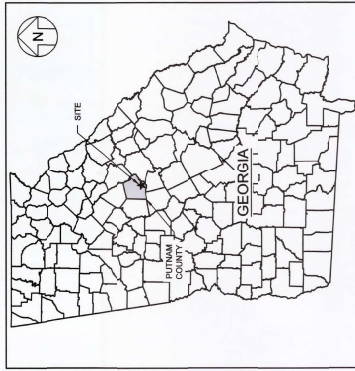
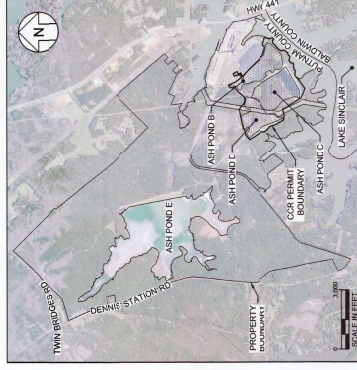


# PLANT BRANCH CCR SURFACE IMPOUNDMENT CLOSURES ASH PONDS B, C, AND D CLOSURE-BY-REMOVAL PUTNAM COUNTY, GEORGIA

PERMIT DRAWINGS  
NOVEMBER 2018



DRAWING NO.	DRAWING TITLE
1	COVER SHEET
2	LEGENDS, ABBREVIATIONS, AND REFERENCE NOTES
3	PROPERTY BOUNDARY SURVEY
4	EXISTING SITE CONDITIONS
5	CCR REMOVAL PLAN
6	RESTORATION GRADING PLAN
7	SITE CROSS SECTIONS I
8	SITE CROSS SECTIONS II
9	STORMWATER MANAGEMENT SYSTEM PLAN
10	STORMWATER MANAGEMENT SYSTEM DETAILS
11	EROSION AND SEDIMENT CONTROL DETAILS



PREPARED FOR:



**Georgia  
Power**

GENERAL MANAGER  
GEORGIA POWER ENVIRONMENTAL AFFAIRS  
241 RALPH MCGILL BOULEVARD NE  
ATLANTA, GEORGIA 30308  
404.506.6505

PREPARED BY:

**Geosyntec**  
consultants

1255 ROBERTS BOULEVARD NW, SUITE 200  
KENNESAW, GEORGIA 30144  
678.202.9500



**Georgia  
Power**

PERMIT DRAWINGS  
NOT FOR CONSTRUCTION

NO.	TITLE	DATE	BY	CHK.	APP.
1	PERMIT DRAWINGS FOR CCR SURFACE IMPOUNDMENT CLOSURES				

COVER SHEET

PLANT BRANCH CCR SURFACE IMPOUNDMENT CLOSURES  
ASH PONDS B, C, AND D CLOSURE-BY-REMOVAL  
PUTNAM COUNTY, GEORGIA

**Geosyntec**  
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KENNESAW, GEORGIA 30144-5004

PHONE: 678.202.9500  
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PROJ. NO. GW584

DWG. 0384-01

AS SHOWN

SCALE

DATE

NOVEMBER 2018

DRAWING 1 OF 11

**LINETYPE LEGEND**

	APPROXIMATE ASH POND BOUNDARY (NOTE 3)
	BATHYMETRIC SURFACE
	CONVEYANCE CHANNEL
	COUNTY LINE
	CCR PERMIT BOUNDARY
	EDGE OF ROAD/EXISTING BUILDINGS
	EXCAVATION SURFACE (NOTE 1)
	EXISTING GROUND (NOTE 1)
	EXISTING WATER MANAGEMENT LINE AND FLOW DIRECTION (NOTE 3)
	FREE WATER SURFACE
	NON-WOVEN GEOTEXTILE SEPARATOR
	OVERHEAD POWER TRANSMISSION LINES
	POWER TRANSMISSION LINE EASEMENT
	PRE-CCR PLACEMENT SURFACE
	PROPERTY BOUNDARY (NOTE 2)
	PROPOSED WATER MANAGEMENT LINE AND FLOW DIRECTION
	RESTORATION SURFACE (NOTE 1)
	STORMWATER CHANNEL
	STORMWATER PIPE AND FLOW DIRECTION
	TRELLISE

**SYMBOL LEGEND**

	CONTROL MARKER (NOTE 2)
	GRATE INLET
	GROUNDWATER PIEZOMETER
	GUY WIRE
	HEADWALL
	HISTORICAL WELL / PIEZOMETER
	JUNCTION BOX
	MONITORING NETWORK WELL
	POWER POLE
	SLOPE GRADE
	SLOPE INDICATOR
	SLOPE LABEL
	SUMP
	TRAILER OR BUILDING
	VEGETATION
	WATER SURFACE

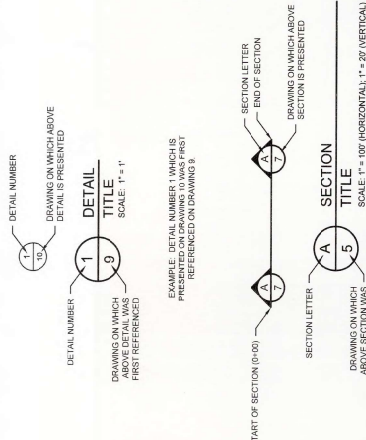
**HATCH PATTERN LEGEND**

	ACCESS ROAD (EXISTING AND PROPOSED)
	EXISTING CCR
	PIPE EMBEDMENT FILL
	RIPRAP
	STREAM (NOTE 1)
	SUBGRADE
	TRENCH BACKFILL
	WETLANDS (NOTE 1)

**CONTOUR LEGEND**

	BATHYMETRIC SURFACE ELEVATION (FEET) (NOTE 1)
	EXCAVATION SURFACE ELEVATION (FEET) (NOTE 1)
	EXISTING GROUND ELEVATION (FEET) (NOTE 1)
	RESTORATION SURFACE ELEVATION (FEET) (NOTE 1)

