CONSERVATION PLAN FOR THE ENDANGERED BLANDING'S TURTLE *(EMYDOIDEA BLANDINGII)* LAFOX ROAD BRIDGE REPLACEMENT OVER MILL CREEK CAMPTON HILLS, KANE COUNTY, ILLINOIS

PROJECT DESCRIPTION

LOCATION

The LaFox Road over Mill Creek Project is located on LaFox Road between Illinois Route 38 and Campton Hills Road in the SW ¼ of Section 26 and NW ¼ of Section 35, Township 40N, Range 7E in Campton Hills, Illinois. More specifically, the center of the project is located 41.911889°N and 88.406377° W. A location exhibit (Exhibit 1) is included in Tab 1 which illustrates the limits of the Kane County Right of Way or easements necessary to complete the project.

DESCRIPTION OF PROPOSED ACTIVITIES

The proposed project consists of widening and resurfacing 1,600-feet of roadway to provide shoulders, replacing the single 4-foot by 6.5-foot box culvert (the southern culvert) with a 6-foot by 6-foot box culvert, and replacing the double 8-foot by 7-foot culverts (northern culvert) with a 42-foot span bridge over Mill Creek. The project shall also include installing sheet pile along the western side of LaFox Road to minimize the impact to wetlands while providing the necessary space for the required shoulders. The culverts under the intersections of Grande Monde Road and LaFox Road shall be replaced with larger concrete culverts. The northern part of the intersection of North Grande Monde Road and LaFox Road will be widened to provide the required turning radius and visibility for traffic entering LaFox Road.

PROJECT PURPOSE

The purpose of this project is to replace two functionally obsolete structures which show signs of disrepair. The roadway is classified as a Minor Arterial (Urban) road with an Average Daily Traffic Count of 8,100 vehicles. This portion of the roadway has gravel shoulders of varying width, making it difficult and unsafe for vehicles to stop in cases of emergency. The roadway improvements will provide the necessary roadway and shoulder width, appropriate drainage, and safe visual distances at intersections within the project area.

PROJECT NEED

The wing walls and the head wall culvert over the Mill Creek Tributary (southern culvert) are in poor condition with moderate cracking and mild spalling exposing the reinforcement bars. The channel has mild erosion behind the southeast wing wall and sediment buildup behind the northwest wing wall. The roadway in this section has 1-foot asphalt and 3-foot gravel shoulders on either side of the 24-foot roadway. The headwall and wing walls on each side of the culvert over Mill Creek (northern culvert) are in poor condition with moderate cracking and spalling exposing the reinforcement bars. There is cracking and isolated spalling within the culvert. Due

to the accumulation of sediment in the bottom of both culverts, the condition of the culvert floors is not observable. There is sheet pile along the eastern side of LaFox Road to prevent the erosion of the embankment.

ANTICIPATED ADVERSE EFFECTS

Human and vehicular traffic required to install the sheet pile and construct the improvements are the anticipated actions to potentially impact the Blanding's Turtle (*Emydoidea blandingii*) that may be in the project area. Replacement of the box culverts will impact the waterways during the construction period.

AVOIDANCE AND MINIMIZATION

AVOIDANCE AND MINIMIZATION OF PROJECT DESIGN

With the presence of ADID High Quality Habitat Wetlands and Fens within the Right-of-Way (ROW) for this stretch of LaFox Road, the potential for wetland impacts is high to achieve the necessary road cross section. Based on the predicted traffic and the current design requirements, the roadway shall consist of two 12-foot lanes with 8-foot paved shoulders. To match the existing drainage patterns north and south of the project area along LaFox Road, a rural cross section, utilizing drainage swales, is required. To meet the floodway conveyance requirements, the road profile needs to be elevated to provide one-foot of freeboard above the 30-year flood event.

To meet the roadway profile requirements, the embankment on either side of the roadway would need to be expanded. The eastern embankment consists of sheet pile. To reduce the potential impacts required to grade the necessary embankment, sheet pile shall be installed along the western embankment. To prevent impacts to the fens on either side of the roadway, holes shall be drilled into the sheet pile during installation to maintain the groundwater connection under the roadway. The existing sheet pile already contains the wick drains.

