

Commercial/Industrial Floodplain Development Permit

Doddridge County, WV Floodplain Management

This permit has been issued to **Antero Resources**, and is for the approved commercial and/or industrial development project associated with this permit that impacts the FEMA-designated floodplain and/or floodway of Doddridge County, WV, pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance. This permit must be posted at the site of work as to be clearly visible, and must remain posted during entirety of development.

Permit: #14-315 ~ Antero Resources ~ Ramsey's Ridge Road Upgrade

Date Approved: 11/13/2014

Expires: N/A

Issued to: Antero Resources

POC: Rachel Grzybek 304-842-4008

Company Address: 535 White Oaks Blvd

Bridgeport, WV 26330

Project Address: Central District

Lat/Long: 39.294810N/80.837163W to 39.301061N/80.844742W

Purpose of development: Road upgrade project. Project does not impact floodplain.

Issued by: Edwin L. "Bo" Wriston, Doddridge County FPM (or designee)

Date: 11/13/2014

Legal Advertisement:

Doddridge County

Floodplain Permit Application

Please take notice that on the 8th day of November, 2014

Antero Resources

filed an application for a Floodplain Permit to develop land located at or about:

Central District

39.294810N/80.837163W to 39.301061N/80.844742W

Permit #14-315 Ramsey's Ridge Road Upgrade Project

(Note: This project is not within the floodplain)

The Application is on file with the Clerk of the County Court and may be inspected or copied during regular business hours. As this project is outside the FEMA identified floodplain of Doddridge County, Doddridge County Floodplain Management has no regulatory authority. Any interested persons who desire to comment shall present the same in writing by **December 08, 2014,** delivered to:

Clerk of the County Court

118 E. Court Street, West Union, WV 26456

Beth A Rogers, Doddridge County Clerk

Edwin L. "Bo" Wriston. Doddridge County Flood Plain Manager



Antero Resources 535 White Oaks Blvd. Bridgeport, WV 26330 Office 304.842.4100 Fax 304.842.4102

November 7, 2014

Doddridge County Commission Attn: Bo Wriston, Doddridge County Floodplain Manager 118 East Court Street, Room 102 West Union, WV 26456

Mr. Wriston:

Antero Resources Corporation would like to submit a Doddridge County Floodplain permit application for Ramseys Ridge Road Upgrade. Our project is located in Doddridge County, Central District where the road upgrade begins at coordinates 39.294810 N, 80.837163 W and will continue to Balli Pad site entrance at coordinates 39.301061 N, 80.844742 W. Per the FIRM Maps #54017C0115C, this location is out of the floodplain.

Attached you will find the following:

- ▶ Doddridge County Floodplain Permit Application
- > Surface Owner Information
- > FIRM Map
- > WV Flood Tool Map
- > Site Design Plans

If you have any questions please feel free to contact me at (304) 842-4008.

Thank you in advance for your consideration.

Rochel Dyl

Sincerely,

Rachel Grzybek Floodplain Engineer

Antero Resources Appalachian Corporation

Enclosures

DODDRIDGE COUNTY FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

SECTION 1: GENERAL PROVISIONS (APPLICANT TO READ AND SIGN)

- 1. No work may start until a permit is issued.
- 2. The permit may be revoked if any false statements are made herein.
- 3. If revoked, all work must cease until permit is re-issued.
- **4.** Development shall not be used or occupied until a Certificate of Compliance is issued.
- 5. The permit will expire if no work is commenced within six months of issuance.
- **6.** Applicant is hereby informed that other permits may be required to fulfill local, state, and federal requirements.
- 7. Applicant hereby gives consent to the Floodplain Administrator/Manager or his/her representative to make inspections to verify compliance.
- 8. I, THE APPLICANT CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

APPLICANT'S SIGNATURE	
DATE November 7, 2014	

SECTION 2: PROPOSE DEVELOPMENT (TO BE COMPLETED BY APPLICANT).

IF THE APPLICANT IS NOT A NATURAL PERSON, THE NAME, ADDRESS, AND TELEPHONE NUMBER OF A NATURAL PERSON WHO SHALL BE APPOINTED BY THE APPLICANT TO RECEIVE NOTICE PURSUANT TO ANY PROVISION OF THE CURRENT DODDRIDGE COUNTY FLOODPLAIN ORDINANCE.

APPLICANT'S NAME: Antero Resources Corporation - Randy Kloberdanz,	
ADDRESS: 1615 Wynkoop Street, Denver, CO 80202	-
TELEPHONE NUMBER: Contact Rachel Grzybek: (304) 842-4008	

BUILDER'S NAME: Antero Resources Corporation
ADDRESS: 1615 Wynkoop Strett, Denver, CO 80202
TELEPHONE NUMBER: (303)-357-7310
ENGINEER'S NAME: Hannah Engineering
ADDRESS: 1121 Beverly Pikes, Elkins, WV 26241
TELEHONE NUMBER: (304) 636-7777
PROJECT LOCATION:
NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) See Surface Owner Information
ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT)
DISTRICT:
DATE/FROM WHOM PROPERTY
PURCHASED:
LAND BOOK DESCRIPTION:
DEED BOOK REFERENCE: See Surface Owner Information
TAX MAP REFERENCE: See Surface Owner Infromation
EXISTING BUILDINGS/USES OF PROPERTY:
NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT
NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY See Surface Owner Information
TAX MAP REFERENCE: See Surface Owner Infromation EXISTING BUILDINGS/USES OF PROPERTY: NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY See Surface Owner Information ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY
NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY See Surface Owner Information ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE

To avoid delay in processing the application, please provide enough information to easily identify the project location.

DESCRIPTION OF WORK (CHECK ALL APPLICABLE BOXES) A. STRUCTURAL DEVELOPMENT

ACTIVITY STRUCTURAL TYPE Χ **New Structure** Residential (1 - 4 Family)[]Addition Residential (more than 4 Family) Π Alteration Non-residential (floodproofing) Relocation Combined Use (res. & com.) **Demolition** Replacement Manufactured/Mobil Home **OTHER DEVEOPLMENT ACTIVITIES:** В. Fill Π Mining Drilling **Pipelining** Grading Excavation (except for STRUCTURAL DEVELOPMENT checked above) []Watercourse Altercation (including dredging and channel modification) n Drainage Improvements (including culvert work) X Road, Street, or Bridge Construction Subdivision (including new expansion) Individual Water or Sewer System

C. STANDARD SITE PLAN OR SKETCH

Other (please specify)

 Π

- 1. SUBMIT ALL STANDARD SITE PLANS, IF ANY HAVE BEEN PREPARED.
- 2. IF STANDARD SITE PLANS HAVE NOT BEEN PREPARED:

 SKETCH ON A SEPARATE 8 ½ X 11 INCH SHEET OF PAPER THE SHAPE AND LOCATION OF THE LOT. SHOW THE LOCATION OF THE INTENDED CONSTRUCTION OR LAND USE INDICATING BUILDING SETBACKS, SIZE & HEIGHT. IDENTIFY EXISTING BUILDINGS, STRUCTURES OR LAND USES ON THE PROPERTY.
- 3. SIGN AND DATE THE SKETCH.

ACTUAL TOTAL CONSTRUCTION COSTS OF THE COMPLETE DEVELOPMENT
IRRESPECTIVE OF WHETHER ALL OR ANY PART OF THE SUBJECT PROPOSED
CONSTRUCTION PROJECT IS WITHIN THE FLOODPLAIN \$ N/A - Location is not within the floodplain

D. ADJACENT AND/OR AFFECTED LANDOWNERS:

ACTIVITY WILL OCCUR AND ALL OTHER SURFACE OWNERS UP & DOWN STREAM) WHO OWN PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY (IF ONE HAS BEEN COMPLETED). NAME: N/A-No properties sharing an NAME:____ ADDRESS: immediate and common boundary ADDRESS: up or down stream due to the location not being in floodplain NAME: NAME:_____ ADDRESS: ADDRESS: 1. NAME AND ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON ANY ADJACENT PROPERTY AT THE TIME THE FLOODPLAIN PERMIT APPLICATION IS FILED AND THE NAME AND ADDRESS OF AT LEAST ONE ADULT RESIDING IN ANY HOME ON ANY PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY. NAME: N/A-No properties sharing an NAME:____ ADDRESS: immediate and common boundary ADDRESS: up or down stream due to the location not being in floodplain NAME:____ NAME:_____ ADDRESS:____ ADDRESS:____

1. NAME AND ADDRESS OF ALL OWNERS OF SURFACE TRACTS ADJACENT TO THE AREA OF THE SURFACE TRACT (UP & DOWN STREAM) UPON WHICH THE PROPOSED

E. CONFIRMATION FORM

THE APPLICANT ACKNOWLEDGES, AGREES, AND CONFIRMS THAT HE/IT WILL PAY WITHIN 30 DAYS OF RECEIPT OF INVOICE BY THE COUNTY FOR ALL EXPENSES RELATIVE TO THE PERMIT APPLICATION PROCESS GREATER THAN THE REQUIRED DEPOSIT FOR EXPENSES INCLUDING:

- (A) PERSONAL SERVICE OF PROCESS BY THE DODDRIDGE COUNTY SHERIFF AT THE RATES PERMITTED BY LAW FOR SUCH SERVICE.
- (B) SERVICE BY CERTIFIED MAIL RETURN RECEIPT REQUESTED.
- (C) PUBLICATION.

- (D) COURT REPORTING SERVICES AT ANY HEARINGS REQUESTED BY THE APPLICANT.
- (E) CONSULTANTS AND/OR HEARING EXPERTS UTILIZED BY DODDRIDGE COUNTY FLOODPLAIN ADMINISTRATOR/MANAGER OR FLOODPLAIN APPEALS BOARD FOR REVIEW OF MATERIALS AND/OR TESTIMONY REGARDING THE EFFICACY OF GRANTING OR DENYING THE APPLICANT'S FLOODPLAIN PERMIT.

NAN	IE (PRINT): Randy Noberdanz		·
SIGN	IATURE:	DATE:_	November 7, 2014
Afte Adm	r completing SECTION 2, APPLICANT should submit form in inistrator/Manager or his/her representative for review.	to Floodplair	1
SEC Adn	TION 3: FLOODPLAIN DETERMINATION (to be continued in the	mpleted b	<u>y Floodplain</u>
THE	PROPOSED DEVELOPMENT:		
THE	PROPOSED DEVELOPMENT IS LOCATED ON:		
FIRM	Panel:		
Date	d:		
[] revie	Is <u>NOT</u> located in a Specific Flood Hazard Area (Notify a w is complete and NO FLOOPLAIN DEVELOPMENT PERM	applicant tha	et the application
D -	Is located in Special Flood Hazard Area. FIRM zone designation		:
	100-Year flood elevation is:		NGVD (MSL)
[]	Unavailable		
[]	The proposed development is located in a floodway. FBFM Panel No	Dated_	
	See section 4 for additional instructions.		

	SIGNED DATE
SECT	TION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by
	dplain Administrator/Manager or his/her representative)
	epplicant must submit the documents checked below before the application can be essed.
	A plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.
()	Development plans, drawn to scale, and specifications, including where applicable: details for anchoring structures, storage tanks, proposed elevation of lowest floor, (including basement or crawl space), types of water resistant materials used below the first floor, details of flood proffing of utilities located below the first floor and details of enclosures below the first floor. Also
0	Subdivision or other development plans (If the subdivision or development exceeds 50 lots or 5 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if they are not otherwise available).
[]	Plans showing the extent of watercourse relocation and/or landform alterations.
0	Top of new fill elevationFt. NGVD (MSL). For floodproofing structures applicant must attach certification from registered engineer or architect.
0	Certification from a registered engineer that the proposed activity in a regulatory floodway will not result in any increase in the height of the 100-year flood. A copy of all data and calculations supporting this finding must also be submitted.

Contractor's License and a Manufactured Home Installation License as required by the

Manufactured homes located in a floodplain area must have a West Virginia

Federal Emergency Management Agency (FEMA).

[]

]	Other:			
EC.	TION E. DEDI	MIT DETERMINATION (T.)		
LC	Administra	MIT DETERMINATION (To be completed by Floodplain ator/Manager or his/her representative)		
	provisions of County on M	mined that the proposed activity (type is or is not) in conformance with f the Floodplain Ordinance adopted by the County Commission of Doddrid lay 21, 2013. The permit is issued subject to the conditions attached to ar f this permit.		
	SIGNED	DATE		
	with the prov	lain Administrator/Manager found that the above was not in conformance visions of the Doddridge County Floodplain Ordinance and/or denied that the applicant may complete an appealing process below.		
	APPEALS:	Appealed to the County Commission of Doddridge County? [] Yes {} No Hearing Date:		
		County Commission Decision - Approved [] Yes [] No		
	CONDITIONS	·		

SECTION 6: AS-BUILT ELEVATIONS (To be submitted by APPLICANT before Certificate of Compliance is issued).

The following information must be provided for project structures. This section must be completed by a registered professional engineer or a licensed land surveyor (or attach a certification to this application).

