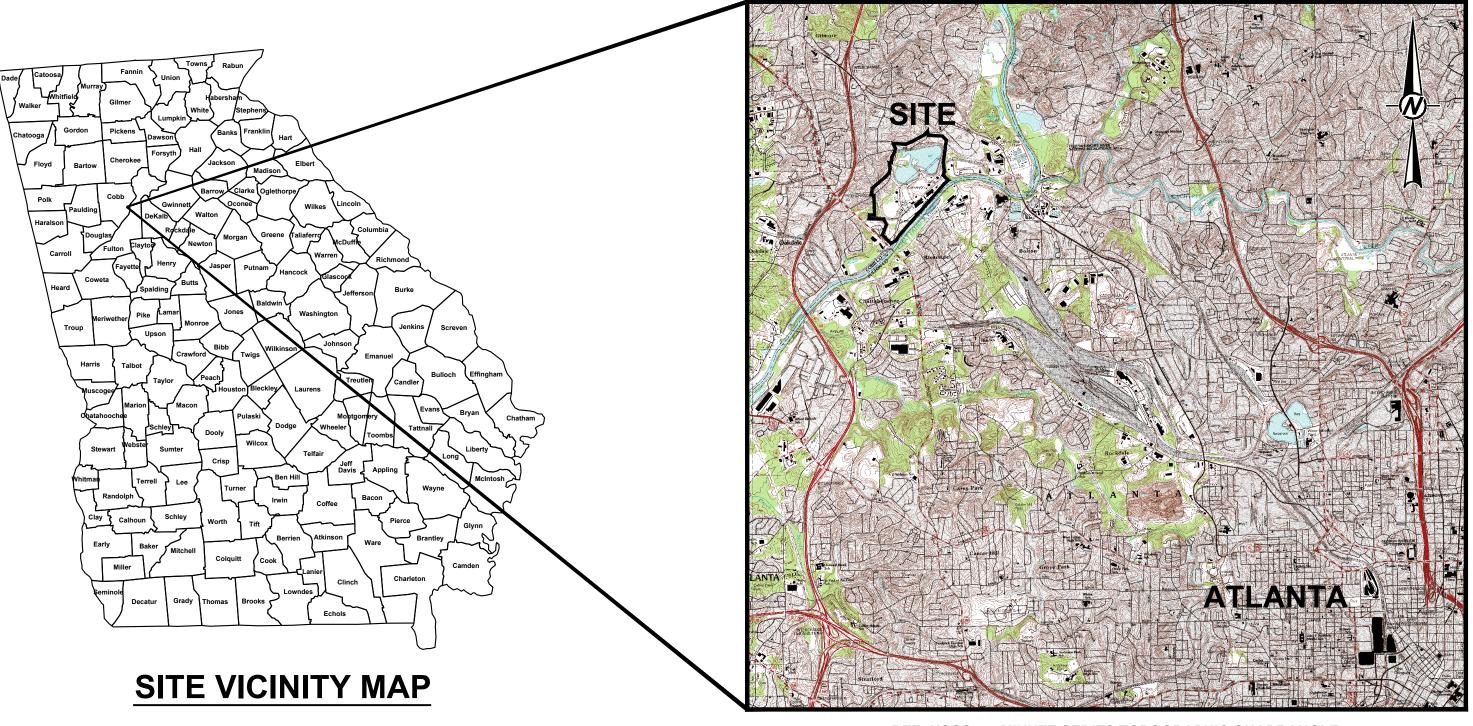
GEORGIA POWER COMPANY PLANT MCDONOUGH - ATKINSON INACTIVE SURFACE INPOUNDMENT ASH POND NO. 1 CLOSURE DRAWINGS

COBB COUNTY, GEORGIA **NOVEMBER 2018**

LIST OF SHEETS	
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1	TITLE SHEET AND DRAWING INDEX
2	PRE-CLOSURE CONDITIONS TOPOGRAPHIC SITE MAP
3	ESTIMATED BOTTOM OF CCR
4	GENERAL SITE DEVELOPMENT
5	CLOSURE FINAL GRADING PLAN (1 OF 2)
6	CLOSURE FINAL GRADING PLAN (2 OF 2)
7	FINAL GRADING (1 OF 2)
8	FINAL GRADING (2 OF 2)
9	AP-1 SECTIONS
10	SECTIONS AND DETAILS (1 OF 5)
11	SECTIONS AND DETAILS (2 OF 5)
12	SECTIONS AND DETAILS (3 OF 5)
13	SECTIONS AND DETAILS (4 OF 5)
14	SECTIONS AND DETAILS (5 OF 5)
15	SPILLWAY SECTIONS AND DETAILS
16	FUTURE SITE DEVELOPMENT
	PERMIT AND PLANT BOUNDARY SURVEYS
P470-5(1)	ASH POND 1 PERMIT BOUNDARY SURVEY
P281-4	BOUNDARY SURVEY FOR PLANT MCDONOUGH-ATKINSON (1 OF 2)
P281-4	BOUNDARY SURVEY FOR PLANT MCDONOUGH-ATKINSON (2 OF 2)



REF: USGS 7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE: MABLETON, GA 1992 & NORTHWEST ATLANTA, GA 1993

SITE LOCATION MAP

CONTACT INFORMATION

CONSULTANT

GARY H. MCWHORTER, P.E. **SOUTHERN COMPANY** SERVICES, INC. 241 RALPH MCGILL BLVD. ATLANTA, GA 30308 **TELEPHONE:** 404-506-7291 / 205-992-5368

RESPONSIBLE OFFICIAL

GENERAL MANAGER ENVIRONMENTAL AFFAIRS GEORGIA POWER COMPANY 241 RALPH McGILL BLVD **BIN 10221 ATLANTA, GA 30308 TELEPHONE: 404-506-6505**

PROPERTY OWNER

GEORGIA POWER COMPANY 241 RALPH McGILL BLVD ATLANTA, GA 30308 **TELEPHONE: 404-506-6505**

PREPARED FOR:



FOR PERMITTING PURPOSES NOT FOR CONSTRUCTION

GEORGIA POWER COMPANY



2018-NOV

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VPM / RMS

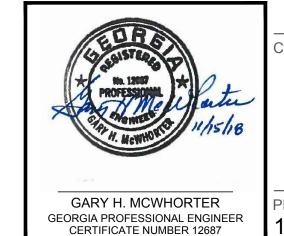
RCP / MHL / LS

JWM / GHM / GLH

PROJECT

PLANT MCDONOUGH - ATKINSON ASH POND 1 CLOSURE

TITLE SHEET AND DRAWING INDEX



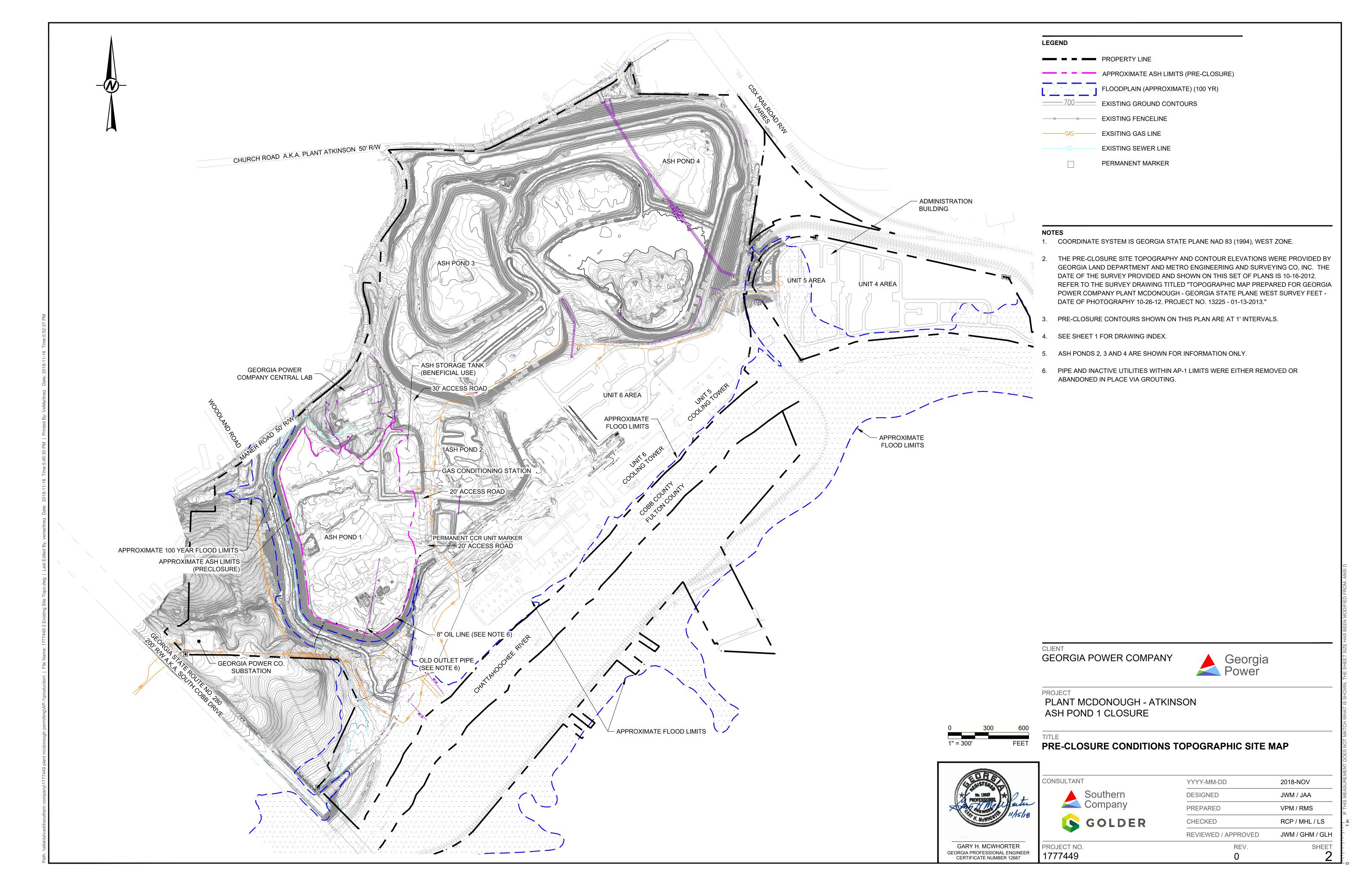
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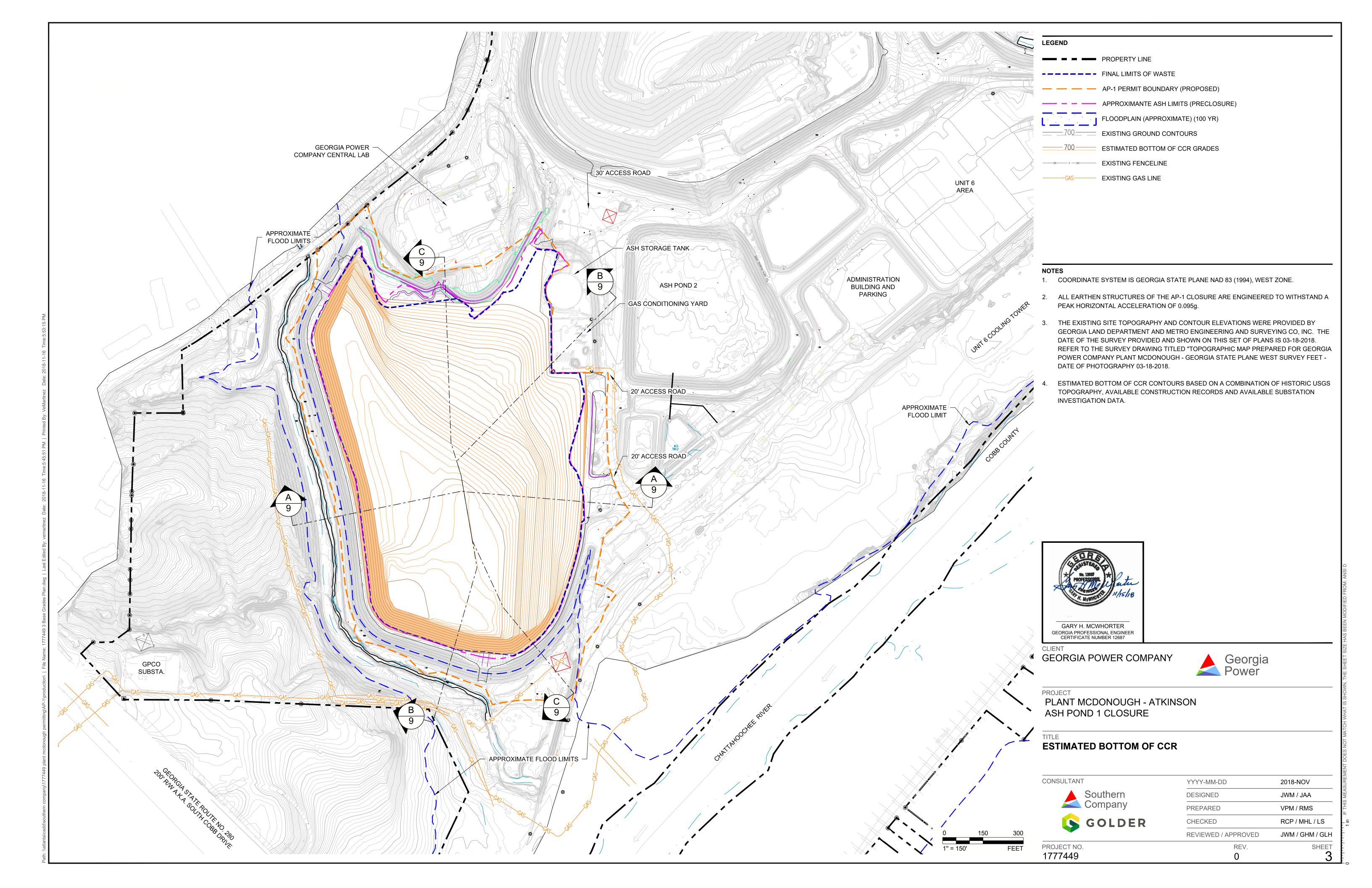
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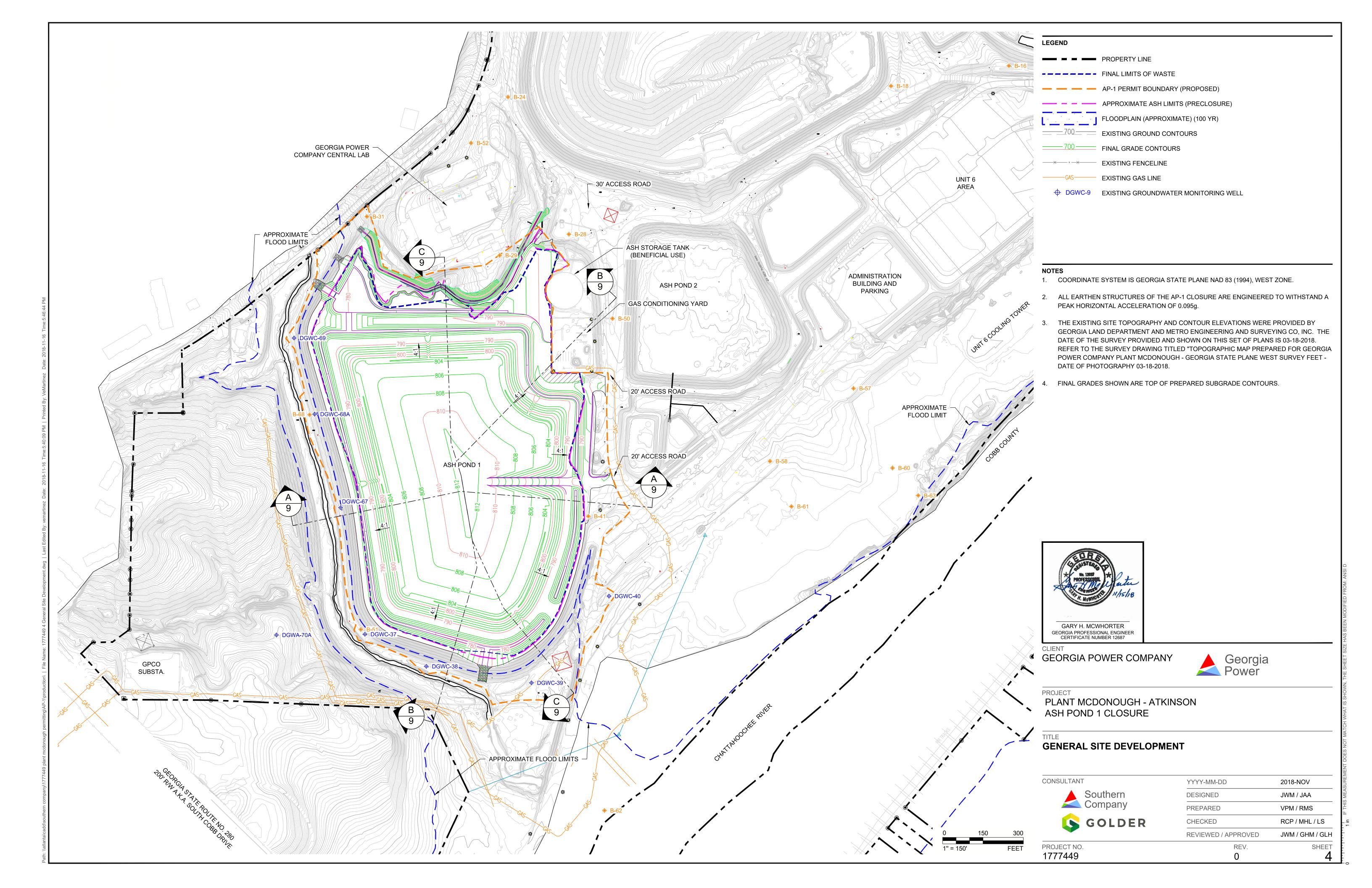
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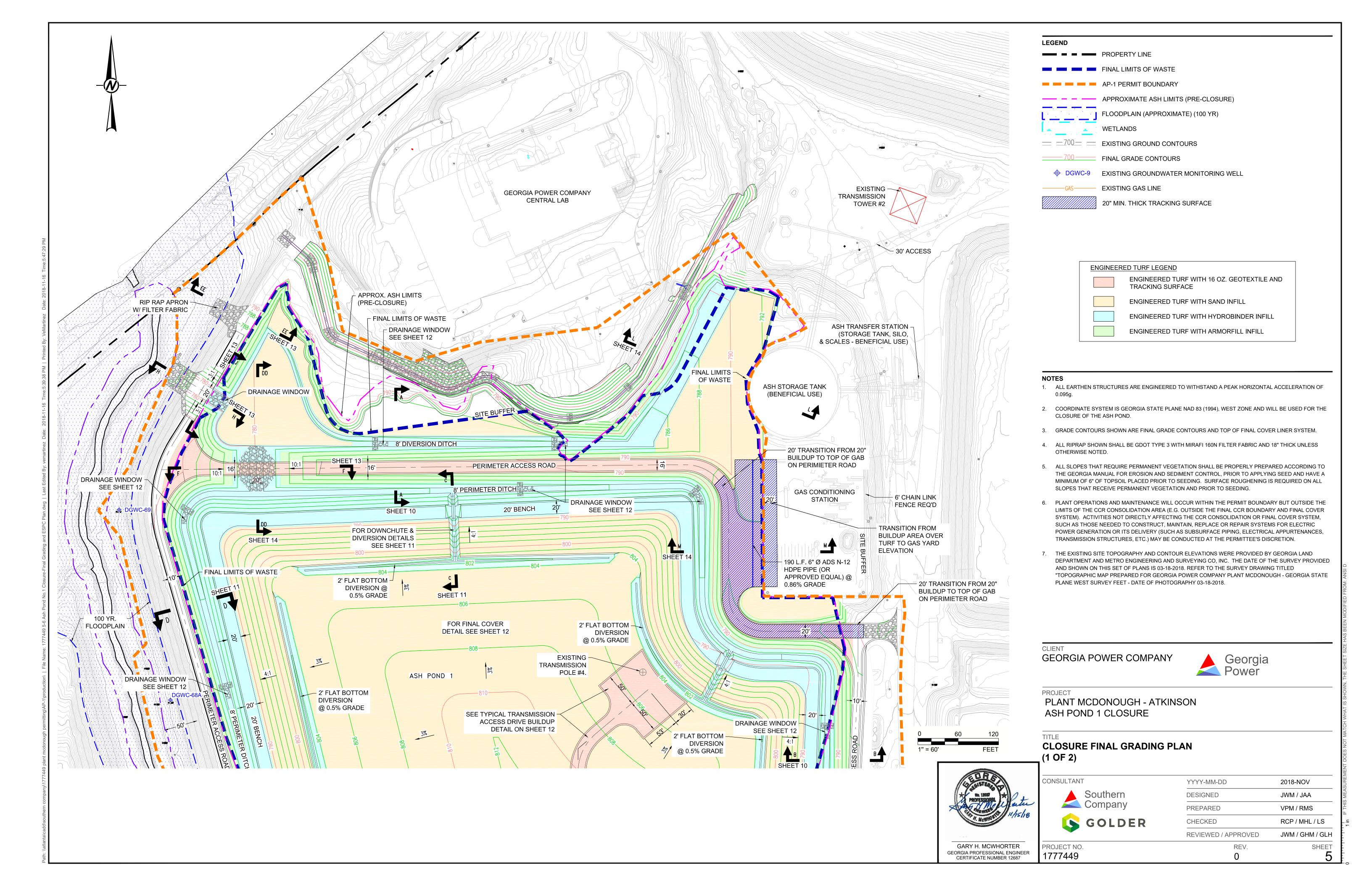


