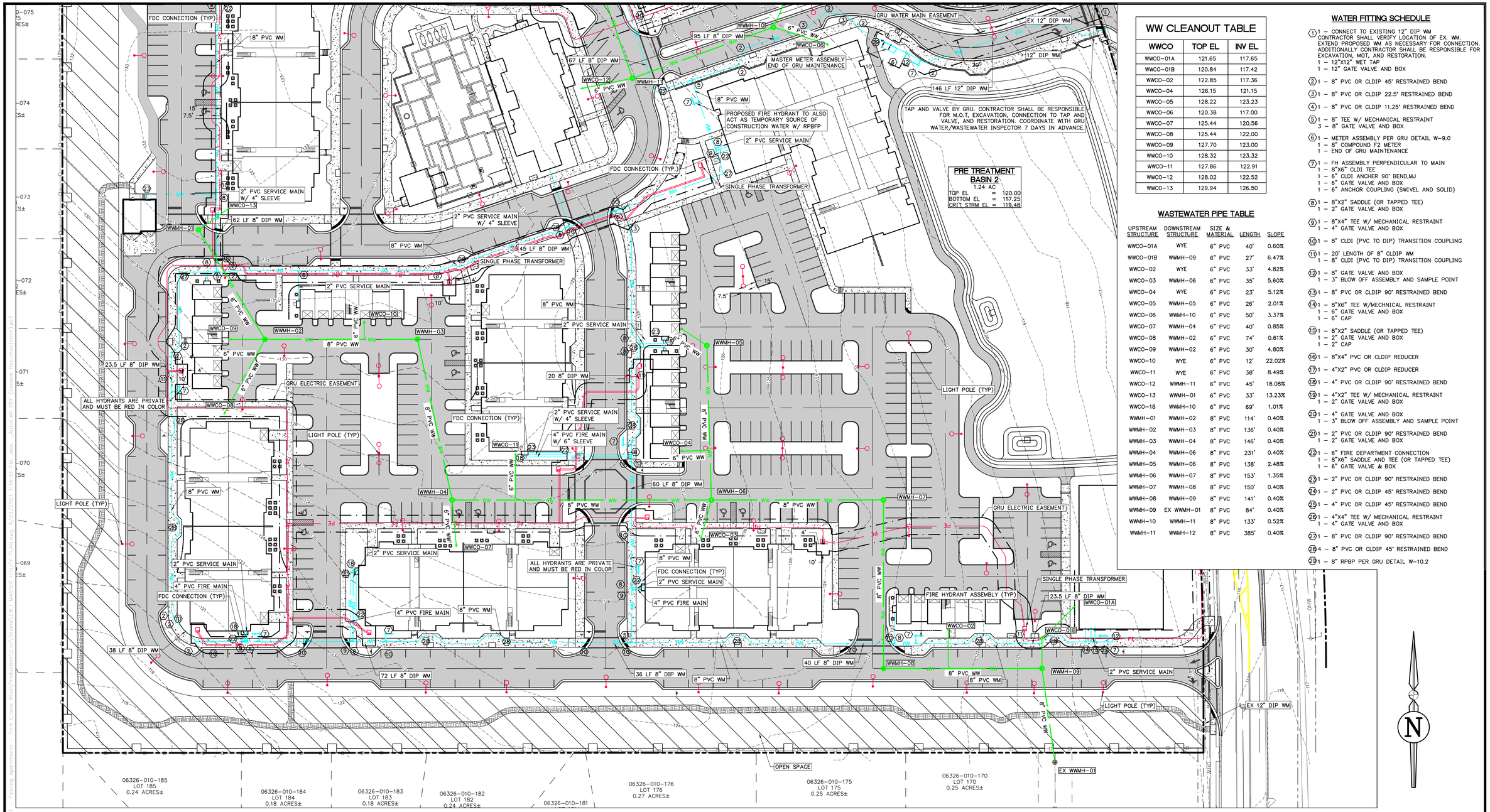

WW CLEANOUT TABLE

WWCO	TOP EL	INV EL
WWCO-01A	121.65	117.65
WWCO-01B	120.84	117.42
WWCO-02	122.85	117.36
WWCO-04	126.15	121.15
WWCO-05	128.22	123.23
WWCO-06	120.38	117.00
WWCO-07	125.44	120.56
WWCO-08	125.44	122.00
WWCO-09	127.70	123.00
WWCO-10	128.32	123.32
WWCO-11	127.86	122.91
WWCO-12	128.02	122.52
WWCO-13	129.94	126.50

WASTEWATER PIPE TABLE

UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	SIZE & MATERIAL	LENGTH	SLOPE
WWCO-01A	WYE	6" PVC	40'	0.60%
WWCO-01B	WWMH-09	6" PVC	27'	6.47%
WWCO-02	WYE	6" PVC	33'	4.82%
WWCO-03	WWMH-06	6" PVC	35'	5.60%
WWCO-04	WYE	6" PVC	23'	5.12%
WWCO-05	WWMH-05	6" PVC	26'	2.01%
WWCO-06	WWMH-10	6" PVC	50'	3.37%
WWCO-07	WWMH-04	6" PVC	40'	0.85%
WWCO-08	WWMH-02	6" PVC	74'	0.61%
WWCO-09	WWMH-02	6" PVC	30'	4.80%
WWCO-10	WYE	6" PVC	12'	22.02%
WWCO-11	WYE	6" PVC	38'	8.49%
WWCO-12	WWMH-11	6" PVC	45'	18.08%
WWCO-13	WWMH-01	6" PVC	33'	13.23%
WWMH-10	WWMH-12	6" PVC	69'	1.01%
WWMH-01	WWMH-02	8" PVC	114'	0.40%
WWMH-02	WWMH-03	8" PVC	136'	0.40%
WWMH-03	WWMH-04	8" PVC	146'	0.40%
WWMH-04	WWMH-06	8" PVC	231'	0.40%
WWMH-05	WWMH-06	8" PVC	138'	2.48%
WWMH-06	WWMH-07	8" PVC	153'	1.35%
WWMH-07	WWMH-08	8" PVC	150'	0.40%
WWMH-08	WWMH-09	8" PVC	141'	0.40%
WWMH-09	EX WWMH-01	8" PVC	84'	0.40%
WWMH-10	WWMH-11	8" PVC	133'	0.52%
WWMH-11	WWMH-12	8" PVC	385'	0.40%

WATER FITTING SCHEDULE

1. 1 – CONNECT TO EXISTING 12" DIP WM
   CONTRACTOR SHALL VERIFY LOCATION OF EX. WM.
   EXTEND PROPOSED WM AS NECESSARY FOR CONNECTION.
   ADDITIONALLY CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION, MOT, AND RESTORATION.
   1 – 12"X12" WET TAP
   1 – 12" GATE VALVE AND BOX
2. 1 – 8" PVC OR CLDIP 45° RESTRAINED BEND
3. 1 – 8" PVC OR CLDIP 22.5° RESTRAINED BEND
4. 1 – 8" PVC OR CLDIP 11.25° RESTRAINED BEND
5. 1 – 8" TEE W/ MECHANICAL RESTRAINT
   3 – 8" GATE VALVE AND BOX
6. 1 – METER ASSEMBLY PER GRU DETAIL W-9.0
   1 – 8" COMPOUND F2 METER
   1 – END OF GRU MAINTENANCE
7. 1 – FH ASSEMBLY PERPENDICULAR TO MAIN
   1 – 8"X6" CLDI TEE
   1 – 6" CLDI ANCHER 90° BEND,MJ
   1 – 6" GATE VALVE AND BOX
   1 – 6" ANCHOR COUPLING (SWIVEL AND SOLID)
8. 1 – 8"X2" SADDLE (OR TAPPED TEE)
   1 – 2" GATE VALVE AND BOX
9. 1 – 8"X4" TEE W/ MECHANICAL RESTRAINT
   1 – 4" GATE VALVE AND BOX
10. 1 – 8" CLDI (PVC TO DIP) TRANSITION COUPLING
11. 1 – 20' LENGTH OF 8" CLDIP WM
    1 – 8" CLDI (PVC TO DIP) TRANSITION COUPLING
12. 1 – 8" GATE VALVE AND BOX
    1 – 3" BLOW OFF ASSEMBLY AND SAMPLE POINT
13. 1 – 8" PVC OR CLDIP 90° RESTRAINED BEND
14. 1 – 8"X6" TEE W/MECHNICAL RESTRAINT
    1 – 6" GATE VALVE AND BOX
    1 – 6" CAP
15. 1 – 8"X2" SADDLE (OR TAPPED TEE)
    1 – 2" GATE VALVE AND BOX
    1 – 2" CAP
16. 1 – 8"X4" PVC OR CLDIP REDUCER
17. 1 – 4"X2" PVC OR CLDIP REDUCER
18. 1 – 4" PVC OR CLDIP 90° RESTRAINED BEND
19. 1 – 4"X2" TEE W/ MECHANICAL RESTRAINT
    1 – 2" GATE VALVE AND BOX
20. 1 – 4" GATE VALVE AND BOX
    1 – 3" BLOW OFF ASSEMBLY AND SAMPLE POINT
21. 1 – 2" PVC OR CLDIP 90° RESTRAINED BEND
    1 – 2" GATE VALVE AND BOX
22. 1 – 6" FIRE DEPARTMENT CONNECTION
    1 – 8"X6" SADDLE AND TEE (OR TAPPED TEE)
    1 – 6" GATE VALVE & BOX
23. 1 – 2" PVC OR CLDIP 90° RESTRAINED BEND
24. 1 – 2" PVC OR CLDIP 45° RESTRAINED BEND
25. 1 – 4" PVC OR CLDIP 45° RESTRAINED BEND
26. 1 – 4"X4" TEE W/ MECHANICAL RESTRAINT
    1 – 4" GATE VALVE AND BOX
27. 1 – 8" PVC OR CLDIP 90° RESTRAINED BEND
28. 4 – 8" PVC OR CLDIP 45° RESTRAINED BEND
29. 1 – 8" RPBP PER GRU DETAIL W-10.2

REVISIONS

NO.	DATE	DESCRIPTION	DRWN	APPR

ENGINEER OF RECORD: LOGAN B. PETERS, P.E. FLORIDA LICENSE NO. 88516

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Toll Free: (844) Go-JBPro | E-mail: contact@jbpro.com

SHEET TITLE: UTILITY CROSSING PLAN (SOUTH)

