CONSTRUCTION and MITIGATION PLAN

Rockdale-West Middleton Project – Yahara River Wetlands

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). General Condition #11 requires additional information specific to this sub-segment of the project. This CMP addresses the area generally known as the Yahara River wetlands, and includes structures 122080 through 122089 (EAP pages H-11 through H-14) of Segment H. ATC has prepared this CMP for the Yahara River wetlands which outlines various construction methods and procedures which will be followed to minimize impacts to this area. The components of this CMP follow those outlined in General Condition #10 and #11 of the WDNR utility permit. Separate CMPs for Segments A, B, H, and O will be prepared and submitted for WDNR approval.

Construction Approach Overview

ATC spent considerable time evaluating various design and construction techniques for the Yahara River wetlands in order to come up with an optimal solution, factoring in environmental concerns, economic constraints, and design requirements. Both WDNR and PSC staff participated in consultation with ATC during this evaluation.

Structures 122080 and 122089 will be traditional dead end monopoles on concrete caisson foundations. Construction matting will be used to facilitate access to these structures, and construction methods will be similar to those used throughout other portions of the Rockdale-West Middleton project.

The other eight structures (122081 through 122088) will be H-frame structures on helical pier foundations. The helical pier foundations consist of a hollow screw pile foundation, supported by a series of battered piles. All piles are hollow and will be screwed into the ground (lengths, diameter, and configuration specific to each location). There will be no excavation at these structure locations; however a minimal amount of mounding, or uplift of the ground surface, surrounding the piles may occur. Total permanent wetland impact from these ten structures is 0.009 acres, which is significantly less than proposed in the Joint Application. Marsh buggies will be used to access to the helical pier foundation locations. Construction matting will be placed in the wetland at each H-frame location to create a temporary work platform for ground crews.

The H-frame structures will be installed using a heavy-lift helicopter. Ground crews and hardware will be transported to the temporary work platforms via an argo or similar small tracked vehicle. Wire will be strung and bird-flight diverters installed via a light-duty helicopter.

1

10/18/2011

The construction schedule was developed in order to take advantage of winter conditions as much as possible with the goal of minimizing the overall impacts to the resource.

A. Environmental Access Plan

An Environmental Access Plan (EAP) for this portion of Segment H is provided in Appendix A. This EAP shows the location of wetlands and waterways, pole locations, construction access and other pertinent information.

All ten structures will be located in wetland. No temporary clear span bridges are needed.

Approximately 3.6 acres of forested wetland clearing will be required, which is the same as assumed in the Joint Application. As discussed in the *Wooded Wetland Management Plan* section, a 50-foot low growth vegetative buffer will be maintained along the waterways, where it currently exists.

ATC's construction access is similar to what was presented on the *Environmental Features and Access Plan* in the Joint Application; and has been negotiated with the Wisconsin Department of Transportation (DOT).

Ground access into the wetland will be from three access points 1) the west side near structure 122080 from the First Supply property (Madison Property A LLC), 2) the intersection where Monona Drive meets the entrance/exit ramp to the Beltline highway, 3) the intersection of the Beltline highway exit ramp and US Highway 51.

Construction matting will be used to facilitate access to structures 122080 and 122089, and will be placed to form a work pad at each of the H-frame structure locations.

Matting will potentially be used within a portion of the ROW to act as a barrier to prevent the spread of invasive *Phragmites*. This area is shown on the attached EAP, and will extend for approximately 800 linear feet surrounding, and west of, structure 122083.

Matting at the east end may also be used to facilitate removal of woody vegetation from the wetland.

Matting will also be used in both wetland and upland areas at three locations to provide temporary transition and staging areas. These areas will allow trucks and equipment to safely exit from the highway and load/unload, and will also be used to temporarily store materials and equipment. These locations are 1) the upland area on the eastern portion of the First Supply property at the west end of the marsh, 2) south of the Monona Drive exit/entrance ramps, and 3) south of the Beltline & Highway 51 intersection.

The total area of matting in this wetland complex is estimated to be 2.8 acres.

B. Photographs of Pre-Construction Site Conditions

Pre-construction photographs of the Yahara River wetlands are provided in Appendix B.

C. Waterway Crossings

No waterway crossings are anticipated in this portion of the project.

D. Endangered Resources Plan

ATC evaluated the potential for rare species to be present along the Yahara River wetlands portion of Segment H as part of the Joint Application. This evaluation included review of WDNR Natural Heritage Inventory (NHI) data, in-field habitat characterizations and/or field surveys in representative areas. Extensive coordination with the WDNR was conducted throughout this period. There is a potential that the marsh provides habitat for one state threatened turtle species. WDNR's preliminary suggested avoidance measures include (consultation is ongoing):

- Work completed from 16 October to 15 March. If work is anticipated to extend beyond March 15th, contact WDNR by March 1st.
- Access by foot, marsh buggy, or ATV only.
- The entire workspace around each pole placement site will be matted to the minimum area necessary to construct each structure.
- In the event that an unexpected thaw occurs, or daytime temperatures reach above freezing, additional construction mats may be used along access routes in areas that have not already been accounted for in section A. These mats will further dissipate the weight of the equipment.
- If excavated material must be temporarily stored onsite in the wetland, it must be stored on mats or in such a way as to prevent spillage of materials directly into the wetland.

E. Invasive Species Management Plan

This section summarizes our management plan for wetland and aquatic invasive species in the Yahara River wetlands.

Wetland Species

Dominant vegetation within the ROW of the Yahara River wetlands was documented during field evaluations in 2006 (from the wetland edges), 2008, 2010 and 2011. The general location and composition of dominant invasive species present within the ROW were also identified during these assessments.

Invasive species are commonly present in the Yahara River wetlands along the transmission line ROW. The floodplain forest at the eastern end is dominated by an understory of reed canary grass, and narrow-leaved cattail (a "Restricted" species as defined in *Wis. Admin Code* Ch. NR 40) is common in the shallow marsh areas throughout this wetland complex (Appendix C). Common reed grass (*Phragmites australis*), another "Restricted" species, is also present west of the Yahara River in localized areas as described below.

