SITE DEVELOPMENT PLANS

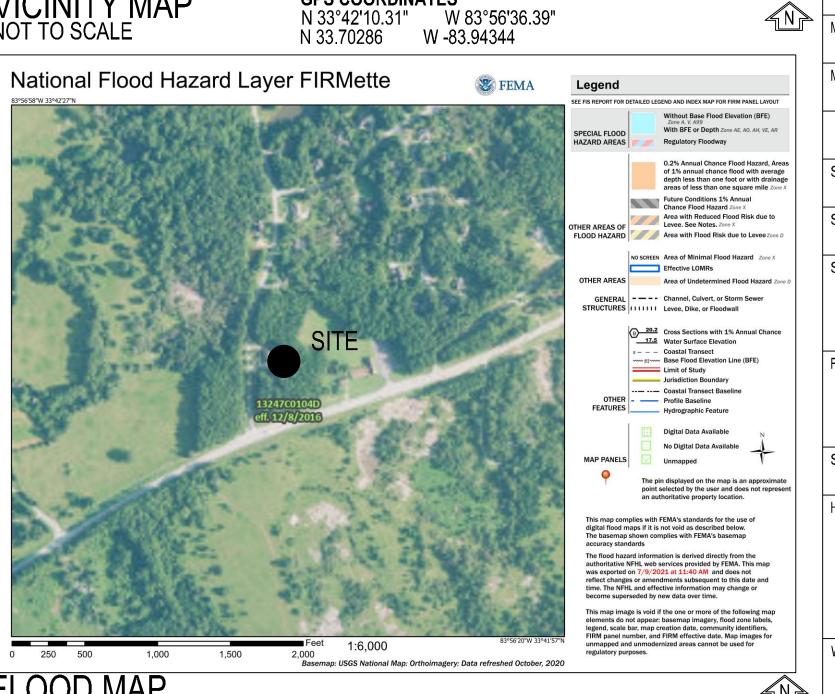
ROCKDALE COUNTY FIRE STATION #10

3100 NE HIGHWAY 138 CONYERS, GA 30012 ZONING - WP-WATERSHED PROTECTION DISTRICT

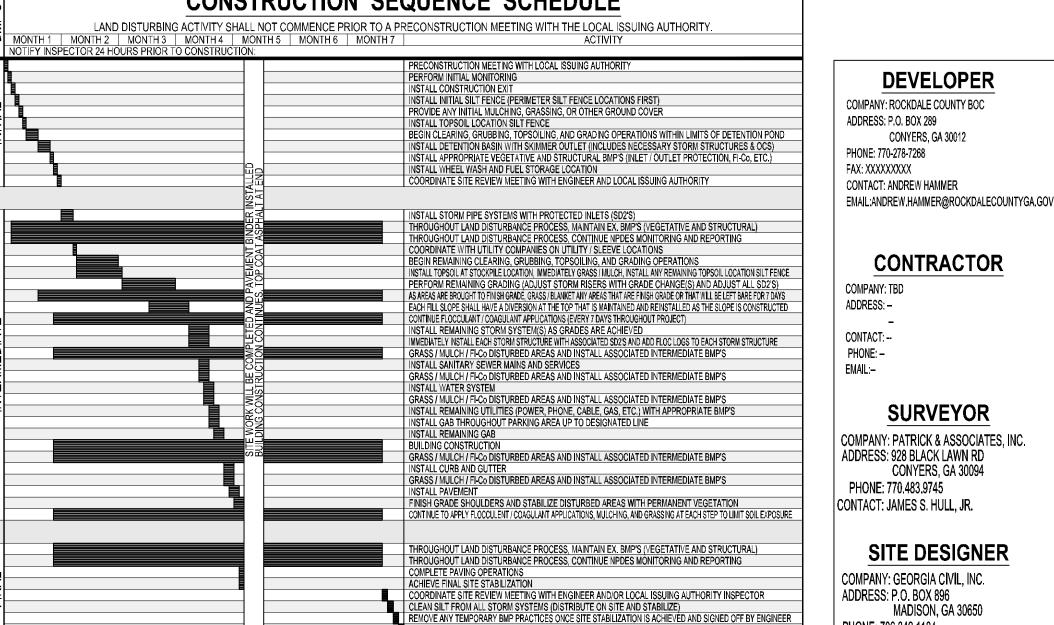
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C-6.7	EROSION, SEDIMENTATION, & POLLUTION CONTROL DETAILS
C-8.1	SITE WORK DETAILS
C-8.2	SITE WORK DETAILS





			L	EGEND				
STANDARD ABBREVIAT	TIONS							
APPROX.= APPROXIMATE BLDG = BUILDING BM = BENCH MARK C&G = CURB AND GUTTER CI = CURB INLET C.L. = CHAIN LINK CMP = CORRUGATED METAL PIPE CO = CLEAN OUT CPP = CORRUGATED PLASTIC PIPE CTF = CRIMP TOP FOUND DB = DEED BOOK	DIA = DIAMETER DS = DOWNSPOUT DWCB = DOUBLE WING CATU ES&PC = EROSION, SEDIMEN POLLUTION CONTR FDC = FIRE DEPARTMENT FFE = FINISH FLOOR ELEV FH = FIRE HYDRANT FO = FIBER OPTIC FT = FEET GI = GRATE INLET	TATION, AND OL CONNECTION 'ATION	GP = GUY GV = GAS ICV = IRRI IE = INVI IMP = IMPI IPF = IROI JB = JUN LIA = LOC LP = LIGH	METER POLE VALVE GATION CONTROL VALVE RT ELEVATION ERVIOUS IP IN FOUND CTION BOX AL ISSUING AUTHORITY IT POLE TO SCALE	PB = PG = POB = PVC = RBF = RW =	OVER HEAD POWER PLAT BOOK PAGE PROPERTY LINE POINT OF BEGINNING POWER POLE POLYVIN'L CHLORIDE PIPE REBAR FOUND REINFORCED CONCRETE PIPE RIGHT OF WAY STORM MANHOLE	SSMH SWCB TC TMP W WM	= SANITARY SEWER = SANITARY SEWER MANHOLE = SINGLE WING CATCH BASIN = TRAFFIC CONTROL BOX = TAX MAP PARCEL = WATER = WATER = WATER METER = WATER VALVE
STANDARD SYMBOLS	•							
= BM	◎ = FH	Q = GP	/ WIDE	₩ = LP	(EDLIEAD	= SIGN		TP = TELE PEDEST
(A) = BM IDENTIFICATION = CO	-FOFO- = FQ -GASGAS- = GAS LINE	——(= GU\		-OHE-OHE- = POWER (O\ -PP- = POWER (UN		•	-	= TRAFFIC WIRE ■ TRANSFORME
☑ = DS	(GM) = GAS METER	€ = H/C € = ICV	FARRING	(PB) = POWER (OF		© = SSMH	_	-WW- = WATER LINE
		= IPF		(PM) = POWER ME		TC = TC		(WM) = WM
-x-x- = FENCE	———— = GATE	LB = LIGI	нт вох	Ø = PP		□ TELECO STRUCT	MM IRE	₩ = WV
	CONCT	DUCTI	<u> </u>	CEOUENC		_	U. 1.L	
LAND DISTU	CONST	KUUII	UN	SEMOENC	E 3	CHEDULE		
LAND DIST	URBING ACTIVITY SHALL N	IOT COMMENO	E PRIOR	TO A PRECONSTRUCTION	ON MEET	TING WITH THE LOCAL ISSU	ING AU	JTHORITY.



COORDINATE SITE REVIEW MEETING WITH ENGINEER FOR FINAL SITE APPROVAL

		1	
de Sign	SITE	INFORMATION	
	THE TOTAL 4.10 ACRES OF WOODED PROPERTY WILL BEFIRE STATION.	EXISTING UNDEVELOPED GRASSED AND BE DEVELOPED FOR A NEW ROCKDALE COUNTY	
1	ZONING - (AS PER ROCKDALE COUNT ZONING)	WP-WATERSHED PROTECTION DISTRICT	
	PROPERTY AREA	4.10 ACRES	,
	DISTURBED AREA	2.1 AC	
17	MINIMUM LOT SIZE	2 AC	
	MINIMUM LOT WIDTH	150'	
	MINIMUM FRONT SETBACK	35'	
le.	MINIMUM SIDE SETBACK	30'	
	MINIMUM REAR SETBACK	60'	
<u>{N</u>	MINIMUM OPEN SPACE	0%	
YOUT	MAXIMUM IMPERVIOUS %	10% PER TABLE 1 IN SEC. 214-1 18% PROVIDED 0 SF EXISTING IMPERVIOUS 32,235 SF PROPOSED IMPERVIOUS	
E) E, AR	MISCELLA	NEOUS INFORMATION	١,
d, Areas verage rainage e Zone X	SIGNAGE	SIGNAGE SHALL BE HANDLED UNDER A SEPARATE PERMIT	
e to	SITE LIGHTING	SITE LIGHTING IS NOT A PART OF THE CIVIL PLANS (SITE WORK	

32,235 SF PROPOSED IMPERVIOUS						
MISCELLANEOUS INFORMATION						
SIGNAGE	SIGNAGE SHALL BE HANDLED UNDER A SEPARATE PERMIT					
SITE LIGHTING	SITE LIGHTING IS NOT A PART OF THE CIVIL PLANS (SITE WORK CONSTRUCTION DRAWINGS). SIGHT LIGHTING PROVIDED BY OTHERS UNDER SEPARATE COVER					
SOIL SERIES	PaB - PACOLET SANDY LOAM - 2 TO 6% SLOPES PaC - PACOLET SANDY LOAM - 6 TO 10% SLOPES					
FLOOD PLAIN	THERE IS NO FLOODPLAIN ON THIS PROPERTY AS PER FIRM PANEL 13247C0104D DATED 12/8/2016. NO WORK IS BEING DONE WITHIN A FLOODPLAIN. THE PROPERTY SHOWN HEREON LIES WITHIN ZONE X AND IS NOT WITHIN A SPECIAL FLOOD HAZARD AREA.					
STATE WATERS	THERE ARE NO STATE WATERS PRESENT ON THIS SITE. THERE ARE NO STATE WATERS PRESENT WITHIN 200' OF THIS SITE THERE ARE NO STREAM BUFFERS ON THIS PROPERTY					
HYDROLOGY	STORMWATER MANAGEMENT IS PROVIDED ON-SITE WITH A PROPOSED, DRY DETENTION BASIN TO REDUCE THE POST DEVELOPMENT PEAK FLOW RATES TO LESS THAN PRE DEVELOPMENT PEAK FLOW RATES FOR THE 1YR THROUGH 100YR STORM EVENTS. A HYDRODYNAMIC SEPARATOR IS PROPOSED TO PROVIDE 80% TSS WATER QUALITY TREATMENT FOR THE IMPERVIOUS AREAS.					
WETLAND	THERE ARE NO WETLANDS BEING DISTURBED ON THIS SITE. THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING: 1) THE NATIONAL WETLANDS INVENTORY MAPS HAVE BEEN CONSULTED AND, 2) THE APPROPRIATE PLAN SHEET DOES NOT INDICATE WETLANDS AS SHOWN ON THE MAP. AND 3) IF WETLANDS ARE INDICATED, THE LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SALTERATION (SECTION 404) PERMIT HAS BEEN OBTAINED.					

DEVELOPER

CONYERS, GA 30012

CONTRACTOR

SURVEYOR

CONYERS, GA 30094

SITE DESIGNER

MADISON, GA 30650

PHONE: 706.342.1104



ROCKD,

georgia civil

CIVIL ENGINEERING

LANDSCAPE ARCHITECTURE LAND SURVEYING

311 N. Main St, Ste. 101, Unit C P.O. Box 896 | Madison, GA 30650 P: 706.342.1104 | F: 706.342.1105

STATION #10

COVER SHEET

actual location. This plan may not show and/or may incorrect show utilities located on site. Contractor shall be responsible t secure and use the services of a private utility locator firm dur the entire course of work and shall pay for said service Contractor shall locate utilities prior to any disturbance (includin field verifying location and depth of utilities that are to be save and protected). Contractor shall notify the site design profession: of any utility conflicts prior to installation of new utilities, gradin etc. The Contractor, at their expense, shall be responsible repair replace and/or relocate, as necessary, any utilitie damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

JASON P. BROWN

LEVEL II CERTIFIED DESIGN PROFESSIONAL

#53274 - EXP. 05.01.202

24-HOUR CONTACT

ANDREW HAMMER 770-278-7268

Contact 811 before you dig

Utilities/Services shown are for Contractors' convenience. Item

are shown schematically and neither the site design professional

nor the owner assumes any responsibility for variances in their

ROCKDALE FIRE DEPARTMENT NOTES:

WATER SUPPLY FOR FIRE PROTECTION SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING CONSTRUCTION.

APPROVED DOCUMENTATION OF A WATER SUPPLY TEST SHALL BE PROVIDED TO THE FIRE CODE OFFICIAL PRIOR TO FINAL APPROVAL OF THE WATER SUPPLY SYSTEM.

ROCKDALE DOT NOTES:

STORE ALL CONSTRUCTION EQUIPMENT AND MATERIALS AWAY FROM THE ROW.

MAINTAIN LINE OF SIGHT (LOS) DURING ALL CONSTRUCTION ACTIVITIES - DO NOT BLOCK WITH MATERIALS, EQUIPMENT, ETC.

COORDINATE MATERIAL AND EQUIPMENT DELIVERIES TO MINIMIZE TRAFFIC IMPACTS TO THE CHURCH AND HIGHWAY 138.

- NOTIFY ROCKDALE COUNTY INSPECTION 24 HRS BEFORE BEGINNING OF CONSTRUCTION.
- CONTRACTOR SHALL THOROUGHLY REVIEW CONSTRUCTION PLANS AND BE FAMILIAR WITH EXISTING CONDITIONS BY SITE VISITATION, PRIOR TO FORMULATING BID
- CONTRACTOR SHALL VERIFY CONDITIONS AND DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCY FOUND IN THIS SET SHALL BE REFERRED TO THE SITE DESIGN PROFESSIONAL BY THE CONTRACTOR FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR DISCREPANCIES WHICH ARE NOT
- CONSTRUCTION SHALL MEET OR EXCEED ROCKDALE COUNTY MINIMUM STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL ADHERE TO NORMAL WORKING HOURS AS PER ROCKDALE COUNTY ORDINANCES. CONSTRUCTION OUTSIDE OF NORMAL WORKING HOURS, MAY BE ALLOWED UPON PRIOR APPROVAL BY ROCKDALE COUNTY.
- THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL ADHERE TO FEDERAL, STATE, COUNTY AND LOCAL LAWS, ORDINANCES, AND REGULATIONS WHICH IN ANY MANNER AFFECT THE CONDUCT OF WORK, INCLUDING, BUT NOT LIMITED TO, INITIATING, MAINTAINING, AND SUPERVISING SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK (IE. THE REQUIREMENTS OF APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)). CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNI AND HOLD ROCKDALE COUNTY AND ITS AGENTS, THE OWNER AND THE SITE DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN THE CONNECTION WITH THE
- THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS
- DO NOT BREAK THESE DOCUMENTS INTO PARTS AND SUB-PARTS. THE SITE DESIGN PROFESSIONAL AND OWNER ASSUMES NO RESPONSIBILITY FOR THE SEPARATION OF THESE DOCUMENTS Y ENTITY OF THE CONTRACTING INDUSTRY. EACH CONTRACTING ENTITY SHALL BE RESPONSIBLE FOR ALL OF THE WORK RELATED TO THEIR TRADES WHEREVER IT MAY BE SHOWN
- NO WORK SHALL BE PERFORMED WITHIN GEORGIA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY (IF APPLICABLE) UNTIL PERMIT(S) (INCLUDING GEORGIA DEPARTMENT OF TRANSPORTATION UTILITY ENCROACHMENT PERMIT) ARE OBTAINED FROM GEORGIA DEPARTMENT OF TRANSPORTATION AND ON SITE.
- BARRICADES, SUFFICIENT LIGHTS, TRAFFIC SAFETY SIGNS, AND OTHER TRAFFIC CONTROL MEASURES AS DEEMED NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC SHALL BE
- SIGNS (LOCATION, NUMBER, AND SIZE) ARE NOT APPROVED UNDER THIS DEVELOPMENT PERMIT. A SEPARATE PERMIT IS REQUIRED FOR EACH SIGN.
- NO CERTIFICATE OF OCCUPANCY SHALL BE ISSUED UNTIL SITE IMPROVEMENTS ARE COMPLETE
- 14. ACCESS TO BUILDINGS DURING CONSTRUCTION SHALL BE MAINTAINED AND OPEN TO EMERGENCY VEHICLES AT ALL TIMES, THROUGH THE USE OF EXISTING OR TEMPORARY ROADS, DRIVES,
- 15. SITE LIGHTING SHALL BE FULLY SHIELDED. SITE LIGHTING IS TO BE DESIGNED BY OTHERS.
- 16. ALL WORK SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL CODES AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR QUANTITY TAKE OFFS AND ESTIMATING ALL QUANTITIES FOUND WITHIN THE SITE WORK CONSTRUCTION DRAWINGS. ANY QUANTITY TAKE OFFS OR ESTIMATES PROVIDED BY THE SITE DESIGN PROFESSIONAL ON THESE DOCUMENTS OR OTHERWISE SHALL BE VERIFIED BY THE CONTRACTOR BY PERFORMING HIS/HER OWN QUANTITY TAKE OFF AND/OR ESTIMATE. ANY COST FOR ANY DISCREPANCY IN QUANTITY TAKE OFF OR ESTIMATE PROVIDED BY SITE DESIGN PROFESSIONAL AND REQUIRED CONSTRUCTION QUANTITIES SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE SITE DESIGN PROFESSIONAL AND/OR OWNER AND/OR OWNER'S REPRESENTATIVE.

DEMOLITION REQUIREMENTS:

- THE CONTRACTOR SHALL INSPECT ALL STRUCTURES, FACILITIES, AND AREAS SLATED FOR DEMOLITION TO GAIN A FULL UNDERSTANDING OF THE WORK REQUIRED. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC, HIS/HER EMPLOYEES AND AGENTS DURING THE INSPECTION AND SUBSEQUENT WORK. THE OWNER, CLIENT AND SITE DESIGN PROFESSIONAL ARE NOT RESPONSIBLE FOR THE CONDITION OF THE BUILDINGS, FACILITIES, OR OTHER AREAS SLATED FOR DEMOLITION.
- THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE OWNER TO DEMOLISH ANY STRUCTURE ON THE SITE BEFORE PROCEEDING WITH WORK
- ALL WORK PERFORMED ON THE SITE SHALL ADHERE TO ALL (OSHA) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION SAFETY STANDARDS.
- ALL MATERIALS NOT SLATED FOR REUSE SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER. THE CONTRACTOR MAY SALVAGE ALL MATERIALS NOT DESIGNATED BY THE OWNER TO BE SAVED. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND STORE SAFELY ALL MATERIALS SLATED TO BE SAVED OR REUSED. THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS USING PHOTOGRAPHS PRIOR TO START OF WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE MATERIALS DAMAGED DUE TO HIS WORK OR
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL APPROPRIATE UTILITY OWNERS, OPERATORS AND USERS PRIOR TO DISCONNECTION AND DEMOLITION. ALL WORK L BE DONE IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION. ALL PLUGS, STOPS, AND CAPS SHALL BE PER AGENCIES REQUIREMENTS AND IF NONE EXIST THEN A 3000 PSI
- THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY AND STOP ALL WORK IN AREAS WHERE HAZARDOUS MATERIALS ARE DISCOVERED. WHEN REQUIRED, THE CONTRACTOR SHALL
- THE APPROPRIATE ENVIRONMENTAL AND HEALTH AGENCIES. THE CONTRACTOR SHALL FLAG OFF ALL ACCESS WITH SUFFICIENT FLAGGING THAT THERE IS AN APPARENT WARNING OF
- NO BURNING, EXPLOSIVES OR OTHER POTENTIALLY DANGEROUS METHODS OF DEMOLITION SHALL BE ALLOWED UNLESS WRITTEN PERMISSION IS GRANTED BY THE OWNER AND ALL
- THE CONTRACTOR SHALL PROVIDE WHAT EVER SAFETY EQUIPMENT AND DEVICES ARE NECESSARY TO PROTECT THE ADJACENT PROPERTIES, STRUCTURES AND OTHER AREAS SLATED TO REMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE ANY DAMAGE CAUSED BY HIS/HER WORK. THIS SHALL ALSO INCLUDE EROSION CONTROL, DUST
- ALL AREAS SHALL BE BROUGHT BACK TO THEIR ORIGINAL GRADE OR THAT OF THE SURROUNDING AREA, WHICH EVER IS CLOSER TO THE FINAL GRADES OF THE PROJECT FOR THAT AREA. ALL TEMPORARY SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL. ALL AREAS REQUIRING FILL SHALL BE COMPACTED TO THE REQUIREMENTS OF THE AREA BUT IN NO CASE LESS THAN
- 10. THE CONTRACTOR SHALL PROVIDE NECESSARY EROSION CONTROL MEASURES DURING THE DEMOLITION AND REMOVAL OF EXISTING SITE FEATURES.
- 11. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES.
- EXISTING BUILDINGS, APPURTENANCES, CANOPIES AND FOUNDATIONS ON THE PROPERTY SHALL BE PROTECTED UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL MAINTAIN SAFE, CLEARLY MARKED PEDESTRIAN ACCESS ROUTES TO BUILDING ENTRANCES THROUGHOUT ALL PHASES OF CONSTRUCTION. ACCESS TO BUILDINGS
- SERVICES SHOWN ARE TO ASSIST CONTRACTOR IN LOCATING UTILITIES. ITEMS ARE SHOWN SCHEMATICALLY AND NEITHER THE ARCHITECT, SITE DESIGN PROFESSIONAL, NOR THE OWNER ASSUMES ANY RESPONSIBILITY FOR VARIANCES IN THE ACTUAL LOCATION OF THE EXISTING UTILITIES.
- THE CONTRACTOR SHALL REPAIR OR REPLACE AS NECESSARY ANY UTILITIES DAMAGED, WHETHER SHOWN ON THESE PLANS OR NOT, AT NO ADDITIONAL COST TO THE CONTRACT.
- EXISTING UTILITY APPURTENANCES (CLEAN OUTS, VALVE/METER BOXES AND/OR COVERS, MANHOLES, ETC.) LOCATED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE RELOCATED AS NECESSARY OR ADJUSTED TO FINISHED GRADE AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY PROVIDER OF DAMAGE TO ANY ACTIVE UTILITY AND PROVIDE CORRECTIVE MEASURES AS DIRECTED BY THE UTILITY PROVIDER AT NO ADDITIONAL COST TO THE CONTRACT.
- EXISTING ITEMS TO REMAIN WITHIN THE PROJECT LIMITS SHALL BE RETAINED IN PLACE AND PROTECTED FROM DAMAGE DURING CONSTRUCTION, UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
- 19. ALL DISPOSAL SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES.
- THERE SHALL BE NO ON SITE BURIAL
- WORK DONE A HEAD OF SCHEDULE OR FOR TEMPORARY PROVISIONS SHALL HAVE EXISTING DISTURBED SURFACES PATCHED TO MATCH ORIGINAL CONDITIONS UNTIL NEW CONSTRUCTION REPLACES SUCH REPAIRS OR MODIFICATIONS.
- PAVEMENT AREAS TO BE SAVED SHALL BE ABRASION SAW CUT PRIOR TO DEMOLITION. FAILURE TO PROVIDE A CLEAN EDGE MAY RESULT IN ADDITIONAL DEMOLITION AND NEW PAVEMENT INSTALLATION PAID FOR AND EXECUTED BY THE CONTRACTOR.
- 23. LIMITS OF CURB AND GUTTER DEMOLITION ARE SUBJECT TO THE NEAREST CONSTRUCTION JOINT. CURB AND GUTTER AND WALKS SHALL BE REPAIRED TO THE NEAREST CONSTRUCTION JOINT.
- 24. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR THE REMOVAL OF EXISTING LANDSCAPE MATERIALS OR SITE FEATURES WHICH THE OWNER ELECTS TO RETAIN.
- 25. DEMOLITION WITHIN THE DRIP-LINE OF EXISTING SPECIMEN TREES SHALL BE ACCOMPLISHED UTILIZING MANUAL PROCEDURES WITHOUT DAMAGING THE ROOT SYSTEM OF THE TREE(S).
- THE CONTRACTOR SHALL NOT CONSIDER DEMOLITION DESIGNATIONS AND NOTES TO BE ALL-INCLUSIVE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ASSESS EACH AREA AND TO PERFORM THE DEMOLITION AS REQUIRED TO ACCOMMODATE THE SCHEDULED NEW CONSTRUCTION.

STAKING REQUIREMENTS:

- SURVEYING WORK PERFORMED BY THE CONTRACTOR SHALL BE SUFFICIENT AND ACCURATE TO CONSTRUCT THE WORK IN ACCORDANCE WITH THE SITE WORK CONSTRUCTION DRAWINGS. LAYOUT AND STAKING WORK SHALL BE IN ACCORDANCE WITH GENERAL ACCEPTED SURVEYING PRACTICES AND PROVISIONS OF THE CONTRACT. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS. CONTRACTOR SHALL NOT STAKE BUILDING DIMENSIONS FROM THE BUILDING(S) SHOWN ON THE SITE WORK CONSTRUCTION DRAWINGS. REFERENCES IN THESE DOCUMENTS TO BUILDING SQUARE FOOTAGES ARE FOR OWNER'S PURPOSES ONLY. DO NOT RELY ON THESE NUMBERS FOR
- CONTRACTOR SHALL STAKE BUILDING CORNERS AND HAVE APPROVAL FROM THE ARCHITECT AND/OR SITE DESIGN PROFESSIONAL BEFORE COMMENCING THE CONSTRUCTION OF ANY
- DIMENSIONS SHOWN ARE TO THE FACE OF CURB(S), UNLESS OTHERWISE NOTED. ANGLES ARE 90° (INCLUDING STREET CENTER-LINES) UNLESS NOTED OTHERWISE.
- CURB AND GUTTER RADII ARE 5.0 FT. UNLESS OTHERWISE NOTED.
- APPLICABLE) WITHIN THE CONTRACTOR'S AREA OF WORK, THE CONTRACTOR SHALL NOT DISTURB OR REMOVE EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS WITHOUT THE PERMISSION OF ROCKDALE COUNTY, AND CONTRACTOR SHALL BEAR THE EXPENSE OF RESETTING EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS WHICH MAY BE DISTURBED OR REMOVED WITH OR WITHOUT PERMISSION. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 15 WORKING DAYS
 NOTICE TO TROCKDALE COUNTY PRIOR TO DISTURBANCE OR REMOVAL OF EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS. THE CONTRACTOR ITILIZE THE SERVICES OF A GEORGIA LICENSED LAND SURVEYOR TO RESET DISTURBED OR REMOVED RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE
- THE CONTRACTOR (UNLESS OTHERWISE INSTRUCTED BY THE OWNER) SHALL PROVIDE STAKING AND LAYOUT SERVICES, INCLUDING BUT NOT LIMITED TO, CENTERLINE STAKES, ADDITIONAL LINES, CONNECTIONS, RAMPS, SLOPE STAKES, GRADE STAKES, CONSTRUCTION BENCHMARKS AND REFERENCE STAKES LOCATING DRAINAGE, ROADWAY, AND UTILITIES NECESSARY FOR THE PROJECT. ALIGNMENT CONTROL ESTABLISHED BY THE CONTRACTOR SHALL BE REFERENCED, AND A COPY OF THE REFERENCES SHALL BE FURNISHED TO THE SITE DESIGN PROFESSIONAL.

THE CONTRACTOR SHALL VERIFY ALL INVERTS OF EXISTING STORM AND SANITARY SEWER TIE-INS AND ALL GRADES AT EXISTING PAVEMENT TIE-INS BEFORE PROCEEDING WITH ANY SITE

ALL CONTROL SHALL BE VERIFIED BEFORE PROCEEDING. SURVEYOR SHALL VERIFY INVERTS AT ALL GRAVITY STORM AND SEWER TIE IN POINTS BEFORE PROCEEDING. SURVEYOR SHALL VERIFY TIE POINT ELEVATIONS AT ALL ACCESS POINTS BEFORE PROCEEDING.

