

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

Project Number: ER-16992-1

Name of Applicant: Joseph DiMisa

Address of Applicant:

Woolpert Incorporated
7635 Interactive Way Suite 100
Indianapolis, IN 46278-2727

Project Description:

Replacement of a runway culvert over a tributary of Johnson Ditch and channel cleaning 480' upstream and 485' downstream of the culvert, Griffith-Merrillville Airport

Location of Project: Merrillville, IN

Send comments to the following no later than June 25, 2013:

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

From: [DiMisa, Joe](#)
To: [Review, Environmental](#)
Subject: ER-16992 Coastal Zone Consistency Approval Request-Griffith Merrillville Airport Ditch 2
Date: Thursday, June 13, 2013 9:21:15 AM
Attachments: [GM-PCN-Exhibits-5-21-13.pdf](#)

Hello-This email responds to a letter received by Woolpert from the IDNR Division of Fish and Wildlife dated June 6, 2013 regarding culvert replacement and one-step channel dredging/habitat enhancement at Ditch 2 of the Griffith Merrillville Airport. Ditch Two is a tributary to Johnson Ditch (a tributary to the Little Calumet River) and the airport is located 7.5 miles south of Lake Michigan in Lake County, Indiana. The purpose of the project is to alleviate flooding in the area. We will soon be submitting for U.S. Army Corps of Engineers authorization for this project. **This email is requesting a federal coastal zone consistency review for the project.** It is our judgment that *the proposed activity complies with Indiana's approved coastal management program and will be conducted in a manner consistent with such program.*

Further, we do not believe that this project is within a floodway or floodplain and *we do not believe that the project requires a permit under the Flood Control Act, IC 14-28-1.* The drainage area leading to the ditch and culvert being considered for improvement is 0.14 square miles (less than the statutory threshold of one square mile under IC 14-28-1).

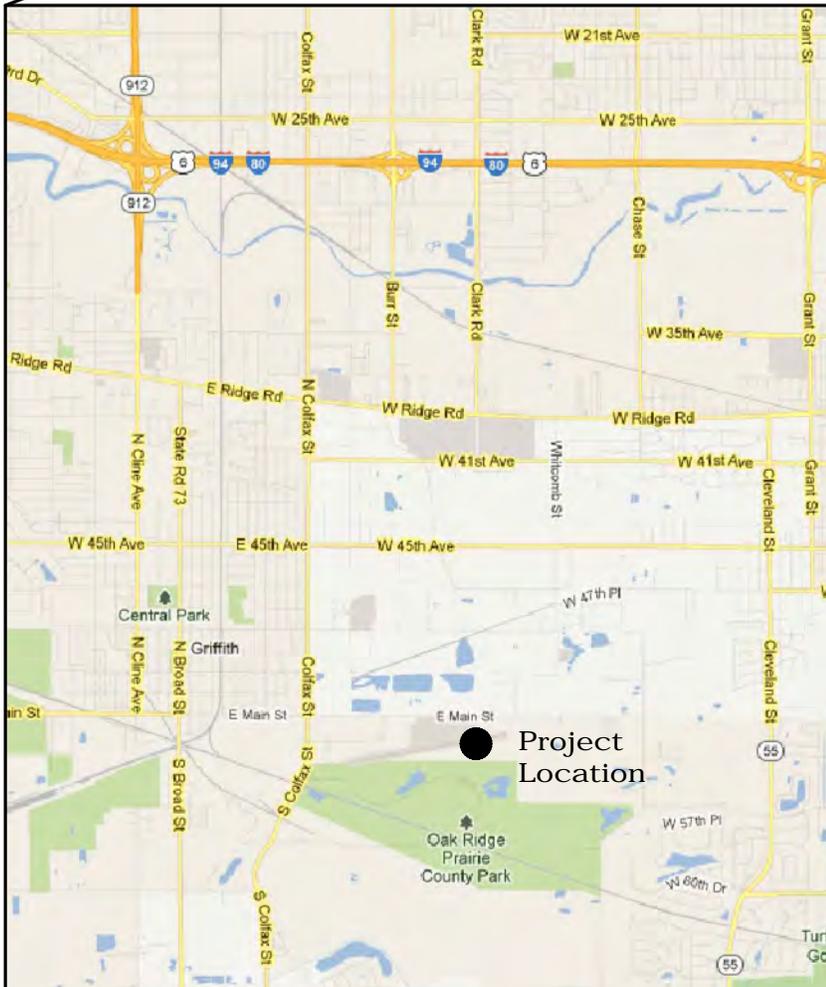
Please respond to us on coastal zone consistency and the need for a Flood Control Act permit. We have included project plans for your reference. If you have any questions during your review, feel free to contact us anytime. Thank you for your assistance.

Joseph M. Di Misa, AICP, LEED® AP BD+C, PWS
Environmental and Sustainability Consultant

Woolpert
4454 Idea Center Boulevard | Dayton, OH 45430
D 937.531.1224 | O 937.461.5660
joe.dimisa@woolpert.com | www.woolpert.com



