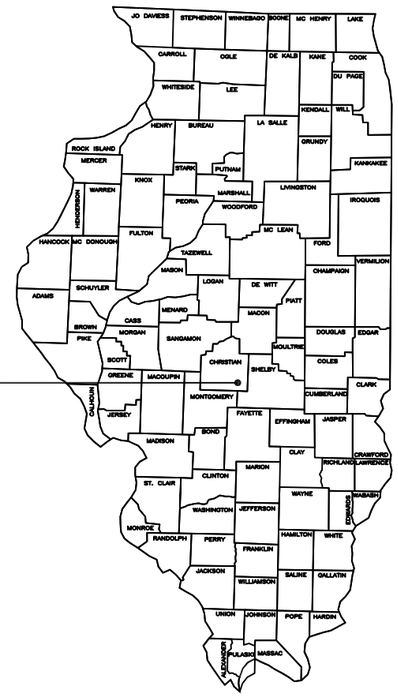
State of Illinois
Department of Natural Resources
Office of Mines and Minerals
Division of Abandoned Mined Lands

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

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County
1LR



Peabody Mine #17
Christian County

NOTE:
A Pre-Bid meeting is scheduled for this project at 10:30 A.M., Friday January 10, 2014 at the Project Site. All Interested prime and subcontractors are encouraged to attend.

SCHEDULE OF DRAWINGS:

1. Cover Sheet
2. Summary of Quantities/General Notes/Location Map
3. Overall Site Map/Survey Information
4-9. Existing and Proposed Conditions
10. Demolition of Existing Structures
11-20. Cross Sections
21. Details of Changes to Existing Manholes
22. Details - Ditches and Tunnel Demolition
23. Profiles of Subsurface Drainage Systems

IDOT Standards
Precast Reinforced Concrete Flared End Sction - Standard 542301
Grating for Concrete Flared End Section - Standard 542311
Catch Basin Type C - Standard 602011
Precast Reinforced Concrete Flat Slab Top - Standard 602601
Grate Type 8 - Standard 604036

Contract No. M1306

Certified Copy

Prepared By IDNR Staff

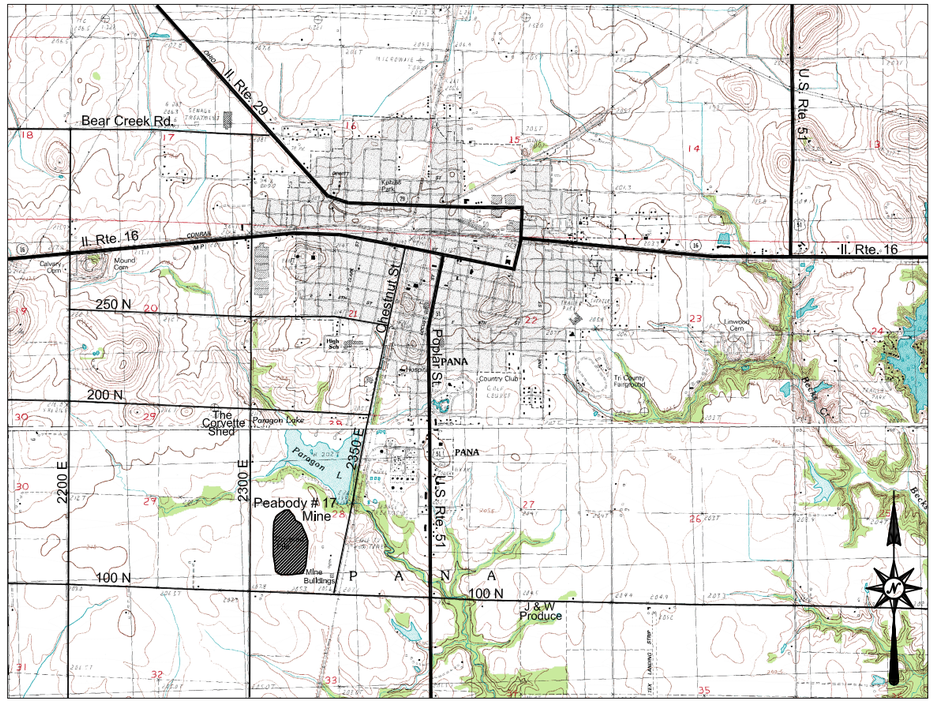
Approved for Bidding:
Michael L. Woods, Director
Office of Mines and Minerals

Approved By:
Greg Pinto, Acting Manager
AML Division

Approved By:
VINOD V. PATEL 062.046043 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
Vinodchandra V. Patel
IL Licensed Professional Engineer
No. 062.046043

Summary of Quantities

Code No.	#	Item	Section	Unit	Quantity	Rates/Remarks
NRM20110	1	Special Clearing	201	L SUM	1	
NRM20210	2	Earth Excavation	202	CU YD	6,647	
25000330	3	Seeding, Class 6, Conservation Mixture	IDOT 250	ACRE	13.6	
25000400	4	Nitrogen Fertilizer Nutrient	IDOT 250	POUND	3264	
25000500	5	Phosphorous Fertilizer Nutrient	IDOT 250	POUND	2720	
25000600	6	Potassium Fertilizer Nutrient	IDOT 250	POUND	6800	
25000700	7	Agricultural Ground Limestone	IDOT 250	TON	136	
25100115	8	Mulch, Method 2, Procedure 1	IDOT 251	ACRE	12.9	
NRM25610	9	Incorporation – Limestone	256	TON	592	100 Tons per acre
NRM25810	10	Mowing	258	ACRE	13.3	
28100105	11	Stone Riprap, Class A–3	IDOT 281	SQ YD	854	
28200200	12	Filter Fabric	IDOT 282	SQ YD	854	
NRM28610	13	Special Excelsior Blanket	286	SQ YD	3,502	
40200800	14	Aggregate Surface Course, Type B	IDOT 402	TON	164	
NRM50110	15	Removal of Existing Structures #1 – Utility Tunnel	501	EACH	1	
NRM50120	16	Removal of Existing Structures #2 – Mine Office Building	501	EACH	1	
NRM50190	17	Porous Granular Backfill	501	TON	794	
542A0220	18	Pipe Culverts, Class A, Type 1 – 15" Dia.	IDOT 542	FOOT	52	
542A1063	19	Pipe Culverts, Class A, Type 1 – 18" Dia.	IDOT 542	FOOT	16	
54213660	20	Precast Reinforced Concrete Flared End Sections – 15" Dia.	IDOT 542	EACH	4	
54213663	21	Precast Reinforced Concrete Flared End Sections – 18" Dia.	IDOT 542	EACH	1	
54247100	22	Grating for Concrete Flared End Section – 15"	IDOT 542	EACH	3	
54247110	23	Grating for Concrete Flared End Section – 18"	IDOT 542	EACH	1	
NRM55321	24	Drainage Tile, 8" Dia. Non–Perforated Corrugated Polyethylene (PE) Tubing	553	FOOT	600	
NRM55323	25	Drainage Tile, 8" Dia. Perforated Corrugated Polyethylene (PE) Tubing with Sleeve	553	FOOT	1,100	
NRM55344	26	Drainage Tile, 12" Dia. Corrugated Polyethylene (PE) Pipe with a Smooth Interior	553	FOOT	1,734	
NRM55349	27	Drainage Tile, Pipe Tee 8"x12" Diameters	553	EACH	8	
NRM59310	28	Controlled Low–Strength Material	593	CU YD	495	
NRM59510	29	Removal and Disposal of Asbestos Containing Material	595	L SUM	1	
60207605	30	Catch Basins, Type C, Type 8 Grate	IDOT 602	EACH	2	
NRM60211	31	Manhole to be Adjusted with New Slab Top and Type 8 Grate	602	EACH	1	
NRM60212	32	Manhole to be Reconstructed with New Riser, Slab Top and Type 8 Grate	602	EACH	1	
NRM60213	33	Manhole to be Modified with New Inlet Pipe Connection	602	EACH	1	
NRM67110	34	Mobilization (Max. 6% of Bid)	671	L SUM	1	



Location Map

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 damages done to any area outside the construction limits.

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.

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.

Schedule of Seeding, Fertilizer Nutrients, Mulch and Mowing

ITEM (unit)	August 15, 2014 – September 30, 2014	March 15, 2014 – April 10, 2014	May 1, 2014 – May 15, 2015	TOTAL QUANTITY
SEEDING (acres)	13.6 (acres)			13.6 (acres)
AGRICULTURAL GROUND LIMESTONE (tons)	136 10 Tons/Acre			136 (tons)
NITROGEN FERTILIZER NUTRIENT (pounds)	1632 120 lbs./Acre	1632 120 lbs./Acre		3264 (pounds)
PHOSPHOROUS FERTILIZER NUTRIENT (pounds)	1360 100 lbs./Acre	1360 100 lbs./Acre		2720 (pounds)
POTASSIUM FERTILIZER NUTRIENT (pounds)	3400 250 lbs./Acre	3400 250 lbs./Acre		6800 (pounds)
MULCH, METHOD 2 PROCEDURE 1 (acres)	12.9 2 Tons/Acre			12.9 (acres)
MOWING (acres)			13.3 (acres)	13.3 (acres)

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AML-GCtE-1306
Christian County

Drawn By: T.M., M-LF Date: 12/6/2013
Checked By:

Summary of Quantities/
General Notes/Location Map
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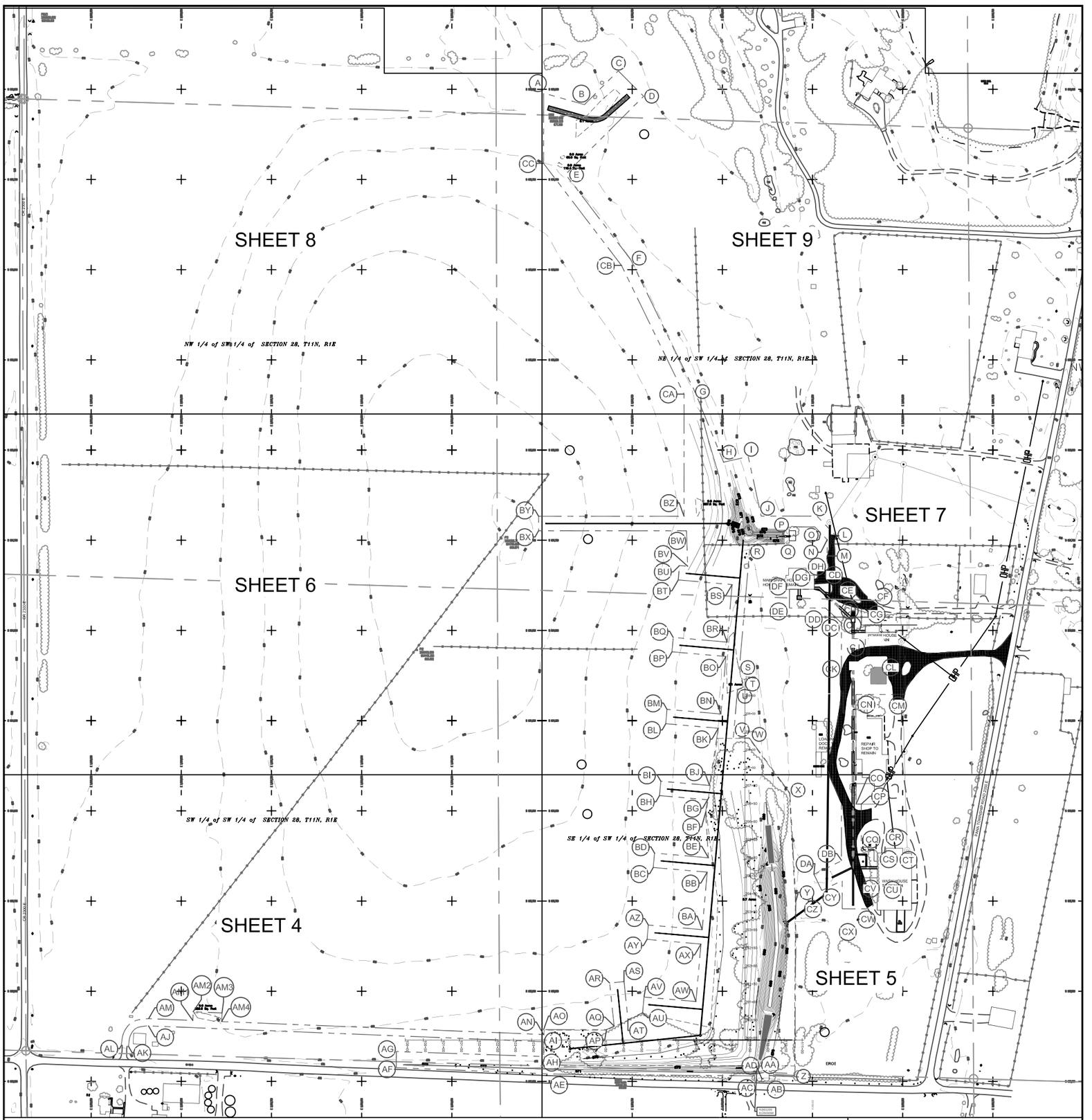
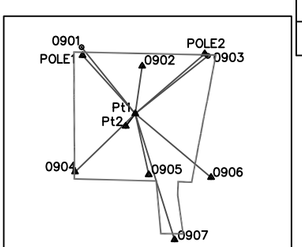


