



Photo 9. ROW Corridor, Fallow Field Vegetation, facing West.



Photo 10 ROW Corridor, Stream, facing Northeast.

Attachment G

Stormwater Pollution Prevention Plan



Storm Water Pollution Prevention Plan

F7581/F7582/F5689—138Kv Garver Substation TLoop

Butler County, Ohio

Duke Project M170053
Cardno Project J156720M76

January 17, 2019

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Storm Water Pollution Prevention Plan

F7581/F7582/F5689—138Kv Garver Substation TLoop

Middletown, Butler County, Ohio

January 17, 2019

Document Information

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Project(s) Name	F7581/F7582/F5689—138Kv Garver Substation TLoop
Project(s) Number	Duke M170053 Cardno J156702M76
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This plan was prepared in accordance with the Rainwater and Land Development: Ohio's Standards for Stormwater Management, Land Development and Urban Stream Protection published December 2006 by the Ohio Department of Natural Resources Division of Soil and Water Conservation and in compliance with ORC Chapter 1511, ORC Chapter 6111, and OAC Chapter 3745-38. In Ohio, responsibility for regulating storm water is held by both local and state authorities. Locally, municipalities, townships, and counties have the authority to regulate storm water. Ohio EPA administers the National Pollutant Discharge Elimination System (NPDES) program, which regulates wastewater discharges that are associated with construction and/or land disturbing activities by limiting the quantities of pollutants to be discharged and imposing monitoring requirements and other conditions.

Certification Requirements per Ohio EPA Permit No. OHC000004 Part V.G.

Corporate Certification (Duke Energy- Owner or Owner Representative)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manages the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name _____
Title _____
Date _____

Contractor Certification (_____ Utility Line General Contractor)

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Name _____
Title _____
Date _____

Contractor Certification (_____ Erosion Control Subcontractor)

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Name _____
Title _____
Date _____

Contractor Certification (_____ Grading and Excavation Subcontractor)

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Name _____
Title _____
Date _____

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Appendices

Appendix A	Figures
Appendix B	Storm Water Pollution Prevention Plan Typical Details
Appendix C	Storm Water Evaluation Form for Construction
Appendix D	SWPPP Amendment Log
Appendix E	Notice of Termination (replace when filed)

Figures

Figure 1	Project Vicinity
Figure 2	Project Area Watersheds (14-Digit HUC)
Figure 3	Soils Classification
Figure 4	Environmental Access and Erosion Control Plan

Acronyms

SWPPP	Storm Water Pollution Prevention Plan
NOI	Notice of Intent
NOT	Notice of Termination
NWP	Nationwide Permit
OEPA	Ohio Environmental Protection Agency
USACE	United States Army Corps of Engineers

SECTION A – Basic Plan Elements

A1 Plan Index showing locations of required items

See Table of Contents

A2 11 X 17 inch plat showing building lot numbers/boundaries and road layout/names

Please refer to Appendix A, Figure 4, Environmental Access and Erosion Control Plan.

A3 Narrative describing project nature and purpose

Duke Energy Ohio proposes to install approximately 0.18-mile (950 feet) of new 69kV transmission line, 0.39-mile (2,046 feet) of new 138kV transmission line, 0.19-mile (1,003 feet) of in-kind replacement of 138kV transmission line, and re-wire approximately 0.11-mile (581 feet) of 69kV transmission line and 0.2-mile (1,056 feet) of 138kV transmission line, located in the City of Middletown, Butler County, Ohio. The project will include installing four (4) new 69kV steel structures, in-kind replacement of five (5) wood 69kV structures with updated steel structures, and rewiring three (3) existing structures along the F7582 line (formerly F5381). Additionally, the project will involve installing twelve (12) new 138kV steel structures, in-kind replacement of one (1) wood 138kV structure with an updated steel structure, and rewiring five (5) 138 kV structures along the F7581 Loop (formerly F5689) in support of expanding the existing Duke Energy Ohio Garver Substation.

The proposed project area consists of approximately 1.28 miles of existing 100-foot wide Duke Energy Ohio transmission line corridor Right-of-Way (ROW). The project initiates at Duke Energy Ohio Structure BT071-92 (39.46592, -84.34695) and terminates at Duke Energy Ohio Garver Substation (39.46687, -84.35283) located north of Enterprise Drive and west of Cincinnati Dayton Road. A field investigation of the corridor was conducted on November 7, 2018.

F7581/F7582/F5689 – 138kV Garver Substation TLoop project is necessary in order to maintain the integrity of existing Duke structures and ensure adequate power supplies to current and future utility customers in the area. The transmission line routes consist of existing and new transmission line corridor and Duke Energy easement.

Construction will be accomplished largely through the use of bucket trucks with truck-mounted augers for structure installation and other construction vehicles transporting cable spools to install the transmission cable along the route. Excavation will be restricted to the locations where the installation of new structures will occur. Earth moving activities are anticipated to be minimal, if any. The extent of access disturbance can vary widely dependent upon many factors, including density and type of surface, vegetative cover, weather conditions, and the type of vehicles moving over the area. The existing vegetation will be preserved to the maximum extent practicable.

Project construction is expected to begin in late Fall 2019.

A4 Vicinity map showing project location

Please refer to Appendix A, Figure 1, Project Vicinity map, which provides a simplified layout of Project activities and adjacent land features and information.

A5 Legal description of the project site

The Project crosses the following section:

Cincinnati East Quad and Cincinnati West Quad

Section 7, Township 2E, Range 4N, Lemon Township: Middletown

A6 Location of all lots and proposed site improvements

The proposed project is linear in scope and will take place within new and existing transmission line ROW. Only approved areas beyond the ROW will be used for equipment storage, temporary access routing, and laydown areas. Where feasible, construction activities at structure locations will be performed from roadways to minimize soil disturbance. Maps of the project site including structure locations, parcel boundaries, and water resources can be found in Appendix A, Figure 4, Environmental Access and Erosion Control Plan.

