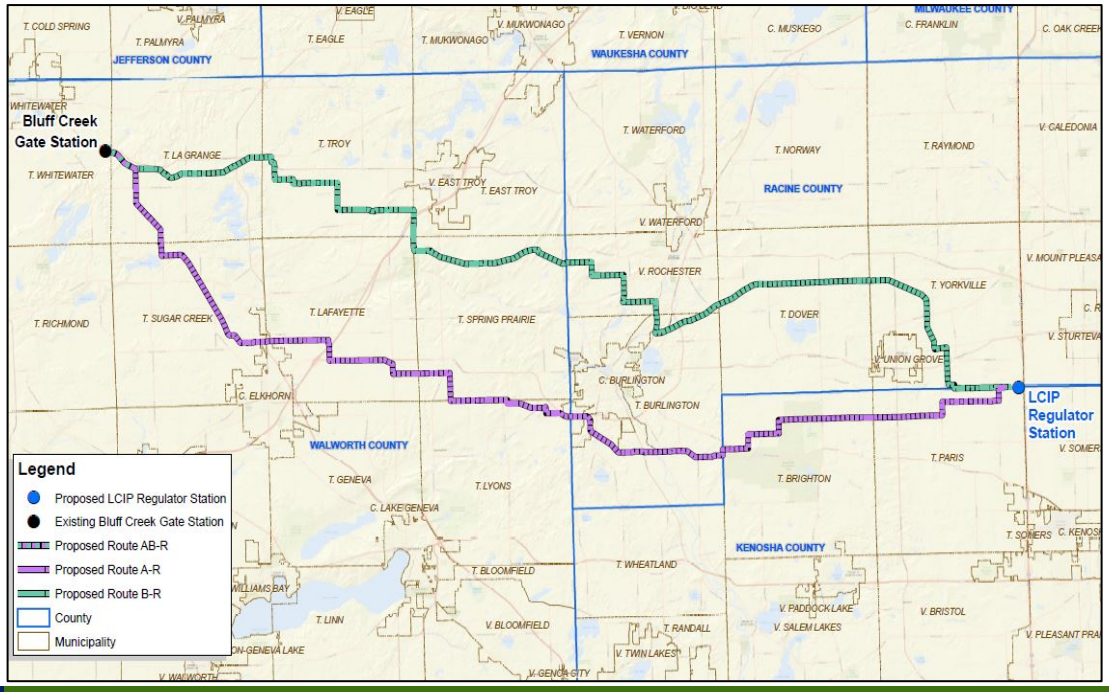
AGRICULTURAL IMPACT STATEMENT



DATCP #4262

Lakeshore Lateral Natural Gas Pipeline

Walworth, Kenosha, and Racine Counties

PSC #6630-CG-138

WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION

PUBLISHED JULY 10, 2019

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DATCP #4262
Lakeshore Lateral Natural Gas Pipeline
Walworth, Kenosha, and Racine Counties
We Energies

WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION

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The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) has prepared this Agricultural Impact Statement (AIS) for the proposed Lakeshore Lateral Natural Gas Pipeline (DATCP #4262) in accordance with Wis. Stat. §32.035. We Energies initially submitted project information to DATCP in November of 2018 with revised information provided in February and March of 2019. We Energies proposes to construct approximately 46 miles of 24-inch natural gas pipeline to provide additional gas supply in southeastern Wisconsin. Two potential routes, Route A and Route B are described in its project application.

The proposed project connects an existing gate station in the town of LaGrange, Walworth County and the Lakeshore Capacity Improvement Project (LCIP) Regulator Station located in either the village of Yorkville in Racine County or in the town of Paris, Kenosha County. The LCIP Regulator Station was approved as part of the LCIP project (PSC Docket 6630-CG-137) by the PSC on April 26, 2019. The PSC did not approve a specific location for the regulator station. Three sites are being considered. This project, the Lakeshore Lateral, is designed to connect to the western end of the LCIP project.

Route A and Route B both begin with a common segment (Route AB) that is about one mile long. The right-of-way (ROW) for both routes is a mix of existing utility ROWs, highway and road ROWs, and cross-country new ROW. Route A requires substantially more new ROW than Route B. Approximately 53 percent of Route A is new ROW, whereas about 35 percent of Route B would be new ROW. A large percentage of the ROW for both routes is across farmland, 89 percent for Route A and 80 percent for Route B. DATCP prefers limiting impacts to agricultural fields by using routes that follow field or property boundaries or using field edges along road and railroads rather than crossing the middle of farm fields. About 22 miles of Route B would be located within, partially overlap, or directly adjacent to road/railroad ROW and, therefore, away from the center of farm fields. Whereas, about 12 miles of Route A would be similarly situated.

The Public Service Commission of Wisconsin (PSC or Commission) is the authority that approves, denies, or makes modifications to this project and chooses the route that the project will follow.

As part of its review of the project, DATCP sent questionnaires to agricultural property owners who may have four or more acres of easement acquired for this project. Depending on the route selected, 118 or 146 farmland owners could be directly affected by the project. Of those farmland owners, 65 to 68 could have four or more acres of easement acquired. DATCP sent 88 questionnaires and received 48 responses. The landowners' comments and concerns are summarized in Section VI, Agricultural Landowner Impacts.

Recommendations to the Public Service Commission

Having reviewed all of the materials provided by We Energies and the comments from property owners, DATCP does not recommend a specific route. Both routes proposed for this project would impact significant acres of farmland. However Route B would affect fewer acres of farmland and is routed along field edges and property lines more than Route A.

Even though no specific route is recommended, DATCP does recommend the following to the PSC, We Energies, and to agricultural property owners to help mitigate impacts on farmland and farm operations.

Route Modifications

- DATCP recommends that landowner-proposed route modifications be reviewed and if reasonable, the Commission should consider approving these route changes.

  A significant proportion of both routes crosses through agricultural fields, which can create accessibility issues for farm operators and a greater potential for damaging drain tiles. Many of the potentially affected farms use drainage tiling systems. We Energies has indicated that landowner-proposed route modifications would be considered if the modification would not change the route on neighboring properties or if the neighboring property owners agreed to the route modifications. DATCP is aware of the following farmland owner-proposed route modifications:

  - Route A: On the Bartholomew Ament property, east of State Trunk Highway (STH) 75, the landowner suggests the route be moved to the south to avoid a 3-foot culvert in a ditch.

  - Route B: The owners of the Dietzler Farm LP property suggest that the route be relocated from the middle of their cropland to the field edges. This would shift the route slightly east and south of its proposed location. A sketch of this proposal is included in Appendix F.

Proposed Facilities

- DATCP recommends that We Energies work with landowners to site all new aboveground facilities and access roads to minimize impacts to actively farmed lands.

Compensation to Farmers

- Much of this project crosses diagonally through cropland. DATCP recommends that farmers should be compensated for construction activities that create off-ROW impacts. Typical pipeline construction-related off-ROW impacts involve the temporary division of fields and the limited maneuverability of farm equipment. Divided fields may make it very difficult for farm equipment to gain access to all parts of a field, and the creation

of temporary small or odd-shaped field remnants may make portions of farm fields impractical to farm.

Agricultural Inspector

- DATCP recommends the use of a dedicated Agricultural Inspector for this project due to the extensive use of drain tiling on many of the potentially affected farms. Damage to drain tiling can cause significant harm to the future productivity of farmland.
- The Agricultural Inspector should assist with pre-construction discussions between the utility and agricultural property owners, conduct inspections of construction activities through agricultural properties, and monitor the implementation of the project-specific Agricultural Mitigation Plan (AMP) and Best Management Practices (BMPs). The Agricultural Inspector should be familiar with agricultural practices and gas pipeline construction impacts and mitigation, as well as have knowledge in agronomy, soil conservation, and soil identification.
- DATCP recommends that the Agricultural Inspector share periodic construction reports with DATCP staff.

Three-Lift Soil Handling

- DATCP recommends that the Agricultural Inspector conduct field reviews for the following three-lift soil candidates along the approved route where trenching would occur in cropland and pasture:

Boyer complex	Fox loam	Matherton loam
Casco sandy loam	Fox silt loam	McHenry silt loam
Casco loam	Griswold loam	Miami loam
Casco-Rodman complex	Griswold silt loam	Mundelein silt loam
Dresden loam	Kane loam	Plano silt loam
Drummer silt loam	Kendall silt loam	Warsaw loam
Elburn silt loam	Lorenzo loam	Warsaw silt loam
Fox sandy loam	Matherton silt loam	

- DATCP recommends that We Energies inform affected agricultural property owners who have potential three-lift candidate soils on their land and how three-lift soil handling could preserve the productivity of their fields.

Organic Farming Practices

- Route B crosses two farms that are certified for organic production. They are the Grassway Farm on the Yggdrasil Land Foundation, Inc. property and the Rohrer Family Farms LLC.

  DATCP recommends that, prior to the start of construction, We Energies work with these farms and their certifying entities to determine site-specific construction practices

that would protect the organic practices used by these farmers and minimize the potential for decertification. Issues that should be addressed include cleaning construction equipment before entering certified organic land, the application or potential release of any prohibited materials, soil management, erosion control, and weed control. We Energies should not apply seed to organic land without approval from the operator. Additionally, We Energies should compensate the operator for any damages if decertification results from pipeline construction or restoration activities.

Land Enrolled in Conservation Programs

- Several potentially affected farmland owners participate in the Conservation Reserve Program (CRP) and a few participate in the Conservation Reserve Enhancement Program (CREP). DATCP recommends that We Energies work with these property owners to minimize impacts to their participation in these or other similar programs.

Recommendations to We Energies

- We Energies should submit documentation to DATCP when the eastern end of this project is known. Information should include a map of the LCIP Regulator Station and project ROW, a list of landowners that would be affected by the station's location and connecting pipeline, and acres of impact. If the finalized regulator station is not one of the three locations identified in this document, information should be submitted to DATCP so it can be determined if an AIS addendum should be completed for this project.
- Where practicable, DATCP recommends that We Energies work with farmers who have proposed minor route modifications on their property so that impacts from the project to their drain tiling and drainage systems are minimized.
- The AMP and BMPs submitted by We Energies for this project are effective tools in mitigating potential impacts to farm properties. DATCP recommends that We Energies implement appropriate training for all construction supervisors, inspectors, and crews to ensure that implementation of the AMP and BMPs is well understood and the integrity of agricultural lands and operations is protected during project construction and restoration.
- When the proposed project requires the removal of trees, We Energies should hire appraisers who have expertise in valuing trees, including immature trees that have not yet reached a marketable stage. Compensation should include the other impacts from tree removal including damage to windbreaks, loss of shade or other needs for livestock, loss of fruit or nut bearing trees, and loss of aesthetics to the property.
- DATCP recommends that We Energies make reasonable efforts to ensure that any renters of project-affect agricultural land are kept up-to-date and informed of construction schedules and potential impacts.

- We Energies should work with property owners and renters to minimize construction impacts to farming operations and infrastructure.
- We Energies should work with landowners to restore agricultural properties impacted by construction activities to pre-construction function and address concerns resulting from construction.
- Where construction activities have altered the natural stratification of soils resulting in new wet areas, We Energies should work with the landowner to determine the means to return the agricultural land either in the ROW or on adjoining lands to pre-construction function. New drainage tiles, regrading, or additional fill may be required to correct the problems that arise after construction is completed.

Recommendations to Agricultural Property Owners

- Farmland owners and others affected by the proposed project should participate in the PSC's review process, so that their concerns may be considered by the Commission.
- Landowners should examine the language of any easement contract carefully and verify that it contains all agreed-to terms. Landowners should be familiar with the We Energies AMP and BMPs prepared for this project (Appendix G) to determine if additional conditions should be negotiated with We Energies. Though landowners may choose to waive any or all of the practices and procedures described in the AMP and BMPs, DATCP recommends to only do so with careful consideration.
- Landowners/operators should keep records of the condition of their land within the ROW before, during, and after construction to document any impacts or damage that occurs due to the proposed project. Documentation could include crop yield records and photographs taken every season.
- Prior to the start of construction, landowners should identify for We Energies where construction activities may interfere with farm operations and where farm facilities are located including, drain tiles, wells, watering systems, fencing, farm access roads, or grain bins. Landowners should work with We Energies to schedule agricultural operations during each phase of pipeline construction. If any infrastructure such as drain tiles or fencing is damaged by construction activities, landowners should document and photograph the damage and any repair efforts conducted on behalf of We Energies to ensure the repair is adequate.
- After construction is completed, landowners and the utility should carefully monitor for the emergence of drainage problems. If problems are observed that can be attributed to pipeline construction, the landowner and We Energies should work together to develop a mutually agreeable solution.

I. INTRODUCTION

The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) has prepared this agricultural impact statement (AIS) in accordance with Wis. Stat. §32.035. The AIS is an informational and advisory document that describes and analyzes the potential effects of the project on farm operations and agricultural resources, but it cannot stop a project. The DATCP is required to prepare an AIS when the actual or potential exercise of eminent domain powers involves an acquisition of interest in more than five acres of land from any farm operation. The term farm operation includes all owned and rented parcels of land, buildings, equipment, livestock, and personnel used by an individual, partnership, or corporation under single management to produce agricultural commodities.

The AIS reflects the general objectives of the DATCP in its recognition of the importance of conserving important agricultural resources and maintaining a healthy rural economy. DATCP is not involved in determining whether or not eminent domain powers will be used or the amount of compensation to be paid for the acquisition of any property. As stated in Wis. Stat. §32.035(4)(d):

> *Waiting period.* The condemnor may not negotiate with an owner or make a jurisdictional offer under this subchapter until 30 days after the impact statement is published.

The full text of Wis. Stat. §32.035, as well as additional references to statutes that govern eminent domain and condemnation processes are included in Appendix B. Links to other sources of information can be found in Appendix C.

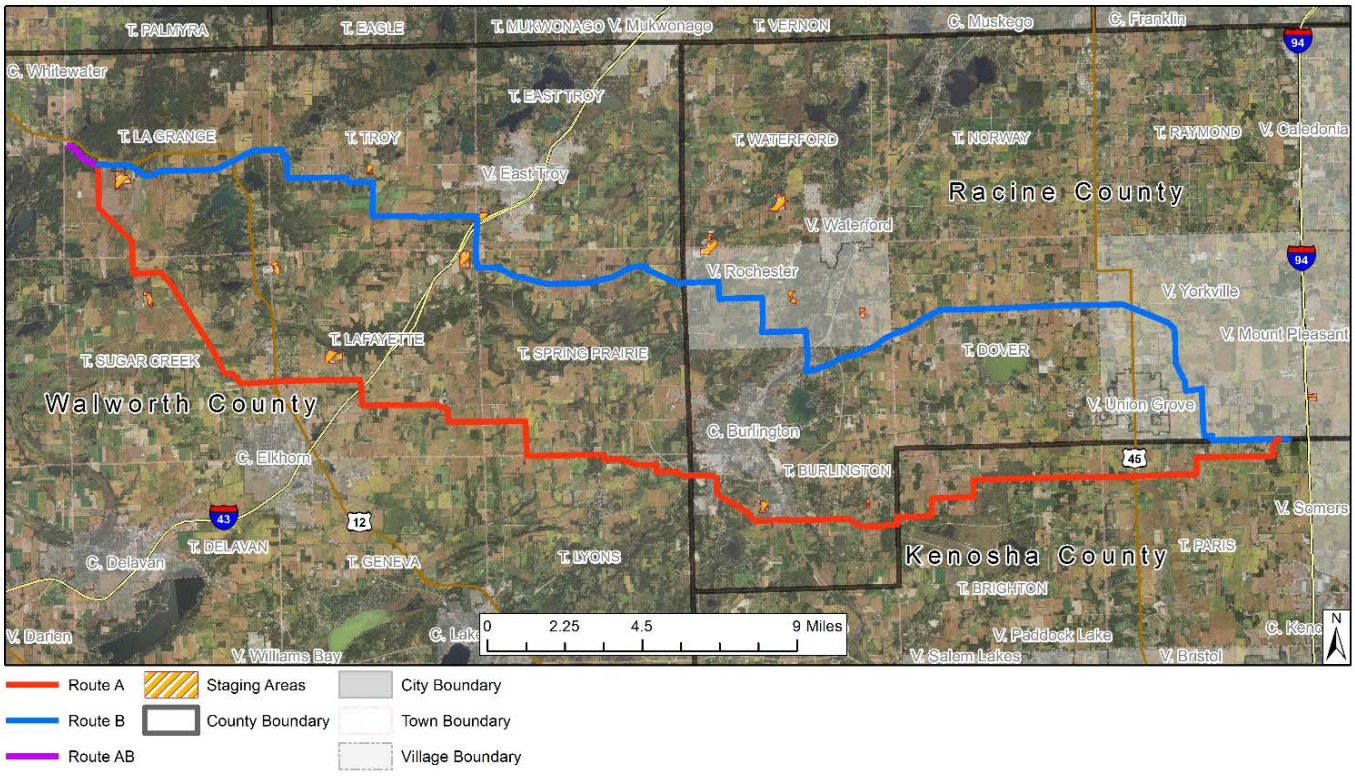
We Energies submitted an application to construct the Lakeshore Lateral Pipeline project to the Public Service Commission of Wisconsin (PSC or Commission) on May 18, 2018. We Energies submitted an application supplement on December 5, 2018 and an application amendment on March 28, 2019. The utility submitted an Agricultural Impact Notice to DATCP for this project on November 15, 2018 and a revised notice on February 28, 2019.

The PSC is preparing an Environmental Impact Statement (EIS) for this project. The EIS will analyze the need for the project and the potential environmental and community impacts. Public hearings for this project may be held in the project area. The Commission is the regulatory authority that will approve, modify, or deny We Energy's project application. Additional information about this project and the PSC review process can be found on the PSC web site: http://psc.wi.gov under the docket number 6630-CG-138 .

We Energies has developed an Agricultural Mitigation Plan (AMP) and Best Management Practices (BMPs) for this project. The AMP and BMPs describe the policies to be followed and methods to be used by We Energies to avoid, reduce, or mitigate the potentially adverse impacts on agricultural productivity from the construction of this pipeline. The AMP and BMPs are included in Appendix G of this report.

II. PROJECT DESCRIPTION

Figure 1: Overview Map



Overview

We Energies proposes to construct a new natural gas transmission main pipeline from the existing Bluff Creek Gate Station in the town of LaGrange, Walworth County to the Lakeshore Capacity Improvement Project (LCIP) Regulator Station in either the town of Paris in Kenosha County or the village of Yorkville in Racine County. The construction, though not the location, of the LCIP Regulator Station was approved by the Commission on April 26, 2019. More discussion about the potential location of the east endpoint of the Lakeshore Lateral project can be found in the section under, "Description of Potential Routes."

The pipeline will be 24 inches in diameter and about 46 miles long. This is a new pipeline that does not replace any existing pipe. Natural gas for this pipeline will come from either a Guardian pipeline or a Northern Natural Gas pipeline via the Bluff Creek Gate Station.

We Energies has identified two potential routes, Route A (the southern route) and Route B (the northern route). Route A is located in the counties of Walworth, Racine, and Kenosha. In Walworth County, it crosses through the towns of LaGrange, Lafayette, Lyons, Spring Prairie, and Sugar Creek; and the city of Elkhorn. In Racine County, Route A would affect properties in the city and the town of Burlington. In Kenosha County, it would affect properties in the towns of Brighton

and Paris. Route B is located in Walworth and Racine counties. It would require easements in the towns of East Troy, LaGrange, Lafayette, Spring Prairie, and Troy, in Walworth County. In Racine County, it would affect properties in the villages of Rochester and Yorkville, the city of Burlington, and the towns of Burlington and Dover. The western end of the project starts with a one-mile common route segment (Route AB).

If the project is approved, We Energies anticipates starting construction in the summer of 2020, with an in-service date of 2021.

Project Purpose and Need

We Energies has indicated that the purpose and need for this project are to connect the Lakeshore Capacity pipeline to an interstate pipeline and to increase the quantity and reliability of natural gas service in southeastern Wisconsin.

Service Connections

Adjacent landowners will be able to request natural gas service if the proposed main is located within the parcel requesting service or the main is located within the public road right-of-way (ROW) adjacent to the parcel requesting service. Service requests will be evaluated on a case-by-case basis and customer contributions may be required per company policies.

Right-of-Way Requirements

Through agricultural areas, the permanent easement for this project would be 50 feet wide and the temporary construction easement would require an additional 50 feet of width. For the portions of the project in non-agricultural areas, the permanent easement could range from 20 to 50 feet wide, and the temporary construction easement would be 0 to 50 feet wide.

After construction is completed, the land covered by the temporary easements would be restored and then the easement contract would be terminated.

For much of the route, the natural gas pipeline would be constructed in an open trench. Horizontal directional drilling (HDD) is proposed in some locations to avoid man-made obstacles and natural resources including highways, roads, railroads, residential and commercial developments, rivers, wetlands, and woodlands. In areas where HDD would be used instead of open trenching, narrower ROW widths may be allowable. However, often other areas of off-ROW temporary easement are required at each end of the HDD.

Shared Right-of-Ways

Much of these routes share or partially overlap existing utility (natural gas or electric line) ROWs, or road corridors. This type of routing has the advantage of requiring fewer acres of new ROW. However, utility ROWs, as opposed to road ROWs, are often located within agricultural fields and

can impact agricultural operations during construction and also cause damage to farmland soils that may impact crop yields well after construction is completed.

To farmers, there are benefits to routes that are directly adjacent to roads, highways, and railroads, even when there is no overlap of the two ROWs. Roads and railroads are located at the edges of fields and, therefore, create fewer complications for agricultural operations. Field edges may have soils that are already compacted if they are headlands or used for access, so construction impacts to farmland soils in these areas may not be as significant. The ROW may incorporate fence line areas that are not cropped and again have less impact to future crop yields. Roads can also provide easy access to construction sites so routes require fewer off-ROW access roads.

In many locations, this project partially overlaps existing ROWs or would be adjacent to roads and railroads. Route A requires substantially more new ROW than Route B. Approximately 53 percent of the length of Route A requires new ROW whereas Route B requires new ROW for about 35 percent of its length. Approximately 30 percent of the length of both routes would partially overlap an existing utility or road ROW. However, about 22 miles of Route B would be located within, partially overlap, or be directly adjacent to road/railroad ROW, whereas about 12 miles of Route A would be similarly situated.

Trench Dimensions

The excavated trench would be approximately 7 feet deep and 8 feet wide. The typical minimum distance between the soil surface and the top of the pipeline would be four feet. However, circumstances may result in only three feet of cover in some locations.

Description of Potential Routes

We Energies has proposed two potential routes, Route A (the southern route) and Route B (the northern route). Both routes use a short common segment (Route AB) at the western end of the project. This segment is about 1 mile long and has been included in the overall description for both routes. The eastern end of the project ends at the LCIP Regulator Station, which will be located at one of the three sites identified in a previous docket.

Route A (the southern route)

About half of Route A would be new ROW, though parts of it may straddle parcel boundaries. It would partially overlap or be located adjacent to electric utility corridors and road ROWs. It would partially overlap an existing 138 kV electric line (6552) for close to 5 miles and is adjacent to or partially overlap State Trunk Highway (STH) 11 for more than 3 miles.

Walworth County

Town of LaGrange: The common Route AB portion of Route A begins at the existing Bluff Creek Gate Station, south of U.S. Highway (USH) 12. The route heads southeast and cross-country,

paralleling two existing natural gas pipelines (a Guardian and a high-pressure pipeline) for a little over a mile. The new pipeline would be constructed along the south side of the existing pipelines partially overlapping a portion of the existing ROW width.

At County Trunk Highway (CTH) O, Route A turns south to parallel CTH O. It runs first along the west side of CTH O and then at Kettle Moraine Drive, it crosses to the east side of the highway. Most of the required ROW would be all new ROW adjacent to the road. It continues south until reaching an existing 138-kilovolt (kV) electric line (6552) where it turns southeast and parallels the northeast side of the electric line. Route A ROW overlaps about 34 feet of the transmission line ROW width. At Jackson Road the route turns south to parallel the west side of Jackson Road and continues into the town of Sugar Creek.

Town of Sugar Creek: After crossing CTH O, Route A continues south along the west side of Jackson Road for about a half-mile. Route A then turns east, cross-county on all new ROW until reaching the same 138 kV electric line (6552) it paralleled in the town of LaGrange. The route turns southeast following the northeast side of the transmission line, again partially overlapping about 34 feet of the electric ROW. It parallels the electric line for about 3 miles, crossing CTH A and CTH H, and then briefly turns east along the north side of Schmidt Road. The route then heads southeast until crossing to the south side of the same 138 kV transmission line (6552). It parallels, but does not share, the electric line ROW for about one mile until reaching USH 12/STH 67. The Route A ROW is about 100 feet south of the 138 kV ROW.

City of Elkhorn and town of Lafayette: Route A passes through a small part of the city of Elkhorn. The route continues east with some overlap of the existing 6552 electric line for about 2.5 miles. At Plank Road, the route turns south for about 700 feet and runs adjacent to the west side of the road. It then crosses to the east side of Plank Road and continues south across I-43. Route A then turns east and runs adjacent to the north side of STH 11. To avoid impacts to residential properties located close to STH 11, the route ROW periodically shifts into the highway so that no residential property is required for the project ROW. As the route approaches the intersection of STH 11 and Bray Road, it crosses STH 11 and then angles southeast, cross-country to Bowers Road. At Bowers Road, it turns south and follows the west side of Bowers Road and another 138 kV electric line (6541) for about 1,900 feet. Just north of the Lee Hample Trust property line, Route A turns east on all new ROW. The route continues east and cross-country into the town of Spring Prairie.

Town of Spring Prairie and Town of Lyons: From Townline Road, Route A continues cross-country on all new ROW first east, across STH 120, and then south along property boundaries. Turning east on Prairie Road into the town of Lyons, the route travels along the south side of the road. After crossing Clausen Road, the route continues east cross-country on new ROW until reaching North Road. It heads south along the west side of North Road for about 680 feet and then turns east to follow the Molitor Trust property line. Route A heads primarily east until it reaches the

Ingram Trust property where it angles to the southeast, then east again. Briefly paralleling the north side of STH 36, it then turns south along the east side of Mangold Road and then east again cross-country on new ROW. It crosses the White River and then follows the south side of STH 11.

Racine County

Town of Burlington and city of Burlington: Route A continues along the south side of STH 11 to the Cretex Materials property where the route again would be all new ROW. It angles southeast through the northeast corner of the Cretex Materials property and then turns briefly south along the Cretex property boundary. When it reaches the Bielawa Trust property, the route angles to the southeast, crosses CTH P and Yahnke Road, and then turns east at the southeast corner of the Zang property. Route A travels along the south side of Liberty Drive. After crossing STH 83, it continues east along the 945 Anita LLC property line, crosses the Fox River and the Wisconsin Central Railroad, runs through a portion of the Ament property, and again parallels the south side of Brever Road until it reaches Wheatland Road. Route A follows the southwest side of Wheatland Road for about 1,300 feet, then crosses to the northeast side for another 1,100 feet. At this point, Route A heads east again cross-country on all new ROW. It heads north along the west side of CTH J for 1,125 feet and then turns east and crosses into the town of Brighton in Kenosha County.

Kenosha County

Town of Brighton: After turning east and crossing CTH J, this route travels east along property lines, and crosses STH 142. About 3,500 feet east of STH 142, Route A heads north along property lines for about 2,700 feet, then turns east paralleling, but not overlapping, the north side of an ANR Pipeline ROW for almost 6,500 feet. It then heads north again and turns east along the north side of CTH BB. It crosses 264th Avenue and STH 75, then continues cross-country to the east. Route A crosses 224th Avenue and then continues into the town of Paris.

Town of Paris: Route A continues eastward on all new ROW and crosses USH 45. At 172nd Avenue, it turns briefly north along the east side of the road. About 2,640 feet north of CTH A, the route turns east and continues cross-country, briefly paralleling a double-circuit 345 kV electric line (PUBL81 and 2222). It crosses 144th Avenue and then turns north about one-half mile east of 144th Avenue. Continuing north and cross-country, the route approaches CTH KR and ends at the LCIP Regulator Station.

Route B (the northern route)

About one-third of Route B would require all new ROW, though parts of it may straddle parcel boundaries. It would partially overlap or be located adjacent to electric utility corridors and road ROWs for a significant portion of its length. Route B runs parallel to CTH A for almost 10 miles, CTH D for more than 5 miles, and the existing 138 kV electric line (3025) for more than 3.5 miles.

Walworth County

Town of LaGrange: The common Route AB portion of Route B begins at the existing Bluff Creek Gate Station, south of USH 12. The route heads southeast and cross-country, paralleling two existing natural gas pipelines (a Guardian and a high-pressure pipeline) for a little over a mile. The new pipeline would be constructed along the south side of the existing pipelines partially overlapping a portion of the existing ROW width. After the first 3,200 feet, the new pipeline ROW would be mostly within the existing natural gas ROW.

About 400 feet before the route crosses CTH O, Route B turns east to parallel, but not overlap, the north side of the high-pressure gas pipeline. After crossing CTH O and entering the Payne & Dolan property, the new pipeline ROW partially overlaps the existing pipelines' ROW width. It travels east, southeast, and northeast until about 900 feet east of CTH M. At that location, the route turns east and leaves the high-pressure natural gas ROW. Route B continues cross-country, requiring all new ROW for about 1.7 miles until turning northeast along the northern side of Territorial Road. Before coming to the Schimelfenyg property, the route crosses to the southern side of Territorial Road. It turns eastward along the south side of STH 20 and crosses into the town of Troy.

Town of Troy: Route B continues east along the south side of STH 20 for about 1,900 feet and then heads south and southeast, cross-county. It angles to the southeast to briefly parallel STH 20 and then heads south again for about 2,800 feet along the Albrecht property line. Route B departs the property boundary to cross mid-field to the east. For the next 6.7 miles, Route B is cross-country, following some property boundaries and requiring all new ROW. The route stair-steps east and south until reaching Townline Road in the town of East Troy.

Town of East Troy: Route B turns south to follow Townline Road, crosses I-43, and continues south. It starts along the east side of Townline Road in the town of East Troy, then just north of Swoboda Road, it jumps to the west side of the road in the town of Lafayette before returning to the east side, briefly, and then turns east along CTH D.

Town of Spring Prairie: Route B heads east along CTH D for the next 5.1 miles. It briefly follows the north side of CTH D, then crosses to the south side of CTH D. Periodically, the Route B ROW jogs mostly into the highway ROW to avoid impacts to residences and structures that were built close to the highway. Route B crosses STH 120 and Church Road, and just before crossing Valley View Road, the route turns south for a short distance. It then heads east and southeast cross-country on all new ROW, crossing Valley View Road, Honey Creek, and CTH DD. It curves to the northeast for a short distance around some small parcels and then turns east into the village of Rochester.

Racine County

Village of Rochester: Route B continues heading east and south on all new ROW, generally along property lines for about the next 3.5 miles. It starts east between Sections 6 and 7 (T3N-R19E), then south between sections 7 and 8, then east just after crossing Oak Knoll Road, and finally

south again through the middle of cropland owned by Michael Weinkauf and Robert Rasmussen. Continuing south, Route B crosses CTH FF and runs along the east side of Maple Road for a little less than one-half mile. Route B turns eastward just north of the Richard Schmidt property, on all new ROW and along parcel boundaries for the next 1.3 miles. Just west of CTH W, the route heads south, eventually following the west side of CTH W.

Town and city of Burlington, village of Rochester, and town of Dover: After crossing into the city of Burlington, Route B crosses to the east side of CTH W. It crosses CTH Q/Milwaukee Avenue, the Fox River, and continues adjacent to CTH W into the town of Burlington.

Route B then turns east along the north side of CTH A. For the next 10.5 miles Route B stays adjacent to CTH A through the town of Burlington, the village of Rochester, the town of Dover, and the village of Yorkville. It is mostly routed along the north side of CTH A, but switches to the south side from about 1,150 feet east of CTH W to just west of Westwood Avenue. At 11 locations along CTH A, the Route B ROW shifts mostly into the highway ROW to avoid impacts to residences and buildings that were built close to the highway. In the city and town of Burlington the route crosses STH 83, Westwood Avenue, and Crossway Road. In the village of Rochester, the route crosses CTH J. In the town of Dover, the route crosses Sharp Road, CTH N, STH 75, Britton Road, and Raynor Avenue.

Village of Yorkville: From the north side of CTH A at about 1,275 feet west of USH 45, Route B angles southeast and south, partially overlapping the south side of a 138 kV transmission line (3025) ROW. It continues adjacent and partially overlapping the electric ROW for about 3.6 miles. It crosses USH 45 and 67th Drive and then briefly crosses over to the north side of the electric line for about 1,500 feet before crossing back to the southeast side of the electric line. Route B continues south, crossing CTH C and 58th Road. As it approaches the abandoned Canadian Pacific Railroad, Route B crosses the electric line one last time and then turns east along the north side of the railroad for about one-half mile. It then turns south along the west side of a double-circuited 345 kV line (PLP81 and 2222) for the next 1.4 miles and crosses STH 11. The project ROW would, in some places, partially overlap the electric ROW. Route B leaves the electric corridor to jog east and south as it approaches CTH KR. Route B turns east along the north side of CTH KR. For several stretches along CTH KR, the Route B ROW would be located mostly within the road ROW to avoid impacts to residences and buildings built close to the highway. Route B ends at the LCIP Regulator Station.

East End of the Project

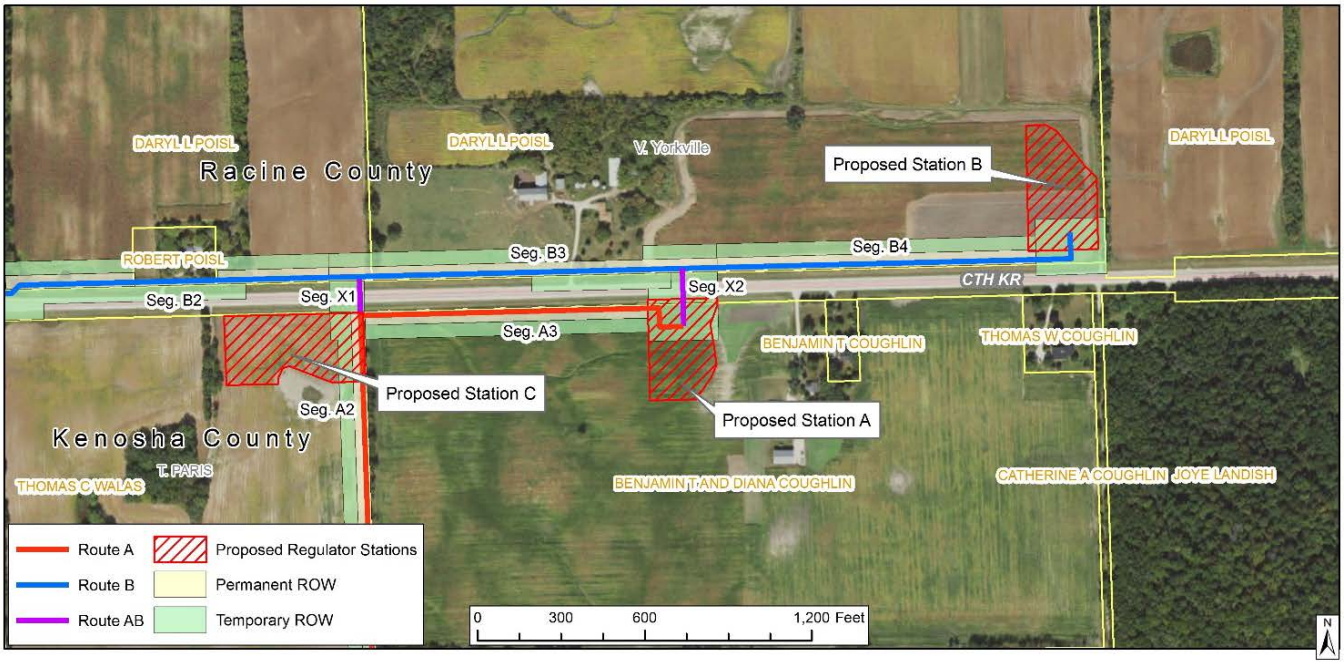
This project would end at the LCIP Regulator Station. The LCIP Regulator Station was approved as part of the LCIP project (PSC Docket 6630-CG-137) on April 26, 2019 (PSC REF#: 364928). For the LCIP docket, the Commission approved project scope and cost only, allowing We Energies to make the final determination on where the LCIP Regulator Station would be located and built.

Currently, DATCP understands that the LCIP Regulator Station may be built on one of three potential locations.

The Lakeshore Lateral project identified two locations for the east end of the project, one sited on the Benjamin and Diana Coughlin property and the other site owned by Daryl Poisl. The Coughlin site (Proposed Station A) is located on the south side of CTH KR, approximately 4,300 feet west of I-94, in the town of Paris in Kenosha County. The Poisl site (Proposed Station B) is located on the north side of CTH KR, approximately 3,000 feet west of I-94, in the village of Yorkville, Racine County. In addition to these two sites, the LCIP docket identified a third site, "Proposed Regulator Station C" in the northeast corner of the Thomas Walas property. The Walas site is located on the south side of CTH KR in the town of Paris, Kenosha County. We Energies identified the Walas site as its preferred LCIP Regulator Station location in the LCIP docket. Figure 2 shows the location of all three sites.

There are sufficient segments in this project to connect to any of the three regulator station sites.

Figure 2: Proposed LCIP Regulator Station Sites



If the Walas site for the LCIP Regulator Station were chosen by the utility as the connection point for this project, Route A would be modified as follows:

- Route A would end at CTH KR on the Walas property
- A 1,225-foot segment along the south side of CTH KR totaling 3.0 acres from the Coughlin Property would not be required
- Both optional segments that cross CTH KR, X1 (0.3 acres) and X2 (0.6 acres) would not be required

If the Walas Site for the LCIP Regulator Station were chosen by the utility as the connection point for this project, Route B would be modified as follows:

- Route B would be 0.5 miles shorter along the north side of CTH KR and require 6.4 fewer acres from the Poisl property
- Optional Segment X1 (0.3 acres) would be required to cross CTH KR
- Optional Segment X2 (0.6 acres) would not be required to cross CTH KR

Aboveground Facilities

Bluff Creek Gate Station

This station is located at the western end of the project on We Energies-owned property. No additional easements would be required for this station if this project is approved. Modifications to the existing equipment would be required inside the station.

LCIP Regulator Station

The LCIP Regulator Station was approved as part of another project and will be located at the eastern end of this project. However, no specific site was approved for the station. We Energies will acquire about 2.9 acres (250 x 500 feet) for the station.

Valve Assemblies

This project requires 6 new aboveground facilities that would be 50 by 50 feet in size and be used for valve assemblies. Six sites have been proposed for Route A and another six for Route B. All but one of the potential aboveground facilities are located on agricultural properties though they are mostly on the edges of fields and would be located within the proposed ROW. The locations of the potential aboveground valve assembly facilities are listed below.

Route A

- Walworth County, town of LaGrange, Sec. 32 (Barbara Papcke and Ronny Rohloff property), Northwest corner of Jackson Road and CTH O, located along edge of cropland
- Walworth County, town of Sugar Creek, Sec. 24 (Greg Goldsmith property), West of USH 12/67, located in a grassland on agricultural property
- Walworth County, town of Spring Prairie, Sec. 30 (Woellert Trusts property), East of Townline Road, located in cropland
- Walworth County, town of Lyons, Sec. 1 (David and Kathleen Thate property), East of Mangold Road, located on edge of cropland
- Racine County, town of Burlington, Sec. 13 (NKC Ventures LLC property), West of CTH J, located in forested non-agricultural land
- Kenosha County, town of Brighton, Sec. 1 (Bartholomew and Anny Ament property), East of 224th Avenue, located along edge of cropland

Route B

- Walworth County, town of LaGrange, Sec. 24 (Joseph Scaro property), South of Territorial Road, located in a tree line adjacent to cropland
- Walworth County, town of Troy, Sec. 35 (Robert David property), West of CTH ES, located in cropland
- Walworth County, town of Spring Prairie, Sec. 10 (Hard Rock Farms LLC property), Southeast corner of the CTH D and Hamms Road, located in cropland
- Racine County, village of Rochester, Sec. 16 (Beverly Borucki property), East of Maple Road, located on the edge of cropland
- Racine County, town of Dover, Sec. 9 (Patricia Larson property), Northwest corner of CTH A and CTH N, located in cropland
- Racine County, village of Yorkville, Sec. 21 (Helen Bodven property), North of 58th Road, located in cropland

Off-ROW Access Roads

We Energies will acquire temporary easement to create access roads to the ROW. If a field road already exists in an area where access to the ROW is needed, We Energies will use that. If a new access road is created, landowners will be given the option to keep the access road after construction and restoration of the ROW are completed. If landowners decline to keep them, these areas will be restored to pre-construction conditions. All access roads will be a maximum of 50 feet wide. Existing access roads may be less than 50 feet wide, and may or may not need to be widened for the proposed project. Depending on the time of year and landowner preference, the topsoil layer may be stripped and stored on the side. Temporary matting may also be used in wetlands.

Table 1: Off-ROW Access Roads

Access Road	Length (feet)	Location	Landowner	Land Use
Route A				
A1	2,000	W. of Cobb Rd.	Dwayne Deakins	cropland
A2	1,000	E. of Clausen Rd.	Clausen Farm Inc.	cropland
A3	300	S. of Burlington Bypass	Hughes Trust	cropland
A4	1,800	S. of STH 11, E of Spring Valley Rd	Burlington Spring Valley LLC	active sand & gravel mine
A5	700	W. of CTH P	Cretex Materials Inc.	active sand & gravel mine
A6	6,200	S. of Liberty Dr., W of STH 83	J. Boilini Farms Inc.	cropland and woodland
A7	450	E. of STH 75	David and Sharon Beth	cropland and other agricultural land
A8	500	E. of 172nd Ave.	Wilks Trust	cropland
A9	727	S. of STH 36	William G. & Irene Mangold Life Estate	driveway

Access Road	Length (feet)	Location	Landowner	Land Use
Route B				
B1	250	S. of USH 12	Payne & Dolan Inc.	active sand & gravel mine
B2	9,000	Along Marsh Rd and field edges	Troy Farms Scurek Holdings LLC	farm lane, cropland, other agricultural land, crosses 2 waterways with culverts
B3	200	S. of Marsh Rd., N. of CTH A	Scurek Holdings LLC	cropland, also crosses a waterway and a culvert

We Energies is proposing 9 access roads for Route A totaling 10.2 acres of impact and 3 access roads for Route B totaling 6.4 acres of impact.

Staging Areas

We Energies is evaluating 15 potential sites for use as staging areas for storage of equipment and materials. We Energies will select five of the potential sites and will use 1 to 5 acres for each staging area. All potential staging areas are comprised of active mining operations or other industrial/developed uses. No agricultural land would be impacted by the proposed staging areas.

AMP and BMPs and the Role of the Agricultural Inspector

We Energies will employ a construction manager and an environmental manager to provide oversight and enforcement of permits, approvals, and the AMP and BMPs. We Energies may also retain one or more individuals designated as the project Agricultural Inspector. If retained, the Agricultural Inspector will be thoroughly familiar with the project and pipeline construction processes as well as issues regarding agricultural operations and soil conservation. The role of the Agricultural Inspector is crucial in enforcing the AMP and BMPs; reporting incidents of noncompliance; and recommending methods to limit or mitigate agricultural impacts. DATCP recommends that the project have at least one individual designated as the Agricultural Inspector and that periodic construction reports are shared with DATCP for review.

Contractors will be required to ensure that their construction activities are consistent with the AMP and the BMPs. Refer to Appendix G for the full text of these documents. We Energies will work with landowners to ascertain existing agricultural operations that may require special attention during construction and restoration. Topics that are covered by the AMP and BMPs include restoration of any damaged conservation practices, tiling, and fences.

III. PROJECT IMPACTS TO AGRICULTURAL PROPERTIES

Direct Project Impacts

The majority of this project would affect agricultural properties. We Energies does not anticipate affecting any farm buildings or structures for this project.

Table 2 identifies the potential acres required (temporary and permanent easements) for both potential routes and off-ROW access roads. The totals may be slightly different from final totals as the final location of the LCIP Regulator Station is currently unknown.

Table 2: Project Overview by Route

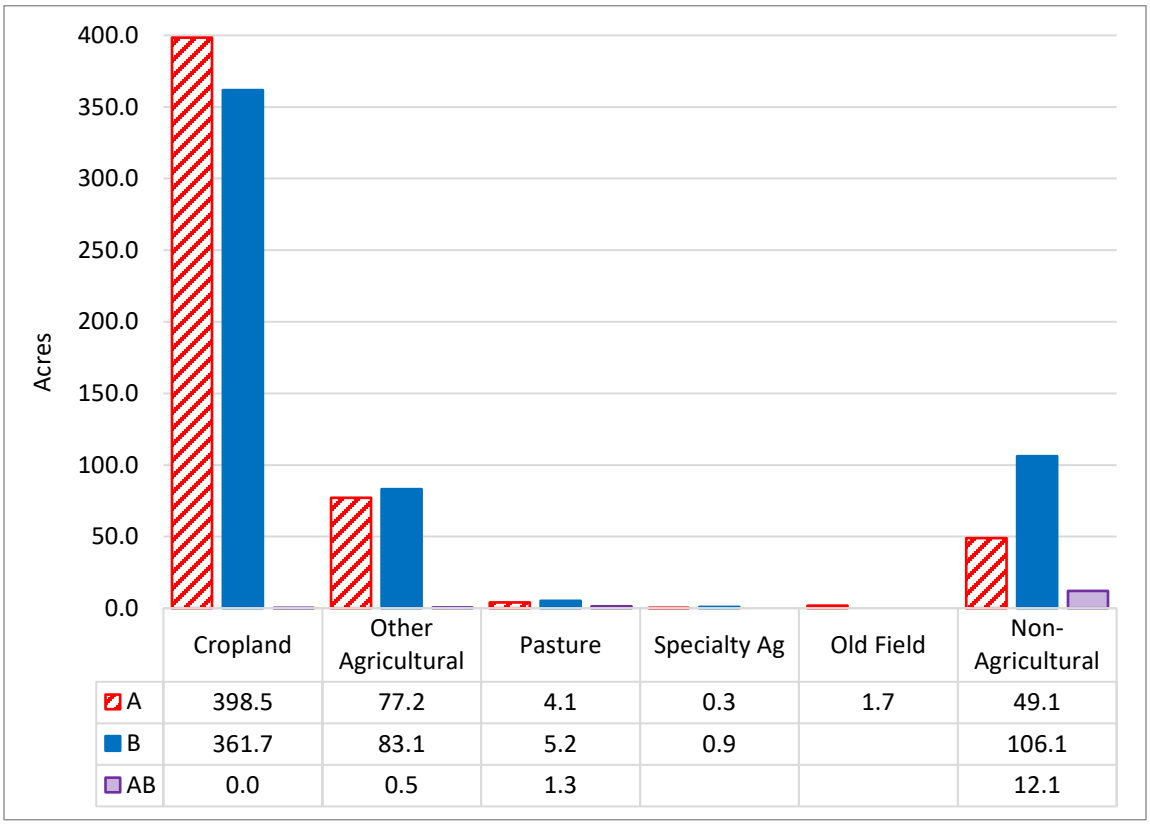
Route	Length (miles)	All Easements (acres)			Agricultural Easements (acres)			Percent In Agriculture
		Perm.	Temp.	Total	Perm.	Temp.	Total	
Route A	44.4	252.9	277.9	530.8	239.8	241.9	481.7	91%
Route B	45.2	247.8	309.2	557.1	230.8	220.1	450.9	81%
Route AB	1.1	6.4	7.5	13.8	1.0	0.8	1.7	12%

Route A is slightly shorter than Route B and would affect fewer acres of land. However, Route A would impact about 31 more agricultural acres than Route B. Both routes would require the same amount of agricultural acres for the common segment (Route AB).

Table 3: Types of Potentially Affected Farmland

Agricultural Land Use	Route (acres)		
	Route A	Route B	Route AB
Cropland	398.5	361.7	<0.1
Other Agricultural Land	77.2	83.1	0.5
Pasture	4.1	5.2	1.3
Specialty Ag	0.3	0.9	0
Idle or Fallow Field	1.7	0	0
Non-Agricultural	49.1	106.1	12.1
Totals	***530.8***	***557.1***	***13.8***

Figure 3: Types of Potentially Affected Farmland



	Cropland	Other Agricultural	Pasture	Specialty Ag	Old Field	Non-Agricultural
A	398.5	77.2	4.1	0.3	1.7	49.1
B	361.7	83.1	5.2	0.9		106.1
AB	0.0	0.5	1.3			12.1

Farmland Preservation

Wisconsin's Farmland Preservation Program (FPP) provides counties, towns, and landowners with tools to aid in protecting agricultural land for continued agricultural use and to promote activities that support the larger agricultural economy. Through this program, counties adopt state-certified farmland preservation plans, which map areas identified as important for farmland preservation and agricultural development based upon reasonable criteria. The plans identify farmland preservation areas in the county, and local governments may choose to adopt an agricultural zoning ordinance to ensure that landowners covered by the ordinance are eligible to claim farmland preservation tax credits. Such an ordinance must also be certified by DATCP.

All of the potentially affected towns in Walworth County and the town of Burlington in Racine County have certified farmland preservation ordinances. There are no other farmland preservation ordinances that have been certified for the remaining parts of Racine County or Kenosha County that would be affected by the project.

Within these farmland preservation areas, local governments and owners of farmland can petition for designation by the state as an Agricultural Enterprise Area (AEA). This designation highlights the importance of the area for agriculture and further supports local farmland preservation and agricultural development goals. None of the land that could be affected by this project is part of any AEA

Conservation Reserve Program

The USDA, Natural Resources Conservation Services (NRCS) offers farmers financial incentives to convert highly erodible or environmentally sensitive cropland to permanent vegetative cover by planting species that will enhance the environment. This is called the Conservation Reserve Program or CRP. Landowners who indicated that they have CRP agreements for land that might be affected by Route A include:

- Steven Ament (affected by both routes)
- Alvin R. and Jean R. Wilks Revocable Living Trust (affected by both routes)
- Dutchman Acres LLC
- Donald F. and Virginia Koldeway Trust
- L&G Farms LLC

Landowners who indicated that they have CRP agreements for land that may be affected by Route B include:

- Steven Ament (affected by both routes)
- Alvin R. and Jean R. Wilks Revocable Living Trust (affected by both routes)
- David Baumeister
- Skewes Farm, Inc.
- W&W Ventures LLC

We Energies will need to communicate directly with all potentially affected landowners to find out which of them have CRP contracts and if the project would affect any of the CRP land. We Energies should pay any costs associated with restoring any project-affected CRP land and any CRP penalties the landowner might incur because of the project.

Conservation Reserve Enhancement Program

The Conservation Reserve Enhancement Program (CREP) pays landowners to install filter strips along waterways or to return continually flooded fields to wetlands while leaving the remainder of the adjacent land in agricultural production. CREP is a joint effort between the federal, state, and county governments.

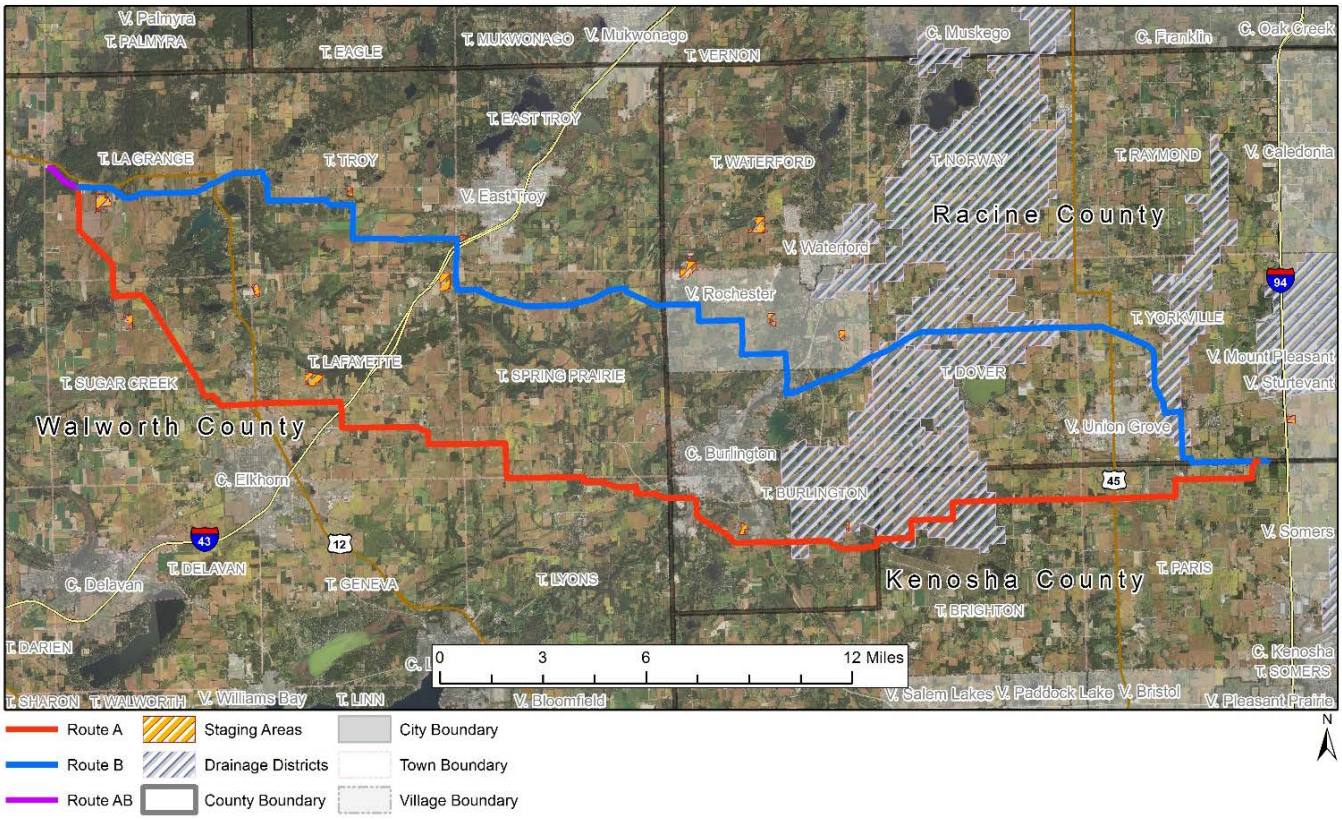
Matt Scurek, who would be affected by Route B, has stated that he has a CREP agreement on a portion of his property. Similar to the issues associated with CRP contracts, We Energies will need to communicate directly with farmland owners to determine if they have CREP agreements on their property and if the proposed project would affect any CREP-registered land. We Energies should pay any costs associated with restoring any project-affected CREP land and any CREP penalties the landowner might incur because of the project.

Drainage Districts

Drainage districts are organized under Chapter 88 of the Wisconsin Statutes and are overseen by county drainage boards. They allow landowners to join together to establish and maintain drainage ditches to remove excess water from their property so it can be farmed. Both of the potential routes for this project would cross drainage districts. Route A would pass through the Hoosier Creek Drainage District in Kenosha and Racine counties. Route B would pass through the Eagle Creek, Norway-Dover, and Yorkville-Raymond Drainage Districts, all in Racine County. Figure 4 shows the locations of the potentially affected drainage districts. All of these drainage districts are active. The Hoosier Creek Drainage District is 12,392 acres in size, the Eagle Creek Drainage District is 4,184 acres, the Norway-Dover Drainage District is 19,334 acres large, and the Yorkville-Raymond Drainage District is 4,805 acres.

Starting on page 3 of the AMP (Appendix G), We Energies has described its plans for working with the county drainage boards with land affected by this project.

Figure 4: Drainage Districts in the Project Area



Appraisal and Compensation

The acquisition of easements by utilities with eminent domain authority in Wisconsin is stipulated under Wis. Stat. § 32.06. Additional information about the appraisal process and landowners rights can be found in a Wisconsin Department of Administration publication, "The Rights of Landowners under Wisconsin Eminent Domain Law," at the website: https://doa.wi.gov/Pages/AboutDOA/RelocationAssistance.aspx.

We Energies may conduct a market study to determine current area property values of affected property. If the landowner signs an appraisal waiver form, the market study will be the basis for the utility's offer of compensation and an individual property appraisal will not be conducted. We Energies may also offer additional compensation to landowners who choose to sign the appraisal waiver form.

Under Wisconsin's eminent domain laws (Wis. Stat. §32.06), a jurisdictional offer will be provided to the landowner. It will include an appraisal of the fair market value for the easement and any anticipated damages to the property. The fair market value means the price that a willing buyer would pay to a willing seller in the market. This will be based on at least one full narrative appraisal for each property the utility intends to acquire. The appraisal must be presented to the landowner.

Additionally, landowners have the right to obtain their own appraisal of their property. They will be compensated for the cost of this appraisal by the utility if the following conditions are met:

- The appraisal must be submitted to the utility or its designated real estate contractor within 60 days after the landowner has received the initial utility appraisal.
- The appraisal fee must be reasonable.
- The appraisal must be a full narrative appraisal
- The appraisal must be completed by a qualified appraiser.

The amount of compensation for the easement is established during the negotiation process between the utility and the individual landowner. Landowners may also attempt to negotiate additional stipulations from the utility and additional payments.

The utility is required to provide landowners with information about their rights in this process before negotiations begin. Wis. Stat. § 32.035(4)(d) additionally requires that the utility not negotiate with a landowner or make a jurisdictional offer until 30 days after the AIS is published. More information about the appraisal process and landowners rights can be found on the DOA website at: https://doa.wi.gov/Pages/AboutDOA/RelocationAssistance.aspx.

Landowners should keep in mind that any easement they sign with a utility is an individual contract. The easement contract is binding to the landowner and any future owners of the land, until the contract is dissolved. When considering whether or not to sign an easement, landowners

should examine the language carefully and verify that it contains all agreed-to terms. Landowners should be familiar with the utility's project-specific AMP and BMPs (Appendix G) so as to determine if additional conditions should be negotiated with the utility. Though they can choose to waive any or all of the practices and procedures described in the AMP and BMPs, DATCP recommends to only do so with careful consideration. Landowners may want to seek legal advice if they have any questions about this process, and should make sure that any attorney hired has expertise and experience in eminent domain law and procedures. More reference information can be found in Appendixes B and C.

IV. AGRICULTURAL SETTING

This information is intended to describe the existing agricultural sector of Walworth, Kenosha, and Racine counties in general terms and to aid agricultural property owners in their easement negotiations with the utility. Section VI, "Agricultural Landowner Impacts" discusses the specific potential impacts from this project and the concerns of agricultural property owners. The majority of the data provided in this section is from the USDA, National Agricultural Statistic Service.

Agricultural Productivity

The largest agricultural sector in southeastern Wisconsin is cash crops. Walworth County ranks high in the production of corn for grain, soybeans, and winter wheat in the state. Even though Racine and Kenosha are small counties in area that are also experiencing significant development pressure, they still have a vital agricultural sector that produces high yields of winter wheat.

In 2017, Walworth County ranked eighth out of Wisconsin's 72 counties in the production of corn for grain and in soybeans. In winter wheat production, Racine County ranked seventh and Kenosha County ranked nineteenth in the same year. Additionally, Walworth, Racine, and Kenosha counties ranked fourth, fifth, and sixth respectively among Wisconsin counties in their per-acre yields of winter wheat. In 2017, all three counties produced more than 77 bushels per acre of winter wheat, exceeding the state-wide average of 68 bushels per acre.

Table 4 shows the acres harvested annually of selected crops from 2013 through 2017 in the three project-area counties. Over the five-year period, the production of soybeans in each county has trended slightly up while the production of winter wheat has trended slightly down. The production of alfalfa hay also appears to be declining in Racine County.

Table 4: Acres of Selected Crops, Harvested

Year	County	Corn for Grain	Corn for Silage	Soybeans	Winter Wheat	Alfalfa Hay
2013	Kenosha	28,200	3,600	22,400	6,650	3,740
	Racine	30,700	NA	33,400	8,920	6,970
	Walworth	88,700	NA	50,000	10,800	NA
2014	Kenosha	27,900	4,890	24,200	4,800	4,740
	Racine	32,700	2,220	37,100	7,170	NA
	Walworth	102,900	NA	55,300	4,700	9,710
2015	Kenosha	26,600	NA	24,000	4,400	3,940
	Racine	33,100	NA	35,500	7,100	6,370
	Walworth	93,500	NA	56,300	6,600	NA
2016	Kenosha	22,800	NA	NA	4,770	NA
	Racine	34,500	NA	35,800	7,290	5,630
	Walworth	99,000	NA	53,900	NA	NA
2017	Kenosha	24,200	NA	25,000	3,800	NA
	Racine	31,300	1,720	38,600	5,700	5,560
	Walworth	94,800	NA	60,800	4,000	NA

* NA = data not available

All three counties typically have above average milk production per cow. In 2017, the statewide average was 23,725 pounds of milk per cow. The average in Walworth County was 27,300 pounds per cow, giving it a ranking of sixth among Wisconsin's 72 counties. Racine County dairy cows produced an average of 25,600 pounds of milk per cow and Kenosha County cows produced an average of 23,900 pounds of milk per cow.

Land in Agriculture

Kenosha, Racine, and Walworth are classified as urban counties. Urban counties have an average of more than 100 residents per square mile. The population densities and acres of farmland for the project counties are shown in Tables 5 and 6. Population densities were taken from data published by the Wisconsin Department of Administration. The most recent data for acres in farms for the counties was published in the 2017 Census of Agriculture. Land in farms consists primarily of land used for crops, pasture, or grazing; however, it also includes woodland and undeveloped land not cropped or grazed, providing it is part of the overall farm operation.

Table 5: Percent of Land in Farms and Population Density

Area	Percent in Farmland (1997)	Percent in Farmland (2007)	Percent in Farmland (2017)	Population Density 2017 (per sq. mi.)
Kenosha County	48.5%	48.5%	44.5%	620
Racine County	57.7%	56.6%	59.8%	590
Walworth County	61.9%	61.2%	54.1%	186
Wisconsin Urban Counties*	58.6%	60.5%	57.7%	176
Wisconsin	43.2%	43.8%	41.5%	107

*The designation of some counties classified as urban or rural changed between 1997 and 2017.

Table 6: Acres of Land in Farms

Location	1997	2007	2017	Percentage Change
Kenosha County	84,744	84,345	77,682	**-8.3%**
Racine County	123,012	120,459	127,496	+3.6%
Walworth County	220,089	217,593	192,422	**-12.6%**
Wisconsin Urban Counties*	3,715,731	4,457,282	4,253,724	+14.5%
Wisconsin	14,900,205	15,190,804	14,318,630	**-3.9%**

*The population of Dodge County and St. Croix County between 1997 and 2007 increased and were reclassified as urban counties in 2007.

From 1997 to 2017, the amount of land in farms declined in most Wisconsin counties and the state as a whole. However Racine County saw an increase in land in farms, similar to other urban counties. Even though all three of these counties are urban counties, much of the farmland is high-quality and it continues to be used for farming, despite economic and development pressures that affects this region of the state.

Over the twenty year period, the decrease in the percentage of land in farms was far greater for Kenosha and Walworth counties than in Wisconsin as a whole. This suggests greater development

pressure in these counties than in Wisconsin. The increase in the amount of land in farms in Racine County and all urban Wisconsin counties suggests the conversion of marginal lands into agricultural production.

Number and Size of Farms

The change in the number of farms and the average size of farms for 1997 and 2017 is shown in Table 7. During this time period, all of the project area counties as well as Wisconsin as a whole saw a decrease in the average size of farms. The greatest decrease was 54 acres in Walworth County and the smallest decrease was in Racine County in which the average size of farms decreased by 13 acres. Changes in the size of farms can indicate a change in commodities produced on farms. Small farms tend to grow specialty and organic crops while larger farms tend to grow cash crops and raise large numbers of livestock.

The number of farms increased for all three counties as well as in Wisconsin as a whole (1997 and 2017 Census of Agriculture).

Table 7: Change in the Number of Farms and Average Size of Farms

Location	1997		2017		Percent Change in Number of Farms
	Number of Farms	Average Size of Farms (acres)	Number of Farms	Average Size of Farms (acres)	
Kenosha County	388	218	415	187	+7.0%
Racine County	554	222	611	209	+10.3%
Walworth County	853	258	941	204	+10.3%
Wisconsin	65,602	227	64,793	221	**-1.2%**

Property Taxes and Values

Table 8 details the 2017 average property tax, assessed value, and sale price per acre of agricultural land for the counties in the project area, urban counties, and Wisconsin. The assessed values and property taxes are based on the use value of "agricultural land." Agricultural land is defined by statute as, "… land, exclusive of buildings and improvements, and the land necessary for their location and convenience, that is devoted primarily to agricultural use." (Wis. Stat. § 70.32(2)(c)1g)

In 2017, the average property taxes on farmland for all three counties were higher than the average for urban counties and the state as a whole. For Kenosha County, the average property taxes on farmland was 17.2 percent higher than the average for urban counties and 19.2 percent higher than the average for Wisconsin. Racine County's average tax on farmland was 3.2 percent higher than the average for urban counties and 5.0 percent higher than the statewide average. Walworth County's average farmland tax was 10.6 percent higher than the urban county average and 12.5 percent higher than the average for all of Wisconsin.

Table 8: 2017 Farmland Taxes and Values

Location	Dollars per Acre of Farmland		
	2017 Average Tax*	2017 Assessed Value*	2017 Sale Value for Continued Ag Use
Kenosha County	$4.09	$241	$7,380
Racine County	$3.60	$213	$7,724
Walworth County	$3.86	$244	$7,524
Urban Counties	$3.49	$207	$7,046
Wisconsin	$3.43	$175	$4,960

Source: USDA, National Agricultural Statistic Service (NASS) and Wisconsin Department of Revenue.
* The assessed value is an "equalized value" calculated by DOR to correct for variability in estimating the taxable value of real property across municipalities.

Based on 2017 data, the average sale price of agricultural land in Kenosha County was 4.7 percent higher than the average for urban counties and 48.8 percent higher than the average for Wisconsin. The average sale price on Racine County farmland was 9.6 percent higher than the average for urban counties and 55.7 percent higher than the average for all Wisconsin farmland. The Walworth County average was 6.8 percent higher than the average for urban counties and 51.7 percent higher than the statewide average (NASS Wisconsin 2018 Agricultural Statistics). These values do not include farmland sold and converted to nonfarm use and do not include farmland with buildings or improvements. These figures show that the market for agricultural land is very strong in the southeast part of Wisconsin and, therefore, replacement land may be very costly to acquire.

V. FARMLAND SOILS

Farmland Soil Definitions

Farmland soil is classified by the USDA based on its ability to produce crops. Protecting prime farmland, prime farmland if drained, and prime farmland if drained and protected from flooding should be a priority for project initiators.

Prime Farmland

Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

Prime Farmland if Drained

This farmland is prime farmland but requires draining in order to have the best combination of physical and chemical characteristic for producing food, feed, forage, fiber, and oilseed crops.

Farmland of Statewide Importance

The criteria for defining and delineating this soil are to be determined by the appropriate state agency or agencies. Generally, additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable. In some states, additional farmlands of statewide importance may include tracts of land that have been designated for agriculture by state law.

Non-prime soils

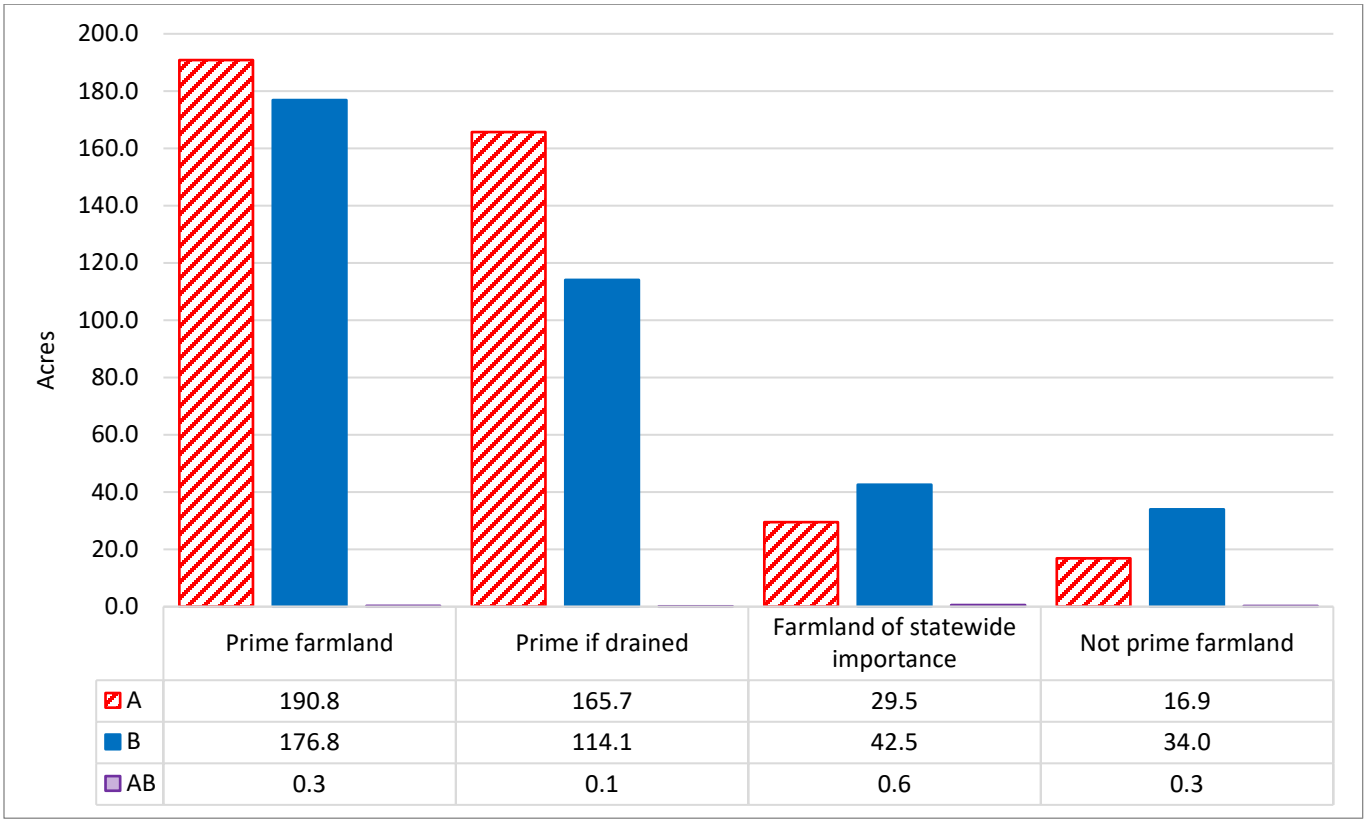
Non-prime soils have limitations in terms of agricultural production and may be more susceptible to damage from pipeline construction.

Farmland Soils Affected by the Proposed Project

If the project is approved by the PSC, the project could impact between 453 and 483 acres of agricultural land. Cropland and pasture account for about 80 percent or more of the potentially affected agricultural land for either route.

Figure 5 shows that for Route A, 88 percent of the potentially affected soils on cropland and pasture are one of the various forms of prime farmland. For Route B, 79 percent of cropland and pasture are classified as a type of prime farmland.

Figure 5: Soil Classification for Potential Routes



No soil series dominates the project route ROWs. The soils in the project area are, for the most part, well-drained, silt loam, sandy loam, and clay loam soils.

The table below lists the cropland and pasture soils that could be affected by the proposed project.

Table 9: Soils on Cropland and Pasture within Potential Project Routes

Symbol	Soil Name	Soil Classification	Route (acres)		
			Route A	Route B	Route AB
Ac	Adrian muck	N	0.38	4.99	
AtA	Ashkum silty clay loam, 0 to 2 percent slopes	P-D	21.03	30.21	<0.01
AzA	Aztalan loam, 0 to 2 percent slopes	P-D	2.29		
AzA	Aztalan loam, 1 to 3 percent slopes	P-D		1.72	
AzB	Aztalan loam, 2 to 6 percent slopes	P-D	4.45	2.46	
BcA	Beecher silt loam, 1 to 3 percent slopes	P-D	4.62	4.38	
BlA	Blount silt loam, 1 to 3 percent slopes	P-D		0.51	
BpC2	Boyer complex, 6 to 12 percent slopes, eroded	S		1.38	0.55
CcC2	Casco sandy loam, 6 to 12 percent slopes, eroded	N	0.74		
CeB	Casco loam, 2 to 6 percent slopes	S	1.50		

Symbol	Soil Name	Soil Classification	Route (acres)		
			Route A	Route B	Route AB
CeB2	Casco loam, 2 to 6 percent slopes, eroded	S	1.32	3.71	
CeC2	Casco loam, 6 to 12 percent slopes, eroded	N	2.09	6.14	
CeD2	Casco loam, 12 to 20 percent slopes, eroded	N	1.85	7.55	
CfC3	Casco soils, 6 to 12 percent slopes, severely eroded	N	2.11		
CfD3	Casco soils, 12 to 20 percent slopes, severely eroded	N	0.56		
CkD2	Casco-Fox loams, 12 to 20 percent slopes, eroded	N	1.25	0.65	
CrC	Casco-Rodman complex, 6 to 12 percent slopes	N	0.54		
CrD2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	N	0.67	1.11	
CrE	Casco-Rodman complex, 20 to 30 percent slopes	N	0.20		
CrE2	Casco-Rodman complex, 20 to 30 percent slopes, eroded	N	2.33	0.47	
CtB	Chelsea fine sand, 1 to 6 percent slopes	N			0.24
CyA	Conover silt loam, 1 to 3 percent slopes	P-D	9.32	2.04	
DdB	Dodge silt loam, 2 to 6 percent slopes	P	1.09		
DrA	Dresden loam, 1 to 3 percent slopes	P	1.65		
Dt	Drummer silt loam, gravelly substratum	P-D	9.63	0.73	
EbA	Elburn silt loam, 1 to 3 percent slopes	P-D	3.67		
EgA	Elburn silt loam, gravelly substratum, 1 to 3 percent slopes	P-D	0.45	0.22	
EtA	Elliott silt loam, 0 to 2 percent slopes	P-D	0.12	3.95	
EtB	Elliott silty clay loam, 2 to 6 percent slopes	P-D	9.90	38.34	
FmB	Fox sandy loam, 2 to 6 percent slopes	P	0.62	2.38	0.28
FoA	Fox loam, 0 to 2 percent slopes	P	<0.01	5.55	
FoB	Fox loam, 2 to 6 percent slopes	P	3.21	10.11	
FoC2	Fox loam, 6 to 12 percent slopes, eroded	S	0.35	8.33	
FsA	Fox silt loam, 0 to 2 percent slopes	P	5.63	18.18	
FsB	Fox silt loam, 2 to 6 percent slopes	P	11.32	6.90	
FsC2	Fox silt loam, 6 to 12 percent slopes, eroded	S	3.44	2.39	
GP	Gravel pit	N	0.09		
GsC2	Griswold loam, 6 to 12 percent slopes, eroded	S	0.37	2.30	
GsD2	Griswold loam, 12 to 20 percent slopes, eroded	N	0.37	<0.01	
GwA	Griswold silt loam, mottled subsoil variant, 0 to 3 pct. slopes	P-D	6.17		
HbB	Hebron sandy loam, 2 to 6 percent slopes	P		0.38	
HeB	Hebron loam, 1 to 6 percent slopes	P	5.60		
HeB2	Hebron loam, 2 to 6 percent slopes, eroded	P	1.69	2.30	
HfE	Hennepin-Miami loams, sandy loam substratum, 20 to 35 percent slopes	N	0.21		
Ht	Houghton muck, 0 to 2 percent slopes	S	7.45	1.52	
Ht	Houghton muck, 0 to 2 percent slopes	N		7.37	
JuA	Juneau silt loam, 1 to 3 percent slopes	P	0.36	0.05	
KaA	Kane loam, 1 to 3 percent slopes	P-D	0.32		
KhA	Kane silt loam, clayey substratum, 1 to 3 percent slopes	P-D	0.99		
KlA	Kendall silt loam, 1 to 3 percent slopes	P-D	13.02		
Lu	Loamy land	N	0.01		
LyB	Lorenzo loam, 2 to 6 percent slopes	S		2.11	
LyC2	Lorenzo loam, 6 to 12 percent slopes, eroded	N	1.79	0.31	
LzD2	Lorenzo-Rodman complex, 12 to 20 percent slopes, eroded	N	0.19	<0.01	
MeB	Markham silt loam, 2 to 6 percent slopes	P	6.71	12.81	<0.01
MeB2	Markham silt loam, 2 to 6 percent slopes, eroded	P	7.12	2.04	

Symbol	Soil Name	Soil Classification	Route (acres)		
			Route A	Route B	Route AB
MeC2	Markham silt loam, 6 to 12 percent slopes, eroded	S		1.01	
MgA	Martinton silt loam, 1 to 3 percent slopes	P-D	1.94	2.79	
MkA	Matherton loam, 1 to 3 percent slopes	P-D	0.83	1.21	
MlA	Matherton loam, clayey substratum, 1 to 3 percent slopes	P-D	1.24		
MmA	Matherton silt loam, 1 to 3 percent slopes	P-D	0.82	7.46	
MpB	McHenry silt loam, 2 to 6 percent slopes	P	31.78	41.37	
MpB2	McHenry silt loam, 2 to 6 percent slopes, eroded	P	2.17	0.16	
MpC	McHenry silt loam, 6 to 12 percent slopes	S	0.25	3.00	
MpC2	McHenry silt loam, 6 to 12 percent slopes, eroded	S	0.36	6.11	
MwB	Miami loam, 2 to 6 percent slopes	P		0.58	
MwD2	Miami loam, 12 to 20 percent slopes, eroded	N	0.70		
MxB	Miami loam, sandy loam substratum, 2 to 6 percent slopes	P	1.44	2.34	
MxC2	Miami loam, sandy loam substratum, 6 to 12 percent slopes, eroded	S	3.46	6.08	
MxD2	Miami loam, sandy loam substratum, 12 to 20 percent slopes, eroded	N	0.79	1.00	0.05
MxE2	Miami loam, sandy loam substratum, 20 to 35 percent slopes, eroded	N		0.18	
MyA	Miami silt loam, 0 to 2 percent slopes	P	2.66	1.86	
MyB	Miami silt loam, 2 to 6 percent slopes	P	16.18	0.48	
Mzc	Montgomery silty clay	P-D	18.10	2.52	
MzdB	Morley silt loam, 2 to 6 percent slopes	P	9.29	6.87	
MzdB2	Morley silt loam, 2 to 6 percent slopes, eroded	P	1.38	0.91	
MzdC	Morley silt loam, 6 to 12 percent slopes	S	0.90	0.13	
MzdC2	Morley silt loam, 6 to 12 percent slopes, eroded	S	1.64	2.89	
MzdD2	Morley silt loam, 12 to 20 percent slopes, eroded	N		0.42	
MzfA	Mundelein silt loam, 0 to 3 percent slopes	P-D	0.75		
Na	Navan silt loam	P-D	4.82	6.13	
Oc	Ogden muck	S	4.80	0.73	
Pa	Palms muck, 0 to 2 percent slopes	S	2.07	0.21	
Pa	Palms muck, 0 to 2 percent slopes	N		0.18	
Ph	Pella silt loam, 0 to 2 percent slopes	P-D	38.67	1.55	
PsA	Plano silt loam, till substratum, 0 to 2 percent slopes	P	3.68	0.49	
PsB	Plano silt loam, till substratum, 2 to 6 percent slopes	P	5.27	3.48	
PsC	Plano silt loam, till substratum, 6 to 12 percent slopes, eroded	S	0.61		
PtA	Plano silt loam, gravelly substratum, 0 to 2 percent slopes	P	41.08	10.97	
PtB	Plano silt loam, gravelly substratum, 2 to 6 percent slopes	P	2.73	1.67	
RaA	Radford silt loam, 0 to 3 percent slopes	P-D	0.37	0.02	
Ru	Rollin muck, deep	N		1.16	
Rv	Rollin muck, shallow	N		2.14	
ScA	St. Charles silt loam, 0 to 2 percent slopes	P	3.15		
ScB	St. Charles silt loam, 2 to 6 percent slopes	P	4.93		
SeA	St. Charles silt loam, gravelly subtratum, 0 to 2 percent slopes	P		4.16	
SeB	St. Charles silt loam, gravelly subtratum, 2 to 6 percent slopes	P	3.16	2.79	
Sf	Sandy and gravelly land	N		0.02	
ShA	Saylesville silt loam, 0 to 2 percent slopes	P		1.22	

Symbol	Soil Name	Soil Classification	Route (acres)		
			Route A	Route B	Route AB
ShB	Saylesville silt loam, 2 to 6 percent slopes	P	1.04	3.63	
ShC2	Saylesville silt loam, 6 to 12 percent slopes, eroded	S	0.30	0.44	
SkB	Saylesville silt loam, dark surface variant, 2 to 6 percent slopes	P		0.28	
Sm	Sebewa silt loam, 0 to 2 percent slopes	P-D	11.21	7.88	0.14
So	Sebewa silt loam, clayey substratum	P-D	0.14		
SzA	Symerton loam, 0 to 2 percent slopes	P	0.12		
SzB	Symerton loam, 2 to 6 percent slopes	P	1.18	0.23	
TxA	Troxel silt loam, 0 to 3 percent slopes	P	1.56		
VaB	Varna silt loam, 2 to 6 percent slopes	P	0.59	19.82	
VaB2	Varna silt loam, 2 to 6 percent slopes, eroded	P		2.33	
Wa	Wallkill silt loam	P-D-F	0.76	0.33	
WeA	Warsaw loam, 0 to 2 percent slopes	P		1.05	
WhA	Warsaw silt loam, 0 to 2 percent slopes	P	3.38	4.95	
WhB	Warsaw silt loam, 2 to 6 percent slopes	P	7.84	4.31	
WhC2	Warsaw silt loam, 6 to 12 percent slopes, eroded	S	0.62	0.19	
Ww	Wet alluvial land	N		0.31	
Ww	Wet alluvial land	P-D-F	0.05		
Way	Worthen silt loam, 0 to 3 percent slopes	P		0.17	
ZuA	Zurich silt loam, 0 to 2 percent slopes	P	0.77		
ZuB	Zurich silt loam, 2 to 6 percent slopes	P	0.45		

Soil Classification: P = Prime farmland, P-D = Prime farmland if drained, P-D-F = Prime farmland if drained and protected from flooding, S = Farmland of statewide importance, N = Not prime farmland.
NOTE: This table only includes acres associated with cropland, pasture, and specialty agriculture.

Three-Lift Soil Handling

The three-lift soil handling procedure is recommended for cropland and pasture where the mixing of the subsoil layers may result in persistent crop yield reductions. For agricultural soils, the typical pipeline construction practice is to remove and stockpile the topsoil (up to the top 12 inches) from the entire ROW. Then, all of the soils from the trench are excavated and stockpiled separately from the topsoil. The three-lift method also requires stripping of the topsoil from the full width of the ROW but then the next two layers of subsoil are excavated from the trench and stored in separate piles. The standard method of pipeline construction creates two stockpiles of soil, whereas, the three-lift method creates three stockpiles of soil. Finally, after the pipe is laid, the trench is backfilled with the different layers of soil. The last material removed from the trench is the first material backfilled into the trench.

The three-lift soil handling method is useful when the proposed trench will intersect both the B and C horizons of a soil profile and the C horizon is of poorer quality (gravel, rock, and/or sand) than the B horizon (silt, clay, and/or loam). Alternatively, this practice may be applicable to soil profiles with a distinct upper and lower B horizon, as opposed to a B and C horizon. Additional factors such as slope, soil drainage, thickness of the soil horizons, and acres of soil units crossed by the project are important in determining soil candidates for which the three-lift method could be beneficial in

protecting crop yields. A key for identifying soil candidates for three-lift soil handling is provided in Appendix D.

DATCP used the soil characteristics and descriptions compiled by the USDA NRCS Web Soil Survey, to conduct a desktop review of the project routes and identify potential soils and areas that could benefit from this type of soil handling. For a final determination of three-lift soils, the characteristics of the soils must be verified in the field by an Agricultural Inspector. We Energies best management practice for three-lift soil handling is included in Appendix G (BMP 09).

The project's potential permanent easements cross the following soil series on cropland and pasture that might benefit from three-lift soil handling:

Table 10: Three-Lift Soil Candidates

Boyer complex	Fox loam	Matherton loam
Casco sandy loam	Fox silt loam	McHenry silt loam
Casco loam	Griswold loam	Miami loam
Casco-Rodman complex	Griswold silt loam	Mundelein silt loam
Dresden loam	Kane loam	Plano silt loam
Drummer silt loam	Kendall silt loam	Warsaw loam
Elburn silt loam	Lorenzo loam	Warsaw silt loam
Fox sandy loam	Matherton silt loam	

Figure 6 shows the general locations of the agricultural lands where DATCP has identified three-lift soil candidates within the permanent easements of this project. There tends to be more of these soils in the western two-thirds of the project for both routes. There are limitations to a desktop review and the existence and extent of these soils must be confirmed in the field by an individual with knowledge in identifying soils such as an Agricultural Inspector.

Similar amounts of potential three-lift candidate soils appear to be present for both routes. Analysis of Route A indicates about 69 acres or 29 percent of the permanent easement on agricultural land has three-lift candidate soils. Route B appears to have about 71 acres or 31 percent of the permanent easement on agricultural land with three-lift candidate soils. As such, a significant portion of either route would require field reviews for three-lift soils. Table 11 identifies the property owners of agricultural fields where the project would trench through soils that may benefit from three-lift soil handling. The owners of these properties had a minimum of 0.6 of an acre of potential three-lift soils, which represents 40 percent of the permanent easement passing through a 40-acre parcel.

Figure 6: Agricultural Areas with Potential Three-Lift Soil Candidates

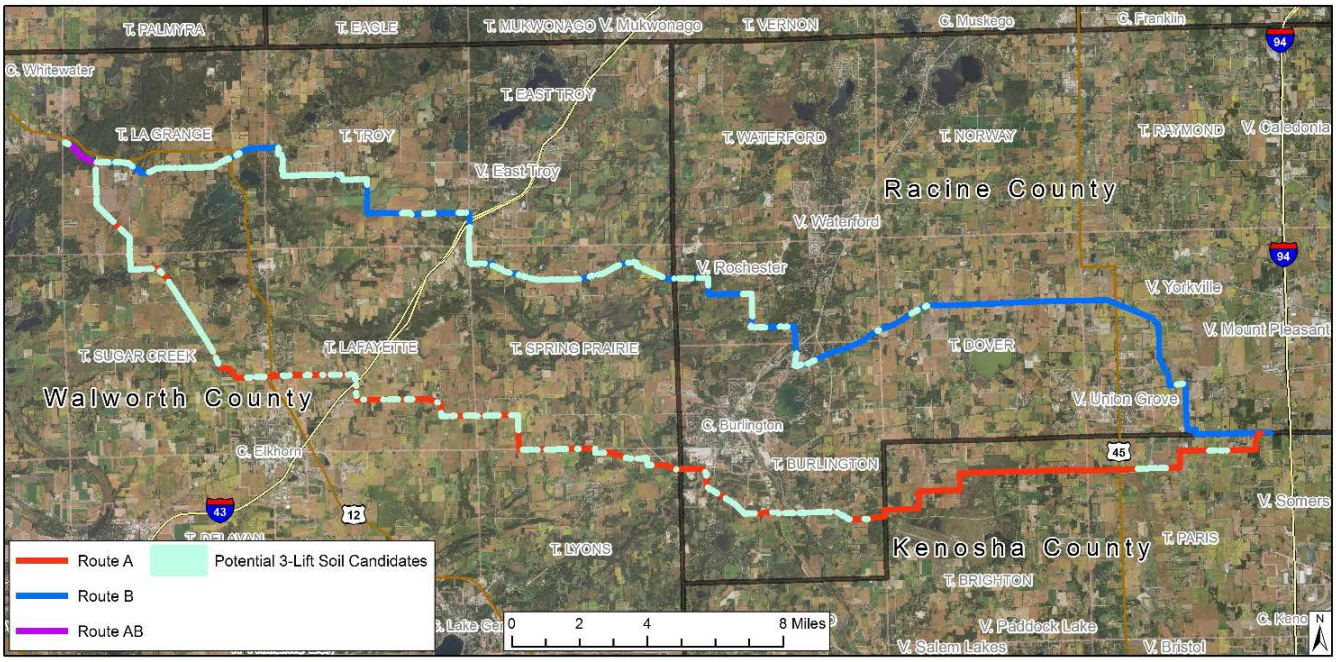


Table 11: Agricultural Landowners with Potential Three-Lift Soils

Route A Agricultural Landowner	Acres
945 ANITA LLC	0.96
ABBE, HELEN	1.57
AMENT, STEVEN B	1.23
BIGELOW LIFE ESTATE, NANCY J	2.78
BRUMMEL, SAMUEL P	2.78
CEP CORP	1.27
CHADWICK, CHAD A	0.86
CLAUSEN FARM INC	0.99
COWAN, JAMES	2.45
DEAKINS, DWAYNE	1.20
DEMPSEY LIFE ESTATE, JAMES & EILEEN	1.40
DRM LAND LLC	1.03
DUTCHMAN ACRES LLC	1.00
EHLEN TRUST, JAMES	1.35
EHRHARDT, JUSTIN	0.70
ELLSWORTH TRUST, GARY M	1.07
FINCUTTER, ANTHONY J	1.08
FREDERICK, RICHARD F	1.32
GRANT TRUST, TED C	1.54
GREVING FARMS LLC	1.80
GREVING JOINT TRUST, MARVIN W	1.22
GUTHRIE TRUST, ALLEN C	3.50
GUTHRIE, CRAIG A	1.80
HOUCK FARMS LLC	0.89
INGRAM TRUST, RICHARD P	0.89
JENKINS, KERRY C	0.68
LAUDERDALE, WILLARD	2.90
LEICHT, DOUGLAS	2.65
MENKE FAMILY TRUST, DAVID L	0.60

Route B Agricultural Landowner	Acres
AERWAY LEASING LLC	1.07
ALBRECHT, DALE N	3.82
ARVELIG ACRES LTD	1.11
ATKINSON TRUST, THOMAS R	2.00
BAUMEISTER, DAVID A	0.86
BENNETT FAMILY TRUST	0.94
BORUCKI TRUST, LUCILLE	0.93
BOURDO, BENJAMIN E	0.68
BUCCI, CHARLES	1.14
DAVID, ROBERT C	1.24
DIETZLER FARM LP	0.73
ERICKSON, SCOTT W	1.79
FERRY TRUST, LARRY A	1.54
FRANCISCAN FATHERS THE ORDER OF THE	0.68
FRIEMOTH, JAMES	1.50
GRULING TRUST, ALFRED T	1.38
GUIDARELLI TRUST, MARGARET R	0.70
HARD ROCK FARMS LLC	7.24
HOLMESTEAD FARM OF HONEY CREEK	1.10
KATZMAN FARMS INC	0.97
KESKE LIVING TRUST	2.25
KREFT LIFE ESTATE, DONALD P	1.51
LATER, DONALD K	1.11
LAWTON LEGACY FARM LLC	0.72
MA & PA FERRY LAND HOLDINGS	1.51
MARTIN TRUST, MAUREEN M	1.81
MORGAN, KIM E	0.71
NABER, ARTHUR A	1.77
NABOLOTNY, MICHAEL J	0.65

Route A Agricultural Landowner	Acres
MERTEN IRREVOCABLE TRUST, CAROL	1.32
PAPCKE, BARBARA, AND RONNY ROHLOFF	1.94
RFD II LLC	1.83
ROHLOFF, RONNY	1.16
RRAM PRODUCTIONS INC	0.97
SCHMITT TRUST, KENNETH S	1.94
STERKEN FARMS INC	6.21
SUNSET INVESTMENTS	0.91
THATE, DAVID A	1.94
UHLENHAKE, KENNETH J	0.64
WINKLER, THOMAS O	0.81
WUTTKE, RODNEY D	1.11
YARMO, DAVID S	0.65
YURSDEN FARMS INC	1.77
ZANG, MICHAEL L	2.28
ROUTE A TOTAL	**68.99**

Route B Agricultural Landowner	Acres
PAYNE & DOLAN INC	1.22
RASMUSSEN TRUST, WILLIAM R	1.54
RASMUSSEN, ROBERT L	1.49
ROBRAN TRUST, ELMER E	0.63
ROBRAN, RONALD E	0.74
RUSTEBAKKE, DAVID A	0.68
S&R EGG FARM INC	1.44
SCHMIDT FAMILY TRUST, GERALD J	2.75
SCOTT, SETH H	0.86
SCUREK HOLDINGS LLC	0.97
SZUTA, JAMES W	0.75
TAYLORS ROUND PRAIRIE FARMS LLC	1.54
TOMAS ORCHARD PROPERTIES LLC	1.30
VANCHENA TRUST, NICKOLAS F	1.79
VILONA TRUST, MICHAEL J	1.61
W&W VENTURES LLC	1.26
WEINKAUF, MICHAEL P	3.07
WELKE BROTHERS FARM PARTNERSHIP	1.81
YGGDRASIL LAND FOUNDATION INC	1.20
ZAGER, DAN	0.86
ROUTE B TOTAL	**70.97**

VI. AGRICULTURAL LANDOWNER IMPACTS

DATCP Survey of Agricultural Property Owners

Tables 12 and 13 list the property owners that could be affected by this project and the acres of easements required for each route. Landowners with an asterisk after their name may have an off-ROW access road on their property. Landowners with a number sign after their name could be affected by either route.

Table 12: Route A - Potentially Affected Farmland Owners

Agricultural Property Owners	Permanent Easement (acres)	Temporary Easement (acres)	Aboveground Facilities (acres)	Total Acres
945 ANITA LLC	2.73	2.80		5.52
ABBE, HELEN	1.95	1.73		3.68
AMENT, BARTHOLOMEW G #	12.54	9.92	0.06	22.52
AMENT, STEVEN B #	3.27	3.14		6.42
BETH, DAVID G*	3.98	3.98		7.96
BIGELOW LIFE ESTATE, NANCY J	2.96	3.07		6.03
BOILINI FARMS INC J*	3.74	7.12		10.86
BRIGHTONWOODS ORCHARD INC	1.57	1.45		3.02
BRUMMEL TRUST, NORMAN L	0.76	0.76		1.51
BRUMMEL, SAM	1.50	1.56		3.07
BRUMMEL, SAMUEL P	1.59	1.62		3.21
BURLINGTON SPRING VALLEY LLC*	2.85	4.16		7.01
CEP CORP	4.41	4.61		9.02
CHADWICK, CHAD A	1.77	1.46		3.23
CLAUSEN FARM INC*	4.43	4.20		8.63
COOK PROPERTY LLC	2.13	2.13		4.27
COUGHLIN REVOCABLE TRUST, MARJORIE H	1.30	1.30		2.60
COUGHLIN, BENJAMIN T AND DIANA	1.26	1.93		3.19
COWAN, JAMES	4.25	4.59		8.84
CRETEX MATERIALS INC*	4.56	5.16		9.72
DEAKINS, DWAYNE*	3.00	3.73		6.74
DEBACK TRUST, HAROLD R	0.54	0.55		1.09
DEMPSEY LIFE ESTATE, JAMES & EILEEN	1.40	1.40		2.79
DRM LAND LLC	2.99	3.11		6.10
DUTCHMAN ACRES LLC	6.04	5.88		11.92
EHLEN TRUST JAMES	1.87	1.87		3.73
EHRHARDT, JUSTIN	6.44	5.99		12.43
ELLSWORTH TRUST, GARY M	1.49	1.54		3.03
EVERETT, DELSIE J	2.12	2.14		4.26
FINCUTTER, ANTHONY J	1.52	1.52		3.03
FLIESS, JEROME N	3.08	3.15		6.23
FREDERICK, RICHARD F	4.35	4.43		8.78
FROGGATT, JEAN A	0.72	0.43		1.15
GOLDSMITH, GREG	1.37	0.93	0.05	2.34
GRANT TRUST, TED C	2.87	2.94		5.81

Agricultural Property Owners	Permanent Easement (acres)	Temporary Easement (acres)	Aboveground Facilities (acres)	Total Acres
GRETEBECK REV TRUST, LOIS C	0.90	0.86		1.76
GREVING FARMS LLC	6.58	6.48		13.05
GREVING JOINT TRUST, MARVIN W	1.53	1.49		3.02
GUTHRIE TRUST, ALLEN C	5.46	5.67		11.13
GUTHRIE, CRAIG A	3.73	3.80		7.54
HANOVER, JOHN R	1.40	1.16		2.56
HOFFMANN, PATRICK M	0.98	1.03		2.01
HOUCK FARMS LLC	3.61	4.11		7.71
HRUPKA FAMILY ASSET TRUST	2.87	2.00		4.87
HUGHES TRUST*	1.51	1.42		2.93
INGRAM TRUST, RICHARD P	4.19	3.33		7.52
JENKINS, KERRY	2.48	2.00		4.48
JENKINS, KERRY C	1.25	1.01		2.27
KEMPF, JAMES J	0.60	0.60		1.20
KENOSHA BEEF INTERNATIONAL LTD	1.74	1.74		3.48
KOLDEWAY TRUST, DONALD F & VIRGINIA	2.26	2.26		4.52
L&G FARMS LLC	4.26	4.20		8.46
LAUDERDALE, WILLARD	2.91	2.94		5.85
LEICHT, DOUGLAS	2.90	3.05		5.94
LINSLEY, RICHARD C	1.52	1.52		3.05
MANGOLD, WILLIAM G. & IRENE LIFE ESTATE*		2.26		2.26
MARZAHL, MARVIN	2.44	2.51		4.96
MAY, MICHAEL S	1.04	1.07		2.10
MENKE FAMILY TRUST, DAVID L	4.06	4.02		8.07
MERTEN IRREVOCABLE TRUST, CAROL	2.32	2.46		4.78
MICHETTI, DANIEL	0.45	0.73		1.18
NOBLE, DALE A #	11.58	11.97		23.55
PAPCKE, BARBARA, RONNY ROHLOFF	2.55	2.85	0.02	5.43
RFD II LLC	2.46	2.46		4.92
RICHTER, WARD R	1.41	0.64		2.06
ROHLOFF, RONNY #	1.34	1.57	0.06	2.98
RRAM PRODUCTIONS INC	1.55	1.55		3.10
SCHINKE TRUST, BARBARA JEAN	0.57	0.63		1.20
SCHMITT TRUST, KENNETH S	2.78	2.64		5.42
SCHOENBERG, EDWARD J	2.08	2.06		4.14
SCHUSTER REVOCABLE TRUST	1.76	2.01		3.77
STERKEN FARMS INC	6.60	6.77		13.37
SUNSET INVESTMENTS	2.89	3.08		5.98
THATE, DAVID A	2.40	2.16	0.06	4.62
UHLENHAKE, KENNETH J	0.74	0.76		1.50
UHLENHAKE, PHILIP L	2.43	2.52		4.94
WALAS, THOMAS C	4.06	4.31		8.37
WEIS, ELMER R	4.58	4.51		9.08
WILKS REVOCABLE LIVING TRUST, ALVIN R & JEAN R*#	2.96	3.21		6.17
WINKLER, THOMAS O	1.55	1.68		3.22
WOELLERT TRUST, THOMAS R	1.35	1.48	0.06	2.89
WUTTKE, RODNEY D	1.82	1.56		3.38

Agricultural Property Owners	Permanent Easement (acres)	Temporary Easement (acres)	Aboveground Facilities (acres)	Total Acres
YARMO, DAVID S	2.14	1.08		3.22
YURSDEN FARMS INC	4.51	4.51		9.03
ZANG, MICHAEL L	3.12	3.06		6.18
Acquisitions from 31 landowners, each less than 1 acre	3.99	2.74		6.73
TOTALS	**239.53**	**241.87**	**0.30**	**481.70**

* Landowners identified with an asterisk would be impacted by an off-ROW access road, if this route is approved.
# Landowners who could be affected by either route.

Table 13: Route B - Potentially Affected Farmland Owners

Agricultural Property Owners	Permanent Easement (acres)	Temporary Easement (acres)	Aboveground Facilities (acres)	Total Acres
AERWAY LEASING LLC	3.65	3.43		7.09
ALBRECHT, DALE N	5.05	4.32		9.37
AMENT REV TRUST BARTHOLOMEW G & ANNY #	2.67	2.70		5.37
AMENT, STEVEN B #	1.88	1.89		3.77
ARVELIG ACRES LTD	1.51	1.51		3.02
ATKINSON TRUST, THOMAS R	2.06	2.26		4.33
ATKINSON, TIMOTHY R	2.16	1.46		3.62
BAJWA, TANVIR	5.56	5.25		10.81
BAUMEISTER REV TRUST 7/30/2008, SHIRLEY R	1.47	0.17		1.64
BAUMEISTER, DAVID A	4.19	3.82		8.01
BEGUHL, RUSSELL AND RENEE	1.35	1.49		2.85
BENNETT FAMILY TRUST	1.12	1.15		2.27
BLESER, VICTORIA M	1.70	1.48		3.18
BONNER REVOCABLE TRUST, DONALD J	2.71	2.61		5.33
BORK, ROBERT L	3.04	1.24		4.28
BORUCKI TRUST, LUCILLE	1.36	1.54		2.90
BOSE TRUST, RUTH	1.52	1.52		3.04
BOURDO, BENJAMIN E	1.15	0.96		2.10
BUCCI, CHARLES	1.14	1.15		2.29
CARBONNEAU, CAROLE	0.61	0.66		1.27
CONSOLIDATED MILLS FARMS INC	1.47	1.48		2.95
DAVID, ROBERT C	4.53	3.03	0.05	7.61
DIETZLER FARM LP	2.06	2.18		4.24
DIETZLER, DANIEL P	0.62	0.73		1.35
ERICKSON, SCOTT W	2.74	2.21		4.95
FERRY TRUST, LARRY A	1.54	1.54		3.07
FLUEGGE, GLENN A JR	0.78	0.68		1.46
FRANCISCAN FATHERS, THE ORDER OF THE	2.16	1.41		3.57
FRIEMOTH, JAMES	1.82	1.86		3.68
GEHRAND LLC	2.65	2.64		5.29
GRULING TRUST, ALFRED T	1.52	1.52		3.03
GUIDARELLI TRUST, MARGARET R	1.03	1.07		2.10
HACK, THOMAS R	1.65	1.64		3.29
HARD ROCK FARMS LLC	8.62	8.97	0.06	17.64

Agricultural Property Owners	Permanent Easement (acres)	Temporary Easement (acres)	Aboveground Facilities (acres)	Total Acres
HAZELO REVOCABLE TRUST	1.52	1.51		3.03
HEGEMANN, ROGER A	1.52	1.12		2.64
HOLMESTEAD FARM OF HONEY CREEK	1.76	1.12		2.88
JKD FARM LLP	2.85	3.07		5.92
KATZMAN FARMS INC	1.46	1.47		2.93
KESKE LIVING TRUST	2.25	2.30		4.55
KEY TRUST, JOSEPH H	2.01	2.06		4.07
KOWALCZYK, MELODY R	1.66	1.66		3.31
KREFT LIFE ESTATE, DONALD P	1.54	1.56		3.10
LARSON, PATRICIA	1.30	1.50	0.08	2.87
LATER, DONALD K	1.26	1.06		2.32
LAWTON LEGACY FARM LLC	2.35	1.83		4.18
LAWTON TRUST, FRED H	1.06	1.26		2.32
MA & PA FERRY LAND HOLDINGS	1.51	1.58		3.09
MALEK REVOC TRUST, EDWARD & TERESA	1.54	1.61		3.15
MARTIN TRUST, MAUREEN M	3.04	3.03		6.06
MAYER, SHAWN	1.49	1.55		3.05
MILLER, LAWRENCE	0.62	0.81		1.43
MORGAN, KIM E	1.50	1.50		3.01
MOYER, DAVID W	1.49	1.52		3.01
NABER, ALOYSIUS B & ANN-MARIE	1.06	0.74		1.81
NABER, ARTHUR A	3.82	3.45		7.27
NABOLOTNY, MICHAEL J	0.76	0.75		1.51
NASS, STEPHEN L	0.92	0.81		1.74
NOBLE REVOCABLE TRUST	1.68	1.76		3.44
NOBLE TRUST, ROSEMARIE - EDWARD - DAWN	1.57	1.01		2.58
NOBLE, DALE A #	1.51	1.51		3.02
NOBLE, EDWARD C	1.51	1.51		3.02
P THOMAS P LEMBCKE LLC	1.32	1.45		2.77
PAYNE & DOLAN INC*	1.53	1.72		3.25
PETERSON, DONALD	1.48	1.51		2.99
POISL, DARYL L	3.90	4.54		8.44
RASMUSSEN TRUST, WILLIAM R	1.54	1.54		3.08
RASMUSSEN, ROBERT L	1.51	1.51		3.03
REHBERG, RICHARD T	0.99	0.64		1.63
ROBRAN TRUST, ELMER E	1.26	1.06		2.32
ROBRAN, RONALD E	1.02	0.85		1.87
ROHLOFF, RONNY #	0.94	0.48		1.43
ROHRER FAMILY FARMS LLC	1.54	1.53		3.07
ROWNTREE BROTHERS PARTNERSHIP	4.21	3.87		8.09
RUFFOLO, VINCENT I	0.57	0.59		1.17
RUSTEBAKKE, DAVID A	0.88	1.03		1.90
S&R EGG FARM INC	1.49	1.71		3.20
SCARO, JOSEPH M	1.60	0.79	0.07	2.46
SCHMIDT FAMILY TRUST, GERALD J	2.86	2.86		5.72
SCOTT, SETH H	2.93	2.68		5.61
SCUREK HOLDINGS LLC*	9.29	11.80		21.09

Agricultural Property Owners	Permanent Easement (acres)	Temporary Easement (acres)	Aboveground Facilities (acres)	Total Acres
SKEWES FARM INC	4.93	4.91		9.84
SONNENBERG, JASON N	1.53	1.53		3.06
STORCK TRUST, AUGUST & LAVERNE	4.94	5.08		10.02
STORCK, LAVERNE V	0.59	0.59		1.18
STREHLOW, DORIS	1.52	1.52		3.04
SZUTA, JAMES W	1.50	1.26		2.76
TAYLORS ROUND PRAIRIE FARMS LLC	2.24	1.77		4.01
TOMAS ORCHARD PROPERTIES LLC	2.39	1.40		3.79
TROY FARMS INC*	3.73	4.13		7.85
VANBEEK, RUSSELL J	0.69	0.69		1.38
VANCHENA TRUST, NICKOLAS F	1.79	1.76		3.55
VILONA TRUST, MICHAEL J	1.94	2.09		4.04
W&W VENTURES LLC	2.98	3.29		6.27
WALVOORD, GARY J	1.28	1.14		2.42
WEINKAUF, MICHAEL P	3.07	3.88		6.95
WELKE BROTHERS FARM PARTNERSHIP	2.21	2.28		4.49
WHITLEY, THOMAS L	1.56	1.50		3.05
WILKS LIV TRUST, ALVIN R & JEAN R TRUSTEES	5.26	5.29		10.55
WILKS REVOCABLE LIVING TRUST, ALVIN R & JEAN R*#	3.93	4.00		7.94
WILKS, KELLEY L	1.39	1.45		2.85
YGGDRASIL LAND FOUNDATION INC	5.42	4.85		10.27
ZAGER, DAN	1.92	1.83		3.75
Acquisitions from 43 landowners, each less than 1 acre	7.10	5.47	0.12	12.70
TOTALS	**230.45**	**220.11**	**0.38**	**450.95**

* Landowners identified with an asterisk would be impacted by an off-ROW access road, if this route is approved.
\# Landowners who could be affected by either route.

Property Owner Comments

DATCP sent questionnaire to the 88 farmland owners who could have four or more acres of land affected by the proposed project. Owners of 48 properties responded with comments. Those comments are summarized below and are listed in alphabetical order for each route.

Route A

Farmland Owner: David G. Beth / Operator: Dale Daniels

Mr. Beth owns 120 acres of land and rents 55 acres to Mr. Daniels. The cropland is used to grow corn and there are also 30 horses on this farm. Mr. Beth is concerned that the project will affect drainage tiling, pasture fencing, and woods on his property.

Farmland Owner: Nancy J. Bigelow Life Estate

The trust owns 80 acres of land. They grow corn and soybeans. The owner did not identify any concerns about the project.

Farmland Owner: Boilini Farms Inc.

Boilini Farms, Inc. owns 425 acres of land in Racine County with an overall operation of 2,000 acres. They grow corn, soybeans, and hay. The owners noted that the project would affect cropland and woodland on their property. They are concerned that the proposed project will affect drainage ditches and waterways. They are also concerned about soil compaction and the loss of yields where pipeline construction crosses cropland.

Farmland Owner: Burlington Spring Valley LLC

This is an 80-acre parcel. The owners stated that the project will affect drainage tiling. The trees on this property act as a windbreak. The owners said that they plan to mine the site and then use it for commercial development. They anticipate that the grade of the property will be lowered 12 feet and they would like to see the pipe buried 20 feet deep to avoid potential impacts to their planned mining.

Farmland Owner: CEP Corp. / Operator: Crane Grain

This property is 59.2 acres in size and is all cropland. The renter grows corn, soybeans, and wheat. The owners are not sure if drainage tiling would be affected by this project.

Farmland Owner: Dwayne Deakins

This property includes 380 acres of cropland that is used to grow corn and soybeans. The woodland on this property provides firewood. Mr. Deakins said that the project would affect new tiling. He would prefer not to have the project because he has put a lot of time and labor into the property, installing drainage tiles and cleaning fence lines.

Farmland Owner: DRM Land LLC (Duane Newman)

This LLC owns 380 acres of land and rents additional farmland. The owner grows corn and soybeans. This farm is covered by the Farmland Preservation program. There are drain tiles on this property northwest of the I-43 and Plank Road intersection.

Farmland Owner: Dutchman Acres LLC

This farm consists of owned and rented land. In an average year they grow 500 acres of corn and 500 acres of soybeans. They have 10 acres of land enrolled in the CRP. The owners stated that the project could affect their tile lines. They are concerned that pipeline construction could lead to soil compaction and reduce crop yields.

Farmland Owner: Delsie J. Everett / Operator: John Nagel

Delsie Everett owns almost 112 acres of land and Mr. Nagel grows corn, hay, and wheat. Route A crosses their driveway and construction could interfere with building access. In addition, trees along the driveway enhance the value of the property and the owner is very concerned that pipeline construction could damage these trees. The project would also cross their cropland and construction could potentially block access to a portion of their field. Also during construction,

areas of fields not directly affected by construction might be too small or irregularly-shaped to farm efficiently depending on the location of the ROW and ease of access.

Farmland Owner: Ted C. Grant Trust

This property is 1,003 acres in size and is used to grow corn. The owner is concerned about how construction will disturb his land.

Farmland Owner: Greving Farms LLC

The owners of this farm rent additional cropland from Larry Marzahl and the David Menke Family Trust who could also be affected by the project. They grow corn and soybeans. The owners have tiled all of their cropland. There is an evergreen windbreak along Bowers Road that could be affected by the project. The owners are concerned that the project might interfere with the culverts that cross the highway such as the ones located under STH 11 near Plank Road.

Farmland Owner: Donald F. and Virginia Koldeway Trust

The trust owns over 86 acres of land and grows corn and soybeans in rotation. The owner also raises a couple head of beef cattle and a few poultry. In addition, there are 23.31 acres enrolled in the CRP.

Farmland Owner: L&G Farms LLC / Operator: Walter Farms, Inc.

This farm is 600 acres and grows corn and soybeans. One acre is enrolled in the CRP. The owners stated that the project would cross drain tiles and a drainage ditch.

Farmland Owner: Willard Lauderdale / Operator: Lauderdale Farm

Mr. Lauderdale owns 95 acres of land, 93 of which is cropland.

Farmland Owner: Douglas Leicht

Mr. Leicht owns 106.6 acres of land. He grows corn and soybeans. Fifty five acres of this farm is covered by the FPP. Mr. Leicht stated that the project might affect a few tile lines. He is concerned that project construction will bring rocks to the surface and he wants all such rocks removed from his land.

Farmland Owner: Marvin Marzahl / Operator: Greving Farms (Arthur Greving)

Mr. Marzahl owns 164 acres of land including 145 acres of cropland that is rented to Greving Farms. There are drainage tiles on the land west of the existing We Energies Sugar Creek Substation.

Farmland Owner: Edward J. Schoenberg

Mr. Schoenberg owns 164 acres of land and rents additional farmland. He grows corn, soybeans, and hay. Mr. Schoenberg indicated that the project will affect a grassed waterway, property line fencing, and a few trees. He has had a bad experience with another utility working on his property. He is apprehensive about how We Energies will construct the pipeline and the damage it could do to his property.

Farmland Owner: Sterken Farms, Inc. / Operator: Katzman Farms

Sterken Farms owns approximately 1,800 acres of land. The owners are uncertain if the project would affect any drainage tiling on their property. They are concerned that it might affect two wells and an irrigation system.

Farmland Owner: David Thate / Operator: Stanley J. Czahor

Mr. Thate owns 30.5 acres of land. Mr. Czahor grows corn and soybeans in rotation. There are also a few poultry on this property. All of the 24 acres of cropland are zoned A-1. Mr. Thate is concerned that the project might affect a town culvert under Mangold Road that provides drainage for a field west of Mangold Road. He is also concerned that the project could affect gas, electric, and telephone service and it might cross part of his 1.25-acre vegetable garden. His neighbor planted a 400-foot spruce windbreak that also serves his cropland. This project will add a third utility easement to this property and Mr. Thate is very concerned that it will limit this property's potential for development.

Farmland Owner: Rodney D. Wuttke

Mr. Wuttke owns 217 acres of land and grows corn, soybeans, and hay. Mr. Wuttke is very concerned that if the project crosses his drainage tiling, the system upstream would never work properly again for him and for his neighbors. He is concerned that soil settling over the gas line will impede the flow of water in all of the tile lines it crosses. Mr. Wuttke estimates that this would damage 8 acres of his land and 10 acres of his neighbors' land.

Farmland Owner: Yursden Farms, Inc.

Yursden Farms, Inc. owns over 800 acres of land. They grow corn, soybeans, and hay on the cropland, and they have a tenant who uses the pasture. The owners are concerned that the project might affect drainage tiling and pasture fencing.

Farmland Owner: Michael Zang / Operator: Ryan Crane

This farm is 148 acres. The renter grows 85 acres of corn and soybeans in rotation. There are also a few horses and poultry on this property. The cropland is tiled. There is livestock fencing, woven wire and barbed wire, along the west and southeast lot lines. Mr. Zang is very concerned that the proposed project will significantly interfere with his future development plans for this property.

Route B

Farmland Owner: Thomas R. Atkinson Trust

The trust owns 52 acres of land and rents additional farmland. The owners grow corn, soybeans, hay, and wheat. They also run a 150-cow dairy operation with 70 head of replacement dairy cattle and 40 head of beef cattle.

Farmland Owner: David A. Baumeister / Operator: Mike Nolan

Mr. Baumeister owns 242 acres of land. Some of this land is enrolled in the CRP. Mr. Nolan grows corn and soybeans on the cropland. Mr. Baumeister is not sure if the project will affect any drainage tiles installed on his property. It would affect line fencing. He is very concerned that this project would require the removal of trees from his property. He is also concerned about the project's overall economic impact on his property as a whole.

Farmland Owner: Donald J. Bonner Revocable Trust

The trust owns 350 acres of farmland and rents additional cropland. Mr. Bonner grows corn, soybeans, and wheat. He also removes the dead trees from his woods for firewood. Mr. Bonner indicated that the drainage district main tile line crosses CTH A just east of STH 75. He is concerned that pipeline construction would cause long-term loss of cropland productivity due to soil compaction and soil mixing.

Farmland Owner: Robert L. Bork

Mr. Bork owns 155 acres of land and grows corn, soybeans, and hay. He also raises a dozen head of beef cattle. Mr. Bork is concerned that the project will affect drainage tiling on his property. Specifically, he identified a small drain tile line from the farm house to the ditch and a major drainage main (14 inches) toward the east end of the property that crosses under CTH A. Fencing along CTH A could also be affected. He has 25 to 30 oak trees that are 30 to 70 years old that could also be affected by the project. These trees provide shade for the cattle and add value to the property. Soil compaction is another concern. Photos of this property are included in Appendix E.

Farmland Owner: Robert C. David / Operator: Matt Scurek

Mr. David owns 505 acres of land including 390 acres of cropland that is used to grow corn and soybeans. Mr. David identified six tile lines and a drainage/diversion ditch that could be crossed by this project. He is concerned that the project could interfere with future plans for irrigation on this land. He is also concerned that access to adjacent cropland could be affected during construction and the potential for developing this land could be limited in the future.

Farmland Owner: Dietzler Farm LP / Operator: Friemoth Farms

Dietzler Farm LP owns 70 acres of land and rents 52.4 acres to Friemoth Farms to grow soybeans. The project would affect cropland. Project construction could also affect fencing and a waterline that serves a cattle waterer. The potentially-affected fencing is located on the property boundaries and along both sides of a lane within the property. The owners would prefer to see the line routed along their field edges rather than through the middle of their cropland. They are proposing a modification of Route B that would move the north/south portion of the line to the west side of their field. In addition, the east/west section of the route could be shifted south along the edge of the cropland. They feel this would also benefit their neighbors to the east. A sketch of the proposed route modification is included in Appendix F.

Farmland Owner: Scott W. Erickson / Operator: Noble Farms (Dale Noble)

The affected property is 120 acres in size and the operator uses 32 acres of cropland to grow soybeans. Mr. Erickson also operates a nursery on this property. Some of the Erickson property which might be affected by the project is enrolled in the CREP. Mr. Erickson stated that there are tile lines running north-south on this property and there is a grassed waterway running from the neighbor to the north. This property also has two ponds with multiple springs within about 100 feet of the proposed pipeline. The ponds provide irrigation for Mr. Erickson's nursery crops. Damage to these ponds and springs could cause harm to his nursery crops, as well as reduce recreational use of the property. Mr. Erickson just had the 110th lot line pruned and cleaned to enhance crop production and wildlife habitat. An aerial photo identifying Mr. Erickson's concerns is included in Appendix E.

Farmland Owner: Keske Living Trust / Operator: James G. Beu

The owners did not describe their farmland or identify any concerns about the project.

Farmland Owner: Joseph H. Key Trust (Ruth Miller, Trustee) / Operator: Dale Dingman

The trust owns 338 acres of land. Mr. Dingman grows corn, soybeans, and hay. The owner is concerned that the value of the land will be affected by the project, especially when this land is converted to residential development.

Farmland Owner: Daryl Poisl

This farm is 427 acres. The owner grows corn, soybeans, and hay, and raises beef cattle. Mr. Poisl stated that the project would affect cropland, pasture, and buildings on his property, including drain tiling and livestock fencing. He is also concerned that the pipeline will be constructed too close to his house. Trees on his property act as a windbreak, reducing erosion and crop damage. He is concerned that the project might affect his windbreak.

Farmland Owner: Rohrer Family Farms LLC / Operators: Graham Adsit and Walter Goldstein

The owners grow 4.5 acres of certified organic produce. In the past, Demeter Association, Inc. has been their certifier, but they are in the process of selecting a new organic certifier. Graham Adsit is working with Grassway Organics to grow and do genetic research on organic grain and forage. These research plots include lysine corns that are being developed to fix nitrogen in the soil, and peas and beans to be used in dairy farming. He will likely use Midwest Organic Services Association for his certifier. Walter Goldstein grows organic high-methionine corn, as well. The owners feel that the use of drop cloths for welding and coating practices during pipeline construction are not adequate to protect the organic soils from contamination.

On this property is a 15-acre wetland that could be affected by the project. The owners state that this wetland is critical to supporting the surrounding sustainable farming ecosystem because it provides water management and retention. The owners are concerned that the project would split the farm in two and that it would damage two lateral water pipes and hydrants that provide water

for their high-value organic produce. Pipeline construction could also disturb valuable organic soils and expose them to potential contamination from chemicals that are not permitted under organic production. Construction activities could contaminate their soils either from the deposition of trenched water onto their land or by causing runoff from neighboring conventional farms to enter their property. Construction could cause soil compaction that would take the years to recover from. The owners are opposed to having any access roads constructed on their property. The project could also affect the Justin Roher residence, which is adjacent to the Rohrer Family Farms LLC property. The owners are concerned that it would also reduce the future residential development value of the Rohrer property.

Farmland Owner: Rowntree Brothers Partnership / Operator: Rowntree Farms, Inc.

The Partnership owns almost 873 acres of land. The farm grows corn, soybeans, wheat, and hay, and they also produce 3,800 pigs annually. The Partnership is concerned about the project damaging drain tiles, damaging a house foundation and a septic drainage field, preventing access to and from the farm during construction, disrupting electric and/or gas service to livestock barns, removing farm fencing, clearing trees, and impacting soil quality.

Route B crosses a 14-inch drain tile main. The main is located west of 27420 Plank Road, Burlington, on the adjacent Bork farm. This tile main is critical for drainage of the Noble, Rowntree, and Bork farms. Additionally, several small tile lines may also cross Plank Road, a half-mile east and a quarter-mile west of Cox Road. The exact locations and depths of these tile lines are unknown. Any tiles disturbed by construction activities must be repaired by a qualified drainage contractor. The owners are also concerned that pipeline construction will cause soil mixing, increase the number of rocks on the soil surface, and spread weeds and invasive species.

Within the permanent easement of the route is a house foundation and septic drainage field that could be damaged by construction activities. Additionally, access to and from the farm could be blocked by pipeline construction. Farm access is especially important in the fall for marketing hogs and harvesting grain. It is also critical that electric and gas service to their hog barns are not disrupted. There are 1,400 feet of woven wire livestock fencing on this farm which helps prevent hogs from entering the highway. Prior to the removal of any fencing, impact to driveways, or disruption of electrical or gas service, We Energies should discuss such disruptions with the operator of the farm so that impacts are minimized.

In front of the house and within the route ROW is a 75-foot spruce tree and other landscape trees that the owners are concerned about. There are woodlots on each side of the farmhouse that produce firewood and saw logs. There is also a windbreak west of the farmstead.

Farmland Owner: Gerald J. and Barbara E. Schmidt Family Trust / Operators: Steve and Bill Jacques

This farm is 150 acres and the renters grow corn and soybeans in rotation. There is a waterway across the property that could be affected by the project. The affected cropland is highly

productive with Class I and II soils. The owners are concerned about the project negatively affecting the residential development potential of wooded areas on the property.

Farmland Owner: Scurek Holdings LLC / Operator: Scurek Farms LLC (Matt Scurek)
Scurek, Farms LLC also farms the Troy Farms, Inc. and the Robert David property. Scurek Farms LLC grows corn and soybeans on almost 2,200 acres of cropland. Some of the Scurek Holdings property is enrolled in the CREP. The owners stated that the proposed project would cut through cropland that has an extensive tiling system. It will also cross many farm roads, both grassed and gravel; several drainage ditches; two underground electric lines; and an underground irrigation pipeline. The owners are concerned about damage to tile lines that could affect drainage and irrigation. Damaged tile lines would also be difficult to repair because of the high level of organic-matter content of the soil. They are concerned that cutting through farm roads during construction would restrict access to 1,500 acres. Signage for the project could interfere with access for farm equipment such as mowers and spray booms. Pipeline construction could leave the soils above the pipe unable to support the weight of farm equipment, leading to equipment getting stuck more frequently. This could also happen with the farm roads.

Farmland Owner: Skewes Farm, Inc.
The owners have 600 acres of land that is used to grow corn, soybeans, hay, and wheat. They also raise 250 head of beef cattle. One parcel of this property (0.7 acres) is enrolled in the CRP. The owners are concerned that the project will damage soil productivity, damage a driveway, impede access to cropland, and damage creeks that would be crossed by the project. Additionally, there are fifteen drainage tile structures that could be damaged by pipeline construction. Two grassed waterways and several crossing points on a driveway could also be affected. Sketches of some of these concerns are shown in Appendix E.

Farmland Owner: Michael J. Vilona Trust / Operator: Wendell Schultz
The trust owns 85 acres of land and the cropland is used to grow corn, soybeans, and wheat in rotation. Mr. Vilona is concerned that the project will affect grassed waterways on this property. He is also concerned that the pipeline will pass close to the barn, shed, and two grain bins.

Farmland Owner: W&W Ventures LLC / Operator: Walter Farms
W&W Ventures LLC owns 960 acres of land. Walter Farms grows corn and soybeans on the cropland and 3 acres is enrolled in the CRP. The project would affect the drainage tiling within the CRP land.

Farmland Owner: Michael P. Weinkauf / Operators: Trevor and Jacob Weinkauf
Michael Weinkauf owns 136 acres of land. Trevor and Jacob Weinkauf rent additional land for their operation. They grow corn, soybeans, hay, wheat, and oats. They also raise 200 head of beef cattle. Around 38 acres of the Weinkauf property is enrolled in the CREP. The project would run parallel to the northern fence line of this property and through the center of the farm. The owner

is very concerned that, since the project will cross the middle of the property, the natural drainage patterns will be severely disrupted. The owner is strongly opposed to this project.

Farmland Owner: Yggdrasil Land Foundation, Inc. / Operator: Grassway Farm

This farm has 409 acres of land. The operator typically grows hay, corn, and winter rye. Grassway Farm also runs a 55-cow dairy operation with 45 replacement dairy cattle and 25 head of beef cattle. The operator also has a 500-bird poultry flock. Geneva Lake Conservancy holds a conservation easement on the entire property. The easement only allows organic production on this property, and the certifier is the Midwest Organic Services Association (MOSA). This farm's organic certification requires all equipment to be washed before entering the property.

The owners are also concerned about drainage ditches, drain tiles, a stream, electric fencing, above and below ground waterlines for watering cattle, and windbreaks that could be impacted by construction activities. Of the three drainage ditches that could be affected by the project, the route ROW crosses two of them. Two fields have drain tiles. On the east end of the property, there is a stream that flows in the proposed ROW. High-tensile electric fencing runs along the entire route. Above and below ground waterlines for watering cattle could be damaged. The proposed route crosses two windbreaks as well as woodland that is used for firewood cutting and wildlife habitat.

Route A or B

Farmland Owners: Steven B. Ament and Bartholomew Ament

Steven Ament and his father Bartholomew Ament grow corn, soybeans, and wheat. Portions of their properties are enrolled in the CRP. Both of the Aments own property that would be affected by Route A and Steven Ament also owns land that would be affected by Route B. They are very concerned about pipeline construction damaging their drain tiles and waterways, which could lead to saturation and flooding of their cropland. A new waterway with drainage tiling was constructed along CTH A between Raynor Road and STH 45. Route A would pass through the middle of Bartholomew Ament's land that has a large number of drain tiles on it. Steven Ament prefers Route B because he is very concerned about the damage that Route A pipeline construction could do to the drainage system on his father's land. He has concerns about the potential impacts from Route B, but he said that the impacts from Route A are potentially devastating to the overall farm operation and the impacts from Route B could be managed. Sketches of some of the Aments' Route A concerns are included in Appendix E.

Farmland Owner: Alvin R. and Jean R. Wilks Revocable Living Trust

Mr. and Mrs. Wilks farm about 4,700 acres of land. They grow corn, soybeans, hay, and wheat and they raise, on average, 250 head of beef cattle. They have enrolled 3 acres of their property in the CRP. There are numerous drainage tiles and grassed waterways on their property that would be affected by the project. Tiling has been installed over the last 50 years or more. The owners are strongly opposed to the project.

Summary of Agricultural Property Owner Comments

No matter which route is approved by the Commission, this project would significantly affect cropland. Most of the landowners who responded with concerns about the project identified drainage as their first concern. Much of the cropland in this area is tiled. In addition, grassed waterways, drainage ditches, culverts, and ponds could be affected by the project, which could also impact drainage. Proper field drainage is vital for a successful farm operation and DATCP urges We Energies to work with landowners to locate drainage tiles and other drainage structures used to control surface and subsurface water, so that these structures can be repaired as quickly as practicable if they are damaged by pipeline construction.

Both routes would affect land enrolled in the CRP and CREP. At least two farms on Route B are certified for organic production. They are the Grassway Farms on the Yggdrasil Land Foundation, Inc. property and the Rohrer Family Farms LLC. farmed by Graham Adsit and Walter Goldstein.

Pasture and cropland can easily become inaccessible due to linear construction projects that do not follow field or pasture boundaries. It is essential that We Energies coordinate construction activities with farm operators to minimize the interruption of access to farmland and the timing of farm activities as much as possible.

A number of property owners have woodland and trees that they value for firewood, timber, landscaping, and windbreaks. Where practicable, We Energies should limit tree clearing. Furthermore, DATCP recommends that We Energies make sure to hire appraisers who have expertise in valuing trees, especially those that have not yet reached a marketable stage.

Other concerns identified by farmers and farmland owners along both routes include: damage to soils due to pipeline construction; loss of access to cropland and buildings during construction; damage to fencing; potential damage to underground pipes, wells, irrigation systems, and septic fields; interruption of utilities during construction; proximity of the pipe to buildings and other structures; and the potential loss of property values and future development opportunities.

In the project area, a significant number of affected fields are rented to others. Thus it is critical for We Energies to not only communicate with the owners of agricultural properties but attempt to reach out to the renters as well, so that they are aware of the construction schedule.

Several landowners and farm operators including the owners of the Dietzler Farm LLC, stated that the project would have fewer negative impacts if the route affecting their property were modified. We Energies has indicated that landowner-proposed route modifications would be considered if the modification would not affect any new landowners and if the neighboring property owners agreed to the route modifications if they affect their land.

VII. CONSTRUCTION PROCESS

If the project is approved by the PSC, construction on the gas pipeline will likely begin after the utility has secured all necessary permits and ROW easements. Typical natural gas pipeline construction proceeds in the manner of an outdoor assembly line; comprised of specific activities that make up the linear construction sequence. These operations include surveying and staking the ROW, clearing and grubbing (digging up roots and stumps), grading, pipe stringing, welding and bending, trenching, lowering-in, backfilling, re-grading, cleanup, hydrostatic testing, and restoration. While most of this project would use open trench construction, horizontal directional drilling (HDD) and Jack and Bore (J&B) will be used in some locations to avoid impacts to features such as roads, driveways, and natural resources. Figure 7 on the next page shows the cross section of typical trench construction in agricultural land.

Typical construction equipment used on pipeline projects includes: dozers, graders, excavators, trenchers, dump trucks, backhoes, side booms, ATV's, road bore rigs, horizontal directional drill rigs, pickup trucks, rock trenchers, vacuum excavators, rippers, tillers, rock picking machines, welding rigs and trucks, and x-ray trucks.

Surveying and Staking

The first construction step involves surveying and staking the pipeline centerline, construction ROW limits, temporary workspace areas, and known underground facilities that cross or parallel the proposed pipeline. Construction activities and equipment travel requires the use of temporary work space in addition to the permanent easement.

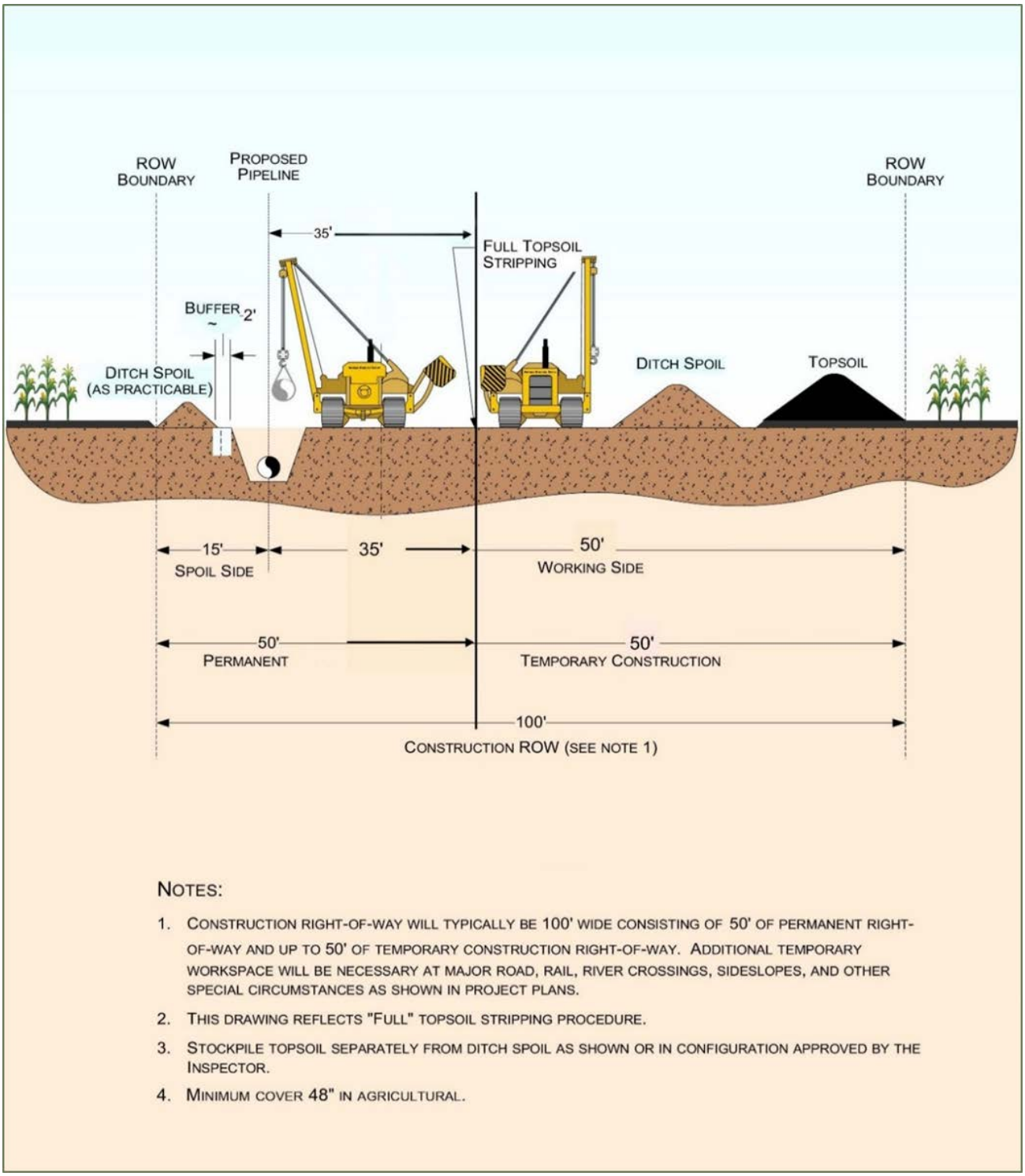
Access roads to the pipeline ROW are typically along existing ROWs such as public roads and farm roads. Additional temporary access roads may be necessary, and some of these may cross agricultural lands. Temporary work space needed for access roads on private lands will be negotiated with the landowner. Construction of these roads will follow practices detailed in the utility's AMP and BMPs including where appropriate, soil segregation, proper maintenance of existing surface drainage patterns, and restoration of the land. If the property owner approves, access roads will be left in place.

Clearing, Grubbing, and Grading

The construction ROW (easement and areas secured for temporary work space) is cleared, grubbed, and graded to provide a level area for pipe-laying operations and the transport of construction equipment. Clearing involves the removal of all trees and brush from the work area. Grubbing, the removal of stumps and roots, occurs over the area where the trench will be excavated. Non-woody vegetation is removed by mowing. However, crops such as small grains with a limited amount of biomass may be left in place to minimize soil erosion. A fence crew operates with the clearing crew to cut and brace existing fencing and install temporary gates along

the ROW. This crew also installs necessary fencing along identified sensitive areas, as required by agencies, and along pastures that contain livestock.

Figure 7: Typical Pipeline Construction Cross-Section on Agricultural Land



Source: We Energies

The utility will work with affected landowners when the cutting of merchantable timber on their property is necessary for construction of the pipeline. Timber may be cut and left along the edge of the ROW for the landowner's use. If the landowner does not want to retain ownership of the material, it will be properly disposed. The disposal of trees, brush, and stumps may include burning, burying, or chipping at a landowner-approved location or removal to another authorized location.

Vegetation from wild black cherry and black walnut trees can be toxic to livestock. All debris from these trees are to be removed from actively pastured areas or areas that livestock have access to in order to prevent its contact with livestock. This material will not be stockpiled on-site.

The utility strips the topsoil (typically up to the top 12 inches) from the full width of the ROW in agricultural areas. The topsoil is stockpiled along the edge of the easement to minimize damage to the productivity of the topsoil. In some locations, maintaining pre-construction soil productivity requires that the subsoil be segregated not only from the topsoil but also from the underlying parent material. This is known as three-lift soil managing.

Erosion control methods and materials vary depending on the specific construction activities, time of year, soil conditions, and slope at the time of construction. A general description of construction phases will be outlined in the utility's Erosion Control Plan and the project-specific AMP and BMPs. These documents include details about clearing and grubbing (digging up roots and stumps), pipe and associated facility installation, and restoration.

Pipe Stringing

After clearing, grubbing, and grading, sections of pipe are transported by truck from pipe storage areas to the construction ROW and positioned along the pipeline route. This is called pipe stringing. Pipe stringing can be conducted either before or after trenching.

Bending and Welding

After pipe stringing, the sections of pipe are bent, as necessary, to fit the contours of the terrain. The pipe is then placed on temporary supports along the edge of the trench, aligned, and welded together. A qualified inspector visually and radiographically inspects the completed welds. Following inspection, a coating is field-applied to each weld joint. An external coating, applied at the mill protects the rest of the pipe. This pre-applied coating is also inspected and repaired as necessary.

Trenching

Open trenching is the primary method for new gas pipeline construction. Alternatively, in some locations, the utility will use HDD or J&B to avoid impacts to features such as roads, driveways, and natural resources. HDD and J&B are discussed in more detail later in this section. Trenches are typically excavated using a backhoe, or in some cases a track hoe, or a trenching machine. Topsoil

and subsoil excavated during trenching of agricultural land are segregated and temporarily stored within the construction ROW for use during restoration. Any material not suitable for backfill, or in excess, is hauled to a suitable location. Proper erosion control practices are employed to minimize erosion during trenching and construction activities. The trench bottom is inspected to ensure it is free of rock and debris. If required, sand or soil bedding material is placed in the trench bottom. Any necessary dewatering of the trench is done in accordance with applicable permits and regulations.

Lowering-In

The pipeline is then lowered into the trench using side-boom tractors. A final inspection ensures the pipeline is properly placed on the trench bottom, that all bends conform to trench alignment, and that the pipe coating is not damaged.

Trench Breakers and Tile Repairs

Upon completion of lowering-in activities, trench breakers (plugs) are installed as needed in sloped areas to prevent subsurface water from moving along the pipe. Permanent tile repairs are also completed during this phase.

Backfilling

After the pipeline is installed in the trench, the trench is first backfilled with the subsoils and then the topsoil is redistributed over the trench and working area. To minimize the potential for soil compaction in agricultural areas, certain construction techniques may be suspended due to wet weather conditions or post-construction soil decompaction techniques may be required to return the soil to productivity.

Rocks removed from the trench but not suitable for backfill are properly disposed of. Rock content of the ROW is managed so that the size and distribution are similar to the adjacent land. The ROW is graded as near as practicable to preconstruction contours, except as needed for soil stability purposes and the installation of erosion control measures.

Horizontal Directional Drilling (HDD) and Jack and Boring (J&B)

Both J&B and HDD construction are alternatives to open trench construction.

J&B may be used to cross under roadways or railways with minimal disruption to traffic. Typically the construction area is first stripped of topsoil that is set aside. Bore pits are then excavated on each side of the obstruction. The bore pits are typically 20 feet by 30 feet and 6 to 12 feet deep. Any groundwater is pumped into a dewatering structure. The auger boring machine and a casing pipe are jacked under the obstruction while the earth is removed by an auger inside a casing pipe. The new carrier pipe is attached to the casing pipe and is either pushed or pulled under the road or railway. After the new carrier pipe is installed and tied into the rest of the pipeline, the bore pits are backfilled and restored.

HDD is often used to avoid disturbance to environmentally sensitive areas such as wetlands and waterways. HDD construction through wooded areas requires fewer trees to be removed than for open trench construction. An entry and exit bore pit are typically excavated on either side of the feature to be avoided. Typically, additional ROW is needed to accommodate these entry and exit bore pits. First, a drill machine is set up and a small diameter pilot hole is drilled under the obstacle. The pilot hole is then enlarged using reaming tools. During this process, drilling mud composed of clean water, bentonite clay, and synthetic polymers are pumped into the hole to lubricate the reaming tool, remove soil cuttings, and maintain the integrity of the hole. When the hole is the appropriate size, the welded pipe is pulled through the hole. Used drilling mud is taken to an approved upland area or disposed of in accordance with applicable permits and regulations. Exit and entrance bore pits are restored.

Cleanup and Initial Restoration

Following the completion of construction activities, the area is restored to preconstruction conditions. Surface grading is done to reestablish natural contours. Disturbed areas are revegetated to be compatible with preconstruction conditions and adjacent vegetation patterns.

Where necessary, soil compaction is alleviated and any segregated topsoil replaced. Additional detail and information about soil compaction and restoration is included in Section VIII: Potential Adverse Impacts of Pipeline Construction on Agriculture. Trash and debris are removed and disposed of in approved areas in accordance with federal, state, and local regulations.

Fences cut or removed during construction are repaired or replaced. Pipeline markers are installed along the length of the pipeline in accordance with Department of Transportation (DOT) specifications. If drain tiles were damaged by construction activities, they are repaired.

Hydrostatic Testing

The completed pipeline is then hydrostatically tested and caliper-pigged prior to service. A pig is a mechanical device that is sent through the pipeline to perform tests on the pipeline. After backfilling is completed, sections of the pipeline are filled with water and tested to pressure levels greater than the maximum design operating pressure of the pipeline in accordance with DOT standards. These procedures are repeated along the entire length of the new pipeline. After completion of testing, the test water is disposed of in accordance with permit requirements.

Final Restoration

Revegetation is completed in areas where vegetation was disturbed by construction activities. Typically active or rotated croplands are not seeded unless specifically requested to do so in writing by the landowner or land management agency.

Erosion and sediment controls are implemented as needed and maintained until final restoration and stabilization are achieved.

VIII. POTENTIAL ADVERSE IMPACTS OF PIPELINE CONSTRUCTION ON AGRICULTURE

Agricultural operations and productivity can be adversely affected by pipeline construction. These impacts include but are not limited to:

- Interference with farm operations in the ROW and adjacent areas
- Changes in field drainage
- Interruption of or damage to irrigation systems
- Alteration of surface and subsurface drainage systems
- Impacts to grazing areas, row crops, and existing fencing
- Flooding due to dewatering activities during construction
- ROW restoration that is inconsistent with landowners cropping plans
- Use of prohibited substances on farms with organic practices

Some impacts may affect agricultural productivity for years after construction is completed, not only in the ROW but in the adjacent fields as well. These long-term potential impacts include but are not limited to:

- Topsoil inversion and mixing of the subsoil with spoil materials
- Soil subsidence
- Erosion
- Deep compaction of subsoils
- Ponding and drainage seeps from altered surface and subsurface drainage profiles
- Inadequate restoration resulting in increased rock content in the topsoil or alteration to the original land contours
- Spread of weeds, weed seeds, and diseases from parcel to parcel

To avoid or minimize agricultural impacts, We Energies has prepared project-specific AMP and BMPs (see Appendix G). These documents identify technical and performance standards for construction and restoration, and are essential to the protection of agricultural land. However, their value can be realized only to the extent that they are faithfully implemented during the construction and restoration process. The goal of the AMP and BMPs is to protect the agricultural resources and farmland owners along the route. However, nothing in the AMP or BMPs prevents landowners from negotiating stronger measures to address property-specific concerns.

The following sections discuss the potential agricultural impacts from a natural gas construction project and the measures that would minimize or mitigate the impacts. Additionally, they reference the appropriate sections of the project AMP and BMPs that address these issues.

Topsoil Mixing

Potential Adverse Impact

Good agricultural topsoil is an invaluable resource that should be preserved. Mixing topsoil with the underlying subsoil and/or parent material will reduce tilth, organic matter content and cation exchange capacity, and alter soil structure and distribution of particle sizes (particularly water stable aggregates). Mixing soil layers can also increase the number of rocks and increase the concentrations of harmful salts near the surface. Rocks larger than three inches can damage farm equipment and reduce soil productivity. Once mixed, full restoration may require transporting new topsoil of similar quality from an off-site location. This will add costs to the project and may still not fully return the agricultural field to pre-construction productivity.

Topsoil mixing can occur under wet or dry conditions, during grading and re-grading of the pipeline ROW. Significant long-term agricultural productivity impacts can occur as a result of soil mixing if deep ruts are created during construction and the topsoil layer is shallow. To avoid these types of impacts, topsoil is typically stripped to a depth of at least 12 inches.

Soil mixing is a greater danger when soils are wet. The moisture and precipitation pattern expected during construction must be taken into account in planning adequate mitigation measures to protect topsoil from mixing. In some soils, one inch of summer rainfall over five out of ten days can cause significant rutting with normal construction equipment traffic. Significant rutting is frequently defined as ruts that are 6 inches deep or deeper.

Measures to Avoid Topsoil Mixing/Inversion

To prevent the mixing of topsoils with subsoil layers, the topsoil is stripped from the full width of the ROW to a depth of 12 inches across agricultural lands (Appendix G, AMP Section a and BMP 02). This is done prior to grading and any construction activities. Topsoil does not need to be removed from the topsoil storage area on the edge of the working side of the trench or areas where construction mats are laid on the surface for material storage and equipment travel. The stripped topsoil is then stored separately from the subsoil material until construction is complete and the topsoil can be replaced during restoration of the ROW. With the topsoil removed, work may continue under wetter conditions; however subsoils may still be at risk for compaction and rutting. If compaction occurs or is suspected, subsoils should be de-compacted during the restoration process.

Fertile Subsoil Mixing with Underlying Soils (Three-Lift Soil Handling)

Potential Adverse Impact

Long-term crop productivity losses may result from mixing lower soil layers of glacial till/outwash or sandy soil with upper layers of better quality subsoils. The subsoil layer in many parts of Wisconsin is often of relatively high quality. Estimates for yield loss may be as significant

immediately after construction for areas where poorer quality subsoils are mixed with better quality upper soil horizons.

Measures to Avoid Mixing of Fertile Subsoils Mixed with Underlying Parent Material

To avoid mixing the fertile subsoil with underlying gravelly material, three-lift soil handling can be used to greatly mitigate construction impacts to agricultural soils. Details about three-lift soil handling for this project can be found in Section V of this report, under "Three-Lift Soil Handling." For this method, the subsoil is not only segregated from the topsoil but also from the underlying soil horizons. Three separate storage piles are required: one for the topsoil to a depth of 12 inches; a second for the subsoil to its depth of up about to 2 or 3 feet; and a third for the underlying soil horizons. All three soil layers are stored separately for reuse during backfilling of the trench and restoration. In order for this method to be of value, there must be a significant difference between the upper subsoil layer and the lower subsoil layer or parent material. Candidate soils are identified through desktop soil analysis and verified by subsequent on-site sampling. This type of soil segregation would only be used over the trench and through lands that are and will be returned to crop and pasture use (Appendix G, BMP 09).

Increased Rock Content of Soil

Potential Adverse Impacts

Large stones at the surface can damage farm machinery and lead to added costs to landowners for removal. Many subsoil layers have a greater rock content than the topsoil. Trench excavations may bring up lower soil horizons with rocky subsoil, which might be mixed with upper soil layers. Even where the three-lift method is used, additional rocks may be spread through the subsoil layer during backfilling.

Pipeline companies typically pad the area around the pipe with sand or stone-free subsoil to avoid damage to the pipe. Due to the subsurface soil volume displaced by the pipe and by the padded stone-free area, the restored upper subsoil profile may end up containing a higher rock content than was present before excavation. Through frost heave dynamics, these rocks may eventually end up near the soil surface.

Mitigation Measures

To avoid increasing the rock content of the subsoil, We Energies will ensure that the size, density, and distribution of rock in the restored construction work areas will be similar to the adjacent areas not disturbed by construction. Excess rocks should not be spread across the ROW, added to the topsoil pile, or added to other farm fields.

Soil Compaction

Potential Adverse Impact

Compaction of subsoil and topsoil is a major adverse impact that can result from pipeline construction. Compaction reduces the uptake of water and nutrients by crops, restricts rooting depth, decreases soil temperature, increases the proportion of water-filled pore space at field moisture capacity, decreases the rate of decomposition of organic matter, decreases pore size and water infiltration, and increases surface runoff. The greater the depth at which soil compaction occurs, the more persistent it is.

Yield loss caused by soil compaction may range between 10 and 50 percent for a variety of crops (Wolkowski, R. & Lowery, B., (2008), Soil Compaction: Causes, Concerns, and Cures, University of Wisconsin Extension, publication A3367). The magnitude of yield loss is dependent on a number of factors including, soil type, degree of compaction, and water availability. Compaction is most evident when the crop is under additional stress such as drought or excessively wet conditions.

The factors that influence whether a soil becomes compacted include the weight of the construction equipment traveling over the soil, soil moisture, and soil texture. As axle load increases, the depth of compaction can increase. When traffic loads are relatively lightweight, less than 10 tons per axle, the soil generally does not compact below the 8-10 inch range. Compaction at this depth can usually be decompacted with typical farm tillage equipment. Heavier construction equipment can compact soils to a depth that cannot be removed by conventional tillage. Wet soils can also increase the risk for compaction. Sometimes, the plow layer may appear dry, but the subsoil can still be saturated resulting in the potential for significant compaction during construction. Also, soil texture may be a good indicator of potentially sensitive soils. Fine soils, such as clay or silty clay loams have a greater risk of becoming compacted.

Soil Restoration: Removing Compaction in Subsoil and Topsoil

Pipeline construction can cause long-term damage to agricultural productivity from deep soil compaction if proper construction methods are not implemented or proper decompaction is not performed. However, with the proper techniques, timing, and equipment, there are few subsoils that cannot be adequately decompacted.

Prevention of rutting and compaction is easier than restoring the soil structure after it has been damaged. The most effective method to reduce compaction and rutting in construction ROWs is to avoid the use of heavy construction equipment when the soils are wet.

After construction is completed, the ROW will be compacted to some degree. Deep tillage equipment is typically used on the exposed subsoil of the construction ROW, after the trench has been backfilled and time has been allowed for trench settling.

One example for deep ripping is an industrial V-ripper, which should have 4 to 5 heavy-duty shanks, spaced 30 to 36 inches apart and be pulled with 40 to 50 horsepower per shank. It is recommended to use this with an articulated, 4-wheel drive tractor with the bulk of the weight in front. Such rippers may not be readily available to typical farm operators. Other types of equipment such as chisel plows or paraplows may also be effective under some conditions. Multiple passes with the deep decompaction device are essential over the compacted subsoil in the ROW until sampled penetrometer readings in the ROW match those in adjoining fields that were not disturbed by construction. The typical depth of ripping is 18 to 24 inches below the exposed subsoil. Multiple straight and zigzag patterns of ripping need to be used on different passes. The type of equipment used and the depth of rip may be adjusted as appropriate for different soil types or for a deeply and severely compacted soil.

In lacustrine soils with intensive tile drain systems, deep ripping may be limited to the top 6 to 8 inches of the subsoil layer because soil compaction from pipeline construction is usually undetectable below 8 inches and deeper ripping could destroy the load-bearing capacity of the subsoil. However, the presence of tile lines is no reason to avoid completing the deep ripping phase of the soil restoration process. Any damage to tiles during the deep ripping process must be repaired/replaced by the utility at the utility's expense. Deep ripping and other subsequent restoration steps must only be done during low soil moisture conditions to prevent irreparable damage to soils from mixing or additional compaction.

Following decompaction, penetrometer measurements are taken as per a sampling protocol to ensure proper decompaction has occurred at representative sites throughout the topsoil and subsoil profile. Moisture conditions should be comparable on and off the construction ROW and throughout the soil horizon at the time of sampling since the same bulk density will result in a much lower penetrometer resistance reading when the soil is wet as opposed to when it is dry.

Once effective deep de-compaction of subsoil has been accomplished as indicated by penetrometer readings, rocks have been removed and topsoil replaced, a final subsoil shattering may be necessary to correct the compaction caused by the heavy decompaction equipment. This can be done using an angled 3- or 4-leg tool bar, with leg spacing set no greater than 2 feet. Equipment commonly used for this includes a four-legged paratill or paraplow with the depth wheels disengaged to allow for maximum adjustment of depth of penetration. The angled legs are pulled slowly at an 18-inch depth (up to a maximum of 24 inches) using 50 horsepower per leg by a 4-wheel drive articulated tractor with the bulk of the weight in front traveling at a rate of 2.5 to 3 mph. This must be done only in conditions of low moisture to prevent damage to the soil profile and sloughing or mixing. Disking should not be used for subsoil shattering because it can mix and re-compact the subsoil and topsoil.

DATCP only recommends the delegation of de-compaction to farm operators if those farm operators have access to the proper equipment to correctly restore productivity after pipeline

construction. The necessary scope and depth for successful de-compaction of agricultural lands typically exceeds standard farming equipment and practices.

Drainage

Potential Adverse Impacts

Proper field drainage is vital to a successful farm operation. Pipeline construction can permanently disrupt improvements such as drainage tiles, grassed waterways, and drainage ditches, which regulate the flow of water on farm fields. Compaction can also alter the soil profile, and cause ponding or seeps, where none existed prior to construction. The pipeline may exacerbate existing drainage problems in fields by increasing surface flows within the construction area and in adjacent fields.

If drainage is impaired, water can settle in fields and cause substantial damage such as stunting crop growth and other vegetation, concentrating mineral salts, flooding farm buildings, or causing hoof rot and other diseases that affect livestock.

It may take several years for these problems to become apparent, or even longer if there is a dry period. It is also possible for pipeline construction to interfere with future plans for drainage systems in a field.

Mitigation Measures

DATCP recommends that landowners work with the utility to identify the locations (where known) of existing and planned drainage systems that could be affected by the project. Field conditions should be documented by the landowner prior to the start of construction so it can be compared with post-construction conditions.

The utility should note and monitor the location of significant seeps along the trench walls during the open construction phase of the project. Temporary ditch plugs and permanent trench breakers can be used to help deter the pipeline corridor from acting as a channel for underground water flows.

The AMP and BMP 04 (Appendix G) requires that the excavated pipeline trench be a minimum of 12 inches from the drainage tile, where practicable. All damaged tiles will be permanently repaired prior to backfilling. Repaired tiles on or adjacent to the ROW must be equivalent to its prior condition. Local tile contractors should be used wherever possible.

After construction is completed, landowners and the utility should carefully monitor for the emergence of drainage problems. If problems are observed that can be attributed to pipeline construction, the landowner and utility should work together to develop a mutually agreeable solution.

Where construction activities have altered the natural stratification of the soils resulting in new wet areas, DATCP recommends the utility work with the landowner to determine the means to return the agricultural land either in the ROW or on adjoining lands to pre-construction function. New drainage tiles, regrading, or additional fill may be required to correct the problems that arise after construction is completed.

Trench Dewatering

Potential Adverse Impacts

Before lowering the pipe into the trench, dewatering of the trench may be necessary so that the bottom of the trench can be inspected for rocks. Any combination of weather, topography and/or hydric soils (i.e. land with a shallow water table) can result in conditions of wet trenching. Extra care must be taken when wet trenching to avoid mixing, compacting, and erosion of the subsoil. Trench dewatering is typically done in such cases. Improper trench dewatering can result in soil erosion; sedimentation and deposition of gravel, sand, or silt onto adjacent agricultural lands; and inundation of crops.

Mitigation Measures

The BMPs (Appendix G, BMP 05: Trench Dewatering) requires We Energies to identify low areas and hydric soils that are likely to collect water during construction, as well as suitable areas for the discharge of water accumulated within the pipe trench or other excavated areas. The utility must ensure that work is structured to minimize the accumulation of water within the trench and create discharge locations that are in compliance with current drainage laws, local ordinances, WDNR permit conditions, and the provisions of the Clean Water Act. Discharge locations must be well-vegetated areas that prevent the water from returning to the ROW; be as far from backfilling activities as possible; and not deposit gravel or sediment onto fields, pastures, or watercourses. If deposition of trench water onto cropland is unavoidable, crops should not be inundated for more than 24 hours. Crops inundated for more than 24 hours may incur severe damage. Discharge of water from non-organic farms or from hydrostatic testing should never be allowed to flow onto organic farm operations.

Silt or sediment extraction from the trench is required to be minimized by preventing the intake from touching the bottom or sides of the trench, and by ensuring that the intake is supported by a flotation device. Dewatering will be monitored and stopped whenever necessary to correct conditions and practices inconsistent with BMP 05. When construction in hydric soils creates wet trenching and dewatering activities that cause unavoidable damage, We Energies will reasonably compensate the landowner for damages and restore the land and crops to pre-construction conditions.

Erosion and Conservation Practices

Potential Adverse Impacts

Both topsoil and subsoil along the project routes are valuable resources. Construction activities can destabilize soil horizons and cause top soil to erode and potentially migrate off of the ROW. During wet conditions, risks to soil from erosion are increased. However, in parcels with a shallow water table, wet conditions may be the normal soil condition as exposed soils form rills and the soil travels downslope. In these areas wet trenching may be necessary. Areas with steeper slopes can be subject to greater soil loss from erosion by water. Silt and very fine sand, and certain clay textured soils tend to be more susceptible to erosion. Trench dewatering can also result in flooding, erosion, and sedimentation on farm fields off the ROW unless appropriate measures are applied.

Significant erosion can have an adverse effect on long-term productivity of agricultural lands. Where a pipeline ROW runs up and down gently sloping soils, the collection of surface runoff in the tracks left by construction equipment can erode significant amounts of soil in fields.

Many agricultural fields have existing erosion control practices such as diversion terraces, grassed or lined waterways, outlet ditches, water and sediment control basins, vegetated filter strips, etc. These can be damaged by construction activities.

Soil erosion can affect crop yields through the loss of natural nutrients and applied fertilizers. Seeds and plants can be disturbed or completely removed from the eroded site. Organic matter, manure, and crop residue can be transported off the field through erosion. Pesticides can also be carried off the site with eroded soil.

Mitigation Measures

To avoid erosion, construction and restoration should not proceed if conditions are excessively wet. The AMP, Section f (Appendix G), requires that the construction contractor meet or exceed WDNR standards for erosion control on construction sites. These standards are described on the WDNR's website at: http://dnr.wi.gov/topic/stormwater/standards/index.html. Erosion control practices must be carefully followed to minimize construction-related impacts.

The AMP (Appendix G) allows the Agricultural Inspector to temporarily halt construction or restoration activities when work activities do not appear to meet the AMP requirements. This authority may be used when the soil conditions are unfavorable due to weather conditions.

Existing erosion control practices such as diversion terraces, grassed or lined waterways, outlet ditches, water and sediment control basins, vegetated filter strips, etc. damaged by construction activities must be restored to pre-construction condition.

Temporary erosion controls must be properly maintained on agricultural lands on a daily basis throughout construction and restoration. Whenever necessary, they must be reinstalled until

permanent erosion controls are installed or restoration is completed. The details of erosion controls are described in AMP Sections f and i, and in BMP 03 (Appendix G).

The best method to control erosion is the growth of a vegetative cover. As soon as practicable the land should be returned to cropland or seeded with the appropriate species mix.

The utility must structure work in a manner consistent with the requirements of the AMP and BMPs and maintain an adequate supply of approved erosion control materials on hand.

Crop Rotation and Dairy Operations

Potential Adverse Impacts

A common dairy rotation may include 2 to 3 years of field corn, followed by soybeans, and then 3 years of alfalfa. Construction activities across fields may affect the yield and/or quality of the alfalfa crop that the farming operation needs to feed its herd. If construction activities cause a delay in alfalfa seeding, it may cause a shortage of alfalfa forage or the field may contain an increase percentage of grass. Some operators may choose to alter their crop rotation schedule and plant extra years of row crops to avoid the likelihood of an alfalfa crop that doesn't meet the operation's quantity or quality forage needs. If any of these occur, the operator will be negatively impacted due to a shortage of alfalfa forage and the operator would need to adjust the herd's rations by doing any or all of the following: buy haylage or hay, obtain more corn silage, and/or provide protein supplements such as soybean oil meal. All these activities would increase costs to the dairy operator.

Mitigation Measures

Dairy operators need to know the construction schedule well in advance in order to make adjustments to their crop rotation schedule. Due to the high cost of seeding alfalfa, some operators may decide to plant a row crop during the year of construction and maybe even the year following construction to have an additional opportunity for tillage to further decompact the soils. Other operators may choose to keep a field in alfalfa but may have decreased quality or quantity of yields from construction impacts. Fertilization (top-dress) of the forage field with potassium (K20) may enhance alfalfa plant density. With advance knowledge of the construction schedule, dairy operators can determine how best to provide forage for their herd and the associated costs for these adjustments.

The utility should provide dairy operations with as much advance information as possible about the construction schedule on individual properties and compensate the landowner for any increased costs associated with construction impacts to forage requirements.

Temporary Access Roads

Potential Adverse Impacts

Temporary access roads may need to be created during the construction process to allow personnel and equipment to access the construction corridor. Where possible, existing public or private roads are used. However, in some locations these are not available or suitable.

Temporary access roads may cross agricultural fields. The potential negative effects of building access roads across agricultural lands include the potential mixing of topsoil with subsoil, soil compaction, erosion, damage to existing drainage structures, disruption of irrigation, and interference with farming operations. Any of these impacts can result in the loss of agricultural productivity on affected soils after construction is completed.

Mitigation Measures

The utility will use existing public roads and farm roads to access the ROW whenever possible. The utility must consult with landowners before siting temporary access roads on their property. (Appendix G, AMP, Section b) In places where temporary access roads are constructed over agricultural land, the utility will work with the landowner to determine if the topsoil needs to be stripped and temporarily stockpiled. Access roads should be designed to allow proper drainage and minimize soil erosion. Geotextile construction fabric may be placed below any imported rock used to build the road, in order to protect the subsoil. If desired by the landowner, temporary roads will be left in place after construction. If access roads are removed, adequate soil restoration practices should be used to return the agricultural field to pre-construction function. Any disturbance to drainage tiles or drainage patterns should be remediated by the utility or its contractors. During the restoration phase, temporary and existing access roads should be restored to preconstruction conditions. If additional top soil is necessary to restore the farmland, top soil should be of similar quality to adjacent soils. All construction temporary access roads will be removed unless there is an agreement in writing between the landowner and the utility for them to remain.

Trees and Other Woody Vegetation

Adverse Impacts

All trees will be removed from the full width of the ROW (temporary and permanent ROW) prior to the start of construction. Agricultural property owners have trees on their property for many uses. They may have:

- a woodlot for income, firewood, or recreational use
- tree crops (nurseries, orchards, Christmas tree farms)
- a fencerow used as a windbreak to reduce erosion
- trees to shade livestock
- trees planted as a visual and/or sound barrier from a highway or other land uses

- ornamental, shade, fruit and nut trees for personal use, or other landscaping vegetation around the residence and other buildings for aesthetic purposes

Typically, tree stumps are only excavated and removed from the trench area. Stumps in other parts of the ROW are usually cut at or near ground level.

Both the existence of a woodlot or tree crops provide financial benefit to the landowner. Windbreaks in the form of a single row of trees may protect for a distance downwind for approximately 10 to 12 times the height of the windbreak. Therefore, taller trees in a windbreak will protect a larger area of cropland than shorter trees. Tree lines can serve as a herbicide barrier between organic farm parcels and farm operations not under organic management. Removal of this barrier may allow herbicide drift to affect an organic farm operation. Shade trees in pastures benefit livestock. Heat above 75 degrees Fahrenheit can negatively affect cattle by inhibiting feed intake, which can result in lower milk production in dairy cows and lower weight gain in beef cattle. Planted trees can have sentimental value or add aesthetic enjoyment to the property. Removal of any trees from a property can decrease overall market value of the property.

Trees may be permitted to regrow or be replanted in the temporary easement areas. However, the permanent easement (between 20 to 50 feet of ROW width) must remain clear of trees for pipeline safety and access purposes. The utility may elect to minimize the "tree-free" corridor to a width of 20 feet so that impacts to tree crops are minimized.

Where the ROW crosses through wooded areas, the landowners may choose to keep the cut timber, which will be cut and stacked at the edge of the construction corridor. If they decline, the cut wood will be removed from the site.

Some parts of trees such as black walnut contain compounds that are toxic if eaten by livestock. Cornell University identifies these potential risks to livestock including the following (http://poisonousplants.ansci.cornell.edu/php/plants.php?action=display&ispecies=cattle):

- Seeds, leaves, and bark from wild cherries, black cherry, bitter cherry, choke cherry, and pin cherry trees (*Prunus spp*.) to all grazing animals
- Acorns and young leaves from oak trees (*Quercus spp.*) for all grazing animals
- Bark, leaves, and seeds from a black locus trees (*Robinia pseudoacacia*) to horses and cattle
- Leaves, twigs, roots, unripe fruit from elderberry bushes (*Sambucus canadensis*) to cattle and goats

Chipped wood from these trees or other tree parts may present a danger to livestock when the ROW is returned to pasture after construction is completed.

The utility will dispose of any trees or brush that the landowner doesn't want by burying, burning, or removing the woody vegetation off-site. Refer to the AMP, Section c (Appendix G) for additional details about vegetation removal.

Mitigation Measures

Landowners are compensated for the loss of trees and may also be compensated for the future loss of trees that are currently immature within the permanent easement. If these properties are removed from agricultural use in the future, the utility may decide to remove all trees within the 50 foot permanent easement corridor, because those trees would no longer be an agricultural commodity or resource. Before an easement is signed, the utility should clearly identify for each landowner where trees will and will not be permitted to re-grow within the ROW. The utility should also consult with landowners before disposing of any trees that need to be removed from the pipeline ROW to confirm that the landowner does not want to keep these trees.

Additionally, WDNR guidelines should be strictly adhered to for preventing the spread of exotic invasive plant species and diseases such as oak wilt and Heterobasidion root disease.

Where trees serve an agricultural function such as livestock shade or windbreaks, or if they provide an aesthetic value, landowners should be adequately compensated for the full loss of the function of the trees. An appraiser who has experience and expertise in valuing trees should be consulted to ensure that landowners receive fair compensation that includes all of the value those trees provide.

If trees that must be removed as a result of the proposed project pose a potential risk to livestock, the utility should consult with the landowner to ensure that all parts of these trees are removed and disposed of so that livestock cannot come in contact with them.

Irrigation

Potential Adverse Impacts

Pipeline construction can interfere with the operation of field irrigation systems. Crops outside of the proposed pipeline ROW could also be negatively affected when irrigation is interrupted.

Mitigation Measures

The utility has the right to temporarily disrupt irrigation systems that intersect the pipeline ROW during construction. However, the landowner must be notified beforehand and establish a mutually acceptable amount of time that the system will be taken out-of-service. The maximum period of time that irrigation systems can be taken out-of-service without reducing yields on field corn is 5 to 7 days during the period from silking - tasseling to the finished crop. Earlier delays in meeting irrigation requirements may result in smaller plants, but should not reduce grain production significantly. Vegetable crops will have a shorter period between irrigations.

DATCP recommends that all irrigators along the pipeline route document irrigation information for their fields, including amount of water and frequency of irrigation; and weather conditions such as rainfall and temperature for the growing season prior to the start of pipeline construction. Pre- and post- construction records will assist the landowner in identifying stressed crops caused by the utility's disruption of the irrigation system. Stressed crops could potentially result in reduced yields.

Any damages to the system (well, pumping plant, irrigation system – center pivot, traveling large volume sprinkler, buried supply lines, electrical supply lines) caused by construction activities will be repaired by the utility as soon as possible (Appendix G, AMP, Section e).

Fencing

Potential Adverse Impacts

The construction process may necessitate severing fences that are located across pipeline construction areas. Changes to existing fences can interfere with grazing activities, particularly for rotational grazing operations, which depend on precise, scheduled grazing in particular areas.

Mitigation Measures

Prior to construction, the utility will identify farm operations with livestock adjacent to the pipeline route, including rotational graziers. The utility has stated that they will work with landowners to determine if fences may be in the way of construction activities. Severe disruption of grazing operations should be avoided as much as possible by modifying routes or by consultation with the farmer regarding timing of construction activities.

Permanent fences severed by the utility will be restored as close as possible to their previous condition. Temporary fences and gates will also be installed where necessary at landowner request to allow continued grazing by livestock across the ROW. Tension on such fences must be adequate to prevent sagging. Bracing of fences to trees or other vegetation is prohibited. Temporary fences will be removed following construction, unless the landowner approves otherwise. These measures are described in the Appendix G, AMP, Section d.

Weed Control

Potential Adverse Impacts

Disturbance of the land by construction activities may allow opportunistic weeds to take root where none existed prior to the construction activities. Weed seeds can also be spread from farm to farm by equipment and personnel when machinery, tires, and footwear are not periodically cleaned. The introduction of weeds and invasive species may reduce crop yields as they compete with the crop for the same resources. They can interfere with harvesting or harbor problem insects and crop diseases. Weeds, once established, tend to spread if they are not managed through mechanical or

chemical actions. Weed management can be especially troubling for organic farms for which the use of most herbicides is not an option.

Stockpiled soils can become an opportunistic place for weeds to flourish because they remain undisturbed for most of the construction period.

Mitigation Methods

Agricultural property owners should be aware that construction activities may cause weed growth where none existed prior to construction. The utility should, based on the wishes of the landowner, re-establish vegetation in the ROW as soon as possible after construction is completed and any mats are removed. Vegetated ROWs will reduce the likelihood of weeds establishing themselves in the newly disturbed area. Weed growth on stockpiled topsoil could present a problem to adjacent cultivated fields. The utility will remove or kill weeds observed on the stockpile. If a herbicide is used on the topsoil pile, the landowner will be consulted to obtain permission to use a chemical and to approve which one(s) will be used. All herbicide applications will be done by a state-licensed applicator (Appendix G, AMP, Section h).

Seeding and Seedbed Preparation

Potential Adverse Impacts

Seeding over the ROW without consulting the landowner may interfere with crop rotation, or may result in a cover crop that is not consistent with the landowner's plans.

Mitigation Measures

As described in BMP 07: Seeding and Seedbed Preparation, the utility will reseed areas disturbed by construction activities following final clean-up. Seed mixes will be determined in consultation with the landowner, where appropriate. Any seedbed preparation and seeding done by the utility must be done at the correct time and at the proper depth to promote adequate seed-soil contact on cropland or pasture requiring seeding. Seeding is to be completed immediately after seedbed preparation, if weather permits. Temporary erosion controls will be used if weather does not permit immediate seeding. If seeding is done outside of recommended windows, temporary erosion control methods such as mulching or temporary cover will be used.

Bio-security

Potential Adverse Impacts

Construction activities can spread weeds, diseases, chemicals, and genetically-modified organisms (GMO's) that can cause significant economic losses to farms, and may have greater negative impacts on certified organic farms.

Mitigation Measures

The utility should actively work toward avoiding contact with livestock and manure during the construction process to reduce the risk of biosecurity issues occurring. If avoidance is not possible the utility should work with the farmers to develop protocols specific to the landowner's farm operation. The utility's personnel and contractors should follow all posted directives regarding bio-security on farms.

DATCP recommends that any affected farm operation that has a written bio-security plan, provide this plan to the utility. The utility's employees and contractors should become familiar with these plans and develop appropriate procedures to comply with these plans.

Organic Farms

Potential Adverse Impacts

For certified organic farms and farms working towards certification, contamination concerns can involve a broad range of substances. Prohibited substances may be spread to organic farms directly via construction machinery or carried indirectly by water flowing onto organic fields. Pesticides can also drift onto adjacent organic farm properties, if wind direction and speed are not appropriately monitored.

Mitigation Measures

Care must be taken by the utility and its contractors where construction crosses farmland where the operator uses organic practices. Organic top soil is difficult to replace. Where soil is excavated on these farms in particular, the topsoil should be segregated from subsoils and set aside to be used during restoration activities. No herbicide should be used on organic farms without the operator's written consent. Additional precautions must be taken with herbicide use on adjacent land in order to prevent herbicide drift or to prevent herbicide-dissolved water from flowing onto organic fields. Wis. Admin. Code § ATCP 29.50(2) states that no pesticides may be used in a manner that results in pesticide overspray or significant pesticide drift. Any oil or fuel spill on these farms could also jeopardize organic certification, so care must be taken to avoid such spills or clean them up immediately and thoroughly if they happen.

DATCP recommends that landowners with organic certifications and those working towards organic certification discuss the range and type of substances that are and are not permitted on their land by their certifying entity. This list should be shared with the utility and its contractors. Any substances that are not approved for use in organic production should not be used on these properties. Additionally, prior to the start of construction, appropriate methods should be agreed to by the landowner and the utility to avoid the potential for any unintentional contacts. This could include herbicide applications from adjacent ROW acreage drifting onto the organic farm. Also, the utility should not apply seed to certified organic farms without approval of the operator.

Induced Current on the Pipe

A small direct current (DC) is applied to pipelines for cathodic protection to prevent corrosion of the pipe material. Because pipelines, particularly if located in electric transmission line corridors, can be carriers of induced alternating current (AC), the pipeline industry takes precautions to discharge AC current along the pipe into the ground. This is necessary to both protect the integrity of the DC cathodic protection system as well as to prevent continued flow of AC current in the pipe. If induced AC current is not adequately grounded, it can cause long-term serious metal loss from the pipe wall, potentially resulting in gas leaks.

Construction Noise and Dust

Potential Adverse Impacts

During each phase of construction, noise and dust is generated. Noise may startle livestock, causing them to break through fences and escape from the farm property. Fur animals and poultry are particularly sensitive to noise.

Mitigation Measures

The utility should work with farmers to determine if they have any potentially sensitive animals. Where sensitive animals exist, the utility should provide appropriate advance warning of construction activities so that farmers can take the necessary steps to safeguard their animals. Dust should be kept at a minimum when practicable.

IX. AIS DISTRIBUTION LIST

State Government

NAME	GOVERNMENT BRANCH
TONY EVERS	STATE OF WISCONSIN GOVERNOR
REPRESENTATIVE GARY TAUCHEN	COMMITTEE ON AGRICULTURE, CHAIR
SENATOR HOWARD L MARKLEIN	COMMITTEE ON AGRICULTURE, REVENUE AND FINANCIAL INSTITUTIONS, CHAIR
	WISCONSIN DOCUMENT DEPOSITORY PROGRAM
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SAM TAPSON	CITY FO ELKHORN ADMINISTRATOR
CAIRIE VIRRUETA	CITY OF ELKHORN CLERK
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DON HENNINGFELD	TOWN OF SPRING PRIAIRE CHAIR
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TRACEY RAYMOND	TOWN OF TROY CLERK
JOHN KENDALL	TOWN OF TROY CHAIR
KIM BUCHANAN	TOWN OF EAST TROY CLERK
JOE KLARKOWSKI	TOWN OF EAST TROY CHAIR
MICHAEL MCKINNEY	VILLAGE OF YORKVILLE CLERK
DOUGLAS NELSON	VILLAGE OF YORKVILLE PRESIDENT

NAME	GOVERNMENT
BETTY NOVY	VILLAGE OF ROCHESTER ADMINISTRATOR
SANDRA SWAN	VILLAGE OF ROCHESTER CLERK
MAUREEN MURPHY	VILLAGE OF MOUNT PLEASANT ADMINI.
STEPHANIE KOHLHAGEN	VILLAGE OF MOUNT PLEASANT CLERK
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TINA M MAYER	TOWN OF WATERFORD CLERK
CAMILLE GEROU	TOWN OF DOVER CLERK/TREASURER
SAM STRATTON	TOWN OF DOVER CHAIR
DIAN BAUMEISTER	TOWN OF BURLINGTON ADMINISTRATOR
ADELHEID STREIF	TOWN OF BURLINGTON CLERK
CARINA WALTERS	CITY OF BURLINGTON ADMINISTRATOR
DIAHNN HALBACH	CITY OF BURLINGTON CLERK
LINDA PERONA	TOWN OF BRIGHTON CLERK
JOHN KIEL	TOWN OF BRIGHTON CHAIR
BEVERLY MCCUMBER	TOWN OF PARIS CHAIR
VIRGIL GENTZ	TOWN OF PARIS CLERK

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NAME	GOVERNMENT BRANCH
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MARY KUBICKI	KENOSHA COUNTY CLERK
KIMBERLY S BUSHEY	WALWORTH COUNTY CLERK
PEG REEDY	UWEX WALWORTH COUNTY
SHANNON HAYDIN	WALWORTH COUNTY CONSERVATIONIST

NAME	GOVERNMENT BRANCH
CHAD SAMPSON	RACINE COUNTY CONSERVATIONIST
LEIGH PRESLEY	UWEX RACINE AND KENOSHA COUNTIES
DAN TRELOAR	KENOSHA COUNTY CONSERVATIONIST
ALVIN WILKS	RACINE COUNTY DRAINAGE BOARD

Libraries

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KATHRYN A HANSON	GRAHAM PUBLIC LIBRARY
MARY STAPLETON	ROCHESTER PUBLIC LIBRARY

NAME	LIBRARY
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JESSICA MACPHAIL	RACINE PUBLIC LIBRARY

Newspapers

NEWSPAPER	NEWSPAPER	NEWSPAPER	NEWSPAPER
RACINE JOURNAL TIMES.	KENOSHA NEWS	COUNTRY TODAY	AGRI-VIEW
MILWAUKEE JOURNAL SENTINEL			

Landowners and Interested Parties

NAME
ALVIN R & JEAN R WILKS REVOCABLE LIVING TRUST
BOILINI FARMS INC
BONNER REVOCABLE TRUST DONALD J
BURLINGTON SPRING VALLEY LLC

NAME
ROBERT L BORK
RODNEY D WUTTKE
ROWNTREE BROTHERS PARTNERSHIP
SCOTT W ERICKSON

NAME
CEP CORP
DARYL L POISL
DAVID A THATE
DAVID G BETH
DELSIE J EVERETT
DOUGLAS LEICHT
DRM LAND LLC
DUTCHMAN ACRES LLC
DWAYNE DEAKINS
EDWARD J SCHOENBERG
GERALD J AND BARBARA E SCHMIDT FAMILY TRUST
GREVING FARMS LLC
DAVID A BAUMEISTER
HOUCK FARMS LLC (2)
JAMES E COWAN
JOSEPH H KEY TRUST
KESKE LIVING TRUST
KOLDEWAY TRUST DONALD F & VIRGINIA
L&G FARMS LLC
MARVIN MARZAHL
ICHAEL J VILONA TRUST
MICHAEL L ZANG
MICHAEL P WEINKAUF
NANCY J BIGELOW LIFE ESTATE
ROBERT C DAVID

NAME
SCUREK HOLDINGS LLC
SKEWES FARM INC
STERKEN FARMS INC
STEVEN B AMENT
TED C GRANT TRUST
W&W VENTURES LLC
WILLARD LAUDERDALE
YGGDRASIL LAND FOUNDATION INC
YURSDEN FARMS INC
KENNETH NEWMAN
MIKE NOLAN
DALE DANIELS
CRANE GRAIN
JOHN NAGEL
JIM AND SUZANNE COWAN
DALE DINGMAN
ROHRER FAMILY FARMS LLC
GRAHAM ADSIT
STANLEY J. CZAHOR
WENDELL SCHULTZ
WALTER FARMS
TREVOR AND JACOB WEINKAUF
LAURA HERRICK, SOUTHEASTERN WIS. REGIONAL PLANNING COM.
DEVAN ZAMMUTO, WEC ENERGY GROUP (2)
JOHN CLANCY, GODFREY & KAHN

APPENDIX A: ACRONYMS

AI	Agricultural Inspector
AIS	Agricultural Impact Statement
AEA	Agricultural Enterprise Area
AMP	Agricultural Mitigation Plan
BMPs	Best Management Practices
CA	Certificate of Authority
CTH	County Trunk Highway
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
DATCP	Department of Agriculture, Trade, and Consumer Protection
EIS	Environmental Impact Statement
FPP	Farmland Preservation Program
HDD	Horizontal Directional Drilling
J&B	Jack and Bore
LCIP	Lakeshore Capacity Improvement Project
NASS	National Agricultural Statistics Service
NRCS	Natural Resources Conservation Service
PSC	Public Service Commission of Wisconsin
ROW	Right-of-Way
STH	State Trunk Highway
USDA	U.S. Department of Agriculture
WDNR	Department of Natural Resources

APPENDIX B: STATUTES FOR AGRICULTURAL IMPACT STATEMENTS

DATCP is required to prepare an AIS whenever more than five acres of land from at least one farm operation will be acquired for a public project if the agency/company acquiring the land has the authority to use eminent domain for property acquisitions. DATCP has the option to prepare an AIS for projects affecting five or fewer acres from each farm if the proposed project would have significant effects on a farm operation. The entity proposing a construction project is required to provide DATCP with the necessary details of the project so that the potential impacts and effects of the project on farm operations can be analyzed. DATCP has 60 days to make recommendations, and publish the AIS. DATCP provides the AIS to affected farmland owners, various state and local officials, local media and libraries, and any other individual or group who requests a copy. Thirty days after the date of publication, the project initiator may begin negotiating with the landowner(s) for the property.

Wisconsin Statute § 32.035 is provided below and describes the Wisconsin Agricultural Impact Statement procedure and content.

(1) DEFINITIONS. In this section:

(a) "Department" means department of agriculture, trade, and consumer protection.

(b) "Farm operation" means any activity conducted solely or primarily for the production of one or more agricultural commodities resulting from an agricultural use, as defined in s. 91.01 (2), for sale and home use, and customarily producing the commodities in sufficient quantity to be capable of contributing materially to the operator's support.

(2) EXCEPTION. This section shall not apply if an environmental impact statement under s. 1.11 is prepared for the proposed project and if the department submits the information required under this section as part of such statement or if the condemnation is for an easement for the purpose of constructing or operating an electric transmission line, except a high voltage transmission line as defined in s. 196.491(1) (f).

(3) PROCEDURE. The condemnor shall notify the department of any project involving the actual or potential exercise of the powers of eminent domain affecting a farm operation. If the condemnor is the department of natural resources, the notice required by this subsection shall be given at the time that permission of the senate and assembly committees on natural resources is sought under s.

23.09(2)(d) or 27.01(2)(a). To prepare an agricultural impact statement under this section, the department may require the condemnor to compile and submit information about an affected farm operation. The department shall charge the condemnor a fee approximating the actual costs of preparing the statement. The department may not publish the statement if the fee is not paid.

(4) IMPACT STATEMENT.

(a) *When an impact statement is required*; *permitted*. The department shall prepare an agricultural impact statement for each project, except a project under Ch. 82 or a project located entirely within the boundaries of a city or village, if the project involves the actual or potential exercise of the powers of eminent domain and if any interest in more than 5 acres from any farm operation may be taken. The department may prepare an agricultural impact statement on a project located entirely within the boundaries of a city or village or involving any interest in 5 or fewer acres of any farm operation if the condemnation would have a significant effect on any farm operation as a whole.

(b) *Contents*. The agricultural impact statement shall include:

1. A list of the acreage and description of all land lost to agricultural production and all other land with reduced productive capacity, whether or not the land is taken.

2. The department's analyses, conclusions, and recommendations concerning the agricultural impact of the project.

(c) *Preparation time; publicatio*n. The department shall prepare the impact statement within 60 days of receiving the information requested from the condemnor under sub. (3). The department shall publish the statement upon receipt of the fee required under sub. (3).

(d) *Waiting period*. The condemnor may not negotiate with an owner or make a jurisdictional offer under this subchapter until 30 days after the impact statement is published.

(5) PUBLICATION. Upon completing the impact statement, the department shall distribute the impact statement to the following:

(a) The governor's office.

(b) The senate and assembly committees on agriculture and transportation.

(c) All local and regional units of government that have jurisdiction over the area

affected by the project. The department shall request that each unit post the statement at the place normally used for public notice.

(d) Local and regional news media in the area affected.

(e) Public libraries in the area affected.

(f) Any individual, group, club, or committee that has demonstrated an interest and has requested receipt of such information.

(g) The condemnor.

STATUTES GOVERNING EMINENT DOMAIN

The details governing eminent domain as it relates to utility projects are included in Wis. Stat. ch. 32 (http://docs.legis.wisconsin.gov/statutes/statutes/32.pdf).

DATCP recommends that farmland owners concerned about eminent domain powers and the acquisition of land should review this statute in its entirety. Additionally, landowners may wish to consult with an attorney who should have expertise in eminent domain proceedings. Any Wisconsin licensed appraiser should be knowledgeable in partial takings.

APPENDIX C: INFORMATION SOURCES

DATCP (datcp.wi.gov)

- Farmland Preservation
- Agricultural Impact Statements
- Wisconsin Farm Center: provides services to Wisconsin farmers including financial mediation, stray voltage, legal, vocational, and farm transfers

Department of Administration (doa.wi.gov)

Relocation Assistance includes several publication on landowner rights under Wisconsin eminent domain law

- Wisconsin Relocation Rights Residential
- Wisconsin Relocation Rights for Businesses, Farm and Nonprofit Organizations
- The Rights of Landowners under Wisconsin Eminent Domain Law, Procedures under sec. 32.06 Wis. Stats. (Condemnation procedures in matters other than highways, streets, storm & sanitary sewers, watercourses, alleys, airports and mass transit facilities)

Public Service Commission of Wisconsin (psc.wi.gov)

- PSC project webpage for docket #6630-CG-138

Department of Natural Resources (dnr.wi.gov)

- Energy and utility projects
- Managed Forest Law

U.S. Department of Agriculture (www.usda.gov)

- National Agricultural Statistics Service
- Web Soil Survey
- Soil Quality – Urban Technical Note No. 1, Erosion and Sedimentation on Construction Sites

We Energies http://www.we-energies.com/

- We Energies Agricultural Services
- Natural gas pipeline replacement project

State Bar of Wisconsin (www.wisbar.org)

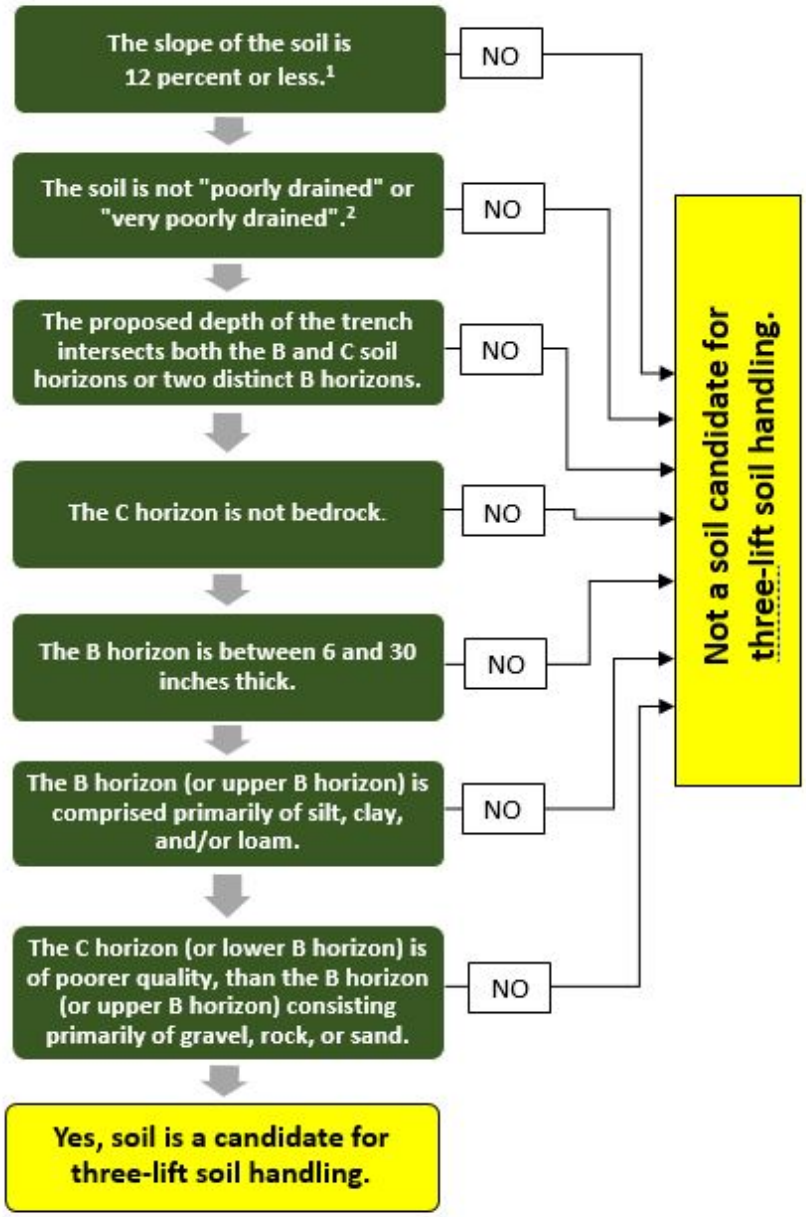
- For general legal information and assistance in finding a lawyer

Background Resources

- Wolkowski, R., Soil Compaction: Causes, concerns and cures University of Wisconsin-Extension, A3367, 2008.
- University of Minnesota Extension, website “Soil compaction” (https://extension.umn.edu/soil-management-and-health/soil-compaction)

APPENDIX D: THREE-LIFT SOIL CANDIDATE KEY

This key is applicable to soil profiles with distinct B and C horizons or alternatively to soil profiles with distinct upper and lower B horizons.



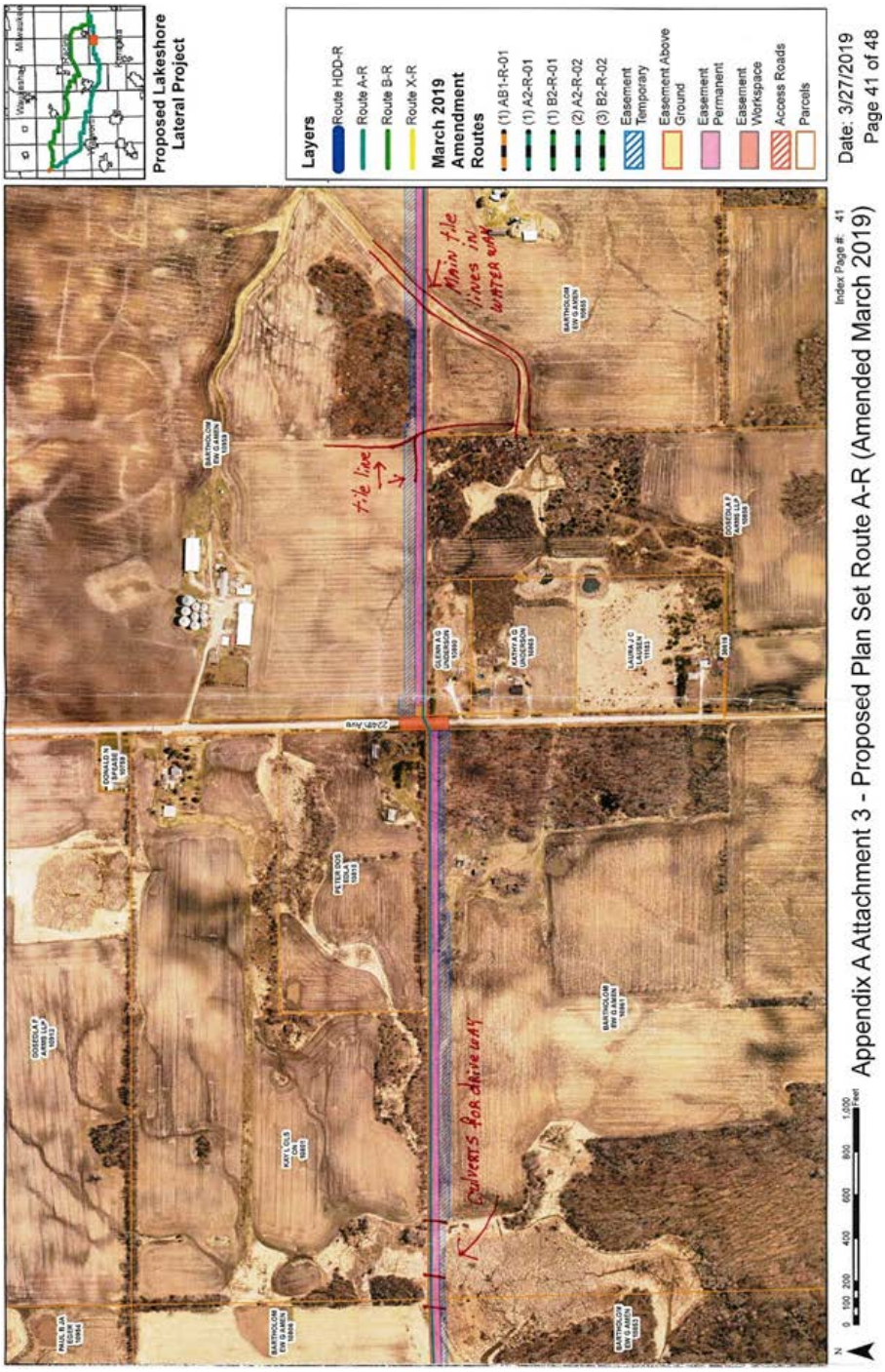
1. Soils with a slope greater than 12 percent are Class IV soils, likely to be eroded with shallow topsoil, and marginally suited for crop production. As such, they are unlikely to meet the criteria for soils that would benefit from three-lift soil handling.
2. Poorly drained soils tend to be too wet to use three-lift soil handling successfully. They are also likely to be deep soils.

APPENDIX E:

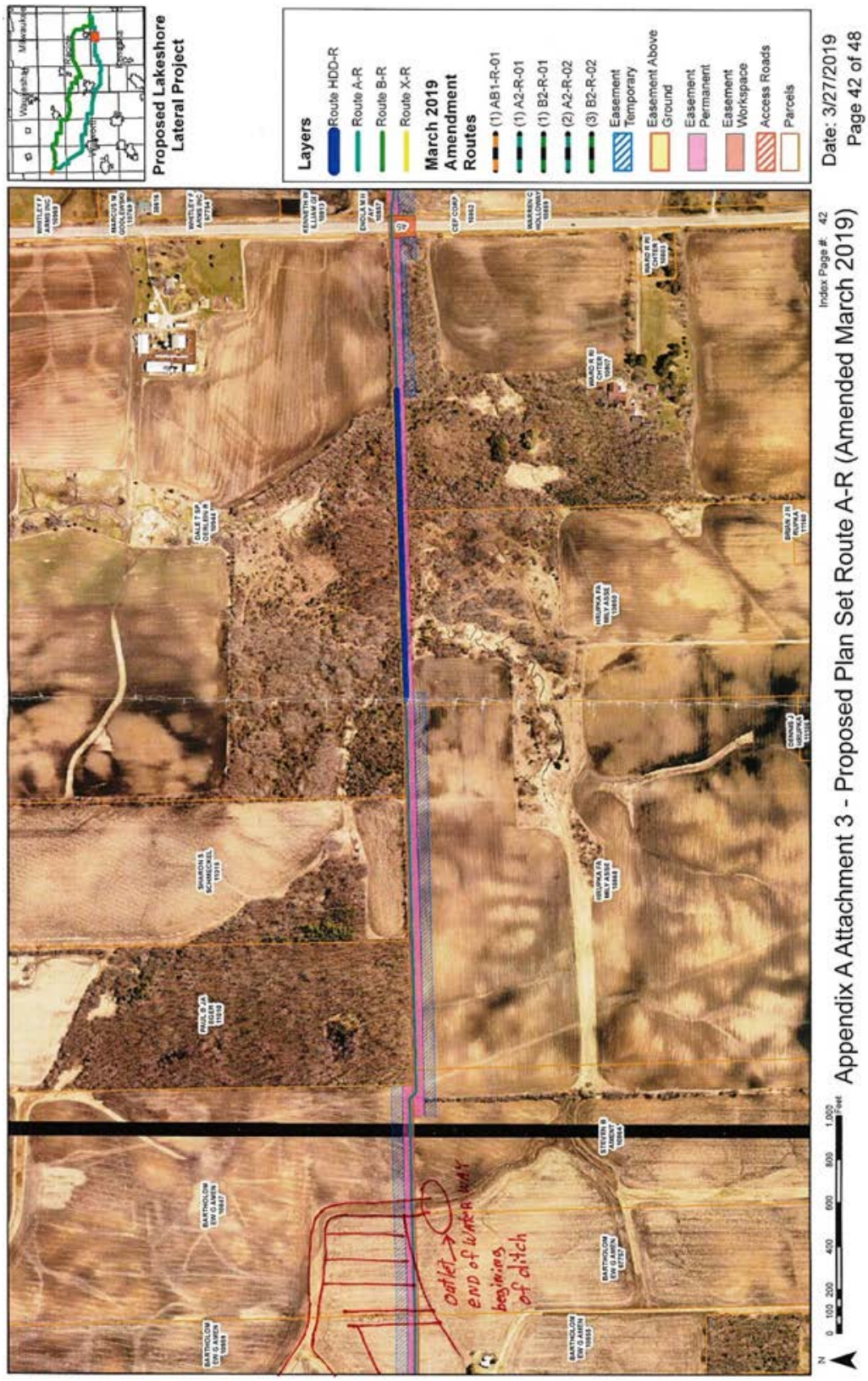
PROPERTY–OWNER SUBMITTED MAPS AND PHOTOS

Route A: Two maps supplied by Steven and Bartholomew Ament

Three culverts would be crossed east of 224th Avenue. The pipeline makes a jog to go in the fields where it crosses a waterway and tile mains rather than through the woods.



The pipeline crosses numerous tile lines. If the pipeline can be moved south, it can avoid crossing main tiles in waterway shown in the circle on the map. The owner is not sure of the location of all the tile lines.



Route B: Four photos of Robert L. Bork Concerns

Fence along CTH A

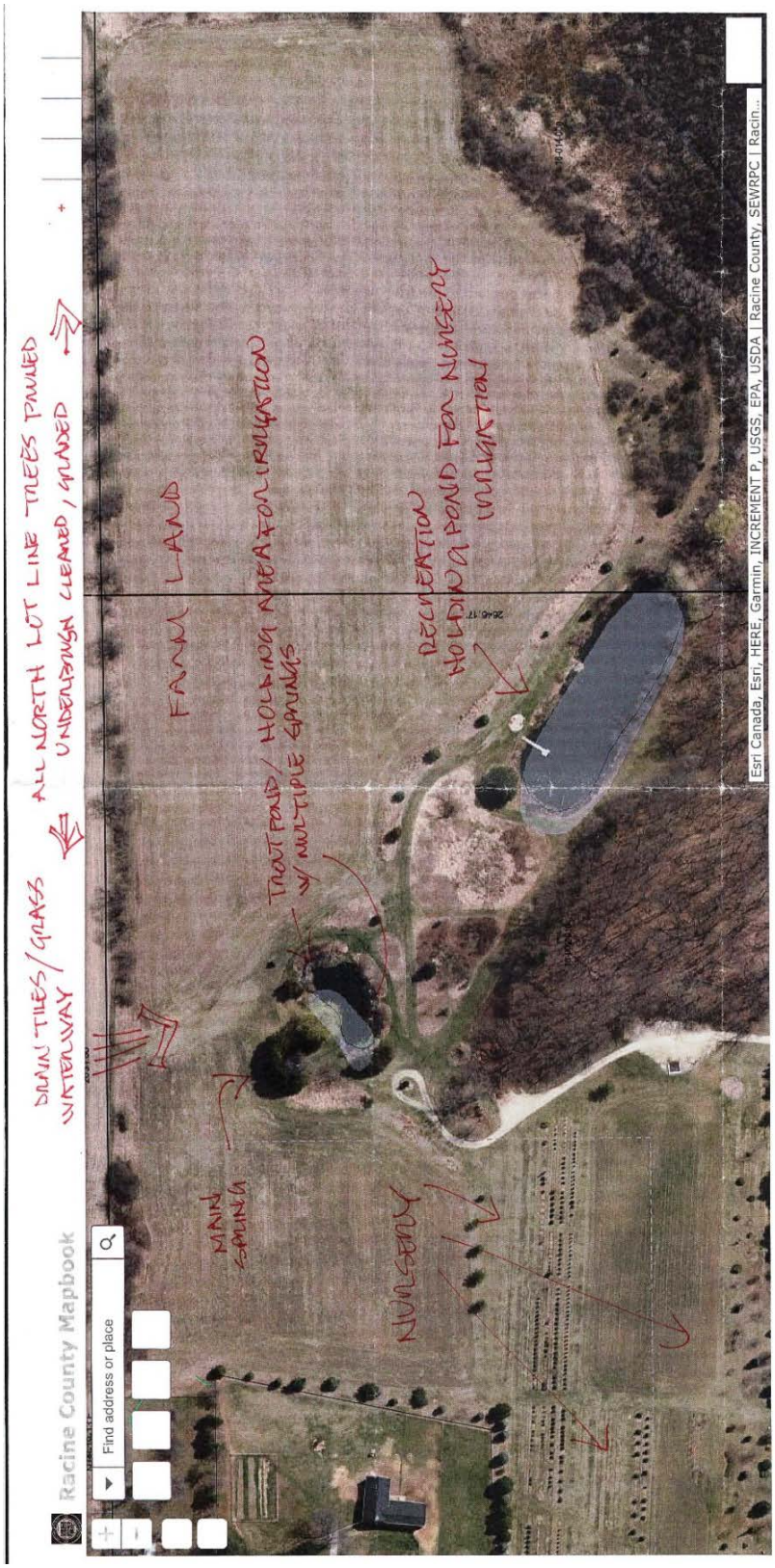
Mr. Bork is concerned about these oak trees.

A 14-inch tile main along CTH A bored under the road.

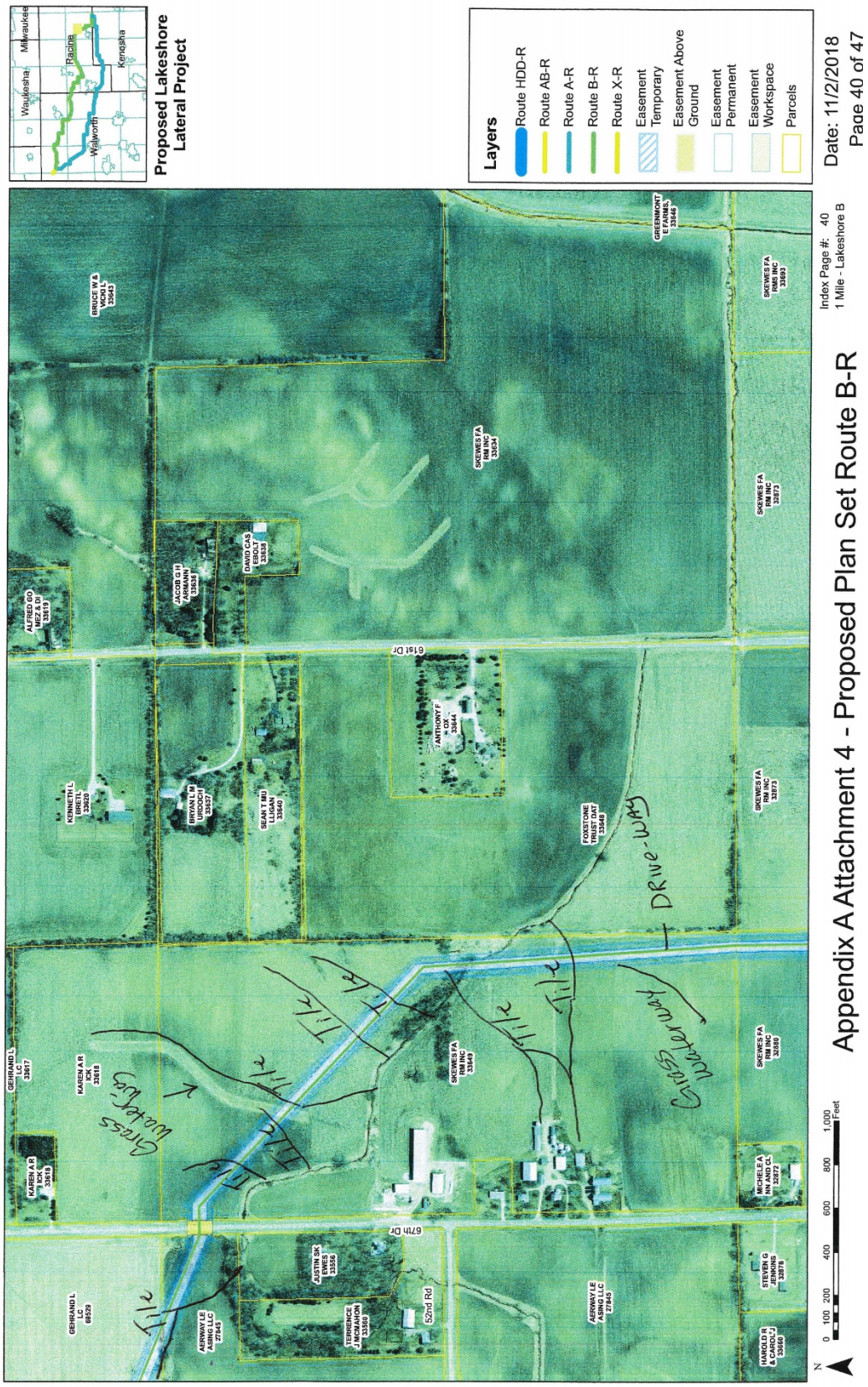
Small drain tile goes from the ditch to the house and drains only groundwater

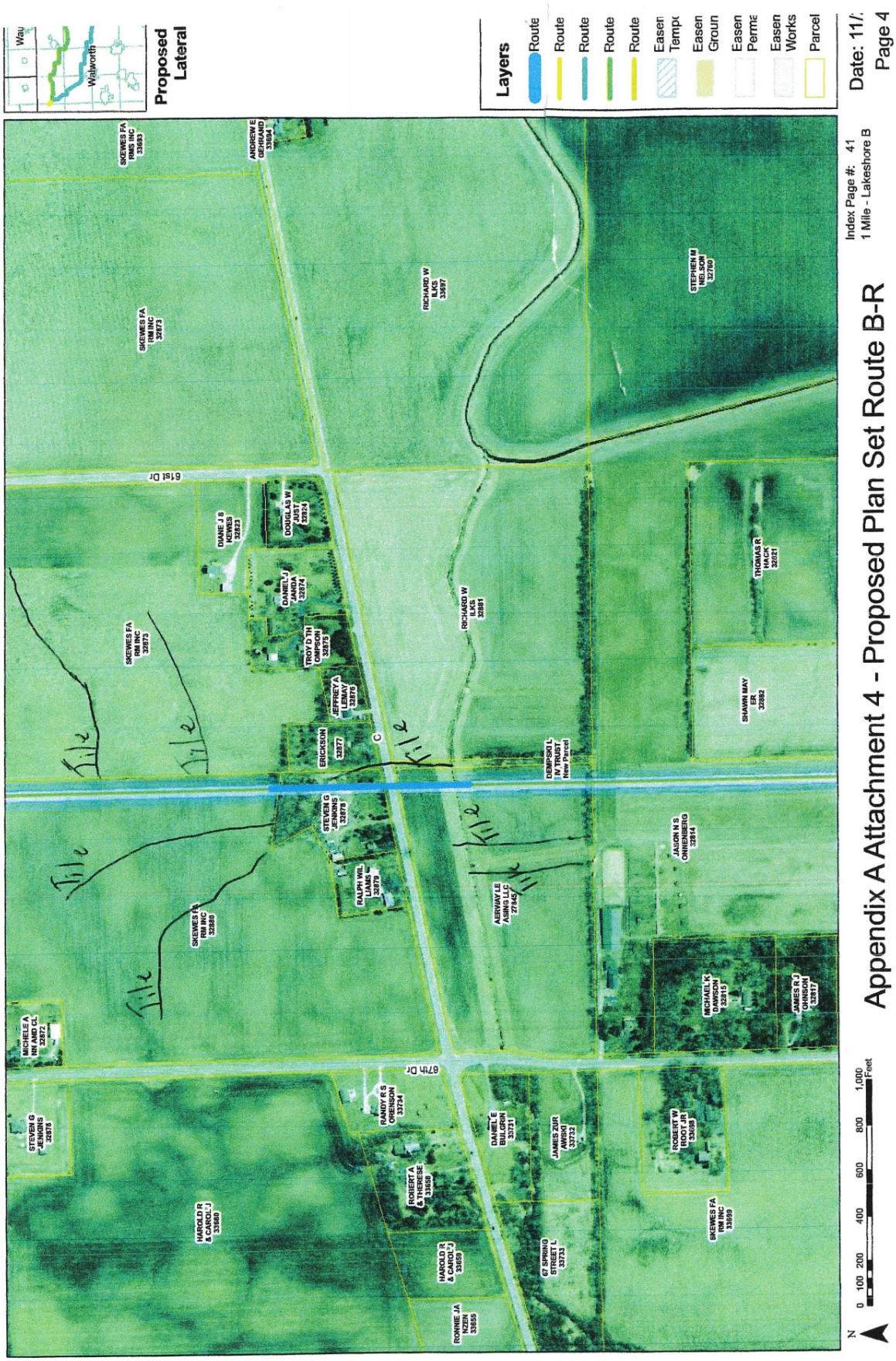
Route B: Scott W. Erickson's sketch of drain tiles

Tile lines run north and south, a grassed waterway runs from the neighbor to the north.



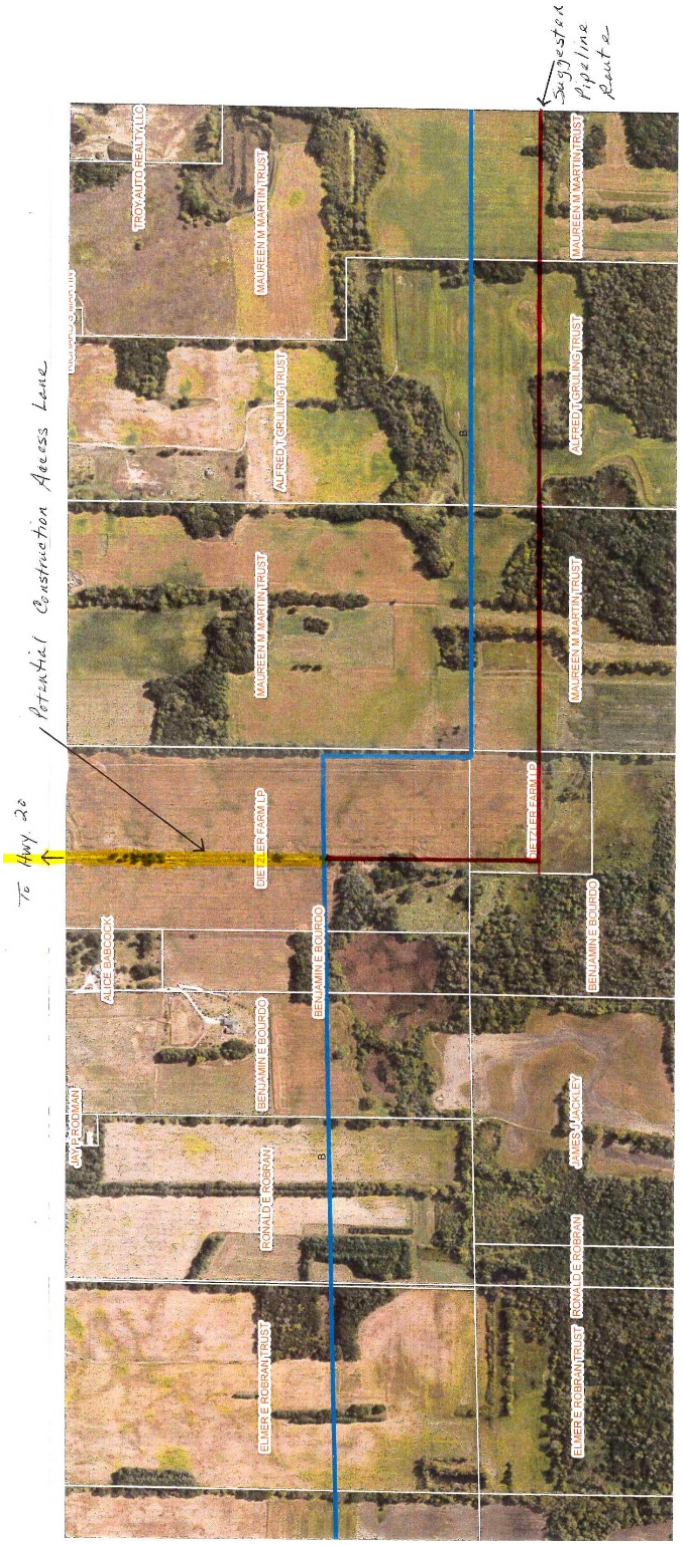
Route B Two maps of the Skewes Farm, Inc. showing tile lines and grass waterways




Appendix A Attachment 4 - Proposed Plan Set Route B-R
Page 4
Index Page #: 41
1 Mile - Lakeshore B
Date: 11/
Layers
Route
Route
Route
Route
Proposed Lateral
Walworth
0 100 200 400 600 800 1,000 Feet
N
SKEWES FA RM INC 32873
SKEWES FA RM INC 32875
SKEWES FA RM INC 32880
SKEWES FA RM INC 33699
RICHARD W ILKS 33897
RICHARD W ILKS 32881
STEPHEN M NELSON 32700
THOMAS R HACK 32021
SHAWN MAY ER 32882
DEMPSKI L IV TRUST New Parcel
ERICKSON 32877
JEFFREY A LEMAY 33876
TROY D TH OMPSON 32875
DANIEL J KRUSE 32874
DOUGLAS W JUST 32943
DUANE J S KRUSE 32823
ANDREW E GRISWOLD 33894
STEVEN G JENKINS 32878
RALPH WIL LIAMS 32879
AERWAY LE ASING LLC 27945
JASON N S ONNESEN 32845
MICHAEL K DUNCAN 32915
JAMES R J OHNSON 32917
MICHELE A WILLIAMS 32872
STEVEN G JENKINS 32876
RANDY R S OMPSON 32734
DANIEL E BULGRIN 33731
JAMES ZUR 33732
ROBERT W ILCOX 33698
SKEWES FA RM INC 33699
ROBERT A & THERESE 33658
HAROLD R & CAROL J 33660
HAROLD R & CAROL J 33659
RONNIE JA NZEN 33655
GT SPRING STREET L 33733
61st Dr
67th Dr
File
File
File
File
C

APPENDIX F: LANDOWNER-PROPOSED ROUTE MODIFICATION

Route B: Dietzler Farm LP Suggested Route Modification



Proposed modification to shift Route B further west and south on the Dietzler property.

APPENDIX G: WE ENERGIES AMP AND BMPS

LAKESHORE LATERAL PROJECT AGRICULTURAL MITIGATION PLAN

INTRODUCTION

Wisconsin Electric Power Company, dba We Energies ("the Company"), proposes to install approximately 46 miles of 24-inch steel 650 psig maximum allowable operating pressure distribution main. Route A starts in the town of La Grange and continues south and east through the towns of Sugar Creek, Lafayette, Spring Prairie, Lyons, Burlington, Brighton, Dover and Yorkville and the villages of Union Grove and on the outer limits of the cities of Elkhorn and Burlington. Route B starts in the town of La Grange and continues north and east through the towns of Troy, Spring Prairie, Burlington, Dover and Yorkville and the village of Rochester and the outer limits of the City of Burlington. Both Routes A and B intersect Walworth, Racine and Kenosha Counties. This project will be called the "Lakeshore Lateral Project" ("the Project").

The Company has a longstanding commitment to working with landowners who may be affected by construction of various utility projects throughout the State of Wisconsin. The Company has a vested interest in working with landowners within the Project to ensure their satisfaction with utility project construction and post-construction restoration.

The Company continues to be committed to restoring construction areas to pre-construction conditions with all our construction projects. We believe this Agricultural Mitigation Plan (AMP) will help to assure this outcome within agricultural areas in the proposed gas main replacement corridor. The Company has prepared this AMP specifically to prevent or mitigate potential adverse impacts of the project on agricultural productivity, using construction and restoration procedures from other Company projects and modifying them as necessary.

PURPOSE

The purpose of this AMP is to:

- provide a description of effective agricultural construction mitigation and restoration methods to be used on the Project;
- establish personalized communication with agricultural landowners to ensure their unique concerns are addressed;
- provide agricultural landowners and tenants with a hotline for convenient contact access to the Company Representative; and
- describe the job duties of the Company Agricultural Inspector (AI).

SCOPE OF AGRICULTURAL MITIGATION

This AMP applies to those activities occurring on agricultural lands (tilled land row crops). "Agricultural land" as used here is understood to include rotated pastureland (except permanent pasture), all presently cultivated land including cropland, haylands, truck gardens, specialty crops, and land in government agricultural set-aside programs.

"Permanent pasture" as used here includes land devoted exclusively to pasture use, and not suited to tillage or crop rotation, as determined by the lack of any sustained crop history. "Construction area(s)" as used here includes all permanent or temporary workspace areas to be used by the Company for the purpose of constructing and operating the project, as well as lands on which aboveground facilities or other appurtenances related to the project will be located.

AGRICULTURAL INSPECTOR ROLE AND QUALIFICATIONS

The Company will have a project Construction Manager (CM) and an Environmental Manager (EM) for the project. To assist with on-site inspection and monitoring, the Company may also have one or more individuals designated as the project Agricultural Inspector (AI).

The person designated as the AI will be a qualified individual who will monitor the implementation of the AMP. The AI will have familiarity with agricultural operations and general construction, as well as knowledge of agronomy and soil conservation.

The AI will be thoroughly familiar with the following:

- Agricultural Mitigation Plan; and
- gas lateral construction sequences and processes.

They also will:

- be familiar with techniques of soil conservation;
- be familiar with agricultural operations;
- possess good oral and written communication skills; and
- be able to work closely with the agricultural landowners, tenants and applicable agencies.

Contractors will be required to structure their construction activities to be consistent with the AMP.

AGRICULTURAL MITIGATION: PLANNING AND PRE CONSTRUCTION PHASE

The Company will communicate as needed with affected landowners and tenants of agricultural land to keep them informed of overall progress, explain mitigation actions, and to learn of any additional problems noted by landowners. No later than 30 days prior to the start of construction, the Company will provide landowners with a telephone number and address that can be used to contact the Company (also known as the Hotline Number). The phone number will include provisions for taking calls on evenings and weekends by use of an answering machine or voicemail system. The Company will respond promptly to calls or correspondence from landowners or tenants along the utility easement and/or right-of-way. Where the Company needs to consult or obtain concurrence from both the landowner and tenant of a property, they will make a good faith effort to do so. In the event, there is a disagreement between landowner and tenant with regards to a decision, the Company's obligation will be satisfied by securing an agreement with the landowner.

Prior to the start of construction, the Company will provide the Wisconsin Department of Agriculture, Trade, and Consumer Protection (WDATCP) with any information about the project corridor or the location of project facilities that is substantially different from the information submitted as part of the Agricultural Impact Notice (AIN), including:

- Different agricultural land uses (cropland, pasture, specialty crops);
- Previously unknown locations of fields with irrigation or drainage systems that could be impacted by the project;
- New impacts to agricultural buildings or field access; and
- Different or new temporary access roads and laydown/storage areas.

This information will be provided to WDATCP in a timely manner with the understanding that additional changes to project facilities and/or impacts may become necessary during construction due to site-specific conditions.

The Company will work with landowners to ascertain existing agricultural operations that may require special attention, such as conservation practices, location of above and below ground structures or obstructions, such as drain tile, irrigation systems, fencing, livestock, certified organic lands, proposed new drainage systems or other farm technology.
During the pre-construction phase, the Company will:

- Contact each landowner to obtain property specific information (such as drain tiles, conservation practices, etc.) to ensure these structures/operation practices are noted on construction documents;
- Review agricultural related project documents such as descriptions or maps of leased lands, permits, draft construction alignment sheets, and relevant plans prior to construction;
- Review information supplied by affected farm operators, conservation districts, agricultural extension agents, and others;
- Educate construction crews through an environmental training session, to ensure they are familiar with AMP, agricultural concerns and issues that may occur; and
- Negotiate with the farmland owner/operators to avoid the spreading manure over all areas within the proposed construction area prior to construction.

If any construction activities occur on a Certified Organic Farm, the Company will work with the landowner or tenant, the landowner and/or tenant's certifying agent to identify site-specific construction practices that will minimize the potential for decertification as a result of construction activities. Possible practices may include: surveying/staking methods prior to construction (specifically non paint methods), equipment cleaning, use of drop cloths during welding and coating activities; removal and storage of additional topsoil; planting a deep-rooted cover crop in lieu of mechanical decompaction; applications of composted manure; or similar measures. The Company recognizes that Organic System Plans are proprietary in nature and will respect the need for confidentiality.

If any construction activities occur within a drainage district, the Company will work with the appropriate county drainage board to ascertain existing drainage district operations that may require special attention. Examples of these include above and below ground district drains, district ditches, drain tiles or other facilities, and locations of district corridors.

During the pre-construction phase, the Company will:

- Contact each county drainage board to obtain district specific information (such as district ditches, district tiles, and district corridors) to ensure these structures and district operation locations are noted on construction documents;
- Review DATCP-approved drainage district specifications prior to construction;
- Educate construction crews through an environmental training session to ensure they are familiar with AMP, agricultural concerns and issues that may occur;
- Avoid any alterations to district drains; and
- Negotiate with county drainage boards to avoid drainage district maintenance activities within the proposed construction area prior to construction.

If any planned construction activities would modify any district drain or install or modify any structure in a district drain, the Company will work the appropriate county drainage board to obtain DATCP's written approval as required under Subchapter V, ATCP 48, for alterations within drainage districts.

AGRICULTURAL MITIGATION: CONSTRUCTION AND RESTORATION PHASE

During construction and restoration, the AI's role is to monitor the implementation of the Company AMP to avoid negative impacts to agricultural lands by advising the appropriate Company representative, either the EM or the CM, in the event incorrect construction methods are being used. The AI will generally be present on-site during construction, and will have access to all work areas in agricultural lands. The AI will travel between various construction activities in agricultural lands and spot check construction operations. If the AI discovers actions that do not appear to meet the AMP requirements, he may stop-work at that location if necessary and will immediately contact the EM or the CM who will determine if site-specific restoration action is necessary. They will also ensure that the erring contractors are trained in the appropriate construction methods.

In the event adverse weather conditions cause soil conditions to become unfavorable for construction or restoration activities at a given site, the AI will consult with the EM or the CM to temporarily halt activity at that location and will confer with them as to when activities should be resumed at the site.

In the event that construction activities cause an unintended modification (i.e. damage) to a drainage district drain, the AI will consult with the county drainage board to temporarily halt activity at that location and will confer with them to obtain DATCP's written approval as required under Subchapter V, ATCP 48, for alterations within drainage districts.

AGRICULTURAL MITIGATION: CROP COMPENSATION

The Company will compensate the landowner for crop loss; compensation will be based on crop prices and yields for the County at the time of construction. Crop loss will occur during the construction of the project, which, depending on the timing of construction activities, may include one or two growing seasons. Payments will be made to landowners as soon as possible after construction is completed.

If the landowner rents or leases out the land to a tenant farmer (renter), the landowner may designate that the renter be compensated directly.

BEST CONSTRUCTION MANAGEMENT PRACTICES

The Company requires those working on the project to research, plan, implement, monitor, and assure the proposed results are obtained. The Company relies on these methods to identify agricultural concerns and implement measures to maintain agricultural productivity throughout construction and restoration. Appropriate use of these measures are assured by key field personnel such as the AI and the Company EM, CM, and Construction Inspector (CI). Additionally, the Company seeks to only use contractors with a consistent favorable history of installing and maintaining measures according to the best management practices (BMPs). Thus, permit conditions, landowner satisfaction, and natural resources are preserved. The Company will incorporate the applicable provisions of this AMP and accompanying BMPs into all bid documents and contracts with each contractor retained on this Project by the Company for construction, restoration, mitigation or post-restoration monitoring. Each contractor retained by the Company for the Project must also incorporate the applicable provisions of the AMP into their contracts with each subcontractor.

The Company utilizes construction techniques within agricultural areas that will insure future agricultural productivity. The following construction methods are to be utilized in agricultural areas:

a. Topsoil Segregation

During construction of the gas main, topsoil will be removed from the construction area and stockpiled separately from any other excavated soils. This will preserve the topsoil resource by eliminating the potential for topsoil/subsoil mixing. Topsoil is defined to include the upper most portion of the soil commonly referred to as the plow layer, the A horizon, or its equivalent in uncultivated soils. It is the surface layer of the soil that has the darkest color or the highest content of organic matter. All of the topsoil to a depth of 12 inches, or the entire original topsoil depth if it is less than 12 inches, will be removed from excavated areas; however, topsoil will not be removed from under the topsoil storage piles. The Company has the option to remove amounts of topsoil in excess of 12 inches at its discretion.

The gas main will be installed via open cut trench, "plow" method and directional boring. The plow method of installation consists of using a vibratory plow which slices the soil open, allows installation of the pipe into the trench, and then replaces the soil into its original location. The horizontal directional bore method consists of pipe installation using an auger to drill an underground tunnel, into which the pipe is drawing. The plow and bore method do not disturb the soil horizons. Open cut trenching will require separation of top and subsoils during excavation. For all excavations, top and subsoils will be replaced in their original soil horizons when backfilling. Landowners will be asked to refrain from manure spreading prior to topsoil removal. Erosion control measures will be used as necessary.

b. Temporary Access Road

The Company will attempt to utilize existing farm roads for access to and from the right-of-way where possible. In places where temporary access roads are constructed over agricultural land, topsoil will be stripped and temporarily stockpiled. If the temporary roads in agricultural lands require gravel stabilization, geotextile construction fabric will be placed below imported rock material for additional stability and to provide a distinct barrier between imported rock material and the subsoil surface.

Temporary roads will be designed to accommodate existing surface drainage patterns and to minimize soil erosion. During the restoration phase, both temporary and pre-existing access roads will be removed and the areas will be restored as close as reasonably possible to its pre-construction conditions. In the event the landowner wants the road left intact, a written mutual agreement between the Landowner and the Company will be established.

c. Clearing of Brush and Trees from the Easement

The Company will work with each landowner for the cutting of merchantable timber necessary for construction of the gas distribution system. Timber may be cut and left along the edge of the utility right-of-way for the landowner's use or disposed of in various methods. Methods of disposal of trees, brush, and stumps may include off-site burning, burial, chipping, or removal. Vegetation from cherry and walnut trees can be toxic to livestock. All debris from these trees will be removed from areas that are actively pastured such that it will not be allowed to come into contact with livestock and may not be stockpiled on site.

d. Fencing

Prior to construction, the Company will work with landowners to determine if fences may be in the way of access for construction equipment. If necessary, existing fences may be removed and temporary fencing will be installed. Wire tension on temporary fences must be adequate to

prevent sagging. Bracing of fences to trees or vegetation is prohibited. Fence materials, such as paint, must not be used as it is toxic to livestock.

Where livestock graze adjacent lands to construction areas, arrangements will be made with the landowner prior to construction to determine if temporary fences are necessary. The Company's contractors will be responsible to close any gates as used throughout the workday.

Existing fence crossings removed due to construction activities will be repaired. Following construction, any temporary gates and fences installed for use by construction crews must be removed, unless the landowner approves otherwise. Permanent fences will be restored as closely as reasonably possible to their pre-construction condition.

e. Irrigation Systems

If project construction intersects an operational irrigation system on agricultural land, the Company and the landowner will establish a mutually acceptable amount of time that the affected irrigation systems may be taken out of service during construction. Water flow in irrigation systems on agricultural land is not to be disrupted by construction without first notifying affected landowners. Any damage to an irrigation system caused by construction will be repaired as soon as reasonably possible.

f. Erosion Control and Dewatering

Erosion controls such as silt fence, staked hay bales, and erosion matting will be used to prevent surface runoff from carrying sediment laden water onto adjacent lands. Dewatering may be required to remove standing water from trench or bore pit areas. Erosion control and dewatering technical standards are described on the Wisconsin Department of Natural Resources website (http://dnr.wi.gov/topic/stormwater/standards/). These standards will be met or exceeded at all times. It is not permissible to allow soil or water runoff to occur from non-organically farmed fields onto organically farmed fields at any time even if both fields are owned by the same landowner.

g. Drain Tile

The Company will work with each landowner and appropriate county drainage boards through the pre-construction process to determine location of known drain tiles. If a drain tile is damaged or severed in the course of construction, the tile will be repaired. A temporary repair with solid tubing to allow drainage while construction activities are completed may be used, or a permanent repair immediately installed.

Prior to backfilling soils at that location, the drain tile will be permanently repaired. Repairs may include support of the tile to maintain proper drainage gradient, replacement of tile and placement of subsoils free of large rocks and clumps around the tile to cushion it, and/or placement of filter cloths. Each repair will be documented to show proper actions have been taken to ensure future drainage and GPS coordinates of the repair location recorded.

h. Weed Control

Where the AI sees evidence that weed growth on stockpiled topsoil could present a problem to adjacent cultivated fields the AI will consult with the Company Representative to have the weeds removed or killed prior to topsoil replacement. If the Company chooses to spray the topsoil pile with herbicide, the landowner will be consulted in regard to the choice of herbicide

to be used, taking into account their preference for cover crop and plans for the next year's crop. If any herbicide spraying is completed, it will be done by a state licensed applicator.

i. Repair of Existing Agricultural Erosion Control Facilities

Existing agricultural facilities, such as diversion terraces, grassed or lined waterways, outlet ditches, water and sediment control basins, vegetated filter strips, etc., damaged due to construction activities will be restored to pre-construction conditions. Photographs and elevation surveys may be taken as necessary prior to construction activities at the site to ensure final restoration is satisfactory.

j. Repair of Existing Drainage District Features (drains, ditches, tiles and other facilities)

Existing drainage district features, such as above and below ground drains, ditches, tiles and other facilities in district corridors, damaged due to construction activities will be restored to pre-construction conditions. The Company will address questions relating to district drain, ditch or tile repair/restoration with the appropriate county drainage board to reach a mutually agreeable resolution. Photographs and elevation surveys may be taken as needed and where applicable, prior to construction activities at the site to ensure final restoration is satisfactory.

k. Soil Restoration

The purpose of soil restoration is to ensure that soil strata are replaced in the proper order, decompacted, and that rock content of the upper 24 inches of soil is not increased. The Company will discuss rock and excess soil disposal with the landowner to determine acceptable disposal location(s) on the property. Heavy equipment will not be allowed to cross those agricultural areas that have been decompacted and restored.

<u>De-compacting the Subsoil:</u>

De-compaction of the subsoil will only be done when the subsoil condition is friable/tillable in the top 18 inches of the subsoil profile, using the Atterbeg Field Test as guidance (Attachment A). The AI may recommend to the Company specific locations for the decompaction of the subsoil in locations where soils appear to be either predominantly wet or in low lying areas where water ponding has occurred due to the "trench effect" as a result of topsoil removal. In these cases, the Company may consult with the landowner to determine the appropriate decompaction needs.

Equipment that can be used for soil decompaction may include a v-ripper, chisel plow, paraplow, or equivalent. Typical spacing of the shanks varies with equipment but is typically in the 8 to 24 inch range. The normal depth of tillage is 18 inches. The type of equipment used and the depth of rip may be adjusted as appropriate for different soil types or for a deeply and severely compacted area.

Subsoil compaction will normally be alleviated with three passes of the decompaction equipment. Multiple passes refers to the implement passing over the same soil band. That is, three passes of a 10 foot wide implement will treat a 10 foot wide band of soil, not a 30 foot wide band. Passes must be made in multiple directions. This can be achieved in the narrow areas by having the implement weave back and forth across the area being ripped.

Topsoil Replacement:
The topsoil will be replaced to its original depth across the spoil storage, trench, work, and traffic areas. The layer of replaced topsoil should be uniform across the right-of-way width, including any crowning. Topsoil should be replaced with wide tracked machinery or equivalent light loaded equipment to avoid compaction of the topsoil and subsoil layers. Rubber tired motor graders may be used to spread and level topsoil to address unevenness in the field. In areas where minimal tillage, no-till, or level land farming practices are employed, a tracked machine will be required to establish final grades.

De-compacting Through the Topsoil:
De-compaction through the topsoil may be necessary, if the subsoil and/or topsoil are compacted during topsoil replacement activities. A penetrometer will be used to determine if additional decompaction is necessary through the topsoil.

Final Rock Removal:
Replacing the topsoil (or de-compacting through the topsoil) may free some rocks and bring them to the surface. The size, density and distribution of rock remaining on the construction work area should be the same as adjacent areas not disturbed by construction.

Final Cleanup:
All previously restored construction area should not be traversed by unnecessary equipment traffic. All construction related debris, including litter generated by the construction crews, will be removed from the landowner's property and disposed of appropriately. Final clean-up begins immediately after all the other above-mentioned sequence of restoration activities operations are completed, and not before. Final clean-up includes installation of permanent erosion control measures if necessary and disposal of construction debris and will be completed as soon as practicably possible (weather permitting), or as soon as possible thereafter. If final clean-up is delayed, temporary erosion controls will be installed as necessary.

ATTACHMENT A

Purpose: To determine when soil is suitable for tillage operations.

Process: The Agricultural Inspector will determine the soil's consistency using the following:

1. Pull a sample soil plug at the maximum depth to be tilled, or from within the topsoil pile.

2. Roll a portion of the sample between the palms of the hands to form a wire with a diameter of one-eighth inch.

3. The soil consistency is:
    a. Tillable if the soil wire breaks into segments not exceeding 3/8 of an inch in length.
    b. Plastic (not tillable) if the segments are longer than 3/8 of an inch before breaking.

4. This procedure is to be used prior to decompacting the subsoil; on the topsoil pile prior to stripping and stockpiling; on the topsoil prior to replacement; and prior to decompacting through the topsoil.

5. One determination of soil consistency is adequate until the next rain event.

Best Management Practices for Construction within Agricultural Lands
BMP 01 - Right-of-Way Width

Purpose: To define the locations and limits of rights-of-way and additional temporary workspaces, in order to minimize the impacts to agricultural lands.

Organization: WISCONSIN ELECTRIC GAS OPERATIONS onsite construction inspection personnel will monitor and enforce the measures described, in concert with the Agricultural Inspector (AI), for pipeline construction operations within agricultural lands.

Installation Planning

1. WISCONSIN ELECTRIC GAS OPERATIONS will determine the required right-of-way widths over the length of lands traversed by the pipeline, including extra workspaces.
2. WISCONSIN ELECTRIC GAS OPERATIONS will show the specific limits of rights-of-way on alignment sheet drawings which will be provided to the construction contractor, environmental consultants and inspection personnel.
3. WISCONSIN ELECTRIC GAS OPERATIONS will provide the construction contractor, environmental consultants and inspection personnel with the right-of-way configuration drawings and other figures referred to by the BMPs developed for the project.
4. WISCONSIN ELECTRIC GAS OPERATIONS will obtain the appropriate environmental and right-of-way clearances prior to entry on any land affected by construction of the pipeline, or notify all parties of areas of special concern or areas for which clearance is withheld.

Construction

1. The limits of the right-of-way and all additional temporary workspaces will be staked prior to work commencing at that location.
2. For Construction Easements in Agriculture Lands a right-of-way width of 100 foot is required and topsoil stripping will be the complete right-of-way width excluding the topsoil stockpile area. This consists of a 50 foot temporary construction easement and a 50 foot permanent easement. The running centerline of the pipeline will generally be 15’ from one side of the 50 foot permanent easement. See Construction Figures, Detail 27.
3. For Construction Easements in non-cultivated Wooded Lands or Wetlands a right-of-way width of 75 feet is required. This consists of a 25 foot temporary construction easement and a 50 foot permanent easement. Where feasible, existing corridors are being utilized to reduce the impact of tree clearing. In areas where the gas main will be installed by horizontal directional drilling a 50 foot permanent easement will be required but the 25 foot temporary easement will not be necessary.
4. Additional temporary workspace will be required for stream crossings, road bore crossing areas, uplands on either side of wetlands, and equipment turnaround areas. WISCONSIN ELECTRIC GAS OPERATIONS will determine the amount of additional right-of-way needed for construction and restoration on agricultural land as per these BMPs.
5. Should a situation arise where the approved workspace is not adequate to implement the agricultural BMPs, work will be stopped at the respective location until WISCONSIN ELECTRIC GAS OPERATIONS determines an appropriate course of action. For example, triple lift soil segregation may require an additional 25 feet in the temporary construction easement as necessary to allow separation of the three stockpile areas.

Best Management Practices for Construction within Agricultural Lands
BMP 02 - Topsoil Segregation

Purpose: To preserve the topsoil resources by eliminating the potential for topsoil/subsoil mixing in agricultural lands.

Installation Planning

1. During right-of-way negotiations for easements on agricultural lands, WISCONSIN ELECTRIC GAS OPERATIONS will identify full topsoil removal as the only alternative.

2. The topsoil is defined to include the upper most portion of the soil commonly referred to as the plow layer, the A horizon, or its equivalent in uncultivated soils. It is the surface layer of the soil that has the darkest color or the highest content of organic matter.

Construction

Full Topsoil Removal

1. The WISCONSIN ELECTRIC GAS OPERATIONS operator or construction contractor will oversee determination of the topsoil depth. This will be completed as construction progresses.

2. All of the topsoil to a depth of 12 inches, or the entire original topsoil depth if it is less than 12 inches, will be removed from the subsoil storage area, the trench area, and the rest of the temporary right-of-way (work and traffic areas); however, topsoil will not be removed from under the topsoil storage piles or areas where construction mats are laid on the surface for material storage or equipment travel. WISCONSIN ELECTRIC GAS OPERATIONS has the option to remove amounts of topsoil in excess of 12" at its discretion.
3. All subsoil material removed from the pipeline trench will be stockpiled separate from the topsoil stockpile. The subsoil material will be stockpiled in the subsoil storage area.
4. Additionally, all topsoil to a depth of 12-inches will be stripped from newly constructed temporary access roads, temporary storage areas, and temporary construction areas associated with stations, mainline valves, and pig launchers located on agricultural land. It is intended that existing field access roads will not be stripped of any existing cover.
5. Topsoil will be removed prior to cut/fill grading operations.

Partial Topsoil Removal

1. There will be no Partial Topsoil Removal on agricultural lands.

Best Management Practices for Construction within Agricultural Lands
BMP 03 - Erosion Control

Purpose: To minimize the effects of erosion to lands affected by construction, and adjacent properties, and to prevent silts and sediments from being transported off the right-of-way or into natural resources.

Installation Planning

1. WISCONSIN ELECTRIC GAS OPERATIONS will conduct training of inspection personnel and contractors to ensure all parties have a thorough understanding of the erosion control requirements to be utilized on the project. The training will include a review of the requirements of WISCONSIN ELECTRIC GAS OPERATIONS Lakeshore Lateral Project Construction Diagrams AMP, and BMPs. Such training will identify the authorities of the inspection personnel, the criteria for placement of the particular erosion structures, and the procedure to be followed in the event that a violation of these practices appears to have occurred.

2. WISCONSIN ELECTRIC GAS OPERATIONS will advise the construction contractor of all known areas of special concern.

3. WISCONSIN ELECTRIC GAS OPERATIONS will require its construction contractor to structure its work in a manner that is consistent with the requirements of the documents listed in Paragraph 1 above, and to maintain an adequate supply of approved erosion control materials necessary for providing an appropriate level of control.

Construction

Temporary Erosion Control

1. Temporary erosion controls will be constructed after initial disturbance of the soil, and will be properly maintained throughout construction. The erosion control structures will be inspected as described below and reinstalled as necessary (such as after backfilling of the trench) until they are either replaced by permanent erosion controls or restoration is complete.

2. Temporary slope breakers will be constructed where necessary to reduce runoff velocity and divert water off of the construction right-of-way. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, sand bags, or wattles.

3. Unless otherwise specified as a permit condition, temporary slope breakers will generally be installed using the following spacing:

Slope %	Spacing (feet)
5 - 15	300
>15 - 30	200
>30	100

4. The outfall of each temporary slope breaker will be directed off the construction right-of-way to a stable, well-vegetated area or energy-dissipating device at the end of the slope breaker and off the construction right-of-way. Discharge of water shall not be made in a way that can runoff from non-organic farm operations onto adjacent organic farm operations.

5. The integrity of slope breakers will be confirmed, during active construction on a daily basis and during inactive construction on a weekly basis. In areas with no construction or equipment

operation, integrity of slope breakers will be confirmed within 24 hours of each 0.5-inch of rainfall. Slope breakers found to be ineffective will be repaired within 24 hours of identification.

6. The placement of temporary slope breakers will be coordinated with the placement of trench/ditch plugs. Trench/ditch plugs will be installed at the boundaries of certified organic farming to ensure that the pipeline does not provide a surface or subsurface drainage path from the surrounding area to the certified organic farm during construction.

7. Slope breakers will be of adequate height and width to contain and divert a significant rain event. Additionally, slope breakers will be constructed with a two to eight percent outslope to a stable area. In the absence of a stable area, appropriate energy-dissipating devices will be used to direct the flow off of the construction right-of-way. The slope breaker will be compacted during its construction to prevent the water from eroding through the berm. The inlet end of the berm will be located to prevent water from traveling around the berm.

8. The outlet of the slope breaker will be stable enough to filter sediment from the water and retain the sediment within the existing vegetation.

Sediment Barriers

1. Sediment barriers will be installed to stop the flow of sediment. They may be constructed of materials such as silt fence, staked hay or straw bales, sand bags, wattles, or equivalent.

2. Temporary sediment barriers will be installed at the base of slopes adjacent to road crossings until disturbed vegetation has been reestablished and at appropriate locations to prevent siltation into water bodies or wetlands crossed by, or near, the construction work area.

3. Temporary sediment barriers will be maintained until permanent revegetation measures are successful or the upland areas adjacent to wetlands, water bodies, or roads are stabilized. Temporary sediment barriers will be removed from an area when that area is successfully restored

Mulch

1. In general, mulch will not be used as an erosion control measure in agricultural lands. In the event mulch is required by WISCONSIN ELECTRIC GAS OPERATIONS in consultation with the landowner in agricultural lands, the mulch will be applied according to We Energies Erosion Control Standards and Procedures.

Permanent Erosion Control Devices

1. To prevent subsurface flow of water through the pipe trench, trench breakers will be installed.

2. The following reference table can be used to locate trench breaker spacing on areas with slopes greater than 5%.

Slope (%)	**Spacing Recommendations (feet)**
5 – 15	300
>15 - 30	200
> 30	100

3. When permanent trench breakers are installed in the trench prior to backfilling, they will consist of sandbags, earth-filled sacks or other approved material. Topsoil will not be used for trench breakers. Trench breakers are required to have a minimum bottom width of two sacks wide.

4. Trench breakers will be installed to a minimum elevation of one-foot above the top of the pipe. The top of the trench breaker must be two feet or more below the restored surface on agricultural land.

Best Management Practices for Construction within Agricultural Lands
BMP 04 - Drain Tile

Purpose: To ensure that any tile line damaged during construction is repaired to a condition that is functionally equivalent to its condition prior to construction and to avoid adverse impacts to planned or proposed drainage systems.

Installation Planning

1. Identify fields containing drain tiles through contact with landowners, appropriate county drainage board, the local Land Conservation District, and the USDA-Natural Resources Conservation Service staff. All drain tiles will be photographed and GPS documented pre-construction and post-construction.

2. Flag all identified drain tiles within the right-of-way after clearing and grading, and prior to trenching.

3. WISCONSIN ELECTRIC GAS OPERATIONS will document proposed drain tile plans that the landowner may plan to install within the three years following construction.

4. WISCONSIN ELECTRIC GAS OPERATIONS will identify local drain tile installation contractors and consult with the landowner to determine whether the landowner would prefer repair/replacement services (if necessary) be provided by a local contractor.

5. WISCONSIN ELECTRIC GAS OPERATIONS will document existing moisture content.

Construction

1. The excavated pipeline trench shall provide a minimum of 12 inches clearance, where practicable, between the pipe and the drainage tile.

<u>General Conditions</u>

1. WISCONSIN ELECTRIC GAS OPERATIONS will use the construction contractor or their sub-contractor to replace, relocate or reconfigure existing tile lines as may be required.

2. WISCONSIN ELECTRIC GAS OPERATIONS will take the necessary actions to ensure the functioning of the tile lines will be equivalent to its prior condition where tile lines adjacent to the pipeline's right-of-way are adversely affected by the construction of the pipeline. This may include the relocation, reconfiguration, and replacement of the existing tile lines within the construction corridor. The repaired drain tile will be verified that it was installed correctly and WISCONSIN ELECTRIC GAS OPERATIONS will make an effort to understand the existing conditions within the limited pipeline ROW.

3. The quality of all clay and concrete drain tile and corrugated polyethylene tubing to be installed shall be appropriate for the work as determined by the AI and/or qualified drain tile repair

contractor. Material to be installed will meet American Society of Testing Materials (ASTM) standards.

4. Any drain tile removed from the pipeline trench will not be reused.

5. WISCONSIN ELECTRIC GAS OPERATIONS will repair or correct tile or drainage problems caused by construction of the pipeline immediately, upon written notice from the landowner or appropriate county drainage board to WISCONSIN ELECTRIC GAS OPERATIONS of such a problem, unless WISCONSIN ELECTRIC GAS OPERATIONS can demonstrate that the problem identified by the landowner or appropriate county drainage board was not caused by actions performed during such construction or restoration. WISCONSIN ELECTRIC GAS OPERATIONS may arrange a pay settlement to the landowner or county drainage board.

Locating Damaged Drains

1. All drains found during trenching will be flagged.

2. Drains that are located within the right-of-way, but are not located within the trench, will be probed (examined) for damage.

Temporary Repairs

1. All exposed tiles will be capped or screened with window screen or equivalent to protect against soil intrusion when the trench is dug, whether repaired immediately or later.

2. Any flowing tile line will be repaired as soon as practicable with solid tubing, until permanent repairs can be made.
3. Temporary repairs are needed if a flowing drain will be stopped for longer than 24 hours.

Permanent Repairs

1. All permanent tile line damaged within the trench area will be repaired prior to backfilling at the respective location.

2. Where tile lines are severed by construction of the pipeline trench, angle iron, three-sided steel channel iron, I-beams, full round slotted pipe, perforated plastic pipe or half pipe will be used to support the repaired tile line. The support members must extend a minimum of 2-feet into previously undisturbed soil. If the tile repairs involve clay tile, the support member will extend to the first tile joint beyond the minimum 2-foot distance.

3. Each tile drain's slope (gradient) will be maintained by providing sufficient support to prevent the drain line from sagging. Sandbags, bags of concrete, Sakrete, or equivalent can be used as support under repaired tile lines. The grade of the tile line should remain unchanged.

4. If the tile is clay, ceramic or concrete, any connection with new material must be made with commercially available connectors, or wrapped with plastic or effectively sealed to prevent soil intrusion.

5. To avoid the risk of damaging (crushing) the tile lines with large soil clumps or stones during backfilling loosened native subsoil free of large soil clumps and stones should be placed on top of, and to the sides of, the tile line. Where appropriate native subsoil is not available, imported subsoil free of clumps and stones, or pea gravel, can be used to cushion the tile line.

6. Filter-covered drain tiles will be used where the existing tile line is covered with a filter.

Best Management Practices for Construction within Agricultural Lands
BMP 05 - Trench Dewatering

Purpose: Pump water from an open trench or other excavated area while controlling the rate of discharge to avoid:

- Permanent or temporary erosion and scour;
- Damage to adjacent agricultural land, crops, or pastureland;
- Inundating crops for more than 24 hours, including rainfall;
- Depositing sand, silt, or sediment in or near a wetland or waterbody;
- Depositing gravel in fields, pastures, or watercourses; and
- Damaging cultural resources sites, locations of sensitive plant species and organic farming operations.

Typically, the trench will need to be dewatered for purposes of, but not limited to, tie-ins, measuring the trench for bends, lowering-in pipe, trench inspection, and back-filling the trench. Water discharge from hydrostatic testing following backfilling shall follow the same protocols described here when applicable.

Installation Planning

1. Water will be discharged in an upland area so any sediment, stones, and silt-laden water will not deposit material in a sensitive area adversely impacting the hydrology or plant communities. The contractor should have sufficient intake or outlet hose (250 - 350 feet) to reach the nearest appropriate upland area.

2. WISCONSIN ELECTRIC GAS OPERATIONS and their construction contractors will identify during construction activities:

    - Low areas along the pipeline route that are likely to collect water during construction, and
    - Suitable areas for the discharge of water accumulated within the pipe trench or other excavated area
    - Identify accumulated water that needs to be discharged as construction progresses

3. WISCONSIN ELECTRIC GAS OPERATIONS will require its construction contractors to obtain:

    - WISCONSIN ELECTRIC GAS OPERATIONS approval of all off-right-of-way and on-right-of-way discharge locations and techniques, and all trench dewatering discharge locations and techniques
    - WISCONSIN ELECTRIC GAS OPERATIONS may obtain voluntary permissions with landowners

4. WISCONSIN ELECTRIC GAS OPERATIONS will require its construction contractors to structure the work to minimize the accumulation of water within the trench.

5. In the event it is not possible to avoid water-related damages as described above, WISCONSIN ELECTRIC GAS OPERATIONS will:

    - Reasonably compensate the landowner for the damages, and
    - Restore the cropland and crops, pastureland, water courses, and any other damaged lands to their pre-construction condition.

Construction

1. All dewatering activities will be conducted in compliance with current drainage laws, local ordinances relating to such activities, WDNR permit conditions, and the provisions of the Clean Water Act.

2. Rainwater or groundwater that collects in the trench will be pumped:

    - Onto a well-vegetated area that will prevent the water from returning to the right-of-way, or
    - Into a filter bag or a settling basin constructed of straw bales when adequate vegetation is absent or when in the vicinity of a wetland or waterbody.

    Additionally, sediment barriers or similar erosion control measures may be used as necessary to divert the flow of pumped water.

3. To minimize the extraction of silt or sediment from the trench the intake will be prevented from touching the bottom or side of the trench. A flotation device or a support will be attached to the intake of the suction line to prevent sucking up soil and other debris from the trench.

4. All structures will be located in a stabilized and vegetated area with a minimum buffer width of 100 feet between it and any adjacent water body or wetland area. Sediment barriers or similar erosion control measure will be installed if an adequate buffer is not available.

5. Preferably, dewatering efforts will not deliver water onto cropland. If it is absolutely necessary to do so, the crops will be inundated (flooded) less than 24 hours.

6. The dewatering activities will not deposit gravel, sediment (mud) or other debris in fields, pastures, or watercourses.

7. Dewatering sites will be selected, and structures and slope breakers will be installed, to ensure that water is not directed into known cultural resources sites or locations of sensitive plant communities.

8. Backfill activities will begin as soon as possible after pipe installation to prevent the trench from refilling with water in high water table conditions. Attempts to dewater as far from the back-filling activity as possible will be made.

9. Dewatering will be monitored and stopped, if necessary, to correct conditions and practices that do not comply with this best management practice.

10. Discharge of water from the trench of non-organic farm operations and hydrostatic testing shall not be made in a way that can runoff onto adjacent organic farm operations.

Best Management Practices for Construction within Agricultural Lands
BMP 06 - Soil Restoration

Purpose: To restore the contour and to ensure the quality and agricultural productivity of the soil by:

- Avoiding the mixing of the topsoil with the subsoil, and
- Eliminating compaction from the subsoil and topsoil layers, and
- Assuring the rock content of the upper 12-inches of topsoil and subsoil is not increased after completion of the construction and restoration process.

Installation Planning

1. WISCONSIN ELECTRIC GAS OPERATIONS will identify, through consultation with the landowner, all rock disposal location(s) on the ROW or adjacent to the ROW. This location can be on the construction right-of-way of the landowner's property. Written permission from the landowner is required for disposal at another site on the farm.

2. WISCONSIN ELECTRIC GAS OPERATIONS will consult the landowner about properly disposing of excess excavated material to maintain agricultural productivity.

3. Successful restoration of the soil requires that the proper equipment be used, in the proper sequence, under the correct soil moisture content conditions. Each step in the restoration process is completed before moving to the next step. De-compaction will occur as determined necessary by the Agricultural Inspector (AI) and in consultation with the contractor and landowner.

4. Heavy equipment will not be allowed to cross those agricultural areas that have been de-compacted. In the event any area of previously restored right-of-way that is traversed by equipment for any reason (e.g. to reach a hydrostatic test location) which results in further compaction, the area will be appropriately restored.

Construction

<u>Backfilling</u>

1. After installation of the pipeline is complete, the trench materials will be backfilled in the order in which they were removed.

<u>Crowning the Trench</u>

1. Crowning the trench area will compensate for ground settling or subsidence. The crown shall be constructed with native topsoil material. Topsoil from adjacent ROW areas will be used (if needed) for crowning to avoid the potential for mixing of subsoil and topsoil in the event settling is overestimated. The AI will determine the height of the crown based on soil type and moisture content. Breaks will be left in the crown to accommodate existing surface drainage systems while the crown settles over the first year post construction.

2. Crowning the trench will be used when necessary and performed per WISCONSIN ELECTRIC GAS OPERATIONS standards.

3. If in the first growing season post-construction the landowner determines that the crown area may have settled too much or too little and is causing a problem with agricultural activity, WISCONSIN ELECTRIC GAS OPERATIONS will consult with the landowner to determine what corrective action may be needed to restore the crown area to its pre-construction topography and productivity.

De-compacting the Subsoil

1. Deep subsoil ripping shall be carried out on all traffic and work areas of agricultural right-of-way where full corridor stripping of topsoil occurred. This includes the pipeline workspaces, temporary workspaces, and temporary access roads. It does not include the area over the trench.

2. De-compaction of the subsoil will only be done when the subsoil condition is friable/tillable in the top 18-inches of the subsoil profile as determined by the AI. The AI, using their best judgment, may need to allow the de-compaction of the subsoil in areas where soils appear to be either predominantly wet or in low lying areas where water ponding has occurred due to the "trench effect" as a result of topsoil removal. In these cases the AI will consult with, and receive approval from, the landowner or tenant.

3. Ripping equipment to be used will be selected based on successful use on previous pipeline projects such as the v-ripper, chisel plow, paraplow, or an equivalent. WISCONSIN ELECTRIC GAS OPERATIONS may, at their discretion, choose to compensate the landowner to chisel plow his impacted land(s).

4. The normal depth of tillage is 18-inches. The AI will provide guidance on the appropriate depth of rip in special situations or soil types. For example, a depth of 6 to 8-inches may be appropriate on intensively drained mineral (lacustrine/alluvial) soils. A depth of 22-inches may be appropriate for a deeply and severely compacted area.

5. The optimal spacing of the shanks will depend on the ripping equipment, soil type and moisture content, but will typically be in the range of 8 to 24-inches. Shanks are at their optimum spacing when the implement shatters the soil area between the shanks. Shatter is evidenced by the soil lifting between the shanks as the implement passes. The AI can assist the contractor in selecting the appropriate shank spacing.

6. Subsoil compaction will normally be alleviated with three passes of the de-compaction equipment. Multiple passes refers to the implement passing over the same soil band. That is, three passes of a 10-foot wide implement will treat a 10-foot wide band of soil, not a 30-foot wide band.

7. Passes must be made in multiple directions. This can be achieved in the narrow pipeline right-of-way by weaving the implement back and forth across the area being ripped.

8. If de-compaction was not successful, the de-compaction effort will continue. The contractor is required to make as many passes as necessary to alleviate compaction. If the de-compaction effort is not successful after additional passes, a change in the de-compaction equipment used would be appropriate, and determined with guidance from the AI.

Topsoil Replacement

1. The topsoil will be replaced to its original depth across the spoil storage, trench, work, and traffic area. The layer of replaced topsoil should be uniform across the right-of-way width, including the crown over the trench.
2. Topsoil should be replaced with small tracked machinery or equivalent light loaded equipment to avoid compaction of the topsoil and subsoil layers. Rubber tired motor graders may be used to

spread and level topsoil to address unevenness in the field due to pipeline construction. In areas where minimal tillage, no-till, or level land farming practices are employed, a motor grader will be required to establish final ROW grades.

De-compacting Through the Topsoil

1. De-compaction through the topsoil may be necessary if the subsoil and/or topsoil are compacted during topsoil replacement activities.

Final Rock Removal

1. Replacing the topsoil (or de-compacting through the topsoil) may free some rocks and bring them to the surface.

2. The size, density and distribution of rock remaining on the construction work area should be the same as adjacent areas not disturbed by construction

Final Cleanup

1. Any area of previously restored right-of-way should not be traversed by unnecessary equipment traffic. All construction-related debris, including litter generated by the construction crews, will be removed from the landowner's property and disposed of appropriately.

2. Final clean-up begins immediately after all the other above-mentioned sequence of restoration activities operations are completed, and not before. Final clean-up includes installation of permanent erosion control measures and disposal of construction debris and will be completed within 14 days after backfilling in the area, weather permitting, or as soon as possible thereafter. Final clean-up shall not be delayed until the end of the next seeding season. If final clean-up is not completed within the 14-day time period, temporary erosion controls will be installed.

Best Management Practices for Construction within Agricultural Lands
BMP 07 - Seeding and Seed Bed Preparation

Purpose:

1. To place the seed into the soil at the correct time and proper depth to promote sufficient seed-soil contact on cropland or pasture requiring seeding.
2. To prepare the soil surface of an exposed area by natural or artificial means, such as tilling and fertilizing.
3. To minimize topsoil erosion on disturbed agricultural areas.

Installation Planning

1. The entire right-of-way will be reseeded following final clean up. WISCONSIN ELECTRIC GAS OPERATIONS will attempt to identify properties during the pre-construction phase where cropland seeding procedures or pasture seeding procedures will be used.
2. During recommended seeding periods, seedbed preparation should immediately follow soil restoration as soon as weather conditions and individual right-of-way requirements permit.
3. Seeding will be completed immediately after finishing seedbed preparation, weather permitting. Temporary erosion control measures will be used if this timeframe cannot be met.
4. For seeding outside of the recommended seeding periods, temporary erosion control methods will be used.
5. WISCONSIN ELECTRIC GAS OPERATIONS will consult with the landowner to determine the preferred option for vegetation restoration on agricultural lands.

   Option 1 – WISCONSIN ELECTRIC GAS OPERATIONS will enter into an agreement with the landowner to perform their own seeding following final clean up and seedbed preparation.

   Option 2 – WISCONSIN ELECTRIC GAS OPERATIONS will complete the seeding following final cleanup and seedbed preparation. Under this option, the seed mix will be determined in consultation with the landowner.

Construction

<u>Seed Selection</u>

1. An annual oat, wheat, or similar grain will be used for erosion control on crop land and a special pasture seeding mix will be used for all pastures.

<u>Seedbed Preparation for Conventional, Broadcast and Hydroseeding</u>

1. The ideal condition for conventional seeding is a smooth, firm, clod-free soil for optimum seed placement with drills or cultipacker seeders, if appropriate for that type of seed. The soil should be firm enough at planting for an adult footprint to sink no deeper than 3/8-inch. Avoid overworking the soil because rainfall following seeding may crust the surface, preventing seedling emergence.
2. If the area to be seeded has been recently loosened, and will provide an adequate seedbed, no additional tillage will be required.
3. If the area to be seeded has been compacted or crusted, the top layer of soil will be tilled.

4. Spike–toothed harrows may also be used during seedbed preparation. The spikes of the harrow will dig lightly into the soil to break up soil masses. Harrows may also be used to cover broadcast seed.
5. The seedbed will be scarified to create sites for seed to lodge and germinate where broadcasting the seed or hydroseeding will be used.

Seeding

1. Seeding of permanent cover will be done, whenever possible, during the recommended seeding date ranges for southeast Wisconsin.
2. If seeding cannot be accomplished before the recommended October 15 seeding deadline, it will be done in conformity with the Critical Area Planting conservation practice standard of the NRCS, or temporary erosion controls will be implemented and the seeding of permanent cover done at the beginning of the next seeding season.
3. Any soil disturbance occurring outside of the recommended October 15 seeding deadline date, or any bare soil left unstabilized by vegetation, will be treated as a winter construction condition and appropriate erosion controls will be installed to minimize erosion over winter and spring thaw.
4. After seedbed preparation, the seed mixes of all the permanent grasses or legume plantings will be applied at the rate determined from the Agricultural Inspector, landowner or recommended by the USDA-Natural Resources Conservation Service (NRCS).
5. In areas where a different seed mix is proposed, seeding will conform to the Critical Area Planting conservation practice standard of the NRCS, Conservation Reserve Program or any other similar federal program.
6. Grass waterways and terraces will be seeded to reestablish grass cover similar to preconstruction conditions. Erosion control measures, such as mulch or erosion control fabric, will be used in conjunction with seeding.
7. If a Certified Organic Farm will be impacted by construction, WISCONSIN ELECTRIC GAS OPERATIONS will coordinate with the affected landowner to ensure that an appropriate seed mix and planting methods are used as required by the farm's Certification Plan.

Best Management Practices for Construction within Agricultural Lands BMP 08 - Crop Compensation

Purpose: To ensure that agricultural landowners are fairly compensated for loss of crop production due to the pipeline project.

Planning

1. WISCONSIN ELECTRIC GAS OPERATIONS will compensate the landowner for crop loss once at the beginning or the end of the project. If the landowner rents or leases out the land to a renter, then the renter will be compensated in lieu of the landowner. There will be an attempt to communicate the agreement of compensation to both the renter as well as the landowner.

2. The value of the crop will be determined by the Payment Worksheet in the Easement Agreement Package. Crop compensation will be based on September/October 2019 futures and will be adjusted upward in year of construction if crop prices increase, but will not change if crop prices decline.

3. The landowner/renter will be compensated a total of 200% of the value of the crop based on the calculation in Item 2 above. 100% of the value of the crop during the year of construction, 60% the first year after construction, and 40% the second year after construction.

4. The landowner/renter would signify agreement by signing a damage release form.

Best Management Practices for Construction within Agricultural Lands
BMP 09 - Three-Lift Soil Handling

Purpose: To maintain the root zone over the trench area to the extent practicable through management of the topsoil, and subsoil layers in areas where the subsoil qualifies for this three-lift protocol.

Organization: The contractor will be responsible for implementing the three-lift soil-handling method. The Agricultural Inspectors (AI) will be available to assist in making "field calls" such as identifying boundaries between soil layers and to monitor compliance with this BMP.

Installation Planning

1. In areas where the AI determines the need to apply the triple-lift soil handling practice during trenching operations, an attempt will be made in preconstruction planning to ensure that adequate construction right-of-way space is made available. WISCONSIN ELECTRIC GAS OPERATIONS will compile a list of potentially affected farmland owners whose land is eligible for triple lift soil handling during excavation of the trench. This will be obtained from NRSC Soil Maps and/or original soil maps for each county. This list of qualifying "candidate" soils and parcels will be provided to the Wisconsin Department of Agriculture, Trade, & Consumer Protection (WDATCP) and to the Agricultural Inspectors (AIs).

2. The criteria for soils qualifying as "candidates" for the three-lift soil handling procedure are determined by WDATCP on lands that involve cultivated croplands, rotated pastureland, or government set-aside program land. Locations of tree-lift soil handling will be confirmed by the AI.

3. Where applicable, WISCONSIN ELECTRIC GAS OPERATIONS will inform landowners possessing lands containing soils within the construction right-of-way (ROW) that meet the three-lift soil handling criteria and offer landowners the option of implementing the three-lift soil trenching procedure on their property during construction.

4. WISCONSIN ELECTRIC GAS OPERATIONS will include in the construction bid documents explanation of the three-lift soil handling procedure along with the potential locations. WISCONSIN ELECTRIC GAS OPERATIONS will also review the process and the potential locations with the bidders during the pre-bid job showing to ensure the potential contractor is well acquainted with the expectations. WISCONSIN ELECTRIC GAS OPERATIONS will also review this process and the potential locations with the selected construction contractor during the construction "kick-off" meeting. The three-lift soil handling process will also be included in WISCONSIN ELECTRIC GAS OPERATIONS's environmental training sessions required for all field personnel prior to working on the construction right-of-way.

Construction

1. WISCONSIN ELECTRIC GAS OPERATIONS may perform additional soil sampling to confirm the depth and extent of soil layers.

2. All topsoil up to a depth of at least 12 inches of will be stripped and stockpiled along the edge of the working side of the construction ROW.

3. After topsoil has been removed (first lift) and trenching begins, a backhoe will remove the upper portion of the subsoil (second lift) and place this layer as far from the trench as the reach of the equipment permits on side of the construction ROW.

4. Where the subsoil material changes the backhoe operator will place this underlying material (third lift) between the trench and the second-lift pile on the side of the right-of-way. Since the depth at which the underlying material is encountered will vary from location to location, the boundary between the upper subsoil and the underlying material will be determined visually by the construction and inspection team, with the advice of the AI when necessary.

5. WISCONSIN ELECTRIC GAS OPERATIONS will attempt to maintain separation between the two piles. Depending on the available workspace and the volume of soil involved, maintaining complete separation between these two piles may not be possible.

6. During backfilling, the operator will make every effort to place the lower subsoil pile material (third layer) of the spoil material in the trench first, and will only then replace the upper subsoil layer (second layer) of the spoil material in the trench.

7. WISCONSIN ELECTRIC GAS OPERATIONS will perform field adjustments as necessary in conjunction with the contractor and AI to ensure lower subsoil or parent material does not become mixed with the upper subsoil by the proper placement of the spoil piles to the extent practicable.

WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION

DIVISION OF

AGRICULTURAL RESOURCE MANAGEMENT

Agricultural Impact Program

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https://datcp.wi.gov/Pages/Programs_Services/AgriculturalImpactStatements.aspx