Item includes all joint fusions, all MJ adapters (with stiffener inserts), trace wire, warning tape and temporary sample taps. Owner-furnished quantity includes piping only. Refer also to Table 2 - Supplemental Materials by Owner.
- E. Item includes all horizontal directional drill (HDD) installation; no casing required.
- F. Item includes all joint accessories and polyethylene (PE) pipe encasement.
- G. Item includes all joint accessories and PE encasement. Owner-furnished quantity includes fitting only. Refer also to Table 2 - Supplemental Materials by Owner.
- H. Item includes hydrant tee, 6" branch main, 6" gate valve, valve box assembly, all joint accessories, PE encasement and RPM marker. Refer also to Table 2 - Supplemental Materials by Owner.
- J. Item includes all joint accessories and valve box assemblies for buried installations.
- K. Item includes tapping saddle and precast concrete vault. Owner-furnished quantity includes valve only.
- L. Item includes 1" hydraulic sensing line to ground storage tanks.
- M. Item includes remote display, all electrical accessories and precast concrete doghouse vault.
- N. Item includes concrete foundation slab, doors with hardware, HVAC systems with louvers, plumbing, electrical and lightning protection.
- P. Item includes injection quill, analyzer probes, chemical piping and precast concrete vaults.
- Q. Item includes equipment pads, protective bollards, automatic transfer switch with controls, and all fuel piping with accessories.
- R. Item includes 12'-wide double swing gate.
- S. Item includes clearing, grading, grassing, sidewalk, equipment pads and miscellaneous yard piping.
- T. Item includes asphalt millings for open-cut drives where millings pre-exist.
- U. Owner-Furnished (Install Only) items have been pre-purchased by the Owner and are intended for use on this Project. These materials are stored at the Ellisville WTP site: 2379 SE Giles Martin Ave, Lk City, FL. Contractor shall be responsible for all other elements of work related to these items to complete the Project requirements, including loading and transporting the materials to the Project site and installing the materials. Refer also to Table 2 - Supplemental Materials by Owner. NOTE: For Contractor-furnished items, Contractor shall coordinate with Owner to provide the same manufacturers/models of Owner-furnished materials, including hydrants, valves and valve boxes.

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COLUMBIA COUNTY BID NO: 2023-12

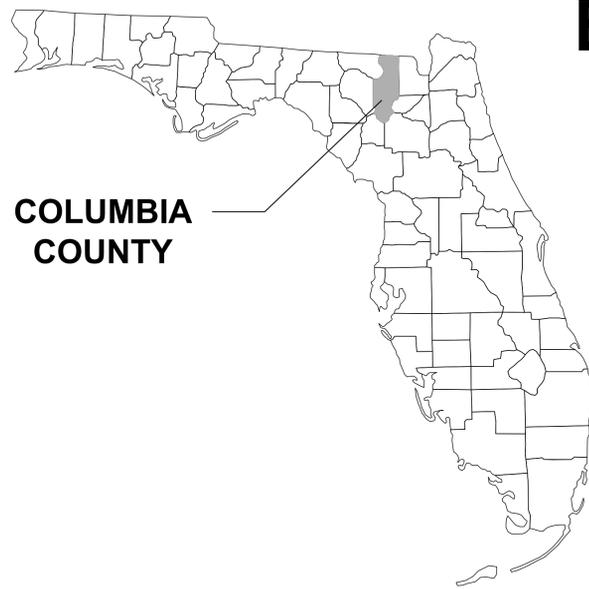
TABLE 2
SUPPLEMENTAL MATERIALS BY OWNER

Item	Item Description	Notes *	Quantity	Unit
PIPING ACCESSORIES:				
1	12" HDPE MJ Adapter, DR-13.5, with Stiffener Insert	A,B	100	EA
2	12" MJ Accessory Pack	A,B	100	EA
3	10 AWG Tracer Wire, HDPE, 30 mil, 500' Roll	A,B	75	EA
4	3" Buried Warning Tape, PE, 1000' Roll	A,B	40	EA
VALVE ACCESSORIES:				
5	18" x 24" Valve Box, Heavy Duty, with "WATER" Lid	A,B	40	EA
HYDRANT ACCESSORIES:				
6	12" x 6" DI Hydrant Tee, MJ, C153	A,C	20	EA
7	6" Gate Valve, Resilient Wedge, NRS, MJ	A,C	20	EA
8	6" Megalug Restraint, MJ	A,C	40	EA
9	6" MJ Accessory Pack	A,C	40	EA
10	6" DIP Pipe, MJ, C151	A,C	390	LF

* Table 2 Notes:

- A. *These supplemental materials have been pre-purchased by the Owner and are intended for use on this Project. These materials are stored at the Ellisville WTP site: 2379 SE Giles Martin Ave, Lk City, FL. Contractor shall be responsible for all other elements of work related to these items to complete the Project requirements, including loading, transporting and installing the materials at the Project site.*
- B. *The unit prices for installing these Owner-furnished supplemental materials are not itemized in Table 1 - Bid Form. They are incorporated within and across multiple pay items on Table 1.*
- C. *These items are included under Hydrant Accessories per Pay Item 52 of Table 1 - Bid Form, but do not include PE encasement or RPM markers. This quantity breakdown of Owner-furnished components are provided for the Bidder's convenience in estimating installation costs.*

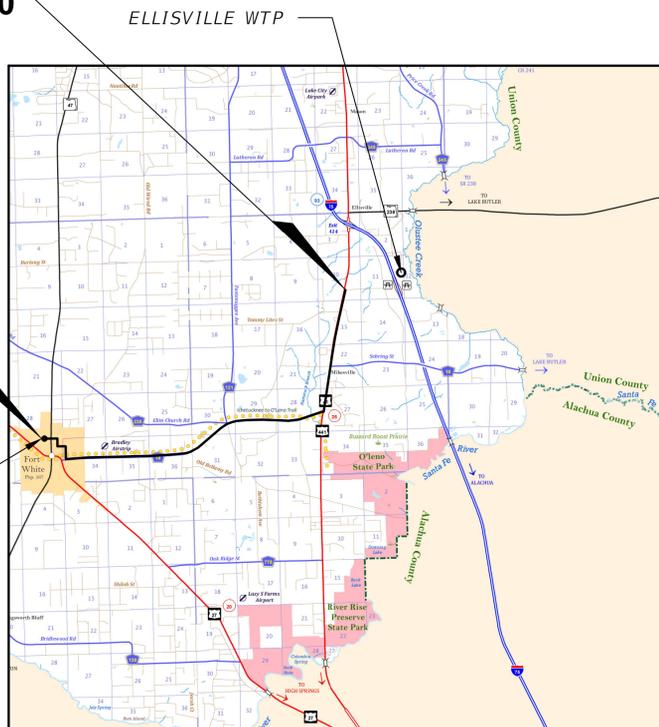
ELLISVILLE WATER MAIN EXTENSION COLUMBIA COUNTY, FLORIDA



COLUMBIA
COUNTY

END PROJECT
STA. 951+83.00

BEGIN PROJECT
STA. 100+00.00



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PLANS PREPARED FOR:

COLUMBIA COUNTY BOCC
135 HERNANDO AVE, SUITE 203
LAKE CITY, FL 32055
(386)758-1005

11/2023
ISSUED FOR BID

REVISIONS	
DATE	DESCRIPTION
1/18/24	△ PER ADDENDUM NO. 2



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JOB NUMBER:
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EOR:
RICKY L. HENDRIX
P.E. NO.:
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COVER SHEET