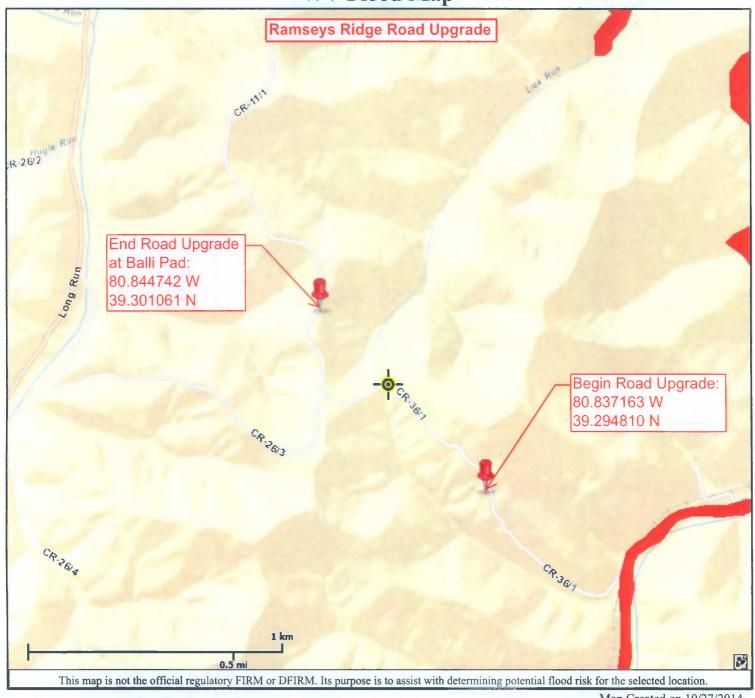
COMPLETE 1 OR 2 BELOW:

1	Actual (As-Built) Elevation of the top of the lowest floor (including basement or crawl space isFT. NGVD (MSL)
2	Actual (As Built) elevation of floodproofing isFT. NGVD (MSL)
Note: applic	Any work performed prior to submittal of the above information is at risk of the ant.
SECTI	ON 7: COMPLIANCE ACTION (To be completed by the Floodplain
<u>Admi</u>	nistrator/Manager or his/her representative).
as app	poodplain Administrator/Manager or his/her representative will complete this section licable based on inspection of the project to ensure compliance with the Doddridge y Floodplain Ordinance.
INS	SPECTIONS:
	DATE:BY:BY:
CO	MMENTS
SECTION Admin	ON 8: CERTIFICATE OF COMPLIANCE (To be completed by Floodplain histrator/Manager or his/her representative).
	ate of Compliance issued: DATE:

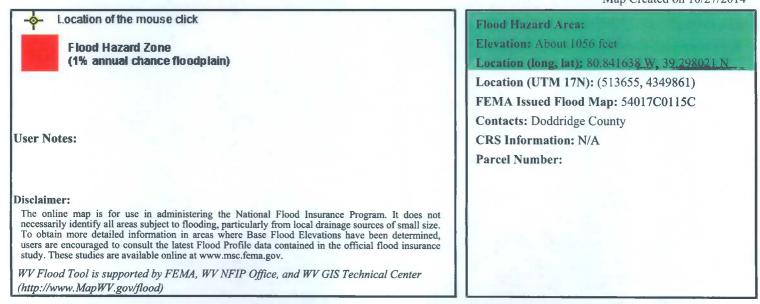
CERTIFICATE OF COMPLIANCE FOR DEVELOPMENT IN SPECIAL FLOOD HAZARD AREA (OWNER MUST RETAIN)

PERMIT PERMIT	T NUMBER:
PURPOSE –	
CONSTRUCTION LOCATION:	
OWNER'S ADDRESS:	
	•
THE FOLLOWING MUST BE COMP	PLETED BY THE FLOODPLAIN
ADMINISTRATOR/MANAGER OR	HIS/HER AGENT.
COMPLIANCE IS HEREBY CE	ERTIFIED WITH THE REQUIREMENT OF THE
FLOODPLAIN ORDINANCE ADOPT	ED BY THE COUNTY COMMISSION OF
DODDRIDGE COUNTY ON MAY 21	l, 2013.
SIGNED	
SIGNED	DATE

WV Flood Map



Map Created on 10/27/2014



LEGAL ADVERTISEMENT:

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Doddridge County
Floodplain Permit 'Application
Please-take notice that on the 8th day of November,
2014 Antero Resources' filed an application for a
Floodplain Permit to developland located accorabour.
Central District 39 2948 [ON/80.8371/63]W to
39:301061 N/80.844742WP ermit #14-315 Ramsey's Ridge
Road Upgrade Project (Note This projectis not within
the floodplain). The Application is on file with the Clerk
of the County Court and may be inspected or copied
during regular business hours. As this project is outside
the FEMA identified floodplain of Ibodariade County,
Doddridge County Floodplain Management has no
regulatory authority, Any interested persons who desire
to occument shall present she printed in writing by
December 8, 2014.

Delivered to the:

Clerk of the County Court

1187E. Court Street, West Union, WV 26456
Beth A. Rogers, Doddridge County Flood Plain
Manager:

11718-2xb

STATE OF WEST VIRGINIA, COUNTY OF DODDRIDGE, TO WIT

I, Virginia Nicholson, Editor of THE HERALD RECORD, a weekly newspaper published regularly, in Doddridge County, West Virginia, Do Hereby Certify That the Accompanying Legal Notice Entitled: was published in said paper for successive weeks beginning with the issue ending with the issue of November 25th that said notice contains ... \$10 amounts to the sum of \$. . . FOR FIRST PUBLICATION, SECOND **PUBLICATION IS 75% OF THE FIRST PUBLICATION** and each publication thereafter **EDITOR** NOTARY RUBLIC OFFICIAL SEAL Notary Public, State Of West Virginia

LAURA J STICKEL 212 Edmond Street West Union, WV 26456 My Commission Expires June 14, 2023



The Doddridge Independent **PUBLISHER'S CERTIFICATE**

I, Michael D. Zorn, Publisher of The Doddridge Independent, A newspaper of general circulation published in the town of West Union, Doddridge County, West Virginia, do hereby certify that:

Antero Resources

filed an application for a Floodplain Permit to develop land located at or about:

Central District

39.294810N/80.837163W to 39.301061N/80.844742W Permit #14-315 Ramsey's Ridge Road Upgrade Project

was published in The Doddridge Independent 2 times commencing on Friday, November 14, 2014 and Ending on Friday, November 21, 2014 at the request of:

Doddridge County Commission Bo Wriston: Floodplain Manager

Given under my hand this Monday, November 24, 2014

The publisher's fee for said publication is:

\$ 23.38 1st Run/\$ 17.53 Subsequent Runs This Legal Ad Total: \$,40.91

Michael D/Z/6rp

Publisher of the Doddridge Independent

Subscribed to and sworn to before me on

this date: 11 / 24 / 14

Notary Public in and for Doddridge County

My Commission expires on

Public Notice · Legal Notice

ase take nouce that on the Bundayo November 2014. AnteroiResources

filed an application for a Flood plain Remit to develop land located

@Gentral District 39/294810N/80/837/163W/to/39/301061N/80/844742W Permit #14 315 Ramsey's Ridge Road Upgrade Project

(Note: This project as not within the floodplain).

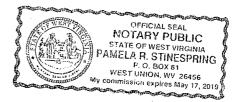
The Application is on file with the elerk of the County Court and m be inspected or copied during regular business hours. As this project is outside the FEMA identified flood plain of Doddridge County Doddridge outside the FEMA identified flood plain of Doddridge County. outside the FEMA identified alloodplain of Doddridge County, Doddridge County Floodplain Management has no regulatory authority. Any County Floodplain Management has no regulatory authority. Any interested persons who desire to comment shall present the same in writing by December 108, 2014, delivered to writing by December 108, 2014, delivered to Clerk of the County Court.

Clerk of the County Court.

F18E: Court Street, West Union. WV 26456.

Beth A Rogers. Doddridge County Clerk.

Edwin Web Wriston Doddridge County Floo





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Edwin Wriston, Doddridge County Floodplain Manager& Doddridge County Commission

Given under my hand this Tuesday, January 27, 2015

The publisher's fee for said publication is:

\$ 25.27 1st Run/\$ 18.95 Subsequent Runs This Legal Ad Total: \$ 44.22

Michael Zorn

Publisher of The Doddridge Independent

Subscribed to and sworn to before me on

this date:

: 21 /JAN/ 2015

Notary Public in and for Doddridge County

My Commission expires on

The _____ day of ____ MA_

20\0



Public Notice • Legal Notice

Legal Advertisement:
Doddridge County
Floodplain Permit Application

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Antero Resources

filed an application for a Floodplain Permit to develop land located at or about:

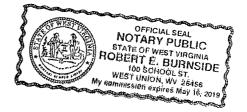
Central District

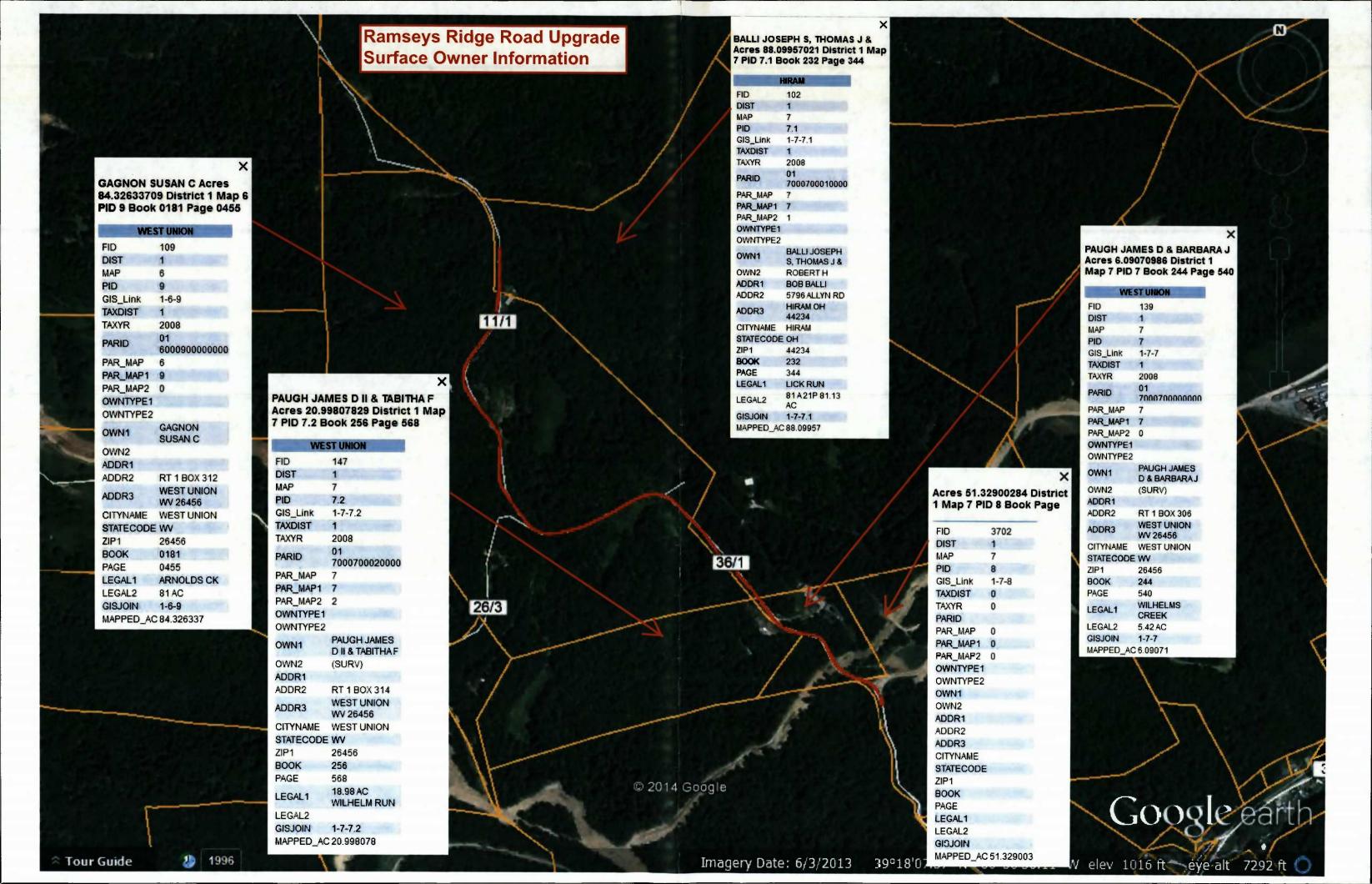
39.294810N/80.837163W to 39.301061N/80.844742W Permit #14-315 Ramsey's Ridge Road Upgrade Project