The following location-specific and general BMPs will be utilized during construction within the Yahara River wetlands 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, with a location specific focus on limiting the spread of *Phragmites* since it is not as prevalent.

Location-Specific BMPs

As discussed, *Phragmites* is present within and adjacent to the transmission line ROW west of the Yahara River. Three localized areas of this species occur between structures 122081 and 122082, while this species is more widespread throughout the ROW from about 250 feet east of structure 122082 to the western edge of the river (Appendix A).

The three localized areas of *Phragmites* will be marked in the field so that vehicles traveling the ROW can avoid contact.

Access to the more widespread area of *Phragmites* that begins approximately 250 feet east of structure 122082 will be handled in one of the following ways:

- A barrier will be placed between the vehicle tracks and the marsh surface. Barriers will consist of
 construction mats and/or geotextile fabric. In the event that winter conditions allow for the
 establishment of an ice road, and significant snow cover is present (similar to the conditions
 during the February 2010 soil borings) this may be considered a suitable barrier; or
- all vehicles will be cleaned with brushes or compressed air to remove mud and plant parts, to the extent practicable, each time it leaves the area.

If geotextile is used as a barrier, it must be disposed of upon removal from the invasive species area. If mats are used without geotextile underneath, the mats must be either cleaned or disposed of upon removal from the invasive species area. Care must be taken to prevent the inadvertent transport of invasive material during removal of the geotextile and/or mats from the invasive species area.

General BMP's

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

- All vehicles and equipment, including mats, will be clean before entering the wetland.
- Construction equipment and material
 - Minimize soil disturbance and utilize established equipment access paths to the extent practicable.
- Managing soil and material

- Avoid movement of invasive material to non-infested areas. If possible, invasive material should be left within the ROW.
- 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.

Restoration and landscaping

- Select appropriate species for restoration and landscaping activities. Invasive species should not be used for revegetation purposes.
- Allow disturbed soils to revegetate as soon as possible to minimize establishment of invasive species not present prior to disturbance.

Aquatic Species

The portion of this wetland east of structure 122080 to structure 122088 may be considered below the ordinary high water mark of the Yahara River. The Yahara River is considered a non-infested water for the Viral Hemorrhagic Septicemia virus. Decontamination procedures will be followed for all equipment entering the portion of the wetland east of structure 122080 through 122088 to minimize the potential spread of aquatic invasive species (per General Condition #18 of the WDNR Utility Permit).

F. Wetland Restoration and Revegetation Plan

A general summary of the characteristics of the Yahara River wetland within the transmission line ROW is presented in Appendix C. This characterization is based on observations from the field assessments mentioned above. In summary, this extensive wetland is primarily a shallow marsh community dominated by cattail. *Phragmites* is present in localized areas of this community on the west side of the river. This shallow marsh community is underlain by organic soils (i.e. peat and muck) that are typically saturated to the surface and/or ponded throughout the year. The floodplain forest at the east end is dominated by eastern cottonwood trees with an understory of primarily reed canary grass. Soils underlying this community are not saturated to the surface/ponded to the extent of the shallow marsh community.

As discussed in the *Construction Approach and Overview* section, construction methods for the Yahara River wetland were selected to minimize environmental impact. Winter construction combined with the use of marsh buggies, helicopters, helical pier foundations and matting (around structure locations) will result in less impact than other methods considered. Some restoration may still be required in this wetland after construction; however, conditions present in portions of this wetland may limit the degree of restoration that is feasible. These conditions include deep organic soils that are saturated / inundated throughout much of the year. In these areas, attempts to restore conditions (e.g., deep tilling or grading to restore topography), if necessary may do more damage than allowing the area to naturally restore.

The following provides guidelines for wetland restoration and revegetation for the Yahara River wetland:

Restoration / Revegetation

- Restoration within this wetland will include removal of all construction-related materials and the
 restoration of significant ruts and localized depressions (≥ 6 inches deep) that may occur. These
 areas will be repaired using hand tools or other appropriate means to restore topography to the
 extent practicable.
- Construction matting is not proposed to be used for access between structures 122081-122088
 (except at structure working areas and through unavoidable areas of *Phragmites*). Depressions
 along the vehicle access path may occur; however this will be minimized with the methods
 described above. If depressions occur along access paths, it is anticipated the topography will
 be allowed to restore naturally over time. This decision will be made in coordination with the
 Independent Environmental Monitor.
- At structures 122080 and 122089 which require concrete foundations, topsoil will be segregated and re-spread around the installed pole foundation. Excavation is not required at the structures with helical pier foundations.
- If bare ground is exposed from construction activities, it will be seeded with common oats or annual rye as a temporary cover crop. Based on existing conditions, the majority of the area is expected to regenerate quickly by the existing seed bank, however if there are areas that appear to need permanent seeding, it will consist of 3 or more of the following species (equivalent native species may be substituted depending on seed availability and site conditions).

Big Bluestem	Andropogon gerardii	FAC-
Bluejoint Grass	Calamagrostis canadensis	OBL
Virginia Wild Rye	Elymus virginicus	FACW-
Switch Grass	Panicum virgatum	FAC+
Prairie Cord Grass	Spartina pectinata	FACW+
Brown Fox Sedge	Carex vulpinoidea	OBL
Fowl Manna Grass	Glyceria striata	OBL
Rice Cut Grass	Leersia oryzoides	OBL
Wool Grass	Scirpus cypernus	OBL
Canada Wild Rye	Elymus canadensis	FAC-

Other /Miscellaneous

- Fertilizers will not be used.
- Cover such as erosion blankets or other weed-free devices may be applied after seeding and final restoration has occurred in areas disturbed by construction activities. Mulch will not be utilized. All implemented erosion control measures will conform to WDNR Technical Standards.
- Installed soil erosion and sedimentation control measures will be maintained until the disturbed areas are permanently stabilized.

G. Wooded Wetland Management Plan

The entire ROW width through the floodplain forest at the east end of the Yahara River wetlands will be cleared for safe construction equipment access; 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.