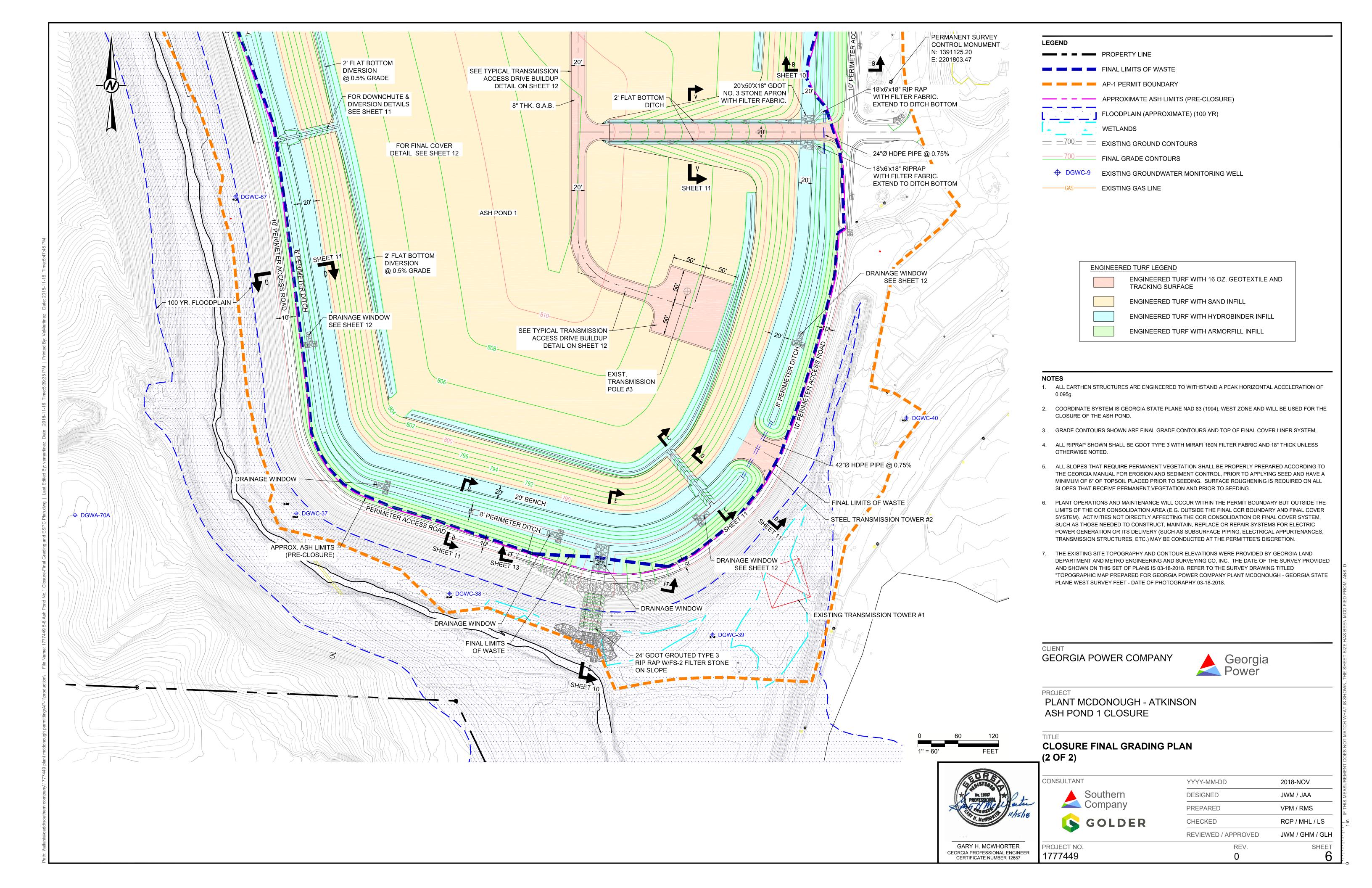


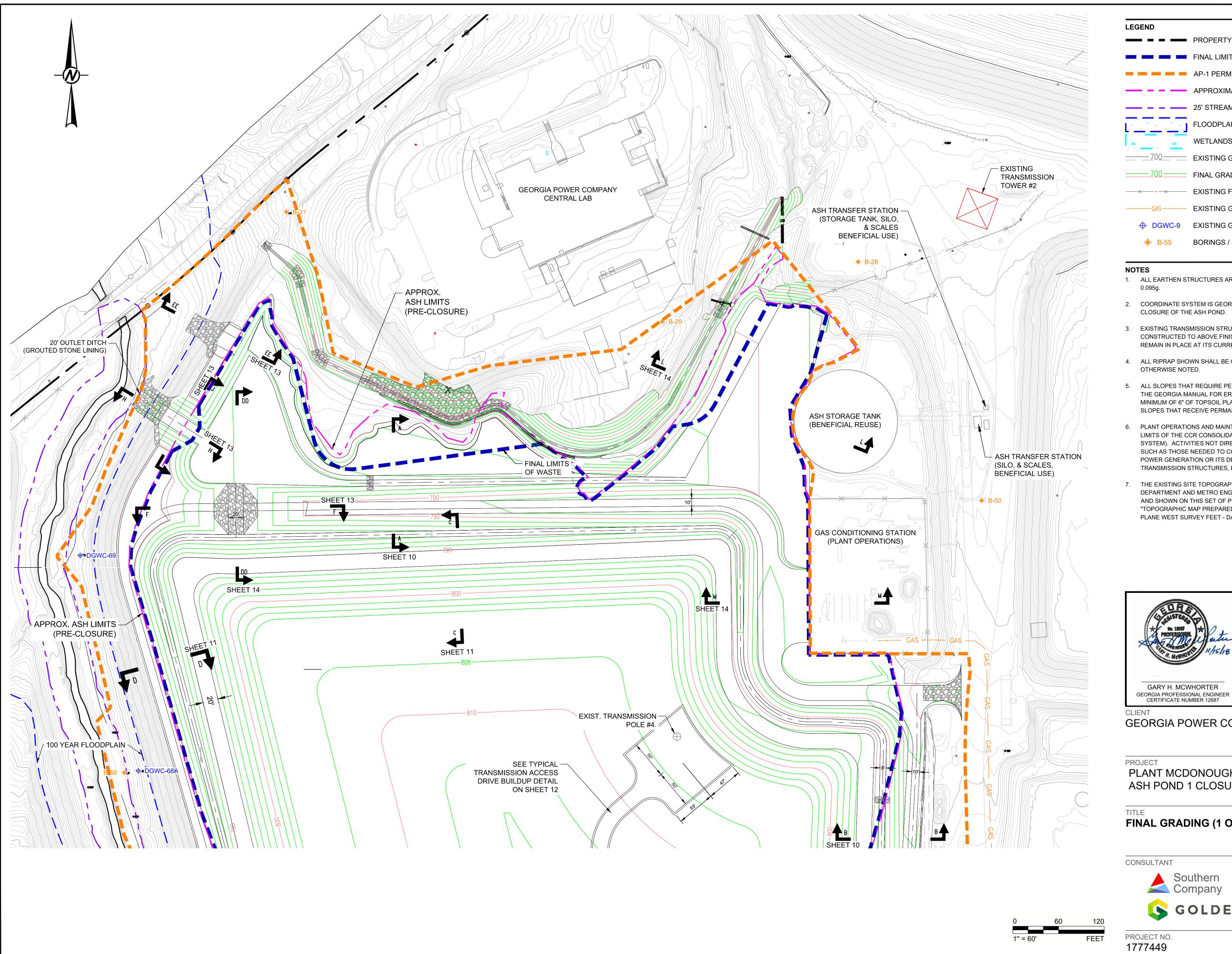


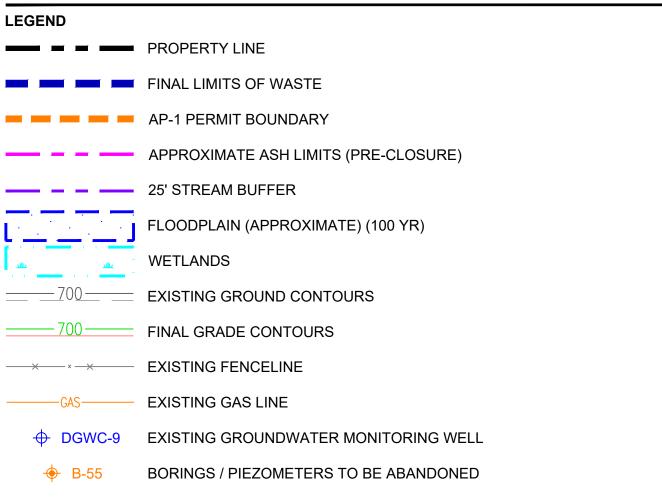




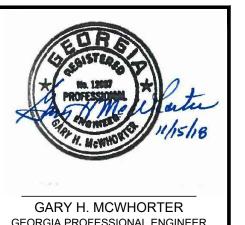








- 1. ALL EARTHEN STRUCTURES ARE ENGINEERED TO WITHSTAND A PEAK HORIZONTAL ACCELERATION OF
- 2. COORDINATE SYSTEM IS GEORGIA STATE PLANE NAD 83 (1994), WEST ZONE AND WILL BE USED FOR THE CLOSURE OF THE ASH POND.
- 3. EXISTING TRANSMISSION STRUCTURE NUMBERS 3 & 4 WERE MOVED TO NEW FOUNDATIONS CONSTRUCTED TO ABOVE FINISH GRADE ADJACENT TO CURRENT LOCATION. STRUCTURE NUMBER 2 WILL REMAIN IN PLACE AT ITS CURRENT LOCATION AND ELEVATION.
- 4. ALL RIPRAP SHOWN SHALL BE GDOT TYPE 3 WITH MIRAFI 160N FILTER FABRIC AND 18" THICK UNLESS
- 5. ALL SLOPES THAT REQUIRE PERMANENT VEGETATION SHALL BE PROPERLY PREPARED ACCORDING TO THE GEORGIA MANUAL FOR EROSION AND SEDIMENT CONTROL, PRIOR TO APPLYING SEED AND HAVE A MINIMUM OF 6" OF TOPSOIL PLACED PRIOR TO SEEDING. SURFACE ROUGHENING IS REQUIRED ON ALL SLOPES THAT RECEIVE PERMANENT VEGETATION AND PRIOR TO SEEDING.
- 6. PLANT OPERATIONS AND MAINTENANCE WILL OCCUR WITHIN THE PERMIT BOUNDARY BUT OUTSIDE THE LIMITS OF THE CCR CONSOLIDATION AREA (E.G. OUTSIDE THE FINAL CCR BOUNDARY AND FINAL COVER SYSTEM). ACTIVITIES NOT DIRECTLY AFFECTING THE CCR CONSOLIDATION OR FINAL COVER SYSTEM, SUCH AS THOSE NEEDED TO CONSTRUCT, MAINTAIN, REPLACE OR REPAIR SYSTEMS FOR ELECTRIC POWER GENERATION OR ITS DELIVERY (SUCH AS SUBSURFACE PIPING, ELECTRICAL APPURTENANCES, TRANSMISSION STRUCTURES, ETC.) MAY BE CONDUCTED AT THE PERMITTEE'S DISCRETION.
- 7. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018.



GEORGIA POWER COMPANY

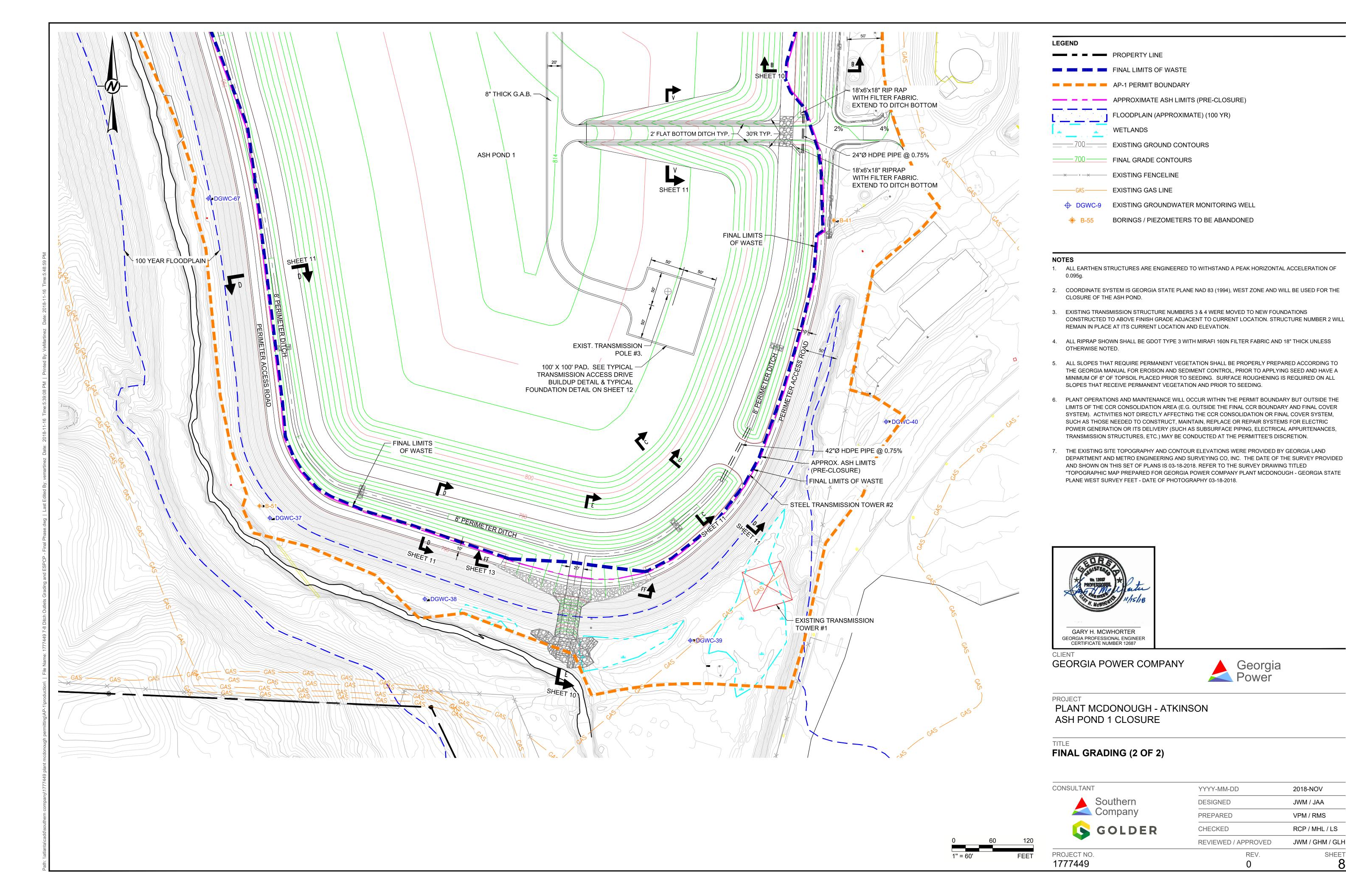


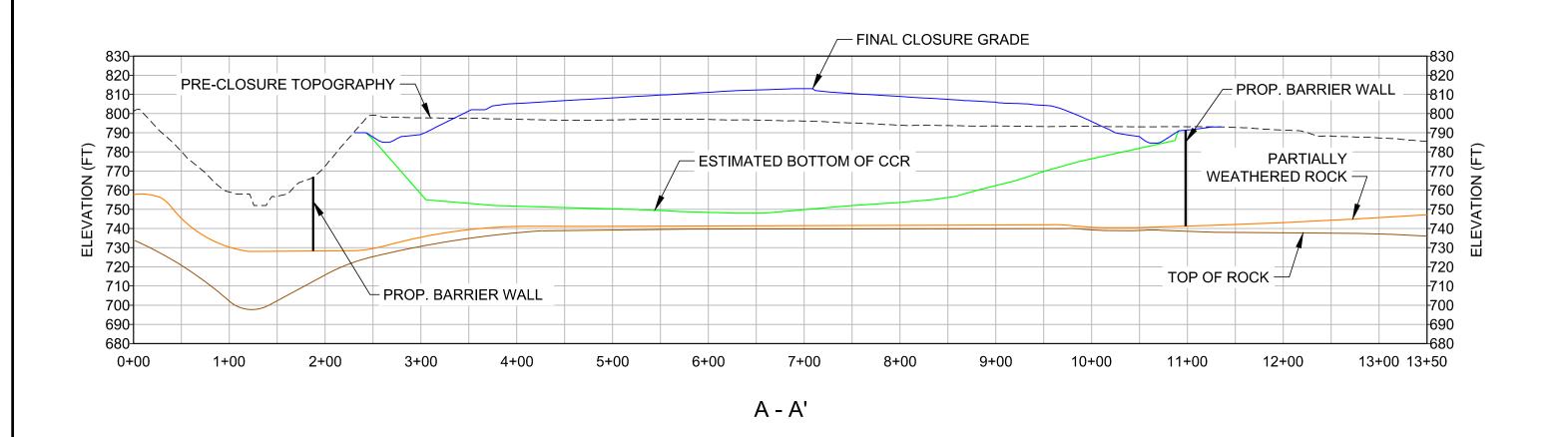
PLANT MCDONOUGH - ATKINSON ASH POND 1 CLOSURE

