

WATERS CAR WASH

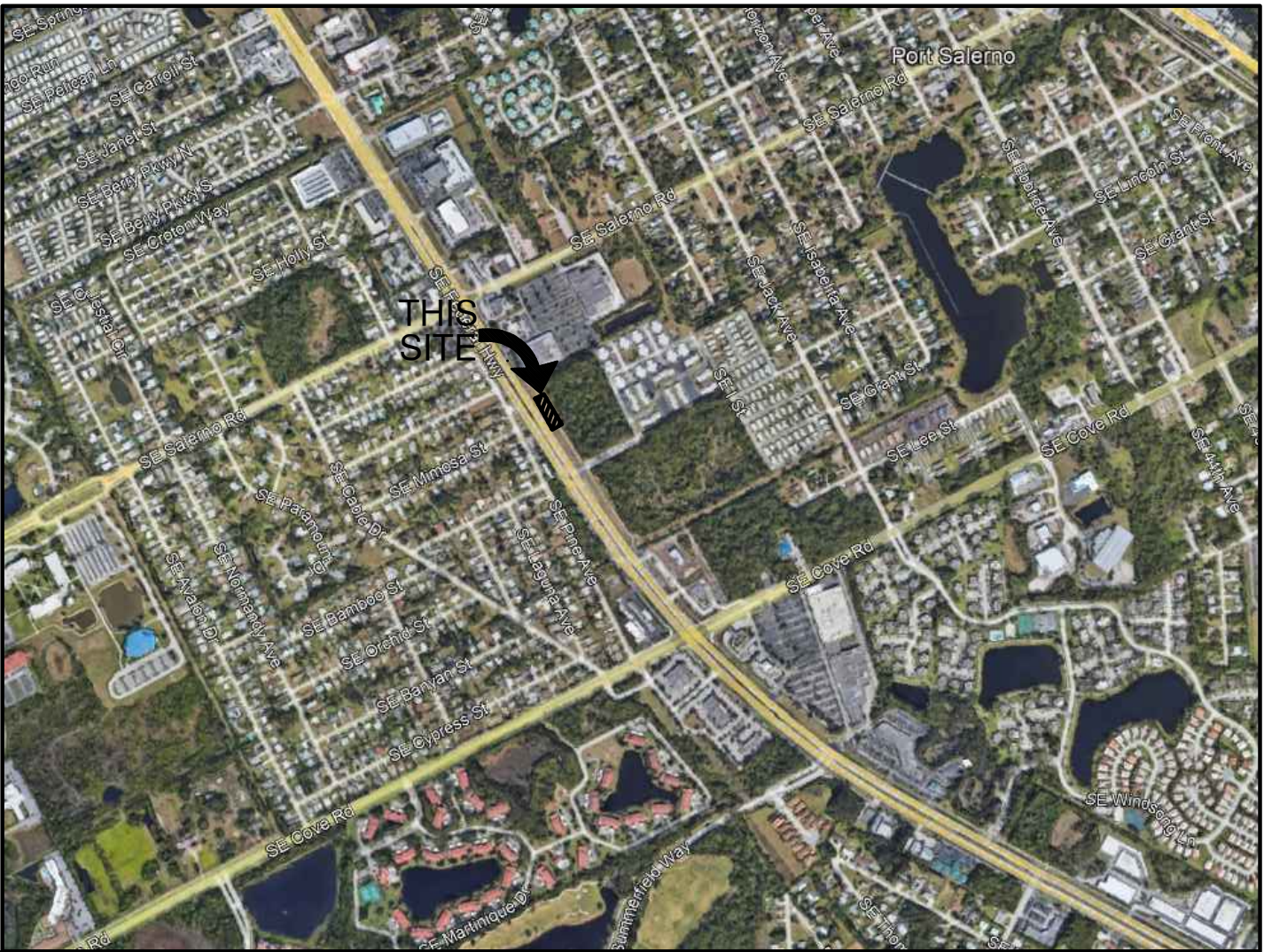
SR5 / US HIGHWAY 1 DRIVEWAY AND TURN LANE

PAVING, DRAINAGE AND UTILITY PLANS

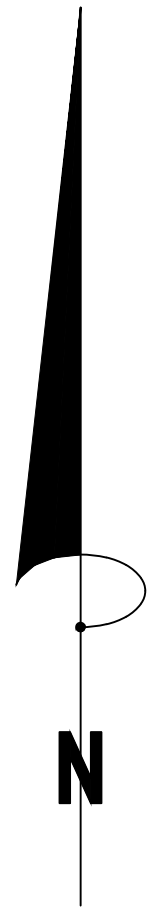
MARTIN COUNTY, FLORIDA

GENERAL NOTES:

1. THE LOCATION OF ALL EXISTING UTILITIES ON THE PLAN IS APPROXIMATE. THE CONTRACTOR SHALL LOCATE AND EXPOSE ALL EXISTING UTILITIES TO BE CONNECTED SUFFICIENTLY AHEAD OF CONSTRUCTION TO ALLOW REDESIGN BY THE ENGINEER IF SUCH UTILITIES ARE FOUND TO BE DIFFERENT THAN SHOWN ON THESE PLANS.
2. THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER IMPROVEMENTS SHOWN ON THESE PLANS AND OTHER UTILITIES AND OTHER IMPROVEMENTS NOT SHOWN. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR REPAIRS OF UTILITIES AND OTHER IMPROVEMENTS DAMAGED DURING CONSTRUCTION, AND SHALL MAINTAIN SUFFICIENT PROTECTION TO ALL UTILITIES REQUIRED TO PROTECT THEM FROM DAMAGE AND TO PROTECT THE PUBLIC DURING CONSTRUCTION.
3. CONTRACTOR SHALL CONTACT MARTIN COUNTY ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
4. CONTRACTOR SHALL NOTIFY SDA CONSULTING ENGINEERS AT (954) 943-9433 AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY FLORIDA POWER & LIGHT CO., ALL LOCAL TELECOMMUNICATIONS COMPANIES, THE LOCAL WATER AND SEWER UTILITY COMPANIES AND ANY OTHER UTILITY COMPANY WHICH MAY HAVE THEIR UTILITIES WITHIN THE CONSTRUCTION AREAS BEFORE BEGINNING CONSTRUCTION.
6. A PRE-CONSTRUCTION MEETING IS TO BE HELD BETWEEN FDOT, MARTIN COUNTY, ENGINEER OF RECORD AND CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.
7. THE CONTRACTOR MUST NOTIFY MARTIN COUNTY UTILITY DEPARTMENT AND FDOT (IF LOCATED IN FDOT RIGHT-OF-WAY) 48 HOURS PRIOR TO TYING INTO ANY EXISTING STRUCTURES AND HAVE AN INSPECTOR PRESENT.
8. PLANS AND SPECIFICATIONS REQUIRE THAT COMPACTED BACKFILL BE PLACED ALONG SIDE OF AND OVER ALL UTILITIES. COMPACTION TESTS SHALL BE TAKEN TO VERIFY BACKFILL COMPACTION. THE COSTS OF SUCH COMPACTION TESTS WILL BE BORNE BY THE OWNER.
9. ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
10. THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND (INCLUDING SPRINKLERS) SHALL BE PLACED BENEATH THE PAVEMENT AND ITS EDGE PRIOR TO THE CONSTRUCTION OF PAVEMENT. THE PAVEMENT SHALL NOT BE CUT WITHOUT PRIOR APPROVAL OF THE ENGINEER.
11. ALL MATERIALS AND CONSTRUCTION WITHIN THE FDOT R/W SHALL CONFORM TO THE LATEST FDOT STANDARDS AND SPECIFICATIONS.
12. ALL LABOR, MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY, FLORIDA DEPARTMENT OF TRANSPORTATION, MARTIN COUNTY ENGINEERING DEPARTMENT AND THE PLANS AND CONSTRUCTION SPECIFICATIONS. WHERE CONFLICTS OR OMISSIONS EXIST, FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS SHALL DICTATE FOR ALL WORK IN THE FDOT RIGHT-OF-WAY. SUBSTITUTIONS AND DEVIATIONS FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE ENGINEER.
13. CONSTRUCTION INSPECTION WILL BE PERFORMED BY FDOT AND THE ENGINEER AND IS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND FDOT AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION, AND AT LEAST 48 HOURS BEFORE REQUIRING INSPECTION OF EACH AND EVERY PHASE OF WORK.
14. CONSTRUCTION SURVEYING WILL BE PERFORMED BY THE ENGINEER OR SURVEYORS DESIGNATED BY THE OWNER. THE CONTRACTOR SHALL CONTACT THE SURVEYOR NOT LESS THAN 48 HOURS BEFORE THE SURVEYORS ARE NEEDED ON-SITE TO STAKE OUT ANY PHASE OF WORK. THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF PROTECTING ALL SURVEY STAKES AND MONUMENTS. REPLACEMENT COSTS OF ALL RESTAKES SHALL BE BORNE BY THE CONTRACTOR.
15. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF APPROVED CONSTRUCTION PLANS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION.
16. THE CONTRACTOR SHALL MAINTAIN A COPY OF ALL CURRENT GOVERNMENTAL AGENCY/CITY/COUNTY/STATE PERMITS AND APPROVALS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL ADHERE TO ALL CONDITIONS OF THESE PERMITS AND APPROVALS, AS REQUIRED.
17. SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. THE DRAWINGS WILL THEN BE FORWARDED BY THE CONTRACTOR TO MARTIN COUNTY ENGINEERING DEPARTMENT, AND/OR MARTIN COUNTY UTILITY DEPARTMENT, AND/OR FLORIDA DEPARTMENT OF TRANSPORTATION, AS APPLICABLE.
18. THE CONTRACTOR RESPONSIBLE FOR MAINTENANCE OF TRAFFIC SHALL ENSURE THAT THE MAINTENANCE OF TRAFFIC FOR THE PROJECT CONFORMS WITH FDOT STANDARD INDEX SERIES 600, OR APPLICABLE INDEX FOR WORK BEING PERFORMED, AND HAS BEEN APPROVED BY FDOT PRIOR TO CONSTRUCTION.
19. ALL MOT SIGNS SHALL BE POST MOUNTED AND LANE CLOSURE SIGNS SHALL BE COVERED WHEN LANES ARE NOT CLOSED. NO LANES CLOSURES ARE ALLOWED BETWEEN 7:00 AM AND 9:00 AM OR BETWEEN 4:00 PM AND 6:00 PM., PEAK TRAFFIC HOURS.
20. THE PROPOSED WORK HAS BEEN DESIGNED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, COUNTY AND CITY CODES AND REGULATIONS HAVING JURISDICTION. IF ANY DISCREPANCIES EXIST BETWEEN THE PLANS/SPECIFICATIONS PREPARED BY THE DESIGNER AND THE COUNTY CODE AND/OR THE COUNTY STANDARD DETAILS, THE LATER SHALL GOVERN OR THE MOST STRINGENT.
21. ALL VEGETATION, MUCK, AND ANY DELETERIOUS MATERIAL WITHIN THE ROW LIMITS OF ALL STREETS AND ALLEYS AND REQUIRED OFF-STREET PARKING AREAS MUST BE REMOVED AND REPLACED WITH CLEAN FILL MATERIAL, FREE OF STUMPS, LARGE ROOTS OR OTHER MATTER NOT SUITABLE FOR INCLUSION IN ROADWAY FILL.
22. THE FINISH SURFACE OF BASE COURSE AND THAT OF THE WEARING SURFACE SHALL NOT VARY MORE THAN .04 FOOT FROM THE APPROVED GRADING PLAN (TEMPLATE) AND ALL AREAS SHALL BE GRADED TO DRAIN. ANY IRREGULARITIES EXCEEDING THIS LIMIT SHALL BE CORRECTED.



LOCATION MAP
N.T.S.



INDEX OF SHEETS

CIVIL	
CE0	COVER SHEET
CE1	PAVING AND UTILITY PLAN
CE2	GRADING AND DRAINAGE PLAN
CE3	PAVEMENT MARKING AND SIGNAGE PLAN
CE4-8	DETAILS AND SPECIFICATIONS

CALL 48 HOURS
BEFORE YOU DIG

IT'S THE LAW!
1-800-432-4770

Sunshine State One Call of Florida, Inc.

