FAYETTE COUNTY PATRICIA LANE CULVERT REPLACEMENT PROJECT PROJECT NUMBER 17SAK



1899 POWERS FERRY ROAD SE, SUITE 400 ATLANTA, GEORGIA 30339

TEL: (770) 850-0949 FAX: (770) 850-0950



www.tetratech.com

	-PROJECT SITE		
		PATRICE	ALANE

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PROJECT LOCATION:

151 PATRICIA LANE FAYETTEVILLE, GA 30214 **CLIENT INFORMATION:**

FAYETTE COUNTY 140 STONEWALL AVE W. SUITE 203 FAYETTEVILLE, GA 30214

Tt PROJECT No.: **CLIENT PROJECT No.:**

200-01297-18002

PROJECT DESCRIPTION / NOTES:

REFERENCE DATUM: NAD83 GEORGIA STATE PLANE, WEST ZONE, US FOOT

ISSUED:

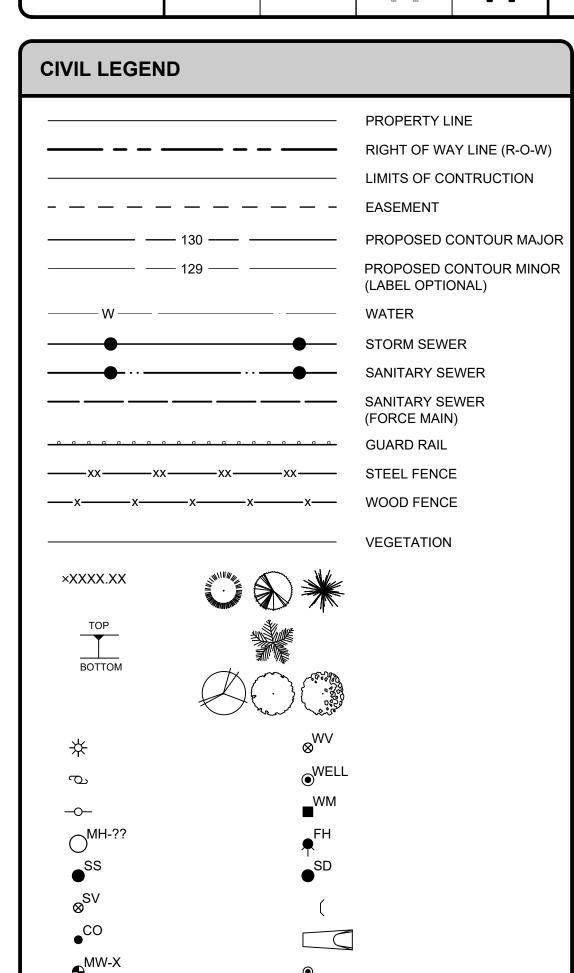
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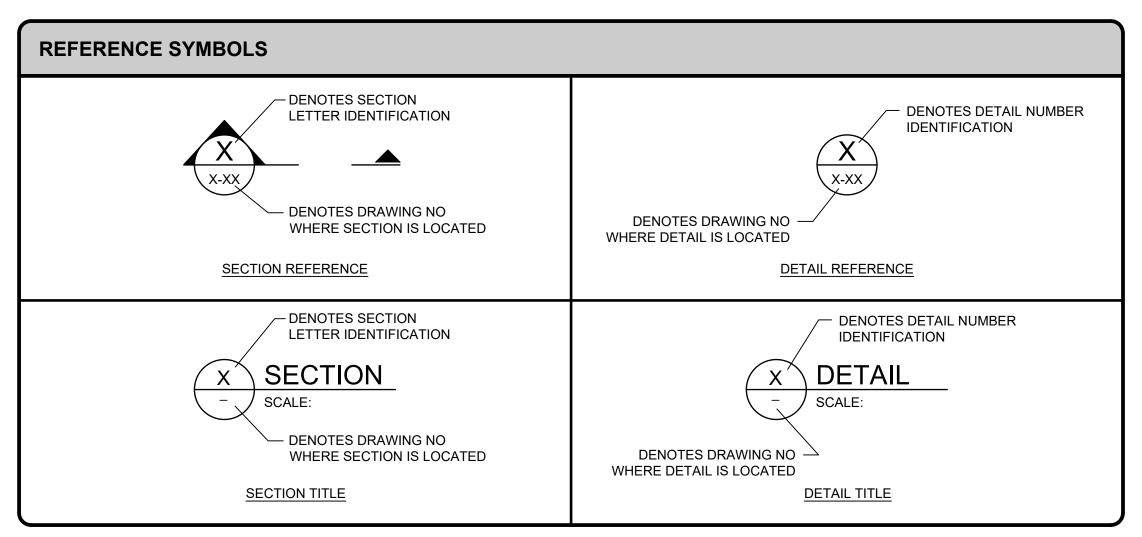
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HATCH	ING LEGEND		MECHANICAL/DRAFTIN	IG LEGEND	
	ASPHALT OR CONCRETE SURFACE (SIDEWALK OR ROADWAY)	PRECAST CONCRETE		EXISTING	PROPOSED
	ROADWAY/SIDEWALK OPEN CUT RESURFACE	GROUT	VISIBLE LINE HIDDEN LINE		
ψ Ψ Ψ	SODDED OR SEEDED AND MULCHED AREA OR EXISTING WETLAND	CONCRETE UNIT MASONRY (PLAN)	CENTER LINE		
	EARTH	STEEL	PHANTOM LINE MATCHLINE		
	EXISTING PIPES, STRUCTURES, EQUIPMENT TO BE REMOVED	ALUMINUM	BREAK LINE DIMENSION LINES AND LEADERS	1 3/32"	
4 4	CAST-IN-PLACE CONCRETE	GRATING	DIIVILINGION LINES AND LEADERS		NOTE -

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GSWCC LEVEL II

CERT. # 0000073529

Bar Measures 1 inch

Checked By:

- 2. THE ORDER OF MAJOR LAND DISTURBING ACTIVITIES IS INDICATED IN THE ACTIVITY SCHEDULE LOCATED ON SHEET C-505.
- 3. THE TOTAL AND DISTURBED ACREAGE FOR THE PROJECT IS 0.52 ACRES.
- 4. THE CULVERT REPLACEMENT PROJECT LOCATION IS: 33.47352° -84.49006°

FAYETTE COUNTY WATER SYSTEM NOTES

- 1. FAYETTE COUNTY WATER SYSTEM SPECIFICATIONS AND DETAILS SHALL GOVERN ALL WATER MAIN CONSTRUCTION.
- 2. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH FAYETTE COUNTY WATER SYSTEM AND AWWA STANDARDS AND SPECIFICATIONS.
- 3. DUCTILE IRON PIPE (D.I.P.) SHALL BE MINIMUM PRESSURE CLASS 300 CEMENT MORTAR LINED, PER ANSI C151/A21.51. ALL FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON PER ANSI A21.10 OR A21.53. ALL SERVICE PIPING SHALL BE COPPER.
- 4. PROVIDE THRUST RESTRAINT (THRUST BLOCKS OR RESTRAINED JOINTS) AT ALL BENDS, TEES, CROSSES AND END OF LINES. (EOL) SIDE FORMS SHALL BE USED TO PREVENT ENCASEMENT OF BOLTS. SERVICE TAPS SHALL NOT BE LOCATED BENEATH PAVEMENT.
- 5. MAINTAIN 24" MINIMUM CLEARANCE BETWEEN WATERLINE AND OTHER STRUCTURES.
- 6. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4' OVER ALL WATER LINES.
- 7. CONTRACTOR SHALL FLAG WATER LINE AND SERVICE LOCATIONS TO PREVENT DAMAGE BY OTHER UTILITY CONTRACTORS.
- 8. PROPER COMPACTION IS REQUIRED THROUGHOUT THE PROJECT. (95% PERVIOUS, 98% IMPERVIOUS)
- 9. UNSUITABLE SOIL MATERIALS SHALL BE REPLACED WITH SUITABLE MATERIALS.
- 10.NEW WATER LINE SHALL BE PRESSURE TESTED FOR 2 HOURS AT 200 P.S.I. UNACCEPTABLE LEAKAGE SHALL BE REPAIRED AND WATER LINE SHALL BE RETESTED PRIOR TO ACCEPTANCE BY FAYETTE COUNTY WATER SYSTEM. MAIN MUST BE DISINFECTED PRIOR TO BEING PLACED IN SERVICE.
- 11. TOP OF CURBS SHALL BE PERMANENTLY MARKED AND PAINTED BLUE AT MAIN AND SERVICE CROSSINGS, AS WELL AS, VALVE AND METER LOCATIONS.
- 12. WATERLINE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL, INCLUDING SIGNAGE AND FLAGMEN, WHILE WORKING WITHIN THE RIGHT OF WAY OF ANY EXISTING ROAD.
- 13. WATERLINE CONTRACTOR PERFORMING ANY WORK WITHIN AN EXISTING RIGHT OF WAY MUST COMPLY WITH THE MUTCD 2003 EDITION WITH REVISIONS NUMBER 1 AND 2 INCORPORATED, DATED DECEMBER 2007. FLAGGERS MUST POSSESS A CURRENT CERTIFICATION CARD. DOCUMENTATION SHALL BE AVAILABLE UPON REQUEST BY ANY COUNTY EMPLOYEE.
- 14. WATER TO BE PROVIDED BY FAYETTE COUNTY WATER SYSTEM.
- 15. ALL TIE-INS SHALL BE COORDINATED WITH FAYETTE COUNTY WATER SYSTEM. EXISTING VALVES SHALL BE OPERATED BY COUNTY PERSONNEL ONLY.
- 16. CONTRACTOR MUST NOTIFY FAYETTE COUNTY WATER SYSTEM 24 HOURS PRIOR TO BEGINNING CONSTRUCTION OR REQUESTING INSPECTIONS. ALL WORK MUST BE INSPECTED PRIOR TO BACKFILL AND COMPACTION. ANY WORK COVERED PRIOR TO INSPECTION IS SUBJECT TO REJECTION UNTIL IT HAS BEEN EXPOSED AND INSPECTED BY FAYETTE COUNTY WATER PERSONNEL.
- 17.NO TRENCHES OR PITS ARE TO BE LEFT OPEN OVERNIGHT OR THROUGH A WEEKEND. IF CREW VACATES JOB SITE DURING DAYTIME HOURS, A PROPERLY CONSTRUCTED, HIGHLY VISIBLE BARRICADE MUST BE ERECTED.
- 18. WHILE THE EXCAVATION IS OPEN, UNDERGROUND INSTALLATIONS SHALL BE PROTECTED, SUPPORTED OR REMOVED AS NECESSARY TO SAFEGUARD EMPLOYEES.
- 19. MEANS OF EGRESS FROM TRENCH EXCAVATIONS. A STAIRWAY, LADDER, RAMP OR OTHER SAFE MEANS OF EGRESS SHALL BE LOCATED IN TRENCH EXCAVATIONS THAT ARE 4 FEET OR MORE IN DEPTH SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL FOR EMPLOYEES.
- 20.CONTACT JAMES MUNSTER AT THE FAYETTE COUNTY WATER SYSTEM TO SCHEDULE AN ONSITE MEETING PRIOR TO BEGINNING ANY WORK. PHONE: 770-320-6082
- 21.ALL CONTRACTORS MUST HAVE A CERTIFIED COMPETENT PERSON ON SITE WHILE WORK IS BEING PERFORMED. DOCUMENTATION SHALL BE AVAILABLE UPON REQUEST BY ANY COUNTY EMPLOYEE.
- 22.ALL CONTRACTORS PERFORMING ANY LAND DISTURBING ACTIVITY SHALL HAVE ATTENDED THE GSWCC SUB CONTRACTOR AWARENESS COURSE WHEN WORKING IN A COMMON DEVELOPMENT WHERE THE PRIMARY PERMITTEE HAS OBTAINED A LEVEL 1A CERTIFICATION. THE PRIMARY PERMITTEE IS REQUIRED TO HAVE A LEVEL 1A CERTIFIED REPRESENTATIVE ON SITE AT ALL TIMES. DOCUMENTATION SHALL BE AVAILABLE UPON REQUEST BY ANY COUNTY EMPLOYEE.
- 23.ANY CONTRACTOR PERFORMING ANY LAND DISTURBING ACTIVITY UNDER CONTRACT FOR FAYETTE COUNTY WATER SYSTEM SHALL BE CONSIDERED THE SECONDARY PERMITTEE FOR EACH PROJECT. THE CONTRACTOR SHALL BE REQUIRED TO HAVE A GSWCC LEVEL 1A CERTIFIED REPRESENTATIVE ON SITE AT ALL TIMES. DOCUMENTATION SHALL BE AVAILABLE UPON REQUEST BY ANY COUNTY EMPLOYEE.
- 24.BEFORE RELEASE OF THE WATER LINES, 2 CERTIFIED AS BUILTS (24 X 36) MUST BE SUBMITTED ALONG WITH 2 SIGNED FINAL PLATS OR FINAL SITE PLANS. ONE ELECTRONIC COPY OF EACH DOCUMENT SHOULD BE SENT TO THE INSPECTOR UPON ACCEPTANCE.