SHEET
NO.
1

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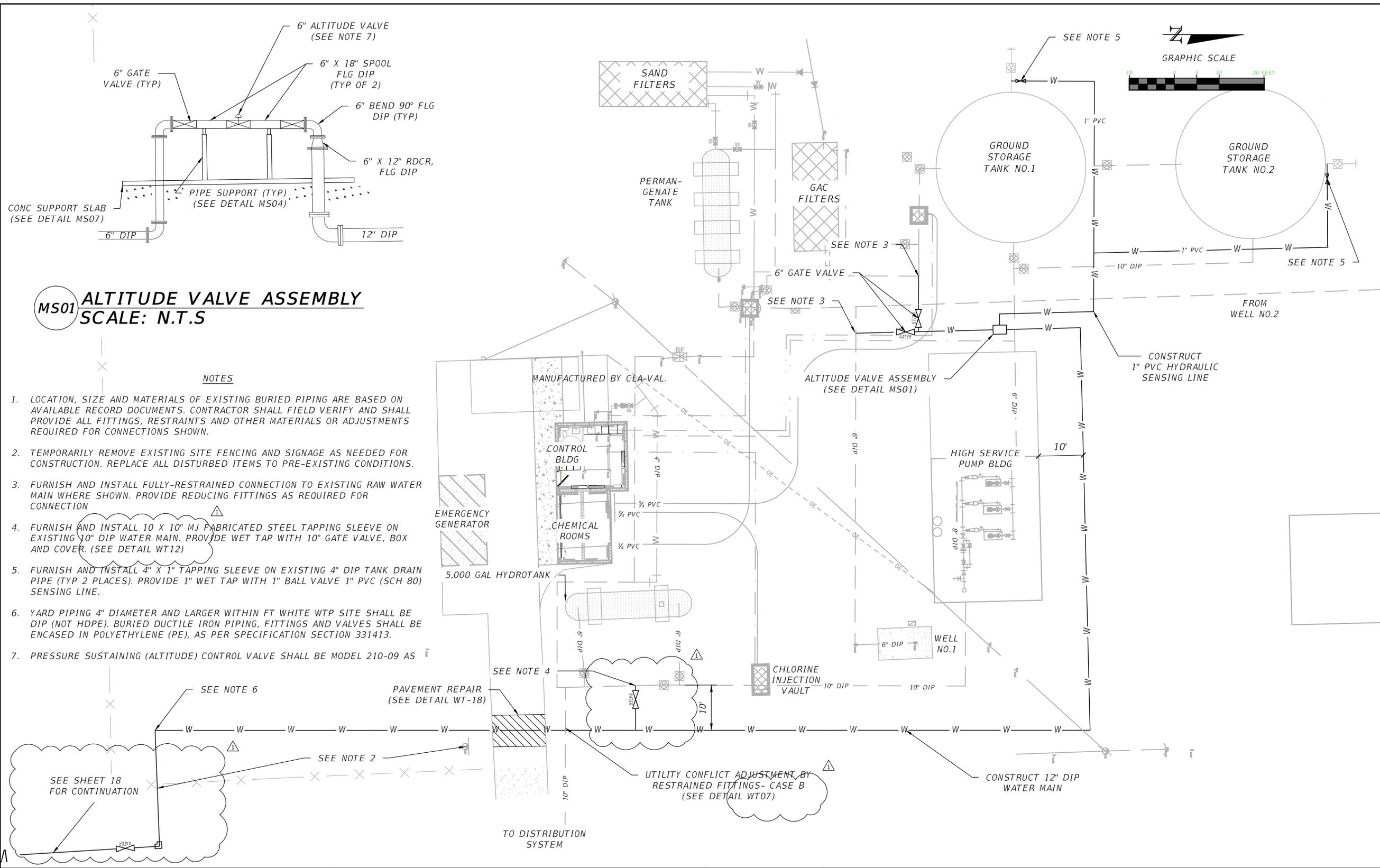
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KEY MAP

ELLISVILLE WATER MAIN EXTENSION COLUMBIA COUNTY, FLORIDA

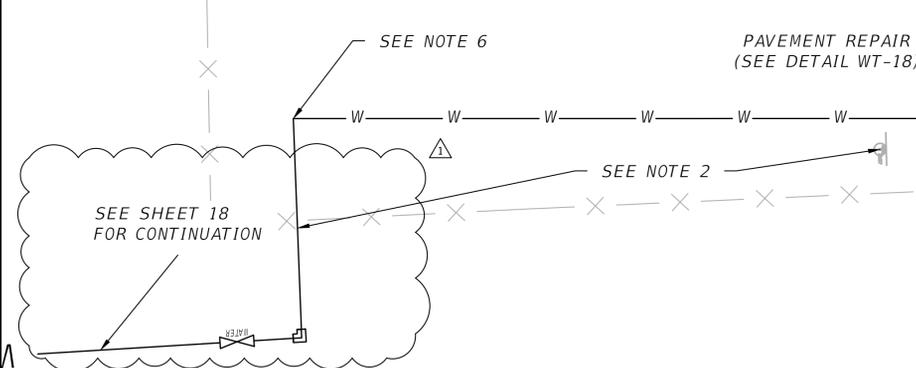
SHEET NO.
9



MS01 ALTITUDE VALVE ASSEMBLY
SCALE: N.T.S

NOTES

1. LOCATION, SIZE AND MATERIALS OF EXISTING BURIED PIPING ARE BASED ON AVAILABLE RECORD DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY AND SHALL PROVIDE ALL FITTINGS, RESTRAINTS AND OTHER MATERIALS OR ADJUSTMENTS REQUIRED FOR CONNECTIONS SHOWN.
2. TEMPORARILY REMOVE EXISTING SITE FENCING AND SIGNAGE AS NEEDED FOR CONSTRUCTION. REPLACE ALL DISTURBED ITEMS TO PRE-EXISTING CONDITIONS.
3. FURNISH AND INSTALL FULLY-RESTRAINED CONNECTION TO EXISTING RAW WATER MAIN WHERE SHOWN. PROVIDE REDUCING FITTINGS AS REQUIRED FOR CONNECTION
4. FURNISH AND INSTALL 10" X 10" MJ FABRICATED STEEL TAPPING SLEEVE ON EXISTING 10" DIP WATER MAIN. PROVIDE WET TAP WITH 10" GATE VALVE, BOX AND COVER. (SEE DETAIL WT12)
5. FURNISH AND INSTALL 4" X 1" TAPPING SLEEVE ON EXISTING 4" DIP TANK DRAIN PIPE (TYP 2 PLACES). PROVIDE 1" WET TAP WITH 1" BALL VALVE 1" PVC (SCH 80) SENSING LINE.
6. YARD PIPING 4" DIAMETER AND LARGER WITHIN FT WHITE WTP SITE SHALL BE DIP (NOT HDPE). BURIED DUCTILE IRON PIPING, FITTINGS AND VALVES SHALL BE ENCASED IN POLYETHYLENE (PE), AS PER SPECIFICATION SECTION 331413.
7. PRESSURE SUSTAINING (ALTITUDE) CONTROL VALVE SHALL BE MODEL 210-09 AS