A7 Hydrologic Unit Code (HUC)

The project lies within the boundaries of the following 14-Digit USGS Hydrologic Unit Code watersheds:

Shaker Creek watershed (HUC 05080002050060)

A8 Notation of any State or Federal water quality permits

If there are proposed impacts to regulated waters which will require a permit from either the U.S. Army Corps of Engineers (USACE) or the Ohio Environmental Protection Agency (OEPA). The Notice of Intent (NOI) for storm water discharges will be submitted contingent on the local reviewing agency approval(s).

A9 Specific points where storm water discharge will leave the site

All discharges are planned to consist solely of storm water runoff through sheet flow leading to existing water courses. There are no planned non-storm water discharges associated with the proposed project.

A10 Location and names of all wetlands, lakes, and watercourses on and adjacent to the site

Wetlands, watercourses, and other waters have been delineated with respect to pole placement. These locations are shown in Appendix A, Figure 4, Environmental Access and Erosion Control Plan. The National Wetland Inventory (NWI) mapped wetlands are shown in Appendix A, Figure 4, Project Vicinity.

A11 Identification of all receiving waters

The storm water runoff from the project will ultimately discharge into the Great Miami River via Shaker Creek.

A12 Identification of potential discharges to groundwater

The proposed site does not contain any known sinkholes, active or abandoned wells, or any other direct groundwater recharge points. Any recharging of the groundwater supply by water from the proposed site will be by natural means of infiltration through the soil.

A13 100 year floodplains, floodways, and floodway fringes

Eighteen (18) structures associated with the F7581/F7582/F5689—138kV Garver Substation TLoop project will be within the FEMA-defined floodplains. The project is exempt from the City of Middletown floodplain requirements per section 3.9C of the City of Middletown's Flood Damage prevention Regulations. See Appendix A, Figures 4.01 to 4.02, for the location of floodplains.

A14 Pre-construction and post-construction estimate of peak discharge

Based on the nature of this project, there will be no impounded storm water. There is no anticipated significant change in peak discharge from this project site between pre-construction and post-construction site conditions or new or impervious surfaces.

A15 Adjacent land use, including upstream watershed

Adjacent land use consists of a mix between industrial, secondary deciduous forest, emergent wetland, agricultural, riparian scrub shrub, and fallow field.

A16 Locations and approximate boundaries of all disturbed areas

The majority of ground disturbance will occur within off-road sections of construction vehicle access routes and the structure installation locations. The expected disturbance for this project is conservatively estimated at less than an acre.

A17 Identification of existing vegetative cover

The existing vegetative cover is mixture secondary growth deciduous forest, forested wetland, emergent wetland, scrub shrub, and fallow field within the projected transmission line ROW.

A18 Soils map including descriptions and limitations

According to the NRCS Soil Survey Geodatabase data collected for Butler County, three (3) mapped soil units are present within the Study Area. Patton silty clay loam is listed as hydric. See Appendix A, Figure 3, Soils Classifications for soil types and hydric classification by line segment.

A19 Locations, size, and dimensions of proposed storm water systems

There is no proposed construction of any permanent storm water systems.

A20 Plan for any off-site construction activities associated with this project

No off-site construction activities are planned for this project.

Any temporary staging and laydown areas for both new and used structures and other equipment will be identified near the time of construction. Typically, Duke Energy substations are utilized for storage, and used structures are taken off-site. Storm water protection will be integrated as necessary at laydown areas and amended into the plan and routine inspections by the Construction Supervisor.

A21 Locations of proposed soil stockpiles, borrow and/or disposal areas

It is anticipated that no soil fill will be brought in. However, gravel backfill will be used at structure locations. Where wetland or stream impacts may occur, spoils management protocol will be followed during structure installation. Where appropriate, any excavated soil, gravel backfill, or other construction material will be stored on construction matting within a wetland area and erosion control measures will be implemented. Excess soil from boring or auguring operations will be permanently relocated to an upland location away from surface drainage ways and wetland areas adjacent to structure replacement locations.

A22 Existing site topography at an interval appropriate to show detailed drainage patterns

Given the project corridor runs through variable terrain, the existing drainage patterns are best depicted and evaluated with 1 foot contours shown in Appendix A, Figure 4, Environmental Access and Erosion Control Plan.

A23 Proposed final topography at an interval appropriate to show detailed drainage patterns

Final post-construction contours will match pre-construction condition to the extent practicable. The construction scope is limited to the replacement of utility structures and overhead facilities.

SECTION B – Active Construction Component

B1 Description of potential pollutant sources associated with the construction activities

The anticipated pollutants to be generated by this type of construction include the following:

- Sediment carried off-site by storm water runoff
- Vegetation debris generated during onsite vegetation removal
- Concrete washout and dewatering operations for projects with foundations
- Domestic garbage from construction workers
- Potential for petroleum spills from heavy equipment operation and refueling

Clearing and/or maintenance trimming will involve mowing and limb cutting with standard forestry equipment and hand cutting where required. In instances where tree or large limbs are removed entirely for access or maintenance they will be cut into appropriate lengths for use by the landowner, or otherwise chipped within the ROW. Digging, grubbing, and any other disturbance will be restricted to locations where the installation of new structures will occur. All excavated materials will be distributed in approved upland locations away from surface drainage ways. Wood chippings and other low-height vegetation will be distributed within the ROW to the maximum extent possible to assist in soil stabilization and sediment runoff control.

Any and all domestic garbage generated onsite such as disposable food and drink containers and other items shall be either carried off-site and properly disposed or deposited into a construction dumpster provided onsite. The project site shall be monitored on a daily basis for the proper disposal of such waste.

The erosion of exposed soils by storm water runoff shall be controlled through the installation of best management practices (BMPs) such as silt fence, fiber rolls, or similar barriers, followed by seeding and mulching. All such practices shall be installed and maintained in accordance with Appendix B, Storm Water Pollution Prevention Plan Typical Details.

