

# State of Illinois

## Department of Natural Resources

Office of Mines and Minerals

Division of Abandoned Mined Lands

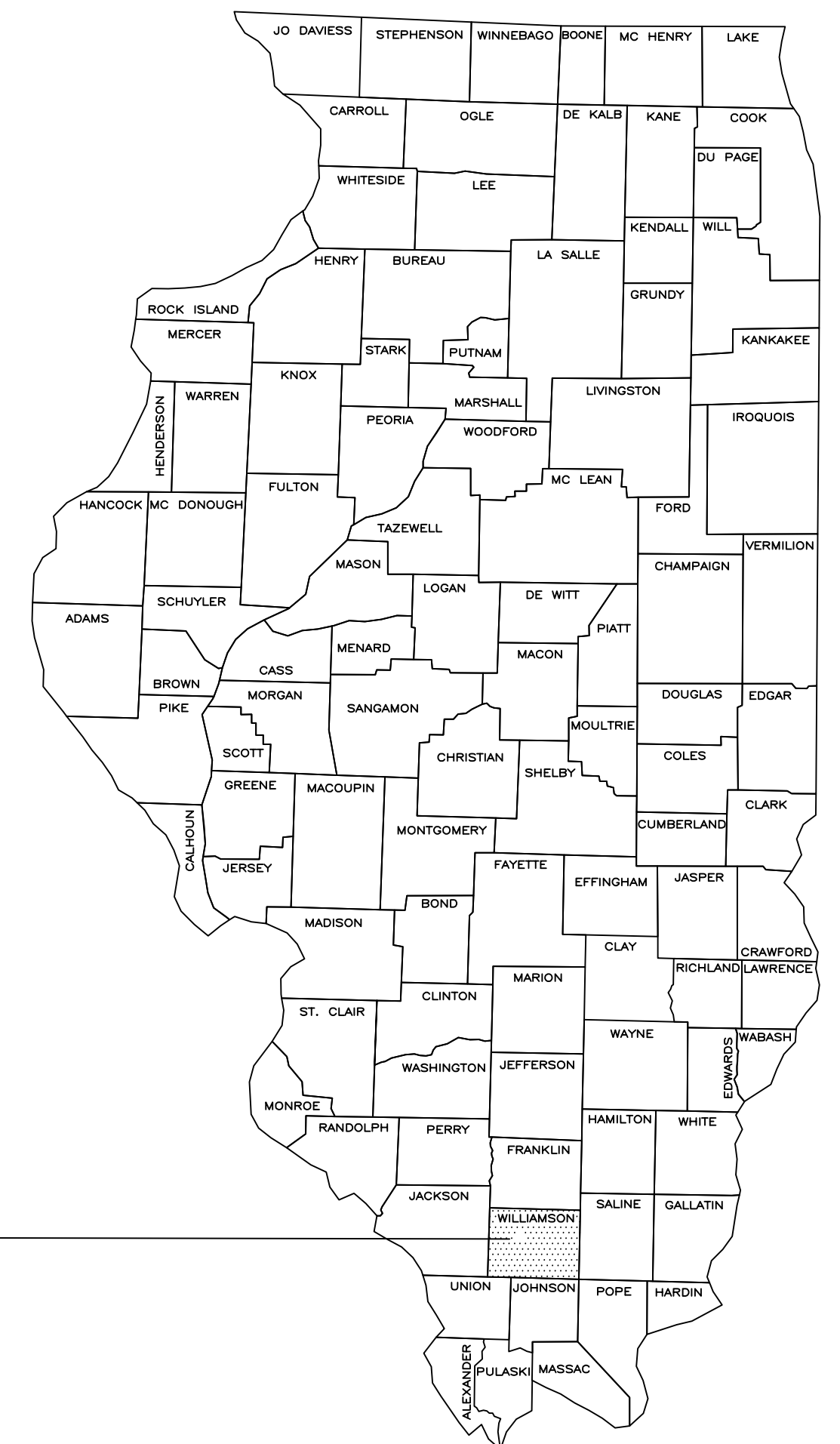
Funded by the  
United States Department of Interior  
Federal Office of Surface Mining

Burr Mine Group  
Reclamation Project  
AML-GWmE-0710  
Williamson County  
2LR

### SCHEDULE OF DRAWINGS:

1. Cover Sheet
2. Summary of Quantities / General Notes
3. Burr Mine Site Layout / General Location Map
4. Thomas Site Existing and Proposed Conditions
- 5-11. Thomas Site Cross Sections
12. Ladd Site Existing and Proposed Conditions
- 13-14. Ladd Site Cross Sections
15. Hunter Site Existing and Proposed Conditions
- 16-17. Hunter Site Cross Sections
18. Hall West Site Existing and Proposed Conditions
19. Hall West Site Cross Sections
- 20-21. Hall East Site Existing and Proposed Conditions
- 22-34. Hall East Site Cross Sections
35. Brookhouse Site Existing and Proposed Conditions
36. Rayfield Site Existing and Proposed Conditions
37. Details  
I.D.O.T. Standard 701006-03 Traffic Control  
I.D.O.T. Standard 280001-05 Erosion Control

**Certified Copy**




Williamson County

### Notice:

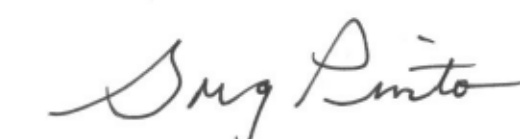
A Pre-Bid Meeting will be held at 10:00 AM,  
Friday, January 8, 2010 at the residence at 4931  
Sycamore Road in Carterville, IL.

Prepared By IDNR Staff

Approved for Bidding:

  
Joseph R. Angleton, Director  
Office of Mines and Minerals

Approved By:

  
Greg Pinto, Acting Manager  
AML Division

Approved By:

  
Lawrence L. Lewis, P.E.  
IL Licensed Professional Engineer  
No. 0062-038880



**Summary of Quantities**

No.	Item	Section	Unit	Project Sites											Quantity	Rates/Remarks
				Thomas	Ladd	Hunter	Hall West	Hall East	Brookhouse	Rayfield-Stroud	Sizemore	Haul Routes				
1	Special Clearing	201	L.S.	0.23	0.15	0.14	0.03	0.32	0.01	0.02	0.07	0.07	1			
2	Earth Excavation	202	C.Y.	481	7272	421	59	87666	0	0	0	0	95899	Compaction per Sec. 205		
3	Earth Excavation & Haulage	202	C.Y.	0	0	26589	2171	0	0	0	0	0	28760	Compaction per Sec. 205		
4	Furnished Excavation	204	C.Y.	14585	0	0	0	0	698	181	124	0	15588	Compaction per Sec. 205		
5	Special Excavation	214	C.Y.	8854	7698	46059	4088	0	1471	2942	1422	0	72534	Compaction per Sec. 205		
6	Class SI Concrete Plug	216	C.Y.	0	334	517	168	0	145	112	56	0	1332			
7	S.B.B.A. Fill	216	C.Y.	0	0	96	0	0	0	0	0	0	96			
8	Riprap Fill C-4	216	Ton	0	143	1167	66	0	78	44	22	0	1520.0			
9	Seeding	250	Acre	16.5	11	10	2	21.5	0.6	2	1	7.1	71.7			
10	Nitrogen	250	Pound	3300	2200	2000	400	4300	120	400	200	1420	14340	100 lb/acre - twice		
11	Phosphorous	250	Pound	2475	1650	1500	300	3225	90	300	150	1065	10755	150 lb./acre		
12	Potassium	250	Pound	6947	4631	4210	842	9052	253	842	421	2989	30187	371 lb./acre + 50 lb./acre		
13	Agricultural Ground Limestone	250	Ton	165	110	100	20	215	6	20	10	71	717.0	10 ton/acre		
14	Mulch, Method 2, Procedure 1	IDOT 251	Acre	16.5	11	10	2	21.5	0.6	2	1	7.1	71.7	2 tons/acre		
15	Mowing	258	Acre	16.5	11	10	2	21.5	0.6	0	0	4.1	65.7			
16	Perimeter Erosion Barrier	280	Foot	402	0	312	276	94	0	0	0	0	1084	IDOT Std. 280001-05		
17	Inlet and Pipe Protection	280	Each	0	0	1	0	1	0	0	0	0	2	IDOT Std. 280001-05		
18	Stone Riprap A-3	IDOT 281	S.Y.	745	1866	0	0	2964	0	0	0	0	5575			
19	Stone Riprap A-4	IDOT 281	S.Y.	0	0	0	0	1359	0	0	0	0	1359			
20	Special Excelsior Blanket	286	S.Y.	1745	347	1527	249	5511	98	0	0	0	9477			
21	Aggregate Surface Course, Type B	IDOT 402	Ton	30	18	0	32	130	37	38	29	0	314.0			
22	Pipe Culvert, 18", PE, corr., smooth interior	IDOT 542	Foot	0	0	0	0	60	0	0	0	0	60	Type 1		
23	Pipe Culvert, 36", PE, corr., smooth interior	IDOT 542	Foot	0	0	70	0	70	0	0	0	0	140	One Type 1 & One Type 2		
24	Dewatering Impoundments	614	L.S.	0.2	0.2	0.2	0	0.4	0	0	0	0	1			
25	Entrance Gate	665	Each	1	0	0	0	0	0	0	0	0	1			
26	Barbed Wire Fence	665	Foot	280	0	0	0	450	0	50	40	0	820			
27	Mobilization	671	L.S.	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0	1			
28	Traffic Control	701	L.S.	0	0	1	0	0	0	0	0	0	1	IDOT Std. 701006-03		

**CONSTRUCTION NOTES**

**BURIAL/REMOVAL OF MATERIAL**—Concrete and masonry debris designated for burial by the engineer shall be buried at least two 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 202.03 of the Special Provisions.

**TREE REMOVAL**—Trees removed shall be disposed of onsite per Section 201 and 202 of the Special Provisions. Tree clearing shall be completed prior to April 1, 2010.

**ACID WATER TREATMENT**—Although no treatment is anticipated, if acid mine drainage is encountered, treatment shall be in accordance with 614 of the Special Provisions.

**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.

**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. Access roads to the site as designated on 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.

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

The locations from which Furnished Excavation comes must meet the review requirements of Article 107.22 and Section 204 of the Special Provisions prior to disturbance.

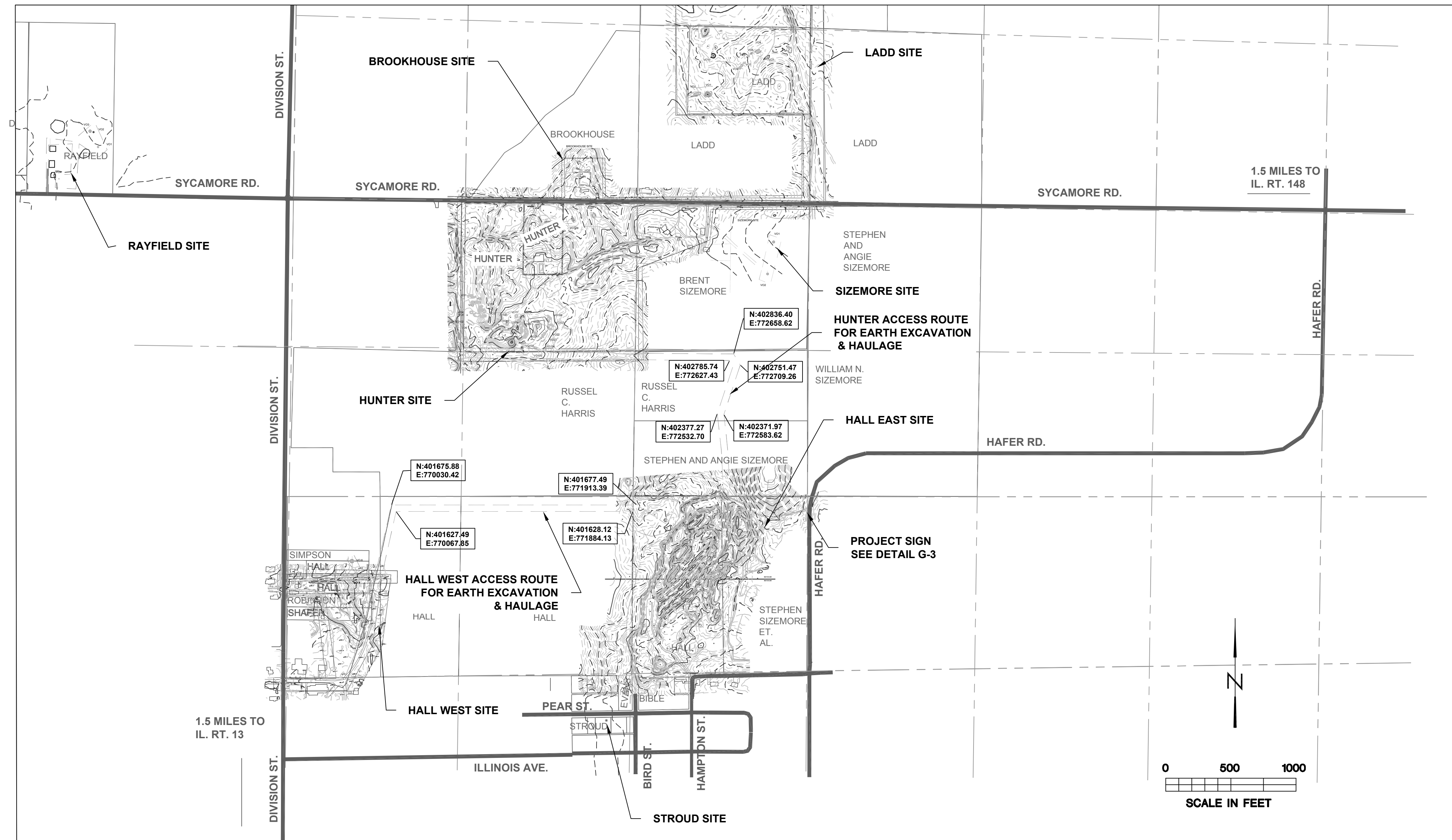
**Schedule of Seeding, Fertilizer Nutrients and Mulch**

ITEM (unit)	FALL 2010	SECOND APPLICATION	TOTAL QUANTITY
	AUGUST 20 – SEPTEMBER 30	JANUARY 1–MARCH 15, 2011	
SEEDING (acres)	71.7		71.7
NITROGEN FERTILIZER NUTRIENT (pounds)	7170 (100 LB/ACRE)	7170 (100 LB/ACRE)	14340
PHOSPHOROUS FERTILIZER NUTRIENT (pounds)	10755 (150 LB/ACRE)	0	10755
POTASSIUM FERTILIZER NUTRIENT (pounds)	26601 (371 LB/ACRE)	3586 (50 LB/ACRE)	30187
AGRICULTURAL GROUND LIMESTONE (tons)	717 (10 TON/ACRE)		717
MULCH, METHOD 2 PROCEDURE 1 (acres)	71.7		71.7
MOWING 65.7 (acres)	MOWING TO BE COMPLETED PRIOR TO JUNE 30, 2011 WITH ENGINEER APPROVAL		

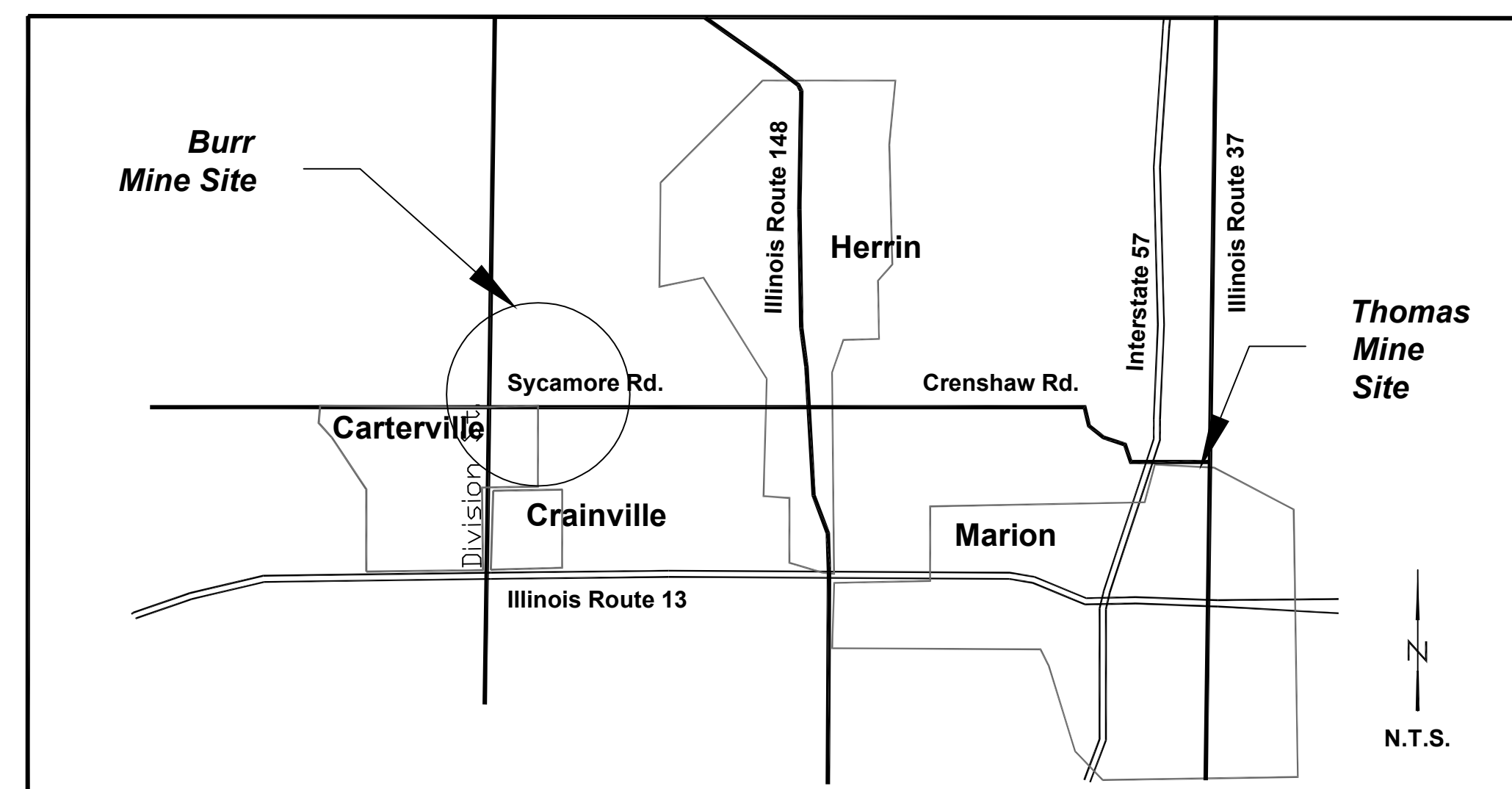
**VERTICAL OPENING (VO)  
QUANTITY REFERENCE**

SITE & VO NUMBER	SPEC. EXC.	RR FILL	CONC. FILL	EARTH FILL**	S.B.A. FILL
<b>Thomas Site</b>					
VO 1				15066	
VO 3	87			*	
VO 4	2067			*	
VO 5	289			*	
VO 6	394			*	
VO 7	491			*	
VO 8	961			*	
VO 9	718			*	
VO 10	699			*	
VO 11	164			*	
VO 14	236			*	
VO 15	117			*	
VO 16	125			*	
VO 17	262			*	
VO 18	113			*	
VO 19	199			*	
VO 20	138			*	
VO 21	80			*	
VO 22	54			*	
VO 23	84			*	
VO 24	743			*	
VO 25	466			*	
	367			*	
<b>Ladd Site</b>					
VO 1				4113	
VO 2	381	11	28	601	
VO 3	575	11	28	400	
VO 4	689	11	28	*	
VO 5	1555	22	46	*	
VO 6	716	11	28	*	
VO 7	703	11	28	*	
VO 8	733	11	28	*	
VO 9	1459	33	64	*	
VO 10	172	11	28	923	
	715	11	28	92	
<b>Hunter Site</b>					
VO 1				26458	
VO 2	2386	33	64	*	
VO 3	857	11	29	*	
VO 4	857	11	29	*	
VO 5	922	11	29	*	
VO 6 & 102	7116	43	80	*	
VO 7	3328	37	81	*	
VO 8	732	3	13	*	
VO 9	1536	11	28	*	
VO 10	1536	11	28	*	
VO 11	1091	11	28	*	
VO 12	3873	11	28	*	
VO 13	391	11	28	*	
VO 14	759	11	28	*	
VO 15	902	11	28	*	
VO 16	838	11	28	*	
VO 17	2398	31	69	*	
VO 18	646	11	28	*	
VO 19	867	11	28	*	
VO 20	653	11	28	*	
VO 21	1490	19	45	*	
VO 22	23	11	28	*	
VO 23	750	11	28	*	
VO 24	2586	47	101	*	
VO 25	985	11		320	48
VO 100	1117	13	35	*	
VO 101	1126	11	28	*	
VO 103	751	11	28	*	
VO 104	743	11	28	*	
VO 105	1147	11	28	*	
VO 106	1259	11	28	*	
VO 107	611	16	36	*	
VO 108	942	19	45	*	
VO 109	585	11	48	199	48
VO 110	256	3	7	33	
<b>Hall West</b>					
VO 1				2033	
VO 2	712	11	28	*	
VO 3	733	11	28	*	
VO 4	677	11	28	*	
VO 5	707	11	28	*	
VO 6	662	11	28	*	
	597	11	28	197	
<b>Brookhouse</b>					
VO 1				265	
VO 2	699	11	28	57	
	772	67	117	376	
<b>Rayfield</b>					
VO 1				63	
VO 2	725	11	28	10	
VO 3	746	11	28	39	
VO 4	717	11	28	34	
VO 5	754	11	28	35	
Stroud VO	0	0	0	35	
<b>Size more</b>					
VO 1				0	
VO 2	692	11	28	84	
	730	11	28	40	

\* Earth Fill included in site grading quantities as shown on the cross sections.  
\*\* Earth Fill does not include quantities for compaction and/or shrinkage and does not correspond to the the Earth Excavation quantities shown in the contract.



**BURR MINE SITES LAYOUT**



**GENERAL LOCATION MAP**

SPACING LETTERS

2.0"	3.5"
1.5"	3.5"
1.5"	3.5"
1.5"	3.5"
3.5"	3.0"
3.5"	2.5"
1.5"	2.5"
3.5"	2.0"
1.5"	2.0"
2.0"	

RECLAMATION PROJECT  
of the  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF ILLINOIS  
PAT QUINN, GOVERNOR

10" dia. Marc Miller, Director  
Department of Natural Resources

In cooperation with the Office of Surface Mining  
United States Department of the Interior

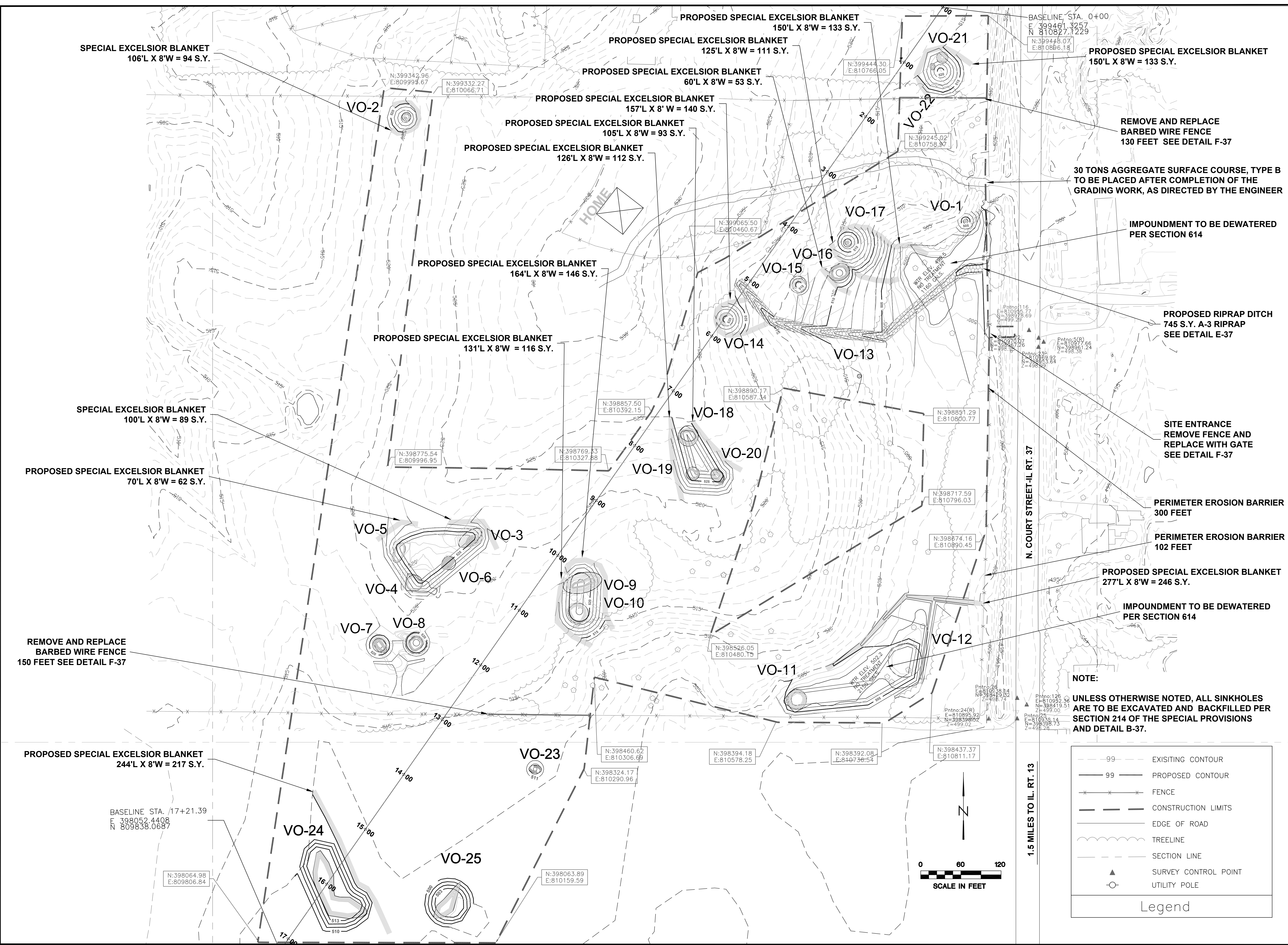
1. Furnishing, erecting and removing the sign shall be incidental to the contract.
2. The sign shall be painted on 1/2" or thicker exterior plywood (4' x 8'), color shall be black on white, and a 10" diameter Illinois state seal shall be provided by the D.N.R.
3. The posts shall be made of 4" x 4" wood or 2.5" metal pipe, and shall be 10' long. The sign shall be securely fastened to the posts with six 2.5" long, round head wood screws (for wood posts) or four 5" long, 3/8" diameter carriage bolts (for wood or metal posts).
4. The top of the sign shall be level with the top of the posts, and the posts shall be 1' from the edges of the sign. The posts shall be set in the ground 3', so that the bottom of the sign is 3' from the ground.

**G  
3**

**CONSTRUCTION SIGN DETAIL**

NOT TO SCALE

Drawn By: M.T.  
Checked By:  
Date: 9/15/09



REMOVE AND REPLACE BARBED WIRE FENCE 130 FEET SEE DETAIL F-37

30 TONS AGGREGATE SURFACE COURSE, TYPE B TO BE PLACED AFTER COMPLETION OF THE GRADING WORK, AS DIRECTED BY THE ENGINEER

IMPOUNDMENT TO BE DEWATERED PER SECTION 614

PROPOSED RIPRAP DITCH 745 S.Y. A-3 RIPRAP SEE DETAIL E-37

SITE ENTRANCE REMOVE FENCE AND REPLACE WITH GATE SEE DETAIL F-37

PERIMETER EROSION BARRIER 300 FEET

PERIMETER EROSION BARRIER 102 FEET

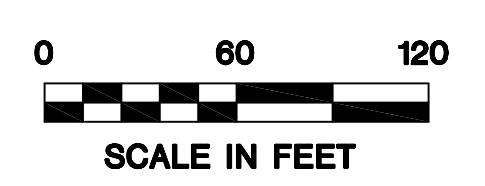
PROPOSED SPECIAL EXCELSIOR BLANKET 277' L X 8' W = 246 S.Y.

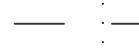
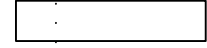

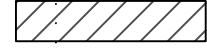
IMPOUNDMENT TO BE DEWATERED PER SECTION 614

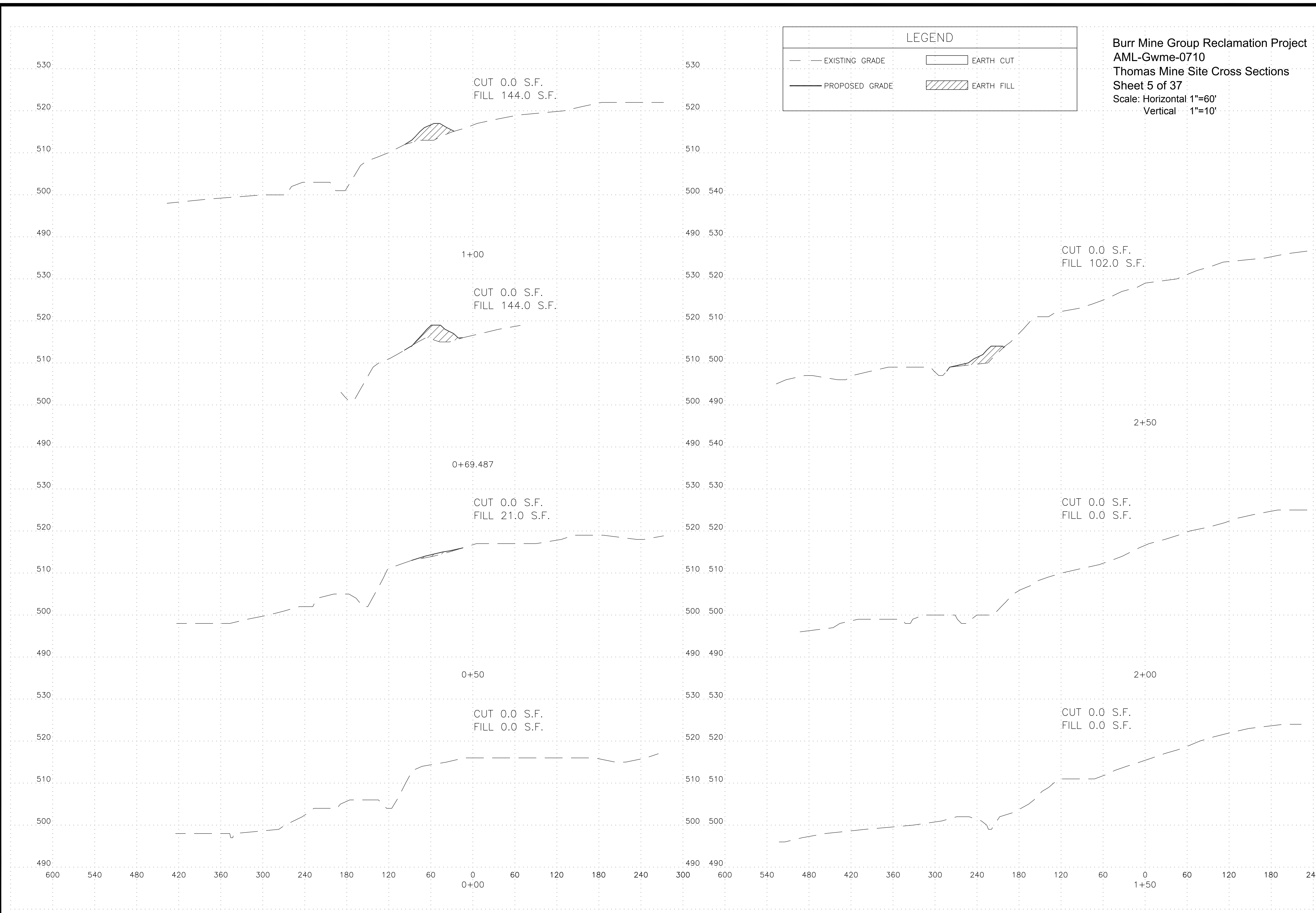
**NOTE:**  
UNLESS OTHERWISE NOTED, ALL SINKHOLES ARE TO BE EXCAVATED AND BACKFILLED PER SECTION 214 OF THE SPECIAL PROVISIONS AND DETAIL B-37.