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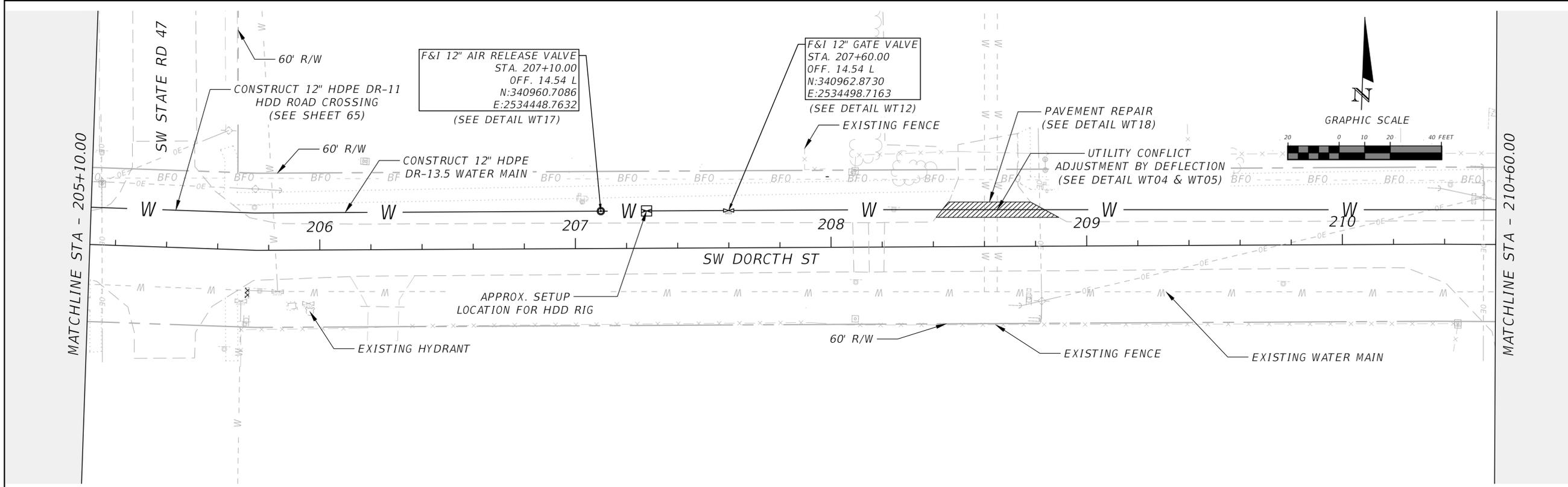
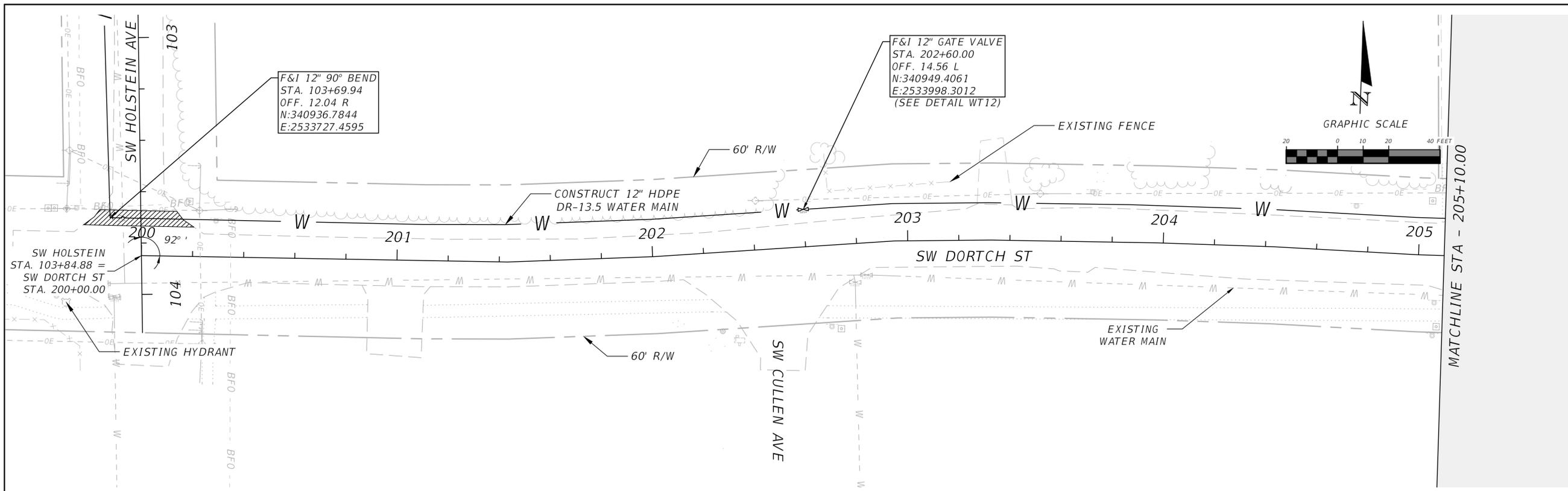
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FORT WHITE WTP SITE PLAN
ELLISVILLE WATER MAIN EXTENSION
COLUMBIA COUNTY, FLORIDA

SHEET NO.
15



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1/18/24	REALIGNMENT PER ADDENDUM NO. 2 (REPLACES PREVIOUS SHEET 19)


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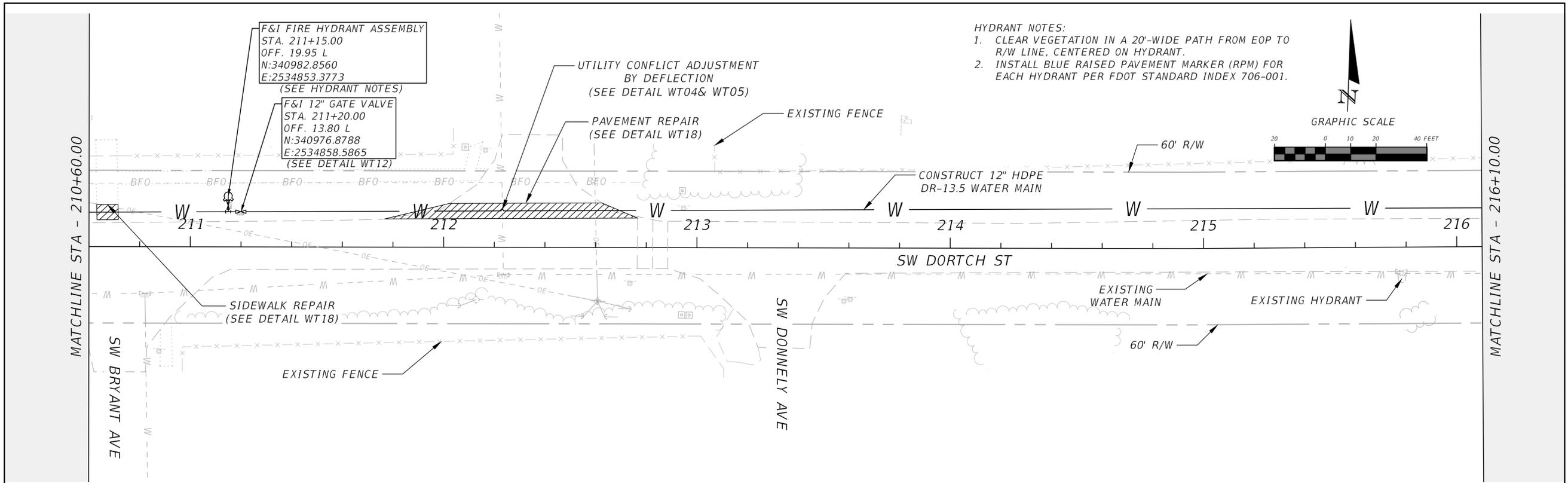
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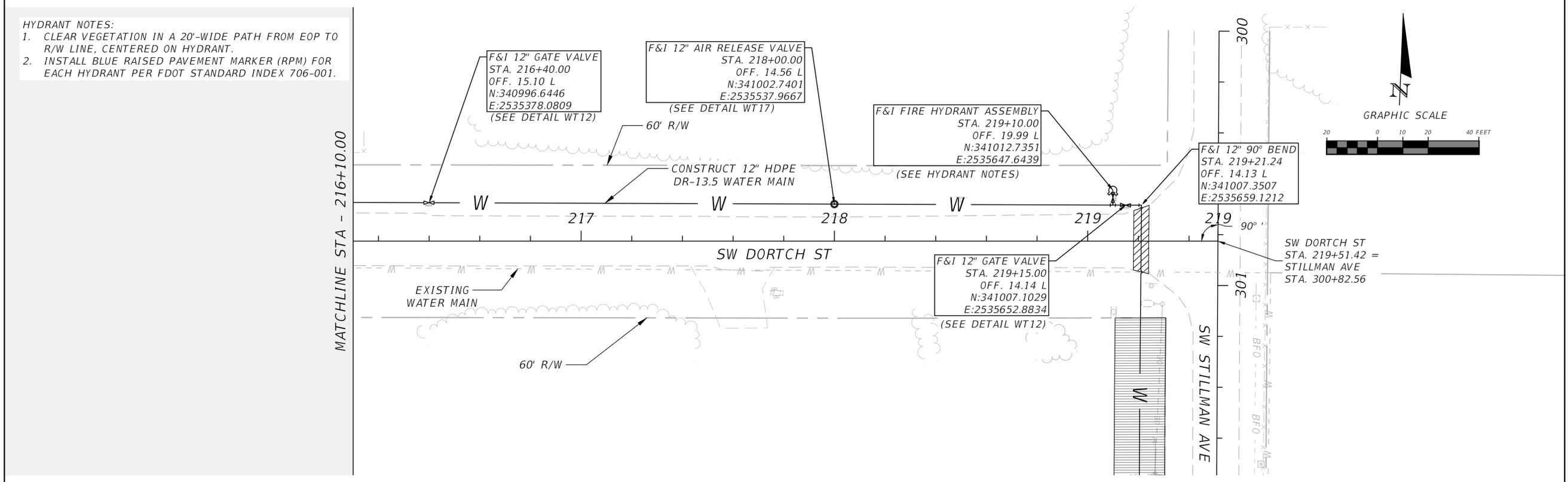
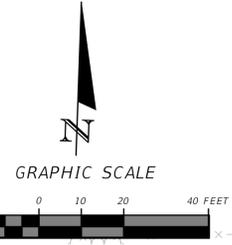
DORTCH ST PLAN
ELLISVILLE WATER MAIN EXTENSION
COLUMBIA COUNTY, FLORIDA

