36 | C | 10W217-01

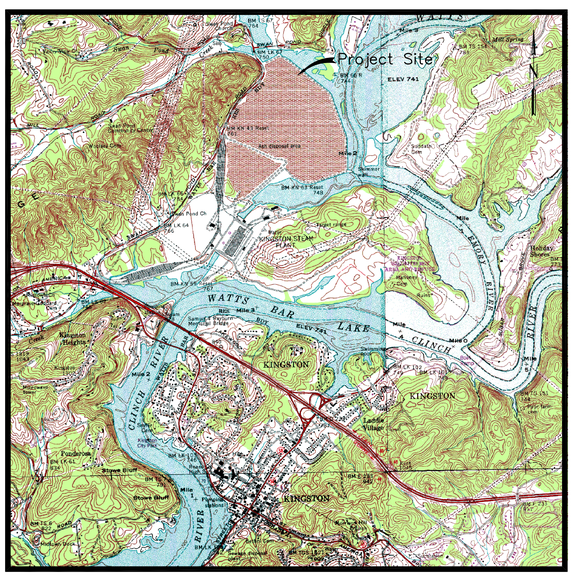
REVISED 90% PLANS FOR CONSTRUCTION

PERIMETER CONTAINMENT
NORTH DREDGE CELL (DIKE C)
SEGMENT 1 - STA. A161+50 TO STA. A179+50
KINGSTON FOSSIL PLANT

HARRIMAN, ROANE COUNTY, TENNESSEE

PREPARED FOR

TENNESSEE VALLEY AUTHORITY



VICINITY MAP

1000 0 2000 4000 FEET
GRAPHIC SCALE

PREPARED BY

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
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ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R -	-	-	-	-	-	-	-	-	-	-	-
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	-	-	-

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) - RDP-0113-E

PERIMETER CONTAINMENT
COVER SHEET

Stantec Consulting Services Inc.
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DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-01 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:1
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
U:\KINGSTON\DRAWINGS\DRAFTING\DRAWINGS\DIKE C\REVISED_DFN\SHEET\10W217-01-R0.DWG

GENERAL NOTES

1. CLEANUP AND CLOSURE OF THE KINGSTON DREDGE CELL AND ASH POND IS BEING ACCOMPLISHED UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) OF 1980. EPA AND TDEC ARE PROVIDING REGULATORY OVERSIGHT FOR THE PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS.

2. DEFINITIONS: WHENEVER THE FOLLOWING TERMS ARE USED ON THESE DRAWINGS, IT IS UNDERSTOOD THAT THEY REPRESENT THE FOLLOWING:

   <u>CONTRACTOR</u>: AN ENTITY WITH WHICH THE TENNESSEE VALLEY AUTHORITY (TVA) HAS ENTERED INTO AN AGREEMENT TO CONSTRUCT ASPECTS OF THIS PROJECT. CONTRACTOR ROLES ARE FURTHER DESCRIBED IN THE SPECIAL CONDITIONS SECTION OF THE SPECIFICATIONS.

   <u>EPA</u>: THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

   <u>TDEC</u>: THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION.

   <u>OWNER</u>: TENNESSEE VALLEY AUTHORITY – KINGSTON FOSSIL PLANT.

   <u>TCM</u>: THE TECHNICAL CONTRACT MANAGER, WHO IS THE DESIGNATED TVA REPRESENTATIVE RESPONSIBLE FOR ADMINISTRATION AND OVERSIGHT OF THE WORK.

   <u>TDOT</u>: THE TENNESSEE DEPARTMENT OF TRANSPORTATION. SPECIFICALLY REFERENCES THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION. ANY MATERIAL DESIGNATED AS "TDOT" IS TO CONFORM TO THE MATERIAL STANDARDS NOTED AND PLACEMENT/INSTALLATION METHODOLOGY SPECIFIED IN THE CURRENT EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

   <u>QUALITY CONTROL (QC) PLAN</u>: REFERS TO A DOCUMENT THAT ESTABLISHES MINIMUM QUALITY CONTROL REQUIREMENTS, TESTING FREQUENCY AND QUALITY OVERSIGHT RESPONSIBILITY.

   <u>QUALITY ASSURANCE (QA) MANAGER</u>: RESPONSIBLE FOR THE OVERALL QUALITY ASSURANCE FOR THE KINGSTON RECOVERY PROJECT, WITH A PRIMARY FOCUS ON ENSURING COMPLIANCE AND DOCUMENTATION CONSISTENT WITH THE TVA QUALITY PROCEDURES. JACOBS IS THE QA MANAGER FOR THIS PROJECT.

   <u>QUALITY CONTROL (QC) MANAGER</u>: RESPONSIBLE FOR THE QUALITY OF THE CONSTRUCTED PROJECT AS DEFINED IN THE QC PLAN. THE QC MANAGER WILL BE FOCUSED ON REVIEWING AND EVALUATING TEST DATA AND OTHER AS-BUILT INFORMATION TO CHECK FOR COMPLIANCE AND CONSISTENCY WITH THE DESIGN. THE QC MANAGER WILL REPRESENT THE DESIGN ENGINEER OF RECORD (STANTEC) AND WILL BE A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TENNESSEE. THE QC MANAGERS FOR EARTHWORK AND PERIMETER WALL STABILIZATION ARE DEFINED IN THE SPECIAL CONDITIONS SECTION OF THE SPECIFICATIONS.

   <u>QUALITY CONTROL (QC) REPRESENTATIVE</u>: RESPONSIBLE FOR REPORTING QC DATA COLLECTED BY THE QC TEAM DURING CONSTRUCTION.

   <u>PERIMETER WALL STABILIZATION</u>: TERM FOR GROUND IMPROVEMENT ACCOMPLISHED BY MIXING GROUT WITH IN-SITU SOIL, OR EXCAVATION/REPLACEMENT WITH SELF-HARDENING SLURRY.

   <u>CONSTRUCTION MANAGER</u>: RESPONSIBLE FOR CONSTRUCTION ACTIVITIES TO INCLUDE BUT NOT LIMITED TO, THE CHARACTER AND SEQUENCE OF WORK, COORDINATION AND SCHEDULING. JACOBS IS THE CONSTRUCTION MANAGER FOR THIS PROJECT.

   <u>SWMP</u>: STORM WATER MANAGEMENT PLAN PREVIOUSLY ESTABLISHED FOR THE PROJECT SITE.

   <u>SWMP MANAGER</u>: RESPONSIBLE FOR REPORTING AS REQUIRED BY THE SWMP.

3. TVA PLANS TO RETAIN MULTIPLE CONTRACTORS TO COMPLETE PORTIONS OF THE WORK AS DEFINED BY TVA. FOR THIS SEGMENT OF PERIMETER CONTAINMENT, SEPARATE CONTRACTORS WILL BE ENGAGED FOR PERIMETER WALL STABILIZATION CONSTRUCTION, FOR EARTHWORK CONSTRUCTION, AND POSSIBLY FOR OTHER PORTIONS OF THE WORK.

4. THE EARTHWORK CONTRACTOR WILL ESTABLISH A SUBGRADE SURFACE FOR PERIMETER WALL STABILIZATION AS DEFINED IN SECTION 02650 OF THE SPECIFICATIONS. EARTHWORK CONSTRUCTION FOR THE SUBGRADE, EMBANKMENT AND FINAL DRAINAGE ARE NOT INCLUDED IN THE SCOPE OF WORK FOR THE PERIMETER WALL STABILIZATION CONTRACTOR.

5. FOLLOWING COMPLETION OF PERIMETER WALL STABILIZATION, THE EARTHWORK CONTRACTOR WILL PROOF ROLL ALL THE SUBGRADE, THEN CONSTRUCT THE EMBANKMENT PLATFORM, THE EARTHEN PERIMETER BERM, THE ROCK BERM, AND ALL FINAL DRAINAGE FEATURES.

6. CONSTRUCTION OF THE PERIMETER CONTAINMENT WILL OCCUR IN SEVERAL SEGMENTS. THIS PROJECT INCLUDES PERIMETER WALL STABILIZATION AND EARTHEN BERM CONSTRUCTION WITHIN THE NORTH DREDGE CELL (DIKE C) SEGMENT TO THE LINES AND GRADES AS DEFINED ON THE DRAWINGS.

7. THESE DRAWINGS ARE THE CONSTRUCTION DRAWINGS THAT ARE TO BE REFERENCED ALONG WITH THE TECHNICAL SPECIFICATIONS, THE QC PLAN, THE SITE WIDE SWMP AND APPLICABLE ENVIRONMENTAL AND SAFETY REGULATIONS.

8. TOPOGRAPHIC INFORMATION SHOWN ON THE DRAWINGS IS DATED AND DOES NOT REFLECT CHANGES SINCE THE TIME OF THE LIDAR SURVEY. TEMPORARY STOCKPILING OF MATERIALS AND FILLING HAS OCCURRED SINCE THE DATE OF THE LIDAR SURVEY.

9. SEQUENCING OF THE CONSTRUCTION SHALL CONFORM TO APPROVED CONTRACTOR WORK PLANS AND OTHER REQUIREMENTS ESTABLISHED BY THE CONSTRUCTION MANAGER.

10. TVA HAS PERFORMED REQUIRED UTILITY LOCATION SERVICES AND OBTAINED THE PLANT ISSUED EXCAVATION PERMIT FOR THIS PROJECT. TVA HAS VERIFIED THAT THERE ARE NO CONFLICTING UTILITY SERVICES WITHIN THE DESIGNATED WORK AREAS.

11. SECURITY ON SITE IS PROVIDED BY TVA.

12. THE PROJECT SITE IS WITHIN THE AREA AFFECTED BY THE DECEMBER 2008 DREDGE CELL FAILURE. CONSTRUCTION WILL OCCUR IN AREAS COVERED BY FAILED COAL ASH. THE CONTRACTOR SHALL BE PREPARED FOR THE UNCERTAINTY OF WORKING IN THESE HETEROGENEOUS MATERIALS.

13. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR PROTECTING PREVIOUSLY INSTALLED INSTRUMENTATION FROM DAMAGE. THE EARTHWORK CONTRACTOR SHALL INSTALL PROTECTIVE BARRIERS AROUND SAID INSTRUMENTATION. SUCH BARRIERS SHALL BE IN ACCORDANCE WITH STANDARD TVA PRACTICES OR AS APPROVED BY THE QC MANAGER. THE EARTHWORK CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING INSTRUMENTS WITHIN THE LIMITS OF THE PERIMETER WALL STABILIZATION. INSTRUMENTATION WILL BE EXTENDED UPWARD BY THE EARTHWORK QC TEAM DURING THE COURSE OF THE WORK AS DESCRIBED IN THESE CONSTRUCTION DOCUMENTS AND IN ACCORDANCE WITH ESTABLISHED TVA PROCEDURES. COMPACTION OF MATERIALS AROUND GEOTECHNICAL INSTRUMENTATION SHALL BE PERFORMED BY THE EARTHWORK CONTRACTOR USING MANUALLY OPERATED TAMPING DEVICES.

14. ADDITIONAL GEOTECHNICAL INSTRUMENTATION BEYOND THAT CURRENTLY DEPICTED MAY BE INSTALLED DURING CONSTRUCTION.

15. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR HEALTH AND SAFETY OF THEIR PERSONNEL. ALL CONTRACTORS AND SUBCONTRACTORS SHALL ADHERE TO TVA REQUIREMENTS FOR SAFETY AND CONSTRUCTION UNLESS OSHA OR OTHER REGULATORY REQUIREMENTS SUPERCEDE THEM.

16. CONTRACTOR LAYDOWN AND STAGING AREAS, AND ANY MATERIAL STOCKPILE AREAS, OUTSIDE OF THE CONTRACTOR'S WORK LIMITS SHALL BE ESTABLISHED ONLY WITHIN AREAS APPROVED BY THE TCM.

17. SITE ACCESS AND EGRESS POINTS FOR THE CONTRACTOR'S PERSONNEL, EQUIPMENT, AND MATERIALS WILL BE APPROVED BY THE TCM.

18. THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL ACCESS ROADS. DURING CONSTRUCTION, EACH CONTRACTOR OR SUBCONTRACTOR SHALL MAINTAIN THEIR OWN STAGING AREAS AND STORAGE AREAS, AND SHALL RESTORE SAID AREAS TO THEIR ORIGINAL CONDITION OR BETTER ONCE CONSTRUCTION IS COMPLETE, UNLESS TVA GIVES WRITTEN PERMISSION TO RETAIN THE AREA "AS IS".

19. ALL CONTRACTORS AND SUBCONTRACTORS SHALL CONDUCT ALL OPERATIONS IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL PERMITS, RULES, LAWS AND REGULATIONS INCLUDED BUT NOT LIMITED TO THOSE SET FORTH IN CEC 19966, 20065 OR OTHER ENVIRONMENTAL REVIEW DOCUMENTS FOR THE PROJECT.

20. THE CONTRACTORS ARE JOINTLY RESPONSIBLE FOR SITE DRAINAGE THROUGHOUT CONSTRUCTION AND SHALL INSTALL TEMPORARY DRAINAGE STRUCTURES OR PUMP WATER AS NECESSARY TO PREVENT INTERFERENCE WITH THEIR WORK. SUCH TEMPORARY DRAINAGE FEATURES SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF ENVIRONMENTAL PERMITS AND THE SITE WIDE SWMP. THE CONTRACTORS SHALL COORDINATE THEIR ACTIVITIES IN SUCH A MANNER AS TO NOT INTERFERE WITH OTHER WORK ON THE SITE.

21. VEGETATIVE AND ORGANIC MATERIALS SHALL BE REMOVED AS DESCRIBED IN THE TECHNICAL SPECIFICATIONS.

22. DRAINAGE CONDITIONS SURROUNDING EXISTING FACILITIES OUTSIDE THE GRADING LIMITS ARE NOT ADDRESSED BY THE DRAWINGS. GRADING, SHAPING AND INSTALLATION OF DRAINAGE STRUCTURES MAY BE REQUIRED TO PROMOTE POSITIVE DRAINAGE.

23. MATERIALS DELIVERED FOR INCORPORATION INTO THE WORK SHALL BE TEMPORARILY STORED IN AREAS SELECTED BY THE RESPECTIVE CONTRACTORS AND APPROVED BY THE TCM. MATERIALS SHALL BE STORED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND COMPLY WITH TVA REQUIREMENTS. MATERIALS THAT CAN BE DIRECTLY INCORPORATED INTO THE WORK DO NOT NEED TO BE STOCKPILED.

24. THE INTERIM DRAINAGE AND SEDIMENT CONTROL PLAN MEASURES SHOWN SHALL BE CONSIDERED THE MINIMUM; SUPPLEMENTAL MEASURES SHALL BE PROVIDED BY ALL CONTRACTORS AND SUBCONTRACTORS AS FIELD CONDITIONS DICTATE OR AS DIRECTED BY THE CONSTRUCTION MANAGER OR THE REGULATORY AUTHORITY.

25. DURING CONSTRUCTION, THE EARTHWORK CONTRACTOR SHALL CLEAN AND MAINTAIN ALL SEDIMENT CONTROL DEVICES SHOWN ON THE DRAWINGS. THE SWMP MANAGER SHALL PROVIDE REPORTING AS REQUIRED BY THE SWMP, TECHNICAL SPECIFICATIONS AND REGULATIONS ON SAID ITEMS.

26. ALL CONTRACTORS AND SUBCONTRACTORS SHALL CONTROL FUGITIVE DUST EMISSIONS DURING CONSTRUCTION IN SUCH A MANNER AS TO COMPLY WITH APPLICABLE REGULATIONS. DUST CONTROL MEASURES SHALL BE SUBJECT TO APPROVAL BY THE CONSTRUCTION MANAGER AND THE OWNER.

27. CERTIFICATIONS OF MATERIAL QUALITY AND CONFORMANCE TO PROJECT REQUIREMENTS SHALL BE SUBMITTED TO TVA FOR FORWARDING TO THE QC AND QA MANAGER.

28. TVA WILL BE RESPONSIBLE FOR CONSTRUCTION SURVEYING. ALL ESTABLISHED TVA BENCHMARKS OR OTHER MONUMENTS SHALL BE PRESERVED AND PROTECTED. ANY ESTABLISHED MARKER OR BENCHMARK THAT IS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED BY THE RESPONSIBLE CONTRACTOR AT ITS OWN COST.

29. THE CONTRACTOR SHALL COMMUNICATE CONSTRUCTION ISSUES, PROBLEMS OR DISCREPANCIES IN THE DRAWINGS TO THE CONSTRUCTION MANAGER AND TVA IMMEDIATELY UPON BECOMING AWARE OF SUCH PROBLEMS.

30. ALL CONTRACTORS AND SUBCONTRACTORS SHALL NOTE THAT THIS WORK MAY BE PERFORMED CONCURRENT WITH NORTH AND CENTRAL DREDGE CELL (CELLS 2 AND 3) ASH STACKING. THIS WORK MAY ALSO COINCIDE WITH OTHER CONSTRUCTION ON THE PROJECT SITE.

31. BORROW AREAS SHALL BE GRADED AND VEGETATED IN CONFORMANCE WITH PROJECT REQUIREMENTS, SUBJECT TO ENVIRONMENTAL REGULATIONS FROM OTHER AGENCIES, AND SHALL BE PERMITTED IF REQUIRED BY REGULATION. IT SHOULD BE NOTED THAT THERE MAY BE REGULATORY RESTRICTIONS ASSOCIATED WITH CLEARING A SITE.

32. BORROW AREAS SHALL BE MAINTAINED IN SUCH A MANNER AS TO PROMOTE POSITIVE DRAINAGE, REDUCE EROSION OF SOILS AND PROVIDE STABLE EXCAVATIONS. FINAL GRADE SLOPES SHALL BE NO STEEPER THAN 3H:1V AND INTERIM SLOPE CONDITIONS SHALL NOT ABRUPTLY TERMINATE OR IMPOUND WATER.

33. DURING BORROW EXCAVATION, SATISFACTORY EARTH MATERIALS SHALL BE SEGREGATED FOR USE IN THE EARTHEN PERIMETER BERM. SATISFACTORY MATERIALS ARE LISTED IN SECTION 02300 OF THE SPECIFICATIONS.

34. THE PERIMETER WALL STABILIZATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE CONSTRUCTION PLATFORM, AS OUTLINED IN SECTION 02650 (PARAGRAPH 4.3.3) OF THE SPECIFICATIONS. THE PERIMETER WALL STABILIZATION CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY OF ALL EQUIPMENT USED TO CONSTRUCT THE SOIL-CEMENT WALLS.

35. THE APPROXIMATE LOCATION OF KNOWN BURIED PIPES AND OTHER OBSTRUCTIONS ARE SHOWN ON THE DRAWINGS. OTHER BURIED FEATURES, POSSIBLY INCLUDING STONE FILLS, MAY BE ENCOUNTERED DURING CONSTRUCTION.

36. ALL PIPE REMOVAL AND TRENCHING SHALL BE CONDUCTED IN STRICT ACCORDANCE WITH APPLICABLE TVA PROCESS AND PROCEDURE REQUIREMENTS.

37. ASH BACKFILL WILL BE REQUIRED IN AREAS WHERE PIPES OR OTHER OBSTRUCTIONS ARE REMOVED AND IN OTHER AREAS WHERE FILL IS NEEDED TO ESTABLISH GRADE AT THE TOP OF THE PERIMETER WALL STABILIZATION PLATFORM. ON THE INTERIOR SIDE OF THE INBOARD PERIMETER WALL, ALL ASH BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ASH STACKING DESIGN PACKAGES. WITHIN THE FOOTPRINT OF THE PERIMETER WALL STABILIZATION, OR ANY OTHER AREAS OUTSIDE OF THE INBOARD PERIMETER WALL, BACKFILL WILL UNDERGO NO LESS THAN THREE PASSES OF A ASH (OR EQUIVALENT) DOZER OR LARGER, ON LIFTS THAT DO NOT EXCEED 12 INCHES IN COMPACTED THICKNESS.

38. BURIED STONE FILL MAY EXIST AT VARIOUS LOCATIONS WITHIN THE PROJECT LIMITS. WHERE KNOWN TO EXIST, THE APPROXIMATE LOCATION OF STONE FILL IS INDICATED ON THE DRAWINGS. EXISTING STONE FILL MAY BE EXCAVATED BY THE PERIMETER WALL STABILIZATION CONTRACTOR AS NEEDED TO CONSTRUCT THE SOIL-CEMENT WALLS.

39. ALL SUBGRADE SURFACES SHALL BE APPROVED BY THE EARTHWORK QC MANAGER PRIOR TO EMBANKMENT CONSTRUCTION.

40. THE PERIMETER WALL STABILIZATION CONTRACTOR SHALL SUBMIT A DRAWING DEPICTING THE PROPOSED LAYOUT OF THE SOIL-CEMENT WALLS PRIOR TO CONSTRUCTION, AS OUTLINED IN SECTION 02650 OF THE SPECIFICATIONS.

41. BORING LOGS FOR THE LOCATIONS SHOWN ON THE BORING PLAN ARE INCLUDED AS A SEPARATE DOCUMENT.

42. THE PERIMETER WALL STABILIZATION CONTRACTOR SHALL COLLECT SAMPLES AND CONDUCT TESTING IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 02650 OF THE SPECIFICATIONS.

43. REFER TO SECTION 02936 OF THE SPECIFICATIONS FOR SHORT TERM, INTERMEDIATE, AND LONG TERM VEGETATION REQUIREMENTS.

44. WATER ELEVATIONS IN THE ADJACENT LAKE ARE CONTROLLED BY WATTS BAR DAM ON THE TENNESSEE RIVER. NORMAL SUMMER POOL ELEVATION IS 741 FEET. NORMAL WINTER POOL ELEVATION IS 737 FEET. HIGHER OR LOWER POOL LEVELS SHOULD BE ANTICIPATED.

45. ANY PROPOSED MODIFICATION TO DESIGN FEATURES AS SHOWN (OR DESCRIBED) IN THE APPROVED ISSUED FOR CONSTRUCTION DESIGN DOCUMENTS SHALL BE CONTINGENT UPON ENGINEER OF RECORD APPROVAL. TEMPORARY FEATURES TO FACILITATE CONSTRUCTION TO ACHIEVE THE APPROVED DESIGN FEATURES SHALL BE ADDRESSED BY METHODS DESCRIBED IN APPROVED PROJECT DOCUMENTS AND PRACTICES (E.G. STORM WATER MANAGEMENT PLAN, BEST MANAGEMENT PRACTICES, ETC.).