CONSTRUCTION LIMITS		
	NORTHING	EASTING
A	986051	2599711
B	985981	2599782
C	985764	2599565
D	985528	2599746
E	985162	2599924
F	984886	2599924
G	984886	2599984
H	984959	2599969
I	984982	2600072
J	984817	2600108
K	984817	2600262
L	984760	2600317
M	984707	2600291
N	984752	2600291
O	984787	2600256
P	984787	2600185
Q	984742	2600185
R	984738	2600077
S	984396	2600047
T	984342	2600059
U	984335	2600042
V	984202	2600030
W	984202	2600075
X	984049	2600187
Y	983750	2600204
Z	983267	2600201
AA	983269	2600130
AB	983250	2600130
AC	983250	2600089
AD	983265	2600089
AE	983270	2599548
AF	983288	2599096
AG	983333	2599096

CONSTRUCTION LIMITS		
	NORTHING	EASTING
AH	983319	2599504
AI	983360	2599504
AJ	983404	2598409
AK	983347	2598353
AL	983350	2598334
AM	983424	2598409
AM1	983419	2598532
AM2	983443	2598533
AM3	983440	2598613
AM4	983416	2598612
AN	983380	2599504
AO	983394	2599504
AP	983394	2599679
AQ	983403	2599700
AR	983523	2599688
AS	983527	2599727
AT	983421	2599738
AU	983441	2599779
AV	983484	2599783
AW	983471	2599927
AX	983631	2599941
AY	983644	2599791
AZ	983684	2599795
BA	983671	2599944
BB	983830	2599958
BC	983843	2599808
BD	983883	2599812
BE	983870	2599961
BF	983996	2599954
BG	984031	2599959
BH	984042	2599826
BI	984082	2599829
BJ	984070	2599964

CONSTRUCTION LIMITS		
	NORTHING	EASTING
BK	984229	2599989
BL	984242	2599843
BM	984281	2599847
BN	984268	2599996
BO	984428	2600010
BP	984441	2599860
BQ	984481	2599864
BR	984468	2600013
BS	984627	2600027
BT	984640	2599878
BU	984680	2599881
BV	984678	2599904
BW	984776	2599901
BX	984776	2599491
BY	984816	2599491
BZ	984816	2599894
CA	985155	2599894
CB	985512	2599720
CC	985795	2599504
CD	984640	2600277
CE	984583	2600339
CF	984573	2600430
CG	984556	2600430
CH	984560	2600385
CI	984515	2600385
CJ	984452	2600396
CK	984387	2600330
CL	984427	2600459
CM	984322	2600504
CN	984322	2600370
CO	984019	2600370
CP	984019	2600385
CQ	984890	2600385

CONSTRUCTION LIMITS		
	NORTHING	EASTING
CR	983890	2600420
CS	983860	2600420
CT	983860	2600429
CU	983814	2600429
CV	983814	2600382
CW	983728	2600382
CX	983728	2600332
CY	983807	2600332
CZ	983779	2600276
DA	983824	2600254
DB	983861	2600330
DC	984521	2600330
DD	984562	2600286
DE	984562	2600186
DF	984614	2600186
DG	984614	2600255
DH	984640	2600255



Traverse Layout Data

400 EXISTING CONTOUR
400 PROPOSED CONTOUR
EDGE OF MINE REFUSE
CONSTRUCTION LIMITS
EDGE OF ROAD
TREELINE
EDGE OF WATER
SURVEY CONTROL POINT

Legend

Site Name

N

0 130 260
SCALE IN FEET

Overall Site Map / Survey Information

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Drawn By: _____ Date: _____
Checked By: _____ _____
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Peabody Mine #17
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AML-GCtE-1306
Christian County

State of Illinois
Department of Natural Resources

SW 1/4 of SW 1/4 of SECTION 28, T11N, R1E

BARREN AREA TO RECEIVE INCORPORATION - LIMESTONE

0.0 Acres
926.6 Sq. Feet

BASELINE "A" BEGINS
N 983365, E 2599121

CR 2300 E

PANA TOWNSHIP ROAD 100 N

CR 100 N

E 2,598,250 E 2,598,500 E 2,598,750 E 2,599,000 E 2,599,250

N 984,000 N 983,750 N 983,500 N 983,250

100+00 100+50 101+00 101+50 102+00 102+50 103+00 103+50

673 672

400 EXISTING CONTOUR	TREELINE
400 PROPOSED CONTOUR	EDGE OF WATER
CONSTRUCTION LIMITS	SURVEY CONTROL POINT
EDGE OF ROAD	

Legend

Peabody Mine #17

0 50 100
SCALE IN FEET

N

State of Illinois
Department of Natural Resources

Peabody Mine #17
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Christian County

Drawn By: V.P., M-LF Date: 12/6/2013
Checked By:

Existing & Proposed Conditions

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LATERAL 4

B 22 TRAPEZOIDAL DITCH WITH STONE RIPRAP A-3
108' LONG x 18' WIDE (216 S.Y.)

SE 1/4 of SW 1/4 of SECTION 28, T11N, R1E.

LATERAL 5

SUBSURFACE DRAINAGE TILE SYSTEM #2
OUTLET TO BE PROTECTED WITH PIPE CULVERTS,
TYPE I-15" DIA. x 16 FT. WITH PRECAST REINFORCED
CONCRETE FLARED END SECTION AND GRATING FOR
CONCRETE FLARED END SECTION OUTLET LOCATION
N 984,750 / E 2,600,057 ELEV. 670.50

LATERAL 6

ACID SOIL DEAD ZONE TO RECEIVE INCORPORATION - LIMESTONE

CATCH BASIN TYPE C WITH GRATE
TYPE 8 - N 983,376 / E 2,599,939
RIM ELEV. 675.50, BASE ELEV. 670.63

LATERAL 7

LATERAL 8

BASELINE "B" BEGINS
N 983365, E 2600063

CATCH BASIN TYPE C WITH GRATE
TYPE 8 - N 983,340 / E 2,599,579
RIM ELEV. 676.50, BASE ELEV. 670.95
INLET AND OUTLET PIPE ELEV. 672.20

EXISTING FIELD TILE
8" DIA. PERFORATED CORRUGATED
POLYETHELENE (PE) TUBING WITH
SLEEVE

5.7 Acres

60' x 36" DIA.
CONCRETE PIPE
TO BE REMOVED

AIR SHAFT HOIST HOUSE
TO REMAIN

CAPPED AIR SHAFT
TO REMAIN

WASH HOUSE
TO REMAIN

B 21 MANHOLE TO BE RECONSTRUCTED WITH
NEW RISER, SLAB TOP AND TYPE 8 GRATE

100' x 36" DIA. CONCRETE
PIPE TO BE REMOVED

SPECIAL EXCELSIOR BLANKET (1051 S.Y.)

SPECIAL EXCELSIOR BLANKET (717 S.Y.)

B 22 TRAPEZOIDAL DITCH WITH
STONE RIPRAP A-3 (265 S.Y.)

BASELINE "A" ENDS
N 983365, E 2600221

SPECIAL EXCELSIOR BLANKET (888 S.Y.)

PANA TOWNSHIP ROAD 100 N

PIPE CULVERTS CLASS A, TYPE 1 - 15" DIA. x 20 FT. WITH PRECAST
REINFORCED CONCRETE FLARED END SECTIONS (2) AND
GRATING FOR FLARED END SECTION ON INLET END SECTION
INLET END N 983,255/E 2,600,110 INV. ELEV. 669.5
OUTLET END N 983,289/E 2,600,095 INV. ELEV. 667.5

PANA TOWNSHIP ROAD 2350 E

DEBRIS

OHP

WF 675.2

N 984,000 | N 983,750 | N 983,500 | N 983,250

E 2,599,750 | E 2,600,000 | E 2,600,250 | E 2,600,500 | E 2,600,750

207+00 | 206+50 | 206+00 | 205+50 | 205+00 | 204+50 | 204+00 | 203+50 | 203+00 | 202+50 | 202+00 | 201+50 | 201+00 | 200+50 | 200+00 | 104+00 | 104+50 | 105+00 | 105+50 | 106+00 | 106+50 | 107+00 | 107+50 | 108+00 | 108+50 | 109+00 | 109+50 | 110+00 | 110+50 | 111+00

400	EXISTING CONTOUR
400	PROPOSED CONTOUR
	CONSTRUCTION LIMITS
	EDGE OF ROAD
	TREELINE
	EDGE OF WATER
	SURVEY CONTROL POINT

Legend

Peabody Mine #17

0 50 100
SCALE IN FEET

N

State of Illinois
Department of Natural Resources

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

Drawn By: V.P., M-LF Date: 12/6/2013
Checked By:

Existing & Proposed Conditions

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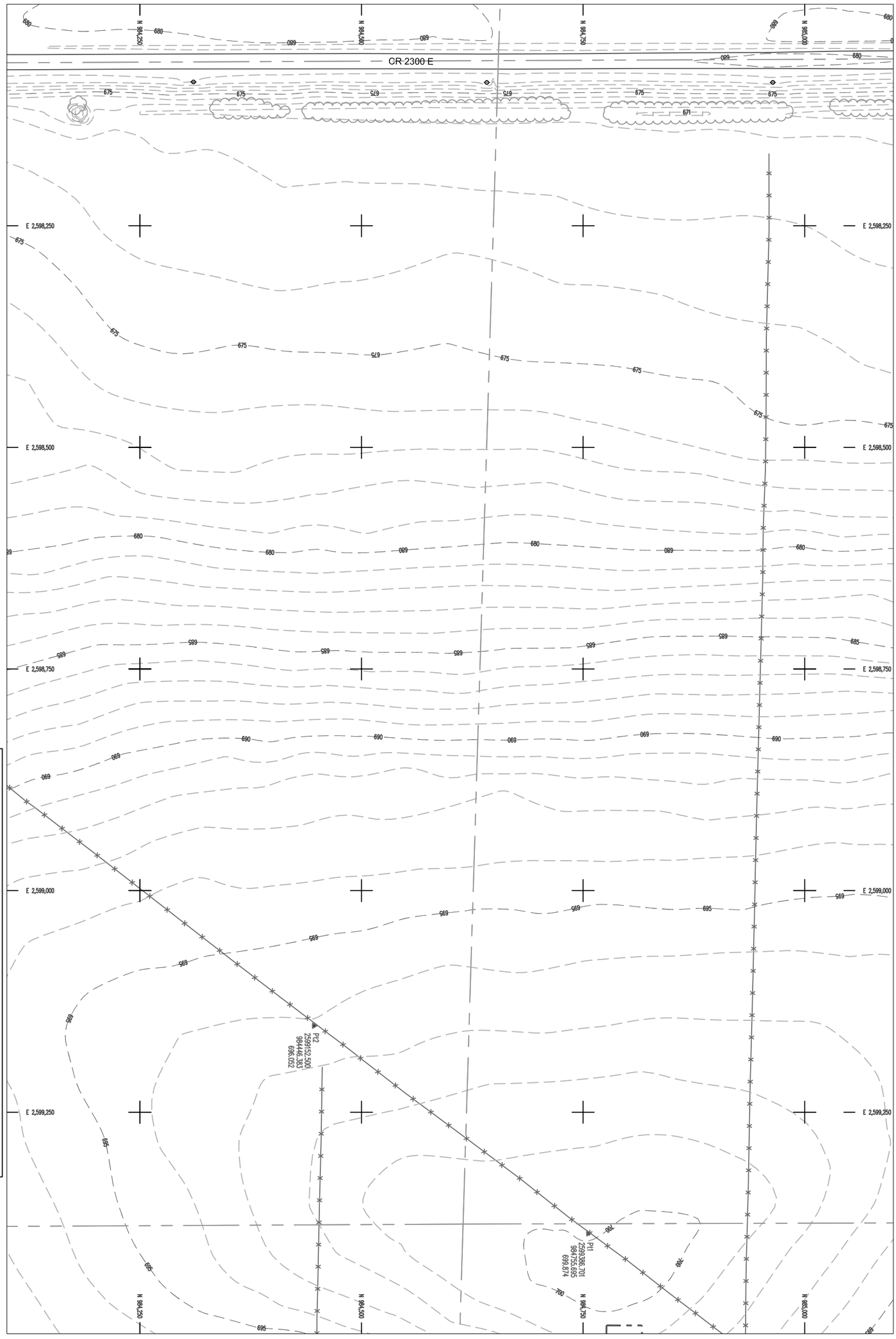

Legend

- EXISTING CONTOUR
- PROPOSED CONTOUR
- CONSTRUCTION LIMITS
- EDGE OF ROAD
- TREELINE
- EDGE OF WATER
- SURVEY CONTROL POINT

SCALE IN FEET
0
50
100

N

Peabody Mine #17

Existing & Proposed Conditions Sheet 6 of 23	Drawn By: V.P., M-LF Date: 12/6/2013 Checked By:	Peabody Mine #17 Reclamation Project AML-GCtE-1306 Christian County	*State of Illinois* *Department of Natural Resources*

C 23 SUBSURFACE DRAINAGE TILE SYSTEM #1
16 FT. x 15" DIA. RCCP WITH END SECTION AND GRATE
200 FT. x 8" DIA. NON-PERFORATED CORRUGATED POLYETHYLENE (PE) TUBING.
300 FT. x 8" DIA. PERFORATED CORRUGATED POLYETHYLENE (PE) TUBING WITH SLEEVE.

