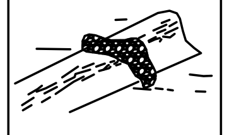
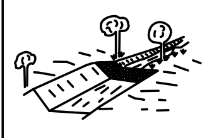
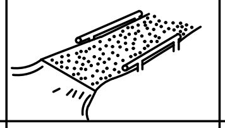
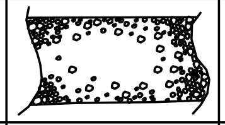
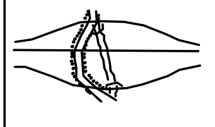
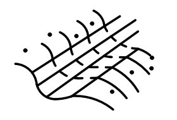
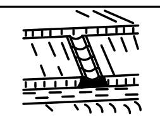
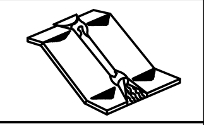
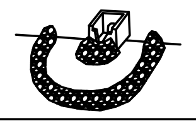
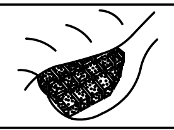
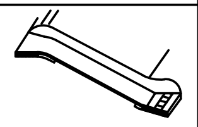
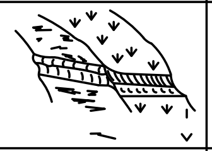
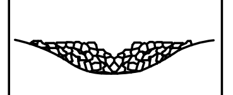
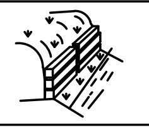
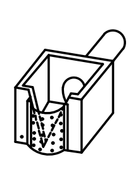
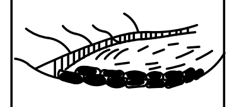
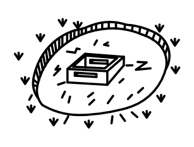
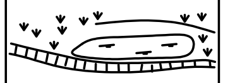
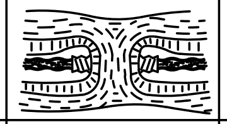
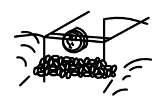
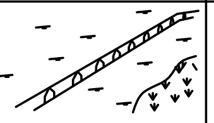
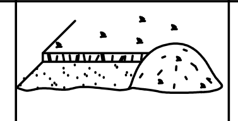
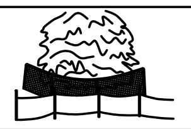
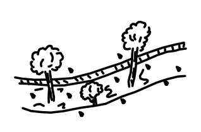
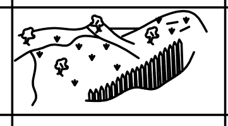
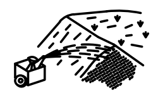
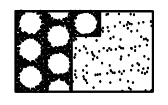
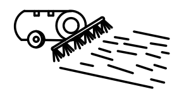
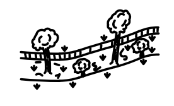
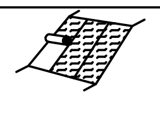
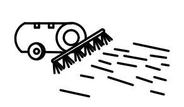
STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM Cd-S STONE CHECK DAM Cd-Hb STRAW-BALE CHECK DAM Cd-Fs COMPOST FILTER SOCK			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION Ch-1 CATEGORY 1 (0-5FT/SEC) Ch-2 CATEGORY 2 (5-10FT/SEC) Ch-3 CATEGORY 3 (<10FT/SEC)			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT		(Label)	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL Dc-A GEOTEXTILE, POLYETHELENE FILM, OR SOD (0-2.5 FPS) Dc-B GEOTEXTILE ALONE (2.5-9.0 FPS) Dc-C CLASS 1 RIPRAP & GEOTEXTILE (9.0-13.0 FPS)			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE		(Label)	A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE		(Label)	A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A storm flow outlet device constructed at zero grade across the slope whereby concentrated runoff may be discharged at a non-erosive velocity onto undisturbed areas stabilized by existing vegetation.
Rd	ROCK FILTER DAM			A temporary stone filter dam installed across drainageways or in conjunction with a TEMPORARY SEDIMENT BASIN.
Re	RETAINING WALL		(Label)	A wall installed to stabilize out and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING Rt-P PERFORATED HALF-ROUND PIPE WITH STONE FILTER Rt-B SLOTTED BOARD DAM WITH STONE OR FILTER FABRIC Rt-Sg SILT CONTROL GATE		(Label)	A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER Sd1-NS NONSENSITIVE AREAS Sd1-S SENSITIVE AREAS Sd1-BB BRUSH BARRIER		TYPE	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, or a silt fence.
Sd2	INLET SEDIMENT TRAP Sd2-F FILTER FABRIC W/SUPPORTING FRAME Sd2-B BAFFLE BOX Sd2-Bg BLOCK & GRAVEL DROP INLET PROTECTION Sd2-G GRAVEL DROP INLET PROTECTION Sd2-S SOD INLET PROTECTION Sd2-P CURB INLET PROTECTION		(Indicate type)	A temporary protective device formed at or around an inlet to a storm drain to trap sediment.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT BASIN Sd4-A OVERFLOW Sd4-B COMBINATION STRAW BALE & SILT FENCE OUTLET Sd4-C ROCK OUTLET			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a TEMPORARY SEDIMENT BASIN from a temporary sediment basin is the lack of a pipe or riser.
Sk	FILTER SURFACE SKIMMER			A buoyant device that releases/drains water from the surface of sediment ponds, traps or basins at a controlled rate of flow.
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 creating multiple sedimentation chambers with the employment of intermediate dikes.
Sr	TEMPORARY STREAM CROSSING Sr-B TEMPORARY BRIDGE CROSSING Sr-C TEMPORARY CULVERT CROSSING		(Label)	A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING		Su	A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN Tc-F FLOATING TURBIDITY CURTAIN Tc-S STAKED TURBIDITY CURTAIN			A floating or staked barrier installed within the water. (It may also be referred to as a floating boom, silt barrier or silt curtain).
Tp	TOPSOILING		Tp	Stripping off the more fertile top soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION		Tr	To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL	EROSION BLANKET	Wt	Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE MEASURES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE		Bf (Label)	An undisturbed natural "green belt" separating the land-disturbed site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also at times a noise or "vision pollution" barrier.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)		Cs	Planting vegetation on dunes that are denuded, artificially construction, or renourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERMENANT SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, sod or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SODDING)		Ds4	A permanent vegetative cover using sods on highly erodable or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Co	FLOCCULANTS & COAGULANTS		Fl-Co	Formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERMENANT VEGETATION)		Sb	The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION		Ss	The installation of a protective covering (blanket) or soil stabilization mat on a prepared planting area of a steep slope, channel, or shoreline.
Tac	TACKIFIERS & BINDERS Tac-1 SYNTHETIC POLYMERS Tac-2 ORGANIC POLYMERS Tac-3 SYNTHETIC/ORGANIC BLENDS Tac-4 ORGANIC TACKIFIERS WITH SYNTHETIC FIBERS Tac-5 SYNTHETIC/ORGANIC BLENDS WITH SYNTHETIC FIBERS		Tac	Substance used to anchor straw or hay mulch by causing the organic material to bind together.

TEMPORARY VEGETATIVE COVERS

PLANT, PLANT RATE, AND PLANTING DATE FOR TEMPORARY COVER OR COMPANION CROPS[1]

SPECIES	BROADCAST RATES		RESOURCE AREA^3	PLANTING DATES BY RESOURCE AREA^4												REMARKS
	RATE/ACRE^2	PLS*/1,000SF		J	F	M	A	M	J	J	A	S	O	N	D	
BARLEY alone in mixture	3 bu. (144lbs) ½ bu. (24lbs)	3.3lbs 0.6lbs	M-L P C													14,000 seed per pound. Winter hardy. Use on productive soils.
LESPEDEZA, ANNUAL alone in mixture	40lbs 10lbs	0.9lbs 0.2lbs	M-L P C													200,000 seed per pound. May volunteer for several years. Use inoculate EL.
LOVEGRASS, WEEPING alone in mixture	4lbs 2lbs	0.1lbs 0.05lbs	M-L P C													1,500,000 seed per pound. May last for several years. Mix with *Sericea lespedeza.*
MILLET, BROWNTOP alone in mixture	40lbs 10lbs	0.9lbs 0.2lbs	M-L P C													137,000 seed per pound. Quick dense cover. Will provide excessive competition in mixtures if seeded at high rate.
MILLET, PEARL alone	50lbs	1.1lbs	M-L P C													88,000 seed per pound. Quick dense cover. May reach 5 feet in height. Not recommended for mixtures.
OATS alone in mixture	4 bu. (128lbs) 1 bu. (32lbs)	2.9lbs 0.7lbs	M-L P C													13,000 seed per pound. Use on productive soils. Not as winter hardy as rye or barley.
RYE alone in mixture	3 bu. (168lbs) ½ bu. (28lbs)	3.9lbs 0.6lbs	M-L P C													18,000 seed per pound. Quick cover. Drought tolerant and winter hardy.
RYEGRASS, ANNUAL alone	40lbs	0.9lbs	M-L P C													227,000 seed per pound. Dense cover. Very competitive and is not to be used in mixtures.
SUDANGRASS alone	60lbs	1.4lbs	M-L P C													55,000 seed per pound. Good on droughty sites. Not recommended for mixtures.
TRITICALE alone in mixture	3 bu. (144lbs) ½ bu. (24lbs)	3.3lbs 0.6lbs	C													Use on lower part of Southern Coast Plain and in Atlantic Coastal Flatwoods only.
WHEAT alone in mixture	3 bu. (180lbs) ½ bu. (30lbs)	4.1lbs 0.7lbs	M-L P C													15,000 seed per pound. Winter hardy.

[1] Temporary cover crops are very competitive and will crowd out perennials if seeded too heavily.
[2] Reduce seeding rates by 50% when drilled.
[3] M-L represents the Mountain; Blue Ridge; and Ridges and Valleys MLRAs
P represents the Southern Piedmont MLRA
C represents the Southern Coastal Plain; Sand Hills; Black Lands; and Atlantic Coast Flatwoods MLRAs (see Figure 6-4.1, p6-40 of the Manual for Soil Erosion & Sediment Control in Georgia, 2016 Edition)
[4] Solid lines indicate optimum dates. Dotted lines indicate permissible but marginal dates.
*Pure Live Seed

FERTILIZER REQUIREMENTS

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. COOL SEASON GRASSES	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500lbs/ac. 1000lbs/ac. 400lbs/ac.	50-100lbs/ac. 1/2/ - 30
2. COOL SEASON GRASSES AND LEGUMES	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500lbs/ac. 1000lbs/ac. 400lbs/ac.	0-50lbs/ac. 1/ - -
3. GROUND COVERS	First Second Maintenance	10-10-10 10-10-10 10-10-10	1300lbs/ac. 3/ 1300lbs/ac. 3/ 1100lbs/ac.	- - -
4. PINE SEEDLINGS	First	20-10-5	one 21-gram pellet per seedling placed in the hole	-
5. SHRUB LESPEDEZA	First Maintenance	0-10-10 0-10-10	700lbs/ac. 700lbs/ac. 4/	-
6. TEMPORARY COVER CROPS, SEEDED ALONE	First	10-10-10	500lbs/ac.	30lbs/ac. 5/
7. WARM SEASON GRASSES	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500lbs/ac. 800lbs/ac. 400lbs/ac.	50-100lbs/ac. 2/6/ 50-100lbs/ac. 2/ 30lbs/ac.
8. WARM SEASON GRASSES AND LEGUMES	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500lbs/ac. 1000lbs/ac. 400lbs/ac.	50lbs/ac./6/

1/ Apply in spring following seeding.

2/ Apply in split applications when high rates are used.

3/ Apply in 3 split applications.

4/Apply when plants are pruned.

5/Apply to grass species only.

6/Apply when plants grow to a height of 2 to 4 inches.

GENERAL EROSION CONTROL NOTES

1. ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN COMPLIANCE WITH THE "EROSION AND SEDIMENTATION ACT OF 1975" AS AMENDED TO DATE.
2. ALL MATERIALS USED FOR BMPS AND OTHER EROSION AND SEDIMENT CONTROL DEVICES AND PRACTICES SHALL BE FIRST-QUALITY AND DESIGNED TO WITHSTAND A MINIMUM 25-YEAR STORM EVENT.
3. ALL PERIMETER EROSION CONTROL AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES. ALL OTHER BMPS SHALL BE INSTALLED PRIOR TO, OR CONCURRENT WITH LAND DISTURBING ACTIVITIES. THE LOCATION OF CERTAIN EROSION CONTROL DEVICES MAY REQUIRE ALTERING FROM THE LOCATIONS SHOWN ON THE DRAWINGS IF DRAINAGE PATTERNS DURING CONSTRUCTION DIFFER FROM THE FINAL GRADING PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. AT ALL TIMES, 67 CUBIC YARDS OF SEDIMENT STORAGE MUST BE AVAILABLE FOR EACH ACRE OF DRAINED LAND. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED SHALL BE CORRECTED BY THE END OF THE DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE OBSERVATIONS.
5. DIVERSION DITCHES, BERMS, AND TEMPORARY DOWN DRAINS SHALL BE USED DURING GRADING OPERATIONS TO PROVIDE SEDIMENT CONTROL FOR DISTURBED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF THESE MEASURES DURING THE VARIOUS PHASES OF GRADING. THESE MEASURES MAY OR MAY NOT BE INDICATED ON THE DRAWINGS.
6. ALL SITE CLEARING AND GRUBBING SHALL BE KEPT TO AN ABSOLUTE MINIMUM. VEGETATION AND MULCH SHALL BE APPLIED TO APPLICABLE AREAS IMMEDIATELY AFTER GRADING IS COMPLETE. LAND DISTURBING SHALL BE SCHEDULED TO LIMIT EXPOSURE OF BARE SOILS TO EROSIVE ELEMENTS.
7. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO LIMIT AND CONTROL DUST ON AND NEAR THE CONSTRUCTION SITE WHEN DUST IS CAUSED BY CONSTRUCTION OPERATIONS.
8. ALL CUT AND FILL SLOPES SHALL HAVE SILT FENCE INSTALLED AND MAINTAINED AT THE TOE OF SLOPES. THE CONTRACTOR SHALL FURNISH AND INSTALL DOUBLE ROWS OF TYPE "C" SILT FENCE AT THE TOE OF ALL SLOPES ADJACENT TO ALL STATE WATERS. INSTALL AND MAINTAIN SEDIMENT BARRIERS AROUND ALL INLETS AND BELOW ALL OUTLETS AND OTHER DISTURBANCES WHERE EROSIVE RUNOFF MAY LEAVE THE SITE.
9. ALL CUT AND FILL SLOPES MUST BE SURFACE ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR GRADING.
10. THE CONTRACTOR SHALL NOT BE PERMITTED TO PLACE TRENCH DIRT ON THE SURFACE OF ASPHALT ROADWAYS. IF DIRT IS PLACED IN A DITCH SECTION, DITCH SHALL BE RE-GRADED TO EXISTING CONDITIONS, GRASSED AND MULCHED, AND CHECK DAMS (HAY BALES PREFERRED) PLACED IN THE DITCH.
11. ALL EXCAVATED DIRT SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH AWAY FROM CREEKS, RIVERS, AND OTHER STATE WATERS.
12. CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE LAWS, RULES, AND REGULATIONS.
13. SEDIMENT BARRIERS SHALL MEET GEORGIA D.O.T. STANDARDS AND SPECIFICATIONS AND SHALL BE INSTALLED AS DESCRIBED HEREIN AND AS INDICATED ON THE DRAWINGS.
14. ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATION FOR THIS PROJECT SHALL CONSIST OF GROUND PREPARATION, SEEDING OR HYDRO SEEDING AND MULCHING OF ALL DISTURBED AREAS IN THE PROJECT AREA, WHICH SHALL CONFORM TO THE SPECIFICATIONS AND THE FOLLOWING SCHEDULE:
    MULCHING ALONE: SHALL BE USED ON ROUGH GRADED AREAS FOR UP TO SIX (6) MONTHS. IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, ANCHORED AND MAINTAIN A CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE.
    TEMPORARY SEEDING: SHALL BE USED ON DISTURBED AREAS THAT WILL BE LEFT EXPOSED FOR LESS THAN SIX (6) MONTHS.
    PERMANENT VEGETATION: SHALL BE USED ON ALL AREAS THAT ARE AT FINAL GRADE OR ON DISTURBED AREAS THAT WILL BE LEFT EXPOSED FOR MORE THAN SIX (6) MONTHS. SEE GRASSING TABLE AND MULCHING SCHEDULE ON THIS SHEET.
15. THE CONTRACTOR SHALL BEGIN GRASSING WITHIN SEVEN (7) DAYS AFTER THE COMPLETION OF ANY LAND DISTURBING ACTIVITY OR IF THE ACTIVITY IS DISCONTINUED FOR A PERIOD OF FOURTEEN (14) DAYS OR LONGER UNLESS INCLEMENT WEATHER PROHIBITS OR GRADING ACTIVITIES WILL BEGIN AGAIN IN LESS THAN TWENTY-ONE (21) DAYS. NO ADDITIONAL PAYMENT SHALL BE MADE FOR GRASSING THE SAME AREA MORE THAN ONCE.
16. EROSION CONTROL SLOPE STABILIZATION (Ss) AND/OR SODDING (Ds4) SHALL BE USED ON: (1) ALL SLOPES STEEPER THAN 2½ : 1 AND GREATER THAN OR EQUAL TO 10 FEET IN HEIGHT; (2) ALL CONCENTRATED FLOW AREAS; AND (3) CUTS AND FILLS ADJACENT TO STATE WATERS.
17. PERMANENT CONTROL STRUCTURES SHALL BE MAINTAINED BY THE CONTRACTOR FOR A PERIOD OF ONE (1) YEAR FOLLOWING ACCEPTANCE OF THE PROJECT.
18. TEMPORARY MEASURES, SUCH AS SILT FENCING, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR ONCE THE AREA DRAINING TO THE BMP HAS REACHED FINAL STABILIZATION. FINAL STABILIZATION MEANS THAT ALL LAND-DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND THAT FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR EQUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS GABIONS, RIP-RAP, PERMANENT MULCH, GEOTEXTILES) HAVE BEEN USED.
19. MAINTENANCE PROGRAM: ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONTINUOUSLY MAINTAINED BY THE CONTRACTOR. ALL DEVICES SHOULD BE CLEANED OUT BEFORE THEY REACH HALF FULL. CLEANOUT OF SEDIMENT CONTROL STRUCTURES WILL BE ACCOMPLISHED BY SPREADING ON SITE. SEDIMENT BARRIERS SHALL REMAIN IN PLACE AT ALL TIMES UNTIL ALL SEDIMENT CONTRIBUTING AREAS ARE FULLY STABILIZED.
20. NPDES GENERAL PERMIT: A GENERAL NPDES PERMIT FOR STORM WATER DISCHARGES RELATED TO CONSTRUCTION ACTIVITIES IS REQUIRED ON ALL PROJECTS THAT DISTURB 1.0 OR MORE ACRES OF LAND. AS REQUIRED BY GENERAL NPDES PERMIT NO. GAR100002 FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, THE CONTRACTOR IS REQUIRED TO ACT AS PRIMARY PERMITTEE FOR HIS SPECIFIC DIVISION OF WORK AND MUST FOLLOW ALL RULES AND REGULATIONS AS REQUIRED BY THE GENERAL NPDES PERMIT AND PAY ALL NECESSARY PERMIT FEES.
21. ACCORDING TO O.C.G.A. 12-5-51 (OFFICIAL CODE OF GEORGIA ANNOTATED), ANY PERSON WHO INTENTIONALLY OR NEGLIGENTLY CAUSES OR PERMITS ANY SEWAGE, WASTES, OIL, SCUM, FLOATING DEBRIS, OR OTHER SUBSTANCES, INCLUDING BUILDING MATERIALS, TO BE SPILLED, DISCHARGED, OR DEPOSITED IN THE WATERS OF THE STATE, MAY BE HELD LIABLE IN DAMAGES TO THE STATE. NECESSARY SANITARY CONVENIENCES FOR THE USE OF LABORERS ON THE WORK SITE SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR IN SUCH A MANNER AND AT SUCH POINTS AS APPROVED BY THE ENGINEER. THEIR USE SHALL BE STRICTLY ENFORCED.
22. THE CONTRACTOR MAY BE SUBJECT TO THE RESPONSIBILITIES, LIABILITIES AND PENALTIES UNDER THE GEORGIA HAZARDOUS WASTE MANAGEMENT ACT, O.C.G.A. 12-8-60, ET SEQ. OR UNDER CHAPTER 14 OF TITLE 12 OF THE OFFICIAL CODE OF GEORGIA ANNOTATED, OR UNDER SECTION 311 OF THE CLEAN WATER ACT, OR SECTION 106 OF COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT.
23. THE CONTRACTOR SHALL DISPOSE OF ALL SOLID WASTE MATERIALS SUCH AS TRASH AND DEBRIS RESULTING FROM CLEARING OPERATIONS AND CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH BOTH THE AIR QUALITY CONTROL (CHAPTER 391-3-1) AND THE SOILD WASTE MANAGEMENT (CHAPTER 391-3-4) OF THE RULES AND REGULATIONS OF THE ENVIRONMENTAL PROTECTION DIVISION OF THE GEORGIA DEPARTMENT OF NATURAL RESOURCES.