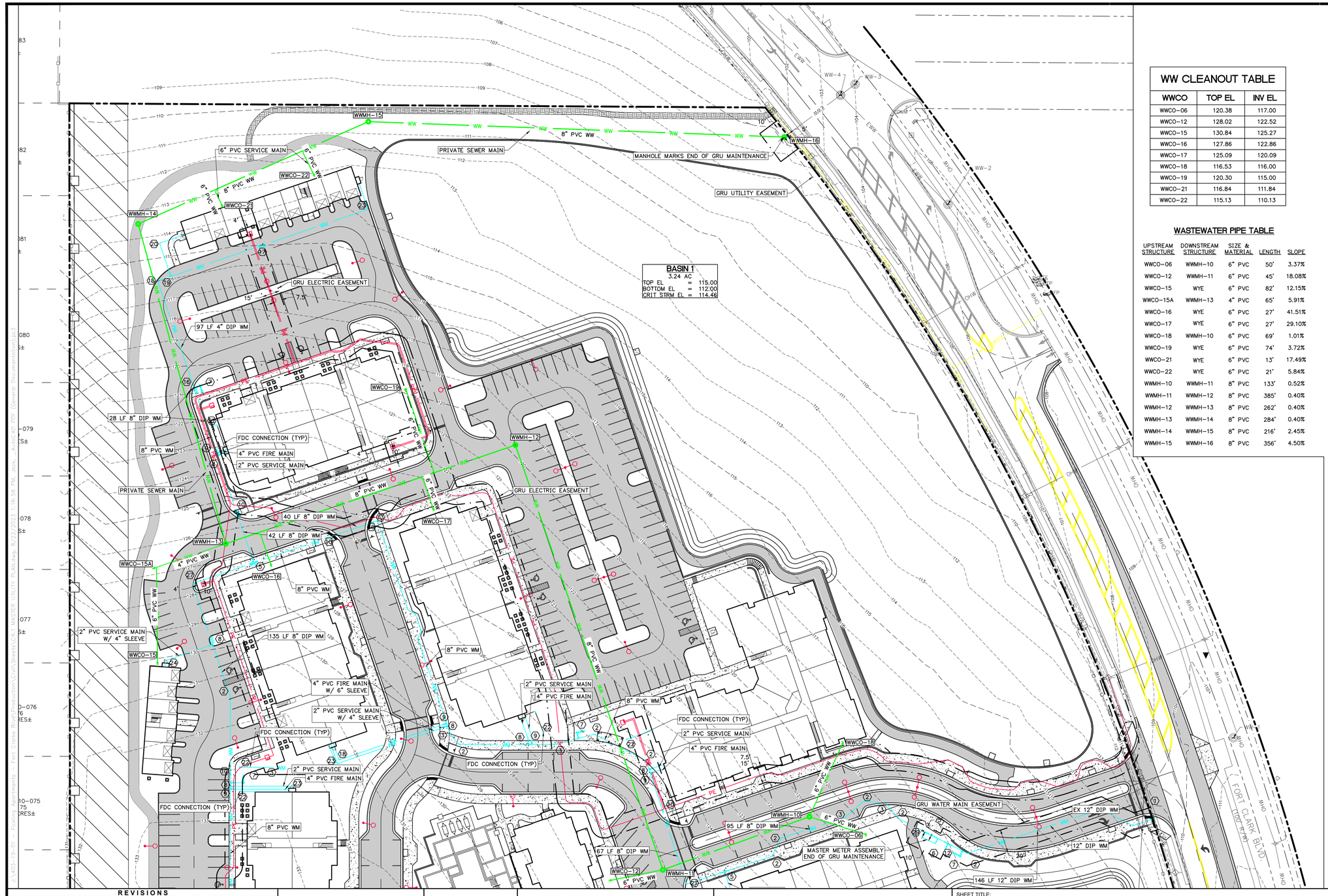
DATE: AUGUST 2023

PROJECT NO: 403-19-01

CLIENT: FICKLING AND CO. MACON, GA

PROJECT: LULLWATER AT FORT CLARKE BLVD

SHEET NO: C6.1



WW CLEANOUT TABLE

WWCO	TOP EL	INV EL
WWCO-06	120.38	117.00
WWCO-12	128.02	122.52
WWCO-15	130.84	125.27
WWCO-16	127.86	122.86
WWCO-17	125.09	120.09
WWCO-18	116.53	116.00
WWCO-19	120.30	115.00
WWCO-21	116.84	111.84
WWCO-22	115.13	110.13

WASTEWATER PIPE TABLE

UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	SIZE & MATERIAL	LENGTH	SLOPE
WWCO-06	WWMH-10	6" PVC	50'	3.37%
WWCO-12	WWMH-11	6" PVC	45'	18.08%
WWCO-15	WYE	6" PVC	82'	12.15%
WWCO-15A	WWMH-13	4" PVC	65'	5.91%
WWCO-16	WYE	6" PVC	27'	41.51%
WWCO-17	WYE	6" PVC	27'	29.10%
WWCO-18	WWMH-10	6" PVC	69'	1.01%
WWCO-19	WYE	6" PVC	74'	3.72%
WWCO-21	WYE	6" PVC	13'	17.49%
WWCO-22	WYE	6" PVC	21'	5.84%
WWMH-10	WWMH-11	8" PVC	133'	0.52%
WWMH-11	WWMH-12	8" PVC	385'	0.40%
WWMH-12	WWMH-13	8" PVC	262'	0.40%
WWMH-13	WWMH-14	8" PVC	284'	0.40%
WWMH-14	WWMH-15	8" PVC	216'	2.45%
WWMH-15	WWMH-16	8" PVC	356'	4.50%

WATER FITTING SCHEDULE

(1) 1 – CONNECT TO EXISTING 12" DIP WM
CONTRACTOR SHALL VERIFY LOCATION OF EX. WM. EXTEND PROPOSED WM AS NECESSARY FOR CONNECTION. ADDITIONALLY CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION, MOT, AND RESTORATION.
1 – 12"X12" WET TAP
1 – 12" GATE VALVE AND BOX

(2) 1 – 8" PVC OR CLDIP 45° RESTRAINED BEND

(3) 1 – 8" PVC OR CLDIP 22.5° RESTRAINED BEND

(4) 1 – 8" PVC OR CLDIP 11.25° RESTRAINED BEND

(5) 1 – 8" TEE W/ MECHANICAL RESTRAINT
3 – 8" GATE VALVE AND BOX

(6) 1 – METER ASSEMBLY PER GRU DETAIL W-9.0
1 – 8" COMPOUND F2 METER
1 – END OF GRU MAINTENANCE

(7) 1 – FH ASSEMBLY PERPENDICULAR TO MAIN
1 – 8"X6" CLDI TEE
1 – 6" CLDI ANCHER 90° BEND,MJ
1 – 6" GATE VALVE AND BOX
1 – 6" ANCHOR COUPLING (SWIVEL AND SOLID)

(8) 1 – 8"X2" SADDLE (OR TAPPED TEE)
1 – 2" GATE VALVE AND BOX

(9) 1 – 8"X4" TEE W/ MECHANICAL RESTRAINT
1 – 4" GATE VALVE AND BOX

(10) 1 – 8" CLDI (PVC TO DIP) TRANSITION COUPLING

(11) 1 – 20' LENGTH OF 8" CLDIP WM
1 – 8" CLDI (PVC TO DIP) TRANSITION COUPLING

(12) 1 – 8" GATE VALVE AND BOX
1 – 3" BLOW OFF ASSEMBLY AND SAMPLE POINT

(13) 1 – 8" PVC OR CLDIP 90° RESTRAINED BEND

(14) 1 – 8"X6" TEE W/MECHNICAL RESTRAINT
1 – 6" GATE VALVE AND BOX
1 – 6" CAP

(15) 1 – 8"X2" SADDLE (OR TAPPED TEE)
1 – 2" GATE VALVE AND BOX
1 – 2" CAP

(16) 1 – 8"X4" PVC OR CLDIP REDUCER

(17) 1 – 4"X2" PVC OR CLDIP REDUCER

(18) 1 – 4" PVC OR CLDIP 90° RESTRAINED BEND

(19) 1 – 4"X2" TEE W/ MECHANICAL RESTRAINT
1 – 2" GATE VALVE AND BOX

(20) 1 – 4" GATE VALVE AND BOX
1 – 3" BLOW OFF ASSEMBLY AND SAMPLE POINT

(21) 1 – 2" PVC OR CLDIP 90° RESTRAINED BEND
1 – 2" GATE VALVE AND BOX

(22) 1 – 6" FIRE DEPARTMENT CONNECTION
1 – 8"X6" SADDLE AND TEE (OR TAPPED TEE)
1 – 6" GATE VALVE & BOX

(23) 1 – 2" PVC OR CLDIP 90° RESTRAINED BEND

(24) 1 – 2" PVC OR CLDIP 45° RESTRAINED BEND

(25) 1 – 4" PVC OR CLDIP 45° RESTRAINED BEND

(26) 1 – 4"X4" TEE W/ MECHANICAL RESTRAINT
1 – 4" GATE VALVE AND BOX

(27) 1 – 8" PVC OR CLDIP 90° RESTRAINED BEND

(28) 4 – 8" PVC OR CLDIP 45° RESTRAINED BEND

N

40 20 0 40 80 120
SCALE 1" = 40'

REVISIONS

NO.	DATE	DESCRIPTION	DRWN	APPR

ENGINEER OF RECORD: LOGAN B. PETERS, P.E. FLORIDA LICENSE NO. 88516

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SHEET TITLE: UTILITY CROSSING PLAN (NORTH)

CLIENT: FICKLING AND CO.
MACON, GA

PROJECT: LULLWATER AT FORT CLARKE BLVD

DATE: AUGUST 2023

PROJECT NO: 403-19-01

SHEET NO: C6.2

GRU UTILITY CONSTRUCTION NOTES

A. A UTILITY PERMIT IS REQUIRED FROM GAINESVILLE REGIONAL UTILITIES.

B. THE UTILITY PLAN AND PLAT SHOWS ALL PUBLIC UTILITY EASEMENTS (PUE's) IN A METES AND BOUNDS FORMAT. UPON GRU's APPROVAL OF PLANS FOR DEVELOPMENTS NOT BEING PLATTED, OWNER MAY CHOOSE TO GRANT THE METES AND BOUNDS EASEMENTS AS SHOWN, OR A BLANKET EASEMENT OVER THE ENTIRE PROPERTY. PROVIDED FACILITIES ARE INSTALLED WITHIN THE PRESCRIBED DISTANCES AS SHOWN ON THE UTILITY PLANS AND IN ACCORDANCE WITH THE UTILITY SEPARATION REQUIREMENTS TABLE IN APPENDIX C OF THE GRU W/WW/RCW DESIGN STANDARDS.

