

**FIREPIT (SURPRISE PIT)**

SITE NO.	CONTRACT NO.
2084	DEL2015208633/E008-302

PIKE COUNTY



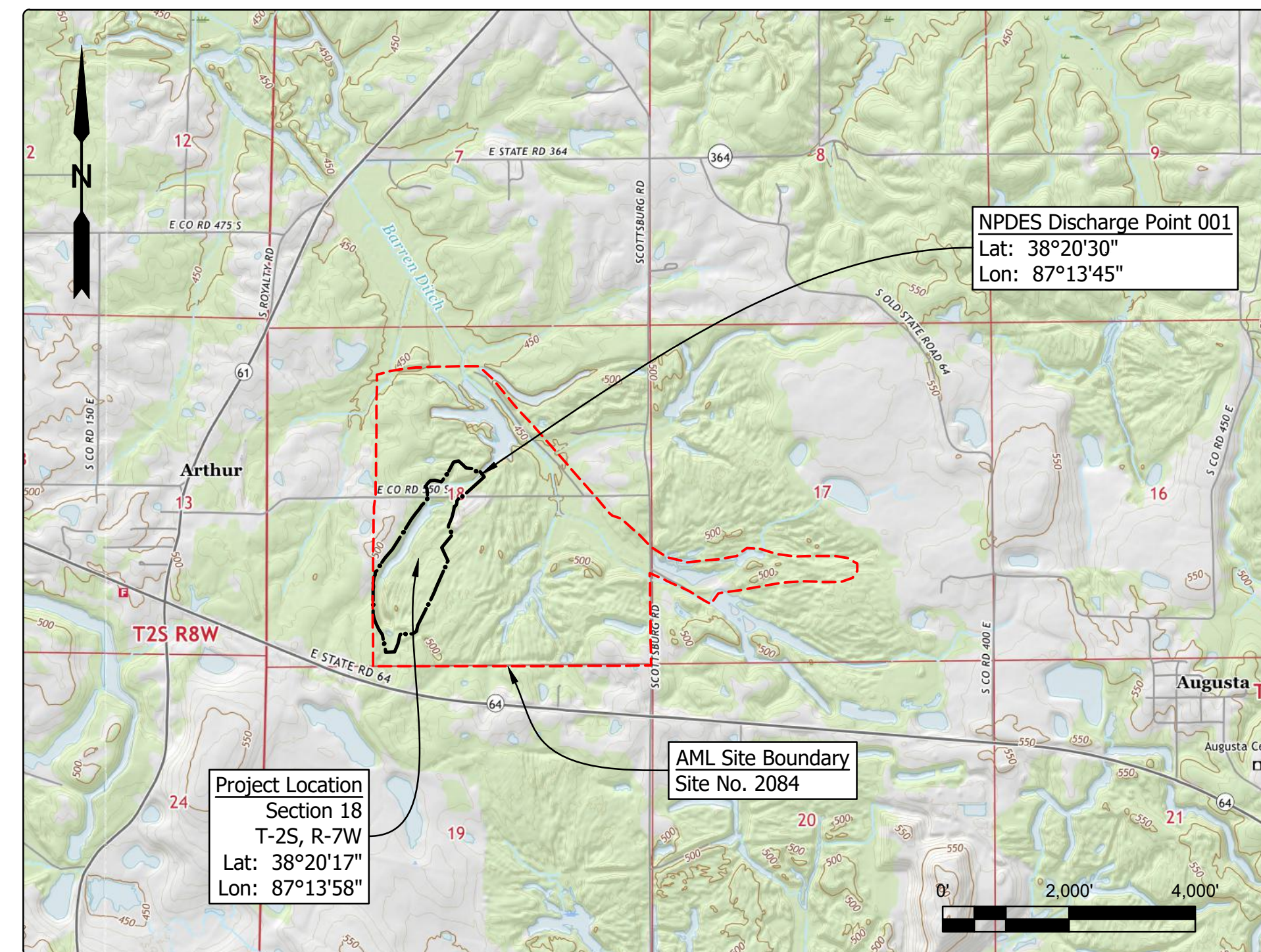
STATE OF INDIANA  
INDIANA DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION



ABANDONED COAL MINE  
RESTORATION

FIREPIT (SURPRISE PIT)  
SITE 2084  
CONTRACT DEL2015208633/E008-302  
PIKE COUNTY

Clear and grub, backfill highwall, improve drainage,  
improve wetlands, and revegetate all disturbed areas.



Project Location Map  
Augusta US TOPO (USGS, 2016)

**GENERAL NOTES**

2010 AML Standard Specifications to be used with these plans.  
Plans developed from topographic mapping survey flown in Summer of 2018 by Williams Aerial & Mapping, Inc. in NAD 83, Indiana State Plane West, Feet.  
An NPDES discharge permit is required for this project.  
Loose fill shall be placed for the top 4 ft in the fill areas of the tree planting mix. Loose fill shall consist of a single 4 ft lift and one pass of a low ground pressure dozer unless otherwise approved by the Engineer.

**INDEX**

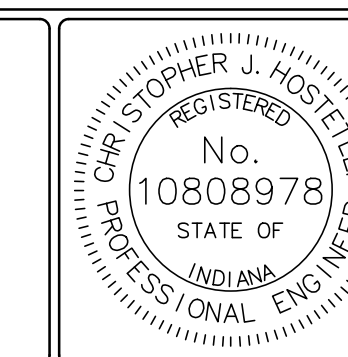
SHEET NO.	SHEET TITLE
1	TITLE
2	SITE MAP
3 - 5	SITE PLANS
6	SECTIONS
7	REVEGETATION PLAN
8	DETAILS

**UTILITIES**

The facilities of the following utilities exist near the project site but are not expected to be affected by the proposed construction. If questions arise, the utility may be contacted using the information below.

<b>ELECTRIC:</b> Vectren (Fort Branch) 1800 W. 26th St. Muncie, IN 47302 (765) 287 - 2119	<b>TELECOM:</b> Frontier 8001 West Jefferson Blvd Fort Wayne, IN 46804 (260) 461-3324
<b>NATURAL GAS:</b> Vectren (Fort Branch) 1800 W. 26th St. Muncie, IN 47302 (765) 287 - 2119	Insight Communications 1900 N Fares Avenue Evansville, IN 47711 (812) 253 - 2736
Ohio Valley Gas Corp. 111 Energy Park Dr. Winchester, IN 47394 (765) 584 - 6842	New Wave Communications 102 N 5th St. Vincennes, IN 47591 (812) 887 - 8996
<b>PIPELINE:</b> Enbridge Energy 222 Indianapolis Blvd, Ste. 100 Schereville, IN 46375 (219) 864 - 5471	Zayo Bandwidth 9209 Castlegate Dr Indianapolis, IN 46256 (765) 341 - 1199
Enterprise Products Operating, LLC 1100 Louisiana Street, 10th Floor Houston, TX 77002 (713) 381 - 6500	<b>WATER/SANITARY:</b> Pike-Gibson Water, Inc. 300 N Jackson St. Oakland City, IN 47660 (812) 749-4916
	Patoka Lake Regional Water & Sewer District 2647 N. State Road 545 Dubois, IN 47527 (812) 678 - 8325









Call Before You Dig. Indiana Underground Plant Protection Service (IUPPS) 1-800-382-5544 or 811 from your mobile phone.



