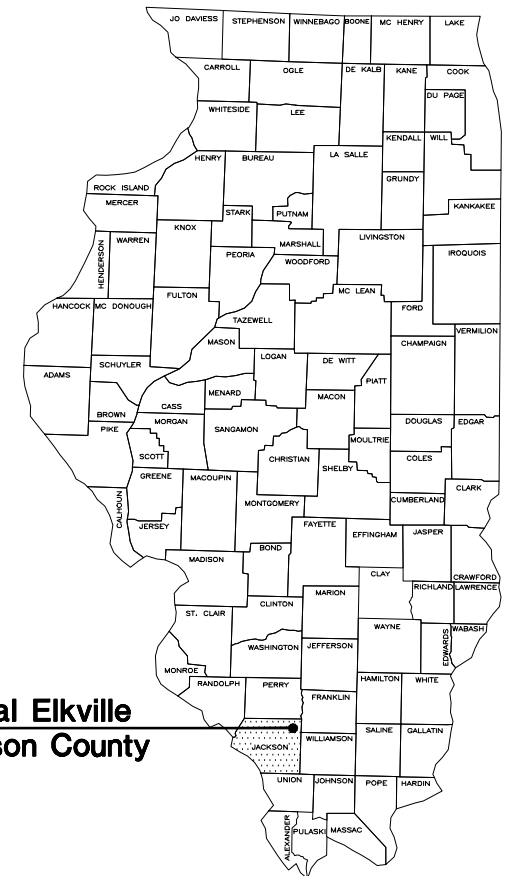


State of Illinois
Department of Natural Resources
Office of Mines and Minerals
Division of Abandoned Mined Lands Reclamation

Funded by the
 United States Department of Interior
 Federal Office of Surface Mining

S Coal Elkville
Reclamation Project
LRD-2018-367
Jackson County
3LR



S Coal Elkville
Jackson County

PRE-BID MEETING

A PRE-BID MEETING IS SCHEDULED FOR THIS PROJECT AT 9:00 A.M., MONDAY, JULY 30TH, 2018. ALL INTERESTED POTENTIAL BIDDERS ARE TO MEET AT THE ENTRANCE OF THE PROJECT SITE, ON COAL RD., APPROXIMATELY 1/2 MILE SOUTHWEST OF THE TOWN OF ELKVILLE, ON U.S. ROUTE 51.

SCHEDULE OF DRAWINGS:

- 1. Cover Sheet
- 2. Summary of Quantities/General Notes/Location Map
- 3. Site Layout/Survey Control Point Data
- 4-17. Existing/Proposed Conditions
- 18.-46. Cross Sections
- 47. Soil Placement Layout
- 48. Details

I.D.O.T. Standard 280001-07

CONTRACT NO. MF367

Prepared By IDNR Staff

Approved for Bidding:

Thomas A. Benner, Director
 Office of Mines and Minerals

Approved By:

J. Greg Pinto, Acting Manager
 AMLR Division

Approved By:

Olga Moya Aranzubia, P.E.
 IL Licensed Professional Engineer
 No. 062-062471



Summary of Quantities

Item No.	#	Item	Section	Quantity	Unit	Rates/Remarks
NRM20110	1	SPECIAL CLEARING	201	1	L SUM	
NRM20210	2	EARTH EXCAVATION	202	292,741	CU YD	
NRM20211	3	EARTH EXCAVATION – SUBSOIL STOCKPILES	202	129,843	CU YD	
NRM20212	4	EARTH EXCAVATION – TOPSOIL STOCKPILES	202	158,865	CU YD	
NRM20220	5	ROCK EXCAVATION	202	30,097	CU YD	
NRM20230	6	MINE REFUSE EXCAVATION	202	254,631	CU YD	
NRM25040	7	NITROGEN FERTILIZER NUTRIENT	250	19,900	POUND	See
NRM25050	8	PHOSPHORUS FERTILIZER NUTRIENT	250	27,860	POUND	Schedule
NRM25060	9	POTASSIUM FERTILIZER NUTRIENT	250	19,900	POUND	Below
NRM25070	10	AGRICULTURAL GROUND LIMESTONE	250	3,980	TON	20.0 TONS/ACRE
NRM25090	11	SEEDING	250	199	ACRE	SEEDING PERMANENT
25100115	12	MULCH, METHOD 2	IDOT 251	199	ACRE	PROCEDURE 1, 2.0 TONS/ACRE
NRM28040	13	PERIMETER EROSION BARRIER	280	2,156	FOOT	Silt Fence Required IDOT Standard 280001-07
NRM28610	14	SPECIAL EXCELSIOR BLANKET	286	24,435	SQ YD	8 Feet Wide Strips
35101400	15	AGGREGATE BASE COURSE, TYPE B	IDOT 351	1,140.0	TON	CA-6, 4" Lifts, 8" Total thickness
NRM61410	16	DEWATERING IMPOUNDMENTS	614	1	L SUM	
NRM61700	17	DRAINAGE IMPROVEMENTS	617	1	L SUM	
NRM66510	18	BARBED WIRE FENCE	665	175	FOOT	
NRM66520	19	ENTRANCE GATE	665	1	EACH	
NRM67110	20	MOBILIZATION (MAX. 6% OF BID)	671	1	L SUM	
NRM67420	21	BOREHOLE GROUTING	674	6	EACH	

GENERAL NOTES

Unless otherwise noted on the plans, all disturbed areas within the construction limits will be amended with agricultural ground limestone, fertilizer nutrients, seeded and mulched at the required rates specified in the plans.

The contractor is responsible for visiting the site and familiarizing himself with the existing conditions and the proposed reclamation work prior to submitting a bid.

The contractor shall provide and pay for all field engineering services to execute the project as specified in the Field Engineering section of the Special Provisions.

The contractor is responsible for locating and protecting all existing utility lines pertaining to the work.

Unless noted on the plans, all onsite access roads may be used for construction and must be maintained during construction and restored to original or better condition at the completion of work by the contractor. Access roads to the site as designated in the plans are to be maintained to the satisfaction of the engineer.

The construction limits will be staked by the contractor prior to construction. The contractor is responsible for the repair and or restitution at his own expense for all damaged done to any area outside the construction limits.

Application rates specified in the plans are shown in the Summary of Quantities-Rates/Remarks column.

CONSTRUCTION NOTES

BURIAL/REMOVAL OF MATERIAL-Concrete and masonry debris designated for burial by the engineer shall be buried at least three feet below proposed final grade. Onsite organic debris and trash shall be disposed of in an engineer approved offsite landfill in accordance with Sections 201 and 501 of the Special Provisions.

TREE REMOVAL-Trees removed shall be disposed of onsite per Section 201 of the Special Provisions.

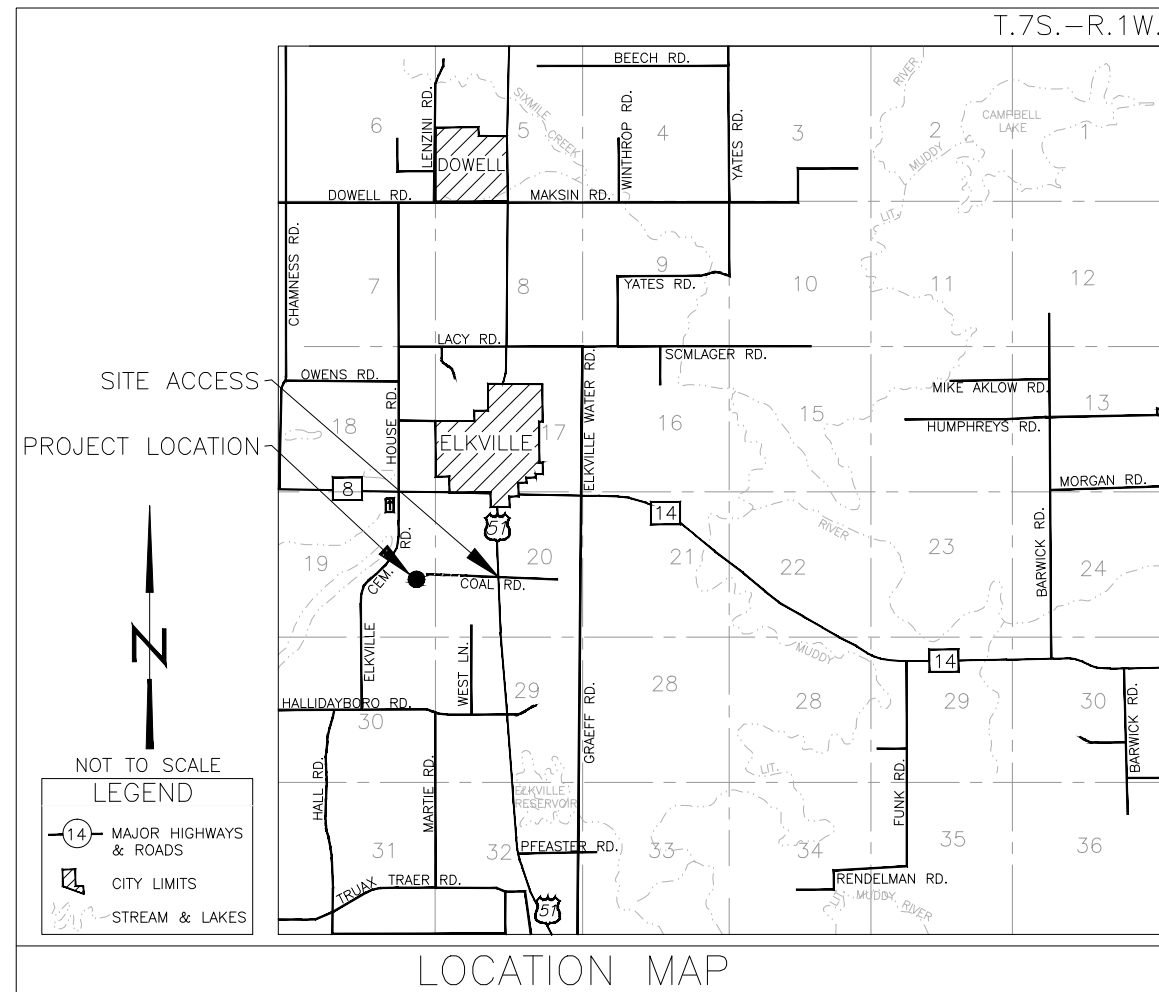
ACID WATER TREATMENT-If acid mine drainage treatment is determined necessary by the engineer, and not otherwise specified in the plans, any water treatment will be paid for in accordance with Article 109.04 of the Standard Specifications.

EROSION CONTROL-The contractor shall schedule his operations and take such precautions that may be necessary to prevent or minimize erosion. Failure to comply with this requirement shall cause the contractor to be fully responsible for repairing any eroded areas and cleaning up areas or drainage structures that have become silted in or damaged.

AGRICULTURAL GROUND LIMESTONE-Immediately prior to seed bed preparation, fertilizer nutrients and agricultural ground limestone shall be uniformly spread at the rates specified in the plans.

MULCHING-Within 24 hours from the time seeding has been performed, the seeded area shall be given a covering of mulch at the rates specified in the plans. The mulch is to be anchored into the soil in accordance with the requirements for method 2, procedure 1 of Article 251.03 of the Standard Specifications. If Excelsior or Special Excelsior Blanket is to be used, the blanket shall be placed the same day that the areas are seeded.

MINE REFUSE TREATMENT-After mine refuse has been graded to the subgrade shown in the plans, agricultural ground limestone shall be uniformly spread at the rate specified in the plans. A 3 inch layer of soil shall then be spread over the mine refuse treatment area and blended to a depth of 6 inches with an industrial disk approved by the engineer. Treated areas shall then be covered with 33 inches of soil.



Schedule of Seeding, Fertilizer Nutrients and Mulch

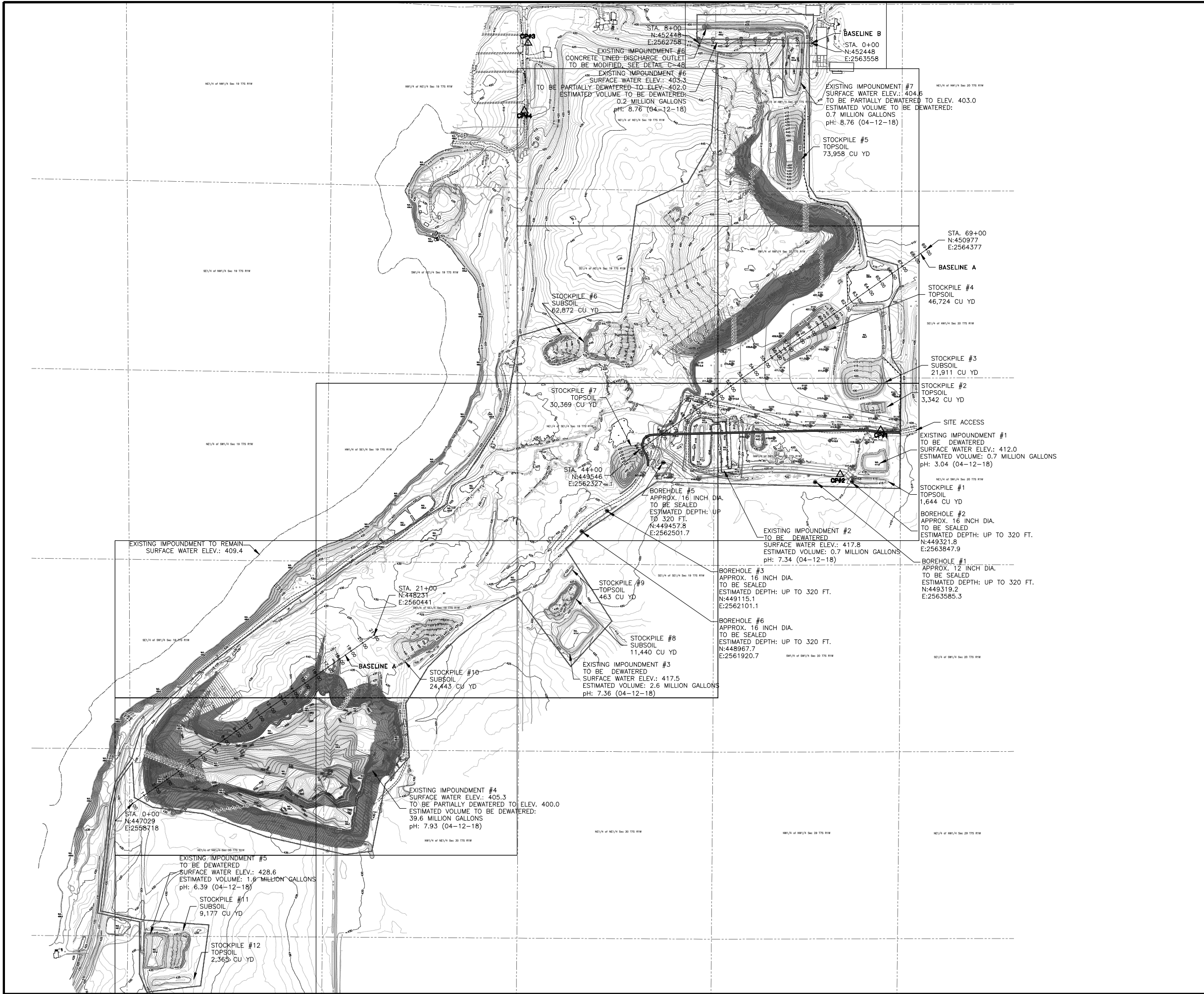
ITEM (unit)	FALL 2019 AUG. 20 – SEPT. 30	TOTAL QUANTITY
SEEDING (acres)	199.0	199.0
AGRICULTURAL GROUND LIMESTONE (tons)	3,980.0 20 T/A	3,980.0
NITROGEN FERTILIZER NUTRIENT (pounds)	19,900 100 LB./A	19,900
PHOSPHOROUS FERTILIZER NUTRIENT (pounds)	27,860 140 LB./A	27,860
POTASSIUM FERTILIZER NUTRIENT (pounds)	19,900 100 LB./A	19,900
MULCH, METHOD 2 PROCEDURE 1 (acre)	199.0 2 T/A	199.0

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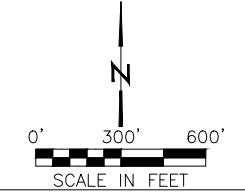
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LRD-2018-367
Jackson County

Drawn By : OMA
Checked By :
Date : 06-12-18

Summary of Quantities/
General Notes/Location Map
Sheet 2 of 48



- NOTES:**
1. ALL CLEARING SHALL BE IN ACCORDANCE WITH SECTION 201.
 2. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.
 3. IMPOUNDMENTS ARE TO BE DEWATERED IN ACCORDANCE WITH SECTION 614 OF THE SPECIAL PROVISIONS. APPROXIMATE IMPOUNDMENT VOLUMES ARE SHOWN ON THE PLANS.
 4. ADDITIONAL AREAS OF SHALLOW STANDING WATER EXIST AND MAY APPEAR BEFORE AND DURING CONSTRUCTION. DEWATERING AND TREATMENT, IF NECESSARY, SHALL BE INCIDENTAL TO THE CONTRACT PRICE FOR DEWATERING IMPOUNDMENTS.
 5. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR THE PROPERTY OWNERS AT ALL TIMES, FOR THE DURATION OF THE PROJECT.
 6. ALL THE MINE REFUSE EXCAVATION SHALL BE COMPLETED AND ALL MINE REFUSE PLACED IN IMPOUNDMENT #4 PRIOR TO THE PLACING OF ANY BACKFILL IN THIS IMPOUNDMENT.



SHEET LAYOUT

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- LEGEND
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - CONSTRUCTION LIMITS
 - EXISTING TREELINE
 - EDGE OF WATER
 - SECTION LINE
 - FENCE LINE
 - △ CONTROL POINT
 - BORING LOCATION

TRAVERSE LAYOUT DATA

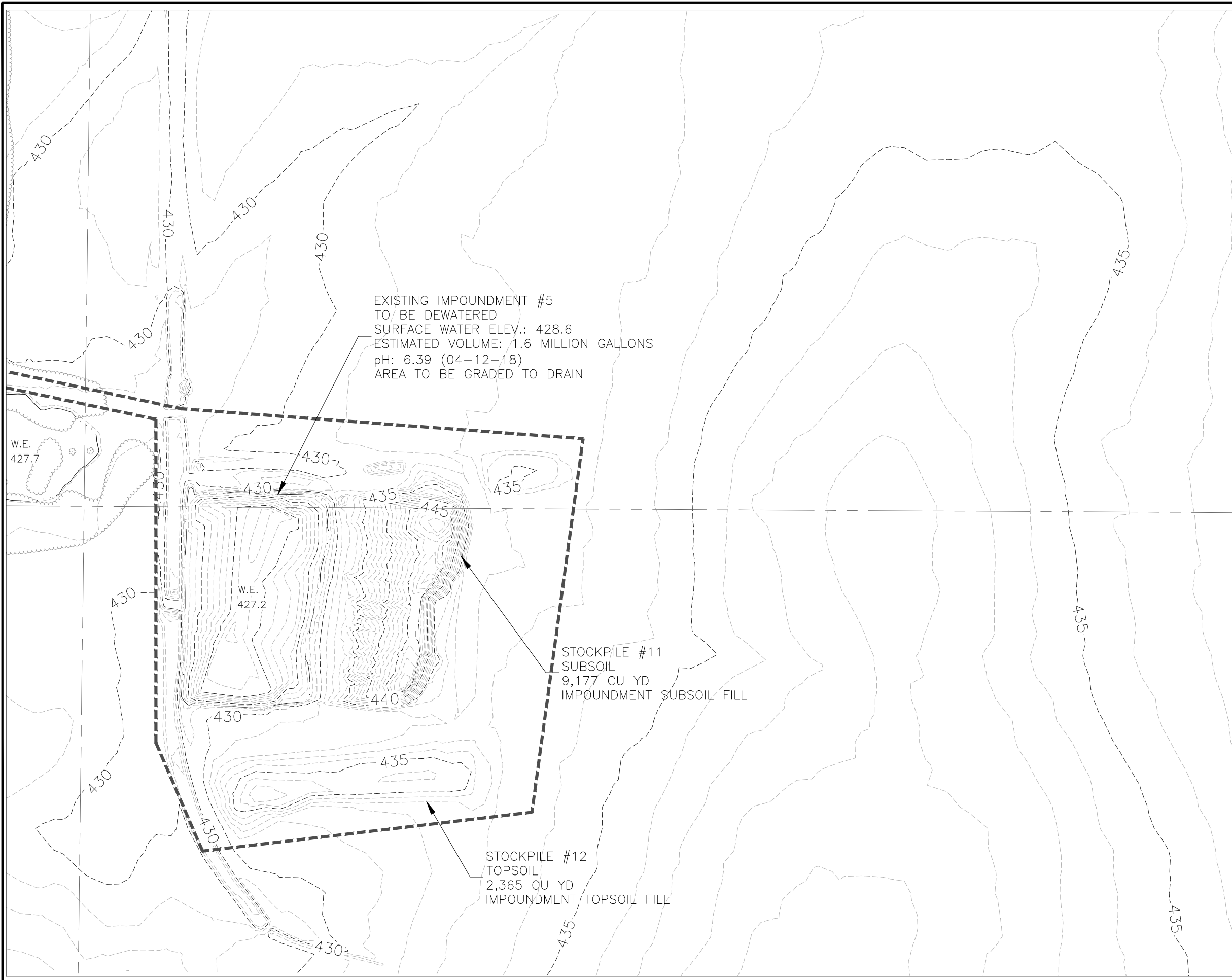
CP	ELEVATION	NORTHING	EASTING
#1	414.43	449689.67	2564051.52
#2	415.96	449375.98	2563762.46
#3	414.46	452372.46	2561526.49
#4	410.57	451966.31	2561511.95

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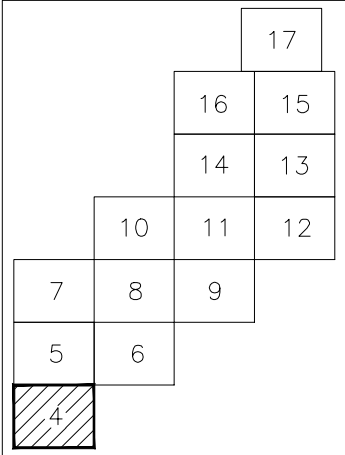
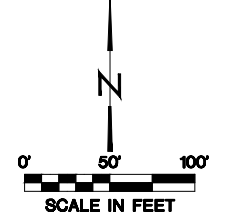
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Jackson County**

Drawn By: OMA Date: 06-18-18
Checked By: _____

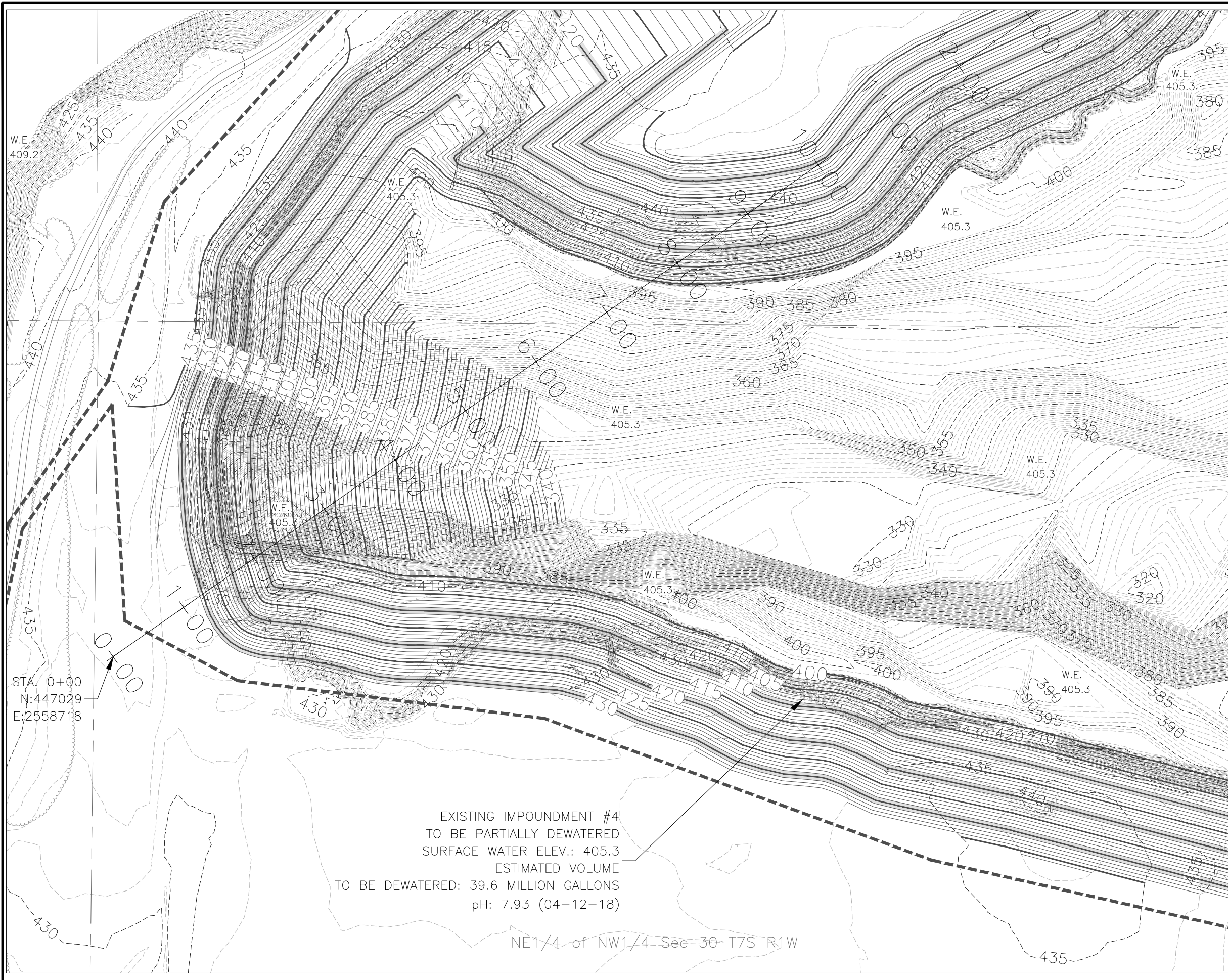
**Site Layout
Survey Control Point Data
Sheet 3 of 48**



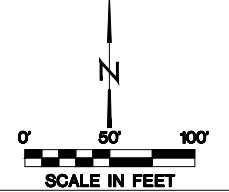
- NOTES:
1. IMPOUNDMENT #5 SHALL BE DEWATERED IN ACCORDANCE WITH SECTION 614 OF THE SPECIAL PROVISIONS. THE NEED FOR TREATMENT IS NOT ANTICIPATED. FOLLOWING DEWATERING, IMPOUNDMENT #5 SHALL BACKFILLED WITH AVAILABLE MATERIAL FROM SUBSOIL STOCKPILE #11 AND THEN GRADED TO DRAIN UTILIZING MATERIAL FROM TOPSOIL STOCKPILE #12.
 2. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.
 3. ADDITIONAL AREAS OF SHALLOW STANDING WATER EXIST AND MAY APPEAR BEFORE AND DURING CONSTRUCTION. DEWATERING AND TREATMENT, IF NECESSARY, SHALL BE INCIDENTAL TO THE CONTRACT PRICE FOR DEWATERING IMPOUNDMENTS.
 4. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR THE PROPERTY OWNERS AT ALL TIMES, FOR THE DURATION OF THE PROJECT.



