VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Tammy Jett, Principal Environmental Specialist, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of her knowledge, information and belief.

Tammy Jett

Tammy Jett, Affiant

Subscribed and sworn to before me by Tammy Jett on this 1st day of May, 2015.

Adele M. Frisch

NOTARY PUBLIC

ADELE M. FRISCH
Notary Public, State of Ohio
My Commission Expires 01-05-2019

My Commission Expires: 1/5/2019

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Nick Sellet, Supt Technical, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Nick Sellet, Affiant

Subscribed and sworn to before me by Nick Sellet on this 5th day of May, 2015.

NOTARY PUBLIC

My Commission Expires:

ROCCO O. D'ASCENZO
ATTORNEY AT LAW
Notary Public, State of Ohio
My Commission Has No Expiration
Section 147.03 R.C.

VERIFICATION

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG)

SS:

The undersigned, Joseph A. Miller, Jr, VP Central Engineering & Services, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Joseph A. Miller, Jr., Affiant

Subscribed and sworn to before me by Joseph A. Miller, Jr. on this 4 day of May, 2015.

EVELYN G ROSEMAN NOTARY PUBLIC MECKLENBURG COUNTY, NC

NOTARY PUBLIC

My Commission Expires: Aug. 18, 2019

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Tom Wiest, Engineer II, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Tom Wiest, Affiant

Subscribed and sworn to before me by Tom Wiest on this 5th day of May 2015.

NOTARY PUBLIC

My Commission Expires:

NOTARIAL SEAL
STATE OF OHIO

ROCCO O. D'ASCENZO
ATTORNEY AT LAW
Notary Public, State of Ohio
My Commission Has No Expiration
Section 147.03 R.C.

TABLE OF CONTENTS

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-001

REQUEST:

Reference Jett testimony page 13, line 15. Define or describe "balance-of-plant wastewater treatment systems."

RESPONSE:

In the Direct Testimony of Tammy Jett, page 13, line 15, the reference to installation of "balance-of-plant wastewater treatment systems" means that it may be necessary to install some alternative systems to handle various wastewaters from the plant that currently go to the ash pond if the ash pond is required to close, or operate differently than it does currently, either under the ELG or CCR rule. A final closure determination has not yet been reached. Please see Confidential Response to Staff-02-004. This/these system(s) could include the use of free-standing tanks, a wastewater treatment pond created from a downsized former/closed ash pond or any number of combinations.

PERSON RESPONSIBLE: Tammy Jett

AG-DR-02-002

REQUEST:

Reference Jett testimony page 14, lines 8-16.

a. On what date was the project design finalized?

b. In what ways will the first cell not comply with the CCR requirements?

c. How many cells will be directly adjacent to the first cell?

RESPONSE:

In reference to the Direct Testimony of Tammy Jett, page 14, lines 8-16:

a. The overall project design should be considered as being finalized on December 8, 2008. That was the date the initial permit was issued for the landfill, thus approving the project design and making it final until/unless design modifications are submitted for the design.

b. According to Duke Energy Kentucky's current understanding of the CCR rule, there are a few ways in which Cell 1 could be considered as not complying with the CCR rule requirements:

- If Cell 1 is under construction by October 2015, Cell 1 will be in compliance with the liner requirements of the CCR rule in that the current design will be grandfathered by the new rule. If Cell 1 is not under construction by October 2015, according to a preliminary engineering

analysis, it is expected that the liner design for Cell 1 will then require a design change which replaces the currently specified Geosynthetic Clay Liner (GCL) component with either 24-inches of compacted soil with a permeability not more than 1 x 10-7 cm/sec, or possibly with a new product with a reported Maximum Average Roll Value (MARV) permeability of 3.0 x 10-9 cm/sec or less. The second option needs further evaluation. The cap design of Cell 1, when Cell 1 is eventually closed, currently does not comply with the cap design requirement of the CCR rule. An engineering evaluation of needed cap design modifications is currently underway. The current cap design does not meet the permeability requirements of the rule which would apply regardless of when construction begins on the cell. It is expected that more soil and/or a soil with a different permeability rate than that reflected in the currently permitted design, and/or a synthetic material will be needed in the cap modification to meet the rule requirements.

- The current landfill design for Cell 1 addresses controlling stormwater, but an engineering assessment must be made to determine if the current design addresses stormwater in the exact manner prescribed in the CCR rule. It is expected that than engineering assessment regarding run-on and run-off controls will be conducted in the next couple of months.
- An engineering analysis must be done to confirm that sufficient fugitive dust control measures are in the design of Cell 1 to meet the CCR rule requirements. A fugitive dust control plan must be prepared specifically

to meet the CCR rule by October 2015. Therefore, the engineering analysis will be completed within the next few months in order to allow for the preparation of the plan by the October deadline.

- Cell 1 has to be evaluated for sufficiency of the currently designed groundwater monitoring system in comparison to the CCR rule requirements. This evaluation will be done over the next several months.

It should be noted that addressing the above described situations may or may not constitute or require a design change for the landfill cells. For example, changing elements of the groundwater plan or the dust mitigation/fugitive dust program would not typically call for a change of design in the landfill.

c. Two cells (cells 2 and 5) will be directly adjacent to Cell 1 and Cell 6 will be built on top of Cell 1. Please see AG-DR-02-011 Attachment for map showing layout of individual cells.

PERSON RESPONSIBLE: Tammy Jett

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-003 PUBLIC

REQUEST:

Reference Miller testimony page 8, lines 16-23. Provide a detailed cost breakdown of all construction expenses unique to the construction of the first cell.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment Only)

A detailed breakdown of the construction expenses is provided in AG-DR-02-003 Confidential Attachment, which has been filed with the Commission under a petition for confidential treatment.

PERSON RESPONSIBLE: Nicholas R. Sellet

CONFIDENTIAL PROPRIETARY TRADE SECRET

Duke Energy East Bend West Landfill - Common Items for all Cells			
Description	**Est. Cost**	**Source**	**Notes**
Tree clearing and grubbing	[redacted]	Bid	Sediment pond, borrow area, road, common areas
Haul Road		Engineering Study	Common to all cells (from CCR discharge at plant to new landfill)
Maintenance and access road construction		Bid	Common to all cells (around landfill areas, pipeline areas, etc.)
Wet well (Civil)		Bid	Common to all cells
Pipeline (Civil)		Bid	Common to all cells
Transmission line and controls		Engineering Estimate[redacted]	Common to all cells
Sediment pond construction		Bid (Includes PTI pond cut*unit price from bid+ protective)	Common to all cells
Borrow area construction		Bid, not including the clearing	Common to all cells
Fencing		Estimated	Fence around entire landfill site, required by permit
Groundwater Monitoring		Engineering Estimate (Duke Engineering)	Modification required by CCR
Truck Wash		Engineering Estimate (Duke Engineering)	Required for air permit compliance
Fuel		Bid Estimate	Proportion of total fuel submitted in bid use based on spend
PTI		Actual spend	Engineering and permitting costs from 2007-present
Overheads			
Total			
Duke Energy East Bend West Landfill Cell 1 Costs	**Est. Cost**	**Source**	**Notes**
Duke Labor + Labor Loadings	[redacted]	Promet	
Construction of Cell 1		Bid	
Fuel		Bid Estimate	
Engineering, QA/QC, PTO submittal		[redacted]Bid, archeological services, and permitting	
Overheads			
Total			
Grand Total Cell 1			Includes common items for all cells

AG-DR-02-004

REQUEST:

Reference Miller testimony page 9, lines 6-8. Of the estimated $33-$35 per ton cost, what is the individual dollar figures attributed to transportation costs, and to disposal costs?

RESPONSE:

Please see response to STAFF–DR–01–005.

PERSON RESPONSIBLE: Nicholas R. Sellet

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-005

REQUEST:

Reference Miller testimony page 10, line 19, wherein he states the lined landfill will be approximately 200 acres. Does that 200 acres include the designed space between the two sites designated for waste disposal or is that acreage excluded from the calculation?

RESPONSE:

The 200 acres referenced in the Direct Testimony of Joseph A. Miller, Jr., only includes the areas that are within the "Limits of Waste" shown on AG-DR-01-004 Attachment A. The landfill's limits of waste (the area that is permitted by the Kentucky Department of Environmental Protection to accept CCR) are approximately 200 acres, and thus, this figure does not include the space between Cells 1-7 and Cell 8 or areas that contain roads and/or ancillary equipment.

PERSON RESPONSIBLE: Joseph A. Miller, Jr.

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-006

REQUEST:

When the Company prepares a numeric value for the volume of the space, is that calculated based upon acreage units, or specific dimensions of the cells?

RESPONSE:

The volume is calculated based on the specific dimensions of the cells. This is accomplished using computer modelling software and was completed for the proposed landfill by a third party engineering contractor as a part of the application for the permit to install. The volumes calculated were included in the Application, Exhibit 2 in the table labeled "Waste Data."

As a general comment, some of the slopes of cells get covered by the construction of adjacent cells. This can be seen in the drawings that are included in AG-DR-02-11 Attachment.

PERSON RESPONSIBLE: Nicholas R. Sellet

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-007

REQUEST:

Provide an explanation and cost estimate for methods of disposing of the liquid sulfate waste sludge, fly ash, and bottom ash as independent waste streams, without the production of Poz-o-tec.

RESPONSE:

The cost per ton of disposal of fly ash, and bottom ash as individual waste streams would be similar to the estimates provided in the Direct Testimonies of Nicholas R. Sellet, page 5, lines 7 through 18 and Joseph A. Miller, Jr., page 9, lines 5 through 23.

Duke Energy Kentucky does not believe that the liquid sulfate waste sludge can be disposed of as an individual waste stream, as it is only 30% solids by weight. Please see AG-DR-02-008 for additional information on why East Bend Station produces Poz-o-tec.

PERSON RESPONSIBLE: Nicholas R. Sellet/Tammy Jett

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-008

REQUEST:

If the Company knows, how do other coal generating units in Kentucky dispose of liquid sulfate waste sludge produced at their units and what is the approximate cost of those disposal methods?

RESPONSE:

It is Duke Energy Kentucky's understanding that other coal generating units in Kentucky, where more modern flue gas desulfurization (FGD) systems were constructed, compared to the older FGD system which East Bend Station currently has, create gypsum instead of Poz-o-tec. Modern FGD processes make synthetic gypsum by using forced oxidation in their reaction vessels instead of producing Poz-o-tec. The precise operations and maintenance costs other Kentucky coal generating units incur producing gypsum instead of Poz-o-tec is unknown.

East Bend Station has a 1980's vintage FGD, does not utilize a forced oxidation process in its FGD, and as result, does not produce synthetic gypsum.

The production of the Poz-o-tec material is necessary because the sulfites without the fly ash and lime additives would not be able to meet the strength requirements for construction of stable slopes within the landfill.

Duke Energy Kentucky completed a study to convert East Bend Station to a plant that would produce gypsum instead of Poz-o-tec circa 2000. The capital cost estimate to make the conversion was approximately $30 million (year 2000 dollars). The Company does not have an estimate for such costs today.

The conversion to a gypsum byproduct would not eliminate the need to construct a new landfill. While it is possible that gypsum could go into a reuse market, such as to make wallboard, the demand associated with a reuse market is unreliable. This generally forces a company to have alternative disposal methods such as landfills as a back up to the reuse market.

The cost of disposing Poz-o-tec in the landfill instead of gypsum would be the similar because the same general design is used for disposal of both Poz-o-tec and gypsum materials.

PERSON RESPONSIBLE: Tammy Jett

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-009

REQUEST:

Reference Sellet testimony page 5, line 10.

a. Would those transportation costs be the same if the Poz-o-tec disposal mechanism were not in place?

b. What other expenses, and in what amounts, are unique to the Poz-o-tec construction?

RESPONSE:

a. Duke Energy Kentucky believes those costs would be the same because they are primarily based on haul distance from where the CCR is discharged from the plant and where the landfill is located. While weight is also a factor, the weight of Poz-o-tec is similar to other CCR.

b. Duke Energy Kentucky is assuming this question is referring to the construction of the landfill for acceptance of Poz-o-tec. There are no additional expenses related to the design/construction of the landfill for accepting Poz-o-tec versus acceptance of other CCR (synthetic gypsum, fly ash, bottom ash, etc).

PERSON RESPONSIBLE: Nicholas R. Sellet

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-010

REQUEST:

Reference Sellet testimony page 6, lines 13-21.

a. Do the individual cells tie into one another's liner system and leachate prevention system?

b. If so, how does the first cell, which is not CCR compliant, tie into the additional cells to be built later?

RESPONSE:

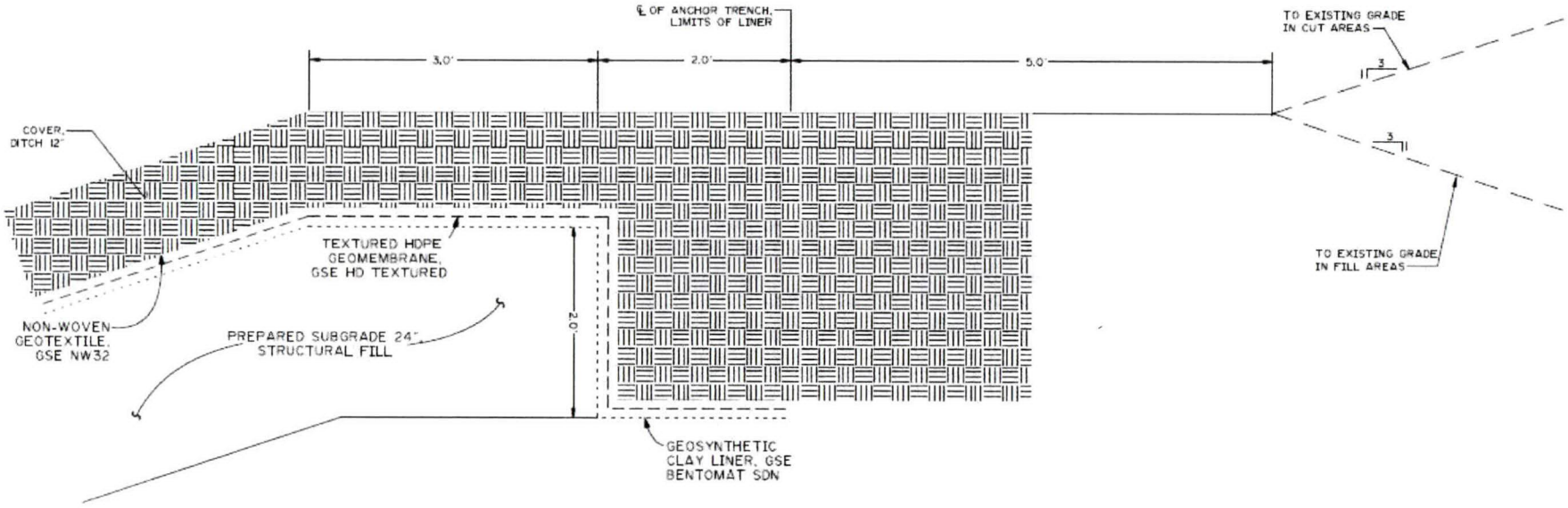
a. Yes, individual cells tie into one another's liner and leachate collection systems. The liner systems for Cells 1 through 5 of the proposed landfill tie to each other. This detail is shown in AG-DR-02-010 Attachment A. Please note that this drawing is a part of the original permit to install drawing package and does not reflect the 2' clay liner that is required by the CCR rule.

In more detail, Cell 1 leachate flows to Cell 2 which in turn flows to Cell 3. This detail is shown in AG-DR-02-010 Attachment B. Cell 3 leachate flows to the sedimentation pond. Cell 5 flows to Cell 4 which flows to Cell 3, also. Cell 8 leachate flows to Cell 4 to Cell 3 to the pond. Cells 6 and 7 are built on top of Cells 1 through 5 thus the leachate flows from Cells 6 and 7 through the leachate collection system that will already be installed in those cells.

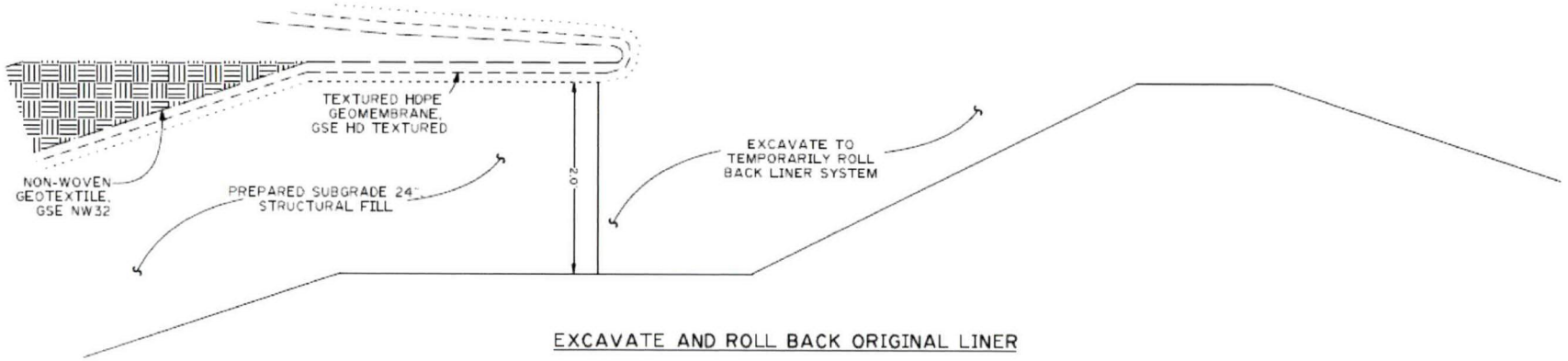
b. To clarify, Cell 1 will be CCR rule compliant. It is a matter of construction timing as to which liner will be required by the CCR rule for Cell 1. If Cell 1 is constructed with a different liner system than the rest of the cells, it will be tied into the additional cells to be built later by assuring that the drainage from the leachate piping in Cell 1 is properly maintained into Cell 2. This is not an unusual situation to occur while building a CCR landfill, and it has been done before at other Duke Energy CCR landfill facilities. For example, leachate piping has been connected from one cell with a three-foot thick liner into another cell with a five foot thick liner. As long as the leachate pipes are arranged to continue positive drainage, the system works effectively.

