

LINETYPE LEGEND

	EDGE OF ROAD / EXISTING BUILDINGS
	RAILROAD TRACKS
	POWER TRANSMISSION LINE EASEMENT
	GAS LINE AND EASEMENT
	EXISTING PIPE
	TREE LINE
	STREAMS / WATER LINE / CREEK
	EXISTING GROUND
	APPROXIMATE TOP OF BEDROCK (NOTE 10)
	APPROXIMATE BOTTOM OF CCR
	PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE (NOTE 9)
	BOTTOM OF EXCAVATION
	PERMIT BOUNDARY
	PROPERTY BOUNDARY (NOTE 5)
	APPROXIMATE EXISTING LIMIT OF AP-1 / LIMIT OF LINER
	FINAL LIMIT OF CCR
	LEACHATE COLLECTION CORRIDOR
	LEACHATE FORCEMAIN
	FINAL COVER TOP DECK DIVERSION BERM
	FINAL COVER TOP DECK LET-DOWN CHANNEL
	FINAL COVER SIDESLOPE DRAINAGE BENCH
	FINAL COVER DOWNCHUTE CHANNEL
	STORMWATER CHANNEL
	TEXTURED HDPE OR LLDPE GEOMEMBRANE
	CLOSURETURF® SYSTEM
	DOUBLE-SIDED GEOCOMPOSITE
	NON-WOVEN GEOTEXTILE SEPARATOR OR CUSHION
	GEOSYNTHETIC CLAY LINER
	LIMIT OF DISTURBANCE
	CONTACT WATER DIVERSION
	STORMWATER (NON-CONTACT WATER) DIVERSION

SYMBOL LEGEND

	EXTRUSION WELD
	GROUNDWATER MONITORING WELL
	SLOPE GRADE
	SLOPE INDICATOR
	SLOPE LABEL
	TRAILER / BUILDING / TANK
	VEGETATION
	GROUNDWATER OR WATER SURFACE
	STORMWATER FLOW DIRECTION
	STORMWATER CHANNEL OUTLET FLUME
	LEACHATE SUMP
	LEACHATE FORCEMAIN AIR RELEASE MANHOLE
	LEACHATE FORCEMAIN CLEANOUT MANHOLE
	LEACHATE FORCEMAIN JUNCTION MANHOLE
	TEMPORARY CONTACT-WATER COLLECTION LOCATION

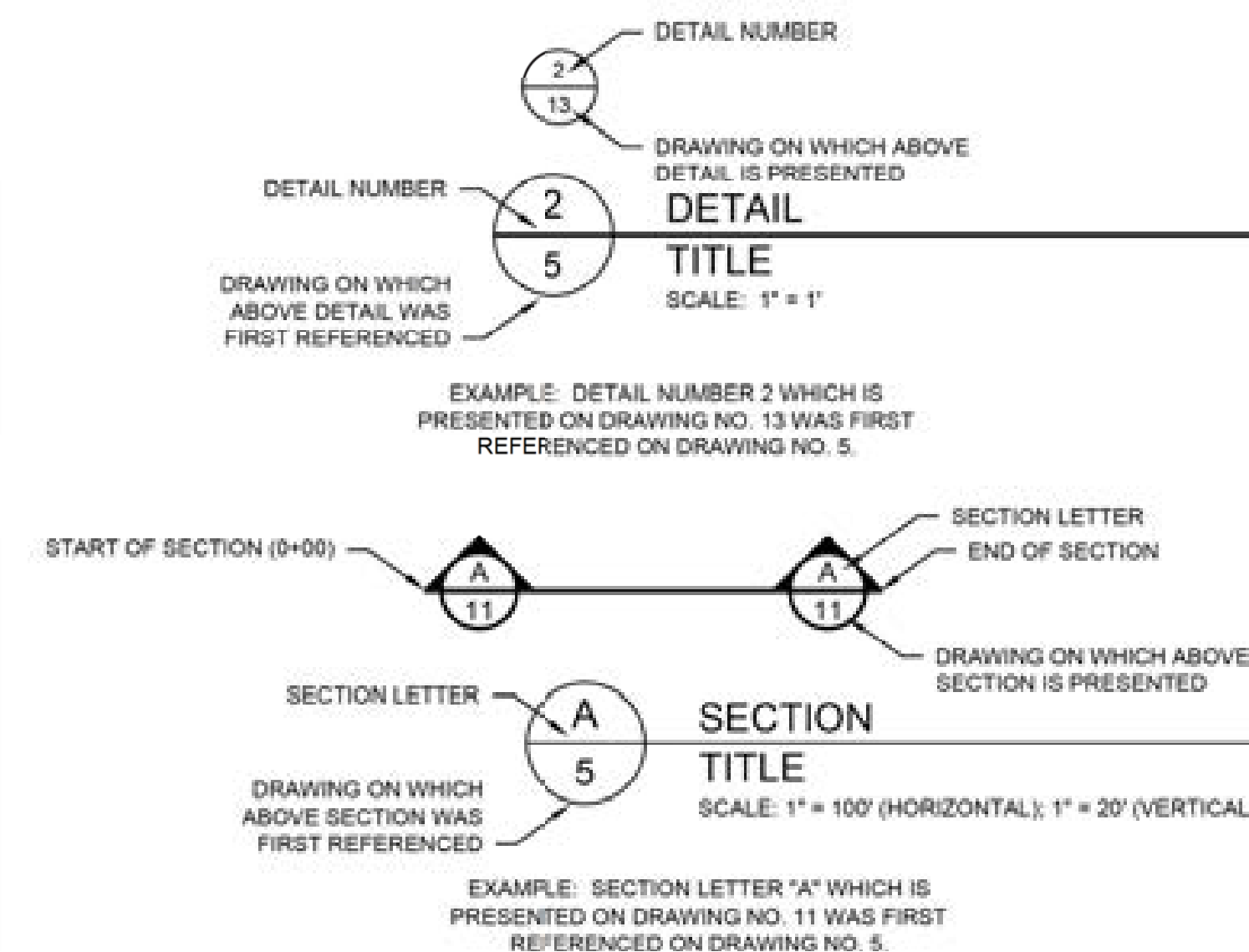
HATCH PATTERN LEGEND

	LINED STORMWATER POND
	CONCRETE
	FINE SAND FILTER LAYER
	FINE GRAVEL DRAINAGE LAYER
	MEDIUM GRAVEL DRAINAGE LAYER
	COARSE GRAVEL DRAINAGE LAYER
	FINE-SCREENED COMPACTED CLAY LINER
	COARSE-SCREENED COMPACTED CLAY LINER
	PROTECTIVE COVER SOIL / TRENCH BACKFILL / STRUCTURAL FILL
	PIPE EMBEDMENT FILL / COMPACTED GRANULAR SUBBASE
	VEGETATIVE COVER LAYER
	CCR
	AGGREGATE
	RIPRAP
	CONSOLIDATED AREA FOUNDATION IMPROVEMENTS
	OTHER AREA FOUNDATION IMPROVEMENTS
	100-YEAR FLOODPLAIN
	WETLANDS
	COVERED CCR AREA (NON-CONTACT WATER)
	TEMPORARY CCR STOCKPILE AREA
	CONTACT WATER COLLECTION AREA
	COMPACTED CLAYEY SOIL
	LINED CONTACT WATER POND

CONTOUR LEGEND

	EXISTING GROUND ELEVATION (FEET) (NOTE 1)
	APPROXIMATE BOTTOM OF CCR SURFACE ELEVATION (FEET)
	EXCAVATION SURFACE ELEVATION (FEET)
	TOP OF LINER ELEVATION (FEET)
	TOP OF CCR ELEVATION FOR SOIL-GEOSYNTHETIC COMPOSITE COVER (FEET)
	TOP OF FINAL COVER SYSTEM / TOP OF CCR FOR ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER) / FINISHED GRADE ELEVATION (FEET)
	PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION (FEET)

DETAIL AND SECTION IDENTIFICATION LEGEND



ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ACRES
APP	APPROVED BY
CAD	COMPUTER-AIDED DRAFTING
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
C-TRM	COMPOSITE TURF REINFORCEMENT MAT
CCR	COAL COMBUSTION RESIDUALS
CL	CENTERLINE
COA	CONSTRUCTION QUALITY ASSURANCE
DIA	DIAMETER
DRN	DRAWN BY
DWG	DRAWING
E	EAST OR EASTING
EL	ELEVATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FT	FEET
GDOT	GEORGIA DEPARTMENT OF TRANSPORTATION
GPC	GEORGIA POWER COMPANY
GSWCC	GEORGIA SOIL AND WATER CONSERVATION COMMISSION
GSWP	GENERAL SERVICE WATER POND
H:V	HORIZONTAL TO VERTICAL LENGTHRATIO FOR A SLOPE
HDPE	HIGH DENSITY POLYETHYLENE
HECP	HYDRAULIC EROSION CONTROL PRODUCTS
HPTRM	HIGH PERFORMANCE TURF REINFORCEMENT MAT
HWY	HIGHWAY
IN	INCH
INV	INVERT
LBS	POUNDS
LF	LINEAR FOOT
LLDPE	LINEAR LOW DENSITY POLYETHYLENE
LOD	LIMITS OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
MSL	MEAN SEA LEVEL
N	NORTH / NORTHING
NAD	NORTH AMERICAN DATUM
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NE	NORTHEAST
NO.	NUMBER
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
N.S.A.	NATIONAL STONE ASSOCIATION
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OZ	OUNCE
PC	PERIMETER CHANNEL
PROJ	PROJECT
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RECP	ROLLED EROSION CONTROL PRODUCTS
REV	REVISION
RP	RECYCLE POND
S	SOUTH
SCS	SOUTHERN COMPANY SERVICES
SF	SILT FENCE
SWP	STORMWATER PIPE
TRM	TURF REINFORCEMENT MAT
TYP	TYPICAL
UV	ULTRAVIOLET
W	WEST OR WIDTH
W.S.	WATER SURFACE
WWTS	WASTEWATER TREATMENT SYSTEM
%	PERCENT OR PERCENTILE

GENERAL SITE NOTES

- IN THE VICINITY OF AP-1, TOPOGRAPHY, UTILITIES, EXISTING ROADS, STREAMS, AND TREELINES SHOWN ON THIS DRAWING SET IS FROM A LIDAR TOPOGRAPHIC SURVEY DATED 4/1/2017, PROVIDED AS AN ELECTRONIC COMPUTER-AIDED DRAFTING DRAWING FILE BY SOUTHERN COMPANY SERVICES.
- BEYOND THE AP-1 AREA MAPPED WITH LIDAR TOPOGRAPHY AS DELINEATED ON THE DRAWINGS, TOPOGRAPHY IS FROM UNITED STATES GEOLOGIC SURVEY (USGS) DIGITAL MAPPING FILE, "MED 1 N35W065 ARCGRID GEORGIA".
- ELEVATIONS ARE SHOWN IN FEET ABOVE MEAN SEA LEVEL (FT. MSL), THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- GRID COORDINATE SYSTEM CORRESPONDS TO NORTH AMERICAN DATUM OF 1983 (NAD83), GEORGIA STATE PLANE, WEST ZONE, US FOOT.
- PROPERTY BOUNDARY IS APPROXIMATE AND WAS PROVIDED AS AN ELECTRONIC CAD DRAWING FILE BY SOUTHERN COMPANY SERVICES.
- MONITORING WELL COORDINATES, GROUND SURFACE ELEVATIONS, AND SCREENED INTERVALS WERE OBTAINED FROM THE "SEPTEMBER 2020 WELL INSTALLATION ADDENDUM MEMORANDUM" DATED 29 SEPTEMBER 2020, PREPARED BY GEOSYNTEC CONSULTANTS, INC.
- EXISTING LIMITS OF AP-1 AS PRESENTED IN THIS DRAWING SET ARE APPROXIMATE AND REPRESENT THE INTERIOR CREST OF THE CONTAINMENT DIKES. LIMITS ARE BASED ON A COMBINATION OF TOPOGRAPHIC MAP INTERPRETATION, EXAMINATION OF AS-BUILT PLANS OF CONTAINMENT DIKES, AND AIRPHOTO INTERPRETATION. FROM THIS INFORMATION, AN ESTIMATE WAS MADE OF THE LATERAL LOCATION AND VERTICAL PROFILE OF THE AP-1 LIMITS.
- BOTTOM OF CCR SURFACE IS APPROXIMATE AND IS BASED ON AN ELECTRONIC CAD DRAWING PROVIDED BY SOUTHERN COMPANY SERVICES OF THE AS-CONSTRUCTED (PRE-ASH) BOTTOM OF AP-1 FROM TOPOGRAPHY DATED 10/30/1969, WITH UPDATES TO THE SURFACE MADE BY GEOSYNTEC USING ELEVATION DATA OF THE CCR-RESIDUUM INTERFACE AS ESTIMATED FROM BORINGS DURING RECENT SUBSURFACE INVESTIGATIONS IN AP-1. ON INTERIOR DIKE SIDESLOPES, BOTTOM OF CCR SURFACE WAS CREATED USING A TWO HORIZONTAL TO ONE VERTICAL (2H:1V) SLOPE.
- PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE OBTAINED FROM GROUNDWATER FLOW MODELING RESULTS AS DOCUMENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" (PART B, SECTION 2 OF THIS PERMIT APPLICATION).
- TOP OF BEDROCK SURFACE IS APPROXIMATE AND WAS DEVELOPED BY GEOSYNTEC USING AVAILABLE SUBSURFACE INFORMATION FROM PREVIOUS SITE INVESTIGATIONS.
- DURING CLOSURE CONSTRUCTION, CONTRACTOR WILL VERIFY BOTH LATERAL AND VERTICAL EXTENT OF CCR IN THE FIELD.
- EXCAVATION SURFACE IS APPROXIMATE AND WAS DEVELOPED BASED ON THE ESTIMATED BOTTOM OF CCR AND TO MEET THE FOLLOWING CRITERIA: (I) EXCAVATE AT LEAST SIX INCHES BELOW THE BOTTOM OF CCR SURFACE IN ALL AREAS OF AP-1; (II) CONDUCT ADDITIONAL EXCAVATION AS NEEDED BENEATH THE FLOOR AREAS OF THE CONSOLIDATED LINED FOOTPRINT AND BENEATH THE BASE OF THE NEW NORTH AND SOUTH CONTAINMENT DIKES TO PROVIDE AN 8-FT (MIN) COMPACTED SOIL BUFFER ZONE BELOW THE LINER SYSTEM, AND (III) CONDUCT ADDITIONAL EXCAVATION IN THE AREAS SOUTH AND NORTH OF THE CONSOLIDATED LINED FOOTPRINT (CLOSURE-BY-REMOVAL AREAS) AS NEEDED TO GRADE TO DRAIN UNDER FINAL CLOSED CONDITIONS.
- EXCAVATION GRADES WILL BE ADJUSTED AS NECESSARY DURING CLOSURE CONSTRUCTION BASED ON APPLYING THE ABOVE CRITERIA TO THE ACTUAL FIELD-LOCATED BOTTOM OF CCR, AS WELL AS BASED ON FOUNDATION EVALUATIONS AND IMPROVEMENTS CONDUCTED IN ACCORDANCE WITH THE "FOUNDATION IMPROVEMENT PLAN" (INCLUDED IN THE "CLOSURE PLAN" IN PART A, SECTION 7 OF THIS PERMIT APPLICATION).
- MATERIAL PROPERTIES FOR THE FILL SOIL, LINER SYSTEM, LEACHATE COLLECTION SYSTEM, AND FINAL COVER SYSTEM ARE PROVIDED IN THE "CONSTRUCTION QUALITY ASSURANCE (CQA) PLAN" (PART A, SECTION 5 OF THIS PERMIT APPLICATION).
- DEWATERING OF CCR DURING CLOSURE CONSTRUCTION WILL BE PERFORMED AS NEEDED.
- INTERIM STORM WATER MANAGEMENT DURING CLOSURE CONSTRUCTION - INCLUDING MANAGEMENT OF CONTACT WATER AND "CLEAN" (I.E. NON-CONTACT) STORMWATER - WILL BE CONDUCTED IN ACCORDANCE WITH THE STORMWATER AND CONTACT WATER MANAGEMENT PROCEDURES DESCRIBED IN THE "CLOSURE PLAN" (PART A, SECTION 7 OF THIS PERMIT APPLICATION). IN SUMMARY: CONTACT WATER WILL BE PUMPED OR CONVEYED BY GRAVITY TO DESIGNATED STORAGE AREAS IN AP-1, WHERE IT WILL BE PUMPED TO AN ON-SITE WASTEWATER TREATMENT SYSTEM (WWTS) OR OTHERWISE PROPERLY MANAGED IN ACCORDANCE WITH THE PLANT'S NPDES PERMIT REQUIREMENTS AND THEN DISCHARGED OFF-SITE VIA NPDES OUTFALL NO. 01A. NON-CONTACT STORMWATER WILL BE DISCHARGED TO RECEIVING WATER BODIES WITHOUT TREATMENT.
- DUST CONTROL DURING CLOSURE CONSTRUCTION WILL BE MANAGED AS DESCRIBED IN THE "CLOSURE PLAN" (PART A, SECTION 7 OF THIS PERMIT APPLICATION).
- INTERNAL HAUL ROADS, ACCESS RAMPS, AND INTERIM STORMWATER FEATURE LOCATIONS WILL BE EVALUATED AS PART OF THE DETAILED DESIGN. ADDITIONAL BERMS AND EXTERIOR DIVERSIONS WILL BE CONSTRUCTED, AS NEEDED, TO ADEQUATELY MANAGE STORMWATER RUNOFF.
- VOLUME OF IN-PLACE CCR TO BE REMOVED FROM AP-1 IS ESTIMATED TO DECREASE (SHRINK) BY APPROXIMATELY 10 PERCENT UPON DEWATERING, PLACEMENT, AND COMPACTION WITHIN THE CONSOLIDATED LINED FOOTPRINT. AS PHASED CLOSURE CONSTRUCTION PROGRESSES, ACTUAL CCR QUANTITIES AND SHRINKAGE FACTORS WILL BE TRACKED AND COMPARED TO THE REMAINING CAPACITY, AND THE SIZE OF THE CONSOLIDATED LINED FOOTPRINT AND/OR ELEVATIONS OF THE FINAL COVER GRADES WILL BE REVISED ACCORDINGLY TO ACCOMMODATE THE ACTUAL SITE-SPECIFIC CCR VOLUME, WHILE MAINTAINING COMPLIANCE WITH APPLICABLE DESIGN CRITERIA.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

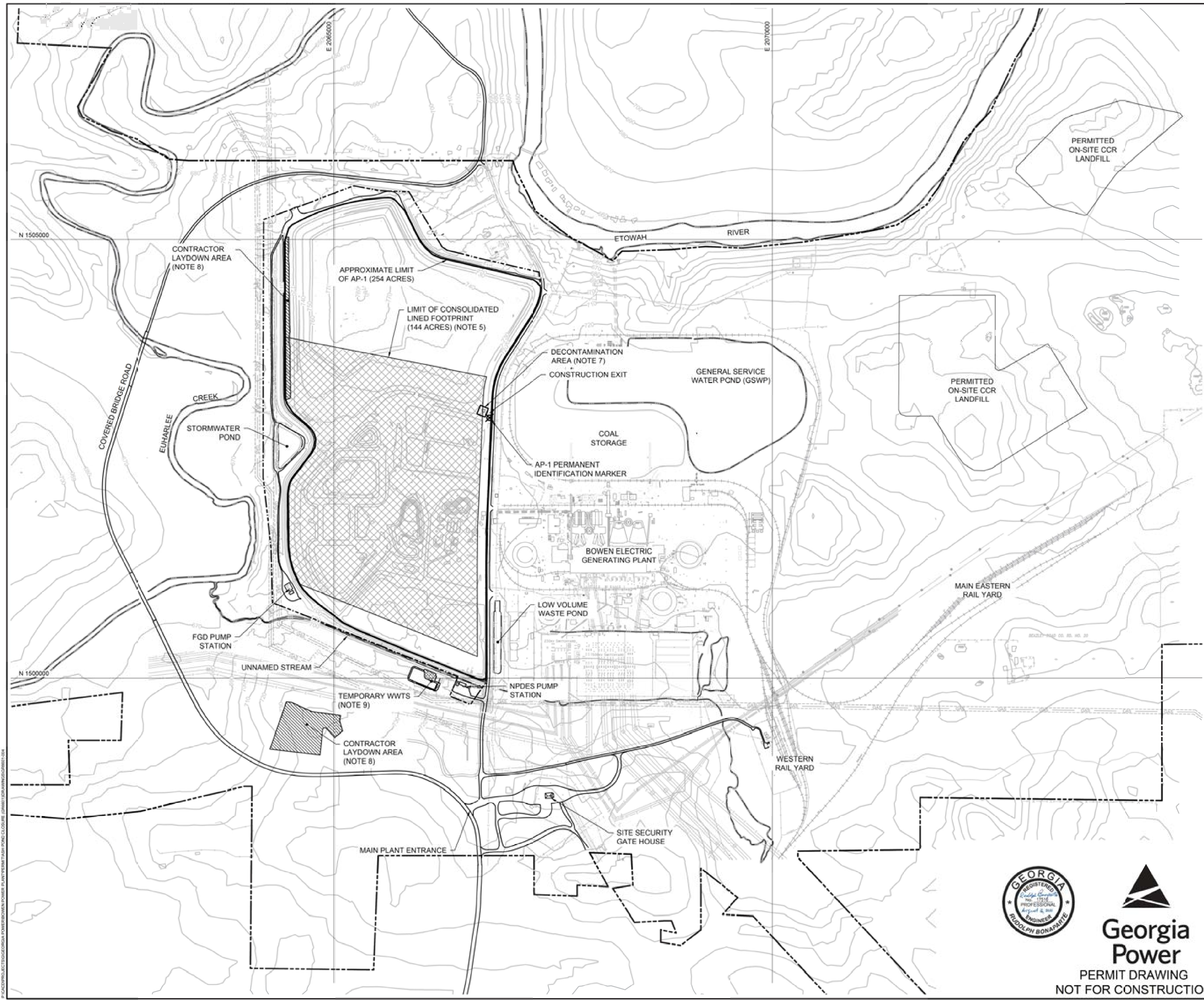
LEGENDS, ABBREVIATIONS, AND REFERENCE NOTES

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA



1255 ROBERTS BOULEVARD, NW, SUITE 200 DUNWOODY, GEORGIA 30144 USA		PHONE: 678.252.8650 WWW.GEOSYNTEC.COM	
PROJ. NO.	GR6601	DWG.	GR6601-002
SCALE	N/A	EDIT	08.16.21
DATE	AUGUST 2021	DRAWING	2 OF 50

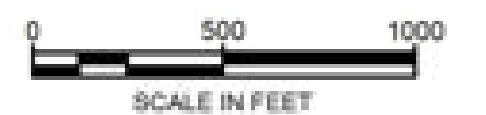
PERMIT DRAWING
NOT FOR CONSTRUCTION



LEGEND

- 730 EXISTING GROUND ELEVATION (FEET) (NOTE 1)
- MAIN SITE AND AP-1 ACCESS ROAD
- APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)
- LIMIT OF CONSOLIDATED LINED FOOTPRINT (NOTE 5)
- PROPERTY BOUNDARY
- PERMIT BOUNDARY (NOTE 6)
- TEMPORARY WWTP PAD

- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - ACREAGE OF AP-1 REPRESENTS THE TWO-DIMENSIONAL (2D) PLAN AREA WITHIN THE ESTIMATED AP-1 LIMITS (ALSO REPRESENTING THE POTENTIAL LATERAL LIMITS OF CCR).
 - TOPOGRAPHIC CONTOUR INTERVALS ARE PRESENTED AT 10-FT INTERVALS ON THIS DRAWING. FOR CLARITY, SEE DRAWING 5 FOR TOPOGRAPHIC CONTOURS AT 2-FT CONTOUR INTERVALS.
 - SEE DRAWING 5 FOR AN EXISTING CONDITIONS PLAN IN THE VICINITY OF AP-1, SHOWN AT AN ENLARGED SCALE.
 - LIMIT OF CONSOLIDATED LINED FOOTPRINT REFERS TO LIMIT OF LINER.
 - ALONG EASTERN SIDE OF AP-1, PERMIT BOUNDARY IS ALIGNED WITH APPROXIMATE LIMIT OF AP-1, AND THUS OBLSCURED IN THIS AREA ON THIS DRAWING. REFER TO DRAWING 3 FOR THE PERMIT BOUNDARY SURVEY AND LEGAL DESCRIPTION.
 - A DECONTAMINATION STATION WILL BE ESTABLISHED AT THE APPROXIMATE LOCATION SHOWN. EQUIPMENT WILL BE DECONTAMINATED (I.E., CCR PARTICLES REMOVED) PRIOR TO EXITING THE AP-1 FOOTPRINT. AS PHASED CLOSURE CONSTRUCTION APPROACHES THIS AREA, THE DECONTAMINATION STATION MAY BE RELOCATED SLIGHTLY AS NEEDED TO ACCOMMODATE CONSTRUCTION OPERATIONS.
 - CONTRACTOR LAYDOWN AREAS FOR STAGING OF CONSTRUCTION MATERIALS AND EQUIPMENT WILL BE AT THE APPROXIMATE LOCATIONS SHOWN. EQUIPMENT MAY ALSO BE STAGED WITHIN THE AP-1 ADJACENT TO WORK AREAS.
 - A TEMPORARY WWTP WILL BE ESTABLISHED AT THE APPROXIMATE LOCATION SHOWN FOR TREATMENT OF LEACHATE AND CONTACT WATER GENERATED DURING CLOSURE CONSTRUCTION. AT THE COMPLETION OF CLOSURE CONSTRUCTION, LEACHATE WILL BE ROUTED TO A PERMANENT ON-SITE WWTP LOCATED OUTSIDE THE AP-1 PERMIT BOUNDARY, ON THE PLANT BOWEN PROPERTY.



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SITE PLAN

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200
DUNESBORO, GEORGIA 30144 USA

PHONE: 678.252.8650
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PROJ. NO.	GR6601	DWG.	GR6601-004	EDIT	8/16/21
SCALE	1" = 50'		DRAWING 4 OF 50		
DATE	AUGUST 2021				



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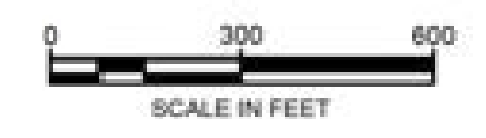


LEGEND

- EXISTING GROUND ELEVATION (FEET) (NOTE 1)
- EXISTING ROAD
- EXISTING PIPE
- PLANT BUILDINGS / STRUCTURES
- WATER-LINE / CREEK
- APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)
- PROPERTY BOUNDARY (NOTE 5)
- PERMIT BOUNDARY
- WETLAND (NOTE 3)
- 100-YEAR FLOODPLAIN (NOTE 4)

- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOPOGRAPHIC CONTOURS ARE PRESENTED AT 2-FT INTERVALS.
 - WETLAND LOCATIONS ARE AS DELINEATED BY ECOLOGICAL SOLUTIONS, INC. IN JUNE 2018.
 - 100-YEAR FLOODPLAIN IS TAKEN FROM FEMA FLOOD INSURANCE RATE MAP NUMBERS 13015C0245G AND 13015C0335G, BOTH DATED 28 SEPTEMBER 2007.
 - ALONG EASTERN SIDE OF AP-1, PERMIT BOUNDARY IS ALIGNED WITH APPROXIMATE LIMIT OF AP-1, AND THUS OBSCURED IN THIS AREA ON THIS DRAWING. REFER TO DRAWING 3 FOR THE PERMIT BOUNDARY SURVEY AND LEGAL DESCRIPTION.

GEORGIA
 ENVIRONMENTAL PROTECTION DIVISION
Approved
 Solid Waste Management Program
 Approved By: Keith Stevens



REV	DATE	DESCRIPTION	DRN	APP
0	AUG 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

EXISTING SITE CONDITIONS AND TOPOGRAPHY

**PLANT EOWEN ASH POND 1 (AP-1)
 CLOSURE DRAWINGS
 BARTOW COUNTY, GEORGIA**

Geosyntec
 consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA	PHONE: 678.252.8650 WWW.GEOSYNTEC.COM
PROJ. NO. GR6601	DWG. GR6601-005
SCALE 1" = 300'	EDIT 8/16/21
DATE AUGUST 2021	DRAWING 5 OF 50



**PERMIT DRAWING
 NOT FOR CONSTRUCTION**



LEGEND

	APPROXIMATE BOTTOM OF CCR SURFACE ELEVATION (FEET) (NOTES 2, 3, AND 4)
	PERMIT BOUNDARY (NOTE 5)
	APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)

- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - CONTOURS SHOWN ON THIS DRAWING WITHIN LIMITS OF AP-1 REPRESENT BOTTOM OF AP-1 (I.E. BOTTOM OF CCR) GRADES. SEE NOTE 8 ON DRAWING 2. CONTOURS SHOWN ON THIS DRAWING BEYOND LIMITS OF AP-1 ARE EXISTING GROUND TOPOGRAPHY.
 - DURING CLOSURE CONSTRUCTION, CONTRACTOR WILL VERIFY BOTH LATERAL AND VERTICAL EXTENTS OF CCR IN THE FIELD.
 - AREAS WITHIN LATERAL EXTENT OF CCR IN AP-1 (AS FIELD-VERIFIED DURING CLOSURE CONSTRUCTION) WILL HAVE AN ADDITIONAL SIX-INCHES MINIMUM OF MATERIAL REMOVAL BELOW BOTTOM OF CCR. EXCAVATED CCR (INCLUDING SIX-INCHES MINIMUM OF ADDITIONAL MATERIAL EXCAVATION) WILL BE PLACED IN THE CONSOLIDATED LINED AREA.
 - ALONG EASTERN SIDE OF AP-1, PERMIT BOUNDARY IS ALIGNED WITH APPROXIMATE LIMIT OF AP-1, AND THUS OBSCURED IN THIS AREA ON THIS DRAWING. REFER TO DRAWING 3 FOR THE PERMIT BOUNDARY SURVEY AND LEGAL DESCRIPTION.



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APPROXIMATE BOTTOM OF AP-1 GRADES

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA



1295 ROBERTS BOULEVARD, NW, SUITE 200 DENVER, GEORGIA 30144 USA		PHONE: 678.252.8650 WWW.GEOSYNTEC.COM	
PROJ. NO.	GR6601	DWG.	GR6601-006
SCALE	1" = 300'	EDIT	8/16/21
DATE	AUGUST 2021	DRAWING 6 OF 50	



PERMIT DRAWING
NOT FOR CONSTRUCTION



LEGEND

- EXCAVATION SURFACE ELEVATION (FEET) (NOTES 2 AND 3)
- PERMIT BOUNDARY (NOTE 4)
- APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)
- CONSOLIDATED AREA FOUNDATION IMPROVEMENTS (NOTE 3)
- OTHER AREA FOUNDATION IMPROVEMENTS (NOTE 3)

- NOTES:**
1. SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 2. EXCAVATION CONTOURS ON THIS DRAWING ARE THE SAME AS DRAWING 8. SEE NOTE 3, DRAWING 8 FOR BASIS FOR EXCAVATION CONTOURS.
 3. FOUNDATION IMPROVEMENTS WILL BE PERFORMED IN ACCORDANCE WITH THE 'FOUNDATION IMPROVEMENT PLAN' INCLUDED WITH THIS PERMIT APPLICATION. A SUMMARY OF ACTIVITIES IS PROVIDED BELOW.
 - a. **CONSOLIDATED LINED AREAS:** AS HIGHLIGHTED ON THIS DRAWING, WITHIN THE FLOOR AREAS OF THE CONSOLIDATED LINED FOOTPRINT AND BENEATH THE BASE OF THE NEW NORTH AND SOUTH DIKES, AFTER REMOVAL OF CCR (AND SIX-INCHES OF ADDITIONAL MATERIAL BELOW CCR), THE FOLLOWING ACTIVITIES WILL BE PERFORMED: (I) ADDITIONAL OVER-EXCAVATION AS PRESENTED AND DESCRIBED ON DRAWING 8; (II) FOUNDATION EVALUATION AND MITIGATION IN ACCORDANCE WITH THE FOUNDATION IMPROVEMENT PLAN; (III) COMPACTED SOIL FILL LAYER PLACEMENT TO ACHIEVE LINER SUBGRADE (BOTTOM OF CLAY LINER) GRADES.
 - b. **OTHER AREAS:** AS HIGHLIGHTED ON THIS DRAWING, WITHIN AP-1 IN THE OTHER AREAS BEYOND THE CONSOLIDATED LINED AREA (PRIMARILY TO THE NORTH AND SOUTH), AFTER REMOVAL OF CCR (AND SIX-INCHES OF ADDITIONAL MATERIAL BELOW CCR), THE FOLLOWING ACTIVITIES WILL BE PERFORMED: (I) ADDITIONAL EXCAVATION AS PRESENTED AND DESCRIBED ON DRAWING 8; (II) FOUNDATION EVALUATION AND MITIGATION IN ACCORDANCE WITH THE FOUNDATION IMPROVEMENT PLAN; (III) COMPACTED SOIL FILL PLACEMENT AS NEEDED TO GRADE TO DRAIN UNDER FINAL CLOSED CONDITIONS.
 4. ALONG EASTERN SIDE OF AP-1, PERMIT BOUNDARY IS ALIGNED WITH APPROXIMATE LIMIT OF AP-1, AND THUS OBSCURED IN THIS AREA ON THIS DRAWING. REFER TO DRAWING 3 FOR THE PERMIT BOUNDARY SURVEY AND LEGAL DESCRIPTION.



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FOUNDATION IMPROVEMENT PLAN

**PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

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PROJ. NO.	GR6601	DWG.	GR6601-007	EDIT	8/16/21
SCALE	1" = 300'				
DATE	AUGUST 2021		DRAWING 7 OF 50		

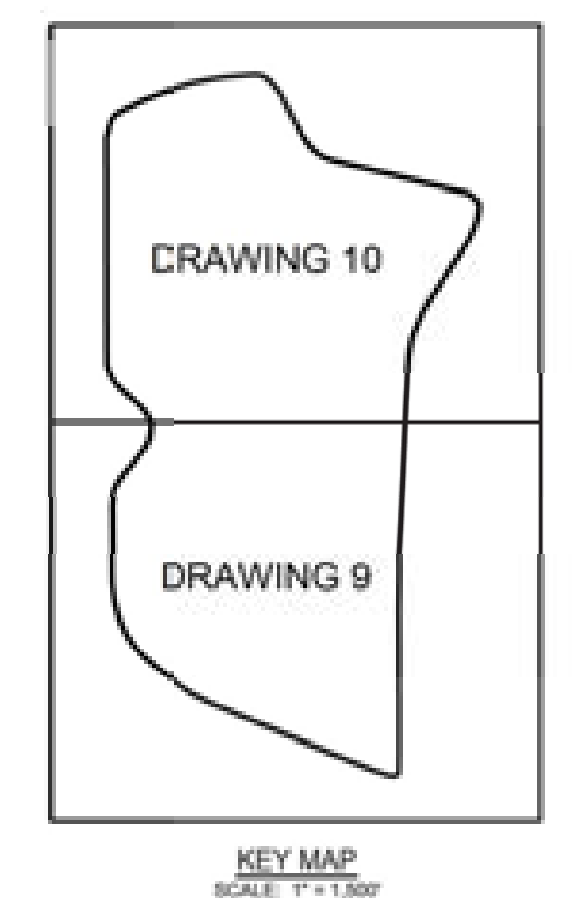


**PERMIT DRAWING
NOT FOR CONSTRUCTION**



LEGEND

	EXCAVATION SURFACE ELEVATION (FEET) (NOTES 2 AND 3)
	PERMIT BOUNDARY (NOTE 6)
	APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)
	APPROXIMATE LIMIT OF CONSOLIDATED AREA FOUNDATION IMPROVEMENTS



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - CONTOURS SHOWN ON THIS DRAWING WITHIN LIMITS OF AP-1 REPRESENT ESTIMATED MINIMUM BOTTOM OF EXCAVATION GRADES. CONTOURS SHOWN ON THIS DRAWING BEYOND LIMITS OF AP-1 ARE EXISTING GROUND TOPOGRAPHY.
 - EXCAVATION SURFACE IS APPROXIMATE, AND WAS DEVELOPED BASED ON THE ESTIMATED BOTTOM OF CCR AND TO MEET THE FOLLOWING CRITERIA: (I) EXCAVATE AT LEAST SIX INCHES BELOW THE BOTTOM OF CCR SURFACE IN ALL AREAS OF AP-1; (II) CONDUCT ADDITIONAL OVER-EXCAVATION AS NEEDED BENEATH THE FLOOR AREAS OF THE CONSOLIDATED LINED FOOTPRINT AND BENEATH THE BASE OF THE NEW NORTH AND SOUTH CONTAINMENT DIKES TO CONDUCT FOUNDATION IMPROVEMENTS AND PROVIDE AN 8-FT (MIN) COMPACTED SOIL BUFFER ZONE BELOW THE LINER SYSTEM; AND (III) CONDUCT ADDITIONAL EXCAVATION IN THE AREAS SOUTH AND NORTH OF THE CONSOLIDATED LINED FOOTPRINT AS NEEDED TO GRADE TO DRAIN UNDER FINAL CLOSED CONDITIONS.
 - EXCAVATION GRADES WILL BE ADJUSTED AS NECESSARY DURING CLOSURE CONSTRUCTION BASED ON APPLYING THE ABOVE CRITERIA TO THE ACTUAL FIELD-LOCATED BOTTOM OF CCR, AS WELL AS BASED ON FOUNDATION EVALUATIONS AND IMPROVEMENTS CONDUCTED IN ACCORDANCE WITH THE 'FOUNDATION IMPROVEMENT PLAN' INCLUDED WITH THIS PERMIT APPLICATION.
 - EXCAVATION CONTOURS SHOWN ON THIS DRAWING ARE APPROXIMATE. ACTUAL EXCAVATION GRADES MAY EXTEND DEEPER AND SMOOTHED AS NEEDED TO FACILITATE CONSTRUCTION AND ACCOMPLISH FOUNDATION IMPROVEMENTS, FOLLOWED BY COMPACTED FILL PLACEMENT AS NECESSARY, PER NOTE 3.
 - ALONG EASTERN SIDE OF AP-1, PERMIT BOUNDARY IS ALIGNED WITH APPROXIMATE LIMIT OF AP-1, AND THUS OBTUSCURED IN THIS AREA ON THIS DRAWING. REFER TO DRAWING 3 FOR THE PERMIT BOUNDARY SURVEY AND LEGAL DESCRIPTION.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

EXCAVATION PLAN - OVERALL

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200
DUNESBORO, GEORGIA 30144 USA
PHONE: 678.353.2650
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-006	EDIT	8/16/21
SCALE	1" = 300'				
DATE	AUGUST 2021		DRAWING 8 OF 50		



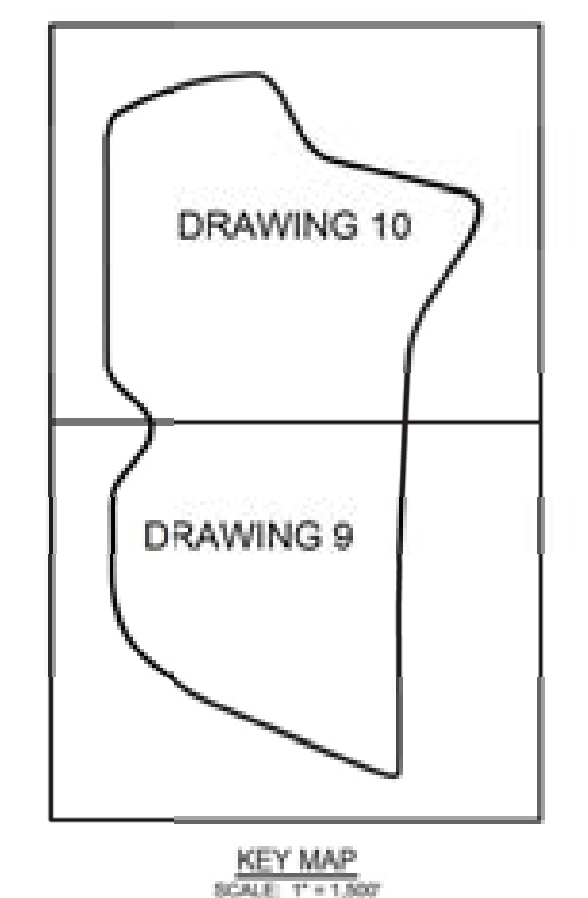
PERMIT DRAWING
NOT FOR CONSTRUCTION

MATCHLINE



LEGEND

	EXCAVATION SURFACE ELEVATION (FEET) (NOTES 2 AND 3)
	PERMIT BOUNDARY (NOTE 6)
	APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)
	APPROXIMATE LIMIT OF CONSOLIDATED AREA FOUNDATION IMPROVEMENTS



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - CONTOURS SHOWN ON THIS DRAWING WITHIN LIMITS OF AP-1 REPRESENT ESTIMATED MINIMUM BOTTOM OF EXCAVATION GRADES. CONTOURS SHOWN ON THIS DRAWING BEYOND LIMITS OF AP-1 ARE EXISTING GROUND TOPOGRAPHY.
 - EXCAVATION SURFACE IS APPROXIMATE, AND WAS DEVELOPED BASED ON THE ESTIMATED BOTTOM OF CCR AND TO MEET THE FOLLOWING CRITERIA: (i) EXCAVATE AT LEAST SIX INCHES BELOW THE BOTTOM OF CCR SURFACE IN ALL AREAS OF AP-1; (ii) CONDUCT ADDITIONAL OVER-EXCAVATION AS NEEDED BENEATH THE FLOOR AREAS OF THE CONSOLIDATED LINED FOOTPRINT AND BENEATH THE BASE OF THE NEW NORTH AND SOUTH CONTAINMENT DIKES TO CONDUCT FOUNDATION IMPROVEMENTS AND PROVIDE AN 8-FT (MIN) COMPACTED SOIL BUFFER ZONE BELOW THE LINER SYSTEM, AND (iii) CONDUCT ADDITIONAL EXCAVATION IN THE AREAS SOUTH AND NORTH OF THE CONSOLIDATED LINED FOOTPRINT AS NEEDED TO GRADE TO DRAIN UNDER FINAL CLOSEST CONDITIONS.
 - EXCAVATION GRADES WILL BE ADJUSTED AS NECESSARY DURING CLOSURE CONSTRUCTION BASED ON APPLYING THE ABOVE CRITERIA TO THE ACTUAL FIELD-LOCATED BOTTOM OF CCR, AS WELL AS BASED ON FOUNDATION EVALUATIONS AND IMPROVEMENTS CONDUCTED IN ACCORDANCE WITH THE 'FOUNDATION IMPROVEMENT PLAN' INCLUDED WITH THIS PERMIT APPLICATION.
 - EXCAVATION CONTOURS SHOWN ON THIS DRAWING ARE APPROXIMATE. ACTUAL EXCAVATION GRADES MAY EXTEND DEEPER AND BE SMOOTHED AS NEEDED TO FACILITATE CONSTRUCTION AND ACCOMPLISH FOUNDATION IMPROVEMENTS, FOLLOWED BY COMPACTED FILL PLACEMENT AS NECESSARY, PER NOTE 3.
 - ALONG EASTERN SIDE OF AP-1, PERMIT BOUNDARY IS ALIGNED WITH APPROXIMATE LIMIT OF AP-1, AND THUS OBLSCURED IN THIS AREA ON THIS DRAWING. REFER TO DRAWING 3 FOR THE PERMIT BOUNDARY SURVEY AND LEGAL DESCRIPTION.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

EXCAVATION PLAN - SOUTH AP-1

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.353.8650
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-009	EDIT	8/16/21
SCALE	1" = 150'	DRAWING 9 OF 50			
DATE	AUGUST 2021				



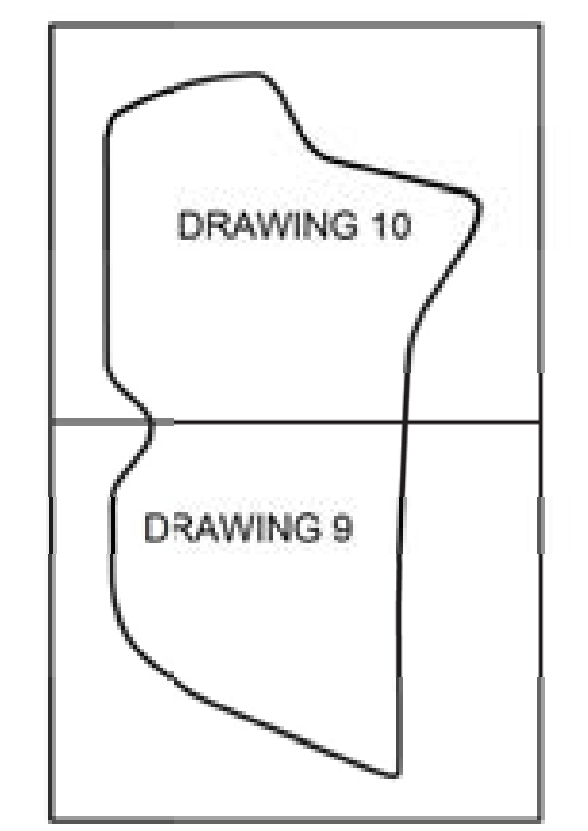
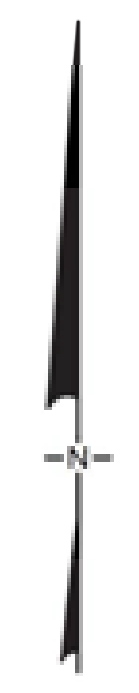
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NOT FOR CONSTRUCTION

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LEGEND

	EXCAVATION SURFACE ELEVATION (FEET) (NOTES 2 AND 3)
	PERMIT BOUNDARY (NOTE 6)
	APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)
	APPROXIMATE LIMIT OF CONSOLIDATED AREA FOUNDATION IMPROVEMENTS



KEY MAP
SCALE: 1" = 1,000'

NOTES:

- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
- CONTOURS SHOWN ON THIS DRAWING WITHIN LIMITS OF AP-1 REPRESENT ESTIMATED MINIMUM BOTTOM OF EXCAVATION GRADES. CONTOURS SHOWN ON THIS DRAWING BEYOND LIMITS OF AP-1 ARE EXISTING GROUND TOPOGRAPHY.
- EXCAVATION SURFACE IS APPROXIMATE, AND WAS DEVELOPED BASED ON THE ESTIMATED BOTTOM OF CCR AND TO MEET THE FOLLOWING CRITERIA: (i) EXCAVATE AT LEAST SIX INCHES BELOW THE BOTTOM OF CCR SURFACE IN ALL AREAS OF AP-1; (ii) CONDUCT ADDITIONAL OVER-EXCAVATION AS NEEDED BENEATH THE FLOOR AREAS OF THE CONSOLIDATED LINED FOOTPRINT AND BENEATH THE BASE OF THE NEW NORTH AND SOUTH CONTAINMENT DIKS TO CONDUCT FOUNDATION IMPROVEMENTS AND PROVIDE AN 8-FT (MIN) COMPACTED SOIL BUFFER ZONE BELOW THE LINER SYSTEM; AND (iii) CONDUCT ADDITIONAL EXCAVATION IN THE AREAS SOUTH AND NORTH OF THE CONSOLIDATED LINED FOOTPRINT AS NEEDED TO GRADE TO DRAIN UNDER FINAL CLOSED CONDITIONS.
- EXCAVATION GRADES WILL BE ADJUSTED AS NECESSARY DURING CLOSURE CONSTRUCTION BASED ON APPLYING THE ABOVE CRITERIA TO THE ACTUAL FIELD-LOCATED BOTTOM OF CCR, AS WELL AS BASED ON FOUNDATION EVALUATIONS AND IMPROVEMENTS CONDUCTED IN ACCORDANCE WITH THE "FOUNDATION IMPROVEMENT PLAN" INCLUDED WITH THIS PERMIT APPLICATION.
- EXCAVATION CONTOURS SHOWN ON THIS DRAWING ARE APPROXIMATE. ACTUAL EXCAVATION GRADES MAY EXTEND DEEPER AND BE SMOOTHED AS NEEDED TO FACILITATE CONSTRUCTION AND ACCOMPLISH FOUNDATION IMPROVEMENTS, FOLLOWED BY COMPACTED FILL PLACEMENT AS NECESSARY, PER NOTE 3.
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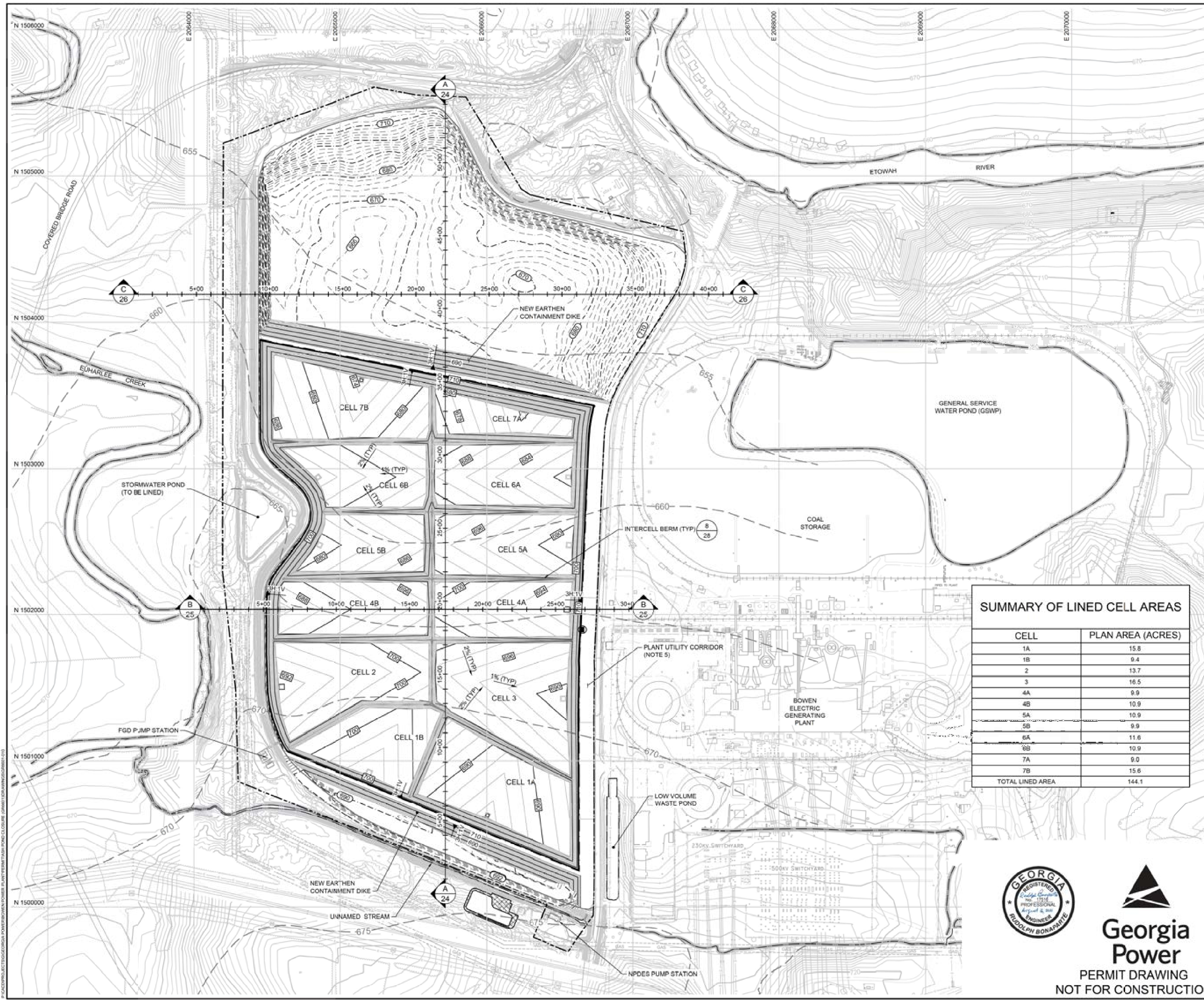
MATCHLINE



PERMIT DRAWING
NOT FOR CONSTRUCTION

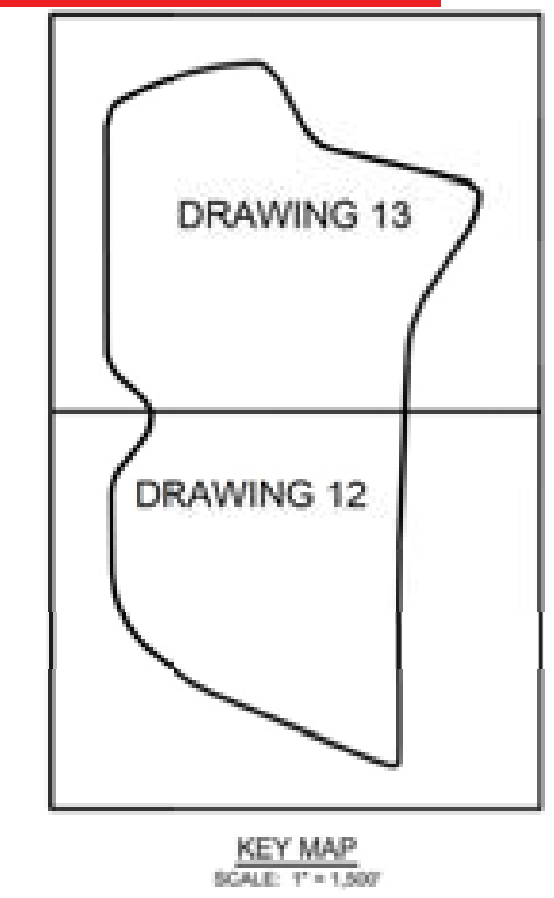
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REV	DATE	DESCRIPTION				DRN	APP		
EXCAVATION PLAN - NORTH AP-1									
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA									
Geosyntec consultants									
1295 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA									
PROJ. NO.	GR6601	DWG.	GR6601-009A	EDIT	8/16/21	PHONE: 678.252.8600 WWW.GEOSYNTEC.COM			
SCALE	1" = 150'								
DATE	AUGUST 2021		DRAWING 10 OF 50						

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LEGEND

- 710 EXISTING GROUND ELEVATION (FEET) (NOTE 1)
- PERMIT BOUNDARY
- 670 EXCAVATION SURFACE ELEVATION (FEET)
- 680 TOP OF LINER ELEVATION (FEET)
- LIMIT OF LINER (NOTE 2)
- APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)
- 680 PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION (FEET) (NOTE 1)
- TEMPORARY WWTs PAD



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOP OF LINER GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE GEOMEMBRANE COMPONENT OF THE LINER SYSTEM WITHIN THE CONSOLIDATED LINED FOOTPRINT AREA. WITHIN THE REMAINDER OF AP-1 (OUTSIDE THE CONSOLIDATED LINED FOOTPRINT AREA), GRADES REPRESENT EXTERIOR NORTH AND SOUTH CONTAINMENT DIKE SLOPES, WHICH TIE-IN TO THE ESTIMATED BOTTOM OF EXCAVATION GRADES CONTOURS SHOWN ON THIS DRAWING BEYOND LIMITS OF AP-1 ARE EXISTING GROUND TOPOGRAPHY. LOW POINTS OF CELLS WILL NOT BE LOWERED WITHOUT GA EPD APPROVAL. MINOR CHANGES TO LINER GRADES SHOWN ON THIS DRAWING MAY BE MADE DURING DETAILED DESIGN (E.G., RAISED TO PROVIDE SEPARATION FROM THE PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE PRESENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" (PART B, SECTION 2 OF THIS PERMIT APPLICATION)). LINER GRADES MAY BE RAISED AS NECESSARY DURING CONSTRUCTION BASED ON CONDITIONS ENCOUNTERED.
 - CLOSURE WILL BE CONDUCTED IN PHASES, RESULTING IN PLAN TO CONSTRUCT LINED CELLS AND PLACE CCR IN ASCENDING NUMERICAL ORDER. AS NEEDED TO FACILITATE CLOSURE CONSTRUCTION TIMING AND SEQUENCING, MULTIPLE CELLS MAY BE CONSTRUCTED AND OPERATED AT A TIME. CELLS MAY ALSO BE CONSTRUCTED OUT-OF-SEQUENCE, WITH MINOR ADJUSTMENTS TO INTERCELL BOUNDARIES, OR SUBDIVIDED INTO PARTIAL CELL AREAS TO FACILITATE CLOSURE ACTIVITIES. REFER TO DRAWINGS 20 THROUGH 23 FOR THE CLOSURE PHASING PLANS.
 - REFER TO DRAWINGS 33 THROUGH 37 FOR THE LEACHATE MANAGEMENT SYSTEM PLAN AND DETAILS.
 - THE PLANT UTILITY CORRIDOR REFERS TO A 100-FT WIDE CORRIDOR IMMEDIATELY EAST OF THE CONSOLIDATED LINED AREA THAT WILL BE CONSTRUCTED IN CONJUNCTION WITH THE CLOSURE PROJECT. CORRIDOR MAY BE USED FOR PLANT-RELATED UTILITIES AND INFRASTRUCTURE.