C. ALL CONSTRUCTION MATERIALS AND METHODS FOR POTABLE WATER, WASTEWATER, AND RECLAIMED WATER SYSTEMS SHALL CONFORM TO GRU'S MOST RECENT POTABLE WATER, WASTEWATER, & RECLAIMED WATER SYSTEM DESIGN AND CONSTRUCTION STANDARDS, AND APPROVED MATERIALS MANUAL.

D. POTABLE WATER AND WASTEWATER MAINS SHALL MAINTAIN A MINIMUM 10 FEET HORIZONTAL AND 1.5 FOOT VERTICAL SEPARATION.

E. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FOR POTABLE WATER MAINS; WASTEWATER FORCE MAINS, AND RECLAIMED WATER MAINS, AND 15 FEET FOR GRAVITY WASTEWATER MAINS SHALL BE PROVIDED AND MAINTAINED FROM BUILDINGS, TRANSFORMERS, AND ALL PERMANENT STRUCTURES. SERVICE LATERALS REQUIRE 5 FEET LESS CLEARANCE FOR EACH OF THE UTILITIES; NOTE THAT WATER SERVICE LATERALS SHALL BE INSTALLED WITHIN 3" SLEEVES. NOTE: WITHIN THE GAINESVILLE CITY LIMITS, SEPARATION TO TREES IS REDUCED TO 7.5' FOR PRESSURIZED MAINS AND 10' (MINIMUM) FOR GRAVITY MAINS. (SEE APPENDIX C OF GRU'S DESIGN STANDARDS AND CONSTRUCTION DETAILS FOR POTABLE WATER, WASTEWATER, AND RECLAIMED WATER – HORIZONTAL SEPARATION DISTANCES FOR PARALLEL AND PERPENDICULAR CLEARANCE FROM OTHER OBJECTS TABLE).

F. POTABLE WATER SERVICES, REQUIRING A SEPARATE WATER METER, SHALL BE PROVIDED TO EACH LOT, BUILDING OR PARCEL. EFFECTIVE OCTOBER 1, 2007, FOR COMMERCIAL, MULTIFAMILY, AND INSTITUTIONAL DEVELOPMENTS, THE DEVELOPER SHALL BE RESPONSIBLE FOR INSTALLING POTABLE WATER SERVICES AND YOKE ASSEMBLY PACKAGE UP TO AND INCLUDING THE METER YOKE, BOX (INSTALLED AT FINAL GRADE) AND ASSOCIATED APPURTENANCES, FOR METERS 1" AND SMALLER (SEE GRU W/WW/RCW CONSTRUCTION DETAIL W – 8.0), WITH A ONE-YEAR WARRANTY.

G. 2" VALVES LOCATED IN PAVED AREAS, INCLUDING SIDEWALKS, SHALL BE GRU APPROVED CAST IRON, RESILIENT SEAT GATE VALVES WITH STANDARD 2" OPERATING NUT, THREADED WITH BRASS NIPPLE BETWEEN THE VALVES AND TAPPING SADDLE OR TAPPED TEE.

H. WATER MAINS 4" IN DIAMETER AND GREATER, PLACED UNDER ROADWAYS, SHALL BE CEMENT LINED DUCTILE IRON PIPE (CLDIP) EXTENDING 5 FEET PAST THE BACK OF CURB (3 FEET WITHIN CITY OF GAINESVILLE LIMITS). TRACER WIRE INSTALLED ON PVC WATER MAINS SHALL CONTINUE ACROSS THE CLDIP SECTIONS.

I. 1" OR 2" WATER SERVICE CROSSINGS LOCATED UNDER ROADWAYS SHALL BE ENCASED IN 3" SCH 40 PVC EXTENDING 5' PAST THE BACK OF CURB (3' INSIDE CITY OF GAINESVILLE LIMITS).

J. ANCHORING TEES, COUPLINGS, AND BENDS SHALL BE USED ON ALL FIRE HYDRANT ASSEMBLIES.

K. ALL PRESSURIZED MAIN FITTINGS SHALL BE MECHANICAL JOINT WITH RESTRAINED JOINT GLANDS; A SUFFICIENT LENGTH OF THE PIPE CONNECTED TO THE FITTINGS SHALL BE MECHANICALLY RESTRAINED TO PROVIDE REACTION AS SPECIFIED ON THE RESTRAINED JOINT STANDARD IN THE CONSTRUCTION DETAILS OF THE GRU STANDARDS (W –2.8 & 2.9, RCW – 2.8 & 2.9, AND WW – 2.4 & 2.5). CALCULATIONS FOR REQUIRED RESTRAINT LENGTH MUST BE PROVIDED IF THE SPECIFIED RESTRAINT LENGTH, DUE TO SOIL TYPE OR DEPTH OF COVER, DIFFERS FROM THOSE PROVIDED ON THESE DETAILS.

L. ALL SANITARY WASTEWATER SERVICE LATERALS SHALL BE MIN. 4" DIAMETER PVC (SDR 26) AT 1.00% MIN. SLOPE UNLESS OTHERWISE LABELED.

M. WASTEWATER CLEANOUT COVERS LOCATED WITHIN PAVEMENT AND SIDEWALKS ADJACENT TO PAVED AREAS SHALL BE RATED FOR TRAFFIC LOAD BEARING.

N. MANHOLES WHICH ARE NOT INSTALLED UNDER PAVEMENT SHALL HAVE A RIM ELEVATION AT LEAST 6" ABOVE FINISHED GRADE, AND AT A 10:1 SLOPE TO FINISHED GRADE.

O. UNLESS OTHERWISE NOTED ON THE PLANS, THE FINISHED FLOOR ELEVATIONS OF BUILDINGS SHALL BE A MINIMUM OF 6" ABOVE THE LOWEST UPSTREAM MANHOLE TOP. IF THIS IS INFEASIBLE, A WASTEWATER SERVICE LATERAL BACKWATER VALVE (BWV) IS REQUIRED ON THE CUSTOMER SIDE OF THE CLEANOUT.

P. AIR CONDITIONING CONDENSATE LINES SHALL NOT DISCHARGE TO WASTEWATER LINES.

Q. CONTRACTOR SHALL USE SUNSHINE ONE-CALL (CALL 811 BEFORE YOU DIG) PRIOR TO ANY EXCAVATION ON SITE.

GENERAL UTILITY NOTES WATER AND WASTEWATER

POTABLE WATER – GRU

1. PRIOR TO CONNECTION TO EXISTING WATER MAIN, CONTRACTOR SHALL CONTACT GRU AND COORDINATE CONNECTION WITH GRU WATER/WASTEWATER INSPECTOR A MINIMUM OF 7 DAYS BEFORE PLANNED CONNECTION.
2. FDEP AND THE FLORIDA BUILDING/PLUMBING CODE GOVERN THE CONNECTION BETWEEN THE WATER METERS AND THE BUILDINGS. JBPRO HAS SPECIFIED A RECOMMENDED ROUTE FOR THIS CONNECTION. HOWEVER, SHOULD THE REQUIREMENTS OF FDEP AND THE FLORIDA BUILDING CODE DIFFER FROM WHAT IS DEPICTED ON THE PLANS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND PLUMBER TO NOTIFY JBPRO AND THE OWNER TO COORDINATE ANY SITE PLAN CHANGES IN ORDER TO BE IN COMPLIANCE WITH FDEP AND THE FLORIDA BUILDING CODE.
3. WATER MAINS SHALL BE INSTALLED WITH 30" TO 36" OF COVER. WATER MAINS AND ASSOCIATED FITTINGS MAY BE DEFLECTED IN ACCORDANCE WITH THE SPECIFIED LIMITATIONS FROM THE MANUFACTURER.
4. WATER METERS SHALL BE OUTSIDE OF LANDSCAPE AND PAVED AREAS, A MINIMUM OF 5' FROM BUILDINGS, BEHIND SIDEWALKS, AND BE A MINIMUM OF 2 FEET FROM THE EDGE OF PAVEMENT.
5. FOR WATER MAINS, ALL MECHANICAL JOINT FITTINGS SHALL HAVE RESTRAINING JOINT GLANDS. PIPE SHALL BE RESTRAINED FOR SUFFICIENT LENGTH TO PROVIDE REACTION FOR BENDS & DEAD ENDS.
7. ALL WATER MAINS MUST BE FLUSHED, PRESSURE TESTED, AND BACTERIOLOGICAL TEST PROVIDED TO GRU. A THIRD PARTY IS REQUIRED TO PROVIDE THIS INFORMATION TO GRU BUT GRU INSPECTOR MUST BE PRESENT WHEN BAC-T'S ARE TAKEN AND PRESSURE TESTS CONDUCTED.
6. POTABLE WATER DEMAND
   a. LULLWATER APARTMENTS – 483 BEDROOMS
      (i) AVERAGE DAILY FLOW = 120 GPD PER BEDROOM X 483 BEDROOMS = 57,960 GPD.
      USE 2.5 PEAKING FACTOR: PEAK FLOW = 2.5 X 57,960 GPD X (1 DAY/1,440 MIN) = 100.6 GPM.
   b. COMMERCIAL – 9,750 SF
      (i) AVERAGE DAILY FLOW = 0.1 GPD PER 1 SF X 9,750 SF = 975 GPD.
      USE 2.5 PEAKING FACTOR: PEAK FLOW = 2.5 X 975 GPD X (1 DAY/1,440 MIN) = 1.69 GPM.