C 22 V-DITCH WITH STONE RIPRAP A-3
30' LONG x 12' WIDE (40 S.Y.)

ALL EXISTING FENCES TO REMAIN
TEMPORARY REMOVAL AND RECONSTRUCTION REQUIRED FOR INSTALLATION OF SUB-SURFACE DRAINAGE TILE SYSTEM AND GRADING SHALL BE CONSIDERED INCIDENTAL

LATERAL 1

LATERAL 2

LATERAL 3

ACID SOIL DEAD ZONE TO RECEIVE INCORPORATION - LIMESTONE

BASELINE "B" ENDS
N 984365, E 2600063

ALL LATERALS SHALL BE CONNECTED TO THE MAIN TILE WITH AN 8" x 12" POLYETHYLENE TEE - THE FIRST 50 FT. OF THE LATERAL SHALL BE 8" DIA. NON-PERFORATED CORRUGATED POLYETHYLENE (PE) TUBING THEN CONNECTED TO 100 FT. OF PERFORATED CORRUGATED POLYETHYLENE (PE) TUBING WITH SLEEVE.
SEE DETAIL A 23

B 23 SUBSURFACE DRAINAGE SYSTEM #2
MAIN LINE TO BE CONSTRUCTED OF DRAINAGE TILE, 12" DIA. CORRUGATED POLYETHYLENE (PE) PIPE WITH A SMOOTH INTERIOR - 1,734 FT.
OUTLET END TO BE PROTECTED WITH PIPE CULVERTS, CLASS A, TYPE1 - 15" DIA. X 16 ' WITH PRECAST CONCRETE FLARED END SECTION AND GRATING.

SPECIAL EXCELSIOR BLANKET (846 S.Y.)

PIPE CULVERTS, CLASS A, TYPE 1 - 18" DIA. x 16' WITH PRECAST CONCRETE FLARED END SECTION AND GRATING TO REPLACE EXISTING 24" DIA. BITUMINOUS COATED CORRUGATED STEEL CULVERT PIPE

MAIN SHAFT TO ABANDONED PEABODY #17 MINE CONCRETE CAP TO REMAIN

EXISTING MINE SHAFT VENT TO REMAIN

EXISTING 18" GLAZED TILE OUTLET PIPE (2) TO REMAIN

EXISTING INLET BOX TO BE REMOVED

B 21 EXISTING MANHOLE TO BE MODIFIED WITH NEW INLET PIPE

MAIN SHAFT HOIST HOUSE TO REMAIN

STAIRWAY FROM SURFACE TO UTILITY TUNNEL SYSTEM TO BE REMOVED

UTILITY TUNNEL SYSTEM TO BE DEMOLISHED IN PLACE AND BACKFILLED

REMOVAL AND RESTORATION OF EXISTING FENCE TO ACCOMPLISH DEMOLITION OF TUNNEL SYSTEM SHALL BE INCIDENTAL TO THE PRICE FOR TUNNEL DEMOLITION

A 22 UTILITY TUNNEL SYSTEM TO BE DEMOLISHED IN PLACE

POWER HOUSE TO REMAIN

SCALE HOUSE AND MINE OFFICE TO BE REMOVED

LOADING DOCK TO REMAIN

REPAIR SHOP TO REMAIN

PANA TOWNSHIP ROAD 2350 E

0.0 Acres
557.9 Sq. Feet

0.1 Acres

ACID SOIL DEAD ZONE TO RECEIVE INCORPORATION - LIMESTONE

Legend
- EXISTING CONTOUR
- PROPOSED CONTOUR
- CONSTRUCTION LIMITS
- EDGE OF ROAD
- TREELINE
- EDGE OF WATER
- SURVEY CONTROL POINT

Peabody Mine #17

N

0 50 100
SCALE IN FEET

State of Illinois
Department of Natural Resources

Peabody Mine #17
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Christian County

Date:
Drawn By:
Checked By:

Existing & Proposed Conditions

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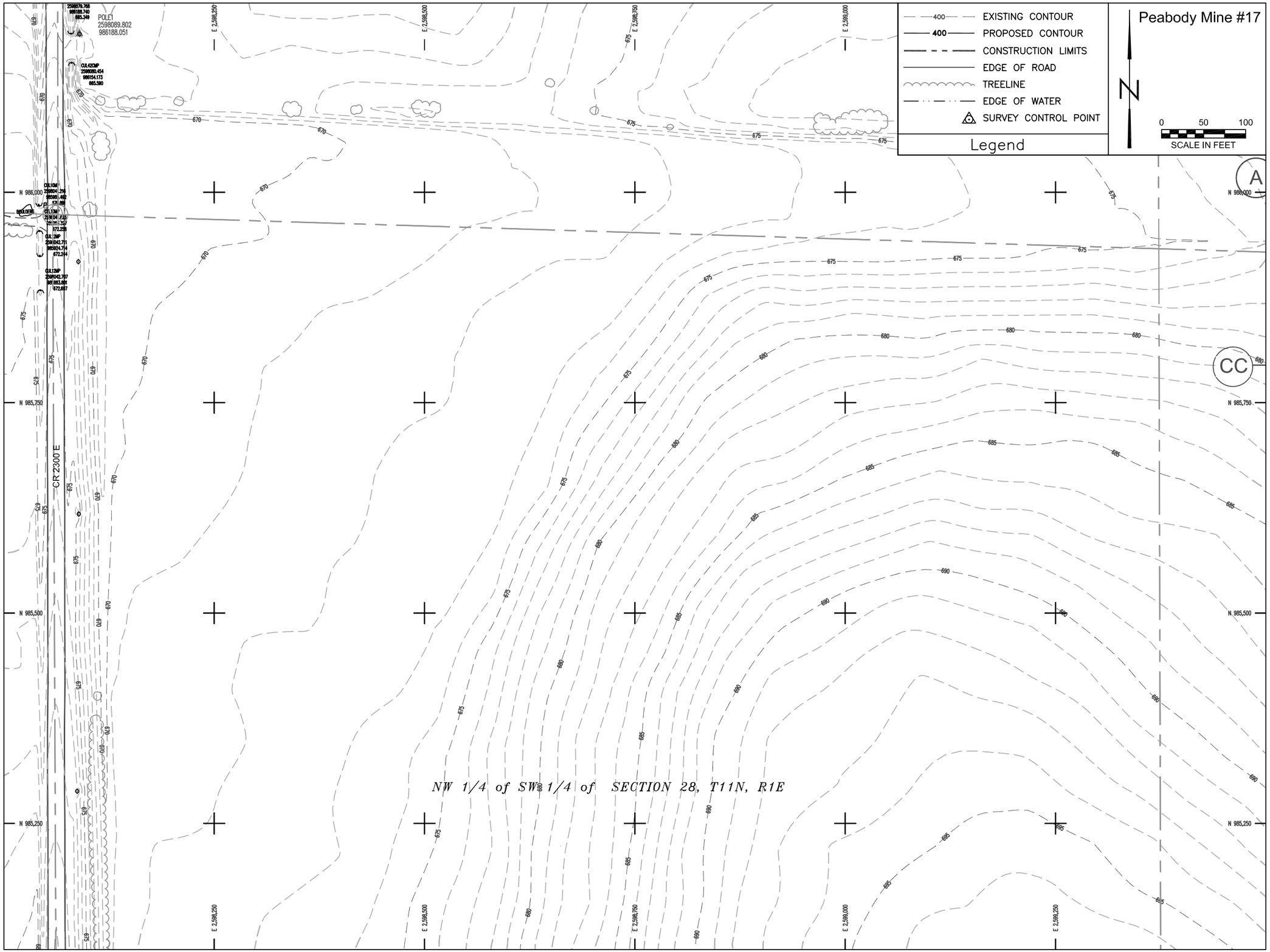

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Date:

Existing & Proposed Conditions

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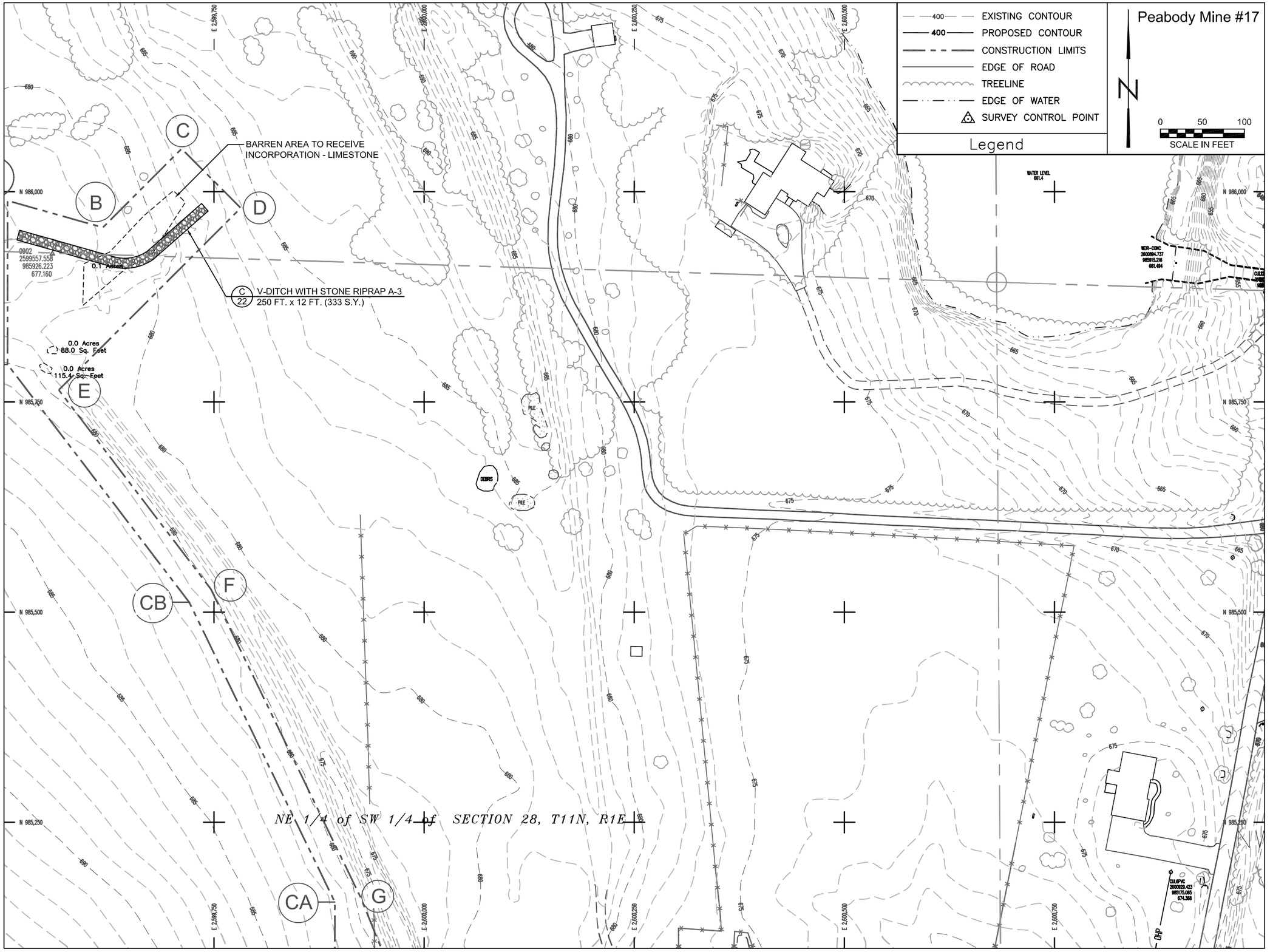

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Existing & Proposed Conditions
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REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL - FLOOR TILES AND CEILING PANELS IN THE OFFICE/SCALE HOUSE HAVE BEEN DETERMINED TO CONTAIN ASBESTOS. ALL ASBESTOS CONTAINING MATERIAL MUST BE REMOVED FROM THE STRUCTURE PRIOR TO DEMOLITION. SEE SPECIAL PROVISION 595.

UTILITY TUNNEL - THE ABANDONED UTILITY TUNNEL SYSTEM CONSISTS OF 6'–0" DIA. REINFORCED CONCRETE PIPE CULVERT, SEVERAL 7'X7' SQUARE SECTIONS OF CAST IN PLACE CONCRETE AND SEVERAL SMALLER 24" AND 36" DIA. CONCRETE PIPES AS SHOWN IN THE PLANS. THE TUNNEL IS TO BE ADDRESSED BY A COMBINATION OF THREE METHODS. SECTIONS OF THE TUNNEL NEAR EXISTING STRUCTURES DESIGNATED TO REMAIN SHALL BE BACKFILLED WITH CONTROLLED LOW–STRENGTH MATERIAL IN ACCORDANCE WITH SECTION 593 OF THE SPECIAL PROVISIONS. SECTIONS OF THE 24" AND 36" DIA. ARE TO BE EXCAVATED AND REMOVED. SECTIONS OF THE 6'–0" DIA. PIPE CULVERT AND CAST IN PLACE CONCRETE SHALL BE PARTIALLY EXPOSED, DEMOLISHED IN PLACE, AND BACKFILLED WITH RUBBLE, POROUS GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 501 OF THE SPECIAL PROVISIONS.

