CATEGORICAL EXCLUSION CHECKLIST

FOR 23 CFR 771.117(c) ACTIONS

Wisconsin Department of Transportation (Revised August 2018)

WisDOT Design and Construction IDs: N/A	Federal Project IDs (if available): N/A	Legal Description (Township, Range, Section): T6N, R20E Sections 27, 32, 33 and 34	County: Waukesha
Project Name: The Great Water Alliance (Program)		Project NEPA/WEPA Terminl/ Location: I-43 ROW and Easements from Racine Ave to 0.5 mi east of Calhoun Rd	
Name of Route or Facility to be Improved: N/A	Facility Classification: N/A	Improvement Type: Utility Installation	
Estimated Project Cost in Year of Expenditure $ (include R/W Cost): N/A		Funding Source(s) (check all that apply): ☒ State ☒ Federal ☒ Local	
23 CFR 771.117(c) Project Type Number and Text: 23 CFR 771.117(c)(2) Approval of utility installations along or across a transportation facility.			
Section 4(f) ☒ No Section 4(f) ☐ Exception to Section 4(f) ☐ De Minimis Section 4(f) ☐ Programmatic Section 4(f) ☐ Full Section 4(f)			
Right-of-Way Acquisition: ☐ Yes, complete boxes below ☒ No right-of-way acquisitions Total Acres Fee Simple Acres Permanent Easement Acres Temporary Easement Acres			
Number of Buildings Acquired: ☒ None Vacant Buildings Occupied Buildings			
Name of Individual/ Firm Preparing this Form TRC	Environmental Process Start Date: 11-6-2018		

WisDOT Region Environmental Coordinator (REC) or Central Office BTS-EPDS Staff:

I certify that I meet the requirements for staff who review and recommend approval of Categorical Exclusion (CE) actions, specified in the FHWA – WisDOT CE Agreement. I further certify that I have reviewed this document, and agree with the determination that the proposed project and resultant impacts meet the definition of a CE as described in 23 CFR 771.117(a) & (b), and will not result in significant environmental impacts. I recommend this CE for approval.

(Signature) Joel R Brown

(Print Name and Affiliation) Joel R Brown BTS-EPDS

(Date) 4/8/2019

WisDOT Region or Central Office Project Manager:

I certify that I am familiar with this proposed project and its impacts and that the information contained in this document is accurate and can be relied upon for documentation decisions. I further certify that the mitigation measures and commitments proposed herein will be incorporated into the project plans and contract documents. I approve this CE.

(Signature) Robert C. Fasick

(Print Name and Affiliation) ROBERT C. FASICK, WISDOT-BTM State ROW Permits Engineer

(Date) 4/8/2019

This template may be used for National Environmental Policy Act (NEPA) documentation and/or Wisconsin Environmental Policy Act (WEPA) CE documentation.

A determination that this project satisfies the criteria for an FHWA (c)-listed Categorical Exclusion (CE) does not relieve the applicant of the requirement to comply with other laws and regulations including, but not limited to, Section 404 of the Clean Water Act, Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, and Section 4(f) of the US Department of Transportation Act. Coordination to comply with these other laws may require FHWA involvement. Furthermore, designation of this project as a (c)-listed CE does not relieve the requirement for WisDOT to coordinate with WDNR under the Cooperative Agreement. Any correspondence or documentation used to comply with Federal, State, or Local laws or regulations should be maintained in the project file and provided with this checklist upon request.

I. Fiscal Constraint

For federally-funded actions, indicate whether the project is included in the most recent version of the WisDOT Statewide Transportation Improvement Program (STIP) or included in a STIP amendment. One of the boxes must be checked.

- [x] The proposed action is not federally funded, a CEC may be completed under WEPA if it meets all other criteria.
- [ ] The proposed action is federally funded and included in the most recent version of the STIP or included in a STIP amendment. Indicate the name of the STIP or STIP amendment, the portion of the proposed project funded and the page number on which the project can be found:

There is federal funding via a WIFIA loan. The project is not a transportation project and not included in a STIP or STIP amendment.

II. Proposed (c)-list Categorical Exclusion 26, 27 or 28

Projects proposed for approval as (c)(26), (c)(27), or (c)(28) actions must not include any of the conditions specified in 23 CFR 771.117(e). Check all boxes that apply to the proposed project. If any boxes are checked, the project cannot be documented with this CEC checklist. Instead, process it with a PCE if it meets the criteria in Section VII of the FHWA – WisDOT CE Agreement. If the action is disqualified by the Section VII criteria, prepare an ER, EA, or EIS, as applicable. If project is being processed as any other (c)-list category skip to question III.

23 CFR 771.117(e) Actions described in (c)(26), (c)(27), and (c)(28) of this section may not be processed as CEs under paragraph (c) if they involve:

- [ ] An acquisition of more than a minor amount of right-of-way or that would result in any residential or non-residential displacements
  *In Wisconsin, a minor amount of right-of-way is defined as fee or PLE acquisition ≤ 1 acre/ mile on average for (c)(26) actions and ≤ 0.5 acre total for (c)(27)&(28) actions.
- [ ] An action that needs a bridge permit from the US Coast Guard
- [ ] An action that does not meet the terms and conditions of a US Army Corps of Engineers nationwide or general permit under Section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act of 1899
- [ ] A finding of "adverse effect" to historic properties under the National Historic Preservation Act
- [ ] The use of a resource protected under 23 USC 138 or 49 USC 303 (Section 4(f)) except for actions resulting in *de minimis* impacts
  *If a project includes a Section 4(f) de minimis determination or programmatic evaluation, the Section 4(f) documentation must be submitted to FHWA for review and approval before final approval of this CE
- [ ] A finding of "may affect, likely to adversely affect" state or federal threatened or endangered species or critical habitat
- [ ] Construction of temporary access, or the closure of existing road, bridge, or ramps, that would result in major traffic disruptions
  *In Wisconsin, projects resulting in major traffic disruptions are those that require a Transportation Management Plan Type 3 or Type 4, as defined in FDM 11-50-5.
- [ ] Changes in access control
  *In Wisconsin, changes in access control are any changes beyond minor longitudinal shifts in existing access. Creation of new access, removal of existing access, or substantial shifts in existing access disqualifies a project from using this checklist.
- [ ] A floodplain encroachment other than functionally dependent uses (e.g., bridges, wetlands) or actions that facilitate open space use (e.g., recreation trails, bicycle and pedestrian paths); construction activities in, across or adjacent to a river component designated or proposed for inclusion in the National System of Wild and Scenic Rivers

III. Description of Purpose and Need, Alternatives Considered and Proposed Action

Provide the project purpose and need, alternatives considered (as needed) and a concise project description below, including the scope of work. Attach a project location map and other appropriate exhibits that are referred to in this document. The description must be consistent with the specific CE listed in Section II, above. The project purpose and need and/or project description should include a brief explanation of the project's NEPA/WEPA logical termini in relation to the project scope, and purpose and need:

The purpose of this portion of the Great Water Alliance Program (Program) is to construct a section of the return flow pipeline that minimizes the hardship for the Waukesha ratepayers; the Waukesha Water Utility; the City of Waukesha; the residents of New Berlin; and the environment, including wetlands, waterways, cultural resources, historical resources, agricultural resources and aesthetics. The portion of the Program evaluated in this CEC is a section of return flow pipeline to be located within or in the area of the I-43 right-of-way from Racine Ave to approximately half a mile east of Calhoun Road, which accounts for approximately 2.4 miles of the overall 23 miles of return flow pipeline. The overall Program purpose is to provide the City of Waukesha with a sustainable supply of clean, safe and economical drinking water.

The need for the return flow pipeline is to maintain an approximately 0% net loss from the Great Lakes Basin following water withdrawal, use and treatment. The withdrawal of water from the Great Lakes is governed by the Great Lakes-St. Lawrence River Basin Water Resources Compact and the Great Lakes St. Lawrence River Basin Sustainable Water Resources Agreement. The Compact Council is formed by the eight Great Lakes Governors. Approval for withdrawal of water from the Great Lakes by a community adjacent to the Great Lakes watershed, but not within the watershed must be approved by Compact Council. The return flow pipeline is needed to meet Compact Council condition that stipulates approximately 100 percent of the water withdrawn must be returned to the Great Lakes Basin. The pipeline alternative within or in the area of the I-43 right-of-way minimizes the project hardship to the Waukesha ratepayers. Furthermore, locating the Return Flow Pipeline within or in the area of the Interstate 43 corridor would minimize impacts to the residents of New Berlin.

The City of Waukesha Water Utility (WWU) provides water treatment and distribution services to a service area that includes the City of Waukesha (Waukesha), and portions of the Town of Waukesha and the City of Pewaukee. The St. Peter Sandstone aquifer, which has been the primary source of drinking water for Waukesha, has been depleted and is contaminated with naturally-occurring radium. Waukesha needs a long-term, sustainable alternative to its existing water supply to protect public health. After study efforts and public engagement, the Great Lakes-St. Lawrence River Basin Water Resources Council (Compact Council) issued its Final Decision unanimously approving Waukesha's Application to source water from Lake Michigan. WWU subsequently commissioned the Great Water Alliance (Program) to transition Waukesha's water supply. As part of the Program, approximately 23-miles of main (referred to as the "Return Flow Pipeline") is required per the Final Decision to achieve a net zero water balance in the Great Lakes–St. Lawrence River Basin by returning highly treated effluent to the Root River, which ultimately discharges into Lake Michigan.

The Return Flow Pipeline will start in the City of Waukesha and will discharge into the Root River in the City of Franklin. Two build alternatives are evaluated in this CEC (Figures 1 and 2 in Appendix A).

Route studies were conducted to identify a preferred route to supply Waukesha with a new, sustainable water supply from a connection to the City of Milwaukee, and a preferred route to return highly treated effluent to Lake Michigan via the Root River. The preferred Return Flow Pipeline route includes approximately two miles within the I-43 ROW. Prior to preparing this CEC, eleven alternative routes of the return line were evaluated based on economic and non-economic evaluation criteria as part of the WisDOT Interstate 43 Hardship Application. The evaluation criteria included pipeline length, maintenance of traffic, easements, wetlands, potential for tree removal, parks and green spaces, stakeholder challenges, and cost. The primary and secondary preferred route alternatives were the route alternative utilizing I-43 ROW and the route alternative utilizing easements adjacent to the I-43 ROW. A comparison summary matrix of the alternatives follows this checklist, and further information on the route alternatives is found in the WisDOT Interstate 43 Hardship application.

In order to minimize maintenance requirements, the Return Flow Pipeline is designed per American Water Works Association (AWWA) Standards. Design provisions in excess of AWWA Standards are being implemented to provide for a 100-year service life. Key provisions include:

1) The Return Flow Pipeline would be designed with Standard Pressure Class 150 ductile iron pipe (DIP) within the I-43 ROW. The maximum normal operating pressure for the Return Flow Pipeline within the I-43 ROW would be approximately 80-pounds per square inch (psi). DIP is manufactured with a net thickness based on two times the maximum normal operating pressure with a 100 psi surge allowance, as per AWWA standard C150, or to an effective maximum pressure of 500 psi. A Standard Pressure Class 150 DIP would provide the Return Flow Pipeline with a minimum factor of safety on pressure within the I-43 ROW of approximately 6.25.

2) Corrosion is a common mechanism that can reduce the service life of any metallic pipe, including DIP. The Return Flow Pipeline will include provisions for corrosion control in excess of AWWA standards to mitigate the potential for corrosion. Key provisions for minimization of corrosion are that AWWA standard C105 requires a single layer of polyethylene encasement to protect against soil and groundwater induced corrosion. The Return Flow Pipeline will be

fitted with two layers of polyethylene encasement. The inner layer will consist of V-bio® Enhanced Polyethylene Encasement, which includes a biological layer to mitigate corrosion derived from any soil and/or groundwater that could have migrated into the annular space between the outside of the DIP and the V-bio® Enhanced Polyethylene Encasement during installation. The outer layer will consist of standard polyethylene encasement required by AWWA C105. The Return Flow Pipeline will be fitted with buried sacrificial magnesium anodes. In the presence of corrosion mechanisms, magnesium corrodes preferentially to iron. Should the two layers of polyethylene encasement become locally compromised, the magnesium anodes will corrode preferentially to the DIP. Sacrificial anodes are not required per AWWA standards.

The Return Flow Pipeline will be installed with bonded DIP joints and test stations. The test stations will be used during the life of the pipeline to monitor for readings that could indicate corrosion. If any readings demonstrate corrosive signatures, the pipeline would be uncovered and inspected, and efforts implemented to mitigate corrosion.

The bonded joints, test stations, second polyethylene encasement and magnesium anodes are design features not required per AWWA standards that will be implemented to provide for a 100-year service life.

Construction in accordance with the described provisions will serve to reduce the likelihood that the Return Flow Pipeline will require maintenance during operations. The potential for failure or breakage that would require future maintenance; however, cannot be completely eliminated. Provisions for future maintenance are being incorporated into the Program contract documents. These provisions include that a flow or pressure measurement device would be provided downstream from the I-43 ROW to monitor for a break or leak. The measuring device will be connected to the Return Flow Pumping Station (RFPS) for monitoring. Buried isolation valves will be located along the pipeline so that segments requiring maintenance can be hydraulically isolated. Buried blow-off assemblies, which are discharge lines attached to the pipeline through valves, will be located between isolation valves at low points along the pipeline so that segments requiring maintenance can be drained.

In the unlikely event of pipe breakage of failure, the flow or pressure measurement device will sense a break or leak and signal pumps at the RFPS to turnoff. The pressure along the pipeline will subsequently dissipate to static conditions as the isolation valves upstream and downstream of the break or leak are closed. The pipeline will be drained through the local blow-off assembly in accordance with applicable requirements. The pipeline would then be repaired in a timely manner in coordination and accordance with the requirements of the local authority(ies) having jurisdiction, including WisDOT. Additional measures are described in the WisDOT Interstate 43 Hardship Application. A risk failure analysis is also included in the Hardship Application.

Future interstate maintenance and expansion within the I-43 ROW were reviewed as provided by the Wisconsin Department of Transportation (WisDOT) and Southeastern Wisconsin Regional Planning Commission (SEWRPC). The WisDOT Improvement Program Southeast Region 2019-2023 and the SEWRPC Vision 2050 were evaluated. Details of the review are in the WisDOT Interstate 43 Hardship Application. Based on the review, the Return Flow Pipeline would be compatible with current I-43 maintenance and expansion plans. The Program would coordinate with WisDOT regarding the 2018 bridge improvements so that the Return Flow Pipeline design accommodates for the improvements.

The pipeline would not be affected by the I-43 expansion identified in the SEWRPC Vision 2050 given its proposed pipeline alignment 66-feet from the northern edge of pavement. An additional five to six westbound lanes would be required in order for the pipeline to be located beneath pavement. The potential for this magnitude of expansion was discussed during the WWU Interstate 43 Hardship Application meeting with the members of the Program, Wisconsin Department of Natural Resources (WDNR), Public Service Commission (PSC), WisDOT, and Federal Highway Administration (FHWA) on October 23, 2018. WisDOT indicated this level of expansion is unlikely. In the unlikely event the road was to expand to a point where the Return Flow Pipeline would be located beneath pavement, the pipeline bedding and DIP system would be sufficient to accommodate an HS-20 loading per the American Association of State Highway Transportation Officials (AASHTO).

If future highway expansion was to ever require relocation of the Return Flow Pipeline located within the I-43 ROW, the pipeline would be abandoned in-place and a new segment constructed and paid for by WWU. Construction of the new segment of Return Flow Pipeline would occur while the existing segment was in service. A shutdown of the Return Flow Pipeline would occur to accommodate the tie-in with the new Return Flow Pipeline segment and the abandonment of the existing segment. The relocation is not anticipated to be prohibitive under the provisions approved by the Compact Council.

IV. Project is a Complete FHWA Action

Check all boxes that apply to the proposed project. To process your project with this checklist, you must be able to check either boxes 1-3 or the last box. If you are unable to check either boxes 1-3 or the last box in this section you cannot complete this document and must reassess the project scope to meet the criteria. Proposed projects being developed under WEPA must also meet these criteria.

23 CFR 771.111(f) To ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated shall:

- ☒ (1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope
- ☒ (2) Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made
- ☒ (3) Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements
- ☐ Project is not an action resulting in construction and does not require compliance with (1-3) above

V. Categorical Exclusion Definition

Check all boxes that apply to the proposed project. If you are unable to check a box in this section you cannot use any CE documentation, prepare an EA or EIS. Proposed projects being developed under WEPA must also meet these criteria. 23 CFR 771.117(a) Categorical exclusions (CEs) are actions which, based on experience with similar actions, do not involve significant environmental impacts. They are actions which:

- ☒ Do not induce significant impacts to planned growth or land use for the area
- ☒ Do not require the relocation of significant numbers of people
- ☒ Do not have a significant impact on any natural, cultural, recreational, historic or other resource
- ☒ Do not involve significant air, noise, or water quality impacts
- ☒ Do not have significant impacts on travel patterns
- ☒ Do not otherwise, either individually or cumulatively, have any significant environmental impacts

VI. Unusual Circumstances

Check all boxes that apply to the proposed project. If any boxes in this section are checked, you cannot use the CEC template, discuss with the REC or EPDS or FHWA to identify the appropriate level of documentation. Proposed projects being developed under WEPA must also meet these criteria.

23 CFR 771.117(b) Any action which normally would be classified as a CE but could involve unusual circumstances will require the FHWA, in cooperation with the applicant, to conduct appropriate environmental studies to determine if the CE classification is proper. Such unusual circumstances include:

- ☐ Significant environmental impacts
- ☐ Substantial controversy on environmental grounds
- ☐ Significant impact on properties protected by Section 4(f) of the DOT Act or Section 106 of the National Historic Preservation Act (not required for WEPA document, consult with REC or EPDS for requirements)
- ☐ Inconsistencies with any Federal, State, or local law, requirement or administrative determination relating to the environmental aspects of the action
- ☐ Other unusual circumstances not listed in FHWA regulations (describe below)
  (*In Wisconsin, auxiliary lane and capacity expansion projects that are proposed for processing with this checklist are examples of unique or unusual circumstances and will require consultation with FHWA before proceeding with the project*.)

Describe any unique or unusual circumstances and subsequent coordination with FHWA or BTS-EPDS:

VII. Tribal Lands

For projects, regardless of project type, located partially or entirely on Tribal lands in trust, allotted, or reservation status, WisDOT Region and Local Program staff shall consult with WisDOT EPDS staff prior to preparing CEC documentation. In certain cases, the involvement of Tribal land may warrant preparing higher level environmental documentation (e.g. ER instead of CEC) than what is normally required by the FHWA–WisDOT CE Agreement. WisDOT TSS-EPDS Staff will ensure adequate Tribal consultation by WisDOT and engage FHWA in consultation when necessary. Describe any Tribal coordination (enter "N/A" if project is not on tribal lands):

N/A

For the entire Program, the Tribal notification letters were mailed on December 12, 2017. The Program notification letters in are Appendix C.

VIII. Agency/Local Unit of Government Coordination and Public Involvement

Provide a brief description of coordination conducted with agencies and local unit(s) of government. Describe any unresolved issues and how they will be resolved. Attach evidence of agency and local unit of government coordination as applicable:

Coordination meetings with municipalities affected by the pipeline have occurred and are ongoing. The City of New Berlin is the community most affected by this segmant of the ReturnFlow Pipeline. Coordination meetings with New Berlin Mayor and New Berlin Public Works staff were held on: June 29, 2017; August 30, 2017; February 15, 2018; February 22, 2018; June 27, 2018; July 18, 2018; and September 26, 2018 to solicit feedback on route placement and public concerns. A full list of public meetings to date is found in Section 1 of the Hardship Application. WDNR held three public scoping meetings on July 26, 27, and 28, 2011, in the City of Pewaukee, the City of Wauwatosa, and the Village of Sturtevant, respectively. The purpose of the public scoping meetings were to give WDNR an opportunity to gauge public sentiment towards the Program. WDNR received 102 public scoping comments during the three scoping meetings. WDNR prepared a draft environmental impact statement (EIS) and invited the public to comment on it between June 25 and August 28, 2015. During the comment period, WDNR received 3,634 written comments from individuals and groups. Prior to submitting the Diversion Application to the Compact Council in January 2016, WDNR conducted two sets of public hearings and two public comment periods. Additionally, comments were received at three public hearings on August 17 and 18, 2015, in the City of Waukesha, the City of Milwaukee, and the City of Racine. The purpose of the hearings and comment periods were to allow the public to share their comments and concerns on the Diversion Application directly with WDNR. Of the 404 people who registered at the hearings, 128 provided oral testimony. Received written and oral comments and WDNR's corresponding responses are summarized in WDNR's Preliminary Final Environmental Impact Statement. The Compact Council received the Diversion Application on January 7, 2016, and held a public comment period from January 12, to March 14, 2016. The public comment period allowed the public to share their comments and concerns on the Diversion Application directly with the Compact Council. The Compact Council also notified the U.S. Tribes and Canadian First Nations of the Diversion Application and requested their comments in order to gauge tribal sentiment towards the Program. A public meeting and hearing was held on February 18, 2016. In all, over 11,000 public comments were received. The Compact Council created a website to keep the public informed of meetings, documents received, and findings of the Compact Council. Representatives from the Program have held over 30 meetings with state regulatory agencies in Wisconsin, as of July 11, 2018. Representatives from the Program shared the Program's purpose, scope, proposed designs, and proposed pipeline alignment in these meetings. Also, in these meetings, the representatives from the regulatory agencies shared details regarding the timing, the review process, key issues, and their concerns. These state regulatory agencies include the Wisconsin PSC, the WDNR, WisDOT, and the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP). Program representatives held: one meeting and one phone call with the WDNR Leadership to introduce the Program; six with WDNR staff to review the standards and permits required for construction; numerous meetings with the WDNR staff to discuss the Wisconsin Pollutant Discharge Elimination System (WPDES) permit application for the Clean Water Plant (CWP); four with the WDNR, PSC, and the United States Army Corps of Engineers (USACE) staff to discuss the PSC Application, and the

Chapter 30 and Section 404 Wetlands and Waterways applications; four with PSC and WDNR to discuss the Environmental Impact Statement; two with WisDOT staff to discuss utilizing WisDOT ROWs; one with the WDNR staff to discuss nuances and timing for applications to the State Revolving Fund (SRF); four with the WDNR staff to discuss soil and groundwater management; and two with DATCP to discuss the Agricultural Impact Statement (AIS). WDNR requested that impacts to forests, wetlands, waterways, and endangered species be minimized in the pipeline route selection. The pipeline routes were selected to minimize environmental impacts. Trenchless crossing methods will be used to minimize impacts to waterways.