SHEET NO.
19

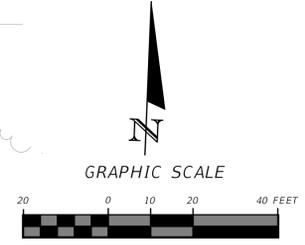
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HYDRANT NOTES:
 1. CLEAR VEGETATION IN A 20'-WIDE PATH FROM EOP TO R/W LINE, CENTERED ON HYDRANT.
 2. INSTALL BLUE RAISED PAVEMENT MARKER (RPM) FOR EACH HYDRANT PER FDOT STANDARD INDEX 706-001.



HYDRANT NOTES:
 1. CLEAR VEGETATION IN A 20'-WIDE PATH FROM EOP TO R/W LINE, CENTERED ON HYDRANT.
 2. INSTALL BLUE RAISED PAVEMENT MARKER (RPM) FOR EACH HYDRANT PER FDOT STANDARD INDEX 706-001.



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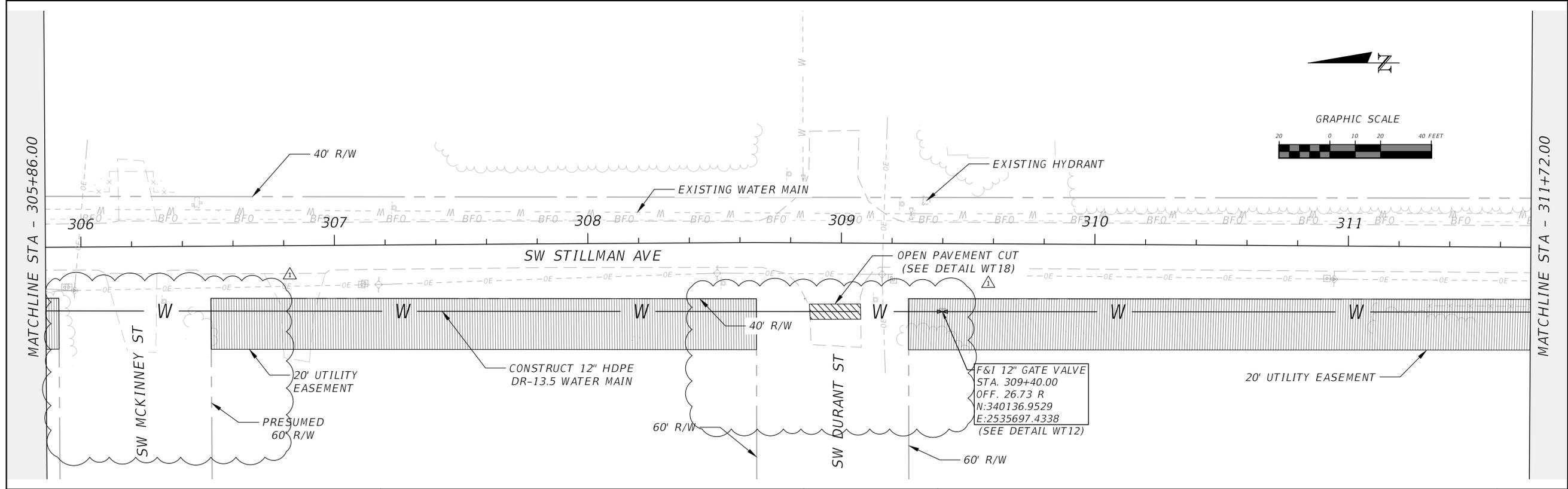
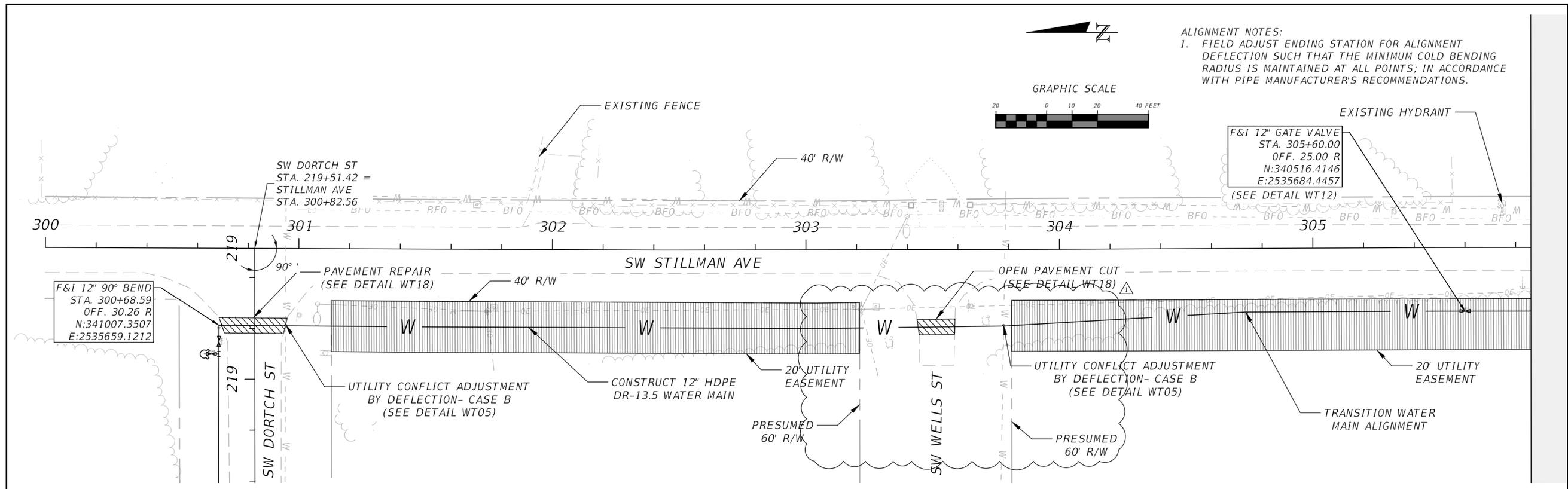
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DORTCH ST PLAN
ELLISVILLE WATER MAIN EXTENSION
COLUMBIA COUNTY, FLORIDA

