

PERMIT NO. 14-114

**DODDRIDGE COUNTY  
FLOODPLAIN DEVELOPMENT  
PERMIT**


PURPOSE FOR PERMIT: Gas/Water Pipeline

ISSUED TO Cone Gathering, LLC

200 Evergreen Dr.

ADDRESS: Waynesburg, PA. 15370

PROJECT ADDRESS: Right Fork of Arnold Creek

ISSUED BY: 

DATE: ~~2~~ 2-14-14

CONSTRUCTION MUST START WITHIN 180 DAYS FROM ISSUED DATE. PERMIT EXPIRES IN 12 MONTHS FROM ISSUED DATE. IF EXTENTION IS NEEDED A REQUEST MUST BE MADE IN WRITING STATING A REASON FOR THE EXTENTION.

THIS PERMIT MUST BE POSTED ON THE PREMISES IN A CONSPICUOUS PLACE SO AS TO BE CLEARLY VISIBLE FROM THE STREET.

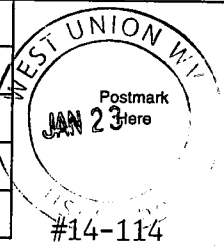
7013 2250 0001 6914 7653

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
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For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$ .46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



Sent To  
 Street, Apt. No.,  
 or PO Box No. Syllanus A & Ruby L. Perine  
 Rt. 1, Box 69  
 City, State, ZIP+4 West Union, WV 26456

PS Form 3800, August 2006 See Reverse for Instructions

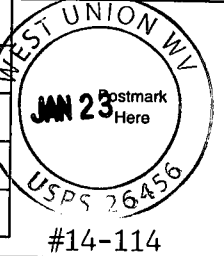
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<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



Sent To  
 Street, Apt. No.,  
 or PO Box No. Zoe Kathryn Walters  
 9407 Scratch Ct.  
 City, State, ZIP+4 Wilmington, NC 28412

PS Form 3800, August 2006 See Reverse for Instructions

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: #14-114

Zoe Kathryn Walters  
9407 Scratch Ct  
Wilmington, NC 28412

2. Article Number  
(Transfer from service label)

7013 2250 0001 6914 7646

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

X

*Zoe Kathryn Walters*

Agent

Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type

Certified Mail

Express Mail

Registered

Return Receipt for Merchandise

Insured Mail

C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes

UNITED STATES POSTAL SERVICE



First-Class Mail  
Postage & Fees Paid  
USPS  
Permit No. G-10

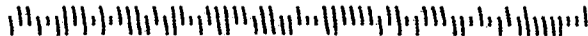
- Sender: Please print your name, address, and ZIP+4 in this box •

Dan Wellings  
Doddrige Co. Flood Plain MGT.  
Room 102  
118 E. Court St.  
West Union, WV 26456

BETTY A. ROGERS  
COUNTY CLERK  
DODDRIDGE COUNTY, WV

2014 JAN 27 AM 11:50

FILED



**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: #14-114

Sylvanus A & Ruby L. Perine  
Rt. 1, Box 69  
West Union, WV 26456

2. Article Number  
(Transfer from service label)

7013 2250 0001 6914 7653

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

*Sylvanus Perine*

Agent

Addressee

B. Received by (Printed Name)

C. Date of Delivery

1-27-14

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type

Certified Mail

Express Mail

Registered

Return Receipt for Merchandise

Insured Mail

C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes

UNITED STATES POSTAL SERVICE



First-Class Mail  
Postage & Fees Paid  
USPS  
Permit No. G-10

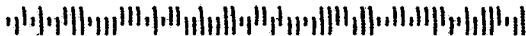
• Sender: Please print your name, address, and ZIP+4 in this box •

**FILED**

**2014 JAN 28 AM 11:33**

**BETH A. ROGERS  
COUNTY CLERK  
DODDRIDGE COUNTY, WV**

Dan Wellings  
Doddridge Co. Flood Plain MGT.  
Room 102  
118 E. Court St.  
West Union, WV 26456



Legal Advertisement:  
Doddridge County  
Floodplain Permit Application

Please take notice that on the 23<sup>rd</sup> day of January, 2014  
**CONE GATHERING, LLC – OXFORD 1 – EQT GAS/WATER PIPELINE**  
**PERMIT # 14 - 114**

filed an  
application for a Floodplain Permit to develop land located at or  
about: **SURFACE OWNERS: SYLVANUS A AND RUBY L PERINE,**  
**ZOE 210/158 & 158/663, T/M:8-19-26 & 8-19-27**

The Application is on file with the Clerk of the County Court and  
may be inspected or copied during regular business hours.  
Any interested persons who desire to comment shall present  
the same in writing by **FEBURARY 12, 2014.**

Delivered to the:  
Clerk of the County Court  
118 E. Court Street, West Union, WV 26456.

Beth A Rogers, Doddridge County Clerk  
Dan Wellings, Doddridge County Flood Plain Manager

Check Date: 1/9/2014

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
01082014	1/8/2014	000000232424	1,000.00			1,000.00
Doddrige County Commission			TOTAL	1,000.00		1,000.00
Operating Account	14	11261				

98815



# Doddridge County, West Virginia

RECEIPT NO: 1456

DATE: 2014/02/11

FROM: CIVIL & ENVIRONMENTAL CONSULT AMOUNT: \$ 1,408.75

ONE THOUSAND FOUR HUNDRED EIGHT DOLLARS AND 75 CENTS

FOR: #14-114 CONE GATHERING LLC  
OXFORD 1 EQT GAS/WATER PIPELINE

00000099669 FP-BUILDING PERMITS

020-318

TOTAL: \$1,408.75

MICHAEL HEADLEY

SHERIFF & TREASURER

MEC

CLERK

Customer Copy

# Doddridge County, West Virginia

RECEIPT NO: 1455

DATE: 2014/02/11

FROM: CIVIL & ENVIRONMENTAL CONSULT AMOUNT: \$ 1,000.00

ONE THOUSAND DOLLARS AND 00 CENTS

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FOR: #14-114 CONE GATHERING LLC  
OXFORD 1 EQT GAS/WATER PIPELINE

00000098815 FP-BUILDING PERMITS

020-318

TOTAL: \$1,000.00

MICHAEL HEADLEY

SHERIFF & TREASURER

MEC

CLERK

Customer Copy

Civil & Environmental Consultants, Inc.

333 Baldwin Road | Pittsburgh, PA 15205

Conc Gathering LLC -  
Oxford 1 - EQT Gas/water  
Pipeline  
# 14-114

381.750

4 3<sup>2</sup>  
287.75

~~1408.75~~

Need more  
monies

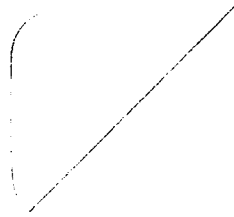


Civil & Environmental Consultants, Inc.  
333 Baldwin Road | Pittsburgh, PA 15205

OXFORD 1 GAS/WATER

KATIE - DODDRIDGE COUNTY

CONE GATHERING



\*\*\*\*\*  
\*  
\* TRANSACTION REPORT \*  
\*  
\* JAN-23-2014 THU 12:39 PM \*  
\*  
\* FOR: DODDRIDGE CO. CLERK 304 873 1840 \*  
\*  
\* SEND \*  
\*  
\* DATE START RECEIVER TX TIME PAGES TYPE NOTE M# DP \*  
\*  
\* JAN-23 12:39 PM 3048731600 26" 1 FAX TX OK 839 \*  
\*  
\* TOTAL : 26S PAGES: 1 \*  
\*  
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Legal Advertisement:  
Doddridge County  
Floodplain Permit Application

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The Application is on file with the Clerk of the County Court and  
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Any interested persons who desire to comment shall present  
the same in writing by **FEBURARY 12, 2014.**

Delivered to the:  
Clerk of the County Court  
118 E. Court Street, West Union, WV 26456.

Beth A Rogers, Doddridge County Clerk  
Dan Wellings, Doddridge County Flood Plain Manager



**Engineers and Environmental Consultants**

7012 MacCorkie Avenue, SE, Charleston, WV 25304 - (304) 342-1400 • FAX (304) 343-9031; [www.potesta.com](http://www.potesta.com)

December 11, 2014

Mr. Bo Wriston  
Doddridge County Floodplain Coordinator  
Doddridge County Commission  
118 East Court Street  
West Union, West Virginia 26456

RE: Request for Termination of Existing Floodplain Permit Application  
EQT Production Company  
EQT MOSA-SO15 Gathering Line  
Doddridge County, West Virginia  
POTESTA Project No. 0101-13-0456-001

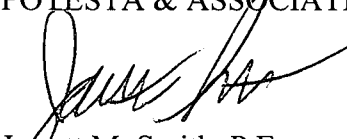
Dear Mr. Wriston:

Potesta & Associates, Inc. (POTESTA) is pleased to submit this letter requesting termination of existing floodplain permit number 14-114 for the MOSA-SO15 Gathering Line project. The proposed project has been completed including those portions located within the floodplain. Areas of disturbance have been stabilized and revegetated. No aboveground structures were constructed as part of this project.

If you have any questions, please feel free to contact me at (304) 342-1400 or [jmsmith@potesta.com](mailto:jmsmith@potesta.com), or Megan Landfried Neylon (EQT) at (304) 848-0061.

Sincerely,

POTESTA & ASSOCIATES, INC.



Jarrett M. Smith, P.E.  
Senior Engineer

JMS/clr

Enclosures

c: Ms. Megan Landfried Neylon – EQT (via email)

**POTESTA & ASSOCIATES, INC.**

Charleston, West Virginia • Morgantown, West Virginia • Winchester, Virginia • Cambridge, Ohio



January 3, 2014

Mr. Dan Wellings  
Doddridge County Clerk's Office  
118 E. Court Street, Room 102  
West Union, WV 26456

**FILED**  
2014 JAN 15 PM 3:44  
BETH A. ROGERS  
COUNTY CLERK  
DODDRIDGE COUNTY, WV

Dear Mr. Wellings:

Subject: CONE Gathering, LLC  
Proposed Oxford 1 to EQT Gas/Water Pipelines Project  
Floodplain Development Permit Application  
Doddridge County, West Virginia  
CEC Project 131-955

Civil & Environmental Consultants, Inc. (CEC) is pleased to submit the floodplain development permit application for the above referenced project on behalf of CONE Gathering, LLC. CONE Gathering, LLC proposes to construct the Oxford 1 gas and water pipelines near West Union, West Virginia in Doddridge County. A portion of the proposed gas line and water lines will cross the Right Fork of Arnold Creek floodplain. The proposed pipelines will be buried. The pipeline trenches will be excavated and backfilled to match the original ground contour. No increase of the base flood elevation is expected since the original ground contour will not be altered as a result of the proposed construction.

This letter is provided in support of the floodplain development permit application. CEC appreciates your time and effort in reviewing this floodplain development permit application. Please feel free to contact me at 304-933-3119 or via e-mail at [glinder@cecinc.com](mailto:glinder@cecinc.com) if you have questions or need additional information.

Respectfully submitted,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Greg Linder, P.E.  
Project Manager

Will Trimbath  
Project Manager



cc: Dan Bitz, CONE Gathering, LLC

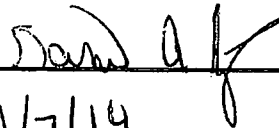
14-114  
CONE Gathering LLC  
Oxford 1 to EQT Gas/water  
P/L

**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

1/7/14

**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: Dan Bitz - CONE Gathering, LLC.**

**ADDRESS: 200 Evergreene Drive, Waynesburg, PA 15370**

**TELEPHONE NUMBER: (724) 627-1246**

BETH A. ROGERS  
COUNTY CLERK  
DODDRIDGE COUNTY, PA

2014 JAN 15 PM 3:44

FILED



**BUILDER'S NAME:** Unknown

**ADDRESS:** \_\_\_\_\_

**TELEPHONE NUMBER:** \_\_\_\_\_

**ENGINEER'S NAME:** Civil & Environmental Consultants, Inc.

**ADDRESS:** 99 Cambridge Place, Bridgeport, WV 26330

**TELEPHONE NUMBER:** (304) 933-3119

**PROJECT LOCATION:** N 39° 14' 33.80", W 80° 48' 42.49"

**NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT):** See Exhibit A

**ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT):**

**DISTRICT:**

**DATE/FROM WHOM PROPERTY PURCHASED:**

**LAND BOOK DESCRIPTION:**

**DEED BOOK REFERENCE:**

**TAX MAP REFERENCE:**

**EXISTING BUILDINGS/USES OF PROPERTY:**

**NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY:** Sylvanus A. and Ruby L. Perine

**ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY:** See Exhibit A

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

**From U.S. Route 50 West – Turn left onto County Route 11 and follow for approximately 3.2 miles to reach the center of the project.**

**DESCRIPTION OF WORK (CHECK ALL APPLICABLE BOXES)**

**A. STRUCTURAL DEVELOPMENT**

<u>ACTIVITY</u>	<u>STRUCTURAL TYPE</u>
<input type="checkbox"/> New Structure	<input type="checkbox"/> Residential (1 – 4 Family)
<input type="checkbox"/> Addition	<input type="checkbox"/> Residential (more than 4 Family)
<input type="checkbox"/> Alteration	<input type="checkbox"/> Non-residential (floodproofing)
<input type="checkbox"/> Relocation	<input type="checkbox"/> Combined Use (res. & com.)
<input type="checkbox"/> Demolition	<input type="checkbox"/> Replacement
<input type="checkbox"/> Manufactured/Mobil Home	

**B. OTHER DEVELOPMENT ACTIVITIES:**

- Fill                     Mining                     Drilling                     Pipelining
  - Grading
  - Excavation (except for STRUCTURAL DEVELOPMENT checked above)
  - Watercourse Altercation (including dredging and channel modification)
  - Drainage Improvements (including culvert work)
  - Road, Street, or Bridge Construction
  - Subdivision (including new expansion)
  - Individual Water or Sewer System
  - Other (please specify)
- 

**C. STANDARD SITE PLAN OR SKETCH**

- 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 \$ 381,750**

**D. ADJACENT AND/OR AFFECTED LANDOWNERS:**

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 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: See Exhibit A

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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: Sylvanus A. and Ruby L. Perine

NAME: \_\_\_\_\_

ADDRESS: Rt. 1 Box 69

ADDRESS: \_\_\_\_\_

West Union, WV 26456

\_\_\_\_\_

NAME: \_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

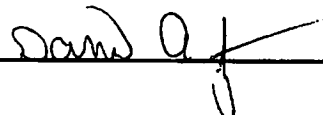
\_\_\_\_\_

**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.

**NAME (PRINT):** Dan Bitz – CONE Gathering, LLC.

**SIGNATURE:**  **DATE:** 1/7/14

After completing SECTION 2, APPLICANT should submit form to Floodplain Administrator/Manager or his/her representative for review.

**SECTION 3: FLOODPLAIN DETERMINATION (to be completed by Floodplain Administrator/Manager or his/her representative)**

**THE PROPOSED DEVELOPMENT:**

THE PROPOSED DEVELOPMENT IS LOCATED ON:

FIRM Panel: 225  
Dated: 10/04/2011

Is **NOT** located in a Specific Flood Hazard Area (Notify applicant that the application review is complete and **NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED**).

Is located in Special Flood Hazard Area.

FIRM zone designation \_\_\_\_\_  
100-Year flood elevation is: NA \_\_\_\_\_ NGVD (MSL)

- Unavailable
  - The proposed development is located in a floodway.  
FBFM Panel No. \_\_\_\_\_ Dated \_\_\_\_\_
  - See section 4 for additional instructions.
- SIGNED Ralph Dando DATE 2-14-2014

**SECTION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by Floodplain Administrator/Manager or his/her representative)**

The applicant must submit the documents checked below before the application can be processed.

- 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 proofing of utilities located below the first floor and details of enclosures below the first floor. Also \_\_\_\_\_
- 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.
- Top of new fill elevation \_\_\_\_\_ Ft. NGVD (MSL).

For floodproofing structures applicant must attach certification from registered engineer or architect.

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.

Manufactured homes located in a floodplain area must have a West Virginia Contractor's License and a Manufactured Home Installation License as required by the Federal Emergency Management Agency (FEMA).

Other:

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**SECTION 5: PERMIT DETERMINATION (To be completed by Floodplain Administrator/Manager or his/her representative)**

I have determined that the proposed activity **(type is or is not)** in conformance with provisions of the Floodplain Ordinance adopted by the County Commission of Doddridge County on May 21, 2013. The permit is issued subject to the conditions attached to and made part of this permit.

SIGNED \_\_\_\_\_ DATE \_\_\_\_\_

If the Floodplain Administrator/Manager found that the above was not in conformance with the provisions of the Doddridge County Floodplain Ordinance and/or denied that application, 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: \_\_\_\_\_  
\_\_\_\_\_

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**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 is \_\_\_\_\_ FT. NGVD (MSL)
- 2 Actual (As Built) elevation of floodproofing is \_\_\_\_\_ FT. NGVD (MSL)

**Note: Any work performed prior to submittal of the above information is at risk of the applicant.**

**SECTION 7: COMPLIANCE ACTION (To be completed by the Floodplain Administrator/Manager or his/her representative).**

The Floodplain Administrator/Manager or his/her representative will complete this section as applicable based on inspection of the project to ensure compliance with the Doddridge County Floodplain Ordinance.

**INSPECTIONS:**

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
DEFICIENCIES ?      Y/N

COMMENTS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**SECTION 8: CERTIFICATE OF COMPLIANCE (To be completed by Floodplain Administrator/Manager or his/her representative).**

Certificate of Compliance issued: DATE: \_\_\_\_\_ BY: \_\_\_\_\_

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

**PERMIT NUMBER:** \_\_\_\_\_

**PERMIT DATE:** \_\_\_\_\_

**PURPOSE –**

**CONSTRUCTION LOCATION:** \_\_\_\_\_

**OWNER'S ADDRESS:** \_\_\_\_\_

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**THE FOLLOWING MUST BE COMPLETED BY THE FLOODPLAIN ADMINISTRATOR/MANAGER OR HIS/HER AGENT.**

**COMPLIANCE IS HEREBY CERTIFIED WITH THE REQUIREMENT OF THE FLOODPLAIN ORDINANCE ADOPTED BY THE COUNTY COMMISSION OF DODDRIDGE COUNTY ON MAY 21, 2013.**

**SIGNED \_\_\_\_\_ DATE \_\_\_\_\_**

<b>EXHIBIT A – Oxford 1 Pipelines</b>				
<b>Property Owner Name</b>	<b>Mailing Address</b>	<b>Tax Map</b>	<b>Deed Book Reference</b>	<b>Land Book Description</b>
<b>HOST PROPERTIES</b>				
Sylvanus A. and Ruby L. Perine	Rt. 1 Box 69, West Union, WV 26456	8-19-26	210/158	47.8 AC Homesite/Tillable/Pasture/Woodland
Zoe Kathryn Walters	9407 Scratch Ct., Wilmington, NC 28412	8-19-27	158/663	261.25 AC Tillable/Woodland/Undeveloped
<b>PROPERTY OWNERS ABUTTING HOST PROPERTIES INSIDE FLOODPLAIN</b>				
Patricia A. Perine	PO Box 403, West Union, WV 26456	8-19-23	198/53	20.97 AC
Douglas G. and Susan Leggett	Rt. 1 Box 69BB, West Union, WV 26456	8-19-25.1	250/565	1 AC

**CONE Gathering, LLC.  
Oxford 1 Pipelines**

<b>Pipeline</b>	<b>Length of Line Pipeline (feet)</b>	<b>Construction in Floodplain (Y/N)</b>	<b>Installation Method</b>	<b>Unit Cost/Foot</b>	<b>Total</b>
16" gasline	575	Yes	Open Cut	\$200	\$115,000
	35	Yes	Bore and Jack	\$350	\$12,250
16" waterline	575	Yes	Open Cut	\$200	\$115,000
	35	Yes	Bore and Jack	\$350	\$12,250
16" waterline	575	Yes	Open Cut	\$200	\$115,000
	35	Yes	Bore and Jack	\$350	\$12,250
<b>Total Floodplain Construction Cost Estimate =</b>					<b>\$381,750</b>



# DODDRIDGE COUNTY COMMISSION

BETH A. ROGERS, Clerk  
Room 102  
118 East Court Street  
West Union, WV 26456-1297  
Phone (304) 873-2631

Deputies:  
Beth A. Kellar  
Jennifer L. Moore  
Pauletta McKinney

## F A X C O V E R S H E E T

3-18-14

DATE

TO: Greg Winder

FROM: Catie Stater - F/P Asst.

SENDER'S DIRECT PHONE NUMBER: (304) 873-2631

RE: F/P # 14-114 DxFord 1 - EQT Gas/water P/L

COMMENTS:

Number of pages (including this page):

8

TRANSACTION REPORT

P. 01

MAR-18-2014 TUE 09:50 AM

FOR: DODDRIDGE CO. CLERK

304 873 1840

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
MAR-18	09:49 AM	13049333327	1'20"	8	FAX TX	OK	934	

TOTAL : 1M 20S PAGES: 8



DODDRIDGE COUNTY COMMISSION

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Phone (304) 873-2631

Deputies:  
Beth A. Kellar  
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Pauletta McKinney

FAX COVER SHEET

3-18-14

DATE

TO: Greg Winder

FROM: Catie Stater - F/P Aest.

SENDER'S DIRECT PHONE NUMBER: (304) 873-2631

RE: F/P # 14-114 Dxsrd 1 - EQT Gas/water P/L

COMMENTS:

Number of pages (including this page):

8

Att: Greg Linder

Fax

~~304-933-3327~~

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 Upon  
Oath That the Accompanying Legal Notice  
Entitled:

*Floodplain Permit*  
*Oxford 1 - EQT*  
*# 14-114*

was published in said paper for *2*  
successive weeks beginning with the issue  
of *January 28<sup>th</sup>* 2014 and  
ending with the issue of

*February 4<sup>th</sup>* 2014 and

that said notice contains *189*

WORD SPACE at *115* cents a word

amounts to the sum of \$ *21.73*

FOR FIRST PUBLICATION, SECOND  
PUBLICATION IS 75% OF THE FIRST  
PUBLICATION

\$ *16.29*

and each publication thereafter

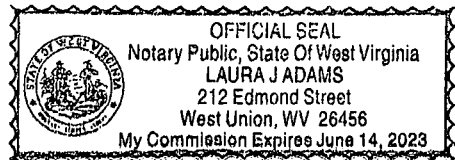
\$ *38.02* TOTAL

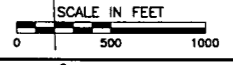
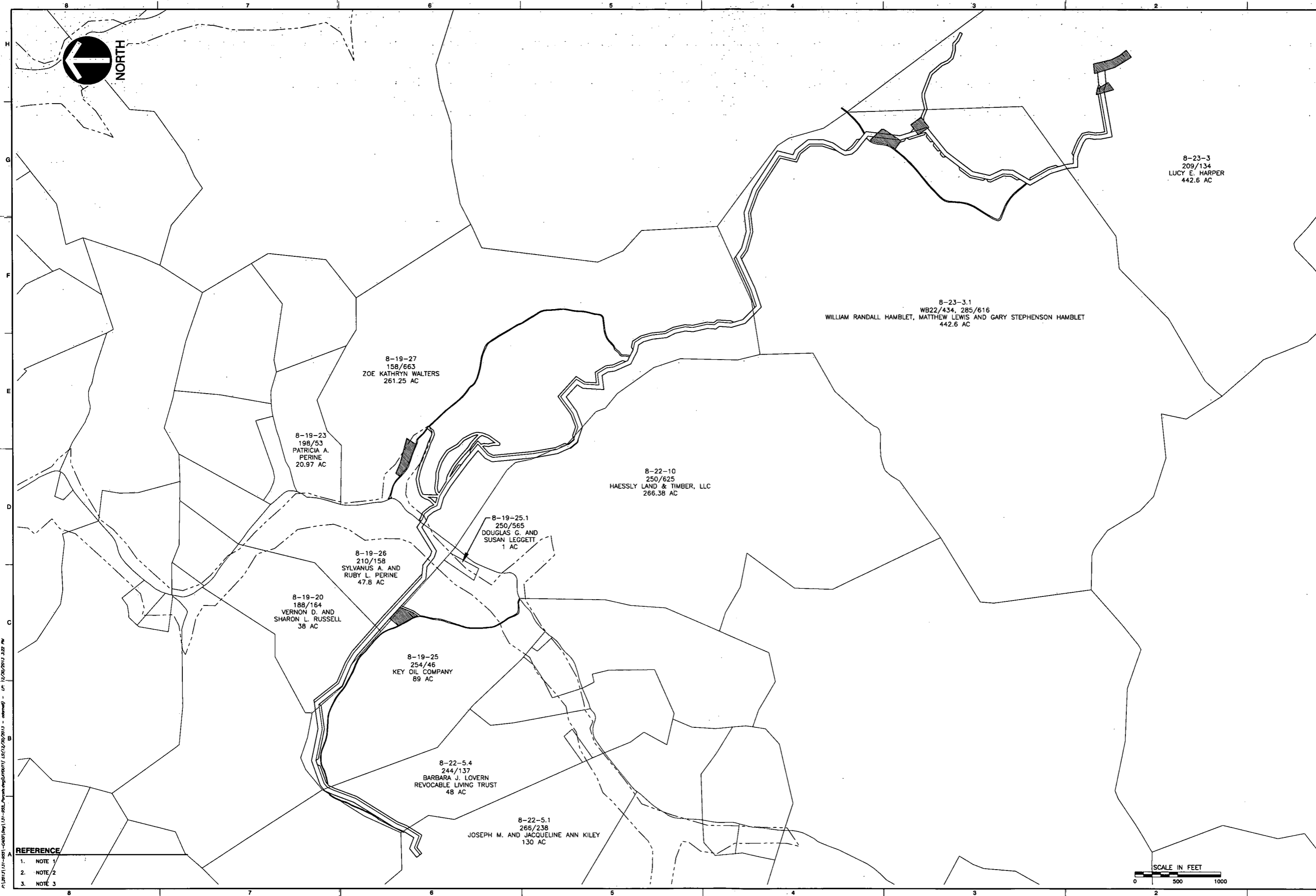
EDITOR  
*Virginia Nicholson*

SWORN TO AND SUBSCRIBED  
BEFORE ME THIS THE *6<sup>th</sup>* DAY  
OF *February* 2014

NOTARY PUBLIC  
*Laura J Adams*

**LEGAL ADVERTISEMENT:**  
Doddridge County  
Floodplain Permit Application  
Please take notice that on the 23rd day of January,  
2014 CONE GATHERING, LLC - OXFORD 1 - EQT  
GAS/WATER PIPELINE PERMIT #14-114 filed an  
application for a Floodplain Permit to develop land  
located at or about: SURFACE OWNERS: SYLVANUS  
A AND RUBY L PERINE, ZOE 210/158 & 158/663, T/M:  
8-19-26 & 8-19-27.  
The Application is on file with the Clerk of the County  
Court and may be inspected or copied during regular  
business hours. Any interested persons who desire to  
comment shall present the same in writing by February  
12, 2014.  
Delivered to the:  
Clerk of the County Court  
118 E. Court Street, West Union, WV 26456  
Beth A. Rogers, Doddridge County Clerk  
Dan Wellings, Doddridge County Flood Plain Manager  
1-28-2xb





- REFERENCE**
1. NOTE 1
  2. NOTE 2
  3. NOTE 3

NO.	DATE	DESCRIPTION

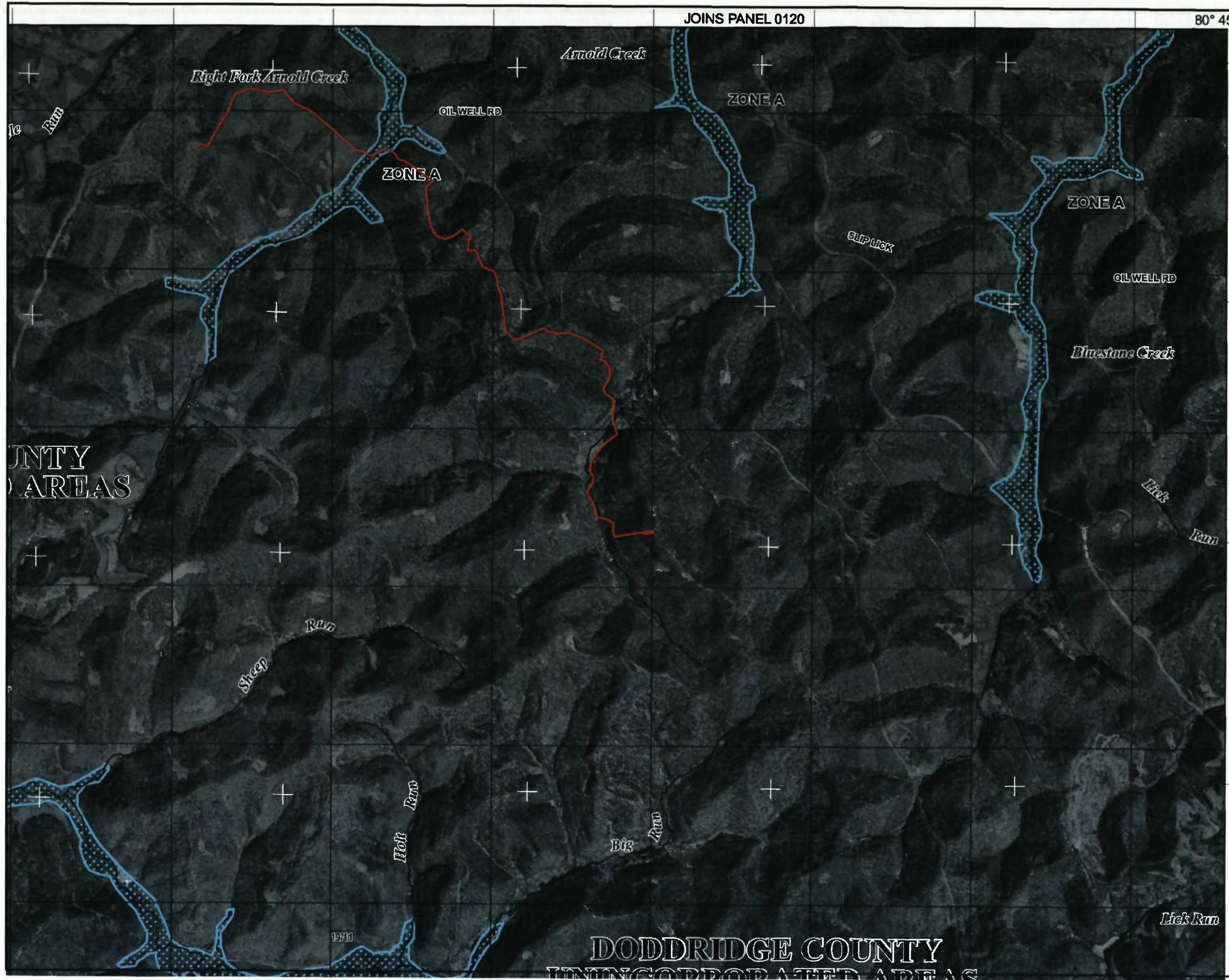
**CEL**  
Civil & Environmental Consultants, Inc.  
99 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.celeinc.com

**CONE GATHERING LLC  
OXFORD 1 PIPELINES PROJECT  
DODDRIDGE COUNTY,  
WEST VIRGINIA**

<b>PARCEL MAP</b>	DATE:	DECEMBER 2013	DRAWN BY:	APD
	DWG SCALE:	1"=600'	CHECKED BY:	DRAFT
	PROJECT NO.:	131-685	APPROVED BY:	DRAFT
	DRAWING NO.:	1		

P:\2013\131-685\131-685.dwg (131-685.dwg) - US 12/20/2013 3:22 PM  
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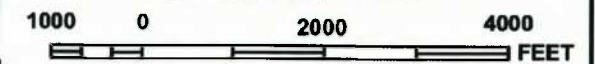


JOINS PANEL 0120

80° 45' 0 39"



MAP SCALE 1" = 2000'



JOINS PANEL 0230

NATIONAL FLOOD INSURANCE PROGRAM

NFIP

PANEL 0225C

**FIRM**

**FLOOD INSURANCE RATE MAP  
DODDRIDGE COUNTY,  
WEST VIRGINIA  
AND INCORPORATED AREAS**

**PANEL 225 OF 325**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
DODDRIDGE COUNTY	540024	0225	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



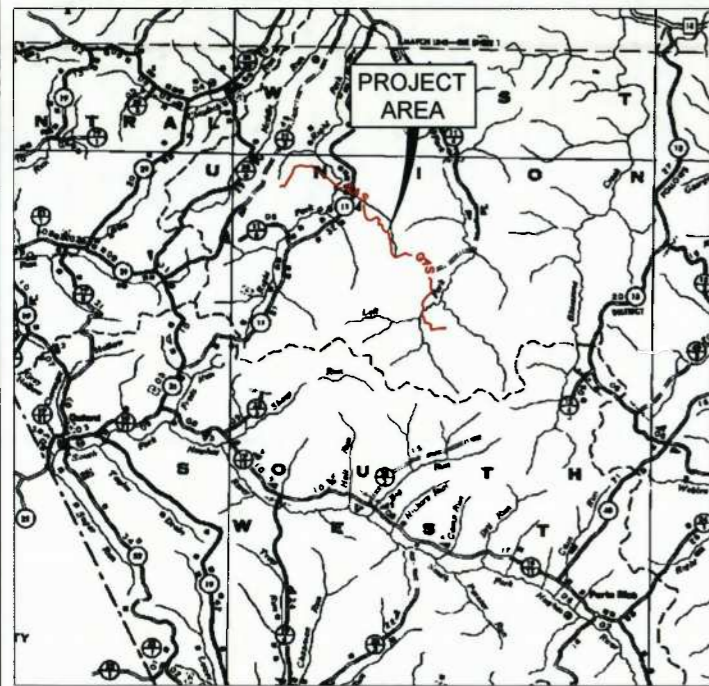
**MAP NUMBER  
54017C0225C  
MAP REVISED  
OCTOBER 4, 2011**