GENERAL

- 1. BENCHMARK FOR CONSTRUCTION HAS BEEN PROVIDED ON SHEET C-101
- 2. ALL LABOR, MATERIALS, AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY THE FAYETTE COUNTY. WHERE CONFLICTS OR OMISSIONS EXIST, THE FAYETTE COUNTY STANDARDS SHALL DICTATE. SUBSTITUTIONS AND DEVIATION FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE ENGINEER.
- 3. SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- 4. ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE FAYETTE COUNTY DEVELOPMENT REGULATIONS, LATEST EDITION, UNLESS OTHERWISE WAIVED.
- 5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND IN HAND BEFORE BEGINNING ANY CONSTRUCTION. NO CONSTRUCTION OR FABRICATION OF ANY ITEM SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED ALL PLANS AND ANY OTHER DOCUMENTATION FROM ALL OF THE PERMITTING AND ANY OTHER REGULATORY AUTHORITIES. ANY PENALTIES, STOP WORK ORDERS OR ADDITIONAL WORK RESULTING FROM THE CONTRACTOR BEING IN VIOLATION OF THE REQUIREMENTS ABOVE, SHALL BE FULLY BORNE BY THE CONTRACTOR.

GENERAL (CONTINUED)

- 6. THE LOCATION OF ALL EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING UNDERGROUND UTILITIES, WHETHER SHOWN ON THE PLAN OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FIRST. ANY FEES ASSOCIATED WITH UTILITY RELOCATIONS SHALL BE BORNE IN ACCORDANCE WITH RESPECTIVE UTILITY COMPANY STANDARDS. IT IS REQUESTED UTILITY COMPANIES MOVE THEIR PARTICULAR UTILITIES. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE RELOCATION OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- 7. THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING TO BE HELD BETWEEN FAYETTE COUNTY, UTILITIES, ENGINEER OF RECORD, AND CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 8. THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND, INCLUDING LANDSCAPE SPRINKLERS, SHALL BE PLACED BENEATH THE PAVEMENT AND ITS EDGES PRIOR TO THE CONSTRUCTION OF THE PAVEMENT. THE PAVEMENT SHALL NOT BE CUT WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- 9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AND AT LEAST 48 HOURS HOURS BEFORE REQUIRED INSPECTION ON EACH AND EVERY PHASE OF WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS NOTICE PRIOR TO ANY SCHEDULED TESTING. NO PRESSURE TESTING, OR FINAL TESTING WILL BE ACCEPTED UNLESS WITNESSED BY THE ENGINEER'S REPRESENTATIVE.
- 10. ALL CONTRACTORS, CITY REPRESENTATIVES, COUNTY REPRESENTATIVES, AND UTILITY COMPANIES ARE RESPONSIBLE FOR THEIR RESPECTIVE SURVEYING AND LAYOUT FROM BENCHMARK PROVIDED ON CONSTRUCTION PLANS. ANY SURVEY MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED UPON COMPLETION OF THE WORK BY A REGISTERED LAND SURVEYOR.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY CONSTRUCTION ACTIVITIES FROM TAKING PLACE OUTSIDE OF THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS. ANY ON-SITE OR OFFSITE AREAS DISTURBED SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER
- 12. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS AND ALL PERMITS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TWO (2) SETS OF RECORD DRAWINGS TO THE ENGINEER OF RECORD WITHIN TWO (2) WEEKS AFTER CONSTRUCTION HAS BEEN COMPLETED ON EACH PHASE. RECORD DRAWINGS MUST BE COMPLETED BY A RLS.
- 13. TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS WERE TAKEN FROM SURVEY PROVIDED BY: ROCHESTER AND ASSOCIATES, INC. SURVEY DATE: 10/02/17.
- 14. ANY CONSTRUCTION BEYOND THE RIGHT-OF-WAY AND/OR ESTABLISHED EASEMENT LINES, ONTO ADJACENT PROPERTY, REQUIRES ADJACENT PROPERTY OWNER PERMISSION AND NECESSARY EASEMENTS PRIOR TO PERFORMING ANY WORK. THE CONTRACTOR IS TO VERIFY SUCH EASEMENTS AND PERMISSIONS PRIOR TO DISTURBING ANY OFF-SITE PROPERTY.
- 15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXISTING SITE CONDITIONS OF SOIL PRIOR TO N.T.P. CONSTRUCTION TO DETERMINE IF ANY OFF SITE MATERIALS WILL NEED TO BE IMPORTED TO ACHIEVE THE GRADES SPECIFIED ON THE PLANS.
- 16. CLEAR AREAS INDICATED SHALL BE COMPLETELY CLEAR OF ALL TIMBER, BRUSH, STUMPS, ROOTS, GRASS, WEEDS, RUBBISH, AND ALL OTHER DEBRIS AND OBSTRUCTIONS RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE GROUND.
- 17. PRIOR TO BID PREPARATION, THE CONTRACTOR MUST BECOME FAMILIAR WITH THE OVERALL SITE CONDITIONS AND PERFORM ADDITIONAL INVESTIGATIONS AS DETERMINED NECESSARY TO UNDERSTAND THE LIMIT AND DEPTH OF EXPECTED ORGANIC SILT PEAT AREAS, ADEQUACY OF EXISTING MATERIALS AS FILL, DEWATERING REQUIREMENTS, CLEAN FILL REQUIRED FROM OFFSITE, AND MATERIALS TO BE DISPOSED OF OFFSITE, ALL OF WHICH WILL AFFECT HIS PRICING. ANY DELAY, INCONVENIENCE, OR EXPENSE CAUSED TO THE CONTRACTOR DUE TO INADEQUATE INVESTIGATION OF EXISTING CONDITIONS SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION WILL BE ALLOWED. THE MATERIALS ANTICIPATED TO BE ENCOUNTERED DURING CONSTRUCTION MAY REQUIRE DRYING PRIOR TO USE AS BACKFILL, AND THE CONTRACTOR MAY HAVE TO IMPORT MATERIALS. AT NO EXTRA COST. FROM OFFSITE TO MEET THE REQUIREMENTS FOR COMPACTION AND PROPER FILL.

DEMOLITION:

- THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND LICENSES FOR PERFORMING THE DEMOLITION WORK AND SHALL FURNISH A COPY OF THESE ITEMS TO THE ENGINEER PRIOR TO COMMENCING THE WORK. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE PERMITS.
- 2. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES OR LOCAL AUTHORITIES FURNISHING GAS, WATER, ELECTRICAL, TELEPHONE, OR SEWER SERVICE SO THEY CAN REMOVE, RELOCATE, DISCONNECT, CAP OR PLUG THEIR EQUIPMENT IN ORDER TO FACILITATE DEMOLITION.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL TREES, STRUCTURES, AND UTILITIES NOT MARKED FOR REMOVAL OR DEMOLITION AND SHALL PROMPTLY REPAIR ANY DAMAGE AS DIRECTED BY THE ENGINEER AT NO COST TO THE OWNER.
- 4. THE CONTRACTOR SHALL REMOVE PAVING MARKED FOR DEMOLITION WHICH INCLUDES ALL ASPHALT, CONCRETE, BASE, AND RETAINING WALLS (INCLUDING THE FOOTERS).
- 5. THE CONTRACTOR SHALL REMOVE TREES MARKED FOR REMOVAL WHICH INCLUDES THE ROOTS ASSOCIATED WITH THE TREE. TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED IN ACCORDANCE WITH THE FAYETTE COUNTY REGULATIONS.
- 6. THE CONTRACTOR SHALL REMOVE UNSALVAGEABLE MATERIALS AND YARD WASTE FROM THE SITE IMMEDIATELY AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
- 7. THE CONTRACTOR SHALL SAW-CUT A SMOOTH STRAIGHT EDGE ON ANY PAVEMENT PROPOSED FOR DEMOLITION PRIOR TO ITS REMOVAL. PRIOR TO CONNECTING PROPOSED PAVEMENT TO EXISTING PAVEMENT, THE CONTRACTOR SHALL ENSURE THAT THE EDGE OF THE EXISTING PAVEMENT IS STRAIGHT AND UNIFORM.

EARTHWORK, GRADING, STABILIZATION, PAVING AND DRAINAGE:

- 1. COMPACT ALL UTILITY TRENCHES WITHIN ROADWAYS TO 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T 180) AND TO 95% WITHIN OTHER AREAS.
- 2. ALL ORGANIC SOILS BELOW UTILITY TRENCHES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL AND COMPACTED TO NO LESS THAN 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T 180).
- 3. STABILIZED SUBGRADE TO MEET SPECIFIED REQUIREMENTS.
- 4. ASPHALTIC CONCRETE TO GDOT STANDARD SPECIFICATION (LATEST EDITION) SECTION 400 AND FAYETTE COUNTY, WHICHEVER IS GREATER.
- $5. \ \ \mathsf{ALL} \ \mathsf{PAVEMENT} \ \mathsf{MARKINGS} \ \mathsf{SHALL} \ \mathsf{BE} \ \mathsf{THERMOPLASTIC}.$
- 6. ALL CONCRETE FLUMES, WALKS, AND CURBS SHALL BE CONSTRUCTED WITH 3000 PSI CONCRETE.
- 7. ALL ON-SITE AREAS DISTURBED BY THE CONSTRUCTION SHALL BE STABILIZED WITH SOD (SAME AS SURROUNDING AREA OR BETTER) OR APPROVED EQUAL. CONTRACTOR IS RESPONSIBLE FOR IRRIGATION OF PERMANENT GRASSING.
- 8. THE REINFORCED CONCRETE PIPE SHALL BE CLASS III WITH WALL THICKNESS "B" CONFORMING TO ASTM C 76 OR AWWA 302 74 AND GASKETS SHALL BE IN ACCORDANCE WITH ASTM C 443 OR ASTM D 412.

EARTHWORK, GRADING, STABILIZATION, PAVING AND DRAINAGE (CONTINUED)

- 9. ALL PIPE CALL OUTS ARE MEASURED CENTER LINE TO CENTER LINE FOR MANHOLES AND INLETS AND FROM THE END OF THE PIPE FOR MITERED END SECTIONS.
- 10. ALL DEWATERING COSTS ASSOCIATED WITH THE INSTALLATION AND CONSTRUCTION OF THE UNDERGROUND UTILITIES; STORM WATER PIPES AND MANHOLES; SANITARY SEWER MAINS, FORCE MAINS, MANHOLES, AND LIFT STATIONS; AND STORM WATER MANAGEMENT SYSTEMS SHALL BE INCLUDED AS PART OF THE CONSTRUCTION BID COSTS. THE CONTRACTOR SHALL SUBMIT FOR WATER USE PERMITS IF REQUIRED FOR DEWATERING ACTIVITIES.
- 11. ALL PIPES SHALL HAVE 3 FEET MINIMUM COVER UNLESS OTHERWISE SPECIFIED IN PLANS, CONTRACTOR SHALL TAKE CARE TO PROVIDE PROPER GRADE ELEVATIONS AND ALIGNMENTS.
- 12. THE CONTRACTOR MUST INSTALL AND MAINTAIN GRASS OR SOD ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETED FINAL GRADES, AS NOTED ON PLANS, AND AT ANY OTHER TIME AS NECESSARY TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES TO ANY DOWNSTREAM WATER BODY, WETLAND, OR OFF-SITE PROPERTY. SODDING ON SLOPES 3:1 AND STEEPER SHALL BE STAKED.
- 13. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO CONTROL TURBIDITY AND SEDIMENT INCLUDING, BUT NOT LIMITED TO, THE INSTALLATION OF TURBIDITY BARRIERS AND SILT FENCES AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY AND SEDIMENT BARRIERS MUST BE MAINTAINED AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING THE BARRIERS.

OTHER UTILITY INFORMATION:

- 1. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES WHICH MAY HAVE THEIR UTILITIES WITHIN THE CONSTRUCTION AREAS TO LOCATE THEIR FACILITIES IN THE FIELD FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING CONSTRUCTION.
- 2. DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE TWENTY-FIVE (25) FEET ON EACH SIDE OF ANY PERPENDICULAR CROSSING OF METALLIC GAS MAINS OR ANY OTHER CATHODICALLY PROTECTED PIPELINE AND FOR LOCATIONS PARALLEL TO AND WITHIN TEN FEET OF METALLIC GAS MAINS OR OTHER CATHODICALLY PROTECTED PIPE AND THROUGH THE AREA OF INFLUENCE OF CATHODIC PROTECTION ANODE BED.