As part of the design process, alternatives were reviewed in relation to replacement of the northern culvert over Mill Creek. These alternatives included replacing the culverts with similar sized structures, larger culverts, a bridge span, or nothing. To prevent additional constriction of Mill Creek, a bridge shall span the creek. This will allow safe passage of the Blanding's Turtles from one side of LaFox Road to the other.

ESTIMATED NUMBER OF TAKEN INDIVIDUALS

Based on the construction period and the measures to be implemented to reduce impacts to the Blanding's Turtles, the estimated number of individuals to be taken is zero, with the caveat that construction activities will be in the Blanding's Turtle habitat and the potential for a take exists.

AMOUNT OF AFFECTED HABITAT

During construction, the entire project area shall be isolated from access by the turtles, essentially removing the area from potential turtle habitat. The entire project area is 3.5 acres, but the area that is considered potential habitat is approximately 2 acres. Areas that have been

previously observed with broken eggs will be temporarily impacted outside of the sheet pile for access to complete the work on the culverts.

After construction, most of the western side of the roadway shall be supported by sheet pile, providing more of a barrier preventing the turtles from accessing the roadway. A portion of the existing embankment shall be removed from potential habitat by the installation of the sheet pile. The embankment is currently mowed on a regular basis, which provided a potential for basking in the sun and impacts due to management activities. Impacts to wetlands and Mill Creek shall be minimal. The substrate under the bridge and the culvert shall be stone which will naturalize and silt in over time.

PROPOSED MANAGEMENT OF PROJECT AREA

Areas outside of the sheet pile shall continue to be managed as wetland and wetland buffers. The portions of the project area that will be disturbed by construction activities shall be seeded with native vegetation appropriate for the hydrologic conditions. There shall be no major change in land use or management after construction is complete.

MINIMIZATION/MITIGATION OF EFFECTS ON SPECIES

To prevent impacts to individuals, the Contractor shall be required to provide education to the workers to identify and safely relocate turtles within the construction area. Prior to the start of construction, the project area shall be surveyed for Blanding's Turtles and any identified individuals shall be relocated upstream of the project, south of Campton Hill Road.

Barriers shall be installed surrounding the site to prevent the turtles from inadvertently entering the site. Within the waterways, wire fencing with 4" by 2" openings shall be installed. The wire fence shall be connected to the barrier fence along the banks in a manner that is intended to prevent spaces large enough for turtles to pass through. All construction and dewatering activities shall occur within the barrier and wire fences.

CONTRACTOR TRAINING AND AWARENESS

The Contractor shall be required to post information at the project site regarding the Blanding's Turtle and its habitat. The information shall be reviewed by all workers onsite at the time of their initial site training. The information shall include keys to identifying the Blanding's Turtle and potential habitat locations onsite as well as the procedures to be followed if an individual is observed.

During weekly progress meetings, permit compliance will be a required topic. The discussion should focus around if any individuals have been identified, where they may likely be found, and what to do if they are observed.

KDOT will provide external permit compliance as part of the Resident Engineer's responsibility to ensure that the Contractor is complying with the requirements of this Incidental Take Authorization.

MONITORING PRACTICES

KDOT shall be required to provide a qualified sub-consultant to perform a pre-construction survey for Blanding's Turtles and relocate any individuals found during the survey. KDOT's

Consultant shall be required to document any findings of Blanding's Turtles (including relocation sites and dates) from the survey and throughout construction.

ADAPTIVE MANAGEMENT PRACTICES

It is not anticipated that conditions will change on-site, but if the proposed measures are ineffective against protecting the Blanding's Turtles from impact during construction, the Contractor shall be directed to provide additional measures such as taller fences, additional barriers, etc. If a specimen is located during construction, the Contractor shall relocate the turtle in the identified area upstream (assuming it is a live individual) and determine where and how the turtle entered the containment area. If a portion of the containment has been damaged, the Contractor will repair the damaged device and continue to monitor the area where the individual was found.