Trees cut in wetland areas will generally be removed from the wetland. If woody vegetation is left in the wetland, it will be scattered in a manner that 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. Areas disturbed by construction will be re-seeded as described in Section F, *Wetland Restoration and Re-vegetation Plan*.

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

I. Final Sequencing and Scheduling Plan

The following summarizes the anticipated timing of construction along the Yahara River wetlands:

- ROW clearing begin in November 2011, may extend through February 2012 depending on weather conditions
- Structure Foundations early December 2011 through mid-January 2012
- Install Structures 1-4 days of work (actual dates weather and DOT dependent) mid-January through mid-February, 2012
- Install Conductor 1-2 days of work (actual dates weather and DOT dependent)
 February 2012
- Remove matting upon conductor installation/clipping, no later than March 5

Construction has been scheduled considering DNR recommendations for helicopter use is from November to mid-February to minimize the potential impact to migrating birds. Construction should be completed prior to April 1 to avoid potential impacts to nesting birds.

ROW cleanup and restoration is scheduled to occur in the spring following completion of construction, actual dates for restoration will be weather and schedule 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. Access for post-construction monitoring and restoration is anticipated by foot and/or light duty vehicle such as an argo or ATV.

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 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. Spill response

All requirements as stated in *Section 11 Spill Prevention and Response* of the Environmental Reference Document apply here. In addition, if vehicles are to be parked overnight in the wetland, precautions such as drip pans, adsorbent pads, or tarps should be used in the event that a hose breaks during cold start-up. Equipment will be inspected on a daily basis for worn or leaking hoses. If refueling of equipment needs to occur in the wetland, appropriate precautions such as drip pans, adsorbent pads, or tarps should be used in the event of overfills or fuel drips during transfer.

L. Fisheries Response

The WDNR has indicated that the Yahara River is a conduit for migrating northern pike and walleye, and the wetlands are used for spawning and nursery areas. Activities requiring Chapter 30 permits are typically restricted between March 15th and May 15th in this portion of the state. Based on the time of year and construction techniques discussed above, fisheries impacts will be avoided or minimized. All practicable efforts to prevent erosion and turbidity in the waterway will be taken, as described in the erosion control plan. The majority of ground access will be completed prior to February, and all construction work will be completed prior to March 5, 2012. As discussed in Section I, *Final Sequencing and Scheduling Plan*, post-construction monitoring and restoration may extend beyond these dates, however impact is expected to be minimal.

M. Oak Wilt

Clearing activities within the Yahara River wetlands are scheduled for November 2011 until February 2012. Therefore any potential oak trimming / removal would occur outside the PSCW timing requirements; and would comply with the WDNR recommended guidelines and City of Madison moratorium on oak activities.

