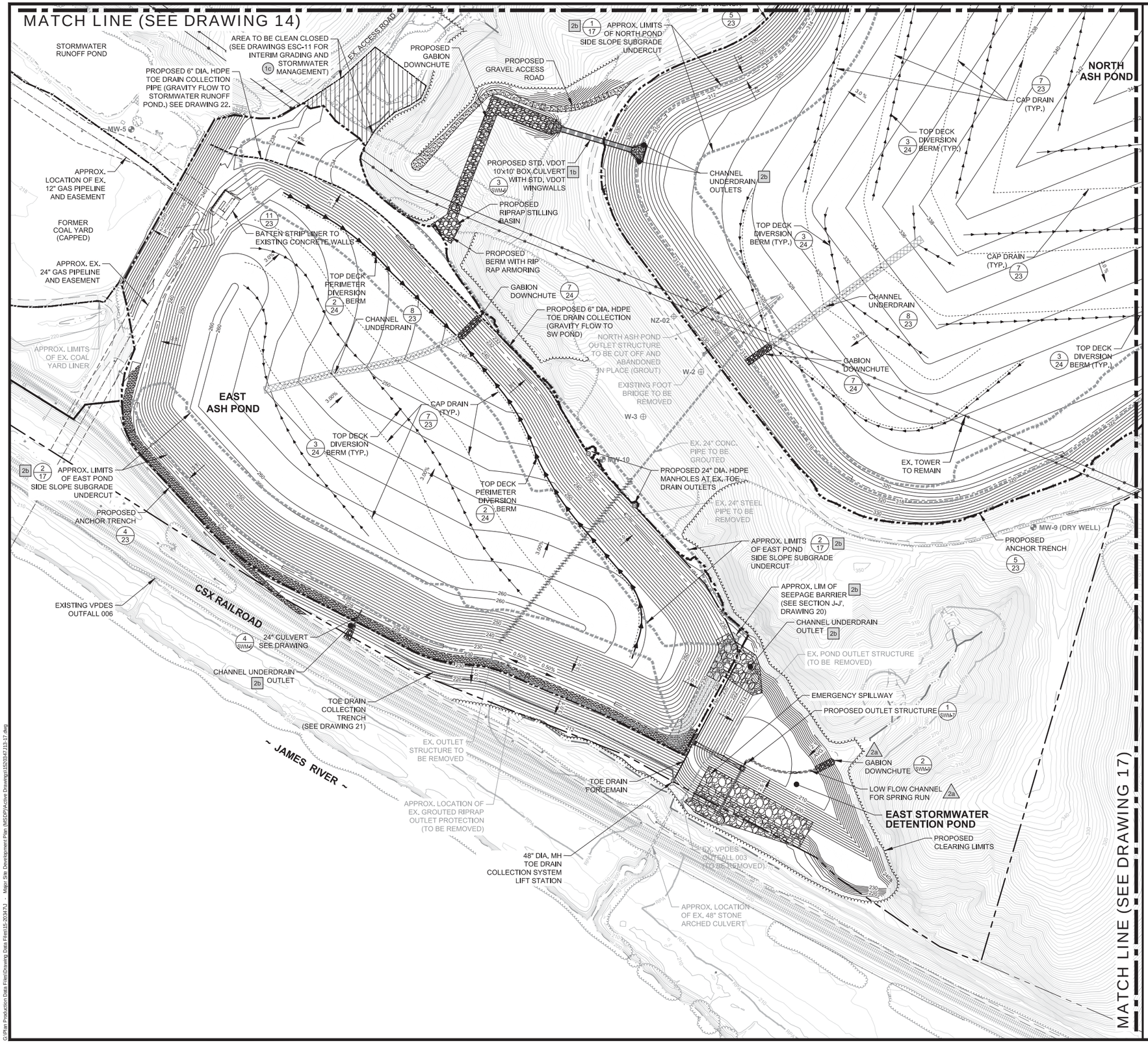


LEGEND

- DOMINION PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- LIMITS OF BATHYMETRIC SURVEYS
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS)
- EXISTING BATHYMETRIC SURFACE CONTOURS (2' INTERVALS)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING RAILROAD
- WETLANDS
- CREEK CENTERLINE
- APPROXIMATE EDGE OF SURFACE WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING OVERHEAD ELECTRIC LINE
- MW-8 EXISTING MONITORING WELL LOCATION AND IDENTIFICATION
- MH EXISTING MANHOLE
- PROPOSED ANCHOR TRENCH LOCATION
- PROPOSED LIMITS OF CLEARING
- PROPOSED CAP DRAIN LOCATION
- PROPOSED SIDESLOPE DIVERSION BERM
- PROPOSED TOP DECK PERIMETER DIVERSION BERM
- PROPOSED TOP DECK DIVERSION BERM

NOTES:

1. PROPOSED ANCHOR TRENCH LOCATION IS BASED ON AN APPROXIMATE LOCATION OF THE EXISTING CCR MATERIAL, LIMITS TO BE FIELD VERIFIED AND ARE SUBJECT TO CHANGE.

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1a	3/16/16	JRD	REV. PER DEQ SWM & SOLID WASTE COMMENTS	KLL	ATN	JRD
1b	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

1a - DENOTES REVISIONS PER FLUVANNA COUNTY E&S COMMENTS
1b - DENOTES REVISION PER DEQ STORMWATER MANAGEMENT COMMENTS
1c - DENOTES ADDITIONAL PLAN REVISION
2a - DENOTES REVISIONS PER DEQ STORMWATER MANAGEMENT COMMENTS
2b - DENOTES REVISIONS PER DEQ SOLID WASTE COMMENTS

Golder Associates

COMMONWEALTH OF VIRGINIA
JAMES J. STANCESCO
Lic. No. 052760
3-14-16
PROFESSIONAL ENGINEER

PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

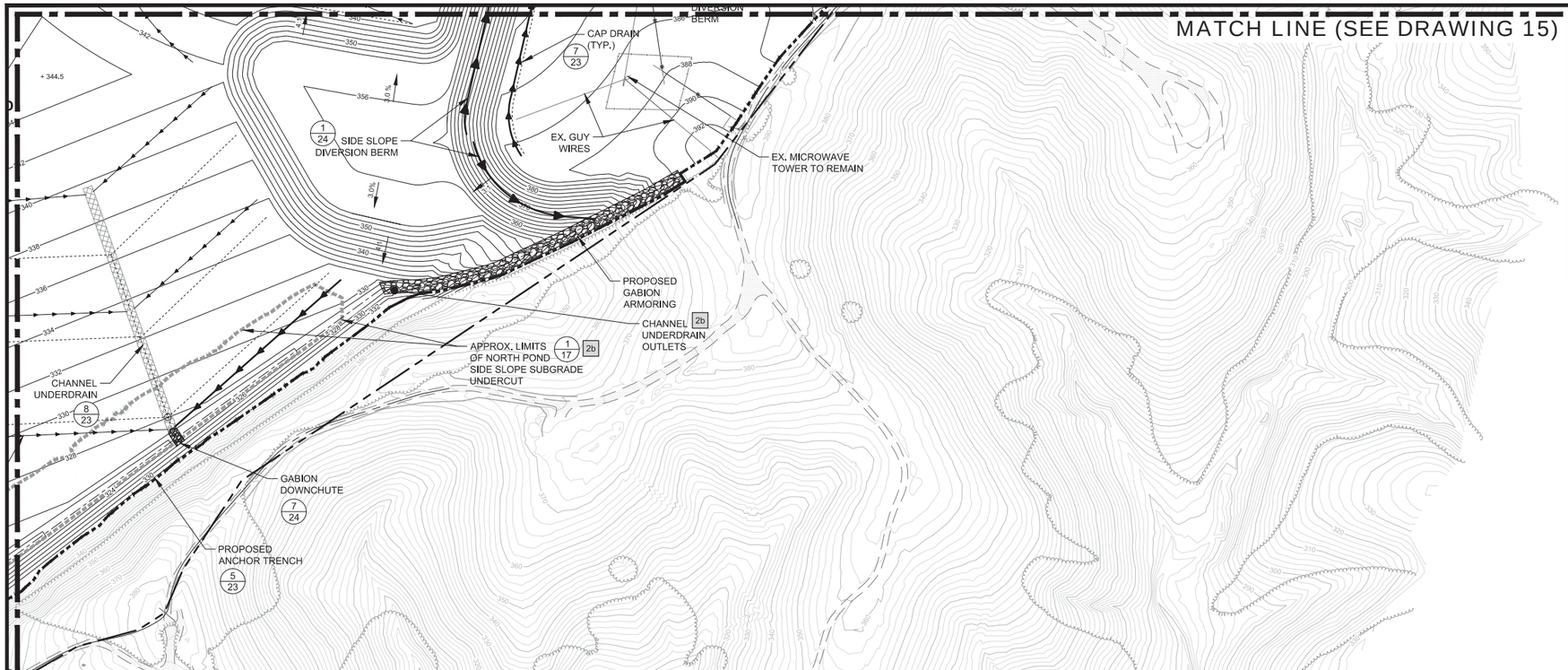
TITLE
FINAL GRADING PLAN
(4 OF 5)

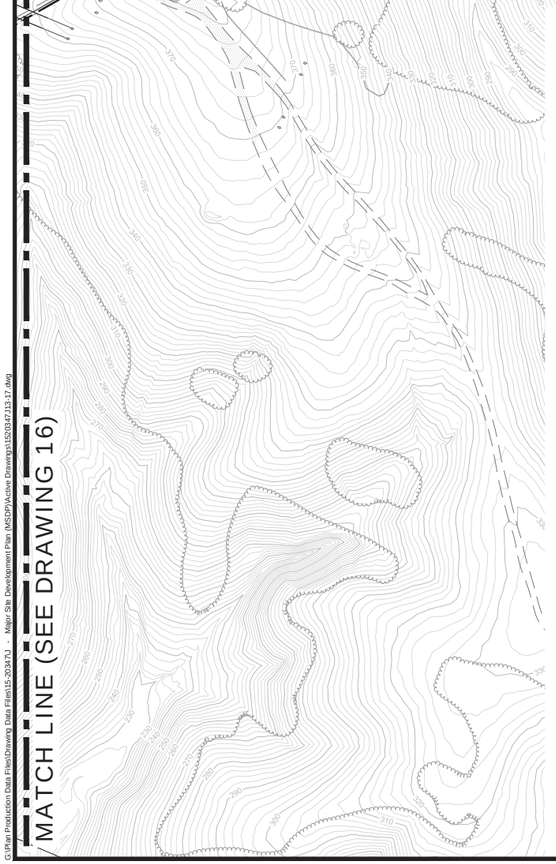
PROJECT No.		15-20347
FILE No.		1520347J13-17
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING 16

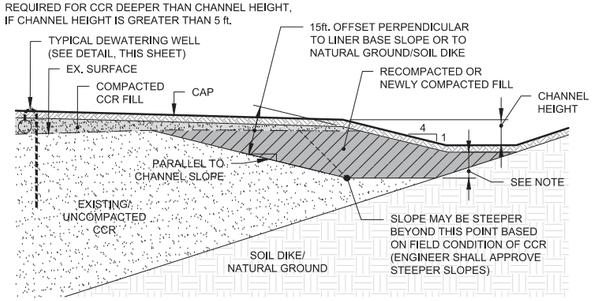
SCALE 100 0 100 200 FEET

G:\Plan Production Data Files\Drawing Data Files\15-20347J13 - Major Site Development\Plan (MSDP)\Active Drawings\1520347J13-17.dwg



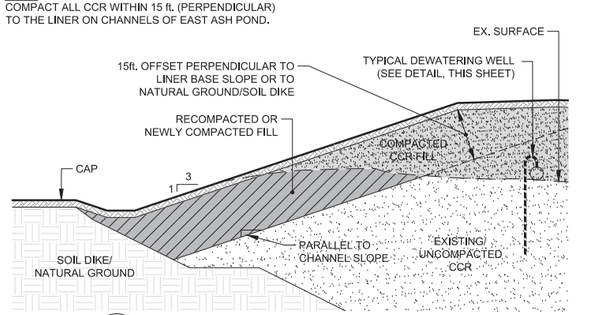


NOTE:
RECOMPACTION/REPLACEMENT OF CCR REQUIRED AT LEAST 5 ft. BELOW CHANNEL BOTTOM, BUT NOT REQUIRED FOR CCR DEEPER THAN CHANNEL HEIGHT, IF CHANNEL HEIGHT IS GREATER THAN 5 ft.