Provide a brief discussion of public involvement efforts. Describe any concerns expressed, how those concerns were resolved and how any unresolved concerns will be resolved:

Public involvement has been completed as part of the Program. Public outreach for the Program has been conducted by WWU since the development of the Diversion Application. From 2006 until the Diversion Application was submitted in January 2016, WWU, WDNR and the Program held over 100 meetings open to the public to discuss the plan to request a Great Lakes Diversion. Appendix G of the second volume of the Diversion Application documents the comments received during public information meetings that occurred prior to the Diversion Application submission as well as the Program's responses. The Program held focus group discussions in December 2016. The focus groups were comprised of community members of Waukesha, Franklin, Muskego, New Berlin, Racine, and Milwaukee. Stakeholder interviews were held by the Program in November and December 2016 and January and February 2017. The interviews were conducted with residents of Waukesha, and the surrounding communities of New Berlin, Muskego, Franklin, Oak Creek, and Racine. The stakeholder interviews were in-depth interviews conducted in person or by phone. Open House Meetings were held in municipalities which would be traversed by the pipleines. The dates and locations of the Open House Meetings were as follows: June 27, 2017 – City of Franklin; June 28, 2017 – City of Muskego; June 29, 2017 – New Berlin; September 6, 2017 – Waukesha; November 28, 2017 – Waukesha; November 29, 2017 – Waukesha; November 30, 2017 – Waukesha; February 12, 2018 – City of West Allis; February 14, 2018 – City of Greenfield; February 15, 2018 – New Berlin; and April 4, 2018 – Milwaukee.

There is a negative public perception associated with exercising eminent domain, especially in New Berlin, a community with residents who will not benefit from the Program. For this reason, easements were avoided when feasible. To address local concerns segments of the pipeline were designated as trenchless construction to mitigate surface disruption. The Program is endeavoring to maintain good relationships with the neighboring communities who are impacted during the construction of the infrastructure to serve the community of Waukesha.

The public did not voice any concern about the I-43 ROW during any of the Open House Meetings held within New Berlin or at other communities. The public did express concerns at Open House Meetings about every other route alternative in existing east-west right-of-ways described in the Hardship Application due to traffic and construction impacts.

IX. Air Quality

Projects must be consistent with the State Implementation Plan (SIP) for air quality. Projects in air quality nonattainment and maintenance areas must be demonstrated to conform to the SIP. Check the appropriate box and proceed accordingly.

- ☐ The project is in an area designated as attainment for all transportation-related criteria air pollutants. The project is not subject to transportation conformity requirements. No further analysis is required.
- ☐ The project is in an area designated as nonattainment or maintenance for one or more transportation-related criteria air pollutants. Proceed with the following analyses for regional and project level transportation conformity.

Regional Conformity

Regional conformity is required for projects in counties designated as nonattainment or maintenance for ozone or $PM_{2.5}$. If the project occurs in a nonattainment/maintenance county or area, check the appropriate box and include appropriate documentation in the appendix (if needed).

- ☐ The project is exempt from conformity per 40 CFR 93.126 or is a traffic signal synchronization project under 40 CFR 93.128. No further analysis is needed.
- ☐ The project is exempt from regional emissions analysis requirements per 40 CFR 93.127.
- ☐ The project is located within a Metropolitan Planning Area and included in the current approved Metropolitan Planning Organization (MPO) Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). The RTP and TIP were determined to conform by FHWA and FTA. Provide the MPO name, RTP name, TIP name and TIP number. The MPO name, RTP name, TIP name and TIP number should be provided in the box below and must be included if this box is checked:
- ☐ The project is located outside of a Metropolitan Planning Organization's boundaries and has received a conformity determination by FHWA per the rural conformity section of the WisDOT/WDNR Memorandum of Agreement. Provide conformity finding dates:
- ☐ The project is non-conforming – project is ineligible for CEC.

Project Level Conformity

Projects in fine particulate matter ($PM_{2.5}$) nonattainment and maintenance areas are also subject to $PM_{2.5}$ project hot spot conformity requirements. A $PM_{2.5}$ hot spot analysis is required to support a project level conformity determination for projects of local air quality concern. A determination of local air quality concern is made by the Wisconsin Transportation Conformity Working Group (WTCWG).

- ☐ The project is <u>not</u> located in a $PM_{2.5}$ nonattainment or maintenance area. No further analysis is required.
- ☐ The project is exempt from conformity per 40 CFR 93.126 or is a traffic signal synchronization project under 40 CFR 93.128. No further analysis is needed.
- ☐ The project has been screened in accordance with the WisDOT Project Level Conformity $PM_{2.5}$ Screening Checklist and (check one of the following as applicable):
  - ☐ Determined not to be a project of local air quality concern. Include the screening checklist in the appendix.
  - ☐ Referred to interagency consultation with the WTCWG resulting in a determination that the action **<u>is not</u>** a project of local air quality concern. Include the project analysis and WTCWG determination in the appendix.
  - ☐ Referred to interagency consultation with the WTCWG resulting in a determination that the action **<u>is</u>** a project of local air quality concern – project is ineligible for PCE.

X. Environmental Factors Matrix (check all that apply)

Factors	Adverse	Benefit	None Identified	Factor Sheet Attached	Note: If the effects on the environmental factor can't be adequately summarized in several sentences, the Factor Sheet must be included. **Effects**
Business & Economics	☒	☐	☒	☐	There will be no permanent business and/or economic impacts as a result of the construction of either build alternative (i.e. ROW Alternative and Easement Alternative). The ROW Alternative is fully within the existing I-43 ROW and no impacts are expected. The Easement Alternative could temporarily adversely affect a local produce farm and associated farm stand. It is anticipated that there will be temporary benefits with both build alternatives for the local businesses and the local economy due to the construction crew utilizing local restaurants and facilities.
Community	☐	☒	☒	☐	There will be no permanent impacts to the community as a result of the construction of either build alternative. No public facilities or services will be impacted as a result of the construction of either build alternative. The ROW Alternative will not cause any road closures, and all construction will be temporary. In addition, the ROW Alternative is fully within the existing I-43 ROW. There may be temporary lane closures along S. Racine Ct and S. Martin Road for the Easement

					Alternative for construction in the adjacent ROW. All construction impacts from the Easement Alternative will be temporary.
Aesthetics	☐	☐	☒	☐	The ROW Alternative is within the existing I-43 ROW which is regularly maintained, therefore there is no effect identified. There is a potential for minimal tree clearing to occur with the Easement Alternative, adjacent to the road ROW. However, this minimal tree clearing should not significantly affect the viewshed of landowners. A buffer will remain between the residences and I-43.
Agriculture	☒	☐	☒	☐	The ROW Alternative does not impact any agricultural lands within the I-43 ROW (Figure 3 in Appendix A). In addition, the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) is reviewing an Agricultural Impact Statement for the overall Program, which includes the ROW described in this CEC. The Easement Alternative has temporary impacts to agricultural lands. Particularly, a local produce farm whose access road may be temporarily affected during construction. These impacts are minor and temporary and will not result in the conversion of any agricultural lands.
Relocations	☐	☐	☒	☐	No relocations will be necessary as a result of the ROW Alternative or Easement Alternative for this Project, therefore no impact as a result of relocations has been identified.
Indirect Impacts	☐	☐	☒		The ROW Alternative and the Easement Alternative are unlikely to result in indirect effects from the aspects of the project described in this environmental document.
Cumulative Impacts	☐	☐	☒		The ROW Alternative and the Easement Alternative are unlikely to result in cumulative effects from the aspects of the project described in this environmental document. Cumulative impacts of the Program have been addressed in the EIS for WEPA compliance. See the EIS for details.
Environmental Justice & Title VI	☐	☐	☒	☐	The ROW Alternative is within the existing I-43 ROW and therefore no low income or minority population is present. No minority or low income populations have been identified within either build alternative that would be adversely impacted by the proposed Project. The poverty rate in the City of New Berlin is lower than that of Waukesha County and the State of Wisconsin. In addition, the percentage of minority populations is also lower in the City of New Berlin than that of Waukesha County and the State of Wisconsin.
Historic Properties/ Cultural Resources	☐	☐	☒	☐	Cultural resources were not identified within the ROW Alternative. One cultural resource, Sunny Side Cemetery, was identified within the Easement Alternative. Sunny Side Cemetery is not listed on the National Register of Historic Places; however, it is an official City of New Berlin landmark. The State Historical Preservation Officer concurred that there were no historic or archeological properties in the area of potential effects (Section 106 Review Form is in Appendix B). A list of tribal notifications, example tribal notificaiton letter and response email are in Appendix C.

Section 4(f)	☐	☐	☒	☐	The project is a utility project and Section 4(f) does not apply. Overall, no Section 4(f) impact is expected for either build alternative.
Section 6(f) or other special funding	☐	☐	☒	☐	No properties were identified in the project area.
Wetlands	☒	☐	☐	☒	There are no wetland fills planned in either alternative. The impacts to wetlands from construction would be temporary. There would be 2.08 acres in the ROW Alternative and 3.35 acres in the Easement Alternative. See Figure 5 in Appendix A. Factor sheets are attached.
Rivers, Streams and Floodplains	☒	☐	☐	☒	Impacts to rivers, streams and floodplains are temporary. See Figure 5 in Appendix A. Factor sheets are attached.
Lakes or Other Open Water	☐	☐	☒	☐	There are no lakes or open water located within the ROW Alternative. A pond is located within the Easement Alternative approximately 50 feet to the east of Muskego Creek. Horizontal directional drilling (HDD) would be used to install the pipeline beneath Muskego Creek. The pipeline would be installed beneath the creek and pond in the same effort and as a result there would not be impacts to the pond.
Groundwater, Wells, and Springs	☐	☒	☐	☐	The overall Program will be beneficial to the groundwater levels in the vicinity of the City of Waukesha because of the decrease in water withdrawal from the aquifers beneath the city. It is anticipated that there may be minor dewatering efforts during construction. Management of the water from construction dewatering will be addressed in the Environmental Construction Plan. There are no wells located within the area of the ROW Alternative. One private supply was identified as possibly located within the area of the Easement Alternative at 5865 S. Martin Road. The well pumps water from a bedrock aquifer from 59 to 100 feet at depth. And as such, is not anticipated to be impacted. No springs (> 1.0 CFS) were inventoried by the Wisconsin Natural History and Geological Survey in the ROW or Easements.
Unique Wildlife and Habitat Concerns	☐	☐	☒		Unique wildlife and habitat concerns were not identified for either of the build alternatives.
Coastal Zones	☐	☐	☒	☐	Both build alternatives are located in Waukesha County, which has tributaries within the Great Lakes Watershed. There will be no coastal zone impacts resulting from either alternative.
Threatened and/or Endangered Species	☐	☐	☐	☒	Impacts to threatened and endangered species are not anticipated from either build alternatives. Factor sheets are attached.
Air Quality	☐	☐	☒	☐	The project is not a transportation project and will have no permanent impact of air quality.
Construction Stage Sound Quality	☒	☐	☐	☐	Two single family residences were identified within 100 feet of the ROW Alternative. Three single family residences were identified within 100 feet of the Easement Alternative. These residences potentially may expericence temporary construction noise impacts during pipeline installation. Following WisDOT Standard Specifications 107.8(6), the

					proposed project will comply with local ordinances governing the hours for operation of construction equipment.
Traffic Noise	☐	☐	☒	☐	A detailed noise analysis is not required.
Hazardous Substances or Contamination	☐	☐	☒	☐	No hazardous substance or contamination concerns were identified for either build alternative in the Contaminated Materials Technical Memoradum for the overall Program.
Stormwater	☐	☐	☒	☐	There will be no impacts with either build alternative as there will be no change to the current stormwater system. See Erosion and Sediment Control Plan note regarding stormwater.
Erosion and Sediment Control	☐	☐	☒	☐	There will be no impacts by either build alternative. An Erosion and Sediment Control Plan per the most recent requirements of NR 216.46 of the Wisconsin Pollution Discharge Elimination System will be prepared and submitted and Wisconsin's Best Management Practices (BMPs). This plan will include sediment and erosion controls for work near roadside drainage ditches. In addition, necessary steps will be taken to prevent soil from getting into nearby waterways by protecting excavated areas with silt fence, hay bales, or other erosion control devices. The limits of construction for either build alternative will be located wholly beyond pavement of I-43, some of the north-south roads are in the LOC for both alternatives, therefore dirt and debris will not be tracked on I-43. In addition, site reporting and monitoring will comprise of recurring site reports including weekly inspections or after every 0.5-inch rain event.
OTHER FACTORS					
	☐	☐	☐	☐	
	☐	☐	☐	☐	

XI. Supporting Documentation

List additional discussion, agency correspondence, or supporting documentation used in this CE determination that was not covered in the previous question or in an attached Factor Sheet. Projects with Section 4(f) *de minimis* determinations or programmatic evaluations will require review by BTS-EPDS and review and approval by FHWA prior to the approval of this CE. Attach necessary documentation to this checklist and maintain a copy in the project file:

Additional information on construction methods, pipeline operation and maintenance, alternative route characteristics, and alternatives not evaluated in this CEC can be found in the Interstate 43 Hardship Application.

XII. Mitigation & Commitments

List any environmental mitigation measures or commitments that will be incorporated into the project. Any items listed below must be incorporated into the project plans and contract documents. *Attach a copy of this page to the design study report (DSR) and the plans, specifications, and estimate (PS&E) submittal package.*

Attach a copy of this page to the design study report and the PS&E submittal package.

Environmental Factor	**Commitment (If none, include 'No special or supplemental commitments required.')**
Business and Economics	No special or supplemental commitments required.
Community	No special or supplemental commitments required.
Aesthetics	Wherever possible, tree clearing will be limited.
Agriculture	No special or supplemental commitments required.
Relocations	No special or supplemental commitments required.
Indirect Impacts	No special or supplemental commitments required.
Cumulative Impacts	No special or supplemental commitments required.
Environmental Justice and Title VI	No special or supplemental commitments required.
Historic Properties/Cultural Resources	Any work within the burial site boundaries must be coordinated with the Wisconsin Historical Society per Wi. Stat. 157.70.
Tribal Lands	No special or supplemental commitments required.
Section 4(f)	No special or supplemental commitments required.
Section 6(f) or Other Specially Funded Lands	No special or supplemental commitments required.
Wetlands	Pipeline installation through wetlands will conform to appropriate sediment and erosion control measures throughout construction, and BMPs for stormwater management and erosion control will be utilized. BMPs will be installed and maintained at the construction sites to minimize impacts of runoff to surrounding properties and resource areas. Stormwater management and erosion control requirements, as set forth by the WDNR within NR 216 and NR 151 and in support of NR 103, will be followed by the Program. Wetland restoration would comply with conditions specified in the ACOE and WDNR permit approvals. It is anticipated that the construction in the wetlands would require USACE Section 404 Wetland and Waterway Individual Permit, WDNR Wetland and Waterway Impact Individual Permits, WDNR (WPDES) Construction Site Stormwater Runoff General Permits, WDNR Pit/Trench Dewatering General Permit (WPDES), and WDNR Stormwater Management and Erosion Control Plan (Water Resources Application for Project Permits).
Rivers, Streams and Floodplains	Trenchless installation methods would be used to install the pipeline beneath Muskego Creek. In other waterways where trenchless methods are not practicable, the program would use trench methods in compliance with WisDOT FDM, Federal and State erosional control regulations and guidelines. Grades of waterways would be restored to preconstruction elevations. Stream restoration would comply with conditions specified in the WDNR permit approvals.
Lakes or other Open Water	No special or supplemental commitments required.
Groundwater, Wells and Springs	No special or supplemental commitments required.

Unique Wildlife and Habitat Concerns	No special or supplemental commitments required.
Coastal Zones	No special or supplemental commitments required.
Threatened and/or Endangered Species	Trenchless construction methods will be used at the Muskego Creek crossings to mitigate impacts to threatened and/or endanagered species.
Air Quality	The project is not a transportation project and no special or supplemental commitments required.
Construction Stage Sound Quality	WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply.
Traffic Noise	No special or supplemental commitments required.
Hazardous Substances or Contamination	No special or supplemental commitments required.
Storm Water	For the Program, appropriate sediment and erosion control measures will be implemented throughout construction, and BMPs for stormwater management and erosion control will be utilized. BMPs will be installed and maintained at the construction sites to minimize impacts of runoff to surrounding properties and resource areas. Stormwater management and erosion control requirements, as set forth by the WisDOT FDM, the WDNR within NR 216 and NR 151 and in support of NR 103, will be followed by the Program.
Erosion Control	For the Program, appropriate sediment and erosion control measures will be implemented throughout construction, and BMPs for stormwater management and erosion control will be utilized. BMPs will be installed and maintained at the construction sites to minimize impacts of runoff to surrounding properties and resource areas. Stormwater management and erosion control requirements, as set forth by the WisDOT FDM, the WDNR within NR 216 and NR 151 and in support of NR 103, will be followed by the Program.
Other:	
Other:	

BASIC SHEET 6 – ALTERNATIVES COMPARISON MATRIX

All estimates including costs are based on conditions described in this document at the time of preparation in the year of expenditure (YOE). Additional agency or public involvement may change these estimates in the future.

		Alternatives/Sections					
PROJECT PARAMETERS	**Unit of Measure**	**No Build[1]**	ROW	Easement			
Project Length	Miles	N/A	2.42	2.29			
PRELIMINARY COST ESTIMATE (YOE)							
Construction	Million $						
Real Estate	Million $						
TOTAL	Million $	$0	$26.7 M	$29.5 M			
LAND CONVERSIONS							
Total Area Converted to ROW	Acres	0	0	0			
REAL ESTATE							
Number of Farms Affected	Number	0	0	3			
Total Area Required From Farm Operations	Acres	0	0 Within the ROW	8.1 Temporary Impacts			
AIS Required		☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Farmland Rating	Score	N/A	N/A	N/A			
Total Buildings Required	Number	0	0	0			
Housing Units Required	Number	0	0	0			
Commercial Units Required	Number	0	0	0			
Other Buildings or Structures Required	Number & Type	0	0	0			
ENVIRONMENTAL FACTORS							
Indirect Effects		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Cumulative Effects		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Environmental Justice Populations		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
National Register Eligible Historic Structures in the Area of Potential Effect	Number	0	0	0			
National Register Eligible Archeological Sites in the Area of Potential Effect	Number	0	0	0			
Burial Site Protection *(authorization required)*		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
106 MOA Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Section 4(f) Evaluation Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Section 6(f) Land Conversion Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Flood Plain		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Unique Upland Habitat Identified		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Total Wetlands Filled	Acres	0	2.21 Temporary Impacts	3.36 Temporary Impacts			
Stream Crossings	Number	0	2 Temporary Impacts	6 Temporary Impacts			
Threatened/Endangered Species		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Noise Analysis Required Receptors Impacted	Number	☐ Yes ☒ No N/A	☐ Yes ☒ No N/A	☐ Yes ☒ No N/A	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Contaminated Sites	Number	0	0	0			

[1]The estimated cost of routine maintenance through the design year should be included in the "Construction" box for the No Build alternative.

Factor Sheet C-1

Alternative Right-of-Way	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☒ Yes ☐ No ☐ None identified	

1. Describe Wetlands: **WETLAND DETAILS ARE IN THE TABLE FOLLOWING THIS FACTOR SHEET**

	Wetland 1		Wetland 2		Wetland 3	
Name (if known) or wetland number[1]						
County						
Location (Section-Township-Range)						
Location (Latitude)						
Location (Longitude)						
Location Map						
Wetland Type(s)[2]						
Temporary Wetland Impact						
Wetland is: (Check all that apply)[3]						
• **Isolated from stream, lake or other surface water body**						
• **Not contiguous (in contact with) a stream, lake, or other water body, but within 100-year floodplain**						
• **If adjacent or contiguous, identify stream, lake or water body**						

[1]Use wetland numbering from the project wetland delineation report.
[2]Use wetland types as specified in the "*WisDOT FDM 24-5 Attachment 10.2 Wetland Type Correspondence Table*"
[3]If wetland is contiguous to a stream, complete Factor Sheet C-2, Rivers, Streams and Floodplains Impact Evaluation. If wetland is contiguous to a lake or other water body, complete Factor Sheet C-3, Lake or Water Body Impact Evaluation.

2. Are any impacted wetlands considered "wetlands of special status" per WisDOT Wetland Mitigation Banking Technical Guideline, page 10 (6 categories)?

☐ No
☒ Yes:
- ☐ Advanced Identification Program (ADID) Wetlands
- ☐ Public or private expenditure has been made to restore, protect, or ecologically manage the wetland on either public or private land
- ☒ Other – Describe: R-W34 immediately adjacent to Muskego Creek has a floodplain forest plant community.

3. Describe proposed work in the wetland(s), e.g., excavation, fill, marsh disposal, other:

The Return Flow Pipeline will be installed through wetlands. This would result in cutting a trench to install the pipeline, grading, and construction access to workspace. Temporary impacts to wetlands would be restored following installation. Temporary impacts to wooded wetlands will result in conversion to herbaceous wetlands.

4. List any observed or expected waterfowl and wildlife inhabiting or dependent upon the wetland: (List should include permanent, migratory and seasonal residents).

No waterfowl or wildlife was observed. However, typical wetland inhabitants are expected to be migratory or seasonal residents such as small mammals, deer, birds, and waterfowl. Amphibians and reptiles may be more permanent residents.

5. **Federal Highway Administration (FHWA) Wetland Policy:**

☒ Not Applicable - Explain
The project is a utility project.

☐ Individual Wetland Finding Required - Summarize why there are no practicable alternatives to the use of the wetland.

☐ Statewide Wetland Finding: **NOTE: All three boxes below must be checked for the Statewide Wetland Finding to apply.**

- ☐ Project is either a bridge replacement or other reconstruction within 0.3 mile of the existing location.
- ☐ The project requires the use of 7.4 acres or less of wetlands.
- ☐ The project has been coordinated with the DNR and there have been no significant concerns expressed over the proposed use of the wetlands.

6. **Erosion control or storm water management practices which will be used to protect the wetland are indicated on form: (Check all that apply)**

☐ Factor Sheet D-6, Erosion Control Evaluation.
☐ Factor Sheet D-5, Stormwater Evaluation.
☒ Neither Factor Sheet - Briefly describe measures to be used

For the Program, appropriate sediment and erosion control measures will be implemented throughout construction, and Best Management Practices (BMPs) for stormwater management and erosion control will be utilized. BMPs will be installed and maintained at the construction site(s) to minimize impacts of runoff to surrounding properties and resource areas. Stormwater management and erosion control requirements, as set forth by the WDNR within NR 216 and NR 151 and in support of NR 103, will be followed by the Program.

7. **U S Army Corps of Engineers (USACE) Jurisdiction - Section 404 Permit (Clean Water Act)**

The overall Program Wetland and Waterway Individual Permit for temporary (8.28 acres), conversion (1.48 acres) and permanent (0.09 acres) wetland impacts for the Program was submitted to the USACE and WDNR.

☐ Not Applicable - No fill to be placed in wetlands or wetlands are not under USACE jurisdiction.
☒ Applicable - Fill will be placed in wetlands under the jurisdiction of the USACE.
Indicate area of wetlands filled: Acres 0.00 Temporary Impacts Acres: 2.21 total for this alternative
Type of 404 permit anticipated:
☒ Individual Section 404 Permit required.
☐ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404 Compliance.

Indicate which GP or LOP is required:
☐ **Non-Reporting GP** [GP-002-WI (*expires 5/31/16*) or GP-004-WI (*expires 12/31/17*)]
☐ **Reporting GP** [GP-002-WI, GP-003-WI (*expires12/31/17*), or GP-004-WI]
☐ **Letter of Permission** [LOP-06-WI (*in effect 4/17/06, no expiration date*)]
☐ **Programmatic GP** [Applies to projects not covered under the DOT/DNR Cooperative Agreement]

8. **Wisconsin Department of Natural Resources Coordination - Section 401 Water Quality Certification**

☐ DNR has provided concurrence on the project wetland delineation. Received on: (Date)
☒ Other- Explain

Section 401 Water Quality Certification will be obtained from the WDNR prior to construction activities commencing.

9. **Section 10 Waters (Rivers and Harbors Act). For navigable waters of the United States (Section 10) indicate which 404 permit is required:**

☒ No Section 10 Waters
☐ Section 10 Waters
- ☐ **Reporting GP** [GP-003-WI (*expires12/31/17*)]
- ☐ **Reporting GP** [GP-004-WI (*expires 12/31/17*)]

Indicate whether Pre-Construction Notification (PCN) to the USACE is:
☐ Not applicable.
☐ Required: Submitted on: (Date)

Status of PCN
USACE has made the following determination on: (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

10. Wetland Avoidance and Impact Minimization: [Note: Required before compensation is acceptable]

A. Wetland Avoidance:

1. Describe methods used to avoid the use of wetlands, such as using a lower level of improvement or placing the roadway on new location, etc.:

   The Program has utilized HDD in their routing to address major engineering challenges (e.g. water crossing) and avoid impacts to sensitive environments and endangered species. However, an HDD installation is a labor and equipment-intensive undertaking with significant logistical and cost concerns. Sufficient land must be available to allow for the establishment of a staging area and the HDD process requires a longer construction schedule to allow for clearing, equipment mobilization and demobilization, and the drilling operation. HDD installations are also significantly more costly than traditional installation (e.g. trenching). For example, it has been estimated that assuming $350,000 per installation would be reasonable for a standard HDD installation. Given the number of wetlands proposed to be traversed for the Program, it is not practical to utilize HDD to avoid wetland impacts. HDD is specifically being proposed to avoid impacts to Muskego Creek and will allow for the avoidance of some wetlands abutting Muskego Creek.

2. Indicate the total area of wetlands avoided:
   Acres: 0.13 per this alternative

B. Minimize the amount of wetlands affected:

1. Describe methods used to minimize the use of wetlands, such as increasing side slopes or use of retaining walls or beam guard, equalizer pipes, upland disposal of hydric soils, etc.:

   HDD/JB method or other trenchless methods will not be used to avoid all wetlands and waterways. It was determined to not be economical to use trenchless methods to avoid temporary impacts to wetlands not abutting the select waterways. Impacts will be minimized by using matting in travel areas in wetland workspaces to prevent soil mixing. Additional temporary workspace may be required in the adjacent uplands. Excavation activities in wetlands would be limited to the areas directly over the trench line, except where topography requires additional grading for safety purposes. Staging areas and extra workspace would be needed outside both ends of larger wetland areas being crossed. These areas would be at least 50 feet away from the wetland boundaries where topographic conditions permit and would be limited to the minimum area needed for assembling the pipeline. Storage of hazardous materials, chemicals, fuels, and lubricating oils would generally be prohibited within 100 feet of wetland boundaries.

2. Indicate the total area of wetlands saved through minimization:
   Acres: not determined

11. Compensation for Unavoidable Wetland Loss:

There are no permanent wetland fills in this alternative.

According to Section 404(b)(1), of the Clean Water Act, wetland compensatory mitigation procedures and sequencing will conform to the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA) joint rule on Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332; and 40 CFR Part 230 - dated April 10, 2008). Compensatory mitigation will be consistent with amendments to the Cooperative Agreement between DNR and WisDOT on compensatory mitigation for unavoidable wetland losses (July 2012), and the WisDOT Interagency Coordination Agreement and Wetland Mitigation Banking Technical Guidelines with DNR, USACE, EPA, USFWS and FHWA (March 2002).

	Type	Acre(s) Loss	Ratio	Compensation Type and Acreage	
				On-site	DOT Mitigation Bank site
RPF(N)	Riparian wetland (wooded)				
RPF(D)	Degraded riparian wetland (wooded)				
RPE(N)	Riparian wetland (emergent)				
RPE(D)	Degraded riparian wetland (emergent)				
M(N)	Wet and sedge meadows, wet prairie, vernal pools, fens				
M(D)	Degraded meadow				
SM	Shallow marsh				
DM	Deep marsh				
AB(N)	Aquatic bed				
AB(D)	Degraded aquatic bed				
SS	Shrub Swamp, shrub carr, alder thicket				
WS(N)	Wooded swamp				
WS(D)	Degraded wooded swamp				
Bog	Open and forested bogs				

D = Degraded
N = Non-degraded

12. If compensation is not possible within the drainage area and floristic province thru the use of the DOT mitigation bank, explain why and describe how a search for an on-site compensation site was conducted:

N/A This is not a transportation project and there are no permanent wetland fills in this Alternative.

13. Summarize the coordination with other agencies regarding the compensation for unavoidable wetland losses. Attach appropriate correspondence.

There were multiple meetings, conference calls and emails with the USACE and WDNR regarding permitting and compensatory mitigation. It is anticipated that the program will meet the mitigation exemption under Ch. 281.36(3n)(d)(2) (Wis. Stats.)

Name (if known) or wetland number	R-W25		R-W26		R-W27		R-W28		R-W29		R-W30	
County	Waukesha		Waukesha		Waukesha		Waukesha		Waukesha		Waukesha	
Location (Section-Township-Range)	32, 6N, 20E		32, 6N, 20E		32, 6N, 20E		33, 6N, 20E		33, 6N, 20E		33, 6N, 20E	
Location (Latitude)	42.93508		42.935923		42.934822		42.937574		42.937768		42.938024	
Location (Longitude)	-88.159263		-88.152192		-88.155905		-88.147341		-88.146658		-88.145849	
Location Map	See Figure 5, 1 of 6		See Figure 5, 1 of 6		See Figure 5, 1 of 6		See Figure 5, 2 of 6		See Figure 5, 2 of 6		See Figure 5, 3 of 6	
Wetland Type(s)	M(D), SM & WS(D)		M(D), SM, SS & RPF(D)		M(D)		M(D)		M(D)		SM	
Temporary Wetland Impact	Acres 0.06		Acres 1.26		Acres 0.005		Acres 0.02		Acres 0.02		Acres 0.04	
Wetland is: (Check all that apply)	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Isolated from stream, lake or other surface water body	✓			✓	✓			✓		✓	✓	
Not contiguous (in contact with) a stream, lake, or other water body, but within 100-year floodplain	✓			✓	✓			✓		✓	✓	
If adjacent or contiguous, identify stream, lake or water body	N/A		Unnamed tributary to Muskego Creek		N/A		Unnamed tributary to Muskego Creek		Unnamed tributary to Muskego Creek		N/A	

Name (if known) or wetland number	R-W31		R-W32		R-W33		R-W34		R-W35		R-W36	
County	Waukesha		Waukesha		Waukesha		Waukesha		Waukesha		Waukesha	
Location (Section-Township-Range)	33, 6N, 20E		33, 6N, 20E		33, 6N, 20E		33, 6N, 20E		33, 6N, 20E		33, 6N, 20E	
Location (Latitude)	42.938606		42.938915		42.939052		42.939495		42.940304		42.940879	
Location (Longitude)	-88.143807		-88.142349		-88.14133		-88.13857		-88.133316		-88.130562	
Location Map	See Figure 5, 3 of 6		See Figure 5, 3 of 6		See Figure 5, 3 of 6		See Figure 5, 3 of 6		See Figure 5, 4 of 6		See Figure 5, 4 of 6	
Wetland Type(s)	M(D) & SS(D)		M(D)		M(D) & RPF(D)		M(D) & RPF		M(D) & SS (D)		M(D)	
Temporary Wetland Impact	Acres 0.103		Acres 0.04		Acres 0.172		Acres 0.09		Acres 0.15		Acres 0.07	
Wetland is: (Check all that apply)	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Isolated from stream, lake or other surface water body	✓		✓		✓			✓	✓		✓	
Not contiguous (in contact with) a stream, lake, or other water body, but within 100-year floodplain	✓		✓		✓			✓	✓		✓	
If adjacent or contiguous, identify stream, lake or water body	N/A		N/A		N/A		Muskego Creek		N/A		N/A	

Name (if known) or wetland number	R-W37		R-W38		R-W39	
County	Waukesha		Waukesha		Waukesha	
Location (Section-Township-Range)	33, 6N, 20E		34, 6N, 20E		34, 6N, 20E	
Location (Latitude)	42.941203		42.941506		42.944192	
Location (Longitude)	-88.129351		-88.128577		-88.122454	
Location Map	See Figure 5, 5 of 6		See Figure 5, 5 of 6		See Figure 5, 5 of 6	
Wetland Type(s)	M(D)		M(D)		M(D)	
Temporary Wetland Impact	Acres 0.03		Acre 0.02		Acres 0.003	
Wetland is: (Check all that apply)	Yes	No	Yes	No	Yes	No
Isolated from stream, lake or other surface water body	✓		✓		✓	
Not contiguous (in contact with) a stream, lake, or other water body, but within 100-year floodplain	✓		✓		✓	
If adjacent or contiguous, identify stream, lake or water body	N/A		N/A		N/A	

Factor Sheet C-1

Alternative Easement	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. Describe Wetlands: **WETLAND DETAILS ARE IN THE TABLE FOLLOWING THIS FACTOR SHEET**

	Wetland 1		Wetland 2		Wetland 3	
Name (if known) or wetland number[1]						
County						
Location (Section-Township-Range)						
Location (Latitude)						
Location (Longitude)						
Location Map						
Wetland Type(s)[2]						
Temporary Wetland Impact						
Wetland is: (Check all that apply)[3]						
• **Isolated from stream, lake or other surface water body**						
• **Not contiguous (in contact with) a stream, lake, or other water body, but within 100-year floodplain**						
• **If adjacent or contiguous, identify stream, lake or water body**						

[1]Use wetland numbering from the project wetland delineation report.
[2]Use wetland types as specified in the "*WisDOT FDM 24-5 Attachment 10.2 Wetland Type Correspondence Table*"
[3]If wetland is contiguous to a stream, complete Factor Sheet C-2, Rivers, Streams and Floodplains Impact Evaluation. If wetland is contiguous to a lake or other water body, complete Factor Sheet C-3, Lake or Water Body Impact Evaluation.

2. Are any impacted wetlands considered "wetlands of special status" per WisDOT Wetland Mitigation Banking Technical Guideline, page 10 (6 categories)?

☐ No
☒ Yes:
- ☐ Advanced Identification Program (ADID) Wetlands
- ☒ Public or private expenditure has been made to restore, protect, or ecologically manage the wetland on either public or private land
- ☒ Other – Describe: Wetland R-W26-E is part of a prairie restoration and sections of R-W26-E have a riparian forest plant community.

3. Describe proposed work in the wetland(s), e.g., excavation, fill, marsh disposal, other:

The Return Flow Pipeline will be installed through wetlands. This would result in cutting a trench to install the pipeline, grading, and construction access workspace. Temporary impacts to wetlands would be restored following installation. Temporary impacts to wooded wetlands will result in conversion to herbaceous wetlands.

4. List any observed or expected waterfowl and wildlife inhabiting or dependent upon the wetland: (List should include permanent, migratory and seasonal residents).

No waterfowl or wildlife was observed. However, typical wetland inhabitants are expected to be migratory or seasonal residents such as small mammals, deer, birds, and waterfowl. Amphibians and reptiles may be more permanent residents.

5. **Federal Highway Administration (FHWA) Wetland Policy:**

☒ Not Applicable - Explain
The project is a utility project.

☐ Individual Wetland Finding Required - Summarize why there are no practicable alternatives to the use of the wetland.

☐ Statewide Wetland Finding: **NOTE: All three boxes below must be checked for the Statewide Wetland Finding to apply.**

- ☐ Project is either a bridge replacement or other reconstruction within 0.3 mile of the existing location.
- ☐ The project requires the use of 7.4 acres or less of wetlands.
- ☐ The project has been coordinated with the DNR and there have been no significant concerns expressed over the proposed use of the wetlands.

6. **Erosion control or storm water management practices which will be used to protect the wetland are indicated on form: (Check all that apply)**

☐ Factor Sheet D-6, Erosion Control Evaluation.
☐ Factor Sheet D-5, Stormwater Evaluation.
☒ Neither Factor Sheet - Briefly describe measures to be used

For the Program, appropriate sediment and erosion control measures will be implemented throughout construction, and Best Management Practices (BMPs) for stormwater management and erosion control will be utilized. BMPs will be installed and maintained at the construction site(s) to minimize impacts of runoff to surrounding properties and resource areas. Stormwater management and erosion control requirements, as set forth by the WDNR within NR 216 and NR 151 and in support of NR 103, will be followed by the Program.

7. **U S Army Corps of Engineers (USACE) Jurisdiction - Section 404 Permit (Clean Water Act)**

The overall Program Wetland and Waterway Individual Permit for temporary (8.28 acres), conversion (1.48 acres) and permanent (0.09 acres) wetland impacts for the Program was submitted to the USACE and WDNR.

☐ Not Applicable - No fill to be placed in wetlands or wetlands are not under USACE jurisdiction.
☒ Applicable - Fill will be placed in wetlands under the jurisdiction of the USACE.
Indicate area of wetlands filled: Acres 0.00 Temporary Impacts Acres: 3.36 total for this alternative
Type of 404 permit anticipated:
☒ Individual Section 404 Permit required.
☐ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404 Compliance.

Indicate which GP or LOP is required:
☐ **Non-Reporting GP** [GP-002-WI (*expires 5/31/16*) or GP-004-WI (*expires 12/31/17*)]
☐ **Reporting GP** [GP-002-WI, GP-003-WI (*expires12/31/17*), or GP-004-WI]
☐ **Letter of Permission** [LOP-06-WI (*in effect 4/17/06, no expiration date*)]
☐ **Programmatic GP** [Applies to projects not covered under the DOT/DNR Cooperative Agreement]

8. **Wisconsin Department of Natural Resources Coordination - Section 401 Water Quality Certification**

☐ DNR has provided concurrence on the project wetland delineation. Received on: (Date)
☒ Other- Explain

Section 401 Water Quality Certification will be obtained from the WDNR prior to construction activities commencing.

9. **Section 10 Waters (Rivers and Harbors Act). For navigable waters of the United States (Section 10) indicate which 404 permit is required:**

☒ No Section 10 Waters
☐ Section 10 Waters
- ☐ **Reporting GP** [GP-003-WI (*expires12/31/17*)]
- ☐ **Reporting GP** [GP-004-WI (*expires 12/31/17*)]

Indicate whether Pre-Construction Notification (PCN) to the USACE is:
☐ Not applicable.
☐ Required: Submitted on: (Date)

Status of PCN
USACE has made the following determination on: (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

10. Wetland Avoidance and Impact Minimization: [Note: Required before compensation is acceptable]

A. Wetland Avoidance:

1. Describe methods used to avoid the use of wetlands, such as using a lower level of improvement or placing the roadway on new location, etc.:

   The Program has utilized HDD in their routing to address major engineering challenges (e.g. water crossing) and avoid impacts to sensitive environments and endangered species. However, an HDD installation is a labor and equipment-intensive undertaking with significant logistical and cost concerns. Sufficient land must be available to allow for the establishment of a staging area and the HDD process requires a longer construction schedule to allow for clearing, equipment mobilization and demobilization, and the drilling operation. HDD installations are also significantly more costly than traditional installation (e.g. trenching). For example, it has been estimated that assuming $350,000 per installation would be reasonable for a standard HDD installation. Given the number of wetlands proposed to be traversed for the Program, it is not practical to utilize HDD to avoid wetland impacts. HDD is specifically being proposed to avoid impacts to Muskego Creek and will allow for the avoidance of some wetlands abutting Muskego Creek.

2. Indicate the total area of wetlands avoided:
   Acres: There are three crossings of Muskego Creek in the Easement Alternative and the adjacent wetlands would be avoided if HDD were to be implemented.

B. Minimize the amount of wetlands affected:

1. Describe methods used to minimize the use of wetlands, such as increasing side slopes or use of retaining walls or beam guard, equalizer pipes, upland disposal of hydric soils, etc.:

   HDD/JB method or other trenchless methods will not be used to avoid all wetlands and waterways. It was determined to not be economical to use trenchless methods to avoid temporary impacts to wetlands not abutting the select waterways. Impacts will be minimized by using matting in travel areas in wetland workspaces to prevent soil mixing. Additional temporary workspace may be required in the adjacent uplands. Excavation activities in wetlands would be limited to the areas directly over the trench line, except where topography requires additional grading for safety purposes. Staging areas and extra workspace would be needed outside both ends of larger wetland areas being crossed. These areas would be at least 50 feet away from the wetland boundaries where topographic conditions permit, and would be limited to the minimum area needed for assembling the pipeline. Storage of hazardous materials, chemicals, fuels, and lubricating oils would generally be prohibited within 100 feet of wetland boundaries.

2. Indicate the total area of wetlands saved through minimization:
   Acres: not determined

11. Compensation for Unavoidable Wetland Loss:

There are no permanent wetland fills in this alternative.

According to Section 404(b)(1), of the Clean Water Act, wetland compensatory mitigation procedures and sequencing will conform to the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA) joint rule on Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332; and 40 CFR Part 230 - dated April 10, 2008). Compensatory mitigation will be consistent with amendments to the Cooperative Agreement between DNR and WisDOT on compensatory mitigation for unavoidable wetland losses (July 2012), and the WisDOT Interagency Coordination Agreement and Wetland Mitigation Banking Technical Guidelines with DNR, USACE, EPA, USFWS and FHWA (March 2002).

	Type	Acre(s) Loss	Ratio	Compensation Type and Acreage	
				On-site	DOT Mitigation Bank site
RPF(N)	Riparian wetland (wooded)				
RPF(D)	Degraded riparian wetland (wooded)				
RPE(N)	Riparian wetland (emergent)				
RPE(D)	Degraded riparian wetland (emergent)				
M(N)	Wet and sedge meadows, wet prairie, vernal pools, fens				
M(D)	Degraded meadow				
SM	Shallow marsh				
DM	Deep marsh				
AB(N)	Aquatic bed				
AB(D)	Degraded aquatic bed				
SS	Shrub Swamp, shrub carr, alder thicket				
WS(N)	Wooded swamp				
WS(D)	Degraded wooded swamp				
Bog	Open and forested bogs				

D = Degraded
N = Non-degraded

12. If compensation is not possible within the drainage area and floristic province thru the use of the DOT mitigation bank, explain why and describe how a search for an on-site compensation site was conducted:

N/A This is not a transportation project and there are no permanent wetland fills in this Alternative.

13. Summarize the coordination with other agencies regarding the compensation for unavoidable wetland losses. Attach appropriate correspondence.

There were multiple meetings, conference calls and emails with the USACE and WDNR regarding permitting and compensatory mitigation. It is anticipated that the program will meet the mitigation exemption under Ch. 281.36(3n)(d)(2) (Wis. Stats.)

Name (if known) or wetland number	R-W26-E		R-W28		R-W29		E-W-1		E-W-2		E-W-3	
County	Waukesha		Waukesha		Waukesha		Waukesha		Waukesha		Waukesha	
Location (Section-Township-Range)	32/33, 6N, 20E		33, 6N, 20E		33, 6N, 20E		33, 6N, 20E		33, 6N, 20E		33, 6N, 20E	
Location (Latitude)	42.9359		42.937687		42.937768		42.936611		42.937301		42.938223	
Location (Longitude)	-88.152625		-88.146658		-88.146658		-88.146183		-88.144481		-88.140137	
Location Map	See Figure 5, 1 of 6		See Figure 5, 2 of 6		See Figure 5, 2 of 6		See Figure 5, 2 of 6		See Figure 5, 3 of 6		See Figure 5, 3 of 6	
Wetland Type(s)	M(D), SM, SS & RPF(D)		M(D)		M(D)		RPE(D)		RPE(D) M(D) & SS(D)		M(D)	
Temporary Wetland Impact	Acres 1.19		Acres 0.005		Acres 0.023		Acres 0.13		Acres 1.86		Acres 0.15	
Wetland is: (Check all that apply)	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Isolated from stream, lake or other surface water body		✓	✓			✓		✓		✓		✓
Not contiguous (in contact with) a stream, lake, or other water body, but within 100-year floodplain		✓	✓			✓		✓		✓		✓
If adjacent or contiguous, identify stream, lake or water body	Unnamed tributary to Muskego Creek		N/A		Unnamed tributary to Muskego Creek		Muskego Creek		Muskego Creek		Muskego Creek	

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Right-of-Way	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. Stream Name: R-S08 on map – Unnamed (WBIC 5037068)

2. Stream Type: (Indicate Trout Stream Class, if known)
- ☒ Unknown
- ☐ Warm water
- ☐ Cold water
  - If trout stream, identify trout stream classification: _____
- ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Approximately 100 acres

4. Stream flow characteristics:
- ☐ Permanent Flow (year-round)
- ☒ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:
1. ☐ Sand
2. ☐ Silt
3. ☐ Clay
4. ☐ Cobbles
5. ☒ Other-describe: Vegetated

B. Average Water Depth: 2.0 - 4.0 inches

C. Vegetation in Stream
- ☐ Absent
- ☒ Present - If known describe:

D. Identify Aquatic Species Present:
Macroinvertebrate based on WDNR Surface Water Data Viewer

E. If water quality data is available, include this information:
Unknown

F. Is this river or stream on the WDNR's "Impaired Waters" list?
- ☒ No
- ☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
- ☒ Not Applicable
- ☐ None identified
- ☐ Yes – Identify Bird Species present
  Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
- ☒ Not Applicable
- ☐ Yes
- ☐ No - Describe mitigation measures:

8. Describe land adjacent to stream:

Field/prairie to the east; deciduous woodlands to west.

9. **Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**

   Unknown

10. **Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment:** [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

    Pipeline installation is anticipated to be crossing the waterway. The work is within the 100-year floodplain. The floodplain continues approximately 600 feet to the southwest and 400 feet to the northeast.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**

    After installation of pipeline and restoration of the waterway to pre-installation elevations, there should be no impacts on flow in the waterway.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**

    N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**
    - ☒ No impacts would occur.
    - ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
    - ☐ Significant flooding with a potential for property loss and a hazard to life.
    - ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**

    The floodplain is open lands and changes to the land use are not planned.

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**

    If appropriate erosion control measures are implemented during construction, impacts to water quality would not be anticipated. Following restoration, post construction impacts are not anticipated.

16. **Are measures proposed to enhance beneficial effects?**
    - ☒ No
    - ☐ Yes. Describe: _____

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Right-of-Way	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. Stream Name: R-S09 on map – Unnamed (WBIC 5037052)

2. Stream Type: (Indicate Trout Stream Class, if known)
- ☐ Unknown
- ☐ Warm water
- ☒ Cold water
  - If trout stream, identify trout stream classification: _____
- ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Approximately 520 acres

4. Stream flow characteristics:
- ☐ Permanent Flow (year-round)
- ☒ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:
1. ☐ Sand
2. ☐ Silt
3. ☐ Clay
4. ☐ Cobbles
5. ☒ Other-describe: The waterway is in a conveyance.

B. Average Water Depth: ___unknown_____

C. Vegetation in Stream
- ☒ Absent
- ☐ Present - If known describe:

D. Identify Aquatic Species Present:

E. If water quality data is available, include this information:
Unknown

F. Is this river or stream on the WDNR's "Impaired Waters" list?
- ☒ No
- ☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
- ☒ Not Applicable
- ☐ None identified
- ☐ Yes – Identify Bird Species present
  Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
- ☒ Not Applicable
- ☐ Yes
- ☐ No - Describe mitigation measures:

8. Describe land adjacent to stream*:*

Highway right-of-way.

9. **Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**

   Unknown

10. **Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment:** [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

    Pipeline installation is anticipated to be under the conveyance. The work is not within the 100-year floodplain.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**

    There should be no impacts on flow in the conveyance.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**

    N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**
    - ☒ No impacts would occur.
    - ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
    - ☐ Significant flooding with a potential for property loss and a hazard to life.
    - ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**

    Not applicable.

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**

    The waterway is within a conveyance and impacts are not anticipated.

16. **Are measures proposed to enhance beneficial effects?**
    - ☒ No
    - ☐ Yes. Describe: _____

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Right-of-Way	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☒ Yes ☐ No ☐ None identified	

1. Stream Name: R-S10 0.51 mi west of S. Calhoun Rd on the map – Muskego Creek (WBIC 762500)

2. Stream Type: (Indicate Trout Stream Class, if known)
- ☐ Unknown
- ☒ Warm water
- ☒ Cold water
  - If trout stream, identify trout stream classification: _____
- ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Approximately 2,100 acres

4. Stream flow characteristics:
- ☒ Permanent Flow (year-round)
- ☐ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:
1. ☐ Sand
2. ☒ Silt
3. ☐ Clay
4. ☐ Cobbles
5. ☐ Other-describe:

B. Average Water Depth: Unknown

C. Vegetation in Stream
- ☒ Absent
- ☐ Present - If known describe:

D. Identify Aquatic Species Present:
Macroinvertebrate based on WDNR Surface Water Data Viewer

E. If water quality data is available, include this information:
Unknown

F. Is this river or stream on the WDNR's "Impaired Waters" list?
- ☒ No
- ☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
- ☒ Not Applicable
- ☐ None identified
- ☐ Yes – Identify Bird Species present
  Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
- ☒ Not Applicable
- ☐ Yes
- ☐ No - Describe mitigation measures:

8. Describe land adjacent to stream*:*

Deciduous woodlands to the east and west.

9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:

Unknown

10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

The pipeline is planned to be installed under the stream using trenchless methods. The work is planned to be underground in the area of the 100-year floodplain. The crossing would be underground and aligned approximately perpendicular to the waterway.

11. Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:

The anticipated trenchless method is Horizontal Directional Drilling (HDD) and as such would not result in backwatering of flow in the waterway.

12. Describe and provide the results of coordination with any floodplain zoning authority:

N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

- ☒ No impacts would occur.
- ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
- ☐ Significant flooding with a potential for property loss and a hazard to life.
- ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:

The floodplain is open lands and changes are not planned.

15. Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:

If appropriate erosion control measures are implemented during construction, impacts to water quality would not be anticipated. Following restoration, post construction impacts are not anticipated.

16. Are measures proposed to enhance beneficial effects?

- ☒ No
- ☐ Yes. Describe: _____

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Easement	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. Stream Name: E-S01 on map – Not shown on WDNR Surface Water Data Viewer

2. Stream Type: (Indicate Trout Stream Class, if known)
- ☒ Unknown
- ☐ Warm water
- ☐ Cold water
  - If trout stream, identify trout stream classification: _____
- ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Undetermined

4. Stream flow characteristics:
- ☐ Permanent Flow (year-round)
- ☒ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:
1. ☐ Sand
2. ☐ Silt
3. ☐ Clay
4. ☒ Cobbles
5. ☒ Other-describe: Gravel

B. Average Water Depth: 2.0-6.0 inches

C. Vegetation in Stream
- ☒ Absent
- ☐ Present - If known describe:

D. Identify Aquatic Species Present:
Undetermined

E. If water quality data is available, include this information:
Not Available

F. Is this river or stream on the WDNR's "Impaired Waters" list?
- ☒ No
- ☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
- ☒ Not Applicable
- ☐ None identified
- ☐ Yes – Identify Bird Species present
  Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
- ☒ Not Applicable
- ☐ Yes
- ☐ No - Describe mitigation measures:

8. Describe land adjacent to stream*:*

Paved impervious surface along the top of the east bank; maintained (mowed) turf grass along the west bank.

9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:

Unknown

10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

The work would be in the easement on the opposite side of the roadway, and not encroach on the waterway.

11. Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:

N/A

12. Describe and provide the results of coordination with any floodplain zoning authority:

N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

- ☒ No impacts would occur.
- ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
- ☐ Significant flooding with a potential for property loss and a hazard to life.
- ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:

There are no planned permanent changes that would affect water levels in the waterway.

15. Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:

Impacts to the waterway are not anticipated because the installation would be parallel to, and on the other side of the easement from the waterway.

16. Are measures proposed to enhance beneficial effects?

- ☒ No
- ☐ Yes. Describe: _____

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Easement	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. Stream Name: E-S02 on map – Not shown as a waterway on WDNR Surface Water Data Viewer

2. Stream Type: (Indicate Trout Stream Class, if known)
- ☒ Unknown
- ☐ Warm water
- ☐ Cold water
  - If trout stream, identify trout stream classification: _____
- ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Undetermined

4. Stream flow characteristics:
- ☐ Permanent Flow (year-round)
- ☒ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:
1. ☐ Sand
2. ☐ Silt
3. ☐ Clay
4. ☒ Cobbles
5. ☒ Other-describe: Gravel

B. Average Water Depth: 2.0 - 5.0 inches

C. Vegetation in Stream
- ☒ Absent
- ☐ Present - If known describe:

D. Identify Aquatic Species Present:
Undetermined

E. If water quality data is available, include this information:
Not Available

F. Is this river or stream on the WDNR's "Impaired Waters" list?
- ☒ No
- ☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
- ☒ Not Applicable
- ☐ None identified
- ☐ Yes – Identify Bird Species present
  Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
- ☒ Not Applicable
- ☐ Yes
- ☐ No - Describe mitigation measures:

8. Describe land adjacent to stream*:*

Active agriculture (cropping) to the east and west.

9. **Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**

   Unknown

10. **Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment:** [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

    Installment of pipeline through stream using open trenching method.

    Pipeline installation is anticipated to be crossing the waterway. The location is not within the 100-year flood elevation of Muskego Creek.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**

    After installation of pipeline and restoration of the waterway to pre-installation elevations, and as such there should be no impacts on flow in the waterway. Backwater effects would not be created.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**

    N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**
    - ☒ No impacts would occur.
    - ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
    - ☐ Significant flooding with a potential for property loss and a hazard to life.
    - ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**

    The present land use adjacent to the waterway is agricultural. There would be no change in land use following installation of the pipeline.

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**

    If appropriate erosion control measures are implemented during construction, impacts to water quality would not be anticipated. Following restoration, post construction impacts are not anticipated.

16. **Are measures proposed to enhance beneficial effects?**
    - ☒ No
    - ☐ Yes. Describe: _____

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Easement	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. Stream Name: E-S08 on map – Unnamed (WBIC 5037068)

2. Stream Type: (Indicate Trout Stream Class, if known)
- ☒ Unknown
- ☐ Warm water
- ☐ Cold water
  - If trout stream, identify trout stream classification: _____
- ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Approximately 100 acres

4. Stream flow characteristics:
- ☐ Permanent Flow (year-round)
- ☒ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:
1. ☐ Sand
2. ☐ Silt
3. ☐ Clay
4. ☐ Cobbles
5. ☒ Other-describe: Vegetated

B. Average Water Depth: 2.0 - 4.0 inches

C. Vegetation in Stream
- ☐ Absent
- ☒ Present - If known describe:

D. Identify Aquatic Species Present:
Macroinvertebrate based on WDNR Surface Water Data Viewer

E. If water quality data is available, include this information:
Unknown

F. Is this river or stream on the WDNR's "Impaired Waters" list?
- ☒ No
- ☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
- ☒ Not Applicable
- ☐ None identified
- ☐ Yes – Identify Bird Species present
  Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
- ☒ Not Applicable
- ☐ Yes
- ☐ No - Describe mitigation measures:

8. Describe land adjacent to stream:

Field/prairie to the east; deciduous woodlands to west.

9. **Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**

   Unknown

10. **Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment:** [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

    Pipeline installation is anticipated to be crossing the waterway. The work is within the 100-year floodplain. The floodplain continues approximately 600 feet to the southwest and 400 feet to the northeast.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**

    After installation of pipeline and restoration of the waterway to pre-installation elevations, there should be no impacts on flow in the waterway.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**

    N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**
    - ☒ No impacts would occur.
    - ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
    - ☐ Significant flooding with a potential for property loss and a hazard to life.
    - ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**

    The floodplain is open lands and changes to the land use are not planned.

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**

    If appropriate erosion control measures are implemented during construction, impacts to water quality would not be anticipated. Following restoration, post construction impacts are not anticipated.

16. **Are measures proposed to enhance beneficial effects?**
    - ☒ No
    - ☐ Yes. Describe: _____

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Easement	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. Stream Name: E-S09 on map – Unnamed (WBIC 5037052)

2. Stream Type: (Indicate Trout Stream Class, if known)
- ☐ Unknown
- ☐ Warm water
- ☒ Cold water
  - If trout stream, identify trout stream classification: _____
- ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Approximately 520 acres

4. Stream flow characteristics:
- ☐ Permanent Flow (year-round)
- ☒ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:
1. ☐ Sand
2. ☐ Silt
3. ☒ Clay
4. ☐ Cobbles
5. ☐ Other-describe:

B. Average Water Depth: ___Unknown_____

C. Vegetation in Stream
- ☒ Absent
- ☐ Present - If known describe:

D. Identify Aquatic Species Present:

E. If water quality data is available, include this information:
Unknown

F. Is this river or stream on the WDNR's "Impaired Waters" list?
- ☒ No
- ☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
- ☒ Not Applicable
- ☐ None identified
- ☐ Yes – Identify Bird Species present
  Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
- ☒ Not Applicable
- ☐ Yes
- ☐ No - Describe mitigation measures:

8. Describe land adjacent to stream*:*

Interstate highway ROW to the north and riparian wetlands to the east and west.

9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:

Unknown

10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

The pipeline would be installed under the stream using trenchless methods. The work would be underground in the area of the 100-year floodplain. The crossing would be underground and aligned approximately perpendicular to the waterway.

11. Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:

The anticipated trenchless method is Horizontal Directional Drilling (HDD) and as such would not result in backwatering of flow in the waterway.

12. Describe and provide the results of coordination with any floodplain zoning authority:

N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

- ☒ No impacts would occur.
- ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
- ☐ Significant flooding with a potential for property loss and a hazard to life.
- ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:

The floodplain is open lands and changes to the land use are not planned.

15. Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:

If appropriate erosion control measures are implemented during construction, impacts to water quality would not be anticipated. Following restoration, post construction impacts are not anticipated.

16. Are measures proposed to enhance beneficial effects?

- ☒ No
- ☐ Yes. Describe: _____

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Easement	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. **Stream Name:** E-S10 at S. Martin Rd on the map – Muskego Creek (WBIC 762500)

2. **Stream Type: (Indicate Trout Stream Class, if known)**
   - ☐ Unknown
   - ☒ Warm water
   - ☒ Cold water
     If trout stream, identify trout stream classification: _____
   - ☐ Wild and Scenic River

3. **Size of Upstream Watershed Area: (Square miles or acres)**
   Approximately 2,530 acres

4. **Stream flow characteristics:**
   - ☒ Permanent Flow (year-round)
   - ☐ Temporary Flow (dry part of year)

5. **Stream Characteristics:**
   A. Substrate:
      1. ☐ Sand
      2. ☒ Silt
      3. ☐ Clay
      4. ☐ Cobbles
      5. ☐ Other-describe:

   B. Average Water Depth: ___Unknown_____

   C. Vegetation in Stream
      - ☐ Absent
      - ☒ Present - If known describe:

   D. Identify Aquatic Species Present:
      Macroinvertebrates based on WDNR Surface Water Data Viewer

   E. If water quality data is available, include this information:
      Unknown

   F. Is this river or stream on the WDNR's "Impaired Waters" list?
      - ☒ No
      - ☐ Yes - List: _____

6. **If bridge or box culvert replacement, are migratory bird nests present?**
   - ☒ Not Applicable
   - ☐ None identified
   - ☐ Yes – Identify Bird Species present
     Estimated number of nests is:

7. **Is a Fish & Wildlife Depredation Permit required to remove swallow nests?**
   - ☒ Not Applicable
   - ☐ Yes
   - ☐ No - Describe mitigation measures:

8. **Describe land adjacent to stream***:*

   Interstate highway ROW to the north and riparian wetlands and residential lands to the south.

9. **Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**

   Unknown

10. **Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment:** [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

    The pipeline would be installed under stream using trenchless methods. The work would be underground in the area of the 100-year floodplain. The crossing would be underground and aligned approximately perpendicular to the waterway.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**

    None anticipated.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**

    N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**
    - ☒ No impacts would occur.
    - ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
    - ☐ Significant flooding with a potential for property loss and a hazard to life.
    - ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**

    The floodplain is open lands and changes are not planned.

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**

    If appropriate erosion control measures are implemented during construction, impacts to water quality would not be anticipated. Following restoration, post construction impacts are not anticipated.

16. **Are measures proposed to enhance beneficial effects?**
    - ☒ No
    - ☐ Yes. Describe: _____

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Easement	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. Stream Name: E-S10 east of S. Martin Rd on the map – Muskego Creek (WBIC 762500)

2. Stream Type: (Indicate Trout Stream Class, if known)
- ☐ Unknown
- ☒ Warm water
- ☒ Cold water
  - If trout stream, identify trout stream classification: _____
- ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Approximately 2,460 acres

4. Stream flow characteristics:
- ☒ Permanent Flow (year-round)
- ☐ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:
1. ☐ Sand
2. ☒ Silt
3. ☐ Clay
4. ☐ Cobbles
5. ☐ Other-describe:

B. Average Water Depth: ___Unknown_____

C. Vegetation in Stream
- ☐ Absent
- ☒ Present - If known describe:

D. Identify Aquatic Species Present:
Macroinvertebrates based on WDNR Surface Water Data Viewer

E. If water quality data is available, include this information:
Unknown

F. Is this river or stream on the WDNR's "Impaired Waters" list?
- ☒ No
- ☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
- ☒ Not Applicable
- ☐ None identified
- ☐ Yes – Identify Bird Species present
  Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
- ☒ Not Applicable
- ☐ Yes
- ☐ No - Describe mitigation measures:

8. Describe land adjacent to stream*:*

County highway ROW to the west, riparian wetland to the north and south and deciduous woodlands to the east.

9. **Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**

   Unknown

10. **Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment:** [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

    The pipeline would be installed under stream using trenchless methods. The work would be underground in the area of the 100-year floodplain. The crossing would be underground and aligned approximately perpendicular to the waterway.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**

    None anticipated.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**

    N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**
    - ☒ No impacts would occur.
    - ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
    - ☐ Significant flooding with a potential for property loss and a hazard to life.
    - ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**

    The floodplain is open lands and changes are not planned.

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**

    If appropriate erosion control measures are implemented during construction, impacts to water quality would not be anticipated. Following restoration, post construction impacts are not anticipated.

16. **Are measures proposed to enhance beneficial effects?**
    - ☒ No
    - ☐ Yes. Describe: _____

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative Easement	Total Length of Center Line of Existing Roadway N/A Length of This Alternative N/A
Preferred ☐ Yes ☒ No ☐ None identified	

1. Stream Name: E-S10 0.51 mi west of S. Calhoun Rd on the map – Muskego Creek (WBIC 762500)

2. Stream Type: (Indicate Trout Stream Class, if known)
- ☐ Unknown
- ☒ Warm water
- ☒ Cold water
  - If trout stream, identify trout stream classification: _____
- ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Approximately 2,120 acres

4. Stream flow characteristics:
- ☒ Permanent Flow (year-round)
- ☐ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:
1. ☐ Sand
2. ☒ Silt
3. ☐ Clay
4. ☐ Cobbles
5. ☐ Other-describe:

B. Average Water Depth: ___Unknown_____

C. Vegetation in Stream
- ☐ Absent
- ☐ Present - If known describe:

D. Identify Aquatic Species Present:
Macroinvertebrates based on WDNR Surface Water Data Viewer

E. If water quality data is available, include this information:
Unknown

F. Is this river or stream on the WDNR's "Impaired Waters" list?
- ☒ No
- ☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
- ☒ Not Applicable
- ☐ None identified
- ☐ Yes – Identify Bird Species present
  Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
- ☒ Not Applicable
- ☐ Yes
- ☐ No - Describe mitigation measures:

8. Describe land adjacent to stream*:*

Deciduous woodlands are to the east and west.

9. **Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**

Unknown

10. **Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment:** [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

The pipeline would be installed under the stream using trenchless methods. The work would be underground in the area of the 100-year floodplain. The crossing would be underground and aligned approximately perpendicular to the waterway.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**

The anticipated trenchless method is Horizontal Directional Drilling (HDD) and as such would not result in backwatering of flow in the waterway.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**

N/A There are no planned permanent changes that would affect water levels in the floodplain.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**
    - ☒ No impacts would occur.
    - ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
    - ☐ Significant flooding with a potential for property loss and a hazard to life.
    - ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**

The floodplain is open lands and changes to the land use are not planned.

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**

If appropriate erosion control measures are implemented during construction, impacts to water quality would not be anticipated. Following restoration, post construction impacts are not anticipated.

16. **Are measures proposed to enhance beneficial effects?**
    - ☒ No
    - ☐ Yes. Describe: _____

THREATENED, ENDANGERED and PROTECTED RESOURCES Factor Sheet 8-20-2018

Wisconsin Department of Transportation

Alternative: Right-of-Way	**Preferred:** ☒ **Yes** ☐ **No** ☐ **None Identified**	**Project ID:** N/A

Federal Resources

1. **Complete the following table using the Official Species List from U.S. Fish and Wildlife Service (FWS):**

Species Common Name	Species Scientific Name	Federal Status	Effect Determination	Justification/ Explanation
Northern long-eared bat	Northern long-eared bat	Threatened	No Effect	Per the U.S. Fish and Wildlife Service's 4(d) rule the route is more than 150 feet from a known maternity roost tree and more than one-quarter mile from a known hibernaculum.
Poweshiek skipperling	Oarisma Poweshiek	Endangered	No Effect	Only one area of possible prairie was encountered during the project area delineation investigations. It is adjacent to the easements on the north side I-43 approximately 500 to 1,000 feet west of S. Martin Road.
Eastern prairie fringed orchid	Platanthera leucophaea	Threatened	No Effect	The wetlands within the project area with potential suitable habitat were screened to determine if Floristic Quality Assessments resulted in parameters above prescribed limits, specifically Native Mean C values of 3.5 or greater, or Native FQI's of 20 or greater. Plant lists were also reviewed for presence of eastern prairie fringed orchid plant associates. Two of the investigated wetlands had Native Mean C's greater than 3.5. None of the wetlands had Native FQI's greater than or equal to 20. Of the two wetlands, none had four or more associated plant species.

Date of Official Species List: December 11, 2018

Document all species identified on Official Species List, including proposed species.

2. **Is there designated or proposed critical habitat in the vicinity of the project?**
   - ☒ No
   - ☐ Yes – Describe critical habitat, proximity to project, and potential impacts to the critical habitat:

3. **Has Section 7 consultation with FWS been completed?**
   - ☒ No – Explain: Not Applicable
   - ☐ Yes – Describe consultation efforts and conclusions:

4. **Are avoidance, minimization or compensatory mitigation measures required?**
   - ☒ No
   - ☐ Yes – Describe. Include commitments on Basic Sheet 9, Environmental Commitments:

State Resources

1. **Are threatened or endangered species known to occur in the vicinity of the project?**
   - ☐ None identified.
   - ☒ Yes – Complete the following table and include the date of the most recent NHI review by WDNR:

Species Common Name	Species Scientific Name	State Status	Effect Determination	Justification/ Explanation
Redfin shiner	Lythrurus umbratilis	Threatened	No Effect	There are no suitable waterbodies along the route that may have the redfin shiner.

Date of Natural Heritage Inventory (NHI) database review: August 2018

2. Has threatened and endangered resource coordination with WDNR been completed?
   - ☐ No – Explain:
   - ☒ Yes – Attach and reference location in this document: Completed and not attached.

3. Are avoidance, minimization or compensatory mitigation measures required?
   - ☐ No

☒ Yes – Describe. Include commitments on Basic Sheet 9, Environmental Commitments: See Section 12 of the Categorical Exclusion Checklist

Other Protected Resources

Bald and Golden Eagles

1. **Are bald and/or golden eagles known to occur near the project?**
   ☒ None identified
   ☐ Yes, describe:

2. **Will there be adverse or beneficial effects on bald and/or golden eagles as a result of the project?**
   ☒ No, explain: Not Applicable
   ☐ Yes, describe general proximity to project and potential impacts:

3. **Has bald and golden eagle-related coordination with WDNR and/or FWS been completed?**
   ☒ No, explain: Not Applicable
   ☐ Yes, attach and reference location in this document:

4. **Are avoidance, minimization or compensatory mitigation measures required?**
   ☒ No
   ☐ Yes, describe. Include commitments on Basic Sheet 9, Environmental Commitments:

Migratory Birds

1. **Are migratory birds known to occur in the vicinity of the project?**
   ☒ None identified
   ☐ Yes, describe:

2. **Will there be adverse or beneficial effects on migratory birds because of the project?**
   ☒ No, explain: Not Applicable
   ☐ Yes, describe general proximity to project and potential impacts:

3. **Has migratory bird-related coordination with WDNR and/or FWS been completed?**
   ☒ No, explain: Not Applicable
   ☐ Yes, attach and reference location in this document:

4. **Are avoidance, minimization or compensatory mitigation measures required?**
   ☒ No
   ☐ Yes, describe and include commitments on Basic Sheet 9, Environmental Commitments:

THREATENED, ENDANGERED and PROTECTED RESOURCES Factor Sheet 8-20-2018

Wisconsin Department of Transportation

Alternative: Easements	**Preferred:** ☐ **Yes** ☒ **No** ☐ **None Identified**	**Project ID:** N/A

Federal Resources

1. **Complete the following table using the Official Species List from U.S. Fish and Wildlife Service (FWS):**

Species Common Name	Species Scientific Name	Federal Status	Effect Determination	Justification/ Explanation
Northern long-eared bat	Northern long-eared bat	Threatened	No Effect	Per the U.S. Fish and Wildlife Service's 4(d) rule the route is more than 150 feet from a known maternity roost tree and more than one-quarter mile from a known hibernaculum.
Poweshiek skipperling	Oarisma Poweshiek	Endangered	No Effect	Only one area of possible prairie was encountered during the project area delineation investigations. It is adjacent to the easements on the north side I-43 approximately 500 to 1,000 feet west of S. Martin Road.
Eastern prairie fringed orchid	Platanthera leucophaea	Threatened	No Effect	The wetlands within the project area with potential suitable habitat were screened to determine if Floristic Quality Assessments resulted in parameters above prescribed limits, specifically Native Mean C values of 3.5 or greater, or Native FQI's of 20 or greater. Plant lists were also reviewed for presence of eastern prairie fringed orchid plant associates. Two of the investigated wetlands had Native Mean C's greater than 3.5. None of the wetlands had Native FQI's greater than or equal to 20. Of the two wetlands, none had four or more associated plant species.

Date of Official Species List: December 11, 2018

Document all species identified on Official Species List, including proposed species.

2. **Is there designated or proposed critical habitat in the vicinity of the project?**
   - ☒ No
   - ☐ Yes – Describe critical habitat, proximity to project, and potential impacts to the critical habitat:

3. **Has Section 7 consultation with FWS been completed?**
   - ☒ No – Explain: Not Applicable
   - ☐ Yes – Describe consultation efforts and conclusions:

4. **Are avoidance, minimization or compensatory mitigation measures required?**
   - ☒ No
   - ☐ Yes – Describe. Include commitments on Basic Sheet 9, Environmental Commitments:

State Resources

1. **Are threatened or endangered species known to occur in the vicinity of the project?**
   - ☐ None identified.
   - ☒ Yes – Complete the following table and include the date of the most recent NHI review by WDNR:

Species Common Name	Species Scientific Name	State Status	Effect Determination	Justification/ Explanation
Redfin shiner	Lythrurus umbratilis	Threatened	No Effect	There are no suitable waterbodies along the route that may have the redfin shiner.

Date of Natural Heritage Inventory (NHI) database review: August 2018

2. Has threatened and endangered resource coordination with WDNR been completed?
   - ☐ No – Explain:
   - ☒ Yes – Attach and reference location in this document: Completed and not attached.

3. Are avoidance, minimization or compensatory mitigation measures required?
   - ☐ No

☒ Yes – Describe. Include commitments on Basic Sheet 9, Environmental Commitments: See Section 12 of the Cateforical Exclusion Checklist

Other Protected Resources

Bald and Golden Eagles

1. **Are bald and/or golden eagles known to occur near the project?**
   ☒ None identified
   ☐ Yes, describe:

2. **Will there be adverse or beneficial effects on bald and/or golden eagles as a result of the project?**
   ☒ No, explain: Not Applicable
   ☐ Yes, describe general proximity to project and potential impacts:

3. **Has bald and golden eagle-related coordination with WDNR and/or FWS been completed?**
   ☒ No, explain: Not Applicable
   ☐ Yes, attach and reference location in this document:

4. **Are avoidance, minimization or compensatory mitigation measures required?**
   ☒ No
   ☐ Yes, describe. Include commitments on Basic Sheet 9, Environmental Commitments:

Migratory Birds

1. **Are migratory birds known to occur in the vicinity of the project?**
   ☒ None identified
   ☐ Yes, describe:

2. **Will there be adverse or beneficial effects on migratory birds because of the project?**
   ☒ No, explain: Not Applicable
   ☐ Yes, describe general proximity to project and potential impacts:

3. **Has migratory bird-related coordination with WDNR and/or FWS been completed?**
   ☒ No, explain: Not Applicable
   ☐ Yes, attach and reference location in this document:

4. **Are avoidance, minimization or compensatory mitigation measures required?**
   ☒ No
   ☐ Yes, describe and include commitments on Basic Sheet 9, Environmental Commitments:

From: Brown, Joel R - DOT
Sent: Wednesday, December 12, 2018 11:08 AM
To: Horton, Andrew <andrew_horton@fws.gov>
Cc: Brown, Joel R - DOT <Joel.Brown@dot.wi.gov>
Subject: Request to initiate informal Section 7 Consultation NLEB and Other Species, Waukesha Water Utility Project.

Andrew,

The city of Waukesha has a project that involves running a water return flow pipeline within approximately two miles I-43 right of way near the City of New Berlin in Waukesha County WI. I attached is an overview map for reference purpose and a series of four maps showing pipeline location.

Due to Waukesha's need to longitudinally place a pipeline within the ROW a FHWA action is triggered.

WisDOT on behalf of FHWA is submitting the following information and determination to fulfil Section 7(a)(2) responsibilities under the ESA pertaining to potential impacts to the Northern Long-Eared Bat, Eastern Prairie Fringed Orchid and Poweshiek skipperling.

WisDOT intends to rely on the programmatic biological opinion for the Northern Long Eared Bat, developed for the final 4(d) rule and this submittal to satisfy our Section 7(a)(2) responsibilities, as outlined in the streamlined consultation framework. Find a signed streamlined consultation framework form attached.

In accordance with the final 4(d) rule issued for the northern long-eared bat, WisDOT has determined that the proposed activity will not result in prohibited take of the NLEB. The activity will involve removal a few trees from properties adjacent roadway, but will not occur within 0.25 miles of a known hibernacula, nor will the activity remove a known maternity roost tree or any other tree within 150 feet of a known maternity roost tree.

Eastern Prairie Fringed Orchid and Poweshiek skipperling, the following table outlines effect findings related to these species.

	Status	Habitat Summary	Habitat Present (Y/N)	Finding	Justification
Flowering Plants					
Eastern Prairie Fringed Orchid (Platanthera leucophaea)	Threatened	The eastern prairie fringed orchid occurs in a wide variety of habitats, from mesic prairie to wetlands such as sedge meadows, marsh edges, even bogs.	N	No Effect	The wetlands in the project area were screened to determine if Floristic Quality Assessments resulted in parameters above prescribed limits, specifically Native Mean C values of 3.5 or greater, or Native FQI's of 20 or greater. If either of these

					metrics were equaled or exceeded, the plant lists were reviewed for presence of eastern prairie fringed orchid plant associates. Four of the 27 investigated wetlands had Native Mean C's greater than or equal to 3.5. None of the wetlands had Native FQI's greater than or equal to 20. Of those four wetlands, none had four or more plant species on the associated plant species list of the eastern prairie fringed orchid. Accordingly, no additional investigation was considered necessary.
Insects					
Poweshiek skipperling	Endangered	Poweshiek skipperlings prefer high quality tallgrass prairie in both upland dry areas as well as low moist areas.	N	No Effect	Field investigations were completed, only one area of possible prairie was encountered during the project area delineation investigations and that was adjacent to the easements on the north side I-43 approximately 500 to 1,000 feet west of S. Martin Road. Field investigators were informed by a local resident that a local lake association was restoring a prairie on a parcel west of S. Martin Road.

Contact me if you have questions or would like to discuss anything.

Thank you

Joel Brown
Bureau of Technical Services
Environmental Process and Document Section
Wisconsin Dept. of Transportation
608-630-3202

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:	**YES**	**NO**
1. Does the project occur wholly outside of the WNS Zone[1]?	☒	☐
2. Have you contacted the appropriate agency[2] to determine if your project is near known hibernacula or maternity roost trees?	☒	☐
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	☐	☒
4. Could the project alter the entrance or interior environment of a known hibernaculum?	☐	☒
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	☐	☒
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	☐	☒

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant[3] (Name, Email, Phone No.):

Joel Brown, joel.brown@dot.wi.gov, 608-630-3202

Project Name: WWU Return Line I-43

Project Location (include coordinates if known): I-43 right of way near the City of New Berlin in Waukesha County WI

Basic Project Description (provide narrative below or attach additional information):

---

[1] http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf

[2] See http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html

[3] If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: _____ Date Submitted: 12/12/2018

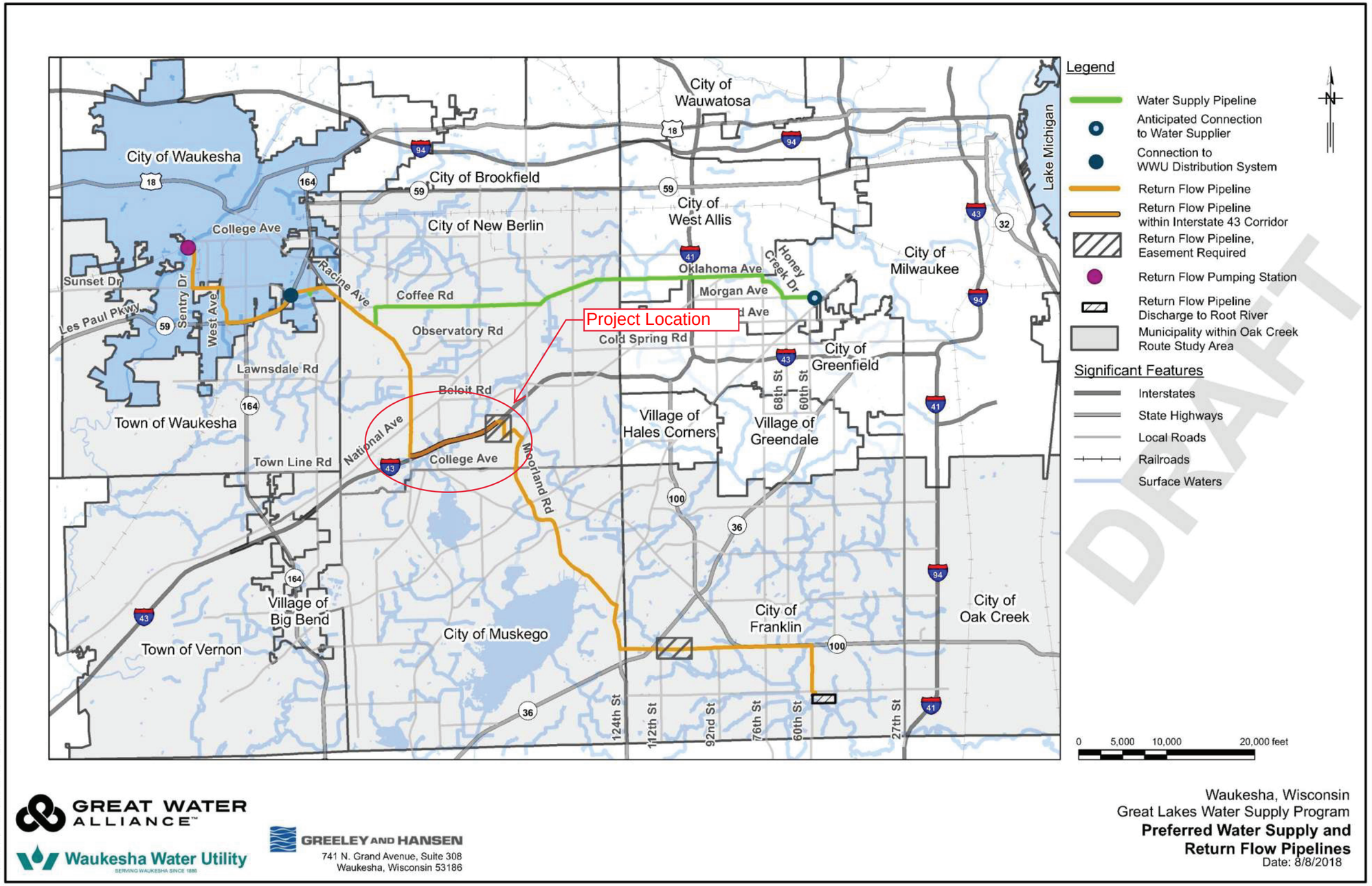


Figure 1-1 Preferred Water Supply and Return Flow Pipelines

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Green Bay Ecological Services Field Office
2661 Scott Tower Drive
New Franken, WI 54229-9565
Phone: (920) 866-1717 Fax: (920) 866-1710

In Reply Refer To: December 11, 2018
Consultation Code: 03E17000-2019-SLI-0303
Event Code: 03E17000-2019-E-00659
Project Name: WWU Return Line IH 43

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website http://ecos.fws.gov/ipac/ at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height (*e.g.*, communication towers)**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act *(*16 U.S.C. 703 *et seq*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html to help you determine if you can avoid impacting eagles or if a permit may be necessary.

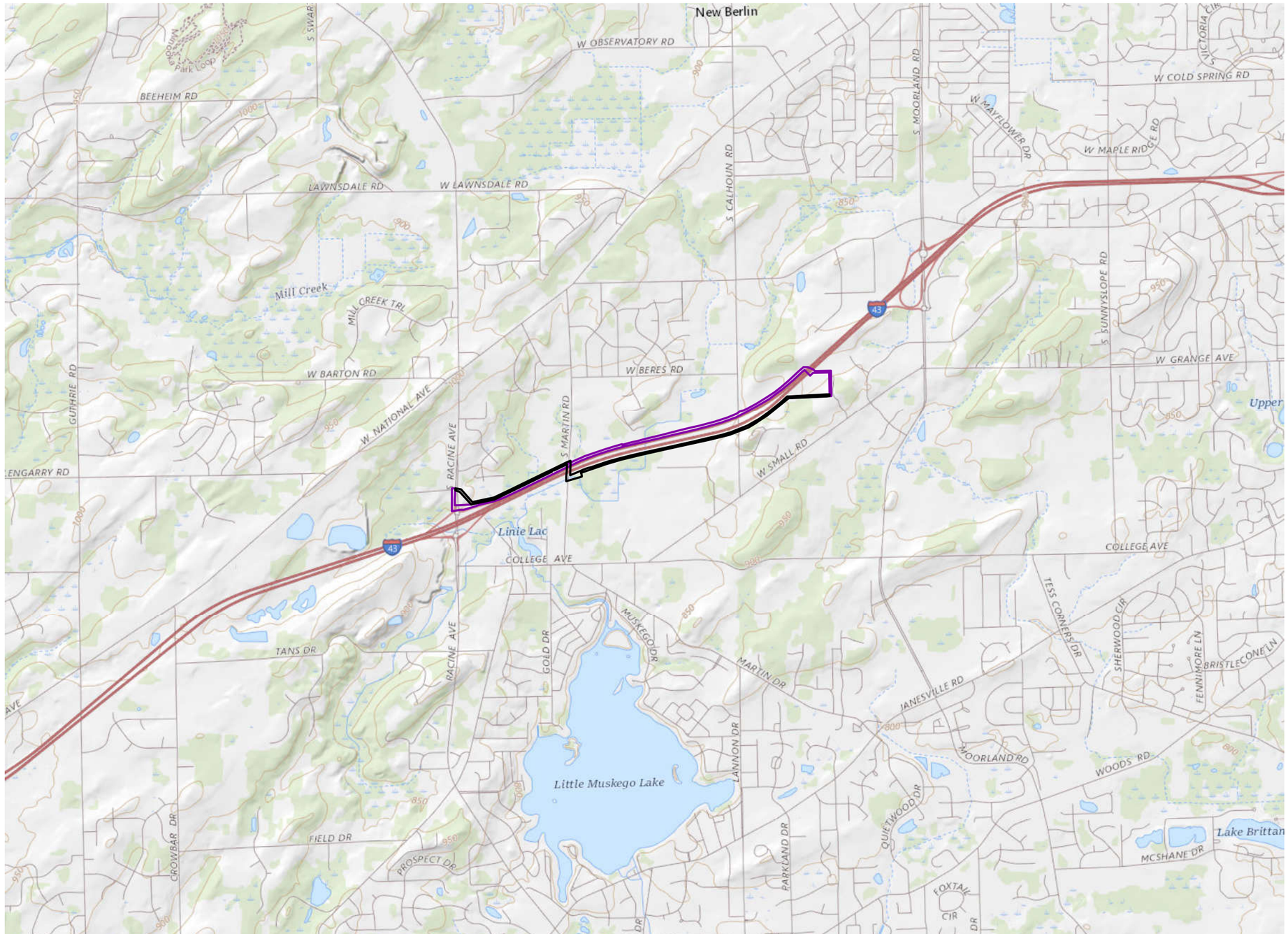
We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Appendix A – Figures

FIGURE 1



LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE

NOTES

1. BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.

1 " = 3,000 '

0 1,500 3,000 6,000

N

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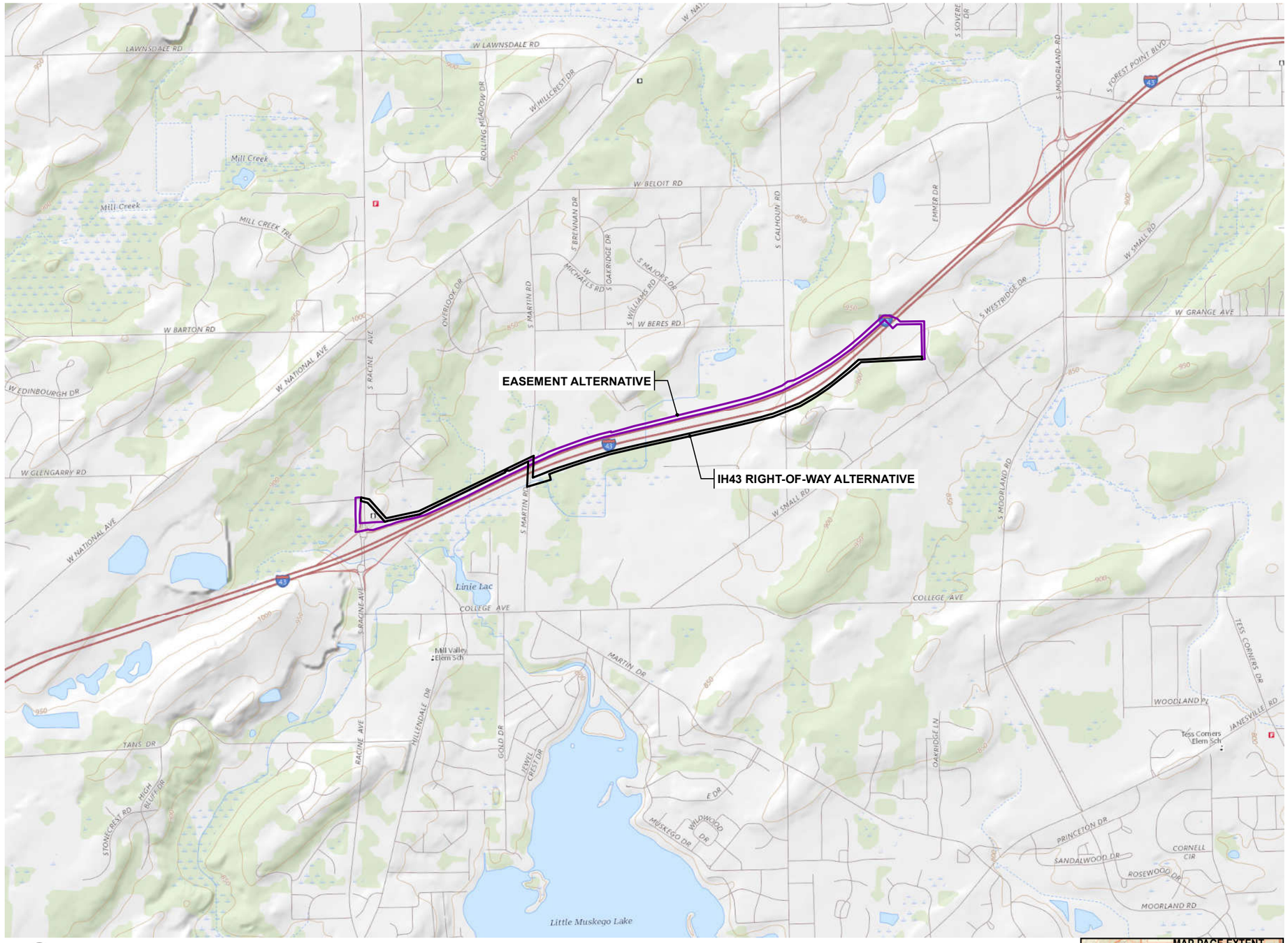
SITE LOCATION MAP

Date: 12/20/2018

Plotted: 12/20/2018
Document Path: E:\WetlandsGeneralWaukeshaPipeline\2016_263344\263344-078-NEPA-F1.mxd

FIGURE 2



LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE

NOTES

1. BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.

1 " = 2,000 '

0 1,000 2,000 4,000

N

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ALTERNATIVES LOCATION MAP

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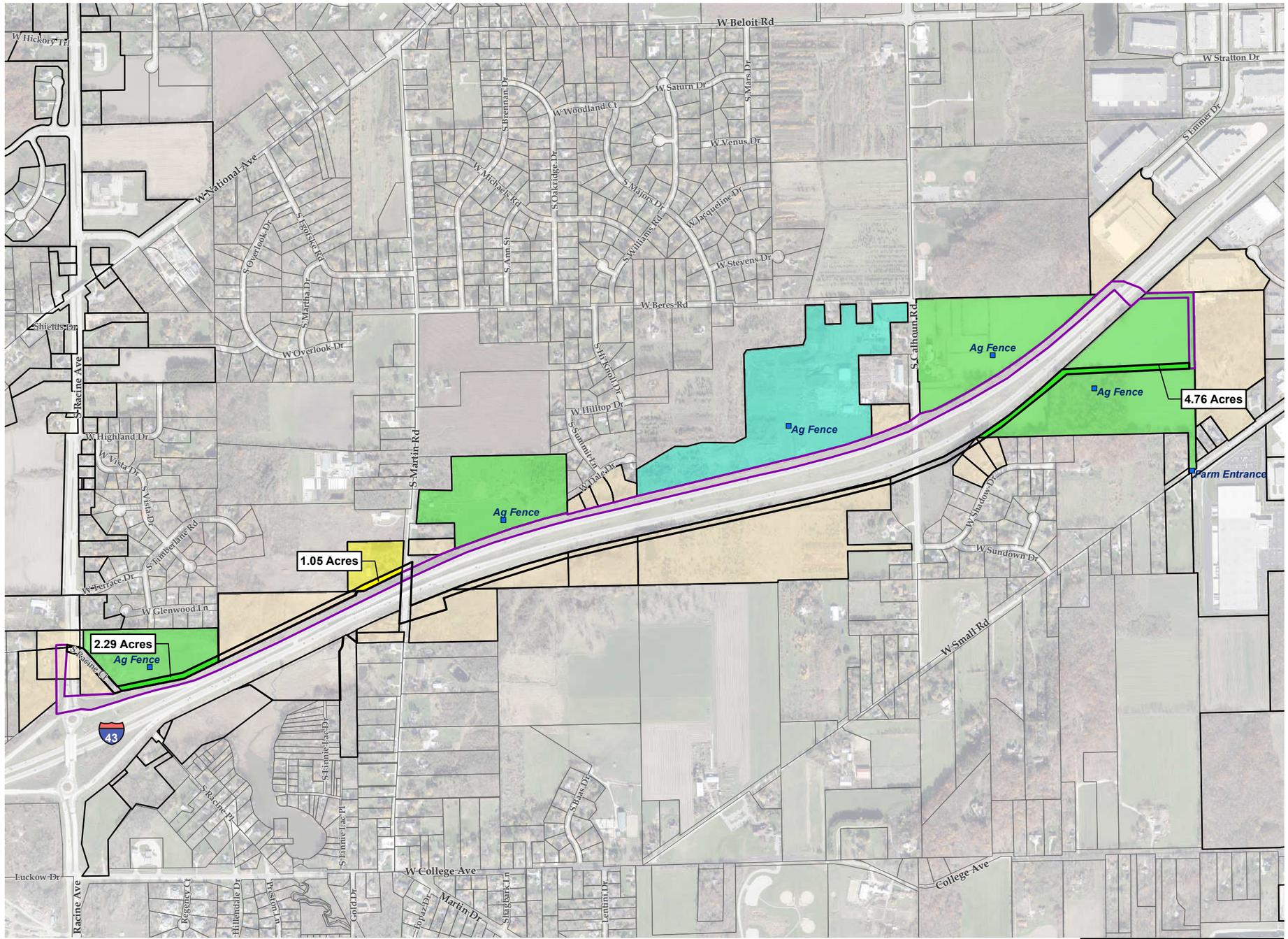
FIGURE 3



LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE

PARCEL ADJACENT TO PROJECT AREA WITH INTERPRETED AGRICULTURAL CLASSIFICATION

- CROPLAND
- IDLE OR FALLOW FIELDS
- NON-AGRICULTURAL LAND
- SPECIALTY FARMLAND
- ARGICULTURAL FEATURE OBSERVATION

NOTES

1. BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.
2. AGRICULTURAL CLASSIFICATION IS BASED ON DESKTOP AND FIELD REVIEW OF PROPERTIES AND DOES NOT REPRESENT AND OFFICIAL DETERMINATION. ONLY PARCEL DIRECTLY ADJACENT TO THE PROJECT AREAS WERE REVIEWED.
3. ACREAGES ARE SHOWN FOR PROJECT AREAS INTERSECTING AGRICULTURAL PROPERTIES ONLY. NON-AGRICULTURAL AND RIGHT-OF-WAY AREAS ARE NOT LABELED.

1 " = 1,000 '

0 500 1,000 2,000

N

MAP PAGE EXTENT

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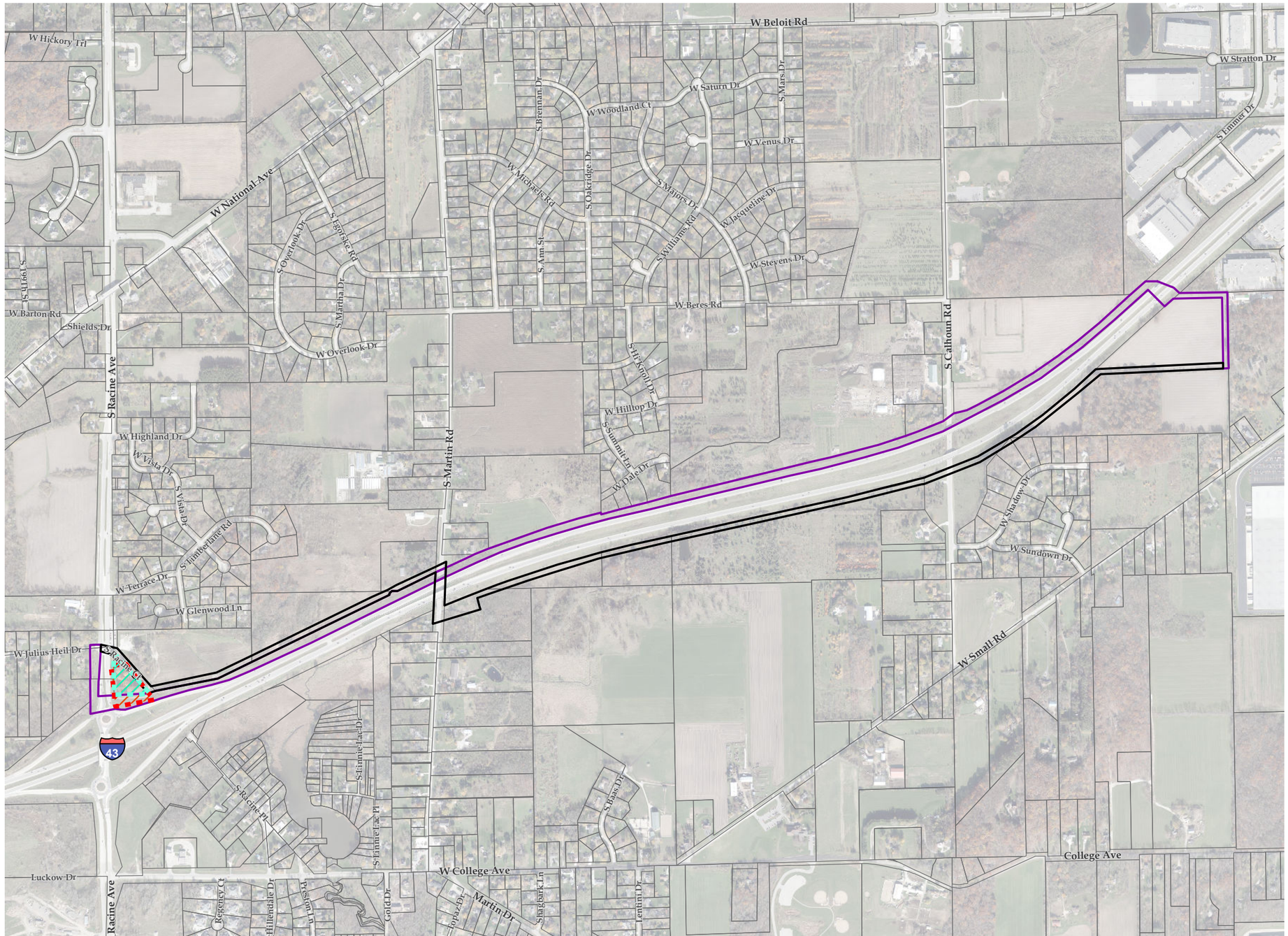
AGRICULTURE LANDS MAP

Date: 12/20/2018

Plotted: 12/20/2018
Document Path: E:\WetlandsGeneral\WaukeshaPipeline\2016_263344\263344-090-NEPA_F3.mxd

FIGURE 4



LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE
- WHS MAPPED CEMETERY BOUNDARY
- SUNNYSIDE CEMETERY BOUNDARY

NOTES

1. BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.

1 " = 1,000 '

0 500 1,000 2,000

N

MAP PAGE EXTENT

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CULTURAL RESOURCES SURVEY

Date: 12/21/2018

Plotted: 12/21/2018
Document Path: E:\WetlandsGeneral\WaukeshaPipeline\2016_263344\263344-093-NEPA-F4.mxd

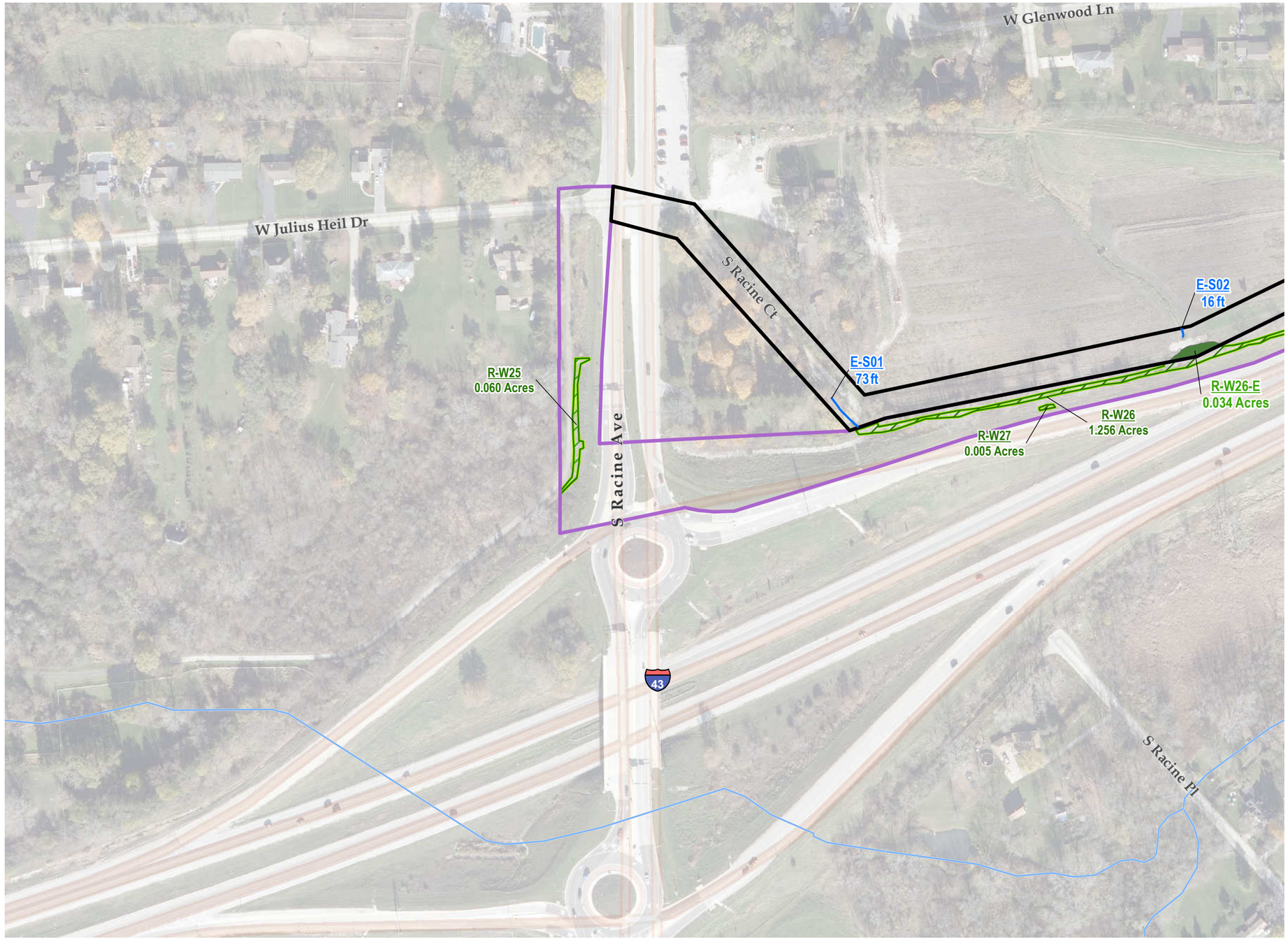

FIGURE 5
SHEET 1 OF 6

LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE
- TRC DELINEATED STREAM CENTERLINE
- TRC DELINEATED WETLANDS IN EASEMENT
- DELINEATED WETLANDS INSIDE RIGHT-OF-WAY/STUDY AREA
- NHD STREAM/RIVER

NOTES

1. BASE MAP FROM GREELEY AND HANSEN, 2017.

1 " = 200 '

0 100 200 400

N

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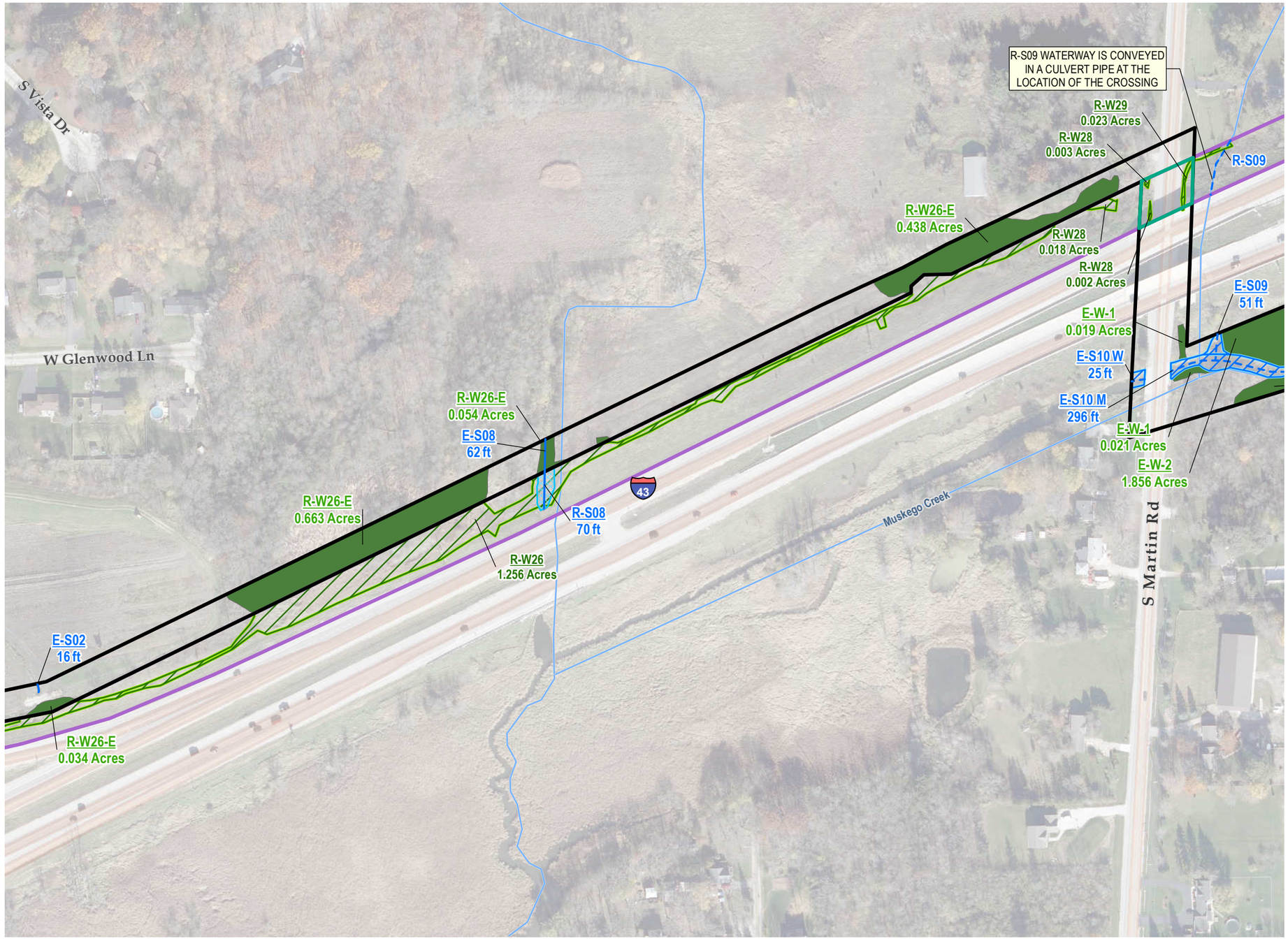
IH43 ROW & Easement Alternatives
WETLAND AND WATERWAY IMPACTS
Date: 1/4/2019

Plotted: 1/4/2019
Document Path: E:\WetlandsGeneral\WaukeshaPipeline\2016_263344\263344-089-NEPA-F5.mxd



LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE
- IH43 ROW AND EASEMENT ALTERNATIVES OVERLAP
- TRC DELINEATED STREAM CENTERLINE
- APPROXIMATE STREAM CENTERLINE
- TRC DELINEATED WETLANDS IN EASEMENT
- TRC DELINEATED WATERWAYS IN EASEMENT
- TRC DELINEATED WATERWAYS IN RIGHT-OF-WAY
- DELINEATED WETLANDS INSIDE RIGHT-OF-WAY/STUDY AREA
- NHD STREAM/RIVER

FIGURE 5
SHEET 2 OF 6

NOTES

1. BASE MAP FROM GREELEY AND HANSEN, 2017.

1 " = 200 '

0 100 200 400

N

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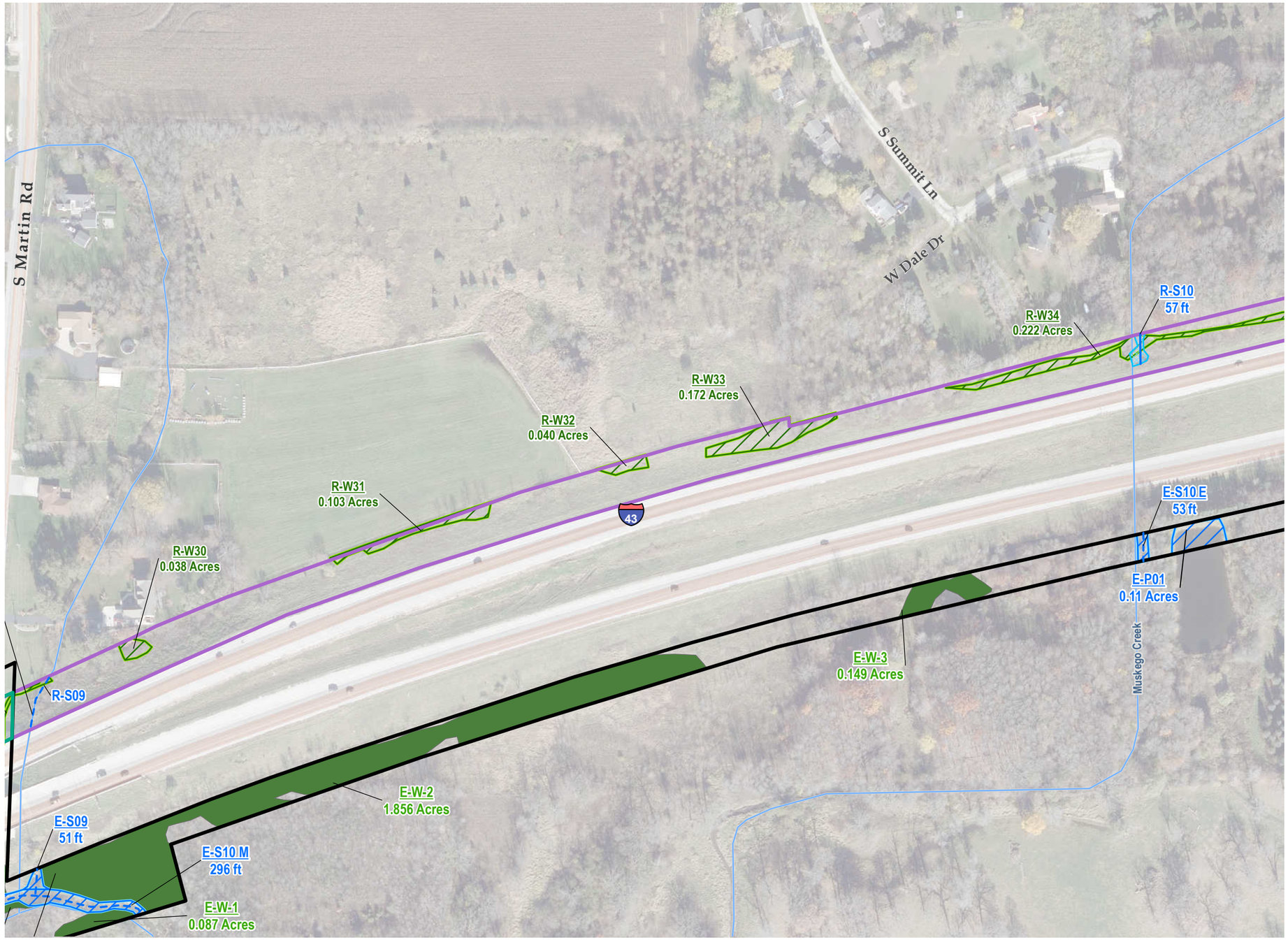

FIGURE 5
SHEET 3 OF 6

LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE
- TRC DELINEATED STREAM CENTERLINE
- APPROXIMATE STREAM CENTERLINE
- TRC DELINEATED WETLANDS IN EASEMENT
- TRC DELINEATED WATERWAYS IN EASEMENT
- TRC DELINEATED WATERWAYS IN RIGHT-OF-WAY
- DELINEATED WETLANDS INSIDE RIGHT-OF-WAY/STUDY AREA
- NHD STREAM/RIVER

NOTES

1. BASE MAP FROM GREELEY AND HANSEN, 2017.

1 " = 200 '

0 100 200 400

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Date: 1/4/2019

Plotted: 1/4/2019
Document Path: E:\WetlandsGeneral\WaukeshaPipeline\2016_263344\263344-089-NEPA-F5.mxd

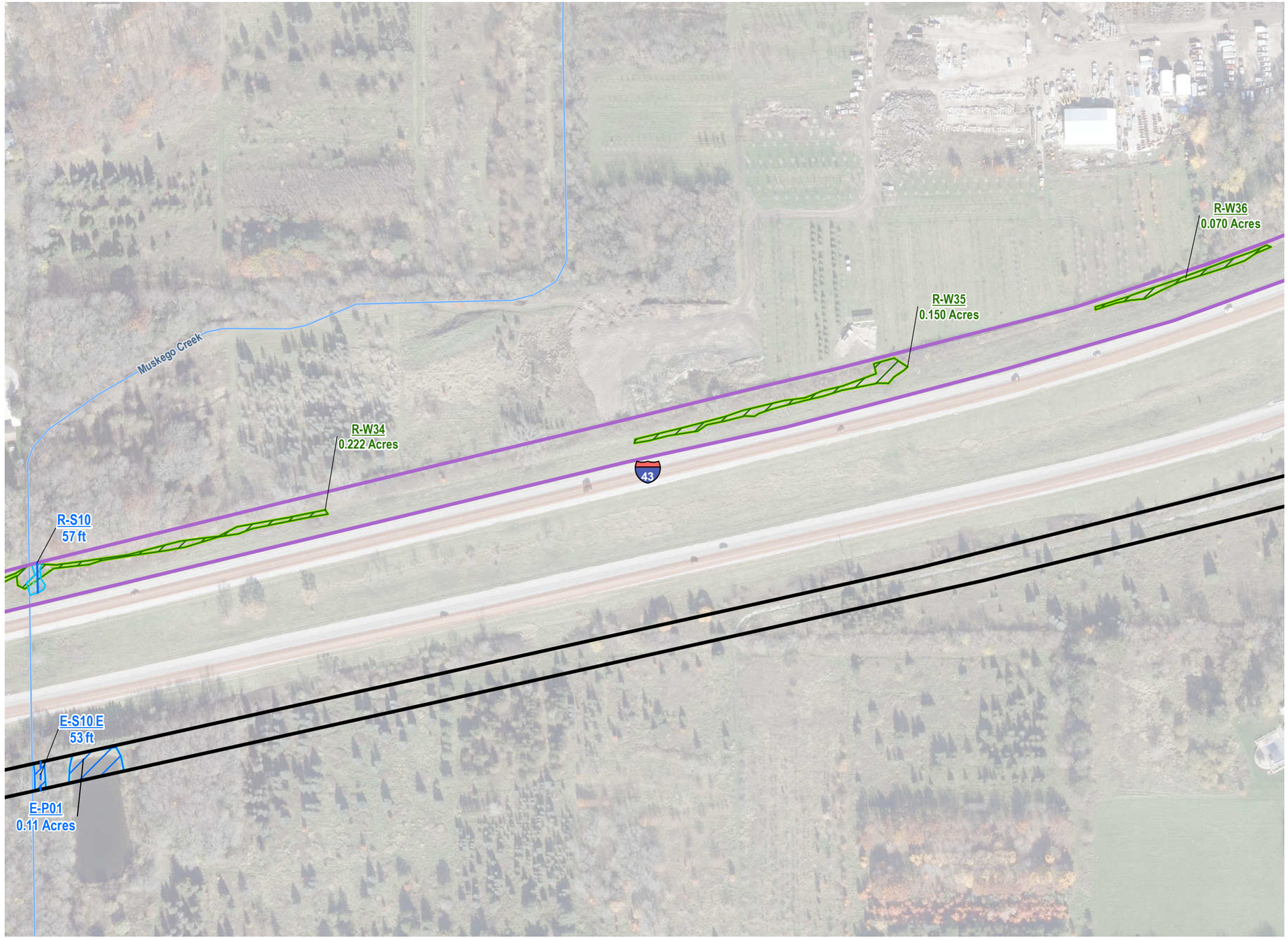

FIGURE 5
SHEET 4 OF 6

LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE
- TRC DELINEATED STREAM CENTERLINE
- APPROXIMATE STREAM CENTERLINE
- TRC DELINEATED WATERWAYS IN EASEMENT
- TRC DELINEATED WATERWAYS IN RIGHT-OF-WAY
- DELINEATED WETLANDS INSIDE RIGHT-OF-WAY/STUDY AREA
- NHD STREAM/RIVER

NOTES

1. BASE MAP FROM GREELEY AND HANSEN, 2017.

1 " = 200 '

0 100 200 400

N

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WETLAND AND WATERWAY IMPACTS
Date: 1/4/2019

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Document Path: E:\WetlandsGeneral\WaukeshaPipeline\2016_263344\263344-089-NEPA-F5.mxd

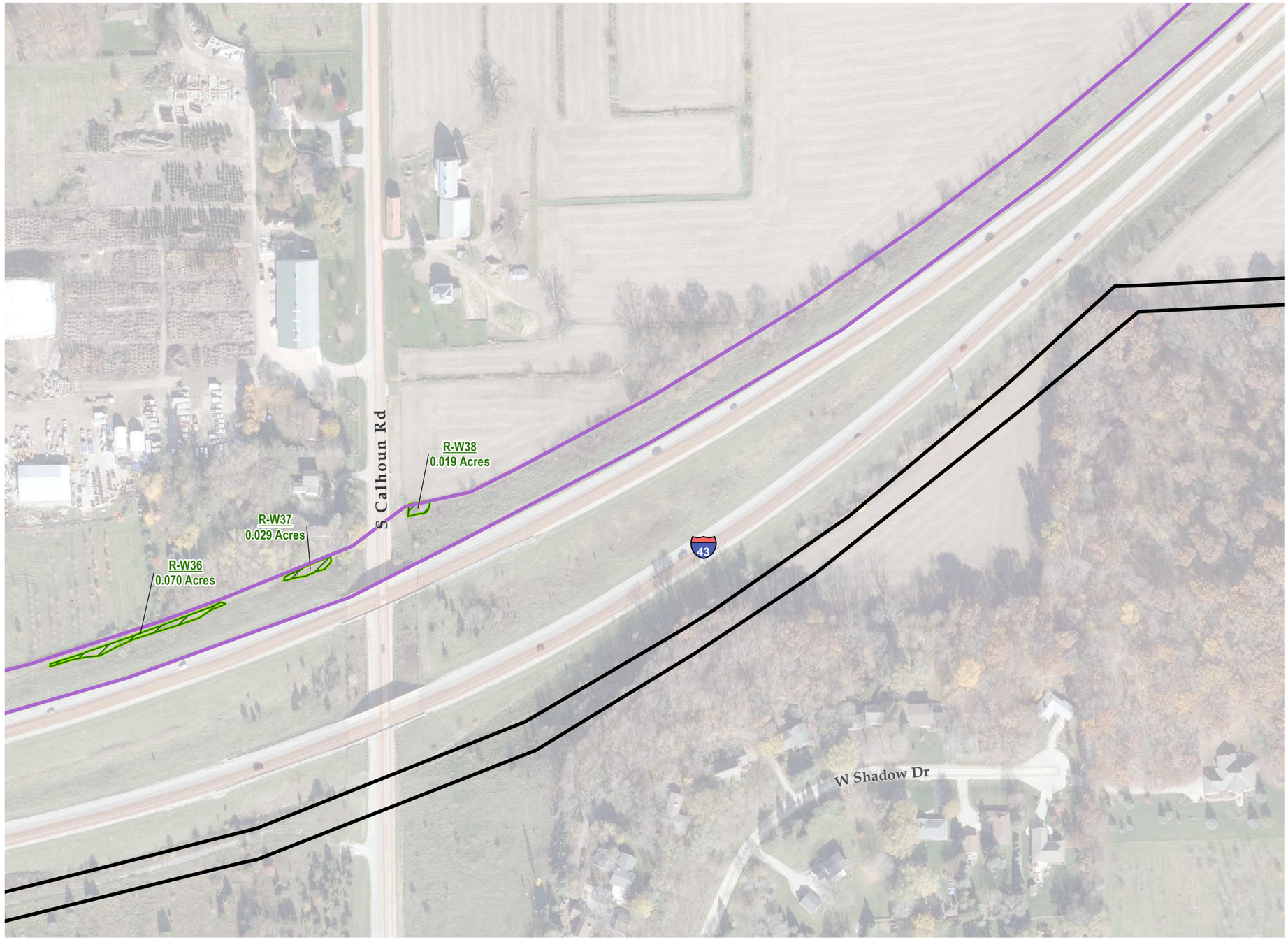

FIGURE 5
SHEET 5 OF 6

LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE
- DELINEATED WETLANDS INSIDE RIGHT-OF-WAY/STUDY AREA

NOTES

1. BASE MAP FROM GREELEY AND HANSEN, 2017.

1 " = 200 '

0 100 200 400

N

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Date: 1/4/2019

Plotted: 1/4/2019
Document Path: E:\WetlandsGeneral\WaukeshaPipeline\2016_263344\263344-089-NEPA-F5.mxd

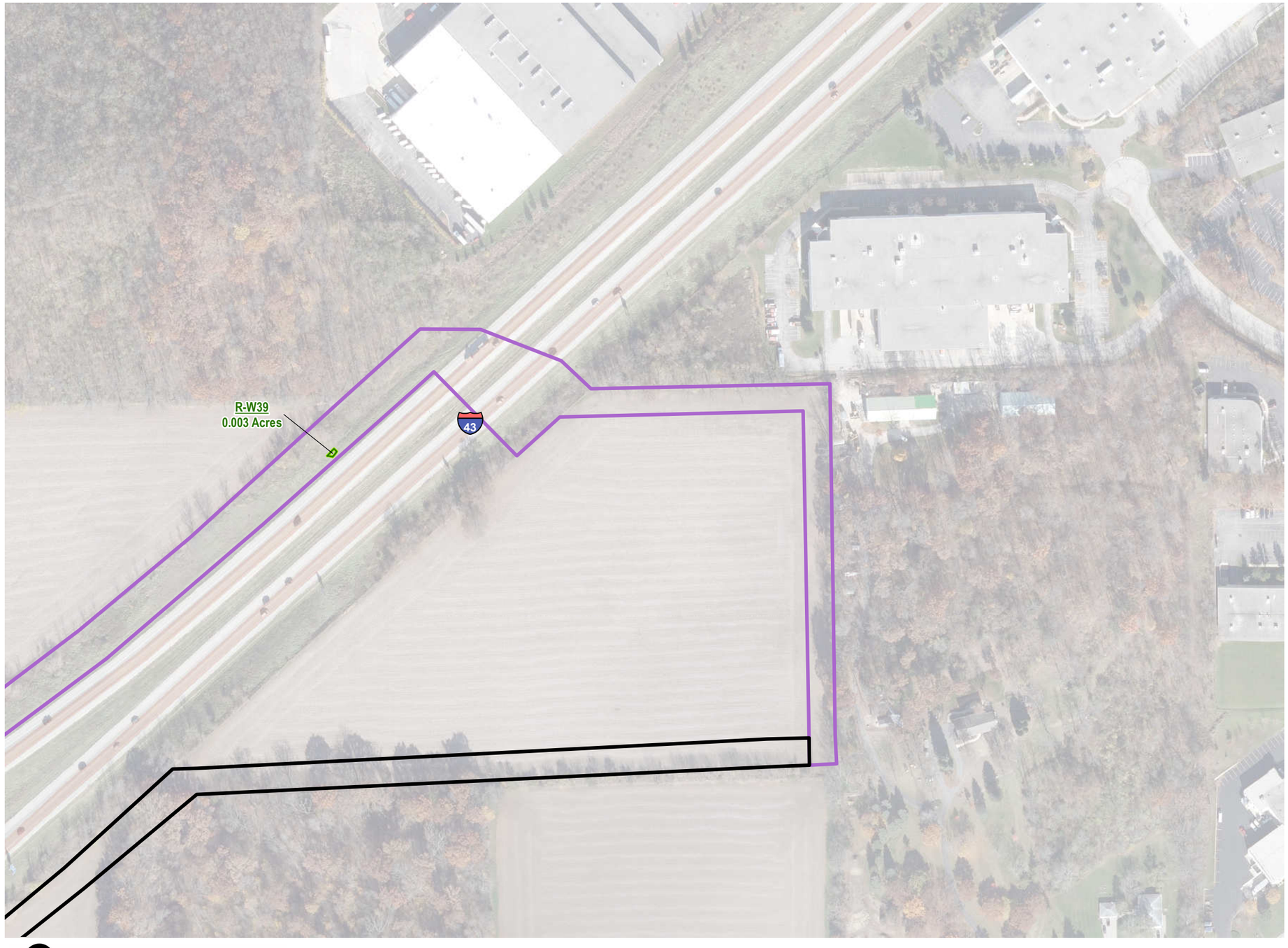

FIGURE 5
SHEET 6 OF 6

LEGEND

- EASEMENT ALTERNATIVE
- IH43 ROW ALTERNATIVE
- DELINEATED WETLANDS INSIDE RIGHT-OF-WAY/STUDY AREA

NOTES

1. BASE MAP FROM GREELEY AND HANSEN, 2017.

1 " = 200 '

0 100 200 400

N

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WETLAND AND WATERWAY IMPACTS
Date: 1/4/2019

Plotted: 1/4/2019
Document Path: E:\WetlandsGeneral\WaukeshaPipeline\2016_263344\263344-089-NEPA-F5.mxd

Appendix B – Section 106 Review Archeological/Historical Information Form

19-0153/WK

SECTION 106 REVIEW ARCHAEOLOGICAL/HISTORICAL INFORMATION

Wisconsin Department of Transportation
DT1635 6/2014

RECEIVED FEB 19 2019 SHPO

For instructions, see FDM Chapter 26.

I. PROJECT INFORMATION

BY: ..... ☐ Amended Submittal *(include new information only)*

Project ID	Highway – Street	County
N/A	I-43	Waukesha
Project Termini: I-43 ROW and Easements from Racine Ave to 0.5 mi east of Calhoun Rd		Region – Office: Southeast
Regional Project Engineer – Project Manager		(Area Code) Telephone Number

Consultant Project Engineer – Project Manager: TRC Environmental Corporation/Ron Londre Project Manager	(Area Code) Telephone Number: 262-229-7687
Archaeological Consultant: TRC Environmental Corporation/Al Van Dyke Principal Archaeologist	(Area Code) Telephone Number: 262-225-5105
Architecture/History Consultant	(Area Code) Telephone Number
Date of Need	SHSW Number
Return a Signed Copy of This Form to	

II. PROJECT DESCRIPTION

Project Length	Land to be Acquired: Fee Simple	Land to be Acquired: Easement
2.42 miles	0 acres	0 acres

Distance as measured from existing centerline	Existing	Proposed	Other Factors	Existing	Proposed
Right-of-Way Width N/A			Terrace Width N/A		
Shoulder N/A			Sidewalk Width N/A		
Slope Intercept N/A			Number of Lanes N/A		
Edge of Pavement N/A			Grade Separated Crossing N/A		
Back of Curb Line N/A			Vision Triangle acres		
Realignment	N/A	N/A	Temporary Bypass N/A acres		
Other – List:			Stream Channel Change	☐ Yes	☒ No
Attach Map(s) that Depict "Maximum" Impacts.	☐ Yes	☐ No	Tree Topping and/or Grubbing	☒ Yes	☐ No

Brief Narrative Project Description: Include all ground disturbing activities. For archaeology, include plan view map indicating the maximum area of ground disturbance and/or new right-of-way, whichever is greater. Include all temporary, limited and permanent easements. For amendments (e.g. design refinements, scope changes, etc) description should only include new/added project actions and materials.

The City of Waukesha needs a long-term, sustainable alternative to its existing water supply. The aquifer which has been the City's primary source of drinking water has become depleted in Southeast Wisconsin. New pipelines will carry fresh water sourced from Lake Michigan to the City of Waukesha, and then return the same amount – in the form of clean water – using the Root River tributary. Current plans call for the pipeline to begin at a pumping station near Milwaukee, and travel some 20 miles to Waukesha. A second pipeline, the return pipeline, will deliver treated water from the Clean Water Plant in Waukesha to an outfall point in Franklin that empties into the Root River. A section of the return pipeline is planned for installation in easements adjacent to I-43 from Racine Ave to 0.5 mi east of Calhoun Road in Waukesha County.

☐ Add continuation sheet, if needed.

SECTION 106 REVIEW ARCHAEOLOGICAL/HISTORICAL INFORMATION *(continued)*

Wisconsin Department of Transportation DT1635

III. CONSULTATION

How has notification of the project been provided to:

☒ Property Owners
- ☒ Public Information Meeting Notice
- ☐ Letter - Required for Archaeology
- ☐ Telephone Call
- ☐ Other:

☐ Historical Societies/Organizations
- ☐ Public Information Meeting Notice
- ☐ Letter
- ☐ Telephone Call
- ☐ Other:

☒ Native American Tribes
- ☐ Public Info. Mtg. Notice
- ☒ Letter
- ☐ Telephone Call
- ☐ Other:

Attach one copy of the base letter, list of addresses and comments received. For history include telephone memos as appropriate.

IV. AREA OF POTENTIAL EFFECTS – APE

ARCHAEOLOGY: Area of potential effect for archaeology is the existing and proposed ROW, temporary and permanent easements. Agricultural practices do not constitute a ground disturbance exemption.

HISTORY: Describe the area of potential effects for buildings/structures.

The project is a utility installation and there are no proposed additions to the existing I-43 ROW. Pipeline installation would be within the existing easements adjacent to the ROW. There are no buildings or structures in the area of easements proposed for the alternative.

V. PHASE I – ARCHAEOLOGICAL OR RECONNAISSANCE HISTORY SURVEY NEEDED

ARCHAEOLOGY	HISTORY
☒ Archaeological survey **is needed**	☐ Architecture/History survey **is needed**
☐ Archaeological survey **is not needed**	☒ Architecture/History survey **is not needed**
☐ Screening list (date)	☐ Screening list (date)
☐ Burial site in project area, Wis. Stat. 157.70 applies	☒ No structures or buildings of any kind within APE
	☐ Non-Survey History Documentation attached

VI. SURVEY COMPLETED

ARCHAEOLOGY	HISTORY
☒ **NO** archaeological sites(s) identified – ASFR attached	☐ **NO** buildings/structures identified – Report attached
☐ **NO** potentially eligible site(s) in project area – Phase I Report attached	☐ Potentially eligible buildings/structures identified in the APE – Report attached
☐ Potentially eligible site(s) identified-Phase I Report attached	☐ Avoided through redesign
☐ Avoided through redesign	☐ Previously listed/eligible property identified in the APE – Report attached
☐ Phase II conducted – go to VII (Evaluation)	
☒ Phase I Report – Cemetery/cataloged burial documentation	

VII. DETERMINATION OF ELIGIBILITY (EVALUATION) COMPLETED

☐ No arch site(s) eligible for NRHP – Phase II Report attached	☐ No buildings/structure(s) eligible for NRHP – DOE attached
☐ Arch site(s) eligible for NRHP – Phase II Report attached	☐ Building/structure(s) eligible for NRHP – DOE attached
☐ Site(s) eligible for NRHP – DOE attached	

VIII. COMMITMENTS/SPECIAL PROVISIONS – must be included with special provisions language

☒ Per Wis. Stat. 157.70 obtain burial authorization from WHS one year prior to construction.

BWK-0039

IX. PROJECT DECISION

☒ No historic properties (historical or archaeological) in the APE.

☐ No historic properties (historical or archaeological) affected.

☐ Historic properties (historical and/or archaeological) may be affected by project;
- ☐ Go to Step 4: Assess affects and begin consultation on affects.
- ☐ Documentation for Determination of No Adverse Effects is included with this form. WisDOT has concluded that this project will have No Adverse Effect on historic properties. Signature by SHPO below indicates SHPO concurrence in the DNAE and concludes the Section 106 Review process for this project.

X. SIGNATURES

X N/A (Regional Project Manager Signature) (Date – m/d/yy)	X 2-19-19 (WisDOT Historic Preservation Officer Signature) (Date – m/d/yy)	X (State Preservation Officer Signature) (Date – m/d/yy) March 1 2019
X 2/4/19 (Consultant Project Manager Signature) (Date – m/d/yy)		

Appendix C – List of Tribes Notified, Example Notification Letter, and Response

Tribal Notification Community	Notification Addressee	Date of Letter	Response
Hannahville Indian Community, Michigan	Mr, Earl Meshigaud	December 12, 2017	
Oneida Tribe of Wisconsin	Ms. Corina Williams	December 12, 2017	
Sokaogon Chippewa Community	Mr. Adam Van Zile	December 12, 2017	
St Croix Band of Lake Superior Chippewa	Ms. Wanda McFaggen	December 12, 2017	
Red Cliff Band of Lake Superior Chippewa Indians	Tribal Historic Preservation Office	December 12, 2017	
NAGPRA Office	Ms. Hattie Mitchel	December 12, 2017	
Menominee Indian Tribe of Wisconsin	Mr. David Grignon	December 12, 2017	
Lac du Flambeau Band of Lake Superior Chippewa Indians	Ms. Melinda Young	December 12, 2017	
Lac Courte Oreilles Band of Lake Superior Chlppewa Indians	Mr. Brian Bissonette	December 12, 2017	
Ho-Chunk Nation	Mr, William Quackenbush	December 12, 2017	
Forest County Potawatomi Community	Mr. Michael LaRonge	December 12, 2017	Yes
Citizen Potawatomi Nation, Oklahoma	Dr. Kelli Mosteller	December 12, 2017	
Bad River Band of Lake Superior Chippewa Indians	Ms. Edith Leoso	December 12, 2017	

GREELEY AND HANSEN
741 North Grand Avenue, Suite 308
Waukesha, Wisconsin 53186
p 262 290 2120
www.greeley-hansen.com

December 12, 2017

Mr. Michael LaRonge
Forest County Potawatomi Community
Natural Resources Department
5320 Wensaut Lane, P.O. Box 340
Crandon, Wisconsin 54520

Subject: Request for Consultation, Great Lakes Water Supply Program, Waukesha and Milwaukee Counties

Dear Mr. LaRonge:

We hope this letter finds you in good health. On behalf of the Waukesha Water Utility (WWU), we are contacting your tribe regarding the proposed construction of a water supply and return pipeline, and related facilities in Waukesha and Milwaukee Counties, Wisconsin. The proposed project, the Great Lakes Water Supply Program (Program), will comprise up to 100 acres of associated facilities and up to 45 miles of pipeline. Four proposed water supply pipeline routes and three proposed return pipelines are being evaluated at this time, with a final route to be selected for construction. The pipeline and facilities could possibly be located in the following communities:

- City of Franklin
- City of Greenfield
- City of Milwaukee
- City of Muskego
- City of New Berlin
- City of Oak Creek
- City of Waukesha
- City of West Allis
- Town of Vernon
- Town of Waukesha

This letter is to inform you of the undertaking. We respectfully request consultation with you and your tribe.

WWU is implementing this Program as the Great Water Alliance. We invite you to visit our website, greatwateralliance.com, for information about the Program.

Program Location and Description

WWU proposes to construct a water supply and return flow pipeline, water supply pumping station, booster pumping station and storage facility, and a return flow pumping station and outfall in the counties of Waukesha and Milwaukee, southeast of the City of Waukesha. The Program will include up to 45 miles of underground pipeline and up to 100 acres of pumping station, storage, and outfall areas. At this time, we are evaluating four proposed water supply pipeline routes and three proposed return pipeline alternatives, as shown in **Figure 1** (attached).

Cultural Resource Assessment

A cultural resource screening assessment (Literature and Archives research) was conducted in 2017 that included a review of the following:

- Archaeological sites and archaeological reports listed in the Wisconsin Historical Society Database (WHPD)
- Historical aerial photographs
- The National Register of Historic Places (NRHP)
- Historical atlases
- General Land Office surveyors maps and notes
- Trygg maps
- Reports of earlier archaeological surveys
- Published works on archaeology for the area

Allen P. Van Dyke of TRC is the Principal Archaeologist for this Program and was responsible for the Literature and Archives research.

The review noted that there are 11 archaeological sites, 13 burial sites, 38 historic structures that either overlap the three proposed route alternatives, or are within 50 feet of the route alternatives. TRC's review determined that some segments of these routes were surveyed for archaeological sites at earlier dates for various highway construction projects, utility projects, and other municipal or commercial projects.

One cultural resource site is significant in terms of National Register of Historic Places (NRHP) criteria, and listed on the NRHP; therefore, that site is recommended for avoidance. Because of the significant disturbance at some of the site locations from previous projects and activities, it would not be expected that most of the sites would still be intact.

Program Review Request

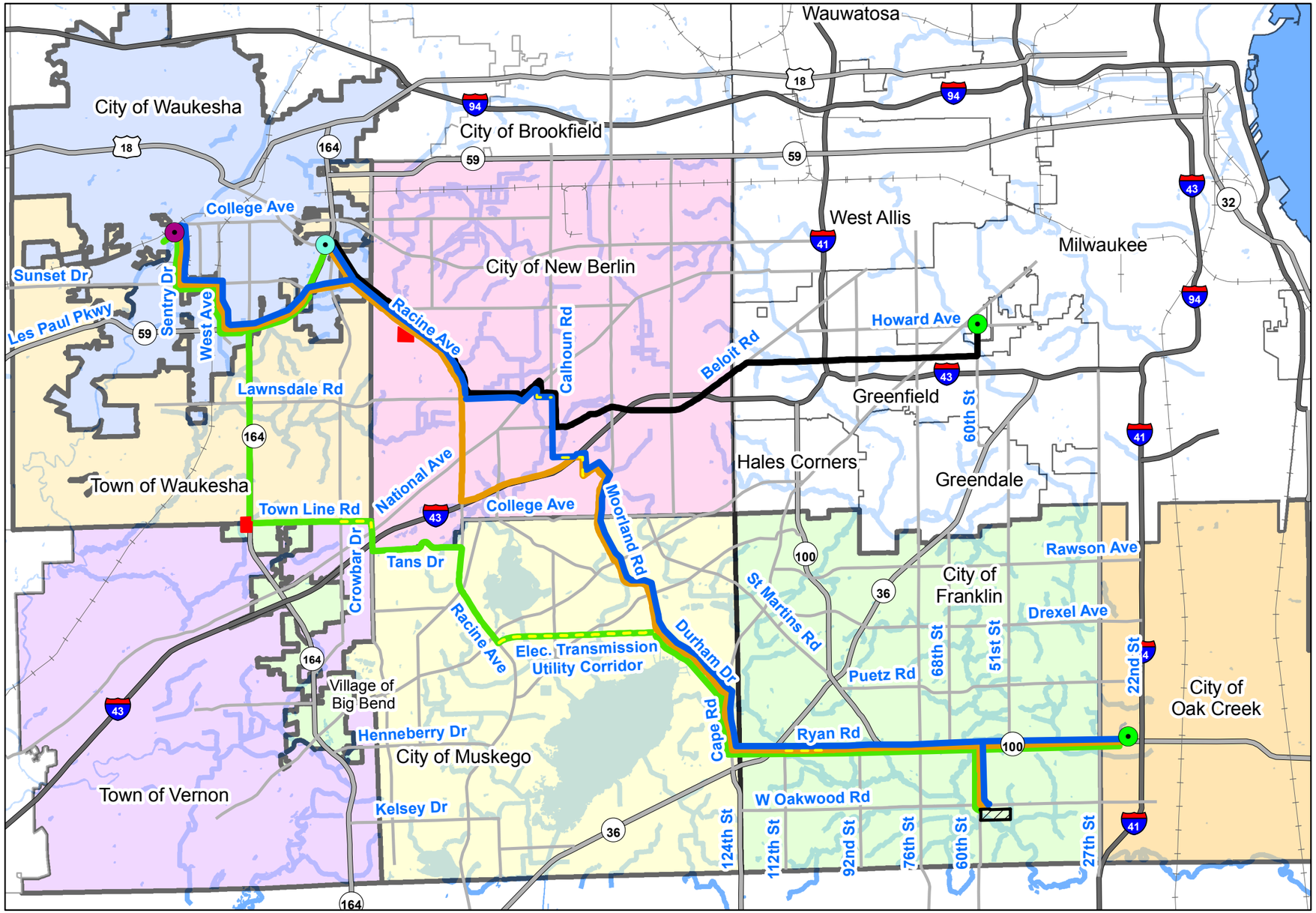
Mr. LaRonge, WWU respectfully requests your comments on the proposed Program within 30 days from this request. We appreciate your efforts to review and respond to this request. If you have any questions regarding the Program or attached materials, please do not hesitate to contact me via email KZylstra@waukesha-water.com, or by telephone at (262) 409-4430.

Yours very truly,

Kelly Zylstra, P.E.
Operations Manager
Waukesha Water Utility

KZ/cb

c: File



Legend

- Oak Creek Route 2
- Oak Creek Route 2, Easement Required
- Oak Creek Route 3
- Oak Creek Route 3, Easement Required
- Oak Creek Route 4
- Oak Creek Route 4, Easement Required
- Milwaukee Supply Route
- Water Supply Pumping Station
- Storage and Booster Pumping Station
- Return Flow Pumping Facility
- Connection to Distribution System
- Return Flow Pipeline Discharge to Root River

Municipal Stakeholders

- City of Muskego
- City of New Berlin
- City of Waukesha
- City of Franklin
- City of Oak Creek
- Town of Vernon
- Town of Waukesha
- Village of Big Bend

Significant Features

- Interstates
- State Highways
- Local Roads
- Railroads
- Surface Waters

1 " = 10,000 '

0 5,000 10,000 20,000

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Waukesha, Wisconsin 53186

Waukesha, Wisconsin
Great Lakes Water Supply Program

Figure 1: Potential Supply and Return Routes

Date: 10/17/2017

Plotted: 10/17/2017
Document Path: G:\15310-Waukesha Great Lakes Water Supply PM-CM\24 GIS\24_05_Working_MXDs\3Routes_10_05_17_EIS.mxd

From: Michael LaRonge [mailto:Michael.LaRonge@fcpotawatomi-nsn.gov]
Sent: Wednesday, January 17, 2018 1:08 PM
To: Kelly L. Zylstra <KZylstra@waukesha-water.com>
Subject: Re: Waukesha Water Utility supply and return pipeline located in Waukesha, and Milwaukee counties, Wisconsin.

Re: Waukesha Water Utility supply and return pipeline located in Waukesha, and Milwaukee counties, Wisconsin.

Dear Ms. Zylstra,

Pursuant to consultation under Section 106 of the National Historic Preservation Act (1966 as amended) the Forest County Potawatomi Community as a Federally Recognized Native American Tribe reserves the right to comment on Federal undertakings, as defined under the act. Thank you for your participation in the process.

This response pertains to the project mention above. The area of Wisconsin Impacted by this project is of extreme interest to the Forest County Potawatomi Community. Therefore, the Tribal Historic preservation office requests a copy of the literature review mentioned in your letter, as well as any archaeological reports conducted to covers gaps in the archaeological survey record coincident with the proposed corridor and related SHPO commentary.

Your interest in protecting Wisconsin's cultural and historic properties is appreciated. If you have any questions or concerns, please contact me at the email or number listed below.

Respectfully,

Michael LaRonge
Tribal Historic Preservation Officer
Natural Resources Department
Forest County Potawatomi Community
5320 Wensaut Lane
P.O. Box 340
Crandon, Wisconsin 54520
Phone: 715-478-7354
Fax: 715-478-7225
Email: Michael.LaRonge@FCPotawatomi-nsn.gov