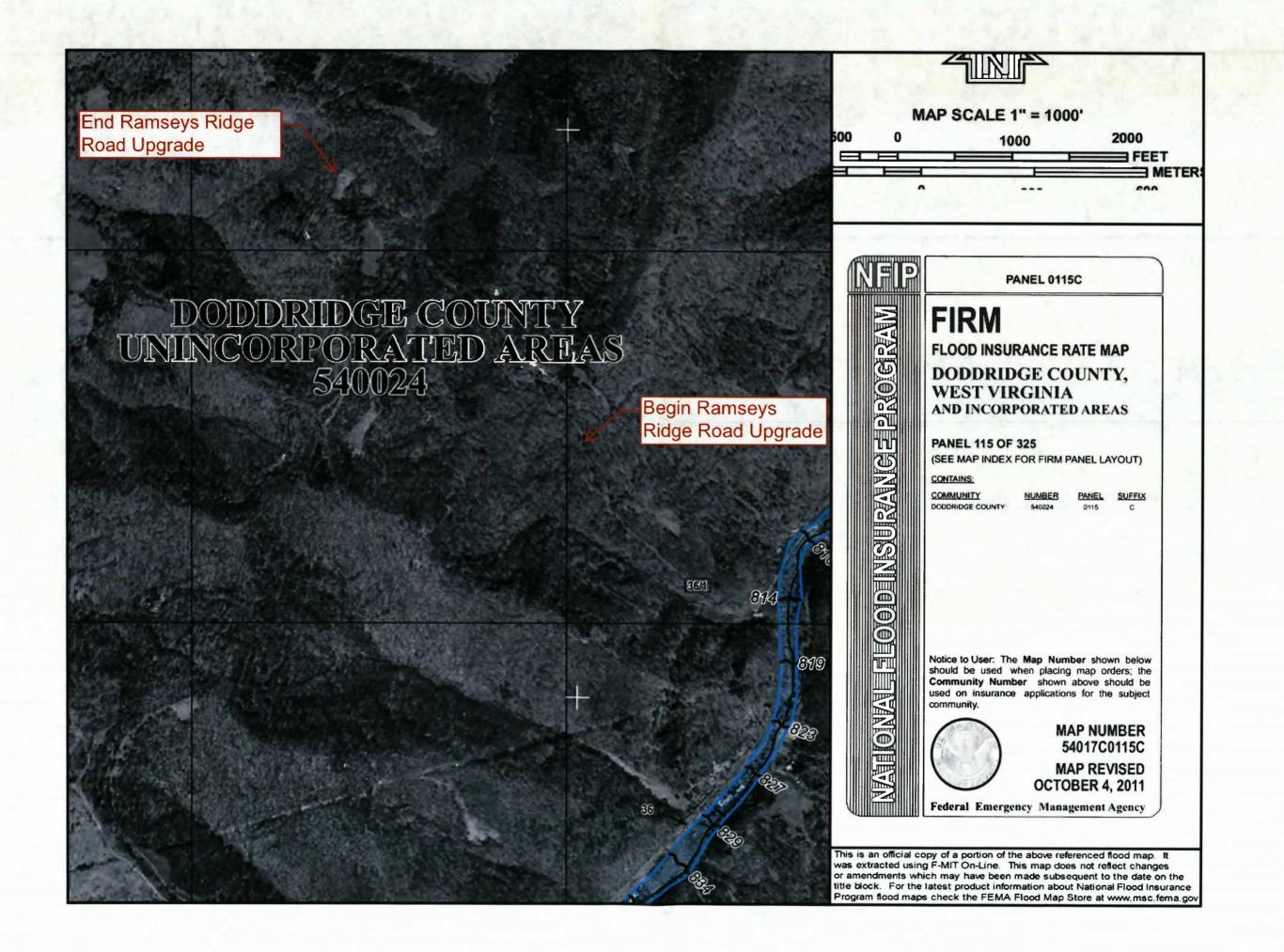
(Note: This project is not within the floodplain)

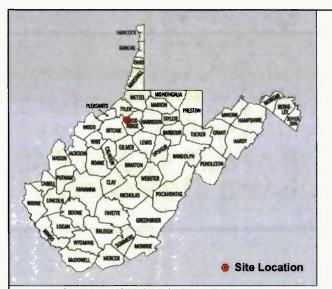
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Clerk of the County Court 118 E. Court Street, West Union, WV 26456 Beth A Rogers, Doddridge County Clerk Edwin L. "Bo" Wriston. Doddridge County Flood Plain Manager









CENTRAL DISTRICT, DODDRIDGE COUNTY

Project Contacts

Antero Resources

Conrad Baston, Senior Civil Engineer 304-842-4100

Eli Wagoner, Environmental Engineer 304-622-3842, ext 311 - Off. 304-476-9770 - Cell

John Kawcak, Engineer 817-368-1553

Aaron Kunzler, Construction Supervisor 405-227-8344

Roger Dunlap, Survey Coordinator 304-622-3842 - Off. 304-651-5588 - Cell

Engineer & Surveyor

Dewayne N. Hannah, PE; PS Hannah Engineering 304-636-7777 - Off. 304-642-9333 - Cell

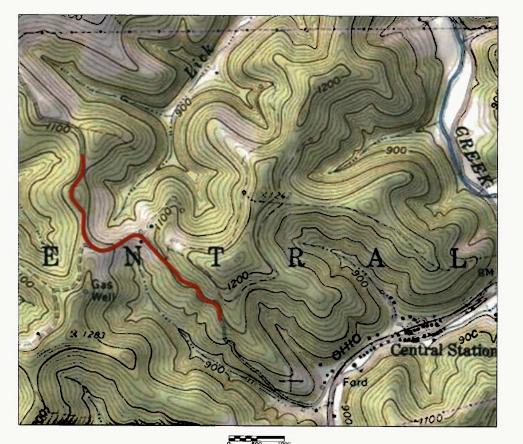
Wetland Delineator

Walter Veselka, Senior Environmental Scientist Allstar Ecology 304-906-5536 - Off.

RAMSEYS RIDGE ROAD (WV 36/1 & 11/1)

ROAD IMPROVEMENT PROJECT TO BALLI PAD SITE DESIGN, CONSTRUCTION PLAN, & EROSION & SEDIMENT CONTROL PLANS

ANTERO RESOURCES CORPORATION



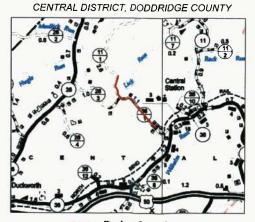
SITE LOCÁTIONS NAD83		
Begin Ramseys Ridge Road (UTM Meters)	N = 4,349,505.432	E = 514,041.645
End Ramseys Ridge Road (UTM Meters)	N = 4,350,197.999	E = 513,386.907
	LATITUDE	LONGITUDE
Begin Ramseys Ridge Road	N = 39.294810°	W = 80.837163
End Ramseys Ridge Road	N = 39.301081' W = 80.844742	

Proposed Construction Area	2.21 Ac
Existing Road Area	- 1.86 Ac
Total Road Disturbance	0.35 Ac
Spoil Area	0.43 Ac
Culverts & Drainage	+ 0.26 Ac
Total Disturbance Area	1.04 Ac

FLOODPLAIN CONDIT	TONS	·	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:		NO	
PERMIT NEEDED FOR FLOODPLAIN COORDINATOR		NO	
HEC-RAS STUDY COMPLETED:		N/A	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:		N/A	
FIRM MAP NUMBER(S) FOR SITE: 54017C0115C			
ACREAGE OF CONSTRUCTION IN FLOOD	PLAIN:	N/A	

MISS Utility of West Virginia 1-800-245-4848 West Virginia State Law (Section XXV: Chapter 24 - C) Requires that you call two business days before you dig in the state of West Virginia IT'S THE LAW!!!





Project Location

N.T.S.

AFFECTED TAX PARCELS: CENTRAL DISTRICT

TM 7 - PCL. 20 LARRY E. COTTRILL DB 275 PG 144 145 ACRES

(Affected Area - 0.003 Ac. for Drainage)

TM 7 - PCL. 7 JAMES D. & BARBARA J. PAUGH DB 197 PG 500

(Affected Area - 0.04 Ac. for Road Fill)

TM 6 - PCL. 9 SUSAN GAGNON DB 181 PG 455

(Affected Area - 0.13 Ac. for Drainage (Affected Area - 0.04 Ac. for Road Cut) (Affected Area - 0.43 Ac. for Spoil Area)

DRAWING INDEX

West Virginia State Plane Coordinate System

Established By Survey Grade GPS & OPUS

North Zone NAD83

Elevations Based on NAVD88

- **COVER SHEET**
- SCHEDULE OF QUANTITIES
- CONSTRUCTION, EROSION & SEDIMENT CONTROL NOTES
- **EXISTING CONDITIONS**
- OVERALL SITE PLAN INDEX
- ROAD PLAN A
- ROAD PLAN B
- ROAD PLAN C
- ROAD PROFILE
- ROAD SECTIONS
- DETAILS

DEWAYNE N. HANNAH P.E. No. WV - 7233; P.S. No. WV - 1213

RAMSEYS RIDGE BOAD WV36/1211/1)

DATE



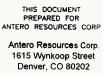
ANTERO RESOURCES

RAMSEYS RIDGE ROAD **IMPROVEMENT PROJECT**

COVER SHEET CENTRAL DISTRICT DODDRIDGE COUNTY, WV

 DATE:
 SCALE:
 JOB NO:
 DRAWN BY:

 OCT. 14, 2014
 AS SHOWN
 14 ARAC 02
 JERRI REED



RESOURCES

ANTERO

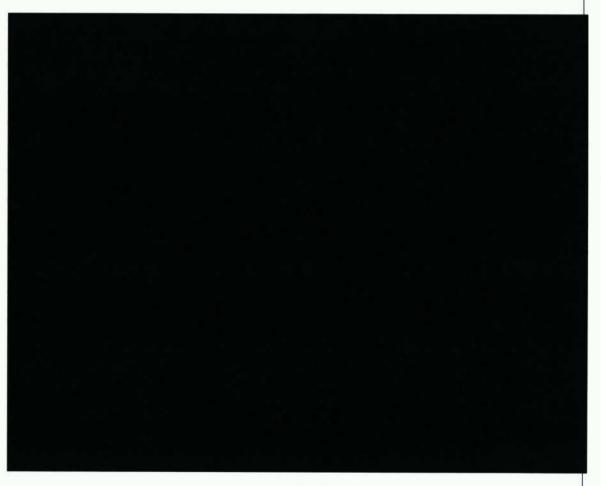
\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 CLEARING & GRUBBING (TREE REMOVAL XOLX ACRES) JUTE MATTING - SLOPE MATTING 8" COMPOST FILTER SOCK 0.0 \$0.00 \$0.00 \$0.00 18" COMPOST FILTER SOCK 24" COMPOST FILTER SOCK 32" COMPOST FILTER SOCK UF UF SUPER SILT FENCE \$0.00 9" STRAW WATTLES UF CONCRETE BIN BLOCKS (2' x 2' x 6') GABION CAGES WITH STONE (3' X 3' X 6') HORIZONTAL REINFORCEMENT (INSTALL TENSAR TX190 GEOGRID OF EQUIVALENT) FINAL PRICE \$0.00 WELL PAD ACCESS ROADS WATER CONTAINMENT PADS and/or PIT/IMPOUNDMENT TRUCK TURNAROUND PAD EXCESS MATERIAL STOCKPILES TORROW CONTRICT \$0.00 a \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 TOPSOIL STOCKPILES DIVERSION DITCH LF UNIT UNIT PRICE FINAL PRICE \$Y \$0.00 TON \$0.00 \$Y \$0.00 ACCESS ROADS 16' FDR ACCESS ROADS 1 1/2" OR 3/4" CRUSHER RUN STONE (4" THICK) \$0.00 \$0.00 \$0.00 \$0.00 ACCESS ROADS GEOTEXTILE FABRIC (US 200) *INSTALL TENSAR TX190 GEOGRID or EQUIVALEN STAGING AREA 6" OR 4" MINUS CRUSHER RUN AGGREGATE (8" THICK) STAGING AREA 1/2" or 3/4" CRUSHER RUN AGGREGATE (2" THICK) STAGING AREA GEOTEXTILE FABRIC (US 200) TON \$0.00 0.0 \$0.00 \$0.00 \$0.00 TRUCK TURNAROUND PAD 6" OR 4" MINUS CRUSHER RUN AGGREGATE (8" THICK) TRUCK TURNAROUND PAD 1 1/2" or 3/4" CRUSHER RUN AGGREGATE (2" THICK) TRUCK TURNAROUND PAD GEOTEXTILE FABRIC (US 200) "INSTALL TENSAR TX 190 GEOGRID or EQUIVALENT TOTAL \$0.00 TON \$0.00 \$0.00 \$0.00 \$0.00 15" HDPE 18" HDPE 24" HDPE 36" HDPE 36" HDPE 42" HDPE 42" HDPE 66" HDPE RA RIP RAP (INLETS/OUTLETS) AASHTO 81 STONE (DITCH CHECK FINAL PRICE \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 LF TON \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 AASHTO #1 STONE (DITCH CHECKS) DITCH LINING (ACCESS ROAD) JUTE MATTING SY DITCHLINING - (ACCESS ROAD) ROCK-UNED DITCH (R4) FINAL PRICE 8 FT CHAINLINK FENCE w/ 3 STRAND BARB WIRE 16 FT DOUBLE GATE UNIT UNIT PRICE FINAL PRICE SITE SEEDING (LIME, FERTILIZER, SEEDING, AND HYDRO-MULCH w/TACK (HYC-2 OR EQUAL)) \$0.00 \$0.00 UNIT UNIT PRICE FINAL PRICE \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 *ROCK CLAUSE - HOE RAMMING *FRENCH DRAINS *PREMO FIRALINS *PHASE 1 FROINGS - STEEL CORRUGATED PANELS w/*T" POST (10 FT CENTERS) - WETLAND PROTECTION *PHASE 2 FENCING - SILT FENCE AND OR FILTER SOCK OUTSIDE OF PHASE 3 FENCING - WETLAND PROTECTION *PHASE 3 FENCING - ORANGE SAFETY FENCE w/*T" POST (10FT CENTERS) - WETLAND PROTECTION *PHASE 3 FENCING - ORANGE SAFETY FENCE w/*T" POST (10FT CENTERS) - WETLAND PROTECTION *PHASE 3 FENCING - ORANGE SAFETY FENCE w/*T" POST (10FT CENTERS) - WETLAND PROTECTION **SILT FENCE **THE STAKEOUT** *4 FT FARM FENCE (WOOD CORNER AND PULL POST & "T" POST - 10 FT SPACING) **SSTRAND BARB WIRE FENCE (WOOD CORNER AND PULL POST & "T" POST - 10 FT SPACING) \$0.00 \$0.00 \$0.00 \$0.00 LF HOUR \$0.00 \$0.00 **GRAND TOTAL** \$0.00