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

R 0: ISSUED FOR REVIEW

DISCIPLINE INTERFACE: 1, 2, 3, 4

SCALE: NONE EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT
GENERAL NOTES

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

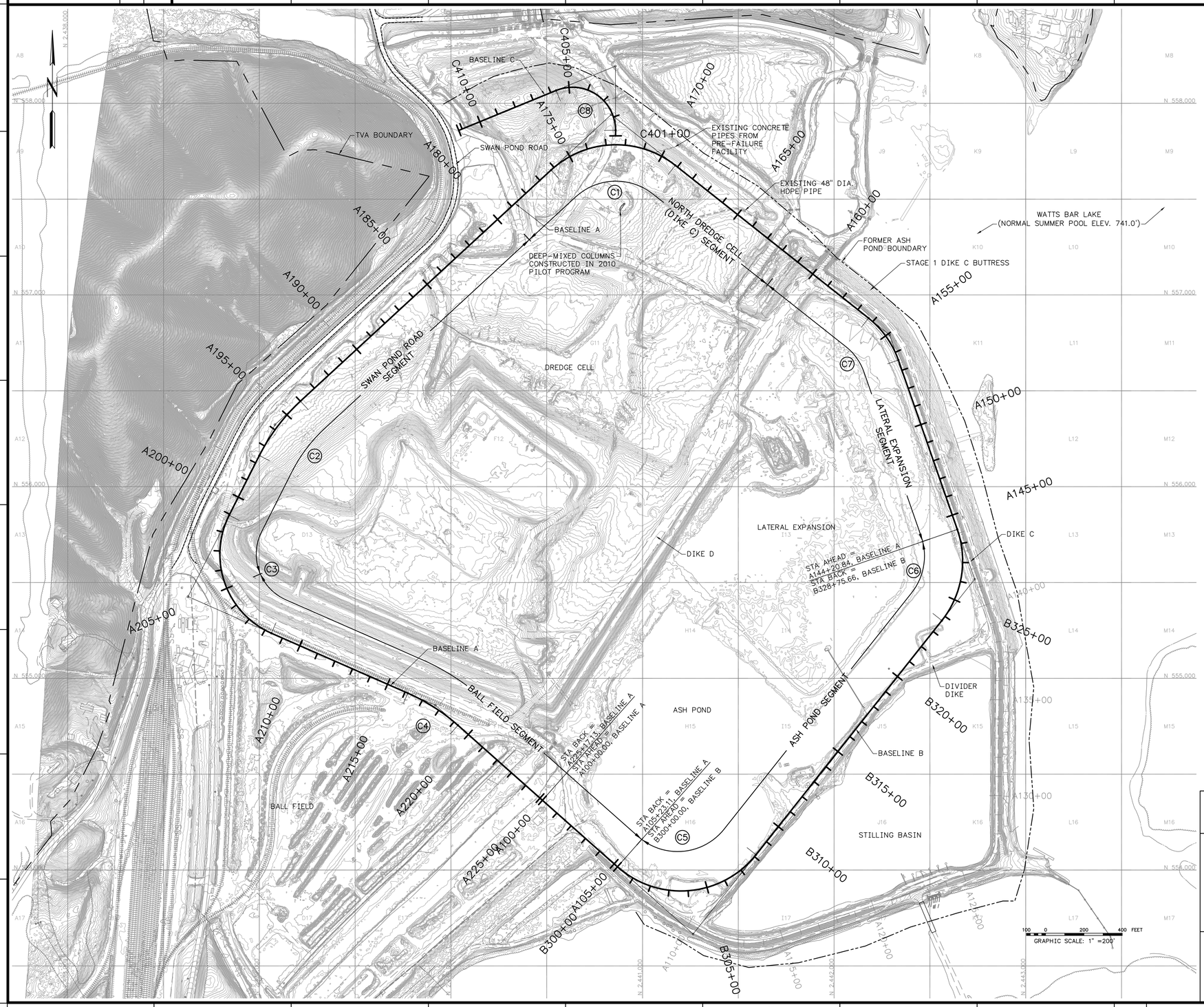
AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-02 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:1
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/20/2011



BASELINE CURVE DATA

BASELINE A

C1
P.I. STA. = A173+40.73
NORTHING = 557,940.85
EASTING = 2,440,836.58
Δ = 80°59'15"
D = 11°27'33"
T = 426.95'
L = 706.75'
R = 500.00'
E = 157.48'
P.C. STA. = A169+13.78
P.T. STA. = A176+20.53

C2
P.I. STA. = A195+80.25
NORTHING = 556,323.49
EASTING = 2,439,081.51
Δ = 20°30'09"
D = 5°43'46"
T = 180.85'
L = 357.84'
R = 1000.00'
E = 16.22'
P.C. STA. = A193+99.40
P.T. STA. = A197+57.24

C3
P.I. STA. = A205+81.57
NORTHING = 555,426.55
EASTING = 2,438,627.7
Δ = 93°07'47"
D = 12°43'57"
T = 475.28'
L = 731.44'
R = 450.00'
E = 204.51'
P.C. STA. = A201+06.29
P.T. STA. = A208+37.73

C4
P.I. STA. = A217+72.77
NORTHING = 554,859.54
EASTING = 2,439,919.04
Δ = 17°52'22"
D = 5°43'46"
T = 157.25'
L = 311.94'
R = 1000.00'
E = 12.29'
P.C. STA. = A216+15.52
P.T. STA. = A219+27.46

C7
P.I. STA. = A154+96.30
NORTHING = 556,792.40
EASTING = 2,442,289.43
Δ = 32°28'34"
D = 11°56'26"
T = 139.75'
L = 271.98'
R = 479.84'
E = 19.94'
P.C. STA. = A153+56.55
P.T. STA. = A156+28.53

BASELINE B

C5
P.I. STA. = B305+28.07
NORTHING = 553,666.24
EASTING = 2,441,264.10
Δ = 93°07'42"
D = 11°27'33"
T = 528.07'
L = 812.70'
R = 500.00'
E = 227.23'
P.C. STA. = B300+00.00
P.T. STA. = B308+12.70

C6
P.I. STA. = B326+47.73
NORTHING = 555,516.90
EASTING = 2,442,733.56
Δ = 57°38'55"
D = 11°27'33"
T = 275.15'
L = 503.08'
R = 500.00'
E = 70.71'
P.C. STA. = B323+72.58
P.T. STA. = B328+75.66

BASELINE C

C8
P.I. STA. = C404+63.46
NORTHING = 558,193.58
EASTING = 2,440,858.24
Δ = 112°04'51"
D = 25°27'53"
T = 334.08'
L = 440.14'
R = 225.00'
E = 177.79'
P.C. STA. = C401+29.38
P.T. STA. = C405+69.52

NOTES:

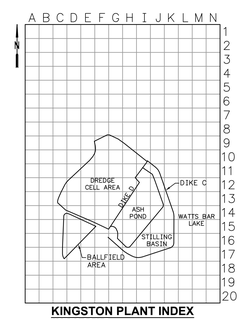
1. TOPOGRAPHIC MAPPING WAS GENERATED FROM A LIDAR SURVEY PERFORMED ON JULY 23, 2010, BY TUCK MAPPING SOLUTIONS, INC.
2. FORMER "ASH POND BOUNDARY" WAS OBTAINED FROM PERMIT DRAWING 10W425-21 (DATED 4/28/81). THE BOUNDARY LINE WAS RE-SCALED, ROTATED AND RECTIFIED, BASED ON THE LOCATIONS OF EXISTING FEATURES, TO FIT THE CURRENT COORDINATE SYSTEM.
3. A BOUNDARY HAS NOT BEEN PREVIOUSLY DEFINED ALONG THE SOUTHWESTERN PERIMETER OF THE DREDGE CELL AND ASH POND.
4. ALONG SWAN POND ROAD, THE OUTBOARD LIMITS OF PERIMETER WALL STABILIZATION ARE SET 100 FEET OR MORE FROM THE CURRENT EDGE OF THE ROADWAY PAVEMENT.
5. SEE TERMS AND CONDITIONS FOR SCHEDULE OF SEGMENT CONSTRUCTION.

SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.

TABLE OF BASELINE COORDINATES

STATION	BASELINE	NORTHING	EASTING
A100+00.00	BASELINE A	554,363.86	2,440,477.77
A105+23.11	BASELINE A	554,016.70	2,440,869.08
A144+20.84	BASELINE A	555,776.75	2,442,643.08
A225+17.13	BASELINE A	554,363.86	2,440,477.77
B300+00.00	BASELINE B	554,016.70	2,440,869.08
B328+75.66	BASELINE B	555,776.75	2,442,643.08
C401+00.00	BASELINE C	557,830.12	2,440,859.53
C411+18.95	BASELINE C	557,858.57	2,440,040.71



KINGSTON PLANT INDEX
NOT TO SCALE

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. CODE
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–
ISSUED FOR REVIEW											

DISCIPLINE INTERFACE

SCALE: 1"=200' EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT EXISTING CONDITIONS AND BASELINE LAYOUT

Stantec
Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

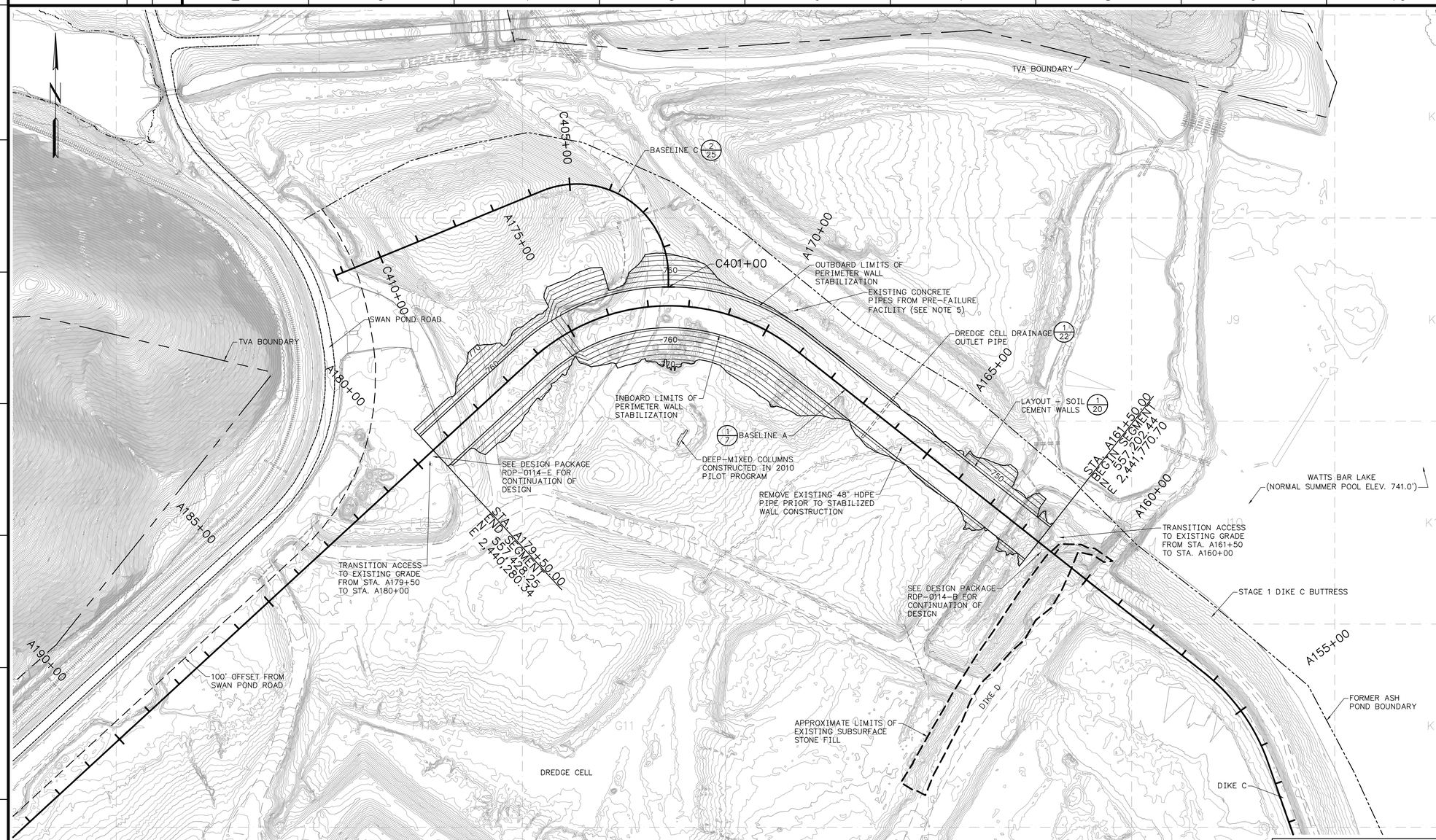
AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-03 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:200
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
N:\DGN\PROJECTS\KINGSTON\10W217-03\ENVIRONMENTAL\DRAWING\PERIM_CONT\SEG_DIKE_C\PERM_ITR\WORK\SHEET\10W217-03.DWG

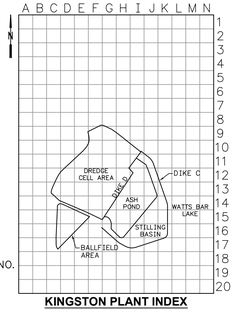


NOTES:

1. TOPOGRAPHIC MAPPING WAS GENERATED FROM A LIDAR SURVEY PERFORMED ON JULY 23, 2010, BY TUCK MAPPING SOLUTIONS, INC.
2. THE "FORMER ASH POND BOUNDARY" SHOWN ALONG THE PERIMETER WITH WATTS BAR LAKE WAS OBTAINED FROM PERMIT DRAWING 10W425-21 (DATED 4/28/81). THIS BOUNDARY LINE WAS RESCALED, ROTATED AND RECTIFIED, BASED ON THE LOCATIONS OF EXISTING FEATURES, TO FIT THE CURRENT COORDINATE SYSTEM.
3. ALONG SWAN POND ROAD, THE OUTBOARD LIMITS OF PERIMETER WALL STABILIZATION ARE SET 100 FEET OR MORE FROM THE CURRENT EDGE OF THE ROADWAY PAVEMENT.
4. THE GRADING SHOWN IS AN INTERIM CONDITION PENDING CONSTRUCTION OF COMPONENTS OF THE NORTH AND CENTRAL DREDGE CELL (CELLS 2 & 3) ASH STACKING PLAN.
5. TWO BURIED CONCRETE PIPES REMAIN FROM THE PRE-FAILURE FACILITY; THE APPROXIMATE LOCATION OF ONE PIPE IS INDICATED. THE PIPES ARE APPROXIMATELY 48-INCHES IN DIAMETER, AND THE LENGTHS ARE UNKNOWN. THESE PIPES WILL NOT BE REMOVED PRIOR TO PERIMETER WALL STABILIZATION. IF THE PIPES INTERFERE WITH CONSTRUCTION OF THE SOIL-CEMENT WALLS, THE PIPES SHALL BE EXCAVATED BY THE EARTHWORK CONTRACTOR. THE AREA SHALL BE BACKFILLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
6. UNKNOWN BURIED OBSTRUCTIONS MAY EXIST WITHIN THE AREA OF PERIMETER WALL STABILIZATION. IF THESE LOCATIONS ARE EXCAVATED, THEY SHALL BE BACKFILLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.



KINGSTON PLANT INDEX
NOT TO SCALE

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. NO.
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: 1"=100' EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT
PERIMETER WALL STABILIZATION
GRADING PLAN

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
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Fax 859.422.3100
www.stantec.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

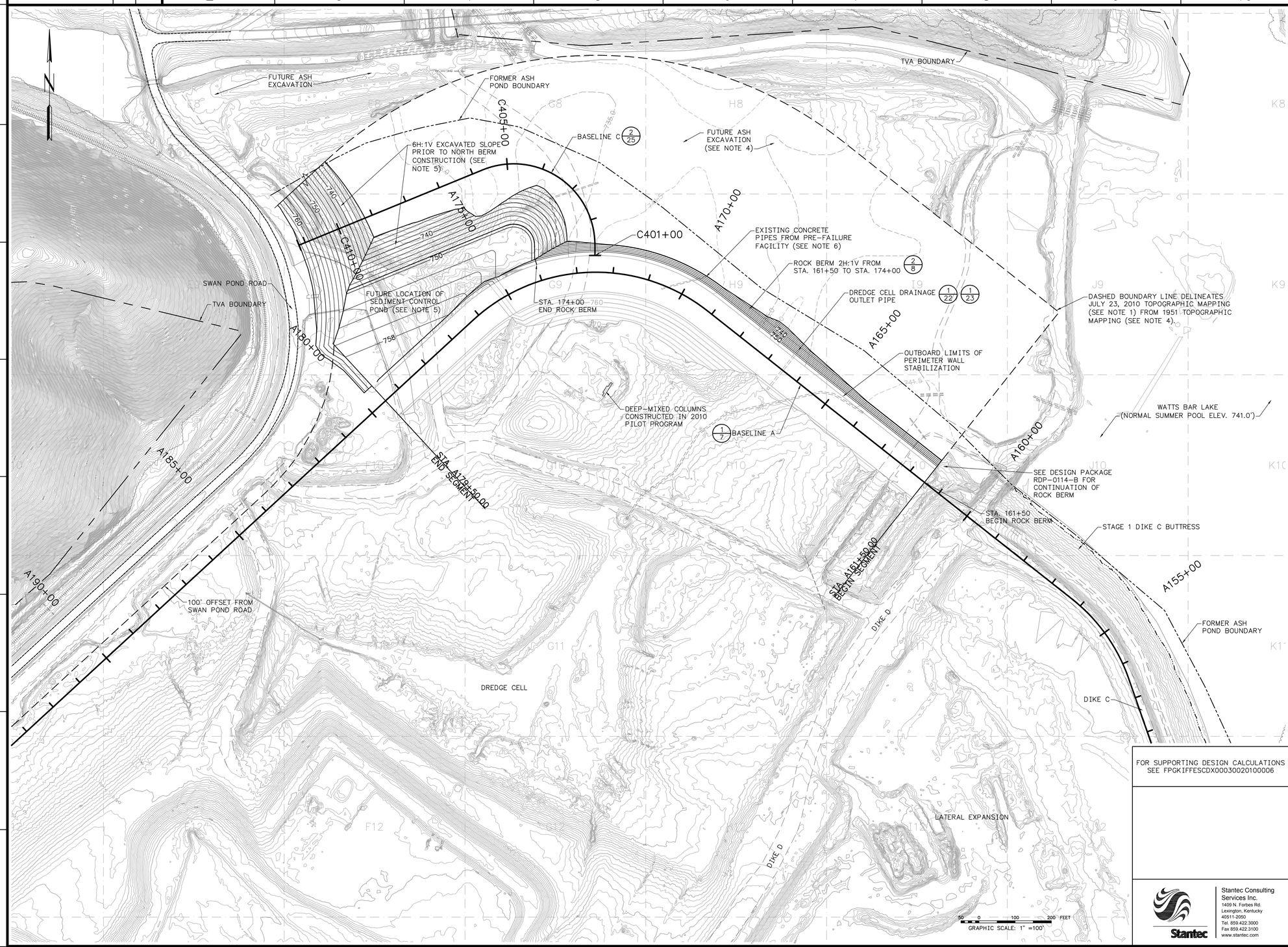
AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-04 | R 0

PLOT FACTOR:100
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
N:\DRAWINGS\10W217\SHEETS\10W217-04-R0.DWG
N:\CIVIL\TVA\KINGSTON\ENVIRONMENTAL\DRAWING\PERIM_CONT\SEG_2\DIKE_C\PERIM_CONT_STR\VIEWS\SHEETS\10W217-04-R0.DWG

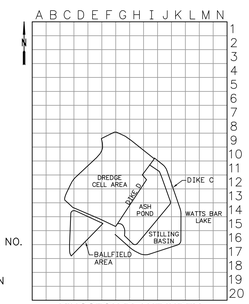


NOTES:

1. TOPOGRAPHIC MAPPING WAS GENERATED FROM A LIDAR SURVEY PERFORMED ON JULY 23, 2010, BY TUCK MAPPING SOLUTIONS, INC
2. THE "FORMER ASH POND BOUNDARY" SHOWN ALONG THE PERIMETER WITH WATTS BAR LAKE WAS OBTAINED FROM PERMIT DRAWING 10W425-21 (DATED 4/28/81). THIS BOUNDARY LINE WAS RESCALED, ROTATED AND RECTIFIED, BASED ON THE LOCATIONS OF EXISTING FEATURES, TO FIT THE CURRENT COORDINATE SYSTEM.
3. ALONG SWAN POND ROAD, THE OUTBOARD LIMITS OF PERIMETER WALL STABILIZATION ARE SET 100 FEET OR MORE FROM THE CURRENT EDGE OF THE ROADWAY PAVEMENT.
4. ASH WITHIN THE EMBAYMENT AREA OUTSIDE THE PERIMETER CONTAINMENT WILL BE EXCAVATED AND REMOVED BY TVA IN ACCORDANCE WITH DESIGN PACKAGE RDP-0112-A AND SUBSEQUENT APPROVED DESIGN PACKAGES. FOR THE PURPOSES OF THESE DRAWINGS ONLY, THE MAXIMUM DEPTH OF EXCAVATION IN THE EMBAYMENT IS ASSUMED TO APPROXIMATELY COINCIDE WITH THE NATURAL GROUND SURFACE PRIOR TO CONSTRUCTION OF THE ASH POND. CONTOUR LINES DIGITIZED FROM A U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAP (DATED 1951) ARE ASSUMED TO REPRESENT THE FORMER GROUND SURFACE IN THE AREA SHOWN.
5. THE GEOMETRY SHOWN FOR THE NORTH BERM AND AREA ENCLOSED BY THE NORTH BERM IS CONCEPTUAL. A SEDIMENT CONTROL POND IS PROPOSED FOR THIS AREA OF THE SITE. DETAILS FOR THE NORTH BERM AND RELATED ELEMENTS, INCLUDING SLOPES, FILL MATERIAL SPECIFICATIONS, COMPACTION REQUIREMENTS, DRAINAGE FEATURES, ETC. WILL BE DEFINED IN A FUTURE DESIGN PACKAGE.
6. TWO BURIED CONCRETE PIPES REMAIN FROM THE PRE-FAILURE FACILITY; THE APPROXIMATE LOCATION OF ONE PIPE IS INDICATED. THE PIPES ARE APPROXIMATELY 48-INCHES IN DIAMETER, AND THE LENGTHS ARE UNKNOWN. THESE PIPES WILL NOT BE REMOVED PRIOR TO PERIMETER WALL STABILIZATION. IF THE PIPES INTERFERE WITH CONSTRUCTION OF THE SOIL-CEMENT WALLS, THE PIPES SHALL BE EXCAVATED BY THE EARTHWORK CONTRACTOR. THE AREA SHALL BE BACKFILLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.