SUMMARY OF LINED CELL AREAS

CELL	PLAN AREA (ACRES)
1A	15.8
1B	9.4
2	13.7
3	16.5
4A	9.9
4B	10.9
5A	10.9
5B	9.9
6A	11.6
6B	10.9
7A	9.0
7B	15.6
TOTAL LINED AREA	144.1



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

TOP OF LINER GRADING PLAN - OVERALL

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

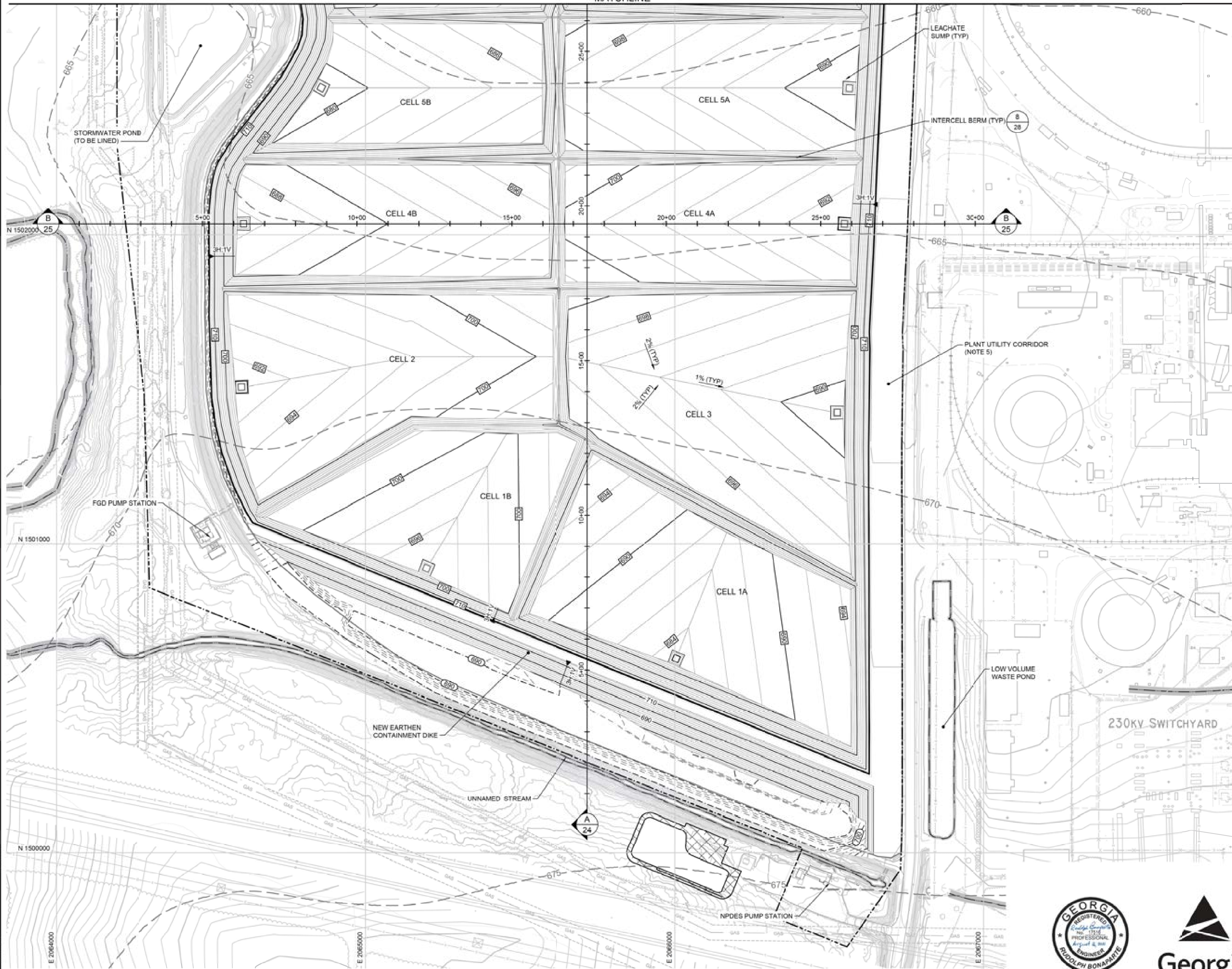


1295 ROBERTS BOULEVARD, NW, SUITE 200 DUNESBORO, GEORGIA 30144 USA		PHONE: 678.252.8650 WWW.GEOSYNTEC.COM	
PROJ. NO.	GR6601	DWG.	GR6601-010
SCALE	1" = 300'	EDIT	8/16/21
DATE	AUGUST 2021	DRAWING 11 OF 50	



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NOT FOR CONSTRUCTION**

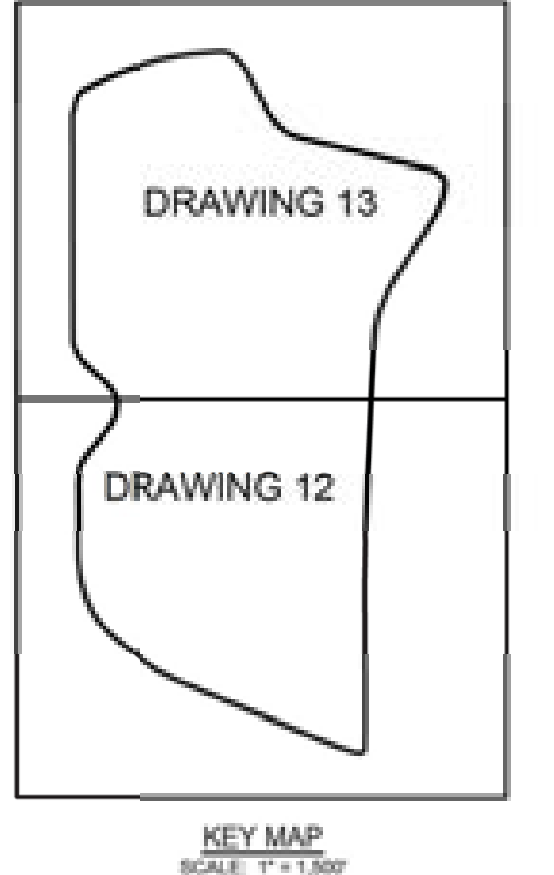
MATCHLINE



LEGEND

- 710 EXISTING GROUND ELEVATION (FEET) (NOTE 1)
- PERMIT BOUNDARY
- 670 EXCAVATION SURFACE ELEVATION (FEET)
- 660 TOP OF LINER ELEVATION (FEET)
- LIMIT OF LINER (NOTE 2)
- APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)
- 680- PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION (FEET) (NOTE 1)
- LEACHATE SUMP
- TEMPORARY WWTs PAD

GEORGIA
 Department of Natural Resources
 ENVIRONMENTAL PROTECTION DIVISION
Approved
 Solid Waste Management Program
 Approved By: Keith Stevens



- NOTES:
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOP OF LINER GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE GEOMEMBRANE COMPONENT OF THE LINER SYSTEM WITHIN THE CONSOLIDATED LINED FOOTPRINT AREA. WITHIN THE REMAINDER OF AP-1 (OUTSIDE THE CONSOLIDATED LINED FOOTPRINT AREA), GRADES REPRESENT EXTERIOR NORTH AND SOUTH CONTAINMENT DIKE SLOPES, WHICH TIE-IN TO THE ESTIMATED BOTTOM OF EXCAVATION GRADES. CONTOURS SHOWN ON THIS DRAWING BEYOND LIMITS OF AP-1 ARE EXISTING GROUND TOPOGRAPHY. LOW POINTS OF CELLS WILL NOT BE LOWERED WITHOUT GA EPD APPROVAL. MINOR CHANGES TO LINER GRADES SHOWN ON THIS DRAWING MAY BE MADE DURING DETAILED DESIGN (E.G. RAISED TO PROVIDE SEPARATION FROM THE PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE PRESENTED IN THE HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3) (PART B, SECTION 2 OF THIS PERMIT APPLICATION)). LINER GRADES MAY BE RAISED AS NECESSARY DURING CONSTRUCTION BASED ON CONDITIONS ENCOUNTERED.
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 - REFER TO DRAWINGS 33 THROUGH 37 FOR THE LEACHATE MANAGEMENT SYSTEM PLAN AND DETAILS.
 - THE PLANT UTILITY CORRIDOR REFERS TO A 100-FT WIDE CORRIDOR IMMEDIATELY EAST OF THE CONSOLIDATED LINED AREA THAT WILL BE CONSTRUCTED IN CONJUNCTION WITH THE CLOSURE PROJECT. CORRIDOR MAY BE USED FOR PLANT-RELATED UTILITIES AND INFRASTRUCTURE.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

TOP OF LINER GRADING PLAN - SOUTH AP-1

PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA

Geosyntec consultants

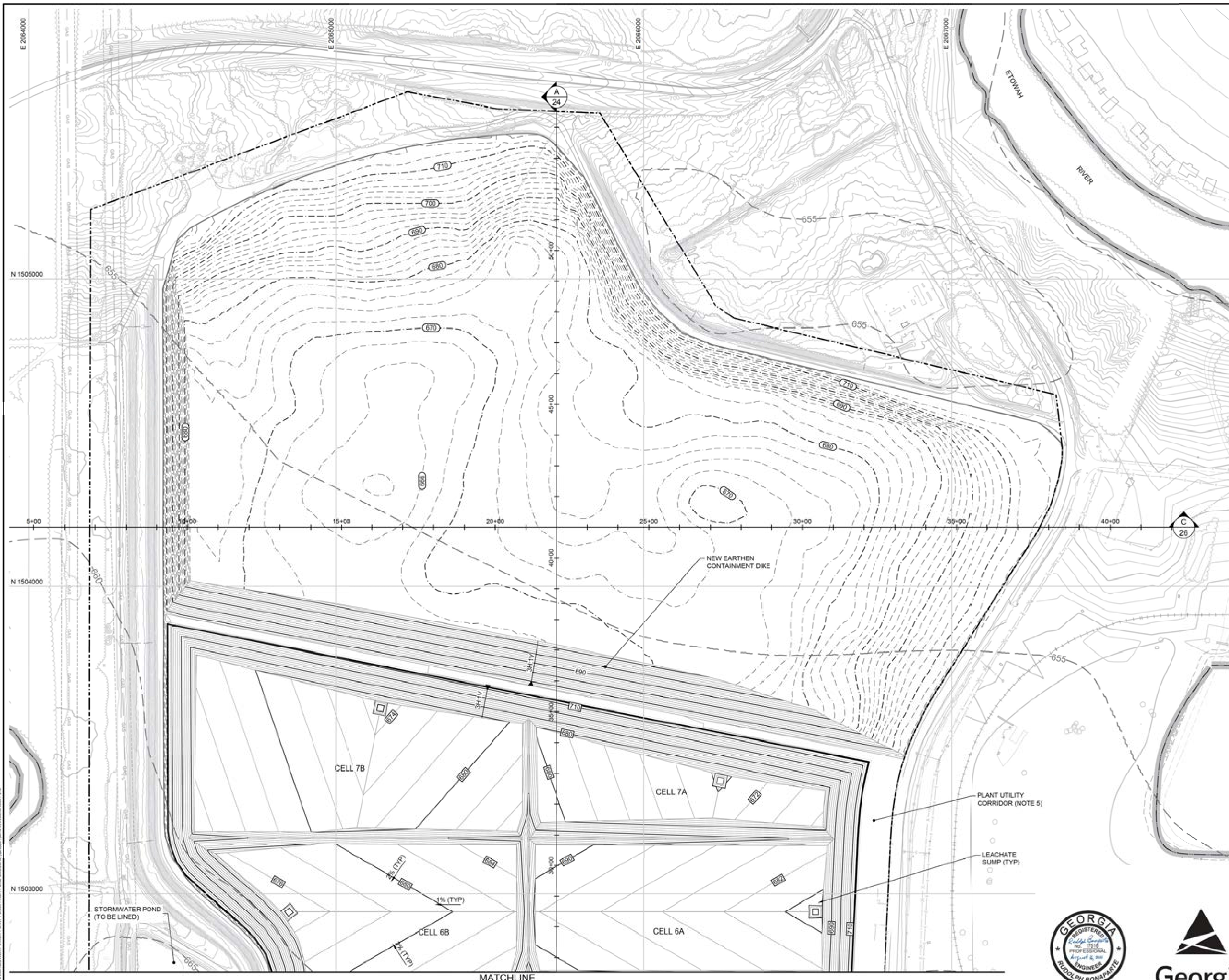
1295 ROBERTS BOULEVARD, NW, SUITE 200
DUNWOODY, GEORGIA 30144 USA
PHONE: 678.252.8600
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-011	EDIT	8/16/21
SCALE	1" = 150'				
DATE	AUGUST 2021				

DRAWING 12 OF 50



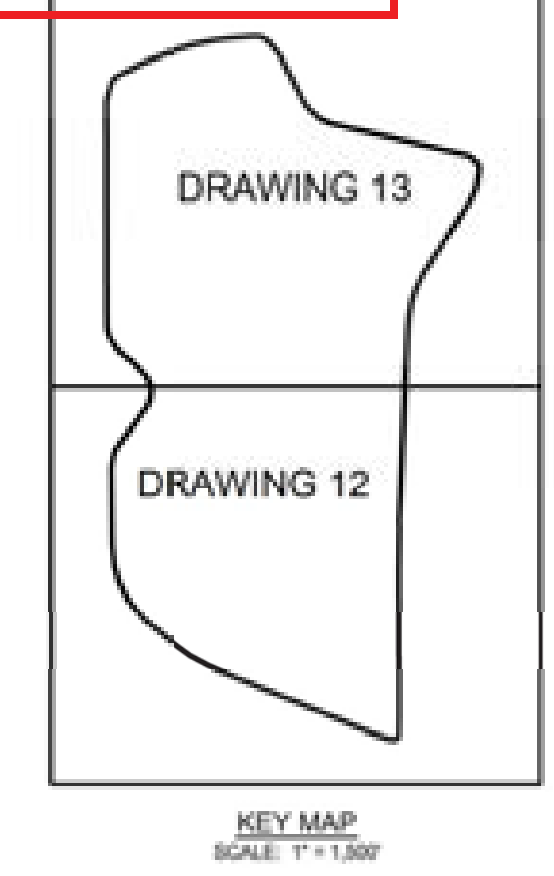
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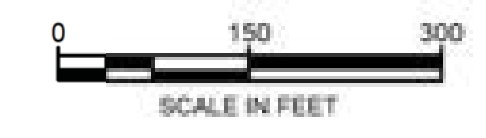
LEGEND

	710	EXISTING GROUND ELEVATION (FEET) (NOTE 1)
		PERMIT BOUNDARY
	670	EXCAVATION SURFACE ELEVATION (FEET)
	660	TOP OF LINER ELEVATION (FEET)
		LIMIT OF RETROFIT LINER
		APPROXIMATE EXISTING LIMIT OF AP-1 (NOTE 1)
	-680-	PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION (FEET) (NOTE 1)
		LEACHATE SUMP

GEORGIA
 ENVIRONMENTAL PROTECTION DIVISION
Approved
 Solid Waste Management Program
 Approved By: Keith Stevens
 Date: 2021.08.27 13:45



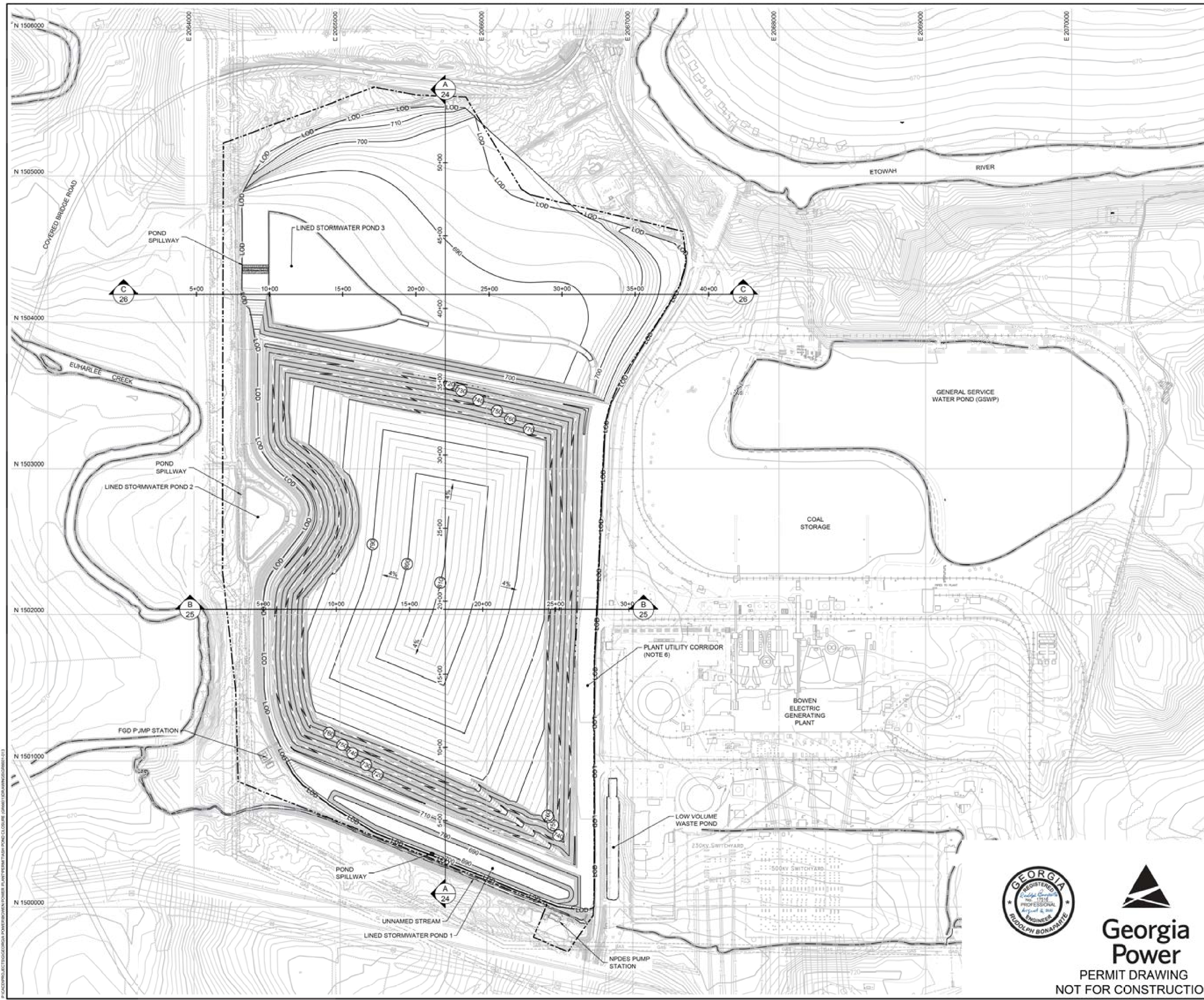
- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
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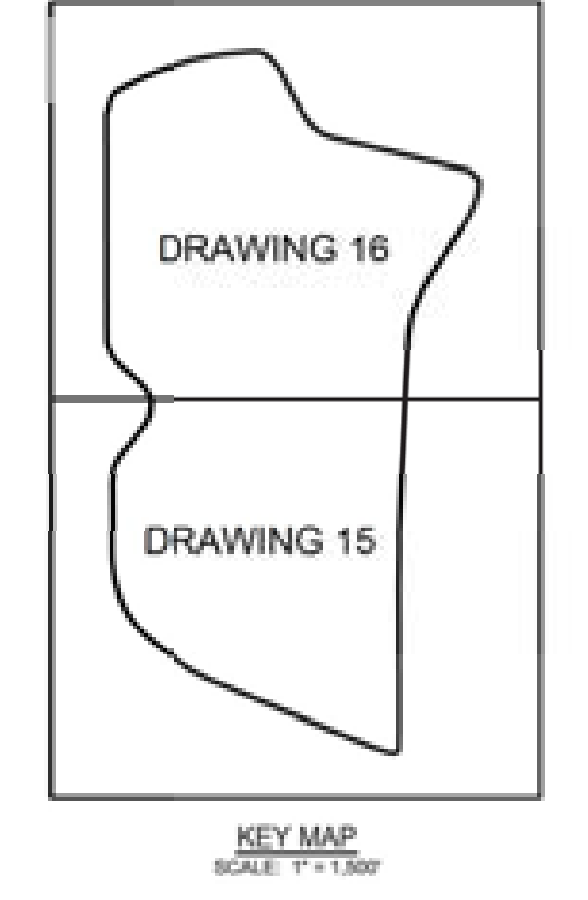
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB
REV	DATE	DESCRIPTION	DRN	APP
TOP OF LINER GRADING PLAN - NORTH AP-1				
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA				
Geosyntec consultants				
<small>1295 ROBERTS BOULEVARD, NW, SUITE 200 DUNESBORO, GEORGIA 30144 USA</small>				
PROJ. NO.	GR6601	DWG.	GR6601-012	EDIT
SCALE	1" = 150'	DATE	AUGUST 2021	8/16/21
				DRAWING 13 OF 50

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LEGEND

	FINISHED GROUND ELEVATION (FEET)
	PERMIT BOUNDARY
	TOP OF CCR ELEVATION FOR SOIL-GEOSYNTHETIC COMPOSITE COVER (FEET)
	LIMIT OF DISTURBANCE



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOP OF CCR GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF CCR ELEVATIONS FOR THE SOIL-GEOSYNTHETIC COMPOSITE FINAL COVER OPTION. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19.
 - REFER TO DRAWINGS 20 THROUGH 23 FOR THE CLOSURE PHASING PLANS.
 - REFER TO DRAWINGS 38 THROUGH 49 FOR THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL PLAN AND DETAILS.
 - FOR CLARITY, FINAL CLOSURE STORMWATER MANAGEMENT FEATURES ARE NOT SHOWN ON THIS DRAWING. REFER TO DRAWING 38 FOR A DRAWING SHOWING THE LAYOUT PLAN AND IDENTIFICATION OF THESE FEATURES.
 - THE PLANT UTILITY CORRIDOR REFERS TO A 100-FT WIDE CORRIDOR IMMEDIATELY EAST OF THE CONSOLIDATED LINED AREA THAT WILL BE CONSTRUCTED IN CONJUNCTION WITH THE CLOSURE PROJECT. CORRIDOR MAY BE USED FOR PLANT-RELATED UTILITIES AND INFRASTRUCTURE.
 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

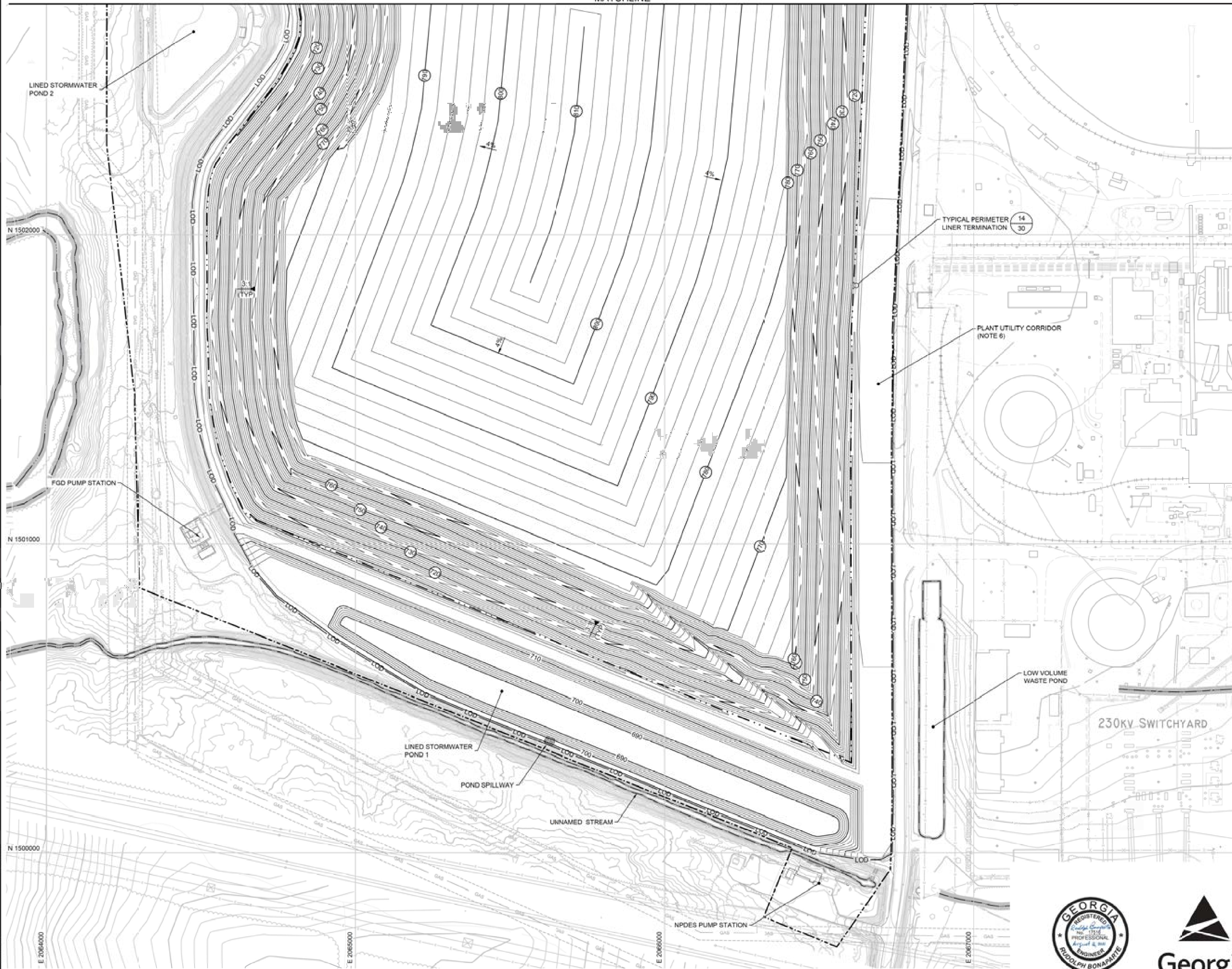
TOP OF CCR GRADING PLAN - OVERALL				
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA				
Geosyntec consultants				
<small>1295 ROBERTS BOULEVARD, NW, SUITE 200 DUNESWAY, GEORGIA 30144 USA</small>				
PROJ. NO.	GR6601	DWG.	GR6601-013	EDIT
SCALE	1" = 30'	DATE	AUGUST 2021	8/16/21
DRAWING 14 OF 50				PHONE: 678.253.8650 WWW.GEOSYNTEC.COM



Georgia Power
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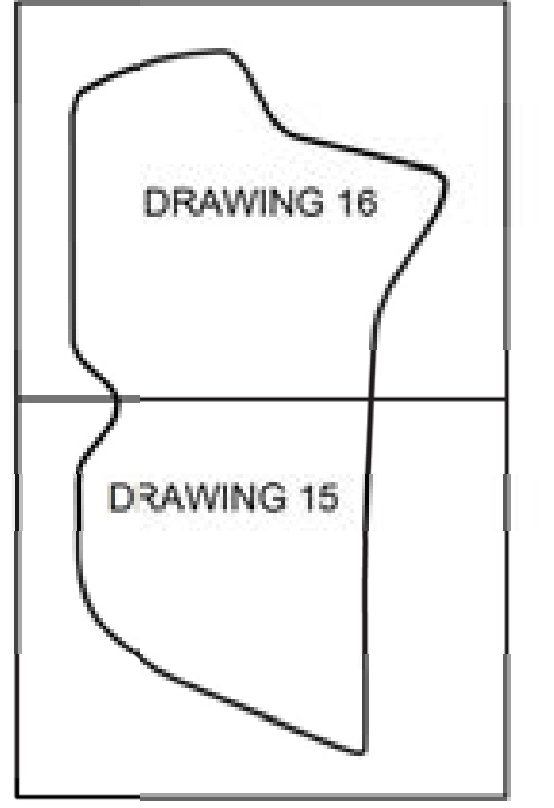
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MATCHLINE



LEGEND

	870	FINISHED GROUND ELEVATION (FEET)
	770	TOP OF CCR ELEVATION FOR SOIL-GEOSYNTHETIC COMPOSITE COVER (FEET)
		PERMIT BOUNDARY
	LOD	LIMIT OF DISTURBANCE
		FINAL LIMIT OF CCR



- NOTES:
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOP OF CCR GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF CCR ELEVATIONS FOR THE SOIL-GEOSYNTHETIC COMPOSITE FINAL COVER OPTION. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL 6 TO NOTE 19.
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 - REFER TO DRAWINGS 38 THROUGH 49 FOR THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL PLAN AND DETAILS.
 - FOR CLARITY, FINAL CLOSURE STORMWATER MANAGEMENT FEATURES ARE NOT SHOWN ON THIS DRAWING. REFER TO DRAWING 38 FOR A DRAWING SHOWING THE LAYOUT PLAN AND IDENTIFICATION OF THESE FEATURES.
 - THE PLANT UTILITY CORRIDOR REFERS TO A 100-FT WIDE CORRIDOR IMMEDIATELY EAST OF THE CONSOLIDATED LINED AREA THAT WILL BE CONSTRUCTED IN CONJUNCTION WITH THE CLOSURE PROJECT. CORRIDOR MAY BE USED FOR PLANT-RELATED UTILITIES AND INFRASTRUCTURE.
 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

TOP OF CCR GRADING PLAN - SOUTH

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.333.8650
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-014	EDIT	8/16/21
SCALE	1" = 150'	DRAWING 15 OF 50			
DATE	AUGUST 2021				



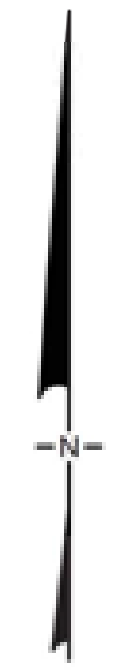
PERMIT DRAWING
NOT FOR CONSTRUCTION

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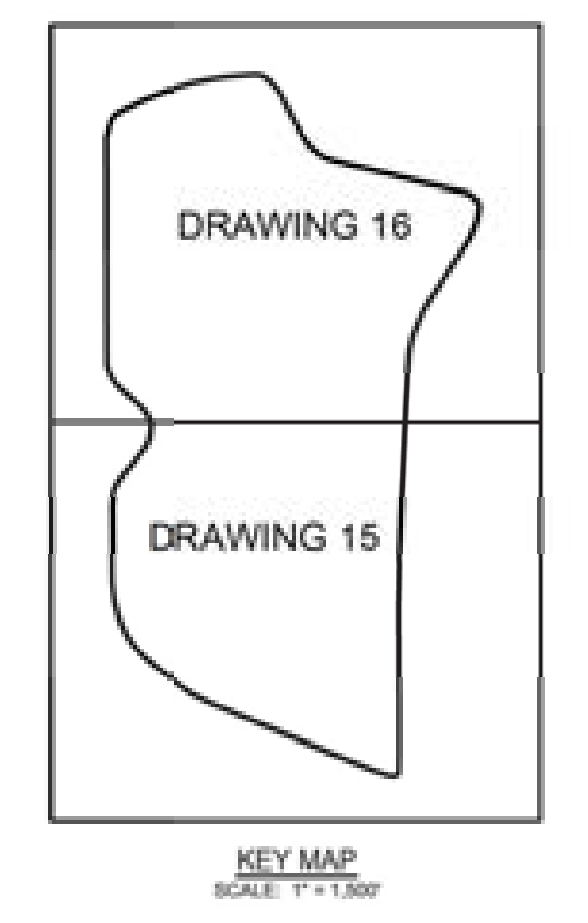


LEGEND

	870	FINISHED GROUND ELEVATION (FEET)
	770	TOP OF CCR ELEVATION FOR SOIL-GEOSYNTHETIC COMPOSITE COVER (FEET)
		PERMIT BOUNDARY
	LOD	LIMIT OF DISTURBANCE
		FINAL LIMIT OF CCR



GEORGIA
 DEPARTMENT OF NATURAL RESOURCES
 ENVIRONMENTAL PROTECTION DIVISION
Approved
 Solid Waste Management Program
 Approved By: Keith Stevens



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOP OF CCR GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF CCR ELEVATIONS FOR THE SOIL-GEOSYNTHETIC COMPOSITE FINAL COVER OPTION. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19.
 - REFER TO DRAWINGS 20 THROUGH 23 FOR THE CLOSURE PHASING PLANS.
 - REFER TO DRAWINGS 38 THROUGH 49 FOR THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL PLAN AND DETAILS.
 - FOR CLARITY, FINAL CLOSURE STORMWATER MANAGEMENT FEATURES ARE NOT SHOWN ON THIS DRAWING. REFER TO DRAWING 38 FOR A DRAWING SHOWING THE LAYOUT PLAN AND IDENTIFICATION OF THESE FEATURES.
 - THE PLANT UTILITY CORRIDOR REFERS TO A 100-FT WIDE CORRIDOR IMMEDIATELY EAST OF THE CONSOLIDATED LINED AREA THAT WILL BE CONSTRUCTED IN CONJUNCTION WITH THE CLOSURE PROJECT. CORRIDOR MAY BE USED FOR PLANT-RELATED UTILITIES AND INFRASTRUCTURE.
 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

TOP OF CCR GRADING PLAN - NORTH

PLANT EOWEN ASH POND 1 (AP-1)
 CLOSURE DRAWINGS
 BARTOW COUNTY, GEORGIA

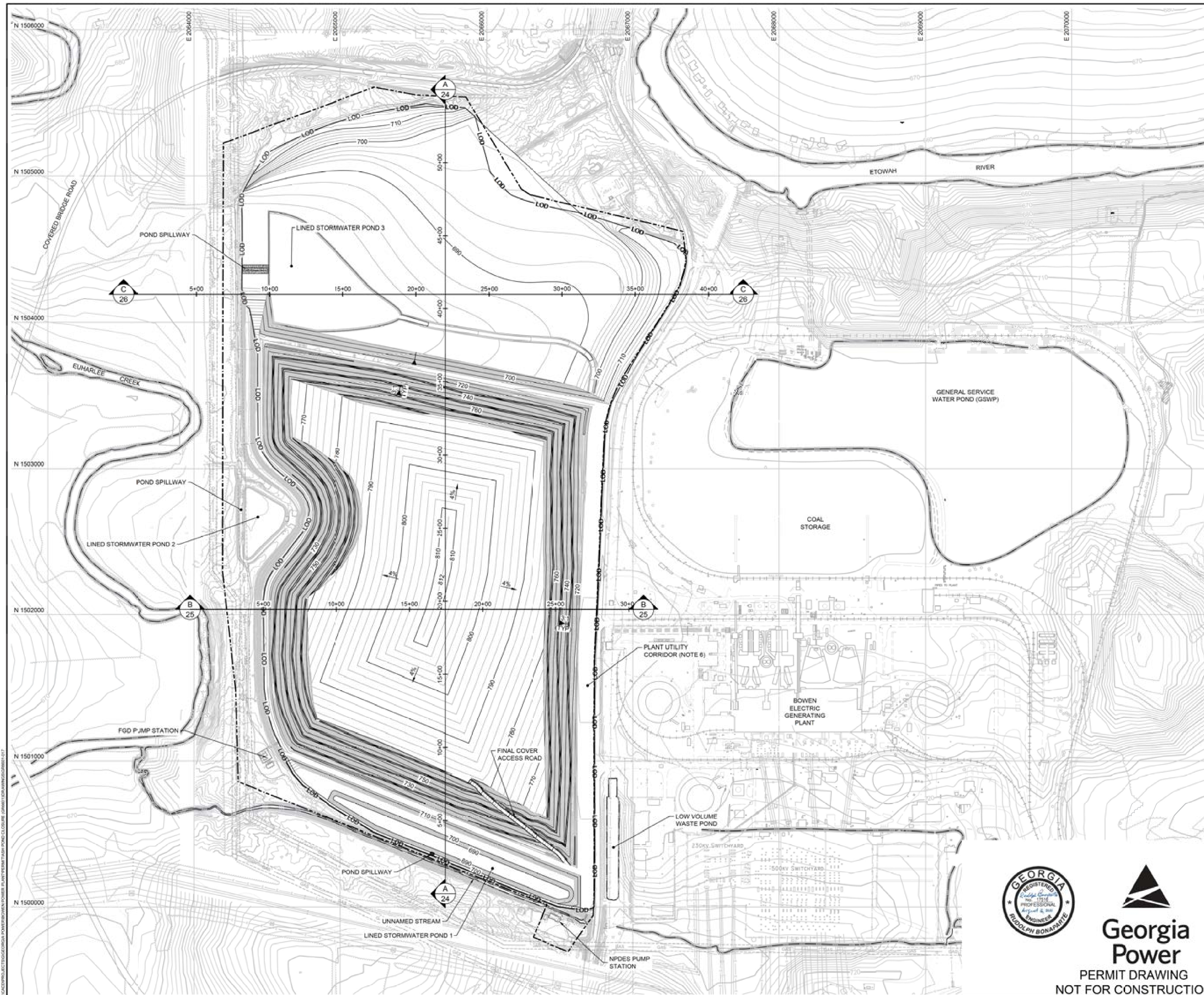
Geosyntec
 consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA	PHONE: 678.252.8600 WWW.GEOSYNTEC.COM
PROJ. NO. GR6601	DWG. GR6601-015
SCALE 1" = 150'	EDIT 8/16/21
DATE AUGUST 2021	DRAWING 16 OF 50



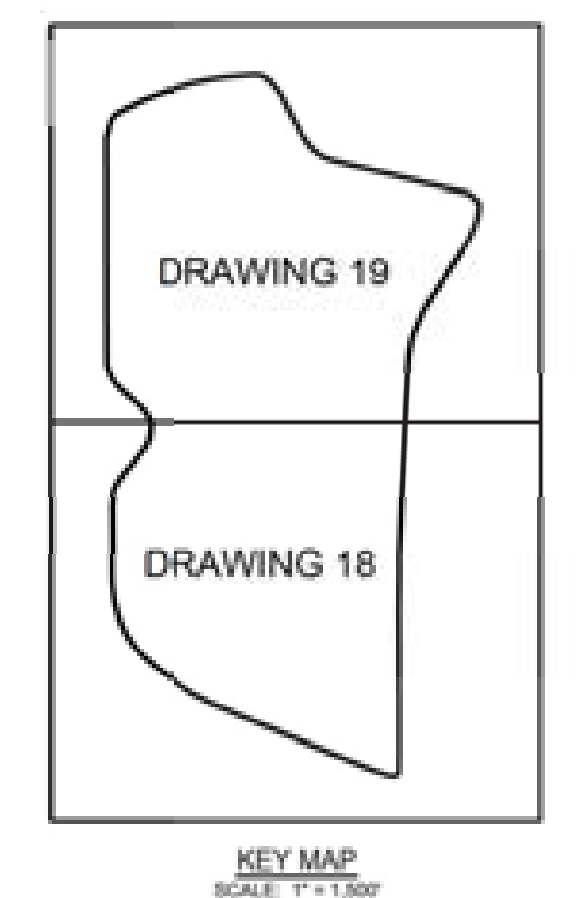
PERMIT DRAWING
 NOT FOR CONSTRUCTION

P:\PROJECTS\GEORGIA POWER\BARTOW COUNTY\AP-1\DRAWING\AP-1_POND CLOSURE_DRAWING\AP-1_POND CLOSURE_DRAWING.dwg



LEGEND

— 670 —	TOP OF FINAL COVER SYSTEM / TOP OF CCR FOR ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER) / FINISHED GRADE ELEVATION (FEET)
- - - - -	PERMIT BOUNDARY
— LOD —	LIMIT OF DISTURBANCE
- · - · - · -	FINAL LIMIT OF CCR



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOP OF FINAL COVER GRADES SHOWN ON THIS DRAWING REPRESENT BOTH THE TOP OF SOIL-GEOSYNTHETIC COMPOSITE FINAL COVER SYSTEM AND THE TOP OF CLOSURETURF® ALTERNATIVE FINAL COVER SYSTEM ELEVATIONS WITHIN THE FINAL COVER LIMITS. THESE GRADES ALSO REPRESENT THE TOP OF CCR ELEVATIONS FOR THE CLOSURETURF® ALTERNATIVE FINAL COVER SYSTEM. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19, BASED ON FIELD CONDITIONS ENCOUNTERED, THE ELEVATION OF THE FINAL COVER MAY VARY, PROVIDED THAT THE ENGINEERING DESIGN CRITERIA ARE MET. THE MAXIMUM FINAL COVER ELEVATION WILL NOT BE EXCEEDED WITHOUT GA EPD AUTHORIZATION.
 - REFER TO DRAWINGS 20 THROUGH 23 FOR THE CLOSURE PHASING PLANS.
 - REFER TO DRAWINGS 38 THROUGH 49 FOR THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL PLAN AND DETAILS.
 - FOR CLARITY, FINAL CLOSURE STORMWATER MANAGEMENT FEATURES ARE NOT SHOWN ON THIS DRAWING. REFER TO DRAWING 38 FOR A DRAWING SHOWING THE LAYOUT PLAN AND IDENTIFICATION OF THESE FEATURES.
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 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG 2021	SUBMITTAL TO GA EPD	JV/KH	RB

FINAL CLOSURE GRADING PLAN - OVERALL

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA



1295 ROBERTS BOULEVARD, NW, SUITE 200 DUNESWAY, GEORGIA 30144 USA		PHONE: 678.252.8650 WWW.GEOSYNTEC.COM	
PROJ. NO.	GR6601	DWG.	GR6601-017
SCALE	1" = 300'	EDIT	8/16/21
DATE	AUGUST 2021	DRAWING 17 OF 50	

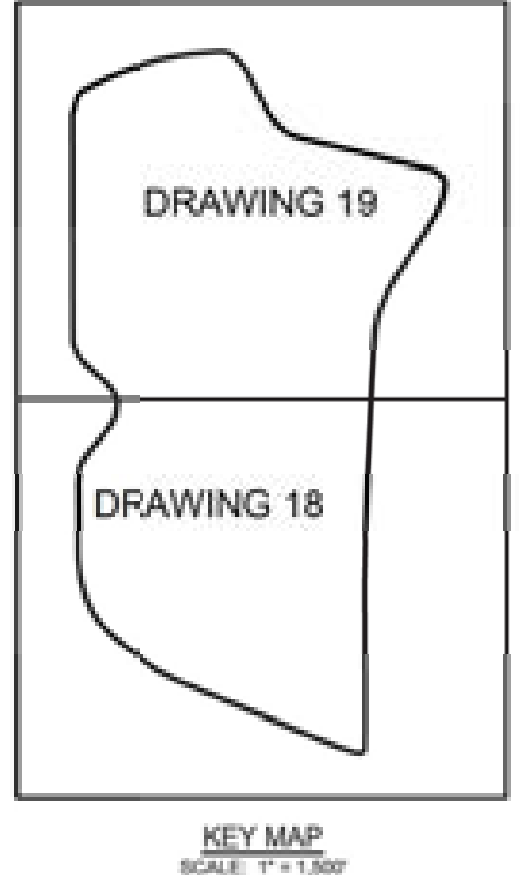


PERMIT DRAWING
NOT FOR CONSTRUCTION



LEGEND

— 670 —	TOP OF FINAL COVER SYSTEM / TOP OF CCR FOR ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER) / FINISHED GRADE ELEVATION (FEET)
- - - - -	PERMIT BOUNDARY
— LOD —	LIMIT OF DISTURBANCE
- · - · - ·	FINAL LIMIT OF CCR



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOP OF FINAL COVER GRADES SHOWN ON THIS DRAWING REPRESENT BOTH THE TOP OF SOIL-GEOSYNTHETIC COMPOSITE FINAL COVER SYSTEM AND THE TOP OF CLOSURETURF® ALTERNATIVE FINAL COVER SYSTEM ELEVATIONS WITHIN THE FINAL COVER LIMITS. THESE GRADES ALSO REPRESENT THE TOP OF CCR ELEVATIONS FOR THE CLOSURETURF® ALTERNATIVE FINAL COVER SYSTEM. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19. BASED ON FIELD CONDITIONS ENCOUNTERED, THE ELEVATION OF THE FINAL COVER MAY VARY, PROVIDED THAT THE ENGINEERING DESIGN CRITERIA ARE MET. THE MAXIMUM FINAL COVER ELEVATION WILL NOT BE EXCEEDED WITHOUT GA EPD AUTHORIZATION.
 - REFER TO DRAWINGS 20 THROUGH 23 FOR THE CLOSURE PHASING PLANS.
 - REFER TO DRAWINGS 38 THROUGH 49 FOR THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL PLAN AND DETAILS.
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 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB
REV	DATE	DESCRIPTION	DRN	APP

**FINAL CLOSURE GRADING PLAN - NORTH
AP-1**

**PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**



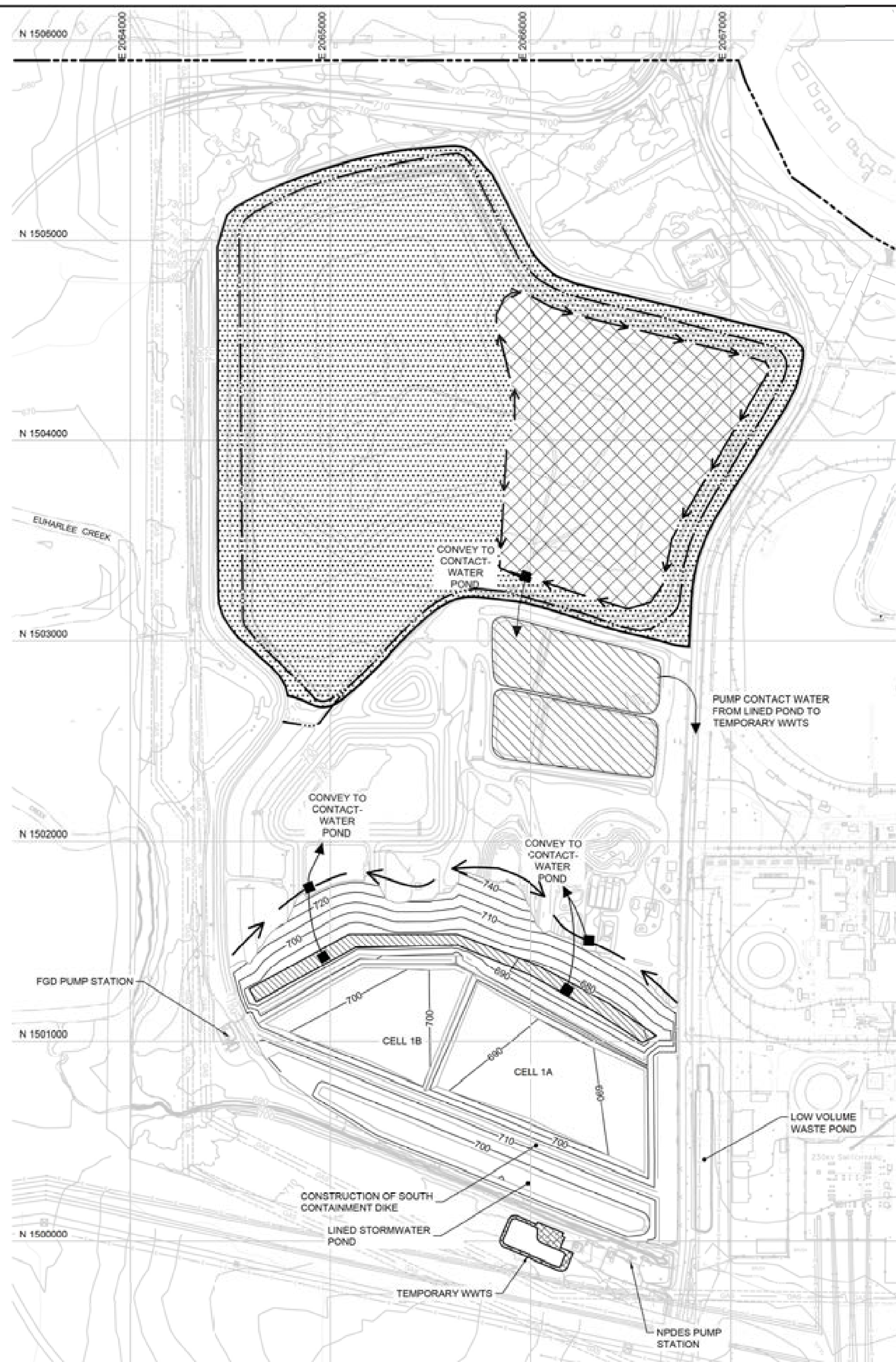
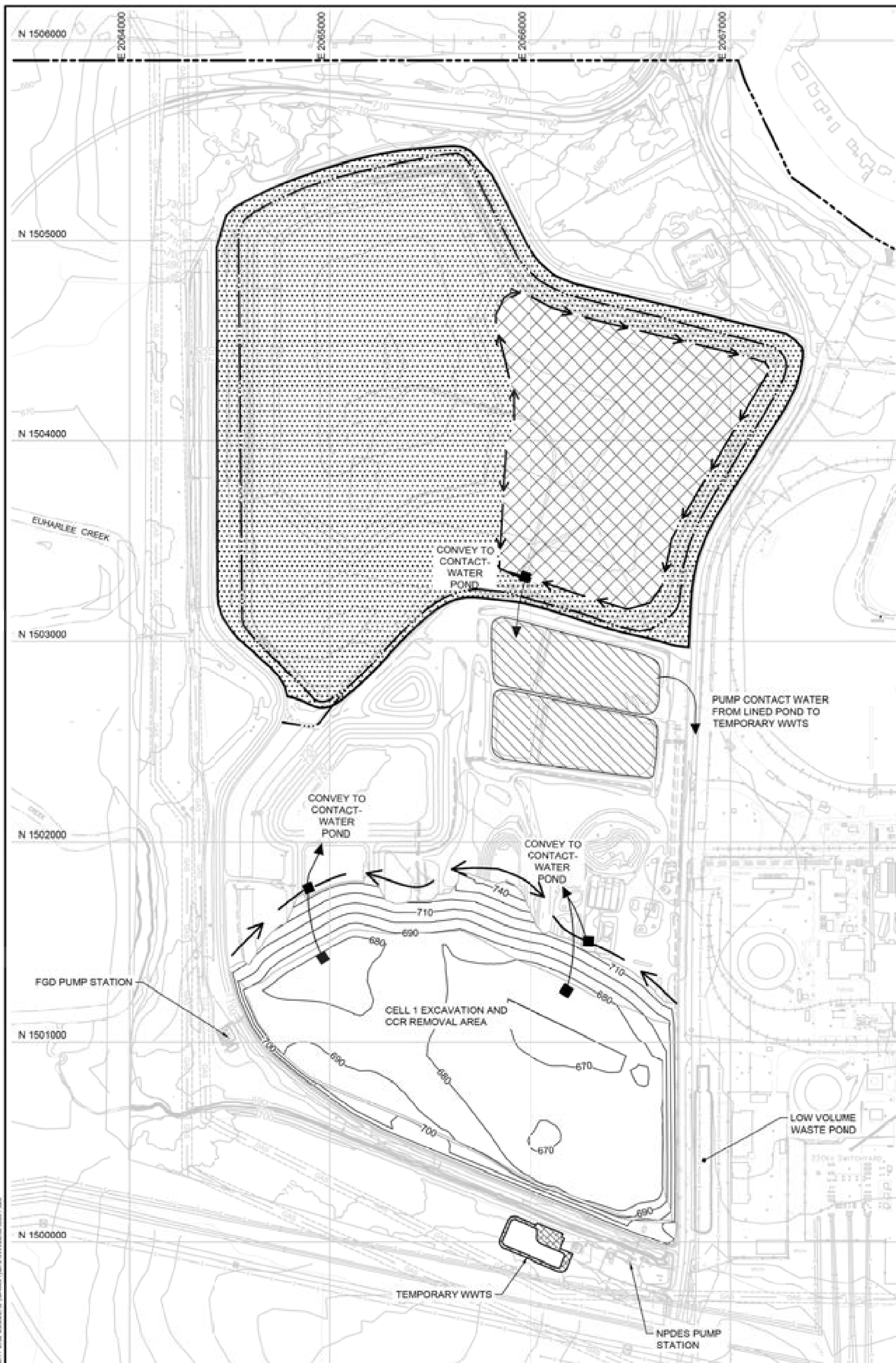
1295 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.252.8650
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-019	EDIT	8/16/21
SCALE	1" = 150'	DRAWING 19 OF 50			
DATE	AUGUST 2021				



**PERMIT DRAWING
NOT FOR CONSTRUCTION**

P:\PROJECTS\GEORGIA POWER\PROJECTS\ASH POND CLOSURE\DRAWINGS\DWG\AP-1\19.DWG



LEGEND

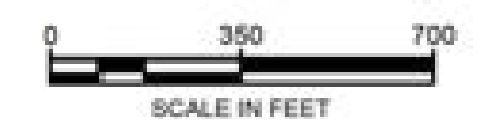
- COVERED CCR (NON-CONTACT WATER)
- TEMPORARY CCR STOCKPILE AREA (NOTE 6)
- CONTACT-WATER COLLECTION / MANAGEMENT AREA (NOTE 7)
- LINED CONTACT-WATER POND
- TEMPORARY WWTs PAD
- CONTACT-WATER DIVERSION
- STORMWATER (NON-CONTACT WATER) DIVERSION

GEORGIA
ENVIRONMENTAL PROTECTION DIVISION

Approved
Solid Waste Management Program

Approved By: Keith Stevens

- NOTES:**
- PHASING APPROACH IS CONCEPTUAL, AND WILL BE REFINED DURING DETAILED DESIGN. IN ADDITION, CONTRACTOR WILL HAVE DISCRETION TO ADJUST PHASE BOUNDARIES AND SEQUENCE, STOCKPILE LOCATIONS(S), AND CONTACT-WATER COLLECTION / MANAGEMENT AREAS, BASED ON FIELD CONDITIONS ENCOUNTERED AND TO FACILITATE CONSTRUCTION, AS APPROVED BY GEORGIA POWER COMPANY, WITH REQUIREMENT THAT DESIGN CRITERIA INCLUDING THOSE RELATED TO STORMWATER AND CONTACT WATER MANAGEMENT, ARE MET.
 - STORMWATER AND CONTACT-WATER MANAGEMENT WILL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE "CLOSURE PLAN" (PART A, SECTION 7 OF THIS PERMIT APPLICATION), DESIGN CRITERIA AND EVALUATION OF CASES RELATED TO THE CLOSURE PHASES PRESENTED HEREIN ARE PROVIDED IN A CALCULATION PACKAGE FOR INTERIM STORMWATER MANAGEMENT CONDITIONS, INCLUDED IN THE "ENGINEERING REPORT" (PART B, SECTION 3 OF THIS PERMIT APPLICATION).
 - DURING CLOSURE CONSTRUCTION, CONTACT WATER WILL BE PUMPED OR CONVEYED BY GRAVITY TO LINED CONTACT-WATER PONDS WITHIN AP-1, WHERE IT WILL BE TEMPORARILY STORED AND THEN PUMPED TO AN ON-SITE TEMPORARY WASTEWATER TREATMENT SYSTEM (WWTs) OR OTHERWISE PROPERLY MANAGED IN ACCORDANCE WITH THE PLANT'S NPDES PERMIT REQUIREMENTS. NON-CONTACT STORMWATER WILL BE MANAGED IN ACCORDANCE WITH APPLICABLE EROSION AND SEDIMENT CONTROL FEATURES AND REQUIREMENTS PROVIDED IN THIS SET OF CLOSURE DRAWINGS, AND THEN DISCHARGED THROUGH EXISTING OR NEW STORMWATER PONDS TO RECEIVING WATER BODIES WITHOUT TREATMENT.
 - CONTRACTOR WILL BE REQUIRED TO TAKE REASONABLE MEASURES TO MINIMIZE STORMWATER RUN-ON INTO THE CONTACT-WATER COLLECTION / MANAGEMENT AREAS. MINIMIZATION TECHNIQUES MAY INCLUDE THE CONSTRUCTION OF TEMPORARY DIVERSION BERMS OR CHANNELS TO DIVERT STORMWATER AWAY FROM THE COLLECTION / MANAGEMENT AREAS.
 - COVER SYSTEM WILL BE TEMPORARILY TERMINATED AT CLOSURE INCREMENT PHASE BOUNDARIES AS SHOWN IN DETAILS 12 AND 13 ON DRAWING 29 FOR FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) AND ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER), RESPECTIVELY. CLOSURE INCREMENTS ARE APPROXIMATE FOR ILLUSTRATIVE PURPOSES, AND MAY BE ADJUSTED DURING CLOSURE.
 - TEMPORARY CCR STOCKPILE AREA(S) SHOWN ARE CONCEPTUAL AND THEIR LOCATIONS AND SIZES WILL BE REFINED DURING DETAILED DESIGN.
 - CONTACT-WATER COLLECTION / MANAGEMENT AREAS SHOWN ON THIS DRAWING MAY BE ADJUSTED OR SUPPLEMENTED DURING CONSTRUCTION AS NEEDED. CONTACT WATER WILL BE PROMPTLY TRANSFERRED TO THE LINED CONTACT-WATER POND TO MINIMIZE DURATION OF PONDING WITHIN AP-1 EXCAVATIONS.
 - TEMPORARY LINED STORMWATER PONDS (NON-CONTACT WATER) MAY BE UTILIZED DURING CONSTRUCTION AS NEEDED.
 - FOR PHASES WHERE COVERED CCR SHADING ENVOUCHES ON ACTIVE CCR PLACEMENT, THIS INDICATES WHERE A TEMPORARY OR FINAL COVER SYSTEM INCREMENT MAY BE INSTALLED ONCE FINISHED WASTE GRADES ARE ACHIEVED FOR THAT PHASE.



PERMIT DRAWING
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

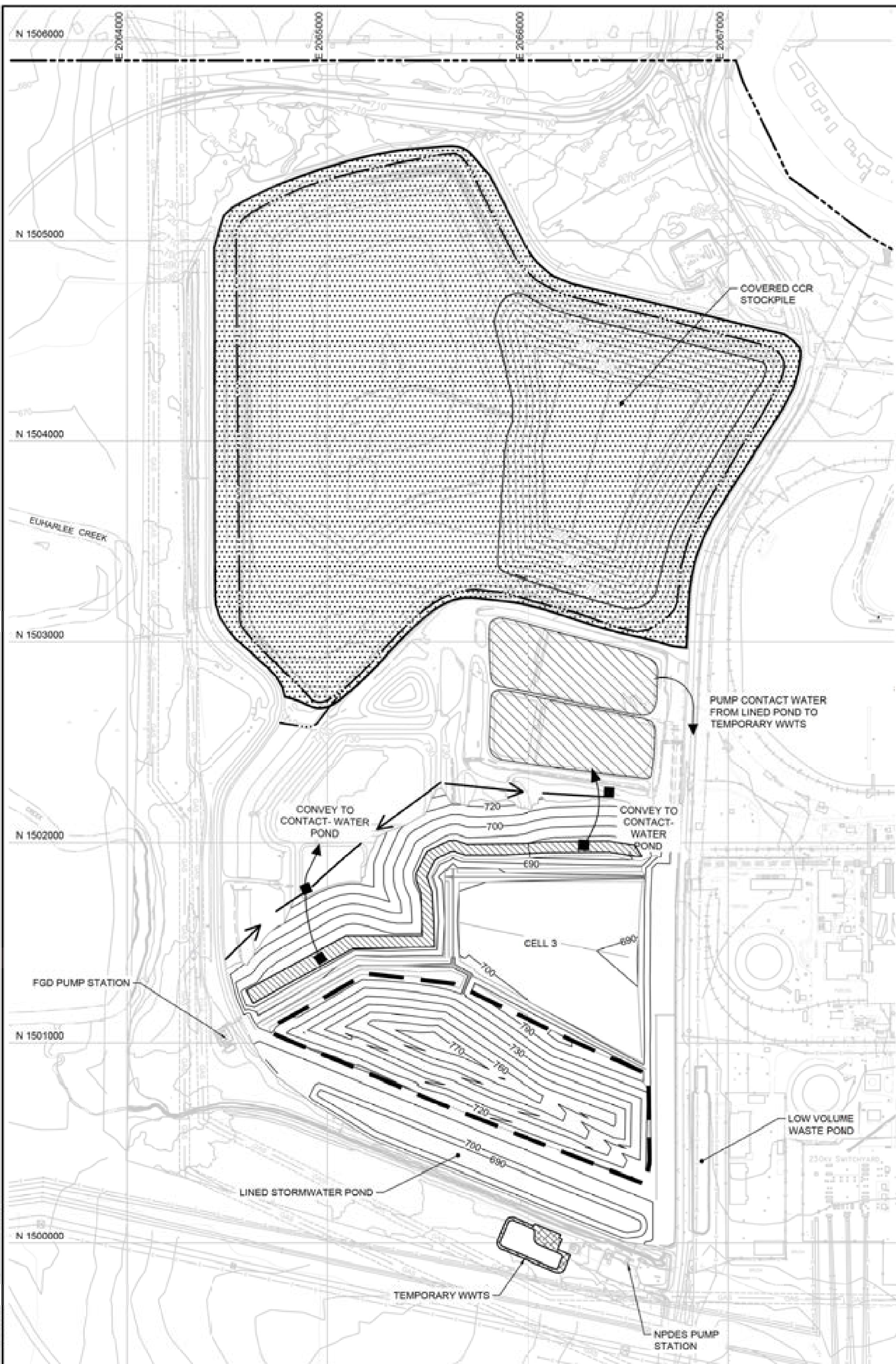
CLOSURE PHASING PLANS I

**PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

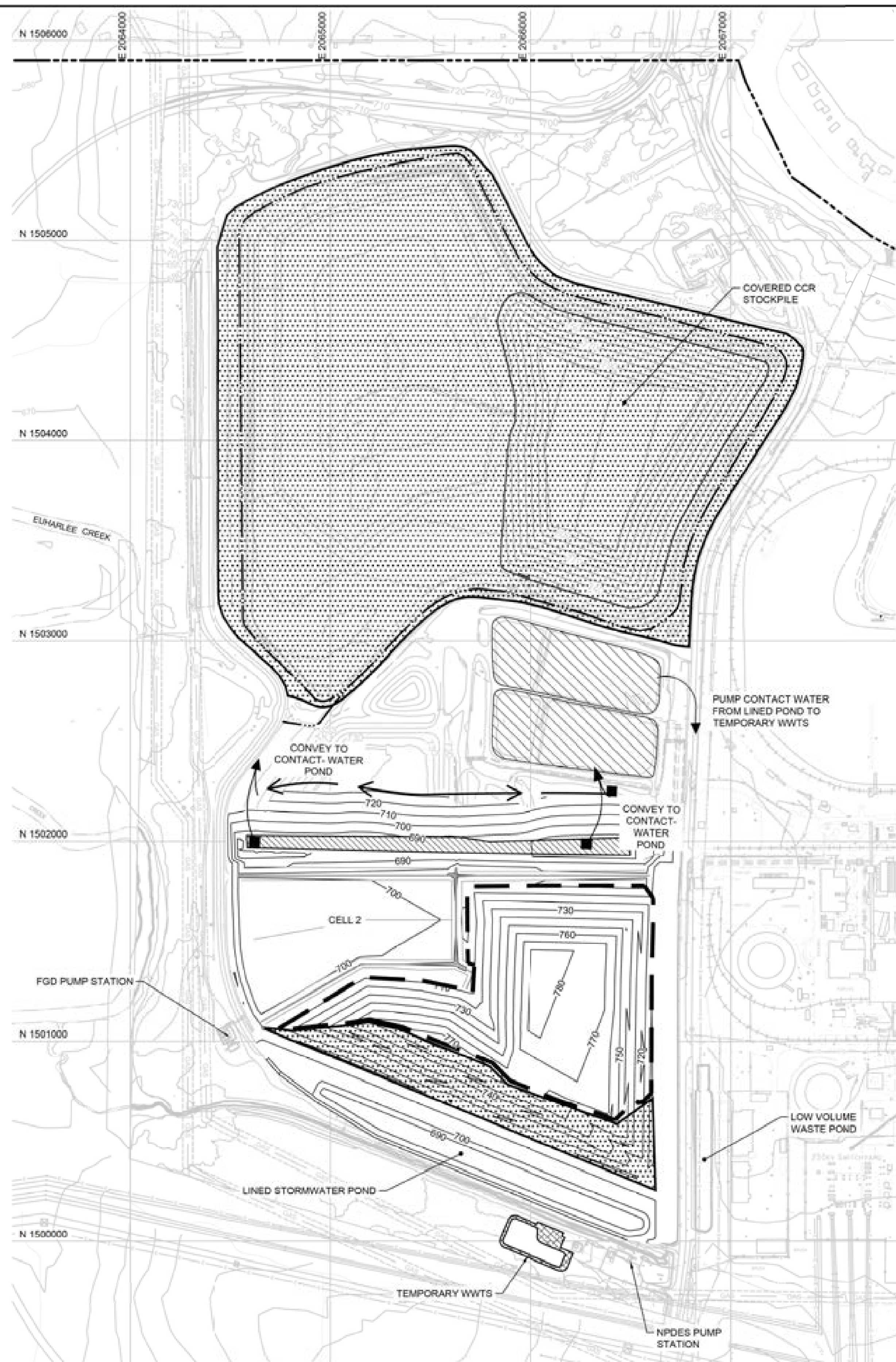
Geosyntec
consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200
DUNESBORO, GEORGIA 30144 USA
PHONE: 678.252.8650
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-020	EDIT	8/16/21
SCALE	1" = 350'	DRAWING 20 OF 50			
DATE	AUGUST 2021				



**PHASE 3
CELL 3 CONSTRUCTION AND
CELL 1 FILLING**

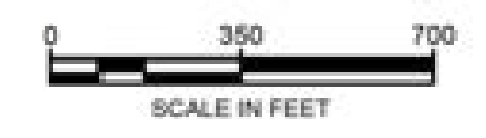


**PHASE 4
CELL 2 CONSTRUCTION AND
CELLS 1 & 3 FILLING**

LEGEND

- COVERED CCR (NON-CONTACT WATER)
- ACTIVE CCR PLACEMENT IN LINED CLOSURE AREA (NOTE 9)
- CONTACT-WATER COLLECTION / MANAGEMENT AREA (NOTE 7)
- LINED CONTACT-WATER POND
- TEMPORARY WWTS PAD
- CONTACT WATER DIVERSION
- STORMWATER (NON-CONTACT WATER) DIVERSION

- NOTES:**
- THIS PHASING APPROACH IS CONCEPTUAL, AND WILL BE REFINED DURING DETAILED DESIGN. IN ADDITION, CONTRACTOR WILL HAVE DISCRETION TO ADJUST PHASE BOUNDARIES AND SEQUENCE, STOCKPILE LOCATION(S), AND CONTACT-WATER COLLECTION / MANAGEMENT AREAS, BASED ON FIELD CONDITIONS ENCOUNTERED AND TO FACILITATE CONSTRUCTION, AS APPROVED BY GEORGIA POWER COMPANY, WITH REQUIREMENT THAT DESIGN CRITERIA INCLUDING THOSE RELATED TO STORMWATER AND CONTACT WATER MANAGEMENT, ARE MET.
 - STORMWATER AND CONTACT-WATER MANAGEMENT WILL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE "CLOSURE PLAN" (PART A, SECTION 7 OF THIS PERMIT APPLICATION). DESIGN CRITERIA AND EVALUATION OF CASES RELATED TO THE CLOSURE PHASES PRESENTED HEREIN ARE PROVIDED IN A CALCULATION PACKAGE FOR INTERIM STORMWATER MANAGEMENT CONDITIONS, INCLUDED IN THE "ENGINEERING REPORT" (PART B, SECTION 3 OF THIS PERMIT APPLICATION).
 - DURING CLOSURE CONSTRUCTION, CONTACT WATER WILL BE PUMPED OR CONVEYED BY GRAVITY TO LINED CONTACT-WATER PONDS WITHIN AP-1, WHERE IT WILL BE TEMPORARILY STORED AND THEN PUMPED TO AN ON-SITE TEMPORARY WASTEWATER TREATMENT SYSTEM (WWTS) OR OTHERWISE PROPERLY MANAGED IN ACCORDANCE WITH THE PLANT'S NPDES PERMIT REQUIREMENTS. NON-CONTACT STORMWATER WILL BE MANAGED IN ACCORDANCE WITH APPLICABLE EROSION AND SEDIMENT CONTROL FEATURES AND REQUIREMENTS PROVIDED IN THIS SET OF CLOSURE DRAWINGS, AND THEN DISCHARGED THROUGH EXISTING OR NEW STORMWATER PONDS TO RECEIVING WATER BODIES WITHOUT TREATMENT.
 - CONTRACTOR WILL BE REQUIRED TO TAKE REASONABLE MEASURES TO MINIMIZE STORMWATER RUN-ON INTO THE CONTACT-WATER COLLECTION / MANAGEMENT AREAS. MINIMIZATION TECHNIQUES MAY INCLUDE THE CONSTRUCTION OF TEMPORARY DIVERSION BERMS OR CHANNELS TO DIVERT STORMWATER AWAY FROM THE COLLECTION / MANAGEMENT AREAS.
 - COVER SYSTEM WILL BE TEMPORARILY TERMINATED AT CLOSURE INCREMENT PHASE BOUNDARIES AS SHOWN IN DETAILS 12 AND 13 ON DRAWING 29 FOR FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) AND ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER), RESPECTIVELY. CLOSURE INCREMENTS ARE APPROXIMATE FOR ILLUSTRATIVE PURPOSES, AND MAY BE ADJUSTED DURING CLOSURE.
 - TEMPORARY CCR STOCKPILE AREA(S) SHOWN ARE CONCEPTUAL AND THEIR LOCATIONS AND SIZES WILL BE REFINED DURING DETAILED DESIGN.
 - CONTACT-WATER COLLECTION / MANAGEMENT AREAS SHOWN ON THIS DRAWING MAY BE ADJUSTED OR SUPPLEMENTED DURING CONSTRUCTION AS NEEDED. CONTACT WATER WILL BE PROMPTLY TRANSFERRED TO THE LINED CONTACT-WATER POND TO MINIMIZE DURATION OF PONDING WITHIN AP-1 EXCAVATIONS.
 - TEMPORARY LINED STORMWATER PONDS (NON-CONTACT WATER) MAY BE UTILIZED DURING CONSTRUCTION AS NEEDED.
 - FOR PHASES WHERE COVERED CCR SHADING ENVOACHES ON ACTIVE CCR PLACEMENT, THIS INDICATES WHERE A TEMPORARY OR FINAL COVER SYSTEM INCREMENT MAY BE INSTALLED ONCE FINISHED WASTE GRADES ARE ACHIEVED FOR THAT PHASE.