SHEET NO.
20

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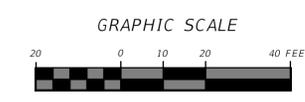
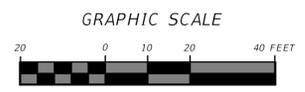
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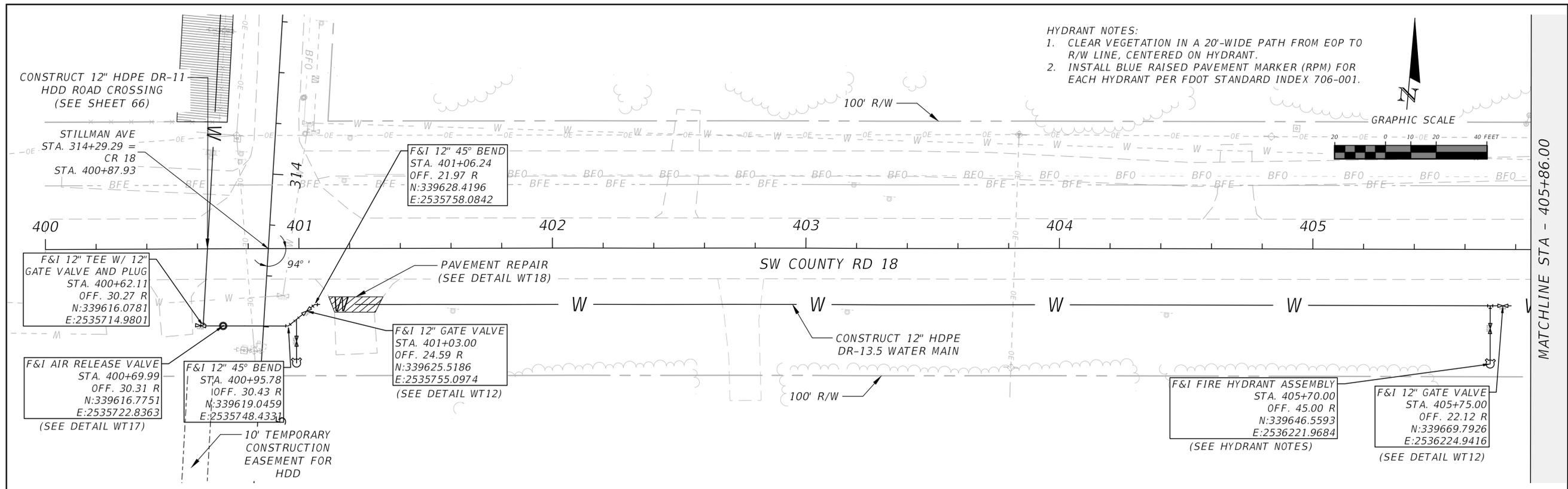
STILLMAN AVE PLAN
ELLISVILLE WATER MAIN EXTENSION
COLUMBIA COUNTY, FLORIDA

SHEET NO.
21

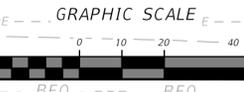
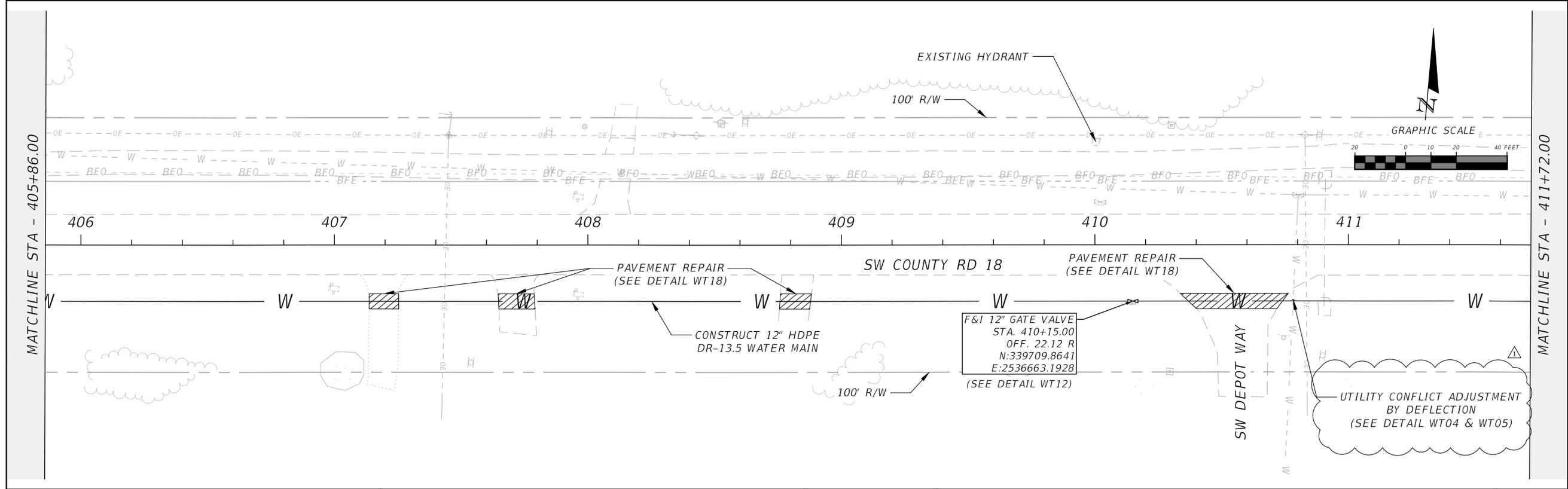
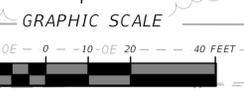
ALIGNMENT NOTES:
 1. FIELD ADJUST ENDING STATION FOR ALIGNMENT DEFLECTION SUCH THAT THE MINIMUM COLD BENDING RADIUS IS MAINTAINED AT ALL POINTS; IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS.



THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY RICKY L. HENDRIX, PE, ON 1/18/2024 USING A SHA AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



HYDRANT NOTES:
 1. CLEAR VEGETATION IN A 20'-WIDE PATH FROM EOP TO R/W LINE, CENTERED ON HYDRANT.
 2. INSTALL BLUE RAISED PAVEMENT MARKER (RPM) FOR EACH HYDRANT PER FDOT STANDARD INDEX 706-001.



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 PH. 386-752-4675
 LIC NO. LB8356