KINGSTON PLANT INDEX
NOT TO SCALE

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–
ISSUED FOR REVIEW											

SCALE: 1"=100' EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT ROCK BERM GRADING PLAN

Stantec Consulting Services Inc.
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40511-2050
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Fax 859.422.3100
www.stantec.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

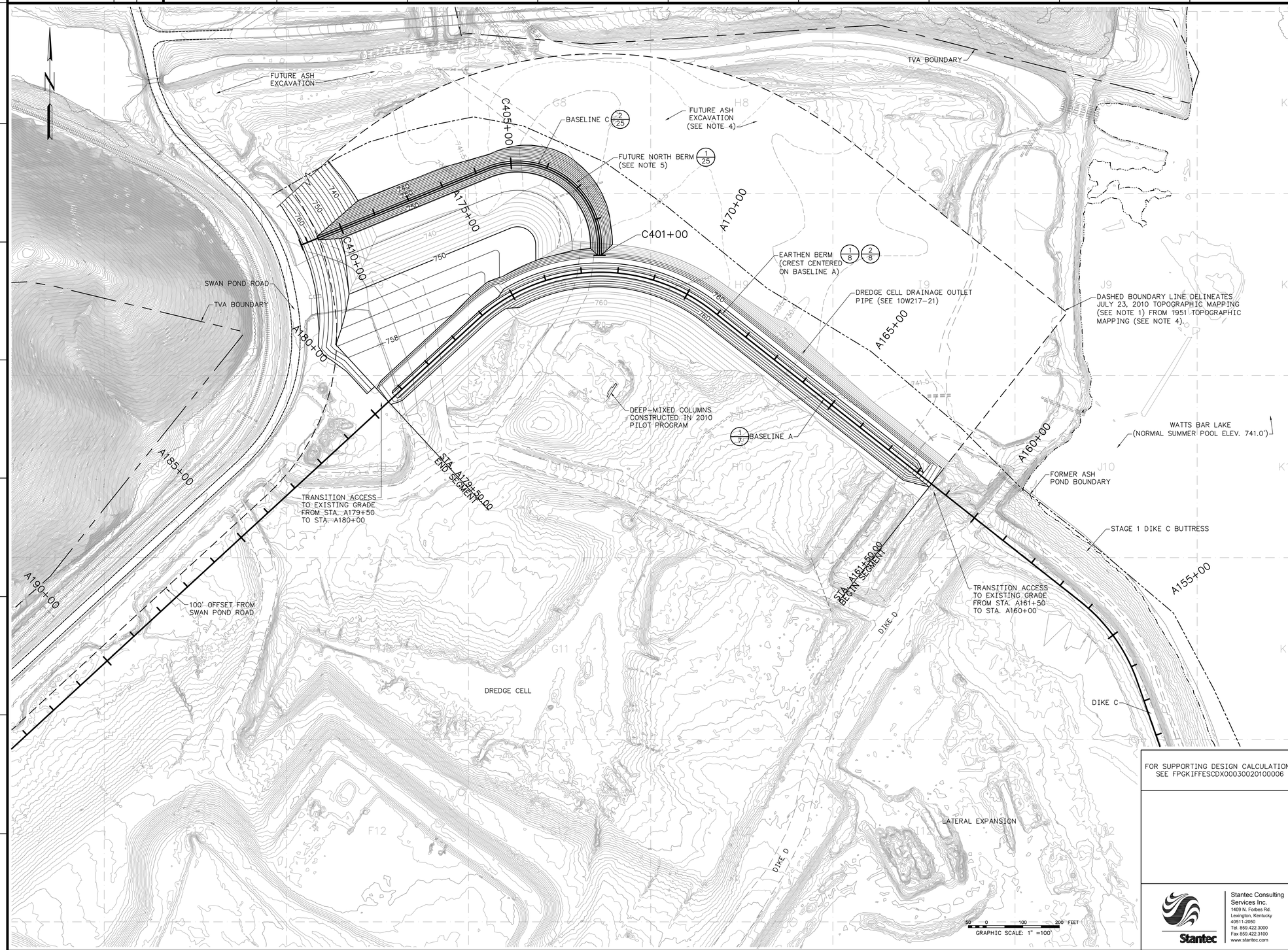
AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-05 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:100
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/29/2011, USER: GRAHAM, DAVID
V:\KNOXVILLE\KINGSTON\CIVIL\DWG\PERIM_CONT\DSG_DIKE_C\REV0_1ER\WORK\SHEET\10W217-05-R0.DWG

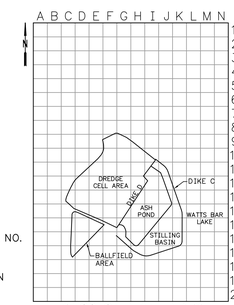


NOTES:

1. TOPOGRAPHIC MAPPING WAS GENERATED FROM A LIDAR SURVEY PERFORMED ON JULY 23, 2010, BY TUCK MAPPING SOLUTIONS, INC.
2. THE "FORMER ASH POND BOUNDARY" SHOWN ALONG THE PERIMETER WITH WATTS BAR LAKE WAS OBTAINED FROM PERMIT DRAWING 10W425-21 (DATED 4/28/81). THIS BOUNDARY LINE WAS RESCALED, ROTATED AND RECTIFIED, BASED ON THE LOCATIONS OF EXISTING FEATURES, TO FIT THE CURRENT COORDINATE SYSTEM.
3. ALONG SWAN POND ROAD, THE OUTBOARD LIMITS OF PERIMETER WALL STABILIZATION ARE SET 100 FEET OR MORE FROM THE CURRENT EDGE OF THE ROADWAY PAVEMENT.
4. ASH WITHIN THE EMBAYMENT AREA OUTSIDE THE PERIMETER CONTAINMENT WILL BE EXCAVATED AND REMOVED BY TVA IN ACCORDANCE WITH DESIGN PACKAGE RDP-0112-A AND SUBSEQUENT APPROVED DESIGN PACKAGES. FOR THE PURPOSES OF THESE DRAWINGS ONLY, THE MAXIMUM DEPTH OF EXCAVATION IN THE EMBAYMENT IS ASSUMED TO APPROXIMATELY COINCIDE WITH THE NATURAL GROUND SURFACE PRIOR TO CONSTRUCTION OF THE ASH POND. CONTOUR LINES DIGITIZED FROM A U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAP (DATED 1951) ARE ASSUMED TO REPRESENT THE FORMER GROUND SURFACE IN THE AREA SHOWN.
5. THE GEOMETRY SHOWN FOR THE NORTH BERM AND AREA ENCLOSED BY THE NORTH BERM IS CONCEPTUAL. A SEDIMENT CONTROL POND IS PROPOSED FOR THIS AREA OF THE SITE. DETAILS FOR THE NORTH BERM AND RELATED ELEMENTS, INCLUDING SLOPES, FILL MATERIAL SPECIFICATIONS, COMPACTION REQUIREMENTS, DRAINAGE FEATURES, ETC. WILL BE DEFINED IN A FUTURE DESIGN PACKAGE.

SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.



KINGSTON PLANT INDEX
NOT TO SCALE

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: 1"=100' EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT EARTHEN BERM AND NORTH BERM GRADING PLAN

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

Stantec Consulting Services Inc.
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Fax 859.422.3100
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KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

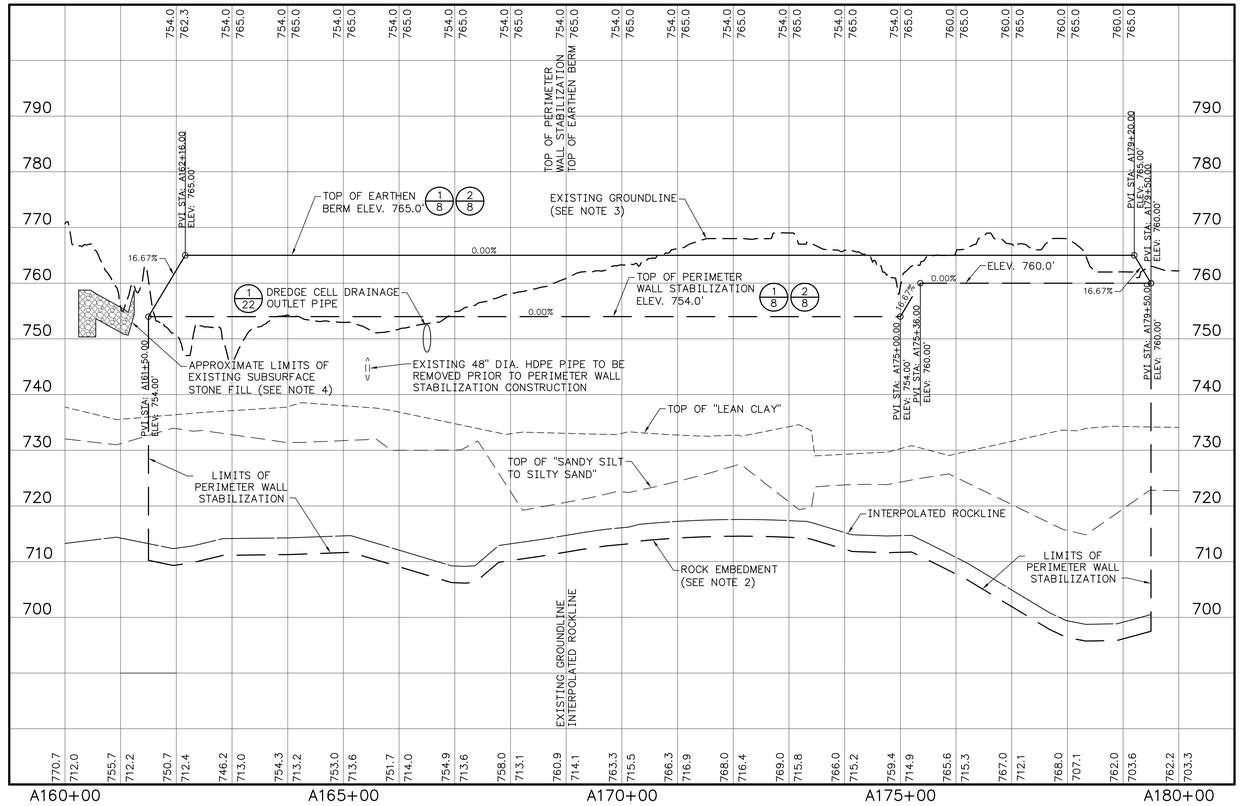
AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-06 | R 0

PLOT FACTOR:100
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC	0
TASK COMPLETED BY:	REV NO.

PLOT DATE: 03/28/2011 USER: GRAHAM, DAVE
U:\KIFFESCDX\00030\DRAWINGS\10W217\10W217-06-R0.DWG



1/7 PROFILE – BASELINE A
SCALE: 1"=100' (HORIZONTAL)
1"=10' (VERTICAL)

NOTES:

1. THE ELEVATIONS OF THE TOP OF ROCK AND THE SOIL STRATA SHOWN ON THIS DRAWING DEPICT APPROXIMATE SUBSURFACE CONDITIONS ONLY AT SPECIFIC BORING LOCATIONS AT THE TIME OF DRILLING. CONDITIONS AT OTHER LOCATIONS MAY DIFFER FROM THOSE OCCURRING AT THE BORING LOCATIONS. ANY CORRELATIONS SHOWN BETWEEN BORINGS ARE BASED ON INTERPOLATION. ACTUAL CONDITIONS BETWEEN BORINGS ARE UNKNOWN AND MAY DIFFER FROM THOSE SHOWN.
2. PERIMETER WALL STABILIZATION SHALL BE ADVANCED TO FORM THE MINIMUM DEPTH OF ROCK EMBEDMENT AS REQUIRED IN THE SPECIFICATIONS. THE EMBEDMENT SHOWN HERE IS FOR ILLUSTRATION ONLY.
3. EXISTING GROUNDLINE BASED ON TOPOGRAPHIC MAPPING GENERATED FROM A LIDAR SURVEY ON JULY 23, 2010, BY TUCK MAPPING SOLUTIONS, INC.
4. BURIED STONE FILL MAY EXIST AT VARIOUS LOCATIONS WITHIN THE PROJECT LIMITS. WHERE KNOWN TO EXIST, THE APPROXIMATE LOCATION OF STONE FILL IS INDICATED ON THE DRAWINGS. IF BURIED STONE MATERIAL INTERFERES WITH CONSTRUCTION OF THE SOIL–CEMENT WALL, THIS MATERIAL SHALL BE EXCAVATED BY THE EARTHWORK CONTRACTOR.
5. ADDITIONAL BURIED PIPES ARE KNOWN TO EXIST. SEE PERIMETER WALL STABILIZATION GRADING PLAN.
6. UNKNOWN BURIED OBSTRUCTIONS MAY EXIST WITHIN THE AREA OF PERIMETER WALL STABILIZATION. IF THESE LOCATIONS ARE EXCAVATED, THEY SHALL BE BACKFILLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

R 0 ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP–0113–E

PERIMETER CONTAINMENT
PROFILE – BASELINE A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

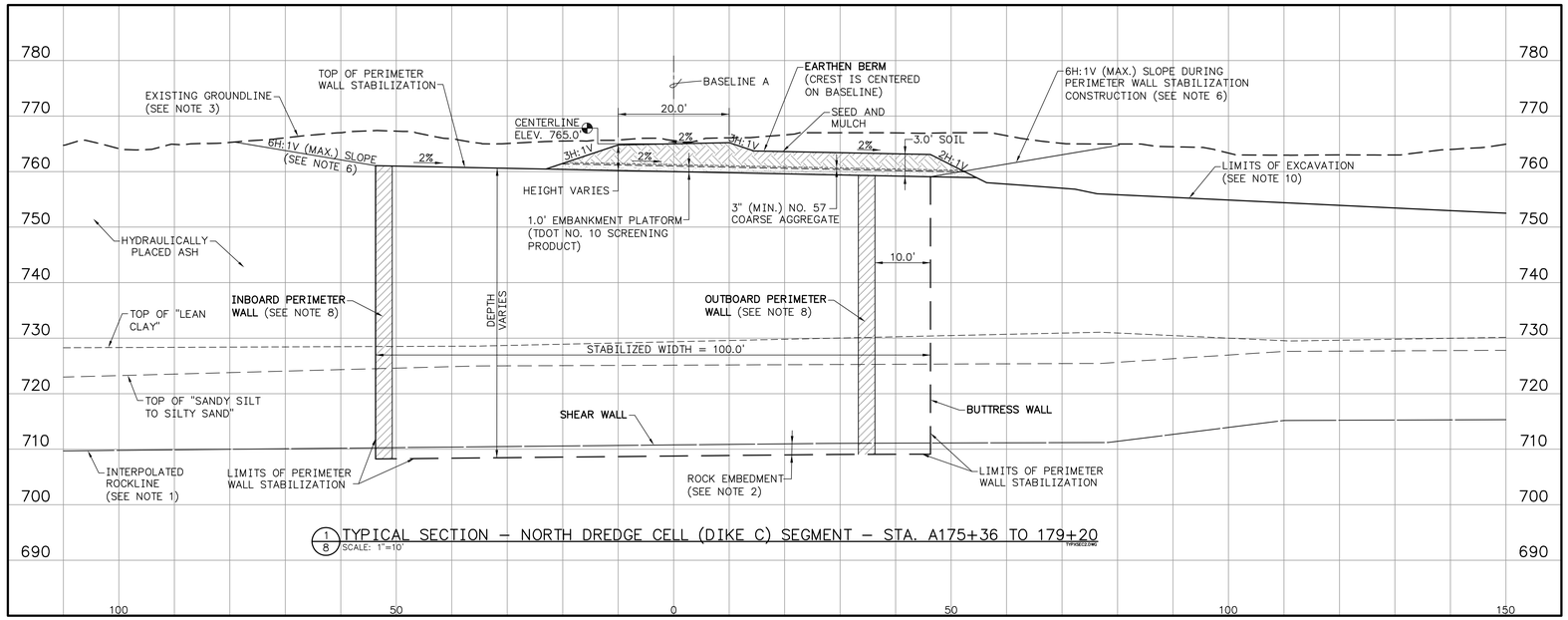
AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217–07 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

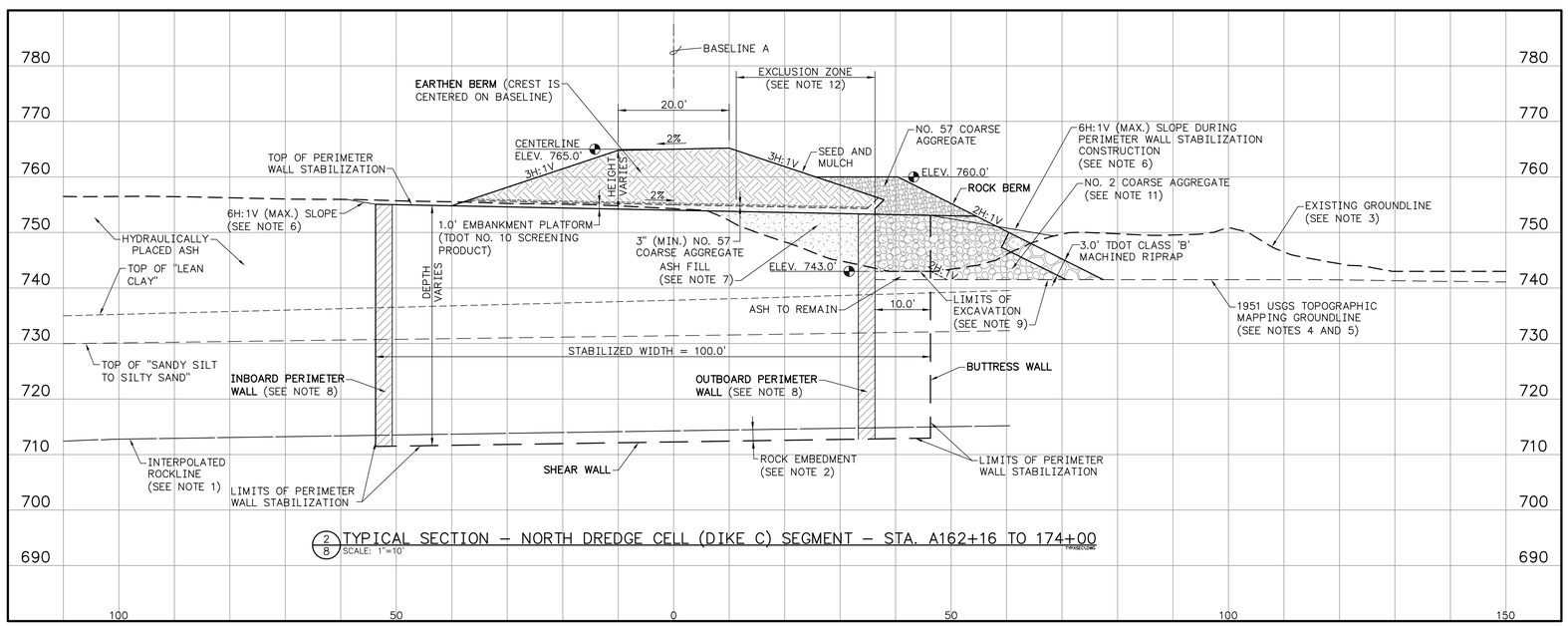
PLOT FACTOR:10
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/20/2011 USER: GRAHAM, DAVE
\\USCHA-FS1\WORKGROUP\KINGSTON\CIVIL\DRAWINGS\ENVIRONMENTAL\GRADING\PERIM_CONT\REV_1\FIG_2\FIG_C\REV_1\FIG\SHEET\10W217-07-R0.DWG



1/8 TYPICAL SECTION – NORTH DREDGE CELL (DIKE C) SEGMENT – STA. A175+36 TO 179+20
SCALE: 1"=10'



2/8 TYPICAL SECTION – NORTH DREDGE CELL (DIKE C) SEGMENT – STA. A162+16 TO 174+00
SCALE: 1"=10'

NOTES:

1. THE ELEVATIONS OF THE TOP OF ROCK AND THE SOIL STRATA SHOWN ON THIS DRAWING DEPICT APPROXIMATE SUBSURFACE CONDITIONS ONLY AT SPECIFIC BORING LOCATIONS AT THE TIME OF DRILLING. CONDITIONS AT OTHER LOCATIONS MAY DIFFER FROM THOSE OCCURRING AT THE BORING LOCATIONS. ANY CORRELATIONS SHOWN BETWEEN BORINGS ARE BASED ON INTERPOLATION. ACTUAL CONDITIONS BETWEEN BORINGS ARE UNKNOWN AND MAY DIFFER FROM THOSE SHOWN.
2. SOIL–CEMENT WALLS SHALL BE CONSTRUCTED TO THE MINIMUM DEPTH OF ROCK EMBEDMENT AS REQUIRED IN THE SPECIFICATIONS. THE EMBEDMENT SHOWN HERE IS FOR ILLUSTRATION ONLY.
3. EXISTING GROUNDLINE BASED ON TOPOGRAPHIC MAPPING GENERATED FROM A LIDAR SURVEY ON JULY 23, 2010, BY TUCK MAPPING SOLUTIONS, INC.
4. 1951 USGS GROUNDLINE IS BASED ON INTERPOLATION BETWEEN CONTOURS SHOWN ON 1951 U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAPPING AND IS INCLUDED TO REPRESENT ORIGINAL TOPOGRAPHY.
5. ASH WITHIN THE EMBAYMENT AREA OUTSIDE THE PERIMETER CONTAINMENT WILL BE EXCAVATED AND REMOVED BY TVA IN ACCORDANCE WITH DESIGN PACKAGE RDP–0112–A AND SUBSEQUENT APPROVED DESIGN PACKAGES. FOR THE PURPOSES OF THESE DRAWINGS ONLY, THE MAXIMUM DEPTH OF EXCAVATION IN THE EMBAYMENT IS ASSUMED TO APPROXIMATELY COINCIDE WITH THE NATURAL GROUND SURFACE PRIOR TO CONSTRUCTION OF THE ASH POND. CONTOUR LINES DIGITIZED FROM A U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAP (DATED 1951) ARE ASSUMED TO REPRESENT THE FORMER GROUND SURFACE IN THE AREA SHOWN.
6. THE 6H:1V SLOPES IN THE ASH SURFACE DURING PERIMETER WALL STABILIZATION MAY BE SHIFTED TO ACCOMMODATE A WIDER CONSTRUCTION PLATFORM AS MAY BE NEEDED FOR PERIMETER WALL STABILIZATION CONSTRUCTION.
7. IN AREAS WHERE THE EXISTING GRADE IS BELOW THE GRADE REQUIRED FOR PERIMETER WALL STABILIZATION, THE AREA SHALL BE BACKFILLED WITH COMPACTED ASH BY THE EARTHWORK CONTRACTOR.
8. SEE SPECIFICATIONS FOR THE WIDTH OF THE INBOARD PERIMETER WALL AND OUTBOARD PERIMETER WALL. THE WALL WIDTHS SHOWN HERE ARE FOR ILLUSTRATION ONLY.
9. BETWEEN STATIONS 161+50 AND 173+61, ASH BETWEEN THE BUTTRESS WALLS SHALL BE EXCAVATED TO FULL DEPTH (AS DEFINED IN DESIGN PACKAGE RDP–0112–A AND SUBSEQUENT APPROVED DESIGN PACKAGES) OR TO ELEVATION 743.0 FEET, WHICHEVER IS HIGHER. OUTSIDE THE BUTTRESS WALLS, THE ASH SHALL BE EXCAVATED ON A SLOPE DOWN TO THE UNDERLYING SOIL, AND THE BASE OF THE ROCK BERM SHALL BE PLACED UPON NATIVE SOIL AND NOT UPON SLUICED OR FAILED ASH.
10. THE GEOMETRY SHOWN FOR THE AREA ENCLOSED BY THE NORTH BERM IS CONCEPTUAL. A SEDIMENT CONTROL POND IS PROPOSED FOR THIS AREA OF THE SITE. DETAILS FOR THE NORTH BERM AND RELATED ELEMENTS, INCLUDING SLOPES, FILL MATERIAL SPECIFICATIONS, COMPACTION REQUIREMENTS, DRAINAGE FEATURES, ETC. WILL BE DEFINED IN A FUTURE DESIGN PACKAGE.
11. DURING EXCAVATION OF ASH BETWEEN THE BUTTRESS WALL AND PLACEMENT OF NO. 2 COARSE AGGREGATE, THE DIFFERENCE IN SURFACE ELEVATION ON EITHER SIDE OF ANY BUTTRESS WALL SHALL NOT EXCEED FOUR FEET AT ANY TIME.
12. SURFACE LOADS ON THE TOP OF THE SOIL–CEMENT WALLS SHALL BE RESTRICTED DURING CONSTRUCTION OF THE ROCK BERM. FROM THE START OF MATERIAL EXCAVATION BETWEEN THE BUTTRESS WALLS, UNTIL THE STONE FILL REACHES THE TOP OF THE BUTTRESS WALLS, ALL MATERIALS AND EQUIPMENT THAT WOULD EXERT A SURFACE PRESSURE OF GREATER THAN 50 POUNDS PER SQUARE FOOT SHALL NOT BE PLACED OR OPERATED WITHIN THE AREA MEASURING 25 FEET INSIDE OF THE OUTER FACE OF THE PERIMETER WALL.

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

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REV NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

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DISCIPLINE INTERFACE

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP–0113–E

PERIMETER CONTAINMENT TYPICAL CROSS SECTIONS BASELINE A

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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TENNESSEE VALLEY AUTHORITY
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AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217–08 | R 0

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TASK COMPLETED BY: | REV NO.