Federal Emergency Management Agency

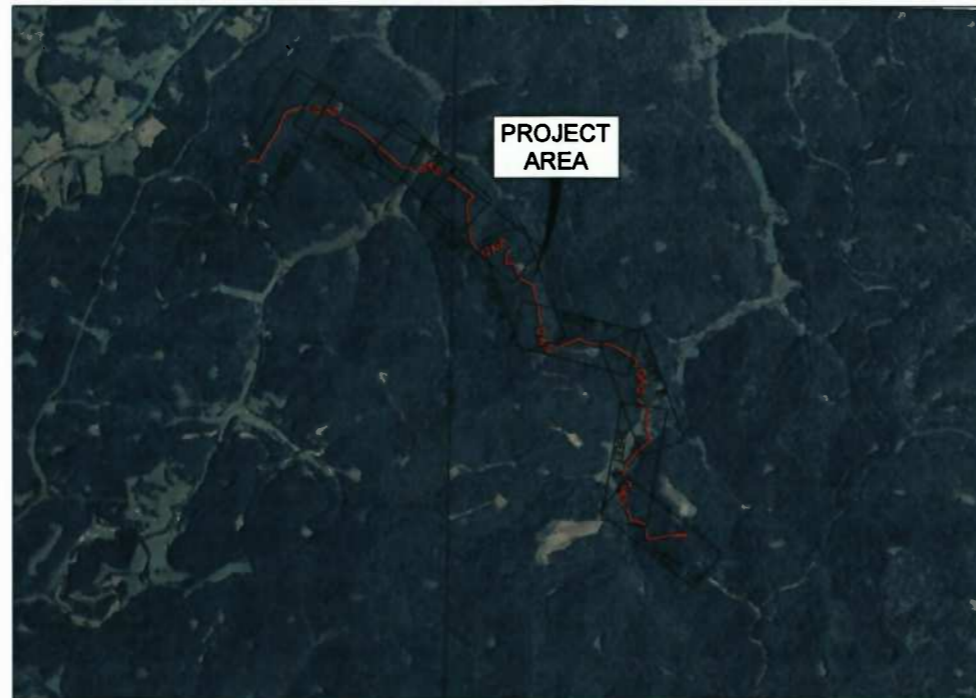
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

# OXFORD 1 TO EQT GAS/WATER PIPELINES WEST UNION DISTRICT DODDRIDGE COUNTY WEST VIRGINIA

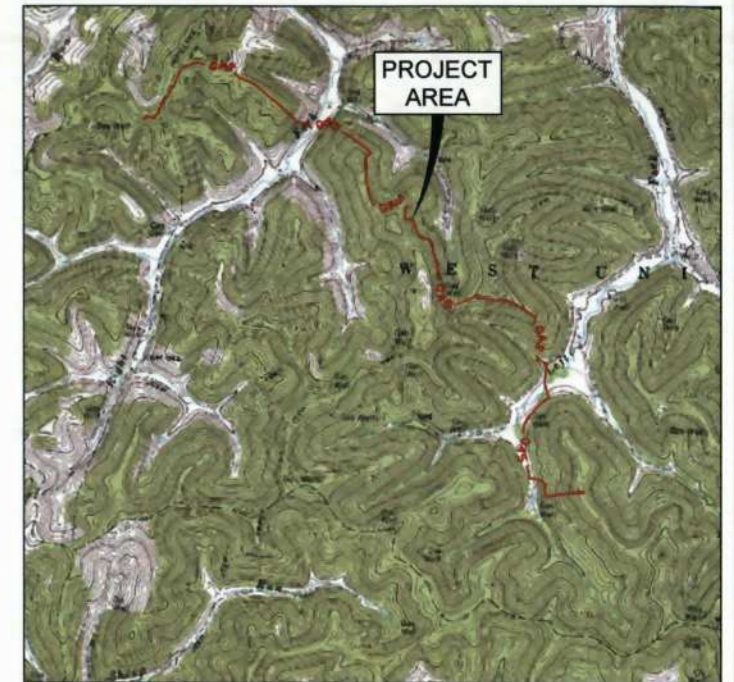
LAT./LONG: N 39° 14' 10.61" W 80° 48' 10.67"  
(APPROXIMATE CENTER OF PROJECT)



**VICINITY MAP**  
DODDRIDGE COUNTY ROAD MAP  
SCALE IN FEET  
0 1 MILES 2 MILES  
1 INCH = 1 MILE



**AERIAL MAP**  
DODDRIDGE COUNTY  
SCALE IN FEET  
0 500 1000  
1 INCH = 500 FEET



**LOCATION MAP**  
OXFORD USGS 7.5' QUAD  
SCALE IN FEET  
0 2000 4000  
1 INCH = 2000 FEET



**PROJECT OWNER/APPLICANT**

**CONE GATHERING, LLC**  
200 EVERGREENE DRIVE  
WAYNESBURG, PA 15370  
PH: (724) 627-1411  
CONTACT: TARA R. MEEK

**CIVIL ENGINEER**

**CIVIL & ENVIRONMENTAL  
CONSULTANTS, INC.**  
99 CAMBRIDGE PLACE  
BRIDGEPORT, WV. 26330  
PH: (304) 933-3119  
FAX: (304) 933-3327  
CONTACTS: GREG LINDER, P.E.

**PLAN REPRODUCTION WARNING**  
THE PLANS HAVE BEEN CREATED ON ANSI D (22" X 34") SHEETS.  
FOR REDUCTIONS, REFER TO GRAPHIC SCALE.  
  
THE PLANS HAVE BEEN CREATED FOR FULL COLOR PLOTTING.  
ANY SET OF THE PLANS THAT IS NOT PLOTTED IN FULL COLOR  
SHALL NOT BE CONSIDERED ADEQUATE FOR CONSTRUCTION  
PURPOSES.  
  
\*\*WARNING\*\* INFORMATION MAY BE LOST IN COPYING AND/OR  
GRAY SCALE PLOTTING.



**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**

MISS UTILITY OF WEST VIRGINIA ONE CALL WAS PERFORMED IN AUGUST, 2013.  
THE FOLLOWING UTILITY COMPANIES MAY BE PRESENT IN THE PROJECT AREA:

- FIRSTENERGY CORP.
- FRONTIER COMMUNICATIONS (FORMERLY VERIZON)
- PDC MOUNTAINEER, LLC
- CHESTNUT RIDGE PUBLIC SERVICE DISTRICT
- DOMINION TRANSMISSION CORPORATION
- CONSOL ENERGY



SHEET INDEX	
SHEET 1 OF 34	COVER SHEET
SHEET 2 TO 10	ALIGNMENT SHEETS STATION 0+00 TO 187+69.07
SHEET 11 TO 16	ACCESS ROAD LAYOUTS
SHEET 17 TO 20	WETLAND, STREAM, AND ROAD LOCATION MAPS
SHEET 21 TO 29	WETLAND, STREAM, AND ROAD CROSSING DETAILS
SHEET 30 TO 34	EROSION & SEDIMENTATION CONTROL DETAILS

LINE TABULATION			
OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2	2,100'	2,119'	16" / 16"
SHEET 3	2,100'	2,121'	16" / 16"
SHEET 4	2,100'	2,212'	16" / 16"
SHEET 5	2,100'	2,126'	16" / 16"
SHEET 6	2,100'	2,120'	16" / 16"
SHEET 7	2,100'	2,117'	16" / 16"
SHEET 8	2,100'	2,139'	16" / 16"
SHEET 9	2,100'	2,110'	16" / 16"
SHEET 10	1,969.07'	2,028'	16" / 16"
TOTAL	18,769.07'	19,092'	16" / 16"

SUMMARY OF MATERIALS		
NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

**\*\*NOTE TO CONTRACTOR\*\***  
THE CONTRACTOR SHALL REFER TO ALL PLANS WITHIN THIS CONSTRUCTION SET. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THE PROJECT.  
  
THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES. THE CONTRACTOR IS REQUIRED TO CONTACT WEST VIRGINIA ONE CALL SYSTEM PRIOR TO PERFORMING ANY EXCAVATION.  
  
CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DOES NOT GUARANTEE THAT THIS SURVEY OR MAP DEPICTS COMPLETE OR CONCLUSIVE SUBSURFACE INFORMATION, NOR DOES IT REFLECT A COMPLETED BOUNDARY SURVEY.

DRAFT

REVISION RECORD		
NO.	DATE	DESCRIPTION

LIMITS OF CONSTRUCTION AND  
LIMITS OF DISTURBANCE - 39.77 AC

**Cone Gathering LLC**

**OXFORD 1 TO EQT  
GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-955  
SCALE: AS SHOWN  
DRAWN BY: B.J.H.  
CHECKED BY: G.S.L. SHEET 1 OF 34

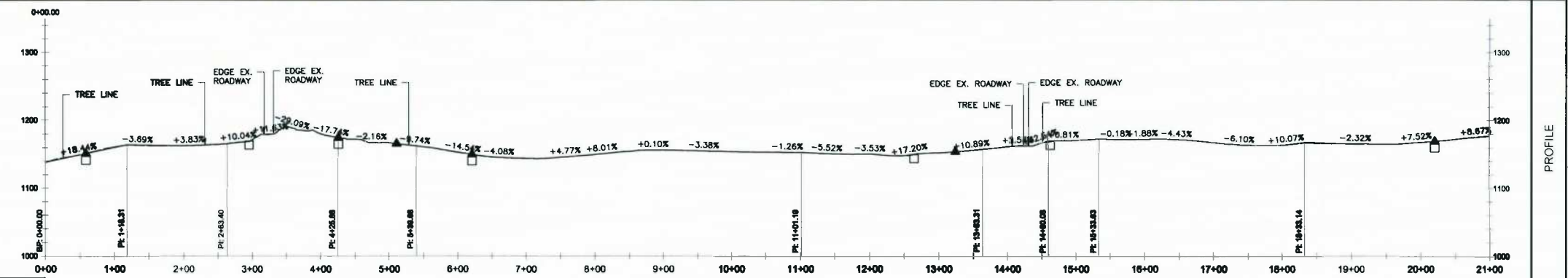
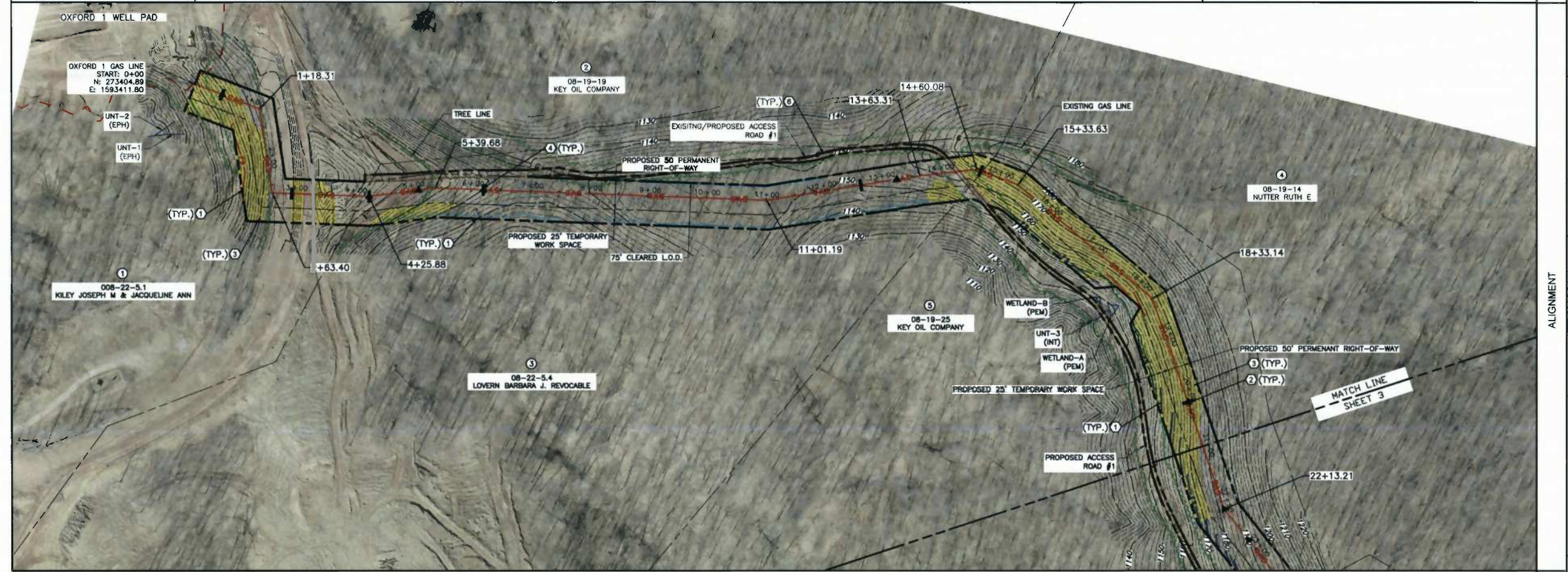
**C&E**  
**Civil & Environmental Consultants, Inc.**  
99 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.cecinc.com

11/22/2013 11:53:31 AM - C:\Users\Bj\Documents\131-955\131-955\_0109 - COVER.dwg (J:\11-955\_0109 - COVER.dwg) (J:\11-955\_0109 - COVER.dwg) (J:\11-955\_0109 - COVER.dwg)

- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - EXISTING WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DELINEATED STREAM
  - EXISTING PEM WETLAND
  - PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
  - PROPOSED PERMANENT RIGHT-OF-WAY
  - PROPOSED LIMITS OF DISTURBANCE
  - PROPOSED WATERBAR
  - PROPOSED SILT FENCE
  - PROPOSED 12" FILTER SOCK
  - PROPOSED 18" FILTER SOCK
  - PROPOSED 24" FILTER SOCK
  - PROPOSED 32" FILTER SOCK
  - PROPOSED FILTER SOCK SEDIMENT TRAP
  - PROPOSED EROSION CONTROL BLANKET
  - PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - PROPOSED TRENCH PLUG
  - PROPOSED RIPRAP
  - PROPOSED CHANNEL
  - PROPOSED STORM PIPE
  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DELINEATED BY OTHERS
  - WELLPAD L.O.D.

- REFERENCES:**
- EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2-FOOT CONTOUR INTERVALS, DATED 03-30-2013 (www.bluemountainaerialmapping.com).
  - AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING.
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM G.I.S.
  - BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT FORK ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DODDRIDGE COUNTY, MAP #54017C0225C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1956; PHOTOREVISED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08-2013 AND 10-2013.

- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
  - FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.



**PI Table**

PI Station	Northing	Easting	Deflection
0+00.00	273,404.89	1,593,411.80	
1+18.31	273,478.86	1,593,504.13	119°42' 52" RT
2+63.40	273,425.50	1,593,639.05	100°36' 22" LT
4+25.88	273,563.00	1,593,725.60	170°31' 11" LT
5+39.68	273,667.98	1,593,769.52	170°33' 52" RT
11+01.19	274,143.44	1,594,068.24	168°39' 06" LT
13+63.31	274,388.49	1,594,161.28	177°14' 42" RT
14+60.08	274,477.20	1,594,199.94	152°36' 50" RT
15+33.63	274,529.56	1,594,257.04	160°24' 21" RT
18+33.14	274,623.41	1,594,539.43	148°58' 55" LT

**LINE TABULATION**

SHEET	OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2		2,100'	2,119'	16" / 16"
SHEET 3		2,100'	2,121'	16" / 16"
SHEET 4		2,100'	2,212'	16" / 16"
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SHEET 10		1,989.07	2,028'	16" / 16"
TOTAL		18,769.07'	19,092'	16" / 16"

**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

NORTH  
SCALE IN FEET

"THIS PLAN HAS BEEN CREATED ON AN ANSI D (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

**SEAL**

**DRAFT**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

PIPELINE ALIGNMENT STA. 0+00 - 21+00

**one Gathering LLC**

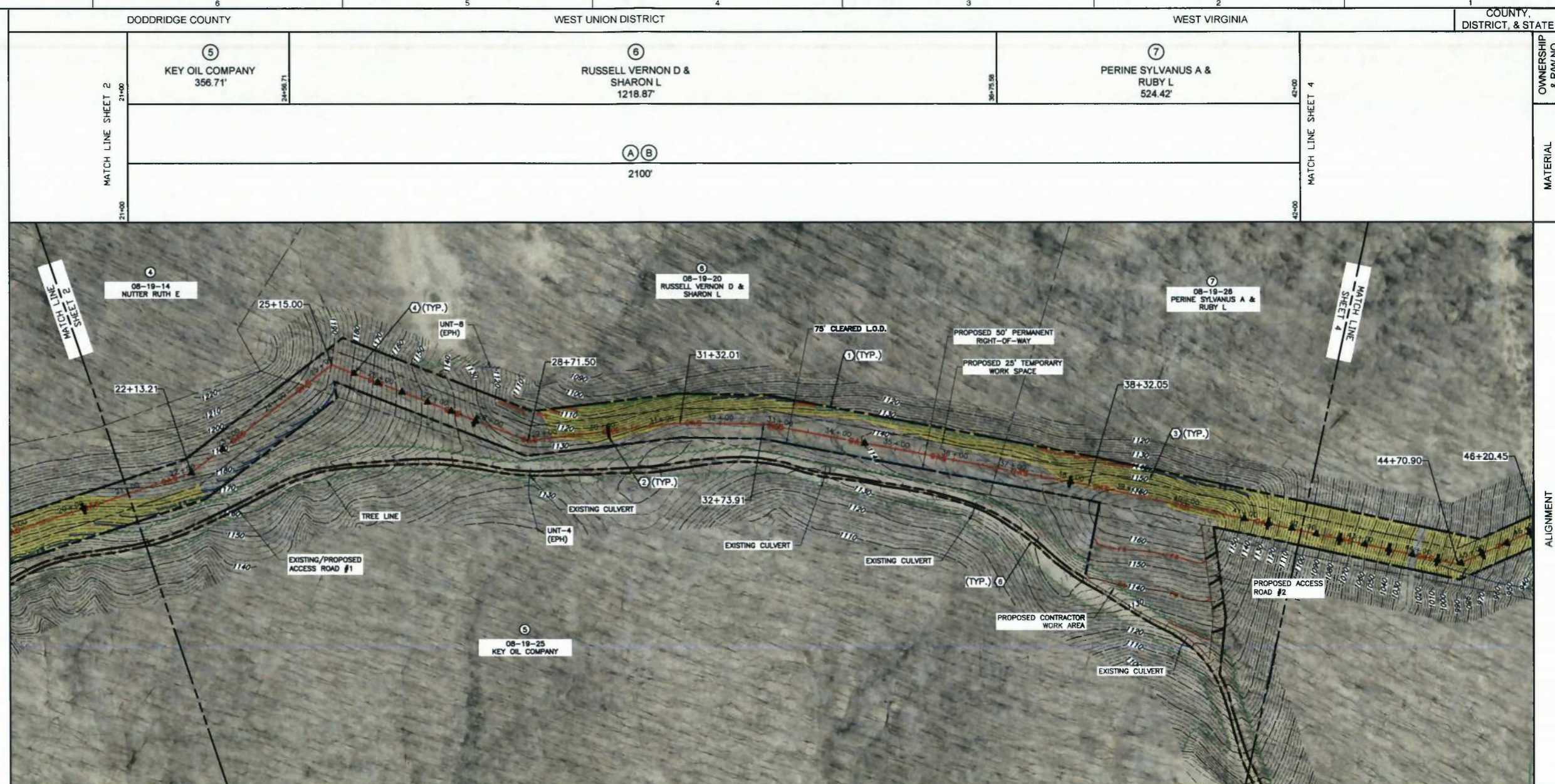
**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-966  
SCALE: 1" = 100'  
DRAWN BY: B.J.H.  
CHECKED BY: G.S.L.

SHEET 2 OF 34

P:\2013\11-22-2013\11-22-2013-131-966\131-966.dwg (11/22/2013 3:00 PM) CA 11/22/2013 3:00 PM



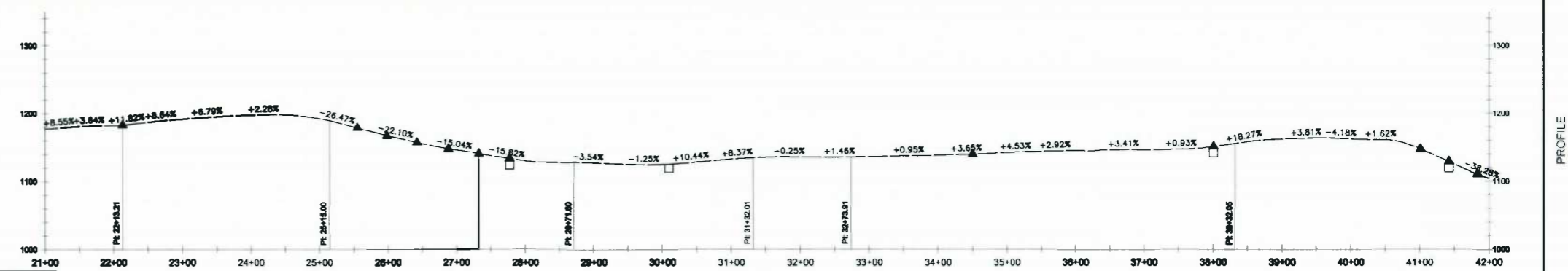
- LEGEND**
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  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
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**PI Table**

PI Station	Northing	Easting	Direction
22+13.21	274,547.34	1,594,911.81	160°38'0" LT
25+15.00	274,588.41	1,595,210.79	120°44'26" RT
28+71.50	274,309.66	1,595,433.02	151°46'20" LT
31+32.01	274,206.86	1,595,672.38	172°20'51" RT
32+73.91	274,134.00	1,595,794.15	170°1'31" RT
38+32.05	273,768.79	1,596,216.22	178°38'15" RT



**LINE TABULATION**

SHEET	OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2		2,100'	2,118'	16" / 16"
SHEET 3		2,100'	2,121'	16" / 16"
SHEET 4		2,100'	2,212'	16" / 16"
SHEET 5		2,100'	2,126'	16" / 16"
SHEET 6		2,100'	2,120'	16" / 16"
SHEET 7		2,100'	2,117'	16" / 16"
SHEET 8		2,100'	2,138'	16" / 16"
SHEET 9		2,100'	2,110'	16" / 16"
SHEET 10		1,969.07'	2,028'	16" / 16"
TOTAL		18,769.07'	19,092'	16" / 16"

**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

STATIONING AS SHOWN IS HORIZONTAL

NORTH  
SCALE IN FEET

0 100 200

THIS PLAN HAS BEEN CREATED ON AN ANSI D (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE

**DRAFT**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

PIPELINE ALIGNMENT STA. 21+00 - 42+00

**one Gathering LLC**

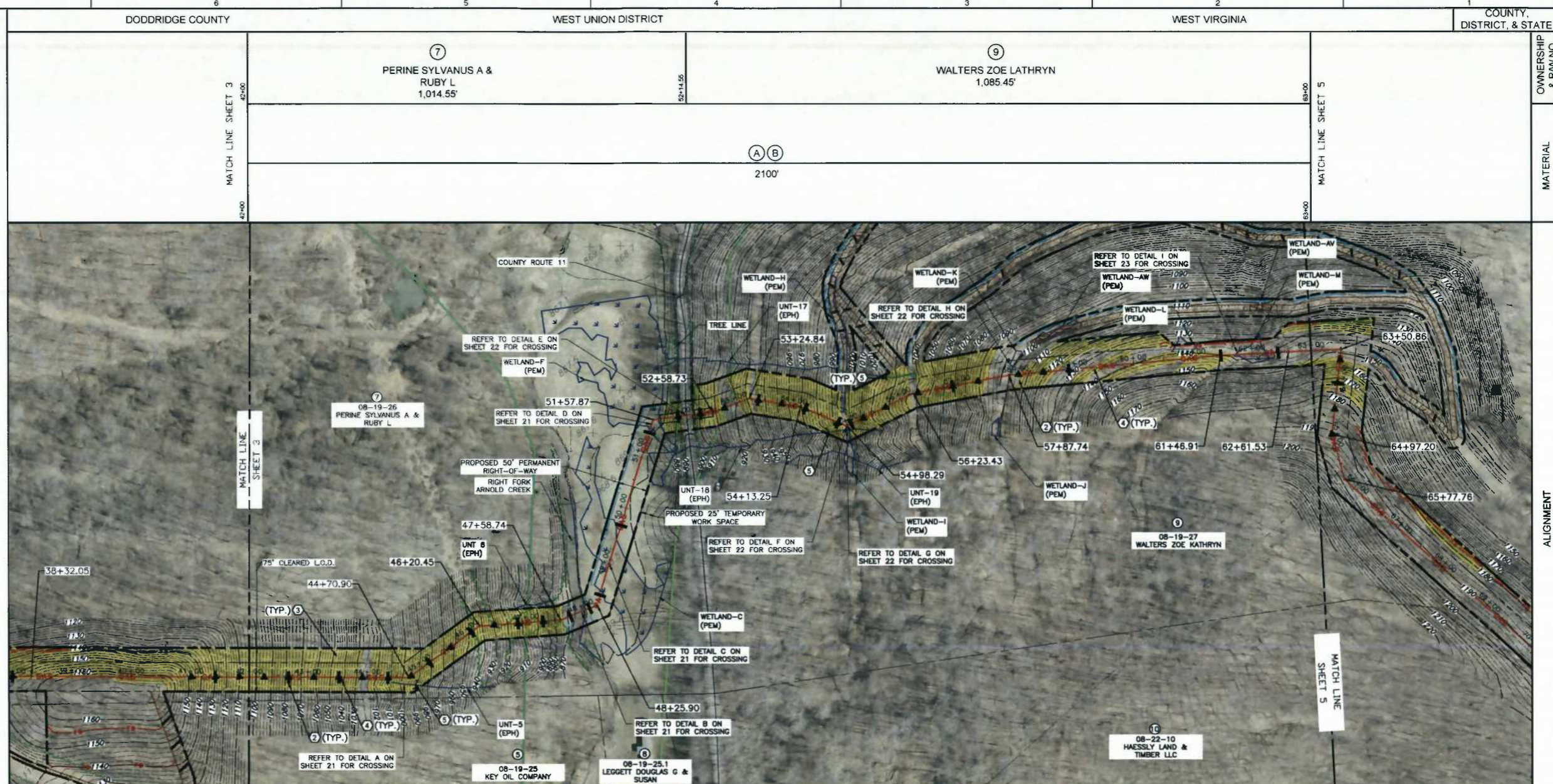
**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-988  
SCALE: 1" = 100'  
DRAWN BY: B.J.H.  
CHECKED BY: G.S.L.

SHEET 3 OF 34

**CEC**  
Civil & Environmental Consultants, Inc.  
99 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.cecinc.com



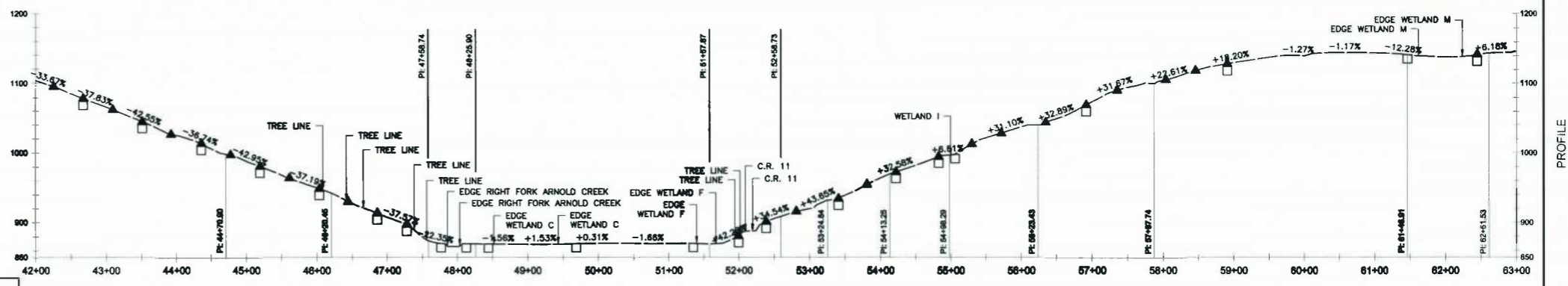
- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DELINEATED STREAM
  - EXISTING PEM WETLAND
  - PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
  - PROPOSED PERMANENT RIGHT-OF-WAY
  - PROPOSED LIMITS OF DISTURBANCE
  - PROPOSED WATERBAR
  - PROPOSED SILT FENCE
  - PROPOSED 12" FILTER SOCK
  - PROPOSED 18" FILTER SOCK
  - PROPOSED 24" FILTER SOCK
  - PROPOSED 32" FILTER SOCK
  - PROPOSED FILTER SOCK SEDIMENT TRAP
  - PROPOSED EROSION CONTROL BLANKET
  - PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - PROPOSED TRENCH PLUG
  - PROPOSED RIPRAP
  - PROPOSED CHANNEL
  - PROPOSED STORM PIPE
  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DELINEATED BY OTHERS
  - WELLPAD L.O.D.

- REFERENCES:**
- EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2-FOOT CONTOUR INTERVALS, DATED 03-30-2013 (www.bluemountainaerialmapping.com).
  - AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING.
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM G.I.S.
  - BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT FORK ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DODDRIDGE COUNTY, MAP #5401700225C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1956, PHOTOREVISED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08-2013 AND 10-2013.

- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
  - FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.

**PI Table**

PI Station	North	East	Direction
44-70.90	273,339.40	1,596,689.28	143°32'33" JT
46-20.45	273,324.36	1,596,838.05	148°12'4" RT
47-58.74	273,239.69	1,596,947.39	161°11'39" JT
48-25.90	273,217.89	1,597,010.91	129°56'35" JT
51-57.87	273,389.40	1,597,285.15	134°25'25" RT
52-58.73	273,332.32	1,597,378.30	157°04'4" LT
53-24.84	273,308.11	1,597,439.82	150°27'7" RT
54-13.25	273,239.26	1,597,495.28	164°18'23" RT
54-98.29	273,152.29	1,597,531.43	130°37'28" JT
56-23.43	273,128.91	1,597,652.03	164°17'15" RT
57-87.74	273,043.84	1,597,792.61	174°37'37" RT
61-46.91	272,829.93	1,598,081.13	177°33'39" RT
62-51.53	272,757.81	1,598,170.22	PARA.L.E.



**LINE TABULATION**

OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2	2,100'	2,119'	16" / 16"
SHEET 3	2,100'	2,121'	16" / 16"
SHEET 4	2,100'	2,212'	16" / 16"
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SHEET 7	2,100'	2,117'	16" / 16"
SHEET 8	2,100'	2,138'	16" / 16"
SHEET 9	2,100'	2,110'	16" / 16"
SHEET 10	1,969.07'	2,028'	16" / 16"
TOTAL	18,789.07'	19,082'	16" / 16"

**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

STATIONING AS SHOWN IS HORIZONTAL

NORTH  
SCALE IN FEET

0 100 200

THIS PLAN HAS BEEN CREATED ON AN ANSI D (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE

**SEAL**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

PIPELINE ALIGNMENT STA. 42+00 - 63+00

**Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-988  
SCALE: 1" = 100'  
DRAWN BY: B.H.  
CHECKED BY: G.S.L.

SHEET 4 OF 34

**CEC**  
Civil & Environmental Consultants, Inc.

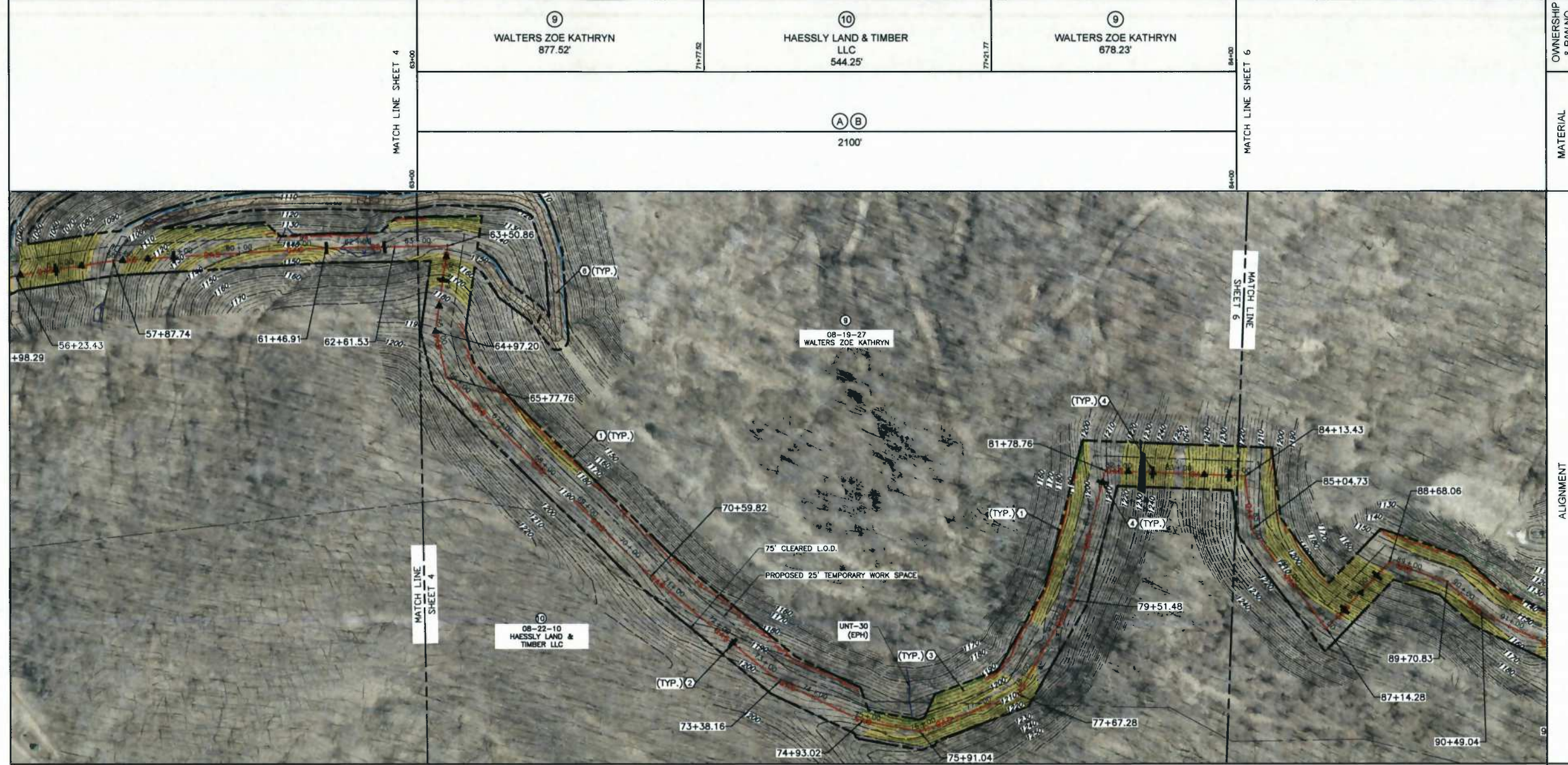
99 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.cecinc.com

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- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DELINEATED STREAM
  - EXISTING PEM WETLAND
  - PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
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  - PROPOSED LIMITS OF DISTURBANCE
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  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DELINEATED BY OTHERS
  - WELLPAD L.O.D.