Equipment cleaning will be limited to water washing in sediment and erosion controlled areas as required to insure reliable equipment operations while preventing the tracking of excessive dirt and mud from the project site. Soil materials that may need to be removed from the Project ROW will be taken to an upland area or other designated disposal area.

Concrete washout will be completed on projects with foundations at designated concrete washout stations for containment of this waste in accordance with Appendix B, Storm Water Pollution Prevention Plan Typical Details. Any dewatering associated with the excavation for the placement foundations will be conducted through an approved dewatering bag or other upland means of filtering dewatering point discharges.

B2 Sequence describing storm water quality measure implementation relative to land disturbing activities

Due to the nature of the Project, multiple construction stages may take place simultaneously within the Project area. Below is the general sequence of construction activities and storm water quality measures implementation:

The general sequence of construction activities includes the following:

- 1) Installation of temporary construction entrances
- 2) Installation of temporary erosion and sediment control measures
- 3) Construction equipment access
- 4) Removal of existing poles and conductors
- 5) Installation of new poles and conductors

- 6) Final restoration (final grading, seeding, and stabilization)
- 7) Removal of temporary erosion and sediment control measures
- 8) Removal of temporary construction entrances

The storm water pollution prevention measures described within this SWPPP will be installed and inspected before soil disturbing activities commence. Structural erosion controls may also need to be installed along equipment access routes dependent upon site condition. These needs will be assessed as the project progresses. Any erosion controls that need to be moved for equipment transfers will be restored, to the extent practical, before significant rainfalls occur. All storm water quality control measures shall be inspected regularly. At the completion of the project all disturbed areas will be stabilized with vegetation and straw mulch. All measures will be in accordance with guidelines provided in the *Rainwater and Land Development* and this Plan.

As conditions may vary from pre-project condition during construction, sediment control measures may be altered and additional locations for such measures may be needed depending upon changing field conditions. Additional measures may be required and implemented as they become warranted and should be documented in Appendix D, SWPPP Amendment Log. SWPPP revisions or alterations require review and/or approval by a trained individual experienced in the principles of storm water, erosion and sediment control, treatment, and monitoring for Duke Energy Projects.

Recognizing the increased potential for erosion special care will be taken to seed and mulch construction travel ways in highly erodible or steep slope areas. Additional measures such as water bars, erosion matting, or other appropriate measures may be employed as necessary to protect the land surface from erosion until termination of the permit is verified and the Notice of Termination (NOT) is filed with OEPA (Blank copy of NOT is provided in Appendix E).

Stabilized construction entrances or other means of limiting the tracking of sediment and debris off-site will be used at roadway intersections whenever possible. All debris or sediment tracked onto road ways will be removed at the end of the day to the maximum extent possible. Large equipment movement to each structure associated with, but not limited to, disassembly, framing, and clipping-in of line will be limited to the maximum extent possible to further reduce ground disturbance.

Temporary or permanent seeding stabilization will adhere to specifications in Subsections B11 and B12. Vegetated areas with a density of less than seventy percent (70%) shall be re-stabilized using appropriate methods to minimize the erosion potential. No structural erosion controls will be removed until construction has permanently stopped and reseeding and mulching has occurred. After the entire project is complete and vegetated coverage is at least 70% any accumulated sediment, fiber rolls, silt fence, or other specified erosion and sediment control measures will be removed.

Wherever equipment crossing drainage ways in steeply sloping areas will result in soil disturbances a combination of temporary timber matting bridges and water bars to divert runoff to the installed sediment controls or vegetative filter areas will help reduce impacts from concentrated flows to receiving streams.

B3 Stable construction entrance locations and specifications

Stabilized construction entrances will be installed when warranted based on project duration or varying site conditions impacted by wet weather patterns. Special consideration shall be given for installation of a stable construction entrance in the event of wet weather or high ingress and egress traffic. Stable construction entrances and other means of limiting the tracking of sediment and debris off-site will be used. Additional construction entrances, other than the ones indicated in the Plans, may be required and implemented as they become warranted based on variable site conditions. All debris or sediment tracked onto roadways will be removed at the end of the day to the maximum extent possible. The existing construction entrances will be evaluated and modified to be in accordance with *Rainwater and Land Development* and this Plan as deemed necessary.

B4 Sediment control measures for sheet flow areas

Runoff and sediment control practices will include a combination of fiber roll (or other plant fiber-based barrier) and/or silt fencing. These sedimentation and erosion control measures will be located at specific locations along the construction route to prevent sediment runoff into streams, wetlands, and other open waters. The placement and use of erosion control structures indicated in Appendix A, Figure 4, Environmental Access and Erosion Control Plan will be installed in accordance with Appendix B, SWPPP Typical Details and be in compliance with the *Rainwater and Land Development* manual. If required, additional appropriate structural controls will be implemented as the Project progresses. Plan changes require approval of Duke Energy.

B5 Sediment control measures for concentrated flow areas

No areas of concentrated flow are expected for this project. If conditions dictate fiber roll or rock check dams will be used, as appropriate, within the ephemeral drainages along the route to limit sedimentation within the drainage and off-site. At locations where equipment crosses drainage ways in steeply-sloping areas, which could result in soil disturbance, a combination of temporary timber matting bridges and water bars to divert runoff to sediment controls or vegetative filter areas can help reduce impacts from concentrated flows to receiving streams.

B6 Storm sewer inlet protection measure locations and specifications

Not applicable for this project.

B7 Runoff control measures

Water bars can be used to prevent runoff flows from occurring in wheel rutting on steep slopes which will impact receiving streams.

B8 Storm water outlet protection specifications

Not applicable for this project.

B9 Grade stabilization structure locations and specifications

Not applicable for this project.

