

**NOTICE OF APPLICATION FOR FEDERAL CONSISTENCY REVIEW
LAKE MICHIGAN COASTAL ZONE PROGRAM**

Project Number: ER-17442-1

Name of Applicant: Max Henschen

Address of Applicant:

Indiana Finance Authority
100 North Senate Avenue
Room 1275
Indianapolis, IN 46204

Project Description:

Morningside sewer piers/supports replacement project for an overhead sewer line running through a forested wetland near the Little Calumet River, Chesterton; SRF #WW13 10 64 02

Location of Project:

Chesterton, IN; Porter County

Send comments to the following no later than Friday, April 4, 2014:

Federal Consistency Review Coordinator, Environmental Unit
Division of Fish and Wildlife
Department of Natural Resources
402 West Washington Street, Room W273
Indianapolis, IN 46204
Electronic mail: environmentalreview@dnr.in.gov

Copies of the request, accompanying information and data are available for inspection at the following location:

Environmental Unit
Division of Fish and Wildlife
Department of Natural Resources
402 West Washington Street, Room W273
Indianapolis, IN 46204

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-17442

Request Received: February 14, 2014

Requestor: Indiana Finance Authority
Max T Henschen
100 North Senate Avenue
Room 1275
Indianapolis, IN 46204

Project: Morningside sewer piers/supports replacement project for an overhead sewer line running through a forested wetland near the Little Calumet River, Chesterton; SRF #WW13 10 64 02

County/Site info: Porter

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: This proposal may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of the Little Calumet River. Please submit more detailed plans to the Division of Water's Technical Services Section if you are unsure whether or not a permit will be required.

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Riparian Habitat:

Construction and equipment access should be confined to the existing disturbed or cleared areas to the greatest extent possible. Based on 2011 aerial images, a cleared path exists from the water tower south near the project area. Using this path will help to reduce impacts to the surrounding habitat.

We recommend a mitigation plan be developed (and submitted with the permit application, if required) if habitat impacts will occur. The DNR's Floodway Habitat Mitigation guidelines (and plant lists) can be found online at:

<http://www.in.gov/legislative/iac/20120801-IR-312120434NRA.xml.pdf>. You may contact Lori White, North Region Environmental Biologist, at (765) 472-7981 for guidance regarding development of the plans.

Impacts to non-wetland forest over one (1) acre should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees).

THIS IS NOT A PERMIT

**State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment**

A native riparian forest mitigation plan should use at least 5 canopy trees and 5 understory trees or shrubs selected from the Woody Riparian Vegetation list or an approved equal. A native riparian forest mitigation plan for impacts of less than one acre in an urban area may involve fewer numbers of species, depending on the level of impact. Additionally, a native herbaceous seed mixture should be planted consisting of at least 10 species of grasses, sedges, and wildflowers selected from the Herbaceous Riparian Vegetation list or an approved equal.

2) Wetland Habitat:

Due to the presence or potential presence of wetlands on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetlands should be mitigated at the appropriate ratio (see guidelines above).

3) Exposed Soils:

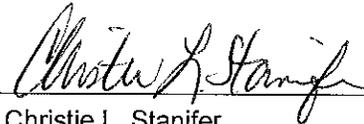
All exposed soil areas should be stabilized with temporary or permanent vegetation by November 1. Between November 1 and April 1, all exposed soils idle for longer than 7 days should be stabilized with erosion control blankets or with a bonded fiber matrix hydro-mulch. Sites should be protected from seasonal flooding by keeping traffic areas covered with stone and soil stockpiles seeded, stable and contained with silt fencing.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.
2. Minimize and contain within the project limits all tree and brush clearing.
3. Do not cut any trees suitable for Indiana bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark) from April 1 through September 30.
4. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
5. Seed and protect all disturbed streambanks and slopes that are 3:1 or steeper with erosion control blankets (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.



Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

Date: March 20, 2014



State Revolving Fund Loan Programs

Drinking Water, Wastewater, Nonpoint Source

MEMORANDUM

To: Christie Stanifer, Environmental Coordinator
Department of Natural Resources
Division of Fish and Wildlife
402 West Washington, St., Room W 264
Indianapolis, Indiana 46204

From: Max Henschen, ^{MTH} mhensche@ifa.in.gov, 2-8623
Environmental Review Coordinator
SRF Programs, IGCN 1275

Date: February 13, 2014

Re: **Chesterton, Porter County, Westchester Township**
Morningside Sewer Supports Replacement Project
Chesterton quad, T37N, R6W, Section 36
State Revolving Fund Project WW 13 10 64 02

Chesterton needs to replace deteriorating piers that support an overhead sewer line that runs through a forested wetland near the Little Calumet River. The wetland will incur 0.10 acres of temporary impact for the installation and removal of timber matting for construction activities related to sewer supports project. Some small trees and brush will need to be cleared. The proposed project is located within the 100-year floodplain.

The Chicago office of the Corps of Engineers is waiting on comments from the USFWS and the DNR Environmental Unit to finish the draft Regional General Permit. We will forward your comments to the town's consultant (STV Inc., Chicago), who will in turn forward them to the Corps.

The projects will not negatively affect the Lake Michigan Coastal Program Area. We assert that the project will be conducted consistent with state laws to the maximum extent practicable.

We are attaching graphics that show the project location, and we're also attaching the Environmental Impacts chapter of the town's Preliminary Engineering Report (PER) (with sections relating to already-approved projects crossed out), a copy of the 90% complete plans, the RGP submittal to IDEM by the wetland delineators, and the wetland delineation.

We ask that your office review the attached material and notify us of your comments on the project as soon as possible. Comments should be sent to me. As usual, please call or email if you have any questions.

MTH/mth

- Attachments:
1. Project Graphics (Figures 1-5)
 2. Environmental Impacts discussion from the town's PER
 3. 90% complete plans
 4. Regional General Permit submitted to IDEM by the wetland delineators (less plans, the delineation and CoE correspondence)
 5. Wetland delineation

CHAPTER 5 - EVALUATION OF ENVIRONMENTAL IMPACTS

5. Evaluation of Environmental Impacts

5.1. Disturbed/Undisturbed Land

The project site is the Chesterton Waste Water Treatment Plant which was originally constructed in 1963 and later expanded in 1987 and 2001. All proposed activities will take place within the existing facility.

Ground-disturbing construction activities include construction of a Wet Weather Headworks building, installation of a 1.2 million gallon CSO storage tank, and installation of underground piping between the Headworks building and the CSO storage tank and construction of paved roadway linking existing facilities to the CSO storage tank. Construction of the headworks building will require disturbance to an area 110 feet long and 20 feet wide. Installation of the CSO storage tank will require disturbance to an area 115 feet long and 90 feet wide. Installation of the underground piping will require construction areas measuring approximately 500 feet long by 10 feet wide and 365 feet long by 5 feet wide. Construction of the proposed paved roadway will require disturbance to approximately 15,000 square feet of surface area. The total area of disturbance is approximately 34,400 square feet, or 0.79 acres.

The entire Waste Water Treatment Plant is located on fill that was placed to raise the elevation of the site above the 100-year floodplain of the Little Calumet River. The site consists entirely of previously disturbed land.

Construction activities for replacement of the Morning Side Sewer supports will involve ground disturbance. As noted below, an archaeological review was completed to determine whether undisturbed land would be affected. The archaeological report documents that the area to be affected by replacement of the sewer supports has been previously disturbed.

Construction, operation, and maintenance of the projects will not affect undisturbed land.

5.2. Historic Resources

A review of the *Indiana Historic Sites and Structures Inventory, Porter County Interim Report* (1991) indicates that the projects are not located adjacent to any property rated as Contributing, Notable or Outstanding except for the Westwood lift station which is described in further detail below. The Interim Report maps depicting the project location are presented as **Figures 7, 8 and 9.**

Westwood Road

The Westwood Road Lift Station is located in proximity to Inventory #127-108-15005. This property is a c.1920 bungalow style house that is rated Contributing.

The project involves upgrade to control systems. The project will not be visible from this property.

In addition to the Interim Report, the following sources of available information were reviewed on-line to determine the potential presence of historic properties in the project vicinity:

- Indiana Properties Listed on the State and National Registers (<http://www.in.gov/dnr/historic/files/hp-nrlist.pdf>). No additional potential properties were identified.
- Indiana Properties Listed only on the State Register (<http://www.in.gov/dnr/historic/files/hp-srlist.pdf>). No additional potential properties were identified.
- Listing of Indiana's National Historic Landmarks (<http://www.nps.gov/history/nhl/designations/Lists/IN01.pdf>). No additional potential properties/landmarks were identified.
- Properties listed on the National Register of Historic Places, National Park Service – United States Department of Interior website (<http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome> National). No additional potential properties were identified.

Construction, operation and maintenance of the project will not affect historic or architectural properties.

5.2.1. Archaeological Review

Because the project involves ground disturbance, an archaeological review of the areas to be disturbed has been completed. No archaeological sites were identified. The archaeological report is included in **Attachment F**.

5.3. Wetlands

Based upon a review of the National Wetlands Inventory (NWI) Map, the Morningside aerial sewer work area is depicted to be in the vicinity of the wetlands. A wetland delineation conducted on June 10, 2013 confirmed the presence of an on-site forested wetland within the project footprint. The wetland was determined to be under the jurisdiction of the U.S. Army Corp of Engineers (COE) which requires permitting for any work in wetlands under their jurisdiction.

Impacts to the on-site wetland were minimized to the greatest practicable extent. The wetland will incur 0.10 acres of temporary impact for the installation (and removal) of timber matting for construction activities related to rehabilitation of the Morningside aerial sewer supports. Therefore, a wetland permit is required. Coordination with the Indiana Department of Environmental Management (IDEM) is also required. No other projects have proposed wetland impacts. A copy of the NWI map is presented as **Figure 5**.

(Revised 12/12/13)

5.4. Hydrology

5.4.1. Surface Waters

The WWTP and lift station projects will not cross any surface waters (refer to **Figure 5**). The work proposed at the Morning Side Sewer will cross the surface water. The existing sewer crosses the Little Calumet River via a pipe bridge (**Attachment L**). Work is limited to the in-kind replacement of the existing sewer supports, which are above the surface water elevation. Work will not be performed from the water and no fill materials will be placed within the river.