**DETAIL AND SECTION IDENTIFICATION LEGEND**



**ABBREVIATIONS**

ASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
APP	APPROVED BY
CCR	COAL COMBUSTION RESIDUALS
CMF	CORRUGATED METAL PIPE
CL	CENTERLINE
DIA	DIAMETER
DRN	DRAWN BY
DWS	DRAWING
E	EAST OR EASTING
EL	ELEVATION
FT	FEET
GA EPD	GEORGIA ENVIRONMENTAL PROTECTION DIVISION
GDOT	GEORGIA DEPARTMENT OF TRANSPORTATION
GPC	GEORGIA POWER COMPANY
GSWCC	GEORGIA SOIL AND WATER CONSERVATION COMMISSION
HV	HORIZONTAL TO VERTICAL LENGTH RATIO FOR A SLOPE
HDPE	HIGH DENSITY POLYETHYLENE
HWY	HIGHWAY
IN	INCH
INV	INVERT
KV	KILOVOLT
MAX	MAXIMUM
MIN	MINIMUM
MSL	MEAN SEA LEVEL
N	NORTH OR NORTHING
NAD	NORTH AMERICAN DATUM
NAVD83	NORTH AMERICAN VERTICAL DATUM OF 1988
ND	NUMBER
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OH	OVERHEAD POWER
PROJ	PROJECT
RD	ROAD
REV	REVISION
S	SOUTH
SCS	SOUTHERN COMPANY SERVICES
TYP	TYPICAL
US	UNITED STATES
WS	WATER SURFACE
WWS	WASTEWATER TREATMENT SYSTEM
%	PERCENT OR PERCENTILE

**REFERENCE NOTES**

- PROPERTY (I.E. EXISTING CONDUIT LOCATIONS AND WATERWAY LOCATIONS, EXISTING ROADS, AND TREELINE SHOWN ON THIS DRAWING SET) OBTAINED FROM ELECTRONIC FILES FROM THE GEORGIA POWER COMPANY. EXISTING GROUND CONTOURS WERE ADJUSTED WITH UPDATED TOPOGRAPHY PROVIDED BY GEORGIA POWER COMPANY DATED NOVEMBER 2017. THE EXCAVATION AND RESTORATION SURFACES FOR ASH POND B, C, AND D WERE OBTAINED FROM DRAWINGS PROVIDED BY SOUTHERN COMPANY SERVICES DATED JUNE 2016. STREAM AND WETLANDS WERE OBTAINED FROM ECOLOGICAL SOLUTIONS INC. DATED SEPTEMBER 2016 AND NOVEMBER 2016, RESPECTIVELY. STREAM AND WETLAND SURVEY WORK SHEETS FOR AREAS WITHIN THE CCR PERMIT BOUNDARY AND 1/8 MILE BUFFER VICINITY.
- PROPERTY BOUNDARY AND CONTROL MARKERS WERE OBTAINED FROM THE PROPERTY BOUNDARY SURVEY, PLANT HARLIE BRANCH, PREPARED BY JORDAN ENGINEERS AND DATED 15 SEPTEMBER 2016, SHOWN HEREIN ON DRAWING 3.
- WATER MANAGEMENT INFRASTRUCTURE LOCATIONS SHOWN WERE THE WATER MANAGEMENT INFRASTRUCTURE KEY MAP TITLED BRANCH ASH POND CLOSURE SURVEY ON AUGUST 2017 AND PLANT BRANCH ASH POND CLOSURE SURVEY ON AUGUST 2017 AND THE ASH POND CLOSURE SURVEY DATED 8 MARCH 2017. LOCATIONS ARE APPROXIMATE AND WILL BE FIELD VERIFIED AT THE TIME OF CONSTRUCTION.
- GRID COORDINATE SYSTEM CORRESPONDS TO NORTH AMERICAN DATUM (NAD) 1983. GEORGIA ENVIRONMENTAL PROTECTION DIVISION (GA EPD) MEAN SEA LEVEL, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
- ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
- VERTICAL AND HORIZONTAL EXTENTS OF EXISTING CCR PRESENTED IN THIS DRAWING SET ARE APPROXIMATE. BOTH HORIZONTAL AND VERTICAL LIMITS OF CCR WILL BE FIELD VERIFIED.
- TOP OF EXISTING CCR WAS TAKEN AS THE BATHYMETRIC SURFACE IN AREAS OF WATER COVERAGE, AND AS EXISTING GROUND IN DRY AREAS OF THE ASH POND.
- ACCESS ROADS, ACCESS RAMPS, AND ASSOCIATED STORMWATER FEATURES WILL BE EVALUATED AS PART OF THE CONSTRUCTION DRAWINGS.
- FUGITIVE DUST WILL BE MITIGATED AS SPECIFIED IN THE CLOSURE PLAN DATED NOVEMBER 2016.
- DEMATERIAL WILL BE PERFORMED AS NEEDED AND AS SPECIFIED IN THE CLOSURE PLAN DATED NOVEMBER 2016.
- CONTACT WATER FROM ASH POND B, C, D, AND E WILL EITHER BE DIVERTED TO WITHIN THE LIMIT OF ASH POND B AND THEN CONDUIT TO AN ON-SITE WASTEWATER TREATMENT SYSTEM (WWS) OR DIRECTLY CONVEYED TO THE WWS. A LINE CONDUIT TO PROVIDE ADDITIONAL STORAGE CAPACITY TO ASH POND B BEFORE CONVEYING THE CONTACT WATER TO THE WWS WILL BE INSTALLED AS PART OF THE CONSTRUCTION. THE CONDUIT WILL BE FIELD VERIFIED AT THE TIME OF CONSTRUCTION. STORMWATER WILL BE DISCHARGED TO RECEIVING WATER BODIES WITHOUT TREATMENT.
- HISTORICAL STORMWATER FEATURES (I.E. BEINGS, CHANNELS, BARRIERS, AND OTHERS) AND EROSION AND SEDIMENT CONTROLS MAY BE IMPLEMENTED FOR THE CONSTRUCTION AND POST-CONSTRUCTION SITE CONDITIONS.
- ASH POND PARAMETERS FOR ASH POND B, C, AND D WERE FIELD MEASURED BASED ON FIELD INVESTIGATIONS, HISTORICAL DRAWINGS, AND AERIAL PHOTOS, AND ARE APPROXIMATE. THE ASH POND BOUNDARY LINE REPRESENTS THE ESTIMATED LIMIT OF IMPOUNDED CCR.