PERMANENT VEGETATIVE COVERS

PLANT, PLANT RATE, AND PLANTING DATE FOR PERMANENT COVER

SPECIES	BROADCAST RATES		RESOURCE AREA^3	PLANTING DATES BY RESOURCE AREA^4												REMARKS
	RATE/ACRE^1	PLS^2/1,000SF		J	F	M	A	M	J	J	A	S	O	N	D	
BAHIA, PENSACOLA alone or with temporary cover with other perennials	60lbs 30lbs	1.4lbs 0.7lbs	P C													166,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with a companion crop. Will spread into bermuda pastures and lawns. Mix with Sericea lespedeza or weeping lovegrass.
BAHIA, WILMINGTON alone or with temporary cover with other perennials	60lbs 30lbs	1.4lbs 0.7lbs	M-L P													Same as above.
BERMUDA, COMMON HULLED SEED alone with other perennials	10lbs 6lbs	0.2lbs 0.7lbs	P C													1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fields.
BERMUDA, COMMON UNHULLED SEED with temporary cover with other perennials	10lbs 6lbs	0.2lbs 0.1lbs	P C													Plant with winter annuals. Plant with Tall Fescue.
BERMUDA SPRIGS COASTAL, COMMON, MIDLAND OR TIFT 44 COASTAL, COMMON, OR TIFT 44	40ft^3 or sod plugs 3'x3'	0.9ft^3	M-L P C													A cubic foot contains approximately 650 sprigs. A bushel contains 1.25 cubic feet or approximately 800 sprigs. Same as above.
TIFT 78			C													Southern Coastal Plain only.
CENTIPEDE	Block Sod Only		P C													Drought tolerant. Full sun or partial shade. Effective adjacent to concrete and in concentrated flow areas. Irrigation is needed until fully established. Do not plant near pastures. Winter hardy as far as north Athens and Atlanta.
CROWNVETCH with winter annuals or cool season grasses	15lbs	0.3lbs	M-L P													100,000 seed per pound. Dense growth. Drought tolerant and fire resistant. Attractive rose, pink, and white blossoms spring to late fall. Mix with 30lbs of Tall Fescue or 15lbs of Rye. Inoculate see with M inoculant. Use from North Atlanta and Northward.
FESCUE, TALL alone with other perennials	50lbs 30lbs	1.1lbs 0.7lbs	M-L P													227,000 seed per pound. Use alone only on better sites. Mix with perennial lespedeza or Crownvetch. Apply top dressing in spring following fall plantings. Not for heavy use areas or athletic fields.
LESPEDEZA SERICEA scarified	60lbs	1.4lbs	M-L P C													350,000 seed per pound. Widely adapted. Low maintenance. Mix with Weeping lovegrass, common bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent on road banks. Inoculate seed with EL inoculant.
unscarified	75lbs	1.7lbs	M-L P C													Mix with Tall fescue or winter annuals.
seed-bearing hay	3 tons	1,338lbs	M-L P C													Cut when seed mixture is mature, but before it shatters. Add Tall fescue or winter annuals.
LESPEDEZA scarified unscarified	60lbs 75lbs	1.4lbs 1.7lbs	M-L P C M-L P C													300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous in urban areas. Spreading-type growth. New growth has bronze coloration. Mix with Weeping lovegrass, common bermuda, bahia, tall fescue or winter annuals. Do not mix with Sericea lespedeza. Slow to develop solid stands. Inoculate seed with EL inoculant.
LESPEDEZA, SHRUB plants	3'x3'		M-L P C													Provide wildlife food and cover.
LOVEGRASS, WEEPING alone with other perennials	4lbs 2lbs	0.1lbs 0.05lbs	M-L P C													1,500,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
MAIDENCANE sprigs	2'x3' spacing		ALL													For very wet sites. May clog channels. Dig sprigs from local sources. Use along river banks and shorelines.
PANICGRASS, ATLANTIC COASTAL	20lbs	0.5lbs	P C													Grows well on coastal sand dunes, borrow areas, and gravel pits. Provides winter cover for wildlife. Mix with Sericea lespedeza except on sand dunes.
REED CANARY GRASS alone with other perennials	50lbs 30lbs	1.1lbs 0.7lbs	M-L P													Grows similar to Tall fescue.
SUNFLOWER, 'AZTEC' MAXIMILLIAN	10lbs	0.2lbs	M-L P C													227,000 seed per pound. Mix with Weeping lovegrass or other low-growing grasses or legumes.

[1] Reduce seeding rates by 50% when drilled.

[2] PLS is an abbreviation for Pure Live Seed. Refer to Section V.E. of the Manual for Erosion and Sediment Control in Georgia, 2016 Edition.

[3] M-L represents the Mountain; Blue Ridge; and Ridges and Valleys MLRAs
P represents the Southern Piedmont MLRA
C represents the Southern Coastal Plain; Sand Hills; Black Lands; and Atlantic Coast Flatwoods MLRAs (see Figure 6-4.1, p6-40 of the Manual for Soil Erosion & Sediment Control in Georgia, 2016 Edition

[4] Solid lines indicate optimum dates. Dotted lines indicate permissible but marginal dates.

ERSOSION & SEDIMENTATION CONTROL PLAN

No. 31780
ALEX S. WISEMAN
08/11/23

LEVEL II CERTIFICATION No.: 46916

RELEASES	
10/16/2023	BID RELEASE
03/15/2024	CONSTRUCTION RELEASE

EASTANOLLEE CREEK
WPCP IMPROVEMENTS - PHASE II
FOR THE
CITY OF TOCCOA
STEPHENS COUNTY, GEORGIA

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ATHENS ◆ CANTON ◆ MOULTRIE
1031 STONEBRIDGE PARKWAY. WATKINSVILLE, GA 30677 . 706.769.4119 TEL . 706.769.4546 FAX
GA COA LICENSE# PEF001004 EXPIRES 6/30/2024

THIS LINE IS ONE INCH LONG WHEN DRAWING IS PLOTTED FULL SCALE

DSGN: ASW
DRWN: BMW
SCALE: AS SHOWN
PROJ. NO.: T7300.052
DATE: 08/11/2023
SHEET NO.: EC1
OF 152 SHEETS

P:\T7300 TOCCOA\T7300.052 EASTANOLLEE CREEK WPCP IMPROVEMENTS-PHASE II\CADD\WORKING DRAWINGS\EROSION CONTROL

EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN CHECKLIST - STANDALONE CONSTRUCTION PROJECTS

1. CHECKLIST
THIS EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN USES THE STANDALONE CONSTRUCTION PROJECTS CHECKLIST ESTABLISHED BY THE COMMISSION AS OF JANUARY 1, 2023.

2. CERTIFICATION
THE LEVEL II CERTIFICATION NUMBER, SIGNATURE, AND SEAL OF THE CERTIFIED DESIGN PROFESSIONAL IS ON EACH SHEET OF THIS ES&PC PLAN.

3. LIMITS OF DISTURBANCE
THE TOTAL DISTURBED AREA FOR THIS PROJECT IS LESS THAN 50 ACRES.

4. 24-HOUR LOCAL CONTACT
THE 24-HOUR EMERGENCY CONTACT FOR THIS PROJECT IS HARRY SCOTT, UTILITIES DIRECTOR, CITY OF TOCCOA, 706-282-3305.

5. PRIMARY PERMITTEE
CITY OF TOCCOA, 92 NORTH ALEXANDER STREET, TOCCOA, GA 30577. PHONE: 706-282-3305; FAX: 706-886-7766. EMAIL: HSCOTT@CITYOFTOCCOA.COM

6. PROJECT DISTURBANCE
THE TOTAL AREA FOR THE PROJECT SITE IS 8.62 ACRES. THE TOTAL DISTURBED AREA IS 4.95 ACRES.

7. GPS LOCATION OF CONSTRUCTION EXIT
THE CONSTRUCTION EXIT IS LOCATED AT 34.5440°N / 83.3026°W.

8. PLAN DATES
INITIAL DATE OF THE PLAN IS LOCATED AT THE BOTTOM RIGHT & REVISIONS ARE LOCATED AT THE TOP RIGHT OF EVERY PAGE, EXCEPT THE TITLE SHEET WHERE THEY ARE LOCATED AT THE BOTTOM RIGHT.

9. CONSTRUCTION ACTIVITY DESCRIPTION
THE EASTANOLLEE CREEK WPCP IMPROVEMENTS - PHASE 2 FOR THE CITY OF TOCCOA, GEORGIA WILL INVOLVE THE CONSTRUCTION OF NEW UTILITY BUILDING, UPDATES TO THE EXISTING DEWATERING BUILDING, EFFLEUNT STRUCTURE, RAS/WAS PUMP STATION & VAULTS, AERATION BASIN, DIGESTERS, AND MISCELLANEOUS PIPING AND VALVES, MINIMAL SITE GRADING, PAVING, EROSION CONTROL BMPS, AND OTHER APPURTENANCES REQUIRED FOR A COMPLETE INSTALLATION. THE PROJECT IS LOCATED ON ROSE LANE, BETWEEN LIBERTY HILL ROAD AND HAYLEY DRIVE IN THE CITY OF TOCCOA, GEORGIA. THE PROJECT SHALL BE CONFINED TO PROPERTY OWNED BY THE CITY OF TOCCOA.

10. VICINITY MAP
SEE **SHEET 2** FOR VICINITY MAP.

11. RECEIVING WATERS
RECEIVING WATERS INCLUDE EASTANOLLEE CREEK. SENSITIVE ADJACENT AREAS TO THE PROJECT INCLUDE RESIDENTIAL AREAS, PUBLIC PARKS, AND UN-DEVELOPED RURAL AREAS.

12. SITE VISIT
THE DESIGN PROFESSIONAL VISITED THE SITE PRIOR TO DEVELOPMENT OF THE ES&PC PLANS. SEE SIGNED STATEMENT ON COVER SHEET.

13. APPROPRIATE AND COMPREHENSIVE SYSTEM OF BMP'S
THE ES&PC PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BMPS AND SAMPLING TO MEET PERMIT REQUIREMENTS AS STATED ON PAGE 15 OF THE PERMIT. SEE SIGNED STATEMENT ON COVER SHEET.

14. INITIAL INSPECTION
THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS WITHIN 7 DAYS AFTER INSTALLATION.

15. NON-EXEMPT ACTIVITIES
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 AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

16. BUFFER ENCROACHMENTS
THERE IS A BUFFER ENCROACHMENT ON THIS PROJECT FOR THE INSTALLATION OF 1-18" CPP DRAINAGE PIPE AND DITCH FOR STORMWATER SITE DRAINAGE AND PIPED TO EASTANOLLEE CREEK. THIS INSTALLATION WILL RESULT IN NO MORE THAN 60 LINEAR FEET OF BANK DISTURBANCE. NO VARIANCE IS REQUIRED FOR STORM UTILITY DESIGN THAT IS LESS THAN 300 LINEAR FEET OF BANK DISTURBANCE.

17. AMENDMENTS/REVISIONS
AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE SIGNIFICANT EFFECT ON BMPS WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

18. WASTE MATERIALS
WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

19. 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.

20. 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.

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

22. IMPAIRED STREAMS
THIS PROJECT DISCHARGES STORM WATER INTO AN IMPAIRED STREAM SEGMENT AND IS WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS AN IMPAIRED STREAM SEGMENT. ADDITIONAL BMPS FOR THIS PROJECT ARE NOTED IN APPENDIX 1 AND SHOWN ON SHEETS EC5-EC7.

23. TMDL IMPLEMENTATION PLAN
OTHER THAN COMPLIANCE WITH THE NPDES PERMIT, THERE ARE NO SITE SPECIFIC REQUIREMENTS IN THE "TOTAL MAXIMUM DAILY LOAD EVALUATION FOR TEN STREAM SEGMENTS IN THE SAVANNAH RIVER BASIN FOR SEDIMENT" DATED MARCH 2010.

24. BMPS FOR CONCRETE TRUCK/TOOL WASHING
NO CONCRETE TRUCKS SHALL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON-SITE. THE WASHDOWN OF CONCRETE TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND REAR OF VEHICLES SHALL OCCUR ON A CONSTRUCTION EXIT DESIGNATED ON THE PLANS FOR THE PROJECT.

25. REMEDIATION OF ALL PETROLEUM SPILLS AND LEAKS
LOCAL, STATE, AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, 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 OR ARE OF UNKNOWN QUANTITY, CONTACT THE NATIONAL RESPONSE CENTER AT 800.424.8802. FOR SPILLS GREATER THAN 25 GALLONS WITH NO SURFACE WATER IMPACTS, CONTACT GEORGIA EPD AT 800.241.4113. FOR SPILLS SMALLER THAN 25 GALLONS, CONTACT LOCAL AGENCIES AS REQUIRED.

26. PERMANENT MEASURES FOR STORM WATER POLLUTION PREVENTION
PERMANENT GRASSING WILL PROVIDE SUFFICIENT PROTECTION FOR STORM WATER POLLUTION AFTER THIS PROJECT IS COMPLETED.

27. BMPs FOR BUILDING MATERIALS AND BUILDING PRODUCTS ON SITE
CONTRACTOR SHALL USE PLASTIC SHEETING OR TEMPORARY ROOFS, TO COVER BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE, AND OTHER MATERIALS IN ORDER TO MINIMIZE EXPOSURE TO PRECIPITATION AND TO STORMWATER.

