# Segment A Construction and Mitigation Plan

#### **CONSTRUCTION and MITIGATION PLAN**

#### Rockdale-West Middleton Project – Segment A

American Transmission Company, LLC (ATC) was granted a Ch. 30.025 utility permit by the Wisconsin Department of Natural Resources (WDNR) for work in and adjacent to wetlands and waterways for the Rockdale-West Middleton project (Permit #IP-SC-2009-13-Nxxxxx). This permit requires that ATC prepare a Construction and Mitigation Plan (CMP) for work in wetlands and waterways for WDNR approval prior to beginning work in these features (conditions #8 and 10). ATC has prepared this CMP for Segment A which outlines various construction methods and procedures which will be followed to minimize impacts to these features. The components of this CMP follow those outlined in General Condition #10 of the WDNR utility permit. Separate CMPs for Segments B, H, O and the Yahara River wetlands will subsequently be prepared and submitted for WDNR approval. Segment specific agricultural requirements are also included in section J. of this document at the request of the Public Service Commission of Wisconsin.

#### A. Environmental Access Plan

An Environmental Access Plan (EAP) for Segment A is provided in Segment A, Appendix A. This EAP shows the location of wetlands and waterways, pole locations, temporary clear span bridge (TCSB) crossings, construction access, and other pertinent information.

As shown on the EAP, two poles will be located in wetlands along Segment A. They are structure 122196 in wetland A130-W1 (EAP pages A-2 & A-3) and structure 122201 in wetland A125-W3 (EAP pages A-4 & A-5), as approved in the utility permit.

Up to five TCSBs will be required along Segment A (Segment A, Appendix A). This number of bridges and the affected waterways are the same as approved in the WDNR utility permit. ATC is attempting to gain alternate access from private property owners at the eastern end of this segment to eliminate the need for some of these TCSB's; however at this point it is assumed all five TCSBs will be required.

A limited amount of forested wetland clearing will be required along Segment A (<1 acre). This clearing will be required in wetlands A125-W1 (page A-4 of EAP) and A125-W5 (page A-6, A-7 of EAP) which occur along waterways. This amount of clearing along this segment is the same as identified in the Joint Application. As discussed in the *Wooded Wetland Management Plan* section, a 50-foot low growth vegetative buffer will be maintained along these waterways, where it currently exists.

ATC's construction access through wetlands along Segment A (as shown on the EAP) is generally the same as presented on the *Environmental Features and Access Plan* in the Joint Application. ATC was able to obtain access from private landowners south of pole #122195, as shown on page A-2, which substantially reduces the amount of access through Wetland A130-W1. However, the configuration of other wetlands along this segment does not allow ATC to feasibly reduce the extent of construction

access in other wetlands. (Note: While most construction equipment will be limited in wetlands where access is not shown, small-track vehicles or all terrain vehicles <u>may</u> still be used to pull the conductor through these portions of wetlands).

Construction matting may be used to facilitate access in wetlands. The table below identifies anticipated quantities of matting in each wetland.

Wetland Identifier	Square footage of mats	
A (130)-W1	11,400	
A (125)-W2	500	
A (125)-W3	12,400	
A (125)-W4	600	
A (125)-W5	10,000	
A (125)-W7	800	

Additional measures to minimize wetland and waterway impacts along Segment A are outlined in other sections of this CMP (e.g. *Invasive Species Management Plan, Final Wetland Restoration and Revegetation Plan,* etc.) and will be provided in the Erosion Control Plan for this segment.

# B. Photographs of Pre-Construction Site Conditions (Wetlands and Waterways)

Pre-construction photographs of wetlands and waterways along the Segment A ROW are provided in Segment A, Appendix B.

### **C.** Waterway Crossings

As discussed above, up to five TCSB crossings will be required along Segment A at locations shown in Segment A, Appendix A. Final plan and cross-sectional view drawings for each TCSB crossing are provided in Segment A, Appendix C. In addition, General Condition #60 of the WDNR Utility Permit indicates the TCSBs should incorporate measures to minimize the amount of soil entering the waterway. A drawing showing typical debris containment to be used for all TCSBs is provided in Segment A, Appendix C.

As noted in the Joint Application (Segment A, Appendix E, Table 3), the WDNR Hydrology layer identifies a waterway associated with wetland A125-W4 (page A-6 of EAP); however, field observations in 2006

2

6/21/2011

and 2010 indicate this feature is a grassy swale with no discernable bed or banks and is therefore not considered a navigable waterway. As such, a TCSB permit was not requested to cross this feature.

### Clearance Waiver

General Condition #56 of the WDNR utility permit indicates: *All bridges across navigable waterways* shall either maintain a clearance of not less than 5 feet, or comply with requirements of s. NR 320.04, *Wis. Admin. Code*. Wis. Admin. Code Chapter NR 320.04(3) indicates the department may allow less than 5 feet of navigation clearance when all of the following apply:

- The waterway is known to have little or no navigation or snowmobile use;
- The waterway is not anticipated to have navigational use by other than lightweight craft;
- The owner provides a portage over or around the bridge or culvert; and
- The reduced clearance would not be detrimental to the public interest.

ATC would allow a portage over or around a bridge if necessary; however given the stream dimensions at these 5 crossings, it is unlikely these waterways are utilized by watercraft. ATC believes the other conditions specified in Wis. Admin. Code Chapter NR 320.04(3) are met at each waterway crossing and therefore, a five-foot clearance is not required at any of the five TCSB locations.

# Fishery Waiver

General Condition #54 of the WDNR utility permit indicates that: All bridges must be placed and removed in compliance with timing restrictions, unless authorized by the local DNR fisheries biologist.....

On all waterways that are not trout streams, placement and removal of the bridges is prohibited March 15 through May 15, annually. None of the waterways along Segment A are trout streams. ATC requested a waiver of this March 15 through May 15 timing restriction on each waterway where a TCSB is proposed. Mr. Kurt Welke, the Dane County Fisheries Manager, agreed this seasonal restriction could be waived at these waterways (Segment A, Appendix D).

#### D. Endangered Resources Plan

ATC evaluated the potential for rare species to be present along Segment A as part of the Joint Application. This evaluation included review of WDNR Natural Heritage Inventory (NHI) data, in-field habitat characterizations and field surveys in representative areas. Extensive coordination with the WNDR was conducted throughout this period. Based on this evaluation, it was determined that rare species are either not present along Segment A or if present they would not be impacted by construction activities (e.g., aquatic species). If it is subsequently determined that a rare species is present along this segment, ATC will undertake appropriate protection measures in coordination with the WDNR and/or USFWS.

# E. Invasive Species Management Plan

Dominant vegetation within the Segment A ROW was documented during field evaluations in 2006 and site walk downs and other field visits in 2010. The general location and composition of dominant

invasive species present within the ROW were identified during these assessments. In addition, observations of purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*) were also recorded at lower densities when observed during field visits.

Segment A is located along existing transmission line ROW traversing primarily agricultural fields, wetlands, and woodlands. The wooded areas along this segment are comprised of varied species, most of which include an understory of common buckthorn and honeysuckle shrubs (both are "Restricted" species as defined in *Wis. Admin Code* Ch. NR 40). Weedy herbaceous species such as smooth brome (*Bromus inermis*) and quack grass (*Elytrigia repens*) are also common along the Segment A ROW. Many of the wetlands along this segment are degraded and dominated by reed canary grass (*Phalaris arundinacea*) (Segment A, Appendix E). Other "Restricted" invasive species observed include localized colonies of purple loosestrife and *Phragmites* as described below.

The following location-specific and general BMPs will be utilized during clearing and construction along Segment A to comply with *Wis. Admin Code* Ch. NR 40 and ATC's Summary of Environmental Commitments for the Rockdale to West Middleton Project. The intent of these practices is to limit the spread of invasive species. However, since invasive species are commonly present along much of the Segment A ROW, our focus will be to limit the spread of purple loosestrife and *Phragmites* since these are not widespread in this corridor.