**GENERAL EROSION AND SEDIMENT CONTROL (E&S) NOTES**

**NOTES**

- ALL EROSION CONTROL MEASURES SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. STORMWATER CONTROLS AND BEST MANAGEMENT PRACTICES SHALL BE DISIGNED IN ACCORDANCE WITH APPROPRIATE STATE AND FEDERAL REGULATIONS AND BEST MANAGEMENT PRACTICES INDUSTRIAL WASTEWATER DISCHARGE INDIVIDUAL PERMIT.
- STORMWATER DISCHARGES ASSOCIATED WITH ASH POND CLOSURE ACTIVITIES SHALL BE CONSIDERED UNDER THE APPLICABLE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT, NPDES INDUSTRIAL WASTEWATER DISCHARGE INDIVIDUAL PERMIT, AND/OR THE FACILITY'S NPDES INDUSTRIAL WASTEWATER DISCHARGE INDIVIDUAL PERMIT.
- STATE WATERS BUFFERS SHALL REMAIN UNDISTURBED EXCEPT WHERE ENCROACHMENT IS REQUIRED TO FACILITATE ASH POND CLOSURE ACTIVITIES. STATE WATERS BUFFERS SHALL BE MAINTAINED BY THE APPROPRIATE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT. A STATE WATERS BUFFER WITHIN THE APPROPRIATE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT SHALL BE MAINTAINED BY THE APPROPRIATE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT. A STATE WATERS BUFFER WITHIN THE APPROPRIATE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT SHALL BE MAINTAINED BY THE APPROPRIATE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT. A STATE WATERS BUFFER WITHIN THE APPROPRIATE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT SHALL BE MAINTAINED BY THE APPROPRIATE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT.
- PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES FOR THIS PROJECT, THE PERMITTED DRAINAGE, THE LIMITS OF DISTURBANCE AND ALL WETLANDS AND STATE WATERS BUFFERS WITHIN 200 FEET OF THE LIMITS OF DISTURBANCE OR WITHIN THE PROPERTY BOUNDARY (WHICHEVER IS CLOSER) SHALL BE CLEARLY FLAGGED AND STAKED. THESE MARKINGS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL NOTIFY GEORGIA POWER COMPANY IMMEDIATELY ALL CONSTRUCTION PERSONNEL SHALL BE TRAINED IN THE PROTECTION OF WETLANDS AND STATE WATERS BUFFERS. STATE WATERS AND WETLANDS OUTSIDE THE LIMITS OF DISTURBANCE TO PROTECT KEY COMPANY ENCROACHMENT INTO THESE AREAS.

REV.	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	DATE
1	11/13/2018	PERMIT DRAWINGS FOR CCR SUBMITTAL	JAMERS	MI	
					APP

**LEGENDS, ABBREVIATIONS, AND REFERENCE NOTES**

PLANT BRANCH CCR SURFACE IMPOUNDMENT CLOSURES  
ASH POND B SURFACE IMPOUNDMENT CLOSURE/REMOVAL  
LUTUNAW COUNTY, GEORGIA

**Ccoosyntec**  
consultants

1230 ROBERTS BOULEVARD NW, SUITE 200  
ALPHARETTA, GEORGIA 30201  
PHONE: 678.202.6600  
WWW.CCOOSYNTEC.COM

PROJECT NO.: CCR018  
SHEET NO.: AS-330707A  
DATE: NOVEMBER 2018

DRAWING 2 OF 11

**Georgia Power**

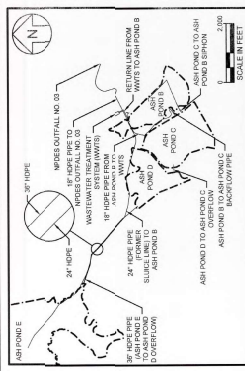
PERMIT DRAWINGS  
NOT FOR CONSTRUCTION

11/13/2018









**LEGEND**

- EXISTING CCR AREA
- LAKE SINCLAIR FREE WATER SURFACE (NOTE 3)
- FREE WATER SURFACE WITHIN LIMITS OF ASH POND
- DKE REPAIR AREA (NOTE 8)

**MONITORING NETWORK WELLS AND GROUNDWATER PIEZOMETERS (NOTES 5 AND 6)**

WELL ID	NORTHING	EASTING
BRWC-21	116208.54	256718.60
BRWC-22	116208.54	256718.60
BRWC-23	116208.54	256718.60
BRWC-24	116208.54	256718.60
BRWC-25	116208.54	256718.60
BRWC-26	116208.54	256718.60
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BRWC-99	116208.54	256718.60
BRWC-100	116208.54	256718.60

**MONITORING NETWORK WELLS AND GROUNDWATER PIEZOMETERS (NOTES 5 AND 6)**

WELL ID	NORTHING	EASTING
PZ-115	116204.11	256704.14
PZ-118	116204.11	256704.14
PZ-120	116204.11	256704.14
PZ-121	116204.11	256704.14
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PZ-200	116204.11	256704.14

**EXISTING SITE CONDITIONS**

PLANT BRANCH CCR SURFACE IMPOUNDMENT CLOSURES  
ASH PONDS B, C, AND D CLOSURE-BY-REMOVAL  
PITMAN COUNTY, GEORGIA

**Geosyntec**  
consultants

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COLUMBIA, SC 29203  
WWW.GEOSYNTEC.COM