SPILL CONTROL NOTES:

- 1. IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS NOTES OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
- a. MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
- b. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
- c. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF SIZE.
- d. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
- e. THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
- 2. PETROLEUM BASED PRODUCTS CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATERS, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

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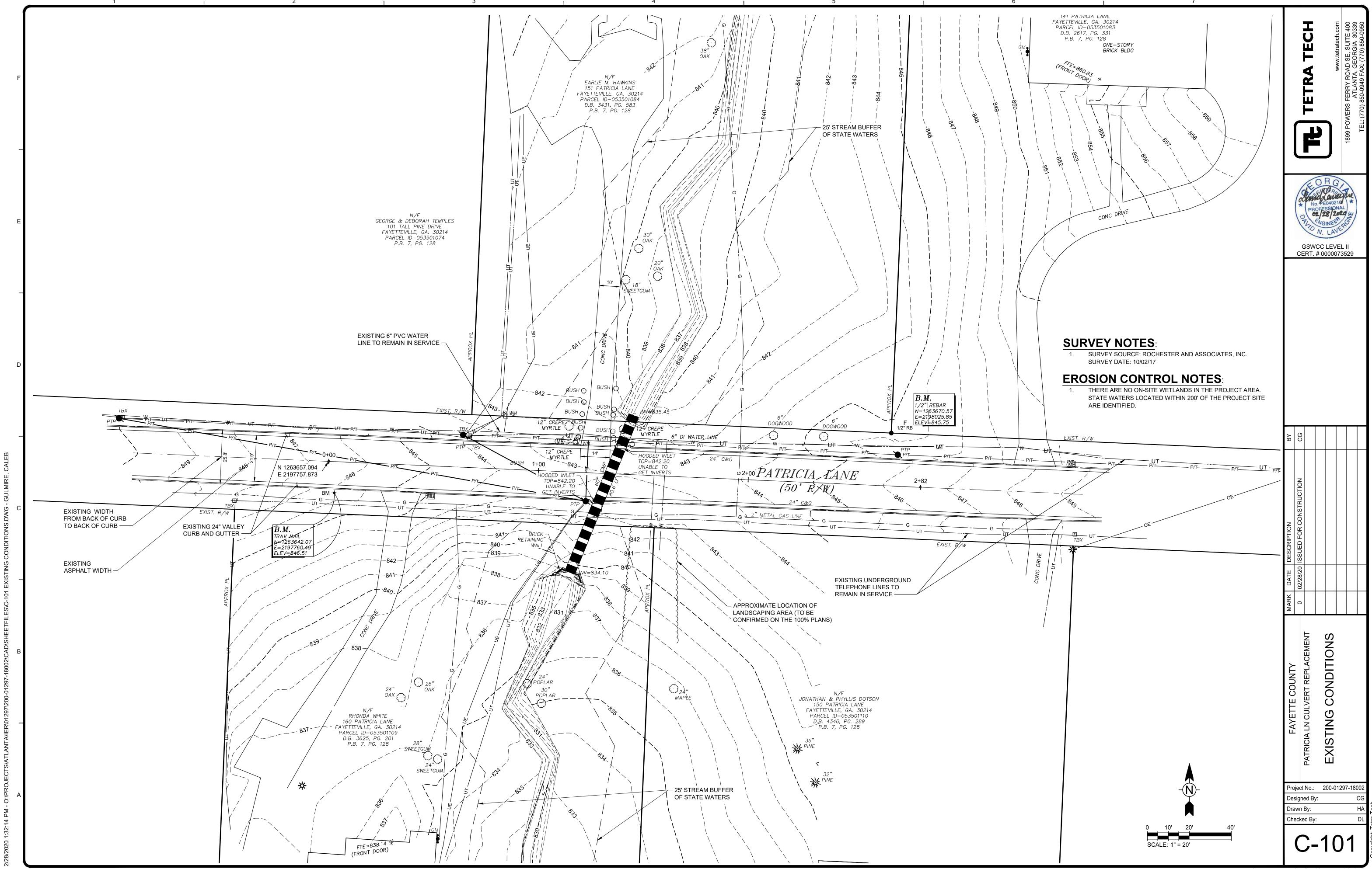
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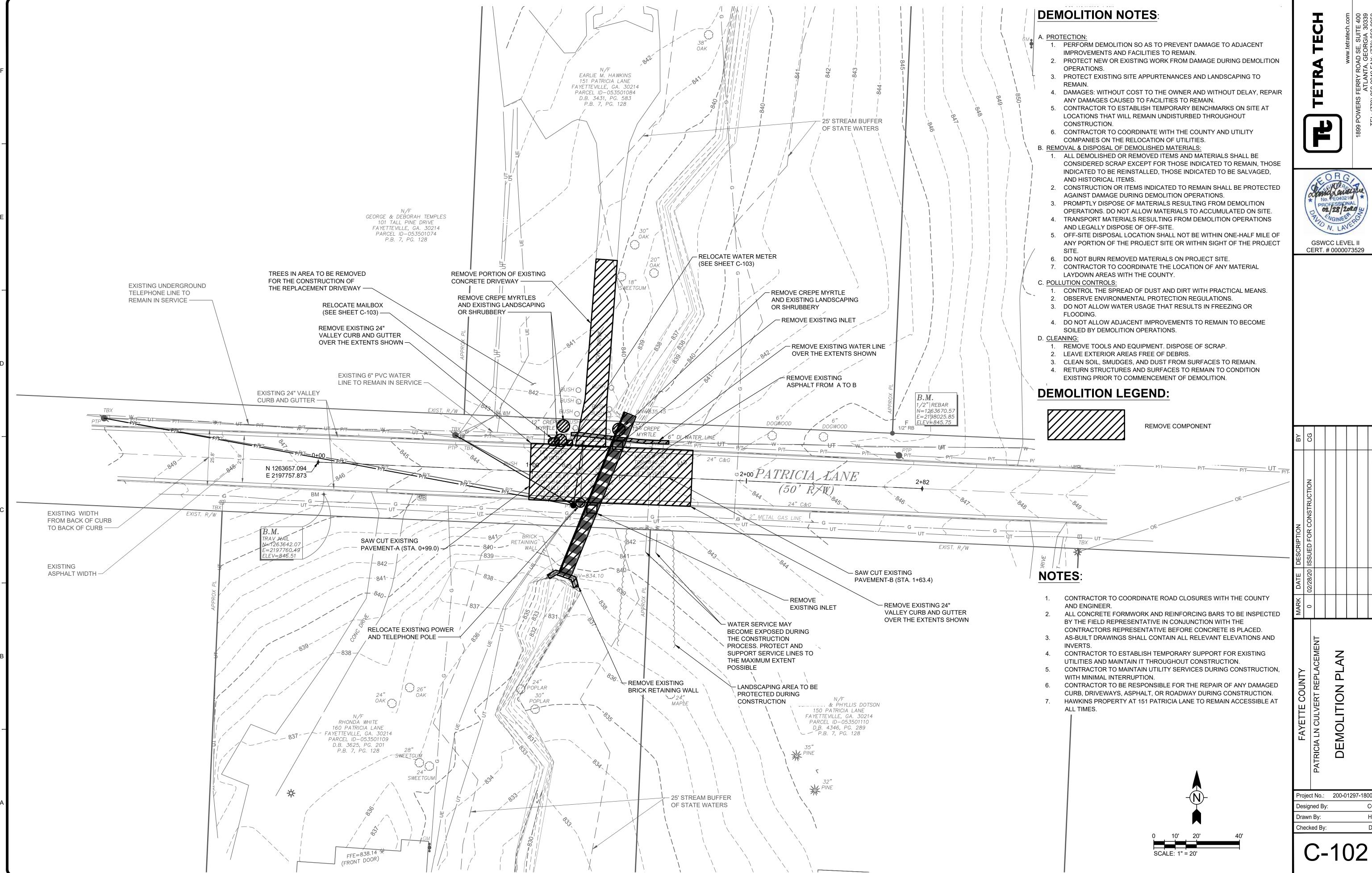
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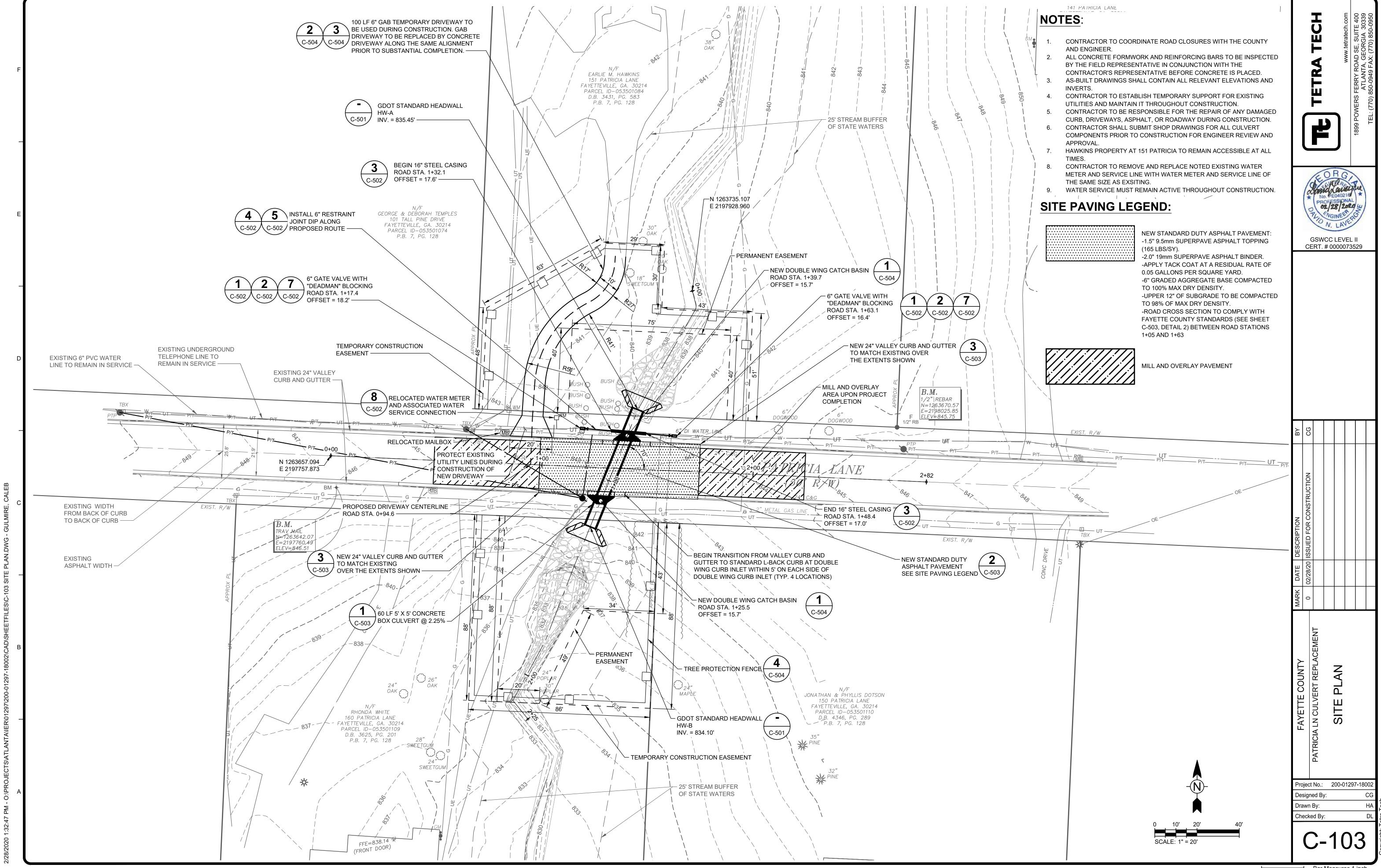
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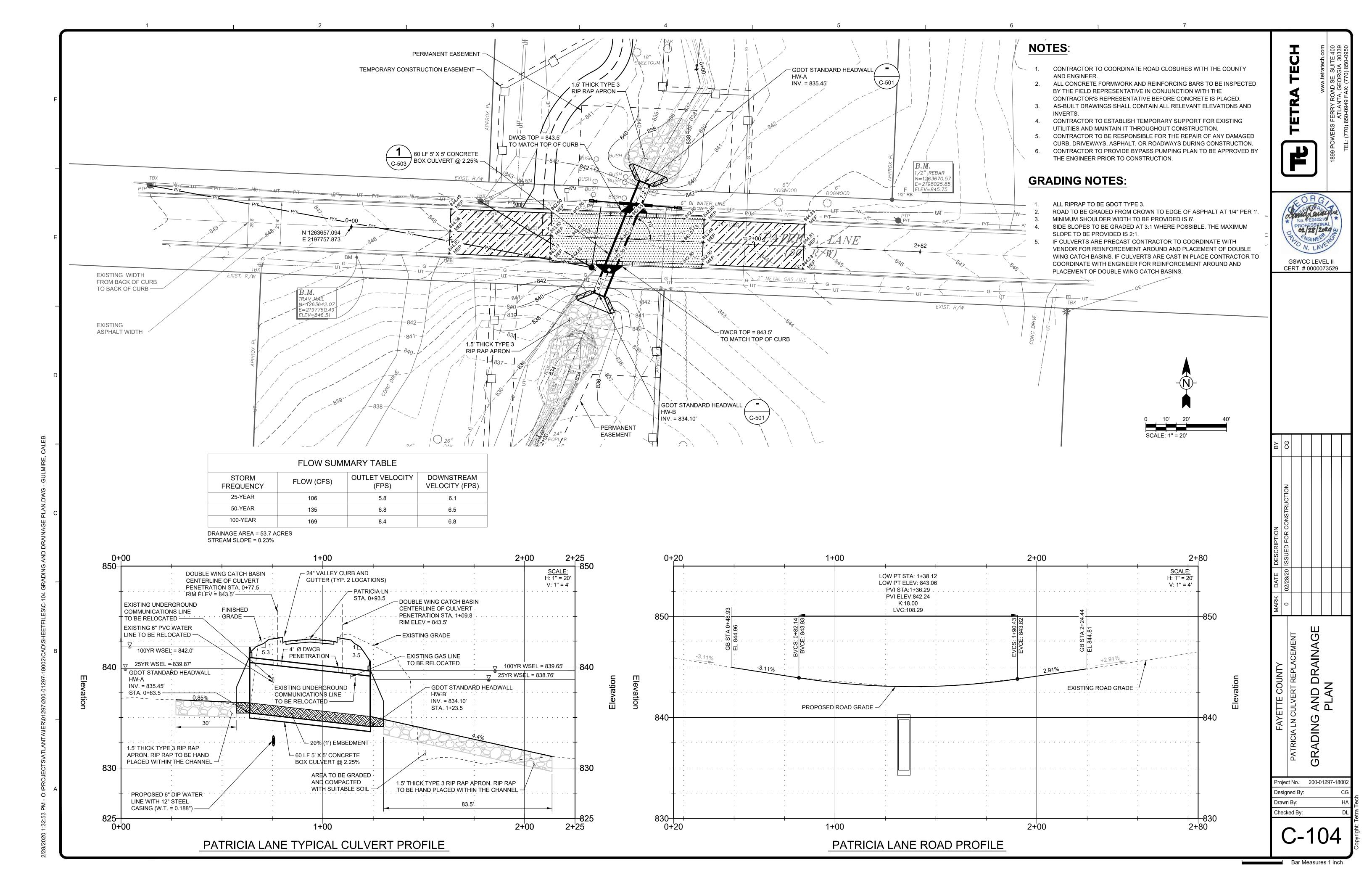