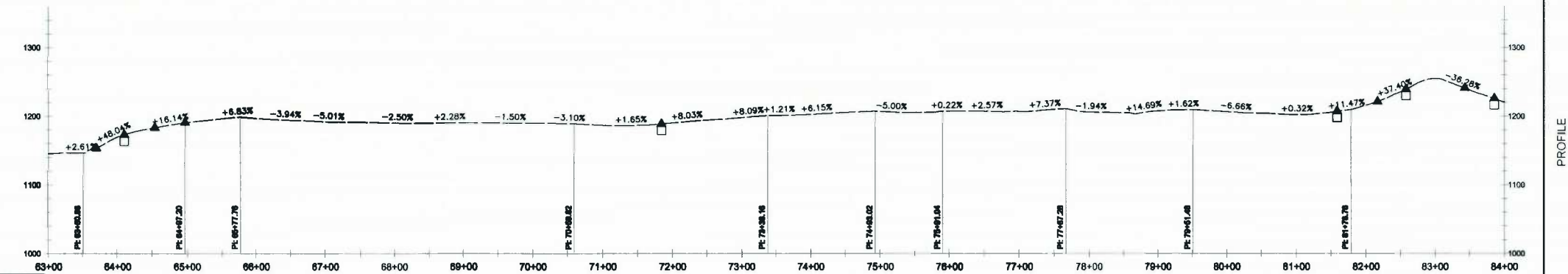
- REFERENCES:**
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  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1956; PHOTOREVISED 1994.
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- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
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  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.



**PI Table**

PI Station	Northing	Easting	Direction
63+30.86	272,701.61	1,598,239.26	30°48'13" N
64+97.20	272,604.04	1,598,130.56	136°25'6" E
65+77.76	272,532.03	1,598,054.52	147°54'3" E
70+39.82	272,052.15	1,598,140.71	175°27'56" E
73+38.15	271,778.06	1,598,169.20	165°42'46" E
74+93.02	271,635.97	1,598,132.98	164°39'30" E
75+91.64	271,561.31	1,598,315.54	348°54'32" E
77+67.28	271,503.42	1,598,461.99	340°33'15" E
79+51.48	271,367.65	1,598,534.21	154°24'4" E
81+78.76	271,699.97	1,598,839.14	101°56'48" E



**LINE TABULATION**

SHEET	OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2		2,100'	2,118'	16" / 16"
SHEET 3		2,100'	2,121'	16" / 16"
SHEET 4		2,100'	2,212'	16" / 16"
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SHEET 10		1,989.07'	2,028'	16" / 16"
TOTAL		18,789.07'	19,062'	16" / 16"

**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

\*\*\*STATIONING AS SHOWN IS HORIZONTAL\*\*\*

NORTH  
SCALE IN FEET  
0 100 200

\*\*\* THIS PLAN HAS BEEN CREATED ON AN ANSI D (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.\*\*\*

**SEAL**

**DRAFT**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

PIPELINE ALIGNMENT STA. 63+00 - 84+00

**Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-955  
SCALE: 1" = 100'  
DRAWN BY: B.J.H.  
CHECKED BY: G.S.L.

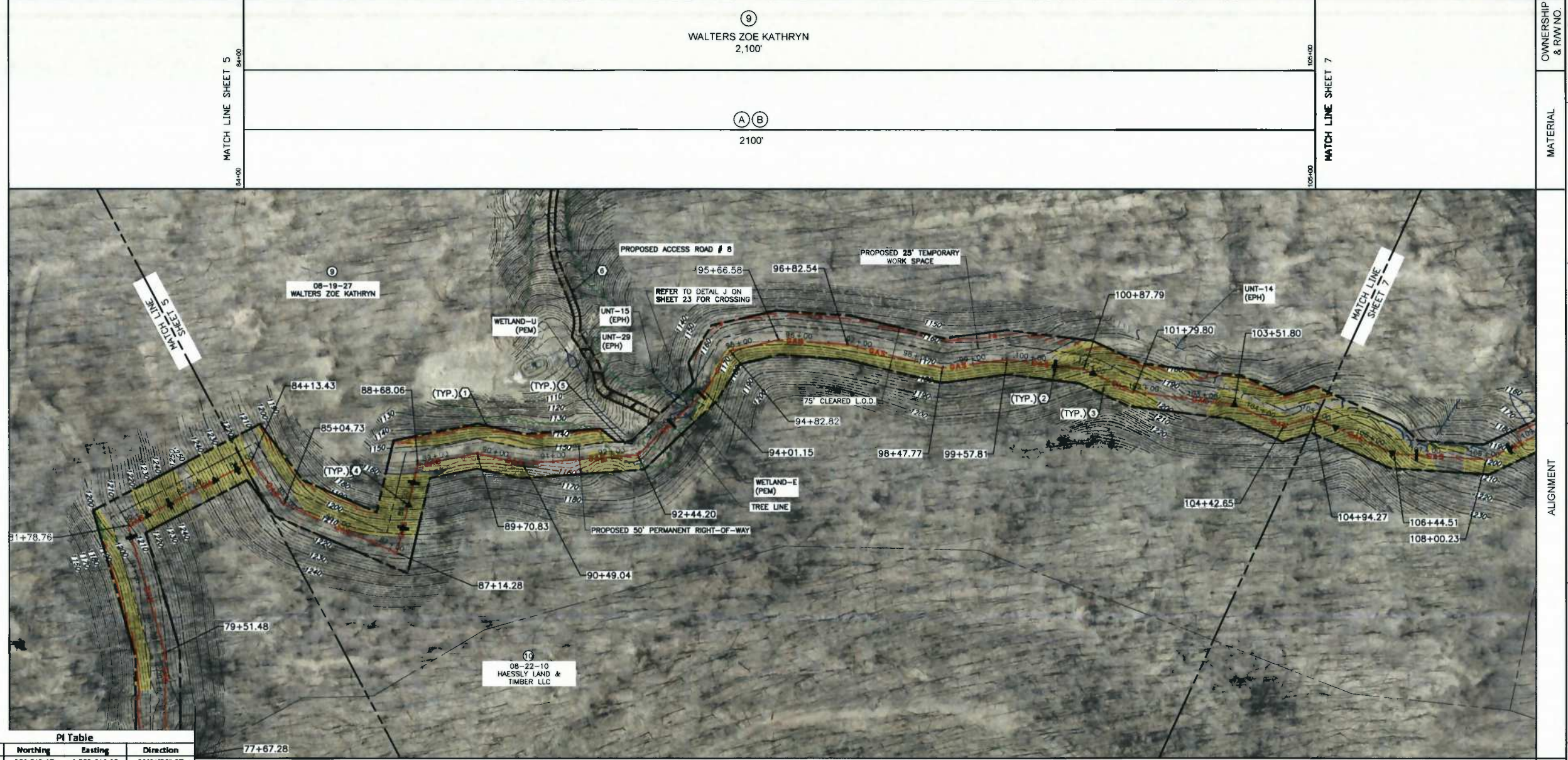
SHEET 5 OF 34

**CEC**  
Civil & Environmental Consultants, Inc.  
99 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.cecinc.com

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- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
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  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DELINEATED STREAM
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  - PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
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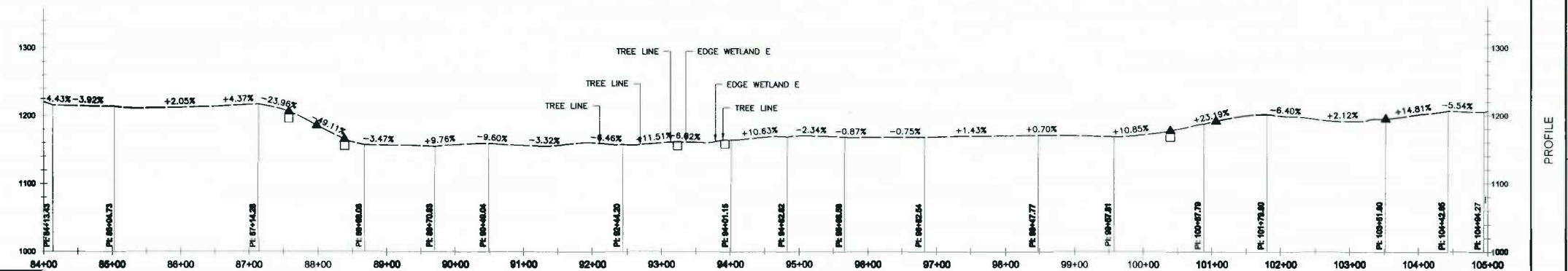
- REFERENCES:**
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  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1956; PHOTOREVISED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 06-2013 AND 10-2013.



- KEY NOTES**
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  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
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  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.

**PI Table**

PI Station	Northing	Easting	Direction
84+13.43	271,542.17	1,599,012.85	99°21'56" RT
85+04.73	271,465.51	1,598,963.27	150°47'13" LT
87+14.28	271,235.36	1,598,950.14	79°30'30" LT
88+68.06	271,274.57	1,599,102.84	114°32'35" RT
89+70.83	271,186.80	1,599,156.29	156°10'7" RT
90+49.04	271,109.26	1,599,166.52	163°16'51" LT
92+44.20	270,931.29	1,599,246.61	140°34'39" LT
94+01.15	270,861.63	1,599,387.25	165°16'11" LT
94+82.82	270,845.22	1,599,467.26	134°40'7" RT
95+66.58	270,775.16	1,599,513.15	182°31'15" RT
96+82.54	270,663.55	1,599,544.61	170°24'43" RT
98+47.77	270,499.27	1,599,562.32	158°38'28" RT
99+57.81	270,401.68	1,599,613.15	165°23'39" RT
100+87.79	270,274.97	1,599,642.15	165°7'3" RT
101+79.80	270,183.31	1,599,634.14	162°11'34" LT
103+51.80	270,015.60	1,599,672.29	163°17'19" RT
104+42.65	269,924.95	1,599,666.12	138°49'58" LT
104+94.27	269,883.87	1,599,697.38	138°14'13" RT



**LINE TABULATION**

OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2	2,100'	2,119'	18" / 16"
SHEET 3	2,100'	2,121'	18" / 16"
SHEET 4	2,100'	2,212'	18" / 16"
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SHEET 10	1,969.07	2,028'	18" / 16"
TOTAL	18,789.07	19,092'	18" / 16"

**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	18" GASLINE	19,092 LF
B	2-18" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

NORTH  
SCALE IN FEET  
0 100 200

"THIS PLAN HAS BEEN CREATED ON AN ANSI D (27"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

**SEAL**

**DRAFT**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

PIPELINE ALIGNMENT STA. 84+00 - 105+00

**Gathering LLC**

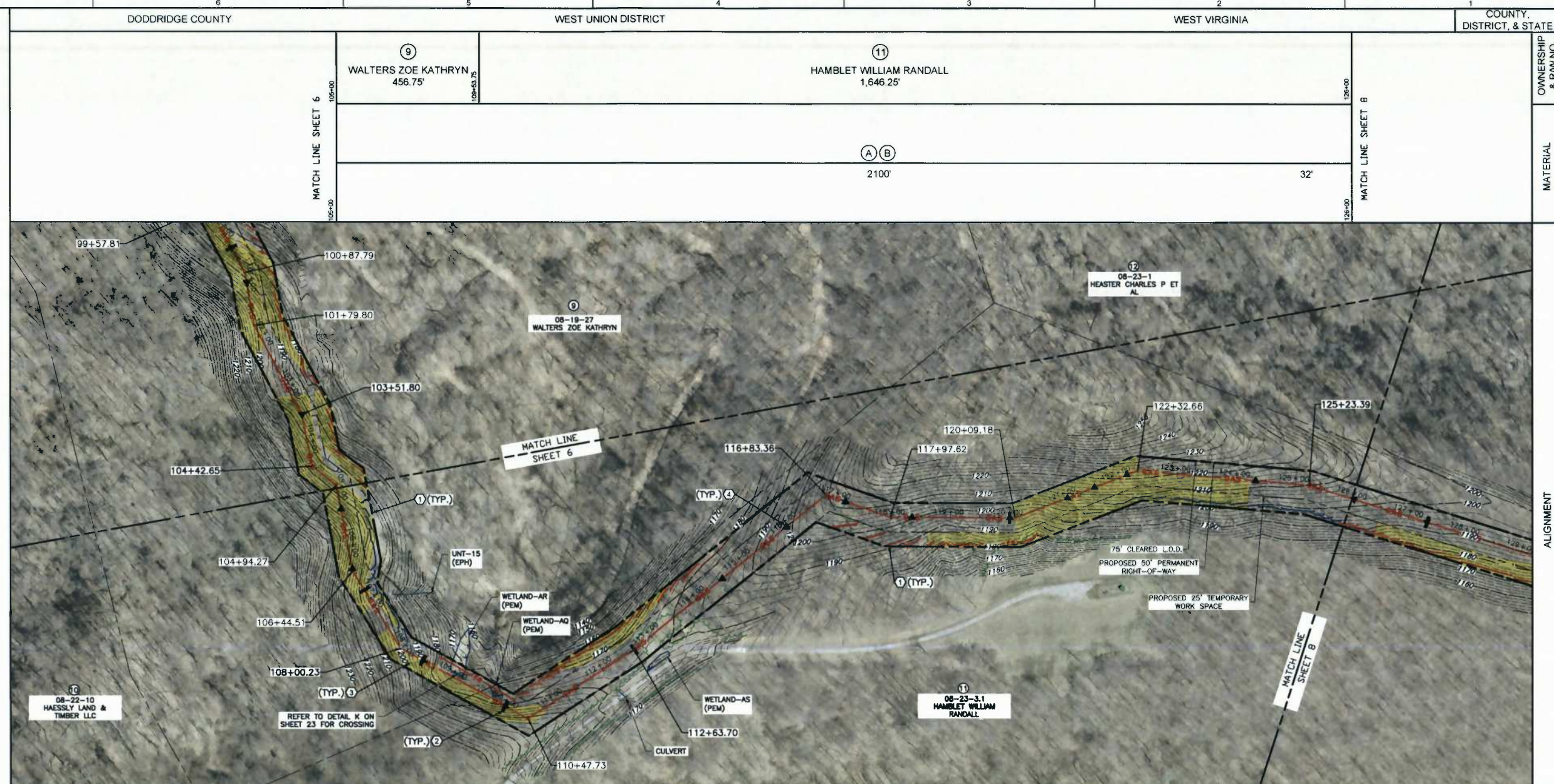
**OXFORD 1 TO EQT GAS/WATER PIPELINES**

18" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-888  
SCALE: 1" = 100'  
DRAWN BY: B.J.H.  
CHECKED BY: G.B.L.

SHEET 6 OF 34

**CEC**  
Civil & Environmental Consultants, Inc.  
99 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 - Fax: 304.933.3327  
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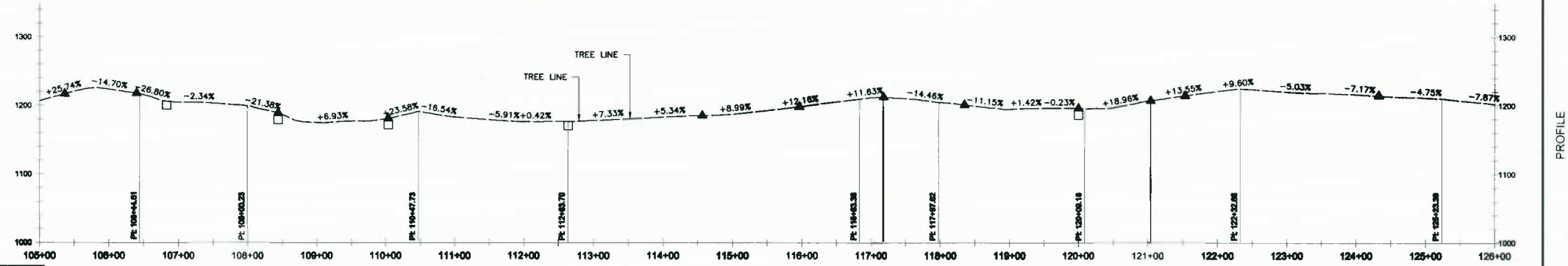
- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - EXISTING WATER PIPELINE
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  - BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT FORK ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DODDRIDGE COUNTY, MAP #54017C0225C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1966; PHOTOREVISED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08-2013 AND 10-2013.

- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
  - FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.

**PI Table**

PI Station	Northing	Easting	Direction
105+44.53	259,738.50	599,565.51	S94°33'12" T
106+00.29	259,584.79	599,729.66	S94°4'12" T
106+47.75	259,412.07	599,906.99	S87°28'15" T
112+53.75	259,479.74	598,112.01	S73°33'28" T
115+83.35	259,552.96	598,454.24	S60°26'28" T
117+97.62	259,587.97	598,588.20	S60°28'25" T
120+09.19	259,532.05	598,752.25	S52°22'34" T
122+32.66	259,396.54	598,301.38	S53°51'33" T
125+23.39	259,458.00	598,267.86	S57°14'54" T



**LINE TABULATION**

OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2	2,100'	2,119'	16" / 16"
SHEET 3	2,100'	2,121'	16" / 16"
SHEET 4	2,100'	2,212'	16" / 16"
SHEET 5	2,100'	2,126'	16" / 16"
SHEET 6	2,100'	2,120'	16" / 16"
SHEET 7	2,100'	2,117'	16" / 16"
SHEET 8	2,100'	2,138'	16" / 16"
SHEET 9	2,100'	2,110'	16" / 16"
SHEET 10	1,969.07'	2,028'	16" / 16"
<b>TOTAL</b>	<b>18,769.07'</b>	<b>19,092'</b>	<b>16" / 16"</b>

**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

**NORTH**  
SCALE IN FEET

"THIS PLAN HAS BEEN CREATED ON AN ANS I D (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

**SEAL**

**DRAFT**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

PIPELINE ALIGNMENT STA. 105+00 - 126+00

**Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

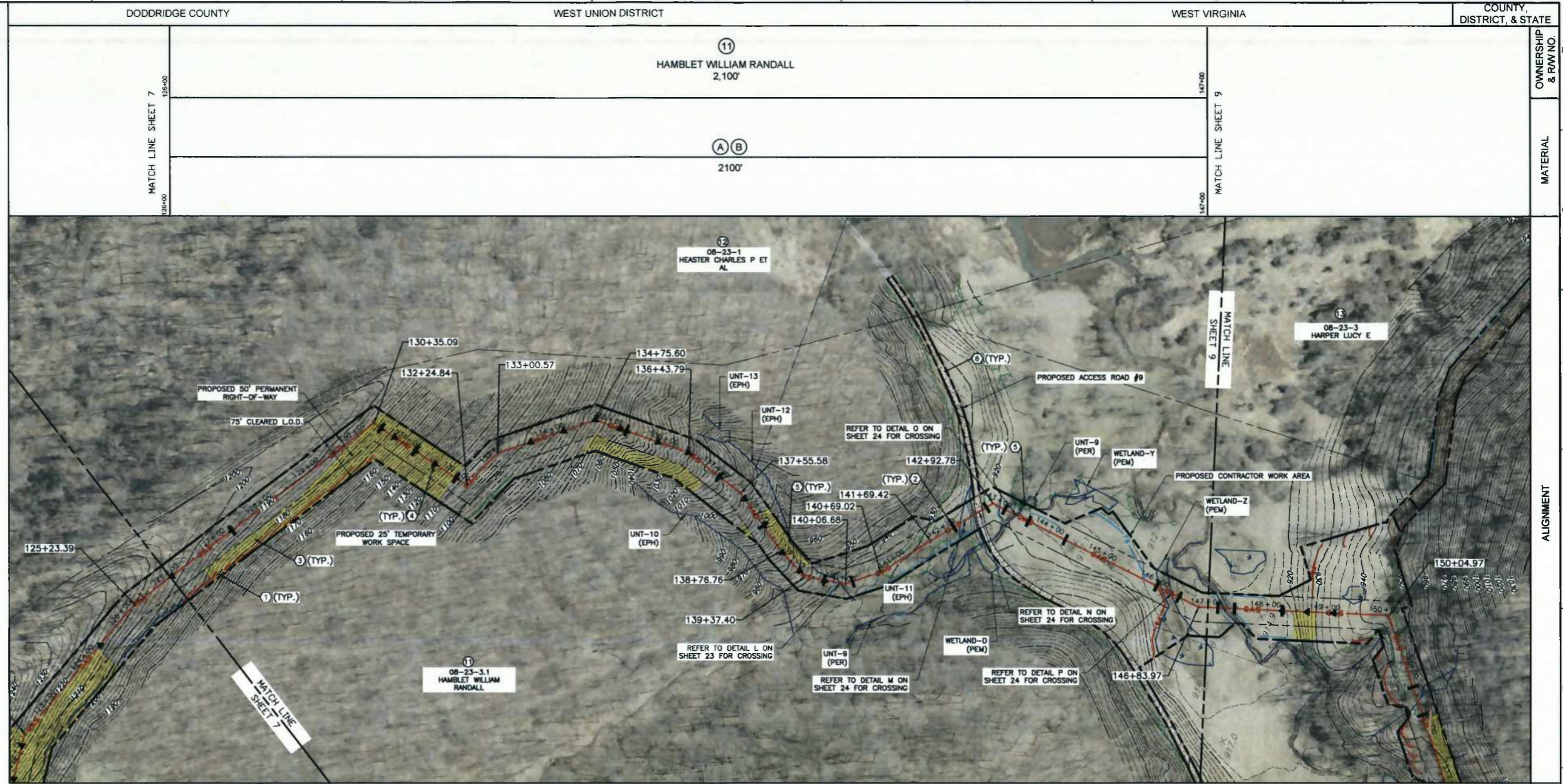
DATE: 11/22/2013 PROJECT NO: 131-955  
SCALE: 1" = 100'  
DRAWN BY: B.J.H.  
CHECKED BY: G.S.L.

SHEET 7 OF 34

**CEC**  
**Civil & Environmental Consultants, Inc.**  
99 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.cecinc.com

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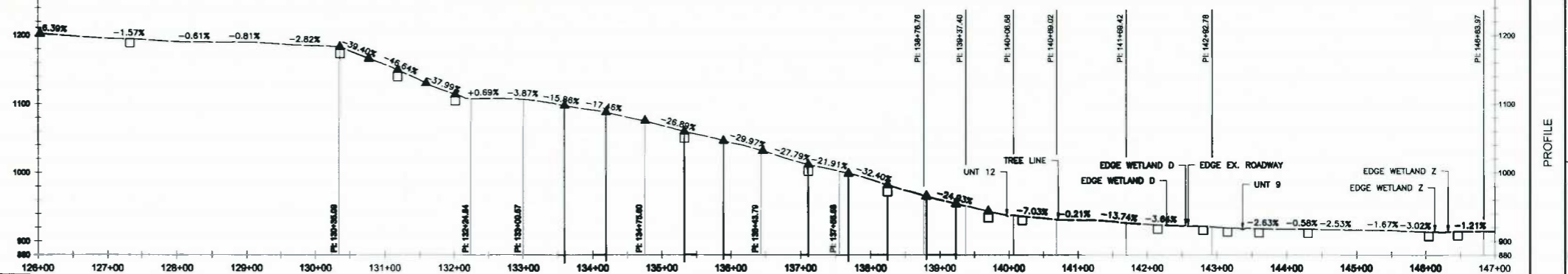


- LEGEND**
- 50' — EXISTING INDEX CONTOUR
  - — — EXISTING VEGETATION
  - x — x — EXISTING FENCE
  - OH — E — EXISTING OVERHEAD ELECTRIC
  - G — EXISTING GAS PIPELINE
  - W — WATER PIPELINE
  - — — EXISTING ROADS (PAVED)
  - — — EXISTING ROADS (UNPAVED)
  - — — FEMA FLOODPLAIN BOUNDARY
  - — — EXISTING TAX PARCEL PROPERTY LINE
  - — — EXISTING DELINEATED STREAM
  - — — EXISTING PEM WETLAND
  - GAS — PROPOSED GATHERING LINE
  - — — PROPOSED ACCESS ROAD
  - — — PROPOSED PERMANENT RIGHT-OF-WAY
  - — — PROPOSED LIMITS OF DISTURBANCE
  - ▲ PROPOSED WATERBAR
  - SF — PROPOSED SILT FENCE
  - FS — PROPOSED 12" FILTER SOCK
  - FS — PROPOSED 18" FILTER SOCK
  - FS — PROPOSED 24" FILTER SOCK
  - FS — PROPOSED 32" FILTER SOCK
  - FS — PROPOSED FILTER SOCK SEDIMENT TRAP
  - — — PROPOSED EROSION CONTROL BLANKET
  - — — PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - — — PROPOSED TRENCH PLUG
  - — — PROPOSED RIPRAP
  - — — PROPOSED CHANNEL
  - ST — PROPOSED STORM PIPE
  - — — PROPOSED CROSS DRAIN
  - — — PROPOSED MOBILE BRIDGE WITH APPROACH
  - — — PROPOSED COFFERDAM
  - — — PROPOSED CONSTRUCTION FENCE
  - — — PROPOSED CHECK DAM
  - — — DELINEATED BY OTHERS
  - — — WELLPAD L.O.D.

- REFERENCES:**
- EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2-FOOT CONTOUR INTERVALS, DATED 03-30-2013 (www.bluemountainaerialmapping.com)
  - AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING.
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM G.I.S.
  - BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT FORK ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DODDRIDGE COUNTY, MAP #54017C0225C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
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- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL).
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  - FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.

PI Station	Northing	Easting	Direction
130+35.09	269,182.42	1,601,719.01	108°36'0" RT
133+00.57	268,967.84	1,601,742.49	152°55'14" RT
136+43.79	268,664.04	1,601,854.55	161°10'46" RT
138+76.76	268,459.09	1,601,749.26	171°32'54" LT
140+06.68	268,336.81	1,601,733.98	151°57'21" LT
141+69.42	268,226.95	1,601,852.36	178°45'29" RT
146+83.97	267,761.84	1,601,901.02	155°32'4" LT



LINE TABULATION			
OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2	2,100'	2,119'	16" / 16"
SHEET 3	2,100'	2,121'	16" / 16"
SHEET 4	2,100'	2,212'	16" / 16"
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SHEET 8	2,100'	2,138'	16" / 16"
SHEET 9	2,100'	2,110'	16" / 16"
SHEET 10	1,969.07'	2,028'	16" / 16"
TOTAL	18,789.07'	19,082'	16" / 16"

SUMMARY OF MATERIALS		
NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

NORTH  
SCALE IN FEET

"THIS PLAN HAS BEEN CREATED ON AN ANS I D (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

SEAL		REVISION RECORD	
NO.	DATE	NO.	DESCRIPTION

PIPELINE ALIGNMENT STA. 126+00 - 147+00

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

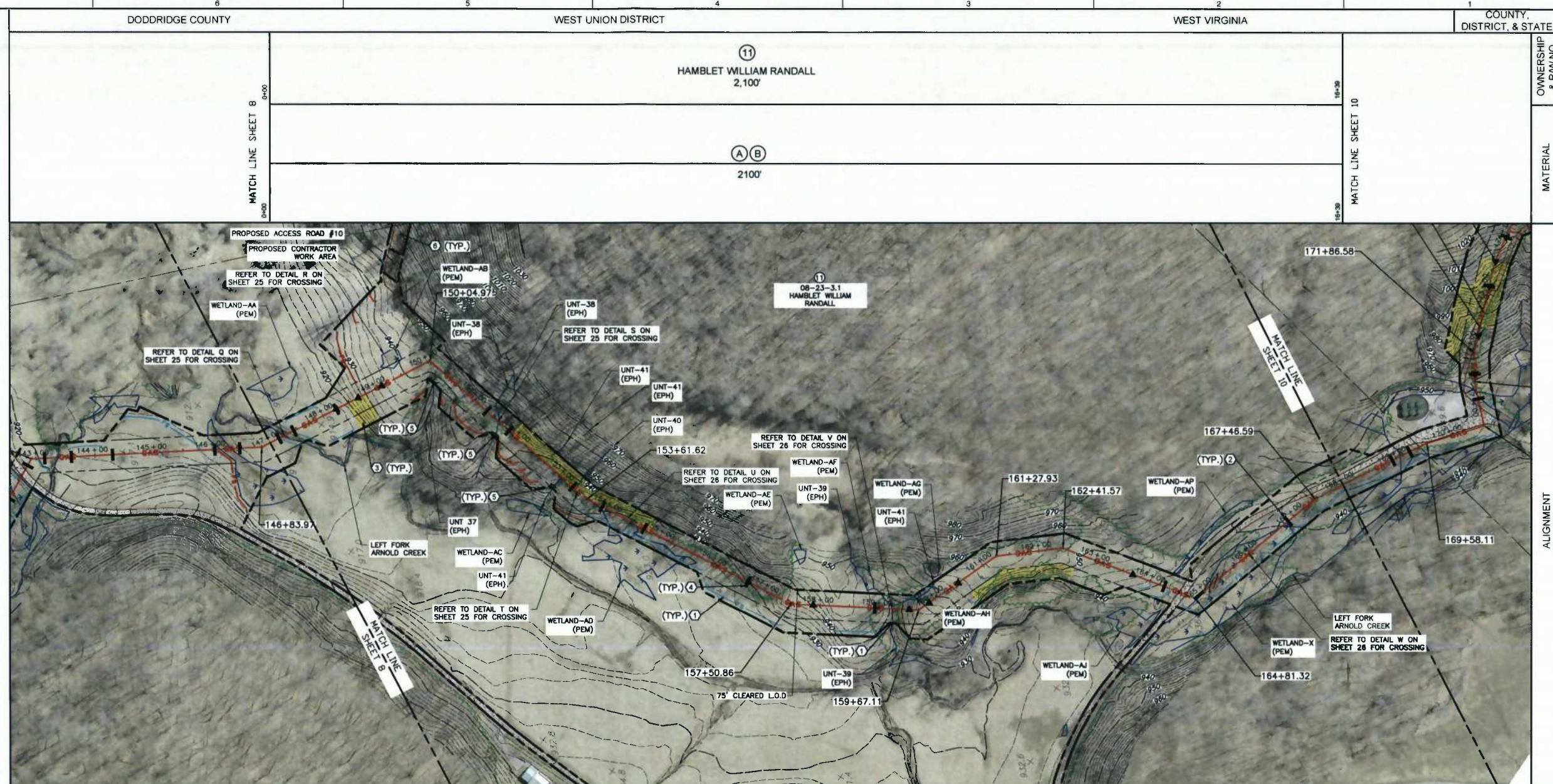
16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-868  
SCALE: 1" = 100'  
DRAWN BY: BJH  
CHECKED BY: GSL

SHEET 8 OF 34

**Civil & Environmental Consultants, Inc.**  
99 Cambridge Place - Bridgeport, WV 28330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.cecinc.com

11/22/2013 11:57:53 AM - C:\Users\gsl\AppData\Local\Temp\131-868-010 - C:\Users\gsl\AppData\Local\Temp\131-868-010 - 11/22/2013 11:57:53 AM



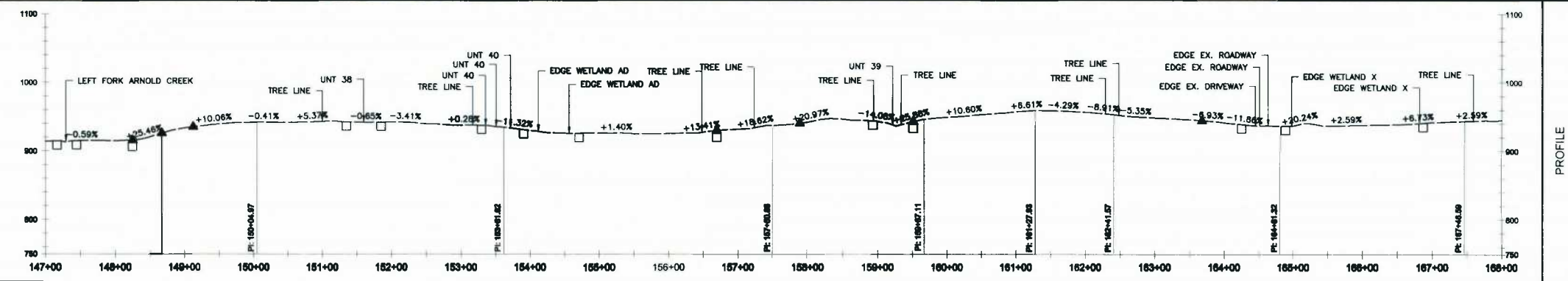
- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - EXISTING WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DELINEATED STREAM
  - EXISTING PEM WETLAND
  - PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
  - PROPOSED PERMANENT RIGHT-OF-WAY
  - PROPOSED LIMITS OF DISTURBANCE
  - PROPOSED WATERBAR
  - PROPOSED SILT FENCE
  - PROPOSED 12" FILTER SOCK
  - PROPOSED 18" FILTER SOCK
  - PROPOSED 24" FILTER SOCK
  - PROPOSED 32" FILTER SOCK
  - PROPOSED FILTER SOCK SEDIMENT TRAP
  - PROPOSED EROSION CONTROL BLANKET
  - PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - PROPOSED TRENCH PLUG
  - PROPOSED RIPRAP
  - PROPOSED CHANNEL
  - PROPOSED STORM PIPE
  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DELINEATED BY OTHERS
  - WELLPAD L.O.D

- REFERENCES:**
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- KEY NOTES**
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  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.