#### Location-Specific BMP's

- Wetland A130-W1 (EAP page A-3) has localized colonies of *Phragmites* and purple loosestrife near Structure 122196. ATC will implement a proactive approach to vegetation management in this area to prevent the spread of both of these species. Where purple loosestrife plants are present, ATC will remove the plants prior to seed set by pulling, bagging and appropriately disposing of purple loosestrife plants. Where *Phragmites* exist within the ROW, ATC will either mark the area for avoidance or implement a combination of herbicide application and/or mowing/ cutting to prevent seed set. Construction matting is anticipated in this area. Matting will be either underlain with geotextile fabric or cleaned before being used at other locations. If fabric is used, it will be collected and disposed of appropriately. If mats are to be disposed of after construction in these areas, fabric is not necessary. Any construction equipment that needs access to this area when construction matting is not present (wire stringing, etc.) will be inspected prior to moving to another area, and soil or plant parts will be removed from the equipment using brushes or compressed air. There may be certain circumstances where it is not necessary to clean vehicles or equipment, but these must be approved by the ATC Environmental Monitor.
- A small isolated stand of purple loosestrife was also observed within a recently unfarmed
  agricultural field near structure 122202 (page A-5 of EAP). ATC intends to remove the plants by
  pulling, bagging and appropriately disposing of the plants prior to purple loosestrife seed set. If

removal of purple loosestrife cannot be achieved, the area will be avoided during work activities.

#### General BMP's

These general BMP's apply to all of Segment A, unless otherwise specified in the previous section (Location-Specific BMP's).

- Construction equipment and material
  - Minimize soil disturbance and utilize gravel roads or established equipment access paths to the extent practicable.
- Managing soil and material
  - Avoid movement of invasive material to non-infested areas, unless otherwise specified in Location-Specific BMP's section. If possible, invasive material should be left within the ROW. For example, when clearing areas dominated by honeysuckle or buckthorn shrubs, cut material should be left in generally the same place and not spread off-site or to uninfested areas.
  - If infested soil or vegetative material must be transported from the ROW, transport to a
    designated area for appropriate disposal. Prior to transporting material, manage the
    load to limit potential spread to uninfested areas.
  - Manage stockpiles onsite to prevent the spread to adjacent areas.
- Restoration and landscaping
  - Select appropriate species for restoration and landscaping activities. Invasive species should not be used for revegetation purposes.
  - Revegetate disturbed soils as soon as possible to minimize invasive species establishment.
  - In areas where topsoil has been segregated and stored on-site (agricultural fields and wetlands), the segregated topsoils should be respread around the installed pole foundation, with minimal mounding. Note that approximately 6 inch height of mounding is needed for caisson foundations, and 12 inches for direct embed, to prevent a depression subsequent to soil settling.

#### F. Wetland Restoration and Revegetation Plan

A general summary of wetland community characteristics within the Segment A ROW is presented in Segment A, Appendix E. This characterization is based on field observations from 2006 and 2010. In summary, the majority of the wetlands are degraded and dominated by reed canary grass and/or weedy hydrophytic species; however, the eastern portion of wetland A130-W1 (page A-2, A-3 of EAP) has

slightly higher floristic diversity relative to the other wetlands (despite the presence of purple loosestrife and *Phragmites*).

The following provides guidelines for wetland restoration and revegetation for Segment A:

#### Restoration / Revegetation

- Restoration within wetland areas will include removal of all construction-related materials, and the restoration of significant ruts and depressions.
- In wetland areas where disturbance is minimal, access paths and structure locations will generally be allowed to regenerate naturally. These locations will be monitored to ensure regeneration is occurring.
- Segregated topsoils in wetlands should be respread around the installed pole foundation.
- The right of way should be restored to pre-existing topography as much as practicable.
- If significant rutting occurs in wetlands, those areas will be repaired using hand tools, back dragging or other appropriate means to restore topography.
- If necessary, disturbed areas within wetlands may be seeded with an annual rye grass or common oats to provide temporary cover while species regenerate.
- If additional seeding is necessary (beyond the use of temporary cover seeding), only seed mixes approved by the ATC Environmental Monitor shall be used (refer to Segment A, Appendix F for a typical wetland seed mix used by ATC) and the seeding will be consistent with the following standards:
  - Seed mixtures shall be selected based on soil and site conditions and intended final use, with approval by the ATC Environmental Monitor.
  - Seed mixes will conform to Wisconsin Statutes Chapter 94 and the Wisconsin Administration Code Chapter ATCP 20.
  - Seed will be uniformly applied and incorporated into the top one inch of soil
  - No invasive or exotic species shall be included in the seed mixture
  - No mulch will be applied in wetlands or on the banks of waterways.

# Other / Miscellaneous

- Fertilizers will not be used within 100 feet of wetlands, streams and rivers.
- Cover such as erosion blankets or other weed-free devices may be applied after seeding and final restoration has occurred in wetland areas disturbed by the construction activities. No mulch will be applied in wetlands or on the banks of waterways. All erosion control measures taken will conform to WDNR Technical Standards.
- Soil erosion and sedimentation control measures installed will be maintained until the disturbed areas are permanently stabilized.

### **G. Wooded Wetland Management Plan**

Less than one acre of wooded wetlands will be impacted by construction along Segment A. These wooded wetlands occur in narrow corridors along waterways

In general, the entire ROW width will be cleared for safe construction equipment access in wooded wetland areas; however, waterways require the preservation of a 50-foot wide low growth vegetative buffer, where it currently exists. In this buffer, only hand clearing of woody and tall-growing species greater than 15 feet at maturity will occur except in areas where a TCSB will be installed, which will minimize the impacts to wooded wetlands. The amount of clearing at a TCSB location will be kept to a minimum.

Trees cut in wetland areas will generally be removed from the wetland and windrowed or chipped in upland areas. Some of the woody vegetation that is cleared may remain in the wetland areas. This includes lop and scatter of tree limbs and potentially some thin scatter of wood chips, and vegetation fragments resulting from mowing the shrub and sapling layer. Woody vegetation left in the wetland will be scattered in a manner that it does not impede vegetation growth, water flow or alter the bottom elevation of the wetland.

# H. Wooded Riparian Buffer Impact Minimization and Restoration Plan

A 50-foot wide low growth vegetative buffer will be maintained along waterways, where it currently exists. In this buffer, woody vegetation attaining heights greater than 15 feet at maturity will be hand cleared; the existing low growth vegetation will be allowed to remain except in areas where TCSBs will be installed. Areas disturbed by construction will be restored as described in the Wetland Restoration and Re-vegetation Plan section.

Cut material shall be placed to assure that the material will not enter any stream or waterway.

# I. Final Sequencing and Scheduling Plan

Segment A will be the initial transmission line segment constructed for this project, with construction scheduled to begin in August, 2011. The following summarizes the anticipated timing of construction along this segment:

- ROW clearing Aug. Sept., 2011
- Structure Foundations Sept.–Nov. 2011
- Install Structures Sept.–Nov., 2011
- Install Conductor Oct. -Dec., 2011

ROW cleanup and restoration is scheduled to occur in the spring following completion of construction, actual dates for restoration will be weather dependent. Permanent restoration within any given area will be properly implemented within 30 days of final construction. If restoration is delayed due to weather or soil conditions, the area will be protected until permanent restoration can be completed.

# J. Post-Construction Monitoring Plan

Two levels of wetland and waterway monitoring will be required for this project. The following provides a summary of this monitoring.

#### Weekly Monitoring

In accordance with typical standard conditions of an Erosion Control permit, it is anticipated that ATC will be required to conduct frequent monitoring (e.g., weekly and after a significant rainfall event) of erosion and sediment controls during and after construction, which may include areas within and adjacent to wetlands and waterways. This monitoring will occur until the areas are stabilized as defined in General Condition #76 in the WDNR Utility Permit.