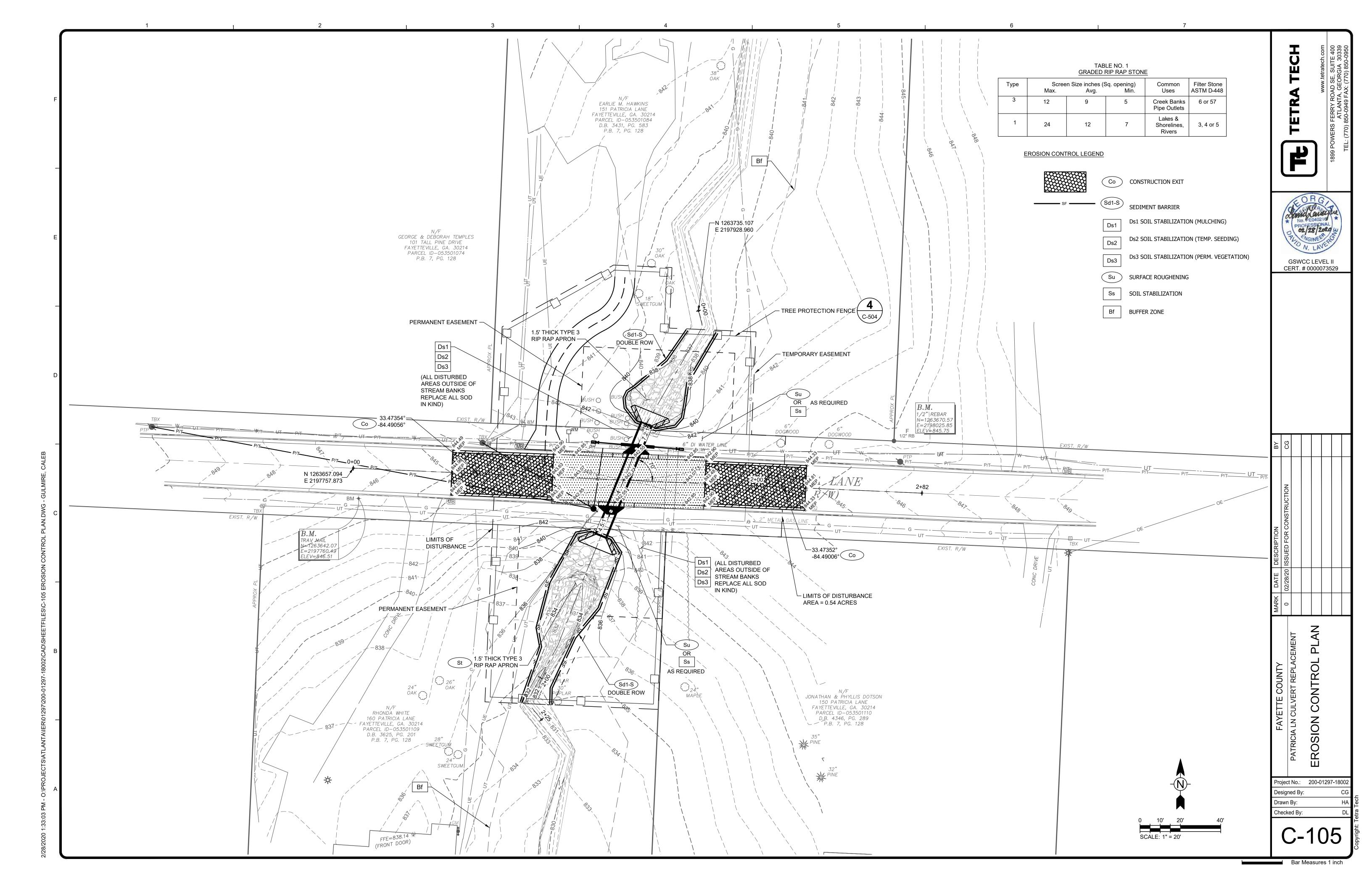


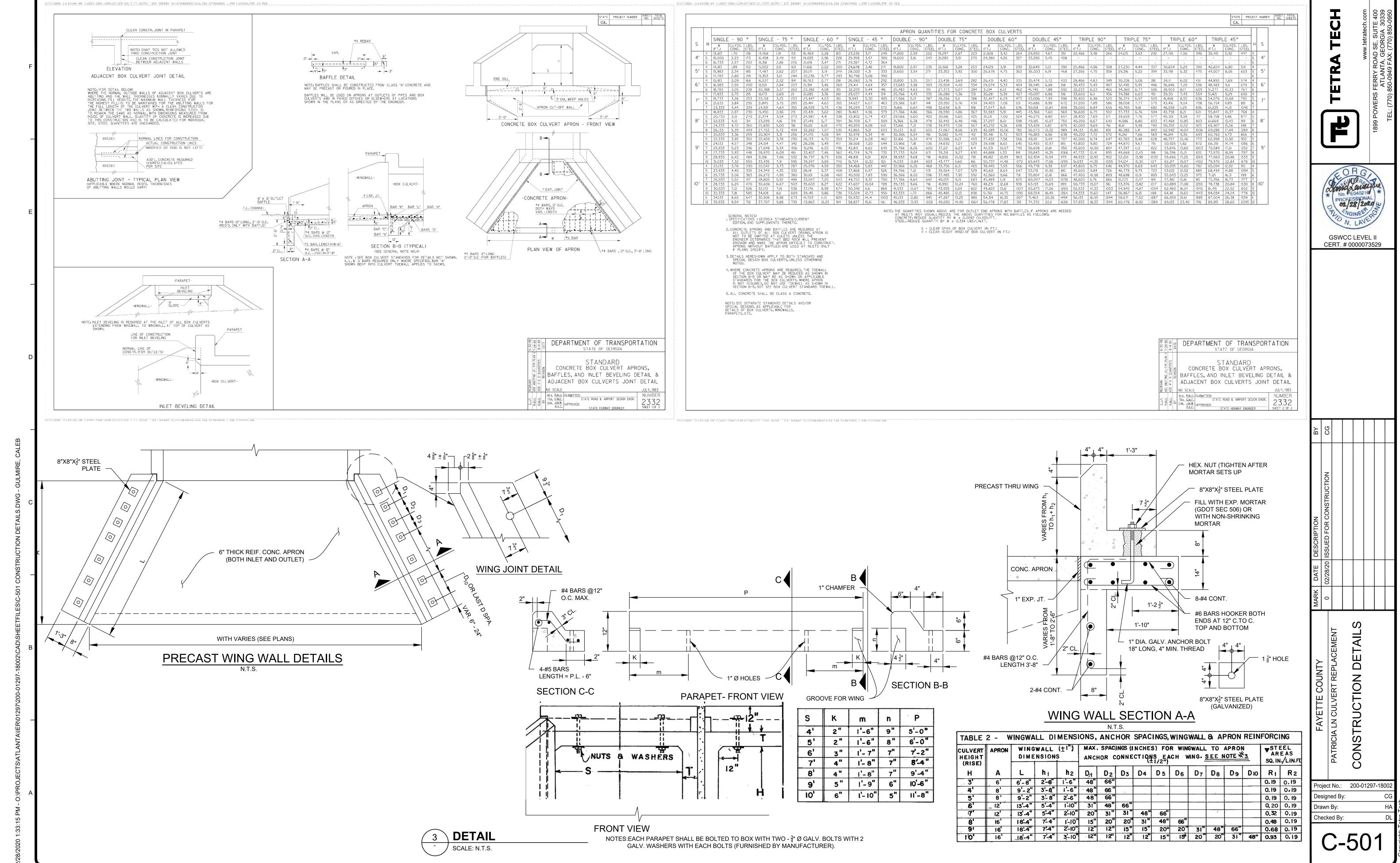
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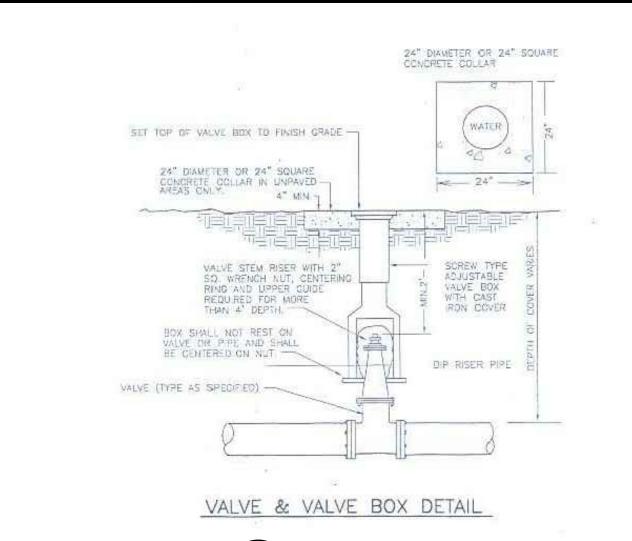
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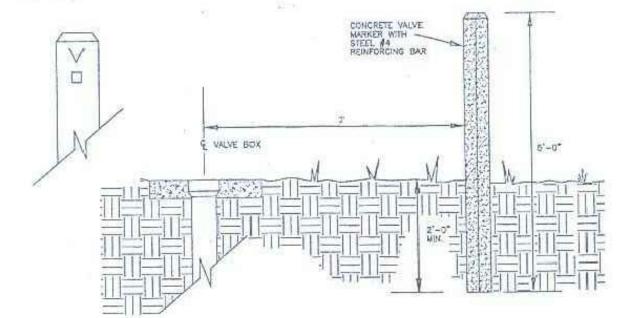




Bar Measures 1 inch



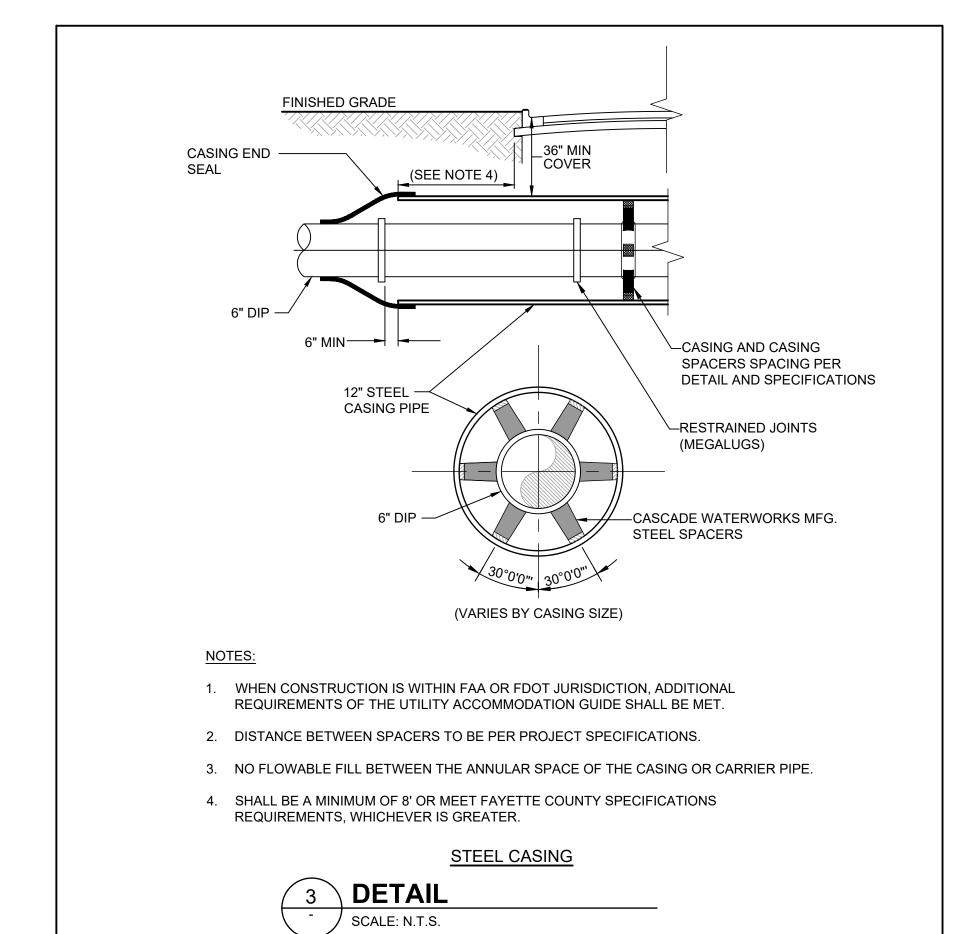


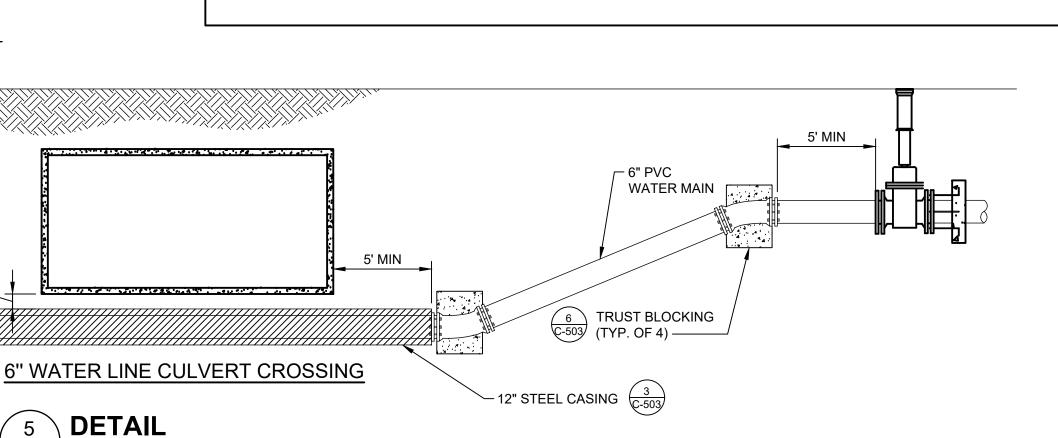


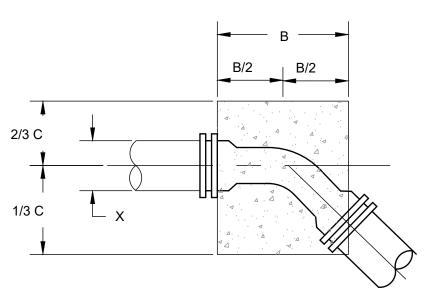
VALVE MARKER DETAIL

(TYP. 4)









VERTICAL BEND - ELEVATION

THRUST BLOCKING

N.T.S.