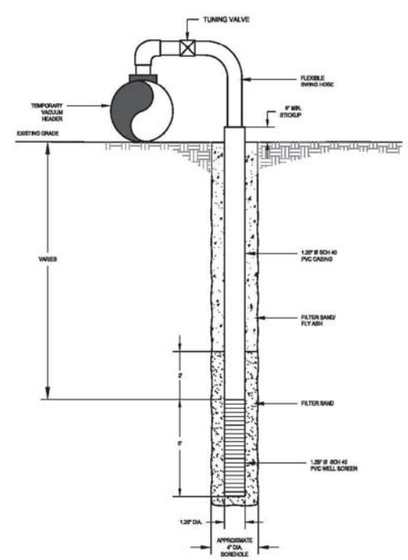


NOT TO SCALE 1/17 2b NORTH POND SIDE SLOPE SUBGRADE UNDERCUT (TYP.)

NOTE:
COMPACT ALL CCR WITHIN 15 ft. (PERPENDICULAR) TO THE LINER ON CHANNELS OF EAST ASH POND.



NOT TO SCALE 2/17 2b EAST POND SIDE SLOPE SUBGRADE UNDERCUT (TYP.)



NOT TO SCALE 3/17 2b TYPICAL DEWATERING WELL

LEGEND

- DOMINION PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- LIMITS OF BATHYMETRIC SURVEYS
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS)
- EXISTING BATHYMETRIC SURFACE CONTOURS (2' INTERVALS)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING RAILROAD
- WETLANDS
- CREEK CENTERLINE
- APPROXIMATE EDGE OF SURFACE WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING OVERHEAD ELECTRIC LINE
- MW-8 — EXISTING MONITORING WELL LOCATION AND IDENTIFICATION
- MH — EXISTING MANHOLE
- PROPOSED ANCHOR TRENCH LOCATION
- PROPOSED LIMITS OF CLEARING
- PROPOSED CAP DRAIN LOCATION
- PROPOSED SIDESLOPE DIVERSION BERM
- PROPOSED TOP DECK PERIMETER DIVERSION BERM
- PROPOSED TOP DECK DIVERSION BERM

NOTES:

1. PROPOSED ANCHOR TRENCH LOCATION IS BASED ON AN APPROXIMATE LOCATION OF THE EXISTING CCR MATERIAL, LIMITS TO BE FIELD VERIFIED AND ARE SUBJECT TO CHANGE.

2b - DENOTES REVISIONS PER DEQ SOLID WASTE COMMENTS

100 0 100 200
SCALE FEET

Golder Associates

REV	DATE	DES		REVISION DESCRIPTION	CADD	CHK	RVW
1	3/16/16	JRD	REV. PER DEQ SWM & SOLID WASTE COMMENTS	KLL	ATN	ATN	JRD
2	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	ATN	JRD

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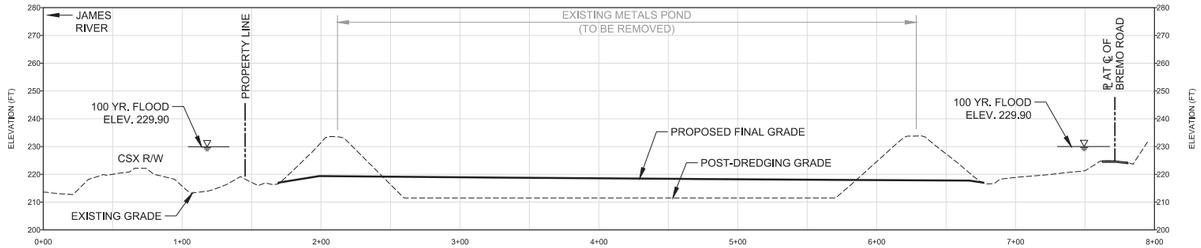
PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
FINAL GRADING PLAN (5 OF 5)

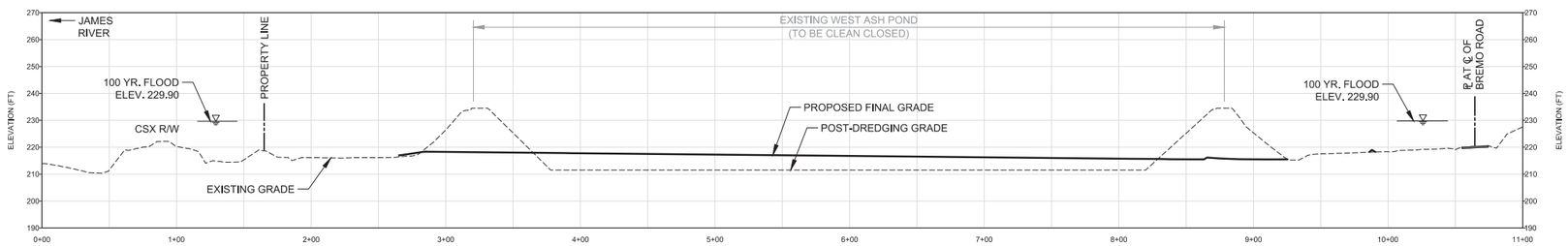
PROJECT No.		15-20347
FILE No.		1520347J13-17
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING 17

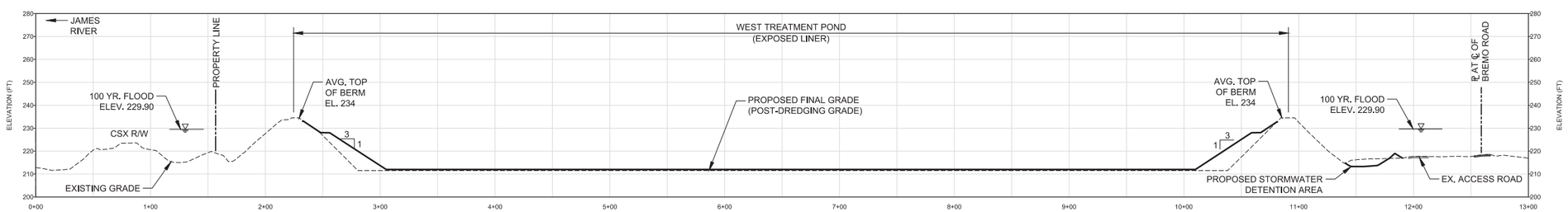
G:\Proj Production Data Files\Drawing Data Files\15-20347J - Major Site Development Plan (MSDP)\Active Drawings\1520347J13-17.dwg



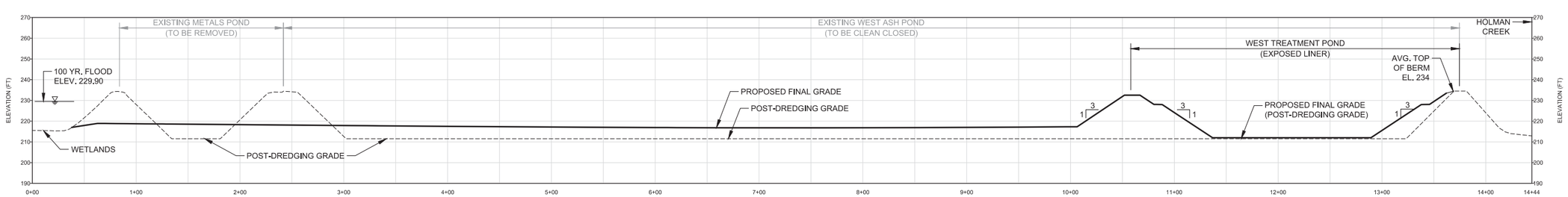
SECTION WP A - A'



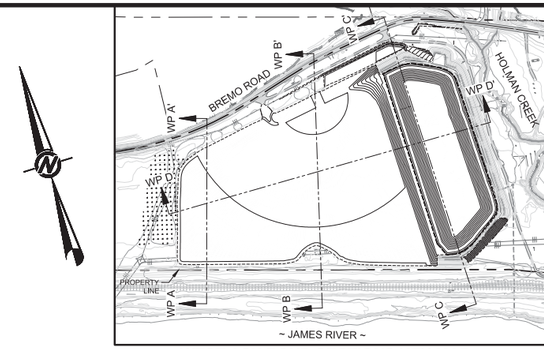
SECTION WP B - B'



SECTION WP C - C'



SECTION WP D - D'



WEST ASH POND SECTIONS KEY MAP
1" = 300'

Golder Associates

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

COMMONWEALTH OF VIRGINIA
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1-20-16
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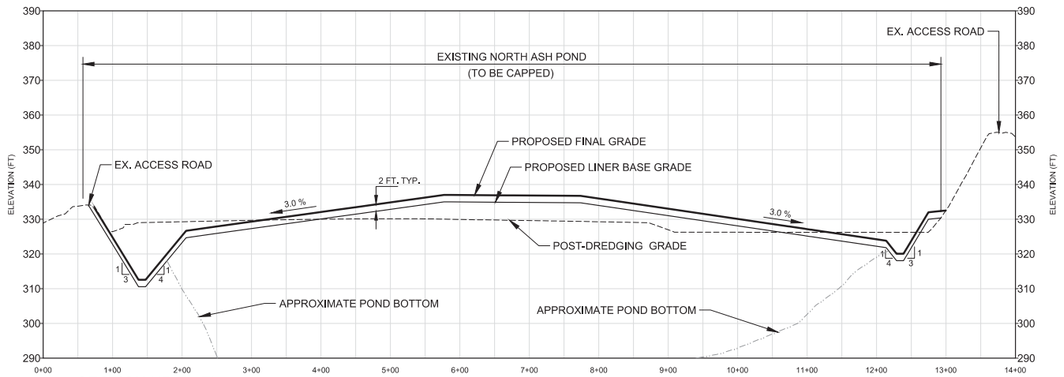
PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
CROSS SECTIONS (WEST ASH POND)

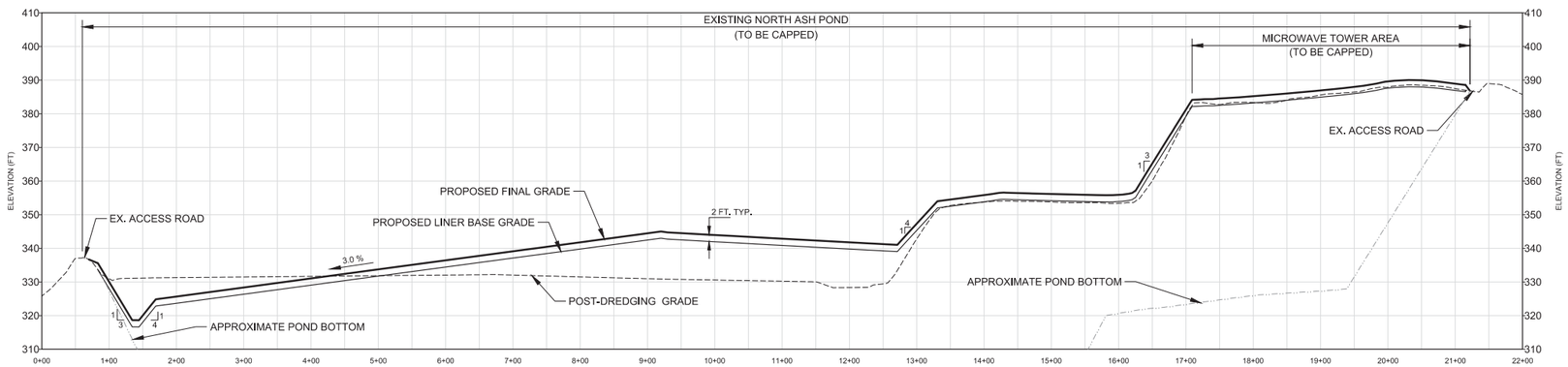
PROJECT No.		15-20347
FILE No.		1520347J18-20
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING 18

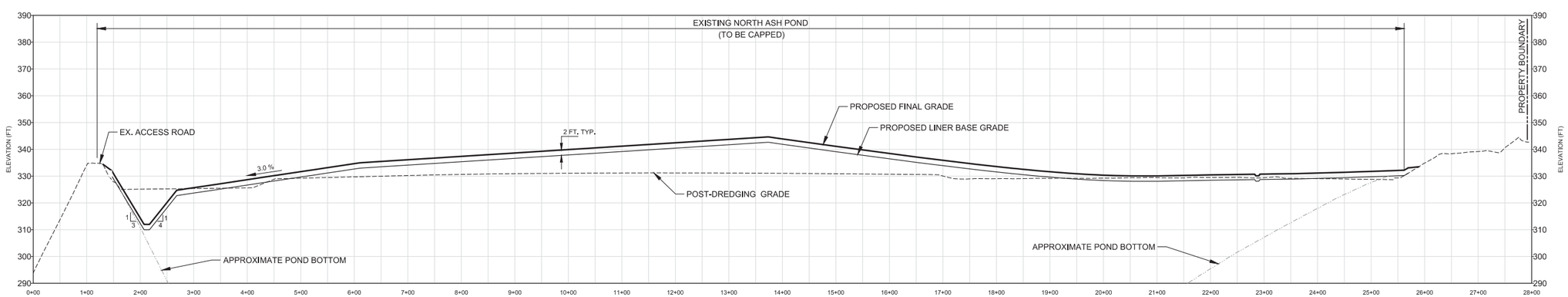
C:\Plan Production Data Files\Drawing Data Files\15-20347J3 - Major Site Development Plan (MSDP)\Active Drawings\1520347J18-20.dwg