GEORGIA
ENVIRONMENTAL PROTECTION DIVISION
Approved
Solid Waste Management Program
Approved By: Keith Stevens



Georgia Power
PERMIT DRAWING
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

CLOSURE PHASING PLANS 2

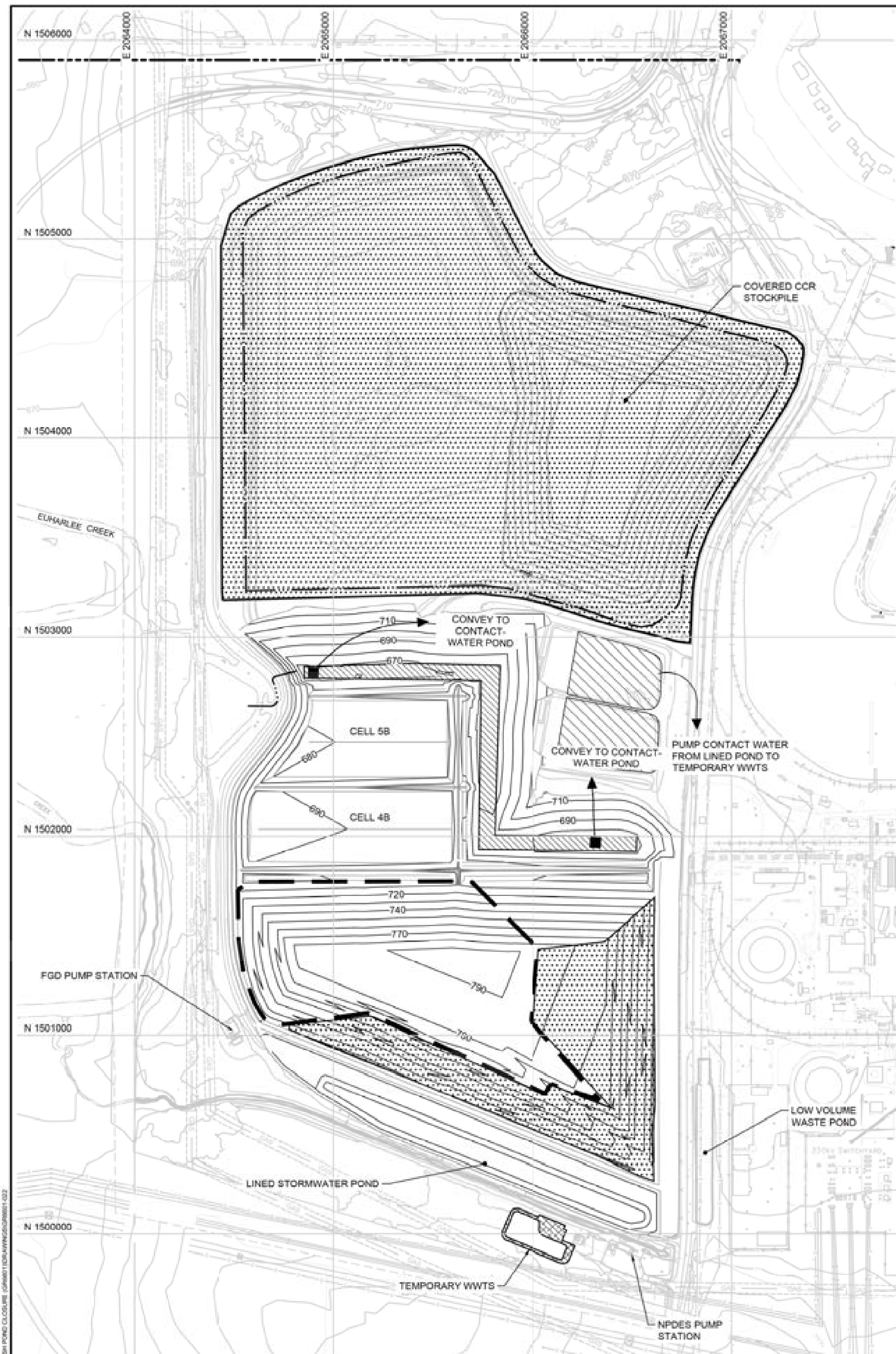
**PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

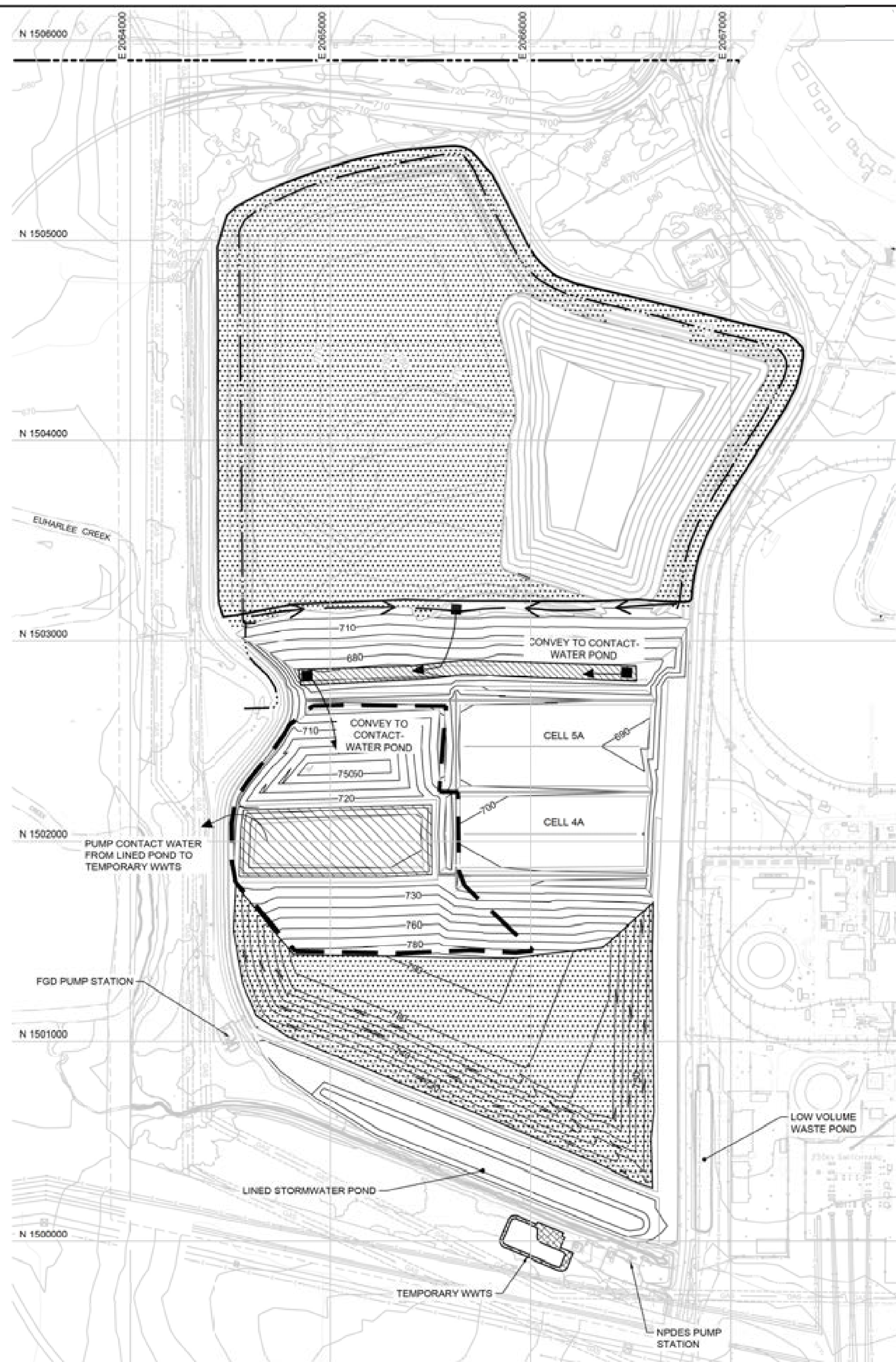
1295 ROBERTS BOULEVARD, NW, SUITE 200
DUNESBORO, GEORGIA 30144 USA
PHONE: 678.252.8650
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-021	EDIT	8/16/21
SCALE	1" = 350'				
DATE	AUGUST 2021				

DRAWING 21 OF 50



**PHASE 5
CELL 4B & 5B CONSTRUCTION AND
CELL 2 FILLING**

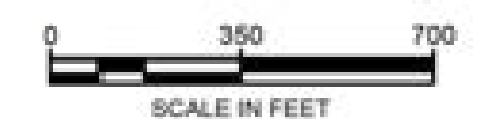


**PHASE 6
CELL 4A & 5A CONSTRUCTION AND
CELL 4B & 5B FILLING**

LEGEND

- COVERED CCR (NON-CONTACT WATER)
- ACTIVE CCR PLACEMENT IN LINED CLOSURE AREA (NOTE 9)
- CONTACT-WATER COLLECTION / MANAGEMENT AREA (NOTE 7)
- LINED CONTACT-WATER POND
- TEMPORARY WWTS PAD
- CONTACT WATER DIVERSION
- STORMWATER (NON-CONTACT WATER) DIVERSION

- NOTES:**
- THIS PHASING APPROACH IS CONCEPTUAL, AND WILL BE REFINED DURING DETAILED DESIGN. IN ADDITION, CONTRACTOR WILL HAVE DISCRETION TO ADJUST PHASE BOUNDARIES AND SEQUENCE, STOCKPILE LOCATION(S), AND CONTACT-WATER COLLECTION / MANAGEMENT AREAS, BASED ON FIELD CONDITIONS ENCOUNTERED AND TO FACILITATE CONSTRUCTION, AS APPROVED BY GEORGIA POWER COMPANY, WITH REQUIREMENT THAT DESIGN CRITERIA INCLUDING THOSE RELATED TO STORMWATER AND CONTACT WATER MANAGEMENT, ARE MET.
 - STORMWATER AND CONTACT-WATER MANAGEMENT WILL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE "CLOSURE PLAN" (PART A, SECTION 7 OF THIS PERMIT APPLICATION). DESIGN CRITERIA AND EVALUATION OF CASES RELATED TO THE CLOSURE PHASES PRESENTED HEREIN ARE PROVIDED IN A CALCULATION PACKAGE FOR INTERIM STORMWATER MANAGEMENT CONDITIONS, INCLUDED IN THE "ENGINEERING REPORT" (PART B, SECTION 3 OF THIS PERMIT APPLICATION).
 - DURING CLOSURE CONSTRUCTION, CONTACT WATER WILL BE PUMPED OR CONVEYED BY GRAVITY TO LINED CONTACT-WATER PONDS WITHIN AP-1, WHERE IT WILL BE TEMPORARILY STORED AND THEN PUMPED TO AN ON-SITE TEMPORARY WASTEWATER TREATMENT SYSTEM (WWTS) OR OTHERWISE PROPERLY MANAGED IN ACCORDANCE WITH THE PLANT'S NPDES PERMIT REQUIREMENTS. NON-CONTACT STORMWATER WILL BE MANAGED IN ACCORDANCE WITH APPLICABLE EROSION AND SEDIMENT CONTROL FEATURES AND REQUIREMENTS PROVIDED IN THIS SET OF CLOSURE DRAWINGS, AND THEN DISCHARGED THROUGH EXISTING OR NEW STORMWATER PONDS TO RECEIVING WATER BODIES WITHOUT TREATMENT.
 - CONTRACTOR WILL BE REQUIRED TO TAKE REASONABLE MEASURES TO MINIMIZE STORMWATER RUN-ON INTO THE CONTACT-WATER COLLECTION / MANAGEMENT AREAS. MINIMIZATION TECHNIQUES MAY INCLUDE THE CONSTRUCTION OF TEMPORARY DIVERSION BERMS OR CHANNELS TO DIVERT STORMWATER AWAY FROM THE COLLECTION / MANAGEMENT AREAS.
 - COVER SYSTEM WILL BE TEMPORARILY TERMINATED AT CLOSURE INCREMENT PHASE BOUNDARIES AS SHOWN IN DETAILS 12 AND 13 ON DRAWING 29 FOR FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) AND ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER), RESPECTIVELY. CLOSURE INCREMENTS ARE APPROXIMATE FOR ILLUSTRATIVE PURPOSES, AND MAY BE ADJUSTED DURING CLOSURE.
 - TEMPORARY CCR STOCKPILE AREA(S) SHOWN ARE CONCEPTUAL AND THEIR LOCATIONS AND SIZES WILL BE REFINED DURING DETAILED DESIGN.
 - CONTACT-WATER COLLECTION / MANAGEMENT AREAS SHOWN ON THIS DRAWING MAY BE ADJUSTED OR SUPPLEMENTED DURING CONSTRUCTION AS NEEDED. CONTACT WATER WILL BE PROMPTLY TRANSFERRED TO THE LINED CONTACT-WATER POND TO MINIMIZE DURATION OF PONDING WITHIN AP-1 EXCAVATIONS.
 - TEMPORARY LINED STORMWATER PONDS (NON-CONTACT WATER) MAY BE UTILIZED DURING CONSTRUCTION AS NEEDED.
 - FOR PHASES WHERE COVERED CCR SHADING ENVOACHES ON ACTIVE CCR PLACEMENT, THIS INDICATES WHERE A TEMPORARY OR FINAL COVER SYSTEM INCREMENT MAY BE INSTALLED ONCE FINISHED WASTE GRADES ARE ACHIEVED FOR THAT PHASE.



GEORGIA
DEPARTMENT OF NATURAL RESOURCES
Environmental Protection Division
Approved
Solid Waste Management Program
Approved By: Keith Stevens
Date: 2021.08.27 11:28:45
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REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

CLOSURE PHASING PLANS 3

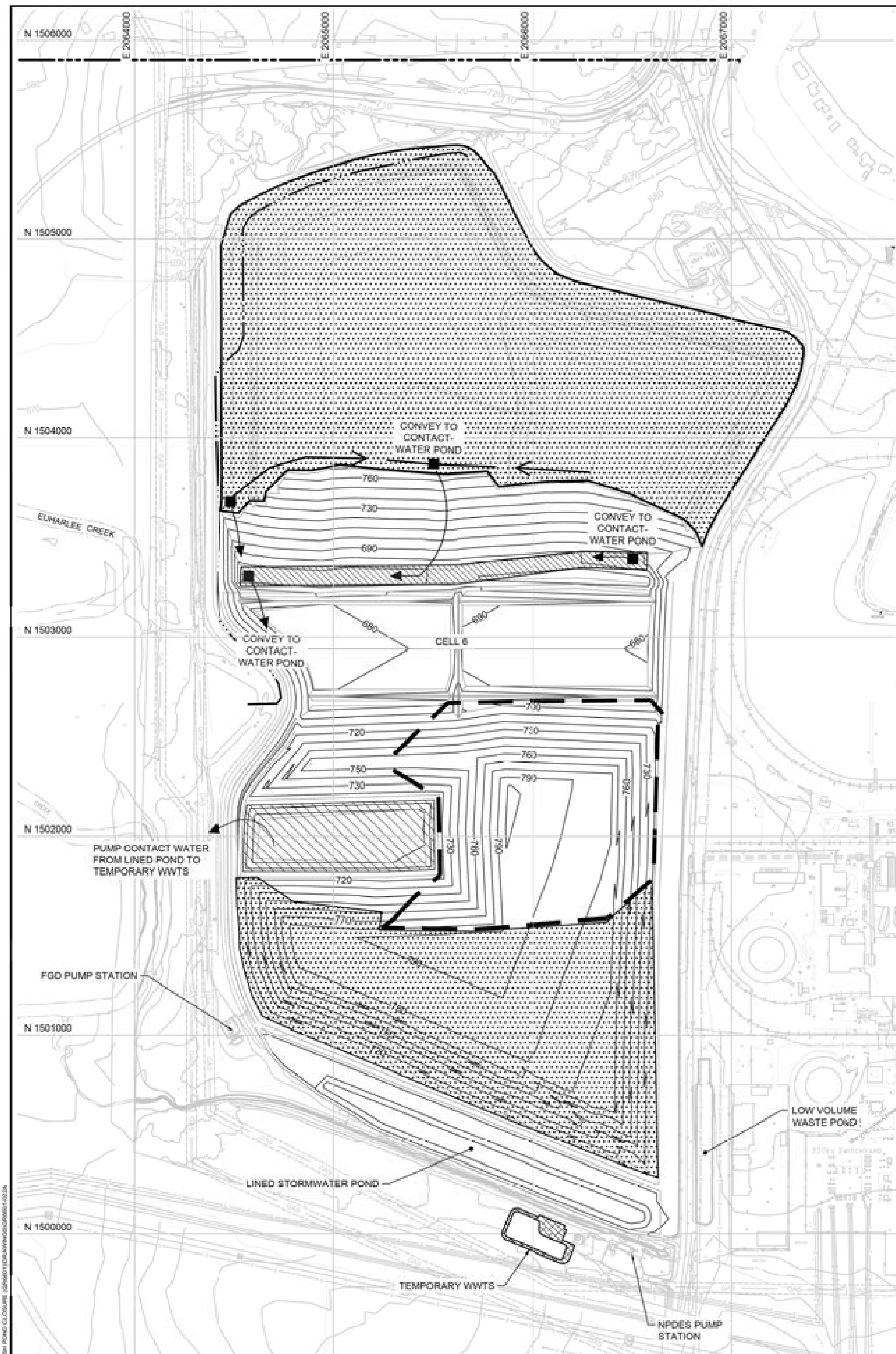
**PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

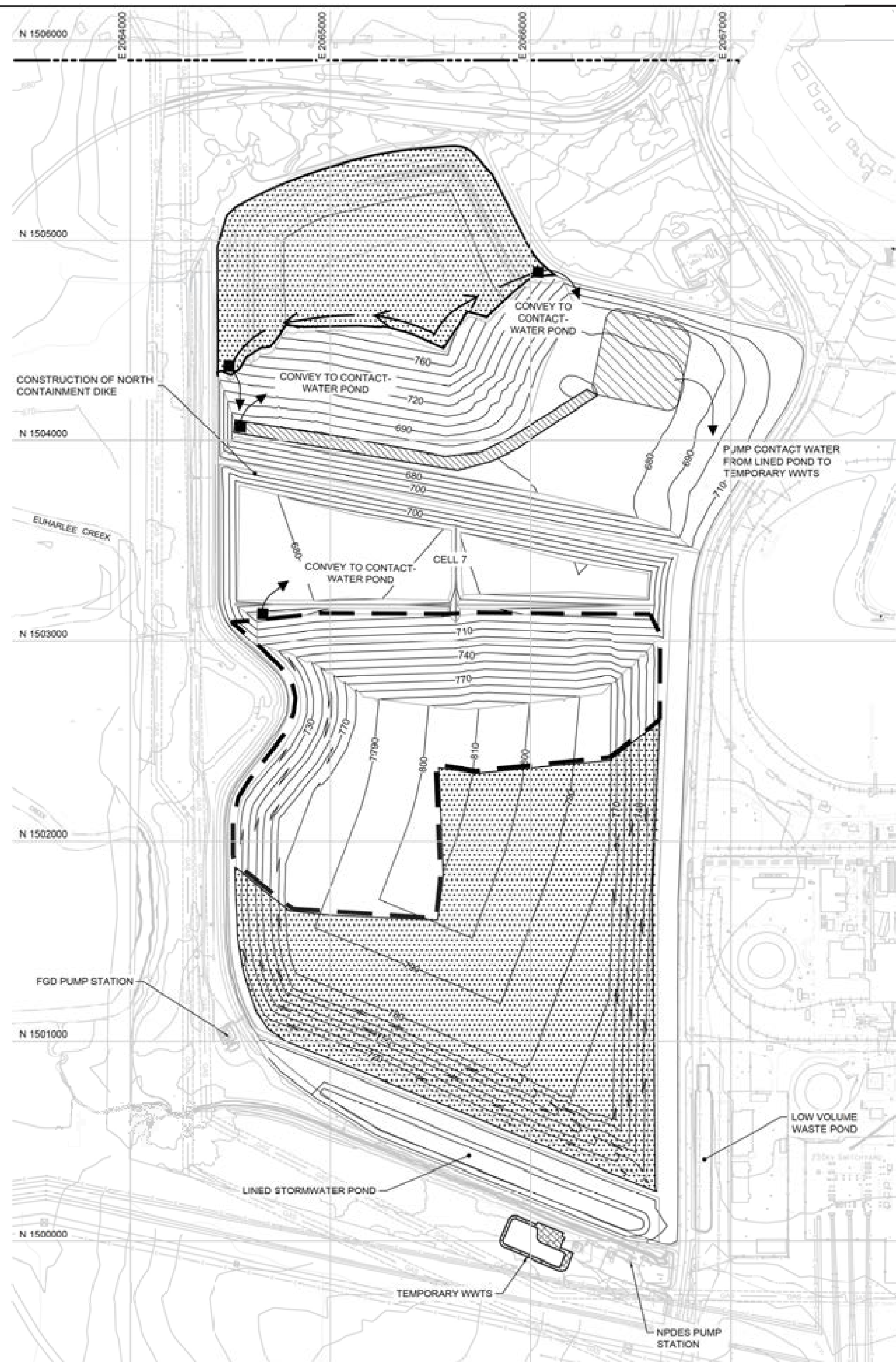
1295 ROBERTS BOULEVARD, NW, SUITE 200
DUNESBORO, GEORGIA 30144 USA
PHONE: 678.252.8650
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PROJ. NO.	GR6601	DWG.	GR6601-022	EDIT	8/16/21
SCALE	1" = 350'				
DATE	AUGUST 2021				

DRAWING 22 OF 50



PHASE 7
CELL 6 CONSTRUCTION AND CELL
4A & 5A FILLING

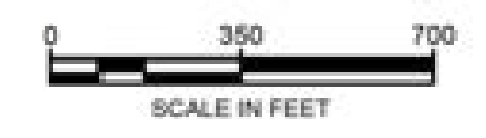


PHASE 8
CELL 7 CONSTRUCTION AND CELL
6 FILLING

LEGEND

- COVERED CCR (NON-CONTACT WATER)
- ACTIVE CCR PLACEMENT IN LINED CLOSURE AREA (NOTE 9)
- CONTACT-WATER COLLECTION / MANAGEMENT AREA (NOTE 7)
- LINED CONTACT-WATER POND
- TEMPORARY WWTS PAD
- CONTACT WATER DIVERSION
- STORMWATER (NON-CONTACT WATER) DIVERSION

- NOTES:**
1. THIS PHASING APPROACH IS CONCEPTUAL, AND WILL BE REFINED DURING DETAILED DESIGN. IN ADDITION, CONTRACTOR WILL HAVE DISCRETION TO ADJUST PHASE BOUNDARIES AND SEQUENCE, STOCKPILE LOCATION(S), AND CONTACT-WATER COLLECTION / MANAGEMENT AREAS, BASED ON FIELD CONDITIONS ENCOUNTERED AND TO FACILITATE CONSTRUCTION, AS APPROVED BY GEORGIA POWER COMPANY, WITH REQUIREMENT THAT DESIGN CRITERIA INCLUDING THOSE RELATED TO STORMWATER AND CONTACT-WATER MANAGEMENT, ARE MET.
 2. STORMWATER AND CONTACT-WATER MANAGEMENT WILL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE 'CLOSURE PLAN' (PART A, SECTION 7 OF THIS PERMIT APPLICATION). DESIGN CRITERIA AND EVALUATION OF CASES RELATED TO THE CLOSURE PHASES PRESENTED HEREIN ARE PROVIDED IN A CALCULATION PACKAGE FOR INTERIM STORMWATER MANAGEMENT CONDITIONS, INCLUDED IN THE 'ENGINEERING REPORT' (PART B, SECTION 3 OF THIS PERMIT APPLICATION).
 3. DURING CLOSURE CONSTRUCTION, CONTACT WATER WILL BE PUMPED OR CONVEYED BY GRAVITY TO LINED CONTACT-WATER PONDS WITHIN AP-1, WHERE IT WILL BE TEMPORARILY STORED AND THEN PUMPED TO AN ON-SITE TEMPORARY WASTEWATER TREATMENT SYSTEM (WWTS) OR OTHERWISE PROPERLY MANAGED IN ACCORDANCE WITH THE PLANT'S NPDES PERMIT REQUIREMENTS. NON-CONTACT STORMWATER WILL BE MANAGED IN ACCORDANCE WITH APPLICABLE EROSION AND SEDIMENT CONTROL FEATURES AND REQUIREMENTS PROVIDED IN THIS SET OF CLOSURE DRAWINGS, AND THEN DISCHARGED THROUGH EXISTING OR NEW STORMWATER PONDS TO RECEIVING WATER BODIES WITHOUT TREATMENT.
 4. CONTRACTOR WILL BE REQUIRED TO TAKE REASONABLE MEASURES TO MINIMIZE STORMWATER RUN-ON INTO THE CONTACT-WATER COLLECTION / MANAGEMENT AREAS. MINIMIZATION TECHNIQUES MAY INCLUDE THE CONSTRUCTION OF TEMPORARY DIVERSION BERMS OR CHANNELS TO DIVERT STORMWATER AWAY FROM THE COLLECTION / MANAGEMENT AREAS.
 5. COVER SYSTEM WILL BE TEMPORARILY TERMINATED AT CLOSURE INCREMENT PHASE BOUNDARIES AS SHOWN IN DETAILS 12 AND 13 ON DRAWING 29 FOR FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) AND ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER), RESPECTIVELY. CLOSURE INCREMENTS ARE APPROXIMATE FOR ILLUSTRATIVE PURPOSES, AND MAY BE ADJUSTED DURING CLOSURE.
 6. CONTACT-WATER COLLECTION / MANAGEMENT AREAS SHOWN ON THIS DRAWING MAY BE ADJUSTED OR SUPPLEMENTED DURING CONSTRUCTION AS NEEDED. CONTACT WATER WILL BE PROMPTLY TRANSFERRED TO THE LINED CONTACT-WATER POND TO MINIMIZE DURATION OF PONDING WITHIN AP-1 EXCAVATIONS.
 7. TEMPORARY LINED STORMWATER PONDS (NON-CONTACT WATER) MAY BE UTILIZED DURING CONSTRUCTION AS NEEDED.
 8. FOR PHASES WHERE COVERED CCR SHADING ENCROACHES ON ACTIVE CCR PLACEMENT, THIS INDICATES WHERE A TEMPORARY OR FINAL COVER SYSTEM INCREMENT MAY BE INSTALLED ONCE FINISHED WASTE GRADES ARE ACHIEVED FOR THAT PHASE.



GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Approved
Solid Waste Management Program

Approved By: Keith Stevens



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CLOSURE PHASING PLANS 4

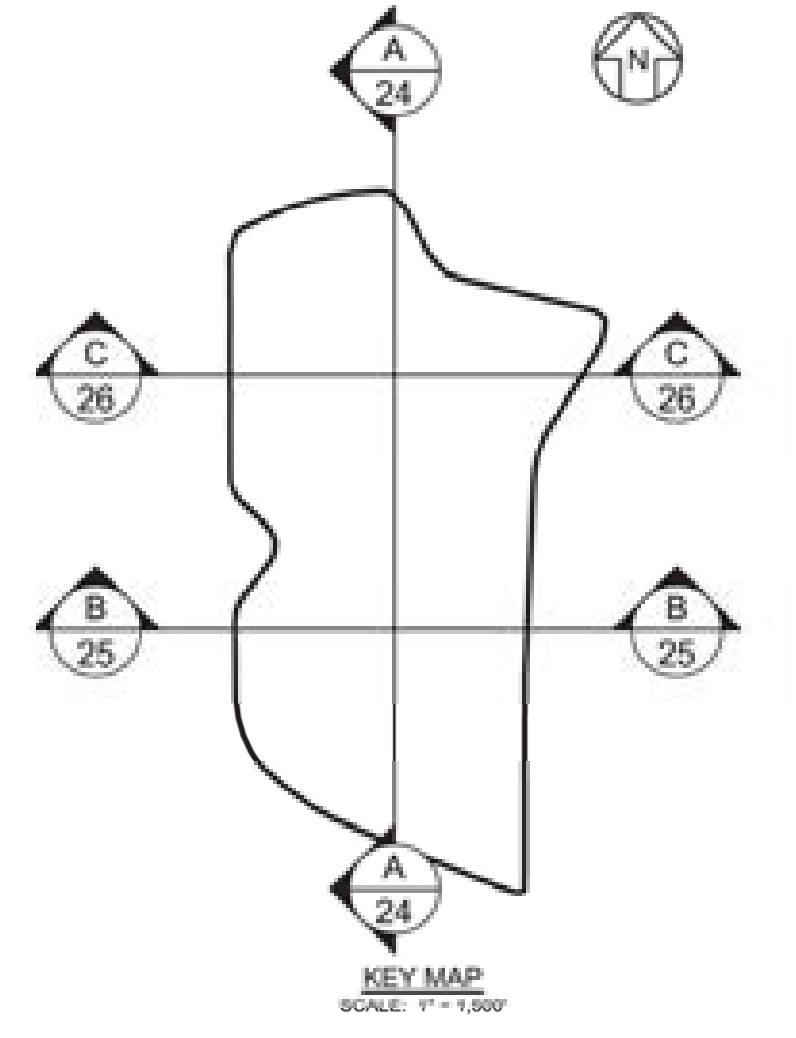
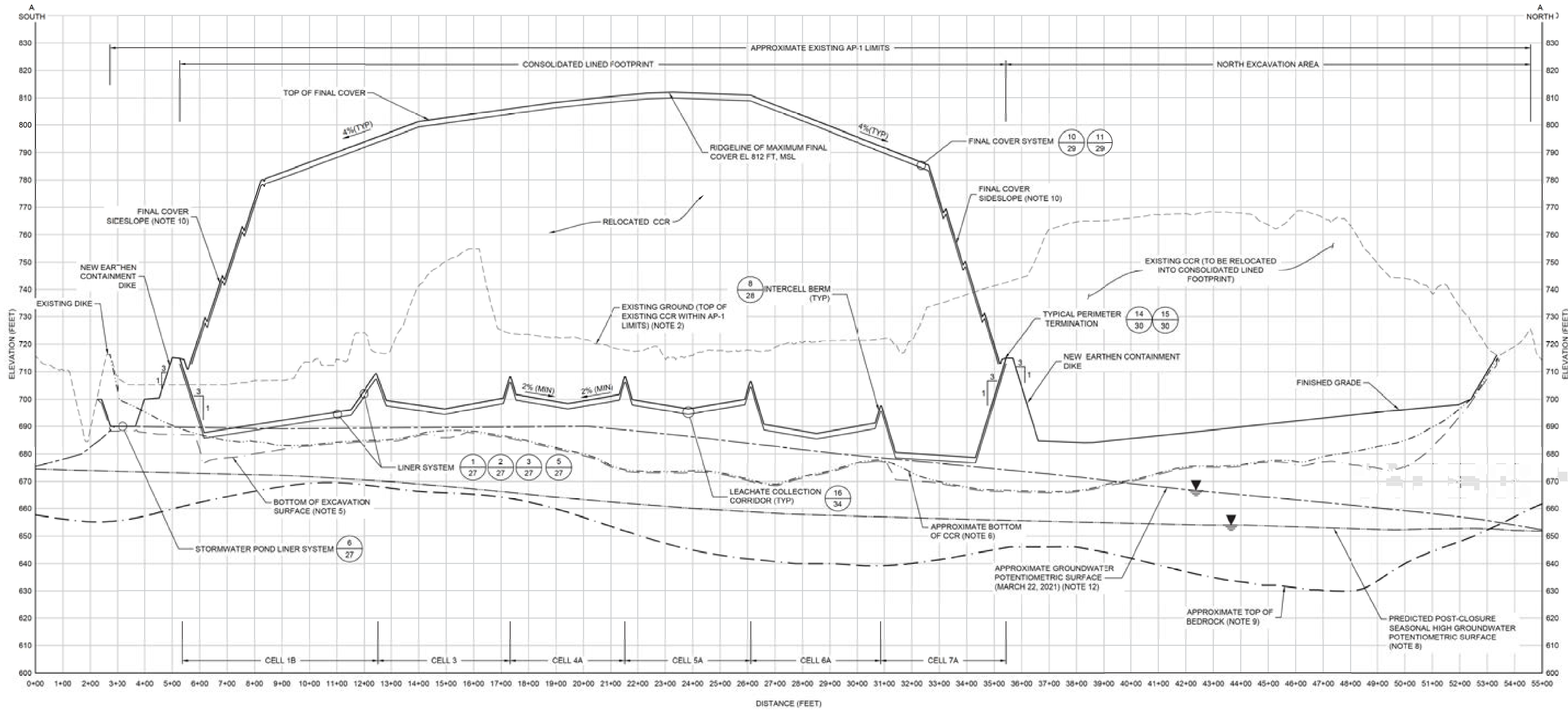
PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

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DRAWING 23 OF 50



- NOTES:
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - EXISTING GROUND SHOWN ON THIS DRAWING IS TAKEN FROM THE TOPOGRAPHIC BASE MAP SHOWN ON DRAWING 4.
 - TOP OF LINER (GEOMEMBRANE COMPONENT OF THE LINER SYSTEM) SHOWN ON THIS DRAWING IS TAKEN FROM DRAWING 11.
 - TOP OF FINAL COVER AND FINISHED GRADES BEYOND THE CONSOLIDATED LINED FOOTPRINT LIMITS SHOWN ON THIS DRAWING ARE TAKEN FROM DRAWING 17.
 - EXCAVATION SURFACE ELEVATION REPRESENTS A MINIMUM EXCAVATION DEPTH. IS APPROXIMATE, AND IS TAKEN FROM DRAWING 8.
 - APPROXIMATE BOTTOM OF CCR SHOWN ON THIS DRAWING IS TAKEN FROM DRAWING 6.
 - TOP OF FINAL COVER SURFACE (AND MAXIMUM ELEVATION) IS BASED ON THE SOIL-GEOSYNTHETIC COVER SYSTEM ALTERNATIVE.
 - PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE SHOWN ON THIS DRAWING OBTAINED FROM GROUNDWATER FLOW MODELING RESULTS AS DOCUMENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION AND SHOWN ON DRAWINGS 11 THROUGH 13.
 - TOP OF BEDROCK SURFACE IS APPROXIMATE AND WAS DEVELOPED BY GEOSYNTEC CONSULTANTS USING AVAILABLE SUBSURFACE INFORMATION FROM PREVIOUS SITE INVESTIGATIONS.
 - TOP OF FINAL COVER DESIGN GRADES ARE SLOPED AT NO STEEPER THAN 3H:1V ON LANDFILL SIDESLOPES BETWEEN DRAINAGE BENCHES, AND AT A MINIMUM OF FOUR (4) PERCENT ON THE LANDFILL TOP AREAS. SLOPES AND FINAL COVER SYSTEM LAYER THICKNESS MAY APPEAR DISTORTED ON THESE CROSS SECTIONS DUE TO THE EXAGGERATED VERTICAL SCALE AND SKEWED ANGLE AT WHICH THESE SECTIONS WERE CUT COMPARED TO THE THREE-DIMENSIONAL TRUE SLOPE DIRECTIONS.
 - LINER DESIGN GRADES ARE SLOPED AT NO STEEPER THAN 3H:1V ON DIKE AND INTERCELL BERM LINER SIDESLOPES, AND AT A MINIMUM OF TWO (2) PERCENT TOWARDS THE LEACHATE COLLECTION CORRIDORS ON THE CELL FLOOR AREAS. LEACHATE COLLECTION CORRIDORS ARE SLOPED AT A MINIMUM OF ONE (1) PERCENT TOWARDS THE SUMPS. SLOPES AND LAYER THICKNESS MAY APPEAR DISTORTED ON THESE CROSS SECTIONS DUE TO THE EXAGGERATED VERTICAL SCALE AND SKEWED ANGLE AT WHICH THESE SECTIONS WERE CUT COMPARED TO THE THREE-DIMENSIONAL TRUE SLOPE DIRECTIONS.
 - APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE IS FROM WATER LEVEL MEASUREMENTS DATED 22 MARCH 2021 IN WELLS/PIEZOMETERS SCREENED IN BEDROCK AS PRESENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION. THE MARCH 2021 POTENTIOMETRIC SURFACE IS HIGHER THAN THAT ASSOCIATED WITH THE DEWATERED AND CLOSED CONDITION WITHIN AP-1, AS REFLECTED IN NOTE 8.

A
11 SECTION
NORTH-SOUTH CROSS SECTION
SCALE: 1"=200' (HORIZONTAL); 1"=20' (VERTICAL)

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0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

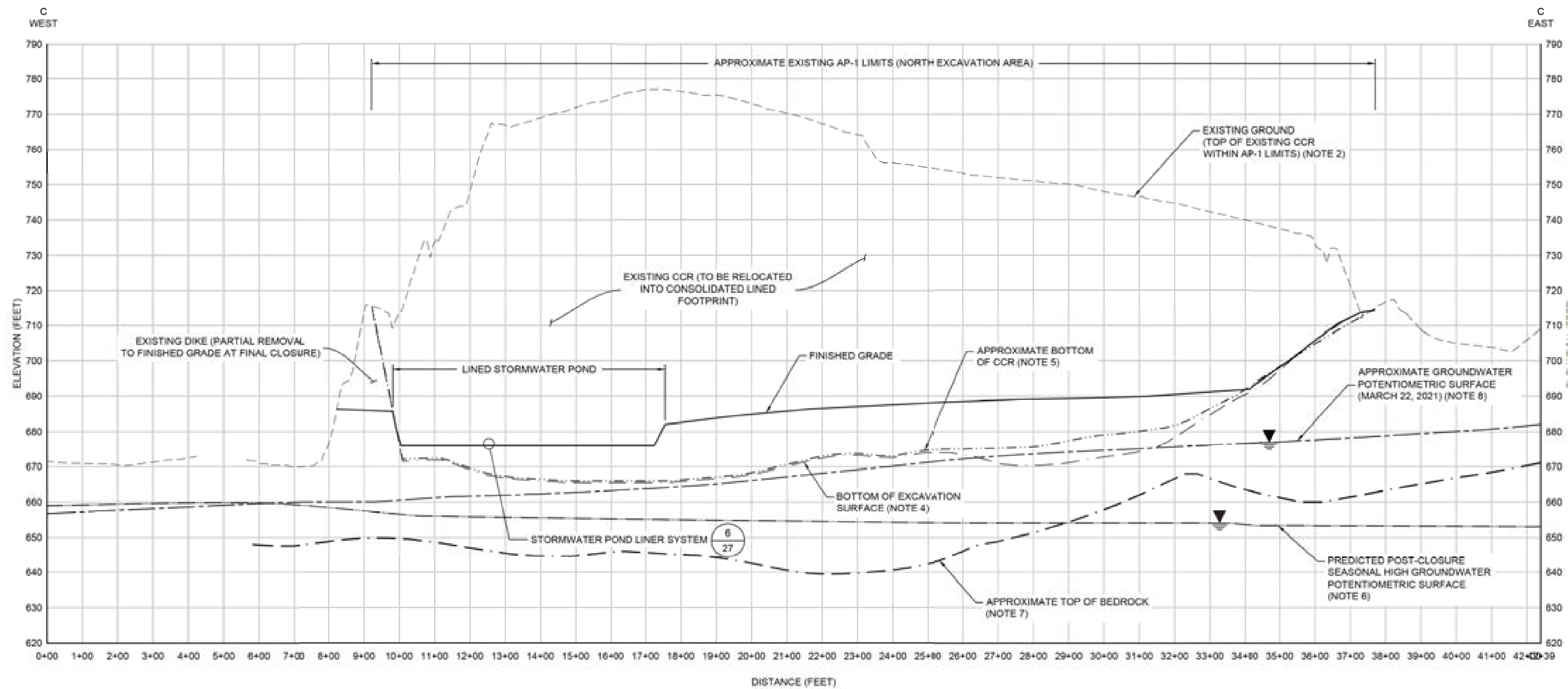
SITE CROSS SECTIONS I

**PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

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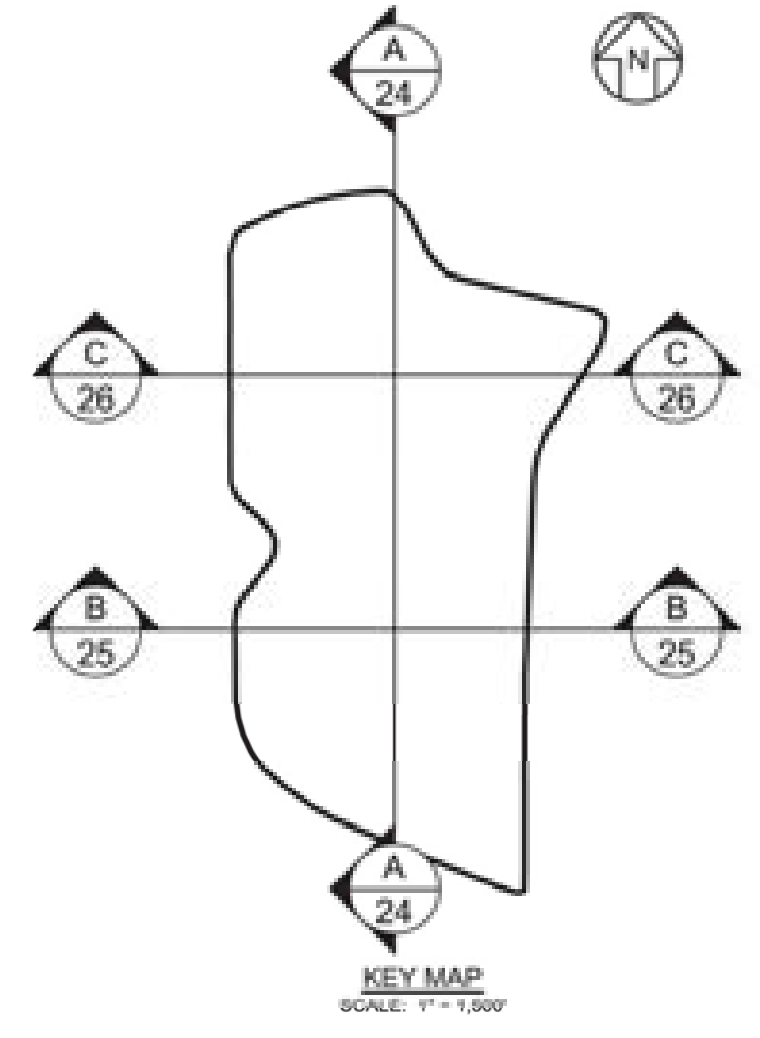
PROJ. NO.	GR6601	DWG.	GR6601-023	EDIT	8/16/21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING 24 OF 50			



C
11
SECTION
EAST-WEST CROSS SECTION
SCALE: 1"=200' (HORIZONTAL); 1"=20' (VERTICAL)

NOTES:

1. SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
2. EXISTING GROUND SHOWN ON THIS DRAWING IS TAKEN FROM THE TOPOGRAPHIC BASE MAP SHOWN ON DRAWING 4.
3. THE CONSOLIDATED LINED FOOTPRINT LIMITS SHOWN ON THIS DRAWING ARE TAKEN FROM DRAWING 17.
4. EXCAVATION SURFACE ELEVATION REPRESENTS A MINIMUM EXCAVATION DEPTH, IS APPROXIMATE, AND IS TAKEN FROM DRAWING 8.
5. APPROXIMATE BOTTOM OF CCR SHOWN ON THIS DRAWING IS TAKEN FROM DRAWING 6.
6. PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE SHOWN ON THIS DRAWING OBTAINED FROM GROUNDWATER FLOW MODELING RESULTS AS DOCUMENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION AND SHOWN ON DRAWINGS 11 THROUGH 13.
7. TOP OF BEDROCK SURFACE IS APPROXIMATE AND WAS DEVELOPED BY GEOSYNTEC CONSULTANTS USING AVAILABLE SUBSURFACE INFORMATION FROM PREVIOUS SITE INVESTIGATIONS.
8. APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE IS FROM WATER LEVEL MEASUREMENTS DATED 22 MARCH 2021 IN WELLS/PIEZOMETERS SCREENED IN BEDROCK AS PRESENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION. THE MARCH 2021 POTENTIOMETRIC SURFACE IS HIGHER THAN THAT ASSOCIATED WITH THE DEWATERED AND CLOSED CONDITION WITHIN AP-1, AS REFLECTED IN NOTE 6.



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SITE CROSS SECTIONS III

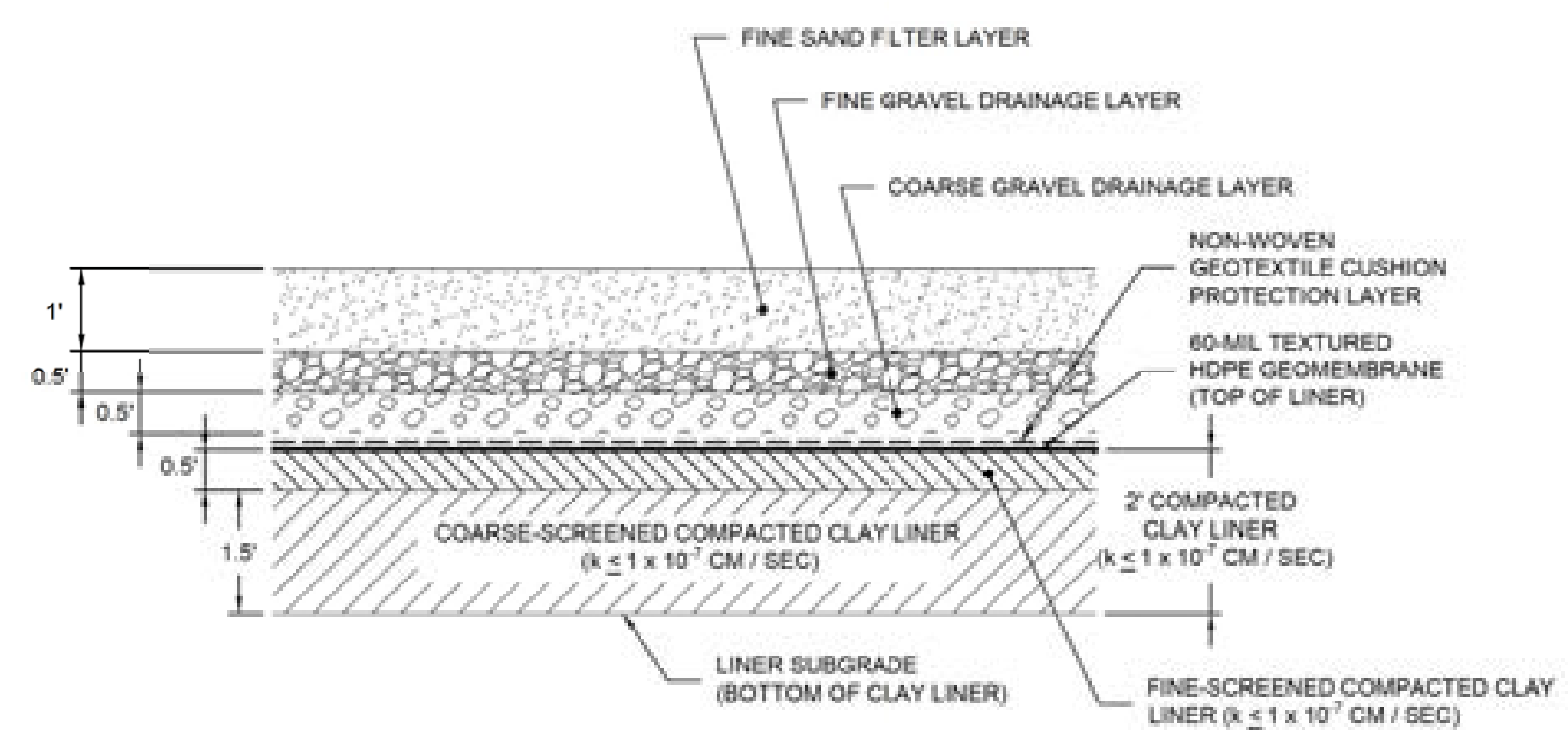
**PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

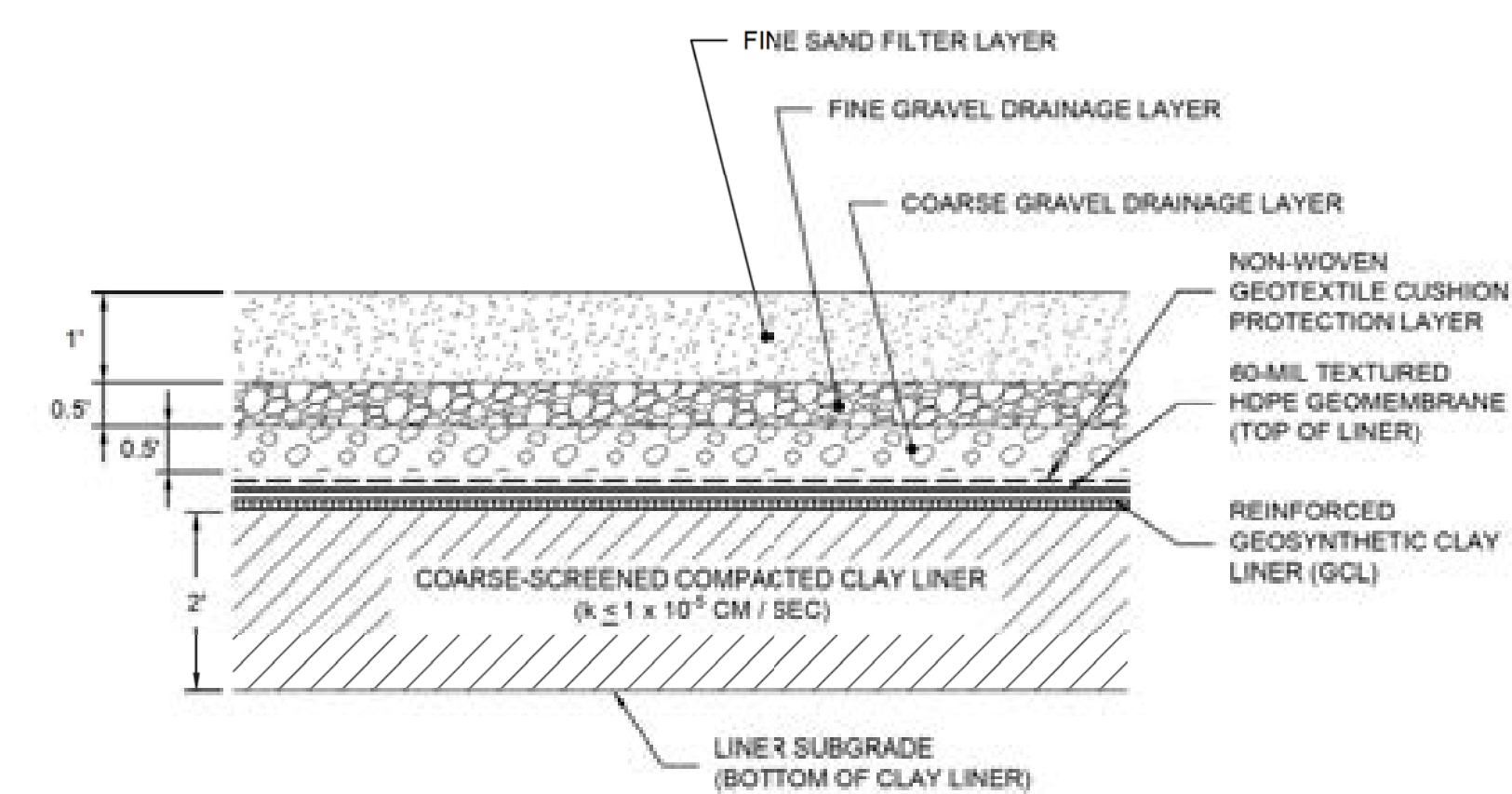
1295 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.252.8600
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SCALE	AS SHOWN				
DATE	AUGUST 2021				