SCALE: N.T.S.

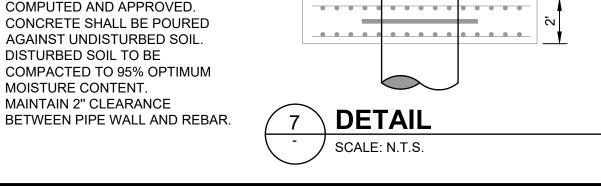
			Pressure = Pressure = 2		
	Pipe Size X	Α	В	С	D
		45	DEGREE	BEND	
	24"	2'-4"	5'-6"	5'-0"	3'-9"
	20"	1'-11"	4'-6"	4'-0"	3'-0"
	18"	1'-9"	4'-0"	4'-0"	2'-9"
	16"	1'-7"	3'-6"	3'-6"	2'-3"
	14"	1'-3"	3'-0"	3'-0"	2'-0"
プ	12"	1'-3"	3'-0"	2'-6"	2'-0"
	10"	1'-3"	2'-6"	2'-0"	1'-9"
	8"	1'-0"	1'-9"	1'-9"	1'-3"
	6"	0'-11"	1'-6"	1'-6"	1'-0"
	4"	0'-9"	1'-0"	1'-0"	1'-0"
			OT DI OOK	INIO DETAI	

NOTE: THESE THRUST BLOCKING DETAILS SHALL BE USED IN CONJUNCTION WITH RESTRAINT JOINT PIPE. **DETAIL**



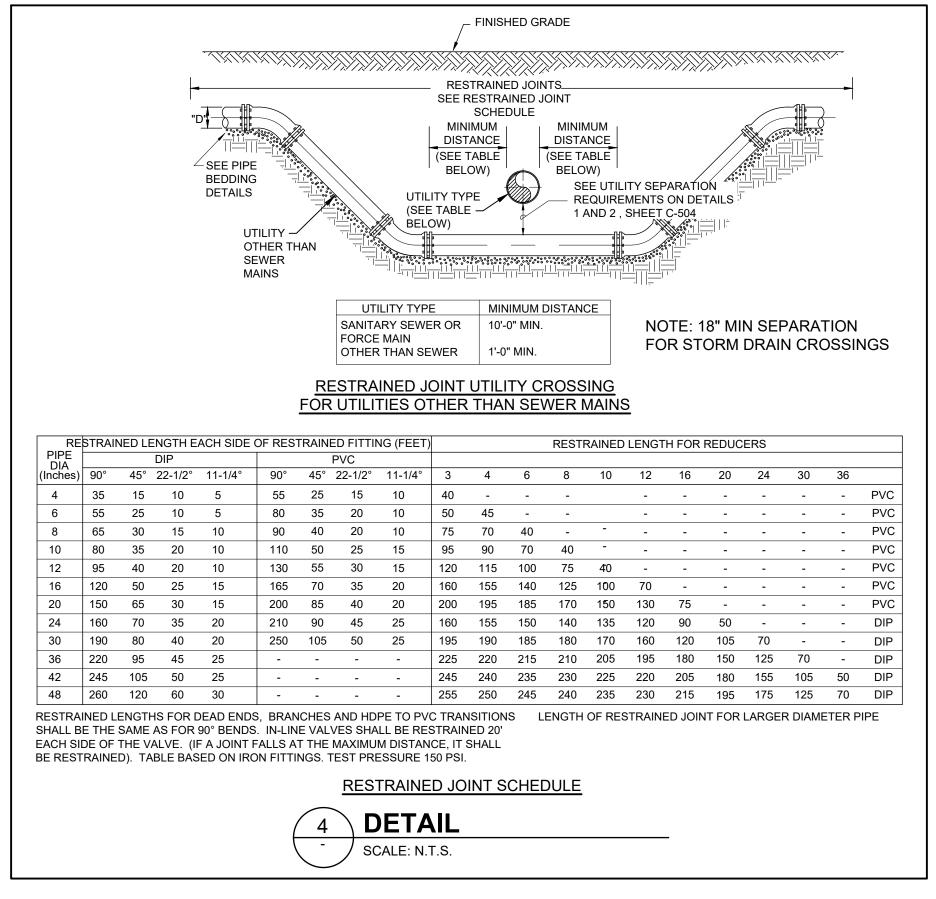
SCALE: N.T.S.

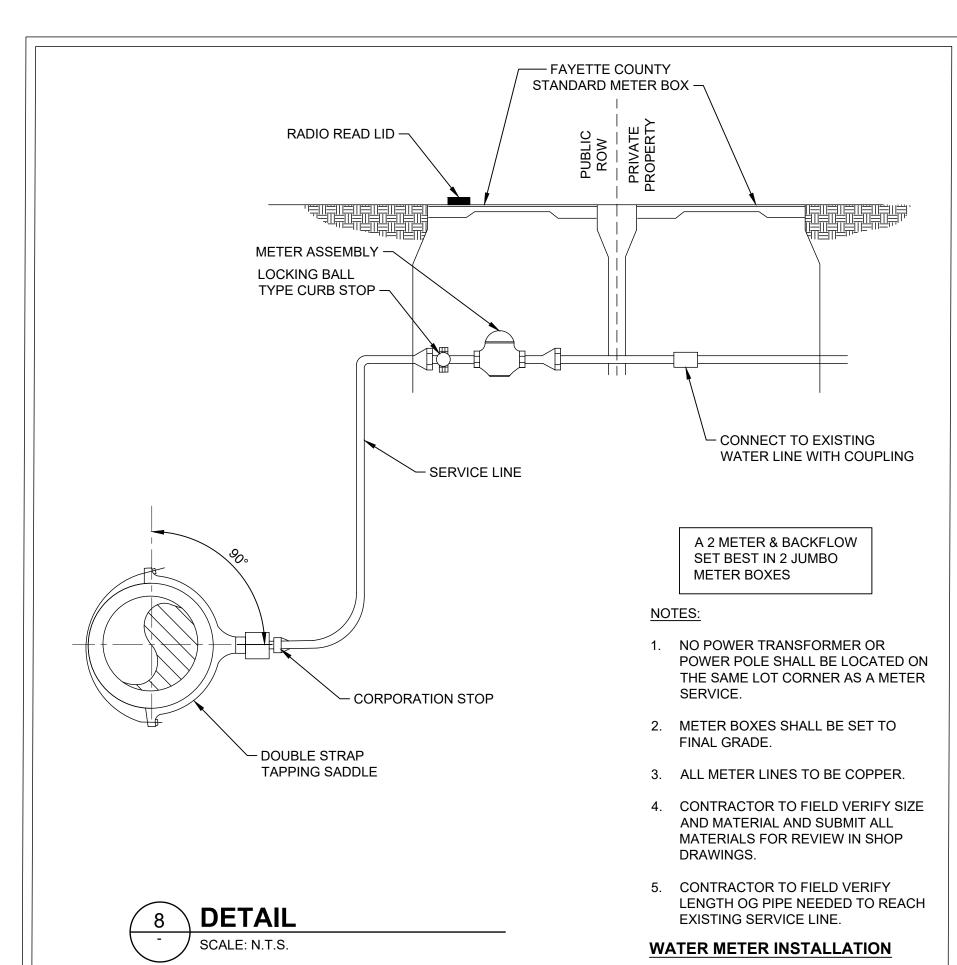
- NOTES: 1. DEADMAN SHALL BE CLASS "C" CONCRETE; "SACKCRETE" WILL NOT BE ALLOWED.
- 2. THE UTILITY LINE MUST BE LOWERED IN ORDER TO HAVE FOUR FEET (4') OF COVER AT THE BEND, TEE, REDUCER, OR PLUG AT ALL LOCATIONS WHERE THESE FITTINGS MAY BE UTILIZED.
- 3. FOR SOIL CONDITIONS LESS THAN 2000 P.S.F. BEARING PRESSURE OR PIPE PRESSURE OVER 150 P.S.I. SPECIAL THURST BLOCKS/RESTAINT MUST BE COMPUTED AND APPROVED.
- 4. CONCRETE SHALL BE POURED AGAINST UNDISTURBED SOIL. DISTURBED SOIL TO BE COMPACTED TO 95% OPTIMUM MOISTURE CONTENT. 5. MAINTAIN 2" CLEARANCE



DEADMAN

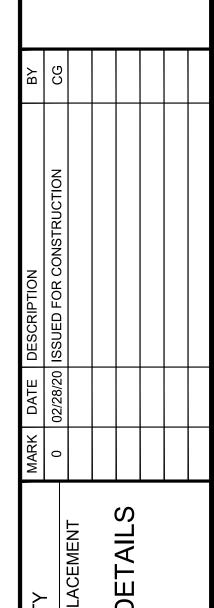
PSI SE	RESSURE IIL PRES: 2000 PSF	SURE =
PIPE SIZE X	Α	В
6′′	2'-0''	2'-0''
8′′	2'-6''	2'-6''
10′′	3′-6′′	3′-6′′
12''	4'-0''	4'-0''
14′′	4'-6''	4'-6''
16′′	5′-0′′	5′-0′′
18′′	6'-0''	6'-0''
20′′	6'-6''	6'-6''
24′′	7′-6′′	7′-6′′