CLEAR AND GRUB REQUIREMENTS:

- THE CONTRACTOR SHALL REVIEW PLANS AND IDENTIFY AND SAFELY MARK ALL PLANTS AND TREES TO BE SAVED. THE CONTRACTOR SHALL PROTECT ALL PLANTS AND TREES TO BE SAVE THROUGH OUT THE CONTRACT. THIS SHALL INCLUDE PROHIBITING ANY WORK WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITE THIS INCLUDES NOT PARKING ANY EQUIPMENT OR HAVING ANY STORAGE AREAS WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT
- ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.
- THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO LOCATE AND PROTECT EXISTING UTILITIES, STRUCTURES, AND OTHER FACILITIES TO REMAIN.
- ALL TREES, SHRUBS, STUMPS, ROOTS AND OTHER DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER. NO BURNING SHALL BE ALLOWED ON THE SITE.

MARKS OR PROVIDE WITNESS MONUMENTS, AND FILE THE REQUIRED DOCUMENTATION WITH ROCKDALE COUNTY.

COMPACTION FOR UTILITY INSTALLATION:

- ANALYTICAL COMPACTION RESULTS SHALL BE SUBMITTED TO ROCKDALE COUNTY ENGINEERING DEPARTMENT (OR SIMILAR DEPARTMENT). THE FOLLOWING APPLIES TO STORMWATER,
- BACKFILL UNDER PERMANENT CONCRETE OR BITUMINOUS PAVEMENT, AND AS ELSEWHERE SPECIFIED OR INDICATED ON THE PLANS, SHALL BE APPROVED BANK-RUN SAND OR GRAVEL OR CRUSHED STONE FREE FROM LARGE STONES AND CONTAINING NOT MORE THAN TEN PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL BE COMPACTED TO ONE HUNDRED PERCENT (100%) AS DETERMINED BY THE MODIFIED PROCTOR TEST FROM PIPE BEDDING TO TWO (2) FEET BELOW TRENCH TOP. MECHANICAL VIBRATING EQUIPMENT SHALL BE
- JSED TO ACHIEVE THE REQUIRED COMPACTION. PAVEMENT SHALL BE REPLACED IMMEDIATELY AFTER THE BACKFILLING IS COMPLETED BACKFILL UNDER GRAVEL OR CRUSHED STONE SURFACED ROADWAYS SHALL BE THE APPROVED SUITABLE EXCAVATED MATERIAL PLACED IN SIX (6) INCH LAYERS THOROUGHLY COMPACTED FOR THE FULL DEPTH AND WIDTH OF THE TRENCH, CONFORMING TO THE COMPACTION, DENSITY COMPACTION METHOD AND MATERIÁLS AS SPECIFIED IN "2" ABOVE.
- BACKFILL IN UNPAYED AREAS SHALL BE COMPACTED WITH MECHANICAL VIBRATING EQUIPMENT TO NINETY PERCENT (90%) AS DETERMINED BY THE MODIFIED PROCTOR TEST. BACKFILL MATERIAL FROM PIPE BEDDING TO GROUND SURFACE SHALL BE EXCAVATED FREE FROM LARGE STONES & OTHER DEBRIS.

GRADING / EARTHWORK REQUIREMENTS:

- PRIOR TO STARTING ANY CUTS OR FILLS, THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL. STRIPPING OF TOPSOIL CAN ONLY COMMENCE AFTER THE CLEAR AND GRUB OPERATIONS ARE COMPLETE IN THAT AREA. TOPSOIL SHALL BE STOCKPILED IN AREAS DESIGNATED ON THE PLANS OR APPROVED WITH THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW THE SOILS REPORTS, BORING LOGS AND WHEN NECESSARY HIS OWN FIELD VERIFICATION SO AS TO BE FAMILIAR WITH THE DEPTH OF TOPSOIL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO
- UNLESS OTHERWISE NOTED, THE GRADES SHOWN ON THE PLANS ARE FINISHED GRADES. THEREFORE, PAVEMENT, FLOORS, SUBBASE AND OTHER IMPROVEMENTS MUST BE SUBTRACTED TO CALCULATE SUBGRADE ELEVATIONS. THE CONTRACTOR SHALL COORDINATE THE STAKING OF THE SITE GRADING WITH THE SURVEYOR AND ENGINEER OF RECORD BEFORE PROCEEDING WITH CONSTRUCTION
- THE CONTRACTOR SHALL MAINTAIN A SURVEY GRID OF NOT LESS THAN 100' X 100' OR OTHER MEANS ACCEPTABLE TO THE OWNER'S REPRESENTATIVE THAT SHALL INDICATE LOCATION AND AMOUNT OF CUT OR FILLS REMAINING, AT SUBGRADE THIS GRID SHALL BE 50' X 50' WITH LOCATION AND FINAL GRADE MARKED CLEARLY OR SURVEY SHALL BE COMPLETED DEMONSTRATING THAT THE SUBGRADE IS
- UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL RETAIN AND PAY ALL COST FOR SOIL COMPACTION TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY, FOR EACH LIFT PLACED, COMPACTION TESTING SHALL BE DONE EVERY OTHER LIFT PLACED, COMPACTION TESTING SHALL BE DONE EVERY OTHER LIFT PLACED. LIFT WITH AT LEAST 1 TEST FOR EVERY 100 LINEAR FEET.
- COMPACTION REQUIREMENTS SHALL BE THOSE OUTLINED IN THE GEOTECHNICAL EVALUATION. IF THE GEOTECHNICAL EVALUATION IS NOT CLEAR OR DOES NOT GIVE REQUIREMENTS THE FOLLOWING SHALL BE USED. UNDER AND TO 20 FEET OUTSIDE THE BUILDING ENVELOPE THE SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). ALL LANDSCAPE AND LAWN AREAS SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). THE TESTING LAB SHALL TEST SOILS IN ACCORDANCE ASTM D 2922
- UNLESS OTHERWISE NOTED IN THE GEOTECHNICAL REPORT OR ON THE DRAWINGS, THE ON SITE MATERIAL SHALL BE USED TO MAKE FILLS. ALL MATERIAL TO BE USED FOR FILL SHALL BE FREE OF ORGANICS, FROZEN MATERIALS, CONTAMINATED MATERIALS, DEBRIS AND ANY ROCKS LARGER THAN 4 INCHES. FOR FILL PLACEMENT WITHIN 1 FOOT OF SUBGRADE, NO ROCK SHALL BE GREATER THAN 2 NCHES IN DIAMETER. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH DRYING, SEGREGATING OR OTHER REQUIRED METHODS TO TREAT SOILS TO MEET COMPACTION AND OTHER
- 7. FILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES IN ALL AREAS.
- 8. IF IMPORTED MATERIAL IS REQUIRED, THE SOURCE AND A RANDOM COMPOSITE SAMPLE SHALL BE REVIEWED BY THE TESTING LABORATORY PRIOR TO BEING BROUGHT TO SITE. THE TESTING LABORATORY SHALL TEST FOR PERCENT PASSING THE 200 SIEVE THAT DOES NOT EXCEED THE EXISTING ON SITE MATERIAL OR IN NO CASE GREATER THAN 35%. THEY SHALL ALSO VERIFY CONSISTENCY WITH EXISTING ON SITE MATERIALS AND ALL OTHER REQUIREMENTS. WAIVERS TO THESE REQUIREMENTS CAN ONLY BE GIVEN JOINTLY BY OWNER AND THE GEOTECHNICAL ENGINEER THAT PREPARED
- THE TESTING LAB MAY RESTRICT SOME ON SITE MATERIALS FROM BEING USED AS FILL IN BUILDING OR PAVEMENT AREAS WHEN IT IS THEIR OPINION THAT THE MATERIAL WILL NOT MEET REQUIREMENTS STATED HERE OR IN THE GEOTECHNICAL REPORT. IF SUCH CONDITIONS DO EXIST AND OTHER MATERIAL IS NOT AVAILABLE ON SITE, THE OWNER'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EARTHWORK OPERATIONS FROM WEATHER AND GROUND WATER INCLUDING KEEPING POSITIVE DRAINAGE, DIVERTING DRAINAGE, DEWATERING AND SEALING DISTURBED AREAS WITH A STEEL DRUM ROLLER PRIOR TO INCLEMENT WEATHER.
- PRIOR PLACEMENT OF FILLS, IN AREAS WHERE THE FINAL DEPTH WILL BE LESS THAN 4 FEET, THE AREA SHALL BE PROOF ROLLED WITH A 10 TON ROLLER OR A LOADED 10 WHEEL DUMP TRUCK. SOFT AREAS SHALL BE SCARIFIED, DRIED AND RE-COMPACTED PRIOR TO FILL BEING PLACED. RETEST BY PROOF ROLL AS NECESSARY. ALL FINAL SUBGRADE UNDER PROPOSED PAVEMENT, BUILDING OR OTHER STRUCTURE SHALL BE PROOF ROLLED AS DESCRIBED ABOVE FOR THE IDENTIFICATION OF SOFT AREAS. AREAS FOUND TO BE UNACCEPTABLE TO THE GEOTECHNICAL ENGINEER OR THE GEOTECHNICAL ENGINEER'S TECHNICIAN SHALL BE SCARIFIED, DRIED AND RECOMPACTED. RETEST BY PROOF ROLL AS NECESSARY. THE
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PROOF ROLLS WITH THE GEOTECHNICAL ENGINEER AND SHALL HAVE THE GEOTECHNICAL ENGINEER OR THE GEOTECHNICAL ENGINEERS TRENCH EXCAVATION REQUIRING SHEETING, SHORING OR OTHER STABILIZING DEVICES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET ALL O.S.H.A. REQUIREMENTS. ALL EXCAVATIONS SHALL MAINTAIN SAFE SIDE SLOPES IN ACCORDANCE WITH LOCAL, STATE, AND O.S.H.A. REQUIREMENTS. NO STOCKING OF MATERIAL CLOSE TO AN OPEN CUT OR STEEP SLOPE SHALL BE PERMITTED IN
- TRENCH EXCAVATIONS SHALL BE MADE UNIFORM AND STRAIGHT TO WIDTHS DETERMINED BY ROCKDALE COUNTY. IF NO GUIDELINES FROM ROCKDALE COUNTY EXIST, THE FOLLOWING SHALL BE USED: (FOR PIPES 36 INCHES OR GREATER THE WIDTH SHALL BE THE DIAMETER PLUS 3 FEET). ADDITIONAL WIDTH HALL ONLY BE ALLOWED WHEN COMPACTION EQUIPMENT LIMITATIONS REQUIRE AND ONLY AFTER APPROVAL OF THE ENGINEER OF RECORD. NO MORE TRENCH SHALL BE OPEN IN ONE DAY BE PROPERLY BACKFILLED IN THAT SAME DAY TO MINIMIZE WEATHER AND SAFETY CONCERNS. WHEN BACKFILLING AROUND PIPES PROVIDE UNIFORM SUPPORT AT INVERT AND PROPER COMPACTION UNDER, ALONG AND OVER THE PIPE. CARE SHALL BE GIVEN WHILE BACKFILLING AROUND PIPES TO PREVENT DAMAGE TO THE PIPES INCLUDING: PLACING BACKFILL/BEDDING BY HAND, USING HAND OPERATED PLATE TAMPS OR JUMPING JACKS, AND OTHER LOAD RESTRICTIVE TECHNIQUES UNTIL FILLS ARE A MINIMUM OF 2 FEET OR MANUFACTURER'S RECOMMEND DEPTH, WHICH EVER IS GREATER.
- ABOVE THE TOP OF THE PIPE. COMPACTION REQUIREMENTS ARE <u>NOT</u> RELIEVED IN THESE AREAS AND SHALL REMAIN AS STATED ON THE DRAWINGS OR AS NOTED ABOVE. 15. IF ROCK IS ENCOUNTERED THAT WAS NOT INDICATED ON THE PLANS OR GEOTECHNICAL REPORT, THE AREA FOR REMOVAL SHALL BE MEASURED AND REVIEWED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROCK REMOVAL. ROCK WILL BE DEFINED AS THE NATURAL EARTH MATERIALS THAT CAN NOT BE REMOVED WITH A D9 DOZIER WITH A SINGLE TOOTH RIPPER.
- 16. WHERE ROCK IS ADJACENT TO A STRUCTURE OR UTILITY, THE ROCK SHALL BE REMOVED TO A MINIMUM OF 6 INCHES BELOW AND 1 TIMES THE DIAMETER, BUT NOT LESS THAN 1 FOOT OR GREATER THAN 3 FEET ON ANY SIDE.
- 17. NO EXPLOSIVES SHALL BE ALLOWED UNTIL ALL PERMITS ARE GRANTED AND THE OWNER HAS SIGNED OFF. PRE AND POST BLAST REPORTS SHALL BE KEPT AND RECORDED. ALL STRUCTURES WITHIN THE AREA OF THE BLAST SHALL RECEIVE A PRE-BLAST SURVEY. ALL BLASTING SHALL BE PERFORMED BY A LICENSED BLASTER.
- 18. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE CONTRACTOR SHALL REMOVE ALL EXCESS TOPSOIL, CUT MATERIAL OR WASTE MATERIAL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.
- 19. NO FILL SHALL BE PLACED ON EXISTING GROUND WITHIN THE LIMITS OF DISTURBANCE UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATERIAL SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES OR TO A DEPTH RECOMMENDED BY THE GEOTECHNICAL REPORT AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACING OF FILD DELETERIOUS MATERIALS, I.E., LUMBER, LOGS, BRUSH, OR ANY OTHER ORGANIC MATERIALS OR RUBBISH SHALL BE REMOVED FROM AREAS TO RECEIVE COMPACTED FILL. UNSUITABLE MATERIALS AS TOPSOIL, WEATHERED BEDROCK, ETC., SHALL BE REMOVED AS REQUIRED BY GEOTECHNICAL ENGINEER (AND ENGINEERING GEOLOGIST, WHERE EMPLOYED) FROM AREAS TO RECEIVE COMPACTED FILL OR DRAINAGE STRUCTURE(S). CONSTRUCT FILL TO GRADES OR SUBGRADES AS SHOWN WITH SELECT FILL MATERIAL COMPACTED TO 95% STANDARD PROCTOR (UNLESS OTHERWISE NOTED). PLACE AND COMPACT IN 6 INCH LIFTS. ALL SOILS WITHIN 12 INCHES OF PAVEMENT SUBGRADE SHALL BE COMPACTED TO AT LEAST 98% OF THEIR STANDARD PROCTOR MAXIMUM DRY DENSITY.
- 20. GRADED AREAS TO BE LANDSCAPED OR GRASSED SHALL BE BROUGHT TO THE ELEVATIONS SHOWN ON THE GRADING PLAN(S).

27. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING(S) AT ALL TIMES.

- 21. CONTRACTOR SHALL VERIFY DIMENSIONS, GRADES AND BENCHMARK(S) BEFORE BEGINNING ANY WORK. THERE SHALL BE NO DISTURBANCE BEYOND PROPERTY LINES, UNLESS WRITTEN PERMISSION FROM ADJACENT PROPERTY OWNERS IS OBTAINED. EXISTING GRADES ALONG PROPERTY LINES SHALL BE
- OR FILL SHALL BE UNIFORM THROUGHOUT FOR EACH SECTION OF CUT OR FILL EXCEPT WHEN BENCHING IS APPROVED BY ROCKOALE COUNTY. WHEN A CUT IS MADE IN ROCK THAT REQUIRES BLASTING, THE SLOPE MAY BE STEEPER IF PRE-SPLITTING IS EMPLOYED AND UPON SUBMISSION OF A GEOTECHNICAL REPORT WHICH SUBSTANTIATES THE INTEGRITY OF THE ROCK IN THE STEEPER CONDITION, SUBJECT TO THE REVIEW AND APPROVAL OF ROCKDALE COUNTY AND/OR SITE DESIGN PROFESSIONAL. (NOTE: NO BLASTING SHALL OCCUR WITHOUT A VALID PERMIT ISSUED BY ROCKDALE COUNTY
- EMBANKMENTS SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED A COMPACTED THICKNESS OF 6 INCHES PER LAYER AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAX. LABORATORY DRY WEIGHT PER CUBIC FOOT AS DETERMINED BY AASHTO METHOD T-99 IN AREAS WHERE STRUCTURES, PARKING LOTS AND DRIVES, STREETS AND UTILITIES ARE TO BE PLACED ABOVE OR BELOW
- 25. CONTOURS AND SPOT ELEVATIONS SHOWN ARE ONLY CONTROLS AND THE PROFILES THEY FORM SHALL BE SMOOTH AND CONTINUOUS (PARTICULARLY IN PARKING AREAS AND DRIVES).
- 26. GRADING SHALL BE PERFORMED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER WHO SHALL CERTIFY THAT FILL HAS BEEN PROPERLY PLACED AND WHO SHALL SUBMIT A FINAL COMPACTION REPORT FOR FILLS OVER 1' DEEP.
- 28. ANALYTICAL COMPACTION RESULTS SHALL BE SUBMITTED TO ROCKDALE COUNTY ENGINEERING DEPARTMENT (OR SIMILAR DEPARTMENT) AND TO THE GEOTECHNICAL ENGINEER OF RECORD.
- ALL GRADING AND PIPE BED PREPARATION SHALL BE PERFORMED ACCORDING TO REQUIREMENTS SET FORTH BY THE GEOTECHNICAL ENGINEER OF RECOR
- 30. CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND FOLLOW ALL RECOMMENDATIONS OF THE REPORT WHEN PERFORMING SITE WORK. APPROVED BANK-RUN SAND OR GRAVEL OR GRUSHED STONE FREE FROM LARGE STONES AND CONTAINING NOT MORE THAN TEN PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BY WEIGHT OR CLAY.
- SHALL BE USED TO ACHIEVE THE REQUIRED COMPACTION. PAVEMENT SHALL BE REPLACED IMMEDIATELY AFTER THE BACKFILLING IS COMPLETED. 32. BACKFILL UNDER GRAVEL OR CRUSHED STONE SURFACED ROADWAYS SHALL BE THE APPROVED SUITABLE EXCAVATED MATERIAL PLACED IN SIX (6) INCH LAYERS THOROUGHLY COMPACTED FOR THE FULL DEPTH AND WIDTH OF THE TRENCH, CONFORMING TO THE COMPACTION, DENSITY COMPACTION METHOD AND MATERIALS AS SPECIFIED ABOVE.
- BACKFILL IN UNPAVED AREAS SHALL BE COMPACTED WITH MECHANICAL VIBRATING EQUIPMENT TO NINETY PERCENT (90%) AS DETERMINED BY THE MODIFIED PROCTOR TEST. BACKFILL MATERIAL FROM PIPE BEDDING TO GROUND SURFACE SHALL BE EXCAVATED FREE FROM LARGE STONES & OTHER DEBRIS.

PAVEMENT AND STRUCTURAL BASE REQUIREMENTS:

- THE TYPE OF SUBBASE REQUIRED FOR EACH USE SHALL BE CALLED OUT ON THE DRAWINGS. IF NO REFERENCE IS MADE ON THE DRAWINGS OR DETAILS TO THE TYPE OF SUBBASE REQUIRED THE FOLLOWING SHALL BE USED. THE SOURCE OF THE MATERIAL SHALL BE ONE OF APPROVED FOR USE BY THE GEORGIA DEPARTMENT OF TRANSPORTATION. THE MATERIAL SHALL BE A CRUSHED STONE CONFORMING TO AASHTO M 147-65 (1980 OR LATEST REVISION), GRADE A. GRAVEL OR OTHER MATERIALS CAN ONLY BE SUBSTITUTED FOR CRUSH STONE WHEN APPROVED IN WRITING BY THE OWNER ND SÎTE DESIGN PROFESSIONAL. MÂTERÎAL SUPPLIED FOR USE AS SUBBASE SHALL HAVE 100% PASSING THE 2 INCH SIEVE, 30% TO 65% PASSING THE 3/8 INCH SIEVE, 25% TO 55% PASSING THE NO.4 SIEVE, 15% TO 40% PASSING THE NO. 40 SIEVE AND 2% TO 10% PASSING THE NO. 200 SIEVE.
- SUBBASE SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES AND COMPACTED TO THE REQUIREMENTS STATED IN THE GEOTECHNICAL REPORT. IF NOT STATED, THE COMPACTION REQUIREMENT SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR).
- 3. FINAL GRADING OF SUBBASE SHALL BE TO +/- 1 INCH OF THAT DESIGNATED ON THE DRAWINGS AND +/- 1 INCH OF THE REQUIRED THICKNESS OF 8 INCHES OR GREATER AND +/- 1/2 INCH FOR THICKNESS LESS THAN 8 INCHES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN PREPARING THE SUBGRADE TO RECEIVE SUBBASE. THIS SHALL INCLUDE FINE GRADING AND COMPACTING AS NECESSARY TO MEET THE REQUIREMENTS STATED HERE AND UNDER "GRADING / EARTHWORK REQUIREMENTS". THE AMOUNT OF TESTING REQUIRED TO VERIFY THE COMPACTION SHALL BE THE SAME AS STATED UNDER "GRADING / EARTHWORK REQUIREMENTS".
- IF REQUIRED, STABILIZING FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "MODULUS (LOAD AT 10% ELONGATION) = 115LB PER ASTM D1682-64", "GRAB TENSILE STRENGTH 200LB PER ASTM D 1682-64", "MULLEN BURST STRENGTH = 400PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 115LB PER ASTM D 1117-80", "COEFFICIENT OF PERMEABILITY K (CM/SEC) = 0.015 PER ASTM D 4491-85", "WATER FLOW RATE (GPM/SP) = 60 PER ASTM D 4491-85". WHEN STABILIZING FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN
- IF REQUIRED, FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "GRAB TENSILE ELONGATION = 50% PER ASTM D1682-64", "GRAB TENSILE STRENGTH 70LB PER ASTM D 1682-64","MULLEN BURST STRENGTH = 200PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 35 LB PER ASTM D 1117-80", "COEFFICIENT OF PERMEABILITY K (CM/SEC) = 0.2 PER ASTM D 4491-85", "WATER FLOW RATE (GPM/SF) = 180 PER ASTM D 4491-85", WHEN FILTER FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURERS

TRAFFIC SIGNAGE AND PAVEMENT MARKINGS:

- PAVEMENT MARKINGS SHALL BE THE TYPE, COLOR, SIZE AND LOCATIONS SHOWN ON THE PLANS. IF THE INFORMATION ON THE PLANS IS NOT COMPLETE AND AUTHORITY HAVING JURISDICTION DOES NOT HAVE REQUIREMENTS REGARDING THIS, USE THE FOLLOWING. PAINT SHALL BE SUPPLIED IN ACCORDANCE WITH AASHTO: M 248 LATEST ADDITION. COLORS SHALL BE AS FOLLOWS (YELLOW-PARKING STALLS, HANDICAP PARKING AND CHARACTERS, PARKING ISLANDS, TRAFFIC CONTROL LETTERING AND CHARACTERS AND FIRE LANES) (WHITE - STOP BARS, PEDESTRIAN CROSSINGS AND STOP
- THE PAVEMENT SHALL BE CLEAN AND FREE OF DIRT, DUST, MOISTURE, OILS AND OTHER FOREIGN MATERIALS. ANY OLD PAVEMENT MARKINGS SHALL BE REMOVED UNLESS PAINTS ARE COMPATIBLE AND OVERLAY IDENTICALLY. THE SURFACE OF THE PAVEMENT PRIOR TO APPLICATION SHALL BE 45 DEGREES F AND RISING UNLESS MANUFACTURE'S RECOMMENDATIONS ARE GREATER.
- THE SIGNAGE SHALL BE THE TYPE AND LOCATED PER THE DRAWINGS. THE SIGNAGE SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL HIGHWAY, COUNTY HIGHWAY AND STATE DEPARTMENT OF TRANSPORTATION. IF LOCAL, COUNTY OR STATE CODES DO NOT EXIST USE AASHTO: M268.
- POSTS, BRACKETS AND FRAMES SHALL BE STEEL PER ASTM A-36, A-242, A-441, A-572, A588, GRADE 50 AND HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. ALL CUTTING, DRILLING OR OTHER POLE MODIFICATIONS SHALL BE PAINTED WITH GALVANIZING PAINT. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.

INCHES OFF BOTTOM AND CENTERED AS 3000 PSI CONCRETE IS PLACED AROUND THE POST. THE OVERALL SIGN AND POST SYSTEM SHOULD BE ABLE TO WITHSTAND 33 POUNDS PER SQUARE FOOT.

- 5. POST HOLES SHALL BE A MINIMUM OF FOUR FEET DEEP AND 12 INCHES IN DIAMETER UNLESS POOR SOILS OR FROST CONDITIONS REQUIRE GREATER DEPTH. SIGN POSTS SHALL BE KEPT PLUMB, 6
- CONTRACTORS CAN PLACE SIGNS ON POSTS AFTER CONCRETE HAS CURED FOR SEVEN DAYS OR % STRENGTH IS ACHIEVED. ALL HANDICAP STRIPING AND SIGNAGE SHALL MEET THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. FIRE LANE STRIPING AND SIGNAGE SHALL MEET THE REQUIREMENTS OF THE LOCAL
- 8. OULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FT X5FT.

