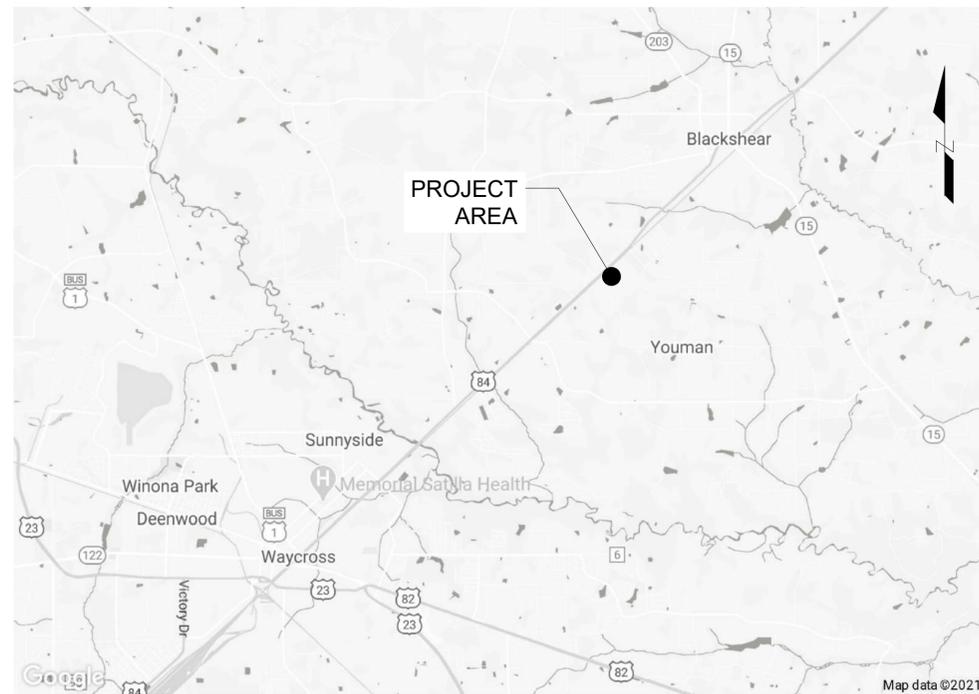


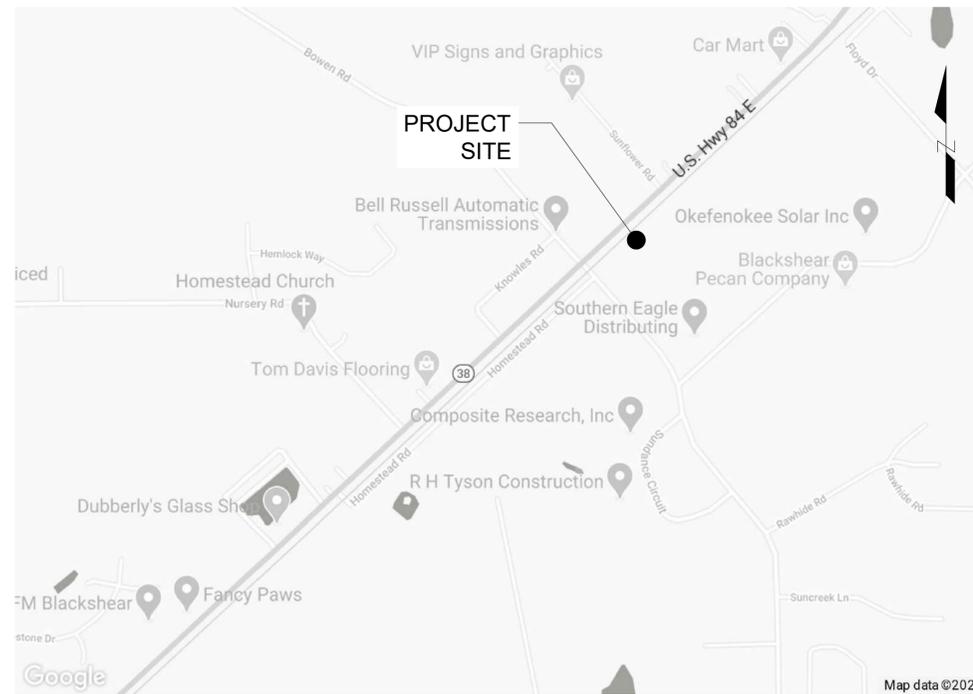


PIERCE COUNTY INDUSTRIAL PARK RAIL ACCESS

PROJECT NUMBER: 20-1019



LOCATION MAP
NOT TO SCALE



PROJECT ENTRANCE:
LAT: 31.163033
LONG: 82.163405

VICINITY MAP
NOT TO SCALE

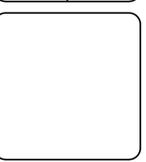
SHEET INDEX	
SHEET TITLE	SHEET ID
COVER SHEET	G001
GENERAL NOTES, LEGEND AND ABBREVIATIONS	G002
EXISTING CONDITIONS	V101
ESPC NOTES	EC001
ESPC NOTES	EC002
ESPC NOTES	EC003
ESPC NOTES	EC004
ESPC & ACCESS PLAN	EC101
ESPC DETAILS	EC501
ESPC DETAILS	EC502
PLAN & PROFILE	C101
PLAN & PROFILE	C102
DETAILS	C501

SOLICITATION NO.: 001
CONTRACT NO.: 001
ISSUE DATE: 4/19/21

MARK	DESCRIPTION	DATE

DESIGNED BY: JPB	CHECKED BY: MTF	ISSUE DATE: 4/19/21	SOLICITATION NO.: 001	CONTRACT NO.: 001	FILE NAME: 20-1019 G001-COVER.DWG
DESIGNED BY: JPB	CHECKED BY: MTF	ISSUE DATE: 4/19/21	SOLICITATION NO.: 001	CONTRACT NO.: 001	FILE NAME: 20-1019 G001-COVER.DWG

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PIERCE COUNTY INDUSTRIAL PARK
RAIL ACCESS
COVER SHEET

SHEET ID
G001



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

GENERAL NOTES

- 1. NOTES BELOW ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES.
2. ALL WORK SHALL CONFORM WITH THESE DRAWINGS, THE PROJECT SPECIFICATIONS, AND ALL CURRENT APPLICABLE CODES WITH THEIR LATEST REVISIONS OF THE FOLLOWING REFERENCE DOCUMENTS:
- GEORGIA DEPARTMENT OF TRANSPORTATION (GDOT) ROAD AND BRIDGE SPECIFICATIONS
- MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA (GREEN BOOK)
- GEORGIA STORMWATER MANAGEMENT MANUAL VOLUMES 1, 2, & THE COASTAL STORMWATER SUPPLEMENT
- AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION'S 2020 MANUAL FOR RAILWAY ENGINEERING
- CSX STANDARD SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PRIVATE SIDETRACKS (2016)
3. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS AND LICENSES AND KEEP COPIES OF THE SAME ONSITE DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES FOUND SHALL BE CALLED TO THE ATTENTION OF THE OWNER AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
5. ALL INFORMATION SHOWN ON THESE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL REPORT IMMEDIATELY TO THE OWNER ANY CONDITIONS CONFLICTING WITH THE DRAWINGS. FIELD MODIFICATIONS TO THE DRAWINGS SHALL NOT BE MADE WITHOUT THE CONSENT OF THE OWNER.
6. THE CONTRACTOR SHALL, ON A DAILY BASIS, REMOVE DEBRIS FROM THE SITE. DISPOSAL OF ALL MATERIALS IS THE CONTRACTOR'S RESPONSIBILITY, EXCEPT AS OTHERWISE NOTED.
7. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE LOCAL AND STATE ENVIRONMENTAL PROTECTION STANDARDS, LAWS AND REGULATIONS.
8. ITEMS INDICATED TO BE REMOVED AND REINSTALLED SHALL BE REMOVED BY THE CONTRACTOR, STORED AND REINSTALLED WITHOUT DAMAGE. DAMAGED ITEMS SHALL BE REPLACED AT NO COST TO THE OWNER.
9. CONTRACTOR SHALL SUBMIT A WRITTEN CONSTRUCTION PHASING PLAN TO THE OWNER FOR THEIR APPROVAL PRIOR TO ANY ONSITE CONSTRUCTION ACTIVITY. DO NOT BLOCK ACCESS TO THE ADJACENT PROPERTIES DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER.
10. CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN ON THE PLANS WITH THE EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING DEMOLITION, FABRICATION, AND CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS.
11. THE CONTRACTOR SHALL KEEP AND MAINTAIN A SET OF PROJECT PLANS AND SPECIFICATIONS ON THE SITE AT ALL TIMES.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WITH MATCHING MATERIALS ANY PAVEMENT, DRIVEWAYS, WALKS, CURBS, PAVEMENT MARKINGS, ETC. THAT MUST BE CUT OR REMOVED, OR THAT ARE DAMAGED DURING CONSTRUCTION.
13. CONTRACTOR SHALL STOP WORK AND NOTIFY ENGINEER IF ANYTHING OF HISTORIC OR ARCHEOLOGICAL SIGNIFICANCE IS ENCOUNTERED.
14. FOR SITE PLANS, SEE SHEETS C101, C102

COORDINATION

- 15. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH OWNER.
16. THE CONTRACTOR SHALL SUBMIT A SCHEDULE FOR CONSTRUCTION TO OWNER, IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
17. IMMEDIATELY PRIOR TO THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL ARRANGE A MEETING WITH OWNER TO DISCUSS COORDINATION OF CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL BE SUBJECT TO AND COMPLY WITH COORDINATION REQUIREMENTS OF OWNER.
18. COORDINATE CONNECTION TO CSX MAINLINE WORK WITH OWNER.

CONSTRUCTION

- 19. SUBMITTALS ON MATERIALS FOR THIS PROJECT SHALL BE PROVIDED TO THE OWNER FOR APPROVAL PRIOR TO ORDERING AND BEGINNING CONSTRUCTION.
20. ALL CONSTRUCTION ACTIVITIES SHALL ONLY TAKE PLACE WITHIN CLEARING LIMITS, UNLESS OTHERWISE NOTED.
21. ALL CLEARING, GRUBBING, AND GRADING SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARDS.
22. EXISTING VEGETATION SURROUNDING THE CONSTRUCTION AREA SHALL REMAIN IN A NATURAL STATE. DAMAGES BY CONTRACTOR OUTSIDE THE PROJECT LIMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
23. THE CONTRACTOR SHALL STRIP TOPSOIL AND ANY ORGANIC LADEN SOIL AND STORE FOR USE IN BACKFILLING AND LANDSCAPING FOR SITE RESTORATION. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ANY EXCESS SOIL AFTER RESTORATION OF THE SITE.
24. WHEN MATERIALS WHICH ARE UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR PURPOSE OCCUR WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE SUCH MATERIAL BELOW THE GRADE SHOWN ON THE PLANS. THE AREAS TO BE EXCAVATED SHALL BE BACKFILLED WITH APPROVED SUITABLE OR SELECT FILL MATERIAL.
25. ANY NECESSARY FILL SHALL BE PLACED IN 6" LIFTS. ALL FILL SHALL BE COMPACTED TO 95% MODIFIED STANDARD PROCTOR. SUBGRADE SHALL BE PROOF-ROLLED PER THE DIRECTION OF THE OWNER. AREAS WHICH RUT EXCESSIVELY SHALL BE UNDERCUT AND REPLACED WITH CONTROLLED FILL.
26. FINISHED SLOPES SHALL BE GRADED TO ENSURE POSITIVE DRAINAGE AWAY FROM ALL WORK AND TO EXISTING DITCHES.
27. CONTRACTOR SHALL REMAIN WITHIN PROJECT LIMITS DURING ALL CONSTRUCTION ACTIVITIES.