PERSON RESPONSIBLE: Nicholas R. Sellet/Tammy Jett

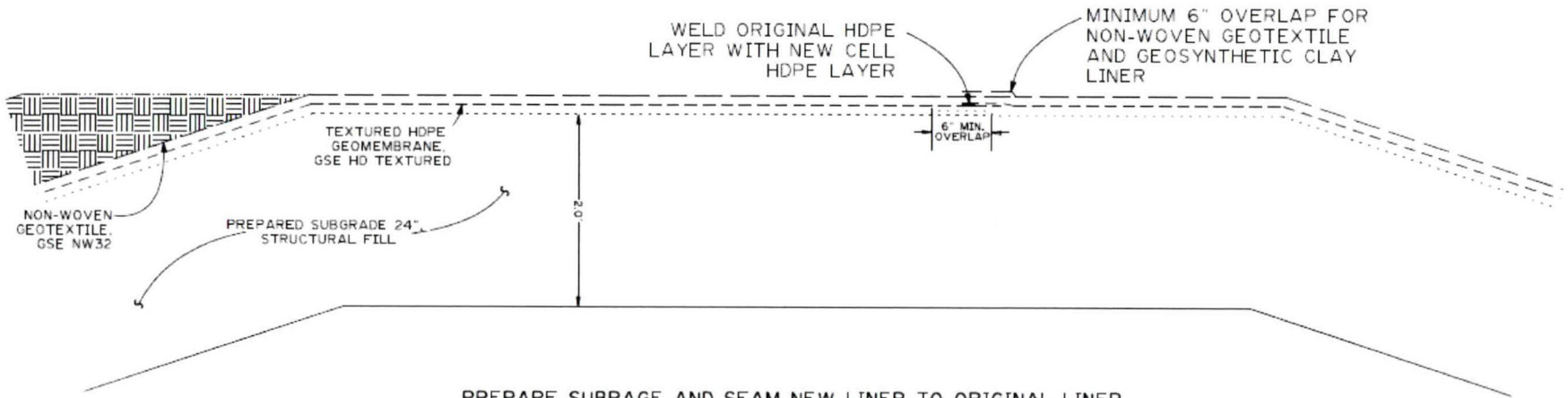
Inter-Cell Liner Attachment Details



INITIAL CELL CONSTRUCTION VIEW

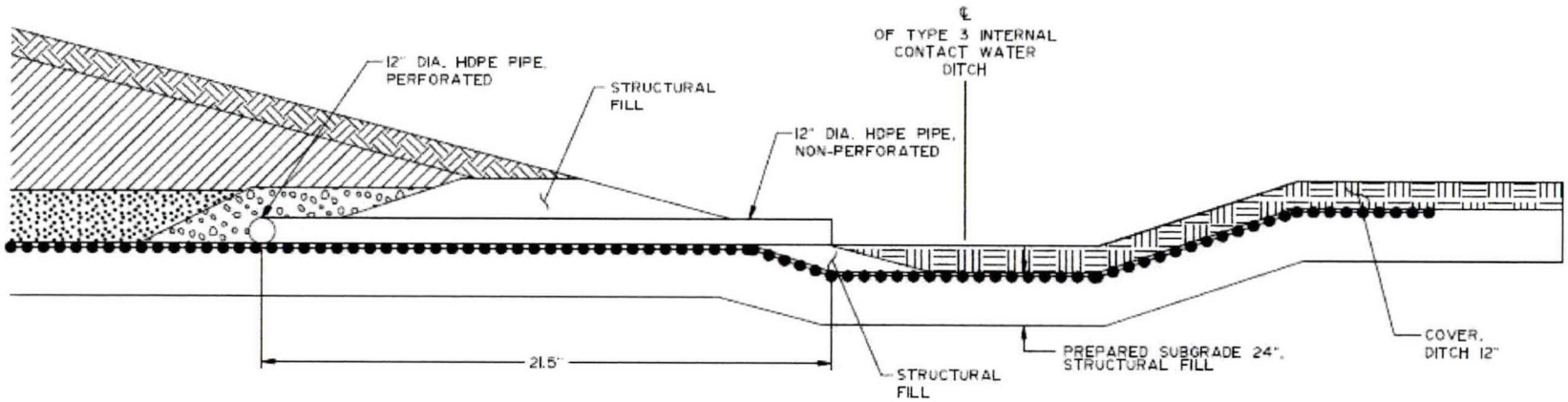


EXCAVATE AND ROLL BACK ORIGINAL LINER

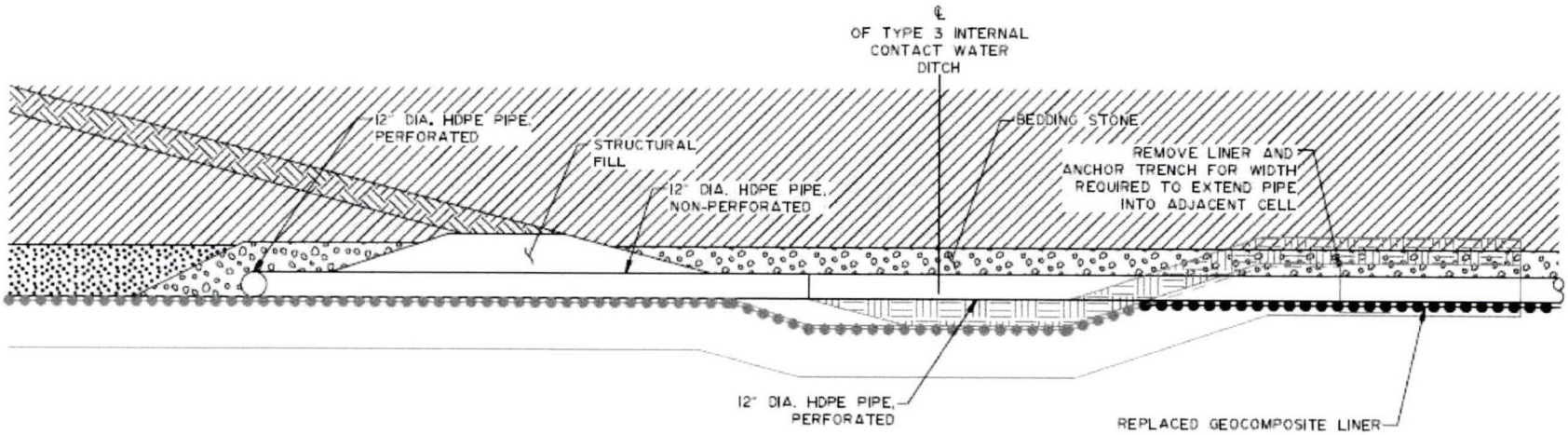


PREPARE SUBRAGE AND SEAM NEW LINER TO ORIGINAL LINER

Cell 1 to Cell 2 Leachate Pipe Connection



OUTLET TO INTERNAL CONTACT WATER DITCH



Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-011

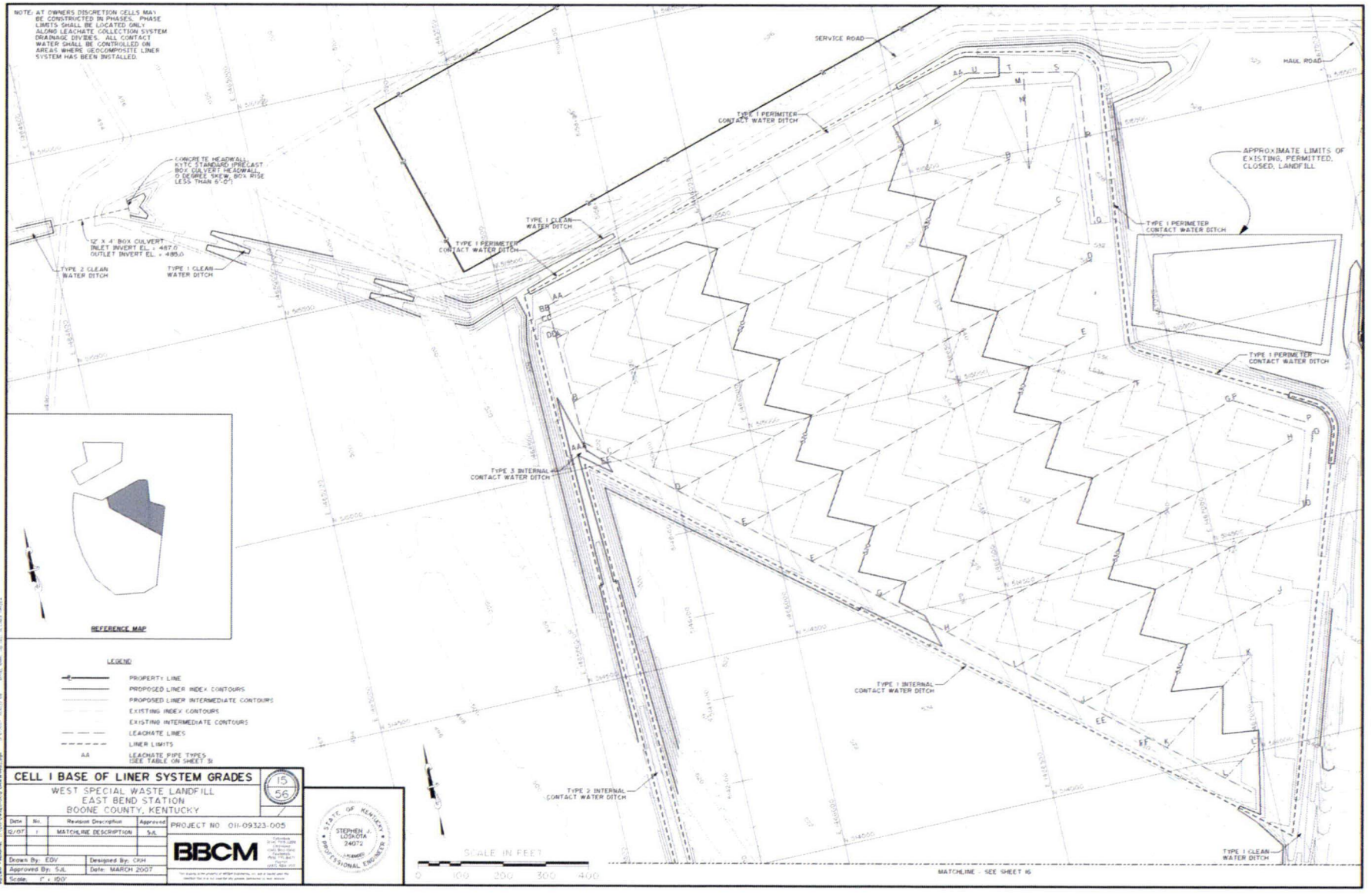
REQUEST:

Please provide a diagram of how the cell design and layout will be constructed.

RESPONSE:

Please see AG-DR-02-011 Attachment. The cells will be constructed in the following order: 1, 2, 3, 4, 5, 6, 7, and 8. The drawings are placed in this order in the Attachment. The drawings labeled "Base of Liner System Grades" show the cells when they have no CCR in them. The drawings labeled "Top of Cover Grades" show the cells when they are full. The Cross Section drawings show elevations of the landfill at the stations that are shown in the plan views.

PERSON RESPONSIBLE: Nicholas R. Sellet



CELL 1 BASE OF LINER SYSTEM GRADES

WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY

15
56

Date	No.	Revision Description	Approved
12/07	1	MATCHLINE DESCRIPTION	SJL

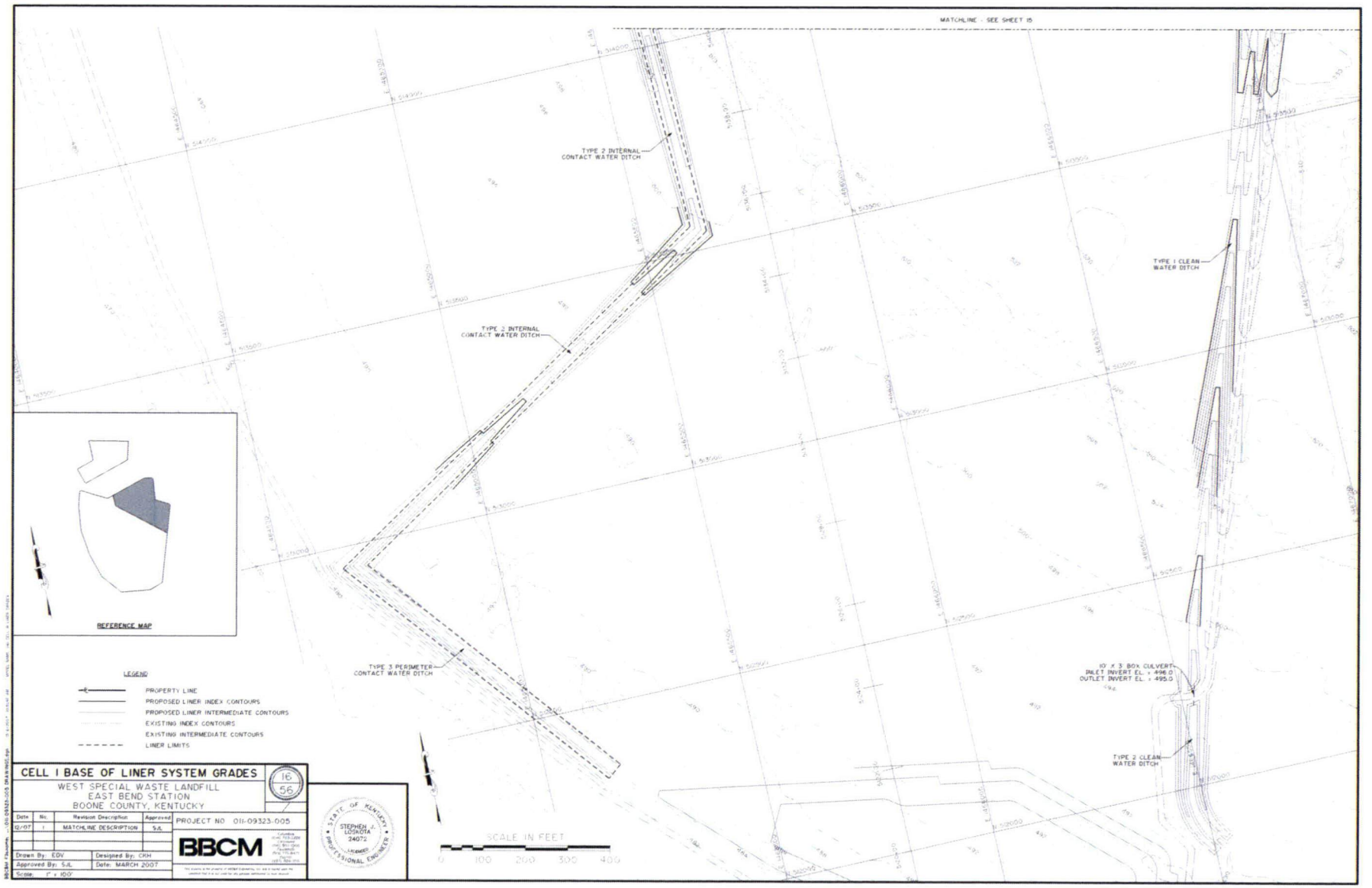
PROJECT NO 011-09323-005

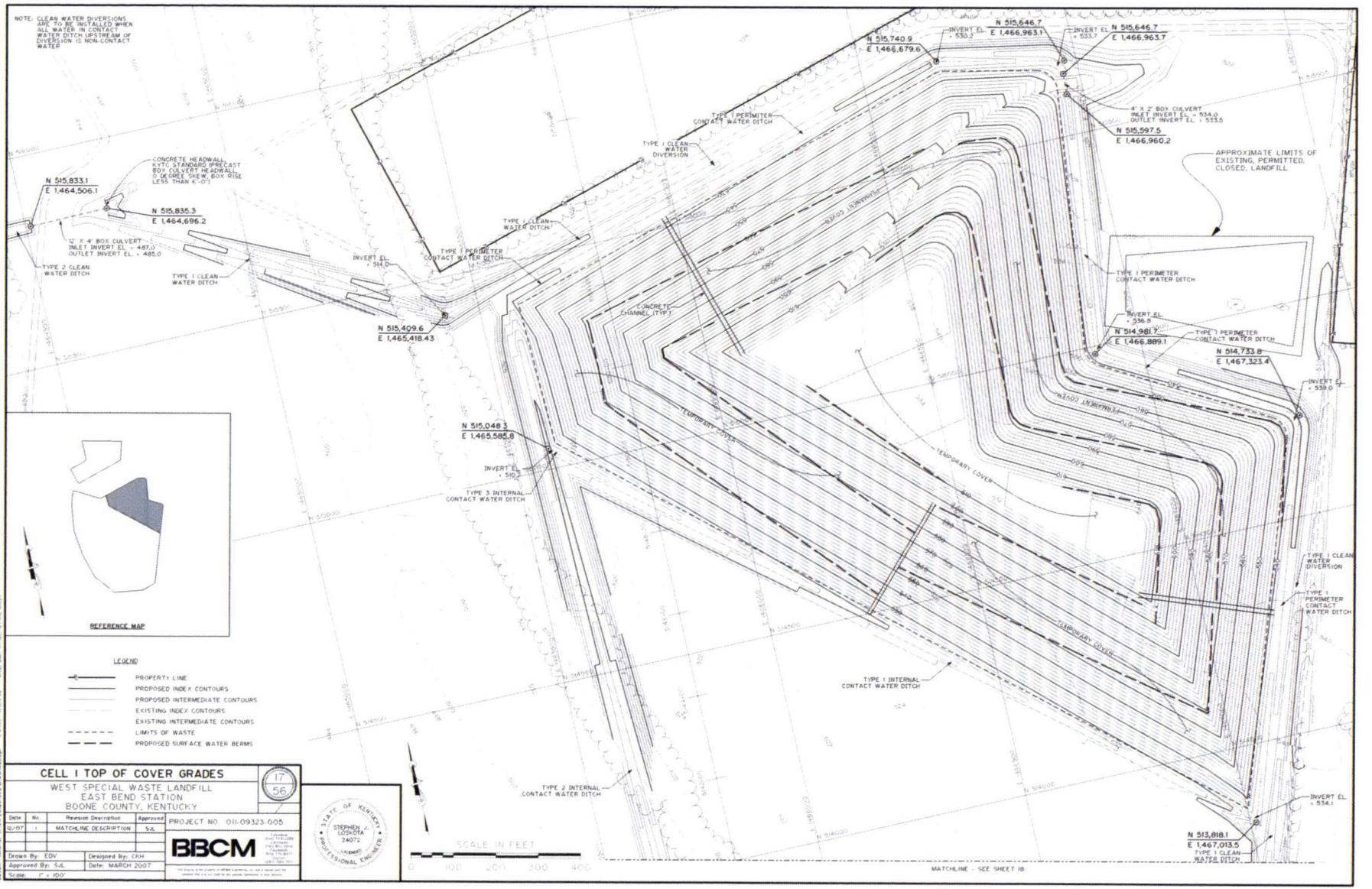
Drawn By: EDV | Designed By: CKH
Approved By: SJL | Date: MARCH 2007
Scale: 1" = 100'

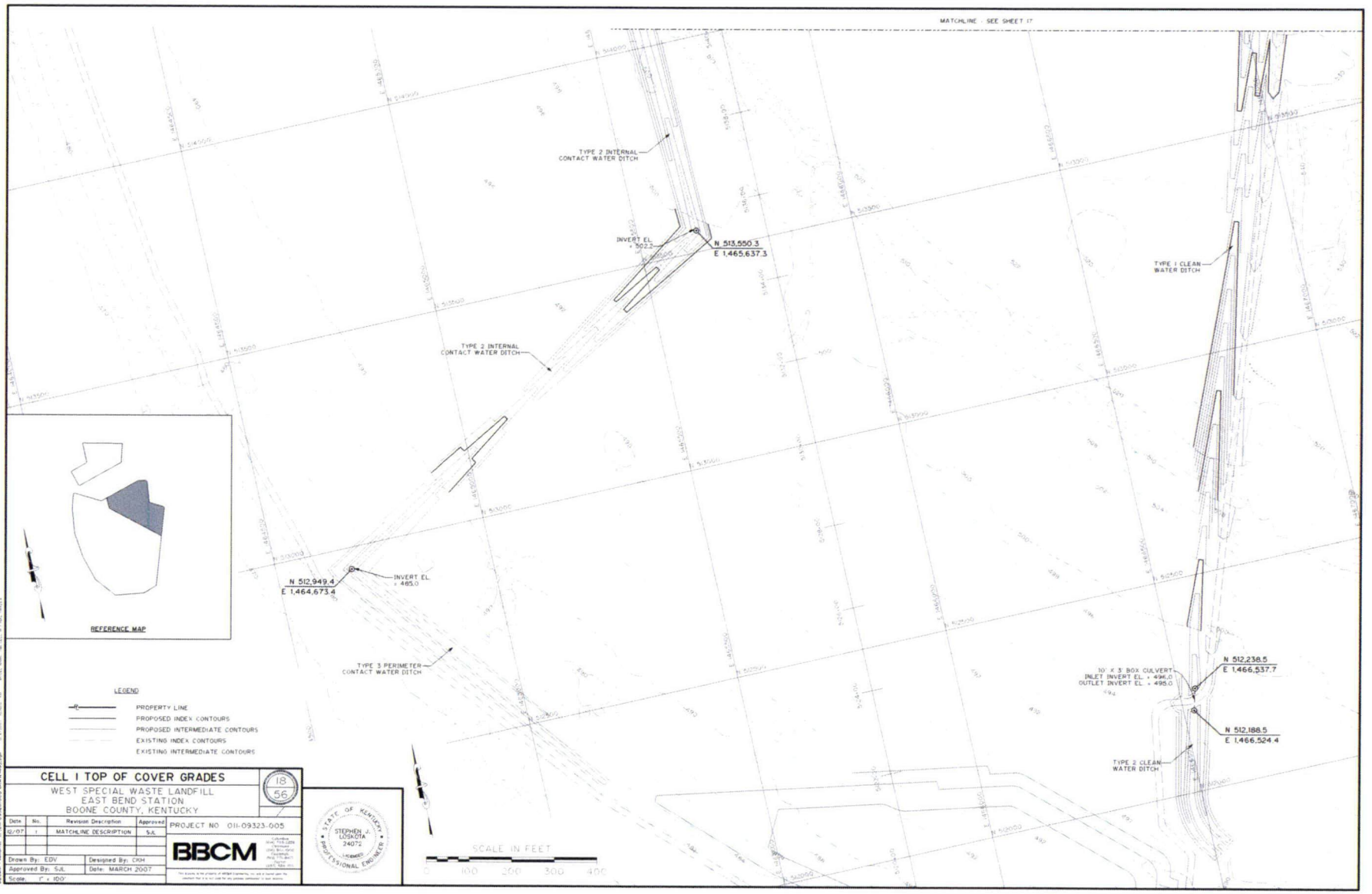
BBCM

STATE OF KENTUCKY
STEPHEN J. LOSKOTA
24072
LICENSED PROFESSIONAL ENGINEER

KyPSC Case No. 2015-00089
AG-DR-02-011 Attachment
Page 1 of 29


MATCHLINE - SEE SHEET 15
TYPE 2 INTERNAL CONTACT WATER DITCH
TYPE 2 INTERNAL CONTACT WATER DITCH
TYPE 3 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
10' x 3' BOX CULVERT INLET INVERT EL. = 496.0 OUTLET INVERT EL. = 495.0
TYPE 2 CLEAN WATER DITCH
REFERENCE MAP
LEGEND
PROPERTY LINE
PROPOSED LINER INDEX CONTOURS
PROPOSED LINER INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LINER LIMITS
SCALE IN FEET
0 100 200 300 400
CELL 1 BASE OF LINER SYSTEM GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
16
56
Date | No. | Revision Description | Approved
12/07 | 1 | MATCHLINE DESCRIPTION | S.L.
PROJECT NO. 011-09323-005
BBCM
STATE OF KENTUCKY
STEPHEN J. LOSKOTA
24072
LICENSED
PROFESSIONAL ENGINEER
Drawn By: EDV
Designed By: CKH
Approved By: S.L.
Date: MARCH 2007
Scale: 1" = 100'


NOTE: CLEAN WATER DIVERSIONS ARE TO BE INSTALLED WHEN ALL WATER IN CONTACT WATER DITCH UPSTREAM OF DIVERSION IS NON-CONTACT WATER
N 515,833.1
E 1,464,506.1
CONCRETE HEADWALL KYTC STANDARD PRECAST BOX CULVERT HEADWALL, 0 DEGREE SKEW, BOX RISE LESS THAN 6'-0"
N 515,836.3
E 1,464,696.2
12' X 4' BOX CULVERT INLET INVERT EL. = 487.0 OUTLET INVERT EL. = 485.0
TYPE 2 CLEAN WATER DITCH
TYPE 1 CLEAN WATER DITCH
INVERT EL. = 514.0
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DIVERSION
TYPE 1 CLEAN WATER DITCH
N 515,409.6
E 1,465,418.43
N 515,740.9
E 1,466,679.6
INVERT EL. = 530.2
N 515,646.7
E 1,466,963.1
INVERT EL. = 533.7
N 515,646.7
E 1,466,963.7
4' X 2' BOX CULVERT INLET INVERT EL. = 534.0 OUTLET INVERT EL. = 533.5
N 515,597.5
E 1,466,960.2
APPROXIMATE LIMITS OF EXISTING, PERMITTED, CLOSED, LANDFILL
TYPE 1 PERIMETER CONTACT WATER DITCH
INVERT EL. = 536.8
N 514,981.7
E 1,466,889.1
TYPE 1 PERIMETER CONTACT WATER DITCH
N 514,733.8
E 1,467,323.4
INVERT EL. = 539.0
CONCRETE CHANNEL (TYP.)
TEMPORARY COVER
N 515,048.3
E 1,465,585.8
INVERT EL. = 510.2
TYPE 3 INTERNAL CONTACT WATER DITCH
TEMPORARY COVER
TYPE 1 CLEAN WATER DIVERSION
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 INTERNAL CONTACT WATER DITCH
TYPE 2 INTERNAL CONTACT WATER DITCH
INVERT EL. = 534.1
N 513,818.1
E 1,467,013.5
TYPE 1 CLEAN WATER DITCH
REFERENCE MAP
LEGEND
PROPERTY LINE
PROPOSED INDEX CONTOURS
PROPOSED INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LIMITS OF WASTE
PROPOSED SURFACE WATER BERMS
SCALE IN FEET
0 100 200 300 400
MATCHLINE - SEE SHEET 18
CELL 1 TOP OF COVER GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
17
56
Date | No. | Revision Description | Approved
12/07 | 1 | MATCHLINE DESCRIPTION | S.A.
PROJECT NO. 011-09323-005
BBCM
Drawn By: EDV | Designed By: CKH
Approved By: S.A. | Date: MARCH 2007
Scale: 1" = 100'
STATE OF KENTUCKY
STEPHEN A. LOSKOTA
24072
LICENSED
PROFESSIONAL ENGINEER