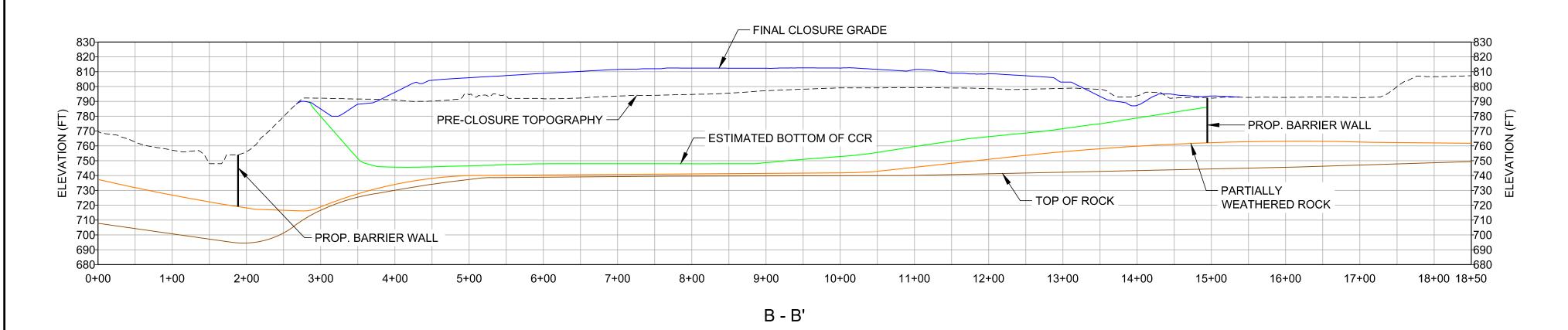
FINAL GRADING (1 OF 2)

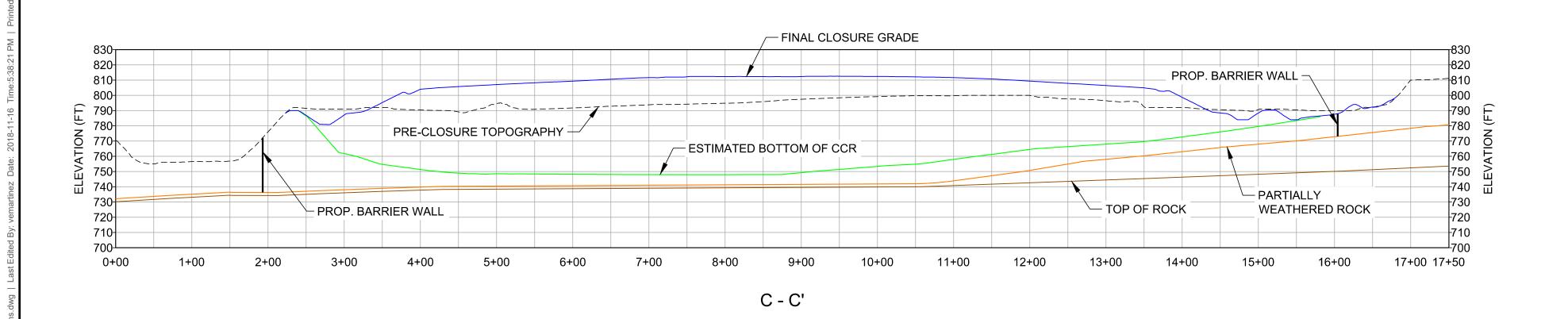
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Southern Company	DESIGNED	JWM / JAA
GOLDER	PREPARED	VPM / RMS
	CHECKED	RCP / MHL / LS
	REVIEWED / APPROVED	JWM / GHM / GLH

SHEET 7 REV.







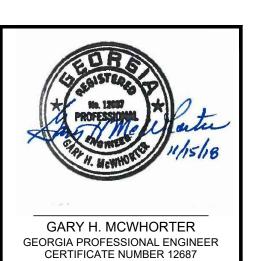


NOTES

- 1. A PROPOSED FUTURE DEVELOPMENT CONSISTING OF THE INSTALLATION OF A BARRIER GROUNDWATER CUTOFF WALL AROUND THE PERIMETER OF AP-1 IS BEING CONSIDERED AND A CONCEPTUAL DESIGN ALIGNMENT IS SHOWN. THE CONCEPTUAL DESIGN OF THE CUTOFF WALL SHALL BE CONFIRMED WITH FURTHER GEOTECHNICAL AND HYDROGEOLOGIC INVESTIGATIONS AND DETAILED ENGINEERING DESIGN AS NECESSARY PRIOR TO CONSTRUCTION. THE DEPTH AND PLAN ALIGNMENT OF THE WALL MAY CHANGE IN FINAL DESIGN BASED ON OBSERVED CONDITIONS AND SITE CONSTRAINTS.
- 2. TOP OF PARTIALLY WEATHERED ROCK, UNDER TOP OF ROCK AND BOTTOM OF CCR LINES ARE ESTIMATED BASED ON DISCRETE BOREHOLE INFORMATION AND SHOULD BE CONSIDERED APPROXIMATE.
- 3. FINAL CLOSURE GRADES PRESENTED ARE THE DESIGN CLOSURE GRADES AND TOP OF FINAL COVER.

REFERENCE

1. PRECLOSURE TOPOGRAPHY UTILITIES, EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."



GEORGIA POWER COMPANY



PROJECT

CONSULTANT

PLANT MCDONOUGH - ATKINSON ASH POND 1 CLOSURE

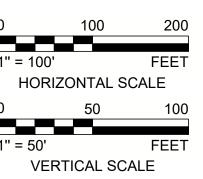
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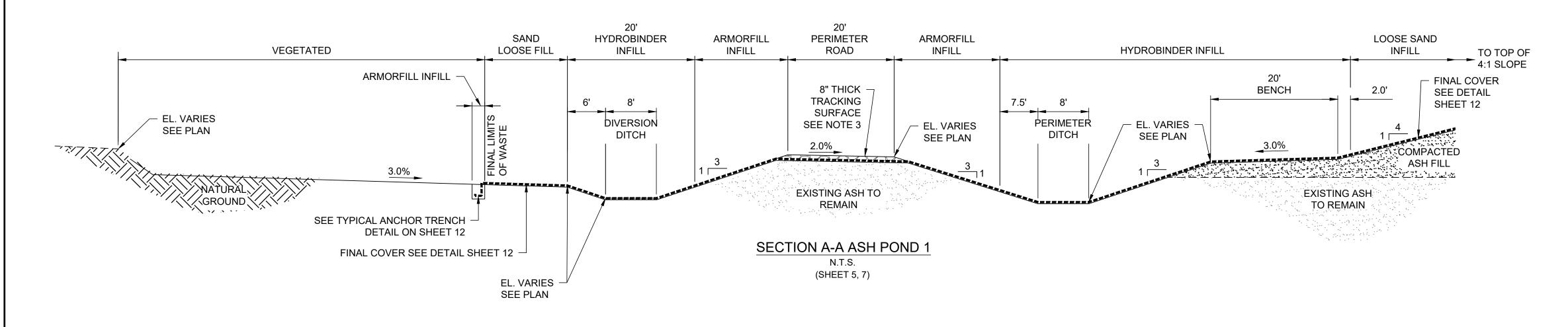
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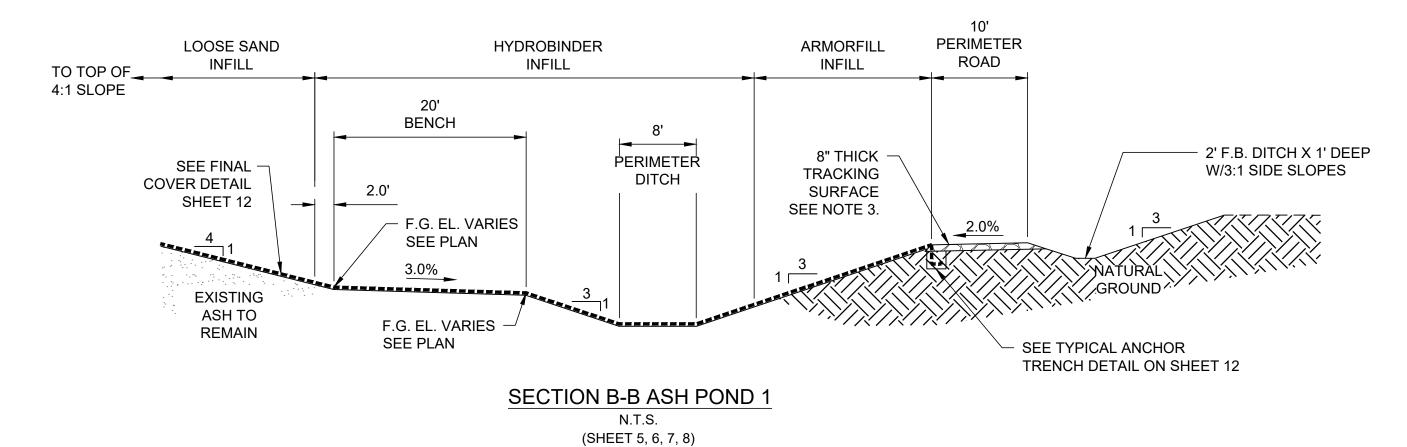


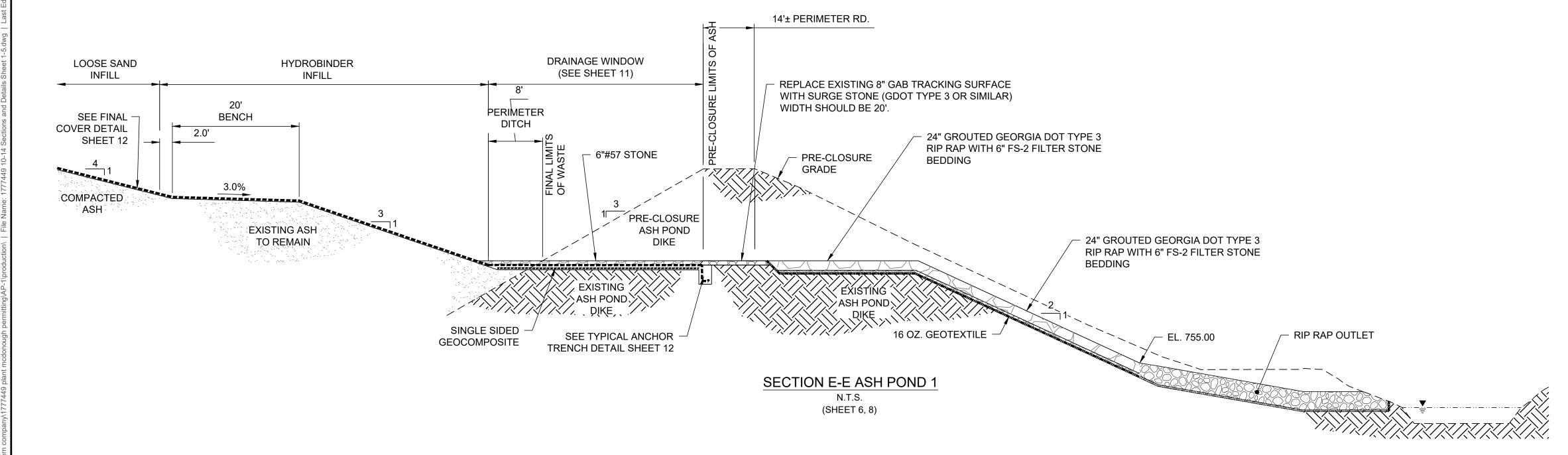
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PREPARED	VPM / RMS
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REVIEWED / APPROVED	JWM / GHM / GLH