PROJ. NO. 0384-655  
DWG. 0384-655  
SCALE AS SHOWN  
DATE NOVEMBER 2018

DATE 4  
OF 11



**Georgia Power**

**Permit Drawings**  
NOT FOR CONSTRUCTION

11/13/2018

**NOTES**

- WATER SURFACE ELEVATIONS AND DATUMING CONTROLS WITHIN THE ASH PONDS WERE OBTAINED FROM A REPORT BY COLUER ASSOCIATES TITLED "GROUNDWATER MONITORING PLAN PLANT BRANCH ASH POND BCD" DATED 10 NOVEMBER 2018.
- MONITORING NETWORK WELLS ARE USED TO COLLECT ANALYTICAL SAMPLES AND MEASURE GROUNDWATER LEVELS WHEREAS GROUNDWATER PIEZOMETERS ARE ONLY USED TO MEASURE GROUNDWATER LEVELS.
- ASH POND A WAS CLOSED IN APRIL 2018 BY THE REMOVAL AND RELOCATION OF ITS STORED CCR TO ASH POND B. THE CLOSURE OF ASH POND A WAS COMPLETED PRIOR TO THE EFFECTIVE DATE OF THE RULE (I.E. NOVEMBER 2018).
- CCR WAS USED TO REPAIR THE SHOWN SEGMENT OF THE ASH POND C DKE AND WILL BE REMOVED AS PART OF THE CLOSURE ACTIVITIES.
- ELACEMENT SUMP FOR THE OVERHEAD TRANSMISSION LINE (ARW) IS APPROXIMATE AND WILL BE VERIFIED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
- MONITORING NETWORK WELL AND GROUNDWATER PIEZOMETER COORDINATES WERE OBTAINED FROM A REPORT BY COLUER ASSOCIATES TITLED "GROUNDWATER MONITORING PLAN PLANT BRANCH ASH POND BCD" DATED 10 NOVEMBER 2018.
- LEVELS WHEREAS GROUNDWATER PIEZOMETERS ARE ONLY USED TO MEASURE GROUNDWATER LEVELS.
- ASH POND A WAS CLOSED IN APRIL 2018 BY THE REMOVAL AND RELOCATION OF ITS STORED CCR TO ASH POND B. THE CLOSURE OF ASH POND A WAS COMPLETED PRIOR TO THE EFFECTIVE DATE OF THE RULE (I.E. NOVEMBER 2018).
- CCR WAS USED TO REPAIR THE SHOWN SEGMENT OF THE ASH POND C DKE AND WILL BE REMOVED AS PART OF THE CLOSURE ACTIVITIES.
- ELACEMENT SUMP FOR THE OVERHEAD TRANSMISSION LINE (ARW) IS APPROXIMATE AND WILL BE VERIFIED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

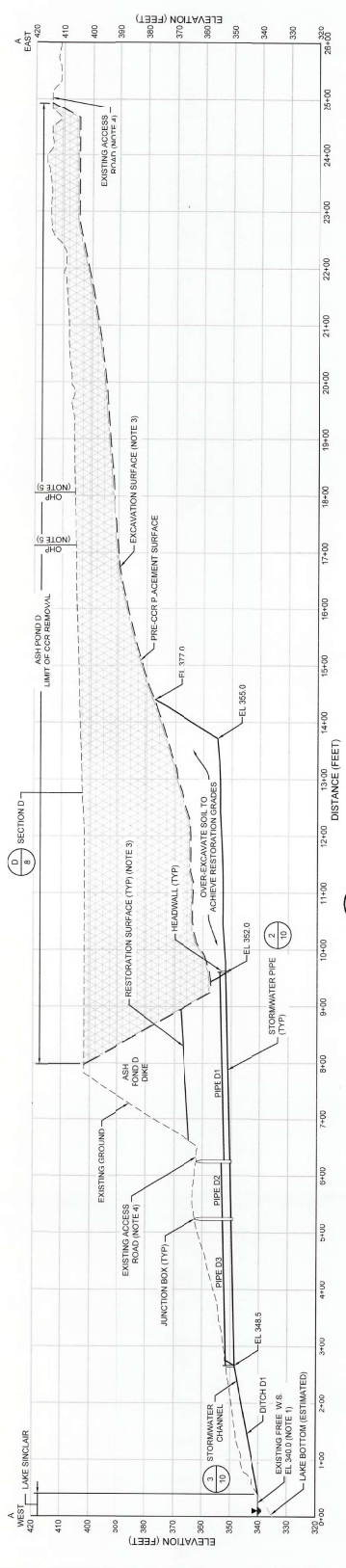
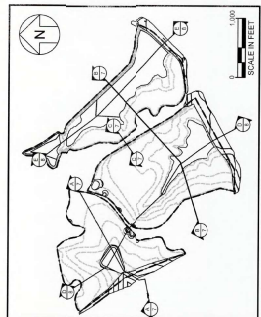