Yahara River Wetlands, Appendix A

Environmental Access Plan

10

Environmental Access Plan – Yahara River Wetlands

Graphic Index for Rockdale to West Middleton Project

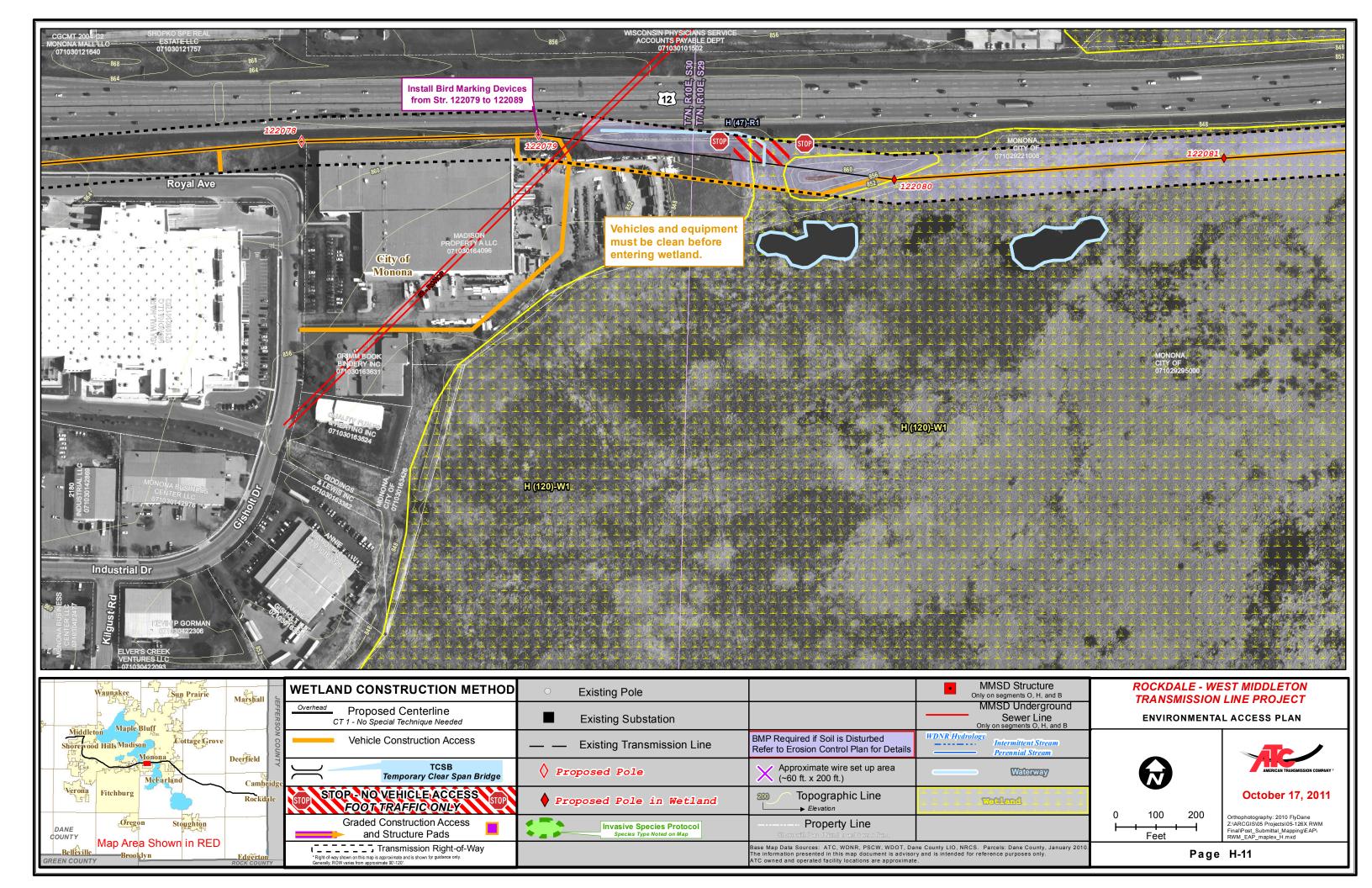
SEGMENT HIGHLIGHTS

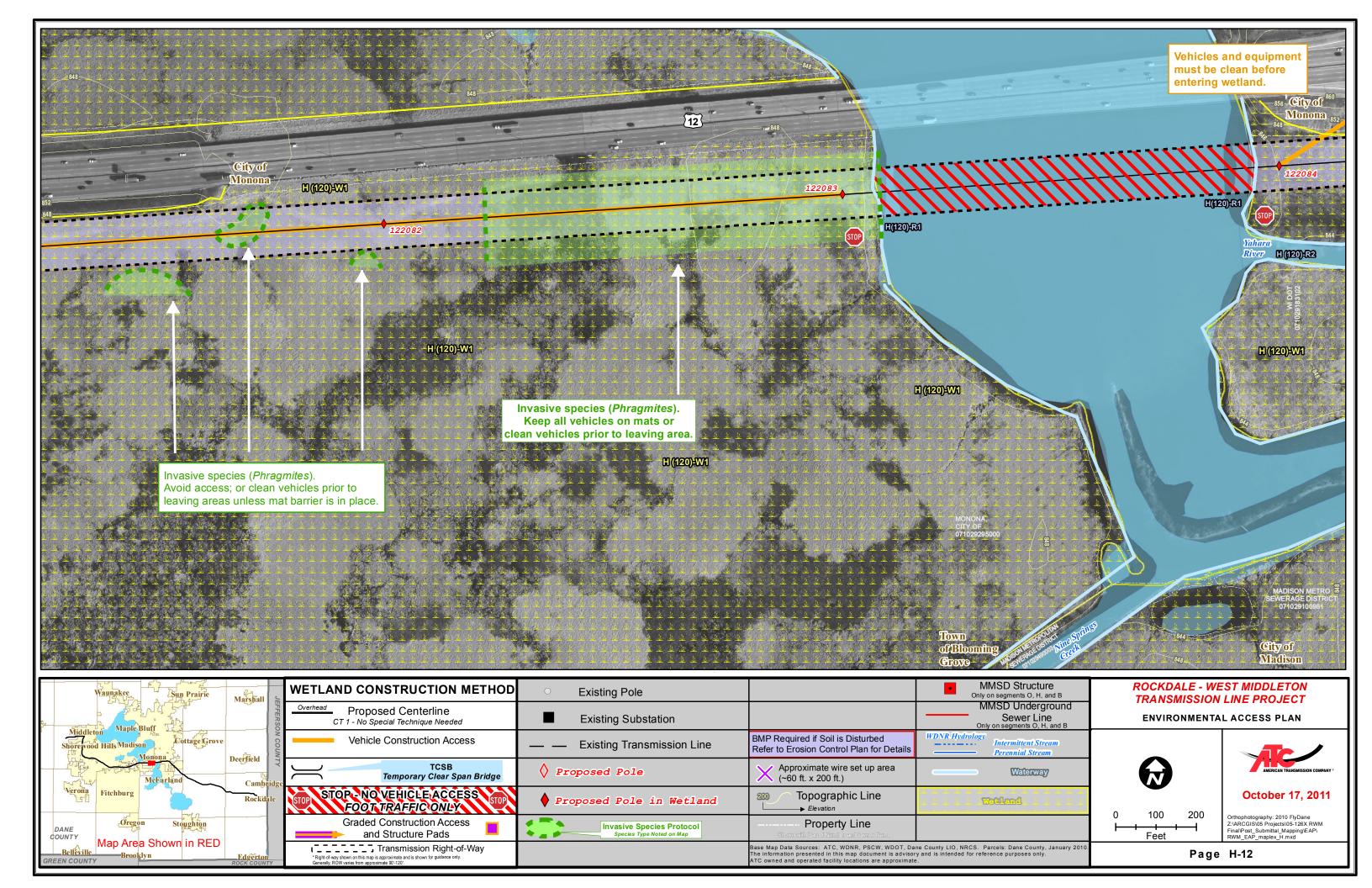
- Ten poles will be constructed in this wetland (#122080-122089)
- Bird marking devices will be installed on the shield wire between structures #122080 and #122089. This area is identified on this plan.
- Invasive Species Caution: Invasive species locations are identified on page H-12 of this plan. Refer to this page for instructions on how to proceed in these areas.
- Refer to the Erosion Control Plan for erosion control details in this wetland.