SITE CONCRETE - INCLUDING CURB, SIDEWALKS & GUTTERS:

- THE DIMENSIONS SHALL BE THOSE SHOWN ON THE DRAWINGS. THE CONCRETE MIX SHALL BE 4000 PSI AT 28 DAYS MADE WITH TYPE I OR TYPE II CEMENT. PER ASTM C 150. AND AGGREGATES MEETING STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS. SLUMP FOR SLIP FORMING SHALL BE 1 INCH +/-½ INCH AND FOR FORMED CONCRETE THE SLUMP SHALL BE 1 INCH +/-1 INCH. AIR ENTRAINMENT MIXTURE SHALL MEET THE REQUIREMENTS OF ASTM C 260 4% +/- 1 ½% FOR SLIP FORM WORK AND 6% +/- 1 ½% FOR FORMED AND PLACED CONCRETE. WATER REDUCING AGENT SHALL CONFORM TO ASTM C 494, TYPE A. CURING COMPOUNDS SHALL CONFORM TO ASTM C 309, TYPE I, CLASS A MOISTURE LOSS OF NOT MORE THAN .055 GR/SQ CM WHEN APPLIED AT 200 SQ FT PER GALLON. CURBS AND GUTTERS SHALL BE PLACED ON COMPACTED SUBBASE, CONSISTENT WITH THE PAVEMENT SUBBASE, AS SHOWN ON THE DRAWINGS. WHEN SUBBASE DETAILS ARE MISSING AND NO AGENCY HAS JURISDICTION USE THE FOLLOWING: CURBS AND GUTTERS SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF GAB ON 98% STANDARD PROCTOR SUBGRADE.
- ALL FORMING, PLACEMENT, MATERIALS AND CURING SHALL CONFORM TO THE LATEST ADDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ALL SIMILAR STATE
- REINFORCING SHALL BE IN ACCORDANCE WITH THAT SPECIFIED ON THE DRAWINGS AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICES". REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60, DEFORMED. WELDED WIRE FABRIC SHALL BE ASTM A 185, WELDED WIRE STEEL FABRIC.
- SIDEWALKS AND GUTTERS SHALL HAVE A BROOM FINISH PERPENDICULAR TO FLOW WITH A PICTURE FRAME EDGE JOINT ALL THE WAY AROUND. CURBS SHALL HAVE A SMOOTH FINISH OR LIGHT RUB
- EXPANSION JOINTS SHALL BE PLACED EVERY 40 FEET AND AT ADJOINING STRUCTURES SUCH AS WALLS, MANHOLES AND VAULTS. EXPANSION JOINT MATERIAL SHALL BE PREMOLDED, ½ INCH MATERIAL WITH ½ INCH CAP IN ACCORDANCE WITH ASTM D1751. AFTER CONCRETE HAS SET, THE CAP SHOULD BE REMOVED AND VOID FILLED WITH WATERPROOF JOINT FILLER. CURB AND GUTTER SHALL BE CUT OR TOOL JOINTED TO 1/3 THE DEPTH EVERY 10 FEET. SIDEWALKS SHOULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FT

ASPHALT PAVEMENT REQUIREMENTS:

- ASPHALT SHALL BE THE TYPE(S) SPECIFIED ON THE DRAWINGS. REFER TO PAVING LEGEND AND PAVING DETAILS PROVIDED. ALL ASPHALT SHALL BE PRODUCED IN STATE APPROVED PLANTS WITH STATE APPROVED PRODUCTS.
- ASPHALT SHALL ONLY BE PLACED WHEN THE OUTSIDE TEMPERATURE IS 45°F AND RISING. ASPHALT SHALL NEVER BE PLACED ON FROZEN MATERIAL, DURING ANY TYPE OF PRECIPITATION OR WHEN PRECEDING PRECIPITATION HAS SATURATED ANY PORTION OF THE SUBBASE AND/OR SUBGRADE. SURFACES ABUTTING THE NEW ASPHALT SHALL BE TACK COATED PRIOR TO PLACEMENT OF ASPHALT INCLUDING CURBS, GUTTER, EXISTING AND NEW STRUCTURES. TACK COAT SHALL BE APPLIED NEATLY TO MATCH THE LINES AND GRADES OF THE PROPOSED ABUTTING ASPHALT AT A RATE OF 0.05 TO 0.15 GALLONS PER SQUARE YARD.
- ASPHALT SHALL BE PLACED IN LAYERS EQUAL TO THOSE SPECIFIED ON THE PLANS. THE THICKNESS OF EACH LAYER OR THE THICKNESS OF ALL LAYERS COMBINED SHALL NOT VARY MORE THAN 50 FOR THICKNESS OF 0 TO 4 INCHES AND 1/2 INCH FOR THICKNESS OF 4 INCHES OR GREATER FROM THOSE SPECIFIED ON THE DRAWINGS. IF MORE THAN 60% OF TEST CORES SAMPLED FAIL TO EQUEXCED THE REQUIRED DEPTH, THE PAVEMENT SHALL BE CONSIDERED FAILED AND BE SUBJECT TO REPAIRS, REPLACEMENT OR REASONABLE COMPENSATION OF WHICH THE CONTRACTOR SHALL ALL COSTS. THE ASPHALT SHALL ALSO BE TESTED FOR SMOOTHNESS BY LAYING A 16 FOOT STRAIGHT EDGE ON THE PAVEMENT AND VERIFYING THAT THERE ARE NO GAPS GREATER THAN 1/4 INC
- PLACEMENT AND COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE SPECIFIED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION. THE ROLLING SHALL BE DONE IN SUCH A MANNER THAT WILL MATCH JOINTS AND LEAVE A SMOOTH UNIFORM SURFACE, WHILE PROVIDING THE PROPER COMPACTION, WHICH SHALL BE 95% OF THE LABORATORY DENSITY.
- WHEN MATCHING INTO EXISTING PAYEMENT ALL MATCH JOINTS SHALL BE SAW OUT TO PROVIDE A STRAIGHT SMOOTH JOINT. THE ASPHALT DEPTH AT THE MATCH POINT SHALL BE EQUAL TO THAT OF THE PAVING EQUIPMENT SHALL BE OF GOOD CONDITION AND QUALITY. ASPHALT SHALL BE PLACED BY MECHANICAL EQUIPMENT EXCEPT IN SMALL AREAS THAT ARE INACCESSIBLE TO A PAVER. ASPHALT SHALL BE TRANSPORTED IN COVERED TRUCKS AND SCHEDULED IN SUCH A MANNER THAT SHALL MAINTAIN ASPHALT TEMPERATURE. ASPHALT SHALL BE REJECTED WHEN THE TEMPERATURES FALL BELOW 250 DEGREES F OR THE MINIMUM TEMPERATURES SPECIFIED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION, WHICHEVER IS HIGHER.
- THE TYPE OF SUBBASE REQUIRED FOR EACH USE SHALL BE CALLED OUT ON THE DRAWINGS. IF NO REFERENCE IS MADE ON THE DRAWINGS OR DETAILS TO THE TYPE OF SUBBASE REQUIRED THE FOLLOWING SHALL BE USED. THE SOURCE OF THE MATERIAL SHALL BE ONE APPROVED FOR USE BY THE APPLICABLE STATE'S "DEPARTMENT OF TRANSPORTATION". THE MATERIAL SHALL BE A CRUSHED STONE CONFORMING TO AASHTO M 147-65 (1980 OR LATEST REVISION), GRADE A. GRAVEL OR OTHER MATERIALS CAN ONLY BE SUBSTITUTED FOR CRUSH STONE WHEN APPROVED IN WRITING BY THE OWNER AND ENGINEER. MATERIAL SUPPLIED FOR USE AS SUBBASE SHALL HAVE 100% PASSING THE 2 INCH SIEVE, 30% TO 65% PASSING THE 3/8 INCH SIEVE, 25% TO 55% PASSING THE NO. 4 SIEVE, 15% TO 40% PASSING THE NO. 40 SIEVE AND 2% TO 10% PASSING THE NO. 200 SIEVE.
- SUBBASE SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES AND COMPACTED TO THE REQUIREMENTS STATED IN THE SOILS REPORT. IF NOT STATED, THE COMPACTION REQUIREMENT SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR).
- FINAL GRADING OF SUBBASE SHALL BE TO +/- 1 INCH OF THAT DESIGNATED ON THE DRAWINGS AND +/- 1 INCH OF THE REQUIRED THICKNESS FOR THICKNESS OF 8 INCHES OR GREATER AND +/- ½ INCH FOR THICKNESS LESS THAN 8 INCHES. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS IN PREPARING THE SUBGRADE TO RECEIVE SUBBASE. THIS SHALL INCLUDE FINE GRADING AND COMPACTING AS NECESSARY TO MEET THE REQUIREMENTS STATED HERE AND UNDER "EARTHWORK".

- DEBRIS AND OTHER FOREIGN MATTER. THE CONTRACTOR SHALL CLEAN ANY SECTIONS REQUIRING SUCH AT NO ADDITIONAL COST TO THE CONTRACT

12. THE AMOUNT OF TESTING REQUIRED TO VERIFY THE COMPACTION SHALL BE THE SAME AS STATED UNDER "EARTHWORK"

TOPSOIL SHALL BE REMOVED FROM STOCKPILES AND SPREAD IN THE AREAS SHOWN ON THE PLANS. THE DEPTH OF TOPSOIL SHALL BE AS SHOWN ON THE PLANS. IF THE DEPTH OF TOPSOIL IS NOT GIVEN THE FOLLOWING SHALL BE USED: "A MINIMUM OF 4 INCHES IN LAWN AREAS" AND "A MINIMUM OF 12 INCHES IN LANDSCAPE PLANTING AREAS".

- AFTER THE TOPSOIL IS IN PLACE IT SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION. THE TOPSOIL SHALL BE FINE GRADED TO THE LINES AND GRADES SHOWN ON THE PLANS. THE TOPSOIL SOIL SHALL HAVE A PH OF 5.5 TO 7.6 AND AN ORGANIC CONTENT OF 3 TO 20%. THE GRADATION OF THE TOPSOIL SHALL BE 100% PASSING 2" SIEVE, 85 TO 100% PASSING THE 1 INCH SIEVE, 65 TO 100% PASSING THE NO. 200 SIEVE.
- LIME OF TYPE RECOMMENDED FOR SOIL CONDITIONING SHALL BE USED TO TREAT ACIDIC SOILS.
- LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHORUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM UREAFORM SOURCE.
- LAWN SEED (WHEN NOT GIVEN ON THE PLANS) SHALL BE "50% BY WEIGHT, 85% PURITY, 85% GERMINATION OF PENNFINE PERENNIAL RYE"; "30% BY WEIGHT, 97% PURITY, 85% GERMINATION OF PENNLAWN RED FESCUE"; "20% BY WEIGHT, 85% PURITY, 80% GERMINATION OF COMMON KENTUCKY BLUEGRASS". WHEN PLACING BY HYDROSEEDING, APPLICATION FERTILIZER SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 1,200 POUNDS PER ACRE, WATER AT 500 GALLONS PER ACRE AND SEED AT A MINIMUM OF 220 POUNDS PER ACRE. ALL OVER SPRAY AREAS SHALL BE PROPERLY CLEANED AND RESTORED AT NO EXPENSE TO THE CONTRACT.
- IF PLACING BY MECHANICAL MEANS, FERTILIZER SHALL BE PLACED AT 25 POUNDS PER 1,000 SQUARE FEET, SEED AT 5 POUNDS PER 1,000 SQUARE FEET, AND STRAW MULCH AT 2 TONS PER ACRE. PLACE FERTILIZER AND SEED, THEN LIGHTLY RAKE AND THE ROLL WITH 200 POUND ROLLER. MÜLCH THE AREA AND THEN WATER. STRAW MAY NEED TO BE SECURED TO PREVENT IT BLOWING AWAY.
- WATER LAWN AREAS AS NEEDED TO PROMOTE GROWTH. THE CONTRACTOR WILL BE RESPONSIBLE TO WATER, RESEED OR WORK WHEN NECESSARY TO INSURE THE GROWTH OF THE LAWN UNTIL A COMPLETE AND UNIFORM STAND OF GRASS HAS GROWN AND BEEN CUT AT LEAST TWICE. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL AREAS NOT RECEIVING STRUCTURES, PAVEMENT, RIP RAP, LANDSCAPING OR OTHER IMPROVEMENTS OR FUTURE IMPROVEMENTS SHALL BE CONSIDERED LAWN AREAS AND RECEIVE TOPSOIL AND SEEDING PER DRAWINGS AND ABOVE STATED REQUIREMENTS.
- PLANTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH THE PLANS AND ANSI 260.1 "AMERICAN STANDARD FOR NURSERY STOCK" IN GOOD HEALTH, VIGOROUS, AND FREE OF INSECTS, LARVAE, EGGS, DEFECTS AND DISEASE.
- 13. WEED BARRIER MADE FROM FIBERGLASS AND ULTRA-VIOLET LIGHT RESISTANT SHALL BE PLACE UNDER ALL PLANTING BEDS PRIOR MULCHING.
- 14. ALL TREES AND SHRUBS SHALL BE STAKED AS DETAILED ON THE DRAWINGS. TREE WRAPPING WILL BE PROVIDED AT THE BASE OF ALL TREES AS DETAILED. MULCH SHALL BE 50% SHREDDED BARK AND 50% WOOD CHIPS, ¾ TO 2 INCH IN SIZE, UNIFORMLY MIXED AND FREE OF ELM WOOD. MULCH SHALL BE PLACED UNIFORMLY OVER THE PLANTING BED ALLOWING NO WEED BARRIER TO BE SEEN.
- 16. ALL LANDSCAPING SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE. ANY PLANTINGS IN NEED OF REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE.

- 1. ALL REQUIRED RW ENCROACHMENT PERMITS SHALL BE SECURED, BEFORE PROCEEDING WITH WORK. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS/HER OPERATION PLAN IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THAT THEY PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
- LESS OTHERWISE NOTED. UTILITY OWNERS ARE TO RESET, RELAY OR READJUST PUBLIC AND PRIVATE UTILITIES CONFLICTING WITH PROPOSED IMPROVEMENT. THE CONTRACTOR SHALL BE REQUIRED COOPERATE WITH THE OWNERS OF LOCAL UTILITIES IN THE ADJUSTMENT OF THEIR FACILITIES WHERE THEY INTERFERE WITH CONSTRUCTION. THE COSTS FOR THE WORK SHALL BE AT THE NTRACTORS EXPENSE. CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING GAS AND WATER METERS, VALVES, LINES, POWER, TELEPHONE, CABLE LINES, ETC. THAT RVICE THE EXISTING BUILDINGS WITH THE APPROPRIATE UTILITY COMPANIES. 2. IF ROCKDALE COUNTY DOES NOT HAVE SPECIFIC REQUIREMENTS REGARDING MATERIALS AND PLACEMENT, THE FOLLOWING SHALL BE USED:
- UTILITIES SHOWN ARE TO ASSIST THE CONTRACTOR IN LOCATING UTILITIES. ITEMS ARE SHOWN SCHEMATICALLY AND NEITHER THE ARCHITECT, SITE DESIGN PROFESSIONAL, NOR THE OWNER ASSUMES ANY RESPONSIBILITY FOR VARIANCES IN THEIR ACTUAL LOCATION. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF UTILITIES PRIOR TO EXCAVATION OR DEMOLITION. ADDITIONAL UTILITIES MAY NOT BE SHOWN ON THESE PLANS. IF THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES DURING CONSTRUCTION WHETHER SHOWN OR NOT IN THE SITE WORK CONSTRUCTION DRAWINGS, HEISHE SHALL, AT HIS/HER EXPENSE, IMMEDIATELY REPLACE OR REPAIR THE UTILITIES TO THEIR ORIGINAL CONDITION AND QUALITY. AS APPROVED BY ROCKDALE COUNTY AND REPRESENTATIVE OF THE APPROPRIATE UTILITY COMPANY. CONTRACTOR SHALL NOTIFY UTILITY PROVIDER AND THE SITE DESIGN PROFESSIONAL OF RECORD PRIOR TO PROCEEDING. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTACTING APPROPRIATE UTILITY PROVIDERS PRIOR TO SUBMITTING HIS/HER BID IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENT WILL AFFECT THE SCHEDULING OF WORK FOR THE PROJECT. SOME UTILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTORS OPERATIONS WHILE SOME WORK MAY BE REQUIRED "AROUND" UTILITIES THAT REMAIN IN PLACE. THE CONTRACTOR SHALL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS OR INCONVENIENCE CAUSED B
- 6. MATERIAL AND INSTALLATION SHALL BE IN COMPLIANCE WITH ROCKDALE COUNTY REQUIREMENTS.
- REFER TO ARCHITECTURAL AND M.E.P. PLANS FOR LOCATION OF WATER, SEWER AND GAS LINES WITHIN PROPOSED BUILDINGS. CONTRACTOR SHALL COORDINATE TIE-IN OF UTILITIES WITH ARCHITECTURAL PLANS AND M.E.P. REPRESENTATIVE.
- EARTHWORK OPERATIONS SHALL COMPLY WITH REQUIREMENTS OF O.S.H.A. CONSTRUCTION STANDARDS, PART 1926, SUBPART P, EXCAVATIONS, TRENCHING, AND SHORING AND SUBPART O, MOTOR VEHICLES. MECHANIZED EQUIPMENT, AND MARINE OPERATIONS, AND SHALL BE CONDUCTED IN A MANNER ACCEPTABLE TO THE SITE DESIGN PROFESSIONAL. A MINIMUM HORIZONTAL SEPARATION OF 10' SHALL BE MAINTAINED BETWEEN WATER LINES AND SANITARY SEWERS. AN 18 INCH MINIMUM VERTICAL SEPARATION SHALL BE MAINTAINED AT CROSSINGS. WHEN CROSSING A WATERLINE OR SEWER LINE, PIPE JOINTS SHALL BE PLACED AS FAR AWAY AS POSSIBLE FROM THE OTHER PIPE.
- PEDESTRIAN AND LOCAL VEHICULAR TRAFFIC SHALL BE MAINTAINED FOR UTILITY WORK WITHIN PUBLIC RIGHT-OF-WAYS. SAFETY DEVICES AND FLAG MEN SHALL BE PROVIDED BY THE CONTRACTOR AT HIS/HER EXPENSE. WRITTEN PERMISSION TO CLOSE THE CONSTRUCTION AREA TO TRAFFIC SHALL BE OBTAINED FROM THE APPROPRIATE GOVERNMENT AGENCY PRIOR TO THE CLOSING. CONTRACTOR SHALL MEET LOCAL UTILITY COMPANY REGULATIONS IN ANY READJUSTMENT OR RELOCATION OF EXISTING SERVICES. WHEN CONSTRUCTION INVOLVES. THE REMOVAL OF FENCE, POLES SIDEWALKS, DRIVE, TEMPORARY OR FIXED STRUCTURES; THE CONTRACTOR AT HIS/HER EXPENSE SHALL PROVIDE FOR TEMPORARY SERVICE OR CONTAINMENT TO THE AFFECTED PROPERTY, AND SHALL REPLACE SUCH ITEMS WITH SIMILAR OR BETTER MATERIALS AS SOON AS PRACTICAL OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE FOLLOWING UTILITY INSTALLATION.
- 12. USE OF PRECAST INVERT MANHOLES IS ACCEPTABLE PROVIDED INVERTS ARE NOT FIELD MODIFIED
- 13. EXISTING PIPE CAN ONLY BE CUT IN THE PRESENCE OF ROCKDALE COUNTY REPRESENTATIVE(S). CUT-IN MANHOLE IS REQUIRED UNLESS DOGHOUSE MANHOLE IS SPECIFICALLY APPROVED BY ROCKDALE COUNTY PRIOR TO CONSTRUCTION.
- 14. NO TREES OR PERMANENT STRUCTURES SHALL BE ALLOWED IN SANITARY SEWER EASEMENT. UNLESS OTHERWISE APPROVED BY ROCKDALE COUNTY.
- 15. SEWER MAINS AND LATERAL(S) SHALL HAVE TRACER WIRE INSTALLED TO THE STRUCTURE FOUNDATION, UNLESS OTHERWISE APPROVED BY ROCKDALE COUNTY. ALL UTILITIES, INCLUDING BUT NOT LIMITED TO WATER AND SANITARY SEWER UTILITIES AND STORM DRAIN FACILITIES SHALL BE INSTALLED AND THE TRENCHES BACKFILLED AND THOROUGHLY COMPACTED BEFORE ANY PAVEMENT OR BASE IS INSTALLED.
- EXISTING UTILITY APPURTENANCES (CLEAN OUTS, VALVE/METER BOXES AND/OR COVERS, MANHOLES, ETC.) LOCATED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE RELOCATED AS NECESSARY OR ADJUSTED TO FINISHED GRADE AT NO ADDITIONAL COST TO THE CONTRACT.
- IF UNDERGROUND ABANDONED PIPES ARE DISCOVERED DURING CONSTRUCTION, CONTRACTOR SHALL REFER TO ROCKDALE COUNTY FOR REMOVAL OR ABANDONMENT REQUIREMENTS. AT A MINIMUM, CONTRACTOR SHALL REMOVE OR ADEQUATELY PLUG ABANDONED UNDERGROUND PIPES, OR A COMBINATION OF BOTH, IF THESE MEASURES ARE APPROVED BY ROCKDALE COUNTY.

ALL UTILITY MATERIALS, INSTALLATION, TESTING, AND

PROCEDURES SHALL CONFORM TO THE STANDARDS AND

SPECIFICATIONS SET FORTH BY THE LOCAL AUTHORITY HAVING JURISDICTION. IF THERE IS A DISCREPANCY

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STANDARÓS AND SPECIFICATIONS OF THE LOCAL

AUTHORITY HAVING JURISDICTION.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING.

READING, UNDERSTANDING, AND ADHERING TO THE THE

MANUAL OF STANDARDS FOR DESIGN AND CONSTRUCTION

SPECIFICATIONS IF THIS DOCUMENT IS PROVIDED FOR AT

THE AGENCY HAVING JURISDICTION.

CONTRACTOR SHALL CONTACT ROCKDALE COUNTY WATER DEPARTMENT AND HAVE ROCKDALE COUNTY DEPARTMENT INSPECTOR PRESENT DURING TAPS

SANITARY SEWER SYSTEM REQUIREMENTS:

- THE SANITARY SEWER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL (HAVING JURISDICTION) REQUIREMENTS. ALL SANITARY SEWER MATERIALS, SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS. IF THE PLANS DO NOT LIST ALL INFORMATION OR ARE UNCLEAR, USE THE FOLLOWING:
- SANITARY PIPE AND FITTINGS SHALL BE POLYVINYL CHLORIDE (PVC) PER ASTM D 3034, SDR 35, WITH GASKETS PER ASTM D 3212, ELASTOMERIC SEAL. THE PIPE SHALL BE BED 6 INCHES BELOW AND UP HALF ITS DIAMETER WITH CLEAN STONE OF A UNIFORM MIX RANGING IN SIZE OF 1/4 TO 3/4 INCH.
- MANHOLES SHALL BE PROVIDED PER ASTM C 478 WITH STEEL CORE POLYETHYLENE STEPS, GASKETS BETWEEN RISERS SHALL BE RUBBER PER ASTM C 443 AND MORTARED WATER TIGHT WITH A WATERPROOF/PLUG MORTAR. THE INVERT SHALL BE MADE WITH CONCRETE OR 1/2 ROUND SECTION OF PIPE. PIPE JOINTS SHALL BE PRESS WEDGE OR CAST IN PLACE BOOT. BOTH SHALL HAVE ADDITIONAL VOIDS FILLED WITH WATERPROOF/PLUG MORTAR. ADJUSTMENT RINGS SHALL BE PRECAST CONCRETE 4000 PSI AND 5 TO 8% AIR ENTRAINMENT EXTERIOR MANHOLES SHALL BE COATED WITH A SEAL COAT ACCEPTABLE TO ROCKDALE COUNTY.
- CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE. A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN STONE OF THE SAME TYPE AS THE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT. CLEANOUTS SHALL BE NO MORE THAN 90 FEET APART ON LATERALS.
- MANHOLE FRAMES AND COVERS SHALL BE PER ASTM A 48, CLASS 30B, FULLY COATED WITH THE LETTERING "SANITARY" CAST INTO IT. THE MINIMUM SIZE SHALL BE A 24 INCH INSIDE OPENING AND DESIGN FOR A MINIMUM OF H-20 LOADING. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. CARE SHALL BE GIVEN DURING BACKFILL OPERATIONS NOT TO MOVE OR DAMAGE PIPE OR APPURTENANCES WHILE ACHIEVING THE APPROPRIATE COMPACTION REQUIREMENTS.
- ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN. LL TAPS TO MAIN LINES SHALL BE MADE WITH SADDLES WHEN THE TAP IS 1/2 THE DIAMETER OR LESS OF THE EXISTING PIPE BUT MADE WITH A SLEEVE WHEN THE TAP IS GREATER THAN 1/ HE DIAMETER OR EQUAL TO THE EXISTING PIPE. IF CONNECTIONS ARE REQUIRED TO EQUAL SIZE PIPES OF 8 INCHES OR GREATER, A MANHOLE SHALL BE INSTALLED OVER THE CONNECTION OINT AND INVERTS FORMED. WHEN CONNECTING TO AN EXISTING MANHOLE, THE CONNECTING PIPE HOLE SHALL BE CORED AND A PRESS WEDGE INSTALLED. THE CONNECTION SHALL BE MORTARED UP WITH WATERPROOF PLUG MORTAR. INSIDE THE EXISTING MANHOLE, THE EXISTING INVERT SHALL BE BROKE OUT IN A MANNER THAT PROTECTS FROM DEBRIS ENTERING THE
- GRAVITY SYSTEMS SHALL BE AIR TESTED BETWEEN MANHOLES TO 3.5 PSI FOR 5 MINUTES PER ASTM F 1417 FOR PLASTIC PIPES. MANHOLES SHALL BE TESTED SEPARATELY FOR LEAKAGE OR INFILTRATION USING ASTM C 969. THE ALLOWED LEAKAGE = 0.1 GALLONS / {{FEET OF DIAMTER}(FEET OF HEAD)(#OF HOURS)} AND THE TEST SHALL RUN FOR 24 HOURS.
- WHEN NECESSARY TO VERIFY THE SYSTEM INTEGRITY, THE ENTIRE SYSTEM MAY BE TESTED FOR INFILTRATION AND EXFILTRATION USING ASTM C 969. THE SYSTEM SHALL BE BROKEN UP INTO SECTIONS WHEN NECESSARY TO CONSIDER GROUNDWATER DEPTH, LENGTH AND ELEVATION DIFFERENCES.
- FAILURE OF ANY TESTING SHALL REQUIRE THE CONTRACTOR TO REPAIR OR REPLACE THE FAILED SECTION AT NO ADDITIONAL EXPENSE TO THE CONTRACT AFTER ALL TESTING IS COMPLETE AND BEFORE THE SYSTEM IS TURNED OVER TO ROCKDALE COUNTY. THE SYSTEM SHALL BE CHECKED TO VERIFY IT IS CLEAN AND FREE OF DIRT, DEBRIS AND OTHER FOREIGN MATTER. THE CONTRACTOR SHALL CLEAN ANY SECTIONS REQUIRING SUCH AT NO ADDITIONAL COST TO THE CONTRACT.

INLETS SHALL MEET THE SAME REQUIREMENTS AS THOSE LISTED FOR MANHOLES.

- THE STORM WATER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE LOCAL STORM WATER AUTHORITY FOR THIS PROJECT IS ROCKDALE COUNTY AND THE EROSION CONTROL AND RUN-OFF AUTHORITY IS ROCKDALE COUNTY. STORM DESIGN INCLUDES MANY VARIABLES, SUCH AS PIPE ROUGHNESS COEFFICIENT. THAT CAN AFFECT THE ACTUAL FINAL RUN-OFF. IF NO ALTERNATIVE MATERIALS ARE LISTED ON THE UTILITY DRAWINGS NO SUBSTITUTIONS MAY BE MADE BY THE CONTRACTOR UNLESS FIRST REVIEWED AND ACCEPTED BY THE ENGINEER.
- ALL STORM MATERIAL SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS. WHENEVER CLEAN STONE IS USED FOR BEDDING, BACKFILL OR ENCASEMENT, FILTER FABRIC SHALL BE PLACED BETWEEN THE NATURAL AND BACKFILL SOILS TO PREVENT MIGRATION OF FINES INTO THE VOIDS, AS NECESSARY. ANTI-SEEP COLLARS SHALL ALSO BE INCORPORATED AT THE PROJECT LIMIT AND ALONG THE PIPE TO PREVENT WATER FLOW WITHIN THE STONE BEDDING OR EXCESSED TO ANTI-SEEP COLLARS MAY NOT BE REQUIRED WHEN USING PERFORATED PIPE. ANTI-SEEP COLLARS SHALL BE INCORPORATED AT POND AND BASIN OUTLETS TO DESCRIPTION AND SIDE SEPUNC OR EXCESSED THE ATTEMAT. PREVENT WATER MIGRATION ALONG PIPE BEDDING OR ENCASEMENT MATERIAL.
- 5. END SECTIONS SHALL BE THE SAME MATERIAL AS THE PRECEDING PIPE AND APPROPRIATE COLLAR.
- MANHOLES SHALL BE PROVIDED PER ASTM C 478 WITH STEEL CORE POLYETHYLENE STEPS. THE MANHOLE SHALL BE SIZED TO A MINIMUM OF 2 FOOT GREATER THAN THE LARGEST DIAMETER PIPE ENTERING OR EXISTING. INCREASE SIZE OF MANHOLE IF, IN THE SAME HORIZONTAL PLANE, THERE ARE TWO AREAS WHERE THE AREA BETWEEN TWO PIPES IS LESS THAN 8 INCHES OR HALVE OR THE CIRCUMFERENCE IS SUPPORTED BY LESS THAN 1/2 OF THE DIAMETER OF THE MANHOLE. INVERTS SHALL BE SMOOTH CAST IN PLACE CONCRETE. UNLESS OTHERWISE INDICATED, COVER 4 INCH WEEPS WITH FILTER FABRIC. 2 INCH STONE SHALL BE PROVIDED AT THE CROWN OF PIPES AND AT SUBGRADE ELEVATION. GASKETS BETWEEN RISERS SHALL BE RUBBER PER ASTM C 443. ADJUSTMENT RINGS SHALL BE PRECAST CONCRETE 4000 PSI AND 5 TO 8% AIR ENTRAINMENT.

GRATES SHALL BE RETICULINE AND GALVANIZED PER ASTM A123. MINIMUM GRATE OPENING SIZE WILL BE 18" X 24" AND DESIGN FOR A MINIMUM OF H-20 LOADING.

- MANHOLE FRAMES AND COVERS SHALL BE PER ASTM A 48, CLASS 30B, FULLY COATED WITH THE LETTERING "STORM" CAST INTO IT. THE MINIMUM SIZE WILL BE A 24 INCH INSIDE OPENING AND DESIGN FOR A MINIMUM OF H-20 LOADING. 10. CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE. A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN STONE OF THE SAME TYPE AS THE PIPE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT.
- 11. RIP RAP SHALL BE PLACED AT THE END OF ALL OUTFALL STRUCTURES. UNLESS OTHERWISE NOTED, THE RIP RAP SHALL BE A CLEAN DURABLE STONE WITH AVERAGE WEIGHTS OF 100 POUNDS. THE RIP RAP SHALL BE PLACED ON 1 FOOT OF GRAVEL SUBBASE OR STABILIZING FABRIC. 2. DRY WELLS SHALL MEET THE SAME REQUIREMENTS AS THOSE LISTED FOR MANHOLES WITH THE ADDITION OF OPENINGS OF APPROXIMATELY 15% OF THE RINGS INTERIOR SURFACE. THE OPENINGS SHALL BE 1 X 3 INCH SLOTS OR 1 INCH DIAMETER ON THE INSIDE SURFACE. DRY WELLS SHALL BE BACKFILLED WITH A MINIMUM OF 1 FOOT OF CLEAN STONE SIZED BETWEEN 3 AND 4 INCHES. OUTSIDE THE STONE THE ENTIRE STRUCTURE SHALL BE WRAPPED IN FILTER FABRIC TO PREVENT OUTSIDE SOILS FROM ENTERING THE STONE AND DRY WELL.
- 13. UNLESS OTHERWISE NOTED, TRENCH DRAINS SHALL BE MADE WITH 4 INCH PERFORATED CORRUGATED POLYETHYLENE PIPE ENCASED IN CLEAN STONE SIZED BETWEEN 2 INCH AND 1/4 INCH AND THEN WRAPPED IN FILTER FABRIC. OUTSIDE DIMENSIONS OF THE TRENCH DRAIN WILL NOT BE LESS THAN 1 FOOT. 14. ALL JOINTS BETWEEN PIPES AND PRECAST STRUCTURES SHALL BE MORTARED TIGHT.
- 5. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATION AND TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. CARE SHALL BE GIVEN DURING BACKFILL OPERATIONS NOT TO MOVE OR DAMAGE PIPE OR APPURTENANCES WHILE ACHIEVING THE APPROPRIATE COMPACTION REQUIREMENTS.

16. ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN.

ANY PIPES FOUND WITH DIAMETER DEFLECTIONS GREATER THAN 5% OF THE SPECIFIED PIPE DIAMETER WILL BE REPAIRED OR REPLACED. ANY ALIGNMENT DIFFERENTIALS GREATER THAN 5% OF THE DIAMETER OF THE PIPE WILL BE CORRECTED OR REPLACED. 18. ANY CLEANING, REPAIRS OR REPLACEMENT REQUIRED, DUE TO FAILURE OF TESTING OR POOR WORKMANSHIP, SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CONTRACT.

- WATER SYSTEM AND SERVICES REQUIREMENTS: THE WATER SYSTEMS AND SERVICES SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL (HAVING JURISDICTION) REQUIREMENTS.
 - ALL WATER PIPING, FITTINGS AND APPLIETENANCES SHALL RE PLACED A MINIMUM OF 6 INCHES RELOW FROST LINE OR 5 FEET WHICH EVER IS GREATER, PIPE SIZES 4 INCHES AND LIP SHALL BE DUCTILE IRON OR POLYVINYL CHLORIDE AS INDICATED ON THE DRAWINGS (IF NOT SHOWN USE DUCTILE IRON). PIPE SIZES BELOW 4 INCHES SHALL BE COPPER OR POLYETHYLENE AS INDICATED ON THE DRAWINGS (IF NOT SHOWN USE COPPER).
 - THE MINIMUM SEPARATION BETWEEN WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS SHALL BE 18 INCHES MEASURED VERTICALLY FROM OUTSIDE TO OUTSIDE OF PIPES AT THE CROSSING. A STANDARD LENGTH OF WATER PIPE SHALL BE CENTERED AT THE CROSSING TO MAXIMIZE THE DISTANCE BETWEEN THE CROSSING AND THE NEAREST WATER MAIN OR SERVICE PIPE JOINT. WHEN THE WATER MAIN OR SERVICE RUNS UNDER THE SEWER LINE, A GRAVEL OR CRUSH STONE BACKFILL MEETING THE REQUIREMENTS OF SUBBASE SHALL BE PLACED AND COMPACTED AROUND THE WATER PIPE (UP TO HALF THE DIAMETER OF THE SEWER PIPE) TO PROVIDE ADEQUATE SUPPORT TO THE SEWER LINE, WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS RUNNING PARALLEL SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE. DUCTILE IRON PIPE SHALL BE PROVIDED IN ACCORDANCE WITH AWWA C151, (6 INCH DIAMETER AND GREATER SHALL BE CLASS 50) AND (SMALLER THAN 6" SHALL BE CLASS 51). DUCTILE IRON PIPE SHALL BE LINED WITH A CEMENT MORTAR AND SEAL COATED IN ACCORDANCE WITH AWWA C104. GASKETS SHALL BE PROVIDED IN ACCORDANCE WITH AWWA C111. FITTINGS SHALL BE DUCTILE IRON IN ACCORDANCE WITH AWWA C153 COMPACT FITTINGS WITH A PRESSURE RATING OF 350 PSI.
- STANDARD DUCTILE IRON OR CAST IRON FITTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH AWWA C110 WITH A PRESSURE RATING OF 250 PSI. THE LINING AND GASKETS FOR THE FITTING SHALL MEET THE SAME REQUIREMENTS AS THE PIPE. PLASTIC WRAP PIPES IN ACCORDANCE WITH AWWA C105 AND TAR COAT ALL FITTING BOLTS WHEN EVER SOILS ARE PVC (POLYVINYL CHLORIDE) PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C900 FOR PIPE 4 INCHES OR GREATER AND ASTM D 1785, SCHEDULE 40, GASKETS PER ASTM F 477-ELASTOMERIC SEAL, SOLVENT CEMENT PER ASTM D 2564 FOR PIPES SMALLER THAN 4 INCHES. TEN GAUGE COPPER TRACE WIRE SHALL BE PLACED WITH ALL PIPE.
- THRUST RESTRAINTS SHALL BE USED AT ALL FITTINGS, PLUGS, AND APPURTENANCES THAT CAUSE A CHANGE IN DIRECTION, FLOW OR ARE SUBJECT TO THRUST OR HAMMERING BY WATER FLOW, THRUST RESTRAINTS INCLUDE CONCRETE THRUST BLOCKS (3000 PSI), ANCHORING JOINTS AND TIE RODS. CONCRETE THRUST BLOCKS SHALL BE USED UNLESS SPACE,

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- COPPER WATER PIPE SHALL BE SUPPLIED IN ACCORDANCE WITH ASTM B 88-TYPE K, SEAMLESS WITH FITTINGS PER AWWA C800.
- PE (POLYETHYLENE) PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C9010 AND ASTM D2737. GATE VALVES SHALL BE NONRISING STEM, DOUBLE DISC, BRONZE DISC RESILIENT SEATED, CAST IRON OR DUCTILE IRON BODY AND BONNET IN ACCORDANCE WITH AWWA C509 AND
 PRESSURE RATED FOR 250 PSI. TEN GAUGE COPPER TRACER WIRE SHALL BE PLACED WITH ALL PIPES.
- VALVE BOX SHALL BE CAST IRON WITH A BASE COMPATIBLE WITH VALVE, 5 INCHES IN DIAMETER, SCREW TYPE EXTENSION AT TOP AND A COVER THAT READS "WATER". • CURB STOPS SHALL HAVE A BRONZE BODY, GROUND KEY PLUG OR BALL WITH WIDE TEE HEAD. THE CURB STOP SHALL BE COMPATIBLE WITH ADJOINING PIPES. THE SERVICE BOX SHALL HAVE A TELESCOPING TOP SECTION WITH A LENGTH THAT PLACES THE ADJUSTMENT CENTERED WHEN BURIED TO THE APPROPRIATE DEPTH. THE SERVICE BOX SHALL BE OF A SIZE AND TYPE THAT IS COMPATIBLE WITH THE CURB STOP. THE COVER SHALL HAVE THE LETTERING "WATER".
- ALL METERS, VAULTS AND BACKFLOW SHALL MEET THE REQUIREMENTS OF ROCKDALE COUNTY FIRE HYDRANTS SHALL CONFORM TO THE REQUIREMENTS OF ROCKDALE COUNTY AND AWWA C502. DRAIN STONE SHALL HAVE 100% PASSING THE 1-1/2 INCH SIEVE, 90-100% PASSING THE 1 INCH SIEVE, 35-95% PASSING THE 1/2 INCH SIEVE AND 0-15% PASSING THE 1/4 INCH SIEVE. ALL HYDRANTS SHALL INCLUDE A GATE VALVE AND BOX LOCATED AT THE HYDRANT BRANCH TO SHUT OFF THE HYDRANT LINE. DUCTILE IRON PIPE SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C600 AND BE ENCASED IN SELECT BACKFILL WHICH MEANS NO STONE OR OTHER MATERIAL GREATER THAN 2 INCHES IN ANY DIRECTION.
- PVC, PEAND COPPER PIPE SHALL BE PLACED PER MANUFACTURERS RECOMMENDATIONS AND EMBEDDED IN A 6 INCH SAND ENCASEMENT MEASURED FROM OUTSIDE SURFACE OF THE PIPE TO ALL BEDDING AND ENCASEMENTS SHALL BE COMPACTED WITH CARE TO ACHIEVE PROPER COMPACTION WITHOUT DAMAGING THE PIPE, FITTINGS OR APPURTENANCES.
- ALL WATER MAIN FITTINGS AND VALVES SHALL BE TESTED FOR PRESSURE AND LEAKAGE IN ACCORDANCE WITH AWWA C600. TEST WATER SHALL BE POTABLE. TEST PRESSURE SHALL NOT BE LESS THAN 1.25 TIMES THE WORKING PRESSURE AT THE HIGHEST POINT AND 1.5 TIMES THE WORKING PRESSURE AT THE TESTING POINT. THE PRESSURE MAY NOT DROP MORE THAN 5 PSI DURING THE 2 HOUR TEST. LEAKAGE SHALL NOT EXCEED MORE THAN (L=(SD(P)*0.5)/133,200) WHERE "L= ALLOWABLE LEAKAGE, IN GALLONS PER HOUR" "S= LENGTH OF PIPE TESTED, IN FEET" "D= NOMINAL DIAMETER OF PIPE, IN INCHES" "P=AVERAGE TEST PRESSURE DURING TEST, IN POUNDS PER SQUARE INCH (GAUGE) DURING THE SAME 2 HOUR DURATION. ALL TAP AND/OR CONNECTION MATERIAL AND WORK SHALL BE DONE IN ACCORDANCE WITH AND COORDINATED WITH ROCKDALE COUNTY. WHEN THE AUTHORITY SO REQUIRES, THE TAPS AND/OR CONNECTIONS SHALL BE DONE BY THE AUTHORITY THEMSELVES AND PAID FOR BY THE CONTRACTOR.
- 11. ALL MAIN LINES AND APPROPRIATE APPURTENANCES SHALL BE FLUSHED AND DISINFECTED IN ACCORDANCE WITH AWWA C651 AND THE REQUIREMENTS OF THE APPROPRIATE HEALTH DEPARTMENT

12. THE CONTRACTOR SHALL COORDINATE ALL TESTING AND DISINFECTING WITH ROCKDALE COUNTY. IF PROFESSIONAL ENGINEER CERTIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST TEN DAYS PRIOR TO THE START OF WORK.

JASON P. BROWN

ANDREW HAMMER

770-278-7268

10. OTHER FITTING AND APPURTENANCES NOT PART OF THE MAIN LINE TESTING SHALL BE TESTED BY VISUAL INSPECTION FOR LEAKAGE UNDER NORMAL WORKING PRESSURES.

13. FAILURE OF ANY TESTING SHALL REQUIRE THE CONTRACTOR TO REPAIR OR REPLACED THE FAILED SECTION AT NO ADDITIONAL EXPENSE TO THE CONTRACT.

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Utilities/Services shown are for Contractors' convenience. Items #53274 - EXP. 05.01.2023

are shown schematically and neither the site design profession actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to secure and use the services of a private utility locator firm dur the entire course of work and shall pay for said services field verifying location and depth of utilities that are to be save and protected). Contractor shall notify the site design professiona of any utility conflicts prior to installation of new utilities, grading etc. The Contractor, at their expense, shall be responsible to damaged, whether shown or not. Abandonment, relocation, etc. of

utilities shall be coordinated with the respective utility company.

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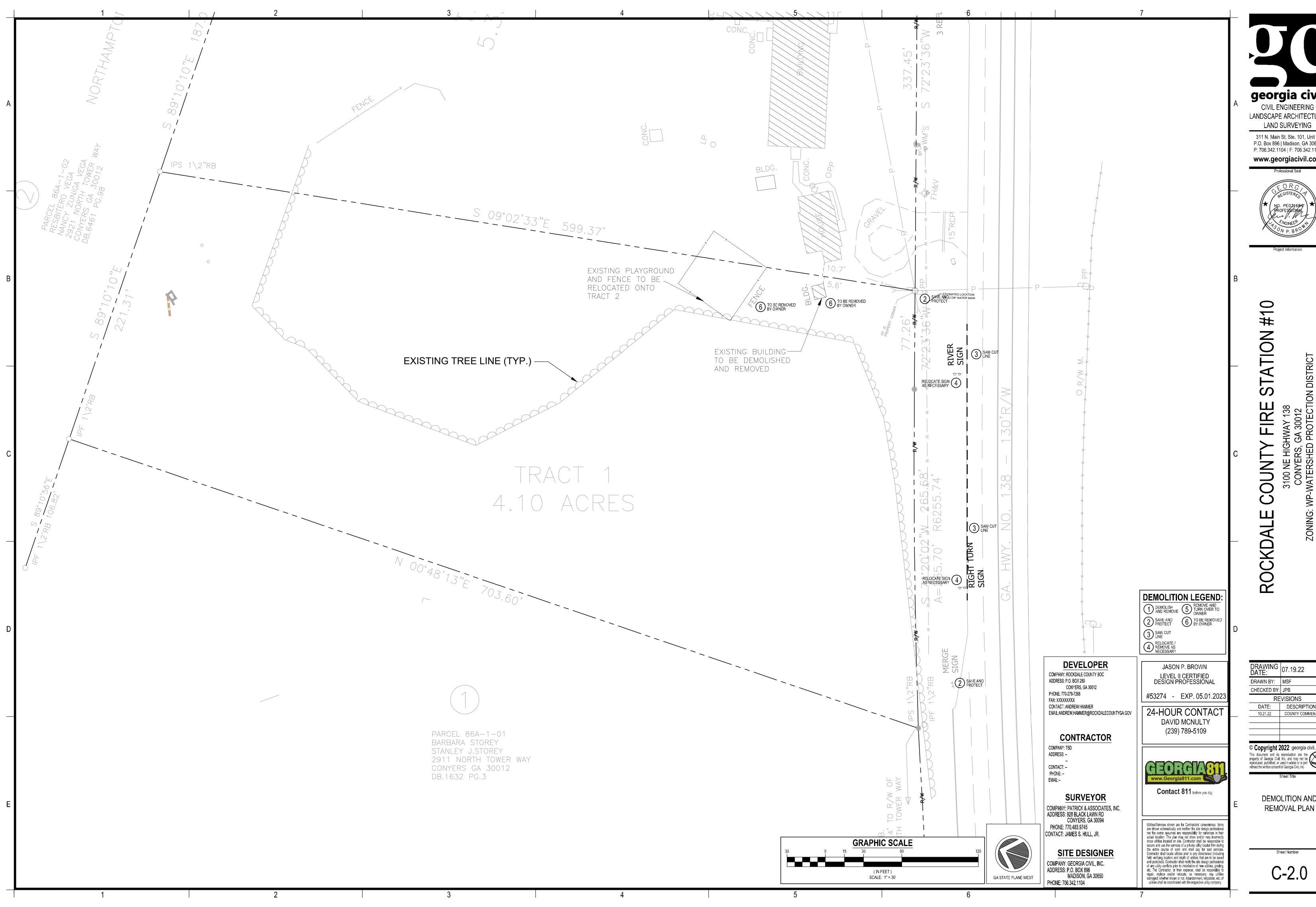
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DATE: DESCRIPTION:

10.21.22 COUNTY COMMENTS

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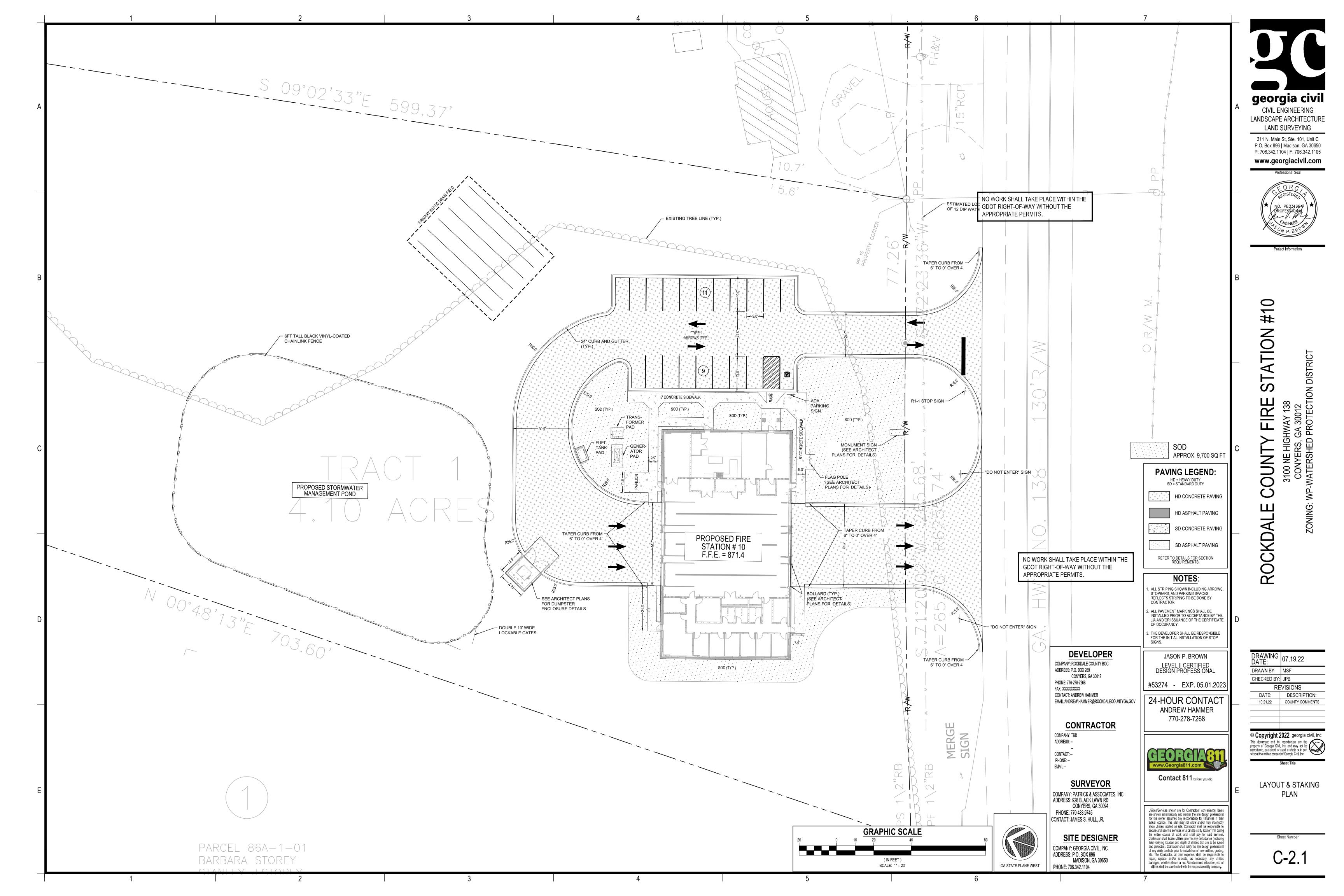
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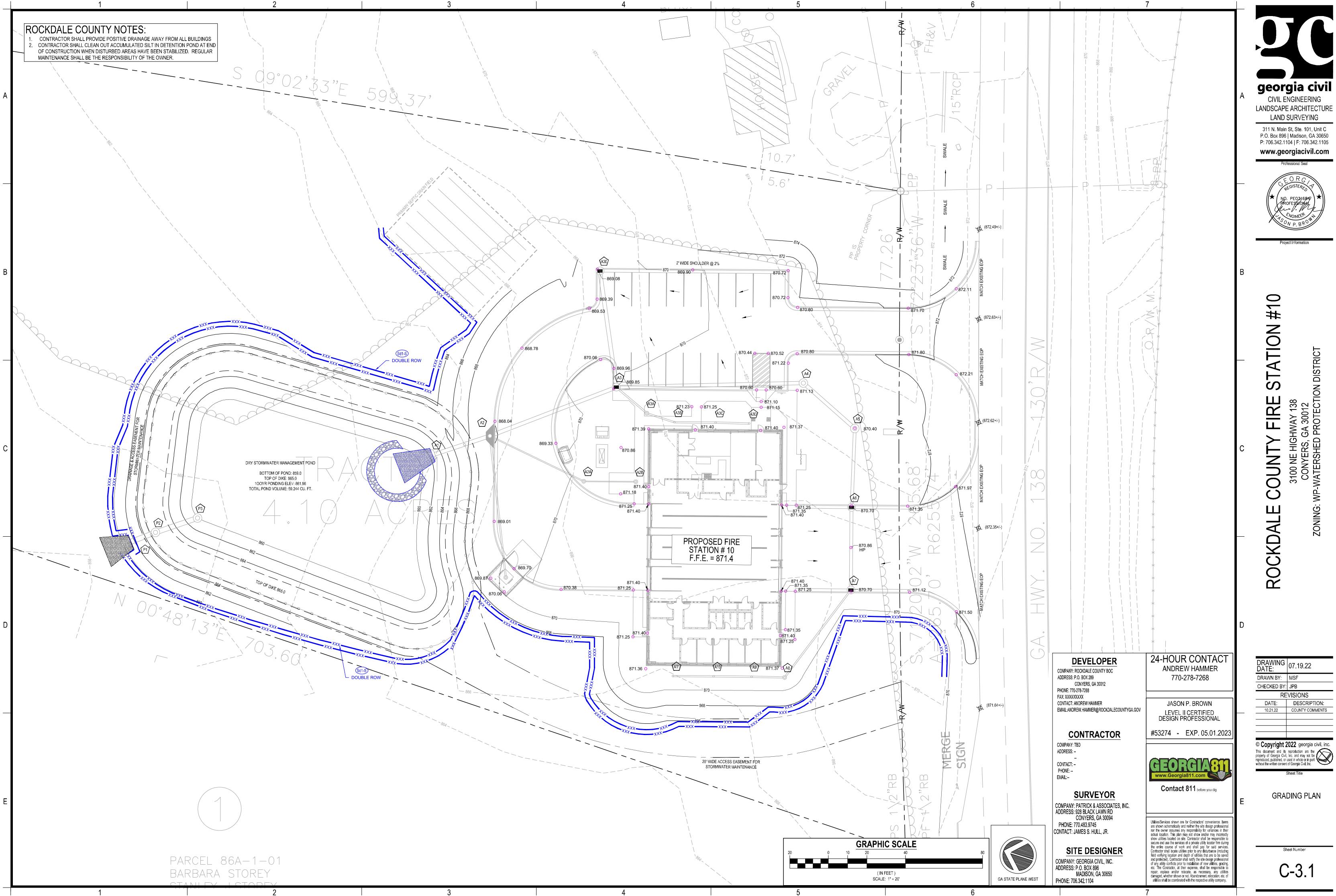
10.21.22 COUNTY COMMENTS

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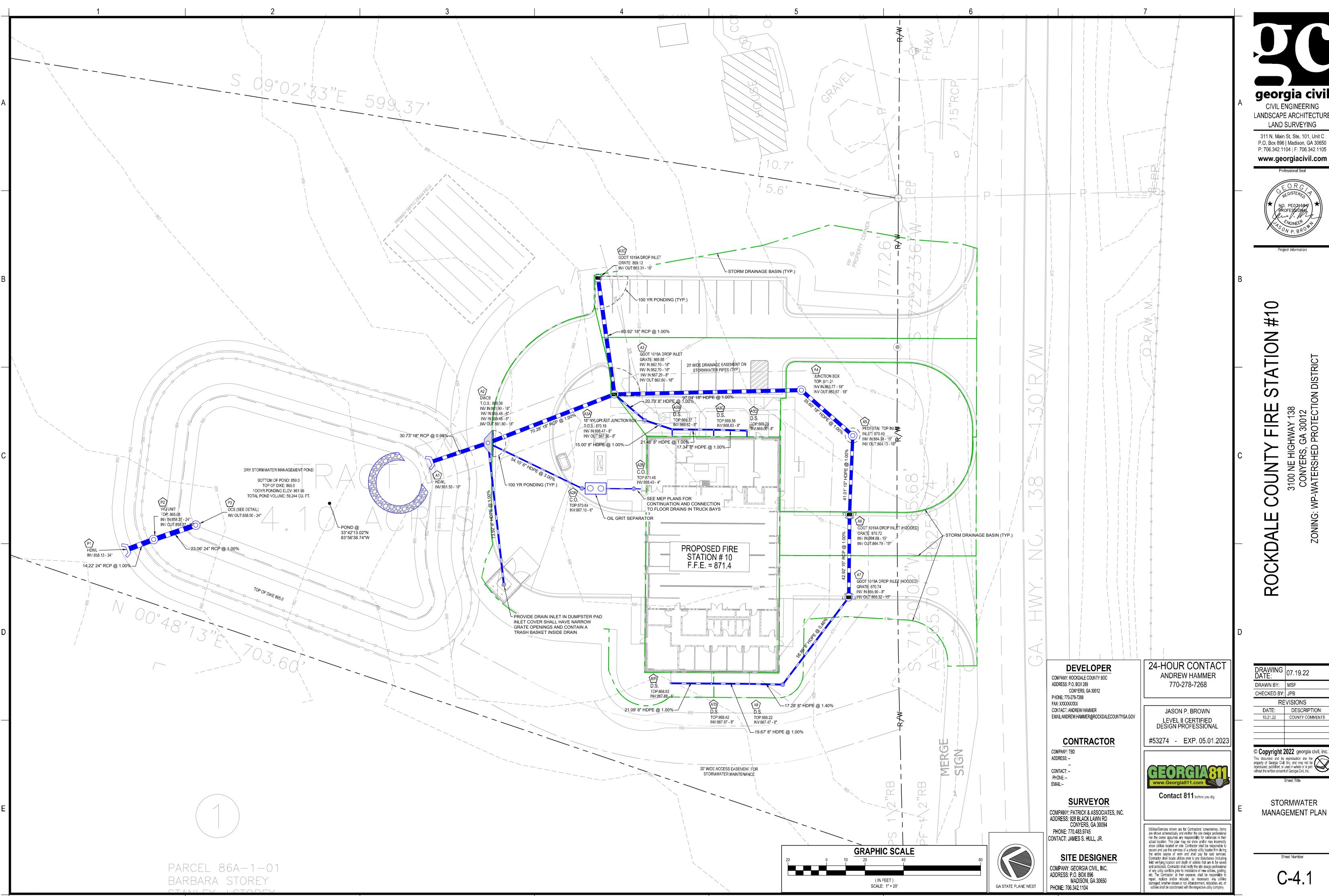
DEMOLITION AND REMOVAL PLAN





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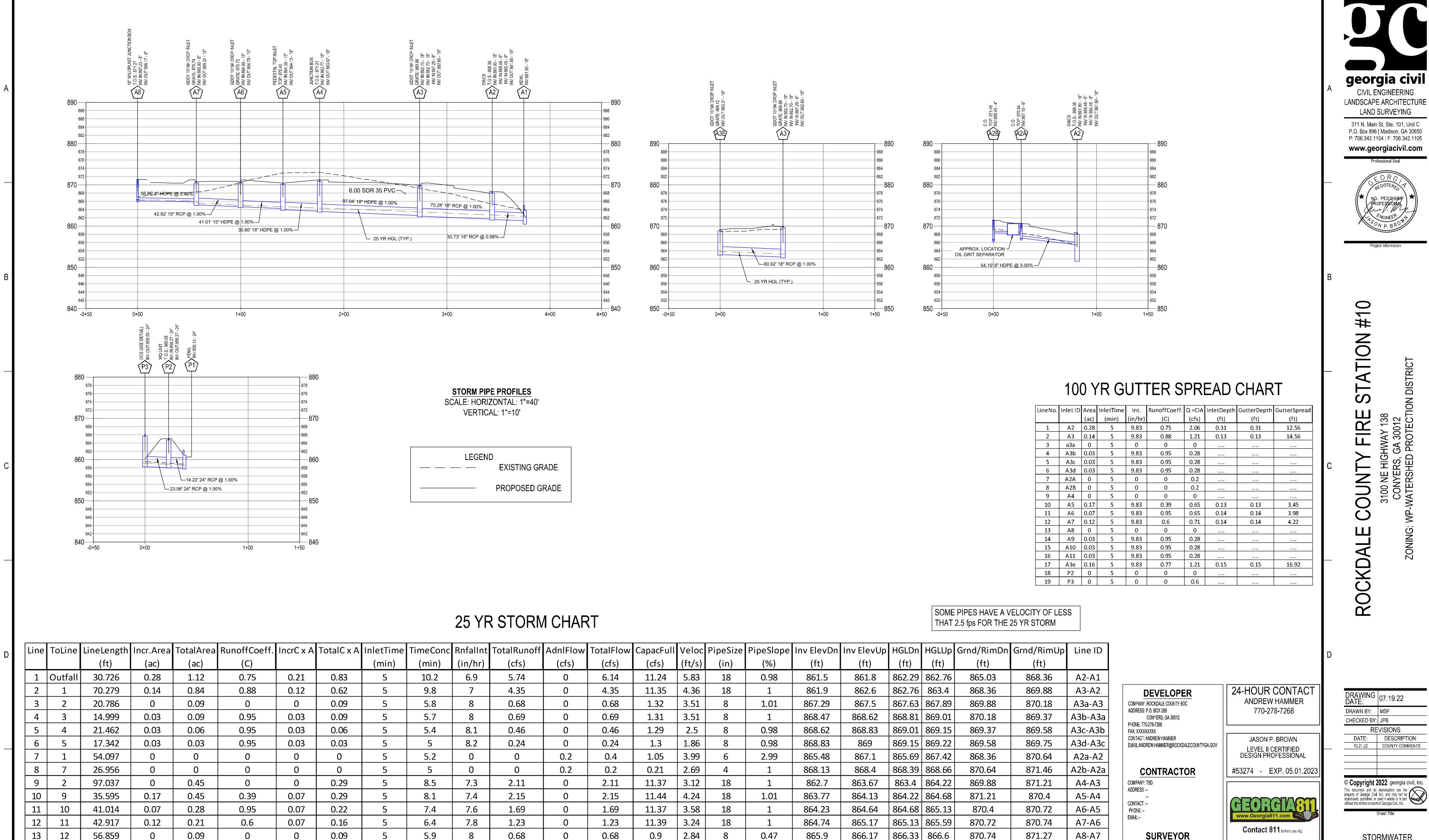
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STORMWATER MANAGEMENT PLAN



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867.67

867.88

863.31

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858.5

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858.13

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866.33 866.6

867.54 867.86

867.86 867.99

867.99 | 868.1

858.35 858.54

858.54 | 858.77

863.69

863.4

870.74

871.27

868.22

868.42

869.88

862.29

865.08

871.27

868.22

868.42

868.63

869.12

865.08

866

A8-A7

A9-A8

A10-A9

A11-A10

A3e-A3

P2-P1 (1)

P2-P1

SURVEYOR

COMPANY: PATRICK & ASSOCIATES, INC.