Therefore, the projects will not adversely affect ^{1.3-3(d)} waters of high quality ^{outstanding state} listed in 327 IAC 2-1-2(3), exceptional use streams listed in 327 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-2, Salmonid Streams listed in 327 IAC 2-1.5-5(a)(3), or waters on the Outstanding Rivers list (Natural Resources Commission Non-rule Policy Document).

*Little Cal
is an
Outstanding
River*

5.4.2. 100-Year Floodplains and Floodways

Based upon a review of the Indiana Map DFIRM layer, the WWTP projects is adjacent to the 100-year floodplain of the Little Calumet River; however, no construction activities are proposed within the 100-year floodplain or a regulatory floodway. A 100-year floodplain map is presented as **Figure 6** for all the projects in this section. The work activity at the Porter Cove Lift Station is located within a 100-year floodplain or regulatory floodway. Proposed work activities are limited to upgrades to control systems.

The Morning Side Sewer Supports are located within a 100-year floodplain or regulatory floodway. Construction activities within 100-year floodplain areas consist of in-kind replacement of existing sewer supports.

All the project's construction, operation and maintenance within Section 2/Phase II will not result in the discharge of fill material within the floodplain and are not anticipated to have any effect upon flood storage or other natural and beneficial floodplain values.

*i.e., sewer
supports*

5.4.3. Groundwater

The projects are not located within the St. Joseph Sole Source Aquifer. No impacts upon the St. Joseph Sole Source Aquifer are anticipated due to construction, operation and maintenance of the project.

It is anticipated that construction of the proposed Wet Weather headworks building will require dewatering activities. The project's effects on local groundwater levels and any nearby wells will be temporary. Mitigation measures will ensure that dewatering flows will be settled in basins prior discharge to prevent solids from entering surface waters.

(Revised 12/12/13)

5.5. Plants and Animals

Upgrading and rehabilitating the WWTP and the lift stations will only disturb areas that have been previously disturbed by development. These projects will not involve impacts to natural terrestrial or aquatic habitats. The projects will also not impact wooded areas, scrub/shrub areas or other habitats.

The Morningside project requires a wetland permit from the COE, therefore threatened and endangered species consultations and reviews by the U.S. Fish and Wildlife Service (FWS) and the Indiana Department of Natural Resources (IDNR) are required. The project site is located within a forested wetland and there is the potential for the project to impact important wildlife habitat. Recommendations and/or mitigation measures cited in comment letters from these agencies will be implemented, as appropriate for all projects. In addition, IDEM may require mitigation for tree removal associated with the project for the conversion of forested wetland habitat to emergent wetland habitat. Mitigation measures cited in comment letters from IDEM will be implemented as appropriate.

5.6. Prime Farmland and Geology

Coordination with NRCS concluded that the project will not result in a conversion of farmland. The NRCS Farmland Conversion Impact Rating Form AD-1006 and the response received from NRCS are attached as **Attachment G**.

Therefore, construction, operation and maintenance of the project will not impact farmland soils.

5.7. Air Quality and Noise

The proposed construction activities may generate some noise, fumes and dust as would normally result from such activities. To reduce noise impacts, construction activities can be limited to normal daytime hours. Noise, dust and fumes are anticipated to be short-term impacts, lasting only during the construction period. No long-term impacts are anticipated. Construction, operation and maintenance activities are not anticipated to affect ozone, airborne pollutants or other current or future air quality concerns.

5.8. Open Space and Recreational Opportunities

Based upon field reconnaissance and a review of the IndianaMap NWI Recreational Facilities, Managed Lands and Trails layers, the WWTP project is not located within a recreational property but is located adjacent to a privately owned recreational property known as the State Park Little league Park.

Also, based upon field reconnaissance and a review of the IndianaMap NWI Recreational Facilities, Managed Lands and Trails layers, work activities at the following Lift Stations are located adjacent to recreational properties.

Revised (12/12/13)

Dogwood Road Lift Station

The Dogwood Road Lift Station is located in proximity to the privately owned Indian Oak Resort golf course. This property is located on the west side of Pearson Road. This lift station is also in proximity to an urban trail along the north side of CR 1100N that is owned by the Chesterton Parks and Recreation Department.

Porter Cove Lift Station

The Golf View Road Lift Station is located in proximity to the above mentioned Prairie Duneland Trail and Porter Cove Park. This park is located off of Essex Drive and is owned by the Chesterton Park Board.

Chesterton High School Lift Station

The Chesterton High School Lift Station is located in proximity to the Chesterton High School athletic fields located in the southeast quadrant of the CR 1100N/Meridian Road intersection. This lift station is also in proximity to an urban trail along the south side of CR 1100N that is owned by the Chesterton Parks and Recreation Department.

Work in proximity to recreational properties is limited to improvements to existing facilities. The projects will not temporarily or permanently affect public access to the above listed or other recreational properties. Therefore, the project's construction, operation and maintenance within Phase II will neither create nor destroy open space and recreational opportunities.

5.9. Lake Michigan Coastal Program

The project is located within Porter County, Indiana and is within the Lake Michigan Coastal Zone Program boundary. The project will not affect the Lake Michigan Coastal Zone.

5.10. National Natural Landmarks

A review of the National Park Service data for National Natural Landmarks in Indiana indicated that the project is not located in close proximity to any National Natural Landmark. Therefore, the construction, operation and maintenance of the proposed project will not impact National Natural Landmarks.

5.11. Secondary Impacts (Induced or Cumulative Effects)

This project is intended to address existing needs at the Chesterton Waste Water Treatment Plant and sanitary system collection needs. The potential to cause secondary impacts is not anticipated.

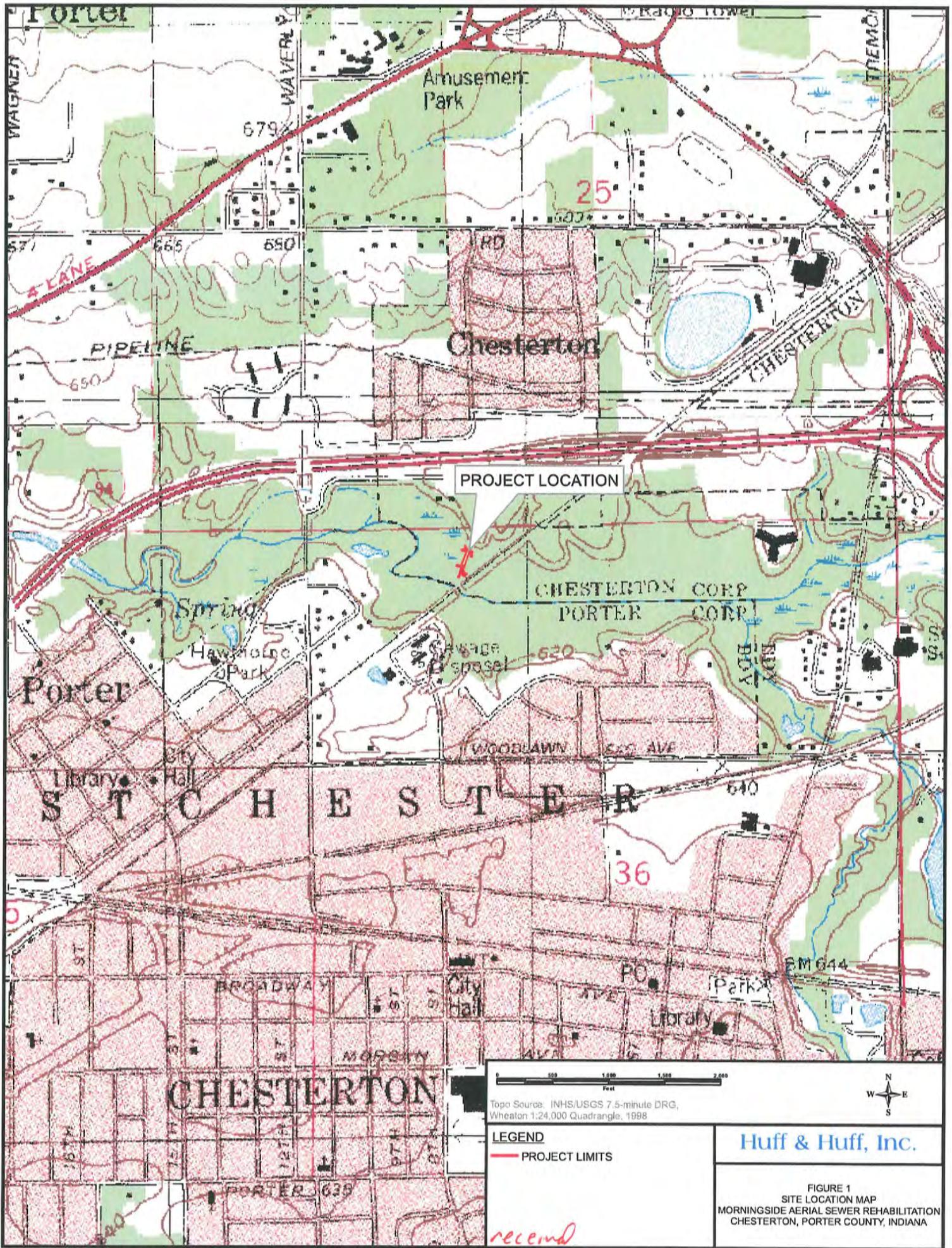
(Revised 12/12/13)

The Town, through the authority of its council, planning commission or other means, will ensure that future development, as well as future collection system or treatment works projects connecting to SRF-funded facilities will not adversely affect sensitive environmental resources. The Town will require new development and treatment works projects to be constructed within the guidelines of the US Fish and Wildlife Service, IDNR, IDEM, and other environmental review authorities.