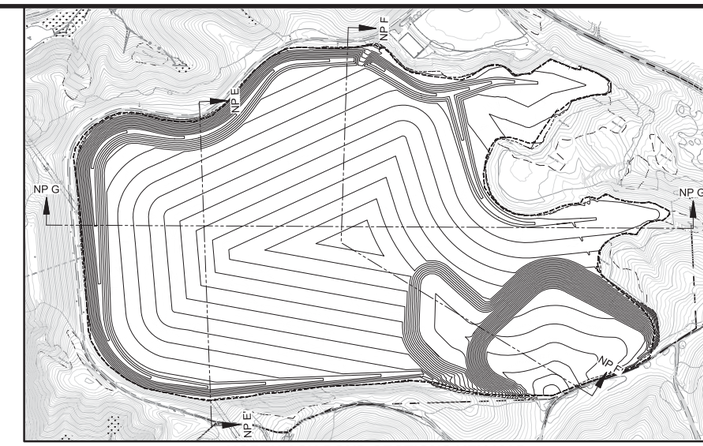
SECTION NP E - E'



SECTION NP F - F'



SECTION NP G - G'



NORTH ASH POND SECTIONS KEY MAP
NOT TO SCALE

SCALE FEET 20 0 20

SCALE FEET 100 0 100

C:\Ffan Production Data Files\Drawing Data Files\15-20347\3 - Major Site Development Plan (MSDP)\Active Drawings\1520347J18-20.dwg

Golder Associates

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

COMMONWEALTH OF VIRGINIA
JAMES R. DEFRANCISCO
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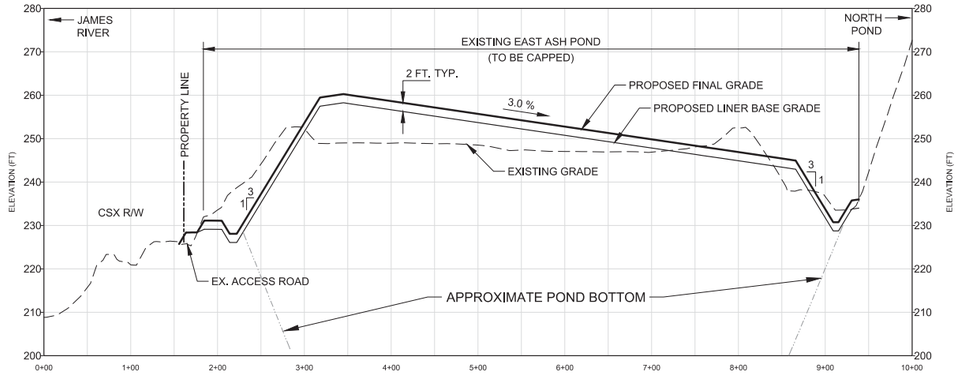
1-20-16
PROFESSIONAL ENGINEER

PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

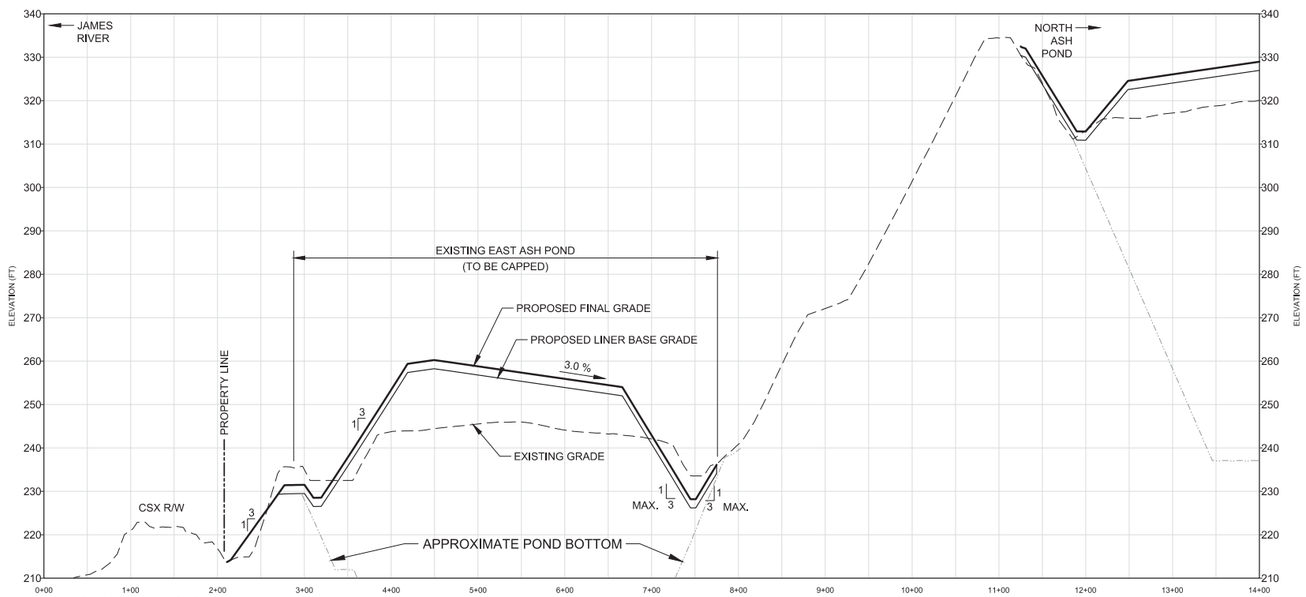
TITLE
CROSS SECTIONS
(NORTH ASH POND)

PROJECT No.		15-20347
FILE No.		1520347J18-20
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

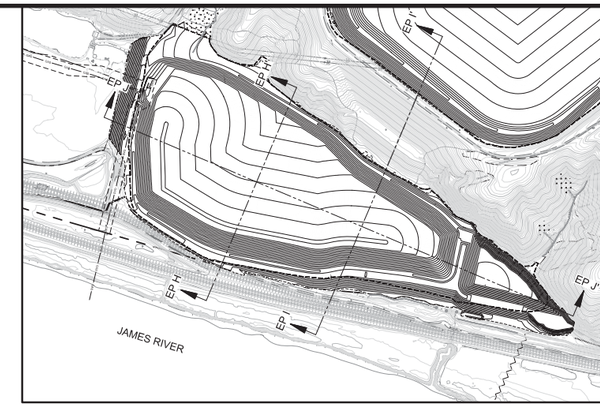
DRAWING 19



SECTION EP H - H'



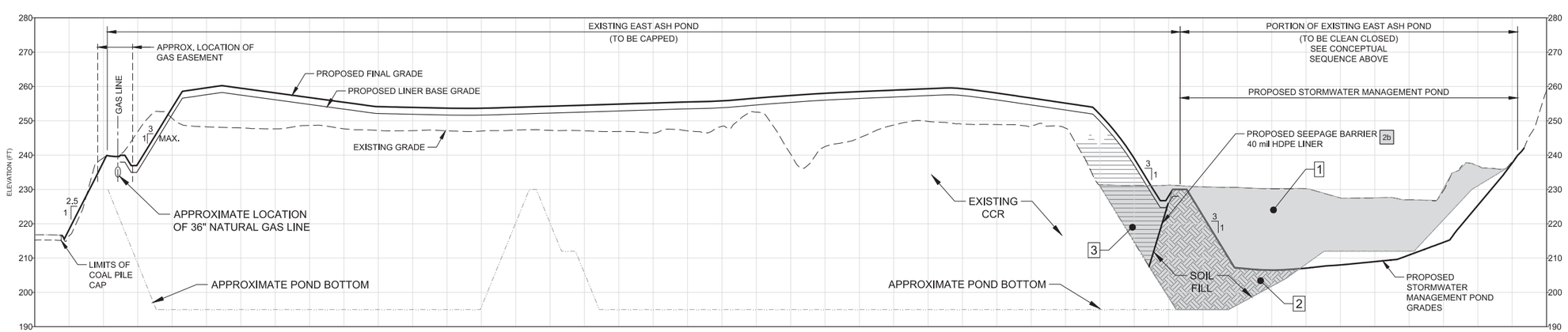
SECTION EP I - I'



EAST ASH POND SECTIONS KEY MAP
1" = 300'

CONCEPTUAL SEQUENCE FOR EAST POND PARTIAL CLEAN CLOSURE (1c)

1. RELOCATE EXISTING CCR TO WESTERN PORTION OF EAST POND AND CERTIFY PORTION AS CLEAN CLOSED
2. CUT/FILL GRADES AND IMPORT SOIL FILL FOR NEW DIKE
3. BACKFILL WITH CCR TO LINER BASE GRADES



SECTION EP J - J' (1c)

SCALE 16 0 16 FEET

SCALE 80 0 80 FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	3/16/16	JRD	REV. PER DEQ SWM & SOLID WASTE COMMENTS	KLL	ATN	JRD
2	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

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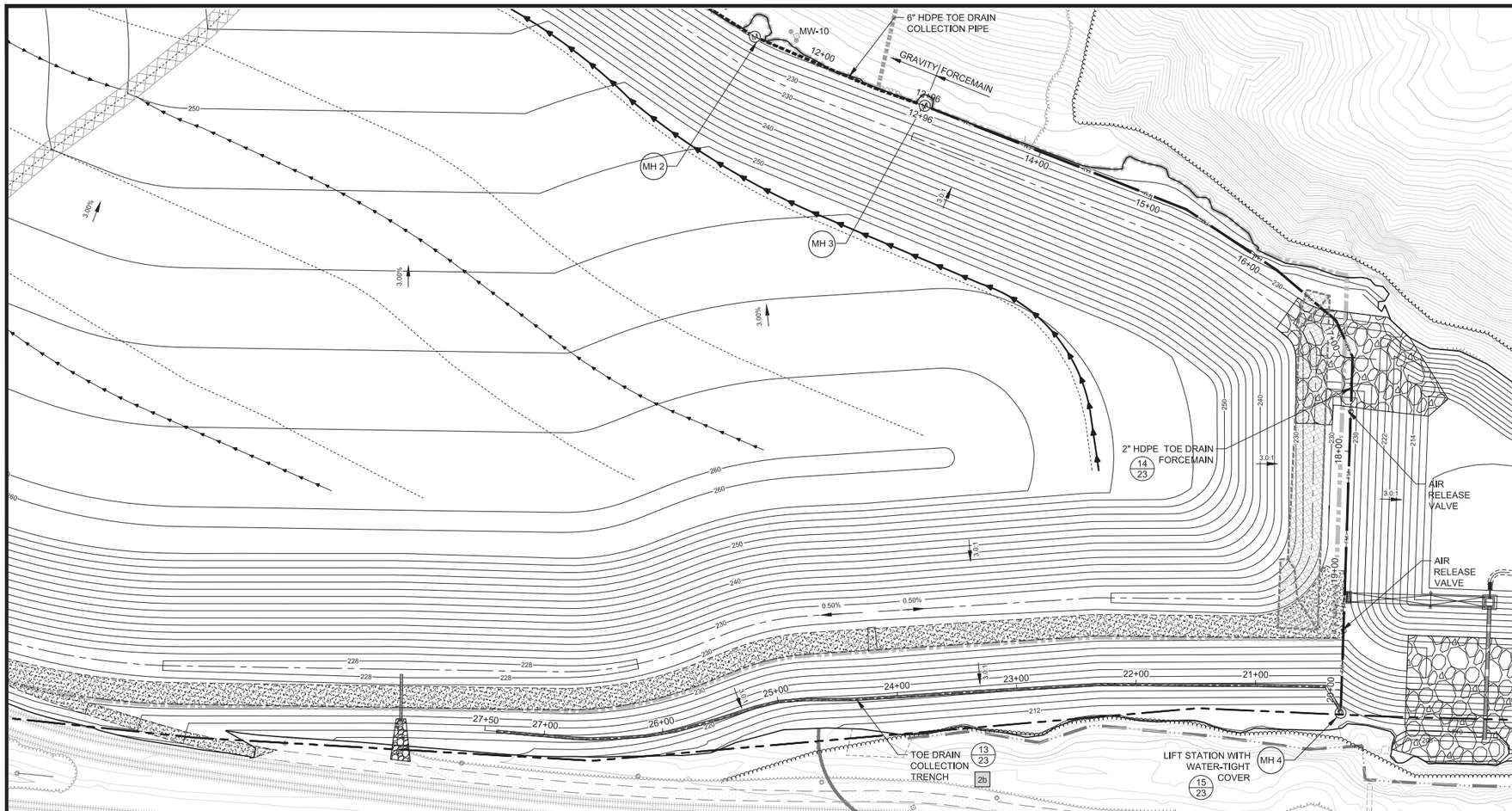
PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
CROSS SECTIONS (EAST ASH POND)