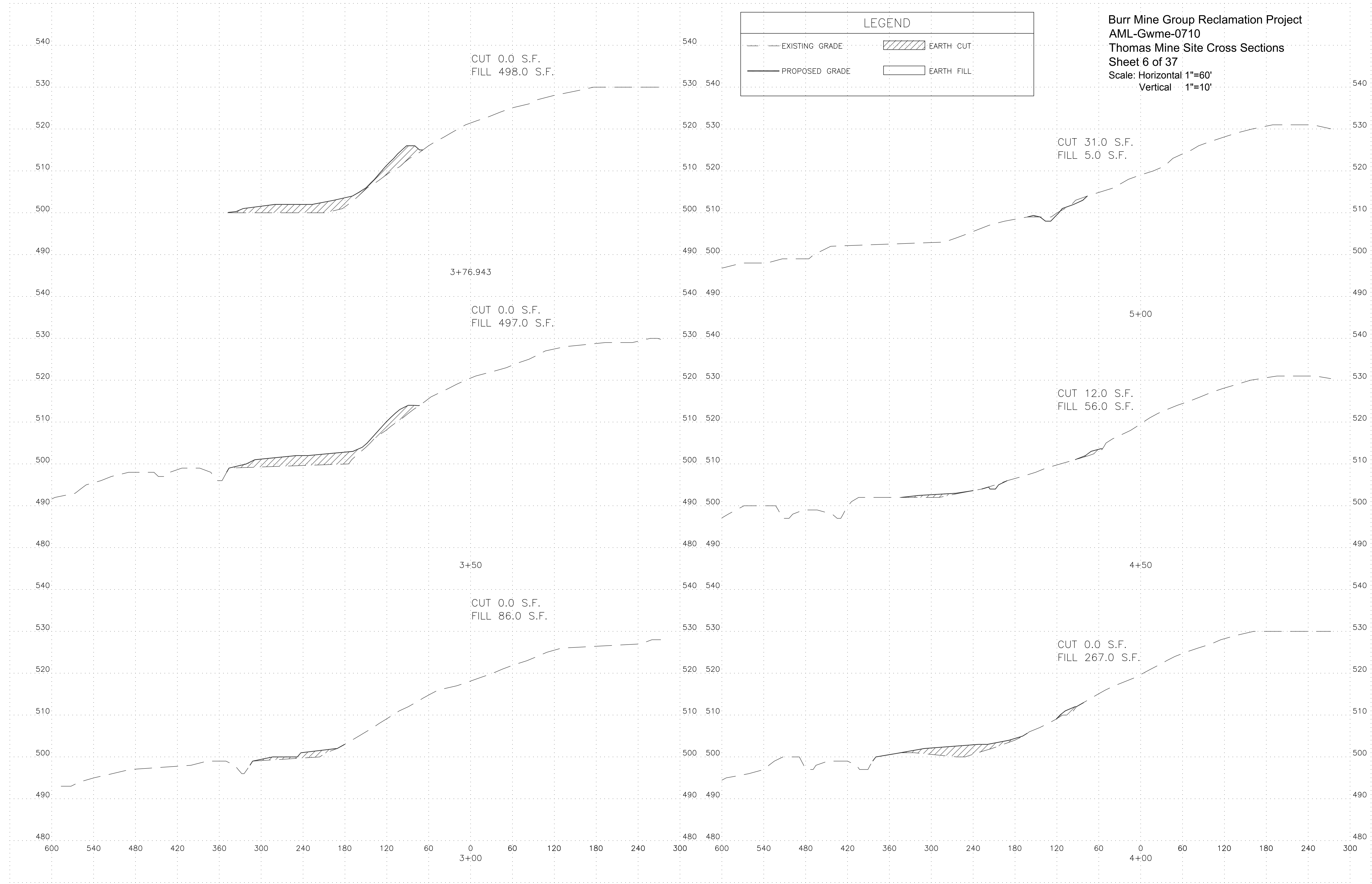
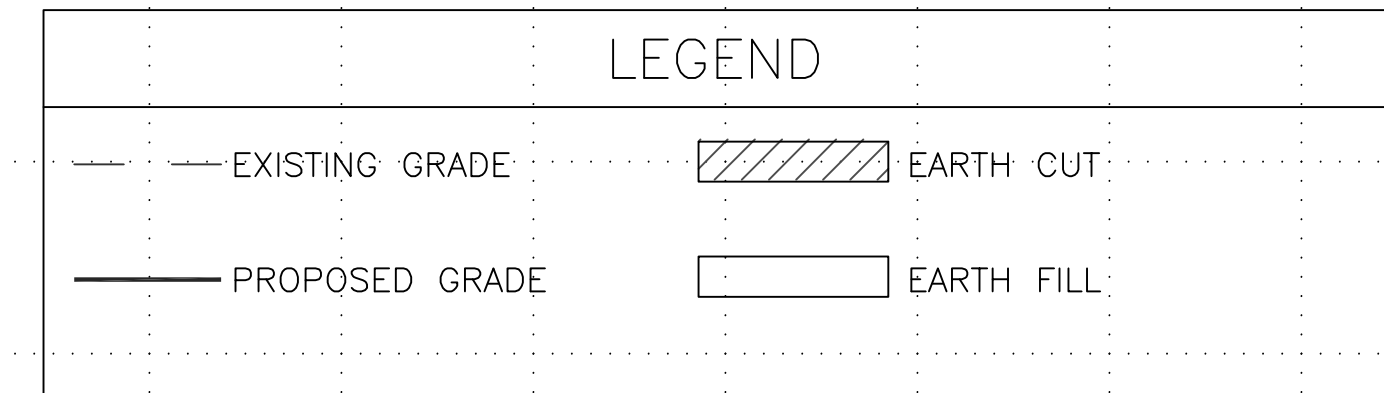
	99	EXISTING CONTOUR
	99	PROPOSED CONTOUR
		FENCE
		CONSTRUCTION LIMITS
		EDGE OF ROAD
		TREELINE
		SECTION LINE
		SURVEY CONTROL POINT
		UTILITY POLE
Legend		




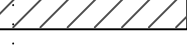
1.5 MILES TO IL. RT. 13



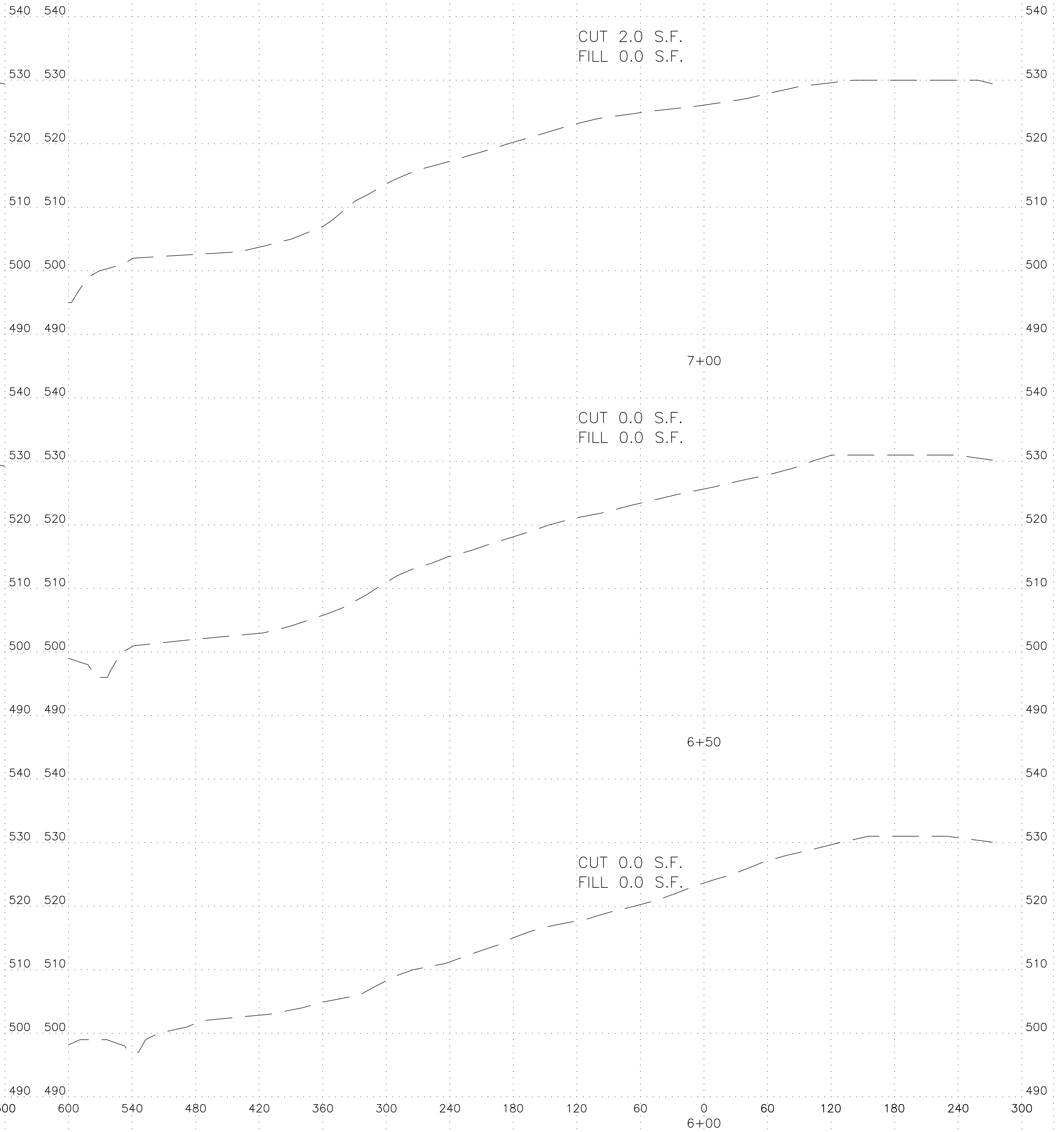
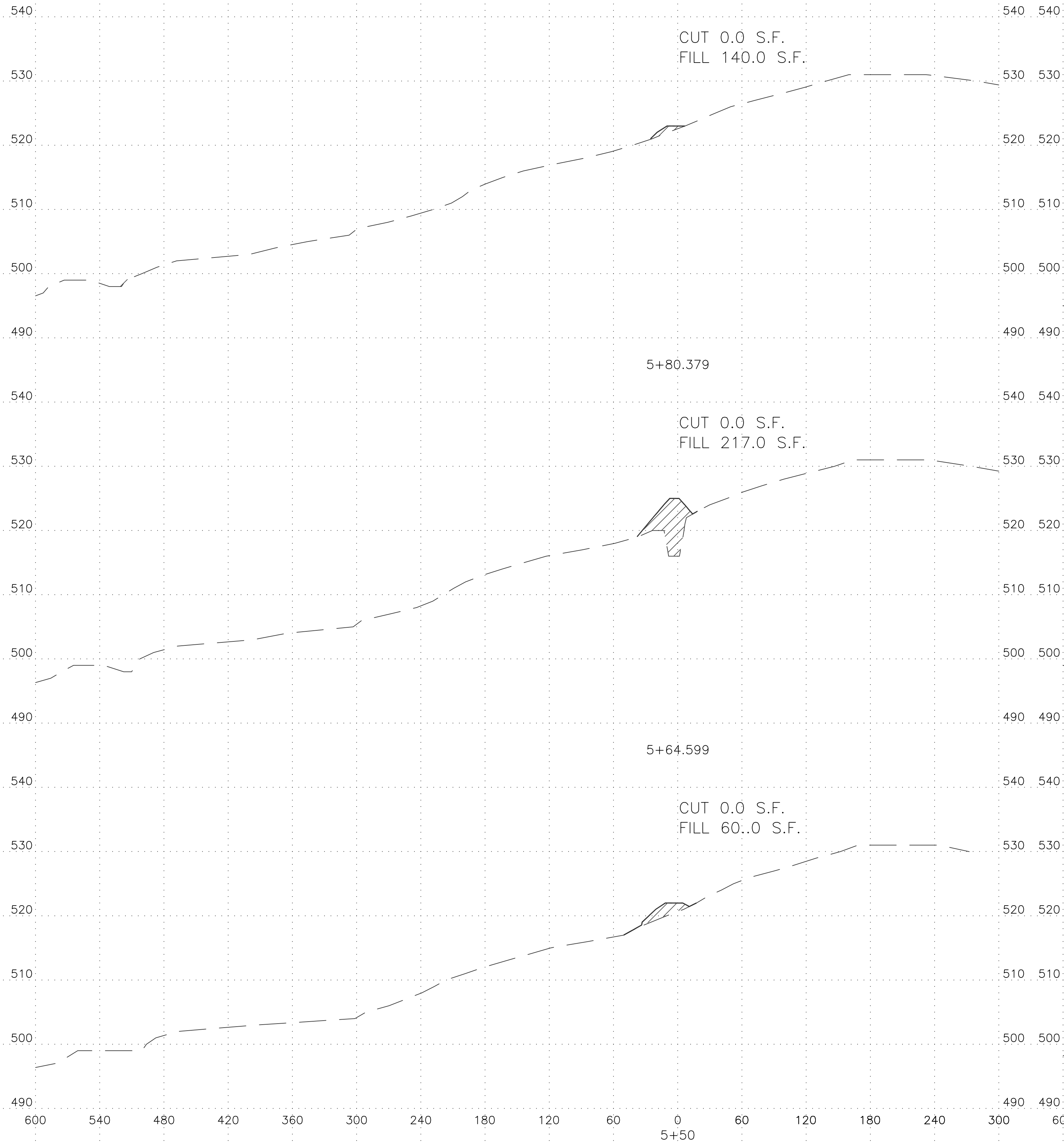
LEGEND			
	EXISTING GRADE		EARTH CUT
	PROPOSED GRADE		EARTH FILL

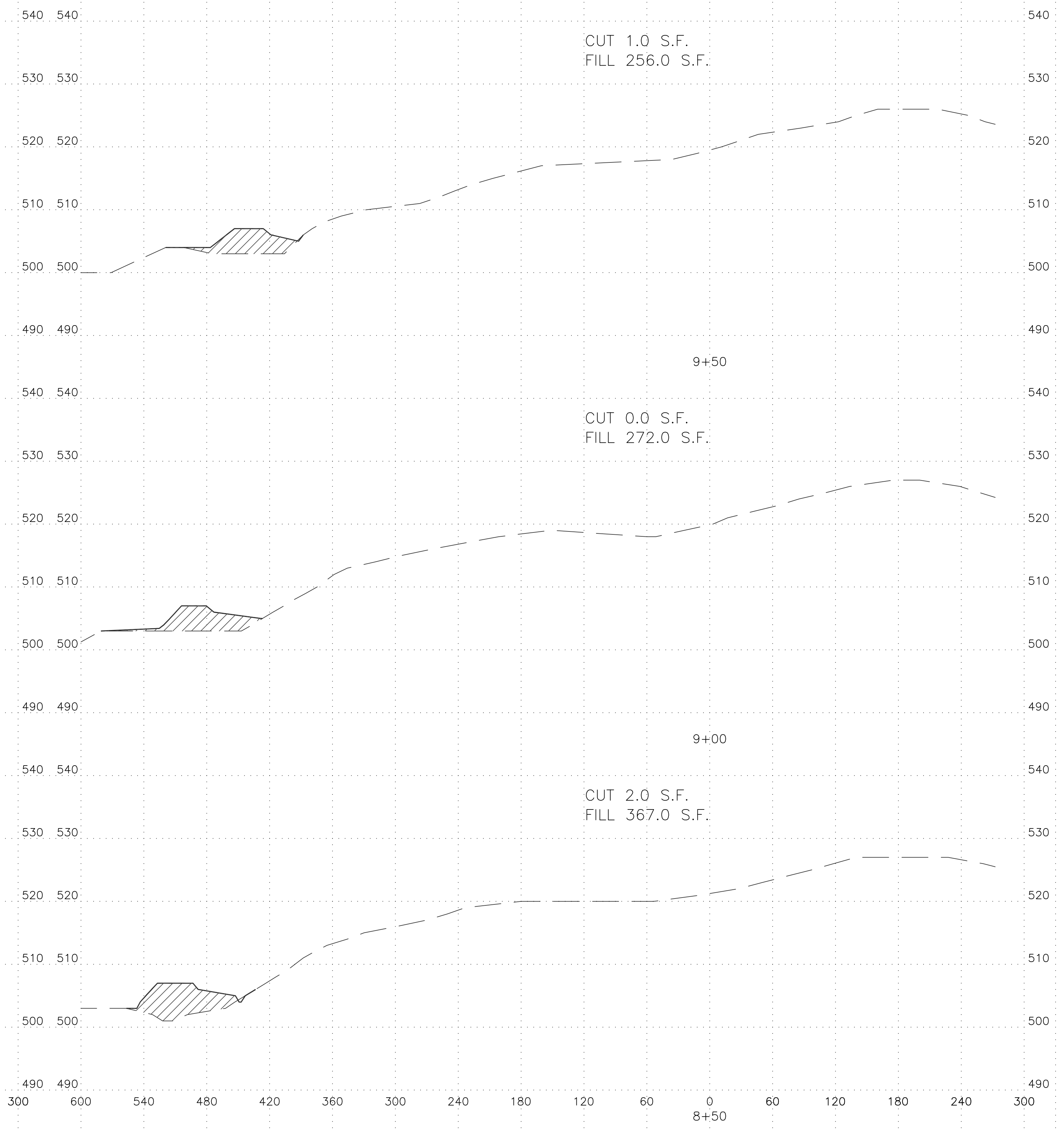
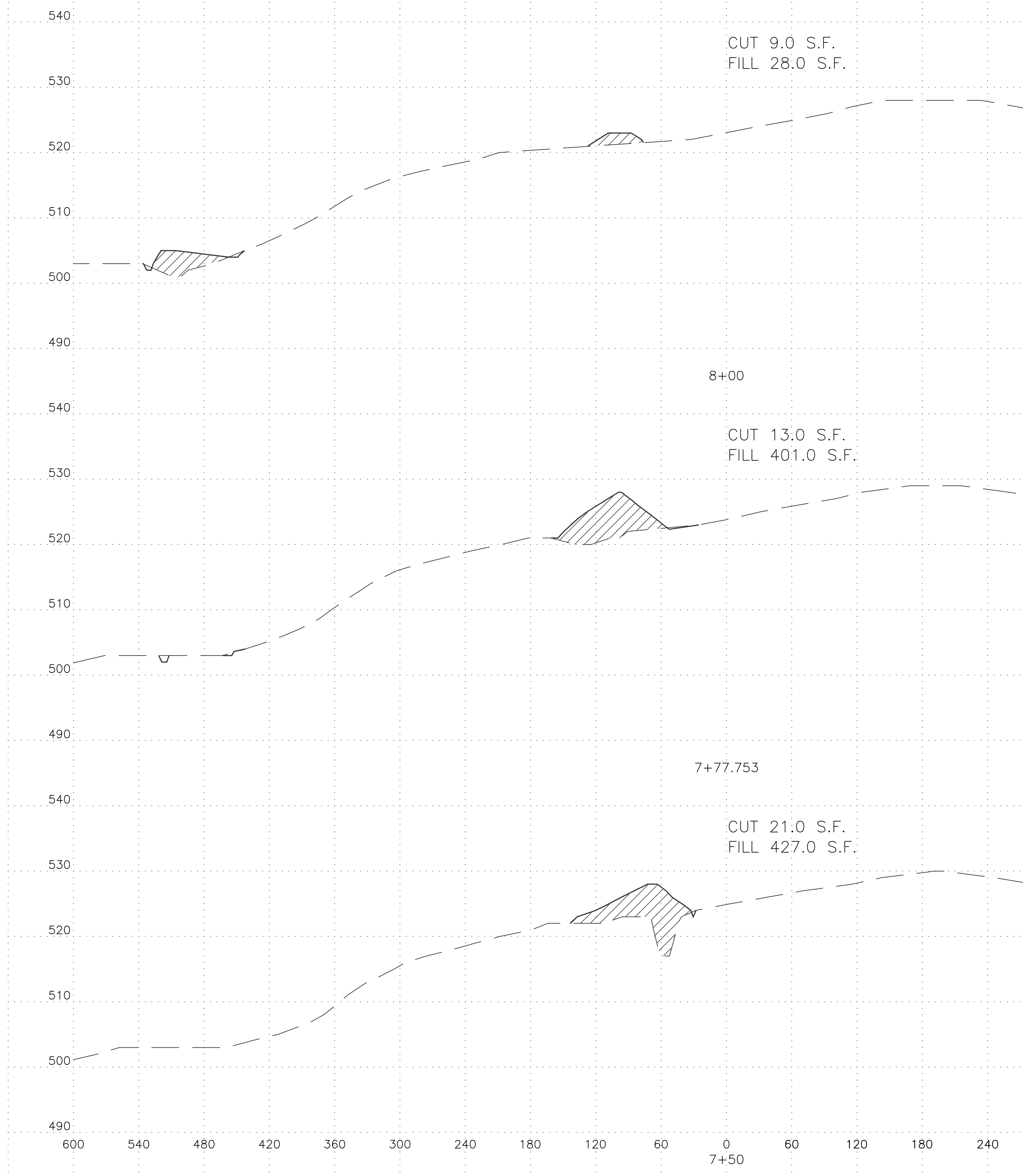
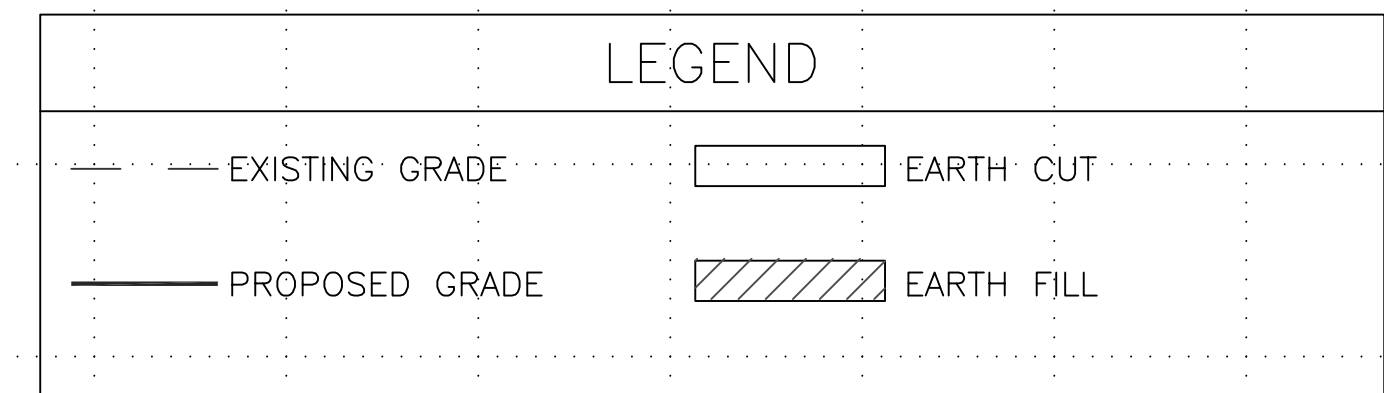




LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EARTH CUT
	EARTH FILL

Burr Mine Group Reclamation Project  
 AML-Gwme-0710  
 Thomas Mine Site Cross Sections  
 Sheet 7 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'