5.12. Mitigation Measures

As determined appropriate, precautions shall be taken during construction to prevent erosion and sediment transport. Efforts shall be made during construction to minimize disturbance of stream and wetlands. Mitigation measures suggested in comment letters received from the reviewing agencies will be implemented as determined appropriate. Project plans shall include requirements for construction sequencing, as well as permanent and temporary erosion control measures. All disturbed areas shall be restored to their pre-construction condition. All vegetated areas shall be permanently seeded and maintained as necessary until vegetation is established. If dewatering is necessary, water shall be pumped through a filter bag prior to discharge into a swale or storm sewer. Applicable permits shall be obtained prior to construction. The Town of Chesterton shall routinely inspect the construction area to ensure the appropriate measures are taken to minimize erosion and sediment transport off-site.

(Revised 12/12/13)



PROJECT LOCATION



Topo Source: INHS/USGS 7.5-minute DRG, Wheaton 1:24,000 Quadrangle, 1998

LEGEND
 — PROJECT LIMITS



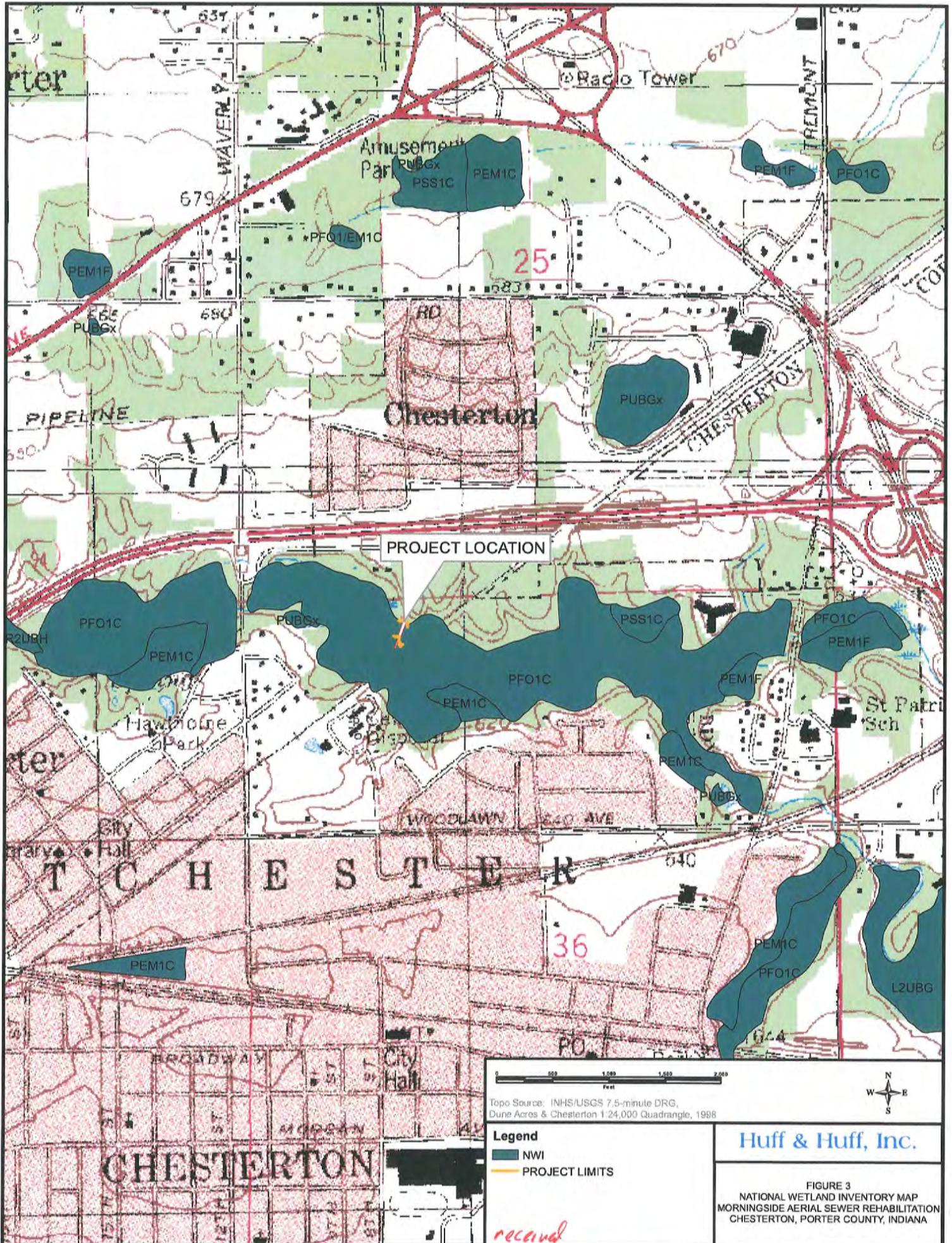
Huff & Huff, Inc.

FIGURE 1
 SITE LOCATION MAP
 MORNINGSIDE AERIAL SEWER REHABILITATION
 CHESTERTON, PORTER COUNTY, INDIANA

*revised
 11/2/2014*



*received
normal Jan 2014*



0 500 1000 1500 2000
Feet

Topo Source: INHS/USGS 7.5-minute DRG,
Dune Acres & Chesterton 1:24,000 Quadrangle, 1988

Legend
 NWI
 PROJECT LIMITS



Huff & Huff, Inc.

FIGURE 3
 NATIONAL WETLAND INVENTORY MAP
 MORNINGSIDE AERIAL SEWER REHABILITATION
 CHESTERTON, PORTER COUNTY, INDIANA

*received
 revised JAN 2014*



PROJECT LOCATION

AE (FLOODWAY)



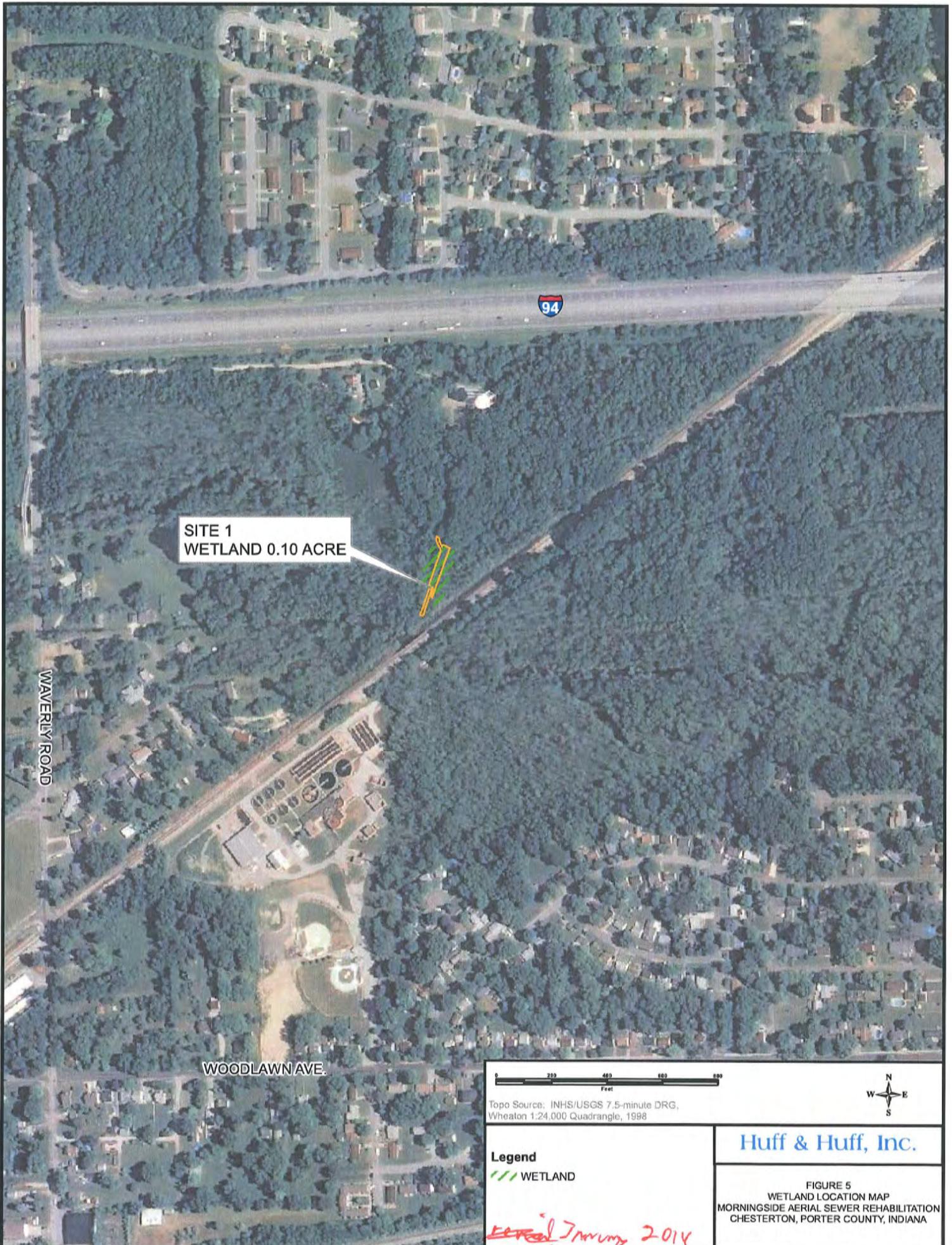
Topo Source: INHS/USGS 7.5-minute DRG, Dune Acres & Chesterton 1:24,000 Quadrangle, 1988

- Legend**
- DFIRM DATA
 - PROJECT LIMITS

Huff & Huff, Inc.

FIGURE 4
FLOOD INSURANCE RATE MAP
MORNINGSIDE AERIAL SEWER REHABILITATION
CHESTERTON, PORTER COUNTY, INDIANA

*received
FIRM Jan 2014*



SITE 1
WETLAND 0.10 ACRE

WAVERLY ROAD

WOODLAWN AVE.

94



Topo Source: INHS/USGS 7.5-minute DRG,
Wheaton 1:24,000 Quadrangle, 1998



Legend
 /// WETLAND
Received January 2014
received

Huff & Huff, Inc.