**PI Table**

PI Station	Northing	Easting	Direction
150+04.97	267,455.59	1,601,997.24	110°13' RT
153+61.62	267,233.83	1,601,717.91	165°59'59" LT
157+50.86	266,925.26	1,601,480.67	155°12'27" LT
159+67.11	266,714.35	1,601,432.90	141°57'3" LT
161+27.93	266,568.93	1,601,501.60	151°36'6" RT
162+41.57	266,455.46	1,601,495.43	152°9'33" RT
164+81.32	266,249.86	1,601,372.12	119°3'0" LT
167+46.59	266,020.12	1,601,504.75	166°48'28" RT



**LINE TABULATION**

OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2	2,100'	2,119'	10" / 16"
SHEET 3	2,100'	2,121'	10" / 16"
SHEET 4	2,100'	2,212'	10" / 16"
SHEET 5	2,100'	2,128'	10" / 16"
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SHEET 7	2,100'	2,117'	10" / 16"
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TOTAL	18,769.07'	19,082'	10" / 16"

**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

NORTH  
SCALE IN FEET

"THIS PLAN HAS BEEN CREATED ON AN ANS I D (27x34) SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

**SEAL**

**DRAFT**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

PIPELINE ALIGNMENT STA. 147+00 - 168+00

**Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-958  
SCALE: 1" = 100'  
DRAWN BY: B.H.  
CHECKED BY: G.S.L.

SHEET 9 OF 34

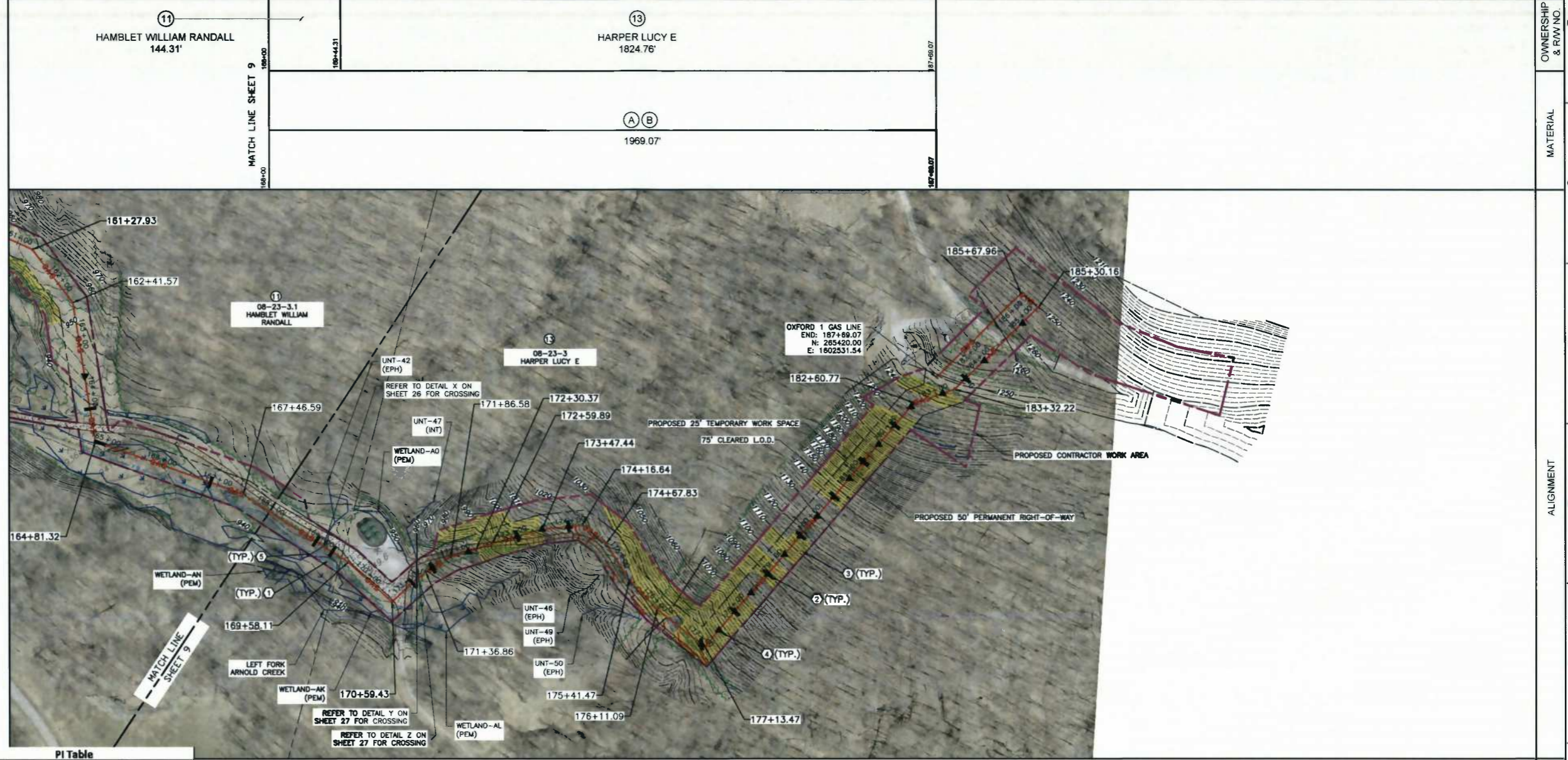
**CEC**  
Civil & Environmental Consultants, Inc.  
99 Cambridge Place - Bridgeport, WV 28330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.cecinc.com

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- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
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  - EXISTING DELINEATED STREAM
  - EXISTING PEM WETLAND
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  - PROPOSED ACCESS ROAD
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  - PROPOSED LIMITS OF DISTURBANCE
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  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
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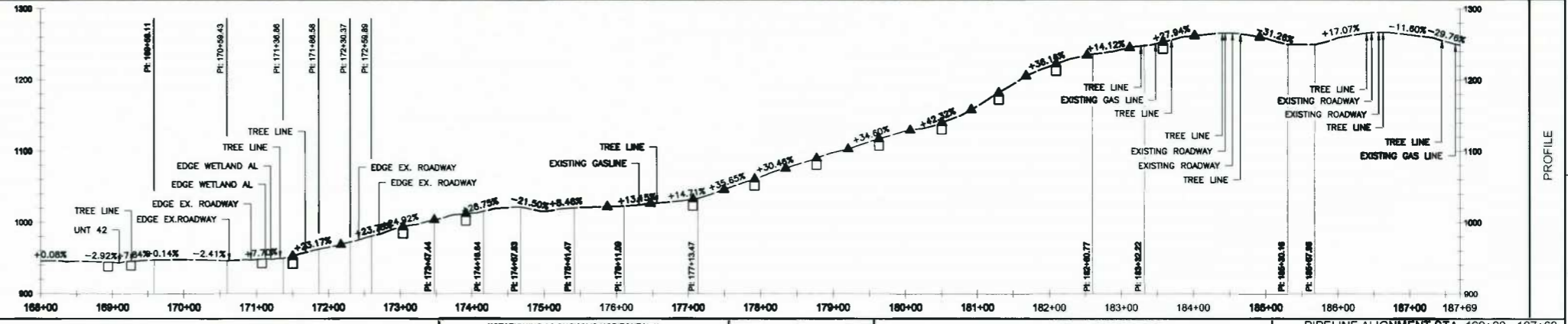
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  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.



**PI Table**

PI Station	Northing	Eastng	Direction
169+58.11	265,817.63	1,601,565.91	170°33'4" RT
170+59.43	265,717.15	1,601,578.88	95°20'54" RT
171+31.86	265,719.87	1,601,656.27	168°51'52" T
171+86.58	265,711.98	1,601,705.36	165°57'34" RT
172+30.37	265,694.75	1,601,745.62	175°57'50" T
172+59.89	265,685.08	1,601,773.51	175°74'2" RT
173+47.44	265,649.46	1,601,853.48	170°16'1" RT
174+16.64	265,611.03	1,601,911.03	135°52'23" RT
174+67.83	265,560.99	1,601,921.79	159°40'31" RT
175+41.47	265,488.10	1,601,911.31	169°4'23" LT
175+11.09	265,418.55	1,601,914.63	171°8'50" LT
177+13.47	265,318.26	1,601,935.71	91°54'40" RT
182+60.77	265,410.30	1,602,474.71	149°28'22" RT
183+32.22	265,384.88	1,602,541.48	154°18'57" T
185+30.16	265,401.57	1,602,738.73	84°15'3" LT
185+67.96	265,438.73	1,602,731.78	95°14'40" LT
187+69.07	265,420.00	1,602,531.34	



**LINE TABULATION**

OXFORD 1 GAS/ (2) WATER PIPELINES	HORIZONTAL LENGTH	SLOPE LENGTH	DIAMETER GAS/WATER
SHEET 2	2,100'	2,110'	16" / 16"
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**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

SEAL

REVISION RECORD

NO.	DATE	DESCRIPTION

**Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-958  
SCALE: 1" = 100'  
DRAWN BY: B.H.  
CHECKED BY: G.S.L.

SHEET 10 OF 34

**CEC**  
Civil & Environmental Consultants, Inc.  
99 Cambridge Plaza - Bridgeport, WV 28330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.cecinc.com

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**LEGEND**

	EXISTING INDEX CONTOUR
	EXISTING VEGETATION
	EXISTING FENCE
	EXISTING OVERHEAD ELECTRIC
	EXISTING GAS PIPELINE
	WATER PIPELINE
	EXISTING ROADS (PAVED)
	EXISTING ROADS (UNPAVED)
	FEMA FLOODPLAIN BOUNDARY
	EXISTING TAX PARCEL PROPERTY LINE
	EXISTING DELINEATED STREAM
	EXISTING PEM WETLAND
	PROPOSED GATHERING LINE
	PROPOSED ACCESS ROAD
	PROPOSED PERMANENT RIGHT-OF-WAY
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED WATERBAR
	PROPOSED SILT FENCE
	PROPOSED 12" FILTER SOCK
	PROPOSED 18" FILTER SOCK
	PROPOSED 24" FILTER SOCK
	PROPOSED 32" FILTER SOCK
	PROPOSED FILTER SOCK SEDIMENT TRAP
	PROPOSED EROSION CONTROL BLANKET
	PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
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	PROPOSED CHECK DAM
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	WELLPAD L.O.D.

- REFERENCES:**
- EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2 FOOT CONTOUR INTERVALS, DATED 03.30.2013 (www.bluemountainaerialmapping.com).
  - AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING.
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM GIS.
  - BY GRAPHIC PLOTTING ONLY. THIS PIPELINE IS NOT LOCATED IN THE RIGHT OF WAY FOR ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR GOODHUGHES COUNTY, MAP #5401700226C, WITH A MAP REVISED DATE OF OCTOBER 2, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1959; PHOTO REVISED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CSC BETWEEN 08-2013 AND 10-2013.

- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL CROSS DRAIN PER DETAIL 18 ON SHEET 34.
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 9 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.
  - FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34 (TYPICAL).



**C&E**  
Civil & Environmental Consultants, Inc.  
96 Cambridge Place - Bridgeport, WV 26330  
PH: 304.933.3119 - Fax: 304.933.3327  
www.ccecinc.com

**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

**NORTH**  
SCALE IN FEET

"THIS PLAN HAS BEEN CREATED ON AN A80 8 1/2 X 11 SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

**SEAL**

DRAFT

**REVISION RECORD**

NO.	DATE	DESCRIPTION

ACCESS ROAD #1

**Stone Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, GOODHUGHES COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-688  
SCALE: 1" = 100'  
DRAWN BY: BJM  
CHECKED BY: OBL

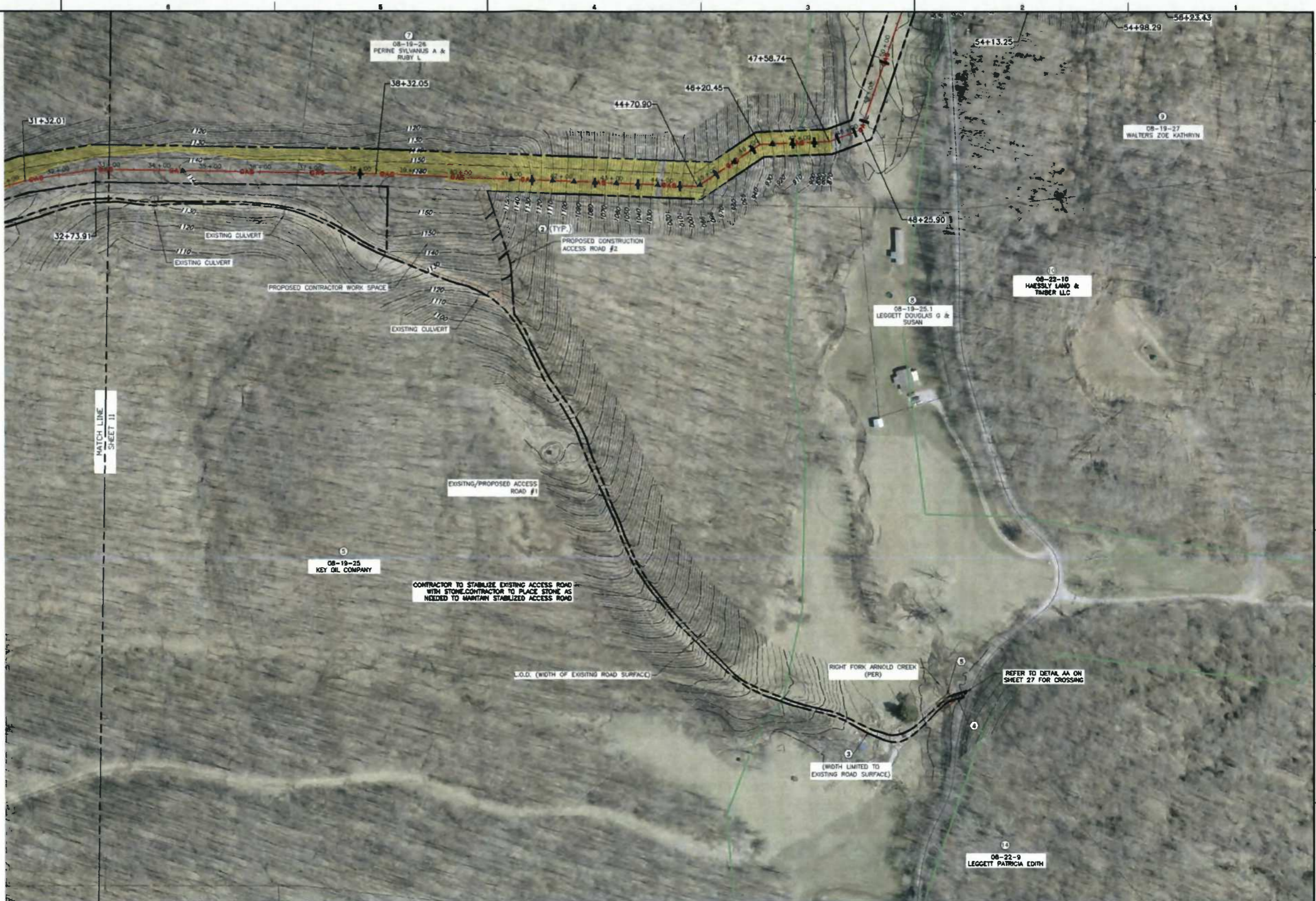
**SHEET 11 OF 34**

**LEGEND**

	EXISTING INDEX CONTOUR
	EXISTING VEGETATION
	EXISTING FENCE
	EXISTING OVERHEAD ELECTRIC
	EXISTING GAS PIPELINE
	EXISTING WATER PIPELINE
	EXISTING ROADS (PAVED)
	EXISTING ROADS (UNPAVED)
	FEMA FLOODPLAIN BOUNDARY
	EXISTING TAX PARCEL PROPERTY LINE
	EXISTING DELINEATED STREAM
	EXISTING PEM WETLAND
	PROPOSED GATHERING LINE
	PROPOSED ACCESS ROAD
	PROPOSED PERMANENT RIGHT-OF-WAY
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED WATERBAR
	PROPOSED SILT FENCE
	PROPOSED 12" FILTER SOCK
	PROPOSED 18" FILTER SOCK
	PROPOSED 24" FILTER SOCK
	PROPOSED 32" FILTER SOCK
	PROPOSED FILTER SOCK SEDIMENT TRAP
	PROPOSED EROSION CONTROL BLANKET
	PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
	PROPOSED TRENCH PLUG
	PROPOSED RIPRAP
	PROPOSED CHANNEL
	PROPOSED STORM PIPE
	PROPOSED CROSS DRAIN
	PROPOSED MOBILE BRIDGE WITH APPROACH
	PROPOSED COFFERDAM
	PROPOSED CONSTRUCTION FENCE
	PROPOSED CHECK DAM
	DELINEATED BY OTHERS
	WELLPAD L.O.D.

- REFERENCES:**
- EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2-FOOT CONTOUR INTERVALS, DATED 03/30/2013 (www.bluemountainaerialmapping.com).
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  - BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT FORK ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DOODRIDGE COUNTY, MAP #560170225C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1994; PHOTO REVISED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08/2013 AND 10/2013.

- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL CROSS DRAIN PER DETAIL 18 ON SHEET 34.
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.
  - FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34 (TYPICAL).



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 www.cecinc.com

**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

**NORTH**  
SCALE IN FEET

0 100 200

"THIS PLAN HAS BEEN CREATED ON AN A850 (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

**SEAL**

**DRAFT**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

**ACCESS ROAD #1 & 2**

**Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DOODRIDGE COUNTY, WV

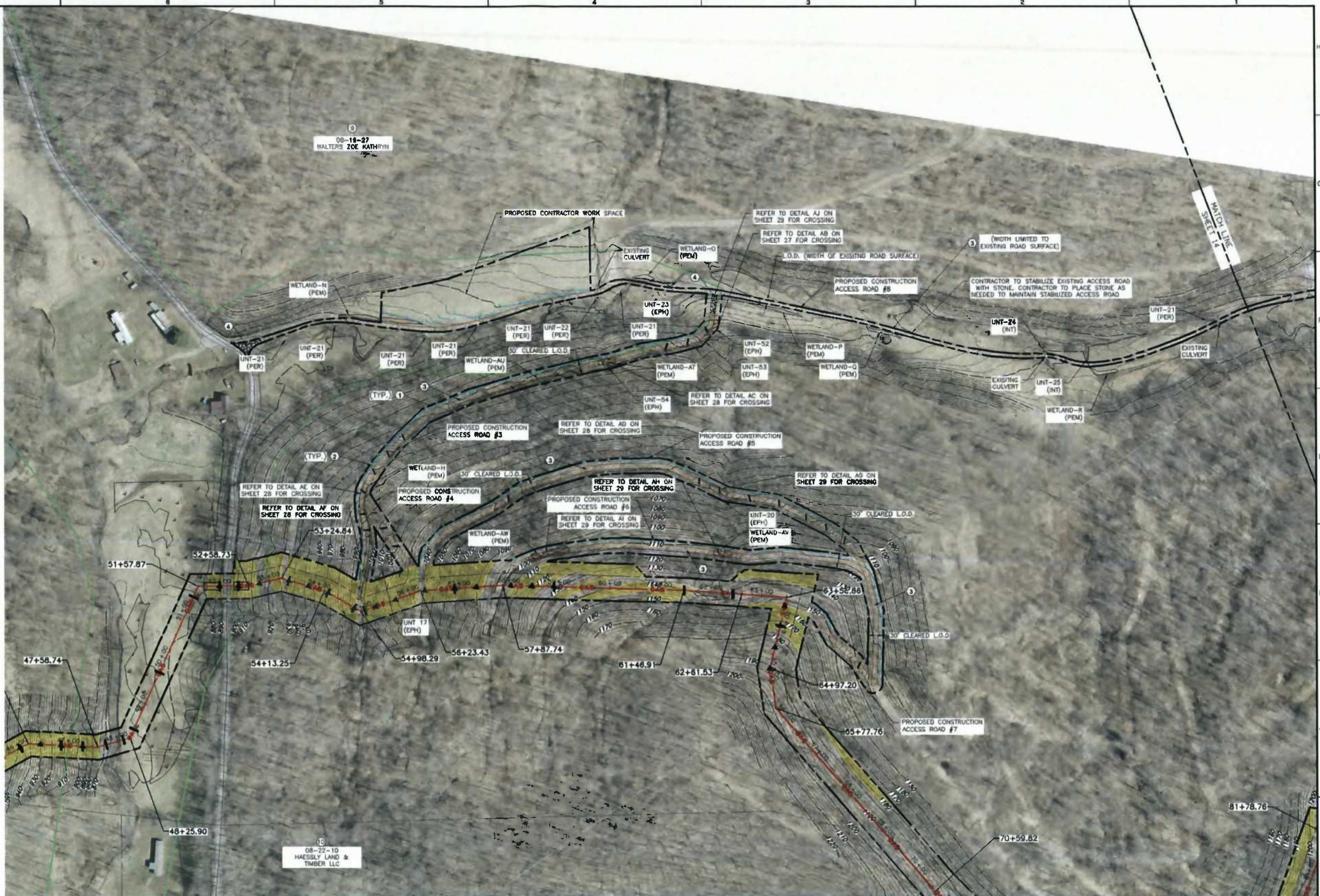
DATE: 11/29/2013 PROJECT NO: 131-468  
 SCALE: 1" = 100'  
 DRAWN BY: B.M.  
 CHECKED BY: CBL

SHEET 12 OF 34

- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DELINEATED STREAM
  - EXISTING PEM WETLAND
  - PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
  - PROPOSED PERMANENT RIGHT-OF-WAY
  - PROPOSED LIMITS OF DISTURBANCE
  - PROPOSED WATERBAR
  - PROPOSED SILT FENCE
  - PROPOSED 12" FILTER SOCK
  - PROPOSED 18" FILTER SOCK
  - PROPOSED 24" FILTER SOCK
  - PROPOSED 32" FILTER SOCK
  - PROPOSED FILTER SOCK SEDIMENT TRAP
  - PROPOSED EROSION CONTROL BLANKET
  - PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - PROPOSED TRENCH PLUG
  - PROPOSED RIPRAP
  - PROPOSED CHANNEL
  - PROPOSED STORM PIPE
  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DELINEATED BY OTHERS
  - WELLPAD L.O.D.

- REFERENCES:**
1. EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2-FOOT CONTOUR INTERVALS, DATED 03/30/2013 (www.bluemountainaerialmapping.com)
  2. AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING
  3. THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM GIS.
  4. BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT OF WAY FOR ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DOODRIDGE COUNTY, MAP #540170022C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  5. USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1986, PHOTO REVISION 1994.
  6. WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08-2013 AND 10-2013.

- KEY NOTES**
1. FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  2. FURNISH AND INSTALL CROSS DRAIN PER DETAIL 18 ON SHEET 34.
  3. FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
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SUMMARY OF MATERIALS		
NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

STATIONING AS SHOWN IS HORIZONTAL

**NORTH**  
 SCALE IN FEET  
 0 100 200

THIS PLAN HAS BEEN CREATED ON AN A850 (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.

**SEAL**

**DRAFT**

REVISION RECORD		
NO.	DATE	DESCRIPTION

ACCESS ROAD # 3, 4, 5, 6, 7, & 8

**One Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
 WEST UNION DISTRICT, DOODRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-888  
 SCALE: 1" = 100'  
 DRAWN BY: B.M.  
 CHECKED BY: C.B.L.

SHEET 13 OF 34

**LEGEND**

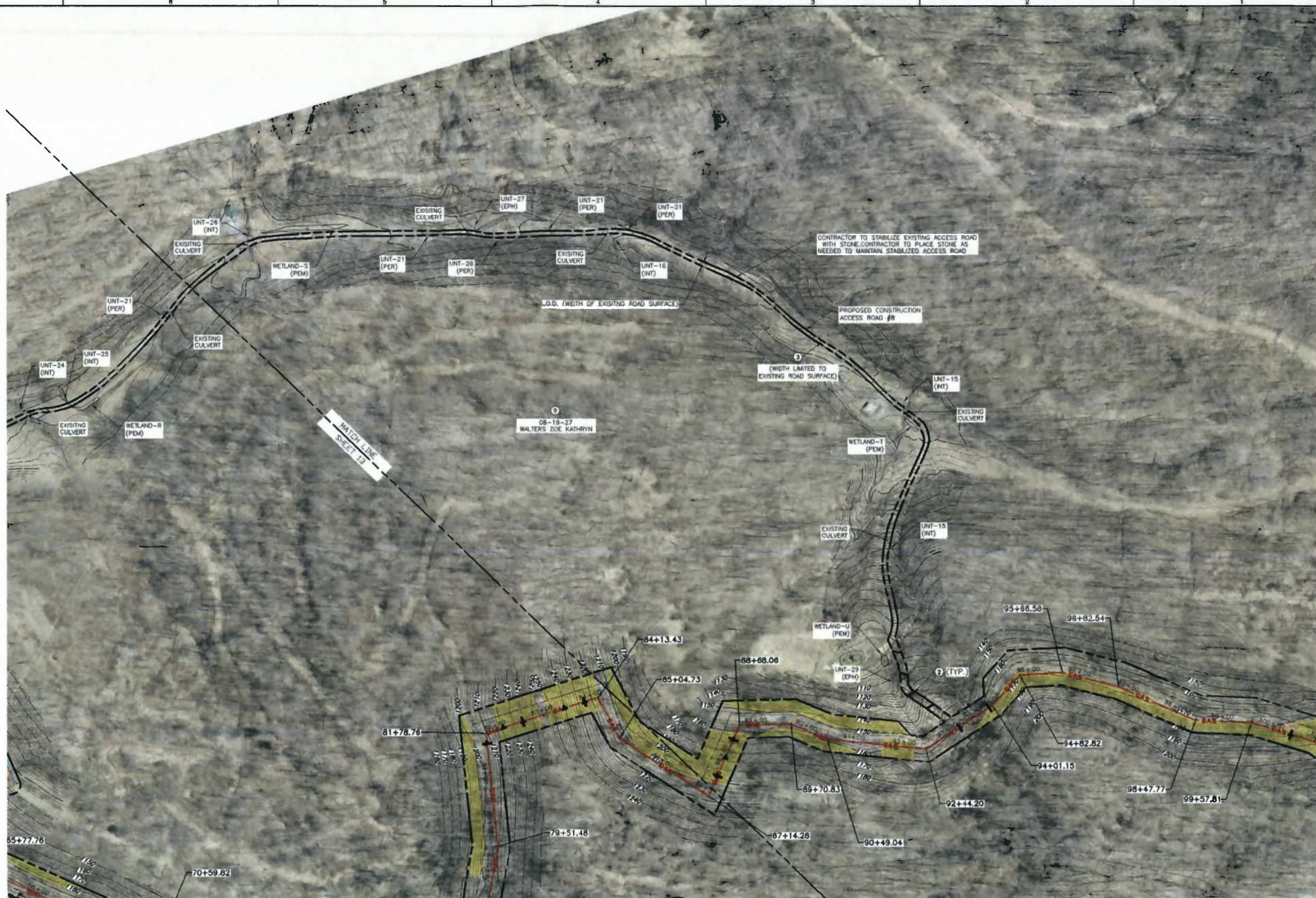
- EXISTING INDEX CONTOUR
- EXISTING VEGETATION
- EXISTING FENCE
- EXISTING OVERHEAD ELECTRIC
- EXISTING GAS PIPELINE
- WATER PIPELINE
- EXISTING ROADS (PAVED)
- EXISTING ROADS (UNPAVED)
- FEMA FLOODPLAIN BOUNDARY
- EXISTING TAX PARCEL PROPERTY LINE
- EXISTING DELINEATED STREAM
- EXISTING PEM WETLAND
- PROPOSED GATHERING LINE
- PROPOSED ACCESS ROAD
- PROPOSED PERMANENT RIGHT-OF-WAY
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED WATERBAR
- PROPOSED SILT FENCE
- PROPOSED 12" FILTER SOCK
- PROPOSED 18" FILTER SOCK
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- PROPOSED EROSION CONTROL BLANKET
- PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
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- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED CROSS DRAIN
- PROPOSED MOBILE BRIDGE WITH APPROACH
- PROPOSED COFFERDAM
- PROPOSED CONSTRUCTION FENCE
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- WELLPAD L.O.D.

**REFERENCES:**

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5. USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1996; PHOTOGRAPHIC 1994.
6. WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CSC BETWEEN 08/2013 AND 10/2013.

**KEY NOTES**

1. FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
2. FURNISH AND INSTALL CROSS DRAIN PER DETAIL 15 ON SHEET 34.
3. FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 8 ON SHEET 31.
4. FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.
5. FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34 (TYPICAL).



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SUMMARY OF MATERIALS		
NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

**NORTH**  
SCALE IN FEET

0 100 200

\*\* THIS PLAN HAS BEEN CREATED ON AN ANISOTROPIC (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.\*\*

DRAFT

REVISION RECORD		
NO.	DATE	DESCRIPTION

ACCESS ROAD # 8

**Stone Gathering LLC**

**OXFORD 1 TO EQT  
GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIEGE COUNTY WV

DATE: 11/22/2013	PROJECT NO: 131-888
SCALE: 1" = 100'	
DRAWN BY: B.J.H.	
CHECKED BY: G.B.L.	

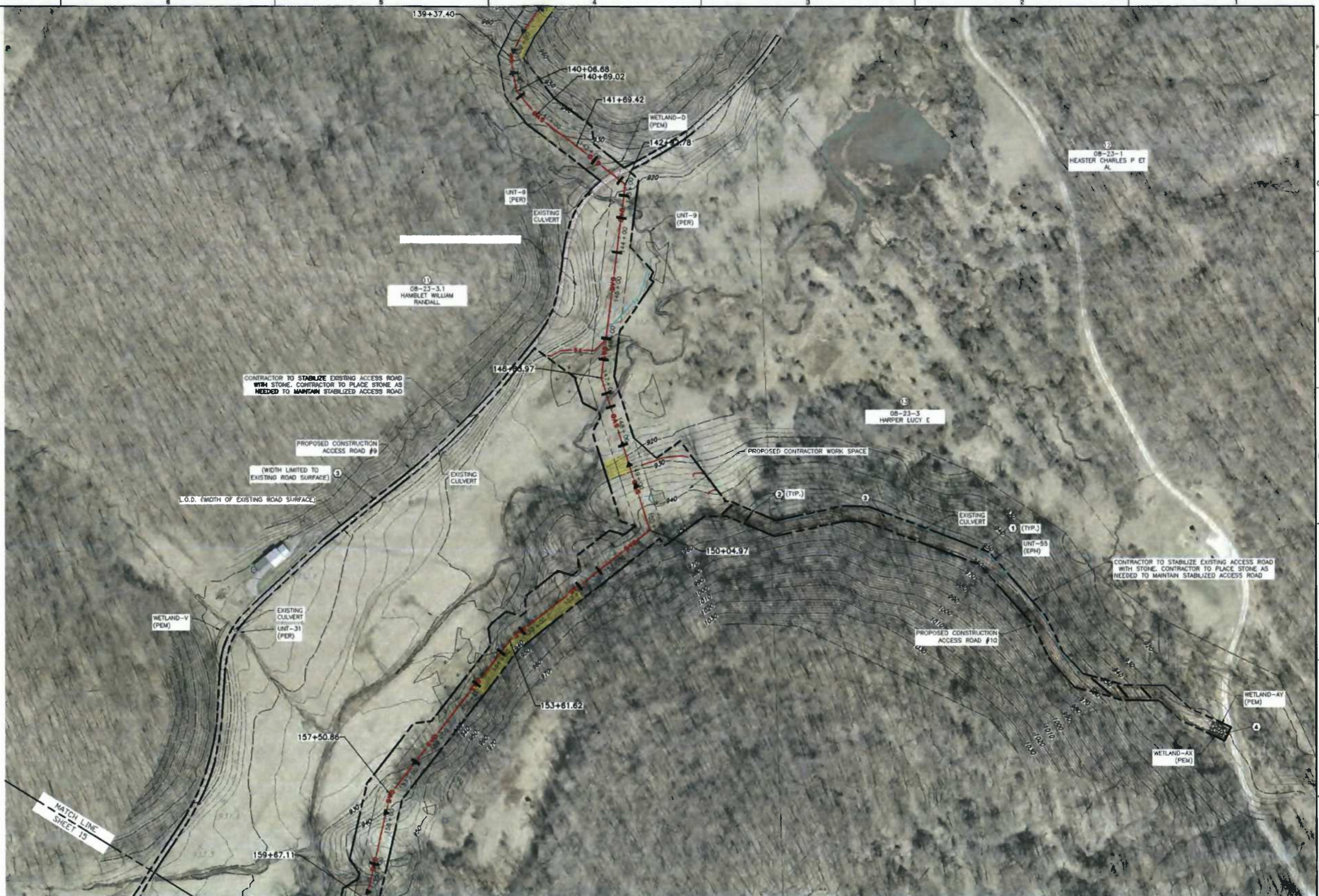
SHEET 14 OF 34

**LEGEND**

	EXISTING INDEX CONTOUR
	EXISTING VEGETATION
	EXISTING FENCE
	EXISTING OVERHEAD ELECTRIC
	EXISTING GAS PIPELINE
	WATER PIPELINE
	EXISTING ROADS (PAVED)
	EXISTING ROADS (UNPAVED)
	FEMA FLOODPLAIN BOUNDARY
	EXISTING TAX PARCEL PROPERTY LINE
	EXISTING DELINEATED STREAM
	EXISTING PEM WETLAND
	PROPOSED GATHERING LINE
	PROPOSED ACCESS ROAD
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	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED WATERBAR
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	PROPOSED 12" FILTER SOCK
	PROPOSED 18" FILTER SOCK
	PROPOSED 24" FILTER SOCK
	PROPOSED 32" FILTER SOCK
	PROPOSED FILTER SOCK SEDIMENT TRAP
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	PROPOSED RIPRAP
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	PROPOSED STORM PIPE
	PROPOSED CROSS DRAIN
	PROPOSED MOBILE BRIDGE WITH APPROACH
	PROPOSED COFFERDAM
	PROPOSED CONSTRUCTION FENCE
	PROPOSED CHECK DAM
	DELINEATED BY OTHERS WELLPAD L.O.D.