SURVEY NOTES

- 28. ALL ELEVATIONS SHOWN ON THE DRAWINGS ARE REFERENCED TO NAVD 88.
29. VERTICAL DATUM - ELEVATIONS SHOWN ARE IN FEET AND ARE BASED ON NAVD 88 DATUM.
30. HORIZONTAL DATUM - GEORGIA STATE PLANE COORDINATE SYSTEM, NAD 83.
31. THESE DRAWINGS ARE BASED ON:
- PIERCE COUNTY LIDAR PROVIDED BY THE OWNER.
32. HORIZONTAL & VERTICAL CONTROL POINTS WILL BE PROVIDED BY THE CONTRACTOR.
33. FOR EXISTING CONDITIONS PLAN, SEE SHEETS V101

DEMOLITION NOTES

- 34. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
35. ALL MATERIALS REMOVED UNDER DEMOLITION, NOT TO BE RELOCATED OR TO BE TURNED OVER TO THE OWNER, SHALL BE REMOVED FROM THE SITE.

GEOTECHNICAL NOTES

- 36. A GEOTECHNICAL EXPLORATION HAS NOT BEEN PERFORMED ON THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRM THAT THE EXISTING SOILS ARE SUITABLE FOR THE PROPOSED CONSTRUCTION ACTIVITIES.

ENVIRONMENTAL NOTES

- 37. THERE ARE NO WETLANDS WITHIN THE PROJECT LIMITS.
38. CONSTRUCTION ENTRANCE LOCATION:
a. LAT: 31.163066/LON: 82.163405
b. N: 463753.0314/E: 621973.3506.
39. PROJECT AREA IS 1.89 ACRES, LAND DISTURBED AREA IS 1.51 ACRES. THE PROJECT REQUIRES THE FOLLOWING PERMIT:
c. GAR 100002 - INFRASTRUCTURE CONSTRUCTION PROJECT OVER ONE ACRE OF DISTURBANCE.
40. FOR SOIL EROSION & SEDIMENTATION CONTROL NOTES, SEE SHEETS EC101-EC104
41. FOR SOIL EROSION & SEDIMENTATION CONTROL PLAN, SEE SHEETS EC101
42. FOR SOIL EROSION & SEDIMENTATION CONTROL DETAILS, SEE SHEETS EXS01-EC502

UTILITIES

- 43. PRIOR TO CONSTRUCTION OR EXCAVATION, THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF LOCATING ANY AND ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST OR CROSS THROUGH THE AREA OF CONSTRUCTION WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS. BEFORE DIGGING, TO AVOID THE UTILITIES, THE CONTRACTOR SHALL CALL THE "UTILITIES PROTECTION CENTER" AT 1-800-282-7411. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS SOLE EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
44. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE, NONEXISTENCE, SIZE, TYPE, LOCATION, ALIGNMENT OR DEPTH OF ANY OR ALL UNDERGROUND UTILITIES OR OTHER FACILITIES. WHERE SURFACE FEATURES (MANHOLES, CATCH BASINS, VALVES, ETC.) ARE UNAVAILABLE OR INCONCLUSIVE, INFORMATION SHOWN MAY BE FROM UTILITY OWNER'S RECORDS AND/OR ELECTRONIC LINE TRACING, THE RELIABILITY OF WHICH IS UNCERTAIN. THE CONTRACTOR SHALL PERFORM WHATEVER TEST EXCAVATION OR OTHER REINVESTIGATION AS NECESSARY TO VERIFY LOCATIONS AND CLEARANCES.
45. UNLESS OTHERWISE NOTED, UTILITIES ARE TO BE ADJUSTED BY THE RESPECTIVE OWNER.
46. GEORGIA STATE LAW MANDATES THE NOTIFICATION OF UTILITY OWNERS 48 HOURS IN ADVANCE OF EXCAVATION. FOR LOCATION OF UTILITIES CALL THE "UTILITY PROTECTION CENTER" AT 811 48 HOURS PRIOR TO LAND DISTURBANCE ACTIVITY.

LEGEND

Table with 3 columns: OBJECT, EXISTING, PROPOSED. Rows include PROJECT LIMITS, PROPERTY LINE, RIGHT-OF-WAY, MINOR CONTOUR (149), MAJOR CONTOUR (150), DITCH, CSX TRACK C/L, INDUSTRY TRACK C/L, WETLAND LINE/EDGE, WETLAND AREA, POINT OF SWITCH.

ABBREVIATIONS:

APPROX = APPROXIMATE
AREMA = AMERICAN RAILWAY AND MAINTENANCE-OF-WAY ASSOCIATION
ASTM = AMERICAN SOCIETY FOR TESTING AND MATERIALS
CL = CENTERLINE
CLR = CLEAR
CMF = CONCRETE MONUMENT FOUND
CMP = CORRUGATED METAL PIPE
CONC = CONCRETE
DB = DEED BOOK
DEMO = DEMOLITION
DIM = DIMENSION
DWG = DRAWING
E = EAST
EA = EACH
EDA = ECONOMIC DEVELOPMENT ADMINISTRATION
EL = ELEVATION
ELEV = ELEVATION
EPD = ENVIRONMENTAL PROTECTION DIVISION
ETC = ET CETERA
EXIST = EXISTING
FEMA = FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION
FPS = FEET PER SECOND
FRA = FEDERAL RAILROAD ADMINISTRATION
FT = FEET
GDOT = GEORGIA DEPARTMENT OF TRANSPORTATION
HWY = HIGHWAY
IAW = IN ACCORDANCE WITH
IN = INCHES
INC = INCORPORATED
INV = INVERT
IRF = IRON ROD FOUND
IRS = IRON ROD SET
LB = POUND
LF = LINEAR FEET
LH = LEFT HAND
LHTO = LEFT HAND TURNOUT
MAX = MAXIMUM
MDD = MAXIMUM DRY DENSITY
MIN = MINIMUM
MISC = MISCELLANEOUS
N = NORTH
N/F = NOW OR FORMERLY
NAD = NORTH AMERICAN DATUM
NAVD = NORTH AMERICAN VERTICAL DATUM
NGVD = NATIONAL GEODETIC VERTICAL DATUM
NIC = NOT IN CONTRACT

No. = NUMBER
NTS = NOT TO SCALE
OC = ON CENTER
OHPL = OVERHEAD POWER LINE
PG = PAGE
PKF = P.K. NAIL FOUND
PP = POWER POLE
PS = POINT OF SWITCH
RHTO = RIGHT HAND TURNOUT
R/W = RIGHT OF WAY
RMF = RAILBOUND MANGANESE FROG
RCP = REINFORCED CONCRETE PIPE
REQ'D = REQUIRED
RH = RIGHT HAND
S = SOUTH
SCH = SCHEDULE
SF = SQUARE FEET
SR = STATE ROAD
ST = STREET
STA = STATION
STD = STANDARD
SY = SQUARE YARD
TYP = TYPICAL
UON = UNLESS OTHERWISE NOTED
W = WEST
WI = WITH
WP = WORK POINT
= NUMBER OR POUNDS
& = AND
@ = AT
C = CENTERLINE
O = DIAMETER
P = PLATE
" = SECONDS OR INCH
' = MINUTES OR FEET
+ = PLUS OR MINUS
° = DEGREES
% = PERCENT

SECTION AND DETAIL SYMBOL

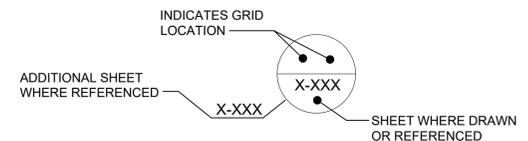
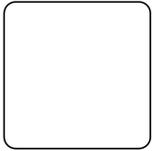


Table with 2 columns: MARK, DESCRIPTION. Multiple empty rows.

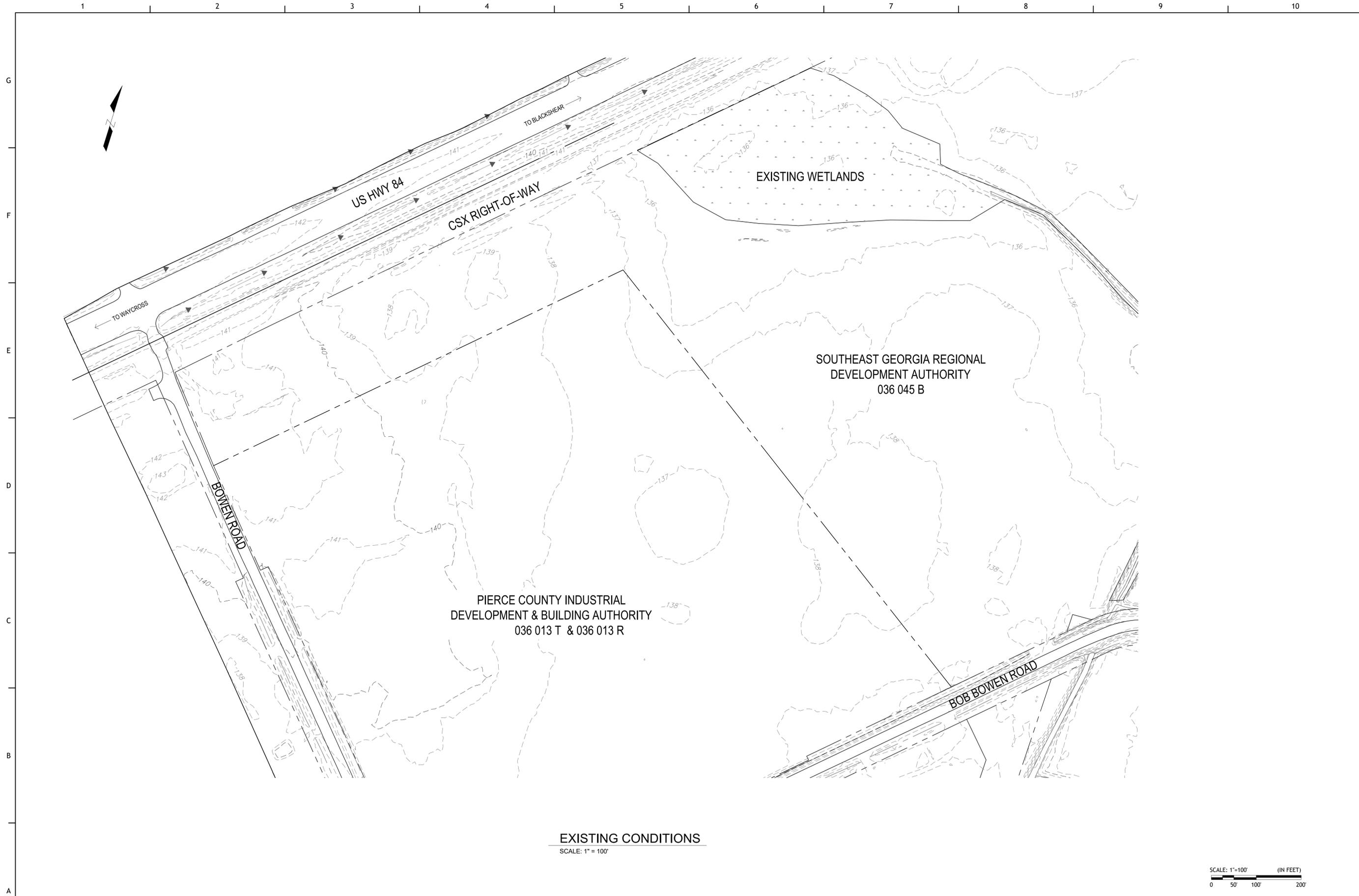
Ball Maritime Group, LLC
4 Cedar View Court, Savannah, Georgia 31410 (912) 662-2014
www.ballmaritime.com
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DRAWN BY: BMA
DESIGNED BY: JPB
CHECKED BY: MTF
SUBMITTED BY: JPB
FILE NAME: 20-1019 G002-GENNOTESLEGABB.DWG
ISSUE DATE: 4/30/2021
SOLICITATION NO.: 001
CONTRACT NO.: 001
CATEGORY CODE:



PIERCE COUNTY INDUSTRIAL PARK RAIL ACCESS
GENERAL NOTES, LEGEND AND ABBREVIATIONS

SHEET ID G002

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION



PIERCE COUNTY INDUSTRIAL
DEVELOPMENT & BUILDING AUTHORITY
036 013 T & 036 013 R

SOUTHEAST GEORGIA REGIONAL
DEVELOPMENT AUTHORITY
036 045 B

EXISTING CONDITIONS
SCALE: 1" = 100'

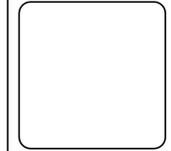


PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

MARK	DESCRIPTION	DATE

DESIGNED BY: JPB	CHECKED BY: MTF	ISSUE DATE: 4/19/21	SOLICITATION NO.: 001	CONTRACT NO.: 001	FILE NAME: 20-1019 V101-EXCONDITIONS.DWG
DRAWN BY: BWA	SUBMITTED BY: JPB				


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PIERCE COUNTY INDUSTRIAL PARK RAIL
ACCESS
EXISTING CONDITIONS

SHEET ID
V101

PERMIT COVERAGE

THIS PLAN HAS BEEN PREPARED TO MEET THE REQUIREMENTS UNDER THE STATE OF GEORGIA, DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION DIVISION (EPD), GENERAL NPDES PERMIT NO. GAR 100002 FOR AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FOR AN INFRASTRUCTURE PROJECT.

AUTHORIZED DISCHARGES

- ALL DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT WILL RESULT IN LAND DISTURBANCE EQUAL TO OR GREATER THAN ONE ACRE PART I.C.1.4.c
- ALL DISCHARGES COVERED BY THIS PERMIT SHALL BE COMPOSED ENTIRELY OF STORMWATER EXCEPT AS PROVIDED IN PART I.C.2 AND PART III.A.2 OF THE PERMIT. PART III.A.1
- AUTHORIZED MIXED STORMWATER DISCHARGES: PART I.C.2
 - THE INDUSTRIAL SOURCE OR ACTIVITY OTHER THAN CONSTRUCTION IS LOCATED ON THE SAME SITE AS THE CONSTRUCTION ACTIVITY AND IS AN INTEGRAL PART OF THE CONSTRUCTION ACTIVITY.
 - THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES ARE OCCURRING ARE IN COMPLIANCE WITH THE TERMS OF THIS PERMIT.
 - STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE AREAS OF THE SITE WHERE INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION ARE OCCURRING ARE COVERED BY A DIFFERENT NPDES GENERAL PERMIT OR INDIVIDUAL PERMIT AUTHORIZING SUCH DISCHARGES AND THE DISCHARGES ARE IN COMPLIANCE WITH A DIFFERENT NPDES PERMIT.
- AUTHORIZED NON-STORMWATER DISCHARGES: PART III.A.2
 - FIRE FIGHTING ACTIVITIES
 - FIRE HYDRANT FLUSHING
 - POTABLE WATER SOURCES INCLUDING WATER LINE FLUSHING
 - IRRIGATION DRAINAGE
 - AIR CONDITIONING CONDENSATE
 - SPRINGS
 - UNCONTAMINATED GROUND WATER
 - FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS OR POLLUTANTS

LIMITATIONS ON COVERAGE: PART I.C.3

- THE FOLLOWING STORMWATER DISCHARGES FROM CONSTRUCTION SITES ARE NOT AUTHORIZED BY THIS PERMIT:
 - STORMWATER DISCHARGES ASSOCIATED WITH AN INDUSTRIAL ACTIVITY THAT ORIGINATES FROM THE SITE AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION.
 - DISCHARGES THAT ARE MIXED WITH SOURCES OF NON-STORMWATER OTHER THAN DISCHARGES WHICH ARE IDENTIFIED IN PART III.A.2 OF THIS PERMIT AND WHICH ARE IN COMPLIANCE WITH PART IV.D.T (NON-STORMWATER DISCHARGES) OF THIS PERMIT.
 - STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY THAT ARE SUBJECT TO AN EXISTING NPDES INDIVIDUAL OR GENERAL PERMIT. SUCH DISCHARGES MAY BE AUTHORIZED UNDER THIS PERMIT AFTER AN EXISTING PERMIT EXPIRES PROVIDED THE EXISTING PERMIT DID NOT ESTABLISH NUMERIC LIMITATION FOR SUCH DISCHARGES.
 - STORMWATER DISCHARGES FROM CONSTRUCTION SITES THAT THE DIRECTOR (EPD) HAS DETERMINED TO BE OR MAY REASONABLY BE EXPECTED TO BE CONTRIBUTING TO A VIOLATION OF A WATER QUALITY STANDARD.
- WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTING QUANTITY ESTABLISHED UNDER EITHER GEORGIA'S OIL OR HAZARDOUS MATERIAL SPILLS OR RELEASES ACT (O.C.G.A §§12-14-2, ET SEQ.) 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24-HOUR PERIOD, THE PERMITTEE IS REQUIRED TO NOTIFY THE FOLLOWING AGENCIES IN ACCORDANCE WITH THE ABOVE-MENTIONED REGULATIONS AS SOON AS HE HAS KNOWLEDGE OF THE DISCHARGE: EPD AT (404) 656-4863 OR (800) 241-4113, OR THE NATIONAL RESPONSE CENTER (NRC) AT (800) 424-8802. PART III.B.1
- THIS PERMIT DOES NOT AUTHORIZE THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL RESULTING FROM AN ONSITE SPILL. PART III.B.2

WATER QUALITY COMPLIANCE: PART I.C.4

ALL DISCHARGES AUTHORIZED BY THIS PERMIT SHALL NOT CAUSE VIOLATIONS OF GEORGIA'S IN-STREAM WATER QUALITY STANDARDS AS PROVIDED BY THE RULES AND REGULATIONS FOR WATER QUALITY CONTROL. CHAPTER 391-3-6-03. NO SAMPLING IS REQUIRED AS PART OF THIS PROJECT.

PROJECT REFERENCE:

DEVELOPER/OWNER PIERCE COUNTY IDA 200 SW CENTRAL AVE. BLACKSHEAR, GA 31516	DESIGN PROFESSIONAL BALL MARITIME GROUP 4 CEDAR VIEW CT. SAVANNAH, GA 31410	24 HOUR CONTACT BALL MARITIME GROUP JASON P. BALL, PE PHONE: (912) 662-2914
--	---	---

CONSTRUCTION ACTIVITIES SCHEDULE:

INFRASTRUCTURE	JUL	AUG	SEP
ESTABLISH CONSTRUCTION EXIT - INSTALL PERIMETER SILT FENCE	█		
PRELIMINARY GRADING/BEGIN GRUBBING	█	█	
INSTALL GRADING PHASE EROSION CONTROL MEASURES AS CLEARING PROGRESSES		█	█
MAINTAIN CONSTRUCTION ENTRANCE/EXIT AS CLEARING AND GRADING WARRANTS	█		█
FINAL GRASSING			█
REMOVE TEMPORARY EROSION CONTROL MEASURES			█

**EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS**

SWCD: Region 3 - Satilla River
Project Name: Pierce County Industrial Park Rail Access **Address:** 6200 Bowen Road, Blackshear, GA 31516
City/County: Pierce County **Date on Plans:** 4/19/2021
Name & email of person filling out checklist: JASON P. BALL, PE JASON@BALLMARITIME.COM

TO BE SHOWN ON ES&PC PLAN

- The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
- Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed)
- Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist and the GAEPD approval letter. * (A copy of the written approval by GAEPD must be attached to the plan for the Plan to be reviewed.)
- The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
- Provide the name, address, email address, and phone number of primary permittee.
- Note total and disturbed acreages of the project or phase under construction.
- Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
- Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
- Description of the nature of construction activity and existing site conditions.
- Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
- Identify the project/receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
- Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 19 of the permit.
- Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV page 19 of the permit. *
- Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with Part I.V.A.5 page 25 of the permit. *
- Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wretched 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."
- Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
- Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.">*
- Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.">*
- Clearly note statement that "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."
- Clearly note statement that "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."
- Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
- Any construction activity which discharges storm water into an Impaired Stream Segment or within 1 linear mile upstream and within the same watershed as, any portion of a Biotra Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
- If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
- BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *
- Provide BMPs for the remediation of all petroleum spills and leaks.
- Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
- Description of practices to provide cover for building materials and building products on site. *
- Description of the practices that will be used to reduce the pollutants in storm water discharges. *
- Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
- Provide complete requirements of Inspections and record keeping by the primary permittee. *
- Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
- Provide complete details for Retention of Records as per Part IV.F. of the permit. *
- Description of analytical methods to be used to collect and analyze the samples from each location. *
- Appendix B rationale for NTU values at all outfall sampling points where applicable. *

- Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *
 - A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *
 - Graphic scale and North arrow.
 - Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft
1 inch = 100ft or larger scale	Flat 0 - 2% Rolling 2 - 8% Sloep 8% +	0.5 or 1 1 or 2 2.5 or 10
 - Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at: www.gaswcc.georgia.gov.
 - Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
 - Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
 - Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
 - Delineation and acreage of contributing drainage basins on the project site.
 - Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
 - An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
 - Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
 - Soil series for the project site and their delineation.
 - The limits of disturbance for each phase of construction.
 - Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofit detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
 - Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
 - Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
 - Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia.
- * If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream, the " checklist items would be N/A.

Effective January 1, 2021



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

MARK	DESCRIPTION	DATE

Ball Maritime Group, LLC
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ISSUE DATE: 4/19/21
SOLICITATION NO.: 001
CONTRACT NO.: 001
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PIERCE COUNTY INDUSTRIAL PARK RAIL ACCESS
ESPC NOTES

SHEET ID
EC002

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN (ESPC)

1. THIS PLAN WAS PREPARED AS REQUIRED BY NPDES GENERAL PERMIT NO. GAR 100002. THESE PLAN SHEETS AND ALL REQUIREMENTS OF THE GENERAL PERMIT AS WELL AS LOCAL, STATE, AND FEDERAL REGULATIONS OR LAWS APPLY REGARDLESS OF SPECIFIC INCLUSION IN THIS PLAN.