RAMSEYS RIDGE ROAD SCHEDULE OF QUANTITIES ANTERO RESOURCES CORPORATION



THIS DOCUMENT
PREPARED FOR
ANTERO RESOURCES CO





Traffic Control Plan

DATE:	REVISIONS:	
-		
_		
		HANNAH
		ENGINEERING
		ELKINS, WV
		304-636-7777

RAMSEYS RIDGE ROAD IMPROVEMENT PROJECT SCHEDULE OF QUANTITIES

CENTRAL D	ISTRICT		DODDRIDGE COUNTY, WI	
DATE: OCT. 14,2014	SCALE; NONE	JOB NO: 14 ARAC 02	DRAWN BY: DAN GRIMM PETE TENNEY	SHEET 2 OF 13 SHEETS

CONSTRUCTION, EROSION AND SEDIMENT NOTES

- WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST EDITIONS OF THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, EROSION AND SEDIMENT CONTROL FIELD MANUAL, CURRENTLY MAY 2012. IN THE EVENT OF CONFLICT BETWEEN THE DESIGN, SPECIFICATIONS OR PLANS, THE MOST STRINGENT WILL GOVERN.
- 2. THE CONSTRUCTION DOCUMENTS SHOW THE EXISTING AND NEW GRADES, ETC. THAT ALL CUT AND FILL ESTIMATES ARE BASED. UPON. THE ENGINEER'S ESTIMATES OF THE QUANTITIES ARE ONLY ESTIMATES AND MAY CHANGE BASED ON ACTUAL FIELD CONDITIONS
- THE GRADES, BERMS, DEPTHS, AND DIMENSIONS MAY CHANGE BASED ON ACTUAL FIELD CONDITIONS. THE ENGINEER RESERVES THE RIGHT TO CHANGE GRADES, DEPTHS AND DIMENSIONS AS NECESSARY TO MEET FIELD CONDITIONS.
- 4. THE CONTRACTOR SHALL PROVIDE THE ENGINEER ALL REASONABLE FACILITIES AND PROVIDE INFORMATION AND SAMPLES AS REQUIRED BY THE ENGINEER FOR PROPER MONITORING AND TESTING OF MATERIAL WORKMANSH
- 5. THE CONTRACTOR SHALL HAVE ON SITE AT ALL TIMES WHEN CONSTRUCTION IS IN PROGRESS. A COMPETENT SUPERINTENDENT OUGHLY FAMILIAR WITH THE CONSTRUCTION OF ROADS, EMBANKMENTS AND THE COMPACTION OF SOILS AND STON
- 6. CLEARING AND GRUBBING SHALL REMOVE ALL BRUSH, TREES, ROOTS, STUMPS, FENCES, SIGNS OR ANY OTHER MATERIALS THAT IS NOT TO BE REUSED FOR THE CONSTRUCTION. SOME STUMPS MAY REMAIN AT THE APPROVAL OF THE ENGINEER. NO CLEARING DERRIS SHALL RE BURIED ON SITE
- 7 TOP SOIL SHALL RE STRIPPED AND STOCKPILED WITH APPROPRIATE STARIL IZATION AND SILT FENCE TO PREVENT EROSION. THE TOP SOIL SHALL BE REUSED DURING THE RECLAMATION PROCESS.
- PRIOR TO PLACING ANY FILL ON UNPAVED ROAD SURFACES. ROAD SURFACE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 8 INCHES. THE SCARIFIED MATERIAL SHALL BE GRADED TO A MINIMUM 2% CROWN AND COMPACTED WITH STEEL DRUM ROLLER. PLACE GEO-TEXTILE STABILIZATION FABRIC OVER COMPACTED SUBGRADE AND PLACE COMPACTED UITS OF CITED GRADATIONS OF LIMESTONE. GEORGID MAY BE SUBSTITUTED FOR GEOTEXTILE FABRIC. LIFTS SHALL BE A MINIMUM OF 8 INCHES OF AASHTO NO. 1 LIMESTONE (3) INCHI, WITH 3 INCHES OF 1.5 INCHES OF CRUSHER RUN OR WASHED LIMESTONE. IN AREAS WHERE NO FILL IS SHOWN, 11 INCHES MINIMUM OF ROAD SURFACE SHALL BE SCARIFIED AND REMOVED. SUCH AREAS SHALL BE BACKFILLED AND COMPACTED WITH THE 8 INCHES OF AASHTO NO. 1 (3) INCH LIMESTONE) AND 3 INCHES OF CLASS 1 (1.5) INCH CRUSHER RUN OR WASHED LIMESTONE) ALL ON GEOTEXTILE FABRIC OR GEOGRID. ALL REMOVED MATERIAL SHALL BE STOCKPILED FOR USE ON THE
- ALL FILL SHALL BE UNIFORMLY GRADED, SOIL FREE FROM AGGREGATE EXCEEDING 6". THE FILL SHALL BE FREE OF ALL ORGANIC MATERIAL, STUMPS, BRUSH, OR OTHER DELETERIOUS MATTER.
- 10. ALL FILL SHALL BE PLACED IN LIFTS AT A MAXIMUM UNCOMPACTED DEPTH OF 12" OR 8" MAXIMUM COMPACTED LIFTS AND SHALL BE ALL FILL SHALL BE PLACED IN LIFTS AT A MAXIMUM UNCOMPACTIED DEPTH OF 12° OR 8" MAXIMUM COMPACTED LIFTS AND SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST METHOD (ASTM D-698). THE MOISTURE CONTENT SHALL BE CONTROLLED TO FACILITATE COMPACTION. IN-PLACE DENSITY TESTS SHALL BE PERFORMED ON EACH LIFT OF SOIL. RECORDS OF FIELD DENSITY TESTS SHALL BE MAINTAINED OF TEST LOCATION WITH RESULTS AND COPIES KEPT ON SITE BY THE CONTRACTOR AND PROVIDED DAILY TO THE ENGINEER BY THE COMPACTION TECHNICIAN, AREAS THAT FAIL COMPACTION THING SHALL BE REMOVED AND/OR RECOMPACTED AN EFTESTED FOR COMPLIANCE. COMPACTION OF SOIL SHALL BE ACHIEVED BY USE OF A SHEEPSFOOT OR TAMPING FOOT ROLLER.
- 11. ON-SITE MATERIAL SHALL BE USED TO THE MAXIMUM EXTENT POSSIBLE. ANY IMPORTED FILL SHALL BE CERTIFIED BY THE CONTRACTOR TO BE CLEAR OF ALL HAZARDOUS SUBSTANCES OR MATERIALS. IF MATERIAL IS ENCOUNTERED THAT CANNOT BE RIPPED BY A CAT D6 WITH A SINGLE TOOTH RIPPER, THEN THE CONTRACTOR SHALL CONTRACT THE ENGINEER WHO WILL VISIT THE SITE AND DETERMINE IF THE MATERIAL MAY BE USED AS IS OR MUST BE REMOVED BY OTHER MEANS. IF UNSUITABLE SOLIS IN THE SUBGRADE ARE FOUND THEY SHALL BE REMOVED AND REPLACED WITH APPROPRIATE FILL AT THE ENGINEER'S DIRECTION.
- 12. IF SPRINGS OR SEEPS ARE ENCOUNTERED, SUBSURFACE DRAINAGE FEATURES SHALL BE INSTALLED PRIOR TO FILL PLACEMENT. CONTACT ENGINEER FOR EVALUATION AND RECOMMENDATION OF CORRECTIVE MEASURES.
- 13. ANY SOFT AREAS SHALL BE OVER-EXCAVATED TO A FIRM MATERIAL AND BACKFILLED WITH AASHTO NO. 1 (3") STONE.
- 14. FILL REQUIRED TO OBTAIN DESIGN GRADES SHALL BE PLACED AS CONTROLLED, COMPACTED FILL. THE FILL SHALL BE FREE OF TRASH, WOOD, TOPSOIL ORGANICS, COAL, COAL MINE REPUSE, FROZEN MATERIAL AND PIECES OF ROCK GREATER THAN 6" IN ANY DIMENSION.
- APPROVED BY PRIOR PROOF-ROLLING. FREE WATER SHALL BE PREVENTED FROM APPEARING ON THE SURFACE DURING OR SUBSEQUENT TO COMPACTION OPERATIONS
- 16. SOIL MATERIAL WHICH IS REMOVED BECAUSE IT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD AND ALLOWED TO DRY DRYING CAN BE FACILITATED BY DISCING, HARROWING OR BLENDING UNTIL THE MOISTURE CONTENT IS REDUCED TO AN ACCEPTABLE LEVEL. WHEN THE SOIL IS TOO DRY, WATER MAY BE UNIFORMLY APPLIED TO THE LAYER TO BE COMPACTED
- 17. THE FILL OUTSLOPES SHALL BE OVERBUILT AND TRIMMED BACK TO DESIGN CONFIGURATIONS TO VERIFY PROPER COMPACTION
- 18. GRANULAR MATERIALS, SUCH AS AASHTO NO. 57 STONE SHALL BE COMPACTED TO 95% OF ITS RELATIVE DENSITY, AS DETERMINED BY ASTM D-4253 AND D-4254 TEST METHODS.
- PHOTOGRAPHIC DOCUMENTATION SHALL BE TAKEN BY THE CONTRACTOR AND PROVIDED TO THE ENGINEER OF THE FOLLOWING ACTIVITIES: 1. SITE AFTER CLEARING AND GRUBBING 2. DAILY PHOTOS OF CUT AND FILL OPERATIONS.
- 20. ALL WOOD WASTE SHALL BE CHIPPED, LEGALLY HAULED OFF OR LEGALLY BURNED ON SITE
- 21. SUPER SILT FENCE MAY BE SUBSTITUTED FOR SILT SOCKS LARGER THAN 24" IN DIAMETER

- ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH PROBLEMS, WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK
- WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST EDITIONS OF THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION EROSION AND SEDIMENT CONTROL BEST MANAGEMENT FIELD MANUAL, CURRENTLY MAY 2012. IN THE EVENT OF CONFLICT BETWEEN THE DESIGN, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT WILL GOVERN.
- 3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED DAILY, RELOCATED WHEN NECESSARY AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED. RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- 4. ALL DRAIN INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE MEANS OF CLEANING.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR, AT HIS OR HER EXPENSE, OF ALL EXISTING UTILITIES DAMAGED DURING CONSTRUCTION, FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION THE CONTRACTOR SHALL CALL MISS LITH ITY AT (800) 245-4848.
- 6. INSTALLATION OF CONCRETE, CORRUGATED METAL, STEEL CASING PIPE, OR HDPE PIPE SHALL BE IN CONFORMANCE WITH
- 7. ALL MATERIALS USED FOR FILL OR BACK FILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDERS, OR ANY OTHER NON-COMPACTABLE SOIL TYPE MATERIALS. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE.
- 8. MATERIALS USED TO FILL AROUND DRAINAGE STRUCTURES, IN UTILITY TRENCHES OR ANY OTHER DEPRESSION REQUIRING FILL OR BACK FILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET FORTH IN ASTM STANDARD D-698. FLOWABLE FILL /LEAN CONCRETE SHALL BE USED ON ROAD CROSSINGS AROUND
- 9. FILL SHALL BE PLACED IN LIFTS AT A MAXIMUM UNCOMPACTED DEPTH OF 12 INCHES OR 8 INCHES MAXIMUM COMPACTED LIFTS WITH SOIL FREE FROM AGGREGATES EXCEEDING 6". AFTER COMPACTION, EACH LIFT MUST PASS A 95% COMPACTION BASED ON TEST RESULTS FROM A STANDARD PROCTOR DENSITY TEST OF THE ACTUAL SOILS USED IN SPECIFIC ENGINEERED FILL SITES. EACH LIFT SHALL BE TESTED FOR COMPACTION, WITH A MINIMUM OF TWO TESTS PER LIFT PER ACRE OF FILL. ALL TEST RESULTS SHALL BE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW
- 10. ALL TEST RESULTS SHALL BE SUBMITTED DAILY TO THE ENGINEER BY THE COMPACTION TECHNICIAN. FAILURE TO CONDUCT DENSITY TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE OF THE FACILITY.
- 11. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION.
- 12. CONTRACTOR SHALL SUBMIT AND ADHERE TO A GENERAL GROUNDWATER PROTECTION PLAN