- REFERENCES:**
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  - BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT OF WAY FOR ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DODDGE COUNTY, MAP #5401700226, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUAD HANGLE OXFORD, WV, DATED 1986; PHOTO REVISIED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 09-2013 AND 10-2013.

- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
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  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 8 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.
  - FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34 (TYPICAL).



**SUMMARY OF MATERIALS**

NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

**NORTH**

SCALE IN FEET

0 100 200

"THIS PLAN HAS BEEN CREATED ON AN ANS I (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

**SEAL**

**DRAFT**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

ACCESS ROAD #9 & 10

**Done Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDGE COUNTY WV

DATE: 11-22-2013 PROJECT NO: 131-088  
SCALE: 1" = 100'  
DRAWN BY: B.J.H.  
CHECKED BY: G.M.

SHEET 15 OF 34

**CEC**

**Civil & Environmental Consultants, Inc.**

99 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 - Fax: 304.933.3327  
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**LEGEND**

- EXISTING INDEX CONTOUR
- EXISTING VEGETATION
- EXISTING FENCE
- EXISTING OVERHEAD ELECTRIC
- EXISTING GAS PIPELINE
- WATER PIPELINE
- EXISTING ROADS (PAVED)
- EXISTING ROADS (UNPAVED)
- FEMA FLOODPLAIN BOUNDARY
- EXISTING TAX PARCEL PROPERTY LINE
- EXISTING DELINEATED STREAM &
- EXISTING PEM WETLAND
- PROPOSED GATHERING LINE
- PROPOSED ACCESS ROAD
- PROPOSED PERMANENT RIGHT-OF-WAY
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED WATERBAR
- SF PROPOSED SILT FENCE
- PROPOSED 12" FILTER SOCK
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- ST PROPOSED STORM PIPE
- PROPOSED CROSS DRAIN
- PROPOSED MOBILE BRIDGE WITH APPROACH
- PROPOSED COFFERDAM
- PROPOSED CONSTRUCTION FENCE
- PROPOSED CHECK DAM
- DELINEATED BY OTHERS
- WELLPAD L.O.D.

**REFERENCES:**

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5. USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1994, PHOTO REVISED 1994.
6. WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY GEC BETWEEN 08-2013 AND 10-2013.

**KEY NOTES**

- 1) FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
- 2) FURNISH AND INSTALL CROSS DRAIN PER DETAIL 18 ON SHEET 34.
- 3) FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
- 4) FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.
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SUMMARY OF MATERIALS		
NO.	DESCRIPTION	QUANTITY
A	16" GASLINE	19,092 LF
B	2-16" WATERLINE	38,184 LF

"STATIONING AS SHOWN IS HORIZONTAL"

**NORTH**

SCALE IN FEET

0 100 200

"THIS PLAN HAS BEEN CREATED ON AN A3/S0 (24"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

**SEAL**

**DRAFT**

REVISION RECORD		
NO.	DATE	DESCRIPTION

**stone** Gathering LLC

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

18" GATHERING LINE  
 WEST UNION DISTRICT, DOODRIDGE COUNTY, WV

DATE: 11/28/2013 PROJECT NO: 131-088  
 SCALE: 1" = 100'  
 DRAWN BY: B.J.H.  
 CHECKED BY: QBL

SHEET 16 OF 34



STREAM AND WETLAND IMPACTS		
STREAM/WETLAND	CLASSIFICATION	STATION
WETLAND-C	PAULLSTRINE EMERGENT	48+51.45
WETLAND-D	PAULLSTRINE EMERGENT	412+27.69
WETLAND-E	PAULLSTRINE EMERGENT	93+35.51
WETLAND-F	PAULLSTRINE EMERGENT	51+39.69
WETLAND-H	PAULLSTRINE EMERGENT	ACCESS ROAD #4
WETLAND-I	PAULLSTRINE EMERGENT	54.98.67
WETLAND-K	PAULLSTRINE EMERGENT	57+91.67
WETLAND-L	PAULLSTRINE EMERGENT	60+65.59
WETLAND-M	PAULLSTRINE EMERGENT	61+71.23
WETLAND-N	PAULLSTRINE EMERGENT	ACCESS ROAD #8
WETLAND-X	PAULLSTRINE EMERGENT	164+98.06
WETLAND-AB	PAULLSTRINE EMERGENT	CONTRACTOR WORK AREA
WETLAND-AD	PAULLSTRINE EMERGENT	154+11.96
WETLAND-AH	PAULLSTRINE EMERGENT	159+51.69
WETLAND-AK	PAULLSTRINE EMERGENT	169+14.40
WETLAND-AL	PAULLSTRINE EMERGENT	171+12.08
WETLAND-AQ	PAULLSTRINE EMERGENT	109+75.85
WETLAND-AR	PAULLSTRINE EMERGENT	108+89.60
WETLAND-AT	PAULLSTRINE EMERGENT	ACCESS ROAD #3
WETLAND-AU	PAULLSTRINE EMERGENT	ACCESS ROAD #3
WETLAND-AV	PAULLSTRINE EMERGENT	ACCESS ROAD #6
WETLAND-AW	PAULLSTRINE EMERGENT	ACCESS ROAD #6
WETLAND-AX	PAULLSTRINE EMERGENT	ACCESS ROAD #10
WETLAND-AY	PAULLSTRINE EMERGENT	ACCESS ROAD #10
UNT-5	EPHEMERAL	44+42.95
RIGHT FORK ARNOLD CREEK CROSSING 1	PERENNIAL	47+85.5
RIGHT FORK ARNOLD CREEK CROSSING 2	PERENNIAL	ACCESS ROAD #1
UNT-9	PERENNIAL	143+37.35
UNT-12	EPHEMERAL	140+00
UNT-17 CROSSING 1	EPHEMERAL	ACCESS ROAD #3
UNT-17 CROSSING 2	EPHEMERAL	55+91.48
UNT-18	EPHEMERAL	54+83.22
UNT-20	EPHEMERAL	ACCESS ROAD 5
UNT-21	PERENNIAL	ACCESS ROAD #8
UNT-23	EPHEMERAL	ACCESS ROAD 3
UNT-25	INTERMEDIATE	ACCESS ROAD #8
LEFT FORK ARNOLD CREEK CROSSING 1	PERENNIAL	147+26.61
LEFT FORK ARNOLD CREEK CROSSING 2	PERENNIAL	ACCESS ROAD #9
UNT-37	EPHEMERAL	150+23.77
UNT-38	EPHEMERAL	151+60.89
UNT-39	EPHEMERAL	159+21.76
UNT-40	EPHEMERAL	153+35.68
UNT-41	EPHEMERAL	153+04.66
UNT-42	EPHEMERAL	169+08.16
UNT-44	EPHEMERAL	159+37.50
UNT-47	INTERMEDIATE	171+31.10
UNT-52	EPHEMERAL	ACCESS ROAD 3
UNT-53	EPHEMERAL	ACCESS ROAD 3
UNT-54	EPHEMERAL	ACCESS ROAD 3
UNT-55	EPHEMERAL	ACCESS ROAD #10

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**CEC**  
**Civil & Environmental Consultants, Inc.**  
 99 Cambridge Place - Bridgeport, WV 26330  
 Ph: 304.933.3119 · Fax: 304.933.3327  
 www.cechc.com

“STATIONING AS SHOWN IS HORIZONTAL.”

**NORTH**  
 SCALE IN FEET

0 100 200

“THIS PLAN HAS BEEN CREATED ON AN ANSI (22"X34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.”

**SEAL**

**DRAFT**

REVISION RECORD		
NO.	DATE	DESCRIPTION

**ORE Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

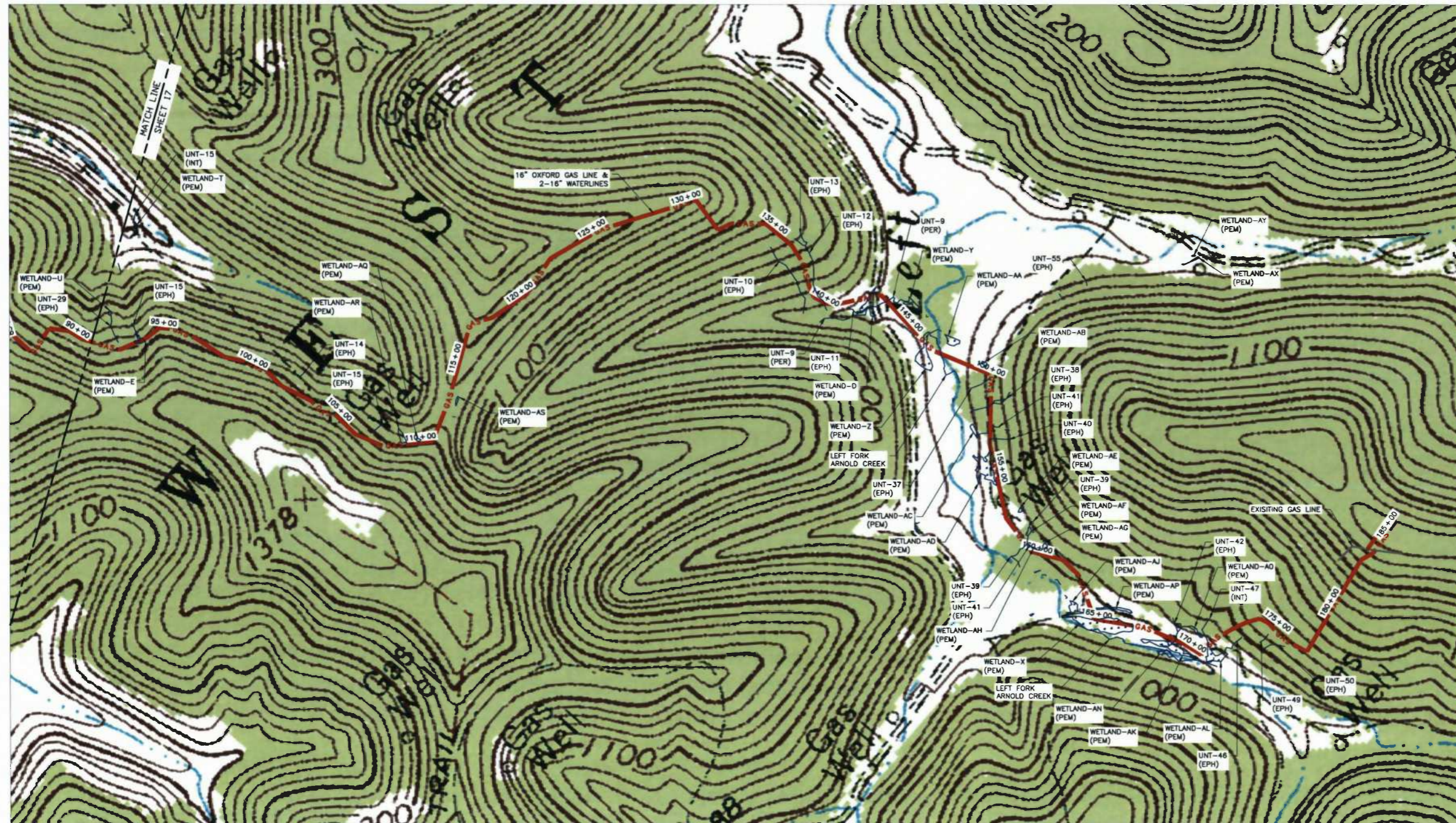
16" GATHERING LINE  
 WEST UNION DISTRICT, DODDRIEGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-066

SCALE: 1" = 300'

DRAWN BY: B.J.H.  
 CHECKED BY: G.B.L.

SHEET 17 OF 34



STREAM AND WETLAND IMPACTS		
STREAM/WETLAND	CLASSIFICATION	STATION
WETLAND-C	PAULUSTRINE EMERGENT	48+51.45
WETLAND-D	PAULUSTRINE EMERGENT	412+27.69
WETLAND-E	PAULUSTRINE EMERGENT	93+35.51
WETLAND-F	PAULUSTRINE EMERGENT	51+39.89
WETLAND-H	PAULUSTRINE EMERGENT	ACCESS ROAD #4
WETLAND-I	PAULUSTRINE EMERGENT	54.98.67
WETLAND-K	PAULUSTRINE EMERGENT	57+91.67
WETLAND-L	PAULUSTRINE EMERGENT	60+65.59
WETLAND-M	PAULUSTRINE EMERGENT	61+71.23
WETLAND-N	PAULUSTRINE EMERGENT	ACCESS ROAD #8
WETLAND-X	PAULUSTRINE EMERGENT	164+98.06
WETLAND-AB	PAULUSTRINE EMERGENT	CONTRACTOR WORK AREA
WETLAND-AD	PAULUSTRINE EMERGENT	154+11.96
WETLAND-AH	PAULUSTRINE EMERGENT	159+51.69
WETLAND-AK	PAULUSTRINE EMERGENT	169+14.40
WETLAND-AL	PAULUSTRINE EMERGENT	171+12.08
WETLAND-AQ	PAULUSTRINE EMERGENT	109+75.85
WETLAND-AR	PAULUSTRINE EMERGENT	108+89.60
WETLAND-AT	PAULUSTRINE EMERGENT	ACCESS ROAD #3
WETLAND-AU	PAULUSTRINE EMERGENT	ACCESS ROAD #3
WETLAND-AV	PAULUSTRINE EMERGENT	ACCESS ROAD #6
WETLAND-AW	PAULUSTRINE EMERGENT	ACCESS ROAD #6
WETLAND-AX	PAULUSTRINE EMERGENT	ACCESS ROAD #10
WETLAND-AY	PAULUSTRINE EMERGENT	ACCESS ROAD #10
UNT-5	EPHEMERAL	44+42.95
RIGHT FORK ARNOLD CREEK CROSSING 1	PERENNIAL	47+85.5
RIGHT FORK ARNOLD CREEK CROSSING 2	PERENNIAL	ACCESS ROAD #1
UNT-9	PERENNIAL	143+37.35
UNT-12	EPHEMERAL	140+00
UNT-17 CROSSING 1	EPHEMERAL	ACCESS ROAD #3
UNT-17 CROSSING 2	EPHEMERAL	55+91.48
UNT-18	EPHEMERAL	54+83.22
UNT-20	EPHEMERAL	ACCESS ROAD 5
UNT-21	PERENNIAL	ACCESS ROAD #8
UNT-23	EPHEMERAL	ACCESS ROAD 3
UNT-25	INTERMEDIATE	ACCESS ROAD #8
LEFT FORK ARNOLD CREEK CROSSING 1	PERENNIAL	147+26.61
LEFT FORK ARNOLD CREEK CROSSING 2	PERENNIAL	ACCESS ROAD #9
UNT-37	EPHEMERAL	150+23.77
UNT-38	EPHEMERAL	151+60.89
UNT-39	EPHEMERAL	159+21.76
UNT-40	EPHEMERAL	153+35.68
UNT-41	EPHEMERAL	153+04.66
UNT-42	EPHEMERAL	169+08.16
UNT-44	EPHEMERAL	159+37.50
UNT-47	INTERMEDIATE	171+31.10
UNT-52	EPHEMERAL	ACCESS ROAD 3
UNT-53	EPHEMERAL	ACCESS ROAD 3
UNT-54	EPHEMERAL	ACCESS ROAD 3
UNT-55	EPHEMERAL	ACCESS ROAD #10

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**Civil & Environmental Consultants, Inc.**  
 99 Cambridge Place - Bridgeport, WV 26330  
 Ph: 304.933.3119 - Fax: 304.933.3327  
 www.cecinc.com

STATIONING AS SHOWN IS HORIZONTAL

**NORTH**  
SCALE IN FEET

THIS PLAN HAS BEEN CREATED ON AN ANS/D (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.

SEAL

DRAFT

REVISION RECORD		
NO.	DATE	DESCRIPTION

STREAM AND WETLAND LOCATION MAP

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

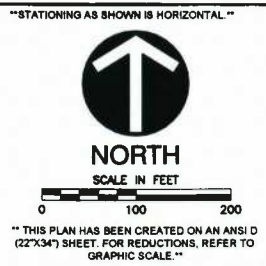
18" GATHERING LINE  
WEST UNION DISTRICT, DODDRIIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-868  
 SCALE: 1" = 300'  
 DRAWN BY: B.J.H.  
 CHECKED BY: G.B.L.

SHEET 18 OF 34



ACCESS ROADS	LENGTH	DESCRIPTION
TEMPORARY ACCESS ROAD #1	4,970 LF	LIMITED TO EXISTING SURFACE WIDTH-TEMPORARY ACCESS ROAD #1, STA. 14+27.15
TEMPORARY ACCESS ROAD #2	245 LF	20' WIDTH-TEMPORARY ACCESS ROAD #2, STA. 40+43.67
TEMPORARY ACCESS ROAD #3	1,050 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #3, STA. 55+00
TEMPORARY ACCESS ROAD #4	155 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #4, STA. 56+18.56
TEMPORARY ACCESS ROAD #5	1,240 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #5, STA. 56+37.17
TEMPORARY ACCESS ROAD #6	670 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #6, STA. 58+35
TEMPORARY ACCESS ROAD #7	180 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #7, STA. 63+63.81
TEMPORARY ACCESS ROAD #8	4,325 LF	LIMITED TO EXISTING SURFACE WIDTH-TEMPORARY ACCESS ROAD #8, STA. 63+13.71
TEMPORARY ACCESS ROAD #9	4,160 LF	LIMITED TO EXISTING SURFACE WIDTH-TEMPORARY ACCESS ROAD #9, STA. 142+66, STA. 164+78
TEMPORARY ACCESS ROAD #10	1,160 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #10, STA. 149+50



SEAL

DRAFT

REVISION RECORD		
NO.	DATE	DESCRIPTION

ACCESS ROAD LOCATION MAP

Gathering LLC

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DOORIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131-988  
SCALE: 1" = 300'  
DRAWN BY: B.J.H.  
CHECKED BY: G.S.L.

SHEET 18 OF 34

Civil & Environmental Consultants, Inc.  
99 Cambridge Place - Bridgeport, WV 28330  
Ph: 304.933.3119 - Fax: 304.933.3327  
www.cecinc.com

11/22/2013 11:05:00 AM C:\Users\Bjrh\AppData\Local\Temp\131-988-0118-001\131-988-0118-001.dwg



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ACCESS ROADS		
ACCESS ROADS	LENGTH	DESCRIPTION
TEMPORARY ACCESS ROAD #1	4,970 LF	LIMITED TO EXISTING SURFACE WIDTH-TEMPORARY ACCESS ROAD #1, STA. 14+27.15
TEMPORARY ACCESS ROAD #2	245 LF	20' WIDTH-TEMPORARY ACCESS ROAD #2, STA. 40+43.67
TEMPORARY ACCESS ROAD #3	1,050 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #3, STA. 55+00
TEMPORARY ACCESS ROAD #4	155 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #4, STA. 56+18.56
TEMPORARY ACCESS ROAD #5	1,240 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #5, STA. 56+37.17
TEMPORARY ACCESS ROAD #6	670 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #6, STA. 58+35
TEMPORARY ACCESS ROAD #7	180 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #7, STA. 63+63.81
TEMPORARY ACCESS ROAD #8	4,325 LF	LIMITED TO EXISTING SURFACE WIDTH-TEMPORARY ACCESS ROAD #8, STA. 63+13.71
TEMPORARY ACCESS ROAD #9	4,160 LF	LIMITED TO EXISTING SURFACE WIDTH-TEMPORARY ACCESS ROAD #9, STA. 142+66, STA. 164+78
TEMPORARY ACCESS ROAD #10	1,160 LF	LIMITED TO 30' L.O.D.-TEMPORARY ACCESS ROAD #10, STA. 149+50

"STATIONING AS SHOWN IS HORIZONTAL"

**NORTH**

SCALE IN FEET

"THIS PLAN HAS BEEN CREATED ON AN ANSI D (22"x34") SHEET. FOR REDUCTIONS, REFER TO GRAPHIC SCALE."

DRAFT

REVISION RECORD		
NO.	DATE	DESCRIPTION

ACCESS ROAD LOCATION MAP

**Gathering LLC**

**OXFORD 1 TO EQT  
GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DODDRIE COUNTY, WV

DATE:	11/22/2013	PROJECT NO:	131-955
SCALE:	1" = 300'		
DRAWN BY:	B.J.H.		
CHECKED BY:	GSL		

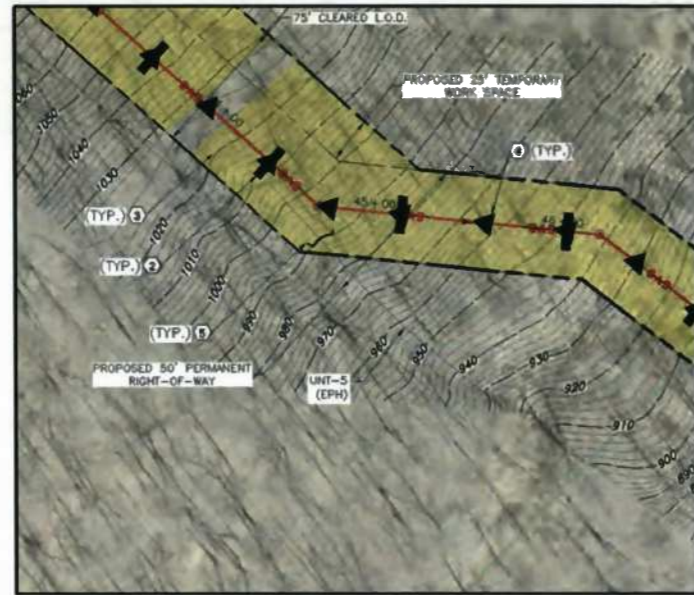
SHEET 20 OF 34

**Civil & Environmental Consultants, Inc.**  
 99 Cambridge Place - Bridgeport, WV 26330  
 Ph: 304.933.3119 - Fax: 304.933.3327  
 www.cecinc.com

- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DEWATERED STREAM
  - EXISTING PEM WETLAND
  - PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
  - PROPOSED PERMANENT RIGHT-OF-WAY
  - PROPOSED LIMITS OF DISTURBANCE
  - PROPOSED WATERBAR
  - PROPOSED SILT FENCE
  - PROPOSED 12" FILTER SOCK
  - PROPOSED 18" FILTER SOCK
  - PROPOSED 24" FILTER SOCK
  - PROPOSED 32" FILTER SOCK
  - PROPOSED FILTER SOCK SEDIMENT TRAP
  - PROPOSED EROSION CONTROL BLANKET
  - PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - PROPOSED TRENCH PLUG
  - PROPOSED RIPRAP
  - PROPOSED CHANNEL
  - PROPOSED STORM PIPE
  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DEWATERED BY OTHERS
  - WETPAD L.O.D.

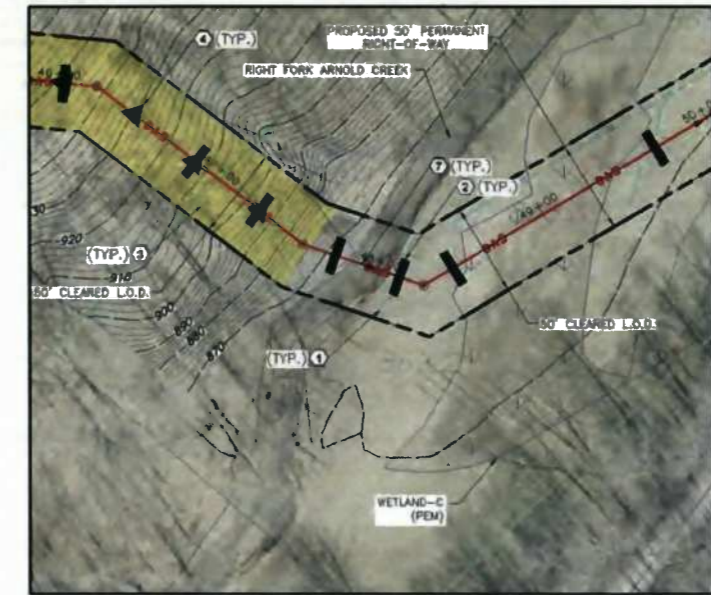
- REFERENCES:**
1. EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2 FOOT CONTOUR INTERVALS, DATED 03.30.2013 (www.bluemountainaerialmapping.com).
  2. AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING.
  3. THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM G.I.S.
  4. BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT-OF-WAY OF RIGHT FORK ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP DOORIDGE COUNTY, MAP #540170325C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  5. USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1986; PHOTO REVISIED 1994.
  6. WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08.2013 AND 10.2013.

- KEY NOTES**
- 1) FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - 2) FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL).
  - 3) FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
  - 4) FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL).
  - 5) FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL).
  - 6) FURNISH AND INSTALL CROSS DRAINS PER DETAIL 18 ON SHEET 34 (TYPICAL).
  - 7) FURNISH AND INSTALL OPEN CUT OR FLUME CROSSING PER DETAILS 10 OR 11 ON SHEET 33.
  - 8) FURNISH AND INSTALL CULVERT PER DETAIL 14 ON SHEET 33 (TYPICAL).
  - 9) FURNISH AND INSTALL OPEN CUT WETLAND CROSSING PER DETAIL 12 ON SHEET 33.
  - 10) FURNISH AND INSTALL BORE AND JACK CROSSING PER DETAIL 15 ON SHEET 33.
  - 11) FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34.
  - 12) FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - 13) FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.



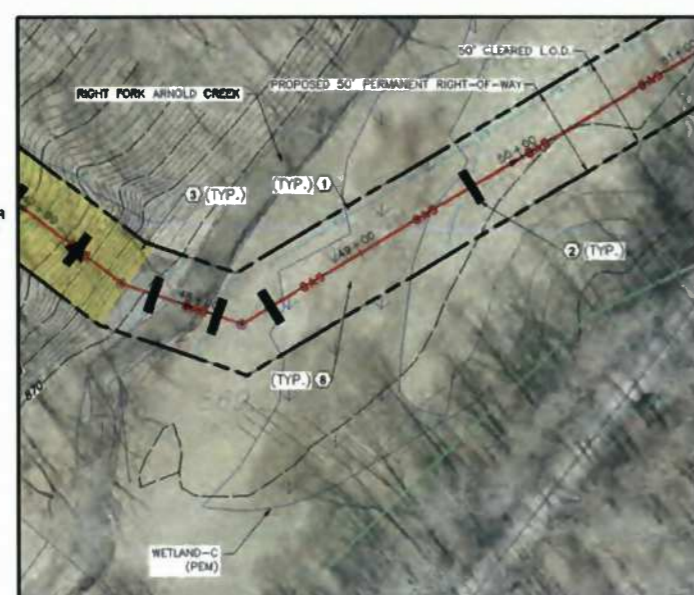
**DETAIL A - UNIT 5 (EPH) STREAM CROSSING**

- NOTES:**
1. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  2. INSTALL A COMPOST FILTER SEDIMENT TRAP IN THE CHANNEL ADJACENT TO THE PIPELINE L.O.D. IN ACCORDANCE WITH DETAIL 9 ON SHEET 32.
  3. INSTALL TIMBER MATS OVER THE STREAM FOR VEHICLE ACCESS.



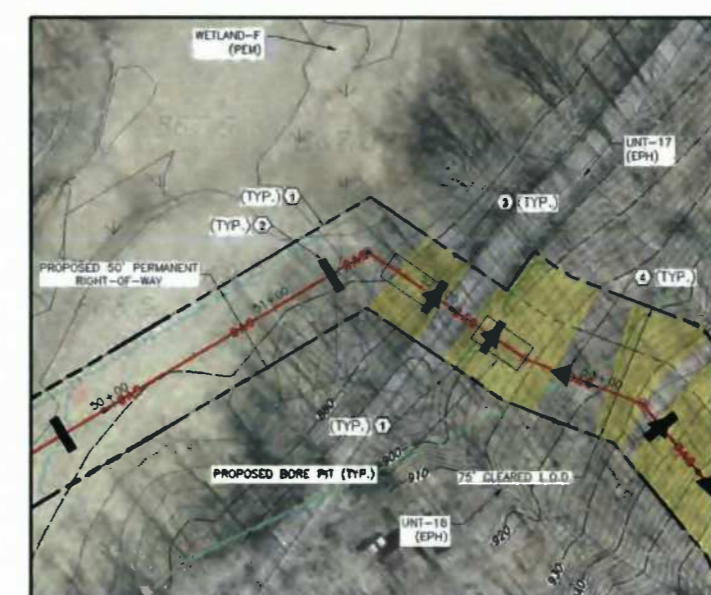
**DETAIL B - RIGHT FORK ARNOLD CREEK CROSSING**

- NOTES:**
1. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  2. REFER TO DETAIL 11 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH SAND BAG COFFERDAM.
  3. INSTALL FLUME PIPE ON EXISTING STREAMBED IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10-100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WVDEP.
  4. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  5. INSTALL A ROCK PAD APPROACH 10' PRIOR TO THE TIMBER MATS.
  6. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 8 INCHES ABOVE ORIGINAL GRADE.
  7. MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  8. CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  9. DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  10. GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  11. THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.



**DETAIL C - WETLAND C (PEM) CROSSING**

- NOTES:**
1. INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT OF WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  2. EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  3. USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  4. INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND AND OR CHANGING HYDROLOGY.
  5. WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH. (UNLESS THERE IS STANDING WATER OR THE SOIL IS TO SATURATED TO SEGREGATE.)
  6. SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  7. UPON RESTORATION, REMOVE GEOTEXTILE, SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  8. SEE DETAIL 12 ON SHEET 33.



**DETAIL D - WETLAND F (PEM) CROSSING**

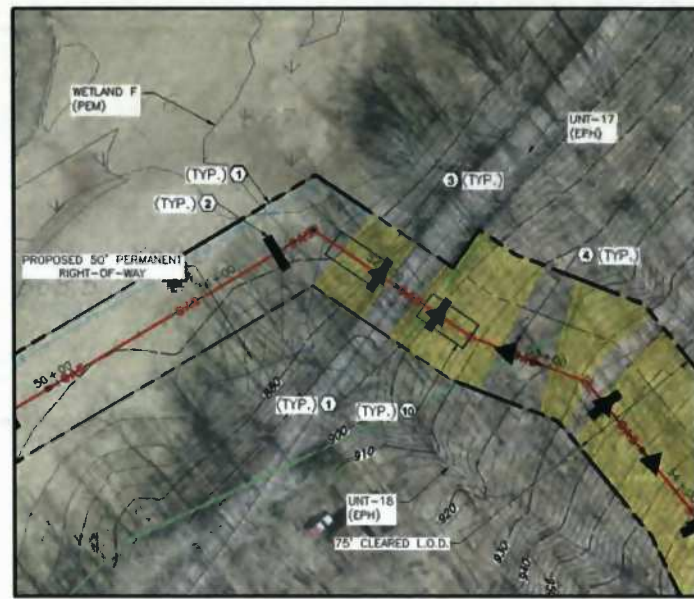
- NOTES:**
1. INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT OF WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  2. EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  3. USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  4. INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  5. WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH. (UNLESS THERE IS STANDING WATER OR THE SOIL IS TO SATURATED TO SEGREGATE.)
  6. SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  7. UPON RESTORATION, REMOVE GEOTEXTILE, SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  8. SEE DETAIL 12 ON SHEET 33.