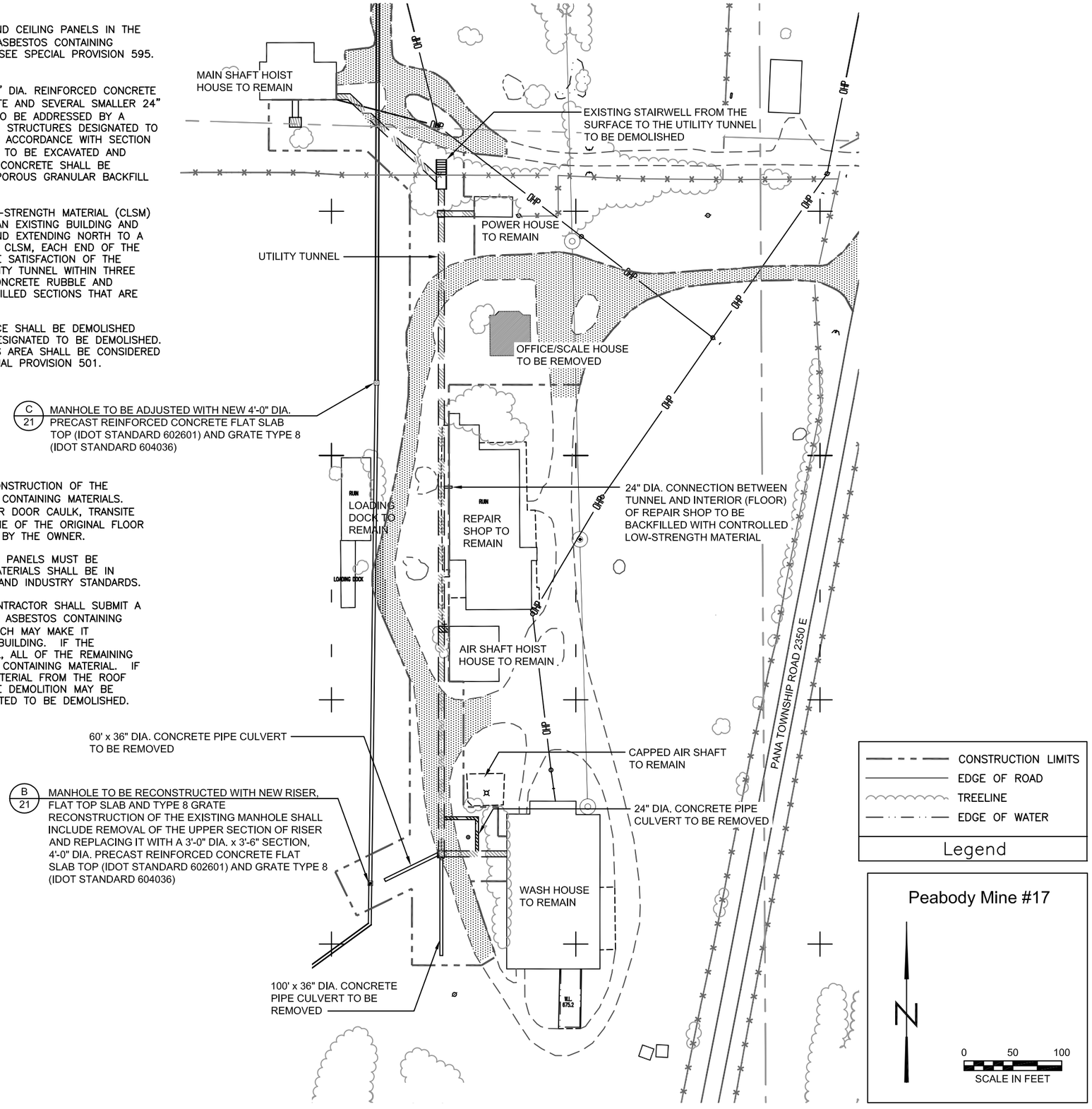
SECTIONS OF THE UTILITY TUNNEL TO BE BACKFILLED WITH CONTROLLED LOW–STRENGTH MATERIAL (CLSM) SHALL INCLUDE EACH SECTION OF THE TUNNEL SYSTEM WITHIN 20 FEET OF AN EXISTING BUILDING AND THE SECTION BEGINNING 40 FEET SOUTH OF THE AIR SHAFT HOIST HOUSE AND EXTENDING NORTH TO A POINT 40 FEET NORTH OF THE REPAIR SHOP. PRIOR TO BACK–FILLING WITH CLSM, EACH END OF THE SECTIONS TO BE FILLED SHALL BE ADEQUATELY BLOCKED OR FORMED TO THE SATISFACTION OF THE ENGINEER. FORM WORK SHALL BE CONSTRUCTED AT EACH END OF THE UTILITY TUNNEL WITHIN THREE FEET OF THE BUILDINGS CONNECTED TO THE TUNNEL. PROPERLY PLACED CONCRETE RUBBLE AND POROUS GRANULAR MATERIAL MAY BE USED TO BLOCK THE ENDS OF CLSM FILLED SECTIONS THAT ARE NOT AT THE TUNNELS ENTRANCES TO A BUILDING.

THE EXISTING CONCRETE STAIRWELL CONNECTING THE TUNNEL TO THE SURFACE SHALL BE DEMOLISHED AND BACKFILLED IN THE SAME MANNER AS THE SECTIONS OF THE TUNNEL DESIGNATED TO BE DEMOLISHED. REMOVAL AND RECONSTRUCTION OF THE EXISTING WOVEN WIRE FENCE IN THIS AREA SHALL BE CONSIDERED INCIDENTAL TO THE COST OF REMOVAL OF EXISTING STRUCTURES. SEE SPECIAL PROVISION 501.

ABANDONED MINE OFFICE/SCALE HOUSE - SEVERAL MATERIALS USED IN THE CONSTRUCTION OF THE ABANDONED MINE OFFICE/SCALE HOUSE HAVE BEEN IDENTIFIED AS ASBESTOS CONTAINING MATERIALS. THESE INCLUDE THE 9"x9" RED AND WHITE FLOOR TILE AND MASTIC, EXTERIOR DOOR CAULK, TRANSITE CEILING PANELS IN THE TOILET/SHOWER AREA AND ROOFING MATERIALS. SOME OF THE ORIGINAL FLOOR TILE THAT HAD BECOME DAMAGED OR WEATHERED WAS PREVIOUSLY REMOVED BY THE OWNER.

ALL FLOOR TILES AND MASTIC, EXTERIOR DOOR CAULK, AND TRANSITE CEILING PANELS MUST BE REMOVED PRIOR TO DEMOLITION OF THE STRUCTURE. REMOVAL OF THESE MATERIALS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND FEDERAL LAWS, REGULATIONS AND INDUSTRY STANDARDS.

AT LEAST FIVE DAYS PRIOR TO THE DEMOLITION OF THE STRUCTURE, THE CONTRACTOR SHALL SUBMIT A WRITTEN PLAN DETAILING HOW HE/SHE INTENDS TO HANDLE REMOVAL OF THE ASBESTOS CONTAINING ROOFING MATERIALS. THE BUILDING'S ROOF IS IN VERY POOR CONDITION WHICH MAY MAKE IT IMPOSSIBLE TO REMOVE THE ROOFING MATERIAL PRIOR TO DEMOLISHING THE BUILDING. IF THE BUILDING IS DEMOLISHED WITHOUT PRIOR REMOVAL OF THE ROOFING MATERIAL, ALL OF THE REMAINING BUILDING MATERIALS, RUBBLE AND DEBRIS, SHALL BE HANDLED AS ASBESTOS CONTAINING MATERIAL. IF THE CONTRACTOR IS ABLE TO REMOVE ALL OF THE ASBESTOS CONTAINING MATERIAL FROM THE ROOF PRIOR TO DEMOLITION OF THE BUILDING, CLEAN CONCRETE RUBBLE FROM THE DEMOLITION MAY BE USED TO PARTIALLY BACKFILL THE SECTIONS OF THE UTILITY TUNNEL DESIGNATED TO BE DEMOLISHED. SEE SPECIAL PROVISION 501.



State of Illinois
Department of Natural Resources

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

Drawn By: V.P., M–LF Date: 12/6/2013
Checked By:

Existing & Proposed Conditions - Demolition of Existing Structures

Sheet 10 of 23

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

EXISTING GRADE
PROPOSED GRADE
EARTH CUT
EARTH FILL
Legend

678 676 674 672 670

EARTH CUT = 1 S.F.
EARTH FILL = 0 S.F.

101+00

EARTH CUT = 2 S.F.
EARTH FILL = 0 S.F.

102+50

EARTH CUT = 13 S.F.
EARTH FILL = 0 S.F.

104+00

680 678 676 674 672 670

EARTH CUT = 1 S.F.
EARTH FILL = 0 S.F.

100+50

EARTH CUT = 1 S.F.
EARTH FILL = 0 S.F.

102+00

EARTH CUT = 9 S.F.
EARTH FILL = 0 S.F.

103+50

680 678 676 674 672 670

EARTH CUT = 2 S.F.
EARTH FILL = 0 S.F.

100+00

EARTH CUT = 1 S.F.
EARTH FILL = 0 S.F.

101+50

EARTH CUT = 5 S.F.
EARTH FILL = 0 S.F.

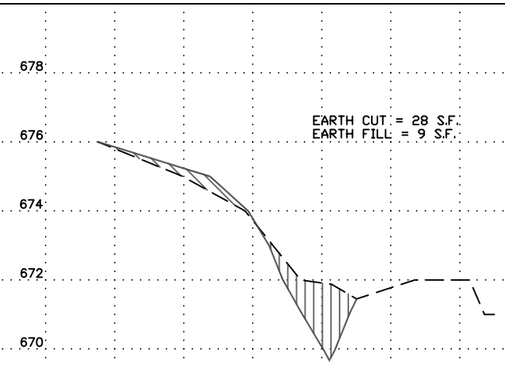
103+00

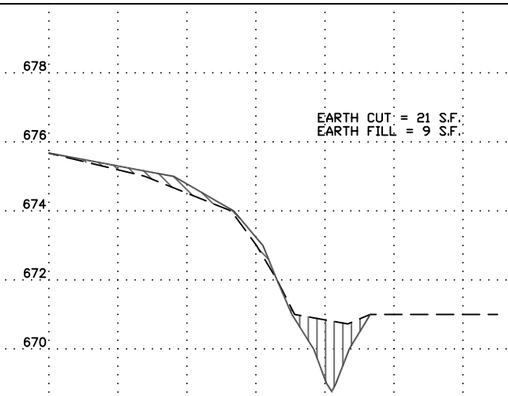
0 20 40 60 80 100 120 140

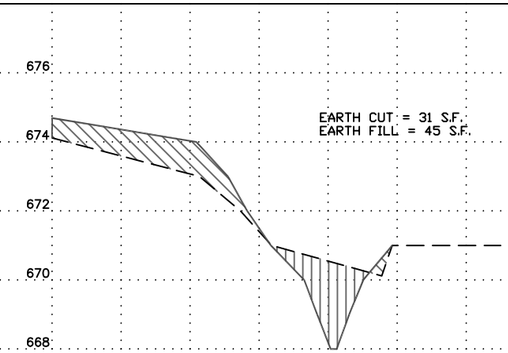
Horizontal Scale 20
Vertical Scale 2

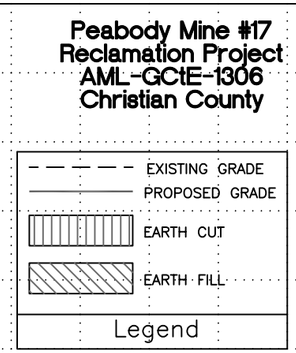
Baseline A

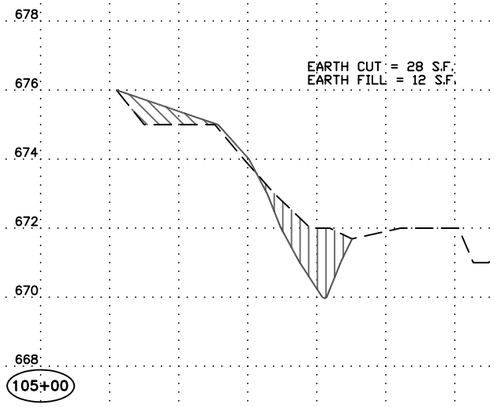
Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