WASTEWATER – GRU

1. PRIOR TO CONNECTION TO EXISTING WASTEWATER, CONTRACTOR SHALL CONTACT GRU AND COORDINATE CONNECTION WITH GRU WATER/WASTEWATER INSPECTOR A MINIMUM OF 7 DAYS BEFORE PLANNED CONNECTION.
2. GRAVITY WASTEWATER MAINS WITH 14 FEET OF COVER OR LESS FROM THE PROPOSED GRADE SHALL BE SDR 26 PVC. GRAVITY WASTEWATER MAINS WITH GREATER THAN 14 FEET OF COVER BUT LESS THAN 20 FEET SHALL BE SDR 26 PVC. GRAVITY MAINS WITH 20-25 FEET OF COVER SHALL BE DR-18 PVC.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF UNSUITABLE MATERIALS AND FURNISH GRU APPROVED MATERIAL FOR THE BACKFILLING OF WASTEWATER LINES AT NO ADDITIONAL COST TO OWNER. THE CONTRACTOR MAY DISPOSE OF UNSUITABLE MATERIAL ONSITE WITH PERMISSION OF THE OWNER.
4. PVC GRAVITY WASTEWATER MAINS SHALL HAVE A MINIMUM OF 3 FEET OF COVER FROM PROPOSED GRADE.
5. WASTEWATER LATERAL CLEANOUTS INSTALLED OUTSIDE OF PAVEMENT SHALL HAVE ADJUSTABLE TOPS, TO ALLOW FOR ADJUSTMENT WITH FINAL LOT GRADING.
6. WASTEWATER LATERALS CONNECTING TO THE MAIN SHALL BE CONNECTED WITH A WYE FITTING ROTATED 45 DEGREES UP. THE INVERT ELEVATION OF THE SERVICE AT THE MAIN SHALL BE AT OR ABOVE THE CROWN OF THE MAIN.
7. WASTEWATER MAINS AND MANHOLES SHALL BE MAINTAINED BY GRU. WASTEWATER SERVICE LATERALS SHALL BE MAINTAINED BY OWNER FROM THE MAIN/MANHOLE TO THE CLEANOUT.
8. WASTEWATER DEMAND
   a. LULLWATER APARTMENTS – 483 BEDROOMS
      (i) AVERAGE DAILY FLOW = 120 GPD PER BEDROOM X 483 BEDROOMS = 57,960 GPD.
      USE 2.5 PEAKING FACTOR: PEAK FLOW = 2.5 X 57,960 GPD X (1 DAY/1,440 MIN) = 100.6 GPM.
   b. COMMERCIAL – 9,750 SF
      (i) AVERAGE DAILY FLOW = 0.1 GPD PER 1 SF X 9,750 SF = 975 GPD.
      USE 2.5 PEAKING FACTOR: PEAK FLOW = 2.5 X 975 GPD X (1 DAY/1,440 MIN) = 1.69 GPM.

GAS – GRU

1. MAINTAIN A MINIMUM 12" ALL-CLEAR ZONE (HORIZONTAL & VERTICAL) AROUND GAS MAINS AND SERVICES. MAINTAIN A MINIMUM DEPTH OF 3' FOR THE GAS MAIN AND ASSOCIATED CASINGS.
2. ALL GAS CASINGS SHALL BE INSTALLED BY CONTRACTOR. CONTACT GRU GAS, ERIC WILLIAMS AT 352-393-1467 72 HOURS IN ADVANCE OF INSTALLING CASING.
3. CONTRACTOR SHALL MAINTAIN A MINIMUM DEPTH OF 36" FOR THE GAS MAIN AND ASSOCIATED CASINGS DURING ALL PHASES OF CONSTRUCTION.
4. ALL PVC JOINTS SHALL BE PROPERLY CLEANED, PRIMED, AND GLUED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

FIRE PROTECTION

1. ALL PROPOSED FIRE PROTECTION SHALL BE IN ACCORDANCE WITH THE FLORIDA FIRE PROTECTION CODE, 7TH EDITION (2018).
2. BASED ON NFPA 2009 FIRE FLOW CALCULATIONS, FIRE PROTECTION DEMAND FOR PROPOSED BUILDINGS VARIES BETWEEN 1,000 GPM AND 3,250 GPM FOR A 4HR DURATION.

FDEP WATER NOTES

1. ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT WILL CONFORM TO APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS.
2. ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FIRE HYDRANTS, THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61.
3. ALL PROPOSED WATER MAINS SHALL BE FLUSHED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-651 AND THE FDEP PROTECTION REQUIREMENTS.
4. POTABLE WATER PIPES SHALL BE HYDROSTATICALLY TESTED FOR PRESSURE AND LEAKAGE IN ACCORDANCE WITH AWWA STANDARD C600 FOR DUCTILE IRON PIPES AND C 605 FOR PVC PIPES, RESPECTIVELY.
5. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL BE LEAD FREE, AND ANY SOLDER OR FLUX USED IN THIS PROJECT WILL CONTAIN NO MORE THAN 0.2% LEAD.
6. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62-555.320(21)(B)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE WILL BE SOLID-WALL BLUE PIPE, WILL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR WILL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE WILL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE WILL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT WILL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT WILL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE WILL BE PAINTED BLUE OR WILL BE COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.)
7. POTABLE WATER PIPES MUST BE MANUFACTURED IN ACCORDANCE WITH THE FOLLOWING AWWA SPECIFICATIONS:
   a. DUCTILE IRON PIPE (3 INCHES TO 54 INCHES) – AWWA C150 AND AWWA C151;
   b. PVC PIPE
      i. AWWA C900/ASTM 1784 (1 INCH TO 12 INCHES) WITH CL200 MINIMUM:
      ii. AWWA C905 (14 INCHES TO 48 INCHES);
8. ALL FIRE HYDRANTS THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL HAVE UNPLUGGED, UNDERGROUND DRAINS WILL BE LOCATED AT LEAST THREE FEET FROM AN EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, PIPELINE CONVEYING RECLAIMED WATER OR VACUUM-TYPE SANITARY SEWER; AT LEAST SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-10, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM".
9. NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE INSTALLED IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS OR IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDED PROCEDURES.
10. A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT; BACKFILL MATERIAL WILL BE TAMPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED PIPE INSTALLED UNDER THIS PROJECT AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE; AND UNSUITABLY SIZED STONES (AS DESCRIBED IN APPLICABLE AWWA STANDARDS OR MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES) FOUND IN TRENCHES WILL BE REMOVED FOR A DEPTH OF AT LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT.
11. ALL WATER MAIN TEES, BENDS, PLUGS, AND HYDRANTS INSTALLED UNDER THIS PROJECT WILL BE PROVIDED WITH THRUST BLOCKS OF RESTRAINED JOINTS TO PREVENT MOVEMENT.
12. NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL BE CONSTRUCTED OF ASBESTOS-CEMENT OR POLYVINYL CHLORIDE PIPE WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C603 OR C605, RESPECTIVELY, AND ALL OTHER NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600.
13. NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-61, F.A.C.; A HORIZONTAL DISTANCE OF A LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER); A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."
14. NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE; AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE.
15. AT THE UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
16. IF CONNECTION OF THE PROPOSED ACTIVITY TO THE WATER MAIN WILL RESULT IN A DEPRESSURIZATION OF THE EXISTING SYSTEM BELOW 20 POUNDS PER SQUARE INCH, ONE OF THE FOLLOWING MUST OCCUR;
   a. PRECAUTIONARY BOIL WATER NOTICES MUST BE ISSUED IN CASES OF PLANNED DISTRIBUTION INTERRUPTIONS, WHICH ARE DEEMED AN IMMINENT PUBLIC HEALTH THREAT BY THE DEP NORTHEAST DISTRICT OR WILL AFFECT THE BACTERIOLOGICAL QUALITY OF THE DRINKING WATER UNLESS THE PUBLIC WATER SYSTEM CAN DEMONSTRATE, BY SOUND ENGINEERING JUDGMENT, THAT THE INTEGRITY OF THE WATER SYSTEM HAS BEEN MAINTAINED; OR
   b. IN CASE OF BRIEF INTERRUPTION IN SERVICE, ADVISORIES (NOT BOIL WATER NOTICES) SHOULD BE ISSUED IF TEMPORARY CHANGES IN WATER QUALITY ARE EXPECTED TO OCCUR AND NOT DEEMED AN IMMINENT PUBLIC HEALTH RISK.

FDEP WASTEWATER NOTES

1. APPROPRIATE DEFLECTION TESTS ARE SPECIFIED FOR ALL FLEXIBLE PIPE. TESTING IS REQUIRED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM. TESTING REQUIREMENTS SPECIFY: 1) NO PIPE SHALL EXCEED A DEFLECTION OF 5%; 2) USING RIGID BALL OR MANDREL FOR THE DEFLECTION TEST WITH A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE, DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATIONS, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED; AND 3) PERFORMING THE TEST WITHOUT MECHANICAL PULLING DEVICES.
2. LEAKAGE TESTS ARE SPECIFIED REQUIRING THAT: 1) THE LEAKAGE EXFILTRATION OR INFILTRATION DOES NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM; 2) EXFILTRATION OR INFILTRATION TEST BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET; AND 3) AIR TEST, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM C 924 FOR CONCRETE PIPE, ASTM F-1417 FOL PLASTIC PIPE, AND OTHER MATERIAL APPROPRIATE TEST PROCEDURES.
3. MANHOLE INSPECTION AND TESTING FOR WATERTIGHTNESS OR DAMAGE PRIOR TO PLACING INTO SERVICE ARE REQUIRED. AIR TESTING SPECIFIED FOR CONCRETE SEWER MANHOLES, SHALL CONFORM TO THE TEST PROCEDURES DESCRIBED IN ASTM C-1244.
4. SUITABLE COUPLINGS COMPLYING WITH ASTM SPECIFICATIONS ARE REQUIRED FOR JOINING DISSIMILAR MATERIALS.

REVISIONS				
NO.	DATE	DESCRIPTION	DRWN	APPR

ENGINEER OF RECORD: LOGAN B. PETERS, P.E. FLORIDA LICENSE NO. 88516

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SHEET TITLE: UTILITY DETAILS AND NOTES

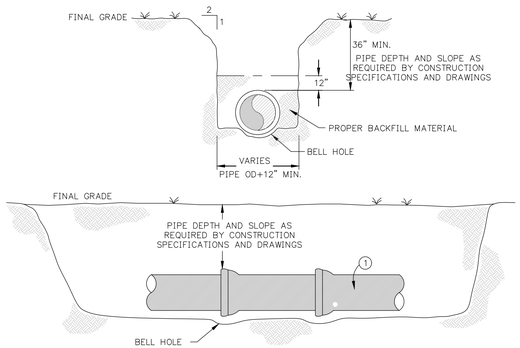
CLIENT: FICKLING AND CO. MACON, GA

PROJECT: LULLWATER AT FORT CLARKE BLVD

DATE: AUGUST 2023

PROJECT NO: 403-19-01

SHEET NO: C6.3

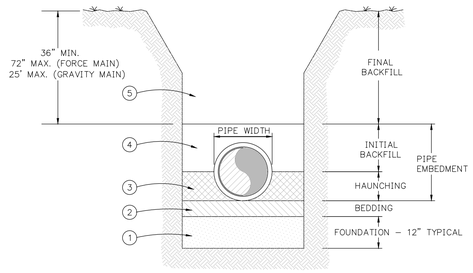


MATERIALS	
ITEM	DESCRIPTION
1	GRAVITY SEWER MAIN PIPE

NOTES:

1. GRAVITY MAIN PIPE SHALL BE INSTALLED AT THE LINE AND GRADE AS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS.
2. PIPE MATERIAL SHALL CONFORM TO AWWA STANDARDS.