INDIANA
NOT TO SCALE



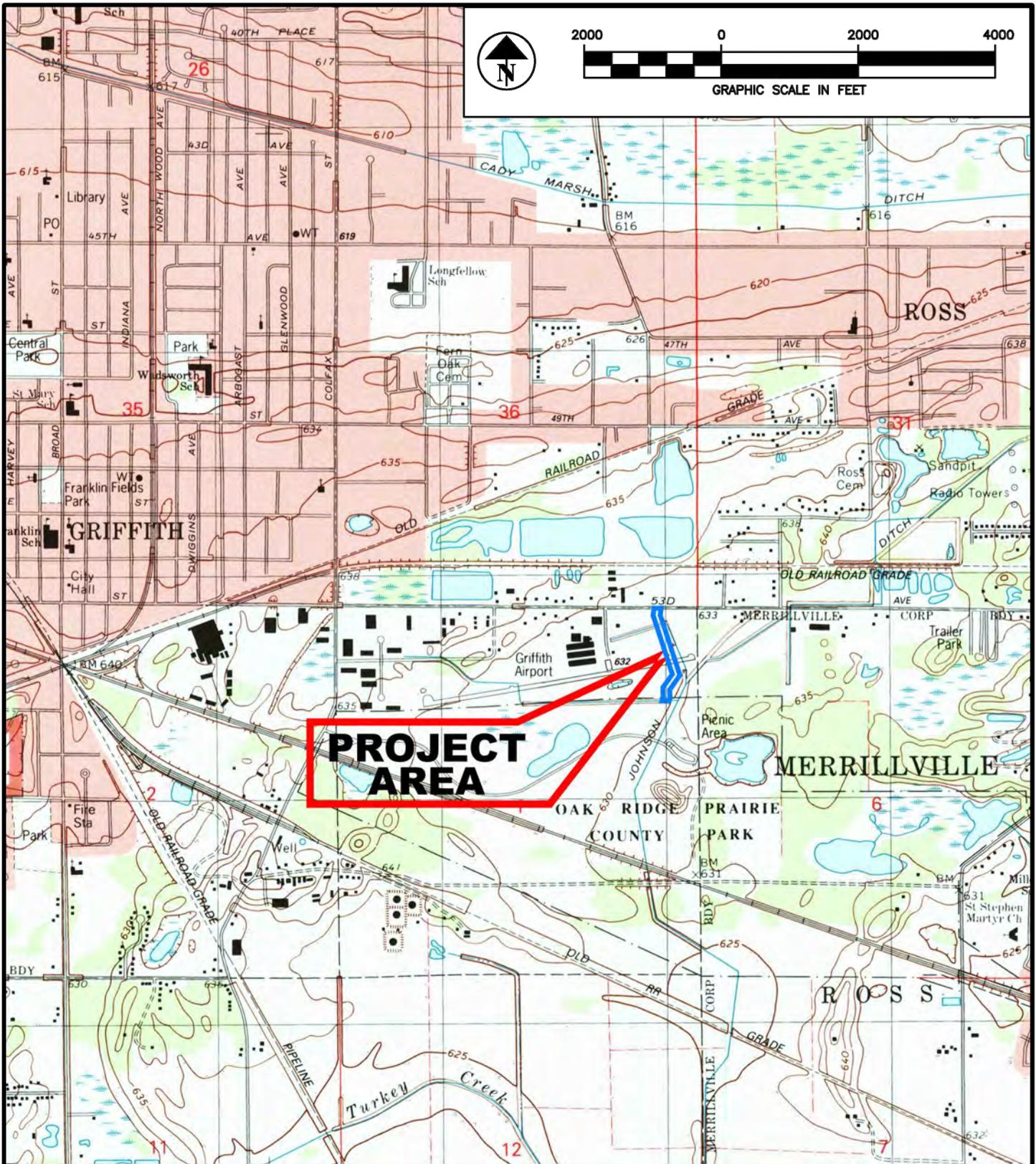
LAKE COUNTY
NOT TO SCALE



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Project Location Map
Exhibit 1

GRIFFITH-MERRILLVILLE AIRPORT
CULVERT REPLACEMENT



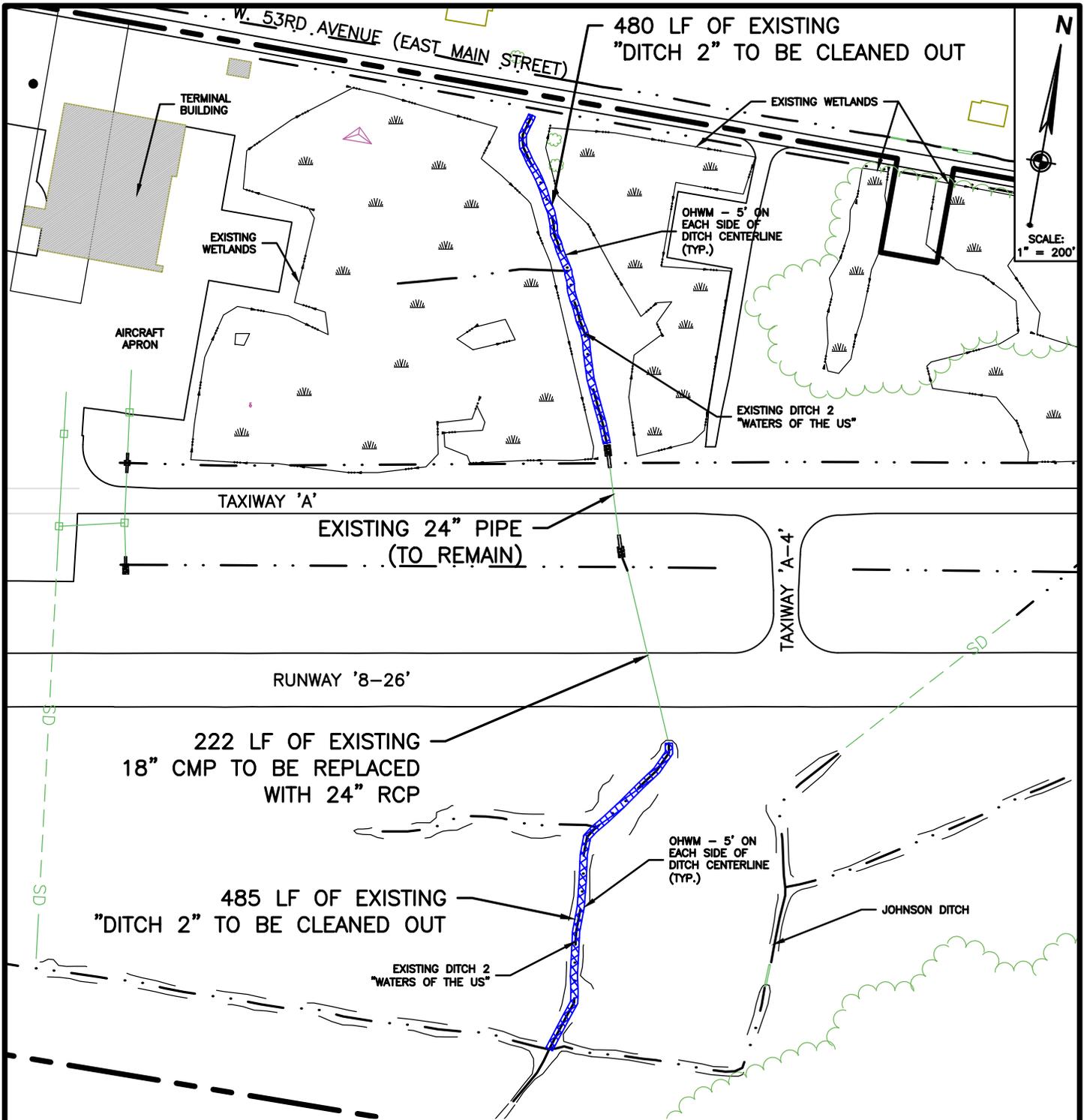
USGS Highland, Indiana



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Project Location Map
 Exhibit 2