NOTES:

1. PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES THAT HAVE FACILITIES WITHIN THE PROJECT AREA.

2. THE ABOVE NOTICE SHALL APPEAR ON THE COVER SHEET OF ALL CONSTRUCTION PLANS SUBMITTED TO THE COUNTY.

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CE0

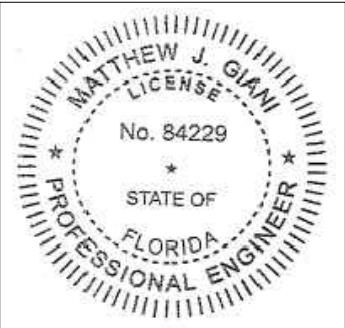
R E V I S I O N S		
DATE	BY	DESCRIPTION

ENGINEERING • SURVEYING • PLANNING

ENGINEERING AUTH. NO. 5634 SURVEYING LIC. NO. LB-6456
3410 N. Andrews Avenue Ext. • Pompano Beach, FL. 33064
PH: 954-943-9433 • FAX: 954-783-4754

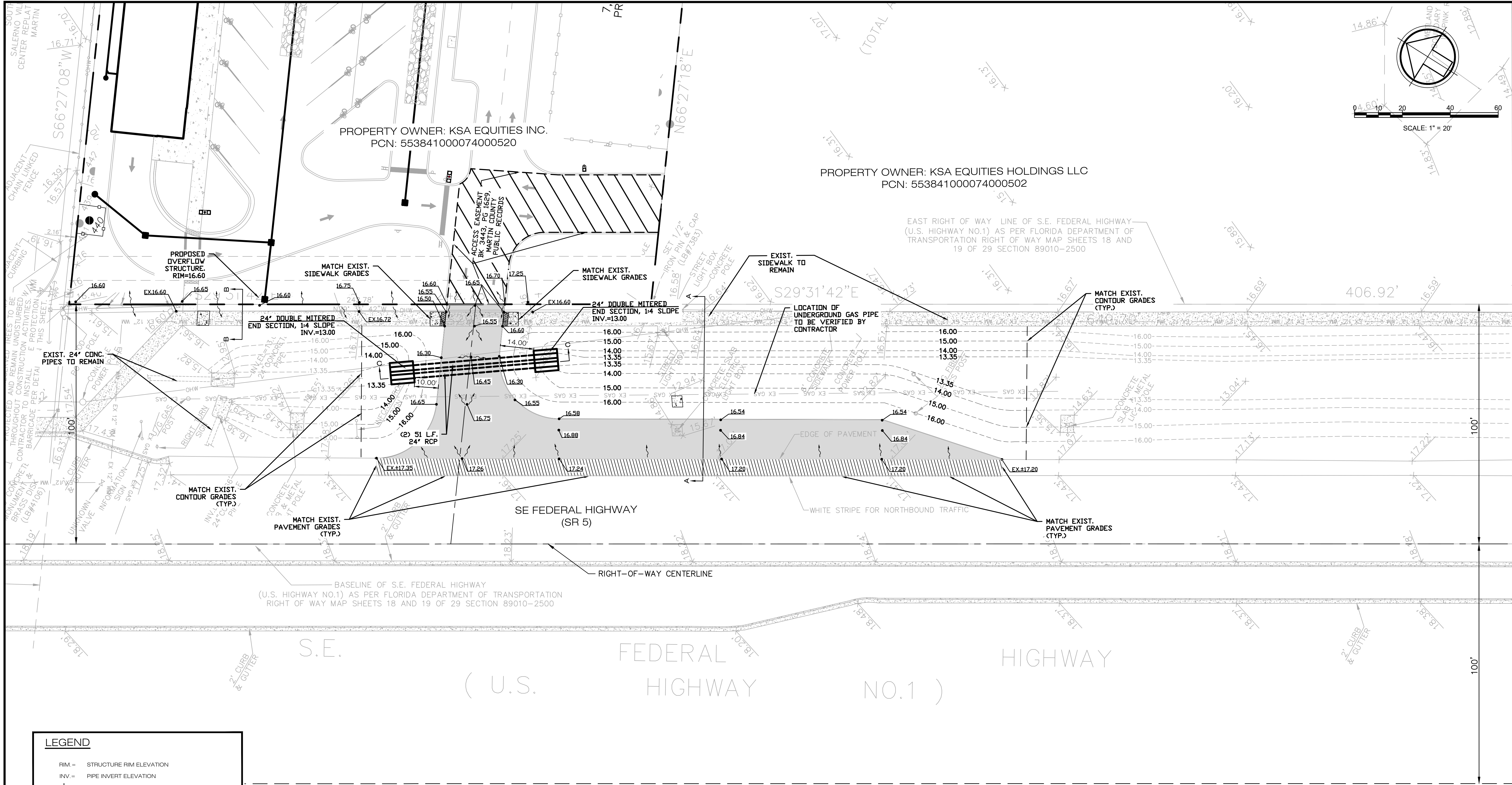
This item has been digitally signed and sealed by Matthew J. Giani on the date on the digital seal.

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FOR THE FIRM, BY:

MATTHEW GIANI, P.E.
FLA. P.E. No. 84229



LEGEND	
	STRUCTURE RIM ELEVATION
	PIPE INVERT ELEVATION
	FIRE HYDRANT ASSEMBLY
	WATER MAIN TEE, GATE VALVE AND REDUCER
	SINGLE WATER METER BOX
	WATER SAMPLE POINT
	TEES AND BENDS
	PROPOSED BACKFLOW PREV.
	PROPERTY LINE
	UTILITY TO BE REMOVED
	PROPOSED RETENTION AREA CONTOUR
	EXISTING RETENTION AREA CONTOUR
	EXISTING UTILITY EASEMENT
	PROPOSED UTILITY EASEMENT
	RELOCATED LIGHT POLE ASSEMBLY
	POLE LOCATION
	SURFACE WATER FLOW ARROW
	PROPOSED CONCRETE SIDEWALK
	PROPOSED ASPHALT PAVED AREA
	EXIST. ASPHALT PAVED AREA TO BE REMOVED AND RE-CONSTRUCTED
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	PROPOSED CATCH BASIN

NOTES:

- ALL GRADES SHOWN IN NAVD88.
- CONVERSION FROM NGVD29 TO NAVD88 = -1.47 FT
- FLOOD ZONE X
- THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS IS APPROXIMATE AND BASED ON AVAILABLE AS-BUILT AND GIS MAP DATA AND HAS NOT BEEN VERIFIED. OTHER UTILITIES WHICH ARE NOT SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE PROXIMITY OF THE SCOPE OF WORK PRIOR TO THE START OF CONSTRUCTION. ALL EXISTING UTILITIES SHALL REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED ON THE PLANS.

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R E V I S I O N S			
DATE	BY	DESCRIPTION	
1-4-24	MJG	REVISED TURN LANE GRADING	
6-24-24	MJG	ADDED ACCESS EASEMENT	

1. MARTIN COUNTY IS THE WATER AND WASTEWATER UTILITY SERVICE PROVIDER FOR THIS PROJECT.
2. ALL WATER AND WASTEWATER UTILITY INSTALLATIONS SHALL COMPLY WITH THE MINIMUM DESIGN & CONSTRUCTION STANDARDS OF THE MARTIN COUNTY UTILITIES AND SOLID WASTE DEPARTMENT, LATEST EDITION.
3. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS IS APPROXIMATE AND BASED ON AVAILABLE AS-BUILT AND GIS MAP DATA AND HAS NOT BEEN VERIFIED. OTHER UTILITIES WHICH ARE NOT SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE PROXIMITY OF THE SCOPE OF WORK PRIOR TO THE START OF CONSTRUCTION. ALL EXISTING UTILITIES SHALL REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED ON THE PLANS.

[illegible]

BY CONTRACTOR

VARIES

FLOW

M

METER (BY MCU)

PROVIDE NIPPLE w/ TEMP. CAP

[illegible]

22. LOCATIONS OF FLOODGATES AND AIR RELEASE VALVES ARE APPROXIMATE ONLY. FINAL LOCATION TO BE DETERMINED BY THE CONTRACTOR.
23. MAXIMUM LENGTH OF WATER MAIN AND FORCE MAIN PRESSURE TEST SHALL BE 100 FEET. WATER SOURCE FOR FILLING, FILLING AND PRESSURE TESTING THE WATER MAIN SHALL BE FROM EXISTING WATER MAINS.
24. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND RESTORATION (IF DAMAGED) OF ALL EXISTING STRUCTURES WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT, INCLUDING BUT NOT LIMITED TO: SIDEWALKS, DRIVEWAYS, STREETS, PARKING LOTS, DRIVEWAYS, ETC.
25. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING WATER SERVICES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROTECT THE EXISTING WATER UTILITIES FROM DAMAGE OR DISRUPTION.
26. "RECORD DRAWINGS" SHALL INCLUDE FURNISHING MARTIN COUNTY UTILITIES DEPARTMENT WITH ALL INFORMATION NECESSARY FOR A COMPLETE SET OF RECORD DRAWINGS AS LATEST IN THE UTILITY UTILITIES DEPARTMENT MANUAL DESIGN AND CONSTRUCTION STANDARDS (STATED) EDITION).
27. MECHANICALLY RESTRAN LENGTHS, AS INDICATED ON DRAWING NO. 20, ON EACH SIDE OF ALL EXISTING TRENCHES SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT. MECHANICAL RESTRAINT SHALL BE EITHER MSD-A+LUG, PLATE OR UNFANGLE. THE CONTRACTORS SHALL PROVIDE THE APPROPRIATE RESTRAINTS TO THE TRENCHES.
28. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL SUPPORT UTILITIES AND SHORE TRENCH AS REQUIRED TO PREVENT COLLAPSE OF EXISTING UTILITIES. IF THE UTILITY REQUIRES THAT ONLY THEIR CREWS ATTEMPTING TO SUPPORT THEIR FACILITIES, IF THE UTILITY REQUIRES THAT ONLY THEIR CREWS ATTEMPTING TO COORDINATE WORK AND PAY THE UTILITY FOR THEIR EXPENSES IF REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK SHALL BE AT THE CONTRACTORS EXPENSE AND INCLUDED IN THE CONTRACTORS BID PRICE.
29. ALL PRESSURE TESTS SHALL BE IN ACCORDANCE WITH AWWA STANDARDS.
30. AIR RELEASE VALVE VAULT COVERS SHALL BE CONSTRUCTED PER DETAIL AS SHOWN IN THE DRAWINGS MINIMUM 18" DIA. COVER.
31. ALL WATER SERVICES SHALL BE DIRECTIONALLY DRILLED UNDER EXISTING PAVEMENT.
32. VALVE STEM RISER SHALL BE REQUIRED WHERE OPERATING NUT DEPTH EXCEEDS 4 FEET. THE RISER SHALL BE BOLTED TO THE VALVE NUT. METHOD AND MATERIALS SHALL BE APPROVED BY THE ENGINEER. COST FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACTORS UNIT PRICE FOR GATE VALVES.
33. THE CONTRACTOR SHALL CLEAN MAINS USING APPROVED POLYURETHANE GELS; TEMPORARY STOPPLUGS SHALL BE USED TO PROTECT DOWNSTREAM MAINS. THE CONTRACTOR SHALL PROVIDE A CLEANING PLAN SHOWING METHOD OF FILLING AND CLEANING MAINS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANING AND BACKFILLING. ALL COSTS FOR FILLING AND CLEANING SHALL BE AT THE CONTRACTORS EXPENSE.
34. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A PERMIT FROM THE LOCAL HEALTH DEPARTMENT TO CONDUCT A PERIODICITY CORROSION WITHIN THE STATE OF VERMONT. THE PERMIT MUST BE MAINTAINED ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION. FOR THE PURPOSES OF THE PERMIT, THE CONTRACTOR SHALL PROVIDE AN ANALYSIS OF THE BIOLOGICAL TESTING OF WATER MAINS. THE CONTRACTOR SHALL INSTALL AND REMOVE AND PUMP CORP. STOPS PER MARTIN COUNTY UTILITIES DEPARTMENT SAMPLE POINT DETAIL. THE LOCATION OF TEST POINTS SHALL BE IDENTIFIED TO THE EMPLOYMENT.