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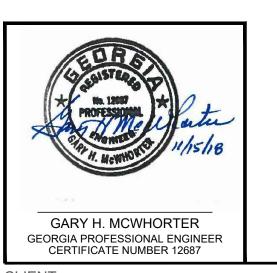






NOTES

- 1. SEE DRAWING 1 FOR DRAWING INDEX.
- 2. THE PRE-CLOSURE ASH LIMITS ARE APPROXIMATE. ANY ASH DISCOVERED OUTSIDE OF FINAL ASH LIMITS SHALL BE EXCAVATED ACCORDING TO REMOVAL PROTOCOLS AND REPLACED WITH COMPACTED FILL TO GRADES SHOWN.
- 3. TRACKING SURFACE SHALL BE PER GDOT SPEC. 815, CL. A, GRP. I. FOR TRACKING SURFACES WITH ASH SUBGRADE, SEE DETAIL ON SHEET 12.
- 4. VEGETATED SLOPES SHALL REQUIRE 6" MIN. OF TOPSOIL AND APPLICATION OF FLEXTERRA HP-FGM.
- 5. GUARDRAIL IS NOT REQUIRED AT ALL LOCATIONS.
- 6. SOME AREAS OF THE PERIMETER ACCESS ROAD MAY REQUIRE ASPHALT PAVING. FOR THOSE AREAS REFER TO THE HEAVY DUTY ASPHALT DETAIL ON SHEET 12.



GEORGIA POWER COMPANY



2018-NOV

JWM / JAA

VPM / RMS

PROJECT

PLANT MCDONOUGH - ATKINSON ASH POND 1 CLOSURE

TITLE

SECTIONS AND DETAILS (1 OF 5)

Southern
Company

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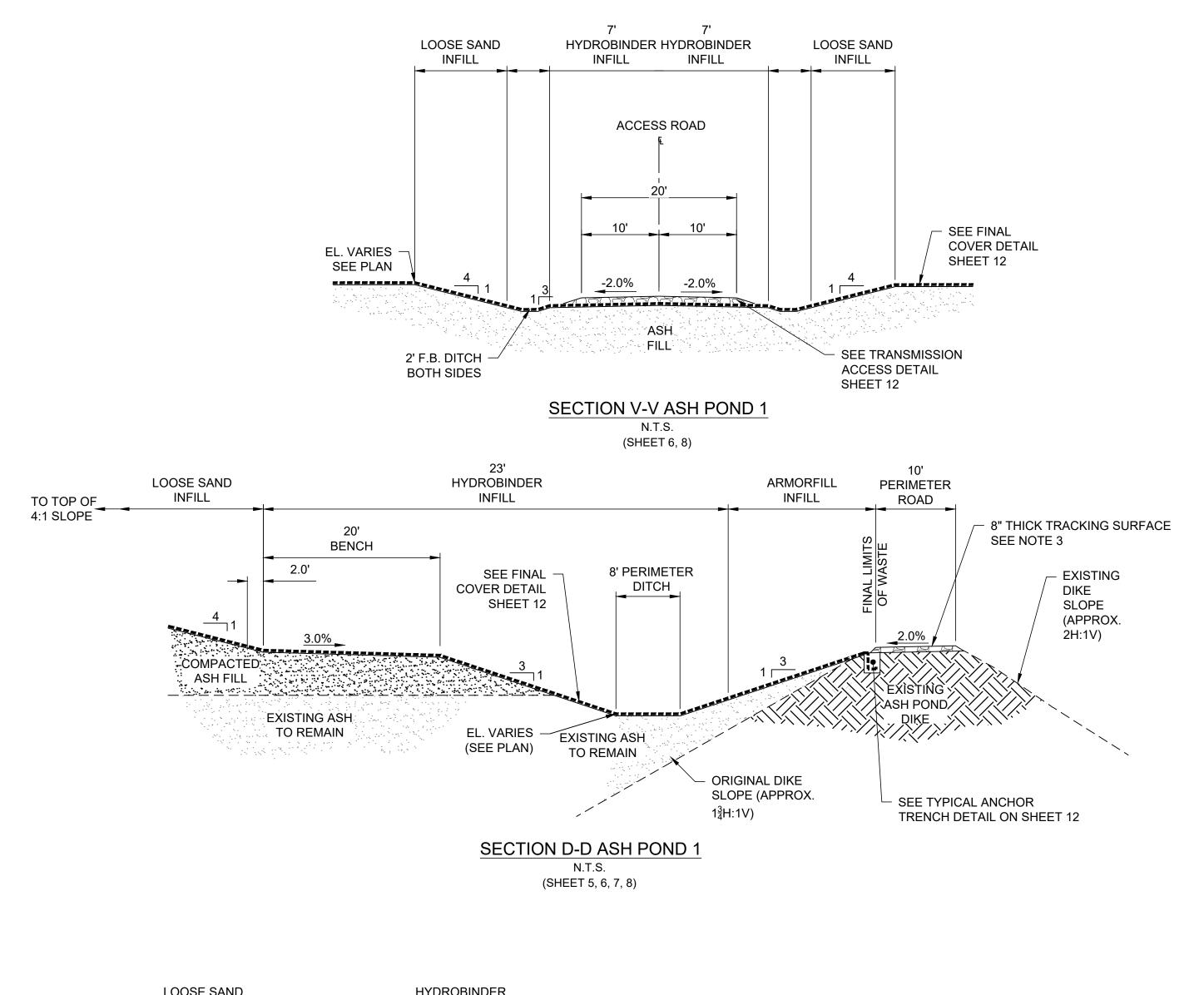
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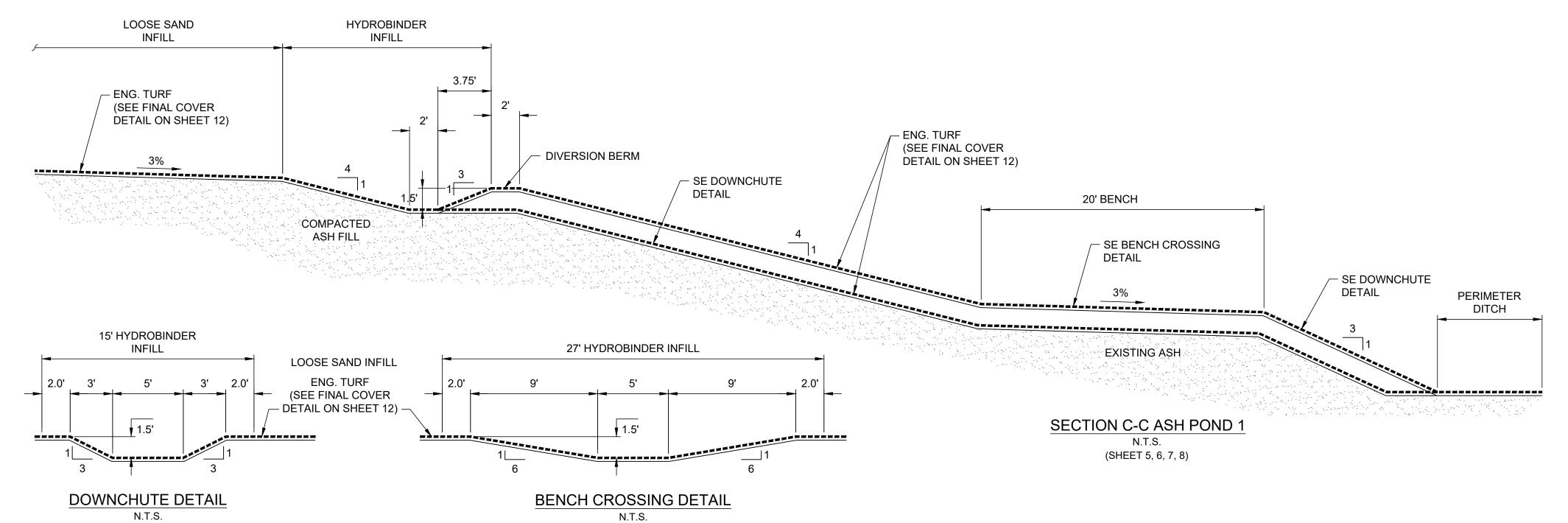
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 JWM / GHM / GLH

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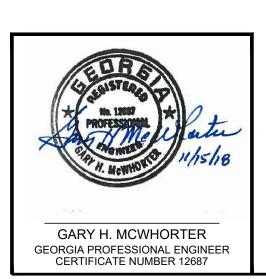
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NOTES

- 1. SEE DRAWING 1 FOR DRAWING INDEX.
- THE PRE-CLOSURE ASH LIMITS ARE APPROXIMATE. ANY ASH DISCOVERED OUTSIDE OF FINAL ASH LIMITS SHALL BE EXCAVATED ACCORDING TO REMOVAL PROTOCOLS AND REPLACED WITH COMPACTED FILL TO GRADES SHOWN.
- 3. TRACKING SURFACE SHALL BE PER GDOT SPEC. 815, CL. A, GRP. I. FOR TRACKING SURFACES WITH ASH SUBGRADE, SEE DETAIL ON SHEET 12.
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- 5. GUARDRAIL IS NOT REQUIRED AT ALL LOCATIONS.
- 6. SOME AREAS OF THE PERIMETER ACCESS ROAD MAY REQUIRE ASPHALT PAVING. FOR THOSE AREAS REFER TO THE HEAVY DUTY ASPHALT DETAIL ON SHEET 12.