GRIFFITH-MERRILLVILLE AIRPORT
 CULVERT REPLACEMENT



IMPACT SUMMARY

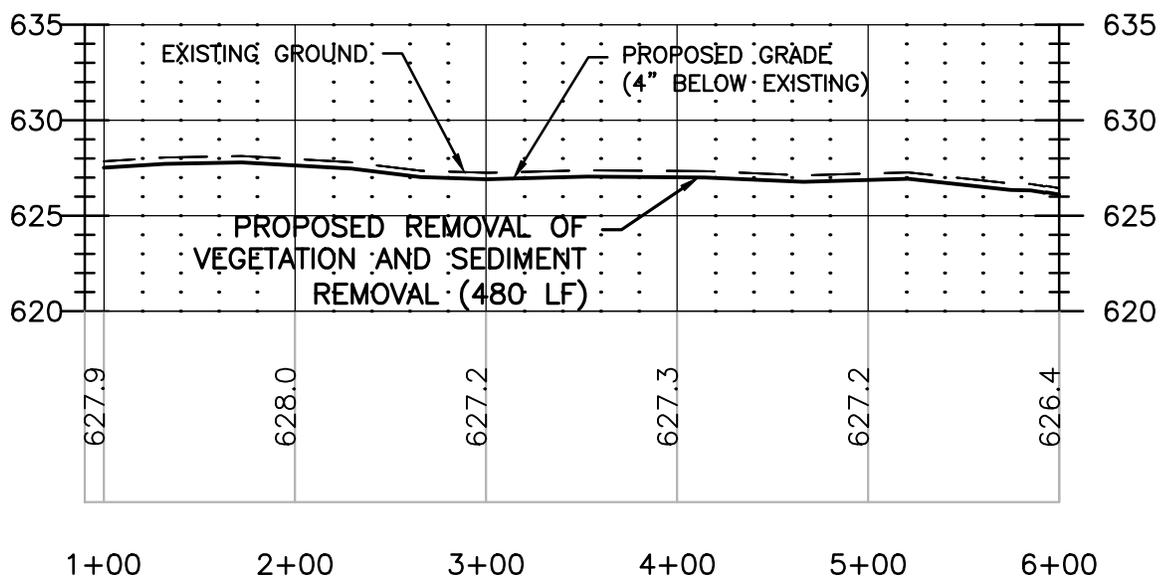
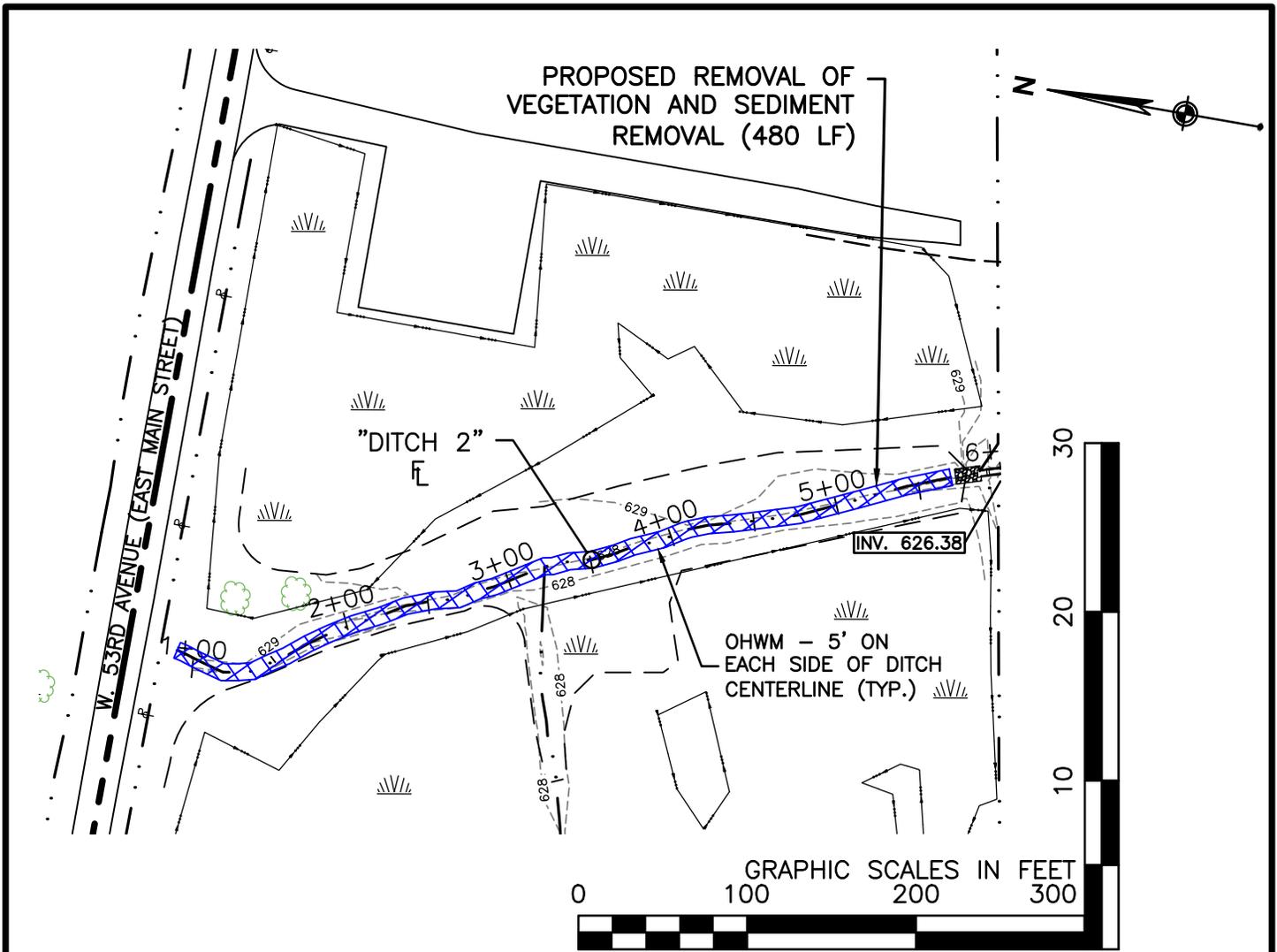
DITCH 2 (NORTH)	= 480 LF (4,800 SF) STREAM
RUNWAY CULVERT	= 222 LF (2,220 SF) STREAM
DITCH 2 (NORTH)	= 485 LF (4,850 SF) STREAM
TOTAL	= 1187 LF (11,870 SF = 0.27 ACRES) STREAM
WETLAND IMPACTS = NONE	



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**Proposed Project Plan View
 Exhibit 3**