The Resident Engineer shall monitor the relocation site throughout construction to ensure that the conditions do not significantly change. If the relocation site becomes impacted, the Resident Engineer shall consult with IDNR to determine the appropriate course of action to prevent impacts to relocated individuals.

FUNDING SOURCE

This project is being funded entirely by local funds.

ALTERNATIVES ANALYSIS

With the presence of Advanced Identification (ADID) High Quality Habitat Wetlands and Fens within the Right-of-Way (ROW) for this segment of LaFox Road, the potential for wetland impacts is high to achieve the road cross section required by the Illinois Department of Transportation Roadway Design Standards. As part of the design process, alternatives were reviewed in relation to replacement of the northern culvert over Mill Creek. These alternatives included replacing the culverts with similar sized structures, larger culverts, a bridge span, or nothing.

The No Action alternative consists of maintaining the current condition without improving the intersection at Grand Monde Road or replacing either of the creek crossings.

Based on the predicted traffic and the current design requirements, the roadway shall consist of two 12-foot lanes with 8-foot paved shoulders. To match the existing drainage patterns north and south of the project area along LaFox Road, a rural cross section, utilizing drainage swales, is required. The road profile must be elevated to provide one-foot of freeboard above the 30-year flood event, meeting the floodway conveyance requirements.

The roadway profile requires the embankment on either side of the roadway to be expanded. The eastern embankment consists of sheet pile. To reduce the potential impacts required to grade the necessary embankment, sheet pile shall be installed along the western embankment. Holes shall be drilled into the sheet pile during installation to maintain the groundwater connection under the roadway and prevent impacts to the fens on either side of the roadway.

The existing sheet pile already contains the wick drains. This option shall help minimize inadvertent access to the roadway by Blanding's Turtles and reduce deaths by vehicular traffic.

As part of the design process, alternatives were reviewed in relation to replacement of the northern culvert over Mill Creek. To prevent additional constriction and impacts of Mill Creek, a bridge will span the creek.

The "No-Action" alternative was not chosen because of safety concerns of the conditions of the culverts.

LONG-TERM EFFECTS OF PROJECT ON SPECIES

The measures proposed to reduce the likelihood of an Incidental Take of Blanding's Turtle individuals during construction are intended to prevent a reduction of the local population. Construction activities, development, and habitat fragmentation are typically cited as the cause of recent population decline. The project will likely reduce approximately that may be suitable for basking in the sun by installing sheet pile along 702-feet of the western side of the road, but this will also provide a barrier to the roadway surface. Stone shall be placed in the stream bottom under the bridge and on top of the culvert bottom which shall be buried in the bottom of the creek. This stone will prevent erosion around the abutment and provide a stable substrate under the structure.

CONSERVATION MEASURES

The proposed conservation measures for the LaFox Road over Mill Creek project include the following:

1) Perform a pre-construction turtle survey of the project area including Mill Creek, Mill Creek Tributary, wetlands, and the roadway embankment. The survey shall be designed to locate all potential turtles with emphasis on locating individuals of the Blanding's Turtle.
    a. Relocate all non-invasive turtles to appropriate upstream habitats outside urbanized sections of Mill Creek. The likely relocation area will be between the project and Campton Hills Road.

2) KDOT's consultant shall survey the project area in the spring or summer of the construction year prior to the initiation of any in-stream work. The applicant proposed to survey the entire construction zone and an additional 100 feet downstream of the construction zone. The surveys shall be conducted using standard methodology including wading in shallow water.
    a. All turtles (listed and non-listed species) found shall be identified to species. The surveys shall be conducted by a team of professionals and a state-licensed firm.
    b. A set of relocation protocols shall be developed for the site-specific conditions. The relocation team shall have extensive experience in developing turtle relocation protocols. Turtles found in the construction area shall be relocated to areas of suitable habitat upstream of the construction zone in appropriate habitat.
    c. Upon completion of the survey, KDOT shall prepare a report detailing the methods and results of the turtle relocations. This report shall include details on the number and species of turtles relocated. The report shall also identify if state-listed species are relocated.