CONYERS, GA 30094

SITE DESIGNER

MADISON, GA 30650

ADDRESS: 928 BLACK LAWN RD

PHONE: 770.483.9745

CONTACT: JAMES S. HULL, JR.

COMPANY: GEORGIA CIVIL, INC.

ADDRESS: P.O. BOX 896

PHONE: 706.342.1104

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18 | Outfall

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STATION #10 FIRE

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secure and use the services of a private utility locator firm during the entire course of work and shall pay for said services

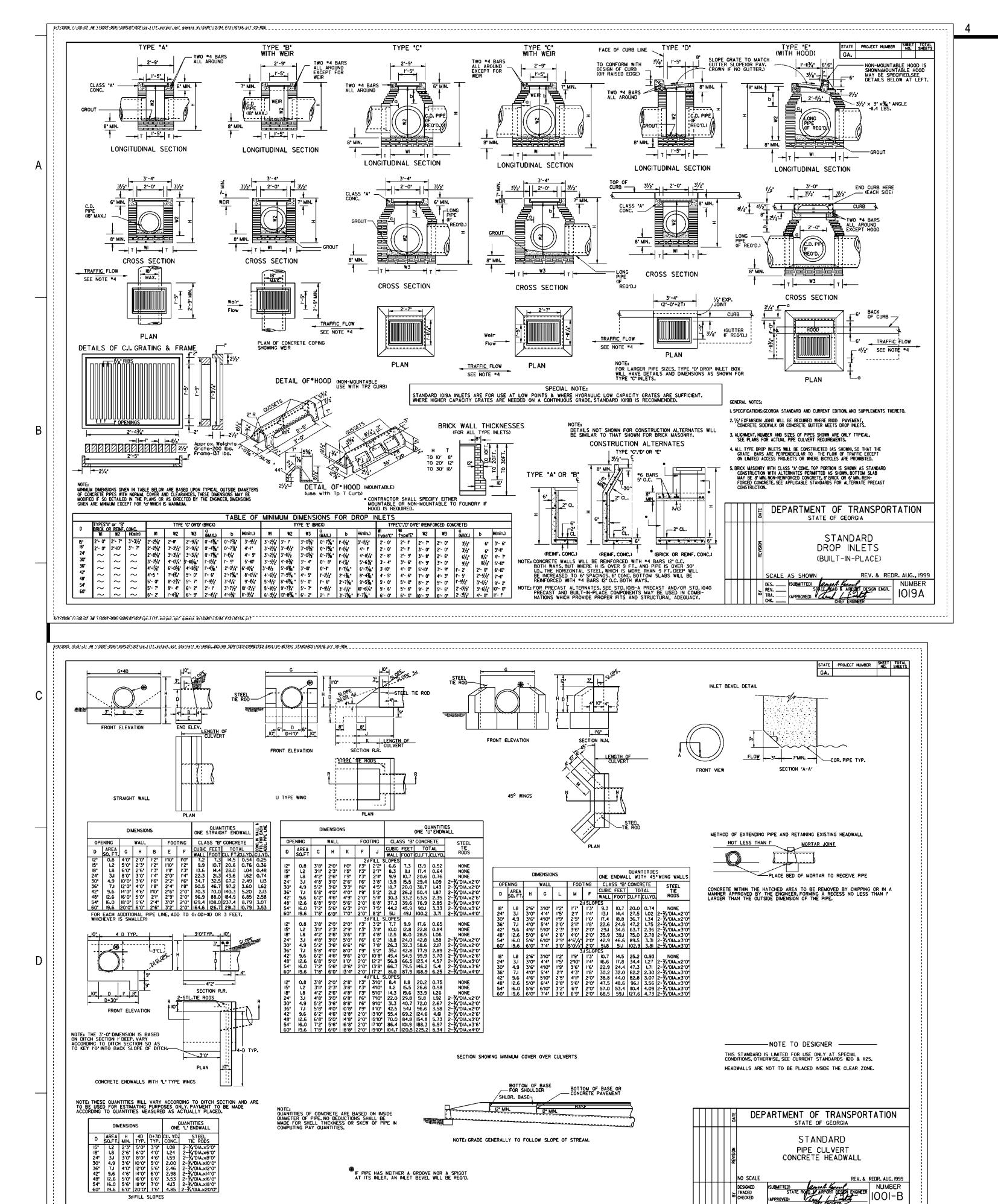
field verifying location and depth of utilities that are to be save and protected). Contractor shall notify the site design professiona

of any utility conflicts prior to installation of new utilities, gradir etc. The Contractor, at their expense, shall be responsible

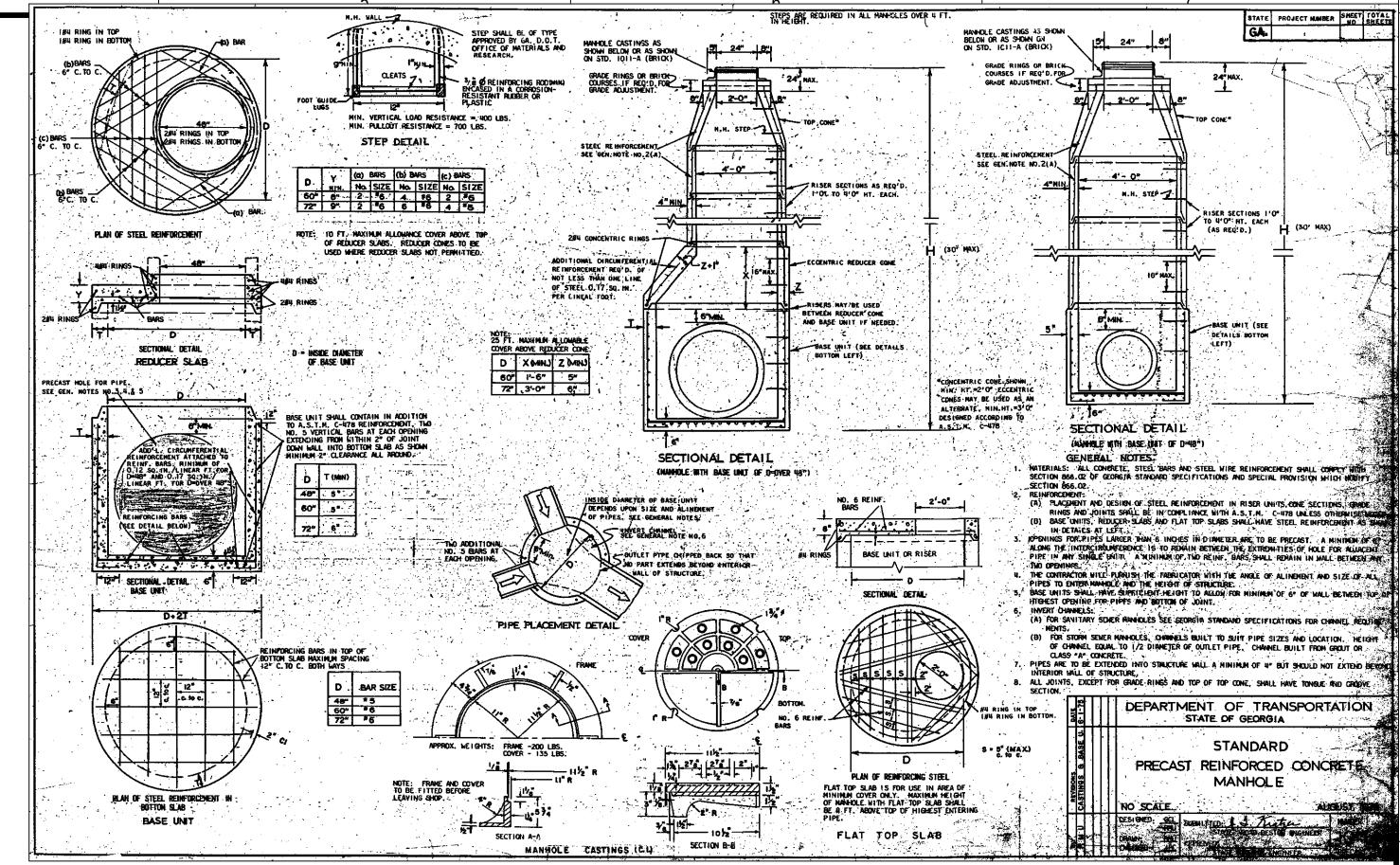
damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

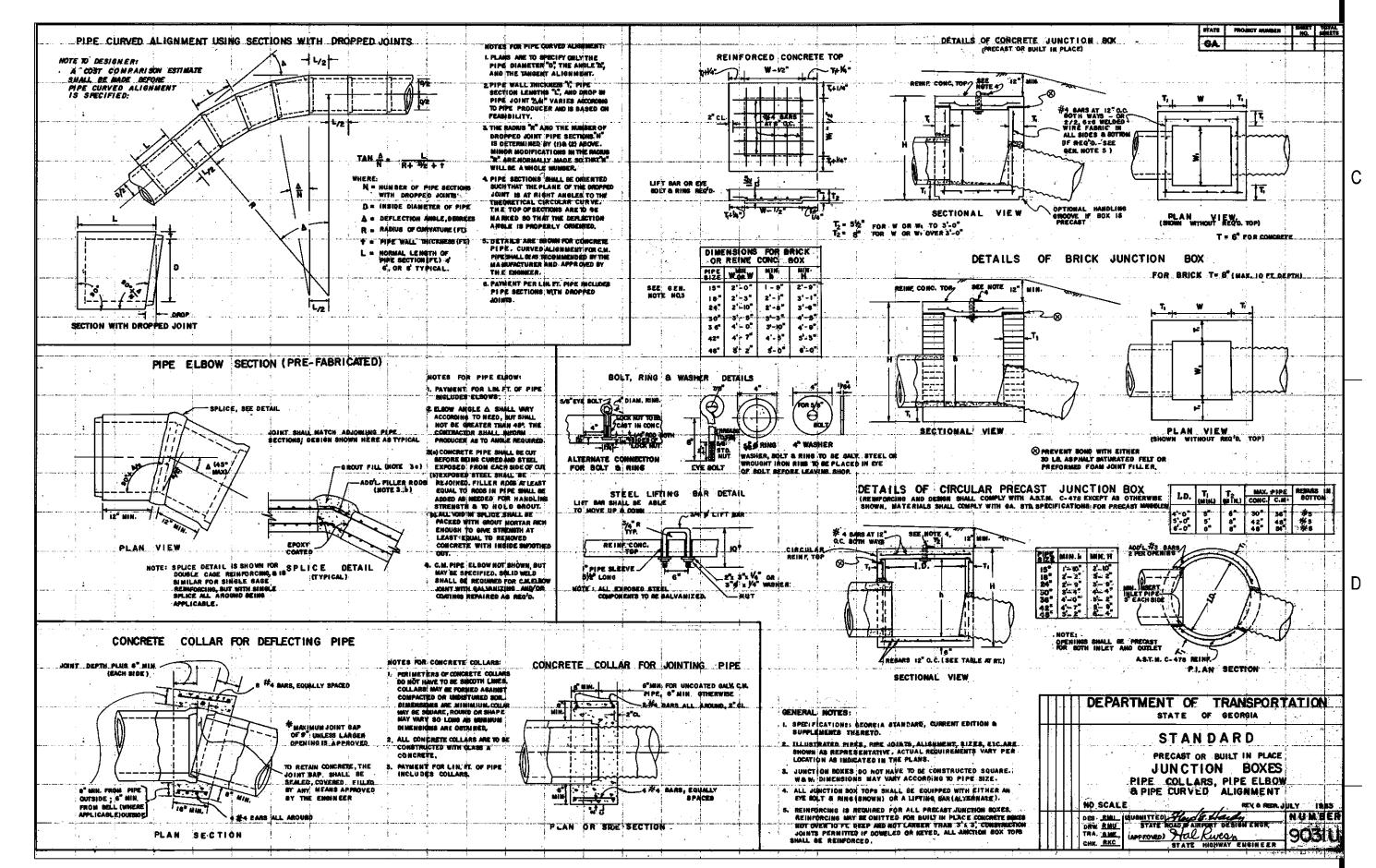
STORMWATER MANAGEMENT SYSTEM **PROFILES** Utilities/Services shown are for Contractors' convenience. Items are shown schematically and neither the site design professiona nor the owner assumes any responsibility for variances in their actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to

> Sheet Number C-4.2



9/9/2005 DESTRUCT NO NODOT-DSHINGUROTNOCKNOCT OF THE CONTROL OF TH





NOT

ALL DETAILS SHOWN ON THIS PAGE ARE STANDARD
DETAILS USED BY GEORGIA CIVIL FOR STORM PIPES.
REFER TO THE STORMWATER MANAGEMENT PLAN FOR
THE PIPE(S) TYPES TO BE USED THROUGHOUT THE SITE.
THE PLACEMENT OF THESE DETAILS ON THE PLAN DOES
NOT CONSTITUTE AN APPROVED ALTERNATE FOR PIPE
MATERIALS. OWNER/CONTRACTOR SHALL COORDINATE
WITH THE DESIGN PROFESSIONAL PRIOR TO ANY MATERIAL
SUBSTITUTIONS. REFER TO SIZING CHART ON THIS PAGE
FOR CLASS OF RCP AND GAUGE OF AST2

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Project Informa

ROCKDALE COUNTY FIRE STATION #1

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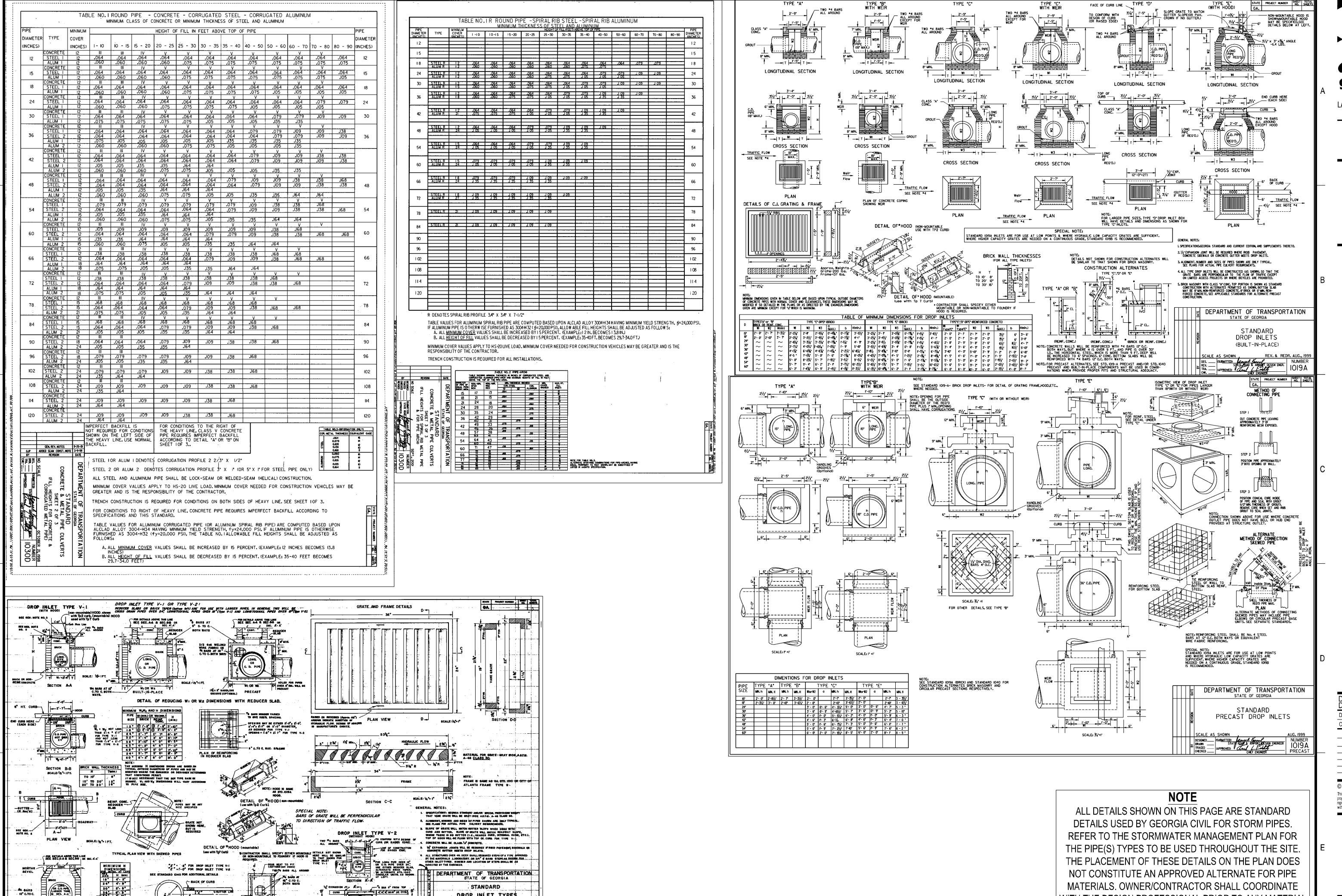
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Sheet Title

STORMWATER
MANAGEMENT SYSTEM
DETAILS

C-4.3



DROP INLET TYPES

V-1 AND V-2

SCALE AS SHOWN

ORE RIMUMUMITED FACE ARROWS BESINDER OF STAY BROWNER OF STAY RESIDENCE OF STAYE RESIDENCE OF STAYE RESIDENCE.

SEC. B'-8' WILL THE SAME AS SEC. B-B (for Laft), BUT WITHOUT HOOD

SCALE TO SALE TO

NOTE: STO 1040 ALTERNATE PERMITTED WITH ANY PIPE SIZE OR BKEW.

ALTERNATE - CAST-IN-PLACE REINFORCED CONCRETE

ALTERNATE - STANDARD 1040 CIRCULAR

ECTIONS-PLAN VIEW LOCATION.

ALTERNATE - REDUCTION OF WI OR WI

DIMENSIONS WITH BRICK MASONRY

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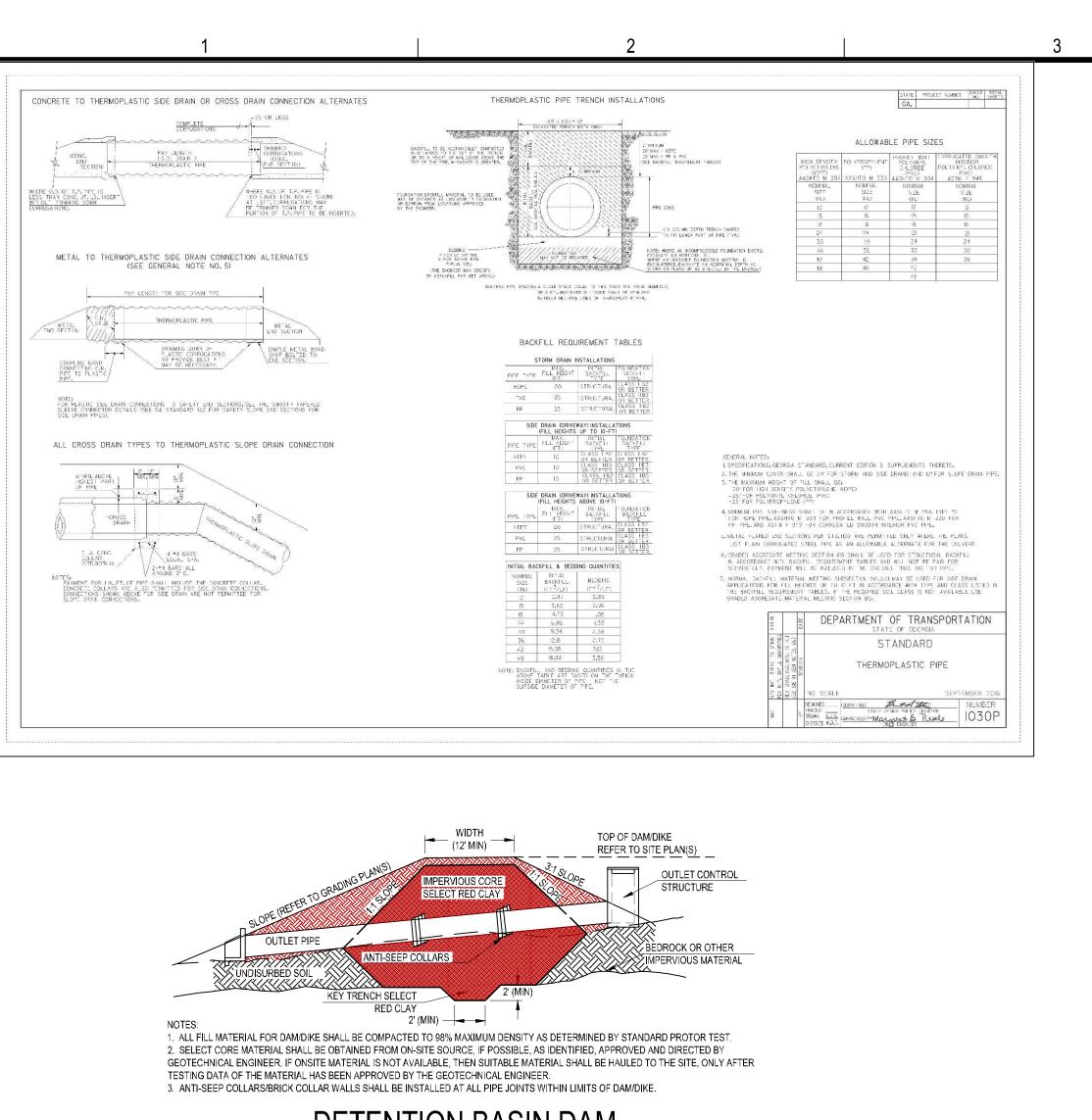
> **STORMWATER** MANAGEMENT **DETAILS**

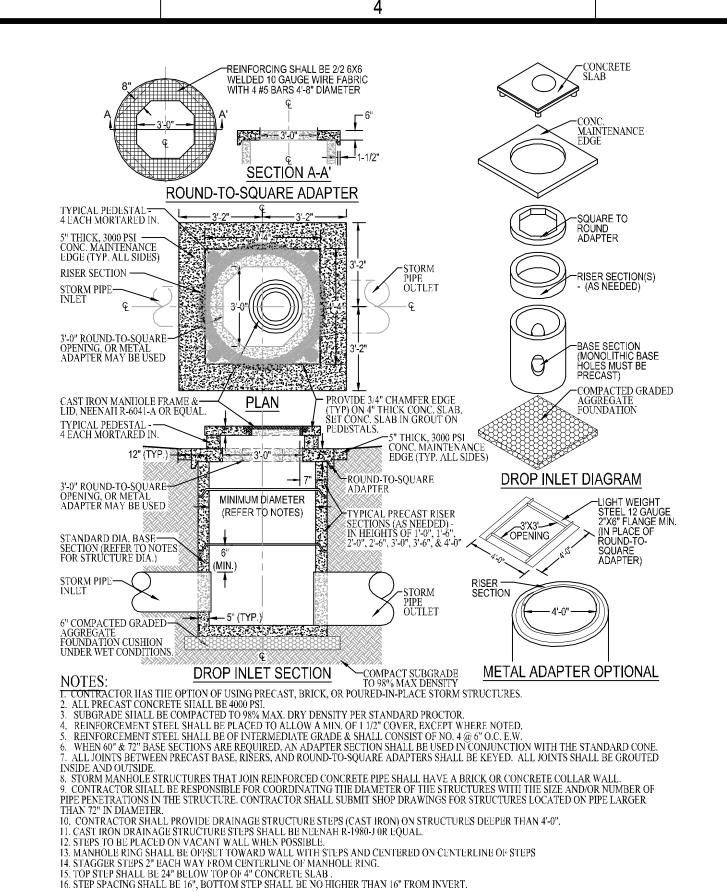
> > C-4.4

WITH THE DESIGN PROFESSIONAL PRIOR TO ANY MATERIAL

SUBSTITUTIONS. REFER TO SIZING CHART ON THIS PAGE

FOR CLASS OF RCP AND GAUGE OF AST2

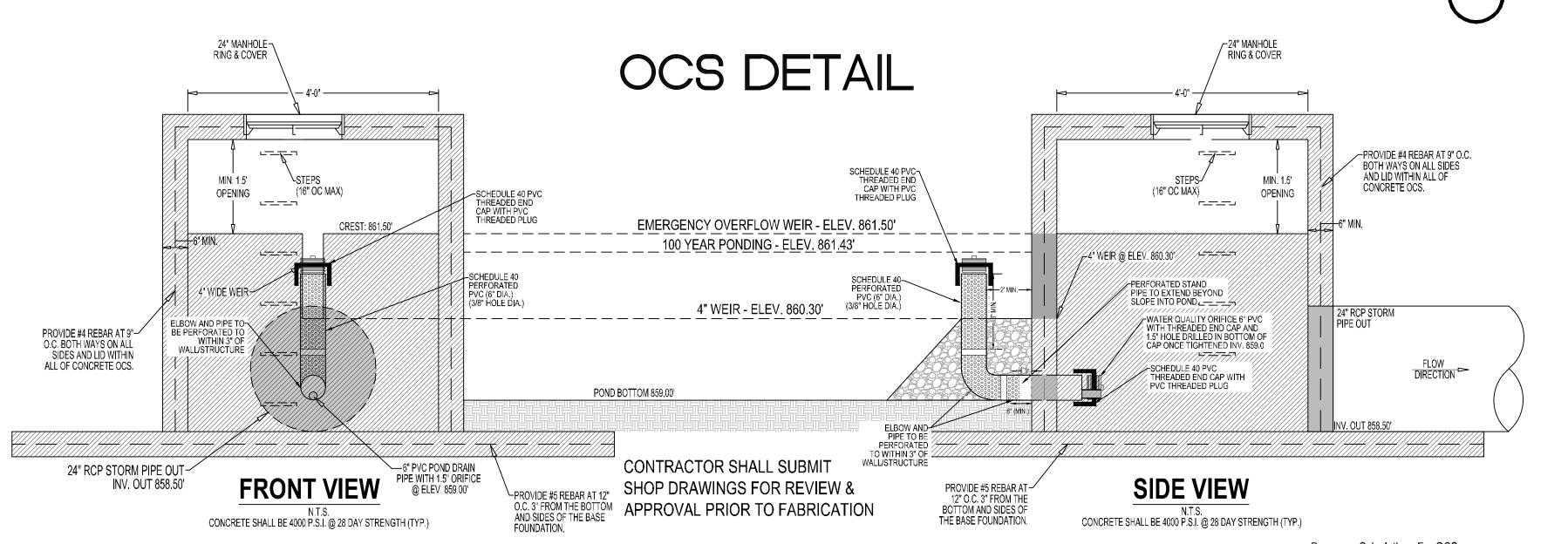




PRECAST DROP INLET (D.I.) - PEDESTAL TOP

<u>TOP OF DIKE = 865.00'</u> <u>TOP_OF_DIKE = 865.00'</u> ____ (BOTTOM OF POND) UNDISURBED SOIL SELECT RED CLAY 1. ALL FILL MATERIAL FOR DAM/DIKE SHALL BE COMPACTED TO 98% MAXIMUM DENSITY AS DETERMINED BY STANDARD