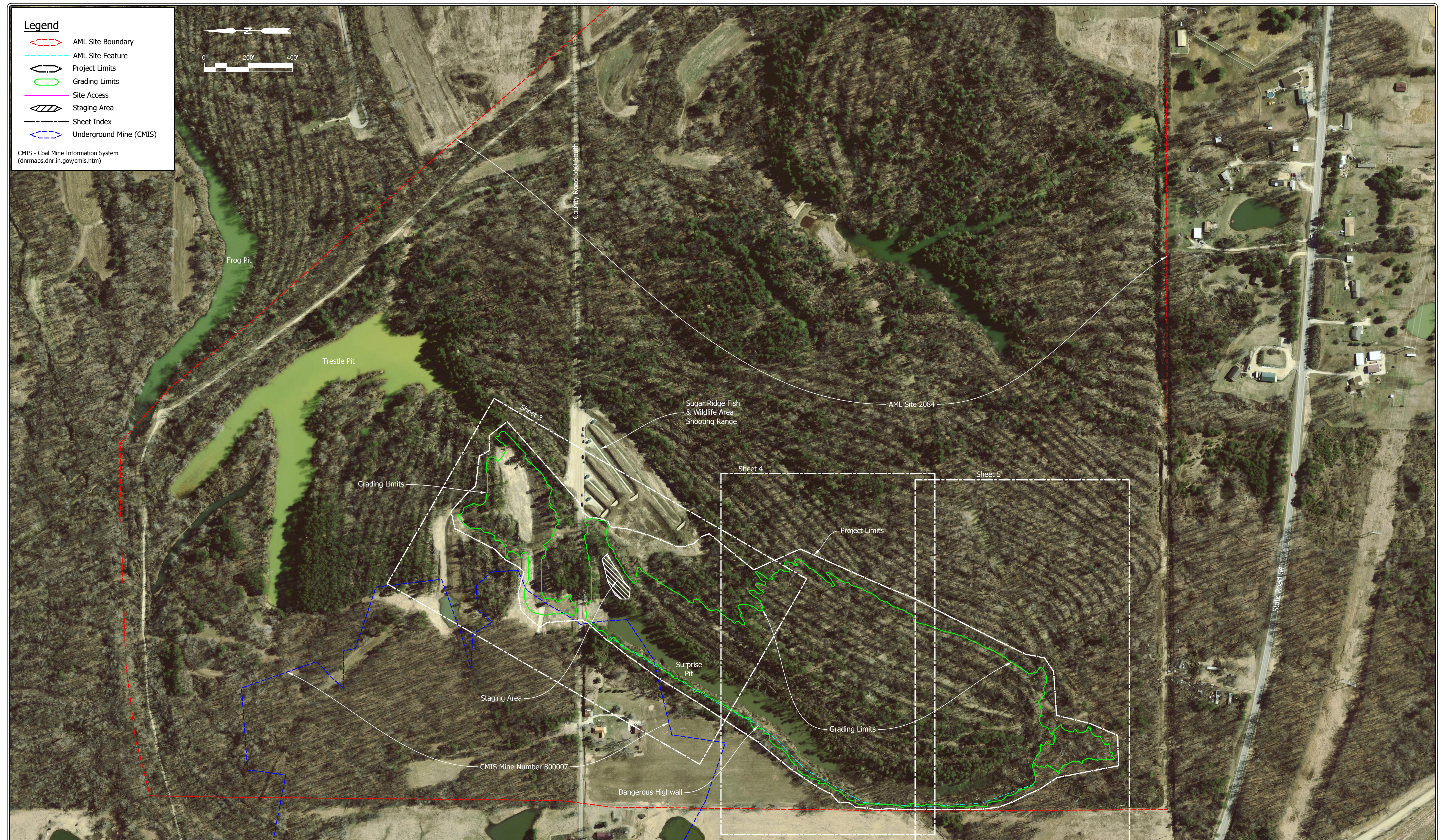
PLANS PREPARED BY: INDIANA DEPARTMENT OF NATURAL RESOURCES (812) 665-2207 DIVISION OF RECLAMATION  
CERTIFIED BY: *Christopher J. Hostetler* 10/7/2020 DATE  
APPROVED FOR LETTING: *[Signature]* 10/7/2020 DATE  
DIVISION OF RECLAMATION

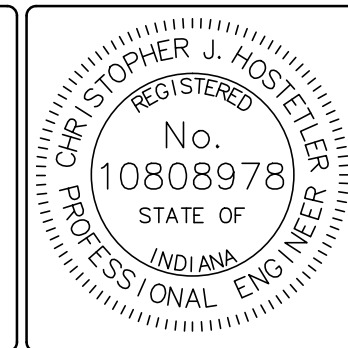
SCALE AS NOTED	SHEET 1 OF 8
PROJECT E008-302	SITE 2084

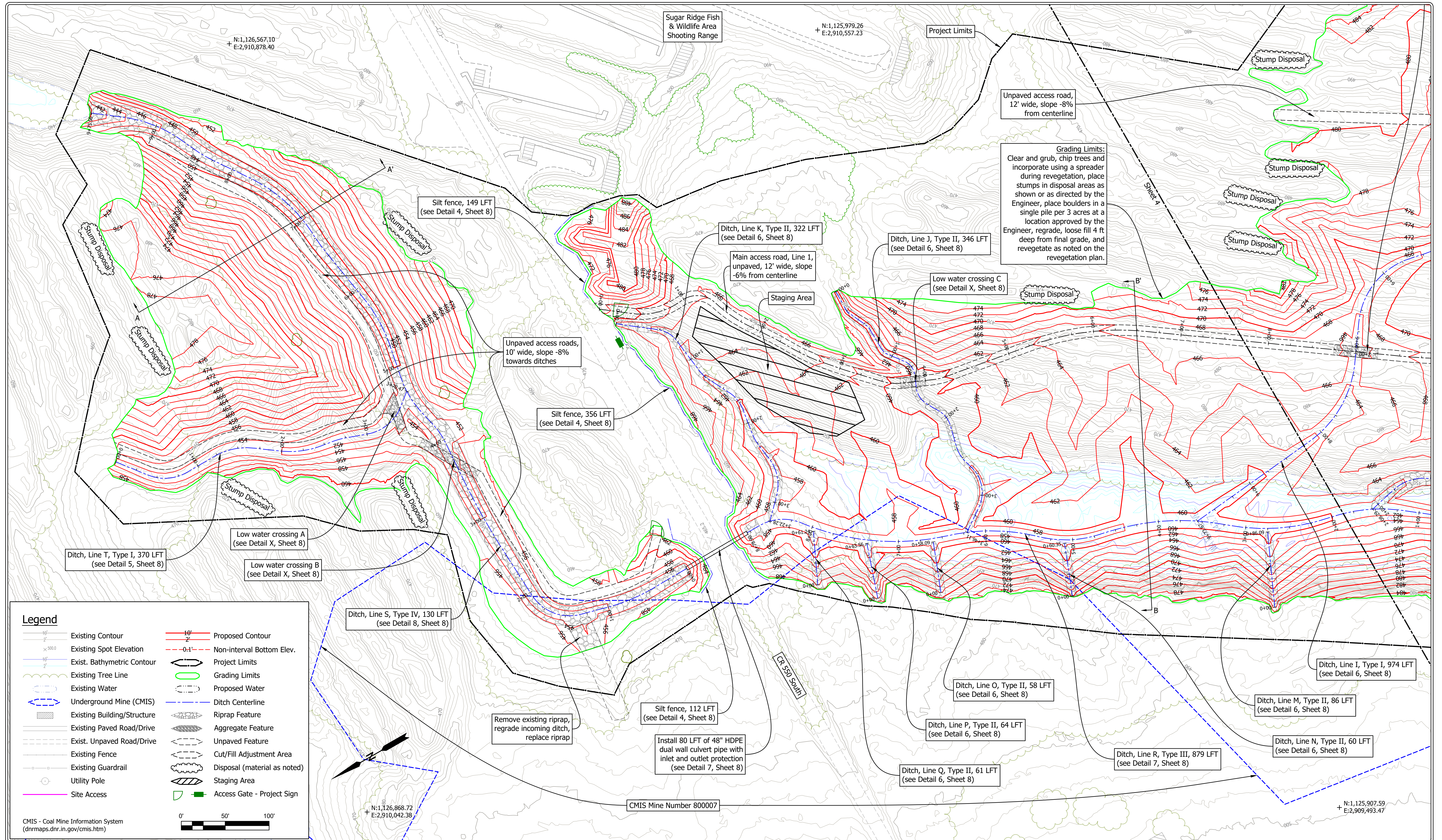
**Legend**

-  AML Site Boundary
-  AML Site Feature
-  Project Limits
-  Grading Limits
-  Site Access
-  Staging Area
-  Sheet Index
-  Underground Mine (CMIS)

CMIS - Coal Mine Information System  
(dnrmaps.dnr.in.gov/cmisis.htm)



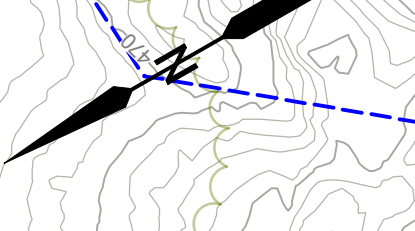
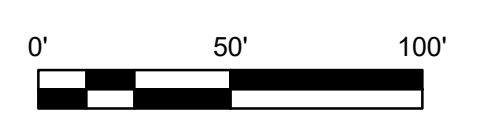
	RECOMMENDED FOR APPROVAL: <i>Christopher J. Hostetler</i> 10/7/2020 <small>DATE</small>	DATE MADE 07/10/2018	SITE MAP	SCALE 1" = 200'	SHEET 2 OF 8
	DESIGNED BY C.J.H.	DRAWN BY C.J.H.	DATE REVISED 9/2/2020 10:00:23 AM	STATE OF INDIANA DEPARTMENT OF NATURAL RESOURCES <small>DIVISION OF RECLAMATION</small>	PROJECT E008-302



**Legend**

	Existing Contour		Proposed Contour
	Existing Spot Elevation		Non-interval Bottom Elev.
	Exist. Bathymetric Contour		Project Limits
	Existing Tree Line		Grading Limits
	Existing Water		Proposed Water
	Underground Mine (CMIS)		Ditch Centerline
	Existing Building/Structure		Riprap Feature
	Existing Paved Road/Drive		Aggregate Feature
	Exist. Unpaved Road/Drive		Unpaved Feature
	Existing Fence		Cut/Fill Adjustment Area
	Existing Guardrail		Disposal (material as noted)
	Utility Pole		Staging Area
	Site Access		Access Gate - Project Sign

CMIS - Coal Mine Information System  
 (dnrmaps.dnr.in.gov/cmisis.htm)