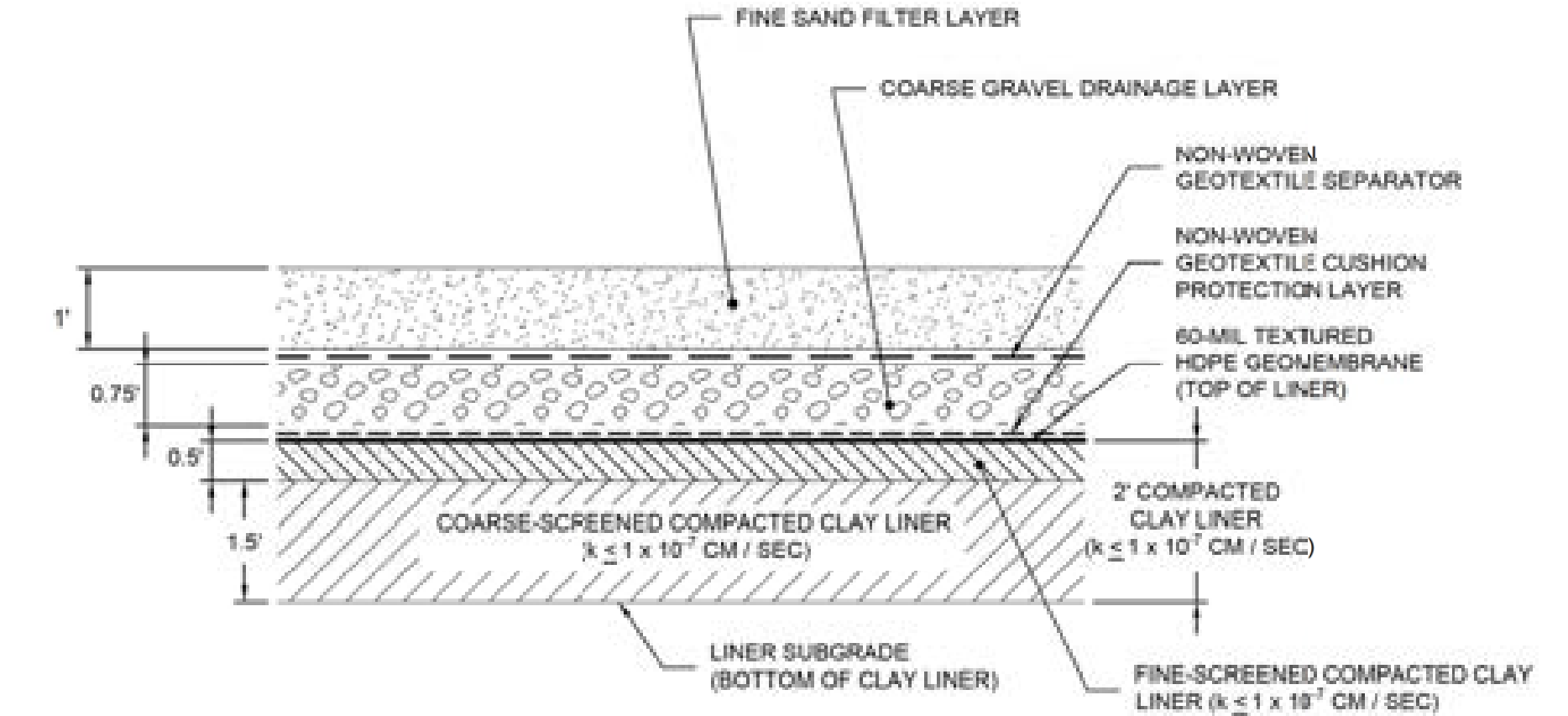
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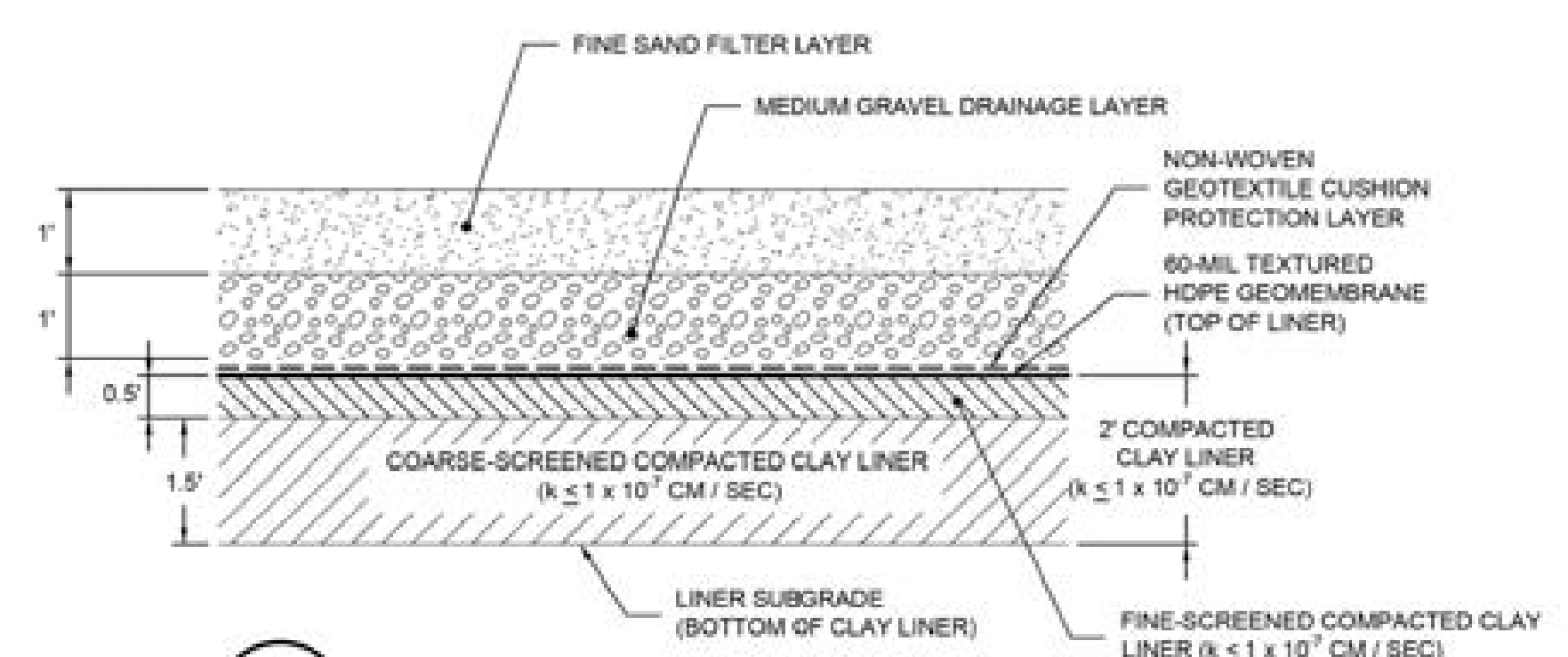
1
24 **DETAIL**
LINER SYSTEM OPTION L1 D1



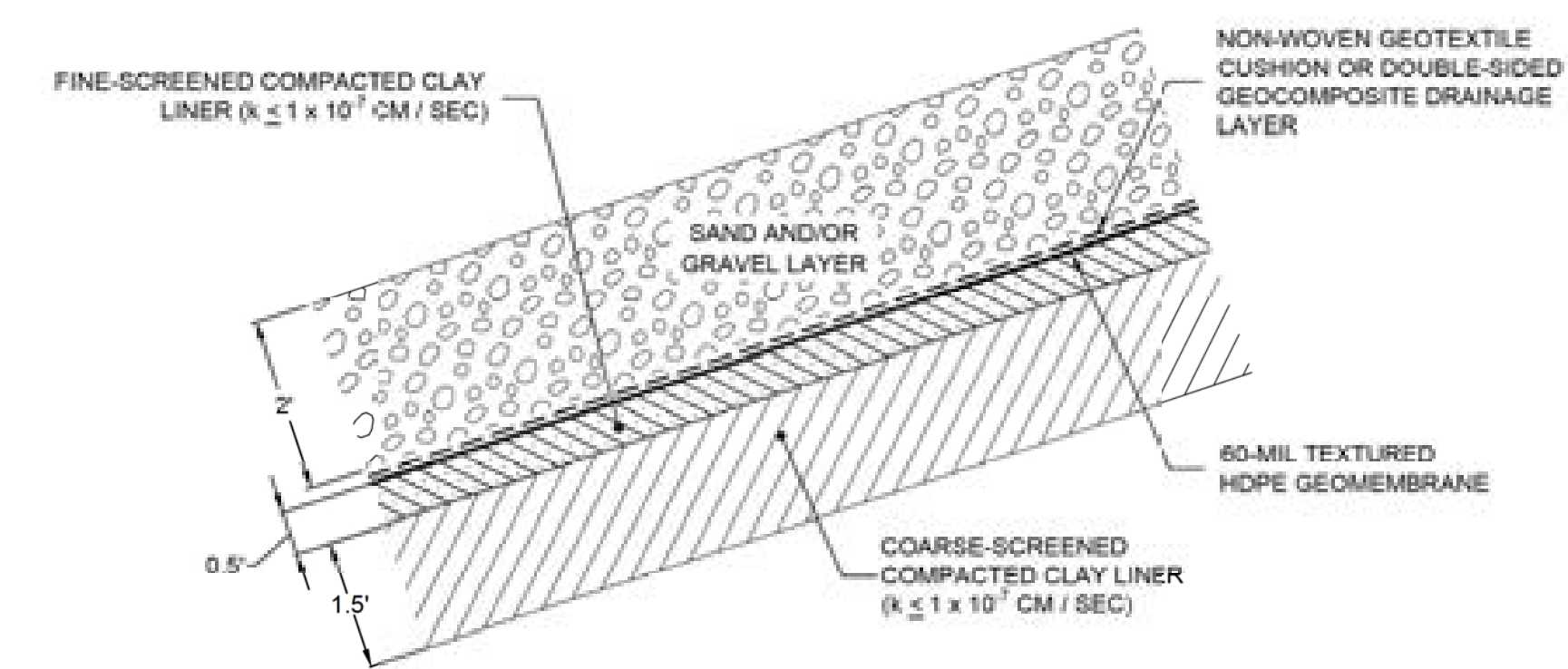
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24 **DETAIL**
LINER SYSTEM OPTION L2



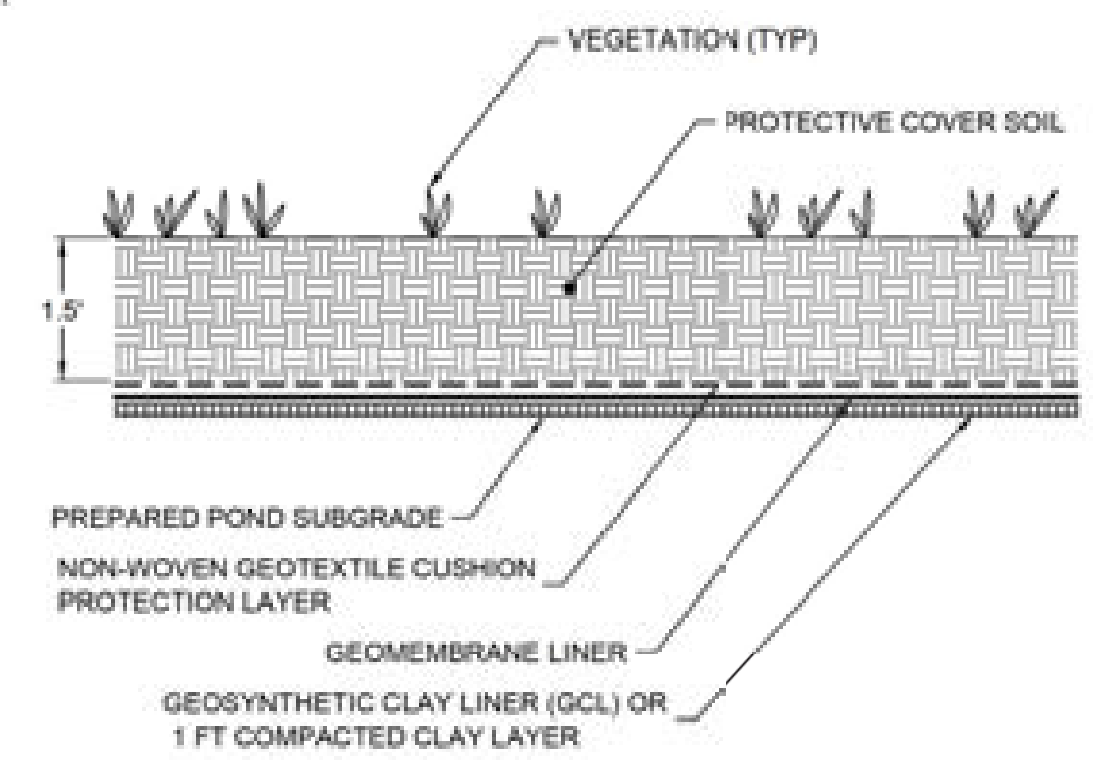
3
24 **DETAIL**
DRAINAGE SYSTEM OPTION D2



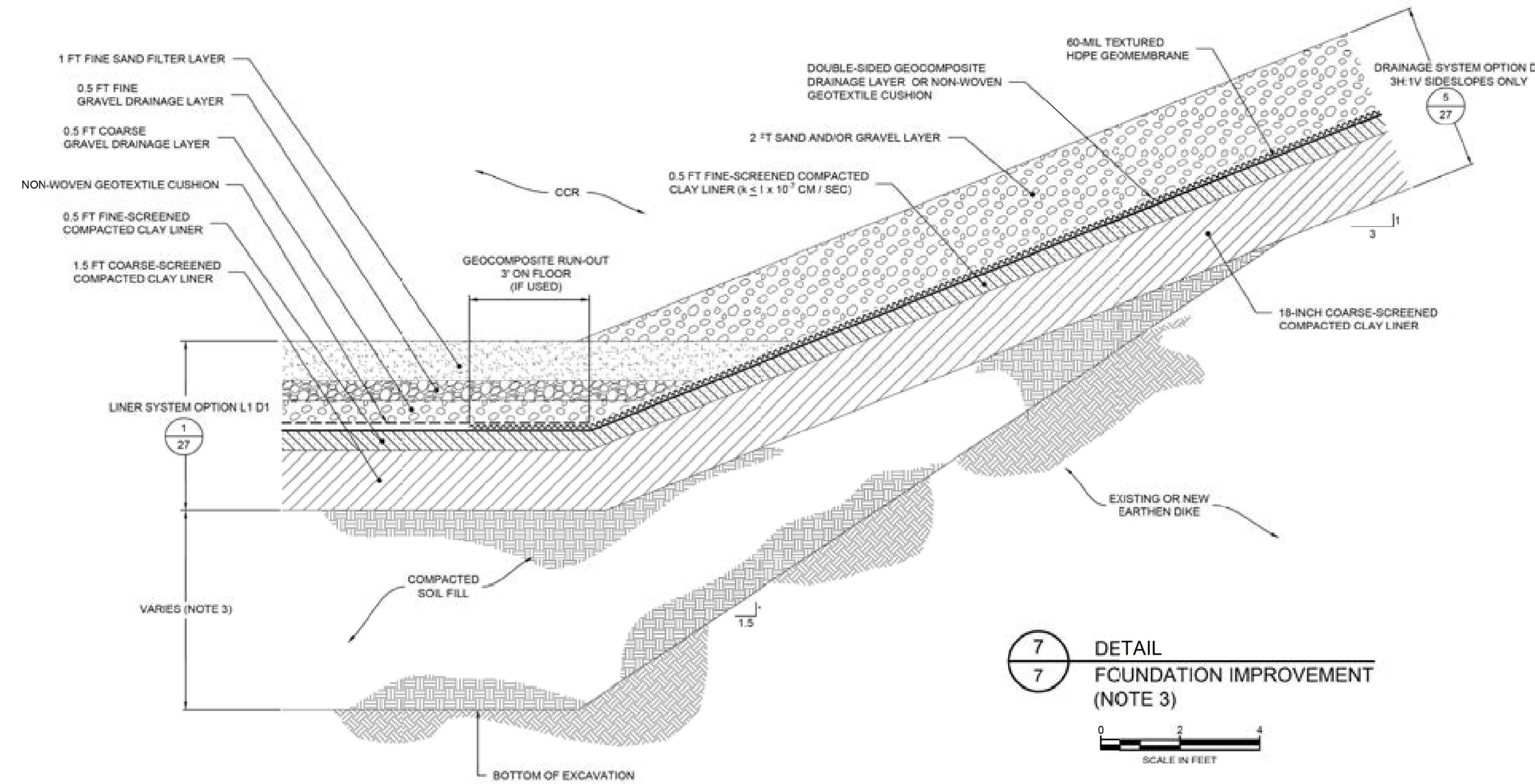
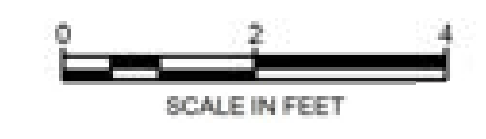
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27 **DETAIL**
DRAINAGE SYSTEM OPTION D3



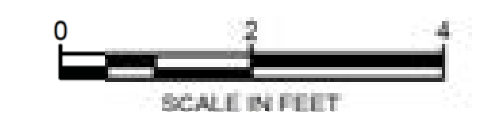
5
24 **DETAIL**
DRAINAGE SYSTEM OPTION D4
3H:1V SIDESLOPES ONLY



6
24 **DETAIL**
STORMWATER POND LINER SYSTEM



7
7 **DETAIL**
FOUNDATION IMPROVEMENT
(NOTE 3)



- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. ADDITIONAL ACCEPTABLE LINER SYSTEMS WOULD COMBINE THE OPTION L2 (DETAIL 2) COMPOSITE LINER WITH THE OPTION D2 (DETAIL 3) OR D3 (DETAIL 4) LEACHATE COLLECTION SYSTEMS.
 3. FOUNDATION IMPROVEMENT FOR CONSOLIDATED LINED AREAS WILL BE PERFORMED IN ACCORDANCE WITH THE "FOUNDATION IMPROVEMENT PLAN" INCLUDED WITH THIS PERMIT APPLICATION. THICKNESS OF COMPACTED SOIL FILL ZONE BENEATH FLOOR LINER AREAS IS A MINIMUM OF 8 FT THICK AND VARIES AS NEEDED TO FILL BETWEEN THE BOTTOM EXCAVATION (DRAWING 8) AND THE LINER SUBGRADE.
 4. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 5. FOUNDATION IMPROVEMENT DETAIL SHOWN ON THIS DRAWING REFLECTS LINER SYSTEM OPTIONS AS INDICATED. IF OTHER LINER SYSTEM OPTIONS ARE USED, THE DESIGN APPROACH WILL REMAIN CONSISTENT WITH THIS DRAWING.



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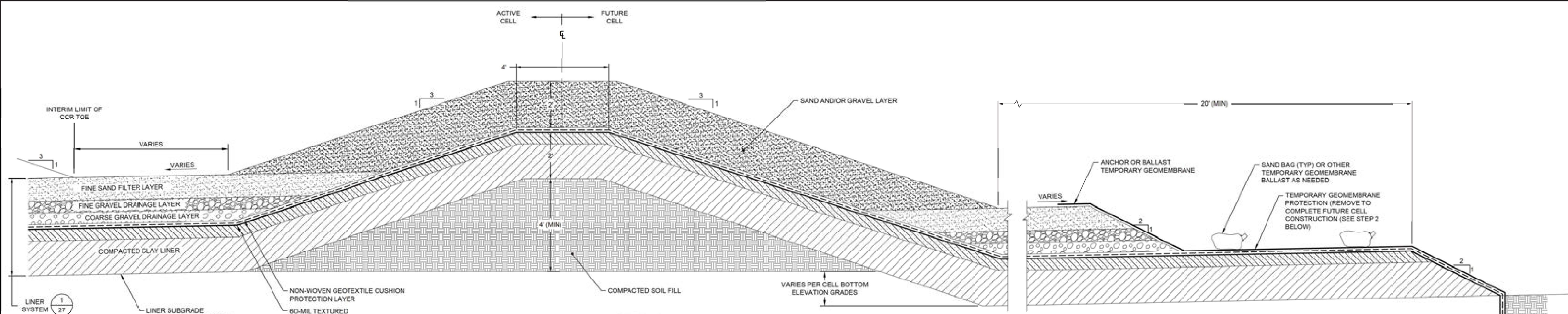
LINER SYSTEM DETAILS I

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

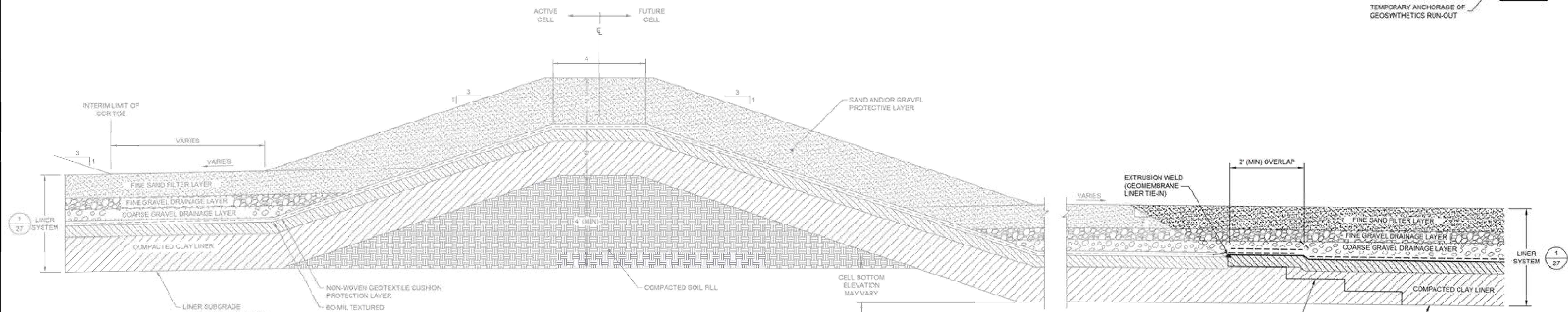
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1250 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
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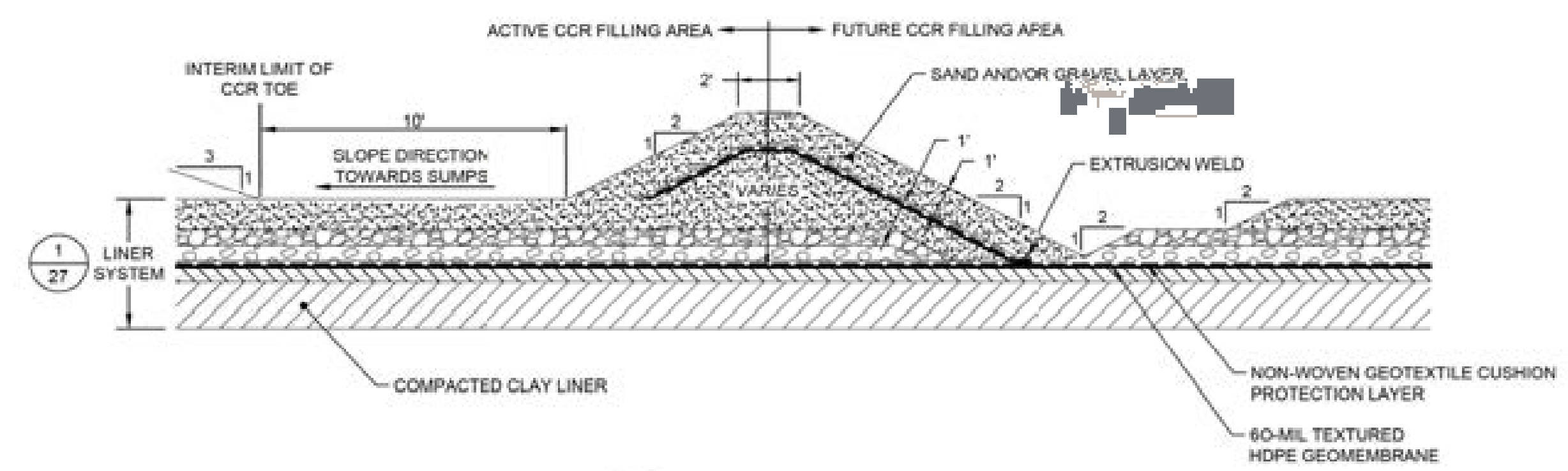
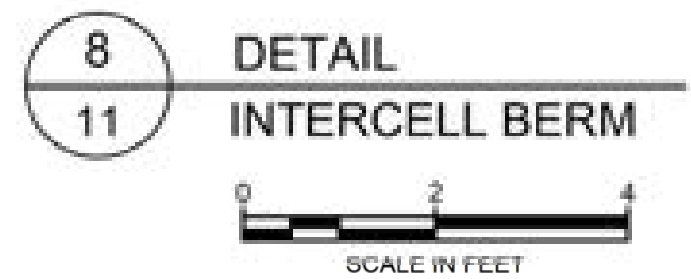
PROJ. NO.	GR6601	DWG.	GR6601-026	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING 27 OF 50			



STEP 1



STEP 2



- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. RAIN FLAP BERMS CAN BE USED TO LIMIT THE SIZE OF THE ACTIVE AREA DURING INITIAL STAGE OF FILLING. RAIN FLAP BERM LOCATIONS WILL BE SELECTED BASED ON ACTUAL CONDITIONS.
 3. DETAILS ON THIS DRAWING ARE SHOWN BASED ON LINER SYSTEM OPTION L1D1 (DETAIL 1 ON DRAWING 27). IF OTHER LINER SYSTEMS ARE USED, THE DESIGN APPROACH WILL REMAIN CONSISTENT WITH THE INFORMATION PRESENTED ON THIS DRAWING.
 4. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
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Solid Waste Management Program
Keith Stevens
Approved By:



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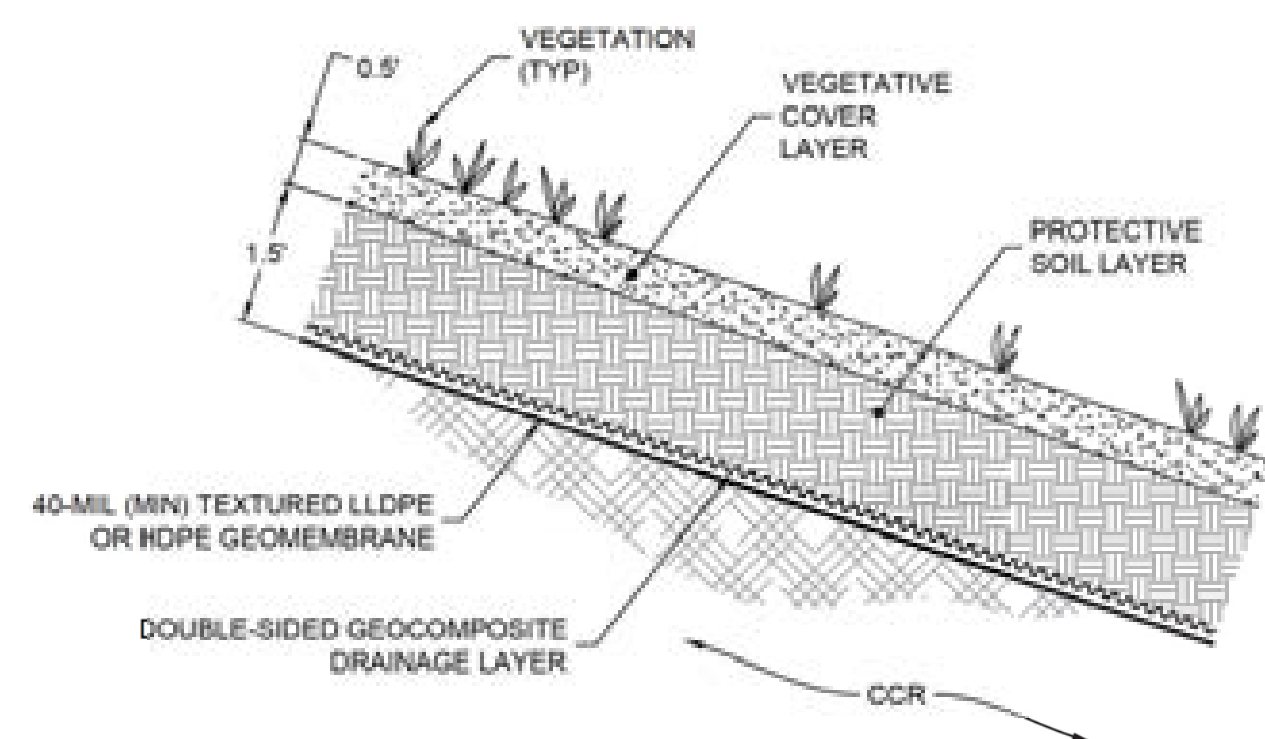
LINER SYSTEM DETAILS II

**PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

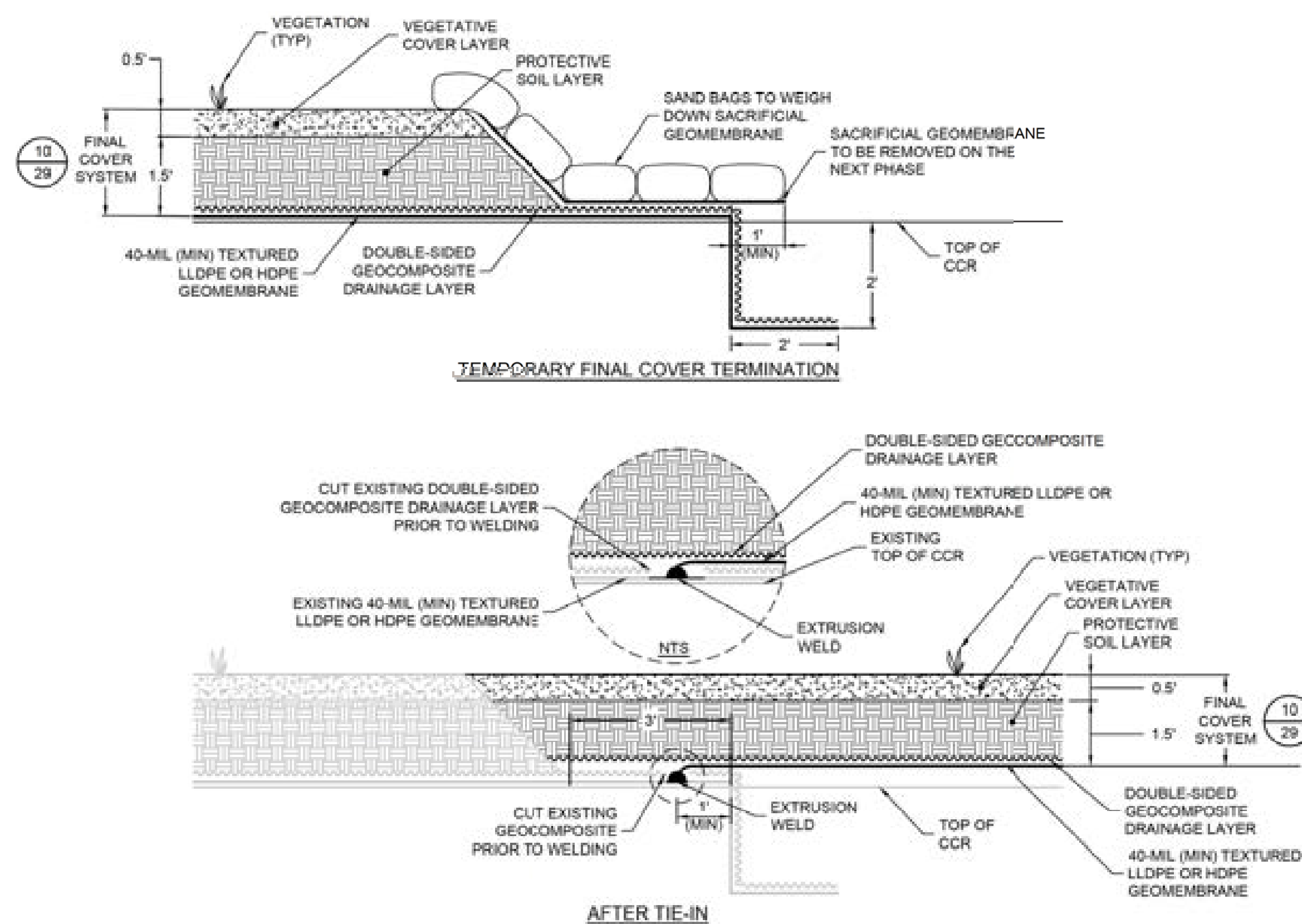
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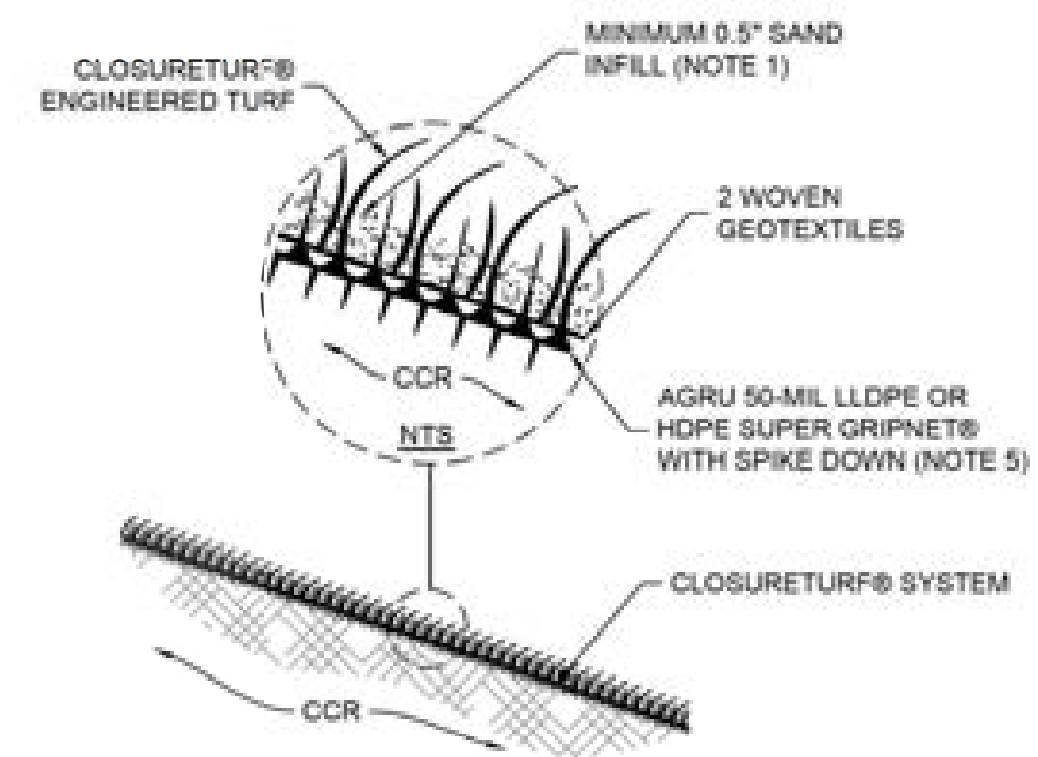
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DATE	AUGUST 2021	DRAWING 28 OF 50			



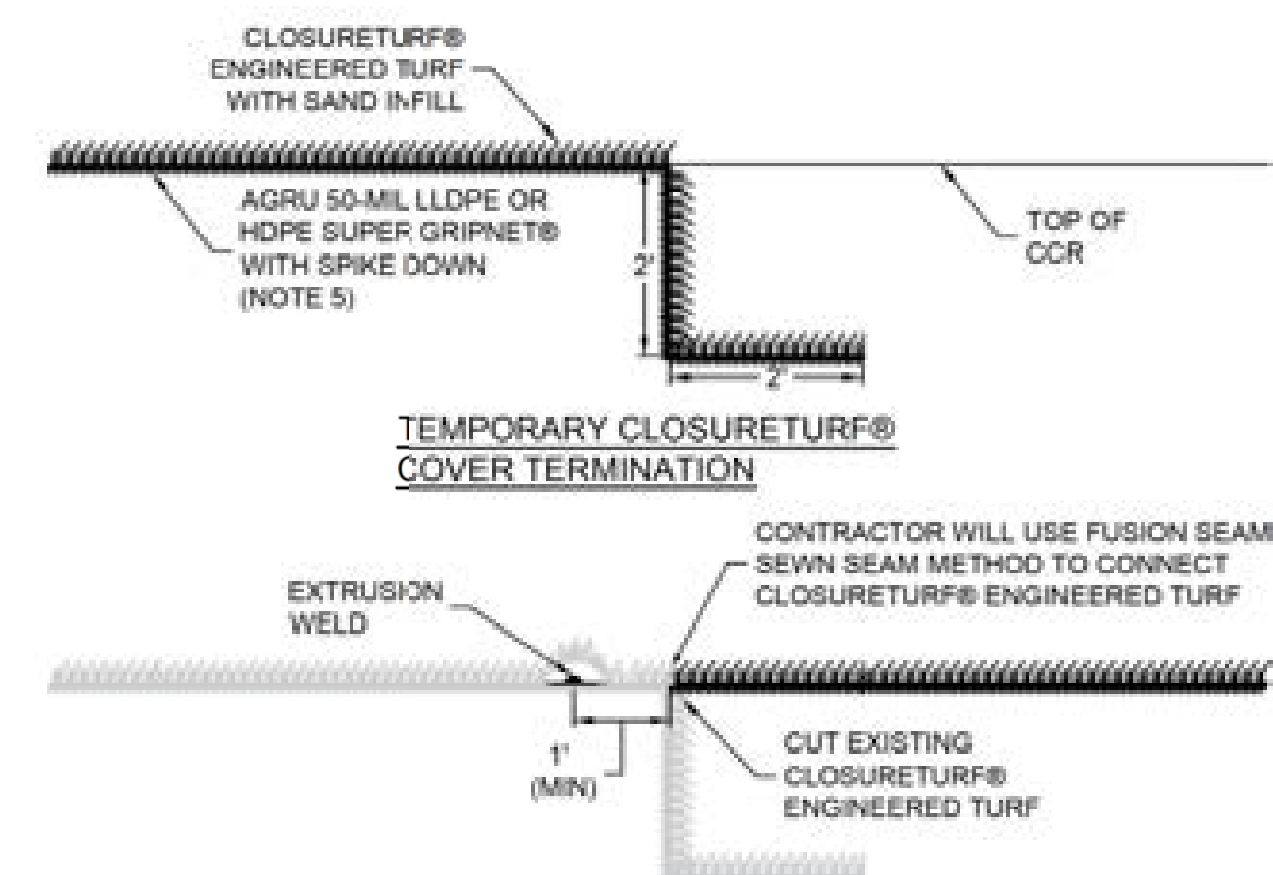
10
24
DETAIL
FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER OPTION)



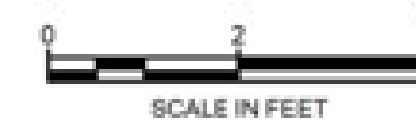
12
-
DETAIL
FINAL COVER TIE-IN AT PHASE BOUNDARY



11
24
DETAIL
FINAL COVER SYSTEM (CLOSURETURF® COVER OPTION)
SCALE: NOT TO SCALE



13
-
DETAIL
ALTERNATIVE COVER TIE-IN AT PHASE BOUNDARY



NOTES:

1. SAND INFILL IS TO BE USED WITH CLOSURETURF® ENGINEERED TURF IN ALL LOCATIONS EXCEPT WITHIN DRAINAGE FEATURES, WHICH WILL USE HYDROBINDER AND/OR RIPRAP AS SPECIFIED ON THE STORMWATER MANAGEMENT SYSTEM DETAILS.
2. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
3. SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
4. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
5. CLOSURETURF® DETAILS SHOWN WITH SUPER GRIPNET® GEOMEMBRANE OPTION. OTHER CLOSURETURF® GEOMEMBRANE OPTIONS (E.G. MICRODRAIN® OR MICROSPIKE®) MAY BE CONSIDERED AS PART OF THE DETAILED DESIGN.

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FINAL COVER SYSTEM DETAILS

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

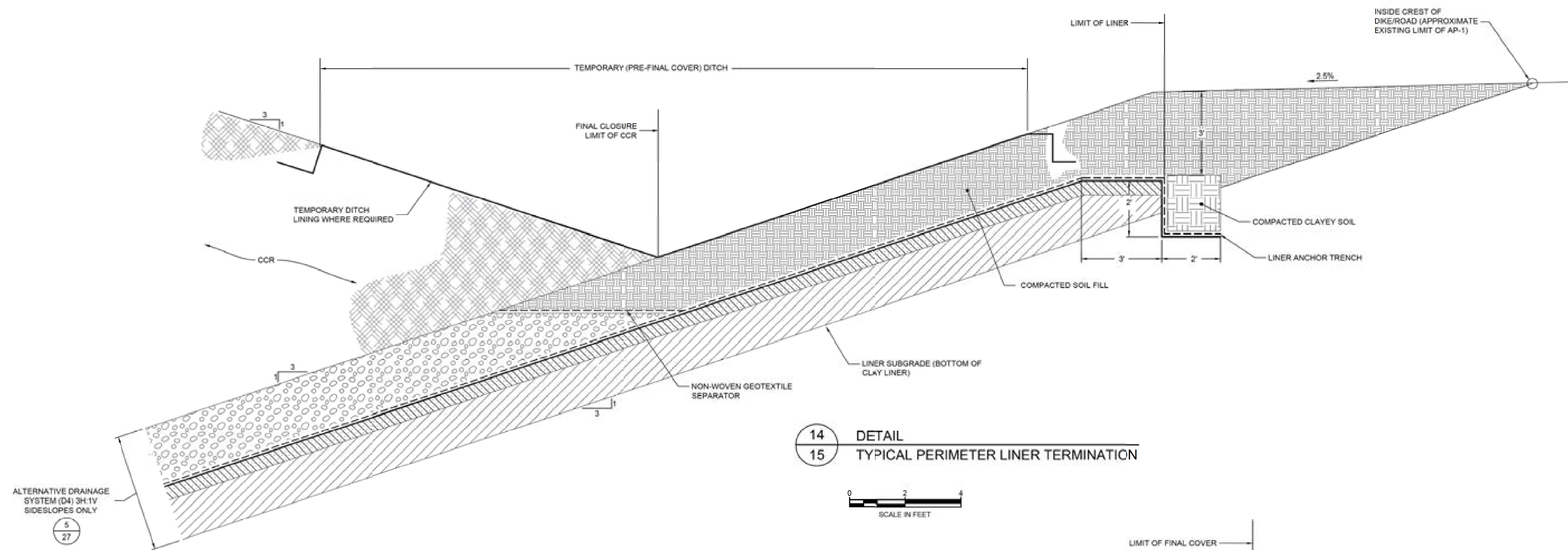
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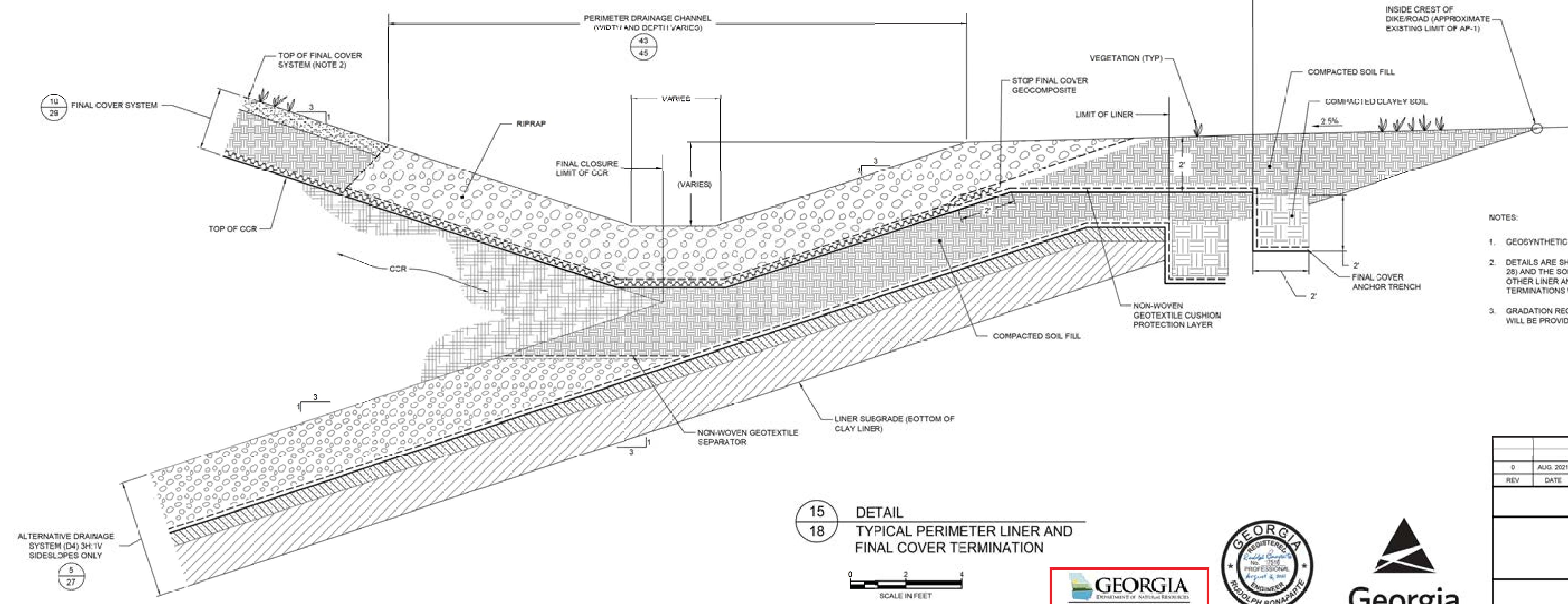
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DATE	AUGUST 2021				



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14 DETAIL
15 TYPICAL PERIMETER LINER TERMINATION



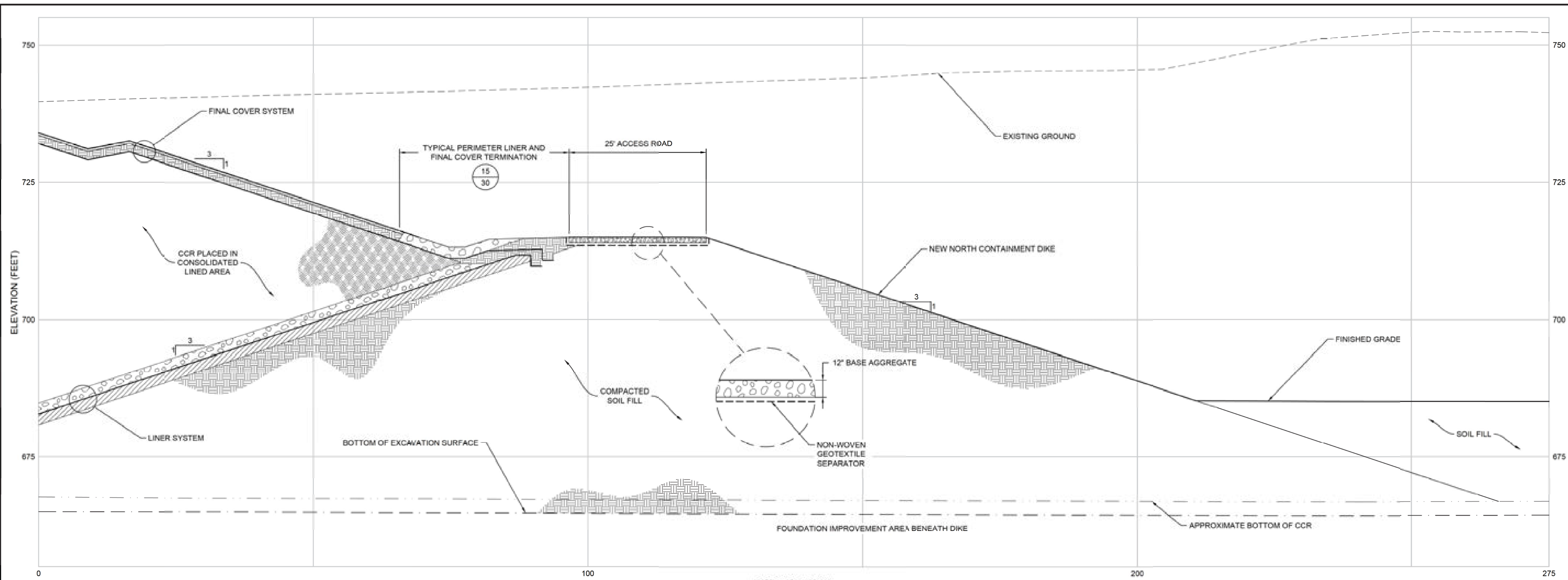
15 DETAIL
18 TYPICAL PERIMETER LINER AND FINAL COVER TERMINATION

- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. DETAILS ARE SHOWN FOR LINER SYSTEM COMPONENTS "L1" AND "D4" (SEE DRAWING 28) AND THE SOIL GEOSYNTHETIC FINAL COVER SYSTEM OPTION (SEE DRAWING 30). IF OTHER LINER AND/OR FINAL COVER SYSTEM OPTIONS ARE USED, THEIR TERMINATIONS WILL BE CONSISTENT WITH THESE SHOWN HERE.
 3. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.

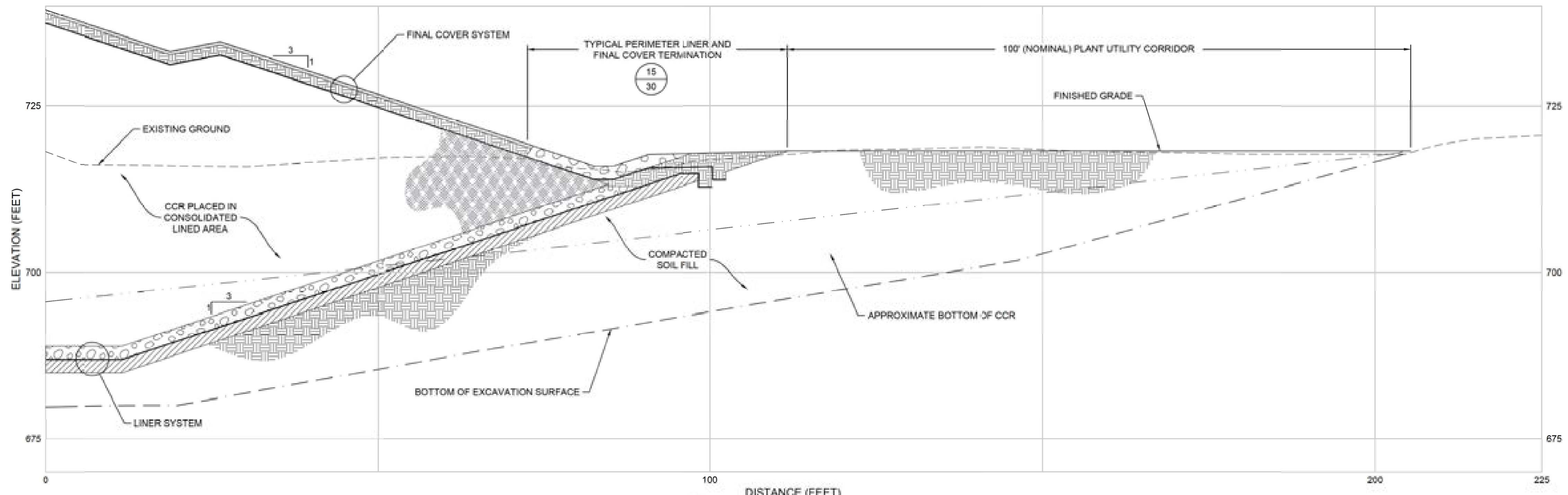
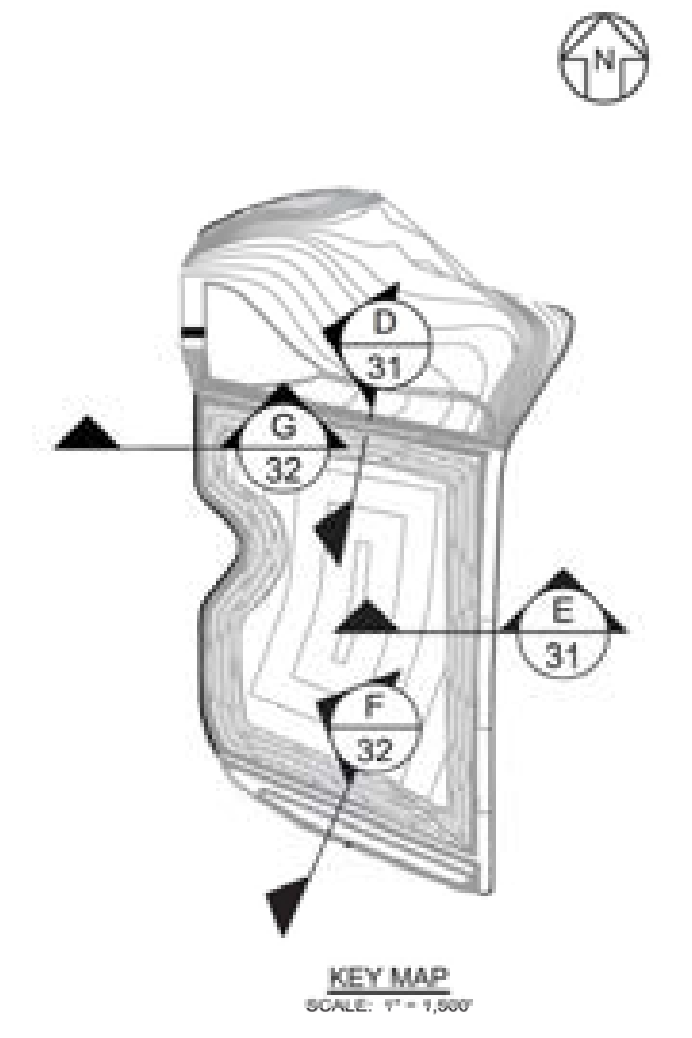
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PERIMETER DETAILS				
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA				
Geosyntec consultants				
<small>1250 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA</small>				
PROJ. NO.	GR6601	DWG.	GR6601-030	EDIT
SCALE	AS SHOWN	DRAWING 30 OF 50		
DATE	AUGUST 2021			



P:\ACAD\PROJECTS\GEORGIA POWER\BARTOW COUNTY PLANT\EOWEN ASH POND CLOSURE - 081621\DWG\GR6601-030.dwg



D
31
SECTION
NORTH PERIMETER
SCALE: 1" = 10'

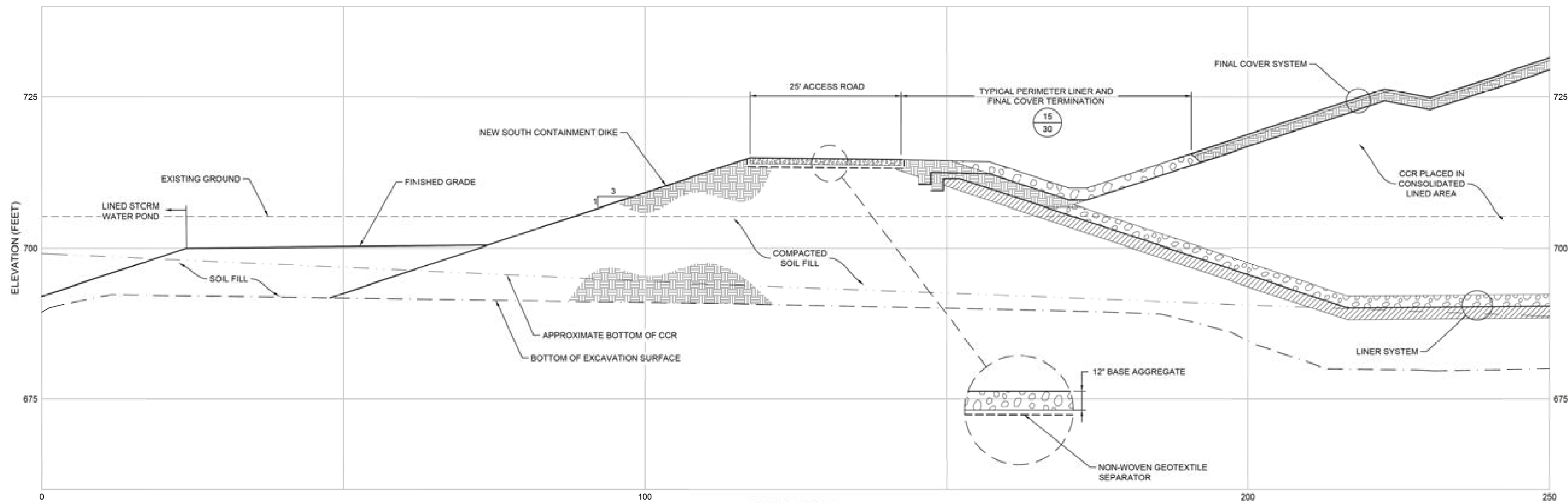


E
31
SECTION
EAST PERIMETER
SCALE: 1" = 10'

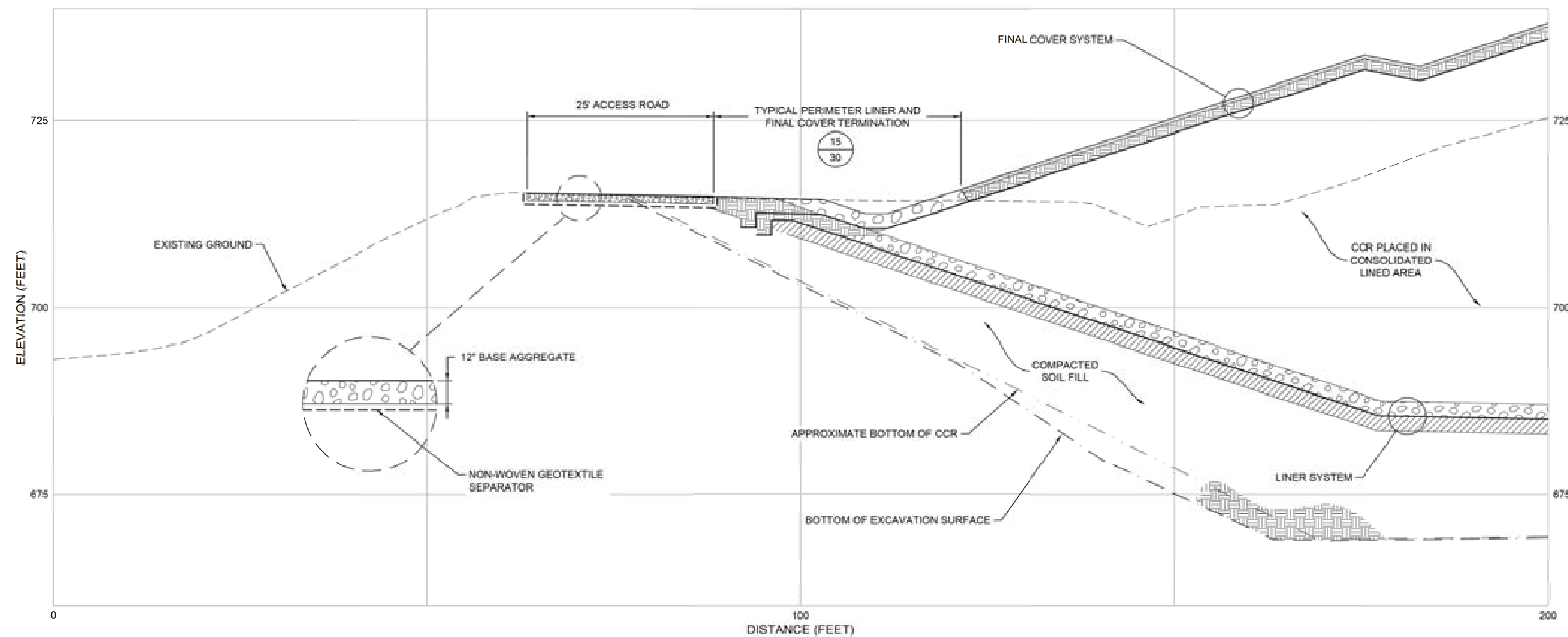
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB	
REV	DATE	DESCRIPTION	DRN	APP	
PERIMETER SECTIONS I					
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA					
Geosyntec consultants					
<small>1295 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA</small>					
PROJ. NO.	GR6601	DWG.	GR6601-032	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021				
			DRAWING 31 OF 50		



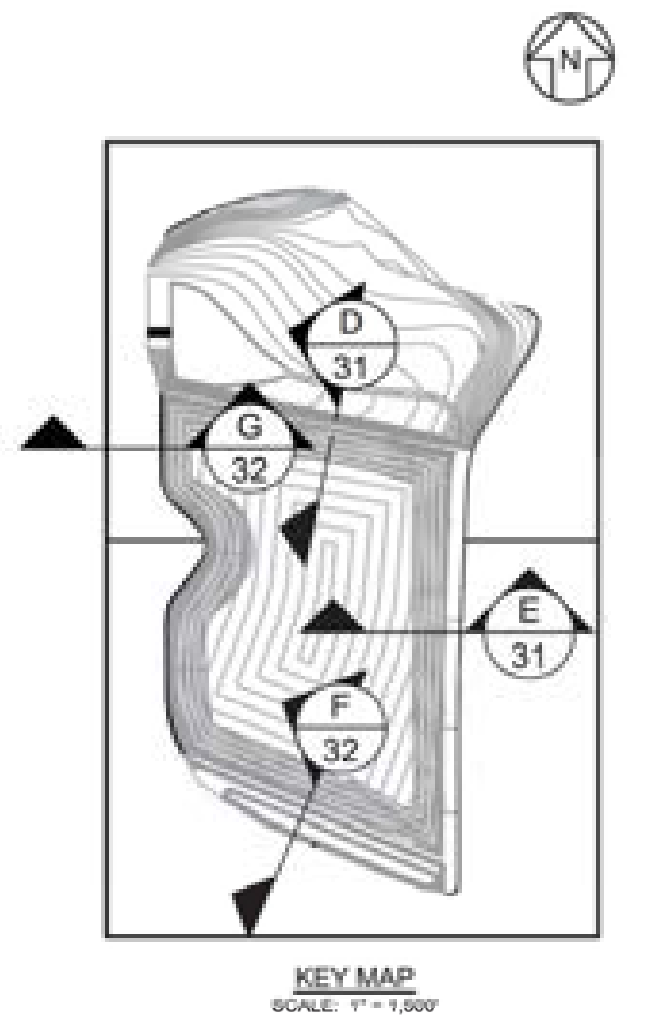
P:\PROJECTS\GEORGIA POWER\EOWEN ASH POND CLOSURE DRAWINGS\DWG\31.DWG



F
SECTION
32 SOUTH PERIMETER
SCALE: 1" = 10'



G
SECTION
32 WEST PERIMETER
SCALE: 1" = 10'



0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB	
REV	DATE	DESCRIPTION	DRN	APP	
PERIMETER SECTIONS II					
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA					
Geosyntec consultants					
<small>1295 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA</small>					
PROJ. NO.	GR6601	DWG.	GR6601-033	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021				
			DRAWING	32	OF 50



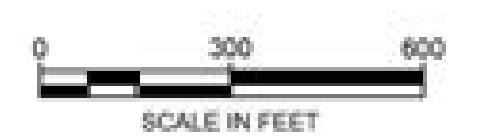
P:\ACORP\PROJECTS\GEORGIA POWER\BENTON POWER PLANT\PERMIT\ASB\FIGURE\DWG\32\32-033.DWG



LEGEND

	EXCAVATION SURFACE ELEVATION (FEET)
	TOP OF LINER SYSTEM ELEVATION (FEET)
	EXISTING LIMIT OF AP-1
	LEACHATE COLLECTION CORRIDOR
	LEACHATE SUMP AND RISER PIPE
	LEACHATE FORCE MAIN
	PERMIT BOUNDARY
	LEACHATE FORCE MAIN AIR RELEASE MANHOLE
	LEACHATE FORCE MAIN CLEANOUT MANHOLE
	LEACHATE FORCE MAIN JUNCTION MANHOLE
	LEACHATE RISER PAD
	TEMPORARY WWTs PAD

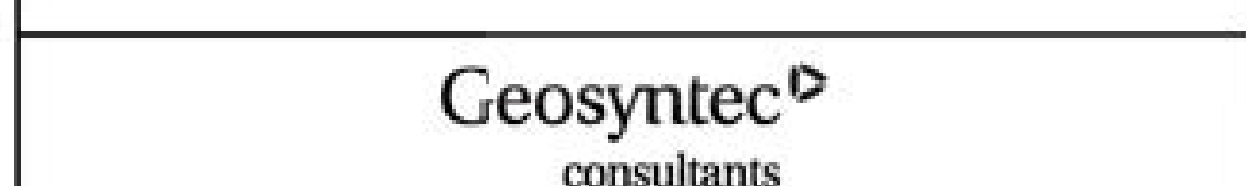
- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOP OF LINER GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE GEOMEMBRANE COMPONENT OF THE LINER SYSTEM WITHIN THE CONSOLIDATED LINED FOOTPRINT AREA. WITHIN THE REMAINDER OF AP-1 (OUTSIDE THE CONSOLIDATED LINED FOOTPRINT AREA), GRADES REPRESENT EXTERIOR NORTH AND SOUTH CONTAINMENT DIKE SLOPES, WHICH TIE-IN TO THE ESTIMATED BOTTOM OF EXCAVATION GRADES. CONTOURS SHOWN ON THIS DRAWING BEYOND LIMITS OF AP-1 ARE EXISTING GROUND TOPOGRAPHY.
 - A TEMPORARY WWTs WILL BE ESTABLISHED AT THE APPROXIMATE LOCATION SHOWN FOR TREATMENT OF LEACHATE AND CONTACT WATER GENERATED DURING CLOSURE CONSTRUCTION. AT THE COMPLETION OF CLOSURE CONSTRUCTION, LEACHATE WILL BE ROUTED TO A PERMANENT ON-SITE WWTs LOCATED OUTSIDE THE AP-1 PERMIT BOUNDARY, ON THE PLANT BOWEN PROPERTY.



