

# Public Notice

U.S. Army Corps  
of Engineers  
Baltimore District  
PN 19-48

In Reply to Application Number  
NAB-2018-02380-P30 (Lightcap Well Line)

Comment Period:

July 31, 2019 to August 30, 2019

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**THE PURPOSE OF THIS PUBLIC NOTICE IS TO SOLICIT COMMENTS FROM THE PUBLIC REGARDING THE WORK DESCRIBED BELOW. NO DECISION HAS BEEN MADE AS TO WHETHER OR NOT A PERMIT WILL BE ISSUED AT THIS TIME.**

This District has received an application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act (33. U.S.C. 1344) as described below:

## **APPLICANT:**

Scott Kinter  
Appalachia Midstream Services, LLC  
400 IST Center, Suite 404  
Horseheads, New York 14845

## **WATERWAY AND LOCATION OF THE PROPOSED WORK:**

Project occurred in wetlands that are part of the Mill Creek watershed, which is the closest named water to the project. The project is located near 661 Morris Road, New Albany, Pennsylvania 18833 (41.574704, -76.586937).

## **PROPOSED WORK AND PURPOSE:**

The Lightcap 6 inch Natural Gas Well Line begins approximately 900 feet south of Township Road 809/Baileys Road and 1,800 feet west of Township Road 808/Morris Road in Overton Township, Bradford County, Pennsylvania. The pipeline then continues south approximately 2,673 feet and terminates 2,650 feet west of Morris Road. The 6 inch diameter natural gas well line is located within a permanent 75 foot wide cleared right-of-way. The original project area was approximately 5.30 acres and consisted primarily of agricultural fields and woodlands. After the completion of the original construction, all disturbed areas were stabilized and seeded upon construction completion. The after-the-fact permit is to authorize the placement of dredged and/or fill material within 1.46 acres of palustrine scrub shrub (PSS) wetland. The impacts include the construction of a 6 inch well line, clearing and grubbing of area, temporary access roads and backfilling the trench along with maintaining a 10 foot wide permanent access area above the pipe. This permanently maintained right-of-way (ROW) resulted in 0.19 acre of permanent conversion from PSS wetland to palustrine emergent (PEM) wetlands. Additionally, grubbing of the 75 foot wide ROW and temporary access roads resulted in an additional 1.27 acres of unauthorized impacts to PSS wetlands. The 1.27 acre area resulted in temporary conversion impacts and in a temporal loss of PSS habitat. The applicant's mitigation statement to off-set permanent and temporary conversion impacts is to conduct native shrub plantings on-site within the 1.27 acre ROW area that was grubbed to off-set temporal losses as a result of the unauthorized activity. Additionally, the 0.19 acre of

permanent conversion from PSS to PEM wetlands is proposed to be mitigated off-site at a 1.5:1 ratio (0.29 acre) at the existing Elk East Mitigation Site located in Elkland Township, Sullivan County, Pennsylvania by conducting enhancement plantings in an existing PEM wetland.

All work was completed in accordance with the enclosed plan(s).

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonable may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economic, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, and consideration of property ownership and in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments provided will become part of the public record for this action. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. Written comments concerning the work described above related to the factors listed above or other pertinent factors must be received by the District Engineer, U.S. Army Corps of Engineers, Baltimore District, (710 Ives Run Lane Tioga, Pennsylvania 16946) within the comment period specified above.

**WATER QUALITY CERTIFICATION:** The applicant is required to obtain a water quality certification in accordance with Section 401 of the Clean Water Act from the Pennsylvania Department of Environmental Protection. The Section 401 certifying agency has a statutory limit of one year from the date of this public notice to make its decision.

The applicant must obtain any State or local government permits which may be required.

A preliminary review of this application indicates that the proposed work will not affect Federal listed threatened or endangered species or their critical habitat, pursuant to Section 7 of the Endangered Species Act, as amended. As the evaluation of this application continues, additional information may become available which could modify this preliminary determination.

Review of the latest published version of the National Register of Historic Places indicates that no registered properties listed as eligible for inclusion, therein, are located at the site of the proposed work. Currently unknown archeological, scientific, prehistoric, or historical data may be lost or destroyed by the work to be accomplished under the request permit.

The evaluation of the impact of this project on the public interest will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 of the Clean Water Act.

Any person who has an interest which may be adversely affected by the issuance of this permit may request a public hearing. The request, which must be in writing, must be received by the District Engineer, U.S. Army Corps of Engineers, Baltimore District, (710 Ives Run Lane Tioga, Pennsylvania 16946), within the comment period as specified above to receive consideration. Also it must clearly set forth the interest which may be adversely affected by this activity and the manner in which the interest may be adversely affected.

It is requested that you communicate this information concerning the proposed work to any persons know by you to be interested and not being known to this office, who did not receive a copy of this notice.

If you have any questions concerning this matter, please contact Mr. Shawn Gill, at (570)-835-4263, 710 Ives Run Lane Tioga, Pennsylvania 16946.

This public notice is issued by the Chief, Regulatory Branch.