PLOT FACTOR:10
W_TVA

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PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
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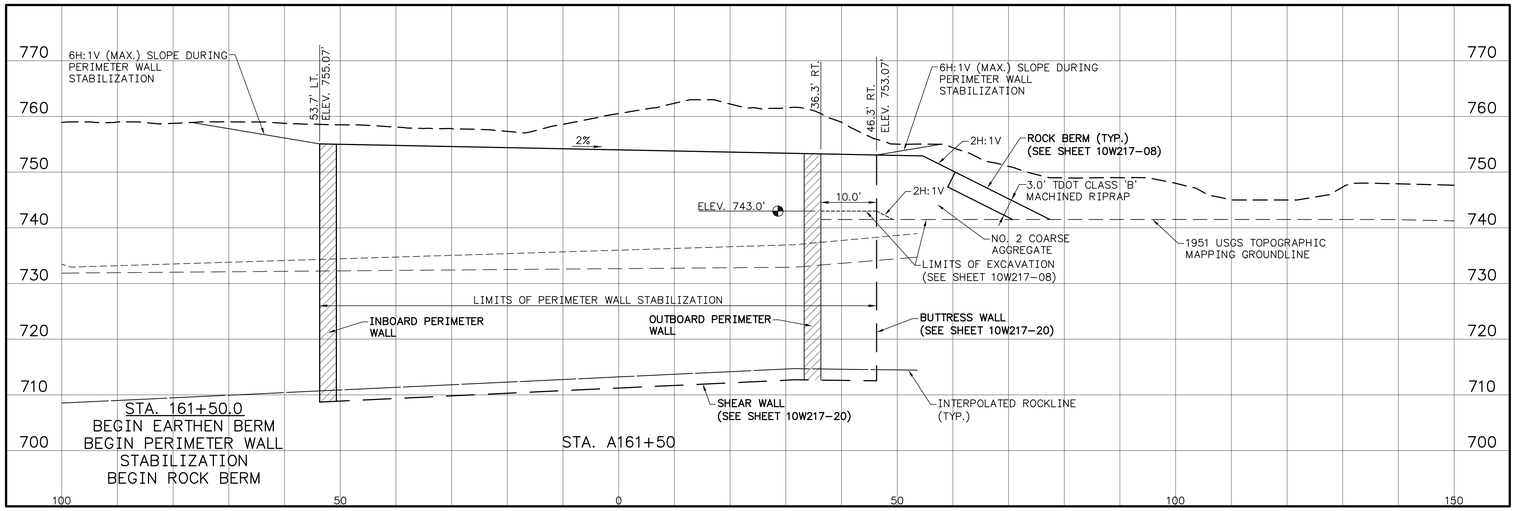

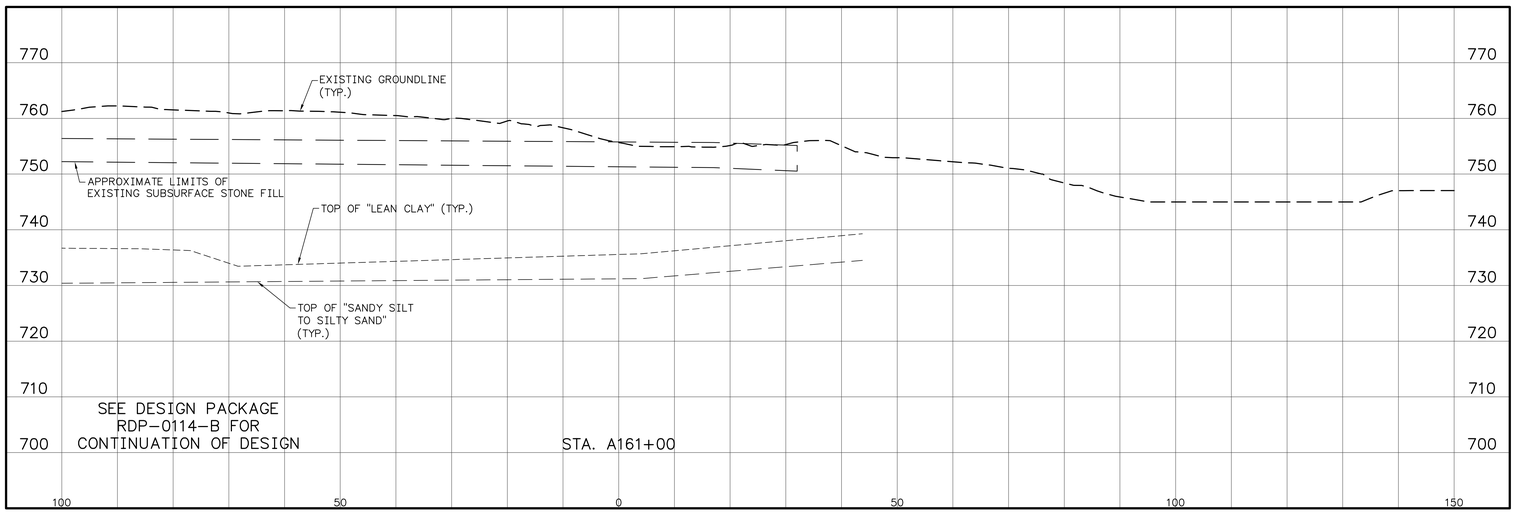

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REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. STAT.
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R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

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DISCIPLINE INTERFACE
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SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT CROSS SECTIONS BASELINE A

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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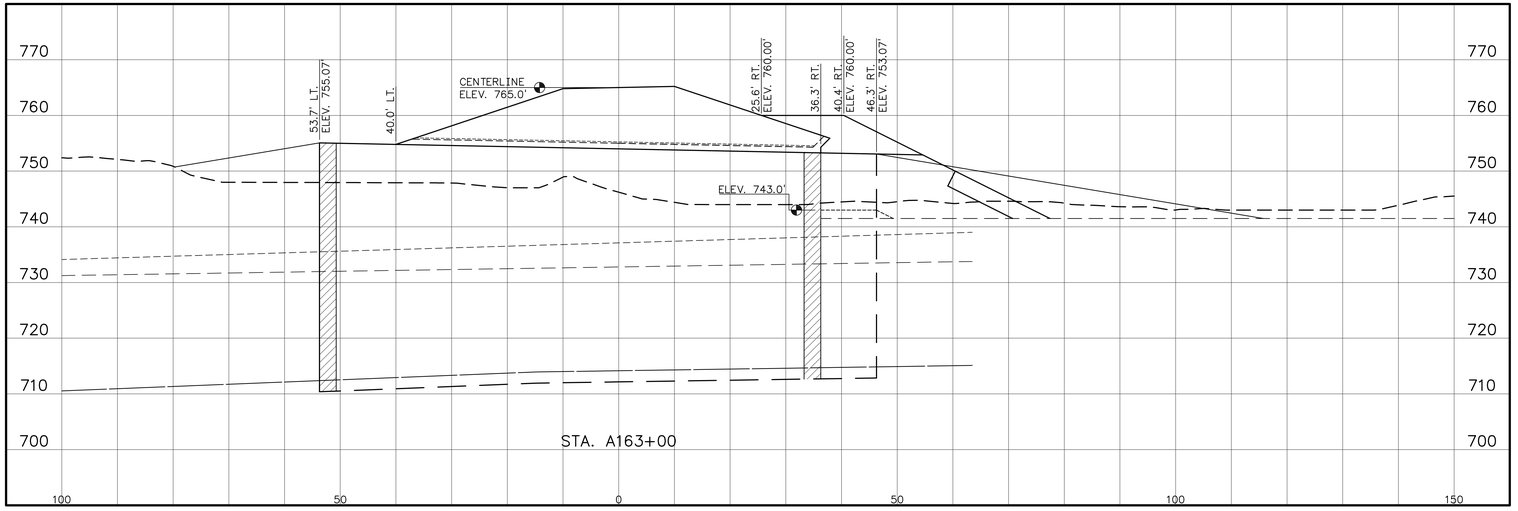

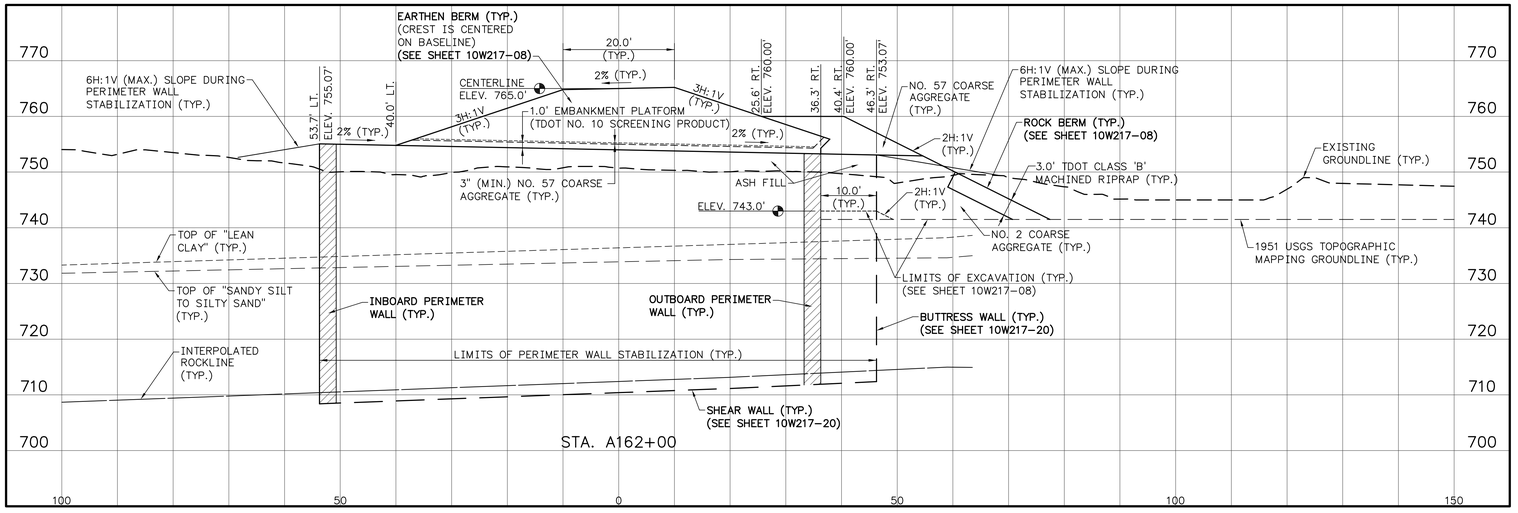

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NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT CROSS SECTIONS BASELINE A

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PLOT DATE: 03/29/2011 USER: GRAHAM, DAVID
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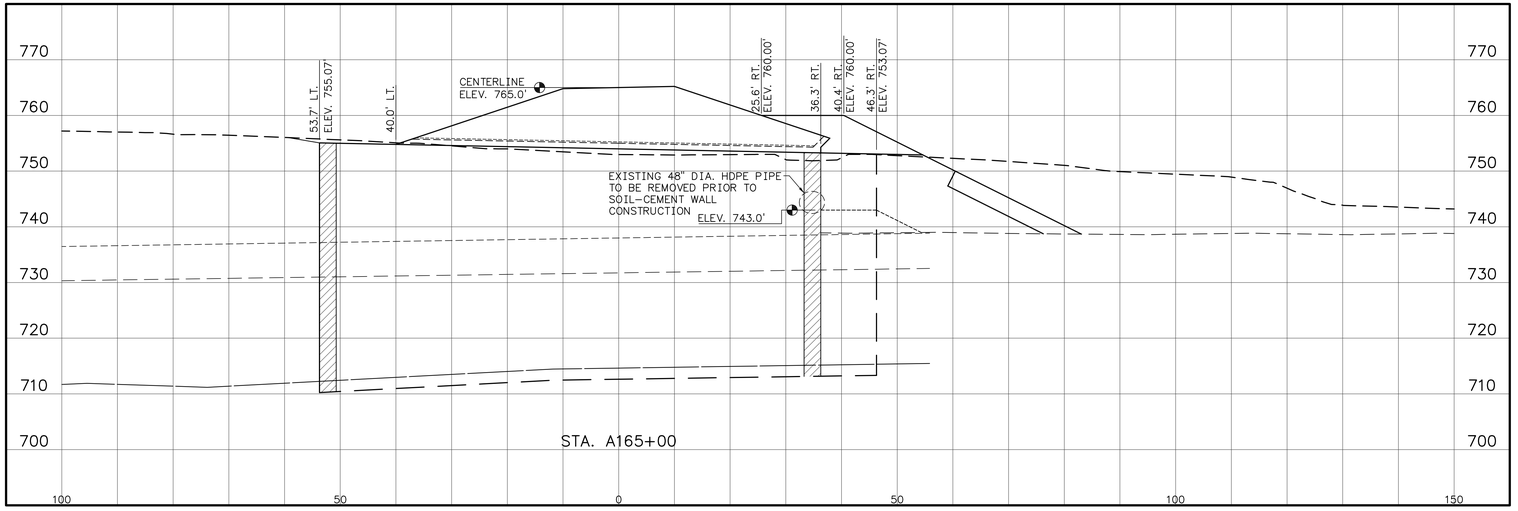

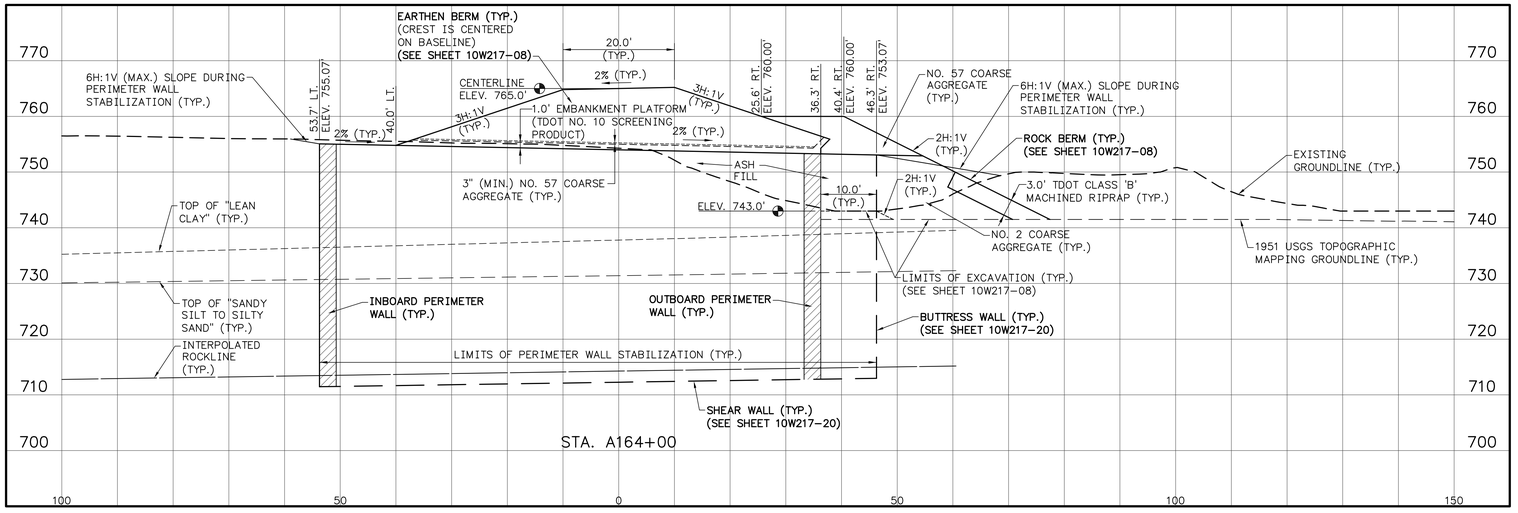

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SCALE: AS SHOWN EXCEPT AS NOTED

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NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT
CROSS SECTIONS
BASELINE A

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PLOT DATE: 03/29/2011, USER: GRAHAM, DAVE
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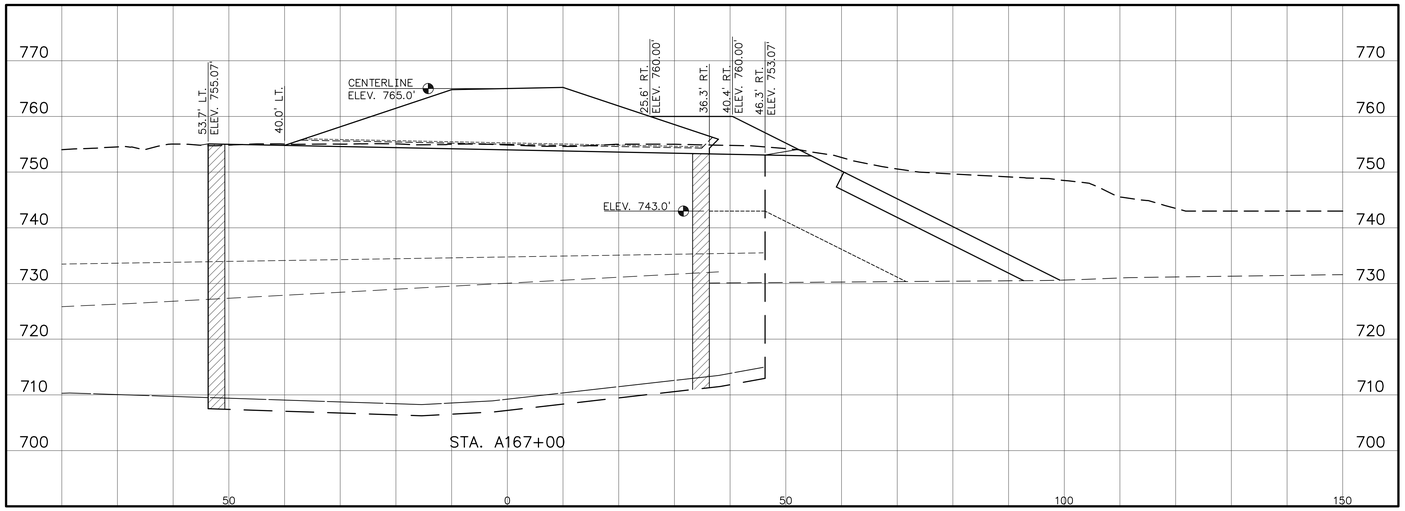

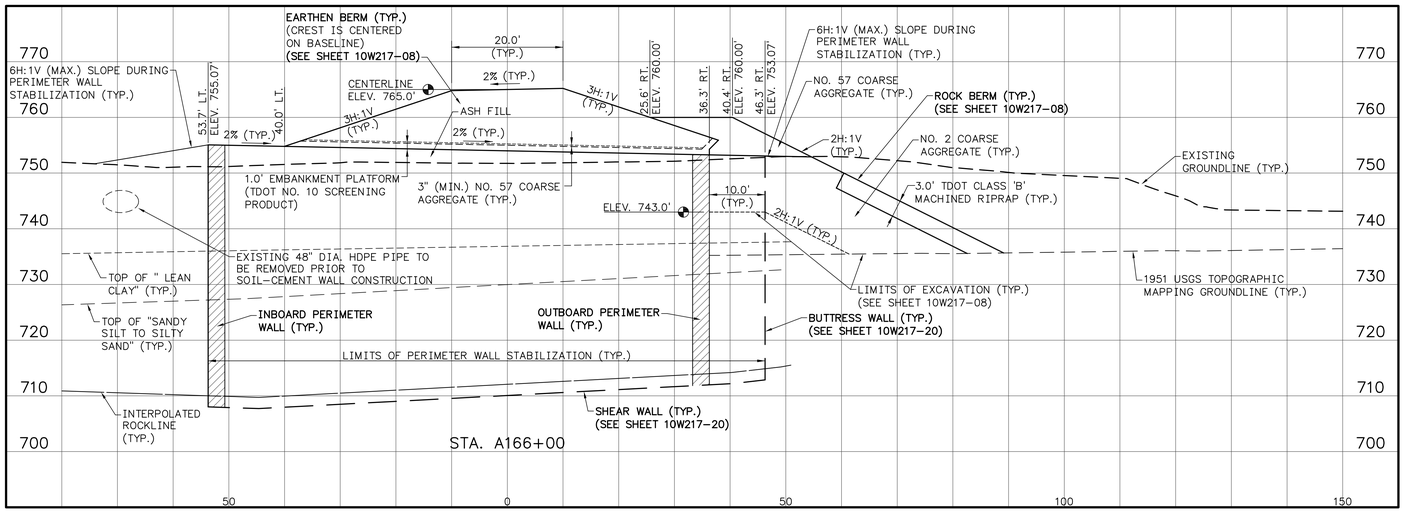

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PERIMETER CONTAINMENT
CROSS SECTIONS
BASELINE A

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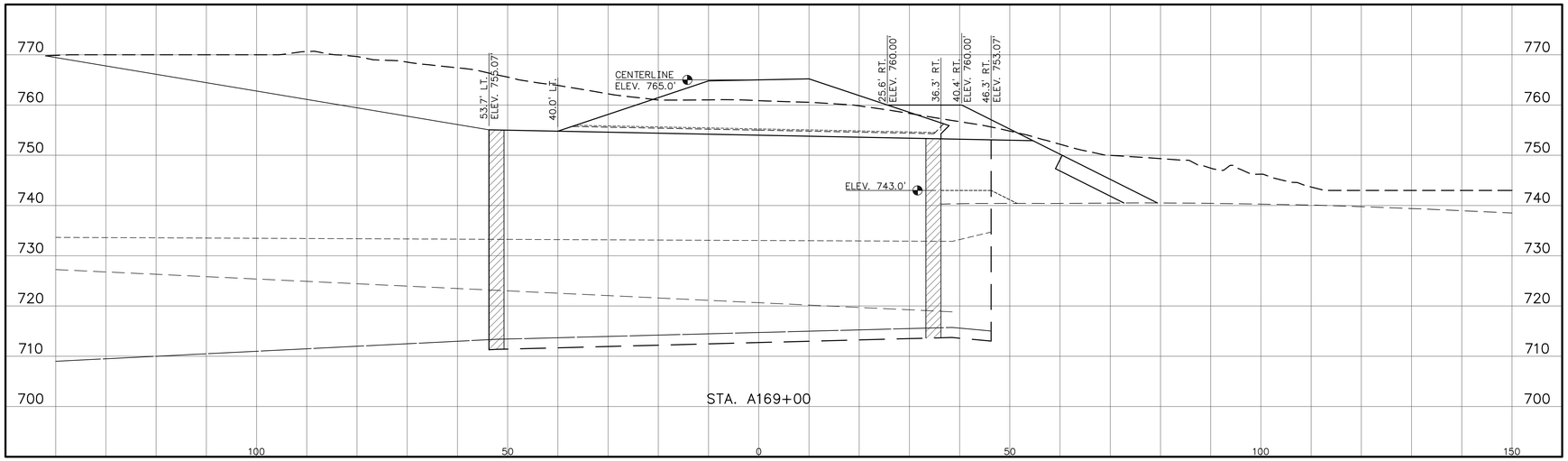