EROSION CONTROL NOTES

- THE CONTRACTOR SHALL ARRANGE FOR A PRE-CONSTRUCTION CONFERENCE WITH THE APPROPRIATE EROSION AND SEDIMENT CONTROL INSPECTOR 48 HOURS PRIOR TO BEGINNING WORK.
- 2. ALL EROSION CONTROL DÉVICES AS SHOWN OR AS REQUIRED. ARE TO BE CONSTRUCTED TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE WEST VIRGINIA EROSION AND SEDIMENT CONTROL FIELD MANUAL CURRENTLY MAY 2012 AND ARE TO BE IN PLACE PRIOR TO ALL CONSTRUCTION.
- 3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN AND MAINTAIN A DENSE STAND
- 4. ALL DISTURBED AREAS NOT PAVED OR BUILT UPON ARE TO BE FERTILIZED AND HYDRO-SEEDED WITH STRAW AND COTTON PRODUCT WITH TACK AGENTS BY THE CONTRACTOR IN ACCORDANCE WITH THE CURRENT WEST VIRG EROSION AND SEDIMENT CONTROL FIELD MANUAL, CURRENTLY MAY 2012
- ALL DRAIN AND CULVERT INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 21 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT RMANT FOR MORE THAN SIX MONTHS
- 7. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED AND PROTECTED WITH SEDIMENT
- 8. SEDIMENT BASINS AND TRAPS. PERIMETER DIKES. SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP EDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- 9. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS WATER CONTAINMENT PADS
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND
- 11. ALL DISTURBED AREAS NOT PAVED OR BUILT UPON SHALL BE HYDRO-SEEDED AND FERTILIZED. PERFORM PERMANENT TOP SOLLING, SEEDING AND FERTILIZING AS SOON AFTER FINISH GRADING AS POSSIBLE. SEEDING SHALL COMPLY WITH THE FOLLOWING:
- A TOPSOIL 4 INCH MINIMUM FOR PERMANENT TURF, TOPSOIL SHALL NOT BE REQUIRED ON CUT SLOPES STEEPER
- FERTILIZER 500 POUNDS PER ACRE OF 10-20-20 FERTILIZER OR EQUIVALENT POUNDAGE OF DIFFERENT ANALYSIS. WORK INTO SOIL PRIOR TO SEEDING
- LIME (PERMANENT SEEDING) AGRICULTURAL LIME SPREAD AT RATE OF 4 TONS/ACRE. WORK INTO SOIL PRIOR TO SEEDING.
- MULCH WOOD FIBER OR CHOPPED STRAW AT RATE OF 2 TONS PER ACRE. HYDRO-MULCH AT RATE OF 30
- E. SEED 45 LBS. PER ACRE TALL FESCUE AND 20 LBS. PER ACRE PERENNIAL RYE GRASS. TO BE SEEDED BY

THE ABOVE NOTES ARE A MINIMUM TO ADDRESS CONTROL OF EROSION AND SEDIMENTATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL ADDITIONAL CONTROL MEASURES IN ACCORDANCE WITH BMP'S AS NECESSARY TO STABILIZE CONSTRUCTION AREA AND ELIMINATE ALL SEDIMENT FROM LEAVING OR BEING

EROSION AND SEDIMENT CONTROL NARRATIVE

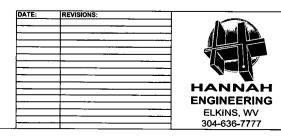
- PROJECT DESCRIPTION: THE PURPOSE OF THIS PROJECT IS TO GRADE AND INSTALL EROSION AND SEDIMENT CONTROL MEASURES, IN PREPARATION FOR THE IMPROVEMENT AND WIDENING OF WY ROUTE 36/1 & 11/1 NEAR WEST UNION, DODDRIDGE COUNTY. THE TOTAL APPROXIMATE LAND DISTURBANCE ASSOCIATED WITH THIS PROJECT IS 1.04 ACRES.
- EXISTING SITE CONDITIONS: THE EXISTING SITE IS UPLAND HARDWOODS WITH MODERATE TO STEEP TOPOGRAPHY WITH 5% TO 50% SLOPES. NO EROSION IS NOTICED ON SITE, OR IN ANY NATURAL DRAINAGE WAYS.
- ADJACENT PROPERTY: THE SITE IS BORDERED BY UPLAND HARDWOODS, RESIDENCES AND FIELDS.
- SOILS: A SOIL STUDY AND WAS PERFORMED FOR THIS PROJECT
- 5. OFF SITE AREAS: THERE SHALL BE NO BORROW AREA OUTSIDE OF THE PROPOSED GRADING AND CONSTRUCTION AREA.
- CRITICAL EROSION AREAS CONTROL MAINTENANCE: ALL 3:1 SLOPES AND STEEPER, DITCHES AND OTHER CONTROLS SHALL BE CONSIDERED CRITICAL EROSION AREAS. THESE AREAS SHALL BE MONITORED & MAINTAINED DAILY DURING CONSTRUCTION AND AFTER EACH RAIN FALL OF 0.5 INCHES OR GREATER. THE LOCAL GOVERNING AUTHORITY WILL HAVE THE AUTHORITY TO RECOMMEND THE PLACEMENT OF ADDITIONAL EROSION CONTROL MEASURES IN THESE AREAS IF IT BECOMES EVIDENT DURING CONSTRUCTION THAT THE ONES IN PLACE ARE NOT FUNCTIONING SUFFICIENTLY.
- EROSION AND SEDIMENT CONTROL MEASURES: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE CURRENT WEST VIRGINIA EROSION AND SEDIMENT CONTROL FIELD MANUAL, CURRENTLY MAY 2012. THE CONTRACTOR SHALL OBTAIN A COPY OF THIS MANUAL FROM THE WYDEP WEBSITE AND CONTRACTOR SHALL OBTAIN A COPY OF THIS MANUAL FROM THE WYDEP WEBSITE AND CONTRACTOR SHALL OBTAIN A COPY OF THIS MANUAL OF THE WEBSITE AND CONTRACTOR OF THE WEST VIRGINIA MANUAL. THE MINIMUM STANDARDE OF THE WEST VIRGINIA MANUAL. THE MINIMUM STANDARDS OF THIS MANUAL SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE. SEE PLANS FOR ALL PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.
- STRUCTURAL PRACTICES:
 -OUTLET PROTECTION: WILL BE CONSTRUCTED AS SHOWN ON THE PLANS. -SILT SOCK/SILT FENCE/SUPER SILT FENCE: WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.
- VEGETATIVE PRACTICE TOPSOILING: TOPSOIL WILL BE STRIPPED FROM THE SITE AND STOCKPILED IN AN AREA AS SHOWN BY THE PLANS. UPON THE COMPLETION OF THE PROJECT TOPSOIL WILL BE PLACED ON ALL DISTURBED AREAS AT A MINIMUM DEPTH OF 4 INCHES. TEMPORARY SEEDING: ALL DENUDED AREAS LEFT DORMANT FOR MORE THAN 21 DAYS SHALL BE SEEDED WITH A FAST GERMINATING SEED. THE TIME OF YEAR WILL BE THE BASIS FOR THE SEED MIXTURE. PERMANENT SEEDING: ALL SEEDED AREAS WILL BE RESEEDED, MULCHED AND FERTILIZED AS NEEDED TO OBTAIN AN ADEQUATE STAND OF GRASS, PERMANENT SEEDING SHALL BE PLACED WITHIN SEVEN DAYS UPON ACHIEVING FINAL GRADE. WATER, MULCH, AND RESEED AS NECESSARY TO OBTAIN AN ADEQUATE STAND OF VEGETATION, IN THE OPINION OF THE ENGINEER.
- 10. MANAGEMENT STRATEGIES: CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS WILL BEGIN AND END AS SOON AS POSSIBLE. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES. AFTER ACHIEVING ADEQUATE STABILIZATION THE TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE STABILIZED.

11. SEQUENCE OF EVENTS:

- A PRE-CONSTRUCTION CONFERENCE WILL BE HELD ON SITE WITH CONTRACTOR TO REVIEW THE CONSTRUCTION DRAWINGS AND PROVIDE ANY REQUESTED GUIDANCE.
- CONSTRUCT ALL PROPOSED SEDIMENT CONTROL DEVICES AS SOON AS CLEARING AND GRUBBING OPERATIONS ALLOW, DIVERSIONS AND SEDIMENT BASINS SHALL BE SEEDED AND MULCHED IMMEDIATELY.
- CLEAR AND GRUB, REMOVE TOPSOIL AND PLACE AT AN AREA WHERE EROSION WILL NOT TAKE PLACE. TOPSOIL STOCKPILES TO BE SEEDED AND MULCHED. SEDIMENT CONTROL SHALL BE CONSTRUCTED AROUND TOPSOIL STOCKPILES.
- GRADING OPERATIONS AS REQUIRED. CUT SLOPES AND FILL SLOPES SHALL BE TOPSOILED AS NEEDED. DITCH LINES SHALL
- BE CONSTRUCTED. ALL DITCHES WILL HAVE AT LEAST GRASS LINING PROTECTION OR GREATER E. CULVERT INLET AND OUTLET PROTECTION SHALL BE CONSTRUCTED IMMEDIATELY UPON PLACEMENT OF CULVERTS.
- INSTALLATION OF MATTING AND/OR RIPRAP TO OCCUR ONCE DITCHES ARE CONSTRUCTE
- WHEN FINAL GRADE IS ACHIEVED, TOPSOIL IS TO BE PLACED ON ALL DISTURBED AREAS NOT LINED. HYDRO-SEED ALL DISTURBED AREAS AS REQUIRED. A SOIL SAMPLE SHOULD BE TAKEN AND TESTED TO DETERMINE RECOMMENDED RATES. IF NO SOILS SAMPLE IS TAKEN, THE FOLLOWING RATES SHOULD BE APPLIED AS A MINIMUM: LIME AT A RATE OF 4 TONS PER ACRE, FERTILIZE AT A RATE OF 500 LBS. OF 10-20-20 PER ACRE. SEED WITH 45 LBS. PER ACRE OF TALL FESCUE AND 20 LBS. PER ACRE OF PERENNIAL RYE GRASS.
- LIME. FERTILIZER. AND SEED WILL BE APPLIED BY USING A HYDRO-SEEDER. HYDRO-MULCH PRODUCTS SHALL BE MIXED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS
- WHEN SITE IS STABILIZED. ALL EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED AND REPAIR/STABILIZE THOSE AREAS IN ACCORDANCE WITH STATE STANDARDS.
- MAKE MODIFICATIONS FOR PERMANENT STORM WATER MANAGEMENT.
- K. FINAL SITE INSPECTION
- 12. PERMANENT STABILIZATION: ALL AREAS LEFT UNCOVERED BY EITHER BUILDINGS OR PAVEMENT SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING AND WITHIN 7 DAYS. AT NO TIME SHALL LAND LAY DORMANT FOR LONGER THAN 21 DAYS. SEE SEQUENCE OF EVENTS FOR RATES.
- 3. MAINTENANCE, AND OTHER CONSIDERATIONS AND GROUND WATER PROTECTION: ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED BI-WEEKLY AND AFTER EACH RAINFALL OF 0.5 INCH OR MORE. THEY WILL BE INSPECTED FOR UNDERMINING, DETERIORATION, EROSION AND EXCESS DEPOSITED MATERIAL. ALL DEFICIENCIES WILL BE CORRECTED IMMEDIATELY. EXCESS MATERIAL WILL BE SPREAD ON THE SITE IN A MANNER WHERE IT IS NOT LIKELY TO ERODE IN THE FUTURE. CLEANING PROCEDURES WILL BE COMPLETED AT REGULAR INTERVALS AND AT LEAST WHEN SEDIMENT REACHES 33% OF CAPACITY, OR AS SHOWN ON A PPILCABLE DETAILS. RECORDS OF CLEANING AND CORRECTIONS WILL BE MAINTAINED BY THE CONTRACTOR. THE "GENERIC GROUNDWATER PROTECTION PLAN FOR CONSTRUCTION SITES" WILL BE USED AND AVAILABLE ON SITE AT ALL TIMES. AN AREA WILL BE PROVIDED FOR VEHICLE AND EQUIPMENT MAINTENANCE. MOBIL FUEL TRUCKS WITH APPROVED TANKS WILL BE USED ON THIS SITE. PORTABLE SANITARY FACILITIES WILL BE AVAILABLE FOR EMPLOYEES, IF CONCRETE IS USED. EXCESS CONCRETE WILL BE DISPOSED OF PROPERLY AND NOT ALLOWED TO REMAIN ON THIS SITE. MACHINERY WILL NOT BE ALLOWED IN LIVE STREAMS. FLUIDS SUCH AS DIESEL FUEL, CAS, OIL OR ANTIFREEZE WILL BE KEPT IN PROPER FACISITY. SOLID OR HAZARDOUS WASTESS WILL BE USED SOLD PROPERLY AND FEDERAL REQUITY. SOLID OR HAZARDOUS WASTESS WILL BE DESORDED IN ACCORDANCE WITH APPROPRIATE STATE AND FEDERAL REQUITYONS. IT IS THE CONTRACTOR'S WASTES WILL BE DISPOSED IN ACCORDANCE WITH APPROPRIATE STATE AND FEDERAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE CHANGES AND NOTIFY WY DEP OF ANY CHANGES TO GPP. A FINAL INSPECTION WILL BE MADE AT THE CONCLUSION OF THE PROJECT AND ALL CORRECTIONS MADE BEFORE SIGN-OFF OF THE PROJECT SITE