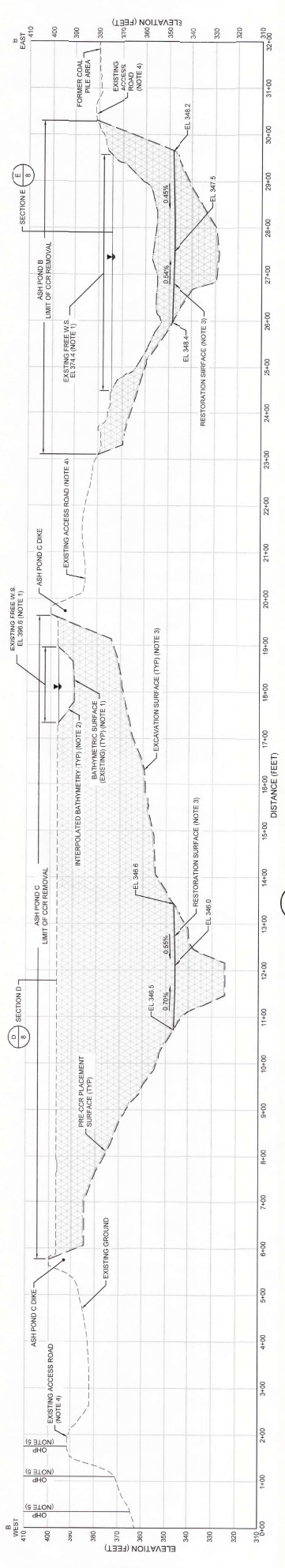




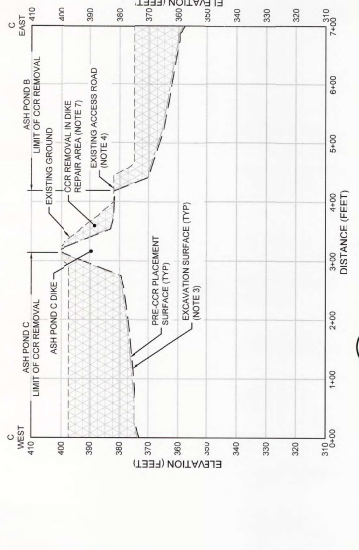




**A** SECTION  
5 ASH POND D (WEST - EAST)  
SCALE: 1" = 100' (HORIZONTAL), 1" = 20' (VERTICAL)



**B** SECTION  
5 ASH PONDS C AND B (WEST - EAST)  
SCALE: 1" = 100' (HORIZONTAL), 1" = 20' (VERTICAL)



**C** SECTION  
5 DIKE REPAIR AREA (WEST - EAST)  
SCALE: 1" = 100' (HORIZONTAL), 1" = 20' (VERTICAL)

- NOTED:
- EXISTING FREE WATER SURFACE AND BATHYMETRIC SURFACE ELEVATIONS PERTAIN TO EXISTING SITE CONDITIONS AS OBTAINED FROM THE PROPERTY BOUNDARY SURVEY. THIS INFORMATION WAS OBTAINED FROM ELECTRONIC FILES PROVIDED BY GEORGIA POWER COMPANY DATED JUNE 2017.
  - INTERPOLATED BATHYMETRY REFERS TO ESTIMATED DIKE SLOPES CONNECTING THE BATHYMETRIC SURFACE TO THE EXISTING GROUND SURFACE OR ESTIMATED DIKE SLOPES.
  - EXCAVATION AND RESTORATION SURFACES FOR ASH PONDS B, C, AND D WERE OBTAINED FROM DRAWINGS PROVIDED BY GEORGIA POWER COMPANY DATED JUNE 2017. HORIZONTAL AND VERTICAL EXTENTS OF COR WILL BE FIELD VERIFIED. ASH PONDS B, C, AND D DIKES WILL BE REPAIRED TO MAINTAIN STABILITY. DURING COR ACTIVITIES IN ASH PONDS B, C, AND D, PRELIMINARY FINGER DRAINS WILL BE INSTALLED TO MAINTAIN STABILITY. FINGER DRAINS AND SUMP SYSTEMS FOR ASH PONDS B, C, AND D DIKES MAY BE MODIFIED AND/OR EXPANDED AS NEEDED.
  - EXISTING ACCESS ROAD LABELS REPRESENT THE CENTERLINE OF THE ROADS OBTAINED FROM ELECTRONIC FILES PROVIDED BY GEORGIA POWER COMPANY DATED 4 JUNE 2017. IF AN ACCESS ROAD IS LOCATED WITHIN THE APPROXIMATE CENTERLINE OF THE ROAD, THE ROAD WILL BE REPAIRED TO ACCOMMODATE THE RESTORATION GRADERS. ACCESS ROADS WILL BE EVALUATED AS PART OF THE CONSTRUCTION DRAWINGS.
  - OVERHEAD POWER TRANSMISSION LINE ELEVATIONS ARE UNKNOWN. THE LOCATIONS OF THESE POWER LINES WERE OBTAINED FROM THE PROPERTY BOUNDARY SURVEY. PLANT HARLEE BRANCH PREPARED BY JORDAN ENGINEERING DATED 10 SEPTEMBER 2018 SHOWN HEREIN (DRAWING 3).
  - PONDS C AND D WILL BE EXCAVATED AND RESTORED TO MAINTAIN STABILITY DURING COR ACTIVITIES IN ASH PONDS B, C, AND D.
  - REMOVAL OF COR AND 8 INCHES OF FOUNDATION SOIL AT THE DIKE BEHIND AREA WILL START FOLLOWING THE COMPLETION OF COR AND 8 INCHES OF FOUNDATION SOIL REMOVAL WITHIN THE FOOTPRINT OF ASH POND C.

REV	DATE	DESCRIPTION	APP'D	APP
0	11/13/2018	PROJECT COMMUNICATIONS TO THE SUBMITTAL		

SITE CROSS SECTIONS 1	
PROJECT NO.	6840456
DATE	AS SHOWN
SCALE	NOVEMBER 2018

PLANT BRANCH COR SURFACE REPAIRMENT CLOSURES ASH PONDS B, C, AND D CLOSURE/REMOVAL PUTNAM COUNTY, GEORGIA	
<b>Geosyntec<sup>®</sup></b> consultants	
1200 WOODBRIDGE BLVD, SUITE 200 ATLANTA, GA 30329	
PROJECT NO.	6840456
DATE	AS SHOWN
SCALE	NOVEMBER 2018

**Georgia Power**

PERMIT DRAWINGS  
NOT FOR CONSTRUCTION

11/13/2018

DATE: 11/13/2018  
DRAWING: 7 OF 11





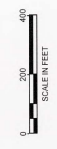




**NOTES**

- DIVERSION FEATURES MAY BE UTILIZED TO DIVERT STORMWATER RUNOFF LOCAL PUMP PAGES FROM ENTERING SUSTAINABLE TO THE EXTENT PRACTICABLE.
- ADDITIONAL STORMWATER FEATURES (E.G. BERMS, CHANNELS, BENCHES AND DOWNCHUTES) MAY BE ADDED WITHIN THE ASH PONDS FOR THE CONSTRUCTION PERIOD. THESE FEATURES WILL BE SUBMITTED IN THE CONSTRUCTION DRAWINGS.
- OUTLET PROTECTION NOT SHOWN FOR CLARITY. SEE DETAIL 2 ON DRAWING.
- MANUAL SUMP PUMP SHALL BE INSTALLED IN ACCORDANCE WITH GDOT STANDARD DETAIL NUMBER 801.8 OR APPROVED EQUIVALENT.
- MANUAL SUMP SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH GDOT STANDARD DETAIL NUMBER 801.9 OR APPROVED EQUIVALENT. JUNCTION BOX DIAMETERS WILL BE SIZED TO ACCOMMODATE STRUCTURAL CAPACITY OF IN-ROW AND OUT-OF-ROW TYPE SIZES AND SPACINGS.
- CONVEYANCE CHANNELS WILL BE DESIGNED TO CONVEY FLOW FROM THE ASH PONDS TO THE WETLANDS. ALL CONVEYANCE CHANNELS WILL BE PRESENTED IN THE CONSTRUCTION DRAWINGS.
- A PHASED EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN (ESPP) PREPARED IN ACCORDANCE WITH THE GEORGIA CONSTRUCTION GENERAL PERMIT IS REQUIRED FOR THIS PROJECT. THE ESPP SHALL BE ASSOCIATED WITH CONSTRUCTION ACTIVITY AND THE MANUAL FOR EROSION CONTROL CONSTRUCTION DRAWINGS. BEST MANAGEMENT PRACTICES TO BE IMPLEMENTED AS PART OF THE ESPP MAY INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING MEASURES:
  - STRUCTURAL MEASURES
    - STONE CHECK DAM
    - FILTER RING
    - FILTER SOCK
    - SILT FENCE - TYPE SENSITIVE
    - BLOCK AND GUTTER INLET
    - TURBIDITY CURTAIN
  - NON-STRUCTURAL MEASURES
    - DUST CONTROL ON DISTURBED AREAS
    - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
    - DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
    - SLOPE STABILIZATION