PROJECT No.		15-20347
FILE No.		1520347J18-20
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING 20

G:\Plan Production Data Files\Drawing Data Files\15-20347\3 - Major Site Development Plan (MSDP)\Active Drawings\1520347J18-20.dwg

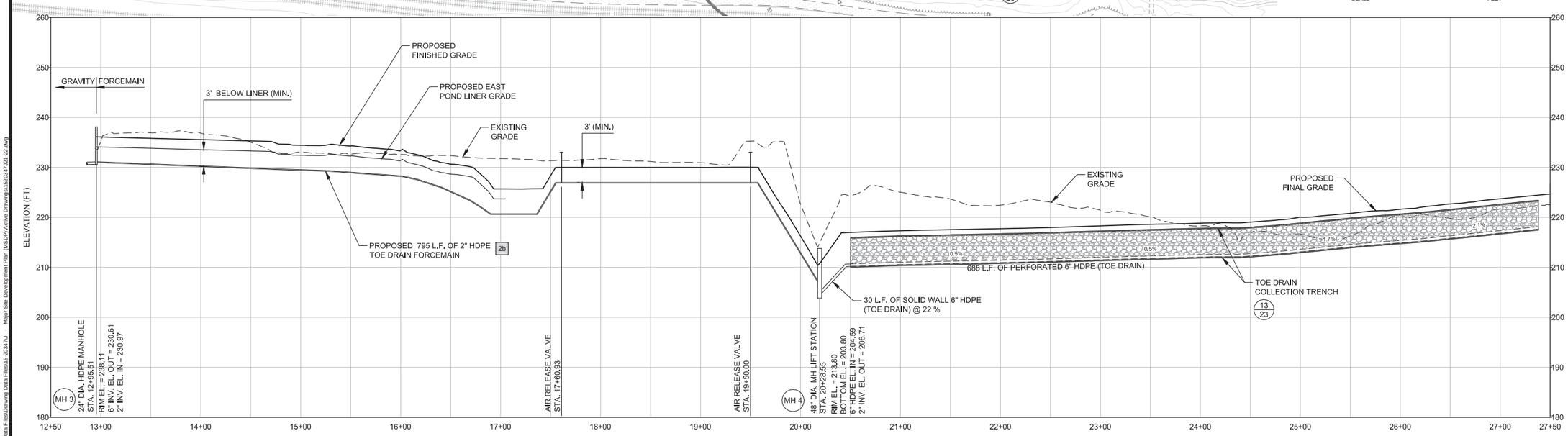


LEGEND

- DOMINION PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- LIMITS OF BATHYMETRIC SURVEYS
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS)
- EXISTING BATHYMETRIC SURFACE CONTOURS (2' INTERVALS)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING RAILROAD
- WETLANDS
- CREEK CENTERLINE
- APPROXIMATE EDGE OF SURFACE WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING OVERHEAD ELECTRIC LINE
- PROPOSED ANCHOR TRENCH LOCATION
- PROPOSED LIMITS OF CLEARING
- PROPOSED CAP DRAIN LOCATION
- PROPOSED SIDESLOPE DIVERSION BERM
- PROPOSED TOP DECK PERIMETER DIVERSION BERM

2b - DENOTES REVISIONS PER DEQ SOLID WASTE COMMENTS

SCALE 50 0 50 100 FEET



EAST ASH POND TOE DRAIN FORCEMAIN PROFILE 1c 2b

Golder Associates

REV.	DATE	DES.	REVISION DESCRIPTION	CADD	CHK	RVW
1	3/16/16	JRD	REV. PER DEQ SWM & SOLID WASTE COMMENTS	KLL	ATN	JRD
2	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

COMMONWEALTH OF VIRGINIA
JAMES T. STRANGIOCO
Lic. No. 052760
3-14-16
PROFESSIONAL ENGINEER

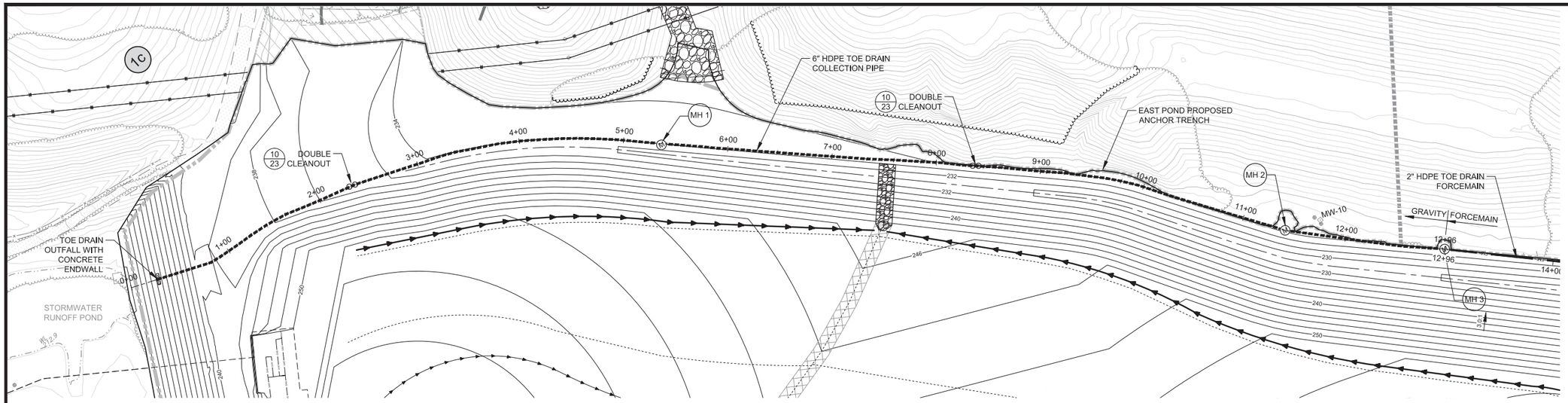
PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

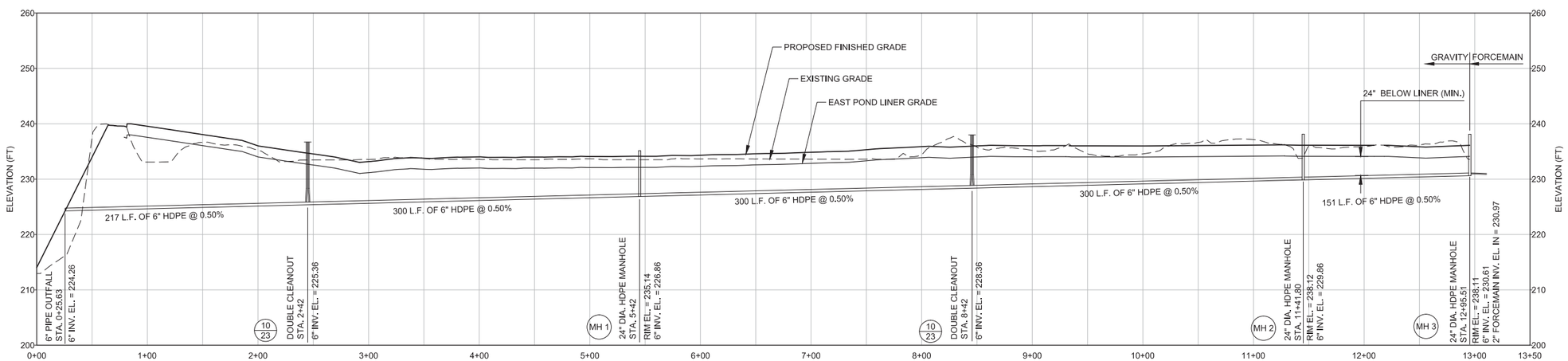
TITLE
EAST ASH POND TOE DRAIN COLLECTION SYSTEM

PROJECT No.		15-20347
FILE No.		1520347J21-22
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING 21

G:\Plan Production Data Files\Drawing Data Files\15-20347\3 - Major Site Development Plan (MSDP)\Active Drawings\1520347J21-22.dwg





TOE DRAIN COLLECTION PIPE 2b
(NORTH AND EAST POND TOE DRAINS)

NOTE:
EXISTING NORTH POND TOE DRAINS TO BE CONNECTED TO TOE DRAIN COLLECTION PIPE AT MANHOLES 2 AND 3 (MH 2, MH 3)

LEGEND

- DOMINION PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- LIMITS OF BATHYMETRIC SURVEYS
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS)
- EXISTING BATHYMETRIC SURFACE CONTOURS (2' INTERVALS)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
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- WETLANDS
- CREEK CENTERLINE
- APPROXIMATE EDGE OF SURFACE WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING OVERHEAD ELECTRIC LINE
- PROPOSED ANCHOR TRENCH LOCATION
- PROPOSED LIMITS OF CLEARING
- PROPOSED CAP DRAIN LOCATION
- PROPOSED SIDESLOPE DIVERSION BERM
- 2b - DENOTES REVISIONS PER DEQ SOLID WASTE COMMENTS

SCALE 50 0 50 100 FEET

Golder Associates

REV	DATE	DES.	REVISION DESCRIPTION	CADD	CHK	RVW
2	3/16/16	JRD	REV. PER DEQ SWM & SOLID WASTE COMMENTS	KLL	ATN	JRD
1	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

COMMONWEALTH OF VIRGINIA
JAMES R. FRANCISCO
Lic. No. 052760
3-16-16
PROFESSIONAL ENGINEER

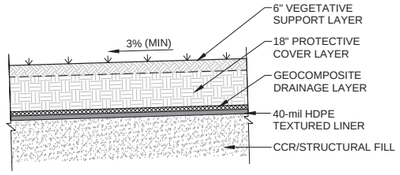
PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
NORTH ASH POND TOE DRAIN COLLECTION SYSTEM

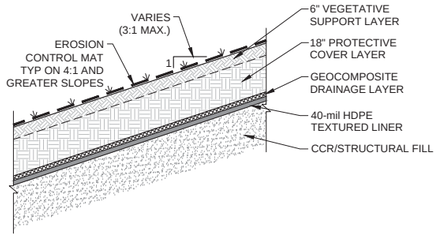
PROJECT No.		15-20347
FILE No.		1520347J21-22
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING 22

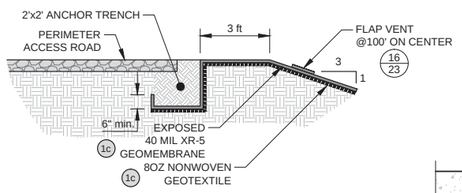
G:\Plan Production Data Files\Drawing Data Files\15-20347J - Major Site Development Plan (NSD)\Active Drawings\1520347J21-22.dwg



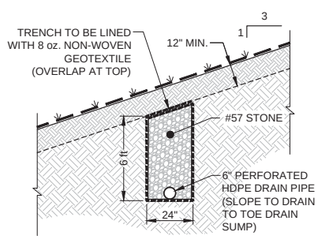
1/23 TOP DECK FINAL COVER SYSTEM DETAIL
NOT TO SCALE



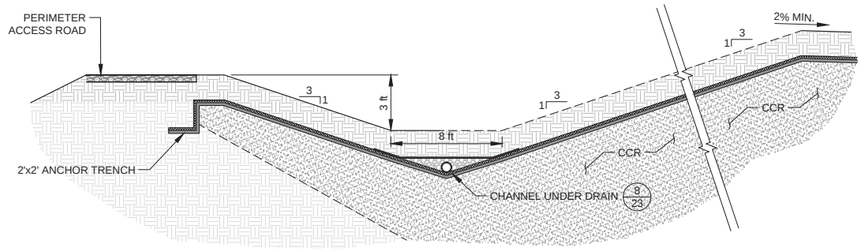
2/23 SIDE SLOPE FINAL COVER SYSTEM DETAIL
NOT TO SCALE



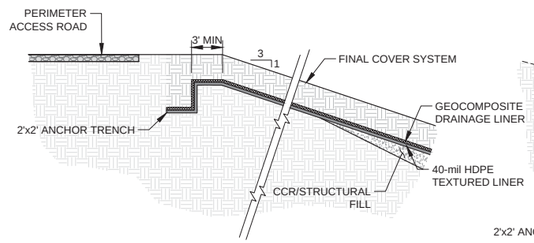
3/23 WEST TREATMENT POND ANCHOR TRENCH
NOT TO SCALE