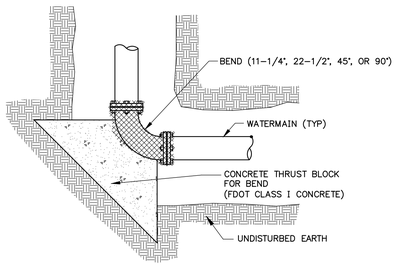
WASTEWATER GRAVITY MAIN CONSTRUCTION



NOTES:

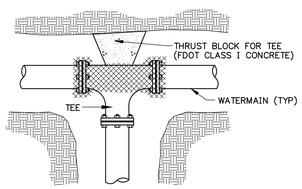
1. A FOUNDATION MAY BE REQUIRED IN VERY POOR SOIL CONDITIONS. FIELD DETERMINATION WILL BE PROVIDED BY CITY OF NEWBERRY INSPECTOR. TYPICAL FOUNDATION THICKNESS SHALL BE 12", BUT MAY VARY ACCORDING TO NATURAL MATERIAL.
2. BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE. IN DRY SOIL CONDITIONS CLASS II OR CLASS III MATERIAL SHALL BE HAND PLACED 4" TO 6", LIGHTLY COMPACTED, UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. IN WET SOIL CONDITIONS CLASS I, CLASS II OR CLASS III SHALL BE HAND PLACED, 4" TO 6", UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. WHEN UTILIZING CLASS I MATERIAL, SUFFICIENT AMOUNTS OF CLASS II OR CLASS III MATERIAL SHALL BE ADDED TO FILL ALL VOIDS CREATED BY THE CLASS I MATERIAL. HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. CLASS II OR
3. CLASS III MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.
4. INITIAL BACKFILL MATERIAL SHALL BE CLASS II OR CLASS III. IT SHALL BE HAND PLACED TO 12", ABOVE THE TOP OF THE PIPE. THE SOIL SHALL BE CONSOLIDATED BY HAND TAMPING OR WALKING THE SOIL IN PLACE.
5. FINAL BACKFILL MATERIAL MAY BE MACHINE PLACED. THE MATERIAL SHALL BE CLASS II OR CLASS III MATERIAL. CLASS IV MATERIAL MAY BE INSTALLED OUTSIDE OF THE ROADWAY. FINAL BACKFILL UNDER ROADWAYS MAY REQUIRE SPECIAL COMPACTION AND DENSITY TESTS.

BACKFILLING REQUIREMENTS



THRUST BLOCK @ BEND

NTS



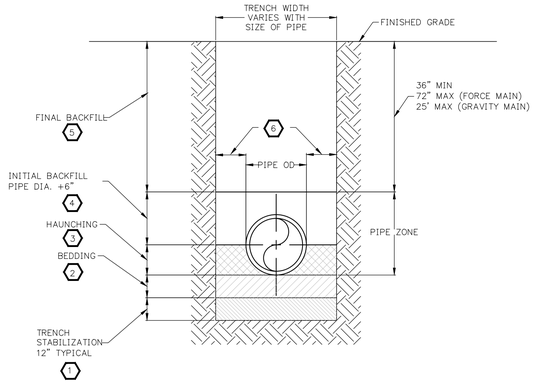
THRUST BLOCK @ TEE

GENERAL NOTE(S):

1. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
2. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
3. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. UTILITIES SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION. THE BOTTOM OF THE TRENCH SHALL NOT BE EXCAVATED BELOW THE SPECIFIED GRADE. IF UNDERCUTTING OCCURS, THE BOTTOM OF THE TRENCH SHALL BE BROUGHT UP TO THE ORIGINAL GRADE WITH APPROVED MATERIAL AND THOROUGHLY COMPACTED TO A MINIMUM OF 95% MODIFIED PROCTOR.
4. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.

KEYED NOTE(S):

1. TRENCH STABILIZATION SHALL BE PROVIDED TO A DEPTH OF 12-INCHES. THE MATERIAL SHALL BE NO. 57 STONE.
2. BEDDING SHALL BE A MINIMUM OF 6-INCHES AND COMPOSED OF IMPORTED GRANULAR FILL. COMPACT TO 95% STANDARD PROCTOR, AASHTO T-99.
3. HAUNCHING PORTION OF THE PIPE ZONE SHALL BE PLACED TO THE SPRINGLINE OF THE PIPE AND COMPOSED OF IMPORTED GRANULAR FILL. COMPACT TO 95% STANDARD PROCTOR ASSHTO T-99.
4. INITIAL BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180. FROM THE SPRINGLINE OF THE PIPE TO TWO (2) FEET ABOVE THE PIPE THE SOIL SHALL BE CAREFULLY BACKFILLED IN 6-INCH LIFTS AND THE SOIL CONSOLIDATED WITH THE HAND OPERATED TAMPING MACHINE (OR AS REQUIRED BY CITY, COUNTY, OR STATE INSPECTORS).
5. FINAL BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180. AFTER PLACEMENT AND COMPACTION OF THE INITIAL BACKFILL THE BALANCE OF THE BACKFILL MATERIAL MAY BE MACHINE PLACED OR AS REQUIRED BY THE INSPECTOR AND SHALL NOT CONTAIN ANY ROCKS OR DEBRIS.
6. 12" MINIMUM



BEDDING AND TRENCHING DETAIL

NTS

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ENGINEER OF RECORD: LOGAN B. PETERS, P.E. FLORIDA LICENSE NO. 88516

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SHEET TITLE: UTILITY DETAILS AND NOTES

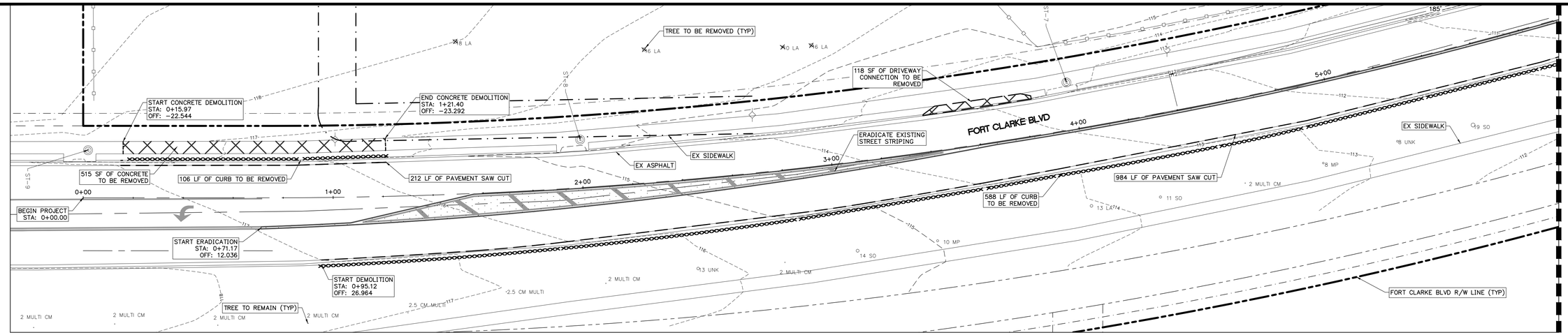
DATE: AUGUST 2023

PROJECT NO: 403-19-01

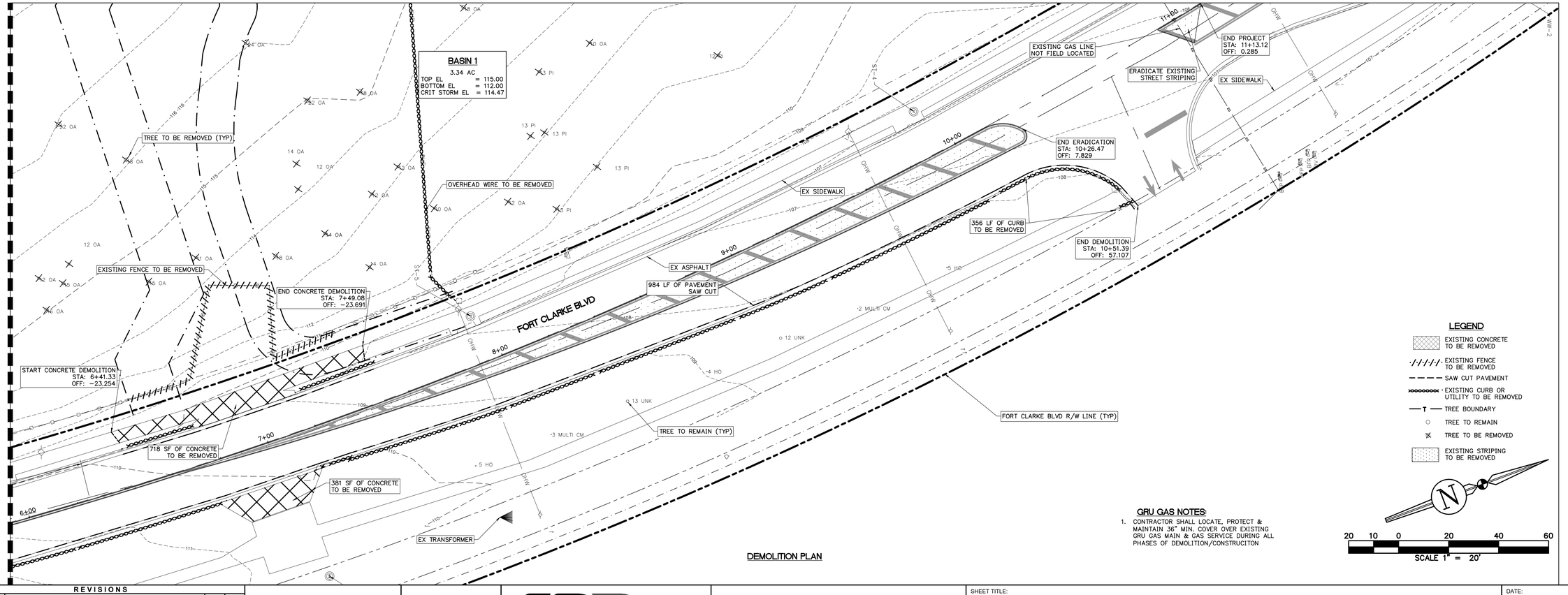
CLIENT: FICKLING AND CO. MACON, GA

PROJECT: LULLWATER AT FORT CLARKE BLVD

SHEET NO: C6.4



DEMOLITION PLAN



DEMOLITION PLAN

LEGEND

- EXISTING CONCRETE TO BE REMOVED
- EXISTING FENCE TO BE REMOVED
- SAW CUT PAVEMENT
- EXISTING CURB OR UTILITY TO BE REMOVED
- TREE BOUNDARY
- TREE TO REMAIN
- TREE TO BE REMOVED
- EXISTING STRIPING TO BE REMOVED