36. WATER MAIN DISINFECTION SHALL BE IN ACCORDANCE WITH CURRENT ANWA, BULLETIN 1651

37. WATER MAINS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH CURRENT ANWA, FDEP AND NSF STANDARDS.

38. MINIMUM COVER TO FINISHED GRADE OVER WATER MAINS SHALL BE 30 INCHES UP TO 18" DIAMETER, 12" OR LARGER SHALL HAVE 48" COVER OR GREATER TO PROVIDE A MINIMUM 18" COVER OVER OPERATING NUT OR GATE VALVES.

39. ALL MAINS SHALL BE TESTED FOR LEAKAGE. WATER SHALL BE SUPPLIED TO THE MAIN AND PUMPED TO THE REQUIRED 150 PSI PRESSURE. THE MAIN TEST SHALL EITHER BE CONDUCTED USING PORTABLE LINES OR PROTECTED FROM LEAKAGE BY A DOUBLE VALVE ARRANGEMENT.

40. NEWLY CONSTRUCTED FIRE HYDRANTS THROUGHOUT THE PROJECT SHALL HAVE A RED TOP AND A RED PULL PIN. THE HYDRANT SHALL BE TESTED TO 150 PSI USING A HYDRANT NOZZLE CAP. DSG TO BE REMOVED AFTER WATER SYSTEM HAS BEEN APPROVED FOR CONSTRUCTION.

41. THE DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY TESTING. PROCEDURES, AFTER FLYSHING IS COMPLETED, LINE PRESSURE SHALL BE APPLIED TO THE SYSTEM AND THE PRESSURE SHALL BE MAINTAINED AT 150 PSI FOR A PERIOD OF TWO HOURS. THE DEPARTMENT MAY, AT ITS DISCRETION, INCREASE THE PRESSURE TO 200 PSI FOR A PERIOD OF TWO HOURS. THE PRESSURE SHALL BE MAINTAINED AT 150 PSI TO 200 PSI FOR A PERIOD OF 150 MINUTES. IF AN OIL FILLED PRESSURE GAUGE UP TO 200 PSI AND 2" PNOZING IS USED, THE DEPARTMENT SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF THE SYSTEM SHALL OCCUR AND LEAKAGE SHALL NOT EXCEED:

$$L = \frac{L \times W}{D}$$

L= LEAKAGE PER HOUR
W= WATER MAIN IN GALLONS
N= NUMBER OF JOINTS IN TEST SECTION
D= DIAMETER OF PIPE IN INCHES

MIN. LENGTH (IN FEET) OF PIPE TO BE RESTRAINED									
(SOURCES: EBMA ROSS RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 3.1, AND DOWNA TECH RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2.)									
FITTING TYPE	PIPE SIZE								
	4"	6"	8"	10"	12"	16"	20"	24"	
90° HORIZ. BEND	4	20	29	35	35	54	54	62	
45° HORIZ. BEND	6	8	11	13	15	19	22	26	
22.5° HORIZ. BEND	3	4	5	6	7	9	11	12	
11.25° HORIZ. BEND	1	2	3	4	4	5	6	6	
90° VERT. OFFSET	UPPER BEND LOWER	29	41	53	64	74	95	115	134
	LOWER BEND UPPER	7	10	13	16	19	25	30	36
45° VERT. OFFSET	UPPER BEND LOWER	12	19	24	29	34	39	48	56
	LOWER BEND UPPER	3	4	6	7	8	10	12	15
22.5° VERT. OFFSET	UPPER BEND LOWER	6	9	12	14	17	19	23	27
	LOWER BEND UPPER	1	2	4	4	4	5	6	7
11.25° VERT. OFFSET	UPPER BEND LOWER	3	4	6	7	8	9	11	13
	LOWER BEND UPPER	1	1	1	2	2	2	3	3
PLUG (DEAD END)	32	45	59	70	83	107	129	151	
IN-LINE VALVE	32	45	59	70	83	107	129	151	
	4" x 23	—	—	—	—	—	—	—	
	6" x 21	35	—	—	—	—	—	—	
	8" x 18	34	47	—	—	—	—	—	
	10" x 16	32	46	—	—	—	—	—	
	12" x 13	30	44	57	69	—	—	—	
	16" x 8	27	36	41	45	67	90	—	
	20" x 6	21	28	31	34	61	85	105	
THE BEECH TRUCK									

[illegible]

1. ALL VALVES TO BE STRAIGHT 1-1/2" BALL VALVES FOR 1-1/2" METER AND 2" BALL VALVES FOR 2" METER WITH LOCK-WING (FLANGE AT METER) FORD OR APPROVED EQUAL.
2. SEE TYPICAL SERVICE DETAIL FOR MAN CONNECTION.
3. METER BOX SHALL BE POLYMER CONCRETE AND FIBER REINFORCED POLYESTER.
4. PIPING SHALL BE 1-1/2" HOPE FOR 1-1/2" METER AND 2" HOPE FOR 2" METER, DR 9 WITH BUTT WELD COMPRESSION FITTINGS.

SHOULDER (MIDTH VARIES)

SOD PAVED

2' MIN.

6x(TYP)

ASPHALT 2x(TYP)

BASE

6'

ROADWAY

2x(TYP)

ASPHALT

BASE

6'

SUBGRADE

LOCAL RESIDENTIAL (SN=3.0 MIN.)

MIN. E.O.P. ELEVATION PEAK STAGE OF 10-YR / 24-HR STORM EVENT

- SURFACE COURSE: 1" TYPE SP-9.5 ASPHALTIC CONCRETE
- BASE COURSE: OPTIONAL BASE GROUP 6 PER FLEXIBLE PAVEMENT DESIGN MANUAL TABLE 5.6
- SUBGRADE: 12" COMPACTED OR STABILIZED SUBGRADE (LBR-40)

COLLECTOR & LOCAL COMMERCIAL/INDUSTRIAL (SN=3.5 MIN.)

MIN. E.O.P. ELEVATION PEAK STAGE OF 10-YR / 24-HR STORM EVENT (MAJOR)

MIN. E.O.P. ELEVATION PEAK STAGE OF 25-YR / 24-HR STORM EVENT (MAJOR)

- SURFACE COURSE: 1 1/2" TYPE SP-12.5 ASPHALTIC CONCRETE (1ST LIFT)
- 1" TYPE SP-9.5 ASPHALTIC CONCRETE (2ND LIFT)
- BASE COURSE: OPTIONAL BASE GROUP 6 FOR FLEXIBLE PAVEMENT DESIGN MANUAL TABLE 5.6
- SUBGRADE: 12" COMPACTED OR STABILIZED SUBGRADE (LBR-40)

ARTERIAL (SN=4.0 MIN.)

MIN. E.O.P. ELEVATION PEAK STAGE OF 25-YR / 72-HR STORM EVENT

[illegible]

1. A LOCATION BALL (3M TMS BALL MARKERS; WATER/BLUE; MODEL NO. 1403-XR; SEWER/GREEN, MODEL NO. 1404-XR OR EQUAL) SHALL BE INSTALLED AT EACH FITTING AND/OR EVERY 100 FEET OF SEPARATION.
2. FOR DEEP VALVE INSTALLATIONS, A 6" C-900 PVC EXTENSION MAY BE USED TO BRING VALVE BOX TO GRADE.

1. THE DATA IN THE ABOVE TABLE ARE BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:

SOIL TYPE-SAND	TEST PRESSURE-150 PSI	DEPTH OF BURY-3'
TRENCH TYPE-3	SAFETY FACTOR- 1.5	VERTICAL OFFSET-3"
MINIMUM PIPE LENGTH ALONG TIE RUN-5'		

2. THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON AND PVC PIPE.

3. ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.

4. RESTRAINED PIPE LENGTHS APPLY TO BOTH SIZES OF VALVES AND FITTINGS.

5. DESIGN ENGINEER SHALL BE RESPONSIBLE FOR PROPER SIZING THE LENGTH OF PIPE TO BE RESTRAINED.

CONSTRUCT IN 6" (152.4MM) GRANULAR MATERIAL OR WASHED AND GRADED SAND TO 1/2" (12.5MM) OR FINER. ALL DEBRIS, ROCKS, LIMESTONE, SUCH AS MUCK, DEBRIS AND LARGER ROCK SHALL BE REMOVED.

2. THE PIPE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTED MATERIAL AND SHORING HAUNCHES.

3. THE PIPE SHALL BE PLACED IN A DRY TRENCH.

4. BACKFILL SHALL BE DONE WITH APPROVED MATERIAL, CLEAN AND FREE OF ROCKS, MUCK AND OTHER DELETERIOUS MATTER AND COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY ASTM-1557. TAMPER TO 100% MAXIMUM DENSITY AS DETERMINED BY ASTM-1557.

5. BACKFILL TO BE COMPACTED ALONG THE SIDES OF THE PIPE TO THE TOP OF THE TRENCH. BACKFILL THE PIPE TO 100% MAXIMUM DENSITY AS DETERMINED BY ASTM-1557.

6. A WHERE PAVEMENT IS TO BE CONSTRUCTED OVER THE PIPE THE REMAINING FILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AND COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY ASTM-1557. THE REMAINING FILL SHALL BE COMPACTED IN 6" (152.4MM) LAYERS TO A DENSITY AS DETERMINED BY ASTM-1557.

7. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL TRENCH SAFETY REGULATIONS

DISTRICT COURSE SHALL BE AS THATCHED OR MAINTAINED TO THE FLEXIBLE PAVEMENT DESIGN MANUAL TABLE 5.6 BASE COURSE. MINIMUM BASE COURSE SHALL BE 8 INCHES OF FLEXIBLE PAVEMENT DESIGN MANUAL TABLE 5.6 BASE COURSE. MINIMUM PERCENT FINE PARTICLES SHALL BE APPROVED BY MARTIN COUNTY. PROVIDED MINIMUM SPAL IS DEMONSTRATED.

SUBGRADE SHALL NOT CONTAIN MORE THAN 30% RECLAIMED ASPHALT PAVEMENT (RAP).

ALL MIX SHALL NOT CONTAIN MORE THAN 10% FILLER WITHIN THE RUMK MUST MEET SPECIFICATIONS AND BE SUPPLIED FROM A USED CERTIFIED SOURCE.

OPERATION AND ASPHALT PLANT.

MINIMUM TWO DENSITY TESTS SHALL BE TAKEN FOR EACH SIX (6) INCH LIFT OF SUB GRADE AND BASE. WHEN THE COMPACTED BASE IS GREATER THAN SIX AND ONE-HALF (6 1/2) INCHES THE BASE SHALL BE TAKEN AT THREE (3) INCHES DEPTH. THE DENSITY TEST SHALL BE CONDUCTED BY A LICENSED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A LICENSED LABORATORY. THE PERCENTAGE OF RUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR REVIEW.

CONCRETE SHALL NOT BE USED WITHIN COUNTY-MAINTAINED ROADWAY.

IN-LINE PARKING DEFICIENCIES SHALL BE ADDRESSED IN ACCORDANCE TO FDOT SPECIFICATION SECTION 330.

[illegible]

SDA ENGINEERING

DRAWN BY: MJG

CHECKED BY: JFD

[illegible]

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EFFECTS OF THE 1997-1998 EL NIÑO ON THE TROPICAL RAIN FOREST OF THE AMAZON BASIN

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FOR THE FIRM.

MATTHEW J. GIANI, P.E. No. 842

JUNE 2023

128.3A.00

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This Item has been digitally signed and sealed by
Matthew J. Giani on the date on the digital seal.

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PAVEMENT MARKING AND SIGNAGE SPECIFICATIONS

1.

ALL SIGNING AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).
2.

ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED DESIGN SHALL BE REMOVED PER FDOT STANDARDS AND APPROVED BY THE ENGINEER PRIOR TO ANY WORK IN THIS AREA.
3.