REV	DATE	DESCRIPTION	DRN	APP
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LEACHATE MANAGEMENT PLAN

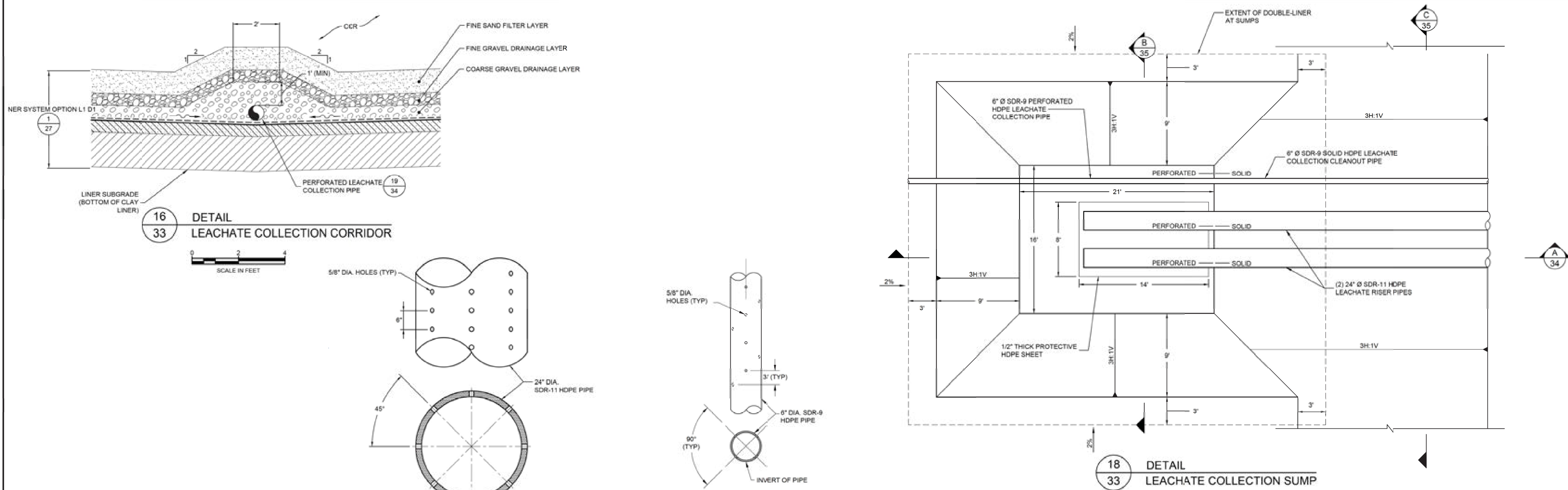
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA



1295 ROBERTS BOULEVARD, NW, SUITE 200 DUNESBORO, GEORGIA 30144 USA		PHONE: 678.252.8650 WWW.GEOSYNTEC.COM	
PROJ. NO.	GR6601	DWG.	GR6601-034
SCALE	1" = 300'	EDIT	8/16/21
DATE	AUGUST 2021	DRAWING 33 OF 50	



PERMIT DRAWING
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16 DETAIL
33 LEACHATE COLLECTION CORRIDOR

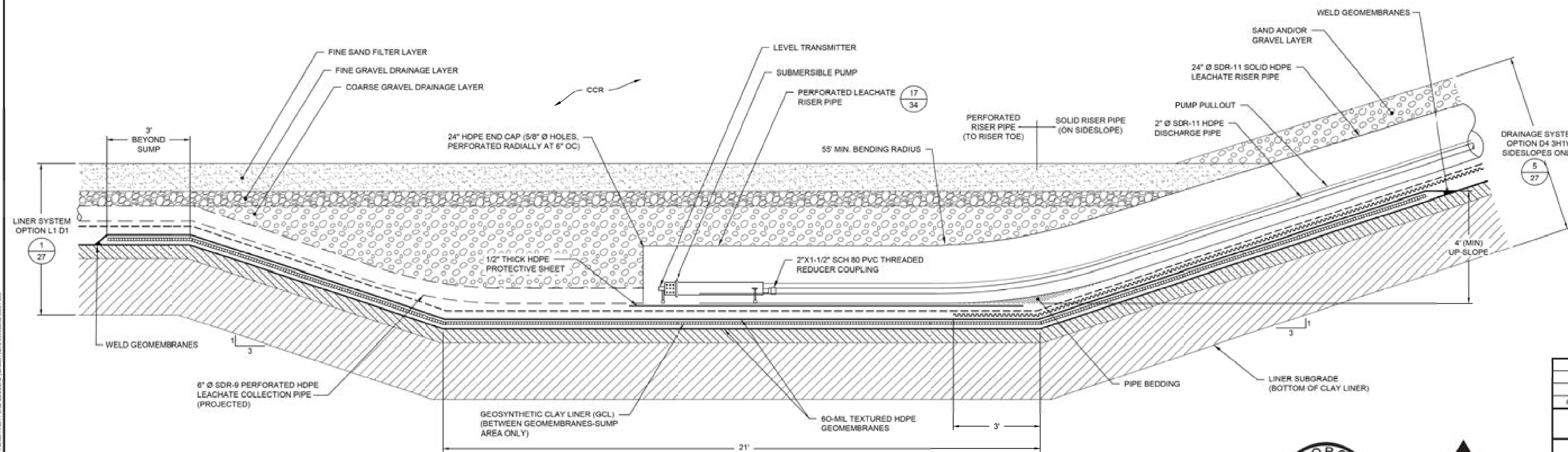
SCALE IN FEET

17 DETAIL
34 PERFORATED LEACHATE RISER PIPE
SCALE: NOT TO SCALE

19 DETAIL
34 PERFORATED LEACHATE COLLECTION PIPE
SCALE: NOT TO SCALE

18 DETAIL
33 LEACHATE COLLECTION SUMP

SCALE IN FEET



A SECTION
34 LEACHATE COLLECTION RISER TOE

SCALE IN FEET

- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
 3. TWO RISER PIPES ARE PROVIDED: A PRIMARY RISER AND A BACKUP/REUNDANT RISER - EACH WITH A SUBMERSIBLE PUMP.
 4. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 5. DETAILS SHOWN ON THIS DRAWING REFLECT LINER SYSTEM OPTIONS AS INDICATED. IF OTHER LINER SYSTEM OPTIONS ARE USED, THE DESIGN APPROACH WILL REMAIN CONSISTENT WITH THIS DRAWING.



PERMIT DRAWING
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
0	AUG 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

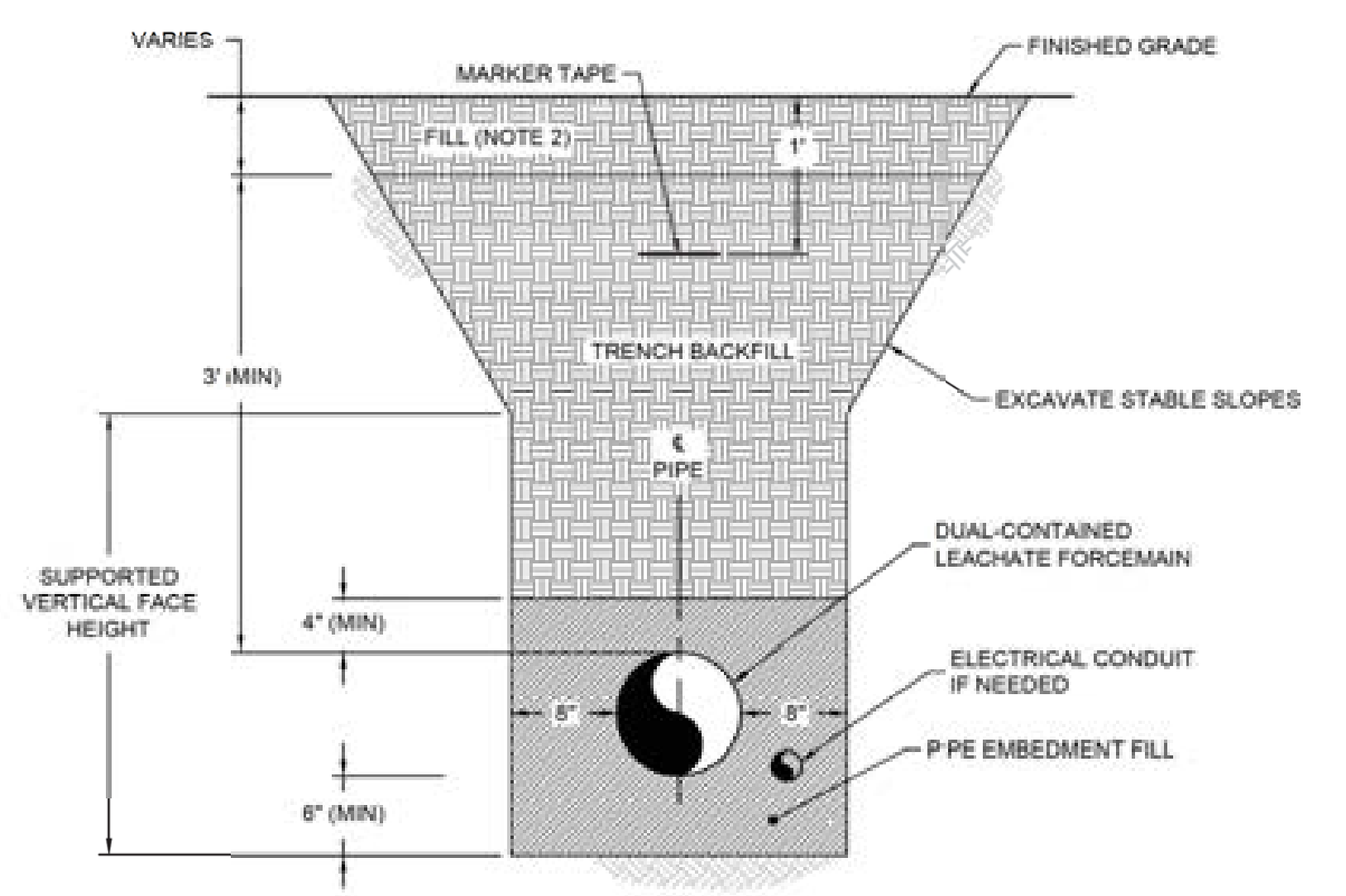
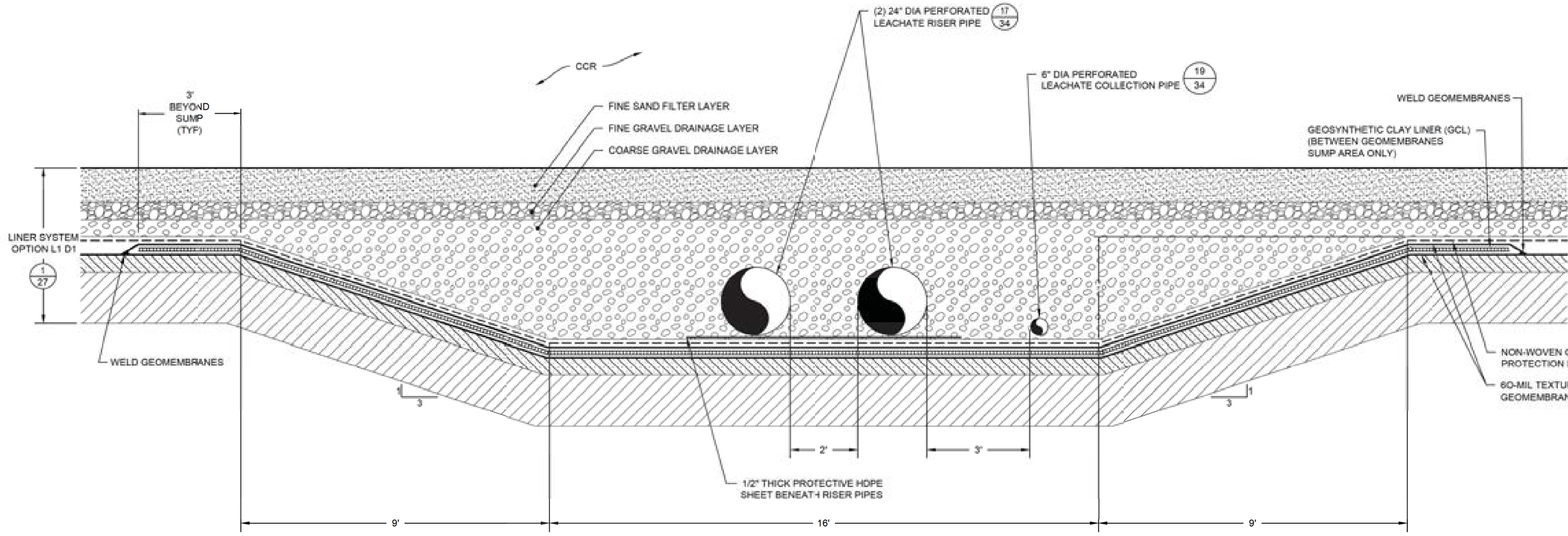
LEACHATE COLLECTION SYSTEM DETAILS I

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

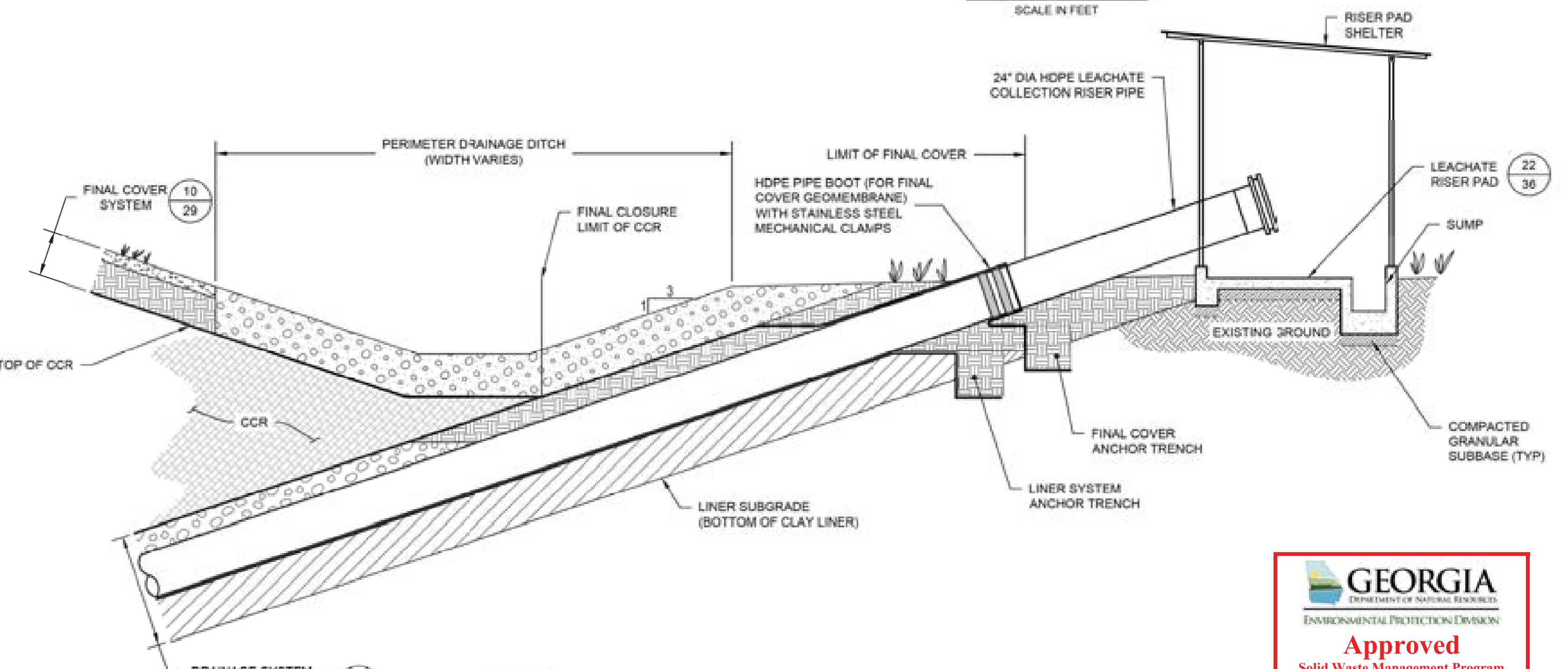
1250 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.233.8650
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-036	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING 34 OF 50			

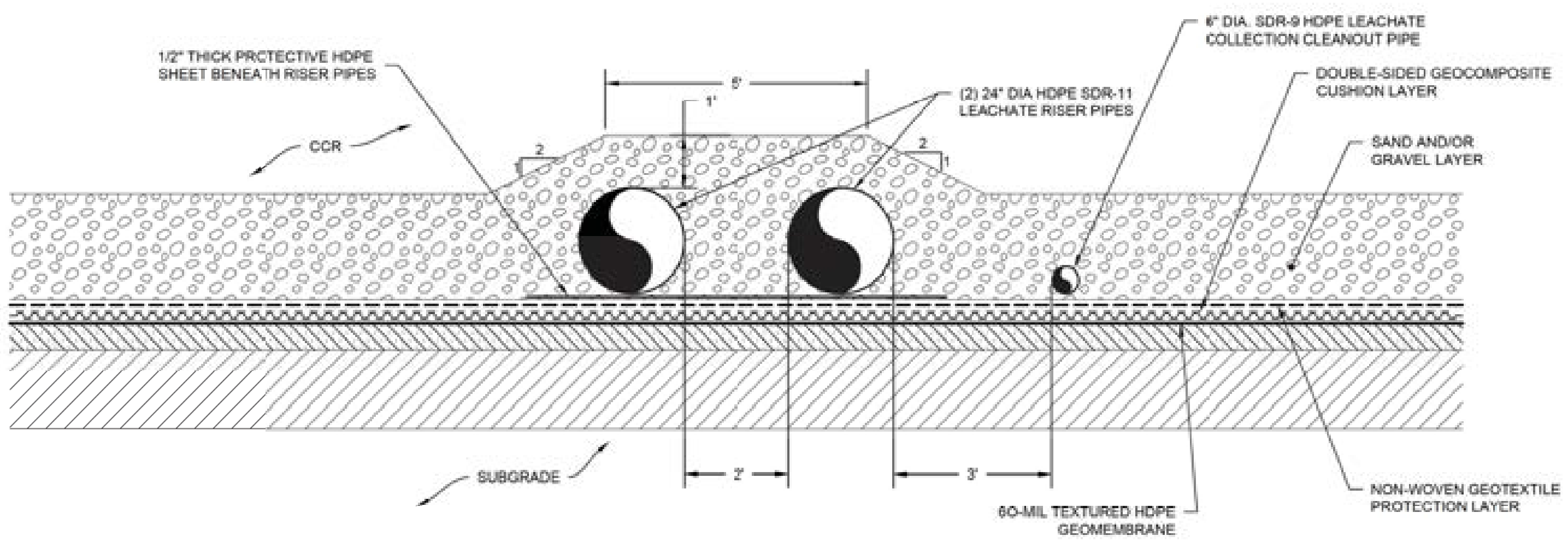


20
33
DETAIL
LEACHATE FORCEMAIN PIPE EMBEDMENT
SCALE: 1" = 1'
SCALE IN FEET

B
34
SECTION
LEACHATE COLLECTION SUMP
SCALE: 1" = 2'
SCALE IN FEET



21
-
DETAIL
LEACHATE COLLECTION RISER PIPE TERMINATION
SCALE: 1" = 4'
SCALE IN FEET



C
34
SECTION
SIDESLOPE LEACHATE RISER SYSTEM
SCALE: 1" = 2'
SCALE IN FEET

- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 3. DETAILS SHOWN ON THIS DRAWING REFLECT LINER SYSTEM OPTIONS AS INDICATED. IF ALTERNATIVE LINER SYSTEMS ARE USED, THE DESIGN APPROACH WILL REMAIN CONSISTENT WITH THIS DRAWING.



Georgia Power
PERMIT DRAWING
NOT FOR CONSTRUCTION



REV	DATE	DESCRIPTION	DRN	APP
0	AUG 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

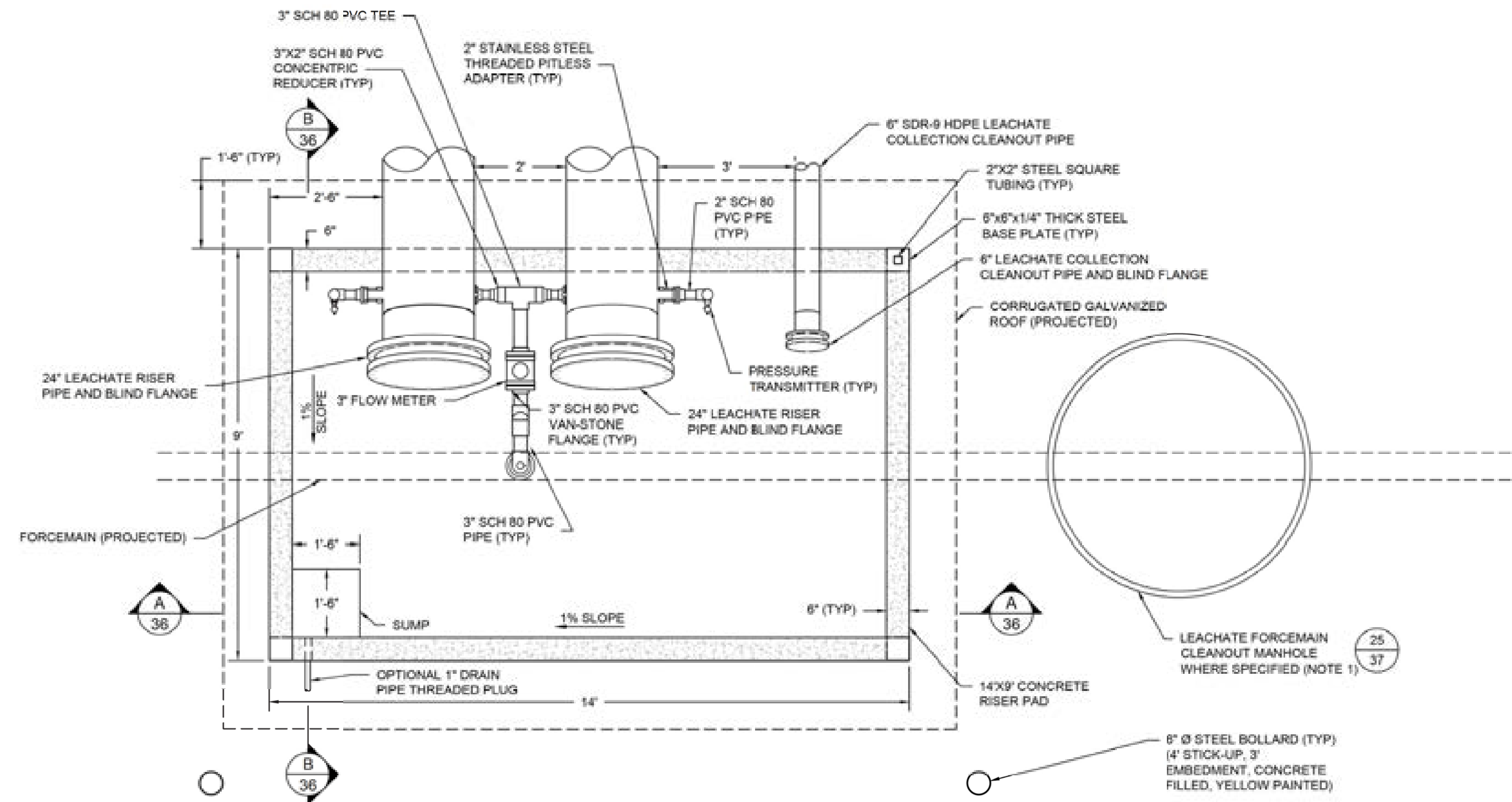
LEACHATE COLLECTION SYSTEM DETAILS II

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

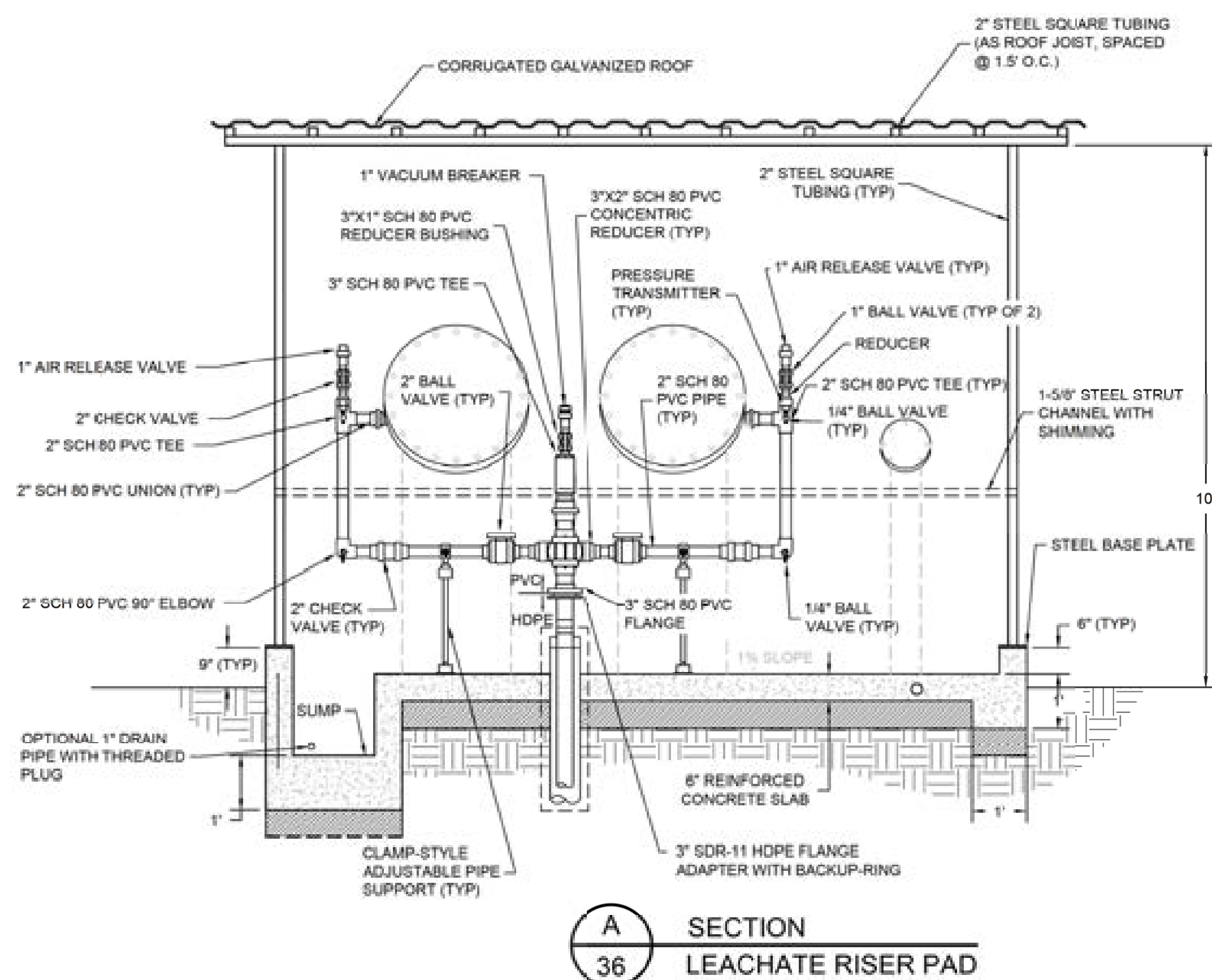
Geosyntec
consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.232.8650
WWW.GEOSYNTEC.COM

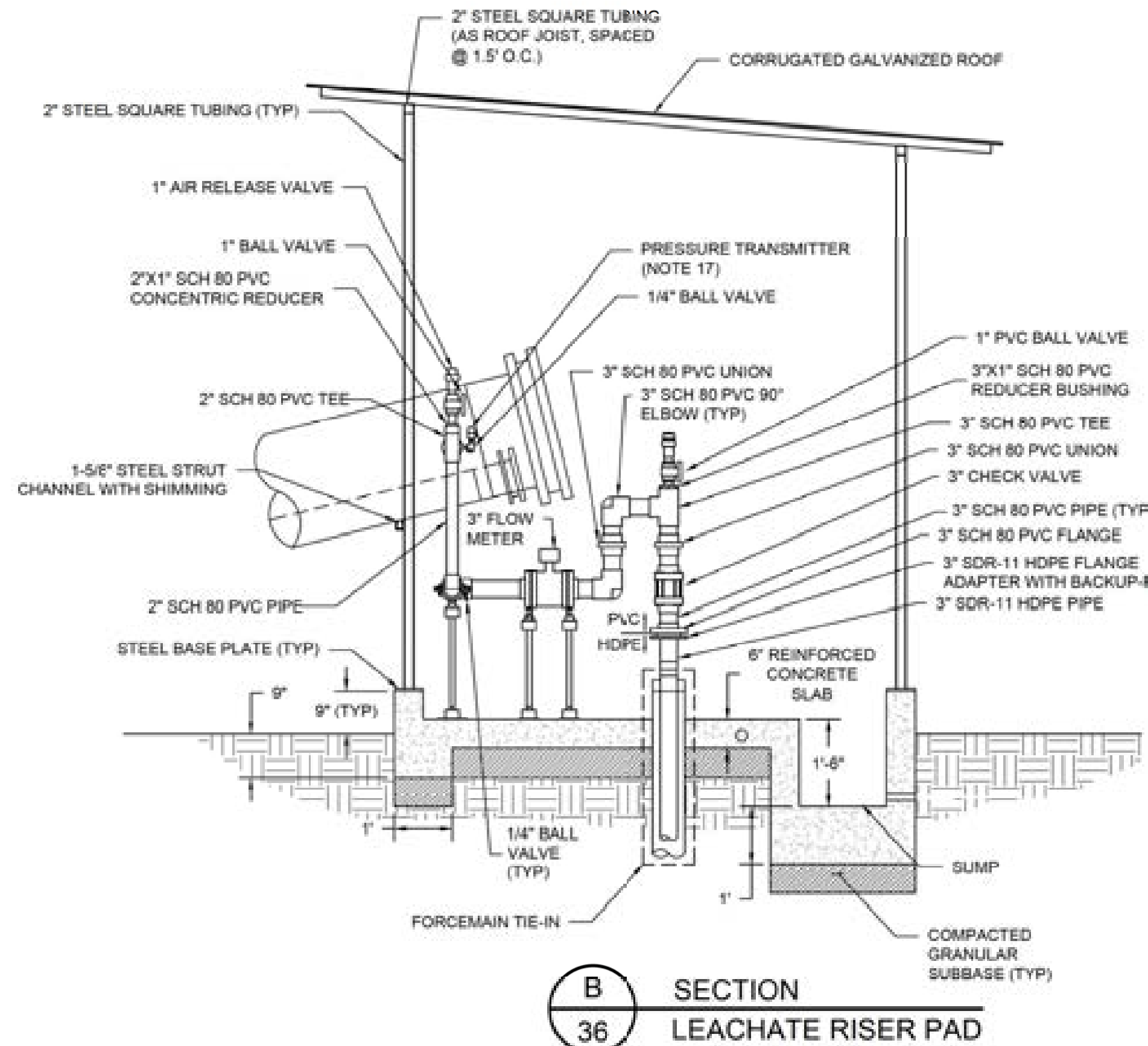
PROJ. NO.	GR6601	DWG.	GR6601-037	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 35 OF 50			
DATE	AUGUST 2021				



PLAN VIEW



A SECTION
36 LEACHATE RISER PAD



B SECTION
36 LEACHATE RISER PAD

22
33 DETAIL
LEACHATE RISER PAD
SCALE: NOT TO SCALE

- NOTE:
- CLEANOUT MANHOLES WILL BE USED AT RISER PAD AREA OF CELLS 1A, 4A, 1B AND 7A. ADDITIONAL CLEANOUTS MAY BE ADDED AS NEEDED. CLEANOUT MANHOLES MAY BE INSTALLED WITHIN RISER PADS, OR NEXT TO RISER PADS AS SHOWN.
 - PIPING AND VALVES ARE CONCEPTUAL TO ILLUSTRATE INTENDED FUNCTIONALITY AND MAY BE REVISED DURING DETAILED DESIGN.



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REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

LEACHATE COLLECTION SYSTEM DETAILS III

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

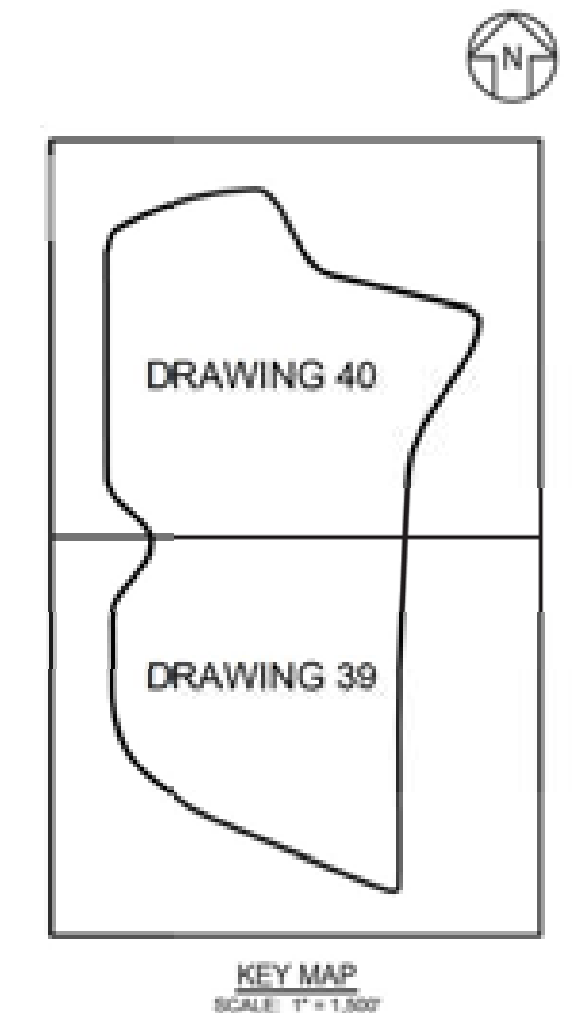
1295 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.252.8600
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-036	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 36 OF 50			
DATE	AUGUST 2021				



LEGEND

	710	FINISHED GROUND ELEVATION (FEET) (NOTE 1)
		FINAL COVER TOP DECK DIVERSION BERM
		FINAL COVER TOP DECK LET-DOWN CHANNEL
	DC	FINAL COVER DOWNCHUTE CHANNEL
		FINAL COVER SIDESLOPE DRAINAGE BENCH
		STORMWATER CHANNEL
		LINED STORMWATER POND



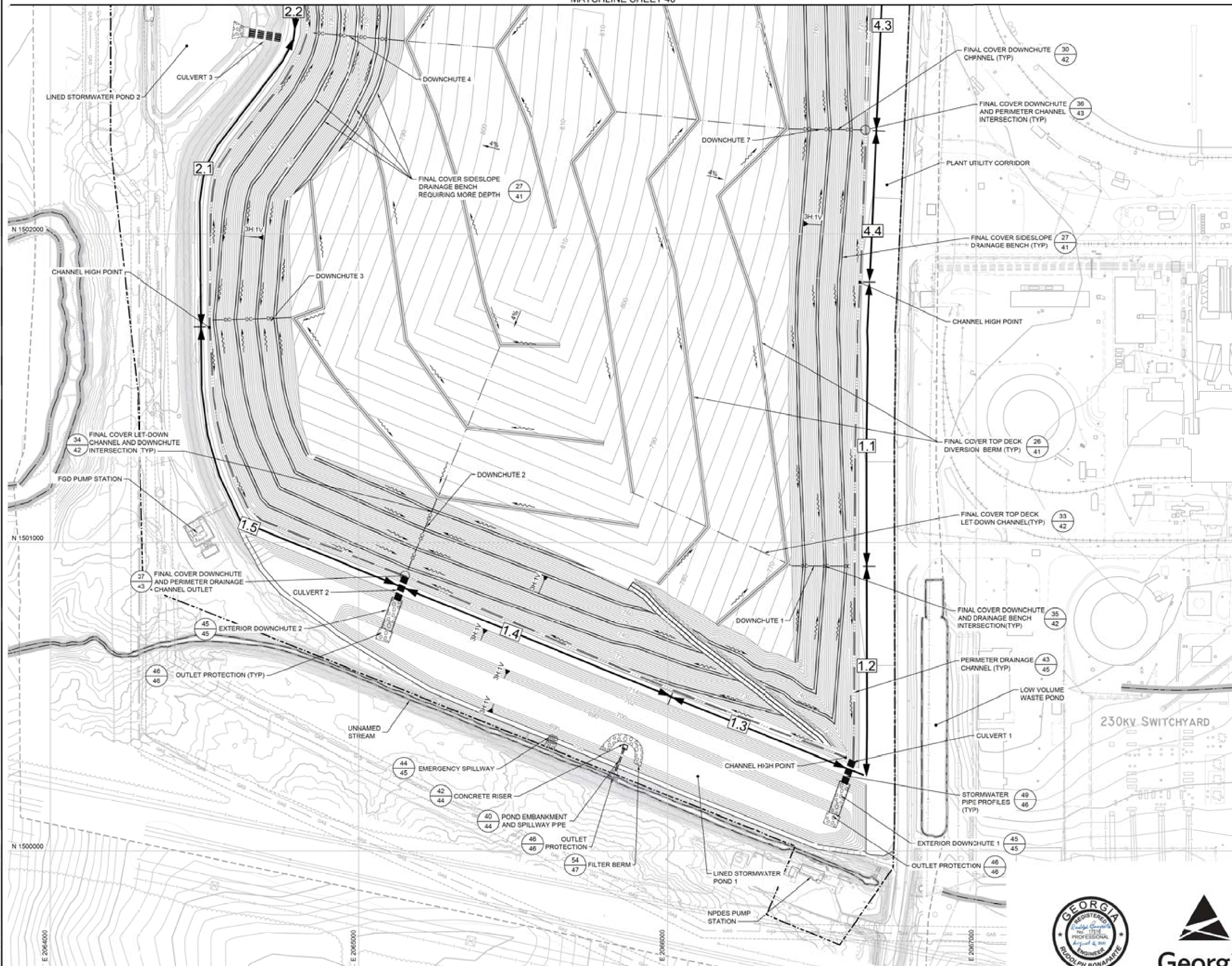
- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - FINAL CLOSURE GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) (WITHIN THE FINAL COVER LIMITS. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19.
 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB
REV	DATE	DESCRIPTION	DRN	APP
STORMWATER MANAGEMENT SYSTEM - OVERVIEW				
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA				
Geosyntec consultants				
<small>1295 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA</small>				
PROJ. NO.	GR6601	DWG.	GR6601-040	EDIT
SCALE	1" = 300'			8/16/21
DATE	AUGUST 2021			

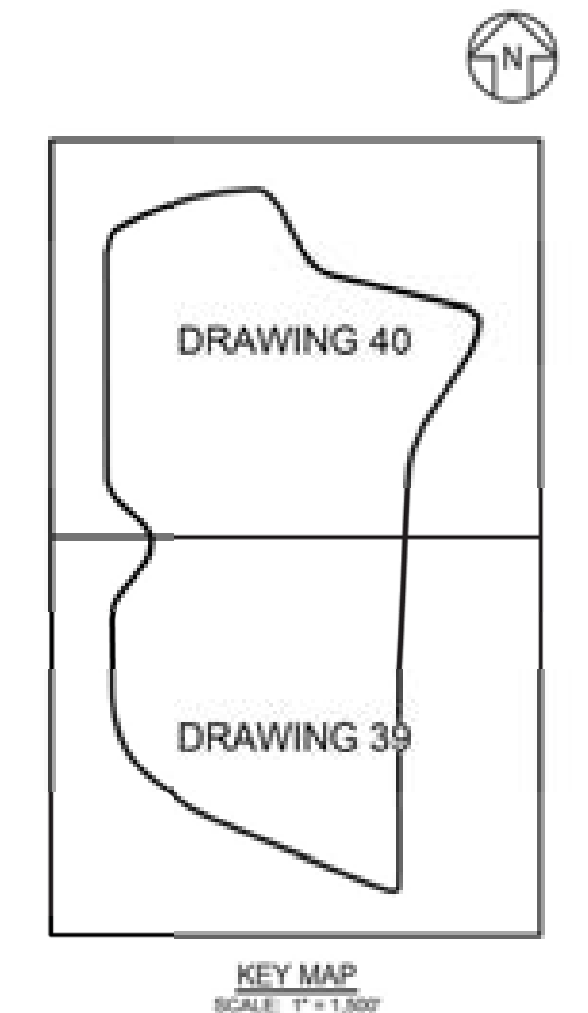


Georgia Power
PERMIT DRAWING
NOT FOR CONSTRUCTION



LEGEND

	710	FINISHED GROUND ELEVATION (FEET) (NOTE 1)
		FINAL COVER TOP DECK DIVERSION BERM
		FINAL COVER TOP DECK LET-DOWN CHANNEL
	DC-DC	FINAL COVER DOWNCHUTE CHANNEL
		FINAL COVER SIDESLOPE DRAINAGE BENCH
		STORMWATER CHANNEL
	4.4	STORMWATER CHANNEL DELINEATION

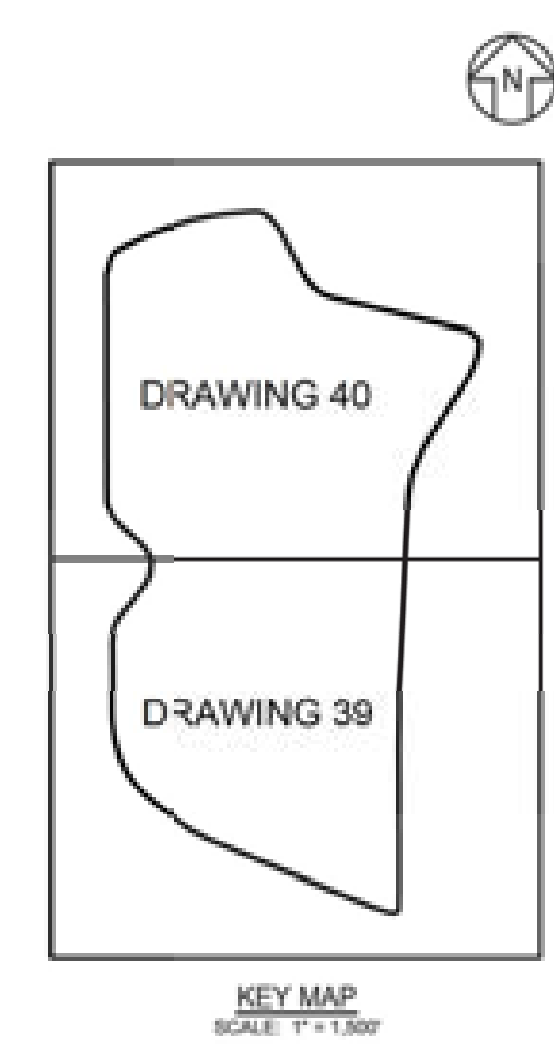
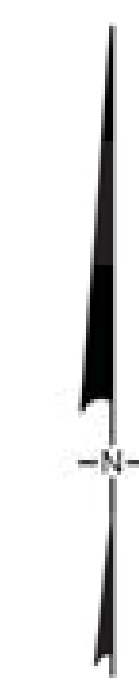
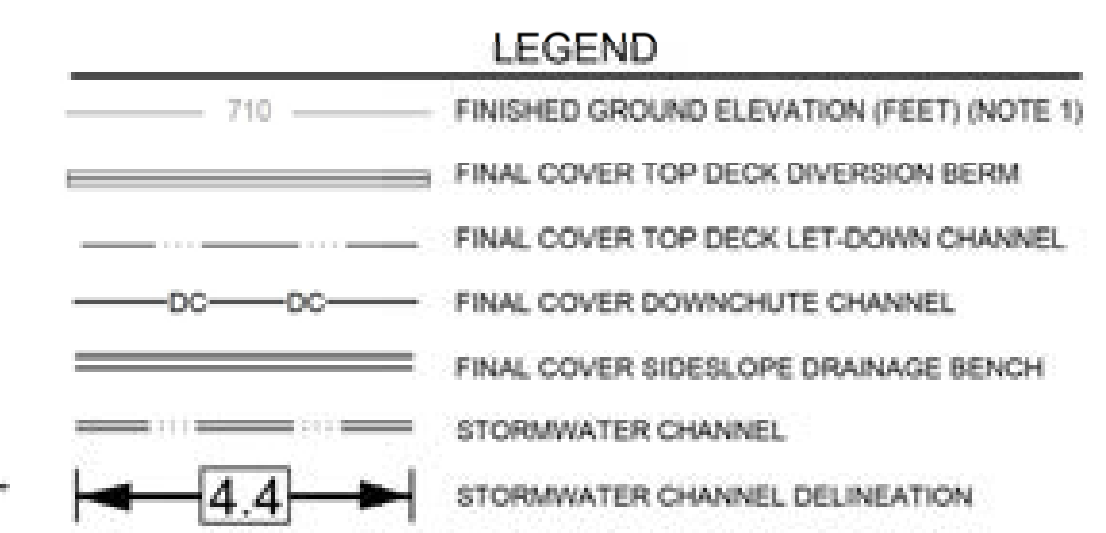
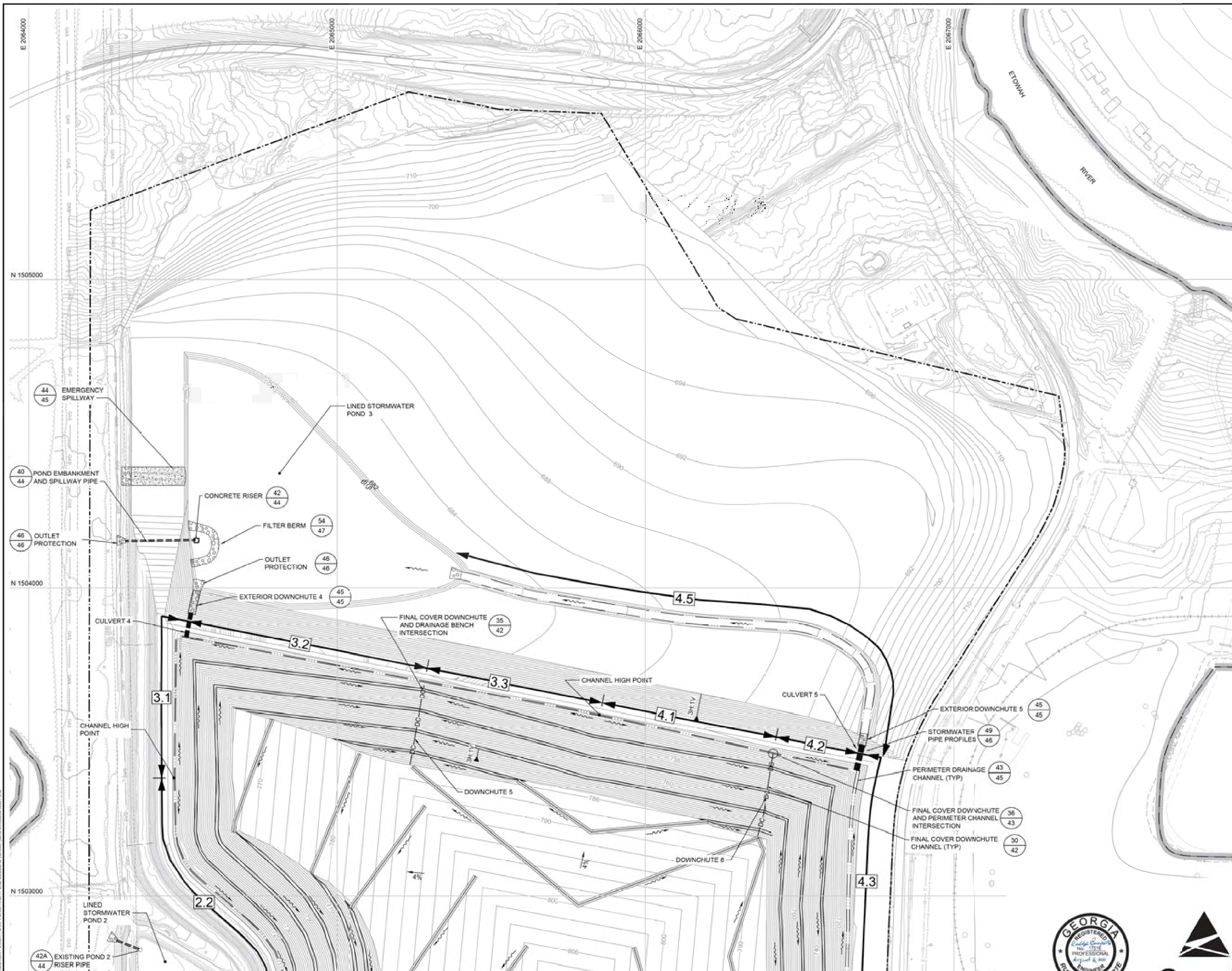


- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - FINAL CLOSURE GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) WITHIN THE FINAL COVER LIMITS. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19.
 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.

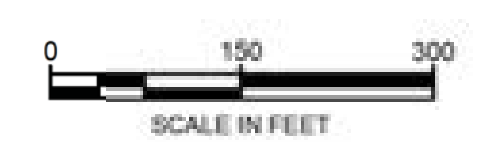


PERMIT DRAWING
NOT FOR CONSTRUCTION

0	AUG 2021	SUBMITTAL TO GA EPD	JJ/WH	RB
REV	DATE	DESCRIPTION	DRN	APP
STORMWATER MANAGEMENT SYSTEM - SOUTH AP-1				
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA				
Geosyntec consultants				
1295 ROBERTS BOULEVARD, NW, SUITE 200 DUNESWAY, GEORGIA 30144 USA PHONE: 678.252.8600 WWW.GEOSYNTEC.COM				
PROJ. NO.	GR6601	DWG.	GR6601-041	EDIT
SCALE	1" = 15'	DATE	AUGUST 2021	8/16/21
				DRAWING 39 OF 50



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - FINAL CLOSURE GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) WITHIN THE FINAL COVER LIMITS. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19.
 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



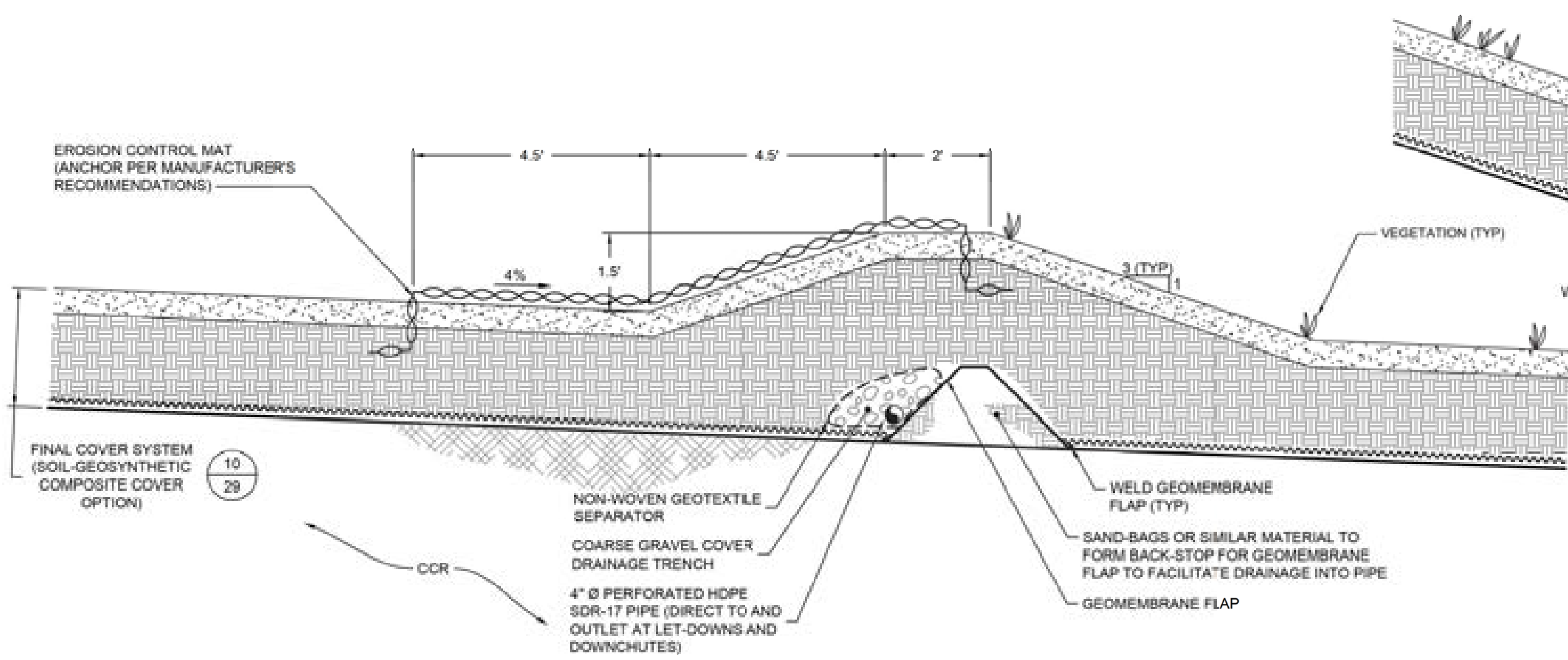
MATCHLINE SHEET 39



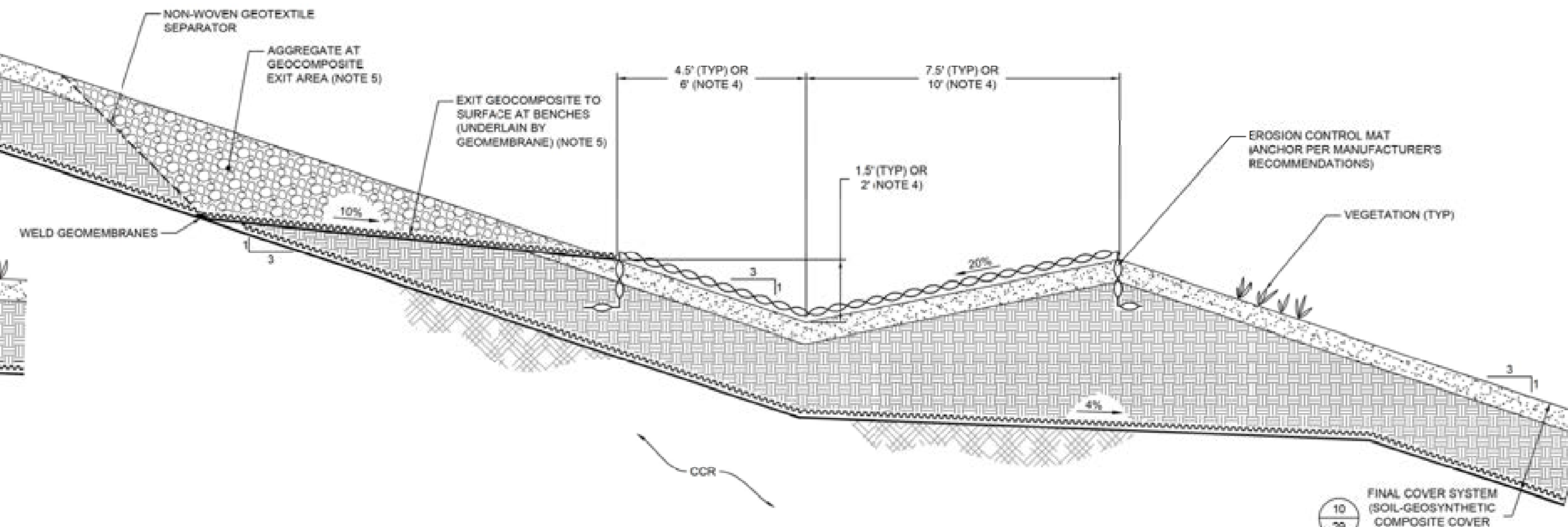
Georgia Power
PERMIT DRAWING
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0	AUG. 2021	SUBMITTAL TO GA EPD	JJV/KH	RB	
REV	DATE	DESCRIPTION	DRN	APP	
STORMWATER MANAGEMENT SYSTEM - NORTH AP-1					
PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA					
Geosyntec consultants					
<small>1295 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA</small>					
PROJ. NO.	GR6601	DWG.	GR6601-042	EDIT	8/16/21
SCALE	1" = 15'				
DATE	AUGUST 2021				
DRAWING 40 OF 50					

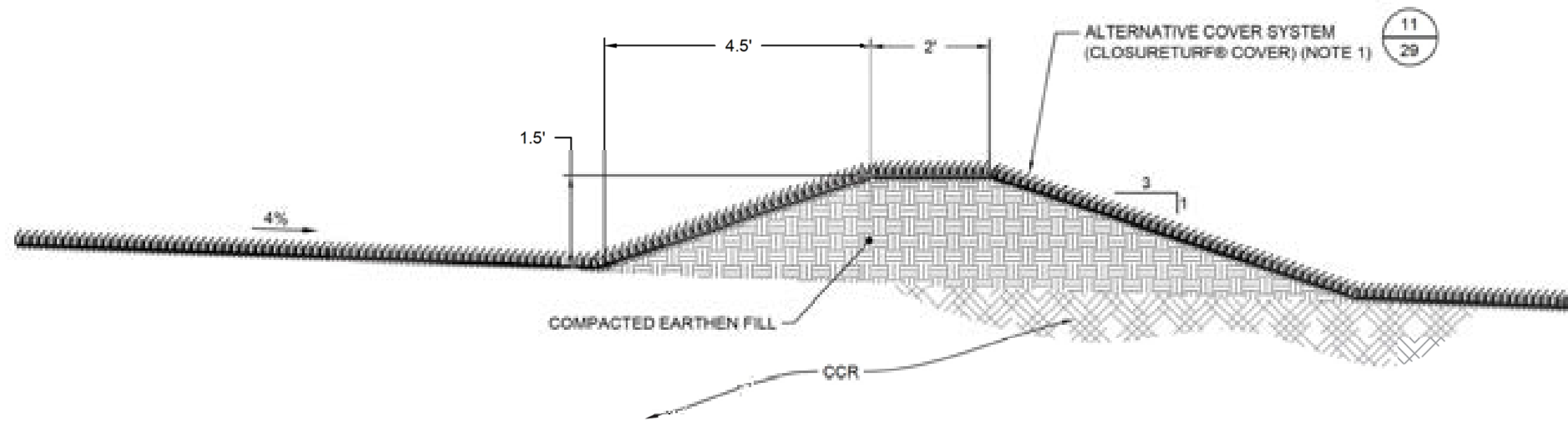
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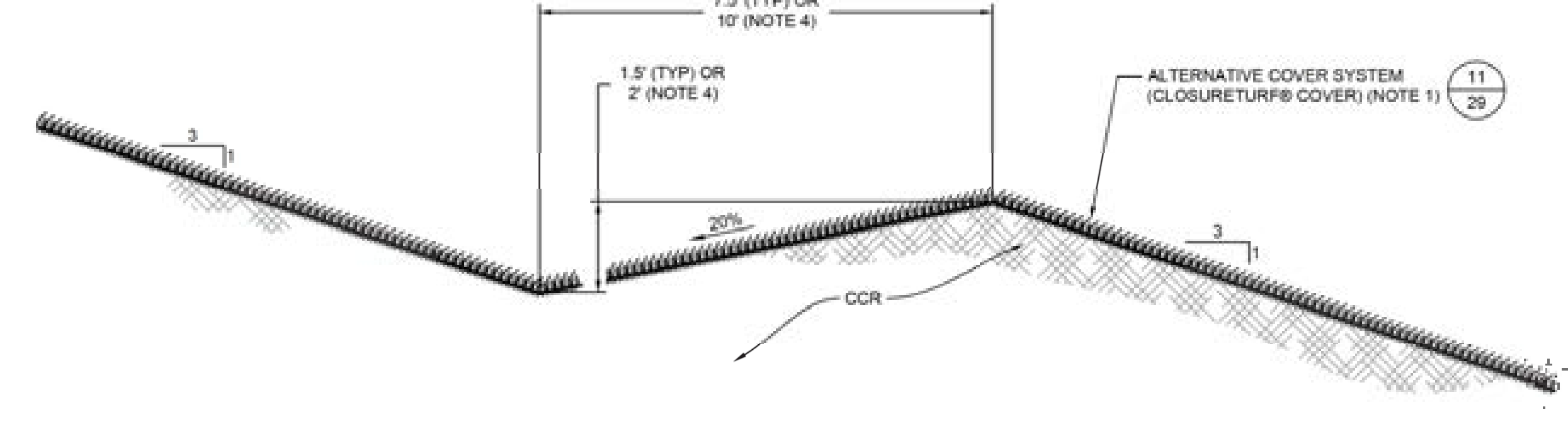
26 **38** **DETAIL**
FINAL COVER TOP DECK DIVERSION BERM
 SCALE IN FEET



27 **38** **DETAIL**
FINAL COVER SIDESLOPE DRAINAGE BENCH
 SCALE IN FEET



28 **DETAIL**
FINAL COVER TOP DECK DIVERSION BERM (CLOSURETURF® OPTION)
 SCALE IN FEET



29 **DETAIL**
FINAL COVER SIDESLOPE DRAINAGE BENCH (CLOSURETURF® OPTION)
 SCALE IN FEET

NOTES:

- IF THE CLOSURETURF® FINAL COVER SYSTEM OPTION IS SELECTED, SAND INFILL IS TO BE USED WITH CLOSURETURF® ENGINEERED TURF IN ALL LOCATIONS. WITHIN THE FINAL COVER SIDESLOPE DRAINAGE BENCHES AND TOP DECK DIVERSION BERM, GRANULAR LINING MATERIALS THAT SUPPLEMENT THE SAND INFILL WILL BE EVALUATED DURING DETAILED DESIGN AND SPECIFIED AS APPROPRIATE.
- GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
- GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
- SIDESLOPE DRAINAGE BENCH DIMENSIONS ARE MINIMUM AND TYPICAL. SEE DRAWINGS 39 AND 40 FOR THE LOCATIONS OF THE LARGER SIDESLOPE DRAINAGE BENCHES.
- IN LIEU OF GEOCOMPOSITE EXIT DESIGN AT SIDESLOPE BENCHES, AN ALTERNATIVE DRAINAGE LAYER EXIT SYSTEM USING PERIODICALLY-SPACED OUTLET PIPES WILL BE EVALUATED DURING DETAILED DESIGN AND MAY BE USED UPON APPROVAL BY THE DESIGN ENGINEER AND AUTHORIZATION BY GPC.
- IN LIEU OF GEOCOMPOSITE EXIT DESIGN AT SIDESLOPE BENCHES, AN ALTERNATIVE DRAINAGE LAYER EXIT SYSTEM USING PERIODICALLY-SPACED OUTLET PIPES WILL BE EVALUATED DURING DETAILED DESIGN AND MAY BE USED UPON APPROVAL BY THE DESIGN ENGINEER AND AUTHORIZATION BY GPC.