GRU GAS NOTES:

1. CONTRACTOR SHALL LOCATE, PROTECT & MAINTAIN 36" MIN. COVER OVER EXISTING GRU GAS MAIN & GAS SERVICE DURING ALL PHASES OF DEMOLITION/CONSTRUCITON

20 10 0 20 40 60

SCALE 1" = 20'

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SHEET TITLE: FORT CLARKE BLVD ROADWAY IMPROVEMENTS

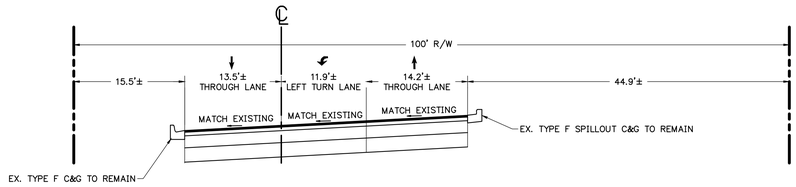
CLIENT: FICKLING AND CO. MACON, GA

PROJECT: LULLWATER AT FORT CLARKE BLVD

DATE: AUGUST 2023

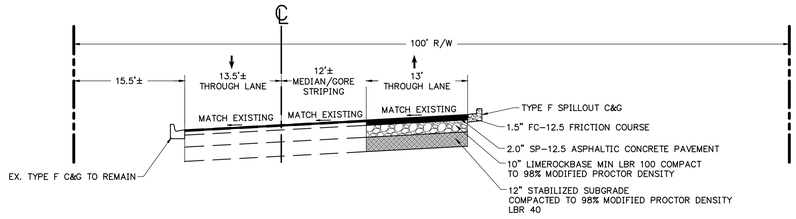
PROJECT NO: 403-19-01

SHEET NO: C7.0



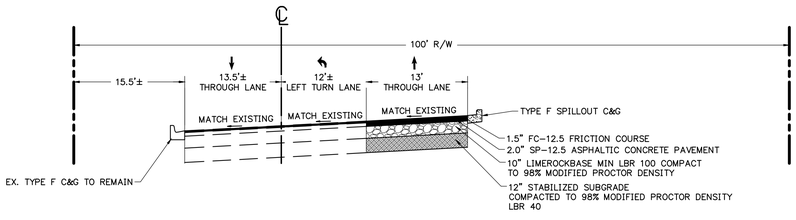
TYPICAL ROADWAY SECTION SOUTH OF LULLWATER DEVELOPMENT

STA 0+00 TO 0+71.18
N.T.S.



TYPICAL ROADWAY SECTION EAST OF LULLWATER DEVELOPMENT

STA 1+56.50 TO 4+90.23, 7+40.34 TO 10+15.71
N.T.S.



TYPICAL ROADWAY SECTION WESTBOUND TURN TO LULLWATER DEVELOPMENT

STA 4+90.23 TO 6+50.23
N.T.S.

TYPICAL SECTION NOTES

1. DESIGN SPEED: 50 MPH
2. POSTED SPEED: 40 MPH
3. ALL DISTURBED AREAS WITHIN R/W SHALL BE SODDED.
4. ALL LIMEROCK, EITHER PLACED NEW OR EXPOSED BY MILLING, SHALL BE PRIMED.
5. ALL ASPHALT PAVEMENT COURSES SHALL BE TRAFFIC LEVEL B MIXTURE.
6. ALL HOT MIX ASPHALT (HMA) MIXTURES SHALL UTILIZE PG 76-22 POLYMER MODIFIED ASPHALT BINDER. THIS APPLIES TO STRUCTURAL AND FRICTION COURSES.

REVISIONS				
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ENGINEER OF RECORD: **LOGAN B. PETERS, P.E. FLORIDA LICENSE NO. 88516**

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SHEET TITLE: FORT CLARKE BLVD ROADWAY IMPROVEMENTS

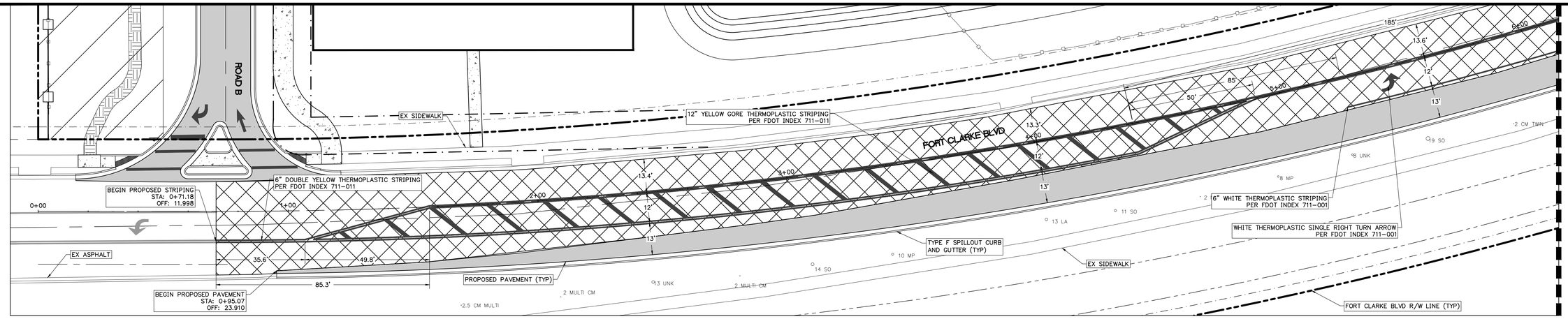
CLIENT: FICKLING AND CO. MACON, GA

PROJECT: LULLWATER AT FORT CLARKE BLVD

DATE: AUGUST 2023

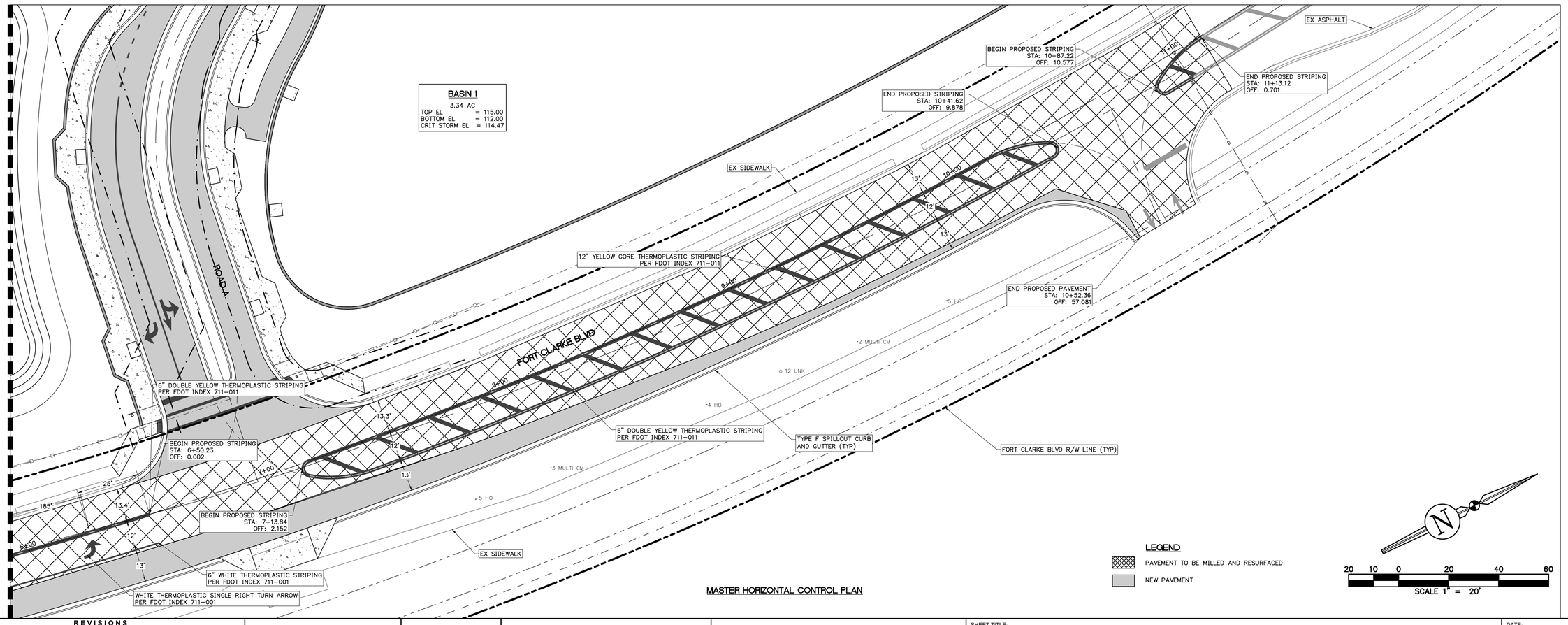
PROJECT NO: 403-19-01

SHEET NO: C7.1



MASTER HORIZONTAL CONTROL PLAN

BASIN 1
3.34 AC
TOP EL = 115.00
BOTTOM EL = 112.00
CRIT STORM EL = 114.47



MASTER HORIZONTAL CONTROL PLAN

LEGEND
PAVEMENT TO BE MILLED AND RESURFACED
NEW PAVEMENT

20 10 0 20 40 60
SCALE 1" = 20'