PROVIDE FOR BLUE REFLECTIVE PAVEMENT MARKERS IN THE CENTER OF THE DRIVE LANE ADJACENT TO EACH FIRE HYDRANT.
4.

PROVIDE FOR RED REFLECTIVE PAVEMENT MARKERS IN THE CENTER OF THE DRIVE LANE ADJACENT TO FIRE DEPARTMENT CONNECTIONS.
5.

ALL EXISTING SIGNS (STOP, SPEED LIMIT, STREET NAMES, SCHOOL, ETC) SHALL BE REMOVED WHERE CONFLICTING WITH CONSTRUCTION ACTIVITIES AND RE-INSTALLED TO CURRENT FDOT STANDARDS PRIOR TO OPENING ROADWAYS FOR TRAFFIC.
6.

PAVEMENT MARKINGS AND GEOMETRICS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND FDOT STANDARDS.
7.

REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE PERFORMED BY WATER BLASTING OR SAND BLASTING.
8.

THE INSTALLATION OF ALL SIGNS AND PAVEMENT MARKINGS WITHIN THE FDOT RIGHT-OF-WAY SHALL CONFORM TO FDOT STANDARD PLANS, CURRENT EDITION.

PAVING AND DRAINAGE SPECIFICATIONS

1.

ALL ORGANIC OR DELETERIOUS MATERIAL SHALL BE REMOVED FROM WITHIN 5 FEET OF ANY EDGE OF PAVEMENT. ANY SUCH MATERIAL SHALL BE REPLACED BY APPROVED GRANULAR FILL WHICH SHALL BE COMPACTED TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
2.

ALL FLEXIBLE PAVEMENT CONSTRUCTION SHALL COMPLY WITH FLORIDA D.O.T. FLEXIBLE PAVEMENT DESIGN MANUAL REQUIREMENTS, LATEST EDITION.
3.

STABILIZED SUBGRADE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 160 OF FLORIDA D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION, AND HAVE A LIMEROCK BEARING RATIO (LBR) OF 40 AND SHALL BE COMPACTED TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
4.

LIMEROCK BASE COURSE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 230 OF FLORIDA D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
5.

ASPHALTIC CONCRETE TYPE SP-9.5, SP-12.5, AND FC-5 SHALL CONFORM TO THE REQUIREMENTS OF SECTION 334 OF FLORIDA D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
6.

PRIME COAT AND TACK COAT FOR BASE COURSES SHALL CONFORM TO THE REQUIREMENTS OF SECTION 300 OF FLORIDA D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION. PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLONS PER SQUARE YARD AND TACK COAT AT A RATE OF 0.08 GALLONS PER SQUARE YARD UNLESS A VARIATION RATE IS APPROVED BY THE ENGINEER.
7.

ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, EXCEPT DRAINAGE STRUCTURES.
8.

PRECAST CONCRETE MANHOLES AND CATCH BASINS SHALL MEET THE REQUIREMENTS OF A.S.T.M. SPECIFICATIONS C-478 AND 64T.
9.

CONCRETE FOR PRECAST MANHOLES AND CATCH BASINS SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
10.

REINFORCING STEEL FOR MANHOLES AND CATCH BASINS SHALL CONFORM TO A.S.T.M. SPECIFICATIONS A-615 AND A-305, LATEST REVISION. GRADE 60 STEEL SHALL BE USED FOR TOP AND BOTTOM SLABS.
11.

ALL RE-BAR SPLICES IN CONCRETE STRUCTURES SHALL HAVE A MINIMUM LAP OF 24 BAR DIAMETERS.
12.

ALL JOINTS IN CONCRETE STRUCTURES SHALL BE FINISHED WATER TIGHT.
13.

ALL SPACES AROUND PIPING ENTERING OR LEAVING MANHOLES AND CATCH BASINS SHALL BE COMPLETELY FILLED WITH 2:1 WATERPROOF, NON-SHRINKING CEMENT MORTAR.
14.

REINFORCED CONCRETE PIPE (RCP) SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. SPECIFICATION C-76, FOR CLASS III, WALL THICKNESS 18" REINFORCED CONCRETE PIPE, AND AS MODIFIED IN SECTION 941 OF FLORIDA D.O.T. STANDARD SPECIFICATION.
15.

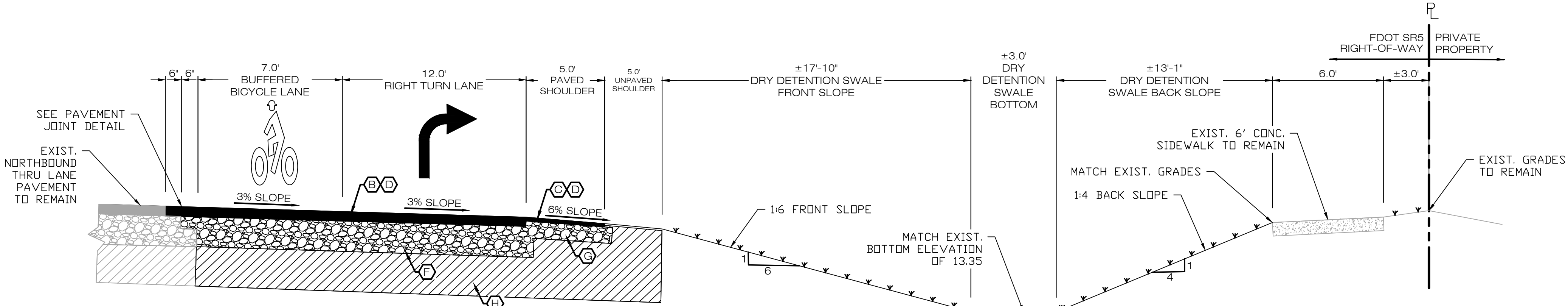
ALL LABOR, MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AND THE PLANS AND CONSTRUCTION SPECIFICATIONS. WHERE CONFLICTS OR OMISSIONS EXIST, THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS SHALL DICTATE. SUBSTITUTIONS AND DEVIATIONS FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE ENGINEER.
16.

ALL UTILITIES AND DRAINAGE INSTALLATIONS WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED AND INSTALLED PRIOR TO COMMENCING SUBGRADE WORK ON THE ROAD.
17.

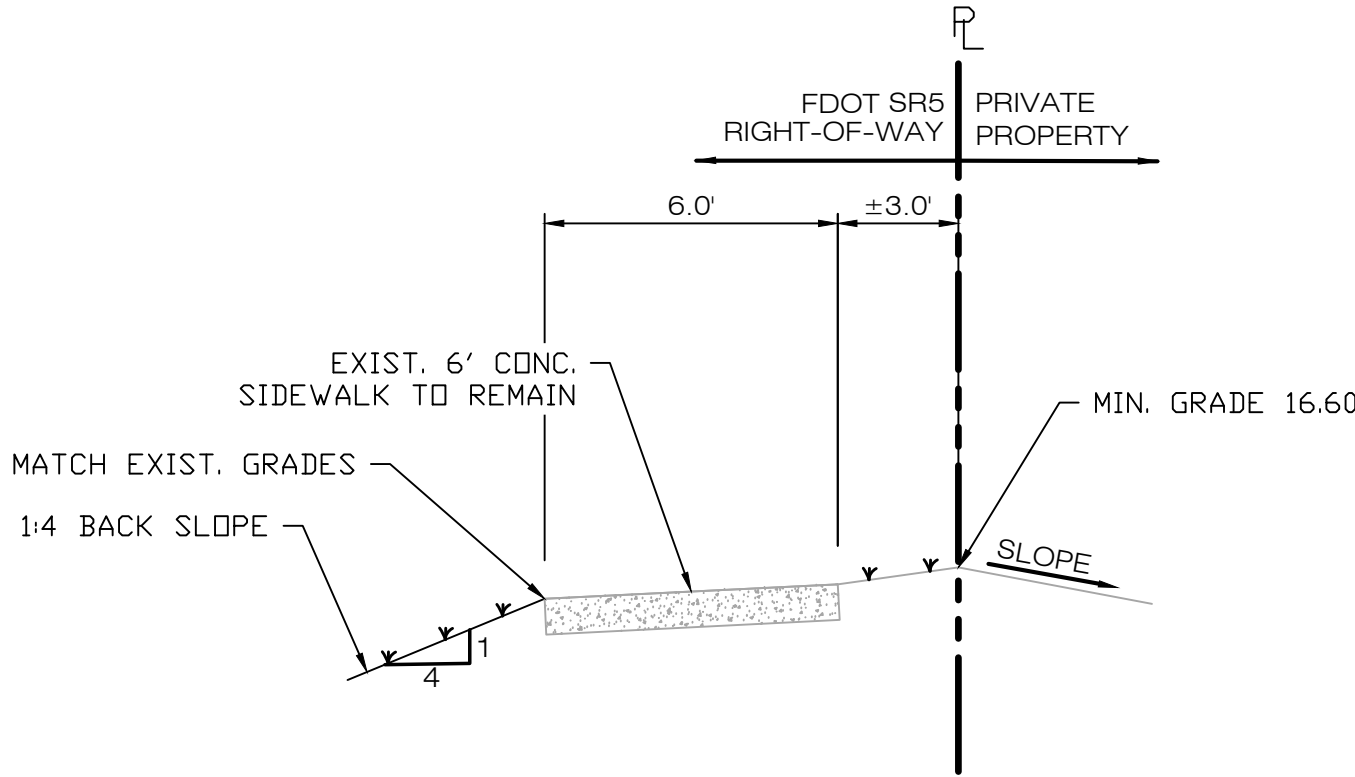
THE EXISTING ELEVATIONS SHOWN ON THE GRADING PLAN INDICATES THE ELEVATION AT THE POINT DEPICTED ONLY, AND SHOULD NOT BE INTERPRETED AS INDICATING THE ELEVATIONS OF ANY OTHER POINT. THESE EXISTING ELEVATIONS ARE IN NO WAY AN INDICATOR OF SURFACE OR SUBSURFACE SOIL CONDITIONS.
18.

ALL CONSTRUCTION AND/OR MATERIALS WITHIN THE STATE ROAD #5 RIGHT OF WAY SHALL CONFORM TO THE FLORIDA DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS.
19.

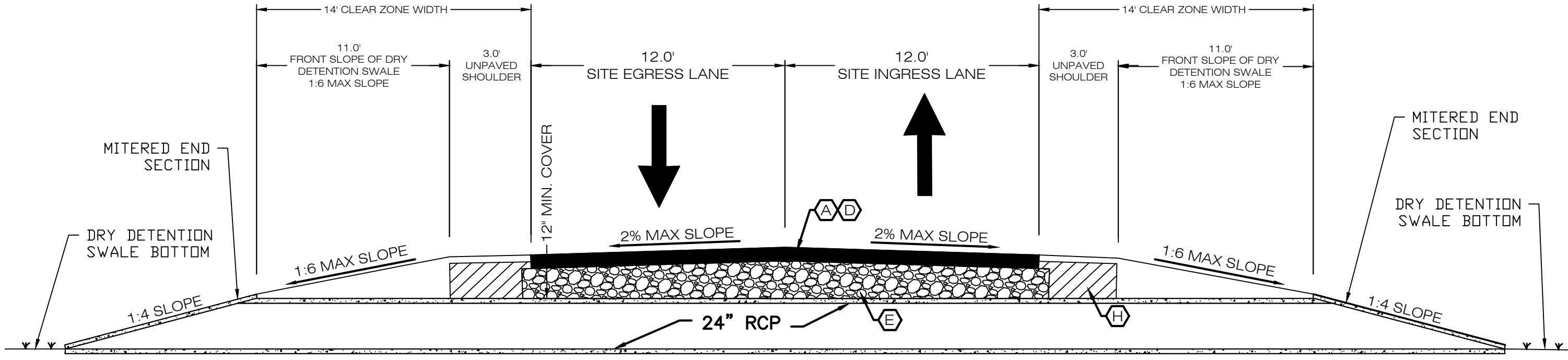
ALL ACCESSIBLE ROUTES SHALL COMPLY WITH ADA REGULATIONS AND ALL CURB RAMPS SHALL COMPLY WITH THE FLORIDA ACCESSIBILITY CODE (LATEST EDITION)



SECTION A-A
N.T.S.