B10 Location, dimensions, specifications and construction details of each storm water quality measure

The locations of the sediment control structures are indicated in Appendix A, Figure 4, Environmental Access and Erosion Control Plan. The general specifications for each practice are located in Appendix B, SWPPP Typical Details. As construction progresses Duke Energy will consider modification to or addition of erosion control structures depending on changing site conditions with respect to slope and proximity to adjacent water bodies.

B11 Temporary surface stabilization methods appropriate for each season

In the event temporary stabilization is required (when construction activity has ceased but will resume in fourteen (14) days or more), either seeding or mulch application or other stabilization measure will be implemented within seven (7) days of the most recent disturbance. Areas within 50 feet of a stream (including intermittent streams) will be stabilized within 2 days of the most recent disturbance. Mulch alone is acceptable temporary cover and may be used in lieu of temporary seeding, provided that it is appropriately anchored. A high potential for fertilizer, seed, and mulch to wash exists on steep banks, cuts, and in channels and areas of concentrated flow.

Table 1. Temporary Seed Mixture

Species	Application Rate
Annual Ryegrass	40 lbs./acre
Oats	128 lbs./acre
Tall Fescue	40 lbs./acre

Straw mulch should be used at a rate of 2 tons/acre or 90 lbs./1,000 sq. ft. for seed protection and additional erosion control. It should be spread by hand or machine and be crimped or anchored, as appropriate. If slopes necessitate the use of a mulch cover, then erosion control blanketing shall be substituted. No hay should be used as it may introduce invasive non-native species to adjacent undisturbed habitats (such as hardwood forests or wetland areas).

B12 Permanent surface stabilization specifications

Areas within fifty (50) feet of a stream will require permanent surface stabilization within two (2) days of the last disturbance. Stream bank and riparian floodplain areas shall be mulched and seeded with the Stream Bank and Riparian Areas Restoration Seed Mix as recommended by Ohio DNR staff as follows.

Table 2. Stream Bank and Riparian Areas Restoration Seed Mix

Grass and Sedge Species	Application Rate
<i>Andropogon gerardii</i> (Big Bluestem)	24 oz./acre
<i>Bouteloua curtipendula</i> (Sideoats Grama)	1 oz./acre
<i>Carex bicknellii</i> (Prairie Oval Sedge)	2 oz./acre
<i>Elymus canadensis</i> (Canada Wild Rye)	2 oz./acre
<i>Dactylis glomerata</i> (Orchard grass)	24 oz./acre
<i>Panicum virgatum</i> , Switchgrass)	4 oz./acre
<i>Schizachyrium scoparium</i> (Little Bluestem)	3 oz./acre
<i>Sorghastrum nutans</i> (Indian Grass)	0.5 oz./acre
Cover Crop Species	Application Rate
<i>Avena sativa</i> (Seed Oats)	800 oz./acre
<i>Lolium multiflorum</i> (Annual Ryegrass)	160 oz./acre

All other areas of soil disturbance will be seeded and mulched for permanent surface stabilization within seven (7) days in areas where construction has ceased and the site is at final grade or will lay dormant for more than one (1) year. Any permanent seeding should consist of a seed mixture appropriate for the area that has been disturbed and conducted during the season appropriate for its installation.

Non-agricultural areas including access and other vegetated ROW areas shall be permanently mulched and seeded with a general use permanent seed mix consisting of the following:

Table 3. General Use Permanent Seed Mixture

Species	Application Rate
Kentucky Bluegrass	20-40 lb/acre
Perennial Ryegrass	10-20 lb/acre
Creeping Red Fescue	20-40 lb/acre

Site Preparations for installing both seed mixes are as follows:

Site Preparation: Use appropriate equipment to level disturbed areas and return to original grades focusing on reinforcing positive drainage. Avoid compaction during construction by placing equipment on mats to access wet or saturated areas. Soil amendments are acceptable in non-native seeding areas.

Seed Preparation: Thoroughly mix the seed prior to planting as many of the heavier seeds may have settled during shipping. The seed mix will contain a temporary cover of Common Spring Oat and Annual Ryegrass to accelerate re-vegetation.

Planting: Seed will be worked into the soil no greater than a ¼ inch in depth. For smaller areas a hand broadcaster and rake can be used. For larger areas the seed can be installed mechanically with a seed box no-till drill (Truax™ Trillion Broadcast Seeder or equivalent). Areas that are too wet for mechanical seeding will be installed via the hand broadcasting method.

Mulching: Straw mulch should be used at a rate of 2 tons/acre for all natural areas, non-maintained areas, for seed protection and additional erosion control. Swales and other areas of concentrated flow should be stabilized with erosion control blanketing.

B13 Material handling and spill prevention plan

Unlikely incidents involving spills or releases of other non-sediment pollutants are expected to be limited to small quantities of petroleum products from construction vehicles, including but not limited to motor oil, transmission fluids, and hydraulic oils. Spill clean-up kits and personnel trained in their use will be at each construction location. No vehicle maintenance activities that could result in storm water contamination (oil changes or engine repairs) will be permitted outside of stabilized construction areas. Appropriate spill control measures (oil absorbent pads or booms) must be in place before maintenance activities occur.

Spills of any amount of petroleum product or polluting materials are to be prevented. The following list details general requirements necessary to avoid spills and minimize the impact of accidental spills:

- No bulk quantities of diesel fuel and gasoline will be stored on the site. No bulk quantities of hazardous materials including solvents and lubricants will be stored on the site.
- Vehicles and equipment are expected to be re-fueled off-site. Fuel carriers (if applicable) and transported equipment will be inspected on a daily basis for leaks prior to entering the site and will not be allowed on site until leaks are repaired.
- The equipment staging area will be located away from surface waters and any private and municipal water wells.
- All construction equipment will be inspected daily for leaks prior to start of work. Any leaking equipment will be repaired, as necessary.
- If any soil is contaminated with hydrocarbons or other objectionable material, it will be segregated and properly disposed of off-site.
- If concrete materials are used on-site, concrete washouts should be used. No washout of concrete materials should occur within wetland areas or other drainage ways.