- SHEET LAYOUT
- EXISTING CONTOUR
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 - - - CONSTRUCTION LIMITS
 - ~ ~ ~ EXISTING TREELINE
 - · - · - EDGE OF WATER
 - - - SECTION LINE
 - o - o - OVERHEAD POWER LINE
 - * - * - FENCE LINE
 - △ CONTROL POINT
 - ⊕ BORING LOCATION
- LEGEND



- NOTES:
1. DEWATERING SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 614 OF THE SPECIAL PROVISIONS. APPROXIMATE IMPOUNDMENT VOLUMES ARE SHOWN ON THE PLANS.
 2. IMPOUNDMENT #4 IS TO BE DEWATERED TO ELEVATION 400.0 FROM THE EXISTING WATER ELEVATION OF 405.3. GRADING SHALL COMMENCE ONCE DEWATERING IS COMPLETED. THE LOWER WATER ELEVATION SHALL BE MAINTAINED UNTIL ALL THE GRADING BELOW WATER HAS BEEN COMPLETED AND APPROVED BY THE ENGINEER.
 3. IMPOUNDMENT #4 VOLUME IS SHOWN ON THE PLANS. THE VOLUME OF WATER TO BE PUMPED FOR DEWATERING WILL EXCEED THE VOLUME SHOWN FOR THE IMPOUNDMENT, DUE TO SURFACE WATER FLOW TO THE IMPOUNDMENT AND THE PRESENCE OF GROUND WATER NEAR ADJACENT SPOIL TERRAIN.
 4. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.



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SHEET LAYOUT

- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - - - CONSTRUCTION LIMITS
 - ~ EXISTING TREELINE
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- LEGEND

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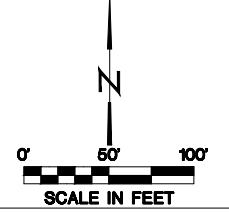
Existing/Proposed
 Conditions
 Sheet 5 of 48



EXISTING IMPOUNDMENT #4
 TO BE PARTIALLY DEWATERED
 SURFACE WATER ELEV.: 405.3
 ESTIMATED VOLUME
 TO BE DEWATERED: 39.6 MILLION GALLONS
 pH: 7.93 (04-12-18)

NW1/4 of NE1/4 Sec 30 T7S R1W

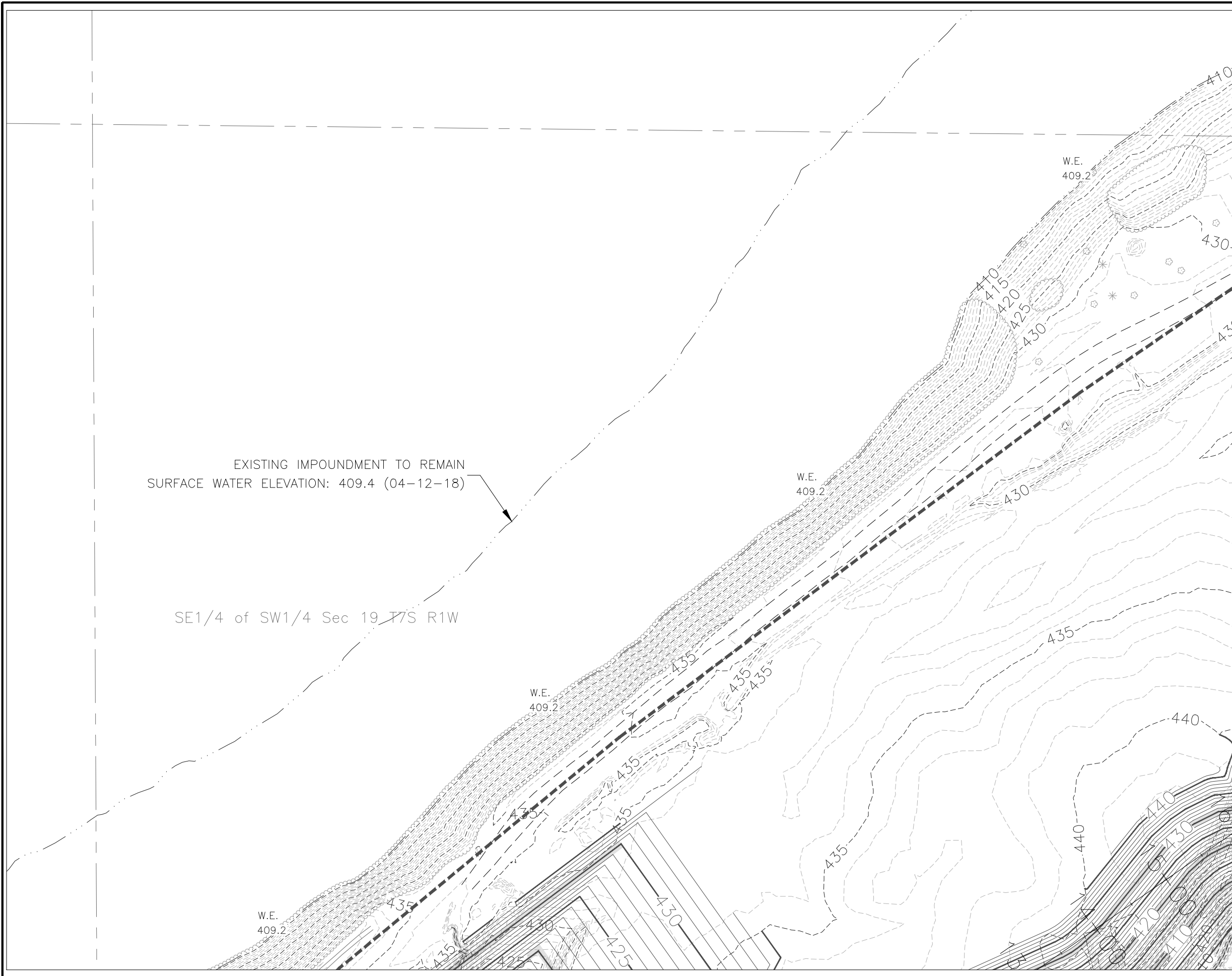
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 2. IMPOUNDMENT #4 IS TO BE DEWATERED TO ELEVATION 400.0 FROM THE EXISTING WATER ELEVATION OF 405.3. GRADING SHALL COMMENCE ONCE DEWATERING IS COMPLETED. THE LOWER WATER ELEVATION SHALL BE MAINTAINED UNTIL ALL THE GRADING BELOW WATER HAS BEEN COMPLETED AND APPROVED BY THE ENGINEER.
 3. IMPOUNDMENT #4 VOLUME IS SHOWN ON THE PLANS. THE VOLUME OF WATER TO BE PUMPED FOR DEWATERING WILL EXCEED THE VOLUME SHOWN FOR THE IMPOUNDMENT, DUE TO SURFACE WATER FLOW TO THE IMPOUNDMENT AND THE PRESENCE OF GROUND WATER NEAR ADJACENT SPOIL TERRAIN.
 4. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.



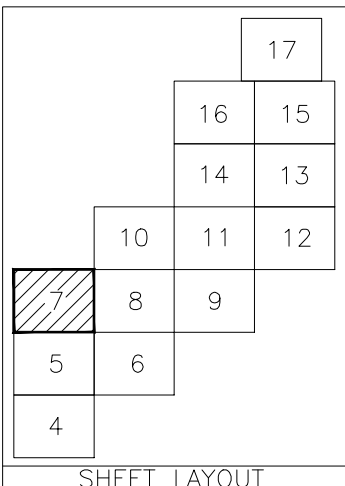
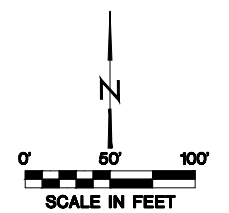
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SHEET LAYOUT

- LEGEND
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 - PROPOSED CONTOUR
 - CONSTRUCTION LIMITS
 - ~ EXISTING TREELINE
 - - - EDGE OF WATER
 - - - SECTION LINE
 - - - OVERHEAD POWER LINE
 - * FENCE LINE
 - △ CONTROL POINT
 - ⊕ BORING LOCATION



NOTES:
 1. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.



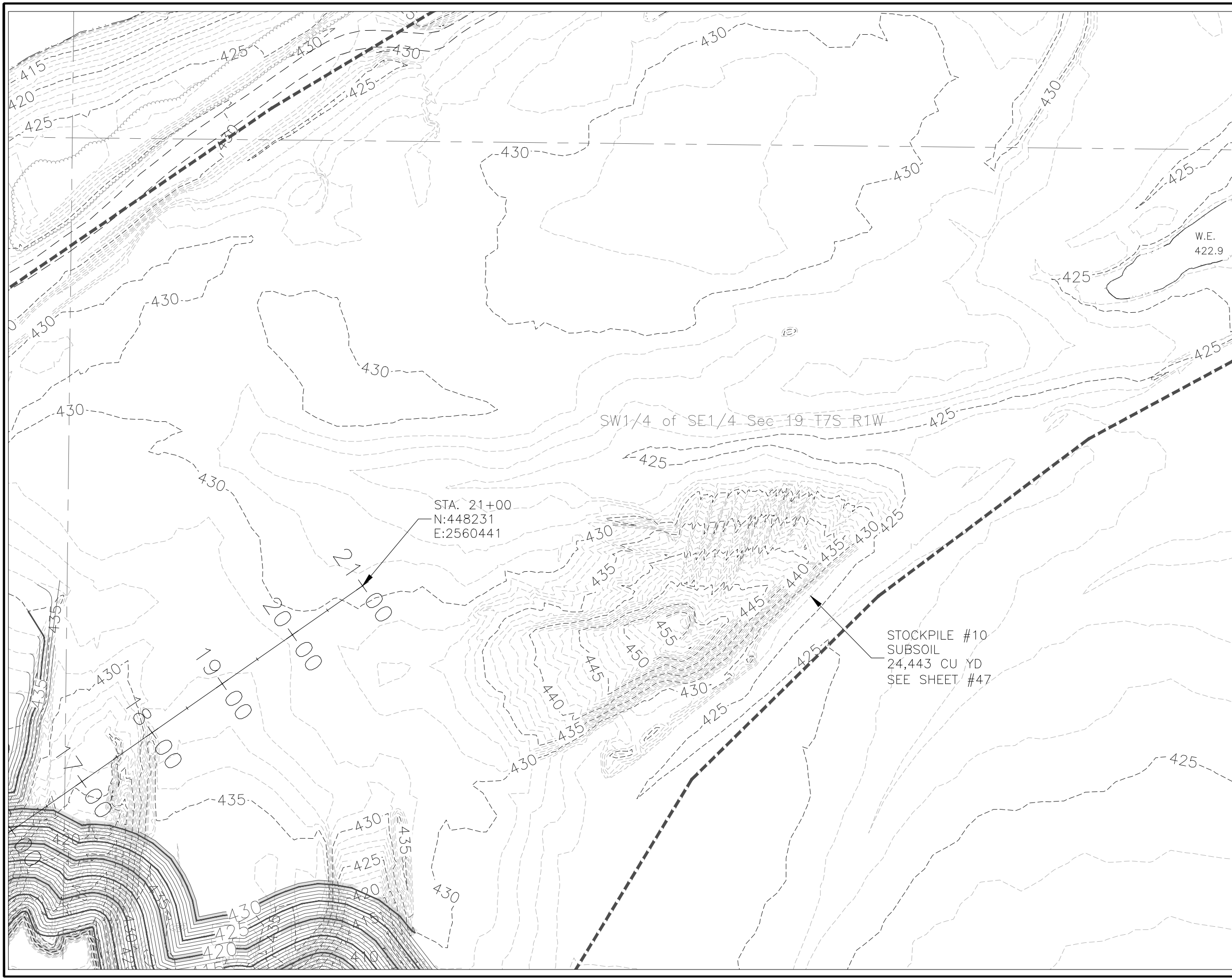
- EXISTING CONTOUR
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- LEGEND

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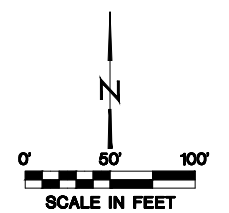
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Drawn By: OMA Date: 06-18-18
 Checked By: _____

Existing/Proposed
Conditions
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NOTES:
 1. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.



SHEET LAYOUT

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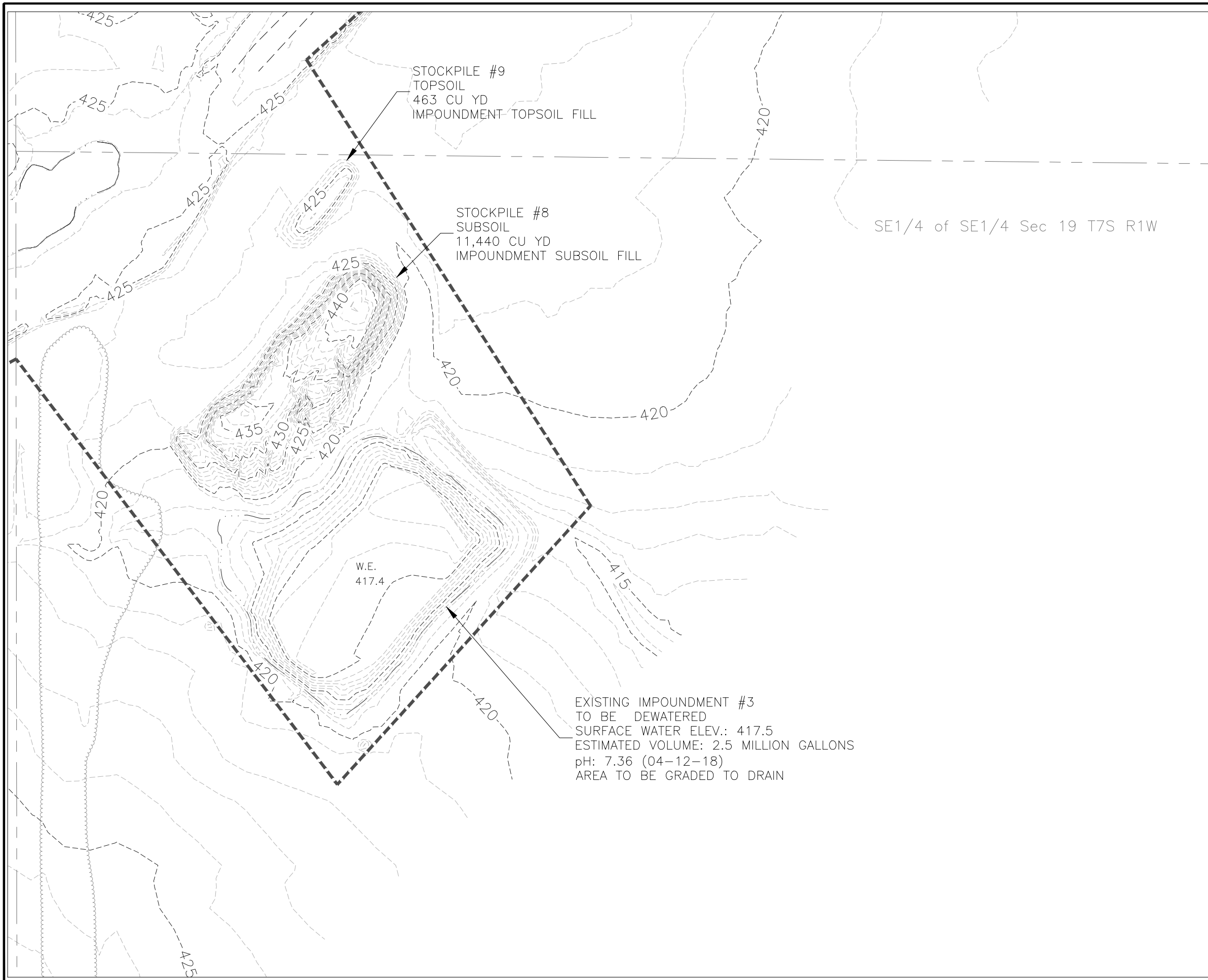
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 - - - - - CONSTRUCTION LIMITS
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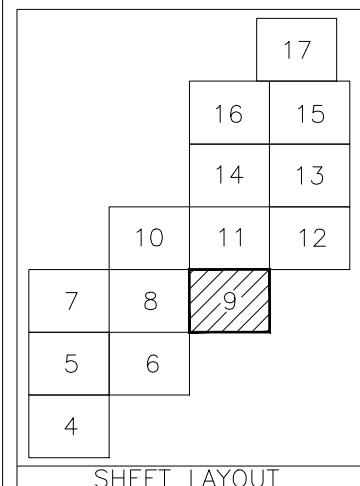
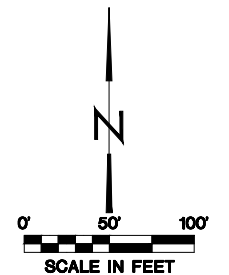
Drawn By: OMA Date: 06-18-18
 Checked By: _____

Existing/Proposed
 Conditions
 Sheet 8 of 48



NOTES:

1. DEWATERING SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 614 OF THE SPECIAL PROVISIONS. APPROXIMATE IMPOUNDMENT VOLUMES ARE SHOWN ON THE PLANS.
2. IMPOUNDMENT #3 SHALL BE DEWATERED IN ACCORDANCE WITH SECTION 614 OF THE SPECIAL PROVISIONS. THE NEED FOR TREATMENT IS NOT ANTICIPATED. FOLLOWING DEWATERING, IMPOUNDMENT #3 SHALL BACKFILLED WITH AVAILABLE MATERIAL FROM SUBSOIL STOCKPILE #8 AND THEN GRADED TO DRAIN UTILIZING MATERIAL FROM TOPSOIL STOCKPILE #9.
3. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.



- LEGEND**
- EXISTING CONTOUR
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 - ~ EXISTING TREELINE
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 - - - SECTION LINE
 - OP-OP- OVERHEAD POWER LINE
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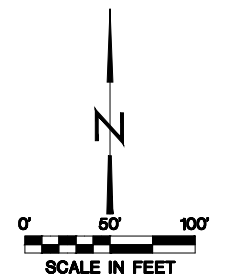
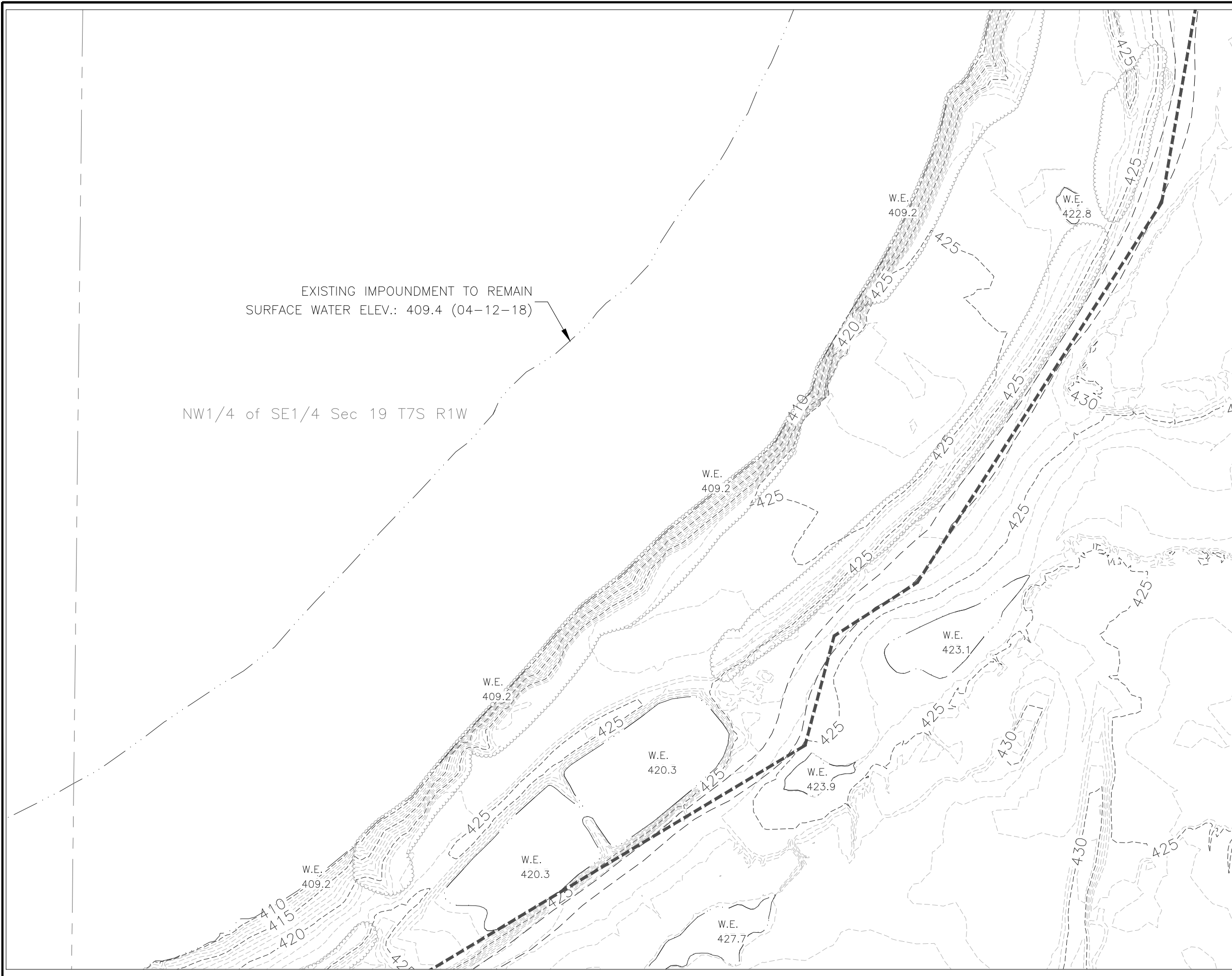
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Department of Natural Resources**

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LRD-2018-367
Jackson County**

Drawn By: OMA Date: 06-18-18
Checked By: _____

**Existing/Proposed
Conditions**

Sheet 9 of 48



SHEET LAYOUT

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4			

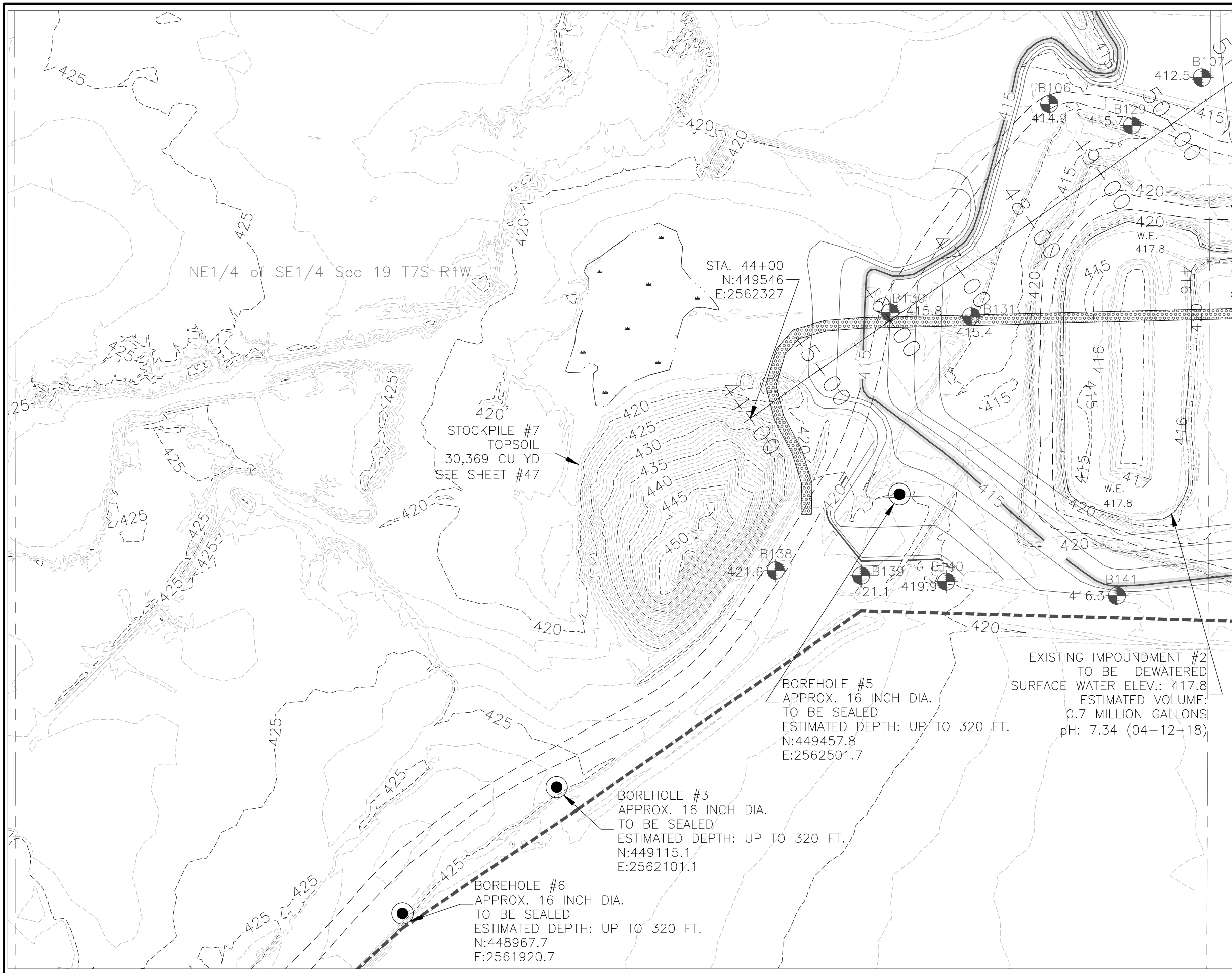
- LEGEND
- EXISTING CONTOUR
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State of Illinois
Department of Natural Resources

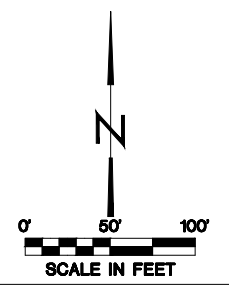
S Coal Elkhille
Reclamation Project
LRD-2018-367
Jackson County

Drawn By: OMA Date: 06-15-18
Checked By: _____

Existing/Proposed
Conditions
Sheet 10 of 48



- NOTES:
1. DEWATERING SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 614 OF THE SPECIAL PROVISIONS. APPROXIMATE IMPOUNDMENT VOLUMES ARE SHOWN ON THE PLANS.
 2. IMPOUNDMENT #2 SHALL BE DEWATERED IN ACCORDANCE WITH SECTION 614 OF THE SPECIAL PROVISIONS. THE NEED FOR TREATMENT IS NOT ANTICIPATED.
 3. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.
 4. BOREHOLES SHALL BE SEALED PER SECTION 674 OF THE SPECIAL PROVISIONS.