SECTION B-B
N.T.S.



SECTION C-C
N.T.S.

- A

FOR DRIVEWAY CONNECTION:
FRICTION/STRUCTURAL COURSE: 2" THICK ASPHALTIC CONCRETE TYPE FC-9.5 (2 LIFTS)
- B

FOR TURNLANE (PER MARTIN COUNTY DETAIL R-10):
FRICTION COURSE: 0.75" THICK ASPHALTIC CONCRETE TYPE FC-5 (1 LIFT)
STRUCTURAL COURSE 1ST LIFT: 2" THICK ASPHALTIC CONCRETE TYPE SP-12.5 (1 LIFT)
STRUCTURAL COURSE 2ND LIFT: 1" THICK ASPHALTIC CONCRETE TYPE SP-9.5 (1 LIFT)
- C

FOR PAVED SHOULDER:
FRICTION COURSE: 0.75" THICK ASPHALTIC CONCRETE TYPE FC-5 (1 LIFT)
STRUCTURAL COURSE: 1" THICK ASPHALTIC CONCRETE TYPE SP-9.5 (1 LIFT)
- D

PRIME AND TACK COAT
- E

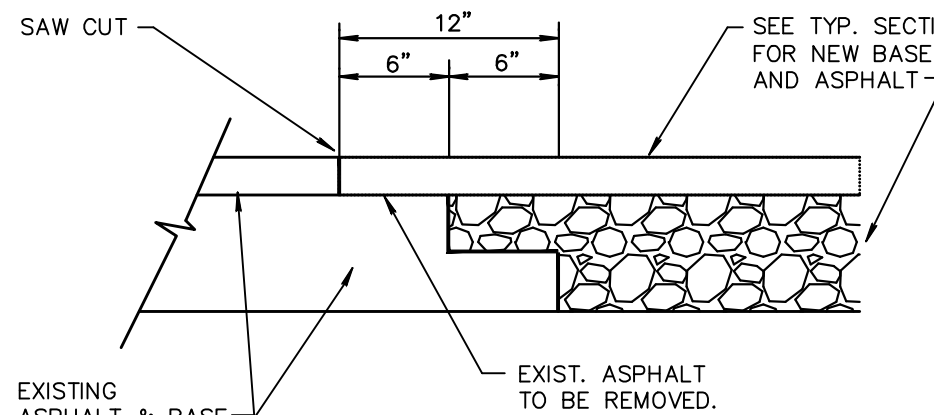
FOR DRIVEWAY CONNECTION:
OPTIONAL BASE GROUP 6 - 8" LIMEROCK BASE COMPACTED TO 98% MAX DENSITY AASHTO T-180, LBR 100.
- F

FOR TURNLANE (PER MARTIN COUNTY DETAIL R-10):
OPTIONAL BASE GROUP 9 - 10" LIMEROCK BASE COMPACTED TO 98% MAX DENSITY AASHTO T-180, LBR 100.
- G

FOR PAVED SHOULDER:
OPTIONAL BASE GROUP 1 - 4" LIMEROCK BASE COMPACTED TO 98% MAX DENSITY AASHTO T-180, LBR 100.
- H

12" SUBGRADE COMPACTED TO 98% MAX DENSITY AASHTO T-180, STABILIZE TO LBR 40

PAVEMENT SPECIFICATIONS



NOTE:
THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND BASE.

PAVEMENT JOINT DETAIL

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DRAWN BY: MJC

CHECKED BY: JFD

DESIGNED BY: JFD

APPROVED BY: SDA

SCALE: 1"=20'

WATERS CAR WASH
SR5 / US HIGHWAY 1 DRIVEWAY AND TURN LANE
MARTIN COUNTY, FLORIDA
DETAILS AND SPECIFICATIONS

FOR THE FIRM:

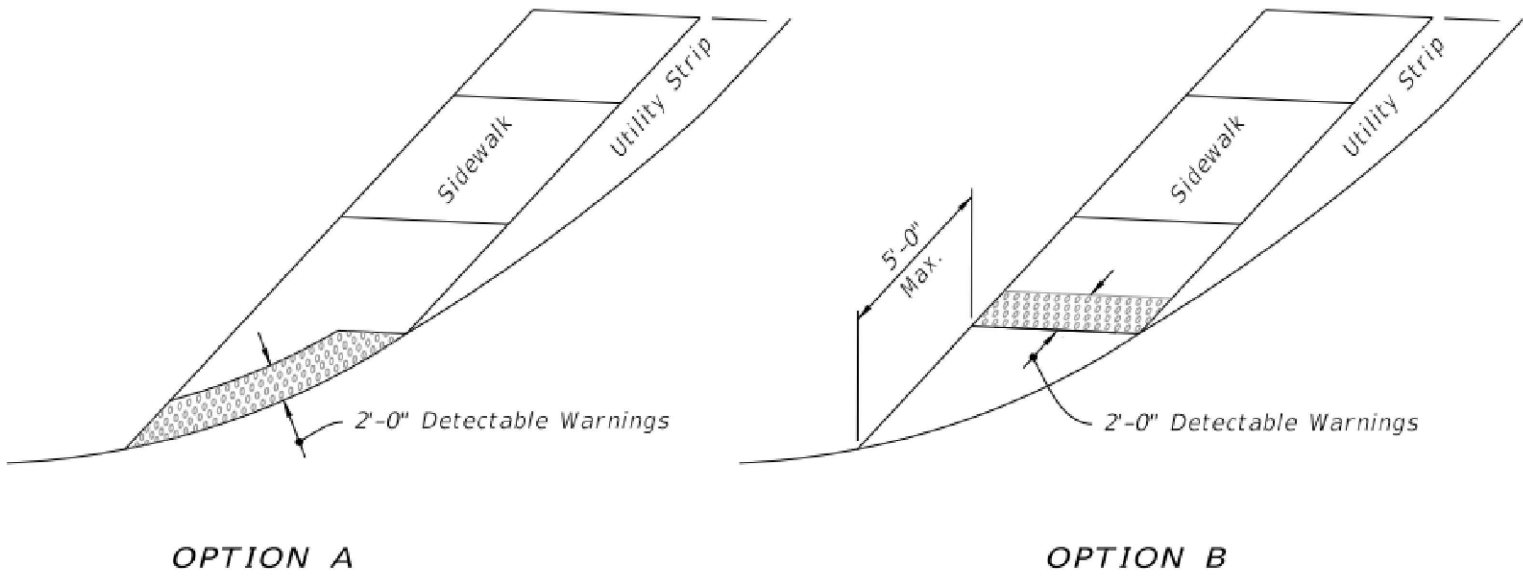
FOR THE FIRM,
BY:

MATTHEW J. GIANI, P.E.
FLA. P.E. No. 84229

DATE:
JUNE 2023

JOB NO.
1283A.00

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CE5



DETECTABLE WARNING ON FLUSH SHOULDER SIDEWALKS

4. Detectable Warnings:

- A.

Install detectable warnings in accordance with Specification 527.
- B.

Place detectable warnings across the full width of the ramp or landing, to a minimum depth of 2 feet measured perpendicular to the curb line and no greater than 5 feet from the back of the curb or edge of pavement.
- C.

If detectable warnings are shown in the Plans on slopes greater than 5%, align the truncated domes with the centerline of the ramp; otherwise, the truncated domes are not required to be aligned.

NOTES:

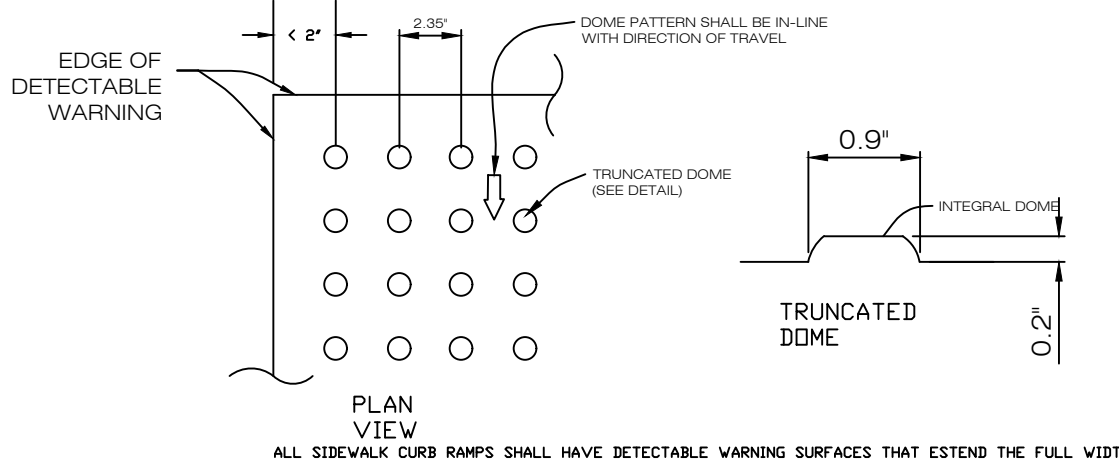
1.

RUNNING SLOPES ALONG ACCESSIBLE PATHS CANNOT EXCEED 5%.
2.

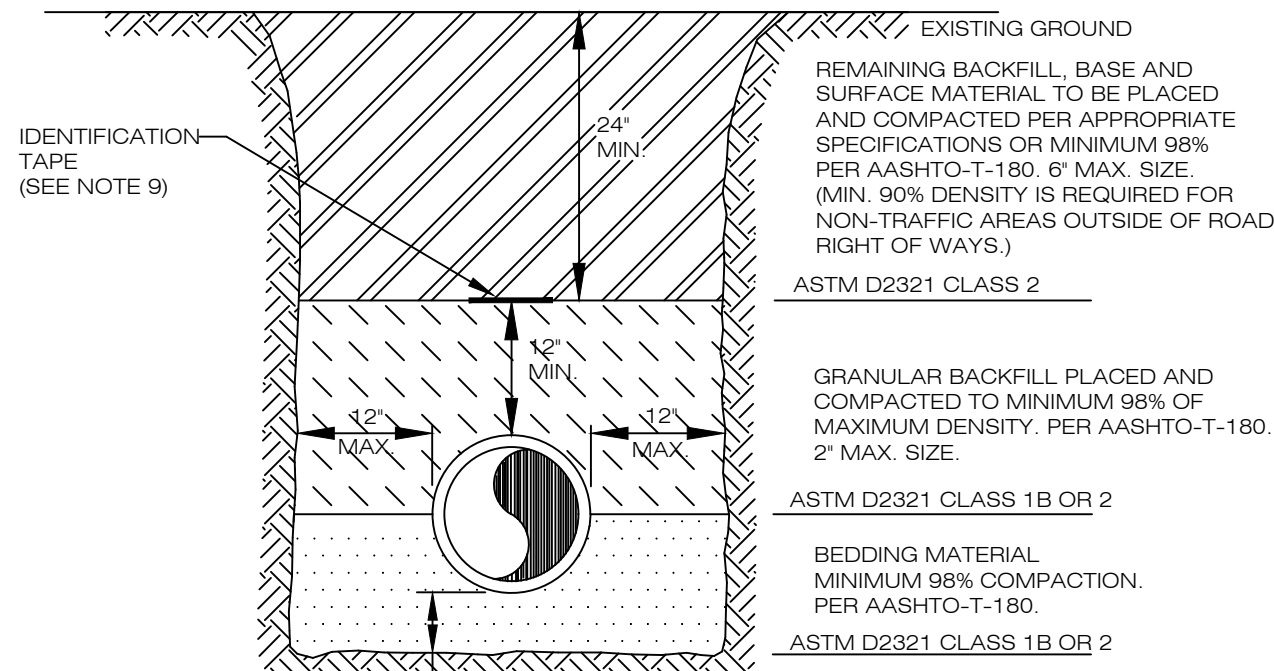
CROSS SLOPES ALONG ACCESSIBLE PATHS CANNOT EXCEED 2%.
3.

SUBGRADE MATERIAL SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY PER AASHTO T-99.
4.