**GRIFFITH-MERRILLVILLE AIRPORT
 CULVERT REPLACEMENT**

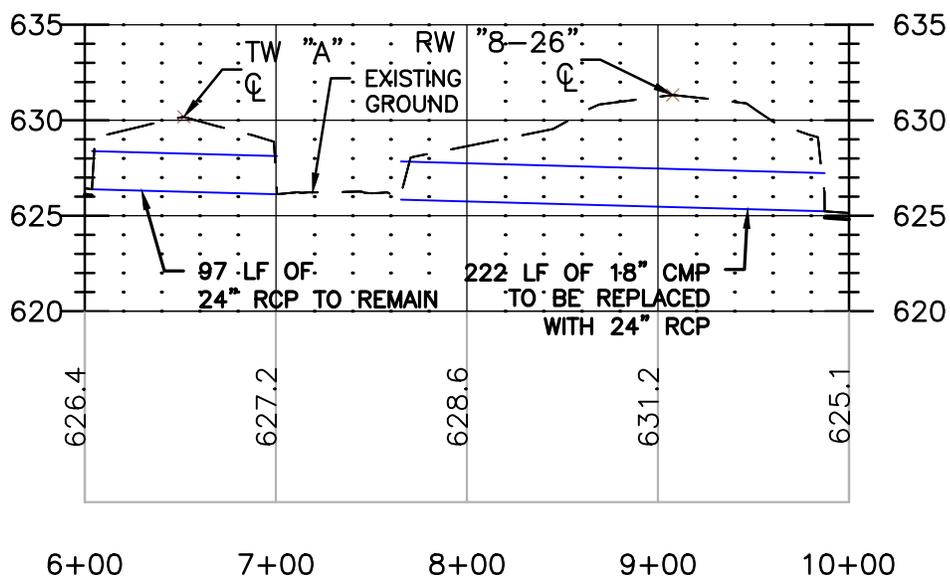
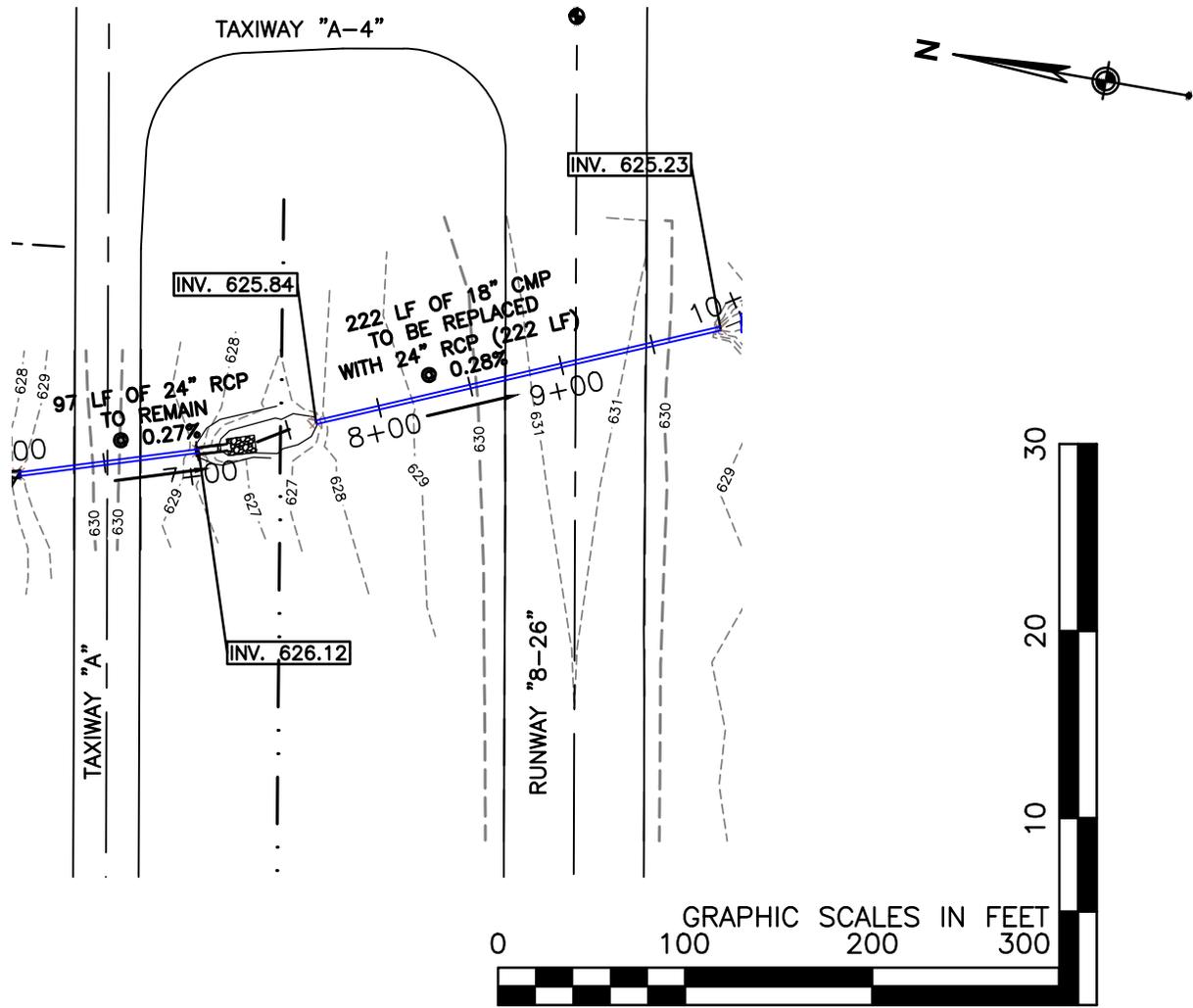


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DESIGN | GEOSPATIAL | INFRASTRUCTURE

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Proposed Project Plan and Profile
Exhibit 4