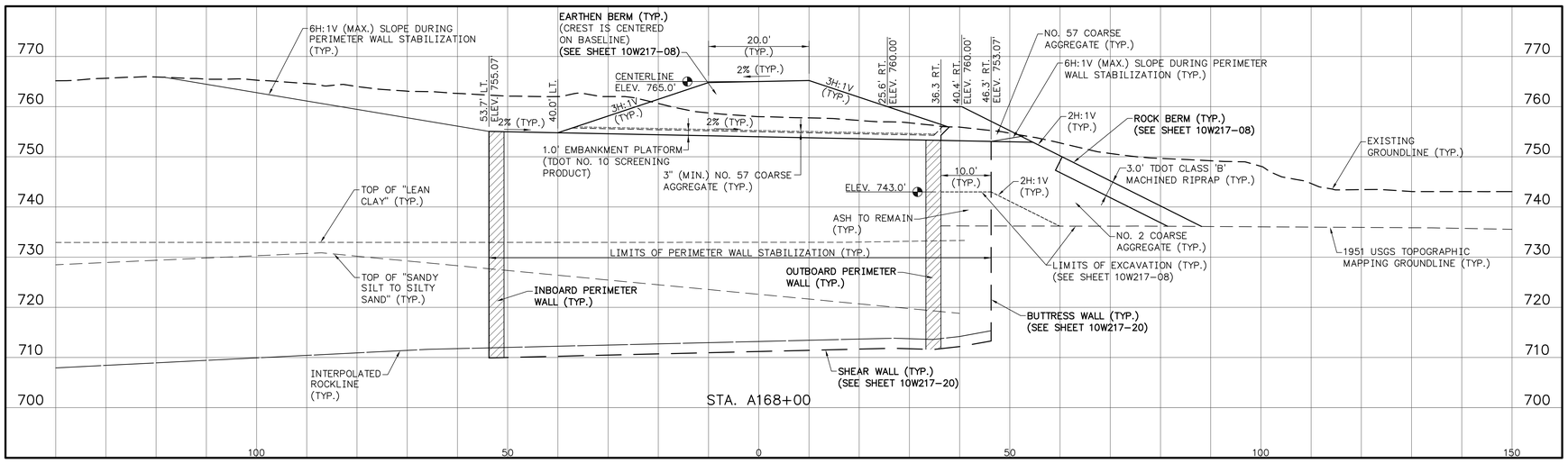

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PERIMETER CONTAINMENT CROSS SECTIONS BASELINE A

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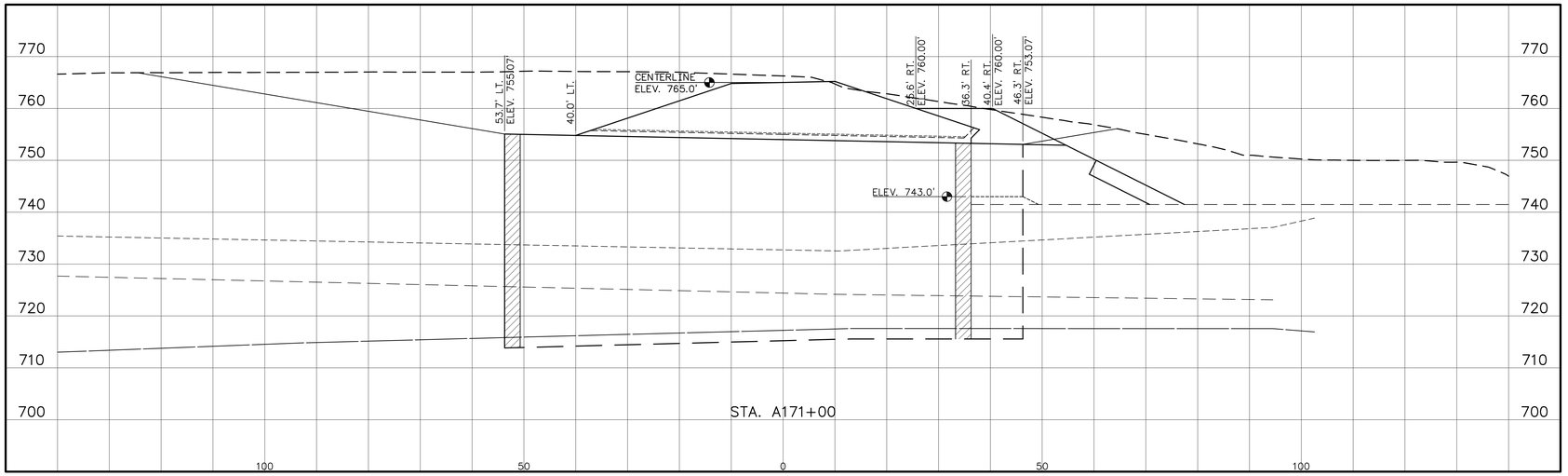

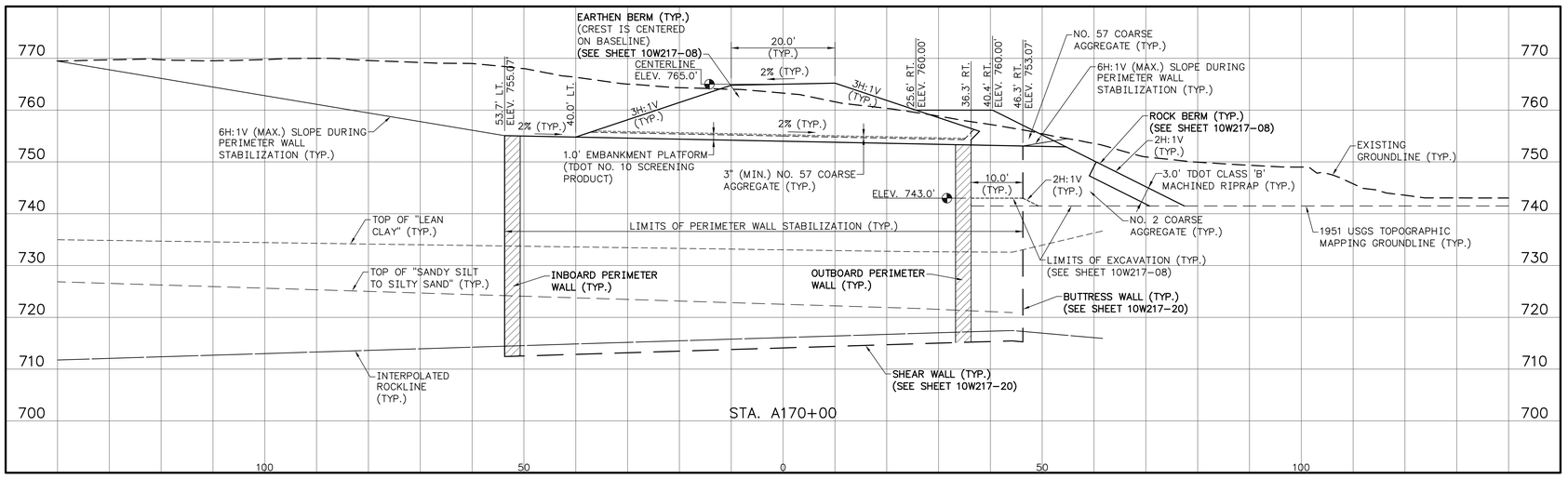

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NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT
CROSS SECTIONS
BASELINE A

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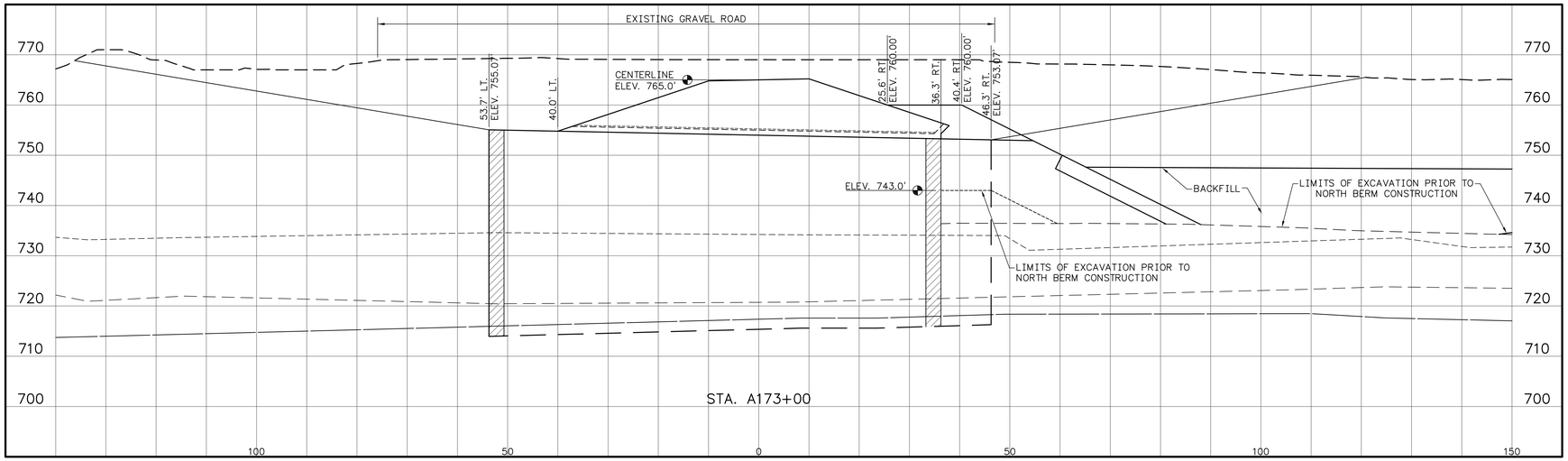

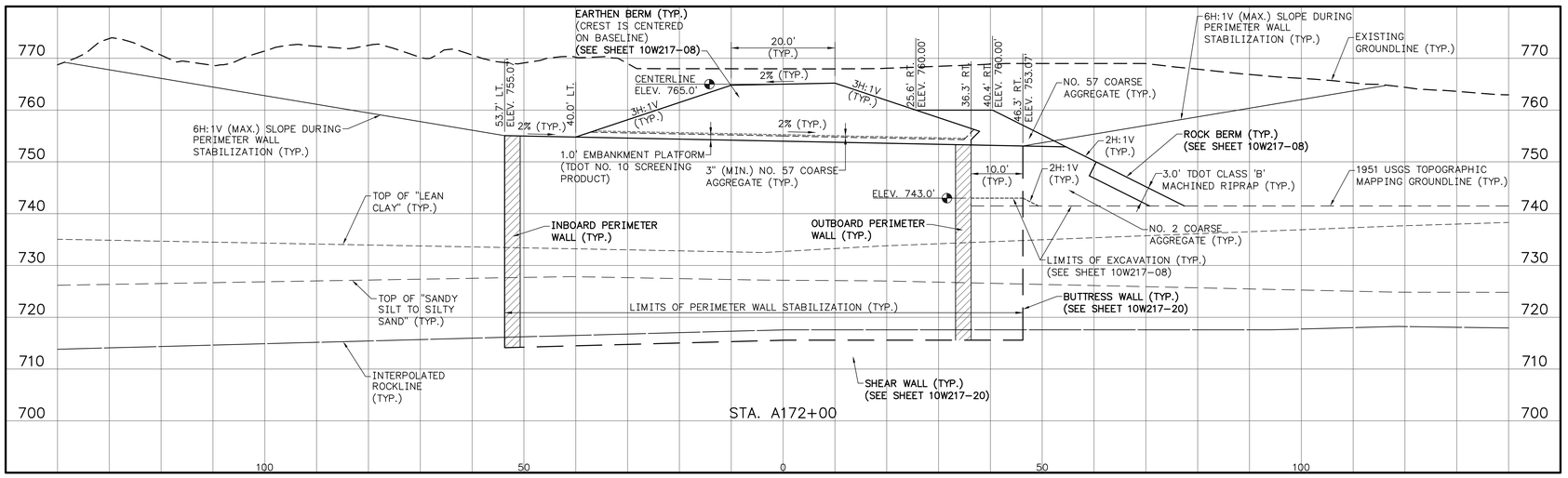

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SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT
CROSS SECTIONS
BASELINE A

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
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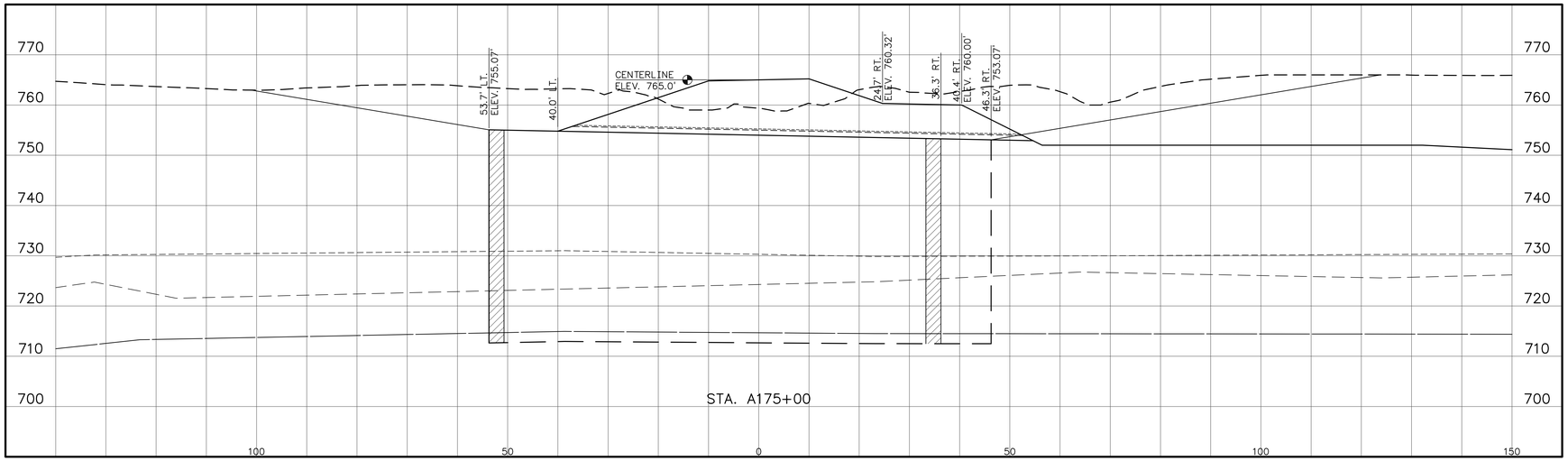

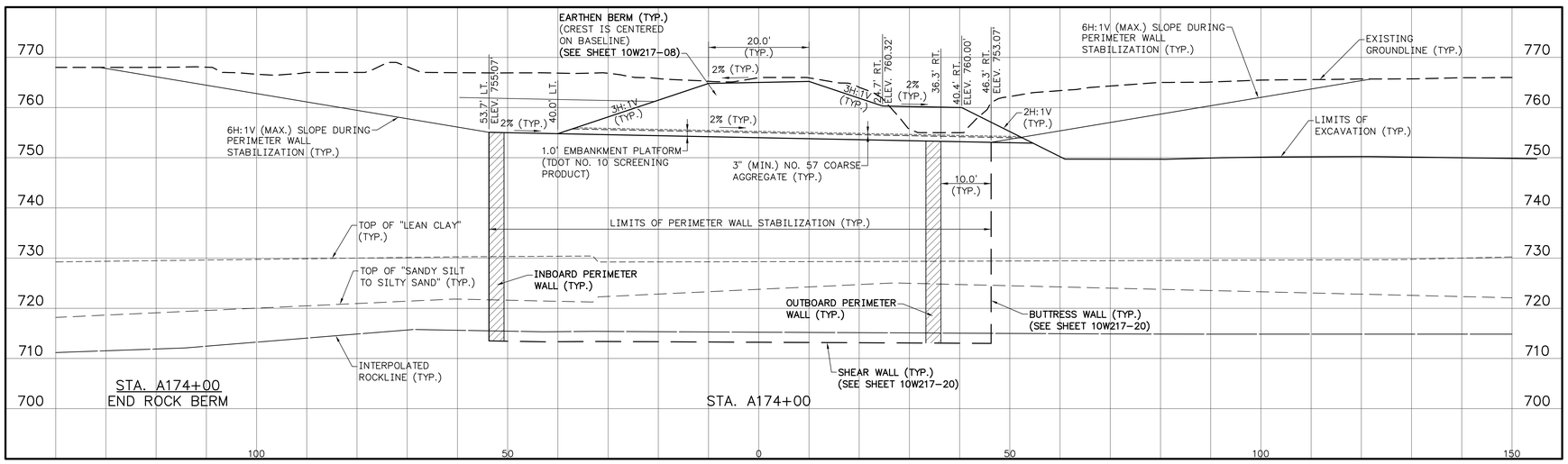

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REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. CD
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NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT
CROSS SECTIONS
BASELINE A

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DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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STANTEC 0
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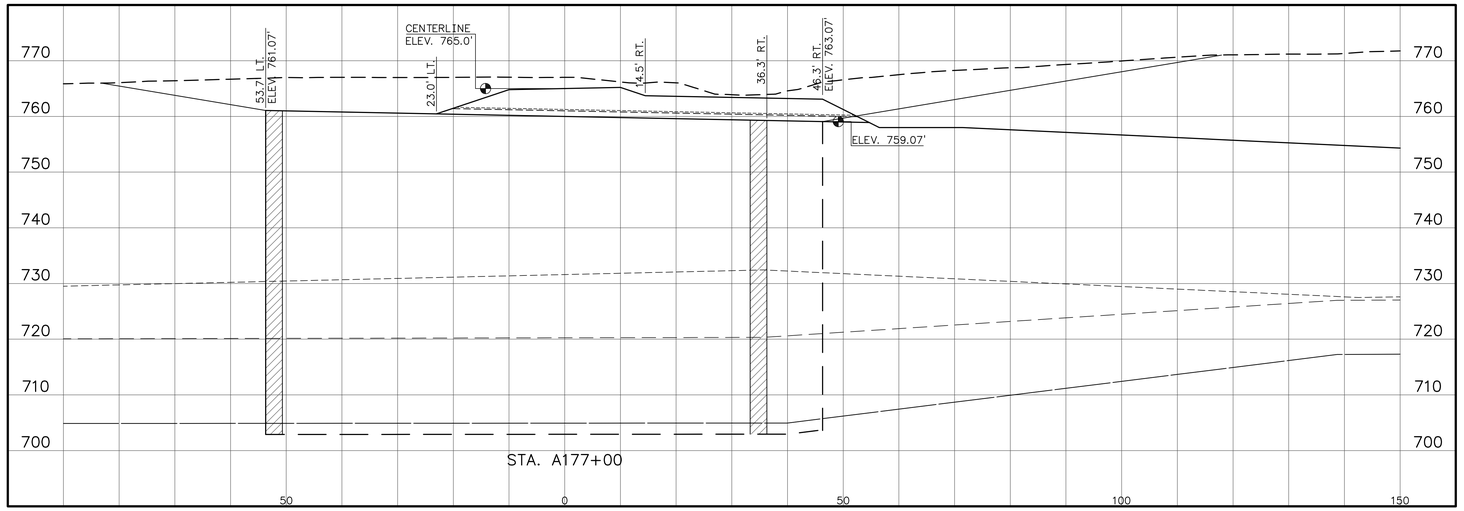
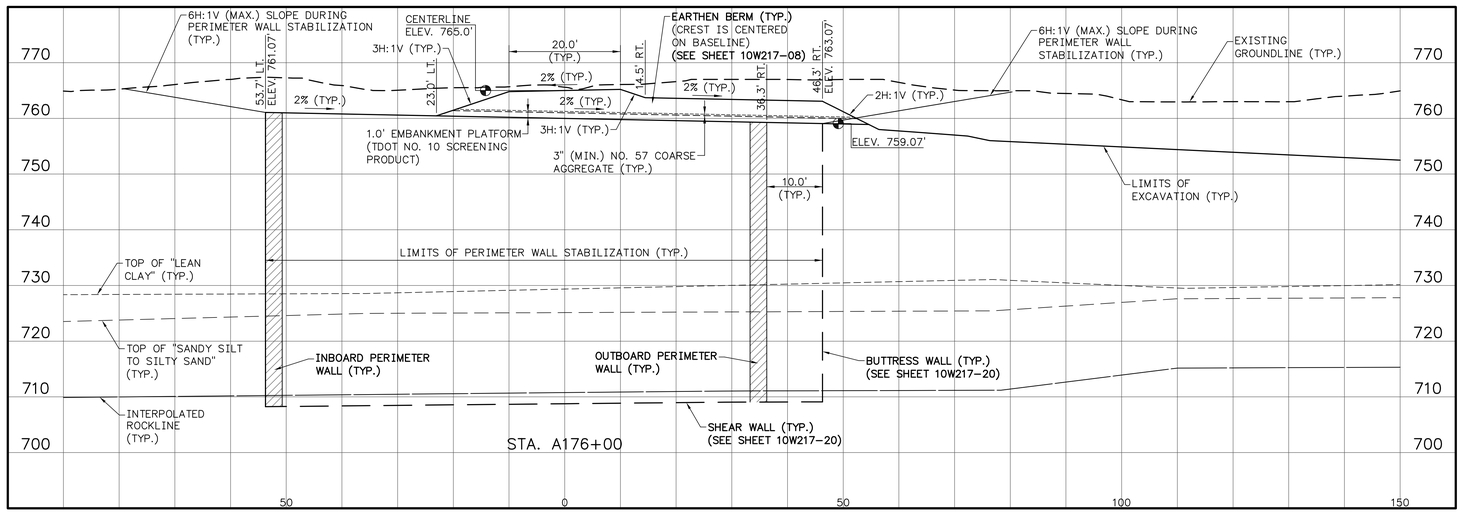
PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
LAYOUT: 10W217-16 DWG: \\S0014\ENVIRONMENTAL\DRAWING\VERTICAL_CONT\SEC_DIKE_C\REVD_FFR\REV1\SHEET\10W217-16-RD.DWG





ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
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FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. SYM.
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT CROSS SECTIONS BASELINE A

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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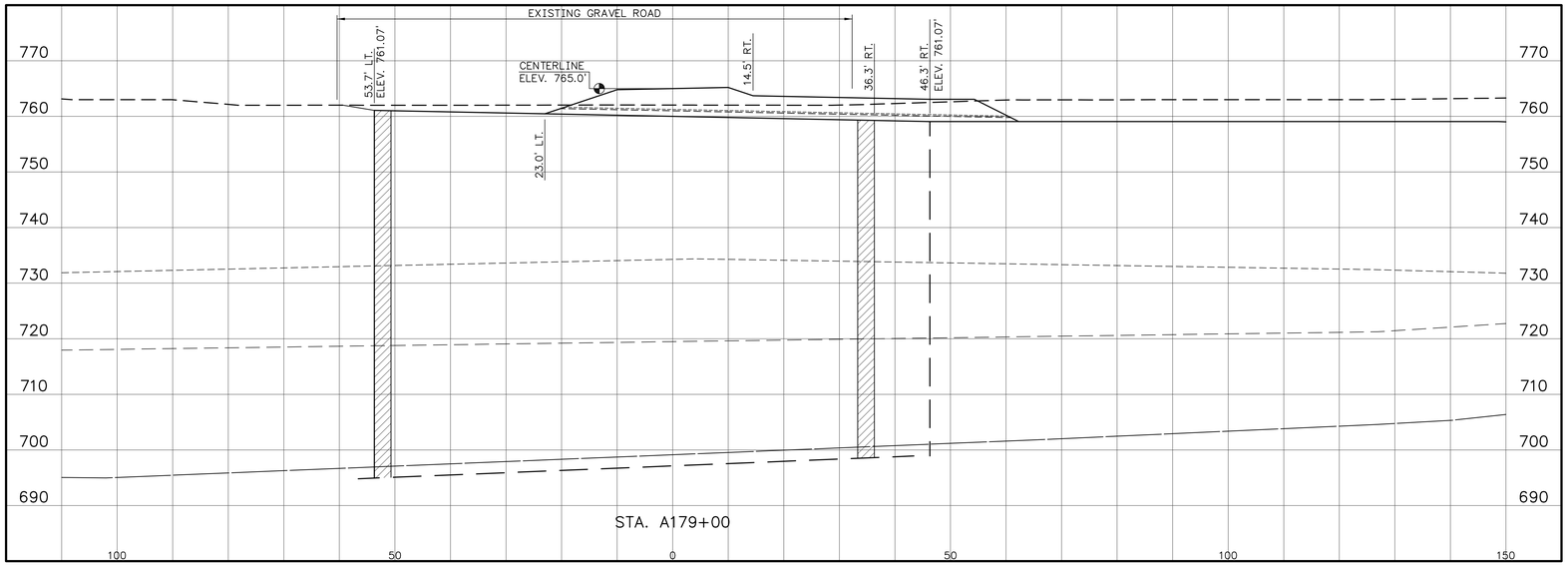
FOSSIL AND HYDRO ENGINEERING