FIGURE 5
 WETLAND LOCATION MAP
 MORNINGSIDE AERIAL SEWER REHABILITATION
 CHESTERTON, PORTER COUNTY, INDIANA

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Morningside Aerial Sewer Rehabilitation City/County Chesterton, Porter Sampling Date: 6/10/2013
 Applicant/Owner: STV Inc. State: Indiana Sampling Point: 1-1
 Investigator(s): Huff & Huff, Inc. (N. Pisula) Section, Township, Range: S36, T37N, R6W
 Landform (hillslope, terrace, etc.): Slight Depression Local relief (concave, convex, none): Concave
 Slope (%): 3 Lat: 41.621325 Long: -87.062128 Datum: WGS84
 Soil Map Unit Name Fluvaquents (Fh) NWI Classification: PFO1C

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil X, or hydrology significantly disturbed? Are "normal circumstances" present? No
 Are vegetation , soil , or hydrology naturally problematic? present? No

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>Y</u>	Is the sampled area within a wetland? <u>Y</u> if yes, optional wetland site ID: <u>Site 1</u>
Hydric soil present?	<u>Y</u>	
Wetland hydrology present?	<u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Site 1 is a wet floodplain forest located northeast of the East Arm Little Calumet River where it crosses a set of railroad tracks. The soil has been disturbed in the past by utility construction. The area received precipitation prior to the site visit.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft x 30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1 <u>Acer saccharinum</u>	45	Y	FACW	
2				Total Number of Dominant Species Across all Strata: <u>6</u> (B)
3				Percent of Dominant Species that are OBL, FACW, or FAC: <u>83%</u> (A/B)
4				
5				
	45	= Total Cover		
Sapling/Shrub stratum (Plot size: <u>15 ft x 15ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet
1 <u>Ulmus americana</u>	30	Y	FACW	
2				OBL species <u> </u> x 1 = <u> </u>
3				FACW species <u> </u> x 2 = <u> </u>
4				FAC species <u> </u> x 3 = <u> </u>
5				FACU species <u> </u> x 4 = <u> </u>
	30	= Total Cover		UPL species <u> </u> x 5 = <u> </u>
				Column totals <u> </u> (A) <u> </u> (B)
				Prevalence Index = B/A = <u> </u>
Herb stratum (Plot size: <u>5 ft x 5 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:
1 <u>Phalaris arundinacea</u>	50	Y	FACW	
2 <u>Geum canadense</u>	30	Y	FAC	<u>X</u> Dominance test is >50%
3 <u>Solidago gigantea</u>	10	N	FACW	<u> </u> Prevalence index is ≤3.0*
4				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
5				Problematic hydrophytic vegetation* (explain)
6				
7				
8				
9				
10				
	90	= Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Woody vine stratum (Plot size: <u>30 ft x 30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic vegetation present? <u>Y</u>
1 <u>Vitis riparia</u>	15	Y	FACW	
2 <u>Parthenocissus quinquefolia</u>	15	Y	FACU	
	30	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
 Hydrophytic vegetation was confirmed by the Dominance Test.

SOIL

Sampling Point: 1-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 3/1	100					Sand with silt	
6-16	10YR 3/1	45	10YR 5/6	15	C	M	Sand with silt	fill
	10YR 5/4	40						mixed matrix (sand)

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: None
 Depth (inches): _____

Hydric soil present? Y

Remarks:

The soil is mapped as Fluvaquents (Fh), which is not considered a hydric soil in Porter County. Redox Dark Surface (F6) and Sandy Redox (S5) confirmed hydric soil. The soil has been disturbed in the past by construction.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

Field Observations:

Surface water present? Yes No Depth (inches): _____
 Water table present? Yes No Depth (inches): 3
 Saturation present? Yes No Depth (inches): 0
 (includes capillary fringe)

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Site 1 receives surface water from adjacent uplands and periodic overbank flooding of an unnamed tributary to the East Arm Little Calumet River. Two primary and three secondary indicators of wetland hydrology were present at the time of the site visit. Little Calumet Galien Watershed (HUC 04040001).

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Morningside Aerial Sewer Rehabilitation City/County Chesterton, Porter Sampling Date: 6/10/2013
 Applicant/Owner: STV Inc. State: Indiana Sampling Point: 1-2
 Investigator(s): Huff & Huff, Inc. (N. Pisula) Section, Township, Range: S36, T37N, R9W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave
 Slope (%): 15 Lat: 41.621319 Long: -87.062171 Datum: WGS84
 Soil Map Unit Name Fluvaquents (Fh) NWI Classification: PFO1C

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil X, or hydrology significantly disturbed? Are "normal circumstances" present? No
 Are vegetation , soil , or hydrology naturally problematic? present? No

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>N</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 This area is an upland hillslope located adjacent to Site 1. The soil has been disturbed in the past by utility activities. The site received precipitation prior to the site visit.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft x 30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1	<u>Acer saccharinum</u>	85	Y	FACW	
2					Total Number of Dominant Species Across all Strata: <u>6</u> (B)
3					Percent of Dominant Species that are OBL, FACW, or FAC: <u>83%</u> (A/B)
4					
5					
		85	= Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15 ft x 15ft</u>)				Prevalence Index Worksheet
1	<u>Acer negundo</u>	5	Y	FAC	
2					OBL species <u> </u> x 1 = <u> </u>
3					FACW species <u> </u> x 2 = <u> </u>
4					FAC species <u> </u> x 3 = <u> </u>
5					FACU species <u> </u> x 4 = <u> </u>
		5	= Total Cover		UPL species <u> </u> x 5 = <u> </u>
					Column totals <u> </u> (A) <u> </u> (B)
					Prevalence Index = B/A = <u> </u>
Herb stratum	(Plot size: <u>5 ft x 5 ft</u>)				Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Geum canadense</u>	35	Y	FAC	
2	<u>Solidago gigantea</u>	15	Y	FACW	
3	<u>Glechoma hederacea</u>	10	N	FACU	
4	<u>Aquilegia canadensis</u>	10	N	FACU	
5	<u>Amphicarpaea bracteata</u>	5	N	FAC	
6	<u>Parthenocissus quinquefolia</u>	5	N	FACU	
7	<u>Acer negundo</u>	5	N	FAC	
8					
9					
10					
		85	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft x 30 ft</u>)				
1	<u>Vitis riparia</u>	10	Y	FACW	
2	<u>Parthenocissus quinquefolia</u>	10	Y	FACU	
		20	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
 Hydrophytic vegetation was confirmed by the Dominance Test.

SOIL

Sampling Point: 1-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-16	10YR 3/2	100					Sand with silt	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric soil present? N

Remarks:

The soil is mapped as Fluvaquents (Fh), which is not listed as a hydric soil in Porter County. Indicators of hydric soil were not present within the soil profile at the time of the site visit. The soil has been disturbed in the past by construction.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

Field Observations:

Surface water present? Yes _____ No X Depth (inches): _____
 Water table present? Yes _____ No X Depth (inches): _____
 Saturation present? Yes _____ No X Depth (inches): _____
 (includes capillary fringe)

Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This area receives overland flow from adjacent uplands that drains into Site 1. Indicators of wetland hydrology were present at the time of the site visit. Little Calumet-Galien Watershed (HUC 04040001).

Study Information

Site: Morningside Aerial Sewer Rehabilitation

Locale: Chesterton, Indiana

By: Huff & Huff, Inc. (N. Pisula)

File: r:\STV\Chesterton IN\2013 wetland delineation\FQI\FQI 1.inv

FLORISTIC QUALITY DATA						
25 NATIVE SPECIES	Native	25	92.6%	Adventive	2	7.4%
27 Total Species	Tree	4	14.8%	Tree	0	0.0%
3.0 NATIVE MEAN C	Shrub	0	0.0%	Shrub	0	0.0%
2.8 W/Adventives	W-Vine	3	11.1%	W-Vine	0	0.0%
15.2 NATIVE FQI	H-Vine	0	0.0%	H-Vine	0	0.0%
14.6 W/Adventives	P-Forb	8	29.6%	P-Forb	1	3.7%
-2.8 NATIVE MEAN W	B-Forb	0	0.0%	B-Forb	0	0.0%
-2.9 W/Adventives	A-Forb	3	11.1%	A-Forb	0	0.0%
AVG: Fac. Wetland	P-Grass	1	3.7%	P-Grass	1	3.7%
	A-Grass	0	0.0%	A-Grass	0	0.0%
	P-Sedge	5	18.5%	P-Sedge	0	0.0%
	A-Sedge	0	0.0%	A-Sedge	0	0.0%
	Cryptogam	1	3.7%			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACENEG	0	Acer negundo	-2	FACW-	Nt Tree	BOX ELDER
ACESAI	0	Acer saccharinum	-3	FACW	Nt Tree	SILVER MAPLE
ANGATR	7	Angelica atropurpurea	-5	OBL	Nt P-Forb	GREAT ANGELICA
ASTPRA	9	Aster praealtus	-5	[OBL]	Nt P-Forb	WILLOW ASTER
BIDFRO	1	Bidens frondosa	-3	FACW	Nt A-Forb	COMMON BEGGAR'S TICKS
CALTPA	5	Caltha palustris	-5	OBL	Nt P-Forb	MARSH MARIGOLD
CXBLAN	1	Carex blanda	0	FAC	Nt P-Sedge	COMMON WOOD SEDGE
CXCRIS	4	Carex cristatella	-4	FACW+	Nt P-Sedge	CRESTED OVAL SEDGE
CXGRAY	7	Carex grayi	-4	FACW+	Nt P-Sedge	COMMON BUR SEDGE
CXSTIP	3	Carex stipata	-5	OBL	Nt P-Sedge	COMMON FOX SEDGE
CXSTRI	5	Carex stricta	-5	OBL	Nt P-Sedge	COMMON TUSsock SEDGE
EQUARV	0	Equisetum arvense	0	FAC	Cryptogam	HORSETAIL
FRAPES	1	Fraxinus pennsylvanica subintegerrima	0	FAC	Nt Tree	GREEN ASH
GEUCAN	1	Geum canadense	0	FAC	Nt P-Forb	WOOD AVENS
GLYSTR	4	Glyceria striata	-3	[FACW]	Nt P-Grass	FOWL MANNA GRASS
IMPCAP	3	Impatiens capensis	-3	FACW	Nt A-Forb	ORANGE JEWELWEED
IRIVIS	5	Iris virginica shrevei	-5	OBL	Nt P-Forb	BLUE FLAG
LAPCAN	3	Laportea canadensis	-3	FACW	Nt P-Forb	WOOD NETTLE
LYSNUM	0	LYSIMACHIA NUMMULARIA	-4	FACW+	Ad P-Forb	MONEYWORT