Project related solid wastes will be collected regularly and transferred to a licensed solid waste disposal site. No construction waste materials will be buried onsite. Portable sanitary waste units will be utilized and available for the project. A licensed sanitary waste management contractor will collect sanitary waste from the portable units as necessary. It will be the responsibility of the Construction Supervisor to ensure that all construction personnel are instructed regarding the correct procedure for waste disposal and that these practices are followed.

Contractors shall provide all necessary labor, materials, equipment, and response capabilities to prevent oil releases. Contractors causing an oil release must take appropriate actions to minimize the environmental impacts of the release.

If a hazardous substance release or oil spill requiring attention shall occur during construction, the responsible party shall immediately contact the Duke Energy Construction Supervisor, who will then contact Duke Energy Health and Safety or Environmental Services to report the spill as necessary and ensure that the spill is cleaned up properly by the responsible party or an approved remediation contractor.

In an emergency, immediately report all spills to the appropriate Duke Energy Coordinator. All spill notifications shall follow Duke Energy procedures.

Duke Energy Spill Hotline 1-800-527-3853

B14 Monitoring and maintenance guidelines for each proposed pollution prevention measure

To maintain the storm water management system in effective operating condition, erosion and sedimentation control structures will be inspected daily if construction personnel are actively working in the area. In addition, each installed erosion and sedimentation control structure, and areas contributing to storm water discharges at the locations of these structures, will also be regularly inspected at least weekly and again after each rainfall/precipitation event exceeding ½ inch in 24 hours by qualified personnel under the direction of Duke Energy.

Any damage or deficiency noted during routine or regular inspections will be recorded on a Storm Water Evaluation Form for Construction (Appendix C) and corrected as directed by the Construction Supervisor. The written inspection records will be kept on file and will include notes on any corrective actions taken. If requested, these records will be made available for review by the 'inspecting authority within 48 hours' per OAC Chapter 3745-38 (NPDES). Inspection records will be kept onsite with the SWPPP to the greatest extent possible.

Any deficiencies will be corrected by repair of damaged or deteriorated controls or by modifying structural or operational practices to achieve the desired results. If needed, the SWPPP shall be revised following such modifications.

Maintenance of stabilization and erosion control measures will include the following:

- "Qualified Inspection Personnel" under the direction and designation of the Construction Supervisor will be responsible for inspections of the erosion controls and completion of the Storm Water Evaluation Form for Construction.
- It is the responsibility of the Construction Supervisor that all personnel selected for maintenance responsibilities are trained in repairs as necessary to keep the erosion and sedimentation controls in good working order.
- Fiber rolls, silt fence, or other specified erosion control measure will be inspected for proper installation and function to include the following: proper anchoring of all controls, depth of sediment, separation from adjacent structures, and to see that stakes are firmly in the ground. Built up sediment will be removed when it has reached one-half (1/2) the height of the control and placed in previously stabilized and upland area.
- Seeded areas shall be checked regularly for bare spots, washouts, and healthy growth to assure that a good stand of grass is being maintained. Areas that fail to establish vegetation cover will be re-seeded as soon as such areas are identified.
- Sediment tracking from temporary construction entrances onto roadways should be minimized and will be the responsibility of the Construction Supervisor. When sediment is observed on roadways it shall be removed at the end of each workday.

B15 Erosion & sediment control specifications for individual building lots

Not applicable for this project.

SECTION C – Post Construction Component

C1 Description of pollutants and their sources associated with the proposed land use

The proposed project contains existing and newly constructed transmission lines and Duke Energy transmission ROW. No post construction pollutants are expected.

C2 Sequence describing storm water quality measure implementation

Seeding and vegetation establishment are the only long-term storm water quality measures proposed for the Project. See Subsection B11 and B12 for a description of seeding implementation.

C3 Description of proposed post construction storm water quality measures

The site will be returned to its previous use and condition. Post-construction pollutant controls are addressed by establishment of permanent vegetative cover in all areas, except those that will be returned to agricultural crops. Cover crop, or nurse crop seed mix, may be used in agricultural areas that are not to be immediately cultivated.

C4 Location, dimensions, specifications and construction details of each storm water quality measure

See Subsection C3.

C5 Description of maintenance guidelines for proposed post construction water quality measures