SITE DESCRIPTION

- 1. OWNER/DEVELOPER, AS PRIMARY PERMITTEE, WILL OVERSEE SITE CONSTRUCTION LOCATED IN PIERCE COUNTY, GEORGIA. THE PROJECT LIMITS CONTAIN APPROXIMATELY 1.89 ACRES.
- 2. THE OFFSITE DRAINAGE ENTERS THE SITE FROM THE WEST SIDE THROUGH SURFACE DRAINAGE TO THE PROPOSED RAILROAD. THE MAJORITY OF THIS DRAINAGE SHEET FLOWS ACROSS THE SITE, AFTER DEVELOPMENT OF THE SITE, IT WILL DIVERTED AROUND THE RAILYARD.
- 3. ALL RUNOFF FROM THE SITE SHEET FLOWS ACROSS THE SITE FROM THE EAST TO THE WEST, COLLECTING EVENTUALLY IN CONCENTRATION IN THE WETLANDS TO THE WEST.
- 4. THE PROPOSED DRAINAGE SYSTEM FOR THE PROJECT CONSISTS OF GRADING ONLY.
- 5. CONSTRUCTION WILL BEGIN WITH INSTALLATION OF A CONSTRUCTION EXIT AND PLACEMENT OF PERIMETER SILT FENCE ALONG APPLICABLE PORTIONS OF THE PROJECT LIMITS TO LIMIT THE AMOUNT OF SILT RUNOFF. AFTER THESE EROSION CONTROL BMPs HAVE BEEN INSTALLED, CLEARING WILL BEGIN. CONSTRUCTION OF DRAINAGE PROVISIONS WILL START. THE SITE WILL THEN BE GRADED AND STABILIZED WITH VEGETATION OR MULCHED.
- 6. FOR EXISTING CONDITIONS SEE SHEET V101.
- 7. FOR PROJECT PLAN & PROFILE SEE SHEETS C101 & C102.
- 8. FOR ESPC PLAN SEE SHEET EC101.
- 9. ZONING: INDUSTRIAL
- 10. NAME OF RECEIVING WATERS: SATILLA RIVER.
- 11. BUFFER VARIANCE: A STREAM BUFFER VARIANCE IS NOT REQUIRED FOR CONSTRUCTION ACTIVITIES FOR THIS PROJECT.
- 12. STATE WATERS: NO STATE WATERS ARE LOCATED WITHIN 200 FEET OF THE PROJECT SITE.
- 13. SURVEY INFORMATION
 - a. ADJACENT PROPERTIES: CSX & NORFOLK SOUTHERN
 - b. VERTICAL DATUM: ELEVATIONS SHOWN ARE IN FEET AND ARE BASED ON NAVD83.
 - c. HORIZONTAL DATUM: COORDINATES ARE IN U.S. SURVEY FEET REFERRED TO THE GEORGIA STATE PLANE ZONE 1001 EAST, NAD83.
- 14. FEMA: FLOOD INSURANCE RATE MAP, COMMUNITY NUMBER 13229C, PANEL 0195D, DATED 09/25/2009, SHOWS THE EXISTING PROJECT SITE TO BE OUTSIDE THE EXISTING FLOODPLAIN.
- 15. THE SITE IS LOCATED IN PIERCE COUNTY, GA. GROSS ACREAGE OF THE DRAINAGE BASIN: 3,000 ACRES. ACREAGE OF THE PROJECT SITE: 1.5 ACRES. THE WEIGHTED CURVE NUMBER FOR THE TOTAL PROJECT SITE IS 80.
- 16. RUNOFF COEFFICIENT (PROJECT SITE):
 - a. WEIGHTED PRE-CONSTRUCTION CURVE NUMBER (CN): 80
 - b. WEIGHTED POST CONSTRUCTION CURVE NUMBER (CN): 80
- 17. SOIL PROPERTIES (SEE SOILS MAP BELOW FOR LOCATIONS)



18. PROJECT SITE CONTAINS THE FOLLOWING SOIL SERIES BASED ON THE USDA-NRCS NATIONAL COOPERATIVE SOIL SURVEY:

- Ada ALBANY SAND
- CmA CHIPLEY SAND
- LiA LEEFIELD SAND
- MnA MASCOTTE SAND
- PaA PELHAM SAND
- RIA ROBERTSDALE LOAMY SAND

19. SOIL DISTURBING ACTIVITIES INCLUDE:

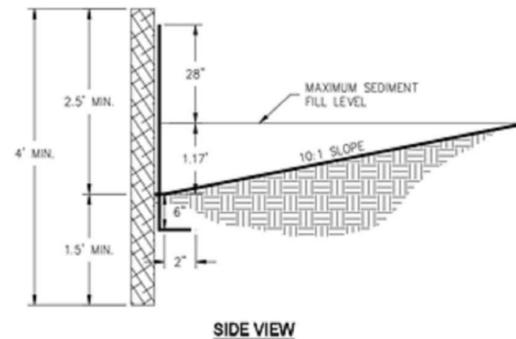
- a. INSTALLING PERIMETER AND OTHER SEDIMENT CONTROLS.
- b. INSTALLING A STABILIZED CONSTRUCTION EXIT.
- c. GRADING AND EXCAVATION.
- d. PREPARATION FOR FINAL SEEDING.
- e. COMPLETION OF ON-SITE STABILIZATION.

EROSION AND SEDIMENT CONTROLS

1. ALL PERIMETER SILT FENCES AND CONSTRUCTION EXITS SHALL BE IN PLACE PRIOR TO ANY LAND DISTURBING ACTIVITIES.

(CONSTRUCTION EXIT SHOULD BE DEFINED - INSTALLATION MAY WAIT UNTIL DEMOLITION HAS OCCURRED)

- 2. WHEN CONSTRUCTION ACTIVITIES HAVE CEASED IN AN AREA, THAT AREA SHALL BE STABILIZED WITHIN 14 DAYS. IF THE AREA IS NOT YET TO FINAL GRADE, IT SHALL BE MULCHED. IF THE AREA IS TO FINAL GRADE AND WILL EVENTUALLY CONTAIN SITE IMPROVEMENTS, IT SHALL BE TEMPORARY SEEDED. AREAS BROUGHT TO FINAL GRADE THAT WILL REMAIN PVIOUS ARE TO BE PERMANENTLY SEEDED. ALLOWABLE EXCEPTIONS FROM THE NPDES GENERAL PERMIT NO. GAR 100001, ARE NOTED BELOW.
- 3. "WHERE THE INITIAL OF STABILIZATION MEASURE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARY OR PERMANENTLY CEASE IS PRECLUDED BY SNOW COVER OR OTHER ADVERSE WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE."
- 4. "WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED."
- 5. PLEASE REFER TO DETAIL SHEETS FOR THE LAND DISTURBANCE CONSTRUCTION SCHEDULE AND TEMPORARY AND PERMANENT GRASSING SCHEDULES.
- 6. STORMWATER FROM THIS SITE WILL BE ROUTED THROUGH THE EXISTING STORMWATER SYSTEM AND SWALES TO THE EXISTING CANAL. THE CANAL DISCHARGES INTO THE SAVANNAH RIVER.
- 7. 67 C.Y. SEDIMENT STORAGE PER DISTURBED ACRE REQUIREMENT
 - a. TOTAL PROJECT SITE = 1.89 AC
 - b. TOTAL DISTURBED ACREAGE = 1.51 AC
 - c. TOTAL REQUIRED SEDIMENT STORAGE: 67 C.Y./AC X 1.51 AC = 45 CY
 - d. SEDIMENT STORAGE REQUIREMENTS WILL BE MET BY UTILIZING SILT FENCE



e. SILT FENCE CALCULATION

$$CY/LINEAR FT = ((11.7' \times 1.17') / 2 \times 1) \times 6.84 = 0.25 \text{ CY/LIN. FT.}$$

1,451 LF SILT FENCE: 1,451 LF X 0.25 CY/LF = 363 CY SEDIMENT STORAGE

f. 363 CY EXCEEDS THE REQUIRED 45 CY OF SEDIMENT STORAGE

g. JUSTIFICATION FOR USING SILT FENCING FOR SEDIMENT STORAGE:

DUE TO THE TOPOGRAPHY, GENERAL SITE STABILITY AND DESIRE TO MINIMIZE NEGATIVE IMPACTS TO WILDLIFE AND VEGETATION, SEDIMENT STORAGE WILL BE PROVIDED USING THE PERIMETER SILT FENCING IN LIEU OF SEDIMENT BASINS. THE SILT FENCING SHOULD PROVIDE THE MOST VIABLE MEANS FOR TRAPPING AND STORING WATERBORNE SEDIMENT ON THIS SITE. THE ADJACENT DETAIL SHOWS THE STORAGE VALUE PER LINEAR FOOT OF SILT FENCE. ACCUMULATED SEDIMENT SHOULD BE REMOVED ONCE IT REACHES THE MAXIMUM SEDIMENT FILL LEVEL AS SHOWN IN THE DETAIL.

NON-STORMWATER DISCHARGES

1. ALL NON-STORMWATER DISCHARGES WILL BE ROUTED THROUGH ON-SITE BMPs WHERE POSSIBLE. THESE DISCHARGES INCLUDE FLUSHING OF WATER AND FIRE LINES, IRRIGATION WATER, GROUND WATER, DEWATERING OF PITS OR DEPRESSIONS WITHIN THE CONSTRUCTION SITE AND RINSE OFF WATER OF NON-TOXIC MATERIALS.

OTHER CONTROLS

- 1. NO WASTE WILL BE DISPOSED OF INTO STORMWATER INLETS OR WATERS OF THE STATE EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
- 2. WASTE MATERIALS
 - a. ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY AND TRASH WILL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE WILL BE BURIED ON-SITE.
 - b. ALL PERSONNEL WILL BE INSTRUCTED ON PROPER PROCEDURES FOR WASTE DISPOSAL. A NOTICE STATING THESE PRACTICES WILL BE POSTED AT THE JOBSITE AND THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
- 3. HAZARDOUS WASTE
 - a. ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE ESPC FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.
 - b. THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN IN THE ESPCP AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH STORMWATER DISCHARGES. IF SUCH CONTACT OCCURS, THE STORMWATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORMWATER. IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC

PLAN.

4. SANITARY WASTES

- a. A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE SANITARY UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS.
- b. ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER 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 STORMWATER DISCHARGES. THE LOCATION OF THE SANITARY WASTES UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN
- c. GRADING PHASE BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

5. OFFSITE VEHICLE TRACKING

- a. A STABILIZED CONSTRUCTION EXIT HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENT. SEE SHEETS EC101 FOR CONSTRUCTION EXIT LOCATION AND DETAILS. THE PAVED STREET ADJACENT TO THE SITE EXIT WILL BE INSPECTED DAILY FOR TRACKING OF MUD, DIRT OR ROCK. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

INVENTORY FOR POLLUTION PREVENTION PLAN

1. THE FOLLOWING MATERIALS ARE EXPECTED ON-SITE DURING CONSTRUCTION: CONCRETE PRODUCTS, ASPHALT, PETROLEUM BASED FUELS AND LUBRICANTS FOR EQUIPMENT, TAR, METAL REINFORCING, PAINTS/FINISHES, PAINT SOLVENTS, LUMBER, PESTICIDES, FERTILIZERS, HERBICIDES, CRUSHED STONE, PLASTIC, METAL, AND CONCRETE PIPES.