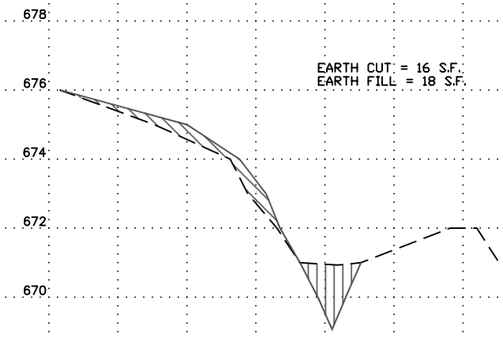


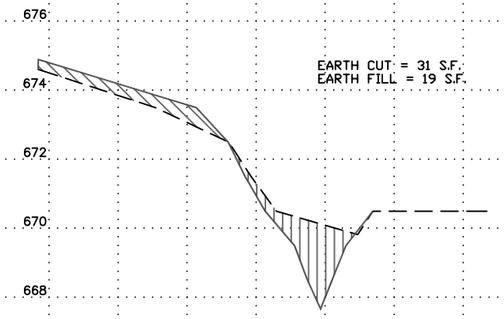


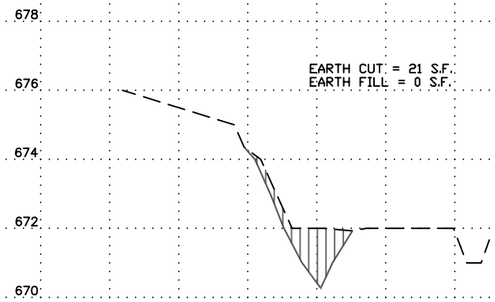


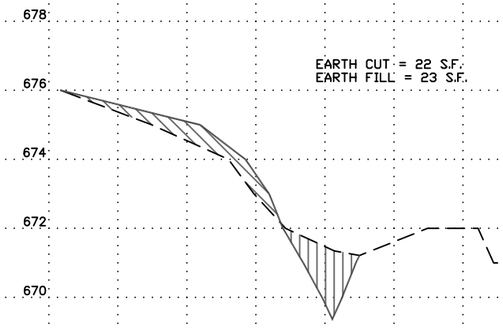


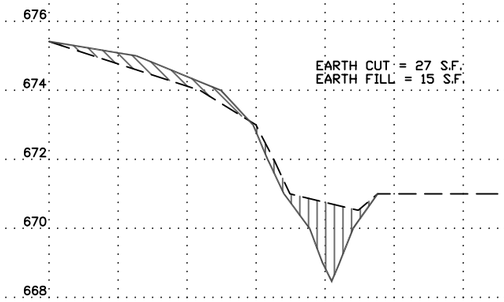












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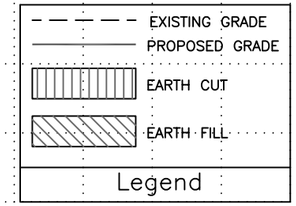
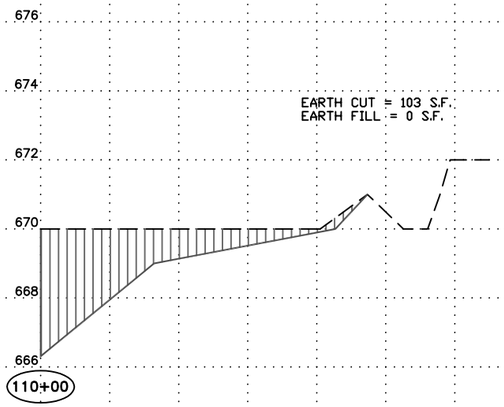
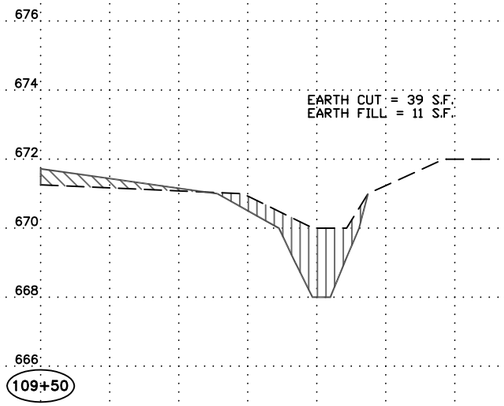
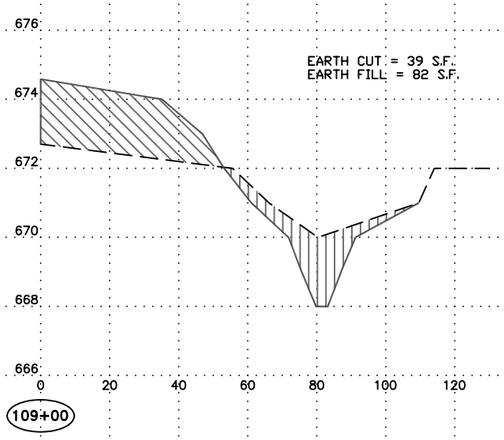
Horizontal Scale 20
Vertical Scale 2

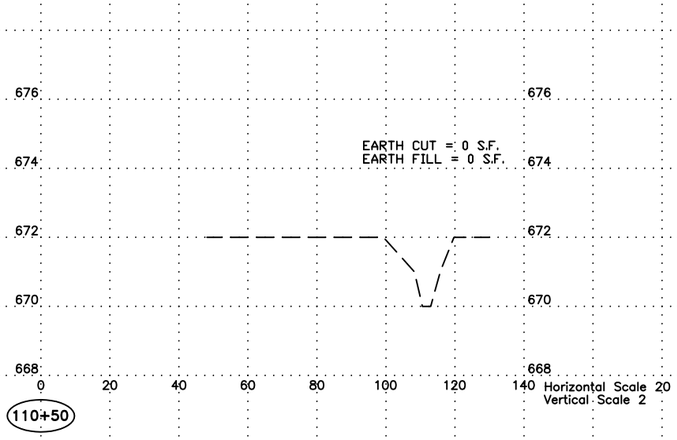
Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County