MATCHLINE - SEE SHEET 17
TYPE 2 INTERNAL CONTACT WATER DITCH
INVERT EL. = 502.2
N 513,550.3
E 1,465,637.3
TYPE 1 CLEAN WATER DITCH
TYPE 2 INTERNAL CONTACT WATER DITCH
REFERENCE MAP
N 512,949.4
E 1,464,673.4
INVERT EL. = 485.0
TYPE 3 PERIMETER CONTACT WATER DITCH
10' X 3' BOX CULVERT
INLET INVERT EL. = 496.0
OUTLET INVERT EL. = 495.0
N 512,238.5
E 1,466,537.7
N 512,188.5
E 1,466,524.4
TYPE 2 CLEAN WATER DITCH
LEGEND
PROPERTY LINE
PROPOSED INDEX CONTOURS
PROPOSED INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
SCALE IN FEET
0 100 200 300 400
CELL 1 TOP OF COVER GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
18
56
Date | No. | Revision Description | Approved
12/07 | 1 | MATCHLINE DESCRIPTION | SJL
PROJECT NO 011-09323-005
BBCM
STATE OF KENTUCKY
STEPHEN J. LOSKOTA
24072
LICENSED
PROFESSIONAL ENGINEER
Drawn By: EDV
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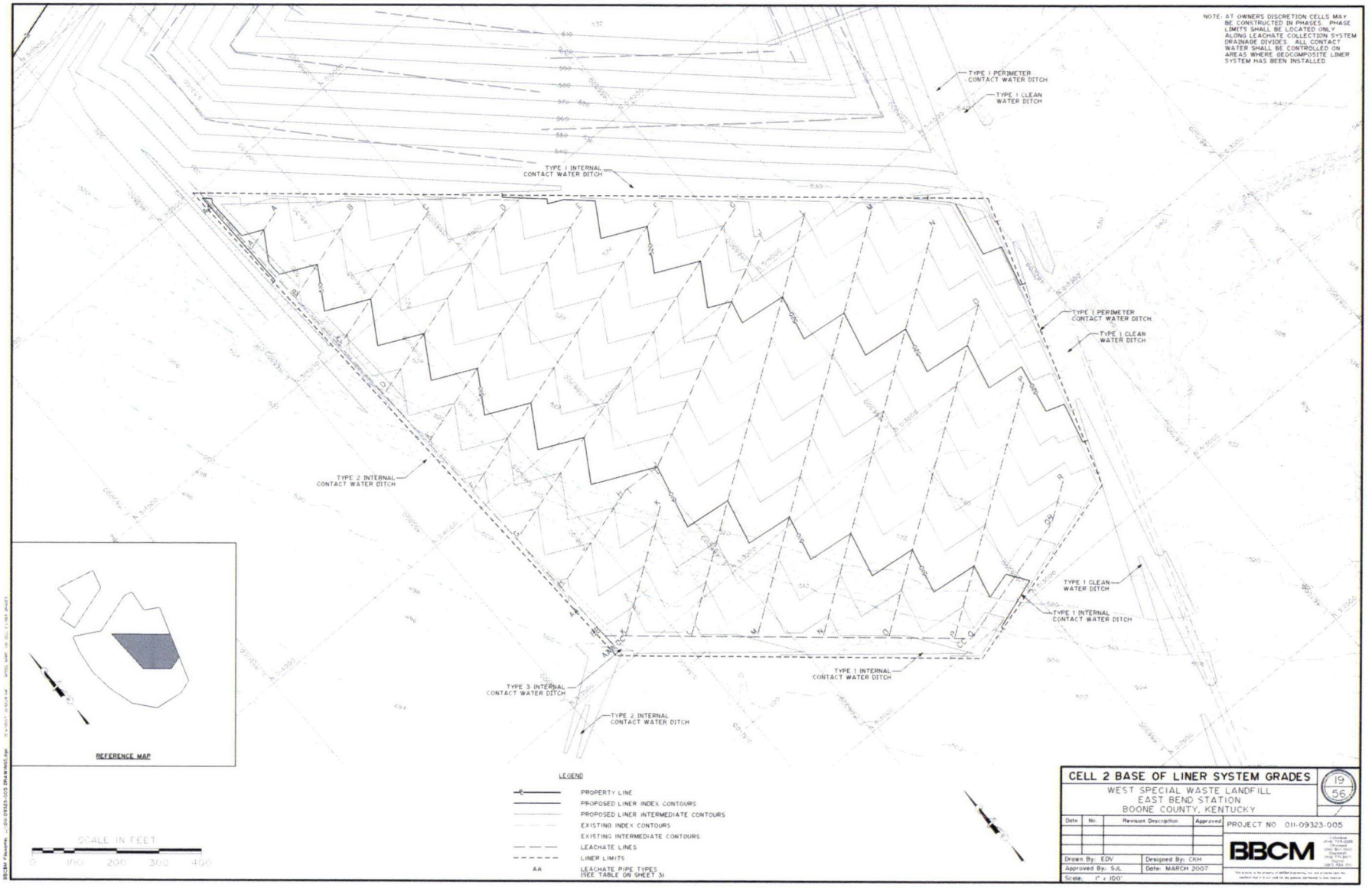
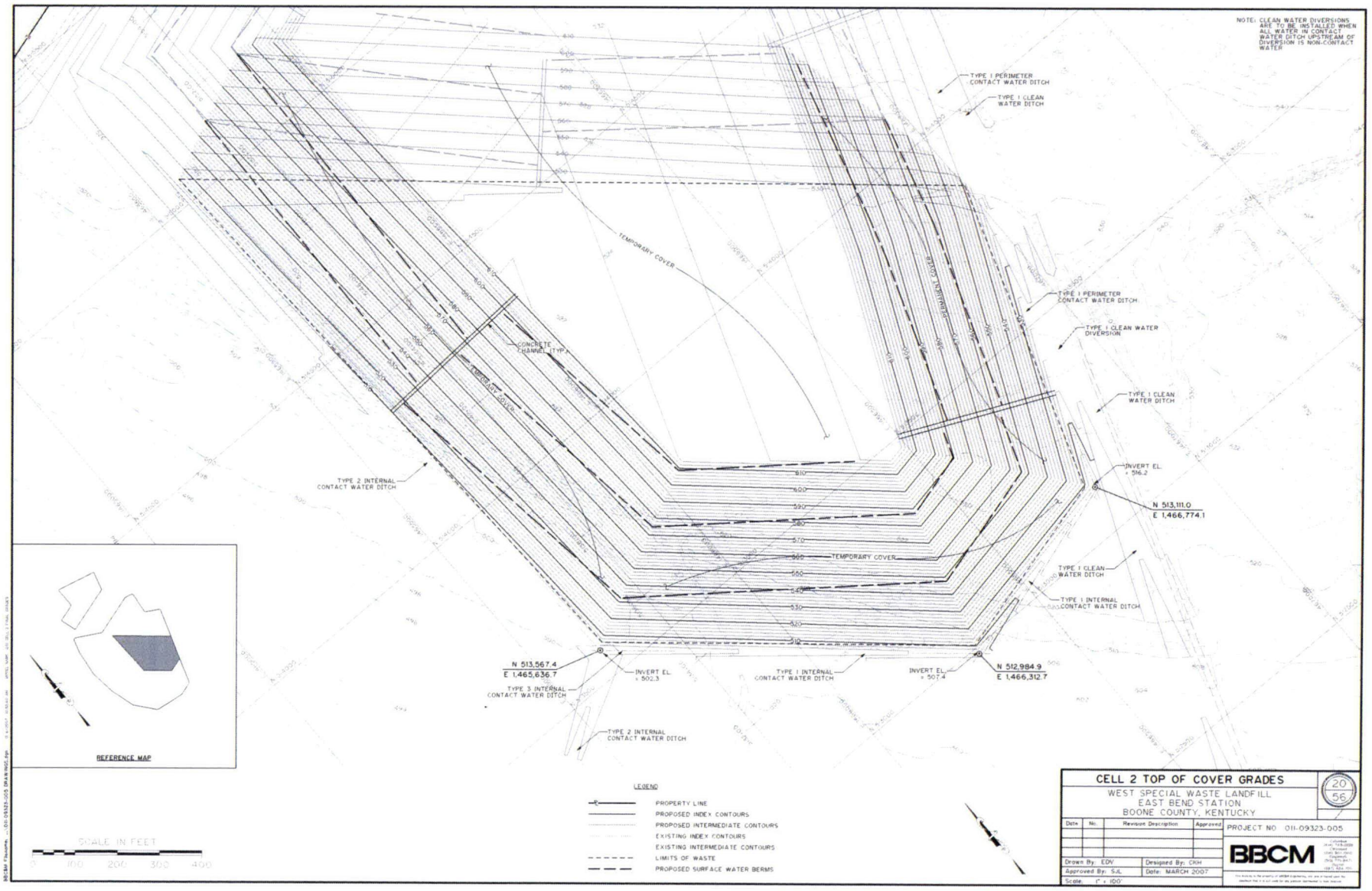
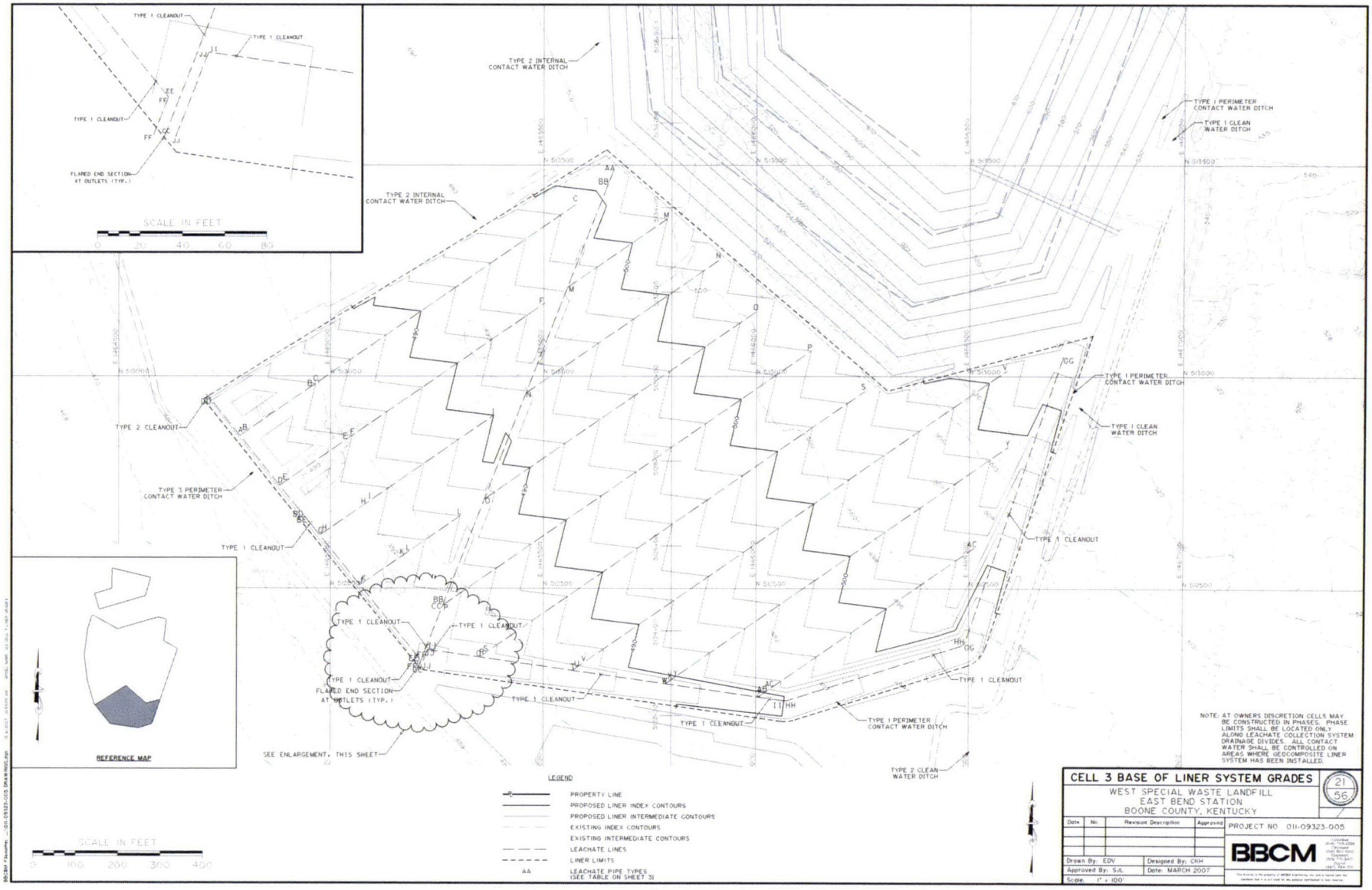
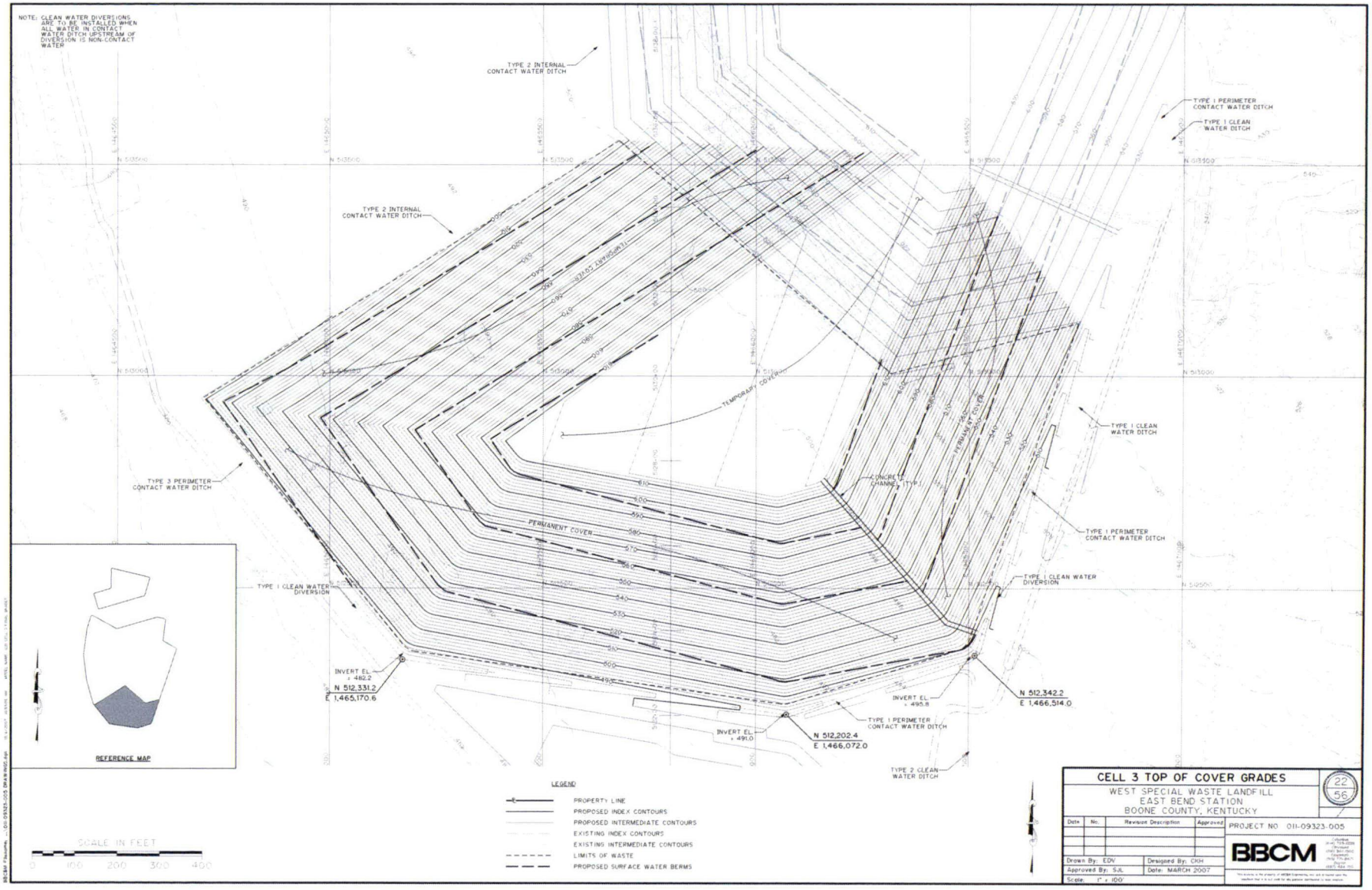
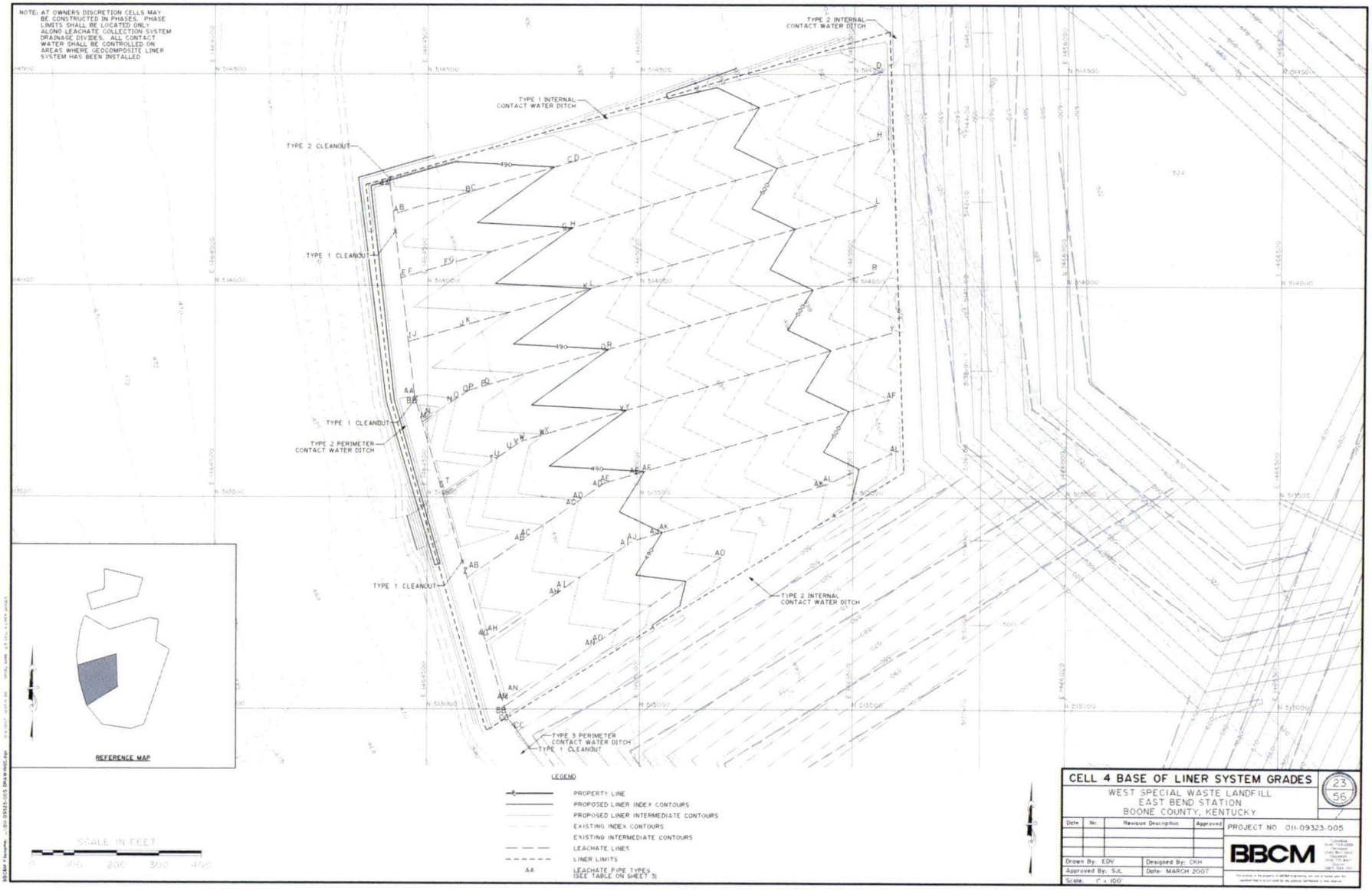
Date: MARCH 2007
Scale: 1" = 100'