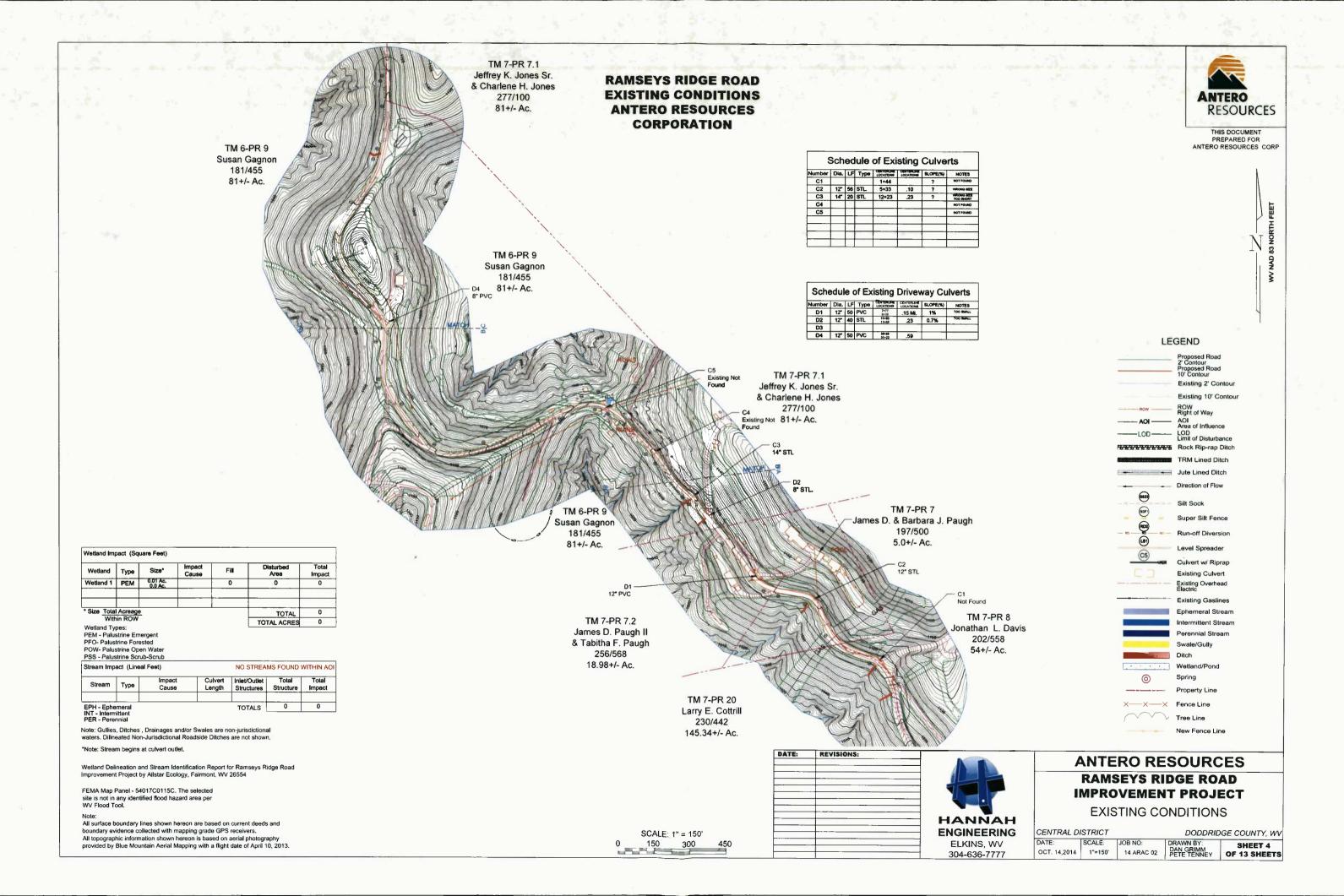
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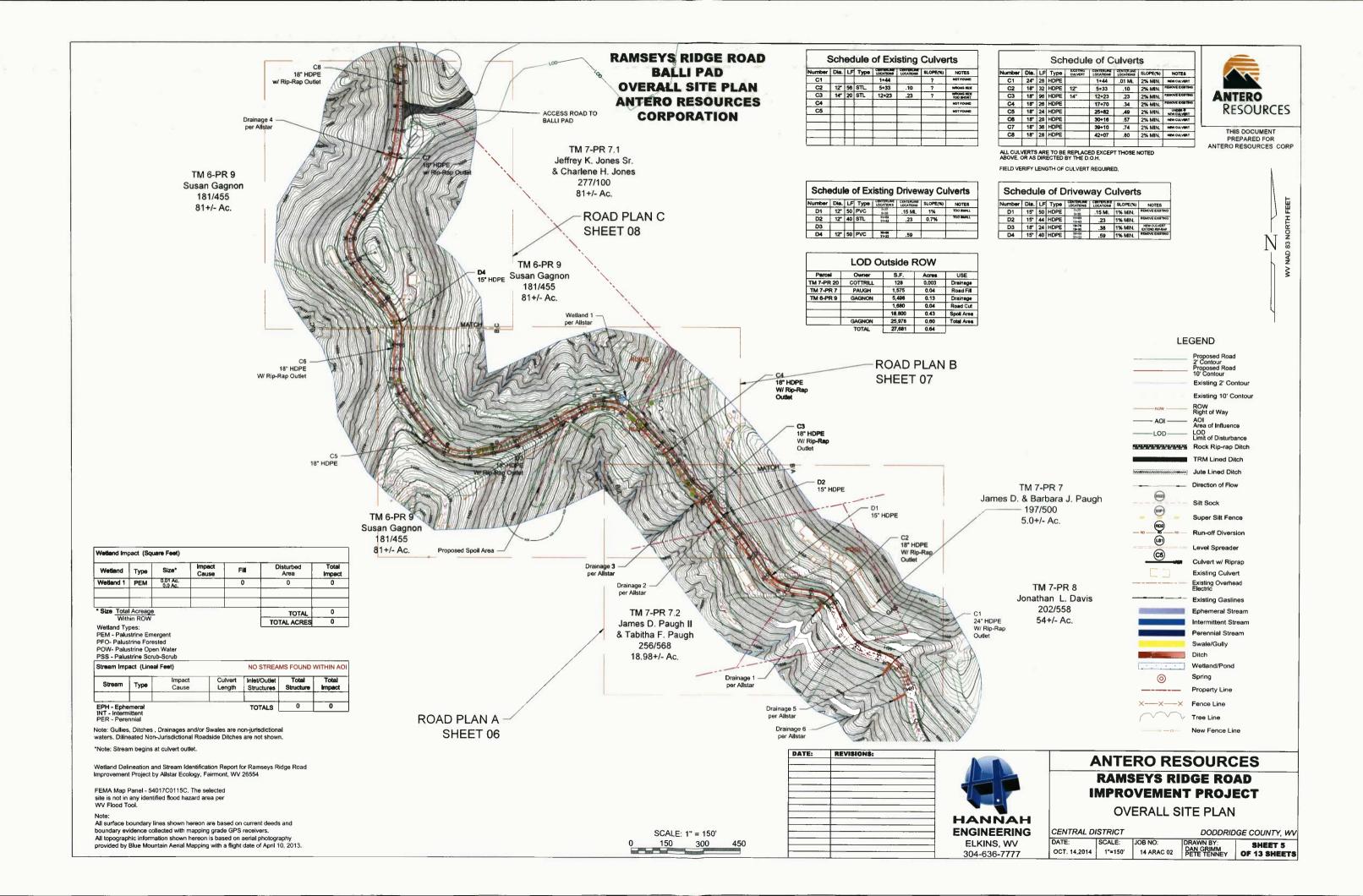