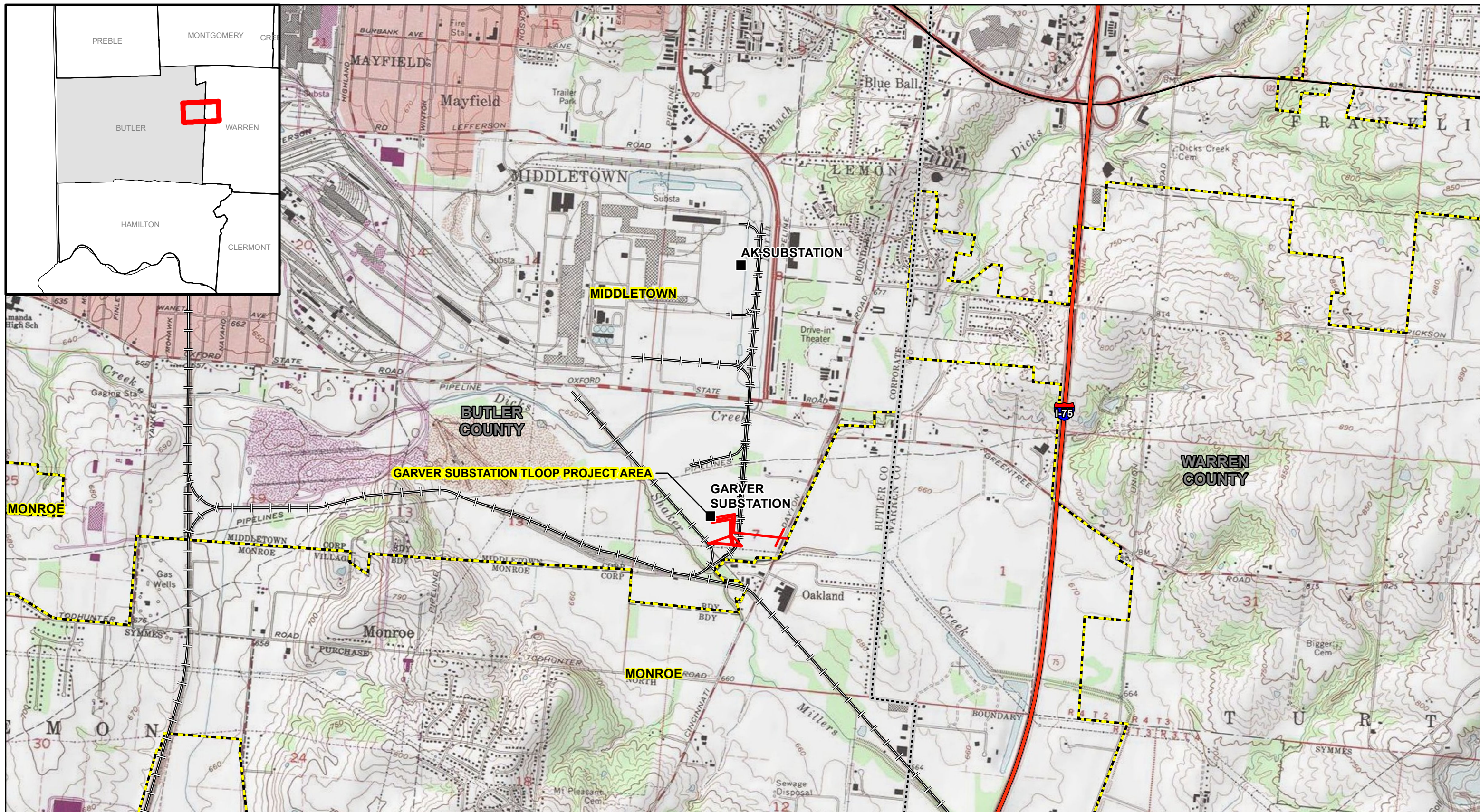
Seeded areas will be inspected to ensure adequate vegetative establishment and coverage. Adequate coverage shall be defined as greater than or equal to 70% areal coverage by visual estimation. Reseeding, watering or fertilization shall be utilized to meet this goal. Fertilizer should not be used in areas requiring native seeding. The ROW will be maintained in accordance with easement guidelines and consist of vegetative mowing and/or woody removal. All temporary erosion and sediment control measures will be removed prior to the NOT being approved.

Routine inspections and monitoring of erosion control structures will end and structures removed, once the disturbed soil areas are permanently re-established with a vegetative cover of at least 70% or greater density (final stabilization). Final stabilization in agricultural areas is defined as returning the disturbed land to its pre-construction agricultural use.

When all construction and ground disturbance activities have ceased, final stabilization has been documented, and all temporary erosion measures are removed, if required the NOT shall be submitted to the OEPA within 45 days. The NOT shall be also submitted to any other Local agencies that required review of the Project.

Appendix A

Figures



REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE: MONROE. OBTAINED VIA ESRI USA TOPO, NATIONAL GEOGRAPHIC TOPO, AND USGS, ACCESSED 01/2017.



0 1,000 2,000 4,000 Feet

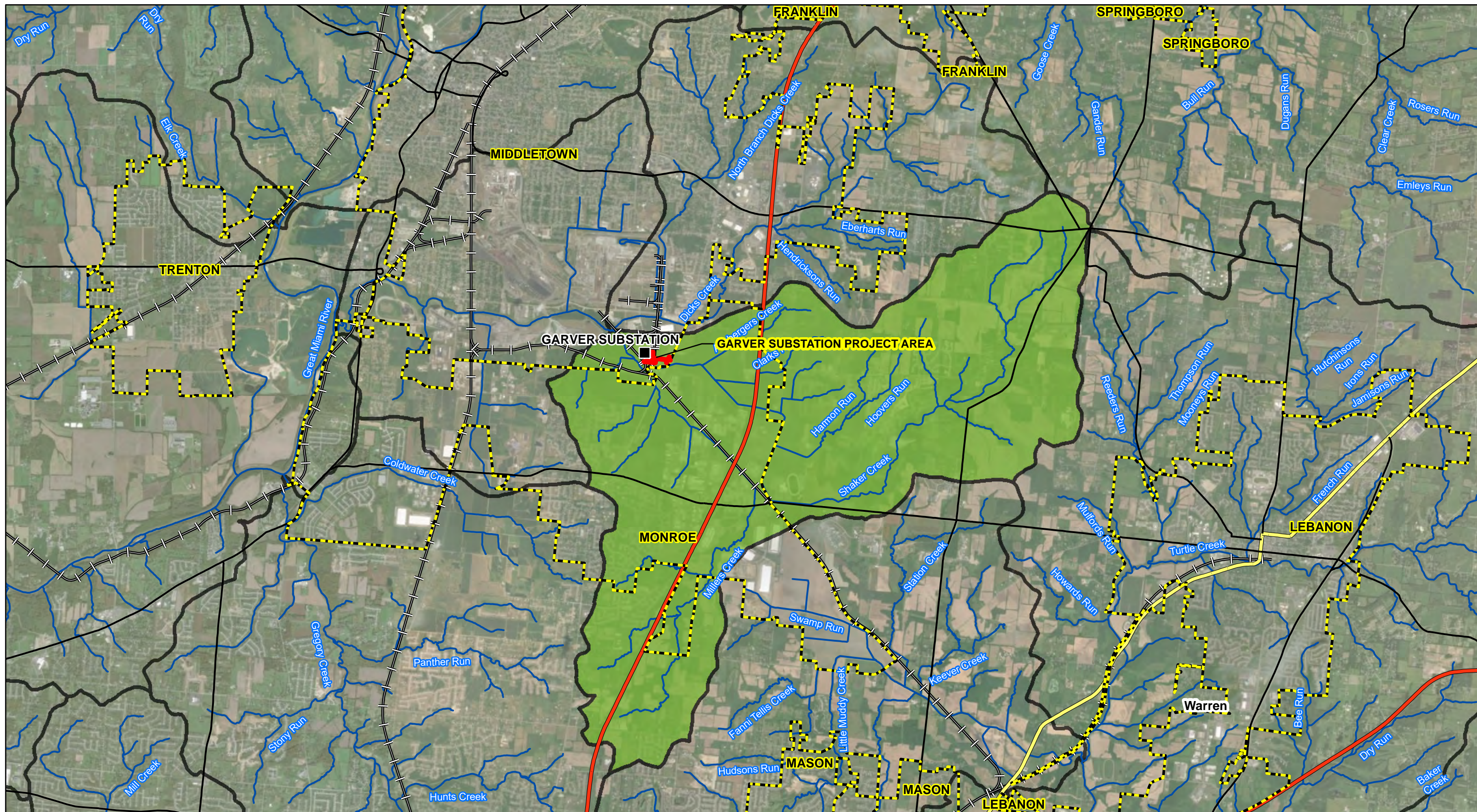
- Existing Facility
- Project CenterLine
- Interstate
- State Highway
- US Highway
- Railroad
- County Boundary
- - - Municipal Boundary