28. POLLUTION PREVENTION PLAN
THE FOLLOWING MATERIALS ARE EXPECTED ONSITE DURING CONSTRUCTION: CONCRETE PRODUCTS, PETROLEUM BASED FUELS AND LUBRICANTS FOR EQUIPMENT, TAR, SOLVENTS, PAINTS, FERTILIZERS, HERBICIDES, CRUSHED STONE, PLASTIC AND METAL PIPES. PRACTICES SUCH AS GOOD HOUSEKEEPING, PROPER HANDLING OF HAZARDOUS PRODUCTS, AND PROPER SPILL CONTROL PRACTICES WILL BE FOLLOWED TO REDUCE THE RISK OF SPILLS AND SPILLS FROM DISCHARGING INTO STORM WATER RUNOFF. QUANTITIES OF PRODUCTS STORED ONSITE SHOULD BE LIMITED TO THE AMOUNT NEEDED TO COMPLETE THE JOB. PRODUCTS AND MATERIALS SHALL BE STORED IN A NEAT, ORDERLY MANNER IN APPROPRIATE CONTAINERS PROTECTED FROM RAINFALL WHERE POSSIBLE. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH MANUFACTURER LABELS LEGIBLE AND VISIBLE. PRODUCT MIXING, DISPOSAL, AND DISPOSAL OF PRODUCT CONTAINERS SHALL BE ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL INSPECT SUCH MATERIALS TO ENSURE PROPER USE, STORAGE, AND DISPOSAL.

PETROLEUM BASED PRODUCTS: CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS 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. PROPER DISPOSAL METHODS SHALL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

WASTE MATERIALS: WASTE DISPOSAL, SOLID MATERIALS INCLUDING BUILDING MATERIALS, WILL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER, MEETING ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER AND SHALL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY. TRASH SHALL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE SHALL BE BURIED ONSITE OR DISPOSED OF INTO STORM WATER INLETS OR WATERS OF THE STATE. ALL PERSONNEL SHALL BE INSTRUCTED ON PROPER PROCEDURES FOR WASTE DISPOSAL A NOTICE STATING THESE PRACTICES SHALL BE POSTED AT THE JOBSITE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE: ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER'S SPECIFICATIONS OF SUCH PRODUCTS. THE JOBSITE SUPERINTENDENT, WHO SHALL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, SHALL INSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOBSITE SHALL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS SHALL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS SHALL BE MAINTAINED IN THE ESPCP FILE AT THE JOBSITE OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES SHALL 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 TECHNIQUES. THE CONTRACTOR SHALL IMPLEMENT THE SPILL PREVENTION BMPS FOUND WITHIN THIS ESPCP AND SHALL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR HAZARDOUS WASTES SHALL BE ALLOWED TO COME IN CONTACT WITH STORM WATER DISCHARGES. IF SUCH CONTACT OCCURS, THE STORM WATER DISCHARGE SHALL BE CONTAINED ONSITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORM WATER. IT SHALL BE THE RESPONSIBILITY OF THE JOBSITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPILL PREVENTION BMPS.

SANITARY WASTES: A MINIMUM OF ONE PORTABLE SANITARY UNIT SHALL BE PROVIDED FOR EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE SHALL 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 SHALL BE LOCATED IN AN AREAS WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORM WATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMPS 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 ESPCP AFTER LOCATIONS ARE DETERMINED IN THE FIELD.

29. CONSTRUCTION SCHEDULE
INITIAL CONSTRUCTION IS EXPECTED TO BEGIN IN MAY 2024 AND FINAL STABILIZATION WILL BE ACCOMPLISHED IN JUNE 2025 (SEE SCHEDULE BELOW). THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE OUTLINING IN DETAIL WHEN MAJOR GRADING ACTIVITIES WILL OCCUR, INITIATION DATE OF BMPS, AND PHASING OF CONSTRUCTION ACTIVITIES. THIS INFORMATION WILL BE USED TO UPDATE THE CONSTRUCTION SCHEDULE SHOWN ON THIS SHEET AS NECESSARY.

30. INSPECTIONS & RECORD KEEPING
SEE **SHEET EC3** FOR COMPLETE REQUIREMENTS OF INSPECTIONS AND RECORD KEEPING BY THE PRIMARY PERMITTEE AS PER PARTS IV.D.4 AND IV.F OF THE PERMIT.

31. SAMPLING FREQUENCY AND REPORTING
SEE **SHEET EC3** FOR COMPLETE REQUIREMENTS OF SAMPLING FREQUENCY AND REPORTING OF SAMPLING RESULTS AS PER PART IV.D.6 OF THE PERMIT.

32. RETENTION OF RECORDS
SEE **SHEET EC3** FOR COMPLETE DETAILS FOR RETENTION OF RECORDS AS PER PART IV.F. OF THE PERMIT.

33. SAMPLING METHOD
SEE **SHEET EC3** FOR COMPLETE DESCRIPTION OF ANALYTICAL METHODS TO BE USED TO COLLECT AND ANALYZE THE SAMPLES FROM EACH LOCATION.

34. APPENDIX B RATIONALE
FOR THIS PROJECT, STREAM SAMPLING OF WARM WATERS THE NTU INCREASE CANNOT BE MORE THAN 25 FROM USP-1 TO DSP-1.

35. SAMPLING LOCATIONS
ALL SAMPLING LOCATIONS,PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED HAVE BEEN DELINEATED ON **SHEET EC4** OF THESE DRAWINGS.

36. BMP DESCRIPTION
BMPS SHALL BE EMPLOYED TO PREVENT EROSION AND SEDIMENTATION IN AREAS OF BARE SOILS AND CONCENTRATED WATER FLOWS. CHECK DAMS (CD) WILL BE CONSTRUCTED IN DITCHES OR AREAS OF CONCENTRATED FLOW. CONSTRUCTION EXITS (CO) WILL BE CONSTRUCTED AT ALL PAVED ROADWAYS AND SHALL HAVE A GRAVEL APRON AND CONFORM TO THE DETAILS SHOWN HEREIN. DIVERSION DITCHES (DI), BERMS AND TEMPORARY DOWN DRAINS WILL BE USED TO DIVERT CONCENTRATED, SEDIMENT-LADEN RUNOFF INTO THE SEDIMENT BARRIERS AND TO PROTECT CUT AND FILL SLOPES FROM EROSIVE WATER FLOWS. SEDIMENT BARRIERS, SUCH AS SILT FENCES AND SEDIMENT TRAPS (SD-1 & 2) WILL BE USED AT LOCATIONS SHOWN ON THE DRAWINGS TO PREVENT SEDIMENT FROM LEAVING THE DISTURBED AREAS. STORM DRAIN OUTLET PROTECTION (ST) OR RIP-RAP (RP) WILL BE INSTALLED AT THE DISCHARGE OF ALL STORM DRAINAGE SYSTEMS TO PREVENT THE EROSION OF DITCHES AND STREAM BEDS. WHERE FREQUENT STREAM CROSSINGS WILL OCCUR, TEMPORARY CULVERT PIPES (SR) SHALL BE INSTALLED TO REDUCE DISTURBANCES. TEMPORARY AND PERMANENT STABILIZATION USING MULCH AND GRASSING (DS1, 2 & 3) WILL BE UTILIZED IN ALL DISTURBED AREAS. DUST CONTROL MEASURES (DU) SHALL BE USED TO CONTROL DUST CAUSED BY THE CONSTRUCTION ACTIVITIES. EROSION CONTROL MATTING AND BLANKETS SHALL BE USED ON STEEP SLOPES AS DESCRIBED HEREIN.

37. GRAPHIC SCALE & NORTH ARROW
A GRAPHIC SCALE & NORTH ARROW HAS BEEN SHOWN ON ALL APPLICABLE SHEETS.

38. CONTOURS
EXISTING AND PROPOSED CONTOUR LINES HAVE BEEN SHOWN ON **SHEETS 5-6** AT A SCALE OF 1"=100' OR GREATER AT 1 FT. INTERVALS FOR 0-2% SLOPES, 1 OR 2 FT. INTERVALS FOR 2-8% SLOPES, AND NO GREATER THAN 10 FT. INTERVALS FOR SLOPES GREATER THAN 8%.

39. ALTERNATIVE BMP'S
NO ALTERNATIVE BMP'S WILL BE USED ON THIS SITE.

40. EQUIVALENT BMP'S
NO ALTERNATIVE BMP'S FOR APPLICATION TO THE EQUIVALENT BMP LIST WILL BE USED ON THIS SITE.

41. BUFFERS
ALL UNDISTURBED BUFFERS ADJACENT TO STATE WATERS AND ANY ADDITIONAL BUFFERS REQUIRED BY THE LOCAL ISSUING AUTHORITY HAVE BEEN DELINEATED ON THE DRAWINGS. A 25-FOOT UNDISTURBED VEGETATED BUFFER ADJACENT TO ALL STATE WATERS SHALL BE LEFT AND MAINTAINED EXCEPT WHERE THE STATE WATERS ARE CLASSIFIED AS "TROUT STREAMS", IN WHICH CASE A 50-FOOT UNDISTURBED VEGETATED BUFFER IS REQUIRED. SEE PLANS FOR ADDITIONAL OR MORE RESTRICTIVE BUFFER REQUIREMENTS. NO ACTIVITIES SHALL BE CONDUCTED WITHIN THE 25 OR 50-FOOT STREAM BUFFER ALONG THE BANKS OF ALL STATE WATERS, UNLESS A VARIANCE HAS BEEN OBTAINED FROM THE GA EPD DIRECTOR, EXCEPT FOR EXEMPT ACTIVITIES PER O.C.G.A., I.E. PIPELINE CROSSINGS.

42. ON-SITE WETLANDS & STATE WATERS
ALL STATE WATERS & WETLANDS LOCATED WITHIN 200 FEET OF THE PROJECT SITE HAVE BEEN DELINEATED ON THE DRAWINGS.

43. DELINEATION OF DRAINAGE BASINS
DELINEATION AND ACREAGE OF CONTRIBUTING DRAINAGE BASINS ON THE PROJECT SITE IS SHOWN ON SHEET EC4. THE CONTRIBUTING DRAINAGE AREA FOR THE EASTANOLLEE CREEK WPCP IMPROVEMENTS - PHASE 2 IS 4.95 ACRES.

44. HYDROLOGY STUDY
THE HYDROLOGY STUDY AND MAPS ARE SHOWN IN THE ATTACHED REPORT.

45. RUN-OFF COEFFICIENT
PRE-CONSTRUCTION RUN-OFF COEFFICIENT IS ESTIMATED TO BE 0.22.
POST-CONSTRUCTION RUN-OFF COEFFICIENT IS ESTIMATED TO BE 0.23.

46. PIPE & WEIR VELOCITIES
THERE ARE NO PROPOSED STORM PIPES ON THIS PROJECT.

47. SOILS INFORMATION
SOIL SERIES AND DELINEATION FOR THE PROJECT SITE IS SHOWN ON **SHEET EC4.**

48. LIMITS OF DISTURBANCE
THE LIMITS OF DISTURBANCE FOR EACH PHASE ARE SHOWN ON SHEETS EC5 - EC7. PROJECT SHALL BE CONFINED TO PROPERTY OWNED BY THE CITY OF TOCCOA.

49. SEDIMENT STORAGE
REFER TO SHEET EC6 FOR SEDIMENT STORAGE TABLE.

50. BEST MANAGEMENT PRACTICES
ALL BEST MANAGEMENT PRACTICES (BMPS) SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) AS PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS AMENDED TO DATE AND IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND LOCAL REQUIREMENTS. WHERE THESE PLANS AND SPECIFICATIONS OR LOCAL REQUIREMENTS ARE MORE STRINGENT THAN THOSE LISTED IN THE MANUAL, THE MORE STRINGENT REQUIREMENTS SHALL BE MET.

BMP'S FOR OFF-SITE TRACKING AND DUST CONTROL: CONSTRUCTION EXITS (CO) WILL BE CONSTRUCTED AT ALL PAVED ROADWAYS AND LOCATIONS SHOWN HEREIN AND SHALL HAVE A GRAVEL APRON AND CONFORM TO THE DETAILS SHOWN HEREIN. DUST CONTROL MEASURES (DU) SHALL BE USED TO CONTROL DUST CAUSED BY THE CONSTRUCTION ACTIVITIES AS NEEDED.

51. STRUCTURAL PRACTICES
DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES ARE SHOWN ON **SHEETS EC1, EC8-EC9.**

52. VEGETATIVE PLAN
SEE **SHEET EC1** FOR COMPLETE VEGETATIVE PLAN.

NOTE
CHECKLIST ITEMS SHOWN IN BOLD ARE SITE SPECIFIC.

APPENDIX 1

THE ES&PC PLAN MUST INCLUDE AT LEAST FOUR (4) OF THE FOLLOWING BMPS FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO A IMPAIRED STREAM SEGMENT AND FOR SITES WHICH EPD HAS APPROVED IN WRITING A REQUEST TO DISTURB 50 ACRES OR MORE AT ANY ONE TIME.