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4			

SHEET LAYOUT

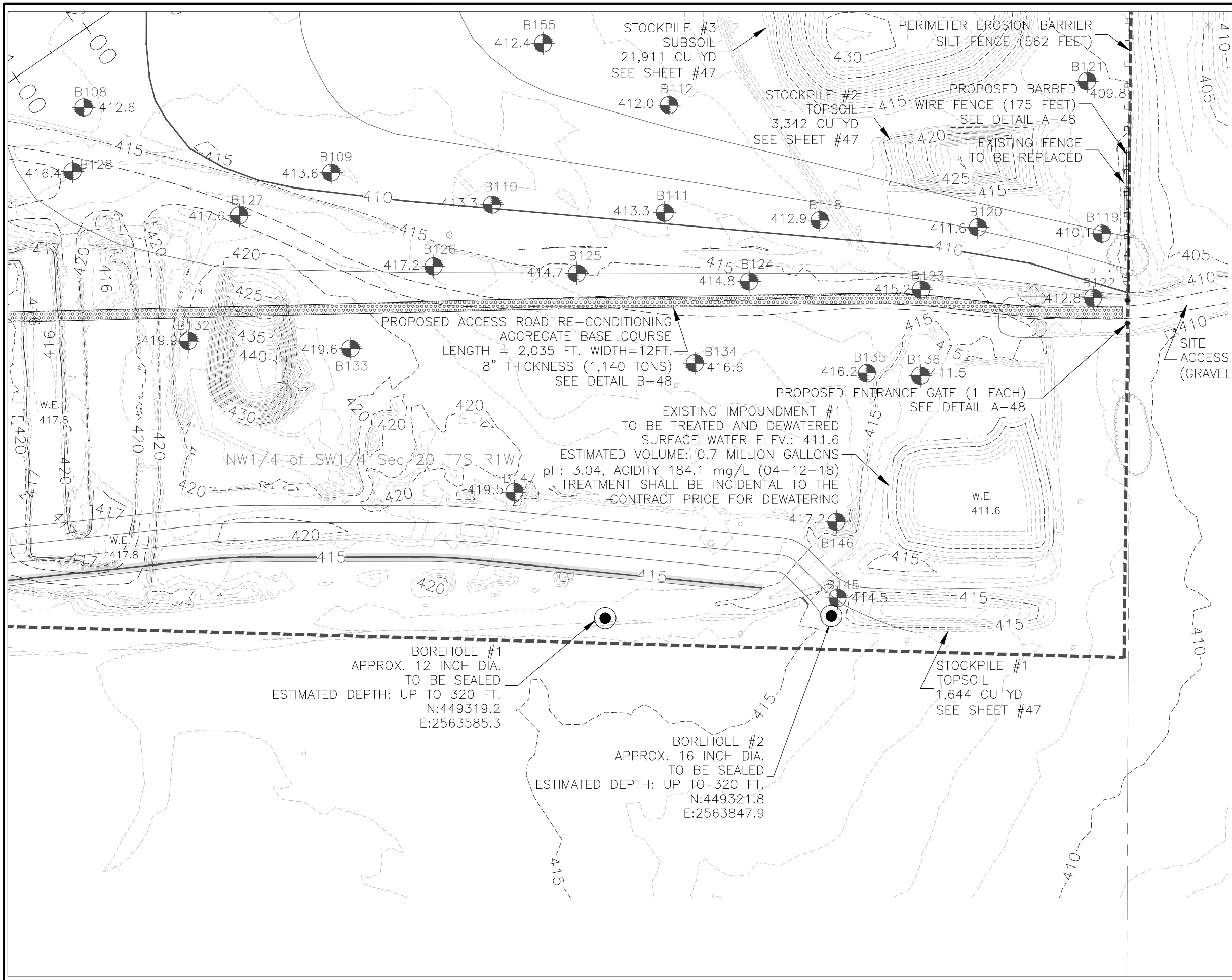
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- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - - - CONSTRUCTION LIMITS
 - ~ ~ ~ EXISTING TREELINE
 - · - · - EDGE OF WATER
 - - - SECTION LINE
 - o - o - OVERHEAD POWER LINE
 - * FENCE LINE
 - △ CONTROL POINT
 - BORING LOCATION

State of Illinois
 Department of Natural Resources

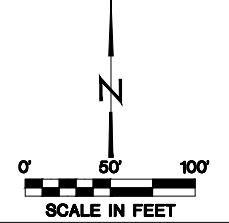
S Coal Elkhill
 Reclamation Project
 LRD-2018-367
 Jackson County

Drawn By: OMA Date: 06-18-18
 Checked By:

Existing/Proposed
 Conditions
 Sheet 11 of 48



- NOTES:
1. DEWATERING SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 614 OF THE SPECIAL PROVISIONS. APPROXIMATE IMPOUNDMENT VOLUMES ARE SHOWN ON THE PLANS.
 2. IMPOUNDMENT #1 SHALL BE TREATED AND DEWATERED IN ACCORDANCE WITH SECTION 614 OF THE SPECIAL PROVISIONS.
 3. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.
 4. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR THE PROPERTY OWNERS AT ALL TIMES, FOR THE DURATION OF THE PROJECT.
 5. THE CONTRACTOR SHALL DETERMINE BY SURVEY THE EXACT LOCATION OF THE EXISTING GATE AND FENCE LINE, PRIOR TO ITS REMOVAL AND REPLACEMENT, SEE DETAIL A-48.
 6. BOREHOLES SHALL BE SEALED PER SECTION 674 OF THE SPECIAL PROVISIONS.



SHEET LAYOUT

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4			

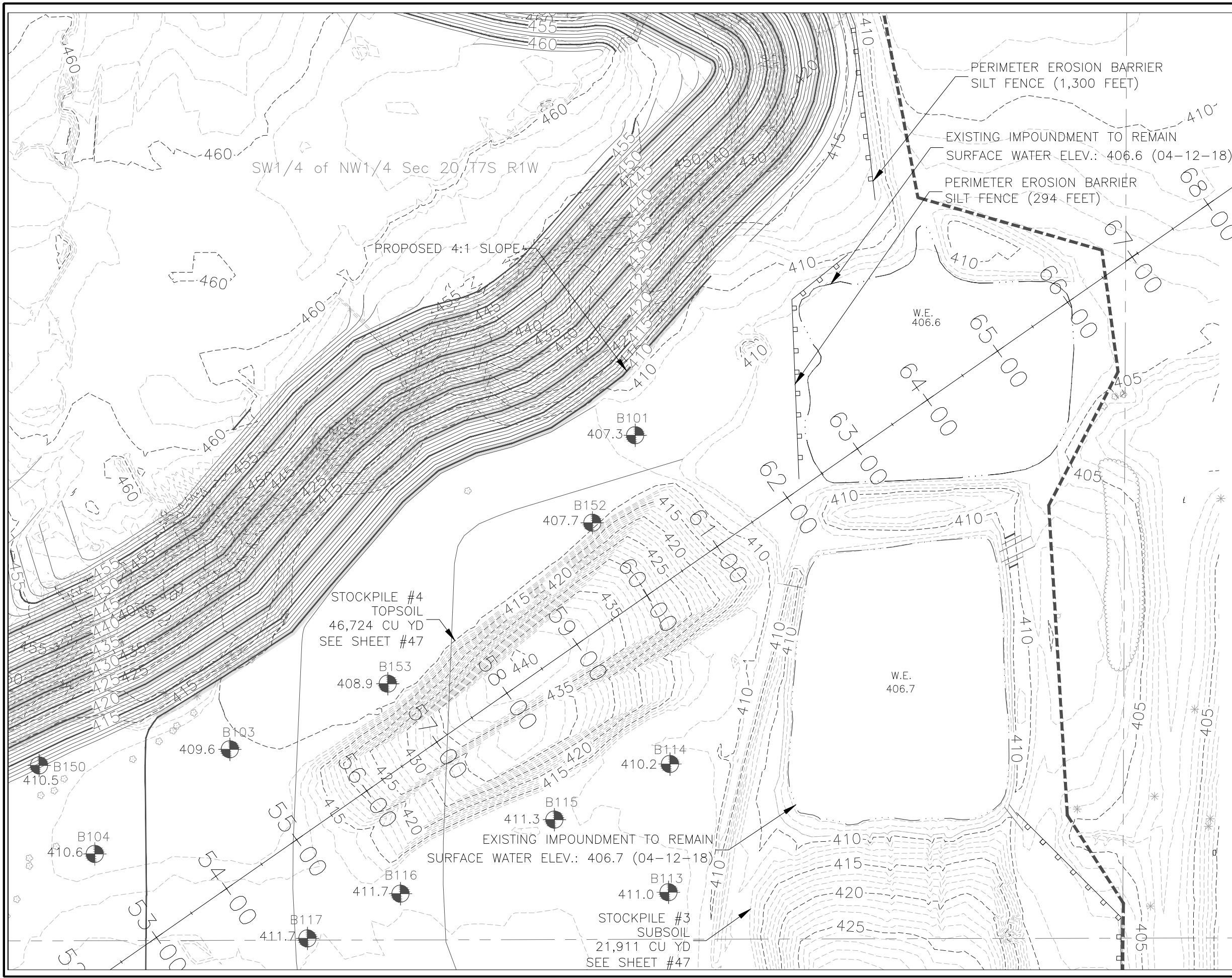
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- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - - - CONSTRUCTION LIMITS
 - ~ EXISTING TREELINE
 - - - EDGE OF WATER
 - - - SECTION LINE
 - - - OVERHEAD POWER LINE
 - * FENCE LINE
 - △ CONTROL POINT
 - BORING LOCATION

State of Illinois
Department of Natural Resources

S Coal Elkville
Reclamation Project
LRD-2018-367
Jackson County

Drawn By: OMA Date: 06-18-18
Checked By:

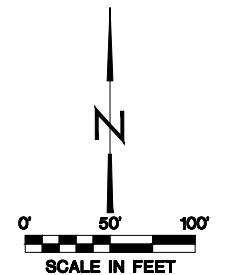
Existing/Proposed
Conditions
Sheet 12 of 48



NOTES:

1. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.

2. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR THE PROPERTY OWNERS AT ALL TIMES, FOR THE DURATION OF THE PROJECT.



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4			

SHEET LAYOUT

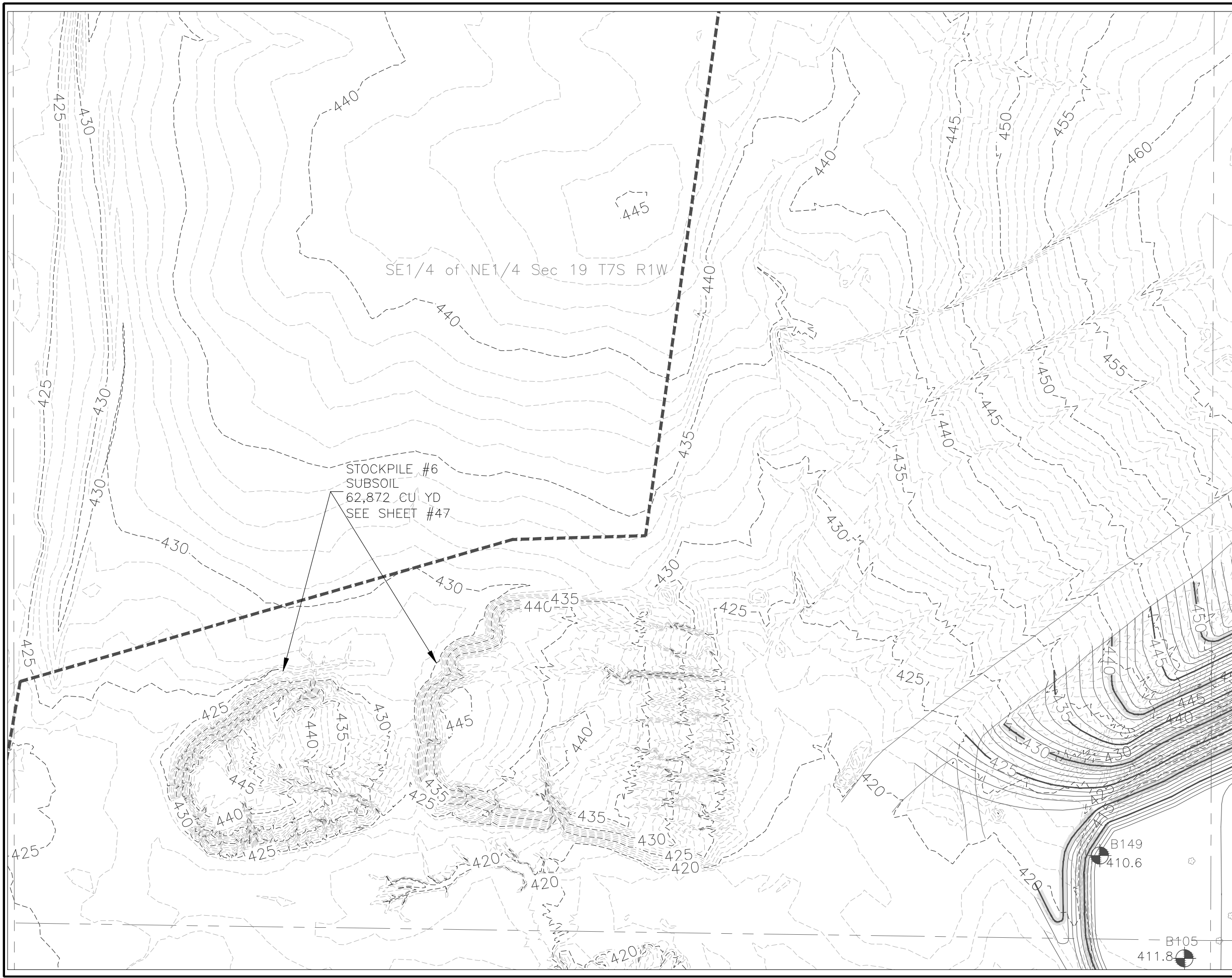
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 - - - CONSTRUCTION LIMITS
 - ~ EXISTING TREELINE
 - - - EDGE OF WATER
 - - - SECTION LINE
 - - - OVERHEAD POWER LINE
 - * FENCE LINE
 - △ CONTROL POINT
 - BORING LOCATION
- LEGEND

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Department of Natural Resources

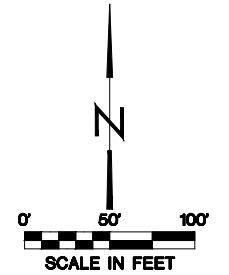
S Coal Elkville
Reclamation Project
LRD-2018-367
Jackson County

Drawn By: OMA Date: 06-15-18
Checked By: _____

Existing/Proposed
Conditions
Sheet 13 of 48



NOTES:
 1. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.



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	10	11	12
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4			

SHEET LAYOUT

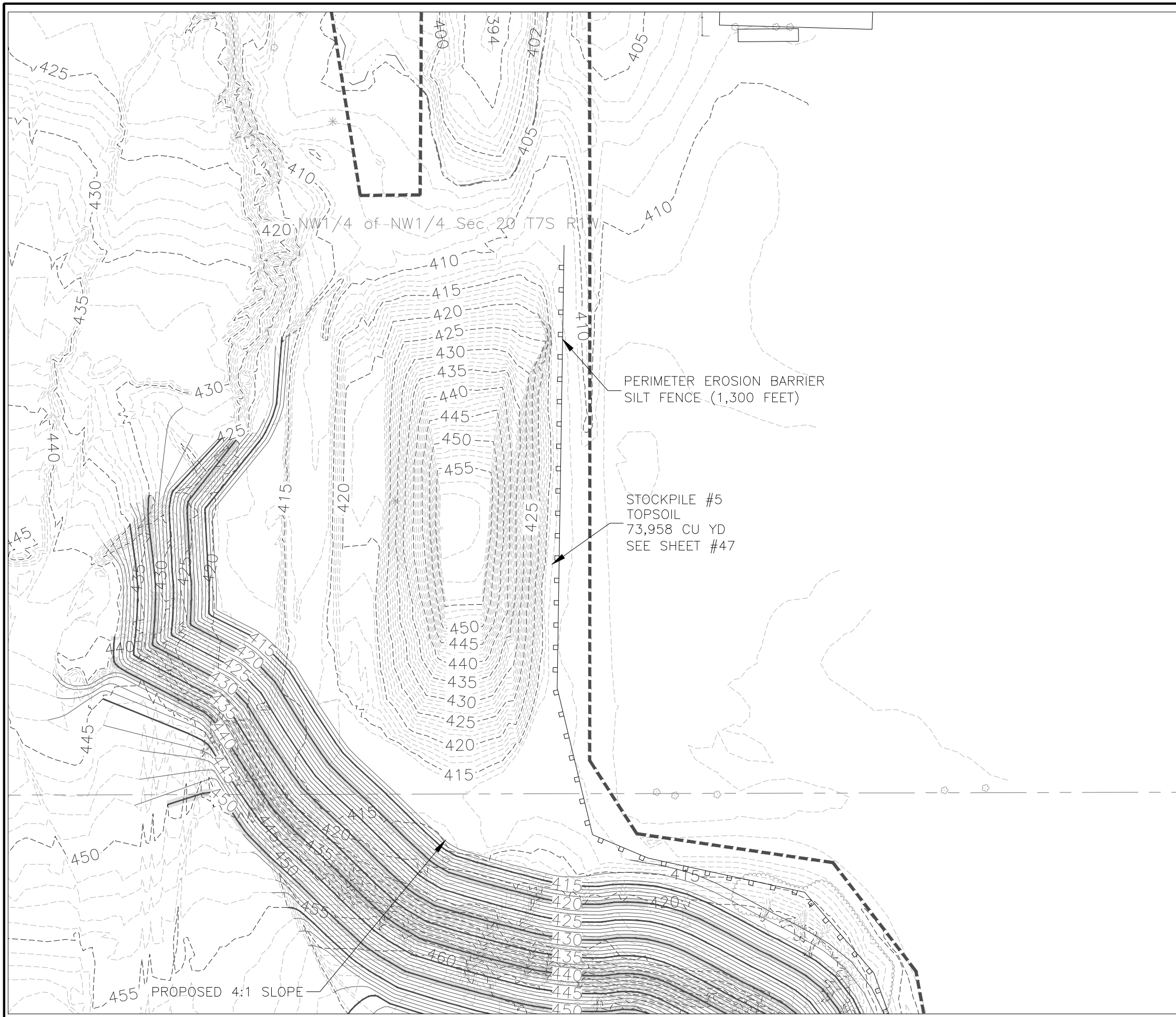
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 - - - CONSTRUCTION LIMITS
 - ~ EXISTING TREELINE
 - - - EDGE OF WATER
 - - - SECTION LINE
 - - - OVERHEAD POWER LINE
 - * FENCE LINE
 - ▲ CONTROL POINT
 - BORING LOCATION
- LEGEND

State of Illinois
 Department of Natural Resources

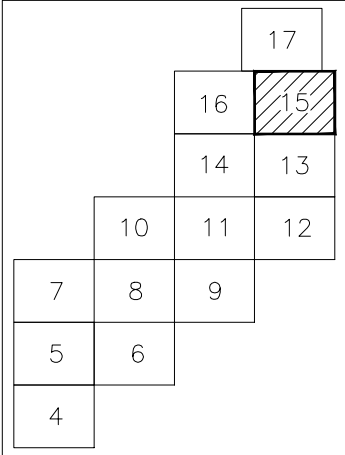
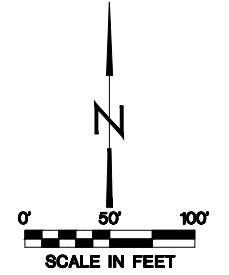
S Coal Elkville
 Reclamation Project
 LRD-2018-367
 Jackson County

Drawn By: OMA Date: 06-18-18
 Checked By: _____

Existing/Proposed
 Conditions
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NOTES:
 1. EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.
 2. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR THE PROPERTY OWNERS AT ALL TIMES, FOR THE DURATION OF THE PROJECT.



SHEET LAYOUT

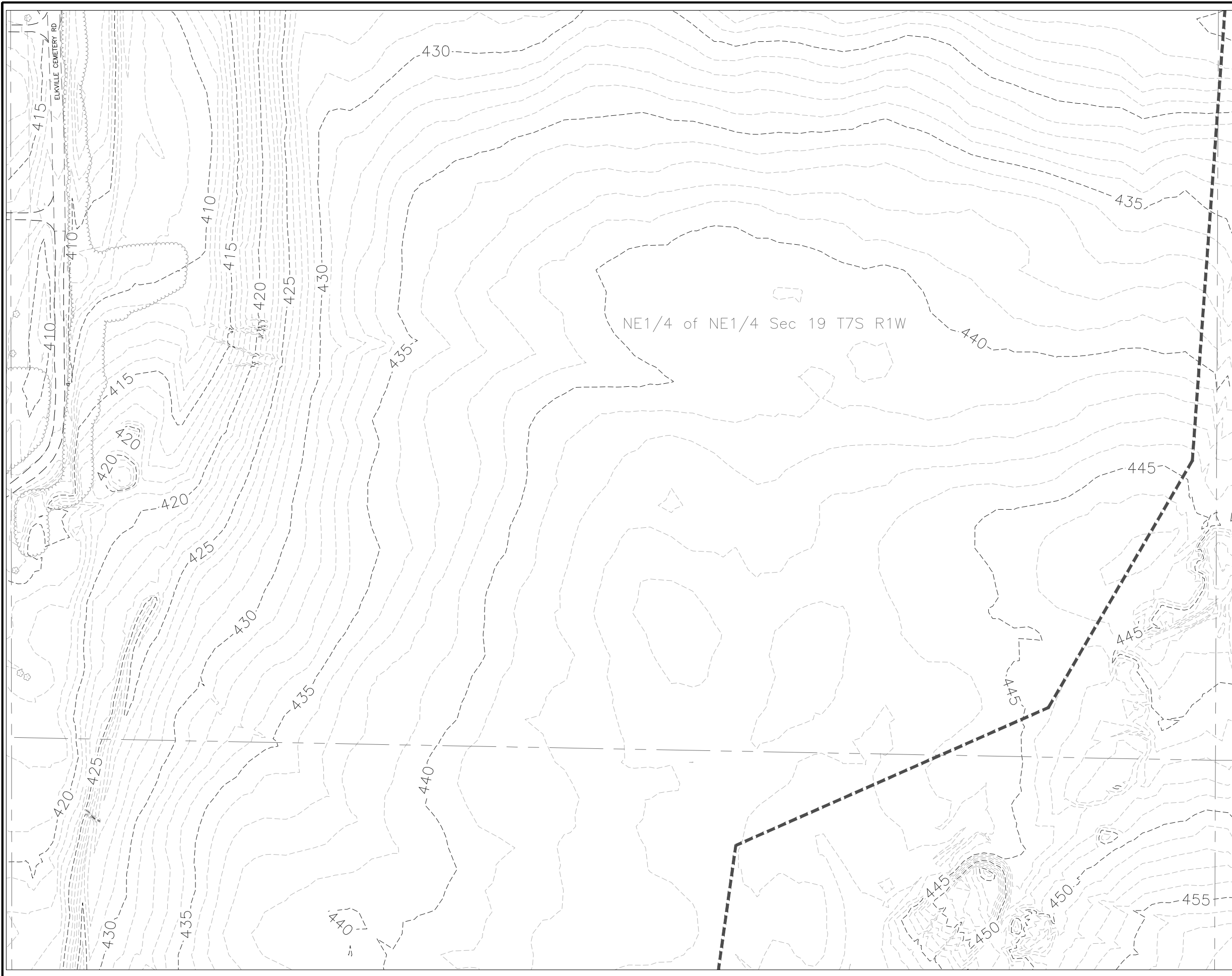
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 - PROPOSED CONTOUR
 - - - CONSTRUCTION LIMITS
 - ~ EXISTING TREELINE
 - - - - EDGE OF WATER
 - - - SECTION LINE
 - - - - OVERHEAD POWER LINE
 - * FENCE LINE
 - △ CONTROL POINT
 - ⊕ BORING LOCATION
- LEGEND

State of Illinois
 Department of Natural Resources

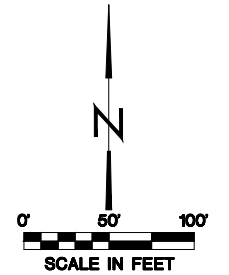
S Coal Elkville
 Reclamation Project
 LRD-2018-367
 Jackson County

Drawn By: OMA Date: 06-18-18
 Checked By: _____

Existing/Proposed
 Conditions
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NE1/4 of NE1/4 Sec 19 T7S R1W



SHEET LAYOUT

			17
		16	15
		14	13
	10	11	12
7	8	9	
5	6		
4			

- LEGEND
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - - - CONSTRUCTION LIMITS
 - ~ EXISTING TREELINE
 - - - EDGE OF WATER
 - - - SECTION LINE
 - - - OVERHEAD POWER LINE
 - * FENCE LINE
 - △ CONTROL POINT
 - ⊕ BORING LOCATION