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REV	DATE	DESCRIPTION	DRN	APP
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STORMWATER MANAGEMENT SYSTEM DETAILS I

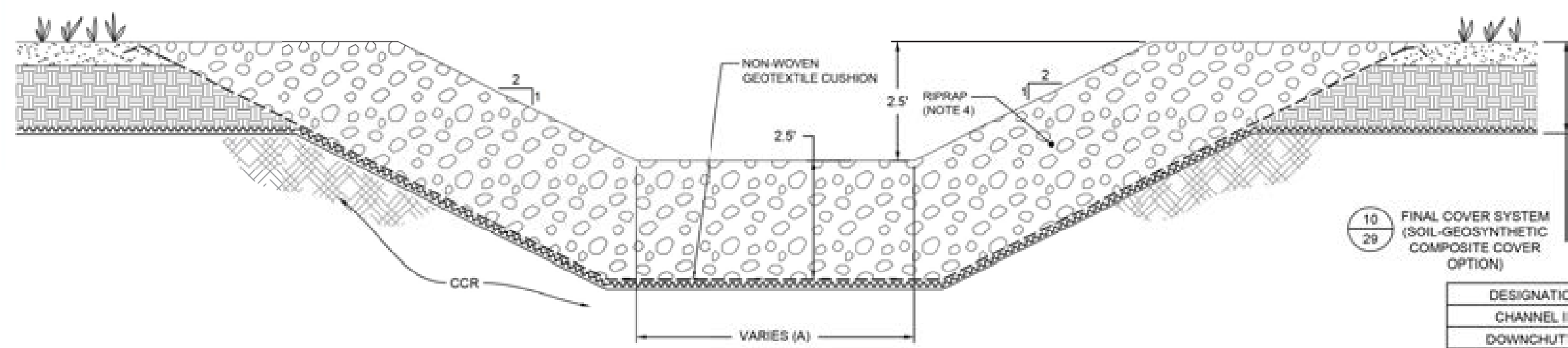
PLANT EOWEN ASH POND 1 (AP-1)
 CLOSURE DRAWINGS
 BARTOW COUNTY, GEORGIA

Geosyntec
 consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200
 KENNESAW, GEORGIA 30144 USA PHONE: 678.252.8600
 WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-043	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING 41 OF 50			

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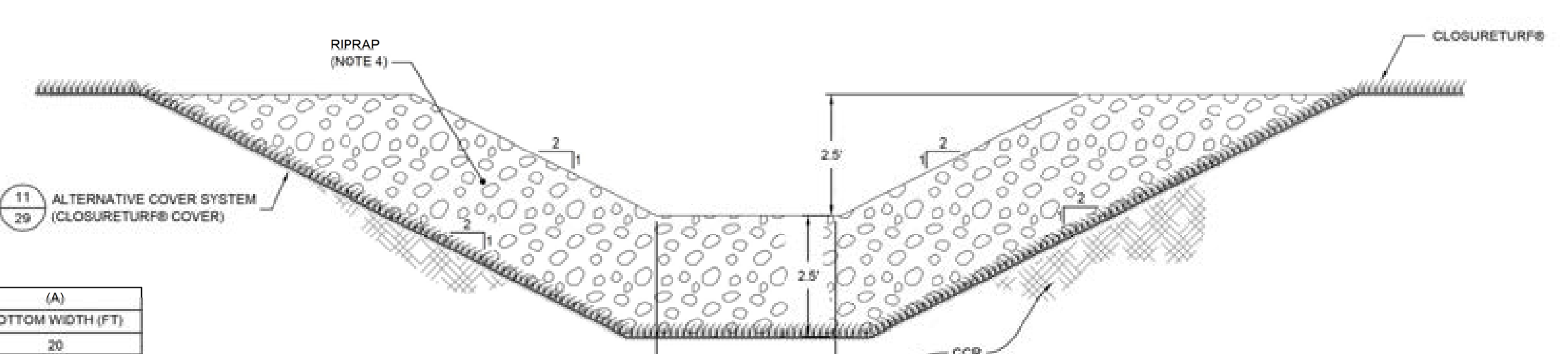


30
38
DETAIL
FINAL COVER DOWNCHUTE CHANNEL



10
29
FINAL COVER SYSTEM
(SOIL-GEOSYNTHETIC
COMPOSITE COVER
OPTION)

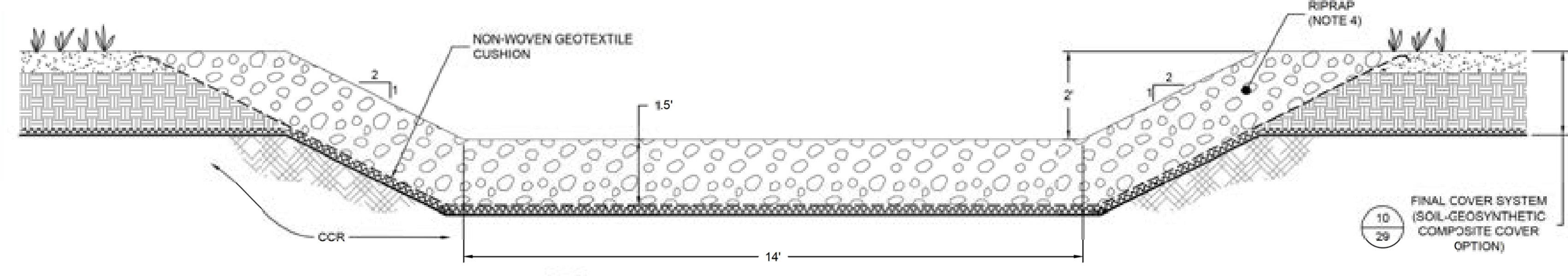
DESIGNATION	(A)
CHANNEL ID	BOTTOM WIDTH (FT)
DOWNCHUTE 1	20
DOWNCHUTE 2	15
DOWNCHUTE 3	5
DOWNCHUTE 4	30
DOWNCHUTE 5	10
DOWNCHUTE 6	5
DOWNCHUTE 7	15



31
DETAIL
FINAL COVER DOWNCHUTE CHANNEL
(CLOSURETURF® OPTION)



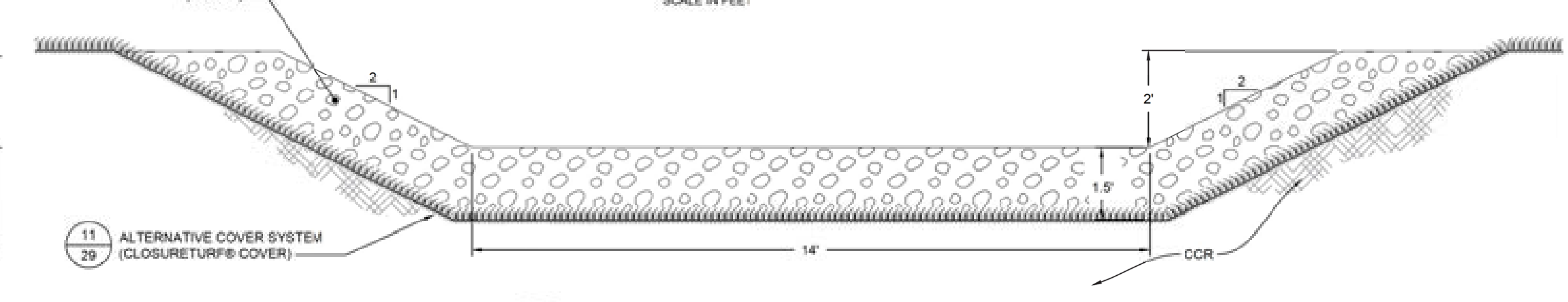
11
29
ALTERNATIVE COVER SYSTEM
(CLOSURETURF® COVER)



33
39
DETAIL
FINAL COVER TOP DECK
LET-DOWN CHANNEL



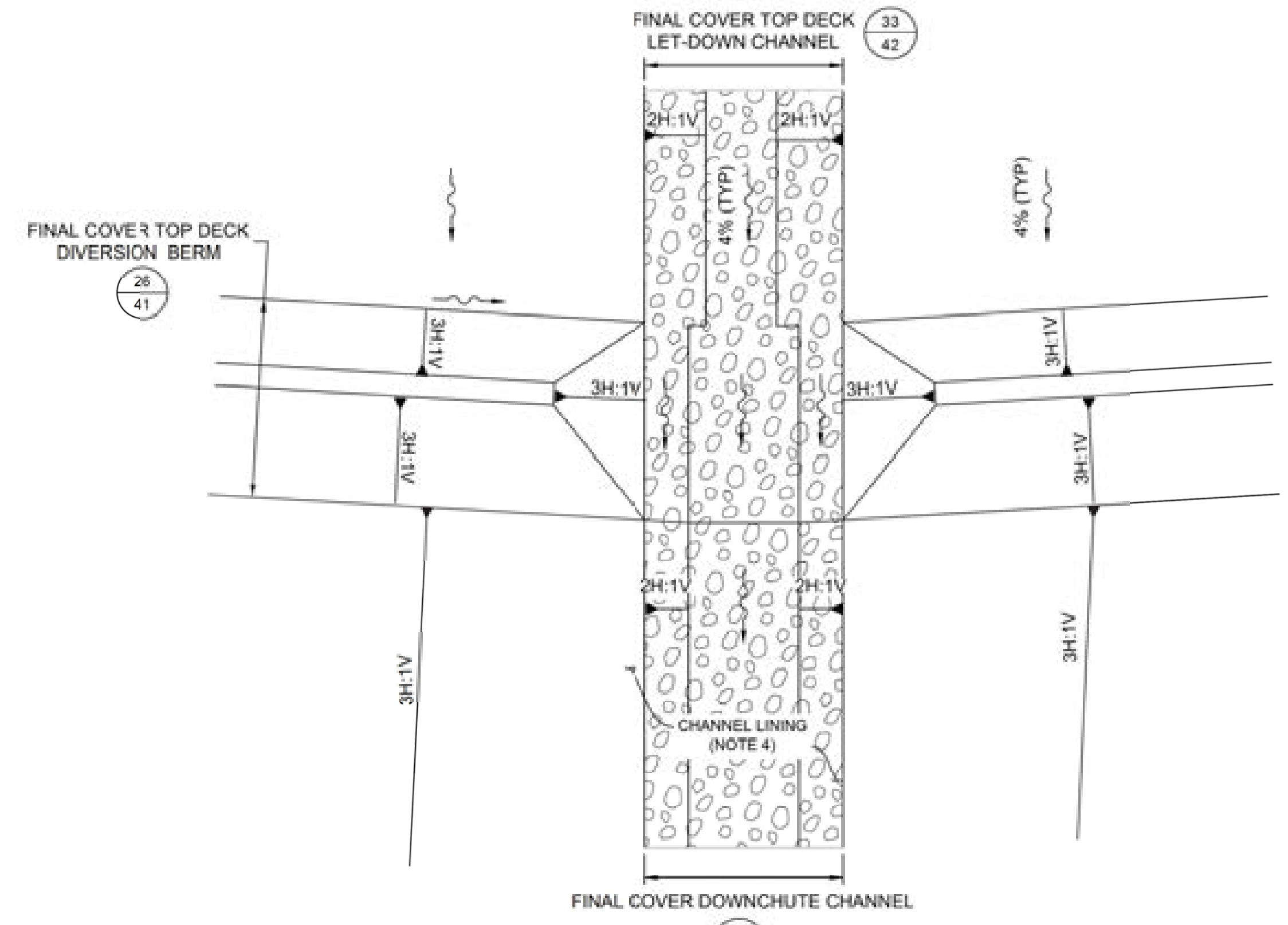
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29
FINAL COVER SYSTEM
(SOIL-GEOSYNTHETIC
COMPOSITE COVER
OPTION)



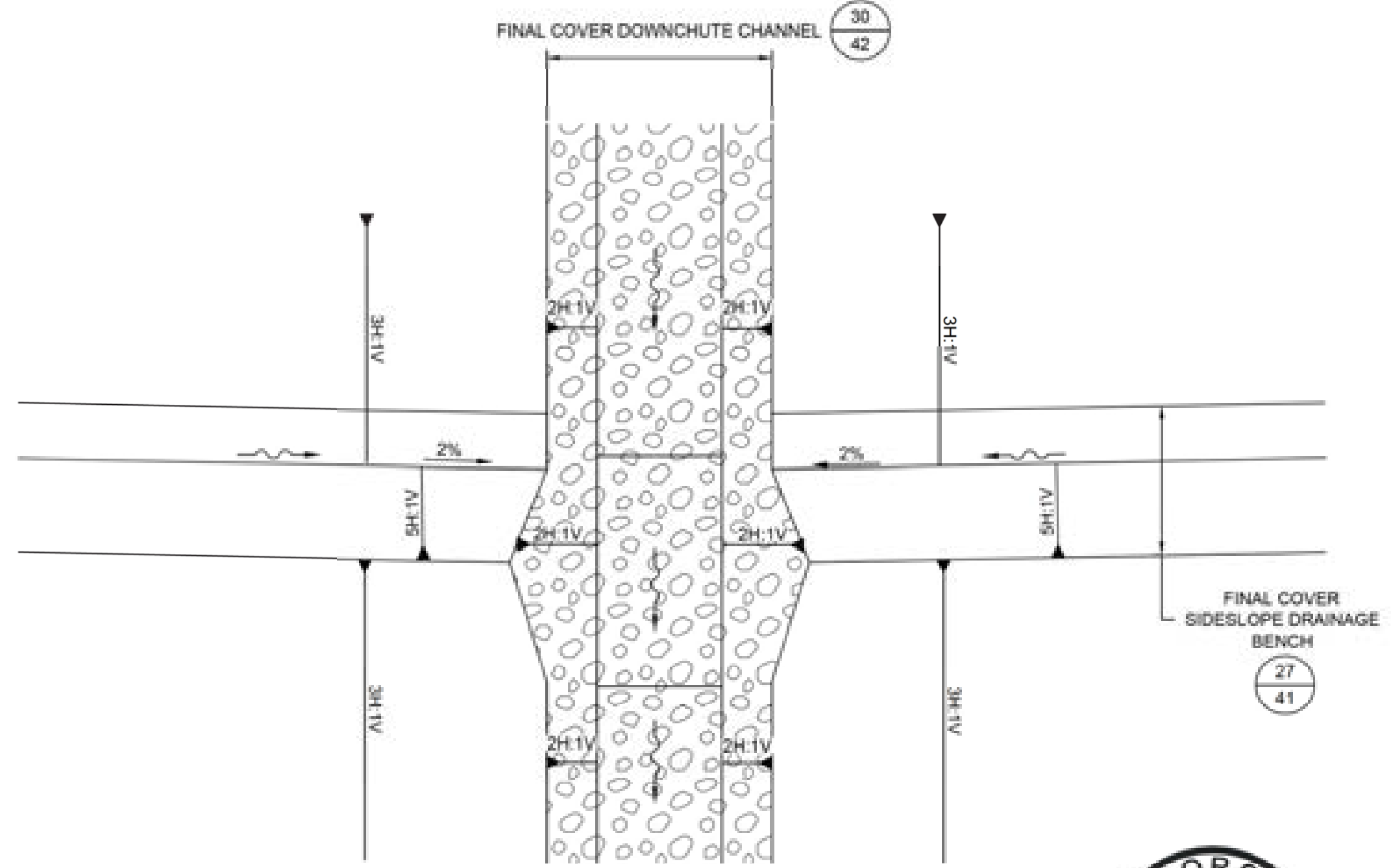
33
DETAIL
FINAL COVER TOP DECK LET-DOWN
CHANNEL (CLOSURETURF® OPTION)



11
29
ALTERNATIVE COVER SYSTEM
(CLOSURETURF® COVER)



34
39
DETAIL
FINAL COVER LET-DOWN CHANNEL
AND DOWNCHUTE INTERSECTION



35
39
DETAIL
FINAL COVER DOWNCHUTE AND
DRAINAGE BENCH INTERSECTION



- NOTES:
- SAND INFILL IS TO BE USED WITH CLOSURETURF® ENGINEERED TURF IN ALL LOCATIONS.
 - GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 - OTHER CHANNEL DIMENSIONS AND LINING SYSTEMS WILL BE ASSESSED DURING THE DETAILED DESIGN BY FOLLOWING THE CHANNEL SIZING PROCEDURES IN THE 'FINAL COVER STORMWATER MANAGEMENT SYSTEM DESIGN AND ANALYSIS' AND UTILIZING SUFFICIENT ENERGY DISSIPATION TECHNIQUES WITHIN FHWA CIRCULAR NUMBER 14 (HEC 14).
 - DOWNCHUTE CHANNELS WILL USE NATIONAL STONE ASSOCIATION (N.S.A.) NO. R-5 GRADED RIPRAP WITH N.S.A. 'NO. FS-2 FILTER STONE AS PRESENTED IN TABLE C-1 OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL' (GREEN BOOK).
 - GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 - IN LIEU OF RIPRAP LINING AT THE FINAL COVER DOWNCHUTES AND TOP DECK LET-DOWN CHANNELS, AN ALTERNATIVE LINING SYSTEM USING CLOSURETURF® WITH HYDROBINDER® WILL BE EVALUATED DURING DETAILED DESIGN AND SPECIFIED AS APPROPRIATE.

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

STORMWATER MANAGEMENT SYSTEM DETAILS II

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

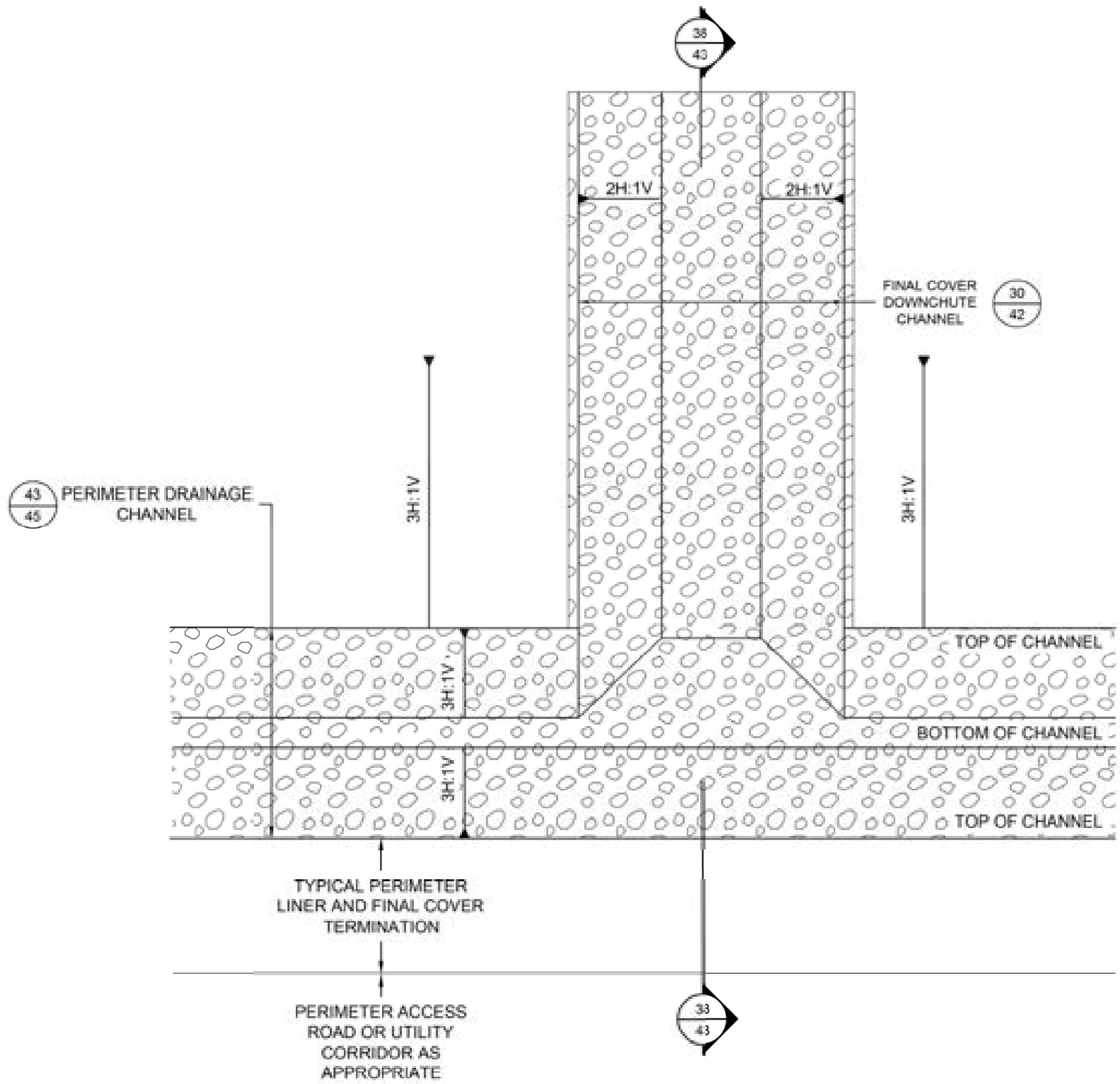
1295 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.252.8600
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-044	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 42 OF 50			
DATE	AUGUST 2021				

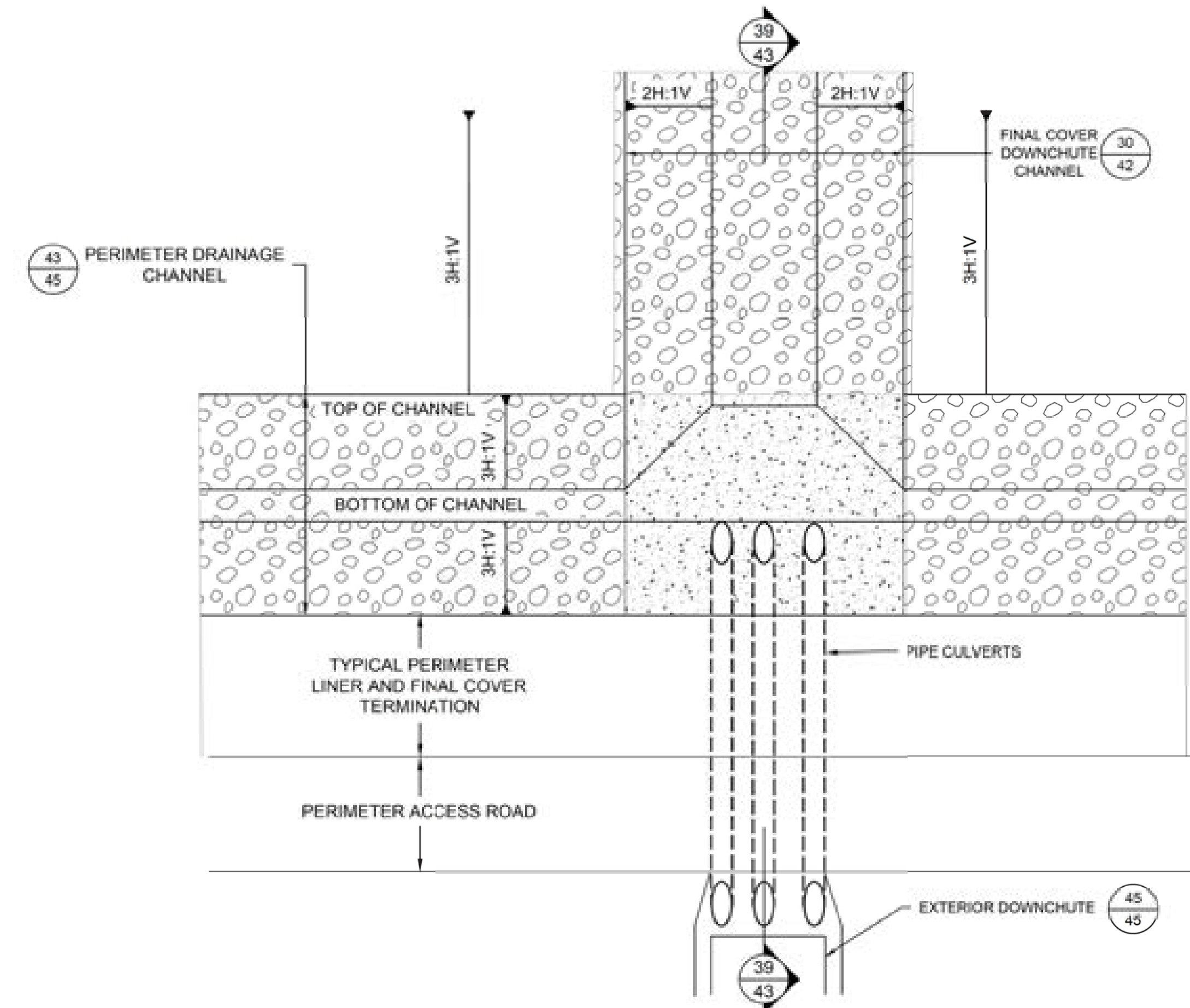


PERMIT DRAWING
NOT FOR CONSTRUCTION

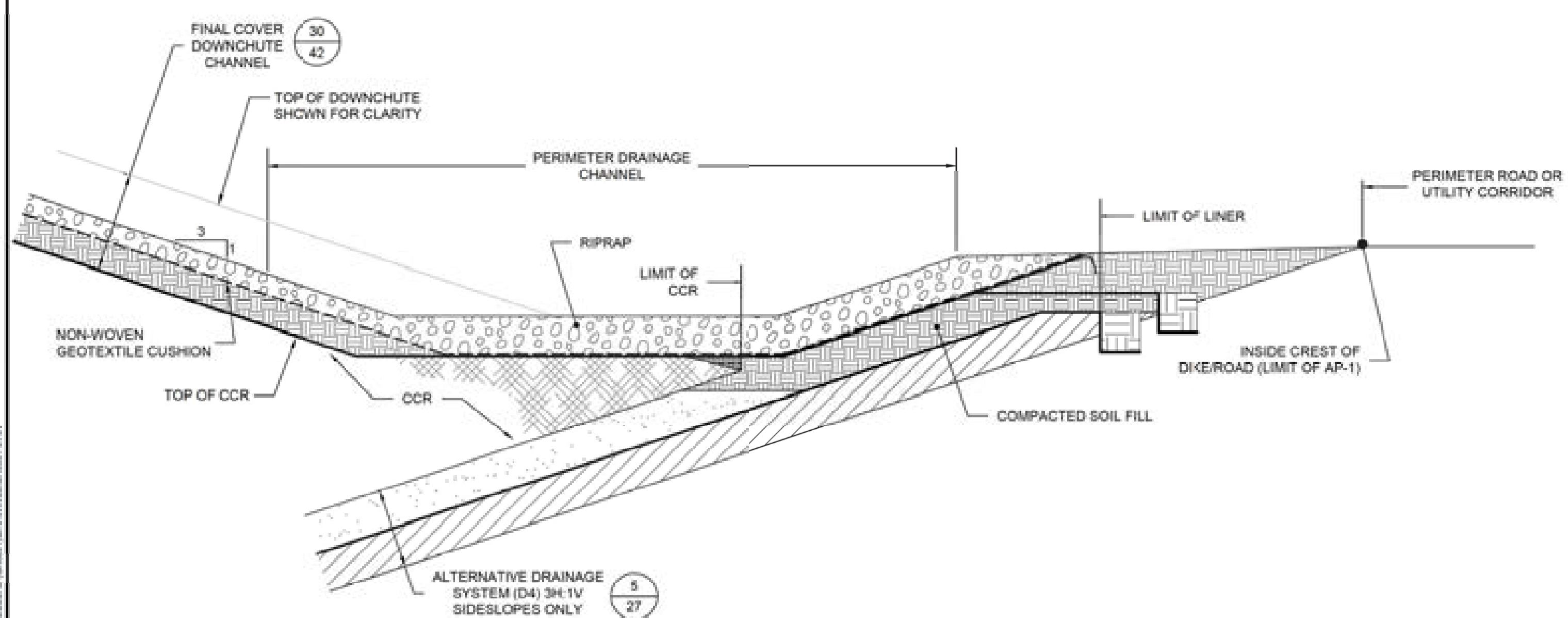
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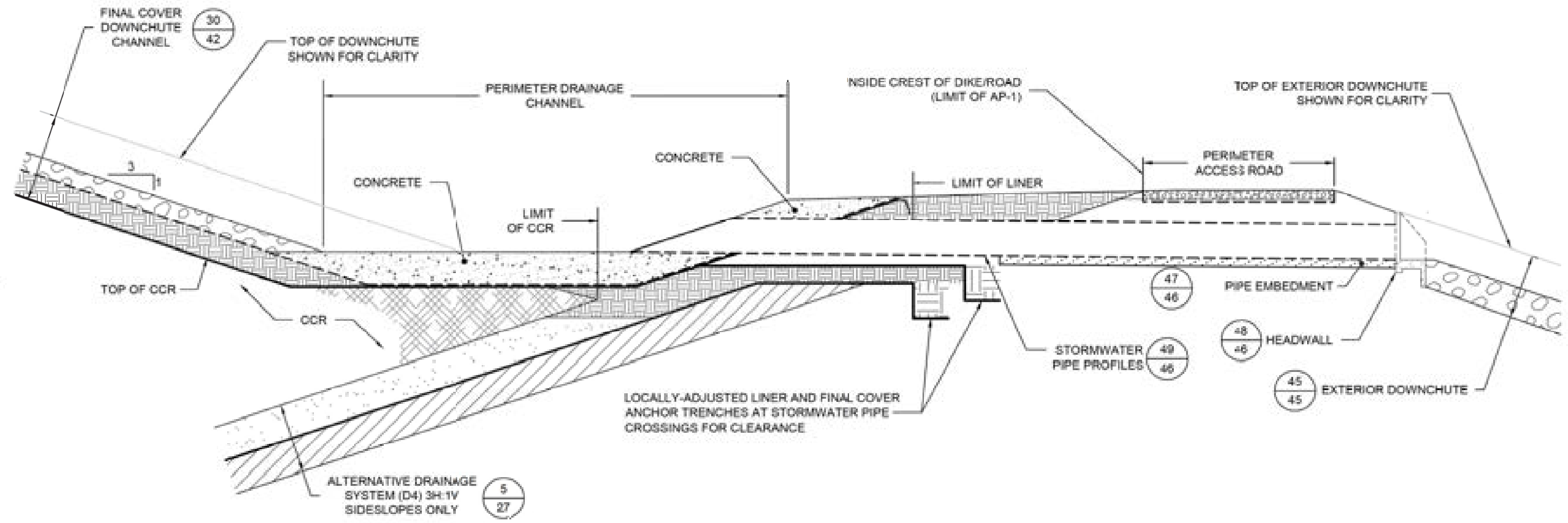
36 DETAIL
38 FINAL COVER DOWNCHUTE AND PERIMETER CHANNEL INTERSECTION
SCALE: NTS



37 DETAIL
39 FINAL COVER DOWNCHUTE AND PERIMETER DRAINAGE CHANNEL OUTLET
SCALE: NTS



38 SECTION
43 FINAL COVER DOWNCHUTE AND PERIMETER CHANNEL SECTION
SCALE: NTS



39 SECTION
43 DOWNCHUTE AND PERIMETER DRAINAGE CHANNEL OUTLET
SCALE: NTS

- NOTES:
1. SAND INFILL IS TO BE USED WITH CLOSURETURF® ENGINEERED TURF IN ALL LOCATIONS.
 2. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 3. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 4. IF THE CLOSURETURF® OPTION IS SELECTED, THE FINAL COVER DOWNCHUTE AND PERIMETER CHANNEL WILL BE INSTALLED TO MAINTAIN THE SAME LIMIT OF CCR MINIMUM CHANNEL DIMENSIONS, AND DEGREE OF SEPARATION BETWEEN THE RIPRAP LINING AND CCR.



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REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

STORMWATER MANAGEMENT SYSTEM DETAILS III

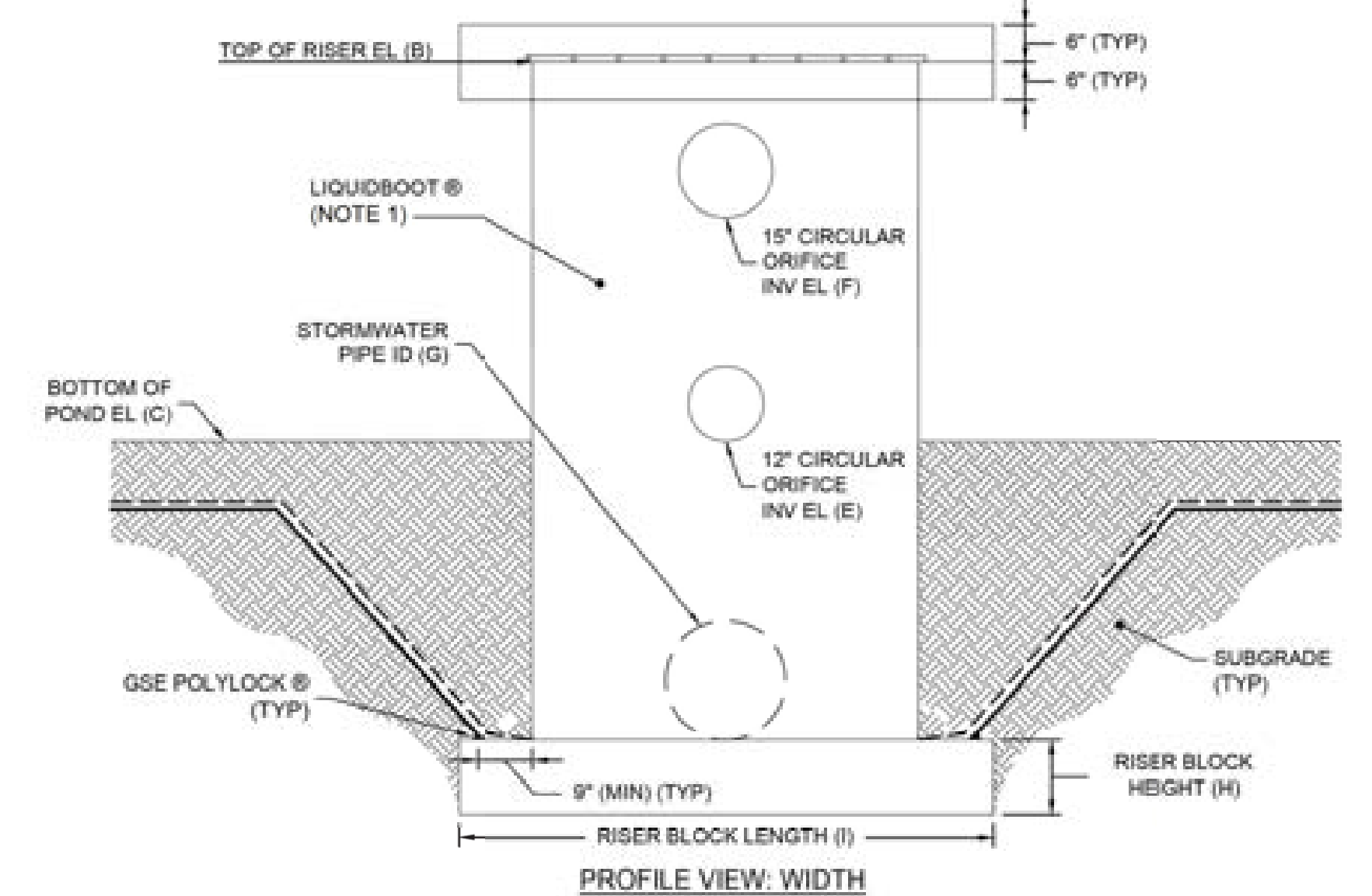
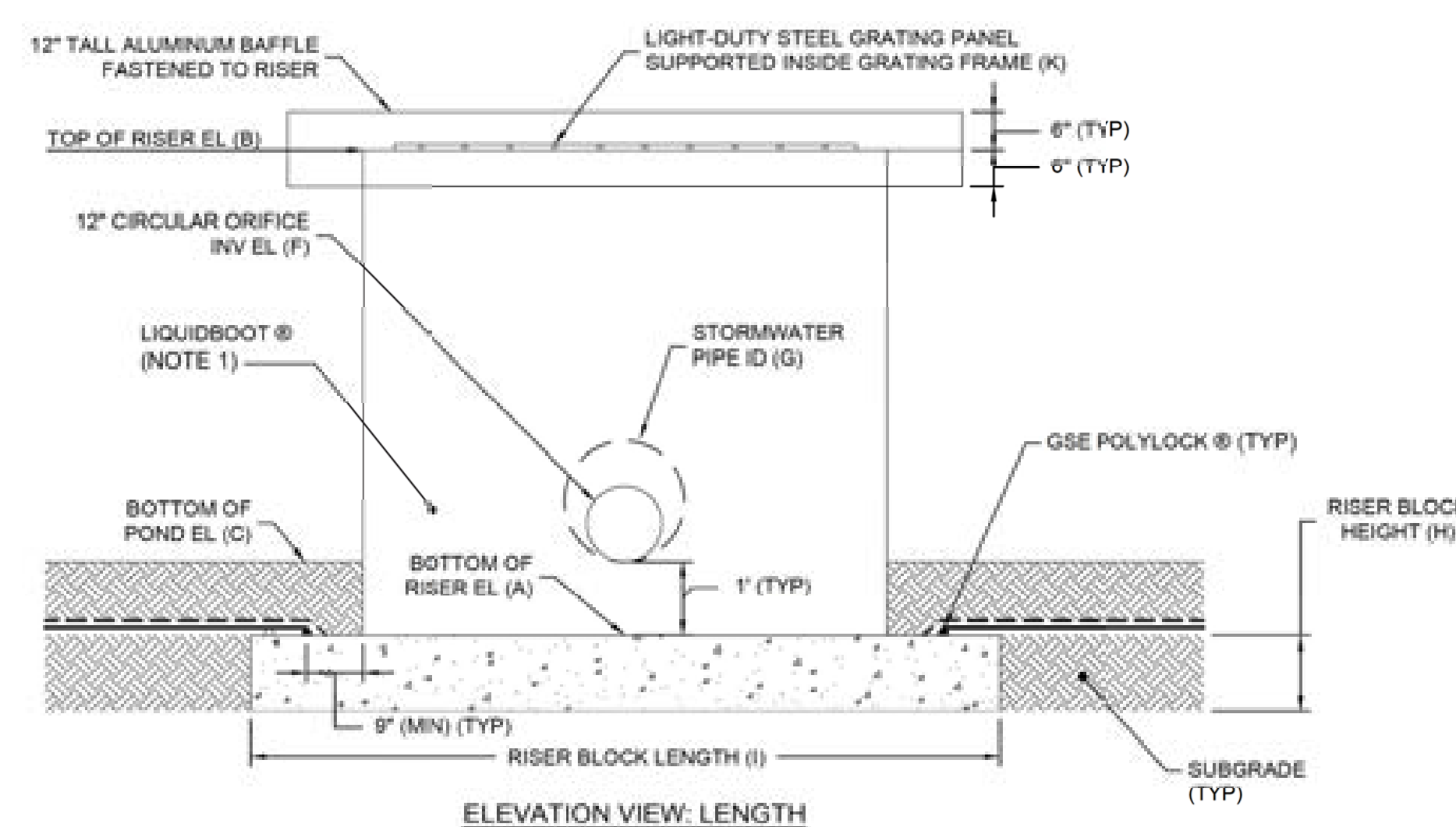
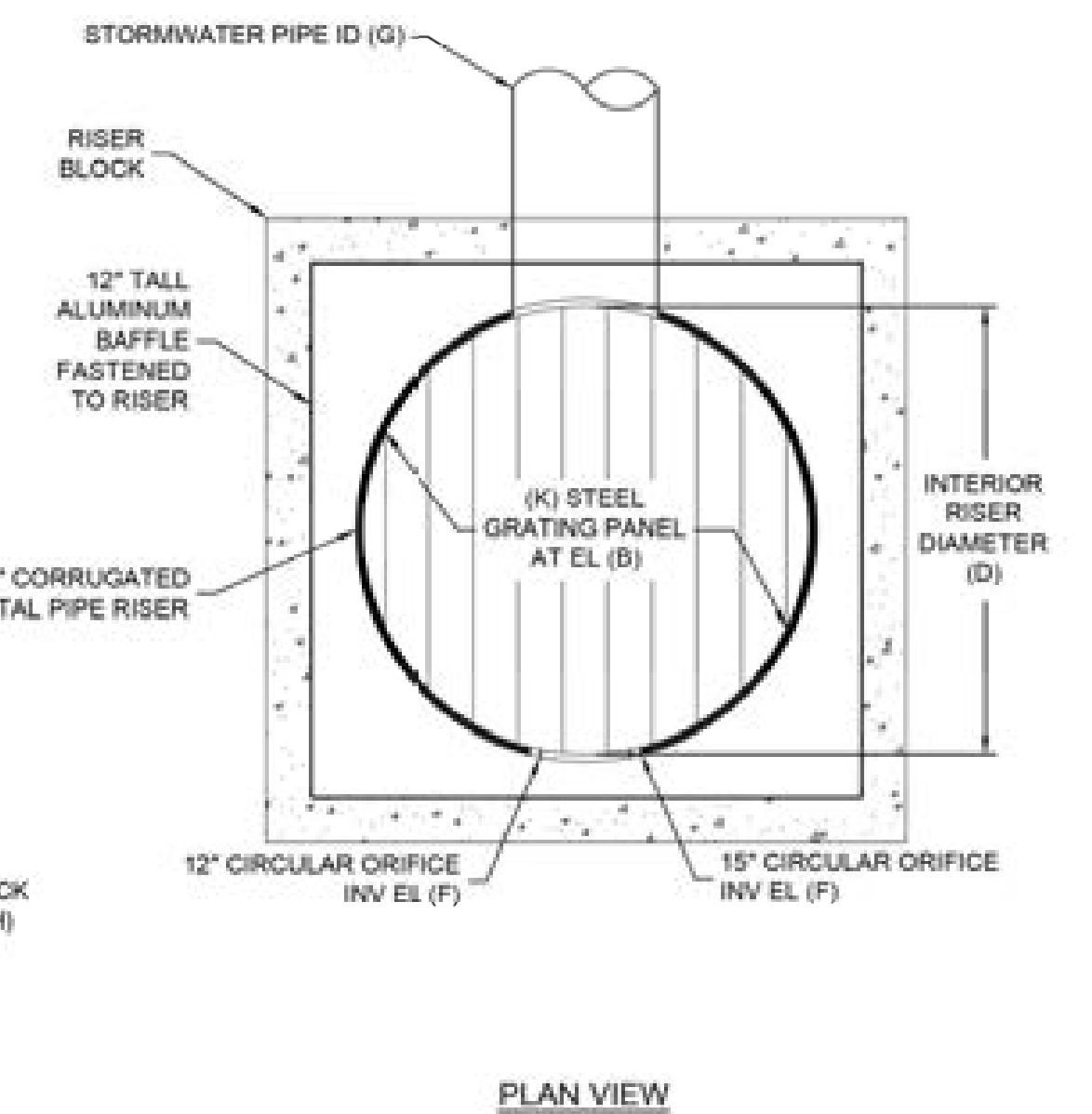
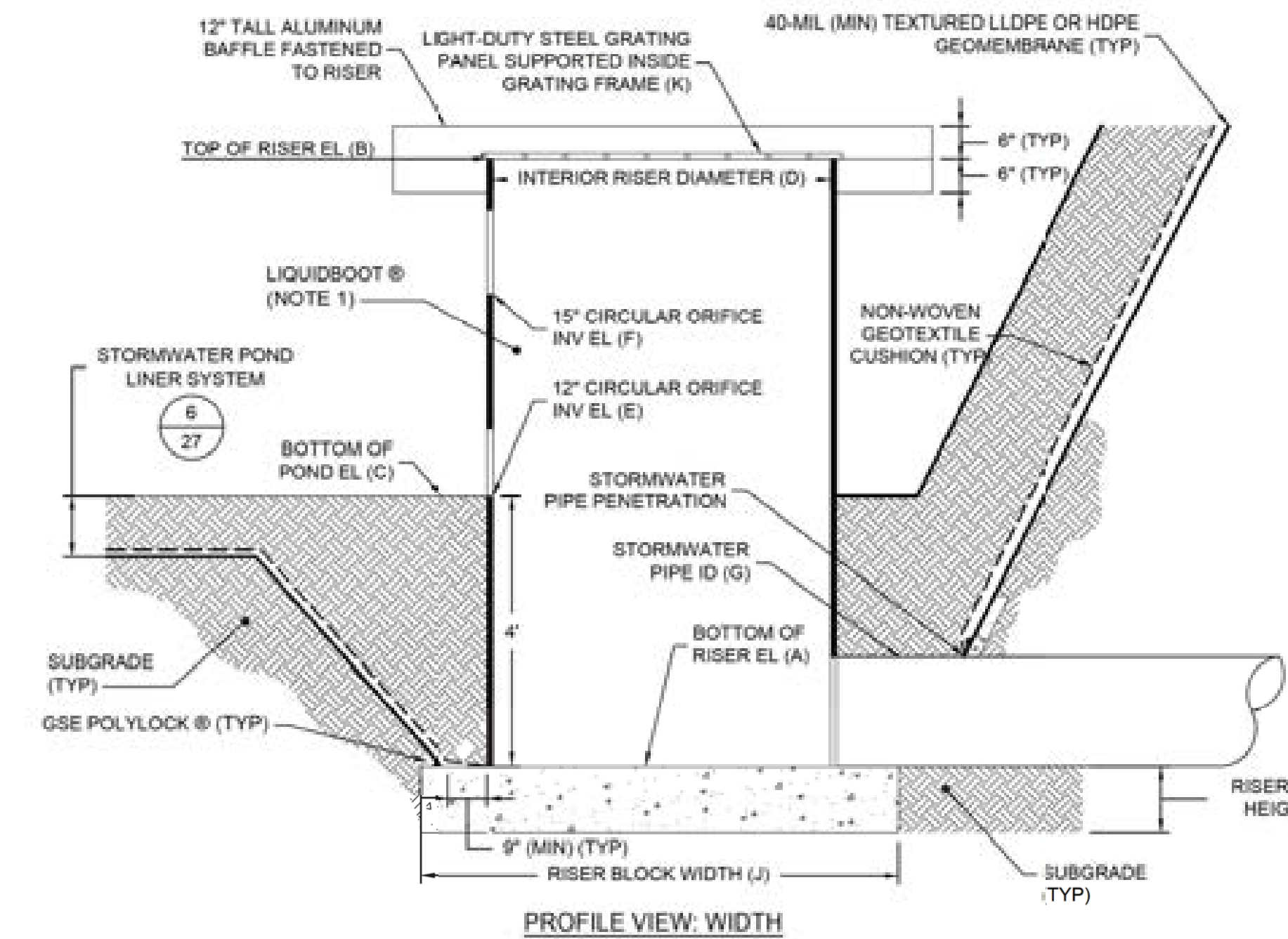
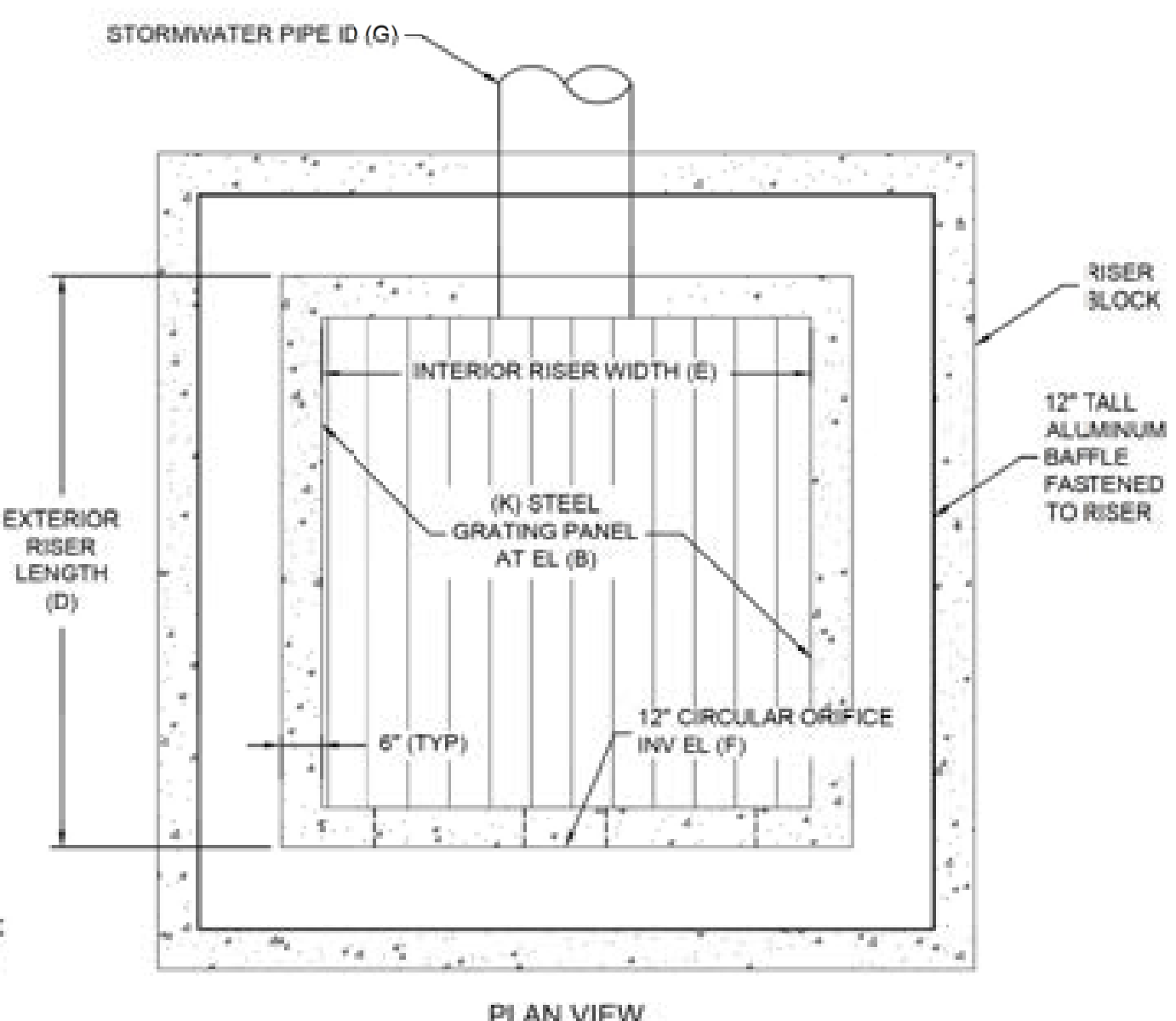
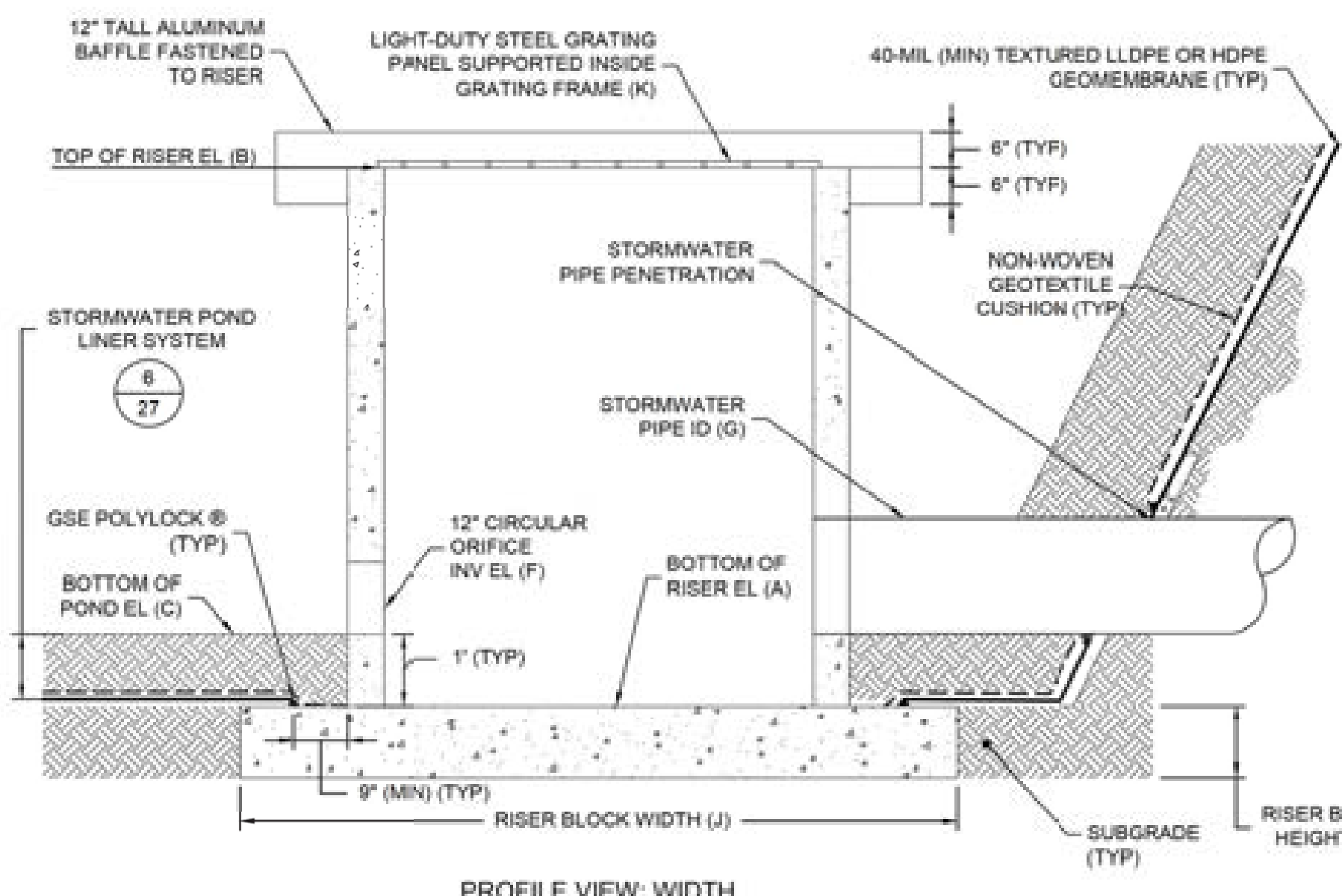
PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200
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PHONE: 678.252.8650
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-044A	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 43 OF 50			
DATE	AUGUST 2021				

P:\ACAD\PROJECTS\GEORGIA POWER\BARTOW COUNTY PLANT EOWEN ASH POND CLOSURE\DWG\STORMWATER\044A

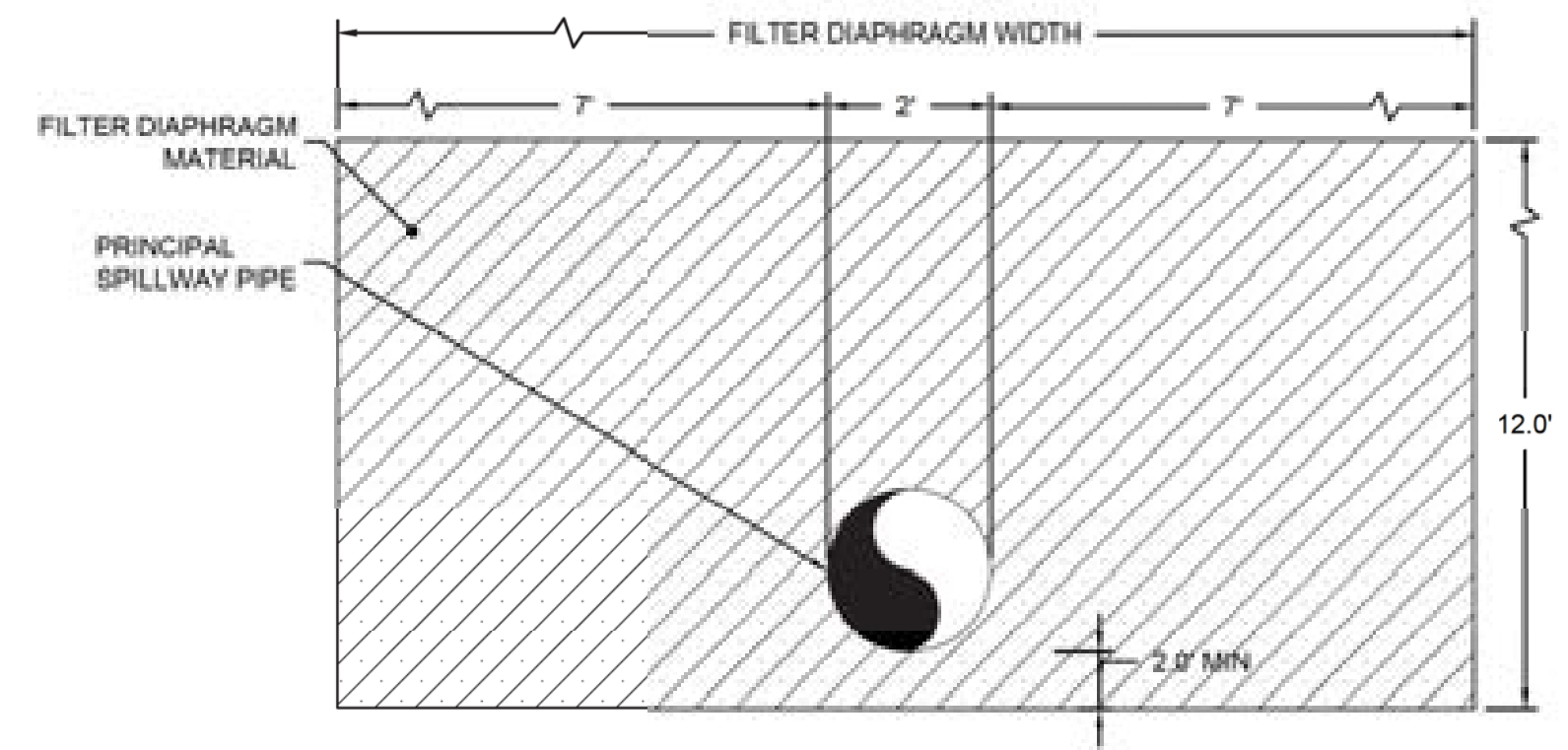
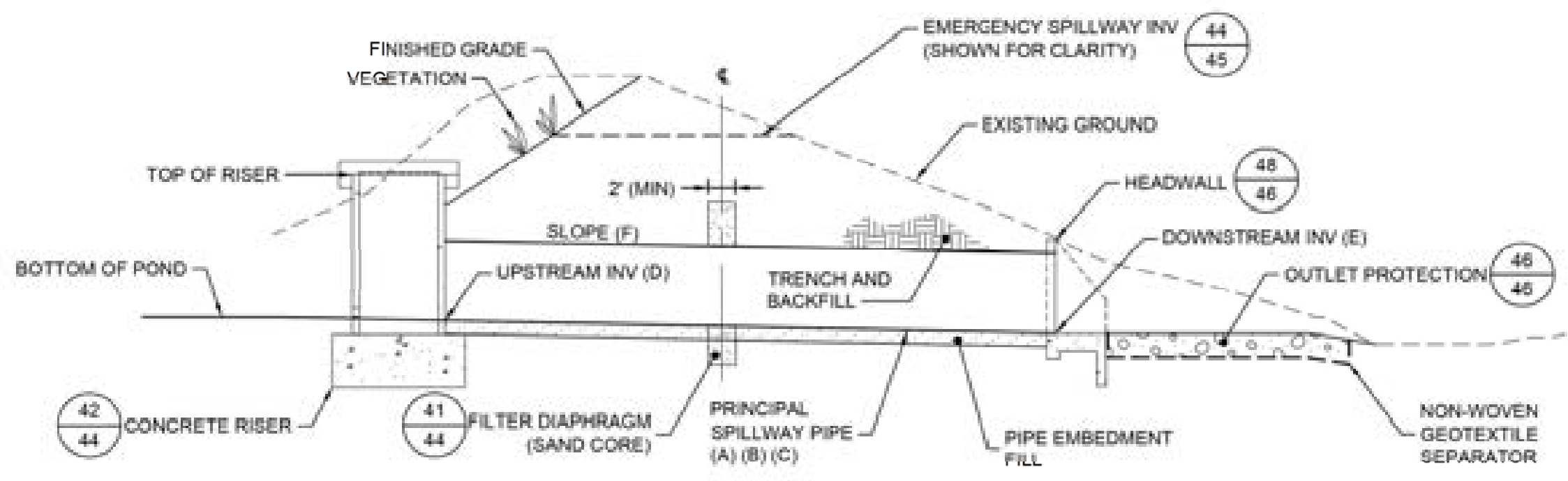


DESIGNATION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
POND ID	BOTTOM OF RISER EL (FT)	TOP OF RISER EL (FT)	BOTTOM OF POND EL (FT)	EXTERIOR RISER LENGTH (FT)	INTERIOR RISER WIDTH (FT)	ORIFICE INV EL (FT)	STORMWATER PIPE ID	RISER BLOCK HEIGHT (FT)	RISER BLOCK LENGTH (FT)	RISER BLOCK WIDTH (FT)	PANEL LENGTH (in.) X WIDTH (in.)
POND 1	689.0	695.5	690.0	5	4	690.0	POND 1 PRINCIPAL SPILLWAY PIPE	2	6	6	50
POND 3	675.0	679.0	676.0	5	4	676.0	POND 3 PRINCIPAL SPILLWAY PIPE	2	6	6	50

DESIGNATION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
POND ID	BOTTOM OF RISER EL (FT)	TOP OF RISER EL (FT)	BOTTOM OF POND EL (FT)	INTERIOR RISER DIAMETER (FT)	12" CIRCULAR ORIFICE INV EL (FT)	15" CIRCULAR ORIFICE INV EL (FT)	STORMWATER PIPE ID	RISER BLOCK HEIGHT (FT)	RISER BLOCK LENGTH (FT)	RISER BLOCK WIDTH (FT)	PANEL DIAMETER (in.)
POND 2	673.5	683.8	677.5	5	677.5	680.5	POND 2 PRINCIPAL SPILLWAY PIPE	2	7.2	7.2	60

42 DETAIL
39 CONCRETE RISER
SCALE: NTS

42A DETAIL
39 EXISTING POND 2 RISER PIPE
SCALE: NTS



41 DETAIL
44 FILTER DIAPHRAGM (SAND CORE)
SCALE: 1" = 5'

NOTE:
1. THE HEIGHT OF THE FILTER DIAPHRAGM WILL BE AT LEAST 2 FEET BELOW THE EMBANKMENT SURFACE AND EXTEND UPWARD AT LEAST 3 TIMES THE OUTSIDE PIPE DIAMETER WHERE POSSIBLE.