DRAWING TITLE:  
**SITE LOCATION MAP**

JOB #:  
**099083.22**

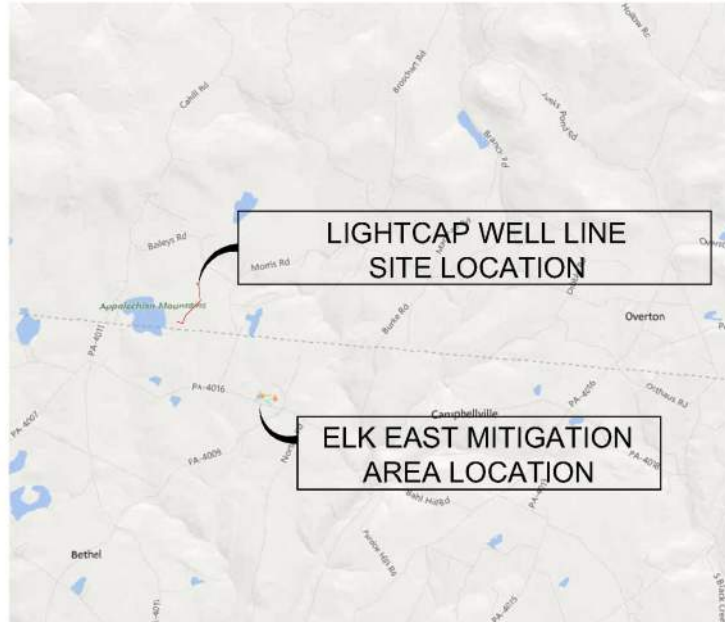
FIGURE NO.:  
**5-1**

BY:  
**D. CHRISTOPHER**

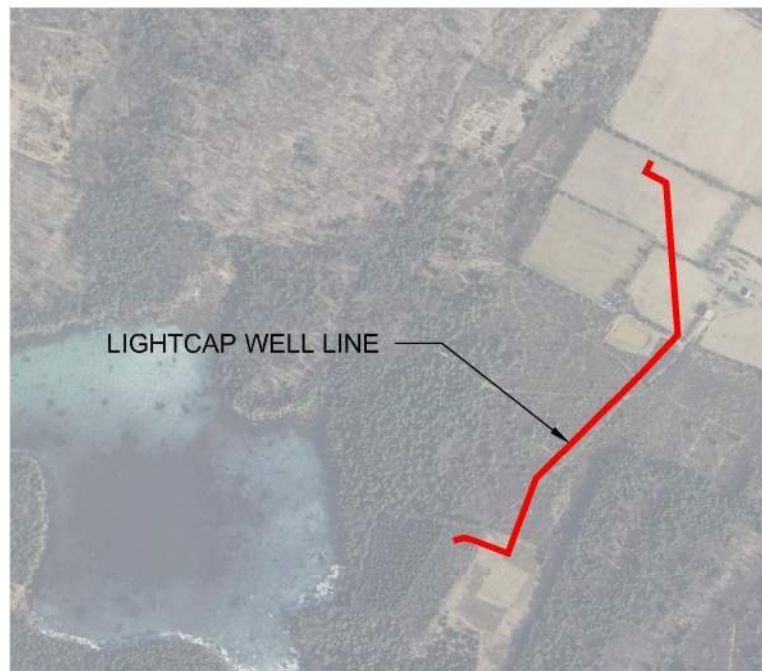
CHKD BY:  
**M. ROBSON, PHD**

DATE:  
**3/8/2019**

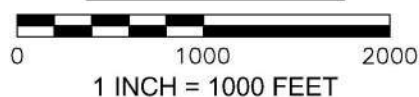
SCALE:  
**AS INDICATED**



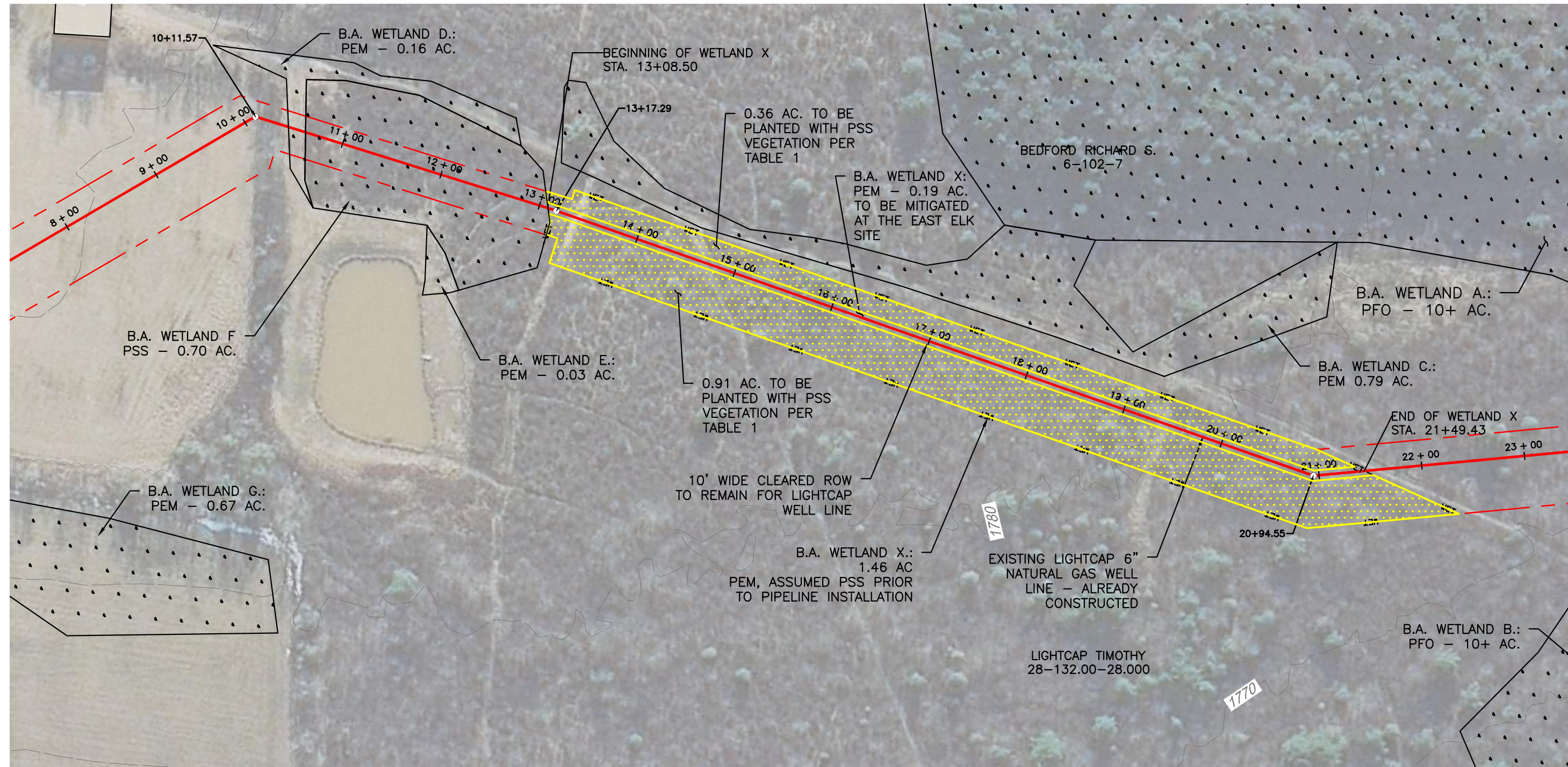
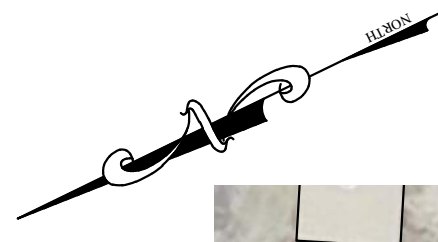
**LOCATION MAP**  
**NOT TO SCALE**



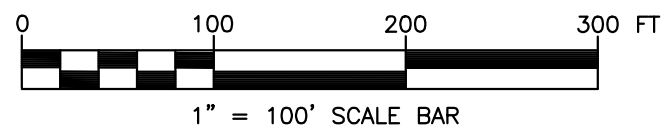
**LIGHTCAP WELL LINE**  
**LOCATION MAP**