# **Annual Monitoring**

ATC will conduct annual post-construction monitoring of the portions of wetlands and waterways impacted by construction, as outlined in General Condition #78 of the WDNR Utility Permit. The monitoring will consist of documenting vegetation types and approximate percent cover in the disturbed areas. The monitoring will occur during the growing season and will be conducted annually for 3 years after construction unless compliance is achieved and documented earlier. If non-native or invasive species identified in the post-construction survey are generally not consistent with adjacent areas and/or pre-construction conditions, ATC will prepare a remediation plan for WDNR approval. This plan will be implemented within 90 days of WDNR approval (if the approval occurs early in the growing season), or during the following growing season, whichever occurs first. Additional follow-up revegetation procedures will be developed and implemented in problem areas if necessary.

A restoration monitoring report will be submitted to the WDNR by December 15 for each year in which monitoring occurs in accordance with General Condition #26 of the WDNR Utility Permit. The report will consist of a summary of dominant vegetation, approximate percent cover and general topography observations in disturbed portions of wetlands and waterways. Photographs of each feature and recommendations to cease monitoring or apply corrective action (if necessary) will also be provided.

# **K. Segment Specific Agricultural Mitigation Measures**

The Contractor shall strip and segregate topsoil and subsoil at all excavation sites located within cropped and uncropped agricultural fields, and all areas where access grading is required within agricultural fields. Stripped topsoil will be stockpiled near the location where it was removed, and will be replaced as soon as practicable. If necessary, new topsoil will be spread if topsoil has been lost or substantially mixed with subsoils.

The Department of Agriculture, Trade, and Consumer Protection (DATCP) has identified three soil types of concern on Segment A (Sable silty clay loam, Elburn silt loam, and Wacousta silty clay loam) that

when wet may result in significant rutting which could cause the mixing of topsoils and subsoil. These soil types are shown on the Environmental Access Plan (located in Attachment A) as "DATCP requirement – avoid or mat when wet".