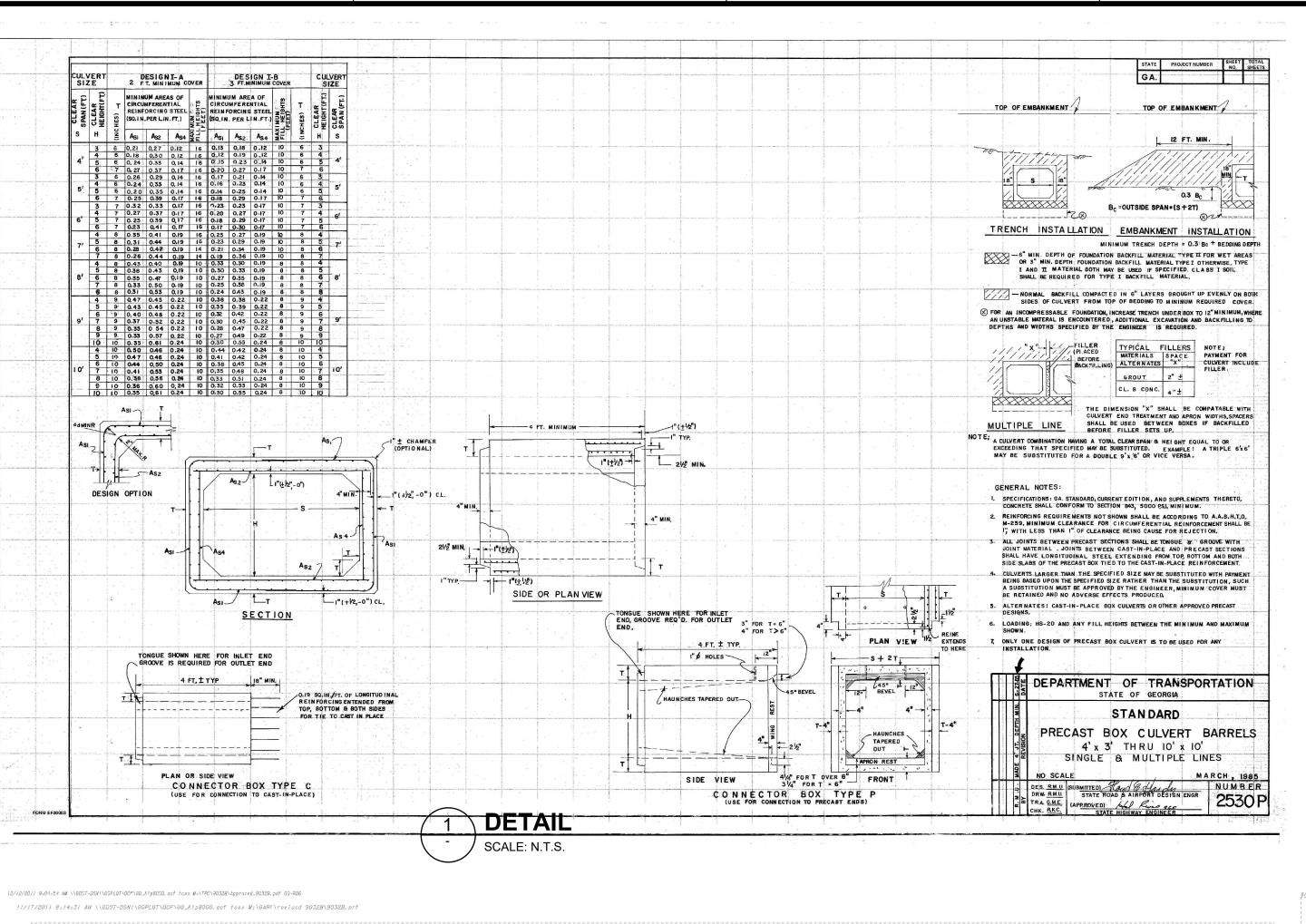


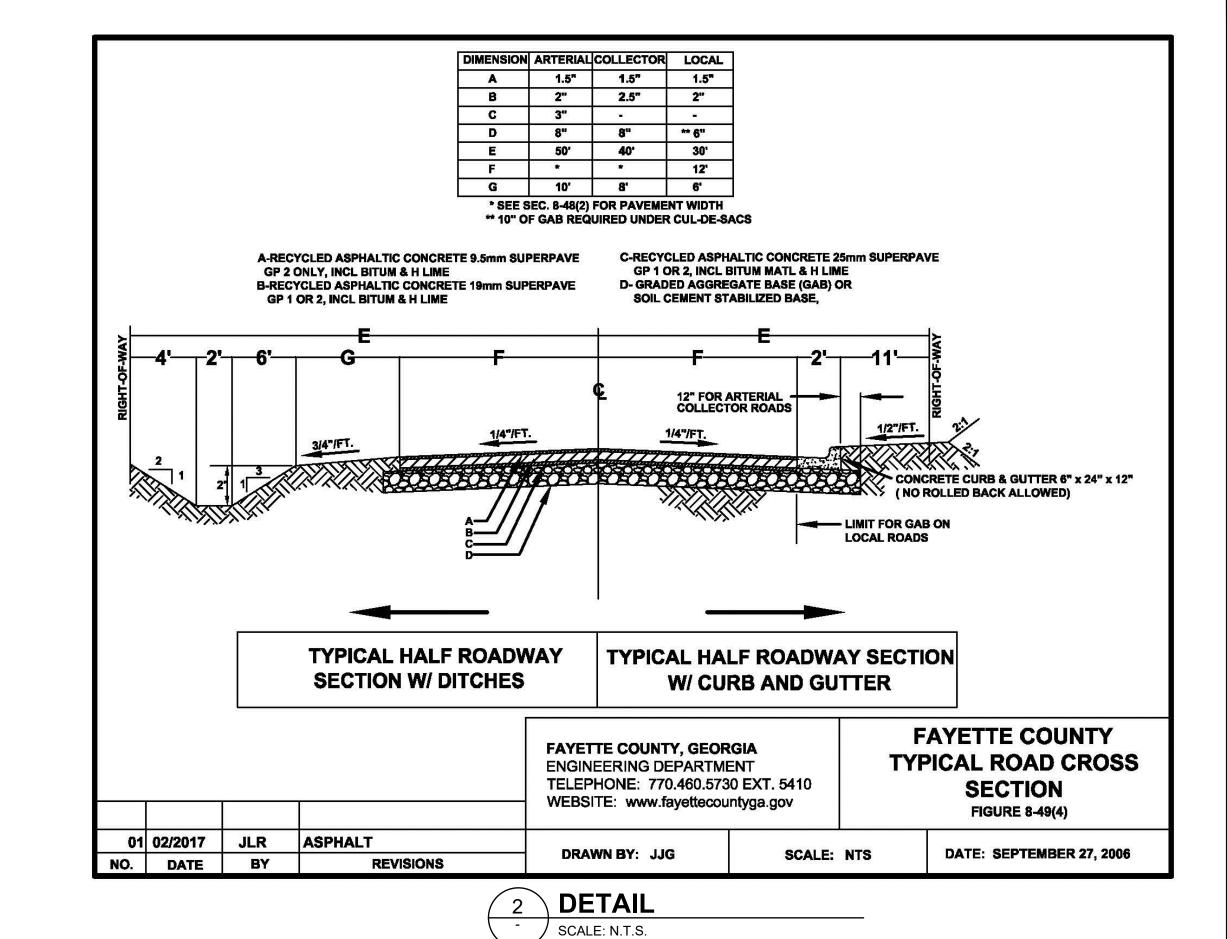


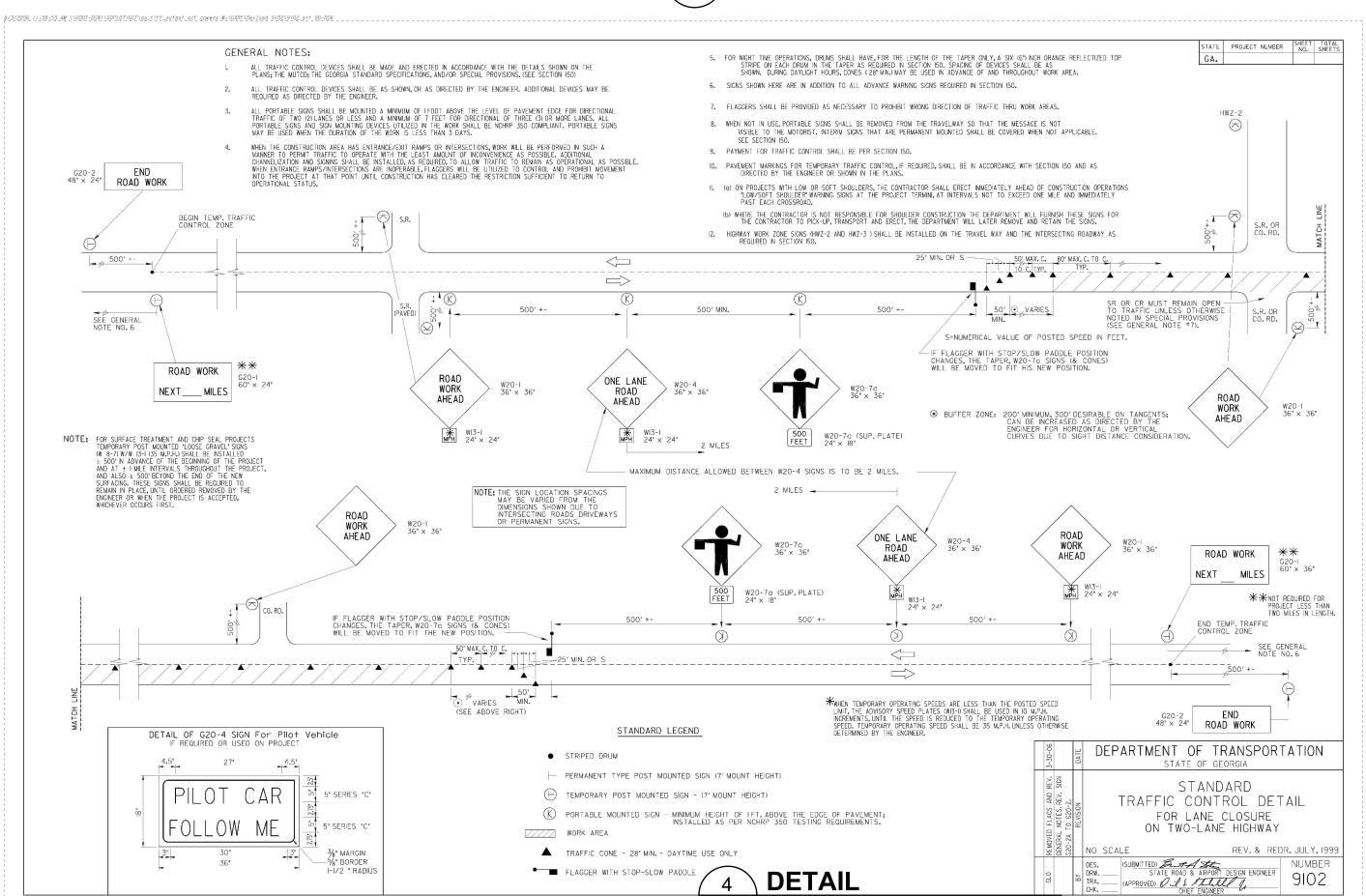


CONSTRUC Project No.: 200-01297-18002 Designed By: Drawn By: Checked By:

NOL

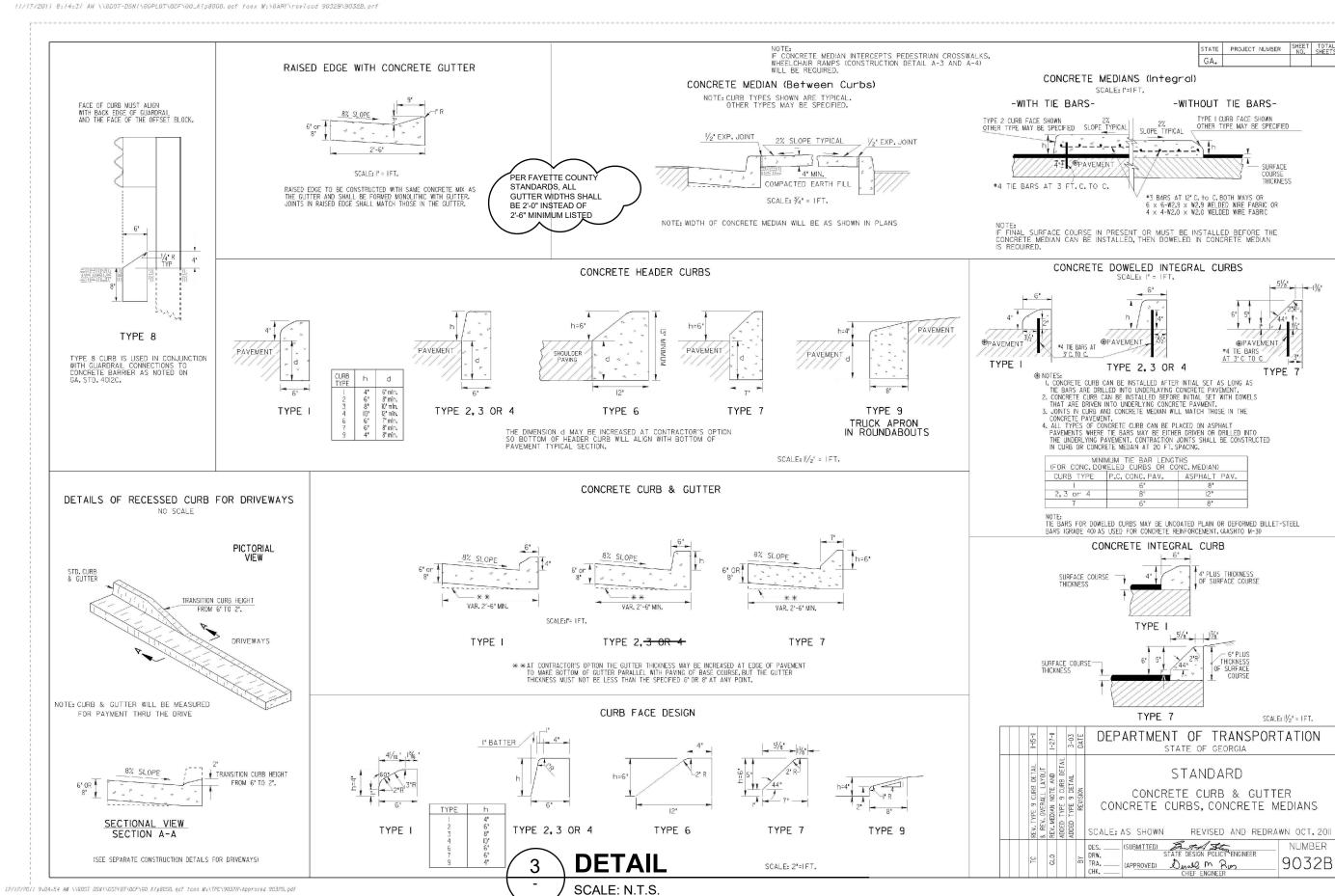






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SCALE: N.T.S.