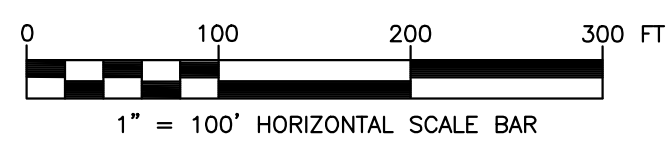
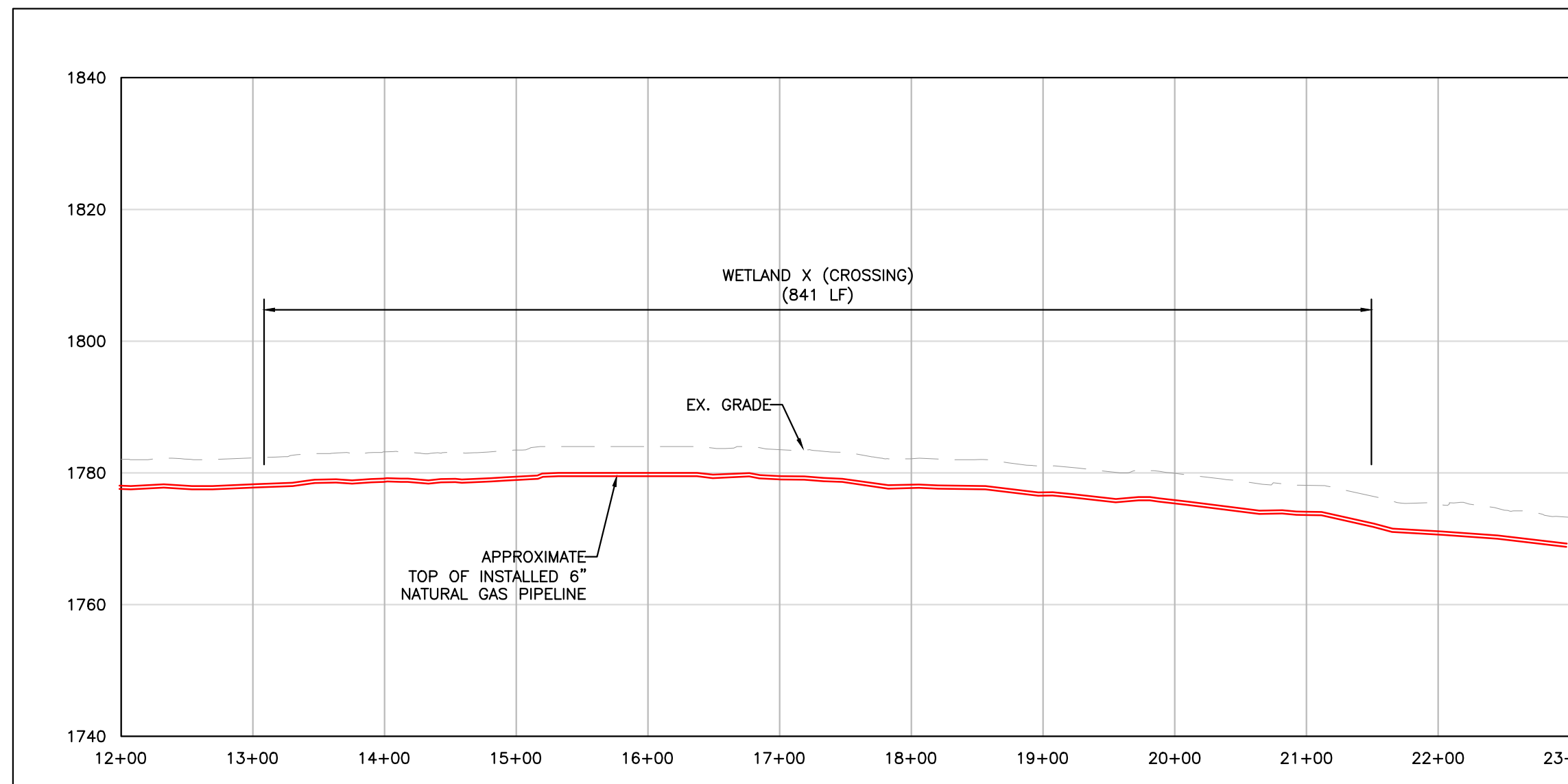


NOTE: IMPACTS TO WETLANDS D AND F PREVIOUSLY PERMITTED. THIS PLAN SET IS ONLY FOR IMPACTS ASSOCIATED WITH WETLAND X



**PIPELINE CROSSING OF WETLAND X PLAN**

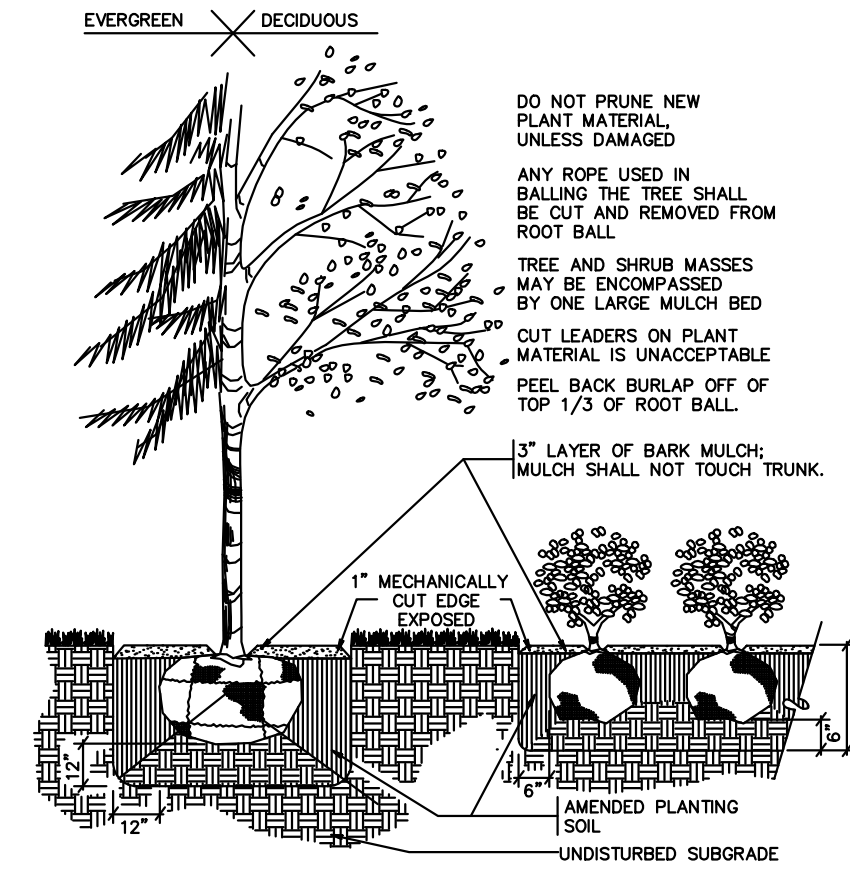
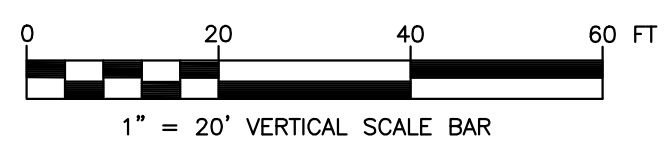
SCALE: 1" = 100'



**PIPELINE CROSSING OF WETLAND X PROFILE**

SCALE: 1" = 100' HORIZONTAL

1" = 20' VERTICAL



**TREE AND SHRUB PLANTING DETAIL**

NOT TO SCALE

**TYPICAL PLANTING SCHEDULE:**

1. PLANTS WILL BE SPACED EITHER IN ROWS THAT ARE 10 FEET APART OR IN CLUSTERS.
2. PLACEMENT OF SPECIES WILL BE CHOSEN RANDOMLY.
3. ALL WOODY SPECIES TO BE HAND PLANTED.
4. RODENT GUARDS WILL BE INSTALLED AT THE BASE OF EACH PLANTING.
5. SUBSTITUTION OF SPECIES TO BE APPROVED BY DEP.

LIGHTCAP WELL LINE		
Table 1: Wetland Species for Planting		
Species Name	Common Name	Indicator Status
SHRUBS		
Cornus amomum	silky dogwood	FACW
Filipendula ulmaria	meadowsweet	FACW
Vaccinium corymbosum	highbush blueberry	FACW
Viburnum dentatum	arrowwood	FAC