PLAN PAGE #	INCLUDED Y/N	THE FOUR ITEMS CHOSEN MUST BE APPROPRIATE FOR THE SITE CONDITIONS.
		A. DURING CONSTRUCTION ACTIVITIES, DOUBLE THE WIDTH OF THE 25 FOOT UNDISTURBED VEGETATED BUFFER ALONG ALL STATE WATERS REQUIRING A BUFFER AND THE 50 FOOT UNDISTURBED VEGETATED BUFFER ALONG ALL STATE WATERS CLASSIFIED AS "TROUT STREAMS" REQUIRING A BUFFER. DURING CONSTRUCTION ACTIVITIES, EPD WILL NOT GRANT VARIANCES TO ANY SUCH BUFFERS THAT ARE INCREASED IN WIDTH.
		B. INCREASE ALL TEMPORARY SEDIMENT BASINS AND RETROFITTED STORM WATER MANAGEMENT BASINS TO PROVIDE SEDIMENT STORAGE OF AT LEAST 3600 CUBIC FEET (134 CUBIC YARDS) PER ACRE DRAINED.
###	Y	C. USE BAFFLES IN ALL TEMPORARY SEDIMENT BASINS AND RETROFITTED STORM WATER MANAGEMENT BASINS TO AT LEAST DOUBLE THE CONVENTIONAL FLOW PATH LENGTH TO THE OUTLET STRUCTURE.
EC5 EC9	Y	D. A LARGE SIGN (MINIMUM 4 FEET X 8 FEET) MUST BE POSTED ON SITE BY THE ACTUAL START DATE OF CONSTRUCTION. THE SIGN MUST BE VISIBLE FROM A PUBLIC ROADWAY. THE SIGN MUST IDENTIFY THE FOLLOWING: (1) CONSTRUCTION SITE, (2) THE PERMITTEE(S), (3) THE CONTACT PERSON(S) AND TELEPHONE NUMBER(S), AND (4) THE PERMITTEE-HOSTED WEBSITE WHERE THE PLAN CAN BE VIEWED MUST BE PROVIDED ON THE SUBMITTED NOI. THE SIGN MUST REMAIN ON SITE AND THE PLAN MUST BE AVAILABLE ON THE PROVIDED WEBSITE UNTIL A NOT HAS BEEN SUBMITTED.
		E. USE FLOCCULANTS OR COAGULANTS AND/OR MULCH TO STABILIZE AREAS LEFT DISTURBED FOR MORE THAN SEVEN (7) CALENDAR DAYS IN ACCORDANCE WITH SECTION III. D.1. OF THE NPDES PERMIT.
		F. CONDUCT TURBIDITY SAMPLING AFTER EVERY RAIN EVENT OF 0.5 INCH OR GREATER WITHIN ANY 24 HOUR PERIOD, RECOGNIZING THE EXCEPTIONS SPECIFIED IN SECTION IV.D.6.D. OF THE NPDES PERMITS.
		G. COMPLY WITH THE APPLICABLE END-OF-PIPE TURBIDITY EFFLUENT LIMIT, WITHOUT THE "BMP DEFENSE" AS PROVIDED FOR IN O.C.G.A. 12-7-6 (A)(1).
		H. REDUCE THE TOTAL PLANNED SITE DISTURBANCE TO LESS THAN 50% IMPERVIOUS SURFACES (EXCLUDING ANY STATE-MANDATED BUFFER AREAS FROM SUCH CALCULATIONS). ALL CALCULATIONS MUST BE INCLUDED ON THE PLAN.
		I. LIMIT THE AMOUNT OF DISTURBED AREA AT ANY ONE TIME TO NO GREATER THAN 25 ACRES OR 50% OF THE TOTAL PLANNED SITE, WHICHEVER IS LESS. ALL CALCULATIONS MUST BE INCLUDED ON THE PLAN.
		J. USE "DIRT II" TECHNIQUES AVAILABLE ON THE EPD WEBSITE TO MODEL AND MANAGE CONSTRUCTION STORM WATER RUNOFF (INCLUDING SHEET FLOW). ALL CALCULATIONS MUST BE INCLUDED ON THE PLAN. (HTTPS://EPD.GEORGIA.GOV/EROSION-AND-SEDIMENTATION)
		K. ADD APPROPRIATE ORGANIC SOIL AMENDMENTS (E.G., COMPOST) AND CONDUCT PRE- AND POST-CONSTRUCTION SOIL SAMPLING TO A DEPTH OF SIX (6) INCHES TO DOCUMENT IMPROVED LEVELS OF SOIL CARBON AFTER FINAL STABILIZATION OF THE CONSTRUCTION SITE.
		L. USE MULCH FILTER BERMS, IN ADDITION TO A SILT FENCE, ON THE SITE PERIMETER WHEREVER CONSTRUCTION STORM WATER (INCLUDING SHEET FLOW) MAY BE DISCHARGED. MULCH FILTER BERMS CANNOT BE PLACED IN WATERWAYS OR AREAS OF CONCENTRATED FLOW.
EC6	Y	M. USE APPROPRIATE EROSION CONTROL SLOPE STABILIZATION INSTEAD OF CONCRETE IN ALL CONSTRUCTION STORM WATER DITCHES AND STORM DRAINAGES DESIGNED FOR A 25 YEAR, 24 HOUR RAINFALL EVENT.
		N. USE FLOCCULANTS OR COAGULANTS UNDER A PASSIVE DOSING METHOD (E.G., FLOCCULANT BLOCKS) WITHIN CONSTRUCTION STORM WATER DITCHES AND STORM DRAINAGES THAT FEED INTO TEMPORARY SEDIMENT BASINS AND RETROFITTED MANAGEMENT BASINS.
		O. INSTALL SOD FOR A MINIMUM 20 FOOT WIDTH (IN LIEU OF SEEDING) AFTER FINAL GRADE HAS BEEN ACHIEVED, ALONG THE SITE PERIMETER WHEREVER STORM WATER (INCLUDING SHEET FLOW) MAY BE DISCHARGED.
		P. CONDUCT SOIL TESTS TO IDENTIFY AND TO IMPLEMENT SITE-SPECIFIC FERTILIZER NEEDS.
		Q. CERTIFIED PERSONNEL FOR PRIMARY PERMITTEES SHALL CONDUCT INSPECTIONS AT LEAST TWICE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF THE STORM THAT IS 0.5 INCHES RAINFALL OR GREATER IN ACCORDANCE WITH SECTION IV.D.4.A.(3)(A) - (C); SECONDARY PERMITTEES, SECTION IV.D.4.B.(3)(A) - (C); AND TERTIARY PERMITTEES SECTION IV.D.4.C.(3)(A) - (C) *
EC6	Y	R. APPLY THE APPROPRIATE COMPOST BLANKETS (MINIMUM DEPTH 1.5 INCHES) TO PROTECT SOIL SURFACES UNTIL VEGETATION IS ESTABLISHED DURING THE FINAL STABILIZATION PHASE OF THE CONSTRUCTION ACTIVITY.
		S. USE ALTERNATIVE BMPS WHOSE PERFORMANCE HAS BEEN DOCUMENTED TO BE SUPERIOR TO CONVENTIONAL BMPS AS CERTIFIED BY A DESIGN PROFESSIONAL (UNLESS DISAPPROVED BY EPD OR THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION). (IF USING THIS ITEM PLEASE REFER TO THE ALTERNATIVE BMP GUIDANCE DOCUMENT FOUND AT WWW.GASWCC.GEORGIA.GOV)
		T. LIMIT THE TOTAL PLANNED SITE DISTURBANCE TO LESS THAN 15% IMPERVIOUS SURFACES (EXCLUDING ANY STATE MANDATED BUFFER AREAS FROM SUCH CALCULATIONS). ALL CALCULATIONS MUST BE INCLUDED IN THE PLAN.
		U. CONDUCT INSPECTIONS DURING THE INTERMEDIATE GRADING AND DRAINAGE BMP PHASE AND DURING THE FINAL BMP PHASE OF THE PROJECT BY THE DESIGN PROFESSIONAL WHO PREPARED THE PLAN IN ACCORDANCE WITH SECTION IV.A.5 OF THE PERMIT. THE PLAN MUST INCLUDE A STATEMENT THAT THE PRIMARY PERMITTEE MUST RETAIN THE DESIGN PROFESSIONAL WHO PREPARED THE PLAN TO CONDUCT INSPECTIONS DURING THE INTERMEDIATE GRADING AND DRAINAGE BMP PHASE AND DURING THE FINAL BMP PHASE.
		V. INSTALL POST CONSTRUCTION BMPS (E.G., RUNOFF REDUCTION BMPS) WHICH REMOVE 80% TSS AS OUTLINED IN THE GEORGIA STORMWATER MANAGEMENT MANUAL KNOWN AS THE BLUE BOOK OR AN EQUIVALENT OR MORE STRINGENT DESIGN MANUAL.

CONSTRUCTION SCHEDULE

ITEM	DESCRIPTION (APPROX. START DATE: MAY 2024 →)	MONTHS OF CONSTRUCTION ACTIVITY 1	2	3	4	5	6	7	8	9	10	11	12
1	INSTALL CONST. EXIT, SED. BARRIER & OTHER PERIMETER CONTROLS & MAINTAIN	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■□□□
2	CLEARING AND GRUBBING	□■■■	■■□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□
3	CONSTRUCTION	□■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■□□□
4	TEMPORARY STABILIZATION	□■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■□□□
5	PERMANENT STABILIZATION	□□□□	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■■■■	■□□□
6	CLEAN-UP	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	■■■■	■■■■	■■■□
7	REMOVAL OF TEMPORARY EROSION & SEDIMENT CONTROL MEASURES	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	■■■■

CONSTRUCTION SCHEDULE NOTES
1. SEDIMENT STRUCTURES SHALL BE INSTALLED PRIOR TO LAND-DISTURBANCE (INCLUDING CLEARING & GRUBBING.)
2. IF CLEARING & GRUBBING PRECEED CONSTRUCTION BY MORE THAN SEVEN DAYS, DISTURBED AREAS SHALL BE MULCHED AND CHECK DAMS INSTALLED IMMEDIATELY PROCEEDING THE LAND-DISTURBING ACTIVITY.
3. EROSION & SEDIMENT CONTROL STRUCTURES SHALL BE REMOVED ONCE "FINAL STABILIZATION" HAS BEEN ACHIEVED.

NOTICE

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.

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

THIS SITE CONTAINS STATE WATERS AND HAS ASSOCIATED STATE AND COUNTY UNDISTURBED BUFFERS. THE CONTRACTOR SHALL FURNISH AND INSTALL TWO (2) ROWS OF TYPE "S" SILT FENCE ADJACENT TO ALL STATE WATERS WITHIN THE PROJECT AREA.

EROSION & SEDIMENTATION CONTROL PLAN

No. 31780
ALEX S. WISEMAN
08/11/23
LEVEL II CERTIFICATION No.: 46916

RELEASES	
10/16/2023	BID RELEASE
03/15/2024	CONSTRUCTION RELEASE

EASTANOLLEE CREEK
WPCP IMPROVEMENTS - PHASE II
FOR THE
CITY OF TOCCOA
STEPHENS COUNTY, GEORGIA

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ATHENS ◆ CANTON ◆ MOULTRIE
1031 STONEBRIDGE PARKWAY. WATKINSVILLE, GA 30677 . 706.769.4119 TEL . 706.769.4546 FAX
GA COA LICENSE# PEF001004 EXPIRES 6/30/2024

THIS LINE IS ONE INCH LONG WHEN DRAWING IS PLOTTED FULL SCALE

DSGN: ASW
DRWN: BMW
SCALE: AS SHOWN
PROJ. NO.: T7300.052
DATE: 08/11/2023
SHEET NO.: EC2 OF 152 SHEETS

P:\T7300 TOCCOA\T7300.052 EASTANOLLEE CREEK WPCP IMPROVEMENTS-PHASE II\CADD\WORKING DRAWINGS\EROSION CONTROL

SAMPLING REQUIREMENTS - PART IV SECTION D.6

THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS PARAGRAPH SHALL NOT APPLY TO ANY LAND DISTURBANCE ASSOCIATED WITH THE CONSTRUCTION OF SINGLE-FAMILY HOMES WHICH ARE NOT PART OF A SUBDIVISION OR PLANNED COMMON DEVELOPMENT UNLESS FIVE (5) ACRES OR MORE WILL BE DISTURBED. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY.

A. SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:

(1). A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24000 MAP SHOWING THE LOCATION OF THE SITE OR THE STAND ALONE CONSTRUCTION; (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES AS SHOWN ON A USGS TOPOGRAPHIC MAP, AND ALL OTHER PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORMWATER IS DISCHARGED AND (B) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS. WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC MAP AND THE RECEIVING WATER(S) IS NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION OF THE RECEIVING WATER(S) MUST BE HAND-DRAWN ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORMWATER(S) ENTERS THE RECEIVING WATER(S) TO THE POINT WHERE THE RECEIVING WATER(S) COMBINES WITH THE FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP;

(2). A WRITTEN NARRATIVE OF SITE SPECIFIC ANALYTICAL METHODS USED TO COLLECT, HANDLE AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR EACH SAMPLING LOCATION;

(3). WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE SAMPLED, A RATIONALE MUST BE INCLUDED ON THE PLAN FOR THE NTU LIMIT(S) SELECTED FROM APPENDIX B. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES); AND

(4). ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL.

B. SAMPLE TYPE. ALL SAMPLING SHALL BE COLLECTED BY ©GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

(1). SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.

(2). SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.

(3). LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.

(4). MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.

(5). SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.

C. SAMPLING POINTS.

(1). FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S). SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORMWATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES:

(A). THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORMWATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.

(B). THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORMWATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.

(C). IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORMWATER OUTFALL CHANNEL(S).

(D). CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORMWATER CHANNEL.

(E). THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.

(F). THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.

(G). PERMITTEES DO NOT HAVE TO SAMPLE SHEET FLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION).

(H). ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORMWATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS III.D.3. OR III.D.4., WHICHEVER IS APPLICABLE.

D. SAMPLING FREQUENCY.

(1). THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN IN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.

(2). HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORMWATER DISCHARGE.

(3). SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:

(A). FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;

(B). IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;

(C). AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;

(D). WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND

(E). EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

THE INFORMATION ABOVE IS A EXACT EXCERPT FROM THE GEORGIA DNR ENVIRONMENTAL PROTECTION DIVISION'S GENERAL PERMIT NO. GAR100001; *NPDES STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FOR STANDALONE CONSTRUCTION PROJECTS*.

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

"I CERTIFY THAT THE PROJECT SITE IS IN COMPLIANCE WITH THE EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN (ES&PC) ON THE DATE OF INSPECTION EXCEPT AS NOTED BELOW. "

GSWCC LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NO. 46916

SITE INSPECTION REVEALED THE FOLLOWING ITEMS THAT ARE NOT IN COMPLIANCE WITH THE ES&PC PLAN:

NON-COMPLICANCE ITEMS MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. LAND DISTURBANCE ACTIVITIES SHALL NOT PROCEED ON SITE UNTIL A CERTIFICATION FROM THE DESIGN PROFESSIONAL IS OBTAINED.

ALEX S. WISEMAN, P.E.
LEVEL II CERTIFICATION No. 46916
EXPIRATION 11/07/2025

INSPECTIONS - PART IV SECTION D.4

A. PERMITTEE REQUIREMENTS.

(1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

(2). MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.

(3). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

(4). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

(5). BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

(6). A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION SITE THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

REPORTING - PART IV SECTION E

1. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

2. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

A. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;

B. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;

C. THE DATE(S) ANALYSES WERE PERFORMED;

D. THE TIME(S) ANALYSES WERE INITIATED;

E. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;

F. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;

G. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;

H. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU;" AND

I. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

RETENTION OF RECORDS - PART IV SECTION F

1. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:

A. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;

B. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;

C. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;

D. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;

E. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;

F. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND

G. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.

2. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS 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 OR AT A DESIGNATED ALTERNATIVE LOCATION ONCETHE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

NPDES PERMIT

No. 31780
ALEX S. WISEMAN
08/11/23
LEVEL II CERTIFICATION No.: 46916

RELEASES	
10/16/2023	BID RELEASE
03/15/2024	CONSTRUCTION RELEASE

EASTANOLLEE CREEK
WPCP IMPROVEMENTS - PHASE II
FOR THE
CITY OF TOCCOA
STEPHENS COUNTY, GEORGIA

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ATHENS ◆ CANTON ◆ MOULTRIE
1031 STONEBRIDGE PARKWAY. WATKINSVILLE, GA 30677 . 706.769.4119 TEL . 706.769.4546 FAX
GA COA LICENSE# PEF001004 EXPIRES 6/30/2024

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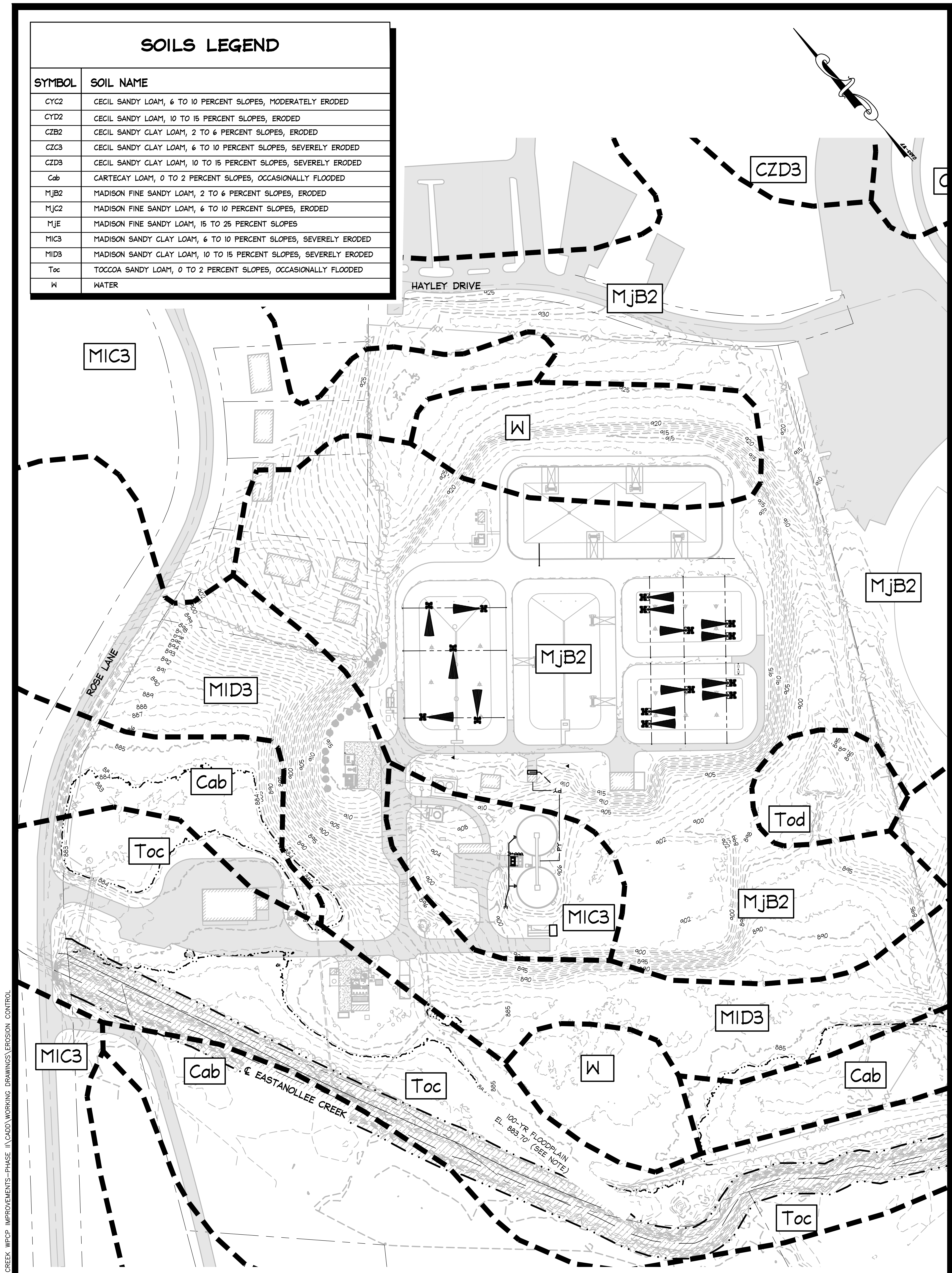
SCALE: AS SHOWN
PROJ. NO.: T7300.052
DATE: 08/11/2023
SHEET NO.: EC3
OF 152 SHEETS