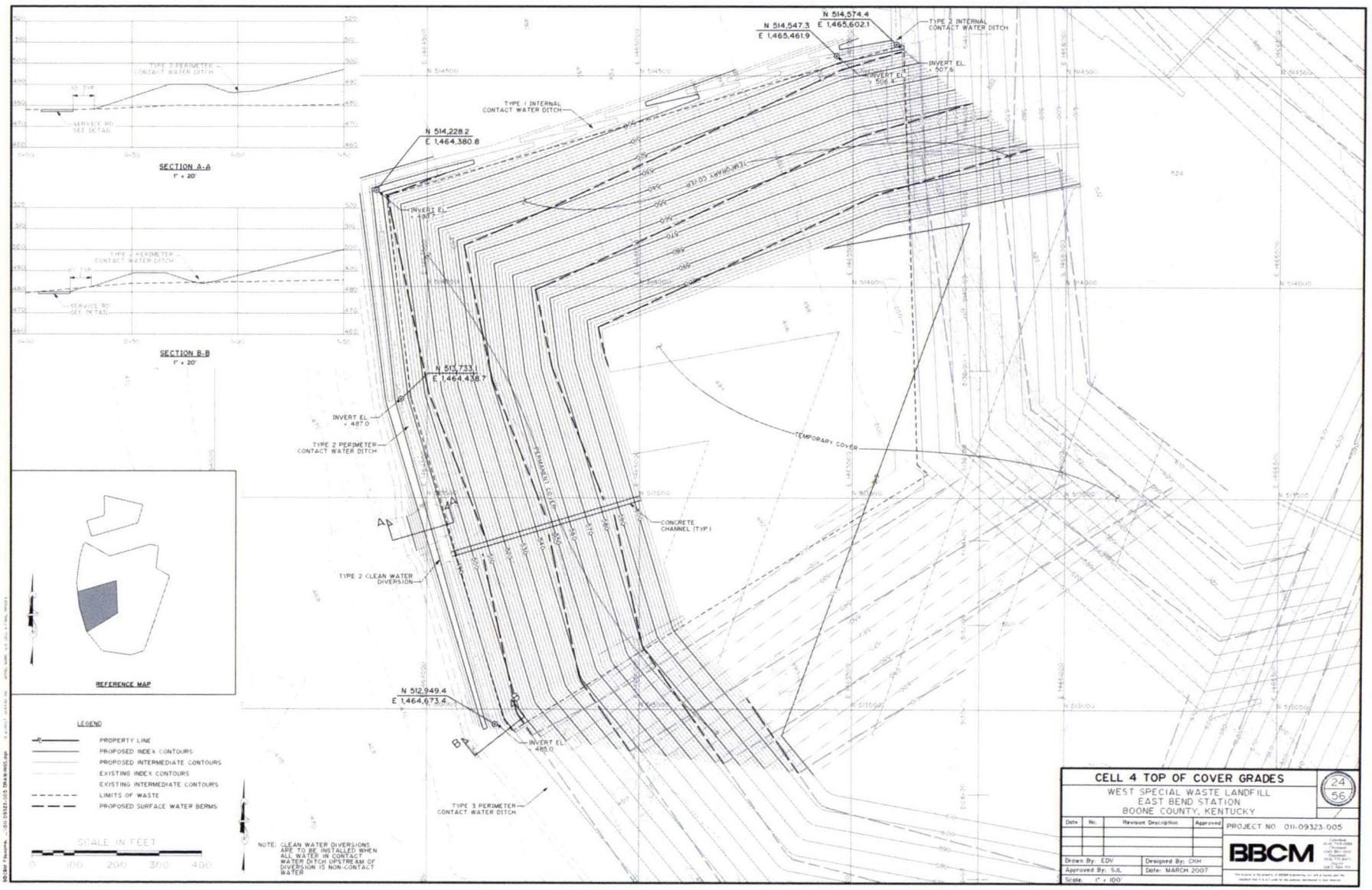

NOTE: AT OWNERS DISCRETION CELLS MAY BE CONSTRUCTED IN PHASES. PHASE LIMITS SHALL BE LOCATED ONLY ALONG LEACHATE COLLECTION SYSTEM DRAINAGE DIVIDES. ALL CONTACT WATER SHALL BE CONTROLLED ON AREAS WHERE GEOCOMPOSITE LINER SYSTEM HAS BEEN INSTALLED.
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
TYPE 1 INTERNAL CONTACT WATER DITCH
TYPE 2 INTERNAL CONTACT WATER DITCH
TYPE 3 INTERNAL CONTACT WATER DITCH
REFERENCE MAP
SCALE IN FEET
0 100 200 300 400
LEGEND
PROPERTY LINE
PROPOSED LINER INDEX CONTOURS
PROPOSED LINER INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LEACHATE LINES
LINER LIMITS
AA LEACHATE PIPE TYPES (SEE TABLE ON SHEET 3)
CELL 2 BASE OF LINER SYSTEM GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
19
56
Date | No. | Revision Description | Approved
PROJECT NO. 011-09323-005
Drawn By: EDV
Designed By: CKH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'
BBCM

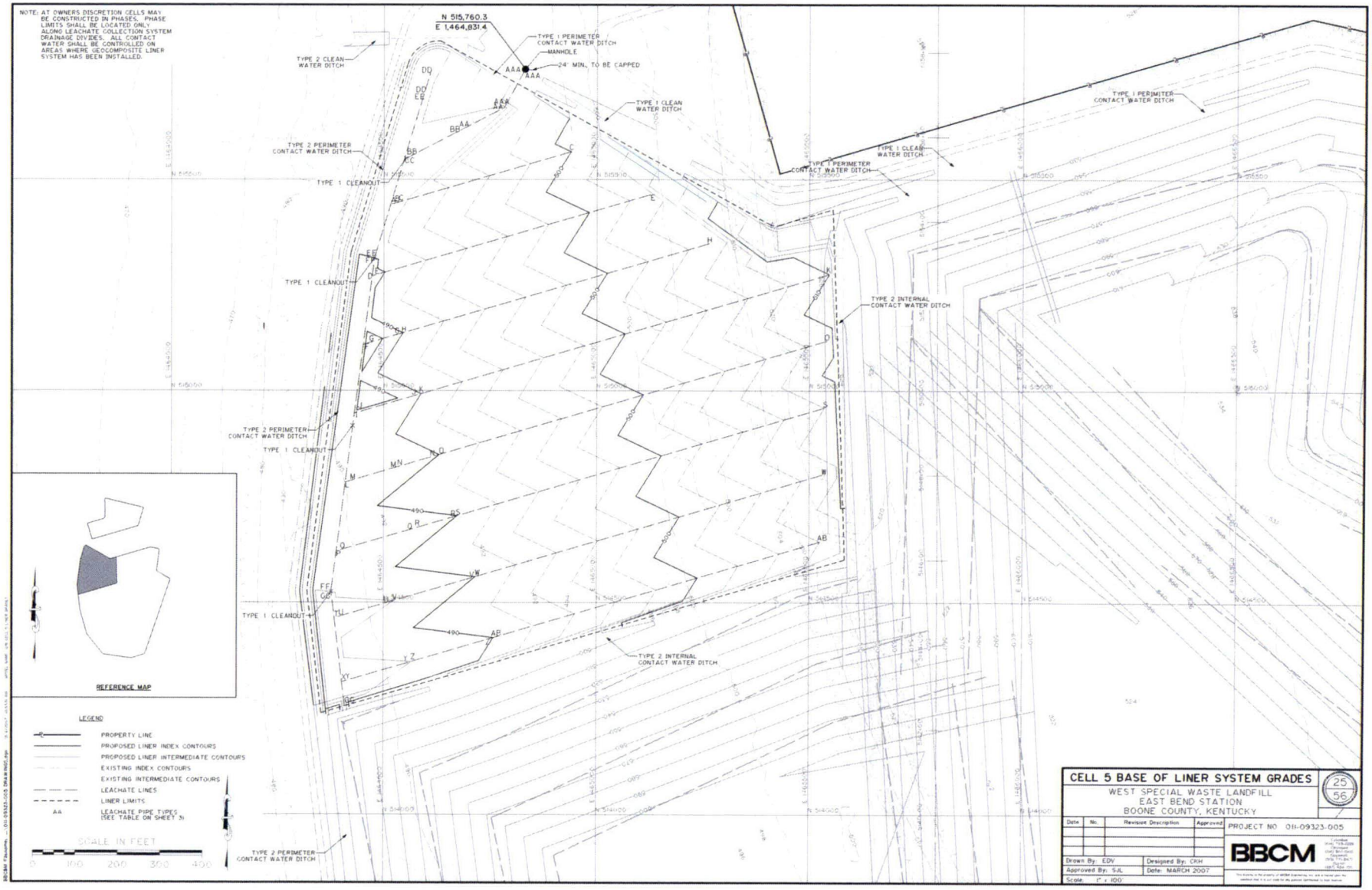

NOTE: CLEAN WATER DIVERSIONS ARE TO BE INSTALLED WHEN ALL WATER IN CONTACT WATER DITCH UPSTREAM OF DIVERSION IS NON-CONTACT WATER
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
TEMPORARY COVER
CONCRETE CHANNEL (TYP.)
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DIVERSION
TYPE 1 CLEAN WATER DITCH
TYPE 2 INTERNAL CONTACT WATER DITCH
INVERT EL. = 516.2
N 513,111.0
E 1,466,774.1
TEMPORARY COVER
TYPE 1 CLEAN WATER DITCH
TYPE 1 INTERNAL CONTACT WATER DITCH
N 513,567.4
E 1,465,636.7
INVERT EL. = 502.3
TYPE 3 INTERNAL CONTACT WATER DITCH
TYPE 1 INTERNAL CONTACT WATER DITCH
INVERT EL. = 507.4
N 512,984.9
E 1,466,312.7
TYPE 2 INTERNAL CONTACT WATER DITCH
REFERENCE MAP
LEGEND
PROPERTY LINE
PROPOSED INDEX CONTOURS
PROPOSED INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LIMITS OF WASTE
PROPOSED SURFACE WATER BERMS
SCALE IN FEET
0 100 200 300 400
CELL 2 TOP OF COVER GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
20
56
Date | No. | Revision Description | Approved
PROJECT NO. 011-09323-005
Drawn By: EDV
Designed By: CRH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'
BBCM

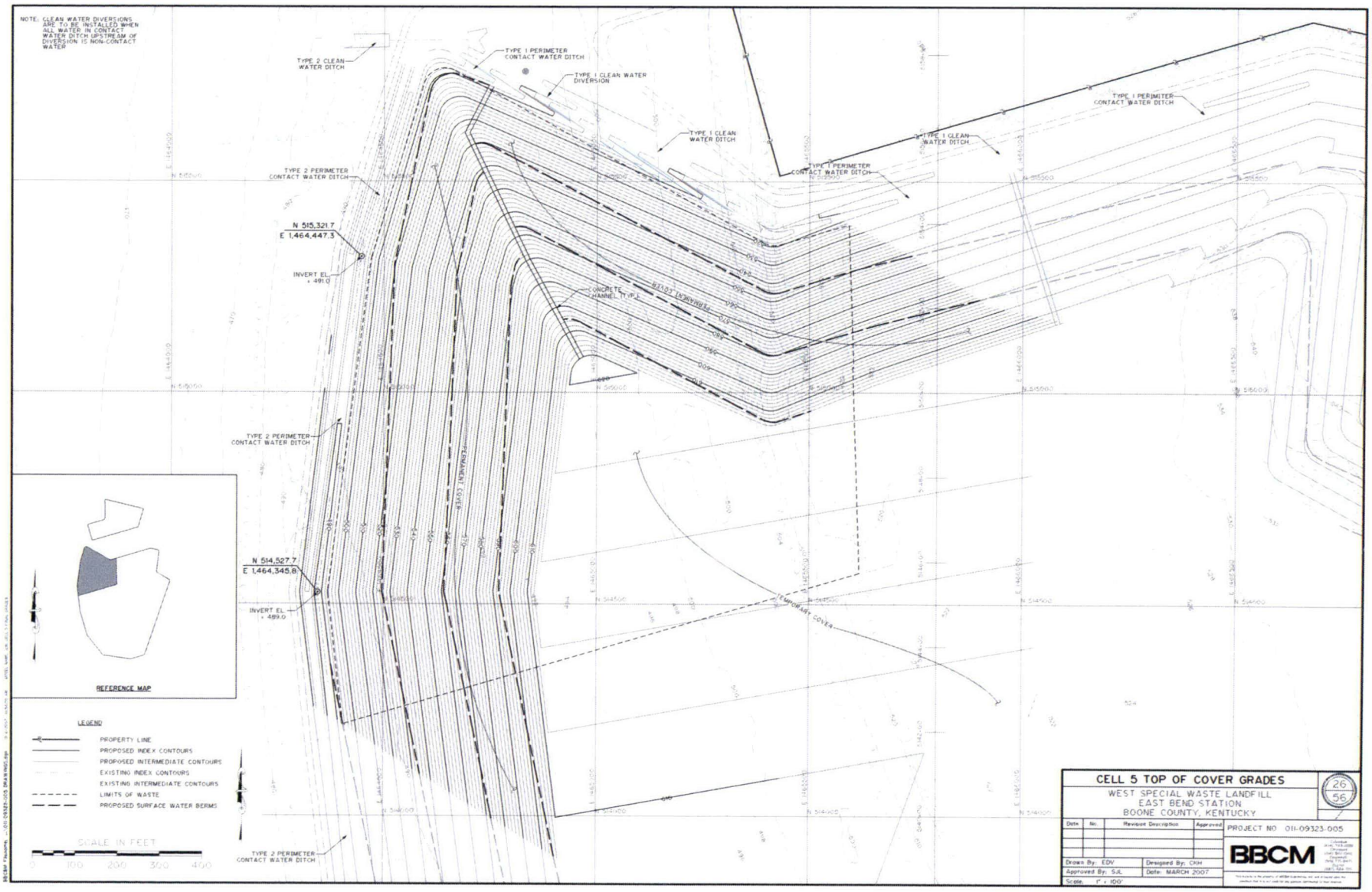

TYPE 1 CLEANOUT
TYPE 1 CLEANOUT
FLARED END SECTION AT OUTLETS (TYP.)
SCALE IN FEET
0 20 40 60 80
TYPE 2 INTERNAL CONTACT WATER DITCH
TYPE 2 INTERNAL CONTACT WATER DITCH
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
TYPE 2 CLEANOUT
TYPE 3 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEANOUT
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
TYPE 1 CLEANOUT
TYPE 1 CLEANOUT
TYPE 1 CLEANOUT
TYPE 1 CLEANOUT
FLARED END SECTION AT OUTLETS (TYP.)
TYPE 1 CLEANOUT
TYPE 1 CLEANOUT
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 2 CLEAN WATER DITCH
SEE ENLARGEMENT, THIS SHEET
REFERENCE MAP
SCALE IN FEET
0 100 200 300 400
LEGEND
PROPERTY LINE
PROPOSED LINER INDEX CONTOURS
PROPOSED LINER INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LEACHATE LINES
LINER LIMITS
AA LEACHATE PIPE TYPES (SEE TABLE ON SHEET 3)
NOTE: AT OWNERS DISCRETION CELLS MAY BE CONSTRUCTED IN PHASES. PHASE LIMITS SHALL BE LOCATED ONLY ALONG LEACHATE COLLECTION SYSTEM DRAINAGE DIVIDES. ALL CONTACT WATER SHALL BE CONTROLLED ON AREAS WHERE GEOCOMPOSITE LINER SYSTEM HAS BEEN INSTALLED.
CELL 3 BASE OF LINER SYSTEM GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
21
56
Date | No. | Revision Description | Approved
PROJECT NO 011-09323-005
Drawn By: EDV
Designed By: CKH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'
BBCM

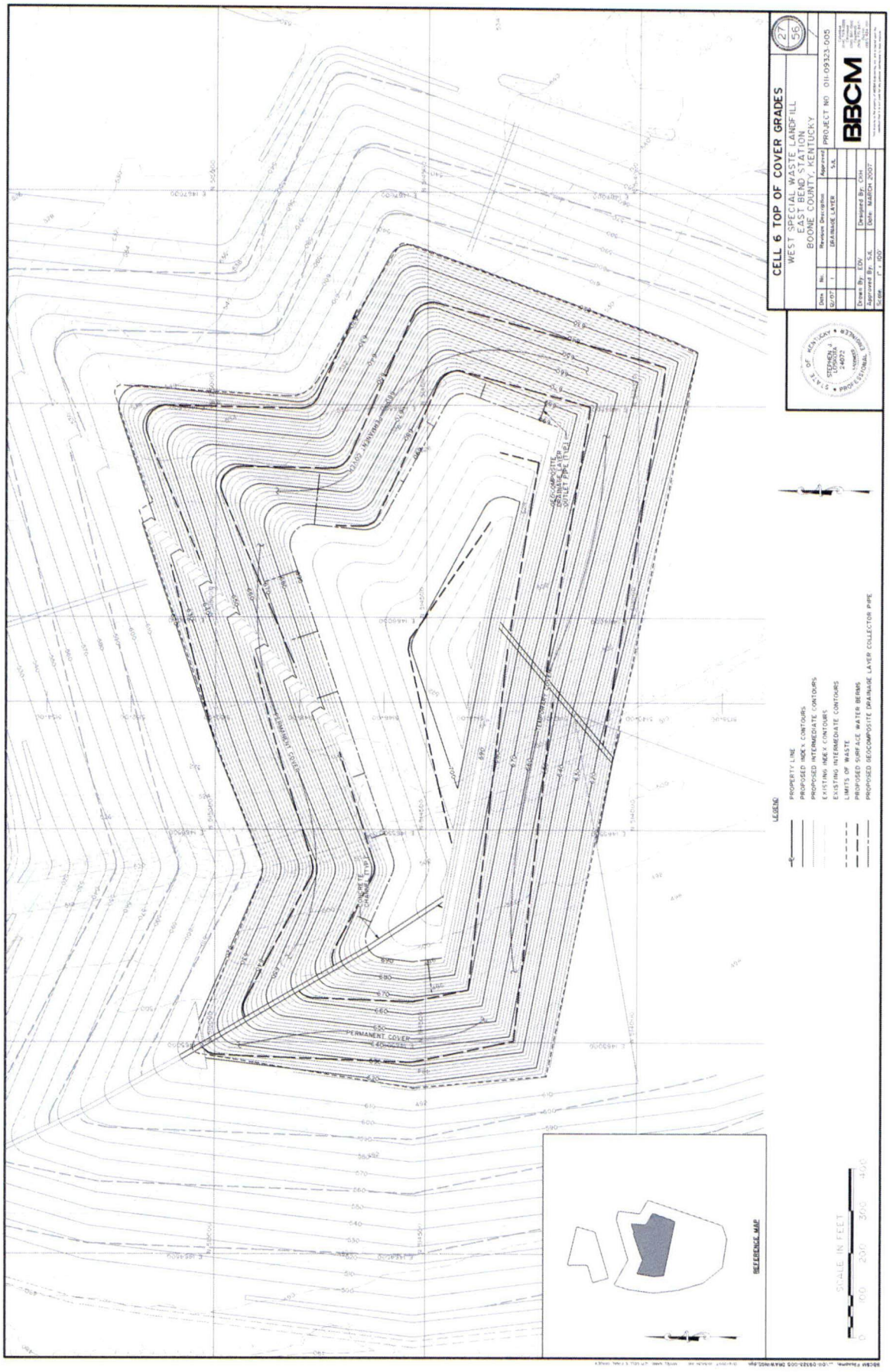

NOTE: CLEAN WATER DIVERSIONS ARE TO BE INSTALLED WHEN ALL WATER IN CONTACT WATER DITCH UPSTREAM OF DIVERSION IS NON-CONTACT WATER
TYPE 2 INTERNAL CONTACT WATER DITCH
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
TYPE 2 INTERNAL CONTACT WATER DITCH
TEMPORARY COVER
TYPE 1 CLEAN WATER DITCH
TYPE 3 PERIMETER CONTACT WATER DITCH
CONCRETE CHANNEL (TYP.)
PERMANENT COVER
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DIVERSION
TYPE 1 CLEAN WATER DIVERSION
INVERT EL. ± 482.2
N 512,331.2
E 1,465,170.6
INVERT EL. ± 495.8
N 512,342.2
E 1,466,514.0
INVERT EL. ± 491.0
N 512,202.4
E 1,466,072.0
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 2 CLEAN WATER DITCH
REFERENCE MAP
LEGEND
PROPERTY LINE
PROPOSED INDEX CONTOURS
PROPOSED INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LIMITS OF WASTE
PROPOSED SURFACE WATER BERMS
SCALE IN FEET
0 100 200 300 400
CELL 3 TOP OF COVER GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
22
56
Date | No. | Revision Description | Approved
PROJECT NO 011-09323-005
BBCM
Drawn By: EDV
Designed By: CKH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'