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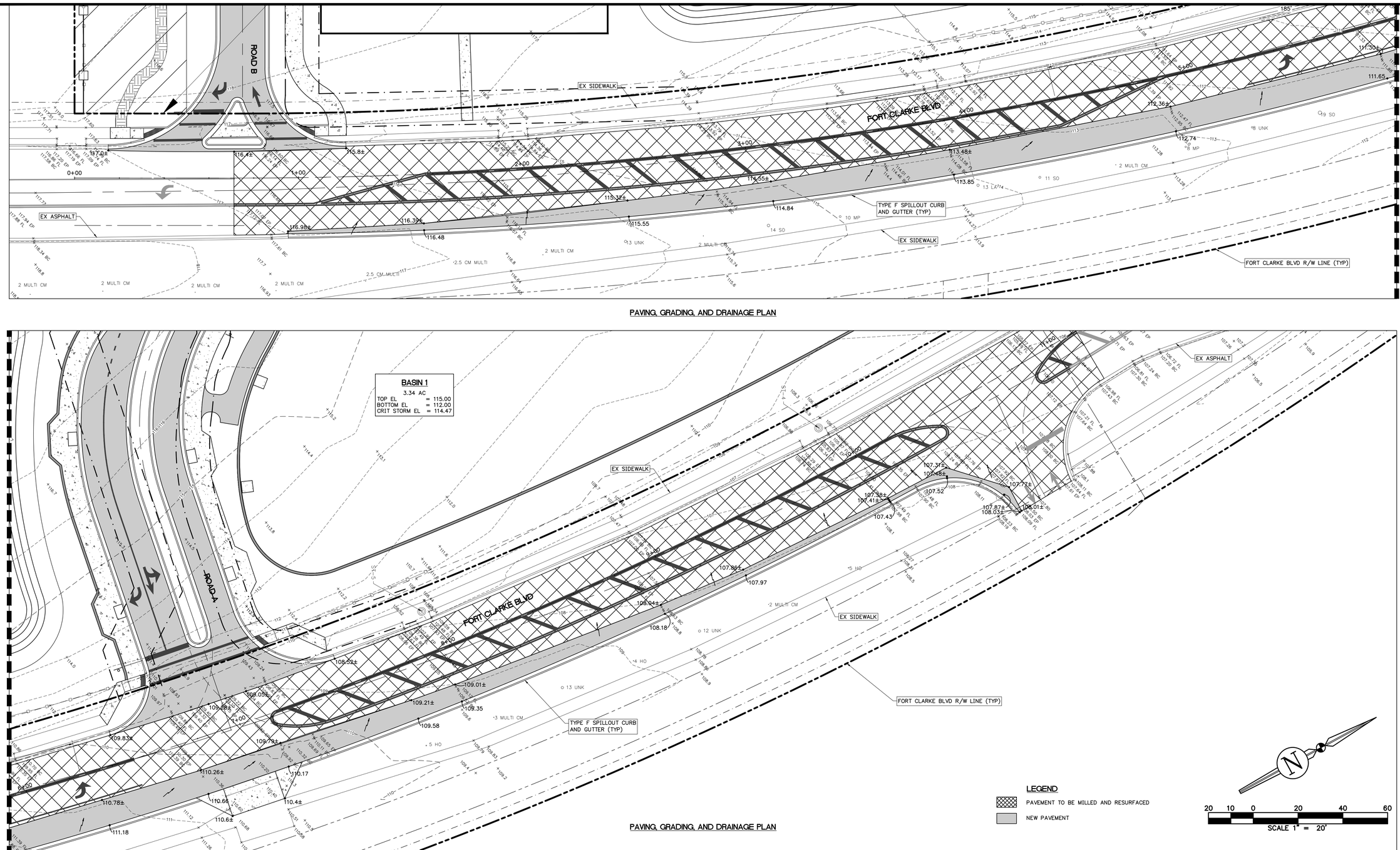
DATE: AUGUST 2023
PROJECT NO: 403-19-01
SHEET NO: C7.2



PAVING, GRADING, AND DRAINAGE PLAN

PAVING, GRADING, AND DRAINAGE PLAN

REVISIONS				
NO.	DATE	DESCRIPTION	DRWN	APPR

ENGINEER OF RECORD: LOGAN B. PETERS, P.E. FLORIDA LICENSE NO. 88516

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Gainesville: (352) 375-8999 | St. Augustine: (904) 789-8999
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SHEET TITLE: FORT CLARKE BLVD ROADWAY IMPROVEMENTS

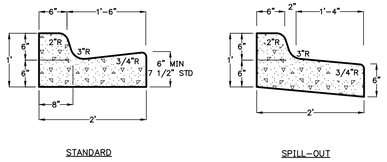
CLIENT: FICKLING AND CO. MACON, GA

PROJECT: LULLWATER AT FORT CLARKE BLVD

DATE: AUGUST 2023

PROJECT NO: 403-19-01

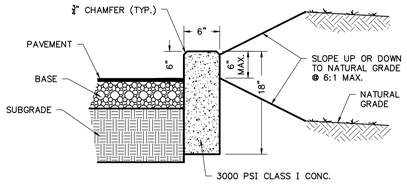
SHEET NO: C7.3



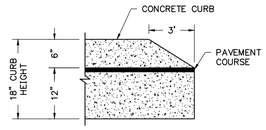
STANDARD SPILL-OUT

NOTE
WHEN USED ON THE HIGH SIDE OF ROADWAYS, THE CROSS-SLOPE OF THE GUTTER SHALL MATCH THE CROSS-SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN ON THE PLANS.

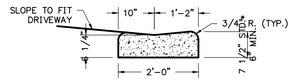
TYPE 'F' CONCRETE CURB AND GUTTER
N.T.S.



STANDARD CURB DETAIL
N.T.S.

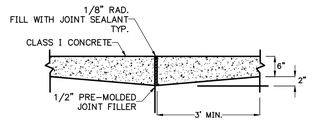


STANDARD CURB END TAPER DETAIL
N.T.S.

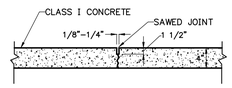


* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS-SLOPE OF THE GUTTER SHALL MATCH THE CROSS-SLOPE OF THE ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6" UNLESS OTHER- WISE SHOWN ON PLANS.

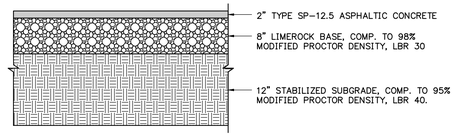
DROP CURB DETAIL
N.T.S.



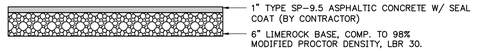
EXPANSION JOINT DETAIL
N.T.S.



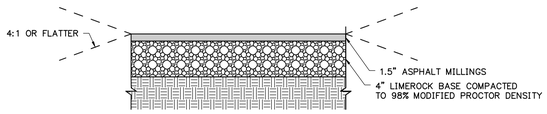
CONTRACTION (CONTROL) JOINT DETAIL
N.T.S.



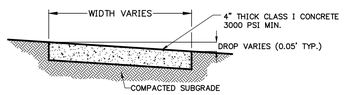
ASPHALT PAVEMENT DETAIL #1 - SITE PARKING LOT + LOADING
N.T.S.



TYPICAL MULTI-USE PATH PAVEMENT DETAIL
N.T.S.

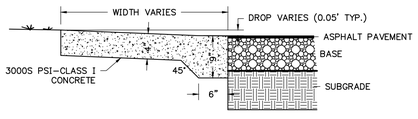


PEDESTRIAN PATH SECTION
N.T.S.

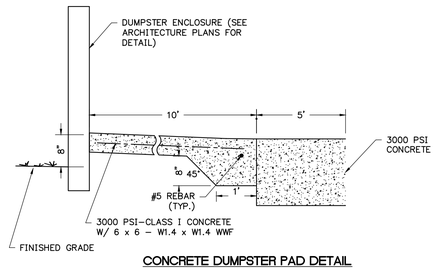


TYPICAL AT GRADE SIDEWALK DETAIL
N.T.S.

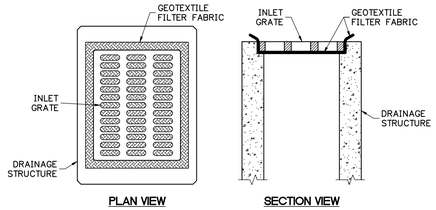
TYPICAL STEP-UP SIDEWALK DETAIL
N.T.S.



TYPICAL FLUSH SIDEWALK DETAIL
N.T.S.



CONCRETE DUMPSTER PAD DETAIL
N.T.S.

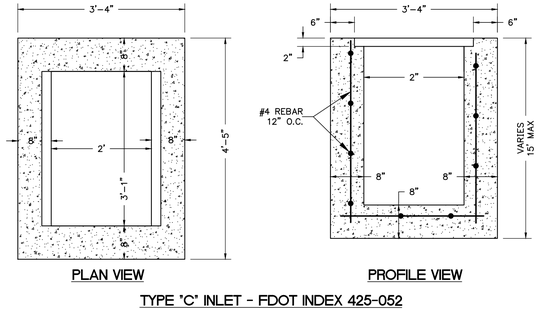


PLAN VIEW SECTION VIEW

NOTE: ALL INLETS WITHIN THE CONSTRUCTION SITE SHALL BE PROTECTED DURING CONSTRUCTION.

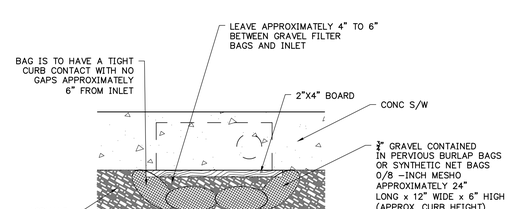
INLET PROTECTION DETAIL

TYPE 'C' GRATE - FDOT INDEX 425-025
N.T.S.

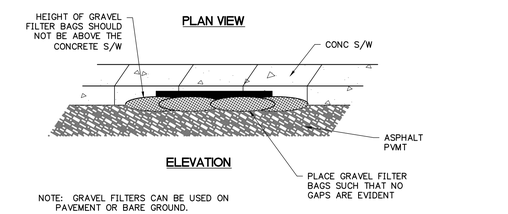


PLAN VIEW PROFILE VIEW

TYPE 'C' INLET - FDOT INDEX 425-052
N.T.S.



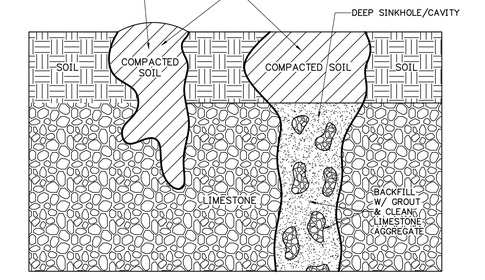
PLAN VIEW



ELEVATION

NOTE: GRAVEL FILTERS CAN BE USED ON PAVEMENT OR BARE GROUND.

GRAVEL FILTER BAGS DETAIL
N.T.S.