GEORGIA POWER COMPANY



PROJECT

CONSULTANT

PLANT MCDONOUGH - ATKINSON ASH POND 1 CLOSURE

TITL

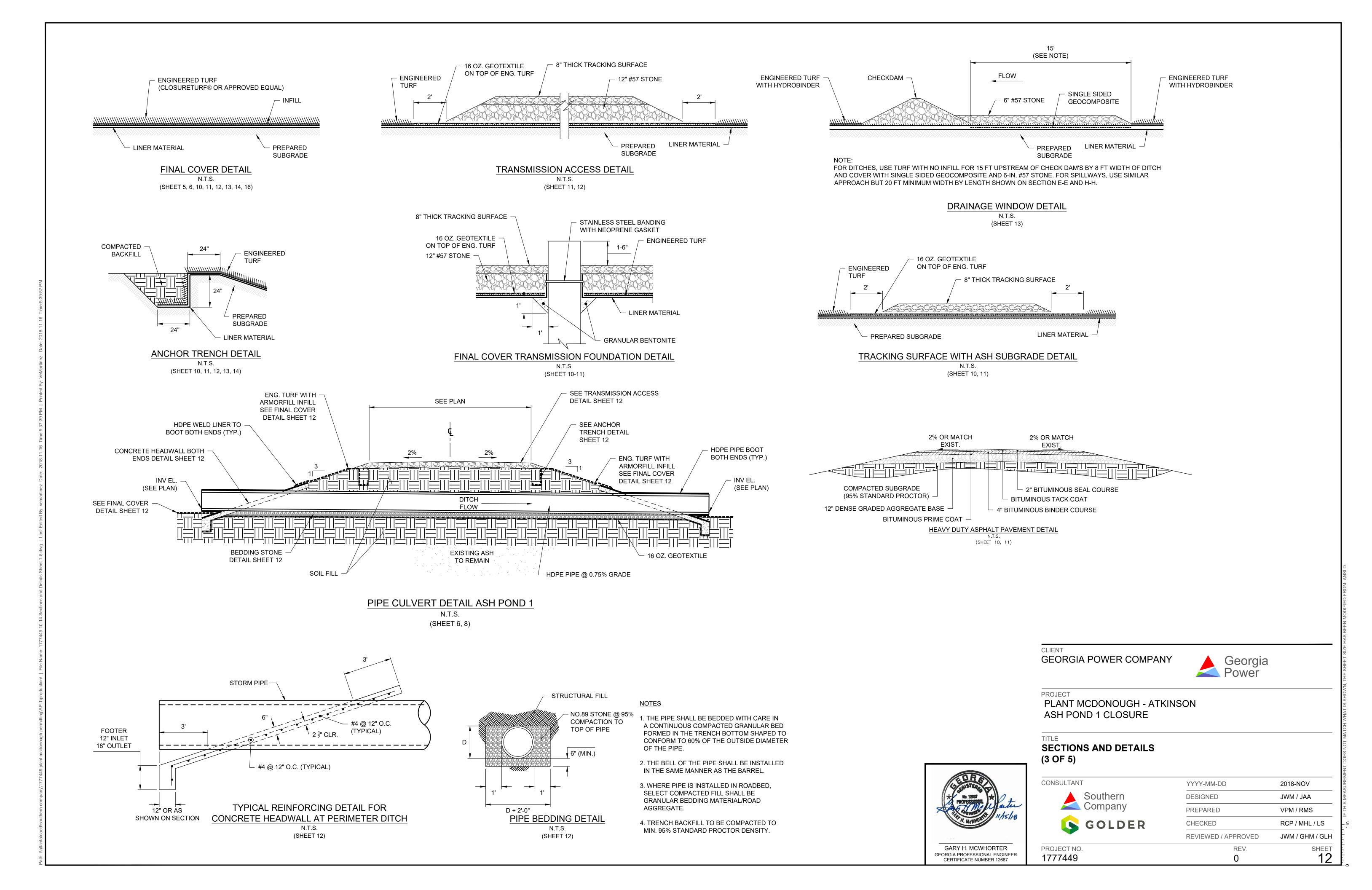
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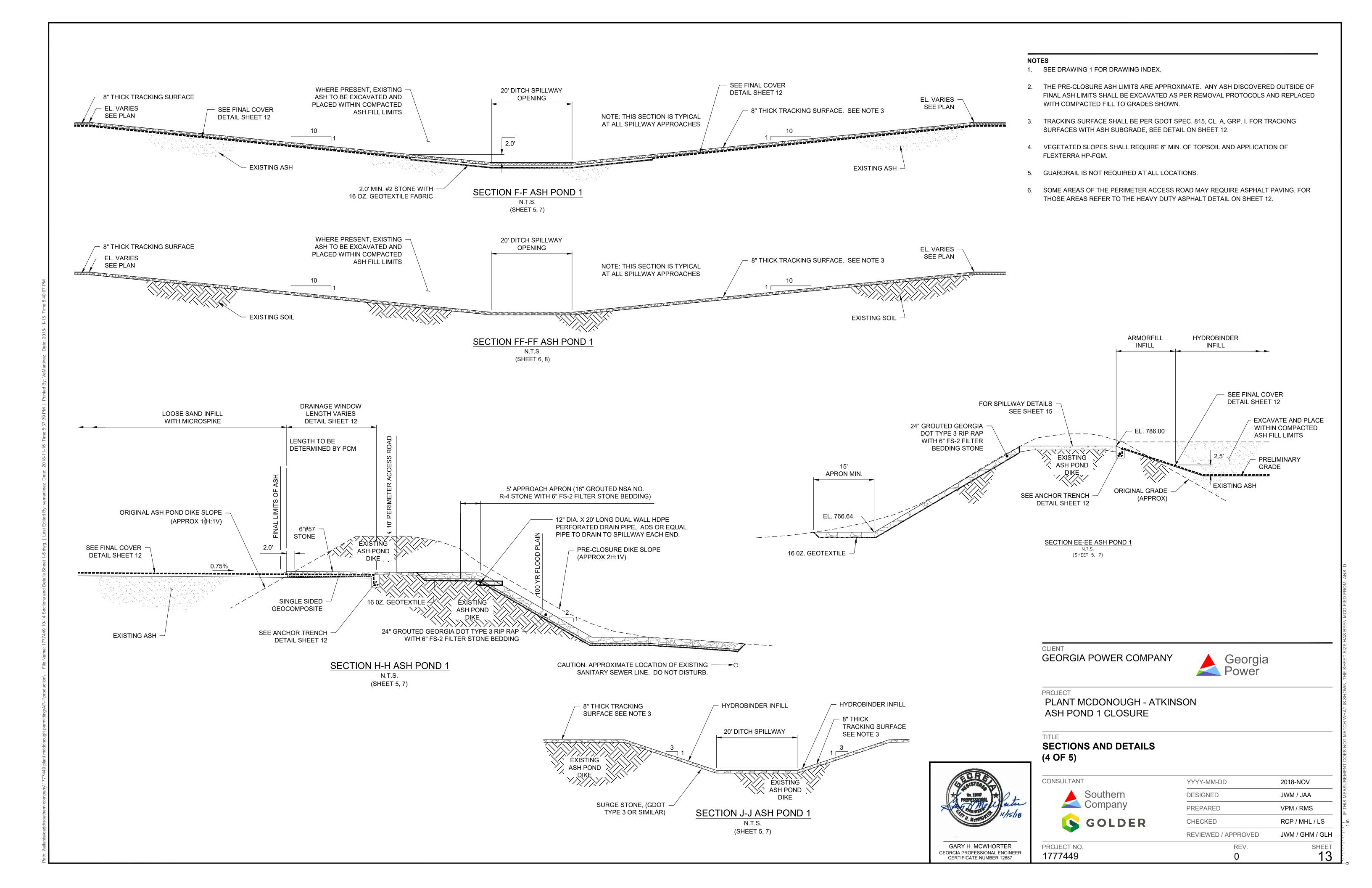
Southern Company

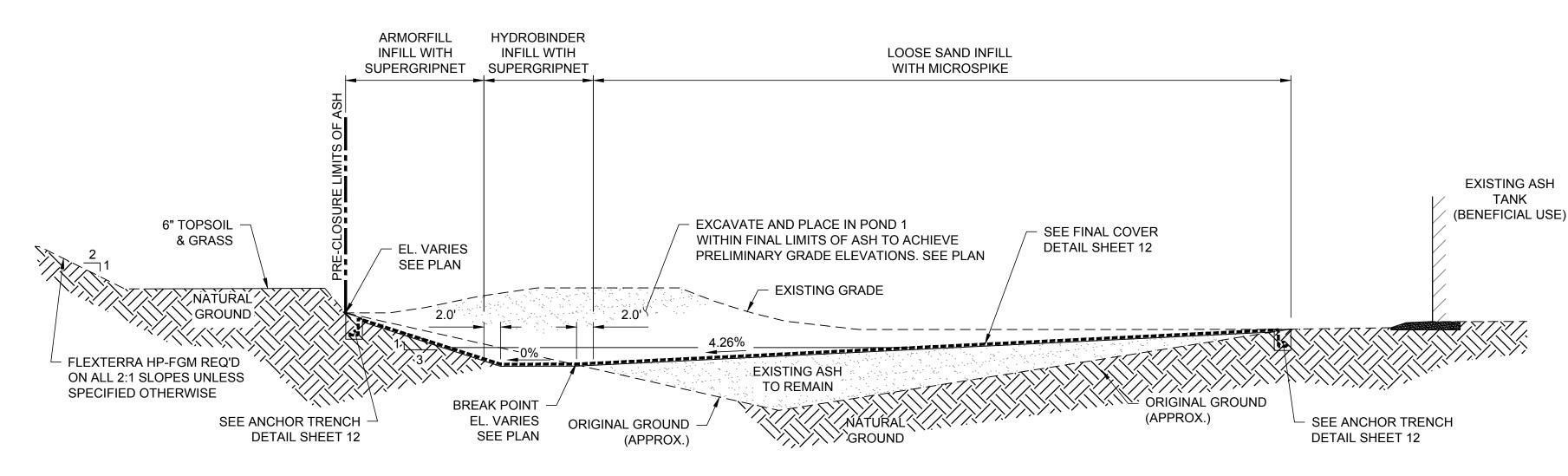
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REVIEWED / APPROVED	JWM / GHM / GLI

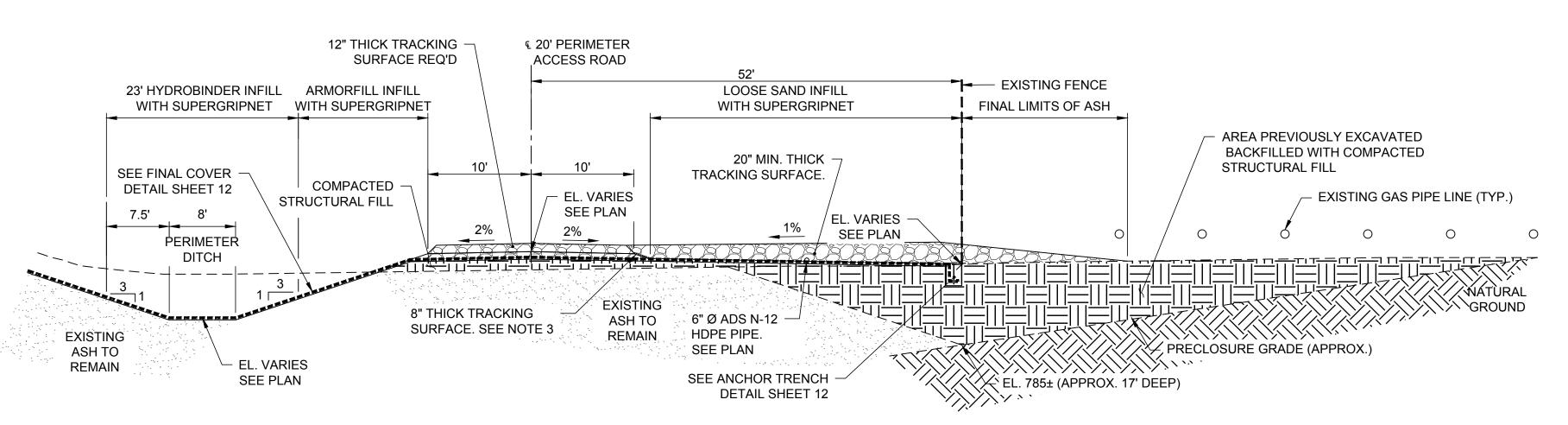
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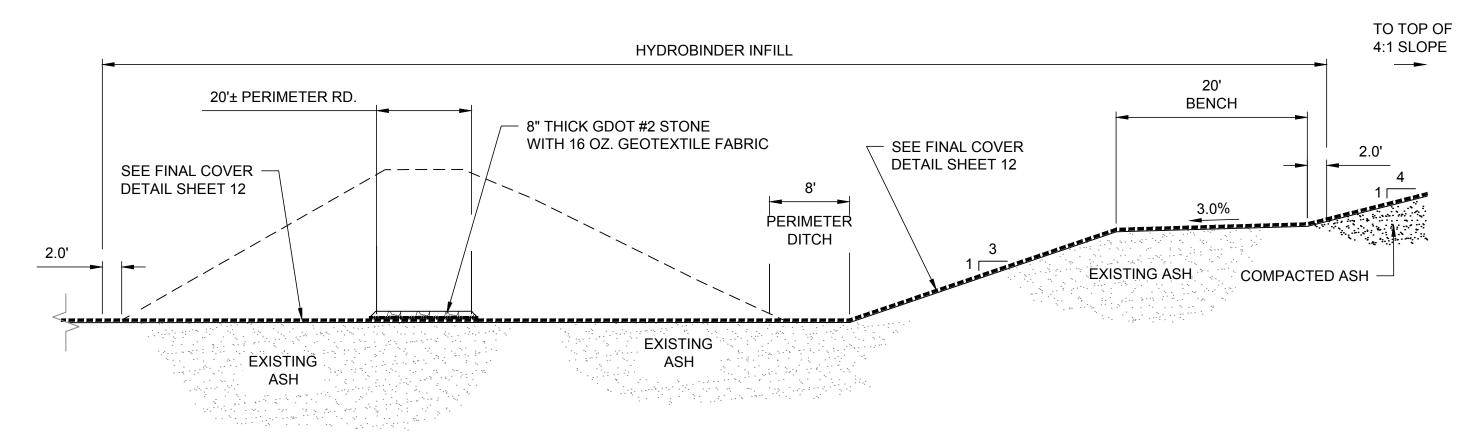




SECTION L-L ASH POND 1 N.T.S. (SHEET 5, 7)