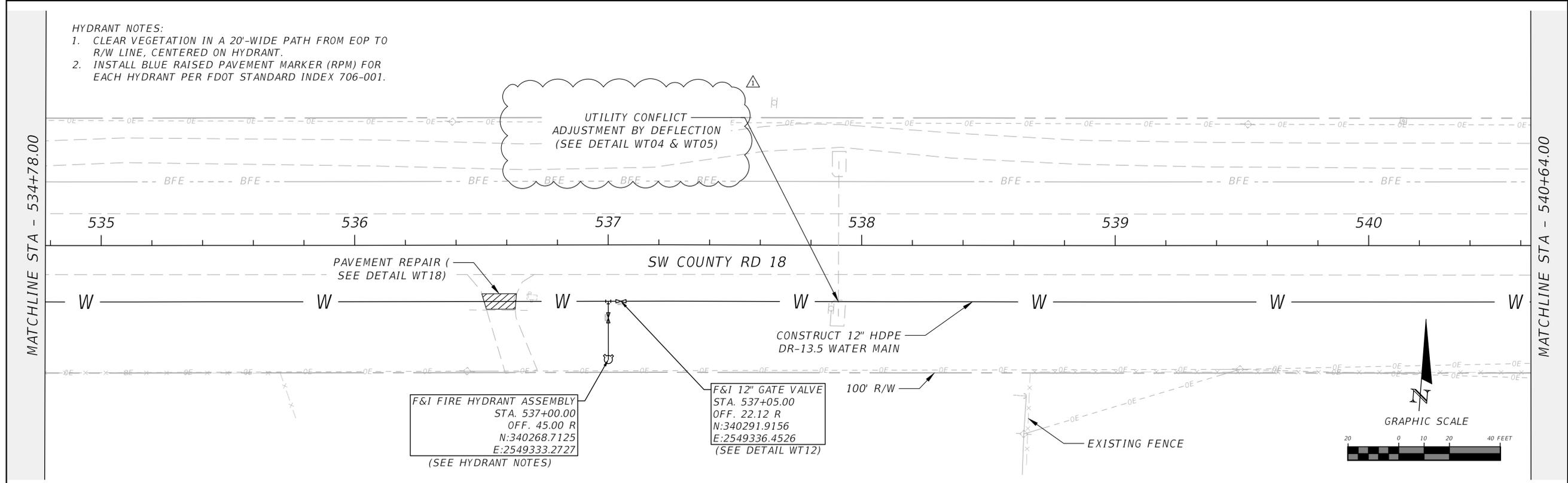
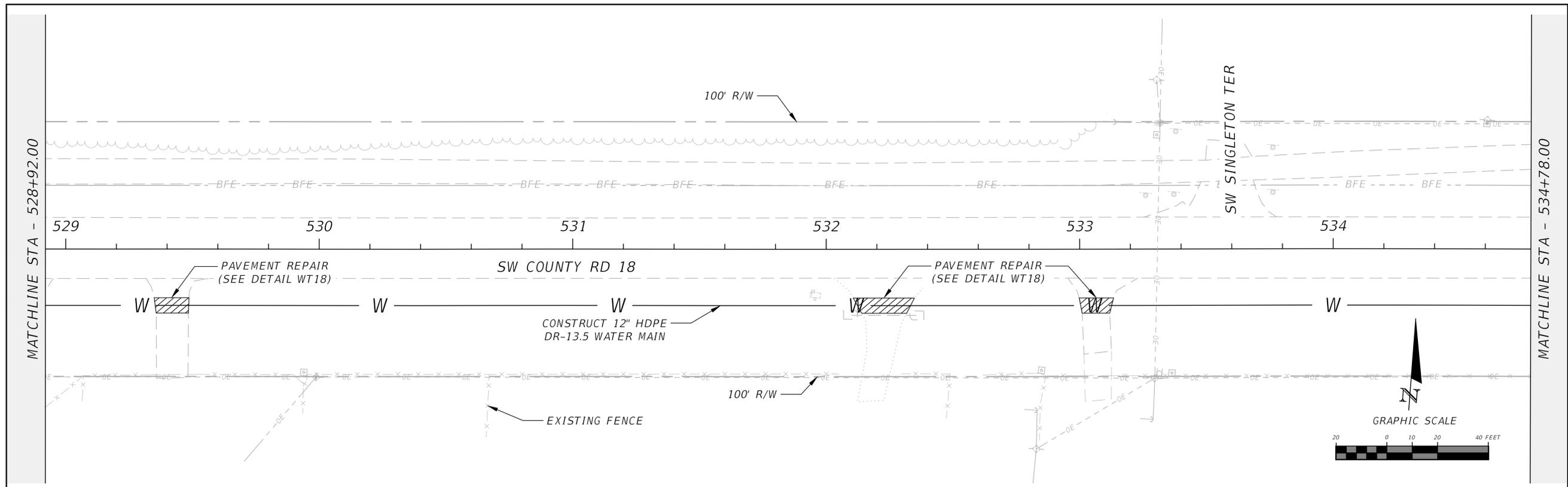
2551 BLAIRSTONE PINES DR.
 TALLAHASSEE, FL 32301
 WWW.NFPS.NET
 CA# 29011

JOB NUMBER:
 L220110CCB
 EOR:
 RICKY L. HENDRIX
 P.E. NO.:
 45239

CR 18 PLAN
ELLISVILLE WATER MAIN EXTENSION
COLUMBIA COUNTY, FLORIDA

SHEET NO.
23

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- HYDRANT NOTES:**
1. CLEAR VEGETATION IN A 20'-WIDE PATH FROM EOP TO R/W LINE, CENTERED ON HYDRANT.
 2. INSTALL BLUE RAISED PAVEMENT MARKER (RPM) FOR EACH HYDRANT PER FDOT STANDARD INDEX 706-001.

UTILITY CONFLICT
ADJUSTMENT BY DEFLECTION
(SEE DETAIL WT04 & WT05)

F&I FIRE HYDRANT ASSEMBLY
STA. 537+00.00
OFF. 45.00 R
N:340268.7125
E:2549333.2727
(SEE HYDRANT NOTES)

F&I 12" GATE VALVE
STA. 537+05.00
OFF. 22.12 R
N:340291.9156
E:2549336.4526
(SEE DETAIL WT12)

REVISIONS	
DATE	DESCRIPTION
1/18/24	△ PER ADDENDUM NO. 2

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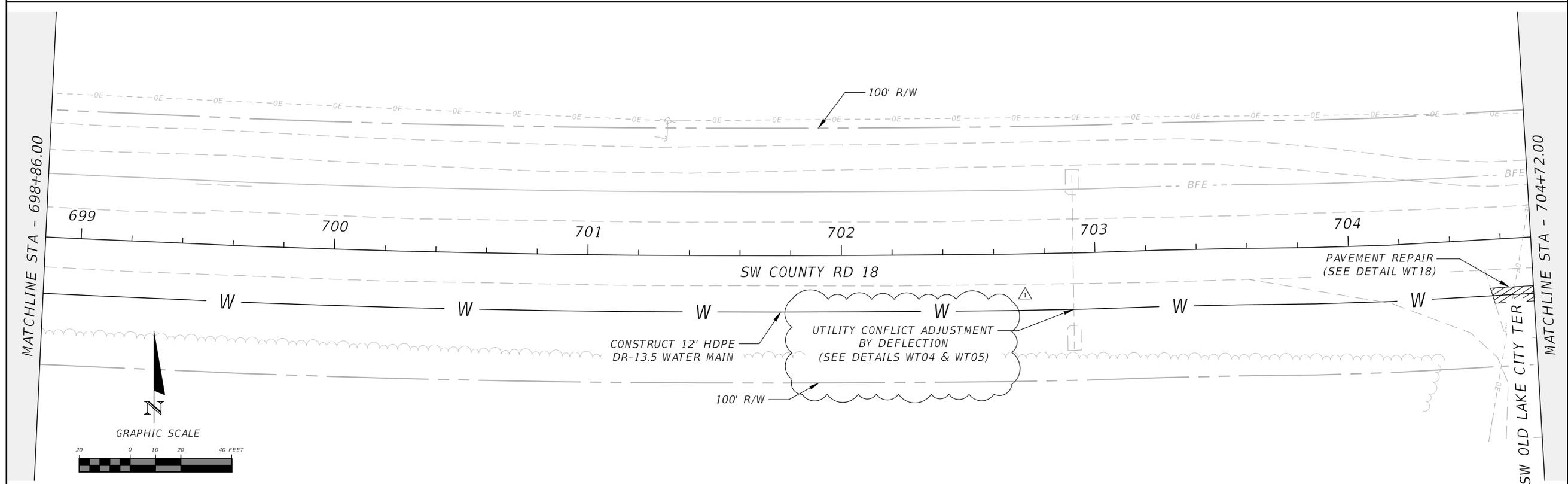
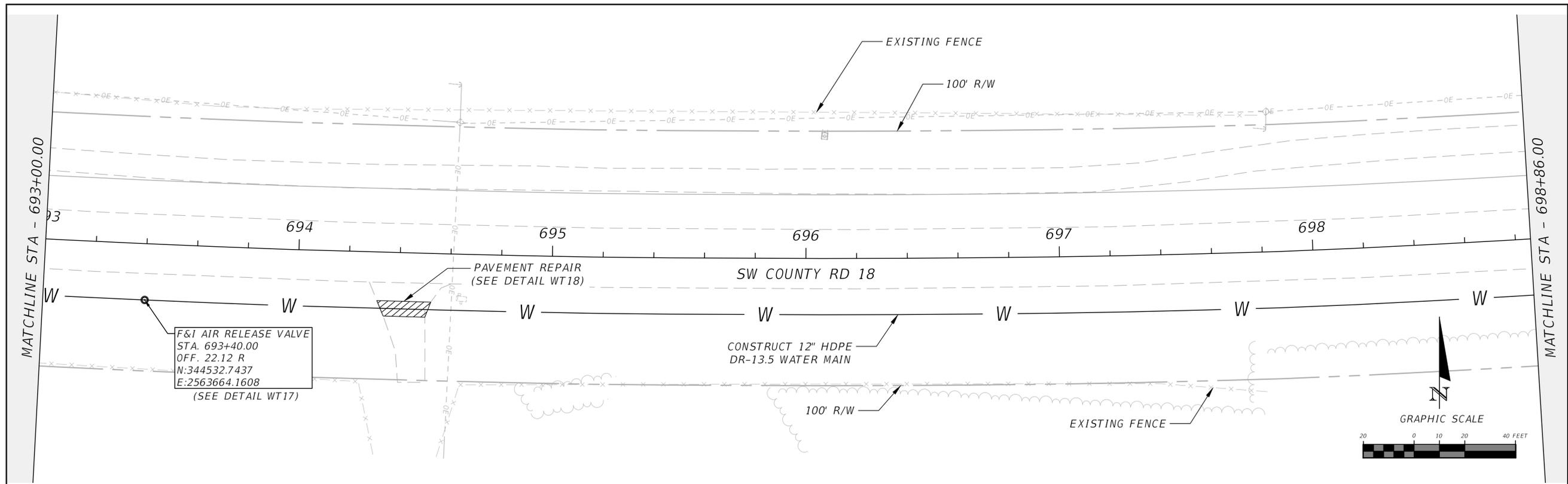
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CR 18 PLAN
ELLISVILLE WATER MAIN EXTENSION
COLUMBIA COUNTY, FLORIDA