SYMBOL	DESCRIPTION	DETAIL NO.
	STONE CHECK DAM	9
	FILTER RING	5
	FILTER SOCK	6
	SILT FENCE - TYPE SENSITIVE	4
	BLOCK AND GUTTER INLET	7
	TURBIDITY CURTAIN	8



STORMWATER MANAGEMENT SYSTEM PLAN

PLANT BRANCH CCR SURFACE IMPROVEMENT CLOSURES  
ASH POND B, C, AND D CCR SURFACE IMPROVEMENT

Geosyntec consultants

1255 ROBERTS BOULEVARD NW, SUITE 200  
FARMERS COUNTRY, GEORGIA

NOVEMBER 2018

DATE: NOVEMBER 2018  
DRAWING: 9 OF 11

Georgia Power

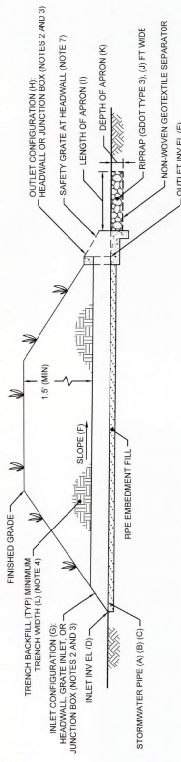
11/13/2018

PERMIT DRAWINGS  
NOT FOR CONSTRUCTION

1255 ROBERTS BOULEVARD NW, SUITE 200  
FARMERS COUNTRY, GEORGIA

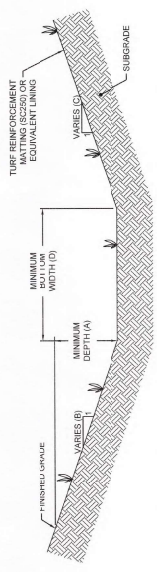
NOVEMBER 2018





DESIGNATION	(A) MATERIAL TYPE (NOTE 5)	(B) NUMBER OF WATER PIPES - DIAMETER	(C) LENGTH (FT)	(D) INLET INVERT EL (FT)	(E) OUTLET INVERT EL (FT)	(F) SLOPE (FT/FT)	(G) INLET CONFIGURATION	(H) OUTLET CONFIGURATION	(I) LENGTH OF RRAP APRON (FT)	(J) WIDTH OF RRAP APRON (FT)	(K) DEPTH OF RRAP APRON (FT)	(L) MIN. TRENCH WIDTH (FT)
PIPE B1	RCP	(1)-18 INCH	222	342.2	341.1	0.005	HEADWALL	HEADWALL	7	5	1.5	4.1
PIPE B2	RCP	(1)-24 INCH	47	346.1	345.5	0.010	GRATE INLET	HEADWALL	9	6	1.5	4.7
PIPE C1	RCP	(1)-24 INCH	126	357.4	356.2	0.010	GRATE INLET	HEADWALL	9	6	1.5	4.7
PIPE C2	RCP	(1)-24 INCH	40	346.5	345.1	0.008	GRATE INLET	HEADWALL	7	5	1.2	4.1
PIPE C3	RCP	(1)-24 INCH	104	352.0	351.0	0.010	GRATE INLET	HEADWALL	8	6	1.5	4.7
PIPE D1	RCP	(1)-24 INCH	336	352.0	350.3	0.005	HEADWALL	JUNCTION BOX	-	-	-	4.7
PIPE D2	RCP	(1)-36 INCH	101	350.3	349.8	0.005	JUNCTION BOX	JUNCTION BOX	-	-	-	5.8
PIPE D3	RCP	(1)-36 INCH	226	349.8	348.5	0.005	JUNCTION BOX	HEADWALL	13	9	1.5	5.8

1  
6  
TABLE  
GRATE INLET  
(NOTE 3)



DESIGNATION	CHANNEL ID	UPSTREAM INVERT EL (FT)	DOWNSTREAM INVERT EL (FT)	LENGTH (FT)	SLOPE (FT/FT)	MIN DEPTH (FT)	MIN SLOPE	MAX SLOPE	MIN BOTTOM WIDTH (FT)
DITCH B1	B1	373.9	353.0	647	0.022	0.8	3.0	3.0	2.0
DITCH B2	B2	353.0	350.0	270	0.011	2.0	3.0	3.0	2.0
DITCH B3	B3	352.2	350.0	372	0.014	2.0	3.0	3.0	2.0
DITCH B4	B4	375.0	352.2	352	0.008	2.0	3.0	3.0	2.0
DITCH B5	B5	375.0	352.2	372	0.008	1.0	3.0	3.0	2.0
DITCH C1	C1	358.5	378.4	142	0.066	2.0	3.0	2.5	2.0
DITCH C2	C2	378.4	365.6	168	0.035	2.0	3.0	2.5	2.0
DITCH C3	C3	352.8	351.4	150	0.009	2.0	3.0	2.5	2.0
DITCH C4	C4	356.8	351.4	200	0.008	2.0	2.5	3.0	2.0
DITCH C5	C5	356.0	352.7	71	0.041	2.0	3.0	2.5	2.0
DITCH C6	C6	356.7	356.0	114	0.005	2.0	3.0	2.5	2.0
DITCH C7	C7	356.0	352.5	218	0.019	2.0	3.0	2.5	2.0
DITCH C8	C8	359.5	352.5	575	0.012	2.0	2.5	3.0	2.0
DITCH C9	C9	359.5	356.0	224	0.015	2.0	3.0	2.5	2.0
DITCH C10	C10	356.7	356.0	65	0.011	2.0	2.5	3.0	2.0
DITCH C11	C11	351.0	356.7	81	0.053	2.0	2.5	3.0	2.0
DITCH D1	D1	348.5	342.0	227	0.037	2.5	3.0	3.0	3.0