3) No long-term monitoring of the relocation sites is proposed.

4) To minimize the extent of project-related disturbance to Mill Creek and any potential for indirect impacts to turtles or turtle habitat, KDOT and its contractor(s) shall implement stringent erosion and sediment control and construction management measures. These measures may include but are not limited to use of fluming, coffer dams, silt fencing or other sediment control measures to limit downstream sedimentation during construction. As part of the US Army Corps of Engineers (USACE) Regional Permit 3 (Category II) authorization, the Illinois Environmental Protection Agency (IEPA) has issued a 401 Water Quality Certification with conditions requiring strict erosion and sediment control measures be followed. Erosion and sediment control during construction shall comply with the Kane County Storm Water Ordinance and USACE requirements. Erosion and Sediment Control Plans for construction shall be reviewed by the Kane-DuPage County Soil & Water Conservation District for compliance with the technical standards of the current version of the Illinois Urban Manual.

IMPLEMENTING AGREEMENT

The Kane County Division of Transportation shall contract with a qualified subcontractor subject to IDNR approval to conduct the preconstruction survey and turtle relocations. The survey shall occur in the spring/summer of the year of construction prior to initiation of in-stream construction. The field personnel from the qualified subcontractor shall hold authorization under Section *5/3.22* Chapter 20 and Section *5/20-100,* Chapter 515 of the Illinois Complied Statutes to collect aquatic invertebrates (Illinois T&E species permit and collecting permit). The Applicant shall provide a report detailing the results of the pre-construction turtle surveys and subsequent relocations to the IDNR, Division of Natural Heritage, within 45 days of the surveys. The surveys and relocations shall occur prior to the initiation of construction activities when water and air temperatures are in compliance with acceptable protocols and standards for turtle relocations.

AUTHORIZATION FOR INCIDENTAL TAKE AND IMPLEMENTING AGREEMENT

Pursuant to the Illinois Endangered Species Protection Act (520 ILCS *10/5.5)* Kane County's Division of Transportation authorization for the incidental take of the State Endangered Blanding's Turtle *(Emydoidea blandingii)* in Kane County, Illinois shall be associated solely with the LaFox Road over Mill Creek Project provided that the Illinois Department of Natural Resources finds that an incidental take is warranted. The implementing agreement shall be based upon procedures and guidelines described in the Final Conservation Plan, as approved by the Illinois Department of Natural Resources, subject to the terms and conditions described in the final Authorization and Implementing Agreement.

The Illinois Endangered Species Protection Act includes six (6) criteria which must be met for the authorization of incidental take of an endangered or Endangered species. These criteria and the Department's determination for each criterion are listed below.

1. The taking shall not be the purpose of, but shall only be incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this proposed action is the replacement of two culverts with a culvert and bridge over Mill Creek and a tributary to Mill Creek, the improvement of LaFox Road, and the placement sheet pile to support the necessary embankment while reducing wetland impacts.

2. The parties to the conservation plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking.

The conservation plan prepared by Kane County Division of Transportation states that turtle surveys, and subsequent relocations, shall be conducted prior to initiation of construction and most likely during the spring/summer while water temperatures are at or above 50 degrees Fahrenheit. All turtles observed (listed or non-listed species) are to be relocated in order to minimize impacts. Turtle surveys shall be conducted using standard survey techniques including searching by feel to methodically cover the area to be disturbed by the project (viewing boxes, wading in shallow water). All turtles found shall be identified to species. Turtles shall be relocated into areas of suitable habitat, in the same habitat if available, upstream of the construction site. Specifically, the transplant site shall be close to the collection area and have similar to better vegetative quality and substrate. KDOT's consultant shall have extensive experience with Midwestern turtles. Consulting staff shall provide the Department with a report detailing the results of all mussel surveys and relocation efforts within 45 days of completing all surveys/relocations. In summary, mussel surveys and related relocations shall occur only after Department authorization and prior to any construction activities.