SHEET NO.
33

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REVISIONS	
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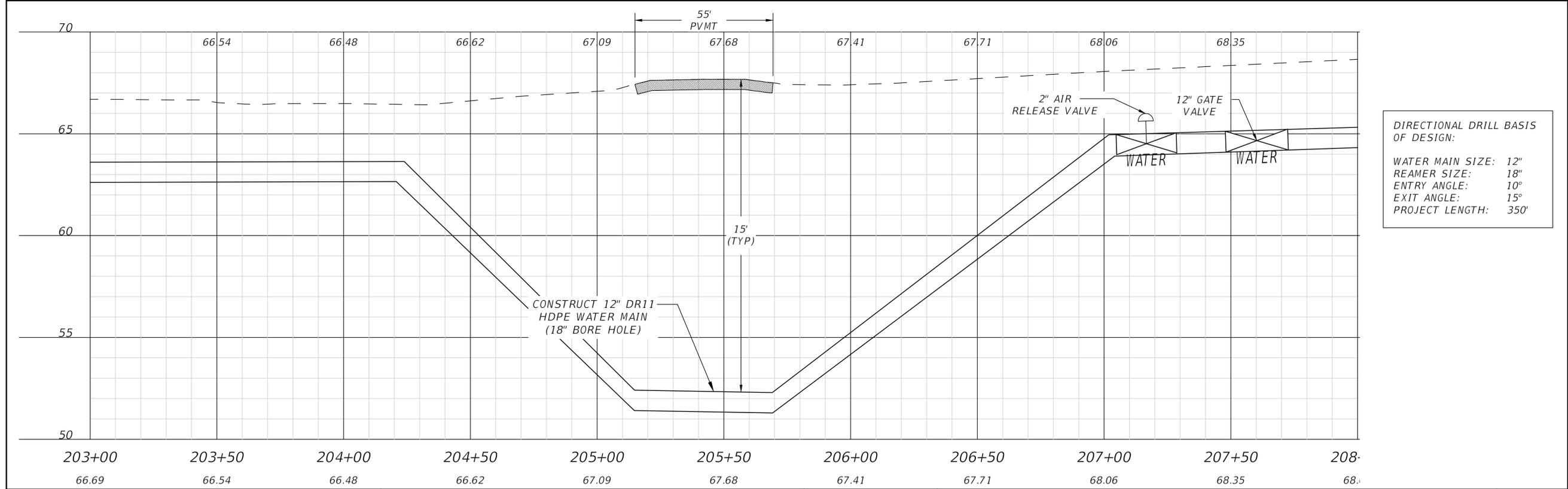
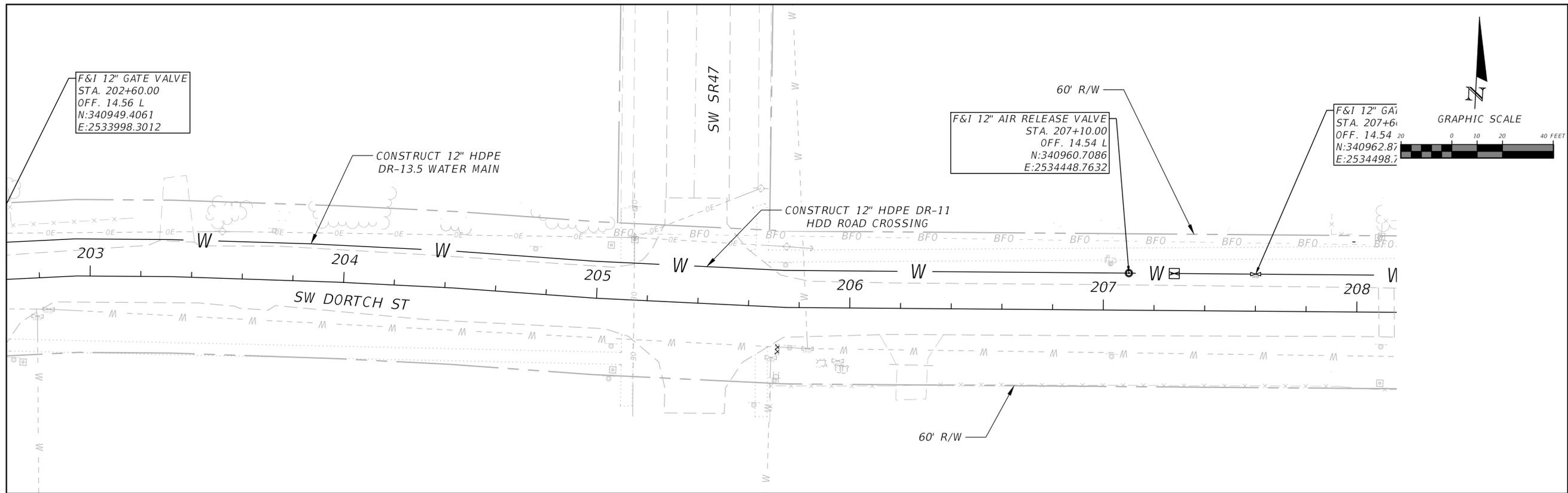
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 P.E. NO.:
 45239

CR 18 PLAN
ELLISVILLE WATER MAIN EXTENSION
COLUMBIA COUNTY, FLORIDA

SHEET NO.
48

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DIRECTIONAL DRILL BASIS OF DESIGN:

- WATER MAIN SIZE: 12"
- REAMER SIZE: 18"
- ENTRY ANGLE: 10°
- EXIT ANGLE: 15°
- PROJECT LENGTH: 350'

REVISIONS	
DATE	DESCRIPTION
1/18/24	REALIGNMENT PER ADDENDUM NO. 2 (REPLACES PREVIOUS SHEET 65)

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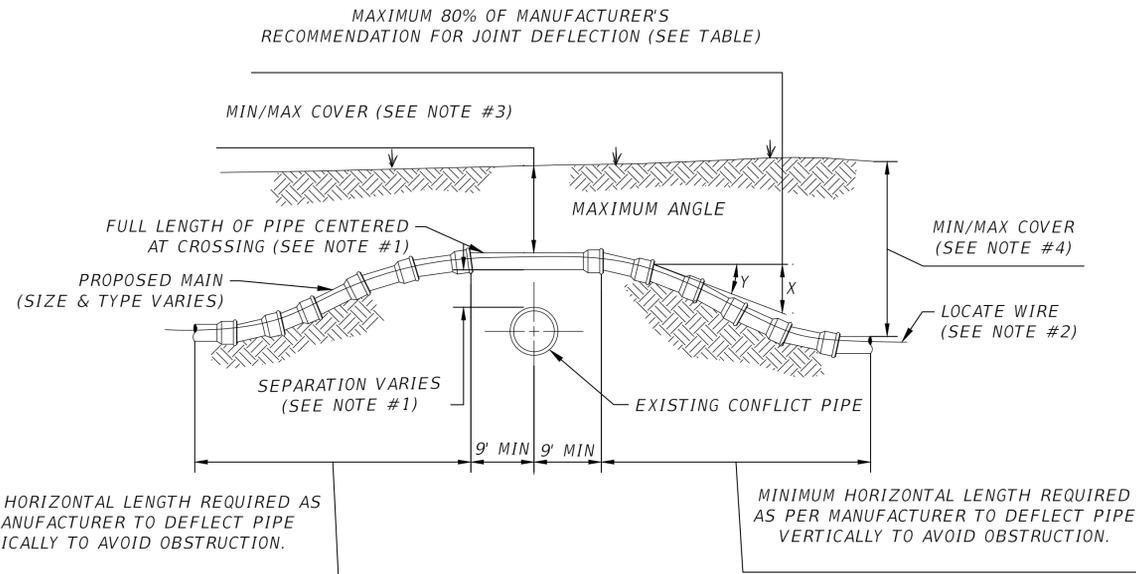
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JOB NUMBER:
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 P.E. NO.:
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SW SR47 CROSSING
ELLISVILLE WATER MAIN EXTENSION
COLUMBIA COUNTY, FLORIDA

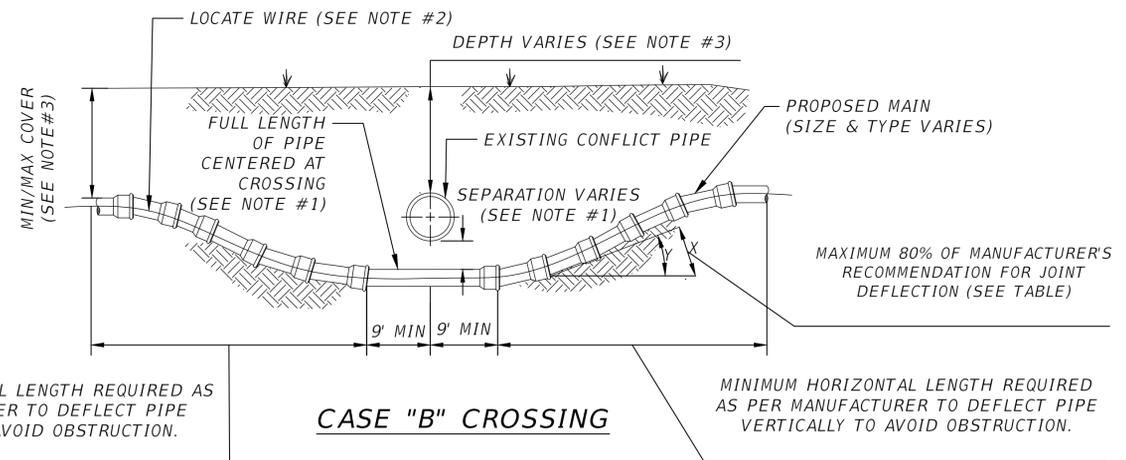
SHEET NO.
65

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NOTES:

1. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE SHEET 83. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
2. LOCATING WIRE REQUIRED.
3. THE COVER OVER ALL PIPING LESS THAN 24" SIZE SHALL BE A MINIMUM OF 30" IN UNPAVED AREAS AND 36" IN PAVED AREAS WITH A MAXIMUM COVER OF 60". COVER FOR PIPING 24" SIZE AND LARGER SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84". THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.



NOTES:

1. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE SHEET 83. A FULL LENGTH OF PIPE SHALL BE CENTERED UNDER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
2. LOCATING WIRE REQUIRED.
3. THE COVER OVER ALL PIPING LESS THAN 24" SIZE SHALL BE A MINIMUM OF 30" IN UNPAVED AREAS AND 36" IN PAVED AREAS WITH A MAXIMUM COVER OF 60". COVER FOR PIPING 24" SIZE AND LARGER SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84". THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

PVC PIPE (BELL JOINT)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7"	158 FT
4	10	2.4000"	480 FT
6	10	2.4000"	480 FT
8	10	2.4000"	480 FT
10	10	2.4000"	480 FT
12	8.5000	2"	564 FT
14-24	5	1 1/2"	960 FT
30-48	3.2500	8000"	1477 FT

DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
4	27	6.5°	177 FT
6	24	5.7°	200 FT
8-12	17	4.2°	273 FT
14-16	12	2.9°	400 FT
18-20	10	2.4°	477 FT
24-30	8.0000	1.9°	600 FT
36	7	1.7°	687 FT
42-48	6.7000	1.6°	716 FT

NOTES:

1. FOR HDPE (FUSED JOINT), PIPE DEFLECTION SHALL CONFORM MINIMUM COLD BENDING RADIUS AT ALL POINTS. IN ACCORDANCE WITH PIPE MANUFACTURE'S RECOMMENDATIONS.

WT04 UTILITY CONFLICT ADJUSTMENT BY DEFLECTION - CASE A
SCALE: N.T.S

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

PVC PIPE (BELL JOINT)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7"	158 FT
4	10	2.4000"	480 FT
6	10	2.4000"	480 FT
8	10	2.4000"	480 FT
10	10	2.4000"	480 FT
12	8.5000	2"	564 FT
14-24	5	1 1/2"	960 FT
30-48	3.2500	8000"	1477 FT

DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
4	27	6.5°	177 FT
6	24	5.7°	200 FT
8-12	17	4.2°	273 FT
14-16	12	2.9°	400 FT
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36	7	1.7°	687 FT
42-48	6.7000	1.6°	716 FT

NOTES:

1. FOR HDPE (FUSED JOINT), PIPE DEFLECTION SHALL CONFORM TO MINIMUM COLD BENDING RADIUS AT ALL POINTS. IN ACCORDANCE WITH PIPE MANUFACTURE'S RECOMMENDATIONS.

WT05 UTILITY CONFLICT ADJUSTMENT BY DEFLECTION - CASE B
SCALE: N.T.S

REVISIONS	
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45239

WATER DETAILS
ELLISVILLE WATER MAIN EXTENSION
COLUMBIA COUNTY, FLORIDA

SHEET NO.
81

END OF ADDENDUM NO. 2
(Please acknowledge receipt of Addendums)