**GENERAL PLANTING NOTES**

1. THE CONTRACTOR SHALL FURNISH, DELIVER, AND INSTALL ALL TREES AND SHRUBS GROWN AS: CONTAINERIZED MATERIAL, TUBINGS, LIVE-STAKES AND OR BARE ROOT, AS SPECIFIED AND DESIGNATED ON THE PLANS. THE CONTRACTOR SHALL FURNISH, IN WRITING, INFORMATION CONCERNING THE SOURCE OF SUPPLY FOR ALL PLANT MATERIAL. ALL PLANT MATERIALS SHALL COMPLY WITH STATE AND FEDERAL LAWS CONTROLLING INSPECTION FOR PLANT DISEASES AND INSECT INFESTATIONS, AND ALL REQUIRED CERTIFICATES SHALL BE SUBMITTED.  
PLANT MATERIAL SHALL BE CAREFULLY HANDLED AND PACKED TO PREVENT INJURIES DURING TRANSIT. THE ROOTS OF ALL PLANTS SHALL BE PROTECTED WITH WET STRAW, MOSS, OR OTHER SUITABLE MATERIAL UNTIL PLANTED. IF NOT PLANTED ON THE DAY OF DELIVERY, ALL BARE ROOT OR LIVE-STAKE MATERIAL SHALL BE HELED-IN, WATERED, AND KEPT SHADED OR COVERED UNTIL PLANTED. LIVE-STAKES MUST BE PLANTED PRIOR TO BUD-BREAK.  
WORK SHALL BE COORDINATED TO PREVENT DELAYS IN PLANTING THAT MAY EXPOSE THE ROOTS OF PLANT MATERIALS TO THE AIR, SUN, OR FREEZING CONDITIONS. PLANTING SHALL BE ACCORDING TO STANDARD NURSERY PRACTICE.  
INSTALLATION DETAILS ARE PROVIDED BELOW.
2. THE CONTRACTOR SHALL LAYOUT AND REVIEW ALL PLANT MATERIAL AND PLANTING LOCATIONS WITH APPALACHIA MIDSTREAM SERVICES, L.L.C. OR THEIR DESIGNATED REPRESENTATIVE PRIOR TO INSTALLATION.
3. WETLAND AREAS INCIDENTALLY DISTURBED DURING PLANTING ACTIVITY SHALL BE TOPSOILED WITH THE NATURAL TOPSOIL AND PLANTED WITH THE FACW MEADOW SEED MIX (ERNM-122).
4. **SUBSTITUTIONS:** WHEN PLANTS OF A SPECIFIED TYPE OR SIZE ARE NOT AVAILABLE WITHIN A REASONABLE DISTANCE, SUBSTITUTIONS MAY BE MADE UPON REQUEST BY THE CONTRACTOR, IF APPROVED BY APPALACHIA MIDSTREAM SERVICES, L.L.C. OR THEIR DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL NOTIFY THE AFOREMENTIONED PARTIES IN WRITING OF ANY PLANT MATERIALS THAT WILL NOT BE AVAILABLE, PRIOR TO SUBMITTING A BID ON THIS PROJECT. IF A BID IS RECEIVED WITHOUT SUCH QUALIFICATION, IT WILL BE ASSUMED NO SUCH SUBSTITUTIONS WILL BE PROPOSED. ONLY PLANTS NATIVE TO THE IMMEDIATE AREA OF THE SITE MAY BE USED FOR SUBSTITUTION.
5. PLANTS WITH EXCESSIVE DAMAGE TO THE CROWN SHALL BE REPLACED PRIOR TO INSTALLATION.
6. FIELD CONDITIONS MAY REQUIRE THE USE OF AN AMENDED PLANTING SOIL. THE CONTRACTOR SHALL COORDINATE ANY SUCH USE OF AN AMENDED PLANTING SOIL WITH APPALACHIA MIDSTREAM SERVICES, L.L.C. OR THEIR DESIGNATED REPRESENTATIVE, THE COSTS FOR WHICH WILL BE IN ADDITION TO THE SCOPE OF THIS RESTORATION PLAN.  
**PREPARATION OF AMENDED PLANTING SOIL:** PLANTING SOIL FOR TREES, SHRUBS, AND GROUND COVER SHALL BE A MIXTURE BY VOLUME OF THE FOLLOWING: (BEFORE MIXING, CLEAN TOPSOIL OF ROOTS, VEGETATION, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.)  
50% TOPSOIL  
50% ORGANIC MATTER
7. FIELD CONDITIONS MAY DICTATE MINOR ADJUSTMENTS TO THE LOCATION OF PLANTINGS. BEFORE MAJOR ADJUSTMENTS OF PLANT LOCATIONS OCCUR, THE CONTRACTOR SHALL NOTIFY APPALACHIA MIDSTREAM SERVICES, L.L.C. OR THEIR DESIGNATED REPRESENTATIVE.
8. TREE SHELTERS SHALL BE INSTALLED ON ALL HARDWOOD SEEDLINGS. SHELTERS ARE TO BE A MINIMUM OF 5 FT HIGH AND ARE TO BE EMBEDDED 1"-2" IN THE GROUND AND HAVE A BIRD-NET FIXED ON TOP OF THE SHELTER. SHELTERS SHALL ADDITIONALLY BE STAKED WITH 1" X 1" HARDWOOD STAKES WHICH ARE TO BE EMBEDDED IN THE GROUND A MINIMUM OF 6"-8". BIRD NETTING SHALL BE REMOVED PRIOR TO TREE EMERGENCE AND SHELTERS ARE TO BE REMOVED AFTER TREES HAVE EMERGED AND EXHIBIT A 1.5" - 2" DIAMETER.

**OFF-SITE MITIGATION MONITORING GUIDELINES**

1. THE WETLAND REPLACEMENT AREAS MUST BE MONITORED FOR A PERIOD OF NOT LESS THAN FIVE YEARS. THE MONITORING SHALL INCLUDE PERIODIC INSPECTIONS BY A QUALIFIED WETLAND SPECIALIST AS MANY TIMES AS WOULD BE NECESSARY, BUT AT A MINIMUM OF TWICE A YEAR FOR THE FIRST TWO YEARS AND ONCE A YEAR FOR THE REMAINING THREE YEARS. THE INSPECTIONS MUST OCCUR DURING THE GROWING SEASON. THE WETLAND SPECIALIST SHALL SUBMIT REPORTS AFTER EACH VISIT ASSESSING THE SUCCESS OF THE WETLAND REPLACEMENT ACTIVITY. THE REPORT MUST INCLUDE: A DISCUSSION OF SUCCESS TO DATE, AN ANALYSIS OF THE FUNCTIONS BEING PROVIDED, AND DISCUSSIONS OF ANY PROBLEMS WHICH HAVE BEEN OR ARE BEING ENCOUNTERED. THE REPORT MUST ALSO INCLUDE PHOTOGRAPHS OF THE REPLACEMENT SITE WITH A PLAN CORRELATED TO THE LOCATION OF EACH OF THE PHOTOS.
2. AT THE END OF TWO GROWING SEASONS, THE WETLAND SPECIALIST SHALL CONDUCT A DETAILED SURVEY OF THE VEGETATIVE COMPOSITION OF THE SITE. THIS SURVEY MUST PROVIDE RESULTS OF 100% COVERAGE OF REVEGETATED AREAS, WITH AT LEAST 85% COVERAGE BY THE HYDROPHYTIC SPECIES PROPOSED IN THE REPLACEMENT PLAN. IF THE 85% SUCCESS HAS NOT BEEN MET, THEN ADDITIONAL PLANTING MUST BE UNDERTAKEN TO ACHIEVE THAT RATE. THE VEGETATIONAL ANALYSIS MUST CONTINUE ON A YEARLY BASIS UNTIL THE 85% SUCCESS RATE IS ACHIEVED. IN THOSE SITUATIONS WHERE WETLAND REPLACEMENT IS NOT SUCCESSFUL, WHERE THE 85% SURVIVAL CRITERIA HAS NOT BEEN MET, OR WHERE THE INSPECTION REVEALS A PROBLEM; THE POST INSPECTION REPORT MUST INCLUDE A DISCUSSION OF REMEDIAL MEASURES TO CORRECT THE PROBLEMS OR DEFICIENCIES. IN SITUATIONS WHERE ALTERNATIVE PLANTS HAVE COLONIZED OR INVADDED THE SITE, THE DEPARTMENT CAN EVALUATE THE SUITABILITY OF THOSE SPECIES AS IT RELATES TO MAINTAINING THE DESIRED SPECIES IN THE REPLACEMENT WETLAND, OR UNDERTAKING STEPS TO ELIMINATE UNDESIRABLE SPECIES.