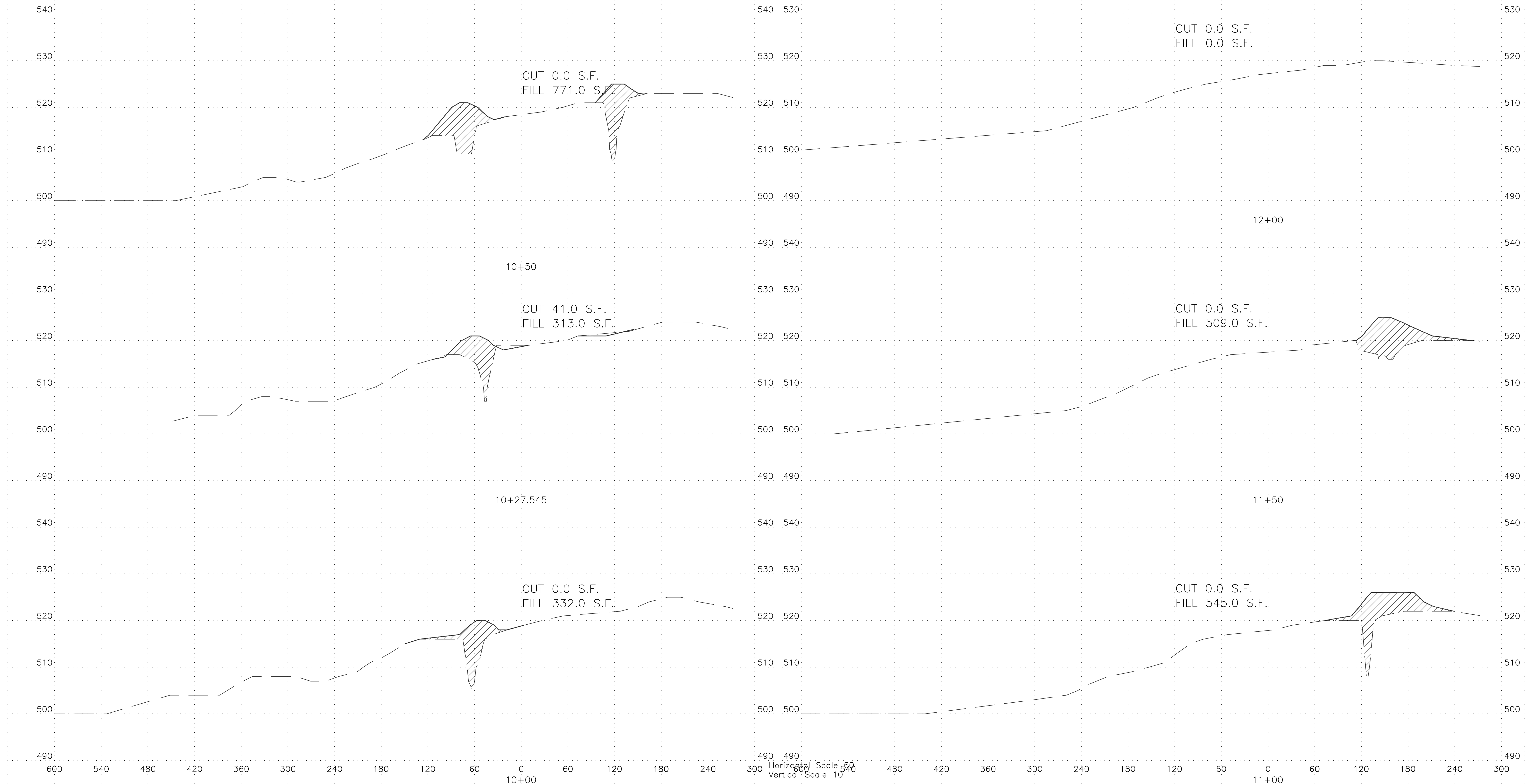


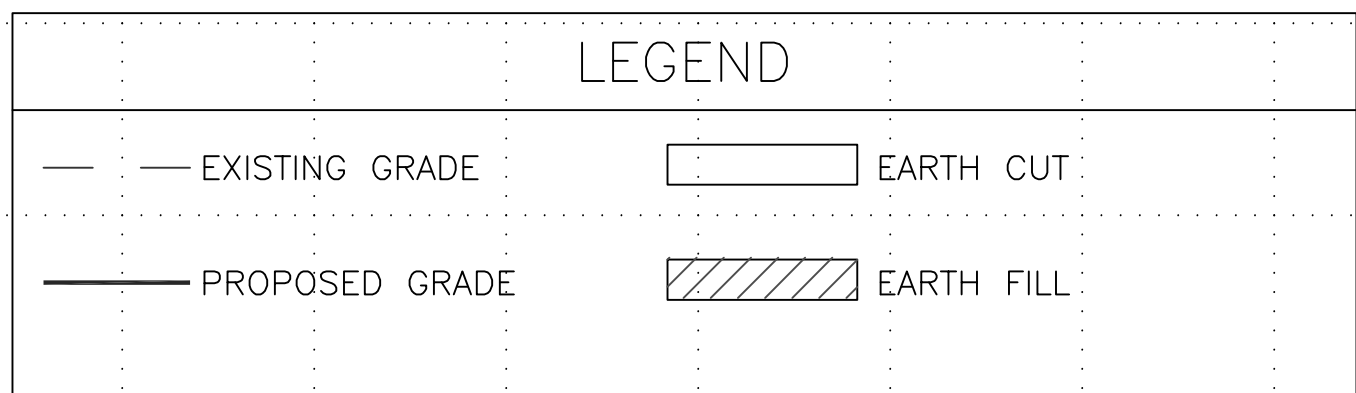


**LEGEND**

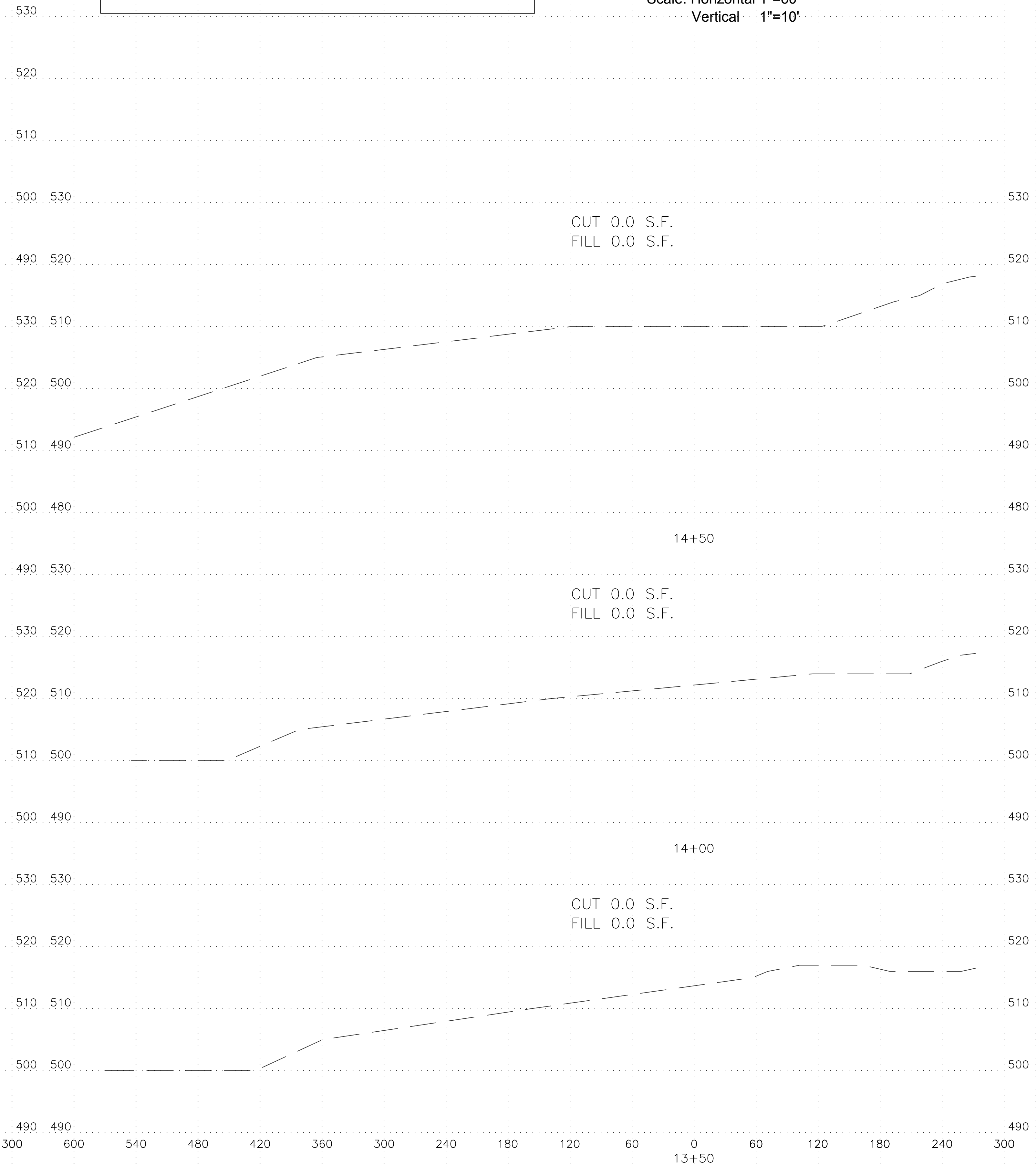
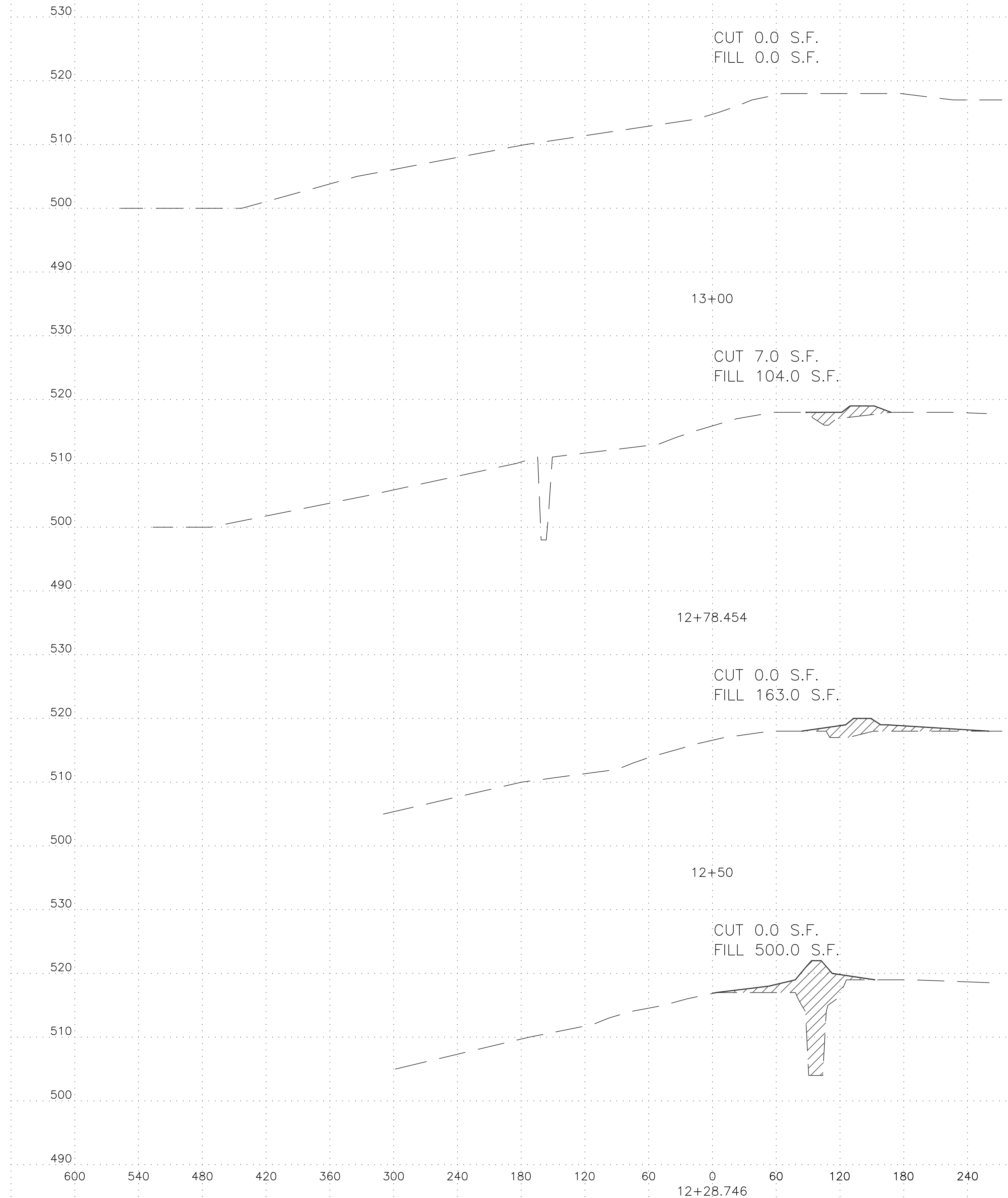
<p>— EXISTING GRADE</p> <p>— PROPOSED GRADE</p>	<p> EARTH CUT</p> <p> EARTH FILL</p>
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**Burr Mine Group Reclamation Project**  
**AML-Gwme-0710**  
**Thomas Mine Site Cross Sections**  
 Sheet 9 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'





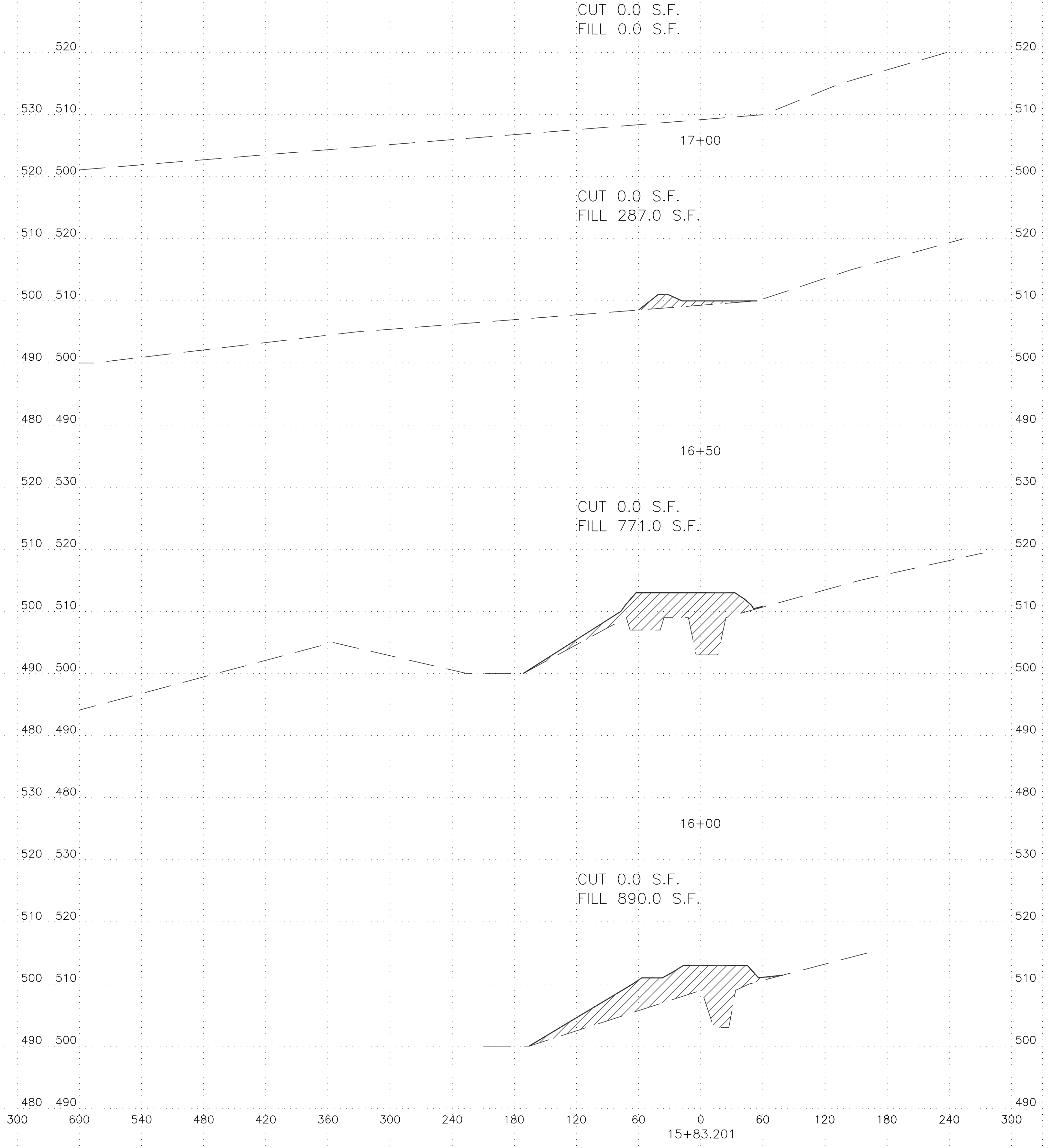
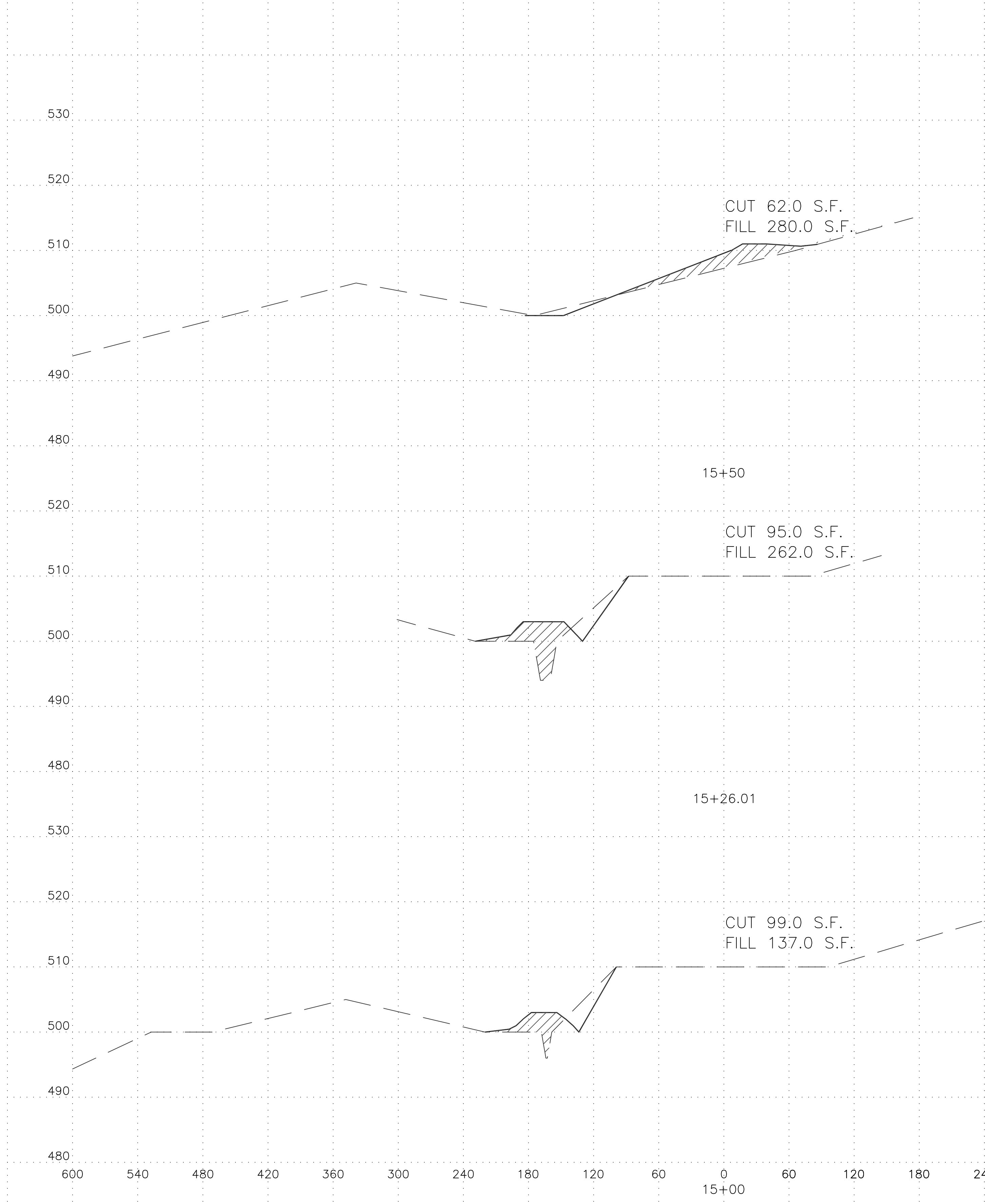
Burr Mine Group Reclamation Project  
 AML-Gwme-0710  
 Thomas Mine Site Cross Sections  
 Sheet 10 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

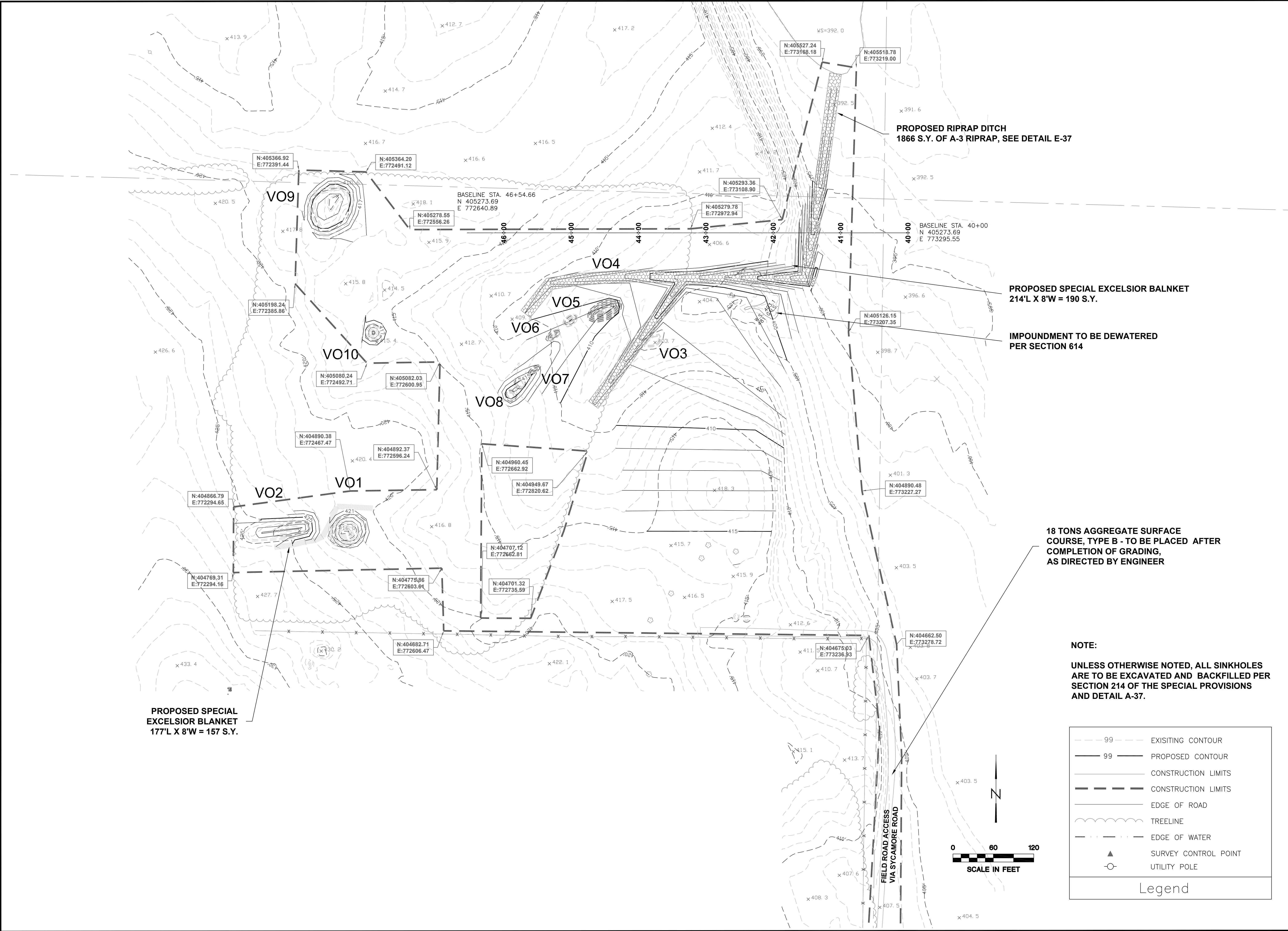


**LEGEND**

<p>— EXISTING GRADE</p> <p>— PROPOSED GRADE</p>	<p> EARTH CUT</p> <p> EARTH FILL</p>
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**Burr Mine Group Reclamation Project**  
**AML-Gwme-0710**  
**Thomas Mine Site Cross Sections**  
**Sheet 11 of 37**  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'





PROPOSED SPECIAL EXCELSIOR BLANKET  
214' L X 8' W = 190 S.Y.

IMPONDMENT TO BE DEWATERED  
PER SECTION 614

18 TONS AGGREGATE SURFACE  
COURSE, TYPE B - TO BE PLACED AFTER  
COMPLETION OF GRADING,  
AS DIRECTED BY ENGINEER

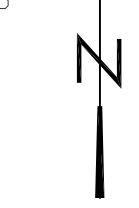
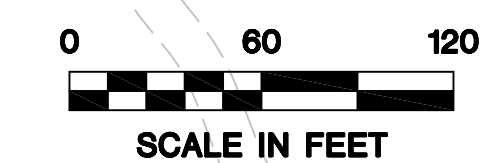
PROPOSED SPECIAL  
EXCELSIOR BLANKET  
177' L X 8' W = 157 S.Y.

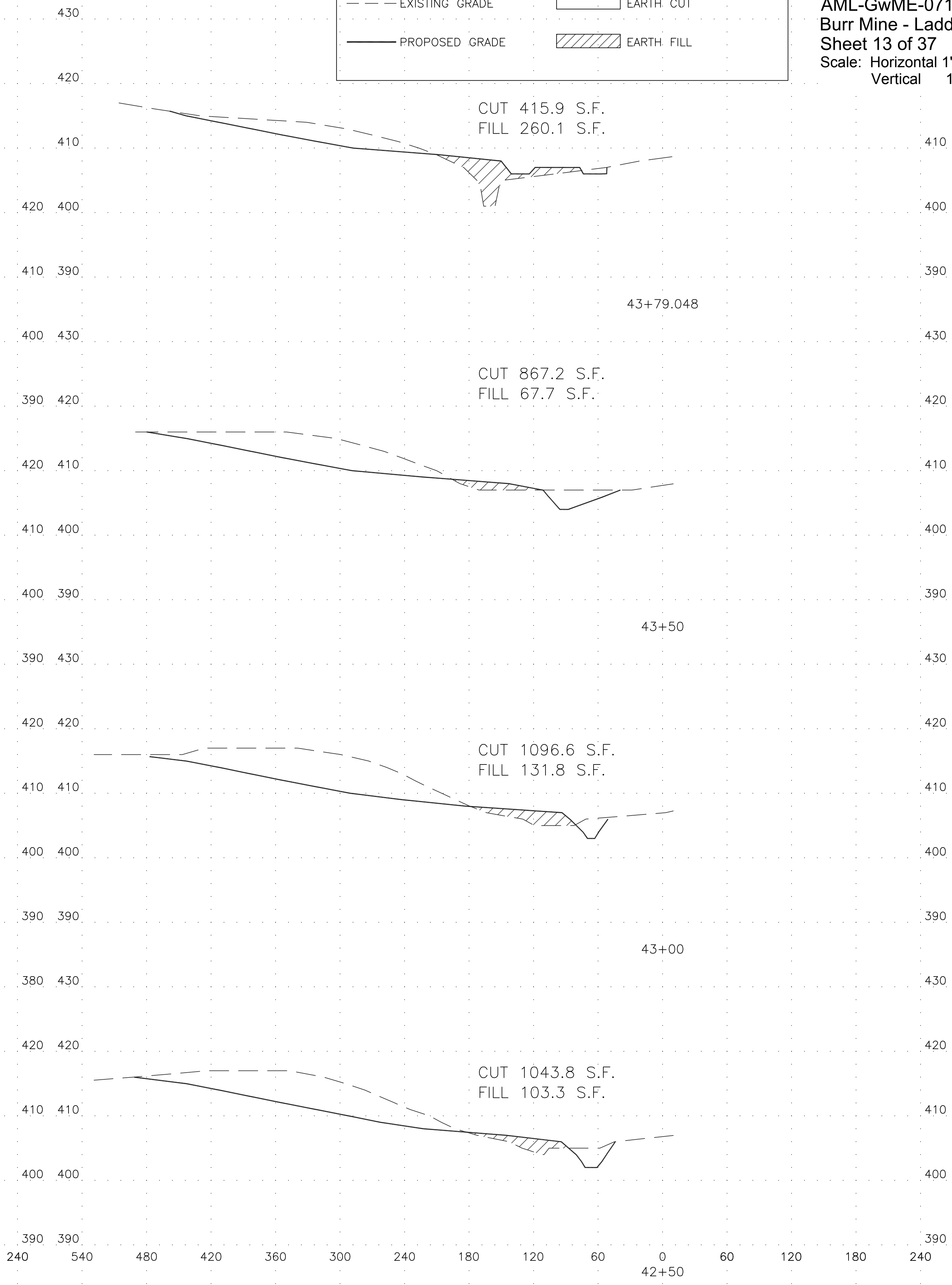
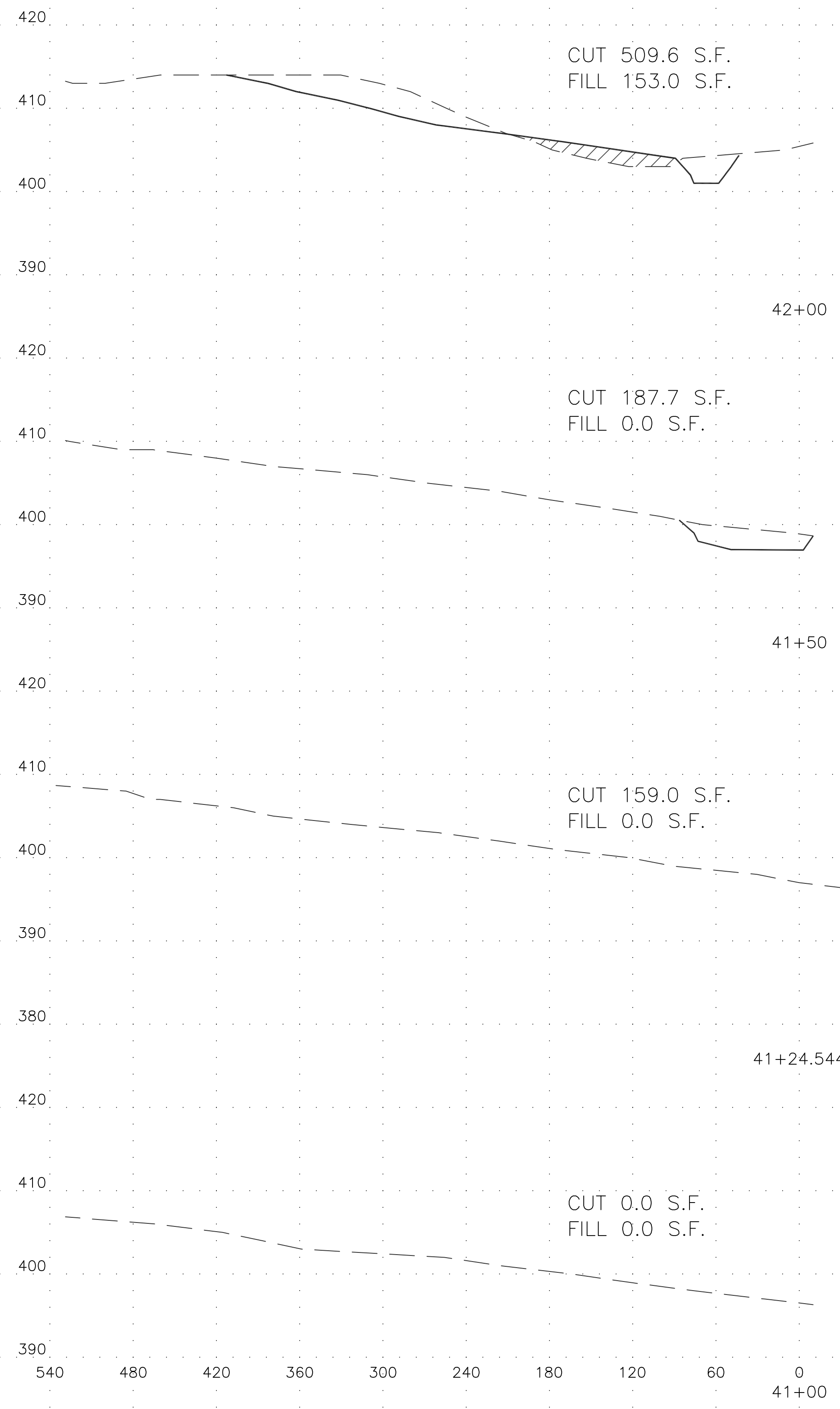
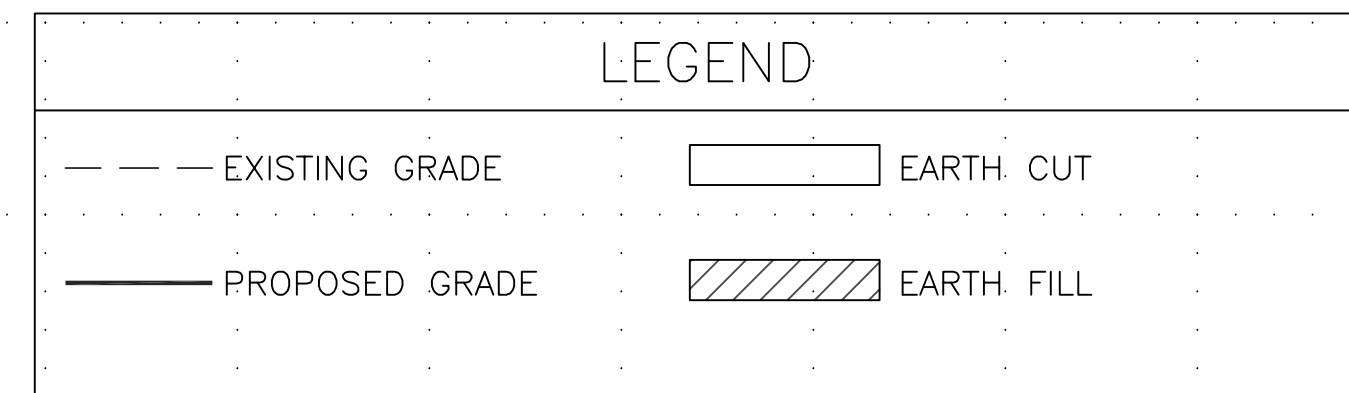
PROPOSED RIPRAP DITCH  
1866 S.Y. OF A-3 RIPRAP, SEE DETAIL E-37

**NOTE:**  
UNLESS OTHERWISE NOTED, ALL SINKHOLES  
ARE TO BE EXCAVATED AND BACKFILLED PER  
SECTION 214 OF THE SPECIAL PROVISIONS  
AND DETAIL A-37.