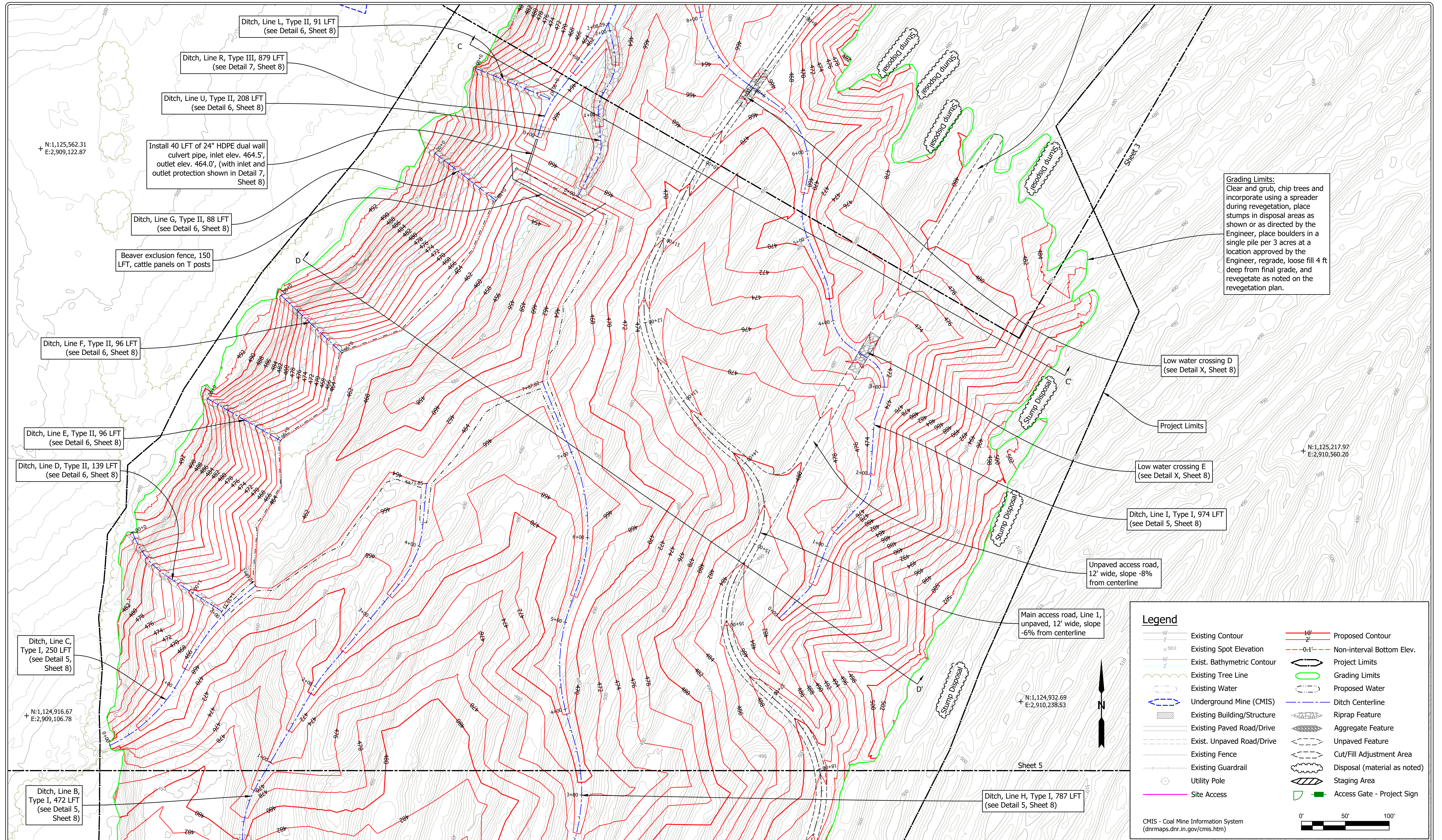
RECOMMENDED FOR APPROVAL: <i>Christopher J. Hostetler</i>	10/7/2020 DATE
DESIGNED BY C.J.H.	DRAWN BY C.J.H.

DATE MADE 07/10/2018	DATE REVISED 9/2/2020 10:00:23 AM
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SITE PLAN NORTH  
 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF RECLAMATION

SCALE 1" = 50'	PROJECT E008-302
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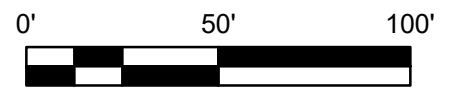
SHEET 3 OF 8	SITE 2084
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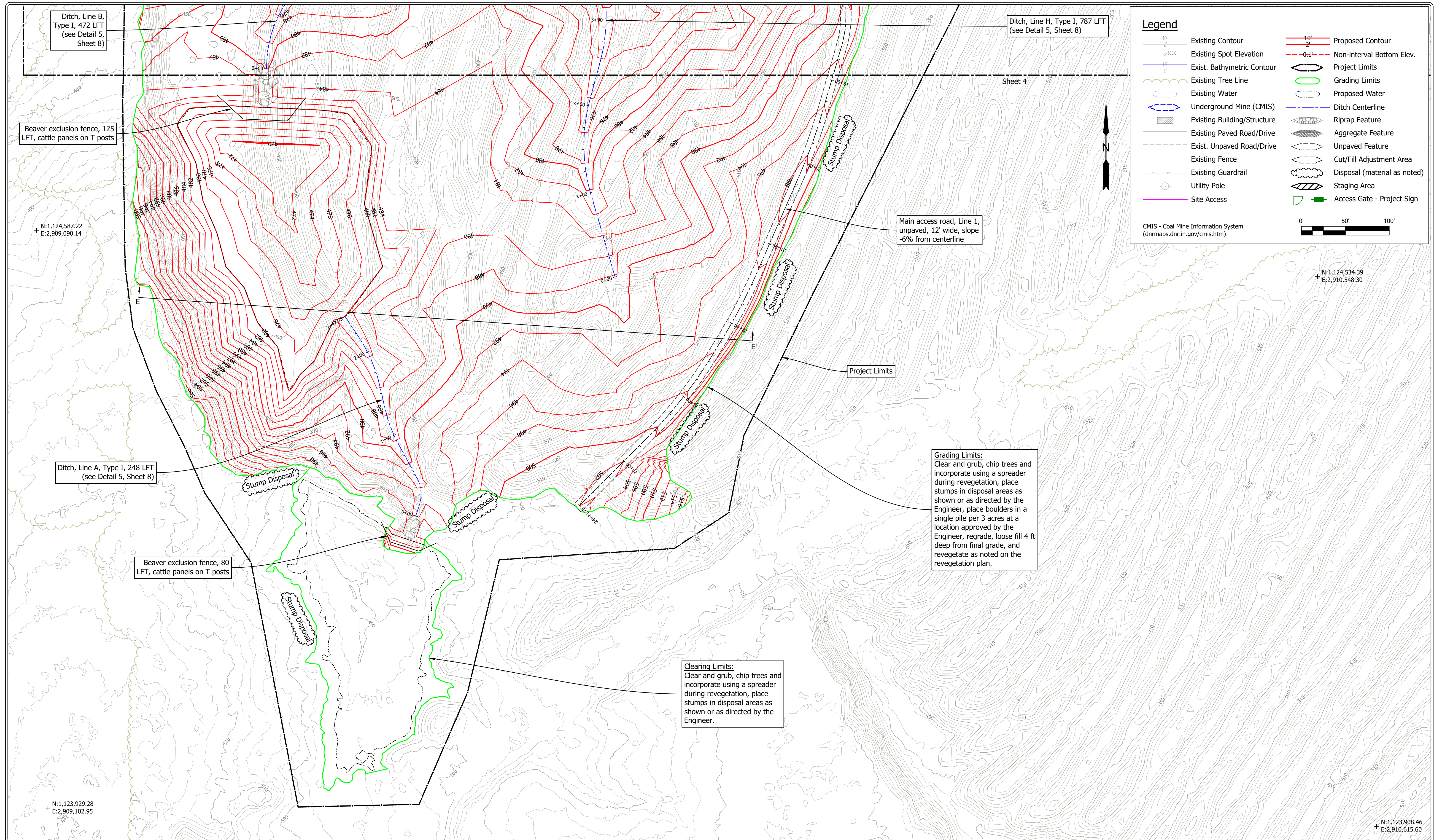
**Grading Limits:**  
 Clear and grub, chip trees and incorporate using a spreader during revegetation, place stumps in disposal areas as shown or as directed by the Engineer, place boulders in a single pile per 3 acres at a location approved by the Engineer, regrade, loose fill 4 ft deep from final grade, and revegetate as noted on the revegetation plan.