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NO.:	REVISION	DATE	BY

**Appalachia APPALACHIA MIDSTREAM SERVICES, LLC**

**LIGHTCAP WELL LINE**

PLAN VIEWS AND PROFILES

BRADFORD COUNTY		OVERTON TOWNSHIP		PA
<b>B. BERGMANN</b> 2665 Corning Road Horsesheds, NY 14845 office: 607.795.1110 fax: 607.795.1444	DRAWN DGC	CHECKED RPS	APPROVED RPS	
DRAWING NUMBER <b>FIGURE 5-2</b>		REVISION <b>0</b>		

Call before you dig.  
1-800-242-1776 or **811**



DRAWING TITLE:  
RESOURCE IDENTIFICATION MAP

JOB #:  
099083.22

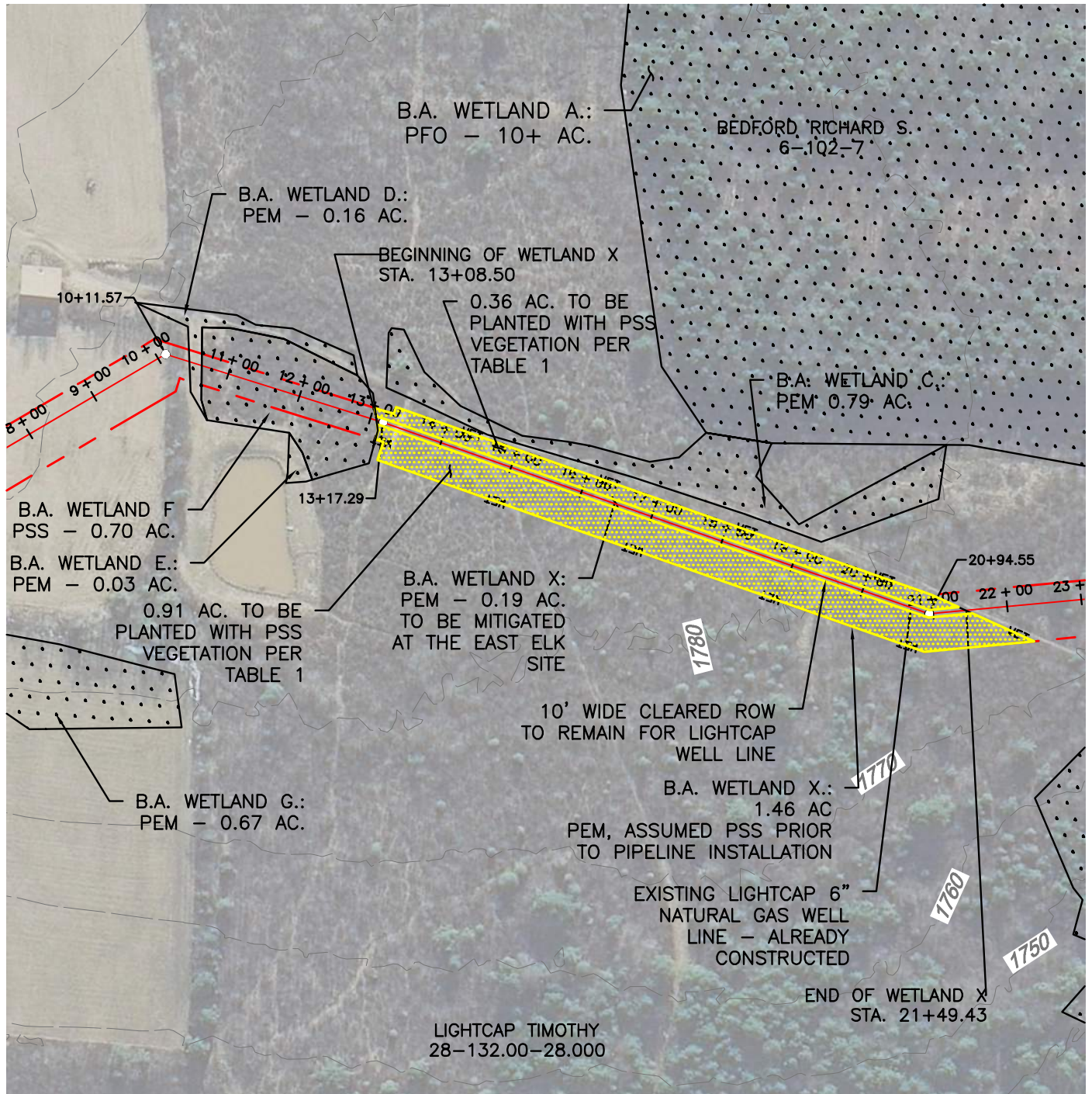
FIGURE NO.:  
5-3

BY:  
D. CHRISTOPHER

CHKD BY:  
M. ROBSON, PHD

DATE:  
3/8/2019

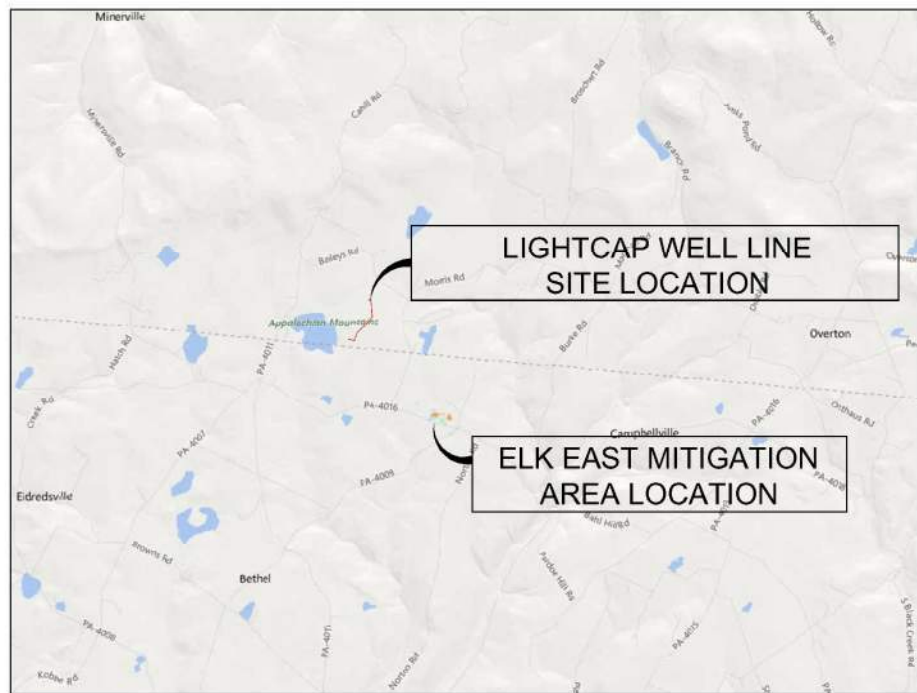
SCALE:  
1" = 200'