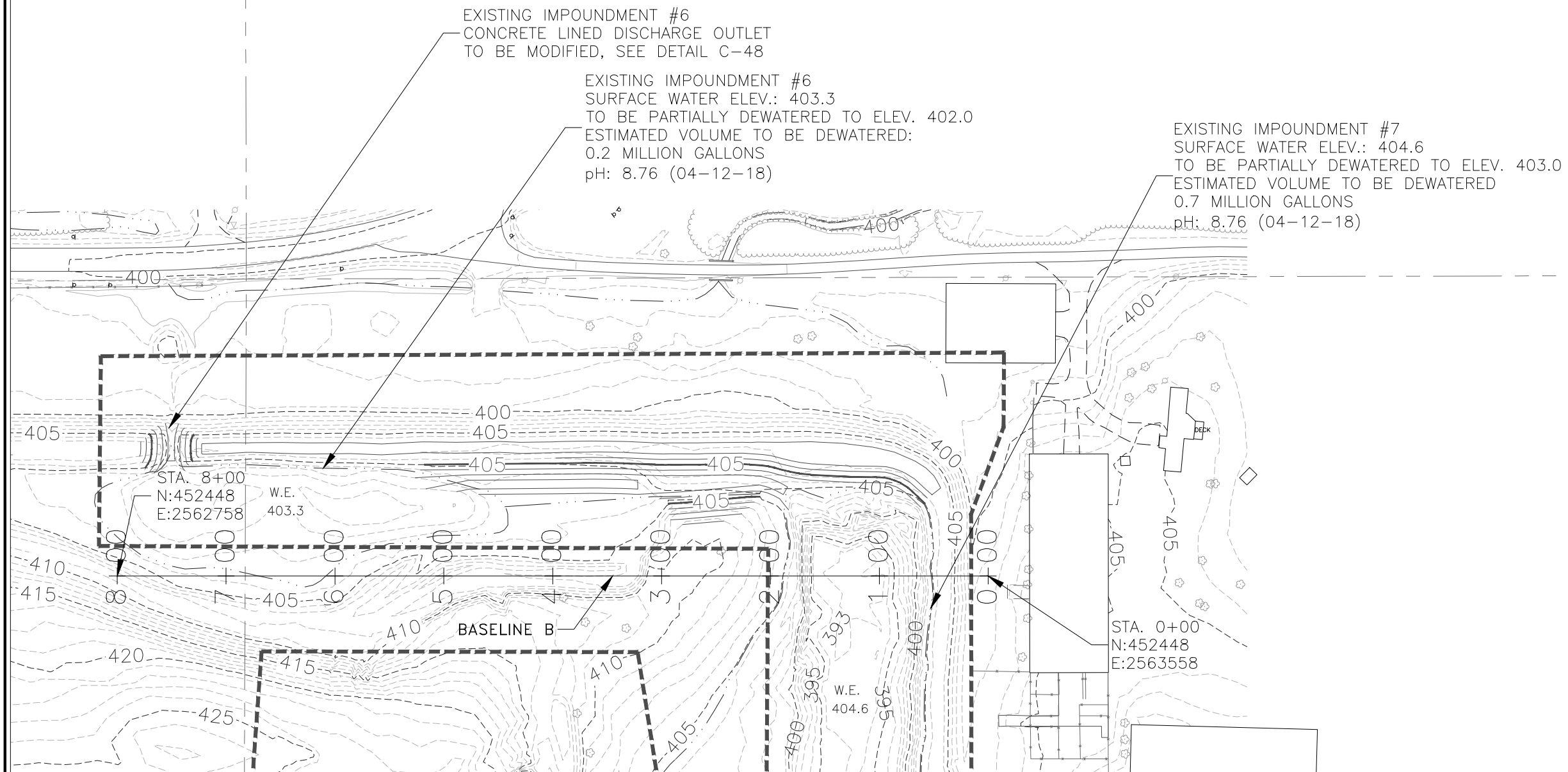
State of Illinois
Department of Natural Resources

S Coal Elkhville
Reclamation Project
LRD-2018-367
Jackson County

Drawn By: OMA Date: 06-18-18
Checked By: _____

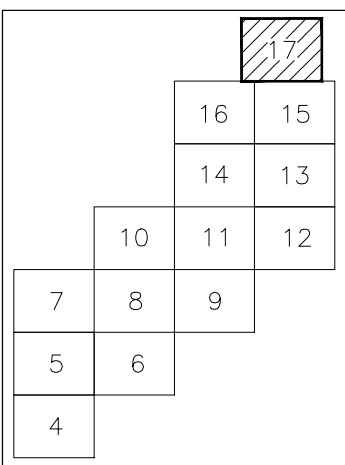
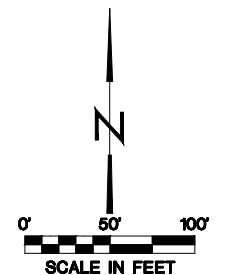
Existing/Proposed
Conditions
Sheet 16 of 48

SW1/4 of SW1/4 Sec 17 T7S R1W



NOTES:

- DEWATERING FOR LOWERING OF WATER ELEVATION OF IMPOUNDMENT #7, FROM ELEV. 404.6 TO ELEV. 403.0, AND IMPOUNDMENT #8, FROM ELEV. 403.3 TO 402.0, SHALL BE INCIDENTAL TO THE CONTRACT PRICE FOR DRAINAGE IMPROVEMENTS. AN ESTIMATED 0.9 MILLION GALLONS WILL NEED TO BE DEWATERED, NO TREATMENT IS ANTICIPATED. SEE DETAIL C-48.
- EARTH FILL MATERIALS MUST BE PLACED IN 9 INCH LIFTS, AND MUST BE COMPACTED WITH MULTIPLE EQUIPMENT PASSES TO THE SATISFACTION OF THE ENGINEER IN THE FOLLOWING AREAS: ALL BASELINE A FILLS FROM SECTION 1+00 TO 20+00, ABOVE THE WATER LEVEL AT IMPOUNDMENT #4. ALL BASELINE A FILL FROM SECTION 50+00 TO 66+00, WHERE PLAN SLOPES ARE 4:1 OR STEEPER. UNDER THE FOOTPRINT OF THE AGGREGATE BASE COURSE ACCESS ROAD. NO COMPACTION IS REQUIRED ON OTHER AREAS OF THE SITE.
- THE CONTRACTOR SHALL MAINTAIN ACCESS FOR THE PROPERTY OWNERS AT ALL TIMES, FOR THE DURATION OF THE PROJECT.



SHEET LAYOUT

- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - - - CONSTRUCTION LIMITS
 - ~ EXISTING TREELINE
 - - - EDGE OF WATER
 - - - SECTION LINE
 - - - OVERHEAD POWER LINE
 - * FENCE LINE
 - △ CONTROL POINT
 - ⊕ BORING LOCATION
- LEGEND

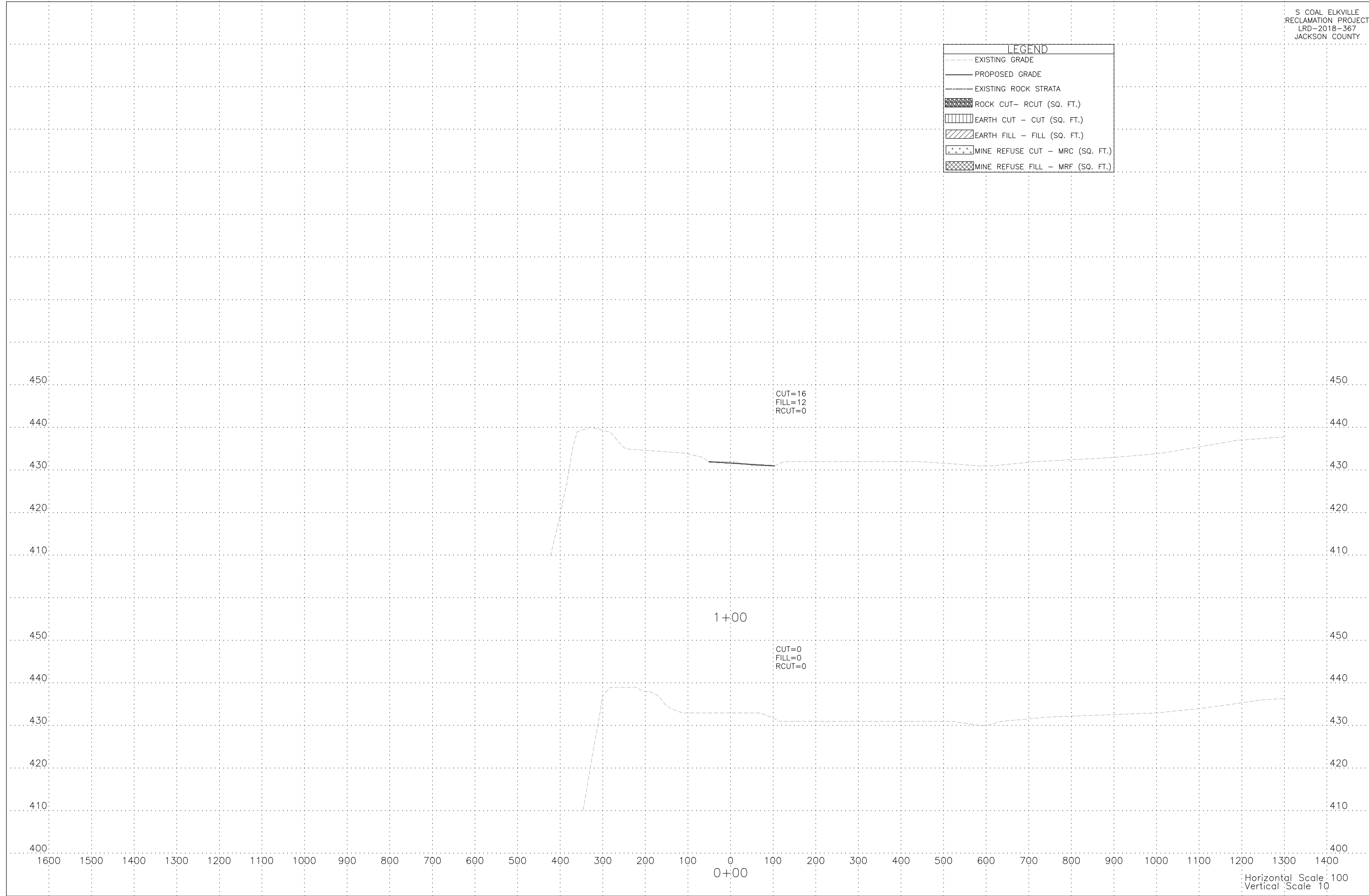
State of Illinois
Department of Natural Resources

S Coal Elkhville
Reclamation Project
LRD-2018-367
Jackson County

Drawn By: OMA Date: 06-18-18
Checked By: _____

Existing/Proposed
Conditions
Sheet 17 of 48

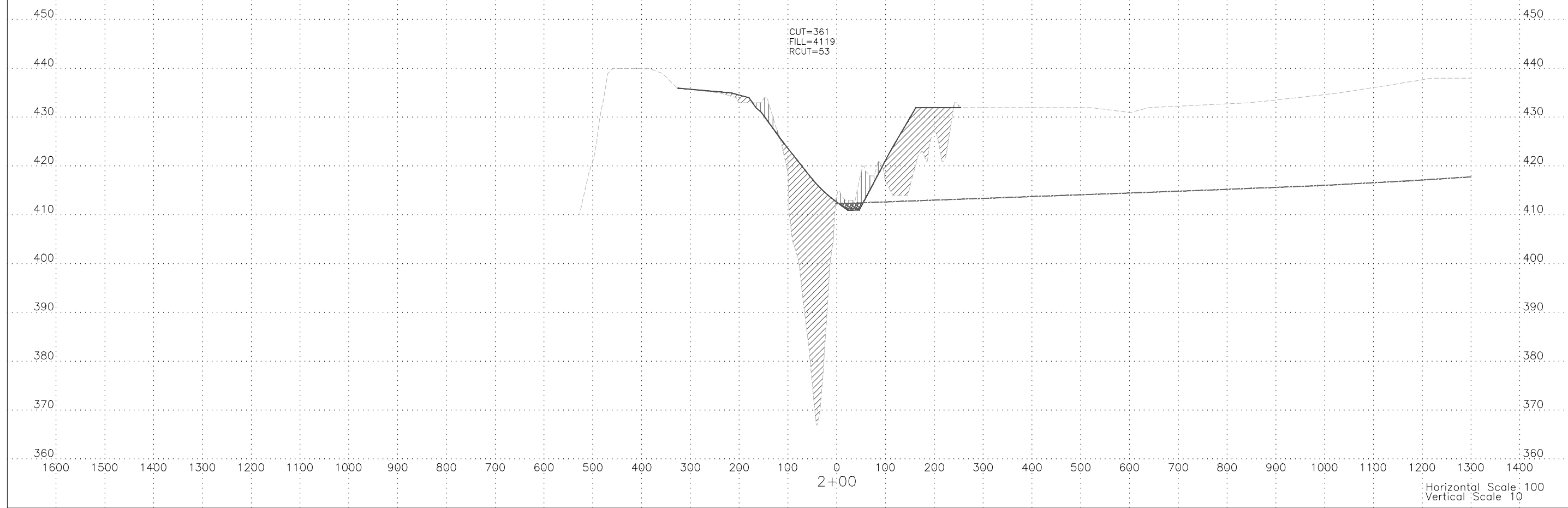
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—	PROPOSED GRADE
—	EXISTING ROCK STRATA
▨	ROCK CUT - RCUT (SQ. FT.)
▤	EARTH CUT - CUT (SQ. FT.)
▧	EARTH FILL - FILL (SQ. FT.)
⋄	MINE REFUSE CUT - MRC (SQ. FT.)
▩	MINE REFUSE FILL - MRF (SQ. FT.)



Horizontal Scale: 100
Vertical Scale: 10

LEGEND

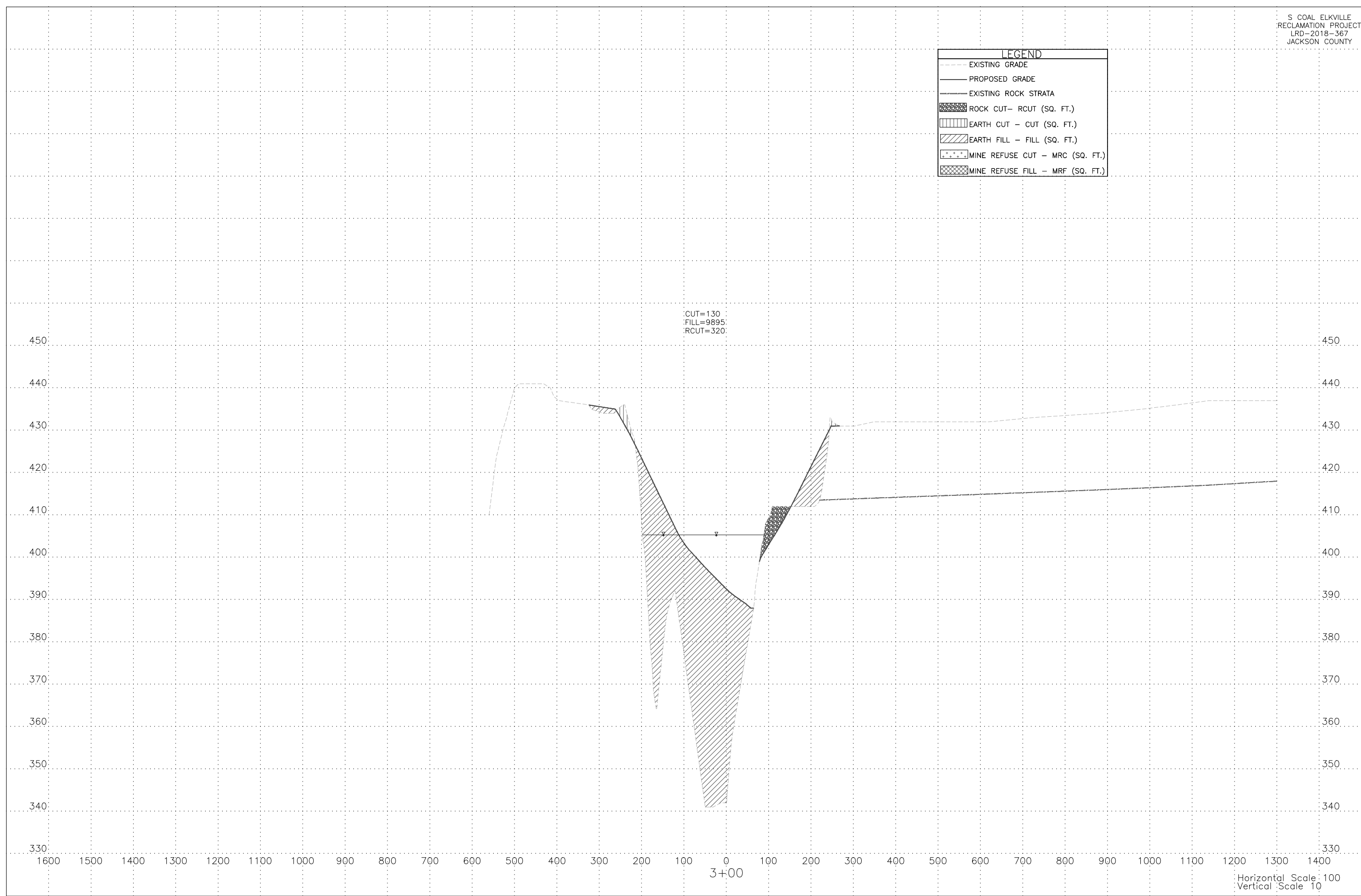
- EXISTING GRADE
- PROPOSED GRADE
- EXISTING ROCK STRATA
- ▨ ROCK CUT - RCUT (SQ. FT.)
- ▤ EARTH CUT - CUT (SQ. FT.)
- ▧ EARTH FILL - FILL (SQ. FT.)
- ▩ MINE REFUSE CUT - MRC (SQ. FT.)
- MINE REFUSE FILL - MRF (SQ. FT.)



Horizontal Scale 100
 Vertical Scale 10

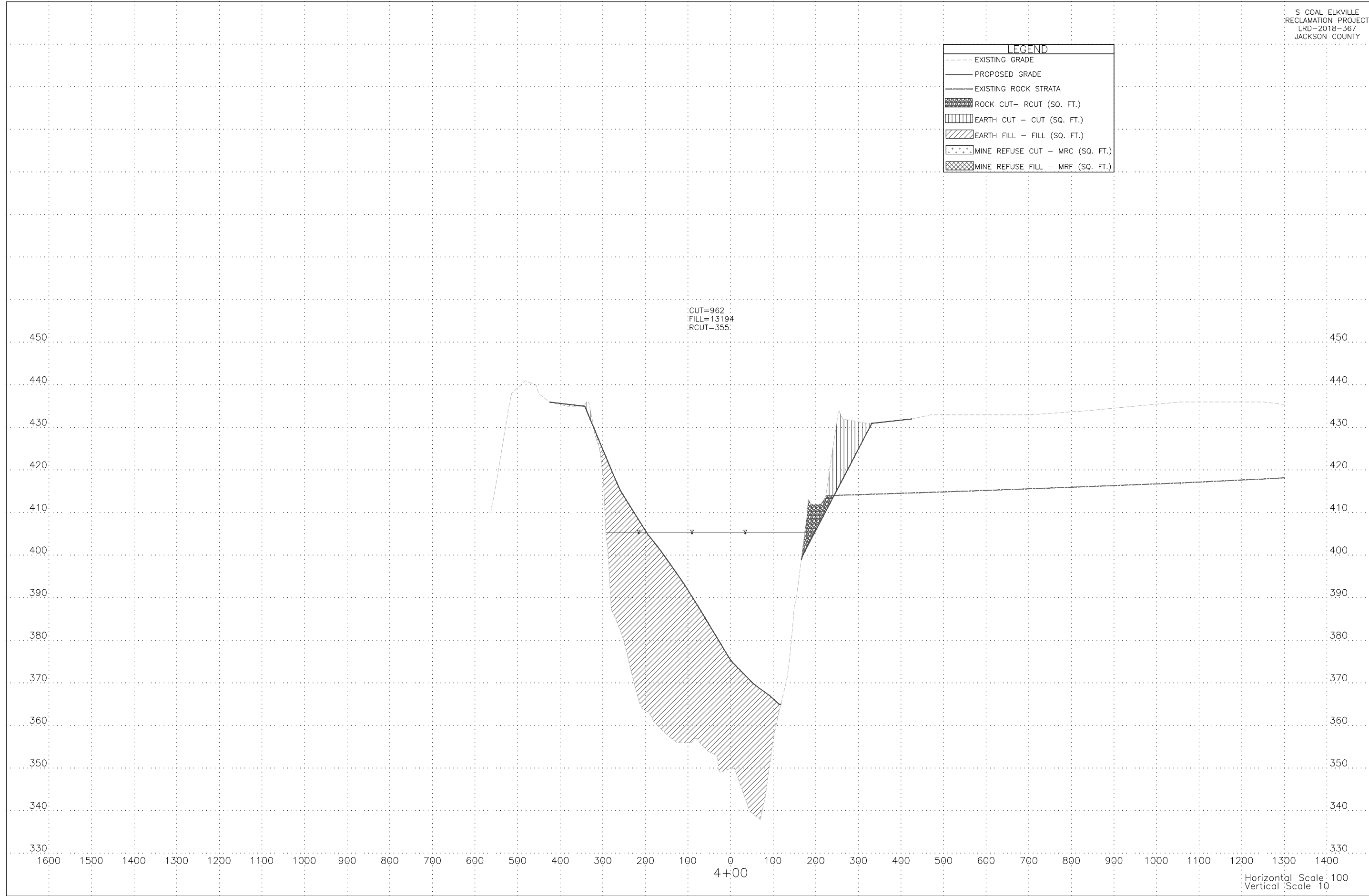
LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE
—	EXISTING ROCK STRATA
▨	ROCK CUT - RCUT (SQ. FT.)
▤	EARTH CUT - CUT (SQ. FT.)
▥	EARTH FILL - FILL (SQ. FT.)
▧	MINE REFUSE CUT - MRC (SQ. FT.)
▩	MINE REFUSE FILL - MRF (SQ. FT.)

CUT=130
 FILL=9895
 RCUT=320



Horizontal Scale 100
 Vertical Scale 10

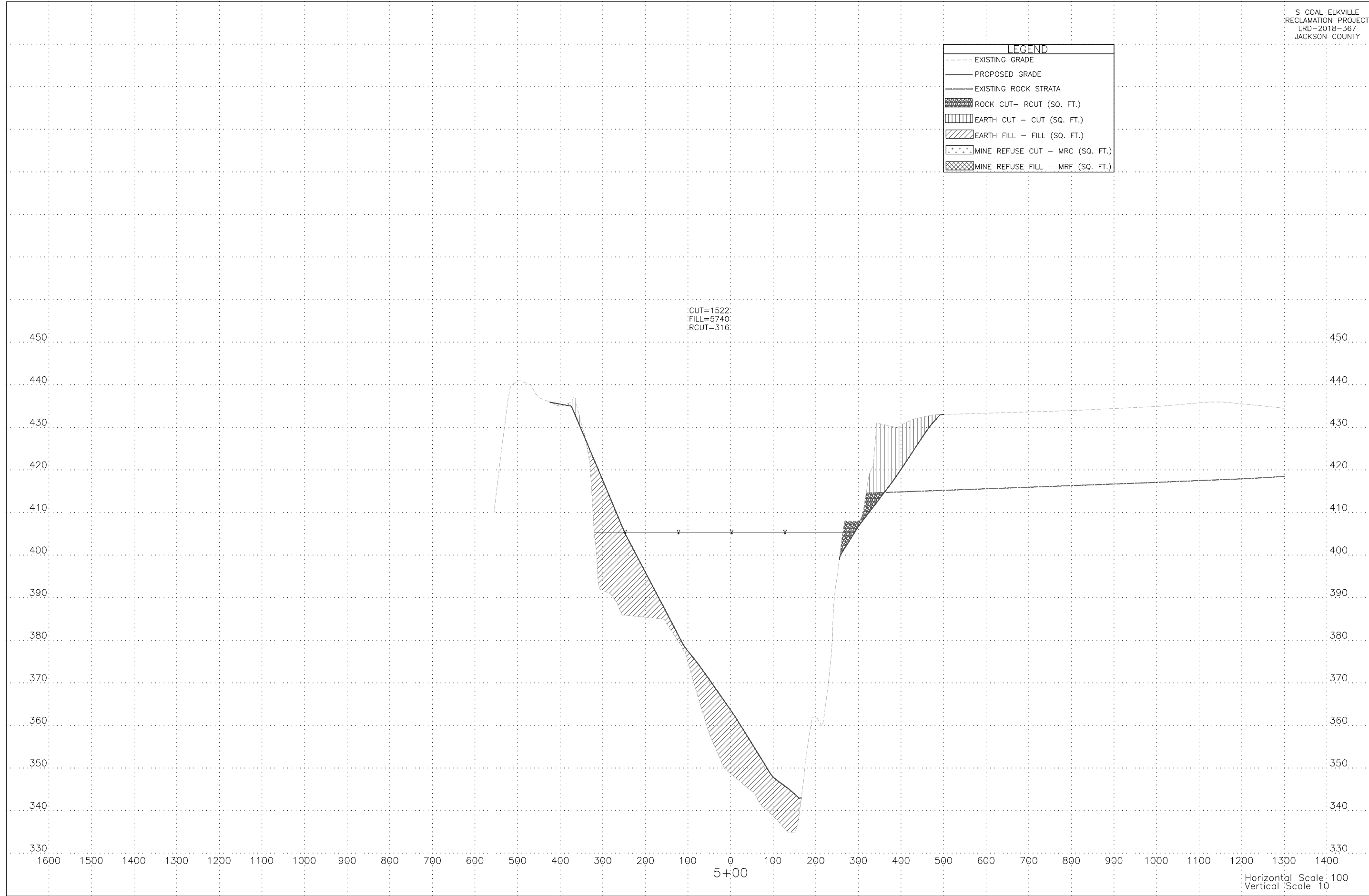
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—	PROPOSED GRADE
—	EXISTING ROCK STRATA
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▤	EARTH CUT - CUT (SQ. FT.)
▥	EARTH FILL - FILL (SQ. FT.)
▧	MINE REFUSE CUT - MRC (SQ. FT.)
▩	MINE REFUSE FILL - MRF (SQ. FT.)



Horizontal Scale: 100
 Vertical Scale: 10

LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE
—	EXISTING ROCK STRATA
▨	ROCK CUT - RCUT (SQ. FT.)
▤	EARTH CUT - CUT (SQ. FT.)
▧	EARTH FILL - FILL (SQ. FT.)
▩	MINE REFUSE CUT - MRC (SQ. FT.)
▪	MINE REFUSE FILL - MRF (SQ. FT.)