- NOTES:
- LIQIDBOOT® WILL BE APPLIED TO EXPOSED SURFACES OF RISER STRUCTURES.
 - SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
 - GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 - TRASH RACK WILL BE INSTALLED OVER DRAWDOWN ORIFICES TO PREVENT CLOGGING.



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REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

STORMWATER MANAGEMENT SYSTEM DETAILS IV

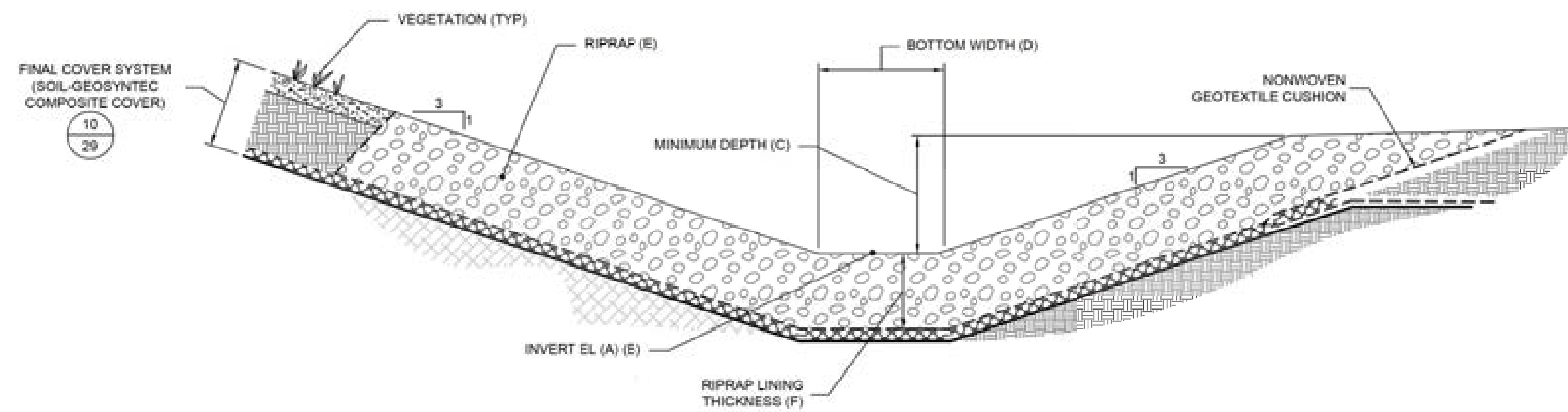
**PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

1250 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.333.8650
WWW.GEOSYNTEC.COM

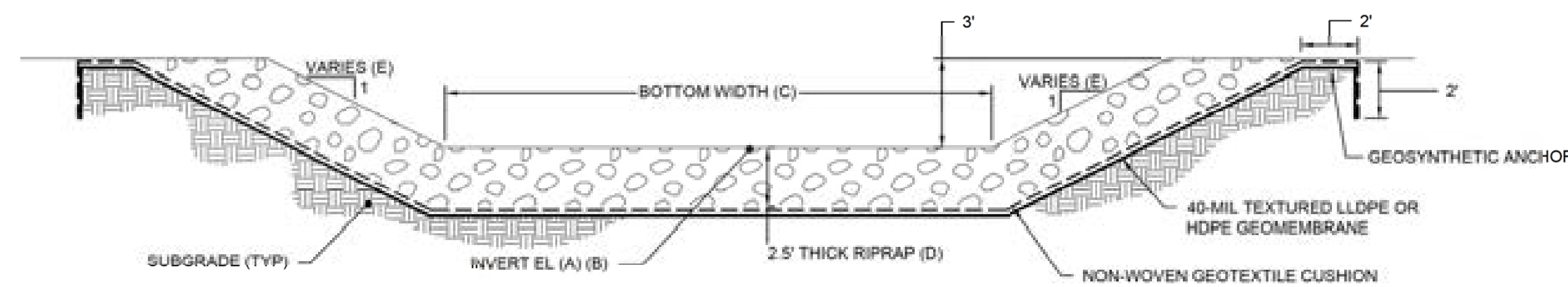
PROJ. NO.	GR6601	DWG.	GR6601-045	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 44 OF 50			
DATE	AUGUST 2021				

P:\ACORP\PROJECTS\GEORGIA POWER\EOWEN ASH POND CLOSURE PLANT\TRENCH AND BACKFILL\CONCRETE RISER\CONCRETE RISER.DWG



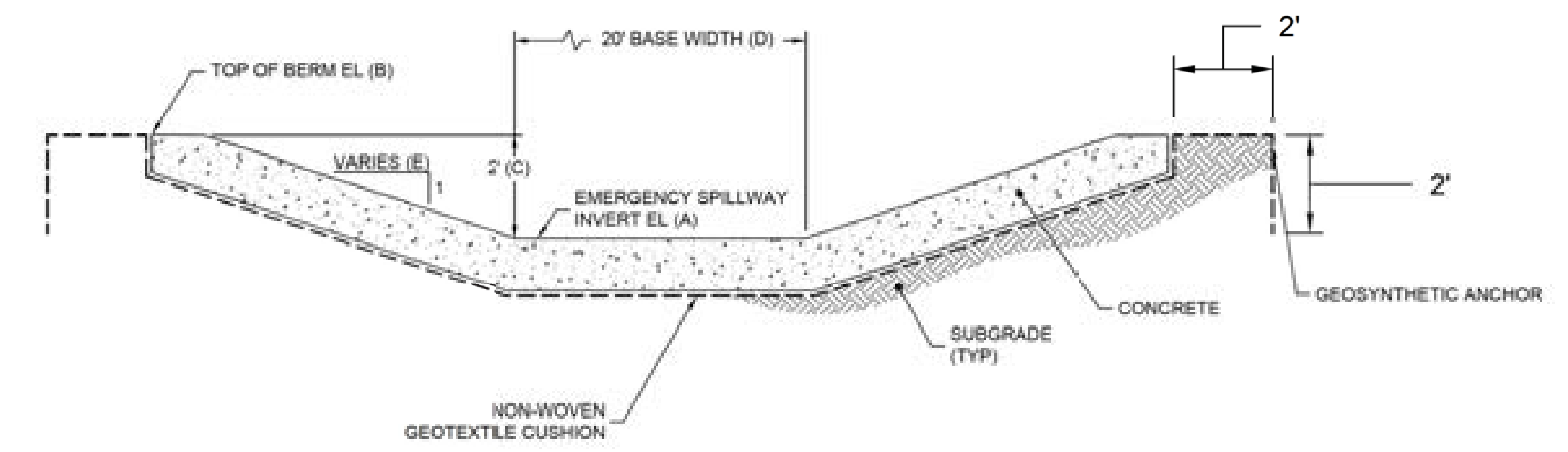
DESIGNATION			(A)	(B)	(C)	(D)	(E)	(F)
PERIMETER CHANNEL ID	LENGTH (FT)	SLOPE (FT/FT)	UPSTREAM INVERT EL (FT)	DOWNSTREAM INVERT EL (FT)	MIN DEPTH (FT)	BOTTOM WIDTH (FT)	RIPRAP STONE GRADE (FILTER STONE GRADE) (NOTE 2)	RIPRAP LINING THICKNESS
1.1	934	0.005	7'-6.86	712.19	2.5	3	N.S.A. No. R-4 (FS-2)	1.5
1.2	675	0.005	7'-2.19	708.81	4	3	N.S.A. No. R-4 (FS-2)	1.5
1.3	674	0.005	7'-3.00	709.62	2	3	N.S.A. No. R-4 (FS-2)	1.5
1.4	927	0.006	7'-3.00	707.17	2.5	3	N.S.A. No. R-4 (FS-2)	1.5
1.5	1226	0.005	7'-3.30	707.17	2.5	3	N.S.A. No. R-4 (FS-2)	1.5
2.1	1031	0.005	7'-3.30	708.14	3	3	N.S.A. No. R-4 (FS-2)	1.5
2.2	872	0.005	7'-2.92	708.14	2	3	N.S.A. No. R-4 (FS-2)	1.5
3.1	490	0.005	7'-2.92	710.47	2	3	N.S.A. No. R-4 (FS-2)	1.5
3.2	807	0.005	7'-0.97	706.93	3	3	N.S.A. No. R-4 (FS-2)	1.5
3.3	580	0.005	7'-3.70	710.97	2	3	N.S.A. No. R-4 (FS-2)	1.5
4.1	575	0.005	7'-3.70	710.60	2	3	N.S.A. No. R-4 (FS-2)	1.5
4.2	315	0.005	7'-0.60	708.91	3	3	N.S.A. No. R-4 (FS-2)	1.5
4.3	1110	0.005	7'-4.46	708.91	3	9	N.S.A. No. R-4 (FS-2)	1.5
4.4	480	0.005	7'-6.86	714.46	2.5	3	N.S.A. No. R-4 (FS-2)	1.5
4.5	1815	0.010	695.49	676.83	3	20	N.S.A. No. R-5 (FS-2)	2.5

43 DETAIL
30 PERIMETER DRAINAGE CHANNEL
SCALE: NTS



DESIGNATION			(A)	(B)	(C)	(D)	(E)
EXTERIOR DOWNCHUTE ID	LENGTH (FT)	SLOPE (FT/FT)	UPSTREAM INVERT EL (FT)	DOWNSTREAM INVERT EL (FT)	BOTTOM WIDTH (FT)	RIPRAP STONE GRADE (FILTER STONE GRADE) (NOTE 2)	SIDE SLOPE (H:V)
ED-1	110	0.33 (NOTE 7)	709.0	790.0	15	N.S.A. No. R-5 (FS-2)	2:1
ED-2	110	0.33 (NOTE 7)	706.6	790.0	10	N.S.A. No. R-5 (FS-2)	2:1
ED-4	100	0.33	706.6	682.0	5	N.S.A. No. R-5 (FS-2)	2:1
ED-5	100	0.33	708.7	699.9	10	N.S.A. No. R-5 (FS-2)	2:1

45 DETAIL
38 EXTERIOR DOWNCHUTE
SCALE: NTS



DESIGNATION	(A)	(B)	(C)	(D)	(E)
POND ID	SPILLWAY INV EL (FT)	TOP OF BERM EL (FT)	DEPTH (FT)	BASE WIDTH (FT)	SIDE SLOPE (H:V)
POND 1 EMERGENCY SPILLWAY	698	700	2	20	3:1
POND 2 EMERGENCY SPILLWAY (EXISTING)	685	687	2	20	10:1
POND 3 EMERGENCY SPILLWAY	680	682	2	20	10:1

44 DETAIL
39 EMERGENCY SPILLWAY
SCALE: NTS

NOTES:

1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
2. N.S.A. No. REFERS TO NATIONAL STONE ASSOCIATION RIPRAP AND FILTER STONE GRADATIONS AS PRESENTED IN TABLE C-1 OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL" (GREEN BOOK).
3. OTHER CHANNEL DIMENSIONS AND LINING SYSTEMS WILL BE ASSESSED DURING THE DETAILED DESIGN BY FOLLOWING THE CHANNEL SIZING PROCEDURES IN THE "FINAL COVER STORMWATER MANAGEMENT SYSTEM DESIGN AND ANALYSIS" AND UTILIZING SUFFICIENT ENERGY DISSIPATION TECHNIQUES WITHIN FHWA CIRCULAR NUMBER 14 (HEC 14).
4. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
5. SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
6. PERIMETER DRAINAGE CHANNEL 4.5 IS CONSTRUCTED OUTSIDE OF THE NEW EARTHEN CONTAINMENT DIKE, AS SHOWN ON DWG 40, AND WILL BE CONSTRUCTED FOLLOWING THE EXTERIOR DOWNCHUTE DETAIL.
7. EXTERIOR DOWNCHUTE 1 AND EXTERIOR DOWNCHUTE 2 WILL BE CONSTRUCTED AT A MINIMUM SLOPE OF 1 PERCENT ALONG THE CORRIDOR BETWEEN THE NEW EARTHEN CONTAINMENT DIKE AND POND 1.



PERMIT DRAWING
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REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

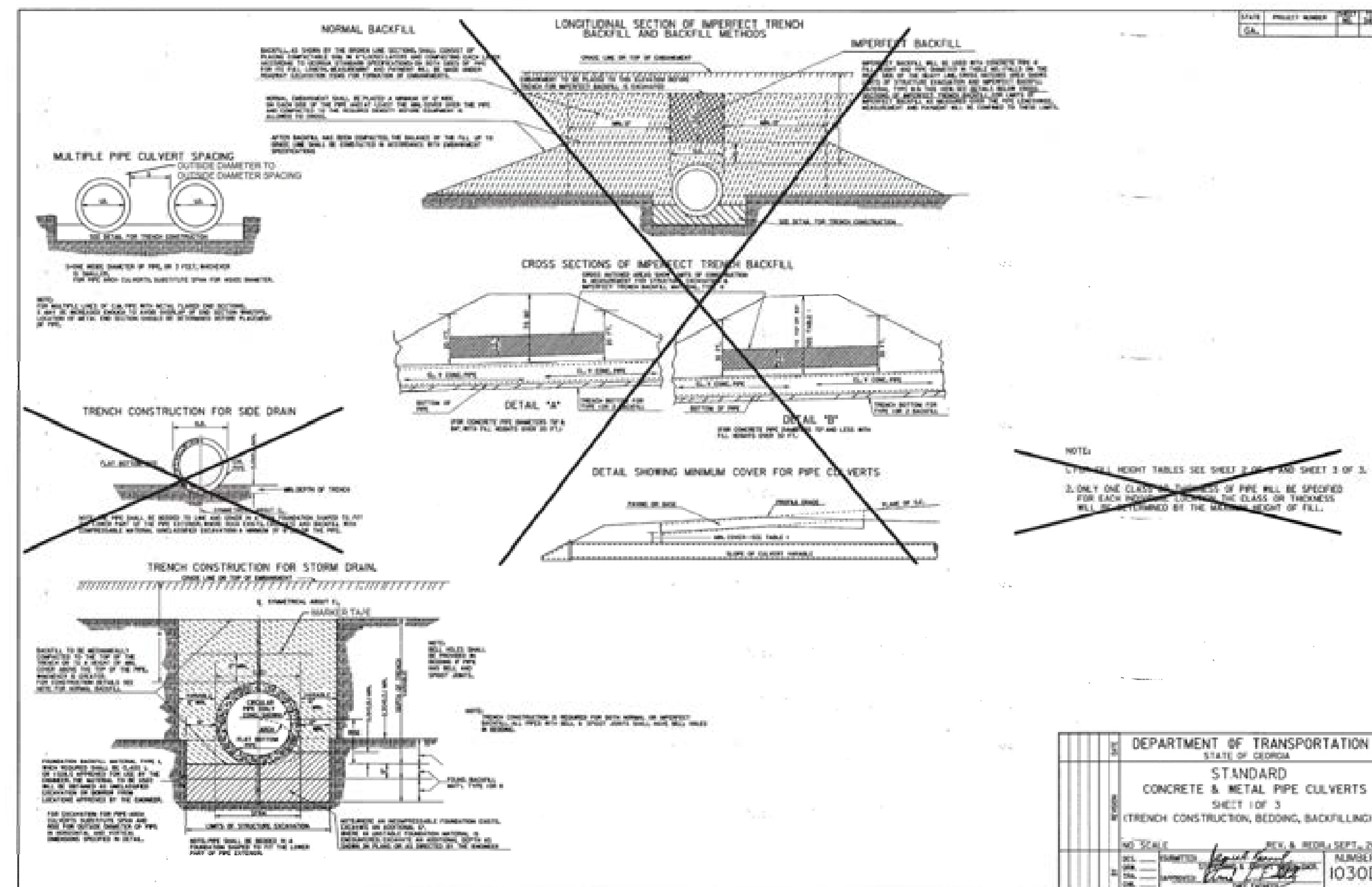
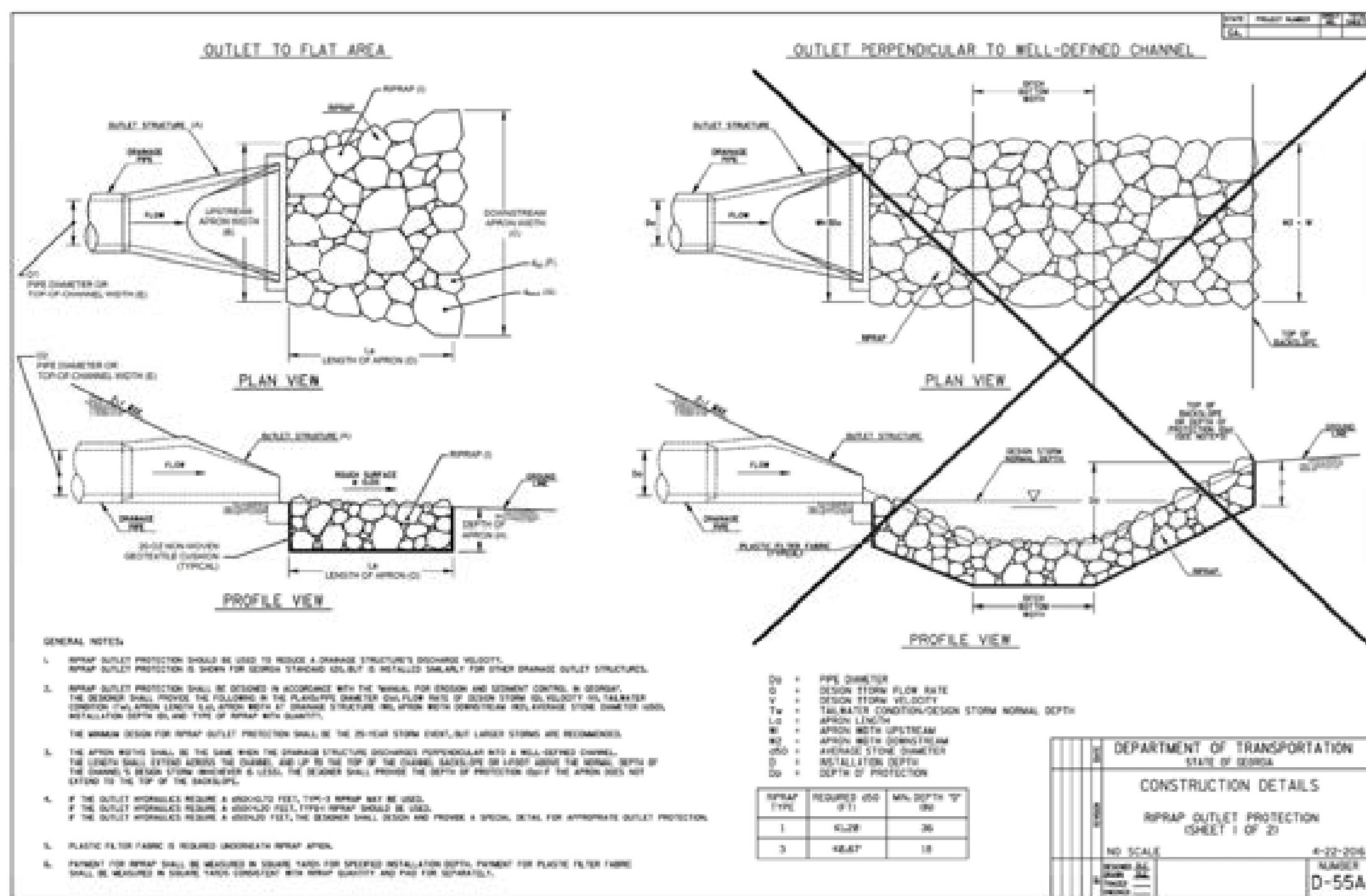
STORMWATER MANAGEMENT SYSTEM DETAILS V

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

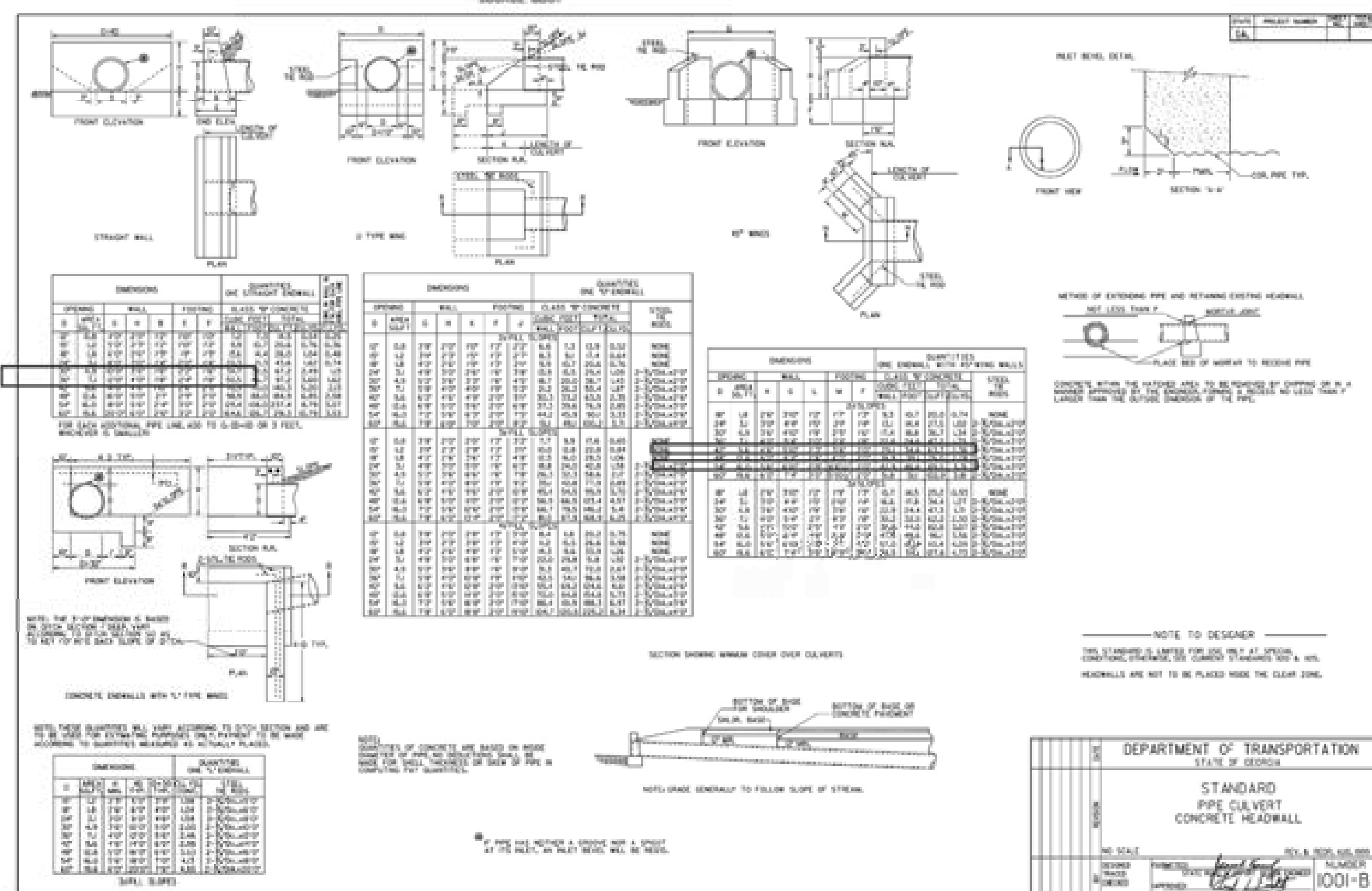
1295 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.333.8650
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PROJ. NO.	GR6601	DWG.	GR6601-046	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 45 OF 50			
DATE	AUGUST 2021				



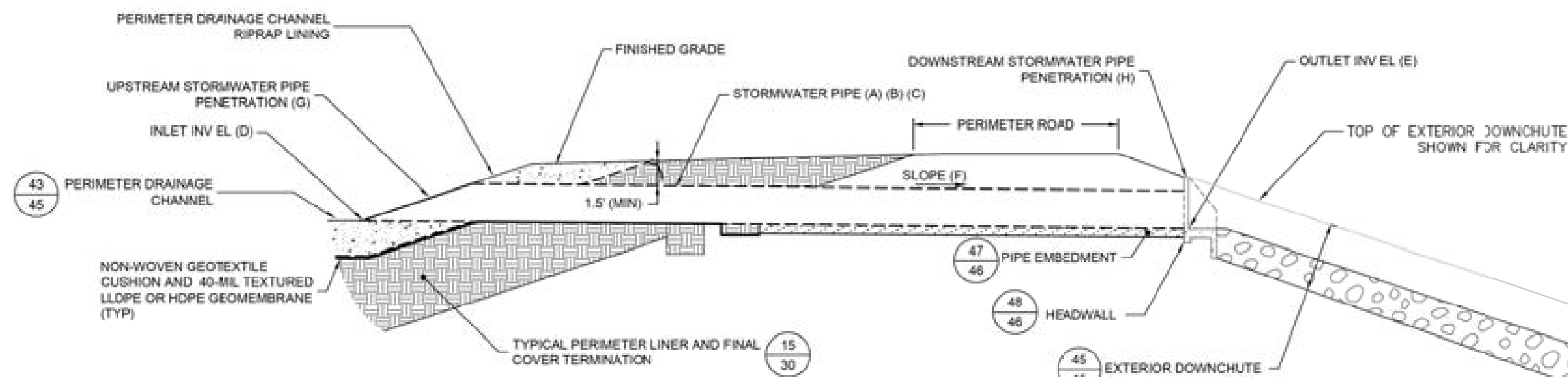
DESIGNATION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
OUTLET ID	OUTLET TYPE	UPSTREAM APRON WIDTH (FT)	DOWNSTREAM APRON WIDTH (FT)	LENGTH OF APRON (FT)	PIPE DIAMETER OR (TOP-OF-CHANNEL WIDTH x DEPTH) (FT)	d50 (in.)	dmax (in.)	DEPTH OF APRON (FT)	RIPRAP/STONE GRADE (FILTER STONE GRADE) (NOTE 3)
POND 1 PRINCIPAL SPILLWAY PIPE	RCP	6	20	15	2.0	6	12	1.5	N.S.A. No. R-4 (FS-2)
POND 3 PRINCIPAL SPILLWAY PIPE	RCP	7.5	20	20	2.5	6	12	1.5	N.S.A. No. R-4 (FS-2)
POND 1 EMERGENCY SPILLWAY	CONCRETE TRAPEZOIDAL CHANNEL	32	32	25	(32 x 2)	9	18	2.5	N.S.A. No. R-6 (FS-2)
POND 3 EMERGENCY SPILLWAY	CONCRETE TRAPEZOIDAL CHANNEL	60	60	25	(60 x 2)	9	18	2.5	N.S.A. No. R-6 (FS-2)
PERIMETER CHANNEL 4.5	RIPRAP-LINED TRAPEZOIDAL CHANNEL	40	45	35	(38 x 3)	9	18	2.5	N.S.A. No. R-6 (FS-2)
EXTERIOR DOWNCHUTE 1	RIPRAP-LINED TRAPEZOIDAL CHANNEL	30	40	35	(27 x 3)	9	18	2.5	N.S.A. No. R-6 (FS-2)
EXTERIOR DOWNCHUTE 2	RIPRAP-LINED TRAPEZOIDAL CHANNEL	25	40	30	(22 x 3)	9	18	2.5	N.S.A. No. R-6 (FS-2)
EXTERIOR DOWNCHUTE 4	RIPRAP-LINED TRAPEZOIDAL CHANNEL	20	40	35	(17 x 3)	9	18	2.5	N.S.A. No. R-6 (FS-2)
EXTERIOR DOWNCHUTE 5	RIPRAP-LINED TRAPEZOIDAL CHANNEL	25	40	35	(22 x 3)	9	18	2.5	N.S.A. No. R-6 (FS-2)

46
38
DETAIL
OUTLET PROTECTION
SCALE: NTS
SOURCE: GDOT



48
43
DETAIL
HEADWALL
SCALE: NTS
SOURCE: GDOT

47
43
SECTION
PIPE EMBEDMENT
SCALE: NTS
SOURCE: GDOT



DESIGNATION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
CULVERT ID	MATERIAL TYPE	NUMBER OF SURFACE WATER PIPE - DIAMETER	LENGTH (FT)	INLET INV. EL. (FT)	OUTLET INV. EL. (FT)	SLOPE (FT/FT)	UPSTREAM PIPE PENETRATION	DOWNSTREAM PIPE PENETRATION
C-1	RCP	(5) - 3.0'	75	709.5	709.0	0.0067	PERIMETER CHANNEL	EXTERIOR DOWNCHUTE CHANNEL TO POND 1
C-2	RCP	(3) - 3.0'	80	707.2	706.8	0.0050	PERIMETER CHANNEL	EXTERIOR DOWNCHUTE CHANNEL TO POND 1
C-4	RCP	(2) - 3.0'	75	707.1	706.6	0.0067	PERIMETER CHANNEL	EXTERIOR DOWNCHUTE CHANNEL TO POND 3
C-5	RCP	(4) - 3.0'	85	709.1	708.7	0.0058	PERIMETER CHANNEL	EXTERIOR DOWNCHUTE CHANNEL TO POND 3

49
39
DETAIL
STORMWATER PIPE PROFILES
SCALE: NTS

- NOTES:**
- RIPRAP OUTLET PROTECTION WILL BE LINED WITH A 40-MIL (MIN) TEXTURED LLOPE OR HDPE GEOMEMBRANE OVERLAIN WITH A GEOTEXTILE CUSHION.
 - SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
 - N.S.A. No. REFERS TO NATIONAL STONE ASSOCIATION RIPRAP AND FILTER STONE GRADATIONS AS PRESENTED IN TABLE C-1 OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL" (GREEN BOOK).

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

STORMWATER MANAGEMENT SYSTEM DETAILS VI

PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA

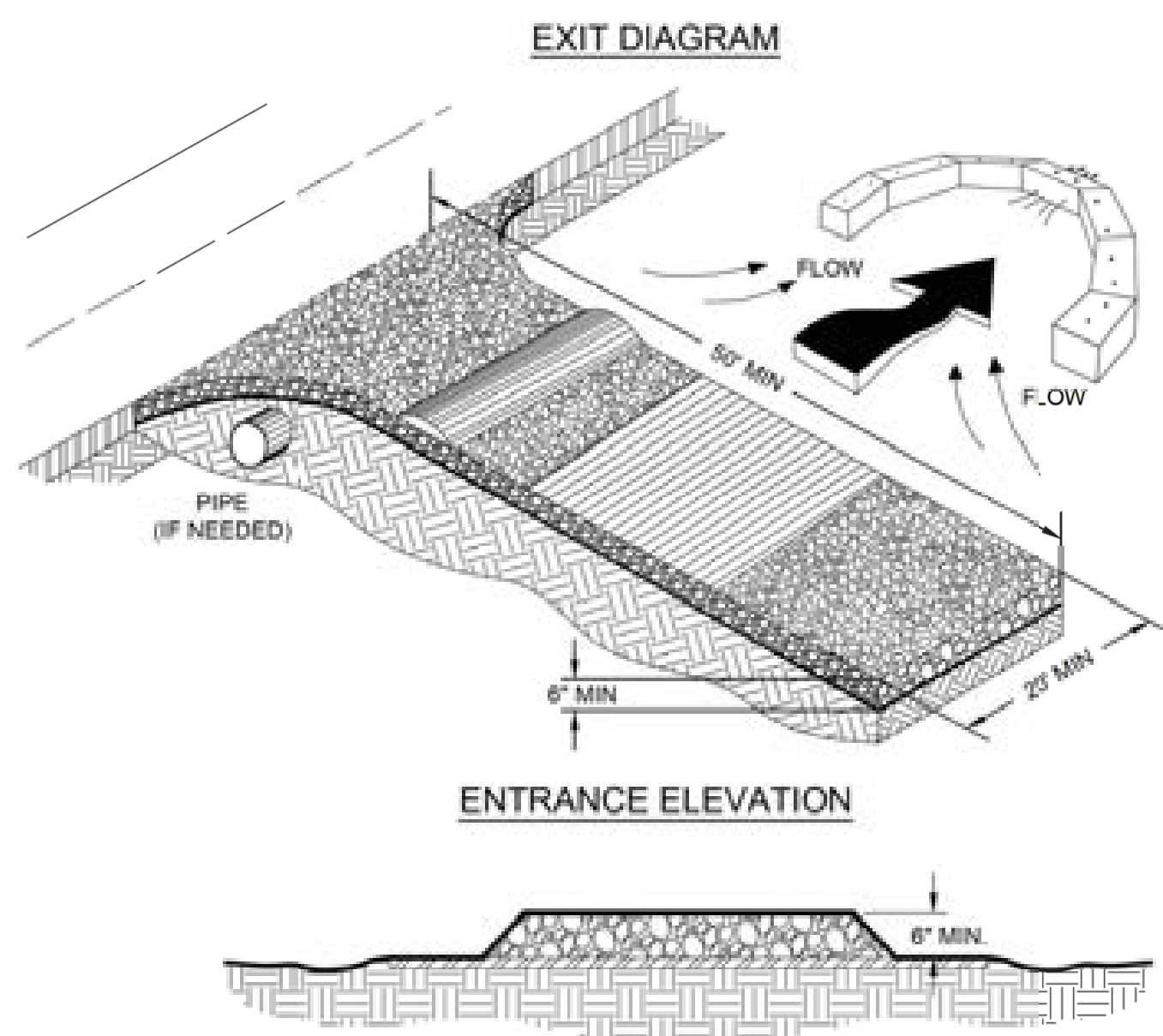
Geosyntec consultants

1295 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA PHONE: 678.252.8600 WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-048	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 46 OF 50			
DATE	AUGUST 2021				

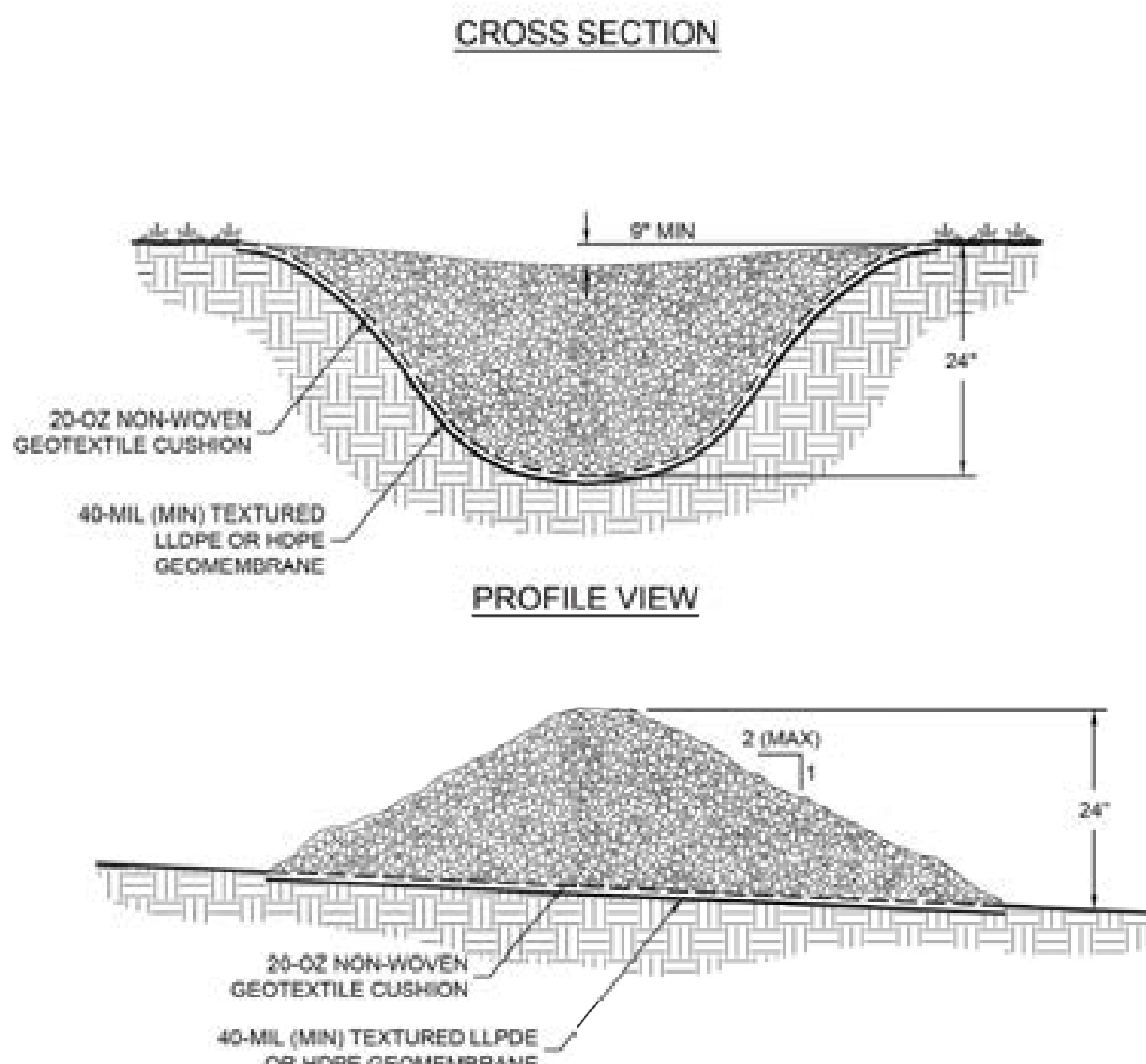


PERMIT DRAWING
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- NOTES:**
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
 3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
 4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
 5. PAD WIDTH SHALL EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
 6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
 7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
 8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
 9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVES MUD AND DIRT.
 10. MAINTAIN AREA BY 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.

Co 50 **DETAIL CONSTRUCTION EXIT**
SCALE: NTS
SOURCE: GSWCC



- NOTES:**
1. CHECK DAMS ARE TO BE USED ONLY IN SMALL OPEN CHANNELS (THEY ARE NOT TO BE USED IN LIVE STREAMS).
 2. THE DRAINAGE AREA FOR STONE CHECK DAMS SHALL NOT EXCEED TWO ACRES.
 3. THE CENTER OF THE CHECK DAM MUST BE AT LEAST 9 INCHES LOWER THAN THE OUTER EDGES.
 4. THE DAM HEIGHT SHOULD BE A MAXIMUM OF 2 FEET FROM CENTER TO RIM EDGE.
 5. THE SIDE SLOPES OF THE CHECK DAM SHALL NOT EXCEED A 2:1 SLOPE.
 6. GEOTEXTILE SHALL BE USED TO PREVENT THE MITIGATION OF SUBGRADE SOIL PARTICLES INTO THE STONES (REFER TO AASHTO M288-06, SECTION 7.3, TABLE 3).
 7. CHECK DAMS SHALL BE SPACED 250 FT APART.

Cd 53 **DETAIL STONE CHECK DAM**
SCALE: NTS
SOURCE: GSWCC

CONDITIONS:
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON AND OFF-SITE DAMAGE MAY OCCUR WITHOUT TREATMENT.

METHODS AND MATERIALS:
A. TEMPORARY METHODS

MULCHES. SEE SPECIFICATION Ds1 - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY).

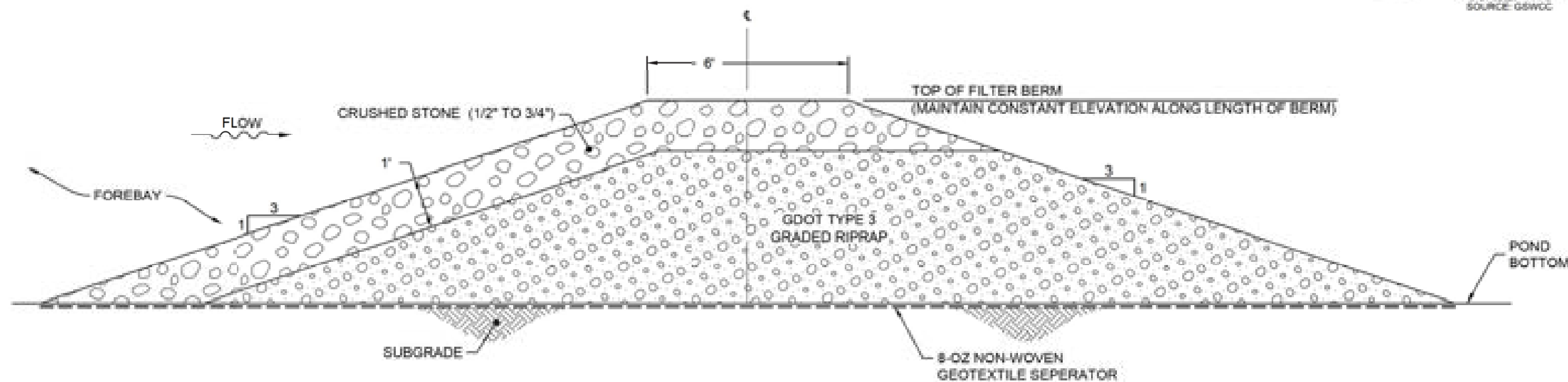
VEGETATIVE COVER. SEE SPECIFICATION Ds2 - DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING).

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. SEE SPECIFICATION Tp - TOPSOILING.

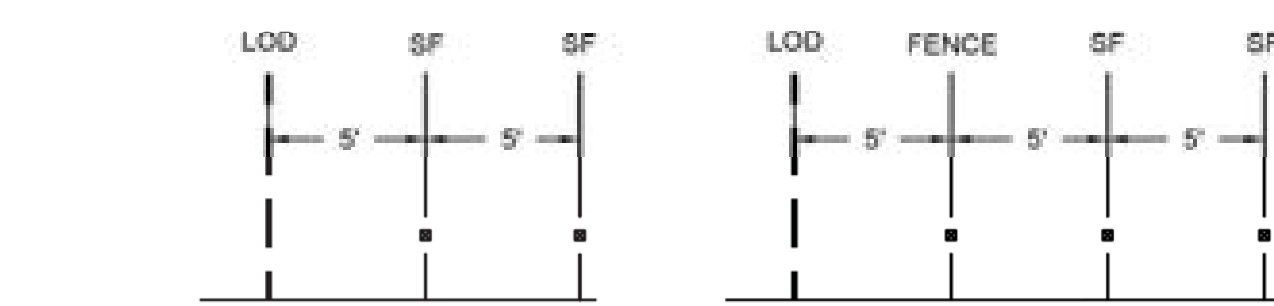
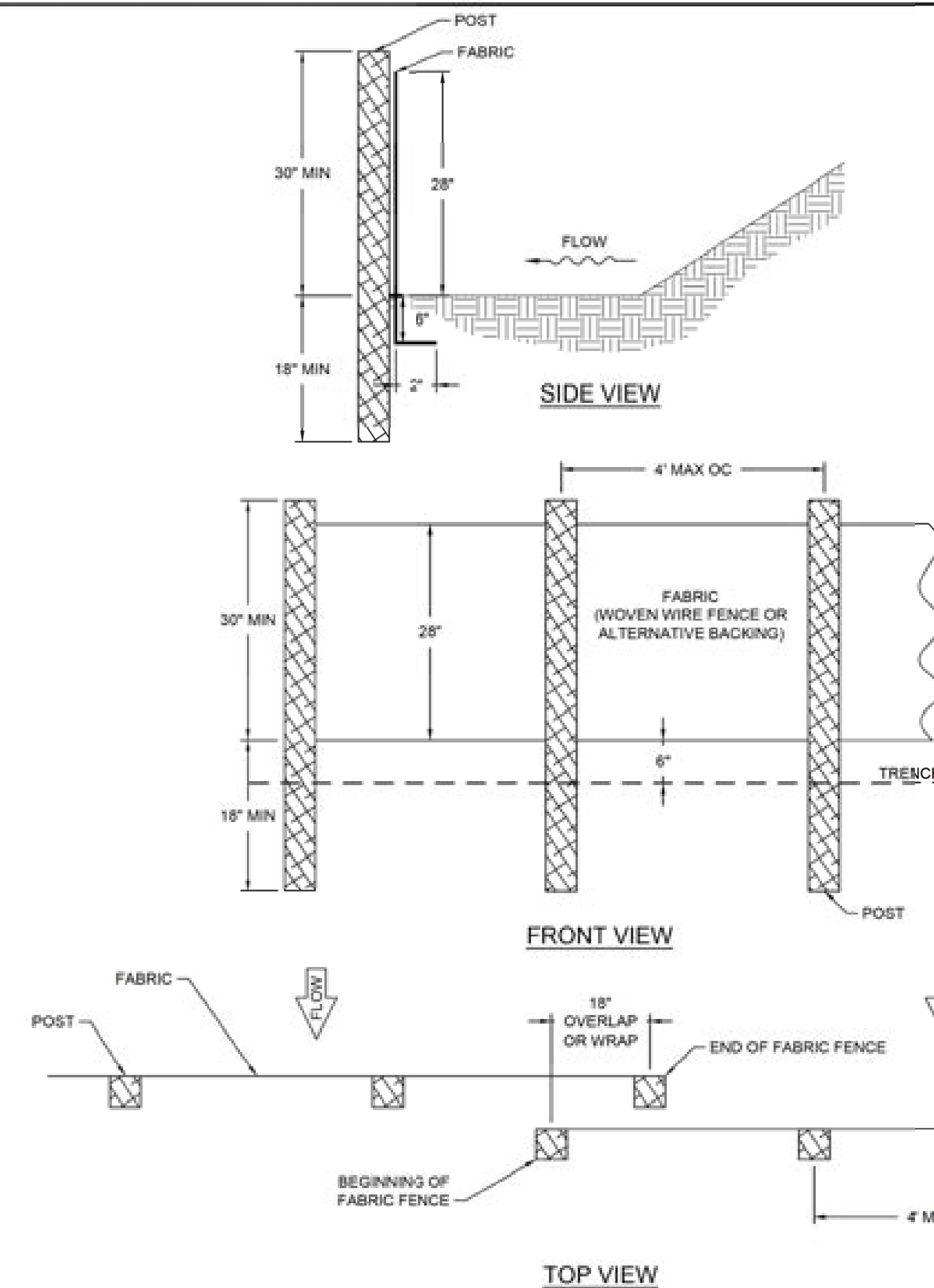
Du 51 **DETAIL DUST CONTROL ON DISTURBED AREAS**
SCALE: NTS
SOURCE: GSWCC



54 **DETAIL FILTER BERM**
SCALE: NTS

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. 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 DESIGNED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPLICABLE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT, NPDES INDUSTRIAL STORMWATER DISCHARGE GENERAL PERMIT AND/OR THE FACILITY'S NPDES INDUSTRIAL WASTEWATER DISCHARGE INDIVIDUAL PERMIT.
2. STORM WATER DISCHARGES ASSOCIATED WITH ASH POND CLOSURE ACTIVITIES WILL BE COVERED UNDER THE APPLICABLE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT, NPDES INDUSTRIAL STORMWATER DISCHARGE GENERAL PERMIT AND/OR THE FACILITY'S NPDES INDUSTRIAL WASTEWATER DISCHARGE INDIVIDUAL PERMIT.
3. STATE WATERS BUFFERS SHALL REMAIN UNDISTURBED, EXCEPT WHERE ENCROACHMENT IS REQUIRED TO FACILITATE ASH POND CLOSURE ACTIVITIES. UNLESS OTHERWISE EXEMPTED BY THE APPROPRIATE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT, A STATE WATERS BUFFER VARIANCE SHALL BE OBTAINED FROM GEORGIA EPD'S WATERSHED PROTECTION BRANCH PRIOR TO BUFFER ENCROACHMENT. GEORGIA EPD'S SOLID WASTE MANAGEMENT BRANCH SHALL BE NOTIFIED WHEN GPC ENVIRONMENTAL AFFAIRS APPLIES FOR A STATE WATERS BUFFER VARIANCE. CONTACT GPC ENVIRONMENTAL AFFAIRS FOR ASSISTANCE.
4. PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES FOR THIS PROJECT, THE PERMITTED BOUNDARY, 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 UNTIL COMPLETION OF CONSTRUCTION / CLOSURE ACTIVITIES. SHOULD ANY OF THE MARKINGS BE DISTURBED, THE CONTRACTOR SHALL NOTIFY GEORGIA POWER COMPANY IMMEDIATELY. ALL CONSTRUCTION PERSONNEL SHALL BE SHOWN THE LOCATION OF THE LIMITS OF DISTURBANCE, STATE WATERS BUFFERS, STATE WATERS AND WETLANDS OUTSIDE THE LIMITS OF DISTURBANCE TO PREVENT HEAVY EQUIPMENT ENCROACHMENT INTO THESE AREAS.



CRITERIA FOR SILT FENCE PLACEMENT	
LAND SLOPE (PERCENT)	MAXIMUM LENGTH OF SLOPE ABOVE FENCE (FEET)
<2	100
2 TO 5	75
5 TO 10	50
10 TO 20	25
>20	15

- SILT FENCE NOTES:**
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 DETERMINED BY THE SITE ENGINEER.
 2. 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 1/4 ACRE FOR EVERY 100 FEET OF SILT FENCE.

INSTALLATION:

1. WHERE NO SEDIMENT TRAP/STORMWATER DISPOSAL SYSTEM IS PRESENT, MAXIMUM SLOPE LENGTH SHALL NOT EXCEED THAT IN THE TABLE. ALSO, THE DRAINAGE AREA IS NOT TO EXCEED 1/4 ACRE PER 100 FEET OF SILT FENCE.
2. INSTALL ALONG CONTOURS WITH ENDS POINTING UPHILL.
3. DO NOT PLACE IN WATERWAYS OR AREAS OF CONCENTRATED FLOW.
4. PROVIDE A RIPRAP SPLASH PAD OR OTHER OUTLET PROTECTION DEVICE FOR ANY POINT WHERE FLOW MAY TOP THE SEDIMENT FENCE. ENSURE THAT THE MAXIMUM HEIGHT OF THE FENCE AT A PROTECTED, REINFORCED OUTLET DOES NOT EXCEED 1 FT AND THAT SUPPORT POST SPACING DOES NOT EXCEED 4 FT FOR TYPE C.
5. SAFETY CAPS ARE REQUIRED FOR ALL STEEL POSTS.
6. POSTS SHALL BE STEEL AND HAVE A MINIMUM LENGTH OF 4 FEET. POSTS SHALL BE "U", "T", OR "C" SHAPED AND HAVE A MINIMUM WEIGHT OF 1.3 POUNDS PER FOOT. THE POSTS SHALL HAVE PROJECTIONS FOR FASTENING THE WOVEN WIRE AND FILTER FABRIC. MAXIMUM POSTS SPACING SHALL BE 4 FEET FOR TYPE C.
7. A WOVEN WIRE SUPPORT FENCE SHALL BE USED WITH TYPE "C" FENCE. THE WIRE FENCE FABRIC SHALL BE AT LEAST 36 INCHES HIGH AND SHALL HAVE AT LEAST 6 HORIZONTAL WIRES. VERTICAL WIRES SHALL HAVE A MAXIMUM SPACING OF 12 INCHES. THE TOP AND BOTTOM WIRES SHALL BE AT LEAST 10 GAUGE AND ALL OTHER WIRES SHALL BE AT LEAST 12 1/2 GAUGE.
8. APPROVED SILT FENCE FABRICS ARE LISTED IN THE GEORGIA DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST #38 (QPL-38).