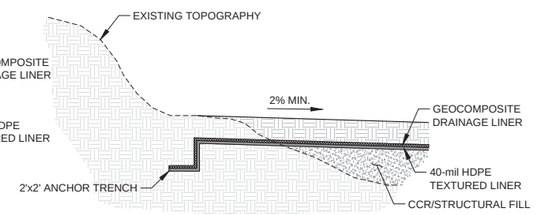
13/23 EAST ASH POND TOE DRAIN
NOT TO SCALE



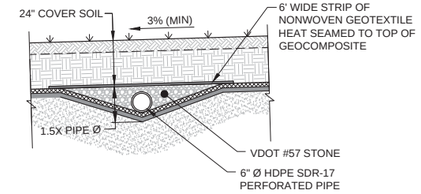
4/23 EAST ASH POND ANCHOR TRENCH AT ACCESS ROAD
NOT TO SCALE



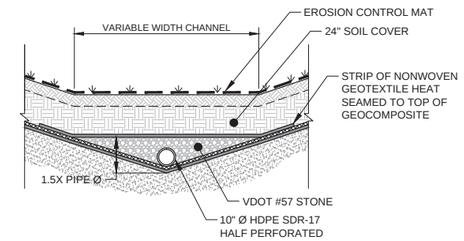
5/23 ANCHOR TRENCH AT TOP OF BANK
NOT TO SCALE



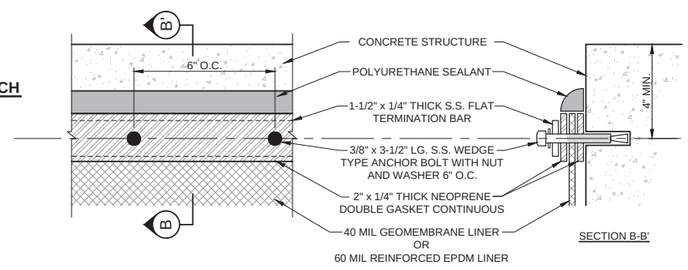
6/23 ANCHOR TRENCH AT TOP OF SLOPE
NOT TO SCALE



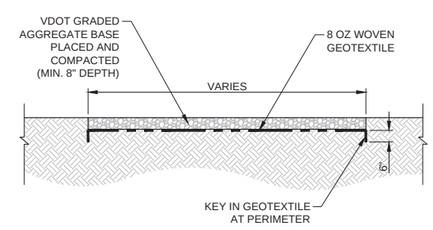
7/23 CAP DRAIN DETAIL
NOT TO SCALE



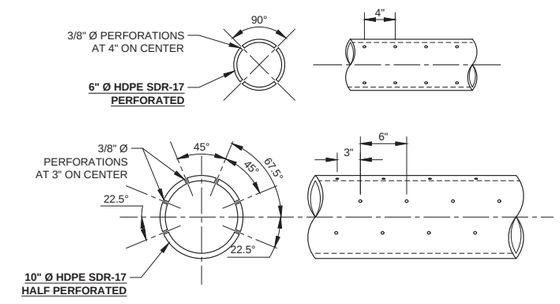
8/23 CHANNEL UNDER DRAIN
NOT TO SCALE



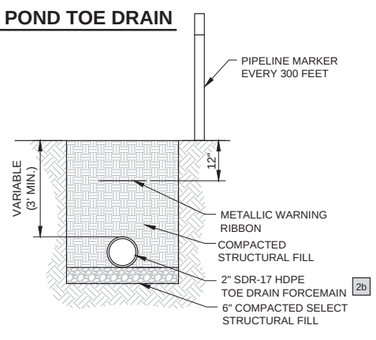
11/23 BATTEN STRIP DETAIL
NOT TO SCALE



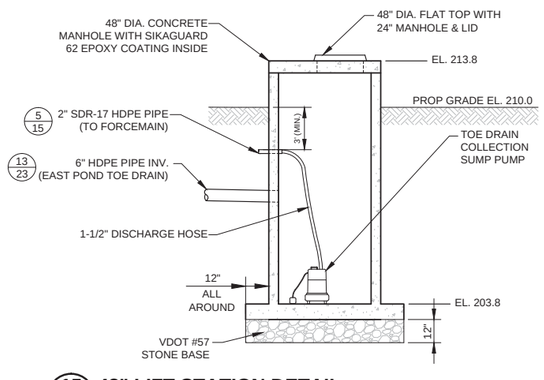
12/23 ACCESS ROAD DETAIL
NOT TO SCALE



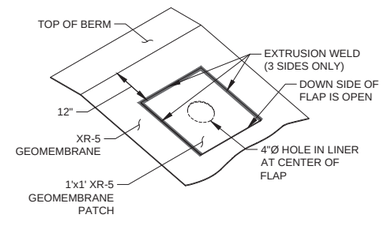
9/23 PIPE PERFORATION DETAIL
NOT TO SCALE



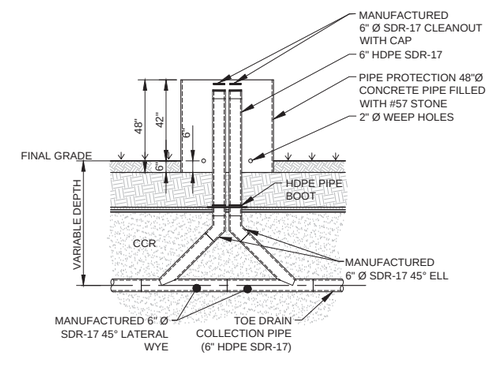
14/23 TOE DRAIN FORCEMAIN DETAIL
NOT TO SCALE



15/23 48" LIFT STATION DETAIL
NOT TO SCALE



1c **16/23 FLAP VENT**
NOT TO SCALE



10/23 DOUBLE CLEANOUT
NOT TO SCALE

Golder Associates

REV.	DATE	DES.	REVISION DESCRIPTION	CADD	CHK	RVW
1	3/16/16	JRD	REV. PER DEQ SWM & SOLID WASTE COMMENTS	KLL	ATN	JRD
2	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

COMMONWEALTH OF VIRGINIA — JAMES J. FRANCISCO — Lic. No. 052760 — 3-14-16 — PROFESSIONAL ENGINEER

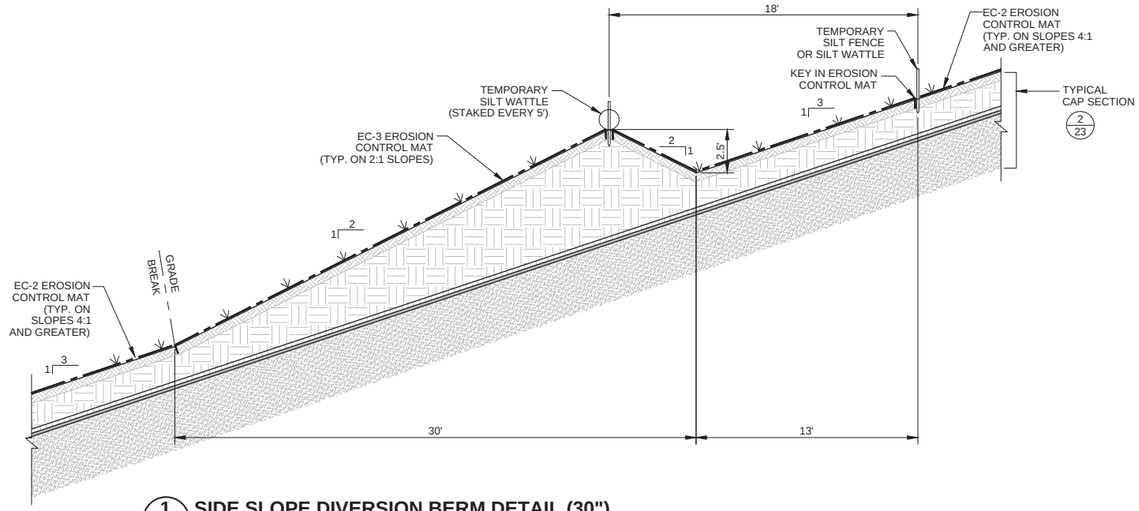
PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
MISCELLANEOUS CONSTRUCTION DETAILS (1 OF 2)

PROJECT No.		15-20347
FILE No.		1520347J23-24
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	09/21/15
CADD	ATN	09/21/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

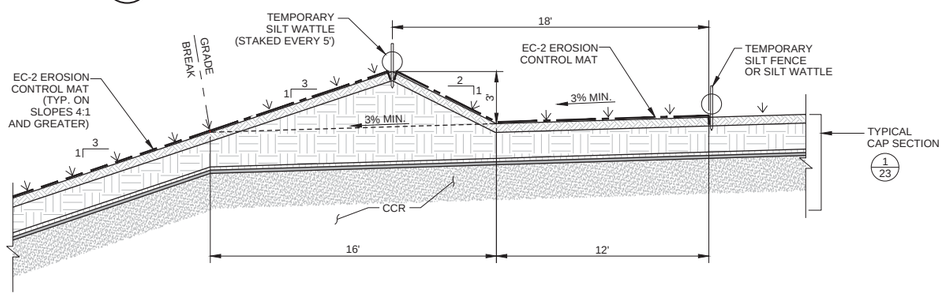
DRAWING 23

G:\Plan Production Data Files\Drawing Data Files\15-20347\J - Major Site Development\Plan (NS\PP)\Active Drawings\1520347J23-24.dwg



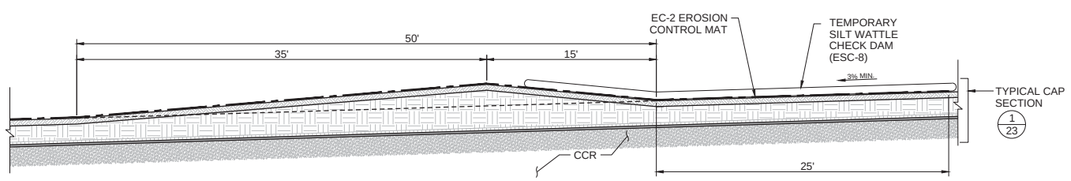
1/24 SIDE SLOPE DIVERSION BERM DETAIL (30")

NOT TO SCALE



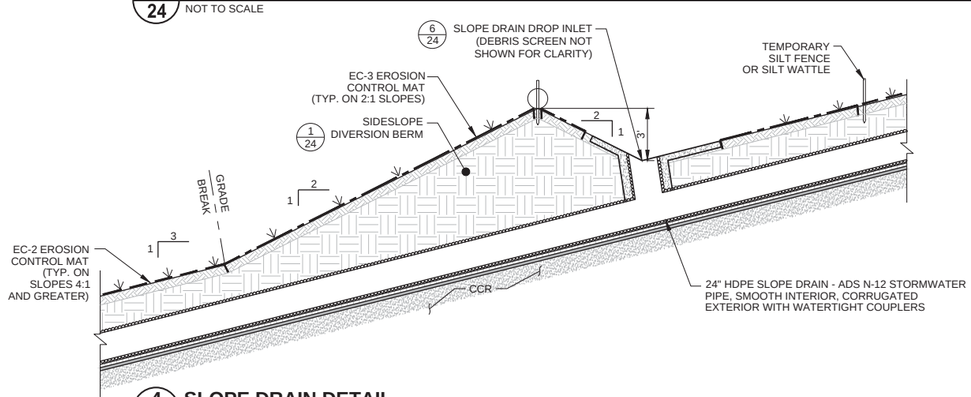
2/24 TOP DECK DIVERSION BERM (36")

NOT TO SCALE



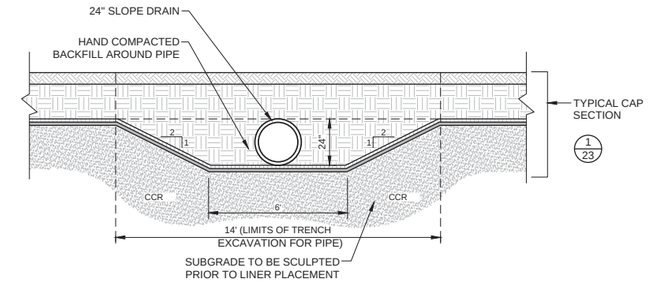
3/24 TOP DECK DIVERSION BERM (18")