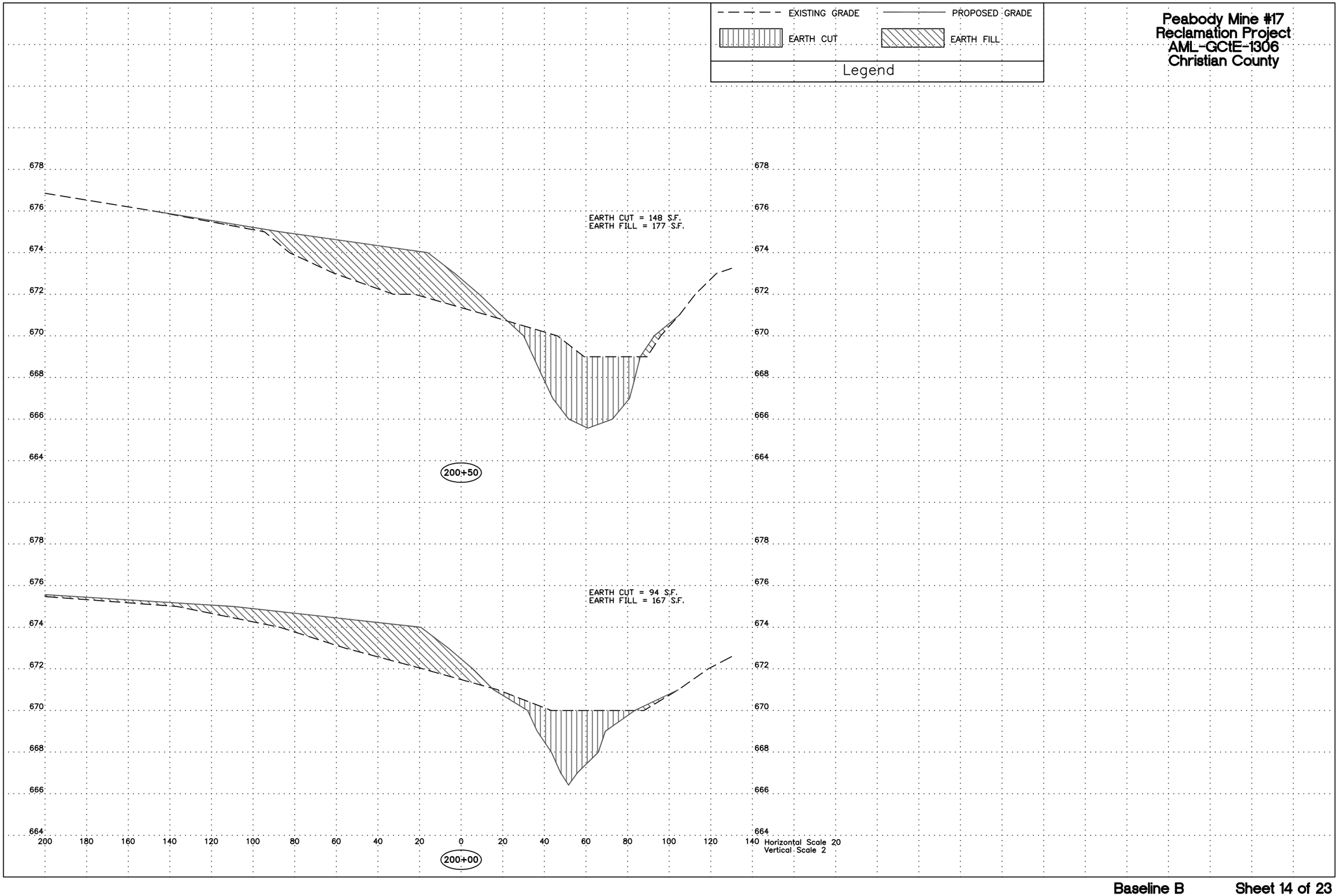


Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

Legend

EXISTING GRADE — PROPOSED GRADE

EARTH CUT — EARTH FILL



Baseline B

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

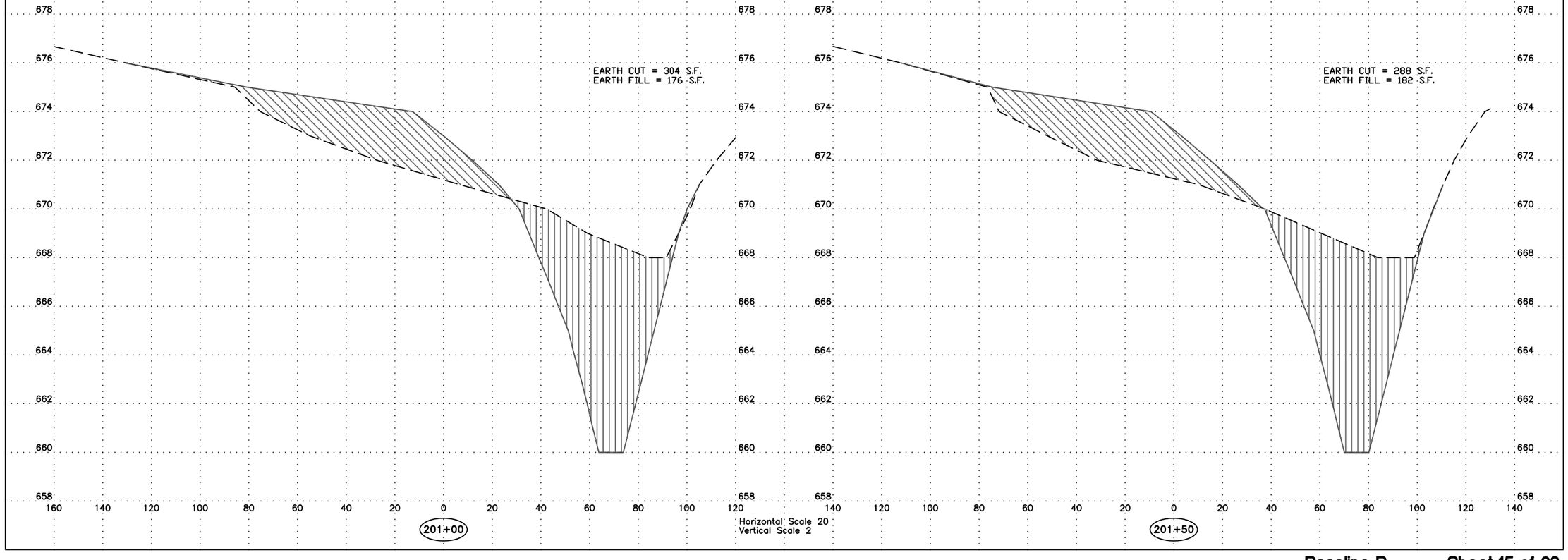
Legend

EXISTING GRADE

PROPOSED GRADE

EARTH CUT

EARTH FILL



Baseline B

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

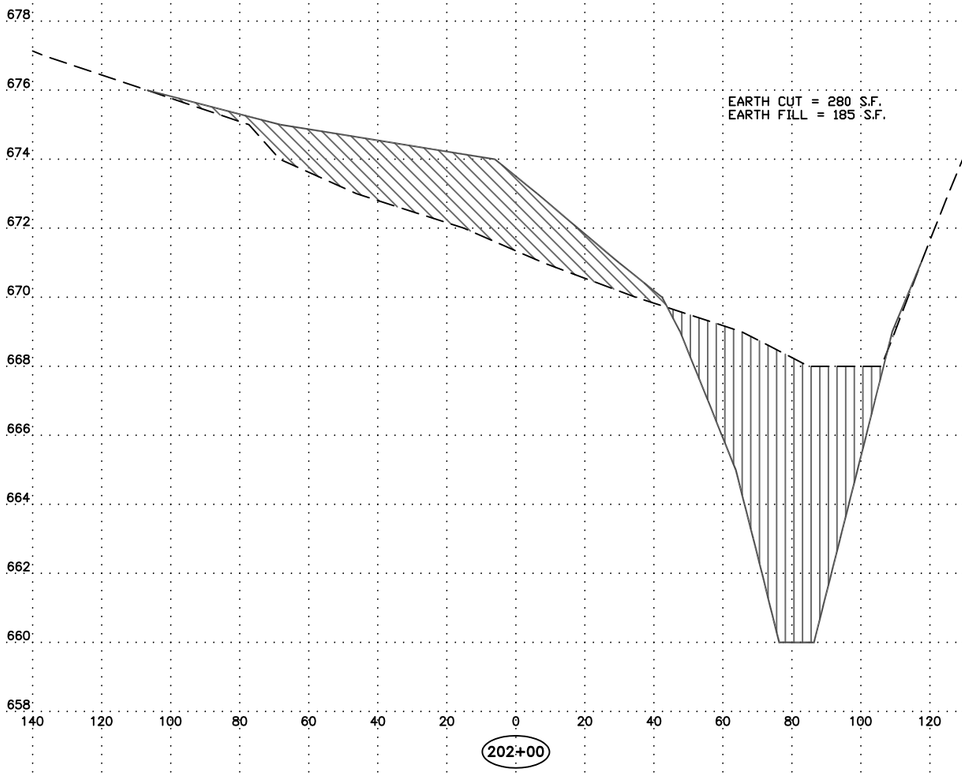
Legend

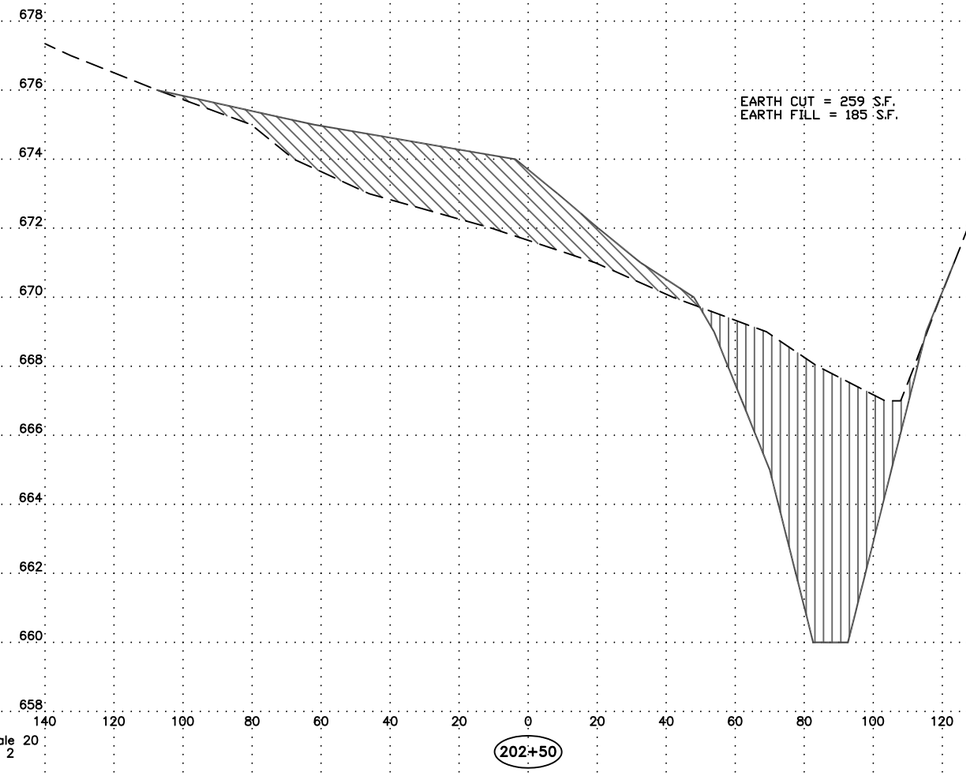
EXISTING GRADE

PROPOSED GRADE

EARTH CUT

EARTH FILL





Horizontal Scale 20
Vertical Scale 2

Baseline B

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

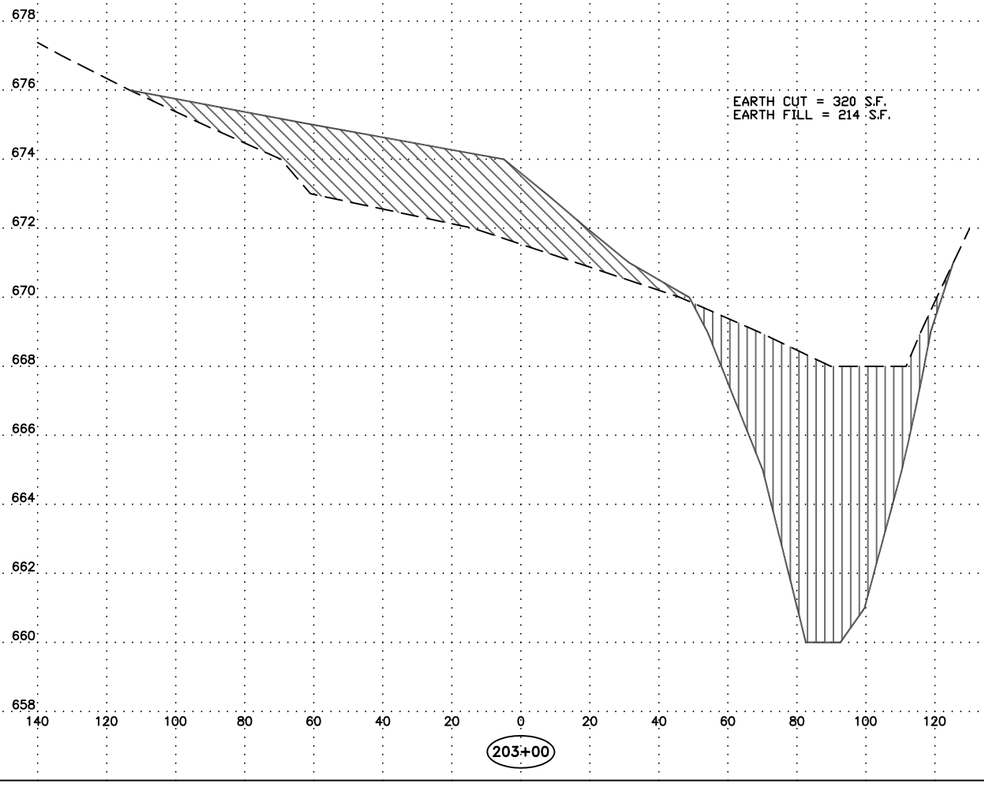
Legend

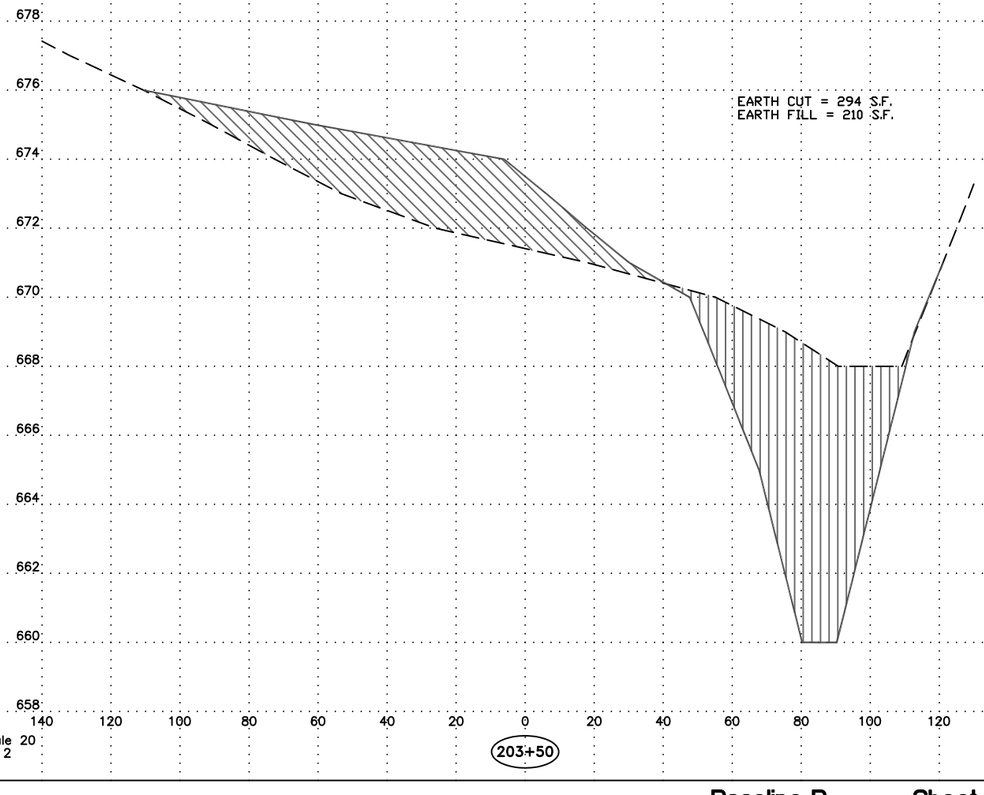
EXISTING GRADE

PROPOSED GRADE

EARTH CUT

EARTH FILL





Horizontal Scale 20
Vertical Scale 2

Baseline B

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

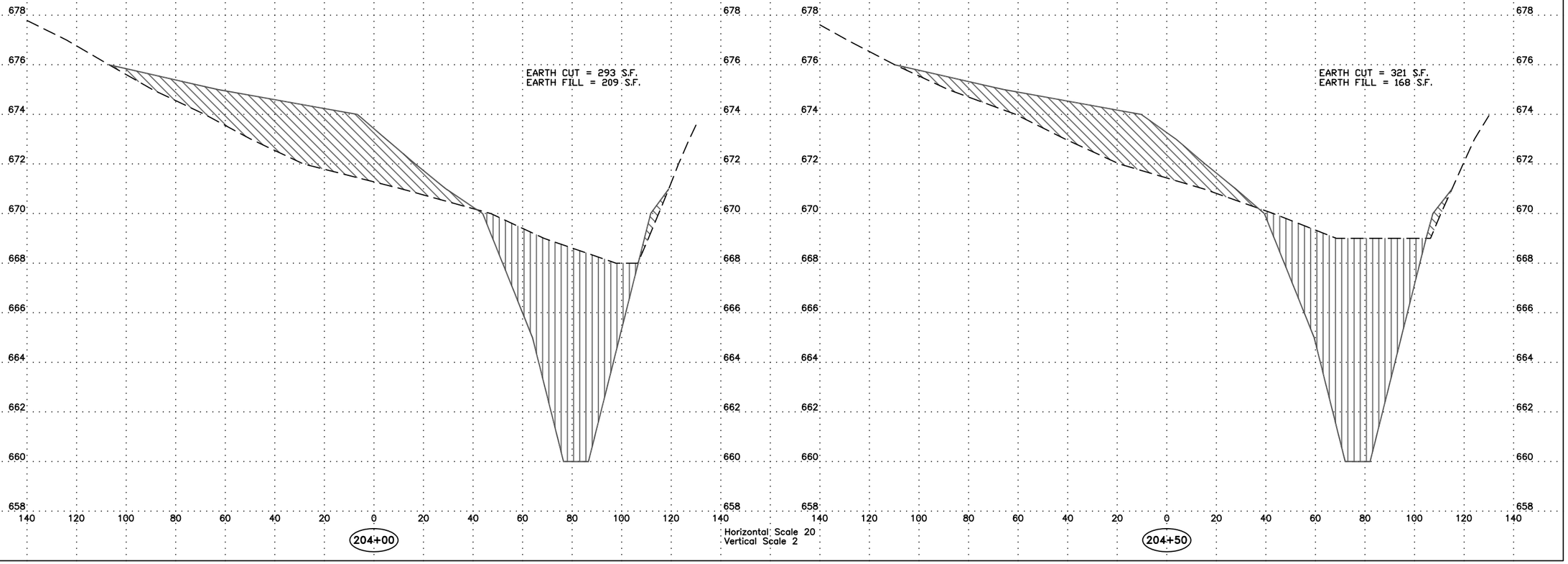
Legend

EXISTING GRADE

PROPOSED GRADE

EARTH CUT

EARTH FILL



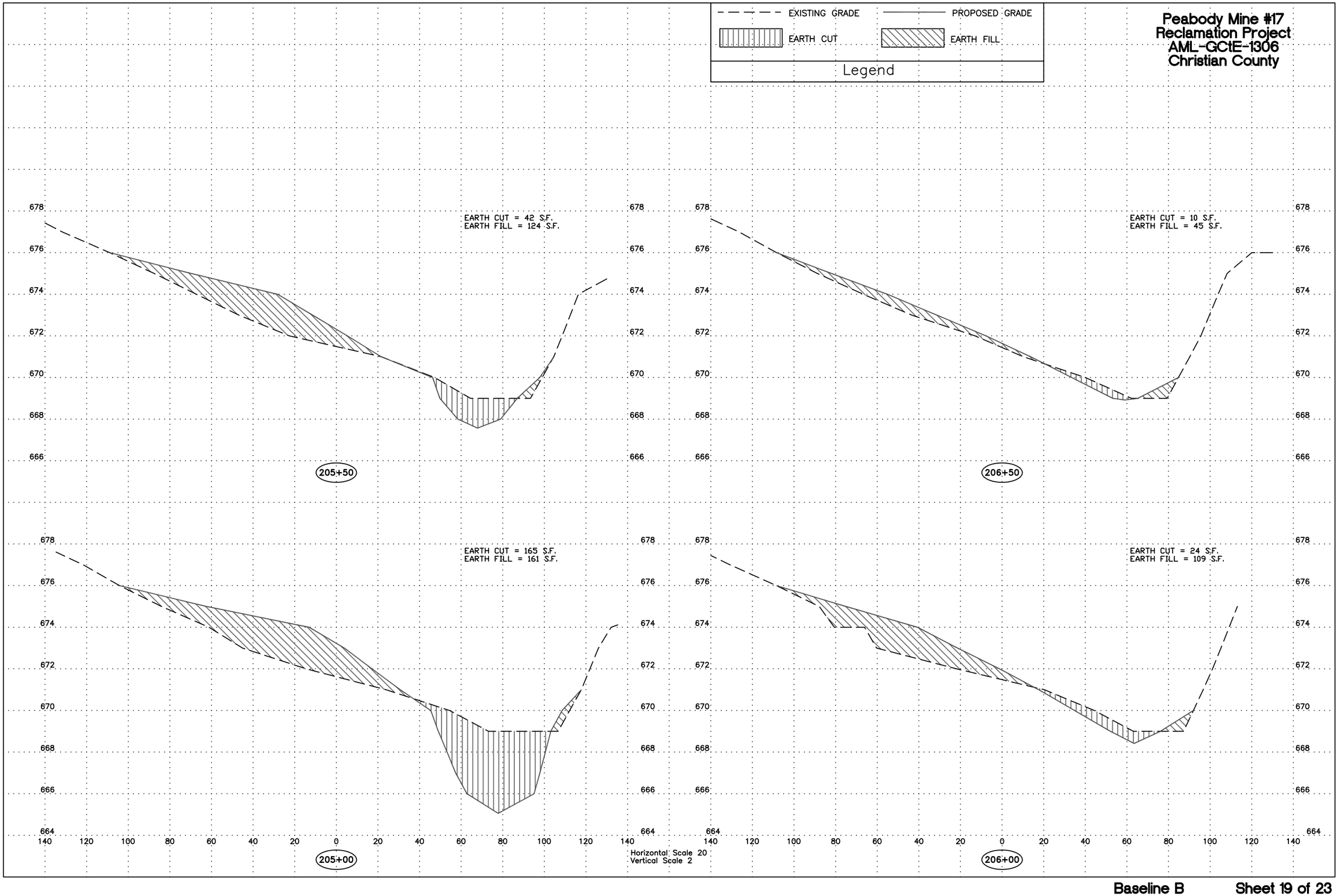
Baseline B

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

Legend

EXISTING GRADE — PROPOSED GRADE

EARTH CUT — EARTH FILL

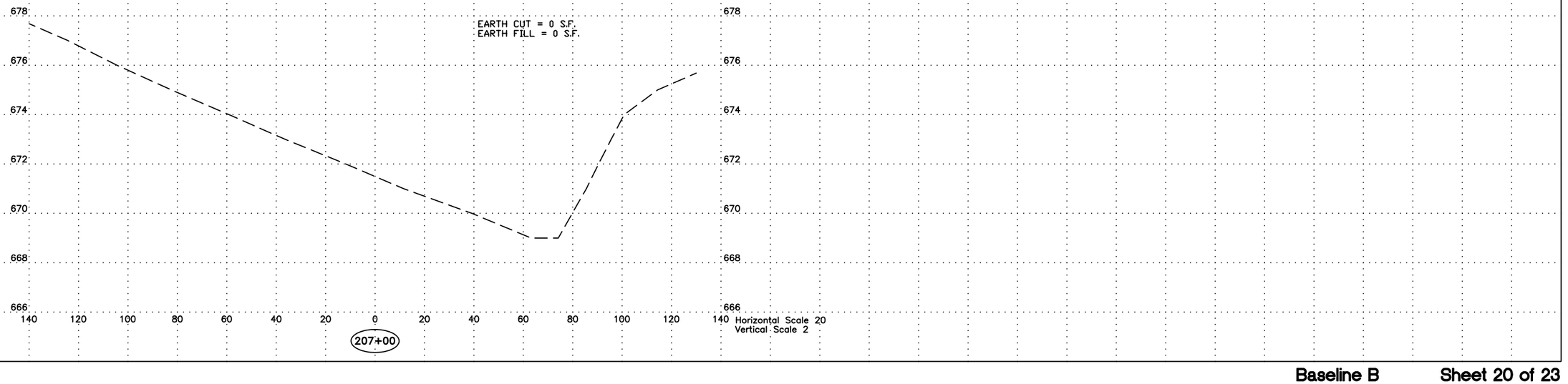


Horizontal Scale 20
Vertical Scale 2

Baseline B

EXISTING GRADE
PROPOSED GRADE
EARTH CUT
EARTH FILL
Legend

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County



Baseline B

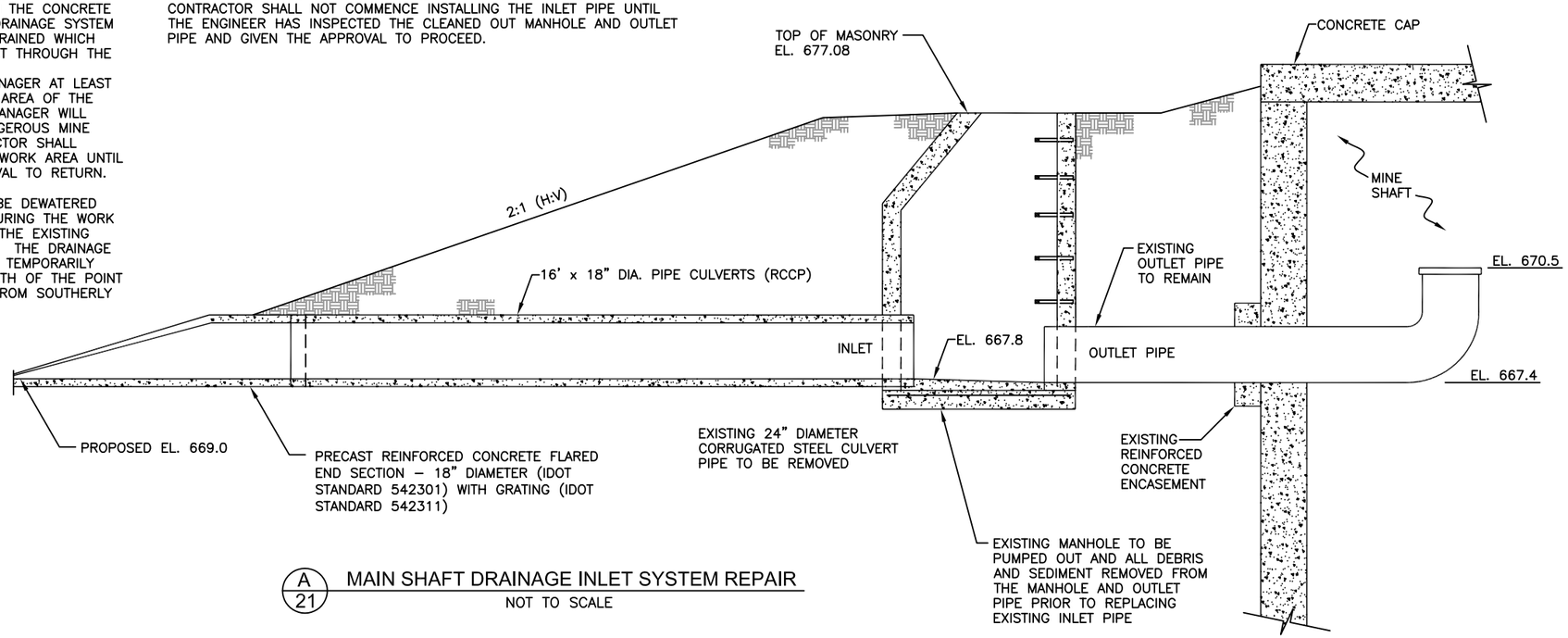
CONSTRUCTION NOTES:

SAFETY: THE EXISTING DRAINAGE SYSTEM IS DESIGNED TO FUNCTION AS AN AIRLOCK TO PREVENT MINE GASES FROM VENTING THROUGH THE MANHOLE AND PIPE CULVERTS. MINE GASES SHOULD NORMALLY VENT THROUGH THE VENT STACK MOUNTED IN THE CONCRETE CAP COVERING THE SHAFT. RECONSTRUCTION OF THE DRAINAGE SYSTEM WILL REQUIRE THAT THE WORK AREA BE TEMPORARILY DRAINED WHICH WILL PROVIDE A PATHWAY FOR MINE GASES TO VENT OUT THROUGH THE MANHOLE AND CULVERTS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER AT LEAST THREE DAYS PRIOR TO COMMENCING ANY WORK IN THE AREA OF THE MINE SHAFT OR THE DRAINAGE SYSTEM, THE PROJECT MANAGER WILL MONITOR THE AIR QUALITY IN THE WORK AREA FOR DANGEROUS MINE GASES. IF DANGEROUS GAS IS DETECTED, THE CONTRACTOR SHALL CEASE WORK AND DIRECT ALL WORKERS TO LEAVE THE WORK AREA UNTIL THE PROJECT MANAGER OR HIS DESIGNEE GIVES APPROVAL TO RETURN.

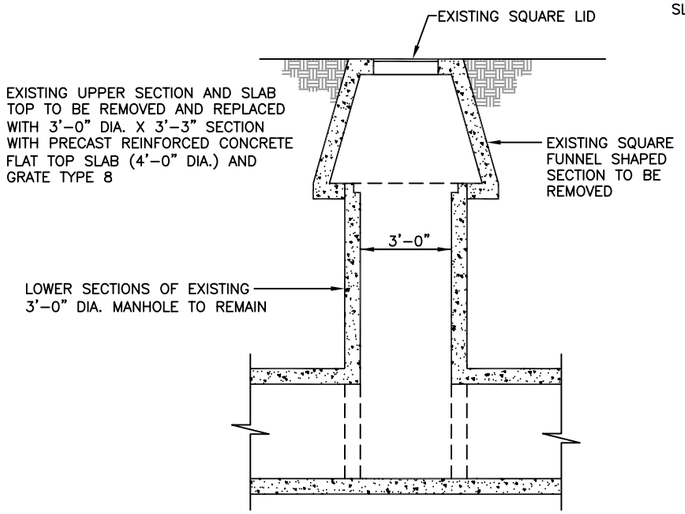
TEMPORARY DRAINAGE: THE WORK AREA MUST BE DEWATERED AND KEPT FREE FROM THE ACCUMULATION OF WATER DURING THE WORK OF REPLACING THE INLET PIPE CULVERT AND CLEANING THE EXISTING MANHOLE AND OUTLET PIPES OF DEBRIS AND SEDIMENT. THE DRAINAGE DITCH THAT CURRENTLY FLOWS INTO THE SHAFT MAY BE TEMPORARILY DIVERTED TO DIRECT FLOW TO THE DRAINAGE DITCH SOUTH OF THE POINT WHERE THE DIRECTION OF FLOW CURRENTLY CHANGES FROM SOUTHERLY TO EASTERLY.

REMOVAL OF DEBRIS AND SEDIMENT: ALL DEBRIS AND SEDIMENT THAT HAS ACCUMULATED IN THE EXISTING MANHOLE AND OUTLET PIPE SHALL BE REMOVED TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL NOT COMMENCE INSTALLING THE INLET PIPE UNTIL THE ENGINEER HAS INSPECTED THE CLEANED OUT MANHOLE AND OUTLET PIPE AND GIVEN THE APPROVAL TO PROCEED.