NOTE: IMPACTS TO WETLANDS D AND F PREVIOUSLY PERMITTED. THIS PLAN SET IS ONLY FOR IMPACTS ASSOCIATED WITH WETLAND X



# LIGHTCAP WELL LINE 6" NATURAL GAS PIPELINE OFF-SITE COMPENSATORY MITIGATION PLAN



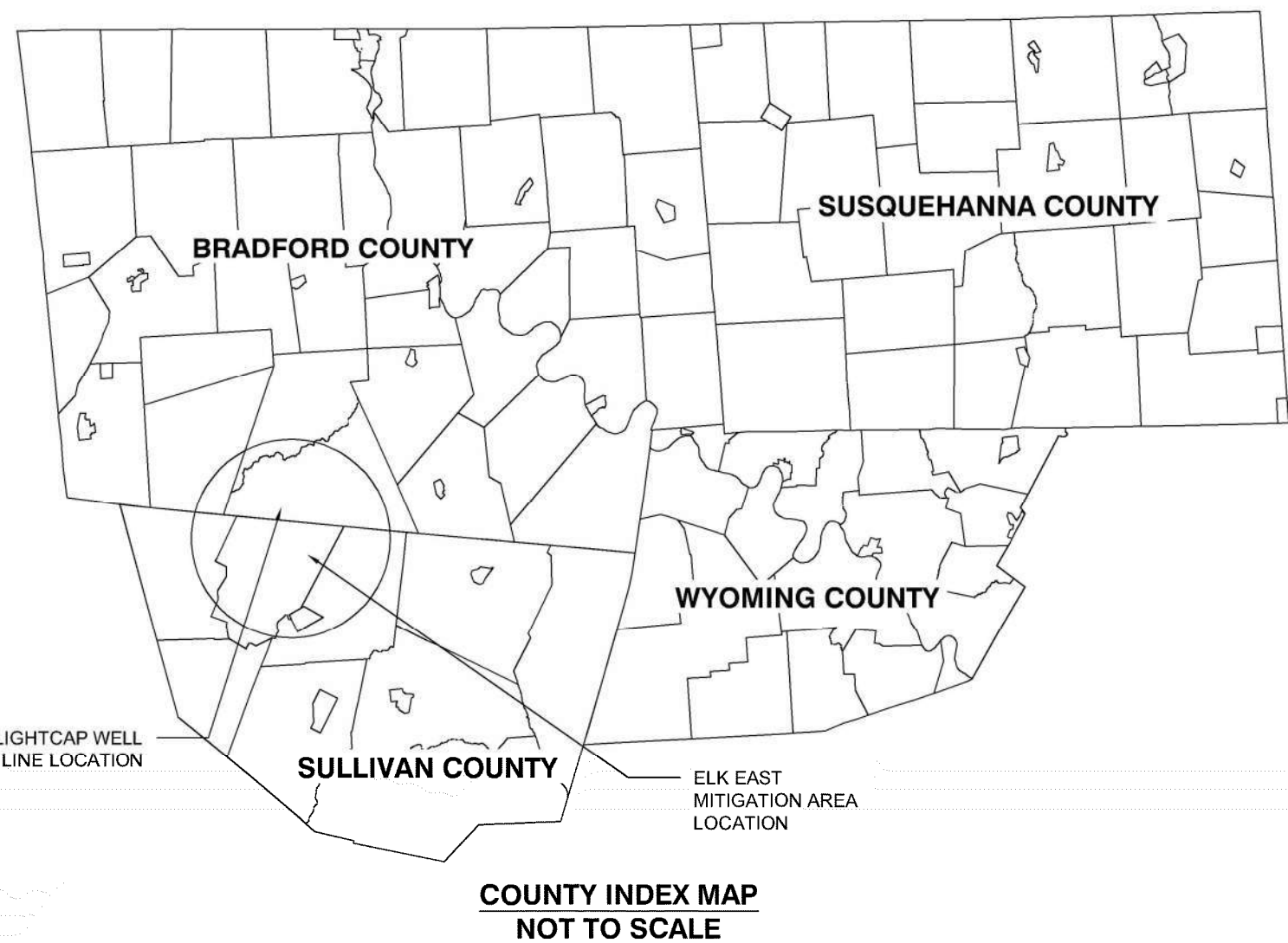
**LOCATION MAP  
NOT TO SCALE**



**LIGHTCAP WELL LINE  
LOCATION MAP**  
0 1000 2000  
1 INCH = 1000 FEET



**ELK EAST MITIGATION AREA  
LOCATION MAP**  
0 500 1000  
1 INCH = 500 FEET



**COUNTY INDEX MAP  
NOT TO SCALE**

**TABLE 1: WETLAND IMPACT TABLE**

PROJECT NAME	WETLAND NO.	PERMANENT WETLAND IMPACT AREA (S.F.)	1.5:1 MITIGATION RATIO (S.F.)	OFF-SITE MITIGATION AT ELK EAST MITIGATION AREA	TEMPORARY IMPACTS (S.F.)	TOTAL IMPACTS
LIGHTCAP WELL LINE	WETLAND X	8,340	12,510	12,510 S.F.	55,616	63,965 S.F.
<b>PROJECT TOTALS</b>		<b>8,340 S.F. (0.19 AC)</b>	<b>12,510 S.F. (0.29 AC)</b>	<b>12,510 S.F. (0.29 AC)</b>	<b>55,616 (1.27 AC)</b>	<b>63,965 S.F. (1.46 AC)</b>
<b>TOTAL MITIGATION REQUIRED (1.5:1 RATIO)</b>				<b>12,510 S.F. (0.29 AC)</b>		

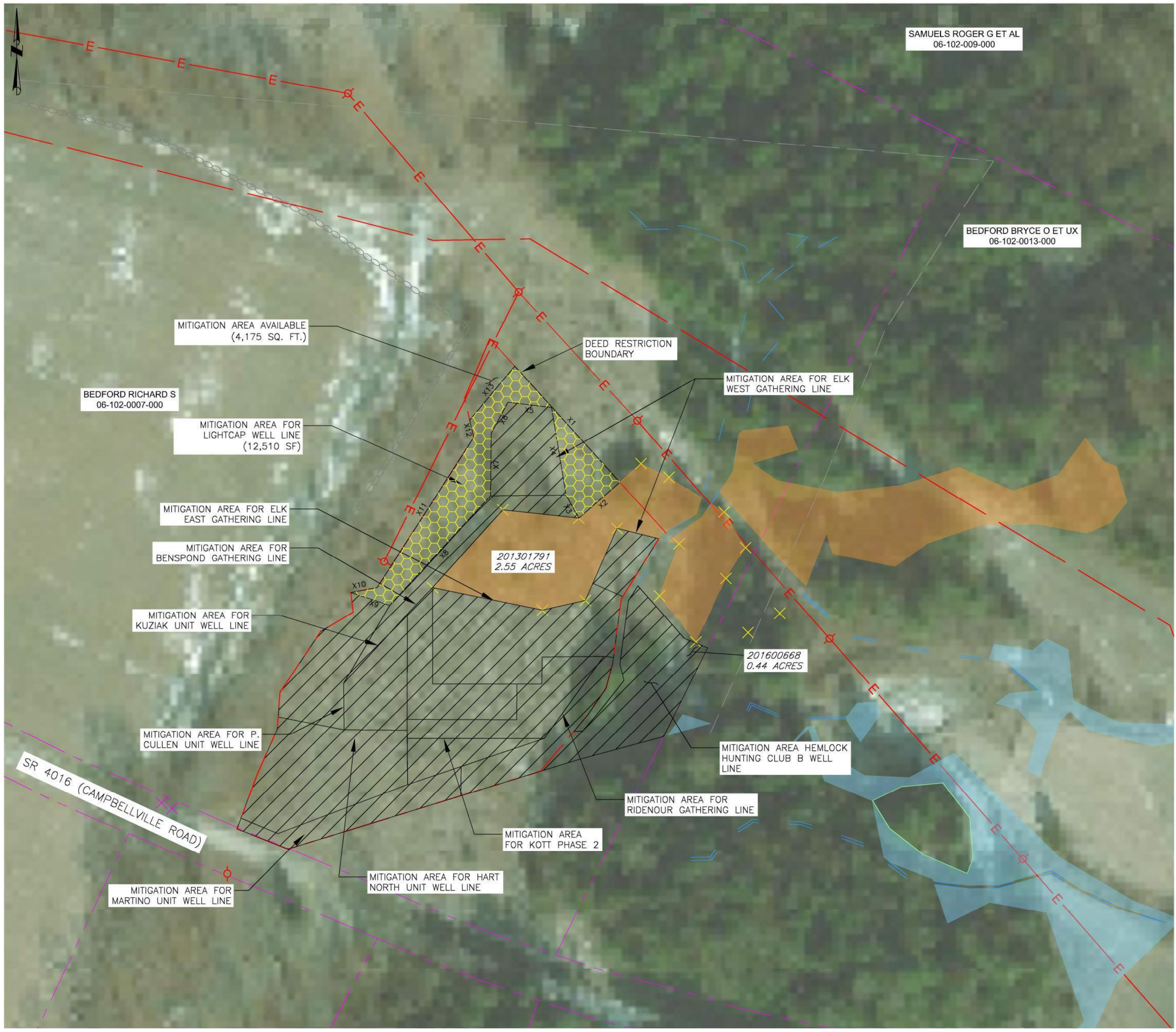
- NOTES:
- AERIAL PHOTOGRAPHY MICROSOFT VIRTUAL EARTH / BING IMAGERY PROVIDED BY AUTODESK, ACCESSED 3/12/2019.
  - LOCATION MAP MICROSOFT VIRTUAL EARTH / BING IMAGERY PROVIDED BY AUTODESK, ACCESSED 3/12/2019.