Legend			
	Existing Contour		Proposed Contour
	Existing Spot Elevation		Non-interval Bottom Elev.
	Exist. Bathymetric Contour		Project Limits
	Existing Tree Line		Grading Limits
	Existing Water		Proposed Water
	Underground Mine (CMIS)		Ditch Centerline
	Existing Building/Structure		Riprap Feature
	Existing Paved Road/Drive		Aggregate Feature
	Exist. Unpaved Road/Drive		Unpaved Feature
	Existing Fence		Cut/Fill Adjustment Area
	Existing Guardrail		Disposal (material as noted)
	Utility Pole		Staging Area
	Site Access		Access Gate - Project Sign

CMIS - Coal Mine Information System  
 (dnrmaps.dnr.in.gov/cmisis.htm)



	RECOMMENDED FOR APPROVAL: <i>Christopher J. Hostler</i> 10/7/2020 DATE	DATE MADE 07/10/2018	SITE PLAN NORTH  DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	SCALE 1" = 50'	SHEET 4 OF 8
	DESIGNED BY C.J.H.	DRAWN BY C.J.H.		DATE REVISED 9/2/2020 10:00:23 AM	PROJECT E008-302



**Legend**

Existing Contour	Proposed Contour
Existing Spot Elevation	Non-interval Bottom Elev.
Exist. Bathymetric Contour	Project Limits
Existing Tree Line	Grading Limits
Existing Water	Proposed Water
Underground Mine (CMIS)	Ditch Centerline
Existing Building/Structure	Riprap Feature
Existing Paved Road/Drive	Aggregate Feature
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Existing Fence	Cut/Fill Adjustment Area
Existing Guardrail	Disposal (material as noted)
Utility Pole	Staging Area
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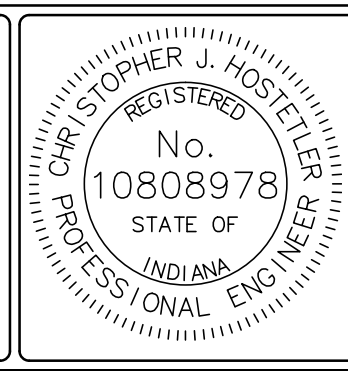
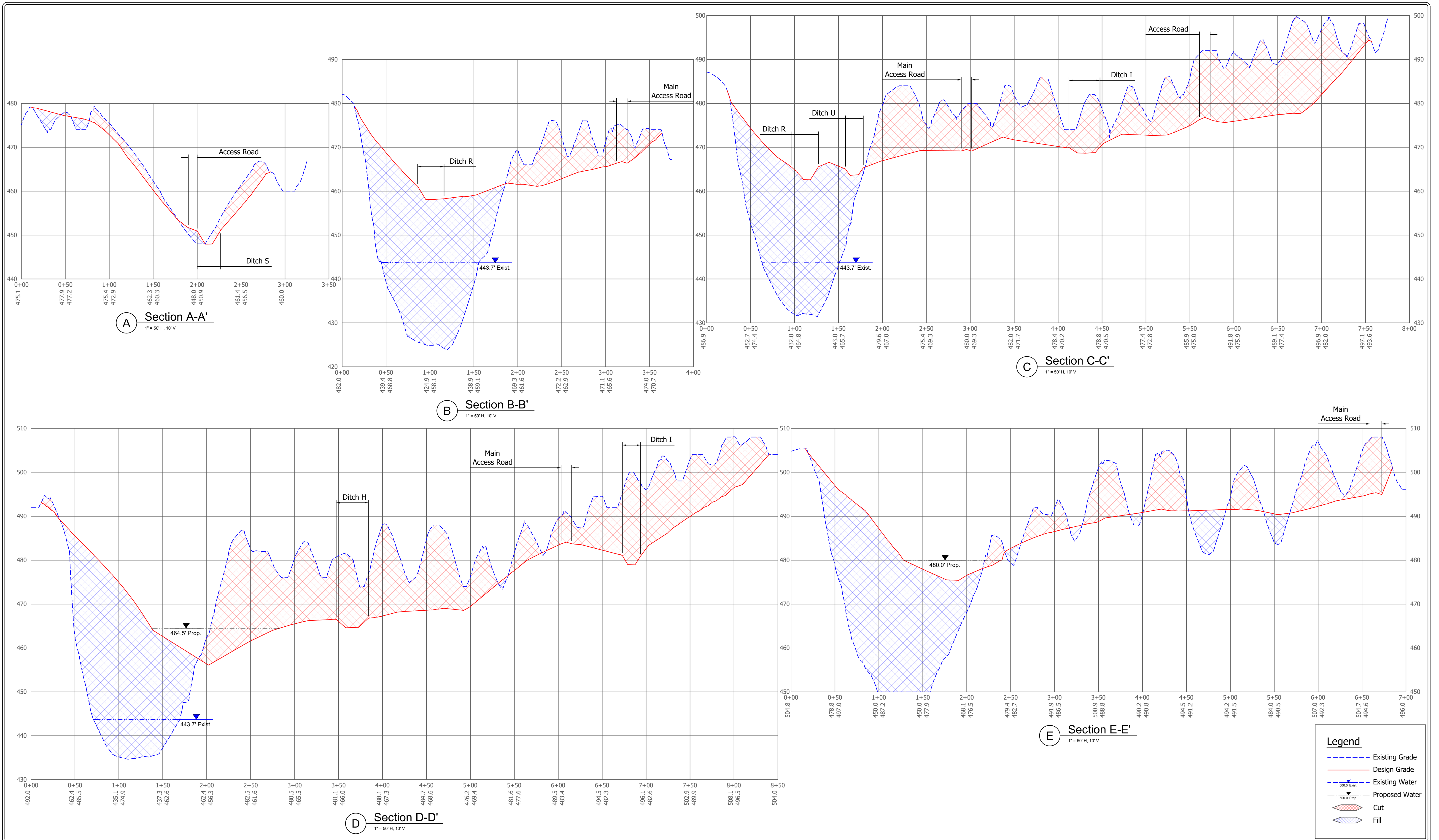
CMIS - Coal Mine Information System  
(dnrmaps.dnr.in.gov/cmisis.htm)

0' 50' 100'

**Grading Limits:**  
Clear and grub, chip trees and incorporate using a spreader during revegetation, place stumps in disposal areas as shown or as directed by the Engineer, place boulders in a single pile per 3 acres at a location approved by the Engineer, regrade, loose fill 4 ft deep from final grade, and revegetate as noted on the revegetation plan.

**Clearing Limits:**  
Clear and grub, chip trees and incorporate using a spreader during revegetation, place stumps in disposal areas as shown or as directed by the Engineer.

	RECOMMENDED FOR APPROVAL: <i>Christopher J. Hostetler</i> 10/7/2020 DATE	DATE MADE 07/10/2018	SITE PLAN SOUTH  STATE OF INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	SCALE 1" = 50'	SHEET 5 OF 8
	DESIGNED BY C.J.H.	DRAWN BY C.J.H.		DATE REVISED 9/2/2020 10:00:23 AM	PROJECT E008-302



RECOMMENDED FOR APPROVAL: *Christopher J. Hostetler* 10/7/2020 DATE

DESIGNED BY: C.J.H. DRAWN BY: C.J.H.