NOT TO SCALE



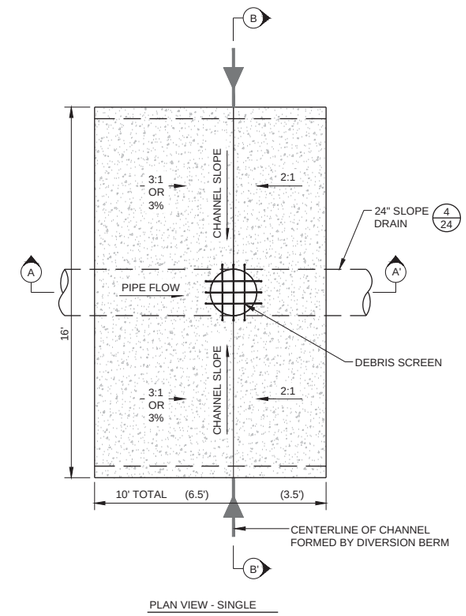
4/24 SLOPE DRAIN DETAIL

NOT TO SCALE

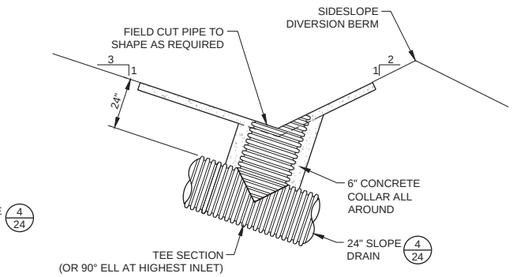


5/24 SLOPE DRAIN CROSS SECTION

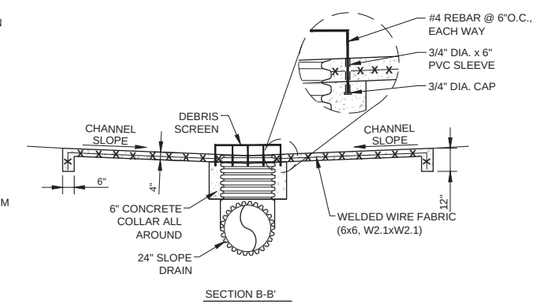
NOT TO SCALE



PLAN VIEW - SINGLE



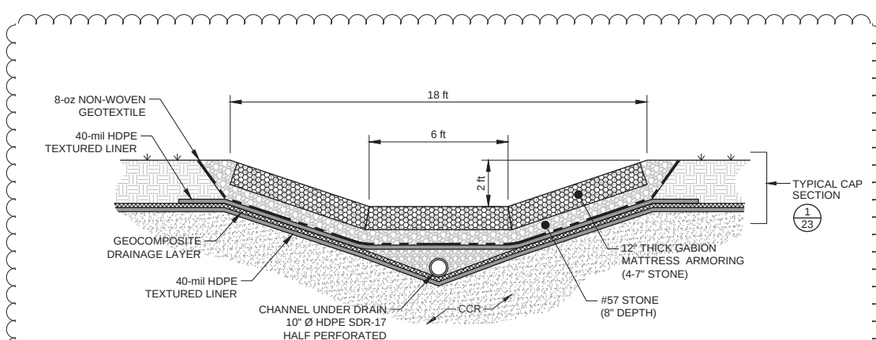
SECTION A-A'



SECTION B-B'

6/24 SLOPE DRAIN DROP INLET DETAIL

NOT TO SCALE



1b

7/24 GABION DOWNCHUTE DETAIL

NOT TO SCALE

Golder Associates

REV	DATE	DES	REVISION DESCRIPTION	ABM	CADD	ATN	CHK	JRD	RVW
1	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS						

COMMONWEALTH OF VIRGINIA
JAMES C. DEFRANCISCO
Lic. No. 032960
1-20-16
PROFESSIONAL ENGINEER

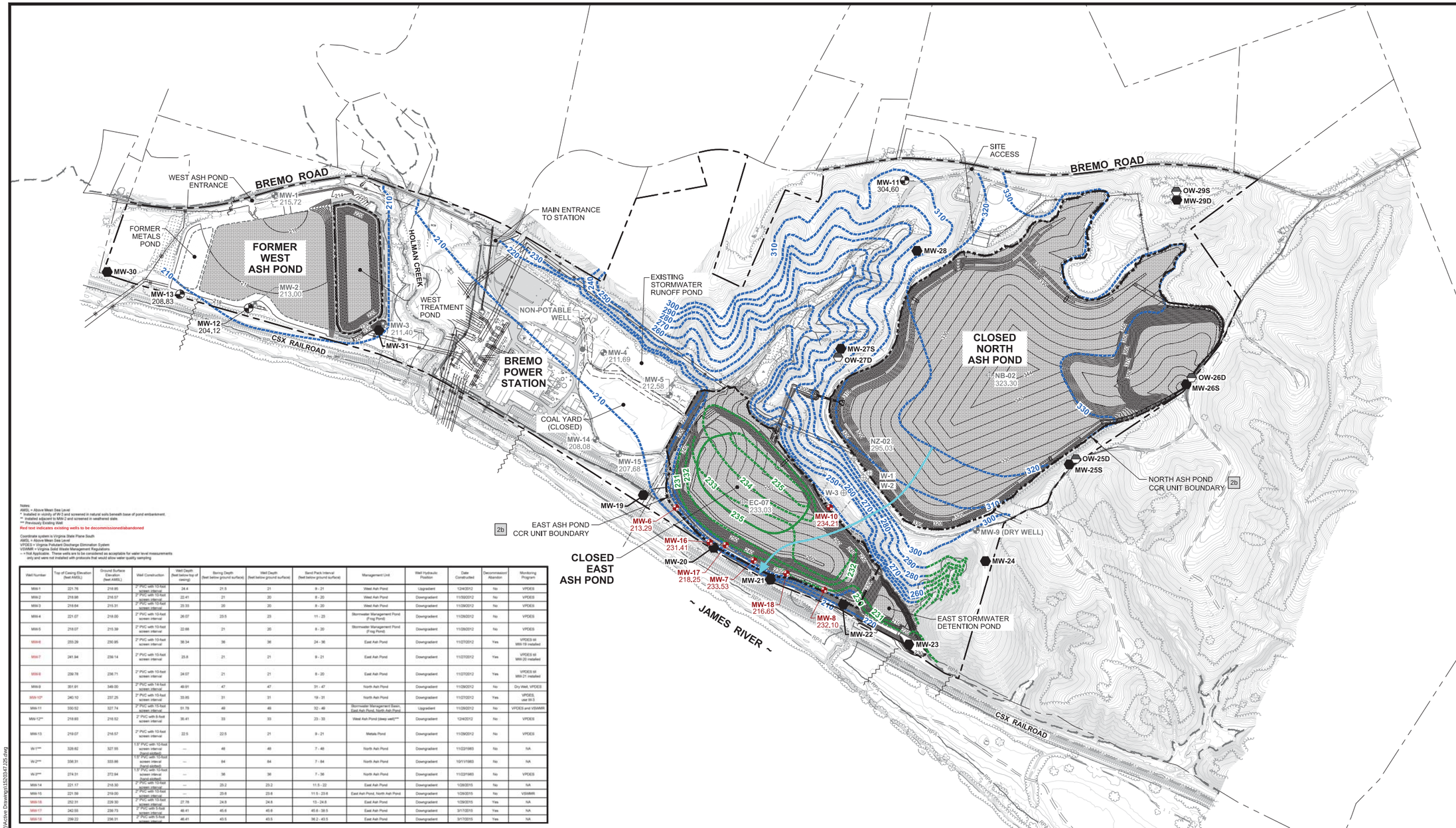
PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
MISCELLANEOUS CONSTRUCTION DETAILS (2 OF 2)

PROJECT No.		15-20347
FILE No.		1520347J23-24
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	09/21/15
CADD	ATN	09/21/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING 24

C:\Plex Production Data Files\Drawing Data Files\15-20347\J Major Site Development Plan (MSDP)\Active Drawings\1520347J23-24.dwg



Notes:
AMSL = Above Mean Sea Level
* Installed in vicinity of W-3 and screened in natural soils beneath base of pond embankment.
** Installed adjacent to MW-2 and screened in weathered slate.
*** Previously Existing Well
Red text indicates existing wells to be decommissioned/abandoned

Coordinate system is Virginia State Plane South
AMSL = Above Mean Sea Level
VPDES = Virginia Pollutant Discharge Elimination System
VSWMR = Virginia Solid Waste Management Regulations
-- = Not Applicable. These wells are to be considered as acceptable for water level measurements only and were not installed with protocols that would allow water quality sampling

Well Number	Top of Casing Elevation (feet AMSL)	Ground Surface Elevation (feet AMSL)	Well Construction	Well Depth (feet below top of casing)	Boring Depth (feet below ground surface)	Well Depth (feet below ground surface)	Sand Pack Interval (feet below ground surface)	Management Unit	Well Hydraulic Position	Date Constructed	Decommission/ Abandon	Monitoring Program
MW-1	221.76	218.95	2" PVC with 10-foot screen interval	24.4	21.5	21	9 - 21	West Ash Pond	Upgradient	12/4/2012	No	VPDES
MW-2	219.98	216.57	2" PVC with 10-foot screen interval	22.41	21	20	8 - 20	West Ash Pond	Downgradient	11/30/2012	No	VPDES
MW-3	216.64	215.31	2" PVC with 10-foot screen interval	23.33	20	20	8 - 20	West Ash Pond	Downgradient	11/29/2012	No	VPDES
MW-4	221.07	218.00	2" PVC with 10-foot screen interval	26.07	23.5	23	11 - 23	Stormwater Management Pond (Frog Pond)	Downgradient	11/28/2012	No	VPDES
MW-5	218.07	215.39	2" PVC with 10-foot screen interval	22.68	21	20	8 - 20	Stormwater Management Pond (Frog Pond)	Downgradient	11/28/2012	No	VPDES
MW-6	233.29	230.85	2" PVC with 10-foot screen interval	38.34	38	38	24 - 38	East Ash Pond	Downgradient	11/27/2012	Yes	VPDES till MW-19 installed
MW-7	241.94	238.14	2" PVC with 10-foot screen interval	25.8	21	21	9 - 21	East Ash Pond	Downgradient	11/27/2012	Yes	VPDES till MW-20 installed
MW-8	239.78	236.71	2" PVC with 10-foot screen interval	24.07	21	21	8 - 20	East Ash Pond	Downgradient	11/27/2012	Yes	VPDES till MW-21 installed
MW-9	351.91	349.00	2" PVC with 14-foot screen interval	49.91	47	47	31 - 47	North Ash Pond	Downgradient	11/29/2012	No	Dry Well, VPDES
MW-10*	240.10	237.25	2" PVC with 10-foot screen interval	33.85	31	31	19 - 31	North Ash Pond	Downgradient	11/27/2012	Yes	VPDES, use W-3
MW-11	330.52	327.74	2" PVC with 10-foot screen interval	51.78	49	49	32 - 49	Stormwater Management Basin, East Ash Pond, North Ash Pond	Upgradient	11/29/2012	No	VPDES and VSWMR
MW-12**	218.60	216.52	2" PVC with 5-foot screen interval	36.41	33	33	23 - 33	West Ash Pond (deep well)**	Downgradient	12/4/2012	No	VPDES
MW-13	219.07	216.57	2" PVC with 10-foot screen interval	22.5	22.5	21	9 - 21	Metals Pond	Downgradient	11/29/2012	No	VPDES
W-1***	329.62	327.55	1.5" PVC with 10-foot screen interval (hand-slotted)	---	48	48	7 - 48	North Ash Pond	Downgradient	11/22/1983	No	NA
W-2***	336.31	333.86	1.5" PVC with 10-foot screen interval (hand-slotted)	---	84	84	7 - 84	North Ash Pond	Downgradient	10/11/1983	No	NA
W-3***	274.31	272.94	1.5" PVC with 10-foot screen interval (hand-slotted)	---	36	36	7 - 36	North Ash Pond	Downgradient	11/22/1983	No	VPDES
MW-14	221.17	218.30	2" PVC with 10-foot screen interval	---	25.2	25.2	11.5 - 22	East Ash Pond	Downgradient	1/29/2015	No	NA
MW-15	221.59	219.00	2" PVC with 10-foot screen interval	---	23.6	23.6	11.5 - 23.6	East Ash Pond, North Ash Pond	Downgradient	1/29/2015	No	VSWMR
MW-16	232.31	229.30	2" PVC with 10-foot screen interval	27.76	24.9	24.9	13 - 24.9	East Ash Pond	Downgradient	1/29/2015	Yes	NA
MW-17	242.55	239.73	2" PVC with 5-foot screen interval	46.41	45.6	45.6	45.6 - 38.5	East Ash Pond	Downgradient	3/17/2015	Yes	NA
MW-18	239.22	236.31	2" PVC with 5-foot screen interval	46.41	43.5	43.5	36.2 - 43.5	East Ash Pond	Downgradient	3/17/2015	Yes	NA