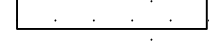
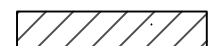
	EXISTING CONTOUR
	PROPOSED CONTOUR
	CONSTRUCTION LIMITS
	CONSTRUCTION LIMITS
	EDGE OF ROAD
	TREELINE
	EDGE OF WATER
	SURVEY CONTROL POINT
	UTILITY POLE

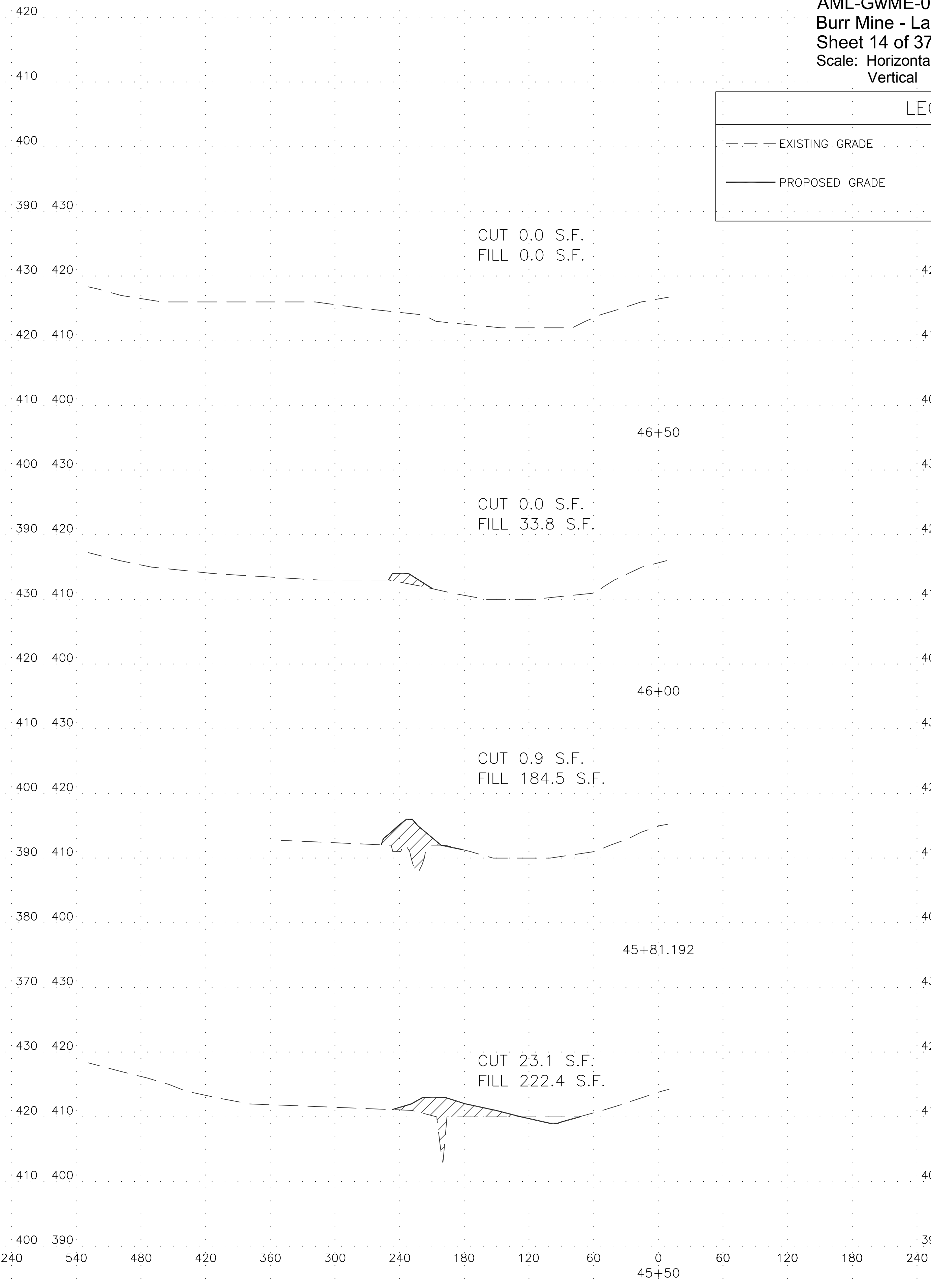
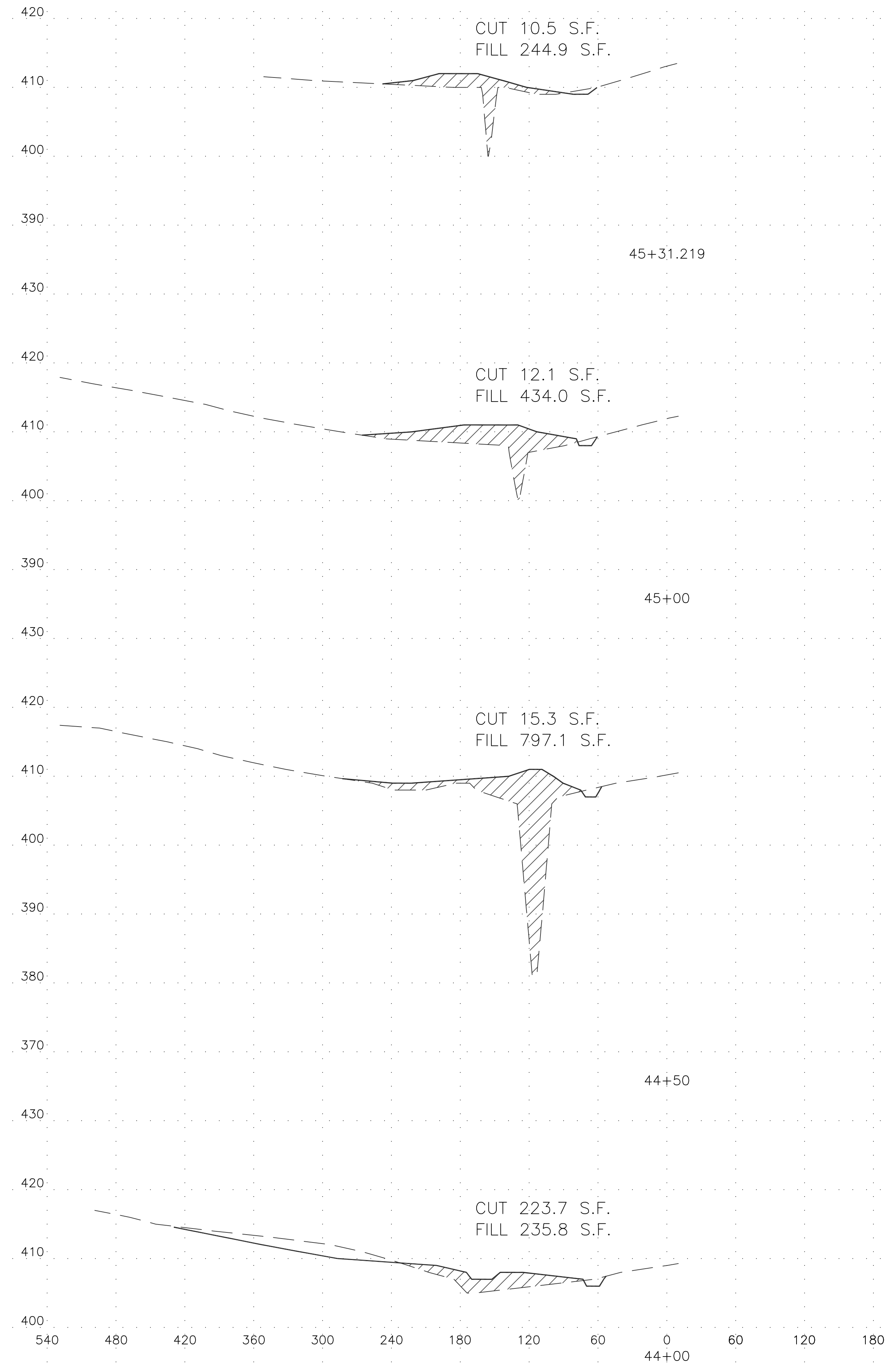
Legend

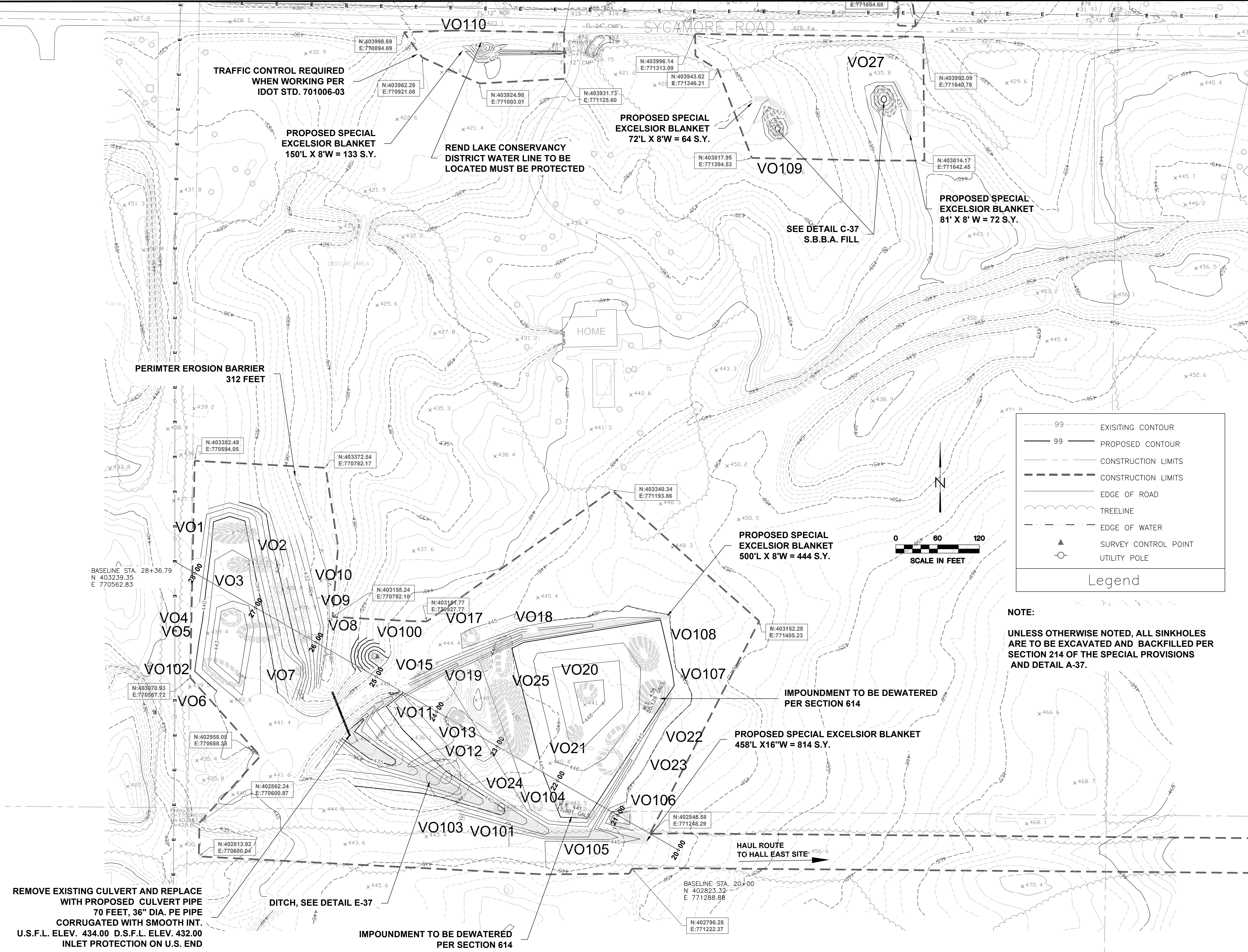




Burr Mine Group Reclamation Project  
 AML-GwME-0710  
 Burr Mine - Ladd Site Cross Sections  
 Sheet 14 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EARTH CUT
	EARTH FILL





**TRAFFIC CONTROL REQUIRED  
WHEN WORKING PER  
IDOT STD. 701006-03**

**PROPOSED SPECIAL  
EXCELSIOR BLANKET  
150'L X 8'W = 133 S.Y.**

**REND LAKE CONSERVANCY  
DISTRICT WATER LINE TO BE  
LOCATED MUST BE PROTECTED**

**PROPOSED SPECIAL  
EXCELSIOR BLANKET  
72'L X 8'W = 64 S.Y.**

**PROPOSED SPECIAL  
EXCELSIOR BLANKET  
81' X 8' W = 72 S.Y.**

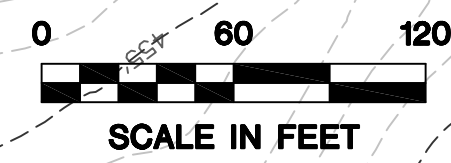
**SEE DETAIL C-37  
S.B.B.A. FILL**

**PERIMETER EROSION BARRIER  
312 FEET**

HOME

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

Legend



**NOTE:**  
UNLESS OTHERWISE NOTED, ALL SINKHOLES  
ARE TO BE EXCAVATED AND BACKFILLED PER  
SECTION 214 OF THE SPECIAL PROVISIONS  
AND DETAIL A-37.

**REMOVE EXISTING CULVERT AND REPLACE  
WITH PROPOSED CULVERT PIPE  
70 FEET, 36" DIA. PE PIPE  
CORRUGATED WITH SMOOTH INT.  
U.S.F.L. ELEV. 434.00 D.S.F.L. ELEV. 432.00  
INLET PROTECTION ON U.S. END**

**DITCH, SEE DETAIL E-37**

**IMPOUNDMENT TO BE DEWATERED  
PER SECTION 614**

**HAUL ROUTE  
TO HALL EAST SITE**

**IMPOUNDMENT TO BE DEWATERED  
PER SECTION 614**

**PROPOSED SPECIAL EXCELSIOR BLANKET  
458'L X 16"W = 814 S.Y.**

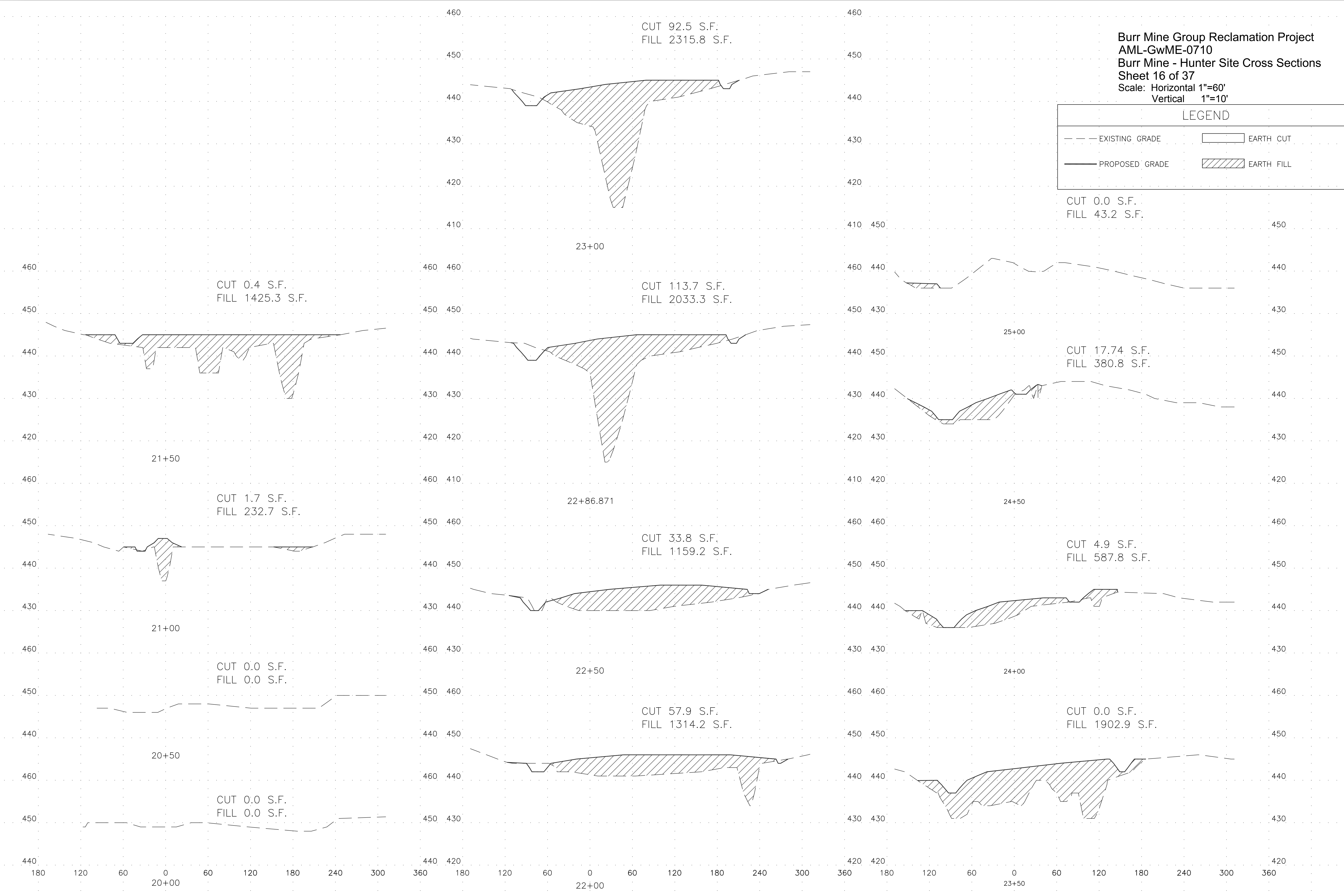
**PROPOSED SPECIAL  
EXCELSIOR BLANKET  
500'L X 8'W = 444 S.Y.**

BASELINE STA. 28+36.79  
N 403239.35  
E 770562.83

BASELINE STA. 20+00  
N 402823.32  
E 771288.88

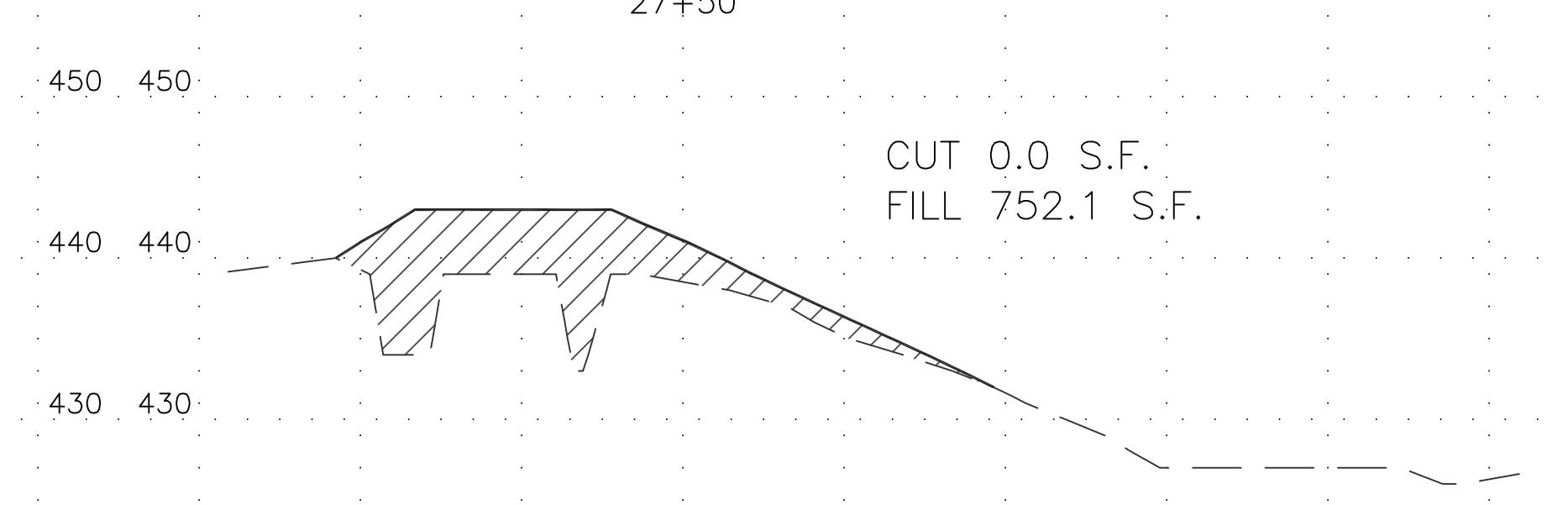
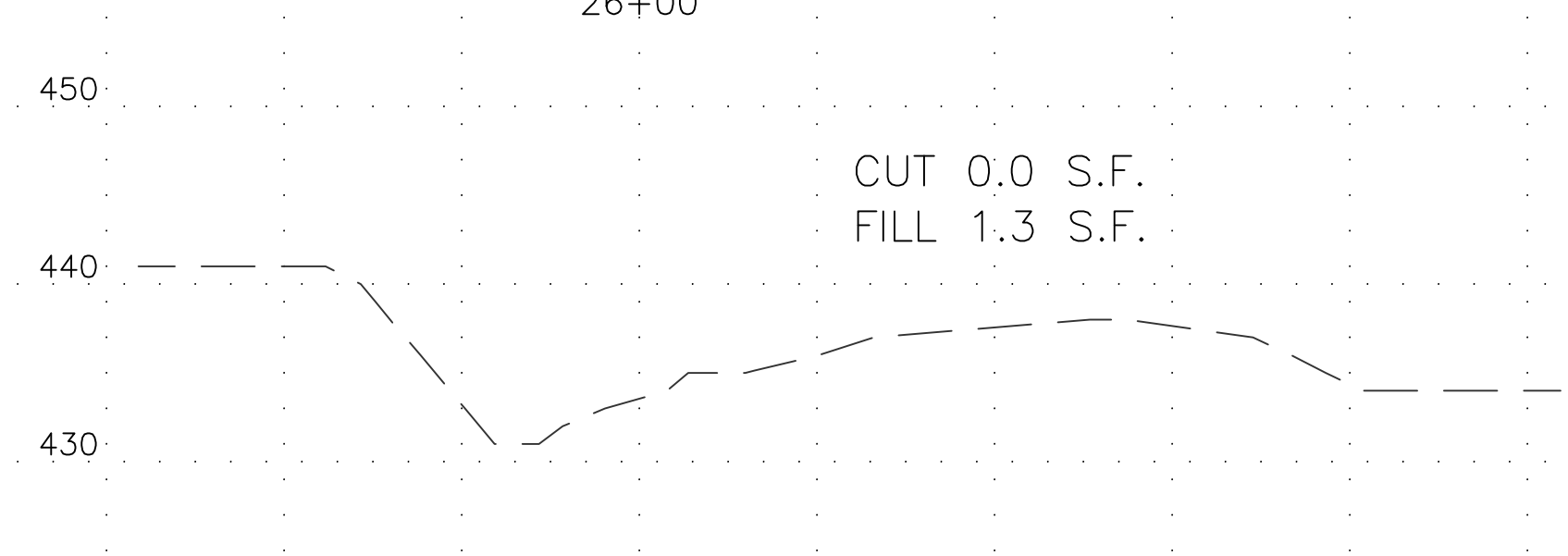
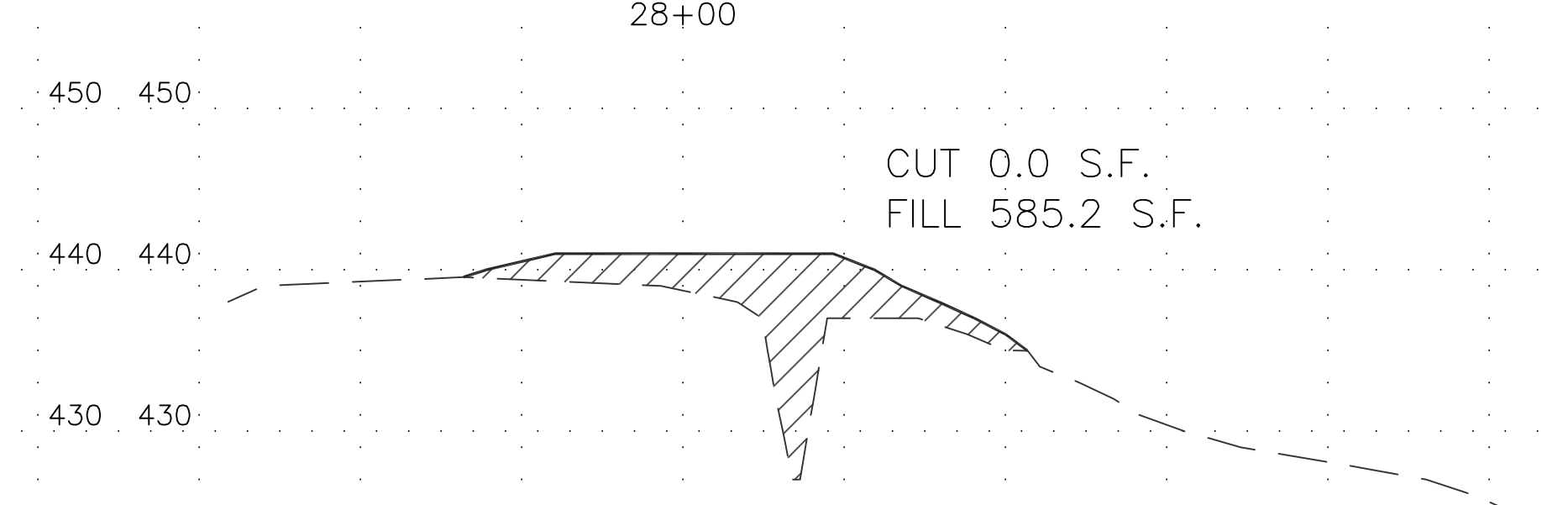
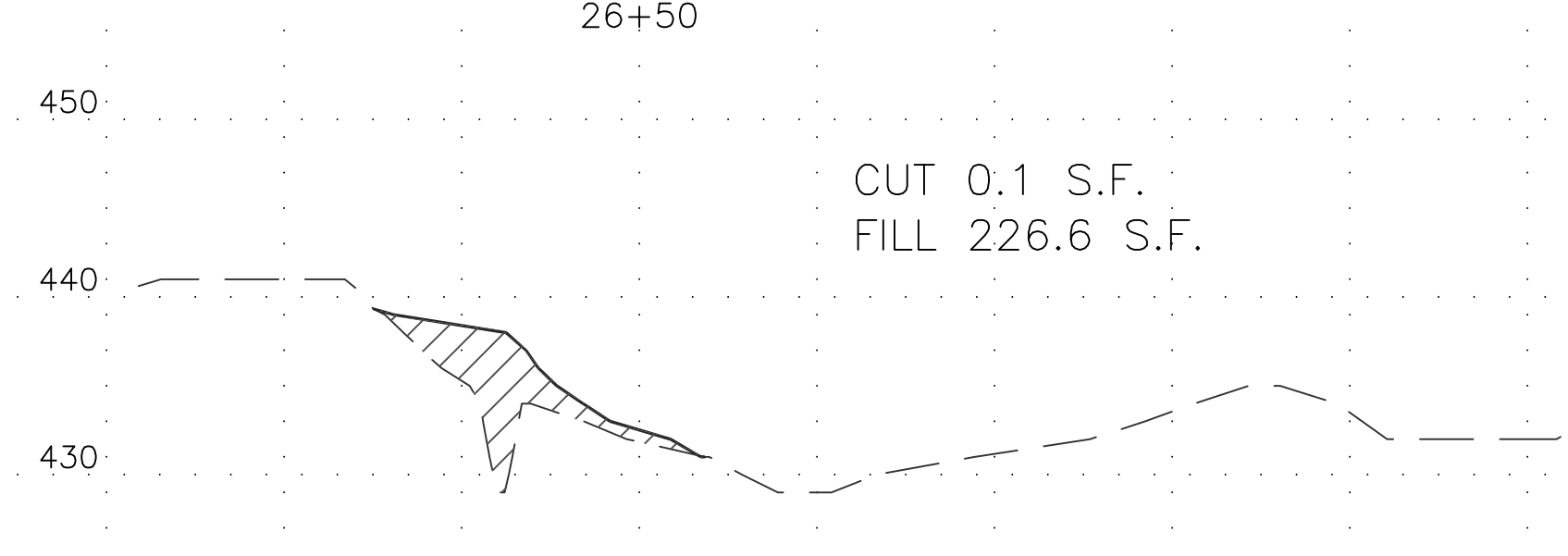
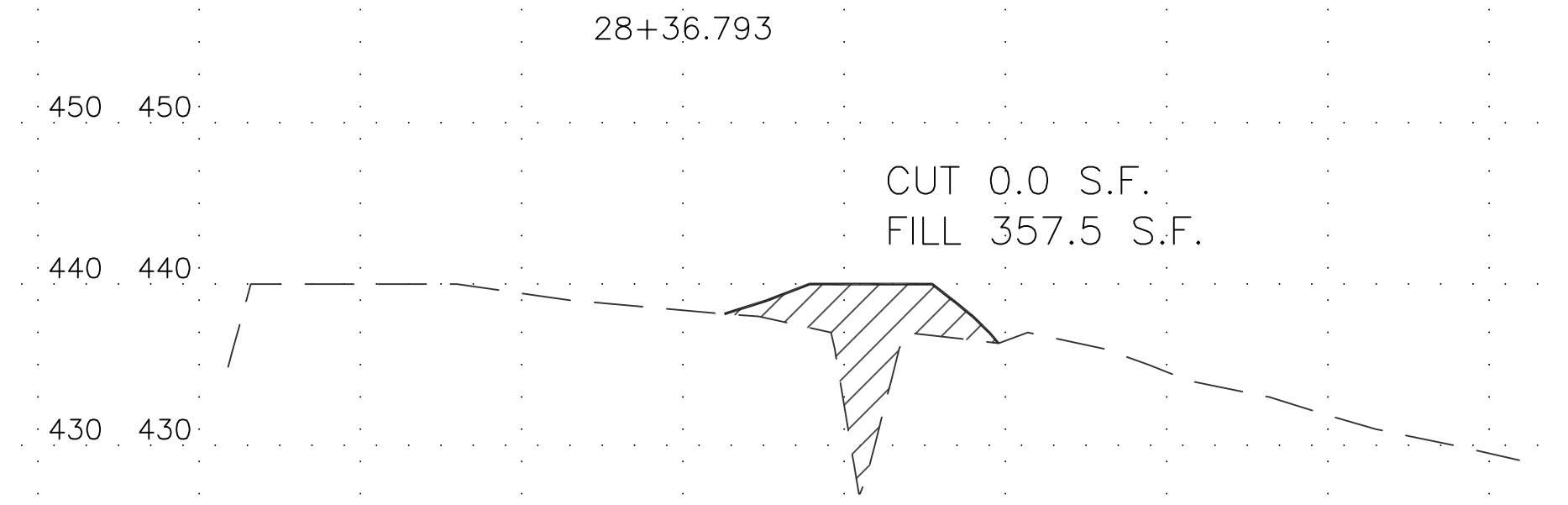
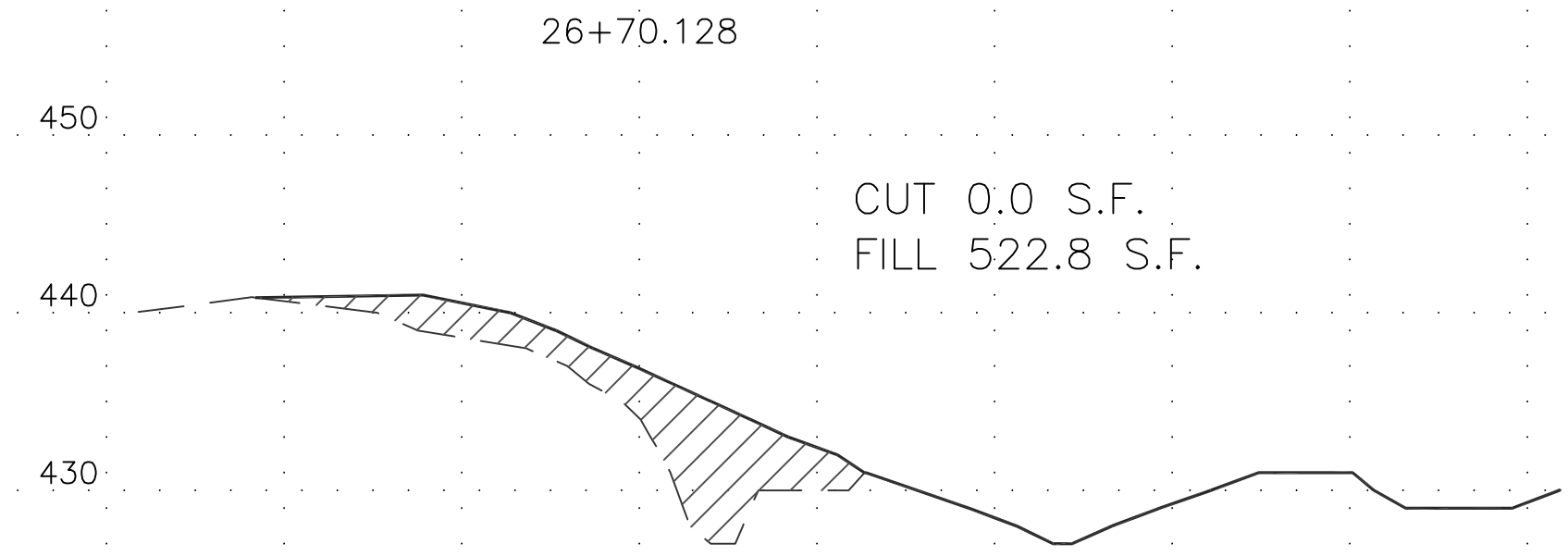
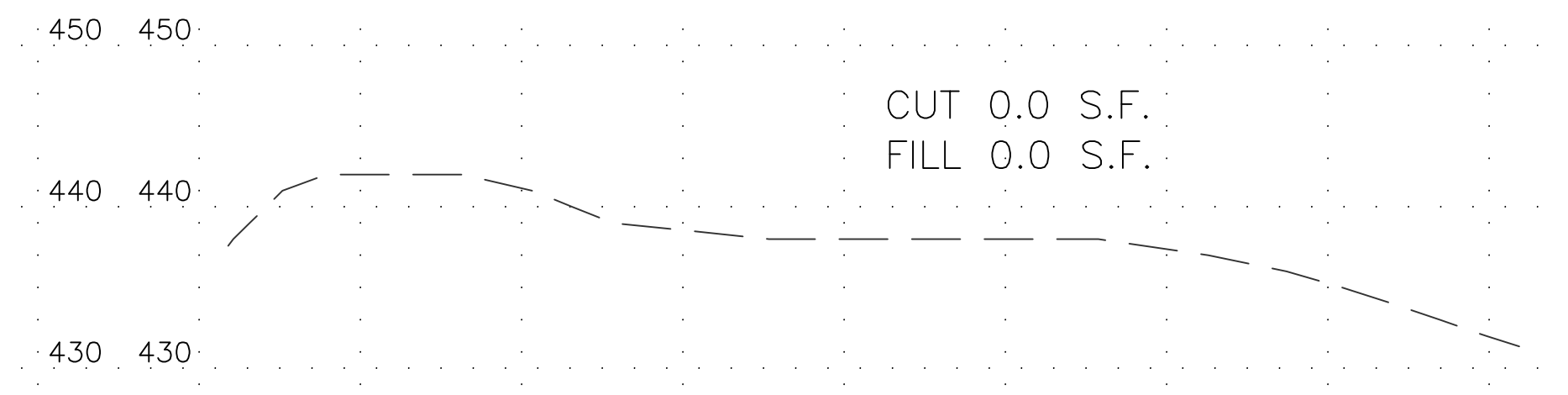
Burr Mine Group Reclamation Project  
 AML-GwME-0710  
 Burr Mine - Hunter Site Cross Sections  
 Sheet 16 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