PARQUI	2	Parthenocissus quinquefolia	1	FAC-	Nt W-Vine	VIRGINIA CREEPER
PHAARU	0	PHALARIS ARUNDINACEA	-4	FACW+	Ad P-Grass	REED CANARY GRASS
POLLAP	0	Polygonum lapathifolium	-4	FACW+	Nt A-Forb	HEARTSEASE
POPDEL	2	Populus deltoides	-1	FAC+	Nt Tree	EASTERN COTTONWOOD
RHURAD	2	Rhus radicans	-1	FAC+	Nt W-Vine	POISON IVY
RUDLAC	5	Rudbeckia laciniata	-4	FACW+	Nt P-Forb	WILD GOLDEN GLOW
SOLGIG	4	Solidago gigantea	-3	FACW	Nt P-Forb	LATE GOLDENROD
VITRIP	2	Vitis riparia	-2	FACW-	Nt W-Vine	RIVERBANK GRAPE

**Photographic Log for the Wetland and "Waters of the U.S." Investigation of Morningside Aerial Sewer Rehabilitation
Town of Chesterton, Porter County, Indiana
June 10, 2013**



Photo 1: Facing west towards Site 1.



Photo 2: Data Point 1-1.



Photo 3: Data Point 1-2.



Photo 4: Facing north towards Site 1.

TOWN OF CHESTERTON CONSTRUCTION DRAWINGS FOR MORNINGSIDE AERIAL SEWER LINE SUPPORTS REPLACEMENT PROJECT 2013



Lawrence Brandt President
James Raffin Vice President
Scot McCord Member
Andrew Michel Member
John Schnadenberg Member

Emerson Delaney President
James Ton Member
Jeff Trout Member
Nick Walding Member
Sharon Darnell Member

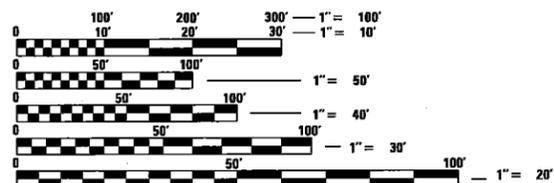
C. Bernard Doyle Town Manager
Gayle Polakowski Clerk Treasurer
Chuck Lukmann Town Attorney
Mark D. O'Dell, P.E. Town Engineer
Terry Atherton, P.E. Utility Superintendent

INDEX OF SHEETS (IN PROGRESS)

- G-01 COVER SHEET
- G-02 GENERAL NOTES
- G-03 SUMMARY OF QUANTITIES

- C-01 SEWER PLAN AND PROFILE
- C-02 PROPOSED REMOVALS & CONSTRUCTION ACCESS PLAN
- C-03 PROPOSED EROSION AND SEDIMENTATION CONTROL PLAN
- C-04 PROPOSED LANDSCAPING PLAN
- C-05 ALIGNMENTS AND CONTROL POINTS
- C-06 CIVIL DETAILS
- C-07 CROSS SECTIONS
- C-08 CROSS SECTIONS
- C-09 CROSS SECTIONS
- C-10 CROSS SECTIONS

- S-01 PIPE SUPPORT FOUNDATION PLAN
- S-02 PIPE SUPPORT DETAILS
- S-03 BORING LOGS

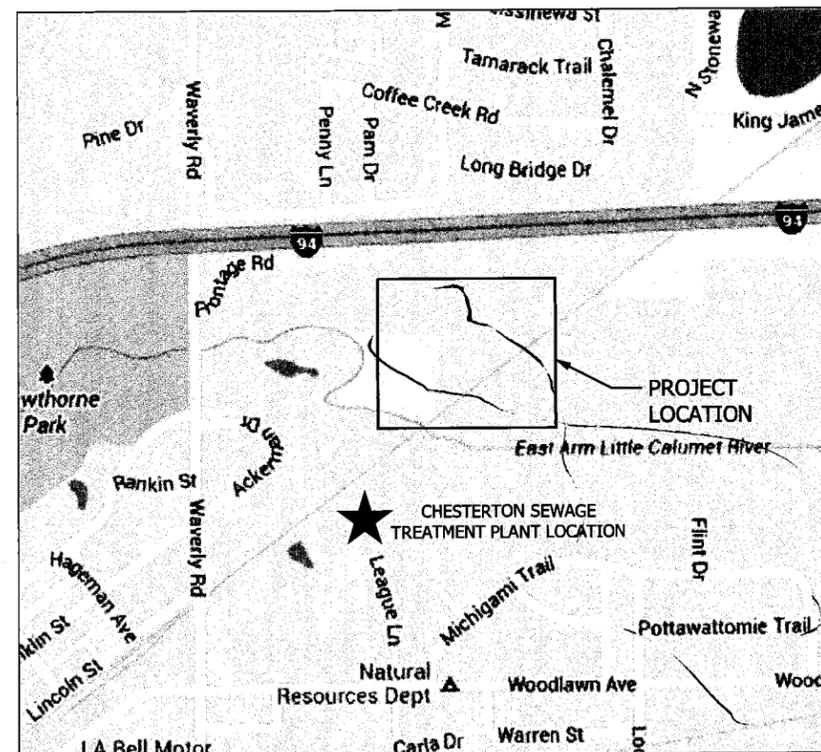


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES.

ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.
CONFORM TO STANDARD SCALES IN MAKING MEASUREMENTS.

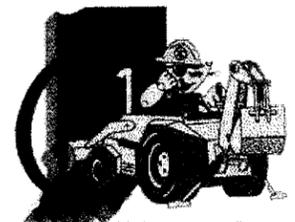
SITE BENCHMARK:
BM-1:
NE CONCRETE ABUTMENT OF RR BRIDGE
LOCATED AT APPROXIMATELY N 2321260.4 E 2958501.7
ELEV=621.32' NAVD 88

HORIZONTAL COORDINATES ARE REFERENCED TO INDIANA STATE PLANE COORDINATES, NAD 83, WEST ZONE
ELEVATIONS ARE EXPRESSED IN NAVD 88 DATUM



PORTER COUNTY
CHESTERTON TOWNSHIP
37N-6W-SEC25

90% SUBMITTAL



Holey Moley says call
1-800-382-5544 at least two full
working days before you dig and
dig safely.

FILE NAME = ...Sheets\G-01_Cover.dgn



STV INCORPORATED
200 WEST MONROE STREET, SUITE 1650
CHICAGO, ILLINOIS 60606
PHONE: (312) 553-0655
FAX: (312) 553-0661
IL DESIGN FIRM #184000933

USER NAME = quallakm	DESIGNED - KMQ	REVISED -
	DRAWN - KMQ	REVISED -
	CHECKED - JAC	REVISED -
PLOT DATE = 10/11/2013	DATE - 10-11-2013	REVISED -



MORNINGSIDE AERIAL
SEWER LINE IMPROVEMENTS
Project Location: Near Frontage Road
in Town of Chesterton, Indiana

COVER SHEET

SHEET NO. 1 OF 16 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		PORTER	16	G-01

(INDIANA) FED. AID PROJECT

GENERAL NOTES

THE CONTRACTOR SHALL CONFORM TO ALL TOWN OF CHESTERTON ORDINANCES, STATE, AND FEDERAL LAWS.

UTILITY AGENCIES, SCHOOL DISTRICTS, LOCAL POLICE, AND FIRE DEPARTMENTS SHOULD BE NOTIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

THE CONTRACTOR SHALL GIVE FORTY-EIGHT (48) HOUR ADVANCE NOTICE TO THE ENGINEER AS TO INITIAL STARTUP DATE AND SHALL ALERT THE ENGINEER AS TO ANTICIPATED PROJECT DELAYS AND INTERRUPTIONS. NO STARTUP OR MOVEMENT OF CONSTRUCTION VEHICLES, EQUIPMENT OR MATERIALS WILL BE PERMITTED BEFORE 7:00 A.M. OR AFTER 8:00 P.M. MON - SAT, 12:00 P.M. - 8:00 P.M. SUNDAYS.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SURE THAT A SET OF PROJECT DRAWINGS IS AVAILABLE AT ALL TIMES AT THE WORK SITE.

THE CONTRACTOR, HIS EMPLOYEES, AND REPRESENTATIVES SHALL PARK THEIR VEHICLES AS CLOSE TO THE PROJECT WORK AREA AS POSSIBLE WITHOUT CREATING TRAFFIC OR PEDESTRIAN HAZARDS.

THE CONTRACTOR SHALL PROVIDE AND HAVE MAINTAINED ON A REGULAR BASIS A PORTABLE SANITARY FACILITY ON THE PROJECT SITE FOR HIS EMPLOYEES. THE FACILITY SHALL BE PLACED AT A LOCATION APPROVED BY THE ENGINEER. THE COST OF PROVIDING AND MAINTAINING PORTABLE SANITARY FACILITIES SHALL BE INCLUDED IN MOBILIZATION.

UNLESS AUTHORIZED BY THE ENGINEER, ALL EXISTING ACCESS POINTS SHOULD BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR, THIS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF MAINTAINING TRAFFIC PAY ITEM.

THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN THE CONSTRUCTION LIMITS, AS SHOWN ON THE PLANS, AND NOT EXTEND BEYOND THESE LIMITS UNLESS DIRECTED BY THE ENGINEER. IF DIRECTED TO PERFORM WORK OUTSIDE THE CONSTRUCTION LIMITS, THE COST OF THE WORK BEING PERFORMED WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE CORRESPONDING PAY ITEM.