Segment A, Appendix A

**Environmental Access Plan** 

# **Environmental Access and Erosion Control/Grading Plan – Segment A**

# Graphic Index for Rockdale to West Middleton Project

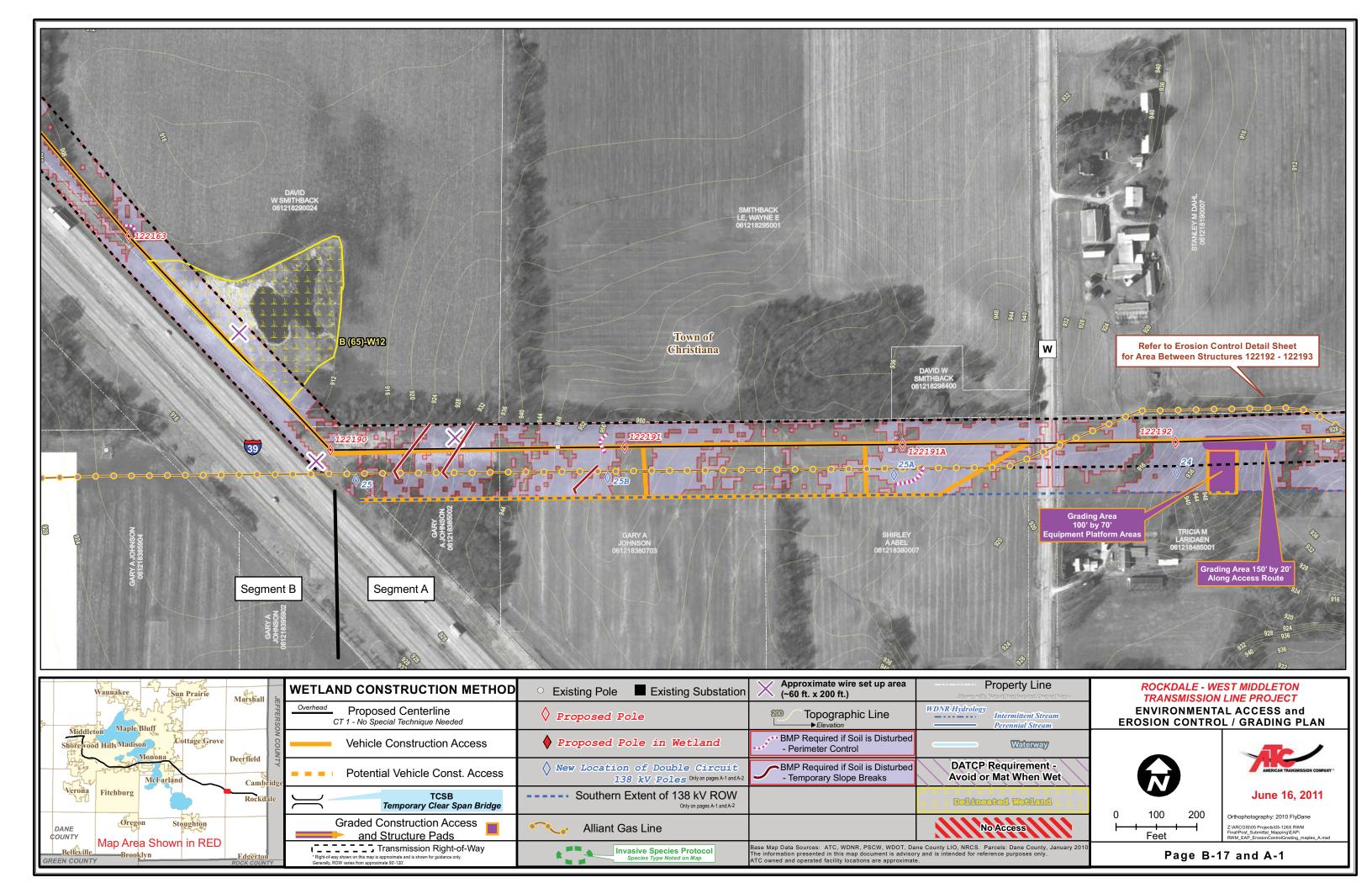
# **SEGMENT HIGHLIGHTS**

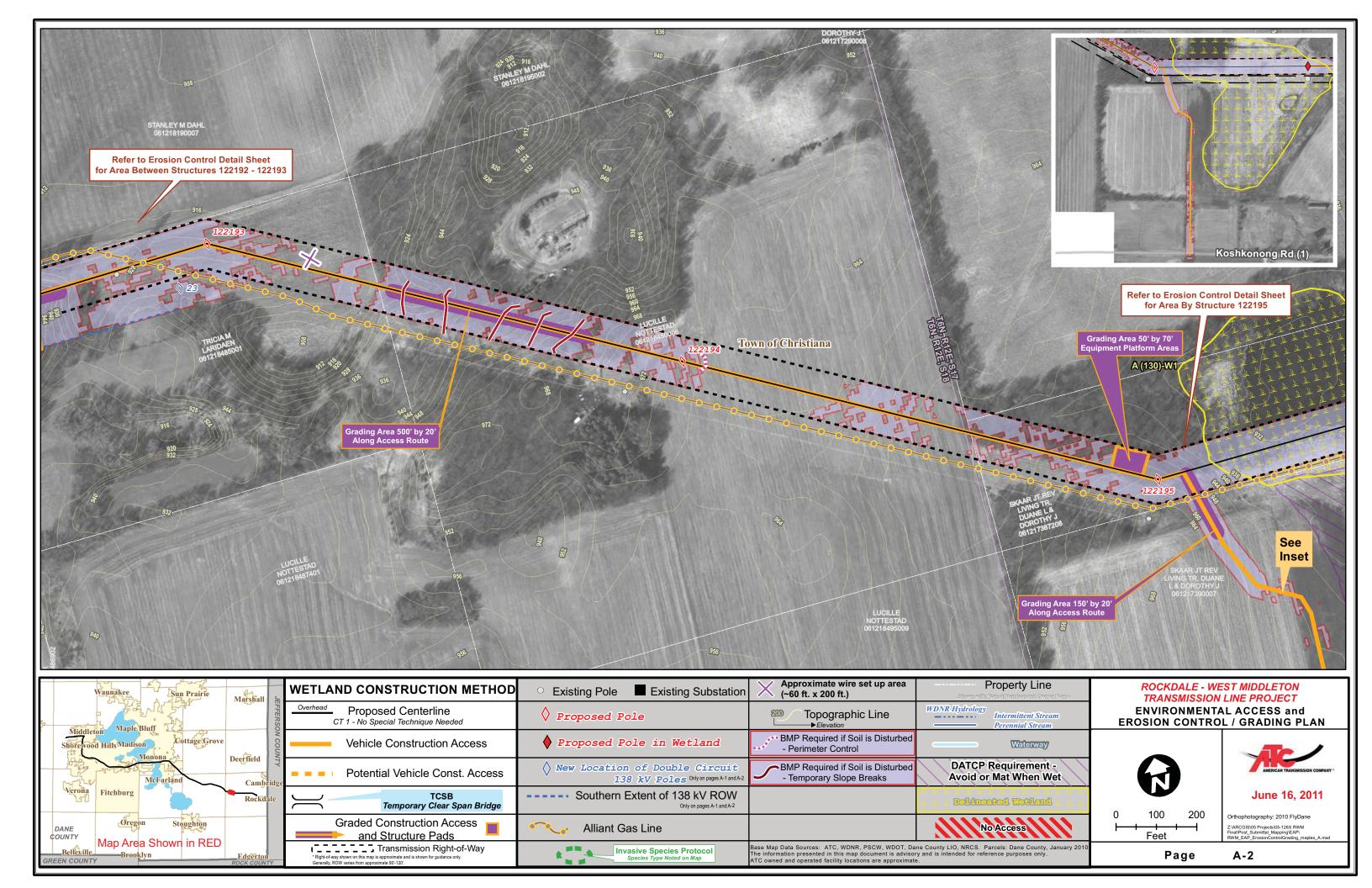
- 5 Temporary Clear Span Bridges will be required over waterways
- Two poles will be constructed in wetlands:
  - > 1 pole (#122196) in wetland A(130)-W1, and
  - > 1 pole (#122201) in wetland A(125)-W3
- Invasive Species Caution: Invasive species locations are identified on pages A-3 and A-5 of this plan. Refer to these pages for instructions on how to proceed in these areas.
- Agricultural Soils: The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) has identified sensitive soil types that must be avoided or matted during construction when wet. These areas are identified on this plan.
- Four locations along this segment have erosion control details specified in the Erosion Control Plan. These areas are identified on this plan.