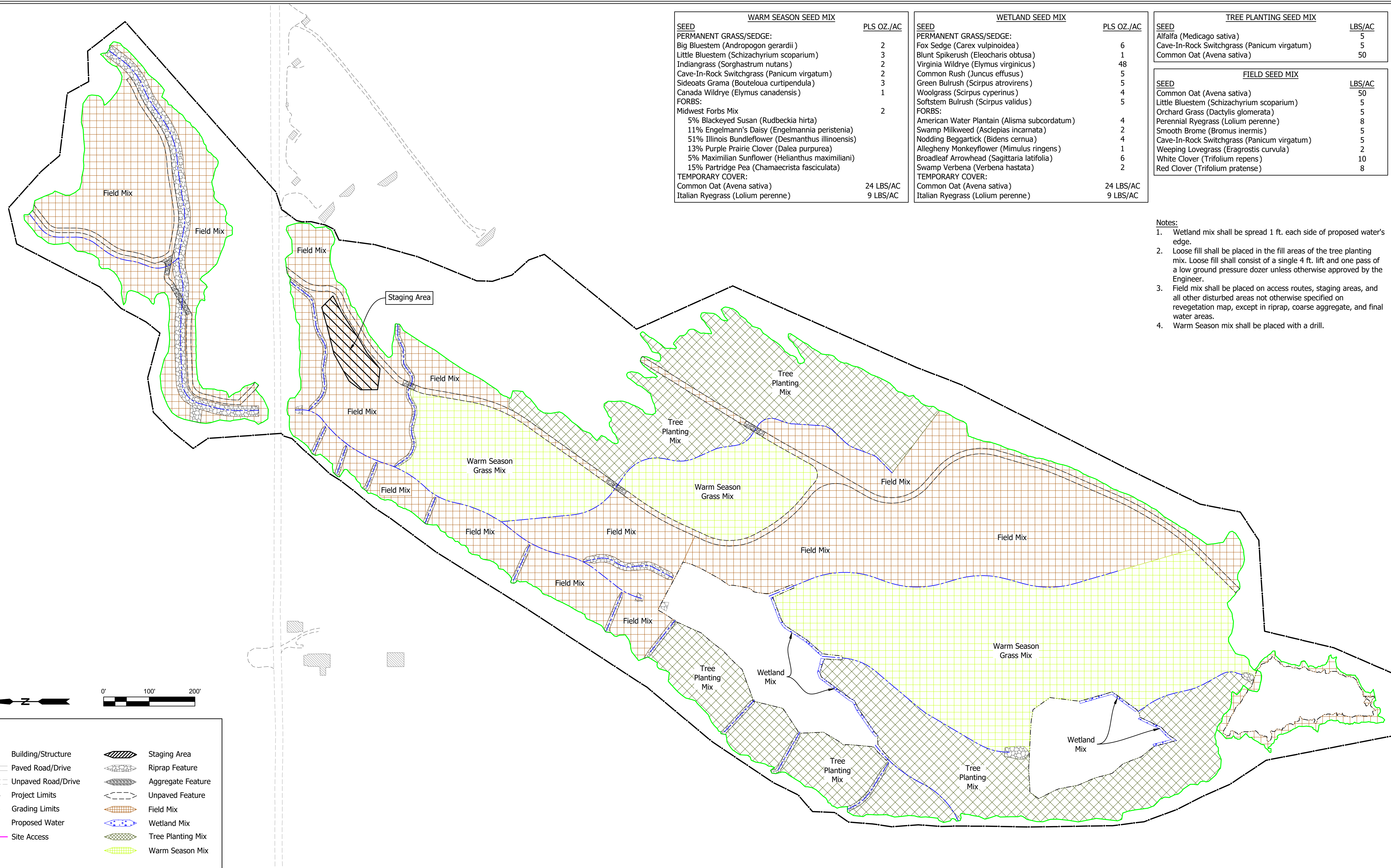
DATE MADE: 07/10/2018

DATE REVISED: 9/2/2020 10:00:23 AM

SECTIONS: STATE OF INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION

SCALE: AS NOTED PROJECT: E008-302

SHEET: 6 OF 8 SITE: 2084



WARM SEASON SEED MIX	
SEED	PLS OZ./AC
<b>PERMANENT GRASS/SEDGE:</b>	
Big Bluestem (Andropogon gerardii)	2
Little Bluestem (Schizachyrium scoparium)	3
Indiangrass (Sorghastrum nutans)	2
Cave-In-Rock Switchgrass (Panicum virgatum)	2
Sideoats Grama (Bouteloua curtipendula)	3
Canada Wildrye (Elymus canadensis)	1
<b>FORBS:</b>	
Midwest Forbs Mix	2
5% Blackeyed Susan (Rudbeckia hirta)	
11% Engelmann's Daisy (Engelmannia peristenia)	
51% Illinois Bundleflower (Desmanthus illinoensis)	
13% Purple Prairie Clover (Dalea purpurea)	
5% Maximilian Sunflower (Helianthus maximiliani)	
15% Partridge Pea (Chamaecrista fasciculata)	
<b>TEMPORARY COVER:</b>	
Common Oat (Avena sativa)	24 LBS/AC
Italian Ryegrass (Lolium perenne)	9 LBS/AC

WETLAND SEED MIX	
SEED	PLS OZ./AC
<b>PERMANENT GRASS/SEDGE:</b>	
Fox Sedge (Carex vulpinoidea)	6
Blunt Spikerush (Eleocharis obtusa)	1
Virginia Wildrye (Elymus virginicus)	48
Common Rush (Juncus effusus)	5
Green Bulrush (Scirpus atrovirens)	5
Woolgrass (Scirpus cyperinus)	4
Softstem Bulrush (Scirpus validus)	5
<b>FORBS:</b>	
American Water Plantain (Alisma subcordatum)	4
Swamp Milkweed (Asclepias incarnata)	2
Nodding Beggartick (Bidens cernua)	4
Allegheny Monkeyflower (Mimulus ringens)	1
Broadleaf Arrowhead (Sagittaria latifolia)	6
Swamp Verbena (Verbena hastata)	2
<b>TEMPORARY COVER:</b>	
Common Oat (Avena sativa)	24 LBS/AC
Italian Ryegrass (Lolium perenne)	9 LBS/AC

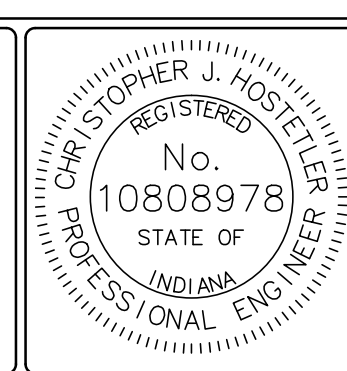
TREE PLANTING SEED MIX	
SEED	LBS/AC
Alfalfa (Medicago sativa)	5
Cave-In-Rock Switchgrass (Panicum virgatum)	5
Common Oat (Avena sativa)	50

FIELD SEED MIX	
SEED	LBS/AC
Common Oat (Avena sativa)	50
Little Bluestem (Schizachyrium scoparium)	5
Orchard Grass (Dactylis glomerata)	5
Perennial Ryegrass (Lolium perenne)	8
Smooth Brome (Bromus inermis)	5
Cave-In-Rock Switchgrass (Panicum virgatum)	5
Weeping Lovegrass (Eragrostis curvula)	2
White Clover (Trifolium repens)	10
Red Clover (Trifolium pratense)	8

- Notes:**
1. Wetland mix shall be spread 1 ft. each side of proposed water's edge.
  2. Loose fill shall be placed in the fill areas of the tree planting mix. Loose fill shall consist of a single 4 ft. lift and one pass of a low ground pressure dozer unless otherwise approved by the Engineer.
  3. Field mix shall be placed on access routes, staging areas, and all other disturbed areas not otherwise specified on revegetation map, except in riprap, coarse aggregate, and final water areas.
  4. Warm Season mix shall be placed with a drill.

**Legend**

	Building/Structure		Staging Area
	Paved Road/Drive		Riprap Feature
	Unpaved Road/Drive		Aggregate Feature
	Project Limits		Unpaved Feature
	Grading Limits		Field Mix
	Proposed Water		Wetland Mix
	Site Access		Tree Planting Mix
			Warm Season Mix



RECOMMENDED FOR APPROVAL: *Christopher J. Hostetler* 10/7/2020 DATE

DESIGNED BY: C.J.H.

DRAWN BY: C.J.H.

DATE MADE: 07/10/2018

DATE REVISED: 9/2/2020 10:00:23 AM

REVEGETATION PLAN

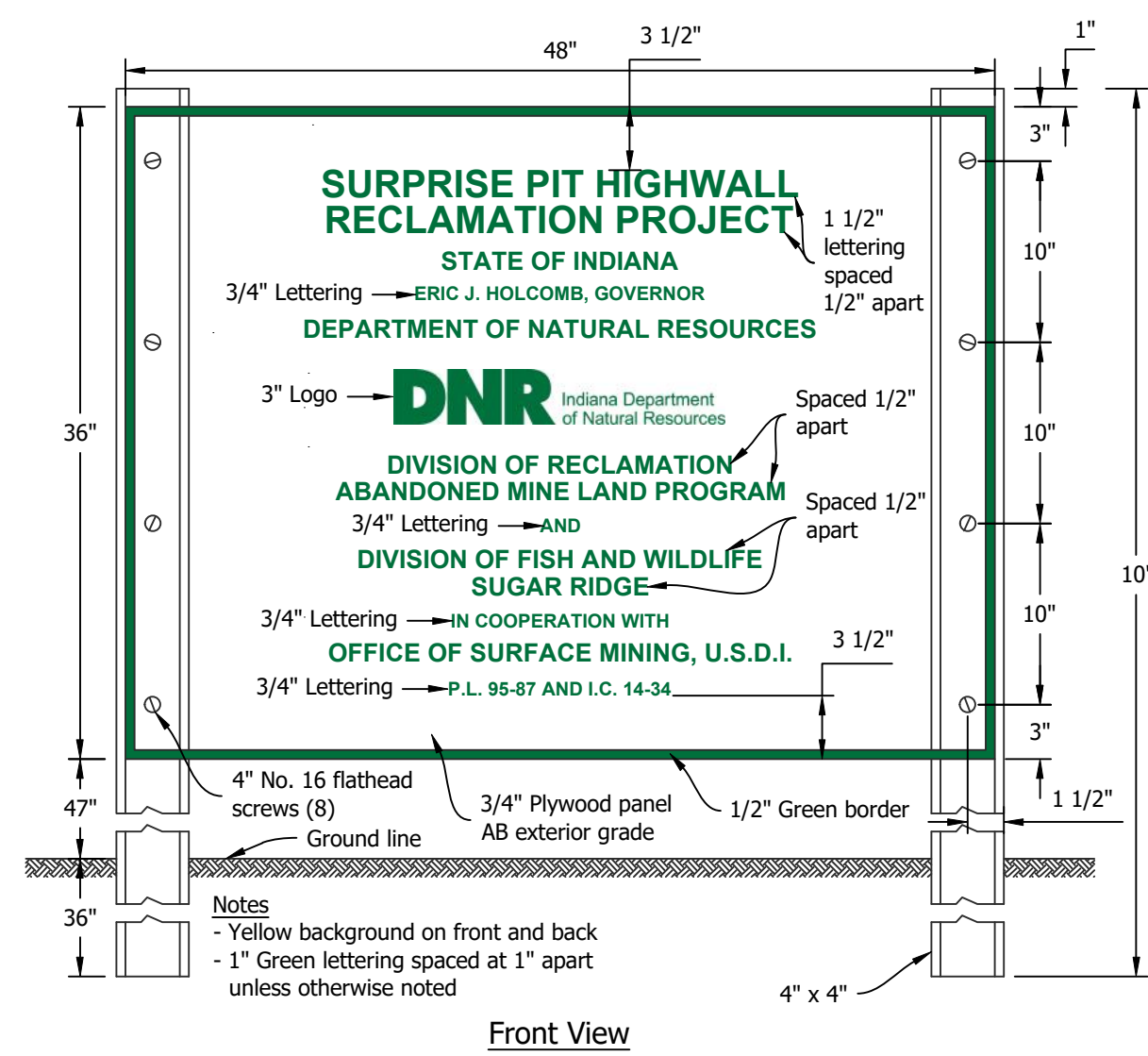
STATE OF INDIANA  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION

SCALE: 1" = 100'

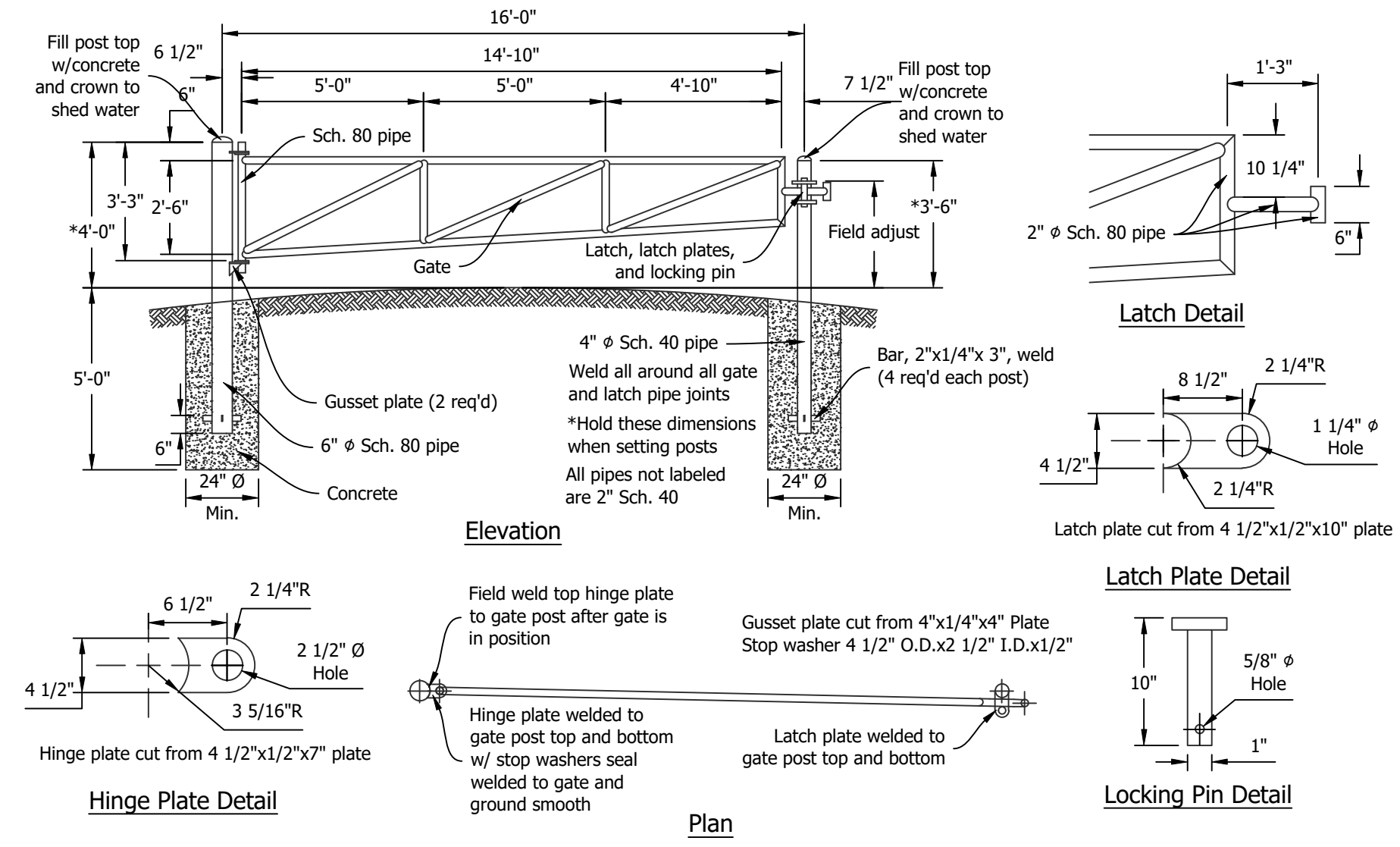
PROJECT: E008-302

SHEET: 7 OF 8

SITE: 2084

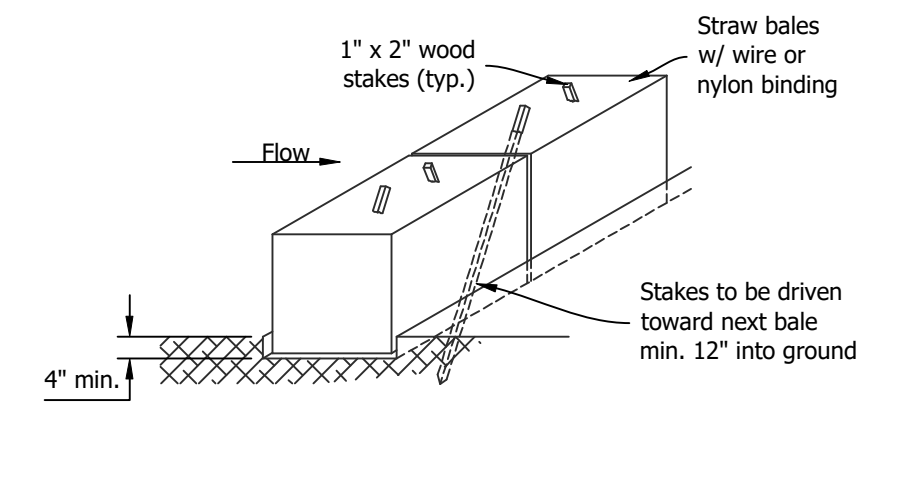


1 Project Sign  
Not to Scale

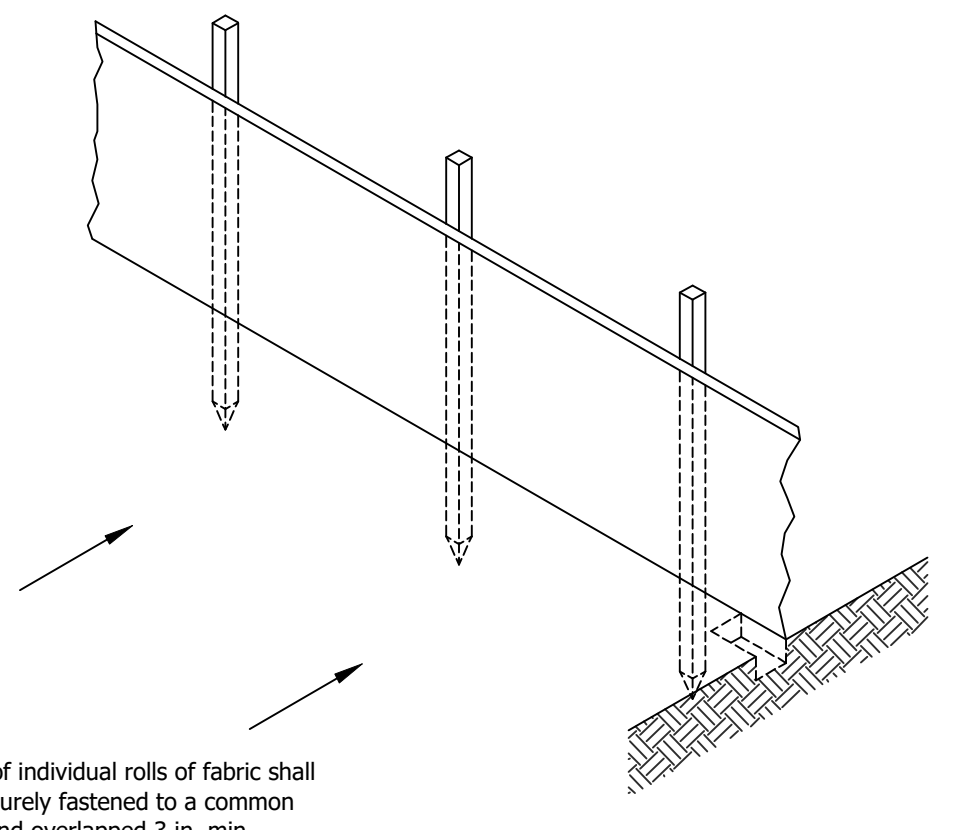


2 Access Gate  
No Scale

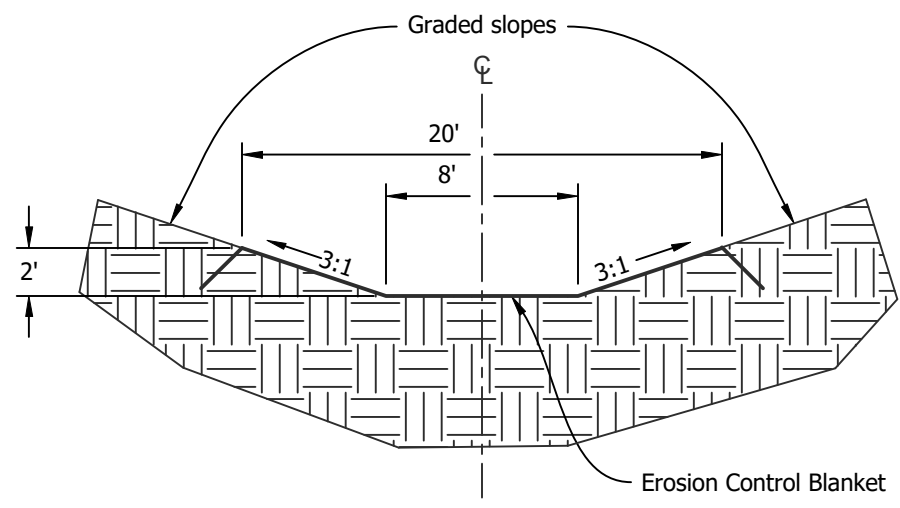
3 Temporary Check Dam, Straw Bale  
Not to Scale