97-18002 CG HA DL

Project No.: 200-01297-1800

Designed By: Company By: H

Checked By: D

NOL

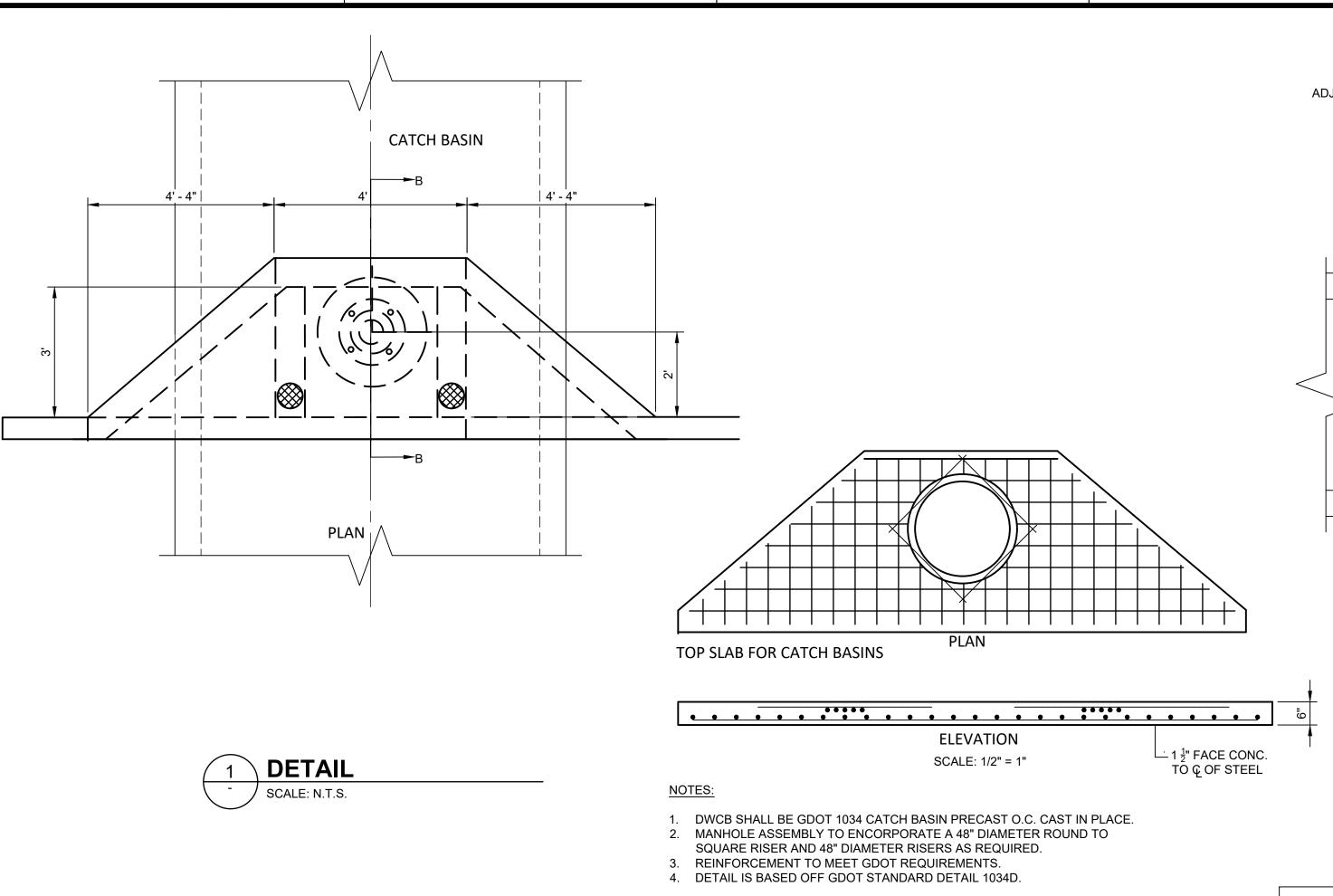
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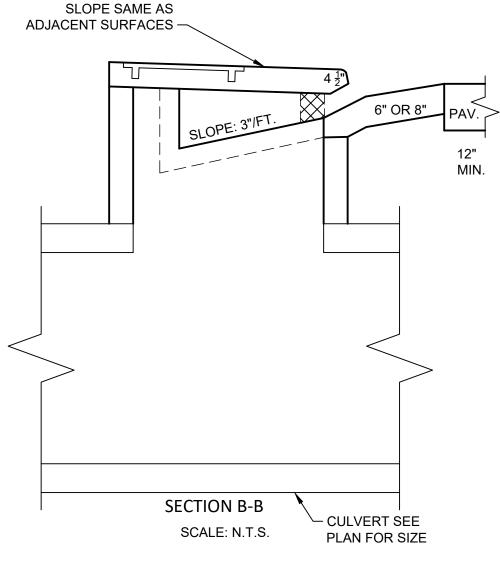
GSWCC LEVEL II

CERT. # 0000073529

C-503

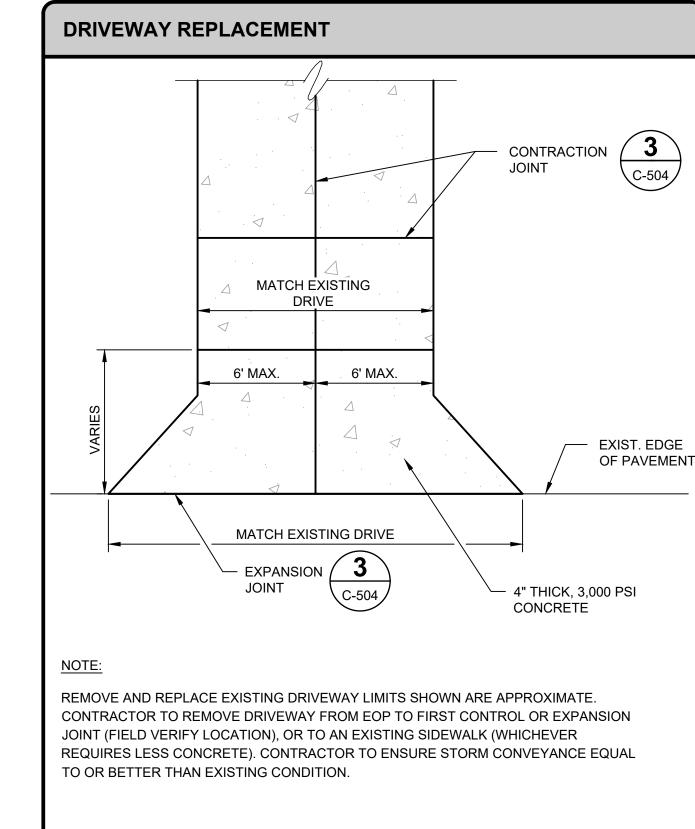
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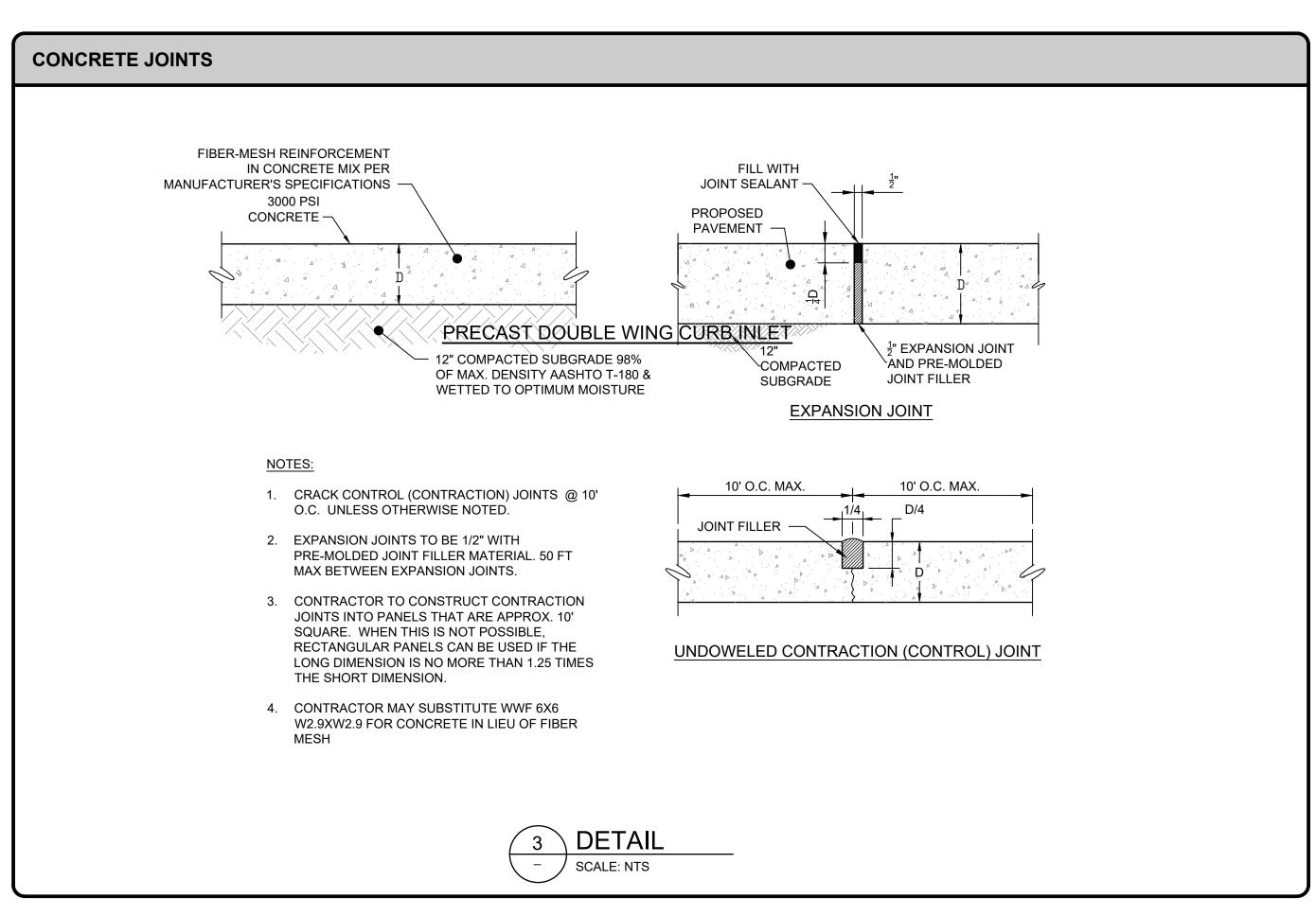


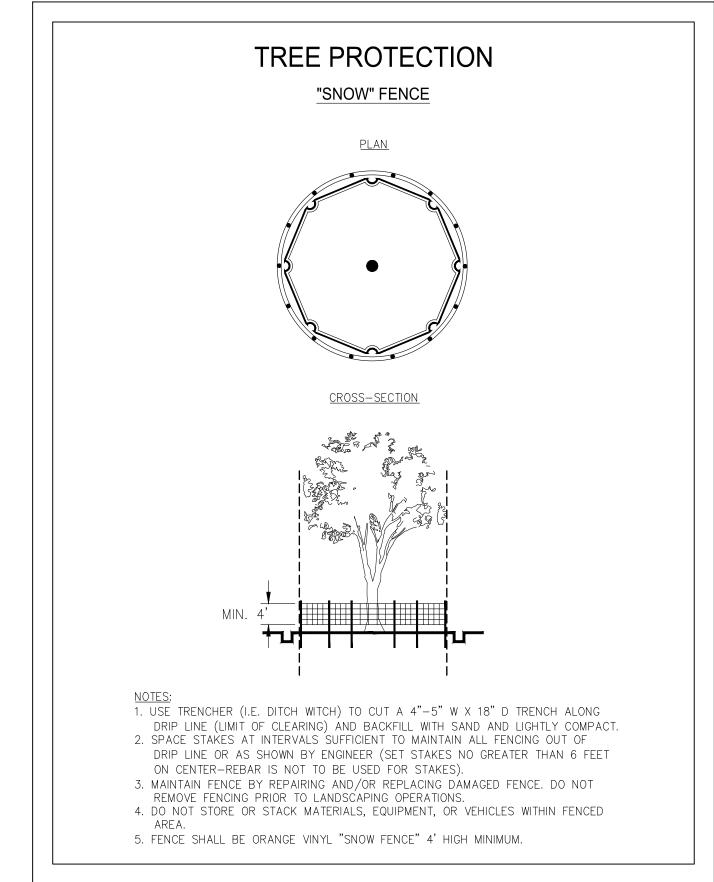


ALL JOINTS BETWEEN PRECAST RISERS OR BETWEEN PRECAST BASE AND RISER

WILL BE KEYED. KEYED JOINTS SHOWN ARE TYPICAL AND MAY BE VARIED.