GRIFFITH-MERRILLVILLE AIRPORT
CULVERT REPLACEMENT




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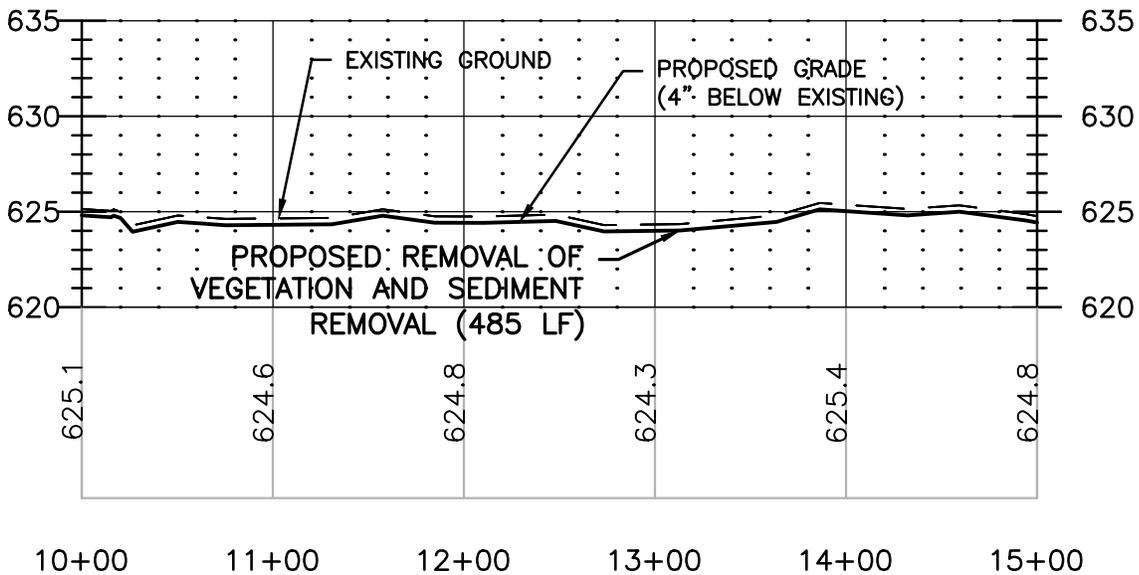
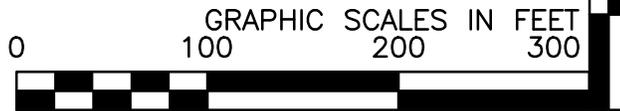
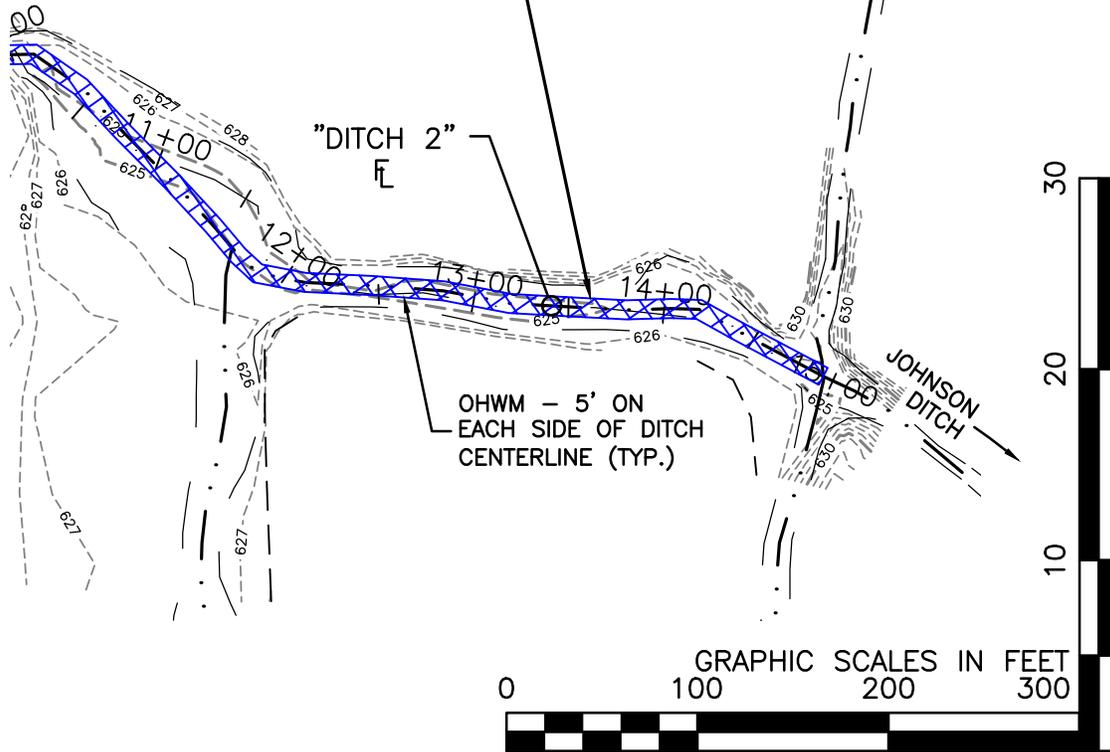
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Proposed Project Plan and Profile
Exhibit 5

GRIFFITH-MERRILLVILLE AIRPORT
CULVERT REPLACEMENT

PROPOSED REMOVAL OF
VEGETATION AND SEDIMENT
REMOVAL (485 LF)

JOHNSON
DITCH

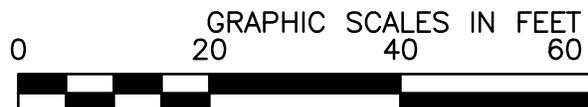
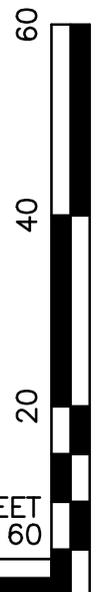
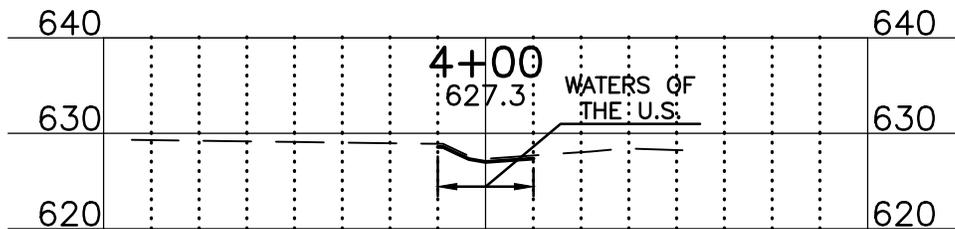
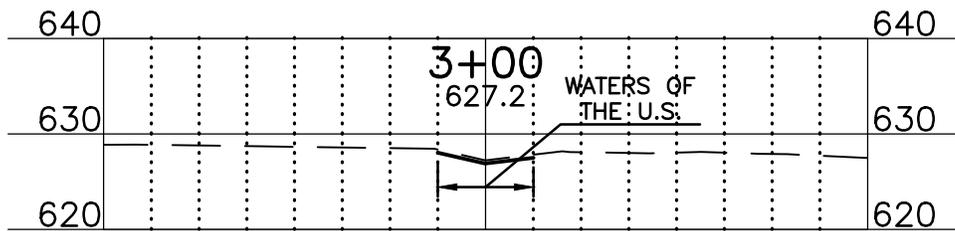
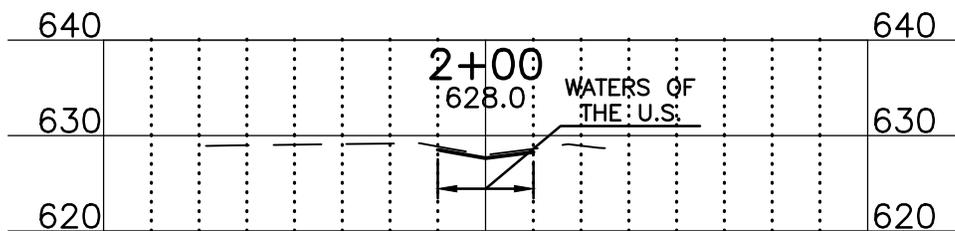
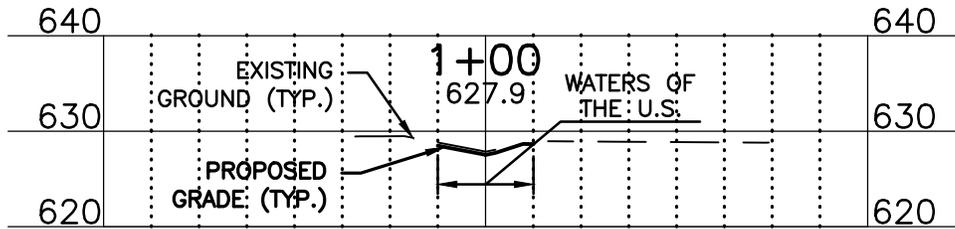