CUT=1522
 FILL=5740
 RCUT=316

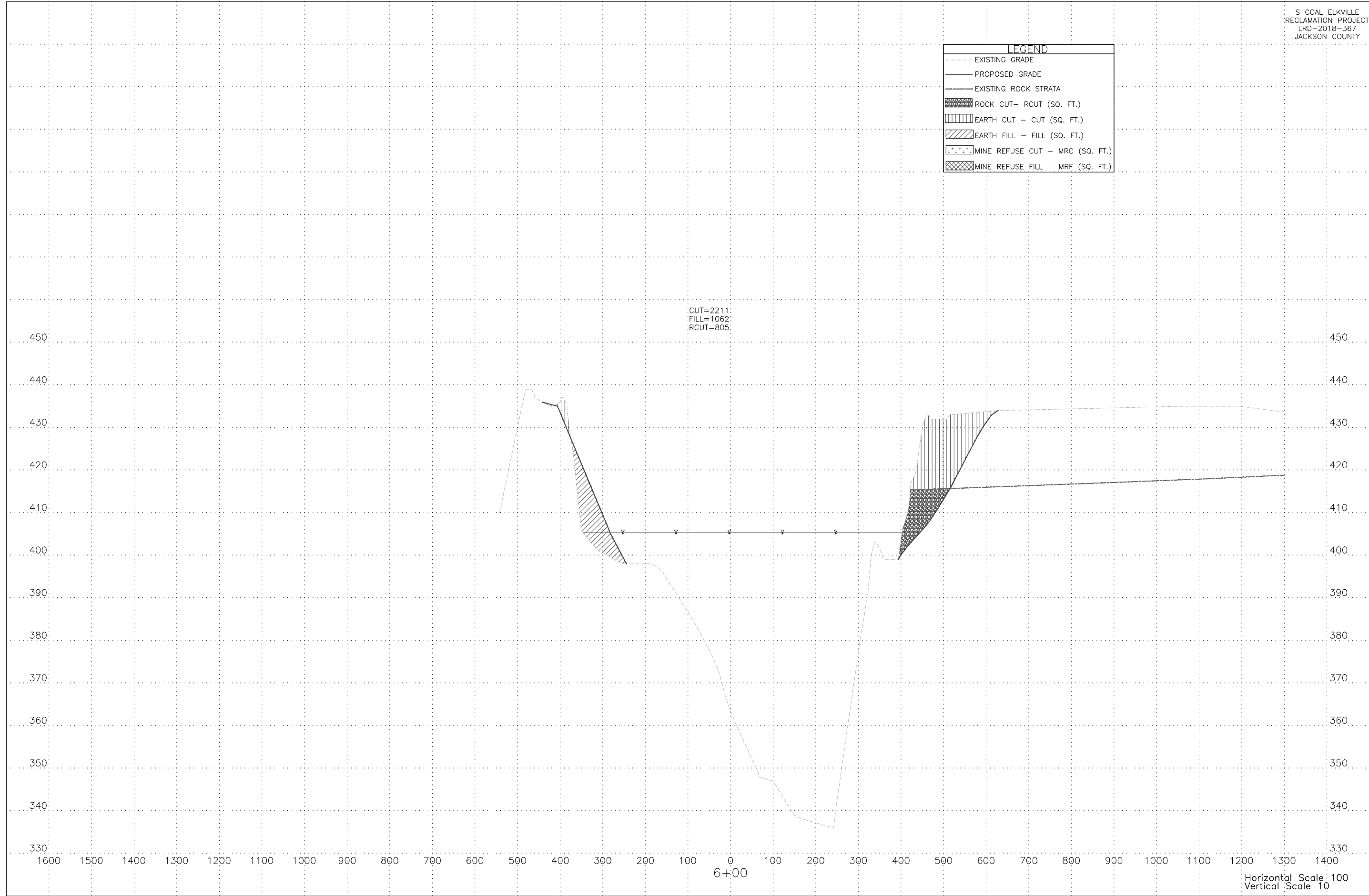


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 Vertical Scale 10

LEGEND

- EXISTING GRADE
- PROPOSED GRADE
- EXISTING ROCK STRATA
- ▨ ROCK CUT - RCUT (SQ. FT.)
- ▤ EARTH CUT - CUT (SQ. FT.)
- ▥ EARTH FILL - FILL (SQ. FT.)
- ▧ MINE REFUSE CUT - MRC (SQ. FT.)
- ▩ MINE REFUSE FILL - MRF (SQ. FT.)

CUT=2211
FILL=1062
RCUT=805

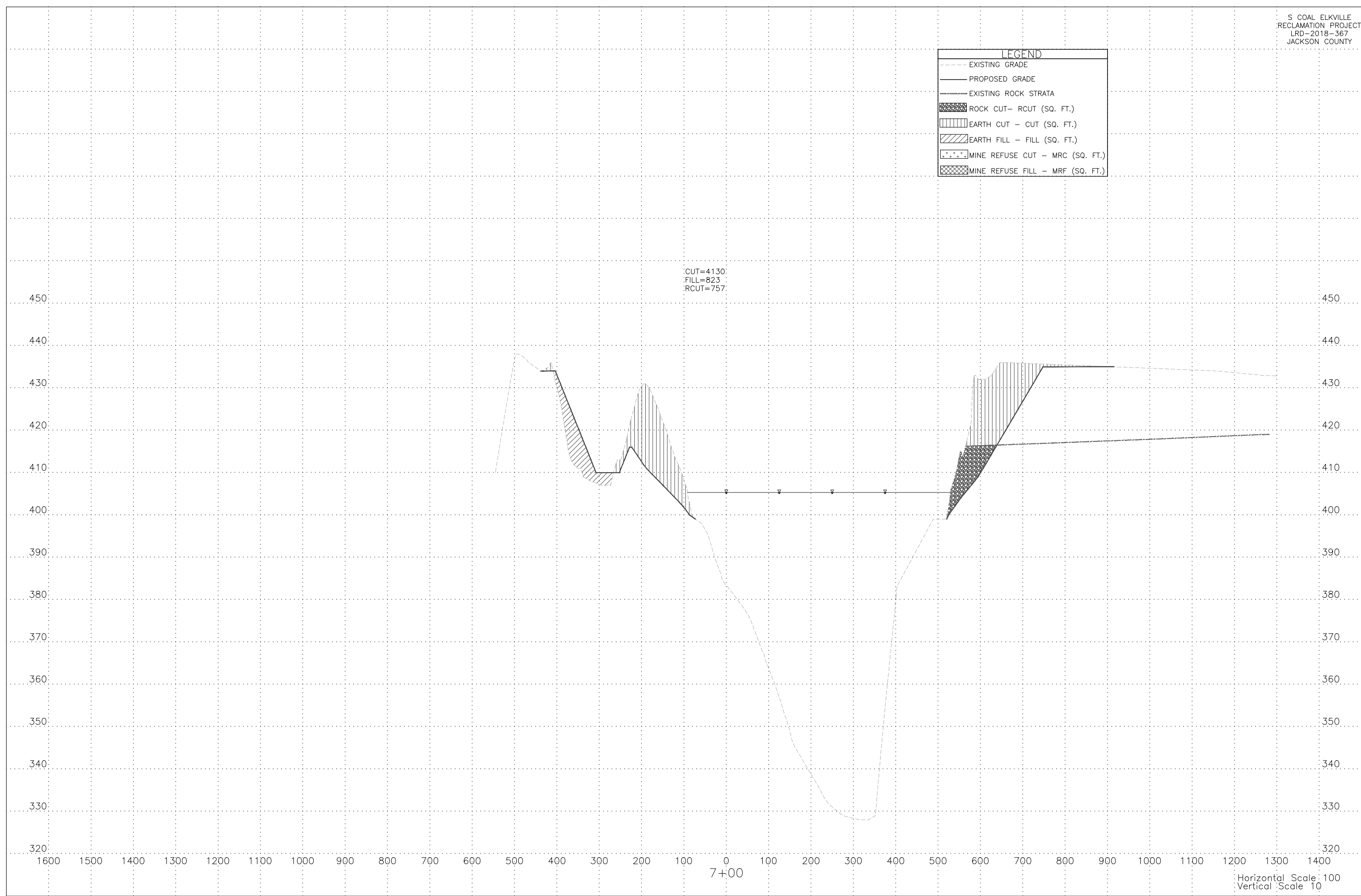


Horizontal Scale 100
Vertical Scale 10

LEGEND

- EXISTING GRADE
- PROPOSED GRADE
- EXISTING ROCK STRATA
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- ▤ EARTH CUT - CUT (SQ. FT.)
- ▧ EARTH FILL - FILL (SQ. FT.)
- ▩ MINE REFUSE CUT - MRC (SQ. FT.)
- MINE REFUSE FILL - MRF (SQ. FT.)

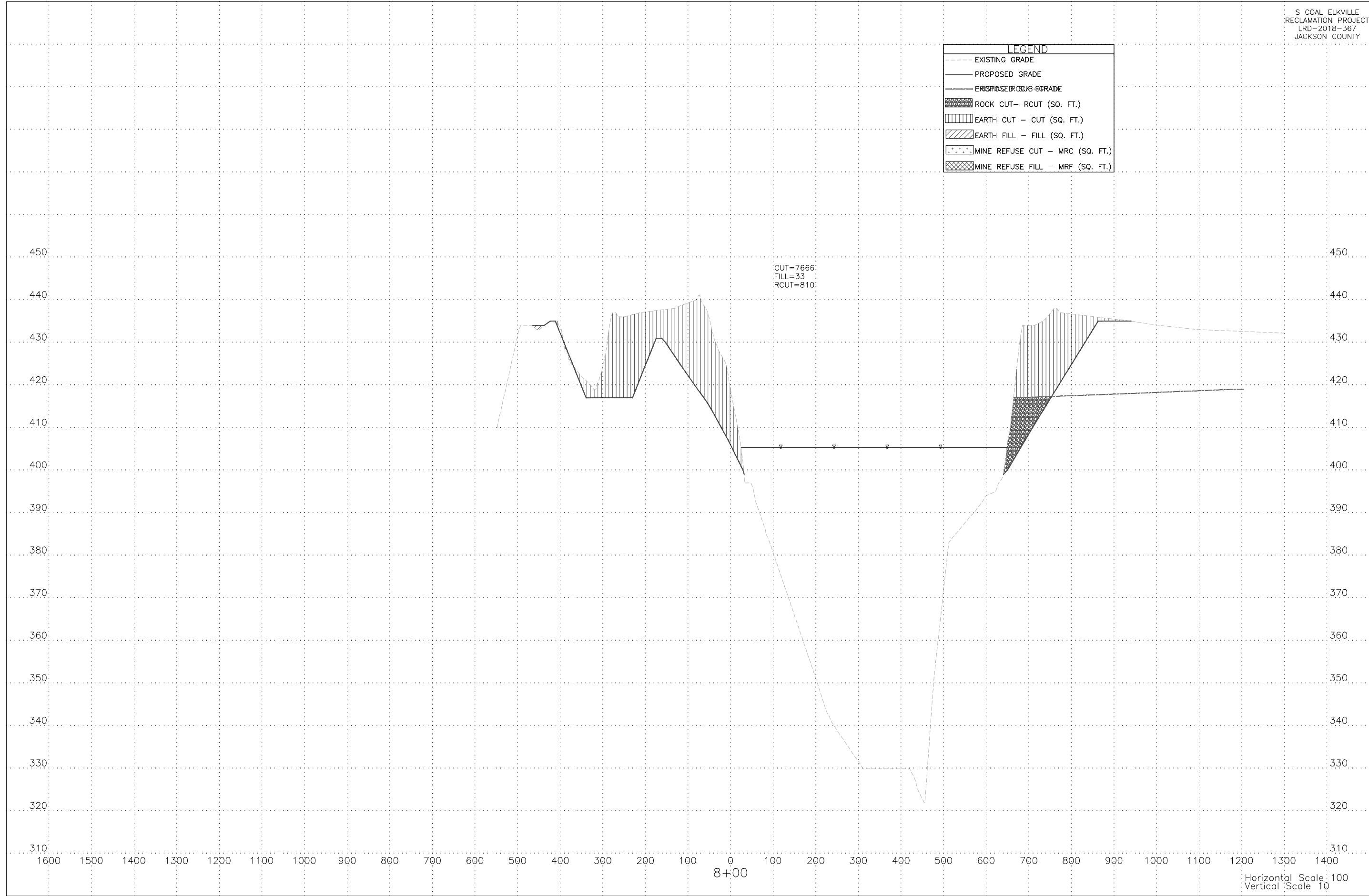
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 FILL=823
 RCUT=757



Horizontal Scale 100
 Vertical Scale 10

LEGEND

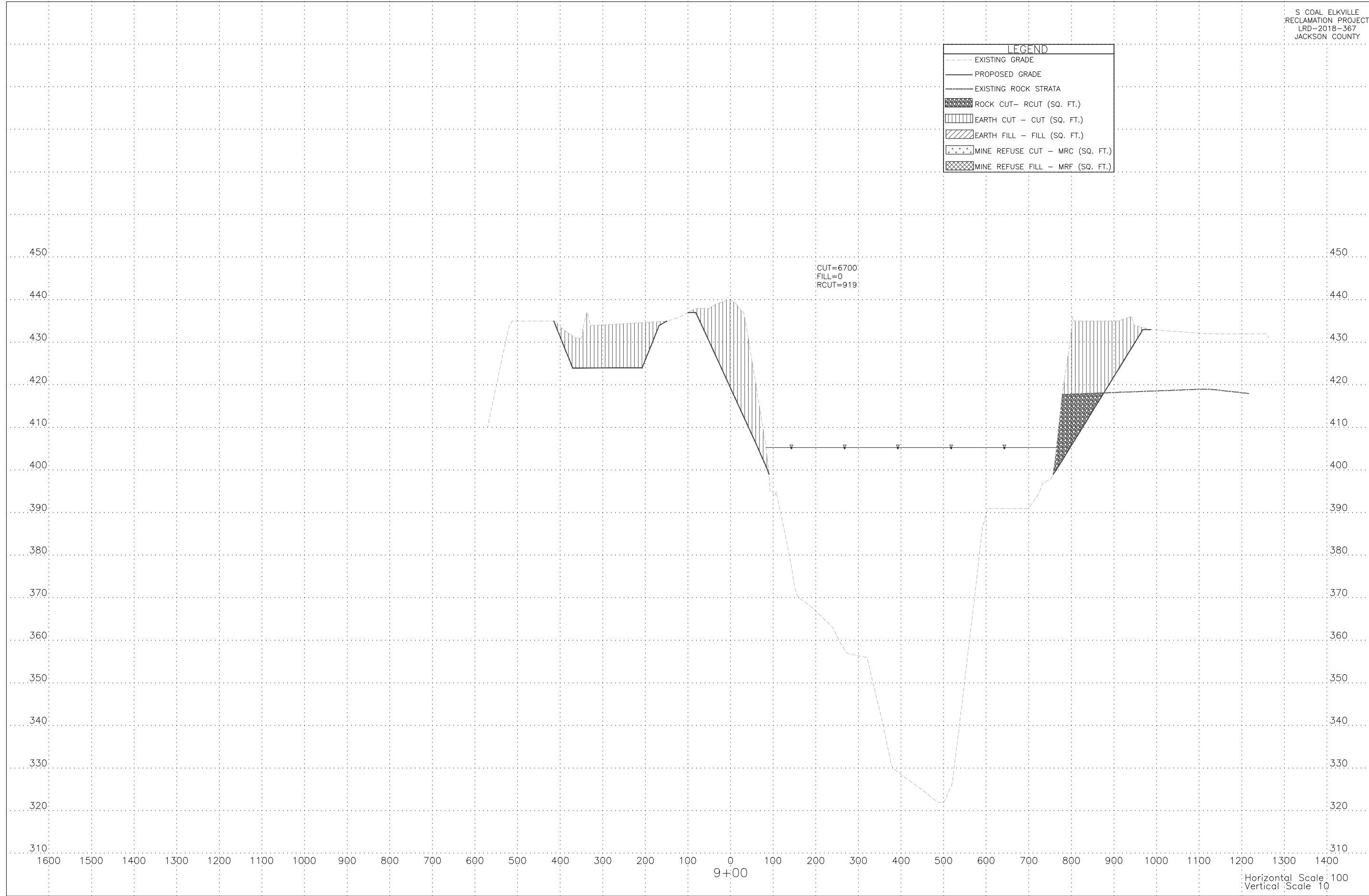
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- PROPOSED GRADE
- ORIGINAL GROUND GRADE
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- ▧ EARTH FILL - FILL (SQ. FT.)
- ▩ MINE REFUSE CUT - MRC (SQ. FT.)
- MINE REFUSE FILL - MRF (SQ. FT.)



Horizontal Scale 100
 Vertical Scale 10

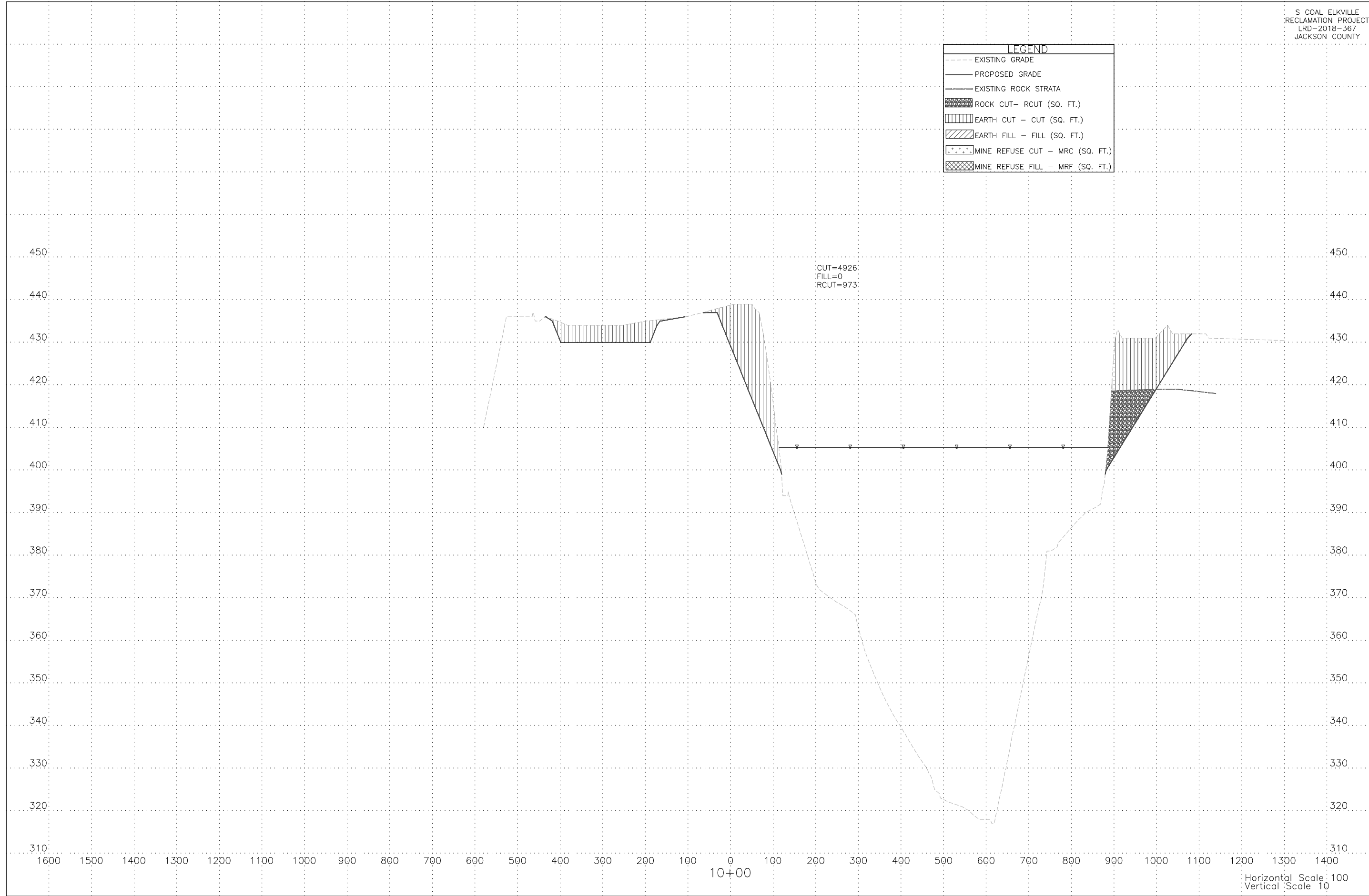
LEGEND

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- PROPOSED GRADE
- EXISTING ROCK STRATA
- ▨ ROCK CUT - RCUT (SQ. FT.)
- ▤ EARTH CUT - CUT (SQ. FT.)
- ▧ EARTH FILL - FILL (SQ. FT.)
- ▩ MINE REFUSE CUT - MRC (SQ. FT.)
- MINE REFUSE FILL - MRF (SQ. FT.)



Horizontal Scale 100
 Vertical Scale 10

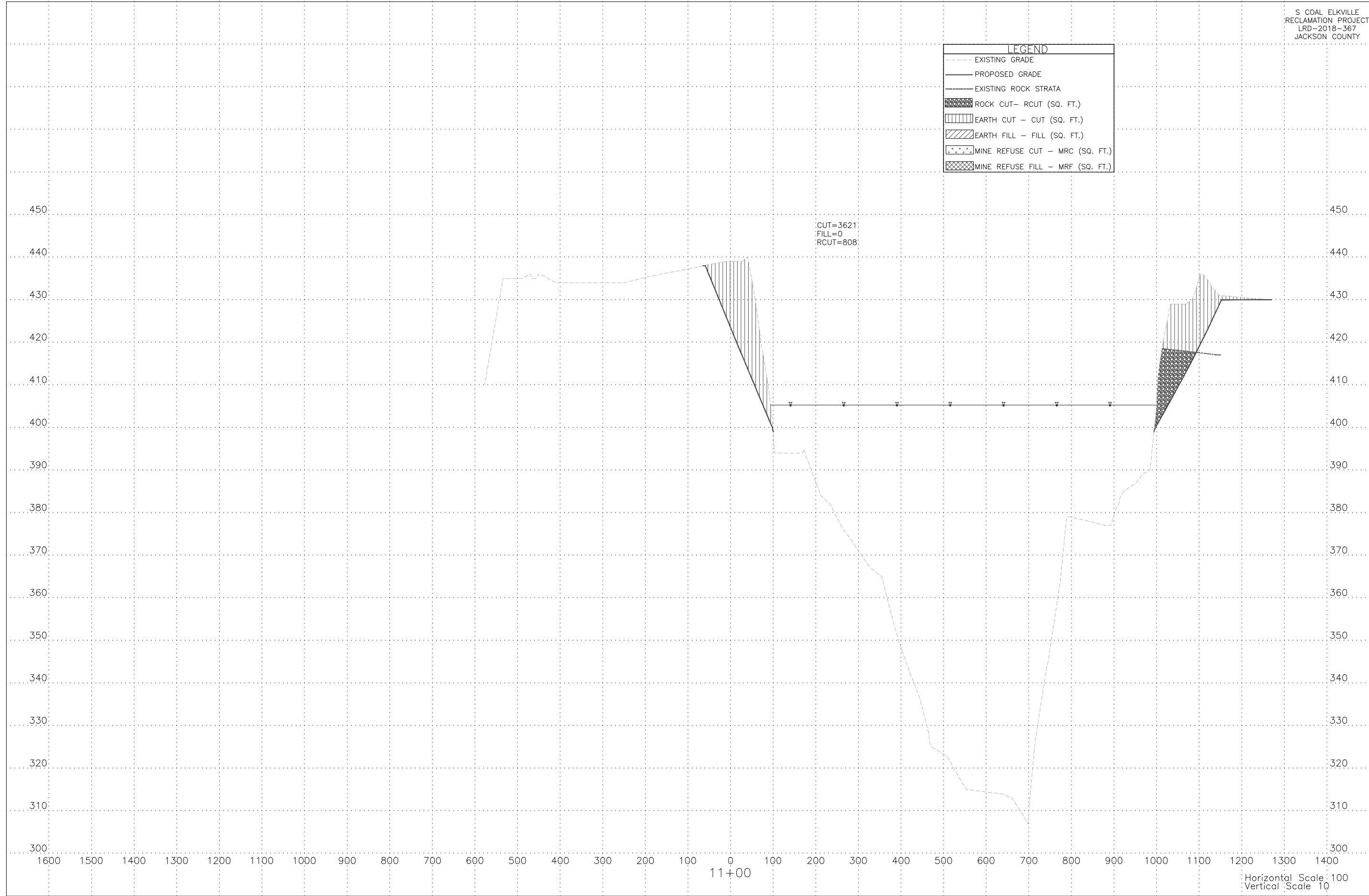
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—	EXISTING ROCK STRATA
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▤	EARTH CUT - CUT (SQ. FT.)
▧	EARTH FILL - FILL (SQ. FT.)
▩	MINE REFUSE CUT - MRC (SQ. FT.)
▪	MINE REFUSE FILL - MRF (SQ. FT.)



LEGEND

- EXISTING GRADE
- PROPOSED GRADE
- EXISTING ROCK STRATA
- ▨ ROCK CUT - RCUT (SQ. FT.)
- ▤ EARTH CUT - CUT (SQ. FT.)
- ▧ EARTH FILL - FILL (SQ. FT.)
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- MINE REFUSE FILL - MRF (SQ. FT.)