COMPACTED SIDEWALK SUBGRADE SHALL EXTEND AT LEAST 1 FOOT BEYOND EACH SIDE OF THE SIDEWALK WHERE RIGHT-OF-WAY ALLOWS.



CURB RAMP DETECTABLE WARNING



NOTES:

1.

BEDDING SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8" - 7/8" SIZING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
2.

THE PIPE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
3.

THE PIPE SHALL BE PLACED IN A DRY TRENCH.
4.

BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK AND DEBRIS.
5.

DENSITY TESTS ARE REQUIRED IN 1 FOOT LIFTS ABOVE THE PIPE AT INTERVALS OF 400' MAXIMUM, OR AS DIRECTED BY THE INSPECTOR.
6.

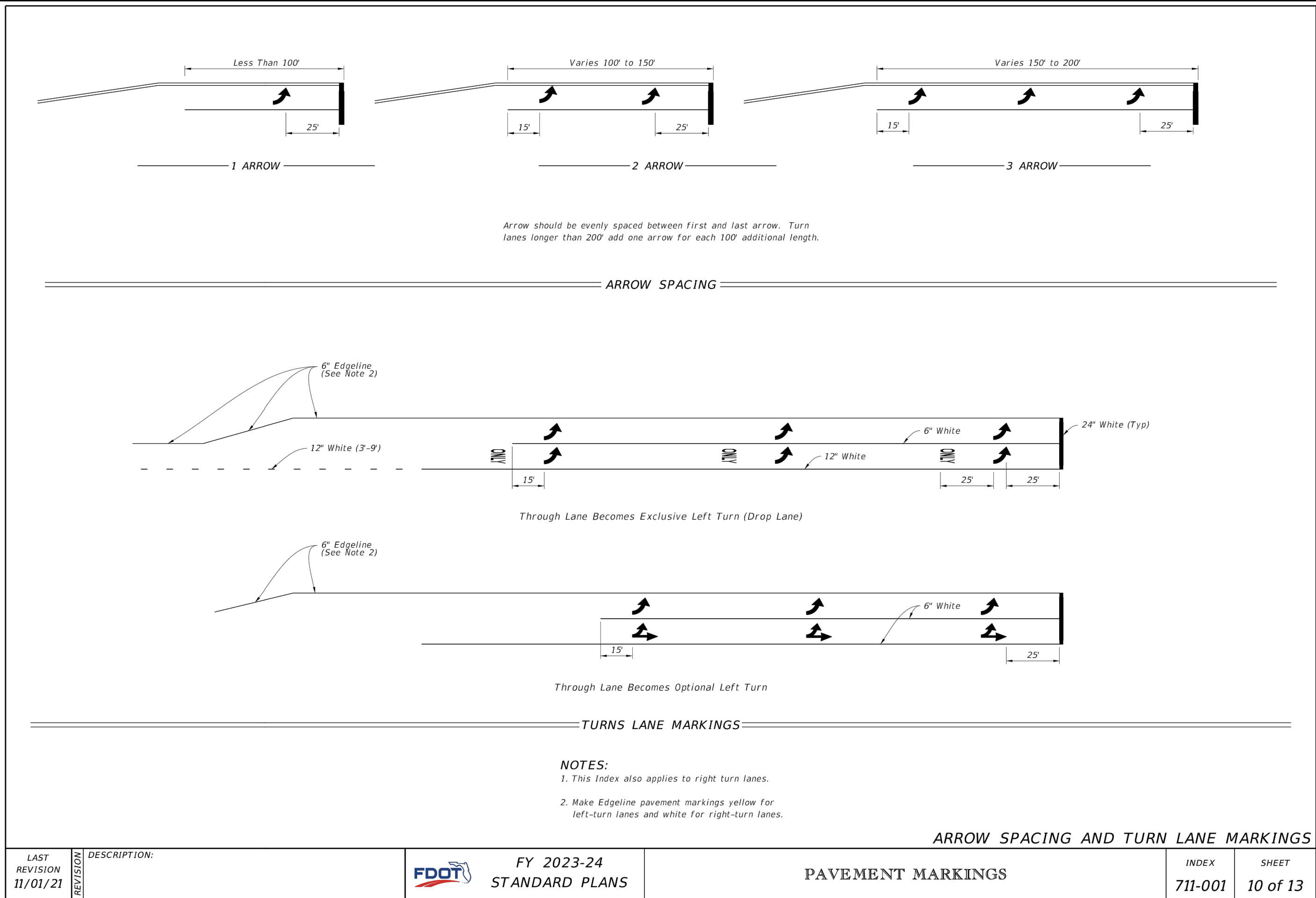
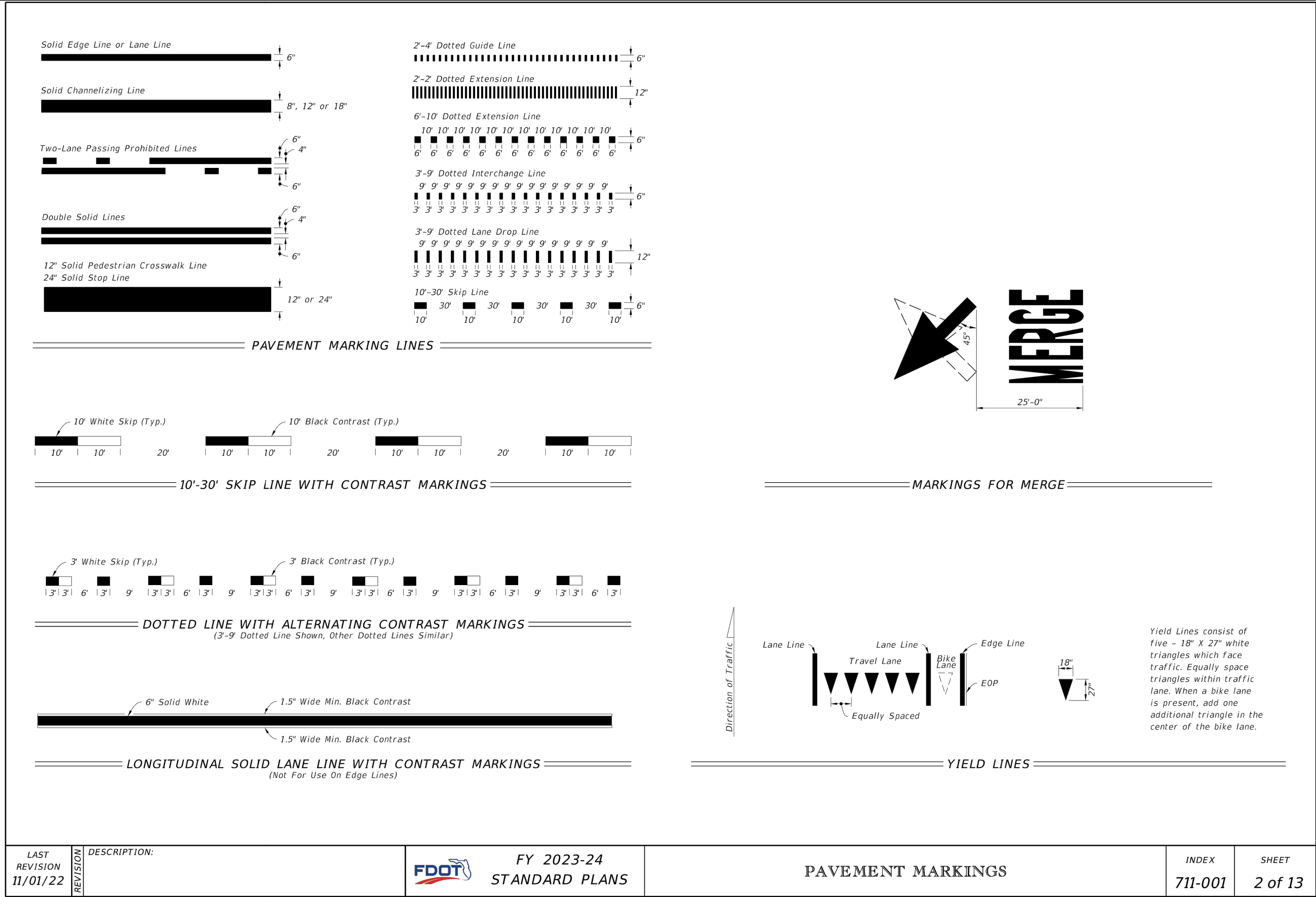
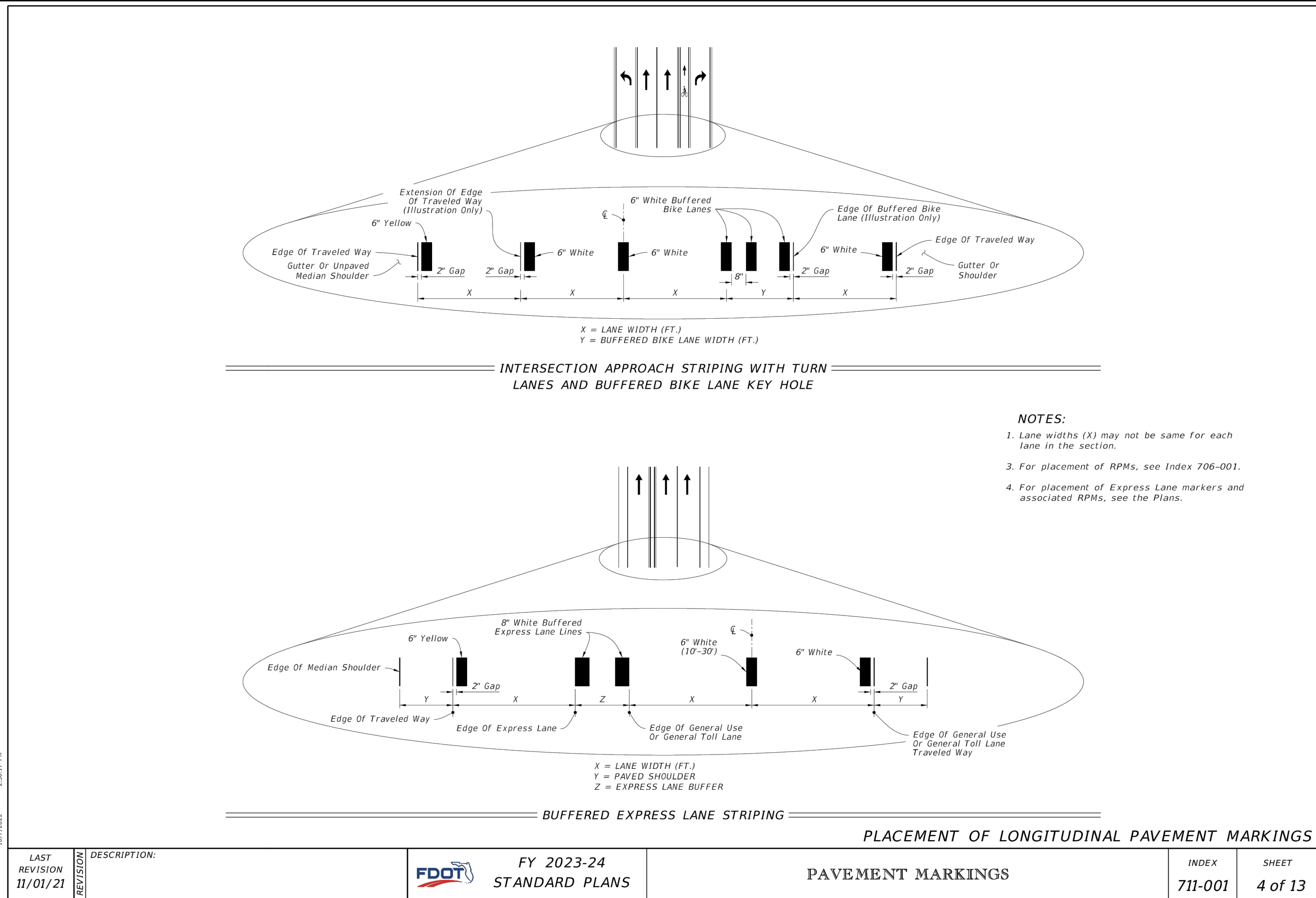
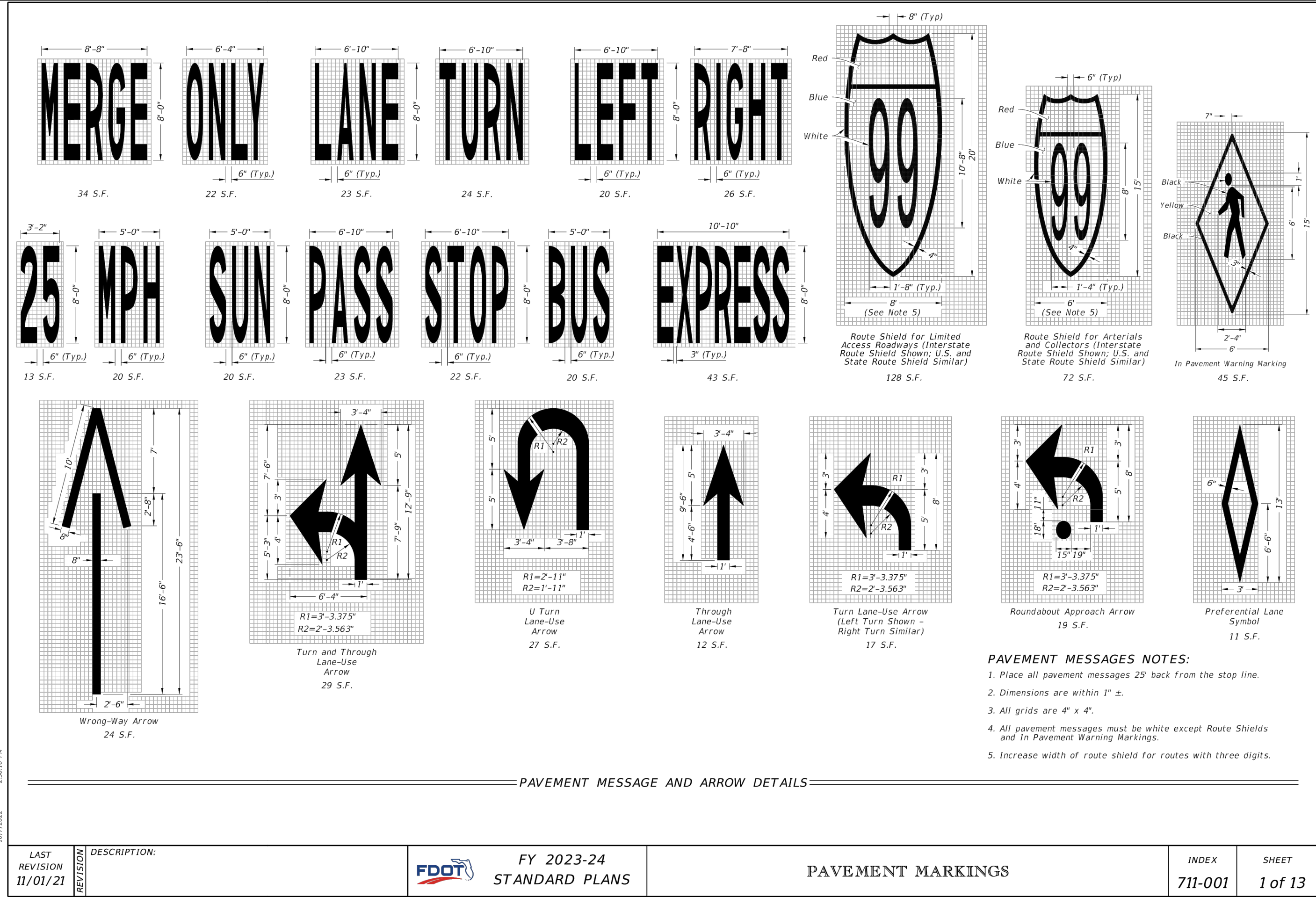
THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL TRENCH SAFETY LAWS AND REGULATIONS.
7.