SECTION VIEW

SHALLOW AND DEEP SINKHOLE/CAVITY MAINTENANCE REPAIR DETAIL
N.T.S.

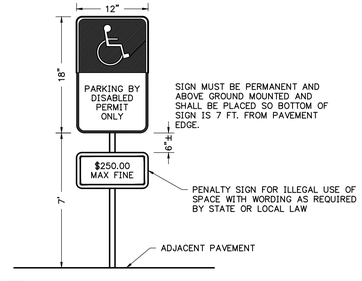
NOTES

IN THE EVENT THAT ANY KARST FEATURES SUCH AS SINKHOLES, SOLUTION CAVITIES, CHIMNEYS, ETC. ARE DISCOVERED DURING ROUTINE INSPECTIONS OF THE STORMWATER BASINS, THE FOLLOWING REMEDIATION PROCEDURE SHALL BE PERFORMED:

SHALLOW REPAIR (SEE DETAIL):
IF THE COLLAPSE IS SHALLOW (<5' DEEP) AND THE VOIDS IN THE LIMESTONE ARE SMALL, THEN THE SINKHOLE CAN BE REPAIRED BY BACKFILLING WITH A LOWER-PERMEABILITY MATERIAL, SUCH AS CLAYEY-SAND OR CLAY. THE MATERIAL SHOULD BE COMPACTED AND THE REPAIR SHALL BE SLIGHTLY ABOVE THE ORIGINAL BOTTOM IN ORDER TO CREATE A SMALL MOUND TO ACCOUNT FOR SETTLING.

DEEP REPAIR (SEE DETAIL):
IF THE COLLAPSE IS DEEP, THEN THE REPAIR SHALL BE MORE PERMANENT. THE COLLAPSE SHALL BE EXCAVATED TO THE LIMESTONE BEDROCK. THE VOID(S) IN THE BEDROCK SHALL BE PLUGGED WITH CLEAN GROUT. A LOW PERMEABILITY MATERIAL SHALL BE PLACED OVER THE CONCRETE PLUG. THE MATERIAL SHALL BE COMPACTED AND BROUGHT TO EXISTING BASIN BOTTOM.

NOTIFICATION:
THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT (SRWMD) SHALL BE NOTIFIED OF ANY SINKHOLE DEVELOPMENT WITHIN 48 HOURS OF DISCOVERY AND THE PROPOSED METHOD BY WHICH THE SINKHOLE WILL BE REPAIRED SHALL BE SUBMITTED TO THE SRWMD FOR APPROVAL WITHIN 30 DAYS. THE SRWMD WILL THEN NOTIFY THE RESPONSIBLE PARTY AS TO THE ACCEPTANCE, DENIAL OR NEED FOR MODIFICATION OF THE REPAIR METHOD.



NOTE:
CONTRACTOR TO PROVIDE MOUNTING POLES, BRACKETS AND COMPLETELY INSTALL THESE AND ALL OTHER SIGNS IN ACCORDANCE WITH MUTCD AND FDOT STANDARDS (PER DESIGN DRAWINGS).

DISABLED PARKING SPACE SIGN DETAIL
N.T.S.

REVISIONS

NO.	DATE	DESCRIPTION	DRWN	APPR

ENGINEER OF RECORD: LOGAN B. PETERS, P.E. FLORIDA LICENSE NO. 88516

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SHEET TITLE: DETAILS AND NOTES

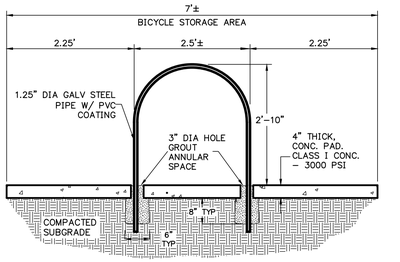
CLIENT: FICKLING AND CO. MACON, GA

PROJECT: LULLWATER AT FORT CLARKE BLVD

DATE: AUGUST 2023

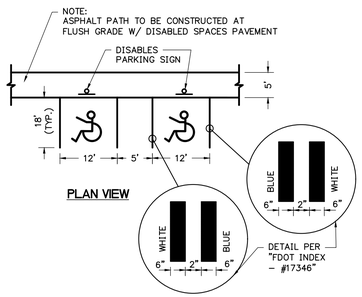
PROJECT NO: 403-19-01

SHEET NO: C8.0

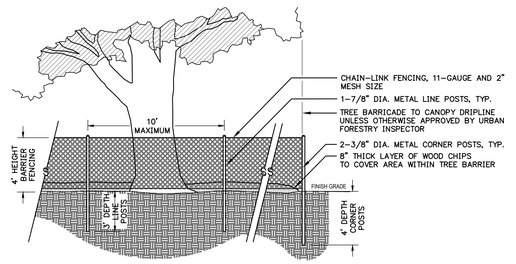


NOTE:
U-RACKS SHALL BE SPACED @ 2.5' ON CENTER WITH 2.25' CLEAR @ SIDES.

BICYCLE U-RACK DETAIL
N.T.S.



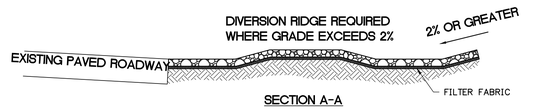
DETAIL OF DISABLED PARKING ACCESS
N.T.S.



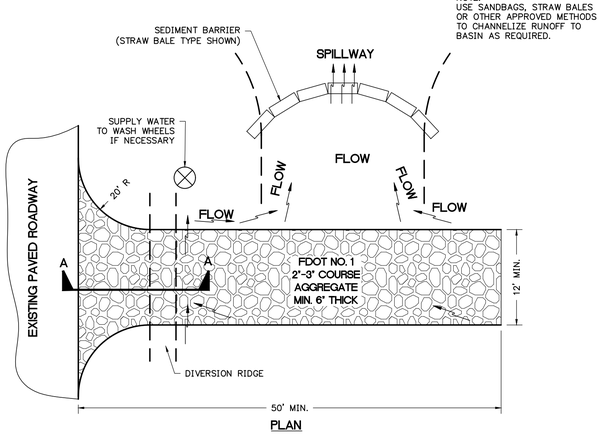
TREE PROTECTION CHAIN LINK FENCING DETAIL

CHAIN LINK FENCE NOTES

1. UTILIZE THIS DETAIL FOR THE WESTERN PERIMETER OF EASTERN OPEN SPACE AREA.
2. DO NOT STORE MATERIALS OR ALLOW ENCROACHMENT OF VEHICLES OR MACHINERY WITHIN TREE BARRIER AREA. NO BUILDING MATERIALS, MACHINERY OR HARMFUL CHEMICALS SHALL BE PLACED WITHIN PROTECTIVE BARRIERS, EXCEPT SHORT-DURATION PLACEMENTS OF CLEAN FILL SOIL THAT WILL NOT HARM THE TREE.
3. NO GRADE CHANGES MAY OCCUR WITHIN TREE BARRIER AREA WITHOUT APPROVAL.
4. TREE BARRIERS TO REMAIN IN PLACE UNTIL LANDSCAPING OPERATIONS BEGIN.



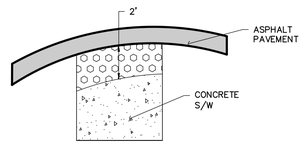
SECTION A-A



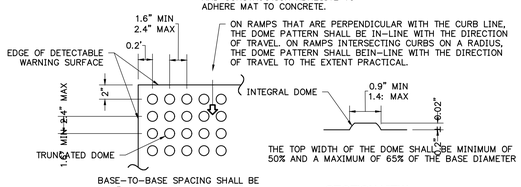
PLAN
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
N.T.S.

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.



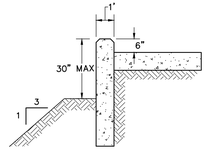
INSTALL ADA DETECTABLE WARNING MAT IN CONFORMANCE TO ADA USING MANUFACTURER RECOMMENDED FASTENERS AND CONSTRUCTION ADHESIVE TO ADHERE MAT TO CONCRETE.



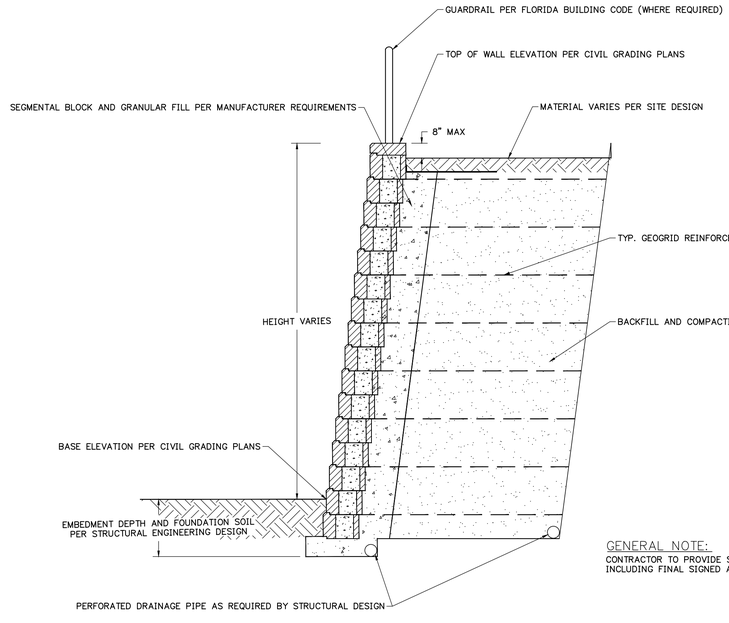
PLAN VIEW
SECTION VIEW TRUNCATED DOME

ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24" FROM THE BACK OF CURB.

CURB RAMP DETECTABLE WARNING SURFACE DETAIL
N.T.S.



CONCRETE GRAVITY WALL DETAIL
N.T.S.



SEGMENTAL BLOCK RETAINING WALL DETAIL
N.T.S.

GENERAL NOTE:
CONTRACTOR TO PROVIDE SHOP DRAWING SUBMITTALS OF WALL DESIGN INCLUDING FINAL SIGNED AND SEALED ENGINEERING DRAWINGS FOR PERMIT.

J:\403-19-01 - Fickling Apartments - Fort Clarke Blvd\Production\Civil\Sheets\Vol.0 DETAILS AND NOTES.dwg, 8/22/2023 1:25:56 PM, Jack...AutoCAD PDF (General Documentation).pc3

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ENGINEER OF RECORD: LOGAN B. PETERS, P.E. FLORIDA LICENSE NO. 88516

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