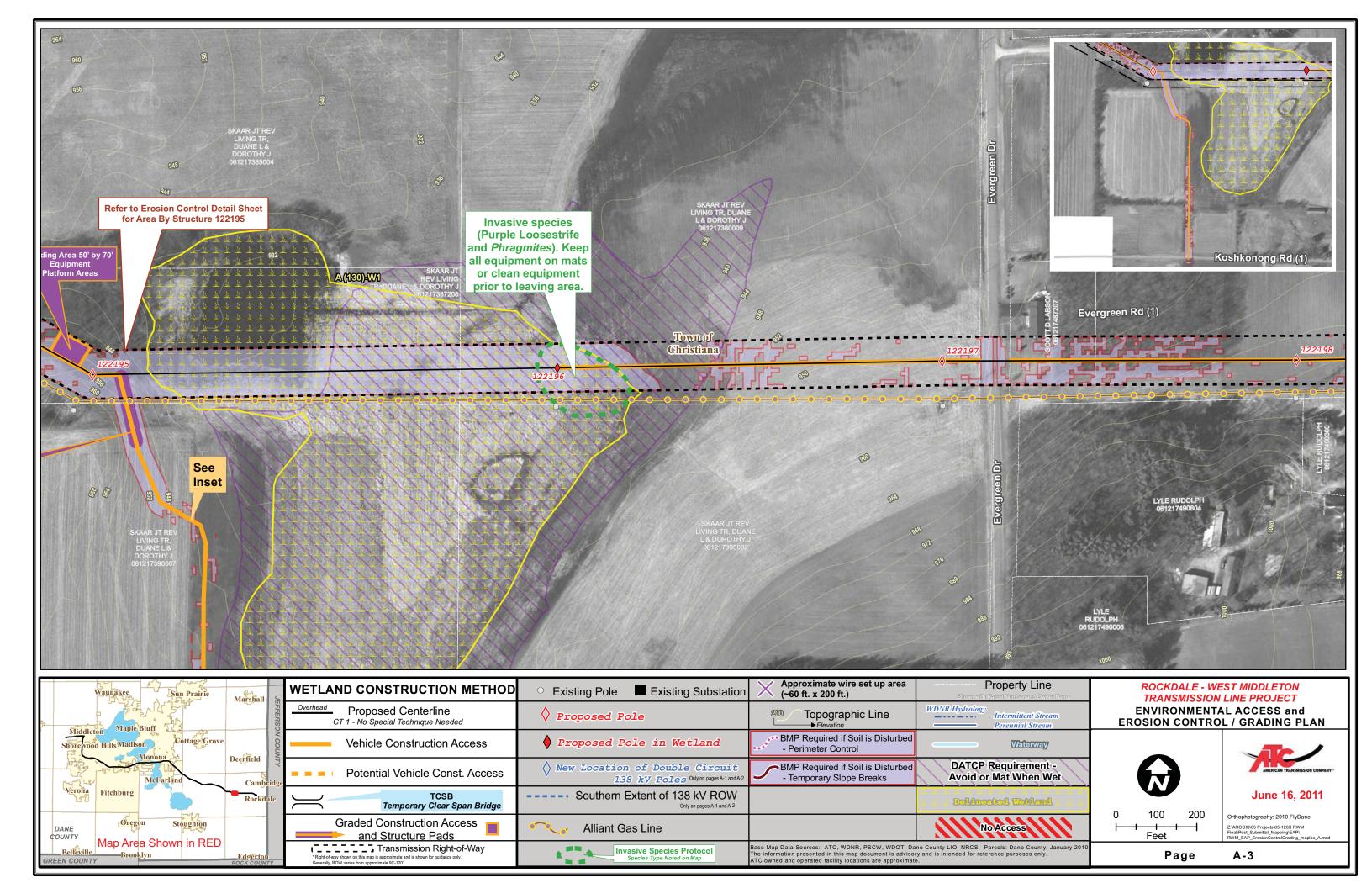
# **INDEX TO FEATURES**

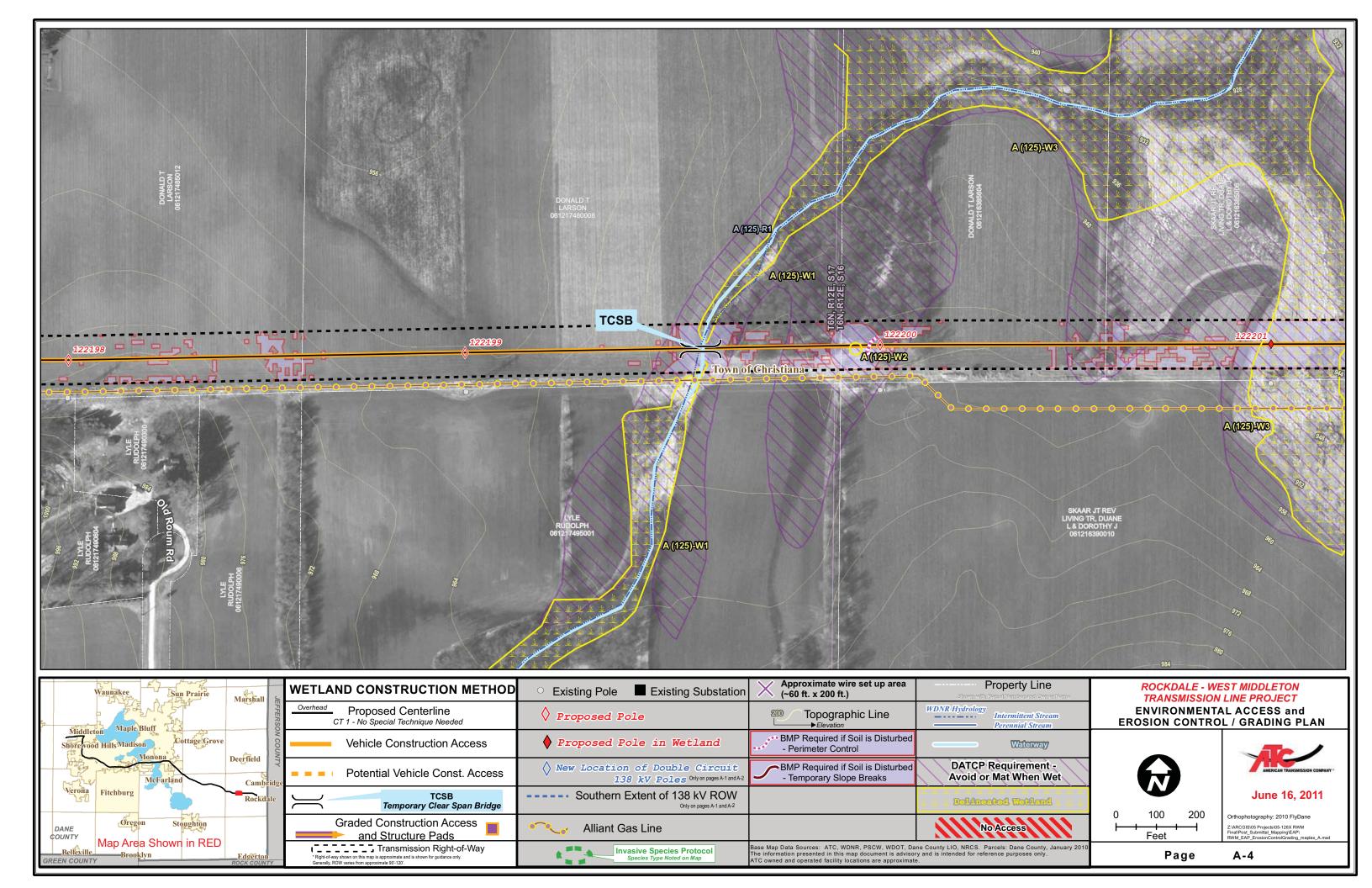
FEATURES INDEX				
Wetland			Map Page	
ldentifier	Identifier TCSB			
A (130)-W1			A-2, A-3	
A (125)-W1	A (125)-R1	Х	A-4	
A (125)-W2			A-4	
A (125)-W3			A-4, A-5	
A (125)-W4			A-6	
A (125)-W5	A (125)-R2	Х	A-6, A-7	
Α	(125)-R3	Х	A-7	
A (125)-W6			A-7	
A (125)-W7	A (125)-R4	Х	A-7	
Α	(125)-R5	Х	A-7	