SEE SEPARATE DETAIL FOR 'PIPE INSTALLATION UNDER EXISTING PAVEMENT - OPEN CUT.'
8.

THE AFFECTED AREA SHALL BE RESTORED TO EQUAL OR BETTER CONDITION OR AS SPECIFIED IN PERMIT/CONTRACT DOCUMENTS.
9.

APPROVED MAGNETIC TAPE IS REQUIRED FOR:
PVC POTABLE WATER MAINS, PVC FORCE MAINS AND RECLAIMED WATER MAINS.

TYPICAL TRENCH DETAIL



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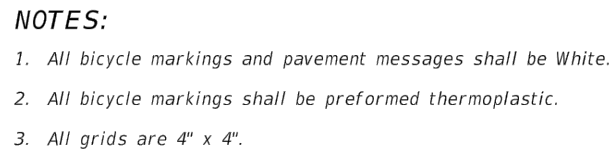
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CHECKED BY: JFD
DESIGNED BY: JFD
APPROVED BY: SDA

SCALE: 1"=20'

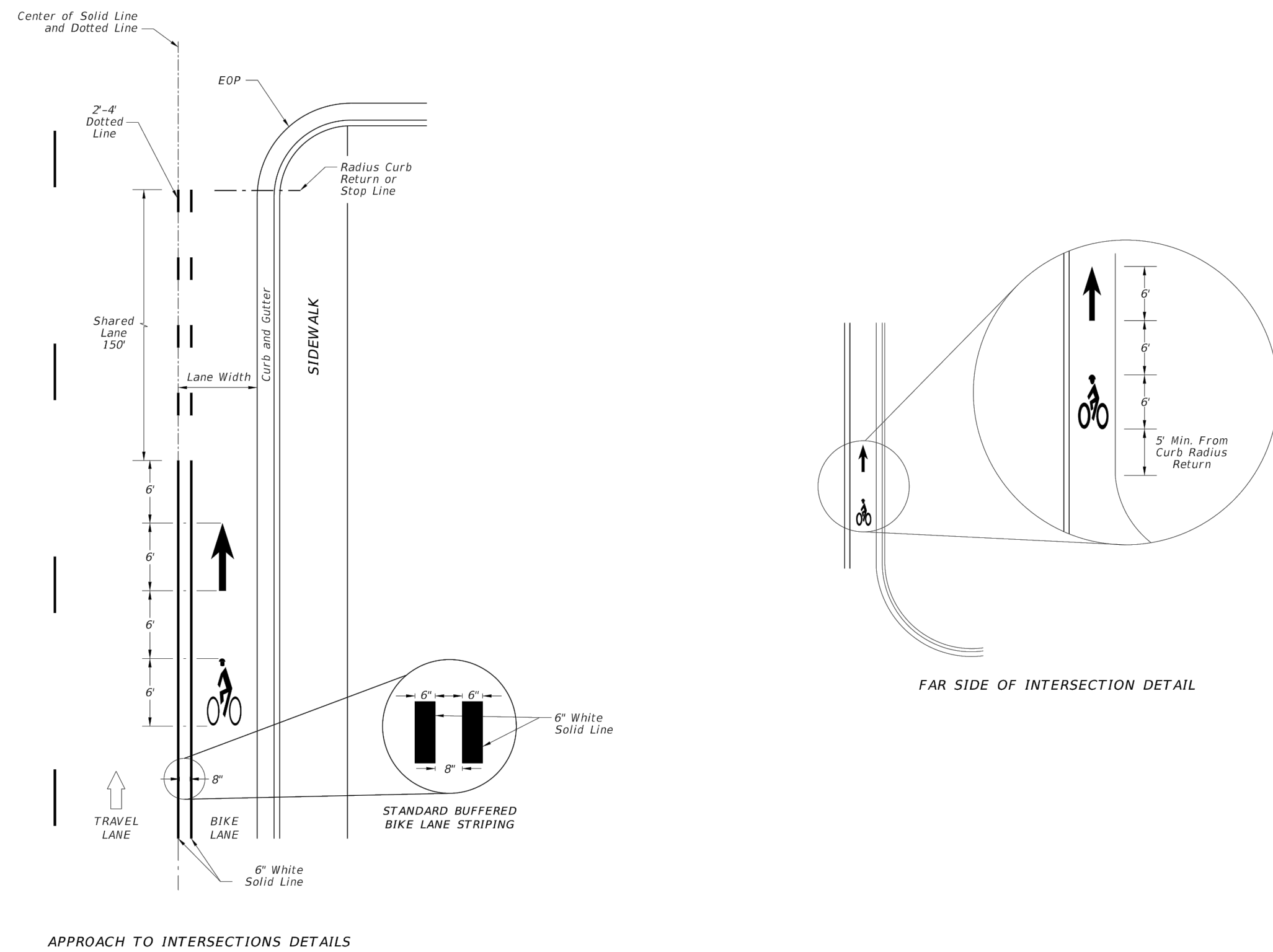
WATERS CAR WASH
SR5 / US HIGHWAY 1 DRIVEWAY AND TURN LANE
MARTIN COUNTY, FLORIDA
DETAILS
AND SPECIFICATIONS

FOR THE FIRM:
FOR THE FIRM,
BY;

MATTHEW J. GIANI, P.E.
FLA. P.E. No. 84229
DATE:
JUNE 2023
JOB NO.
1283A.00
SHEET
CE6



STANDARD PAVEMENT MARKING MESSAGE LAYOUTS



FAR SIDE OF INTERSECTION DETAILS


LAST REVISION 11/01/17	DESCRIPTION:	 FY 2023-24 STANDARD PLANS	BICYCLE MARKINGS	INDEX 711-002	SHEET 2 of 2
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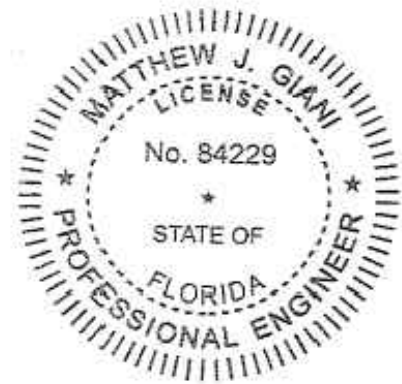


EXHIBIT 223-3
01/01/2021



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DRAWN BY: MJG

CHECKED BY: JFD

DESIGNED BY: JFD

APPROVED BY: SDA

SCALE: 1"=20'

WATERS CAR WASH
SR5 / US HIGHWAY 1 DRIVEWAY AND TURN OFF
MARTIN COUNTY, FLORIDA

DETAILS AND SPECIFICATIONS

FOR THE FIRM:

FOR THE FIRM,
BY;

MATTHEW J. GIANI, P.E.
FLA. P.E. No. 84229

DATE:
JUNE 2023

JOB NO.
1283A.00

SHEET
CE7

1. Unless otherwise designated in the plans, concrete pipe mitered and sections may be used with any type of cross drain pipe; corrugated steel pipe, concrete pipe and sections may be used with any type of cross drain pipe except aluminum pipe. However, corrugated steel pipe mitered and sections may not be used with any type of cross drain pipe except steel pipe. When blumismatic coated metal pipe is specified for cross drain pipe, concrete pipe mitered and sections with like pipe or concrete pipe. When the mitered and section pipe is dissimilar to the cross drain pipe, construct a concrete jacket in accordance with Index 430-001.
2. Use either corrugated metal or concrete mitered and sections for corrugated polyethylene pipe (HDPE), polyvinyl chloride pipe (PVC), steel reinforced polyethylene pipe (SRPE), and polypropylene pipe (PP). Mitered and sections for corrugated metal pipe and sections, male connection using either a formed metal band specifically designed to join HDPE, PVC, SRPE, or PP pipe and pipe. When used in conjunction with a cross drain pipe, construct concrete jacket in accordance with Index 430-001.
3. Class NS concrete cast-in-place reinforced slabs are required for all sizes of cross drain pipes. Construct slabs at 5½" thick, unless 3" thickness is called for in the Plans.
4. Select lengths of concrete pipe that avoid excessive connections in the assembly of the mitered and section.
5. Repair corrugated metal pipe galvanizing that is damaged during beveling and perforating.
6. When existing multiple cross drain pipes are spaced other than the dimensions shown in this Index, have nonparallel axes, or non-uniform sections, either construct the mitered and sections separately as single pipe or collectively as multiple pipe end sections as directed by the Engineer.
7. Saddle Slope:
 - 1.4 Meter - Slope to 6 of pipe for cross drain pipes less than or equal to 18" diameter and 1:1 for round pipes greater than or equal to 24" diameter.
 - Slope to the major axis for elliptical pipes 24"x38" or smaller and 1:2 for round pipes 29"x45" or larger.
 - Slope to the span line for pipe arch 28"x20" or smaller and 1:2 for pipe arch 35"x24" or larger.
- 1.2 Meter - Slope to 6 of pipe for cross drain pipes less than or equal to 18" diameter and 1:2 for round pipes greater than or equal to 24" diameter.
- Slope to the major axis for elliptical pipes 29"x45" or smaller and 1:1 for pipes 34"x53" or larger.
- Slope 1:1 for all pipe arch sizes.