DRAFT	SEAL	REVISION RECORD			STREAM, WETLAND, AND ROAD CROSSING DETAILS	
		NO.	DATE	DESCRIPTION	Gathering LLC	
					<b>OXFORD 1 TO EQT GAS/WATER PIPELINES</b>	
					16" GATHERING LINE WEST UNION DISTRICT, DOORIDGE COUNTY WV	
					DATE: 11/23/13	PROJECT NO: 13-085
					SCALE: 1" = 50'	
					DRAWN BY: GJM	
					CHECKED BY: GBL	SHEET 21 OF 34

- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DEWATERED STREAM
  - EXISTING PEM WETLAND
  - GAS** PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
  - PROPOSED PERMANENT RIGHT-OF-WAY
  - PROPOSED LIMITS OF DISTURBANCE
  - PROPOSED WATERBAR
  - PROPOSED SILT FENCE
  - PROPOSED 12" FILTER SOCK
  - PROPOSED 18" FILTER SOCK
  - PROPOSED 24" FILTER SOCK
  - PROPOSED 32" FILTER SOCK
  - PROPOSED FILTER SOCK SEDIMENT TRAP
  - PROPOSED EROSION CONTROL BLANKET
  - PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - PROPOSED TRENCH PLUG
  - PROPOSED RIPRAP
  - PROPOSED CHANNEL
  - PROPOSED STORM PIPE
  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DELINEATED BY OTHERS
  - WELLPAD L.O.D.

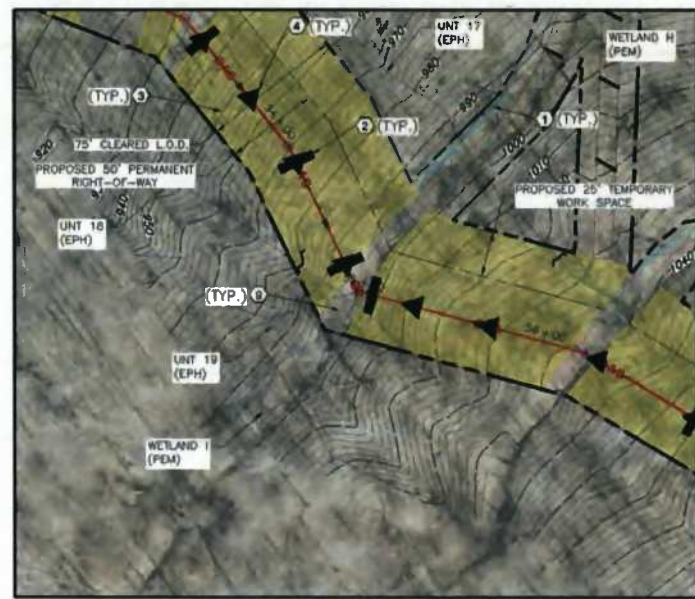
- REFERENCES:**
- EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2 FOOT CONTOUR INTERVALS, DATED 03-30-2013 ([www.bluemountainaerialmapping.com](http://www.bluemountainaerialmapping.com))
  - AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM G.I.S.
  - BY GRAPHIC PLOTTING ONLY. THIS PIPELINE IS NOT LOCATED IN THE RIGHT-OF-WAY OF ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DOODRIDGE COUNTY, MAP #5401700250, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE 0170ND, WY, DATED 1998, PHOTO REVISIED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CSC BETWEEN 08-2013 AND 10-2013.

- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL)
  - FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL CROSS DRAINS PER DETAIL 18 ON SHEET 34 (TYPICAL)
  - FURNISH AND INSTALL OPEN CUT OR FLUME CROSSING PER DETAILS 10 OR 11 ON SHEET 33
  - FURNISH AND INSTALL CULVERT PER DETAIL 14 ON SHEET 33 (TYPICAL)
  - FURNISH AND INSTALL OPEN CUT WETLAND CROSSING PER DETAIL 12 ON SHEET 33
  - FURNISH AND INSTALL BORE AND JACK CROSSING PER DETAIL 15 ON SHEET 33
  - FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31



**DETAIL E - C.R. 11  
BORE AND JACK CROSSING**

**NOTES:**  
1. SEE DETAIL 15 ON SHEET 33.



**DETAIL F - WETLAND H & I (PEM)  
CROSSING**

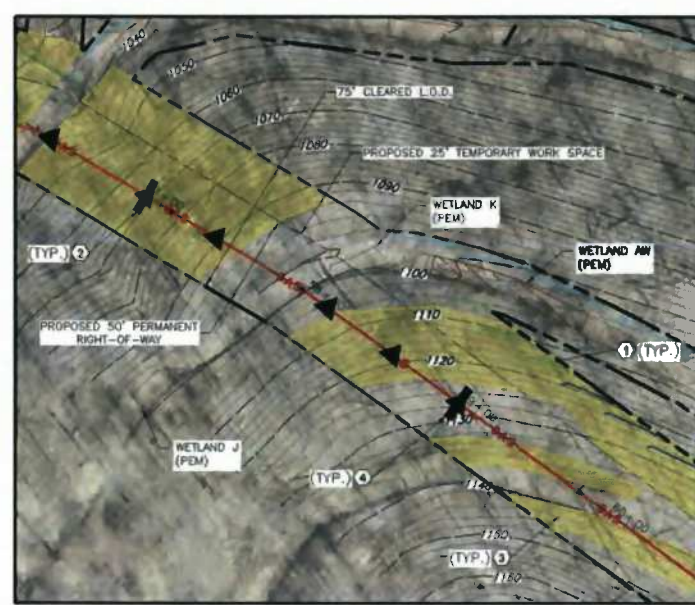
- NOTES:**
- INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL. DURING BACKFILLING OF TRENCH, REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH (UNLESS THERE IS STANDING WATER ON THE SOIL IS TO SATURATED TO BEGRADE).
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  - SEE DETAIL 12 ON SHEET 33.



**DETAIL G - UNT 18 & 17 (EPH)  
STREAM CROSSING**

- UNT-18**
- NOTES:**
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH BAND BAG COFFERDAM.
  - INSTALL FLUME PIPE ON EXISTING STREAM IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24-HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48-HOURS FOR A STREAM WITH A 10'-100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WYDEP.
  - INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - INSTALL A ROCK PAD APPROACH PRIOR TO THE TIMBER MATS.
  - APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6 INCHES ABOVE ORIGINAL GRADE.
  - MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  - CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  - DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  - GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.

- UNT-17**
- NOTES:**
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - INSTALL A COMPOST FILTER SEDIMENT TRAP IN THE CHANNEL ADJACENT TO THE PIPELINE L.O.D. IN ACCORDANCE WITH DETAIL 9 ON SHEET 32.
  - INSTALL TIMBER MATS OVER THE STREAM FOR VEHICLE ACCESS.



**DETAIL H - WETLAND K & AW (PEM)  
CROSSING**

- NOTES:**
- INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL. DURING BACKFILLING OF TRENCH, REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH (UNLESS THERE IS STANDING WATER ON THE SOIL IS TO SATURATED TO BEGRADE).
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  - SEE DETAIL 12 ON SHEET 33.

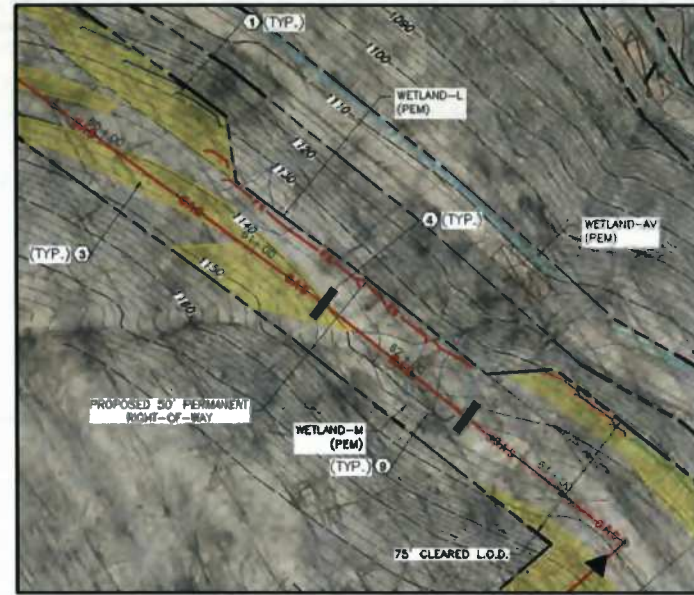
**C&E**  
**Civil & Environmental Consultants, Inc.**  
96 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 - Fax: 304.933.3327  
[www.ccecinc.com](http://www.ccecinc.com)

<b>SEAL</b>  <b>DRAFT</b>	<b>REVISION RECORD</b>			STREAM, WETLAND, AND ROAD CROSSING DETAILS	
	NO.	DATE	DESCRIPTION	<b>One Gathering LLC</b>	
				<b>OXFORD 1 TO EQT GAS/WATER PIPELINES</b>	
			15' GATHERING LINE WEST UNION DISTRICT, WOODBOROUGE COUNTY WV		
			DATE: 11/22/2013	PROJECT NO: 131-465	
			SCALE: 1" = 80'		
			DRAWN BY: B.J.H.		
			CHECKED BY: G.S.L.	SHEET 32 OF 34	

- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - EXISTING WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DELINEATED STREAM
  - EXISTING PEM WETLAND
  - PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
  - PROPOSED PERMANENT RIGHT-OF-WAY
  - PROPOSED LIMITS OF DISTURBANCE
  - PROPOSED WATERBAR
  - PROPOSED SILT FENCE
  - PROPOSED 12" FILTER SOCK
  - PROPOSED 18" FILTER SOCK
  - PROPOSED 24" FILTER SOCK
  - PROPOSED 32" FILTER SOCK
  - PROPOSED FILTER SOCK
  - SEDIMENT TRAP
  - PROPOSED EROSION CONTROL BLANKET
  - PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - PROPOSED TRENCH PLUG
  - PROPOSED RIPRAP
  - PROPOSED CHANNEL
  - PROPOSED STORM PIPE
  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DELINEATED BY OTHERS
  - WELLPAD L.O.D.

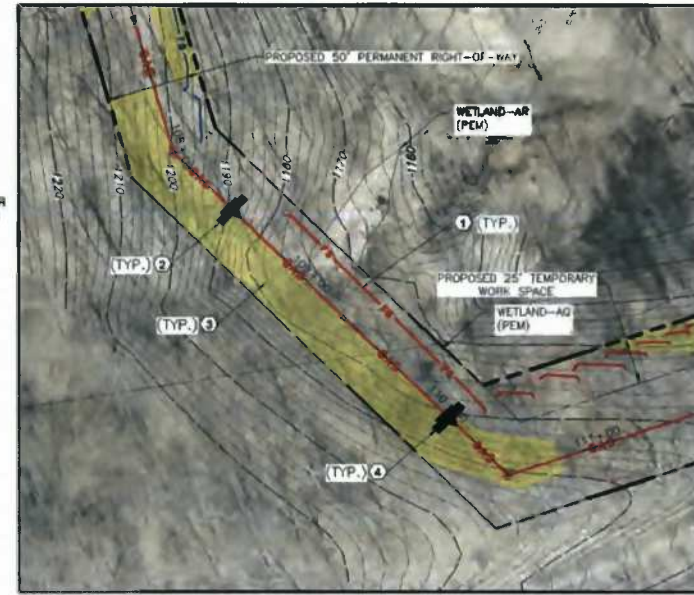
- REFERENCES:**
- EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2 FOOT CONTOUR INTERVALS, DATED 03/30/2013 (www.bluemountainaerialmapping.com)
  - AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM GIS
  - BY GRAPHIC PLOTTING ONLY. THIS PIPELINE IS NOT LOCATED IN THE RIGHT OF WAY OF ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DOODRIDGE COUNTY, MAP #640170025C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011
  - USGS 7.5 MIN. TOPOGRAPHIC QUAD HANGLE OXFORD, WV, DATED 1986; PHOTO REVISED 1994
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08/2013 AND 10/2013

- KEY NOTES**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL)
  - FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL CROSS DRAINS PER DETAIL 18 ON SHEET 34 (TYPICAL)
  - FURNISH AND INSTALL OPEN CUT OR FLUME CROSSING PER DETAILS 10 OR 11 ON SHEET 33
  - FURNISH AND INSTALL CULVERT PER DETAIL 14 ON SHEET 33 (TYPICAL)
  - FURNISH AND INSTALL OPEN CUT WETLAND CROSSING PER DETAIL 12 ON SHEET 33
  - FURNISH AND INSTALL BORE AND JACK CROSSING PER DETAIL 15 ON SHEET 33
  - FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31



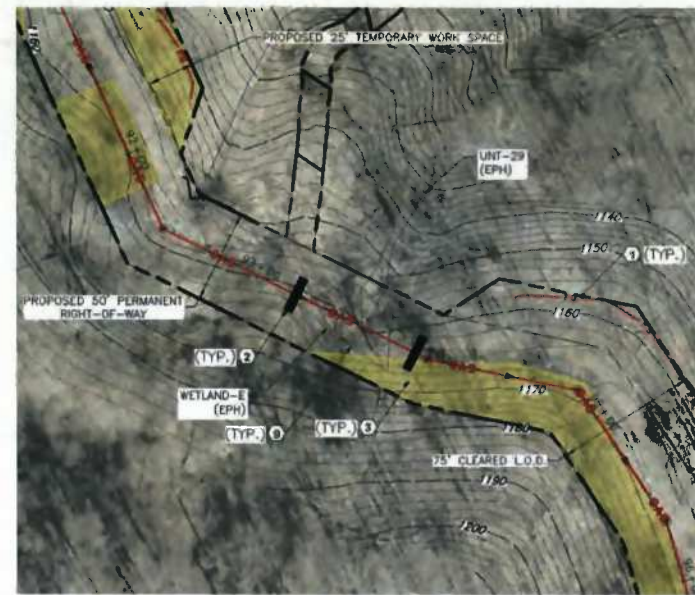
**DETAIL I - WETLAND L & M (PEM) CROSSING**

- NOTES:**
- INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH. (UNLESS THERE IS STANDING WATER OR THE SOIL IS TO SATURATED TO SEGREGATE.)
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE, SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  - SEE DETAIL 12 ON SHEET 33.



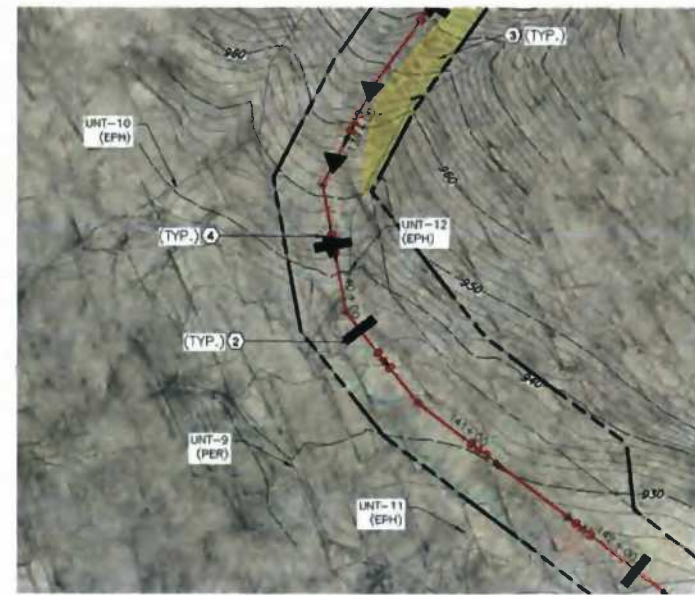
**DETAIL K - WETLAND AR & A Q (PEM) CROSSING**

- NOTES:**
- INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH. (UNLESS THERE IS STANDING WATER OR THE SOIL IS TO SATURATED TO SEGREGATE.)
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE, SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  - SEE DETAIL 12 ON SHEET 33.



**DETAIL J - WETLAND E CROSSING**

- NOTES:**
- INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH. (UNLESS THERE IS STANDING WATER OR THE SOIL IS TO SATURATED TO SEGREGATE.)
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE, SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  - SEE DETAIL 12 ON SHEET 33.



**DETAIL L - UNIT 12 (EPH) STREAM CROSSING**

- NOTES:**
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH SAND BAG COFFERDAM.
  - INSTALL FLUME PIPE ON EXISTING STREAMBED IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10' TO 100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WVDEP.
  - INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - INSTALL A ROCK PAD APPROACH TO PRIOR TO THE TIMBER MATS.
  - APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6 INCHES ABOVE ORIGINAL GRADE.
  - MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  - CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  - DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  - GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  - THESE NOTES PERTAIN TO A FLUME CROSSING REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.

**CEC**  
Civil & Environmental Consultants, Inc.  
94 Cambridge Place - Bridgeport, WV 26330  
Ph: 304.933.3119 Fax: 304.933.3327  
www.cecinc.com

SEAL	REVISION RECORD			STREAM, WETLAND, AND ROAD CROSSING DETAILS		
	NO.	DATE	DESCRIPTION			
DRAFT				Gathering LLC		
	<b>OXFORD 1 TO EQT GAS/WATER PIPELINES</b>					
	16" GATHERING LINE					
	WEST UNION DISTRICT, DOODRIDGE COUNTY, WV					
	DATE: 11/22/2013		PROJECT NO: 131486			
SCALE: 1" = 80'						
DRAWN BY: GJK						
CHECKED BY: GBL				SHEET 23 OF 34		

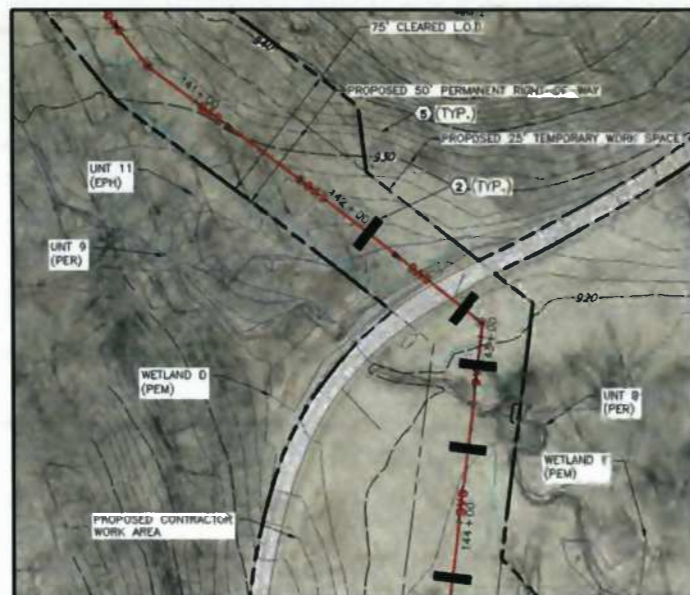


**LEGEND**

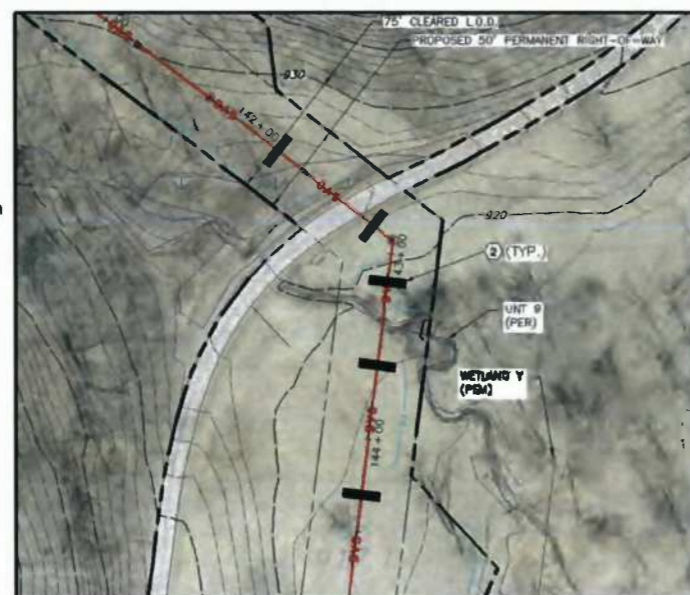
	EXISTING INDEX CONTOUR
	EXISTING VEGETATION
	EXISTING FENCE
	EXISTING OVERHEAD ELECTRIC
	EXISTING GAS PIPELINE
	EXISTING WATER PIPELINE
	EXISTING ROADS (PAVED)
	EXISTING ROADS (UNPAVED)
	FEMA FLOODPLAIN BOUNDARY
	EXISTING TAX PARCEL PROPERTY LINE
	EXISTING DECONTAMINATED STREAM
	EXISTING PEM WETLAND
	PROPOSED GATHERING LINE
	PROPOSED ACCESS ROAD
	PROPOSED PERMANENT RIGHT-OF-WAY
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED WATERBAR
	PROPOSED SILT FENCE
	PROPOSED 12" FILTER SOCK
	PROPOSED 18" FILTER SOCK
	PROPOSED 24" FILTER SOCK
	PROPOSED 32" FILTER SOCK
	PROPOSED FILTER SOCK SEDIMENT TRAP
	PROPOSED EROSION CONTROL BLANKET
	PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
	PROPOSED TRENCH PLUG
	PROPOSED RIPRAP
	PROPOSED CHANNEL
	PROPOSED STORM PIPE
	PROPOSED CROSS DRAIN
	PROPOSED MOBILE BRIDGE WITH APPROACH
	PROPOSED COFFERDAM
	PROPOSED CONSTRUCTION FENCE
	PROPOSED CHECK DAM
	DELINEATED BY OTHERS
	WELLPAD L.O.D.

- REFERENCES:**
- EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2-FOOT CONTOUR INTERVALS, DATED 03/30/2013 ([www.bluemountainaerialmapping.com](http://www.bluemountainaerialmapping.com))
  - AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM GIS.
  - BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT-OF-WAY OF ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DOODRIDGE COUNTY, MAP #540170025C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1988; PHOTO REVISED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08/2013 AND 10/2013.

- KEY NOTES:**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 5 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL)
  - FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL)
  - FURNISH AND INSTALL CROSS DRAINS PER DETAIL 18 ON SHEET 34 (TYPICAL)
  - FURNISH AND INSTALL OPEN CUT OR FLUME CROSSING PER DETAILS 10 OR 11 ON SHEET 33
  - FURNISH AND INSTALL CULVERT PER DETAIL 14 ON SHEET 33 (TYPICAL)
  - FURNISH AND INSTALL OPEN CUT WETLAND CROSSING PER DETAIL 12 ON SHEET 33
  - FURNISH AND INSTALL BORE AND JACK CROSSING PER DETAIL 15 ON SHEET 33
  - FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31



**DETAIL M - WETLAND D (PEM) CROSSING**

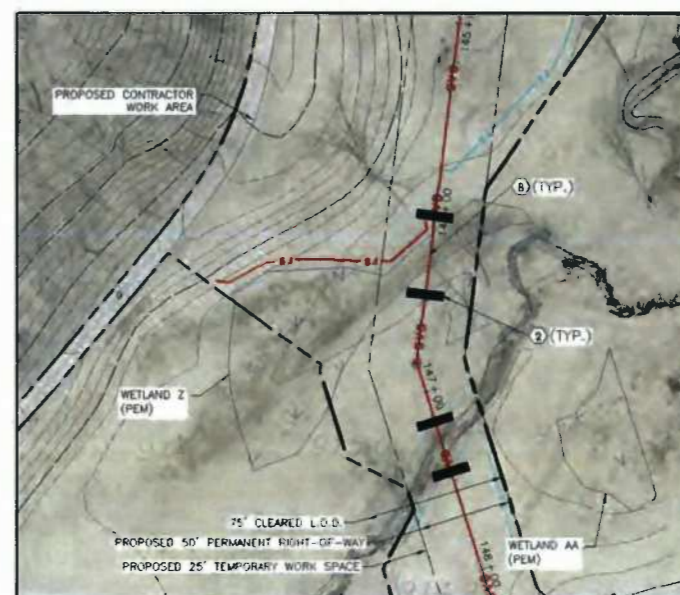


**DETAIL O - UNIT 9 (PER) STREAM CROSSING**

- NOTES:**
- INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL. DURING BACKFILLING OF TRENCH, REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH, UNLESS THERE IS STANDING WATER OR THE SOIL IS TO BE SATURATED TO SEGREGATE.
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  - SEE DETAIL 12 ON SHEET 33.



**DETAIL N - ROAD CROSSING**



**DETAIL P - WETLAND Z (PEM) CROSSING**

- NOTES:**
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH SAND BAG COFFERDAM.
  - INSTALL FLUME PIPE ON EXISTING STRIP JAMMED IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10-100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WDEP.
  - INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - INSTALL A ROCK PAD APPROACH PRIOR TO THE TIMBER MATS.
  - APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6-INCHES ABOVE ORIGINAL GRADE.
  - MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT BURROU INTO MOBILE BRIDGE.
  - CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  - DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  - GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  - THESE NOTES PERTAIN TO A FLUME CROSSING REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.

- NOTES:**
- SEE DETAIL 8 ON SHEET 13
  - INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL. DURING BACKFILLING OF TRENCH, REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH, UNLESS THERE IS STANDING WATER OR THE SOIL IS TO BE SATURATED TO SEGREGATE.
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  - SEE DETAIL 12 ON SHEET 33.

**CEC**  
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<b>DRAFT</b>	<b>SEAL</b>	<b>REVISION RECORD</b>		
		NO.	DATE	DESCRIPTION

STREAM, WETLAND, AND ROAD CROSSING DETAILS

**One Gathering LLC**

**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DOODRIDGE COUNTY, WV

DATE: 11/22/2013 PROJECT NO: 131465  
SCALE: 1" = 80'  
DRAWN BY: B.M.  
CHECKED BY: G.M. SHEET 24 OF 34

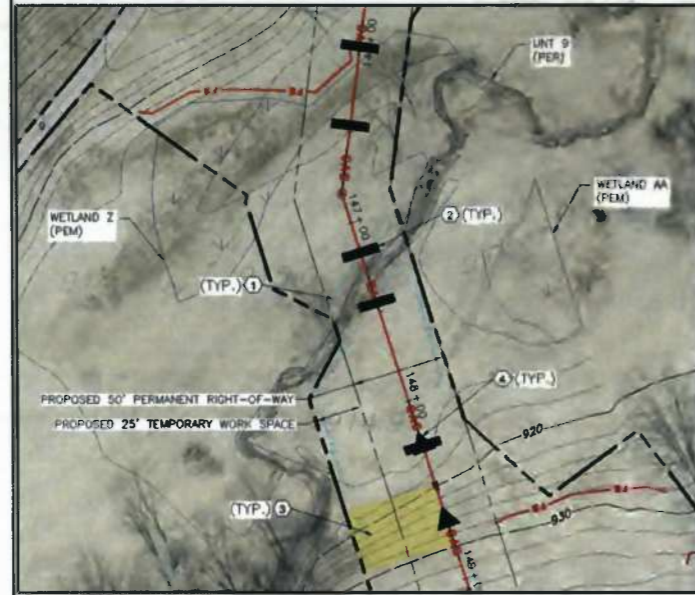
**LEGEND**

- EXISTING INDEX CONTOUR
- EXISTING VEGETATION
- EXISTING FENCE
- EXISTING OVERHEAD ELECTRIC
- EXISTING GAS PIPELINE
- EXISTING WATER PIPELINE
- EXISTING ROADS (PAVED)
- EXISTING ROADS (UNPAVED)
- FEMA FLOODPLAIN BOUNDARY
- EXISTING TAX PARCEL PROPERTY LINE
- EXISTING DEWATERED STREAM
- EXISTING PEM WETLAND
- PROPOSED GATHERING LINE
- PROPOSED ACCESS ROAD
- PROPOSED PERMANENT RIGHT-OF-WAY
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED WATERBAR
- PROPOSED SILT FENCE
- PROPOSED 12" FILTER SOCK
- PROPOSED 18" FILTER SOCK
- PROPOSED 24" FILTER SOCK
- PROPOSED 32" FILTER SOCK
- PROPOSED FILTER SOCK SEDIMENT TRAP
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
- PROPOSED TRENCH PLUG
- PROPOSED RIPRAP
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED CROSS DRAIN
- PROPOSED MOBILE BRIDGE WITH APPROACH
- PROPOSED COFFERDAM
- PROPOSED CONSTRUCTION FENCE
- PROPOSED CHECK DAM
- DEWATERED BY OTHERS
- WELLPAD L.O.D.

- REFERENCES:**
- EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2 FOOT CONTOUR INTERVALS, DATED 03-30-2013 ([www.bluemountainaerialmapping.com](http://www.bluemountainaerialmapping.com)).
  - AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING.
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM G.I.S.
  - BY GRAPHIC PLOTTING ONLY. THIS PIPELINE IS NOT LOCATED IN THE RIGHT-OF-WAY ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DOUGHERTY COUNTY, MAP #560170225C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1986; PHOTO-REVISED 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CED BETWEEN 08-2013 AND 10-2013.

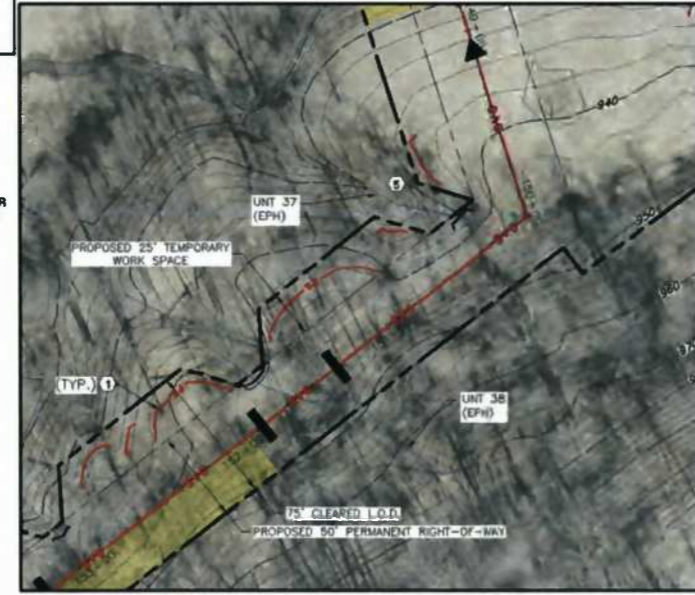
- KEY NOTES:**
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 5 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
  - FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL CROSS DRAIN AS PER DETAIL 18 ON SHEET 34 (TYPICAL).
  - FURNISH AND INSTALL OPEN CUT OR FLUME CROSSING PER DETAILS 10 OR 11 ON SHEET 33.
  - FURNISH AND INSTALL CULVERT PER DETAIL 14 ON SHEET 33 (TYPICAL).
  - FURNISH AND INSTALL OPEN CUT WETLAND CROSSING PER DETAIL 12 ON SHEET 33.
  - FURNISH AND INSTALL BORE AND JACK CROSSING PER DETAIL 15 ON SHEET 33.
  - FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34.
  - FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.

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[www.candec.com](http://www.candec.com)



**DETAIL Q - LEFT FORK ARNOLD CREEK CROSSING**

- NOTES:**
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH BAND BAG COFFERDAM.
  - INSTALL FLUME PIPE ON EXISTING STREAM IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10-100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WVEDP.
  - INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - INSTALL A ROCK PAD APPROACH 10' PRIOR TO THE TIMBER MATS.
  - APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 8 INCHES ABOVE ORIGINAL GRADE.
  - MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  - CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  - DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  - GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  - THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.



**DETAIL S - UNIT 37 & 38 (EPH) STREAM CROSSING**

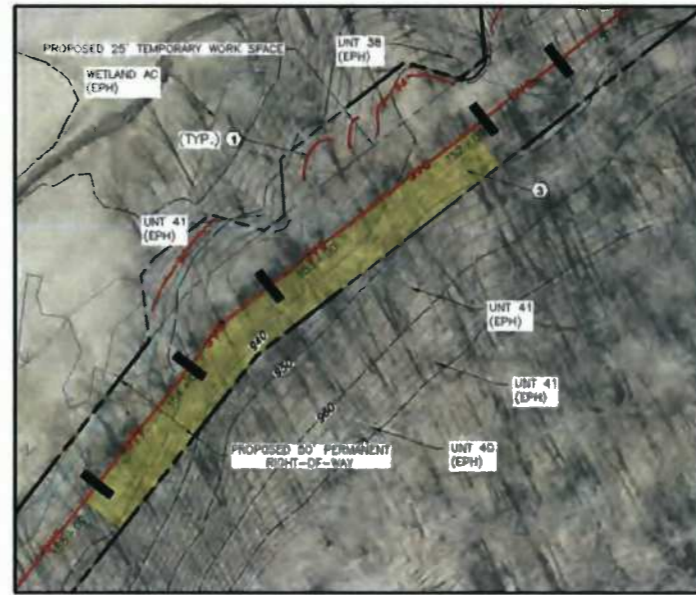
- UNIT-38**
- NOTES:**
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH BAND BAG COFFERDAM.
  - INSTALL FLUME PIPE ON EXISTING STREAM IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10-100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WVEDP.
  - INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - INSTALL A ROCK PAD APPROACH 10' PRIOR TO THE TIMBER MATS.
  - APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 8 INCHES ABOVE ORIGINAL GRADE.
  - MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  - CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  - DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  - GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  - THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.

- UNIT-37**
- NOTES:**
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - INSTALL A COMPOST FILTER SEDIMENT TRAP IN THE CHANNEL ADJACENT TO THE PIPELINE L.O.D. IN ACCORDANCE WITH DETAIL 9 ON SHEET 32.
  - INSTALL TIMBER MATS OVER THE STREAM FOR VEHICLE ACCESS.



**DETAIL R - WETLAND AB (PEM) CROSSING**

- NOTES:**
- INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ON TO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH (UNLESS THERE IS STANDING WATER ON THE SOIL IS TO SATURATED TO SEGREGATE).
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE/SWAMP MATS. INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  - SEE DETAIL 12 ON SHEET 33.