3  
6  
DETAIL  
STORMWATER CHANNEL  
SCALE: NTS

- NOTES:
1. SIDE SLOPE DIMENSIONS ARE PRESENTED SUCH THAT THE STORMWATER CHANNEL CROSS SECTION IS CUT LOOKING DOWNSTREAM WITH RESPECT TO THE DIRECTION OF FLOW.
  2. HEADWALLS WILL BE FINISHED AND INSTALLED IN ACCORDANCE WITH GDOT STANDARD DETAIL NUMBER 10015 OR APPROVED EQUIVALENT.
  3. JUNCTION BOXES WILL BE FINISHED AND INSTALLED IN ACCORDANCE WITH GDOT STANDARD DETAIL NUMBER 10015 OR APPROVED EQUIVALENT. JUNCTION BOX DIAMETERS WILL BE SIZED TO ACCOMMODATE STRUCTURAL CAPACITY OF INFLOW AND OUTFLOW PIPE SIZES AND ANGLES.
  4. PIPE EMBEDEDMENT WILL BE CONSTRUCTED IN ACCORDANCE WITH GDOT STANDARD DETAIL NUMBER 10030 AND MINIMUM FRENCH WIDTHS IDENTIFIED IN COLUMN L OF STORMWATER PIPE DETAIL TABLE IN GENERAL.
  5. GRATE INLET, INCLUDING GRATE AND STRUCTURE, WILL BE SELECTED AS TYPE C AND SHALL BE INSTALLED IN ACCORDANCE WITH GDOT STANDARD DETAIL NUMBER 10015 AND 10016 PRECAST AND DIMENSIONS. IF A DIMENSION-DEPENDENT GRATE IS USED, THE GRATE INLET DESIGN WILL BE PRESENTED IN THE CONSTRUCTION DRAWINGS AND WILL CONFORM TO THE 25-YR, 24-HR DESIGN STORM EVENT WITH 0.5 FT OF FREEBOARD TO THE OVERTOPPING ELEVATION.
  6. RCP OR APPROVED EQUIVALENT PIPE MATERIAL MAY BE UTILIZED. PIPE MATERIAL WILL BE FINISHED AND INSTALLED IN ACCORDANCE WITH GDOT STANDARD DETAIL NUMBER 10030 AND MINIMUM FRENCH WIDTHS IDENTIFIED IN THE CONSTRUCTION DRAWINGS.
  7. SAFETY GRATES WILL BE FINISHED AND INSTALLED AT OUTLET HEADWALLS IN ACCORDANCE WITH GDOT STANDARD DETAIL NUMBER D-5 OR APPROVED EQUIVALENT.

NO.	REV.	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	DATE	APP.
1	11.19.18		PERMIT DRAWING FOR PIPE AND RRAP SUBMITTAL	JUNSON			

PROJECT NO.	DWG.	DATE	SCALE	DATE
11.19.18	0584-002	11.06.18	AS SHOWN	NOVEMBER 2018

STORMWATER MANAGEMENT SYSTEM DETAILS	
PLANT BRANCH CCR SURFACE IMPOUNDMENT CLOSURES	
ASH POND B, C, AND D CLOSURE-BY-REMOVAL	
PUTNAM COUNTY, GEORGIA	

PROJECT NO.	DWG.	DATE	SCALE	DATE
11.19.18	0584-002	11.06.18	AS SHOWN	NOVEMBER 2018

NO.	REV.	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	DATE	APP.
1	11.19.18		PERMIT DRAWING FOR PIPE AND RRAP SUBMITTAL	JUNSON			

Georgia Power  
PERMIT DRAWINGS  
NOT FOR CONSTRUCTION

4/7/15/2018

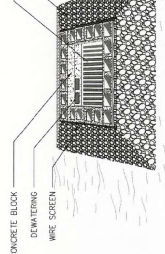
**Geosyntec**  
consultants

1000 W. Peachtree Street, Suite 200  
Atlanta, Georgia 30338  
WWW.GEOSYNTEC.COM

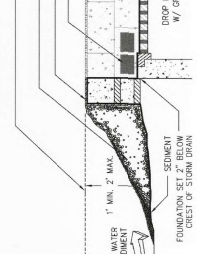
PROJECT NO.	DWG.	DATE	SCALE	DATE
11.19.18	0584-002	11.06.18	AS SHOWN	NOVEMBER 2018



**PERSPECTIVE VIEW**



**CROSS SECTION**



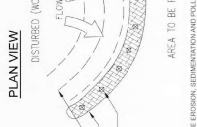
1. DRAINAGE CLOTH OR COMPARABLE WIRE MESH WITH 1/2" HOLES SHALL BE FITTED OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
2. THE FIRST ROW OF BLOCKS WILL BE PLACED HERE FOR LATERAL SUPPORT.
3. BOTTOM ROW TO ALLOW FOR POOL DRAINAGE.