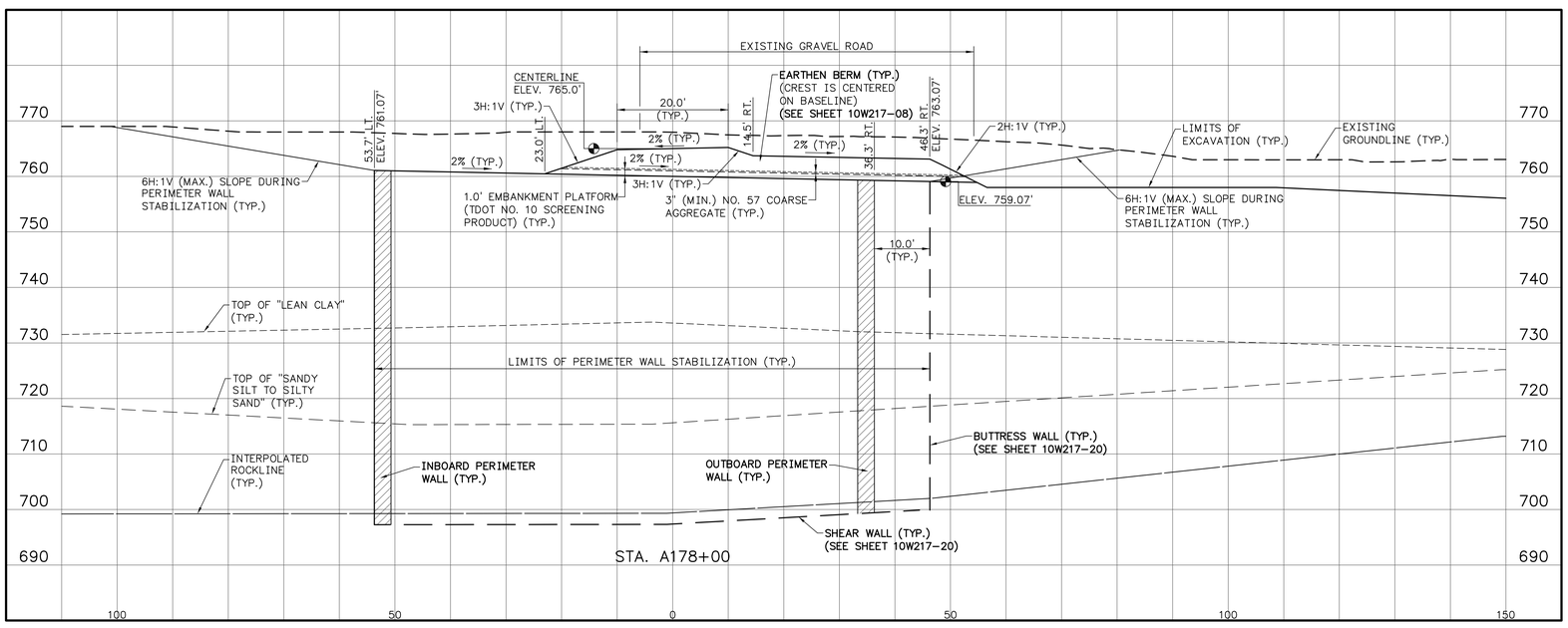
AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-17 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:10
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY





ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS
SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT CROSS SECTIONS BASELINE A

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-18 | R 0

PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
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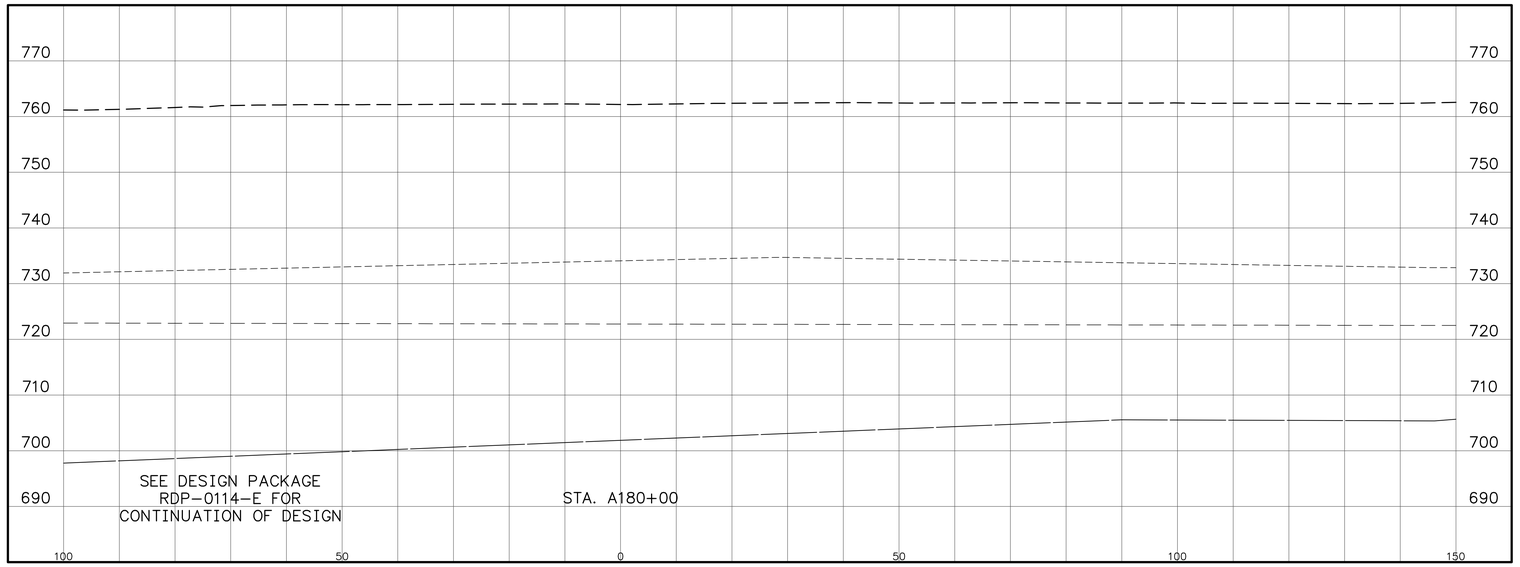
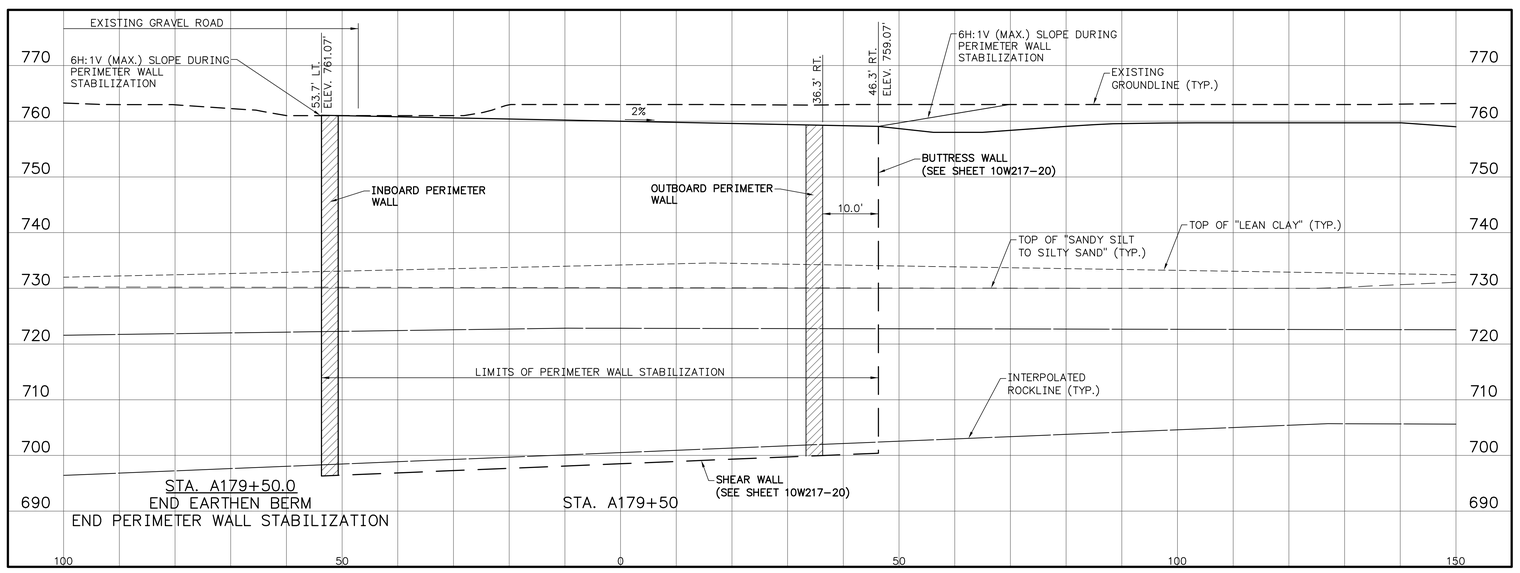
STANTEC	0
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:10
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY





ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS
SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT
CROSS SECTIONS
BASELINE A

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-19 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:10
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/29/2011 USER: GRAHAM, DMG
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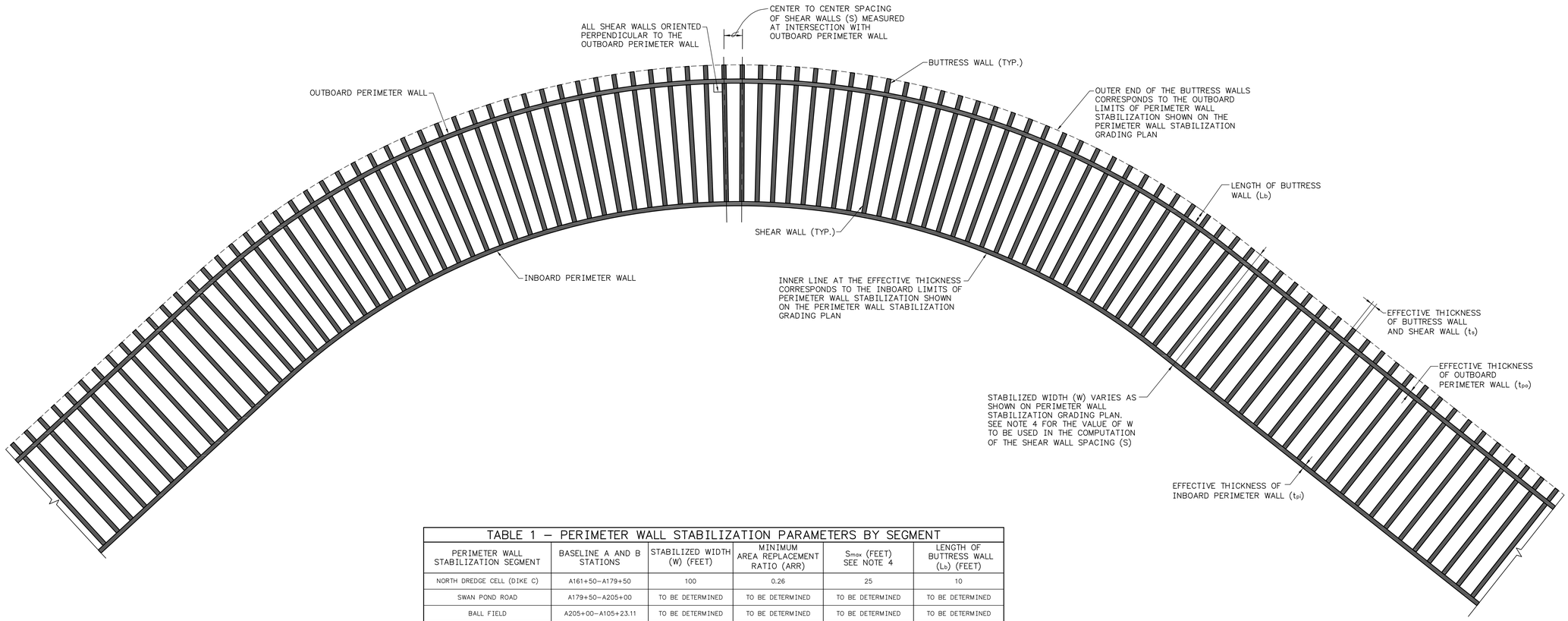

TABLE 1 – PERIMETER WALL STABILIZATION PARAMETERS BY SEGMENT

PERIMETER WALL STABILIZATION SEGMENT	BASELINE A AND B STATIONS	STABILIZED WIDTH (W) (FEET)	MINIMUM AREA REPLACEMENT RATIO (ARR)	S_{max} (FEET) SEE NOTE 4	LENGTH OF BUTTRESS WALL (L_b) (FEET)
NORTH DREDGE CELL (DIKE C)	A161+50–A179+50	100	0.26	25	10
SWAN POND ROAD	A179+50–A205+00	TO BE DETERMINED	TO BE DETERMINED	TO BE DETERMINED	TO BE DETERMINED
BALL FIELD	A205+00–A105+23.11	TO BE DETERMINED	TO BE DETERMINED	TO BE DETERMINED	TO BE DETERMINED
ASH POND	B300+00–B328+75.66	TO BE DETERMINED	TO BE DETERMINED	TO BE DETERMINED	TO BE DETERMINED
LATERAL EXPANSION	A144+20.84–A161+50	TO BE DETERMINED	TO BE DETERMINED	TO BE DETERMINED	TO BE DETERMINED

NOTES:

1. THE STABILIZED WIDTH AND ALIGNMENT SHOWN ARE TYPICAL. THE ACTUAL STABILIZED WIDTH AND ALIGNMENT FOR VARIOUS SEGMENTS OF THE PERIMETER ARE SHOWN ON PERIMETER WALL STABILIZATION GRADING PLAN.
2. PERIMETER WALL STABILIZATION LAYOUT SHOWN IS SCHEMATIC. ACTUAL LAYOUT MAY VARY BASED ON EQUIPMENT AND CONSTRUCTION METHODS UTILIZED, IN ACCORDANCE WITH THE SPECIFICATIONS AND APPROVED SHOP DRAWINGS.
3. THE EFFECTIVE THICKNESS OF ALL WALLS (t_s, t_{po}, t_{pi}) SHALL NOT BE LESS THAN 3.0 FEET.
4. THE SHEAR WALL SPACING (S) MAY NOT EXCEED EITHER OF THESE LIMITS:

$$S \leq \frac{t_s \ (W - t_{po} - t_{pi})}{(ARR * W - t_{po} - t_{pi})}$$

AND

$$S \leq S_{max}$$

WHERE W, ARR, and S_{max} ARE DEFINED IN TABLE 1.

5. STABILIZED WIDTH (W) VARIES AS SHOWN ON PERIMETER WALL STABILIZATION GRADING PLAN. TABLE 1 DEFINES (W) FOR SHEAR WALL SPACING COMPUTATIONS BETWEEN THE STATIONS INDICATED.

1/20 LAYOUT – SOIL CEMENT WALLS
NOT TO SCALE

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT
LAYOUT – SOIL-CEMENT WALLS

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
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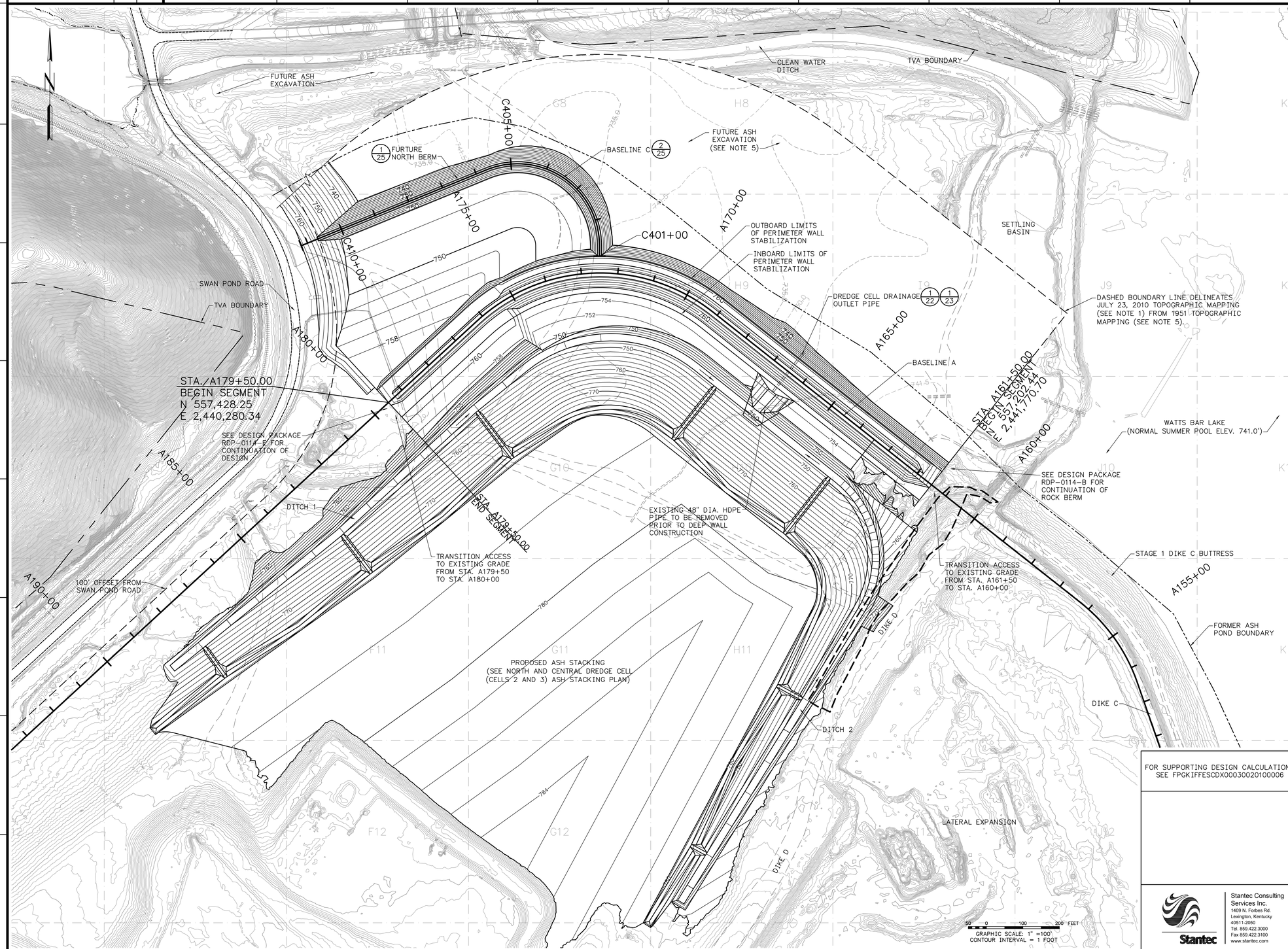
AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-20 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:100
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
V:\WORK\FOSSIL\KINGSTON\CONTRACT\00014\ENVIRONMENTAL\DRAWING\PERIM_CONT\SEL_DIKE_C\REVD_IFR\10W217-20-R0.DWG

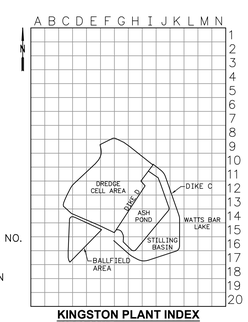


NOTES:

1. TOPOGRAPHIC MAPPING WAS GENERATED FROM A LIDAR SURVEY PERFORMED ON JULY 23, 2010, BY TUCK MAPPING SOLUTIONS, INC.
2. THE "FORMER ASH POND BOUNDARY" SHOWN ALONG THE PERIMETER WITH WATTS BAR LAKE WAS OBTAINED FROM PERMIT DRAWING 10W425-21 (DATED 4/28/81). THIS BOUNDARY LINE WAS RESCALED, ROTATED AND RECTIFIED, BASED ON THE LOCATIONS OF EXISTING FEATURES, TO FIT THE CURRENT COORDINATE SYSTEM.
3. ALONG SWAN POND ROAD, THE OUTBOARD LIMITS OF PERIMETER WALL STABILIZATION ARE SET 100 FEET OR MORE FROM THE CURRENT EDGE OF THE ROADWAY PAVEMENT.
4. DITCHES 1 AND 2 AND ASH STACKING CONTOURS SHOWN ARE PART OF THE NORTH AND CENTRAL DREDGE CELL (CELLS 2 AND 3) ASH STACKING PLAN. THESE FEATURES ARE SHOWN HEREIN FOR REFERENCE AND TO ILLUSTRATE TIE-IN FOR A CONDITION IN WHICH THE PERIMETER CONTAINMENT HAS BEEN COMPLETED AND THE DITCHES, EARTHEN BERM, AND ROCK BERM HAVE BEEN CONSTRUCTED.
5. ASH WITHIN THE EMBAYMENT AREA OUTSIDE THE PERIMETER CONTAINMENT WILL BE EXCAVATED AND REMOVED BY TVA IN ACCORDANCE WITH DESIGN PACKAGE RDP-0112-A AND SUBSEQUENT APPROVED DESIGN PACKAGES. FOR THE PURPOSES OF THESE DRAWINGS ONLY, THE MAXIMUM DEPTH OF EXCAVATION IN THE EMBAYMENT IS ASSUMED TO APPROXIMATELY COINCIDE WITH THE NATURAL GROUND SURFACE PRIOR TO CONSTRUCTION OF THE ASH POND. CONTOUR LINES DIGITIZED FROM A U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAP (DATED 1951) ARE ASSUMED TO REPRESENT THE FORMER GROUND SURFACE IN THE AREA SHOWN.
6. THE GEOMETRY SHOWN FOR NORTH BERM AND THE AREA ENCLOSED BY THE NORTH BERM IS CONCEPTUAL. A SEDIMENT CONTROL POND IS PROPOSED FOR THIS AREA OF THE SITE. DETAILS FOR THE NORTH BERM AND RELATED ELEMENTS, INCLUDING SLOPES, FILL MATERIAL SPECIFICATIONS, COMPACTION REQUIREMENTS, DRAINAGE FEATURES, ETC. WILL BE DEFINED IN A FUTURE DESIGN PACKAGE.

SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.