**DETAIL T - UNIT 41 & 40 (EPH) STREAM CROSSING**

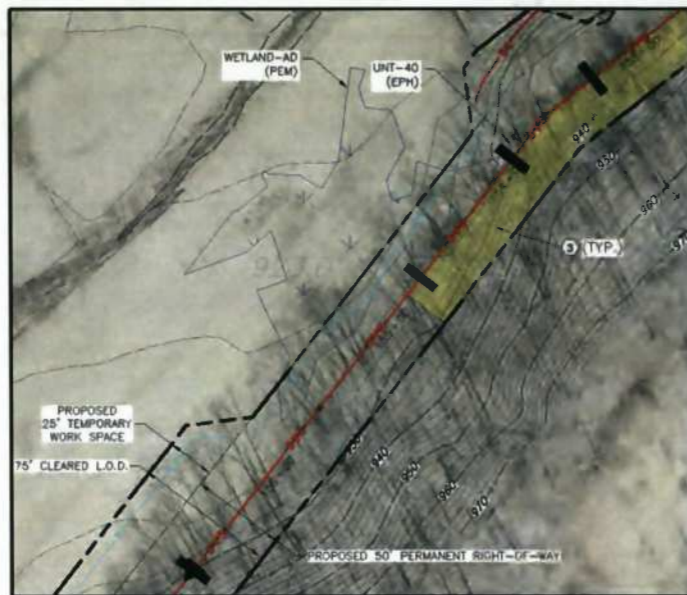
- NOTES:**
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH BAND BAG COFFERDAM.
  - INSTALL FLUME PIPE ON EXISTING STREAM IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10-100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WVEDP.
  - INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - INSTALL A ROCK PAD APPROACH 10' PRIOR TO THE TIMBER MATS.
  - APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 8 INCHES ABOVE ORIGINAL GRADE.
  - MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  - CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  - DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  - GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  - THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.

DRAFT	SEAL	REVISION RECORD			STREAM, WETLAND, AND ROAD CROSSING DETAILS	
		NO.	DATE	DESCRIPTION	Gathering LLC	
					OXFORD 1 TO EQT GAS/WATER PIPELINES	
					18" GATHERING LINE WEST UNION DISTRICT, DOUGHERTY COUNTY WV	
				DATE: 11-23-2013	PROJECT NO: 1314854	
				SCALE: 1" = 50'		
				DRAWN BY: BJM		
				CHECKED BY: GBL		SHEET 25 OF 34

- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DEWATERED STREAM
  - EXISTING PEM WETLAND
  - PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
  - PROPOSED PERMANENT RIGHT-OF-WAY
  - PROPOSED LIMITS OF DISTURBANCE
  - PROPOSED WATERBAR
  - PROPOSED SILT FENCE
  - PROPOSED 12" FILTER SOCK
  - PROPOSED 18" FILTER SOCK
  - PROPOSED 24" FILTER SOCK
  - PROPOSED 32" FILTER SOCK
  - PROPOSED FILTER SOCK
  - SEDIMENT TRAP
  - PROPOSED EROSION CONTROL BLANKET
  - PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - PROPOSED TRENCH PLUG
  - PROPOSED RIPRAP
  - PROPOSED CHANNEL
  - PROPOSED STORM PIPE
  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DEWATERED BY OTHERS
  - WELLPAD L.O.D.

- REFERENCES:**
1. EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2-FOOT CONTOUR INTERVALS, DATED 03-30-2013 ([www.bluemountainaerialmapping.com](http://www.bluemountainaerialmapping.com)).
  2. AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING.
  3. THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM GIS.
  4. BY GRAPHIC PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT-OF-WAY ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP DOODRIDGE COUNTY, MAP #560170225C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  5. USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1956, PHOTO REVISIED 1994.
  6. WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08-2013 AND 10-2013.

- KEY NOTES**
1. FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  2. FURNISH AND INSTALL TRENCH PLUG PER DETAIL 5 ON SHEET 32 (TYPICAL).
  3. FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
  4. FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL).
  5. FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL).
  6. FURNISH AND INSTALL CROSS DRAINS PER DETAIL 16 ON SHEET 34 (TYPICAL).
  7. FURNISH AND INSTALL OPEN CUT OR FLUME CROSSING PER DETAILS 10 OR 11 ON SHEET 33.
  8. FURNISH AND INSTALL CULVERT PER DETAIL 14 ON SHEET 33 (TYPICAL).
  9. FURNISH AND INSTALL OPEN CUT WETLAND CROSSING PER DETAIL 12 ON SHEET 33.
  10. FURNISH AND INSTALL BORE AND JACK CROSSING PER DETAIL 15 ON SHEET 33.
  11. FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34.
  12. FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  13. FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.



**DETAIL U - WETLAND AD (PEM) STREAM CROSSING**

- NOTES:**
1. INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT OF WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT OF WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  2. EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  3. USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  4. INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  5. WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH, UNLESS THERE IS STANDING WATER OR THE SOIL IS TO SATURATED TO SEGREGATE.
  6. SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  7. UPON RESTORATION, REMOVE GEOTEXTILE SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  8. SEE DETAIL 12 ON SHEET 33.



**DETAIL W - WETLAND X (PEM) CROSSING**

- NOTES:**
1. INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT OF WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT OF WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  2. EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  3. USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  4. INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  5. WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH, UNLESS THERE IS STANDING WATER OR THE SOIL IS TO SATURATED TO SEGREGATE.
  6. SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  7. UPON RESTORATION, REMOVE GEOTEXTILE SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  8. SEE DETAIL 12 ON SHEET 33.



**DETAIL V - UNIT 39, 41 (EPH), & WETLAND AH (PEM) STREAM & WETLAND CROSSING**

- NOTES:**
1. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  2. REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH SAND BAG COFFERDAM.
  3. INSTALL FLUME PIPE ON EXISTING STREAMBED IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10' TO 100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WVDEP.
  4. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  5. INSTALL A ROCK PAD APPROACH 10' PRIOR TO THE TIMBER MATS.
  6. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 8 INCHES ABOVE ORIGINAL GRADE.
  7. MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  8. CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  9. DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  10. GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  11. THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.
  12. FOR NOTES PERTAINING TO WETLAND AH CROSSING REFER TO DETAIL U ON THIS SHEET.



**DETAIL X - UNIT 42 (EPH) STREAM CROSSING**

- NOTES:**
1. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  2. REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH SAND BAG COFFERDAM.
  3. INSTALL FLUME PIPE ON EXISTING STREAMBED IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10' TO 100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WVDEP.
  4. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  5. INSTALL A ROCK PAD APPROACH 10' PRIOR TO THE TIMBER MATS.
  6. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 8 INCHES ABOVE ORIGINAL GRADE.
  7. MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  8. CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  9. DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  10. GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  11. THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.

**CEC**  
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[www.cecinc.com](http://www.cecinc.com)

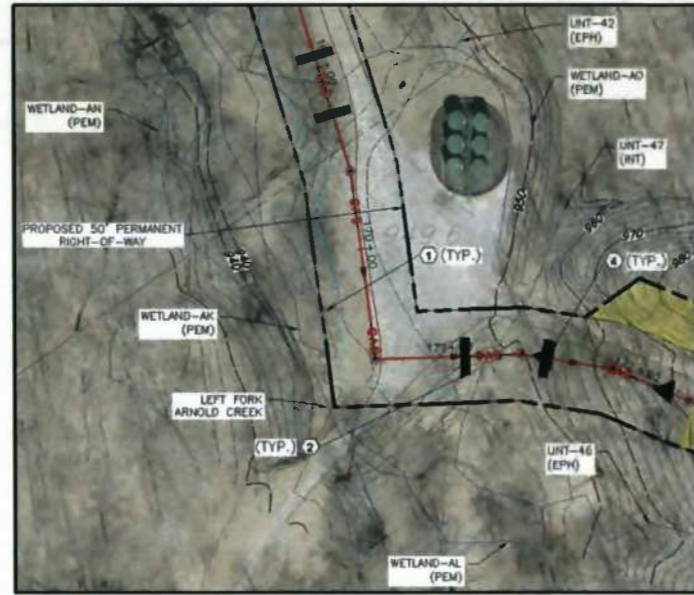
DRAFT	<b>SEAL</b>	<b>REVISION RECORD</b>			<b>STREAM, WETLAND, AND ROAD CROSSING DETAILS</b>	
		NO.	DATE	DESCRIPTION	<b>One Gathering LLC</b>	
					<b>OXFORD 1 TO EQT GAS/WATER PIPELINES</b>	
					18' GATHERING LINE WEST UNION DISTRICT, DOODRIDGE COUNTY WV	
					DATE: 11/22/2013	PROJECT NO: 131-065
					SCALE: 1" = 80'	
					DRAWN BY: BJH	PROJECT NO: 131-065
					CHECKED BY: GBL	SHEET 28 OF 34

- LEGEND**
- EXISTING INDEX CONTOUR
  - EXISTING VEGETATION
  - EXISTING FENCE
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING GAS PIPELINE
  - WATER PIPELINE
  - EXISTING ROADS (PAVED)
  - EXISTING ROADS (UNPAVED)
  - FEMA FLOODPLAIN BOUNDARY
  - EXISTING TAX PARCEL PROPERTY LINE
  - EXISTING DELINEATED STREAM
  - EXISTING PEM WETLAND
  - GAS** PROPOSED GATHERING LINE
  - PROPOSED ACCESS ROAD
  - PROPOSED PERMANENT RIGHT-OF-WAY
  - PROPOSED LIMITS OF DISTURBANCE
  - PROPOSED WATERBAR
  - PROPOSED 5' FENCE
  - PROPOSED 12" FILTER SOCK
  - PROPOSED 18" FILTER SOCK
  - PROPOSED 24" FILTER SOCK
  - PROPOSED 32" FILTER SOCK
  - PROPOSED FILTER SOCK SEDIMENT TRAP
  - PROPOSED EROSION CONTROL BLANKET
  - PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
  - PROPOSED TRENCH PLUG
  - PROPOSED RIPRAP
  - PROPOSED CHANNEL
  - PROPOSED STORM PIPE
  - PROPOSED CROSS DRAIN
  - PROPOSED MOBILE BRIDGE WITH APPROACH
  - PROPOSED COFFERDAM
  - PROPOSED CONSTRUCTION FENCE
  - PROPOSED CHECK DAM
  - DELINEATED BY OTHERS
  - WELLPAD L.O.D.

- REFERENCES:**
1. EXISTING CONTOURS ARE FROM BLUE MOUNTAIN AERIAL MAPPING 2-FOOT CONTOUR INTERVALS, DATED 03-30-2013 ([www.bluemountainaerialmapping.com](http://www.bluemountainaerialmapping.com))
  2. AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING
  3. THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM G.I.S.
  4. BY GRAPHIC PLOTTING ONLY. THIS PIPELINE IS NOT LOCATED IN THE RIGHT-OF-WAY FOR ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DODDRIIDGE COUNTY, MAP #5401700225C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  5. USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1986, PHOTO REVISIED 1994.
  6. WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CEC BETWEEN 08-2013 AND 10-2013.

- KEY NOTES**
1. FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  2. FURNISH AND INSTALL TRENCH PLUG PER DETAIL 6 ON SHEET 32 (TYPICAL).
  3. FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
  4. FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL).
  5. FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL).
  6. FURNISH AND INSTALL CROSS DRAINS PER DETAIL 18 ON SHEET 34 (TYPICAL).
  7. FURNISH AND INSTALL OPEN CUT OR FLUME CROSSING PER DETAILS 10 OR 11 ON SHEET 33.
  8. FURNISH AND INSTALL CULVERT PER DETAIL 14 ON SHEET 33 (TYPICAL).
  9. FURNISH AND INSTALL OPEN CUT WETLAND CROSSING PER DETAIL 12 ON SHEET 33.
  10. FURNISH AND INSTALL BORE AND JACK CROSSING PER DETAIL 15 ON SHEET 33.
  11. FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34.
  12. FURNISH AND INSTALL CONSTRUCTION ACCESS ROAD PER DETAIL 5 ON SHEET 31.
  13. FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.

**CEC**  
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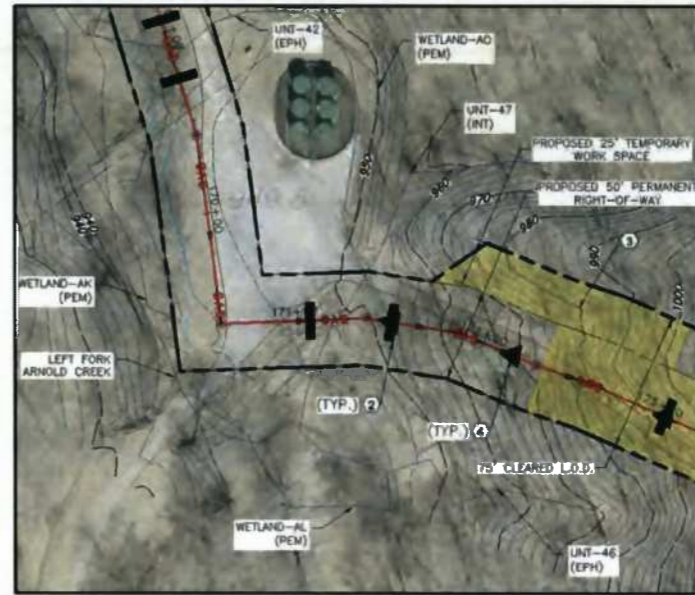
**DETAIL Y - WETLAND AK & AL (PEM) CROSSING**

- NOTES:**
1. INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  2. EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  3. USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  4. INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FROM DRAINING WETLAND AND OR CHANGING HYDROLOGY.
  5. WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ON GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH. (UNLESS THERE IS STANDING WATER OR THE SOIL IS SATURATED TO SEGREGATE.)
  6. SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  7. UPON RESTORATION, REMOVE GEOTEXTILE SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  8. SEE DETAIL 12 ON SHEET 33.



**DETAIL AA-RIGHT FORK ARNOLD CREEK CROSSING**

- NOTES:**
1. SEE DETAIL 17 ON SHEET 34.



**DETAIL Z - UNT 47 (INT) STREAM CROSSING**

- NOTES:**
1. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  2. REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH BAND BAG COFFERDAM.
  3. INSTALL FLUME PIPE ON EXISTING STREAMBED IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10' TO 100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WVDEP.
  4. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  5. INSTALL A ROCK PAD APPROACH 10' PRIOR TO THE TIMBER MATS.
  6. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 8-INCHES ABOVE ORIGINAL GRADE.
  7. MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  8. CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  9. DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  10. GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  11. THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.



**DETAIL AB - UNT 52 & 53 (EPH) STREAM CROSSING**

- NOTES:**
1. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  2. REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH BAND BAG COFFERDAM.
  3. INSTALL FLUME PIPE ON EXISTING STREAMBED IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10' TO 100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WVDEP.
  4. INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  5. INSTALL A ROCK PAD APPROACH 10' PRIOR TO THE TIMBER MATS.
  6. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 8-INCHES ABOVE ORIGINAL GRADE.
  7. MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  8. CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  9. DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  10. GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  11. THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.

DRAFT	SEAL	REVISION RECORD			STREAM, WETLAND, AND ROAD CROSSING DETAILS	
		NO.	DATE	DESCRIPTION	One Gathering LLC	
					<b>OXFORD 1 TO EQT GAS/WATER PIPELINES</b>	
					18' GATHERING LINE WEST UNION DISTRICT, DODDRIIDGE COUNTY, WV	
					DATE: 11-29-13	PROJECT NO.: 131-485
					SCALE: 1" = 50'	
					DRAWN BY: GJM	
					CHECKED BY: GBL	SHEET 27 OF 34

### LEGEND

	EXISTING INDEX CONTOUR
	EXISTING VEGETATION
	EXISTING FENCE
	EXISTING OVERHEAD ELECTRIC
	EXISTING GAS PIPELINE
	WATER PIPELINE
	EXISTING ROADS (PAVED)
	EXISTING ROADS (UNPAVED)
	FEMA FLOODPLAIN BOUNDARY
	EXISTING TAX PARCEL PROPERTY LINE
	EXISTING DEEDED STREAM
	EXISTING PEM WETLAND
	PROPOSED GATHERING LINE
	PROPOSED ACCESS ROAD
	PROPOSED PERMANENT RIGHT-OF-WAY
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED WATERBAR
	PROPOSED SILT FENCE
	PROPOSED 12" FILTER SOCK
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	PROPOSED FILTER SOCK SEDIMENT TRAP
	PROPOSED EROSION CONTROL BLANKET
	PROPOSED ROCK CONSTRUCTION ENTRANCE AND STONE STOCKPILE
	PROPOSED TRENCH PLUG
	PROPOSED RIPRAP
	PROPOSED CHANNEL
	PROPOSED STORM PIPE
	PROPOSED CROSS DRAIN
	PROPOSED MOBILE BRIDGE WITH APPROACH
	PROPOSED COFFERDAM
	PROPOSED CONSTRUCTION FENCE
	PROPOSED CHECK DAM
	DELINEATED BY OTHERS
	WELLPAD L.O.D.

- ### REFERENCES:
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  - AERIAL PHOTOGRAPHY IS DERIVED FROM BLUE MOUNTAIN AERIAL MAPPING
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN HEREON ARE BASED ON TAX PARCEL INFORMATION DERIVED FROM GIS.
  - BY GRAPHING PLOTTING ONLY, THIS PIPELINE IS NOT LOCATED IN THE RIGHT-OF-WAY FOR ARNOLD CREEK FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DOUGHERTY COUNTY, MAP #60170225C, WITH A MAP REVISED DATE OF OCTOBER 4, 2011.
  - USGS 7.5 MIN. TOPOGRAPHIC QUADRANGLE OXFORD, WV, DATED 1959. PHOTO REVISION 1994.
  - WETLAND DELINEATIONS BASED ON WETLAND SURVEYS CONDUCTED BY CSC BETWEEN 08-2013 AND 10-2013.

- ### KEY NOTES:
- FURNISH AND INSTALL COMPOST FILTER SOCK PER DETAIL 7 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL TRENCH PLUG PER DETAIL 5 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL EROSION CONTROL BLANKET PER DETAILS 2 AND 3 ON SHEET 31 (TYPICAL).
  - FURNISH AND INSTALL WATERBAR PER DETAIL 8 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL COMPOST FILTER SOCK SEDIMENT TRAP PER DETAIL 9 ON SHEET 32 (TYPICAL).
  - FURNISH AND INSTALL CROSS DRAINS PER DETAIL 18 ON SHEET 34 (TYPICAL).
  - FURNISH AND INSTALL OPEN CUT OR FLUME CROSSING PER DETAILS 10 OR 11 ON SHEET 33.
  - FURNISH AND INSTALL CULVERT PER DETAIL 14 ON SHEET 33 (TYPICAL).
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  - FURNISH AND INSTALL TIMBER MAT BRIDGE PER DETAIL 17 ON SHEET 34.
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  - FURNISH AND INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET 31.



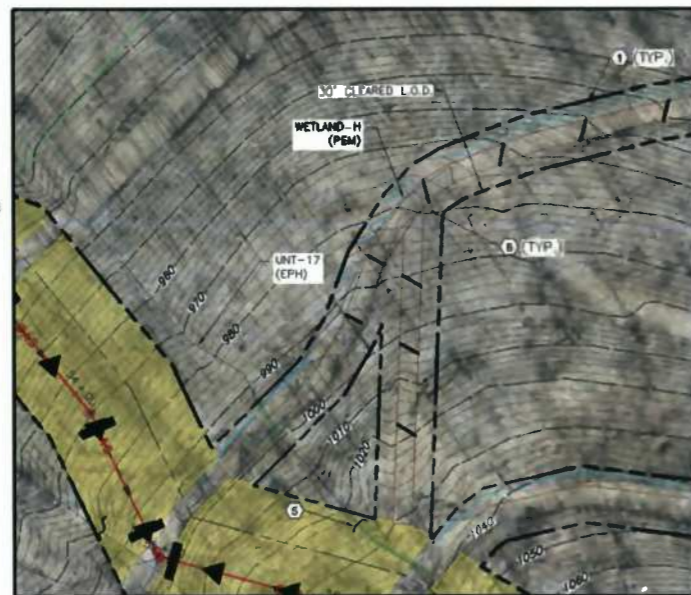
**DETAIL AC - UNT 54 (EPH)  
STREAM CROSSING**

- ### NOTES:
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH SAND BAG COFFERDAM.
  - INSTALL FLUME PIPE ON EXISTING STREAM BED IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10-100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WYDEP.
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  - APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6 INCHES ABOVE ORIGINAL GRADE.
  - MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  - CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  - DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  - GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  - THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.



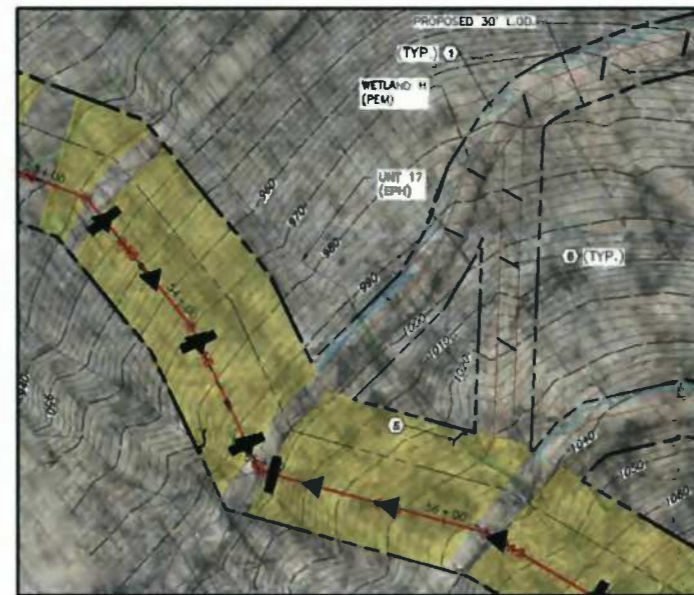
**DETAIL AD - WETLAND AT & AU (PEM)  
CROSSING**

- ### NOTES:
- INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FORM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH (UNLESS THERE IS STANDING WATER OR THE SOIL IS TO SATURATED TO SEGREGATE).
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.



**DETAIL AE - WETLAND H (PEM)  
CROSSING**

- ### NOTES:
- INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILE.
  - EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  - USE TIMBER MATS FOR VEHICULAR CROSSING OF WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  - INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCHING FORM DRAINING WETLAND OR CHANGING HYDROLOGY.
  - WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL DURING BACKFILLING OF TRENCH. REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE WETLAND. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH (UNLESS THERE IS STANDING WATER OR THE SOIL IS TO SATURATED TO SEGREGATE).
  - SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/COMPACTION OF WETLANDS.
  - UPON RESTORATION, REMOVE GEOTEXTILE SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.
  - SEE DETAIL 12 ON SHEET 33.



**DETAIL AF - UNT 17 (EPH)  
STREAM CROSSING**

- ### NOTES:
- INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AS SHOWN. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - REFER TO DETAIL 11 OR 13 ON SHEET 33 FOR CROSS SECTION OF FLUME PIPE WITH SAND BAG COFFERDAM.
  - INSTALL FLUME PIPE ON EXISTING STREAM BED IMMEDIATELY PRIOR TO UTILITY LINE INSTALLATION. FLUME PIPE SHALL ONLY REMAIN IN PLACE DURING THE UTILITY LINE INSTALLATION TIME PERIOD. THE UTILITY LINE INSTALLATION TIME PERIOD IS 24 HOURS FOR A STREAM WITH A 10' BOTTOM WIDTH OR LESS AND 48 HOURS FOR A STREAM WITH A 10-100' BOTTOM WIDTH UNLESS OTHERWISE APPROVED IN WRITING BY THE WYDEP.
  - INSTALL WATERBARS AT APPROACH TO STREAM CROSSING AND FILTER SOCK ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
  - INSTALL A ROCK PAD APPROACH 10' PRIOR TO THE TIMBER MATS.
  - APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6 INCHES ABOVE ORIGINAL GRADE.
  - MOBILE BRIDGE IS TO EXTEND FROM TOP OF BANK TO TOP OF BANK OF THE STREAM. CONTRACTOR SHALL NOT PLACE FILL UNDER THE MOBILE BRIDGE. FLUME PIPE SHALL NOT SUPPORT MOBILE BRIDGE.
  - CONTRACTOR MAY SUPPLEMENT FLUME PIPE SHOWN WITH ADDITIONAL FLUME PIPES OR PUMPS TO ACCOMMODATE STREAM FLOW DURING CONSTRUCTION.
  - DEWATERING ZONE IS TO BE PUMPED OUT USING A PUMP AND FILTER BAG.
  - GEOTEXTILE SHALL BE ATTACHED TO THE UNDERSIDE OF THE TIMBER MAT BRIDGE.
  - THESE NOTES PERTAIN TO A FLUME CROSSING. REFER TO DETAIL 10 NOTES ON SHEET 33 IF TRENCHING OPTION IS USED.

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Ph: 304.933.3119 - Fax: 304.933.3327  
[www.cecinc.com](http://www.cecinc.com)

DRAFT

**SEAL**

**REVISION RECORD**

NO.	DATE	DESCRIPTION

STREAM, WETLAND, AND ROAD CROSSING DETAILS

**Gathering LLC**

**OXFORD 1 TO EQT  
GAS/WATER PIPELINES**

18" GATHERING LINE  
WEST UNION DISTRICT, DOUGHERTY COUNTY, WV

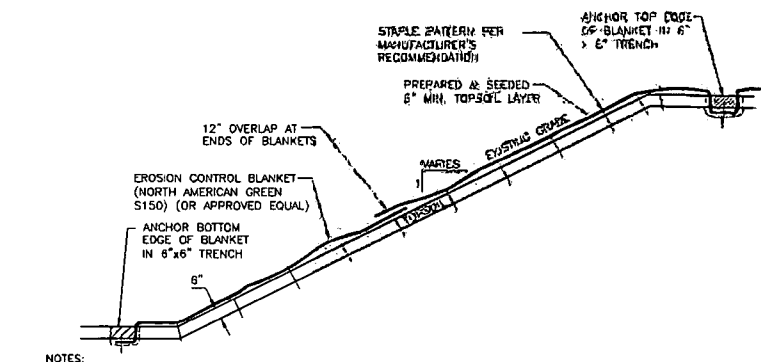
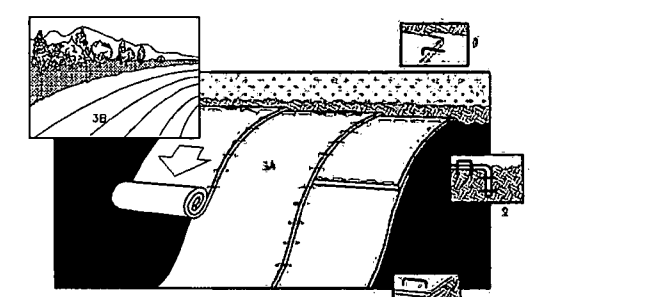
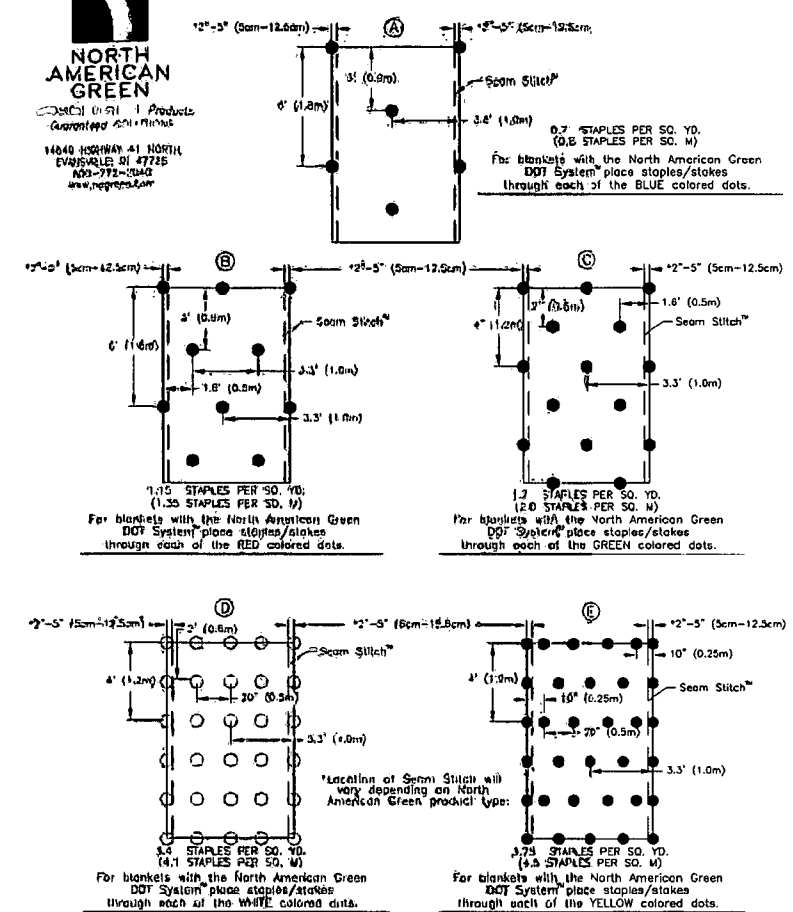
DATE: 11/25/2013 PROJECT NO: 131465A  
SCALE: 1" = 50'  
DRAWN BY: BJM  
CHECKED BY: GBL SHEET 28 OF 34



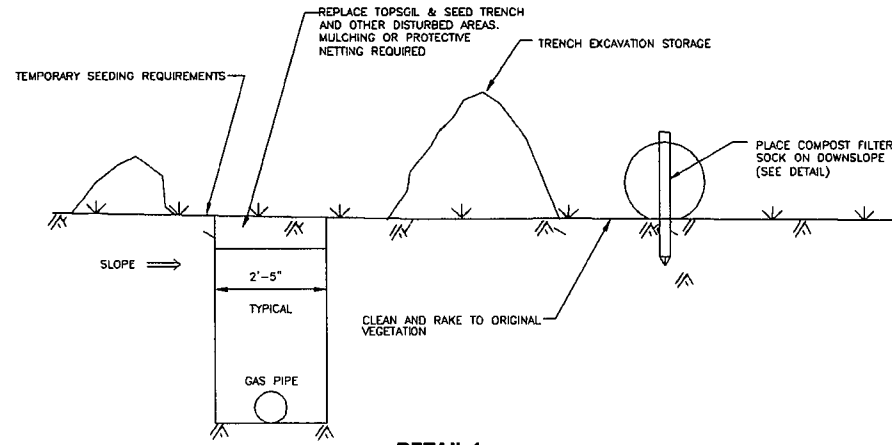




**DOT SYSTEM™  
STAPLE PATTERN GUIDE**



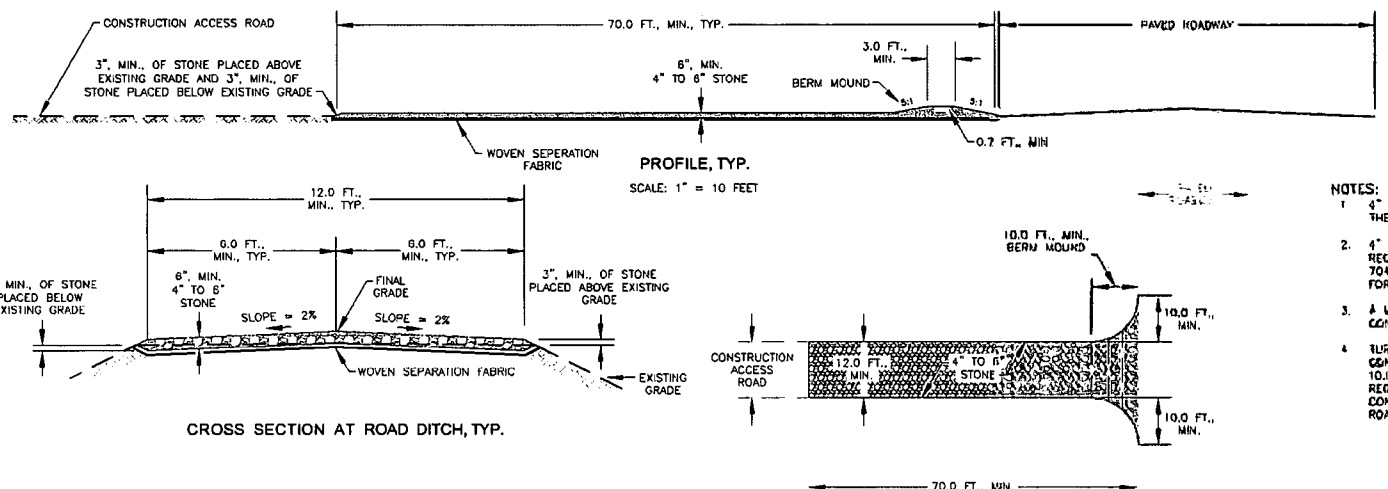
- NOTES:**
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
  2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
  3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE.
  4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
  5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, GLUE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 12" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
  6. EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL 3:1 OR STEEPER SLOPES.
  7. REFER TO DETAIL 7, THIS SHEET FOR STAPLE PATTERN.



**DETAIL 1  
EROSION CONTROL MEASURES FOR PIPELINE TRENCHES**  
NOT TO SCALE

**DETAIL 2  
EROSION CONTROL BLANKET STAPLE PATTERN**  
NOT TO SCALE

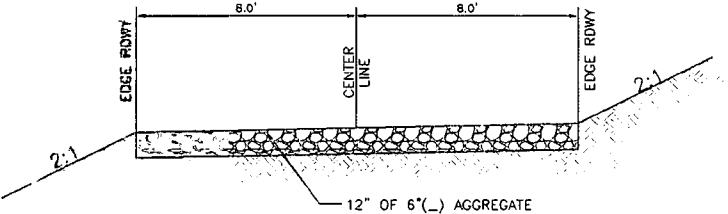
**DETAIL 3  
EROSION CONTROL BLANKET**  
NOT TO SCALE



**DETAIL 4  
STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE

**PLAN VIEW, TYP.**  
SCALE: 1" = 20 FEET

- NOTES:**
1. 4" to 6" STONE SHALL EXTEND THE FULL WIDTH OF THE ACCESS ROAD.
  2. 4" to 6" STONE SHALL MEET THE GRADATION REQUIREMENTS FOR CLASS 7 AGGREGATE IN TABLE 704.6.2A OF THE WYOMING STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
  3. A MOUND BERM MUST BE USED AT ALL STONE CONSTRUCTION ENTRANCES.
  4. TURNOUTS ONTO PAVED ROADS FROM STONE CONSTRUCTION ENTRANCES SHALL BE A MINIMUM OF 10.0 FEET AS MEASURED ALONG THE PAVED ROAD, REGARDLESS OF THE ANGLE AT WHICH THE STONE CONSTRUCTION ENTRANCE ENCOUNTERS THE PAVED ROAD.