THE CONTRACTOR SHALL DISPOSE OF ANY AND ALL MATERIALS EXCAVATED OR REMOVED DUE TO CONSTRUCTION ACTIVITIES. THIS MATERIAL SHALL BE DISPOSED OF OFFSITE. THE CONTRACTOR MUST COMPLY WITH THE TOWN OF CHESTERTON PERMIT REQUIREMENTS PRIOR TO THE PLACEMENT OF FILL ON AN PARCEL OF LAND WITHIN SAID TOWN. NO PAYMENT WILL BE MADE FOR THE EXPENSE OF HAULING THE MATERIALS TO ANY DUMPSITE(S).

THE CONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS TO PROTECT ABUTTING PROPERTY, UTILITIES, PEDESTRIANS, AND VEHICULAR TRAFFIC.

THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT OF ANY BENCH MONUMENT DAMAGED OR DESTROYED DURING CONSTRUCTION.

THE CONTRACT SHALL MAINTAIN ACCESS TO FIRE HYDRANTS, BUILDINGS, STANDPIPES, AND OTHER EMERGENCY FACILITIES WITHIN THE CONSTRUCTION ZONE.

THE CONTRACTOR SHALL VERIFY LOCATION OF ALL BUILDING ACCESS, AND COORDINATE WITH BUILDING OWNERS AND LOCAL AUTHORITIES AND PROVIDE FULL ACCESS TO BUSINESS OR PROPERTIES DURING THEIR NORMAL WORKING HOURS IN ACCORDANCE WITH THE AMERICAN DISABILITIES ACT (ADA) AND THEIR APPLICABLE CODE REQUIREMENTS. OWNERS SHALL BE NOTIFIED SEVENTY-TWO (72) HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS WHICH MAY AFFECT THEIR DAILY SCHEDULE.

THE CONTRACTOR WILL NOT BE COMPENSATED FOR ANY TRESS, PLANTS, OR SODDING UNTIL THE WORK HAS BEEN ACCEPTED BY THE CHESTERTON BOARD OF PUBLIC WORKS AND THE CHESTERTON PARK DISTRICT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO PRIVATE PROPERTY AND SHALL REPAIR SAID DAMAGE AT OWN EXPENSE TO THE SATISFACTION THE ENGINEER AND PRIVATE PROPERTY OWNER.

THE CONTRACTOR IS RESPONSIBLE TO MINIMIZE ATMOSPHERIC POLLUTION AND FUGITIVE DUST AND THE CONTRACTOR IS SUBJECT TO ALL TOWN OF CHESTERTON ORDINANCES, STATE, AND FEDERAL LAWS AND FINES ASSOCIATED WITH THIS MATTER.

THE CROSS SECTIONS INDICATE THE FINISHED GRADE OF TOP SOIL.

ALL COSTS ASSOCIATED WITH RESTORING THE EXISTING WETLAND LIMITS INCLUDE BUT NOT LIMITED TO LABOR, EQUIPMENT, WATERING, OR ADDITIONAL MATERIALS AFTER REMOVAL OF EROSION AND PROTECTIVE FENCES AND TIMBER MATS SHALL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF WETLAND SEEDING.

TREE REMOVAL- CLEARING-HEDGE REMOVAL

THE CONTRACTOR SHALL BE REQUIRED TO REMOVE ONLY THOSE TREES AND SHRUBS DESIGNATED FOR REMOVAL BY PROJECT DRAWINGS AND AS DIRECTED BY THE ENGINEER. THOSE TREES AND SHRUBS NOT MARKED BUT WHICH DIRECTLY INTERFERE WITH THE SAFETY OR QUALITY OF CONSTRUCTION PRACTICES MAY ONLY BE REMOVED AFTER THE DISCUSSION WITH THE ENGINEER. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING TREES AND SHRUBS TO AVOID DAMAGING THOSE NOT SCHEDULED FOR REMOVAL AND SHALL REPLACE ANY DAMAGED PLANTS AT HIS OWN EXPENSE.

ALL EXISTING STUMPS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH SECTION 201 OF THE INDOT STANDARD SPECIFICATIONS.

ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS PROJECT SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OR HER OWN EXPENSE OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY. THE COST OF THIS WORK WILL NOT BE INCLUDED IN THE COST OF THE CONTRACT.

OVERHANGING LIMBS ARE TO BE TRIMMED OR CUT OFF TO PROVIDE A MINIMUM VERTICAL CLEARANCE OF TWENTY (20) FEET FROM THE FINISHED SURFACE OF THE ROAD.

LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF AN APPROVED TREE EXPERT AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION.

ALL CUTS OVER ONE (1) INCH IN DIAMETER SHALL BE MADE FLUSH WITH THE NEXT LARGE BRANCH.

THE COST OF REMOVING TRESS HAVING A TRUNK DIAMETER LESS THAN 4", STUMPS, BUSHES, AND SHRUBS WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE PRICE OF THE CONTRACT.

THE CONTRACTOR SHALL TAKE EXTRA CARE IN GRADING AND EXCAVATING NEAR TREES THAT ARE NOT MARKED FOR REMOVAL AS NOT TO CAUSE INJURY TO THE ROOTS OR TRUNKS. NO EXCAVATION SHALL BE PERMITTED MORE THAN ONE (1) FOOT FROM THE BACK OF THE PROPOSED EDGE OF ROAD WHERE A TREE IS TO REMAIN. HAND EXCAVATION SHALL BE PERFORMED WHERE MAJOR ROOTS ARE PRESENT. ALL WORK REQUIRED TO PRESERVE THE ROOTS SHALL BE INCIDENTAL TO THE CONTRACT.

UTILITIES

THE CONTRACTOR SHALL CALL INDIANA UNDERGROUND AT 1-800-382-5544 TO HAVE THE LOCATION OF EXISTING UNDERGROUND UTILITIES STAKED FORTY-EIGHT (48) HOURS BEFORE STARTING EXCAVATION.

NEITHER THE TOWN OF CHESTERTON NOR THE ENGINEER GUARANTEES THE COMPLETENESS OR ACCURACY OF THE INFORMATION SHOWN ON THE DRAWINGS REGARDING UTILITIES, EITHER PUBLIC OR PRIVATE.

THE CONTRACTOR SHALL HAVE AN INVESTIGATION TO DETERMINE THE EXISTENCE, NATURE, AND EXACT LOCATION OF ALL UTILITY LINES AND APPURTENANCES WITHIN THE LIMITS OF THIS IMPROVEMENT. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT. THE INVESTIGATION SHALL INCLUDE THE CONTRACTOR FURNISHING A COMPLETE LIST OF UTILITIES AND CONTACT NUMBERS TO REMAIN AVAILABLE ON CONSTRUCTION SITE AT ALL TIME.

THE CONTRACTOR SHALL PROTECT EXISTING AND NEW UTILITIES WHEN CONSIDERED NECESSARY BY THE CITY, BY METHODS APPROVED BY THE CITY, AND SHALL BRACE AND SUPPORT THE UTILITIES PROPERLY TO PREVENT SETTLEMENT, DISPLACEMENT, OR CHANGE TO THE UTILITIES.

ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.

THE CONTRACT SHALL BE RESPONSIBLE FOR CONTACTING LOCAL AGENCIES, MAINTAINING WATERMANS TO VERIFY THE MATERIALS AND METHODS ALLOWED FOR THE ADJUSTMENT, RELOCATION, OR EXTENSION OF THE UTILITY INVOLVED.

EARTHWORK/EROSION & SEDIMENTATION CONTROL

SOIL EROSION AND SEDIMENT CONTROL FEATURES MUST BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF UPLAND DISTURBANCE. SOIL DISTURBANCE MUST BE PHASED OR ENACTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES MUST CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY AND/OR PERMANENT MEASURES.

THE CONTRACTOR SHALL MAINTAIN EXISTING POSITIVE DRAINAGE FROM OFF-SITE AT ALL TIMES DURING CONSTRUCTION.

STRIPPING OF VEGETATION, GRADING, OR OTHER SOIL DISTURBANCE, ESPECIALLY IN DESIGNATED WETLAND AREAS, SHALL BE DONE IN A MANNER WHICH WILL MINIMIZE SOIL EROSION, AND SHALL BE IN ACCORDANCE WITH THE APPROVED DRAWINGS, MITIGATION AND PERMIT REQUIREMENTS.

THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO MINIMIZE EARTHWORK IN AREAS WHERE TREES ARE TO BE SAVED AS SHOWN ON THE PLANS OR DETERMINED IN THE FIELD.

THE EXTENT OF THE AREA WHICH IS EXPOSED AND FREE OF VEGETATION AND THE DURATION OF ITS EXPOSURE SHALL BE KEPT WITHIN PRACTICAL LIMITS AS DIRECTED BY THE VILLAGE ENGINEER.

SEDIMENTATION SHALL BE RETAINED ON SITE. EROSION CONTROL SHALL BE INSTALLED AS SHOWN ON THE PLANS TO PREVENT SEDIMENT FROM ENTERING AND/OR LEAVING THE SITE.

ALL MUD SHALL BE REMOVED FROM ALL TIRES BEFORE LEAVING THE SITE AND THE ROADS SHALL BE KEPT CLEAN AND CLEAR OF MUD AND DEBRIS AT ALL TIMES.

EROSION CONTROL MEASURES SHALL BE INSPECTED FREQUENTLY AND MAINTAINED OR REPLACED AS REQUIRED TO MAINTAIN BOTH THEIR EFFECTIVENESS AND INTEGRITY.

WATER COURSES AND DRAINAGE SWALES ADJACENT TO CONSTRUCTION ACTIVITIES SHALL BE MONITORED AS NECESSARY, FOR EVIDENCE OF SILT INTRUSION AND OTHER ADVERSE ENVIRONMENTAL IMPACTS. ANY PROBLEMS OR DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY UPON THEIR DISCOVERY.