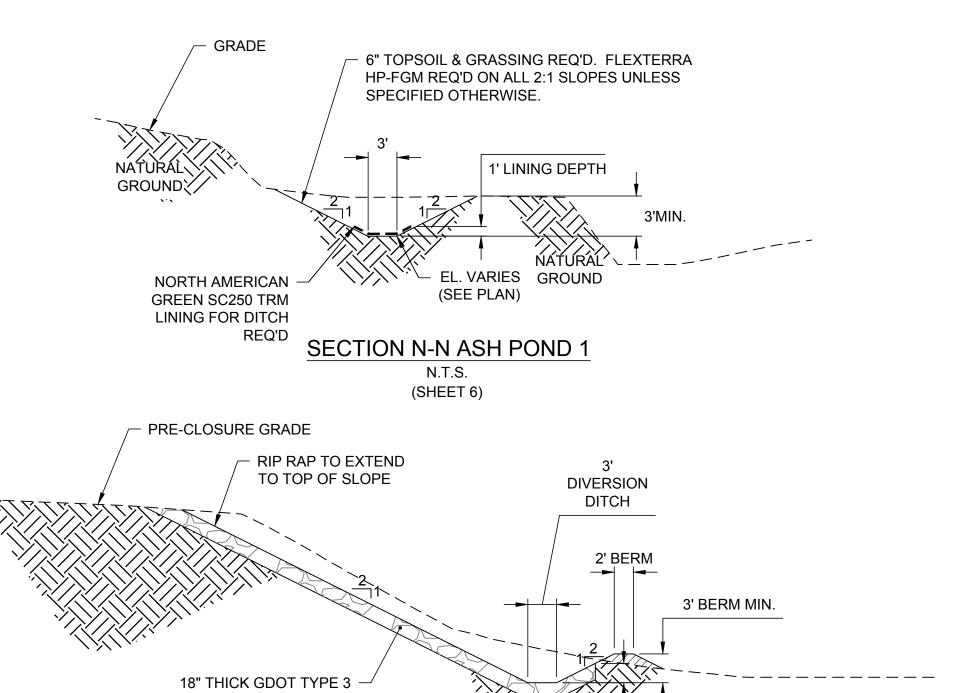
SECTION M-M ASH POND 1 N.T.S. (SHEET 5, 7)



SECTION DD-DD ASH POND 1

N.T.S.

(SHEET 5, 7)



SECTION P-P ASH POND 1

N.T.S.
(SHEET 6)

NOTES

RIP RAP W/ FILTER

FABRIC

SEE DRAWING 1 FOR DRAWING INDEX.

2. THE PRE-CLOSURE ASH LIMITS ARE APPROXIMATE. ANY ASH DISCOVERED OUTSIDE OF FINAL ASH LIMITS SHALL BE EXCAVATED AS PER REMOVAL PROTOCOLS AND REPLACED WITH COMPACTED FILL TO GRADES SHOWN.

2' LINING DEPTH

- 3. TRACKING SURFACE SHALL BE PER GDOT SPEC. 815, CL. A, GRP. I. FOR TRACKING SURFACES WITH ASH SUBGRADE, SEE DETAIL ON SHEET 12.
- 4. VEGETATED SLOPES SHALL REQUIRE 6" MIN. OF TOPSOIL AND APPLICATION OF FLEXTERRA HP-FGM.
- 5. GUARDRAIL IS NOT REQUIRED AT ALL LOCATIONS.
- 6. SOME AREAS OF THE PERIMETER ACCESS ROAD MAY REQUIRE ASPHALT PAVING. FOR THOSE AREAS REFER TO THE HEAVY DUTY ASPHALT DETAIL ON SHEET 12.

CLIENT

GEORGIA POWER COMPANY



PROJECT

PLANT MCDONOUGH - ATKINSON ASH POND 1 CLOSURE

TITLE

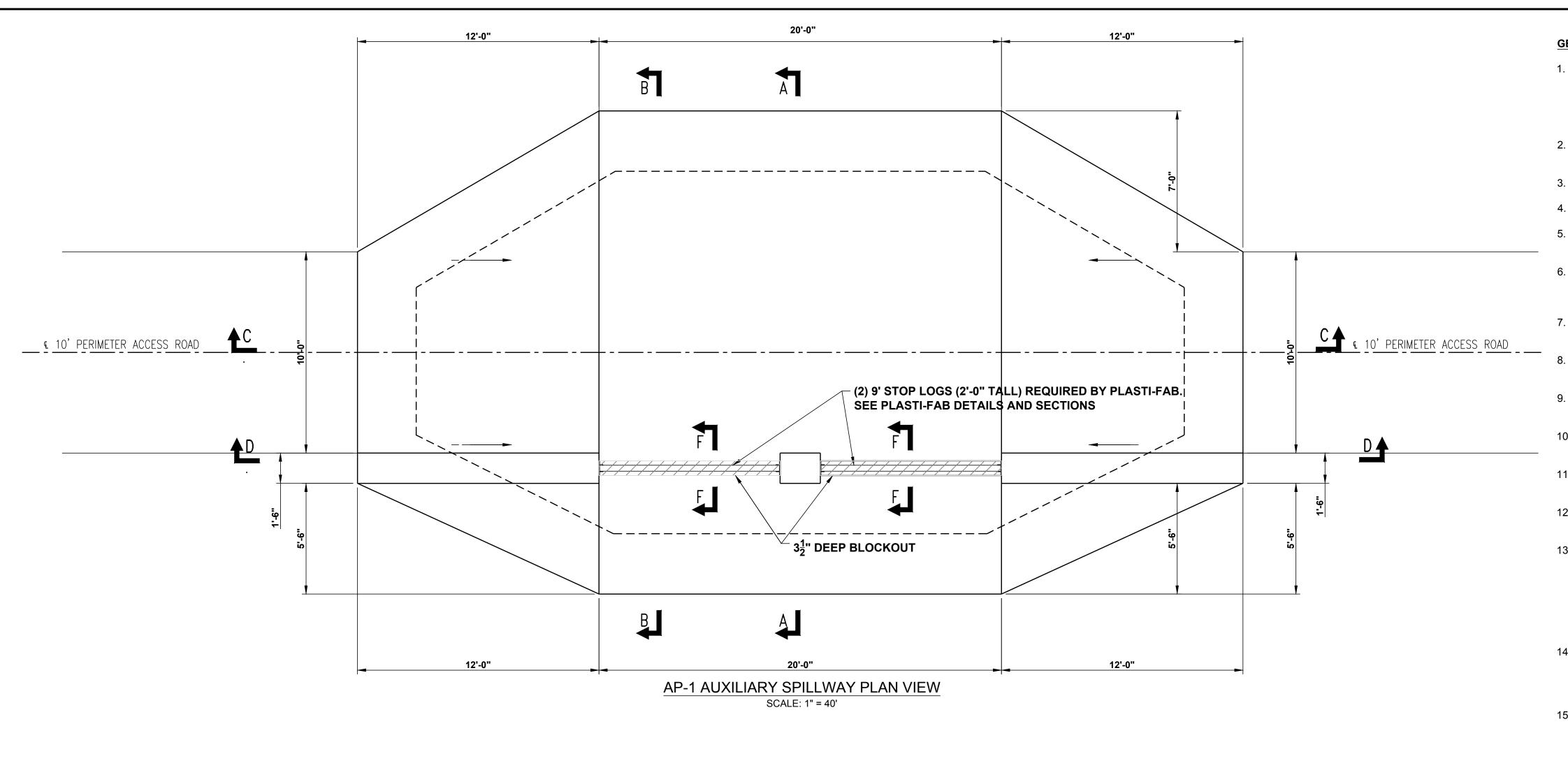
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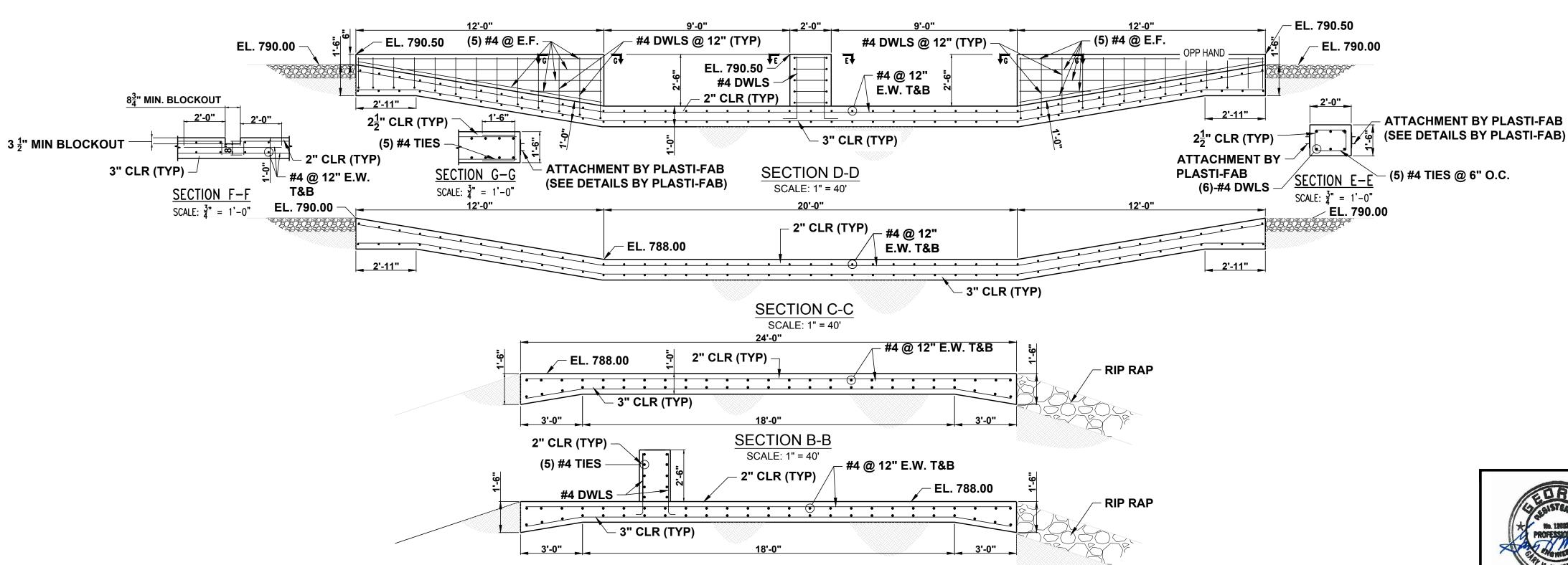


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PROJECT NO. REV. 1777449 0





SECTION A-A SCALE: 1" = 40'