SPILL PREVENTION

- 1. 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 STORMWATER RUNOFF.
- 2. GOOD HOUSEKEEPING
 - a. QUANTITIES OF PRODUCTS STORED ON-SITE WILL BE LIMITED TO THE AMOUNT NEEDED FOR THE JOB.
 - b. PRODUCTS AND MATERIALS WILL BE STORED IN A NEAT, ORDERLY MANNER IN APPROPRIATE CONTAINERS PROTECTED FROM RAINFALL, WHERE POSSIBLE.
 - c. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH MANUFACTURER LABELS LEGIBLE AND VISIBLE.
 - d. PRODUCTS MIXING, DISPOSAL AND DISPOSAL OF PRODUCT CONTAINERS WILL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
 - e. THE CONTRACTOR WILL INSPECT SUCH MATERIALS TO ENSURE PROPER USE, STORAGE AND DISPOSAL.
- 3. PRODUCT SPECIFIC PRACTICES
 - a. 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 INSPECTION AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORMWATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.
 - b. PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORMWATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
 - c. CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON-SITE.
 - d. FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THAT MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.
 - e. BUILDING MATERIALS/FORMWORK - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ON-SITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.
- 4. SPILL CLEANUP AND CONTROL PRACTICES
 - a. LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
 - b. 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.
 - c. SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
 - d. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTS AS REQUIRED BY LOCAL, STAT, AND FEDERAL REGULATIONS.
 - e. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
 - f. FOR SPILLS OF UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
 - g. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.
- 5. THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1,320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

INSPECTIONS

- 1. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, QUALIFIED 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 OF EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- 2. MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. 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.

DATE	DESCRIPTION	MARK

ISSUE DATE: 4/30/2021	SOLICITATION NO.: 001
DRAWN BY: BWA	CONTRACT NO.: 001
DESIGNED BY: JPB	CATEGORY CODE:
CHECKED BY: MTF	FILE NAME: 20-1019 EC000-ESPC NOTES.DWG
SUBMITTED BY: JPB	SIZE: ANS/D

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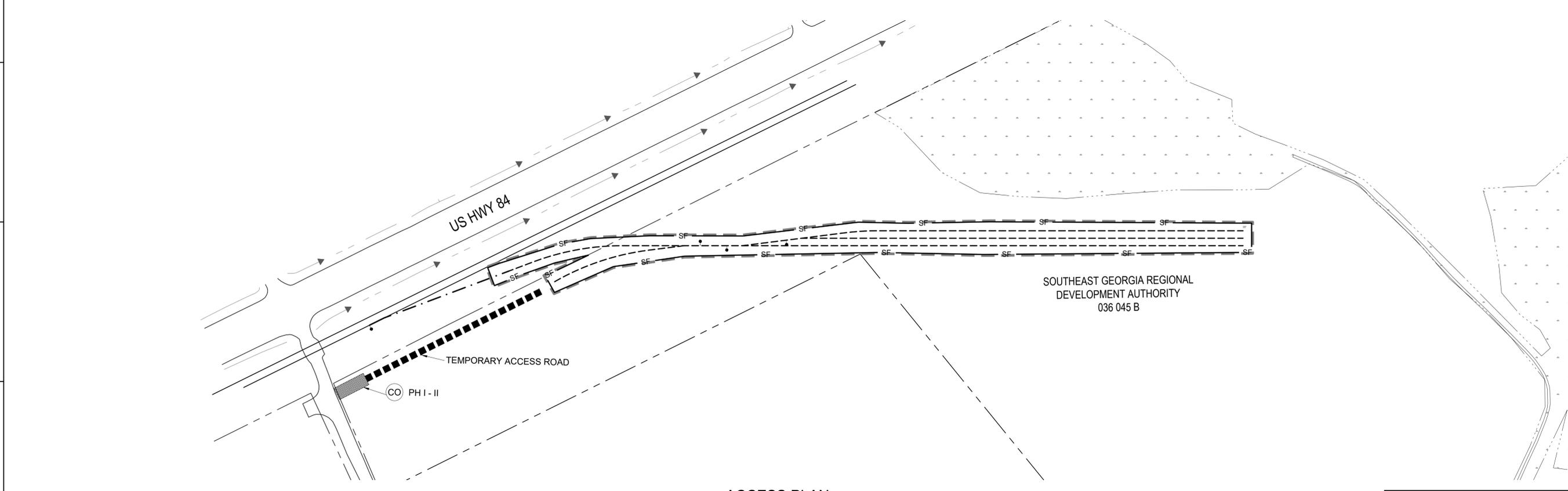
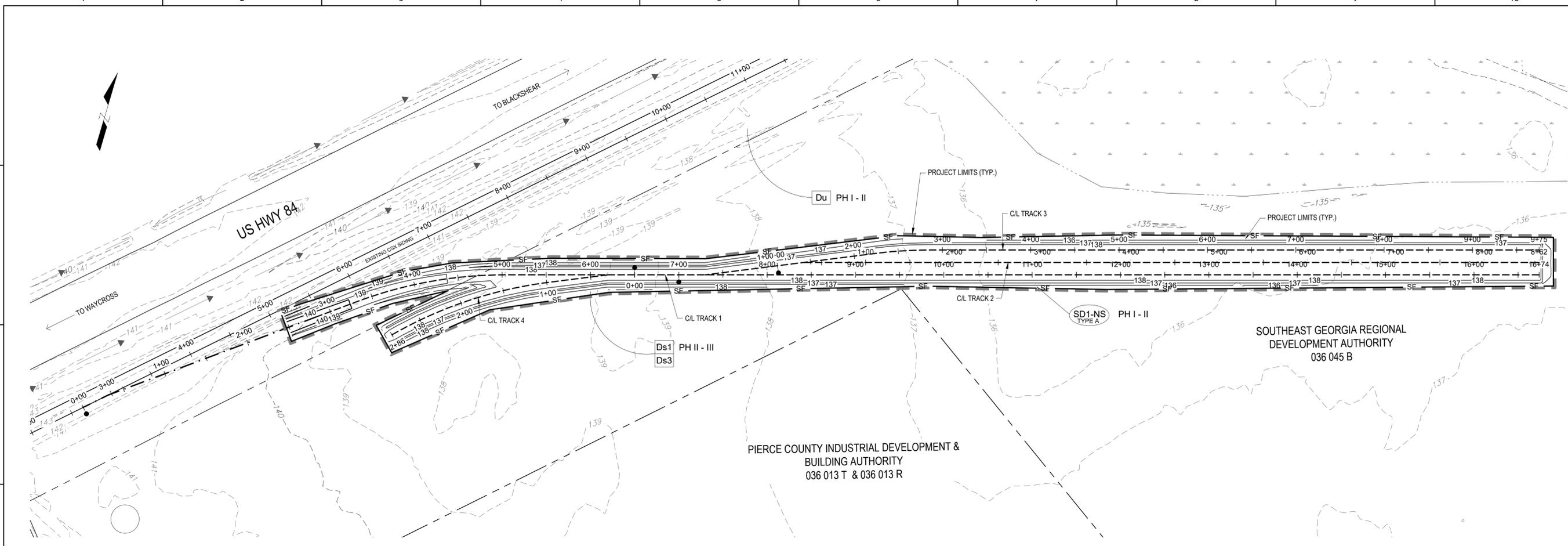
PIERCE COUNTY INDUSTRIAL PARK RAIL ACCESS

ESPC NOTES

SHEET ID EC003



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION



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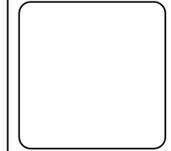
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MARK	DESCRIPTION	DATE

ISSUE DATE: 4/19/24	SOLICITATION NO.:	CONTRACT NO.:	CATEGORY CODE:	FILE NAME: 20-1019-EC101-ESPC PLANS.DWG
DRAWN BY: BWA	DESIGNED BY: JPB	CHECKED BY: MTF	SUBMITTED BY: JPB	SIZE: ANSI D
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PIERCE COUNTY INDUSTRIAL PARK RAIL
ACCESS
ESPC & ACCESS PLAN

SHEET ID
EC101

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Sediment Barrier (Sd1)



DEFINITION
Sediment Barriers are temporary structures made up of a porous material typically supported by steel or wood posts. Types of sediment barriers may include silt fence, brush piles, mulch berms, compost filter socks or other filtering material.

PURPOSE
To minimize and prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage systems by slowing storm water runoff and causing the deposition and/or filtration of sediment at the structure. The barriers retain the soil on the disturbed land until the activities disturbing the land are completed and vegetation is established.

CONDITIONS
Barriers should be installed where runoff can be stored behind the barrier without damaging the submerged area behind the barrier or the structure itself. Sediment barriers shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

DESIGN CRITERIA
Sediment barriers are designed to retain sediment transported by sheet flow from disturbed area. It is important for the design professional to take into account the profile of the product for use on the site. Sediment Barriers should also provide a riprap splash pad or other outlet protection device for any point where flow may overtop the sediment barrier. Ensure that the maximum height of the barrier at a protected, reinforced outlet does not exceed 1 foot and that the support spacing does not exceed 4 feet.

Where all runoff is to be stored behind the sediment barrier (where no storm water disposal system is present), maximum continuous slope length behind a sediment barrier shall not exceed those shown in Table 6-27.1. For longer slope lengths, slope interrupters must be used. The drainage areas shall not exceed 1/4 acre for every 100 feet of sediment barrier.

Placement
The type of sediment barrier depends on whether the area is sensitive or non-sensitive. Sensitive areas can be defined as any area that needs additional protection, these areas include but are not limited to, state waters, wetlands, or any area the design professional designates as sensitive.

When using multiple types of sediment barriers on a site in a single run, the barriers must be overlapped 18 inches or as specified by design professional. See Figure 6-27.5

CONSTRUCTION SPECIFICATIONS

Non-sensitive Areas* (Sd1-NS)
Sediment barriers being used as Type NS shall have a support spacing of no greater than 6 feet on center, with each being driven into the ground a minimum of 18 inches.

Sensitive Areas* (Sd1-S)
Sediment barriers being used as Type S shall have a support spacing of no greater than 4 feet on center, with each being driven into the ground a minimum of 18 inches. *As of January 1 2016, in the existing Georgia Department of Transportation Qualified Products List #36 (QPL - 36), Type A, B, or C will fall under sensitive and non-sensitive applications. **Type C** will be classified as sensitive and Type A and B as non-sensitive. Refer to Appendix A-2 and the Equivalent BMP List.

PRACTICE CLASSIFICATIONS
For silt fence Type A, B or C refer to Table 6-27.4.

Type A Silt Fence
The 36-inch wide filter fabric shall be used on developments where the life of the project is great than or equal to six months. Type A is classified as non-sensitive application.

Type B Silt Fence
Though only 22-inches wide, this filter fabric allows the same flow rate as Type A silt fence. Type B silt fence shall be limited to use on minor projects, such as residential home sites or small commercial developments where permanent stabilization will be achieved in less than six Type B is classified as non-sensitive application.

Type C Silt Fence
Type C fence is 36-inches wide with wire reinforcement or equivalent. The wire reinforcement is necessary because this fabric allows almost three times the flow rate as Type A silt fence. Type C silt fence shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet. Type C is classified as sensitive application.

Filter Media Sock Specifications
Compost filter media used for sediment barrier filter material shall be weed free and derived from a well-decomposed source of organic matter. Filter Media Sock is classified as a Type B, non-sensitive application. The compost shall be produced using an aerobic composting process meeting CFR 503 regulations including time and temperature data. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted without applicable water quality test results. Test methods for the items below should follow US Composting Council Test Methods for the Examination of Composting and Compost guidelines for laboratory procedures.