LEGEND	
- - - EXISTING GRADE	□ EARTH CUT
— PROPOSED GRADE	▨ EARTH FILL



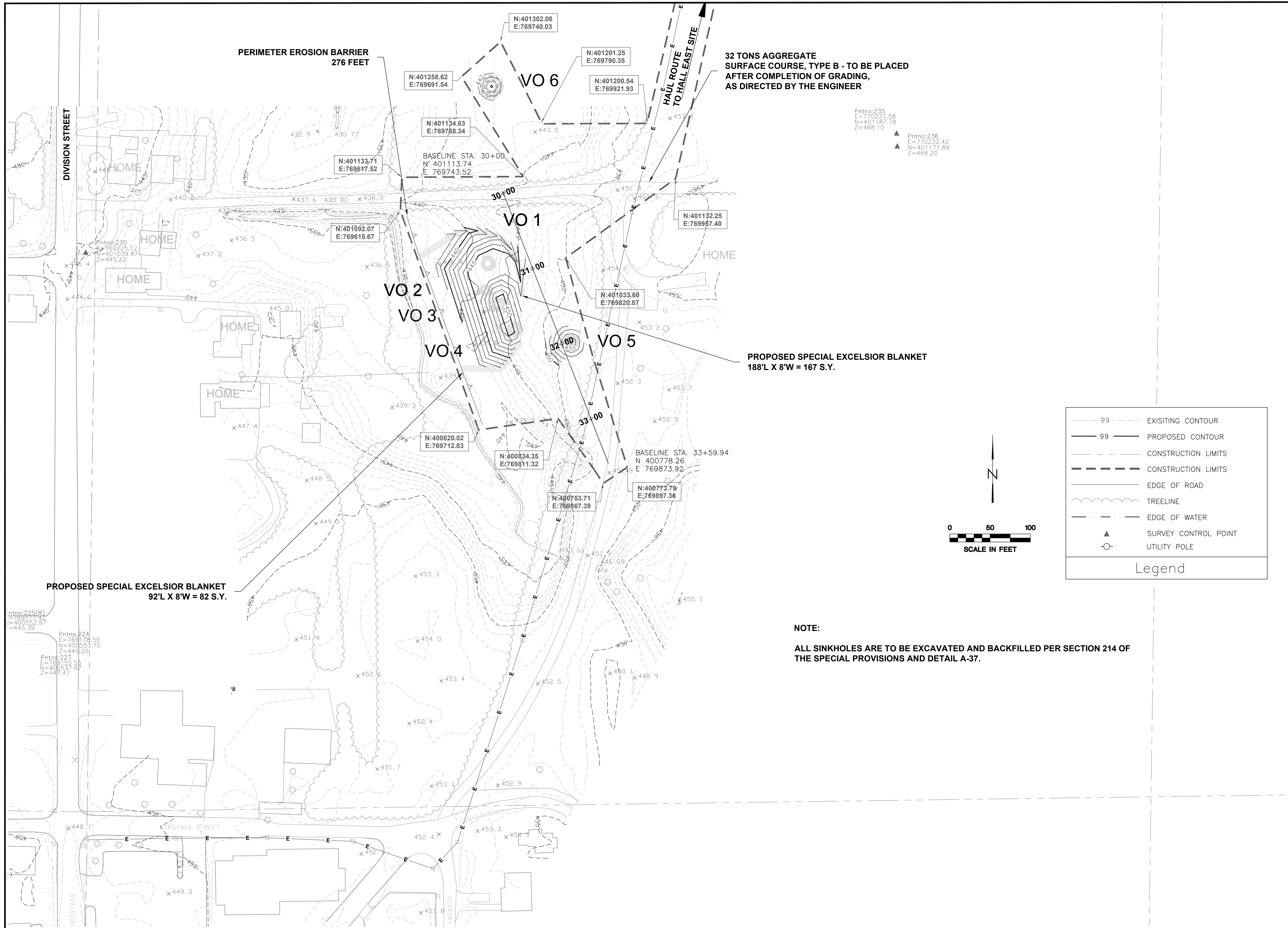


LEGEND	
--- EXISTING GRADE	□ EARTH CUT
— PROPOSED GRADE	▨ EARTH FILL

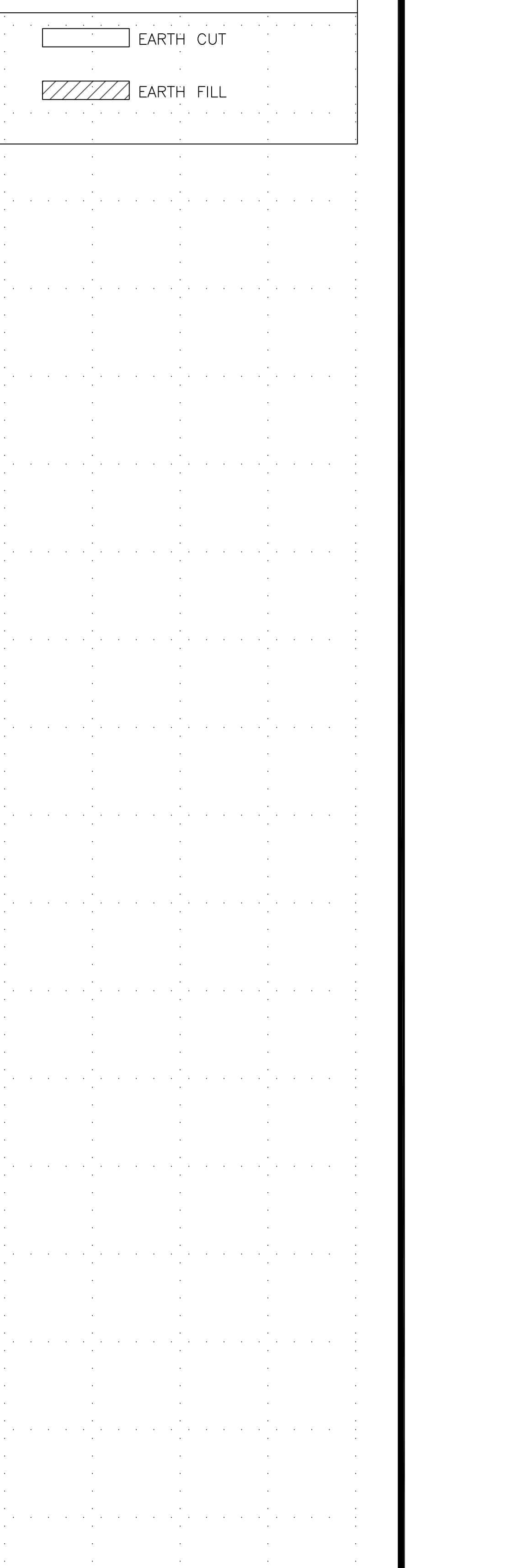
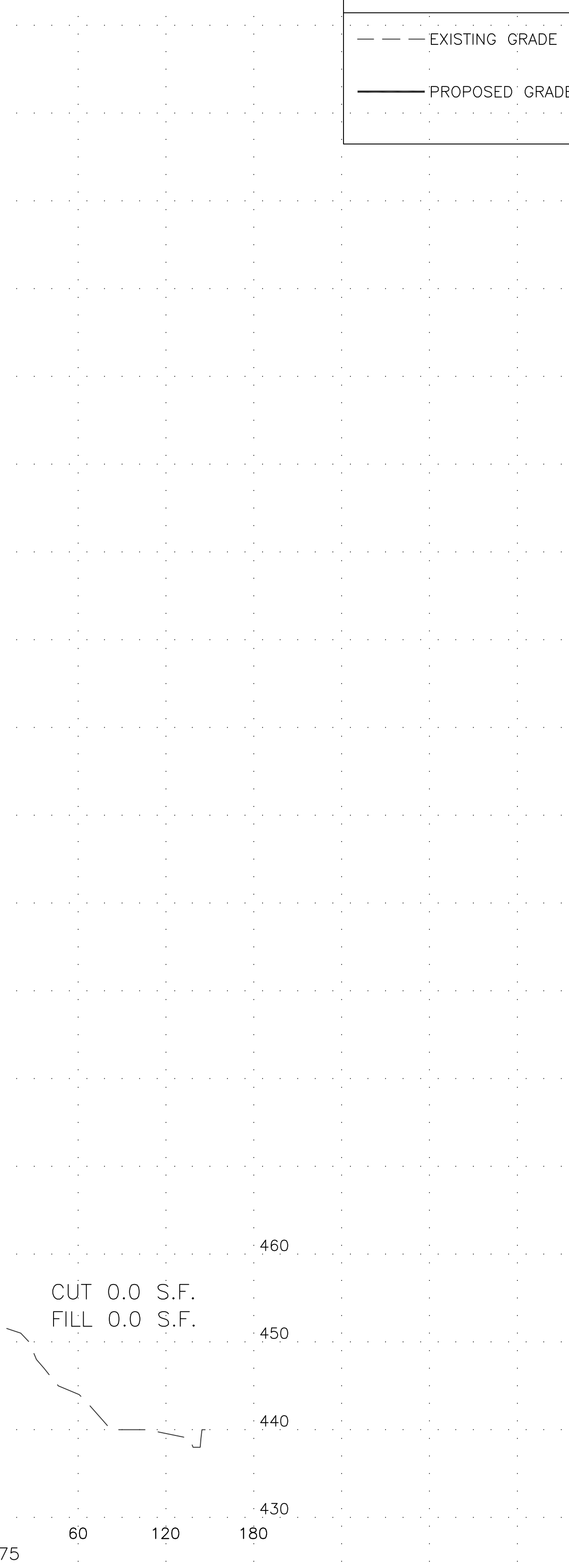
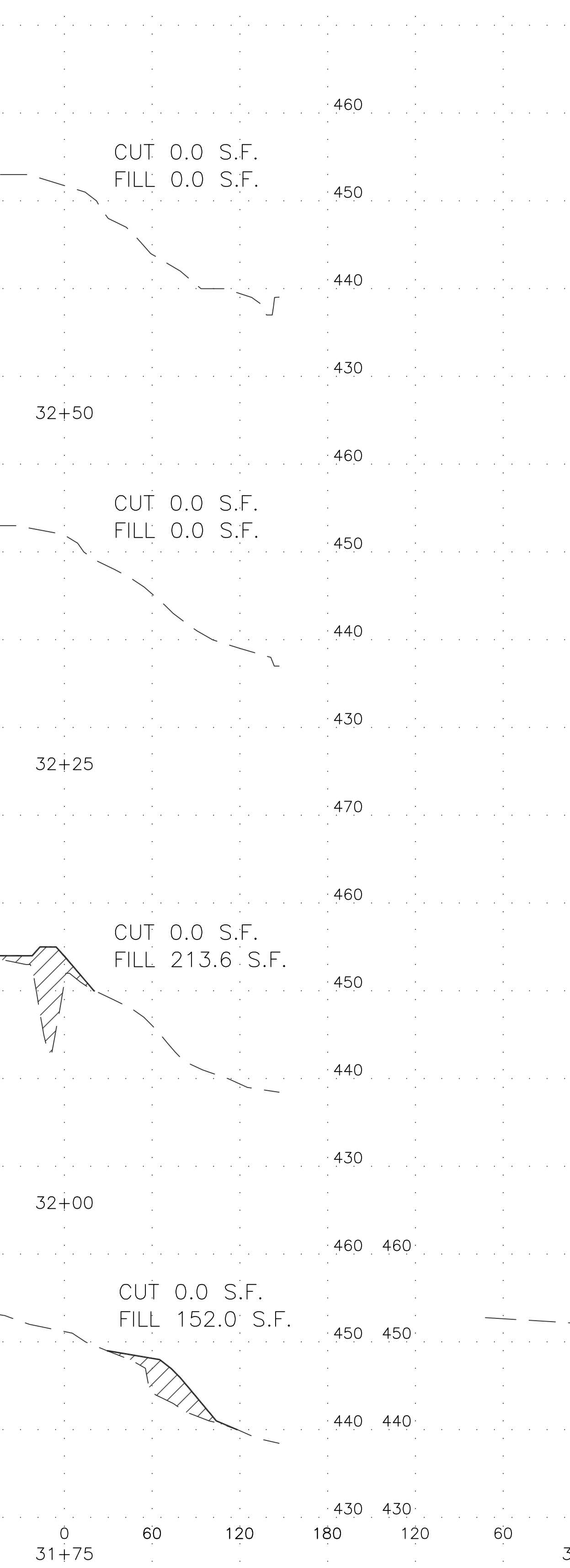
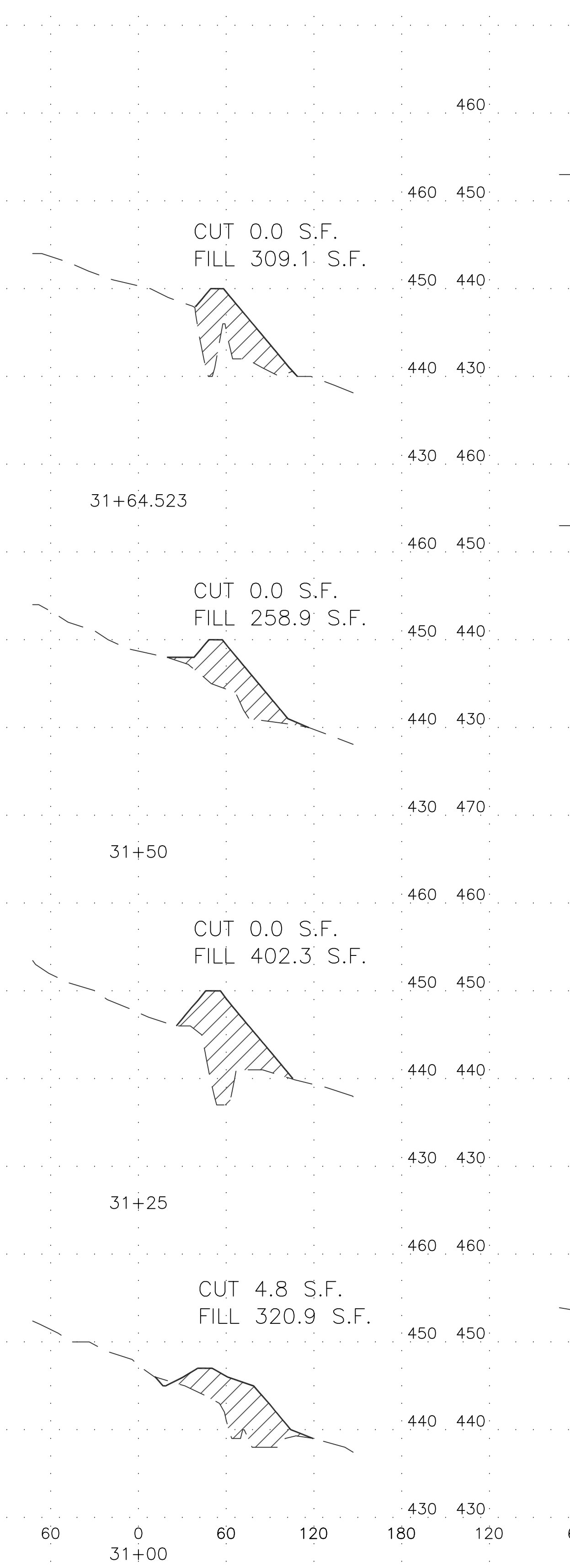
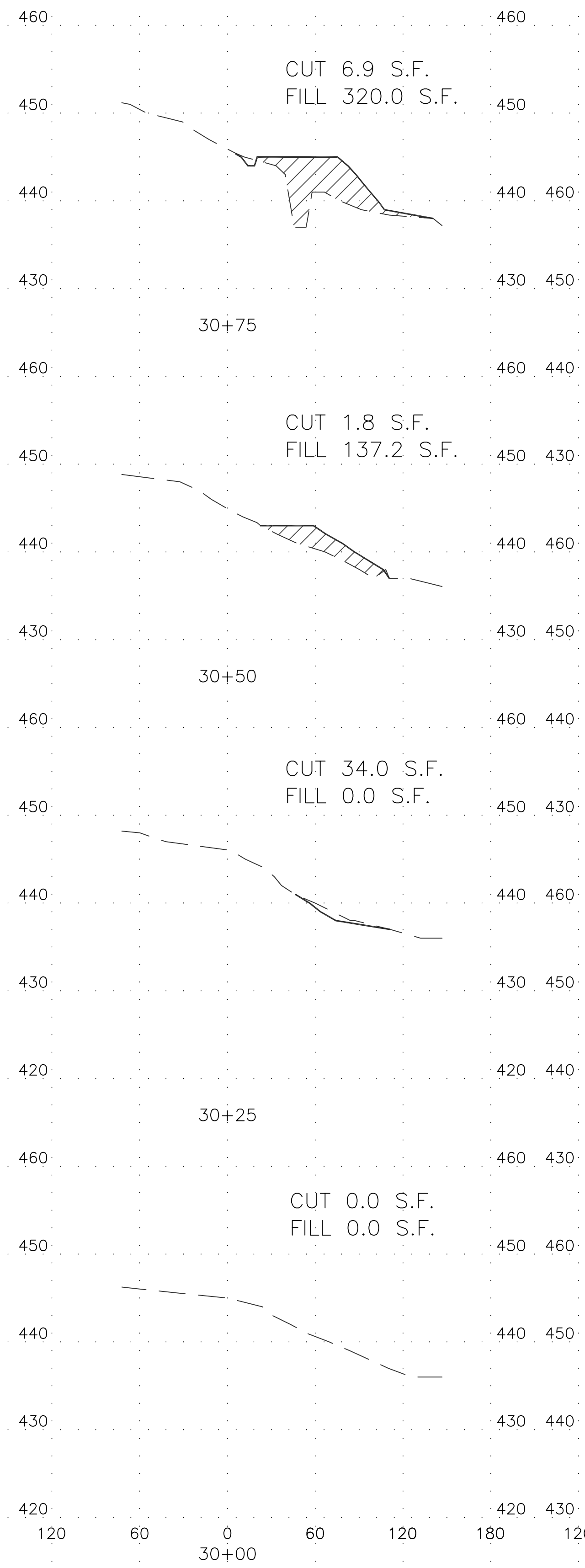


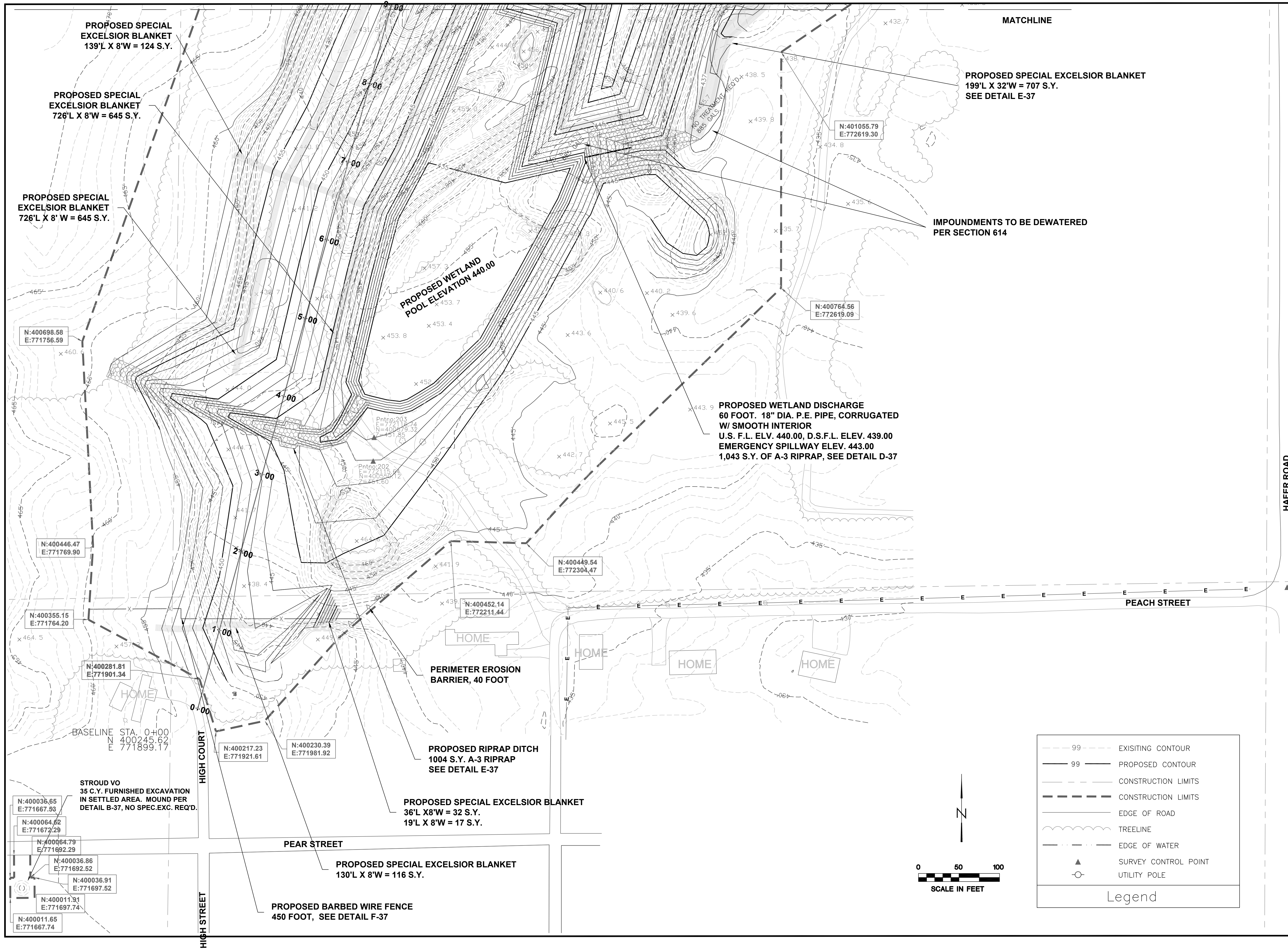
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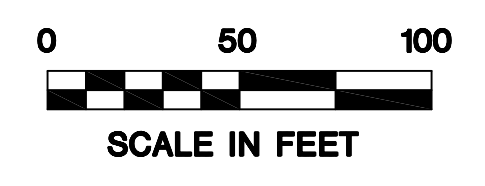


LEGEND	
--- EXISTING GRADE	□ EARTH CUT
— PROPOSED GRADE	▨ EARTH FILL





MATCHLINE



--- 99 ---	EXISTING CONTOUR
— 99 —	PROPOSED CONTOUR
---	CONSTRUCTION LIMITS
---	CONSTRUCTION LIMITS
---	EDGE OF ROAD
~~~~~	TREELINE
---	EDGE OF WATER
▲	SURVEY CONTROL POINT
○	UTILITY POLE

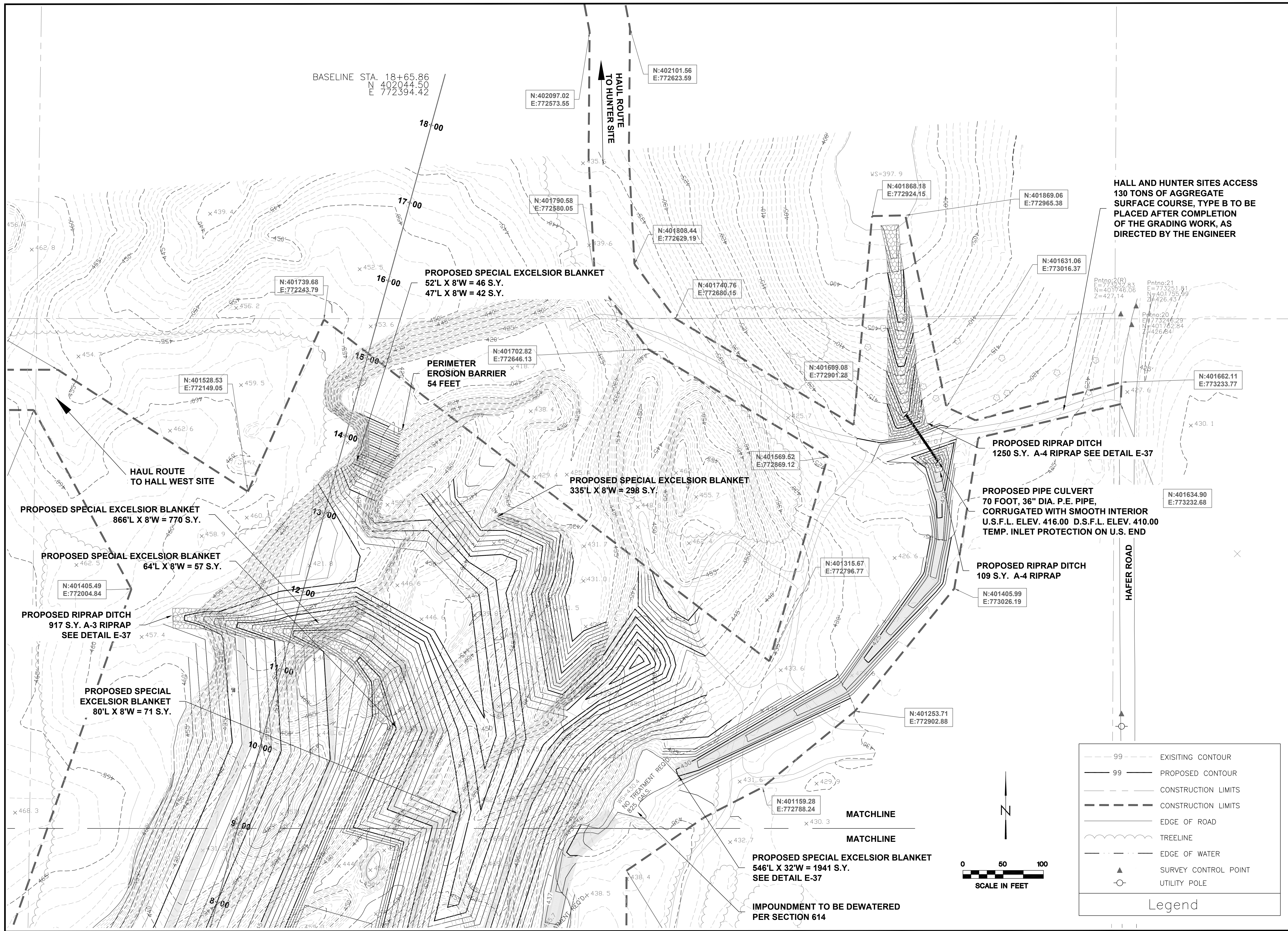
Legend

State of Illinois  
Department of Natural Resources

Burr Mine Group  
Reclamation Project  
AML-GWmE-0710  
Williamson County

Drawn By: M.T.  
Checked By:  
Date: 9/15/09

Hall East Site  
Existing & Proposed  
Conditions  
Sheet 20 of 37



HALL AND HUNTER SITES ACCESS  
130 TONS OF AGGREGATE  
SURFACE COURSE, TYPE B TO BE  
PLACED AFTER COMPLETION  
OF THE GRADING WORK, AS  
DIRECTED BY THE ENGINEER

Pntno:2(R)  
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N=4019746.06  
Z=427.14

Pntno:21  
E=773251.81  
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Z=426.437

Pntno:20  
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Z=426.64

N:401662.11  
E:773233.77

N:401634.90  
E:773232.68

N:401405.99  
E:773026.19

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E:772902.88

N:40159.28  
E:772788.24

N:401315.67  
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N:401689.08  
E:772901.28

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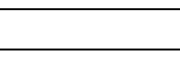
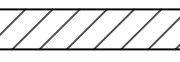
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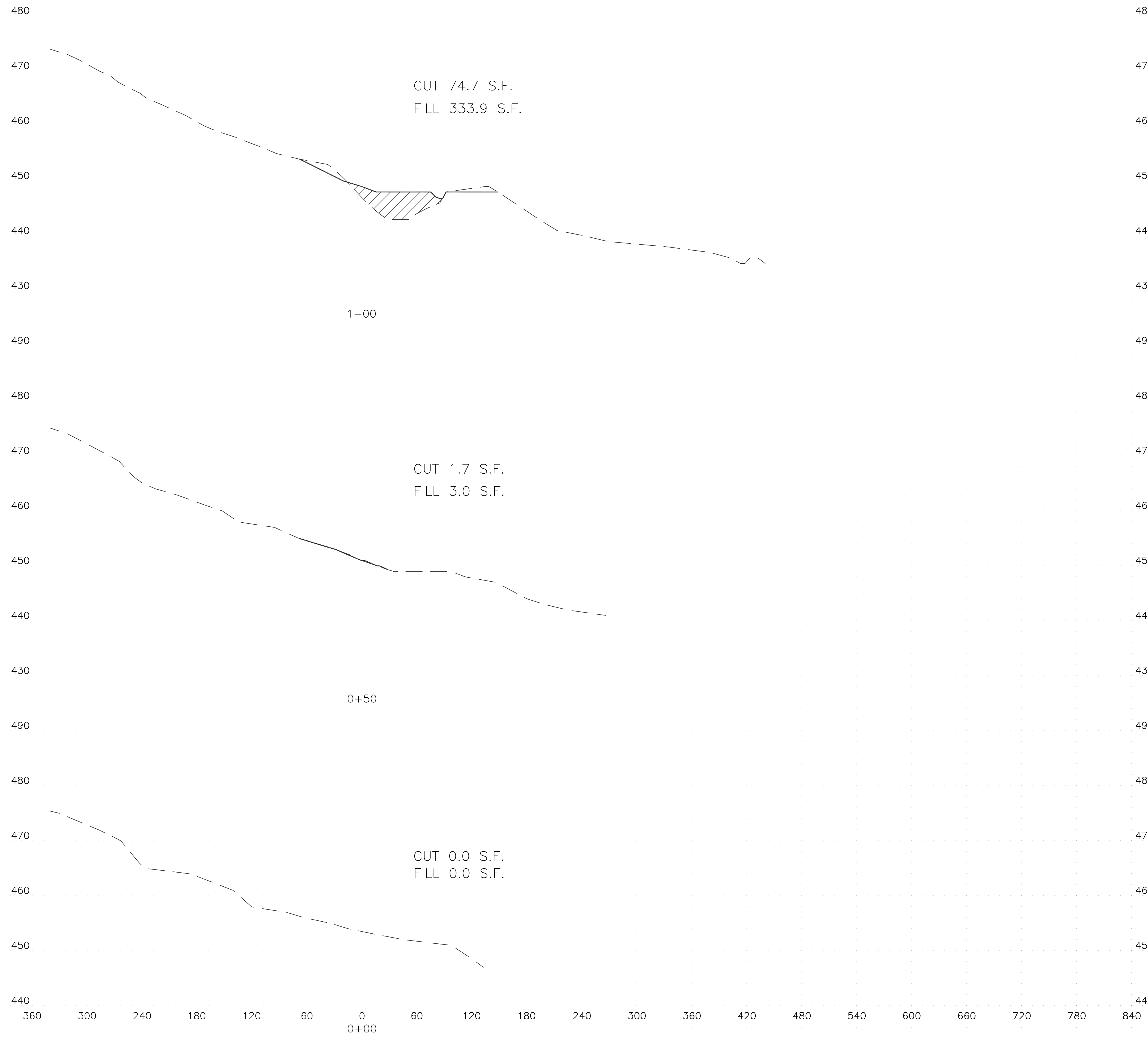
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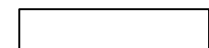
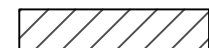
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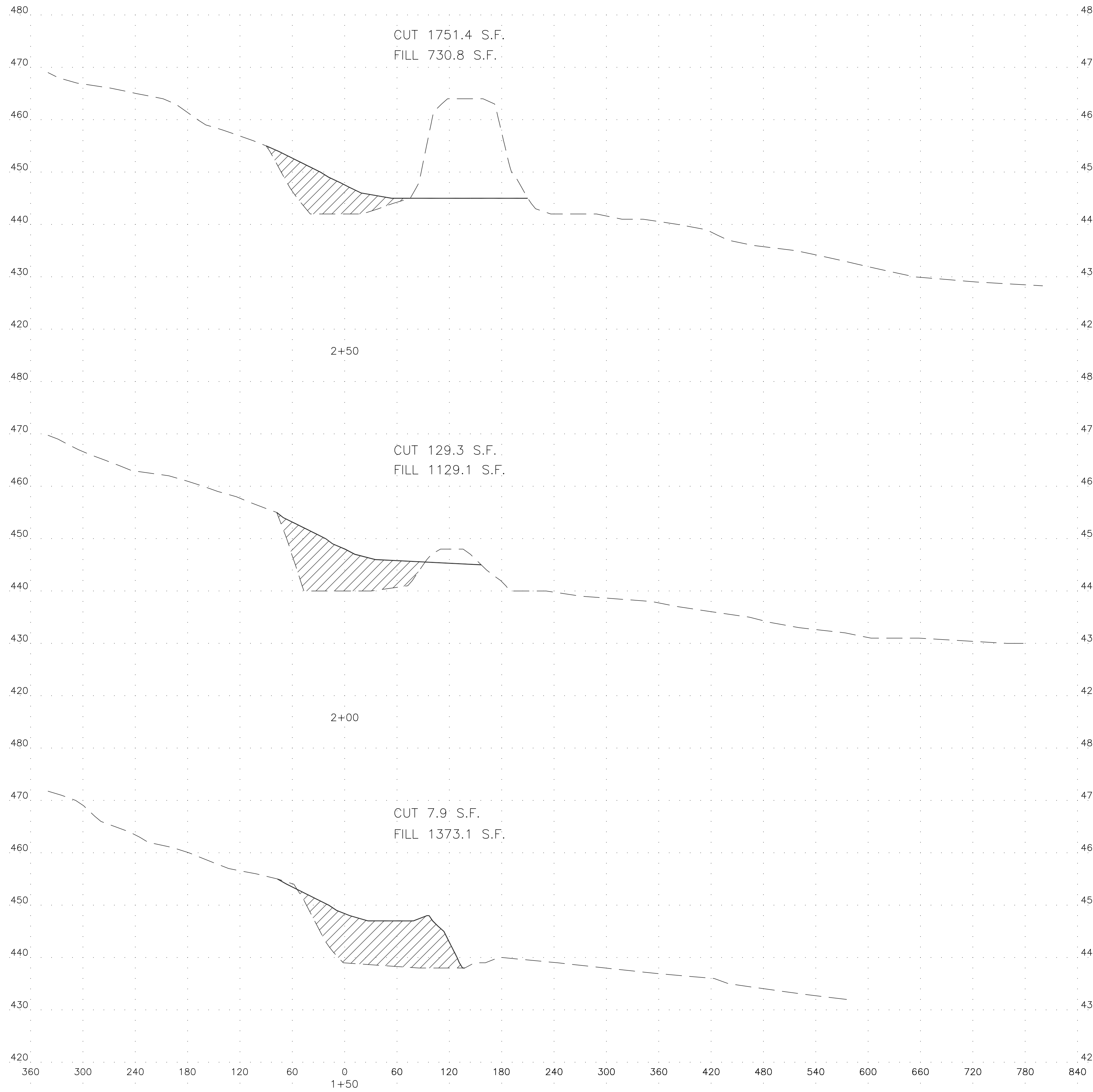
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LEGEND			
---	EXISTING GRADE		EARTH CUT
—	PROPOSED GRADE		EARTH FILL



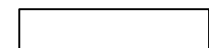
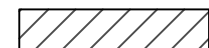


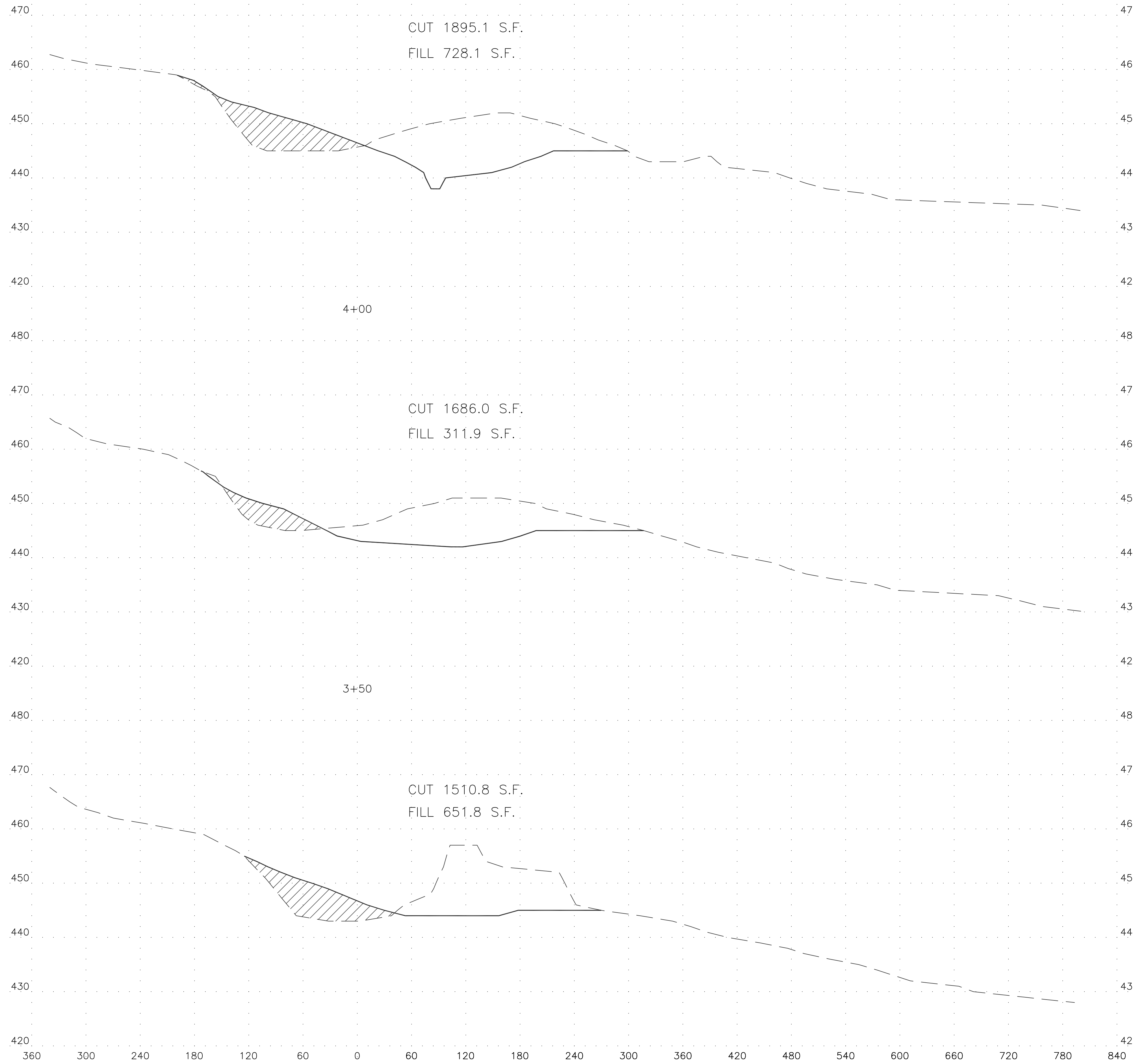
Burr Mine Group Reclamation Project  
 AML-GwME-0710  
 Burr Mine - Hall East Site Cross Sections  
 Sheet 23 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EARTH CUT
	EARTH FILL



Burr Mine Group Reclamation Project  
 AML-GwME-0710  
 Burr Mine - Hall East Site Cross Sections  
 Sheet 24 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

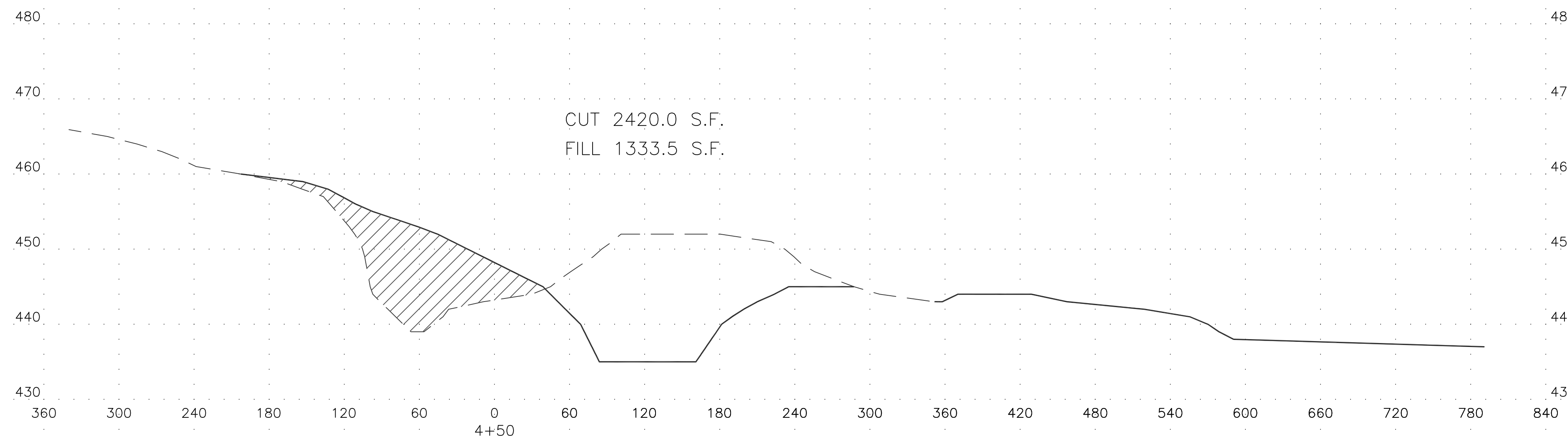
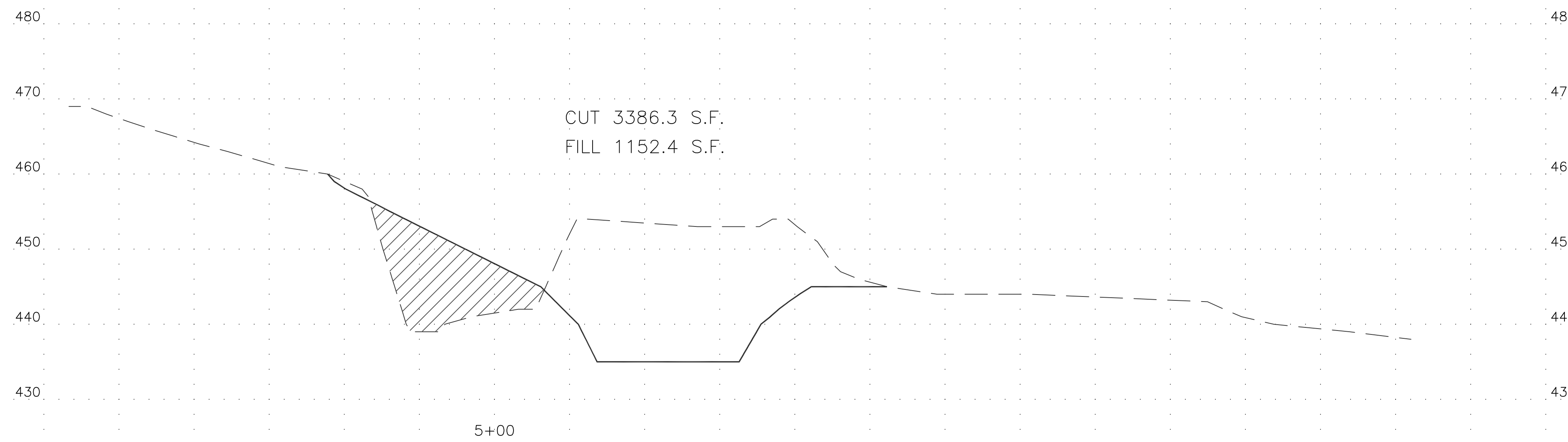
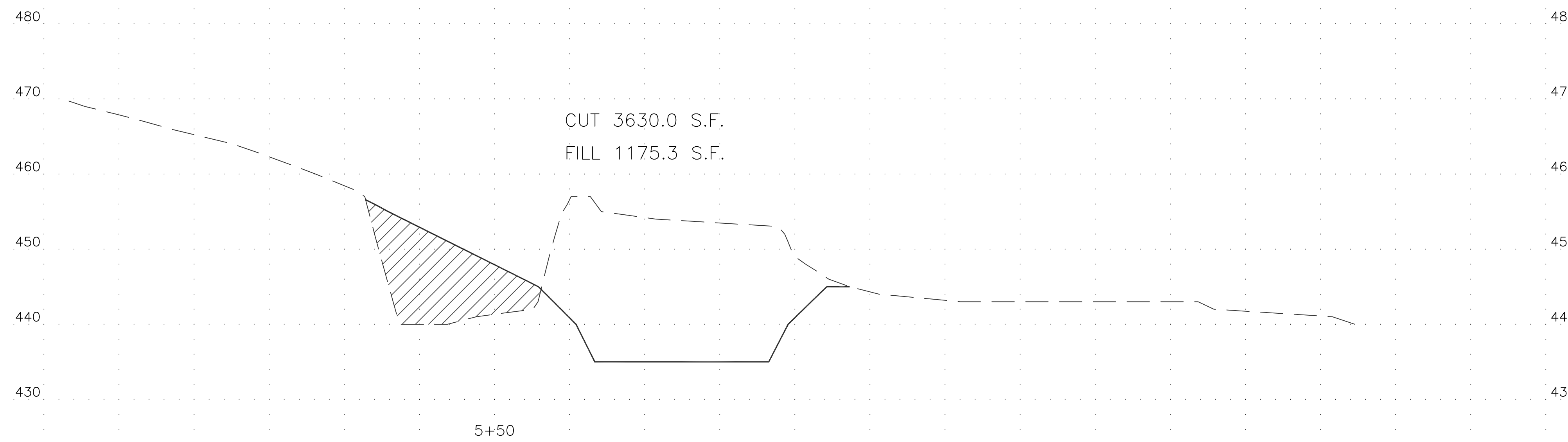
LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EARTH CUT
	EARTH FILL



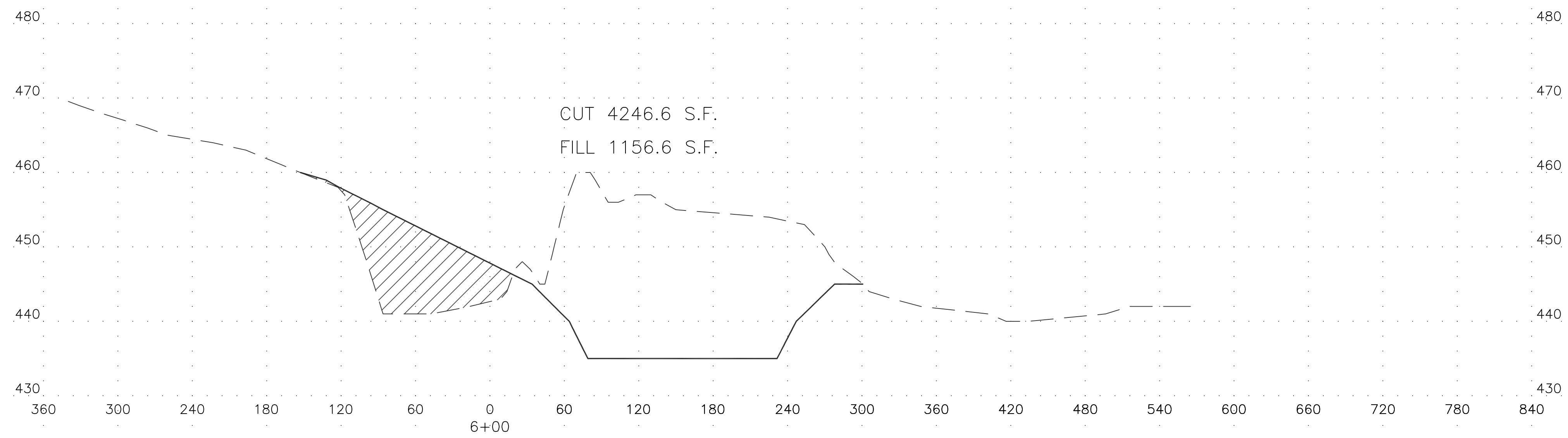
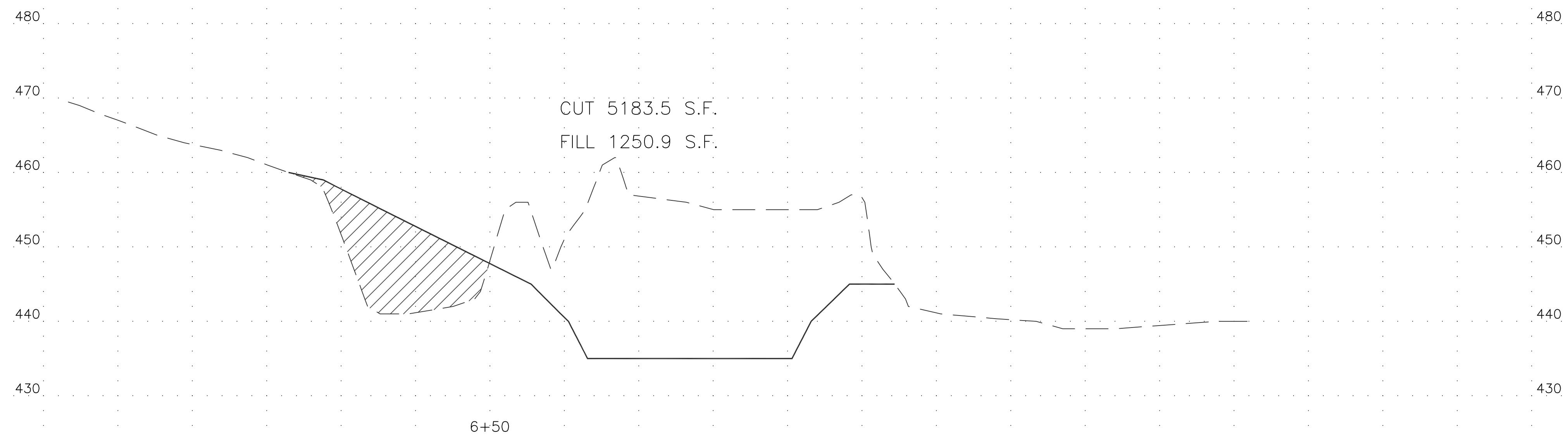
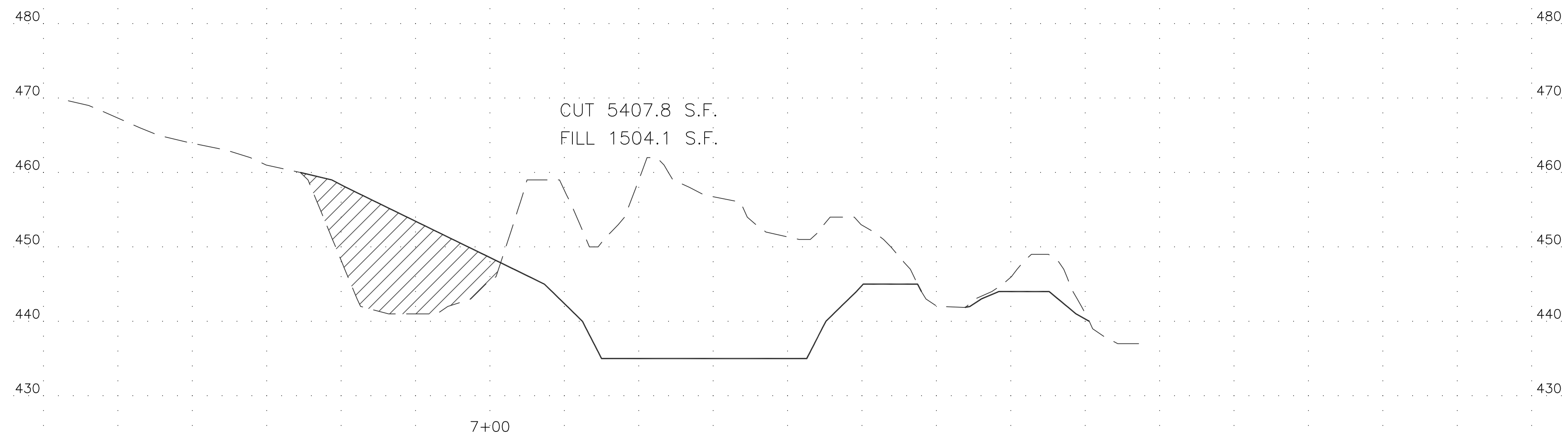
Horizontal Scale 60  
 Vertical Scale 10



LEGEND	
--- EXISTING GRADE	□ EARTH CUT
— PROPOSED GRADE	▨ EARTH FILL

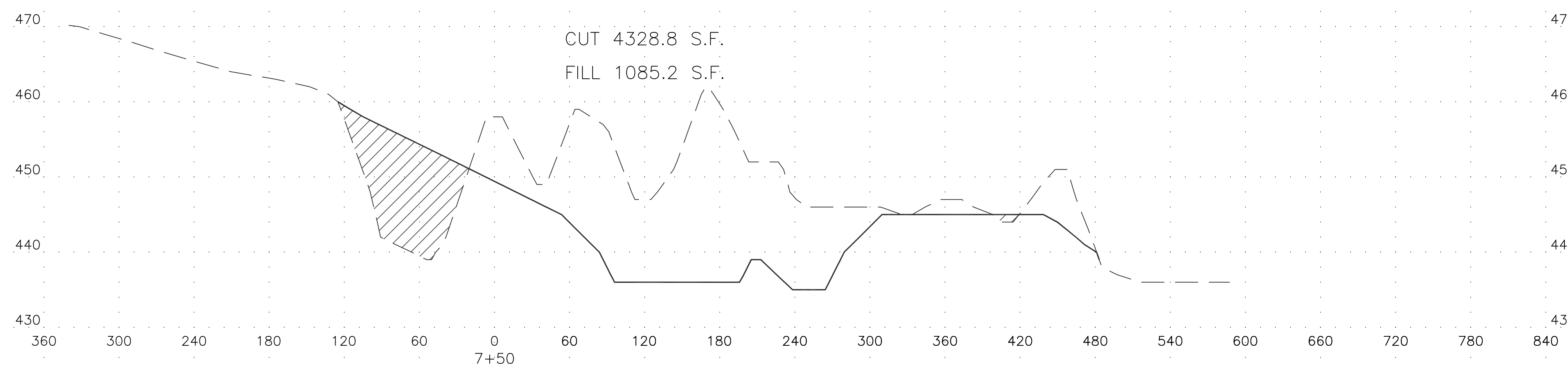
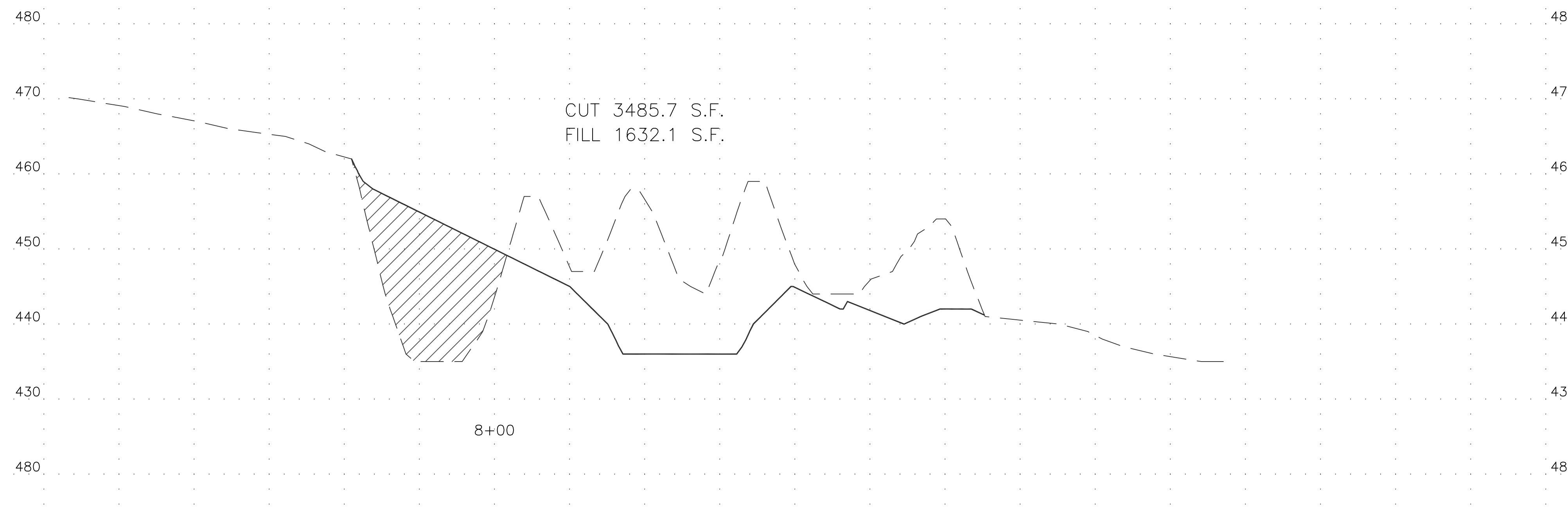
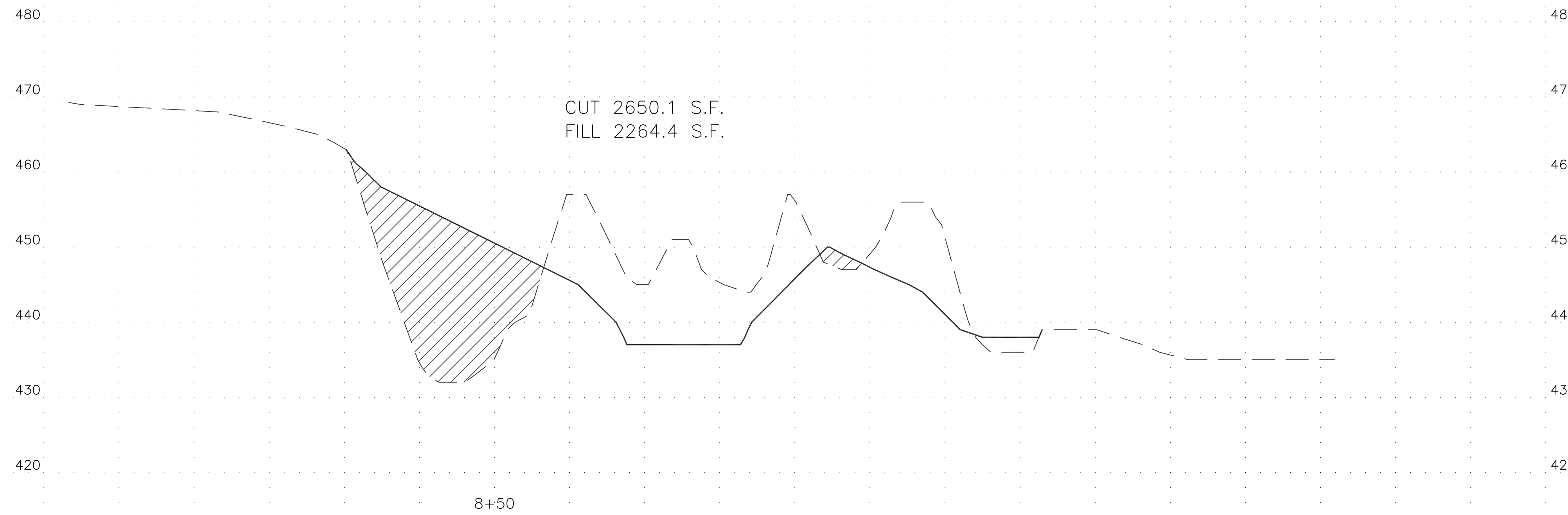


LEGEND	
--- EXISTING GRADE	□ EARTH CUT
— PROPOSED GRADE	▨ EARTH FILL



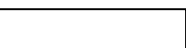
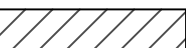


360 300 240 180 120 60 0 60 120 180 240 300 360 420 480 540 600 660 720 780 840

LEGEND	
--- EXISTING GRADE	□ EARTH CUT
— PROPOSED GRADE	▨ EARTH FILL


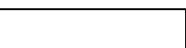

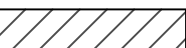


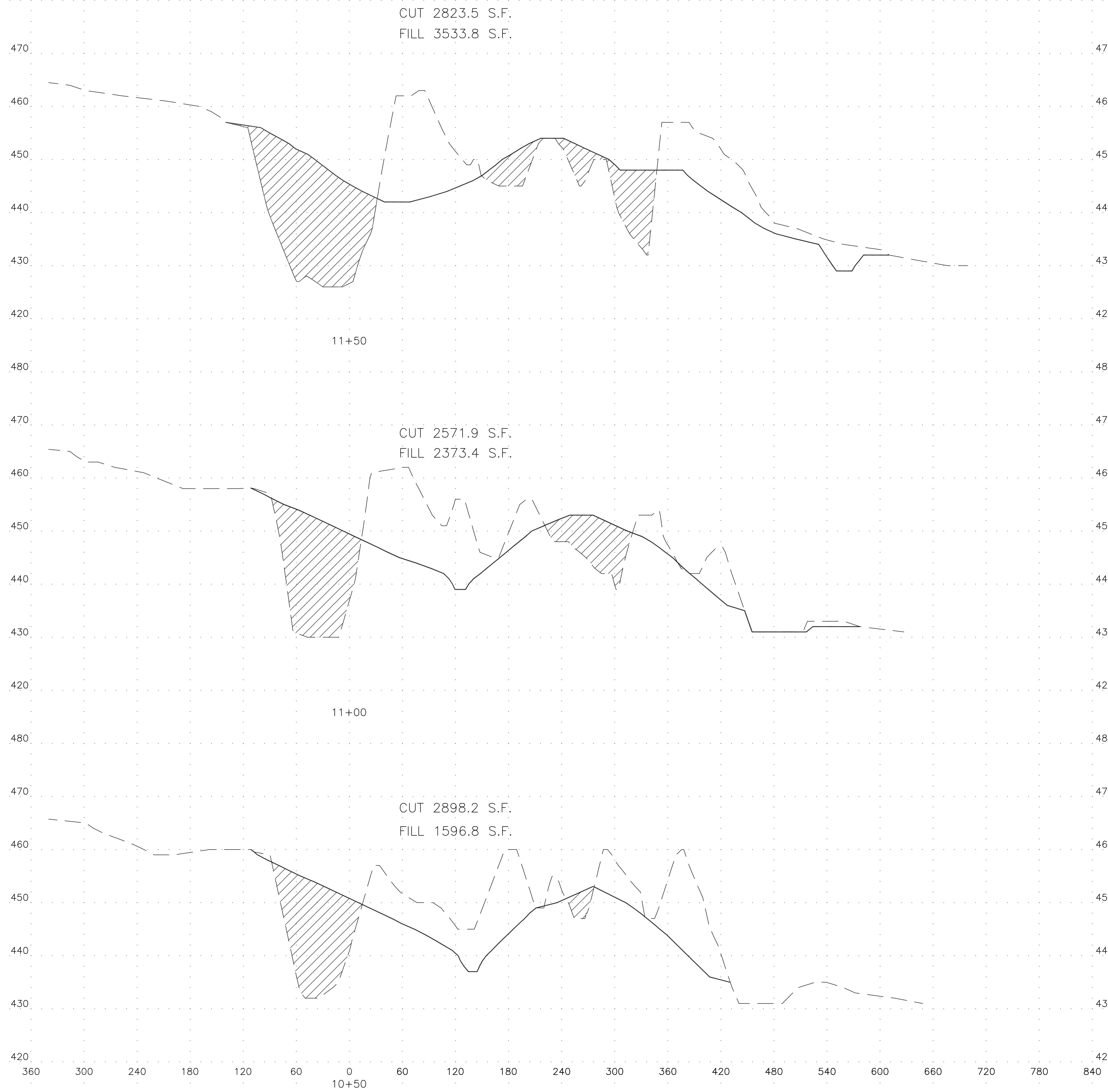
Burr Mine Group Reclamation Project  
 AML-GwME-0710  
 Burr Mine - Hall East Site Cross Sections  
 Sheet 28 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EARTH CUT
	EARTH FILL



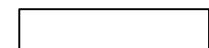
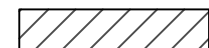


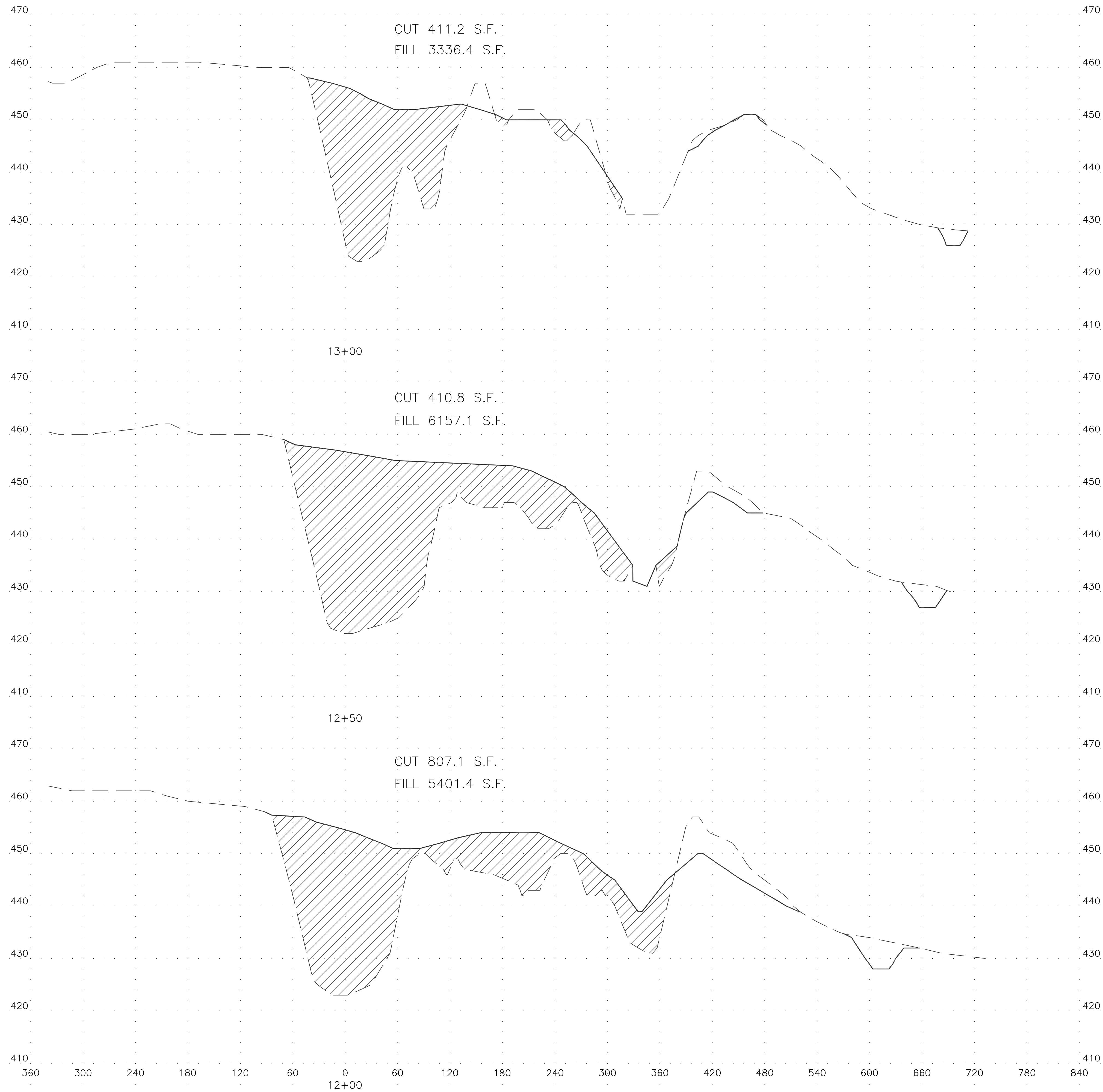
Burr Mine Group Reclamation Project  
AML-GwME-0710  
Burr Mine - Hall East Site Cross Sections  
Sheet 29 of 37  
Scale: Horizontal 1"=60'  
Vertical 1"=10'

LEGEND	
 EXISTING GRADE	 EARTH CUT
 PROPOSED GRADE	 EARTH FILL



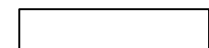
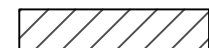


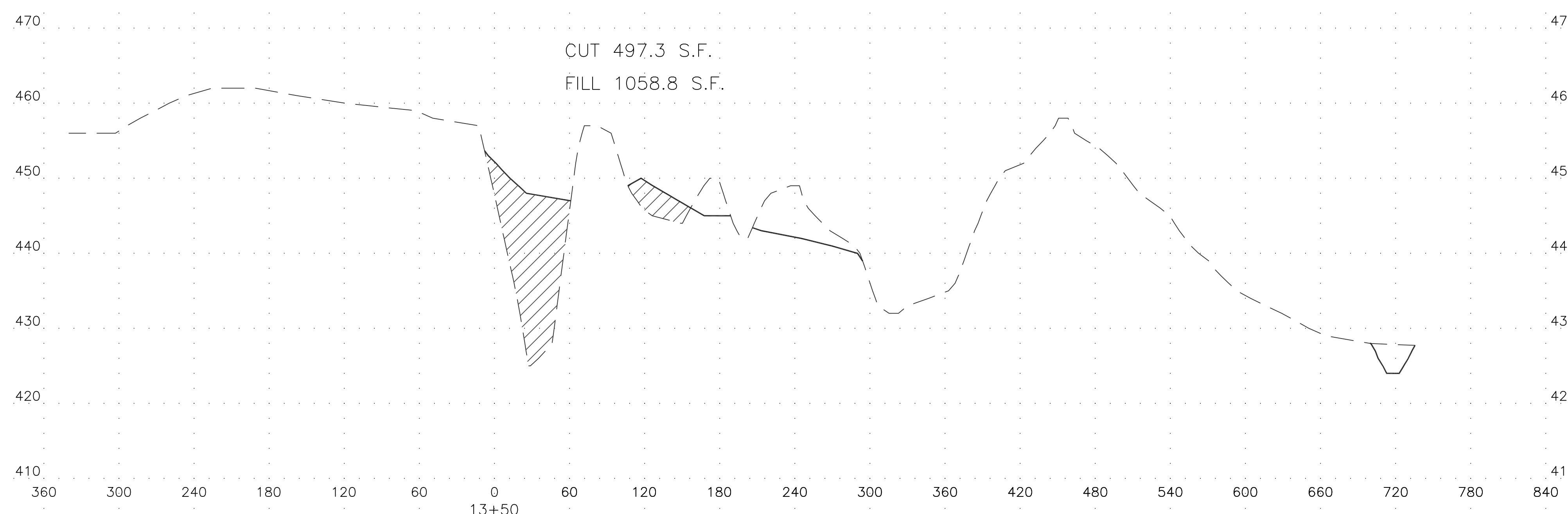
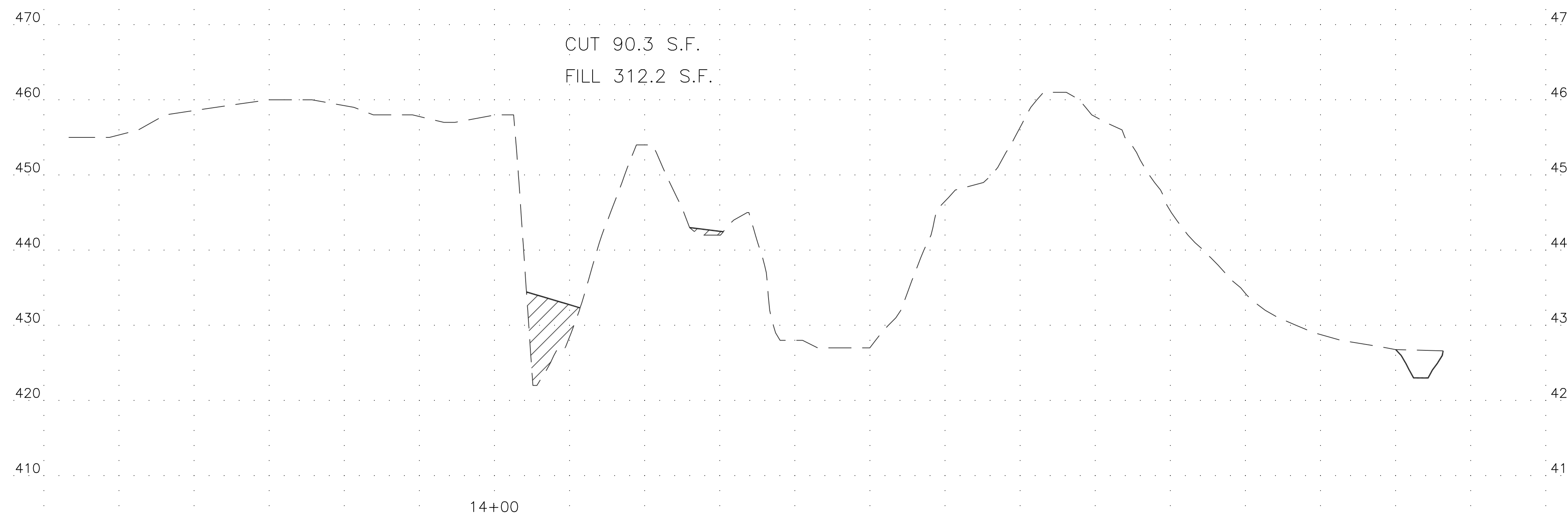
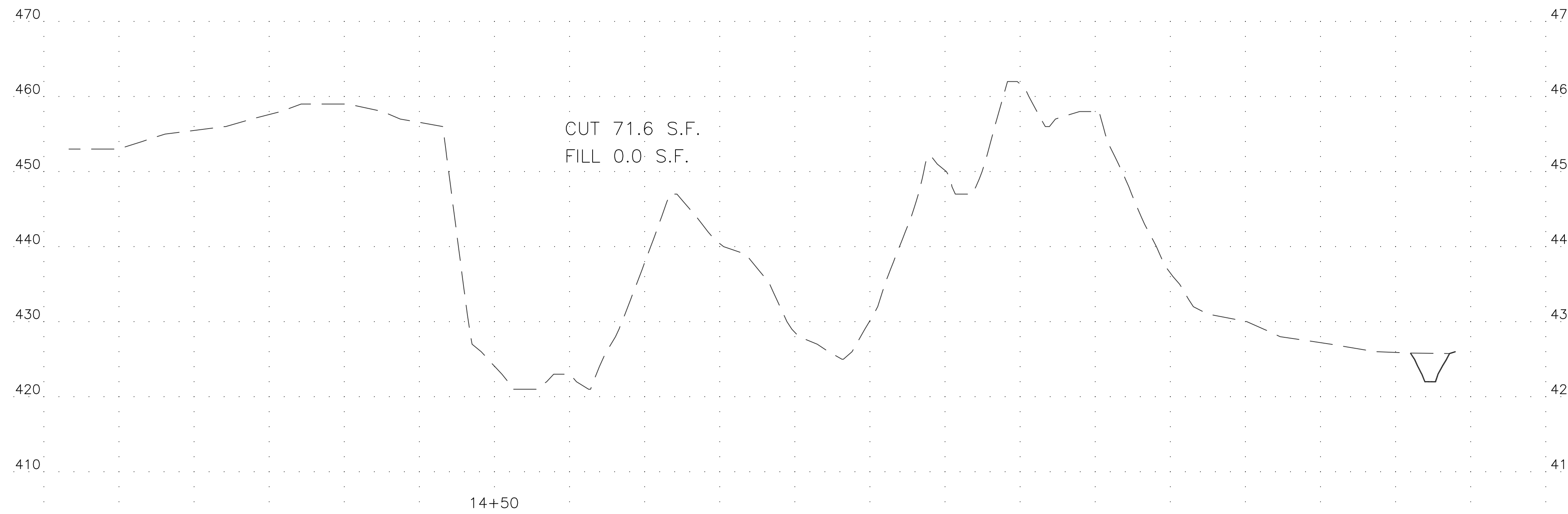
Burr Mine Group Reclamation Project  
 AML-GwME-0710  
 Burr Mine - Hall East Site Cross Sections  
 Sheet 30 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EARTH CUT
	EARTH FILL



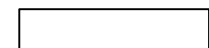
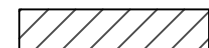


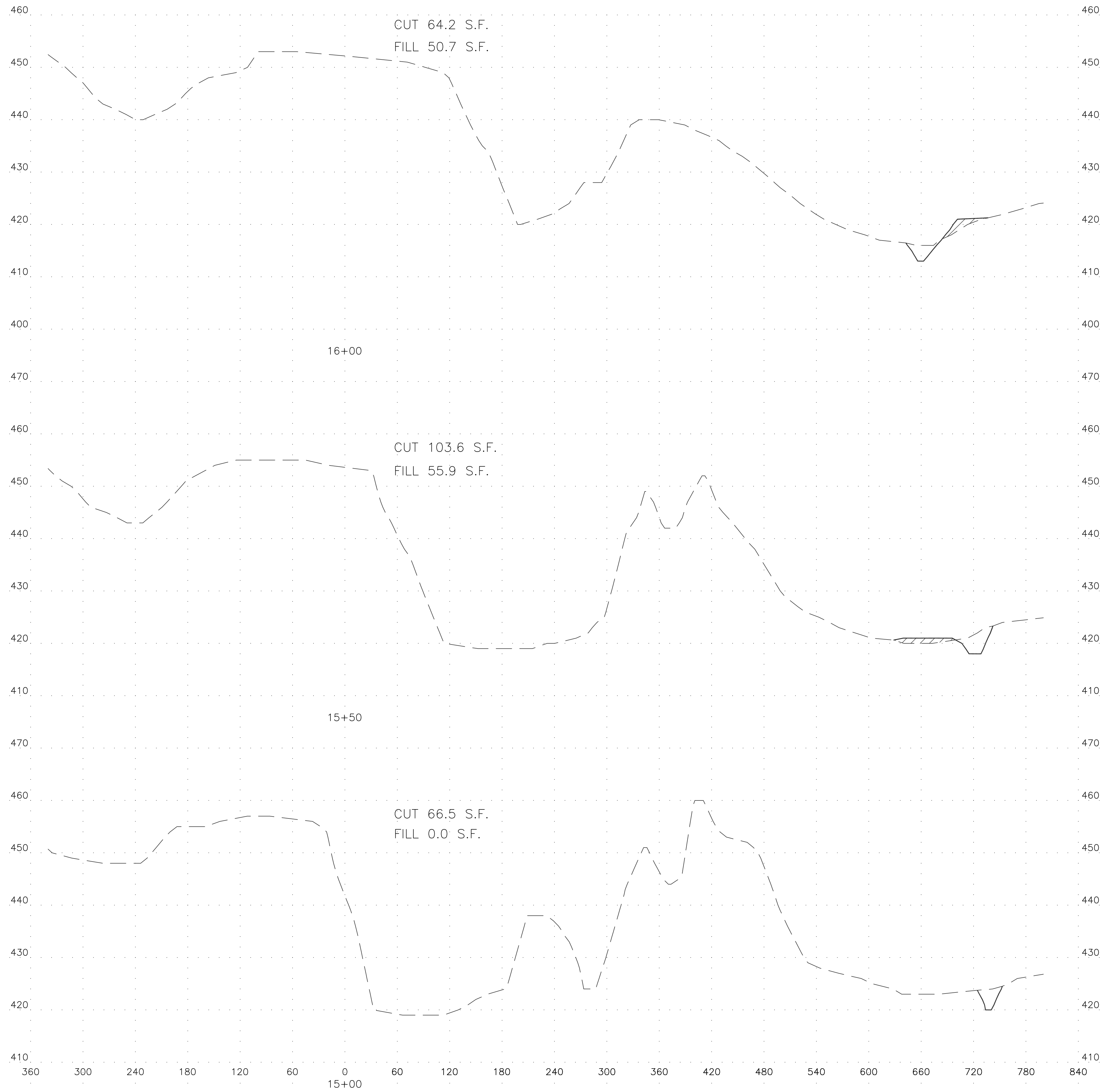
Burr Mine Group Reclamation Project  
 AML-GwME-0710  
 Burr Mine - Hall East Site Cross Sections  
 Sheet 31 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EARTH CUT
	EARTH FILL



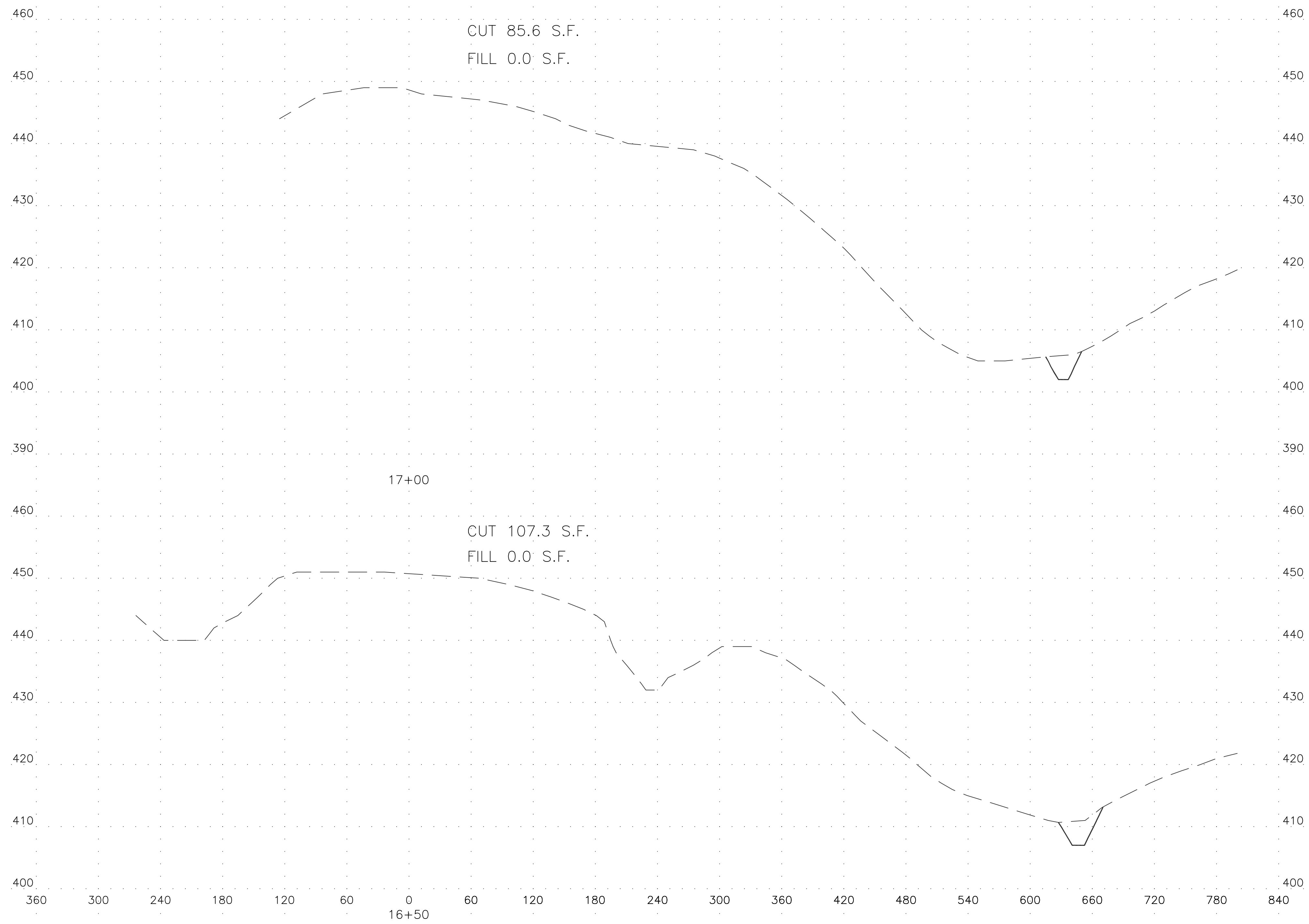
Burr Mine Group Reclamation Project  
 AML-GwME-0710  
 Burr Mine - Hall East Site Cross Sections  
 Sheet 32 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EARTH CUT
	EARTH FILL



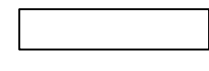
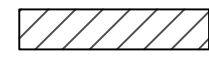


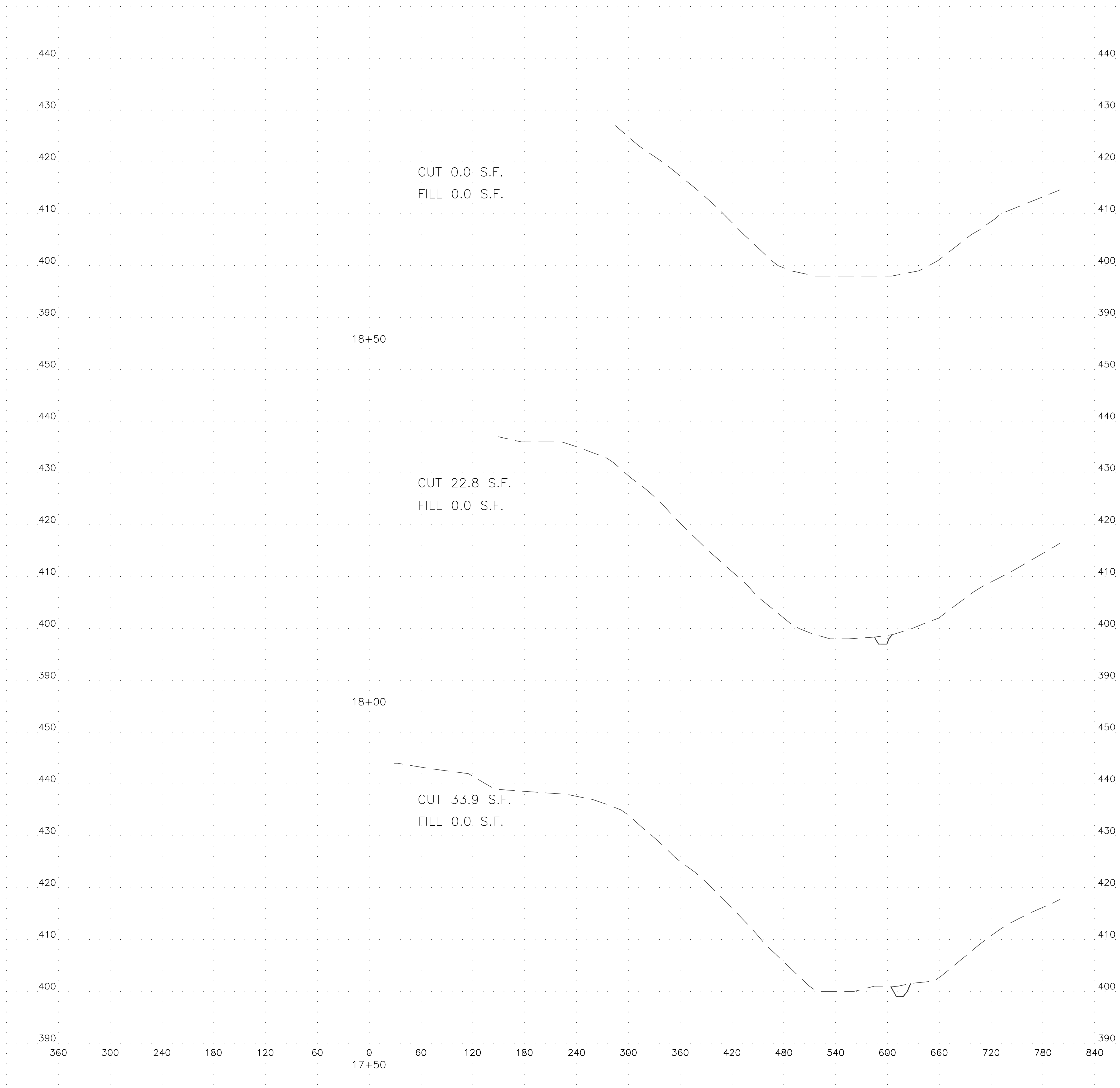


LEGEND	
--- EXISTING GRADE	[ ] EARTH CUT
— PROPOSED GRADE	[ / / ] EARTH FILL



Burr Mine Group Reclamation Project  
 AML-GwME-0710  
 Burr Mine - Hall East Site Cross Sections  
 Sheet 34 of 37  
 Scale: Horizontal 1"=60'  
 Vertical 1"=10'

LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EARTH CUT
	EARTH FILL



CUT 0.0 S.F.  
 FILL 0.0 S.F.

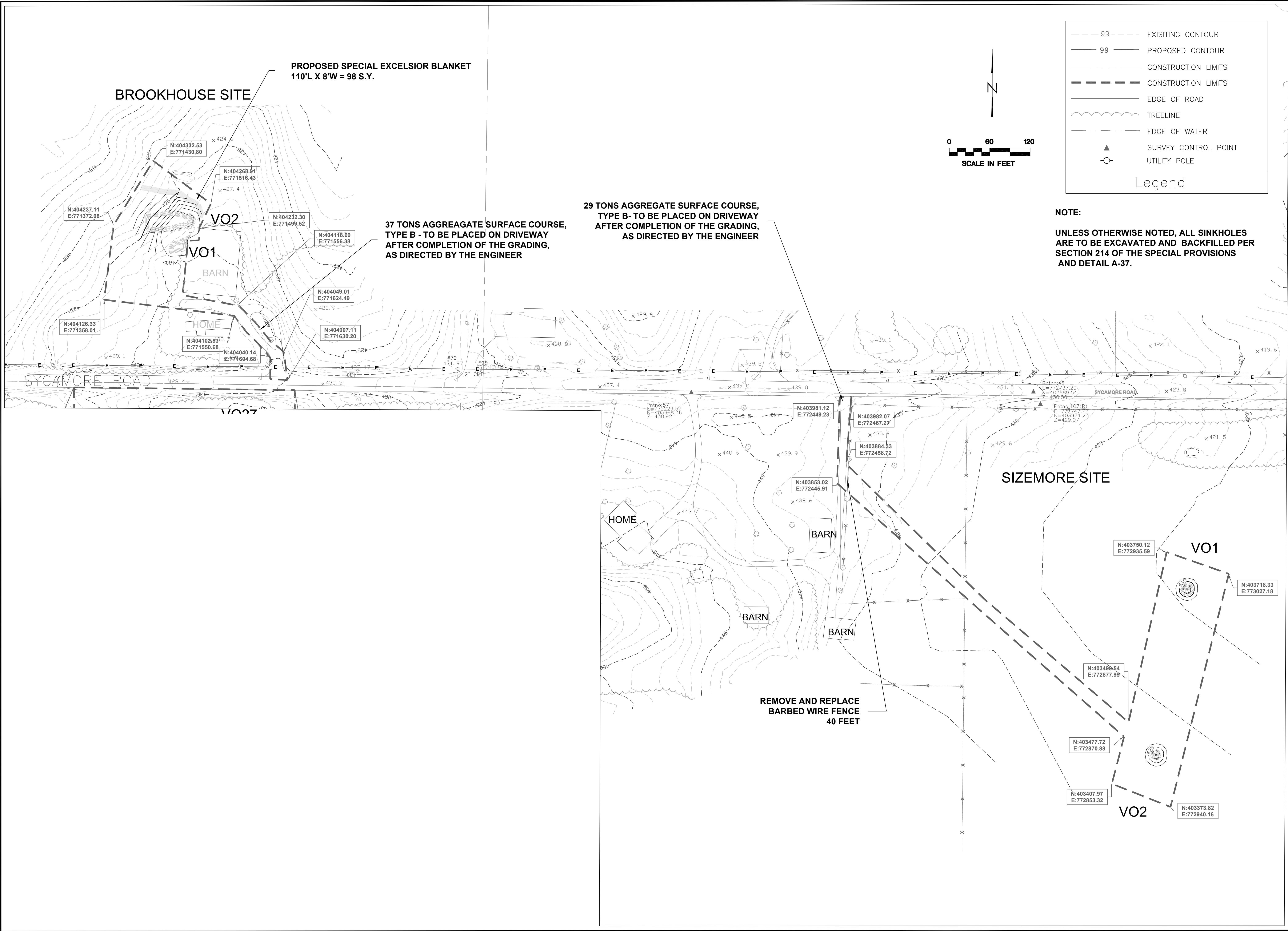
CUT 22.8 S.F.  
 FILL 0.0 S.F.

CUT 33.9 S.F.  
 FILL 0.0 S.F.

18+50

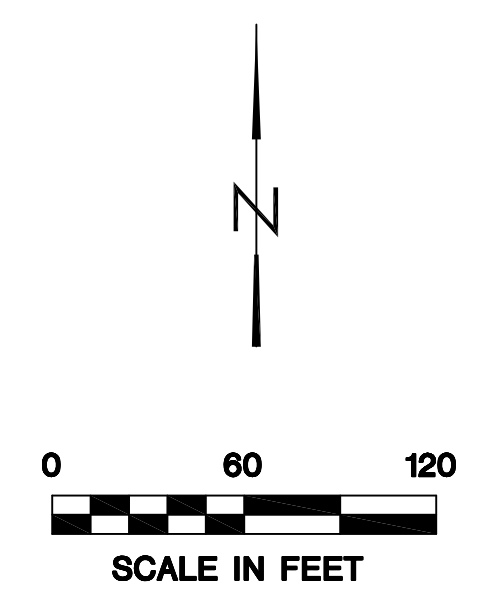
18+00

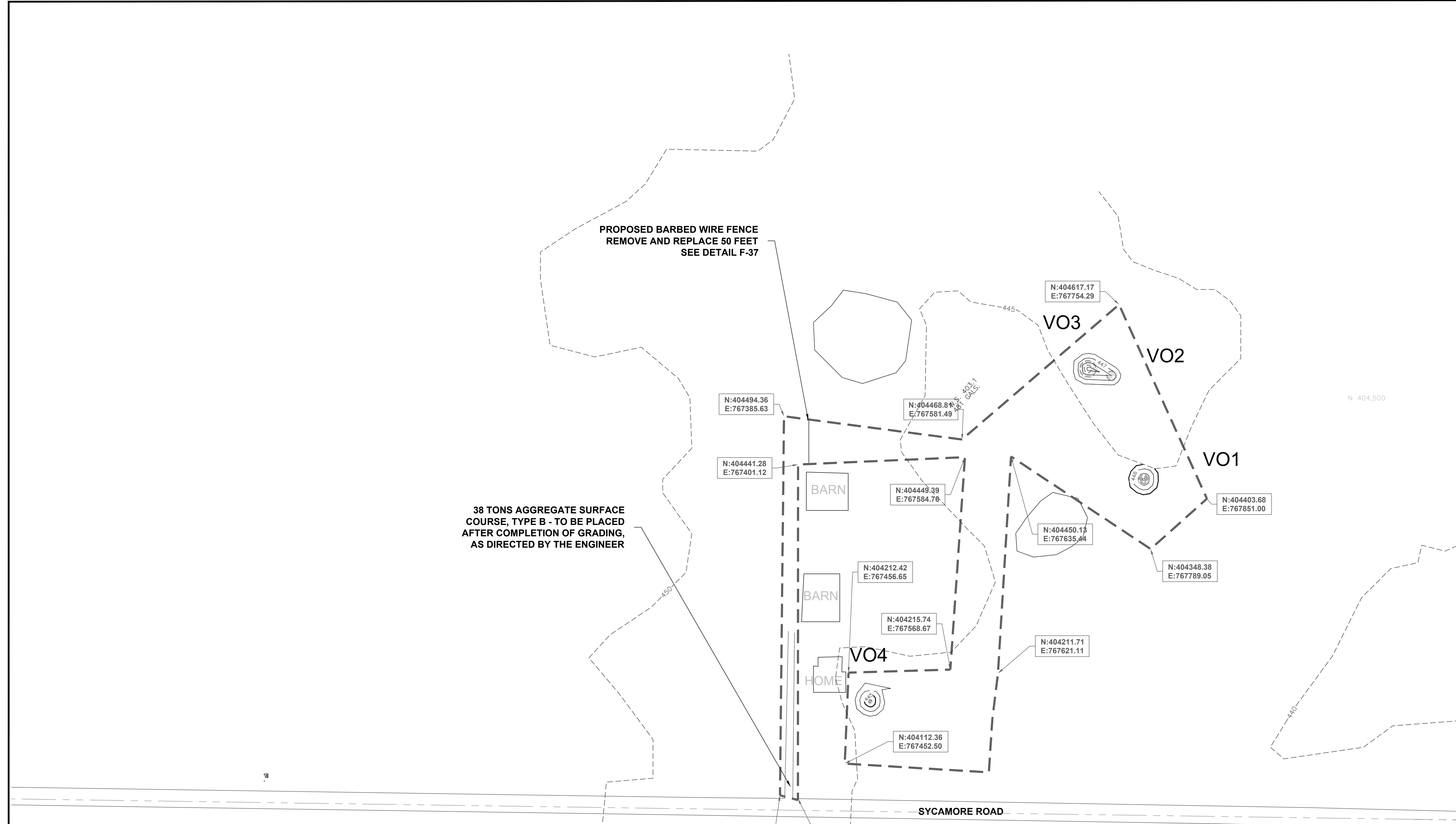
17+50



--- 99 ---	EXISTING CONTOUR
— 99 —	PROPOSED CONTOUR
- - - - -	CONSTRUCTION LIMITS
— - - - -	CONSTRUCTION LIMITS
———	EDGE OF ROAD
~~~~~	TREELINE
- - - - -	EDGE OF WATER
▲	SURVEY CONTROL POINT
○	UTILITY POLE
Legend	