KINGSTON PLANT INDEX
NOT TO SCALE

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. CD
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: 1"=100' EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT DRAINAGE CONTROL PLAN

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-21 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:100
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
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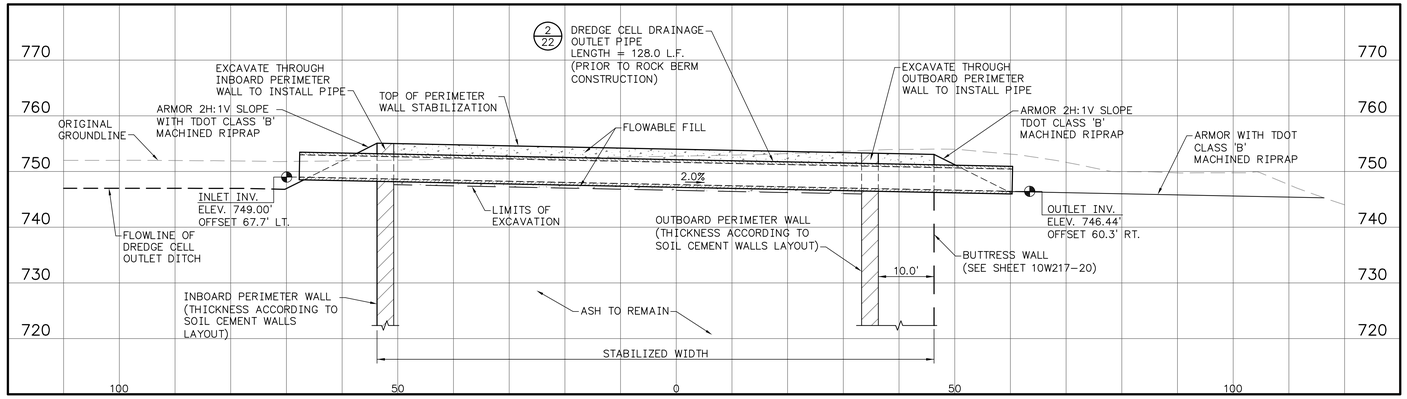
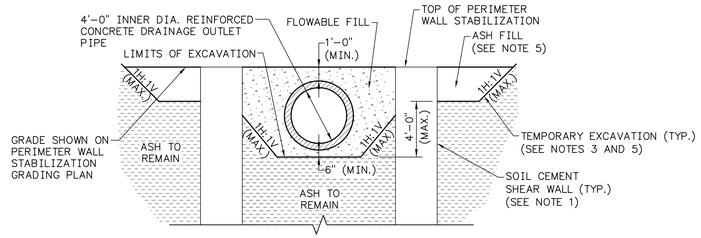


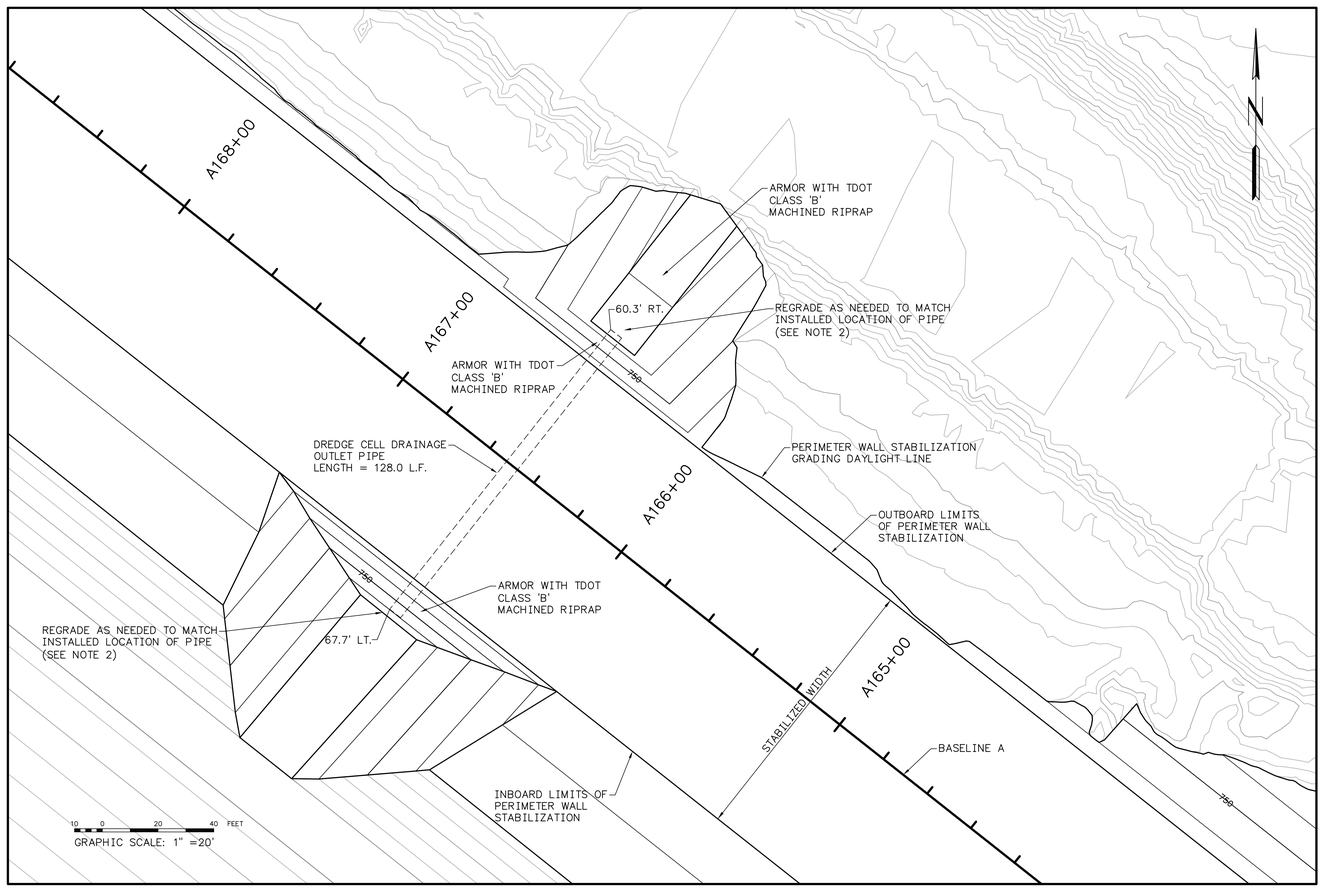
1/22 SECTION – DREDGE CELL DRAINAGE OUTLET PIPE
SCALE: 1"=10'



NOTES:

1. SOIL-CEMENT SHEAR WALL SPACING AND THICKNESS ACCORDING TO SOIL-CEMENT WALLS LAYOUT.
2. THE DRAINAGE OUTLET PIPE SHALL BE CONSTRUCTED BETWEEN ANY TWO SOIL-CEMENT SHEAR WALLS BETWEEN STATIONS A166+30 AND A166+70.
3. MAINTAIN A 4 FOOT MAXIMUM VERTICAL DIFFERENCE BETWEEN THE PIPE EXCAVATION AND TEMPORARY EXCAVATION TO RELIEVE PRESSURE ON SOIL-CEMENT SHEAR WALLS DURING PIPE INSTALLATION.
4. PLACE A MINIMUM OF 2 FEET OF SOIL COVER ABOVE FLOWABLE FILL BETWEEN SHEAR WALLS PRIOR TO CROSSING PIPE WITH CONSTRUCTION EQUIPMENT.
5. FOLLOWING PIPE INSTALLATION AND PLACEMENT OF PIPE BACKFILL, BACKFILL ADJACENT AREAS WITH COMPACTED ASH.

2/22 DETAIL – DREDGE CELL DRAINAGE OUTLET PIPE
SCALE: 1/4"=1'-0"



3/22 PLAN – DREDGE CELL DRAINAGE OUTLET PIPE (PRIOR TO ROCK BERM CONSTRUCTION)
SCALE: 1"=20'

SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.

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SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV NO.
R –	–	–	–	–	–	–	–	–	–	–	R –
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	R 0

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT DRAINAGE CONTROL OUTLET DETAILS

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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TASK COMPLETED BY: | REV NO.

PLOT FACTOR:1
W_TVA

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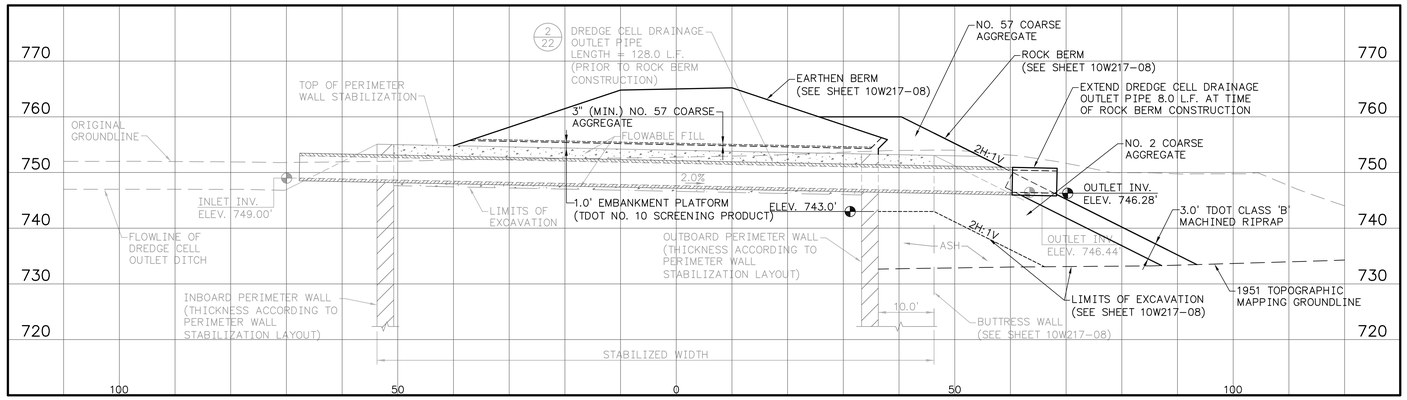
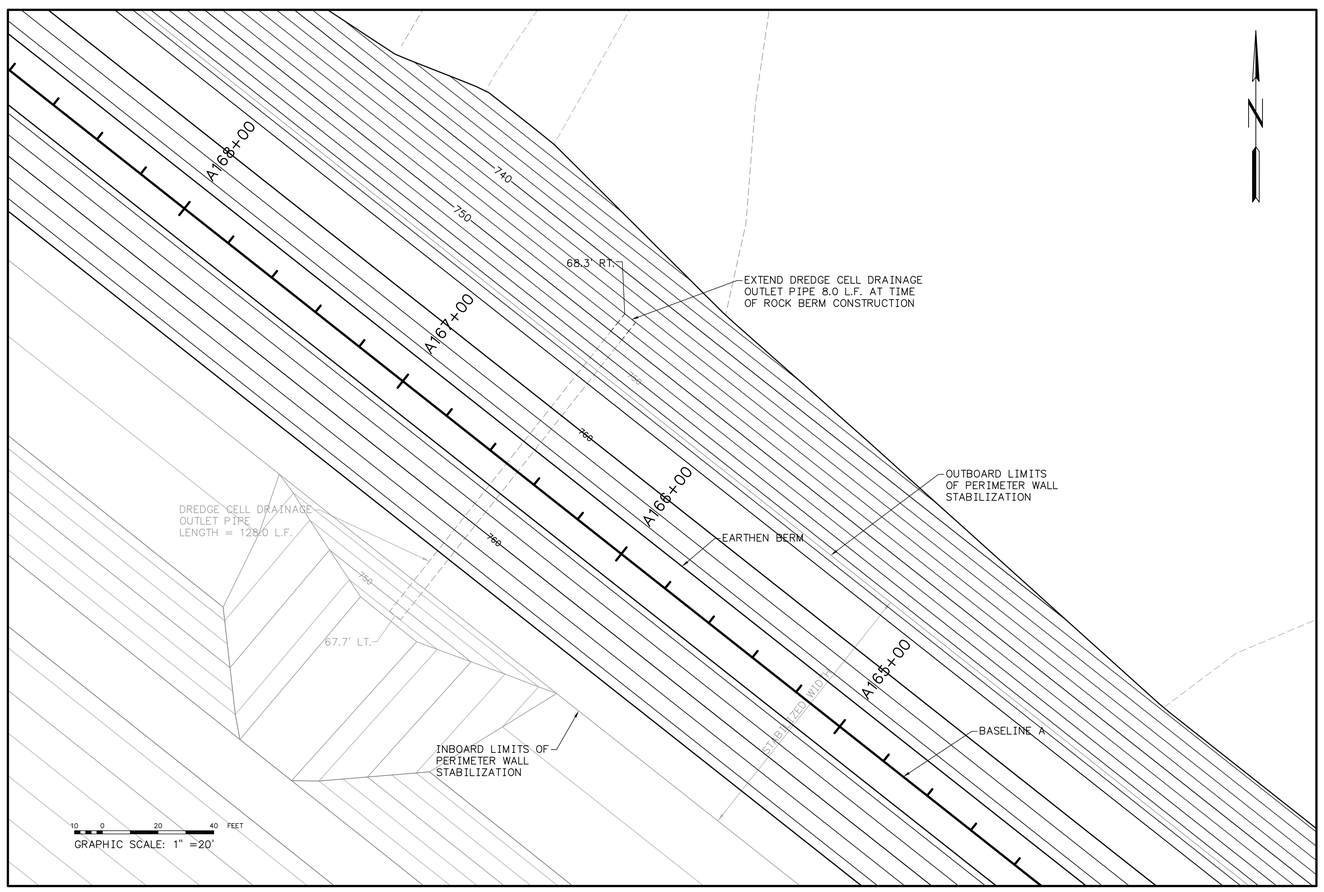
PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
\\USCHA01-FP01\PROJECTS\PROJECTS\ENVIRONMENTAL\DRAWING\PERIM_CONT\SEQ_DIKE_C\REV_LTR\SHEET\10W217-22-R0.DWG



1/23 SECTION – DREDGE CELL DRAINAGE OUTLET PIPE
SCALE: 1"=10'



2/23 PLAN – DREDGE CELL DRAINAGE OUTLET PIPE (AFTER ROCK BERM CONSTRUCTION)
SCALE: 1"=20'

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

SURVEY CONTROL NOTE:

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NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT DRAINAGE CONTROL OUTLET DETAILS

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DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-23 | R 0

PLOT DATE: 03/25/2011 USER: GRAHAM, DAVE
USER-DEFINED: DRAWING TYPE: 10W217-23-RD.DWG
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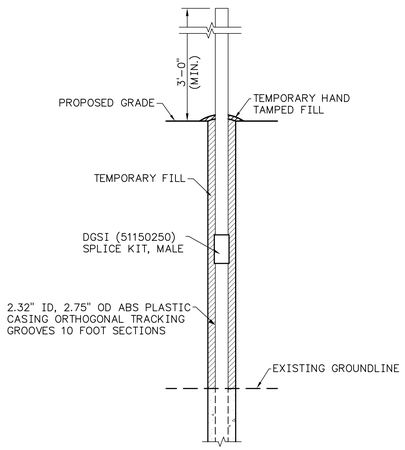
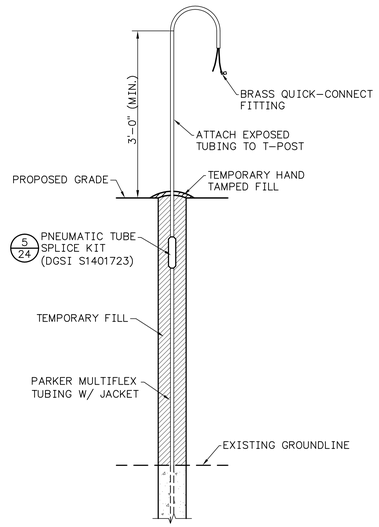
STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:1
W_TVA

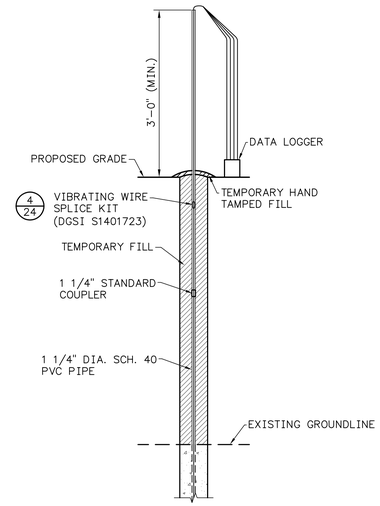
C.A.D. DRAWING
DO NOT ALTER MANUALLY



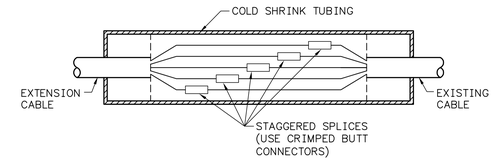
1/24 DETAIL – SLOPE INCLINOMETER EXTENSION
SCALE: 1"=1'-0"



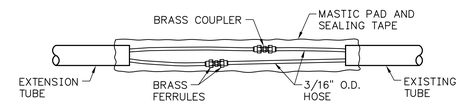
2/24 DETAIL – PNEUMATIC PIEZOMETER EXTENSION
SCALE: 1"=1'-0"



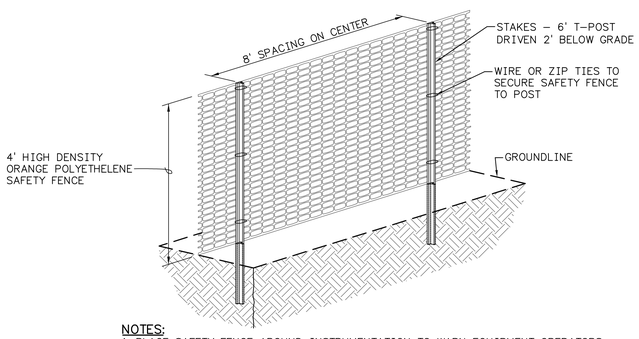
3/24 DETAIL – VIBRATING WIRE PIEZOMETER EXTENSION
SCALE: 1"=1'-0"



4/24 DETAIL – VIBRATING WIRE SPLICE KIT
NOT TO SCALE



5/24 DETAIL – PNEUMATIC TUBE SPLICE KIT
NOT TO SCALE

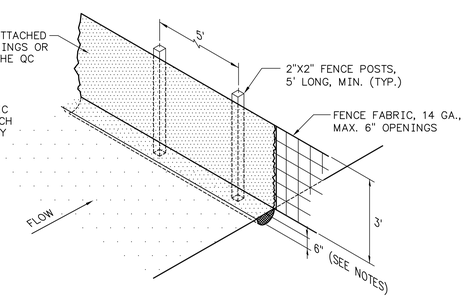


NOTES:
1. PLACE SAFETY FENCE AROUND INSTRUMENTATION TO WARN EQUIPMENT OPERATORS. MOVE FENCE AS INSTRUMENTS ARE EXTENDED.
2. ATTACH SAFETY FENCE TO T-POSTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. USE WARNING SIGNS AS APPROPRIATE.
4. REMOVE FENCE AT PROJECT COMPLETION AND DISPOSE OF IN A LEGAL MANNER.

6/24 DETAIL – SAFETY FENCE
NOT TO SCALE

GEOTEXTILE FABRIC SHALL BE ATTACHED TO FENCE USING STAPLES, HOGRINGS OR OTHER METHODS APPROVED BY THE QC MANAGER (SEE NOTES).

NOTES:
1. THE BOTTOM 12 INCHES OF THE FABRIC SHALL BE BURIED IN A 6-INCH TRENCH CUT INTO THE GROUND OR COVERED BY 6 INCHES OF FILL MATERIAL TO PREVENT SEDIMENT FROM ESCAPING UNDER THE FENCE. ALL EARTHWORK SHALL BE ON THE UPSTREAM SIDE OF THE FENCE.
2. GEOTEXTILE FABRIC SHALL MEET THE FOLLOWING SPECIFICATIONS: GRAB STRENGTH (ASTM D 4632) – 90 LBS. MIN., WIDTH – 4' MIN., APPARENT OPENING SIZE (ASTM D4751) NO. 20. ULTRAVIOLET DEGRADATION (ASTM D 4355) 70% STRENGTH RETAINED. ELONGATION AT 45LB (ASTM D 4632).



7/24 DETAIL – SILT FENCE
NOT TO SCALE

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–
ISSUED FOR REVIEW											

DISCIPLINE INTERFACE

SCALE: MST — EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT DETAILS

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-24 | R 0

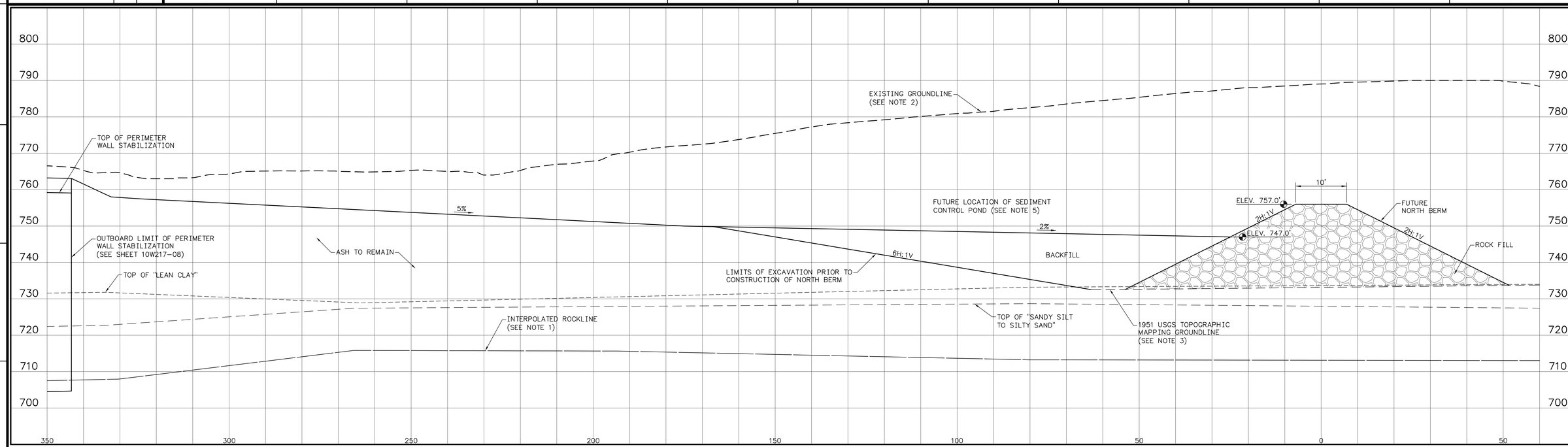
PLOT DATE: 03/18/2011 USER: GRAHAM, DAVE
\\USNAS01\DFS\ENVIRONMENTAL\DRAWING\OPERM_CONT\SEC_D\VEC_-1PY\DRECT\SHEET\10W217-24-RO.DWG

STANTEC | 0
TASK COMPLETED BY: | REV NO.