FIGURE 1
STORMWATER POLLUTION PREVENTION PLAN
F7581/F7582/F5689 -138Kv Garver Substation TLoop
DUKE ENERGY
PROJECT VICINITY MAP

DRAWN BY: COD
 CHECKED: CJ

DATE: 1/18/2019
 APPROVED: JT



PROJECT LOCATION

BUTLER COUNTY, OH

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE: MONROE. OBTAINED VIA ESRI USA TOPO, NATIONAL GEOGRAPHIC TOPO, AND USGS, ACCESSED 01/2017.

■ Existing Facility	—+—+— Railroad
— Project Centerline	— NHD Flowline
- - - Municipal Boundary	▭ Adjacent Watersheds
— Interstate	▭ Shaker Creek
— State Highway	
— US Highway	

FIGURE:2

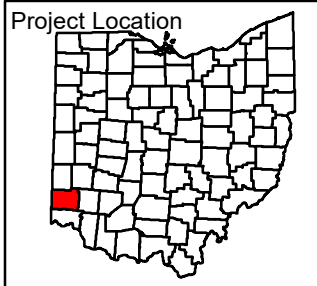
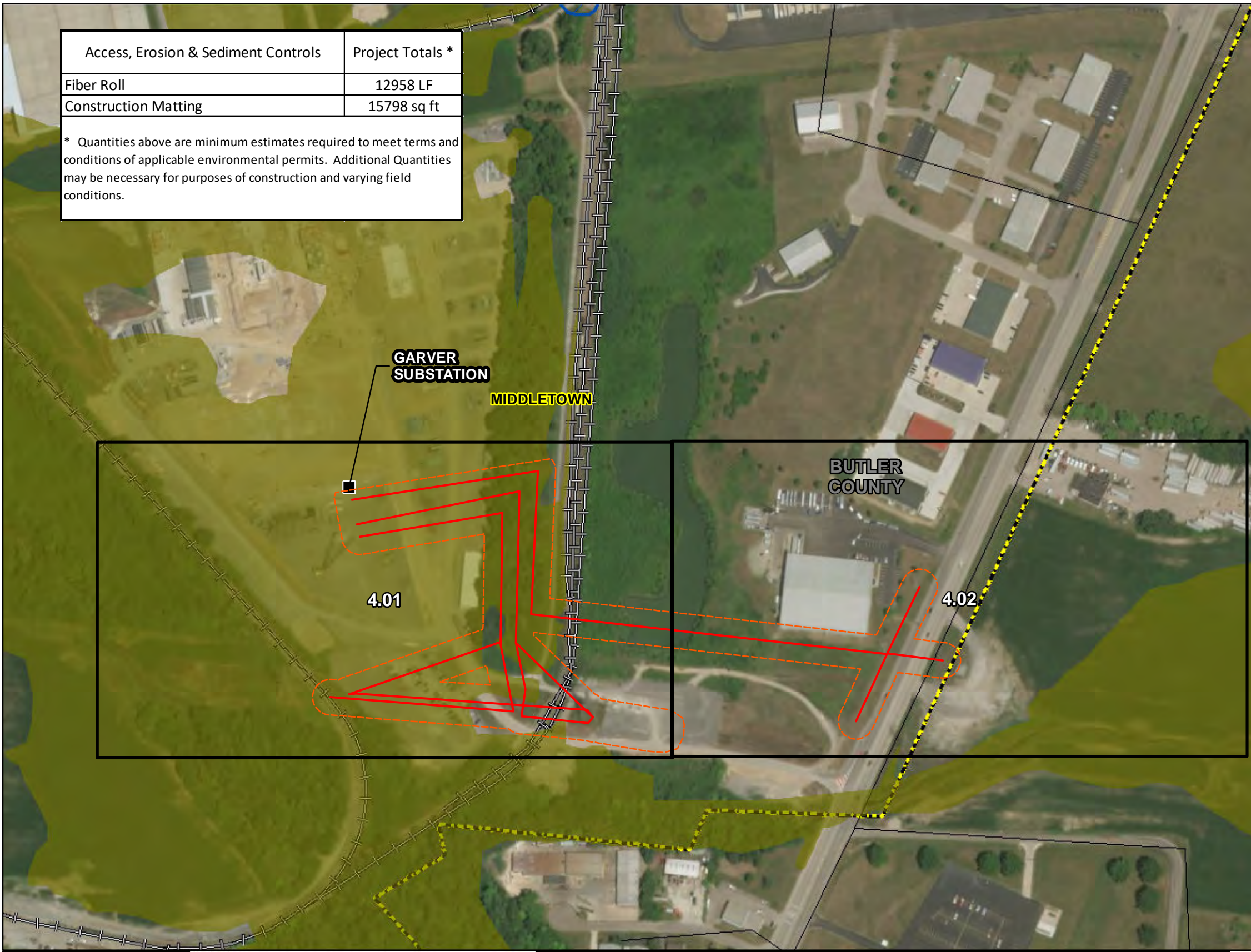
STORMWATER POLLUTION PREVENTION PLAN
 F7581/F7582/F5689 -138Kv Garver Substation TLoop
 DUKE ENERGY
 PROJECT AREA WATERSHEDS