**DETAIL 5  
TEMPORARY CONSTRUCTION ACCESS ROAD**  
NOT TO SCALE

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SEAL	REVISION RECORD		
	NO.	DATE	DESCRIPTION

**One Gathering LLC**

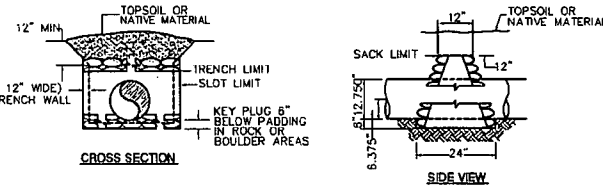
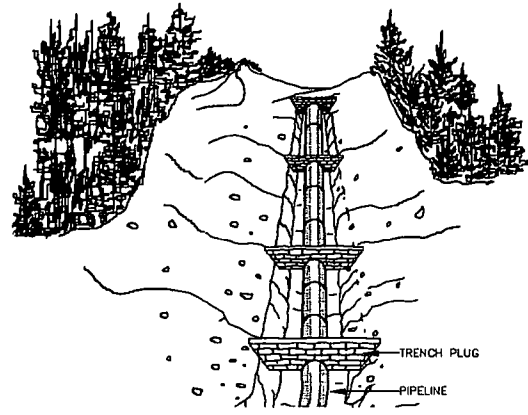
**OXFORD 1 TO EQT  
GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, OODORIDGE COUNTY, WV

DATE: 11/28/2013 PROJECT NO: 131-055  
SCALE: PROJECT NO: 131-055  
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SHEET 31 OF 34





**NOTES:**

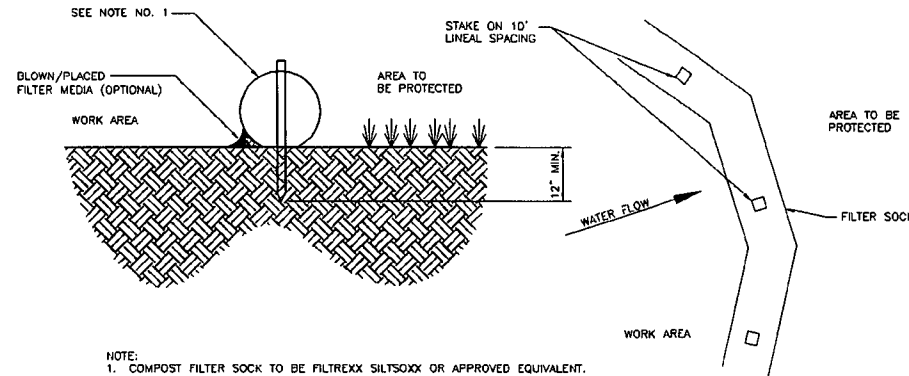
- TRENCH PLUG SHALL BE INSTALLED:
  - ON SLOPES ALONG THE TRENCH LINE WHERE THE NATURAL DRAINAGE PATTERN, PROFILE, AND TYPE OF BACKFILL MATERIAL MAY RESULT IN LOSS OF BACKFILL MATERIAL OR ALTERATION OF NATURAL PATTERN;
  - AT THE BASE OF SLOPES ADJACENT TO WATERBODIES AND WETLANDS
  - WHERE NEEDED TO AVOID DRAINING A WETLAND
  - ON UPLAND SLOPES, AT THE SAME SPACING AS SLOPE BREAKERS AND UP SLOPE OF SLOPE BREAKERS
  - IN CULTIVATED LAND AND RESIDENTIAL AREAS WHERE PERMANENT SLOPE BREAKERS ARE NOT TYPICALLY INSTALLED, AT THE SAME SPACING AS IF PERMANENT SLOPE BREAKERS WERE REQUIRED.
- AS AN ALTERNATIVE TO THE MATERIALS SPECIFIED IN THE TABLE BELOW, OPEN WEAVE HEMP OR JUTE SACKS MAY BE FILLED WITH A MINIMUM OF 55lbs. MIXTURE OF 1 PART CEMENT TO 8 PARTS SAND OR SUBSOIL SO THAT NATURAL GROUND WATER WILL PERMIT MIXTURE TO EXUDE AND BOND SACKS TOGETHER.
- TRENCH PLUG SPACING AND CONFIGURATION MAY BE CHANGED AS DIRECTED BY COMPANY. DEPTH OF DITCH MAY VARY WITH SITE CONDITIONS.
- ALL MATERIALS SHALL BE SUPPLIED BY CONTRACTOR.
- GEOTECHNICAL POLYURETHANE FOAM TRENCH PLUGS MAY BE USED IN LIEU OF SACKS FILLED WITH CEMENT / SOIL MIXTURE.
- TRENCH PLUG SPACING SHOWN BELOW IS THE MAXIMUM ALLOWABLE PER PADEP REGULATIONS. ALL TRENCH PLUG LOCATIONS SHOWN ARE APPROXIMATE. FINAL LOCATIONS WILL BE FIELD IDENTIFIED BY A QUALIFIED INDIVIDUAL TO ACCOMMODATE PIPELINE FITTINGS, SIDE BENDS, OVER BENDS AND SAG BENDS TO ASSURE THAT ALL TRENCH PLUG INDUCED STRESSES ARE MINIMIZED.

MAXIMUM SPACING AND MATERIALS FOR TRENCH PLUGS		
TRENCH SLOPE (%)	SPACING L (FEET)	TRENCH PLUG MATERIAL
0 - 5	1,000	*CLAY, BENTONITE, OR CONCRETE FILLED SACKS, OR AS SPECIFIED IN NOTES 2 AND 5
5 - 15	800	*CLAY, BENTONITE, OR CONCRETE FILLED SACKS, OR AS SPECIFIED IN NOTES 2 AND 5
15 - 25	300	*CLAY, BENTONITE, OR CONCRETE FILLED SACKS, OR AS SPECIFIED IN NOTES 2 AND 5
25 - 35	200	*CLAY, BENTONITE, OR CONCRETE FILLED SACKS, OR AS SPECIFIED IN NOTES 2 AND 5
35 - 100	100	*CLAY, BENTONITE, OR CONCRETE FILLED SACKS, OR AS SPECIFIED IN NOTES 2 AND 5
OVER 100	50	CEMENT FILLED BAGS, (WETTED), MORTARED STONE, OR GEOTECHNICAL POLYURETHANE FOAM

\*TOPSOIL MAY NOT BE USED TO FILL SACKS.

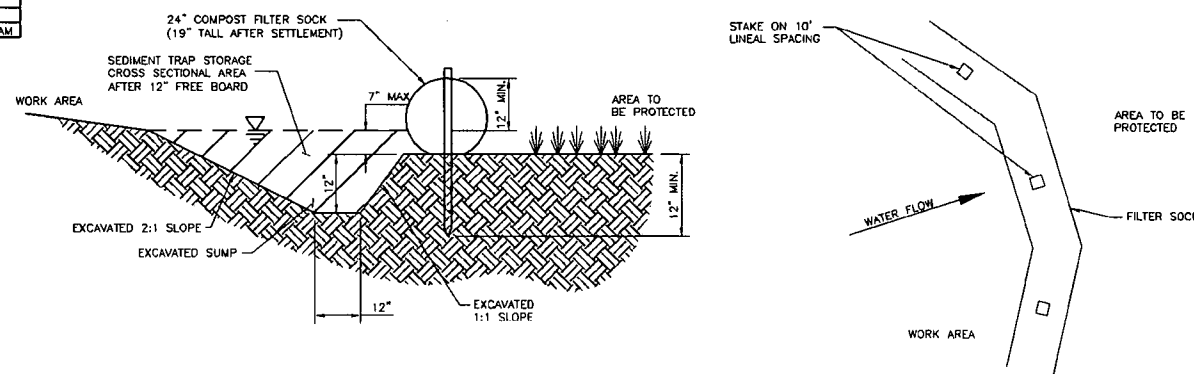
\*\*IMPERVIOUS TRENCH PLUGS ARE REQUIRED AT ALL STREAM, RIVER, WETLAND, OR OTHER WATERBODY CROSSINGS.

**DETAIL 6  
TRENCH PLUG  
NOT TO SCALE**



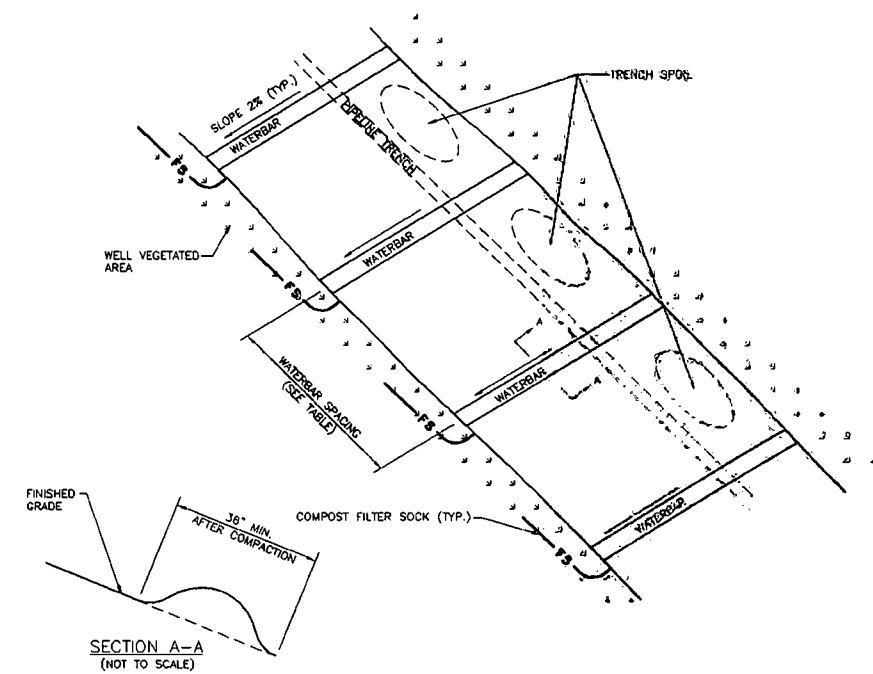
- NOTE:
- COMPOST FILTER SOCK TO BE FILTREXX SILTSOXX OR APPROVED EQUIVALENT.
  - 12" COMPOST FILTER SOCK TO BE USED. SEE PLAN SHEET FOR SIZES AND LOCATIONS.
  - ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF WHEN IT REACHES 1/3 THE ABOVE GROUND HEIGHT OF THE COMPOST FILTER SOCK.
  - COMPOST FILTER SOCK SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED COMPOST FILTER SOCK SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

**DETAIL 7  
COMPOST FILTER SOCK  
NOT TO SCALE**



- NOTE:
- COMPOST FILTER SOCK TO BE FILTREXX SILTSOXX OR APPROVED EQUIVALENT.
  - ACCUMULATED SETTLEMENT SHALL BE REMOVED AND DISPOSED OF IF IT REACHES 1/3 OF THE COMPOST FILTER SOCK SEDIMENT TRAP HEIGHT.
  - COMPOST FILTER SOCK SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED COMPOST FILTER SOCK SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

**DETAIL 9  
COMPOST FILTER SOCK SEDIMENT TRAP  
NOT TO SCALE**



**NOTES:**

- WATERBARS (SLOPE BREAKERS, INTERCEPT DIKES) SHOULD BE INSTALLED ACROSS THE ENTIRE RIGHT-OF-WAY ON ALL SLOPES GREATER THAN 5%.
- WATERBARS SHALL BE PLACED AT 2% SLOPE DOWNHILL. THEY SHALL BE SPACED AT THE INCREMENTS AS SHOWN ON THE PLANS, AND IN ACCORDANCE WITH THE WDEP EROSION AND SEDIMENT POLLUTION CONTROL STANDARDS AND MANUAL AND THE WV DNR BEST MANAGEMENT PRACTICES FOR OIL AND GAS WELL SITE CONSTRUCTION MANUAL.
- WATERBARS SHOULD BE CONSTRUCTED AT A SLOPE OF 2% AND DISCHARGE TO A WELL-VEGETATED AREA. WATERBARS SHOULD NOT DISCHARGE INTO AN OPEN TRENCH. WATERBARS SHOULD BE ORIENTED SO THAT THE DISCHARGE DOES NOT FLOW BACK ONTO THE RIGHT-OF-WAY. SUPER SILT FENCE FENCE SHOULD BE LOCATED BELOW THE DISCHARGE END OF THE WATERBAR.
- A SOFT TRENCH PLUG WILL BE USED IN AREAS WHERE WATER MUST BE CONVEYED ACROSS THE PIPELINE TRENCH.

REQUIRED SPACING FOR PERMANENT WATERBARS	
PERCENT SLOPE	SPACING (FT.)
1%	400
2%	250
5%	135
10%	60
15%	60
20%	45

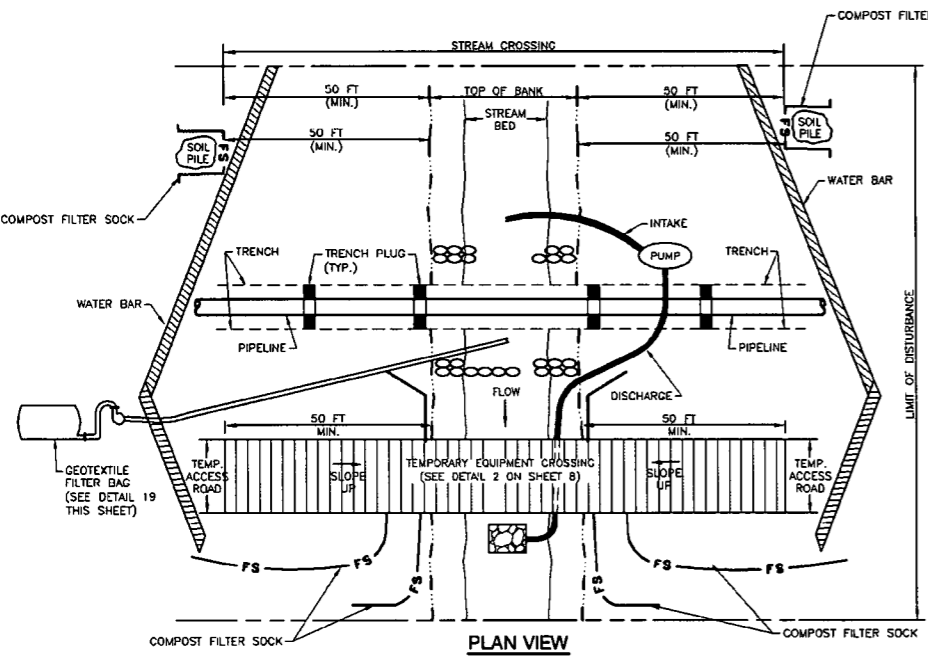
**DETAIL 8  
TYPICAL WATERBAR INSTALLATION  
NOT TO SCALE**

SEAL	REVISION RECORD		
	NO.	DATE	DESCRIPTION

<b>Stone Gathering LLC</b>	
<b>OXFORD 1 TO EQT GAS/WATER PIPELINES</b>	
16" GATHERING LINE WEST UNION DISTRICT, COOKING COUNTY, WV	
DATE: 11/22/2013	PROJECT NO.: 131-055
SCALE:	
DRAWN BY: GJM	
CHECKED BY: GSL	
SHEET 32 OF 34	

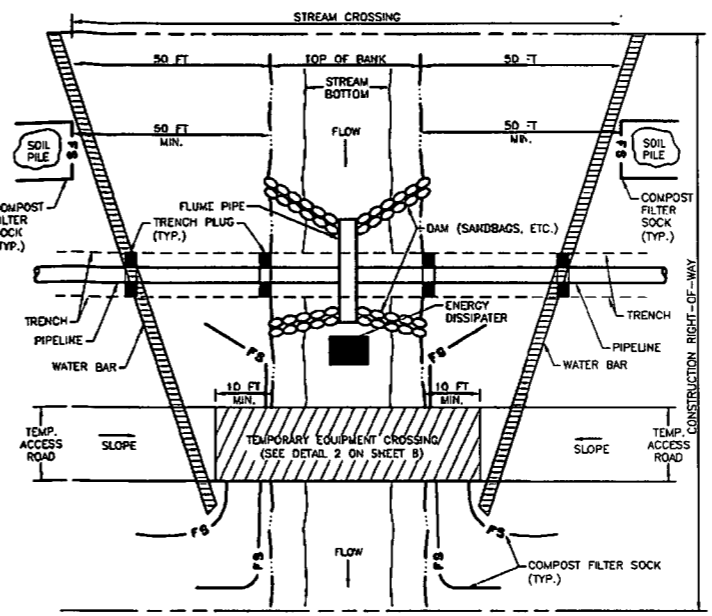
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**Civil & Environmental Consultants, Inc.**  
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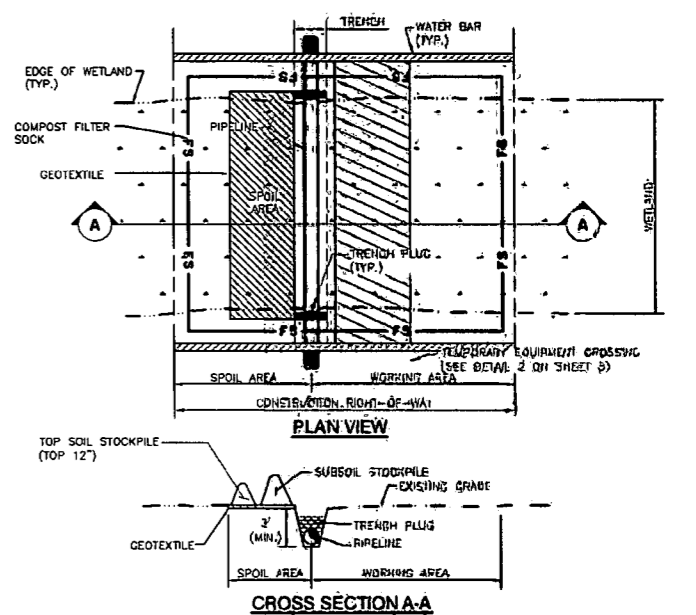
**DETAIL 10**  
**PIPELINE AND EQUIPMENT CROSSING OF STREAM**  
**TRENCHING - PUMP AROUND**  
NOT TO SCALE

- NOTES:**
1. ALL RUNOFF FROM DISTURBED UP-SLOPE AREAS WITHIN LIMIT OF DISTURBANCE MUST BE TREATED FOR SEDIMENT BEFORE IT REACHES STREAM.
  2. INSTALL COMPOST FILTER SOCK, TRENCH PLUGS, PUMP, ENERGY DISSIPATER, AND DAMS BEFORE TRENCHING WITHIN STREAM BED.
  3. PUMP MUST BE OF SUFFICIENT CAPACITY TO CONVEY NORMAL AND/OR EXISTING STREAM FLOW OVER TRENCH. A BACK-UP PUMP OF EQUAL CAPACITY MUST BE AVAILABLE ON-SITE DURING EXCAVATION AND THE 6 MONTH MAINTENANCE PERIOD.
  4. PLACE SPOIL PILES A MINIMUM OF 50 FEET FROM TOP OF BANK.
  5. INSTALL WATER BARS AT APPROACHES TO STREAM CROSSING AND SILT FENCE ALONG STREAM BANKS AND AT DOWNSLOPE END OF WATER BARS.
  6. MAINTAIN SURFACE OF TEMPORARY EQUIPMENT CROSSING TO PREVENT SOIL DISCHARGES TO STREAM.
  7. EXTEND TIMBER MAT 50 FEET, FROM TOP OF BANK, ON BOTH SIDES OF STREAM CROSSING IN ORDER TO MINIMIZE DISTURBANCE OF STREAM BANKS AND RIPARIAN AREAS.
  8. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6 INCHES ABOVE ORIGINAL GRADE.
  9. PUMP INTAKE SHALL HAVE AN ANTI-AQUATIC IMPEDIMENT SCREEN.
  10. STREAM CHANNELS 10 FEET IN BOTTOM WIDTH OR LESS SHALL BE COMPLETED WITHIN 24 HOURS FROM START TO FINISH, INCLUDING TRENCH BACKFILL, STABILIZATION OF STREAM BANKS AND STABILIZATION OF THE AREA 50 FEET BACK FROM THE TOP OF EACH STREAM BANK. STREAM CHANNELS BETWEEN 10 FEET AND 100 FEET IN BOTTOM WIDTH SHALL BE COMPLETED WITHIN 48 HOURS OR AS APPROVED IN WRITING FROM WV DNR.



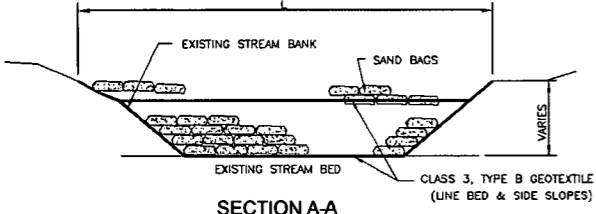
**DETAIL 11**  
**PIPELINE AND EQUIPMENT CROSSING OF STREAM**  
**TRENCHING - FLUME PIPE DIVERSION**  
NOT TO SCALE

- NOTES:**
1. ALL RUNOFF FROM DISTURBED UP-SLOPE AREAS WITHIN CONSTRUCTION RIGHT-OF-WAY MUST BE TREATED FOR SEDIMENT BEFORE IT REACHES THE STREAM CROSSING.
  2. INSTALL COMPOST FILTER SOCK, TRENCH PLUGS, PUMP, ENERGY DISSIPATER, AND DAMS BEFORE TRENCHING STREAM.
  3. FOR FLUME PIPE AND ROCK FILL CROSSINGS, INSTALL FLUME PIPE ON EXISTING STREAMBED. MORE THAN 1 FLUME PIPE MAY BE NEEDED TO SPAN STREAM CHANNEL.
  4. PLACE SPOIL PILES A MINIMUM OF 50 FEET FROM TOP OF BANK.
  5. INSTALL WATER BARS AT APPROACHES TO STREAM CROSSING AND COMPOST FILTER SOCKS ALONG STREAM BANKS AND AT DOWN SLOPE END OF WATER BARS.
  6. MAINTAIN SURFACE OF TEMPORARY EQUIPMENT CROSSING TO PREVENT SOIL DISCHARGES TO STREAM.
  7. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6 INCHES ABOVE ORIGINAL GRADE.

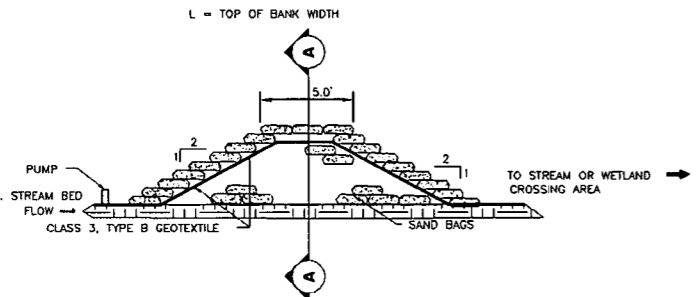


**DETAIL 12**  
**PIPELINE AND EQUIPMENT CROSSING OF**  
**WETLAND TRENCHING**  
NOT TO SCALE

- NOTES:**
1. INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY, IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE RIGHT-OF-WAY, AND AS NECESSARY, AROUND SOIL STOCKPILES.
  2. EQUIPMENT STAGING AREA MUST BE LOCATED A MINIMUM OF 50 FEET FROM THE EDGE OF THE WETLAND.
  3. USE TIMBER MATS FOR VEHICULAR CROSSING OF THE WETLAND. VEHICLES ARE NOT ALLOWED ACCESS TO THE WETLAND CROSSING UNLESS THE WETLAND IS BEING PROTECTED BY TIMBER MATS.
  4. INSTALL TRENCH PLUGS ON EACH SIDE OF THE WETLAND TO PREVENT THE TRENCH FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
  5. WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL. DURING BACKFILLING OF TRENCH, REPLACE TOPSOIL ON TOP OF TRENCH TO RESTORE WETLAND STOCKPILE STR. OVER GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH. (WHEN THERE IS STANDING WATER OR THE SOIL IS TOO SATURATED TO SEGREGATE.)
  6. SWAMP MATS SHOULD BE UTILIZED IN WORKING AREA TO MINIMIZE DISTURBANCE/OCCUPATION OF WETLANDS.
  7. UPON RESTORATION, REMOVE GEOTEXTILE, SWAMP MATS, INSTALL WATERBARS, AND RESTORE WETLAND TO EXISTING GRADE.

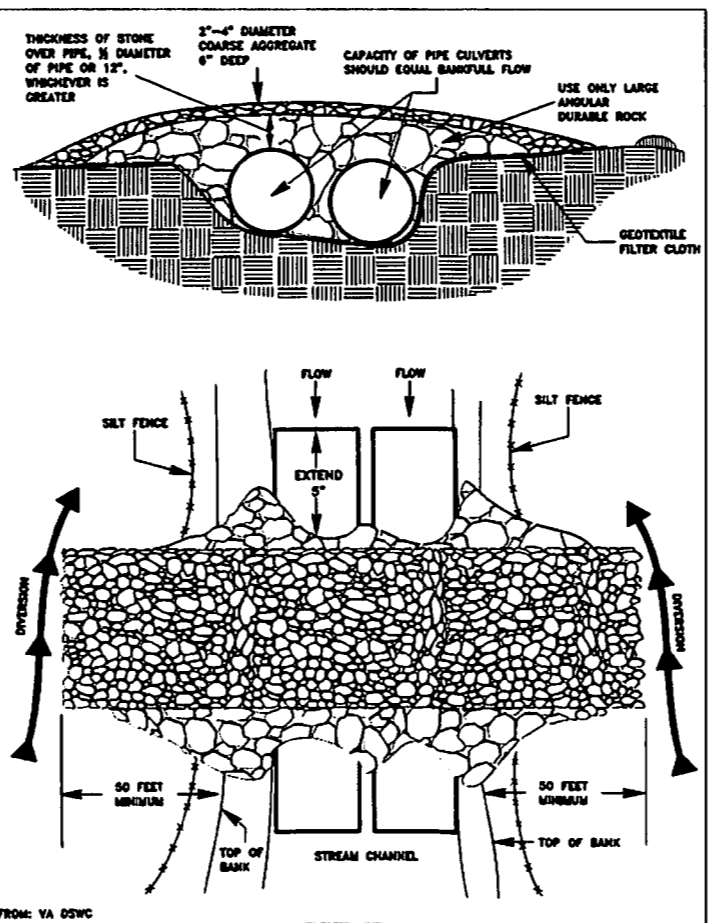


**SECTION A-A**



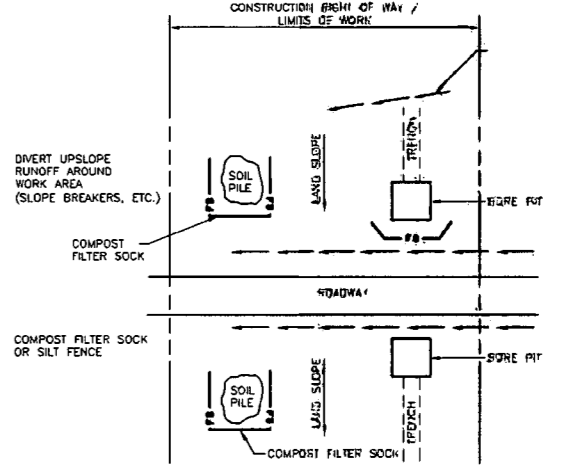
**DETAIL 13**  
**SANDBAG DAM**  
NOT TO SCALE

- NOTES:**
1. PUMP OUTLET PIPE TO BE LOCATED AT APPROXIMATE LOCATION SHOWN ON THE PLAN. R-2 STONE TO BE PLACED AT OUTLET. SEE DETAIL 15 AND 18 FOR CONSTRUCTION SEQUENCE OF STREAM AND WETLAND CROSSINGS.
  2. ADDITIONAL SAND BAGS SHALL BE PLACED AS NEEDED TO PREVENT LEAKAGE INTO CONSTRUCTION AREA.



**DETAIL 14**  
**CULVERT STREAM CROSSING**  
NOT TO SCALE

- THICKNESS OF STONE OVER PIPE, 1/2 DIAMETER OF PIPE OR 12", WHICHEVER IS GREATER
- 2"-4" DIAMETER COARSE AGGREGATE 6" DEEP
- CAPACITY OF PIPE CULVERTS SHOULD EQUAL BANKFULL FLOW
- USE ONLY LARGE ANGULAR DURABLE ROCK
- GEOTEXTILE FILTER CLOTH



**DETAIL 15**  
**CONVENTIONAL BORE AND JACK CROSSING**  
NOT TO SCALE

SEAL	REVISION RECORD		
	NO.	DATE	DESCRIPTION

**One Gathering LLC**

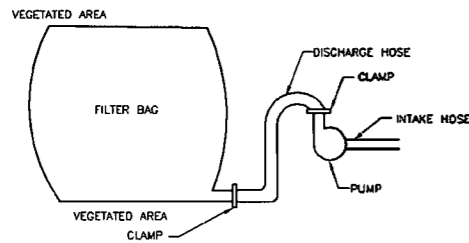
**OXFORD 1 TO EQT GAS/WATER PIPELINES**

16" GATHERING LINE  
WEST UNION DISTRICT, DOODRIDGE COUNTY, WV

DATE: 11/28/2013 PROJECT NO: 131-055

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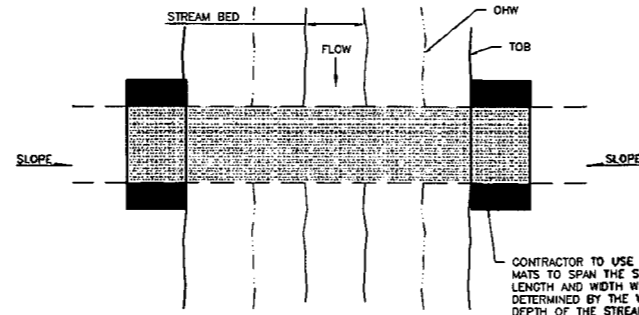


**PLAN VIEW**

**NOTES:**

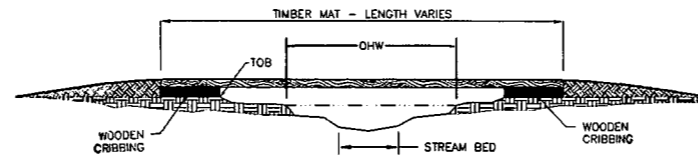
1. FILTER BAGS MAY BE USED TO FILTER WATER PUMPED FROM DISTURBED AREAS SUCH AS UTILITY TRENCHES AND FOOTERS.
2. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
3. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE FILLED OR FAILED. FILTER BAGS WILL BE DISPOSED OF AT A WDEP APPROVED FACILITY.
4. BAGS SHALL BE LOCATED IN WELL VEGETATED (GRASSY) AREAS, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE LINED FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5 PERCENT.
5. THE PUMP RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.
6. FILTER BAGS SHALL BE INSPECTED DAILY AND ANY CORRECTIVE ACTION REQUIRED SHALL BE DONE IMMEDIATELY.

**DETAIL 16  
GEOTEXTILE FILTER BAG**  
NOT TO SCALE



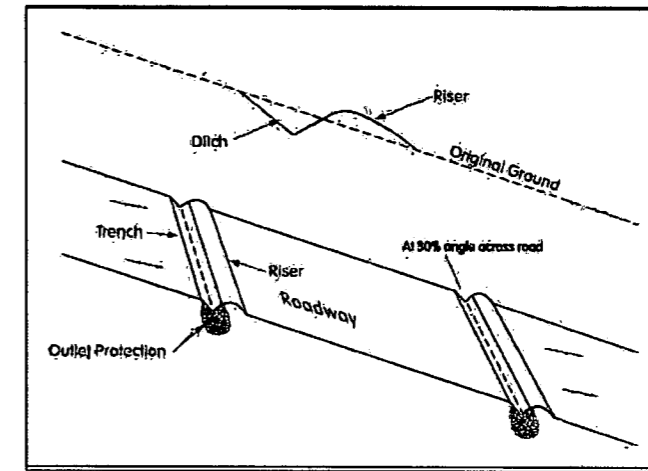
**PLAN VIEW**  
NOT TO SCALE

CONTRACTOR TO USE TIMBER MATS TO SPAN THE STREAM - LENGTH AND WIDTH WILL BE DETERMINED BY THE WIDTH AND DEPTH OF THE STREAM CHANNEL. WOODEN CRIBBING TO BE USED FOR SUPPORT ON EACH END OF CROSSING - LENGTH AND WIDTH TO BE DETERMINED BY SLOPE AND SOIL STABILITY.



**PROFILE VIEW**  
NOT TO SCALE

**DETAIL 17  
TIMBER MAT BRIDGE**  
NOT TO SCALE



**Table II-3 Spacing of Cross Drains**

Road Grade (%)	Distance Between Drains (Ft)
1	400
2	250
5	135
10	60
15	45
20	45

**DETAIL 18  
CROSS DRAIN**  
NOT TO SCALE

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