3. ANTI-SEEP COLLARS/BRICK COLLAR WALLS SHALL BE INSTALLED AT ALL PIPE JOINTS WITHIN LIMITS OF DAM/DIKE



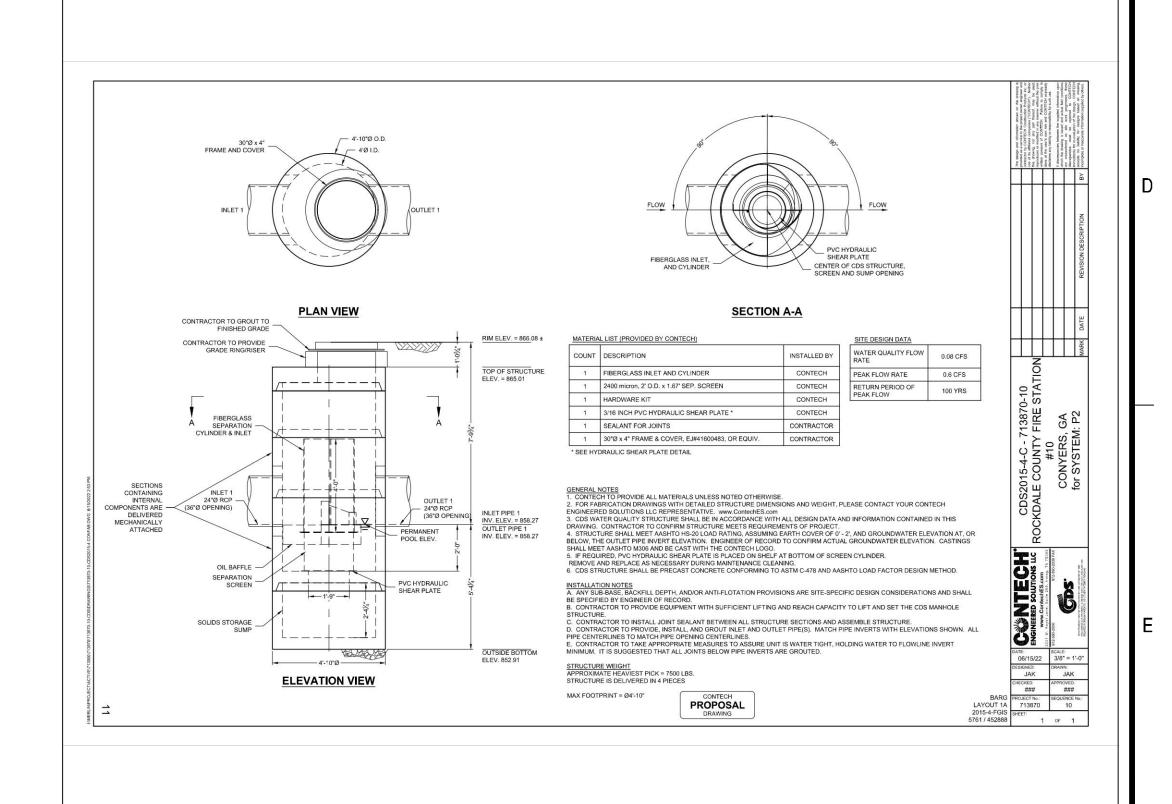
CIRCULAR OUTLET CONTROL STRUCTURE

PRECAST OUTLET CONTROL STRUCTURE BOX SHALL EXTEND A MINIMUM OF 6" LOWER THAN THE LOWEST INVERT. PRECAST STRUCTURE SHALL BE OPEN IN THE BOTTOM WHEN DELIVERED TO SITE, AND SHALL BE SET INTO CONCRETE WHEN BASE FOUNDATION IS POURED IN PLACE. SIX INCHES BELOW THE LOWEST INVERT, #5 REBAR SHALL EXTEND THROUGH DRILLED HOLES, ONE FOOT ON CENTER, ON ALL FOUR SIDES. CONTINUOUS SECTIONS OF #5 REBAR SHALL EXTEND THROUGH THE HOLES FORM ONE SIDE OF THE BOX, ACROSS THE INSIDE OF THE BOX, AND THROUGH THE MATCHING HOLE ON THE OTHER SIDE OF THE BOX. THE REBAR SHALL EXTEND A MINIMUM OF 10" BEYOND EACH OUTSIDE FACE OF THE BOX AND BE WIRED TO THE REBAR SET IN THE CONCRETE BASE FOUNDATION. CONCRETE SHALL BE POURED AND FINISHED UP TO THE ELEVATION OF THE LOWEST INVERT ON THE INSIDE AND OUTSIDE OF THE OUTLET CONTROL STRUCTURE BOX.

Buoyancy Calculations For OCS: HEIGHT OF OCS= 5 FT TOP OF STRUCTURE (EMER. OVRFLW) = 861.5 **BOTTOM OF MANHOLE= 858.5** 100YR STAGE= 861.43 DEPTH OF WATER TOP-BOTTOM= 2.93 FT VOLUME WATER DISPLACED= (3.14)(6)(2.93)=55.2 CF Fb displaced water: Fb dw= (62.4 lb/cf) * 55.2 cf= 3,444.55 lbs Concrete Volume of Manhole With 6" Walls=

(3.14)(6)(2.93) - (3.14)(5)(2.93) = 9.2 cfSpecific weight concrete= 150 lb/cf Weight of Manhole= 9.2*150 lb/f= 1,380 lbs Required weight of concrete footing and manhole= = 2,064.55 lbs

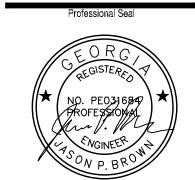
Required Weight of Footing= 3,444.55 - 2,064.55 = 1380 lbs Volume Reg= 1380/150= 9.2 cf Dimensions of footing= <u>3.5'*3.5'x1.00'</u>= 12.25cf



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STATION #1

ROCKDAL

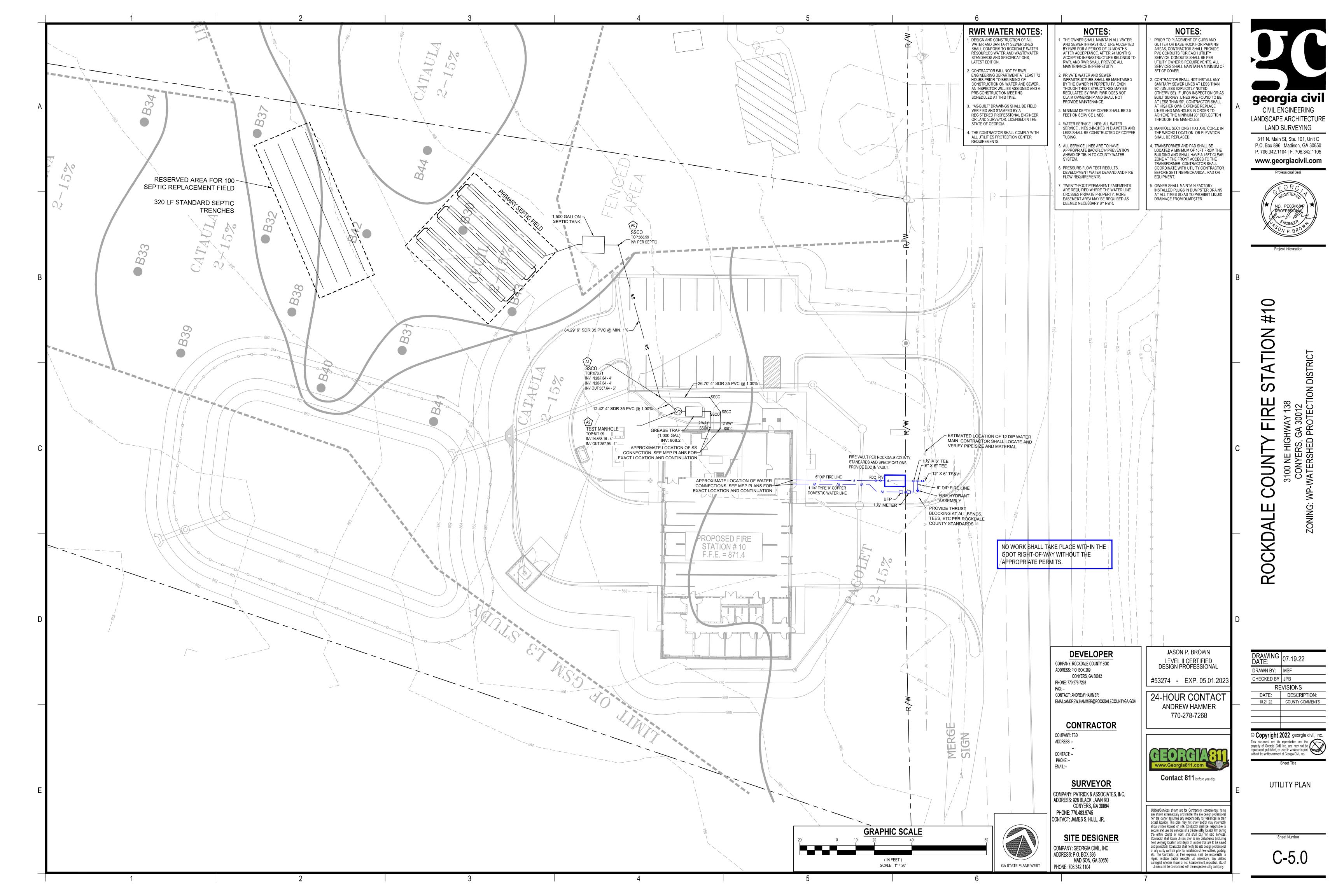
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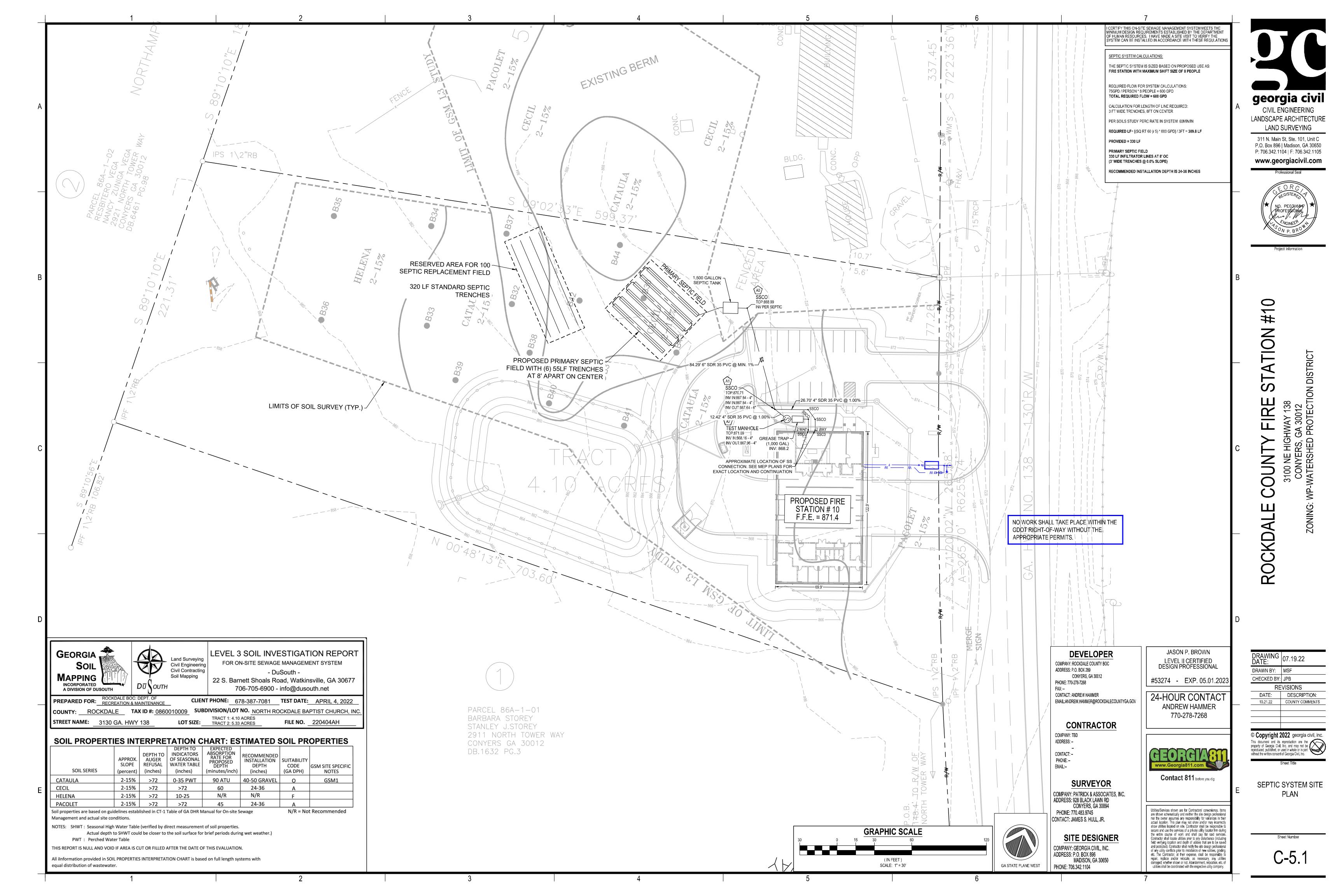
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> **STORMWATER MANAGEMENT DETAILS**

> > C-4.5





(i). Except as provided in Part IV (iii), below, no construction activities shall be conducted within a 25 foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director has determined to allow a variance that is at least as protective of natural resources and the environment in accordance with the provisions of O.C.G.A. 12-7-6, or where a drainage structure or a roadway drainage structure must, be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented, or along any ephemeral stream, or where bulkheads and sewalls must be constructed to prevent the erosion of the shoreline on Lake Oconee and Lake Sinclair. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and are implemented:

public drinking water system reservoirs

stream crossings for water lines and sewer lines, provided the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare or disturbed areas within the

stream crossings fro any utility lines of any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of th Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power, provided that: (a) the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer. (b) native raparian vegetation is re-established in any bare or disturbed areas within the buffer and (c) the entity is no a secondary permittee for a project within a common development

buffer crossings for fences, provided that the crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare areas within the buffer. stream crossings for aerial utility lines, provided that (a) the new utility line right-of-way width does not exceed 100 linear feet, (b) utility lines are routed and constructed so as to minimize the number of stream crossings and disturbance to the buffer, (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e. disturbance of underlying vegetation is minimized), and (d) native riparian vegetation is re-established in any bare or disturbed areas within the buffer. The plan shall include a description of the stream crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and

right-of-way posts, guy wires, anchors, survey markers, and the replacement or maintenance of existing utility structures within the current right-of-way undertaken or finance in whole or in part by the Department of Transportation, the Georgia Highway Authority or State Road and Tollway Authority or undertaken by any county municipality, provided that (a) the area of land disturbance does not exceed 100 square feet per structure. (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) native riparian vegetation is re-established in any bare areas or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project ocated within a common development or sale under this permit;

right-of-way posts, guy-wires, anchors, survey markers, and the replacement or maintenance of existing utility structures within the current right-of-way by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instumentality of the United Stated ged in the generation, transmission or distribution of power, provided that (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of uffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit; and

maintenance (excluding dredging), repair and/or upgrade of Soil and Water Conservation District watershed dams when under the technical supervision of USDA Natural

(ii). No construction activities shall be conducted within a 50 foot buffer, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any State waters classified as "trout streams" except when approval is granted by the Director for alternate buffer requirements in accordance wit the provisions of O.C.G.A. 12-7-6, or where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as "trout steams" which discharge an average appual flow of 25 callons per minute or less shall have a 25 foot buffer or they may be pined, at the discretion of the permittee pursuant to the terms of a rule providing for a general variance promulgated by the Board of Natural Resources including notification of such to EPD and the Local Issuing Authority of the location and extent of piping and prescribed methodology for minimizing the impact of such piping and for measuring the volume of water discharged by the stream. Any such pipe must stop short of the ownstream permittee's property, and the permittee must comply with the buffer requirement for any adjacent trout streams. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and are implemented:

stream crossings for water lines and sewer lines, provided the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare or disturbed areas within the

stream crossings fro any utility lines of any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utilify under the regulatory jurisdiction of th Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power, provided that: (a) the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, (b) native raparian vegetation is re-established in any bare or disturbed areas within the buffer and (c) the entity is no a secondary permittee for a project within a common development or

buffer crossings for fences, provided that the crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare areas within the buffer, stream crossings for aerial utility lines, provided that (a) the new utility line right-of-way width does not exceed 100 linear feet, (b) utility lines are routed and constructed so as to minimize the number of stream crossings and disturbance to the buffer, (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e. disturbance of underlying vegetation is minimized), and (d) native riparian vegetation is re-established in any bare or disturbed areas within the buffer. The plan shall include a

description of the stream crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and right-of-way posts, guy wires, anchors, survey markers, and the replacement or maintenance of existing utility structures within the current right-of-way undertaken or finance i whole or in part by the Department of Transportation, the Georgia Highway Authority or State Road and Tollway Authority or undertaken by any county municipality, provided that (a) the area of land disturbance does not exceed 1,000 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure. (c) native riparian vegetation is re-established in any bare areas or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project

located within a common development or sale under this permit; right-of-way posts, guy-wires, anchors, survey markers, and the replacement or maintenance of existing utility structures within the current right-of-way by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instumentality of the United State ngaged in the generation, transmission or distribution of power, provided that (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit; and maintenance (excluding dredging), repair and/or upgrade of Soil and Water Conservation District watershed dams when under the technical supervision of USDA Natural

(iii). Except as provided in Part IV (iv) below, no construction activity shall be conducted within a 25 foot buffer along coastal marshlands, as measured horizontally from the coastal marshland-upland interface, as determined in accordance with Part 4 of Article 4 of Chapter 5 of Title 12, the Coastal Marshlands Protection Act of 1970, and the rules and regulatio promulgated thereunder, except where the Director determines to allow a variance that is at least as protective of natural resources and the environment in accordance with the provisions of O.C.G.A. 12-7-6, or where otherwise allowed by the Director pursuant to Code Section 12-2-8, or where an alteration within the buffer area has been authorized pursuant to Code Section 12-5-286, or for maintenance of any currently serviceable structure, landscaping, or hardscaping, including bridges, roads, parking lots, golf courses, golf cart paths, retaining walls, bulkheads, and patios, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented, or where a drainage structure or roadway structure is constructed or maintained, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented, or on the landward side of any currently serviceable shoreline stabilization structure, or for the maintenance of any manmade stormwater detention basin, golf course pond, or impoundment that is located entirely within the property of a single individual, partnership, or corporation, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and are implemented

crossings for utility lines that cause a width of disturbance of not more than 50 feet within the buffer

Any land disturbing activity conducted pursuant to and in compliance with a valid and effective land-disturbing permit issued subsequent to April 22, 2014 and prior to December Any lot for which the preliminary plat has been approved prior to December 31, 2015 if roadways, bridges, or water and sewer lines have been extended to such lot prior to the ffective date of this Act and if the requirement to maintain a 25 foot buffer would consume at least 18 percent of the high ground of the platted lot otherwise available for

buffer crossings for fences, provided that the crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare areas within the buffer crossings for aerial utility lines, provided that (a) the new utility line right-of-way width does not exceed 100 linear feet, (b) utility lines are routed and constructed so as to minimize the number of stream crossings and disturbance to the buffer (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e. disturbance of underlying vegetation is minimized), and (d) native riparian vegetation is re-established in any bare or disturbed areas within the buffer. The plan shall include a

description of the stream crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and right-of-way posts, guy wires, anchors, survey markers, and the replacement or maintenance of existing utility structures within the current right-of-way undertaken or finance in whole or in part by the Department of Transportation, the Georgia Highway Authority or State Road and Tollway Authority or undertaken by any county municipality, provided

that (a) the area of land disturbance does not exceed 1,000 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) native riparian vegetation is re-established in any bare areas or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit: right-of-way posts, guy-wires, anchors, survey markers, and the replacement or maintenance of existing utility structures within the current right-of-way by any electric

Tembership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instumentality of the United Stated engaged in the generation, transmission or distribution of power, provided that (a) the area of land disturbance does not exceed 100 square feet per structure. (b) the area of r vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit; and maintenance (excluding dredging), repair and/or upgrade of Soil and Water Conservation District watershed dams when under the technical supervision of USDA Natural

(iv). Except as provided above, for buffers required pursuant to Part IV.(i). and (ii) and (iii), no construction activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed, state of vegetation until all land-disturbing activities on the construction site are completed. During coverage under this permit, a buffer cannot be thinned or trimmed of vegetation and a protective vegetative cover must remain to protect water quality and aquatic habitat and a natural canopy must be left in sufficient quantity to keep shade

EROSION. SEDIMENTATION. AND POLLUTION CONTROL PLAN CERTIFICATION: certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices (BMP's) required y the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation

nmission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GA

Georgia Civil Inc. JASON P. BROWN

Date: 07.19.22 Level II Certified Design Professional # 52374 5-1-2023 _, certify under penalty of law that this plan was prepared after site visit to the locations described herein by myself or my authorized agent, under my direct supervision. Signed: Date: 07.19.22
SIGNATURE OF PLAN PREPARER AND DATE

"The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation " in accordance with Part IV A 5 page 25 of the permit. * Signed: Date: 07.19.22
SIGNATURE OF PLAN PREPARER AND DATE

NATURE OF CONSTRUCTION ACTIVITY:

NEW CONSTRUCTION

HAYNES CREEK

3100 NE HIGHWAY 138 CONYERS, GA 30012

PROJECT LOCATION: PROJECT ADDRESS PROJECT TYPE: IMPROVEMENTS TO BE MADE: SITE ACREAGE:

RECEIVING WATERS:

WETLANDS OR WATERS OF US ON SITE:

THE EXISTING GRASSED AND WOODED SITE WILL BE DEVELOPED FOR NEW FIRE STATION INCLUDING STATION BUILDING, DRIVES, PARKING, DETENTION & WATER QUALITY FACILITIES, AND UTILITIES. 4.10 ACRES DISTURBED ACREAGE STATE WATERS ON SITE: PD BUFFER ENCROACH. PERMIT REQ'D STATE AND LOCAL BUFFERS ADHERED TO:

COEFFICIENT OR PEAK DISCHARGE FLOW PRE AND POST DEVELOPMEN CONDITIONS: PRE CN: 59 POST CN: 79 PRE FLOW: 5.9 CFS POST FLOW: 3.9 CFS (AT STUDY POINT SHOW IN HYDROLOGY STUDY

ESTIMATE OF RUNOFF

"Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit."

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.

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.

GSWCC EROSION CONTROL NOTES:

Any amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.

Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

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 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

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.

6. Any disturbance left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.

ADDITIONAL EROSION CONTROL NOTES:

Maximum fill slopes are 3:1, 3 horizontal to 1 vertical, unless otherwise noted

Maximum cut slopes are 3:1, 3 horizontal to 1 vertical, unless otherwise noted

All buffers, tree save areas, and/or limits of disturbance shall be clearly marked in the field by the contractor by flagging or fencing and signage, prior to commencement of any land disturbance activities or clearing/grubbing activities. Buffers, tree save areas, and areas beyond limits of disturbance are to be left undisturbed in their natural state.

Contractor shall not disturb underground utilities while installing Erosion, Sedimentation and Pollution Control Practices. Contractor shall have all utilities field located before

Contractor shall notify design professional 48 hours before beginning each phase of construction.

Contractor shall notify ROCKDALE COUNTY inspectors 24 hours before beginning each phase of construction.

Construction debris and/or waste shall not be buried or burned on site. All construction debris and/or waste shall be taken to a state approved landfill.

All buffers and tree save areas shall be clearly identified by flagging and/or fencing prior to commencement of any land disturbance activities. The installation of erosion and sedimentation control measures and practices shall occur prior to or concurrent with land disturbing activities and construction on the site and shall be maintained until permanent ground cover is established to 90%

All initial phase Erosion, Sedimentation and Pollution Control best management practices shall be installed prior to any grading.

All Erosion, Sedimentation and Pollution Control best management practices shall be inspected and repaired of damage daily. Any accumulated silt shall be removed and spread on site and controlled with temporary mulching and/or grassing.

Erosion, Sedimentation, and Pollution Control best management practices shall be maintained at all times. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION OR AS REQUIRED BY ENGINEER OR LOCAL JURISDICTION INSPECTOR.

3. Maintenance of all soil erosion and sedimentation control measures and practices whether temporary or permanent shall be the responsibility of the contractor.

4. Any discrepancy within these plans shall be referred to the design professional by the contractor for clarification before proceeding with work.

15. Sediment storage maintenance indicators must be installed in sediment storage structures, indicating the 1/3 full volume.

16. Contractor shall provide temporary diversion berms and down drains on fill slopes to prevent erosion prior to stabilization.

Contractor shall remove accumulated sediment from detention basin at end of construction when all disturbed areas have been fully stabilized.

Maintenance of all soil erosion and sedimentation control measures and practices, whether temporary or permanent, shall be at all times the responsibility of the property owner.

REVISIONS SHOWN ON ES&PC PLAN:

Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the desig

Install utilities (water and septic/sewer)

intermediate BMPs

intermediate BMPs

intermediate BMPs

and structural practices)

Complete paving operations

Achieve Final Site Stabilization

and signed off by Engineer

19. Install curb & gutter

21. Install pavement

vegetation

16. 16. Grass / mulch / flocculent / coagulant disturbed areas and install

18. Grass / mulch / flocculent / coagulant disturbed areas and install

20. Grass / mulch / flocculent / coagulant disturbed areas and install

22 Finish grade shoulders and stabilize disturbed areas with permanent

23. Continue to apply flocculent / coagulant applications, mulching, and grassing

Throughout land disturbance process, maintain existing BMP's (vegetative

2. Throughout land disturbance process, continue NPDES monitoring and

. Coordinate Site Review Meeting with Engineer and/or Local Issuing

Remove any temporary BMP practices once site stabilization is achieved

6. Clean silt from all storm systems (distribute onsite and stabilize)

8. Coordinate Site Review Meeting with Engineer for final site approval

17. Install GAB throughout roadway up to designated line

INTENDED LAND DISTURBANCE CONSTRUCTION ACTIVITY SEQUENCE:

Preconstruction meeting with CITY OF COVINGTON Perform initial monitoring

Install construction exit . Install initial silt fence (perimeter silt fence locations first)

Provide any needed initial mulching, grassing or other ground cover Install topsoil location silt fend Begin clearing, grubbing, topsoiling, and grading operations within limits of

detention ponds & install construction road Install appropriate vegetative and structural BMP's (inlet / outlet protection, flocculants / coagulants, mulching / Install wheel wash and fuel storage location (if necessary)

Intermediate Phase:

intermediate BMPs

Install storm pipe systems with protected inlets (Sd2's) 2. Throughout land disturbance process, maintain existing BMP's (Vegetative and Structural Practices)

Throughout land disturbance process, continue NPDES monitoring and . Coordinate with utility companies on utility/sleeve locations Begin remaining clearing, grubbing, topsoiling, and grading operations

Install topsoil pile at stockpile location and immediately grass/mulch and install any remaining topsoil location silt fence . Perform remaining grading (adjust storm risers with grade change(s) and

adjust all affected Sd2's 8. As areas are brought to finish grade, grass and blanket any areas that are finish grade or that will be left bare for 7 days

. Adjust storm risers with grade change(s) and adjust all Sd2's 10. Each fill slope shall have a diversion at the top that is maintained and reinstalled as the slope is constructed 1. Continue flocculant / coagulant applications and continue every 7 days

throughout project 12. Install remaining storm system(s) as grades are achieved 13. Immediately install each storm structure with associated Sd2's and add floc logs to each storm structure

14. Grass / mulch / flocculent / coagulant disturbed areas and install

e. Large plastic bags to store any contaminated materials for disposal.

ensure required water quality guidelines are met.