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Proposed Project Plan and Profile
Exhibit 6

GRIFFITH-MERRILLVILLE AIRPORT
CULVERT REPLACEMENT

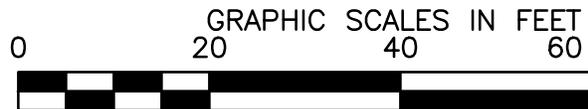
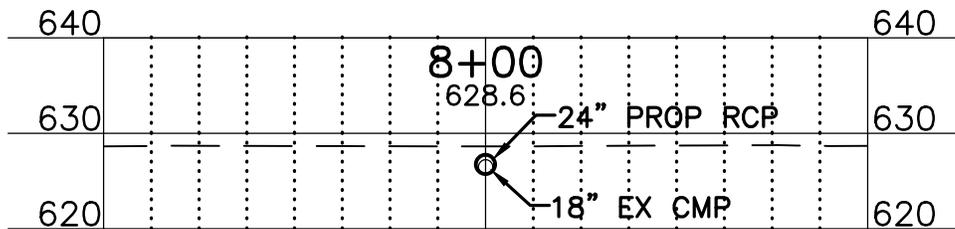
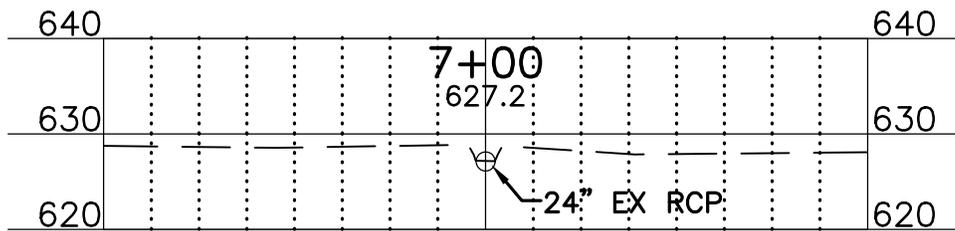
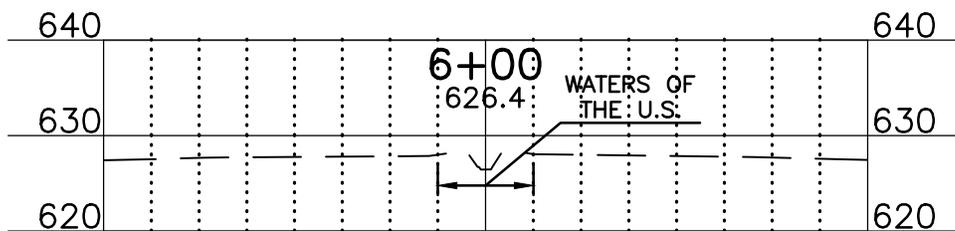
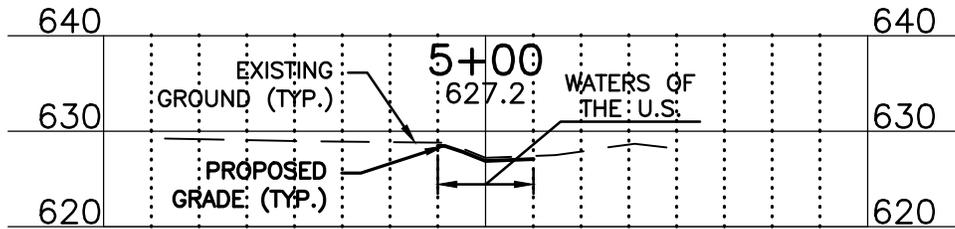


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Project Cross Sections
Exhibit 7

GRIFFITH-MERRILLVILLE AIRPORT
CULVERT REPLACEMENT

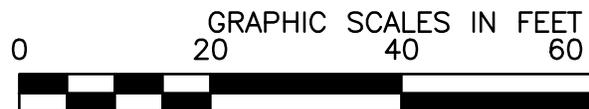
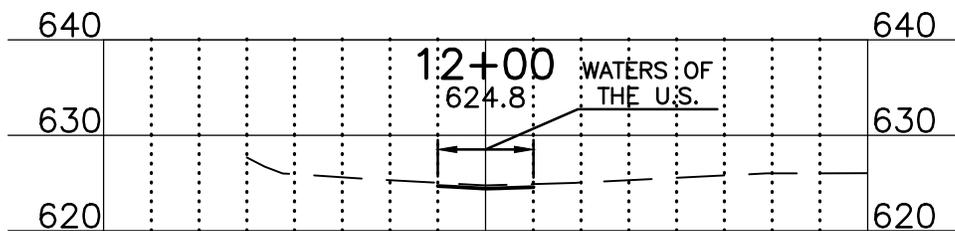
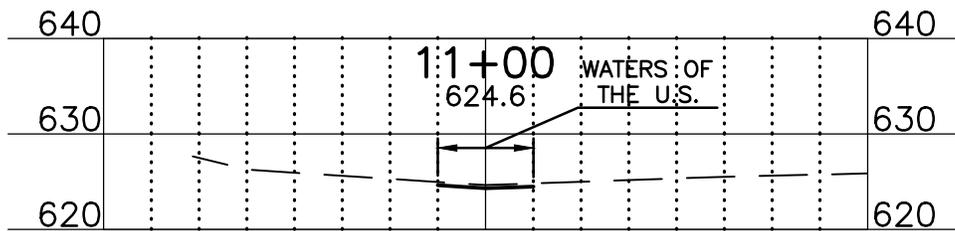
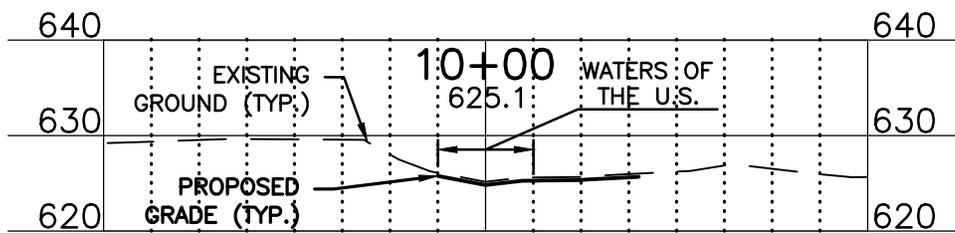
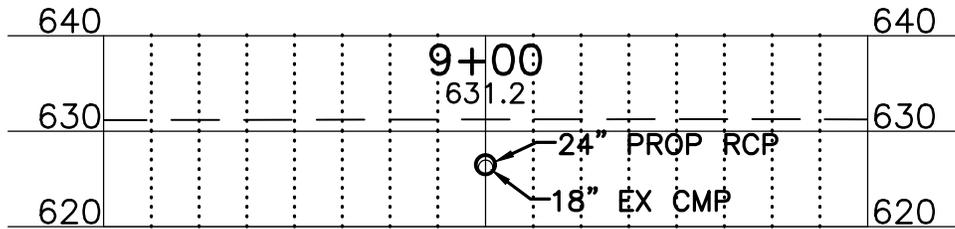