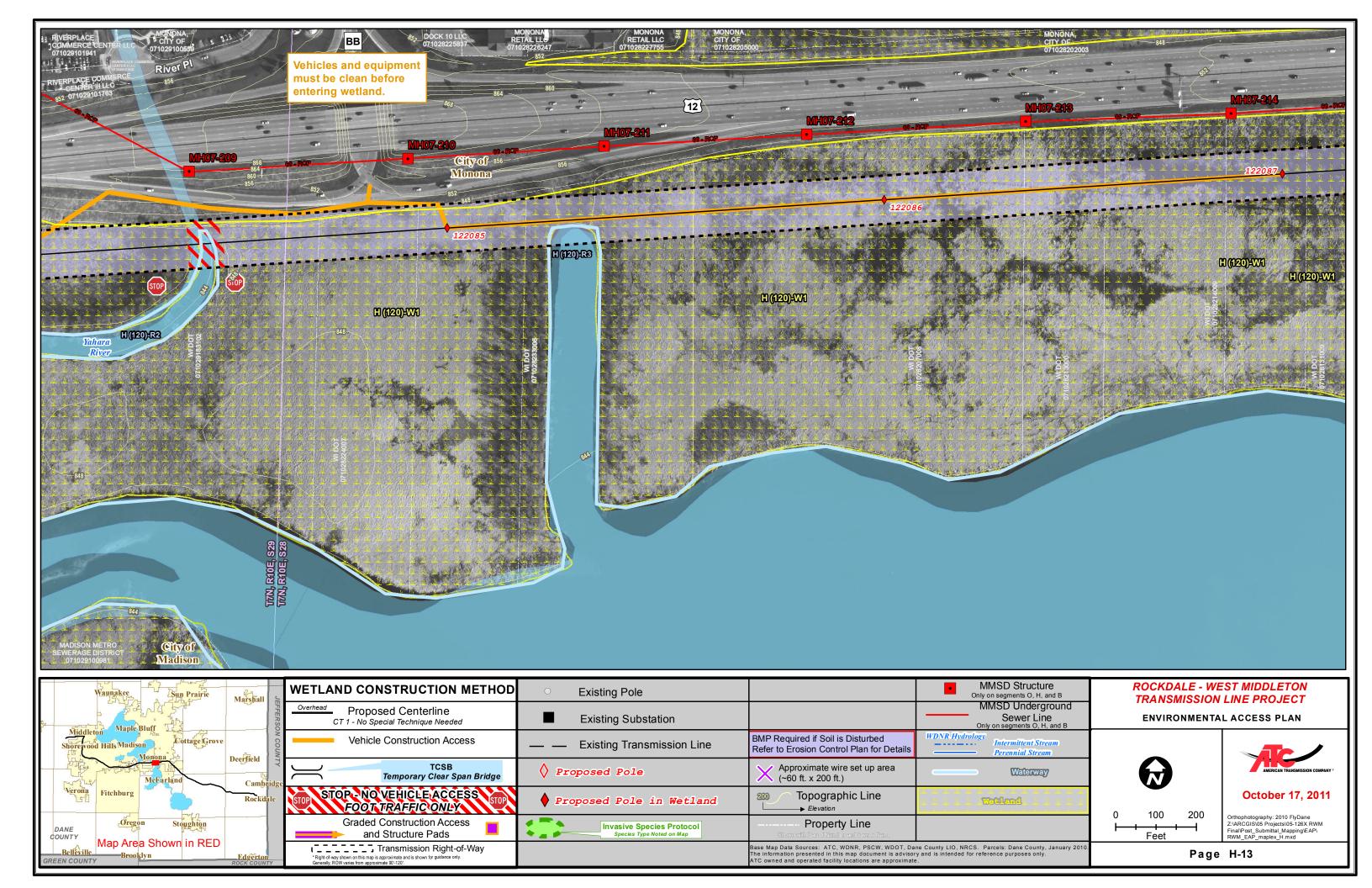
INDEX TO FEATURES

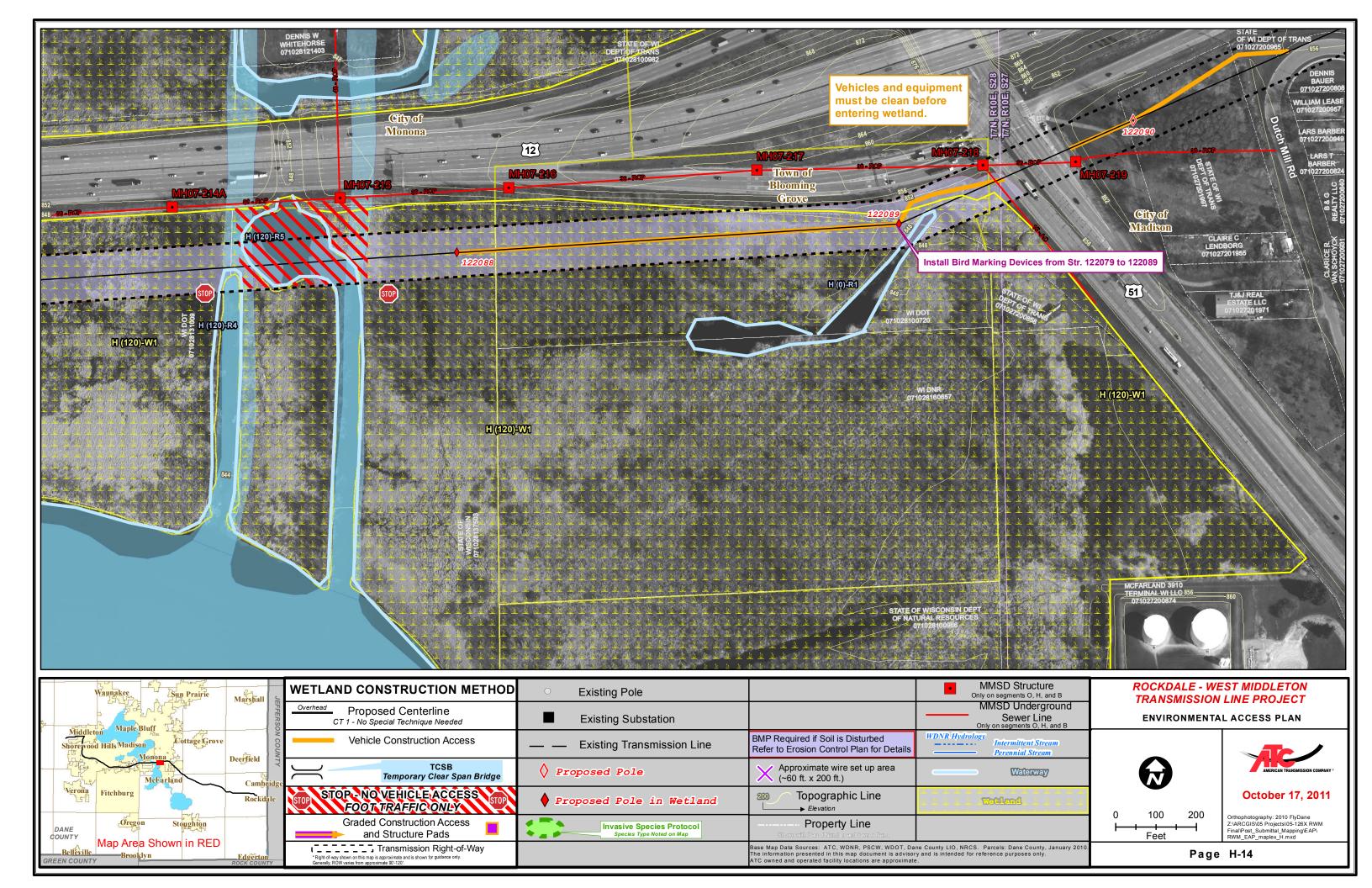
FEATURES INDEX						
Wetland Identifier	Waterway		Map Page			
	Identifier	TCSB				
H (120)-W1			H-11, H-12,			
			H-13, H-14			
	H (47)-R1		H-11			
	H (120)-R1		H-12			
	H (120)-R2		H-13			
	H (120)-R3		H-13			
	H (120)-R4		H-14			
	H (120)-R5		H-14			
	H (0)-R1		H-14			