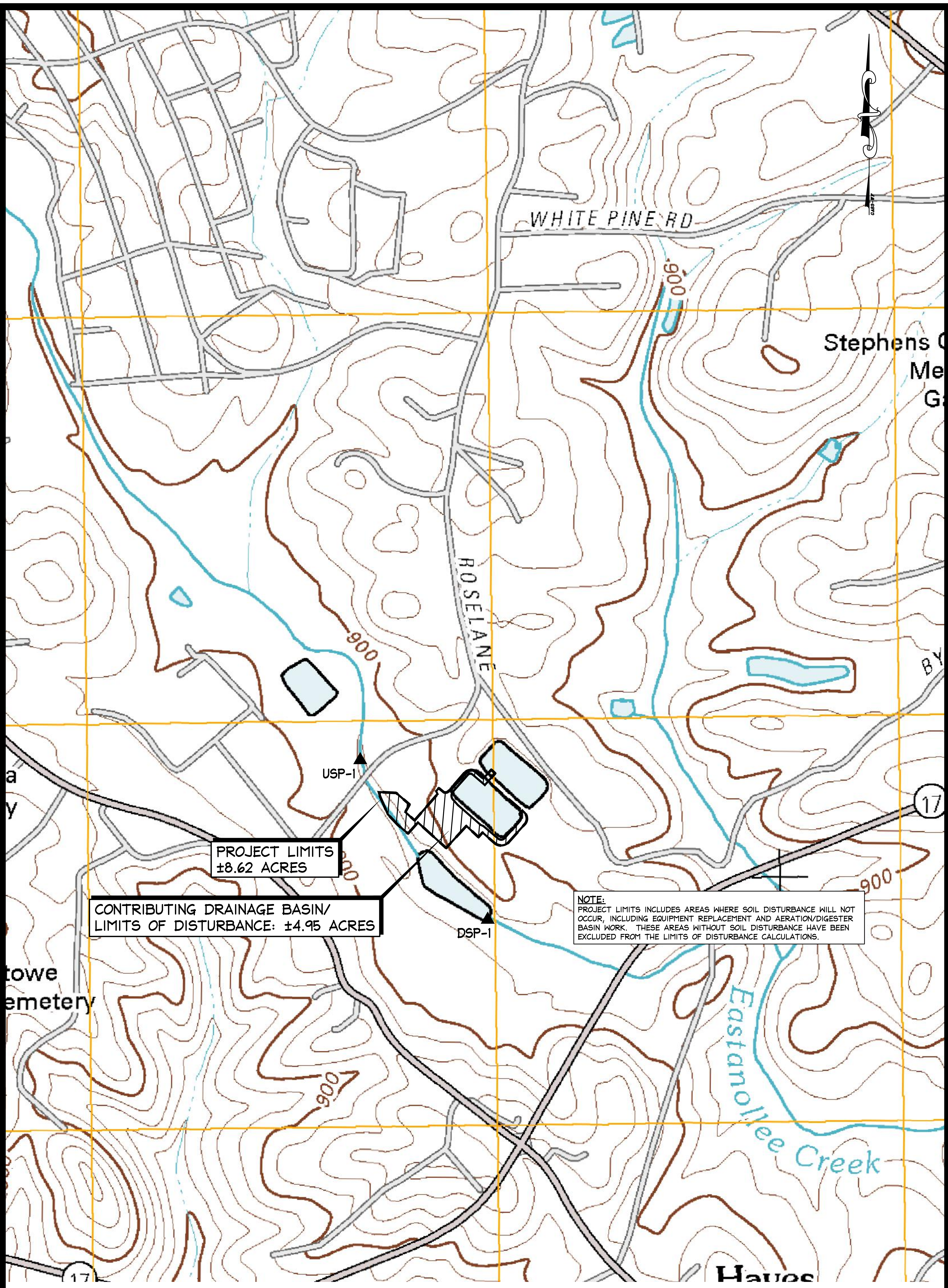
SOILS LEGEND

SYMBOL	SOIL NAME
CYC2	CECIL SANDY LOAM, 6 TO 10 PERCENT SLOPES, MODERATELY ERODED
CYD2	CECIL SANDY LOAM, 10 TO 15 PERCENT SLOPES, ERODED
CZB2	CECIL SANDY CLAY LOAM, 2 TO 6 PERCENT SLOPES, ERODED
CZC3	CECIL SANDY CLAY LOAM, 6 TO 10 PERCENT SLOPES, SEVERELY ERODED
CZD3	CECIL SANDY CLAY LOAM, 10 TO 15 PERCENT SLOPES, SEVERELY ERODED
Cab	CARTECAY LOAM, 0 TO 2 PERCENT SLOPES, OCCASIONALLY FLOODED
MjB2	MADISON FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES, ERODED
MjC2	MADISON FINE SANDY LOAM, 6 TO 10 PERCENT SLOPES, ERODED
MjE	MADISON FINE SANDY LOAM, 15 TO 25 PERCENT SLOPES
MIC3	MADISON SANDY CLAY LOAM, 6 TO 10 PERCENT SLOPES, SEVERELY ERODED
MID3	MADISON SANDY CLAY LOAM, 10 TO 15 PERCENT SLOPES, SEVERELY ERODED
Toc	TOCCOA SANDY LOAM, 0 TO 2 PERCENT SLOPES, OCCASIONALLY FLOODED
W	WATER



SOILS MAP

100 0 100 200 300
GRAPHIC SCALE IN FEET: 1" = 100'



PROJECT LIMITS
±8.62 ACRES

CONTRIBUTING DRAINAGE BASIN/
LIMITS OF DISTURBANCE: ±4.95 ACRES

NOTE:
PROJECT LIMITS INCLUDES AREAS WHERE SOIL DISTURBANCE WILL NOT OCCUR, INCLUDING EQUIPMENT REPLACEMENT AND AERATION/DIGESTER BASIN WORK. THESE AREAS WITHOUT SOIL DISTURBANCE HAVE BEEN EXCLUDED FROM THE LIMITS OF DISTURBANCE CALCULATIONS.

DRAINAGE BASIN MAP

1500 0 500 1000 1500
GRAPHIC SCALE IN FEET: 1" = 500'

MAPS

No. 31780
ALEX S. WISEMAN
08/11/23
LEVEL II CERTIFICATION No.: 46916

RELEASES	
10/16/2023	BID RELEASE
03/15/2024	CONSTRUCTION RELEASE

EASTANOLLEE CREEK
WPCP IMPROVEMENTS - PHASE II
FOR THE
CITY OF TOCCOA
STEPHENS COUNTY, GEORGIA

Carter & Sloope
CONSULTING ENGINEERS
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1031 STONEBRIDGE PARKWAY. WATKINSVILLE, GA 30677 . 706.769.4119 TEL . 706.769.4546 FAX
GA COA LICENSE# PEF001004 EXPIRES 6/30/2024

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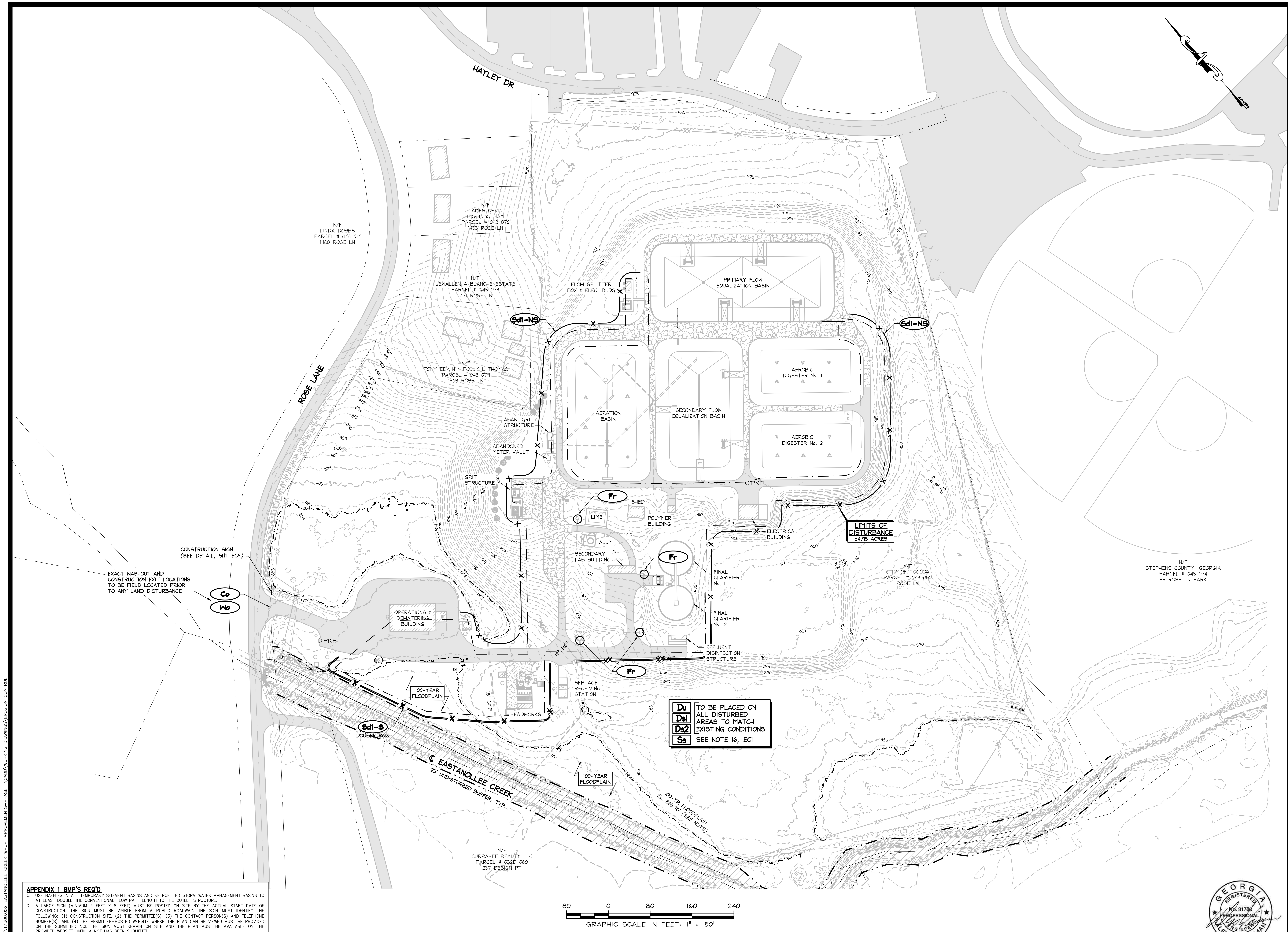
PROJ. NO.: T7300.052
DATE: 08/11/2023
SHEET NO.: EC4
OF 152 SHEETS

P:\T7300 TOCCOA\T7300.052 EASTANOLLEE CREEK WPCP IMPROVEMENTS-PHASE II\CADD\WORKING DRAWINGS\EROSION CONTROL



Du	TO BE PLACED ON ALL DISTURBED AREAS TO MATCH EXISTING CONDITIONS
Ds1	
Ds2	
Ss	SEE NOTE 16, EC1

APPENDIX 1 BMP'S REQ'D

C. USE BAFFLES IN ALL TEMPORARY SEDIMENT BASINS AND RETROFITTED STORM WATER MANAGEMENT BASINS TO AT LEAST DOUBLE THE CONVENTIONAL FLOW PATH LENGTH TO THE OUTLET STRUCTURE.

D. A LARGE SIGN (MINIMUM 4 FEET X 8 FEET) MUST BE POSTED ON SITE BY THE ACTUAL START DATE OF CONSTRUCTION. THE SIGN MUST BE VISIBLE FROM A PUBLIC ROADWAY. THE SIGN MUST IDENTIFY THE FOLLOWING: (1) CONSTRUCTION SITE, (2) THE PERMITTEE(S), (3) THE CONTACT PERSON(S) AND TELEPHONE NUMBER(S), AND (4) THE PERMITTEE-HOSTED WEBSITE WHERE THE PLAN CAN BE VIEWED MUST BE PROVIDED ON THE SUBMITTED NOI. THE SIGN MUST REMAIN ON SITE AND THE PLAN MUST BE AVAILABLE ON THE PROVIDED WEBSITE UNTIL A NOT HAS BEEN SUBMITTED.

M. USE APPROPRIATE EROSION CONTROL SLOPE STABILIZATION INSTEAD OF CONCRETE IN ALL CONSTRUCTION STORM WATER DITCHES AND STORM DRAINAGES DESIGNED FOR A 25 YEAR, 24 HOUR RAINFALL EVENT.

R. APPLY THE APPROPRIATE COMPOST BLANKETS (MINIMUM DEPTH 1.5 INCHES) TO PROTECT SOIL SURFACES UNTIL VEGETATION IS ESTABLISHED DURING THE FINAL STABILIZATION PHASE OF THE CONSTRUCTION ACTIVITY.

INITIAL EROSION CONTROL PLAN

No. 31780
ALEX S. WISEMAN
08/11/23
LEVEL II CERTIFICATION No.: 46916

P:\T7300 TOCCOA\T7300.052 EASTANOLLEE CREEK WPCP IMPROVEMENTS–PHASE II\CADD\WORKING DRAWINGS\EROSION CONTROL

RELEASES	
10/16/2023	BID RELEASE
03/15/2024	CONSTRUCTION RELEASE

EASTANOLLEE CREEK
WPCP IMPROVEMENTS - PHASE II
FOR THE
CITY OF TOCCOA
STEPHENS COUNTY, GEORGIA

Carter & Sloope
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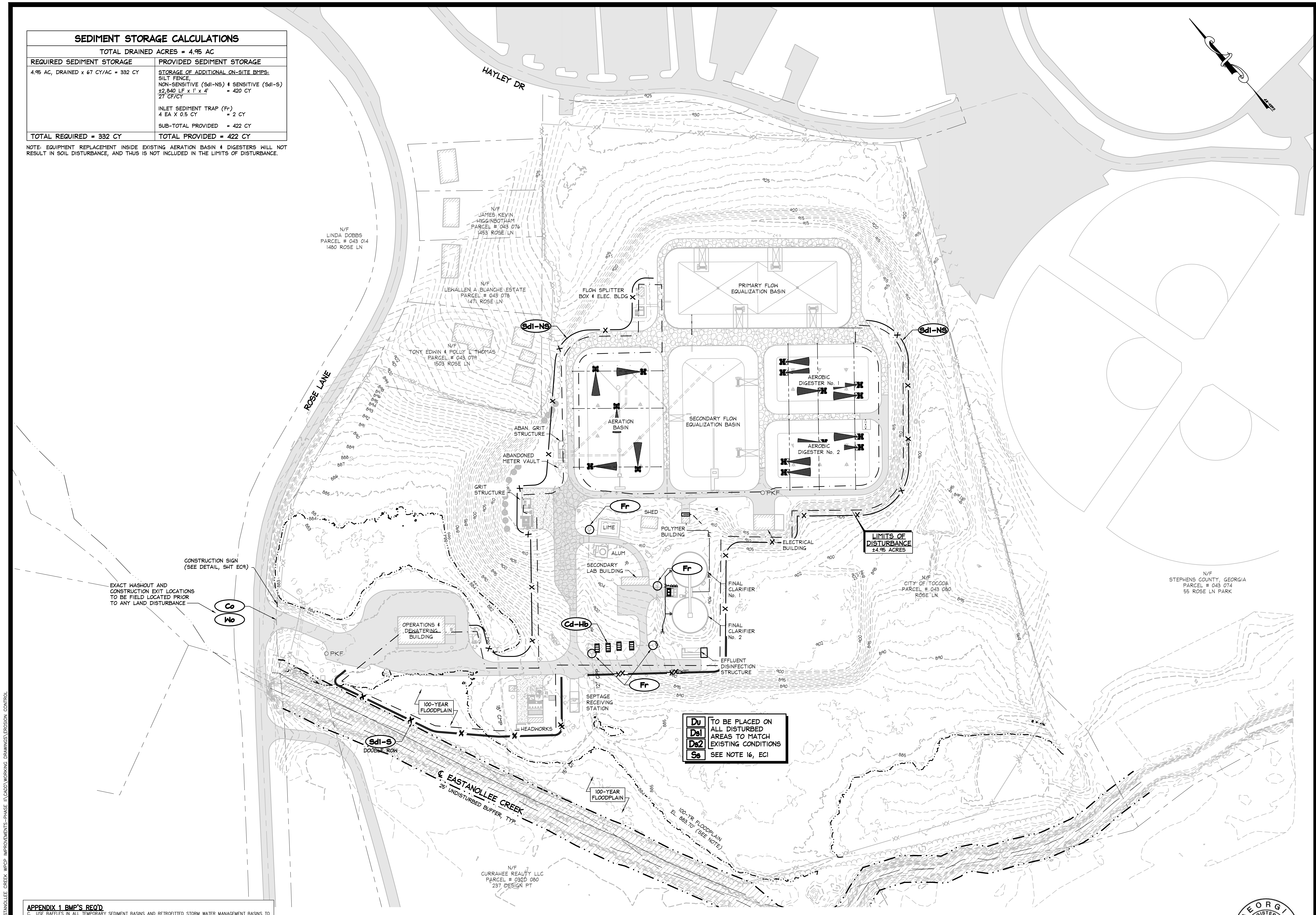
SCALE: AS SHOWN	
PROJ. NO.: T7300.052	
DATE: 08/11/2023	SHEET NO.: EC5 OF 152 SHEETS

SEDIMENT STORAGE CALCULATIONS

TOTAL DRAINED ACRES = 4.95 AC	
REQUIRED SEDIMENT STORAGE	PROVIDED SEDIMENT STORAGE
4.95 AC, DRAINED x 67 CY/AC = 332 CY	STORAGE OF ADDITIONAL ON-SITE BMPS: SILT FENCE, NON-SENSITIVE (Sd1-NS) & SENSITIVE (Sd1-S) ±2,840 LF x 1' x 4' / 27 CF/CY = 420 CY INLET SEDIMENT TRAP (Fr) 4 EA X 0.5 CY = 2 CY SUB-TOTAL PROVIDED = 422 CY
TOTAL REQUIRED = 332 CY	TOTAL PROVIDED = 422 CY

NOTE: EQUIPMENT REPLACEMENT INSIDE EXISTING AERATION BASIN & DIGESTERS WILL NOT RESULT IN SOIL DISTURBANCE, AND THUS IS NOT INCLUDED IN THE LIMITS OF DISTURBANCE.