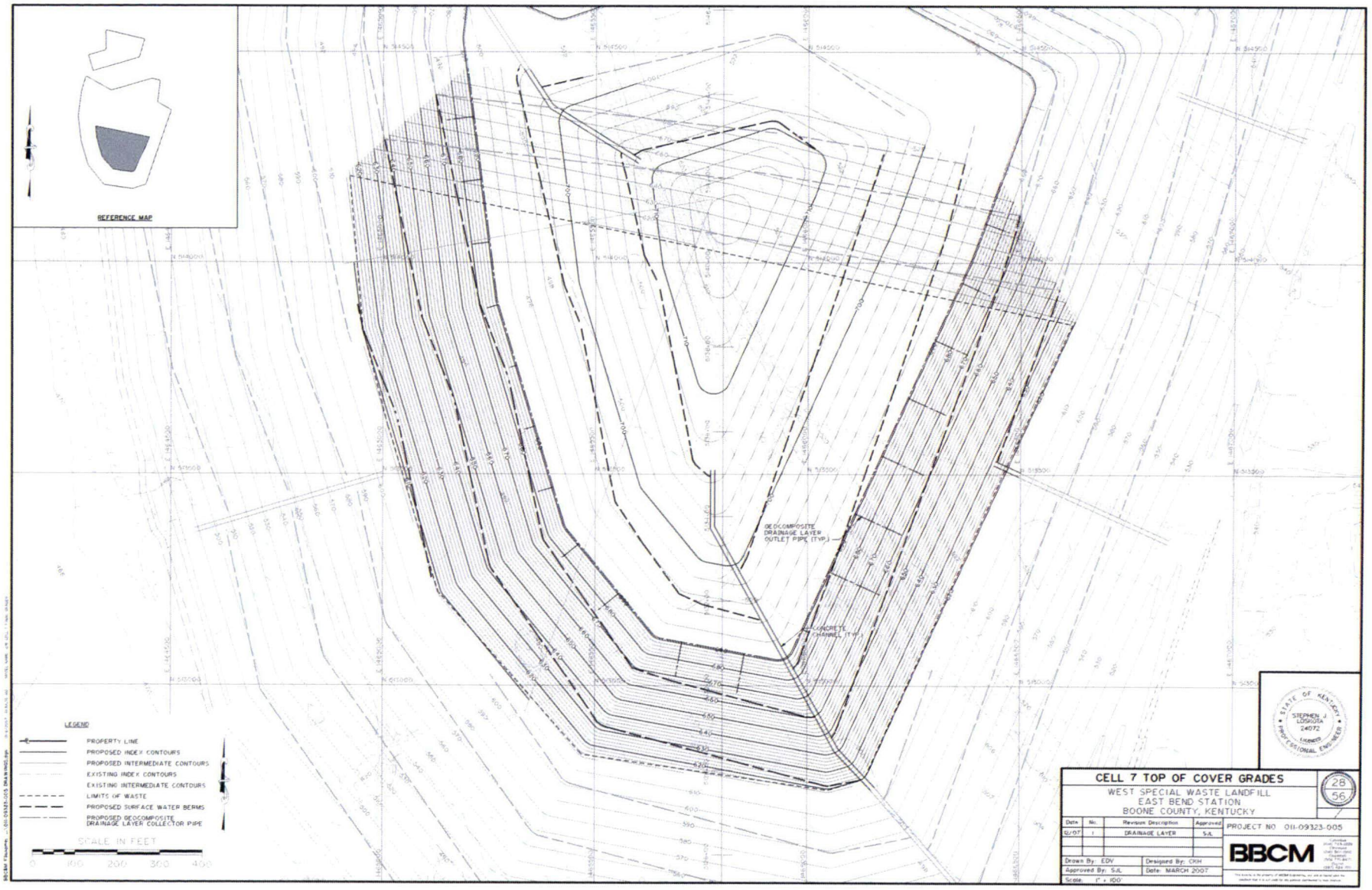

NOTE: AT OWNERS DISCRETION CELLS MAY BE CONSTRUCTED IN PHASES. PHASE LIMITS SHALL BE LOCATED ONLY ALONG LEACHATE COLLECTION SYSTEM DRAINAGE DIVIDES. ALL CONTACT WATER SHALL BE CONTROLLED ON AREAS WHERE GEOCOMPOSITE LINER SYSTEM HAS BEEN INSTALLED
TYPE 2 INTERNAL CONTACT WATER DITCH
TYPE 1 INTERNAL CONTACT WATER DITCH
TYPE 2 CLEANOUT
TYPE 1 CLEANOUT
TYPE 2 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEANOUT
TYPE 1 CLEANOUT
TYPE 2 INTERNAL CONTACT WATER DITCH
TYPE 3 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEANOUT
REFERENCE MAP
LEGEND
PROPERTY LINE
PROPOSED LINER INDEX CONTOURS
PROPOSED LINER INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LEACHATE LINES
LINER LIMITS
AA LEACHATE PIPE TYPES (SEE TABLE ON SHEET 3)
SCALE IN FEET
0 100 200 300 400
CELL 4 BASE OF LINER SYSTEM GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
23
56
Date | No. | Revision Description | Approved
PROJECT NO 011-09323-005
Drawn By: EDV | Designed By: CKH
Approved By: SJL | Date: MARCH 2007
Scale: 1" = 100'
BBCM

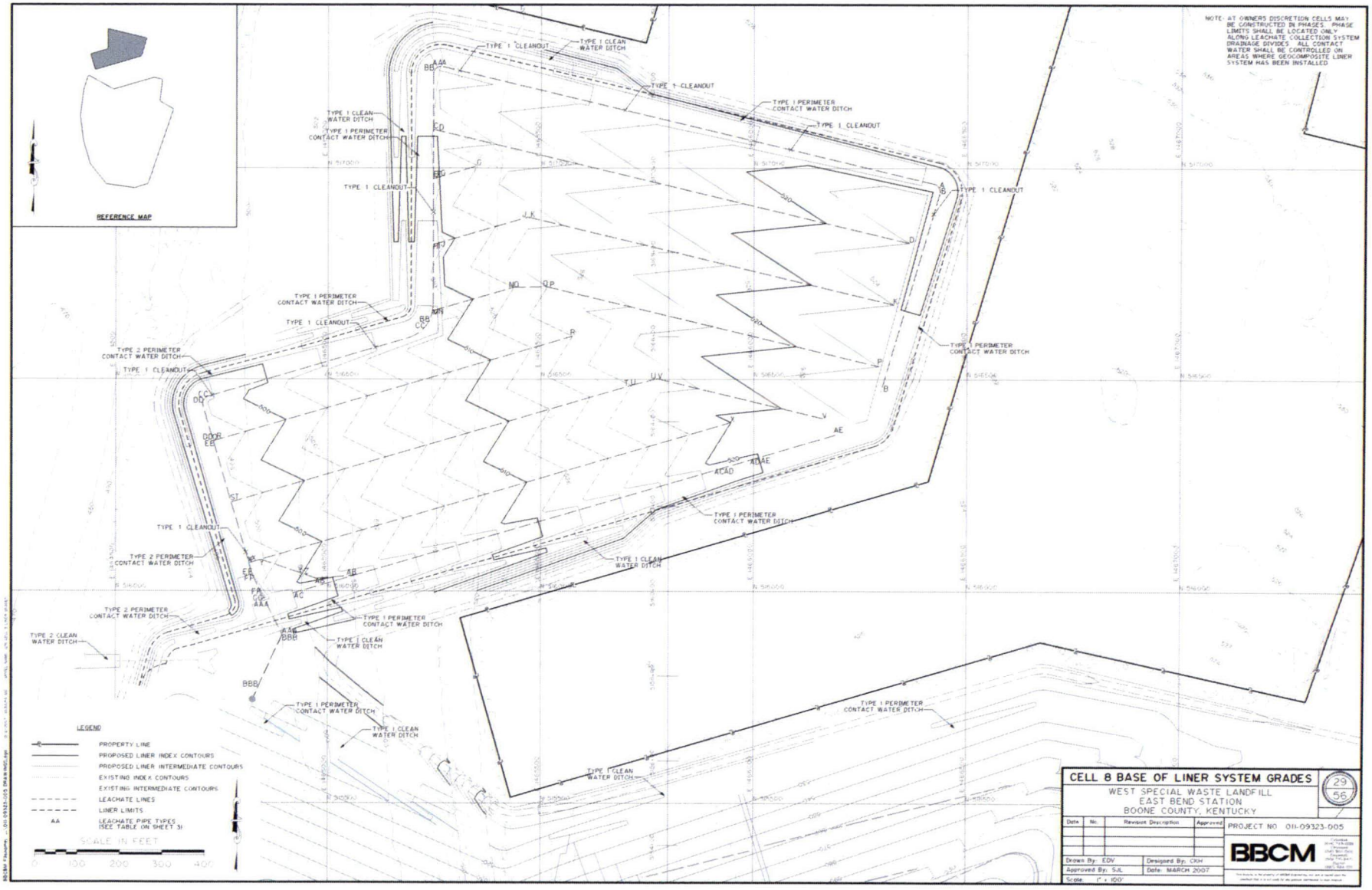

N 514,574.4
E 1,465,602.1
N 514,547.3
E 1,465,461.9
TYPE 2 INTERNAL CONTACT WATER DITCH
INVERT EL. ± 507.6
INVERT EL. ± 506.4
TYPE 1 INTERNAL CONTACT WATER DITCH
N 514,228.2
E 1,464,380.8
TEMPORARY COVER
INVERT EL. ± 497.7
N 513,733.1
E 1,464,438.7
INVERT EL. ± 487.0
TYPE 2 PERIMETER CONTACT WATER DITCH
PERMANENT COVER
TEMPORARY COVER
CONCRETE CHANNEL (TYP.)
TYPE 2 CLEAN WATER DIVERSION
N 512,949.4
E 1,464,673.4
INVERT EL. 480.0
TYPE 3 PERIMETER CONTACT WATER DITCH
SECTION A-A
1" = 20'
TYPE 3 PERIMETER CONTACT WATER DITCH
15' TYP.
SERVICE RD. SEE DETAIL
SECTION B-B
1" = 20'
TYPE 2 PERIMETER CONTACT WATER DITCH
15' TYP.
SERVICE RD. SEE DETAIL
REFERENCE MAP
LEGEND
PROPERTY LINE
PROPOSED INDEX CONTOURS
PROPOSED INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LIMITS OF WASTE
PROPOSED SURFACE WATER BERMS
SCALE IN FEET
0 100 200 300 400
NOTE: CLEAN WATER DIVERSIONS ARE TO BE INSTALLED WHEN ALL WATER IN CONTACT WATER DITCH UPSTREAM OF DIVERSION IS NON-CONTACT WATER
CELL 4 TOP OF COVER GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
24
56
Date
No.
Revision Description
Approved
PROJECT NO 011-09323-005
Drawn By: EDV
Designed By: CKH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'
BBCM

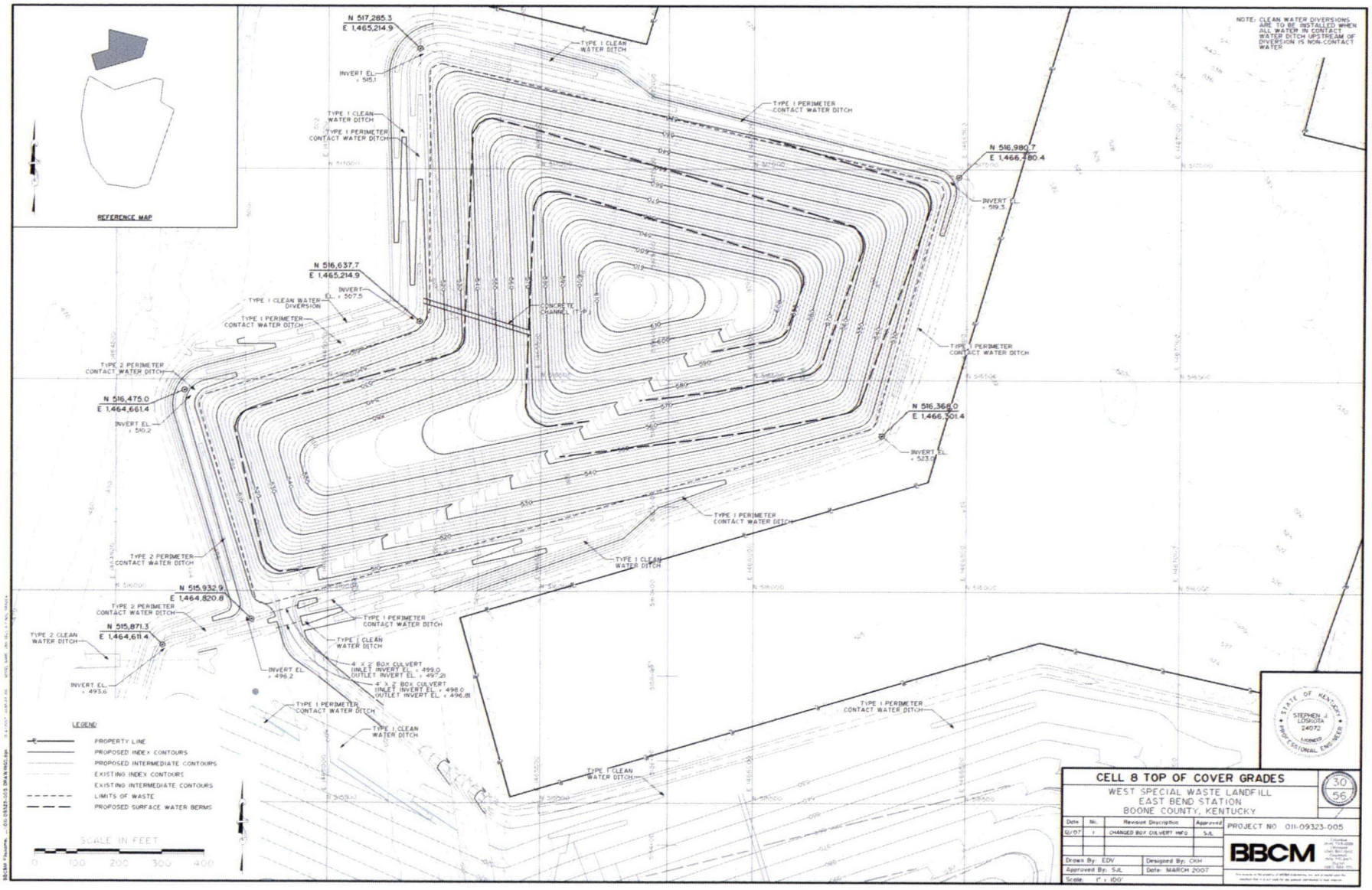

NOTE: AT OWNERS DISCRETION CELLS MAY BE CONSTRUCTED IN PHASES. PHASE LIMITS SHALL BE LOCATED ONLY ALONG LEACHATE COLLECTION SYSTEM DRAINAGE DIVIDES. ALL CONTACT WATER SHALL BE CONTROLLED ON AREAS WHERE GEOCOMPOSITE LINER SYSTEM HAS BEEN INSTALLED.
N 515,760.3
E 1,464,831.4
TYPE 1 PERIMETER CONTACT WATER DITCH
MANHOLE
24" MIN., TO BE CAPPED
TYPE 2 CLEAN WATER DITCH
TYPE 1 CLEAN WATER DITCH
TYPE 2 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEANOUT
TYPE 2 INTERNAL CONTACT WATER DITCH
REFERENCE MAP
LEGEND
PROPERTY LINE
PROPOSED LINER INDEX CONTOURS
PROPOSED LINER INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LEACHATE LINES
LINER LIMITS
LEACHATE PIPE TYPES (SEE TABLE ON SHEET 3)
SCALE IN FEET
0 100 200 300 400
CELL 5 BASE OF LINER SYSTEM GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
25
56
Date | No. | Revision Description | Approved
PROJECT NO. 08-09323-005
Drawn By: EDV
Designed By: CRH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'
BBCM


NOTE: CLEAN WATER DIVERSIONS ARE TO BE INSTALLED WHEN ALL WATER IN CONTACT WATER DITCH UPSTREAM OF DIVERSION IS NON-CONTACT WATER
TYPE 2 CLEAN WATER DITCH
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DIVERSION
TYPE 1 CLEAN WATER DITCH
TYPE 1 PERIMITER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 2 PERIMETER CONTACT WATER DITCH
N 515,321.7
E 1,464,447.3
INVERT EL. + 491.0
CONCRETE CHANNEL (TYP.)
PERIMETER ROAD
TYPE 2 PERIMETER CONTACT WATER DITCH
PERIMETER ROAD
N 514,527.7
E 1,464,345.8
INVERT EL. + 489.0
FLUME WAY COVER
TYPE 2 PERIMETER CONTACT WATER DITCH
REFERENCE MAP
LEGEND
PROPERTY LINE
PROPOSED INDEX CONTOURS
PROPOSED INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LIMITS OF WASTE
PROPOSED SURFACE WATER BERMS
SCALE IN FEET
0 100 200 300 400
CELL 5 TOP OF COVER GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
26
56
Date
No.
Revision Description
Approved
PROJECT NO 011-09323-005
Drawn By: EDV
Designed By: CKH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'
BBCM


CELL 6 TOP OF COVER GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO 011-09323-005
BBCM
LEGEND
PROPERTY LINE
PROPOSED INDEX CONTOURS
PROPOSED INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LIMITS OF WASTE
PROPOSED SURFACE WATER BERMS
PROPOSED GEOCOMPOSITE DRAINAGE LAYER COLLECTOR PIPE
REFERENCE MAP
SCALE IN FEET
PERMANENT COVER
CONCRETE CHANNEL TYP.
TEMPORARY COVER


REFERENCE MAP
GEOCOMPOSITE DRAINAGE LAYER OUTLET PIPE (TYP.)
CONCRETE CHANNEL (TYP.)
LEGEND
PROPERTY LINE
PROPOSED INDEX CONTOURS
PROPOSED INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LIMITS OF WASTE
PROPOSED SURFACE WATER BERMS
PROPOSED GEOCOMPOSITE DRAINAGE LAYER COLLECTOR PIPE
SCALE IN FEET
0 100 200 300 400
STATE OF KENTUCKY
STEPHEN J. LOSHUTA
24072
LICENSED
PROFESSIONAL ENGINEER
CELL 7 TOP OF COVER GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
28
56
Date | No. | Revision Description | Approved
6/07 | 1 | DRAINAGE LAYER | SJL
PROJECT NO 011-09323-005
Drawn By: EDV
Designed By: CKH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'
BBCM


REFERENCE MAP
NOTE: AT OWNERS DISCRETION CELLS MAY BE CONSTRUCTED IN PHASES. PHASE LIMITS SHALL BE LOCATED ONLY ALONG LEACHATE COLLECTION SYSTEM DRAINAGE DIVIDES. ALL CONTACT WATER SHALL BE CONTROLLED ON AREAS WHERE GEOCOMPOSITE LINER SYSTEM HAS BEEN INSTALLED
TYPE 1 CLEANOUT
TYPE 1 CLEAN WATER DITCH
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 2 PERIMETER CONTACT WATER DITCH
TYPE 2 CLEAN WATER DITCH
LEGEND
PROPERTY LINE
PROPOSED LINER INDEX CONTOURS
PROPOSED LINER INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LEACHATE LINES
LINER LIMITS
AA LEACHATE PIPE TYPES (SEE TABLE ON SHEET 3)
SCALE IN FEET
0 100 200 300 400
CELL 8 BASE OF LINER SYSTEM GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
29
56
Date | No. | Revision Description | Approved
PROJECT NO. 011-09323-005
Drawn By: EDV
Designed By: CKH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'
BBCM


REFERENCE MAP
N 517,285.3
E 1,465,214.9
INVERT EL. = 515.1
TYPE 1 CLEAN WATER DITCH
TYPE 1 CLEAN WATER DITCH
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 PERIMETER CONTACT WATER DITCH
N 516,980.7
E 1,466,480.4
INVERT EL. = 519.3
N 516,637.7
E 1,465,214.9
INVERT EL. = 507.5
TYPE 1 CLEAN WATER DIVERSION
TYPE 1 PERIMETER CONTACT WATER DITCH
CONCRETE CHANNEL TYP.
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 2 PERIMETER CONTACT WATER DITCH
N 516,475.0
E 1,464,661.4
INVERT EL. = 510.2
N 516,368.0
E 1,466,501.4
INVERT EL. = 523.0
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
TYPE 2 PERIMETER CONTACT WATER DITCH
N 515,932.9
E 1,464,820.8
TYPE 2 PERIMETER CONTACT WATER DITCH
N 515,871.3
E 1,464,611.4
TYPE 2 CLEAN WATER DITCH
INVERT EL. = 493.6
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
4' X 2' BOX CULVERT
INLET INVERT EL. = 499.0
OUTLET INVERT EL. = 497.21
INVERT EL. = 496.2
4' X 2' BOX CULVERT
INLET INVERT EL. = 498.0
OUTLET INVERT EL. = 496.81
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
TYPE 1 PERIMETER CONTACT WATER DITCH
TYPE 1 CLEAN WATER DITCH
NOTE: CLEAN WATER DIVERSIONS ARE TO BE INSTALLED WHEN ALL WATER IN CONTACT WATER DITCH UPSTREAM OF DIVERSION IS NON-CONTACT WATER
LEGEND
PROPERTY LINE
PROPOSED INDEX CONTOURS
PROPOSED INTERMEDIATE CONTOURS
EXISTING INDEX CONTOURS
EXISTING INTERMEDIATE CONTOURS
LIMITS OF WASTE
PROPOSED SURFACE WATER BERMS
SCALE IN FEET
0 100 200 300 400
STATE OF KENTUCKY
STEPHEN J. LOSKOTA
24072
LICENSED
PROFESSIONAL ENGINEER
CELL 8 TOP OF COVER GRADES
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
30
56
Date | No. | Revision Description | Approved
6/07 | 1 | CHANGED BOX CULVERT INFO | SJL
PROJECT NO 011-09323-005
Drawn By: EDV
Designed By: CKH
Approved By: SJL
Date: MARCH 2007
Scale: 1" = 100'
BBCM