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS) (FROM AERIAL SURVEY - SEE NOTE 8)
- 220 / 218 — PROPOSED TOPOGRAPHIC CONTOURS (2' INTERVALS)
- WETLANDS
- SURFACE WATER BOUNDARY
- W.E. 113.1 — SURFACE WATER ELEVATION
- APPROXIMATE LIMITS OF EXISTING ASH PONDS
- PROPOSED LIMITS OF FINAL COVER SYSTEM (ANCHOR TRENCH)
- LIMITS OF 100-YR FLOOD PLAIN
- OW-25D — PROPOSED GROUNDWATER OBSERVATION WELL LOCATION AND IDENTIFICATION
- MW-23 — PROPOSED GROUNDWATER COMPLIANCE WELL LOCATION AND IDENTIFICATION
- MW-11 304.60 — EXISTING MONITORING WELL PROPOSED FOR INCLUSION WITHIN GROUNDWATER MONITORING NETWORK AND IDENTIFICATION WITH STATIC GROUNDWATER ELEVATION [FEET ABOVE MEAN SEA LEVEL (AMSL)]
- MW-4 211.69 — EXISTING MONITORING WELL WITH STATIC GROUNDWATER ELEVATION (FEET AMSL)
- NB-02 323.30 — EXISTING CPT BORING AND GROUNDWATER OBSERVATION WELL (CONSTRUCTED AND ACCEPTABLE FOR WATER LEVEL MEASUREMENTS ONLY) WITH STATIC GROUNDWATER ELEVATION (FEET AMSL)
- W-1 — EXISTING GROUNDWATER OBSERVATION WELL CONSTRUCTED WITH 1.5-inch PVC CASING (CONSTRUCTED AND ACCEPTABLE FOR WATER LEVEL MEASUREMENTS ONLY)
- 105 — APPROXIMATE GROUNDWATER SURFACE CONTOUR (FEET AMSL)
- 105 — INFERRED GROUNDWATER SURFACE CONTOUR
- 105 — EAST POND PERCHED GROUNDWATER SURFACE CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- 2b - DENOTES REVISIONS PER DEQ SOLID WASTE COMMENTS

NOTES

1. TOPOGRAPHIC CONTOUR INTERVAL = 2 FEET
2. GROUNDWATER SURFACE CONTOUR INTERVAL = 10 FEET
3. STATIC WATER LEVELS MEASURED ON MAY 5, 2015.
4. CPT BORING WATER LEVELS MEASURED IN MARCH 2015, UTILIZED FOR INTERPRETING WATER TABLE IN ASH PONDS.
5. MW-7, MW-8, MW-10 AND MW-16 SCREENED WITHIN FILL AND IN HYDRAULIC CONNECTION WITH PERCHED (MOUNDED) GROUNDWATER SURFACE IN EAST ASH POND. MW-12 WATER ELEVATION NOT UTILIZED FOR INTERPRETATION AS WELL IS SCREENED IN BEDROCK.
6. GROUNDWATER CONTOURS BASED ON LINEAR INTERPOLATION BETWEEN AND EXTRAPOLATION FROM KNOWN DATUM, TOPOGRAPHIC CONTOURS, AND KNOWN FIELD CONDITIONS. THEREFORE, GROUNDWATER CONTOURS MAY NOT REFLECT ACTUAL GROUNDWATER CONDITIONS.
7. GROUNDWATER CONTOUR LINES SHOW THE WATER TABLE SHAPE AND ELEVATION. THESE CONTOURS ARE INFERRED LINES FOLLOWING THE GROUNDWATER SURFACE AT A CONSTANT ELEVATION ABOVE SEA LEVEL. THE GROUNDWATER FLOW DIRECTION IS GENERALLY PERPENDICULAR TO THE GROUNDWATER SURFACE CONTOURS, SIMILAR TO THE RELATIONSHIP BETWEEN SURFACE WATER FLOW AND TOPOGRAPHIC CONTOURS.
8. BASEMAP INFORMATION (e.g., EXISTING TOPOGRAPHY, ROADS, TREE LINES, FENCE LINES, ETC.) TAKEN FROM AERIAL SURVEY PREPARED BY McKENZIE SNYDER. DATE OF AERIAL PHOTOGRAPHY: JANUARY 16, 2015.
9. NON-POTABLE WELL LOCATION IS TO BE CONSIDERED APPROXIMATE.
10. WELLS SHOWN IN GRAY ARE NOT PROPOSED FOR GROUNDWATER MONITORING WELL NETWORK.

300 0 300 600
SCALE FEET

Golder Associates

REV	DATE	DES.	REVISION DESCRIPTION	CADD	CHK	RVW
2	3/16/16	JRD	REV. PER DEQ SWM & SOLID WASTE COMMENTS	KLL	ATN	JRD
1	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

COMMONWEALTH OF VIRGINIA
JAMES J. STRANCISCO
Lic. No. 052560
3-14-16
PROFESSIONAL ENGINEER

PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
GROUNDWATER MONITORING PLAN

PROJECT No.		15-20347
FILE No.		1520347J25
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	11/18/15
CADD	BPG	11/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING 25

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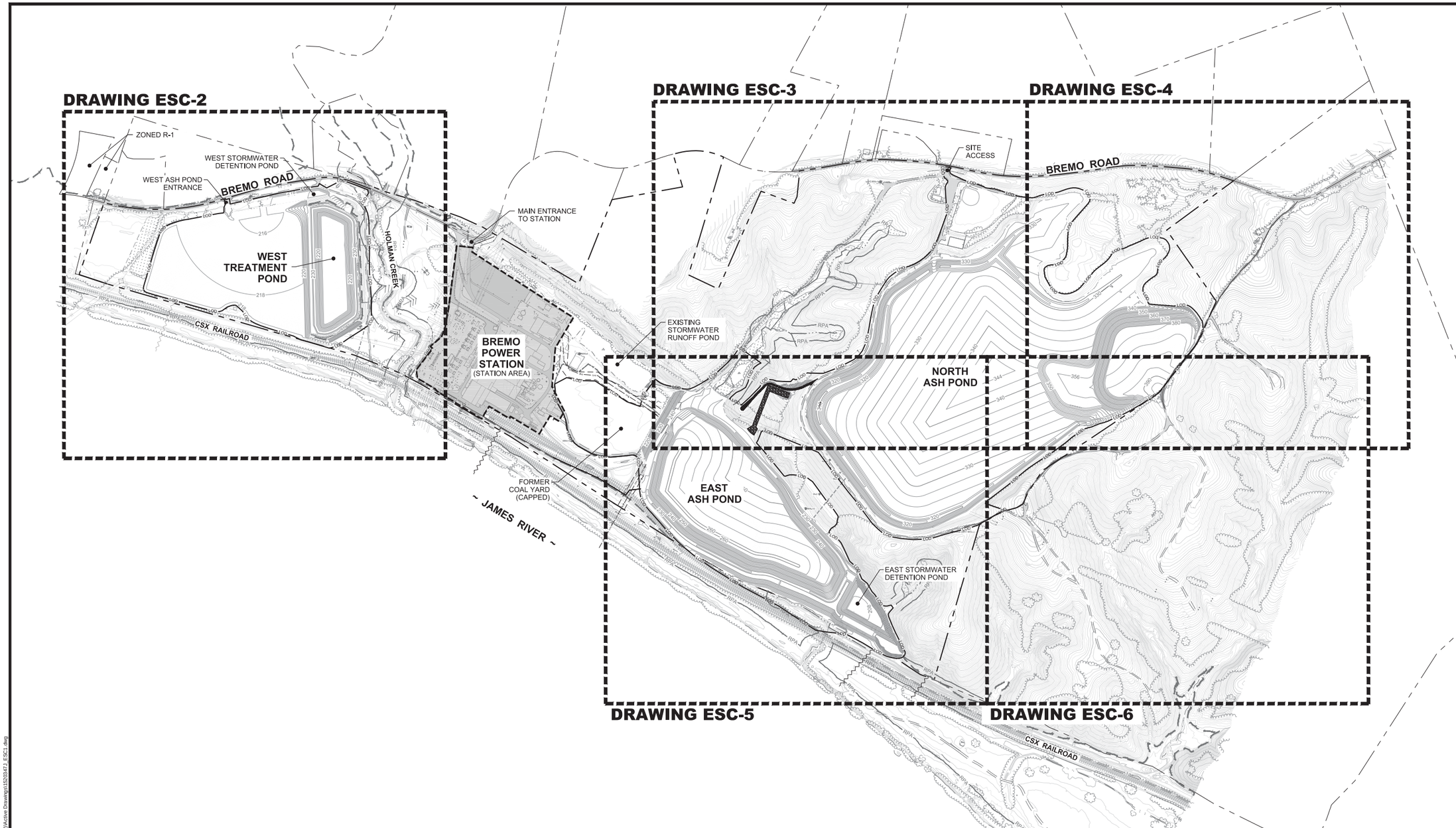


GENERAL NOTES

1. EXISTING CONDITIONS COMPILED FROM:
   a. AERIAL TOPOGRAPHIC SURVEY PREPARED BY McKENZIE SNYDER, INC., DATE OF AERIAL PHOTO: 1/16/15 [CONTROL PREPARED BY H&B SURVEYING & MAPPING (H&B)]
   b. BOUNDARY SURVEY PREPARED BY H&B SURVEYING AND MAPPING, LLC DATED 04/27/15.
   c. BATHYMETRIC SURVEYS PREPARED BY H&B, SURVEYS PERFORMED IN FEBRUARY 2015.
   d. HISTORICAL DATA FOR THE DEVELOPMENT OF THE WEST ASH POND, EAST ASH POND AND NORTH ASH POND.
   e. EXISTING TOPOGRAPHY WITHIN THE LIMITS OF THE WEST ASH POND AND NORTH ASH POND ARE BASED ON A CONCEPTUAL POST DREDGING SURFACE.
2. SITE DATUM: NAD83 / NAVD88
3. WETLAND DELINEATION BY DOMINION ENVIRONMENTAL SERVICES ON 01/30/15 & 02/05/15 AND BY GOLDER ASSOCIATES ON 03/16/15 & 03/25/15. WATERS OF THE U.S. CONFIRMED BY THE USACE DURING JUNE 4, 2015 SITE VISIT.
4. 100 YEAR FLOOD PLAIN DELINEATION BASED ON FLOOD ELEVATION DATA REPRESENTED ON FEMA FLOOD INSURANCE RATE MAP (FIRM), MAP NUMBER 51065C0260C, EFFECTIVE DATE: 05/16/2008.
5. NO IMPROVEMENTS OR CHANGES TO EXISTING STRUCTURES WITHIN THE STATION AREA ARE PROPOSED.
6. ADJACENT PARCELS ARE ZONED A-1 WITH THE EXCEPTION OF THE TWO NOTED PARCELS AT THE NORTH WEST CORNER OF THE PROPERTY BOUNDARY.