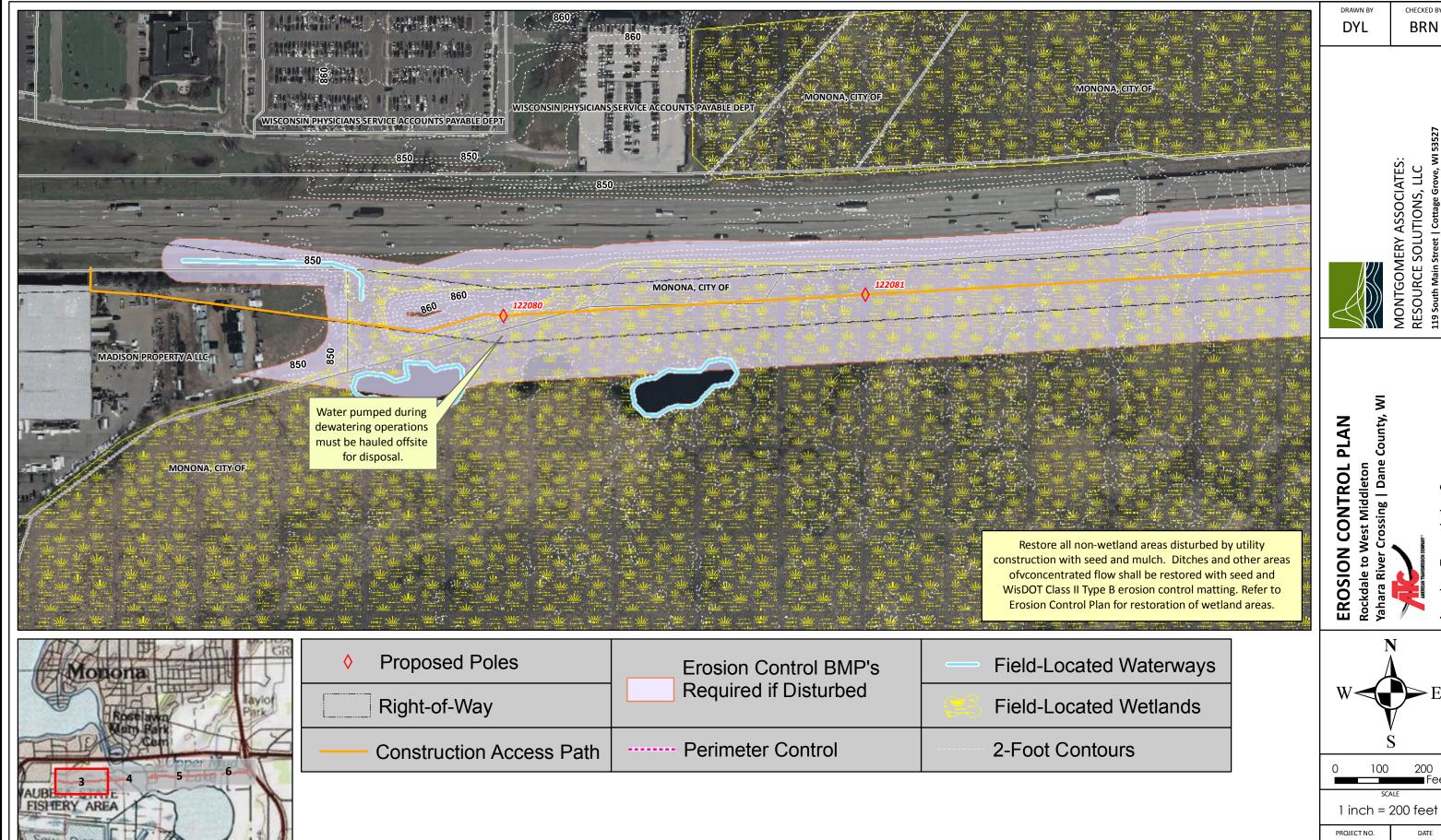












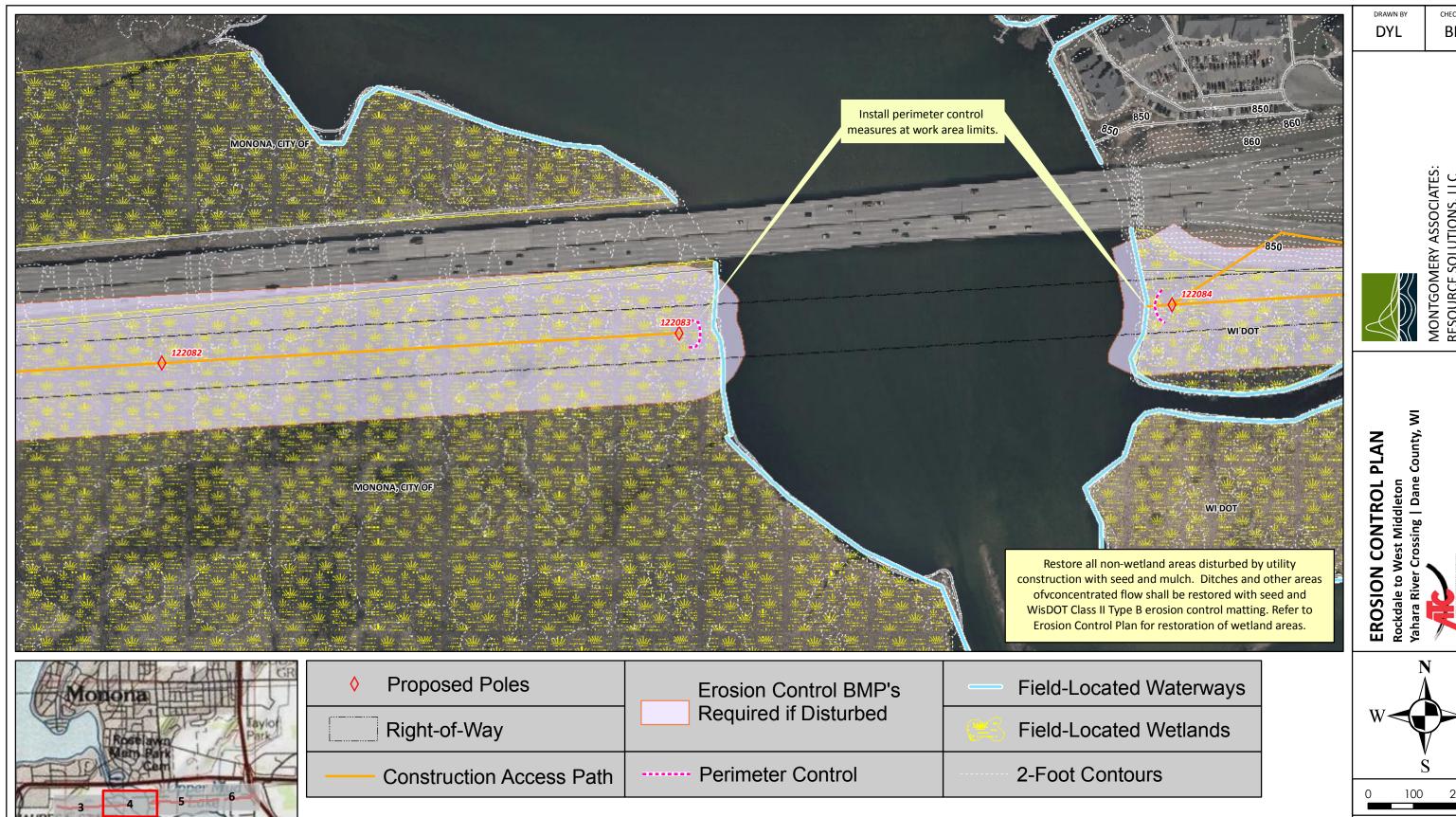
Lake Farm County Park



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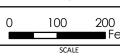




Lake Farm County Park

BRN

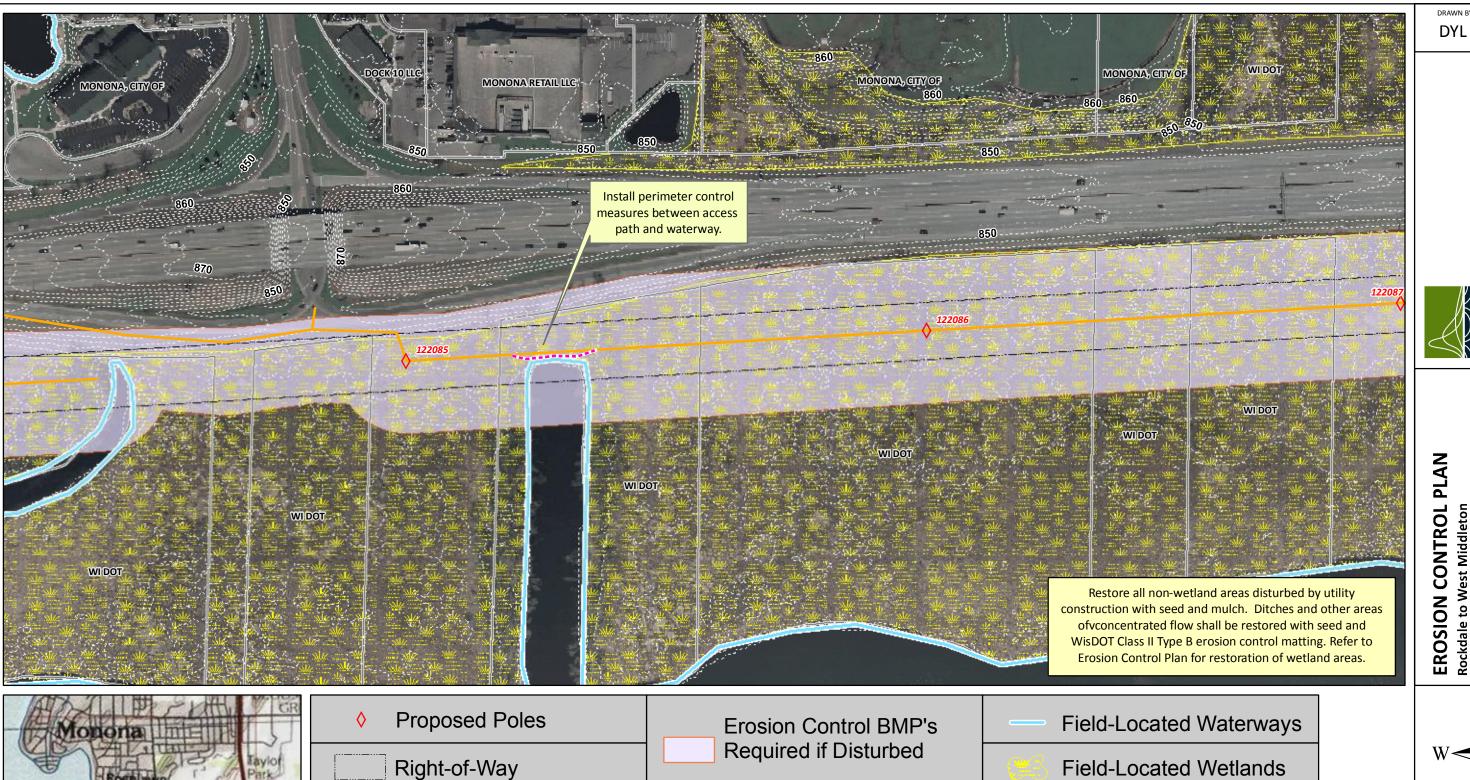




1 inch = 200 feet

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4 of



Perimeter Control

Construction Access Path

Lake Farm County Park EROSION CONTROL PLAN

Rockdale to West Middleton

Vahara River Crossing | Dane County, WI

SCALE

1 inch = 200 feet

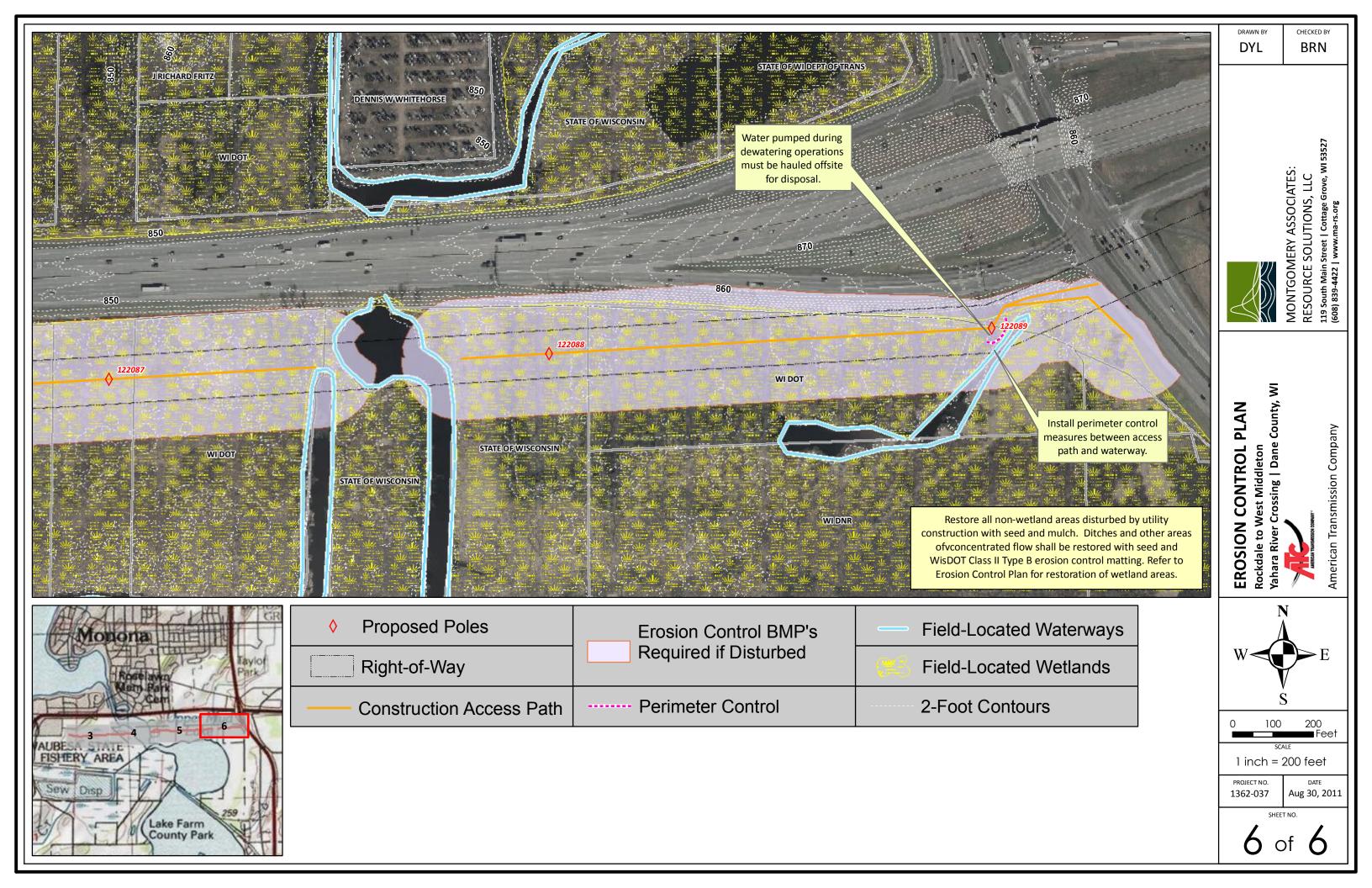
PARE | Dane County, WI

American Transmission Company

5 of

2-Foot Contours

BRN



Yahara River Wetlands, Appendix B

Photographs of Wetlands

Photographs of Yahara River Wetlands



Photo 1. View east near Str. 122081



Photo 3. View west of *Phragmites* between Str. 122081 and 122082



Photo 2. View east near Str. 122082



Photo 4. View south near Str. 122084

Photographs of Yahara River Wetlands



Photo 5. View between Str. 122085 and 122086



Photo 7. View of shallow marsh just west of floodplain forest



Photo 6. View east between Str. 122086 and 122087



Photo 8. View of floodplain forest

Yahara River Wetlands, Appendix C
Wetland Summary Table

Appendix C. Summary of Pre-Construction Characteristics of the Yahara River Wetlands American Transmission Company - Rockdale to West Middleton Project

				Other	
Wetland ID	EAP Map Page	Structures	Community Description	Comments	Photos
H120-W1	H-11 to H-14	122080 - 122089	Shallow marsh occurs west of the Yahara R, dominated by cattail with pockets of <i>Phragmites</i> ; east of the river to the floodplain forest community, this wetland is primarily shallow marsh dominated by cattail with occasional blue-joint grass, lake sedge and reed canary grass (especially at the eastern end); channelized waterways are bordered by trees (e.g., black willow and cottonwood); floodplain forest occurs at eastern end of wetland and is dominated by cottonwood trees with an understory of dense reed canary grass, and orange jewelweed and Virginia creeper		Photos 01 - 08