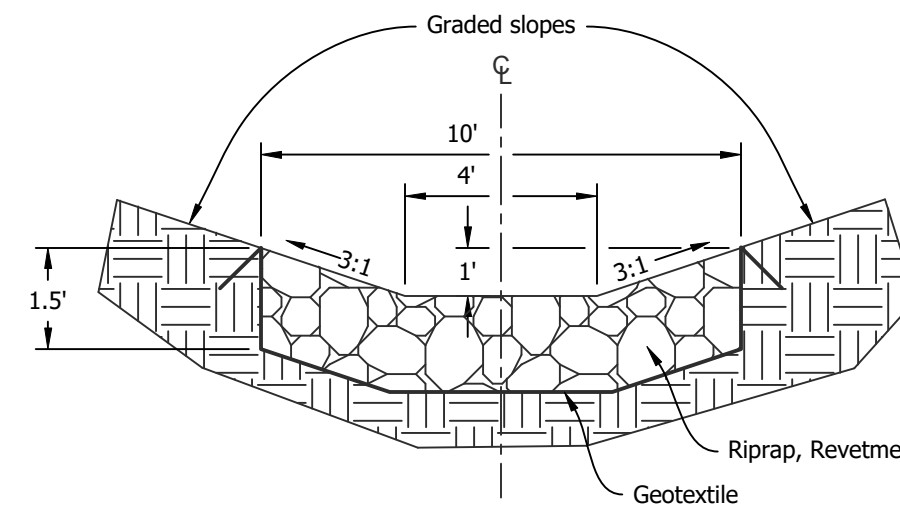
4 Silt Fence  
Not to Scale



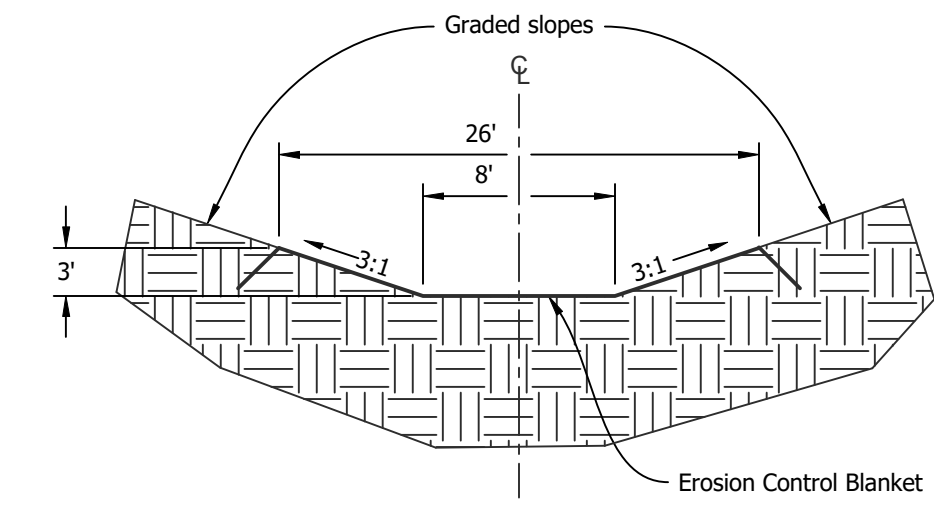
Note:  
Ends of individual rolls of fabric shall be securely fastened to a common post and overlapped 3 in. min.



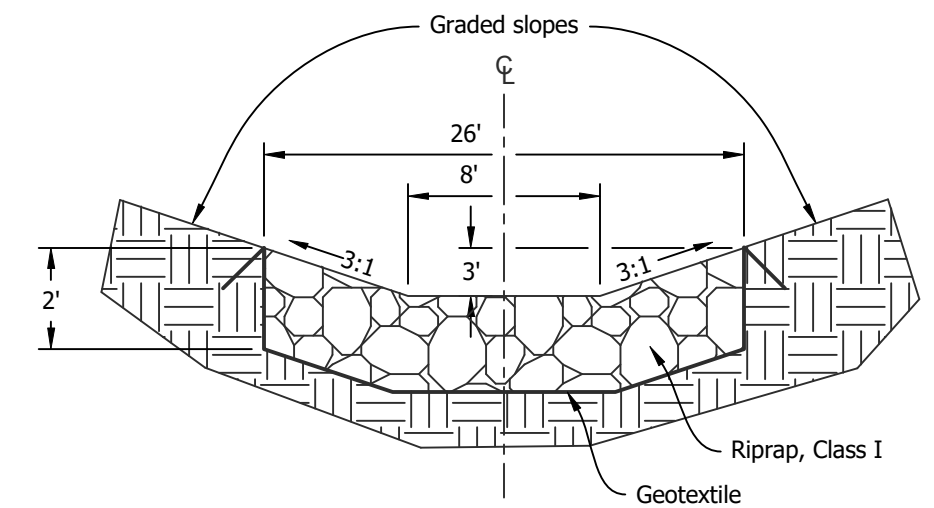
5 Ditch Lines A - C, H, I, and T, Type I  
Not to Scale



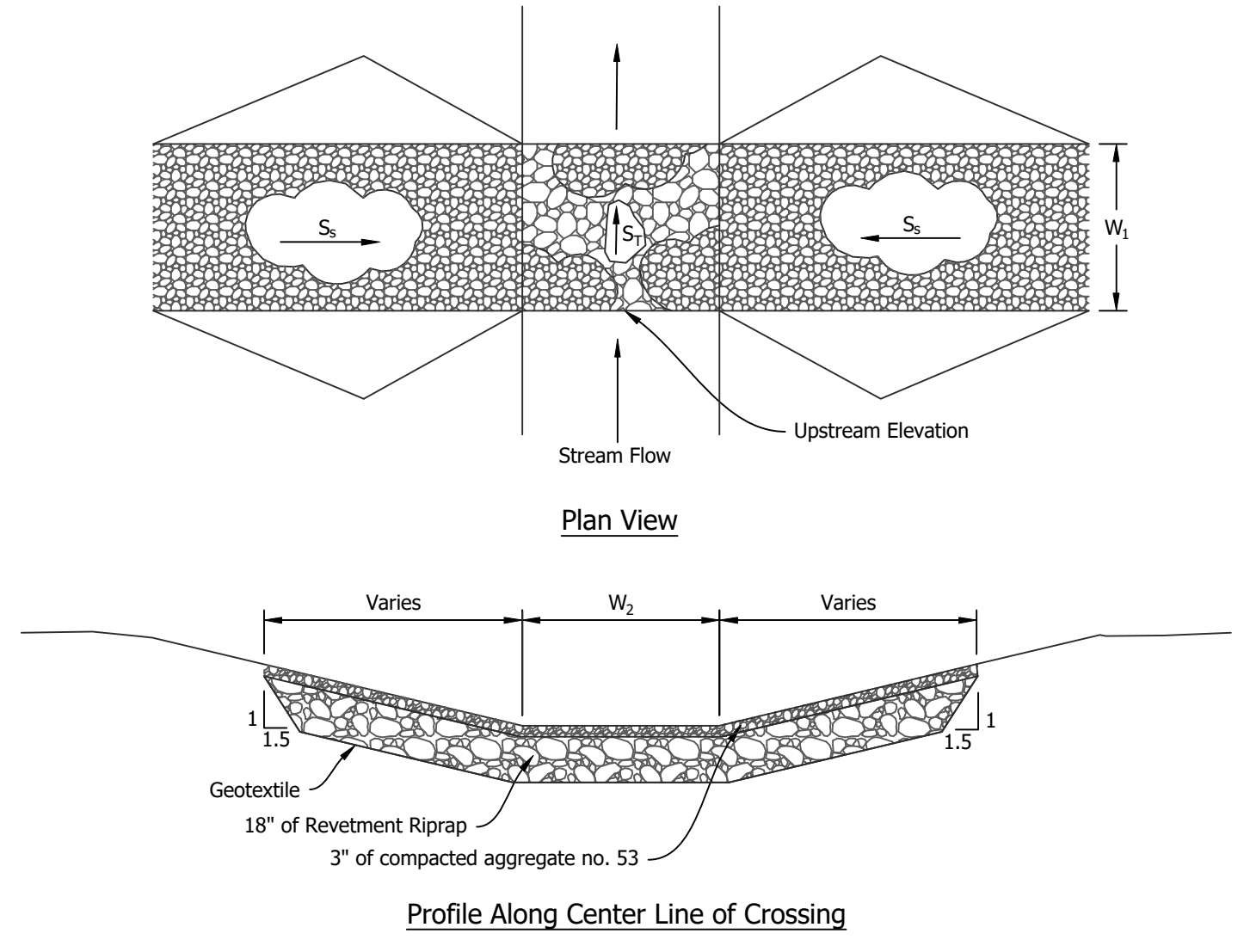
6 Ditch Lines D - G, J - Q, and U, Type II  
Not to Scale