300 0 300 600
SCALE FEET

Golder Associates

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

COMMONWEALTH OF VIRGINIA
JAMES R. DEFRANCISCO
Lic. No. 032960
1-20-16
PROFESSIONAL ENGINEER

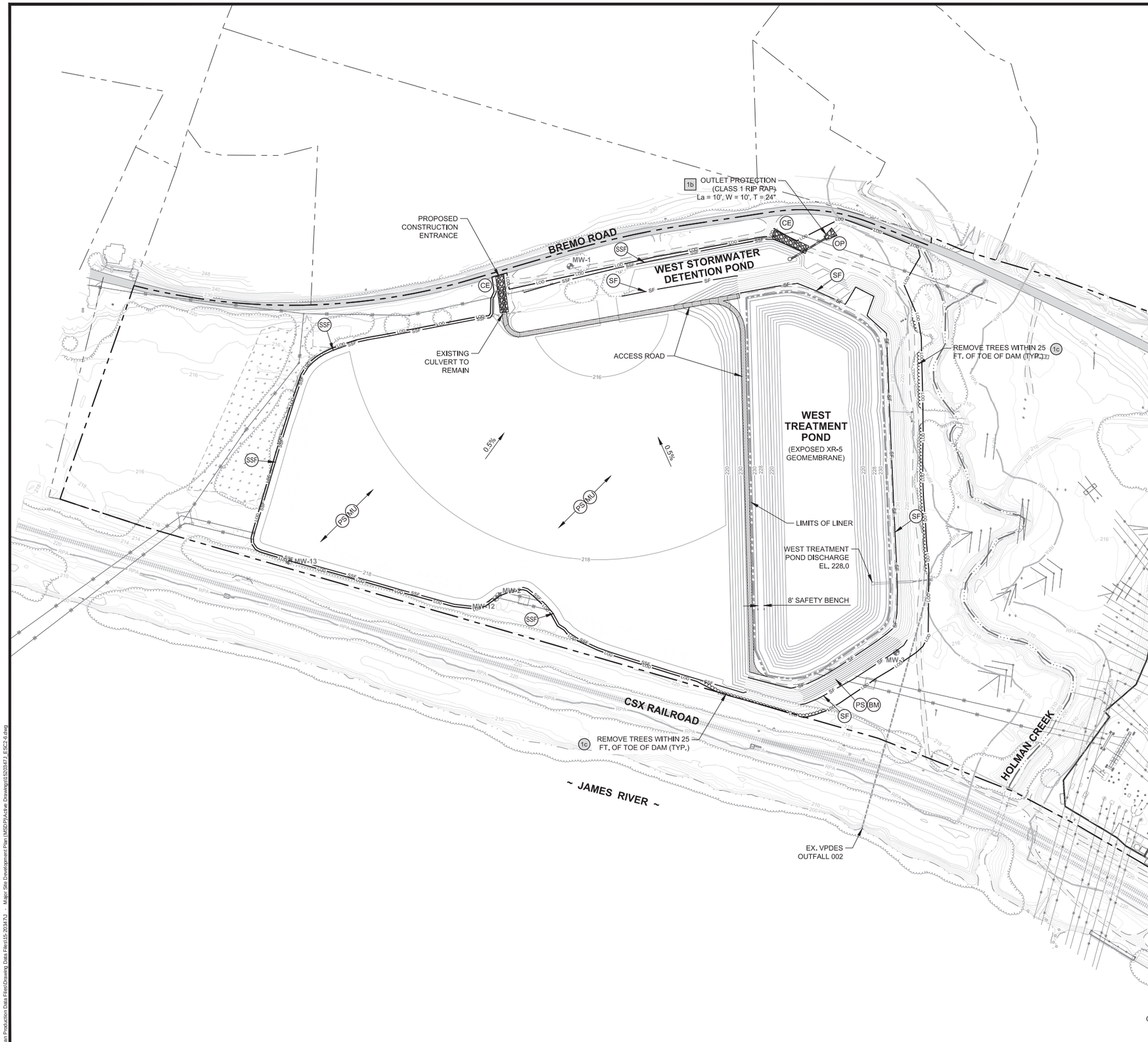
PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
E & S CONTROL PLAN
(INDEX SHEET)

PROJECT No.		15-20347
FILE No.		1520347J_ESC1
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING
ESC-1

G:\Office Production Data Files\Drawing Data Files\15-20347J - Major Site Development Plan (MSDP)\Active Drawings\1520347J_ESC1.dwg



LEGEND

- DOMINION PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING RAILROAD
- WETLANDS
- CREEK / STREAM CENTERLINE
- APPROXIMATE EDGE OF SURFACE WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING OVERHEAD UTILITY LINE
- MW-8 — EXISTING MONITORING WELL LOCATION AND IDENTIFICATION
- MH — EXISTING MANHOLE
- FEMA BASE FLOOD ELEVATION
- RPA — RIPARIAN PRESERVATION AREA (PER FLUVANNA COUNTY ORDINANCE)
- LOD — LIMITS OF DISTURBANCE
- SIDESLOPE DIVERSION BERM (1/24)
- TOP DECK PERIMETER DIVERSION BERM (2/24)
- TOP DECK DIVERSION BERM (3/24)
- CE — CONSTRUCTION ENTRANCE (MIN. STD. 3.02)
- SF — SILT FENCE (MIN. STD. 3.05)
- SSF — SUPER SILT FENCE (MIN. STD. 3.05)
- TC — TURBIDITY CURTAIN (MIN. STD. 3.27)
- CIP — CULVERT INLET PROTECTION (MIN. STD. 3.08)
- OP — OUTLET PROTECTION (MIN. STD. 3.18)
- CD — CHECK DAM (MIN. STD. 3.20)
- BM — EROSION CONTROL MATTING (MIN. STD. 3.36)
- MU — MULCH (MIN. STD. 3.35)
- PS — PERMANENT SEEDING (MIN. STD. 3.32)
- SW — SILT WATTLE (SEE ESC-8) 1a

NOTE:
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SEE DRAWING ESC-11 FOR INTERIM GRADING AND STORMWATER MANAGEMENT DURING CONSTRUCTION. 1a

1a - DENOTES REVISIONS PER FLUVANNA COUNTY E&S COMMENTS
1b - DENOTES REVISION PER DEQ STORMWATER MANAGEMENT COMMENTS
1c - DENOTES ADDITIONAL PLAN REVISION

SCALE 100 0 100 200 FEET

Golder Associates

REV	DATE	DES	REVISION DESCRIPTION	ABM	CADD	ATN	CHK	JRD	RVW
1	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS						

COMMONWEALTH OF VIRGINIA
JAMES C. DEFRANCESCO
Lic. No. 052906
1-20-16
PROFESSIONAL ENGINEER

PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
E & S CONTROL PLAN (1 OF 5)

PROJECT No.		15-20347
FILE No.		1520347J_ESC2-6
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING
ESC-2

G:\Plan Production Data Files\Drawing Data Files\15-20347\3 - Major Site Development Plan (MSDP)\Active Drawings\1520347J_ESC2-6.dwg

LEGEND

- DOMINION PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING RAILROAD
- WETLANDS
- CREEK / STREAM CENTERLINE
- APPROXIMATE EDGE OF SURFACE WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING OVERHEAD UTILITY LINE
- MW-8 — EXISTING MONITORING WELL LOCATION AND IDENTIFICATION
- MH — EXISTING MANHOLE
- FEMA BASE FLOOD ELEVATION
- RPA — RIPARIAN PRESERVATION AREA (PER FLUVANNA COUNTY ORDINANCE)
- LOD — LIMITS OF DISTURBANCE
- SIDESLOPE DIVERSION BERM (1/24)
- TOP DECK PERIMETER DIVERSION BERM (2/24)
- TOP DECK DIVERSION BERM (3/24)
- CE — CONSTRUCTION ENTRANCE (MIN. STD. 3.02)
- SF — SILT FENCE (MIN. STD. 3.05)
- SSF — SUPER SILT FENCE (MIN. STD. 3.05)
- TC — TURBIDITY CURTAIN (MIN. STD. 3.27)
- CIP — CULVERT INLET PROTECTION (MIN. STD. 3.08)
- OP — OUTLET PROTECTION (MIN. STD. 3.18)
- CD — CHECK DAM (MIN. STD. 3.20)
- BM — EROSION CONTROL MATTING (MIN. STD. 3.36)
- MU — MULCH (MIN. STD. 3.35)
- PS — PERMANENT SEEDING (MIN. STD. 3.32)
- SW — SILT WATTLE (SEE ESC-8) 1a

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SEE DRAWING ESC-11 FOR INTERIM GRADING AND STORMWATER MANAGEMENT DURING CONSTRUCTION. 1a

1a - DENOTES REVISIONS PER FLUVANNA COUNTY E&S COMMENTS
1b - DENOTES REVISION PER DEQ STORMWATER MANAGEMENT COMMENTS
1c - DENOTES ADDITIONAL PLAN REVISION

SCALE 100 0 100 200 FEET

Golder Associates

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

COMMONWEALTH OF VIRGINIA
JAMES R. DEFRANCISCO
Lic. No. 032960
1-20-16
PROFESSIONAL ENGINEER

PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
E & S CONTROL PLAN
(2 OF 5)

PROJECT No.		15-20347
FILE No.		15203473_ESC2-6
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING
ESC-3

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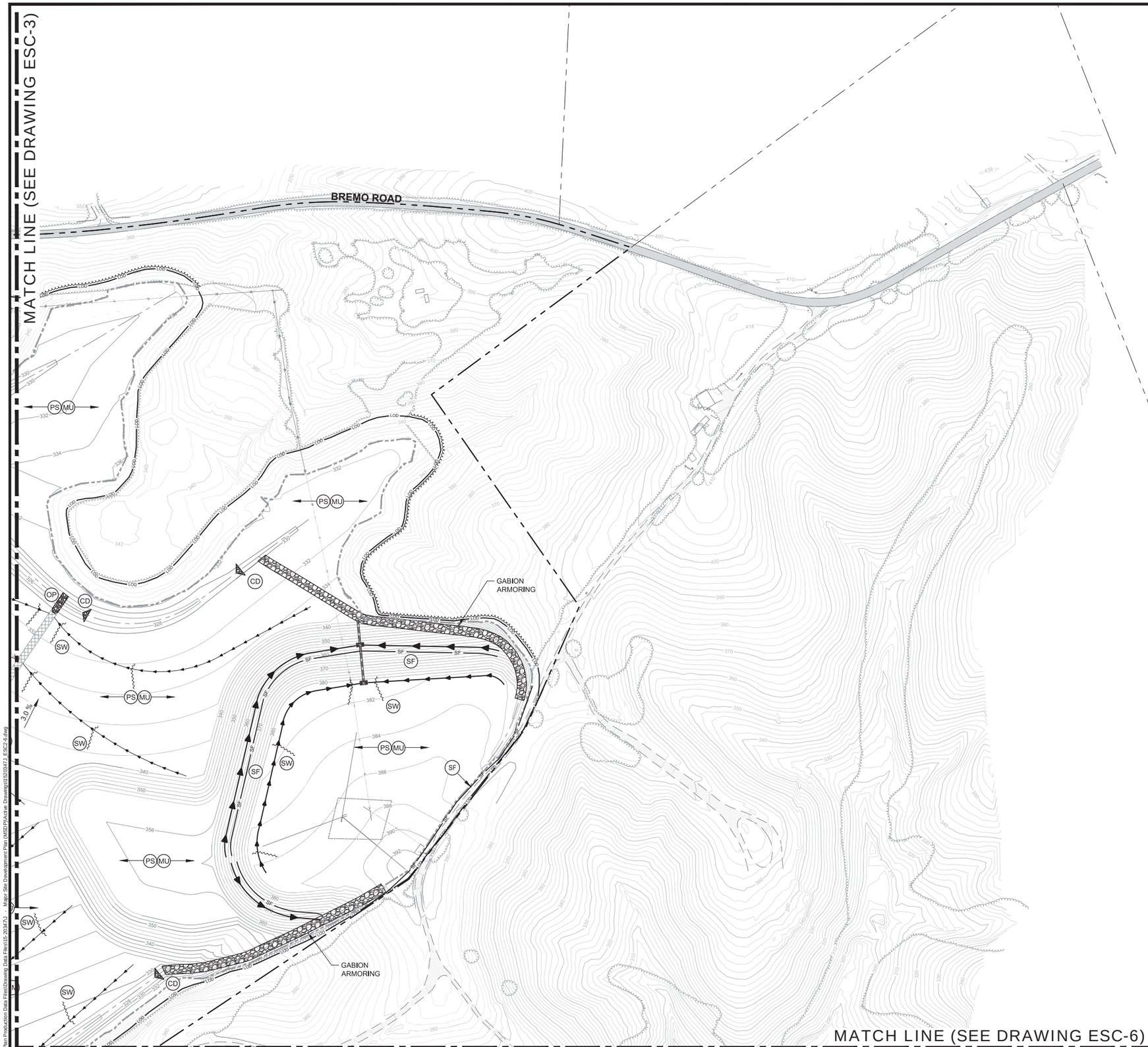

LEGEND

- DOMINION PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING RAILROAD
- WETLANDS
- CREEK / STREAM CENTERLINE
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- EXISTING TREE LINE
- EXISTING FENCE
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- MW-8 — EXISTING MONITORING WELL LOCATION AND IDENTIFICATION
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SEE DRAWING ESC-11 FOR INTERIM GRADING AND STORMWATER MANAGEMENT DURING CONSTRUCTION. 1a

1a - DENOTES REVISIONS PER FLUVANNA COUNTY E&S COMMENTS
1b - DENOTES REVISION PER DEQ STORMWATER MANAGEMENT COMMENTS
1c - DENOTES ADDITIONAL PLAN REVISION

SCALE 100 0 100 200 FEET

Golder Associates

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	1/20/16	JRD	REV. PER COUNTY AND DEQ COMMENTS	ABM	ATN	JRD

COMMONWEALTH OF VIRGINIA
JAMES R. DEFRANCISCO
Lic. No. 052906
1-20-16
PROFESSIONAL ENGINEER

PROJECT
DOMINION
BREMO POWER STATION
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN
FLUVANNA COUNTY, VIRGINIA

TITLE
E & S CONTROL PLAN (3 OF 5)

PROJECT No.		15-20347
FILE No.		1520347J_ESC2-6
REV. 0	SCALE	AS SHOWN
DESIGN	JRD	08/18/15
CADD	ATN	08/18/15
CHECK	DPM	10/14/15
REVIEW	JRD	10/14/15

DRAWING
ESC-4

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