CUT=3621
FILL=0
RCUT=808

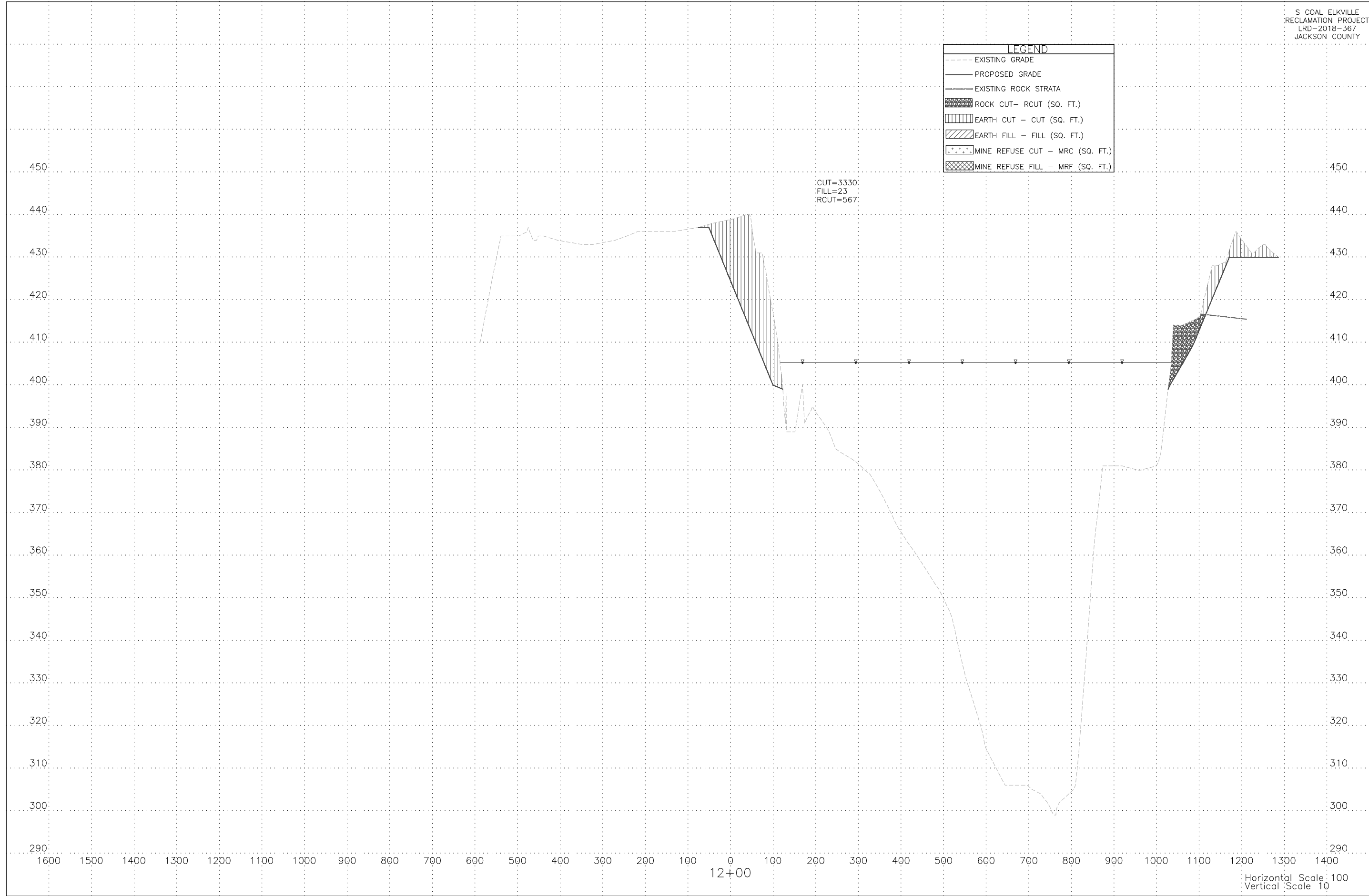


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LEGEND

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- PROPOSED GRADE
- EXISTING ROCK STRATA
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- ▤ EARTH CUT - CUT (SQ. FT.)
- ▥ EARTH FILL - FILL (SQ. FT.)
- ▧ MINE REFUSE CUT - MRC (SQ. FT.)
- ▩ MINE REFUSE FILL - MRF (SQ. FT.)

CUT=3330
 FILL=23
 RCUT=567

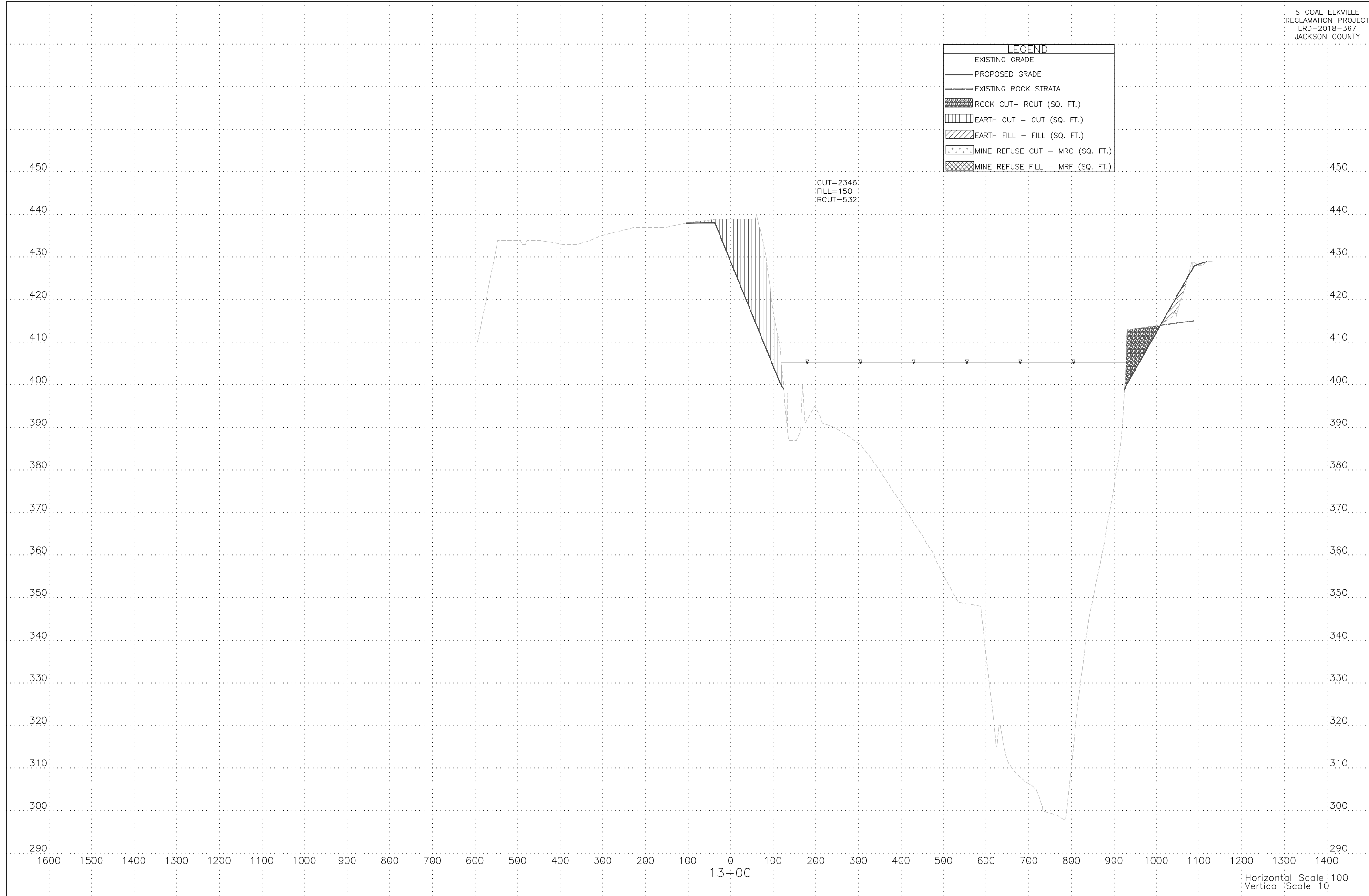


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LEGEND

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- PROPOSED GRADE
- EXISTING ROCK STRATA
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- ▤ EARTH CUT - CUT (SQ. FT.)
- ▧ EARTH FILL - FILL (SQ. FT.)
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- MINE REFUSE FILL - MRF (SQ. FT.)

CUT=2346
FILL=150
RCUT=532

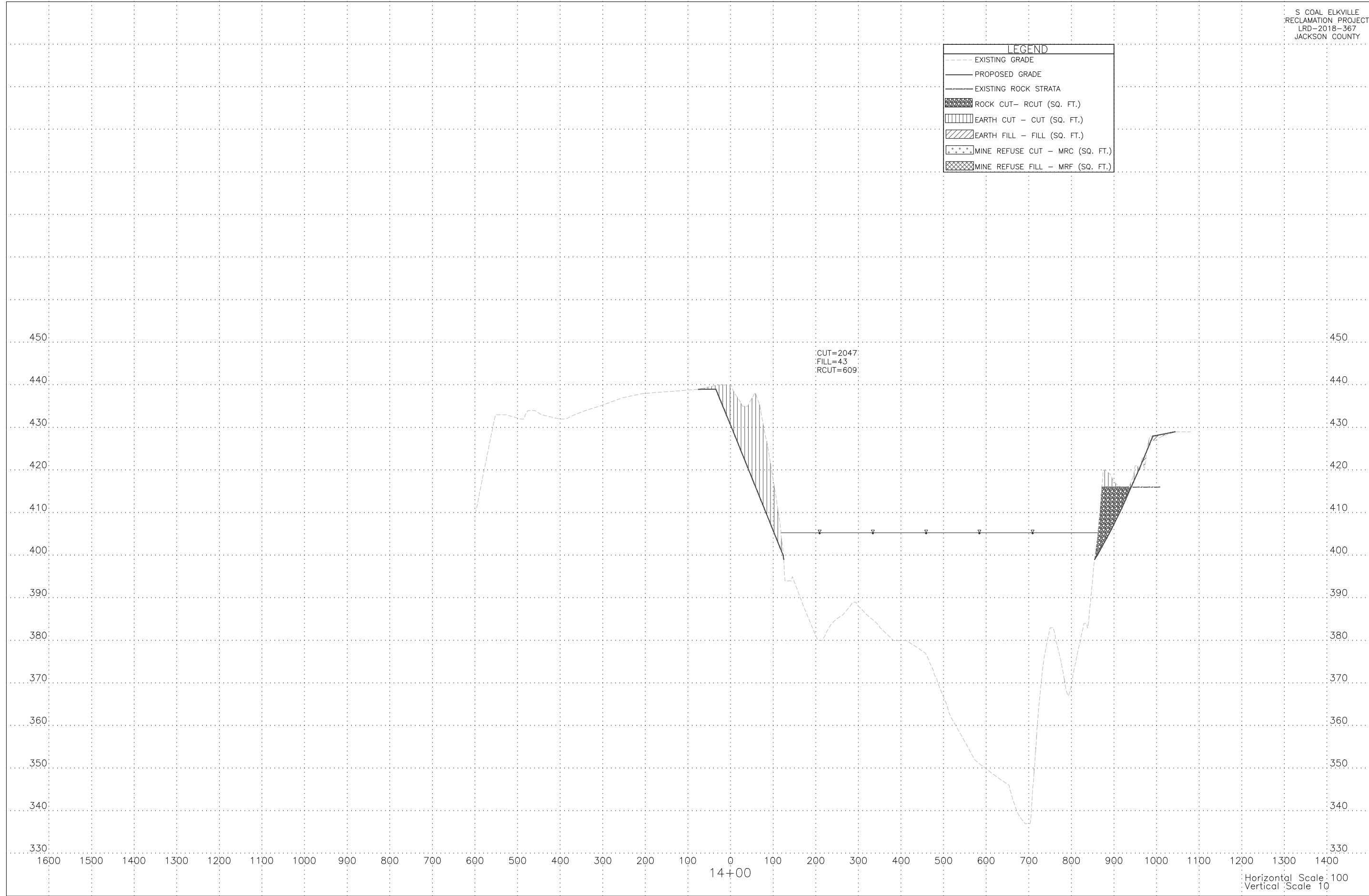


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Horizontal Scale 100
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LEGEND

- EXISTING GRADE
- PROPOSED GRADE
- EXISTING ROCK STRATA
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- ▤ EARTH CUT - CUT (SQ. FT.)
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- ▩ MINE REFUSE CUT - MRC (SQ. FT.)
- MINE REFUSE FILL - MRF (SQ. FT.)

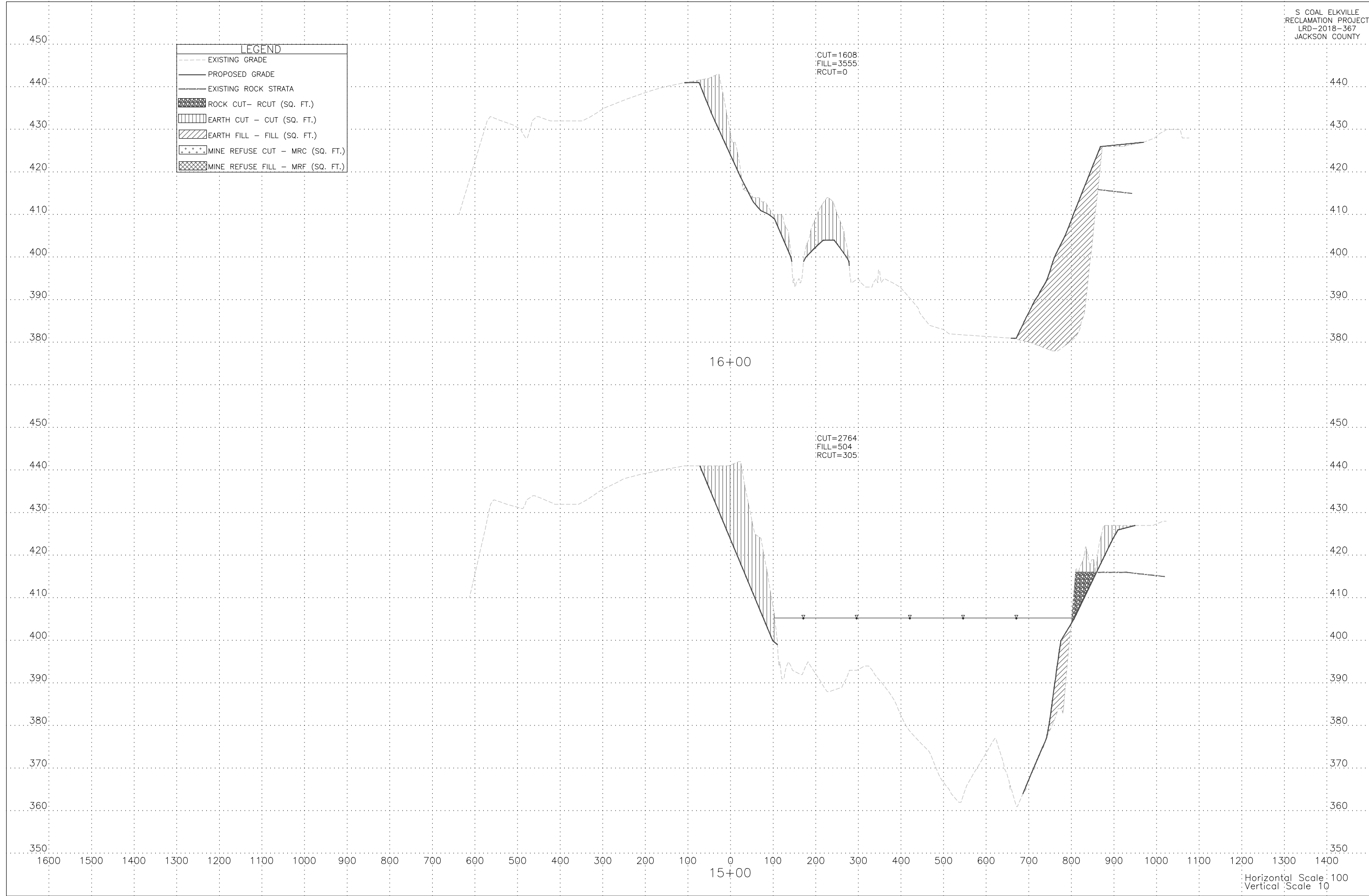


Horizontal Scale 100
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LEGEND	
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—	PROPOSED GRADE
—	EXISTING ROCK STRATA
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▤	EARTH CUT - CUT (SQ. FT.)
▧	EARTH FILL - FILL (SQ. FT.)
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▪	MINE REFUSE FILL - MRF (SQ. FT.)

CUT=1608
 FILL=3555
 RCUT=0

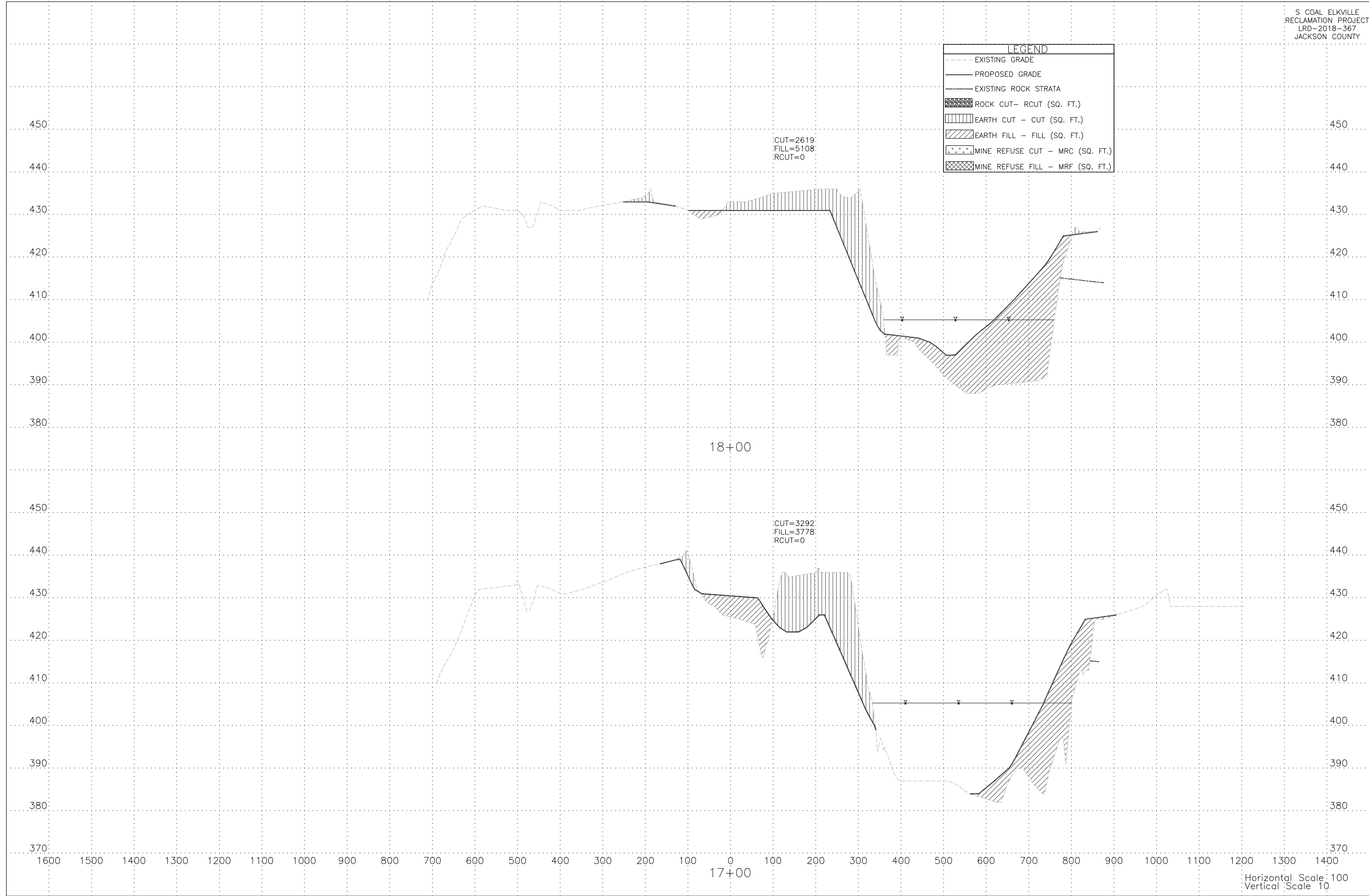
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 RCUT=305



Horizontal Scale 100
 Vertical Scale 10

LEGEND

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- PROPOSED GRADE
- EXISTING ROCK STRATA
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- ▤ EARTH CUT - CUT (SQ. FT.)
- ▥ EARTH FILL - FILL (SQ. FT.)
- ▧ MINE REFUSE CUT - MRC (SQ. FT.)
- ▩ MINE REFUSE FILL - MRF (SQ. FT.)



CUT=2619;
 FILL=5108;
 RCUT=0

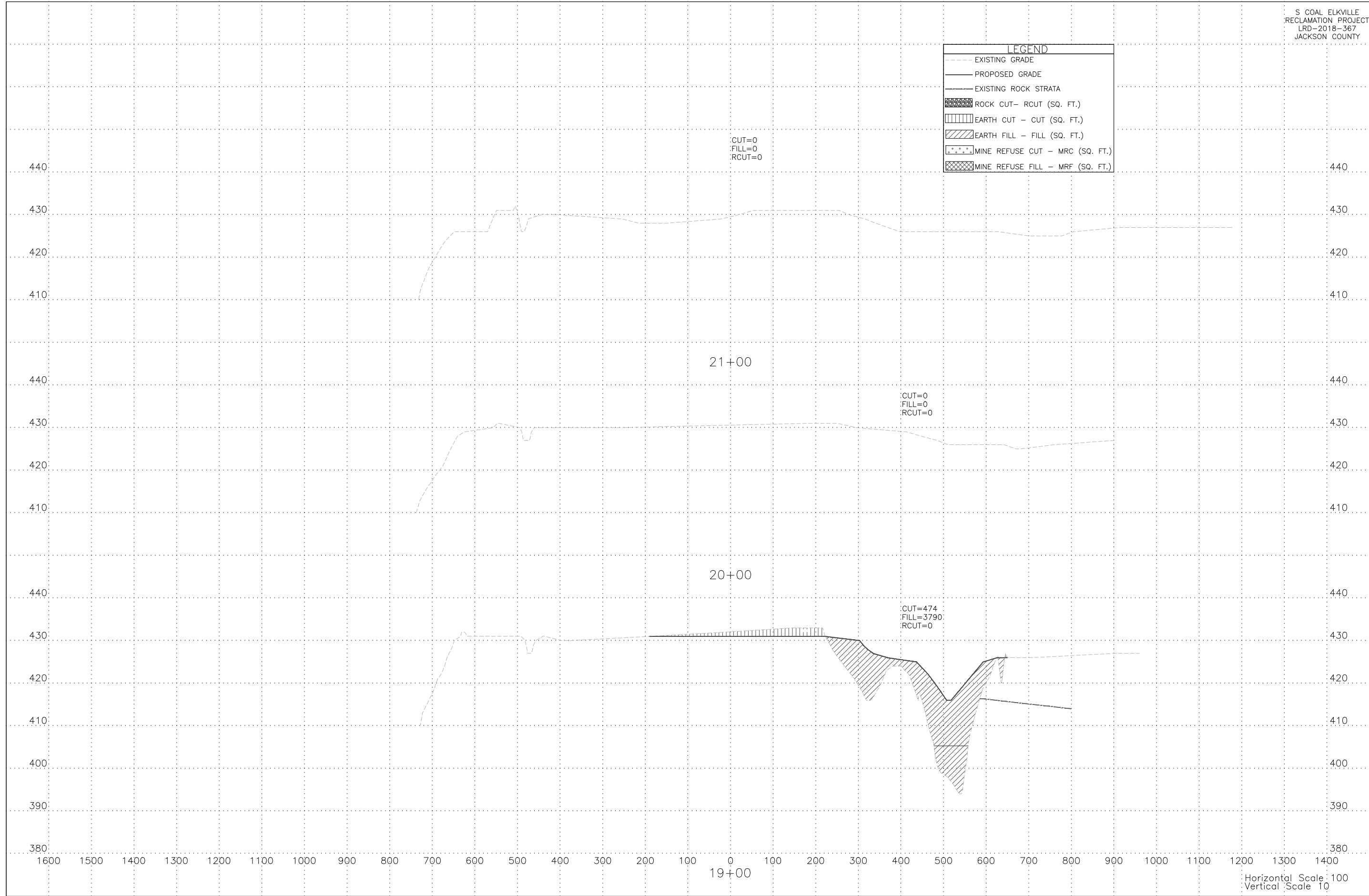
18+00

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 FILL=3778;
 RCUT=0

17+00

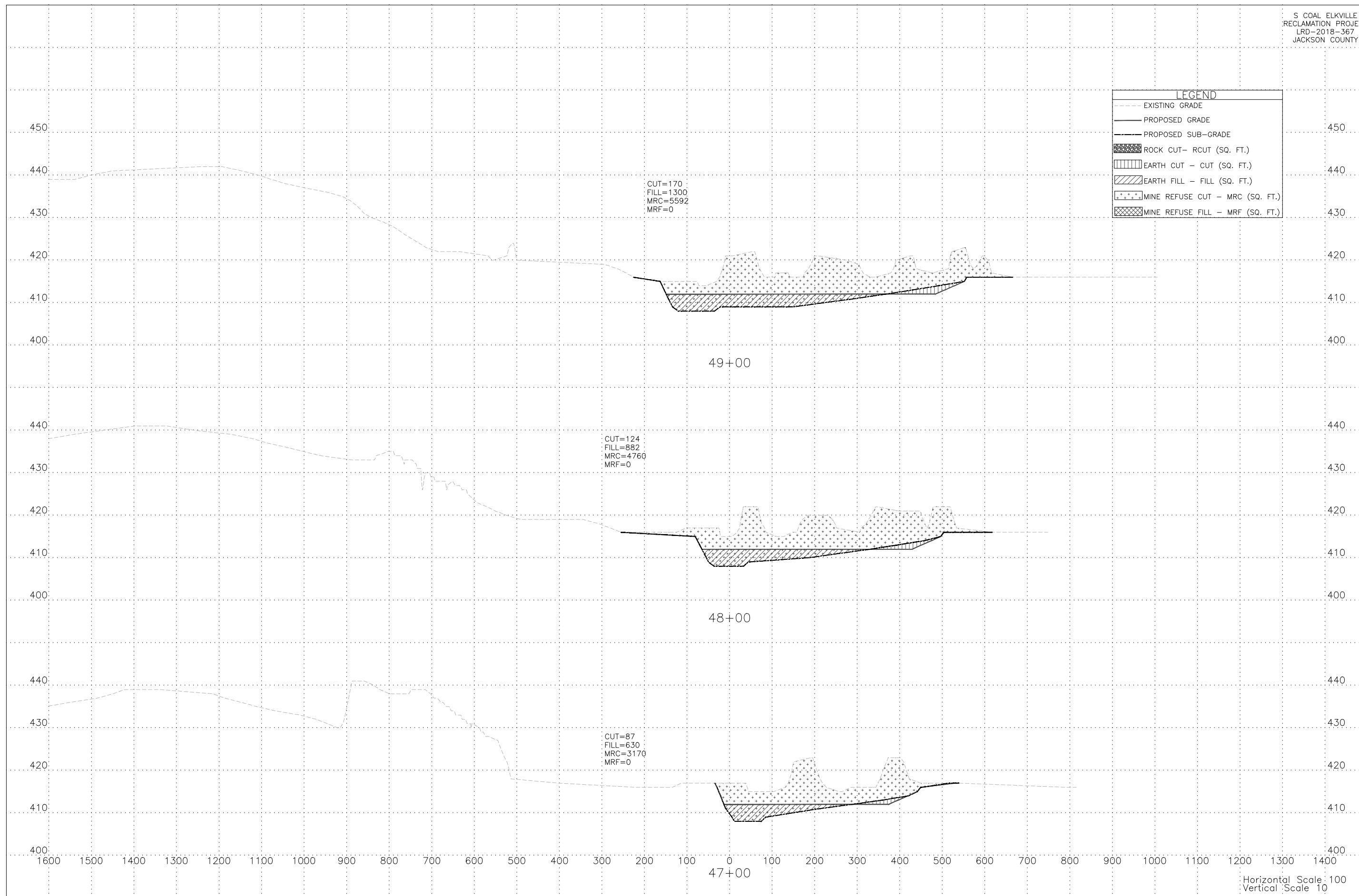
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LEGEND	
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—	PROPOSED GRADE
—	EXISTING ROCK STRATA
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▤	EARTH CUT - CUT (SQ. FT.)
▧	EARTH FILL - FILL (SQ. FT.)
▩	MINE REFUSE CUT - MRC (SQ. FT.)
▪	MINE REFUSE FILL - MRF (SQ. FT.)