Du	TO BE PLACED ON ALL DISTURBED AREAS TO MATCH EXISTING CONDITIONS
Ds1	
Ds2	
Ss	SEE NOTE 16, EC1

80 0 80 160 240
GRAPHIC SCALE IN FEET: 1" = 80'

APPENDIX 1 BMP'S REQ'D

C. USE BAFFLES IN ALL TEMPORARY SEDIMENT BASINS AND RETROFITTED STORM WATER MANAGEMENT BASINS TO AT LEAST DOUBLE THE CONVENTIONAL FLOW PATH LENGTH TO THE OUTLET STRUCTURE.

D. A LARGE SIGN (MINIMUM 4 FEET X 8 FEET) MUST BE POSTED ON SITE BY THE ACTUAL START DATE OF CONSTRUCTION. THE SIGN MUST BE VISIBLE FROM A PUBLIC ROADWAY. THE SIGN MUST IDENTIFY THE FOLLOWING: (1) CONSTRUCTION SITE, (2) THE PERMITTEE(S), (3) THE CONTACT PERSON(S) AND TELEPHONE NUMBER(S), AND (4) THE PERMITTEE–HOSTED WEBSITE WHERE THE PLAN CAN BE VIEWED MUST BE PROVIDED ON THE SUBMITTED NOI. THE SIGN MUST REMAIN ON SITE AND THE PLAN MUST BE AVAILABLE ON THE PROVIDED WEBSITE UNTIL A NOT HAS BEEN SUBMITTED.

M. USE APPROPRIATE EROSION CONTROL SLOPE STABILIZATION INSTEAD OF CONCRETE IN ALL CONSTRUCTION STORM WATER DITCHES AND STORM DRAINAGES DESIGNED FOR A 25 YEAR, 24 HOUR RAINFALL EVENT.

R. APPLY THE APPROPRIATE COMPOST BLANKETS (MINIMUM DEPTH 1.5 INCHES) TO PROTECT SOIL SURFACES UNTIL VEGETATION IS ESTABLISHED DURING THE FINAL STABILIZATION PHASE OF THE CONSTRUCTION ACTIVITY.

INTERMEDIATE EROSION CONTROL PLAN

No. 31780
ALEX S. WISEMAN
08/11/23
LEVEL II CERTIFICATION No.: 46916

RELEASES	
10/16/2023	BID RELEASE
03/15/2024	CONSTRUCTION RELEASE

EASTANOLLEE CREEK
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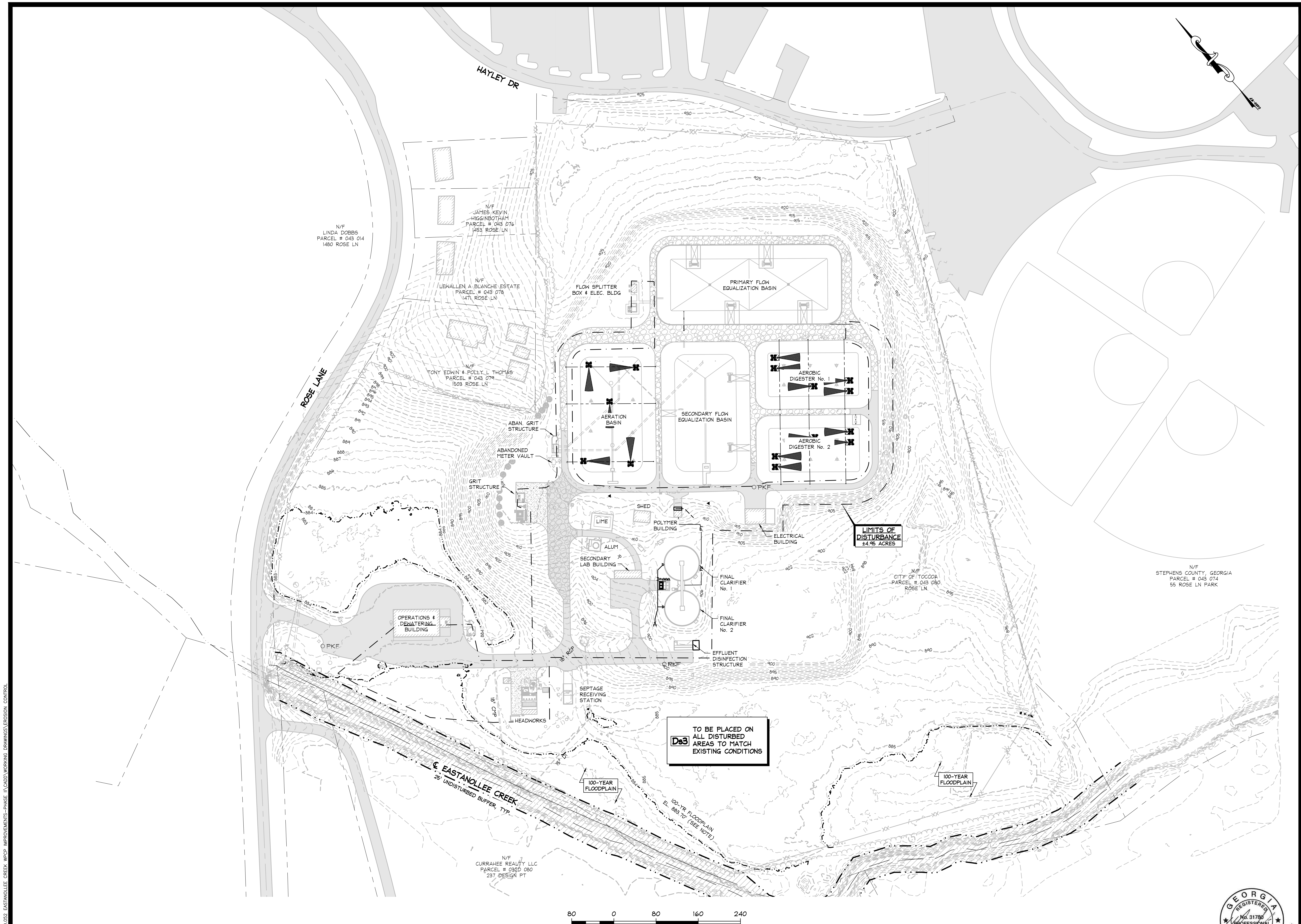
SCALE: AS SHOWN	
PROJ. NO.: T7300.052	
DATE: 08/11/2023	SHEET NO.: EC6 OF 152 SHEETS



LIMITS OF DISTURBANCE
±4.95 ACRES

Ds3 TO BE PLACED ON ALL DISTURBED AREAS TO MATCH EXISTING CONDITIONS

FINAL EROSION CONTROL PLAN

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 31780 ALEX S. WISEMAN
08/11/23

LEVEL II CERTIFICATION No.: 46916

RELEASES	
10/16/2023	BID RELEASE
03/15/2024	CONSTRUCTION RELEASE

EASTANOLLEE CREEK
WPCP IMPROVEMENTS - PHASE II
FOR THE
CITY OF TOCCOA
STEPHENS COUNTY, GEORGIA

Carter & Sloope
CONSULTING ENGINEERS
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GA COA LICENSE# PEF001004 EXPIRES 6/30/2024

THIS LINE IS ONE INCH LONG WHEN DRAWING IS PLOTTED FULL SCALE

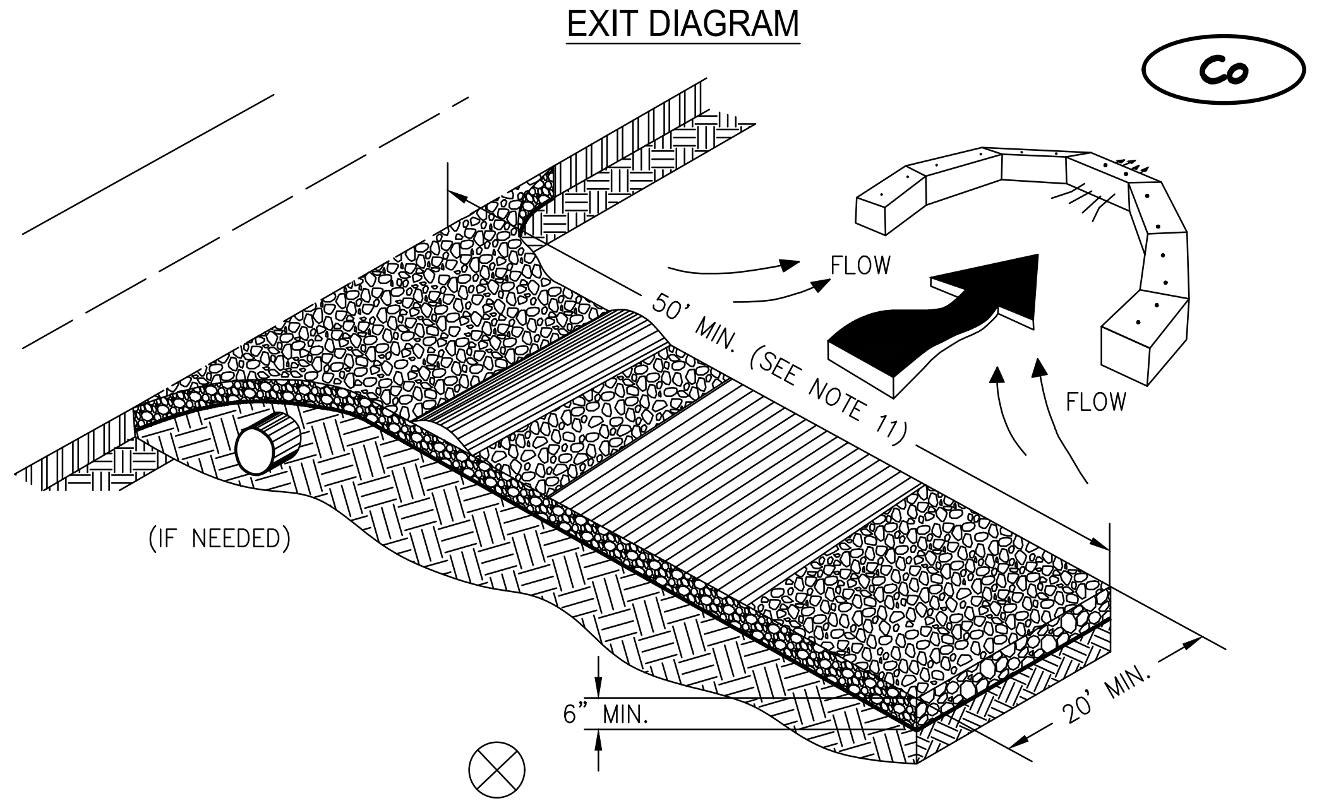
DSGN: ASW	DRWN: BMW
SCALE: AS SHOWN	
PROJ. NO.: T7300.052	
DATE: 08/11/2023	SHEET NO.: EC7 OF 152 SHEETS

P:\T7300 TOCCOA\T7300.052 EASTANOLLEE CREEK WPCP IMPROVEMENTS-PHASE II\CADD\WORKING DRAWINGS\EROSION CONTROL

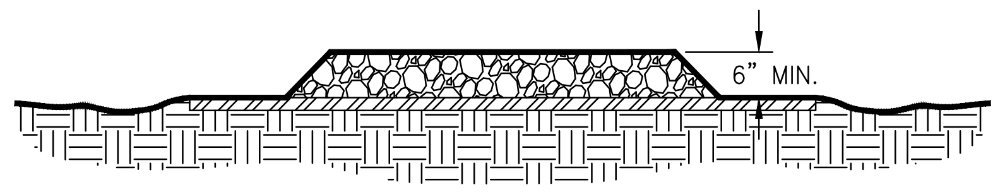
CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM

Co



ENTRANCE ELEVATION



NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R–2 (1.5"–3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%..
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
11. WHEN THE CONSTRUCTION IS LESS THAN 50' FROM THE PAVED ACCESS, THE LENGTH SHALL BE FROM THE EDGE OF EXISTING PAVEMENT TO THE PERMITTED BUILDING BEING CONSTRUCTED.

CONCRETE TRUCK WASHOUT

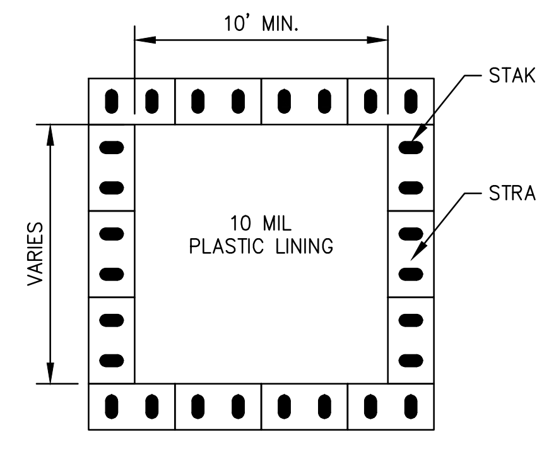
Wo

NOTES:
1. NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.

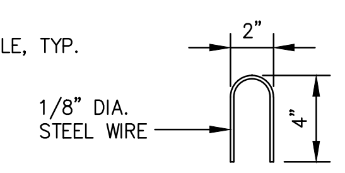
2. THE WASHING OF READY–MIX CONCRETE DRUMS & DUMP TRUCK BODIES USED IN THE DELIVERY OF PORTLAND CEMENT CONCRETE IS PROHIBITED ON THIS SITE. IN ACCORDANCE WITH STANDARD SPECIFICATIONS, 107–LEGAL REGULATIONS & RESPONSIBILITY TO THE PUBLIC, ONLY THE DISCHARGE "CHUTE" UTILIZED IN PORTLAND CEMENT CONCRETE DELIVERY MAY BE RINSED FREE OF FRESH CONCRETE REMAINS. THE CONTRACTOR SHALL EXCAVATE A PIT OUTSIDE OF STATE WATER BUFFERS, AT LEAST 25 FEET FROM ANY STORM DESIGN & OUTSIDE OF THE TRAVEL WAY, INCLUDING SHOULDERS, FOR A WASH PIT AREA. THE PIT SHALL BE LARGE ENOUGH TO STORE ALL WASH–DOWN WATER WITHOUT OVERTOPPING THE PIT. IMMEDIATELY AFTER THE WASH–DOWN OPERATIONS ARE COMPLETED AND AFTER THE WASH–DOWN WATER HAS SOAKED INTO THE GROUND, THE PIT SHALL BE FILLED IN, AND GROUND ABOVE SHALL BE GRADED TO MATCH THE ELEVATION OF THE SURROUNDING AREAS SMOOTHED OUT. ALTERNATIVE WASH–DOWN PLANS MUST BE APPROVED BY THE PROJECT ENGINEER.

3. NEVER DISPOSE OF WASH–DOWN WATER DOWN A STORM DRAIN. WASH–DOWN WATER PIT LOCATION MAY BE RELOCATED AS LONG AS THE FOLLOWING APPLY:
   - 3.1. THE PIT IS LOCATED AWAY FROM A STORM DRAIN, STREAM, OR RIVER;
   - 3.2. THE PIT IS ACCESSIBLE TO THE VEHICLE BEING USED FOR WASH–DOWN;
   - 3.3. THE PIT HAS ENOUGH VOLUME FOR WASH–DOWN WATER, AND;
   - 3.4. MAKE SURE YOU HAVE PERMISSION TO USE THE AREA FOR WASH–DOWN

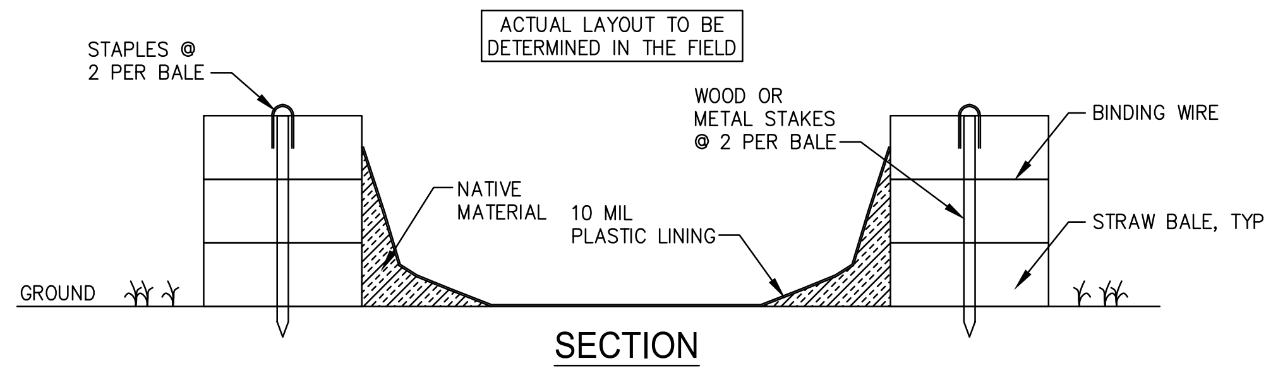
4. ON SOME SITES, YOU MAY NOT HAVE PERMISSION OR ACCESS TO A LOCATION WHICH ALLOWS FOR A WASH–DOWN PIT. IN THOSE CASES, THE CONTRACTOR MAY HAVE TO WASH–DOWN INTO A WHEEL BARREL OR OTHER CONTAINER AND CARRY THE CONTAINER FOR TRANSPORT TO A PROPER DISPOSAL SITE. FOR ADDITIONAL INFORMATION, REFER TO THE GEORGIA ENVIRONMENTAL ASSISTANCE PROGRAMS' "A GUIDE FOR READY MIX CHUTE/HOPPER WASH–DOWN."