Temporary fueling areas shall be installed and operated in compliance with Georgia E.P.D. regulations

CONCRETE WASHOUT:

tractor shall install a concrete washdown. This area is only for the washdown of items such as tools, concrete mixer chutes, hoppers and the rear of the vehicles. ASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED

WASTE DISPOSAL, SANITARY SEWER, SEPTIC TANK REGULATIONS (ES&PC PLAN COMPLIANCE):

Construction Debris shall be recycled to the extent deemed practical by Owner/Contractor. All waste generated from the development of this site including but not limited to. solid waste, liquid waste, chemical waste, construction waste, sanitary sewer discharge, septic tank and septic systems waste, shall be collected and disposed of in a manner hat follows all local, state, and federal laws and regulations for collection and disposal of each type of waste. All required signage, notification, documentation, and training of rsonnel on correct handling of waste shall be done in a manner that follows all local, state, and federal laws and regulations. Owner/Contractor is responsible for obtaining the services (and facilities) of a licensed Waste Management Company in the state of Georgia to adequately and safely handle waste collection and disposal. Solid materials, ncluding building materials, shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

BMP'S FOR PETROLEUM SPILLS AND LEAKS:

Designate areas for equipment maintenance and fueling that are located on level ground and away from any water sources. Park and service equipment on top of tarps to insure any spills or leaks do not get into the ground.

Store all fluids and containers in a leak-proof, locked container to insure safe storage. Collect and remove all leftover lubricants, containers, and trash, especially tires, batteries, pieces or parts of equipment, and all fluid containers. Maintain a spill-containment and clean up kit. At a minimum, a kit for petroleum products should include

 A leak proof container to catch leaking fluid. b. A shovel, rake, and other hand tools to create dirt berms. Absorbent pads, adsorbent substances such as cat litter or oil drying agents, that will absorb fluids before soaking into ground. . Various hoses, plugs, and clamps to control a hydraulic line break. A variety of locking "vise grips" pliers can be used in emergency.

CONSTRUCTION MATERIALS:

Contractor shall at all times have all construction materials protected from rainfall. Contractor shall utilize tarps, plastic sheeting, roof cover, trailers or any other method to make sure all construction material is covered at all times during construction

EROSION CONTROL MEASURES TO CONTROL POLLUTANTS IN STORM WATER POST CONSTRUCTION:

*NOTE THE PERMITTEE IS ONLY RESPOSIBLE FOR INSTALLATION AND MAINTENANCE OF STORMWATER MANAGEMENT DEVISES PRIOR TO FINAL STABILIZATION OF THE SITE AND NOT THE OPERATION AND MAINTENANCE OF SUCH STRUCTURES AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.

1. RIP RAP OUTFALL/CHANNEL PROTECTION: Shall be inspected and maintained prior to final stabilization. Any dislodged stones and/or other repairs deemed ecessary shall be completed according to conditions set forth in GAR100001 permit. 2. WATER QUALITY BASIN: Water quality basin shall be inspected and cleaned out according to Georgia Stormwater Management Manual's recommendations to

his plan has been prepared to meet the requirements under the State of Georgia, Department of Natural Resources, Environmental Protection Division (EPD), General Permit No. GAR100001 for authorization to discharge under the National Pollutant Discharge Elimination System (NPDES), Stormwater Discharges Associated with Construction Activity for Stand Alone Construction Projects. Daily, weekly and monthly inspections as required by Permit No. GAR100001 shall be performed by certified personnel provided by the Contractor. Sampling requirements as required by Permit No. GAR100001 shall be performed by certified personnel provided by the Contractor.

Contractor shall make sure construction is in accordance with regulations of the NPDES Permit No. GAR100001. This includes but is not limited to:

*Site stabilization practices *Vegetative and structural erosion control practices

*Pollution prevention plan and practices *BMP maintenance and inspections *Spill control practices *Material management practices for spill prevention plans *Waste control practices *Wetland and state water protection practices

*Monitoring plans and practice

POLLUTION REDUCTION PRACTICES FOR STORM WATER DISCHARGES

STABILIZATION (VEGETATIVE) MEASURES:

ALL STABILIZATION (VEGETATIVE) MEASURES SHALL BE IMPLEMENTED AS STATED IN THE MANUAL FOR EROSION AND SEDIMENTATION CONTROL IN GEORGIA (LATEST (Bf) Buffer Zone - A strip of undisturbed, original vegetation; enhanced or restored existing vegetation; or re-establishment of vegetation surrounding disturbed areas or bordering streams, ponds wetlands, lakes, or coastal water to provide a buffer zone for one or more of the following purposes: reduce storm runoff velocities, act as visual screen, reduce construction noise, improve aesthetics on disturbed land, filtering and infiltrating runoff, cooling rivers/streams by creating shade, provide food and cover for wildlife, flood protection, or protect channel banks from scour and (DS1) Disturbed Area Stabilization (with Mulching Only)- Applying plant residues or other suitable materials, produced on site if possible, to the soil surface in order to reduce runoff, conserve moisture, prevent surface compaction or crusting, control undesirable vegetation, modify soil temperature, or increase biological activity in the soil. This practice is applicable where stabilizing disturbed/denuded areas is not practical utilizing seeding or planting. (DS2) Disturbed Area Stabilization (with Temporary Seeding)- Establishing temporary vegetative cover with fast growing seedlings for seasonal protection on disturbed/denuded areas in order to reduce runoff and sediment damage of downstream resources, protect the soil surface from erosion, improve wildlife habitat, improve aesthetics, improve tilth, infiltration and aeration as well as organic matter for permanent plantings. This practice is applicable for up to six months or until permanent vegetative cover can be installed. It should be coordinated with permanent measures to assure economical and effective stabilization. (Ds3) Disturbed Area Stabilization (with Permanent Vegetation). Planting of perennial vegetation such as trees, shrubs, vines, or legumes on exposed areas for final permanent stabilization in order to protect the soil surface from erosion, reduce damage from sediment and runoff to downstream areas, improve wildlife habitat and visual resources, and improve aesthetics. It will apply or cut and fill slopes, earth spillways, borrow areas, spoil areas and severely eroded or gullied lands. (DS4) Disturbed Area Stabilization (with Sodding)- Establishing an immediate and permanent vegetative cover using sods in order to reduce runoff and erosion, improve aesthetics and land value, reduce dust and sediments, stabilize waterways and critical areas, filter sediments, nutrients, reduce downstream complaints, reduce likelihood of legal action, reduce likelihood of work stoppage due to legal action, and increase "good neighbor" benefits. (Du) Dust Control on Disturbed Areas- Controlling surface and air movement of dust on construction sites, roads, and demolition sites in order to prevent surface and air movement of dust from exposed soil surfaces, reduce the presence of airborne substances which may be harmful or injurious to human health, welfare, or safety, or to animals or plant life. Methods and materials which can be used include mulches, vegetative cover, spray-on adhesives, mechanical manipulation of existing soil surfaces, irrigation, barriers, chemicals, and stone surface covers (FI-Co) Flocculants and Coagulants- Formulated to assist in the solid/liquid separation of suspended particles (which are characteristically very small) in solution. The suspended stability of such particles (colloidal complex) is due to both their small size and the electrical charge between particles (Sb) Streambank Stabilization (Using Permanent Vegetation). Using native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems in order to lessen the impact of rain directly on the soil, trap sediment from adjacent land, form a root mat to stabilize and reinforce the soil on the streambank, provide wildlife habitat, enhance stream appearance, and lower summertime water temps. (Ss) Slope Stabilization- A protective covering used to prevent erosion and establish vegetation on steep slopes, shore lines, or channels in order to stabilize the soil and act as a rain drop impact dissipater while providing a microclimate which protects young vegetation and promotes its establishment. (Tac) Tackifiers- Substances used to anchor soil, compost, seed, straw, hay or mulch by causing organic material to bind together and discourage it from drifting downslope. Tackifiers also conserve moisture; prevent surface compaction, increase soil infiltration, soil fertility, enhanced seed germination, increased soil cohesion, enhanced soil stabilization, reduced stormwater runoff turbidity and reduction in loss of topsoil.

STRUCTURAL PRACTICES:

ALL STRUCTURAL PRACTICES SHALL BE IMPLEMENTED AS STATED IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA (LATEST EDITION). (Cd) Check Dam- A small temporary barrier, grade control structure, or dam constructed across a swale or drainage ditch which drains five (5) acres or less (not to be used in a live stream) in order to reduce erosion by slowing the velocity of concentrated storm water flows. (Cḥ) Channel Stabilization- Improving, constructing or stabilizing an open channel for water conveyance. Open channels are to be non-erosive, with no sediment deposition and able to provide adequate capacity for flood water, drainage, other water management practices, or any combination thereo (Co) Construction Exit- A stone stabilized pad located where traffic leaves a construction site to a public right-of-way, street, alley, sidewalk, parking, etc. (i.e. bare soil to paved area) in order to reduce/eliminate depositing construction area mud onto public rights-ofway by motor vehicles or by runoff. (Cr) Construction Road Stabilization- Roads, parking areas, and other on-site transportation routes that are stabilized with coarse aggregate between the time of initial grading and final stabilization in order to provide a fixed route for construction traffic, reduce erosion, reduce subsequent re-grading of permanent roadbeds, and provide a stable base for paving. (DC) Stream Diversion Channel- A temporary channel that diverts a live stream and allows work "in the dry" while protecting streambed(s) from erosion. This diversion is used when in-stream work is unavoidable, as with linear projects such as utilities or roads that frequently cross and impact live streams and create a potential for excessive sediment loss by both the disturbance of the approach areas and by the work within the streambed and banks. (Di) Diversion- An earth channel with a compacted supporting ridge on the lower side; constructed above, across, or below a slope to reduce slope lengths, break-up concentrations of runoff (Dn1) Temporary Downdrain Structure- A flexible conduit of heavy-duty plastic or other material used as a temporary structure to convey storm water down the face of a cut or fill slope without causing slope erosion and allowing the establishment of vegetation on the slope. Flexible downdrains are removed once the permanent water disposal system is (Dn2) Permanent Downdrain Structure- A permanent payed chute, pipe or sectional conduit of prefabricated material designed to safely conduct surface runoff from the top to the bottom of a slope thus minimizing erosion. Downdrain structures are to be used where concentrated water will cause excessive erosion of cut and fill slopes (Fr) Filter Ring- A temporary stone barrier used in conjunction with other sediment control measures and constructed at storm drain inlets and pond outlets, in order to reduce flow velocities, brevent failure of other sediment control devices, and prevent sediment from leaving the site or entering drainage systems, prior to permanent stabilization of the disturbed areas (Ga) Gabion- Large, multi-celled, wire mesh boxes, filled with rocks, which form flexible monolithic building blocks used in channel revetments, retaining walls, abutments, check dams, etc. to prevent erosion and sediment damage to a specific structure. When properly wired together, they can be used to stabilize steep or highly erosive slopes

(Gr) Grade Stabilization Structure- Structures of concrete, rock masonry, steel, aluminum, treated wood, etc. that are installed to stabilize the grade in natural or artificial channels and to event the formation or advance of gullies and to reduce erosion and sediment pollution. (LV) Level Spreader- A storm flow outlet device structure constructed at zero grade across a slope where concentrated runoff may be intercepted and diverted at non-erosive sheet flow (Rd) Rock Filter Dam- A permanent or temporary stone filter dam, which can be used in conjunction with a temporary sediment trap, installed across small streams, drainageways with a drainage area of 50 acres or less and outlets for sediment traps in order to serve as a sediment-filtering device and to reduce storm water flow velocities. This structure is not intended to substantially impound water and may require a US Army Corps of Engineers permit.

(Re) Retaining Wall- A constructed wall of concrete, masonry, reinforced concrete, cribbing, treated timbers, gabions, stone dry wall, rip-rap or other durable material in order to stabilize cut of fill slopes where maximum permissible slopes of earth are not obtainable without the use of the wall. (Rt) Retrofitting- A device or structure, such as half round corrugated metal pipe or similar, placed in front of a permanent stormwater detention pond outlet or roadway drainage structure to serve as a temporary sediment filter, thus allowing permanent stormwater detention basin structures to function as temporary sediment retention basins for land-disturbing projects, and allow roadway drainage to be used for temporary sediment storage.

(Sd1) Sediment Barrier- A temporary structure constructed of silt fence, straw, hay bales, brush piles, mulch berms, compost filter sock, gravel or other filtering materials (typically supported by steel or wood posts), that are used to minimize and prevent sediment carried by sheet flow from leaving the site until final stabilization. Silt fence shall not be installed across streams, waterways, or other concentrated flow areas. (Sd2) Inlet Sediment Trap- A temporary protective device formed at or around a storm drain inlet to trap sediment in runoff water from small, disturbed areas and prevent sediment from entering a storm drainage system prior to permanent stabilization of the disturbed area draining to the inlet. Clean out of these facilities is normally required after each heavy rainfall. (Sd3) Temporary Sediment Basin- A basin created by construction of an embankment, barrier or dam containing a principal spillway pipe and an emergency spillway that are normally situated within natural drainageways and at the lowest point on a construction site. Structure size will vary depending on the size of the drainage area, soil type, volume of sediments to be trapped, rainfall pattern(s), structure location, etc. Permanent sediment basins are designed to fit into the overall plan of the completed development. Sd3's are designed to detain runoff waters

(Sd4) Temporary Sediment Trap- A small temporary pond (with no pipe or riser) that drains a disturbed area so that sediment can settle out. Sd4's are designed to collect and store sediment (Sk) Floating Surface Skimmer- A buoyant device that drains surface water of sediment ponds, traps or basins and releases it at a controlled rate of flow. It "skims" the water surface where entrations are at a minimum instead of draining from the bottom where sediment concentrations are higher, and drains to a riser or the backside of (SpB) Seep Berm- A linear control device constructed as a diversion (perpendicular to the direction of the runoff) to enhance dissipation and infiltration of runoff while using intermediate dikes to create multiple sedimentation chambers allowing smaller storms to seep out while diverting larger flows to a sediment storage area. (Sr) Temporary Stream Crossing- A temporary structure installed across a flowing stream or watercourse for use by construction equipment without moving sediment into streams, damaging the streambed or channel, or causing flooding. The structure may consist of a pipe, bridge, or other suitable device permitting vehicular traffic to cross streams or watercourses (St) Storm Drain Outlet Protection- A paved or short section of rip-rap channel placed at the outlet of a storm drain system in order to reduce the velocity of water flows below storm drain

(Su) Surface Roughening- Providing a rough soil surface with horizontal depressions created by operating a tillage or other suitable implement on the contour, or by having slopes in a roughhead condition by not fine-grading them, in order to aid in establishment of vegetative cover with seed, to reduce runoff velocity and increase infiltration and to reduce erosion and provide (TC) Turbidity Curtain- A floating or staked barrier installed within the water in order to minimize turbidity and silt migration from work occurring within the water or as a supplement to perimete

(Tp) Topsoiling-Stripping off the more fertile top soil, storing it, then spreading it over the disturbed area after completion of construction activities, in order to provide a suitable soil medium for vegetative growth on areas where other measures will not produce or maintain a desirable stand. (Wt) Vegetated Waterway or Stormwater Conveyance Channel- Outlets for diversions, terraces, berms, or other structures. They may be natural or constructed, shaped to required dimensions, and paved or vegetated for disposal of storm water runoff. For waterways to be successful, it is essential that a protective cover of vegetation or other erosion protective measures be implemented.

PRODUCT SPECIFIC PRACTICES

All pollutants from waste disposal practices, soil additives, remediation of spills and leaks of petroleum products, concrete truck washout, etc., should any of these occur, shall be controlled by the implementation of appropriate best management practices, the site shall be in compliance with all applicable state and local waste disposal, sanitary sewer or septic Petroleum Based Products - Containers for products such as fuels, lubricants, and tars shall be inspected daily for leaks and spills. This includes onsite vehicles and machinery daily

inspections and regular preventative maintenance of such equipment. Equipment maintenance areas shall 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. Property disposal methods includes collection in a suitable container and disposal as required by local and State regulations Paints/Finishes/Solvents - All products shall be stored in tightly sealed original containers when not in use. Excess product shall not be discharged to the storm water collection system. Excess product, materials used with these products, and product containers shall be disposed of according to manufacturer's specifications and recommendations. Fertilizer/Herbicides - These products shall be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop establishment or in the GSWCC Manual for Erosion and Sediment Control in Georgia. Any storage of these materials will be under roof in sealed containers

Building Materials - No building or construction materials shall be buried or disposed of onsite. All such material shall be disposed of in proper waste disposal procedures. Concrete Truck Washing - NO concrete trucks shall be allowed to wash out or discharge surplus concrete or drum wash water onsite. Concrete wash down of tools, concrete mixer chutes, hoppers and the rear of vehicles will only be allowed in a designated area provided for this purpose, as shown on the drawings, the following best management practices will be followed:

(1) Contain all wash water on soil, in a bowl shaped area created in the designated wash area to prevent the wash water from flowing from the washout area;

(2) Use the minimum amount of water to wash down the tools, concrete mixer chutes, hoppers and the rear of vehicles (3) Remove any concrete sediment from the area surrounding the washout area before it hardens; and

(4) Remove all concrete residue from the designated area once it has hardened.



PRIMARY PERMITTEE CONTACT INFORMATION:

ROCKDALE COUNTY BOC ANDREW HAMMER O BOX 289 ONYERS, GA 30012 770-278-7268 andrew.hammer@rockdalecountyga.gov

MEASURES INSTALLED DURING CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT MAY REMAIN AFTER **CONSTRUCTION IS COMPLETE.:**

3. Ds3. Ds4

POSSIBLE POLLUTANT SOURCES FOR THIS PROJECT

Sediment Loss, Construction Debris, Petroleum Products, Concrete Products, Epoxies and Grouts, Fertilizers (Overuse), Tac applications (Overuse), Paint Products, Asphalt Products. Contract shall maintain a clean working environment at all times and reduce and contain the pollution generated by these and other pollutants that are to be utilized for the construction of this project Contractor shall follow all local, state, and federal laws in handling all polluting products.

NON-STORM WATER DISCHARGES ALLOWED UNDER PERMIT:

Fire fighting activities Air conditioning condensation Fire hydrant flushing Potable water sources including

Irrigation drainage

Foundation or footing drains where flows are not contaminated with process materials or pollutants.

Each of these discharges shall be treated for storm water pollutants in BMPs applied on the site. Discharge from each of these shall be routed to a temporary sediment basin within the same

HAZARDOUS WASTES:

All hazardous waste materials will be disposed of in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. The job site superintendent, who will also be responsible for seeing that these practices are followed, will instruct site personnel in these practices. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the ESPCP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control

The contractor will implement the Spill Prevention Control Countermeasures (SPCC) Plan found within this ESPCP and will train all personnel in the proper cleanup and handling of spilled materials. No spilled hazardous materials or hazardous waste will be allowed to come in contact with the stormwater discharges. If such contact occurs, the stormwater discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated stormwater. It shall be the responsibility of the job site superintendent to properly train all personnel in the use of the SPCC plan.

SANITARY WASTES:

A minimum of one portable sanitary unit will be provided for every ten (10) workers on the site. All sanitary waste will be collected from the portable units a minimum of one time per week by a licensed portable facility provider in complete compliance with local and state regulations All sanitary waste units will be located in one area where the likelihood of the unit contributing storm water discharge is negligible. Additional containment BMP's must be implemented, such as

gravel bags or specially designed plastic skid containers around the base to prevent wastes from contributing to storm water discharges. The location of sanitary waste units must be identified on the ES&PC Plan b the contractor once the locations have been determined. Sanitary sewer will be provided by Municipal Authority/Septic System at the completion of this Project.

SPILL CLEANUP AND CONTROL PRACTICES:

ocal, state and manufacturer's recommended methods for spill clean up will be clearly posted and procedures will be made available to site personnel. Material and equipment necessary for spill leanup will be kept in the material storage areas. Typical materials and equipment includes, but is not limited to, brooms, dustpans, mops, rags, gloves, googles, cat litter, sand, sawdust and properly labeled plastic and metal waste containers. Spill prevention practices and procedures will be reviewed after a spill and adjusted as necessary to prevent future spills. All spills will be cleaned up immediately upon discovery. All spills will be reported as required by local, state and federal regulations. For spills that impact surface water (leave a sheen on surface water), the National Response Center (NRC) will be contacted within 24 hours at 1-800-424-8802. For spills of an unknown amount, the NRC will be contacted within 24 hours at 1-800-424-8802. For spills greater than 25 gallons and no surface water impacts, the Georgia EPD will be contacted within 24 hours. For spills less than 25 gallons and no surface water impacts, the spill will be cleaned up and local agencies will be contacted as required. The contractor shall notify the licensed professional who prepared this plan if more than 1,320 gallons of petroleum is stored onsite (this includes apacities of equipment) or if any one piece of equipment has capacity greater than 660 gallons. The contractor will need a spill prevention containment and countermeasures plan prepared by that licensed professional.

NON-EXEMPT ACTIVITIES:

implementation of appropriate best management practices. The site will be in compliance with all applicable state and local waste disposal, sanitary sewer or septic system regulations.

All pollutants from waste disposal practices, soil additives, remediation of spills and leaks of petroleum products, concrete truck washout, etc., should any of these occur, will be controlled by the

Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer s measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."

SOIL SERIES (PER NRCS MAPS SOILS ARE SHOWN AS):

PaB - PACOLET SANDY LOAM - 2 TO 6% SLOPES PaC - PACOLET SANDY LOAM - 6 TO 10% SLOPES

REFER TO SHEET C-1.1 FOR CONSTRUCTION REQUIREMENTS AND SPECIFICATIONS

CRITICAL AREAS AND ADDITIONAL MEASURES: 1. Critical Areas: 2:1 and 3:1 slopes, inlet traps, sediment basins, and storm outlets. 2. Locate and flag buffers to prevent disturbance

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EROSION. SEDIMENTATION. 8 POLLUTION CONTROL

permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the permittee's primary place of business once construction activity has ceased at the permitted site. The period may

be extended by request of EPD at any time upon written notification to the permittee.

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Project Information

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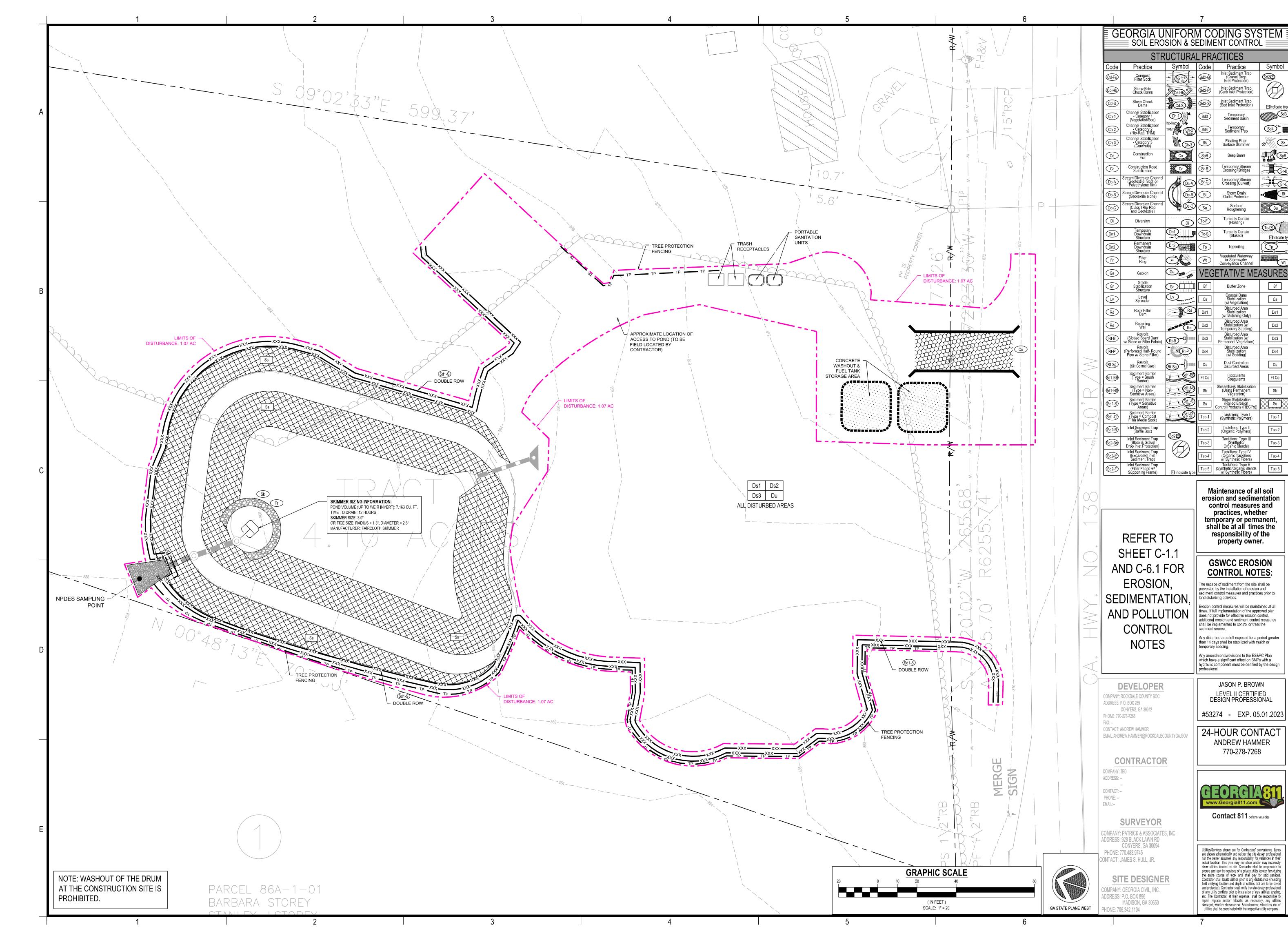
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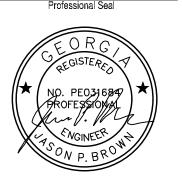