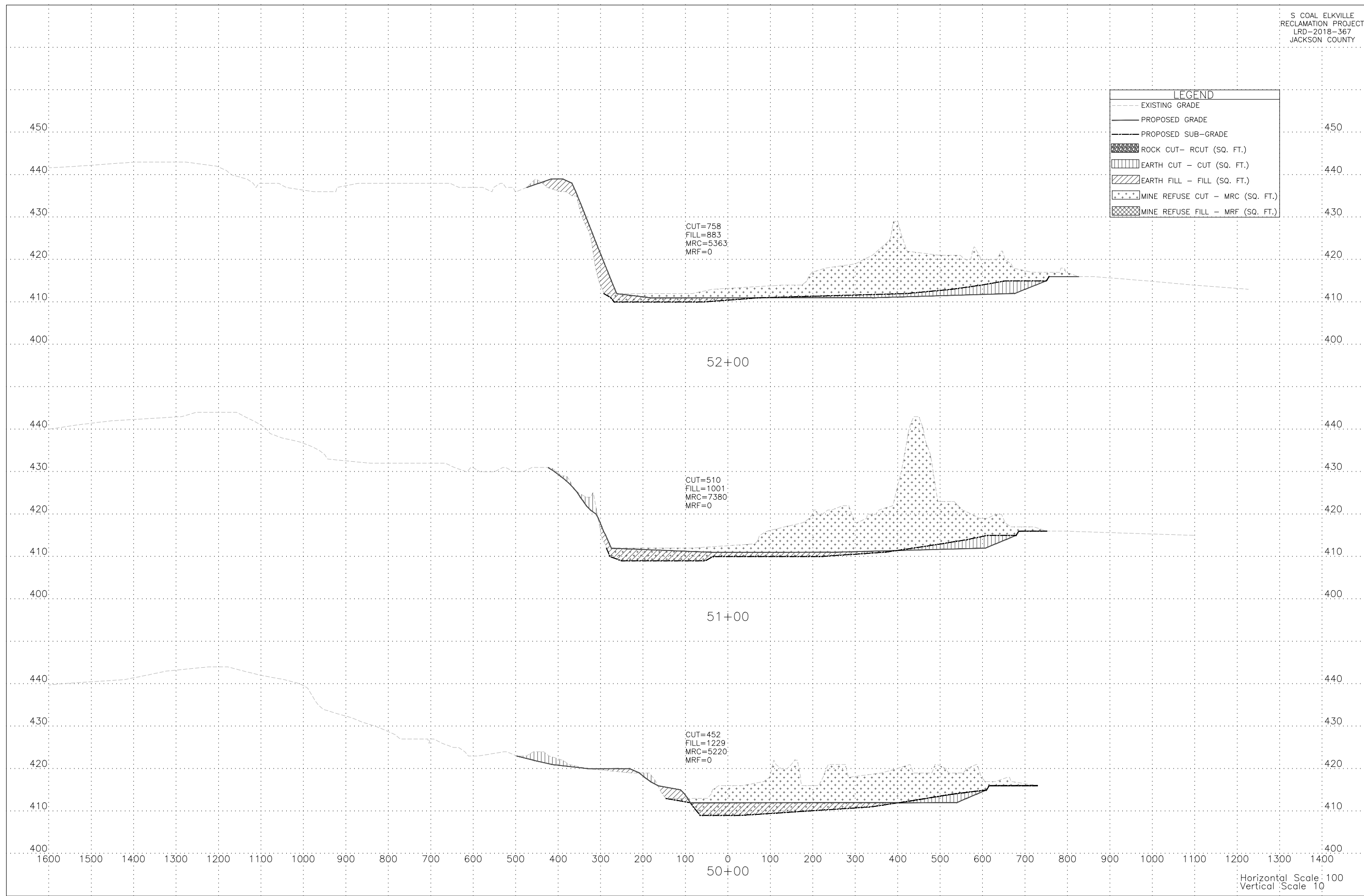


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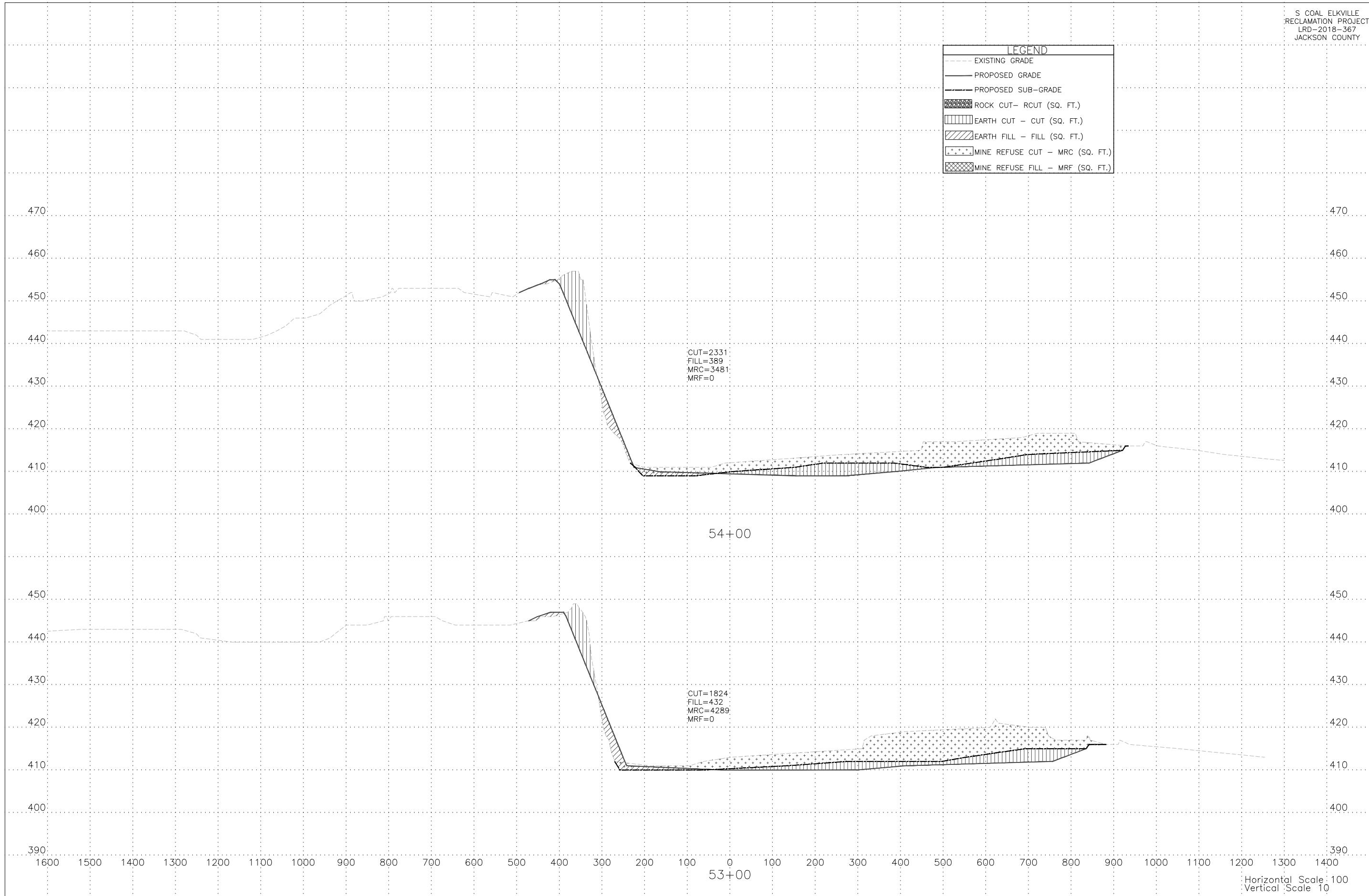
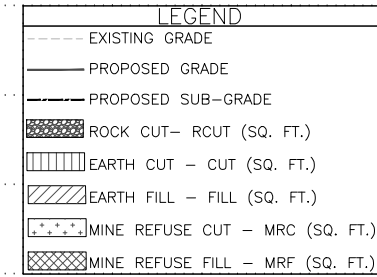




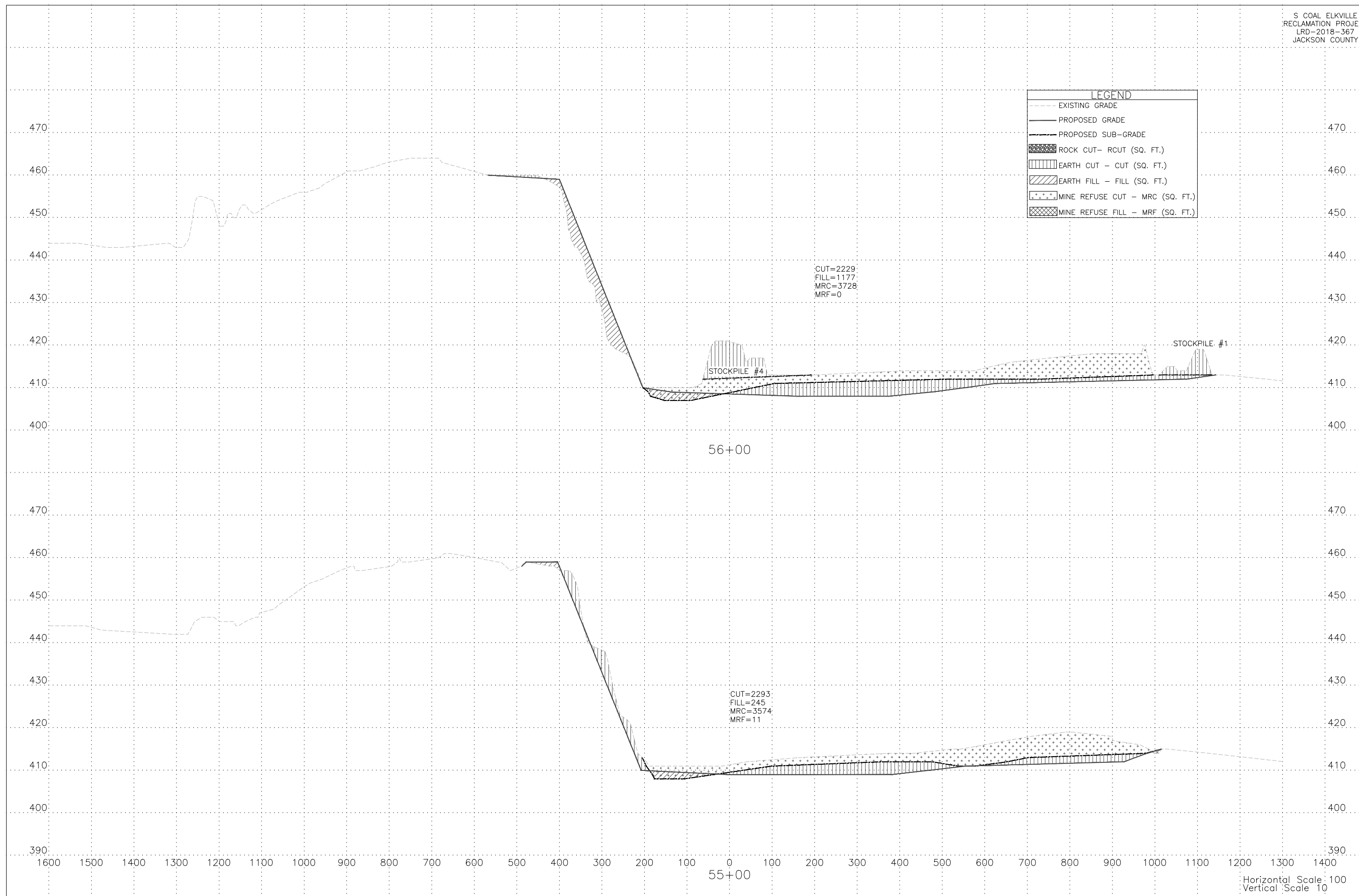
LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE
---	PROPOSED SUB-GRADE
[Cross-hatched]	ROCK CUT- RCUT (SQ. FT.)
[Vertical lines]	EARTH CUT - CUT (SQ. FT.)
[Diagonal lines]	EARTH FILL - FILL (SQ. FT.)
[Dotted]	MINE REFUSE CUT - MRC (SQ. FT.)
[Cross-hatched]	MINE REFUSE FILL - MRF (SQ. FT.)



Horizontal Scale 100
 Vertical Scale 10

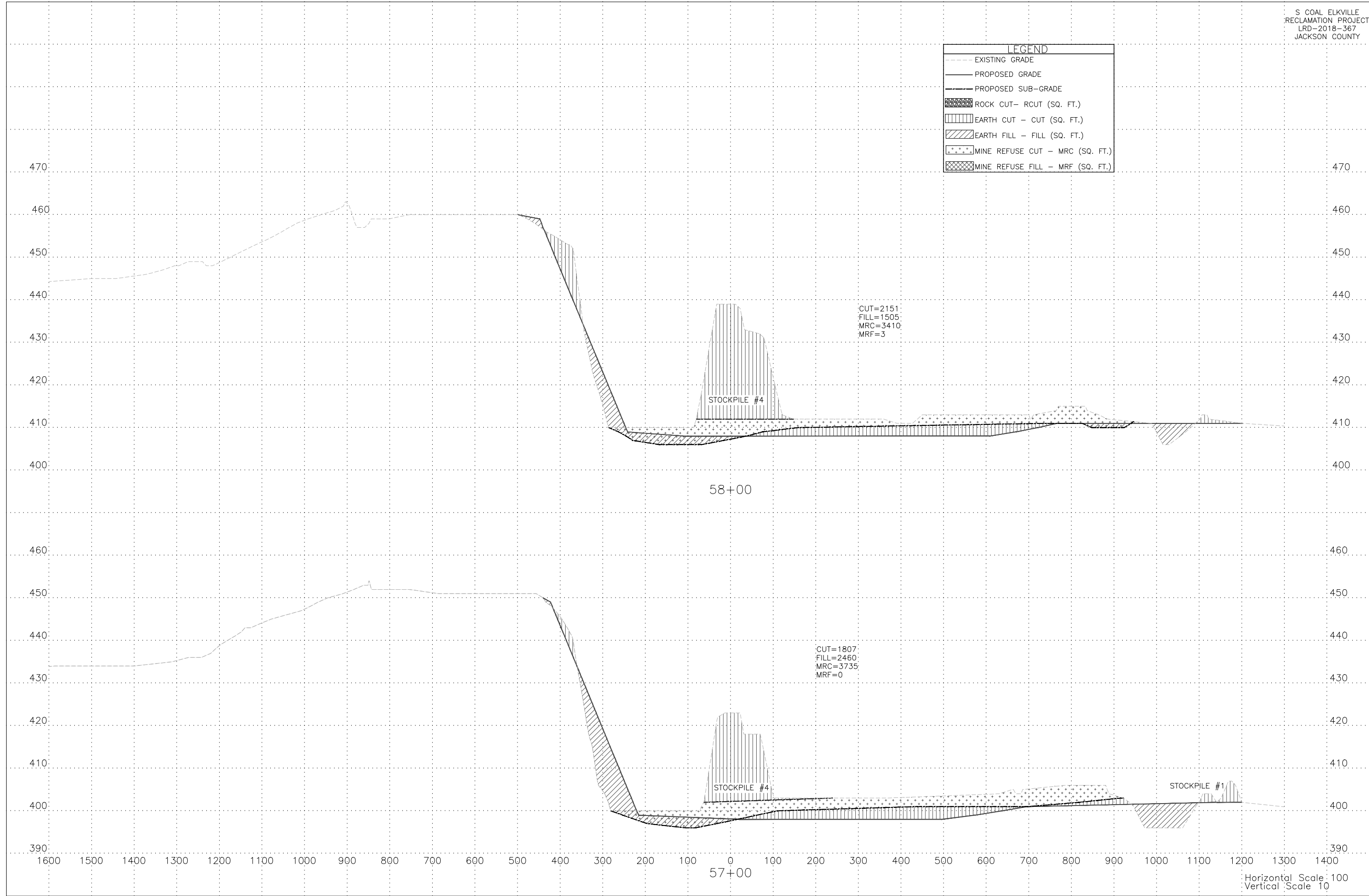


Horizontal Scale 100
 Vertical Scale 10



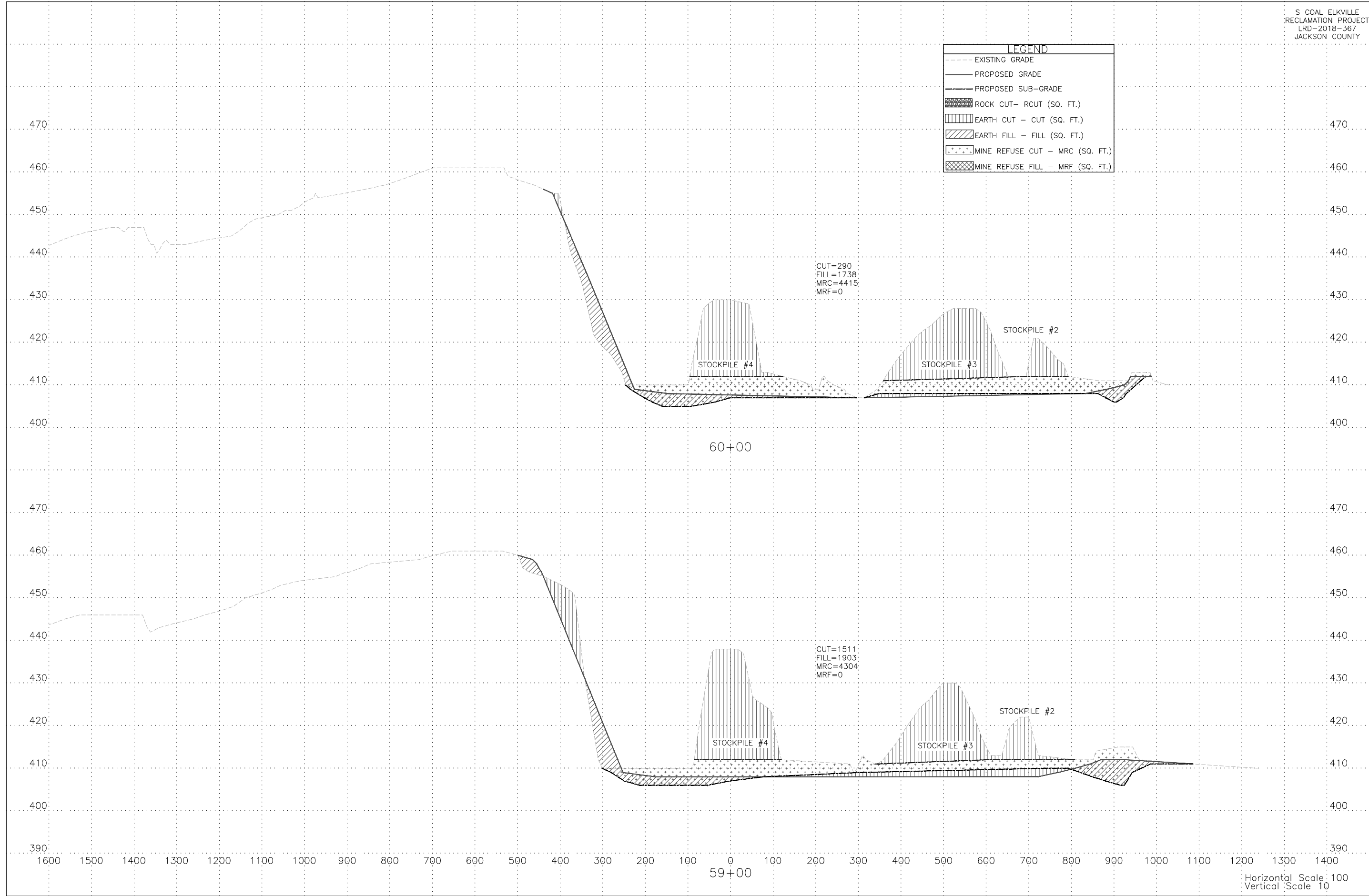
Horizontal Scale 100
 Vertical Scale 10

LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE
—	PROPOSED SUB-GRADE
[Cross-hatched]	ROCK CUT - RCUT (SQ. FT.)
[Vertical lines]	EARTH CUT - CUT (SQ. FT.)
[Diagonal lines]	EARTH FILL - FILL (SQ. FT.)
[Dotted]	MINE REFUSE CUT - MRC (SQ. FT.)
[Cross-hatched]	MINE REFUSE FILL - MRF (SQ. FT.)



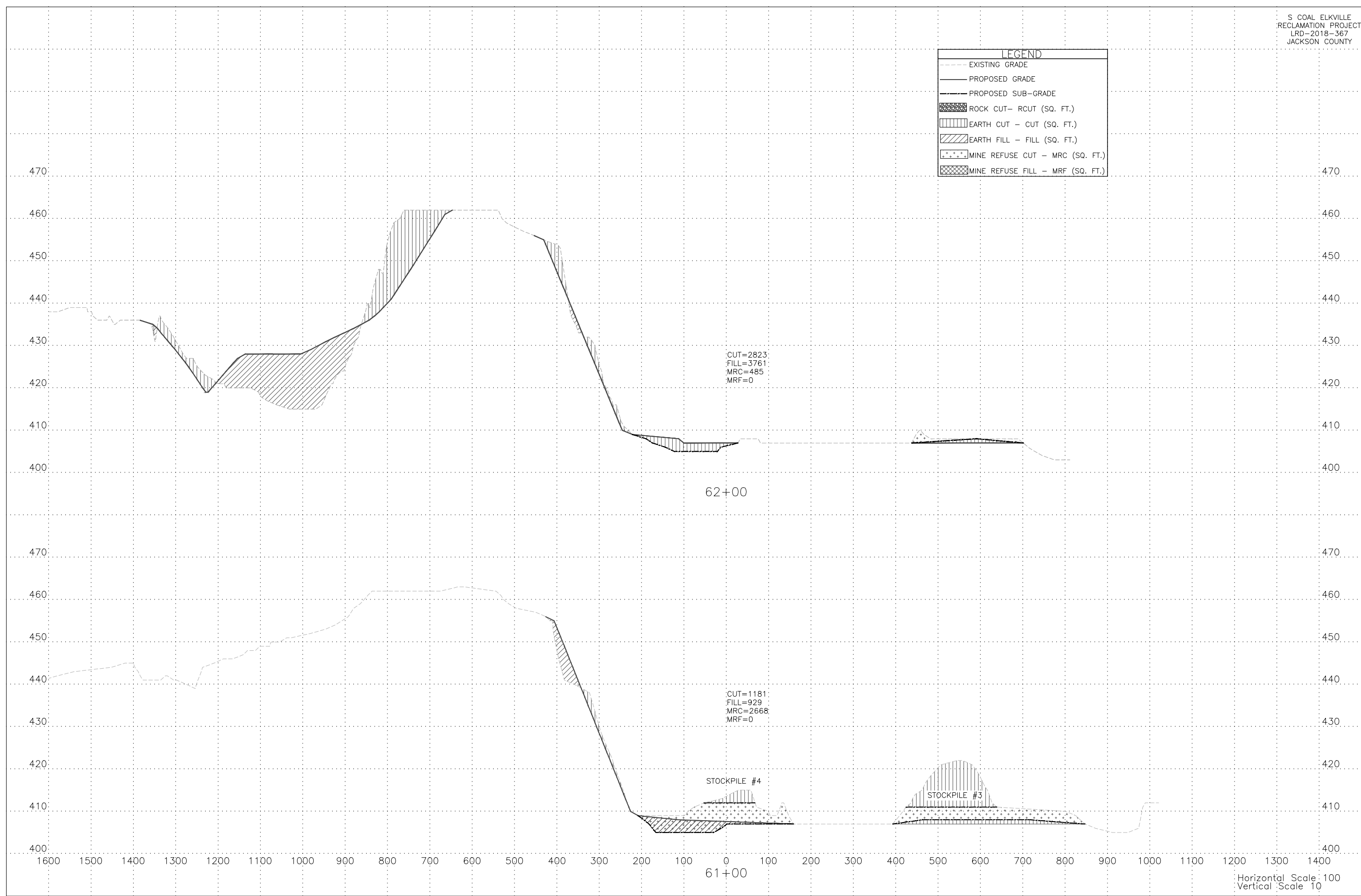
Horizontal Scale 100
Vertical Scale 10

LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE
—	PROPOSED SUB-GRADE
[Cross-hatched]	ROCK CUT - RCUT (SQ. FT.)
[Vertical lines]	EARTH CUT - CUT (SQ. FT.)
[Diagonal lines]	EARTH FILL - FILL (SQ. FT.)
[Stippled]	MINE REFUSE CUT - MRC (SQ. FT.)
[Cross-hatched]	MINE REFUSE FILL - MRF (SQ. FT.)