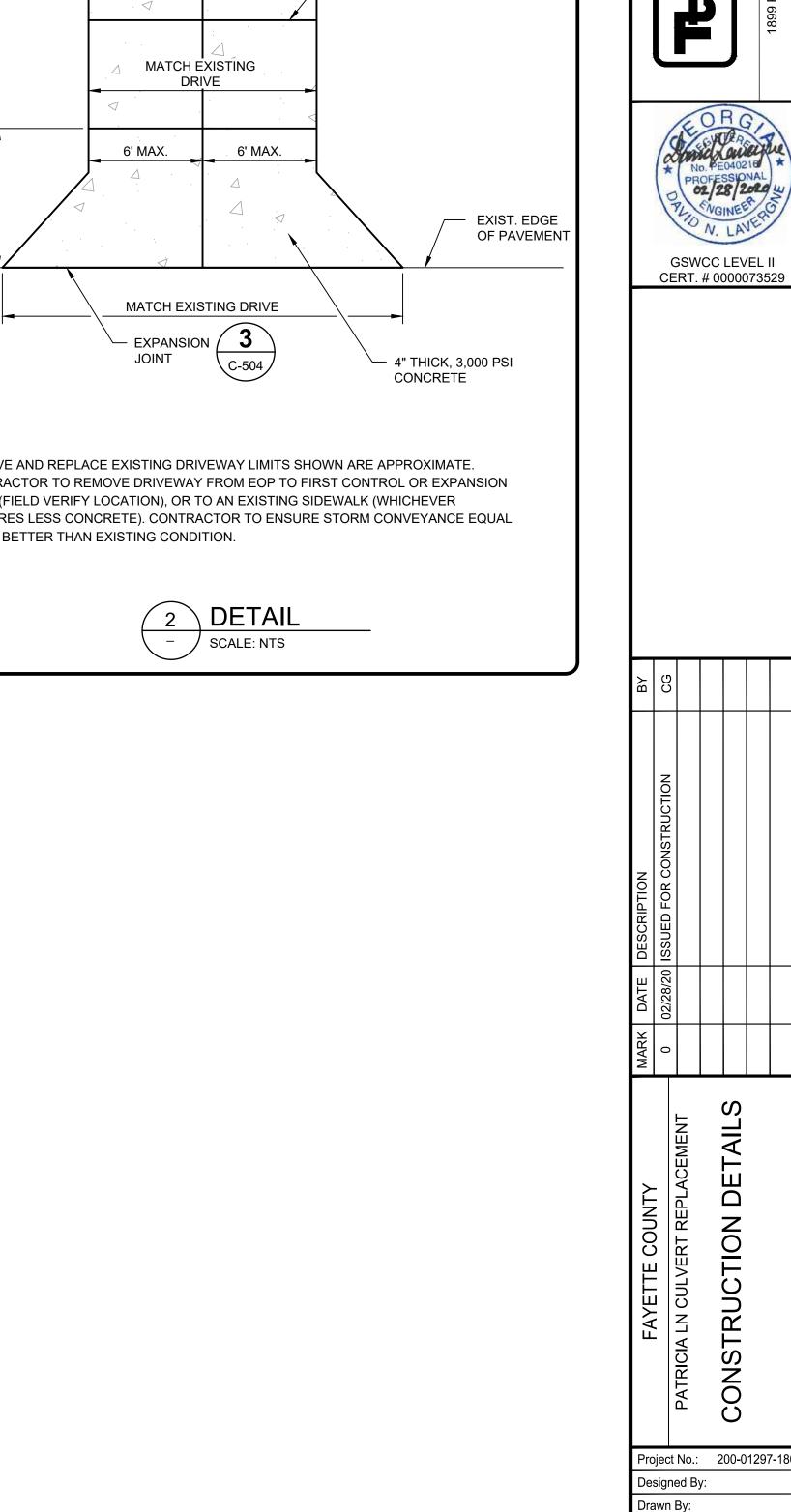




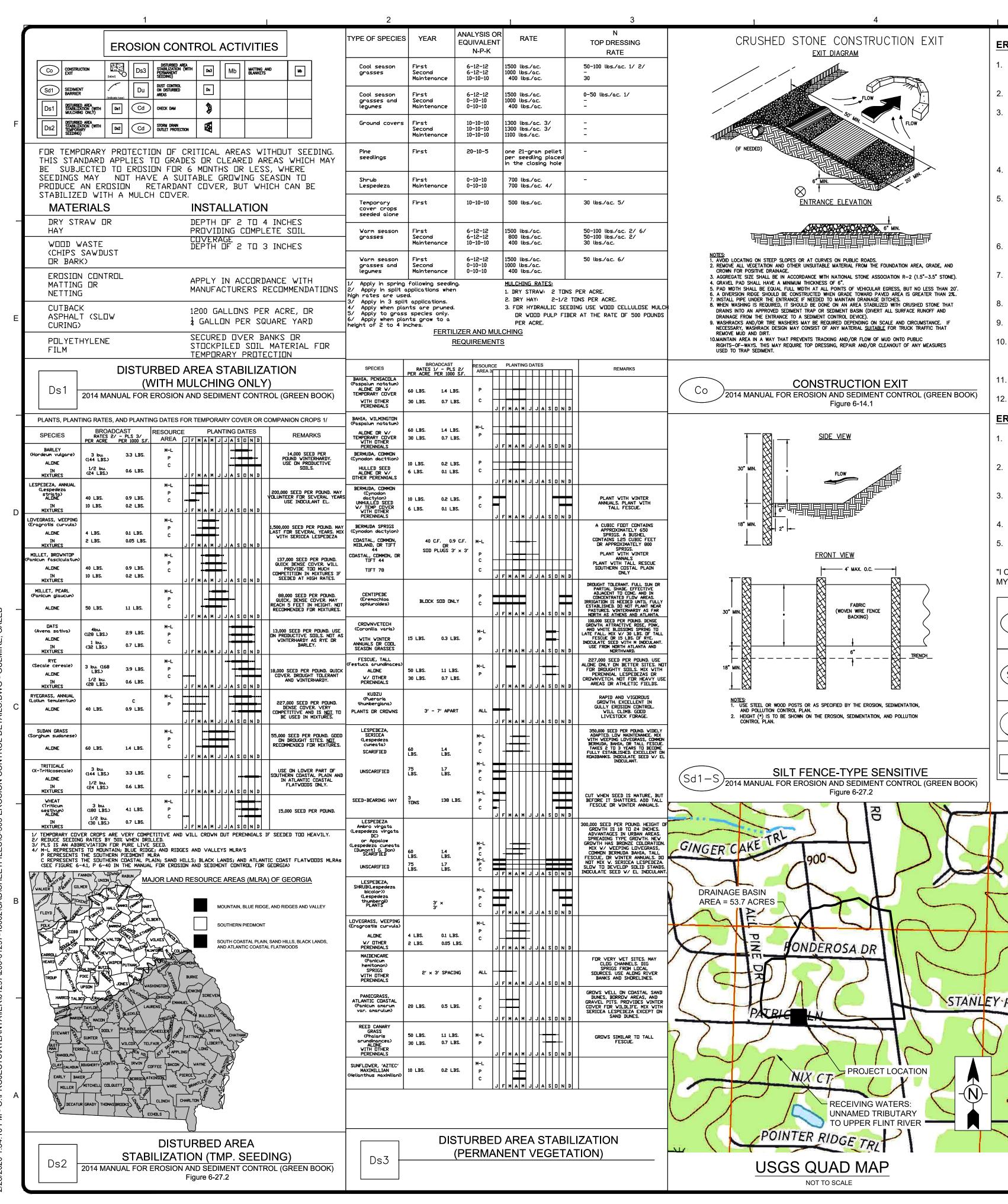


DETAIL

SCALE: N.T.S.



CON Project No.: 200-01297-18002 Checked By: Bar Measures 1 inch



EROSION CONTROL NOTES

1. EROSION CONTROL PRACTICES MUST COMPLY WITH THE MINIMUM BEST MANAGEMENT PRACTICES FOR EROSION CONTROL AND SHALL COMPLY WITH THE STANDARDS AND SPECIFICATIONS IN THE "MANUAL FOR EROSION CONTROL AND SEDIMENT CONTROL IN GEORGIA".

2. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE

3. DISTURBED AREAS LEFT IDLE FOR FIVE DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED WITH TEMPORARY MULCH (DS1) OR VEGETATION (DS2). DISTURBED AREAS LEFT IDLE FOR TWO WEEKS OR MORE WILL BE ESTABLISHED WITH PERMANENT VEGETATION (DS3). ALL AREAS AT FINAL GRADE WILL BE ESTABLISHED WITH PERMANENT VEGETATION IMMEDIATELY UPON COMPLETION. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING. DURING UNSUITABLE GROWING SEASONS, MULCH WILL BE USED AS A TEMPORARY COVER (DS3). ON SLOPES THAT ARE 2:1 OR STEEPER, MULCH WILL BE ANCHORED.

4. IN CONCENTRATED FLOW AREAS: ALL SLOPES STEEPER THAN 2.5:1, HEIGHT TEN FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFER, STABILIZE WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKET.

5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SEDIMENT/EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE THIRD THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

. THE USE OF POLYMERS (PAMS) IS ACCEPTED AS A BMP AS RECOMMENDED BY THE STATE SOIL & WATER CONSERVATION COMMISSION BMP "GREEN BOOK". POLYMERS USED TO STABILIZE CONSTRUCTION SITES MUST BE USED IN CONJUNCTION WITH MULCHING AND OR HYDROSEEDING.

8. MULCH, TEMPORARY VEGETATION, AND PERMANENT (PERENNIAL) VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE.

9. ADDITIONAL EROSION CONTROL DEVICES MAY BE REQUIRED BY ENGINEER DURING CONSTRUCTION.

10. DUE TO THE NATURE AND LOCATION OF THE CONSTRUCTION ACTIVITY, PROVIDING SEDIMENT STORAGE FOR 67 CUBIC YARDS OF SEDIMENT PER ACRE DISTURBED IS NOT FEASIBLE. APPROPRIATE BMPS THAT LIMIT THE TRANSPORT OF SEDIMENT FROM THE SITE WILL BE UTILIZED. THERE BMPS INCLUDE BUT ARE NOT LIMITED TO SILT FENCE AND TEMPORARY MULCHING, GRASSING OR PERMANENT GRASSING FOR THE DISTURBED AREAS OF THE PROJECT.

11. THE EXISTING AND PROPOSED RUNOFF COEFFICIENT FOR THIS SITE IS 0.5.

12. FLOW THROUGH THE CULVERT WAS CALCULATED USING THE NRCS METHOD USING A WEIGHTED CURVE NUMBER (CN) OF 62.

EROSION CONTROL CHECKLIST CERTIFICATIONS:

1. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFER AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

2. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

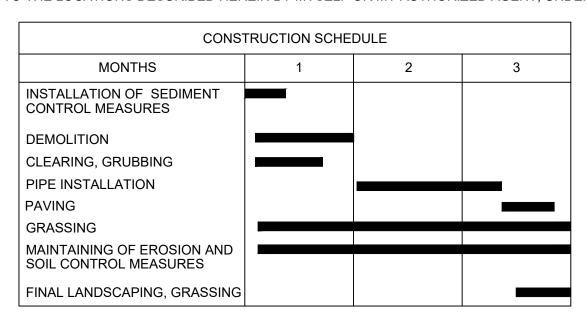
3. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

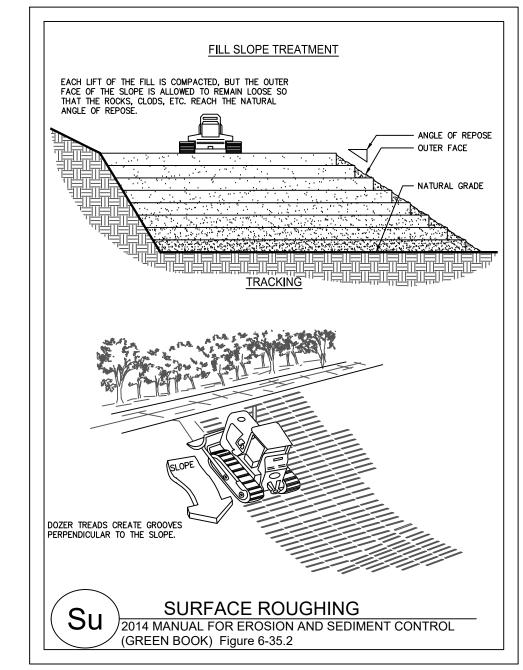
4. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

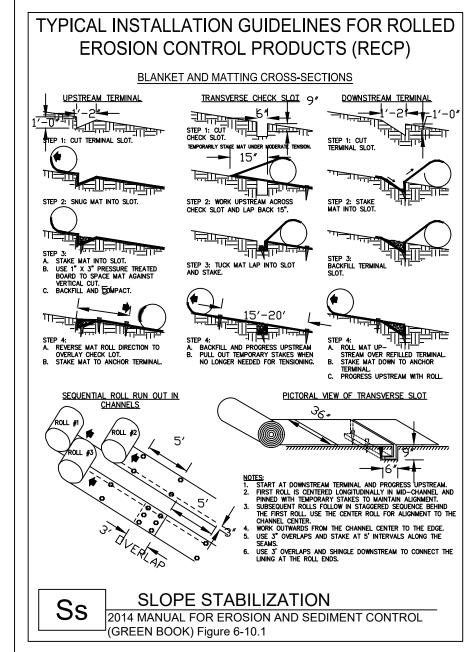
5. ALL STREAM BUFFER DISTURBANCES ARE ASSOCIATED WITH THE CULVERT REPLACEMENT. THE PROJECT DISTURBS LESS THAN 100 LINEAR FEET OF STREAM AND IS CLASSIFIED AS A UTILITY CROSSING. AS SUCH NO USACE PERMIT OR BUFFER VARIANCE IS ANTICIPATED.

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

VEGETATIVE PRACTICES STRUCTURAL PRACTICES STABILIZATION CONSTRUCTION (WITH MULCHING Ds1 Со EXIT ONLY) **DISTURBED AREA** STABILIZATION **SEDIMENT** Sd1-SDs2 (WITH TEMP **BARRIER** SEEDING) PERMANENT Ds3 VEGETATION Ss SLOPE STABILIZATION







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ORG ORG

GSWCC LEVEL II
CERT. # 0000073529

Scription

FAYETTE COUNTY

O 02/28/20 ISSUED FOR CONSTRUCTION

O 0

C-505

Drawn By:

hecked By:

TOWALIGA

PATRICIA LANE CULVERT REPLACEMENT 151 PATRICIA LN, FAYETTEVILLE, GA 30214

FAYETTEVILLE/FAYETTE 02/28/2020

DAVID N. LAVERGNE, DAVID.LAVERGNE@TETRATECH.COM

Custom Soil Resource Report
Soil Map

7,7000 7,7000

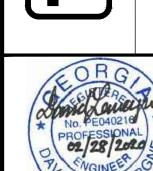
PRIMARY PERMITTEE TO BE PROVIDED AFTER PROJECT IS AWARDED.

24 HOUR EROSION CONTROL CONTACT: PHILIP MALLON (770-313-9855)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AmB	Appling sandy loam, 2 to 6 percent slopes	3.7	7.1%
СеВ	Cecil sandy loam, 2 to 6 percent slopes	15.3	29.7%
CeC	Cecil sandy loam, 6 to 10 percent slopes	1.7	3.2%
CfC2	Cecil sandy clay loam, 6 to 10 percent slopes, eroded	26.7	51.8%
WH	Wehadkee soils, 0 to 2 percent slopes, frequently flooded	4.2	8.2%
Totals for Area of Interest		51.6	100.0%

TETRA TECH





PLIFNGINEER CON N. LAVERO
GSWCC LEVEL II CERT. # 0000073529

TE COUNTY	MARK	DATE	MARK DATE DESCRIPTION	ВУ	
	0	02/86/60	0 02/28/20 ISSUED FOR CONSTRUCTION	<u>ن</u>	
		02/20/20	SOCIETY OF CONTROL	9	
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Designed By: