



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Friday, March 14, 2025
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit Modification Approval for Van Wie 1221 N-7H
47-041-05766-00-00

Adding an access road

HG ENERGY II APPALACHIA, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: Van Wie 1221 N-7H
Farm Name: HG Energy II Appalachia, LLC
U.S. WELL NUMBER: 47-041-05766-00-00
Horizontal 6A New Drill
Date Modification Issued: 3/14/2025

Promoting a healthy environment.

03/14/2025

WEST VIRGINIA
COUNTY MAP

Straight Run Entrance

WV-N NAD 83 N: 76309.00
WV-N NAD 83 E: 2063742.91
WV-N NAD 27 N: 763559.77
WV-N NAD 27 E: 2095194.65
Lat. NAD 83: 39.09644219
Lon. NAD 83: -80.66444248
Lat. NAD 27: 39.09635249
Lon. NAD 27: -80.66462154
UTM 17 NAD 83 N: 4327532.55
UTM 17 NAD 83 E: 529017.06

Fink Creek Exit

WV-N NAD 83 N: 763385.30
WV-N NAD 83 E: 2059634.99
WV-N NAD 27 N: 762911.99
WV-N NAD 27 E: 2083985.92
Lat. NAD 83: 39.10135871
Lon. NAD 83: -80.67889360
Lat. NAD 27: 39.10126936
Lon. NAD 27: -80.67907206
UTM 17 NAD 83 N: 4328073.64
UTM 17 NAD 83 E: 527765.48

Staging Area Entrance

WV-N NAD 83 N: 763388.38
WV-N NAD 83 E: 2059640.55
WV-N NAD 27 N: 765339.25
WV-N NAD 27 E: 2091092.35
Lat. NAD 83: 39.10136711
Lon. NAD 83: -80.67887397
Lat. NAD 27: 39.10127776
Lon. NAD 27: -80.67905242
UTM 17 NAD 83 N: 4328074.58
UTM 17 NAD 83 E: 527767.18

Staging Area Exit

WV-N NAD 83 N: 765364.74
WV-N NAD 83 E: 2059939.87
WV-N NAD 27 N: 765315.60
WV-N NAD 27 E: 2091391.67
Lat. NAD 83: 39.10129937
Lon. NAD 83: -80.67781963
Lat. NAD 27: 39.10121000
Lon. NAD 27: -80.67799812
UTM 17 NAD 83 N: 4328067.38
UTM 17 NAD 83 E: 527858.37

ASTs to consist of (2) 10,000 bbl (76" diameter) tanks with secondary containment 12,000 bbl (83" diameter) for processed water

Site Entrance WV-N NAD 83 N: 762954.49 WV-N NAD 83 E: 2063348.90 WV-N NAD 27 N: 762905.26 WV-N NAD 27 E: 2094800.64 Lat. NAD 83: 39.09464922 Lon. NAD 83: -80.66583893 Lat. NAD 27: 39.09455950 Lon. NAD 27: -80.66501796 UTM 17 NAD 83 N: 4327333.13 UTM 17 NAD 83 E: 528897.04	Center of Well Pad WV-N NAD 83 N: 762961.19 WV-N NAD 83 E: 2062544.18 WV-N NAD 27 N: 762973.41 WV-N NAD 27 E: 2094800.64 Lat. NAD 83: 39.09467556 Lon. NAD 83: -80.66867393 Lat. NAD 27: 39.09458589 Lon. NAD 27: -80.66885286 UTM 17 NAD 83 N: 4327335.16 UTM 17 NAD 83 E: 528651.86 Pad Elev.: 1251.77	Center of AST Pad WV-N NAD 83 N: 762692.43 WV-N NAD 83 E: 2061991.36 WV-N NAD 27 N: 762931.59 WV-N NAD 27 E: 2083943.10 Lat. NAD 83: 39.09394312 Lon. NAD 83: -80.67062491 Lat. NAD 27: 39.09385347 Lon. NAD 27: -80.67080378 UTM 17 NAD 83 N: 4327253.26 UTM 17 NAD 83 E: 528483.45 Pad Elev.: 1229.00	ASTs to consist of (2) 10,000 bbl (76" diameter) tanks with secondary containment 12,000 bbl (83" diameter) for processed water	
N-1H WV-N NAD 83 N: 763022.62 WV-N NAD 83 E: 2062599.14 WV-N NAD 27 N: 762973.41 WV-N NAD 27 E: 2094050.89 Lat. NAD 83: 39.09484365 Lon. NAD 83: -80.66847951 Lat. NAD 27: 39.09475397 Lon. NAD 27: -80.66863945 UTM 17 NAD 83 (m) N: 4327353.87 UTM 17 NAD 83 (m) E: 528668.61	N-2H WV-N NAD 83 N: 763032.46 WV-N NAD 83 E: 2062610.47 WV-N NAD 27 N: 762973.41 WV-N NAD 27 E: 2094062.21 Lat. NAD 83: 39.09487055 Lon. NAD 83: -80.66843950 Lat. NAD 27: 39.09478988 Lon. NAD 27: -80.66861844 UTM 17 NAD 83 (m) N: 4327356.87 UTM 17 NAD 83 (m) E: 528672.06	N-3H WV-N NAD 83 N: 763042.30 WV-N NAD 83 E: 2062621.79 WV-N NAD 27 N: 762983.09 WV-N NAD 27 E: 2094073.53 Lat. NAD 83: 39.09489745 Lon. NAD 83: -80.66839949 Lat. NAD 27: 39.09480778 Lon. NAD 27: -80.66857843 UTM 17 NAD 83 (m) N: 4327359.87 UTM 17 NAD 83 (m) E: 528675.51	N-4H WV-N NAD 83 N: 763052.14 WV-N NAD 83 E: 2062633.11 WV-N NAD 27 N: 763002.93 WV-N NAD 27 E: 2094084.85 Lat. NAD 83: 39.09492436 Lon. NAD 83: -80.66835948 Lat. NAD 27: 39.09483468 Lon. NAD 27: -80.66838842 UTM 17 NAD 83 (m) N: 4327362.87 UTM 17 NAD 83 (m) E: 528678.96	N-5H WV-N NAD 83 N: 763061.98 WV-N NAD 83 E: 2062644.43 WV-N NAD 27 N: 763012.77 WV-N NAD 27 E: 2094096.17 Lat. NAD 83: 39.09495126 Lon. NAD 83: -80.66831947 Lat. NAD 27: 39.09486159 Lon. NAD 27: -80.66849841 UTM 17 NAD 83 (m) N: 4327365.87 UTM 17 NAD 83 (m) E: 528682.41
N-6H WV-N NAD 83 N: 763071.82 WV-N NAD 83 E: 2062655.75 WV-N NAD 27 N: 763022.61 WV-N NAD 27 E: 2094107.49 Lat. NAD 83: 39.09487816 Lon. NAD 83: -80.66827946 Lat. NAD 27: 39.09488849 Lon. NAD 27: -80.66845840 UTM 17 NAD 83 (m) N: 4327368.86 UTM 17 NAD 83 (m) E: 528685.85	S-7H WV-N NAD 83 N: 762930.92 WV-N NAD 83 E: 2062382.73 WV-N NAD 27 N: 762871.72 WV-N NAD 27 E: 2093834.47 Lat. NAD 83: 39.09456558 Lon. NAD 83: -80.66924324 Lat. NAD 27: 39.09447691 Lon. NAD 27: -80.66942215 UTM 17 NAD 83 (m) N: 4327322.89 UTM 17 NAD 83 (m) E: 528602.68	S-8H WV-N NAD 83 N: 762930.76 WV-N NAD 83 E: 2062394.05 WV-N NAD 27 N: 762881.56 WV-N NAD 27 E: 2093845.79 Lat. NAD 83: 39.09455948 Lon. NAD 83: -80.66923323 Lat. NAD 27: 39.09450382 Lon. NAD 27: -80.66938214 UTM 17 NAD 83 (m) N: 4327325.88 UTM 17 NAD 83 (m) E: 528606.13	S-9H WV-N NAD 83 N: 762940.60 WV-N NAD 83 E: 2062405.37 WV-N NAD 27 N: 762891.40 WV-N NAD 27 E: 2093857.11 Lat. NAD 83: 39.09459348 Lon. NAD 83: -80.66916322 Lat. NAD 27: 39.09453072 Lon. NAD 27: -80.66934213 UTM 17 NAD 83 (m) N: 4327328.88 UTM 17 NAD 83 (m) E: 528609.57	S-10H WV-N NAD 83 N: 762950.44 WV-N NAD 83 E: 2062416.69 WV-N NAD 27 N: 762901.24 WV-N NAD 27 E: 2093868.44 Lat. NAD 83: 39.09467429 Lon. NAD 83: -80.66912321 Lat. NAD 27: 39.09457563 Lon. NAD 27: -80.66930213 UTM 17 NAD 83 (m) N: 4327331.88 UTM 17 NAD 83 (m) E: 528613.02
S-11H WV-N NAD 83 N: 762960.28 WV-N NAD 83 E: 2062428.01 WV-N NAD 27 N: 762911.08 WV-N NAD 27 E: 2093879.76 Lat. NAD 83: 39.09467420 Lon. NAD 83: -80.66908020 Lat. NAD 27: 39.09458453 Lon. NAD 27: -80.66925212 UTM 17 NAD 83 (m) N: 4327334.88 UTM 17 NAD 83 (m) E: 528616.47	S-12H WV-N NAD 83 N: 762970.12 WV-N NAD 83 E: 2062439.33 WV-N NAD 27 N: 762920.92 WV-N NAD 27 E: 2093891.08 Lat. NAD 83: 39.09470110 Lon. NAD 83: -80.66904319 Lat. NAD 27: 39.09461143 Lon. NAD 27: -80.66922211 UTM 17 NAD 83 (m) N: 4327337.88 UTM 17 NAD 83 (m) E: 528619.92			

APPROVED
WVDEP OOG
Modification
3/14/2025

Project Contacts

HG Energy LLC

Jared Stemple - Construction Manager
740-336-2477

Survey and Engineer

Kenneth Kelly
304-338-6985 Off.

John P. See
304-442-0220 Off.

Zachary Summerfield
304-338-6987 Off.

MISS UTILITY OF
WEST VIRGINIA
1-800-245-4848

West Virginia State Law
Section XIV, Chapter 24-C requires
that you call two business days
before
you dig in the state of West Virginia.
IT'S THE LAW

811

Know what's below.
Call before you dig.

Environmental:

Wetland Delineations as provided by Palustris Environmental
dated June 20, 2023

Topographic Information:

The topographic information shown herein is based on
aerial photography by Blue Mountain Aerial Mapping, Burton, WV

HG Energy LLC will obtain an Encroachment Permit (Form MM-109)
from the WV Department of Transportation, Division of Highways,
prior to the commencement of any construction activities

The WV Mines Website was consulted. Previous mining
activities are not within the AOI.

WVDEP Website files show that there are
active and/or abandoned gas wells within the AOI

1221 Well Site Fink Creek Access

Site Design, Construction Plan, &
Erosion and Sediment Control Plans

HG Energy LLC

Lewis County

Freemans Creek District

Latitude 39.09467556°

Longitude -80.66867393°

Leading Creek Watershed

Exhibit A: As-Built Modification

03/14/2025

Approach Routes:

From I-79 North near Jane Lew, WV. Take Exit 99 and turn left at the end of the exit onto Co Rt 7, Hackers Creek Rd. Follow Co Rt 7 for 0.9 mi. Turn Left onto US Rt 19 South. Follow US Rt 19 South for 4.9 mi. Turn Right onto Co Rt 12, Jackson Mill Rd. Follow Co Rt 12 for 2.4 mi. Slight Left onto Co Rt 10, Old Mill Rd. Follow Co Rt 10 for 0.6 mi. Turn Left onto Co Rt 10, Old Mill Rd (at Jacksons Mill Fire Station). Follow Co Rt 10 for 500'. Turn Right onto Co Rt 10, Valley Chapel Rd. Follow Co Rt 10 for 4.4 mi. Turn Right onto Co Rt 10, Freemans Creek Rd. Follow Co Rt 10 for 3.8 mi. Turn Right onto Co Rt 9, Churchville Road. Follow Churchville road for 0.2 mi. Turn left onto Co Rt 10, Isaacs Fork Rd. Follow Co Rt 10 for 1.0 mi. Turn Right onto Co Rt 10, Isaacs Fork Rd. Follow Co Rt 10 for 3.6 mi. Continue Straight onto Co Rt 10, Straight Run Rd. Follow Co Rt 10 for 0.5 mi. Continue Straight onto Co Rt 10, Straight Run Rd. Follow Co Rt 10 for 0.5 mi. The site entrance will be on the Right, northwest, side of the road

Well Location Restrictions

All Pad construction complies with the following restrictions.

- *250' from an existing well or developed spring used for human or domestic animals.
- *625' from an occupied dwelling or barn greater than 2,500 SF used for poultry or dairy measured from the center of the pad.
- *300' from the edge of disturbance to a naturally reproducing trout stream.
- *1,000' of a surface or ground water intake to a public water supply.

(Well Location Restrictions of WV Code 22-6A-12)

The drawings, construction notes and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas, 25-CC-20. All Plans, Sheets, and/or Reference Diagrams included in this design constitute a complete set of plans. A complete set of plans is necessary to construct the site in accordance with the design.

Zachary C. Summerfield
RPE 22214
Kelly Surveying PLLC
CO#4338-0005

Date: 02-04-2025

Ephemeral Stream Impact (Linear Feet) - Fink Creek Access Road						
Stream and Impact Cause	Culvert (LF)	Inter/Outlet Structures Fill (LF)	Slope Fill (LF)	Const. Disturb. to LOD (LF)	Total Impact (LF)	
Watercourse FE (Access Road)	10.00	86.60	12.43	109.03		
Watercourse FA (Access Road)	-	12.21	45.95	5.00	63.16	
Total Stream Impacts					172.19	

Sheet	Description
1	Cover Sheet
V1	Schedule of Quantities
N1-N4	Site Notes
2-3	Pre-Construction Site Conditions
4-5	Site Soil Map
6	Clearing Exhibit
7-8	Overall Plan View
9-14	E&S Plan View
15	Toe Key Exhibit
16-23	Plan View
24-27	Cross Sections - Well Pad
28	Cross Sections - Well Pad Access Road
29	Cross Sections - Staging Area
30-32	Cross Sections - Access Road
G1-G2	Geotechnical Exhibit
L1	Landowner Disturbed Area Exhibit
S1	Site Reclamation
M1-M2	Production Exhibit
D1-D2	Erosion and Sediment Control Details
R1	Access Road Details
P1	Pad Details

Pertinent Site Information

1221 Site

Emergency Number: 304-269-8241

Freemans Creek District, Lewis County, WV

Watershed: Leading Creek Watershed

Site 911 Address:

HG Energy Contact Number: 304-420-1100

Property Owner Information - 1221 Well Site						
Freemans Creek District - Lewis County						
Owner	TM - Parcel	Well Pad	Access Road	Stockpiles	Add. Clearing	Total Disturbed
HG Energy II Appalachia, LLC	2D-3.1	0.00	0.00	0.03	0.10	0.13
HG Energy II Appalachia, LLC	2D-3	4.94	0.75	0.14	2.65	13.97
Anthony & Dawn Van Wie	2D-29	4.56	1.59	0.67	2.48	9.30
Site Totals (Ac)	9.50	2.34	0.81	2.68	8.07	23.40

Property Owner Information - 1221 Fink Creek Access						
Freemans Creek District - Lewis County						
Owner	TM - Parcel	Staging Area	Access Road	Topsoil/Excess	Add. Clearing	Total Disturbed
Alice Keely et al	2D-48	1.09	0.23	0.24	1.19	2.75
James II & Sheila Gum	2D-3.4	0.00	5.32	1.37	7.47	14.16
James II & Sheila Gum	2C-7	0.00	3.31	0.47	3.81	7.59
Site Totals (Ac)	1.09	8.86	2.08	12.47	24.50	

Well Site Access Road			
Surface Owner	TM - Parcel	Road Length	Type
HG Energy II Appalachia, LLC	2D-3	111.47'	New Access Road Construction
Anthony & Dawn Van Wie	2D-29	644.05'	New Access Road Construction

Fink Creek Access Road			
Surface Owner	TM - Parcel	Road Length	Type
Alice Keely et al	2D-48	286.52'	New Access Road Construction
James II & Sheila Gum	2D-3.4	3,108.37'	New Access Road Construction
James II & Sheila Gum	2C-7	2,555.68'	New Access Road Construction

Disturbed Area - Well Pad			
Well Pad Construction	9.50 Ac		
AST Pad Construction	2.34 Ac		
Access Road Construction	0.81 Ac		
Spill/Excess Material	2.68 Ac		
Additional Clearing	8.07 Ac		
Total Disturbed Area	23.40 Ac		
Additional Information			
Total Wooded Acres Disturbed	21.65 Ac		
Total Linear Feet of Access Road	5,590.57'		

1221 Well Site Quantities - Well Site						
Description	Cut (CY)	Fill (CY)	Spill (CY)	Borrow (CY)	Max. Slope	Length of Slope Est Topsoil (CY)
Well Pad	127,216.91	75,685.35	51,531.56	-	N/A	15,000.00
AST Pad	142.57	26,303.50	-	26,160.93	N/A	3,800.00
Well Pad Access Road	39.80	7,064.90	-	7,025.10	13.44%	255.18'
AST Pad Access Road	3.04	1,730.01	-	1,726.97	14.55%	169.46'
Landowner Access Road	-	-	-	-	-	-
Excess Material Stockpiles	-	27,358.80	-	27,358.80	N/A	N/A
Totals	127,425.12	136,456.68	51,531.56	60,563.12	(Excess Spill Capacity)	
Total Spoil (CY) =	-	-	9,031.56	-		

1221 Fink Creek Access Quantities						
Description	Cut (CY)	Fill (CY)	Spill (CY)	Borrow (CY)	Max. Slope	Length of Slope
Bypass Access Road	22,252.02	18,886.63	3,365.39	-	-20.38	78.83'
Staging Area	2,320.28	819.95	1,500.33	-	N/A	N/A
Staging Area East Access	0.33	29.65	-	29.32	N/A	N/A
Staging Area West Access	2.21	6.93	-	4.72	N/A	N/A
Staging Area Stockpile	0.00	3,000.00	-	3,000.00	N/A	N/A
Bypass Access Road Stockpiles	0.00	19,000.00	-	19,000.00	N/A	N/A
Totals	24,574.84	41,743.16	4,865.72	22,034.04	(Excess Stockpile Capacity)	
Total Spoil (CY) =	-	-	-17,168.32	-		

Revision
As-Built

Date
02-04-2025

THIS DOCUMENT
PREPARED FOR
HG ENERGY LLC

Kelly Surveying
P.O. Box 254
Dolley, WV 26029
304-338-0905

1221 Fink Creek Access

Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 1 of 32

Schedule of Quantities

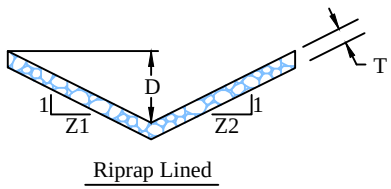
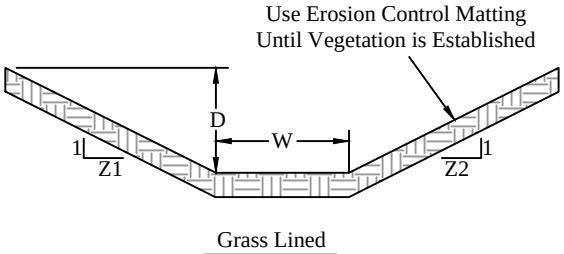
Fink Access Road Pipe Schedule					
Pipe Crossing	Station	Length (ft)	Diameter (ft)	Type	Slope (%)
1	3+62	35	1.5	HDPE	2
2	7+26	35	1.5	HDPE	2
3	9+36	35	1.5	HDPE	2
4	12+37	30	1.5	HDPE	2
5	15+63	35	1.5	HDPE	2
6	18+68	35	1.5	HDPE	2
7	24+93	38	1.5	HDPE	2
8	28+25	40	1.5	HDPE	2
9	34+05	45	1.5	HDPE	2
10	39+30	30	1.5	HDPE	2
11	41+30	35	1.5	HDPE	2
12	46+00	35	1.5	HDPE	2
13	50+39	30	1.5	HDPE	2
14	51+95	32	1.5	HDPE	2
15	53+50	40	1.5	HDPE	2
16	56+83	45	1.5	HDPE	2
17	46+98	80	1.5	HDPE	2
18	51+27	55	1.5	HDPE	2
19	0+14	60	1.5	HDPE	2
20	0+10	80	1.5	HDPE	2

1221 Well Site Fink Creek Access

HG Energy LLC

Exhibit A: As-Built Modification

18" Filter Sock			1875	Belted Silt Retention Fence			1757	Super Silt Fence			3918		
FS18 #1	19	FS18 #22	74	BSRF #1	27	BSRF #17	31	SSF #1	34	SSF #23	63	SSF #45	120
FS18 #2	25	FS18 #23	60	BSRF #2	30	BSRF #18	35	SSF #2	36	SSF #24	67	SSF #46	56
FS18 #3	45	FS18 #24	29	BSRF #3	49	BSRF #19	129	SSF #3	27	SSF #25	52	SSF #47	42
FS18 #4	35	FS18 #25	21	BSRF #4	39	BSRF #20	216	SSF #4	52	SSF #26	51	SSF #48	45
FS18 #5	50	FS18 #26	55	BSRF #5	55	BSRF #21	41	SSF #5	57	SSF #27	43	SSF #49	37
FS18 #6	63	FS18 #27	92	BSRF #6	68	BSRF #22	37	SSF #6	137	SSF #28	35	SSF #50	56
FS18 #7	45	FS18 #28	27	BSRF #7	50	BSRF #23	42	SSF #7	77	SSF #29	27	SSF #51	46
FS18 #8	36	FS18 #29	28	BSRF #8	37	BSRF #24	35	SSF #8	104	SSF #30	33	SSF #52	72
FS18 #9	26	FS18 #30	31	BSRF #9	31	BSRF #25	26	SSF #9	216	SSF #31	34	SSF #53	156
FS18 #10	41	FS18 #31	22	BSRF #10	46	BSRF #26	69	SSF #10	39	SSF #32	32	SSF #54	46
FS18 #11	69	FS18 #32	31	BSRF #11	127	BSRF #27	58	SSF #11	52	SSF #33	36	SSF #55	55
FS18 #12	71	FS18 #33	47	BSRF #12	54	BSRF #28	58	SSF #12	58	SSF #34	33	SSF #56	54
FS18 #13	65	FS18 #34	61	BSRF #13	41	BSRF #29	48	SSF #13	41	SSF #35	98	SSF #57	52
FS18 #14	56	FS18 #35	59	BSRF #14	68	BSRF #30	50	SSF #14	39	SSF #36	57	SSF #58	76
FS18 #15	26	FS18 #36	56	BSRF #15	48	BSRF #31	29	SSF #15	83	SSF #37	33	SSF #59	52
FS18 #16	54	FS18 #37	56	BSRF #16	58	BSRF #32	25	SSF #16	60	SSF #38	63	SSF #60	29
FS18 #17	22	FS18 #38	79					SSF #17	61	SSF #39	82	SSF #61	54
FS18 #18	42	FS18 #39	34					SSF #18	88	SSF #40	30	SSF #62	36
FS18 #19	30	FS18 #40	39					SSF #19	121	SSF #41	30	SSF #63	58
FS18 #20	31	FS18 #41	52					SSF #20	58	SSF #42	38	SSF #64	71
FS18 #21	23	FS18 #42	48					SSF #21	64	SSF #43	47	SSF #65	75
								SSF #22	38	SSF #44	32	SSF #66	72



Rock Lined Channel						
Channel ID	Min Depth (D) (ft)	Width (W) (ft)	z1	z2	T (ft)	Riprap Size D50 (in)
Sump A Outlet	2	4	2	2	1	R4
Sump B Outlet	2	4	2	2	1	R4
Sump C Outlet	2	4	2	2	1	R4
Bench 1 Outlet	2	0	2	2	0.75	R3
AST Drain A	2	0	2	2	1	R4
AST Drain B	2	0	2	2	1	R4
AST Drain C	2	0	2	2	1	R4

Toe Keys	
Toe Key	Toe Key Length (ft)
A	383
B	2037
C	237
D	287
E	255
F	430
G	137
H	340
J	183
K	313
L	1394
M	306
N	470
O	87

Surface Areas			
Area Name	Area (Ac.)	Area (SF)	Area (SY)
Well Pad	5.62	244,841	27,205
Well Pad Access Road	0.40	17,596	1,956
AST Pad	1.05	45,567	5,063
AST Pad Access Road	0.14	6,306	701

Earthwork & Capacity Reports

The earthwork quantities provided are an estimate for consideration. The quantities shown are calculated using a 1:1 Cut / Swell & Shrink factor. The quantities shown may be greater or less than actually excavated. The engineer is not responsible for variances from the estimated quantities and does not certify to their accuracy.

<u>Well Pad Report</u> Top of pad elevation: 1251.77 Cut Slope: 50.00% 2.00:1 Fill Slope: 50.00% 2.00:1 Pad Earthwork Volumes Total cut : 3,434,856.5 C.F., 127,216.91 C.Y. Total fill: 2,043,504.5 C.F., 75,685.35 C.Y.	<u>Stockpile #1 Pad Report</u> Cut Slope: 50.00% 2.00:1 Fill Slope: 50.00% 2.00:1 Pad Earthwork Volumes Total cut : 0.0 C.F., 0.00 C.Y. Total fill: 216,002.9 C.F., 8,000.11 C.Y.
<u>AST Pad Report</u> Top of pad elevation: 1229.00 Cut Slope: 50.00% 2.00:1 Fill Slope: 50.00% 2.00:1 Pad Earthwork Volumes Total cut : 3,849.3 C.F., 142.57 C.Y. Total fill: 710,194.6 C.F., 26,303.50 C.Y.	<u>Stockpile #2 Pad Report</u> Cut Slope: 50.00% 2.00:1 26.57° Fill Slope: 50.00% 2.00:1 26.57° Pad Earthwork Volumes Total cut : 35.1 C.F., 1.30 C.Y. Total fill: 135,399.7 C.F., 5,014.80 C.Y.
<u>Well Pad Access Road Report</u> Processing 0+00.000 to 5+08.218 Total Cut : 991.983 C.F., 36,740 C.Y. Total Fill: 144042.971 C.F., 5334.925 C.Y.	<u>Stockpile #3 Pad Report</u> Cut Slope: 50.00% 2.00:1 26.57° Fill Slope: 50.00% 2.00:1 26.57° Pad Earthwork Volumes Total cut : 0.0 C.F., 0.00 C.Y. Total fill: 22,588.2 C.F., 836.60 C.Y.
<u>AST Access Road Report</u> Processing 0+00.000 to 2+47.299 Total Cut : 81.956 C.F., 3.035 C.Y. Total Fill: 46710.155 C.F., 1730.006 C.Y.	<u>Stockpile #4 Pad Report</u> Cut Slope: 50.00% 2.00:1 26.57° Fill Slope: 50.00% 2.00:1 26.57° Pad Earthwork Volumes Total cut : 1.2 C.F., 0.05 C.Y. Total fill: 243,167.5 C.F., 9,006.20 C.Y.
	<u>Stockpile #5 Pad Report</u> Cut Slope: 50.00% 2.00:1 26.57° Fill Slope: 50.00% 2.00:1 26.57° Pad Earthwork Volumes Total cut : 0.0 C.F., 0.00 C.Y. Total fill: 121,529.5 C.F., 4,501.09 C.Y.

1221 Fink Bypass Access Road Report

Processing 0+00.00 to 58+33.53
Total Cut : 600804.45 C.F., 22252.02 C.Y.
Total Fill: 509939.04 C.F., 18886.63 C.Y.

Staging Area Pad Report

Cut Slope: 50.00% 2.00:1
Fill Slope: 50.00% 2.00:1

Pad Earthwork Volumes
Total cut : 62,647.5 C.F., 2,320.28 C.Y.
Total fill: 22,138.6 C.F., 819.95 C.Y.

Staging Area East Access Road Report

Processing 0+00.00 to 0+72.40
Total Cut : 8.81 C.F., 0.33 C.Y.
Total Fill: 800.61 C.F., 29.65 C.Y.

Staging Area West Access Road Report

Processing 0+00.00 to 0+44.64
Total Cut : 59.78 C.F., 2.21 C.Y.
Total Fill: 187.21 C.F., 6.93 C.Y.

Staging Area Stockpile Pad Report

Cut Slope: 50.00% 2.00:1
Fill Slope: 50.00% 2.00:1

Pad Earthwork Volumes
Total cut : 0.0 C.F., 0.00 C.Y.
Total fill: 81,002.5 C.F., 3,000.09 C.Y.

Stockpile #1 Report

Cut Slope: 50.00% 2.00:1
Fill Slope: 50.00% 2.00:1

Pad Earthwork Volumes
Total cut : 0.0 C.F., 0.00 C.Y.
Total fill: 215,999.4 C.F., 8,000.00 C.Y.

Stockpile #2 Report

Cut Slope: 50.00% 2.00:1
Fill Slope: 50.00% 2.00:1

Pad Earthwork Volumes
Total cut : 0.0 C.F., 0.00 C.Y.
Total fill: 162,000.2 C.F., 6,000.01 C.Y.

Stockpile #3 Report

Cut Slope: 50.00% 2.00:1
Fill Slope: 50.00% 2.00:1

Pad Earthwork Volumes
Total cut : 0.5 C.F., 0.02 C.Y.
Total fill: 135,003.2 C.F., 5,000.12 C.Y.

03/14/2025

Revision
Design

Date
02-04-2025



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Schedule of Quantities
1221 Well Site
Freemans Creek District
Lewis County, WV



Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet V1 of V1

1221 Well Site Fink Creek Access

HG Energy LLC

Exhibit A: As-Built Modification



Revision
Design

Date
02-04-2025

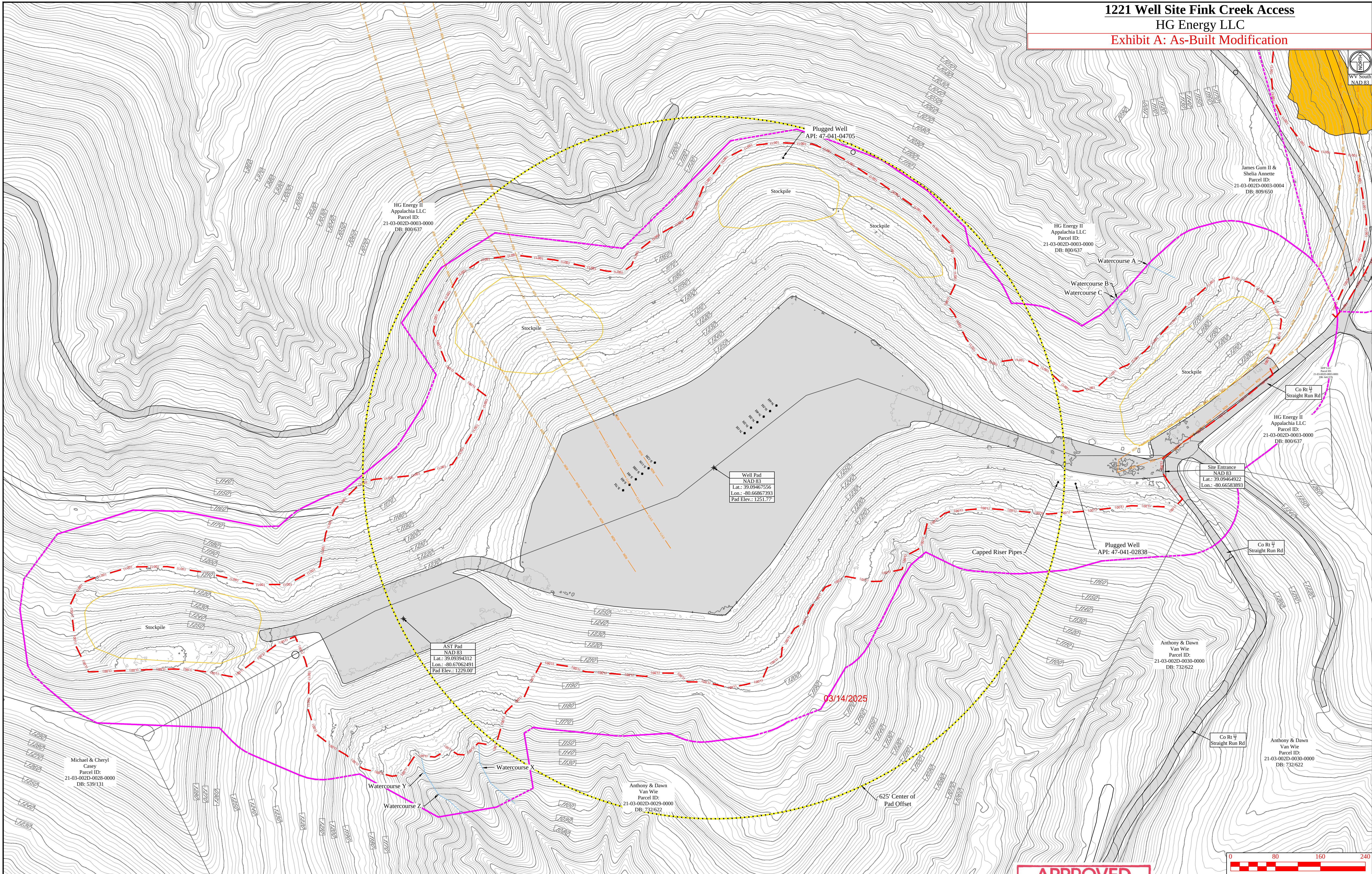


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Pre-Construction Site Conditions
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 2 of 32

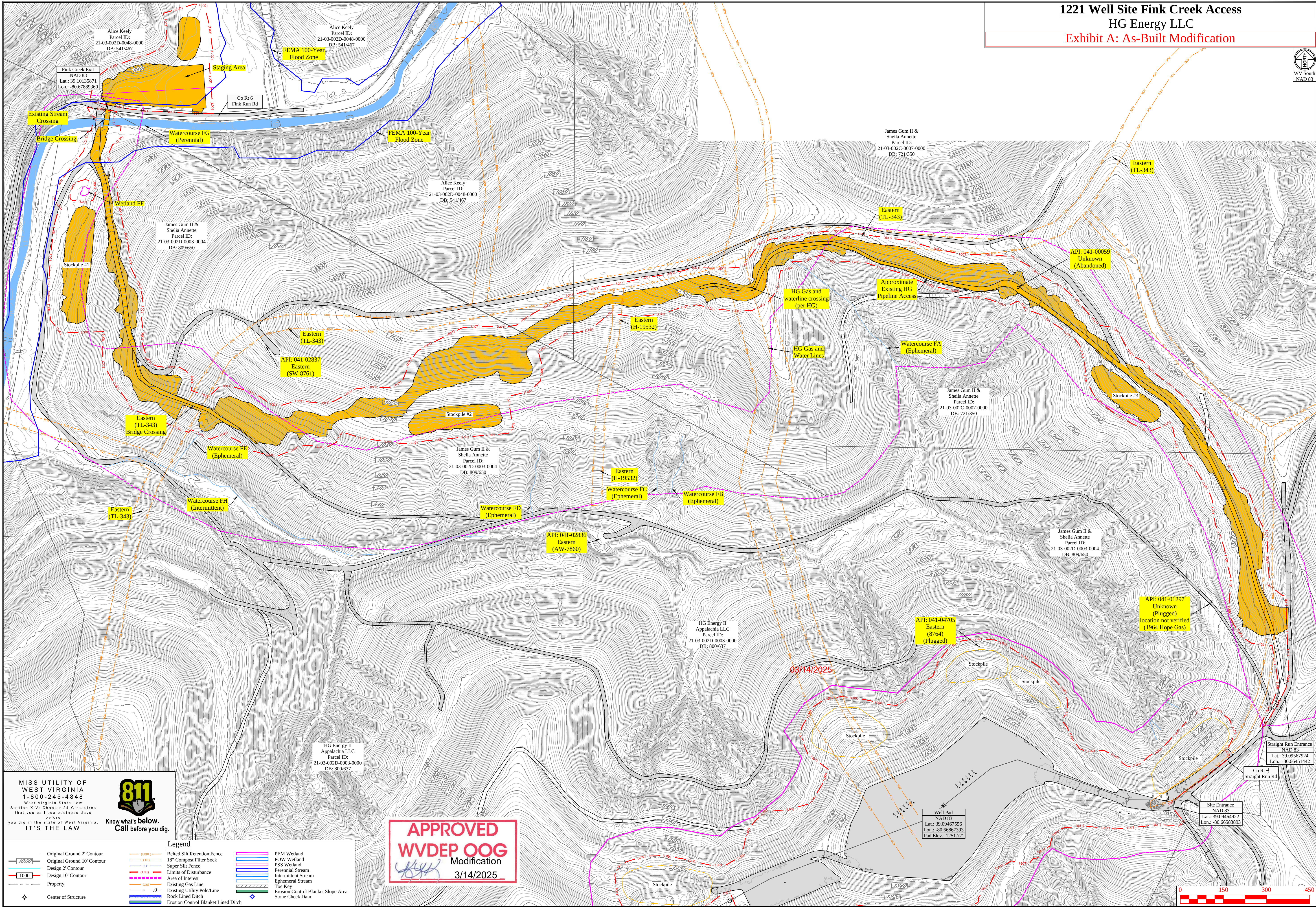


Legend			
	Original Ground 2' Contour		Belted Silt Retention Fence
	Original Ground 10' Contour		18' Compust Filter Sock
	Design 2' Contour		Super Silt Fence
	Design 10' Contour		Limits of Disturbance
	Property		Area of Interest
	Center of Structure		Existing Gas Line
			Existing Utility Pole/Line
			Rock Lined Ditch
			Erosion Control Blanket Lined Ditch
			PEM Wetland
			PDW Wetland
			PSS Wetland
			Perennial Stream
			Intermittent Stream
			Ephemeral Stream
			Toe Key
			Erosion Control Blanket Slope Area
			Stone Check Dam

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WVDEP OOG
Modification
3/14/2025

MISS UTILITY OF
WEST VIRGINIA
1-800-245-4848
West Virginia State Law
Section XIV, Chapter 24-C requires
that you call two business days
before
you dig in the state of West Virginia.
IT'S THE LAW





1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification



Revision	Date	Design
	02-04-2025	



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Pre-Construction Site Conditions - Bypass Access Road
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 3 of 32

MISS UTILITY OF
WEST VIRGINIA
1-800-245-4848
West Virginia State Law
Section XIV, Chapter 24-C requires
that you call two business days
before
you dig in the state of West Virginia.
IT'S THE LAW



Legend
Original Ground 2' Contour
Original Ground 10' Contour
Design 2' Contour
Design 10' Contour
Property
Center of Structure
Belted Silt Retention Fence
18" Composite Filter Sock
Super Silt Fence
Limits of Disturbance
Area of Interest
Existing Gas Line
Existing Utility Pole/Line
Rock Lined Ditch
Erosion Control Blanket Lined Ditch
PEM Wetland
POW Wetland
PSS Wetland
Perennial Stream
Intermittent Stream
Ephemeral Stream
Toe Key
Erosion Control Blanket Slope Area
Stone Check Dam

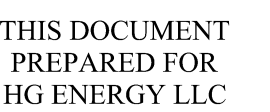
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Modification
3/14/2025



Exhibit A: As-Built Modification



02-04-2025



1221 Well Site

Freemans Creek District
Lewis County, WV

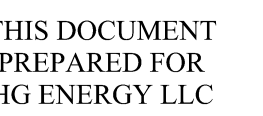
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File No.
Sheet 4 of 32



Exhibit A: As-Built Modification



02-04-2025



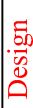
1221 Well Site

Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 5 of 32



Exhibit A: As-Built Modification



02-04-2025



Date: 02/04/2023
Scale: As Shown
Designed By: ZS
File No.
Sheet 6 of 32



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WV South

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Modification
3/14/2025

3/14/2025

Date: 02/04/2025
Scale: As Shown
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Sheet 7 of 32

Overall Site Plan

1221 Well Site

Seemans Creek District
Lewis County, WV

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HG ENERGY LLC

Kelly Surveying
P.O. Box 254
Dalley, WV 26259
(304) 338-6985



02-04-2025

Design

The contractor shall not deviate from the above listed construction sequence without the written consent of the design engineer. The contractor must provide a written explanation and provide an updated construction sequence when requesting permission to deviate from the construction sequence.

Michael & Cheryl
Casey
Parcel ID:
21-03-002D-0028-0000
DB: 539/131

Watercourse Y

Watercourse Z

Legend

- Belted Silt Retention Fence
- 18" Compost Filter Sock
- Super Silt Fence
- Limits of Disturbance
- Area of Interest
- Existing Gas Line
- Existing Utility Pole/Line
- Rock Lined Ditch
- Erosion Control Blanket Lin

 PEM Wetland
 POW Wetland
 PSS Wetland
 Perennial Stream
 Intermittent Stream
 Ephemeral Stream
 Toe Key
 Erosion Control Blanket Slope Area
 Stone Check Dam
 Ditch

Original Ground 2' Contour
Original Ground 10' Contour
Design 2' Contour
Design 10' Contour
Property
Center of Structure

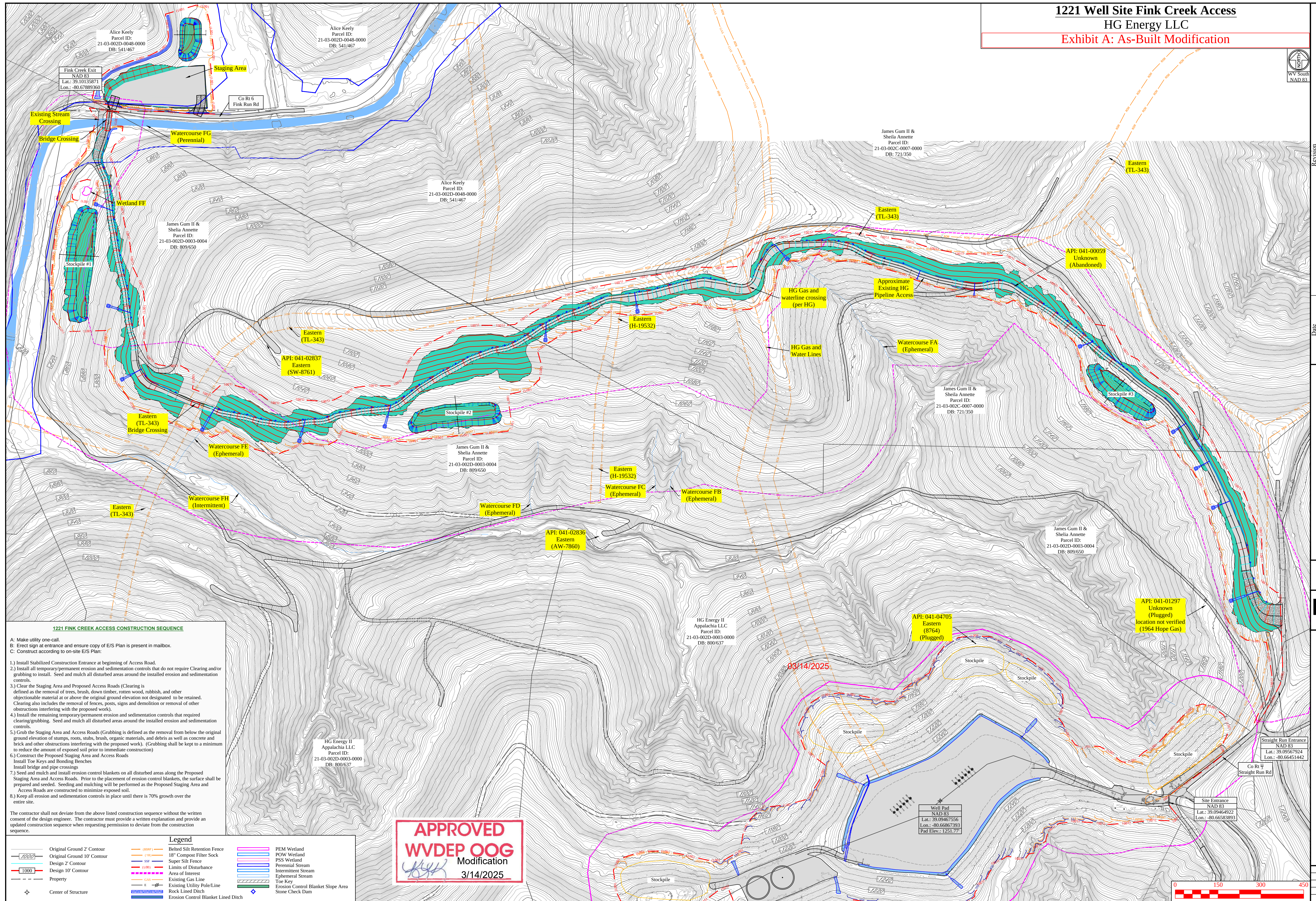
Exhibit A: As-Built Modification

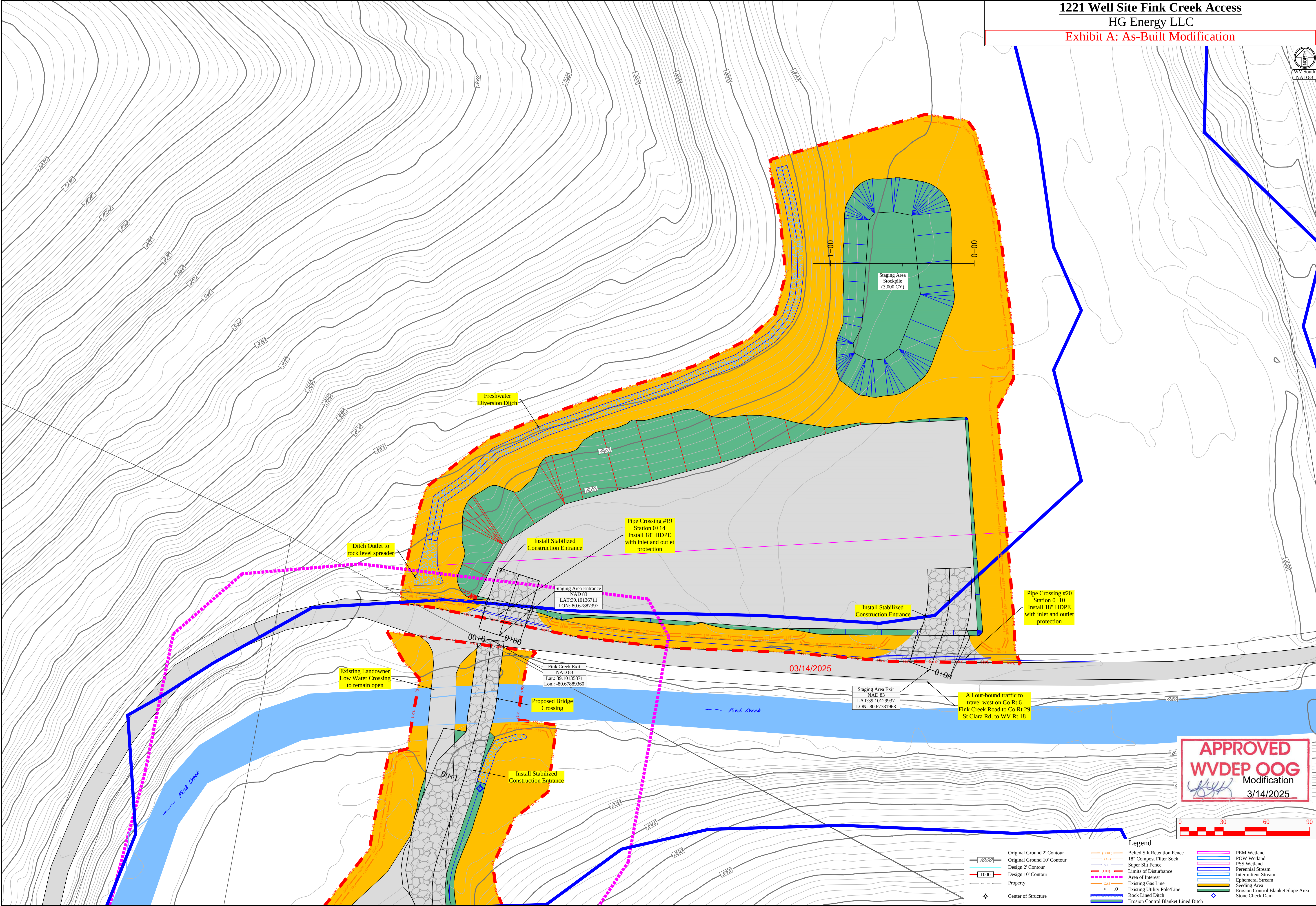


02-04-2025

Kelly Surveying
P.O. Box 254
Dallies, WV 26219

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
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Sheet 8 of 32





1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification



Revision	Date
Design	02-04-2025



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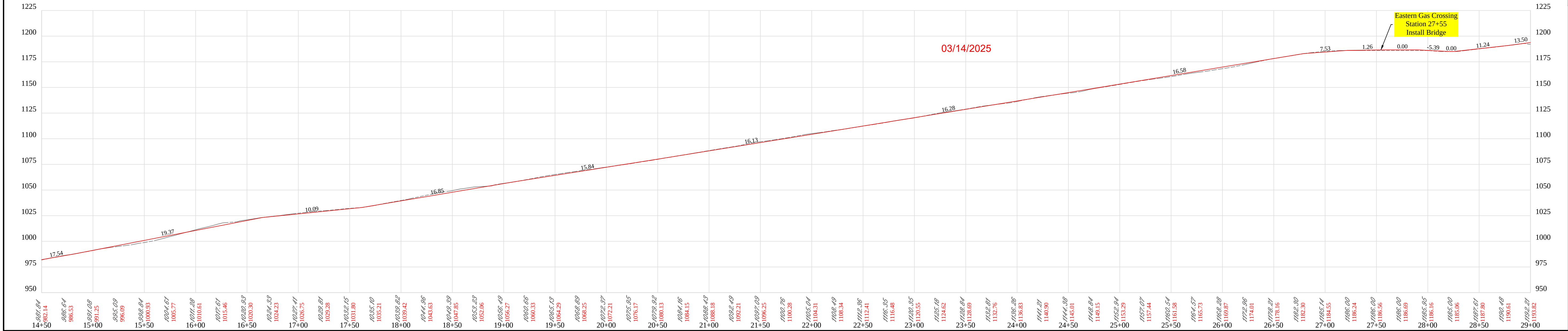
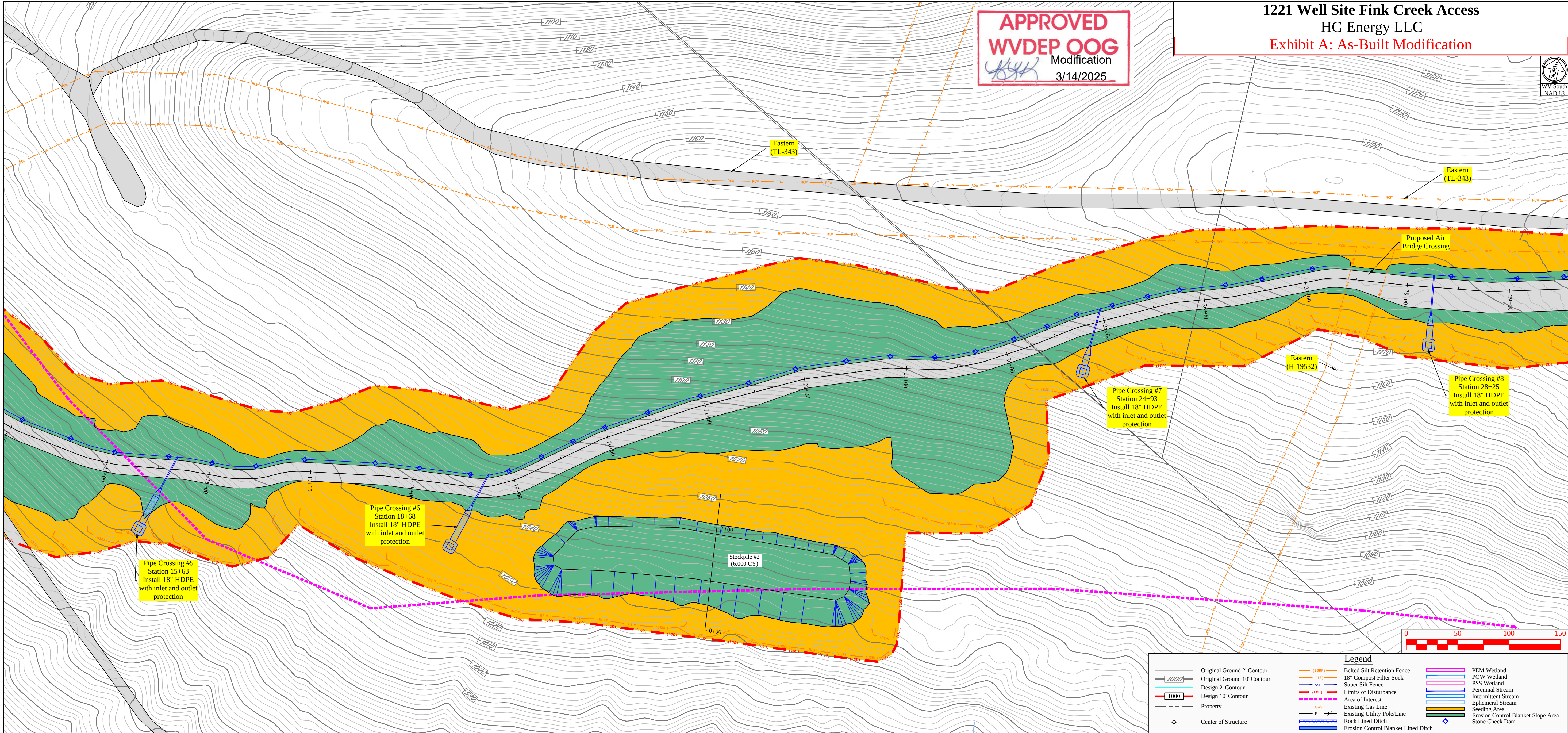
Erosion and Sediment Control Plan
1221 Fink Creek Access
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 9 of 32

APPROVED
WVDEP OOG
Modification
3/14/2025



Legend	
Original Ground 2' Contour	Belted Silt Retention Fence
Original Ground 10' Contour	18" Compost Filter Sock
Design 2' Contour	Super Silt Fence
Design 10' Contour	Limits of Disturbance
Property	Area of Interest
Center of Structure	Existing Gas Line
	Existing Utility Pole/Line
	Rock Lined Ditch
	PEM Wetland
	POW Wetland
	PSS Wetland
	Perennial Stream
	Intermittent Stream
	Ephemeral Stream
	Seeding Area
	Erosion Control Blanket Slope Area
	Stone Check Dam



Revision	Date	Design
	02-04-2025	

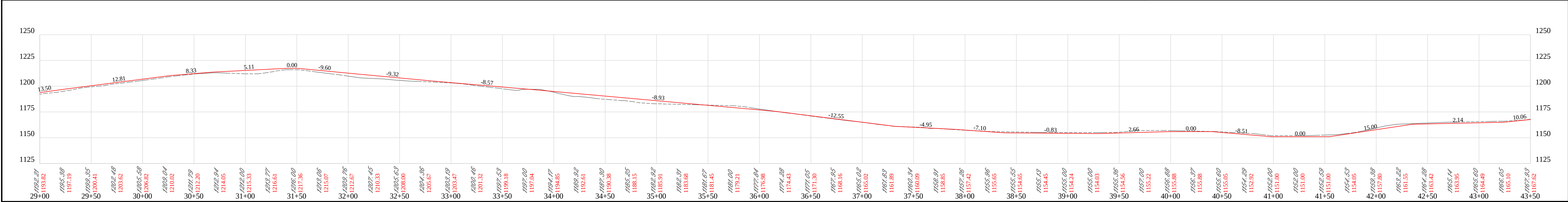
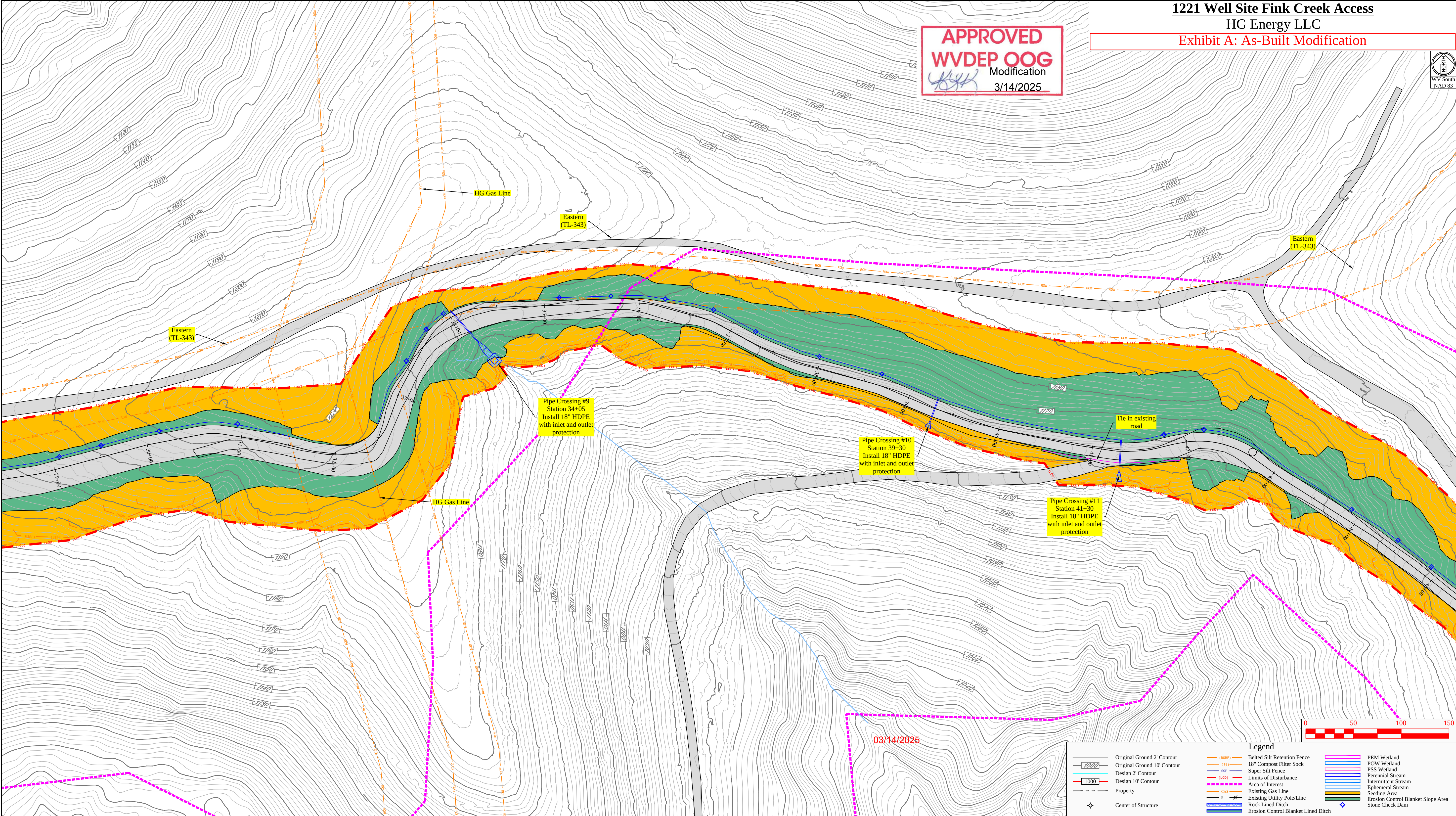
HG ENERGY LLC

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Kelly Surveying
P.O. Box 254
Delmar, WV 26299
304-338-0985

Erosion and Sediment Control Plan
1221 Fink Creek Access
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 11 of 32



1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification

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Modification
3/14/2025

North
WV South
NAD 83

Revision	Date	Design
02-04-2025		

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ENERGY
LLC

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Kelly
Surveying

1500 254
Beltway, WV 26029
304-338-0965

Erosion and Sediment Control Plan

1221 Fink Creek Access

Freemans Creek District
Lewis County, WV

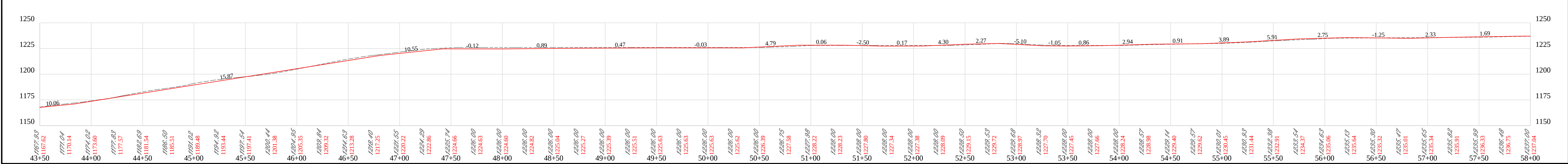
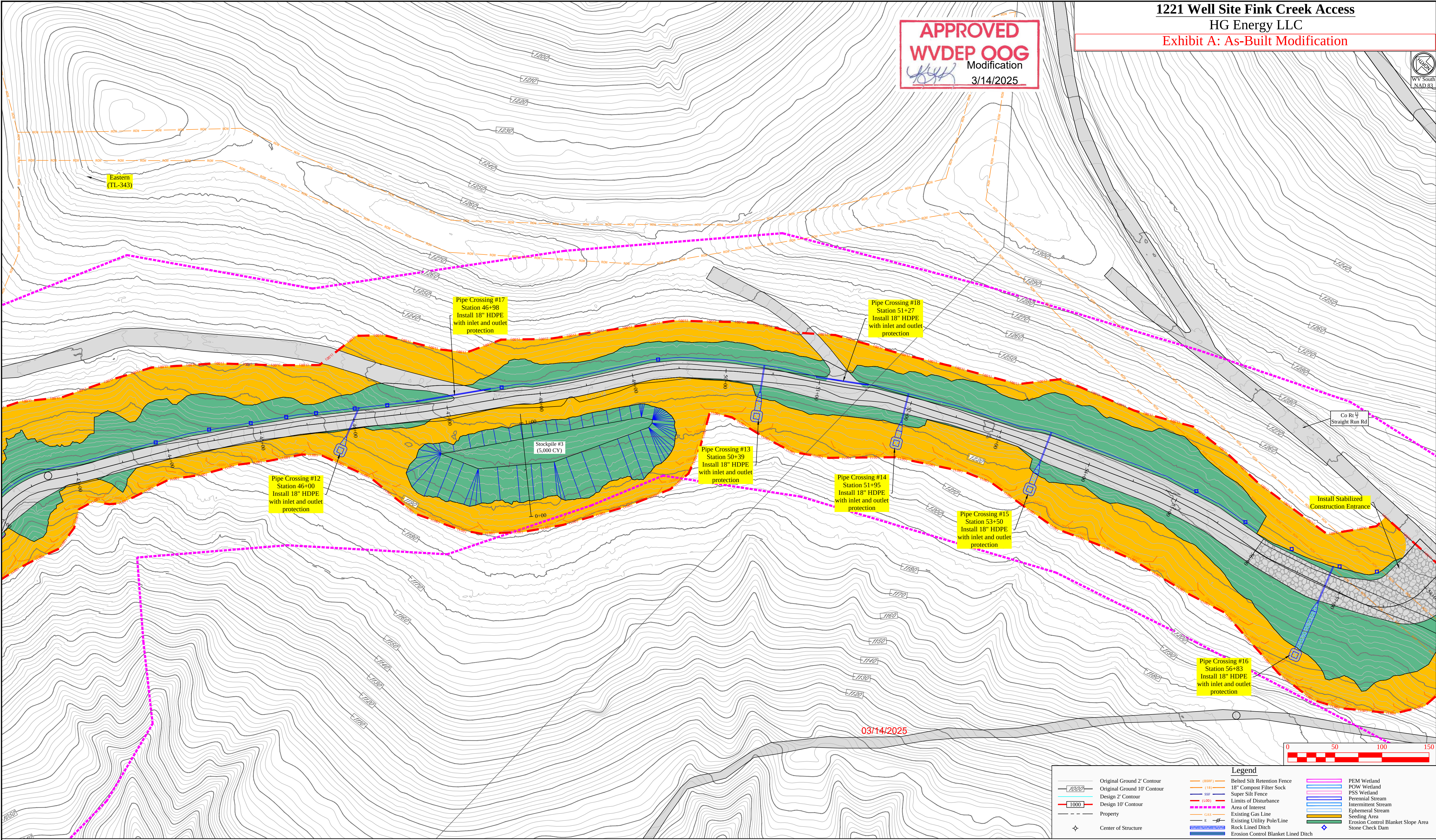
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Sheet 12 of 32



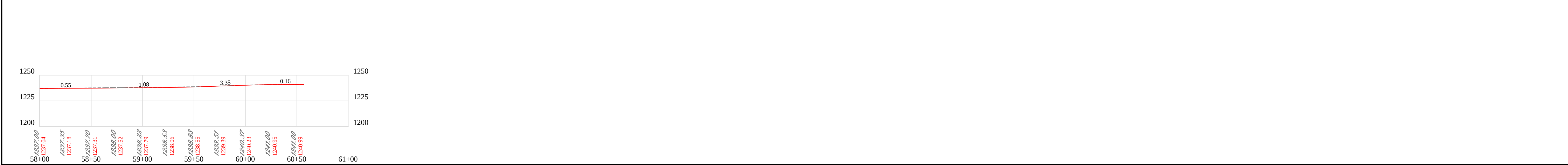
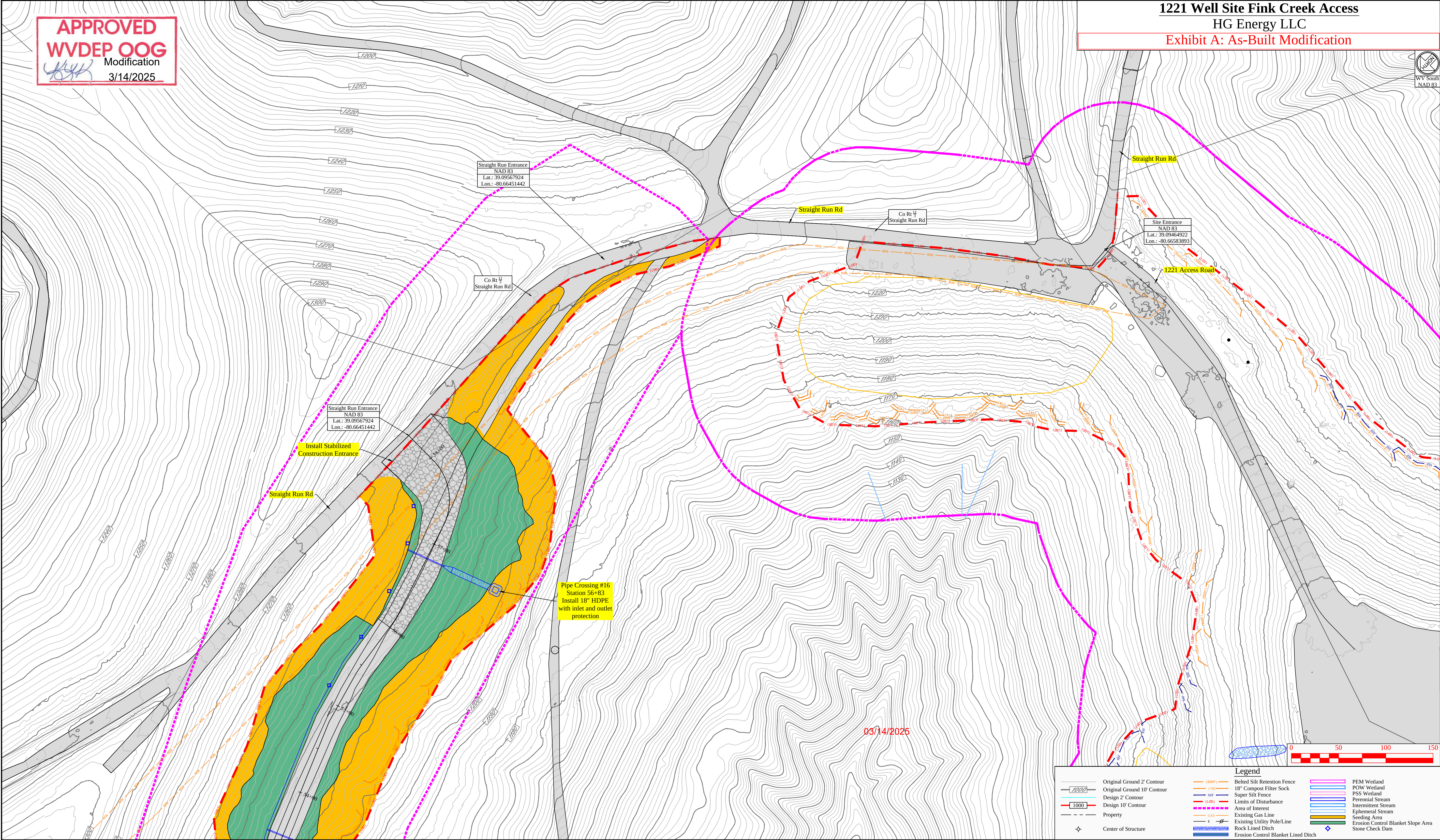
Revision	Design
Date	02-04-2025

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Kelly S Surveying
P.O. Box 254
Dallman, WV 26239
304-338-0965

Erosion and Sediment Control Plan
1221 Fink Creek Access
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
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File No.
Sheet 13 of 32



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WVDEP OOG
Modification
3/14/2025

1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification



Revision	Date
Design	02-04-2025



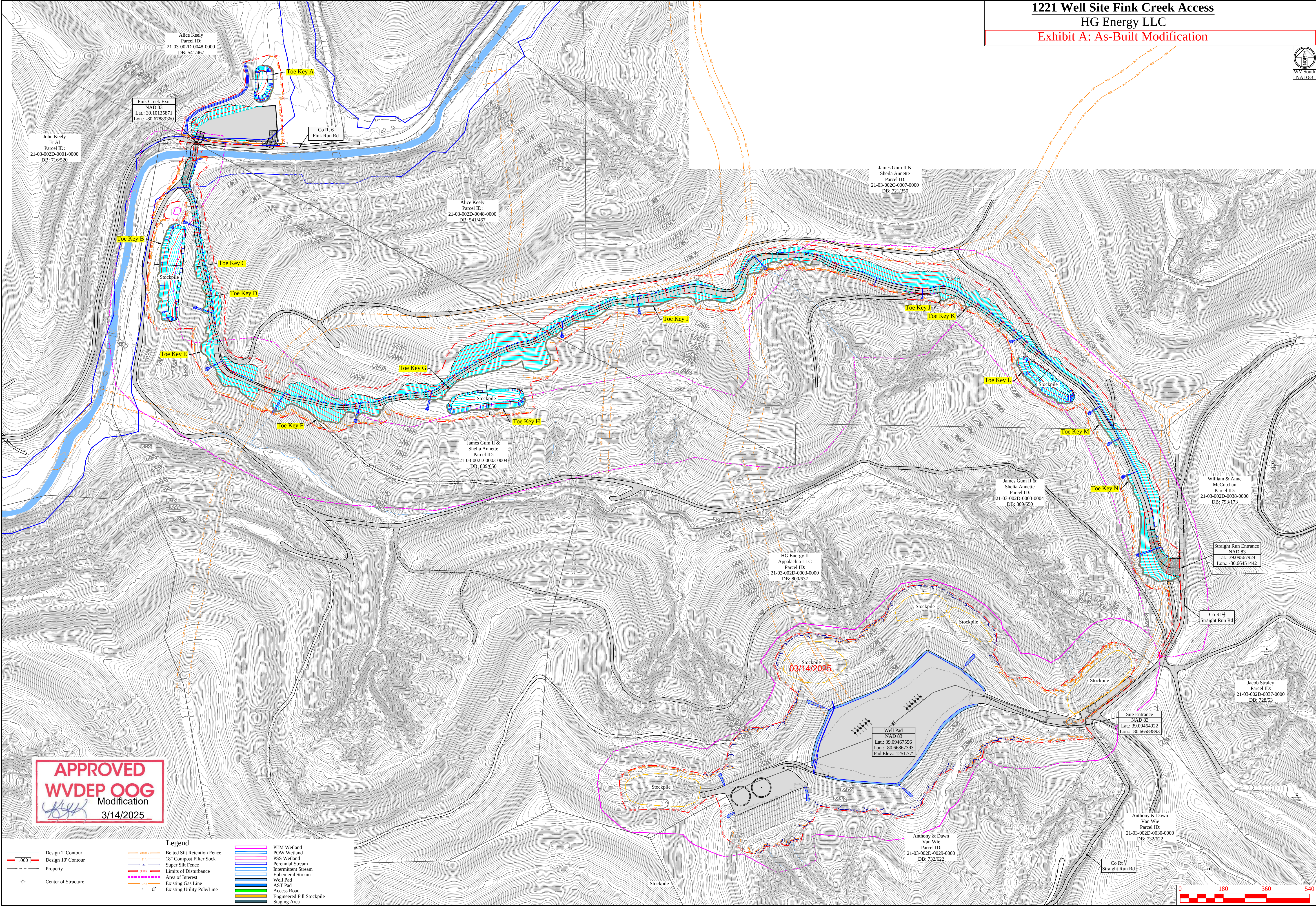
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Erosion and Sediment Control Plan
1221 Fink Creek Access
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 14 of 32

1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification



APPROVED
WVDEP OOG
Modification
3/14/2025

- Legend**
- Design 2' Contour
 - Design 10' Contour
 - Property
 - Center of Structure
 - 18" Composite Filter Sock
 - Super Silt Fence
 - Limits of Disturbance
 - Area of Interest
 - Existing Gas Line
 - Existing Utility Pole/Line
 - PEM Wetland
 - POW Wetland
 - PSS Wetland
 - Perennial Stream
 - Intermittent Stream
 - Ephemeral Stream
 - Well Pad
 - AST Pad
 - Access Road
 - Engineered Fill Stockpile
 - Staging Area

Revision	Date
Design	02-04-2025



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Toe Key Exhibit
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
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Sheet 15 of 32

HG Energy LLC



WV South
NAD 83

Anthony & Dawn
Van Wie
Parcel ID:
21-03-002D-0029-0000
DB: 732/622

Watercourse X ✓

Design

02-04-2025



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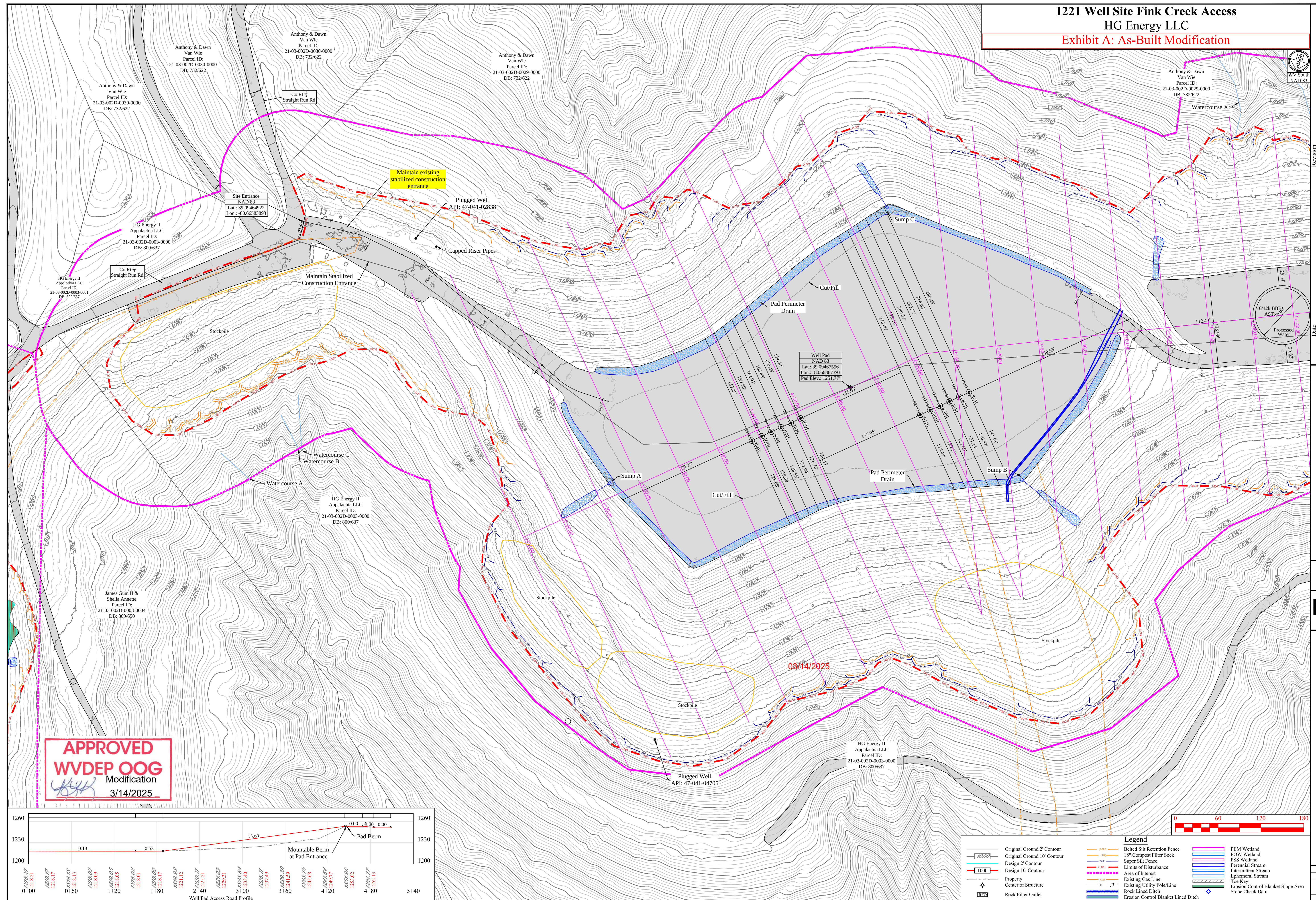
Kelly Surveying
P.O. Box 254
Dalley, WV 26259
(304) 338-6985

Site Plan

1221 Well Site

Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
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File No.
Sheet 16 of 32



1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification



Revision
Design

Date
02-04-2025

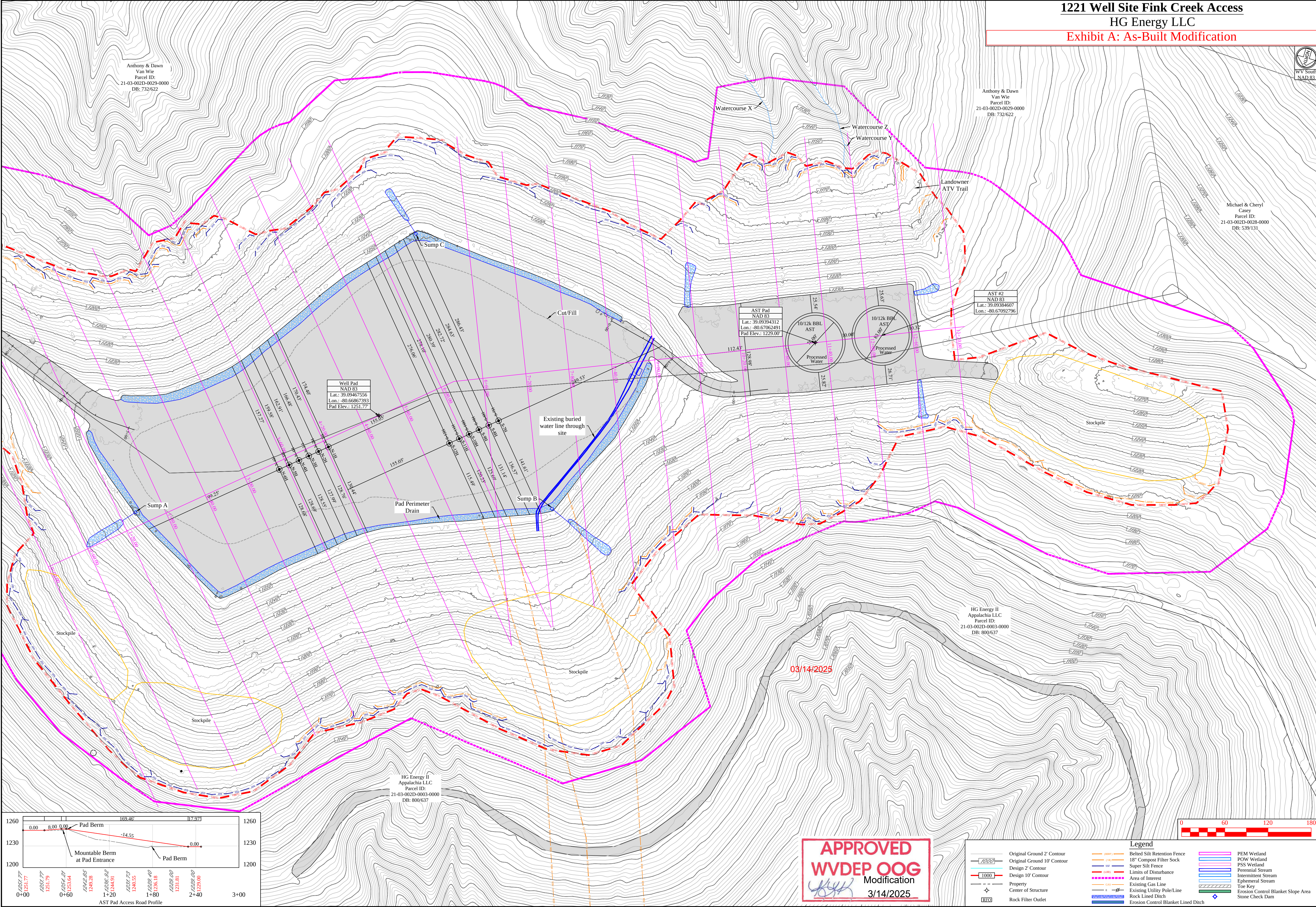


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Site Plan
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 17 of 32



1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification



Revision
Design

Date
02-04-2025

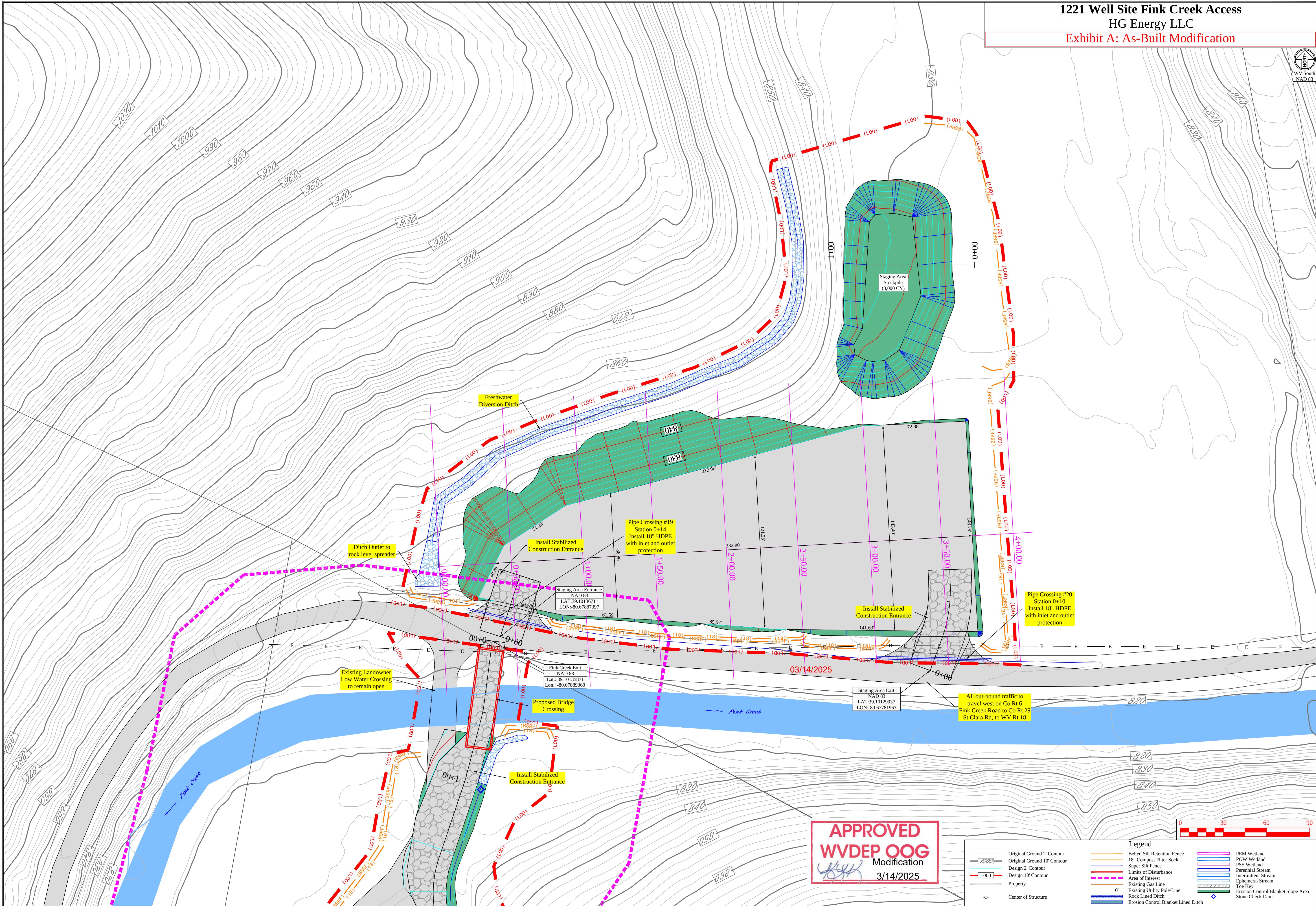


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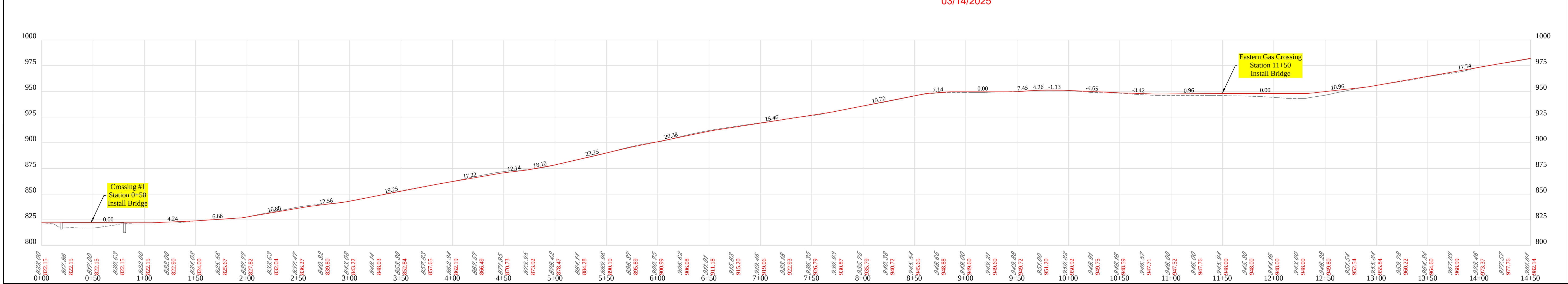
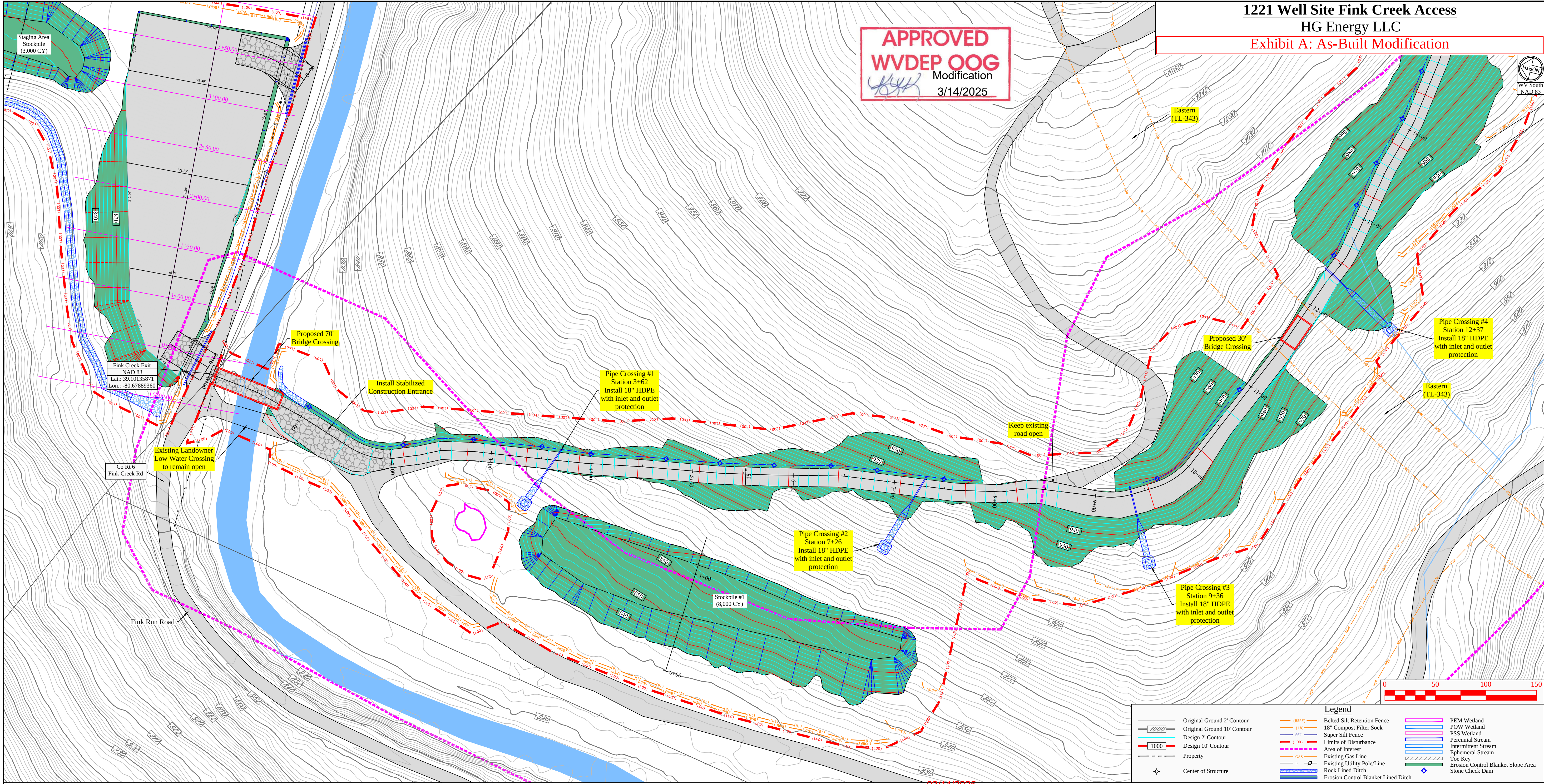
Site Plan - Fink Creek Existing Access
1221 Fink Creek Access
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 18 of 32



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WVDEP OOG
Modification
03/14/2025

Legend			
	Original Ground 2' Contour		Belied Silt Retention Fence
	Original Ground 10' Contour		18" Compost Filter Sock
	Design 2' Contour		Super Silt Fence
	Design 10' Contour		Limits of Disturbance
	Property		Area of Interest
	Center of Structure		Existing Gas Line
			Existing Utility Pole/Line
			Rock Lined Ditch
			Erosion Control Blanket Lined Ditch
			PEM Wetland
			POW Wetland
			PSS Wetland
			Perennial Stream
			Intermittent Stream
			Ephemeral Stream
			Toe Key
			Erosion Control Blanket Slope Area
			Stone Check Dam



Revision
Design

Date
02-04-2025

HG ENERGY LLC

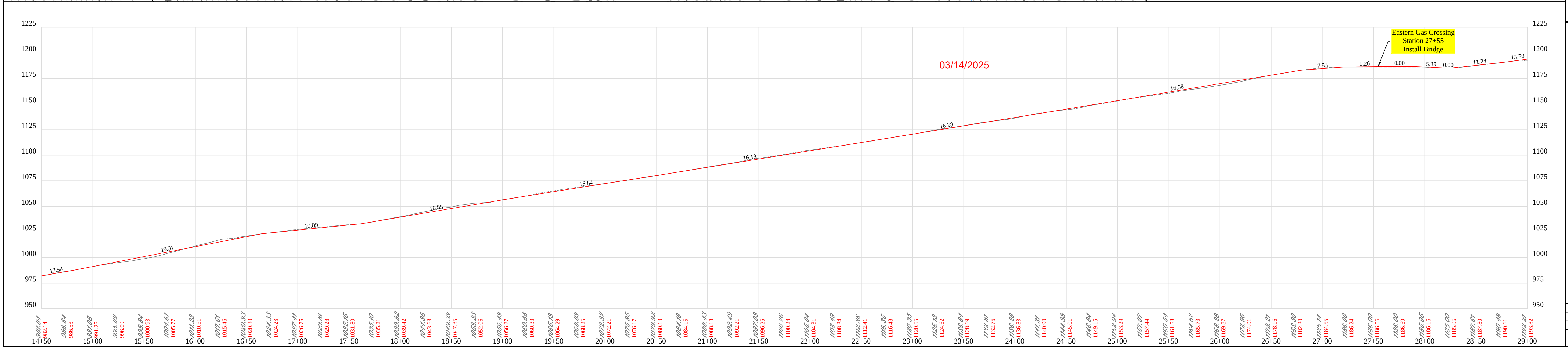
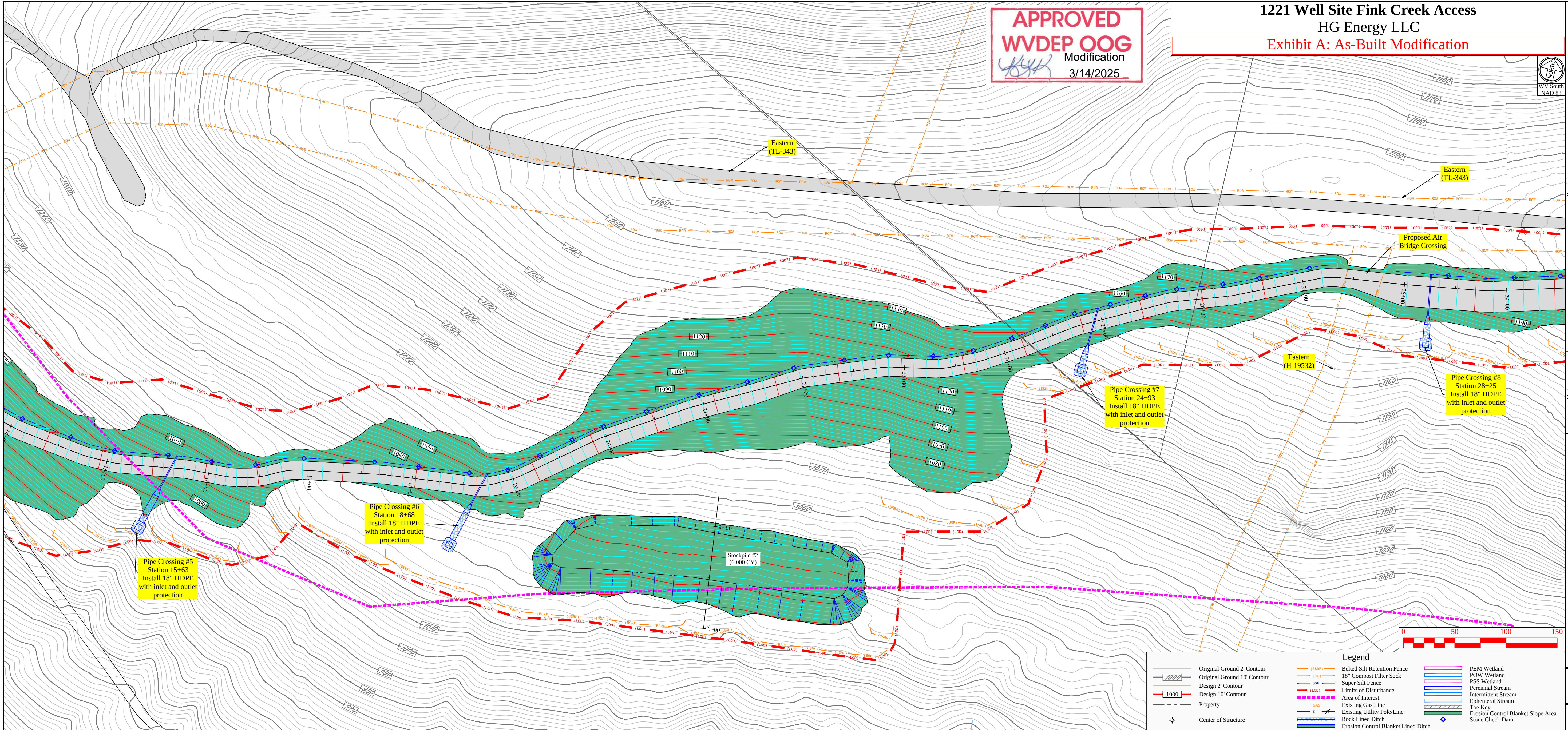
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Kelly Surveying
150 West 25th
Martinsburg, WV 26159
(304) 338-0965

Site Plan - Fink Creek Access Road

1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 19 of 32



Revision	Design
Date	02-04-2025

HG ENERGY LLC

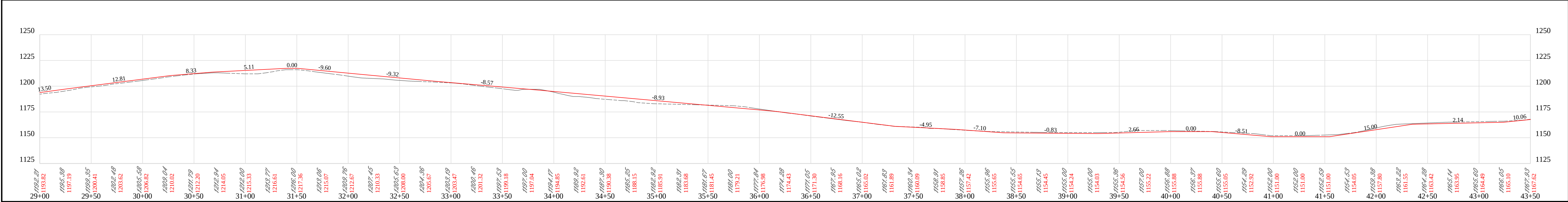
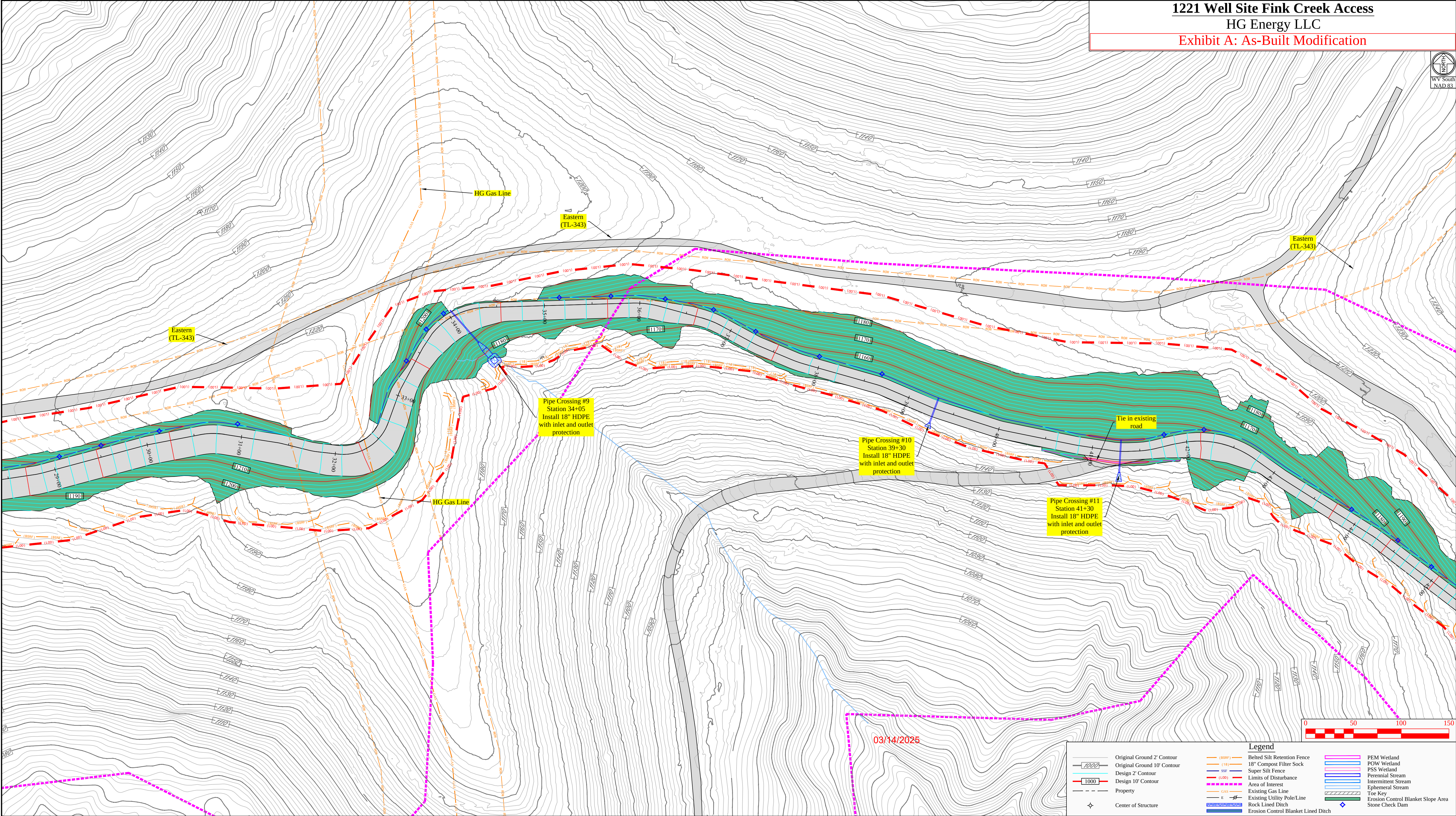
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HG ENERGY LLC

Kelly S Surveying
P.O. Box 254
Delmar, WV 26299
304-338-0985

Site Plan - Fink Creek Access Road

1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 20 of 32



1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification



Revision	Date	Design
02-04-2025		

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P.O. Box 254
Dallman, WV 26039
(304) 338-0965

Site Plan - Fink Creek Access Road

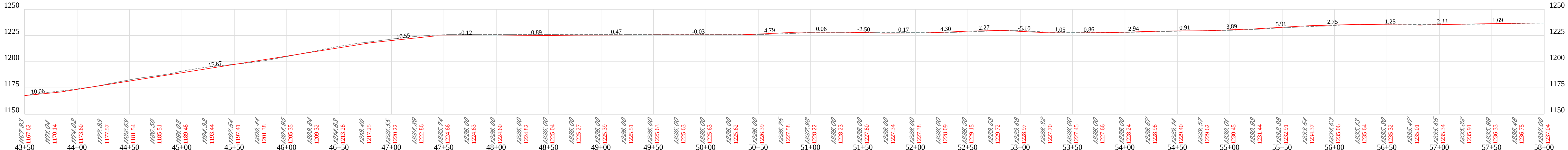
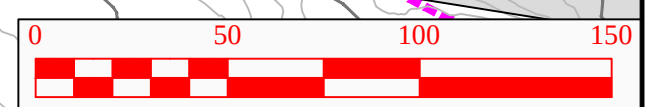
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 21 of 32

Exhibit A: As-Built Modification

4/24/20

Modification
3/14/2025



02-04-2025



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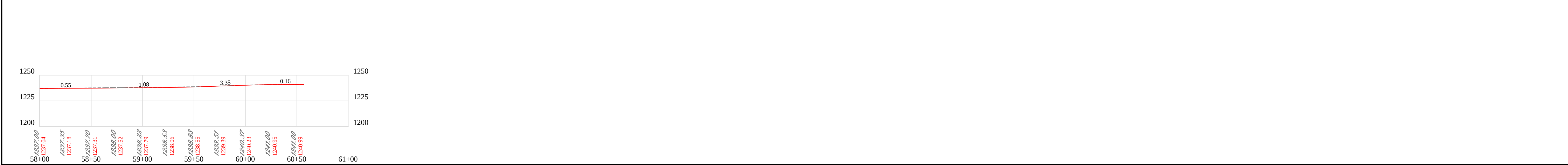
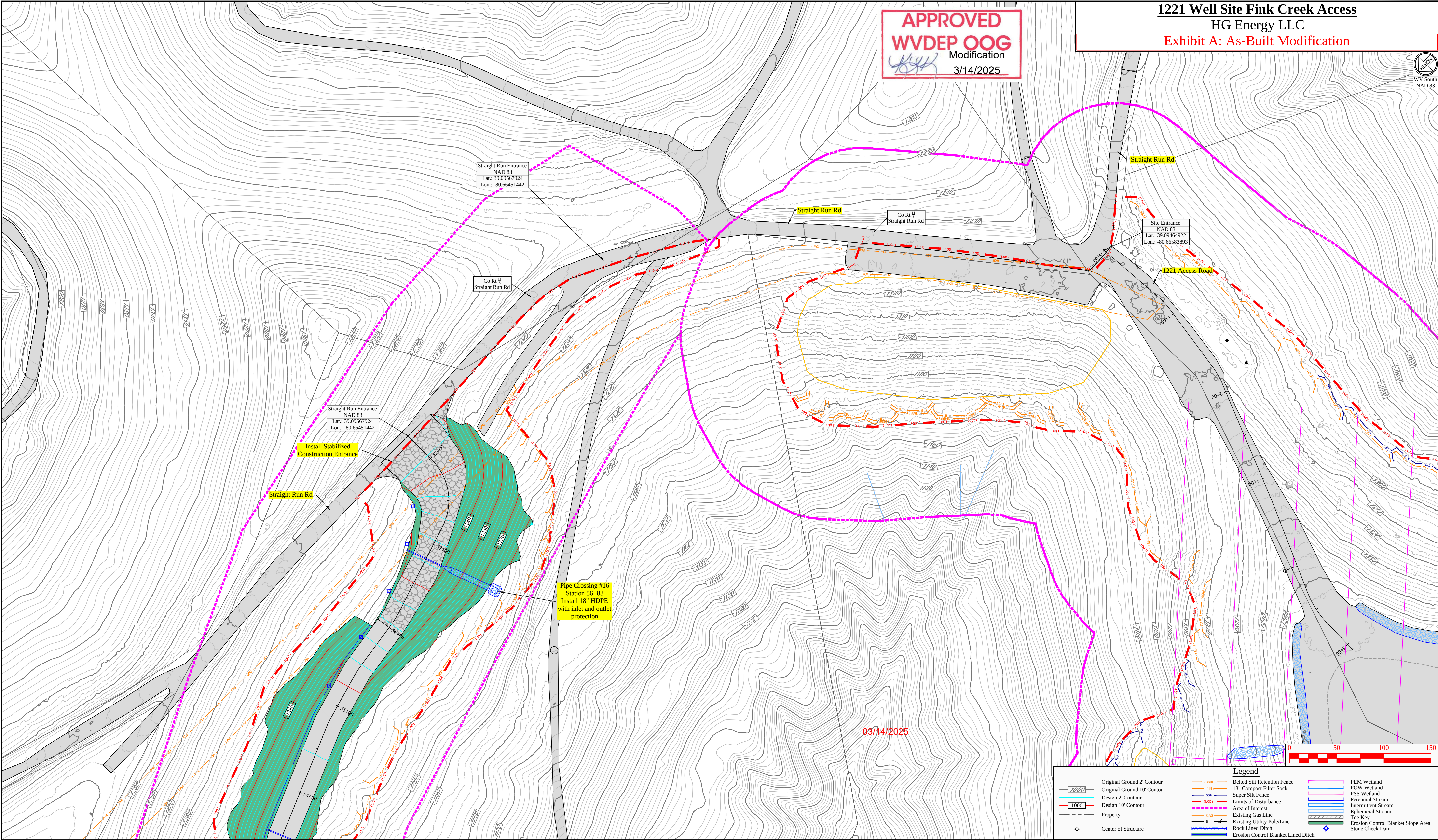


Site Plan - Fink Creek Access Road

1221 Well Site

Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 22 of 32



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Modification
3/14/2025

1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification

WV South
NAD 83

Revision
Design

Date
02-04-2025



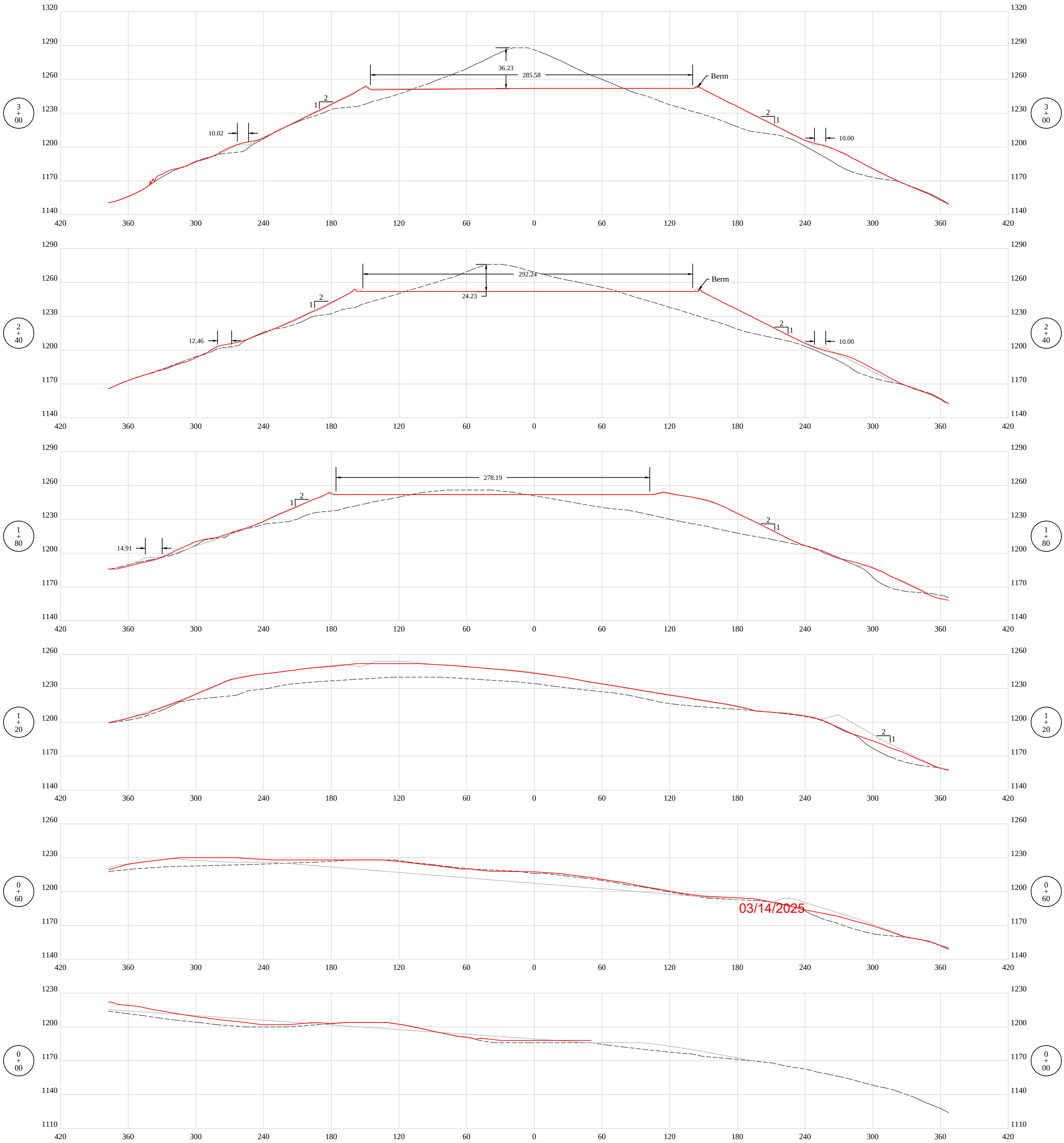
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HG ENERGY LLC

Kelly Surveying
P.O. Box 254
Dallman, WV 26029
(304) 338-0965

Site Plan - Fink Creek Access Road
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 23 of 32

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WVDEP OOG
Modification
3/14/2025



Revision
Design

Date
02-04-2025



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HG ENERGY LLC

Kelly Surveying
P.O. Box 254
Delmar, WV 26039
(304) 338-0985

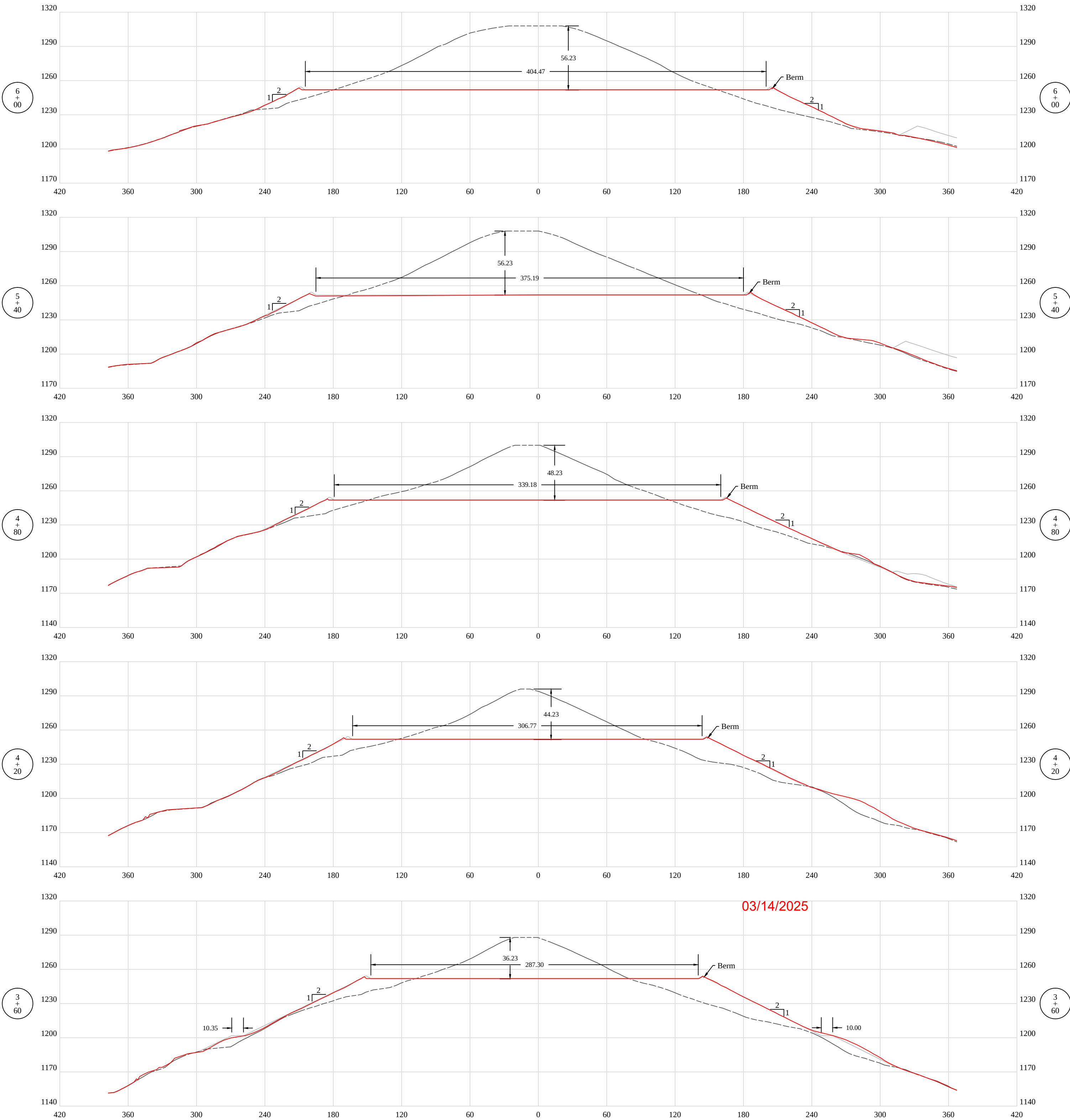
Cross Sections - Well Pad
1221 Well Site
Freemans Creek District
Lewis County, WV

Legend

Design
Original Ground
As-Built



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WVDEP OOG
Modification
3/14/2025



Legend

- Design
- Original Ground
- As-Built



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Cross Sections - Well Pad
1221 Well Site
Freemans Creek District
Lewis County, WV

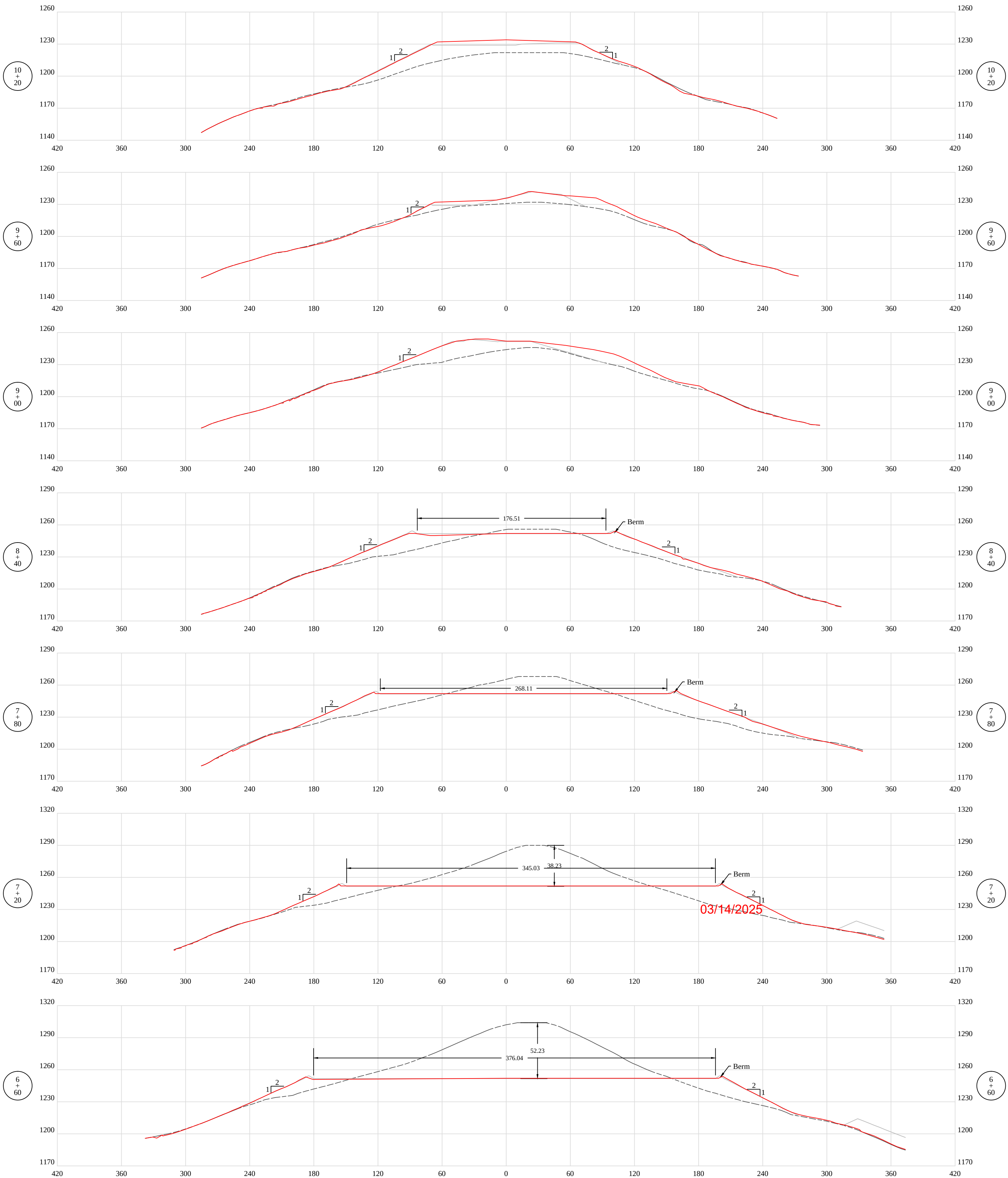
Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 25 of 32

1221 Well Site Fink Creek Access

HG Energy LLC

Exhibit A: As-Built Modification

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3/14/2025



Legend

- Design
- Original Ground
- As-Built

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Design

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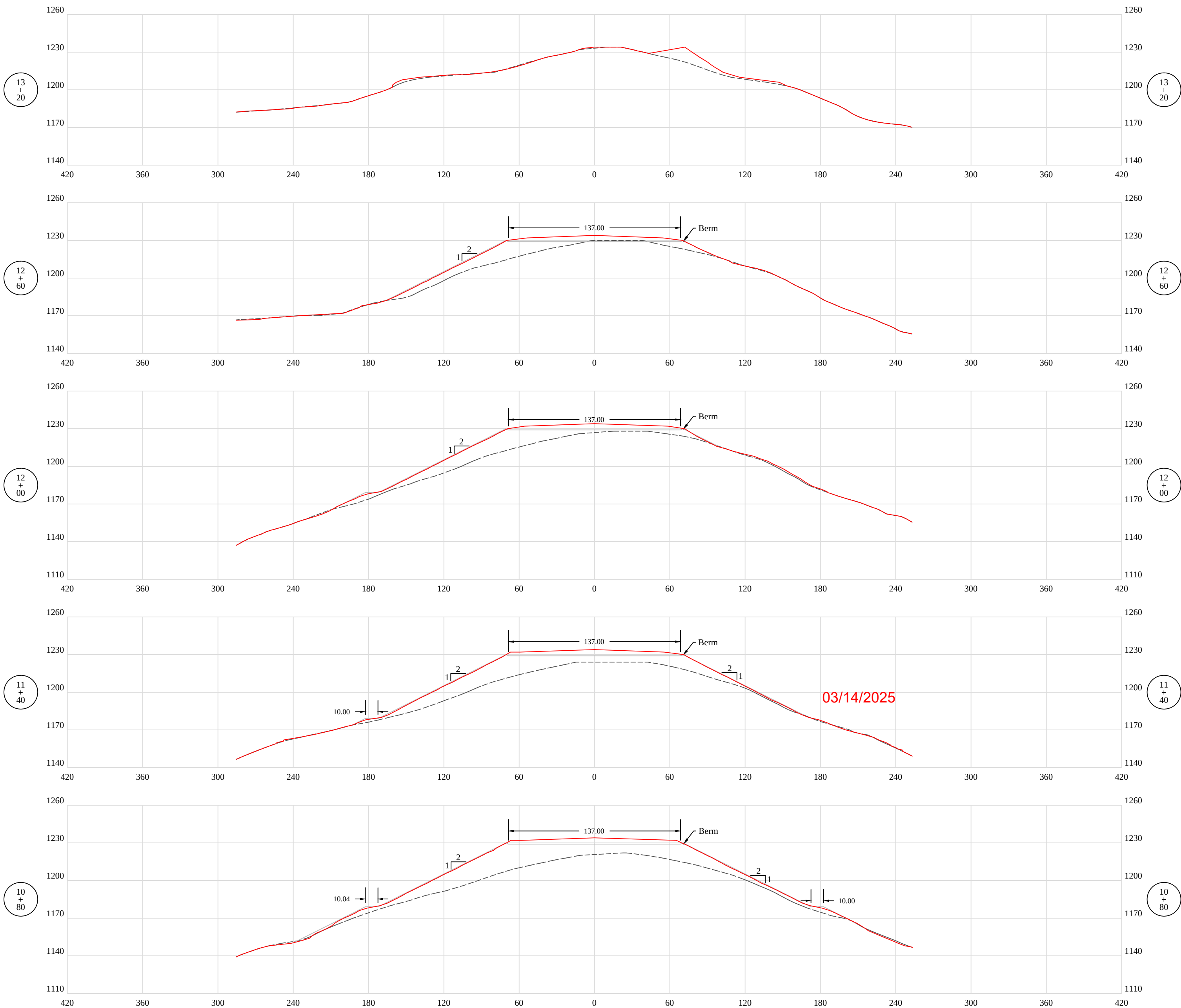
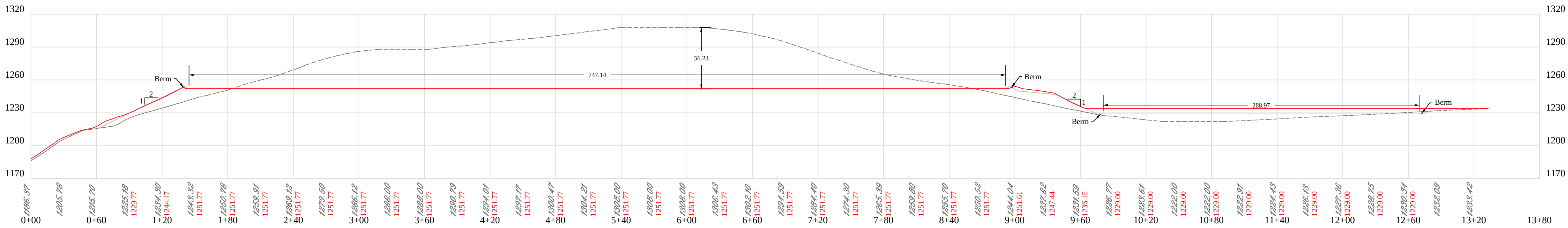
Cross Sections - Well Pad
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
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Sheet 26 of 32

1221 Well Site Fink Creek Access

HG Energy LLC

Exhibit A: As-Built Modification



Legend

- Design
- Original Ground
- As-Built

Revision
Design

Date
02-04-2025



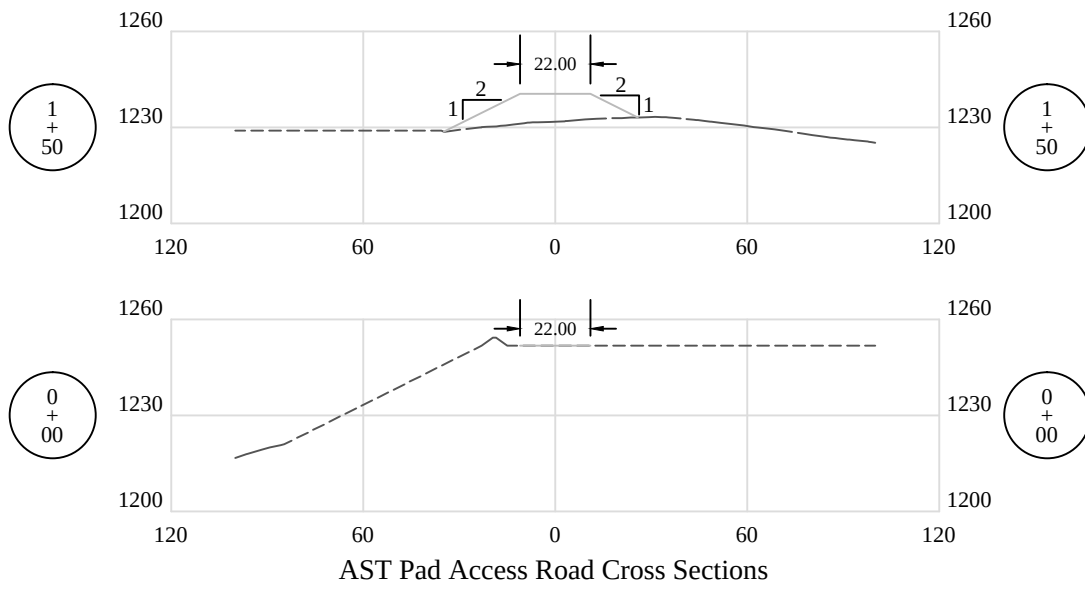
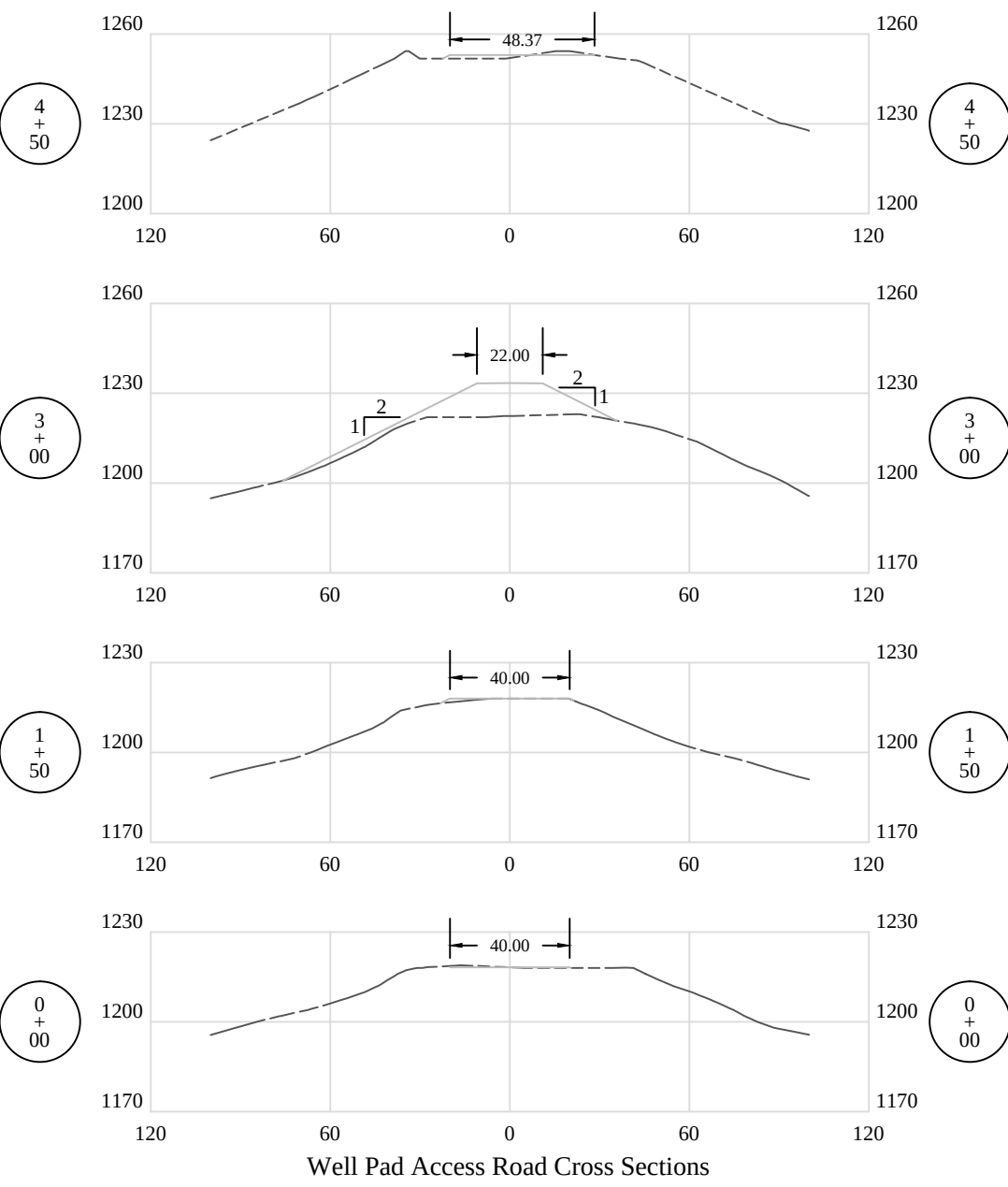
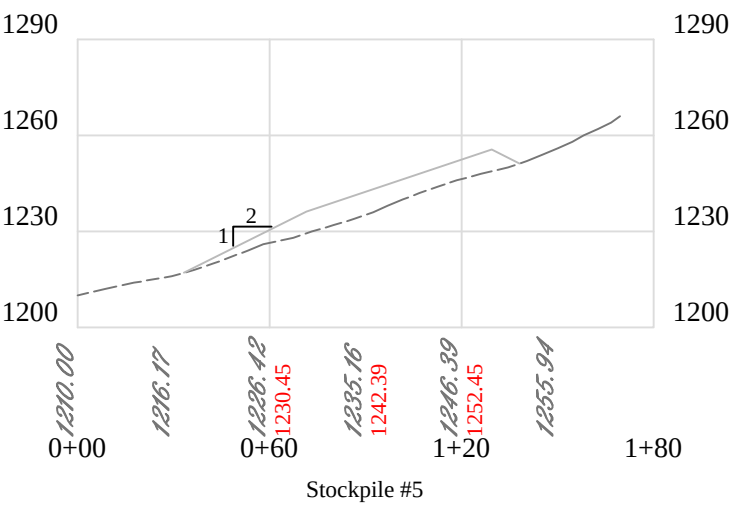
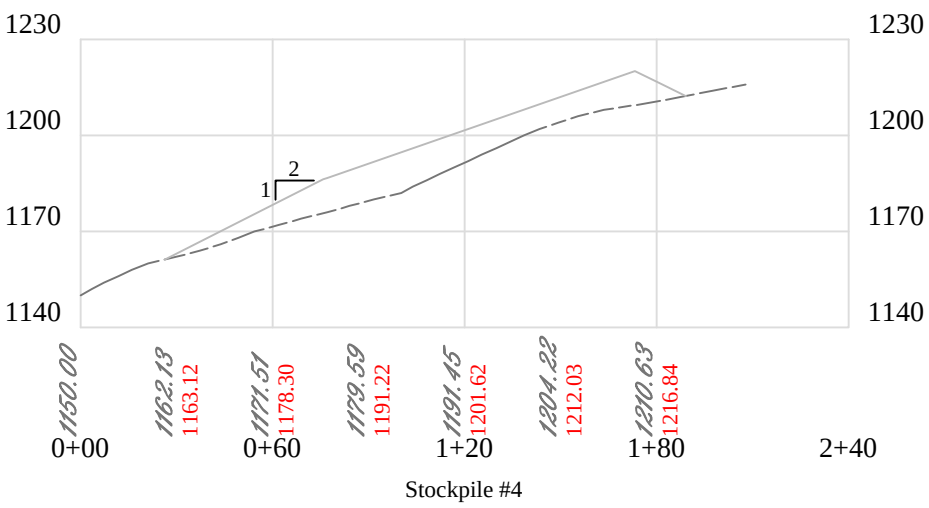
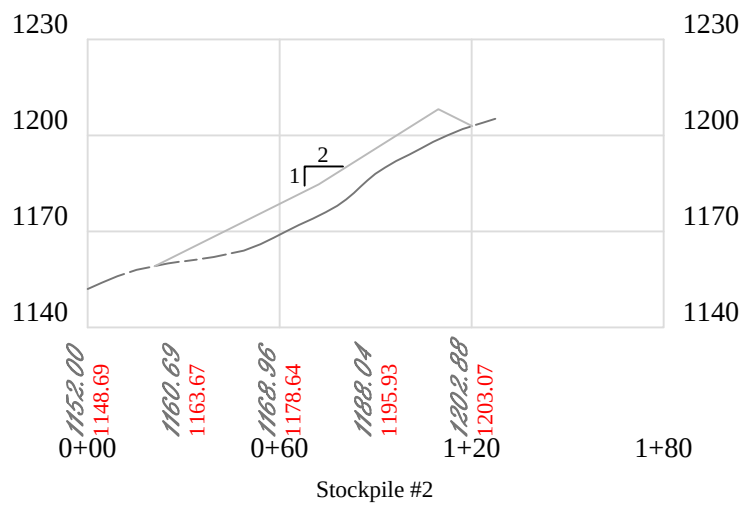
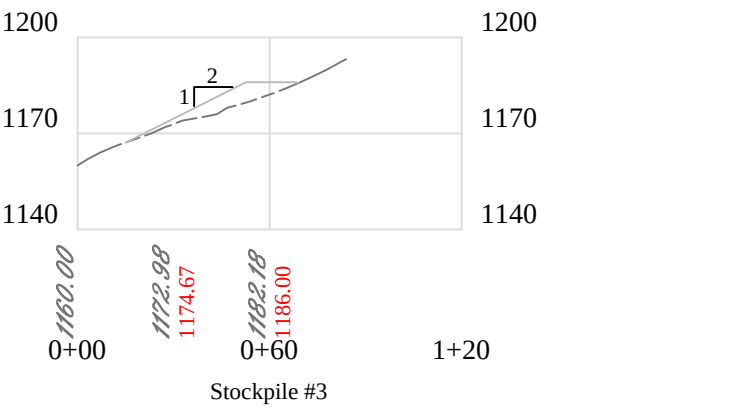
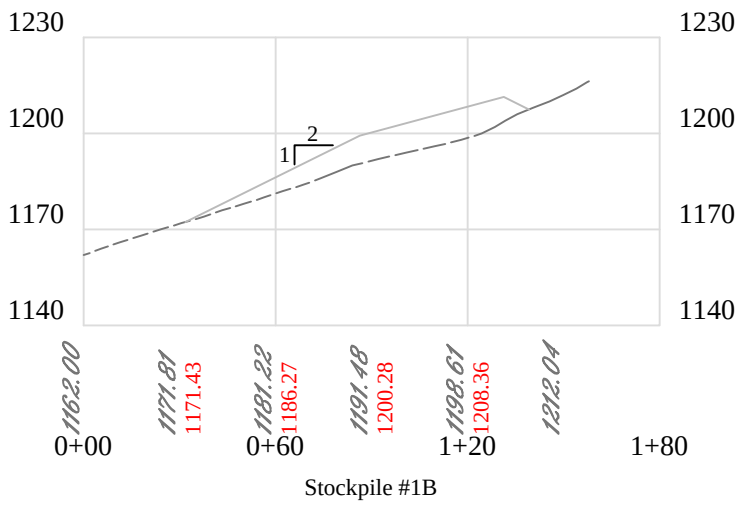
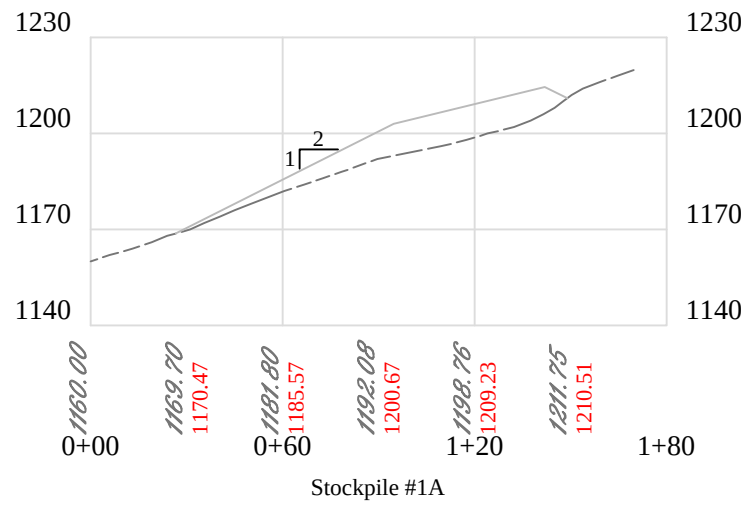
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Cross Sections - Well Pad
1221 Well Site
Freemans Creek District
Lewis County, WV



Date: 02/04/2025
Scale: As Shown
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Legend

Design

Original Ground

As-Built

0

60

120

180

03/14/2025

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Dunbar, WV 26029
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Cross Sections - Access Road

1221 Well Site

Freemans Creek District
Lewis County, WV

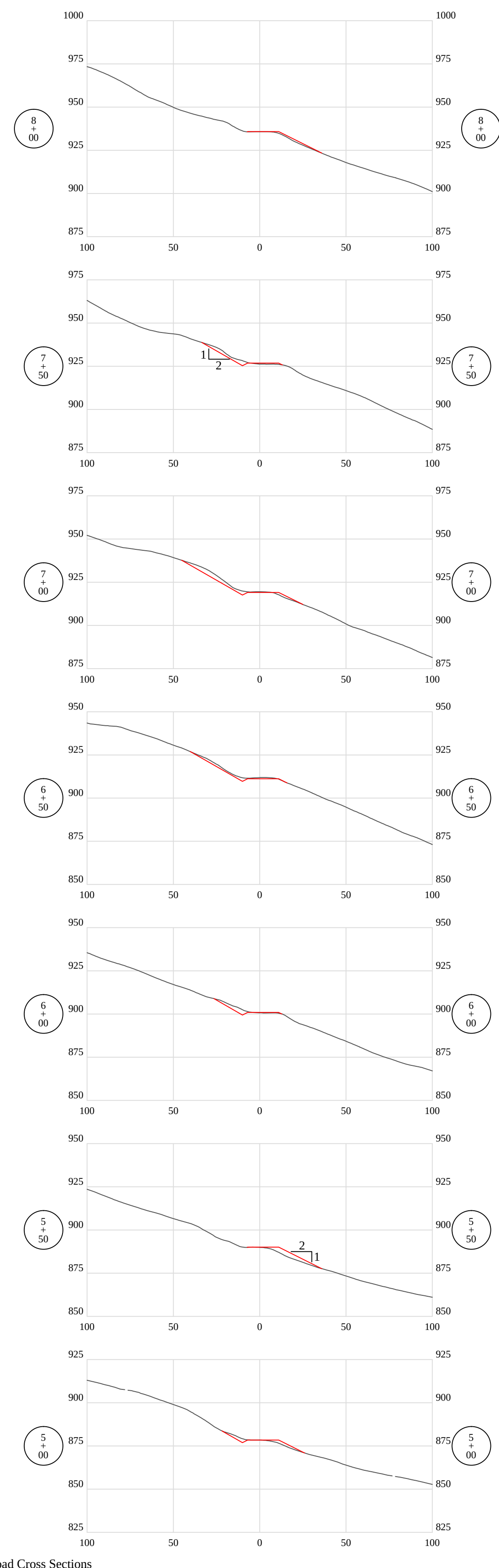
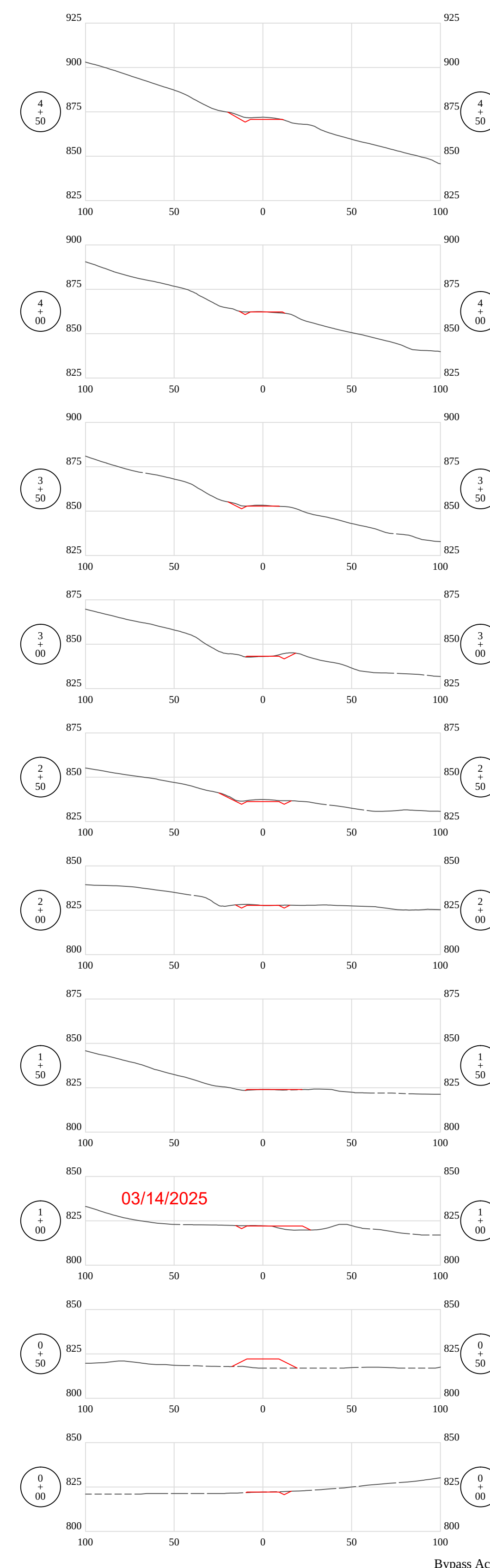
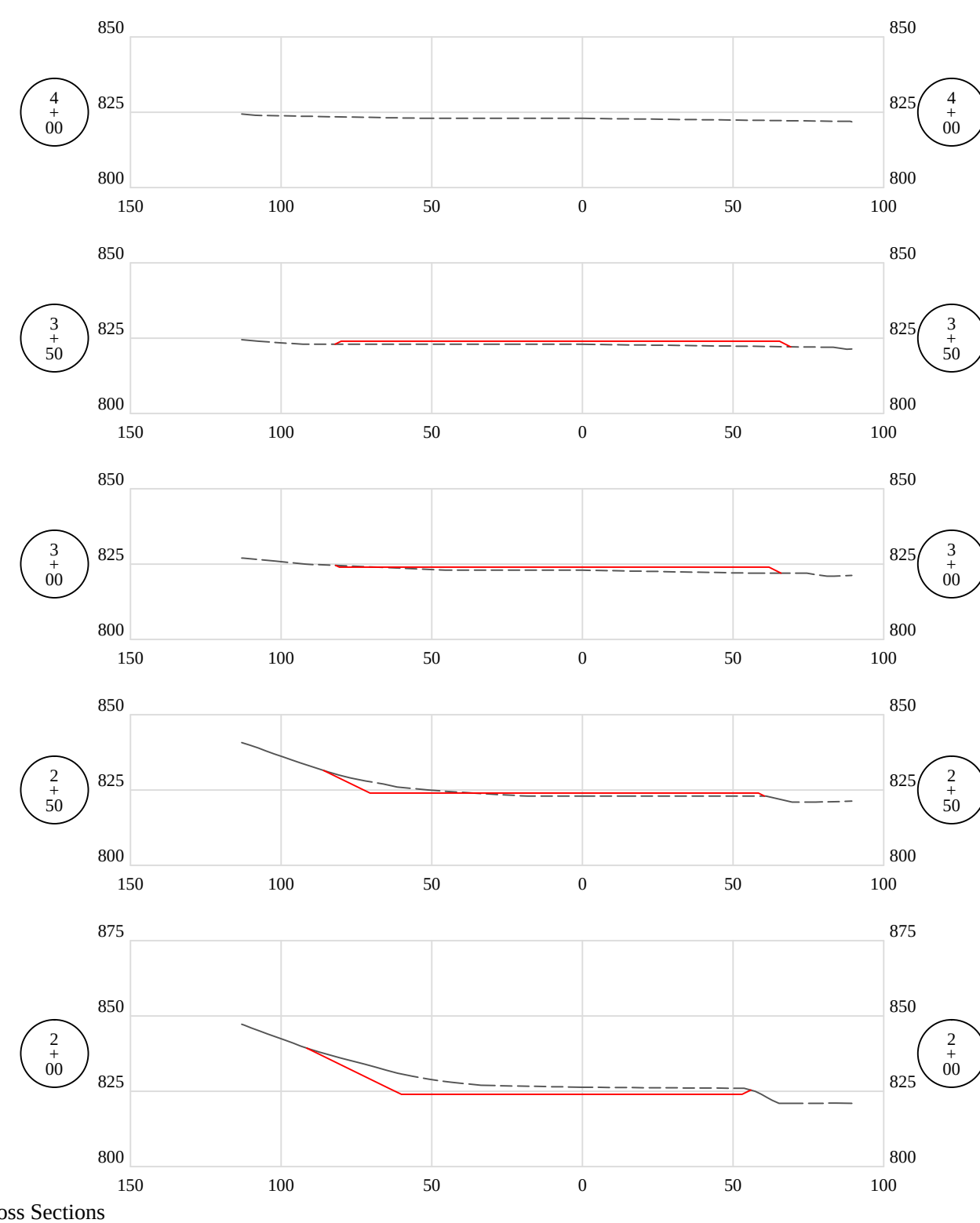
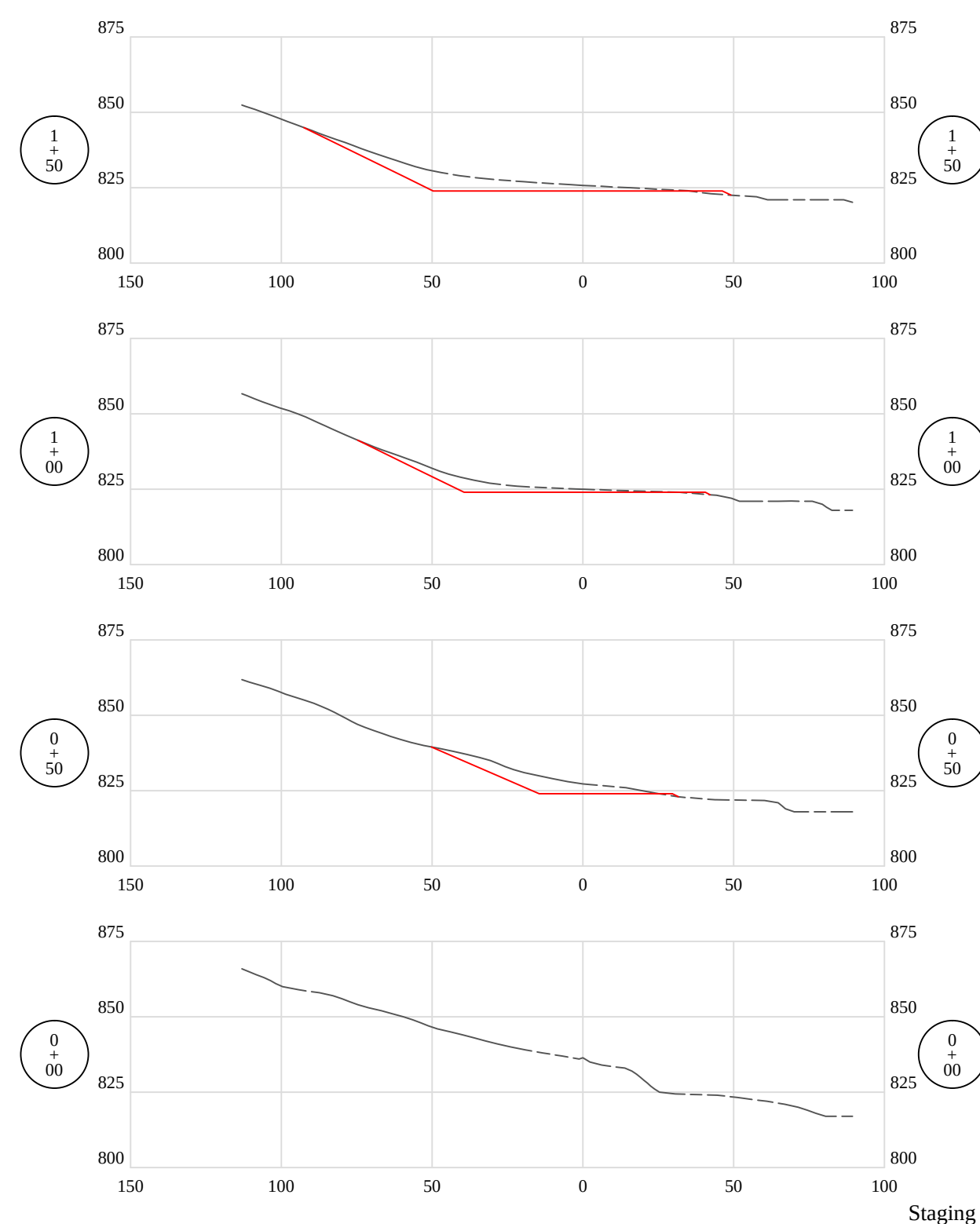
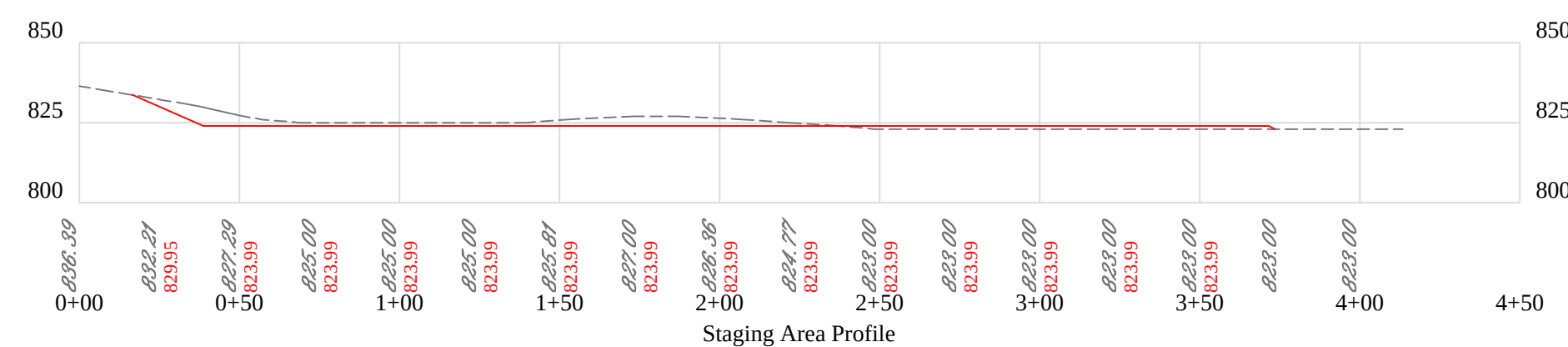
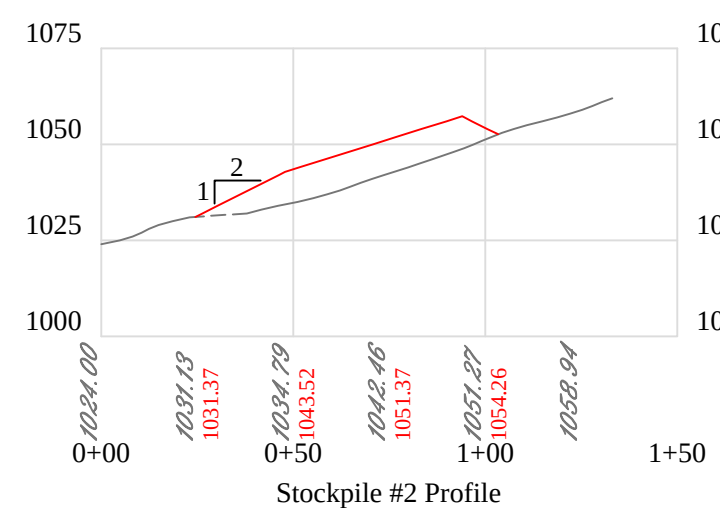
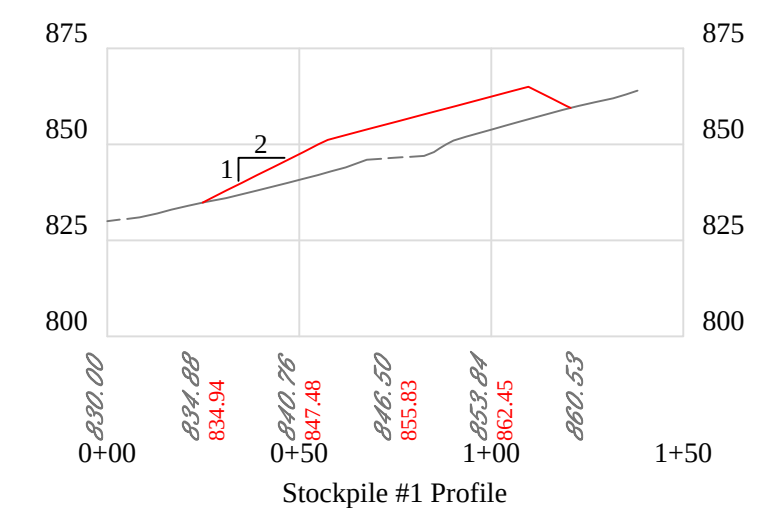
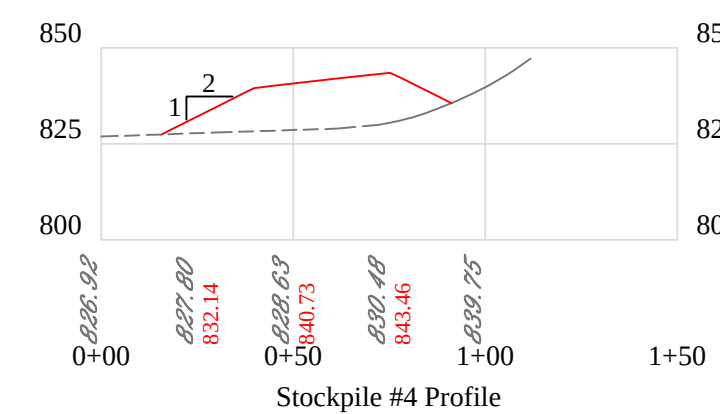
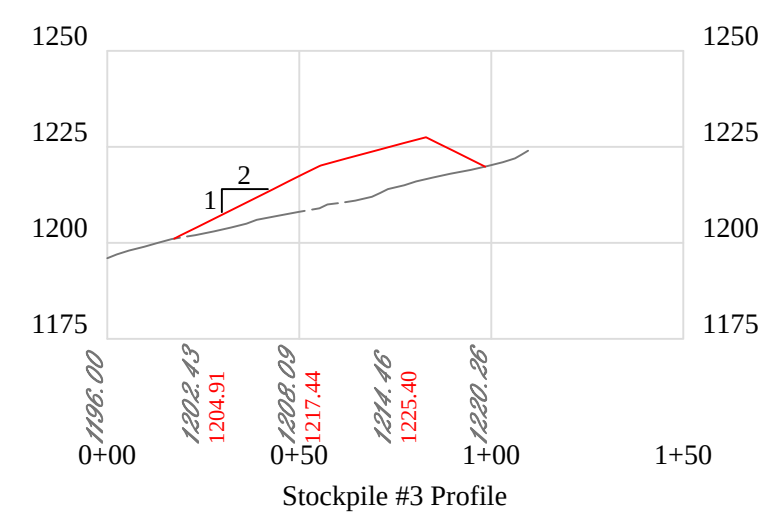
Date: 02/04/2025

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3/14/2025

1221 Well Site Fink Creek Access

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Exhibit A: As-Built Modification

Date	Revision
12-04-2025	Design

Date
02-04-2025

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Cross Sections - Staging Area

1221 Well Site

Freemans Creek District
Lewis County, WV

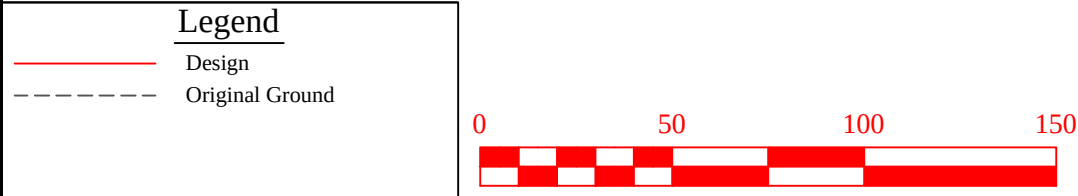
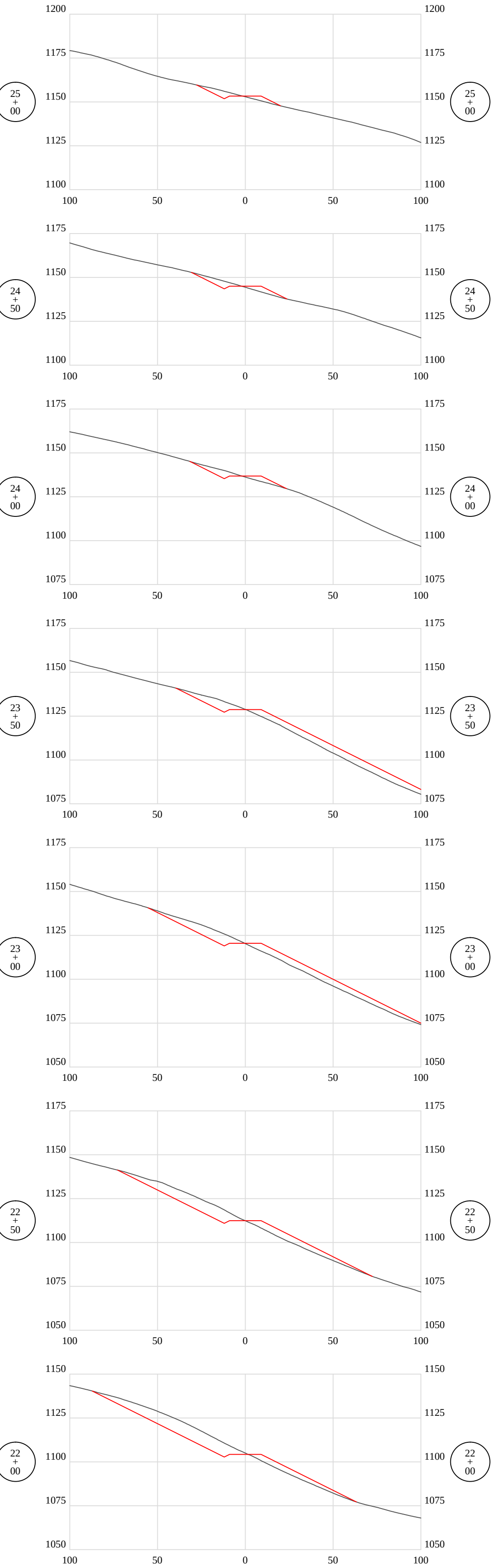
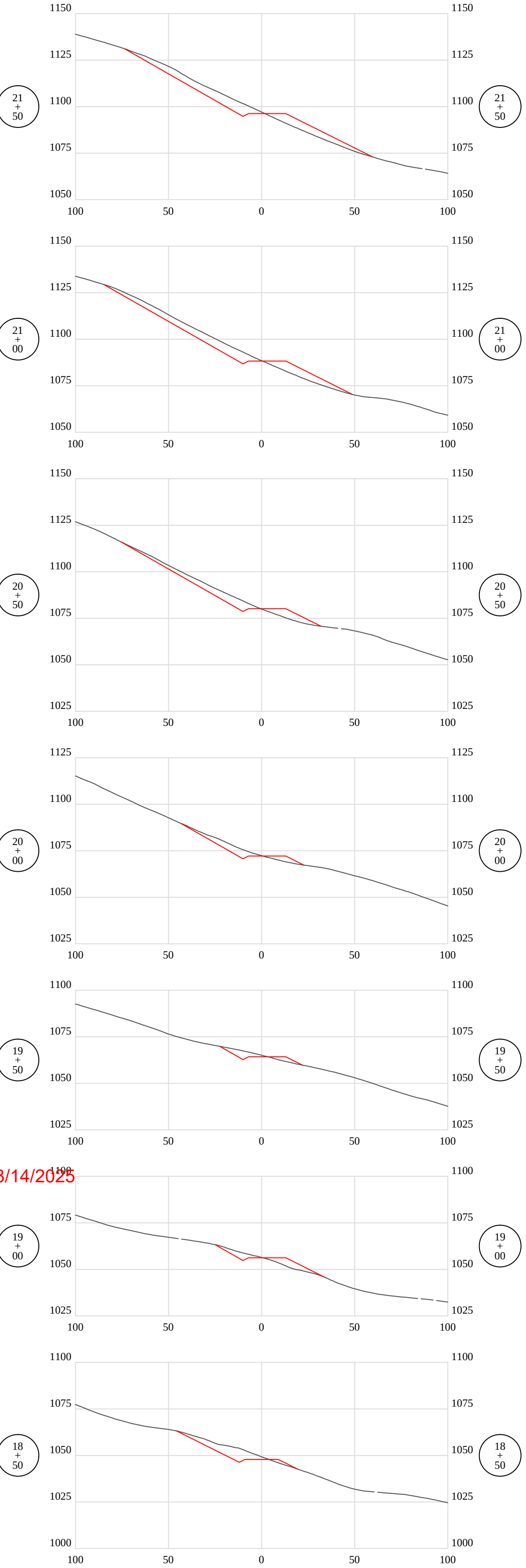
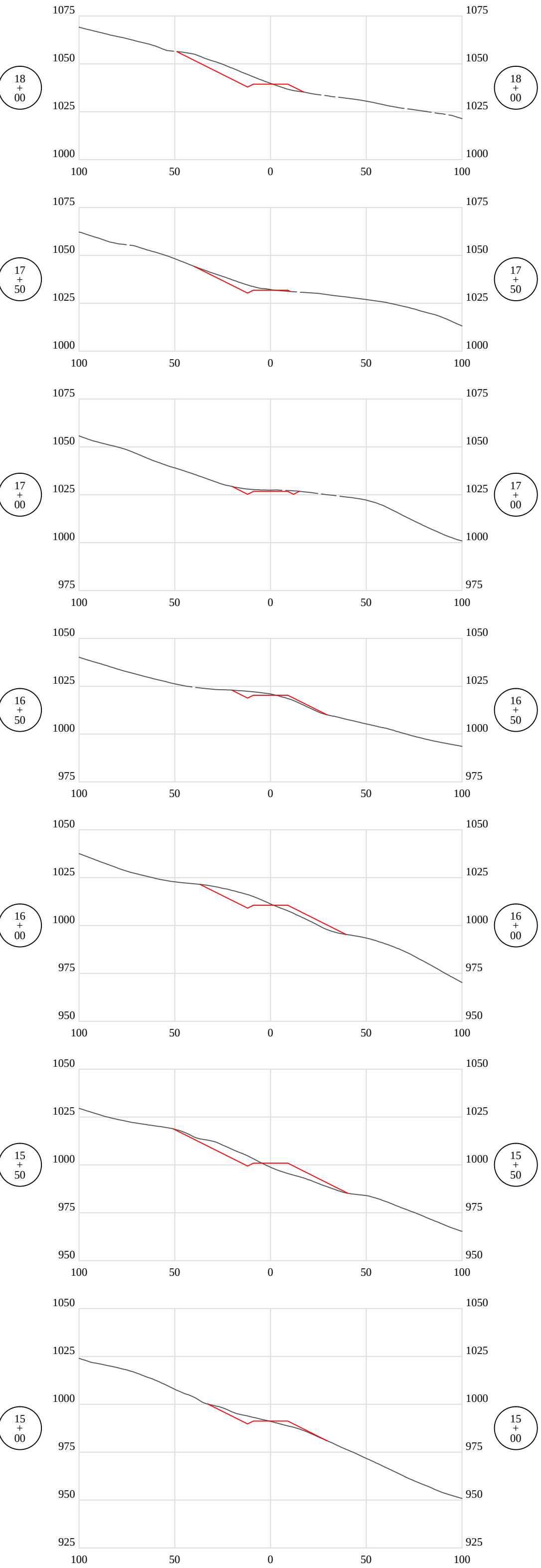
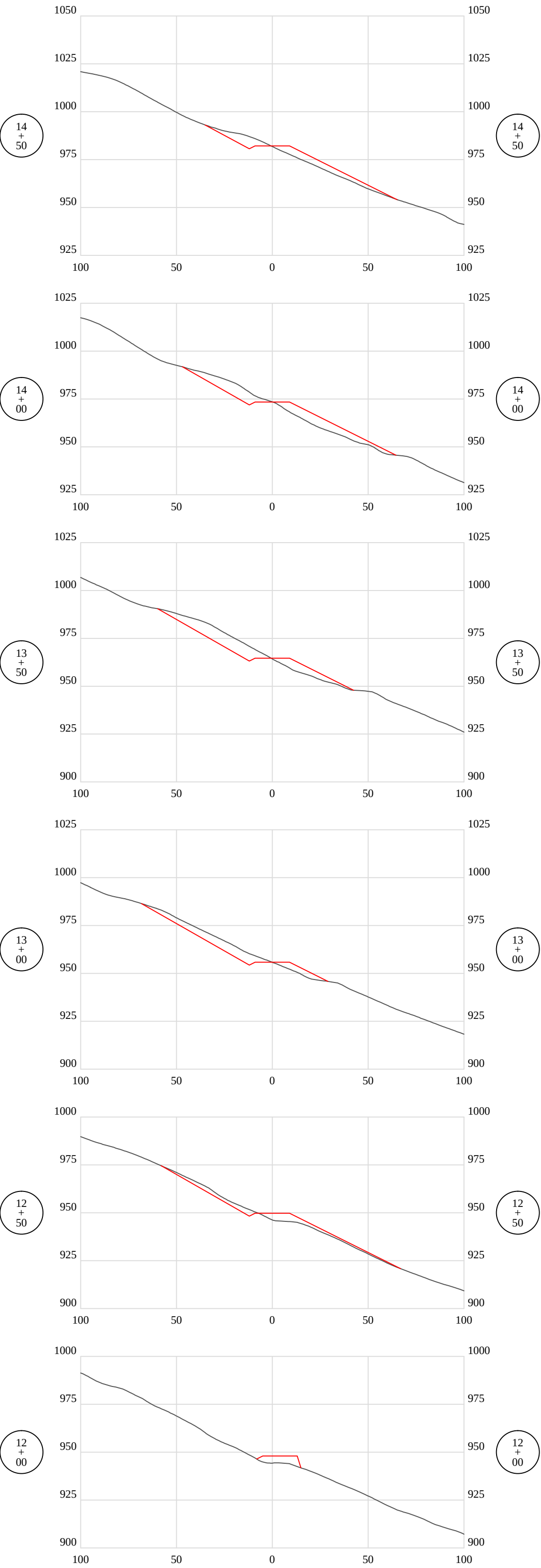
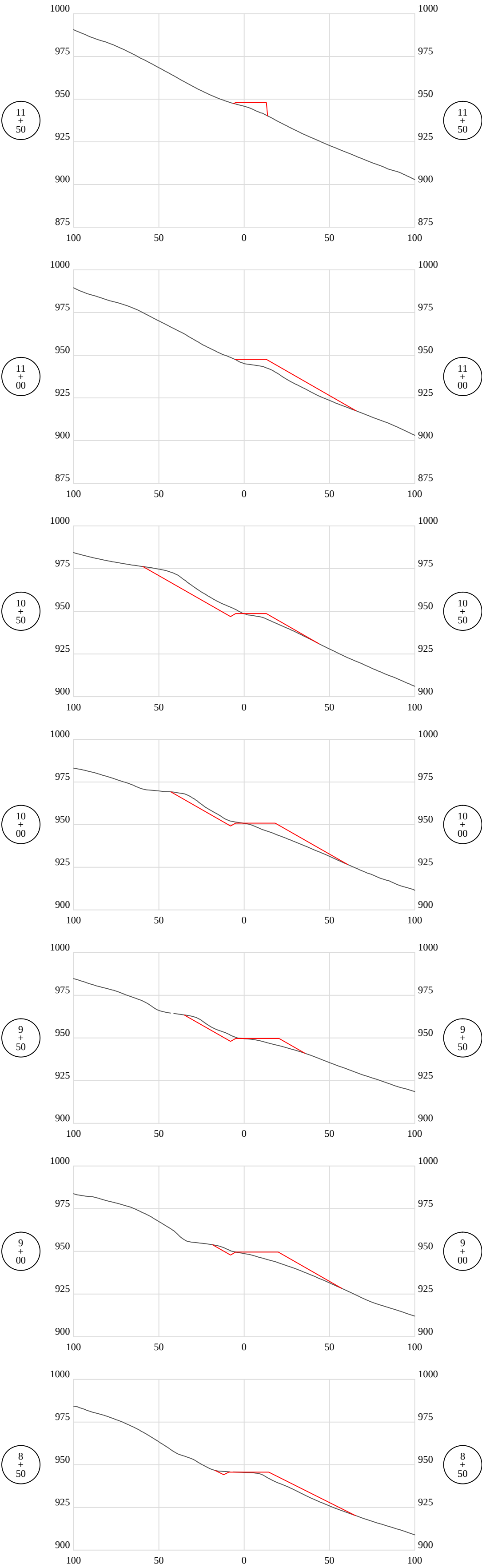
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3/14/2025

1221 Well Site Fink Creek Access

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Exhibit A: As-Built Modification



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Cross Sections - Bypass Access Road
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
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Modification
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1221 Well Site Fink Creek Access

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Exhibit A: As-Built Modification

Revision
Design

Date
02-04-2025

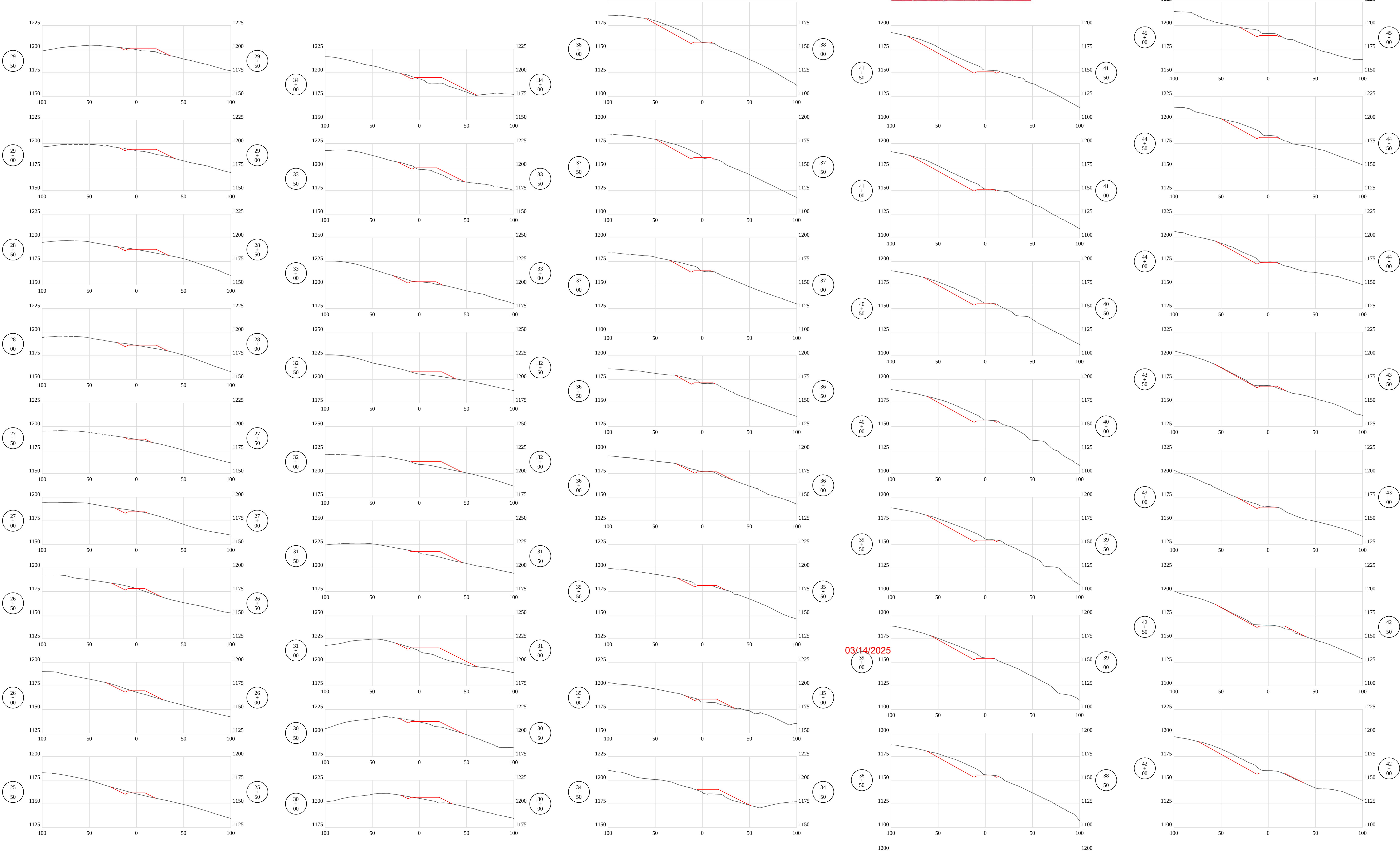


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P.O. Box 254
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(304)338-0965

Cross Sections - Bypass Access Road
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet 31 of 32



Legend
Design
Original Ground

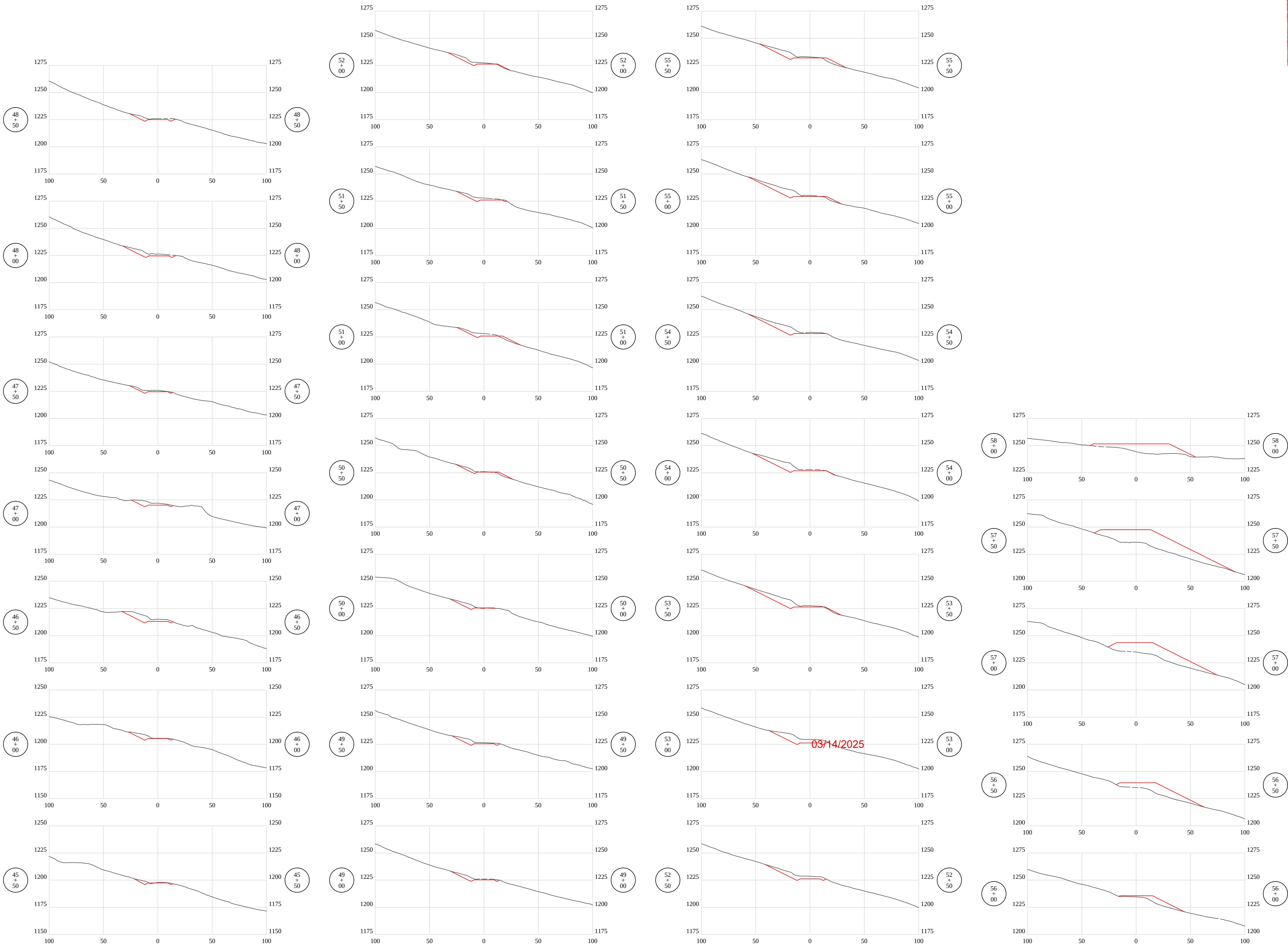


1221 Well Site Fink Creek Access

HG Energy LLC

Exhibit A: As-Built Modification

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Modification
3/14/2025



Legend
Design
Original Ground

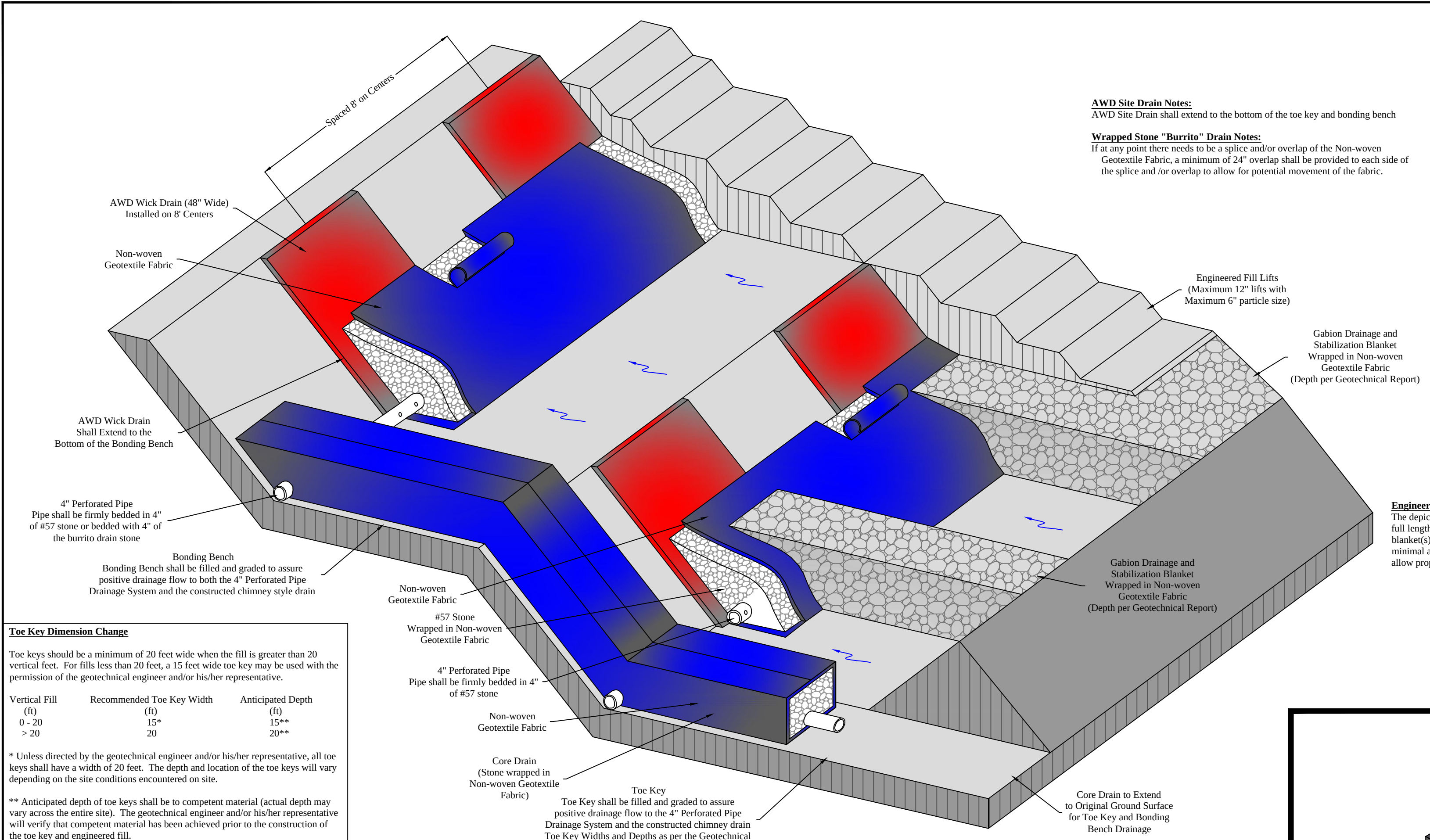
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02-04-2025	Design



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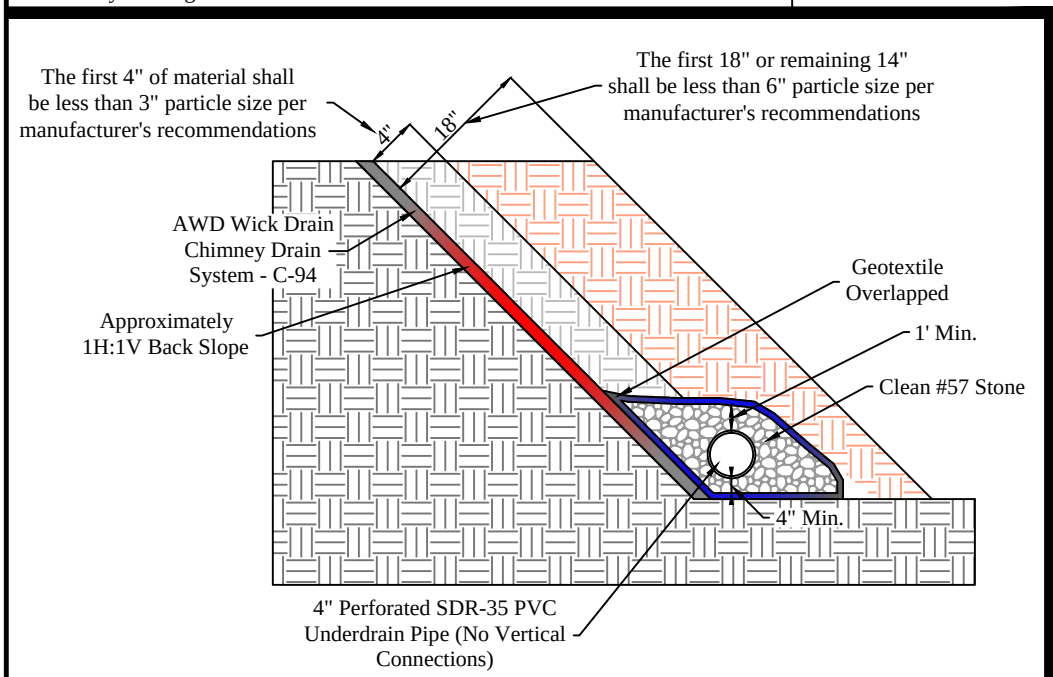
Cross Sections - Bypass Access Road
1221 Well Site
Freemans Creek District
Lewis County, WV



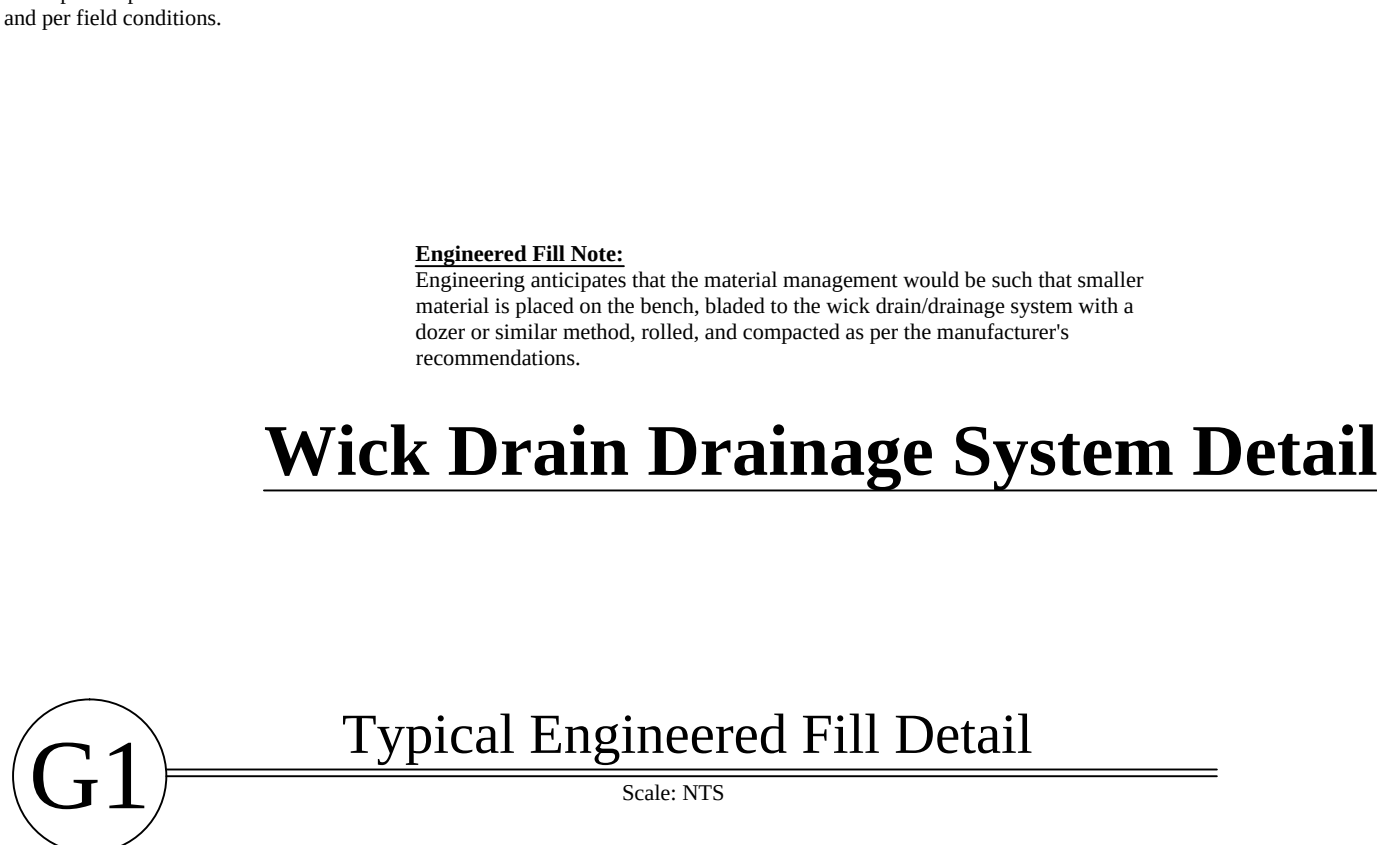
Toe Key Dimension Change		
Vertical Fill (ft)	Recommended Toe Key Width (ft)	Anticipated Depth (ft)
0 - 20	15*	15**
> 20	20	20**

* Unless directed by the geotechnical engineer and/or his/her representative, all toe keys shall have a width of 20 feet. The depth and location of the toe keys will vary depending on the site conditions encountered on site.

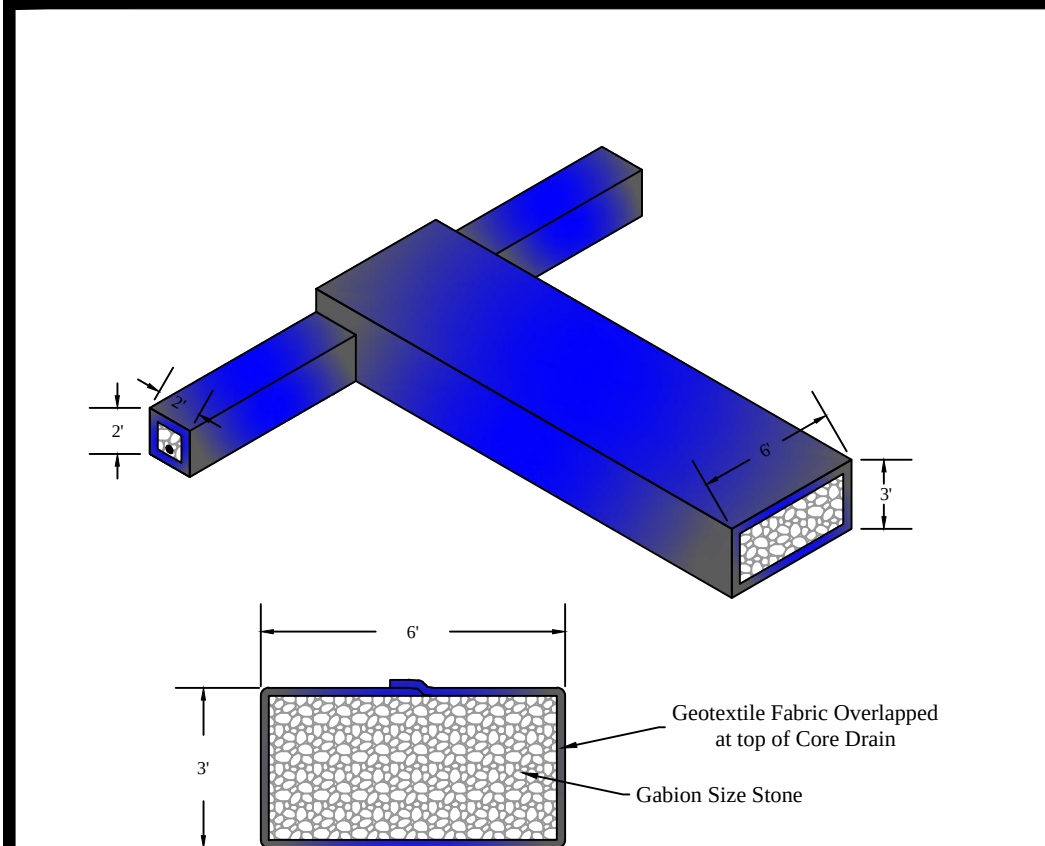
** Anticipated depth of toe keys shall be to competent material (actual depth may vary across the entire site). The geotechnical engineer and/or his/her representative will verify that competent material has been achieved prior to the construction of the toe key and engineered fill.



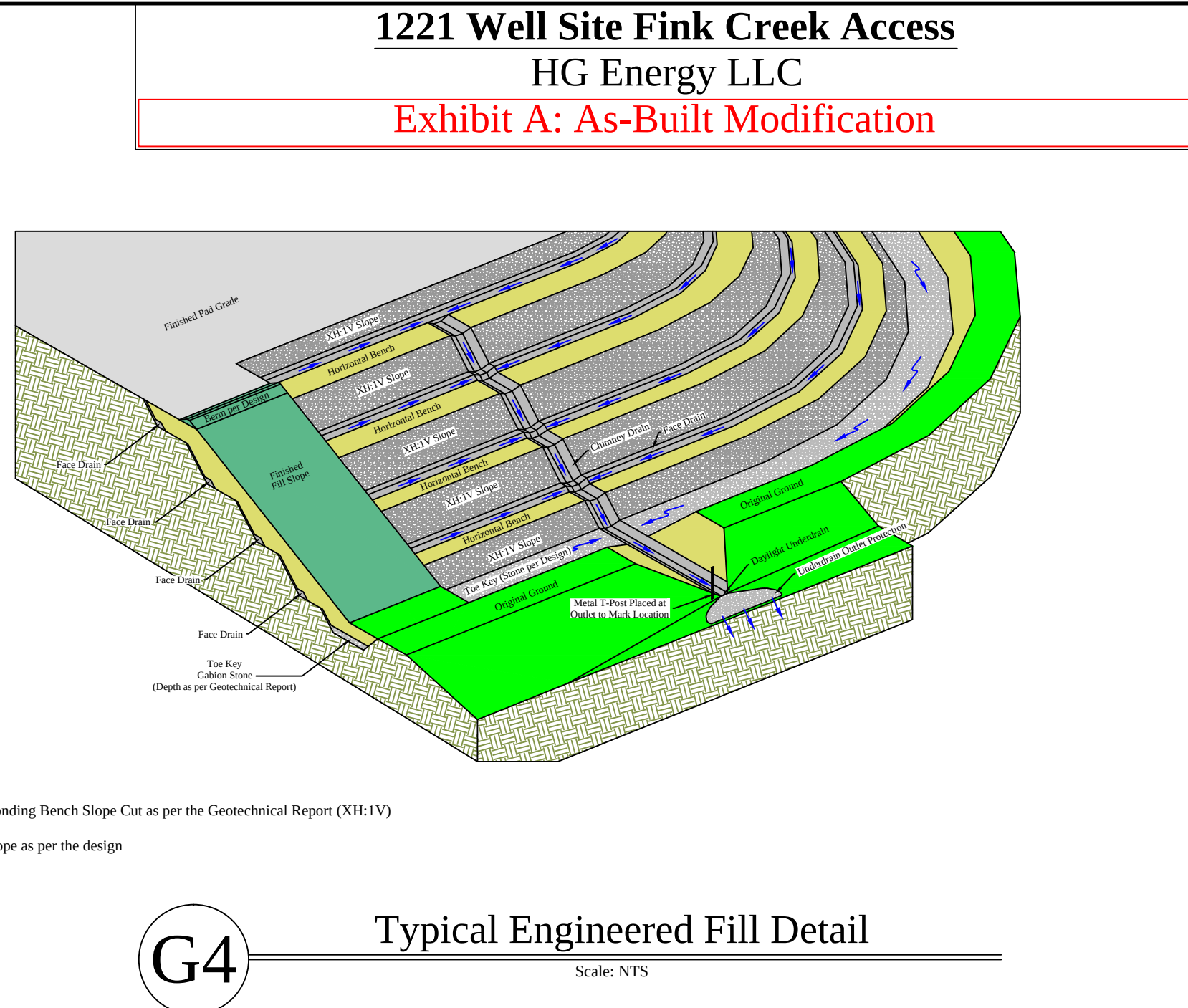
G2 Typical Face Drain Detail
Scale: NTS



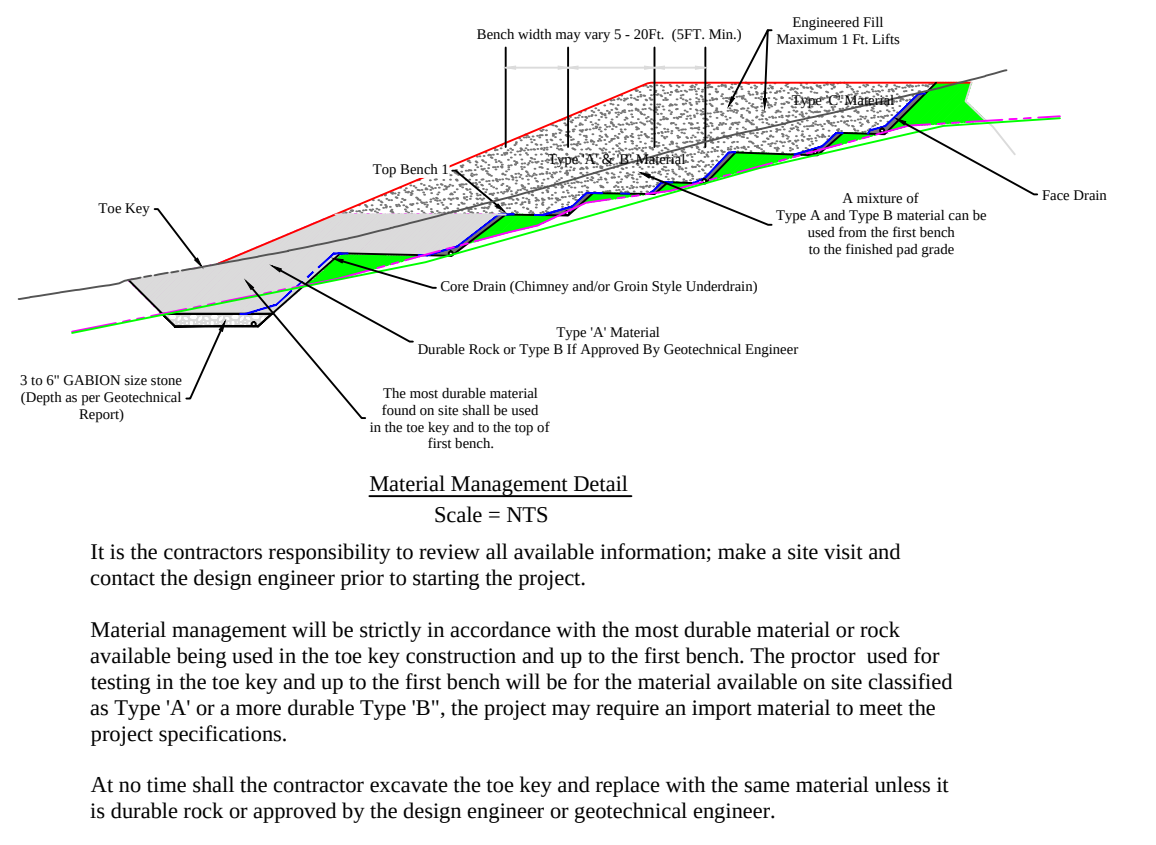
G1 Typical Engineered Fill Detail
Scale: NTS



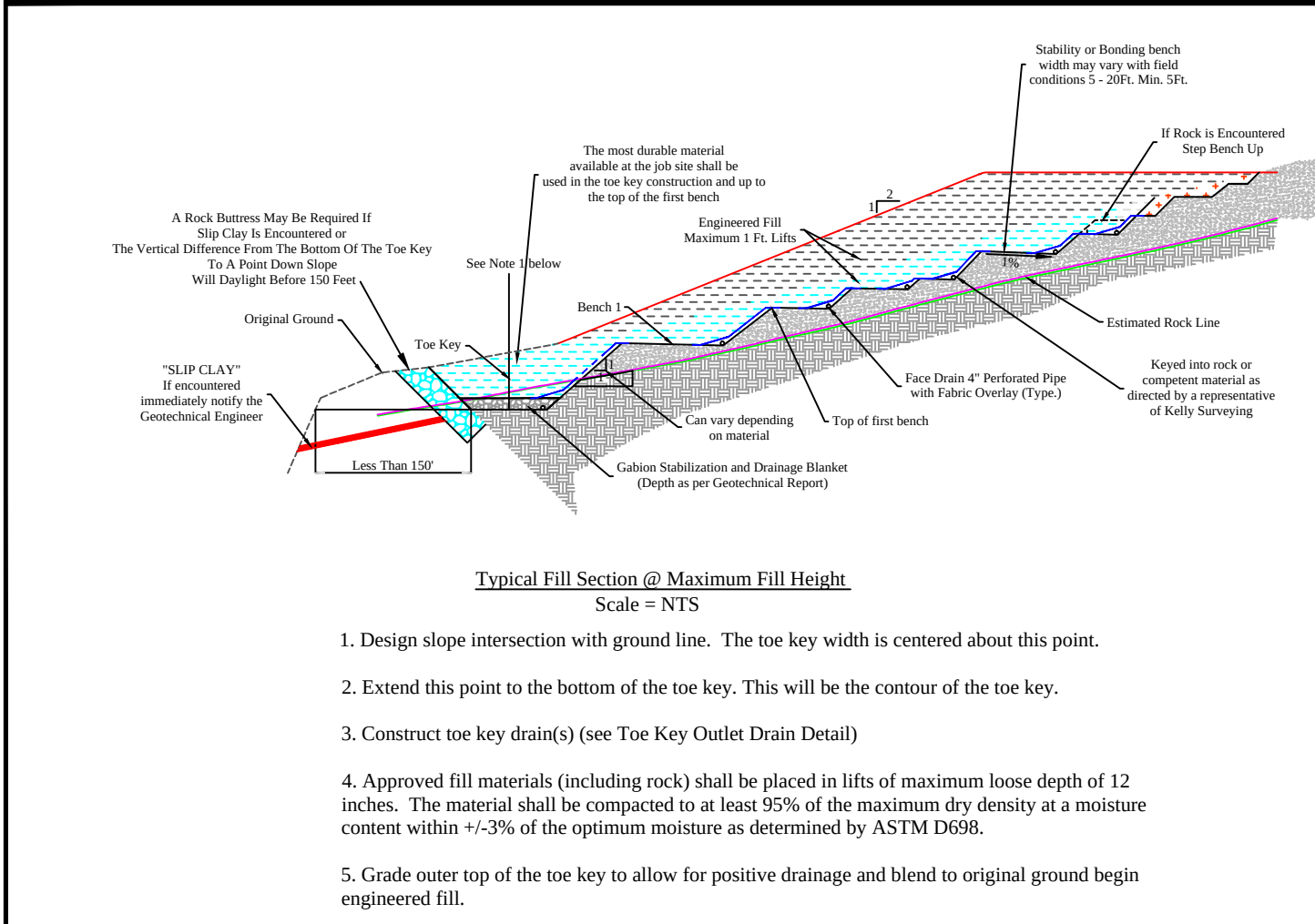
G3 Typical Core Drain Detail
Scale: NTS



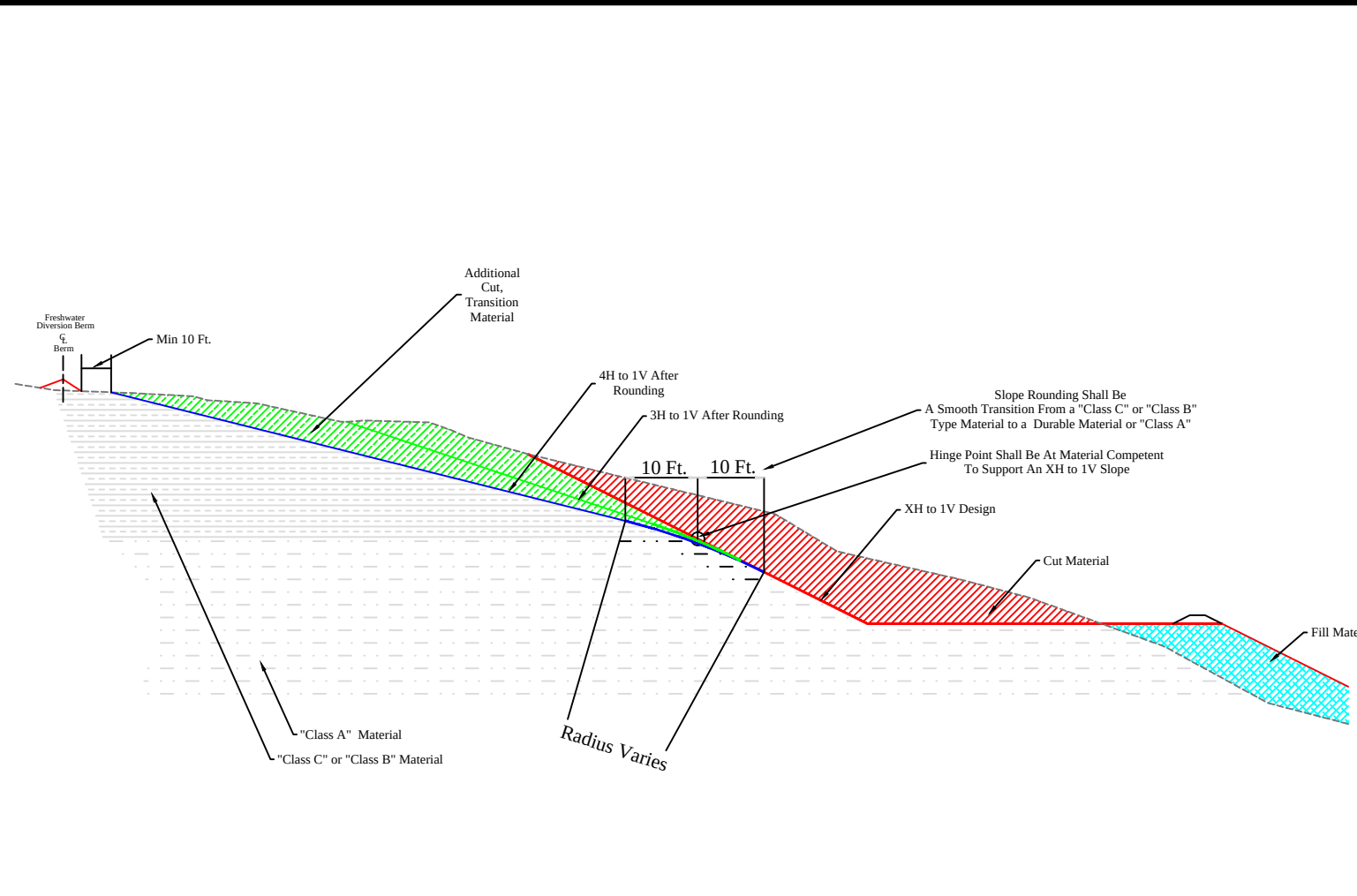
G4 Typical Engineered Fill Detail
Scale: NTS



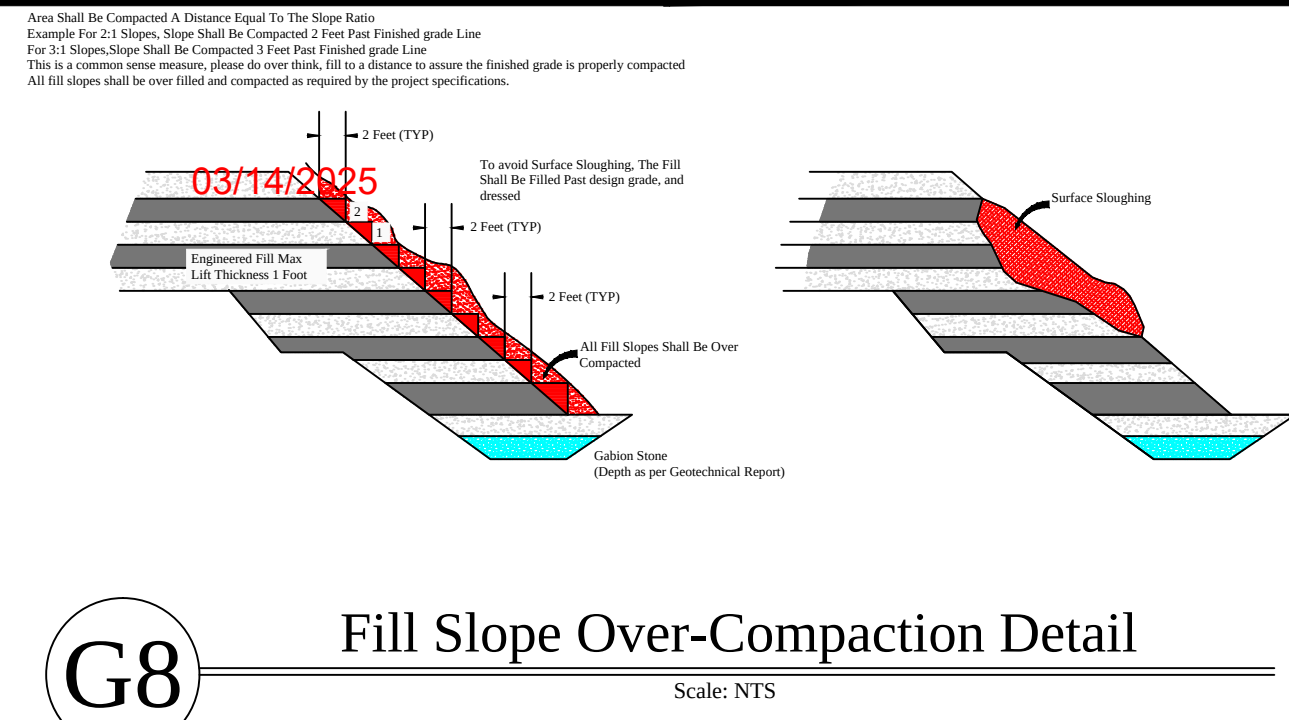
G5 Material Management Detail
Scale: NTS



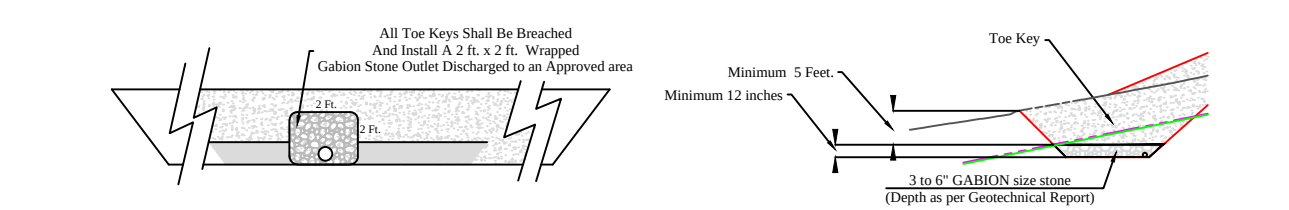
G6 Typical Fill Section at Maximum Fill Height
Scale: NTS



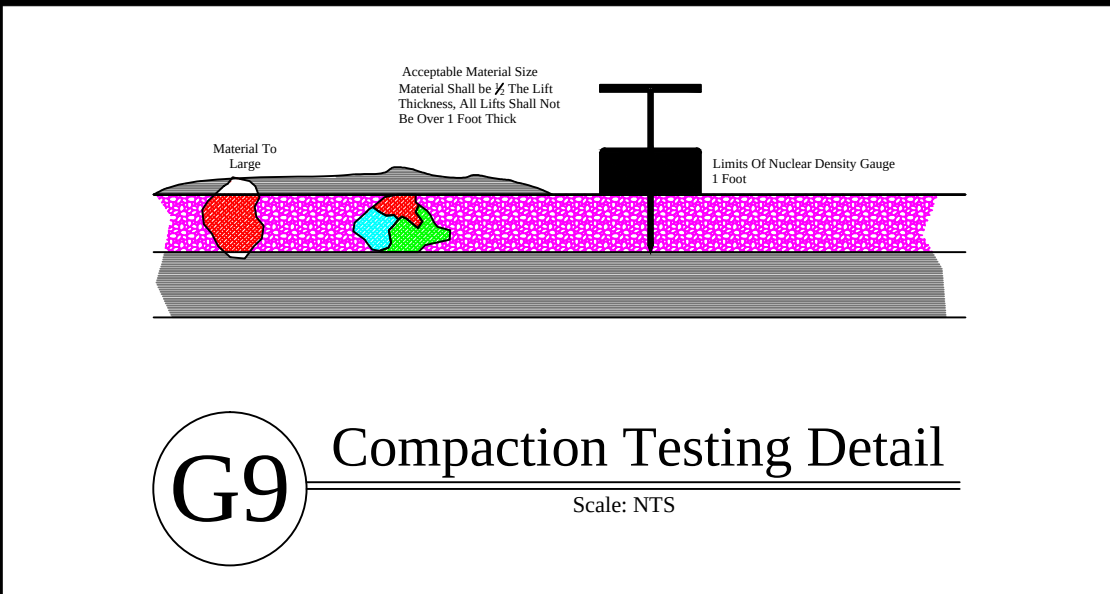
G7 Unstable Slope Management: Slope Rounding
Scale: NTS



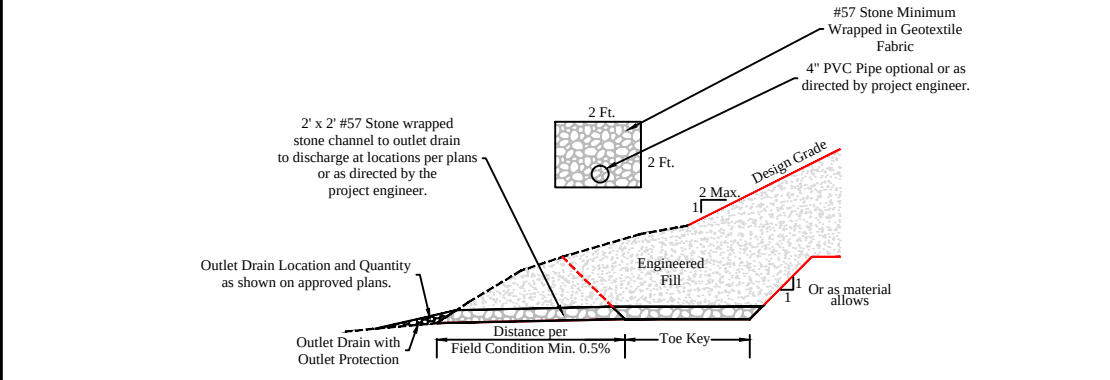
G8 Fill Slope Over-Compaction Detail
Scale: NTS



G10 Minimum Typical Toe Key Detail
Scale: NTS



G9 Compaction Testing Detail
Scale: NTS



G11 Minimum Toe Key Outlet Drain Detail
Scale: NTS

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3/14/2025

1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification

Date	Revision
02-04-2025	Design
Date: 02/04/2025	
Scale: As Shown	
Designed By: ZS	
File No.	
Sheet G1 of G2	

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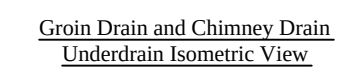
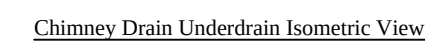
Kelly Surveying
P.O. Box 254
Delmar, WV 26039
304-338-0965

Typical Geotechnical Details

1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet G1 of G2

Exhibit A: As-Built Modification



Scale: NTS



Notes:

The Toe Key outlets can be field adjusted depending on the material horizon. The toe key outlet locations are conceptual as shown on the plan with the intent of providing a location that shall guarantee positive drainage away from the Toe Key without impacting environmental or similar resources.

Fill to be Class A Material at 98% Compaction of
ASTM D 698 or as approved by the site
Geotechnical Engineer

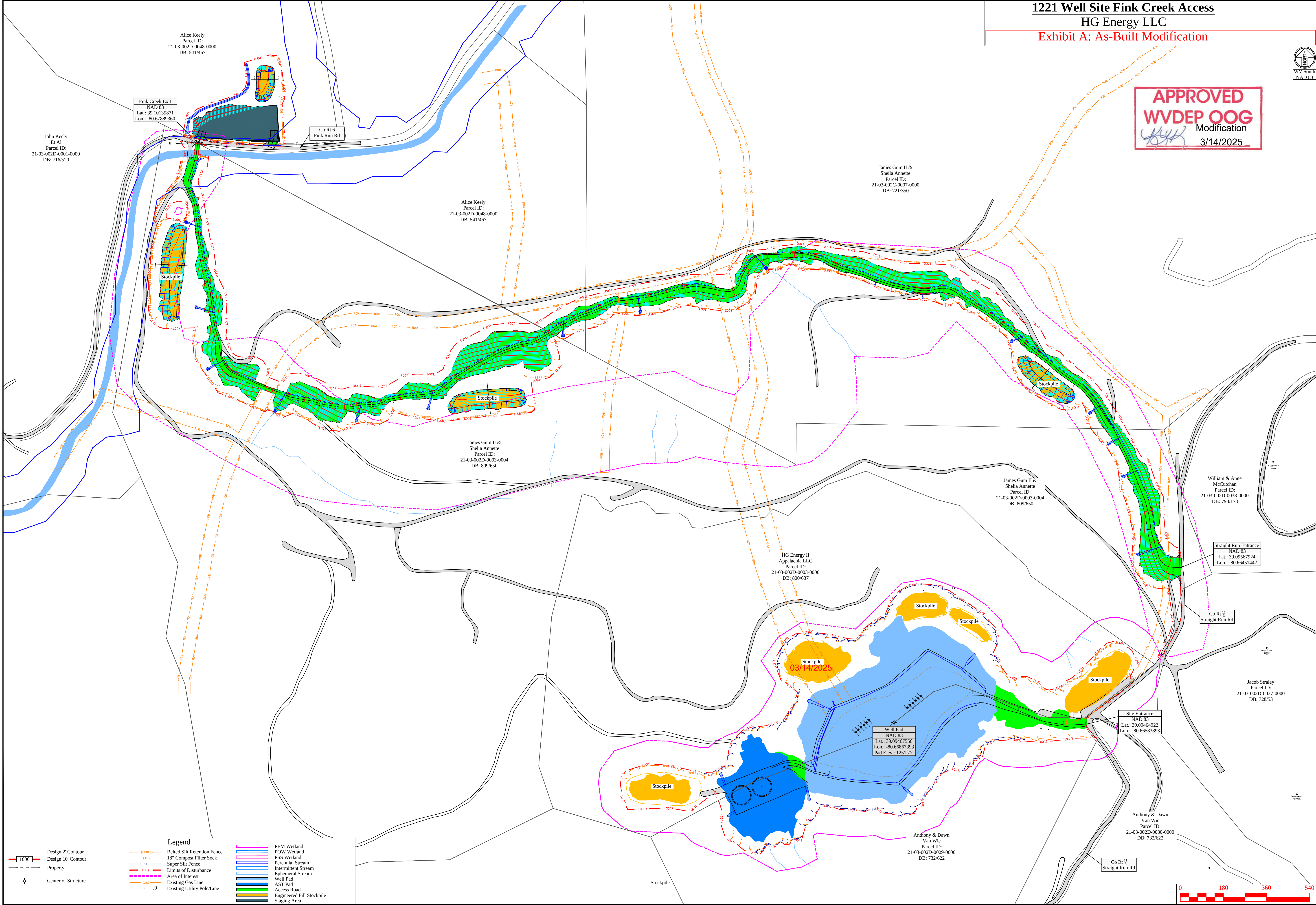


Scale: NTS

1221 Well Site Fink Creek Access
HG Energy LLC
Exhibit A: As-Built Modification



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WVDEP OOG
Modification
3/14/2025



Legend

- Design 2' Contour
- Design 10' Contour
- Property
- Center of Structure
- Beloved Silt Retention Fence
- 18" Compust Filter Sock
- Super Silt Fence
- Limits of Disturbance
- Area of Interest
- Existing Gas Line
- Existing Utility Pole/Line
- PEM Wetland
- PDW Wetland
- PSS Wetland
- Perennial Stream
- Intermittent Stream
- Ephemeral Stream
- Well Pad
- AST Pad
- Access Road
- Engineered Fill Stockpile
- Staging Area

Revision	Date	Design
02-04-2025		



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Landowner Exhibit
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet L1 of L1

Exhibit A: As-Built Modification

Modification
3/14/2025



Parcel ID:
21-03-002D-0003-0004
DB: 809/650

Parcel ID:
21-03-002D-0003-0000
DB: 800/637

course B

course C

HG Energy II
Appalachia LLC

Parcel ID:
1-03-002D-0003-0000
DB: 800/637

Site Entrance
NAD 83
Lat.: 39.09464922
Lon.: -80.66583893

Co Rt $\frac{11}{3}$
Straight Run Rd

Parcel ID:
21-03-002D-0030-000
DB: 732/622

Parcel ID:
1-03-002D-0030-0000
DB: 732/622

The Contractor shall re-spread a minimum of 4" of topsoil over all disturbed areas and slopes prior to seeding and mulching or erosion control blanket installation.

All BMP's shall be inspected after every major storm event. All debris and sediment affecting the proper function of the BMP's shall be removed so not to have an impact in the future. All vegetated areas of the BMP's and surrounding drainage area shall be reseeded and stabilized when weather is conducive if erosion or disturbance impacts the area.

1. The contractor shall re-spread a minimum of 4" of topsoil over all disturbed areas and slopes prior to seeding and mulching or erosion control blanket installation. During site reclamation, all fill areas shall be compacted in maximum 24" lifts and compacted to 90% compaction per ASTM D-698.
2. Seed and mulch or install erosion control blankets on all disturbed areas. Keep all erosion and sedimentation controls in place until there is 70% growth over the entire site.
3. All non-essential structures, tanks, etc. shall be removed from the site.

pH of Soil	Lime in Tons per Acre	Fertilizer, Lbs Per Acre 10-20-20 or Equivalent
Above 6.0	2.00	500.00
5.0 to 6.0	3.00	500.00
Below 5.0	4.00	500.00

The pH can be determined with a portable pH testing kit or by sending the soil samples to a soil testing laboratory. When 4 tons of lime per acre are applied it must be incorporated into the soil by disking, backblading, or tracking up and down the slope.



Revision
 Design

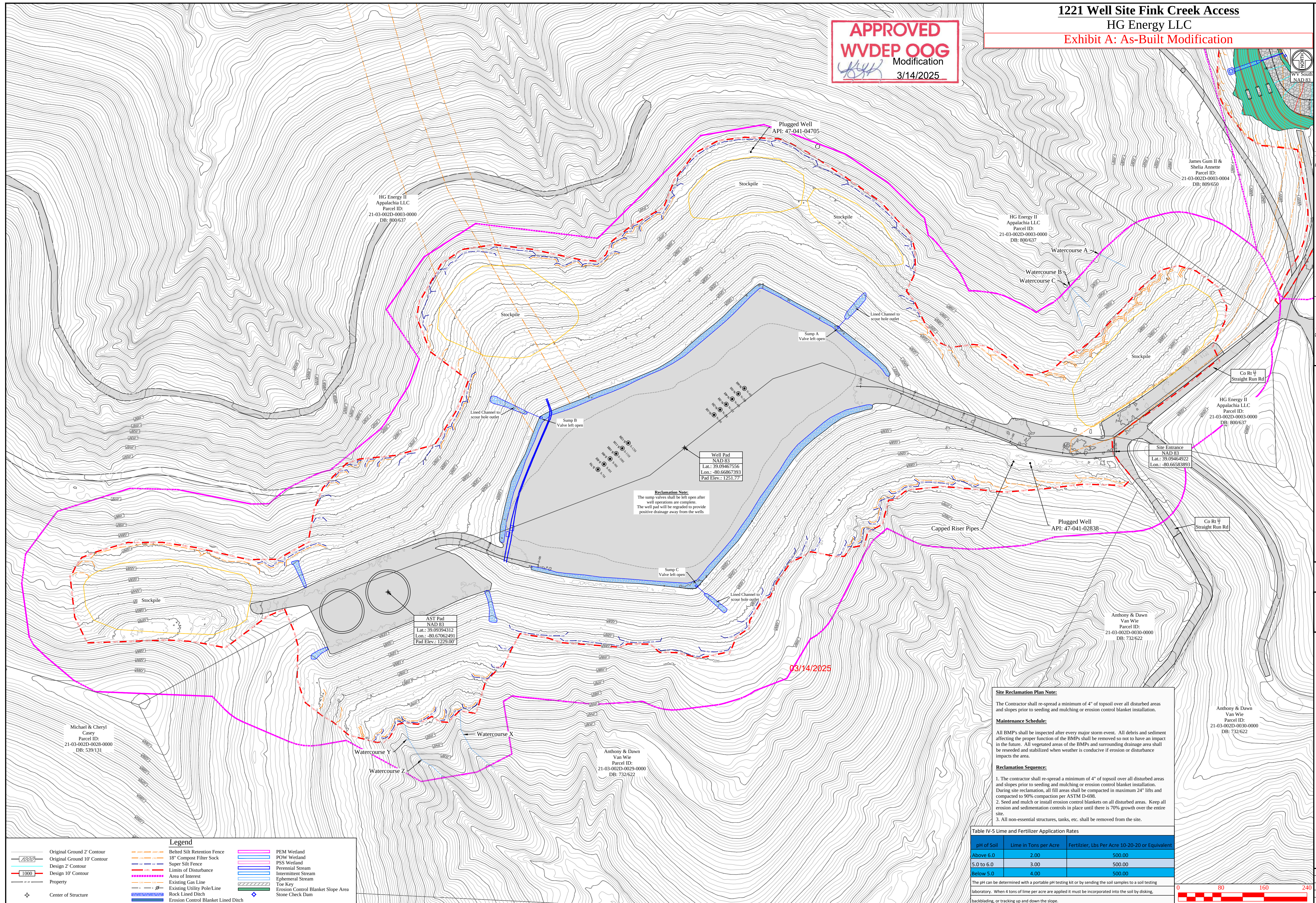
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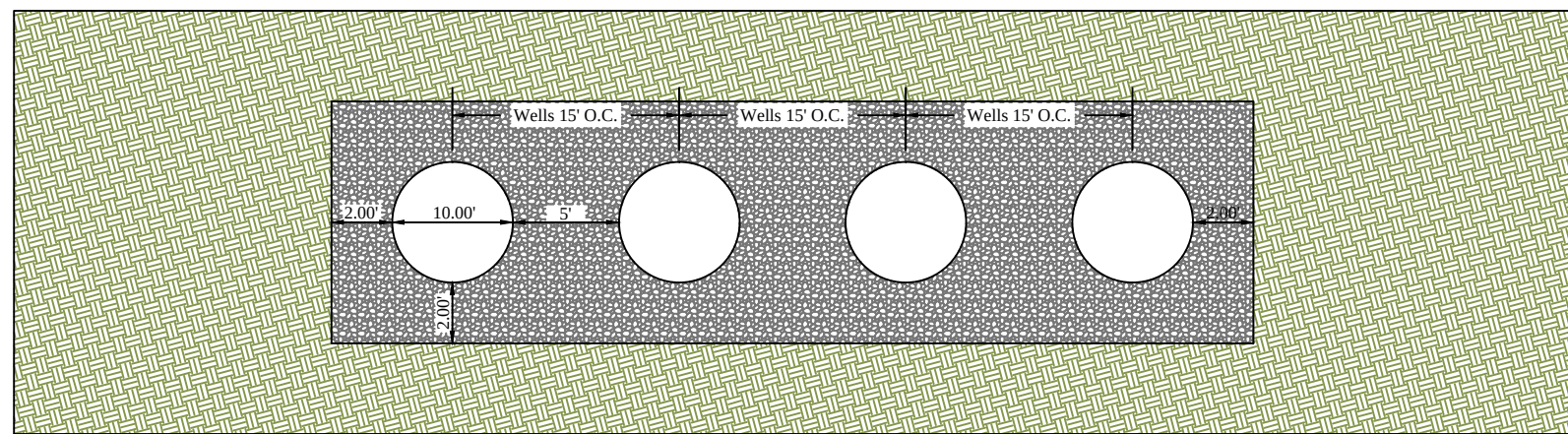
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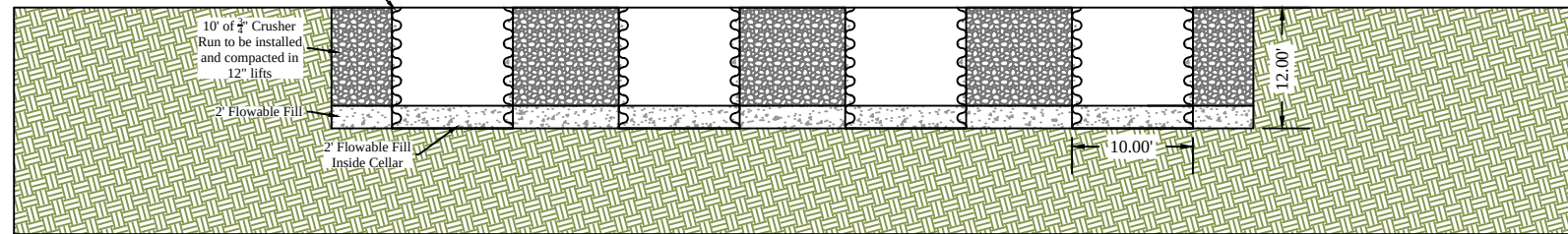
Site Reclamation Plan
1221 Well Site
Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet S1 of S1





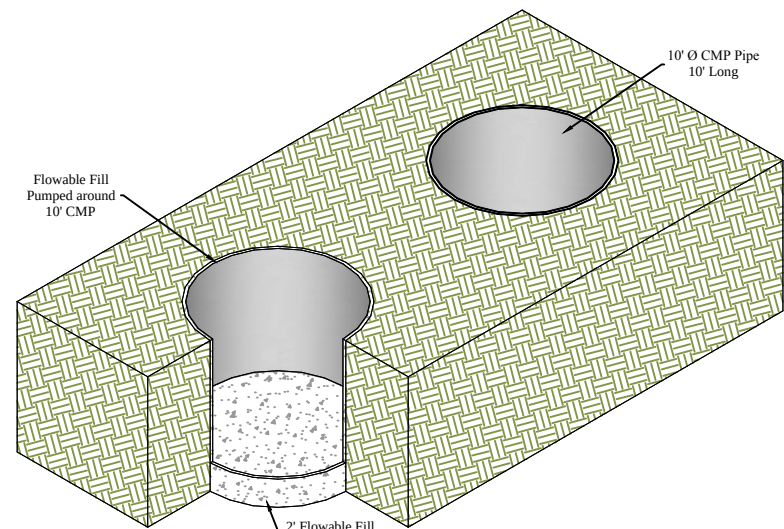
Trench Cellar Plan View



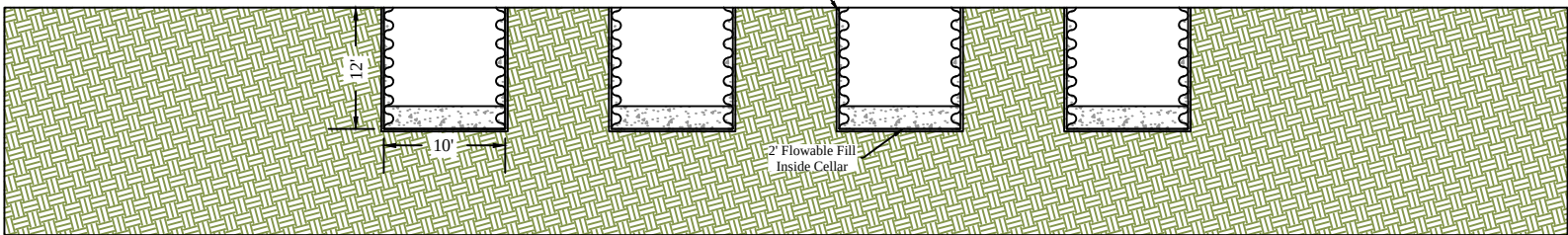
Trench Cellar Section View

M1 Typical Trenched Cellar Detail
Scale: NTS

Note:
All stone placed on the pad and around the cellars shall be compacted.



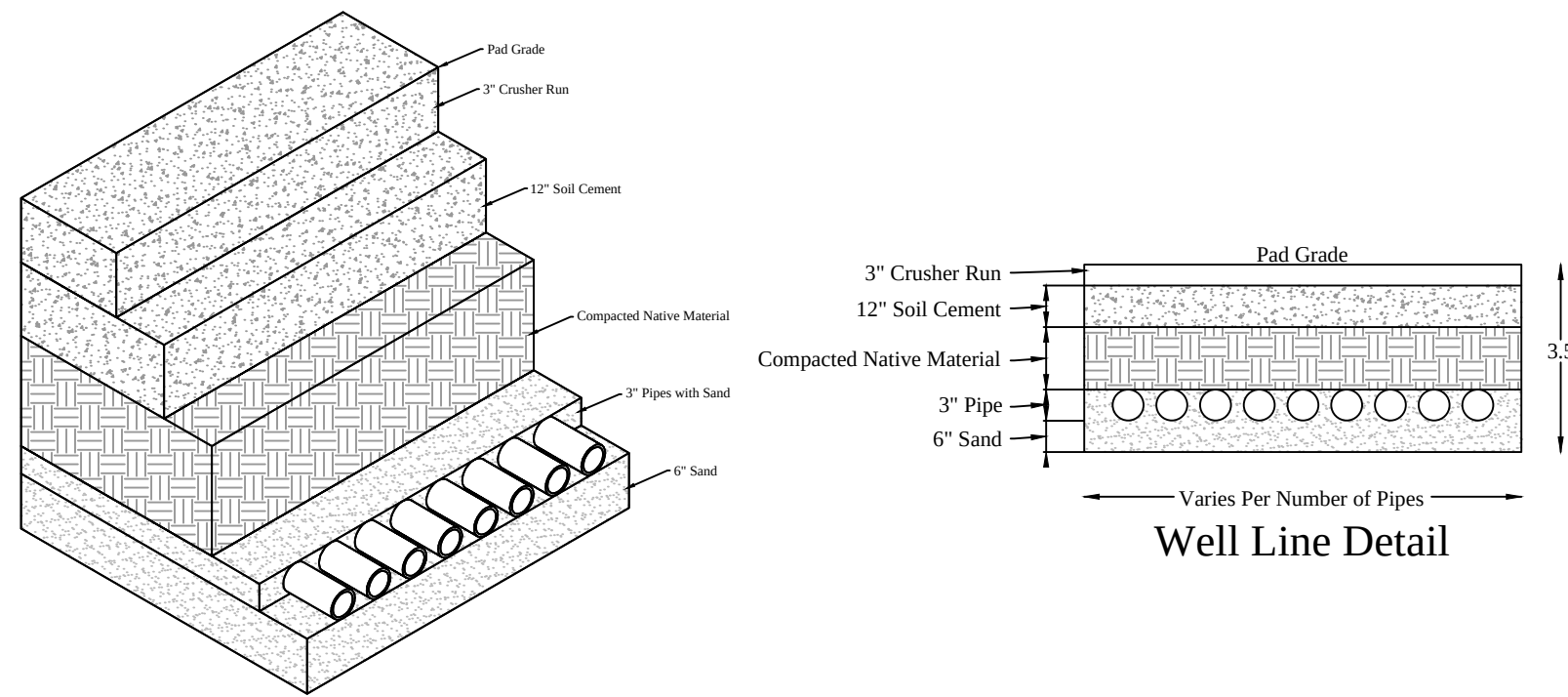
Auger Cellar Plan View



Auger Cellar Section View

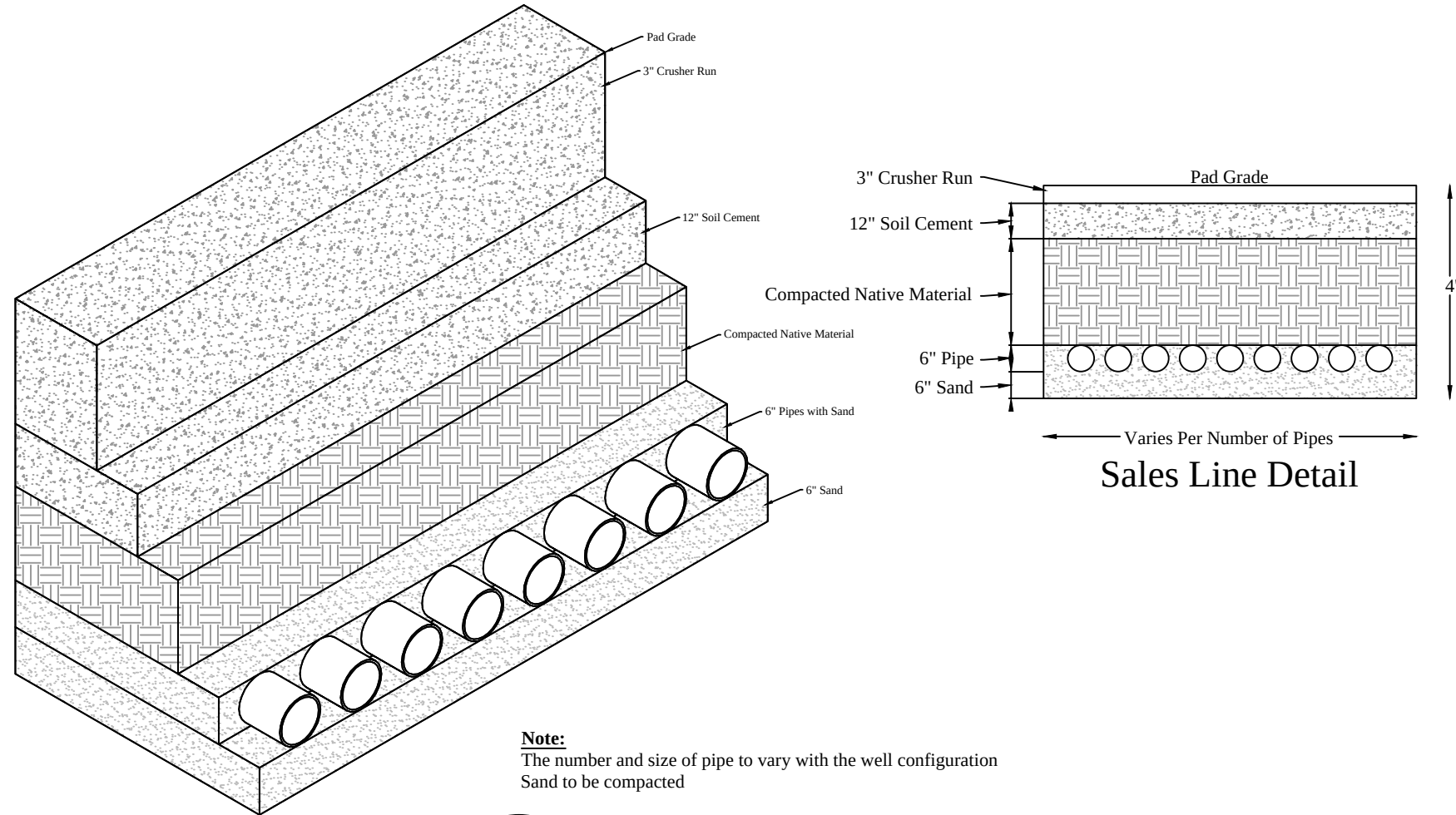
M2 Typical Augered Cellar Detail
Scale: NTS

Note:
All stone placed on the pad and around the cellars shall be compacted.



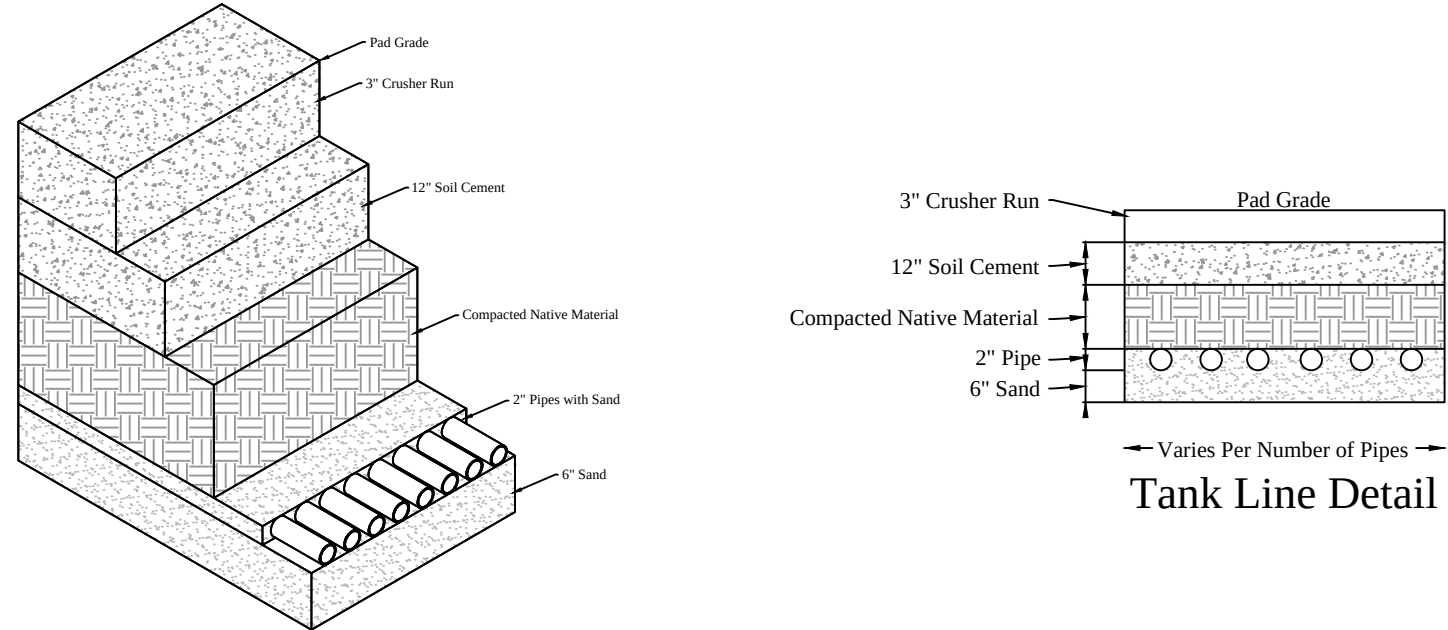
Note:
The number and size of pipe to vary with the well configuration
Sand to be compacted

M3 Typical Well Line Detail
Scale: NTS



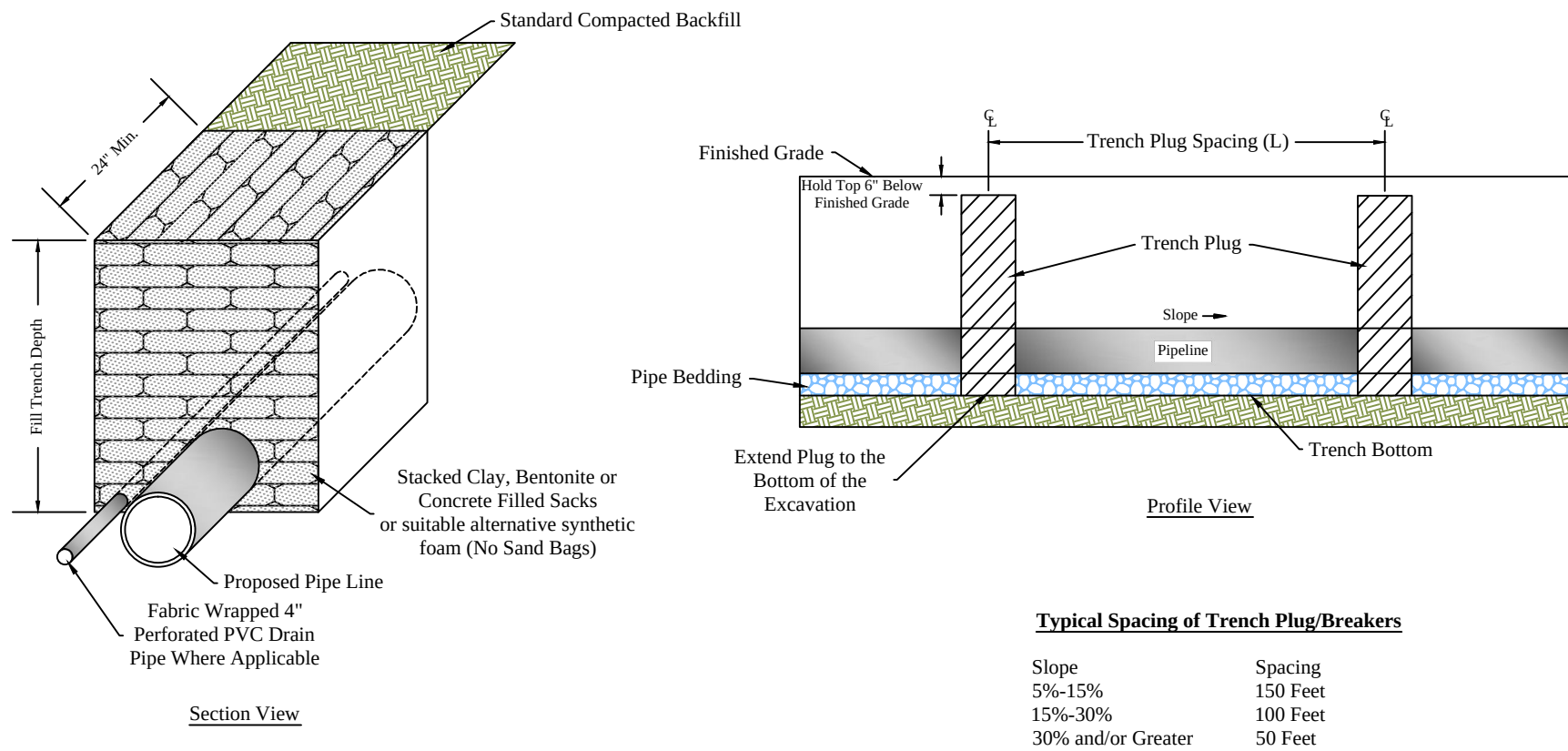
Note:
The number and size of pipe to vary with the well configuration
Sand to be compacted

M4 Typical Sales Line Detail
Scale: NTS



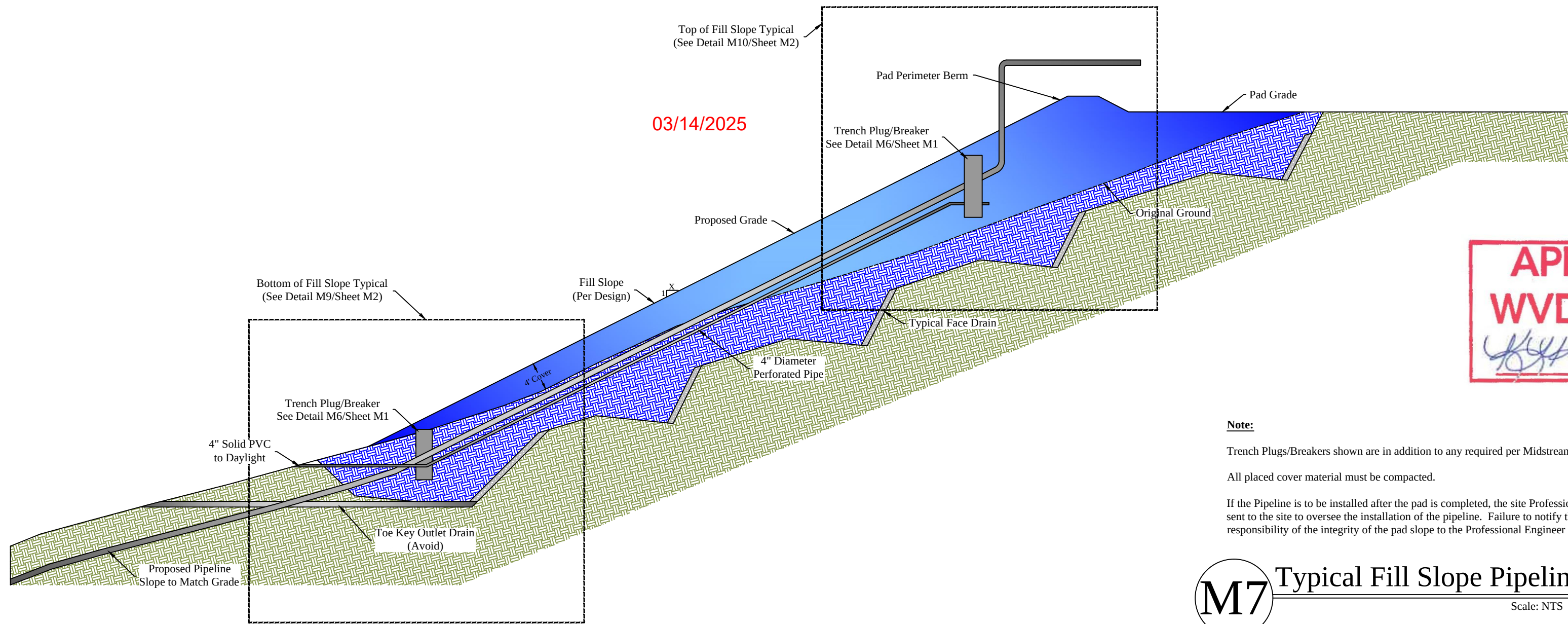
Note:
The number and size of pipe to vary with the well configuration
Sand to be compacted

M5 Typical Tank Line Detail
Scale: NTS



Typical Spacing of Trench Plug/Breakers	
Slope	Spacing
5%-15%	150 Feet
15%-30%	100 Feet
30% and/or Greater	50 Feet

M6 Typical Impervious Trench Plug/Breaker
Scale: NTS



Note:
Trench Plugs/Breakers shown are in addition to any required per Midstream Plans/Details for the Proposed Pipeline.
All placed cover material must be compacted.

If the Pipeline is to be installed after the pad is completed, the site Professional Engineer must be contacted and an inspector sent to the site to oversee the installation of the pipeline. Failure to notify the site Professional Engineer will transfer the responsibility of the integrity of the pad slope to the Professional Engineer who designed the pipeline.

M7 Typical Fill Slope Pipeline Installation Section
Scale: NTS

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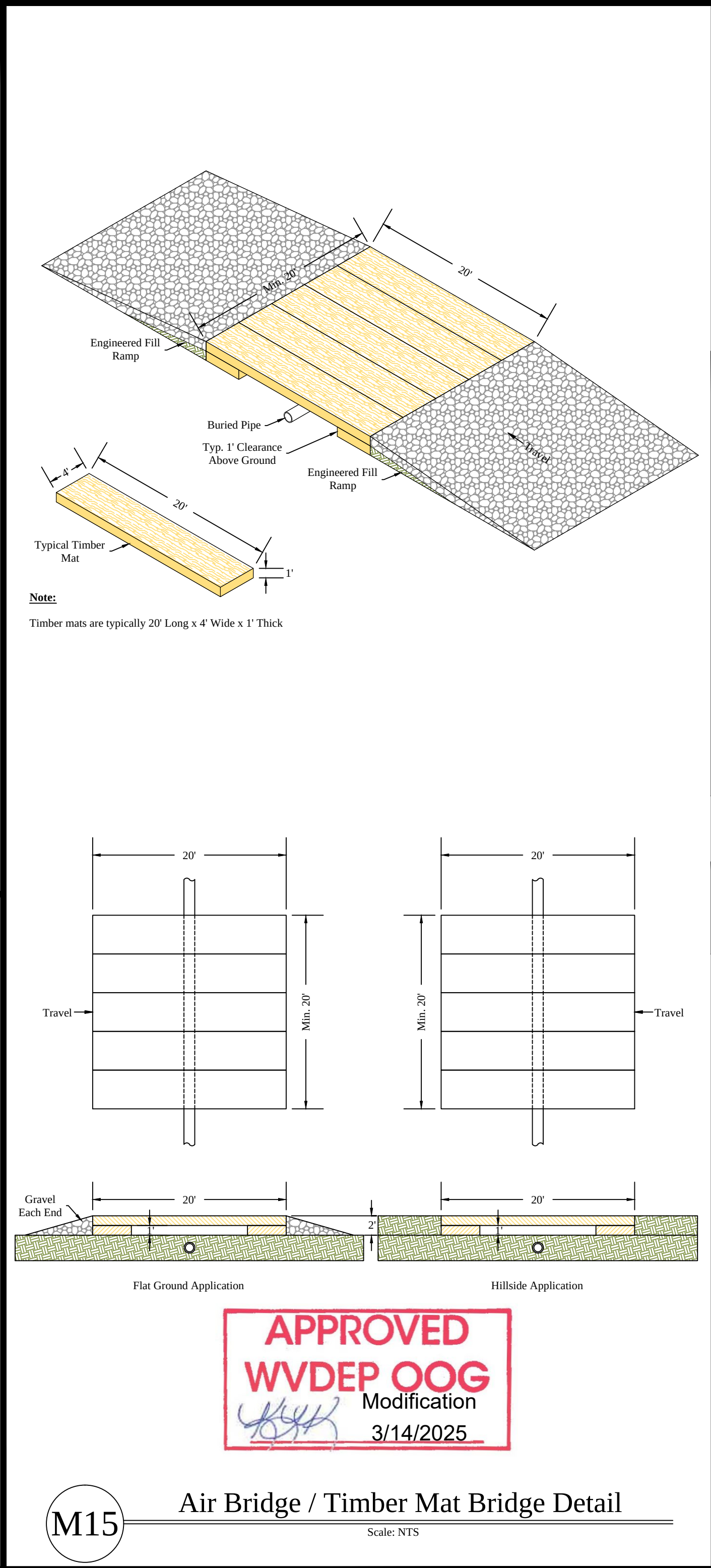
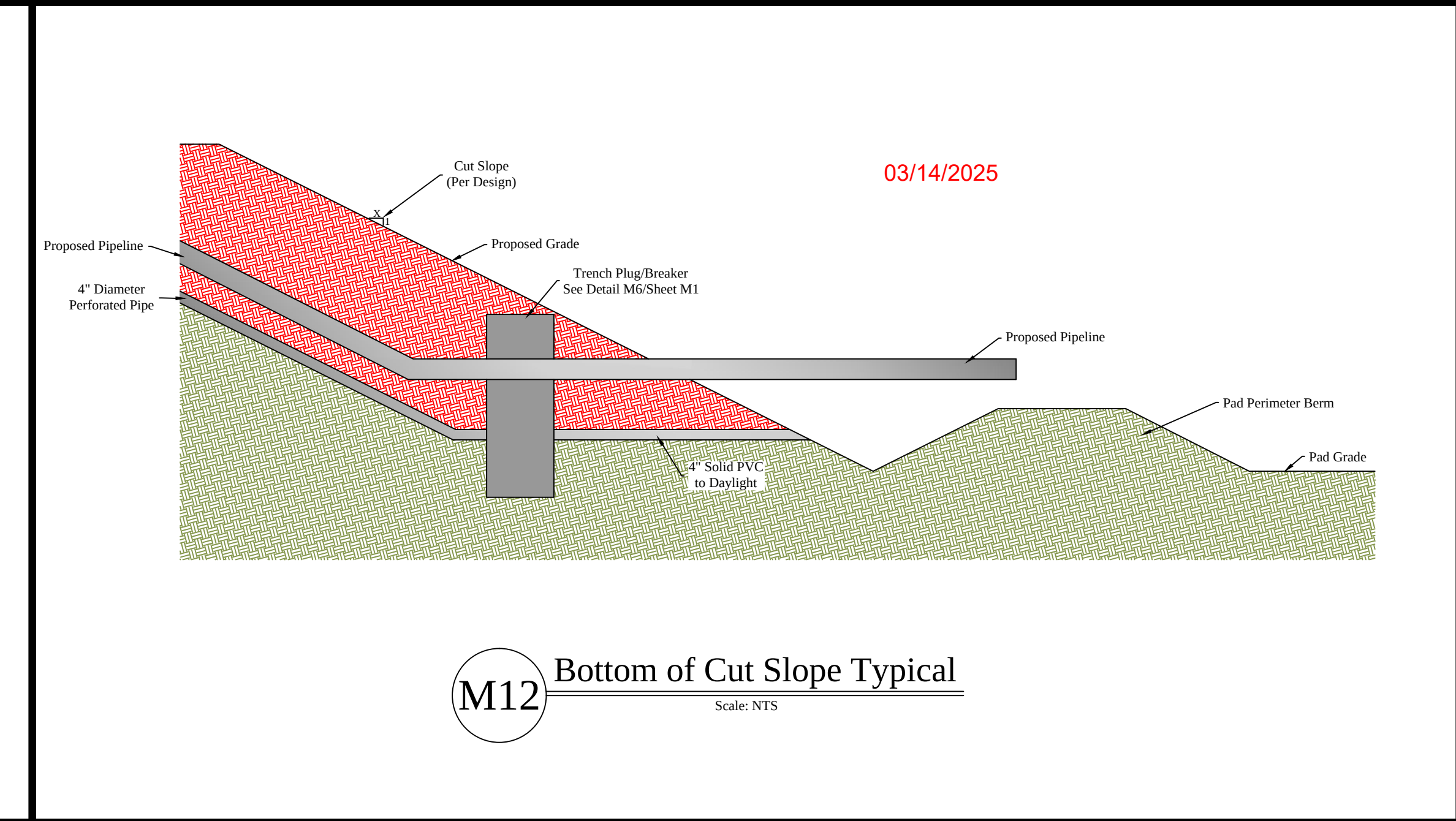
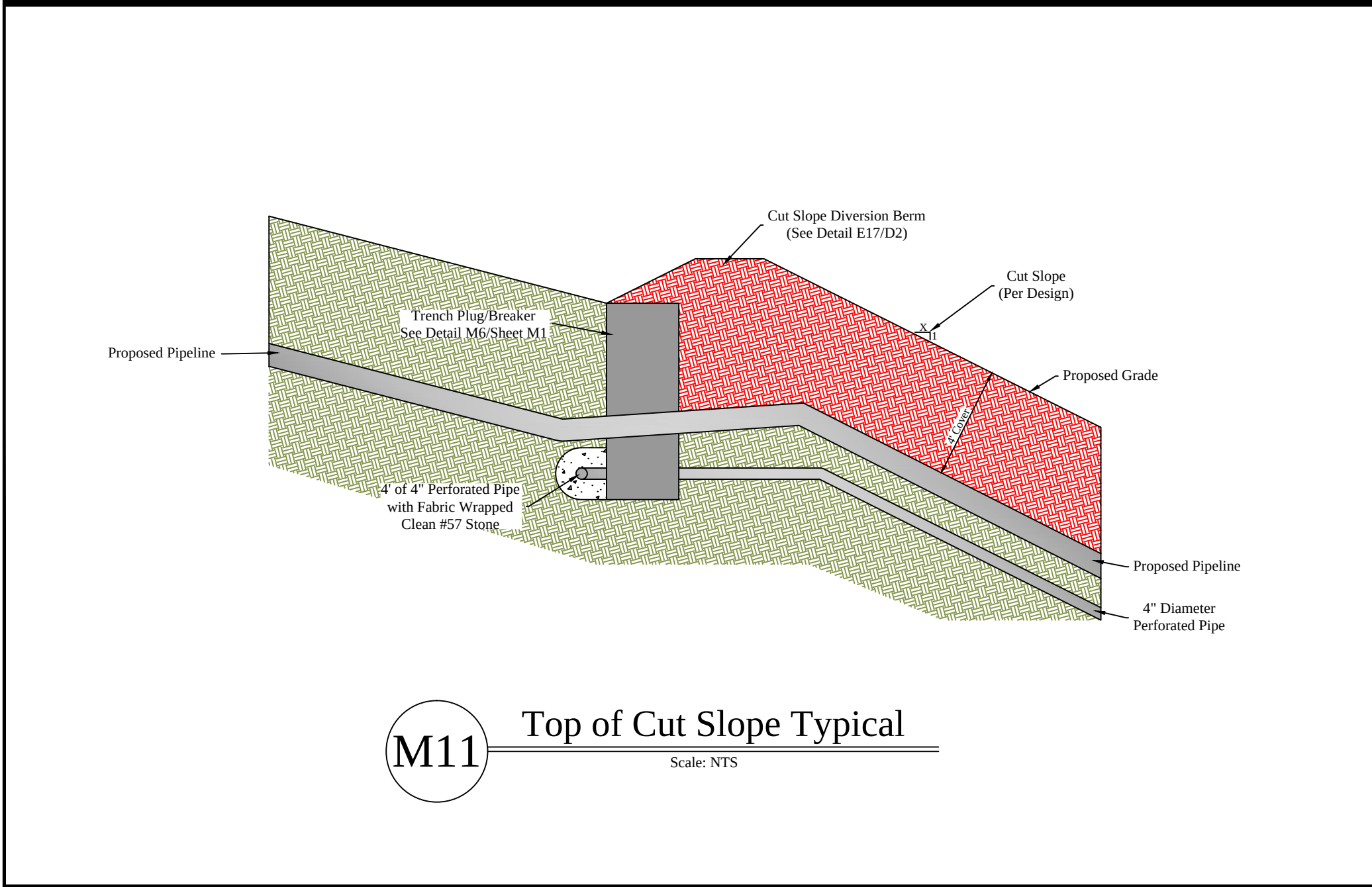
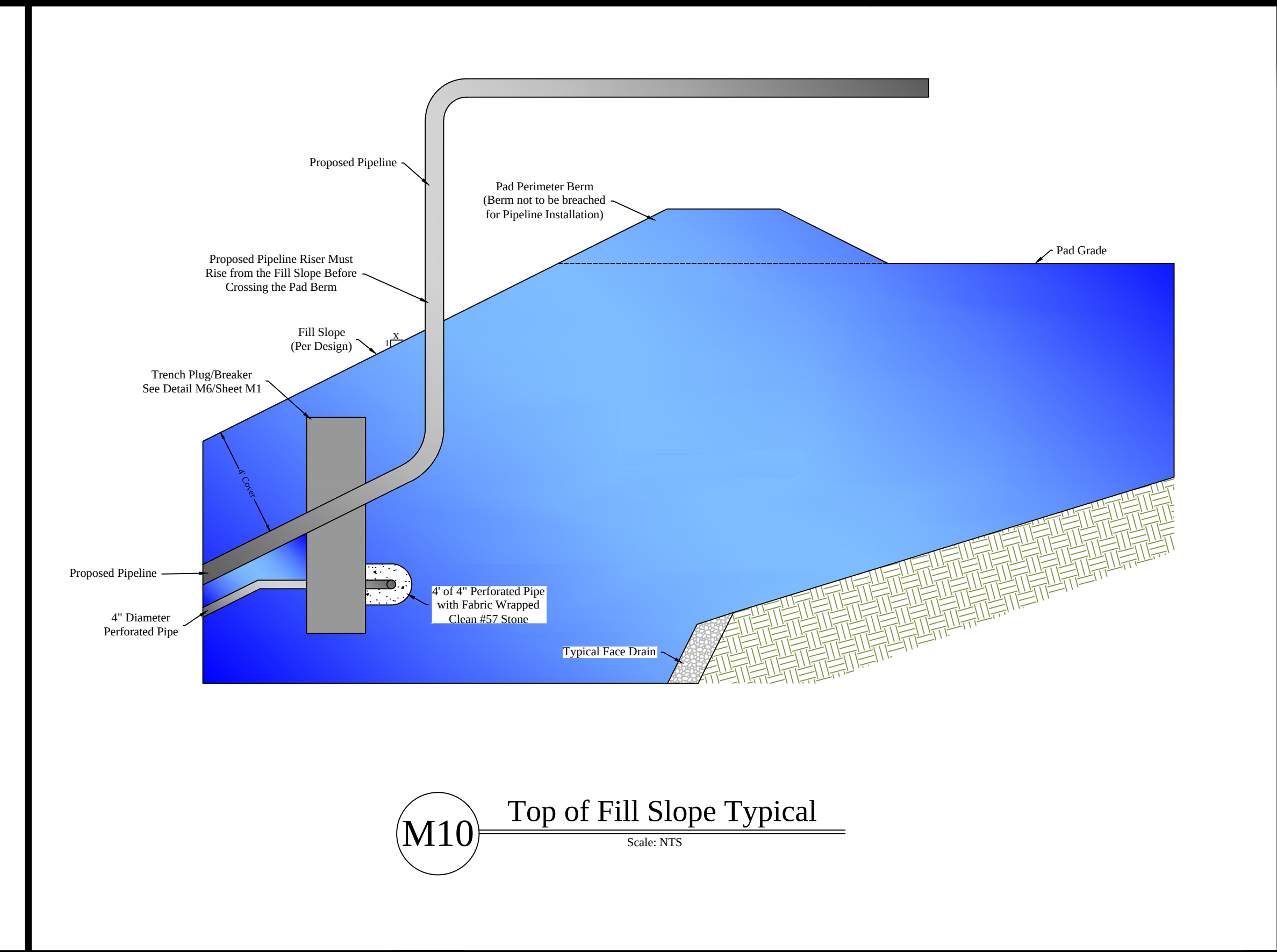
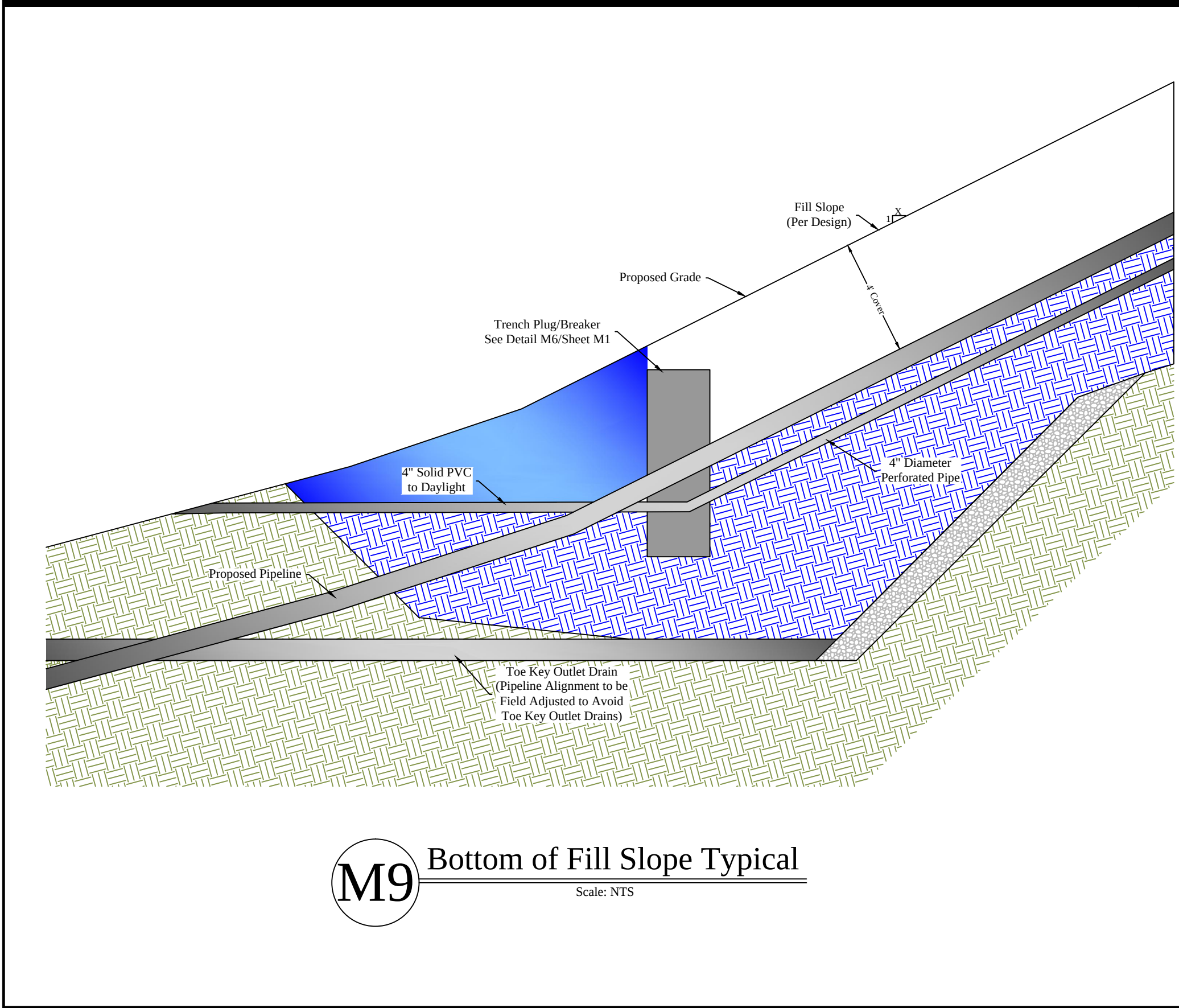
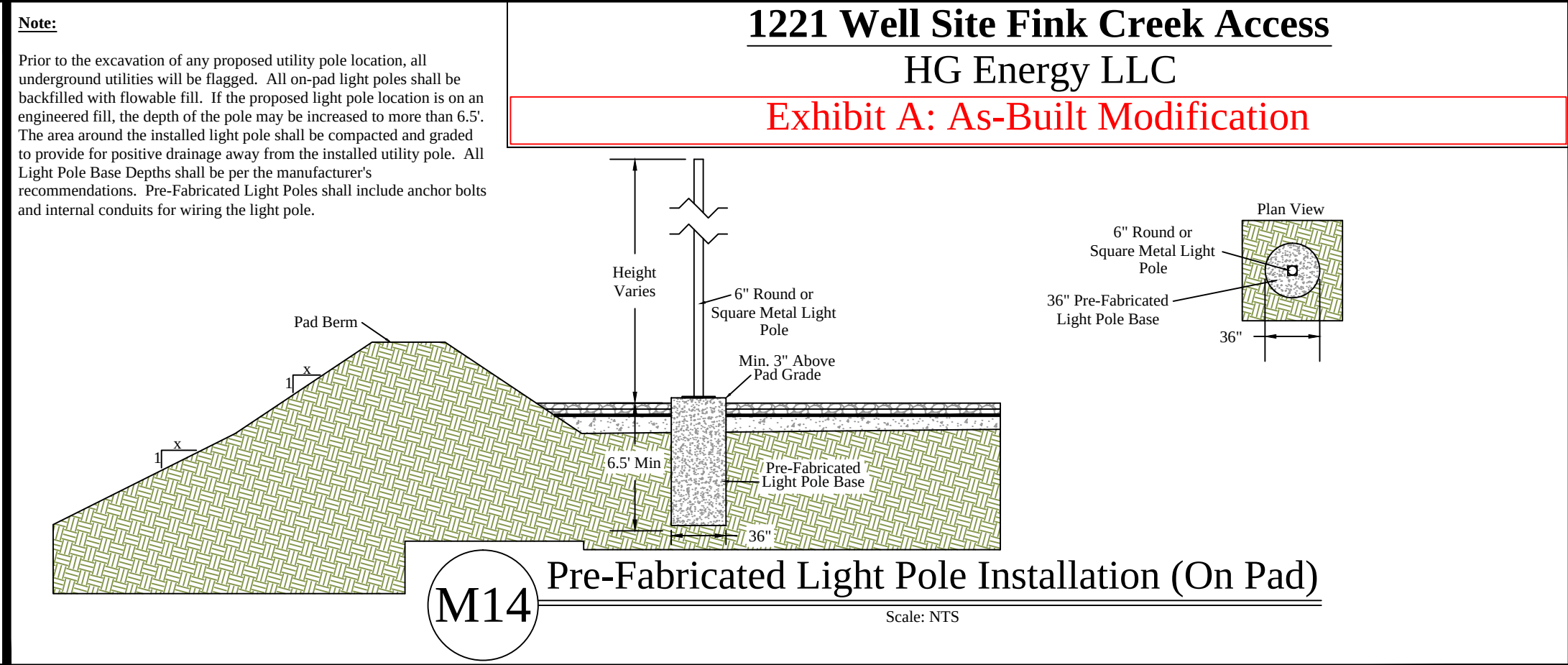
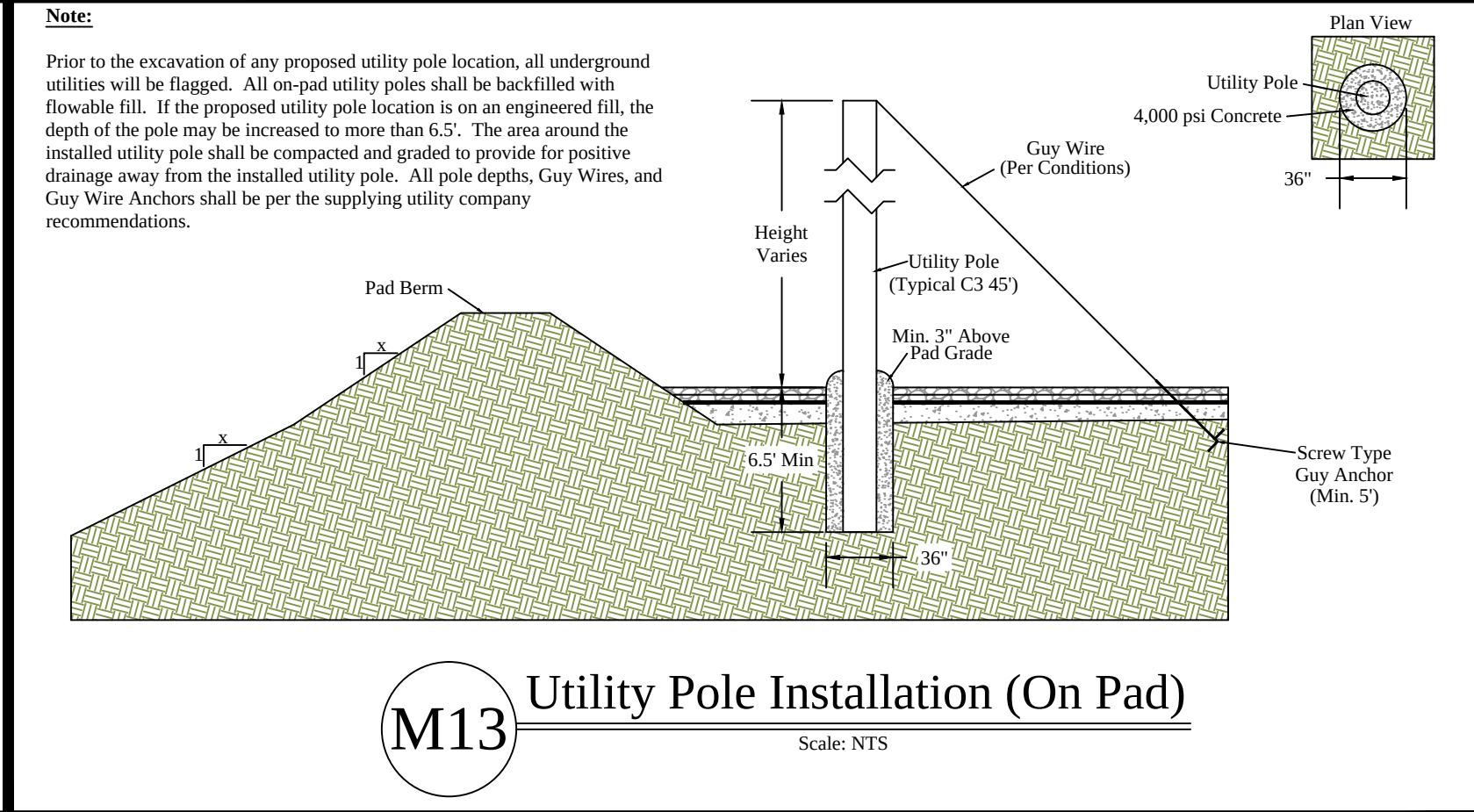
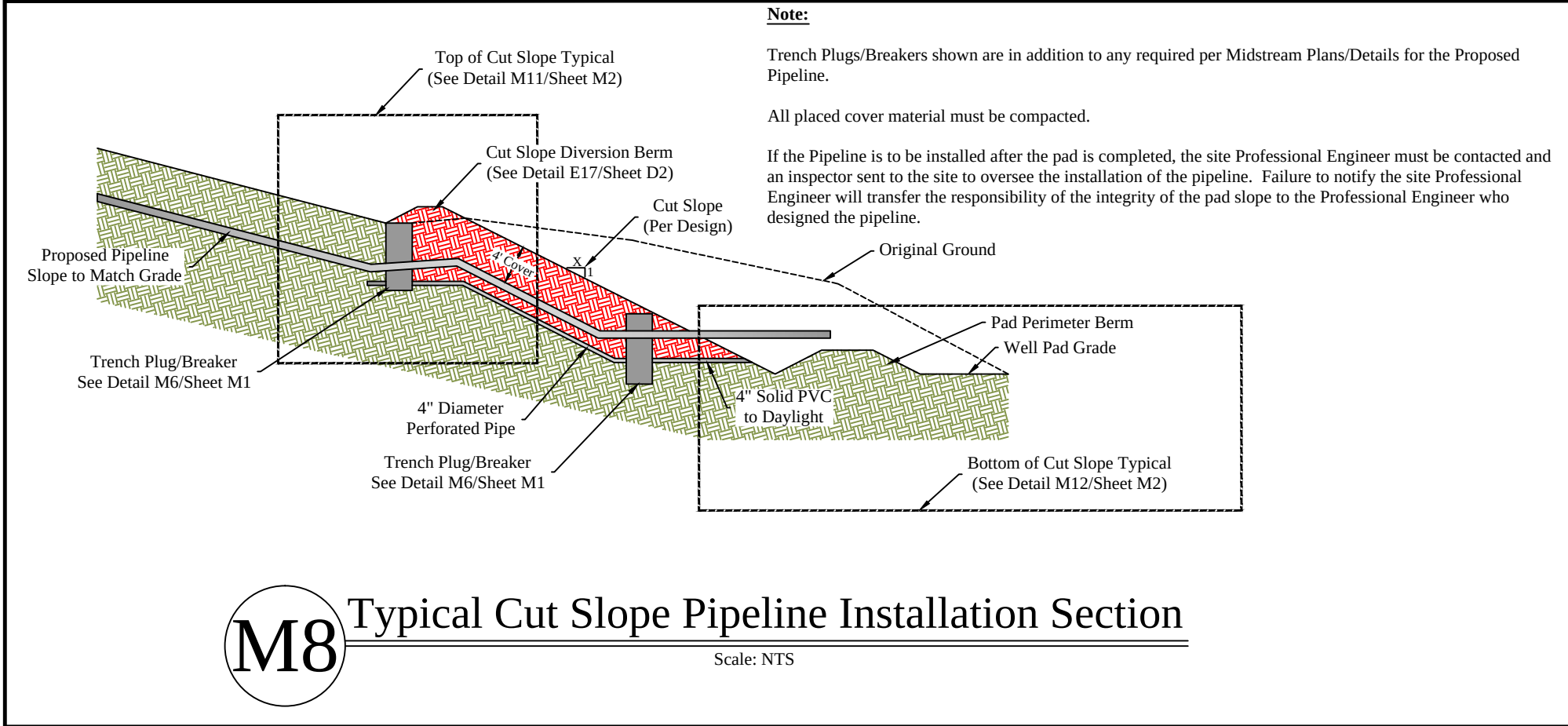


Typical Midstream Production Details

1221 Well Site

Freemans Creek District
Lewis County, WV

Date: 02/04/2025
Scale: As Shown
Designed By: ZS
File No.
Sheet M1 of M2



Revision

Design

Date

02-04-2025

THIS DOCUMENT
PREPARED FOR
HG ENERGY LLC

P.O. Box 254
Dallman, WV 26029
(304) 338-0965

Typical Midstream Production Details

1221 Well Site

Freemans Creek District
Lewis County, WV

Date: 02/04/2025

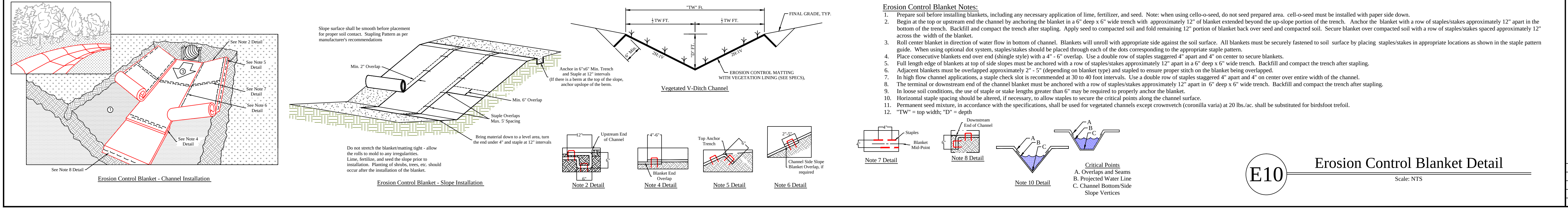
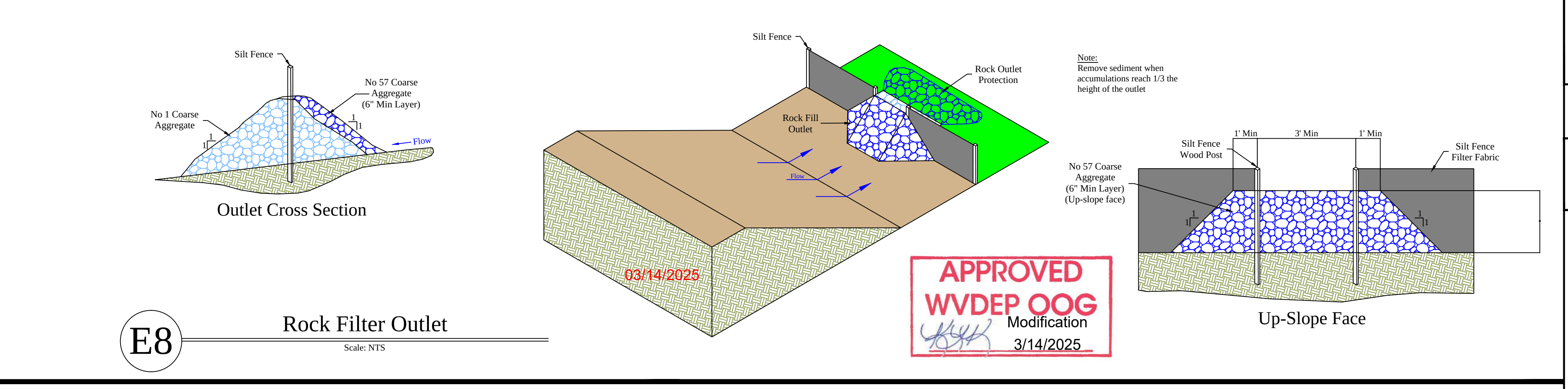
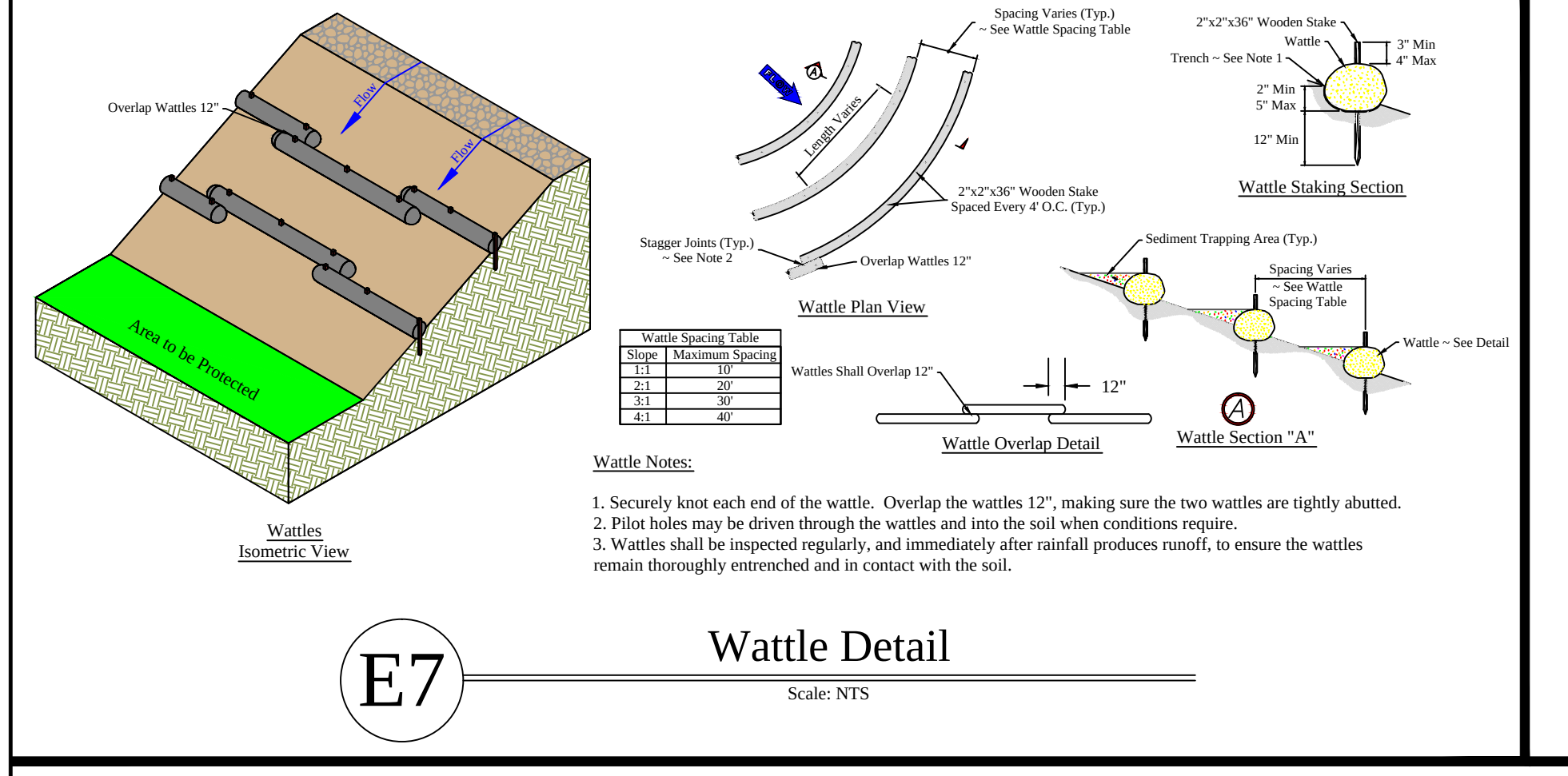
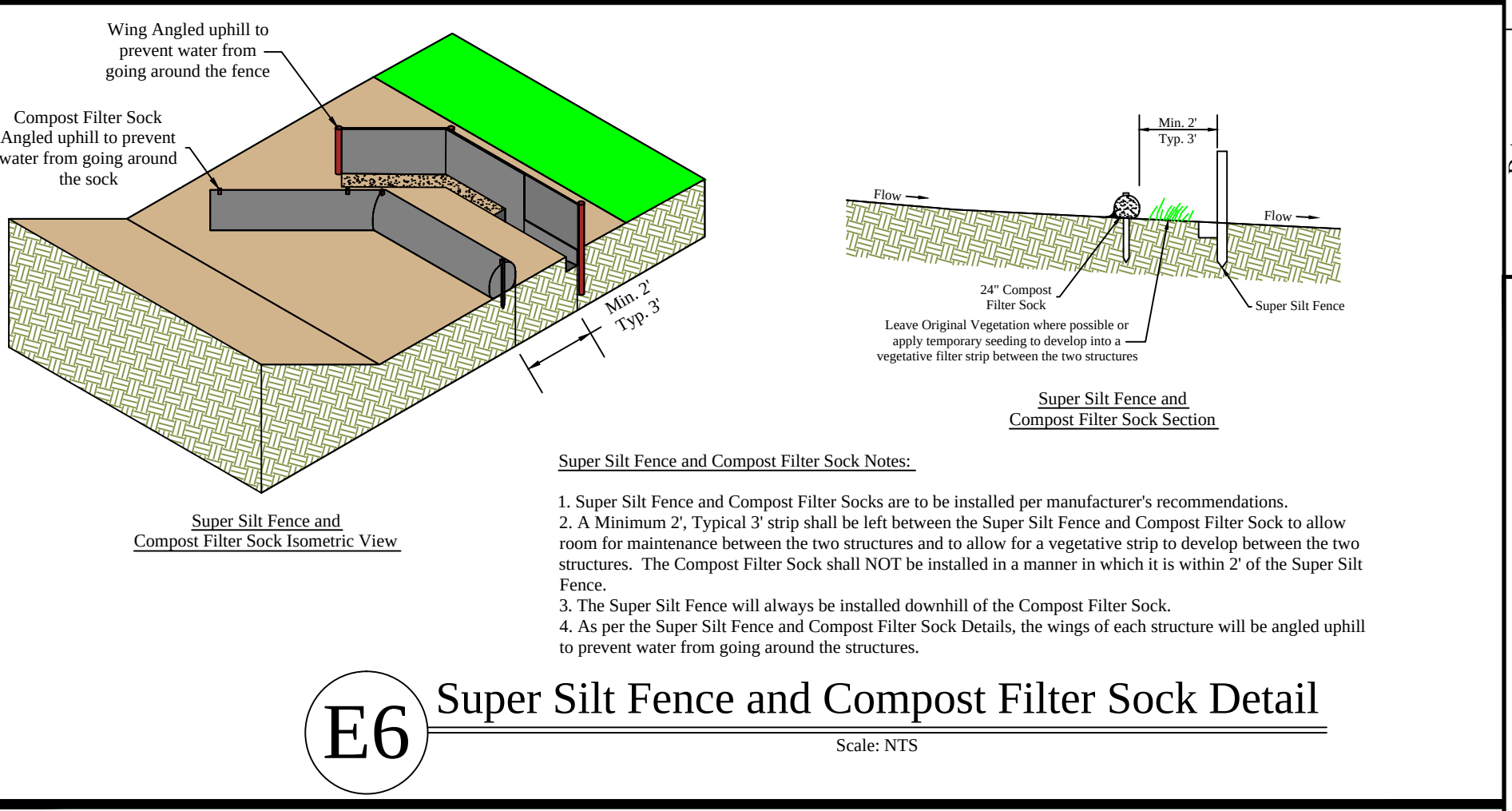
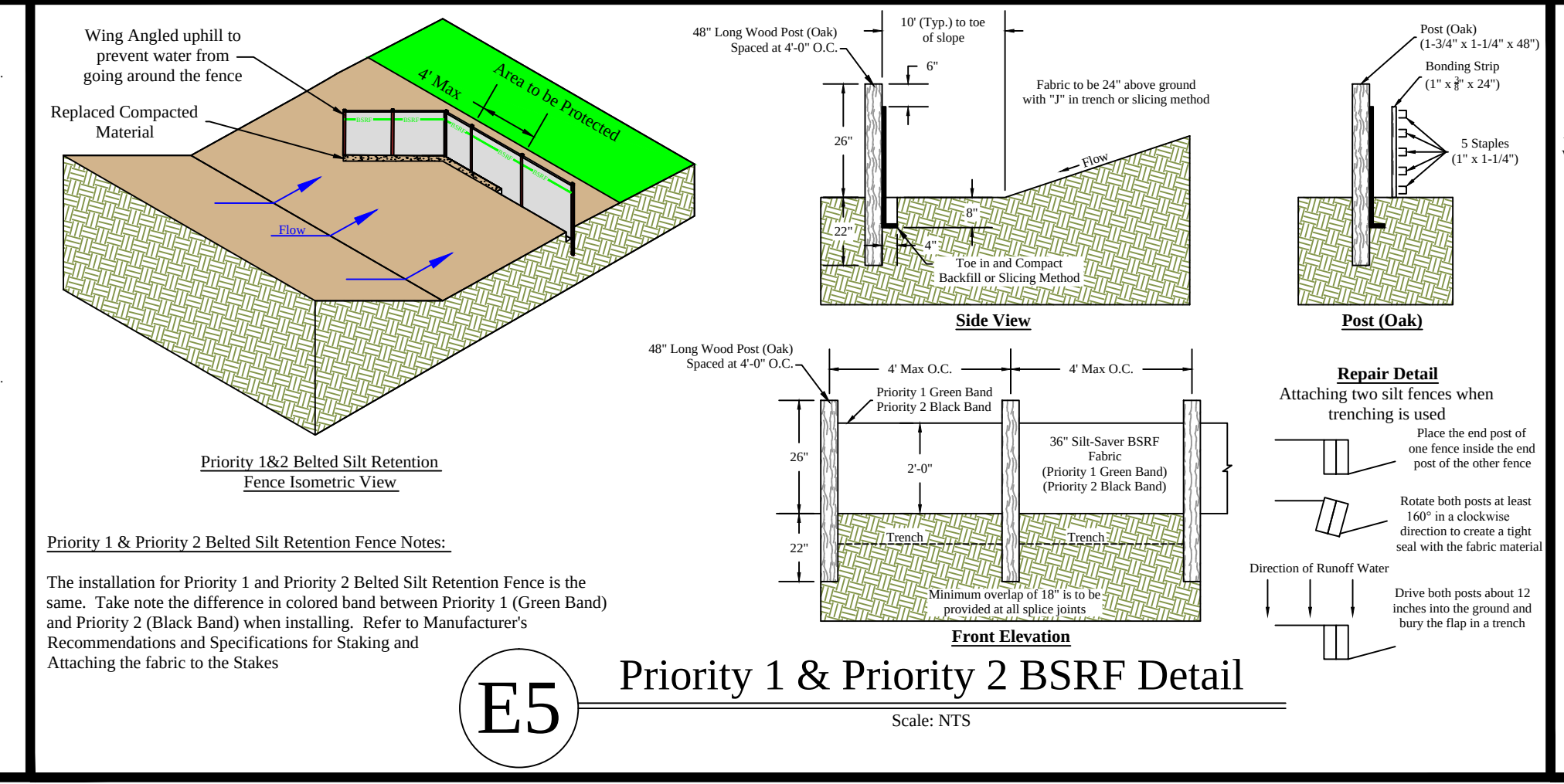
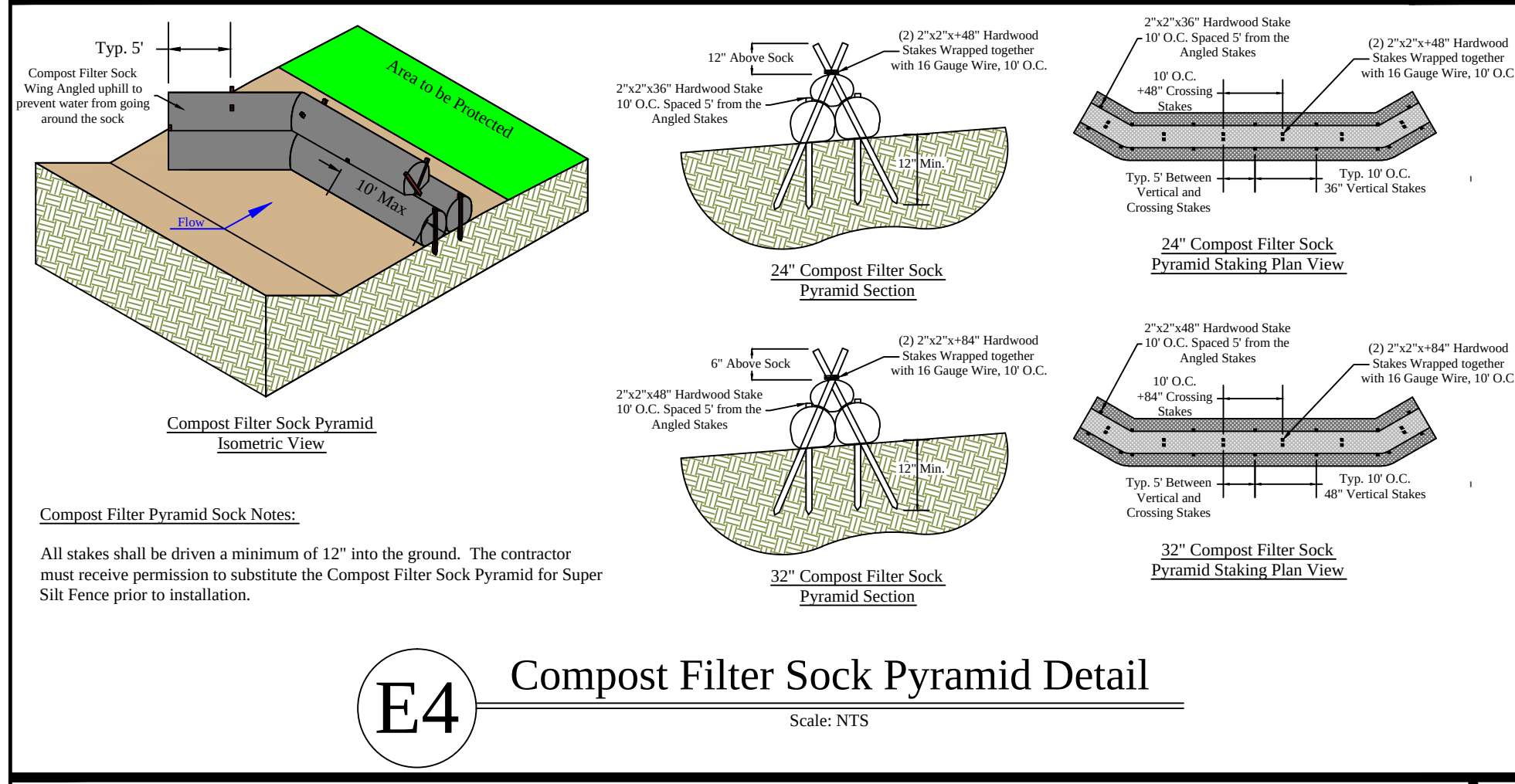
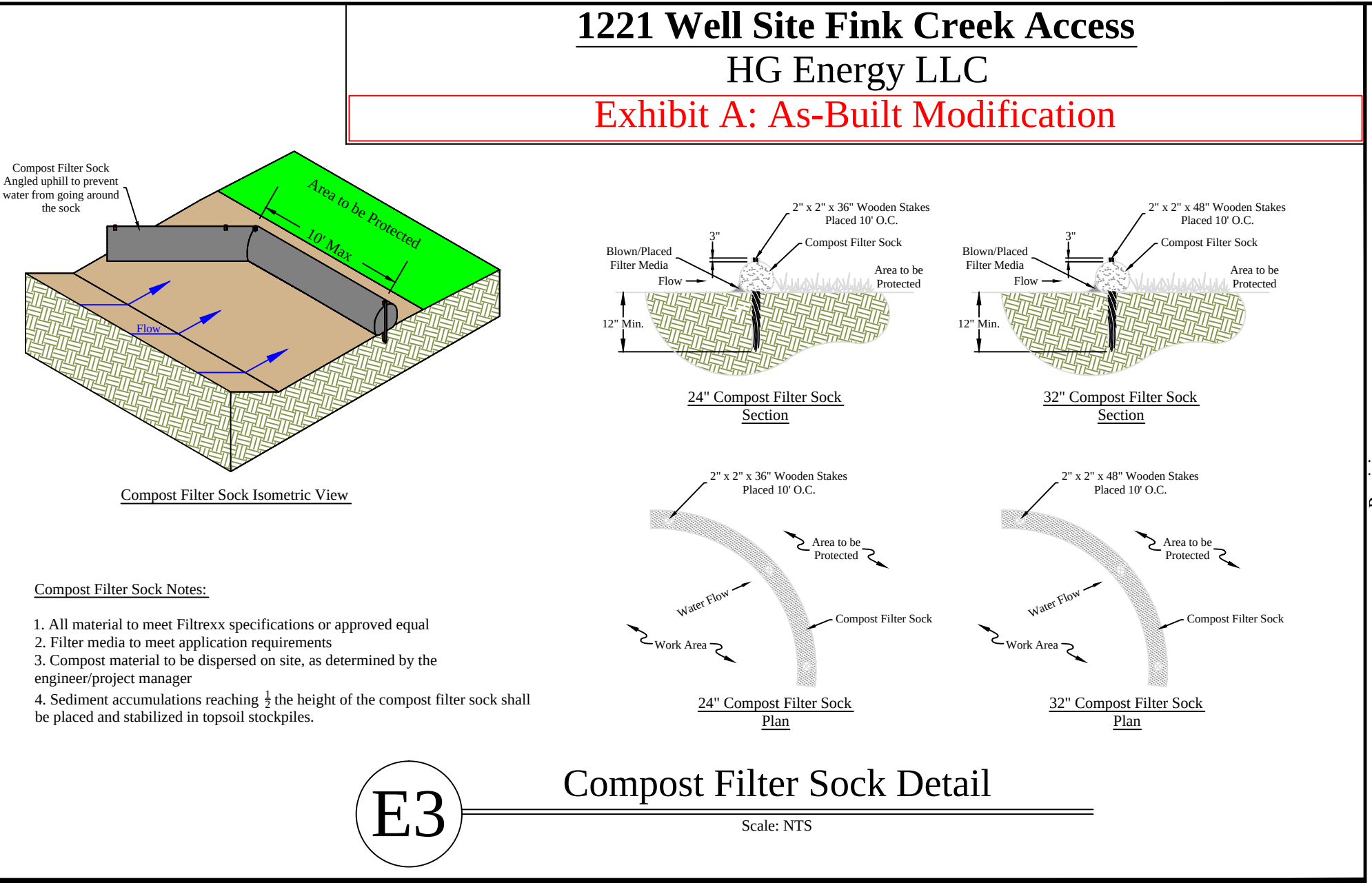
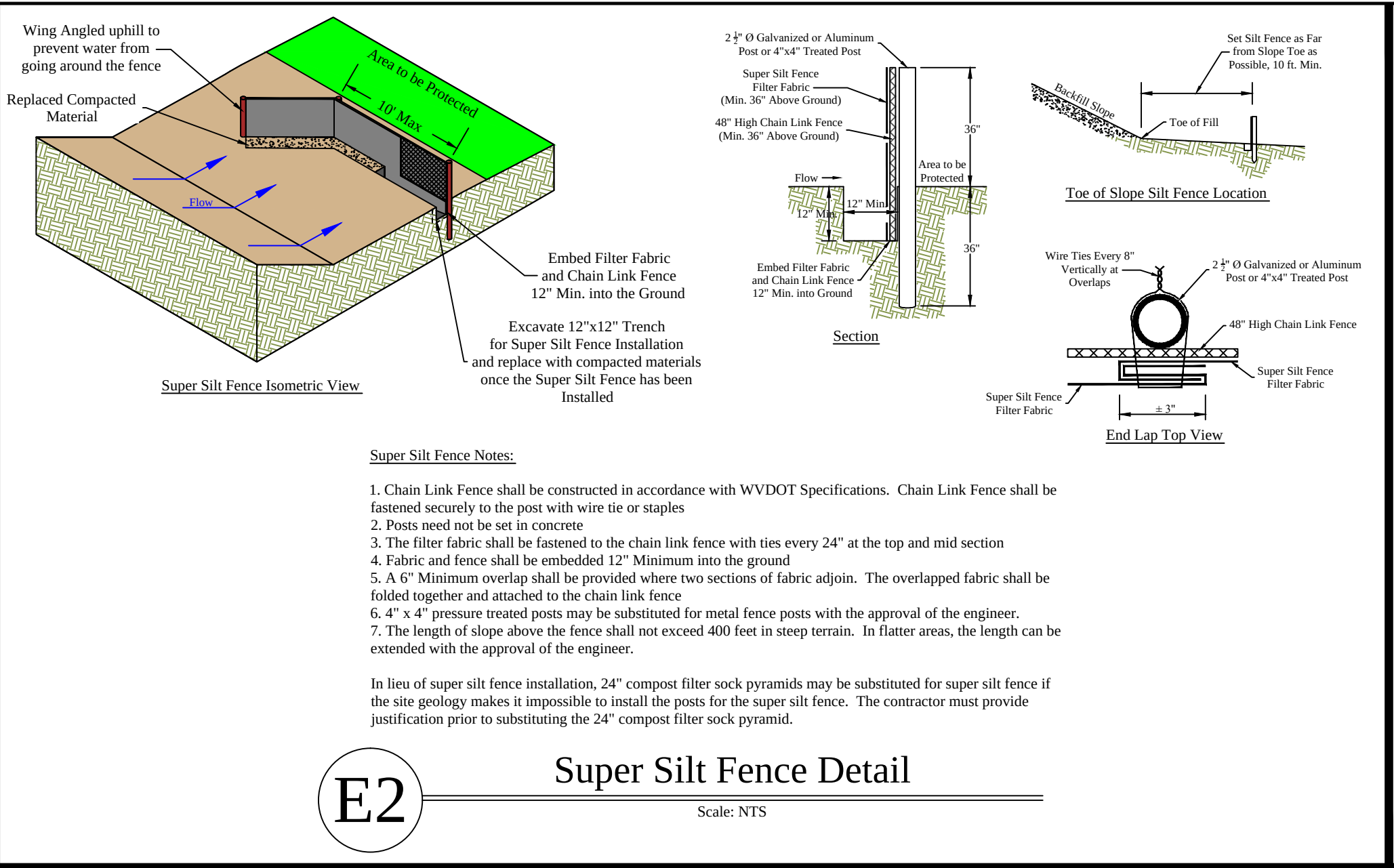
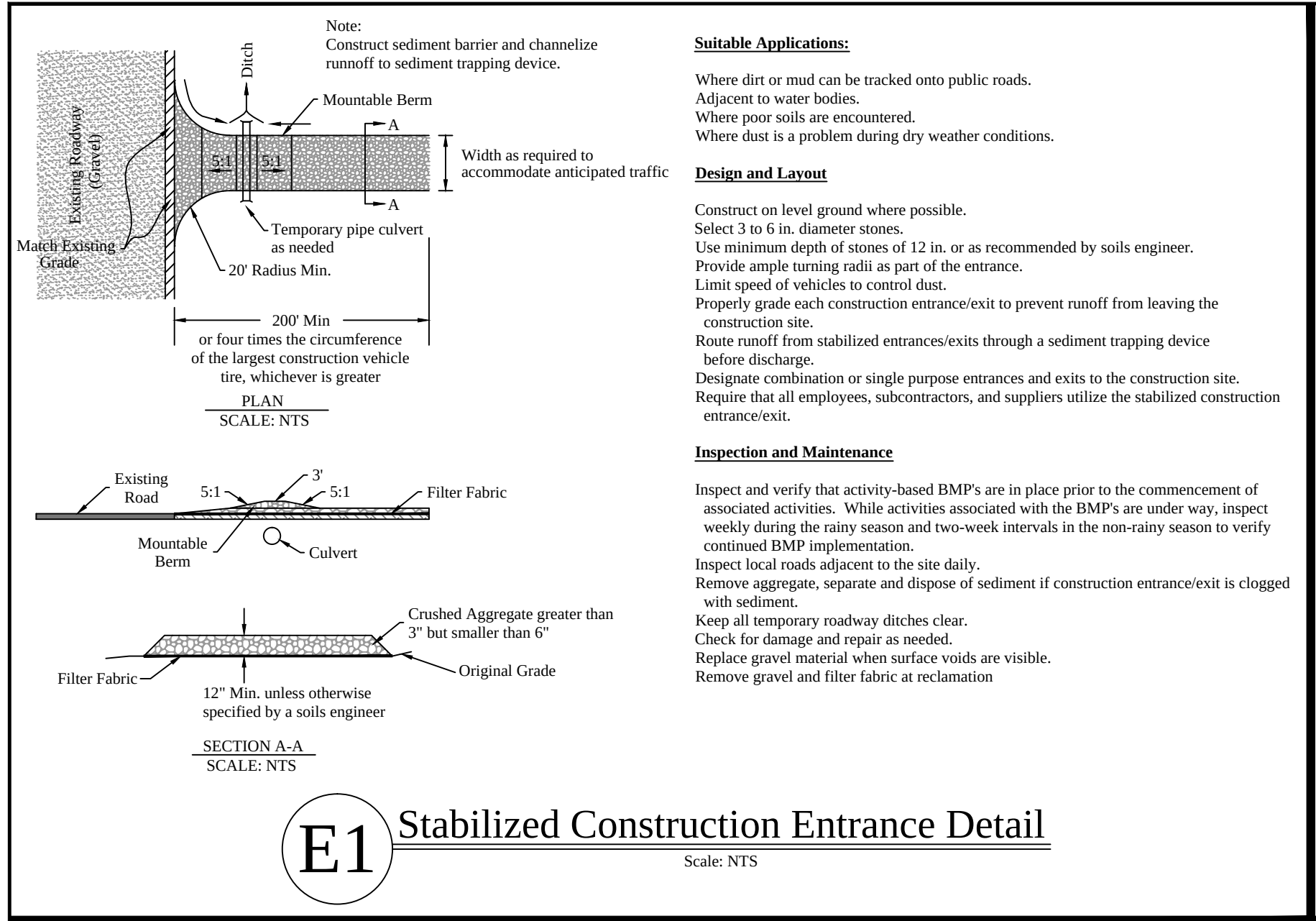
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Designed By: ZS

File No.

Sheet M2 of M2

APPROVED
WVDEP OOG
Modification
3/14/2025



Revision
Design
Date
02-04-2025

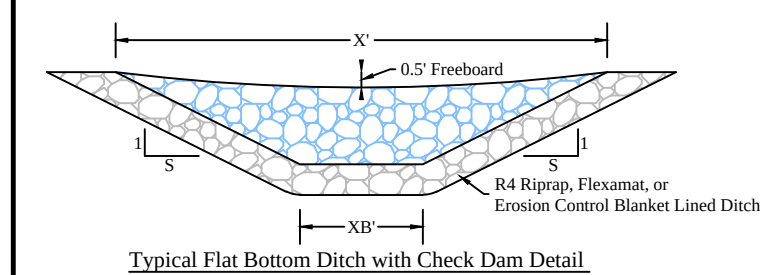
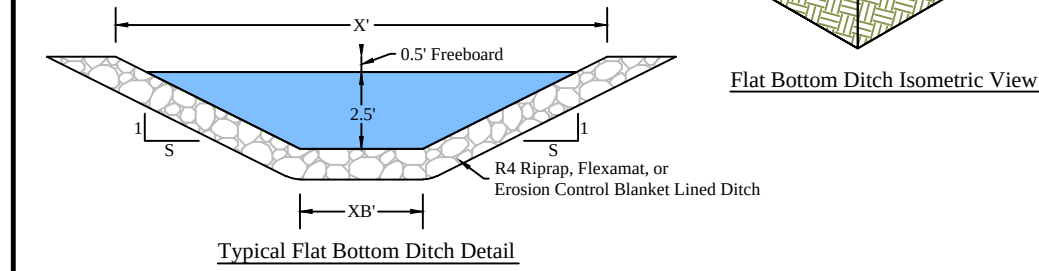
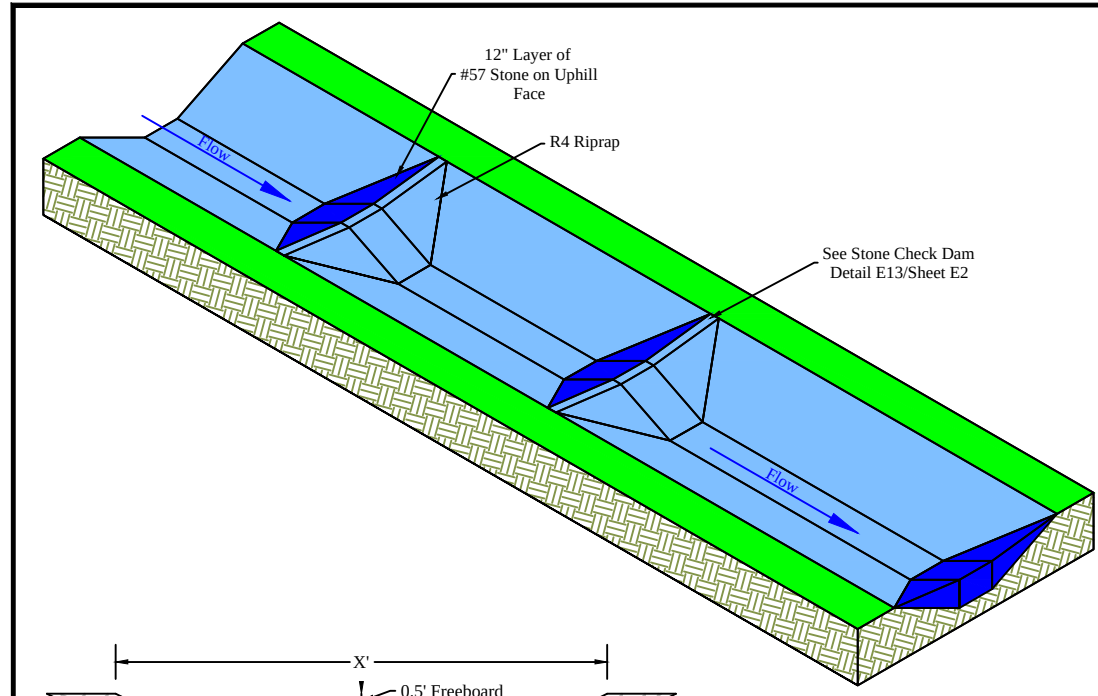
HG ENERGY LLC

THIS DOCUMENT PREPARED FOR HG ENERGY LLC

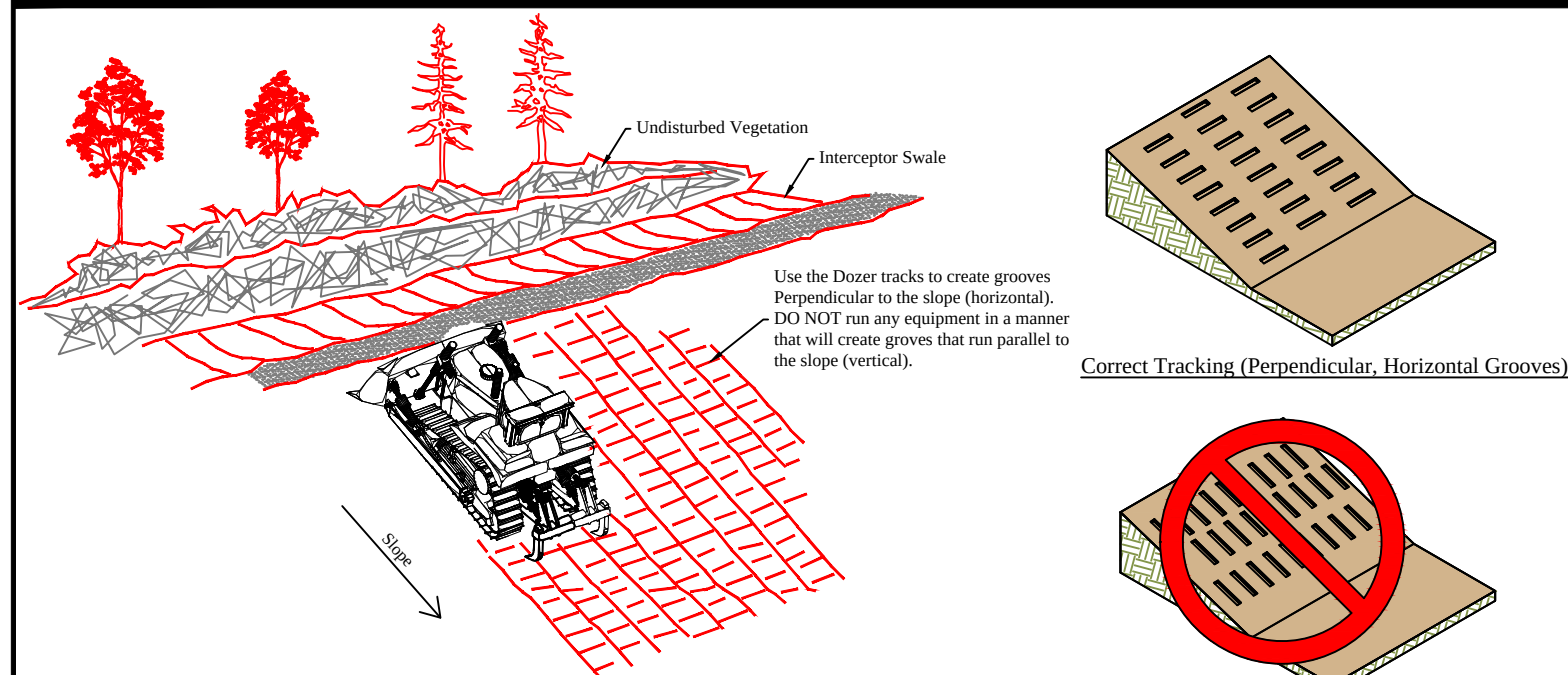
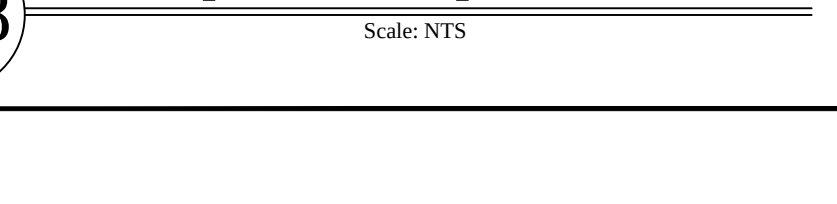
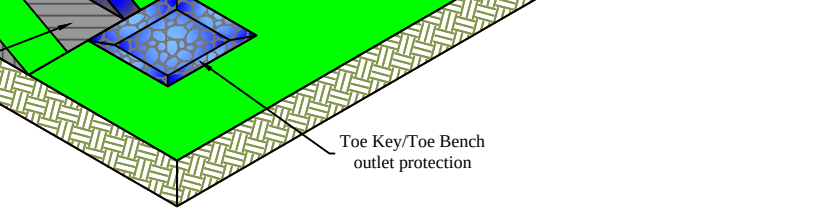
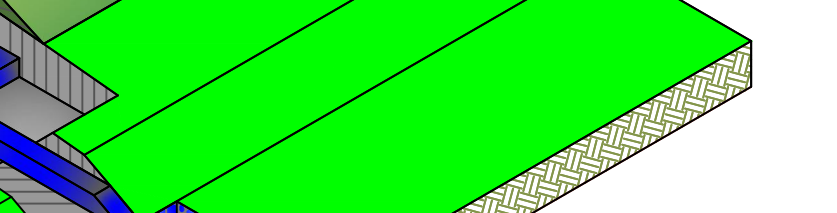
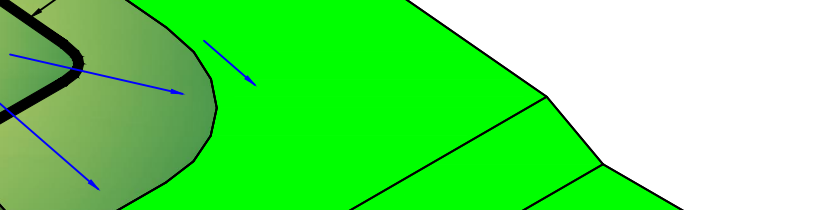
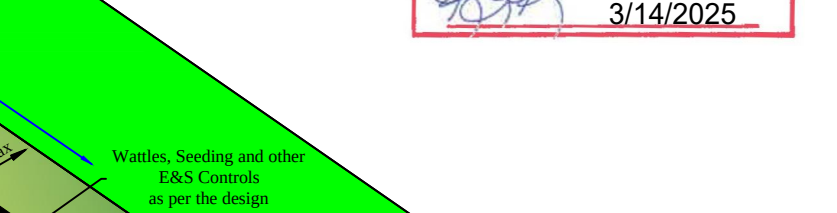
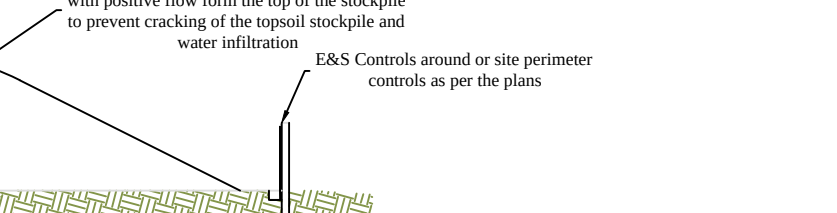
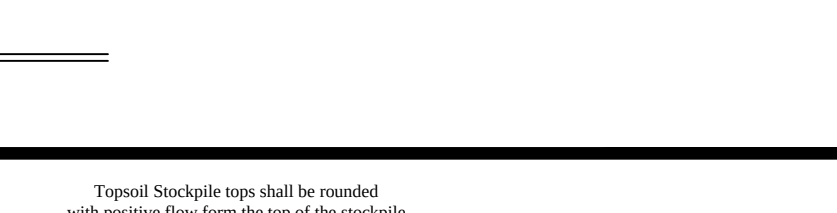
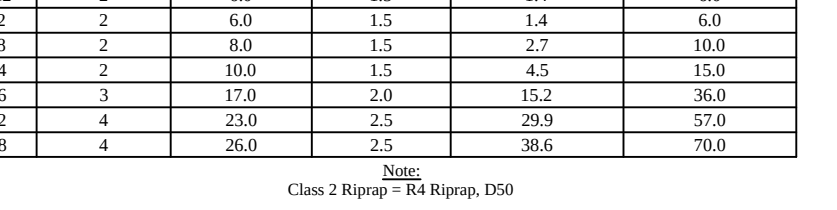
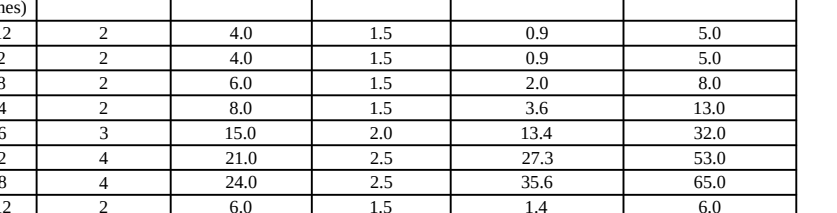
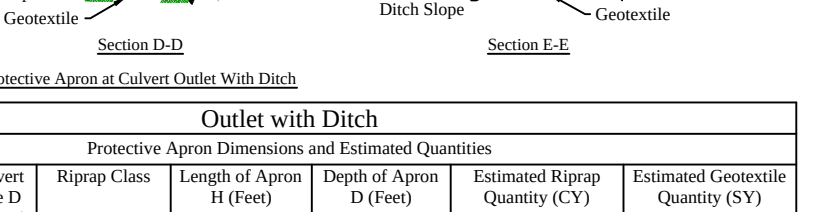
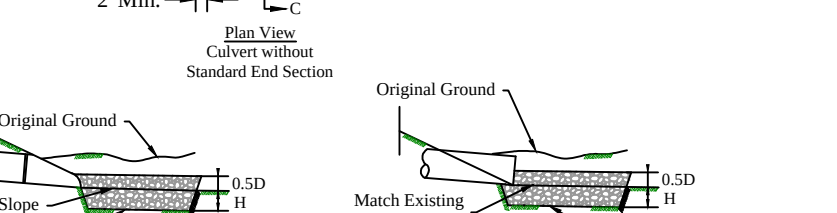
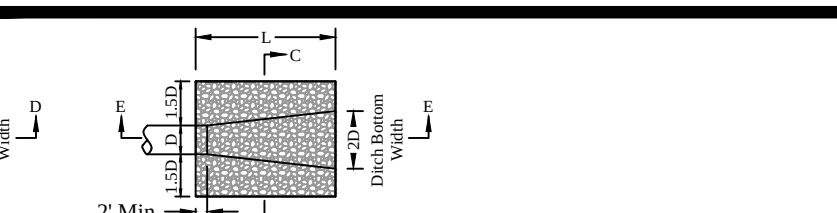
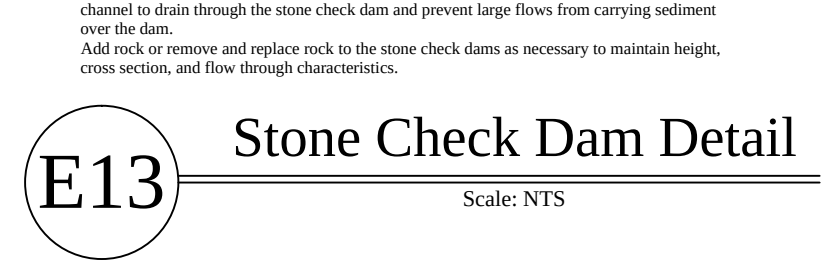
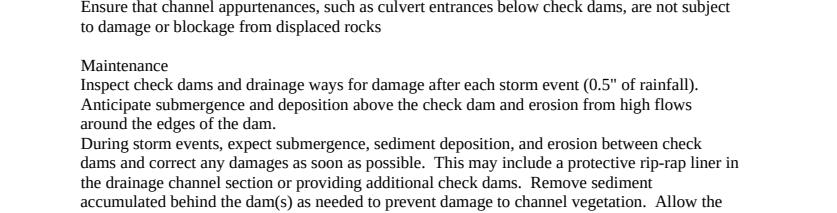
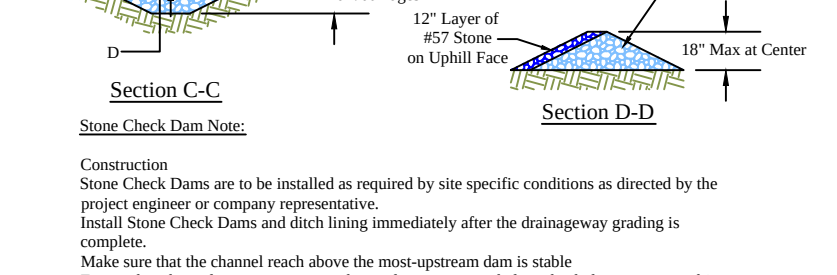
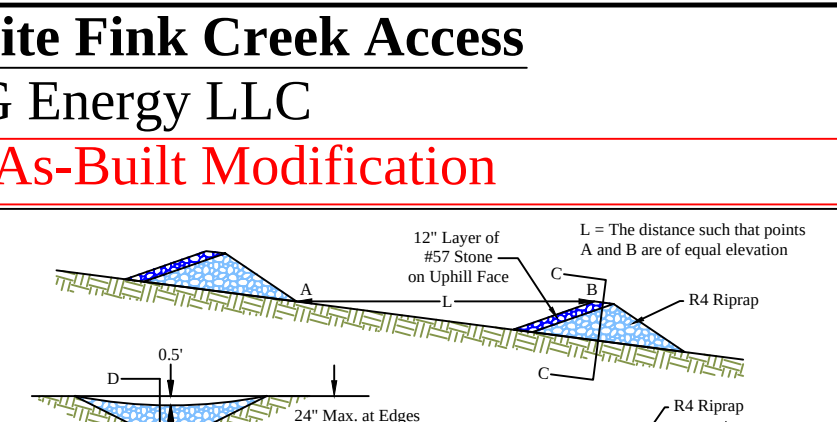
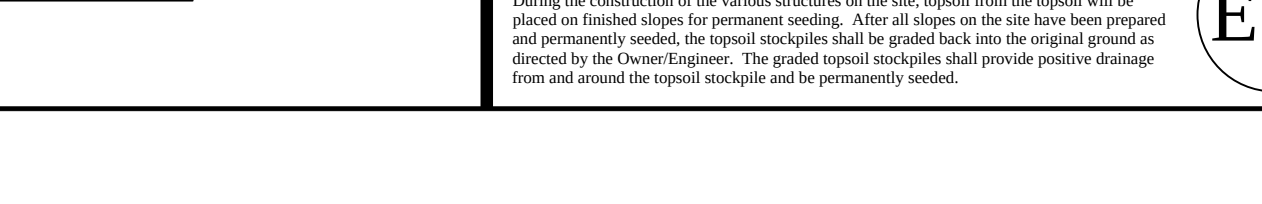
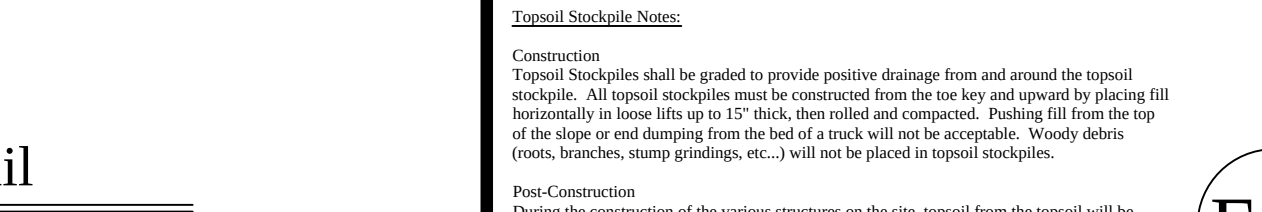
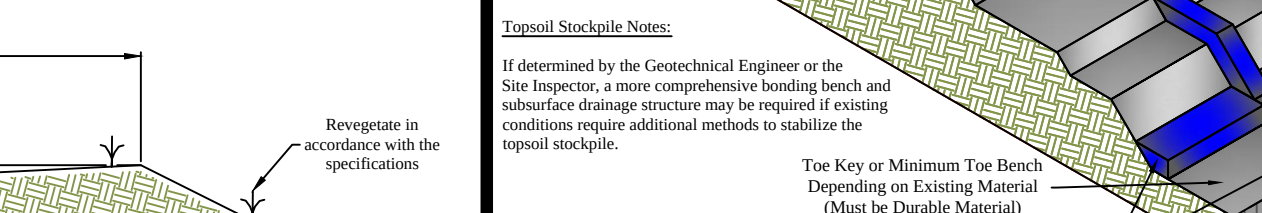
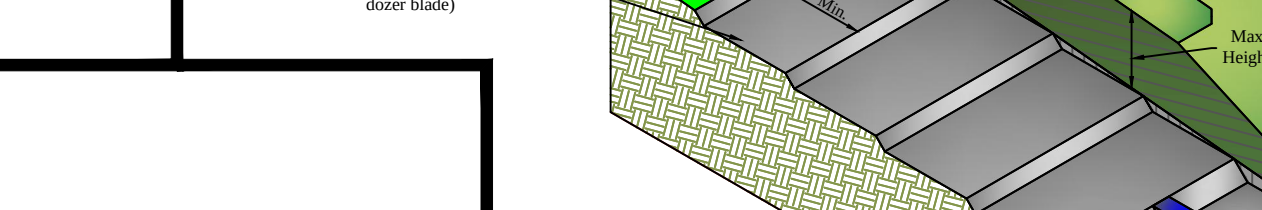
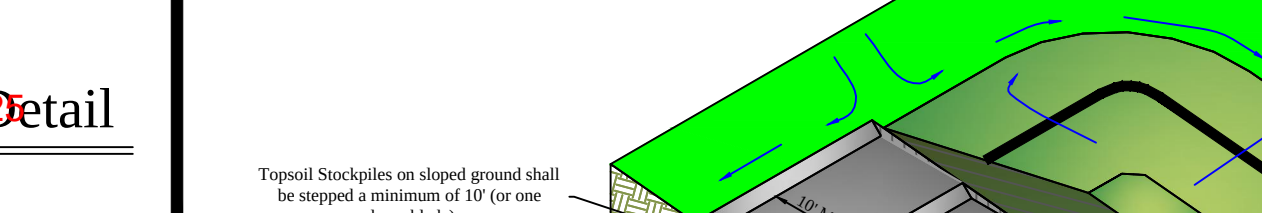
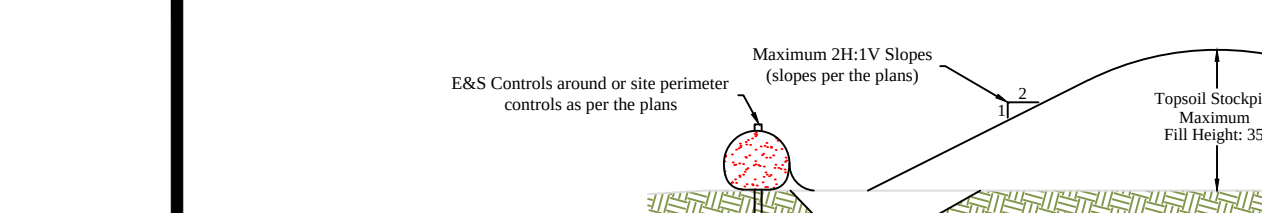
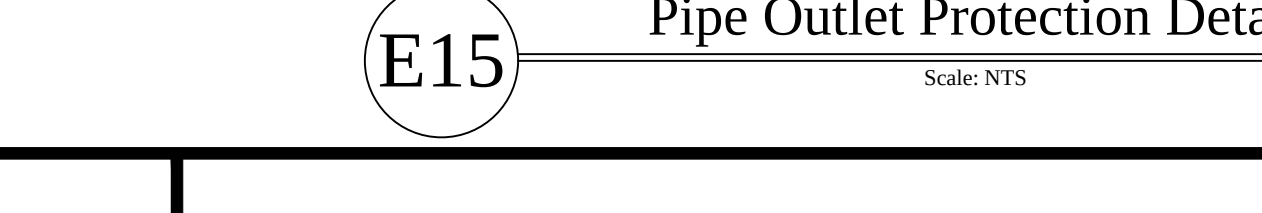
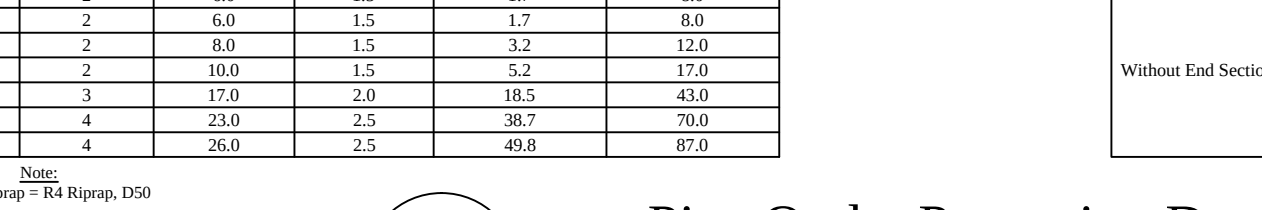
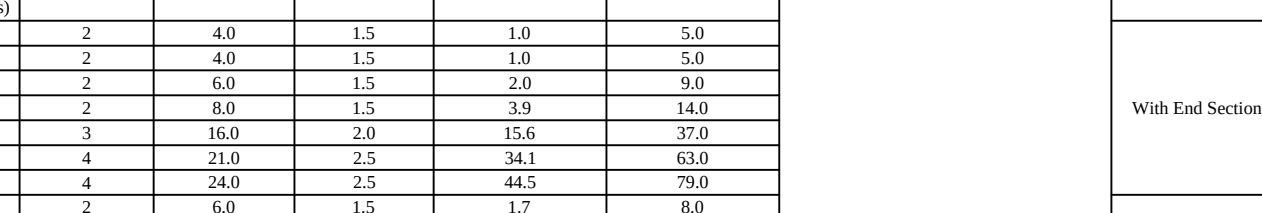
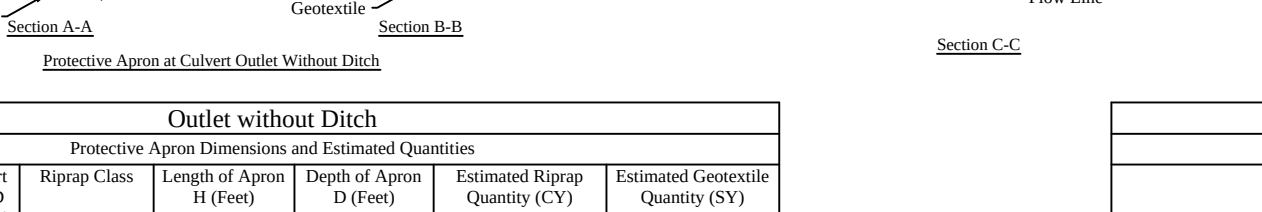
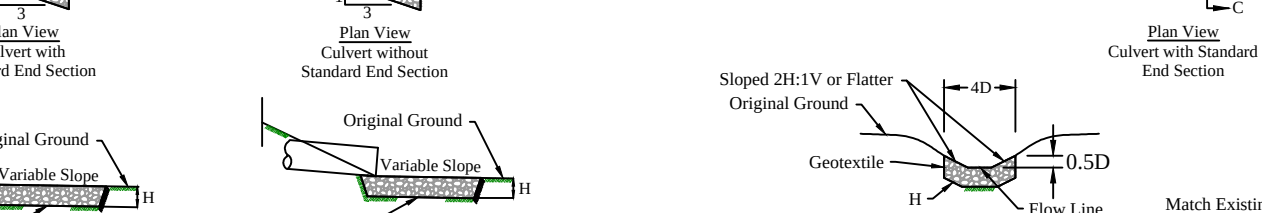
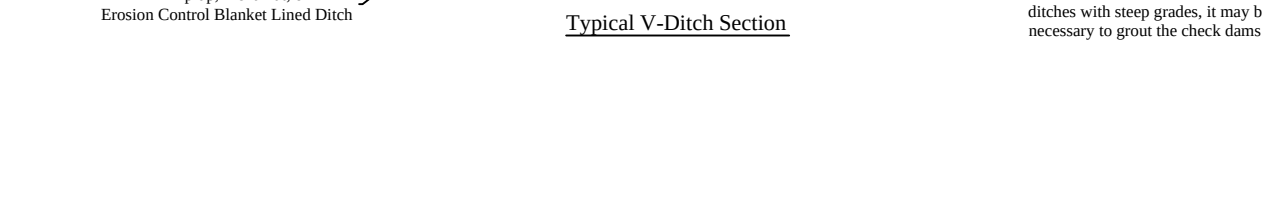
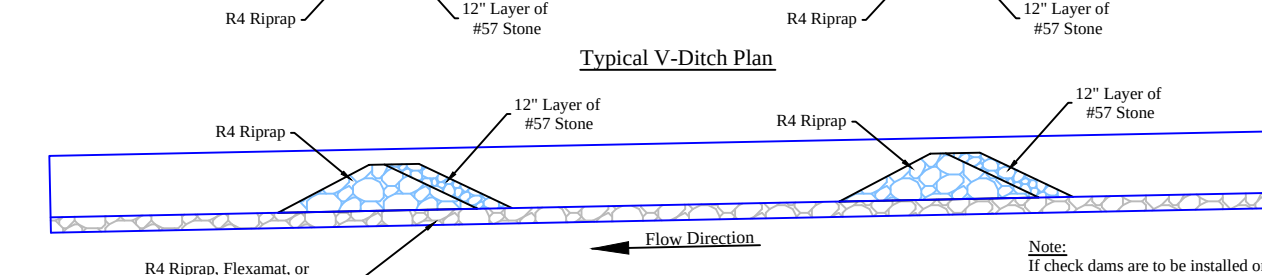
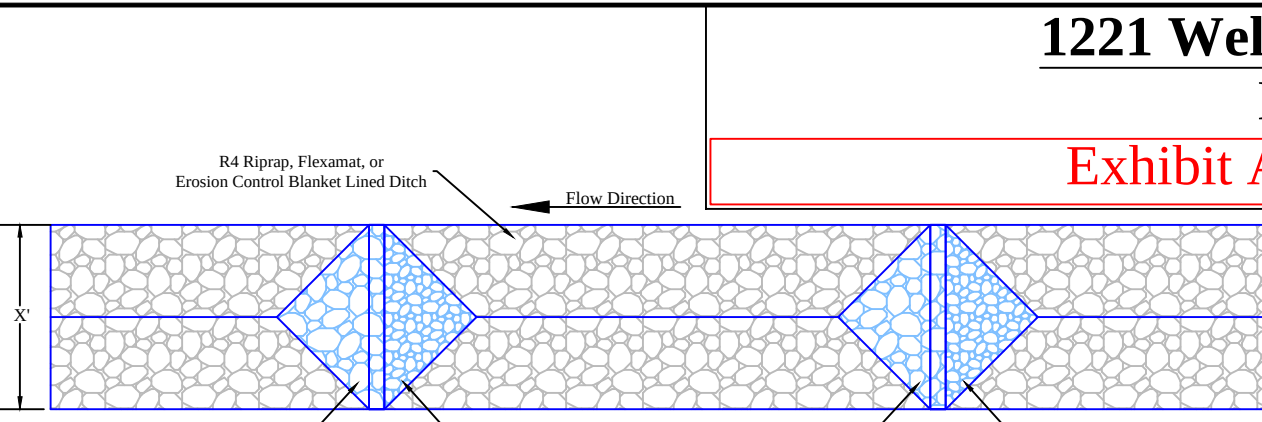
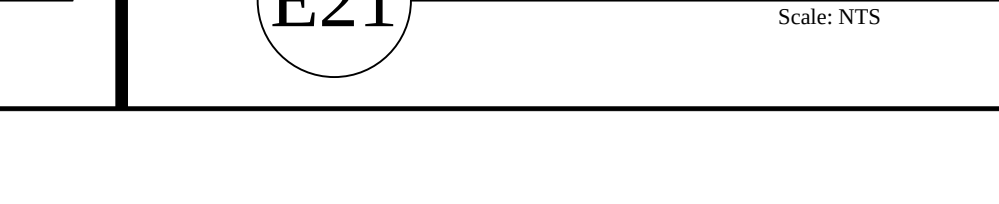
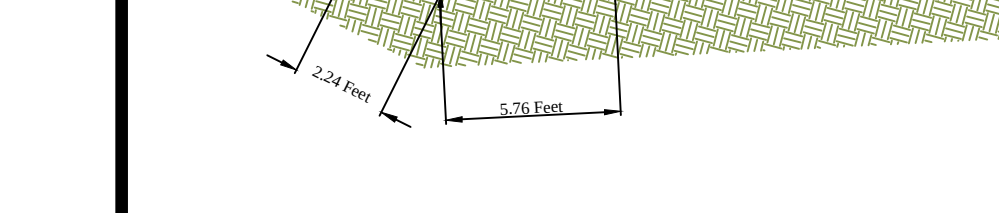
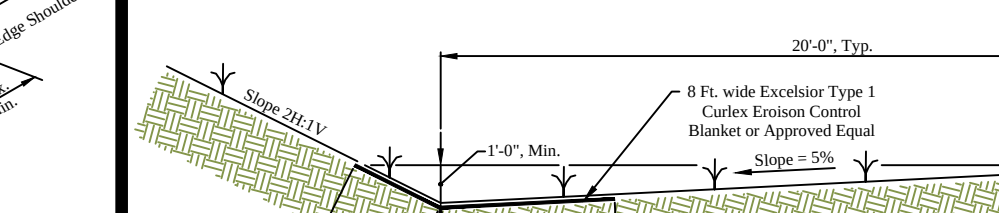
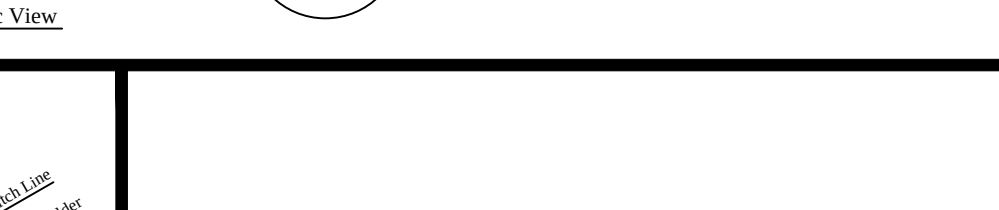
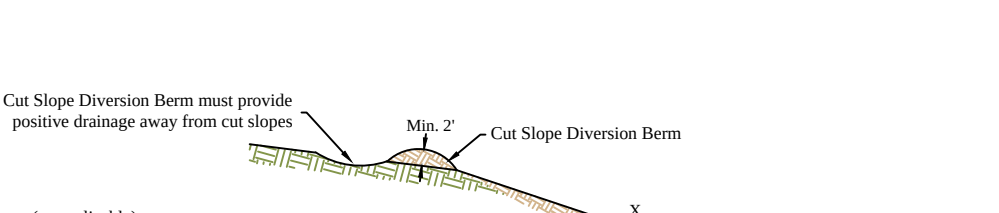
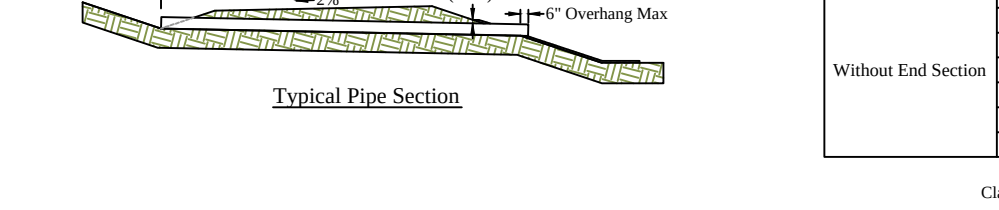
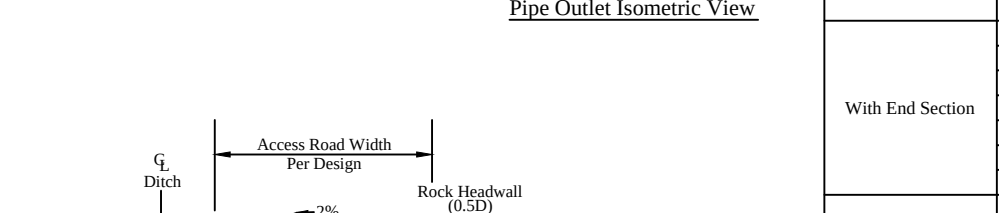
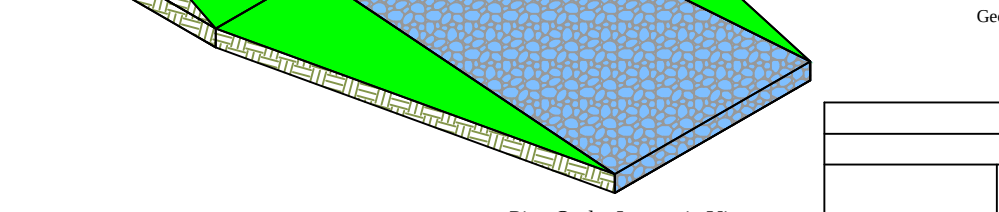
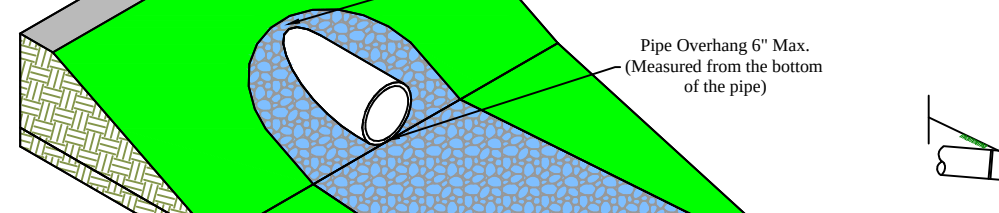
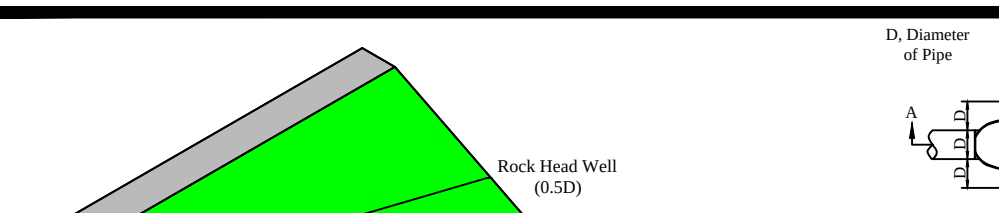
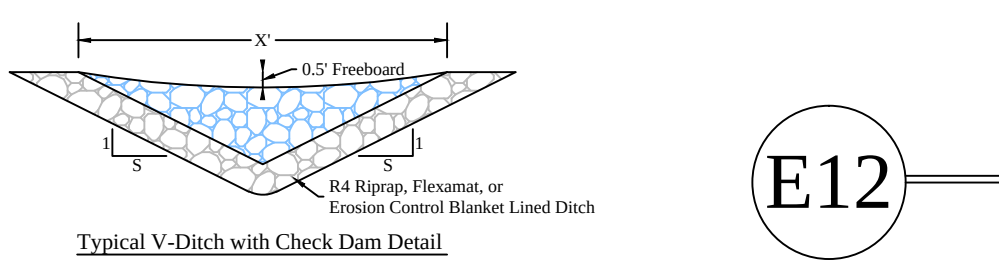
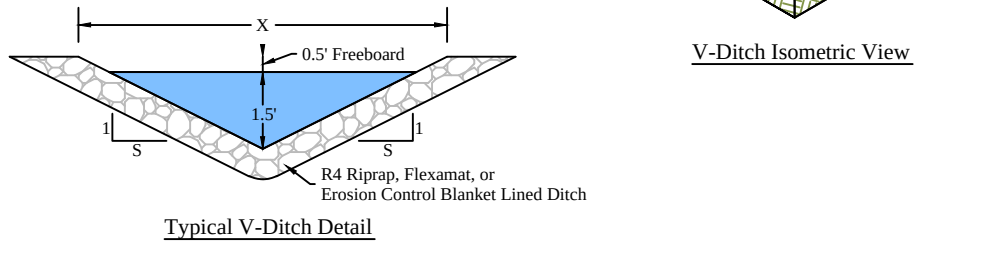
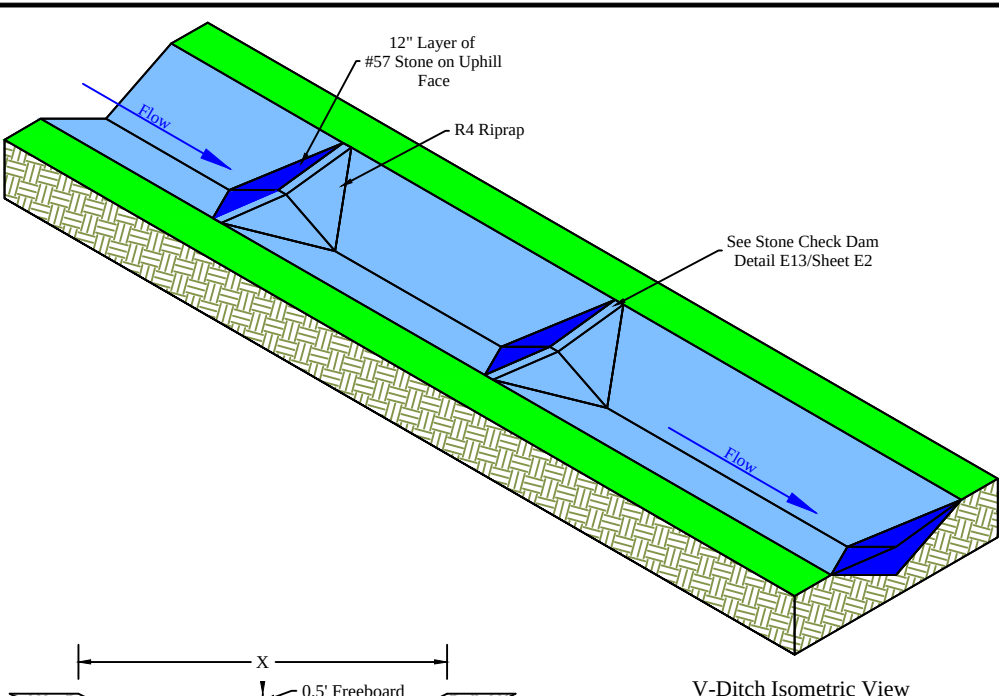
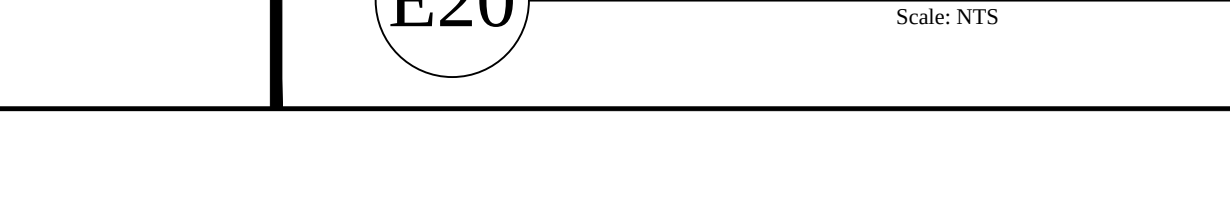
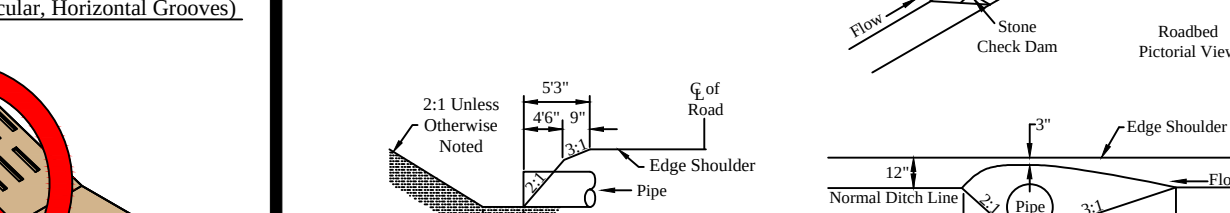
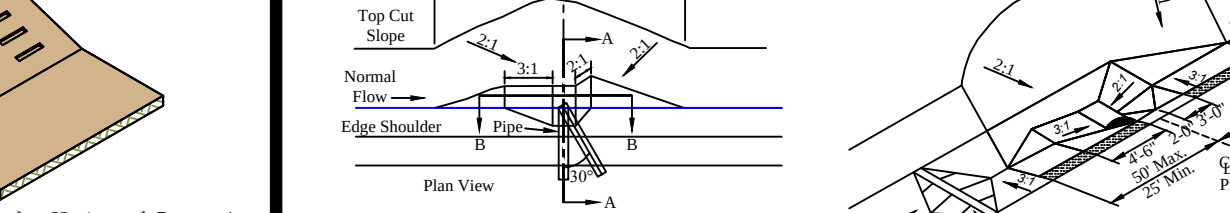
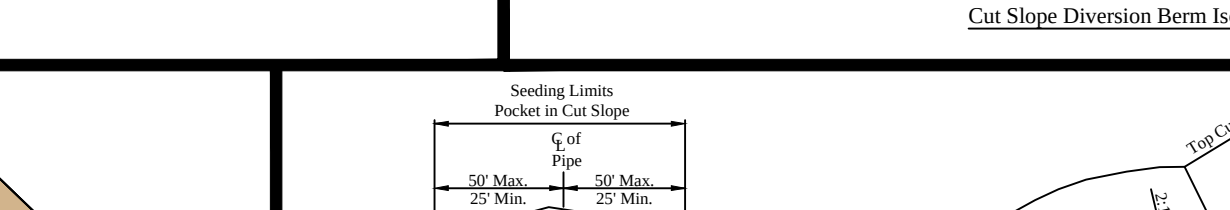
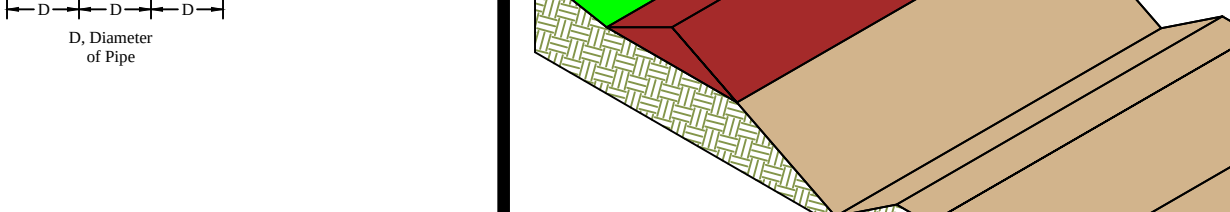
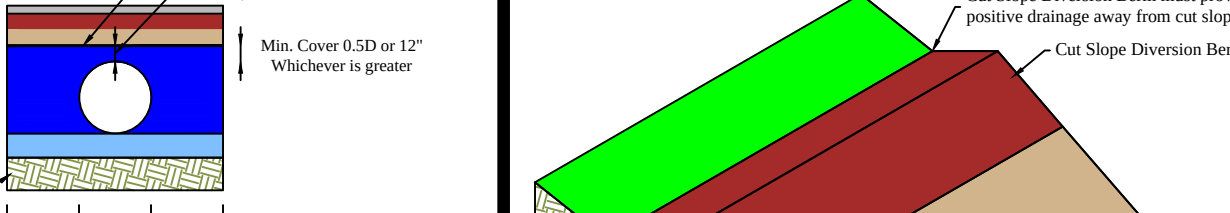
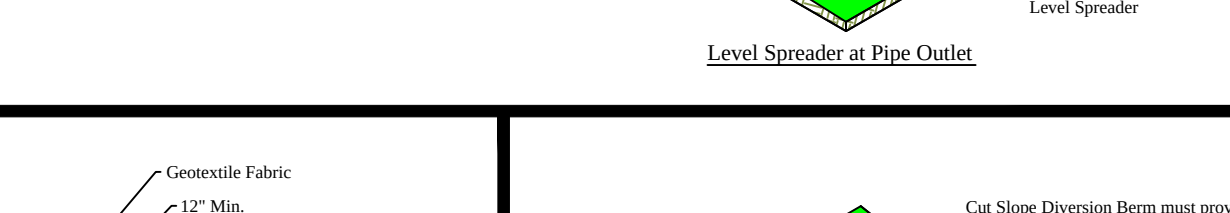
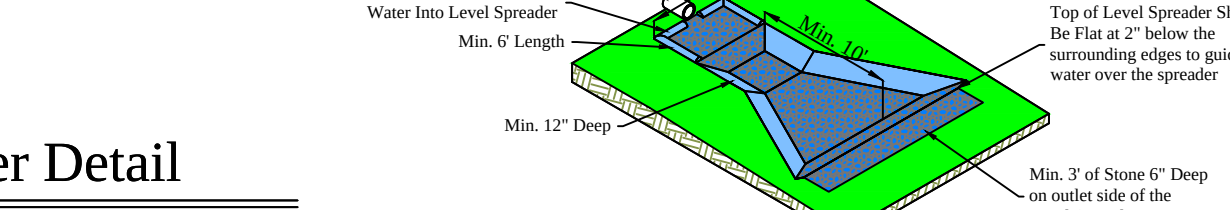
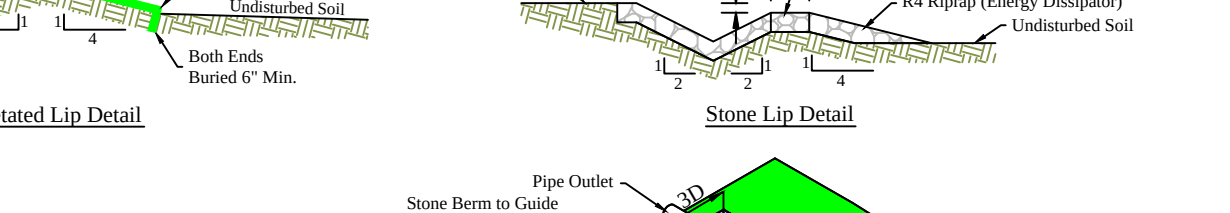
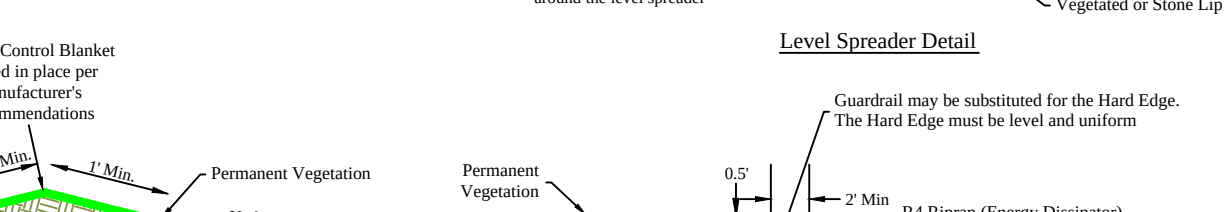
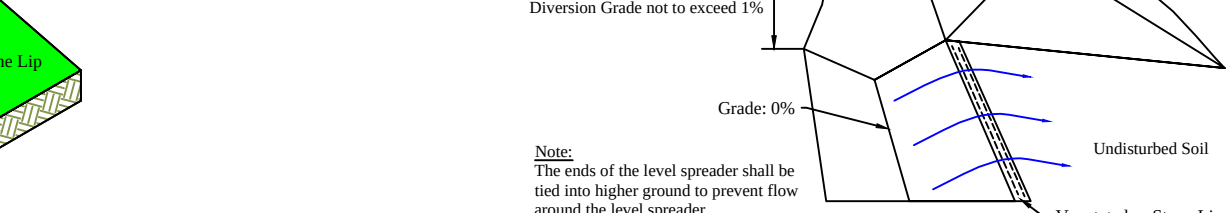
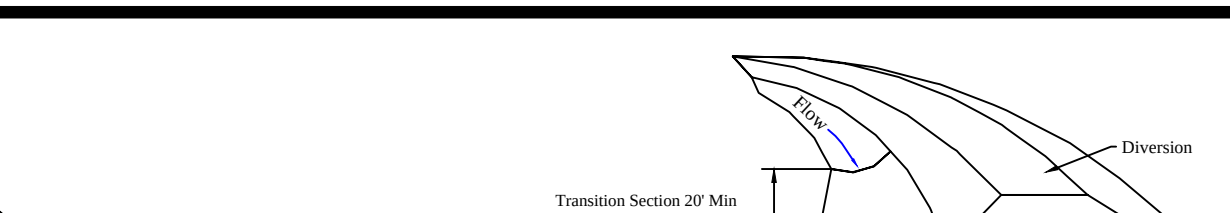
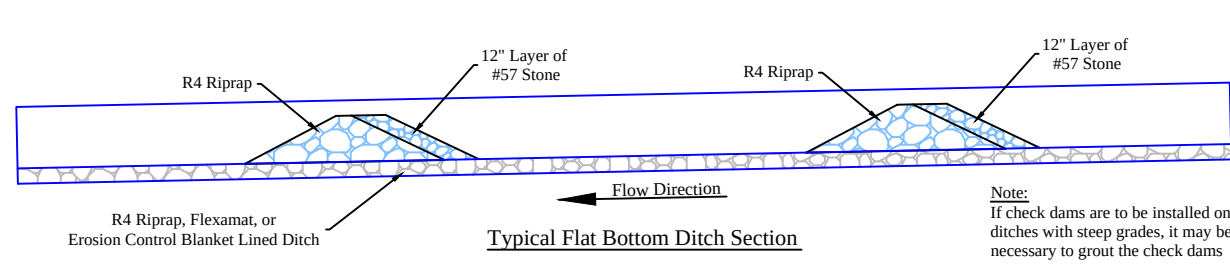
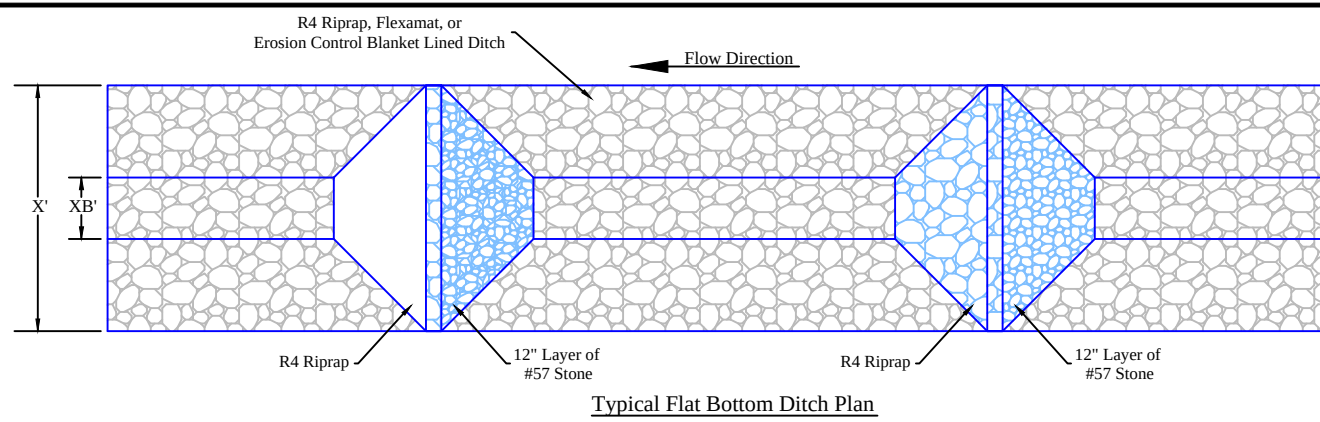
Kelly Surveying
P.O. Box 254
Delmar, WV 26639
304-338-0965

Erosion and Sediment Control Details
1221 Well Site
Freemans Creek District
Lewis County, WV

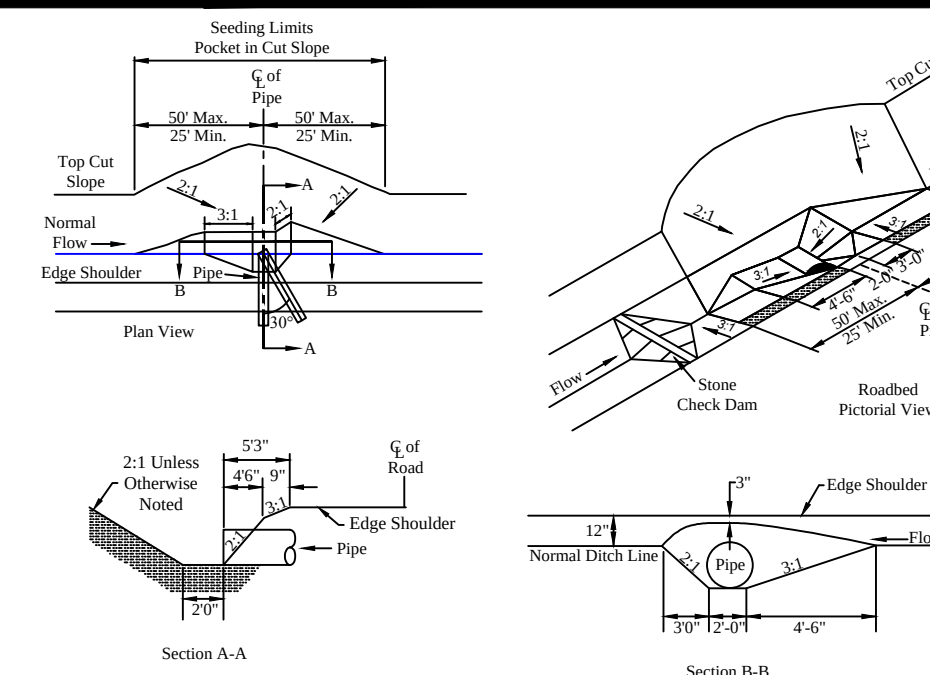
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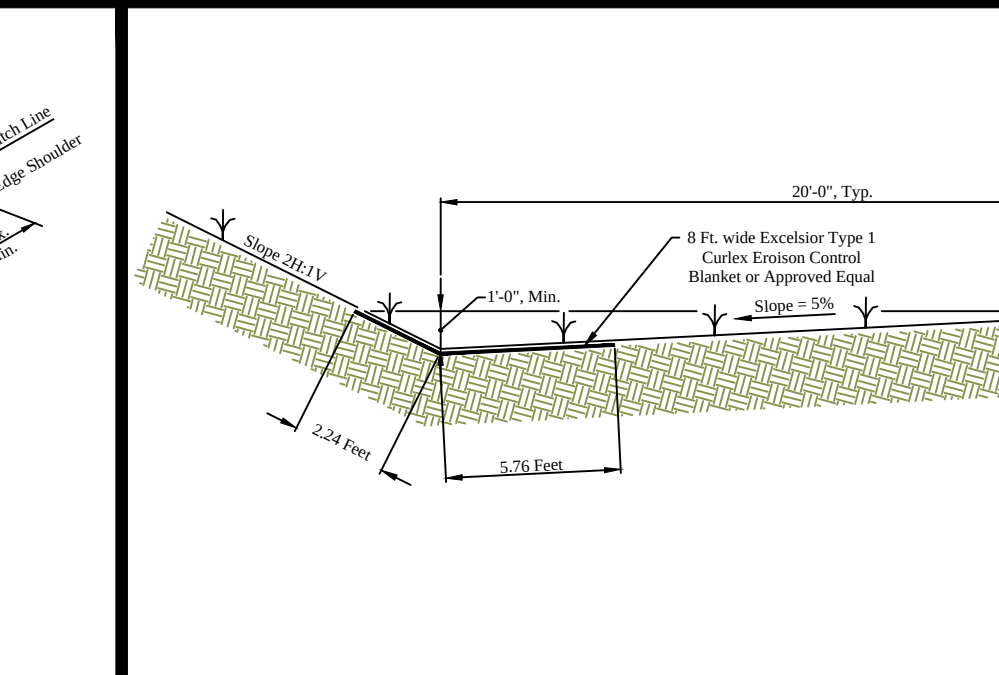
E11 Typical Flat Bottom Ditch Detail
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E19 Slope Tracking Detail
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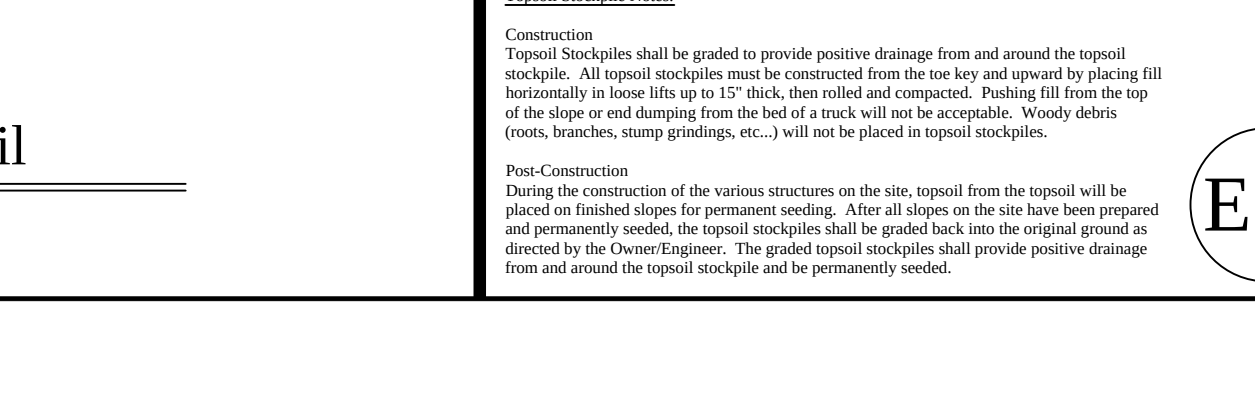
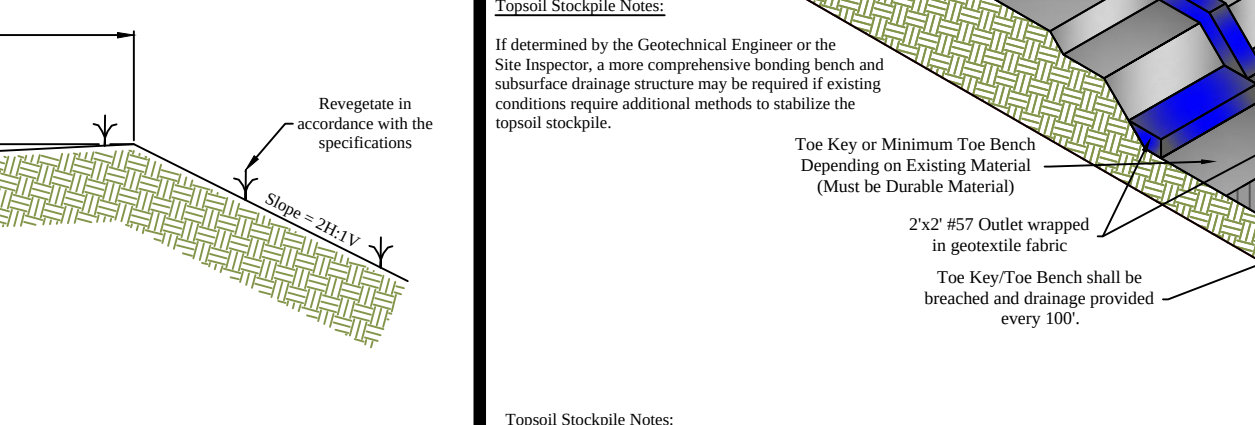
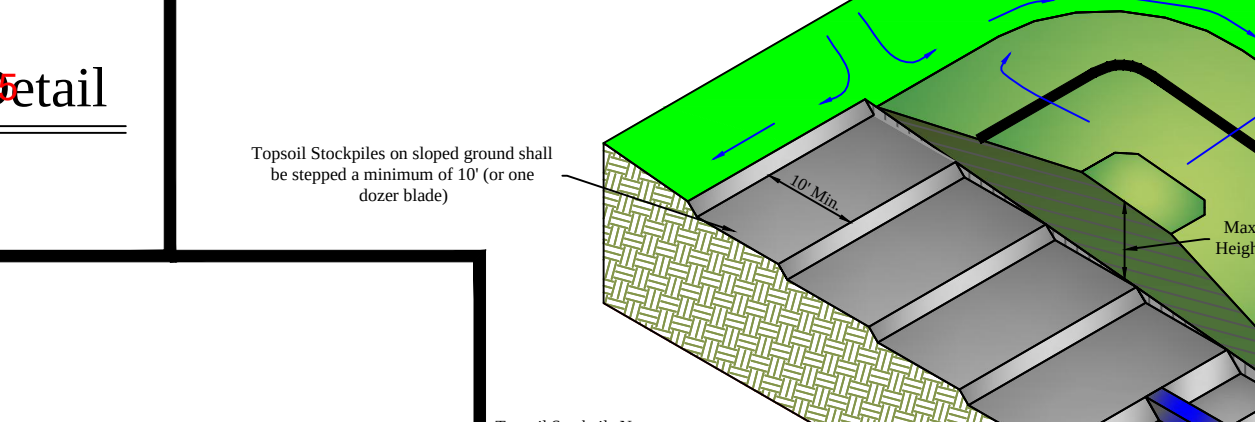
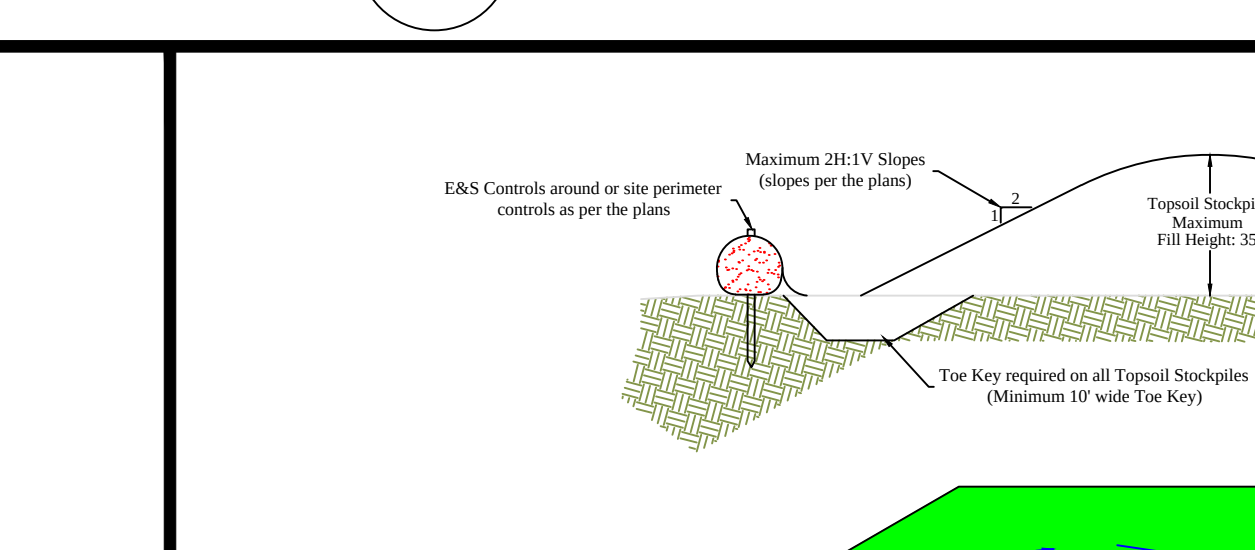


E20 Typical Ditch Relief Culvert Detail
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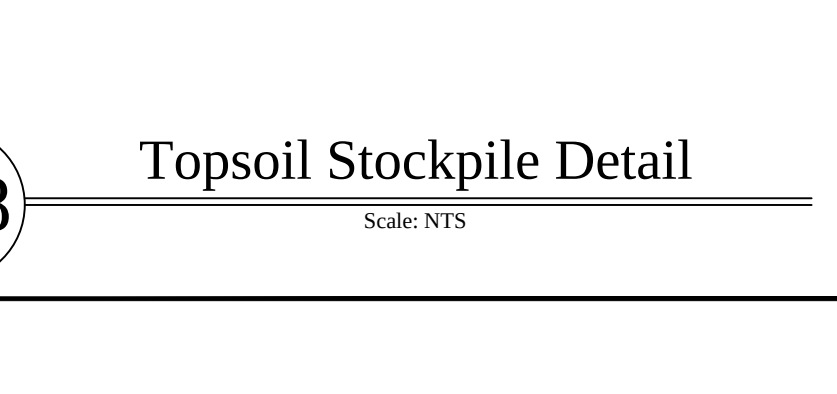
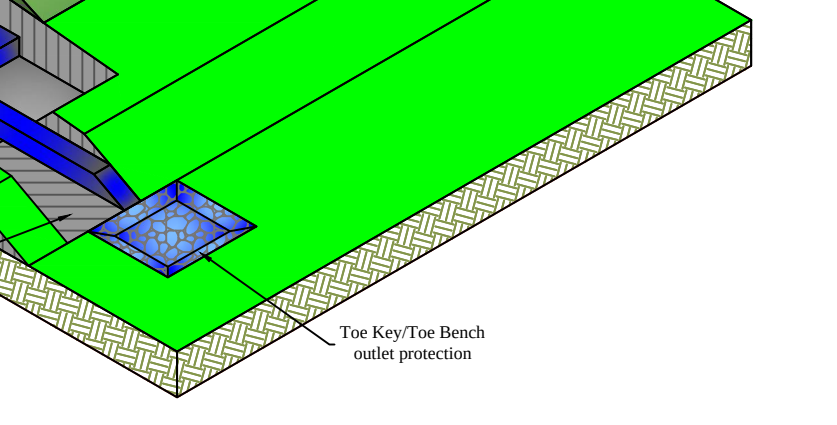
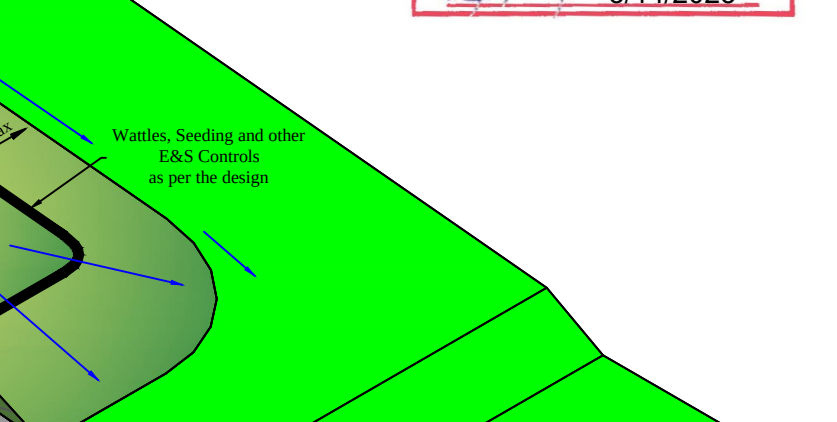
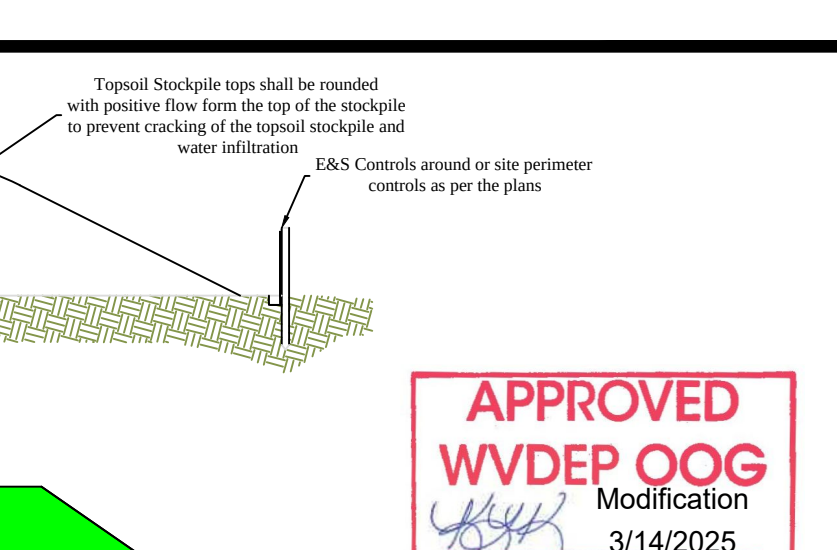


E21 Drainage Bench Detail
Scale: NTS

E15 Pipe Outlet Protection Detail
Scale: NTS



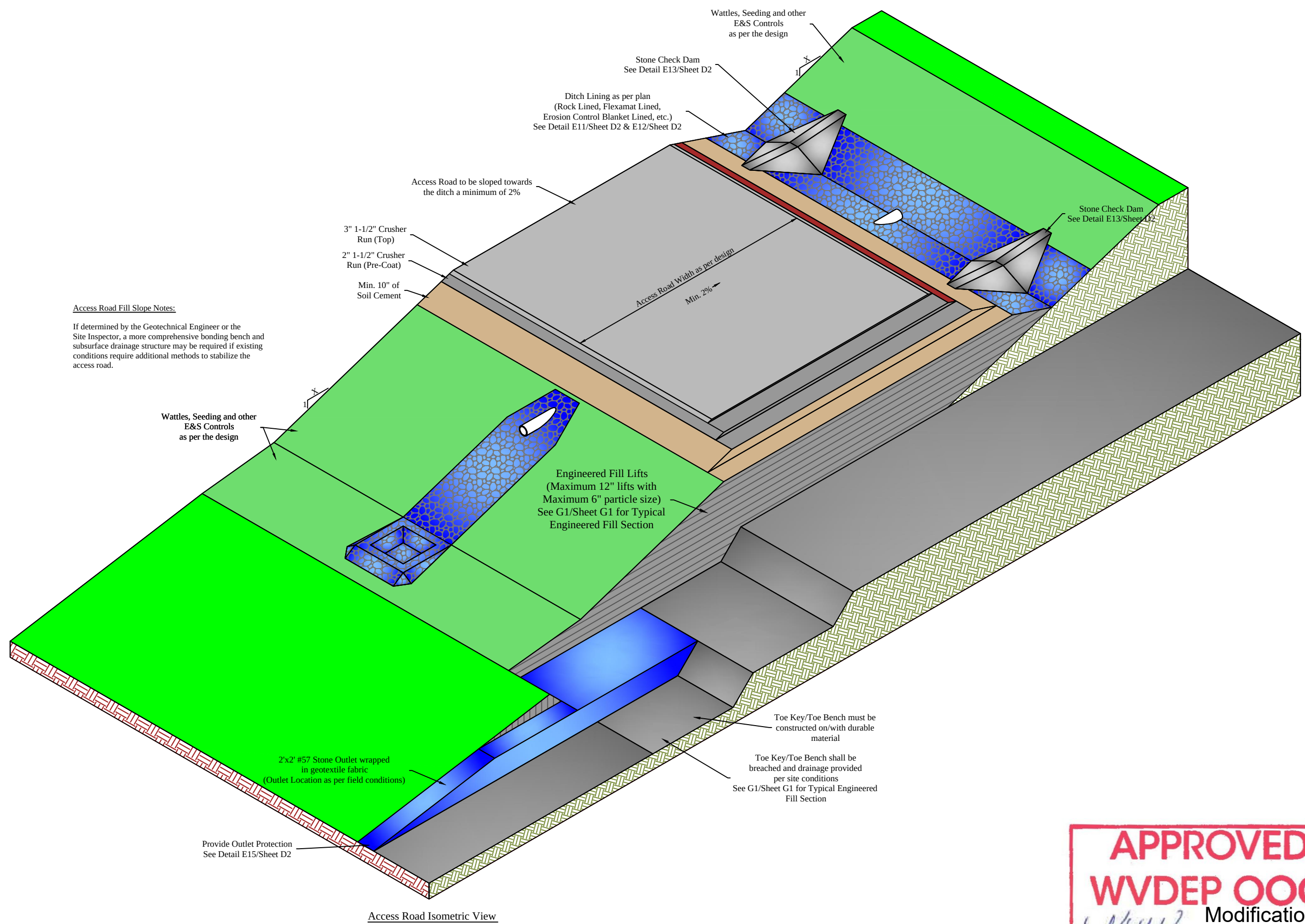
E13 Stone Check Dam Detail
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1221 Well Site Fink Creek Access

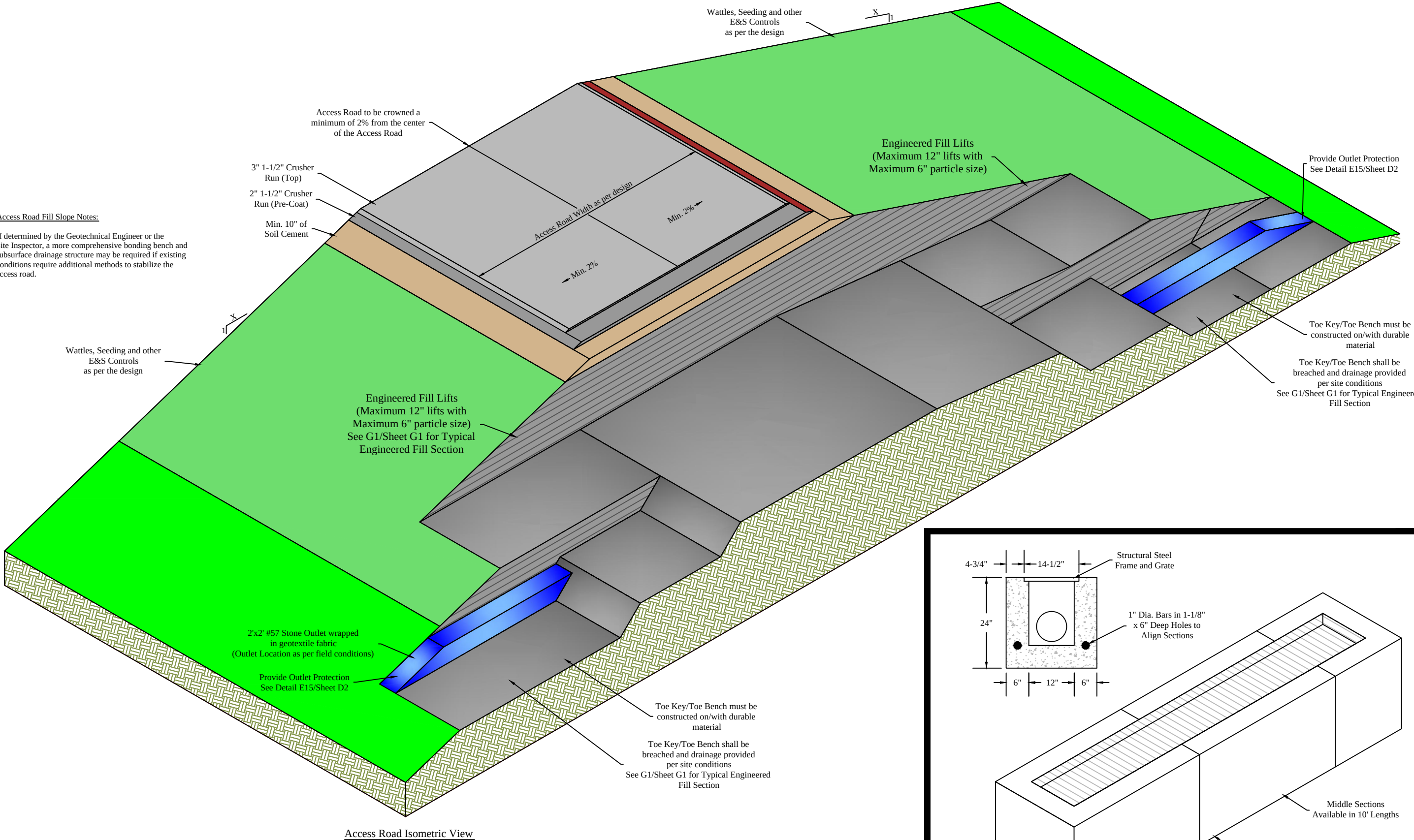
HG Energy LLC

Exhibit A: As-Built Modification

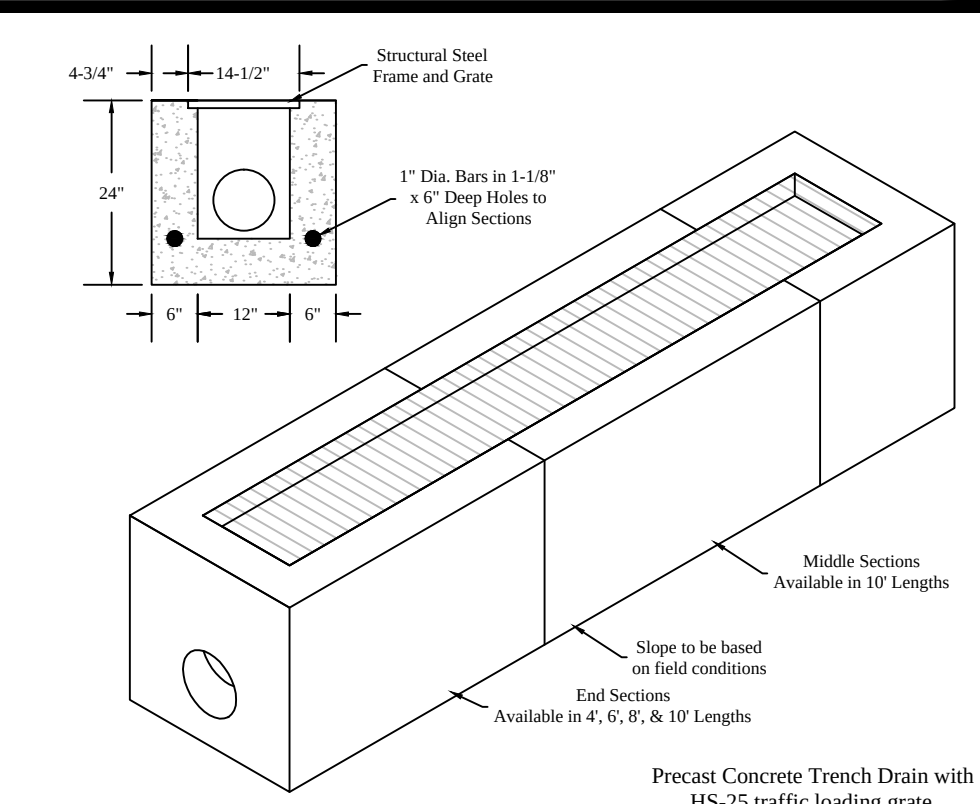


R1 Typical Access Road Cut Section Details
Scale: NTS

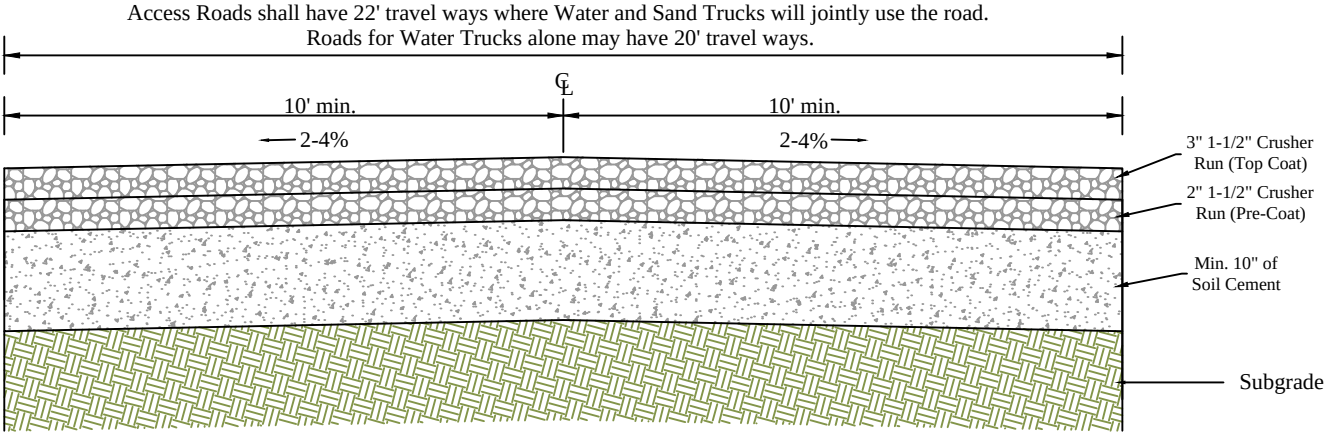
APPROVED
WVDEP OOG
Modification
3/14/2025



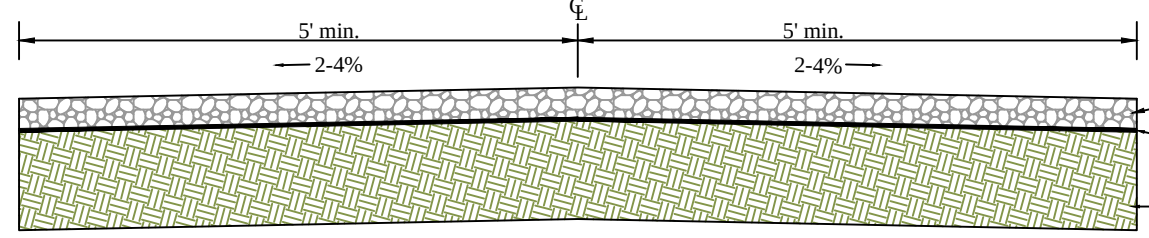
R2 Typical Access Road Fill Section Details
Scale: NTS



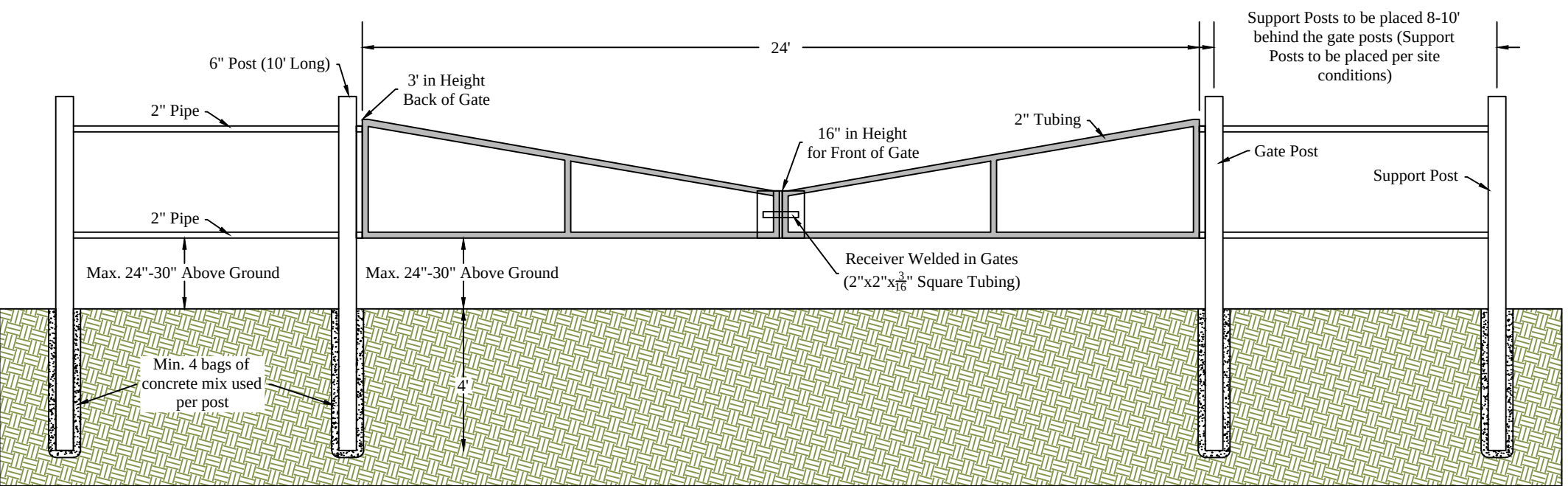
R8 Trench Grate Detail
Scale: NTS



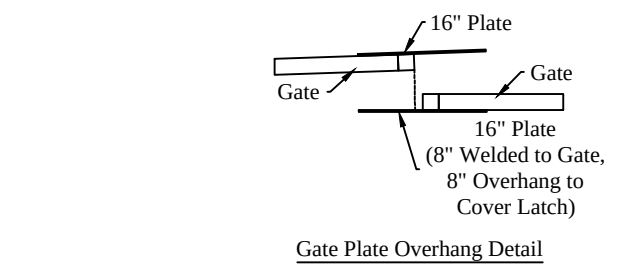
R3 Typical Access Road Surfacing Details
Scale: NTS



R4 Temporary/Adjacent Access Road Surfacing Details
Scale: NTS



R5 Access Road Gate Detail
Scale: NTS



- Gate Specification and Installation
- Prior to any excavation or installation, a "One Call" must be performed
- Gates shall be constructed of Two Inch (2") square tubing
 - Gate posts shall be constructed of Six Inch (6") Steel Pipe, Ten Feet (10') in length
 - Gates are to be Twelve Feet (12') in length each with at least 1 upright brace between the front and rear uprights
 - Two (2) posts will be used to hang gates and an additional Two (2) posts shall be used as supports, approximately 8-10' behind the gate posts
 - Two Inch (2") pipe may be used as bracing between gate posts to secure posts and keep ATV's from going around the gate
 - Gate posts should be installed Four Feet (4') in the ground with a minimum of four (4) bags of concrete mix used per post
 - Gates will have a Sixteen Inch (16") steel plate welded at closure points to secure locks. The plate shall be mounted so that Eight Inches (8") of the plate is welded to the gate and Eight Inches (8") is left to overhang to overlap the other gate.
 - The receiver for the latch on the gate needs to be constructed using 2"x2"x 1/8" tubing to allow space for the latch
 - The bottom of the gates shall be between 24"-30" max. above the road surface to prevent ATV's from driving under the gates
 - Gates shall be painted safety yellow and signs shall be provided to attach to the gates
 - A spacing of 1" between the gates needs to be maintained for the latch to fit and operate properly
 - Fabricators shall have freedom to design their hinges to allow adjustability as the gates require precise installation for the latch system to work properly. A typical design is available from HG Energy LLC.
 - Proper function of the gates must be verified before leaving the site.

CONSTRUCTION STAKING GUIDE & STANDARD RIBBON COLOR SCHEME

03/14/2025

	Yellow Ribbon: Yellow Ribbon used to indicate top of Cuts (C) Cut to be determined at time of stakeout Slope determined by site design		Blue & White Stripe Ribbon: Blue & White Stripe Ribbon used to indicate Limits of Disturbance (LOD) and Clearing Limits
	Yellow and Orange Ribbon: Yellow and Orange Ribbon used to indicate Grade at Top of Pad/Pond/Pit		Orange & Black Stripe Ribbon: Orange & Black Stripe Ribbon used to indicate Vertical Cut (VC) at Centerline or edge of access road Orange & Black Stripe Ribbon used to indicate Vertical Fill (VF) at centerline or edge of access road
	Orange Ribbon: Orange Ribbon used to indicate toes of Fills (F) Fill to be determined at time of stakeout Slope determined by site design		Pink & White Stripe Ribbon: Pink & White Stripe Ribbon used to indicate Erosion and Sediment Control Structures Silt Fence (SF) Reinforced Filter Fence (RFF) Super Silt Fence (SSF) Filter Sock (FS)
	Pink Ribbon: Pink Ribbon used to indicate Top Hole Location Pink Ribbon used to indicate Survey Control Location		Orange & White Stripe Ribbon: Orange & White Stripe Ribbon used to indicate Topsoil Stockpile Locations / Engineered Fill Stockpiles
	Pink & Black Stripe Ribbon: Pink & Black Stripe Ribbon used to indicate Vertical Cut (VC) at Pad/Pond/Pit corner or edge Pink & Black Stripe Ribbon used to indicate Vertical Fill (VF) at Pad/Pond/Pit corner or edge Vertical Cut/Vertical Fill to be determined at time of stakeout		Blue Ribbon: Blue Ribbon used to indicate Centerline (CL) Ditch Blue Ribbon used to indicate Bottom (BTM) Sediment Traps

R6 Construction Staking Guide
Scale: NTS

Revision
Design
Date
02-04-2025

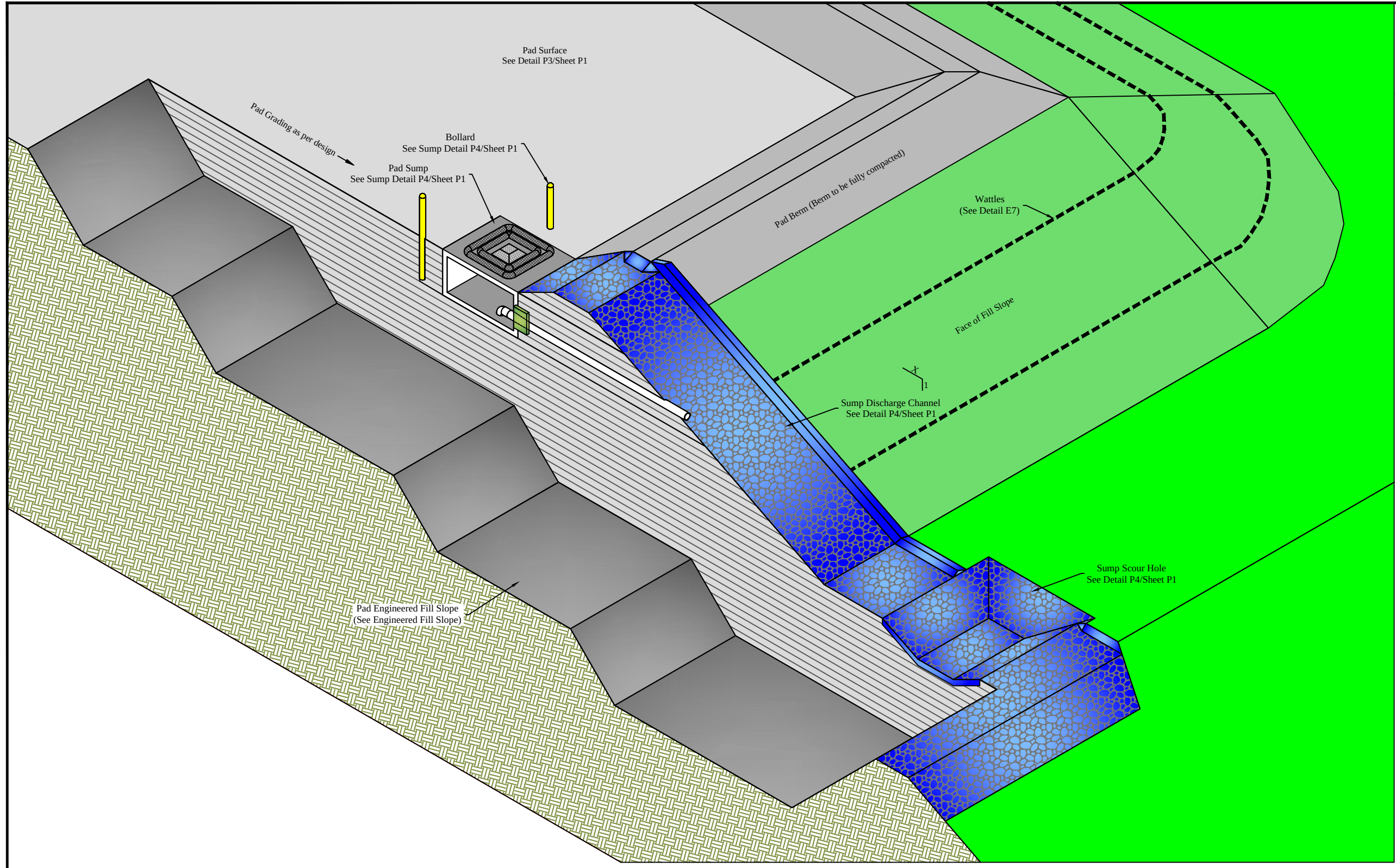


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PREPARED FOR
HG ENERGY LLC

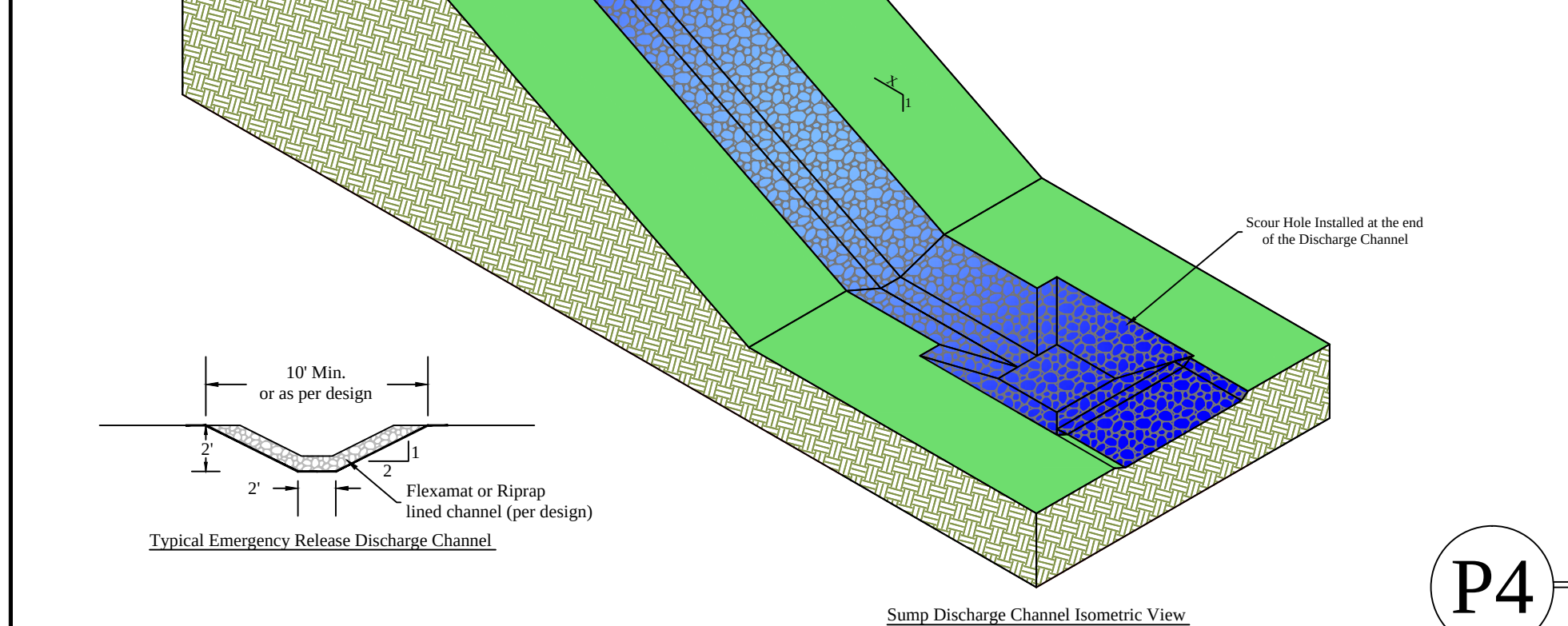
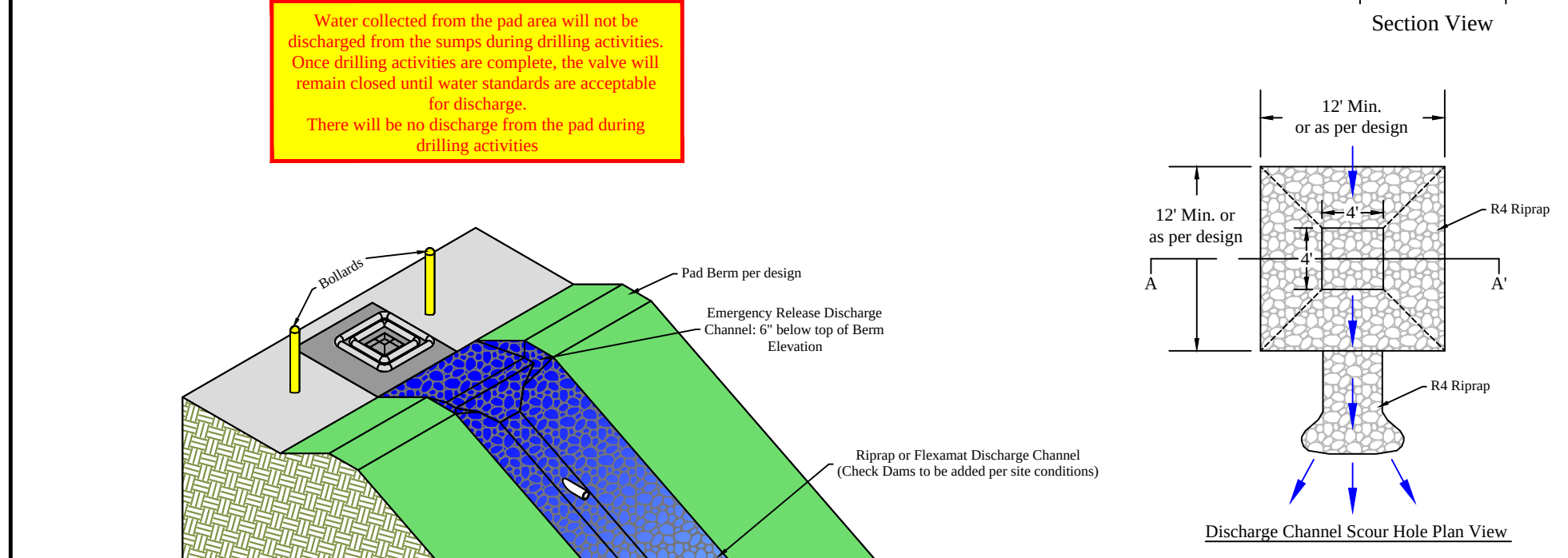
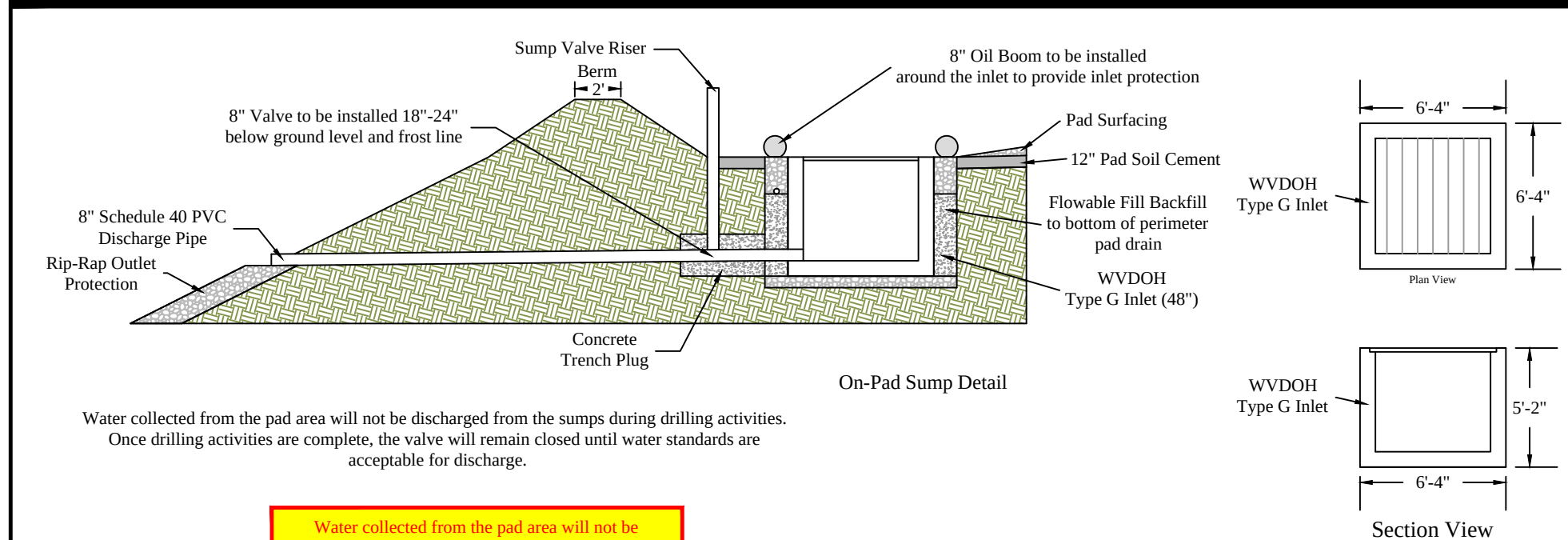


Typical Access Road Details
1221 Well Site
Freemans Creek District
Lewis County, WV

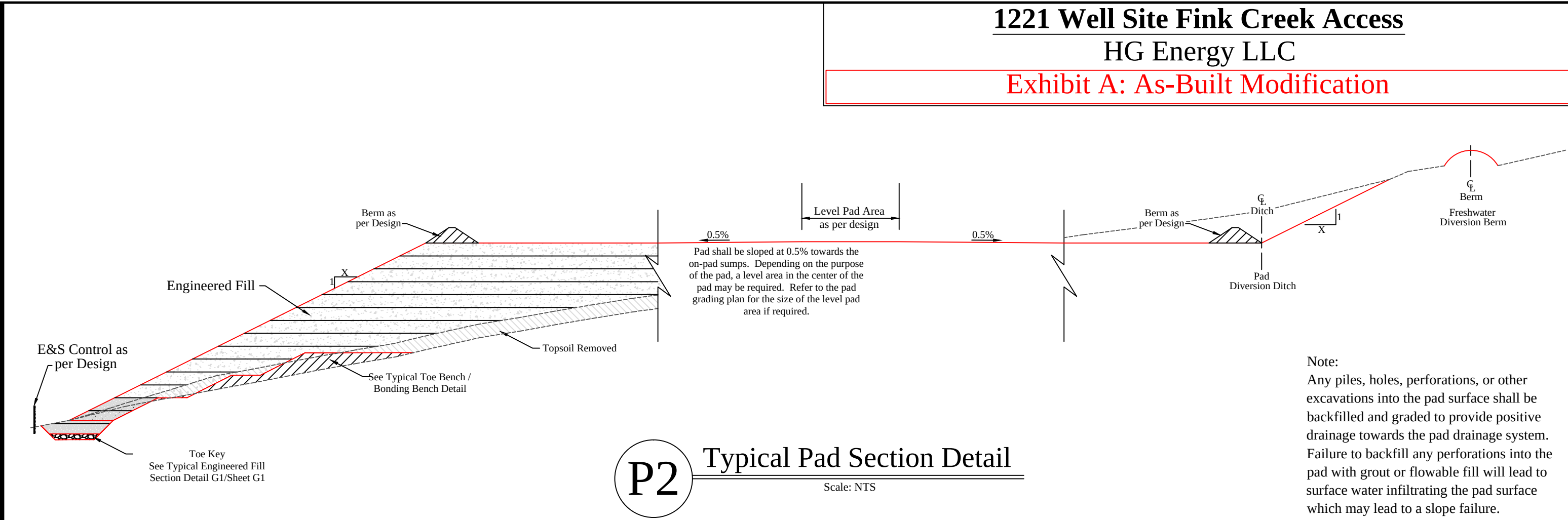
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Designed By: ZS
File No.
Sheet R1 of R1



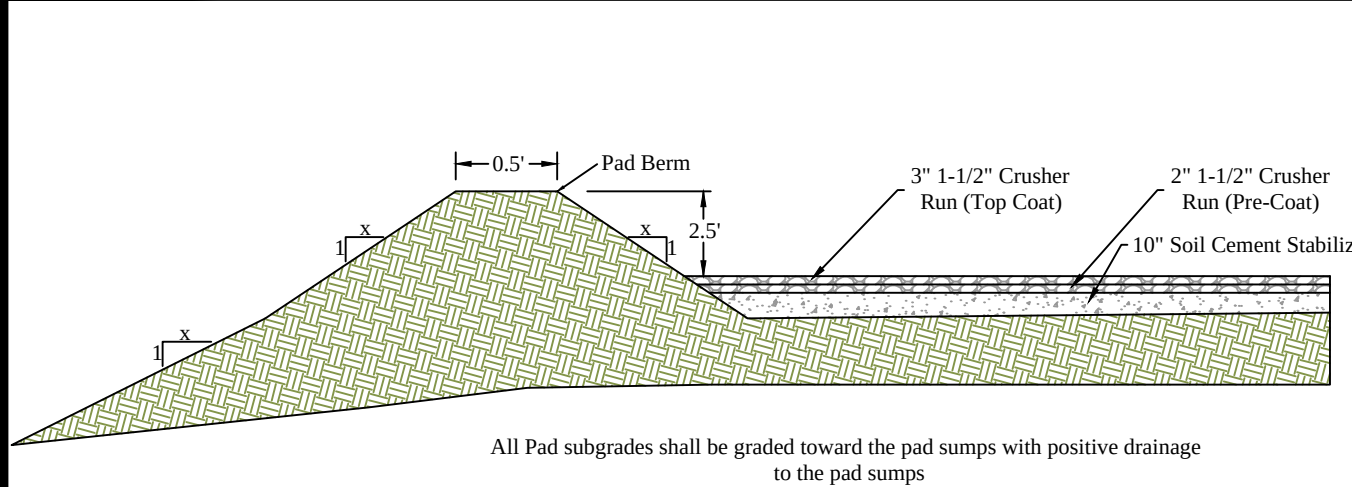
P1 Typical Pad Isometric View Detail
Scale: NTS



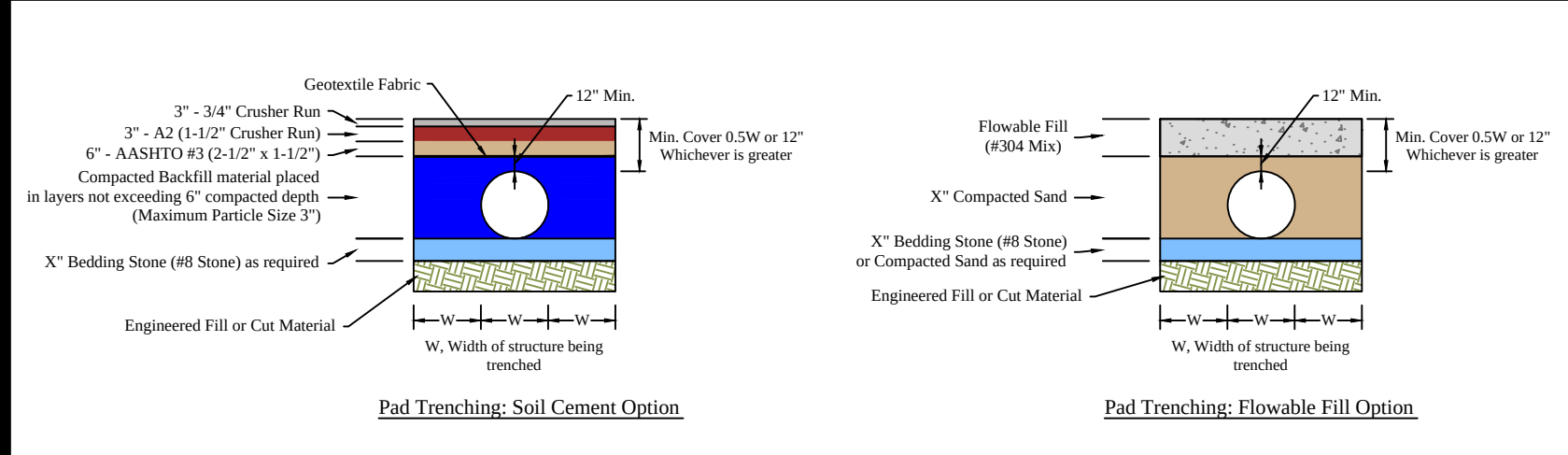
P4 On-Pad Sump Detail
Scale: NTS



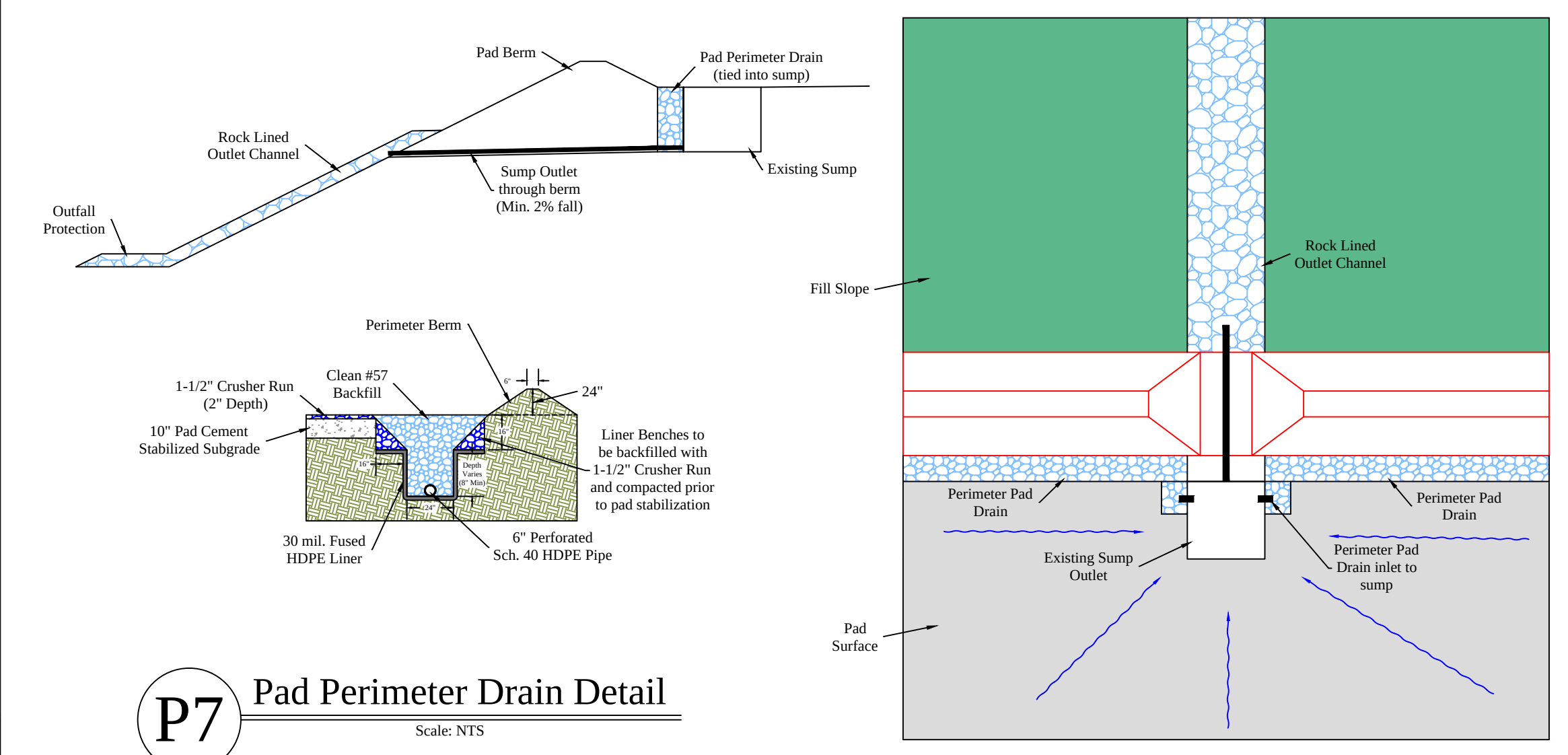
P2 Typical Pad Section Detail
Scale: NTS



P3 Pad Surfacing Detail
Scale: NTS



P6 Typical Pad Trenching Detail
Scale: NTS



P7 Pad Perimeter Drain Detail
Scale: NTS

03/14/2025

APPROVED
WVDEP OOG
Modification
3/14/2025

Revision	
Design	
Date	
02-04-2025	
THIS DOCUMENT PREPARED FOR HG ENERGY LLC	
Kelly Surveying P.O. Box 254 Delmar, WV 26239 (304) 338-0965	
Typical Pad Details	
1221 Well Site	
Freemans Creek District	
Lewis County, WV	
Date: 02/04/2025	
Scale: As Shown	
Designed By: ZS	
File No.	
Sheet P1 of P1	