CROSS-SECTION 5126+00

WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY

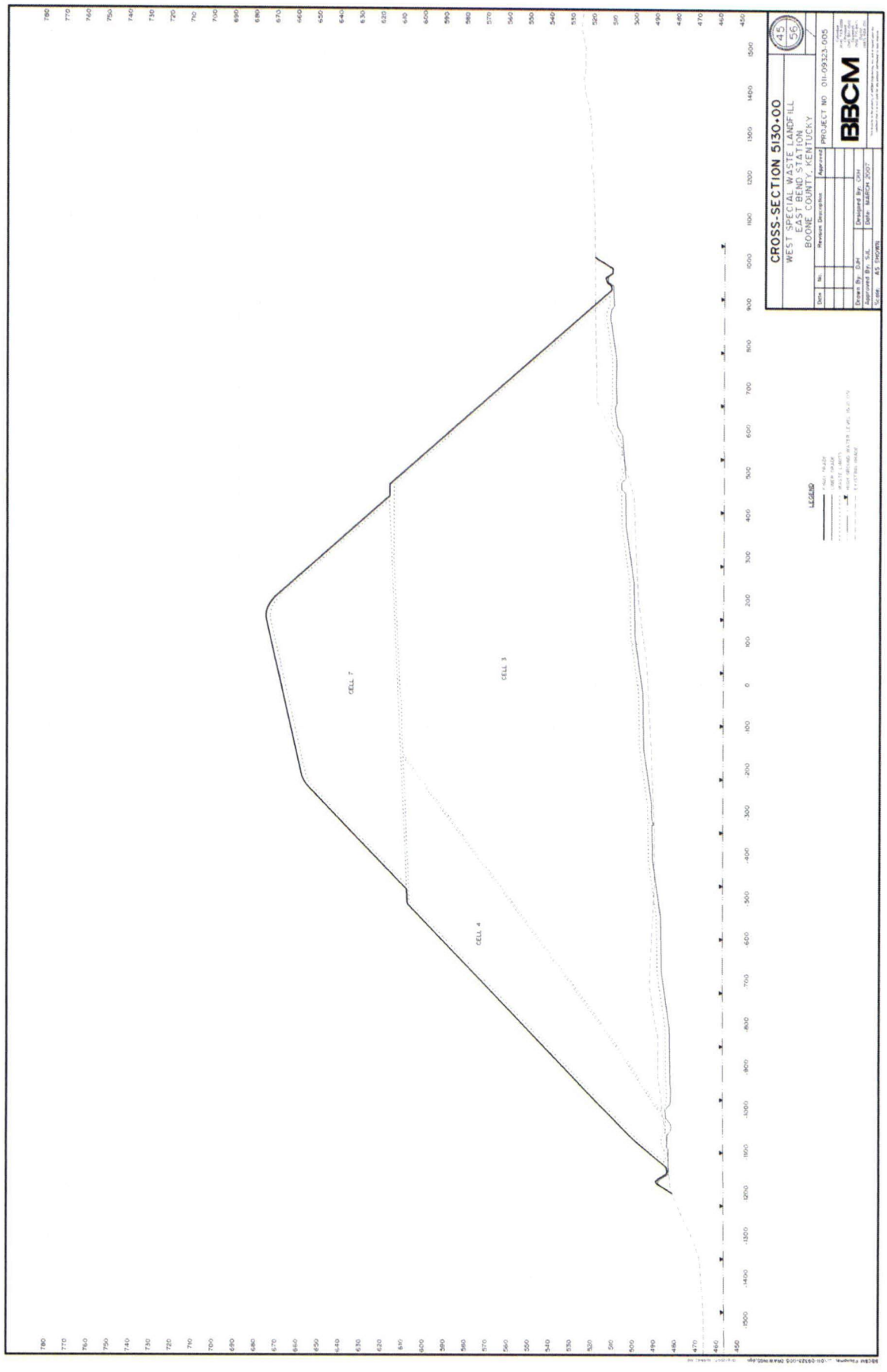
44
56

Date	No.	Revision Description	Approved

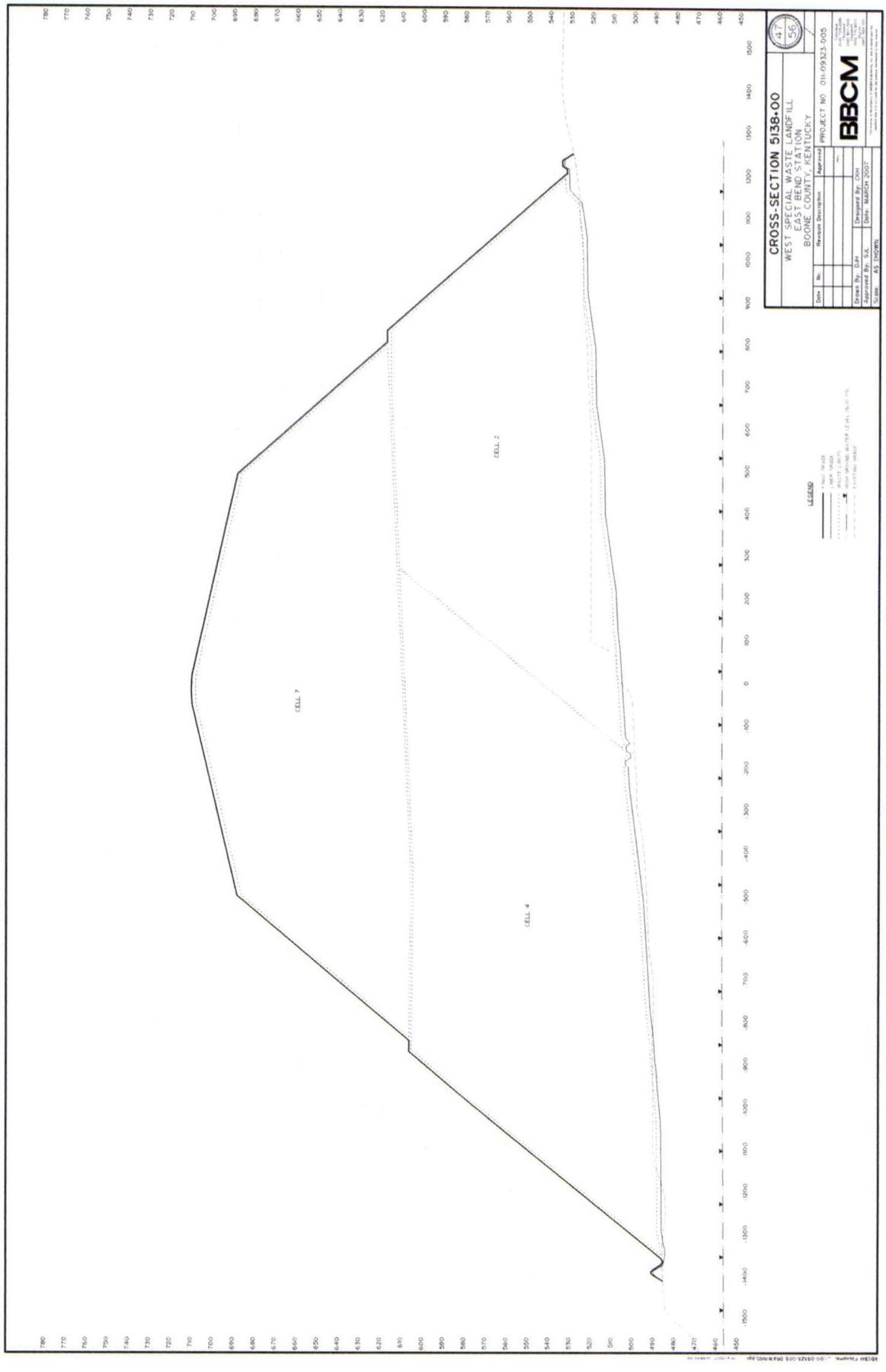
PROJECT NO. 011-09323-005

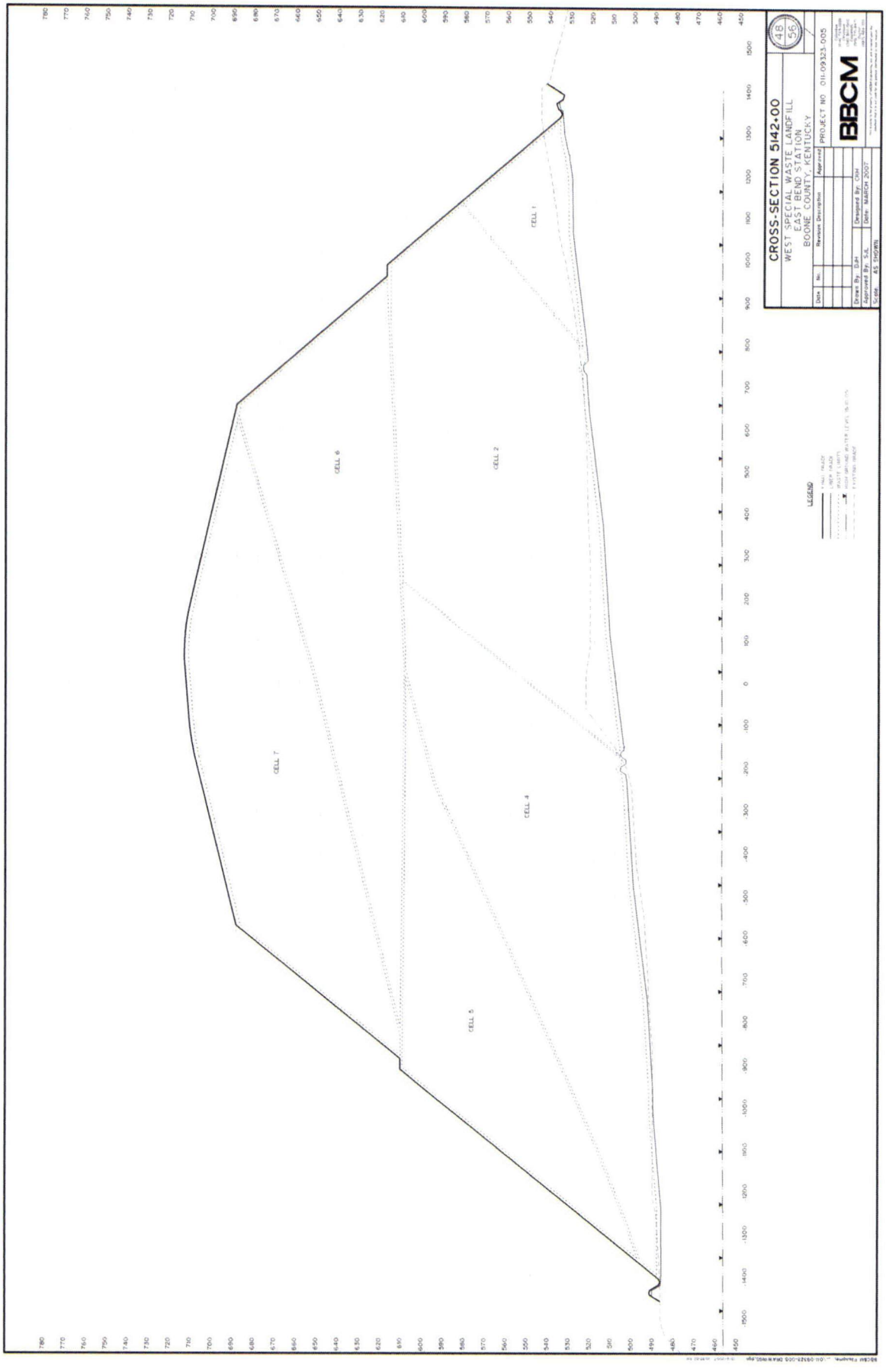
Drawn By: DJH | Designed By: CRM
Approved By: SJL | Date: MARCH 2007
Scale: AS SHOWN

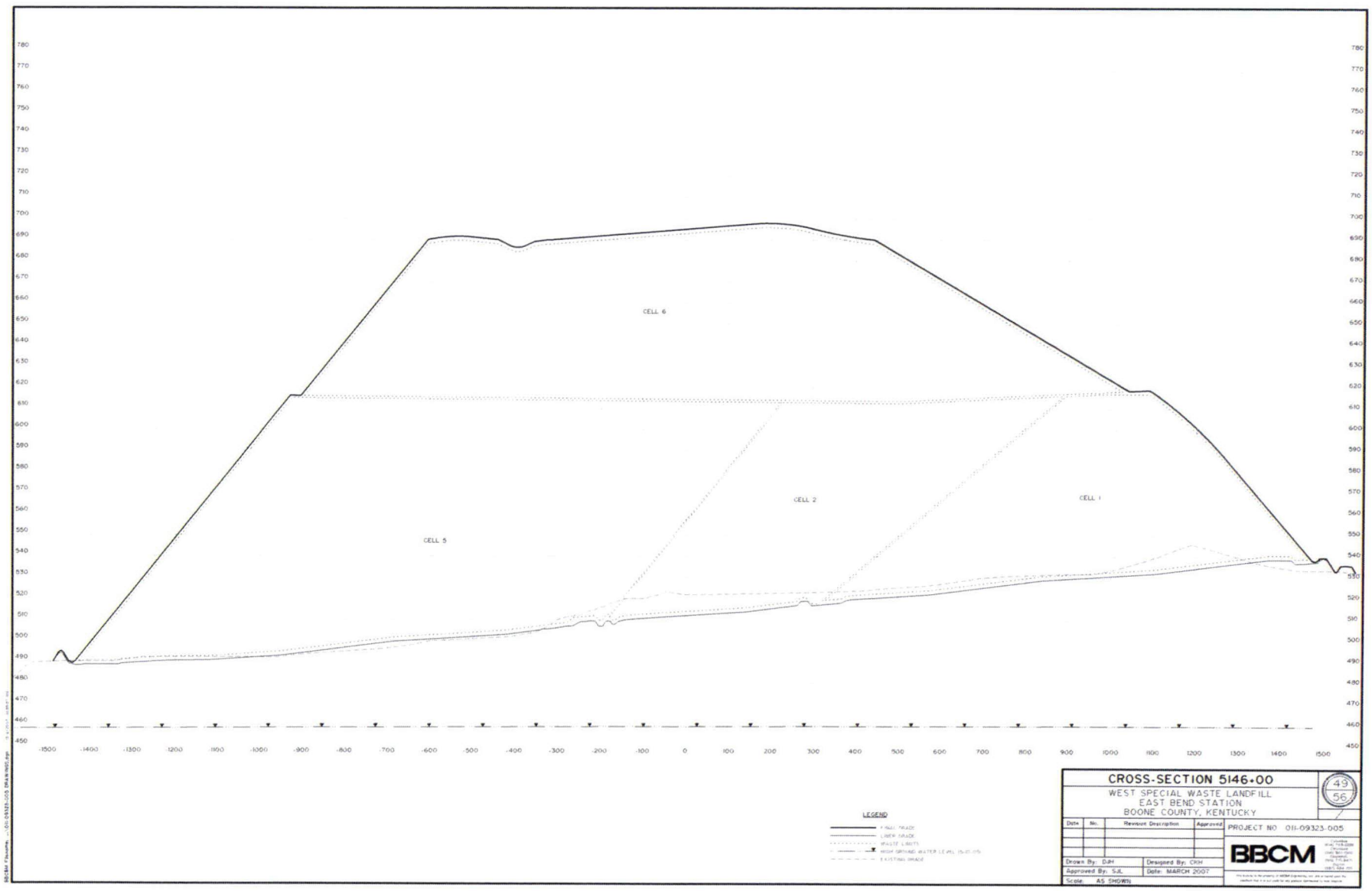
BBCM


CELL 7
CELL 5
CELL 4
LEGEND
CROSS-SECTION 5130+00
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO. 011-09323-005
BBCM


CELL 7
CELL 4
CELL 3
CELL 2
LEGEND
CROSS-SECTION 5134+00
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO 011-09323-005
BBCM
Drawn By: DJH
Designed By: CKH
Approved By: SJL
Date: MARCH 2007
Scale: AS SHOWN


CELL 7
CELL 4
CELL 2
LEGEND
CROSS-SECTION 5138-00
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO 011-09323.005
BBCM
Drawn By: DJH
Designed By: DJH
Approved By: SJL
Date: MARCH 2007
Scale: AS SHOWN


CELL 1
CELL 2
CELL 4
CELL 5
CELL 6
CELL 7
LEGEND
CROSS-SECTION 5142.00
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO. 011-09323.005
BBCM



CROSS-SECTION 5146+00

WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY

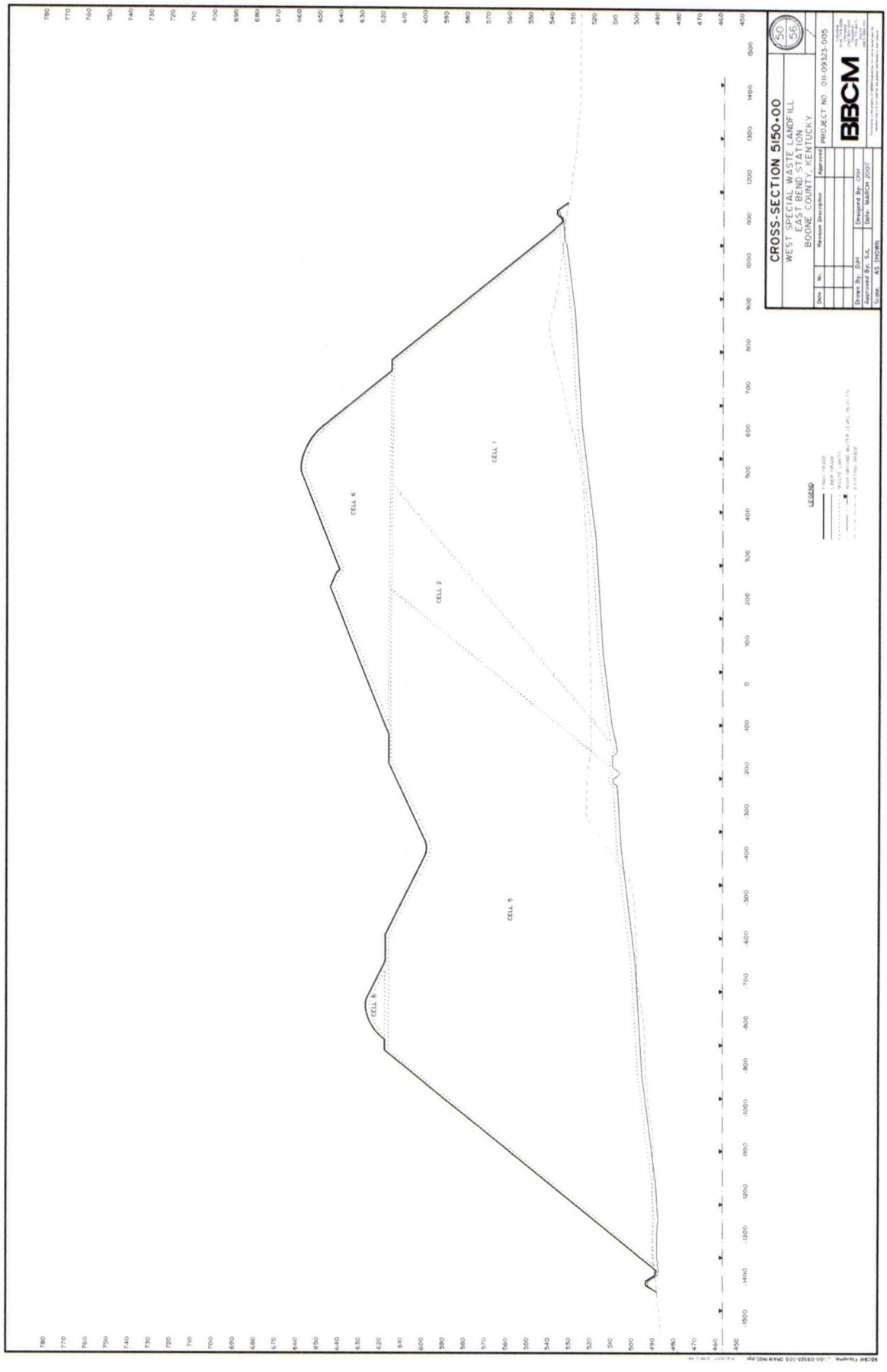
49
56

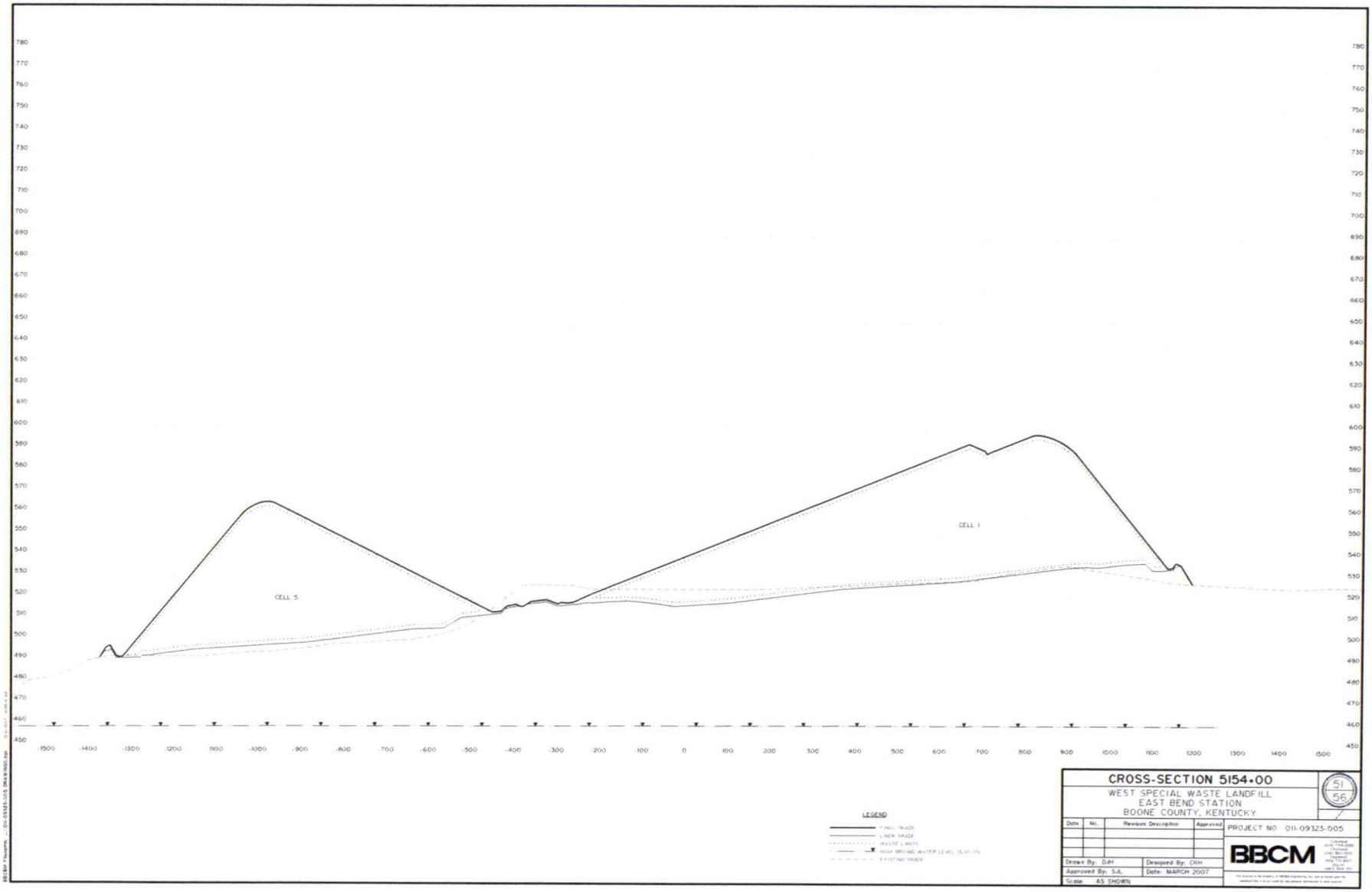
Date	No.	Revision Description	Approved

PROJECT NO 011-09323-005

Drawn By: DJH | Designed By: CRH
Approved By: SJL | Date: MARCH 2007
Scale: AS SHOWN