FILE NAME = ...Sheets\G-02 General Notes.dgn

	STV INCORPORATED 200 WEST MONROE STREET, SUITE 1650 CHICAGO, ILLINOIS 60606 PHONE: (312) 553-0655 FAX: (312) 553-0661 IL DESIGN FIRM #184000933	USER NAME = quallakm	DESIGNED - KMQ	REVISED -		MORNINGSIDE AERIAL SEWER LINE IMPROVEMENTS Project Location: Near Frontage Road in Town of Chesterton, Indiana	GENERAL NOTES SHEET NO. 2 OF 16 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		PLOT DATE = 10/11/2013	DRAWN - KMQ	REVISED -				PORTER	16	G-02		
								INDIANA FED. AID PROJECT				

MORNINGSIDE AERIAL SEWER LINE
SUMMARY OF QUANTITIES

ITEM #	PAY ITEM	UNIT	TOTAL QUANTITY
110-01001	MOBILIZATION AND DEMOBILIZATION	LS	1
201-02245	TREE, 6 IN, REMOVE	EACH	7
201-02250	TREE, 10 IN, REMOVE	EACH	10
201-02255	TREE, 18 IN, REMOVE	EACH	9
206-51225	EXCAVATION, DRY	CYS	89
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	TON	140
603-97461	TEMPORARY FENCE	LFT	617
621-01852	MULCHED SEEDING, GRASS, 2	SYS	152
621-04156	SEEDING, WETLAND	SYS	497
621-06570	TOPSOIL	CYS	20
711-51035	STRUCTURAL STEEL	LBS	4700
NA	TEMPORARY TIMBER MAT	FOOT	151
NA	SILT FENCE, MODIFIED	LFT	619
NA	HELICAL PILES	EACH	30
NA	PARTIAL REMOVAL OF EXISTING PIPE SUPPORT FOUNDATIONS	EACH	19

FILE NAME = ...Sheets\G-03 Quantities.dgn



STV INCORPORATED
200 WEST MONROE STREET, SUITE 1650
CHICAGO, ILLINOIS 60606
PHONE: (312) 553-0655
FAX: (312) 553-0661
IL DESIGN FIRM #184000933

USER NAME = quallakm
PLOT DATE = 10/11/2013

DESIGNED - KMQ
DRAWN - KMQ
CHECKED - JAC
DATE - 10-11-2013

REVISED -
REVISED -
REVISED -
REVISED -



MORNINGSIDE AERIAL
SEWER LINE IMPROVEMENTS
Project Location: Near Frontage Road
in Town of Chesterton, Indiana

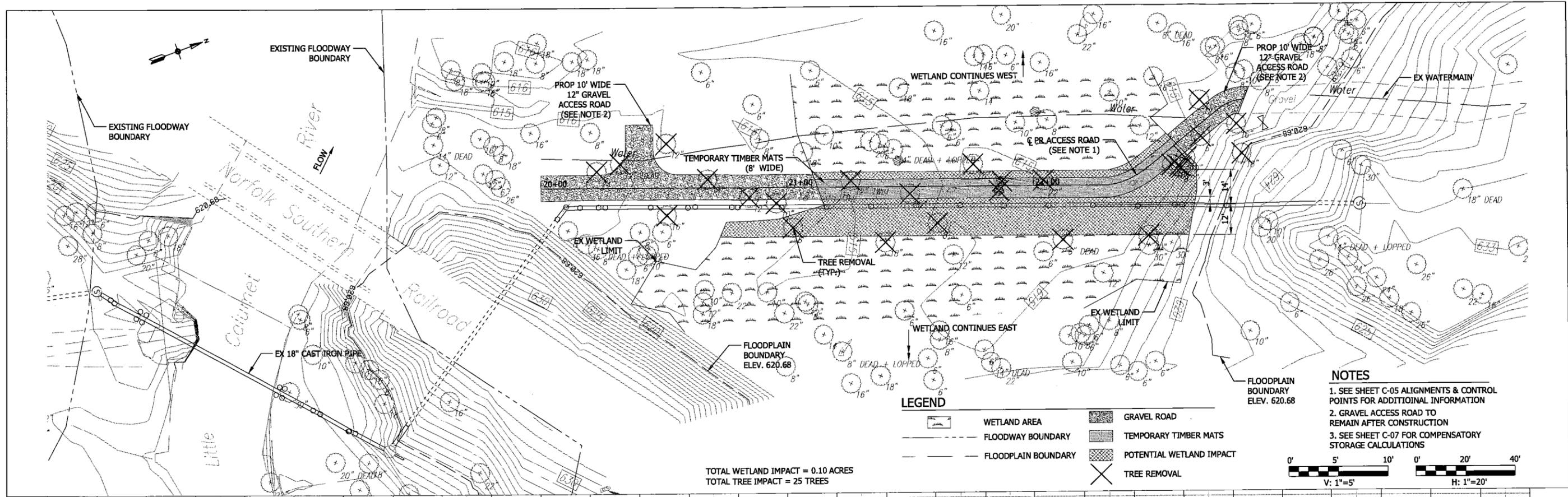
SUMMARY OF QUANTITIES

SHEET NO. 3 OF 16 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		PORTER	16	G-03
[INDIANA] FED. AID PROJECT				

PLAN	SURVEYED	DATE
	BY	
	PLOTTED	
	BY	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO.	

PROFILE	SURVEYED	DATE
	BY	
	PLOTTED	
	BY	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO.	



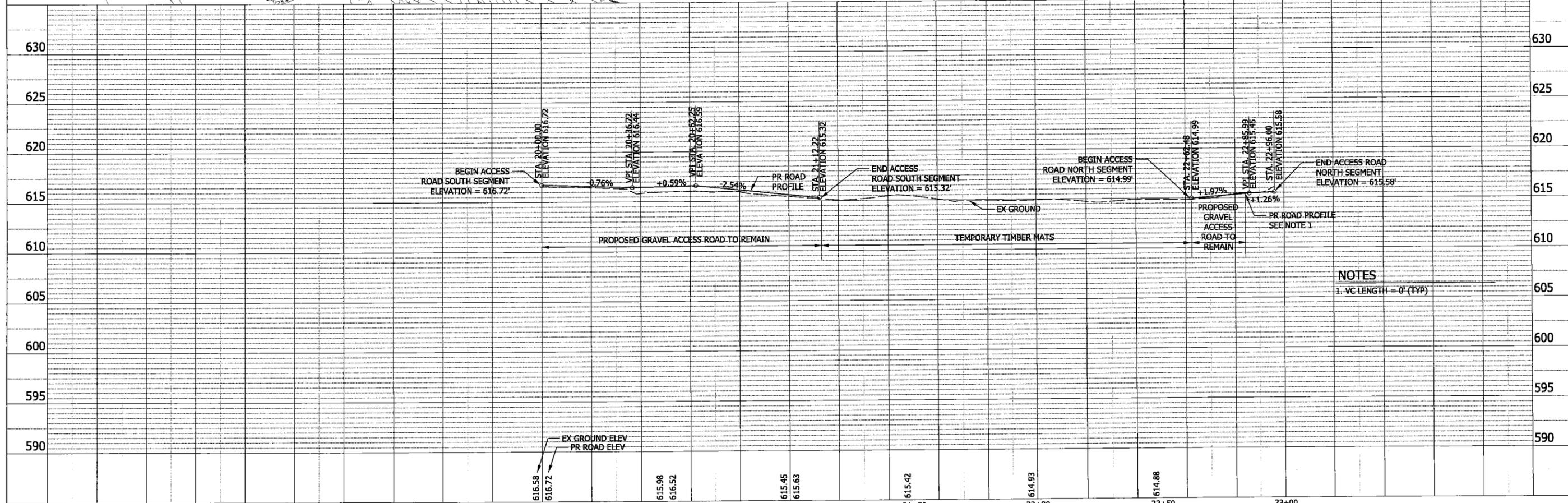
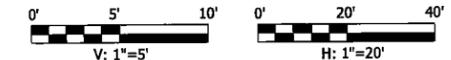
TOTAL WETLAND IMPACT = 0.10 ACRES
 TOTAL TREE IMPACT = 25 TREES

LEGEND

- WETLAND AREA
- FLOODWAY BOUNDARY
- FLOODPLAIN BOUNDARY
- GRAVEL ROAD
- TEMPORARY TIMBER MATS
- POTENTIAL WETLAND IMPACT
- TREE REMOVAL