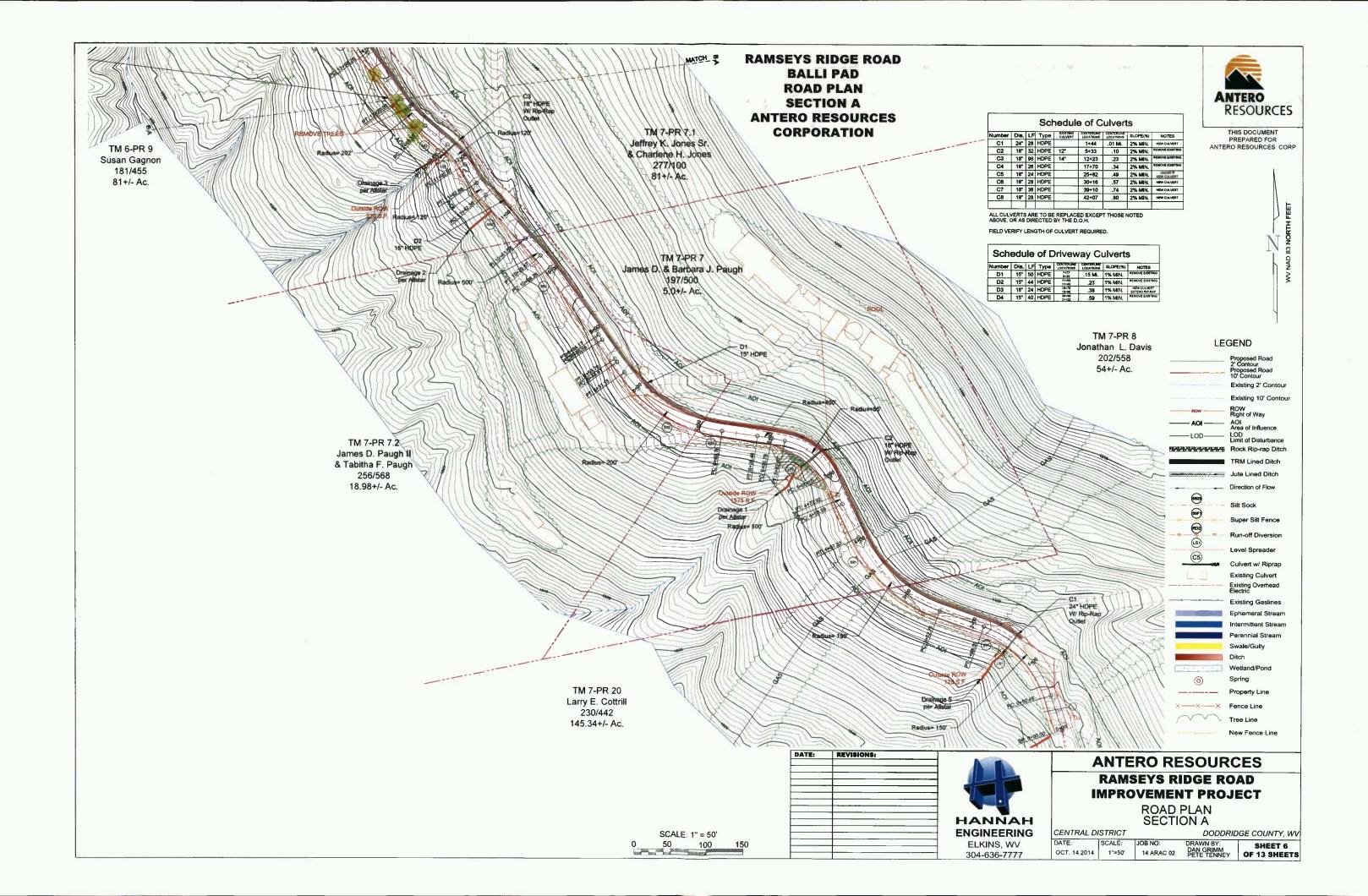
ANTERO RESOURCES RAMSEYS RIDGE ROAD **IMPROVEMENT PROJECT**

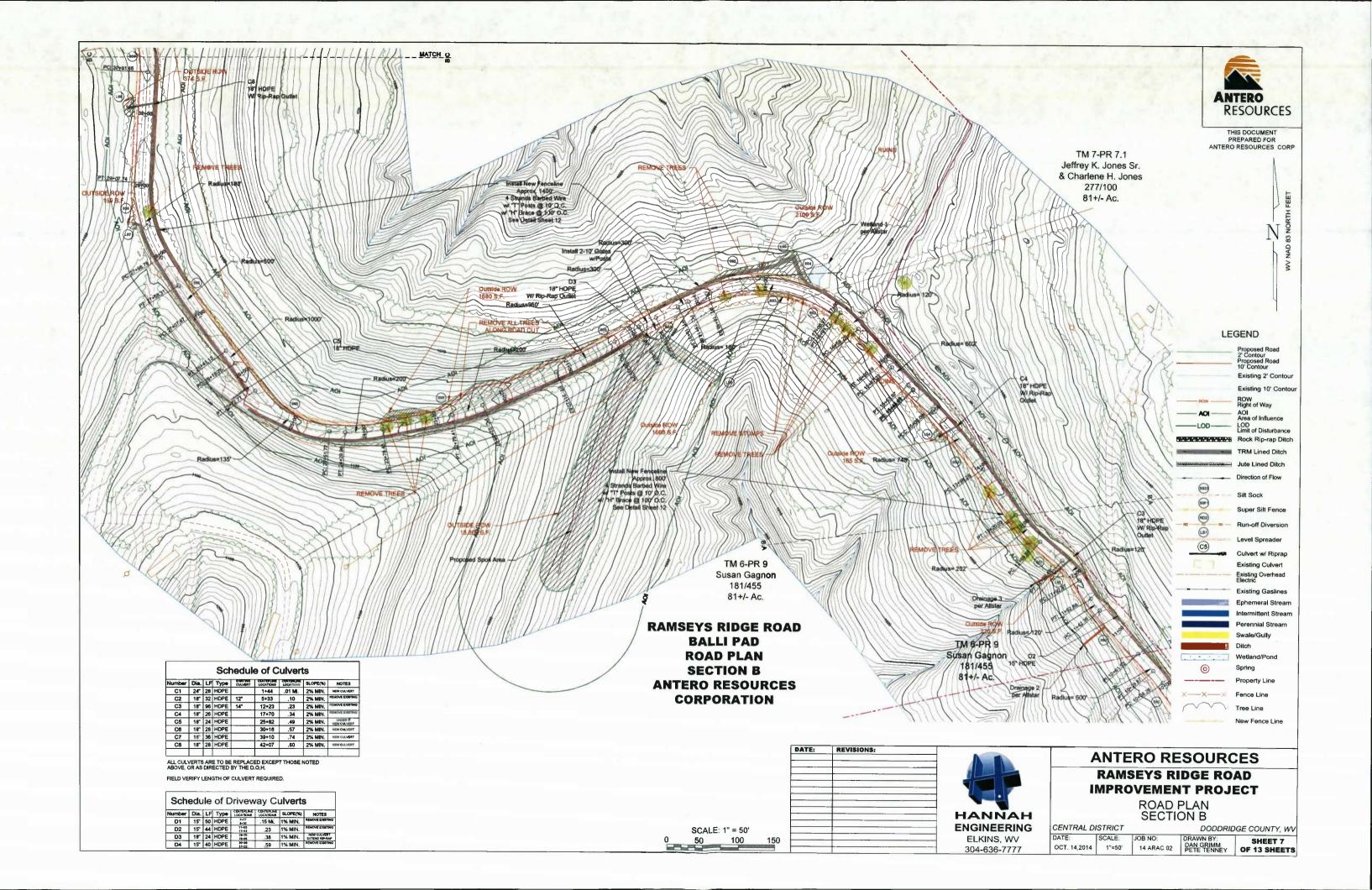
CONSTRUCTION, EROSION & SEDIMENT NOTES

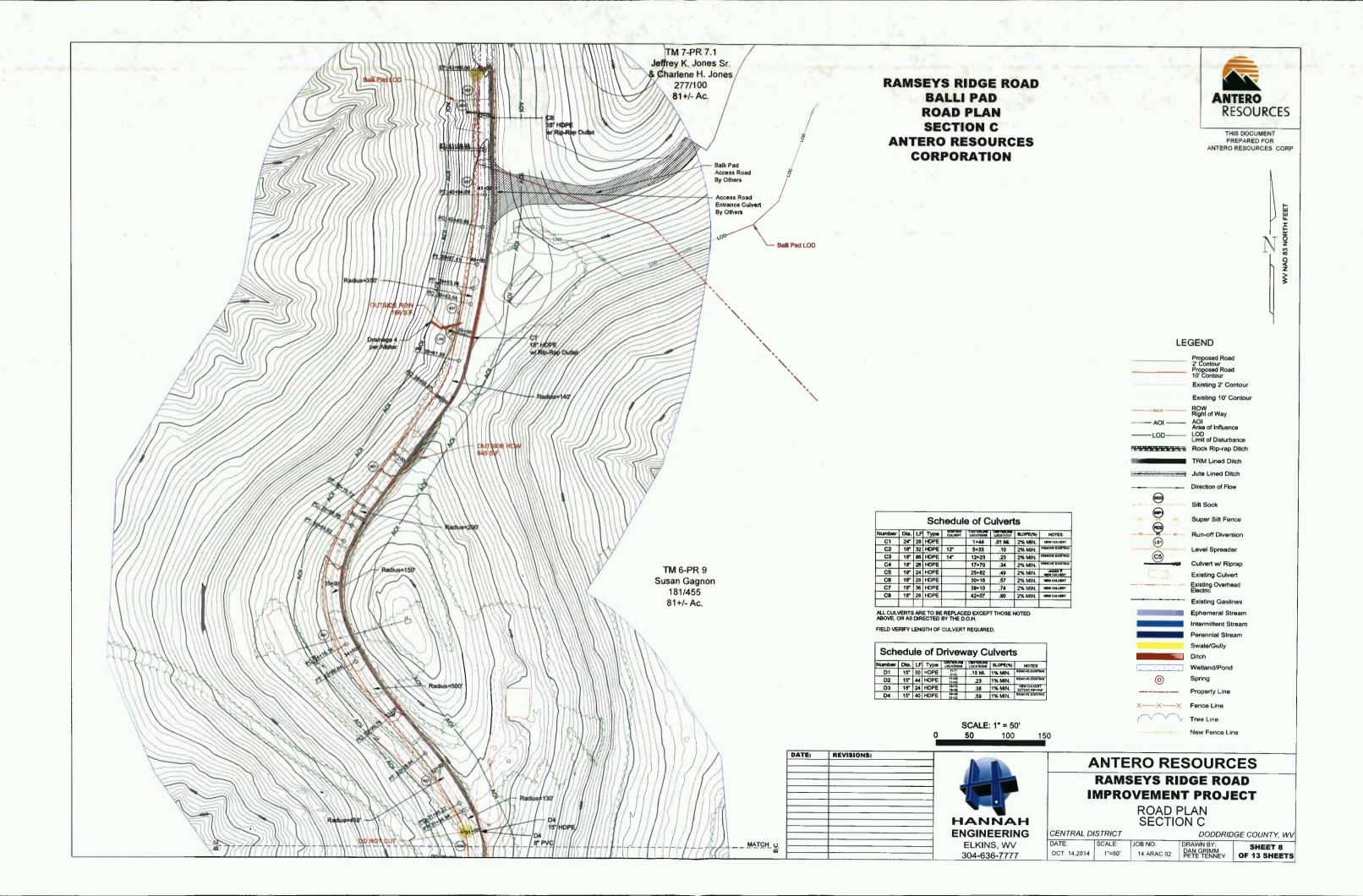
CENTRAL DISTRICT DODDRIDGE COUNTY, WV DATE: SCALE: JOB NO: DRAWN BY: OCT. 14, 2014 NONE 14 ARAC 02 OF 13 SHEETS JERRI REED