Where all runoff is to be stored behind the sediment barrier (where no storm water disposal system is present), maximum continuous slope length behind a sediment barrier shall not exceed those shown in Table 6-27.1. For longer slope lengths, slope interrupters must be used. The drainage areas shall not exceed 1/4 acre for every 100 feet of sediment barrier.

A. pH - 5.0-8.0 in accordance with TMECC 04.11-A. "Electrometric pH Determinations for Compost"

B. Particle size - 99% passing a 2 inch (50mm) sieve and a maximum of 40% passing a 3/8 inch (9.5mm) sieve, in accordance with TMECC 02.02-B. "Sample Sieving for Aggregate Size Classification." (Note: In the field, product commonly is between 1/2 in./12.5mm and 2 in./50 mm in particle size.)

C. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.

Construction Exit (Co)



DEFINITION
A stone stabilized pad located at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk or parking area or any other area where there is a transition from bare soil to a paved area.

PURPOSE
To reduce or eliminate the transport of mud from the construction area onto public rights-of-way by motor vehicles or by runoff.

CONDITIONS
This practice is applied at appropriate points of construction egress. Geotextile underlines are required to stabilize and support the pad aggregates.

DESIGN CRITERIA
Formal design is not required. The following standards shall be used:

Aggregate Size
Stone will be in accordance with National Stone Association R-2 (1.5 to 3.5 inch stone).

Pad Thickness
The gravel pad shall have a minimum thickness of 6 inches.

Pad Width
At a minimum, the width should equal full width of all points of vehicular egress, but not less than 20 feet wide.

Pad Length
The gravel pad shall have a minimum length of 50 feet. 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.

Washing
If the action of the vehicle traveling over the gravel pad does not sufficiently remove the mud, the tires should be washed prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with crushed stone and provisions that intercept the sediment laden runoff and direct it into an approved sediment trap or sediment basin.

Location
The exit shall be located or protected to prevent sediment from leaving the site.

CONSTRUCTION SPECIFICATIONS
It is recommended that the entrance area be excavated to a depth of 3 inches and be cleared of all vegetation and roots.

Diversion Ridge
On sites where the grade toward the paved area is greater than 2%, a diversion ridge 6 to 8 inches high with 3:1 side slopes shall be constructed across the foundation approximately 15 feet above the road.

Geotextile
The geotextile underliner must be placed the full length and width of the entrance. Geotextile selection shall be based on AASHTO M288-06 specification:

- For subgrades with a CBR greater than or equal to 3 or shear strength greater than 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 7.3, Separation Requirements.
- For subgrades with a CBR between 1 and 3 or shear strength between 30 and 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 8, Geotextile Property Requirements for Subsurface Drainage, Separation, Stabilization, and Permanent Erosion Control (Geotextile Property Requirements).

MAINTENANCE
The exit shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5-3 inch stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled, Figure 6-14.1 dropped, washed, or tracked from vehicles or sites onto roadways or into storm drains must be removed immediately.

D. Material shall be relatively free (<1% by dry weight) of inert or foreign manmade materials.

E. Sock containment system for top filter media shall be a photodegradable or biodegradable knitted mesh material and should have 1/8 in. to 3/8 in. openings.

Brush Barrier (Sd1-BB)
(Only during timber clearing operations) Brush obtained from clearing and grubbing operations may be piled in a row along the perimeter of disturbance at the time of clearing and grubbing. Brush barriers should not be used in developed areas or locations where aesthetics are a concern. Brush should be wind-rowed on the contour as nearly as possible and may require compaction. Construction equipment may be utilized to satisfy this requirement. The minimum base width of the brush barrier shall be 5 feet and should be no wider 10 feet. The height of the brush barrier should be between 3 and 5 feet tall.

Trenching Method
Trenching machines have been used for over twenty-five years to dig a trench for burying part of the filter fabric underground. Usually the trench is about 2'-6" wide with a 6" excavation. Post setting and fabric installation often precede compaction, which make effective compaction more difficult to achieve. EPA supported an independent technology evaluation (ASCE 2001), which compared three progressively better variations of the trenching method with static slicing areas. The static slicing method performed better than two lower performance levels of the trenching method, and was as good as or better than the trenching method's highest performance. The best trenching method typically required nearly triple the time and effort to achieve results comparable to the static slicing method.

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.

MAINTENANCE
Sediment shall be removed once it has accumulated to one-half the original height of the barrier. Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately six months) or the height of the product is not maintaining 80% of its properly installed height.

Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

A brush barrier is a good tool to use in developing pasture in an agricultural situation to prevent sediment from leaving the site until the pasture is stabilized. If greater filtering capacity is required, a commercially available sediment barrier may be placed on the side of the brush barrier receiving the sediment-laden runoff. The lower edge of the fabric must be buried in a 6-inch deep trench immediately uphill from the barrier. The upper edge must be stapled, tied or otherwise fastened to the brush barrier. Edges of adjacent fabric pieces must overlap each other. See Figure 6-27.5.

Installation
Temporary sediment barriers should be installed along the contour.

Temporary sediment barriers shall be installed according to the following specifications as shown on the plans or as directed by the design professional.

For installation of the barriers, see Figures 6-27.1, 6-27.2, 6-27.3 and 6-27.4, respectively. It is important to remember that not all sediment barriers need to be trenching into the ground but most taller sediment barriers do.

Post installation shall start at the center of a low point (if applicable) with the remaining posts spaced no greater than 6 feet apart for Type NS sediment barriers and no greater than 4 feet apart for Type C sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

Static Slicing Method
The static slicing machine pulls a narrow blade through the ground to create a silt 12" deep, and simultaneously inserts the silt fence fabric into this silt behind the blade. The blade is designed to slightly disrupt soil upward next to the silt and to minimize horizontal compaction, thereby creating an optimum condition for compacting the soil vertically on both sides of the fabric. Compaction is achieved by rolling a tractor wheel along both sides of the silt in the ground 2 to 4 times to achieve nearly the same or greater compaction as the original undisturbed areas. This vertical compaction reduces the air spaces between soil particles, which minimizes infiltration. Without this compaction infiltration can saturate the soil, and water may find a pathway under the fence.

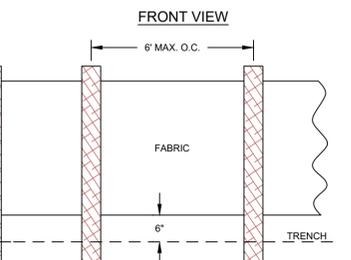
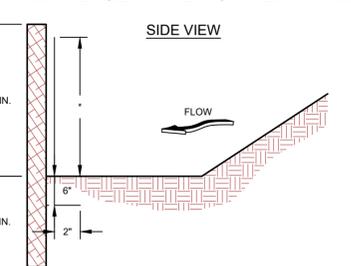
When a silt fence is holding back several tons of accumulated water and sediment, it needs to be supported by posts that are driven 18 inches into the soil. Driving in the posts and attaching the fabric to them completes the installation.

(1) Minimum roll average of five specimens.
(2) Percent of required initial minimum tensile strength.

Table 6-27.4

TYPE FENCE	A	B	C
Tensile Strength (Lbs. Min.) (1)	Warp - 120 Fill - 100	Warp - 120 Fill - 100	Warp - 250 Fill - 180
Elongation (% Max.)	40	40	40
AOS (Apparent Opening Size)	#30	#30	#30
Flow Rate (Gall/Min/Sq. Ft.)	25	25	70
UVI-stability (2)			
ASTM D-4632 after 300 hours	80	80	80
weathering in accordance with ASTM D-4355)			
Bursting Strength (PSI Min.)			
ASTM D-3786 Diaphragm Bursting Strength Tester)	175	175	175
Minimum Fabric Width (Inches)	36	22	36

SILT FENCE - TYPE NON-SENSITIVE



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (") IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

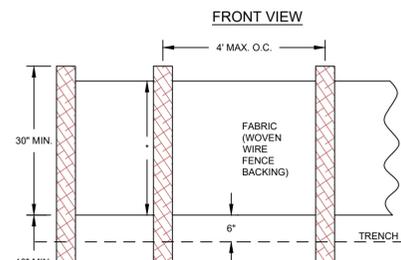
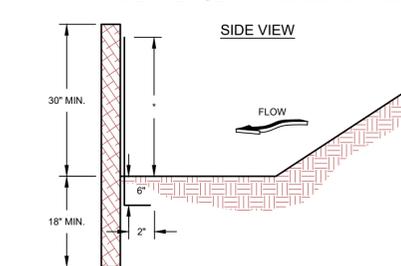
Figure 6-27.1

Table 6-27.1 Criteria for Sediment Barrier

Land Slope Percent	Maximum Slope Length Above Fence Feet
<2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20"	15

*In areas where the slope is greater than 20%, a flat area length of 10 feet between the toe of the slope to the fence should be provided.

SILT FENCE - TYPE SENSITIVE



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (") IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Figure 6-27.2

Table 6-27.2 Post Size

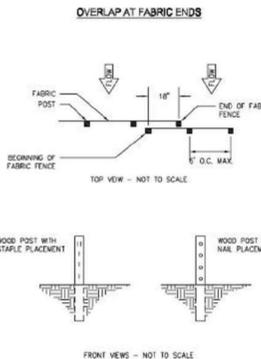
Type	Min Length	Type of Post	Size of Post
NS	4'	Soft wood Oak Steel	3" dia or 2x4 1.5" x 1.5" 1.15lb./ft. min
S	4'	Steel Oak	1.15-1.25 lb./ft. min 2"x2"

Table 6-27.3 Fasteners for Wood Posts

Gauge	Crown	Legs	Staples / Post
Wire Staples	17 min.	3/4" wide	1/2" 5 min.
Gauge	Length	Button Heads	Nail/ Post
Nails	14 min. 1"	3/4"	4 min

Note: Filter Fabric may also be attached to the post by wire, cords, and pockets.

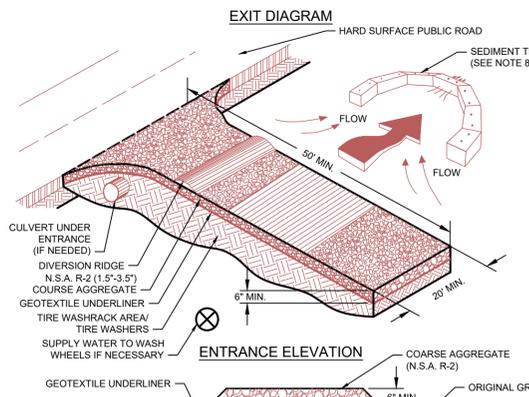
FASTENERS FOR SILT FENCES



NOTES:
1. THE FABRIC AND WIRE SHOULD BE SECURELY FASTENED TO POSTS AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS FABRIC BARRIER.

Figure 6-27.5

CRUSHED STONE CONSTRUCTION EXIT



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 CURVE 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 (INVERT 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.

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.

PURPOSE
-To reduce runoff and erosion
-To conserve moisture
-To prevent surface compaction or crusting
-To control undesirable vegetation
-To modify soil temperature
-To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE
Much 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 any area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to Ds2 - Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 - Disturbed Area Stabilization (With Sodding).

SPECIFICATIONS
Mulching Without Seeding
This standard applies to graded 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

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

Mulching Materials
Select one of the following materials and apply at the depth indicated:

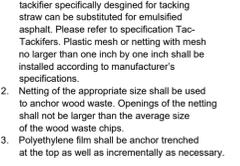
- Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
- Wood waste (chips, sawdust or bark) shall be applied from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
- Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.

- Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
- 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.
- 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 "pucker disk." 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.