GENERAL NOTES CAST-IN-PLACE CONCRETE

- 1. DESIGN MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE FOLLOWING LATEST STANDARDS UNLESS OTHERWISE MODIFIED ON THE DESIGN DRAWING OR IN THE SPECIFICATIONS: • ACI-318-08 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 - ACI-315 MANUAL OF STANDARD PRACTICES FOR DETAILING REINFORCED CONCRETE STRUCTURES • ACI-347R RECOMMENDED PRACTICE FOR PLACING REINFORCED CONCRETE.
- 2. ALL CAST IN PLACE CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI IN 28
- DAYS UNLESS NOTED.
- 3. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
- 4. CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH A 45 DEGREE 3/4" CHAMFER.
- 5. PROVIDE A MINIMUM COVER OF 3" FOR REINFORCING STL. WHEN THE CONCRETE IS PLACED DIRECTLY AGAINST THE GROUND, UNLESS OTHERWISE NOTED.
- 6. PROVIDE A MINIMUM COVER OF 2" FOR BARS LARGER THAN #5 AND 1 1/2" FOR #5 BARS OR SMALLER IF AFTER REMOVAL OF FORMS THE CONCRETE IS EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND UNLESS OTHERWISE NOTED.
- 7. EMBEDMENT AND SPLICE LENGTHS FOR REINFORCING STL. SHALL CONFORM TO ACI-318-08 UNLESS OTHERWISE NOTED.
- 8. SPLICE TOP BARS AND SIDE BARS AT MID SPAN, AND BOTTOM BARS AT THE SUPPORT, UNLESS OTHERWISE NOTED.
- 9. ALL REINFORCING BAR HOOKS SHOWN ON DRAWINGS SHALL BE ACI STANDARD 90 DEGREE HOOKS UNLESS OTHERWISE NOTED.
- 10. REBAR FABRICATOR SHALL OBTAIN APPROVAL OF HIS DETAIL DRAWINGS BEFORE BEGINNING FABRICATION.
- 11. CONCRETE TOP SURFACE SHALL RECEIVE A BROOM FINISH, PER ACI-301-10, SECTION 5.3.4.2.d, "BROOM FINISH", UNLESS OTHERWISE NOTED.
- 12. THE PLACEMENT TEMPERATURE OF CONCRETE AT THE FORM SHALL BE BETWEEN 40°F AND 90°F. CONCRETE WITH A PLACEMENT TEMPERATURE EXCEEDING 90°F SHALL BE REJECTED.
- 13. WHEN PLACING CONCRETE, IF THE MEAN AMBIENT DAILY TEMPERATURE IS BELOW 40°F THE RECOMMENDATIONS OF ACI 301 AND ACI 306 SHALL BE COMPLIED WITH SO AS TO PREVENT FREEZING OF CONCRETE AND TO PROVIDE THE SPECIFIED COMPRESSIVE STRENGTH AND QUALITIES. ALL CONCRETE PLACED DURING THESE PERIODS SHALL BE AIR-ENTRAINED. ALL EQUIPMENT AND MATERIALS FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING PLACING AND CURING OPERATIONS DURING FREEZING OR NEAR FREEZING WEATHER SHALL BE PROVIDED AS REQUIRED. SALT OR OTHER CHEMICALS TO PREVENT FREEZING SHALL NOT BE ADDED TO CONCRETE.
- 14. IMMEDIATELY AFTER PLACEMENT, CONCRETE SHALL BE PROTECTED FROM HARMFUL EFFECTS SUCH AS SEVERE HEATING OR COOLING, PREMATURE DRYING OUT (INCLUDING BY WIND). LEACHING OUT BY FALLING RAIN OR FLOWING WATER, CHEMICAL ATTACK, OR VIBRATION AND IMPACT WHICH MAY DISRUPT THE CONCRETE OR INTERFERE WITH BOND TO THE REINFORCEMENT.
- 15. CONCRETE SHALL BE MAINTAINED WITH MINIMAL MOISTURE LOSS AT A RELATIVELY CONSTANT TEMPERATURE FOR THE PERIOD OF TIME NECESSARY FOR THE HYDRATION OF THE CEMENT AND PROPER HARDENING OF THE CONCRETE. MOIST CURING SHALL CONSIST OF MAINTAINING ALL SURFACES CONTINUOUSLY (NOT PERIODICALLY) WET BY PONDING, SPRINKLING OR BY KEEPING AN ABSORBANT MAT OR FABRIC CONTINUOUSLY WET. THE WATER FOR CURING SHALL BE CLEAN AND FREE FROM ANY ELEMENTS WHICH WILL CAUSE STAINING OR DISCOLORATION OF THE CONCRETE. THE WATER SHALL BE APPROXIMATELY THE SAME TEMPERATURE AS THE CONCRETE. LENGTH OF MOIST CURING SHALL BE AT LEAST 7 DAYS. TEMPERATURE OF CONCRETE SHALL BE PREVENTED FROM FALLING BELOW 50°F DURING THE CURING PERIOD.
- 16. A MINIMUM OF ONE SET OF THREE CONCRETE TEST CYLINDERS SHALL BE TAKEN FOR EVERY 100 CU YDS. OR ONE SET PER DAY, IF LESS THAN 100 CU YDS. OF CONCRETE ARE PLACED.
- 17. ONE SLUMP TEST SHALL BE TAKEN FOR EACH SET OF TEST CYLINDERS TAKEN.
- 18. ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED CONCRETE. AIR ENTRAINMENT TO BE 3% - 5%, MAXIMUM WATER/CEMENT RATIO 0.5 BY WEIGHT, SLUMP 3-5 INCHES AND FLY ASH 15% - 25%.

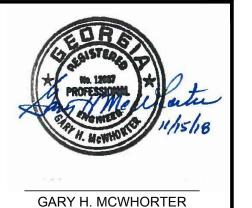
GEORGIA POWER COMPANY



CONSULTANT

PLANT MCDONOUGH - ATKINSON ASH POND 1 CLOSURE

SPILLWAY SECTIONS AND DETAILS



GEORGIA PROFESSIONAL ENGINEER

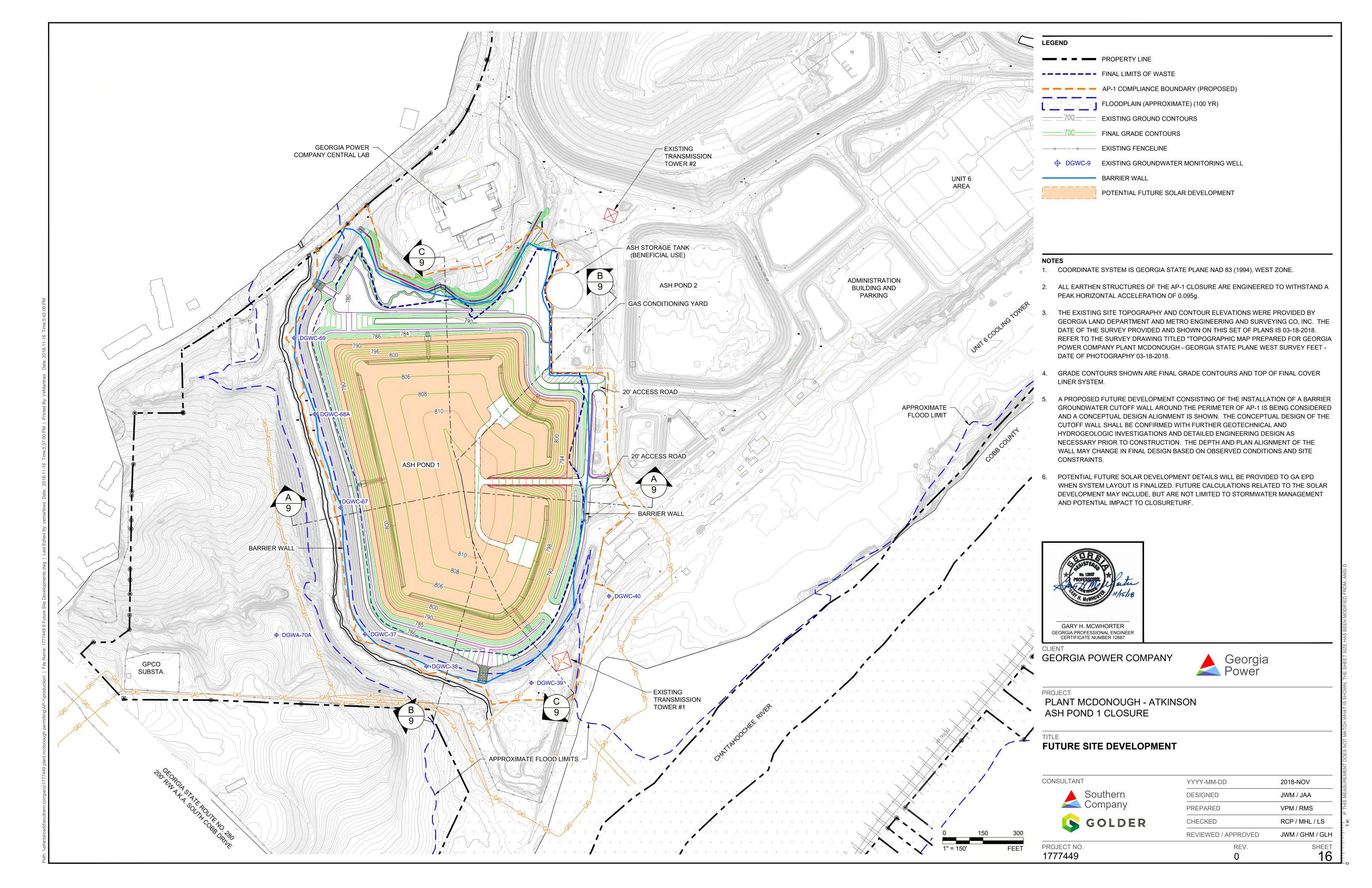
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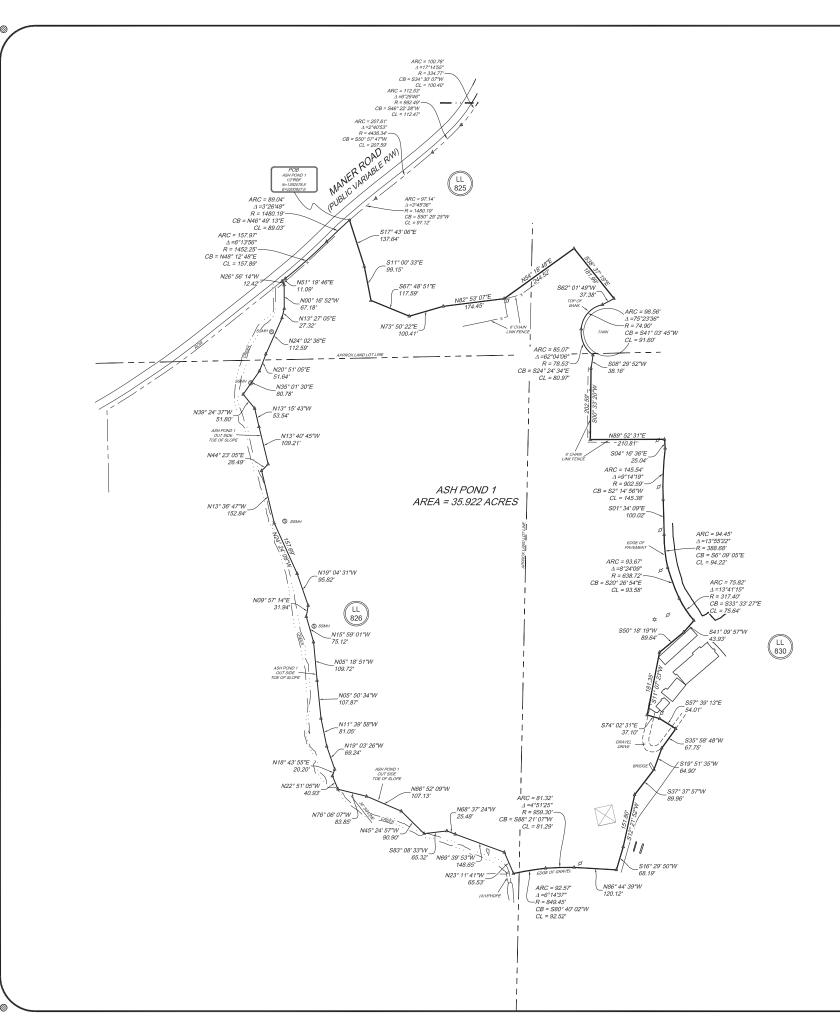
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DESIGNED	JWM / JAA
PREPARED	VPM / RMS
CHECKED	RCP / MHL / LS
REVIEWED / APPROVED	JWM / GHM / GLH
REV.	SHEET

15

REV. **PROJECT NO** 1777449





All of that tract or parcel of land lying and being in Land Lots 825, 826, 830 and 831, 17th District, Cobb County, Georgia and being more particularly described as follows:

Said Ash Pond 1 containing 35,922 acres.





SURVEYORS NOTES

CLOSURE STATEMENT

EQUIPMENT AND FIELD SURVEY STATEMENT

- LINEAR MEASUREMENTS AND ANGULAR MEASUREMENT TORA 1105 PLUS.
 FIELD SURVEY COMPLETED ON 02-20-18.

HORIZONTAL & VERTICAL DATUM

HORIZONTAL AND VERTICAL DATUM WAS ESTABLISHED USING RTK GPS METHODS WITH CORRECTIONS FROM THE 6GPS NETWORK HORIZONTAL DATUM IS GEORGA STATE PLANE, WEST ZONE, NAD83 AND THE VERTICAL DATUM IS NAVD88.

<u>UTILITIES</u>

STREAMS, BODIES OF WATER, & WETLANDS

ARCHEOLOGICAL & HISTORIC

LINLESS SHOWN HEREON, NO CEMETERIES, ARCHEOLOGICAL, OR ARCHITECTURAL LANDMANKS ARE KNOWN TO EXIST ON THIS SITE. HOWEVER, SUNEYOY THE NOT EXCLANTED THE SITE OR CONSULTED WITH A QUALIFED PROFESSIONAL IN THIS FIELD FOR ABSOLUTE CONFORMATION.

REFERENCES

P.O.B. POINT OF BEGINNING
ROW RIGHT-OF-WAY
CIT CRIMP TOP PIPE FOUND
OTT OPEN TOP PIPE FOUND
AREA FEARA FOUND
LICENT TOP PIPE FOUND
AREA FOUND
LICENT FOLE
OTHER POLE
SANITARY SEWER MANHOLE