PLAN



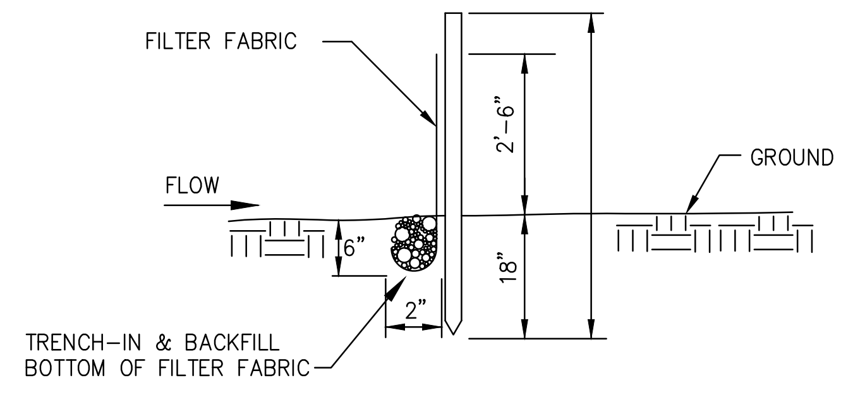
STAPLE



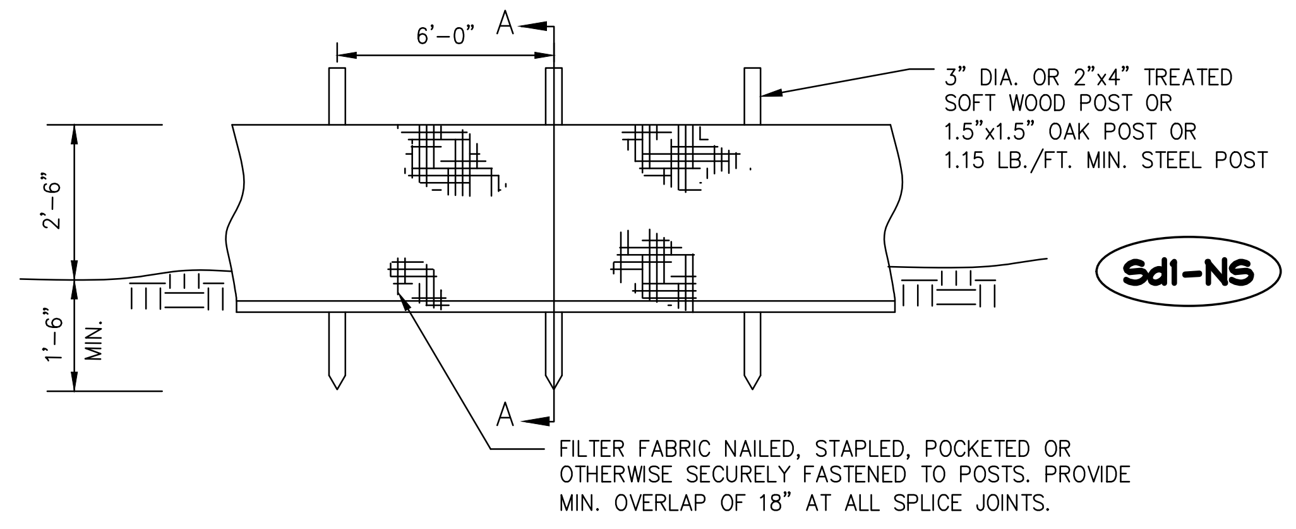
SECTION

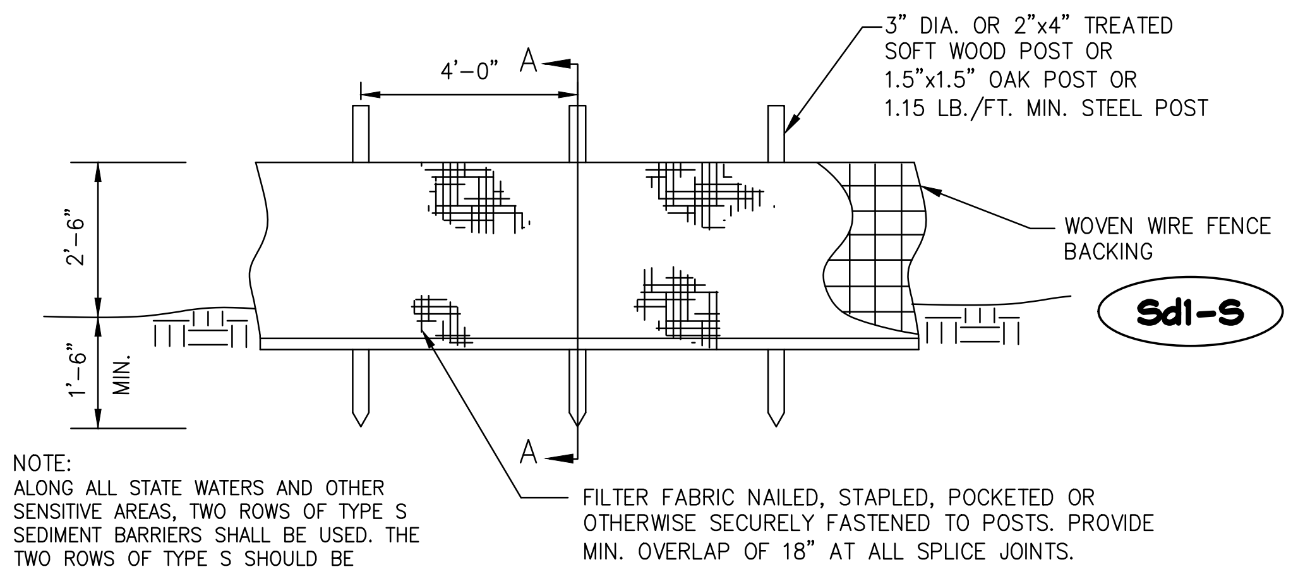
SEDIMENT BARRIER - SILT FENCE

NOTE: SILT FENCE INSTALLATION & MATERIALS SHALL MEET THE MINIMUM REQUIREMENTS OF SECTION 171 OF THE GA DOT SPECIFICATION (LATEST EDITION)



SECTION A



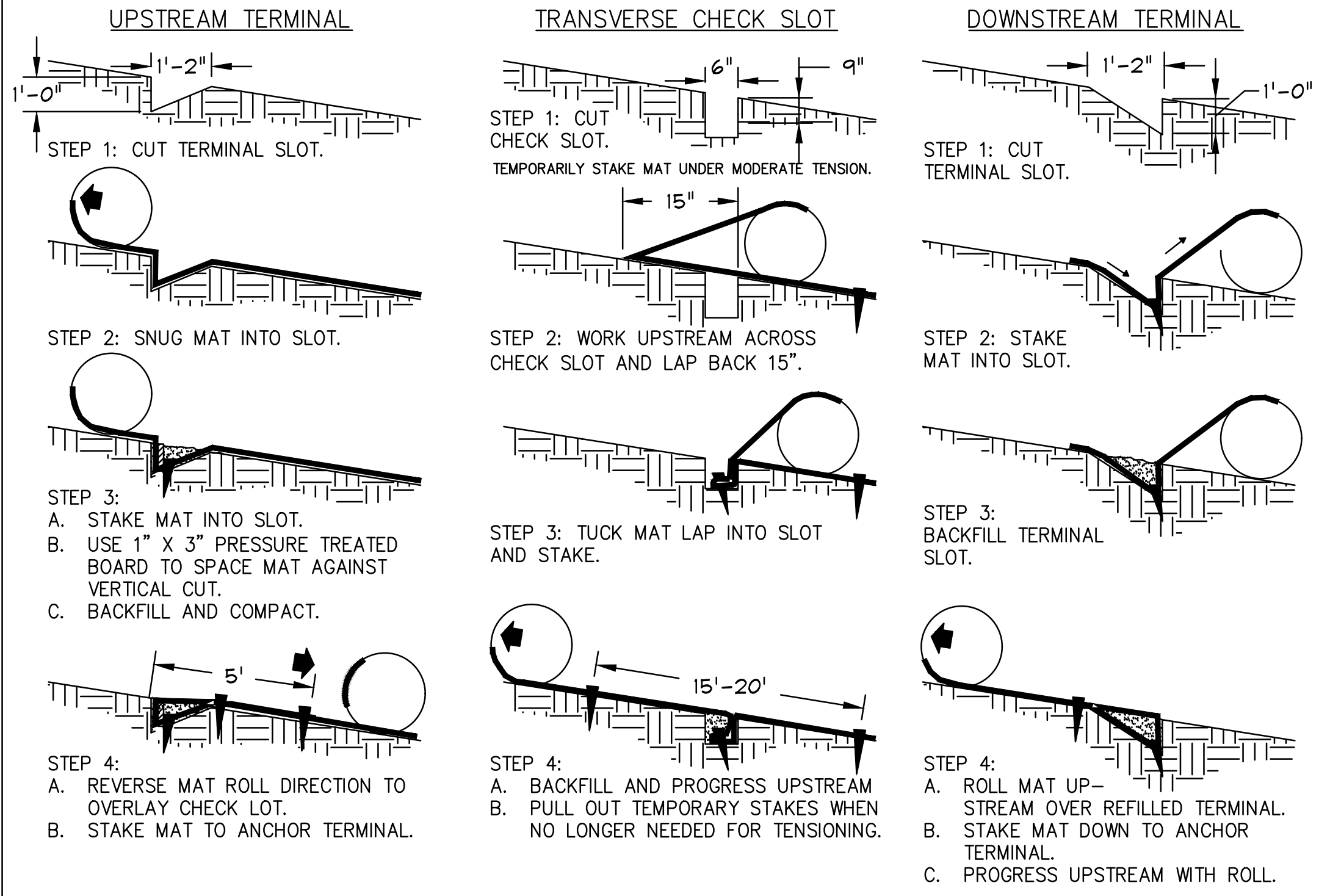


NOTE:
ALONG ALL STATE WATERS AND OTHER SENSITIVE AREAS, TWO ROWS OF TYPE S SEDIMENT BARRIERS SHALL BE USED. THE TWO ROWS OF TYPE S SHOULD BE PLACED A MINIMUM OF 36 INCHES APART.

TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

BLANKET AND MATTING CROSS-SECTIONS

Ss



UPSTREAM TERMINAL

STEP 1: CUT TERMINAL SLOT.

STEP 2: SNUG MAT INTO SLOT.

STEP 3:
- A. STAKE MAT INTO SLOT.
- B. USE 1" X 3" PRESSURE TREATED BOARD TO SPACE MAT AGAINST VERTICAL CUT.
- C. BACKFILL AND COMPACT.

STEP 4:
- A. REVERSE MAT ROLL DIRECTION TO OVERLAY CHECK LOT.
- B. STAKE MAT TO ANCHOR TERMINAL.

TRANSVERSE CHECK SLOT

STEP 1: CUT CHECK SLOT.

TEMPORARILY STAKE MAT UNDER MODERATE TENSION.

STEP 2: WORK UPSTREAM ACROSS CHECK SLOT AND LAP BACK 15".

STEP 3: TUCK MAT LAP INTO SLOT AND STAKE.

STEP 4:
- A. BACKFILL AND PROGRESS UPSTREAM
- B. PULL OUT TEMPORARY STAKES WHEN NO LONGER NEEDED FOR TENSIONING.

DOWNSTREAM TERMINAL

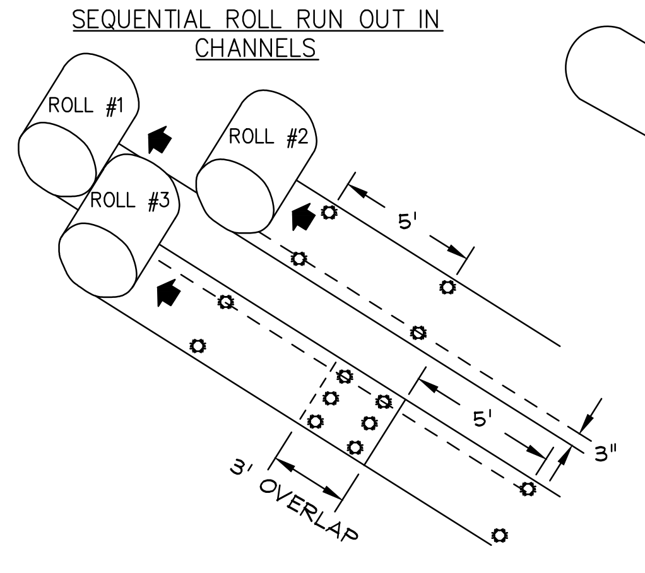
STEP 1: CUT TERMINAL SLOT.

STEP 2: STAKE MAT INTO SLOT.

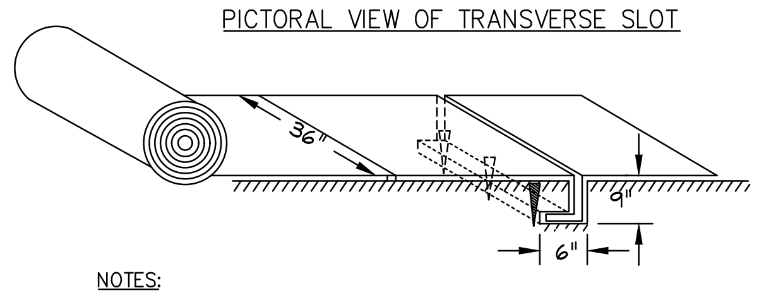
STEP 3: BACKFILL TERMINAL SLOT.

STEP 4:
- A. ROLL MAT UP–STREAM OVER REFILLED TERMINAL.
- B. STAKE MAT DOWN TO ANCHOR TERMINAL.
- C. PROGRESS UPSTREAM WITH ROLL.

SEQUENTIAL ROLL RUN OUT IN CHANNELS



PICTORAL VIEW OF TRANSVERSE SLOT

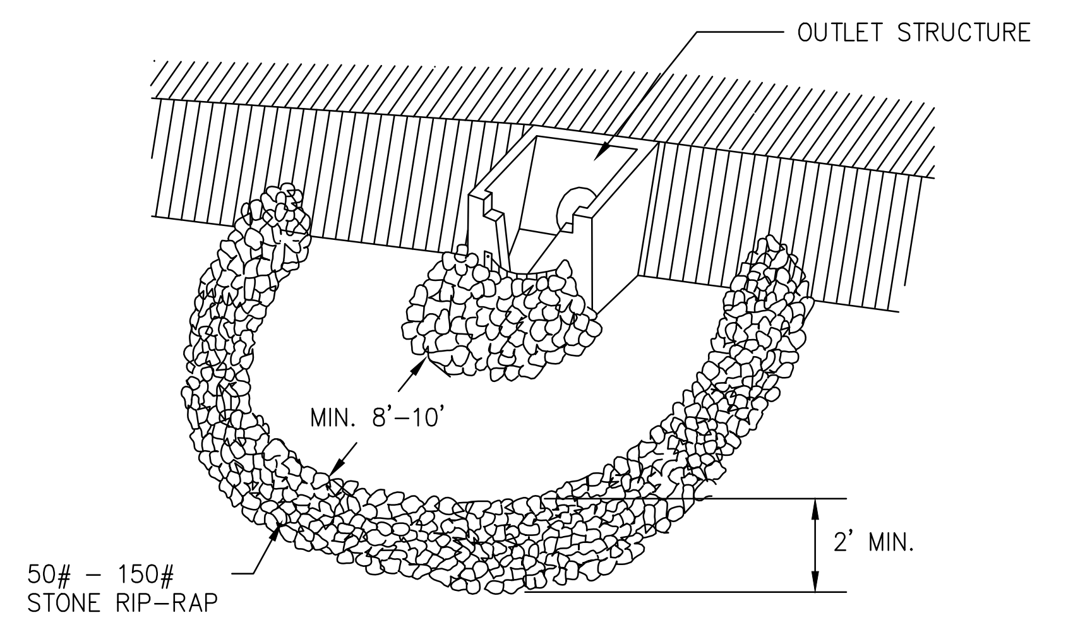


NOTES:
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID–CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
5. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE SEAMS.
6. USE 3' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.