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 movement 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.

METHOD AND MATERIALS
A. Temporary Methods
Mulches. See standard 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 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.



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PIERCE COUNTY INDUSTRIAL PARK RAIL ACCESS

ESPC DETAILS

DATE	DESCRIPTION

DESIGNED BY: JPB	CHECKED BY: MTF	DATE: 11/22/2021
PROJECT NO.: 001	CATEGORY CODE: 001	FILE NAME: 20-1019 EC500-ESPC DETAILS.DWG

Ball Maritime Group, LLC
4 Cedar View Court, Savannah, Georgia 31410 (912) 662-2014
www.ballmaritime.com

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Disturbed Area Stabilization (With Temporary Seeding)

Ds2



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

- PURPOSE**
- To reduce runoff and sediment damage of down stream resources
 - To protect the soil surface from erosion
 - To improve wildlife habitat
 - To improve aesthetics
 - To improve tilth, infiltration and aeration as well as organic matter for permanent plantings

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification **Ds1-Disturbed Area Stabilization (With Temporary Seeding)**.

CONDITIONS
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. Note: Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). Contact NRCS or the local SWCD for more information.

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 hand-seeding, 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 determined by soil test for pH. Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate.

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, culti-packer-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. See Table 6-4.1

Mulching

Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to **Ds1-Disturbed Area Stabilization (With Mulching Only)**.

Irrigation

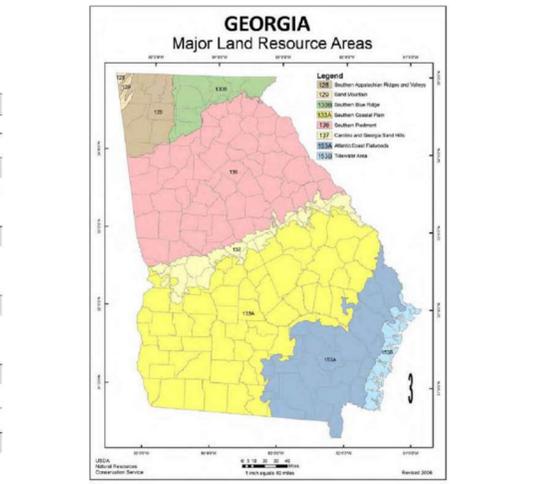
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly watered to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

Table 6-4.1 - Temporary Cover or Companion Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR TEMPORARY COVER OR COMPANION CROPS

Species	Broadcast Rates Rate Per Acre	Resource Area ^a Plus Live Seed (PLS) Per 1000 sqft	Planting Dates by Resource Area Soil lines indicate optimum dates, dotted lines indicate recommended but optional dates	Remarks							
					J	F	M	A	M	J	J
BARLEY <i>Hordeum vulgare</i>	3 bu. (144 lbs) 1/2 bu. (24 lbs)	3.3 lbs 0.6 lb	M-L P C	14,000 seed per pound. Winter hardy. Use on productive soils.							
LESPEDEZA, ANNUAL <i>Lotus tenuis</i>	40 lbs 10 lbs	0.9 lb 0.2 lb	M-L P C	200,000 seed per pound. May volunteer for several years. Use broadcast E.							
LOVEGRASS, WEEPING <i>Elymus caput-medusae</i>	4 bu. 2 bu.	0.1 lb 0.05 lb	M-L P C	1,600,000 seed per pound. May last for several years. Mix with Sorghum legumebes.							
MILLET, BROWNTOP <i>Panicum polycarpum</i>	40 lbs 10 lbs	0.9 lb 0.2 lb	M-L P C	137,000 seed per pound. Quick dense cover. Will provide excessive competition in mixtures if seeded at high rate.							

Species	Broadcast Rates Rate Per Acre	Resource Area ^a Plus Live Seed (PLS) Per 1000 sqft	Planting Dates by Resource Area Soil lines indicate optimum dates, dotted lines indicate recommended but optional dates	Remarks							
					J	F	M	A	M	J	J
MILLET, PEARL <i>Pennisetum glaucum</i>	50 lbs	1.1 lbs	M-L P C	80,000 seed per pound. Quick dense cover. May reach 5 feet in height. Not recommended for mixtures.							
OATS <i>Avena sativa</i>	4 bu. (120 lbs) 1 bu. (32 lbs)	2.9 lbs 0.7 lb	M-L P C	13,000 seed per pound. Use on productive soils. Not as winter hardy as rye or barley.							
RYE <i>Syntherisma cereale</i>	3 bu. (108 lbs) 1/2 bu. (23 lbs)	3.9 lbs 0.6 lb	M-L P C	18,000 seed per pound. Quick cover. Drought tolerant and winter hardy.							
RYEGRASS, ANNUAL <i>Lolium temerense</i>	40 lbs	0.9 lb	M-L P C	227,000 seed per pound. Dense cover. Very competitive and is difficult to be used in mixtures.							
SUDANGRASS <i>Sorghum sudanense</i>	60 lbs	1.4 lbs	M-L P C	55,000 seed per pound. Good on droughty sites. Not recommended for mixtures.							

Species	Broadcast Rates Rate Per Acre	Resource Area ^a Plus Live Seed (PLS) Per 1000 sqft	Planting Dates by Resource Area Soil lines indicate optimum dates, dotted lines indicate recommended but optional dates	Remarks							
					J	F	M	A	M	J	J
TRITICALE <i>Triticum aestivum</i>	3 bu. (144 lbs) 1/2 bu. (24 lbs)	3.3 lbs 0.6 lb	C	Use on lower part of Southern Coastal Plain and in Atlantic Coastal Plain only.							
WHEAT <i>Triticum aestivum</i>	3 bu. (180 lbs) 1/2 bu. (30 lbs)	4.1 lbs 0.7 lb	M-L P C	15,000 seed per pound. Winter hardy.							



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

DATE	DESCRIPTION	MARK

Ball Maritime Group, LLC
4 Cedar View Court | Savannah, Georgia | 31410 | (912) 662-2014
www.ballmaritime.com

ISSUE DATE: 4/10/2014
SOLICITATION NO.: 001
CONTRACT NO.: 001
CATEGORY CODE: 001

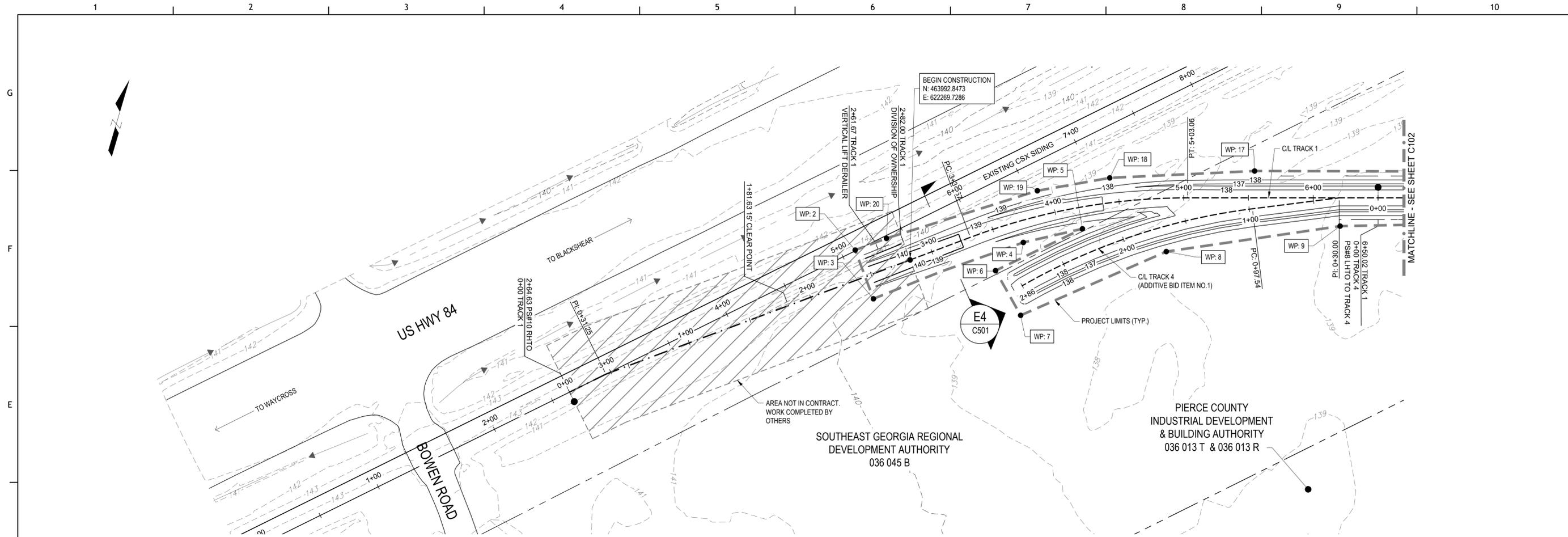
DESIGNED BY: JPB
CHECKED BY: MTF
SUBMITTED BY: JPB

FILE NAME: 20-1019 EC500-ESPC DETAILS.DWG



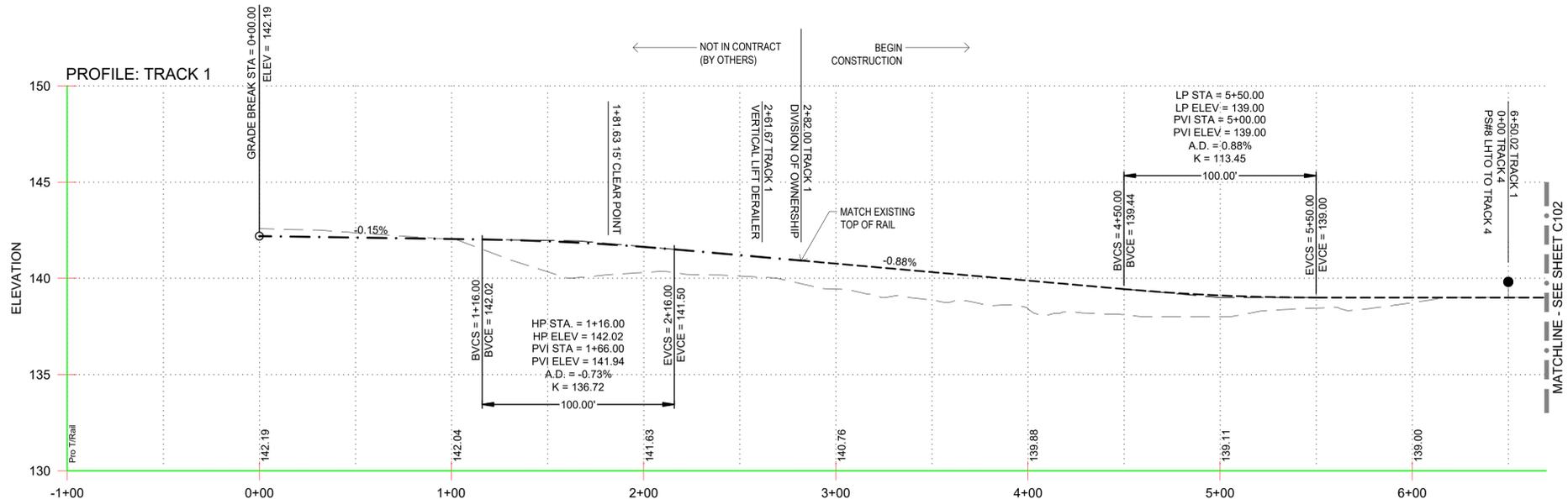
PIERCE COUNTY INDUSTRIAL PARK RAIL ACCESS
ESPC DETAILS

SHEET ID
EC502

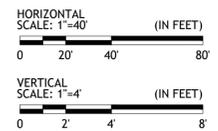


PLAN
SCALE: 1" = 40'