7 Ditch Line R, Type III  
Not to Scale



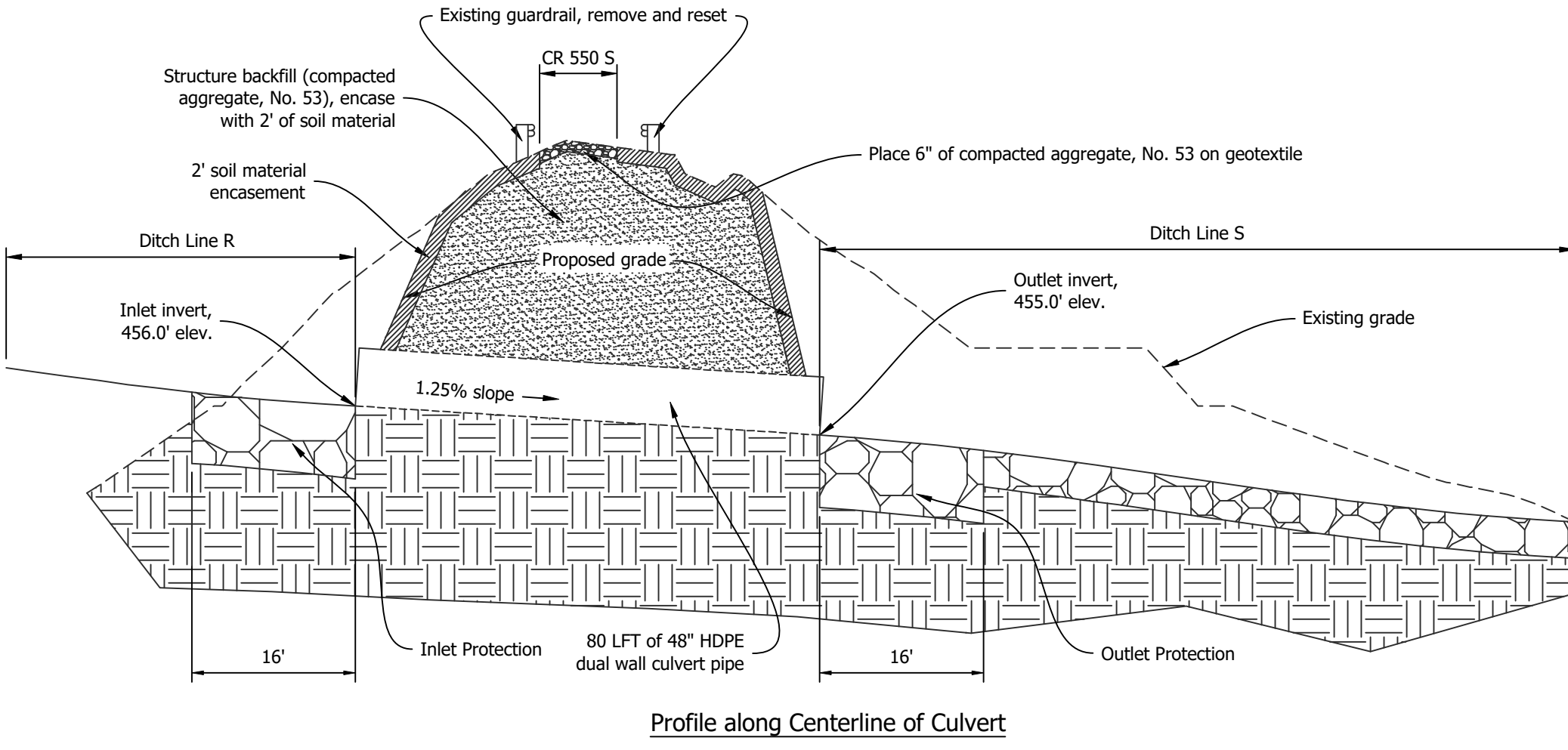
8 Ditch Line S, Type IV  
Not to Scale



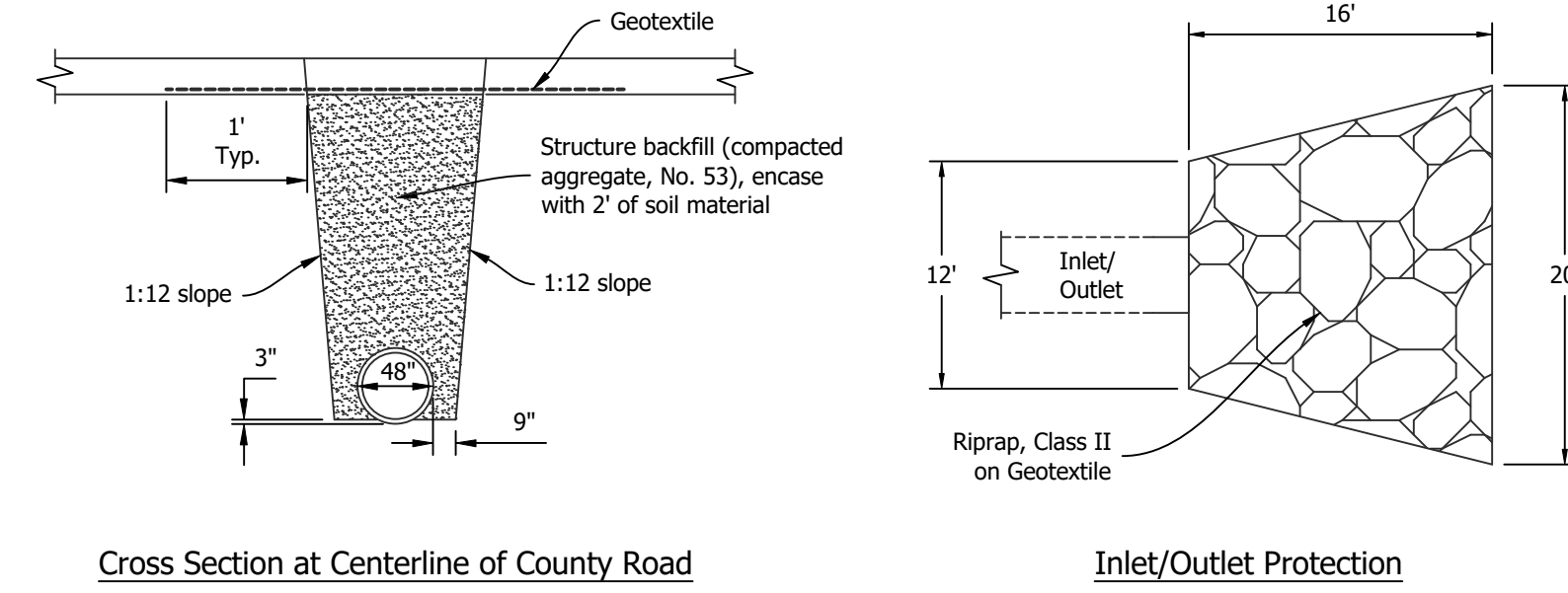
- NOTES
1. Compact surfacing material by equipment travel. The finished top surface of the rock in the bottom of the channel shall be no higher than the ditch bottom at the upstream edge of the crossing. It is expected that surfacing material will have to be replaced following high flow events.
  2. Blend approaches.
  3. Runoff shall be diverted from the approach.
  4.  $S_s$  and  $W_2$  are perpendicular to flow,  $W_1$  is parallel to flow.

8 Low Water Crossing  
Not to Scale

Low Water Crossing Information					
ID	Width, $W_1$	Base Width, $W_2$	Side Slope, $S_s$	Transverse Slope, $S_t$	Upstream Elev.
A	10'	8'	10:1	-1.00%	450.6'
B	10'	14'	Varies	-1.00%	451.4'
C	12'	12'	20:1	-0.76%	459.0'
D	12'	8'	10:1	-2.44%	465.1'
E	12'	8'	Varies	-1.60%	471.4'



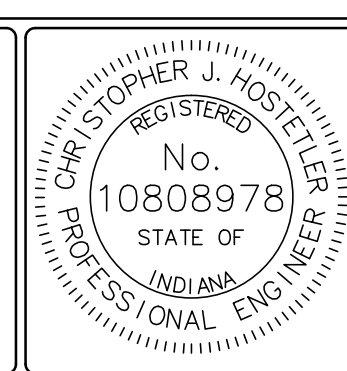
Profile along Centerline of Culvert



Cross Section at Centerline of County Road

Inlet/Outlet Protection

9 County Road Culvert  
Not to Scale



RECOMMENDED FOR APPROVAL: *Christopher J. Hostetler* 10/7/2020 DATE

DESIGNED BY: C.J.H.

DRAWN BY: C.J.H.

DATE MADE: 07/10/2018

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DETAILS

STATE OF INDIANA  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION

SCALE: AS NOTED

PROJECT: E008-302

SHEET: 8 OF 8

SITE: 2084