3. The parties to the conservation plan will ensure that adequate funding for the conservation plan will be provided:

The Kane County Division of Transportation shall not begin work without adequate funding to undertake and implement the conservation plan. The project shall require both financial and engineering plan approval by KDOT prior to letting. Issuance of the Incidental Take permit shall also be required by the USACE before final approval. KDOT shall identify funding for the conservation plan as part of the design process.

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of the survival or recovery of the endangered species or Endangered species in the wild in Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois:

Construction of the LaFox Road over Mill Creek project in Kane County, Illinois will not reduce the likelihood of the survival of state-listed Endangered or endangered mussels in Illinois. In North America, the Blanding's Turtle *(Emydoidea blandingii)* is known in the northeastern United States. In Illinois, in the Mill Creek watershed as well as several other watersheds where there are small creeks and adjacent wetlands and uplands for breeding and habitat. The Blanding's Turtle now has a restricted distribution in Illinois, and its numbers have been reduced most likely as a result of increased habitat fragmentation and accidental mortality from human development. This project shall not significantly alter the characteristics of the area and shall provide a barrier (sheet pile for the embankment of the roadway) between the west side of the road and the Blanding's Turtle habitat.

Any live animals that are overlooked during the relocation effort could be at risk of injury or death as a result of construction activities. The relocation of all turtles encountered will reduce

the likelyhood that a significant number of individuals shall be exposed to threats related to the construction of the LaFox Road over Mill Creek project, in Kane County, Illinois.

5. Any measures required under Section 5.5 of the Illinois Endangered Species Protection Act [520 n.CS10/5.5 - 17 n. Adm. Code Part 1080.40(b)], will be performed:

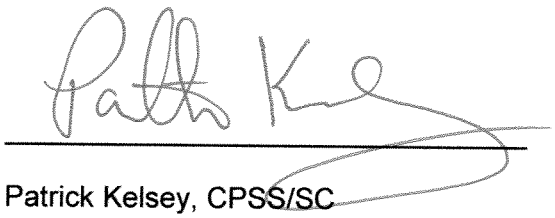
Additional measures necessary shall be included in the authorization. Kane County is willing to meet appropriate measures listed in the permit.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application:

Kane County and the Kane County Division of Transportation, prepared a conservation plan as described by the Illinois Endangered Species Protection Act (520 ILCS *10/5.5).* That plan and Kane County's formal request for authorization for incidental take of Blanding's Turtle *(Emydoidea blandingii)* are forthcoming.

PREPARED FOR KANE COUNTY AND THE KANE COUNTY DIVISION OF TRANSPORTATION BY WILLS BURKE KELSEY ASSOCIATES, LTD.

By:



Patrick Kelsey, CPSS/SC
Executive Vice President

EcoCAT
Ecological Compliance Assessment Tool

Applicant:	Wills Burke Kelsey Associates, Ltd.	*IDNR Project #:*	1113056
Contact:	Patrick VerHalen	Alternate #:	11-0155
Address:	116 W. Main Street Suite 201 St. Charles, IL 60174	Date:	06/02/2011

Project: LaFox Road over Mill Creek
Address: LaFox Road, Campton Hills

Description: Bridge replacements

Natural Resource Review Results

This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Campton Hills Park INAI Site
Campton Hills Park Land And Water Reserve
Blanding'S Turtle *(Emydoidea blandingii)*
Golden Sedge *(Carex aurea)*

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Kane
Township, Range, Section:
40N, 7E, 26 40N, 7E, 35

IL Department of Natural Resources Contact
Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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WILLS BURKE KELSEY ASSOCIATES

MEMORANDUM

DATE: March 12, 2012
Revised October 18, 2012

TO: USFWS

FROM: Natalie Paver

SUBJECT: Section 7 Threatened and Endangered Species Consultation for LaFox Road Bridge over Mill Creek and Tributary to Mill Creek in Campton Hills, Kane County, Illinois (WBK Project No. 11-0155)

Threatened and Endangered Species Consultation:

On November 16, 2009 new procedures were issued by the US Army Corps of Engineers (USACE) and the US Fish and Wildlife Service (USFWS) for completing Section 7 Consultations for Federally-listed Threatened and Endangered Species. The initial process is no longer completed by the USFWS, but is now up to the consultant/applicant for projects requiring review.