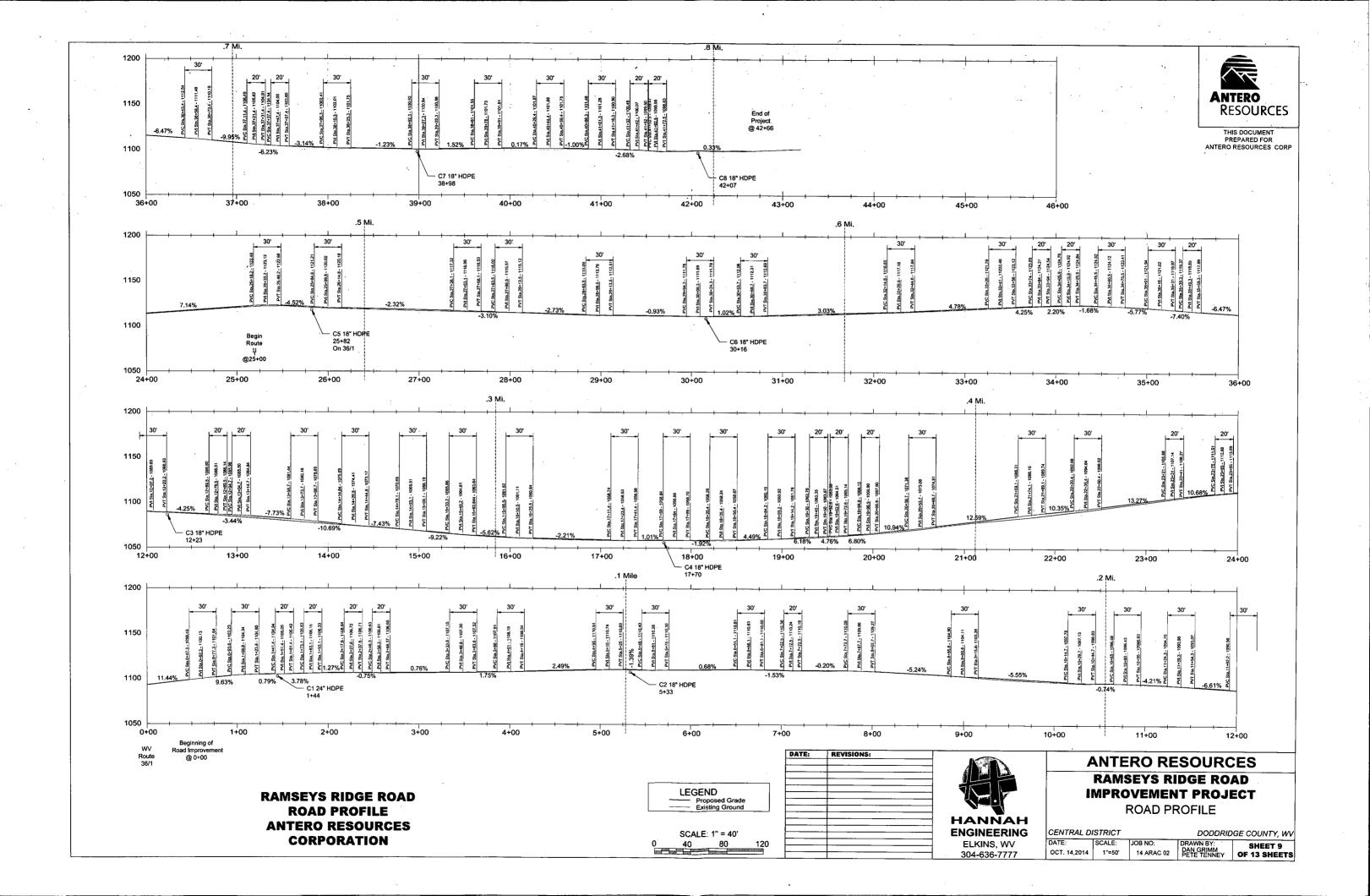


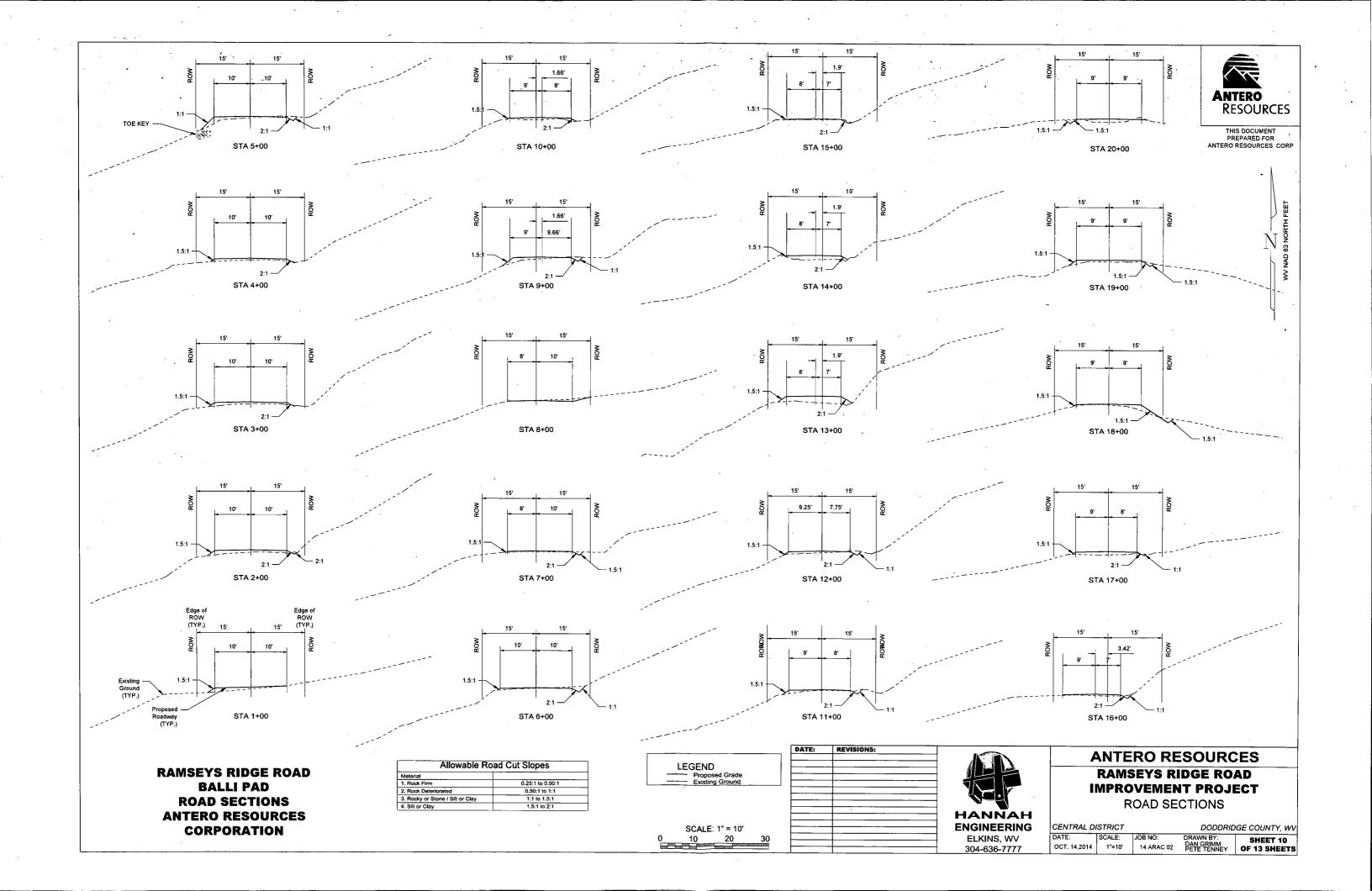


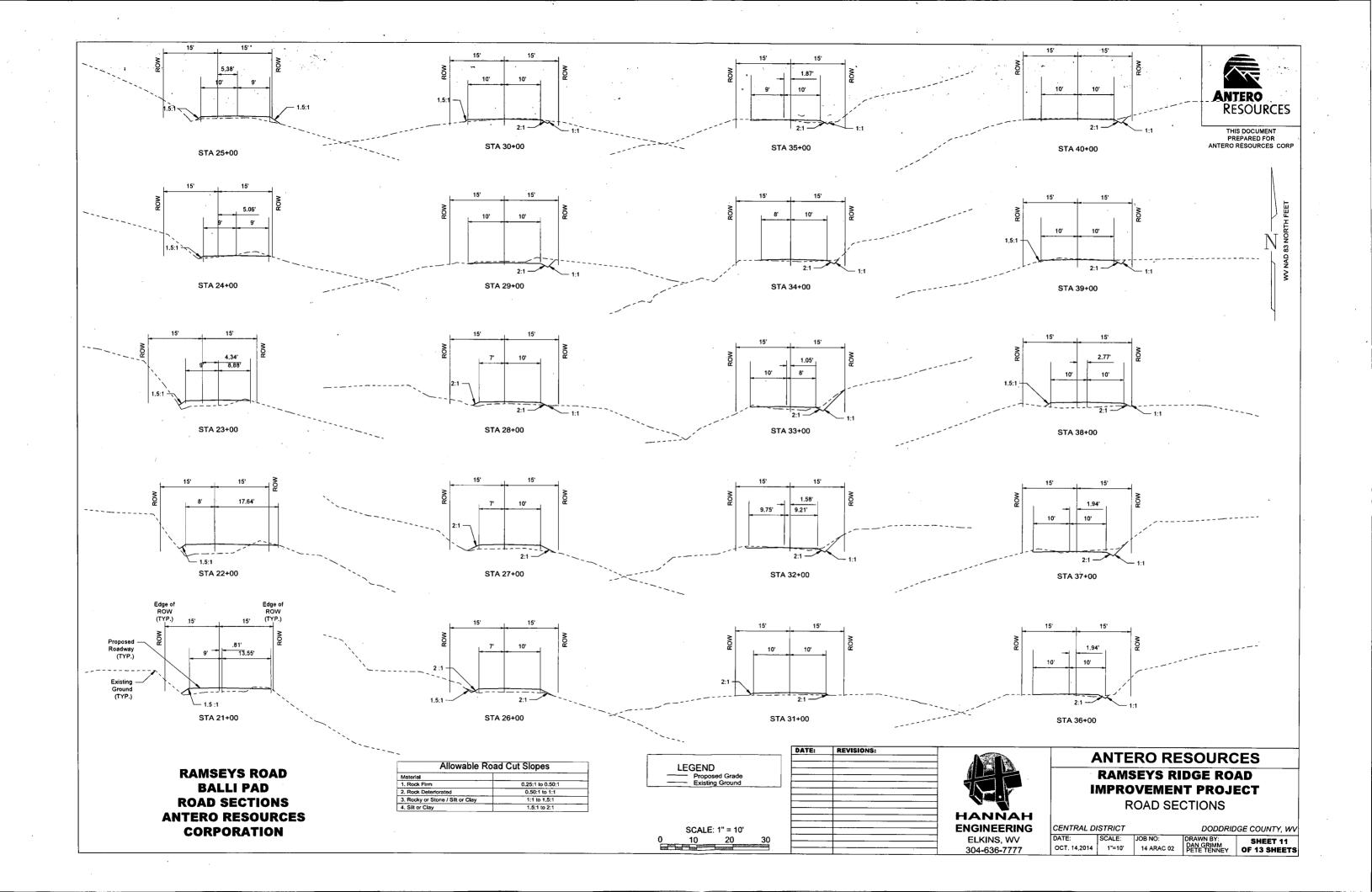








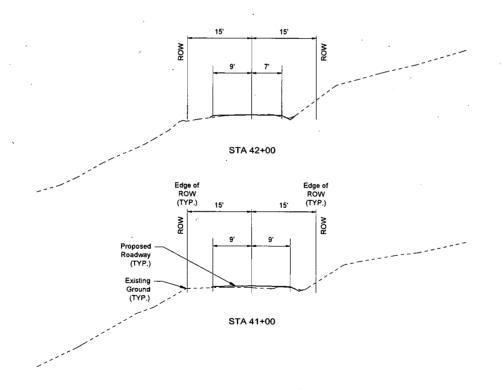


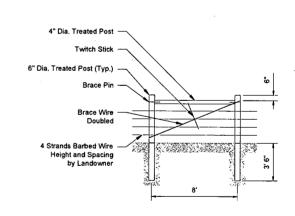




THIS DOCUMENT
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TYPICAL "H" BRACE Scale: 3" = 1'

RAMSEYS ROAD
BALLI PAD
ROAD SECTIONS
ANTERO RESOURCES
CORPORATION

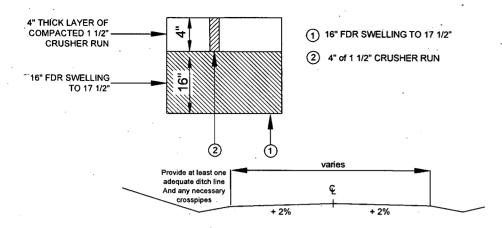
Allowable Road Cut Slopes					
0.25:1 to 0.50:1					
0.50:1 to 1:1					
1:1 to 1.5:1					
1.5:1 to 2:1					

LEGEND	j		
Proposed Grade Existing Ground			
		_	
		-	
SCALE: 1" = 10'	20		

HANNAH
ENGINEERING
ELKINS, WV
304-636-7777

ANTERO RESOURCES RAMSEYS RIDGE ROAD IMPROVEMENT PROJECT

ROAD SECTIONS



ROAD SURFACE HDPF PIPE NOTE: JUTE MATTING, ON BANKS. (SEE TRENCH DETAILS) AS NECESSARY FOR EROSION **CONTROL ON INLETS & OUTLETS** PIPE SIZED PER CHART CUI VERT STREAM PLACE CULVERT ON STREAM GRADE (SEE CULVERT CHART)

RESOURCES

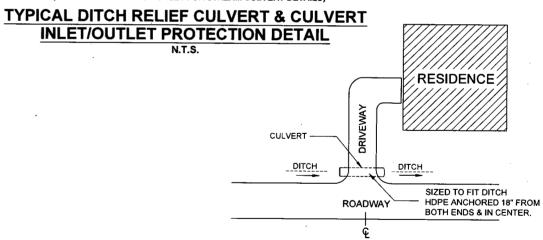
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SEE STREAM IMPACT TABLE FOR CULVERTS INVOLVED

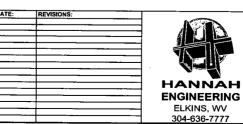
STREAM CULVERTS

12" MIN. COVER OR 1/2 PIPE DIAMETER, WHICH EVER IS JUSE HOPE PIPE MIN 3% GRADE 6"-8" MIN. RIP-RAP DIA JUTE MATTING MIN. 12" THICK BLANKET Culvert PLACE 12" SILT SOCKS ON UPSTREAM SIDE(S) OF

(SEE CULVERT SECTION SHEET FOR STREAM CULVERT DETAILS)



DRIVEWAY REPLACEMENT CULVERT



ANTERO RESOURCES RAMSEYS RIDGE ROAD **IMPROVEMENT PROJECT DETAILS**

CENTRAL DISTRICT DODDRIDGE COUNTY

SCALE: JOB NO: DRAWN BY: OCT. 14, 2014 NONE 14 ARAC 02 JERRI REED

RAMSEYS RIDGE ROAD (WV 36/1 & 11/1), DODDRIDGE CO., WV TYPICAL SECTION

Full Depth Reclamation (FDR) with 4" Wearing Layer of Compacted 1 1/2" Crusher Run

- Pulverize the constructed road surface to a minimum depth of 16 inches
- Evaluate subsurface soils to allow appropriate stabilization measures to be taken
- Compact and rough grade pulverized material to a minimum 2% crown.

CONCRETE ELOWARI E EU L

CONCRETE FLOWABLE FILL

12" MIN. COVER AROUND PIPE

PIPE BACKFILL

WITH ROUGH SURFACE

12" MIN. COVER AROUND PIPE

PIPE BACKFILL

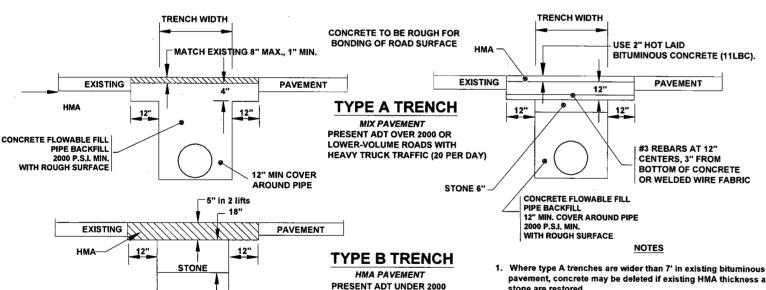
EXISTING

STONE

Apply Type I/II Portland Cement at a rate of 10% or 130 lb/sy (recommended cement placement is to be mixed in two equal applications of 65 Ib/sy for each application) plus water to maintain a moisture content of ± 2% of optimum moisture. Materials stabilized with Type I/II cement should be graded, compacted, final rolled and fine graded before the material sets, which is within about 2 hours of mixing. Compaction shall be 98% of maximum dry density as determined from the daily control strip. Expect about 1 1/2" of swell from the FDR. The completed FDR should be proof rolled prior to placing a 4" thick layer of compacted 1 1/2" Crusher Run. Crusher Run placement should start no sooner than 3 days following completion of the FDR and should occur between 3 to 5 days. Compaction of Crusher Run shall be 95% of maximum dry density as determined by the Standard Proctor Method.

(See "Type C Trench" Detail below for culverts)

STONE



UNLESS HEAVY TRUCK TRAFFIC,

DEFINED AS 20 TANDEM-AXLE

TRUCKS PER DAY IS EVIDENT.

TYPE C TRENCH

STONE ROADWAY

- 1. Where type A trenches are wider than 7' in existing bituminous pavement, concrete may be deleted if existing HMA thickness and 18"
- 2. Traffic is to be maintained at all times by the use of appropriate traffic control devices. Use of metal plates, having sufficient rigidity to span Type A trench, is required to prevent wheel loads from being are to be transmitted to the concrete flowable fill. The plates securely anchored to prevent movement caused by traffic. The plates are to be left in place until Concrete Flowable Fill has attained a 50% of it's compressive strength.
- 3. Anchor pipe 18" from ends and at center with maximum 10' intervals prior to placement of flowable fill.
- 4. Class 1 or #57 Stone may be substituted for concrete flowable fill in Type A, B, & C Trenches.