BBCM


CELL 6
CELL 1
CELL 2
CELL 5
CELL 8
LEGEND
CROSS-SECTION 5150-00
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO 011-09323-005
BBCM
Drawn By: DJH
Designed By: DJH
Approved By: S.A.
Date: MARCH 2007
Scale: AS SHOWN



CROSS-SECTION 5154+00

WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY

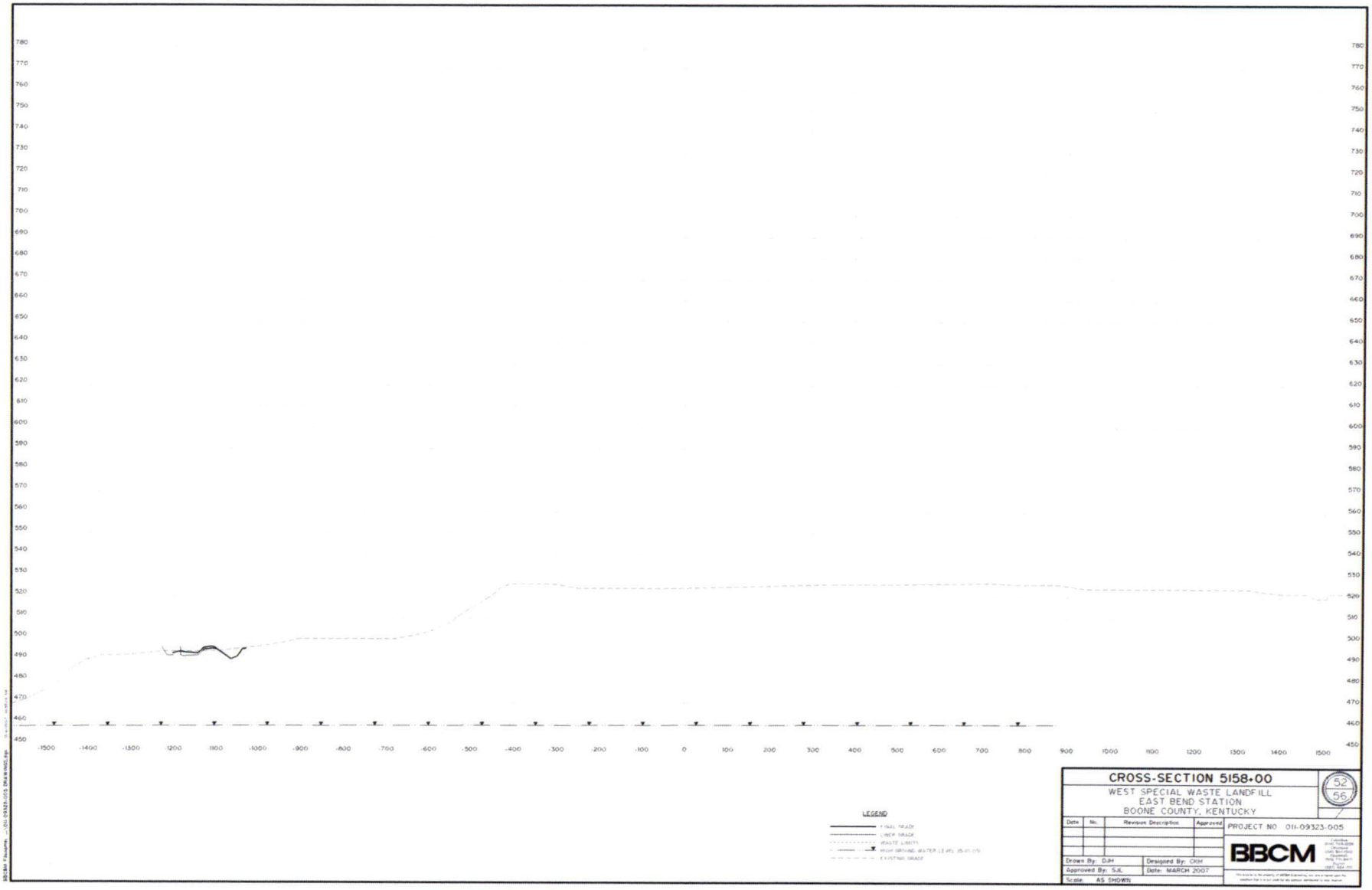
51
56

Date	No.	Revision Description	Approved

PROJECT NO. 011-09323-005

Drawn By: DJH | Designed By: CRH
Approved By: SJL | Date: MARCH 2007
Scale: AS SHOWN

BBCM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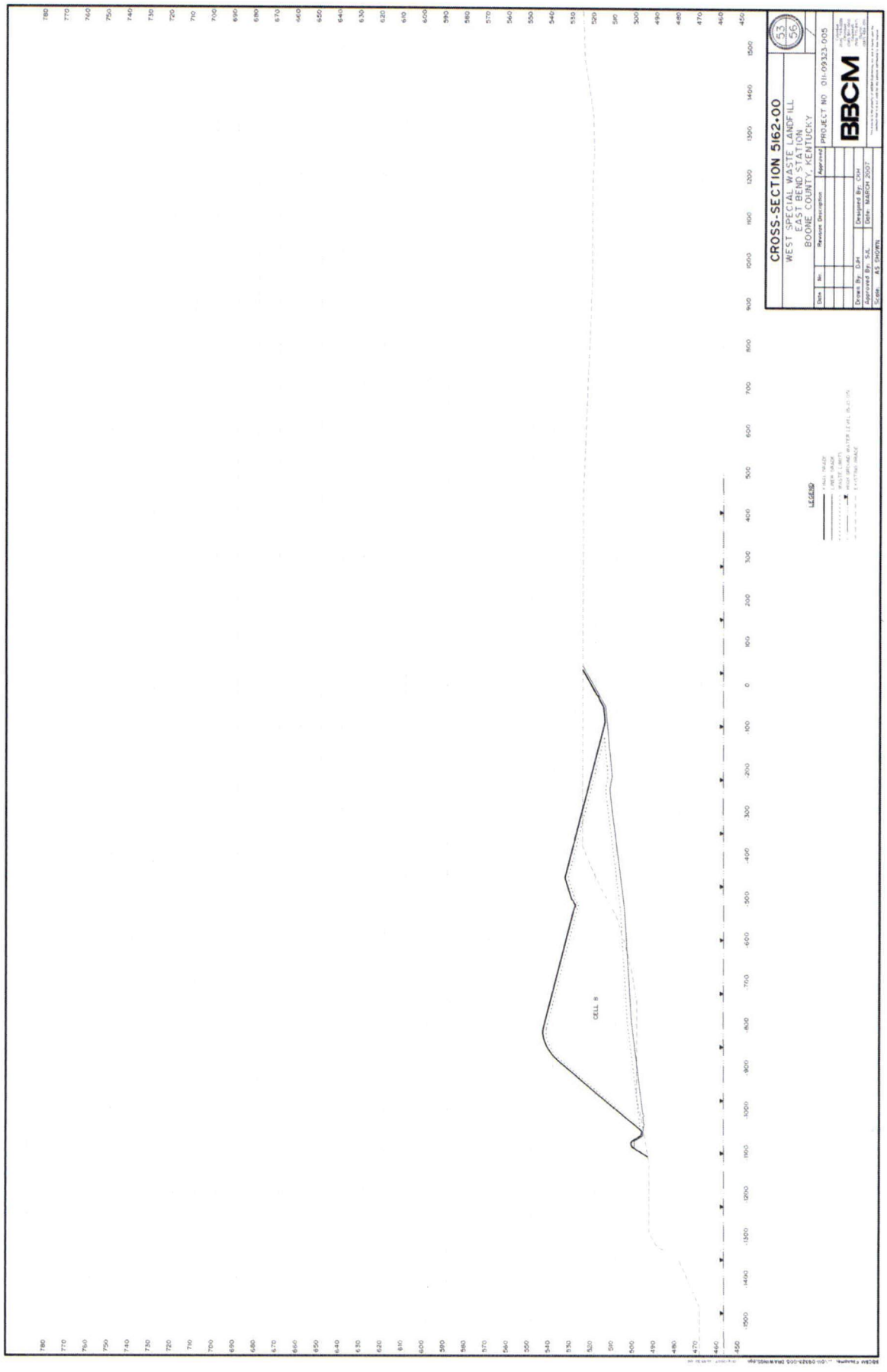
1100
1200
1300
1400
1500
LEGEND
FINAL GRADE
LINER GRADE
WASTE LIMITS
HIGH GROUND WATER LEVEL (5-01-07)
EXISTING GRADE
CROSS-SECTION 5158+00
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
52
56
Date
No.
Revision Description
Approved
PROJECT NO. 011-09323-005
Drawn By: DJH
Designed By: CKM
Approved By: SJL
Date: MARCH 2007
Scale: AS SHOWN
BBCM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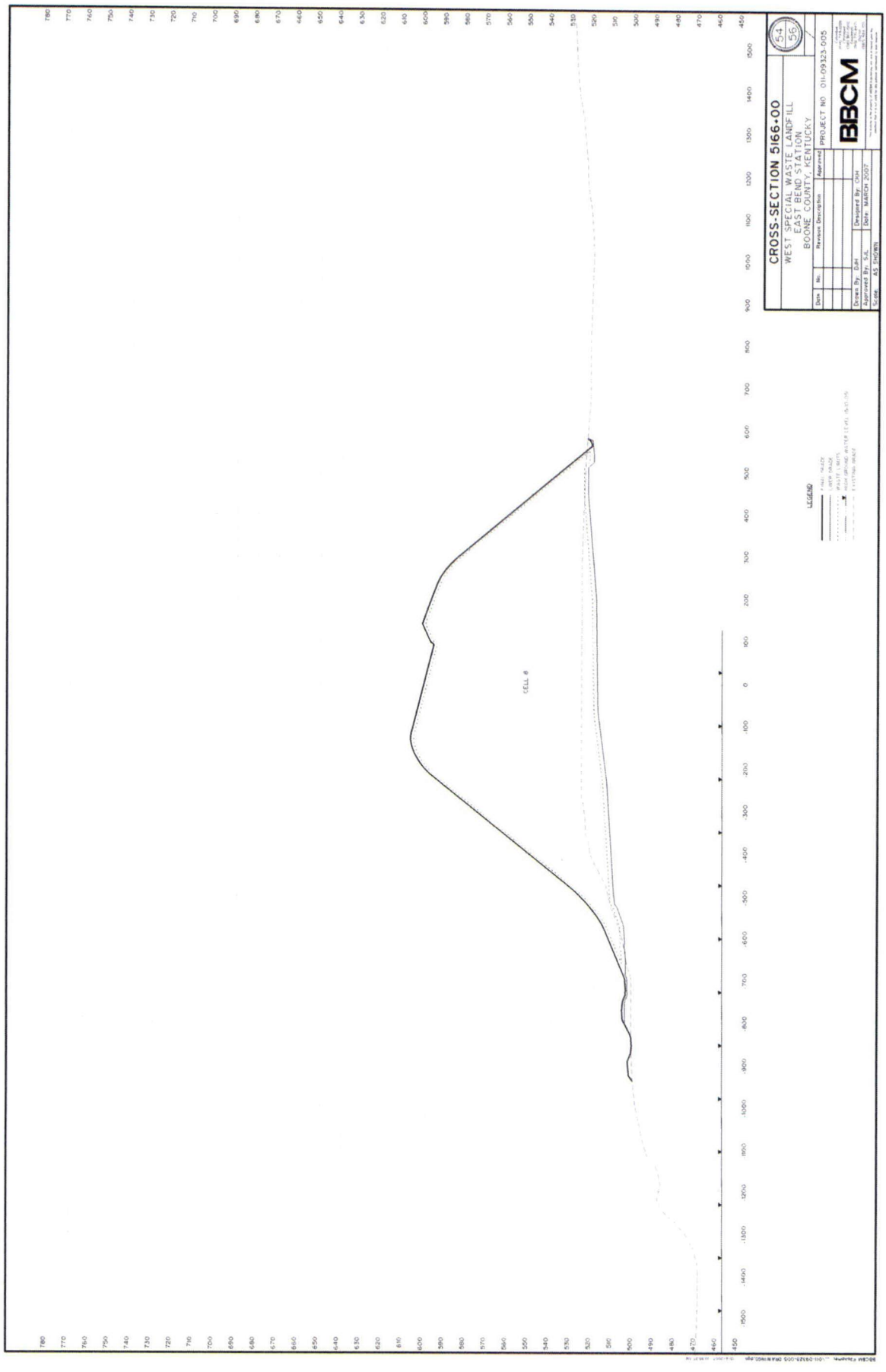
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO 011-09323.005
BBCM
CELL 8
LEGEND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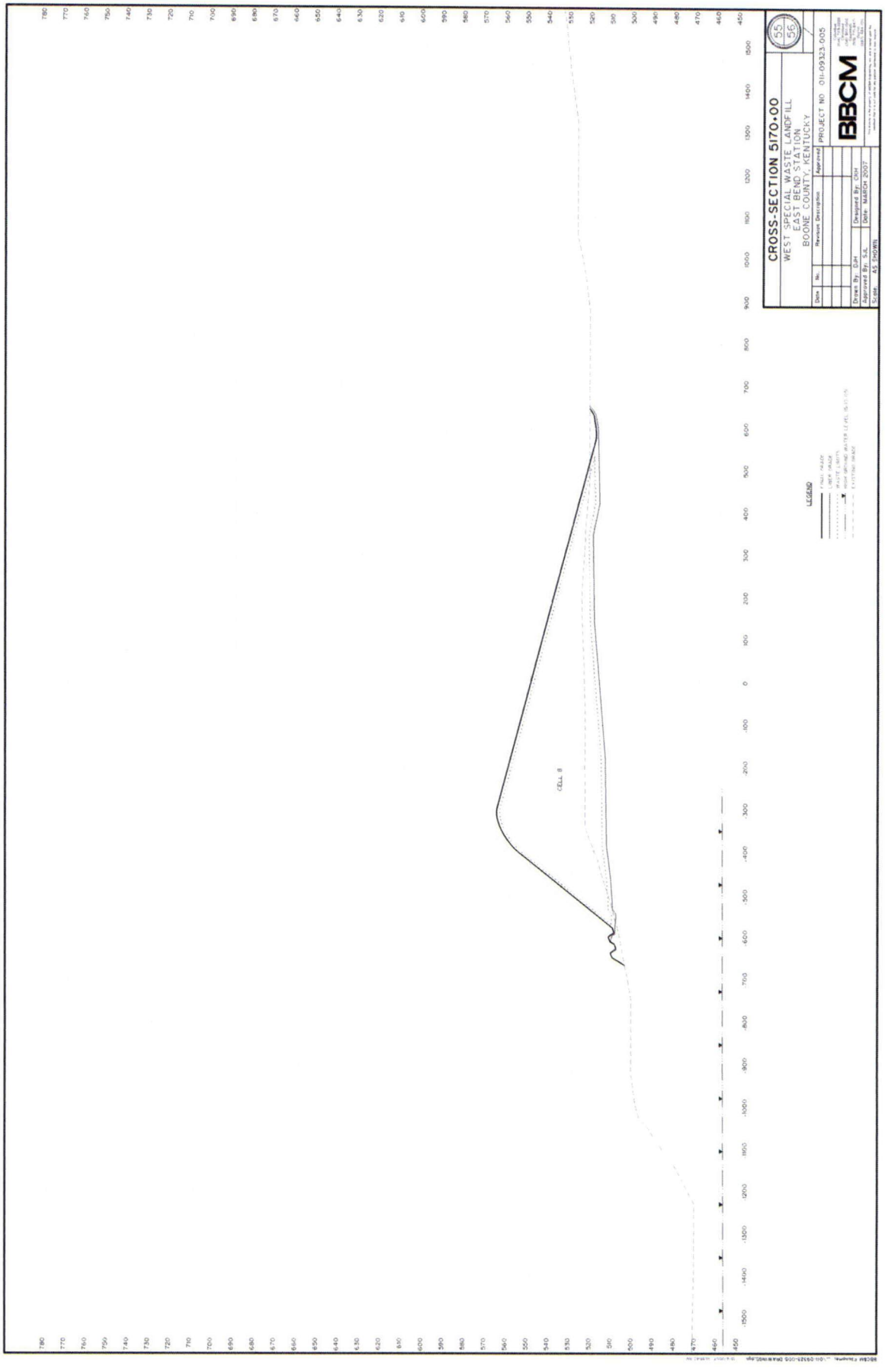
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO 011-09323-005
BBCM
CELL 6
LEGEND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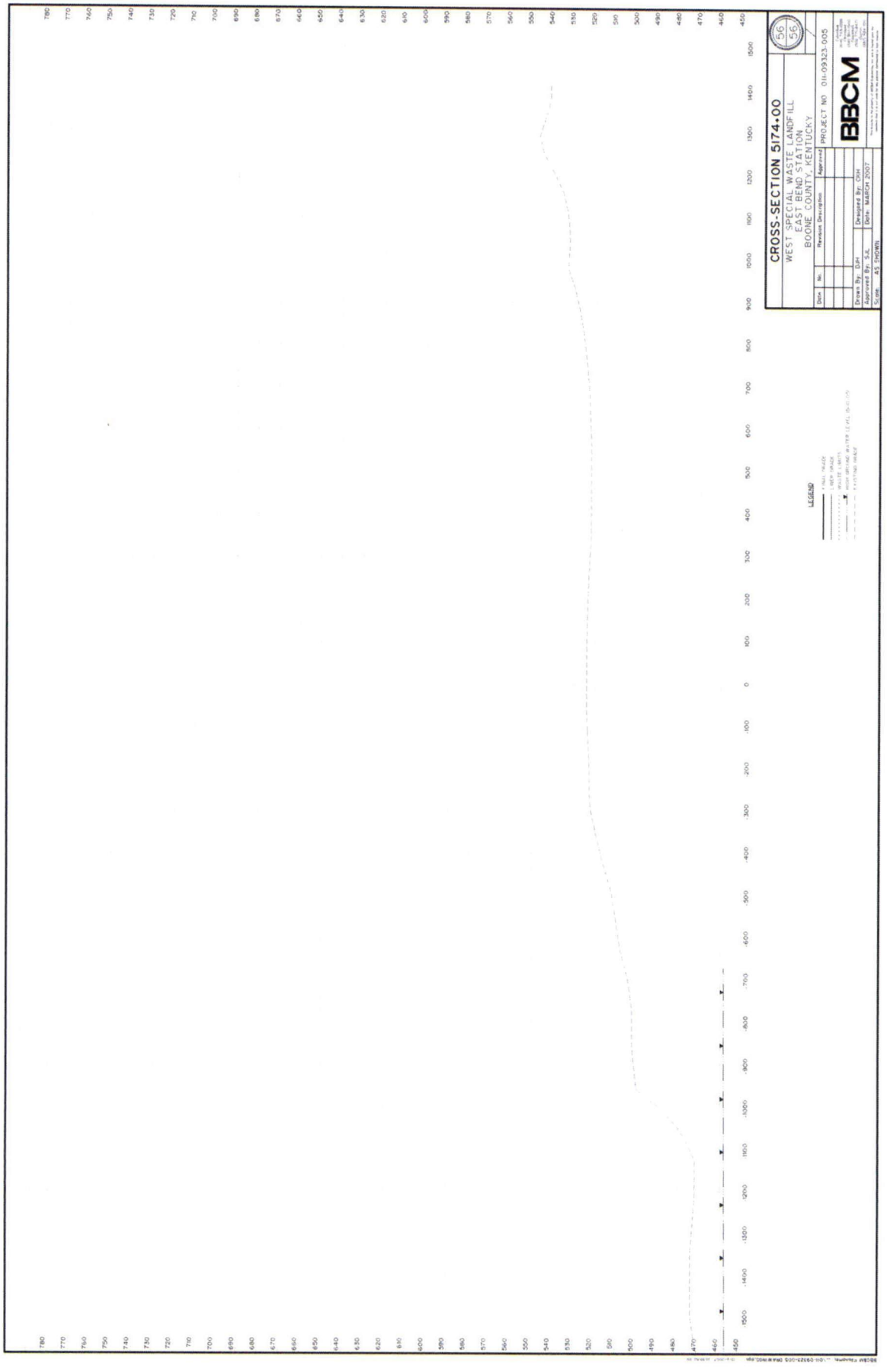
WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO. 011-09323-005
Drawn By: DJH
Designed By: DJH
Approved By: S.A.
Date: MARCH 2007
Scale: AS SHOWN
BBCM
CELL 8
LEGEND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WEST SPECIAL WASTE LANDFILL
EAST BEND STATION
BOONE COUNTY, KENTUCKY
PROJECT NO 014-09323-005
BBCM
LEGEND

AG-DR-02-012 PUBLIC

REQUEST:

Reference Sellet testimony page 8, line 15 - page 9, line 7.

a. Please provide the annual amount spent on transporting dry ash to the East Bend station from other generating units over the last 5 years.

b. Please provide the amount in tons and cubic yards of dry ash that has been brought into the East Bend station from other generating units over the last 5 years.

c. At what capacity percentage must the East Bend Station run to ensure enough fly ash is produced to prevent the need to import fly ash from alternative sources.

d. At what capacity percentage does the East Bend station run on an annual average?