8. Quantities shown are for estimating purposes only.

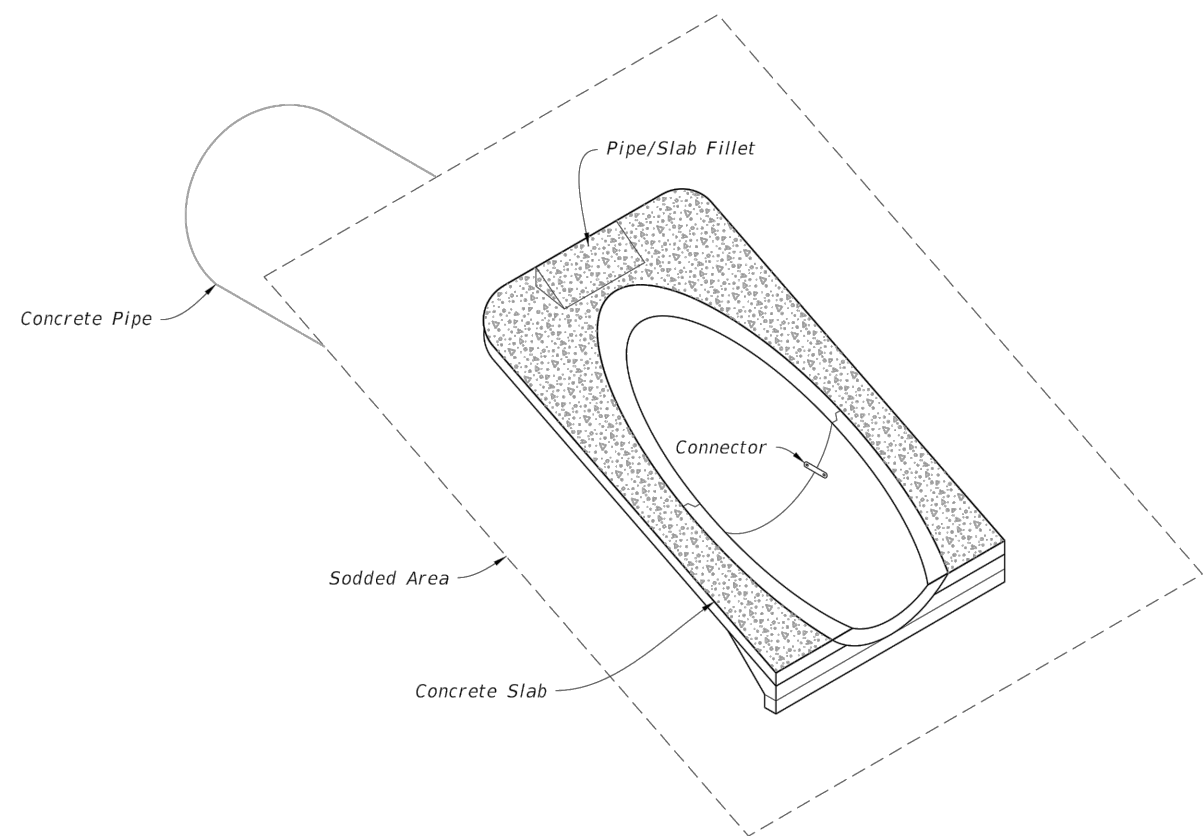
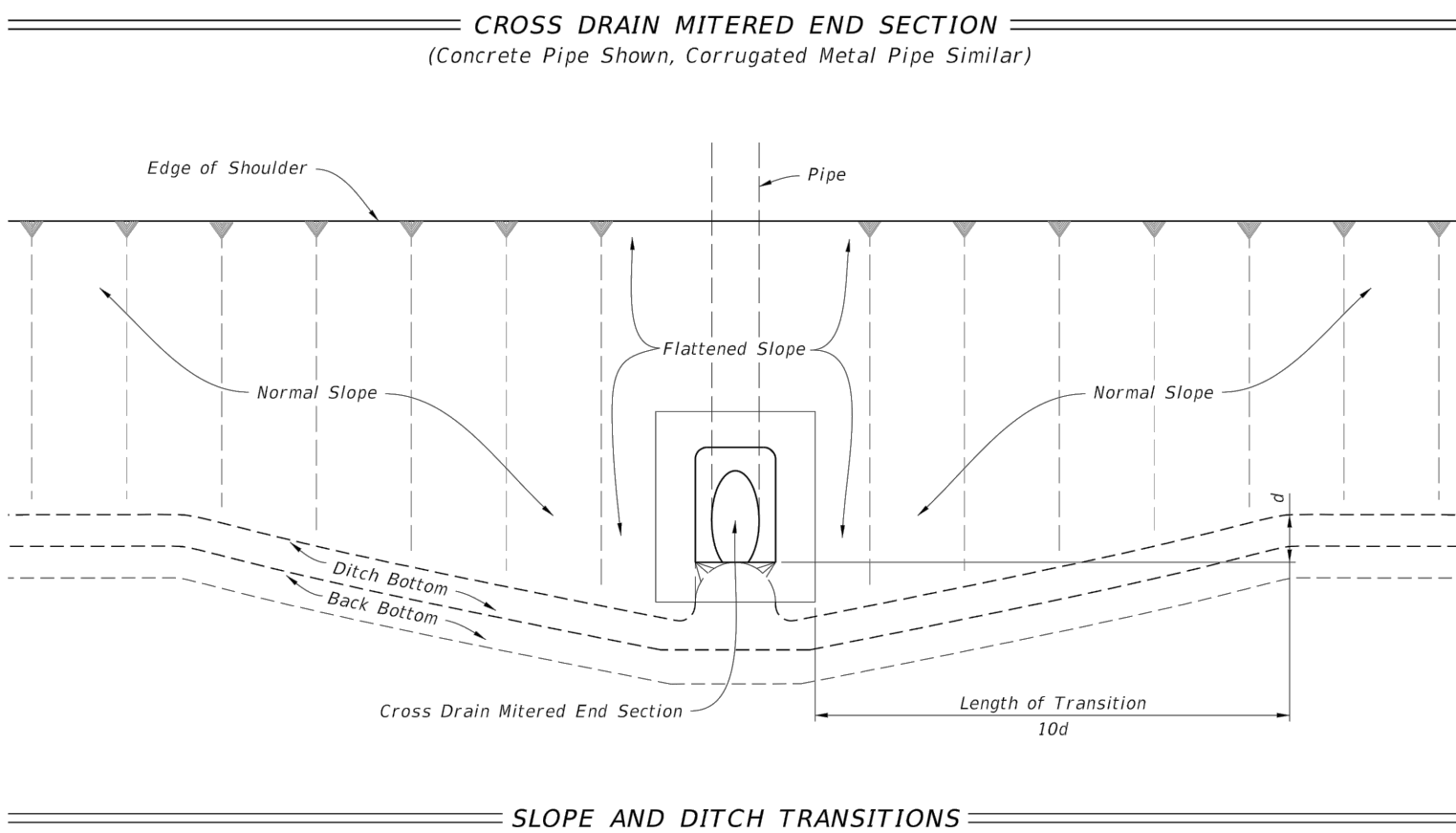

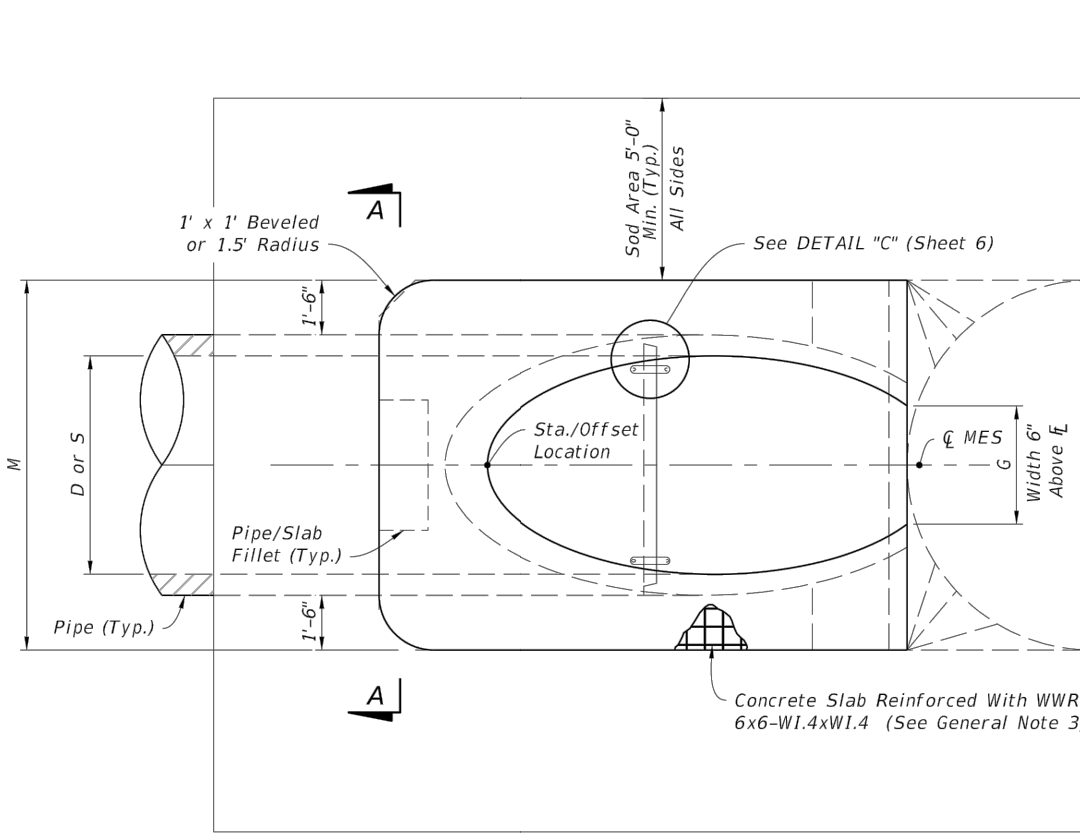


TABLE OF CONTENTS:	
Sheet	Description
1	General Notes and Contents
2	Single and Multiple Concrete Pipe
3	Concrete Pipe Dimensions and Quantities
4	Single and Multiple Corrugated Metal Pipe
5	Corrugated Metal Pipe Dimensions and Quantities
6	Concrete Pipe Connections and Corrugated Metal Pipe (CMP) Anchor Detail



LAST REVISION 11/01/19	DESCRIPTION:	 FY 2023-24 STANDARD PLANS	CROSS DRAIN MITERED END SECTION	INDEX 430-021	SHEET 1 of 6
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LAST REVISION /01/19	DESCRIPTION:	 FY 2023-24 STANDARD PLANS	CROSS DRAIN MITERED END SECTION	INDEX 430-021	SHEET 2 of 6
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SCALE: 1"=20'

WATERS CAR WASH

HIGHWAY 1 DRIVEWAY AND TURN LANE

MARTIN COUNTY, FLORIDA

DETAILS AND SPECIFICATIONS

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FOR THE FIRM,
BY;

MATTHEW J. GIANI, P.E.
FLA. P.E. No. 84229

DATE: JUNE 2023
JOB NO. 1283A.00
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