**DETAIL 7 BLOCK AND GRAVEL DROP INLET PROTECTION**

**CROSS SECTION**



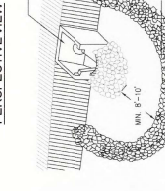
**PLAN VIEW**



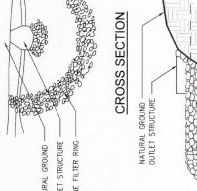
1. EXISTING CONTOURS
2. COMPOSITE FILTER SOCK
3. WOODEN STAKES (7" O.C. FOR TYPE NS)

**DETAIL 6 FILTER SOCK**

**PERSPECTIVE VIEW**



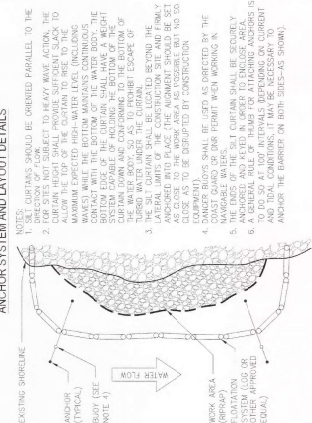
**PLAN VIEW**



1. NATURAL GROUND
2. OUTLET STRUCTURE
3. STONE FILTER RING

**DETAIL 5 FILTER RING**

**TURBIDITY CURTAIN SYSTEM ANCHOR SYSTEM AND LAYOUT DETAILS**



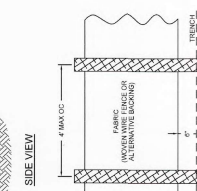
1. ALL CURTAINS SHALL BE ORIENTED PARALLEL TO THE CURTAIN HEIGHT SHALL PROVIDE SUFFICIENT STAKE TO MAXIMUM EXPECTED HIGH-WATER LEVEL (INCLUDING CONTACT WITH THE BOTTOM OF THE WATER BODY). THE BOTTOM EDGE OF THE CURTAIN SHALL HAVE A WEIGHT CURTAIN DOWN AND CONFORMING TO THE BOTTOM OF TURBIDITY CURTAIN UNDER THE CLOSURE. WEIGHTS SHOULD BE SET CLOSE AS TO BE DISTURBED BY CONSTRUCTION.
2. DAMPER BLOBS SHALL BE USED AS DIRECTED BY THE CONSULTING ENGINEER OR PERMIT WHEN WORKING IN THE CURTAIN AREA.
3. THE ENDS OF THE CURTAIN SHALL BE SECURELY ANCHORED TO THE CURTAIN FRAME FOR ATTACHING ANCHORS IS TO BE USED AS DIRECTED BY THE CONSULTING ENGINEER AND LOCAL CONDITIONS. IT MAY BE NECESSARY TO ANCHOR THE BARRIER ON BOTH SIDES-AS SHOWN.
4. CURTAIN SHALL BE 49" MIN. WIDE.
5. CURTAIN SHALL BE 10' MIN. HIGH.
6. CURTAIN SHALL BE 10' MIN. LONG.
7. CURTAIN SHALL BE 10' MIN. LONG.
8. CURTAIN SHALL BE 10' MIN. LONG.
9. CURTAIN SHALL BE 10' MIN. LONG.
10. CURTAIN SHALL BE 10' MIN. LONG.

**DETAIL 8 TURBIDITY CURTAIN**

**SIDE VIEW**

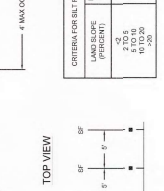


**FRONT VIEW**



1. POST
2. FABRIC
3. END OF FABRIC FENCE
4. MAX. O.C.

**TOP VIEW**



**SILT FENCE SPACING**

CRITERIA FOR SILT FENCE PLACEMENT	LAND SLOPE (PERCENT)	MAXIMUM LENGTH OF SLOPE (FEET)
1	2 TO 4	100
2	5 TO 8	50
3	9 TO 12	25
4	13 TO 15	15

1. ALL SILT FENCE SHOWN ON THE PLANS IS TO BE DOUBLE ROW TYPE "C" BARRIER. CONTRACTOR SHALL MAINTAIN FENCE AT THESE LOCATIONS DURING CONSTRUCTION UNTIL FINAL SURFACE TREATMENTS HAVE BEEN APPLIED AND A SUFFICIENT STAND OF GRASS HAS BEEN ESTABLISHED AS ADDITIONAL SILT FENCE SHALL BE REQUIRED IN AREAS WHICH ARE CLEARED OR GRADED AND DO NOT HAVE STORMWATER RUNOFF DIVERTED TO SEDIMENT BASINS MEETING THE CRITERIA LISTED IN THE TABLES. THE DRAINAGE AREA SHALL NOT EXCEED 1/2 ACRE FOR EVERY 100 FEET OF SILT FENCE.
2. WHERE NO SEDIMENT TRANSPORTATION DISPOSAL SYSTEM IS PRESENT, MAXIMUM SLOPE LENGTH SHALL NOT EXCEED THAT IN THE TABLE. ALSO, THE MAXIMUM HEIGHT OF THE FENCE AT A PROTECTED OUTLET DOES NOT EXCEED 1 FT AND THAT SUPPORT POST SPACING DOES NOT EXCEED 10 FEET.
3. POSTS SHALL BE STEEL AND HAVE A MINIMUM LENGTH OF 4 FEET. POSTS SHALL BE 1 1/2" OR 2" C" SHAPED AND HAVE A MINIMUM WEIGHT OF 13 LBS PER LINEAL FOOT. POSTS SHALL HAVE PROJECTIONS FOR FASTENING THE WOVEN WIRE AND FILTER FABRIC. MAXIMUM POST SPACING SHALL BE 4 FEET FOR TYPE C.
4. A WOVEN WIRE SUPPORT FABRIC SHALL BE USED WITH TYPE C FENCE. WOVEN WIRE FABRIC SHALL BE 1/2" X 1/2" MESH. WOVEN WIRE FABRIC SHALL HAVE 10 GAUGE AND ALL OTHER WIRE SHALL BE AT LEAST 12 GAUGE.
5. APPROVED SILT FENCE FABRICS ARE LISTED IN THE GEORGIA DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST #69 (P.30).

**DETAIL 4 SILT FENCE - TYPE SENSITIVE**

**PERMIT DRAWINGS**  
**NOT FOR CONSTRUCTION**

REV	DATE	DESCRIPTION	BY	APP
1	11/08/18	ISSUE FOR PERMIT	SKS	SKS

PLANT BRANCH CCR SURFACE IMPROVEMENT CLOSURES  
 ASH PONDS B, C, AND D CLOSURE-BY-REMOVAL  
 PUTNAM COUNTY, GEORGIA

Geosyntec<sup>®</sup>  
 consultants

1200 HERBERT F. BOULEVARD, SUITE 200  
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PROJ. NO. GWS24  
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 DATE NOVEMBER 2018

DWG. 534-063  
 EDIT 11/08/18  
 DRAWING 11 OF 11