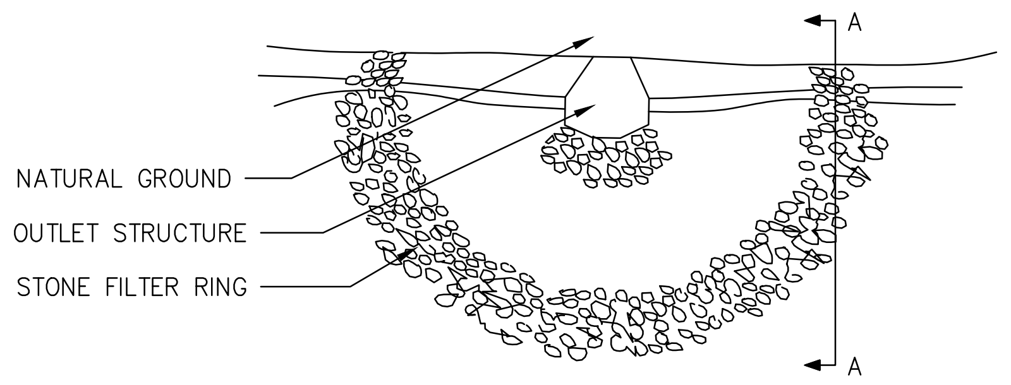
STONE FILTER RING

Fr

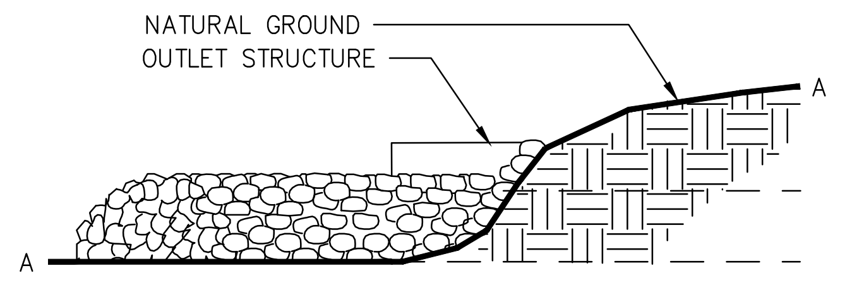
PERSPECTIVE VIEW



PLAN VIEW (NOT TO SCALE)



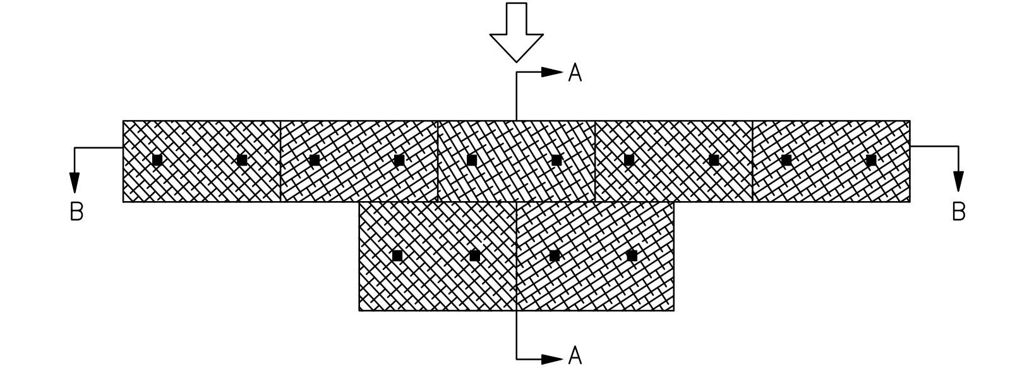
CROSS SECTION (NOT TO SCALE)



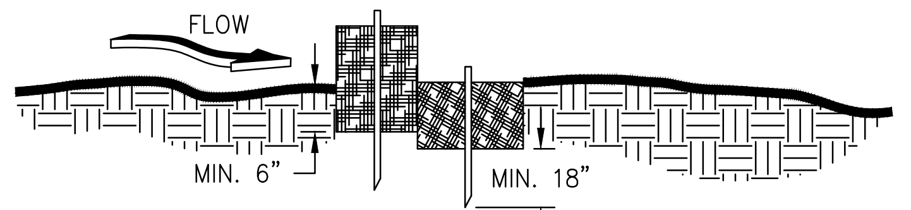
TYPICAL STRAW BALE CHECK DAM

PLAN

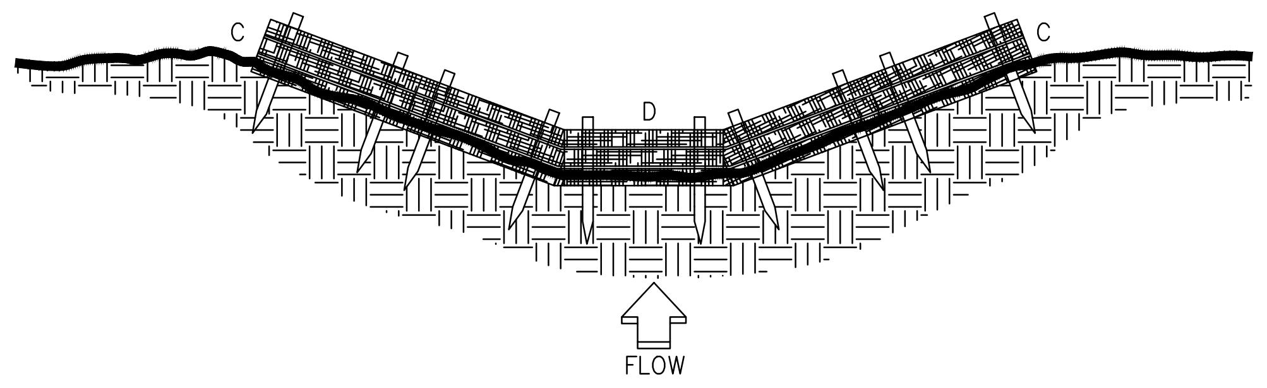
Cd-Hb



SECTION A-A



SECTION B-B



NOTES:
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
3. POINT C OF SECTION B–B SHOULD ALWAYS BE HIGHER THAN POINT D.

EROSION & SEDIMENTATION CONTROL DETAILS

No. 31780
ALEX S. WISEMAN
08/11/23
LEVEL II CERTIFICATION No.: 46916

RELEASES	
10/16/2023	BID RELEASE
03/15/2024	CONSTRUCTION RELEASE

EASTANOLLEE CREEK
WPCP IMPROVEMENTS - PHASE II
FOR THE
CITY OF TOCCOA
STEPHENS COUNTY, GEORGIA

Carter & Sloope
CONSULTING ENGINEERS
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GA COA LICENSE# PEF001004 EXPIRES 6/30/2024

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DSGN: ASW	DRWN: BMW
SCALE: AS SHOWN	
PROJ. NO.: T7300.052	
DATE: 08/11/2023	SHEET NO.: EC8 OF 152 SHEETS

P:\T7300 TOCCOA\T7300.052 EASTANOLLEE CREEK WPCP IMPROVEMENTS–PHASE II\CADD\WORKING DRAWINGS\EROSION CONTROL

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

Ds1

DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

CONDITIONS
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored, and have a continuous 90% cover or greater of the soil surface. Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months. If an area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed.

SPECIFICATIONS
MULCHING WITHOUT SEEDING
This standard applies to grades or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation
1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:
1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Cutback asphalt (slow curing) shall be applied at 1200 gallons per acre (or 1/4 gallon per sq.yd.).
4. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and reused.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.
1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20–30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Cutback asphalt shall be applied uniformly. Care should be taken in areas of pedestrian traffic due to problems of "tracking in" or damage to shoes, clothing, etc.
4. Apply polyethylene film on exposed areas.

Anchoring Mulch
1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disc". Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application. Straw or hay mulch spread with special blower–type equipment may be anchored with emulsified asphalt (Grade AE–5 or SS–1). The asphalt emulsion shall be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Tackifers and binders can be substituted for emulsified asphalt. Please refer to specification Tb
–Tackifers and Binders. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary. DEFINITION App

DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

Ds2

DEFINITION
The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

CONDITIONS
Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. eeded.

SEEDING RATES FOR TEMPORARY SEEDING
Refer to *Temporary Vegetative Covers* Chart

SPECIFICATIONS
Grading and Shaping
Excessive water run–off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others. No shaping or grading is required if slopes can be stabilized by hand–seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation
When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or handseeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall. When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate of one ton per acre. Graded areas require lime application. Soils can be tested to determine if fertilizer is needed. On reasonably fertile soils or soil material, fertilizer is not required. For soils with very low fertility, 500 to 700 pounds of 10–10–10 fertilizer or the equivalent per acre (12–16 lbs./1,000 sq. ft.) shall be applied. Fertilizer should be applied before land preparation and incorporated with a disk, ripper or chisel.

Seeding
Select a grass or grass–legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one–quarter to one–half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand.

Mulching
Temporary vegetation can, in most cases, be established without the use of mulch. Mulch without seeding should be considered for short term protection. Refer to Ds1 – Disturbed Area Stabilization (With Mulching Only).

Irrigation
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

Ds3

DEFINITION
The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization.

CONDITIONS
Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

SEEDING RATES FOR PERMANENT SEEDING
Refer to *Permanent Vegetative Covers* Chart

SPECIFICATIONS
Grading and Shaping
Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation. Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Seedbed Preparation
Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used. When conventional seeding is to be used,seedbed preparation will be done as follows:

Broadcast plantings
1. Tillage at a minimum, shall adequately loosen the soil to a depth of 4 to 6inches; alleviate compaction; incorporate lime and fertilizer; smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a disk is to be used.
2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4.On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 6 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used

Individual Plants
1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Planting
Hydraulic Seeding
Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding
Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker seeder, drill, rotary seeder, other mechanical seeder,or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

No–Till Seeding
No–till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No–tillseeding shall be done with appropriate no–till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants
Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots. Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface. Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

Mulching
Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% soil cover. Select the mulching material from the following and apply as indicated:
1. Dry straw or dry hay of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. Wood cellulose mulch or wood pulp fiber shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
3. One thousand pounds of wood cellulose or wood pulp fiber, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
4. Sericea lespedeza hay containing mature seed shall be applied at a rate of three tons per acre.
5. Pine straw or pine bark shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or block sod, mulch is not required.
7. Bituminous treated roving may be applied on planted areas on slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch
Straw or hay mulch will be spread uniformly within 24 hours after seedingand/or planting. The mulch may be spread by blower–type spreading equipment,other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soil surface.Wood cellulose or wood fiber mulch shall be applied uniformly with hydraulic seeding equipment.

Anchoring Mulch
Anchor straw or hay mulch immediately after application by one of the following methods:
1. Emulsified asphalt can be (a) sprayed uniformly onto the mulch as it is ejected from the blower machine or (b) sprayed on the mulch immediately following mulch application when straw or hay is spread by methods other than special blower equipment
The combination of asphalt emulsion and water shall consist of a homogeneous mixture satisfactory for spraying. The mixture shall consist of 100 gallons of grade SS–1h or CSS–1h emulsified asphalt and 100 gallons of water per ton of mulch. Care shall be taken at all times to protect state waters, the public, adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt discoloration.
2. Hay and straw mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk"' or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20inches or more in diameter and 8 to 12 inches apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it,leaving much of it in an erect position. Mulch shall not be plowed into the soil.
3. Synthetic tackifiers or binders approved by GDOT shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. Refer to Tb – Tackifiers and Binders.
4. Rye or wheat can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of one–quarter to one half bushel per acre.
5. Plastic mesh or netting with mesh no larger than one inch by one inch may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas. These materials shall be installed and anchored according to manufacturer's specifications.

Irrigation
Irrigation shall be applied at a rate that will not cause runoff.

DUST CONTROL ON DISTURBED AREAS

Du

DEFINITION
Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

PURPOSE
- To prevent surface and air movements of dust from exposed soil surfaces.
- To reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

CONDITIONS
This practice is applicable to areas subject to surface and air movement of dust where on and off–site damage may occur without treatment.

METHODS AND MATERIALS
A. Temporary Methods

Mulches. See standards Ds1 – Disturbed Area Stabilization (With Mulching Only). Synthetic resins may be used instead of asphalt to bind mulch material. refer to specification Tac – Tackifiers. Resins should be used according to manufacturer's recommendations.

Vegetative Cover. See specification Ds2 – Disturbed Area Stabilization (With Temporary Seeding).

Spray–on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to specification Tac – Tackifiers.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel–type plows spaced about 12 inches apart, spring–toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

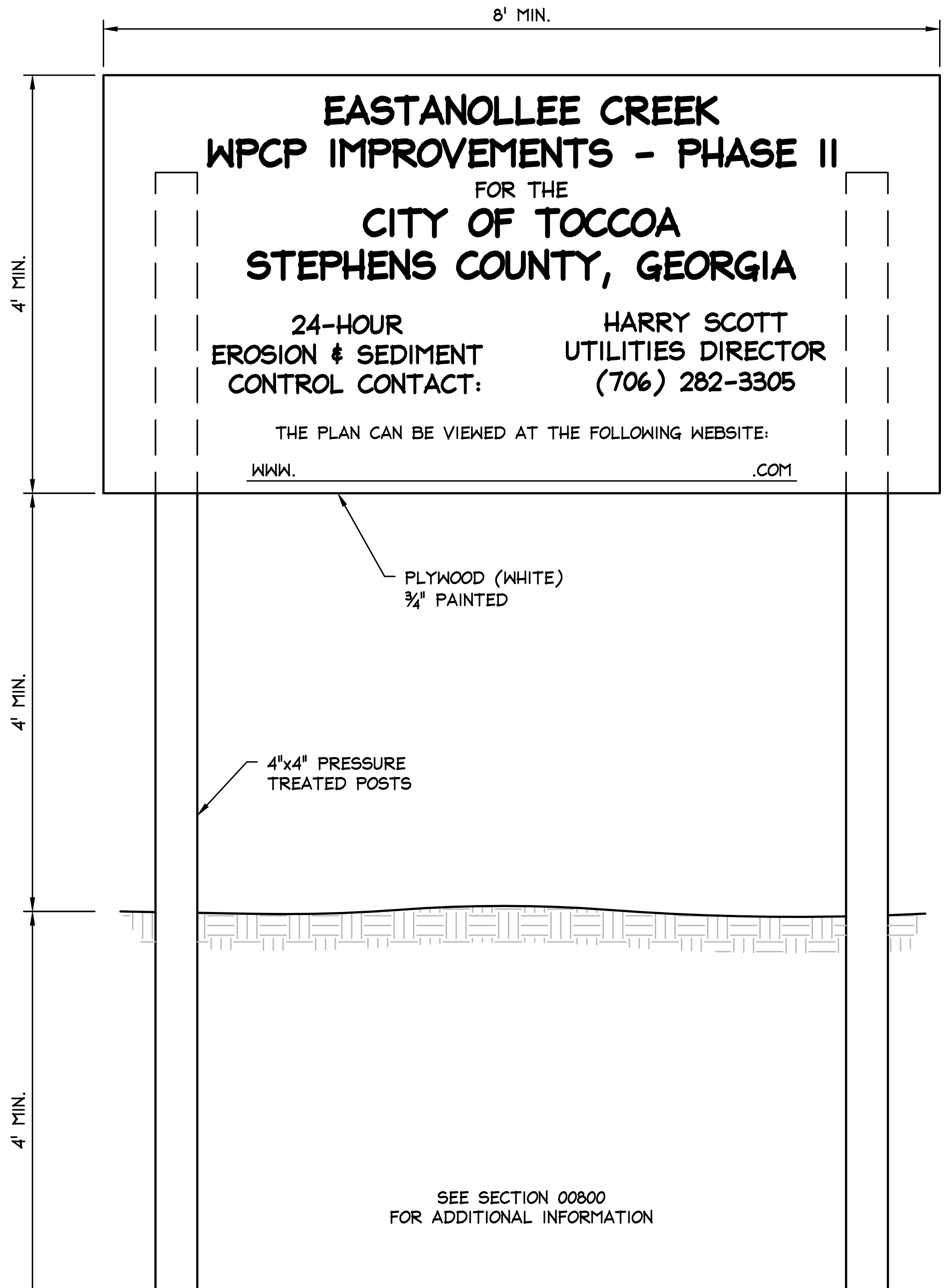
Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. Permanent Methods

Permanent Vegetation. See specification Ds3 – Disturbed Area Stabilization (With Permanent Vegetation). Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See specification Tp – Topsoiling.

Stone. Cover surface with crushed stone or coarse gravel. See specification Cr – Construction Road Stabilization.



SIGN DETAIL
N.T.S.

RELEASES	
10/16/2023	BID RELEASE
03/15/2024	CONSTRUCTION RELEASE

EASTANOLLEE CREEK
WPCP IMPROVEMENTS - PHASE II
FOR THE
CITY OF TOCCOA
STEPHENS COUNTY, GEORGIA

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ATHENS ◆ CANTON ◆ MOULTRIE
1031 STONEBRIDGE PARKWAY. WATKINSVILLE, GA 30677 . 706.769.4119 TEL . 706.769.4546 FAX
GA COA LICENSE# PEF001004 EXPIRES 6/30/2024

THIS LINE IS ONE INCH LONG WHEN DRAWING IS PLOTTED FULL SCALE

DSGN: ASW	DRWN: BMW
SCALE: AS SHOWN	
PROJ. NO.: T7300.052	
DATE: 08/11/2023	SHEET NO.: EC9 OF 152 SHEETS

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 31780 ALEX S. WISEMAN
08/11/23

LEVEL II CERTIFICATION No.: 46916

EROSION & SEDIMENTATION CONTROL DETAILS