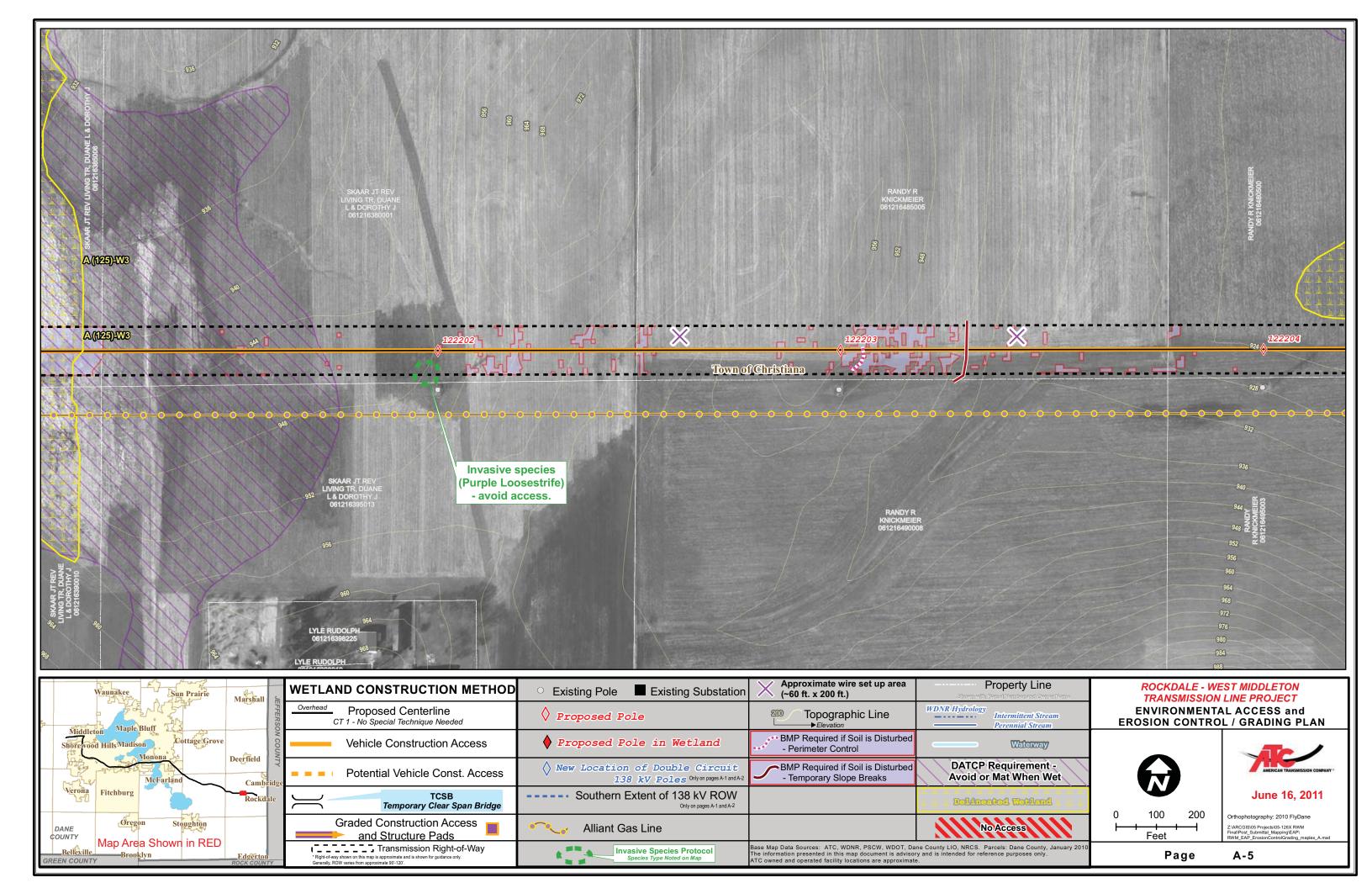


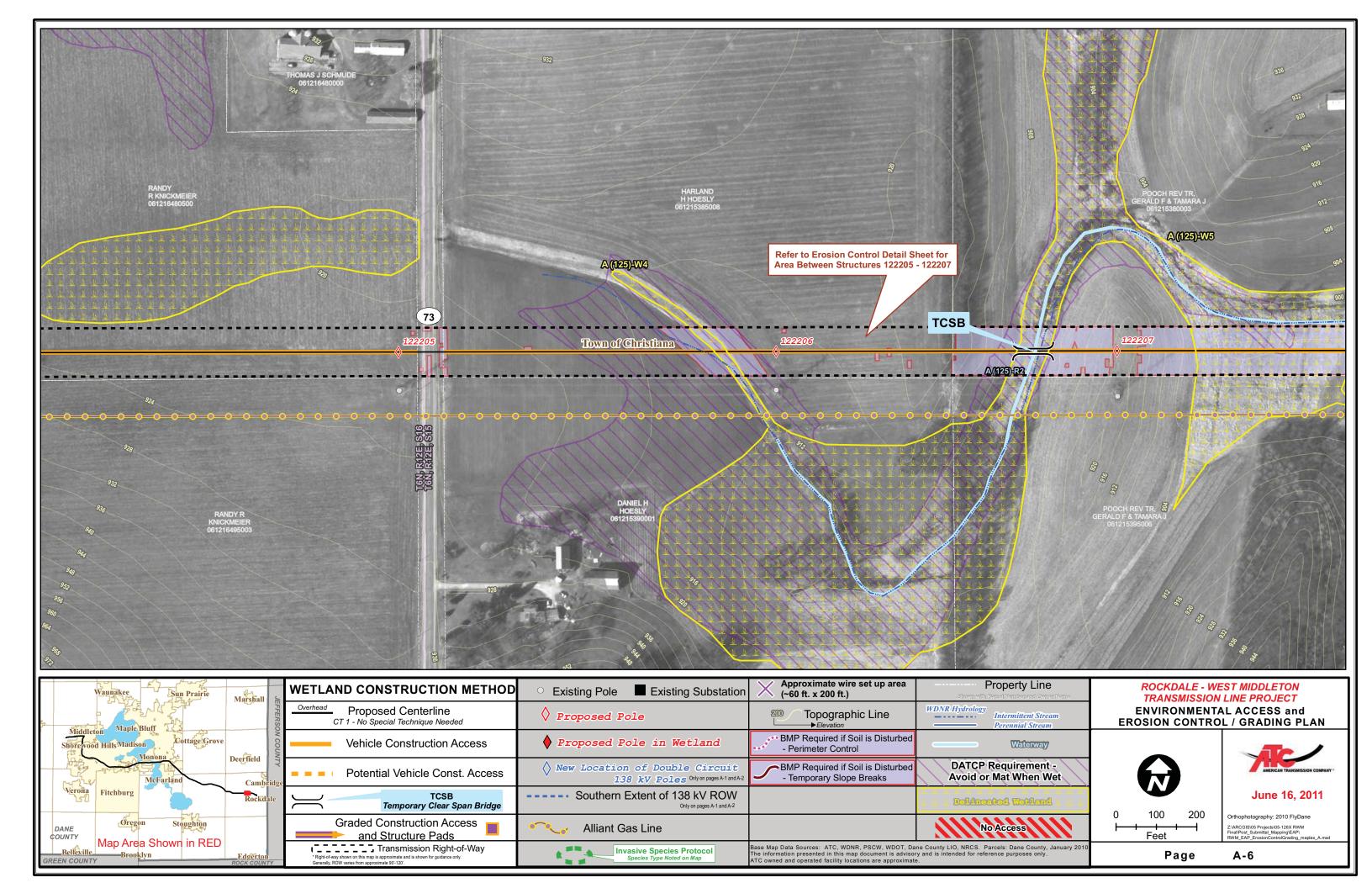


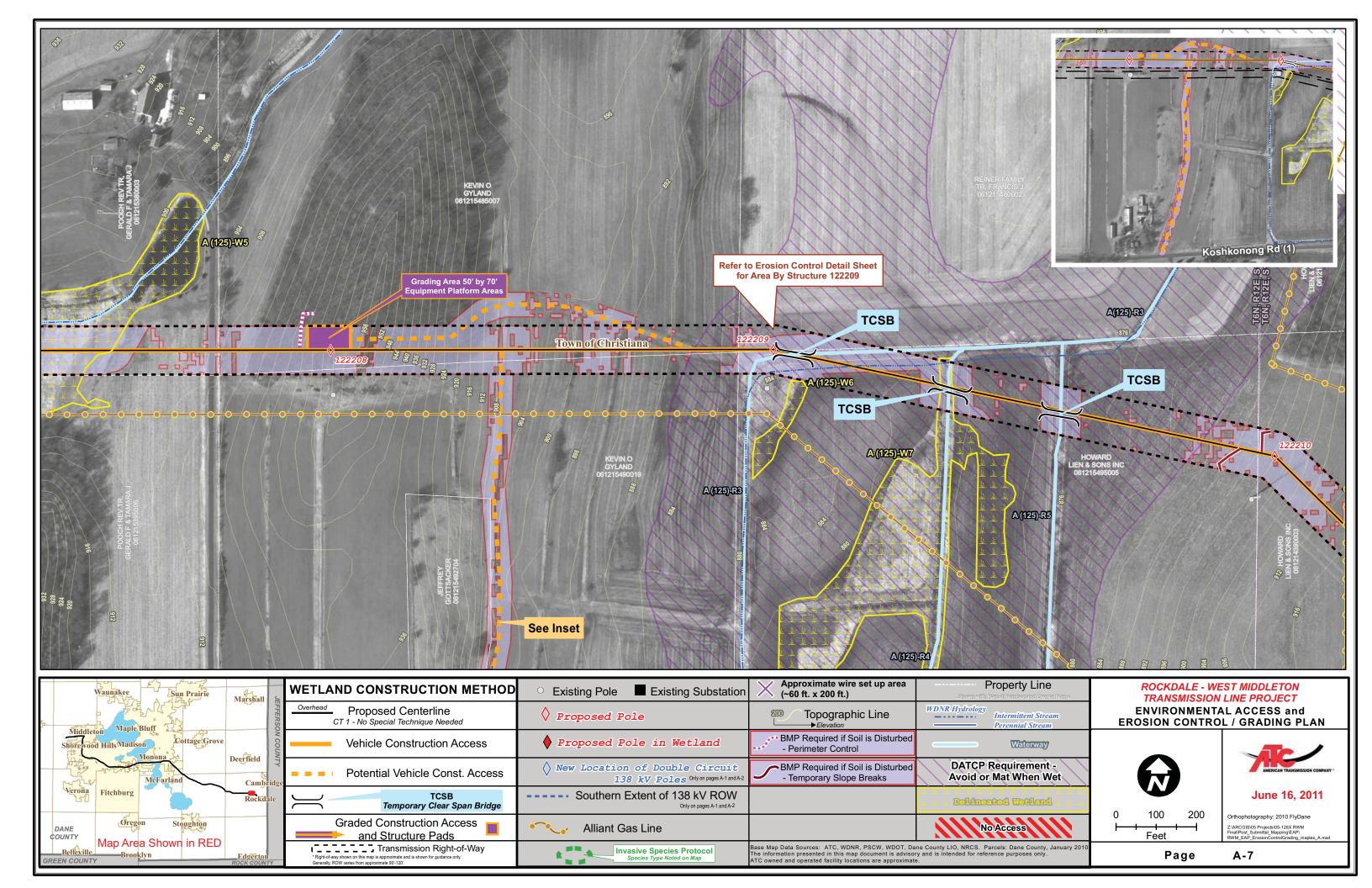


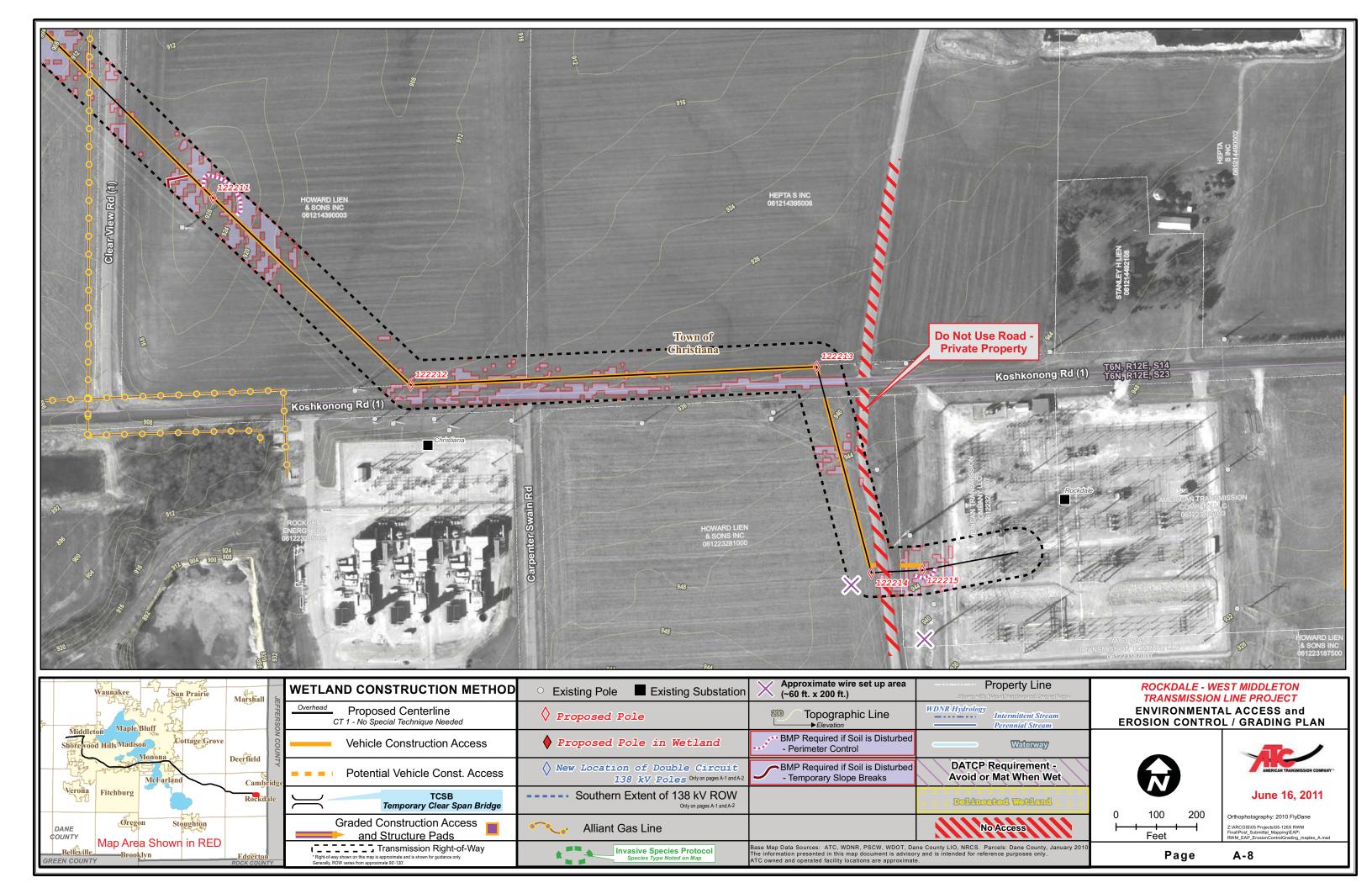


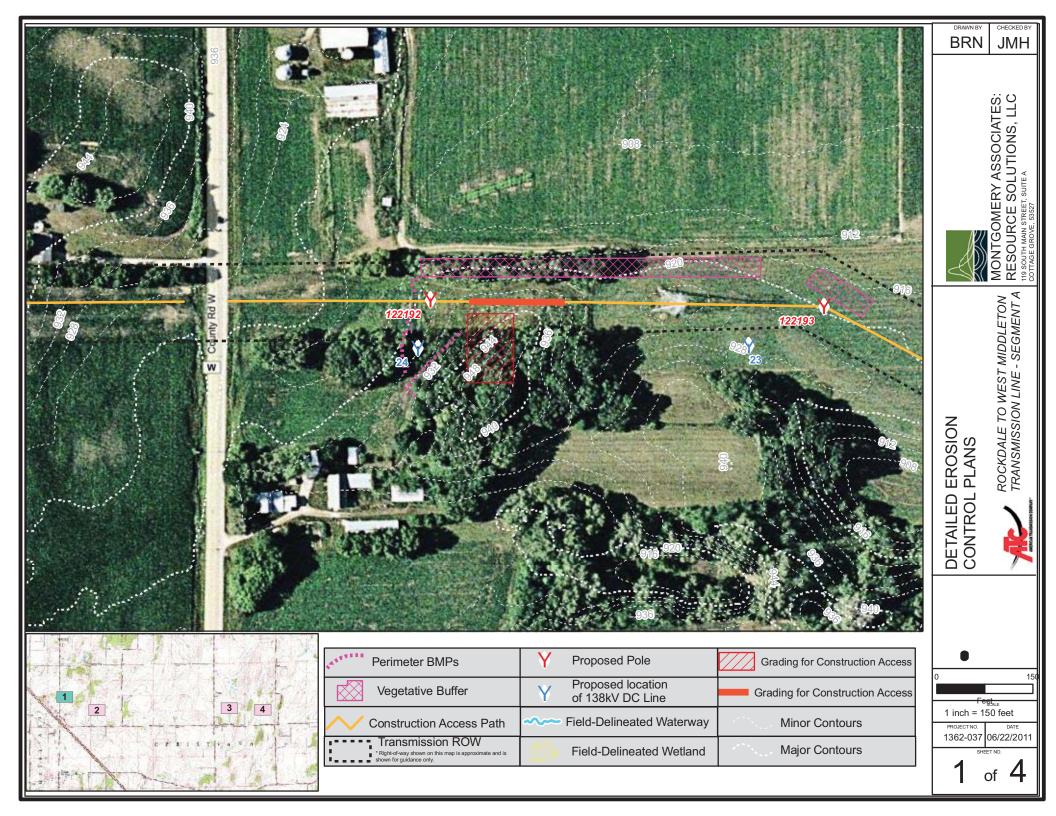


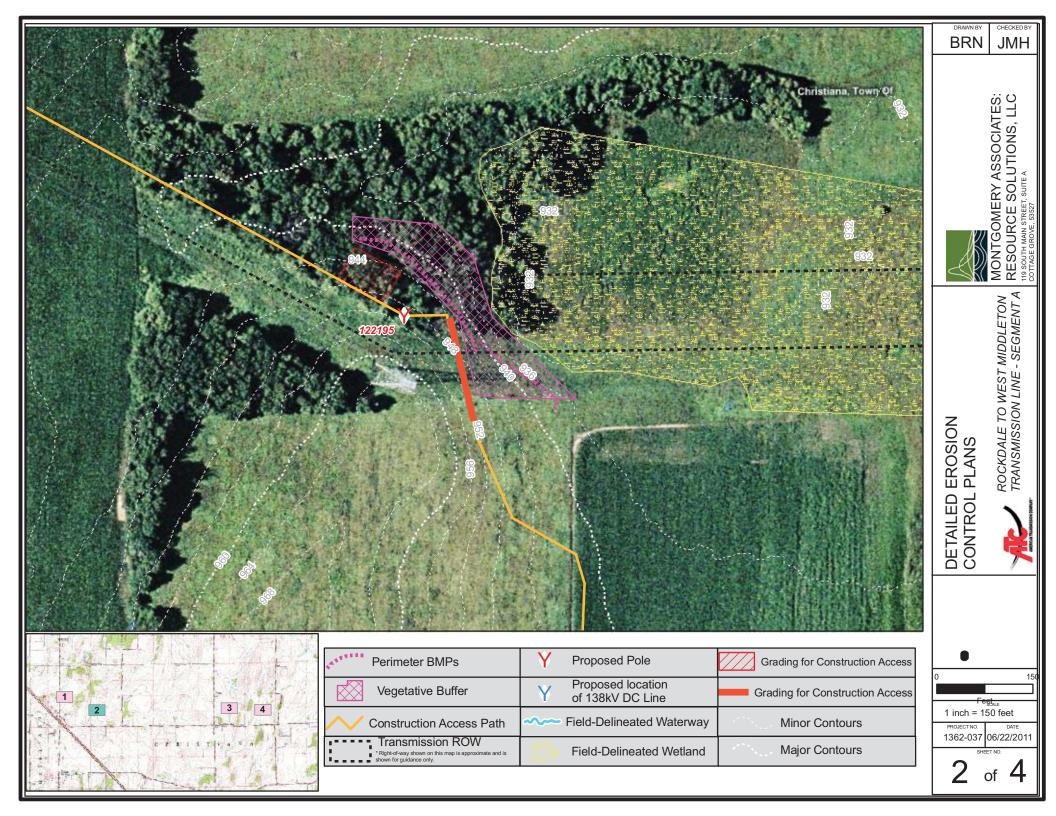


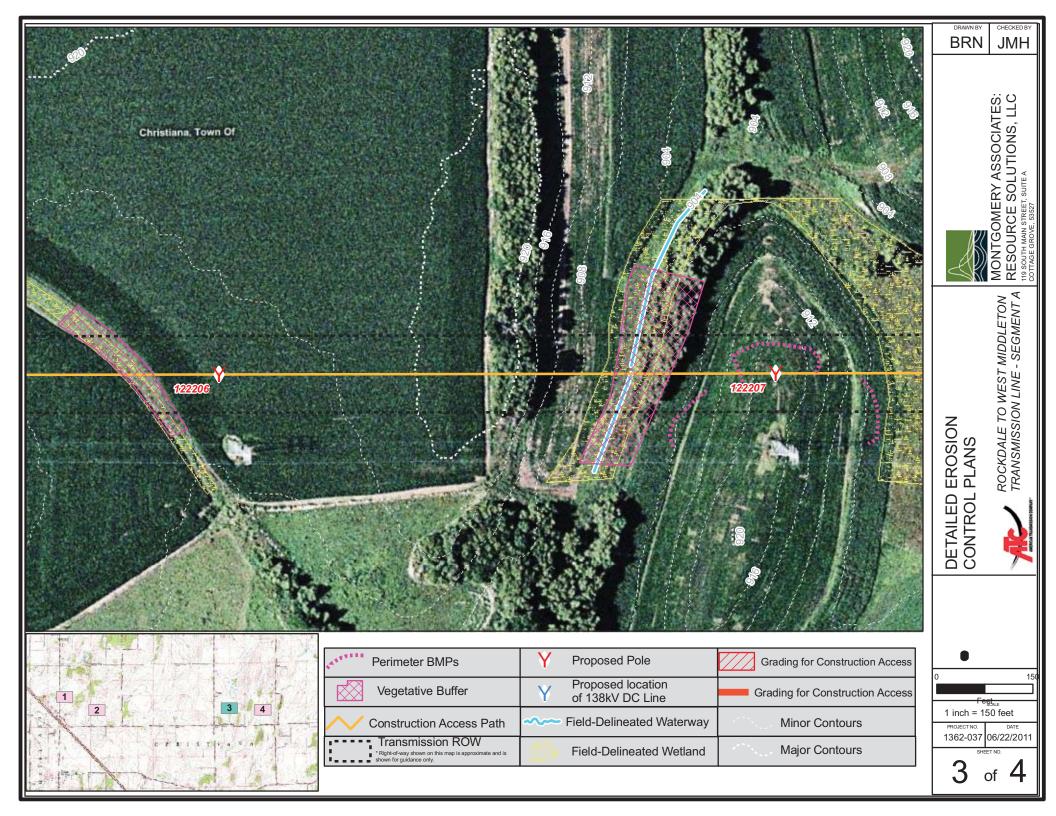


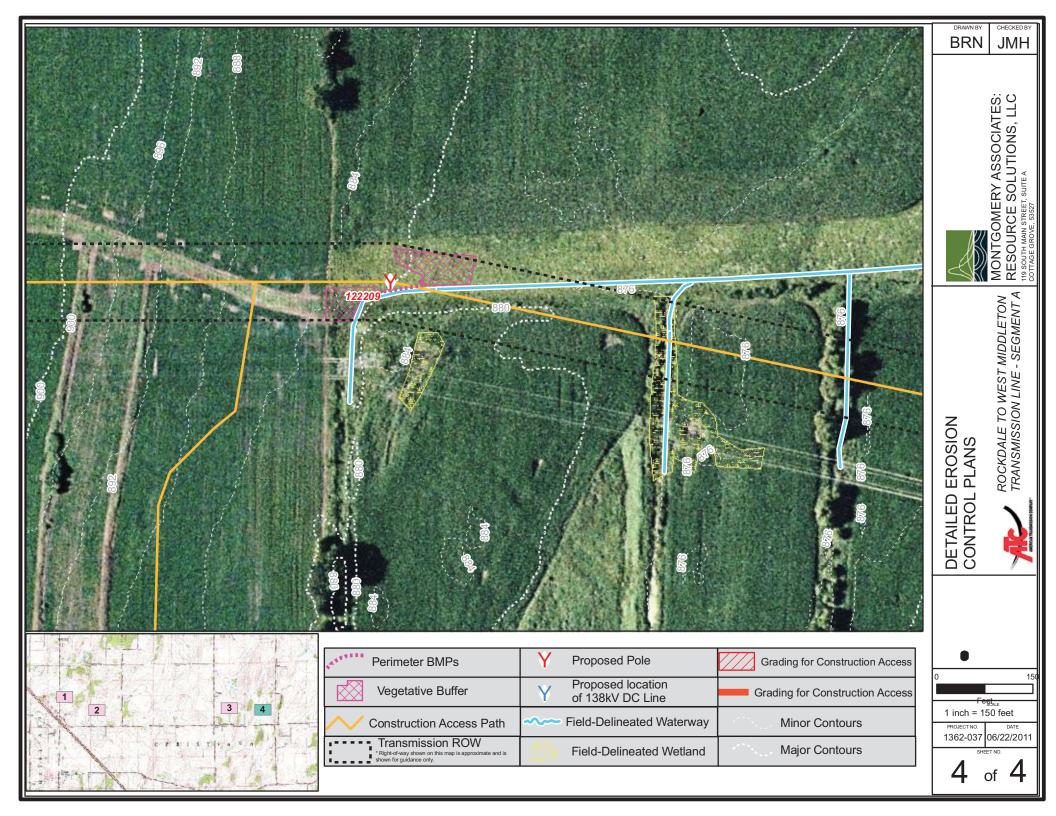












Segment A, Appendix B

**Photographs of Wetlands and Waterways** 

Segment A Wetland Photos





02. A130-W1 facing north.JPG



03. A130-W1 south side of structure facing south.JPG



04. A130-W1 western side of wetland.JPG



05. A130-W1 on west side facing east toward structure.JPG



06. A125-W1 facing north.JPG

Segment A Wetland Photos



07. A125-W1 facing south.JPG





09. A125-W2 facing west.JPG



10. West side of A125-W3 facing north.JPG



11. West side of A125-W3 facing SW.JPG



12. A125-W3 facing north.JPG

Segment A Wetland Photos



13. A125-W3 facing east from central area of wetland.JPG





15. Western portion of A125-W5 facing east.JPG



16. Western portion of A125-W5 facing south at waterway.JPG



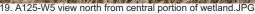
17. A125-W5 view east from west edge of wetland.JPG



18. A125-W5 view east.JPG

Segment A Wetland Photos







20. A125-W6 facing N.JPG



Segment A Waterway Photos



01. A125-R1 facing north.JPG 10/20/2010



02. A125-R1 facing west.JPG 10/20/2010





04. A125-R2 facing west.JPG 10/20/2010



05. A125-R3 V. W.JPG 07/31/2006



06. A125-R4 V. E.JPG 07/31/2006

Segment A Waterway Photos



07. A125-R5 V. W.JPG 07/31/2006

Segment A, Appendix C

**TCSB Plan and Profile Figures** 