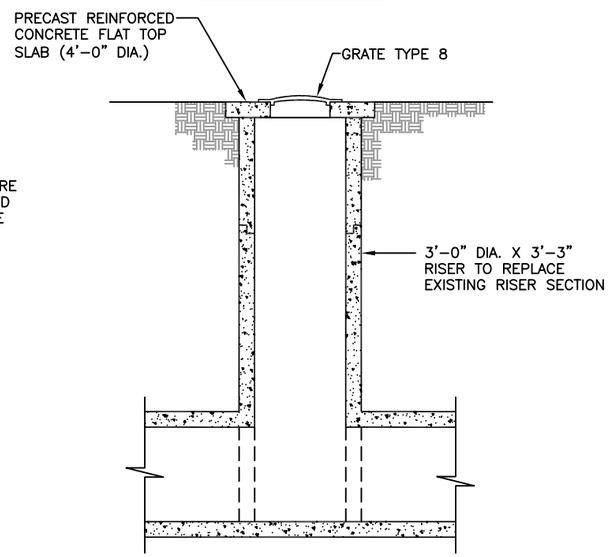


A/21 MAIN SHAFT DRAINAGE INLET SYSTEM REPAIR
NOT TO SCALE

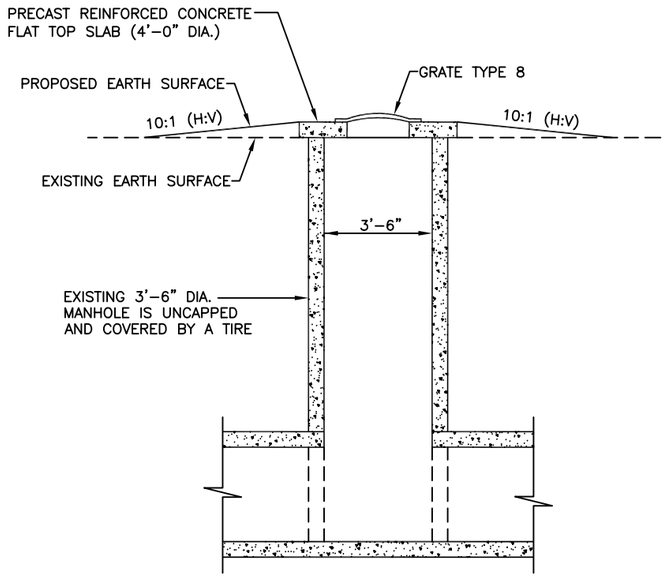
EXISTING CONDITIONS



PROPOSED CONDITIONS



B/21 MANHOLE TO BE RECONSTRUCTED WITH NEW RISER, SLAB TOP AND TYPE 8 GRATE
NOT TO SCALE



C/21 MANHOLE TO BE ADJUSTED WITH NEW SLAB TOP AND TYPE 8 GRATE
NOT TO SCALE

State of Illinois
Department of Natural Resources

Peabody Mine #17
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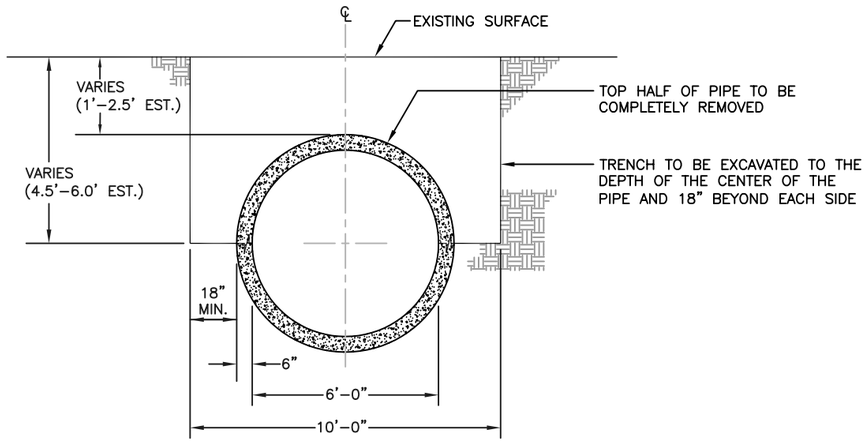
AML-GCtE-1306
Christian County

Date: 12/6/2013
Drawn By: M–LF
Checked By:

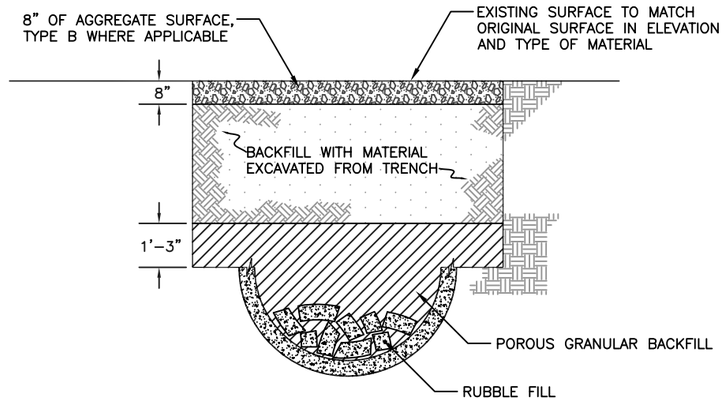
Details of Changes to Existing Manholes

Sheet 21 of 23

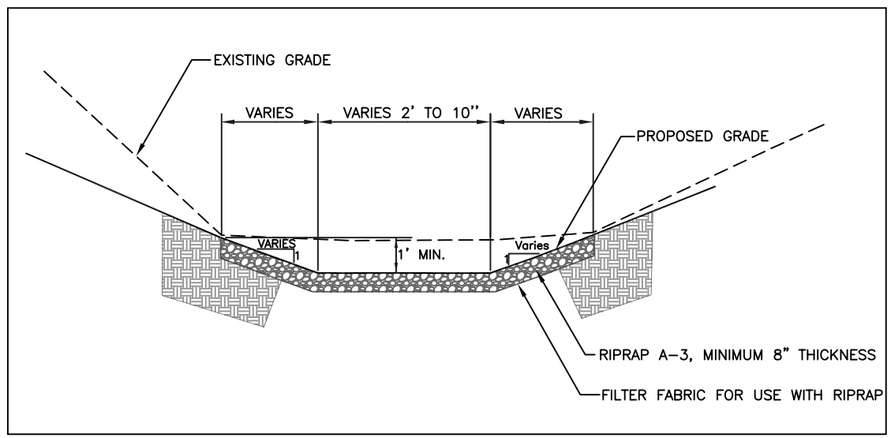
EXISTING CONDITIONS



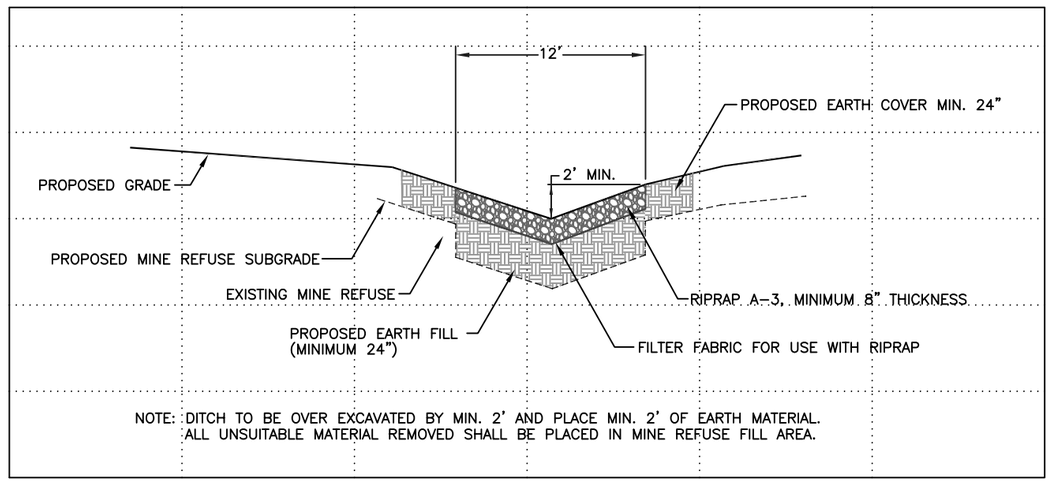
PROPOSED CONDITIONS



A/22 TYPICAL SECTION - UTILITY TUNNEL DEMOLITION
NOT TO SCALE



B/22 STONE RIPRAP A-3 DETAIL
NOT TO SCALE



C/22 V-DITCH RIPRAP DETAIL
NOT TO SCALE

State of Illinois
Department of Natural Resources

Peabody Mine #17
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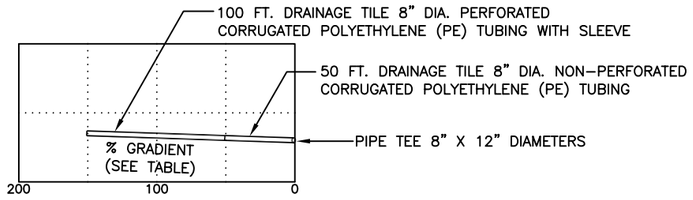
AML-GCtE-1306
Christian County

Drawn By: M–LF & V.P. Date: 12/6/2013
Checked By:

Details - Ditches and Tunnel Demolition
Sheet
22 of 23

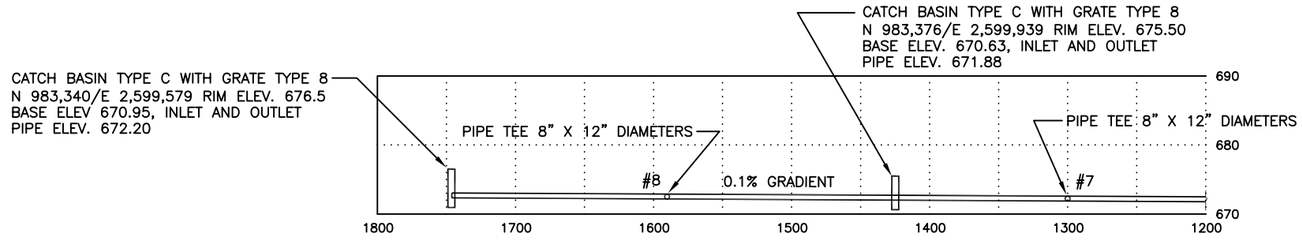
TYPICAL PIPE PROFILE

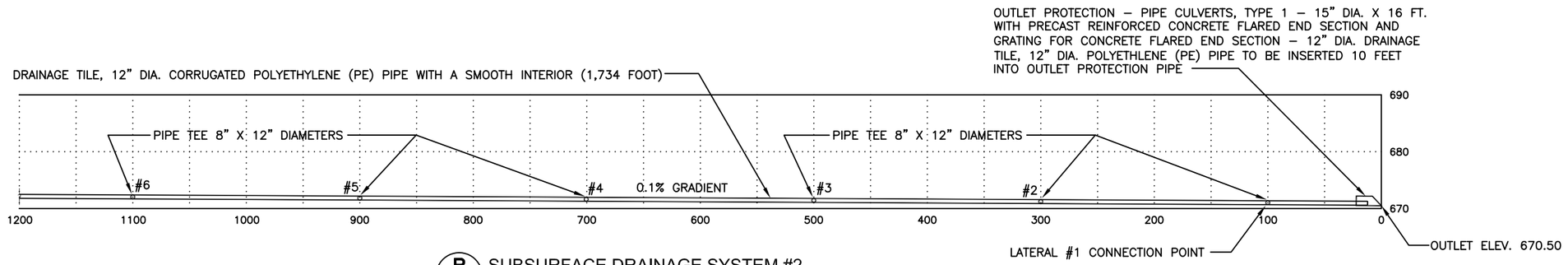


A/23 SUBSURFACE DRAINAGE SYSTEM #2 LATERALS

NOT TO SCALE

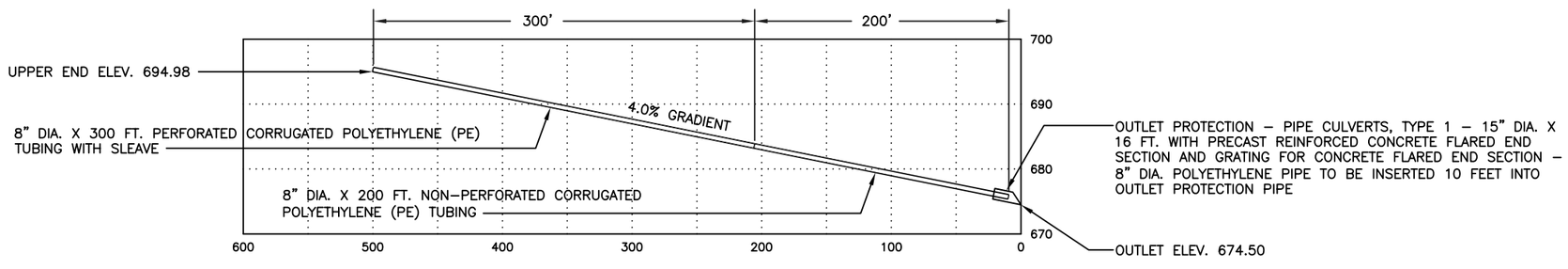
	ELEVATION AT TEE	GRADIENT	ELEVATION AT END OF TILE
LATERAL #1	670.61	3.5%	675.86
LATERAL #2	670.81	3.5%	676.06
LATERAL #3	671.01	3.5%	676.26
LATERAL #4	671.21	3.5%	676.46
LATERAL #5	671.41	3.5%	676.66
LATERAL #6	671.61	3.5%	676.86
LATERAL #7	671.81	2.0%	674.81
LATERAL #8	672.10	3.5%	677.35





B/23 SUBSURFACE DRAINAGE SYSTEM #2

NOT TO SCALE



C/23 SUBSURFACE DRAINAGE SYSTEM #1

NOT TO SCALE

State of Illinois
Department of Natural Resources

Peabody Mine #17
Reclamation Project
AML-GCtE-1306
Christian County

Drawn By: M–LF & V.P. Date: 12/6/2013
Checked By:

Profiles of Subsurface Drainage Systems

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