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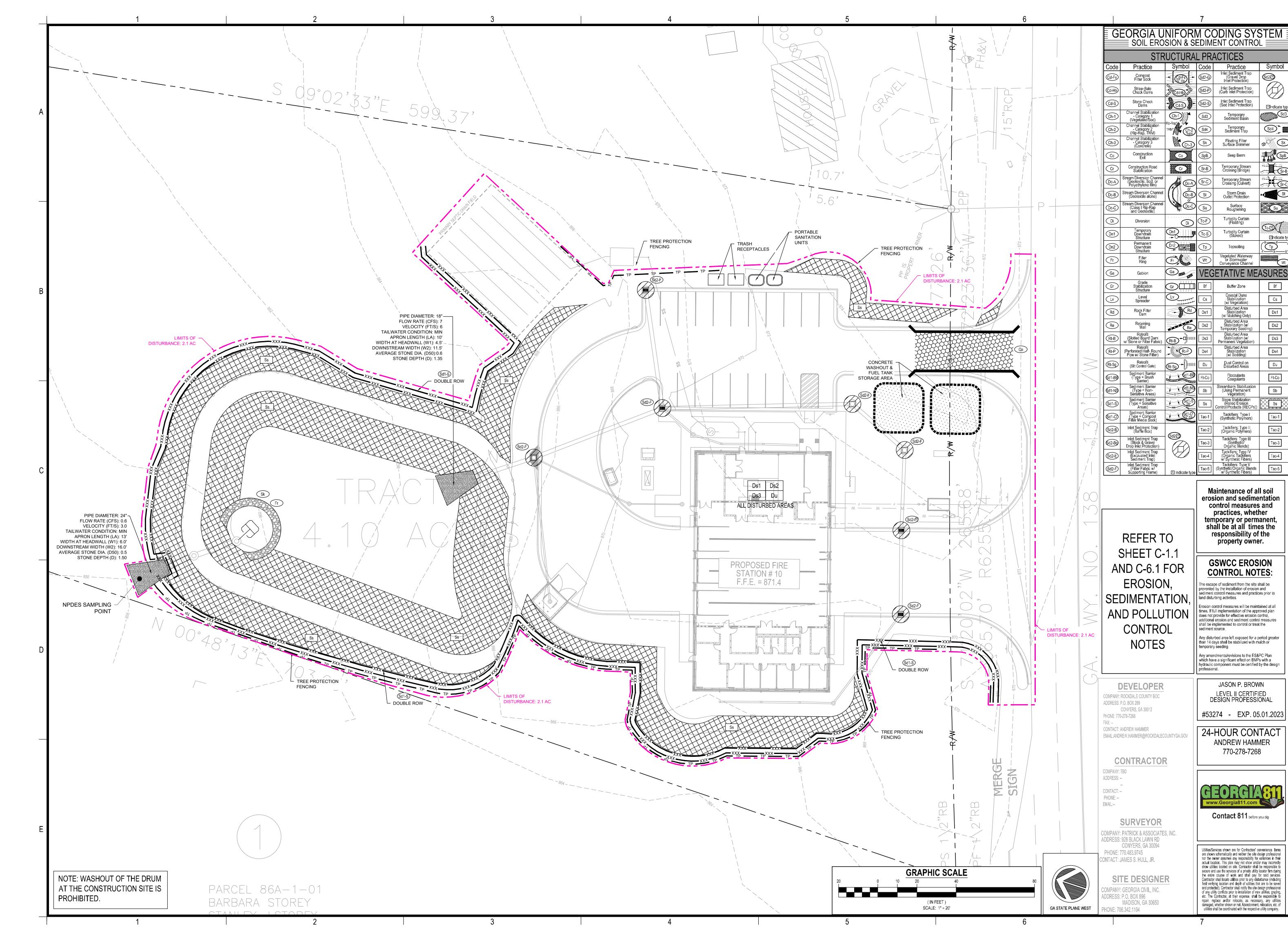
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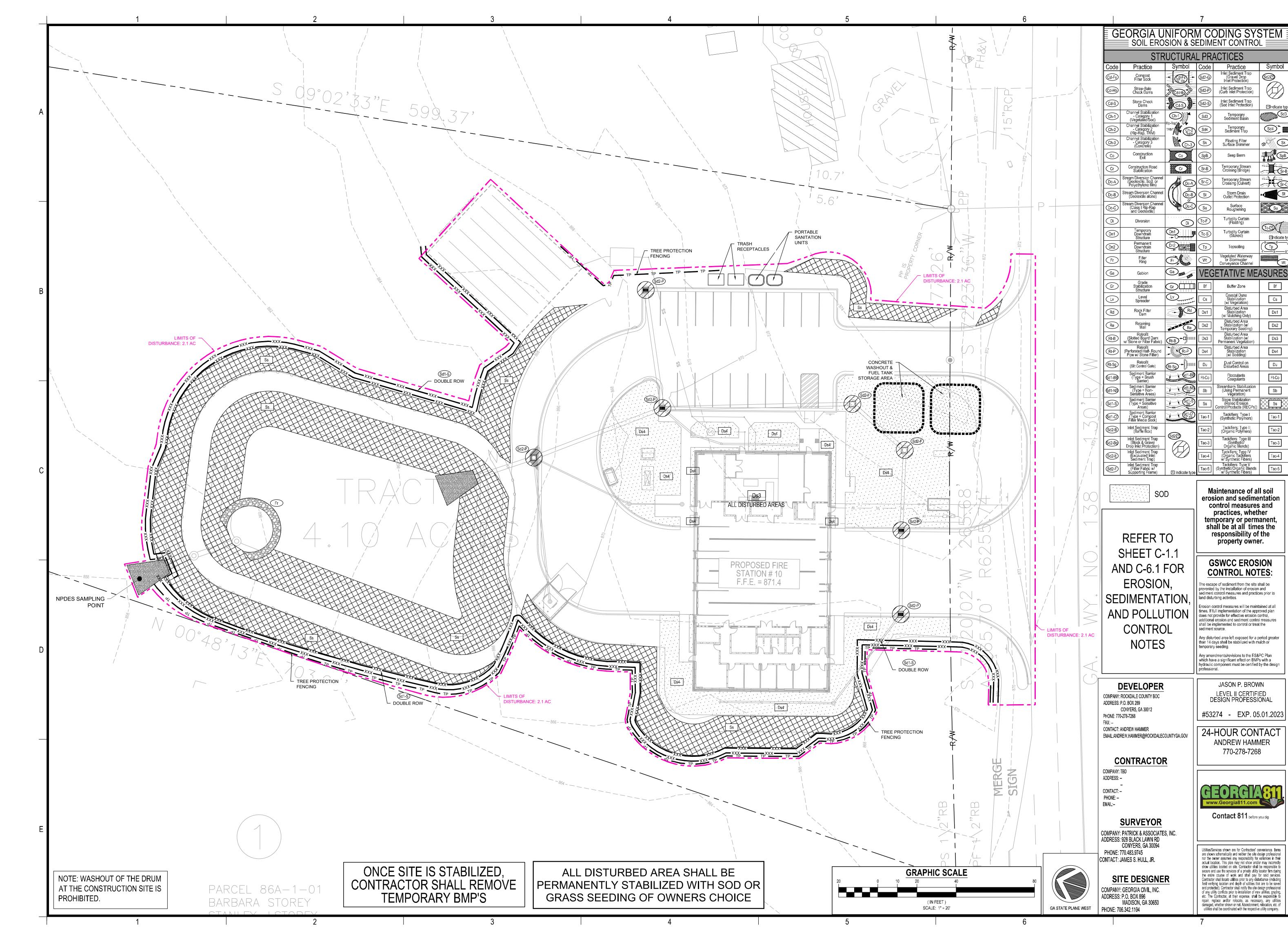
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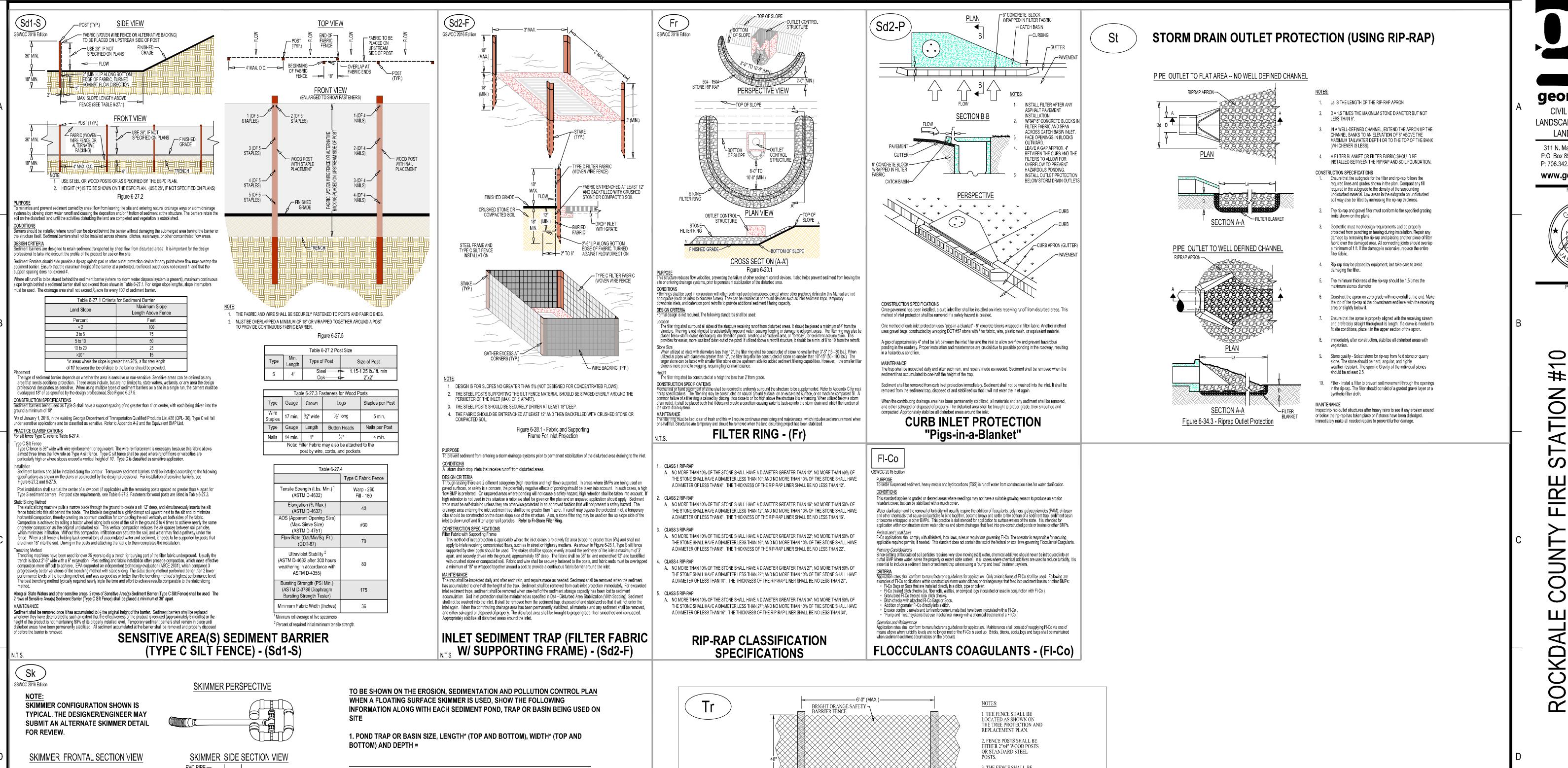
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EROSION SEDIMENTATION & POLLUTION CONTROL

DETAILS



WATER SURFACE

Figure 6-31.4

-HOLE IN ORIFICE

PVC PIPE WITH HOLES IN

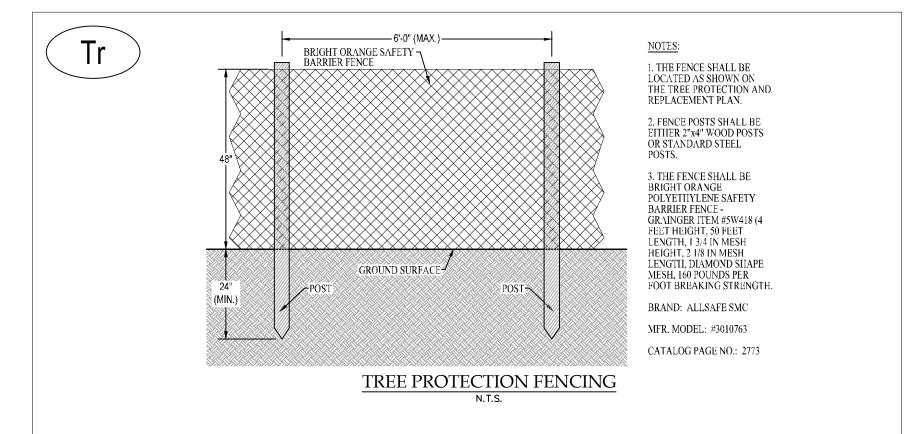
UNDERSIDE

2. TIME TO DRAIN (HRS)=

4. MANUFACTURER'S NAME

3. SKIMMER DIMENSIONS (ORIFICE AND HEAD SIZE)**

*FEET,**INCHES



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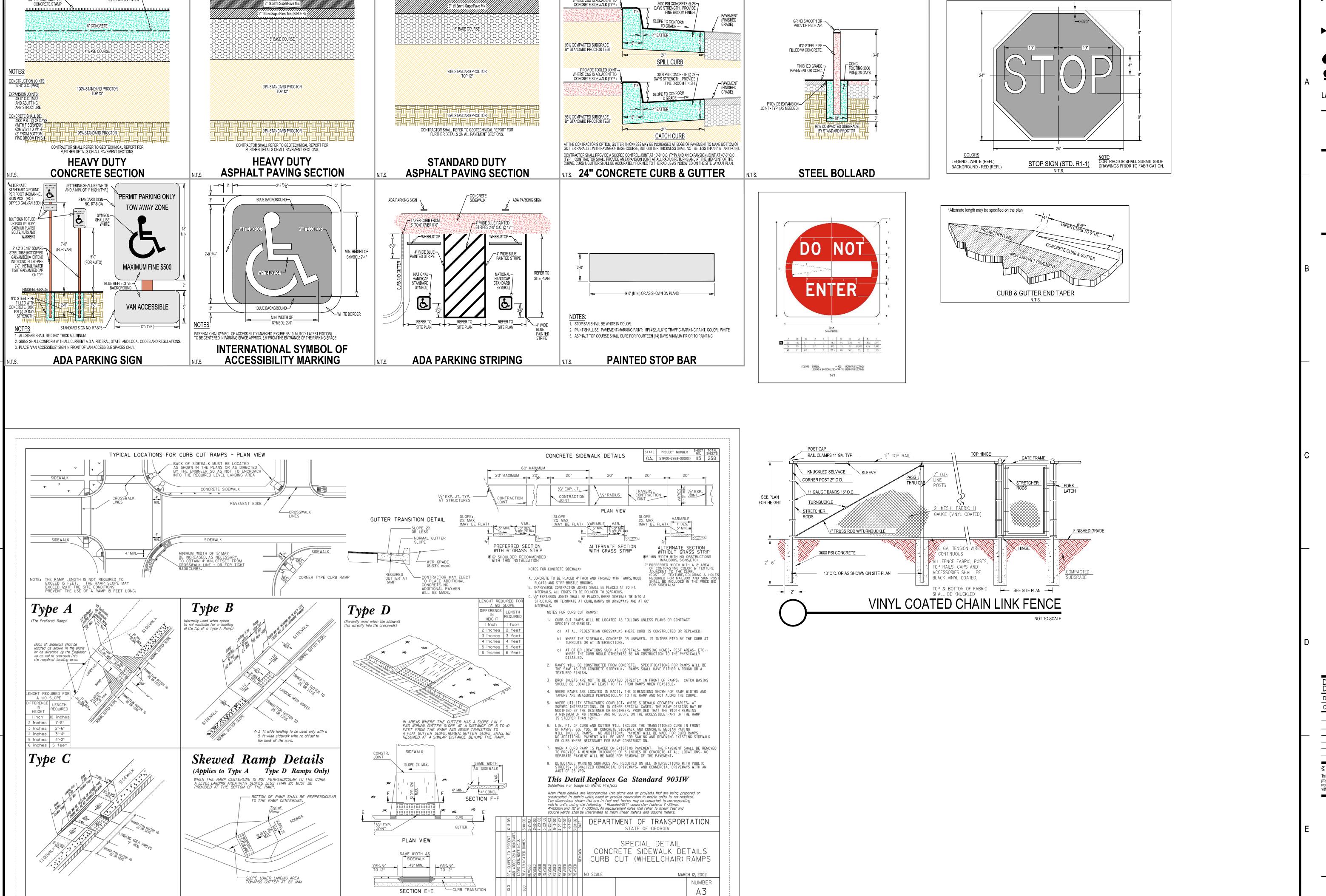
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> **EROSION SEDIMENTATION &** POLLUTION CONTROL DETAILS



PROVIDE TOOLED JOINT -WHERE C&G IS ADJACENT TO CONCRETE SIDEWALK (TYP.)

3" (9.5mm) SuperPave Mix

FINE BROOM FINISH OR -CONCRETE STAMP

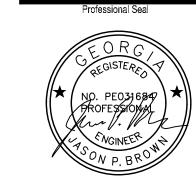
6 x 6 WW1 4 x WW1 4 -

2" 9.5mm SuperPave Mix

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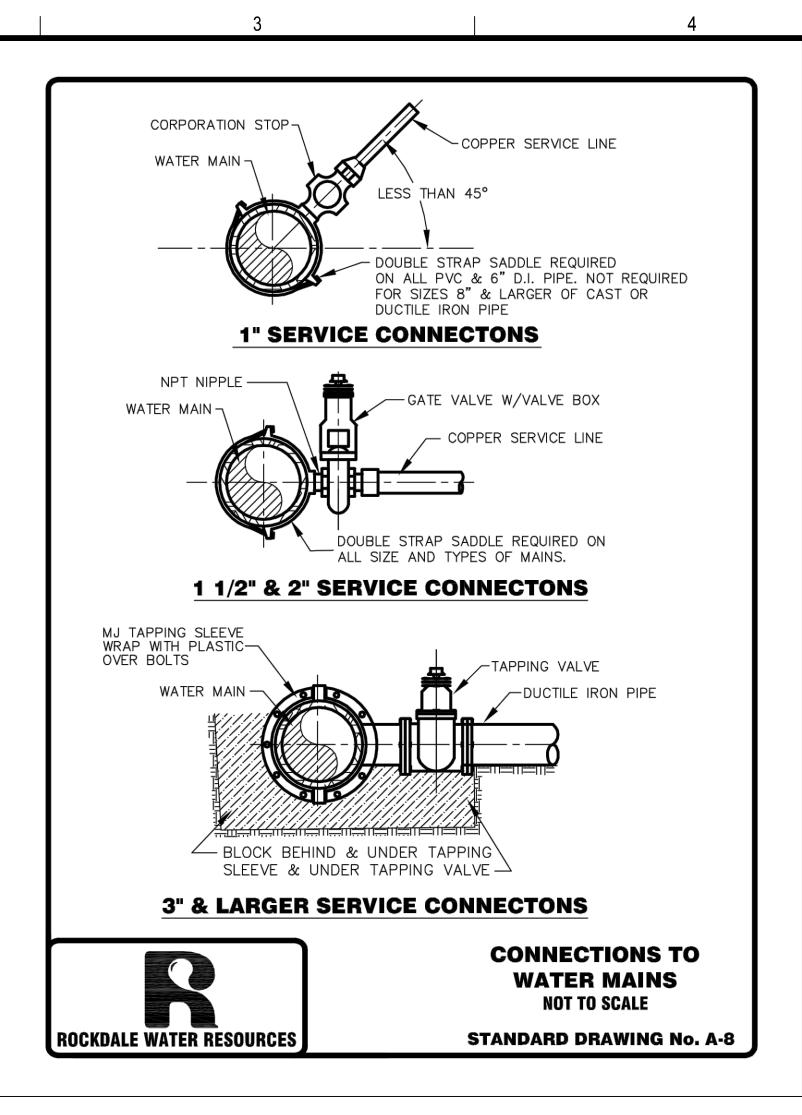
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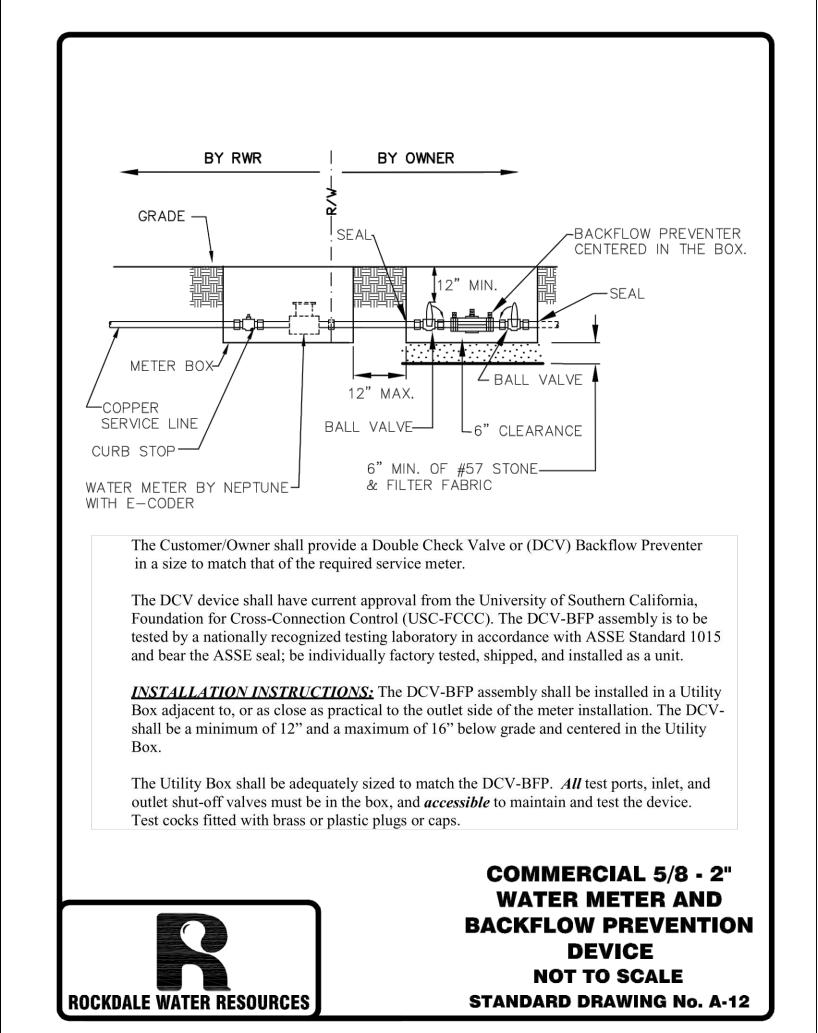
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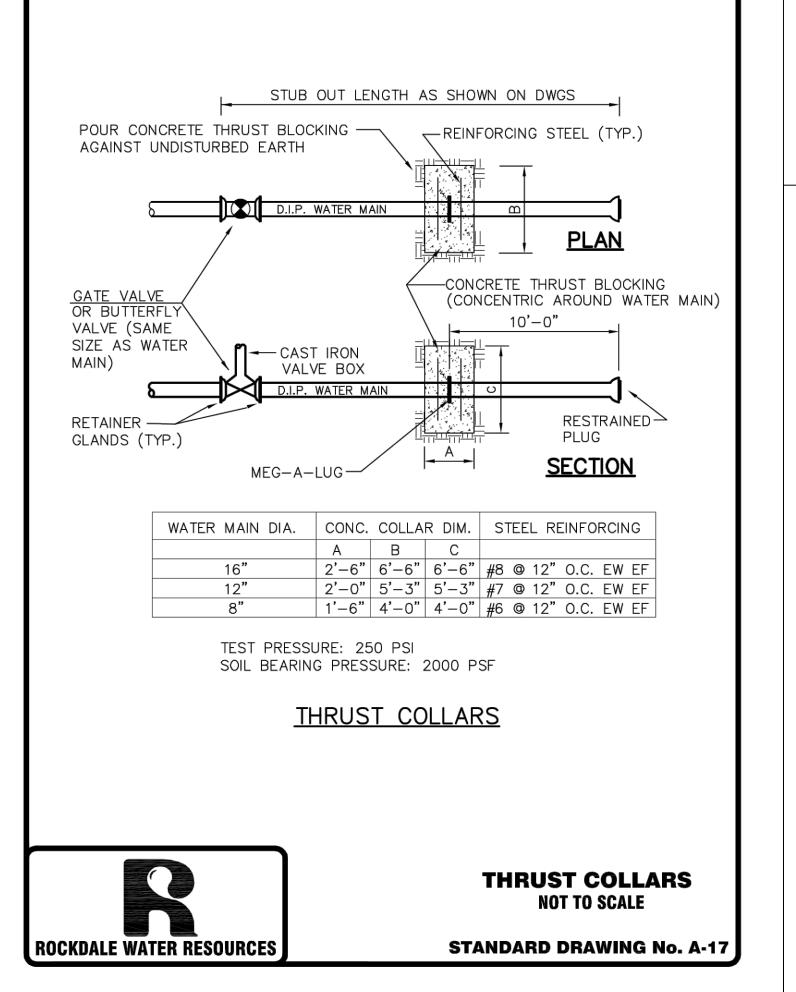
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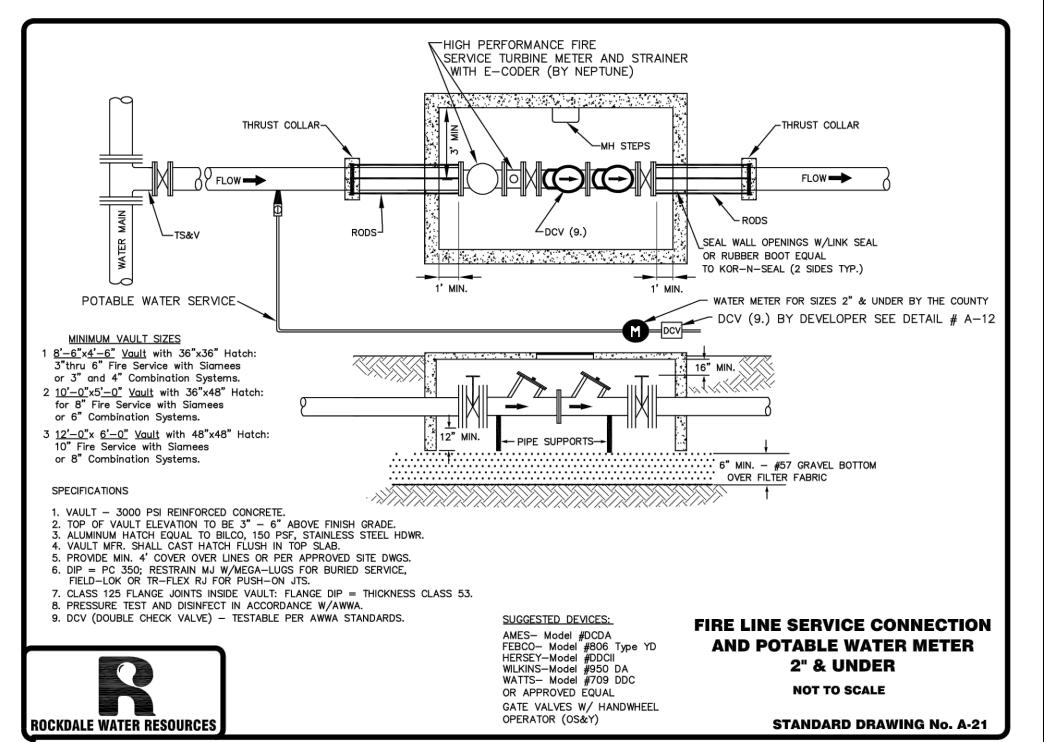
SITE WORK DETAILS

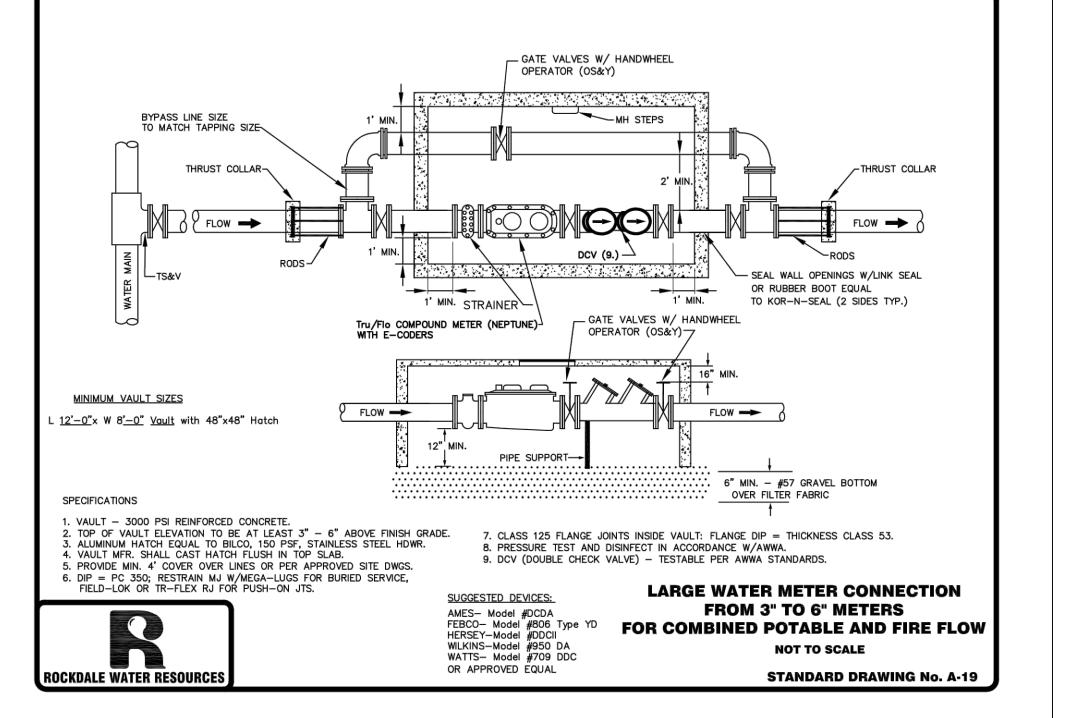
C-8.2





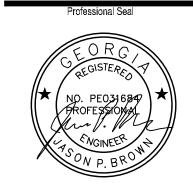






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