NOTES

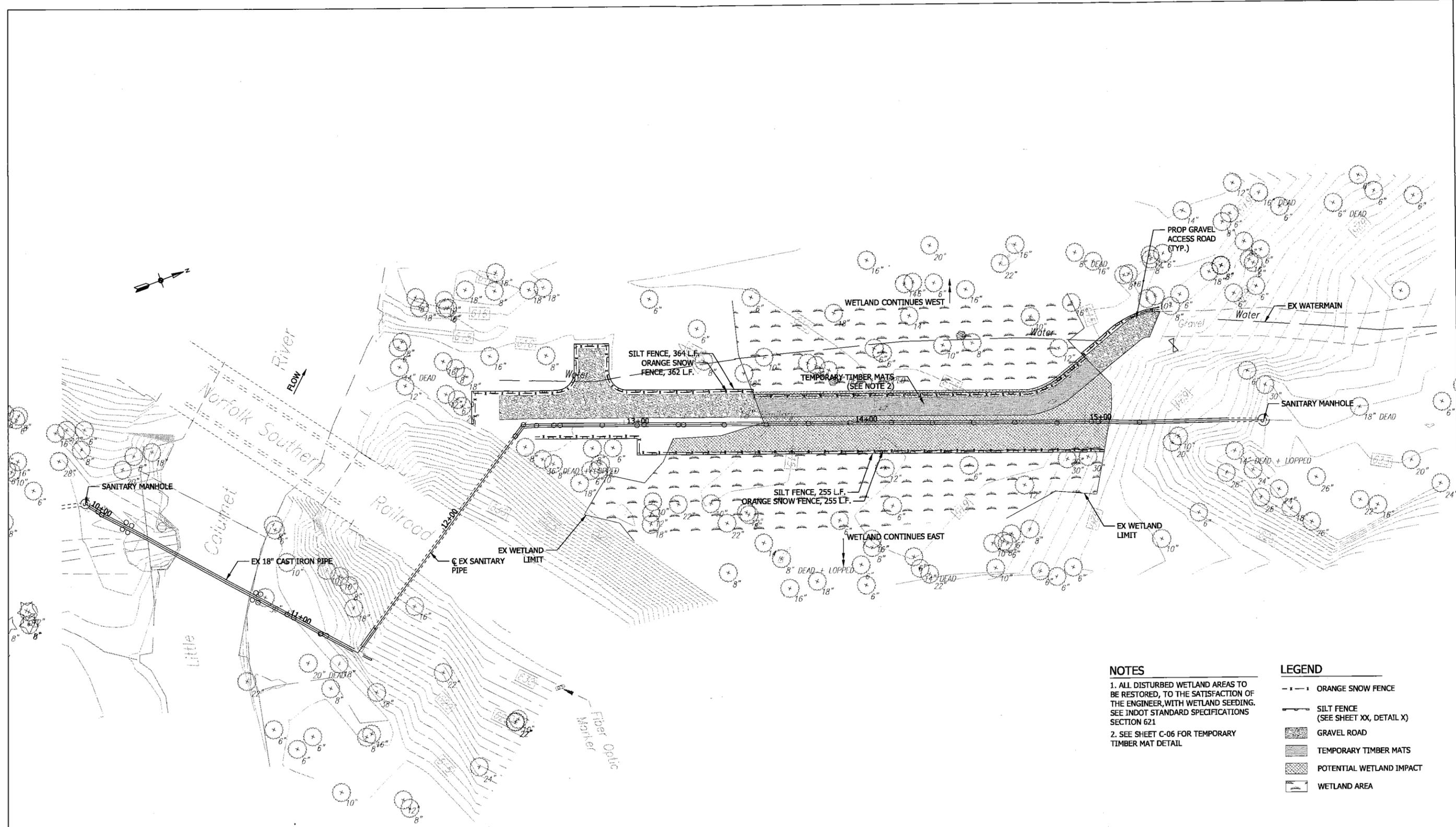
1. SEE SHEET C-05 ALIGNMENTS & CONTROL POINTS FOR ADDITIONAL INFORMATION
2. GRAVEL ACCESS ROAD TO REMAIN AFTER CONSTRUCTION
3. SEE SHEET C-07 FOR COMPENSATORY STORAGE CALCULATIONS



NOTES

1. VC LENGTH = 0' (TYP)

FILE NAME = ...Sheets\C-02 Proposed Road.dgn	USER NAME = qualiakm	DESIGNED - KMQ	REVISED -		MORNINGSIDE AERIAL SEWER LINE IMPROVEMENTS Project Location: Near Frontage Road In Town of Chesterton, Indiana			PROPOSED REMOVALS & CONSTRUCTION ACCESS PLAN		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STV 100 Years	PLOT SCALE = 20.0000' / in.	CHECKED - JAC	REVISED -		SCALE: 20.0000' / in.	SHEET NO. 5 OF 16 SHEETS	STA. 20+00.00	TO STA. 22+96.00	PORTER	16	C-02			
	PLOT DATE = 10/11/2013	DATE - 08-07-2013	REVISED -		INDIANA FED. AID PROJECT									

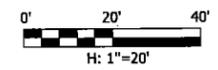


NOTES

1. ALL DISTURBED WETLAND AREAS TO BE RESTORED, TO THE SATISFACTION OF THE ENGINEER, WITH WETLAND SEEDING. SEE INDOT STANDARD SPECIFICATIONS SECTION 621
2. SEE SHEET C-06 FOR TEMPORARY TIMBER MAT DETAIL

LEGEND

- - - - - ORANGE SNOW FENCE
- SILT FENCE (SEE SHEET XX, DETAIL X)
- GRAVEL ROAD
- TEMPORARY TIMBER MATS
- POTENTIAL WETLAND IMPACT
- WETLAND AREA



FILE NAME = ...C-03 Erosion Control.dgn

STV 100 Years
 STV INCORPORATED
 200 WEST MONROE STREET, SUITE 1650
 CHICAGO, ILLINOIS 60606
 PHONE: (312) 553-0655
 FAX: (312) 553-0661
 IL DESIGN FIRM #18-000933

USER NAME = qualiakm	DESIGNED - KMQ	REVISED -
DRAWN - KMQ	CHECKED - JAC	REVISED -
PLOT SCALE = 20.0000' / in.	DATE - 10-11-2013	REVISED -
PLOT DATE = 10/11/2013		



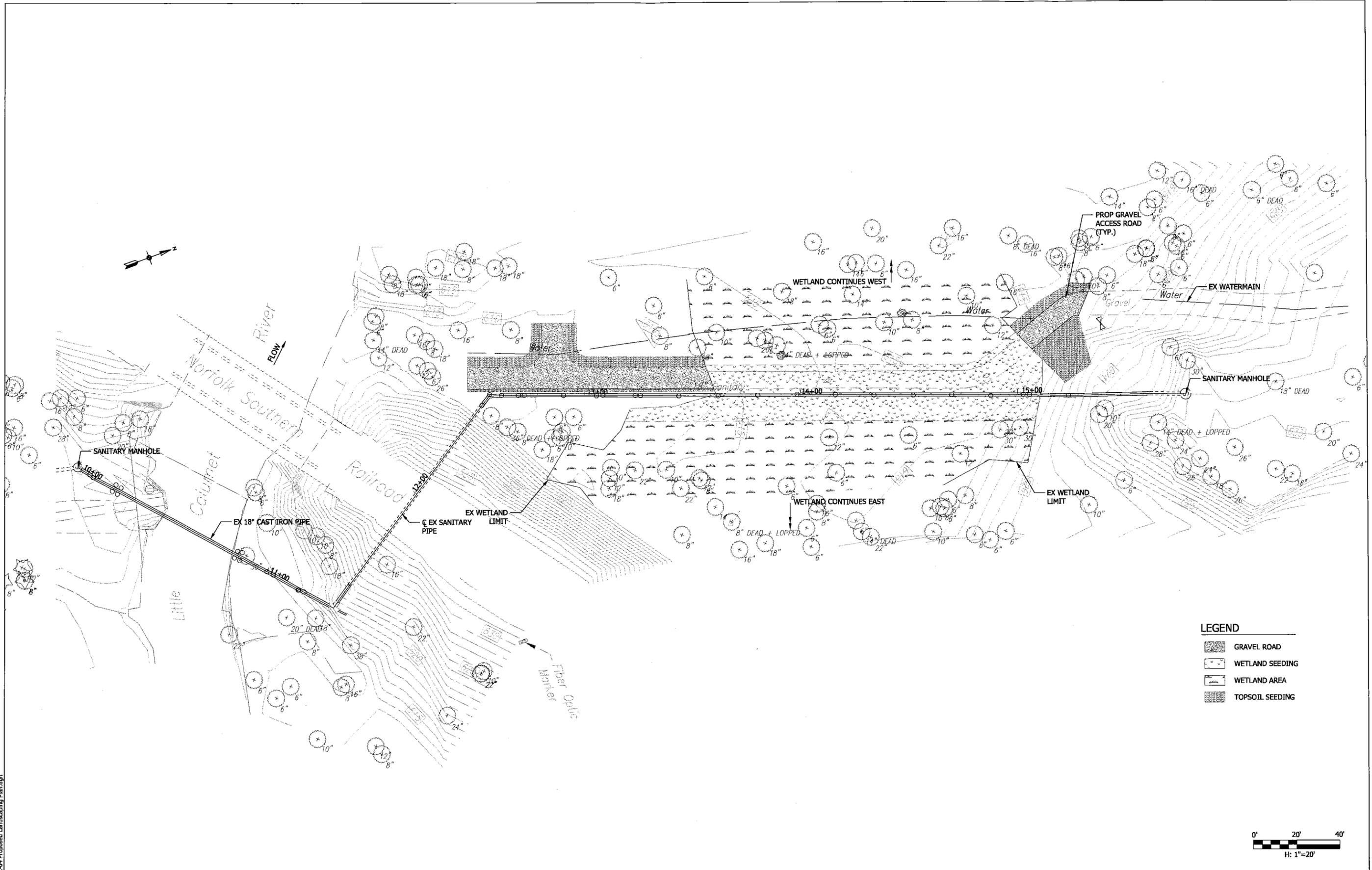
MORNINGSIDE AERIAL SEWER LINE IMPROVEMENTS
 Project Location: Near Frontage Road in Town of Chesterton, Indiana

PROPOSED EROSION AND SEDIMENTATION CONTROL PLAN

SCALE: 20.0000' / in. SHEET NO. 6 OF 16 SHEETS STA. 10+00.00 TO STA. 15+77.92

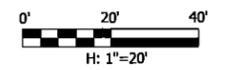
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		PORTER	16	C-03
[INDIANA] FED. AID PROJECT				

FILE NAME = ...C-04 Proposed Landscaping Plan.dgn



LEGEND

	GRAVEL ROAD
	WETLAND SEEDING
	WETLAND AREA
	TOPSOIL SEEDING



STV 100 years
 STV INCORPORATED
 200 WEST MONROE STREET, SUITE 1650
 CHICAGO, ILLINOIS 60606
 PHONE: (312) 553-0655
 FAX: (312) 553-0661
 IL DESIGN FIRM #184000933

USER NAME = qualiakm	DESIGNED - KMQ	REVISED -
DRAWN - KMQ	REVISED -	
PLOT SCALE = 20.0000' / in.	CHECKED - JAC	REVISED -
PLOT DATE = 10/11/2013	DATE - 10-11-2013	REVISED -

CHESTERTON INDIANA
MORNINGSIDE AERIAL SEWER LINE IMPROVEMENTS
 Project Location: Near Frontage Road in Town of Chesterton, Indiana

PROPOSED LANDSCAPING PLAN
 SCALE: 20.0000' / in. SHEET NO. 7 OF 16 SHEETS STA. 10+00.00 TO STA. 15+77.92

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		PORTER	16	C-04
INDIANA FED. AID PROJECT				