DRAWN BY: COD DATE: 1/10/2019
 CHECKED: CJ APPROVED: JT

Access, Erosion & Sediment Controls	Project Totals *
Fiber Roll	12958 LF
Construction Matting	15798 sq ft

* Quantities above are minimum estimates required to meet terms and conditions of applicable environmental permits. Additional Quantities may be necessary for purposes of construction and varying field conditions.

- GENERAL NOTES:**
- UTILITY LINE INFORMATION SHOWN ON THIS DRAWING IS FOR GRAPHIC REPRESENTATION ONLY AND DOES NOT SUBSTITUTE THE ENGINEERING PLANS.
 - ENVIRONMENTAL ASSESSMENT IS LIMITED TO THE RIGHT-OF-WAY CORRIDOR UNLESS NOTED OTHERWISE. STREAM, WETLAND, AND POND BOUNDARIES MAY EXTEND BEYOND STUDY AREA.
 - SEE EROSION AND SEDIMENT CONTROL DETAILS FOR MORE INFORMATION AND INSTALLATION REQUIREMENTS.
 - THE SWPPP MAY BE AMENDED AS NECESSARY BY THE DUKE ENERGY CONSTRUCTION SUPERVISOR AND INSPECTING AUTHORITY DEPENDENT ON SITE CONDITIONS.
 - PROPOSED ACCESS INDICATES RECOMMENDED APPROXIMATE CONSTRUCTION ROUTE IN THE RIGHT-OF-WAY AND OFFSITE AREAS TO MINIMIZE ENVIRONMENTAL DISTURBANCE AND PERMITTING. CONSTRUCTION ROUTE SHALL BE RESTRICTED TO 20-FOOT WIDE PATH. ANY ROUTES OTHER THAN THOSE RECOMMENDED MAY REQUIRE ADDITIONAL PERMITTING AND CAUSE DELAYS IN PROJECT.
 - ADEQUATE CONSTRUCTION ENTRANCES SHALL BE PROVIDED OFF ALL PUBLIC ROADWAYS. SITE CONDITIONS AT EACH ENTRANCE SHALL BE EVALUATED BY THE CONSTRUCTION SUPERVISOR TO DETERMINE AMOUNT OF STONE AND TYPE OF GEOTEXTILE FABRIC UNDERLINER.
 - OUTSIDE OF AGRICULTURAL FIELD BOUNDARIES, TEMPORARY OR PERMANENT SEEDING SHALL BE APPLIED IN ALL AREAS LEFT DISTURBED 15 DAYS OR MORE PER SWPPP SPECIFICATIONS.
 - EROSION CONTROL BLANKET OR HYDROMULCH SHALL BE SUBSTITUTED FOR STRAW MULCH ON ALL SLOPES GREATER THAN 3:1 AND ADJACENT TO STREAM CHANNELS.
 - EROSION CONTROL MEASURES ARE ESTIMATED. THE LOCATION AND QUANTITY MUST BE FIELD VERIFIED BY QUALIFIED INDIVIDUAL.
 - TEMPORARY MATTING SHALL BE UTILIZED AS NEEDED FOR ACCESS AND CONSTRUCTION IN WETLAND AREAS.
 - VEGETATIVE MAINTENANCE MAY PRECEDE CONSTRUCTION ACTIVITY BUT EROSION AND SEDIMENT CONTROL PLACEMENT SHALL BE REQUIRED PRIOR TO CONSTRUCTION ACTIVITIES.
 - DISTURBANCE FROM MECHANIZED EQUIPMENT IS NOT PERMITTED IN REGULATED WETLANDS AND STREAMS. HAND CUTTING OR WORK OFF OF CONSTRUCTION MATTING REQUIRED IN THESE AREAS.
 - ALL FORESTRY CLEARING DEBRIS MUST BE REMOVED FROM REGULATED WETLANDS AND STREAMS. CHIPPING OR STOCKPILING PERMISSIBLE IN UPLAND AREAS ONLY.
 - NHD FLOWLINES ARE SHOWN FOR REFERENCE ONLY AND DO NOT NECESSARILY DEFINE THE PRESENCE OF A STREAM. INCREASED WATER FLOW AND/OR EROSION MAY OCCUR IN THESE AREAS, ESPECIALLY WHEN VEGETATION IS REMOVED.



REFERENCE:
ESRI WORLD IMAGERY, OBTAINED THROUGH ESRI WORLD IMAGERY MICROSOFT CORPORATION, ACCESSED 01/2017

Sheet Index	Interstate	County Boundary
100ft Corridor	State Highway	Municipal Boundary
Existing Facility	US Highway	100Yr Floodplain
Project Centerline	Railroad	OH_Wetlands
NHD Flowline		



FIGURE: 4
STORMWATER POLLUTION PREVENTION PLAN
F7581/F7582/F5689 -138Kv Garver Substation TLoop
DUKE ENERGY
INDEX SHEET

DRAWN BY: COD DATE: 1/11/2019
CHECKED: CJ APPROVED: JT