\* HAND SIGNATURE ON FILE

REVISION RECORD			
NO	DATE	DESCRIPTION	REQUESTED BY

COVER SHEET		
LIGHTCAP WELL LINE RESTORATION AND MITIGATION PLAN		
CHECKED BY: RPS APPROVED BY: RPS DATE: 03/08/19 SCALE: AS NOTED	PROJECT NO. <b>14034.00</b> SHEET NO. <b>X-1</b>	 BERGMANN 2605 Corning Road, Horseheads, NY 14845 Ph: 607.795.1110 www.bergmannpc.com
 APPALACHIA MIDSTREAM SERVICES, LLC		* HAND SIGNATURE ON FILE





SAMUELS ROGER G ET AL  
06-102-009-000

BEDFORD BRYCE O ET UX  
06-102-0013-000

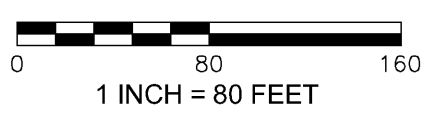
BEDFORD RICHARD S  
06-102-0007-000

SR 4016 (CAMPBELLVILLE ROAD)

**LEGEND**

- EXISTING APPROXIMATE STREAM
- EXISTING ROADS
- EXISTING PEM WETLAND
- EXISTING PFO WETLAND
- EXISTING PSS WETLAND
- PREVIOUS MITIGATION AREAS
- EXISTING PIPELINE
- EXISTING FENCE
- EXISTING ELECTRIC LINE
- PROPERTY LINE
- DEED RESTRICTION BOUNDARY
- PROPOSED MITIGATION AREA

MITIGATION AREA FOR LIGHTCAP WELL LINE		
LINE #	BEARING	DISTANCE
X1	S42° 12' 00"E	161.79'
X2	S48° 40' 08"W	56.55'
X3	N28° 33' 49"W	27.47'
X4	N09° 24' 57"W	91.56'
X5	N83° 01' 27"W	45.29'
X6	S28° 42' 54"W	36.46'
X7	S00° 29' 47"W	64.68'
X8	S42° 28' 44"W	154.16'
X9	N71° 28' 24"W	42.52'
X10	N79° 42' 00"E	27.75'
X11	N32° 38' 34"E	184.91'
X12	N13° 15' 01"W	18.14'
X13	N39° 48' 29"E	72.59'



\* HAND SIGNATURE ON FILE

REVISION RECORD			
NO	DATE	DESCRIPTION	REQUESTED BY
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**ELK EAST MITIGATION AREA  
MITIGATION AND PLANTING PLAN**

**LIGHTCAP WELL LINE  
RESTORATION AND MITIGATION PLAN**

CHECKED BY: RPS APPROVED BY: RPS DATE: 03/08/19 SCALE: AS NOTED	PROJECT NO. <b>14034.00</b> SHEET NO. <b>X-2</b>
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BERGMANN  
 2005 Corning Road, Horseheads, NY 14845  
 Ph: 607.795.1110  
 www.bergmannpc.com

Appalachia  
 APPALACHIA MIDSTREAM SERVICES, LLC



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INSTALLATION DETAILS ARE PROVIDED BELOW.

ALL PLANTING OF TREES AND SHRUBS SHALL BE DONE BY HAND. UNDER NO CIRCUMSTANCES SHALL THERE BE ANY EQUIPMENT TRAFFICKING WITHIN THE WETLAND RESTORATION AREAS.

2. THE CONTRACTOR SHALL LAYOUT AND REVIEW ALL PLANT MATERIAL AND PLANTING LOCATIONS WITH APPALACHIA MIDSTREAM SERVICES, L.L.C. OR THEIR DESIGNATED REPRESENTATIVE PRIOR TO INSTALLATION.

3. WETLAND AREAS INCIDENTALLY DISTURBED DURING PLANTING ACTIVITY SHALL BE TOPSOILED WITH THE NATURAL TOPSOIL AND PLANTED WITH THE FACW MEADOW SEED MIX (ERNMX-122).

4. **SUBSTITUTIONS:** WHEN PLANTS OF A SPECIFIED TYPE OR SIZE ARE NOT AVAILABLE WITHIN A REASONABLE DISTANCE, SUBSTITUTIONS MAY BE MADE UPON REQUEST BY THE CONTRACTOR, IF APPROVED BY APPALACHIA MIDSTREAM SERVICES, L.L.C. OR THEIR DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL NOTIFY THE AFOREMENTIONED PARTIES IN WRITING OF ANY PLANT MATERIALS THAT WILL NOT BE AVAILABLE, PRIOR TO SUBMITTING A BID ON THIS PROJECT. IF A BID IS RECEIVED WITHOUT SUCH QUALIFICATION, IT WILL BE ASSUMED NO SUCH SUBSTITUTIONS WILL BE PROPOSED. ONLY PLANTS NATIVE TO THE IMMEDIATE AREA OF THE SITE MAY BE USED FOR SUBSTITUTION.

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**PREPARATION OF AMENDED PLANTING SOIL:**

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- 50% TOPSOIL
- 50% ORGANIC MATTER