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment Only)

a-c. Please see Confidential AG-DR-02-012 Attachment for the annual amount spent on transporting dry ash to the East Bend station from other units, the tons and cubic yards of dry ash that has been brought into the East Bend station from other generating units, the equivalent availability factor (the percentage of time

that the station is available for operations after planned and unplanned outages and derates), and total generation.

The station is unable to generate enough fly ash to make the proper blend of Poz-o-tec regardless of capacity. As generation output increases, the production of the sulfite waste and fly ash increase proportionally to the increase in generation.

d. Please see Confidential AG-DR-01-012 Attachment.

PERSON RESPONSIBLE: Nicholas R. Sellet

CONFIDENTIAL PROPRIETARY TRADE SECRET

Year	Cost to transport ($)	Tons imported from other sites	Cubic Yards*	Gross Generating (MWH)	Equivalent Availability Factor
2014	$453,075	64492	36456	2388470	[redacted]
2013	$742,481	93513	52861	4103549	[redacted]
2012	$365,059	85836	48521	3177251	[redacted]
2011	$180,888	114194	64551	4674440	[redacted]
2010	$161,438	124397	70319	4845018	[redacted]

* Assumes that the density of fly ash is 1.77 tons per cubic yard

Note: In 2012, 2011 and 2010, East Bend Station took ash from the city of Hamilton power plant, this provided a reimbursement from city of Hamilton power plant of $109,092 in 2012, $25,995.74 in 2011, and $21,598 in 2010. East Bend Station no longer accepts ash from the city of Hamilton because it has converted to natural gas .

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-013

REQUEST:

Reference Duke response to AG 1-1. What is the difference in cost to construct a cell that is compliant with the CCR rule vs. the anticipated cost to construct cell 1?

RESPONSE:

An exhaustive review of cost differences to construct a cell that is compliant with the CCR rule versus the anticipated cost to construct Cell 1 has not been completed, but some estimations have been made based on the one known major element that would have to be changed for constructing a CCR compliant cell versus constructing Cell 1 if construction begins on Cell 1 by October 2015. That major element is a change in the required liner construction. Based on rough estimates, the cost is approximately $980,750 more for constructing liner in a cell the size of Cell 1 that is compliant with the CCR rule versus a cell that same size not in compliance with the CCR rule. This is based on several assumptions/cost estimates. In this evaluation, it is estimated that proper construction of a CCR compliant liner, in a cell equal in size to Cell 1, would require 125,000 cubic yards of compacted soil with a hydraulic conductivity of no more than 1x10-7 cm/sec. This component of the liner would replace the geosynthetic clay layer (GCL) in the current Cell 1 design. This is one method to meet the CCR rule liner specifications.

All new CCR landfill cells, for which construction begins after October 2015, will be required to meet the CCR rule liner requirements regardless of whether they are Poz-o-tec landfills or dispose of other CCR materials. This is true for all CCR landfills not just in Kentucky but in the entire nation. All new landfill cells which are lateral expansions under the CCR rule must comply with the new specifications.

PERSON RESPONSIBLE: Thomas E. Wiest/Tammy Jett

AG-DR-02-014

REQUEST:

Reference Duke response to AG 1-4, attachment 1.

a. Based on the legend and other information contained in attachment 1, it appears as if two separate landfills are to be constructed on the site. There is the larger landfill to the west, and a smaller landfill to the northeast. Please provide a detailed explanation regarding the north eastern landfill outlined in attachment 1.

b. How far, in feet, does the floodplain ingress into the proposed site boundaries?

c. How far, in feet, are the two waste disposal sites from each other?

d. What is the total cost of additional permits and construction to address the portion of the landfill design that sits within the 100 year floodplain?

e. If the landfill had been designed to exclude all portions of the 100 year floodplain, what volume would have been lost from the landfill design?

RESPONSE:

a. These two areas are considered to be the same landfill, but different cells. Cells 1 through 7 of the proposed landfill are located in the larger area, while Cell 8 is the smaller area. Please see AG-DR-02-011 Attachment for additional details.

b. The area that was shown to be in the floodplain in AG-DR-01-004 Attachment A has already been filled in so that it is no longer in the floodplain. This work was

completed in 2011. The certification and construction records of this fill are included in AG-DR-01-004 Attachment B. No areas of the proposed landfill are located within the 100 year floodplain.

c. The two sites are approximately 200 feet from each other at their closest points.

d. See response to b above.

e. See response to b above. The volume lost to exclude the area that was within the floodplain from the landfill footprint was never estimated and is unknown.

PERSON RESPONSIBLE: Thomas E. Wiest/Tammy Jett

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-015

REQUEST:

Reference Duke response to AG 1-5. The attachment referenced in the Duke response contains writing so small as to be unreadable. Provide the number of feet from the closest point of the landfill to the Ohio river.

RESPONSE:

The closest point of the landfill limits of waste to the Ohio River is 700 feet.

PERSON RESPONSIBLE: Thomas E. Wiest

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-016

REQUEST:

Regarding the floodplain map with the outlined area of landfills:

a. Please indicate which area contains the first cell for proposed construction.

b. Please describe any shared systems, or materials that link the two sites or that they have in common.

c. Please describe why there is a need for two distinct waste disposal limits at the proposed site.

RESPONSE:

Duke Energy Kentucky is assuming that the "landfills" referenced are referring to cell 8 and the combination of the other cells, 1 through 7 as explained in AG-DR-02-014.

a. The first cell is presented in AG-DR-02-011 Attachment and the order of construction, as of May 3, 2015, is stated in AG-DR-02-011.

b. Cell 8 will share the sediment pond, pumping station, pipeline, access roads, some drainage ditches, and haul road with Cells 1 through 7. For a more detailed breakdown see AG-DR-02-003 Attachment. Items noted as common are shared between all cells.

c. Cell 8 is not connected to cells 1 through 7 (its liner system does not attach to the liner system of other cells) so there is a gap between the liners. No CCR can be

placed in un-lined areas so the limit of waste is drawn separately from Cells 1 through 7.

PERSON RESPONSIBLE: Thomas E. Wiest

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-017

REQUEST:

Please describe how the regulations affecting stream construction permits impacted your project construction plans?

RESPONSE:

There have been no impacts from stream construction permits on the proposed landfill construction plans. Please see the response to AG-DR-02-014 for details on the filling in of the area located within the floodplain identified on AG-DR-01-004 Attachment A.

PERSON RESPONSIBLE: Tammy Jett

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-018

REQUEST:

Reference Duke response to AG 1-9. Provide the referenced contracts Duke has with W.H. Zimmer Station, Proctor and Gamble Ivorydale Station, and Miami Fort Station.

RESPONSE:

See AG-DR-02-018 Attachments A, B, and C. Duke Energy Kentucky will supplement this response.

PERSON RESPONSIBLE: Thomas E. Wiest/Legal

AMENDMENT TO FLY ASH SALES AGREEMENT

THIS AMENDMENT TO FLY ASH SALES AGREEMENT (the "Amendment") dated as of November 19, 2014 is entered into by and between **Duke Energy Commercial Asset Management, LLC** (f/k/a Duke Energy Commercial Asset Management, Inc.), an Ohio limited liability company ("Seller") and **Duke Energy Kentucky, Inc.**, a Kentucky corporation, ("Buyer").

WHEREAS, the Buyer and the Seller entered into that certain Fly Ash Sales Agreement dated as of December 31, 2013 (the "Agreement"); and

WHEREAS, the Buyer and the Seller desire to amend the Agreement pursuant to the terms stated herein.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Section 5 of the Agreement is hereby replaced in its entirety as follows:

   "This Agreement shall commence on the Effective Date and shall continue until December 31, 2015 (the "Term"), unless terminated earlier pursuant to the terms of this Agreement."

2. The following new Section 18 is hereby added to the Agreement as follows:

   18. GENERATING STATION GUIDELINES. Seller shall conform to the Generating Station Guidelines set forth in Exhibit B which are incorporated herein by reference.

3. The following new Section 19 is hereby added to the Agreement as follows:

   "19. TERMINATION RIGHT. Buyer shall have the right to terminate this Agreement immediately upon written notice (including fax and electronic mail) to Seller upon any change in law or regulations (or interpretation thereof) which classifies Fly Ash as a hazardous material and/or otherwise restricts conditions or limits the rights or ability of Buyer or its affiliate to utilize the Fly Ash as a stabilizer in its land fill operations as intended under this Agreement."

4. Except as herein amended, all terms and conditions of the Agreement are hereby reaffirmed and shall remain in full force and effect as originally written and shall be construed as one document with this Amendment.

5. All capitalized terms not defined herein shall have the same meaning ascribed to such term in the Agreement.

6. This Amendment may be executed in one or more counterparts, each of which shall be an original, and all of which shall be deemed to constitute but one and the same instrument.

IN WITNESS WHEREOF, the Buyer and the Seller have executed this Amendment to Fly Ash Sales Agreement effective as of the day and year first above written.

Duke Energy Kentucky, Inc.

By:
Name:
Title:

Duke Energy Commercial Asset Management, LLC

By:
Name: DAVID JACKSON
Title: DIRECTOR COAL RISK MANAGEMENT

EXHIBIT B
GENERATING STATION GUIDELINES

A. Seller or its supplier shall be solely responsible for loading the Fly Ash at the Source and delivering the Fly Ash to DECAM at the Delivery Point which shall not unreasonably interfere with the operations at the Station.

B. Without limiting Seller's other obligations hereunder, Seller shall ensure that the hauling of the Fly Ash over public roadways or private roads will be conducted in a safe manner and in accordance with all applicable laws including highway weight or load limitations, EPA fugitive dust guidelines and all other applicable safety regulatory requirements. Seller shall ensure that all hauling shall be conducted in such a manner as required to prevent any Fly Ash from being blown or falling off trucks during transportation or becoming an environmental nuisance or source of complaint. Seller shall ensure that a copy of the Material Safety Data Sheet (MSDS) for the Fly Ash being transported shall be available in each truck or tanker in the event of an accident or spill and such information is requested by local or state authorities.

C. All trucks must pass D.O.T. testing requirements, and all drivers must conform to requirements for Commercial Drivers License.

D. Seller shall ensure that additional caution is exercised where haul roads pass through parking areas. Pedestrians shall be given the right-of-way. Seller shall ensure that all haulers of Fly Ash understand the speed limit is 10 mph at the Station.

E. Seller shall be responsible for personnel, equipment, services, permits, and all other expenses associated with the sale and transportation of Fly Ash.

F. Seller shall not create, or permit any of its agents or contractors to create, any condition that may constitute a nuisance, hazard, or otherwise interfere with the operations or, cleanliness of the Station. Any neighbor complaints will be handled by Seller in a quick and expeditious manner.

G. Seller shall use, or cause to be used, tarps on all open top trucks while they are in motion. This includes both loaded and empty trucks. If Seller fails to comply herewith, Buyer in its absolute discretion may stop all acceptance of Fly Ash supplied under this Agreement until conditions are acceptable to Buyer.

ASSIGNMENT AND ASSUMPTION AGREEMENT

This Assignment and Assumption Agreement (this "**Assignment**") is made and entered into effective as of **April 1, 2014** (the "**Assignment Effective Date**") by and between Duke Energy Commercial Asset Management, LLC, an Ohio limited liability company ("**Assignor**") and Duke Energy Kentucky, Inc., a Kentucky corporation ("**Assignee**"). Assignor and Assignee may be individually referred to herein as a "Party" and collectively as the "Parties."

WHEREAS, Assignor and DTE St. Bernard, LLC are parties to that certain Fly Ash Supply Agreement dated as of February 7, 2014 and amended effective as of January 1, 2015 (the "Agreement");

WHEREAS, Assignor wishes to assign its rights, obligations and liabilities under the Agreement to Assignee which pursuant to the terms set forth herein; and

WHEREAS, Assignee desires to assume the rights and obligations of Assignor under the Agreement pursuant to the terms set forth herein.

NOW THEREFORE, in consideration of the premises and the mutual benefits to be gained herefrom, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

1. Assignment and Assumption.

Effective as of the Assignment Effective Date and upon the execution and delivery of this Assignment by the Parties hereto (i) Assignor hereby assigns, transfers and conveys to Assignee all of its right, title, interest, obligations and liabilities in, to and under the Agreement arising on and after the Assignment Effective Date, and (ii) Assignee hereby accepts such assignment and hereby assumes and agrees to pay and otherwise undertake, observe, perform and discharge in accordance with their terms all of Assignor's obligations and liabilities under the Agreement arising on and after the Assignment Effective Date.

2. Miscellaneous

a. This Assignment shall inure to the benefit of the Parties and their respective successors and assigns and is binding upon the Parties' respective successors and assigns.

b. No amendment or waiver of any provision hereof shall be effective unless in writing and signed by each of the Parties hereto.

c. This Assignment shall be governed by the laws of the State of Ohio, excluding its conflicts of law provisions.

d. This Assignment may be executed in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties hereto have executed this Assignment and Assumption Agreement by a duly authorized representative as of the date set forth below.

Duke Energy Commercial Asset Management, LLC.

By: D
Name: DAVID JACKSON
Title: DIRECTOR COAL TRADING
Date: 4/1/15

Duke Energy Kentucky, Inc.

By: Tony R Mathis
Name: Tony R Mathis
Title: Manager Byproducts & Reagents
Date: 4/8/15

FLY ASH SALES AGREEMENT

This Fly Ash Sales Agreement (the "Agreement") is entered into effective as of 31ST day of December, 2013 ("the Effective Date") between Duke Energy Commercial Asset Management, Inc, an Ohio corporation ("Seller"), and Duke Energy Kentucky, Inc., a Kentucky corporation ("Buyer"). Seller and Buyer are each sometimes referred to in the Agreement as a "party" and, collectively, as the "parties".

RECITALS

WHEREAS, Seller's customer is engaged in the generation of electrical energy and uses coal as a fuel at the station identified below which produces fly ash as a byproduct;

WHEREAS, Buyer desires to purchase fly ash from Seller to use as a stabilizer in its land fill operations and Seller desires to sell the fly ash to Buyer pursuant to the terms and conditions of this Agreement.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which the above parties acknowledge, the parties, intending to be legally bound, agree as follows:

1. **FLY ASH**. Unless otherwise agreed to in writing by the parties, all fly ash sold and purchased under this Agreement (the "Fly Ash") shall be produced and delivered from the following station (the "Source"):

Procter & Gamble Ivorydale Boiler House
5189 Spring Grove Avenue
Cincinnati, Ohio 45217

2. **CONTRACT PRICE**. The contract price for the Fly Ash shall be $0.00/per ton.

3. **TRANSPORTATION**. Seller shall furnish suitable trucks for loading and delivery of the Fly Ash. The Seller shall be responsible for all transportation costs from the Source to the Delivery Point.

4. **QUANTITIES**. The quantity of Fly Ash (the "Quantity") to be supplied under this Agreement shall be as mutually agreed by the Parties from time to time. Notwithstanding any provision to the contrary stated herein, the Parties acknowledge and agree that neither Seller nor Buyer shall be obligated to supply, accept, transport or receive any minimum quantity of Fly Ash under this Agreement.

5. **TERM**. This Agreement shall commence on the Effective Date and shall continue until December 31, 2014 (the "Term"), unless terminated earlier pursuant to the terms of this Agreement. The Parties shall meet not later than September 30, 2014 to discuss the renewal or replacement of this Agreement. If the parties fail to reach agreement on the renewal

or replacement of this Agreement at least 30 days prior to the expiration of the Term, this Agreement will terminate on December 31, 2014.

6. **DELIVERY POINT.** The Fly Ash shall be delivered to Buyer's East Bend Generating Station at 6293 Beaver Road, Union, KY 41091 (the "Delivery Point").

7. **SCHEDULING.** The parties agree to reasonably coordinate with each other on the scheduling and shipments of Fly Ash from the Source. Seller shall be responsible for: a) scheduling the necessary daily shipments of Fly Ash with Buyer, b) scheduling supporting trucks needed, c) loading the trucks, and d) verifying that the Fly Ash meets the Specifications required by Buyer.

8. **SPECIFICATIONS.** The quality of Fly Ash to be supplied under this Agreement shall conform to the specifications listed on Exhibit A attached hereto (the "Specifications").

9. **WEIGHTS.** The parties agree that, since no certified truck scales are available at the Source or the Delivery Point, the weight for each Shipment shall be deemed to be 23.5 tons of Fly Ash as reasonably estimated by Seller. A "Shipment" shall mean one truck load.

10. **TITLE AND RISK OF LOSS.** Title to and risk of loss of the Fly Ash shall pass from Seller to Buyer as the Fly Ash is delivered to the Delivery Point.

11. **INVOICES.** For this Agreement, no invoices will be issued by either Party. Quantity sold will be tracked by the "Seller" based on number of Shipments and the "Buyer" will be updated on a quarterly basis of volumes sold.

12. **MSDS.** Seller shall provide a material safety data sheet (MSDS) to Buyer for all Fly Ash supplied under this Agreement.

13. **NO WARRANTIES.** THE FLY ASH SOLD AND PURCHASED UNDER THIS AGREEMENT IS SOLD "AS IS" AND "AS PRODUCED" WITH ALL FAULTS. SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE MERCHANTABILITY OR FITNESS OF THE FLY ASH SOLD FOR ANY PARTICULAR PURPOSE. SELLER SHALL NOT BE LIABLE TO BUYER UNDER ANY CLAIM OR CIRCUMSTANCES (INCLUDING, BUT NOT LIMITED TO, ANY CIRCUMSTANCES INVOLVING A FINDING THAT A WARRANTY OR REMEDY UNDER THIS AGREEMENT HAS FAILED OF ITS ESSENTIAL PURPOSE), WHETHER THE CLAIM SOUNDS IN CONTRACT, TORT, OR OTHER LEGAL THEORY. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO DAMAGES FOR LOST PROFITS OR REVENUE, LOST SALES OR LOST GOODWILL.

14. Governing Laws. This Agreement shall be governed by and construed in accordance with the laws of the State of Ohio, without reference to its conflict of laws principles.

15. Assignment. The terms, conditions and covenants of this Agreement shall be binding upon and shall inure to the benefit of each of the parties hereto, their heirs, personal representatives, successors or assigns. This Agreement may not be assigned by either party without the written consent of the non-assigning party, which consent will not be unreasonably withheld, conditioned or delayed. Notwithstanding the foregoing, either party may assign this Agreement without the consent of the other party to an assignee that has agreed to assume the obligations under this Agreement in writing and provided that such assignee or its credit support provider has an Investment Grade credit rating. "Investment Grade" shall mean a credit rating of (i) BBB- or above as assigned by Standard and Poor's, a division of The McGraw-Hill Companies, Inc. or Standard & Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc., as applicable, or any successor company thereto ("S&P") and (ii) Baa3 or above as assigned by Moody's Investors Service, Inc. ("Moody's") or its successor.

16. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

17. Notices. All notices permitted or required under this Agreement shall be deemed given if hand delivered, sent by certified mail, return receipt requested, sent by Federal Express or another recognized overnight delivery service, or sent by facsimile (with transmission confirmed) and confirmed by first class mail, to the addresses listed below or the subsequent addresses of which the parties give each other notice:

To Seller: Duke Energy Commercial Asset Management, Inc
Attn: Todd Stinson, Manager – Business Development
139 East Fourth Street
Mail Code: EX396A
Cincinnati, OH 45202

To Buyer: Duke Energy Kentucky, Inc.
Attn: Tony Mathis, Director of B,F&MH
526 South Church Street or PO Box 1006
Mail Code EC02F
Charlotte, NC 28203-1006
Facsimile: 704 382-4122

IN WITNESS WHEREOF, both parties have caused this Agreement to be executed in duplicate originals by their duly authorized persons as of the Effective Date hereinabove.

Duke Energy Commercial Asset Management, Inc.

By: _____
Name: David Jackson
Title: Director Coal Hedging

Duke Energy Kentucky, Inc.

By: _____
Name: _____
Title: Alexander (Sasha) Weintraub
Vice President - Fuels and Systems Optimiz

EXHIBIT A
SPECIFICATIONS

Fly Ash shall be at least "Grade F" fly ash. If Fly Ash quality does become "Grade C" the Seller shall provide written notification to the "Buyer" at least 1 month in advance so that the "Buyer" can evaluate if it can continue to utilize the Fly Ash. Seller shall inform Buyer of any other "major" (SO3 mitigation agent, etc.) changes to the Fly Ash.

Duke Energy Kentucky
Case No. 2015-00089
Attorney General Second Set Data Requests
Date Received: May 1, 2015

AG-DR-02-019

REQUEST:

Reference Duke response to PSC 1-1, page 2.

a. Describe the "significant engineering efforts" that would be required to for cell 1 to meet the CCR requirements.

b. Describe the basis for the 1 additional year estimated.

c. Explain why, and in what ways, an accelerated construction schedule would increase the cost of the proposed landfill.

RESPONSE:

a. The significant engineering efforts identified in Duke Energy Kentucky's response to Staff-DR-01-001, page 2, involve engineering a redesign of the liner for Cell 1, including the creation of new drawings and specifications and creating permit modification documents for the redesign.

b. The basis for the additional 1 year estimate mentioned in Duke Energy Kentucky's response to Staff-DR-01-001, page 2, is related to the expected time needed to engineer the redesign of the liner, create the related drawings and permit modification documents, submit a permit modification application to the Kentucky Department of Environmental Protection (KDEP), respond to any KDEP Notice of Deficiencies for the application, and obtain KDEP's approval.

c. Specifically in reference to Duke Energy Kentucky's response to Staff-DR-01-001, page 2, the timing would most likely would be such that there could be no construction of the liner during the 2015 construction season, and this would require an acceleration in the planned construction schedule and increase the cost of the proposed landfill. In an accelerated construction schedule, additional costs are expected to be incurred for labor and equipment overtime charges.

It is difficult to estimate the cost impact of an accelerated schedule until the schedule is finalized and bidders make adjustments for the accelerated schedule. Duke Energy Kentucky has not estimated the cost impacts.

PERSON RESPONSIBLE: Tammy Jett/Nicholas R. Sellet/Thomas E. Wiest