NUMBER	EASTING	NORTHING
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WP: 3	622251.0533	463956.1425
WP: 4	622349.7569	464030.5279
WP: 5	622390.4977	464053.5317
WP: 6	622335.2983	464003.6318
WP: 7	622363.6662	463976.1280
WP: 8	622457.5540	464055.0274
WP: 9	622580.6656	464111.8462
WP: 10	622927.9181	464221.6532
WP: 11	623121.1742	464274.8578
WP: 12	623606.0724	464422.1854
WP: 13	623589.3766	464478.7057
WP: 14	623114.0798	464341.0595
WP: 15	622875.3380	464269.7426
WP: 16	622674.3065	464183.2828
WP: 17	622505.3582	464133.8272
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WP: 20	622247.5426	464003.5805



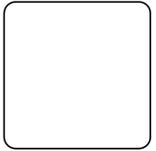
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PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

MARK	DESCRIPTION	DATE

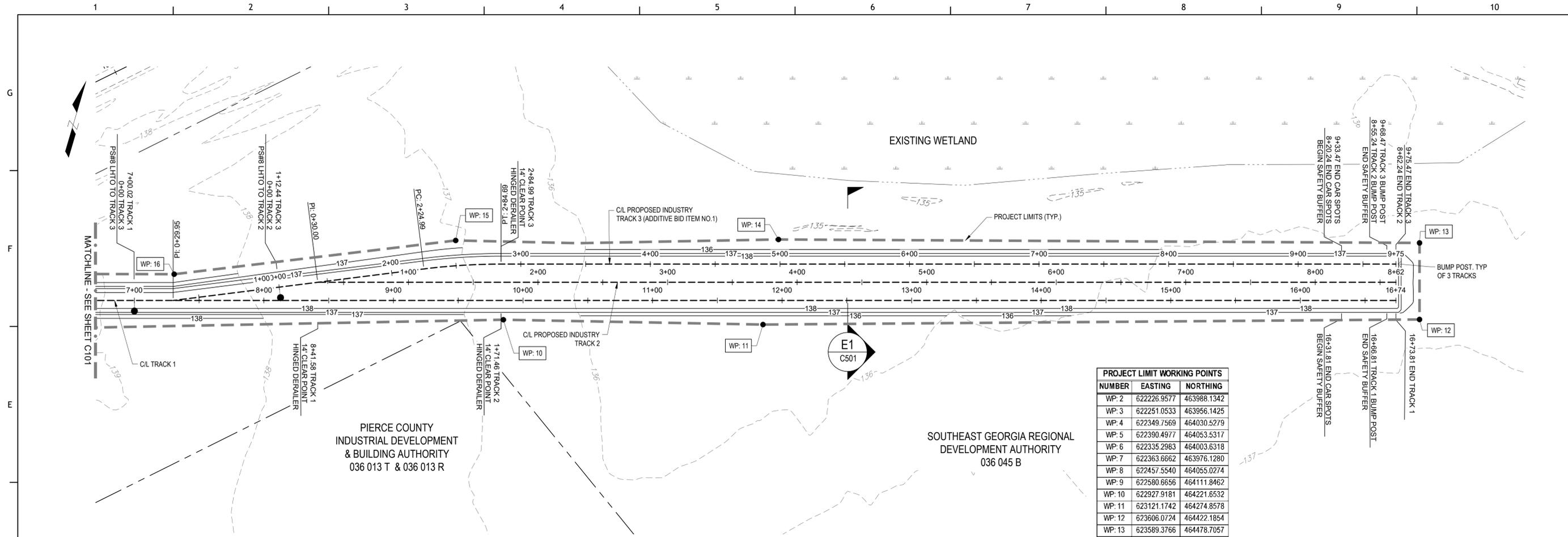
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 DESIGNED BY: JPB
 CHECKED BY: MTF
 SUBMITTED BY: JPB
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 SIZE: ANSISD
 ISSUE DATE: 4/30/21
 SOLICITATION NO.: 001
 CONTRACT NO.: 001
 CATEGORY CODE:
 BALL MARITIME GROUP, LLC
 4 Cedar View Court, Savannah, Georgia 31410 | (912) 662-2014
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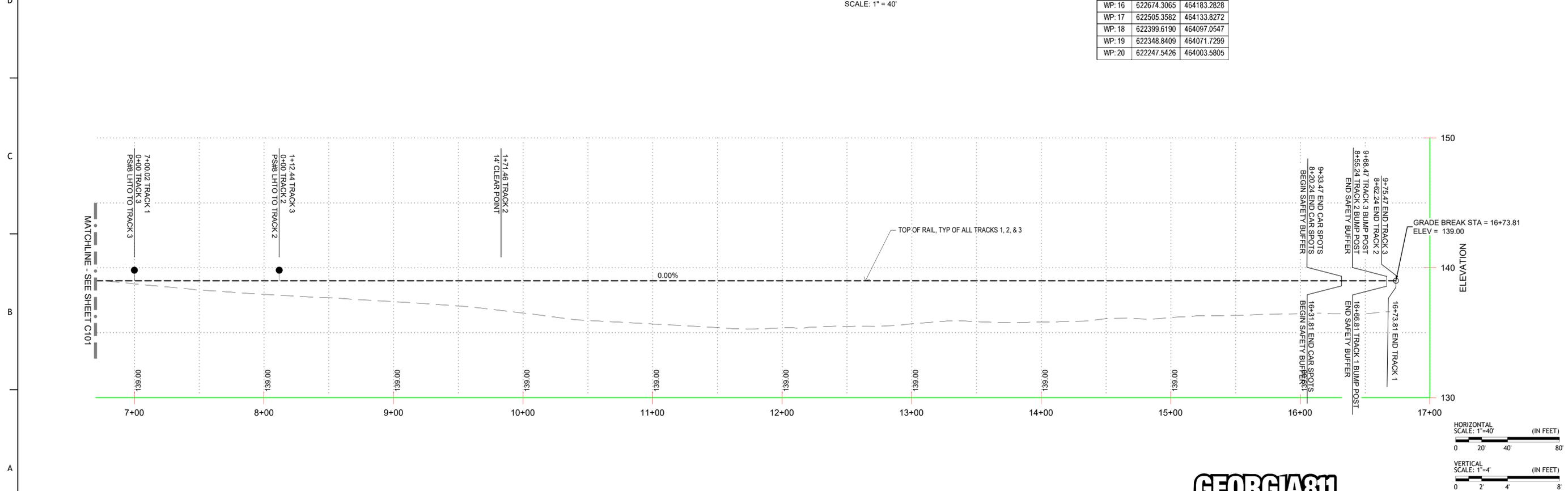
PIERCE COUNTY INDUSTRIAL PARK RAIL
ACCESS
PLAN & PROFILE

SHEET ID
C101

P120-1019 PIERCE COUNTY RAIL/600 CAD/SHEETS/CON/20-1019 C101-PLANPROFILE.DWG - PLOT DATE: 4/30/2021 8:37:52 AM BY: JASON BALL



NUMBER	EASTING	NORTHING
WP: 2	622226.9577	463988.1342
WP: 3	622251.0533	463956.1425
WP: 4	622349.7569	464030.5279
WP: 5	622390.4977	464053.5317
WP: 6	622335.2983	464003.6318
WP: 7	622363.6662	463976.1280
WP: 8	622457.5540	464055.0274
WP: 9	622580.6656	464111.8462
WP: 10	622927.9181	464221.6532
WP: 11	623121.1742	464274.8578
WP: 12	623606.0724	464422.1854
WP: 13	623589.3766	464478.7057
WP: 14	623114.0798	464341.0595
WP: 15	622875.3380	464269.7426
WP: 16	622674.3065	464183.2828
WP: 17	622505.3582	464133.8272
WP: 18	622399.6190	464097.0547
WP: 19	622348.8409	464071.7299
WP: 20	622247.5426	464003.5805



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MARK	DESCRIPTION	DATE

ISSUE DATE: 4/10/21
 SOLICITATION NO.: 001
 CONTRACT NO.: 001
 CHECKED BY: MTF
 SUBMITTED BY: JPB
 FILE NAME: 20-1019 C101-PLANPROFILE.DWG
 SIZE: ANS/D

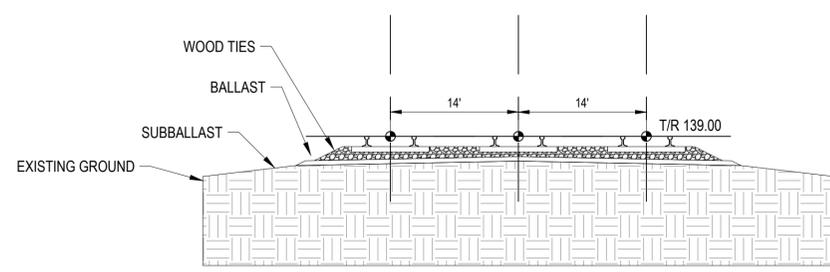
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 CHECKED BY: MTF
 SUBMITTED BY: JPB

PIERCE COUNTY INDUSTRIAL PARK RAIL ACCESS
 PLAN & PROFILE

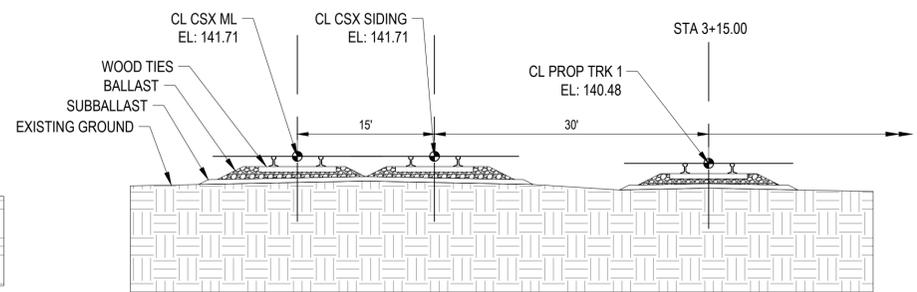
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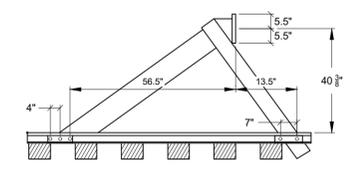
SBRIA



E1 TYPICAL YARD CROSS-SECTION
P101 SCALE: NTS



E4 BEGINNING CROSS-SECTION
C101 SCALE: NTS

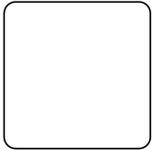


E7 BUMPING POST DETAIL
C102 SCALE: NTS

MARK	DESCRIPTION	DATE

ISSUE DATE: 4/30/21	SOLICITATION NO.: 001
CONTRACT NO.: 001	CATEGORY CODE: 001
DESIGNED BY: JPB	CHECKED BY: MTF
DESIGNED BY: BWA	DESIGNED BY: JPB
DESIGNED BY: JPB	DESIGNED BY: ANSID
DESIGNED BY: JPB	DESIGNED BY: ANSID

Ball Maritime Group, LLC
4 Cedar View Court | Savannah, Georgia | 31410 | (912) 662-2914
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