There is one Federally-listed threatened, endangered, or candidate species in Kane County. The species and known habitat is listed below:

Common Name: Eastern Prairie Fringed Orchid

Scientific Name: *Platanthaera leucophaea*

Habitat Description: The Eastern Prairie Fringed Orchid occurs in wet to mesic prairie communities and wetland communities; including, sedge meadow, fen, and marsh. This species can endure a wide moisture variation. The orchid requires full sun for optimal growth and flowering, however, is also found in partially shaded areas. This species prefers neutral to alkaline glacial soils, lake plain deposits, muck, and peat. Orchids may also occur along ditches and roadways that contain the proper moisture, sunlight, and soil conditions.

Project Description:

LaFox Road is located west of the City of Geneva north of Illinois Route 38, and south of Campton Hills Road. More specifically, the Mill Creek crossing at LaFox Road is located at 41.9118881°N and 88.4063773°W, in the southwest ¼ of Section 26 and the northwest ¼ of Section 35 in Townships 40N, Range 7E. Mill Creek flows northwest to southeast in the vicinity of the crossing under LaFox Road. Mill Creek is conveyed under LaFox Road by two reinforced concrete box culverts. The Mill Creek watershed consists of agriculture, rural farm residences, and single family homes.

The proposed project consists of replacing the culvert across Mill Creek with a bridge, and replacing the culvert across the tributary to Mill Creek with a larger culvert. Additional shoulder will be added to each side of the roadway; however, the roadway will not be widened. Sheet pile will be added to the embankment on the west side of the roadway.

There will be approximately 0.18 acres of temporary wetland impact, 0.05 acres of temporary fen impact, 0.16 acres of permanent wetland impacts, and 0.04 acres of permanent impact to the areas delineated as fen due to the proposed project.

Wetland Delineation:

On August 17, 2011, Wills Burke Kelsey Associates, Ltd. (WBK) completed a field reconnaissance of the LaFox Road site to determine if there are any on-site wetlands/waters of the US. The field reconnaissance was conducted in accordance with the methodology established by the United States Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual and the 2010 Regional Supplement for the Midwest Region. Two waters of the US (Mill Creek and Mill Creek Tributary) and four wetlands were identified at the time of the site visit. WBK identified six fens that are partially within the limits of the delineation, and one large fen off-site to the west.

Floristic Quality Assessment and Associate Plant Species:

At the time of the wetland delineation, a floristic quality assessment for each wetland and fen area was determined. The overall wetland area had an FQI of 28.8 and a C-value of 3.7, and the fen areas each had a C-value greater than 3.5. The wetlands and fens within the project area are considered high quality aquatic resources because they have FQI of 20 or greater and/ or a C-value of 3.5 or greater.

A comparison of the plant species list for the project site from the wetland delineation and the *Associate Plant Species List for Eastern Prairie Fringed Orchid in Northeastern Illinois* was completed. There are 14 species present from the associate plant list within the LaFox Road over Mill Creek project area. Of the fourteen species, 11 have a C-value of 2 or greater. Based on the FQI data, the Eastern Prairie Fringed Orchid could potentially be present within the project limits. The complete vegetation inventory including wetlands, fens, and uplands area within the project limit is attached to this memorandum. The associate plant species of the orchid are highlighted.

Field Assessment:

WBK conducted field investigations in search of the Eastern Prairie Fringed Orchid on June 26 through July 12, 2011 and June 26 through July 11, 2012. Potential orchid habitat is available within and adjacent to the project area. At the time of the site visits, no sign of the orchid was found.