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Project Cross Sections
Exhibit 8

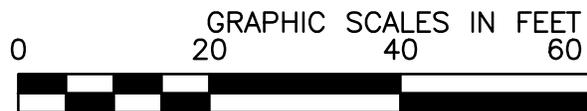
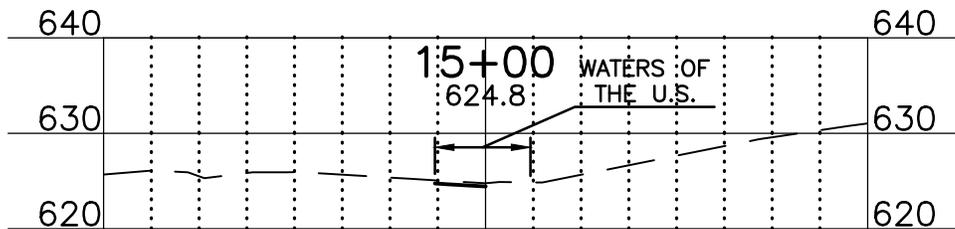
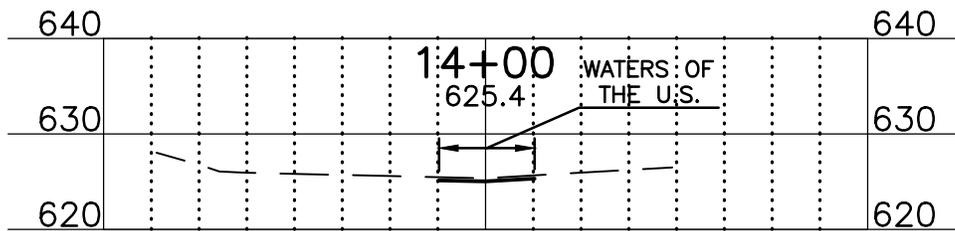
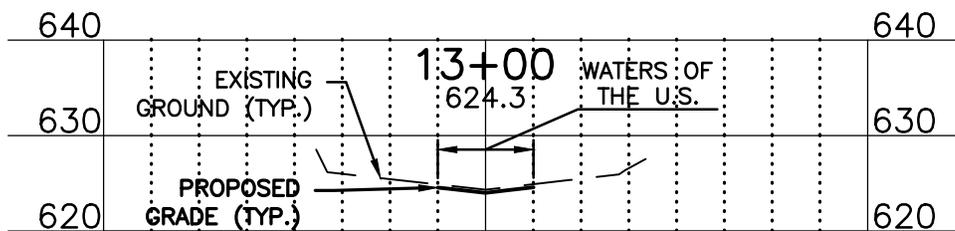
GRIFFITH-MERRILLVILLE AIRPORT
CULVERT REPLACEMENT



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Project Cross Sections
Exhibit 9

GRIFFITH-MERRILLVILLE AIRPORT
CULVERT REPLACEMENT



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Project Cross Sections
Exhibit 10

GRIFFITH-MERRILLVILLE AIRPORT
CULVERT REPLACEMENT

Division of Fish and Wildlife
402 W. Washington St., Rm W273
Indianapolis, IN 46204

June 6, 2013

Woolpert Incorporated
Joesph M DiMisa
7635 Interactive Way Suite 100
Indianapolis, IN 46278-2727

Re: Replacement of a runway culvert over a tributary of Johnson Ditch and channel cleaning 480' upstream and 485' downstream of the culvert, Griffith-Merrillville Airport

Dear Mr. DiMisa:

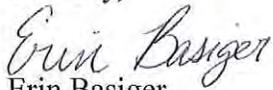
The Indiana DNR conducted an environmental review of the above referenced project. The DNR response letter (DNR #: ER-16992) was sent to you on June 5, 2013.

Under the Coastal Zone Management Act, 16 U.S.C. 1451, 1456 et seq. and regulations at 15 CFR Part 930, it appears that the project will also require a federal consistency review and determination. For more information, please see the Coastal Zone Management Federal Consistency Review Nonrule Policy at <http://www.in.gov/dnr/lakemich/6041.htm> and click on the Indiana LMCP Federal Consistency Nonrule Policy Document.

To request this determination, please email (environmentalreview@dnr.in.gov) or mail a request for a federal consistency review and include a statement that **the proposed activity complies with Indiana's approved coastal management program and will be conducted in a manner consistent with such program**. If more detailed information about the project site is available, please include that information for a determination as to whether or not a permit is required by the DNR under the Flood Control Act, *IC 14-28-1*. A permit issued by the DNR would serve as your federal consistency determination from the Indiana Lake Michigan Coastal Program.

For future reference, you may request a federal consistency review and determination in your request for an Environmental Review from the Indiana DNR. If you have any questions, please do not hesitate to contact me at (317) 234-0586 or at ebasiger@dnr.in.gov.

Sincerely,



Erin Basiger
Statewide Region Environmental Biologist
Division of Fish and Wildlife

THIS IS NOT A PERMIT

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

DNR #: ER-16992

Request Received: May 16, 2013

Requestor: Woolpert Incorporated
Joseph M DiMisa
7635 Interactive Way Suite 100
Indianapolis, IN 46278-2727

Project: Replacement of a runway culvert over a tributary of Johnson Ditch and channel cleaning 480' upstream and 485' downstream of the culvert, Griffith-Merrillville Airport

County/Site info: Lake

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 a stream or other flowing waterbody which has a drainage area greater than one square mile. 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. The species below have been recorded within ½ mile of the project area. The Division of Nature Preserves does not anticipate any impacts to the plant species resulting from the project as long as erosion control measures are implemented to minimize sediment impacts to water quality.

I) PLANTS

A) State Endangered:

1. Small Bristleberry (*Rubus setosus*)
2. Bicknell Northern Crane's-bill (*Geranium bicknellii*)
3. Jointed Rush (*Juncus articulatus*)
4. Globe Beaked-rush (*Rhynchospora recognita*)

B) State Threatened:

1. Cattail Gay-feather (*Liatris pycnostachya*)
2. Slick-seed Wild-bean (*Strophostyles leiosperma*)
3. Pale Corydalis (*Corydalis sempervirens*)
4. Straw Sedge (*Carex straminea*)
5. Slick-seed Wild-bean (*Strophostyles leiosperma*)
6. Carey's Smartweed (*Polygonum careyi*)
7. Smooth Veiny Pea (*Lathyrus venosus*)

C) State Rare:

1. Seabeach Needlegrass (*Aristida tuberculosa*)
2. Northern Bush-honeysuckle (*Diervilla lonicera*)
3. Wolf Spikerush (*Eleocharis wolfii*)
4. Spoon-leaved Sundew (*Drosera intermedia*)
5. Seabeach Needlegrass (*Aristida tuberculosa*)
6. Northern Witchgrass (*Panicum boreale*)
7. Small Yellow Lady's-slipper (*Cypripedium calceolus* var. *parviflorum*)

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

II) ANIMALS

A) Birds (all State Endangered):

1. Marsh Wren (*Cistothorus palustris*)
2. Virginia Rail (*Rallus limicola*)
3. American Bittern (*Botaurus lentiginosus*)

B) Reptiles & Amphibians:

1. Smooth Green Snake (*Liochlorophis vernalis*); State Endangered
2. Western Ribbonsnake (*Thamnophis proximus proximus*); State Special Concern
3. Northern Leopard Frog (*Rana pipiens*); State Special Concern
4. Blue-spotted Salamander (*Ambystoma laterale*); State Special Concern

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) Animal Species:

We do not foresee any impacts to the listed bird species above resulting from the project.