**NOTE:**  
UNLESS OTHERWISE NOTED, ALL SINKHOLES ARE TO BE EXCAVATED AND BACKFILLED PER SECTION 214 OF THE SPECIAL PROVISIONS AND DETAIL A-37.





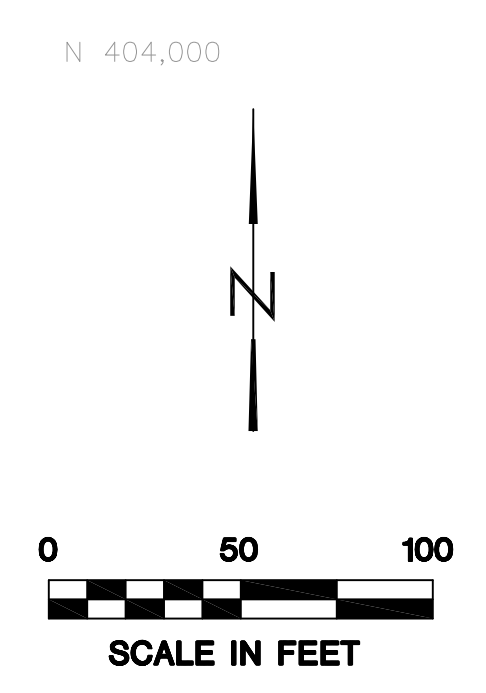
38 TONS AGGREGATE SURFACE COURSE, TYPE B - TO BE PLACED AFTER COMPLETION OF GRADING, AS DIRECTED BY THE ENGINEER

PROPOSED BARBED WIRE FENCE REMOVE AND REPLACE 50 FEET SEE DETAIL F-37

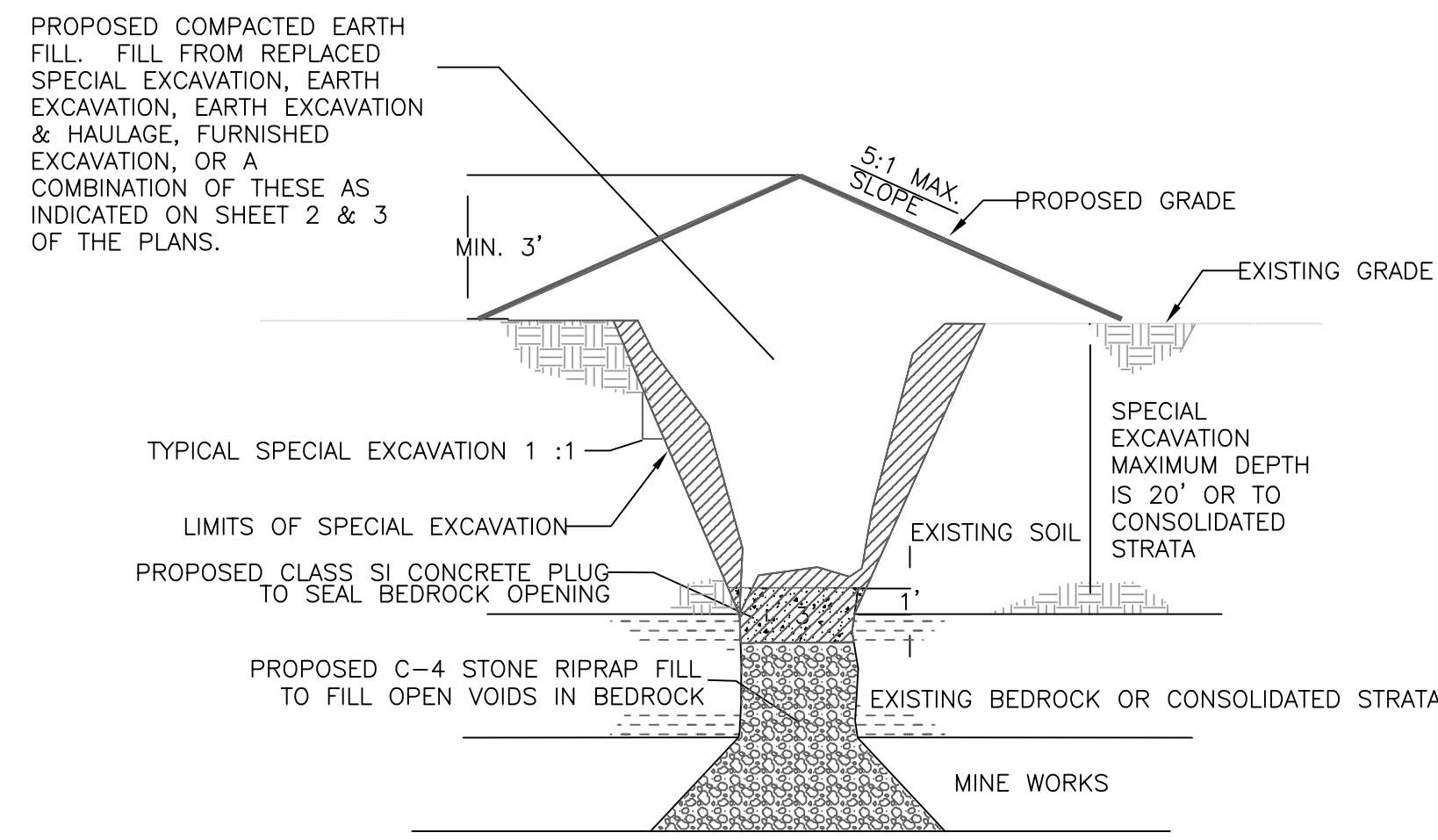
**NOTE:**  
UNLESS OTHERWISE NOTED, ALL SINKHOLES ARE TO BE EXCAVATED AND BACKFILLED PER SECTION 214 OF THE SPECIAL PROVISIONS AND DETAIL A-37.

--- 99 ---	EXISTING CONTOUR
— 99 —	PROPOSED CONTOUR
---	CONSTRUCTION LIMITS
---	CONSTRUCTION LIMITS
---	EDGE OF ROAD
~~~~~	TREELINE
---	EDGE OF WATER
▲	SURVEY CONTROL POINT
○	UTILITY POLE

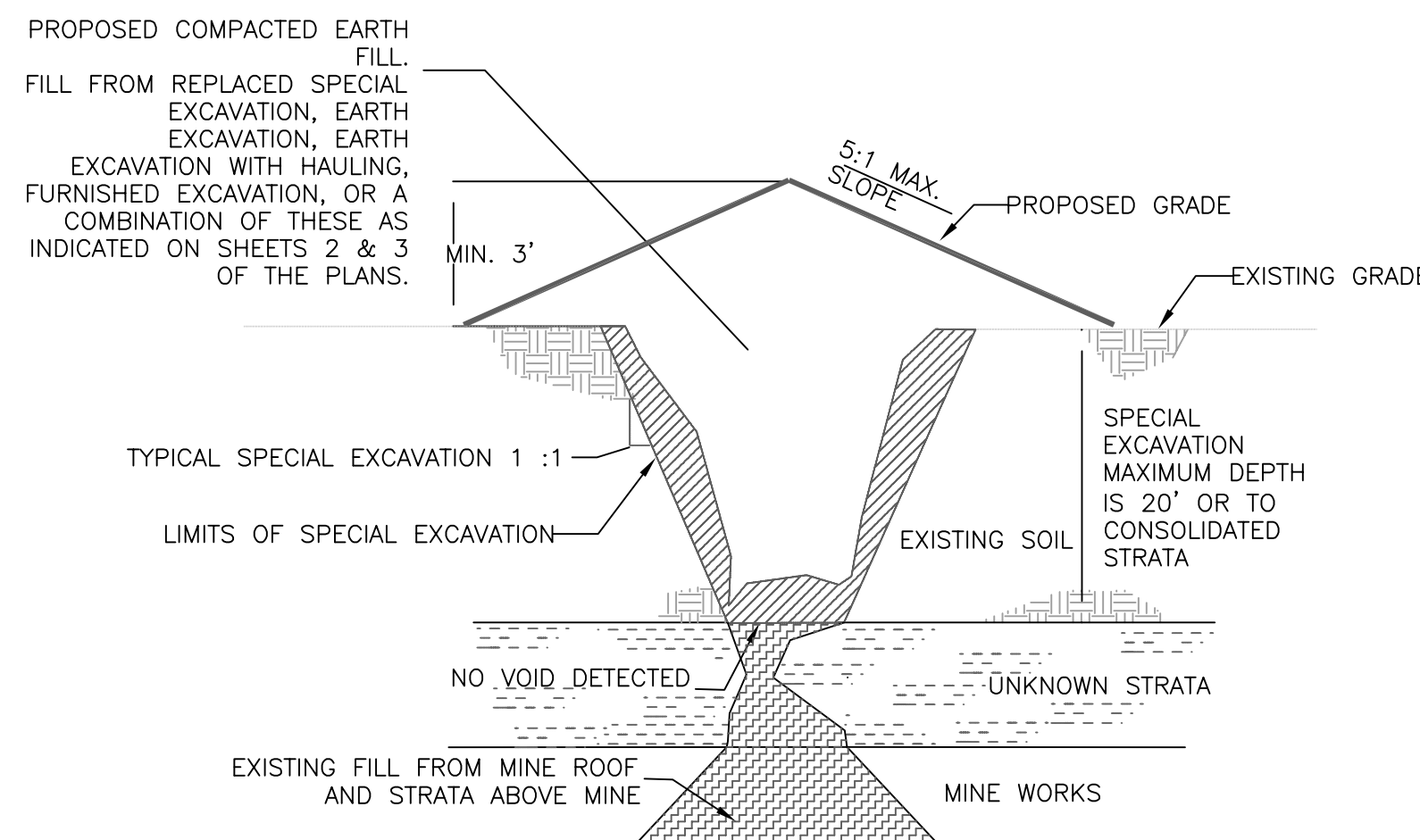
Legend



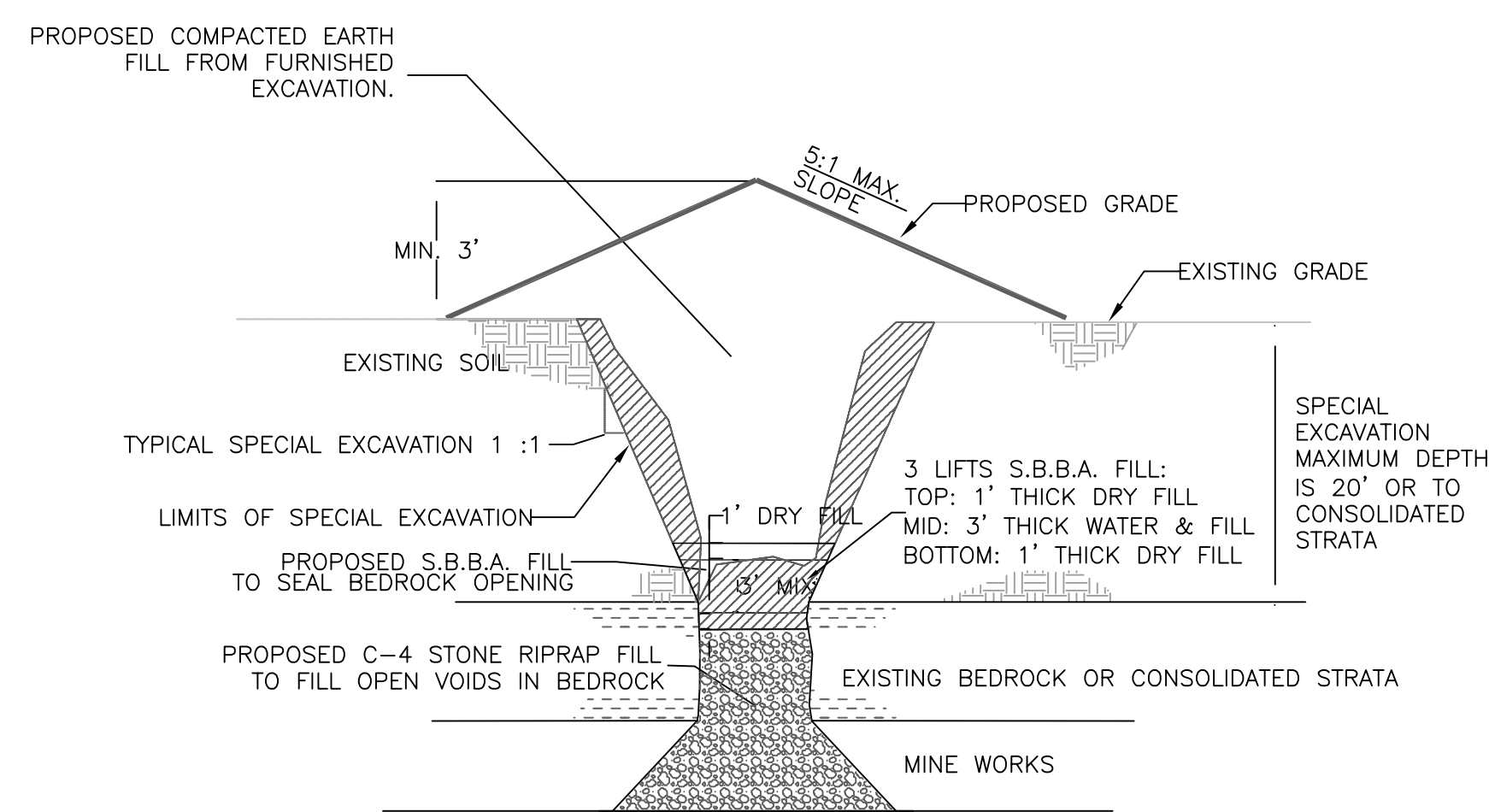
THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THE AREA OF THE SINKHOLES DUE TO THE UNKNOWN STABILITY OF THE AREA AROUND THE SINKHOLES AND THE POSSIBILITY OF MINE GASES. THE ENGINEER WILL VERIFY THE NATURE AND EXTENT OF THE OPEN VOIDS, IF ANY, IN THE STRATA AS SPECIAL EXCAVATION PROGRESSES. THE ENGINEER WILL MAKE THE DETERMINATION DURING CONSTRUCTION BASED UPON THE EXACT CONDITIONS ENCOUNTERED DURING SPECIAL EXCAVATION PROCESS. IF NO CONSOLIDATED MATERIAL IS ENCOUNTERED, NO CONCRETE PLUG WILL BE USED. THE ENGINEER WILL FIELD MEASURE THE VOLUME OF SPECIAL EXCAVATION, CONCRETE PLUG, OR RIPRAP FOR EACH SINKHOLE. THE CONTRACTOR SHALL TEMPORARILY FENCE THE EXCAVATION FOR 48 HOURS AFTER COMPLETION OF THE CONCRETE PLUG AND BEFORE PROCEEDING WITH THE REMAINING FILL.



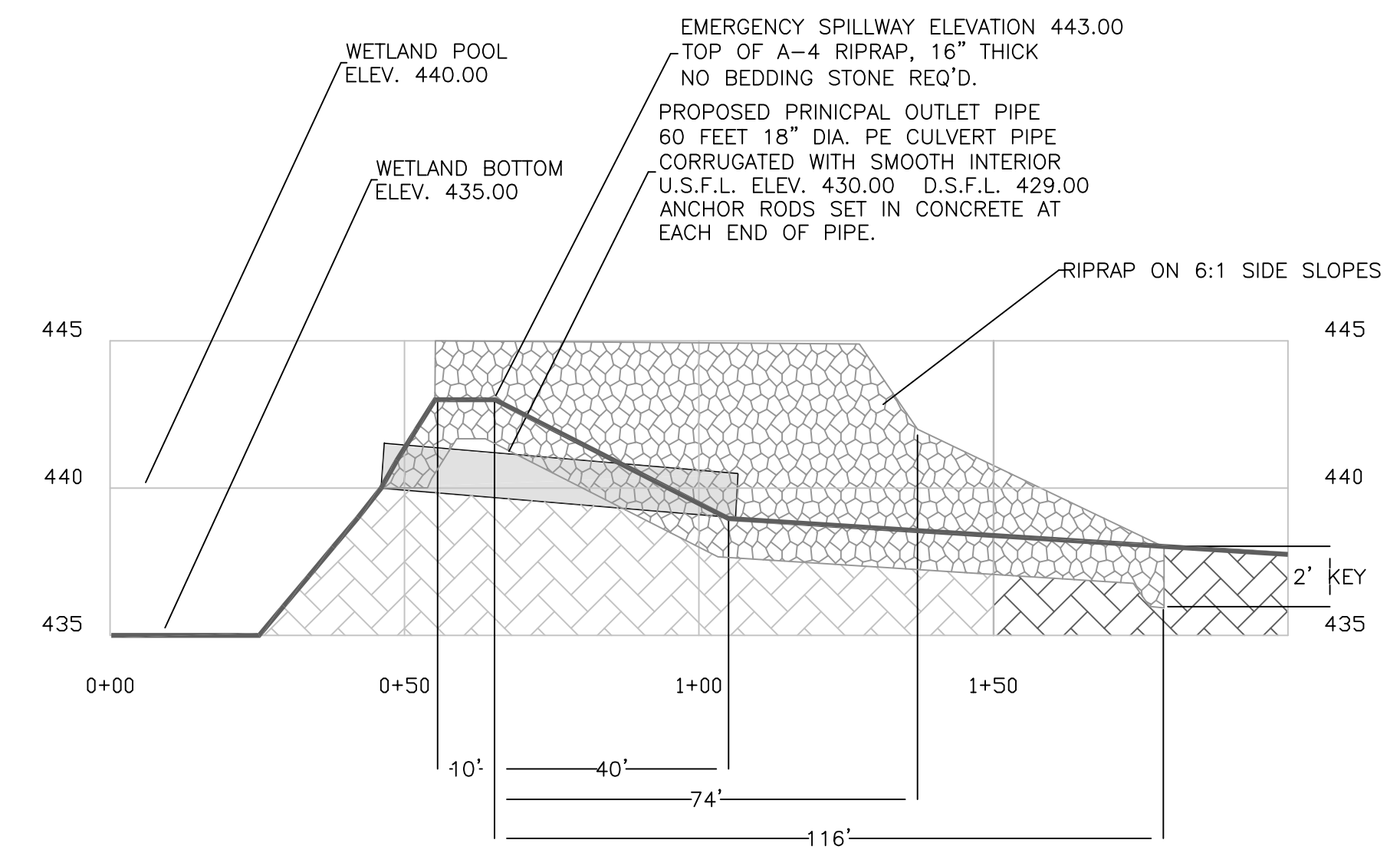
**A**  
37  
OPEN VOID SINKHOLE FILLING DETAIL IN BEDROCK  
NO SCALE, TYPICAL SECTION



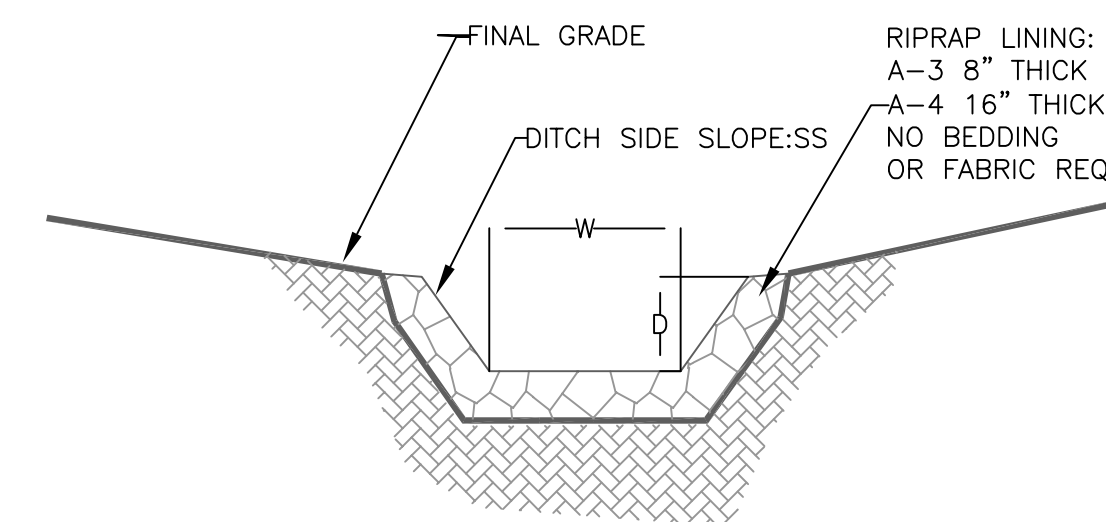
**B**  
37  
NO VOID SINKHOLE FILLING DETAIL  
NO SCALE, TYPICAL SECTION



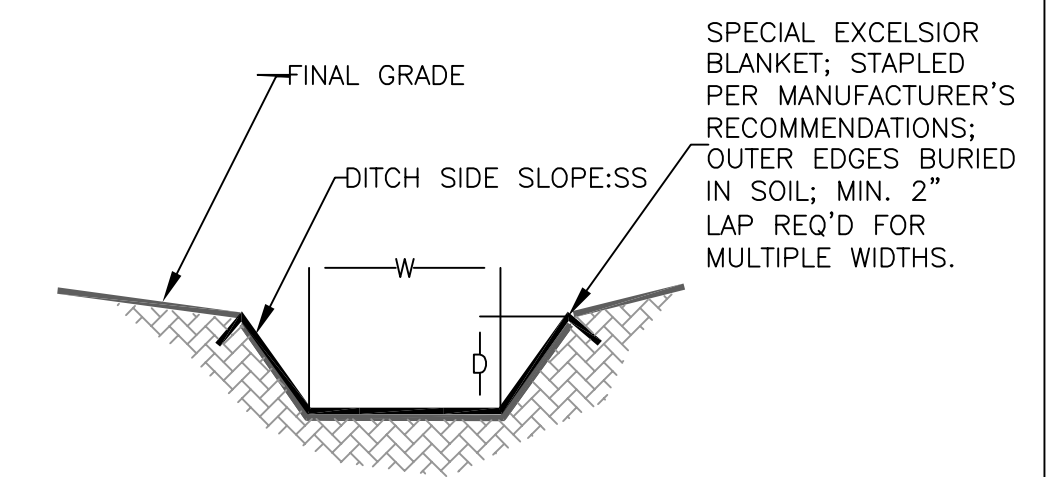
**C**  
37  
SINKHOLE FILLING DETAIL USING S.B.B.A. FILL  
NO SCALE, TYPICAL SECTION SHOWN WITH OPEN VOID



**D**  
37  
WETLAND OUTLET CROSS SECTION  
HALL EAST SITE



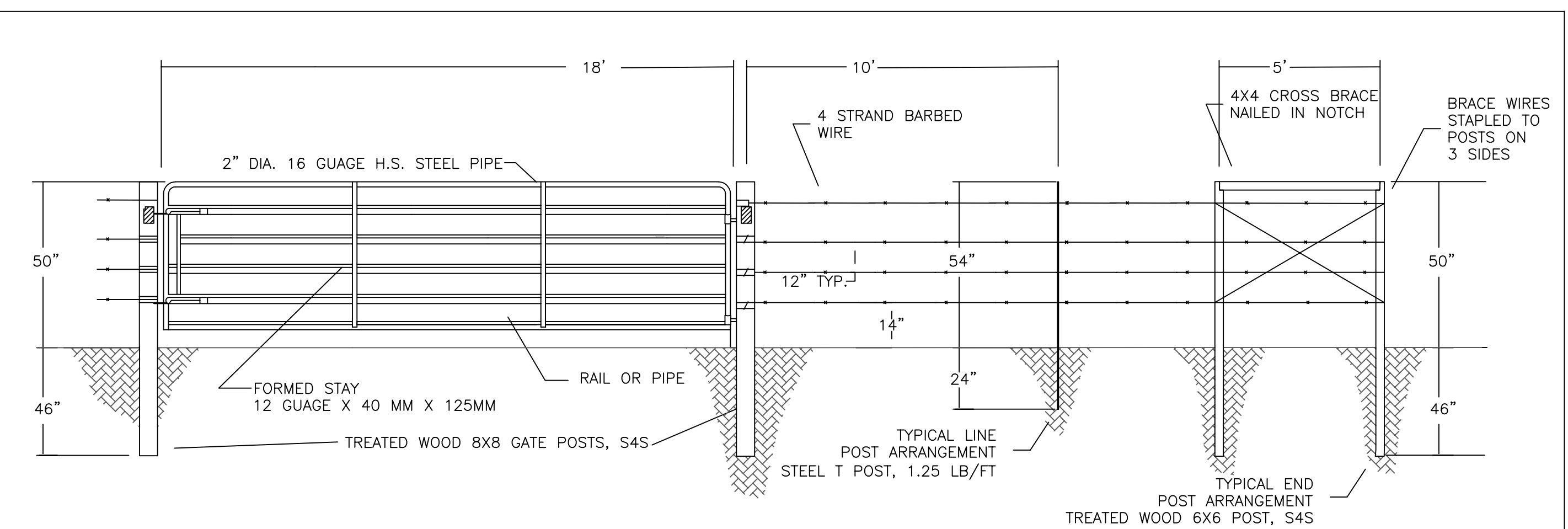
TYPICAL RIPRAP



TYPICAL EXCELSIOR

LOCATION	LINING	"W" DIM.	"D" DIM.	"SS"
THOMAS	A-3	3'	2'	3:1
LADD	A-3	5'	2'	3:1
HUNTER	EXCELSIOR	10'	2'	5:1
HALL EAST HW DITCHES	A-3	6'	3'	3:1
HALL EAST LAKE DITCH	A-4	8'	3'	3:1
HALL EAST WETLAND OUT.	EXCELSIOR	8'	3'	3:1

**E**  
37  
TYPICAL DITCH CROSS SECTIONS  
NOT TO SCALE



**F**  
37  
FENCE AND ENTRANCE GATE DETAIL  
TYPICAL SECTION, NOT TO SCALE