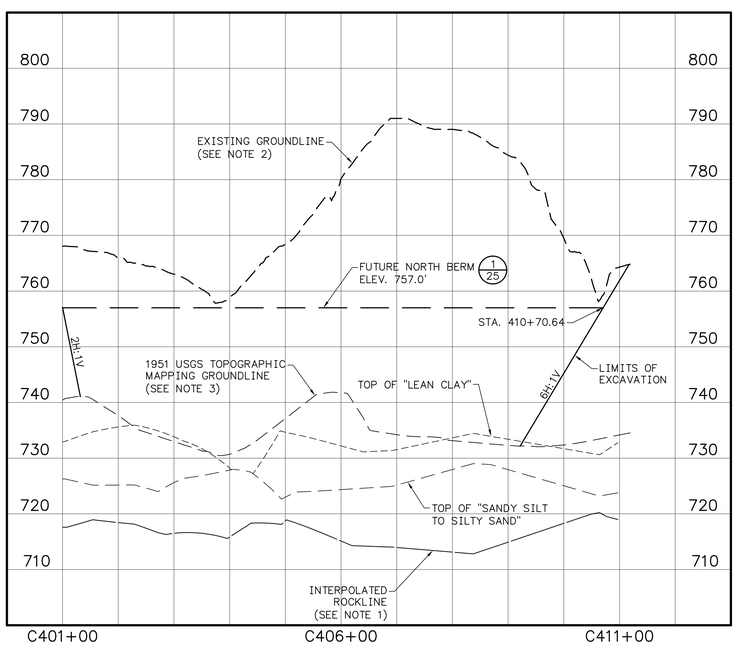
PLOT FACTOR:1
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

36 C 10W217-24



1/25 TYPICAL CROSS SECTION
BASELINE C – NORTH BERM
SCALE: 1"=10'



2/25 PROFILE – BASELINE C
SCALE: 1"=100' (HORIZONTAL)
1"=10' (VERTICAL)

NOTES:

1. THE ELEVATIONS OF THE TOP OF ROCK AND THE SOIL STRATA SHOWN ON THIS DRAWING DEPICT APPROXIMATE SUBSURFACE CONDITIONS ONLY AT SPECIFIC BORING LOCATIONS AT THE TIME OF DRILLING. CONDITIONS AT OTHER LOCATIONS MAY DIFFER FROM THOSE OCCURRING AT THE BORING LOCATIONS. ANY CORRELATIONS SHOWN BETWEEN BORINGS ARE BASED ON INTERPOLATION. ACTUAL CONDITIONS BETWEEN BORINGS ARE UNKNOWN AND MAY DIFFER FROM THOSE SHOWN.
2. EXISTING GROUNDLINE BASED ON TOPOGRAPHIC MAPPING GENERATED FROM A LIDAR SURVEY ON JULY 23, 2010, BY TUCK MAPPING SOLUTIONS, INC.
3. 1951 USGS GROUNDLINE IS BASED ON INTERPOLATION BETWEEN CONTOURS SHOWN ON 1951 U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAPPING AND IS INCLUDED TO REPRESENT ORIGINAL TOPOGRAPHY.
4. ASH WITHIN THE EMBAYMENT AREA OUTSIDE THE PERIMETER CONTAINMENT WILL BE EXCAVATED AND REMOVED BY TVA IN ACCORDANCE WITH DESIGN PACKAGE RDP–0112–A AND SUBSEQUENT APPROVED DESIGN PACKAGES. FOR THE PURPOSES OF THESE DRAWINGS ONLY, THE MAXIMUM DEPTH OF EXCAVATION IN THE EMBAYMENT IS ASSUMED TO APPROXIMATELY COINCIDE WITH THE NATURAL GROUND SURFACE PRIOR TO CONSTRUCTION OF THE ASH POND. CONTOUR LINES DIGITIZED FROM A U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAP (DATED 1951) ARE ASSUMED TO REPRESENT THE FORMER GROUND SURFACE IN THE AREA SHOWN.
5. THE GEOMETRY SHOWN FOR THE NORTH BERM AND THE AREA ENCLOSED BY THE NORTH BERM IS CONCEPTUAL. A SEDIMENT CONTROL POND IS PROPOSED FOR THIS AREA OF THE SITE. DETAILS FOR THE NORTH BERM AND RELATED ELEMENTS, INCLUDING SLOPES, FILL MATERIAL SPECIFICATIONS, COMPACTION REQUIREMENTS, DRAINAGE FEATURES, ETC. WILL BE DEFINED IN A FUTURE DESIGN PACKAGE.

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP–0113–E

PERIMETER CONTAINMENT
BASELINE C – TYPICAL CROSS SECTION AND PROFILE

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

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KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

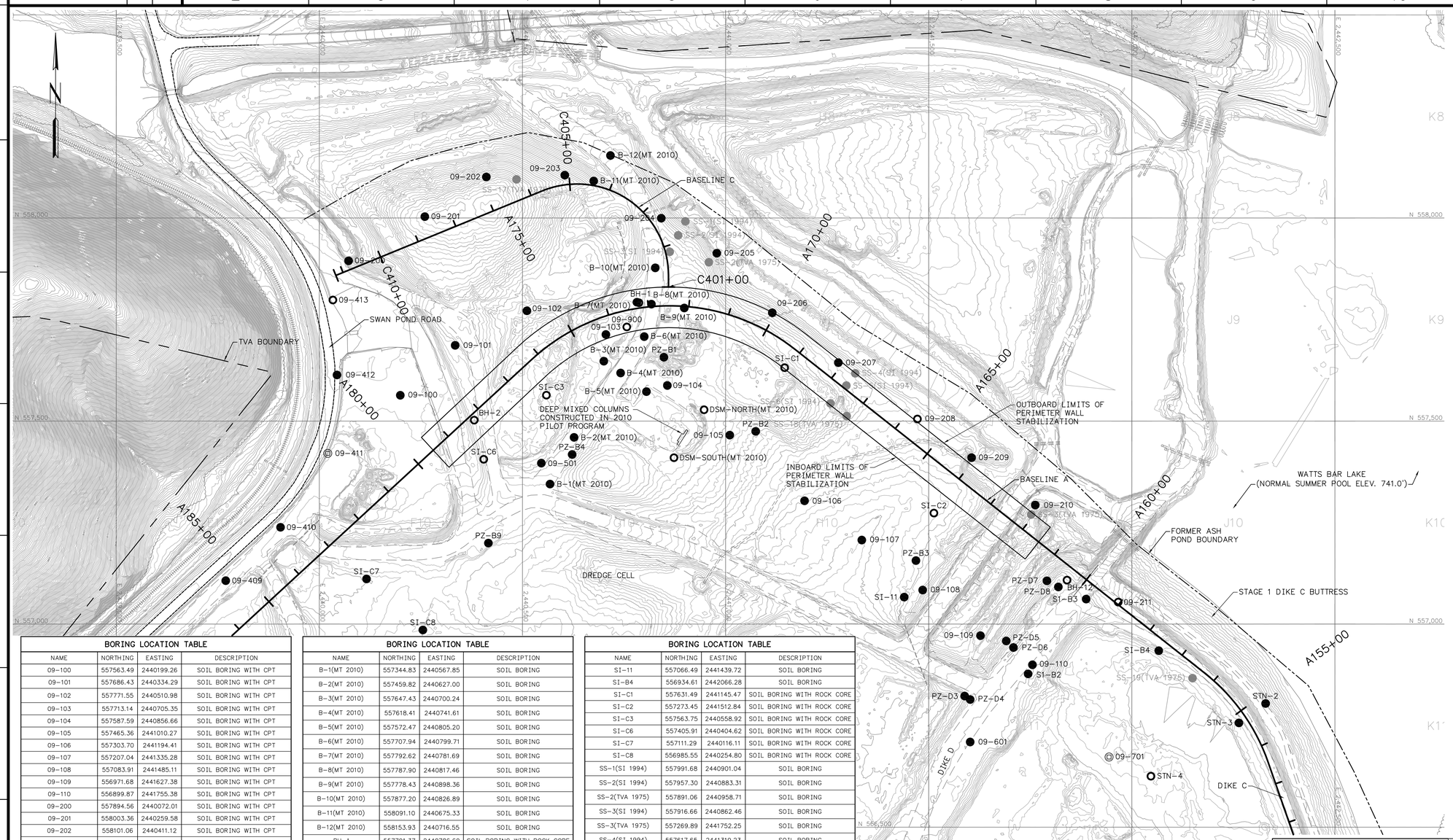
AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217–25 | R 0

PLOT DATE: 03/20/2011 USER: GRAHAM, DAVE
AUTOCAD FILE: J:\KINGSTON\FOSSIL\ENGINEERING\ENVIRONMENTAL\DRAWING\PERIM_CONT\SEQ_DIKE_C\REV0_1ISR\WREV1\SHEET\10W217-25-REV0.DWG

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:10
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

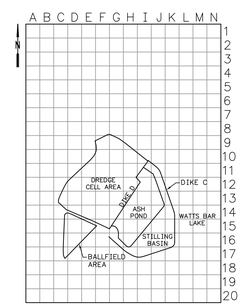


NOTES:

1. TOPOGRAPHIC MAPPING WAS GENERATED FROM A LIDAR SURVEY PERFORMED ON JULY 23, 2010 BY TUCK MAPPING SOLUTIONS, INC.
2. THE "FORMER ASH POND BOUNDARY" SHOWN ALONG THE PERIMETER WITH WATTS BAR LAKE WAS OBTAINED FROM PERMIT DRAWING 10W425-21 (DATED 4/28/81). THIS BOUNDARY LINE WAS RESCALED, ROTATED AND RECTIFIED, BASED ON THE LOCATIONS OF EXISTING FEATURES, TO FIT THE CURRENT COORDINATE SYSTEM.
3. BORING LOGS ARE INCLUDED IN A SEPARATE DOCUMENT.

LEGEND

- SOIL BORING (PRE FAILURE)
- SOIL BORING (POST FAILURE)
- SOIL BORING WITH ROCK CORE (POST FAILURE)
- CPT SOUNDING ONLY (POST FAILURE)



KINGSTON PLANT INDEX
NOT TO SCALE

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

BORING LOCATION TABLE

NAME	NORTHING	EASTING	DESCRIPTION
09-100	557563.49	2440199.26	SOIL BORING WITH CPT
09-101	557686.43	2440334.29	SOIL BORING WITH CPT
09-102	557771.55	2440510.98	SOIL BORING WITH CPT
09-103	557713.14	2440705.35	SOIL BORING WITH CPT
09-104	557587.59	2440856.66	SOIL BORING WITH CPT
09-105	557465.36	2441010.27	SOIL BORING WITH CPT
09-106	557303.70	2441194.41	SOIL BORING WITH CPT
09-107	557207.04	2441335.28	SOIL BORING WITH CPT
09-108	557083.91	2441485.11	SOIL BORING WITH CPT
09-109	556971.68	2441627.38	SOIL BORING WITH CPT
09-110	556899.87	2441755.38	SOIL BORING WITH CPT
09-200	557894.56	2440072.01	SOIL BORING WITH CPT
09-201	558003.36	2440259.58	SOIL BORING WITH CPT
09-202	558101.06	2440411.12	SOIL BORING WITH CPT
09-203	558105.48	2440604.25	SOIL BORING WITH CPT
09-204	557999.50	2440841.72	SOIL BORING WITH CPT
09-205	557913.31	2440978.41	SOIL BORING WITH CPT
09-206	557766.73	2441114.96	SOIL BORING WITH CPT
09-207	557643.84	2441277.57	SOIL BORING
09-208	557505.10	2441472.19	SOIL BORING WITH ROCK CORE
09-209	557409.86	2441605.58	SOIL BORING WITH CPT
09-210	557293.27	2441762.30	SOIL BORING WITH CPT
09-211	557054.25	2441966.50	SOIL BORING WITH ROCK CORE
09-409	557107.02	2439769.63	SOIL BORING WITH CPT
09-410	557238.48	2439904.44	SOIL BORING WITH CPT
09-411	557420.48	2440020.69	CONE PENETRATION TEST (CPT)
09-412	557613.53	2440043.37	SOIL BORING WITH CPT
09-413	557798.09	2440033.31	SOIL BOR. W/ROCK CORE & CPT
09-501	557396.40	2440546.47	SOIL BORING WITH CPT
09-601	556709.83	2441602.14	SOIL BORING WITH CPT
09-701	556672.79	2441943.99	CONE PENETRATION TEST (CPT)
09-900	557731.64	2440756.86	SOIL BORING WITH ROCK CORE

BORING LOCATION TABLE

NAME	NORTHING	EASTING	DESCRIPTION
B-1(MT 2010)	557344.83	2440567.85	SOIL BORING
B-2(MT 2010)	557459.82	2440627.00	SOIL BORING
B-3(MT 2010)	557647.43	2440700.24	SOIL BORING
B-4(MT 2010)	557618.41	2440741.61	SOIL BORING
B-5(MT 2010)	557572.47	2440805.20	SOIL BORING
B-6(MT 2010)	557707.94	2440799.71	SOIL BORING
B-7(MT 2010)	557792.62	2440781.69	SOIL BORING
B-8(MT 2010)	557787.90	2440817.46	SOIL BORING
B-9(MT 2010)	557778.43	2440898.36	SOIL BORING
B-10(MT 2010)	557877.20	2440826.89	SOIL BORING
B-11(MT 2010)	558091.10	2440675.33	SOIL BORING
B-12(MT 2010)	558153.93	2440716.55	SOIL BORING
BH-1	557791.37	2440786.69	SOIL BORING WITH ROCK CORE
BH-2	557502.30	2440381.20	SOIL BORING WITH ROCK CORE
BH-12	557108.37	2441840.48	SOIL BORING WITH ROCK CORE
DSM-NORTH(MT 2010)	557527.80	2440947.00	SOIL BORING WITH ROCK CORE
DSM-SOUTH(MT 2010)	557409.79	2440872.96	SOIL BORING WITH ROCK CORE
PZ-D3	556822.95	2441588.54	SOIL BORING
PZ-D4	556814.34	2441602.15	SOIL BORING
PZ-D5	556958.55	2441690.87	SOIL BORING
PZ-D6	556942.41	2441708.59	SOIL BORING
PZ-D7	557106.66	2441791.01	SOIL BORING
PZ-D8	557091.55	2441819.11	SOIL BORING
PZ-B1	557657.06	2440848.11	SOIL BORING
PZ-B2	557474.69	2441074.15	SOIL BORING
PZ-B3	557156.48	2441468.58	SOIL BORING
PZ-B4	557417.78	2440622.29	SOIL BORING
PZ-B9	557199.55	2440416.08	SOIL BORING
S1-B2	556877.44	2441744.70	SOIL BORING
S1-B3	557061.67	2441887.56	SOIL BORING

BORING LOCATION TABLE

NAME	NORTHING	EASTING	DESCRIPTION
SI-11	557066.49	2441439.72	SOIL BORING
SI-B4	556934.61	2442066.28	SOIL BORING
SI-C1	557631.49	2441145.47	SOIL BORING WITH ROCK CORE
SI-C2	557273.45	2441512.84	SOIL BORING WITH ROCK CORE
SI-C3	557563.75	2440558.92	SOIL BORING WITH ROCK CORE
SI-C6	557405.91	2440404.62	SOIL BORING WITH ROCK CORE
SI-C7	557111.29	2440116.11	SOIL BORING WITH ROCK CORE
SI-C8	556985.55	2440254.80	SOIL BORING WITH ROCK CORE
SS-1(SI 1994)	557991.68	2440901.04	SOIL BORING
SS-2(SI 1994)	557957.30	2440883.31	SOIL BORING
SS-2(TVA 1975)	557891.06	2440958.71	SOIL BORING
SS-3(SI 1994)	557916.66	2440862.46	SOIL BORING
SS-3(TVA 1975)	557269.89	2441752.25	SOIL BORING
SS-4(SI 1994)	557617.65	2441319.23	SOIL BORING
SS-5(SI 1994)	557587.44	2441297.33	SOIL BORING
SS-6(SI 1994)	557543.46	2441258.10	SOIL BORING
SS-17(TVA 1975)	558095.16	2440485.33	SOIL BORING
SS-18(TVA 1975)	557512.19	2441298.17	SOIL BORING
SS-19(TVA 1975)	556866.97	2442149.42	SOIL BORING
STN-2	556804.57	2442329.32	SOIL BORING
STN-3	556756.78	2442263.59	SOIL BORING
STN-4	556625.56	2442047.01	SOIL BORING WITH ROCK CORE

FOR SUPPORTING DESIGN CALCULATIONS SEE FPGKIFFESCDX00030020100006

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. CODE
R_	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: 1"=100' EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT BORING LAYOUT

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DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-26 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:100
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/18/2011 USER: GRAHAM, DAVE
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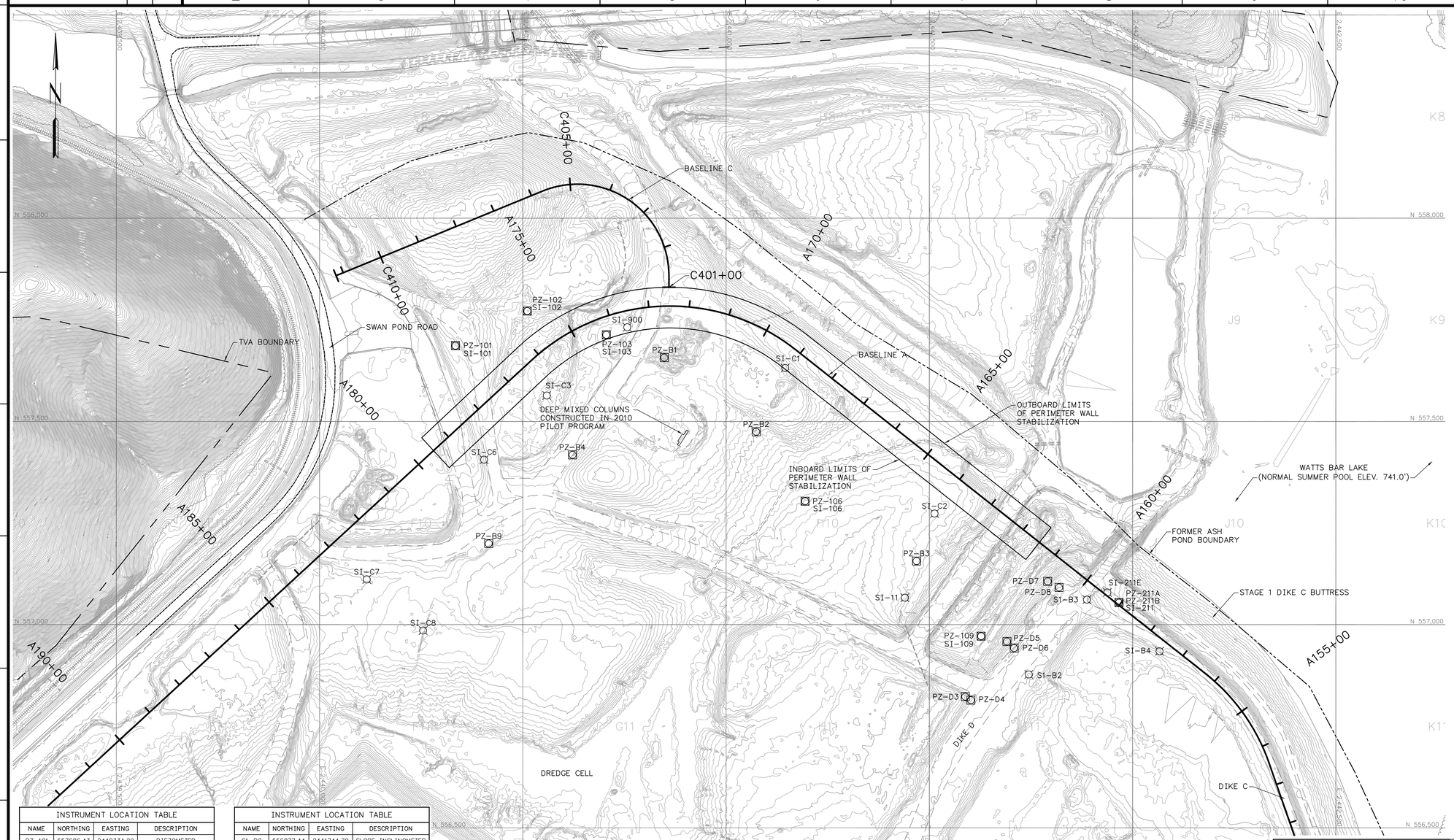


NOTES:

1. TOPOGRAPHIC MAPPING WAS GENERATED FROM A LIDAR SURVEY PERFORMED ON JULY 23, 2010 BY TUCK MAPPING SOLUTIONS, INC.
2. THE "FORMER ASH POND BOUNDARY" SHOWN ALONG THE PERIMETER WITH WATTS BAR LAKE WAS OBTAINED FROM PERMIT DRAWING 10W425-21 (DATED 4/28/81). THIS BOUNDARY LINE WAS RESCALED, ROTATED AND RECTIFIED, BASED ON THE LOCATIONS OF EXISTING FEATURES, TO FIT THE CURRENT COORDINATE SYSTEM.
3. BORING LOGS ARE INCLUDED IN A SEPARATE DOCUMENT.
4. INSTRUMENTS WITHIN THE LIMITS OF PERIMETER WALL STABILIZATION WILL BE REMOVED BY THE EARTHWORK CONTRACTOR PRIOR TO PERIMETER WALL STABILIZATION CONSTRUCTION. INSTRUMENTS OUTSIDE THE PERIMETER WALL STABILIZATION FOOTPRINT SHALL BE PROTECTED AS DESCRIBED IN THE SPECIFICATIONS.

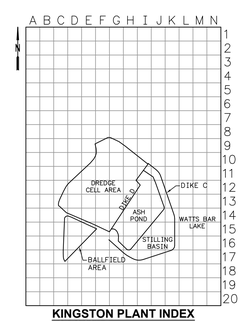
LEGEND

EXISTING PIEZOMETER

EXISTING SLOPE INCLINOMETER

SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.



KINGSTON PLANT INDEX
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INSTRUMENT LOCATION TABLE			
NAME	NORTHING	EASTING	DESCRIPTION
PZ-101	557686.43	2440334.29	PIEZOMETER
PZ-102	557771.55	2440510.98	PIEZOMETER
PZ-103	557713.14	2440705.35	PIEZOMETER
PZ-106	557303.70	2441194.41	PIEZOMETER
PZ-109	556971.68	2441627.38	PIEZOMETER
PZ-211A	557054.25	2441966.50	PIEZOMETER
PZ-211B	557054.25	2441966.50	PIEZOMETER
PZ-B1	557657.06	2440848.11	PIEZOMETER
PZ-B2	557474.69	2441074.15	PIEZOMETER
PZ-B3	557156.48	2441468.58	PIEZOMETER
PZ-B4	557417.78	2440622.29	PIEZOMETER
PZ-B9	557199.55	2440416.08	PIEZOMETER
PZ-D3	556822.95	2441588.54	PIEZOMETER
PZ-D4	556814.34	2441602.15	PIEZOMETER
PZ-D5	556958.55	2441690.87	PIEZOMETER
PZ-D6	556942.41	2441708.59	PIEZOMETER
PZ-D7	557106.66	2441791.01	PIEZOMETER
PZ-D8	557091.55	2441819.11	PIEZOMETER

INSTRUMENT LOCATION TABLE			
NAME	NORTHING	EASTING	DESCRIPTION
SI-B2	556877.44	2441744.70	SLOPE INCLINOMETER
SI-B3	557061.67	2441887.56	SLOPE INCLINOMETER
SI-11	557066.49	2441439.72	SLOPE INCLINOMETER
SI-101	557686.43	2440334.29	SLOPE INCLINOMETER
SI-102	557771.55	2440510.98	SLOPE INCLINOMETER
SI-103	557713.14	2440705.35	SLOPE INCLINOMETER
SI-106	557303.70	2441194.41	SLOPE INCLINOMETER
SI-109	556971.68	2441627.38	SLOPE INCLINOMETER
SI-211	557054.25	2441966.50	SLOPE INCLINOMETER
SI-211E	557079.24	2441937.92	SLOPE INCLINOMETER
SI-900	557731.64	2440756.86	SLOPE INCLINOMETER
SI-B4	556934.61	2442066.28	SLOPE INCLINOMETER
SI-C1	557631.49	2441145.47	SLOPE INCLINOMETER
SI-C2	557273.45	2441512.84	SLOPE INCLINOMETER
SI-C3	557563.75	2440558.92	SLOPE INCLINOMETER
SI-C6	557405.91	2440404.62	SLOPE INCLINOMETER
SI-C7	557111.29	2440116.11	SLOPE INCLINOMETER
SI-C8	556985.55	2440254.80	SLOPE INCLINOMETER

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	03/18/11	TGC	DMG	AFR	MJS	VJD	MST	JCK	–	–	–

ISSUED FOR REVIEW

DISCIPLINE INTERFACE

SCALE: 1"=100' EXCEPT AS NOTED

YARD
NORTH DREDGE CELL (DIKE C) – RDP-0113-E

PERIMETER CONTAINMENT
EXISTING INSTRUMENTATION PLAN

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
T.G. COLEMAN	D.M. GRAHAM	A.F. RAUCH	M.J. STEELE	V.J. DOTSON	M.S. TURNBOW	J.C. KAMMEYER

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2000 | DATE 03/18/11 | 36 | C | 10W217-27 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:100
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 03/29/2011 USER: GRAHAM, DAVE
N:\DGN\PROJECTS\KIFFESCDX00030020100006\DRAWING\PERIMETER_CONTAINMENT\EXISTING_INSTRUMENTATION_PLAN_CONTROL_DIKE_C\PERIM_DIKE_C\PERIM_DIKE_C-PERIM_DIKE_C-10W217-27.DWG