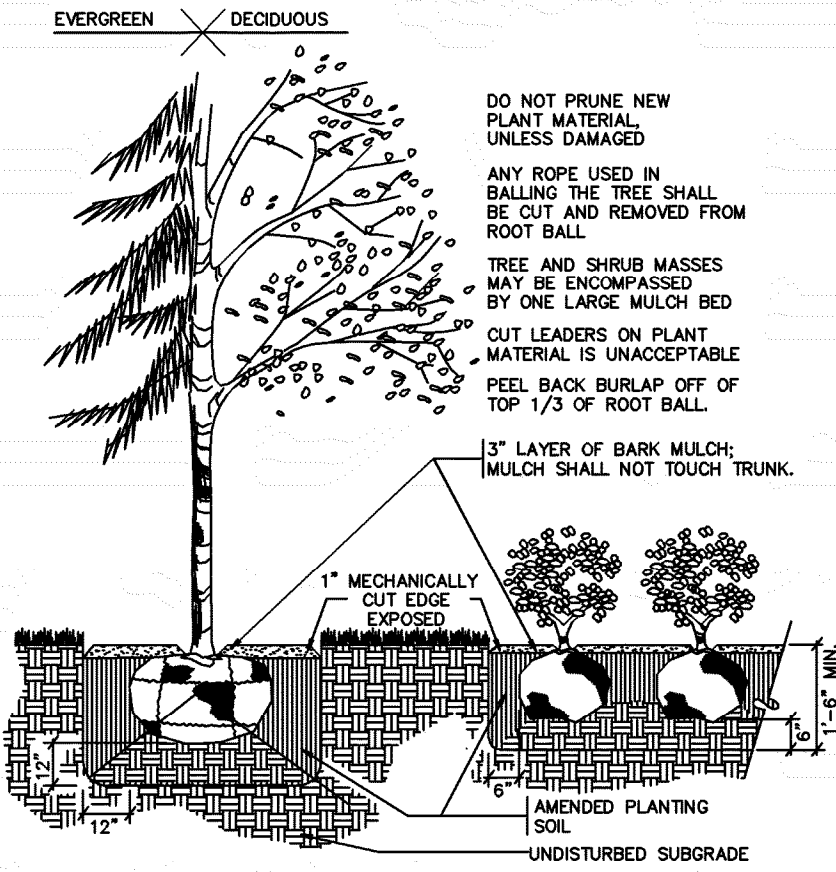
7. FIELD CONDITIONS MAY DICTATE MINOR ADJUSTMENTS TO THE LOCATION OF PLANTINGS. BEFORE MAJOR ADJUSTMENTS OF PLANT LOCATIONS OCCUR, THE CONTRACTOR SHALL NOTIFY APPALACHIA MIDSTREAM SERVICES, L.L.C. OR THEIR DESIGNATED REPRESENTATIVE.

8. TREE SHELTERS SHALL BE INSTALLED ON ALL HARDWOOD SEEDLINGS. SHELTERS ARE TO BE A MINIMUM OF 5 FT HIGH AND ARE TO BE EMBEDDED 1"-2" IN THE GROUND AND HAVE A BIRD-NET FIXED ON TOP OF THE SHELTER. SHELTERS SHALL ADDITIONALLY BE STAKED WITH 1" X 1" HARDWOOD STAKES WHICH ARE TO BE EMBEDDED IN THE GROUND A MINIMUM OF 6"-8". BIRD NETTING SHALL BE REMOVED PRIOR TO TREE EMERGENCE AND SHELTERS ARE TO BE REMOVED AFTER TREES HAVE EMERGED AND EXHIBIT A 1.5" - 2" DIAMETER.

**OFF-SITE MITIGATION MONITORING GUIDELINES**

1. THE WETLAND REPLACEMENT AREAS MUST BE MONITORED FOR A PERIOD OF NOT LESS THAN FIVE YEARS. THE MONITORING SHALL INCLUDE PERIODIC INSPECTIONS BY A QUALIFIED WETLAND SPECIALIST AS MANY TIMES AS WOULD BE NECESSARY, BUT AT A MINIMUM OF TWICE A YEAR FOR THE FIRST TWO YEARS AND ONCE A YEAR FOR THE REMAINING THREE YEARS. THE INSPECTIONS MUST OCCUR DURING THE GROWING SEASON. THE WETLAND SPECIALIST SHALL SUBMIT REPORTS AFTER EACH VISIT ASSESSING THE SUCCESS OF THE WETLAND REPLACEMENT ACTIVITY. THE REPORT MUST INCLUDE: A DISCUSSION OF SUCCESS TO DATE, AN ANALYSIS OF THE FUNCTIONS BEING PROVIDED, AND DISCUSSIONS OF ANY PROBLEMS WHICH HAVE BEEN OR ARE BEING ENCOUNTERED. THE REPORT MUST ALSO INCLUDE PHOTOGRAPHS OF THE REPLACEMENT SITE WITH A PLAN CORRELATED TO THE LOCATION OF EACH OF THE PHOTOS.

2. AT THE END OF TWO GROWING SEASONS, THE WETLAND SPECIALIST SHALL CONDUCT A DETAILED SURVEY OF THE VEGETATIVE COMPOSITION OF THE SITE. THIS SURVEY MUST PROVIDE RESULTS OF 100% COVERAGE OF REVEGETATED AREAS, WITH AT LEAST 85% COVERAGE BY THE HYDROPHYTIC SPECIES PROPOSED IN THE REPLACEMENT PLAN. IF THE 85% SUCCESS HAS NOT BEEN MET, THEN ADDITIONAL PLANTING MUST BE UNDERTAKEN TO ACHIEVE THAT RATE. THE VEGETATIONAL ANALYSIS MUST CONTINUE ON A YEARLY BASIS UNTIL THE 85% SUCCESS RATE IS ACHIEVED. IN THOSE SITUATIONS WHERE WETLAND REPLACEMENT IS NOT SUCCESSFUL, WHERE THE 85% SURVIVAL CRITERIA HAS NOT BEEN MET, OR WHERE THE INSPECTION REVEALS A PROBLEM; THE POST INSPECTION REPORT MUST INCLUDE A DISCUSSION OF REMEDIAL MEASURES TO CORRECT THE PROBLEMS OR DEFICIENCIES. IN SITUATIONS WHERE ALTERNATIVE PLANTS HAVE COLONIZED OR INVADDED THE SITE, THE DEPARTMENT CAN EVALUATE THE SUITABILITY OF THOSE SPECIES AS IT RELATES TO MAINTAINING THE DESIRED SPECIES IN THE REPLACEMENT WETLAND, OR UNDERTAKING STEPS TO ELIMINATE UNDESIRABLE SPECIES.



**TREE AND SHRUB PLANTING DETAIL**  
NOT TO SCALE

**TYPICAL PLANTING SCHEDULE:**

1. PLANTS WILL BE SPACED EITHER IN ROWS THAT ARE 10 FEET APART OR IN CLUSTERS.
2. PLACEMENT OF SPECIES WILL BE CHOSEN RANDOMLY.
3. ALL WOODY SPECIES TO BE HAND PLANTED.
4. RODENT GUARDS WILL BE INSTALLED AT THE BASE OF EACH PLANTING.
5. SUBSTITUTION OF SPECIES TO BE APPROVED BY DEP.

**LIGHTCAP WELL LINE**

Table 1: Wetland Species for Planting

Species Name	Common Name	Indicator Status
<b>SHRUBS</b>		
Cornus amomum	silky dogwood	FACW
Filipendula ulmaria	meadowsweet	FACW
Vaccinium corymbosum	highbush blueberry	FACW
Viburnum dentatum	arrowwood	FAC

\* HAND SIGNATURE ON FILE

RESTORATION AND MITIGATION PLANTING, DETAILS, NOTES, AND MONITORING GUIDELINES

LIGHTCAP WELL LINE RESTORATION AND MITIGATION PLAN

REVISION RECORD			
NO	DATE	DESCRIPTION	REQUESTED BY

OVERTON TOWNSHIP, BRADFORD COUNTY, PENNSYLVANIA	CHECKED BY: RPS	PROJECT NO.
	APPROVED BY: RPS	14034.00
	DATE: 03/08/19	SHEET NO.
	SCALE: AS NOTED	X-3

**BERGMANN**  
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 www.bergmannpc.com

**Appalachia**  
 APPALACHIA MIDSTREAM SERVICES, LLC

M:\CHESAPEAKE MIDSTREAM\APPALACHIAN MIDSTREAM SERVICES\090903.22 CHESAPEAKE MIDSTREAM - GROUP A LIGHTCAP\1.0 DWG\1.1 CIVIL\2019 COMPENSATORY MITIGATION PLANS\PILOT FILES\090903.22-CMP-003.DWG(001) L5:\CHRISTOPHER - 3/12/2019 7:56:31 AM) - LP: 3/12/2019 8:28:51 AM