Horizontal Scale 100
 Vertical Scale 10

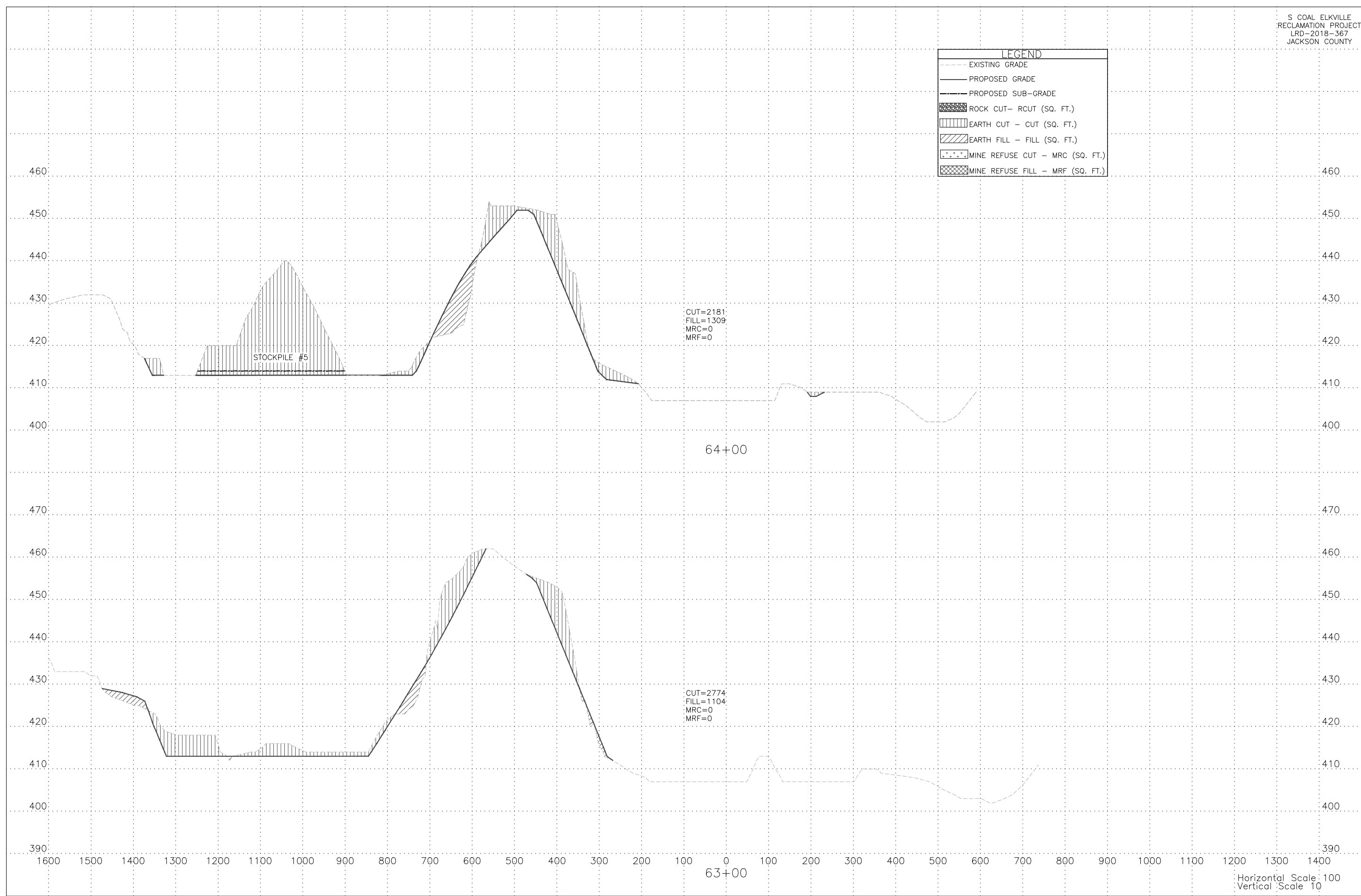
LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE
—	PROPOSED SUB-GRADE
▨	ROCK CUT - RCUT (SQ. FT.)
▤	EARTH CUT - CUT (SQ. FT.)
▧	EARTH FILL - FILL (SQ. FT.)
⋄	MINE REFUSE CUT - MRC (SQ. FT.)
⊠	MINE REFUSE FILL - MRF (SQ. FT.)



Horizontal Scale 100
 Vertical Scale 10

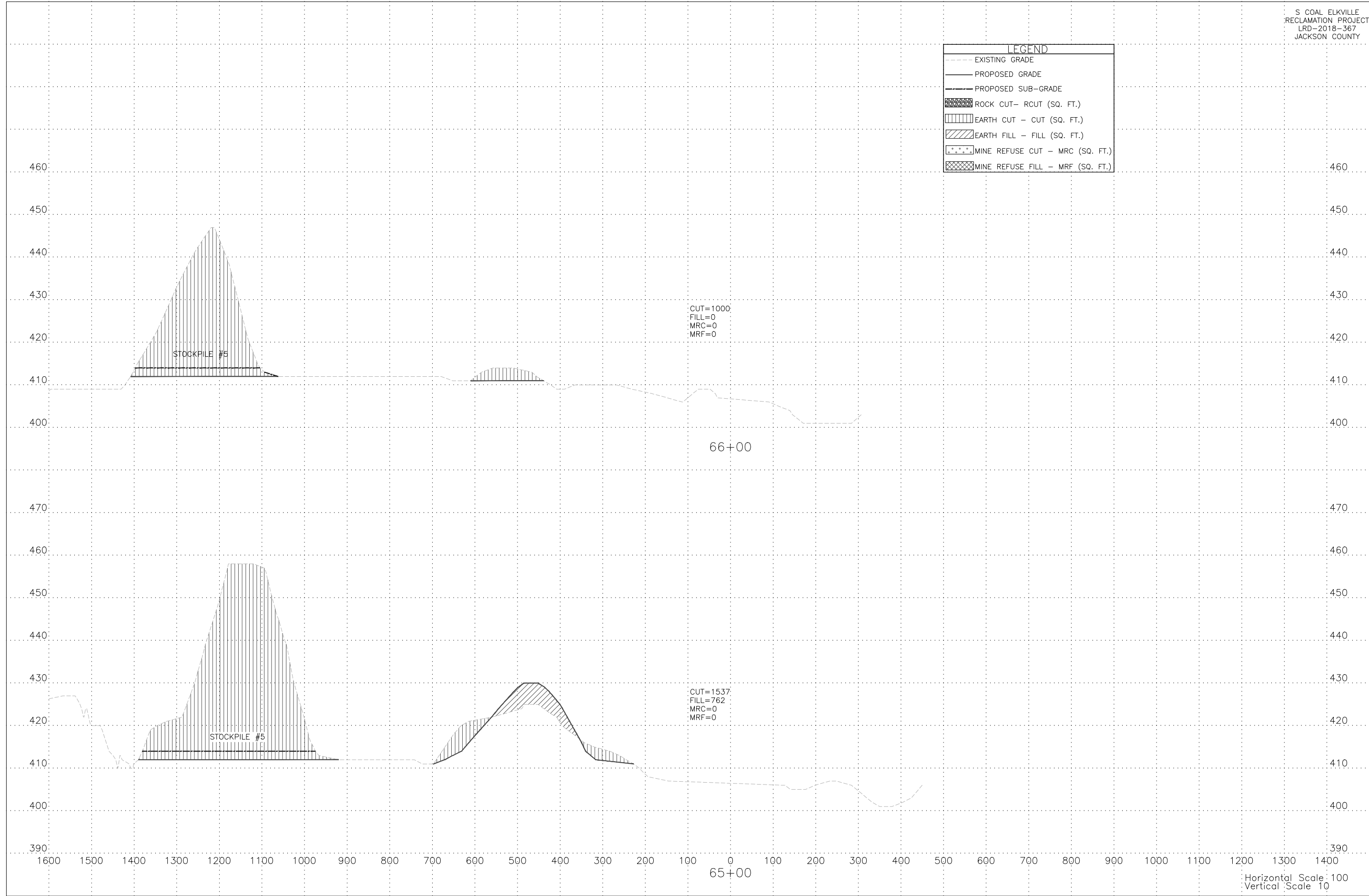
LEGEND

- EXISTING GRADE
- PROPOSED GRADE
- PROPOSED SUB-GRADE
- ▨ ROCK CUT - RCUT (SQ. FT.)
- ▤ EARTH CUT - CUT (SQ. FT.)
- ▥ EARTH FILL - FILL (SQ. FT.)
- ▧ MINE REFUSE CUT - MRC (SQ. FT.)
- ▩ MINE REFUSE FILL - MRF (SQ. FT.)



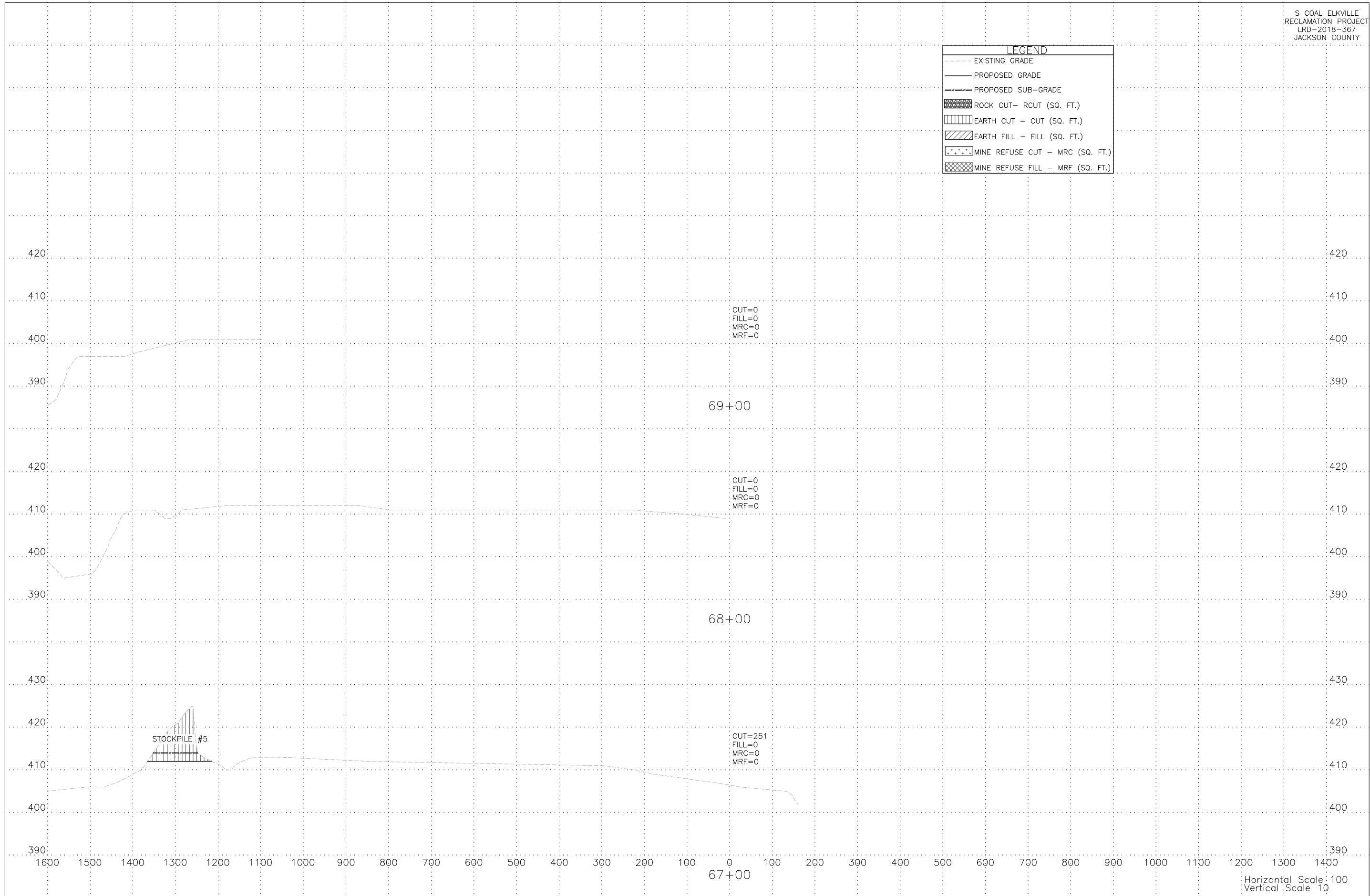
Horizontal Scale 100
 Vertical Scale 10

LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE
—	PROPOSED SUB-GRADE
▨	ROCK CUT - RCUT (SQ. FT.)
▤	EARTH CUT - CUT (SQ. FT.)
▧	EARTH FILL - FILL (SQ. FT.)
▩	MINE REFUSE CUT - MRC (SQ. FT.)
▪	MINE REFUSE FILL - MRF (SQ. FT.)

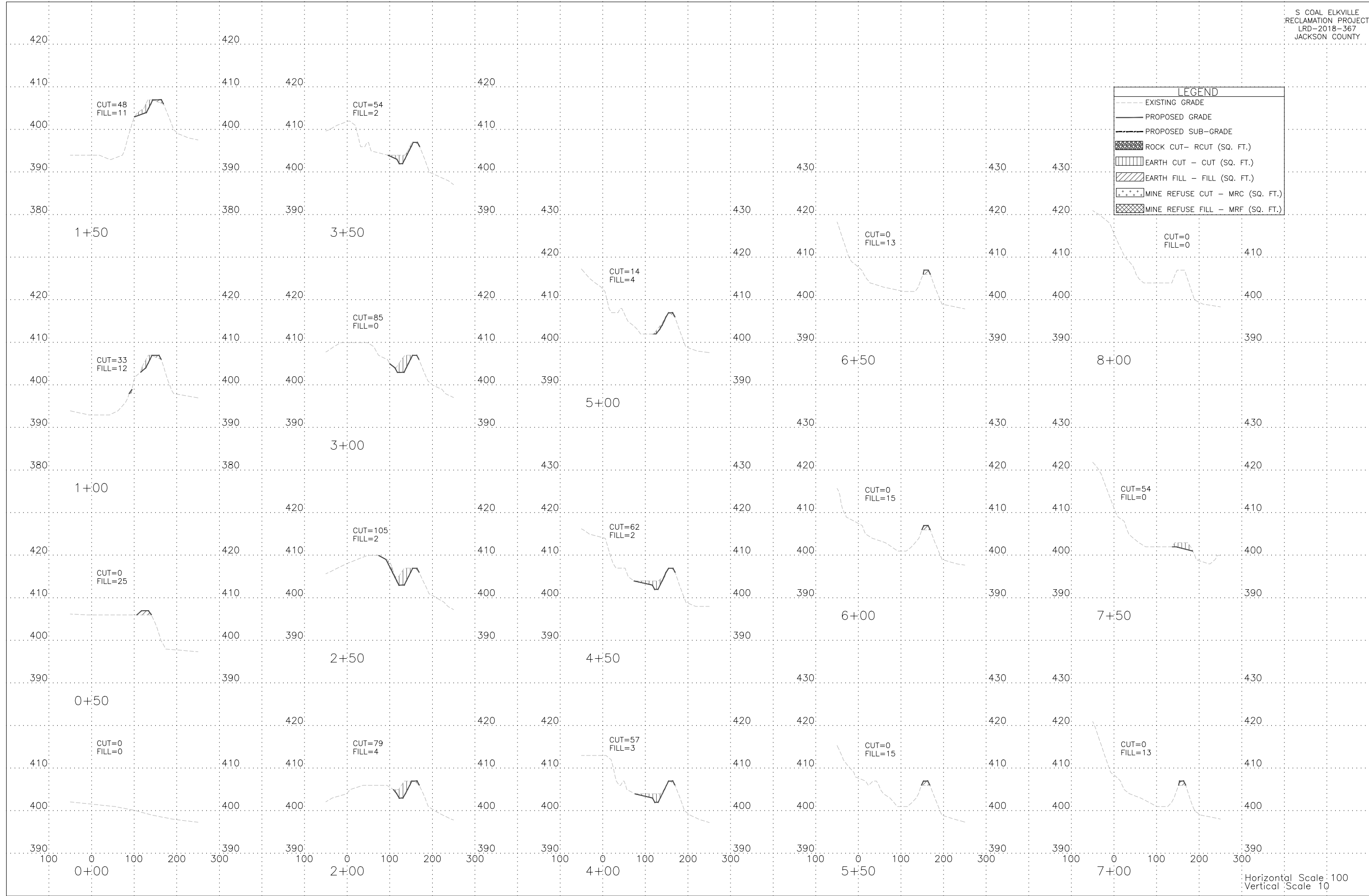


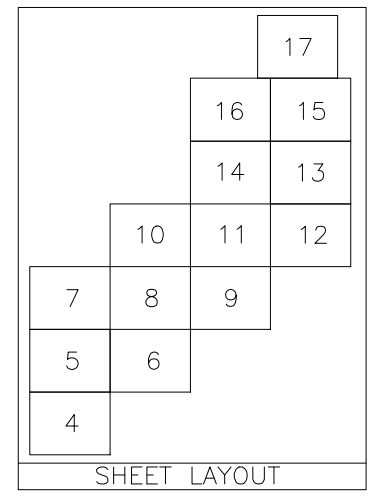
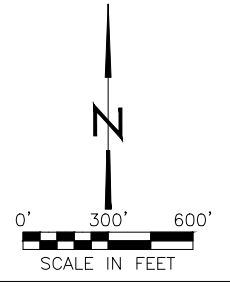
Horizontal Scale 100
Vertical Scale 10

LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE
—	PROPOSED SUB-GRADE
▨	ROCK CUT - RCUT (SQ. FT.)
▤	EARTH CUT - CUT (SQ. FT.)
▧	EARTH FILL - FILL (SQ. FT.)
▩	MINE REFUSE CUT - MRC (SQ. FT.)
▪	MINE REFUSE FILL - MRF (SQ. FT.)



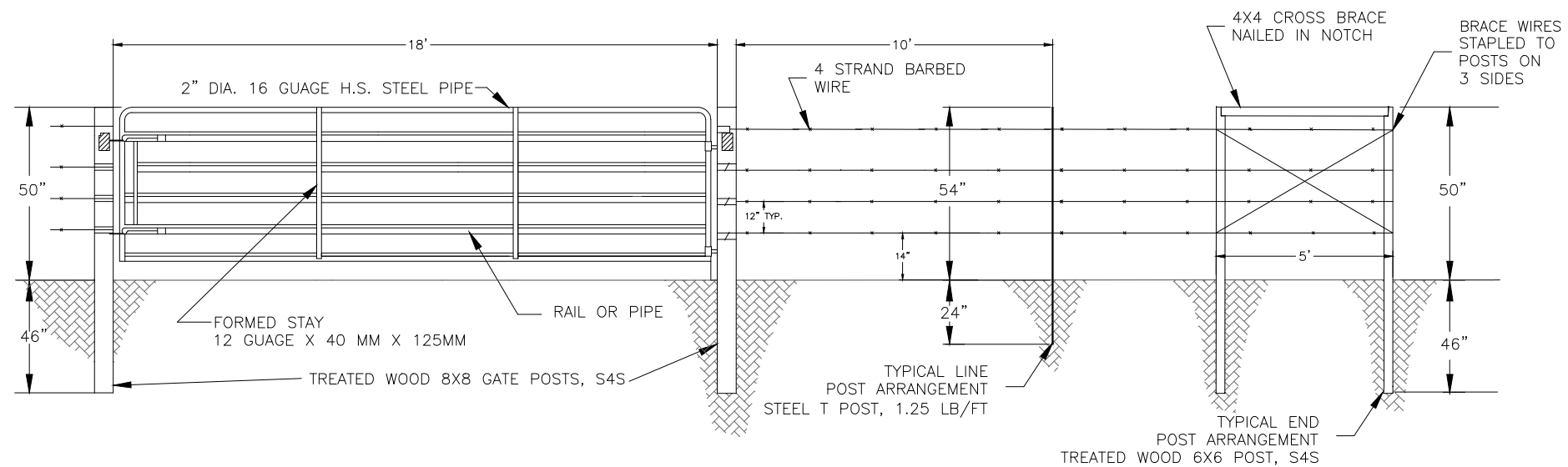
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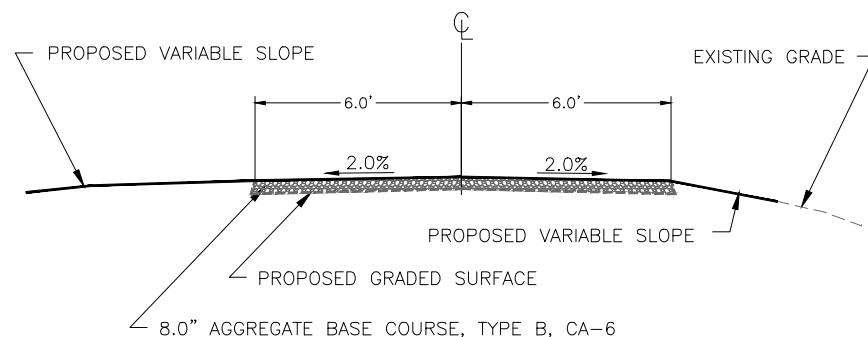


LEGEND

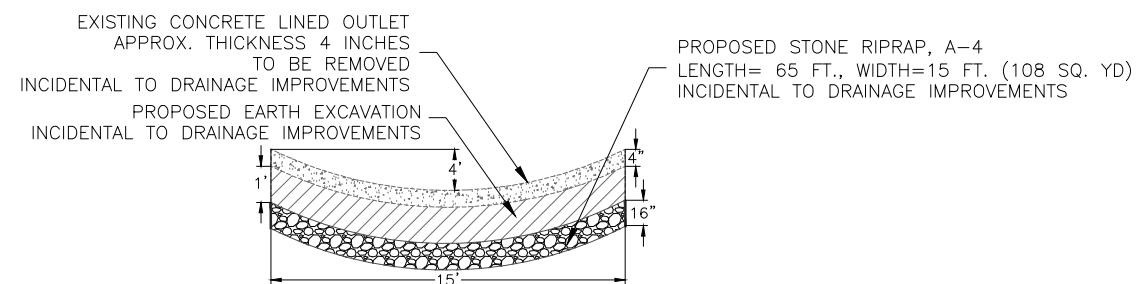
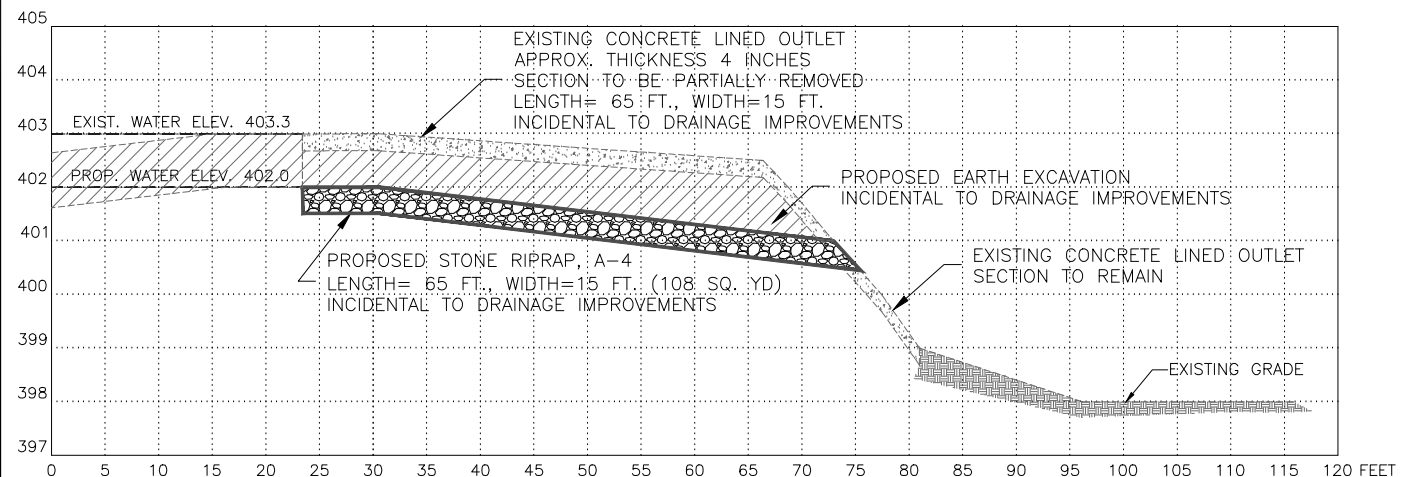
	SUBSOIL - 3 FOOT THICKNESS - 62,920 CU YD
	TOPSOIL - 8 INCH THICKNESS - 13,982 CU YD
	SUBSOIL - 1 FOOT THICKNESS - 58,080 CU YD
	TOPSOIL - 8 INCH THICKNESS - 38,720 CU YD
	TOPSOIL - 8 INCH THICKNESS - 103,253 CU YD



TYPICAL SECTION - BASELINE A - FENCE AND ENTRANCE GATE DETAIL
DETAIL A-48 - NOT TO SCALE



TYPICAL SECTION DETAIL - BASELINE A - ACCESS ROAD
B-48 - NOT TO SCALE



- NOTES:
1. DEWATERING TO ALLOW LOWERING OF WATER ELEVATION OF IMPOUNDMENT #6, FROM ELEV. 404.6 TO ELEV. 403.0, AND IMPOUNDMENT #7, FROM ELEV. 403.3 TO 402.0, SHALL BE INCIDENTAL TO THE CONTRACT PRICE FOR DRAINAGE IMPROVEMENTS. AN ESTIMATED 0.9 MILLION GALLONS WILL NEED TO BE DEWATERED, NO TREATMENT IS ANTICIPATED.
 2. EARTH EXCAVATION OF APPROXIMATELY 1,096 CU. YD. SHALL BE PERFORMED, AND AN APPROXIMATE 228 CU. YD. OF FILL WILL BE REQUIRED TO COMPLETE GRADING AS SHOWN ON THE PLANS. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT PRICE FOR DRAINAGE IMPROVEMENTS.
 3. REMOVAL OF A PORTION, LENGTH OF 65 FT. BY WIDTH OF 15 FT., OF THE EXISTING CONCRETE LINED DISCHARGE OUTLET, SHALL BE INCIDENTAL TO THE CONTRACT PRICE FOR DRAINAGE IMPROVEMENTS. THE RESULTING RUBBLE, IF BROKEN UP ENOUGH, CAN BE USED AS BEDDING STONE PRIOR TO THE PLACEMENT OF THE STONE RIPRAP, A-4.
 4. PLACEMENT OF A MINIMUM OF 108 SQ. YD., LENGTH OF 65 FT. BY WIDTH OF 15 FT., OF STONE RIPRAP, A-4, SHALL BE INCIDENTAL TO THE CONTRACT PRICE FOR DRAINAGE IMPROVEMENTS.
 5. THE APPLICATION OF FERTILIZERS, AGRICULTURAL GROUND LIMESTONE, SEEDING AND MULCHING OF APPROXIMATELY 3 ACRES, PER RATES SHOWN ON THE FERTILIZER, SEEDING AND MULCH SCHEDULE ON SHEET #3, SHALL BE INCIDENTAL TO THE CONTRACT PRICE FOR DRAINAGE IMPROVEMENTS.

TYPICAL PROFILE AND CROSS SECTION DETAIL - BASELINE B - IMPOUNDMENT #6 DISCHARGE OUTLET
C-48 - NOT TO SCALE