To minimize impacts to hibernating reptiles and amphibians, we recommend that construction only take place between May 1 and November 1. We recommend that all logs, trash, or any other type of debris (including any riprap that may be in the vicinity) be removed from the construction zone at least a week prior to the start of work to keep the snakes from hiding underneath them. Any vegetation to be removed should be done, preferably by hand, at least a week prior to the start of work as well. Using heavy machinery could lead to mortality of the Western ribbon snake or Smooth green snake as both species like to climb into low vegetation. After the trash and vegetation are removed, a trenched-in silt fence should be placed around the entire construction area before work starts. Any equipment, materials, or debris that is left in the area overnight should be checked for the presence of reptiles and amphibians prior to the start of work each day. If feasible, it would be best if any trash/debris or vegetation removal could occur in the winter when the animals are below ground.

Any reptiles or amphibians encountered in the project area should be removed, unharmed, and placed outside the construction area. An accredited herpetologist must be hired to translocate state or federally listed herps from current locations within the construction area to an area of suitable habitat. Also, we recommend contacting and coordinating with Sarabeth Klueh-Mundy, Division of Fish and Wildlife herpetologist, at (812) 334-1137 or sklueh-mundy@dnr.in.gov for guidance regarding development of herpetile removal plans. Removal of any state endangered species will require a permit issued by the Division of Fish and Wildlife. Please contact Linnea Petercheff at (317) 233-6527 or lpetercheff@dnr.in.gov regarding this permit, if needed.

2) Stream crossing:

For purposes of maintaining fish passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the bankfull width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width / length) of 0.25; and have stream depth and water velocities during low-flow conditions that are approximate to those in the natural stream channel.

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

The new, replacement, or rehabbed structure and any bank stabilization under the structure should not create conditions that are less favorable for wildlife passage under the structure compared to current conditions. A level area of natural ground under the structure is ideal for wildlife passage. If stabilization material is needed, we recommend a smooth-surfaced material such as articulated concrete mats (or riprap at the toe and turf reinforcement mats above the riprap toe protection) be placed on the side-slopes instead of riprap. Such materials will not impair wildlife movement along the banks under the bridge.

3) Bank Stabilization:

Establishing vegetation along the banks is critical for stabilization and erosion control. In addition to vegetation, some other form of bank stabilization may be needed. While hard armoring alone (e.g. riprap or glacial stone) may be needed in certain instances, soft armoring and bioengineering techniques should be considered first. In many instances, one or more methods are necessary to increase the likelihood of vegetation establishment. Combining vegetation with most bank stabilization methods can provide additional bank protection while not compromising the benefits to fish and wildlife. Information about bioengineering techniques can be found at <http://www.in.gov/legislative/iac/20120404-IR-312120154NRA.xml.pdf>. Also, the following is a USDA/NRCS document that outlines many different bioengineering techniques for streambank stabilization: <http://directives.sc.egov.usda.gov/17553.wba>.

Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap should not be placed above the existing streambed elevation). Riprap may be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM). The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.

4) Riparian 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>.

Impacts that remove trees from a non-wetland, riparian area should be mitigated. 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).

5) Wetland Habitat:

According to National Wetland Inventory data, the project is located within an emergent wetland. A formal wetland delineation should be conducted to determine the presence and/or extent of any potential wetland habitat. We also 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).

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

6) Stream Mitigation:

The removal of built up sediment, shelves, sandbars, logs, and other woody or herbaceous plant material will alter in-stream habitat for fish and wildlife resources as such characteristics provide structure for forage, loaf, or nest on or within. Also, the removal of this habitat can create changes in the stream that can alter the species and abundance of fish and other aquatic organisms. This impact may require in-stream mitigation.

In-stream mitigation could include in-stream structure such as riffles, runs, pools, lunkers or sandbars for habitat or habitat improvements include enhancing (invasive species removal) or replanting a minimum 35 foot wide woody or herbaceous riparian buffer strip using a mixture of grasses, sedges, wildflowers, vines, shrubs, and trees native to Northern Indiana and specifically for stream bank/floodway stabilization purposes. Stream mitigation should occur either upstream or downstream of the project site so the project area does not become an attractant for wildlife near the runway and facility's property, or a potential hazard for the facility (see mitigation guidelines above).

7) Two Stage Ditch:

We recommend the use of a two stage ditch in place of channel modification or channelization to help reduce flooding issues. A two stage ditch system can create a more stable ditch, which requires less maintenance, creates fewer disturbances to the biology of the stream, and reduces nutrient pollution and excess sedimentation. The concept of a two stage ditch was developed by observing natural processes that form stable streams and rivers. The design incorporates a floodplain zone along the ditch, called a bench, by removing the ditch banks roughly 2-3 feet above the stream bottom for a width of about 10 feet on each side. This allows the water to have more area to spread out onto during high flow events leading to decreased flow velocity and an increased volume of water that the ditch can carry, using the benches for overflow. Benefits of a two stage ditch over the typical agricultural ditch include improved drainage and ecological function because there are no impacts to the channel itself, and the benches have the potential to support and maintain better habitat conditions.

In further development of this project, consider coordinating with NRCS (see <http://www.bae.ncsu.edu/people/faculty/jennings/BAE%20579/NRCS%20654%20Chap%2010.pdf>) or The Nature Conservancy (see <http://www.nature.org/wherewework/northamerica/states/indiana/misc/art25464.html>). Also, the West Virginia Conservation Agency has a useful publication that can be reference: http://www.wvca.us/flood/pdf/14_Appendix_H_Dredging_and_Stream_Channel_Restoration.pdf.

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 inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. 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.
5. Do not work in the waterway from March 15 through June 15 and from July 15 through November 30 without the prior written approval of the Division of Fish and Wildlife.
6. Do not use broken concrete as riprap.
7. Minimize the movement of resuspended bottom sediment from the immediate project area.

THIS IS NOT A PERMIT

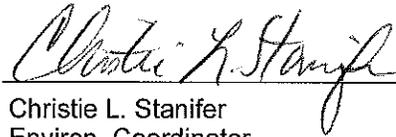
State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

8. 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.

9. 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.



Date: June 5, 2013

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