Sd1-S 52 **DETAIL SILT FENCE - TYPE C**
SCALE: NTS
SOURCE: GSWCC



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REV	DATE	DESCRIPTION	DRN	APP
0	AUG 2021	SUBMITTAL TO GA EPD	JJ/WH	RB

EROSION AND SEDIMENT CONTROL DETAILS I

PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

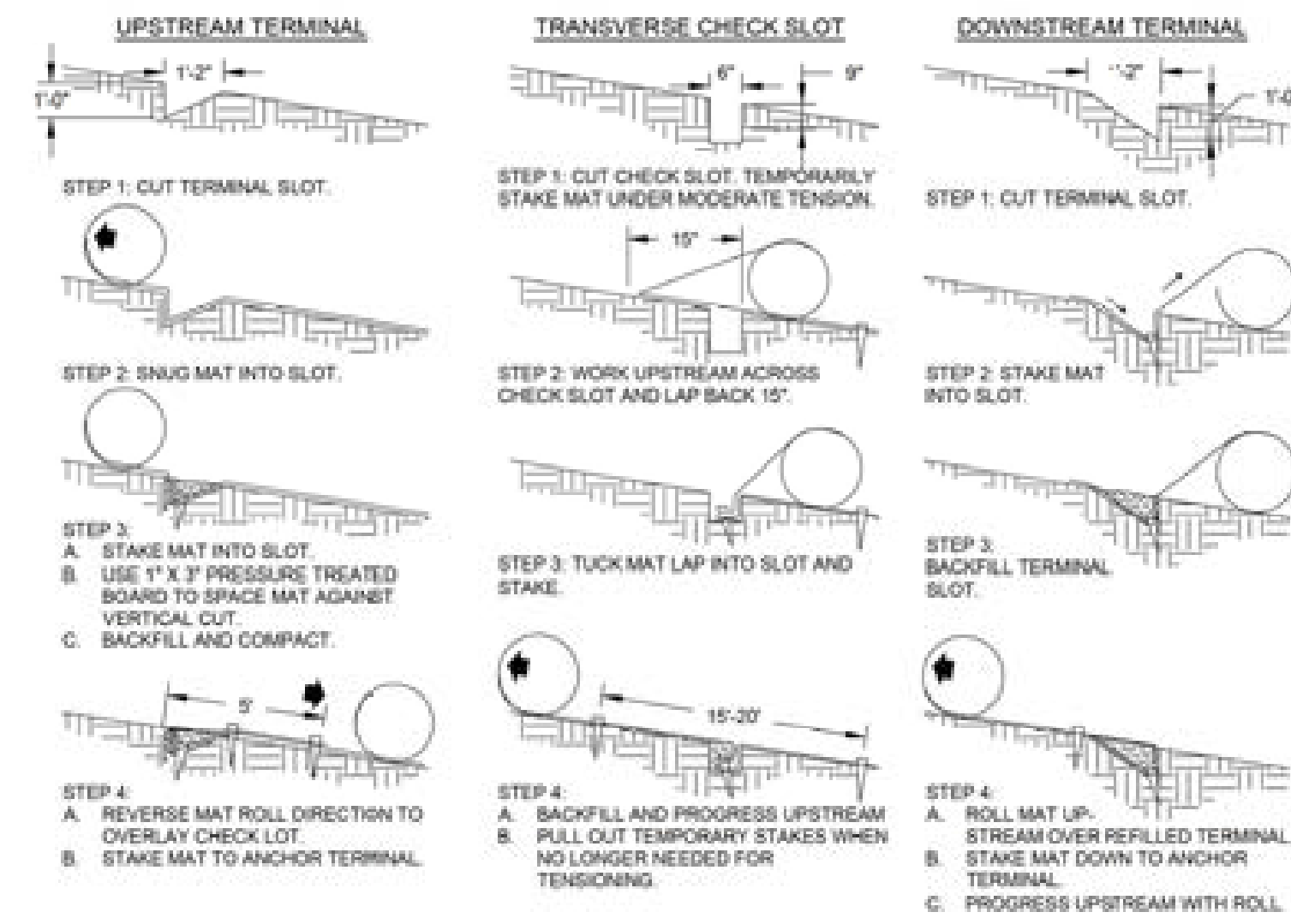
Geosyntec consultants

1250 ROBERTS BOULEVARD, NW, SUITE 200
DUNESWAY, GEORGIA 30144 USA
PHONE: 678.233.8600
WWW.GEOSYNTEC.COM

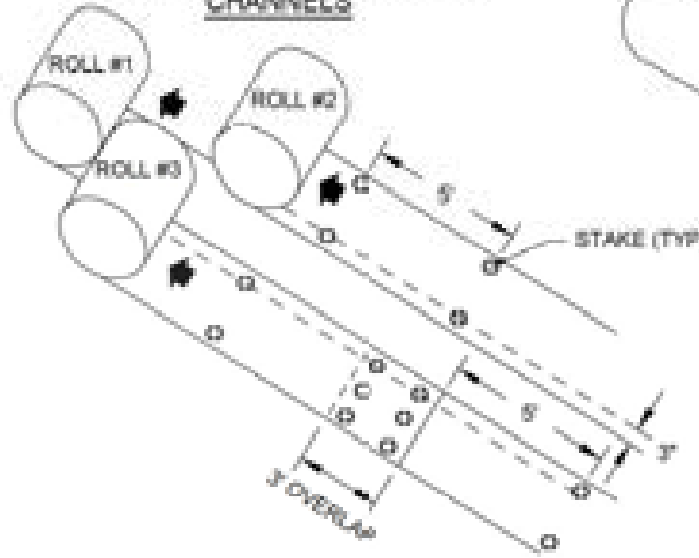
PROJ. NO.	GR6601	DWG.	GR6601-049	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING 47 OF 50			

TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

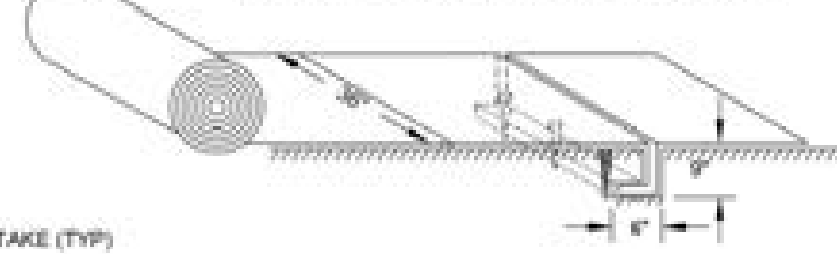
BLANKET AND MATTING CROSS-SECTIONS



SEQUENTIAL ROLL RUN OUT IN CHANNELS



PICTORIAL VIEW OF TRANSVERSE SLOT



NOTES

CONDITIONS
SLOPE STABILIZATION CAN BE APPLIED TO FLAT AREAS OR SLOPES WHERE THE EROSION HAZARD IS HIGH AND SLOPE PROTECTION IS NEEDED DURING THE ESTABLISHMENT OF VEGETATION.

PLANNING CONSIDERATIONS
CARE MUST BE TAKEN TO CHOOSE THE TYPE OF SLOPE STABILIZATION PRODUCT WHICH IS MOST APPROPRIATE FOR THE SPECIFIC NEEDS OF A PROJECT. TWO GENERAL TYPES OF SLOPE STABILIZATION PRODUCTS ARE DISCUSSED WITHIN THIS SPECIFICATION.

ROLLED EROSION CONTROL PRODUCTS (RECP)
A NATURAL FIBER BLANKET WITH SINGLE OR DOUBLE PHOTODEGRADABLE OR BIODEGRADABLE NETS.

HYDRAULIC EROSION CONTROL PRODUCTS (HECP)
HECP SHALL UTILIZE STRAW, COTTON, WOOD OR OTHER NATURAL BASED FIBERS HELD TOGETHER BY A SOIL BINDING AGENT WHICH WORKS TO STABILIZE SOIL PARTICLES. PAPER MULCH SHOULD NOT BE USED FOR EROSION CONTROL.

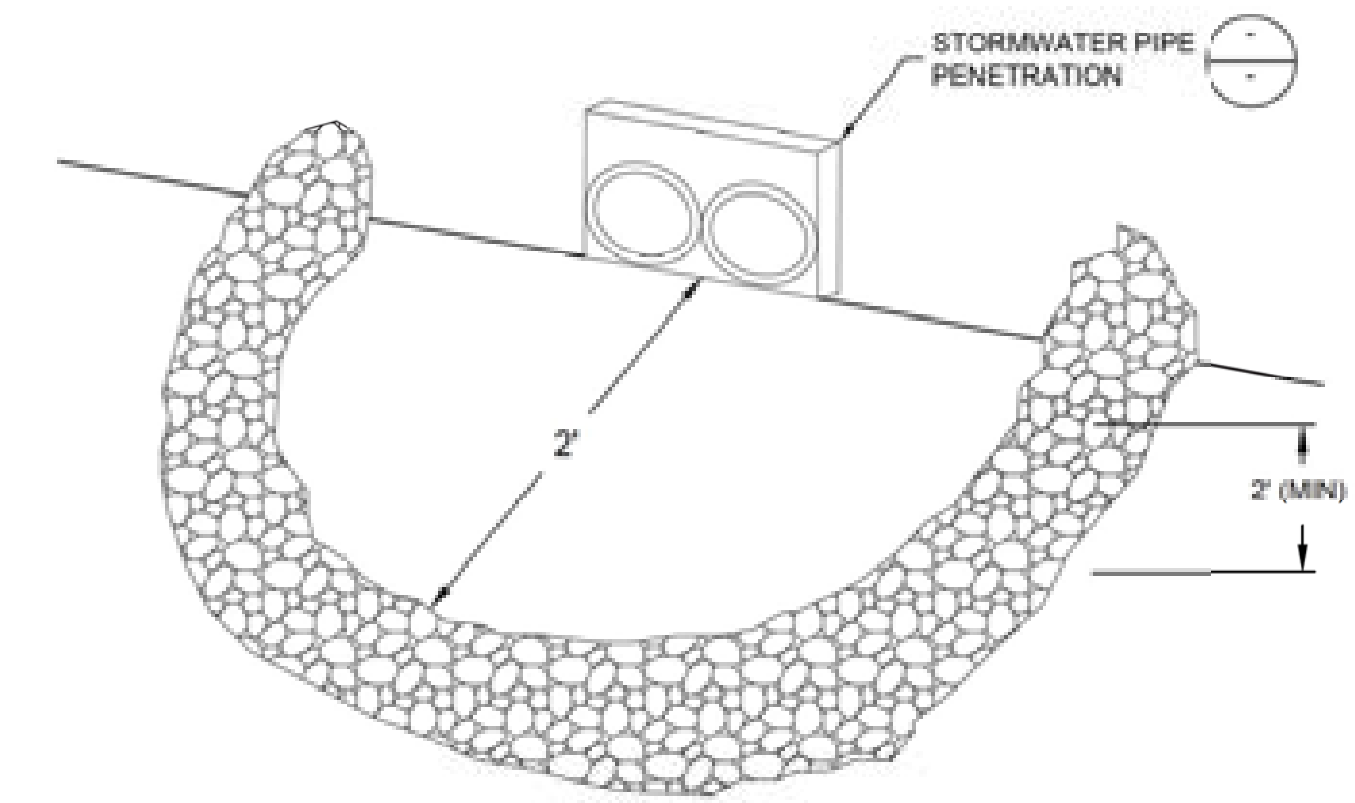
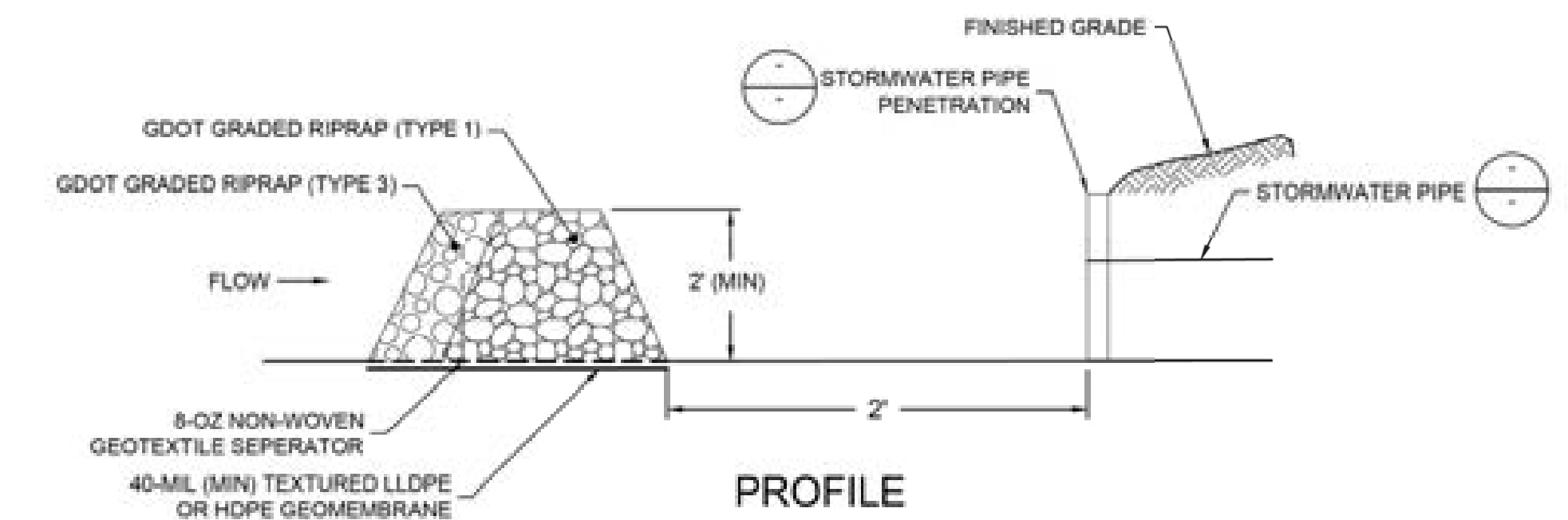
CRITERIA
ROLLED EROSION CONTROL PRODUCTS (RECPs) AND HYDRAULIC EROSION CONTROL PRODUCTS (HECPs):
 • INSTALLATION AND STAPLING OF RECPs AND APPLICATION RATES FOR THE HECPs SHALL CONFORM TO MANUFACTURER'S GUIDELINES FOR APPLICATION
 • PRODUCTS SHALL HAVE A MAXIMUM C-FACTOR (ASTM D6459) FOR THE FOLLOWING GRADE:
 SLOPE (H:V) C-FACTOR (MAX)
 3:1 OR GREATER 0.080

PERFORMANCE EVALUATION
FOR A PRODUCT OR PRACTICE TO BE APPROVED AS SLOPE STABILIZATION, THAT PRODUCT OR PRACTICE MUST HAVE A DOCUMENTED C-FACTOR OF 0.080, AS SPECIFIED BY GSWCC. FOR COMPLETE TEST PROCEDURES AND APPROVED PRODUCTS LIST PLEASE VISIT WWW.GSWCC.GEORGIA.GOV.

SITE PREPARATION

AFTER THE SITE HAS BEEN SHAPED AND GRADED TO THE APPROVED DESIGN, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLODS AND ROCKS MORE THAN ONE INCH IN DIAMETER, AND ANY FOREIGN MATERIAL THAT WOULD PREVENT CONTACT OF THE SOIL STABILIZATION MAT WITH THE SOIL SURFACE. SURFACE MUST BE SMOOTH TO ENSURE PROPER CONTACT OF BLANKETS OR MATTING TO THE SOIL SURFACE. IF NECESSARY, REDIRECT ANY RUNOFF FROM THE DITCH OR SLOPE DURING INSTALLATION.

- START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
- FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
- SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
- WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
- USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE SEAMS.
- USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.
- IT IS THE INTENTION OF THIS SECTION TO ALLOW INTERCHANGEABLE USE OF RECPs AND HECPs FOR EROSION PROTECTION ON SLOPES. THE PROJECT ENGINEER SHOULD SELECT THE TYPE OF EROSION CONTROL PRODUCT THAT BEST FITS THE NEED OF THE PARTICULAR SITE.



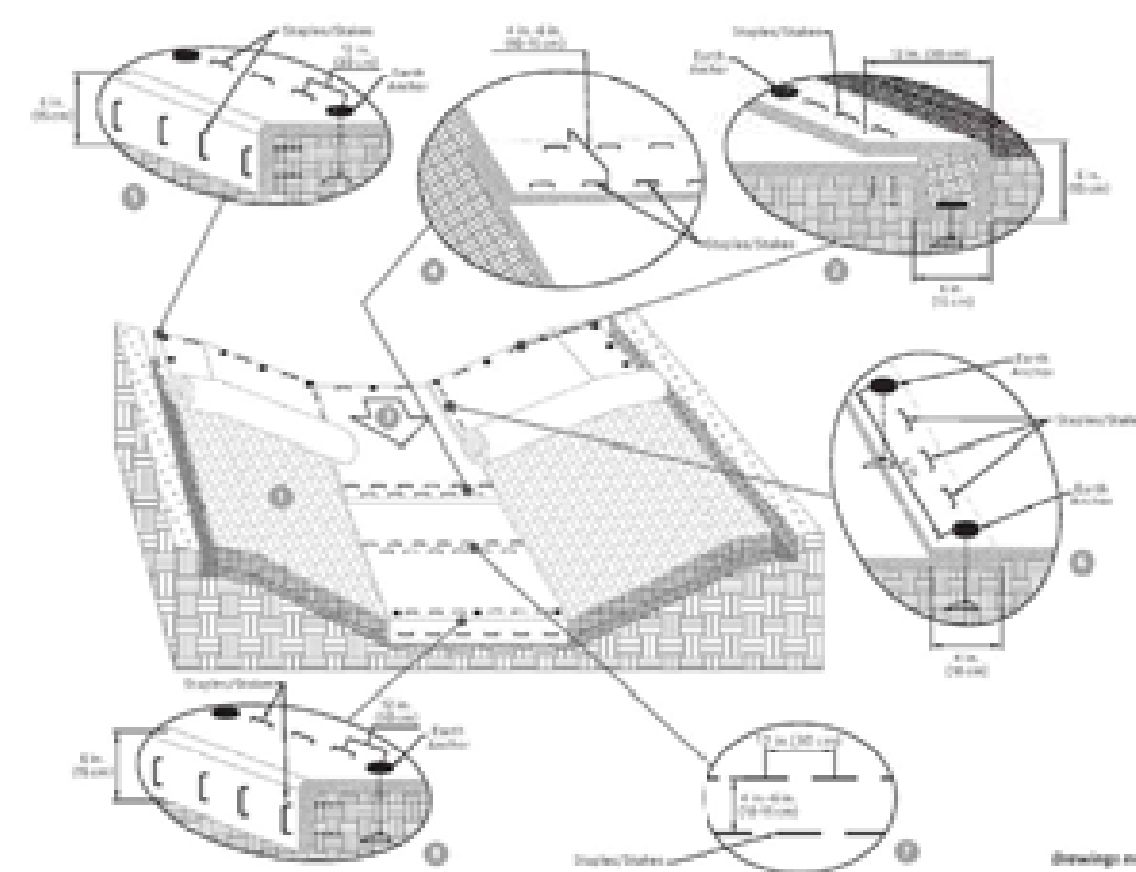
DETAIL 56

DETAIL
FILTER RING
SCALE: NTS

DETAIL 55

DETAIL
SLOPE STABILIZATION
SCALE: NTS
SOURCE: GSWCC

Channel Installation Detail

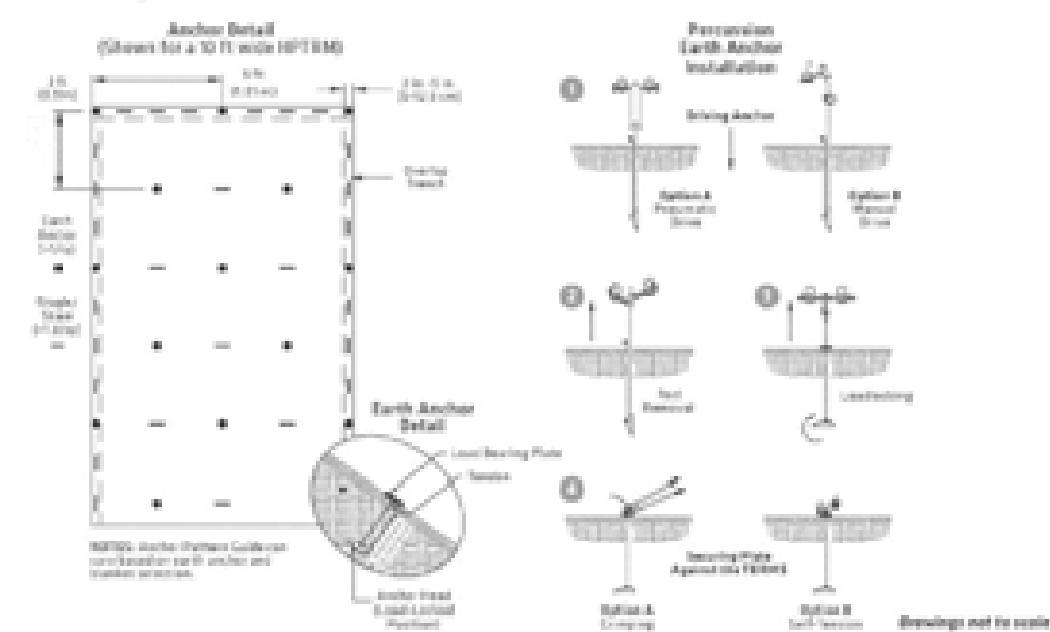


GENERAL INSTALLATION

- Prepare soil before installing the HPTM, including any necessary application of soil amendments such as lime or fertilizer. See seeding and vegetating section for details regarding seeding, over-seeding or use with soil.
- Begin at the top of the channel by anchoring the HPTM in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approximately 12 in. (30 cm) of HPTM extended beyond the up-slope portion of the trench. Anchor the HPTM with a row of anchors/staples/stakes spaced approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench after staking. Compact soil and fold remaining 12 in. (30 cm) portion of HPTM back over compacted soil. Secure HPTM over soil with a row of anchors/staples/stakes spaced approximately 12 in. (30 cm) across the width of the HPTM.
- Roll center HPTM in direction of water flow in bottom of channel. HPTMs will unroll with appropriate side against the soil surface. All HPTMs must be securely fastened to soil surface by placing anchors/staples/stakes in appropriate locations as shown in the anchoring detail.

- Place consecutive HPTMs and overlap (single style) with a 4 in. x 6 in. (10 cm x 15 cm) overlap. Use a double row of staples/stakes staggered 12 in. (30 cm) apart and 12 in. (30 cm) on center to secure HPTMs.
- Full length edge of HPTMs at top of side slopes must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench. Backfill and compact the trench after staking.
- In high flow channel applications, a staple/stake check slot is recommended at 30 ft to 40 ft (9 m to 12 m) intervals. Use a double row of staples/stakes staggered 4 in. (10 cm) apart and 12 in. (30 cm) on center over entire width of the channel.
- The terminal end of the HPTMs must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 4 in. (10 cm) wide trench. Backfill and compact the trench after staking.

Anchoring Detail



ANCHORING DETAIL
The performance of ground anchoring devices is highly dependent on numerous site/project specific variables. It is the sole responsibility of the project engineer and/or contractor to select the appropriate anchor type and design. Anchoring shall be selected to hold the mat in intimate contact with the soil substrate and resist pullout in accordance with the project's design intent.

- Plan consecutive HPTMs and overlap (single style) with a 4 in. x 6 in. (10 cm x 15 cm) overlap. Use a double row of staples/stakes staggered 12 in. (30 cm) apart and 12 in. (30 cm) on center to secure HPTMs.
- Full length edge of HPTMs at top of side slopes must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench. Backfill and compact the trench after staking.
- In high flow channel applications, a staple/stake check slot is recommended at 30 ft to 40 ft (9 m to 12 m) intervals. Use a double row of staples/stakes staggered 4 in. (10 cm) apart and 12 in. (30 cm) on center over entire width of the channel.
- The terminal end of the HPTMs must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 4 in. (10 cm) wide trench. Backfill and compact the trench after staking.

PERCUSSION EARTH ANCHOR INSTALLATION
1. Insert the drive rod into the assembly's anchor head then use either a sledge hammer or vibratory hammer to drive the anchor to their desired depth.
2. After the desired anchor depth is achieved, retract the drive rod.
3. Lock the anchor assembly by twisting pulling the cable upwards until the anchor head rotates as signaled by sudden resist prior to pulling. A heated cutting tool may be used to cut off this step.

NOTE: Larger anchors may require more time to set the anchor. This can be alleviated through using pneumatic equipment to assist in setting the anchor. 2 items, removal of the anchor, and 1 item, setting the anchor.

secure. If using a self-tensioning and piece (rip or wedge grid) net by simply tightening the end-cable against the facelate. If desired, cut the remaining cable assembly above end-piece to desired length.

SEEDING AND VEGETATING
When using a Composite Turf Reinforcement Mat (CTRM) with fiber components:
1. Pre-seed prepared soils prior to the installation of the CTRM. Install matting as directed. CTRM does not require soil left or a top dressing of seed. Over-seeding may be done as a secondary form of seeding.
2. Sod may be installed in place of seeding on top of the CTRM. Additional staking of sod is recommended in high-flow conditions. Sodded areas should be irrigated until rooting through mat or sods are sub-grade occur.

When using a woven HPTM:
1. Install the HPTM as directed prior to seed and soil filling.
2. Place seed into the installed HPTM. After seeding, spread a layer of fine soil into the mat. Using the flat side of a rake, beam or other tool, completely fill the voids. Smooth soil fill in order to just expose the top of the HPTM matrix. Do not place excessive soil above the mat.
3. Additional seed, hydraulic mulching or the use of a temporary Erosion Control Blanket (ECB) can be applied over the soil-filled mat for increased protection.
4. Sod may be installed in place of seeding. Install HPTM and sod as directed above. Place sod directly onto the soil-filled HPTM. Additional staking of sod is recommended in high-flow conditions. Sodded areas should be irrigated until rooting through the mat and into sub-grade occurs.
5. Consult with a manufacturer's technical representative for installation assistance if unique conditions apply.

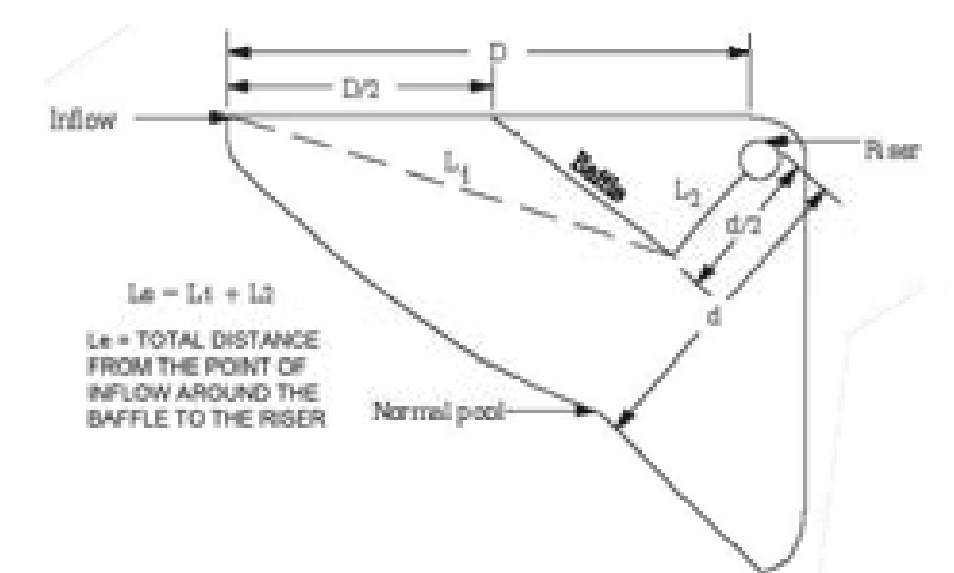
DEFINITION
TACKIFIERS ARE USED AS A TIE-DOWN FOR SOIL, COMPOST, SEED, STRAW, HAY OR MULCH. TACKIFIERS HYDRATE IN WATER AND READILY BLEND WITH OTHER SLURRY MATERIALS TO FORM A HOMOGENOUS SLURRY.

PURPOSE
TO REDUCE SOIL EROSION FROM WIND AND WATER ON CONSTRUCTION SITES. OTHER BENEFITS INCLUDE SOIL INFILTRATION, SOIL FERTILITY, ENHANCED SEED GERMINATION, INCREASED SOIL COHESION, ENHANCED SOIL STABILIZATION, REDUCED STORMWATER RUNOFF TURBIDITY AND REDUCTION IN LESS OF TOPSOIL.

CONDITIONS
THIS PRACTICE IS INTENDED FOR DIRECT SOIL SURFACE APPLICATION TO SITES WHERE THE TIMELY ESTABLISHMENT OF VEGETATION MAY NOT BE FEASIBLE OR WHERE VEGETATION COVER IS ABSENT OR INADEQUATE. SUCH AREAS INCLUDE CONSTRUCTION AREAS, WHERE PLANT RESIDUES ARE INADEQUATE TO PROTECT THE SOIL SURFACE AND WHERE LAND DISTURBING ACTIVITIES PREVENT THE ESTABLISHMENT OR MAINTENANCE OF A VEGETATIVE COVER.

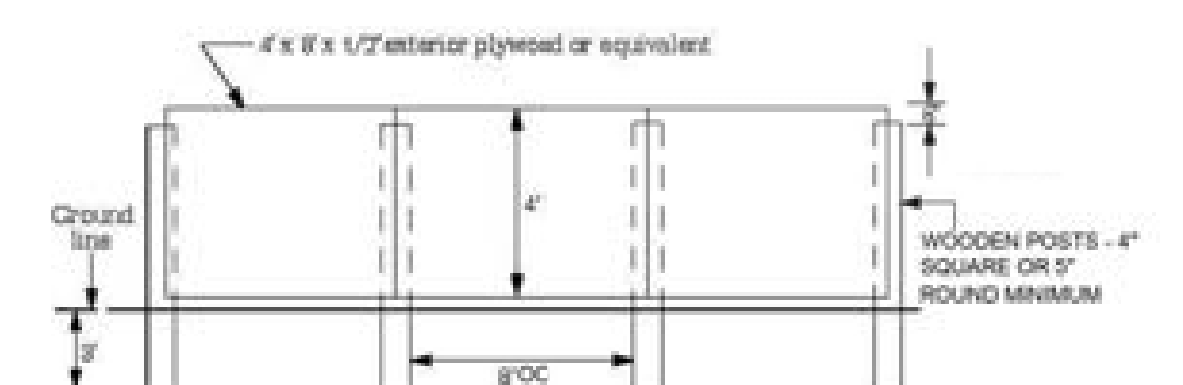
DETAIL 58

DETAIL
TACKIFIER
SOURCE: GSWCC



DETAIL 59

DETAIL
STORMWATER BAFFLE
SCALE: NTS
SOURCE: GSWCC



DETAIL 57

DETAIL
TURF REINFORCEMENT MATTING
SCALE: NTS
SOURCE: NORTH AMERICAN GREEN



PERMIT DRAWING
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

EROSION AND SEDIMENT CONTROL DETAILS II

PLANT EOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-050	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 48 OF 50			
DATE	AUGUST 2021				

DEFINITION
 APPLYING PLANT RESIDUES OR OTHER SUITABLE MATERIALS, PRODUCED ON THE SITE IF POSSIBLE, TO THE SOIL SURFACE.

REQUIREMENT FOR REGULATORY COMPLIANCE
 MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGLE EROSION CONTROL DEVICE FOR UP TO SIX MONTHS, BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH (DEPENDENT 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 D12-DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING), AND D53 - DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION).

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
 1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
 2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSIONS, BERMS, TERRACES AND SEDIMENT BARRIERS.
 3. LOOSEN COMPACTED SOIL TO A MINIMUM DEPTH OF 3 INCHES.

MULCHING MATERIALS
 SELECT ONE OF THE FOLLOWING MATERIALS AND APPLY AT THE DEPTH INDICATED:
 1. DRY STRAW OR HAY SHALL BE APPLIED AT A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVERAGE. ONE ADVANTAGE OF THIS MATERIAL IS EASY APPLICATION.

- WOOD WASTE (CHIPS, SAWDUST OR BARK) SHALL BE APPLIED AT A DEPTH OF 2 TO 3 INCHES. ORGANIC MATERIAL FROM THE CLEARING STAGE OF DEVELOPMENT REMAINING ON SITE CAN 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.

ANCHORING MULCH
 1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL "PACKER 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 UPRIGHT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION. STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED. TACKIFIERS, BINDERS AND HYDRAULIC MULCH WITH TACKIFIER SPECIFICALLY DESIGNED FOR TACKING STRAW CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. REFER TO TACK-TACKIFIERS, PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
 2. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.

CUBIC YARDS OF TOPSOIL REQUIRED FOR APPLICATION TO VARIOUS DEPTHS

DEPTH (IN.)	PER 1,000 SQUARE FEET	PER ACRE
1	3.1	134
2	6.2	268
3	9.3	402
4	12.4	536
5	15.5	670
6	18.6	804

CONDITIONS
 THIS PRACTICE IS RECOMMENDED FOR SITES OF 2H:1V OR FLATTER SLOPES WHERE:
 1. THE TEXTURE OF THE EXPOSED SUBSOIL OR PARENT MATERIAL IS NOT SUITABLE TO PRODUCE ADEQUATE VEGETATIVE GROWTH.
 2. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS WITH CONTINUING SUPPLIES OF MOISTURE AND FOOD.
 3. THE SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

CONSTRUCTION SPECIFICATIONS
 MATERIALS
 TOPSOIL SHOULD BE FRIABLE AND LOAMY, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE THAT MAY BE HARMFUL TO PLANT GROWTH. A pH RANGE OF 5.0-7.5 IS ACCEPTABLE. SOLUBLE SALTS SHOULD NOT EXCEED 500 PPM.

TESTING
 FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER THE QUANTITY AND QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.

STRIPPING
 STRIPPING SHOULD BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA. A 4 TO 6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.

TOPSOIL pH
 IF pH VALUE IS LESS THAN 6.0, LIME SHALL BE APPLIED AND INCORPORATED WITH THE TOPSOIL TO ADJUST THE pH TO 6.5 OR HIGHER. TOPSOILS CONTAINING SOLUBLE SALTS GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

SITE PREPARATION (WHERE TOPSOIL IS TO BE ADDED)
 TOPSOILING - WHEN TOPSOILING, MAINTAIN NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, DIKES, LEVEL SPREADERS, WATERWAYS, SEDIMENT BASINS, ETC.

GRADING - GRADES ON THE AREAS TO BE TOPSOILED WHICH HAVE BEEN PREVIOUSLY ESTABLISHED SHALL BE MAINTAINED.

LIMING - SOIL TESTS SHOULD BE USED TO DETERMINE THE pH OF THE SOIL. WHERE THE pH OF THE SUBSOIL IS 5.0 OR LESS OR COMPOSED OF HEAVY CLAYS, AGRICULTURAL LIMESTONE SHALL BE SPREAD AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURE.

BONDING - USE ONE OF THE FOLLOWING METHODS TO INSURE BONDING OF TOPSOIL AND SUBSOIL:
 1. TILLING AFTER THE AREAS TO BE TOPSOILED TO GRADE AND IMMEDIATELY PRIOR TO DUMPING AND SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENEED BY DISCING OR SCARIFYING TO A DEPTH OF AT LEAST 3 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SUBSOIL.
 2. TRACKING, PASSING A BULLDOZER OVER THE ENTIRE SURFACE AREA OF THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS.

APPLYING TOPSOIL
 1. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE.
 2. A UNIFORM APPLICATION OF 8 INCHES (UNSETTLED) IS RECOMMENDED, BUT MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER OR LANDSCAPE ARCHITECT.



Ds1 **60** **DETAIL**
DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
 SOURCE: GSWCC

61 **DETAIL**
TOPSOILING
 SOURCE: GSWCC

SEEDING RATES FOR TEMPORARY SEEDING

SPECIES	RATES	PLANTING DATES												COMMENTS	
		J	F	M	A	M	J	J	A	S	O	N	D		
BARLEY ALONE	144 LBS./AC														WINTER HARDY, USE ON PRODUCTIVE SOILS
BARLEY IN MIXTURE	24 LBS./AC														
LESPEDEZA, ANNUAL ALONE	40 LBS./AC														MAY VOLUNTEER FOR SEVERAL YEARS, USE INOCULANT TYPE EL
LESPEDEZA, ANNUAL IN MIXTURE	10 LBS./AC														
LOVEGRASS, WEEPING ALONE	4 LBS./AC														MAY LAST FOR SEVERAL YEARS, MIX WITH SERICEA LESPEDEZA
LOVEGRASS, WEEPING IN MIXTURE	2 LBS./AC														
MILLET, BROWNTOP ALONE	40 LBS./AC														QUICK DENSE COVER, WILL PROVIDE TOO MUCH COMPETITION IN MIXTURES IF SEEDING AT HIGH RATES
MILLET, BROWNTOP IN MIXTURE	10 LBS./AC														
MILLET, PEARL ALONE	50 LBS./AC														QUICK DENSE COVER, MAY REACH 5 FEET IN HEIGHT, NOT RECOMMENDED FOR MIXTURES.
OATS ALONE	128 LBS./AC														USE ON PRODUCTIVE SOILS. NOT AS WINTER HARDY AS RYE OR BARLEY.
OATS IN MIXTURE	32 LBS./AC														
RYE ALONE	168 LBS./AC														QUICK COVER, DROUGHT TOLERANT AND WINTER HARDY.
RYE IN MIXTURE	28 LBS./AC														
RYEGRASS, ANNUAL ALONE	40 LBS./AC														DENSE COVER, VERY COMPETITIVE AND NOT TO BE USED IN MIXTURES. GOOD ON DROUGHTY SITES. NOT RECOMMENDED FOR MIXTURES.
SUDANGRASS ALONE	60 LBS./AC														USE ON LOWER PART OF SOUTHERN COASTAL PLAIN AND IN ATLANTIC COASTAL FLATWOODS ONLY.
TRITICALONE ALONE	144 LBS./AC														
TRITICALONE IN MIXTURE	24 LBS./AC														
WHEAT ALONE	180 LBS./AC														WINTER HARDY.
WHEAT WITH OTHER PERENNIALS	30 LBS./AC														

SOLID LINES INDICATE OPTIMUM DATES; DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.

DEFINITION
 THE ESTABLISHMENT OF TEMPORARY VEGETATION COVER WITH FAST GROWING SEEDINGS FOR SEASONAL PROTECTION ON DISTURBED OR DENUDED AREAS.

CONDITIONS
 TEMPORARY VEGETATIVE MEASURES SHOULD BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMIC 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 NATURAL RESOURCE CONSERVATION SERVICE OR THE LOCAL SOIL WATER CONSERVATION DISTRICT FOR MORE INFORMATION.

SPECIFICATIONS
 GRADING AND SHAPING
 EXCESSIVE WATER RUNOFF 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.

SEEDING PREPARATION
 WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED. WHEN USING CONVENTIONAL OR HAND-SEEDED, 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 LEDGE 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.

Ds2 **62** **DETAIL**
DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)
 SOURCE: GSWCC

FERTILIZER REQUIREMENTS

WARM SEASON GRASSES				
YEAR	EQUIVALENT N-P-K	ANALYSIS OR RATE	N	TOP DRESSING
FIRST	8-12-12	1500 LBS./AC	50-100 LBS./AC	20%
SECOND	8-12-12	800 LBS./AC	50-100 LBS./AC	2%
MAINTENANCE	10-10-10	400 LBS./AC	30 LBS./AC	

COOL SEASON GRASSES				
YEAR	EQUIVALENT N-P-K	ANALYSIS OR RATE	N	TOP DRESSING
FIRST	8-12-12	1500 LBS./AC	50 LBS./AC	20%
SECOND	8-12-12	1000 LBS./AC	50 LBS./AC	2%
MAINTENANCE	8-10-10	400 LBS./AC		

- APPLY IN SPRING FOLLOWING SEEDING.
- APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED.
- APPLY IN 3 SPLIT APPLICATIONS.
- APPLY WHEN PLANTS ARE PRUNED.
- APPLY GRASS SPECIES ONLY.
- APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES.

PLANT, PLANTING RATE & PLANTING DATE FOR PERMANENT COVER

SPECIES	BROADCAST RATES	PLANTING DATES												PLANTING DATE REMARKS	
		J	F	M	A	M	J	J	A	S	O	N	D		
LESPEDEZA SERICEA SCARIFIED	60 LBS./AC														WIDELY ADAPTED, LOW MAINTENANCE. MIX WITH COMMON BERMUDA OR TALL FESCUE. INOCULATE SEED WITH EL INOCULANT.
LESPEDEZA SERICEA UNSCARIFIED	75 LBS./AC														MIX WITH TALL FESCUE.
PENSACOLA BAHIA ALONE OR WITH TEMPORARY COVER	60 LBS./AC														LOW GROWING, SOD FORMING, SLOW TO ESTABLISH. PLANT WITH A COMPANION CROP. WILL SPREAD INTO BERMUDA PASTURES AND LAWNS. MIX WITH SERICEA LESPEDEZA.
WILMINGTON BAHIA WITH OTHER PERENNIALS	30 LBS./AC														
TALL FESCUE ALONE	50 LBS./AC														USE ALONE ONLY ON BETTER SITES. MIX WITH PERENNIAL LESPEDEZA OR CROWN VETCH. APPLY TOP DRESSING IN SPRING FOLLOWING FALL PLANTINGS. NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS.
TALL FESCUE WITH OTHER PERENNIALS	30 LBS./AC														
REED CANARY GRASS ALONE	50 LBS./AC														
REED CANARY GRASS WITH OTHER PERENNIALS	30 LBS./AC														GROWS SIMILAR TO TALL FESCUE.
COMMON BERMUDA UNHULLED SEED WITH TEMPORARY COVER	10 LBS./AC														PLANT WITH WINTER ANNUALS.
COMMON BERMUDA UNHULLED SEED WITH OTHER PERENNIALS	6 LBS./AC														PLANT WITH TALL FESCUE.

SOLID LINES INDICATE OPTIMUM DATES; DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.

DEFINITION
 THE PLANTING OF PERENNIAL VEGETATION SUCH AS TREES, SHRUBS, VINES, GRASSES, OR LEGUMES ON EXPOSED AREAS FOR FINAL, PERMANENT STABILIZATION. PERMANENT PERENNIAL VEGETATION SHALL BE USED TO ACHIEVE FINAL STABILIZATION.

CONDITIONS
 PERMANENT PERENNIAL VEGETATION IS USED TO PROVIDE A PROTECTIVE COVER FOR EXPOSED AREAS INCLUDING CUTS, FILLS, DAMS, AND OTHER DENUDED AREAS.

SPECIFICATIONS
 GRADING AND SHAPING
 GRADING AND SHAPING MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENT. WHEN CONVENTIONAL SEEDING AND FERTILIZING ARE TO BE DONE, GRADE AND SHAPE WHERE FEASIBLE AND PRACTICAL, SO THAT EQUIPMENT CAN BE USED SAFELY AND EFFICIENTLY DURING SEEDBED PREPARATION, SEEDING, MULCHING AND MAINTENANCE OF THE VEGETATION. CONCENTRATIONS OF WATER THAT WILL CAUSE EXCESSIVE SOIL EROSION SHALL BE DIVERTED TO A SAFE OUTLET. DIVERSIONS AND OTHER TREATMENT PRACTICES SHALL CONFORM WITH THE APPROPRIATE STANDARDS AND SPECIFICATIONS.

SEEDBED PREPARATION
 SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED (BUT IS STRONGLY RECOMMENDED FOR ANY SEEDING PROCESS, WHEN POSSIBLE). WHEN CONVENTIONAL SEEDING IS TO BE USED, SEEDBED PREPARATION WILL BE DONE AS FOLLOWS:

- BROADCAST PLANTINGS
 1. TLLAGE AT A MINIMUM SHALL ADEQUATELY LOOSEN THE SOIL TO A DEPTH OF 4 TO 8 INCHES; ALLEVIATE COMPACTION; INCORPORATE LIME AND FERTILIZER; SMOOTH AND FIRM THE SOIL; ALLOW FOR THE PROPER PLACEMENT OF SEED, SPRIGS, OR PLANTS; AND ALLOW FOR THE ANCHORING OF STRAW OR HAY MULCH IF A DISK IS TO BE USED.
 2. TLLAGE MAY BE DONE WITH ANY SUITABLE EQUIPMENT.
 3. TLLAGE SHOULD BE DONE ON THE CONTOUR WHERE FEASIBLE.
 4. ON SLOPES TOO STEEP FOR THE SAFE OPERATION OF TILLAGE EQUIPMENT, THE SOIL SURFACE SHALL BE PITTED OR TRENCHED ACROSS THE SLOPE WITH APPROPRIATE HAND TOOLS TO PROVIDE TWO PLACES 6 TO 8 INCHES APART IN WHICH SEED MAY LODGE AND GERMINATE. HYDRAULIC SEEDING MAY ALSO BE USED.

- INDIVIDUAL PLANTS
 1. WHERE INDIVIDUAL PLANTS ARE TO BE SET, THE SOIL SHALL BE PREPARED BY EXCAVATING HOLES, OPENING FURROWS, OR DIBBLE PLANTING.
 2. FOR NURSERY STOCK PLANTS, HOLES SHALL BE LARGE ENOUGH TO ACCOMMODATE ROOTS WITHOUT CROWDING.
 3. WHERE PINE SEEDLINGS ARE TO BE PLANTED, SUBSOIL UNDER THE ROW 36 INCHES DEEP ON THE CONTOUR FOUR TO SIX MONTHS PRIOR TO PLANTING. SUBSOILING SHOULD BE DONE WHEN THE SOIL IS DRY, PREFERABLY IN AUGUST OR SEPTEMBER.

PLANTING
 HYDRAULIC SEEDING
 MIX THE SEED (INOCULATED IF NEEDED), FERTILIZER AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH WITH WATER AND APPLY IN A SLURRY UNIFORMLY OVER THE AREA TO BE TREATED. APPLY WITHIN ONE HOUR AFTER THE MIXTURE IS MADE.

CONVENTIONAL SEEDING
 SEEDING WILL BE DONE ON A FRESHLY PREPARED AND FIRMED SEEDBED FOR BROADCAST PLANTING. USE A CULTIPACKER-SEEDER, DRILL ROTARY SEEDER, OTHER MECHANICAL SEEDER, OR HAND SEEDING TO DISTRIBUTE THE SEED UNIFORMLY OVER THE AREA TO BE TREATED. COVER THE SEED LIGHTLY WITH 1/8 TO 1/4 INCH OF SOIL. FOR SMALL SEED AND 1/2 TO 1 INCH FOR LARGE SEED WHEN USING A CULTIPACKER OR OTHER SUITABLE EQUIPMENT.

NO-TILL SEEDING
 NO-TILL SEEDING IS PERMISSIBLE INTO ANNUAL COVER CROPS WHEN PLANTING IS DONE FOLLOWING MATURITY OF THE COVER CROP OR IF THE TEMPORARY COVER STAND IS SPARSE ENOUGH TO ALLOW ADEQUATE GROWTH OF THE PERMANENT (PERENNIAL) SPECIES. NO-TILL SEEDING SHALL BE DONE WITH APPROPRIATE NO-TILL SEEDING EQUIPMENT. THE SEED MUST BE UNIFORMLY DISTRIBUTED AND PLANTED AT THE PROPER DEPTH.

INDIVIDUAL PLANTS
 SHRUBS, VINES AND SPRIGS MAY BE PLANTED WITH APPROPRIATE PLANTERS OR HAND TOOLS. PINE TREES SHALL BE PLANTED MANUALLY IN THE SUBSOIL FURROW. EACH PLANT SHALL BE SET IN A MANNER THAT WILL AVOID CROWDING THE ROOTS.

NURSERY STOCK PLANTS SHALL BE PLANTED AT THE SAME DEPTH OR SLIGHTLY DEEPER THAN THEY GREW AT THE NURSERY. THE TIPS OF VINES AND SPRIGS MUST BE AT OR SLIGHTLY ABOVE THE GROUND SURFACE.

WHERE INDIVIDUAL HOLES ARE DUG, FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE HOLE, TWO INCHES OF SOIL SHALL BE ADDED, AND THE PLANT SHALL BE SET IN THE HOLE.

MULCHING
 MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL RECEIVE 75% TO 100% SOIL COVER. WHEN SELECTING A MULCH, DESIGN PROFESSIONALS SHOULD CONSIDER THE MULCH'S FUNCTIONAL LONGEVITY, VEGETATION ESTABLISHMENT ENHANCEMENT, AND EROSION CONTROL EFFECTIVENESS. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:
 1. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED AT A RATE OF 2 1/2 TONS PER ACRE.
 2. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER HYDRAULIC SEEDING.
 3. ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 1/4:1 OR STEEPER.
 4. SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF THREE TONS PER ACRE.
 5. PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.
 6. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOO, MULCH IS NOT REQUIRED.
 7. BITUMINOUS TREATED ROVING MAY BE APPLIED ON PLANTED AREAS, SLOPES, IN DITCHES, OR DRY WATERWAYS TO PREVENT EROSION. BITUMINOUS TREATED ROVING SHALL BE APPLIED WITHIN 24 HOURS AFTER AN AREA HAS BEEN PLANTED. APPLICATION RATES AND MATERIALS MUST MEET GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS. WOOD CELLULOSE AND WOOD PULP FIBERS SHALL NOT CONTAIN GERMINATION OR GROWTH INHIBITING FACTORS. THEY SHALL BE EVENLY DISPERSED WHEN AGITATED IN WATER. THE FIBERS SHALL CONTAIN A DYE TO ALLOW VISUAL METERING AND AID IN UNIFORM APPLICATION DURING SEEDING.

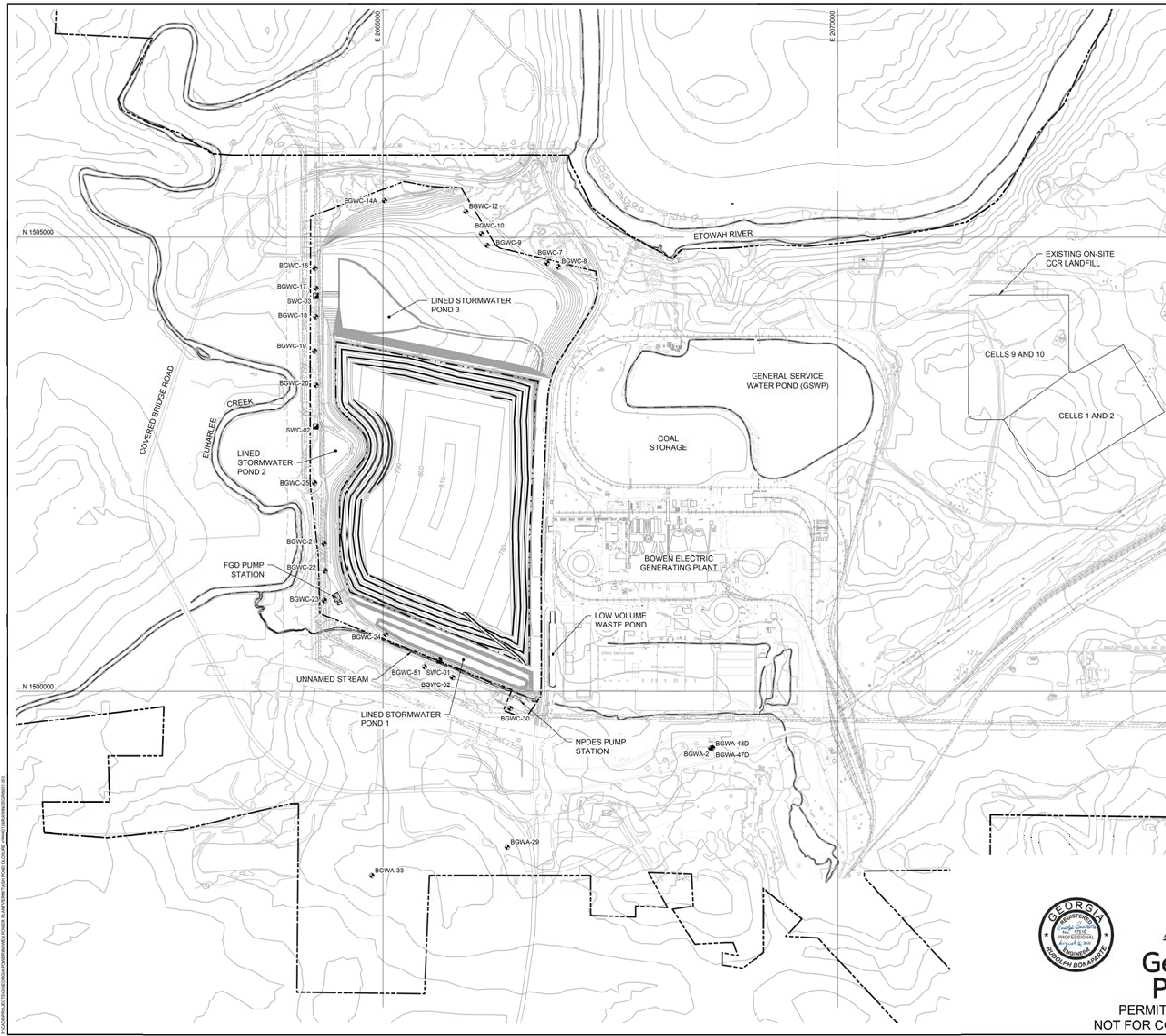
APPLYING MULCH
 STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING AND/OR PLANTING. THE MULCH MAY BE SPREAD BY BLOWER-TYPE SPREADING EQUIPMENT, OTHER SPREADING EQUIPMENT OR BY HAND. MULCH SHALL BE APPLIED TO COVER 75% OF THE SOIL SURFACE. WOOD CELLULOSE OR WOOD FIBER MULCH SHALL BE APPLIED UNIFORMLY WITH HYDRAULIC SEEDING EQUIPMENT.

- ANCHORING MULCH
 ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION BY ONE OF THE FOLLOWING METHODS:
 1. HAY AND STRAW MULCH SHALL BE PRESSED INTO THE SOIL IMMEDIATELY AFTER THE MULCH IS SPREAD. A SPECIAL "PACKER DISK" OR DISK HARROW WITH THE DISKS SET STRAIGHT MAY BE USED. THE DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 2 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISKS SHALL BE DULL ENOUGH TO PRESS THE MULCH INTO THE GROUND WITHOUT CUTTING IT, LEAVING MUCH OF IT IN AN UPRIGHT POSITION. MULCH SHALL NOT BE FLOWED INTO THE SOIL.
 2. SYNTHETIC TACKIFIERS, BINDERS OR HYDRAULIC MULCH SPECIFICALLY DESIGNED TO TACK STRAW, SHALL BE APPLIED IN CONJUNCTION WITH OR IMMEDIATELY AFTER THE MULCH IS SPREAD. SYNTHETIC TACKIFIERS SHALL BE MIXED AND APPLIED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. ALL TACKIFIERS, BINDERS OR HYDRAULIC MULCH SPECIFICALLY DESIGNED TO TACK STRAW SHOULD

BE VERIFIED NONTOXIC THROUGH EPA 2021.0 TESTING. REFER TO TACKIFIERS-TAG IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
 3. RYE OR WHEAT CAN BE INCLUDED WITH FALL AND WINTER PLANTINGS TO STABILIZE THE MULCH. THEY SHALL BE APPLIED AT A RATE OF ONE-QUARTER TO ONE-HALF BUSHED PER ACRE.
 4. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH MAY BE NEEDED TO ANCHOR STRAW OR HAY MULCH ON UNSTABLE SOILS AND CONCENTRATED FLOW AREAS. THESE MATERIALS SHALL BE INSTALLED AND ANCHORED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

LIME AND FERTILIZER APPLICATION
 WHEN HYDRAULIC SEEDING EQUIPMENT IS USED, THE INITIAL FERTILIZER SHALL BE MIXED WITH SEED, INOCULANT (IF NEEDED), AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH AND APPLIED IN A SLURRY. THE INOCULANT, IF NEEDED, SHALL BE MIXED WITH THE SEED PRIOR TO BEING PLACED INTO THE HYDRAULIC SEEDER. THE SLURRY MIXTURE WILL BE MIXED DURING APPLICATION TO KEEP THE INGREDIENTS THOROUGHLY MIXED. THE MIXTURE WILL BE SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER BEING PLACED IN THE HYDROSEEDER. FINELY GROUND LIMESTONE CAN BE APPLIED IN THE MULCH SLURRY OR IN COMBINATION WITH THE TOP DRESSING. WHEN CONVENTIONAL PLANTING IS TO BE DONE, LIME AND FERTILIZER SHALL BE APPLIED UNIFORMLY IN ONE OF THE FOLLOWING WAYS:
 1. APPLY BEFORE LAND PREPARATION SO THAT IT WILL BE MIXED WITH THE SOIL DURING SEEDBED PREPARATION.
 2. MIX WITH THE SOIL USED TO FILL THE HOLES, DISTRIBUTE IN FURROWS.
 3. BROADCAST AFTER STEEP SURFACES ARE SCARIFIED, PITTED OR TRENCHED.
 4. A FERTILIZER PELLET SHALL BE PLACED AT ROOT DEPTH IN THE CLOSING HOLE BESIDE EACH PINE TREE SEEDLING.

Ds3</



LEGEND

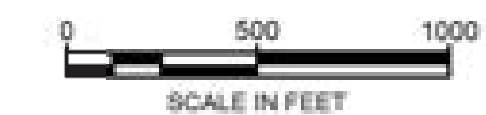
- PROPERTY BOUNDARY
- - - PERMIT BOUNDARY
- . . . FINAL LIMIT OF CCR (CONSOLIDATED FOOTPRINT)
- BGWA-7 CURRENT GROUNDWATER MONITORING WELL (NOTE 3)
- SWC-01 SURFACE WATER MONITORING POINT (NOTE 4)



COMPLIANCE MONITORING NETWORK (NOTE 3)

MONITORING WELL ID	MONITORING PURPOSE	NORTHING	EASTING	GROUND SURFACE ELEVATION	SCREEN ELEVATIONS (TOP TO BOTTOM)	
					(FT)	(FT)
BGWA-2	BACKGROUND	1499374.18	2068599.59	727.00	650.5	TO 640.5
BGWA-29	BACKGROUND	1498283.04	2066382.32	718.84	632.9	TO 622.9
BGWA-33	BACKGROUND	1497972.13	2064876.80	740.50	661.2	TO 651.2
BGWA-47D	BACKGROUND	1499377.79	2068612.48	726.93	585.9	TO 575.9
BGWA-48D	BACKGROUND	1499380.09	2068623.31	726.64	545.0	TO 535.0
BGWC-7	DOWNGRAIENT	1504711.59	2068801.40	702.49	625.2	TO 615.2
BGWC-8	DOWNGRAIENT	1504671.82	2068929.46	703.71	636.8	TO 626.8
BGWC-9	DOWNGRAIENT	1504909.12	2068143.27	689.18	638.3	TO 628.3
BGWC-10	DOWNGRAIENT	1505033.22	2068081.09	683.39	633.7	TO 623.7
BGWC-12	DOWNGRAIENT	1505279.88	2065908.56	691.71	626.0	TO 616.0
BGWC-14A	DOWNGRAIENT	1505398.54	2065015.98	715.57	629.6	TO 619.6
BGWC-16	DOWNGRAIENT	1504656.42	2064247.67	671.85	635.3	TO 625.3
BGWC-17	DOWNGRAIENT	1504432.00	2064259.38	671.25	615.4	TO 605.4
BGWC-18	DOWNGRAIENT	1504118.73	2064257.00	670.32	645.1	TO 635.1
BGWC-19	DOWNGRAIENT	1503742.25	2064244.68	671.04	628.9	TO 618.9
BGWC-20	DOWNGRAIENT	1503367.73	2064259.55	672.29	635.1	TO 625.1
BGWC-21	DOWNGRAIENT	1501627.51	2064348.09	688.53	648.8	TO 638.8
BGWC-22	DOWNGRAIENT	1501323.76	2064358.05	692.64	662.6	TO 652.6
BGWC-23	DOWNGRAIENT	1501000.57	2064350.17	693.16	654.3	TO 644.3
BGWC-24	DOWNGRAIENT	1500621.22	2065032.84	699.46	646.3	TO 636.3
BGWC-25	DOWNGRAIENT	1502292.73	2064244.10	677.60	632.9	TO 622.9
BGWC-30	DOWNGRAIENT	1499815.93	2066395.86	698.39	651.6	TO 641.6
BGWC-51	DOWNGRAIENT	1500270.09	2065455.80	708.99	654.6	TO 644.6
BGWC-52	DOWNGRAIENT	1500156.97	2065764.13	707.77	638.9	TO 628.9

- NOTES:**
1. GRADING SHOWN IN AND AROUND THE AP-1 AREA REPRESENTS FINAL CONDITIONS UPON COMPLETION OF CLOSURE.
 2. MONITORING WELL COORDINATES, GROUND SURFACE ELEVATIONS, AND SCREEN ELEVATIONS WERE OBTAINED FROM THE "SEPTEMBER 2020 WELL INSTALLATION ADDENDUM MEMORANDUM" DATED 29 SEPTEMBER 2020, PREPARED BY GEOSYNTEC CONSULTANTS, INC. DATA FOR MONITORING WELLS BGWC-51 AND BGWC-52 WERE OBTAINED FROM THE "ASH POND MONITORING WELL CERTIFICATION REPORT - ADDENDUM NO. 4" DATED 24 MARCH 2021, PREPARED BY GEOSYNTEC CONSULTANTS, INC.
 3. GROUNDWATER MONITORING WELLS SHOWN AND TABULATED ON THIS DRAWING ARE THOSE USED TO BOTH MEASURE GROUNDWATER LEVELS AND COLLECT GROUNDWATER SAMPLES FOR ANALYSIS. REFER TO THE GROUNDWATER MONITORING PLAN FOR THE LOCATION AND PURPOSE OF OTHER ON-SITE PIEZOMETERS AND WELLS.
 4. THE COORDINATES OF THE SURFACE WATER MONITORING POINTS ARE AS FOLLOWS:
 - SWC-01: 34° 7' 19.40" N, 84° 55' 47.42" W (IN NAD 83: NORTHING: 1500339.06, EASTING: 2065618.14)
 - SWC-02: 34° 7' 44.78" N, 84° 56' 3.85" W (IN NAD 83: NORTHING: 1502914.64, EASTING: 2064258.49)
 - SWC-03: 34° 7' 58.98" N, 84° 56' 3.96" W (IN NAD 83: NORTHING: 1504349.80, EASTING: 2064257.83)



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

COMPLIANCE MONITORING NETWORK

PLANT EOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec consultants

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PROJ. NO.	GR6601	DWG.	GR6601-053	EDIT	8/16/21
SCALE	1" = 500'	DRAWING 50 OF 50			
DATE	AUGUST 2021				



PERMIT DRAWING
NOT FOR CONSTRUCTION