Conclusions:

Based on the current conditions of the site during field investigations, the project area is not likely to support the Eastern Prairie Fringed Orchid. It is determined that the project will have no likely effect on any Federally-listed threatened, endangered, or candidate species.

12.0315.complete veg site list

LaFox Road over Mill Creek - Complete Vegetation Inventory

Site: LaFox Road over Mill Creek
Locale: LaFox Road
By: LJL, PVH
File: w:\Projects\2011\110155 LaFoxBridge\projectmgt\Reports\Wetland\FQA\complete site list.inv

FLORISTIC QUALITY DATA					
24.0%	Native	98	76.0%	Adventive	31
98 NATIVE SPECIES	Tree	7	5.4%	Tree	0
0.0%					
129 Total Species	Shrub	6	4.7%	Shrub	4
3.1%					
3.5 NATIVE MEAN C	W-Vine	2	1.6%	W-Vine	1
0.8%					
2.6 W/Adventives	H-Vine	1	0.8%	H-Vine	0
0.0%					
34.3 NATIVE FQI	P-Forb	48	37.2%	P-Forb	12
9.3%					
29.9 W/Adventives	B-Forb	4	3.1%	B-Forb	4
3.1%					
-1.7 NATIVE MEAN W	A-Forb	15	11.6%	A-Forb	2
1.6%					
-0.9 W/Adventives	P-Grass	6	4.7%	P-Grass	6
4.7%					
AVG: Fac. Wetland (-)	A-Grass	1	0.8%	A-Grass	2
1.6%					
	P-Sedge	8	6.2%	P-Sedge	0
0.0%					
	A-Sedge	0	0.0%	A-Sedge	0
0.0%					
	Cryptogam	0	0.0%		

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	
COMMON NAME						
ACARHO	0	Acalypha rhomboidea	3	FACU	Nt A-Forb	
THREE-SEEDED MERCURY						
ACENEG	0	Acer negundo	-2	FACW-	Nt Tree	BOX
ELDER						
ACOCAL	7	Acorus calamus	-5	OBL	Nt P-Forb	
SWEET FLAG						
AGRREP	0	AGROPYRON REPENS	3	FACU	Ad P-Grass	
QUACK GRASS						
AGRALA	0	AGROSTIS ALBA	-3	FACW	Ad P-Grass	
REDTOP						
AGRALP	10	Agrostis alba palustris	-5	[OBL]	Nt P-Grass	
BENT GRASS						
AMAHYB	0	Amaranthus hybridus	5	UPL	Nt A-Forb	
GREEN AMARANTH						
AMBARE	0	Ambrosia artemisiifolia elatior	3	FACU	Nt A-Forb	
COMMON RAGWEED						
AMBTRI	0	Ambrosia trifida	-1	FAC+	Nt A-Forb	
GIANT RAGWEED						
ANGATR	7	Angelica atropurpurea	-5	OBL	Nt P-Forb	
GREAT ANGELICA						
ANTSYL	0	ANTHRISCUS SYLVESTRIS	3	[FACU]	Ad B-Forb	
WILD CHERVIL						
APIAME	7	Apios americana	-3	FACW	Nt P-Forb	
GROUND NUT						

APOCAN	4 Apocynum cannabinum	0	FAC	Nt P-Forb	
INDIAN HEMP					
ARCMIN	0 ARCTIUM MINUS	5	UPL	Ad B-Forb	
COMMON BURDOCK					
ASCINC	4 Asclepias incarnata	-5	OBL	Nt P-Forb	
SWAMP MILKWEED					
ASCSYR	0 Asclepias syriaca	5	UPL	Nt P-Forb	
COMMON MILKWEED					
ASTNOV	4 Aster novae-angliae	-3	FACW	Nt P-Forb	NEW
ENGLAND ASTER					
ASTPUF	7 Aster puniceus firmus	-5	OBL	Nt P-Forb	
SHINING ASTER					
ASTSIS	3 Aster simplex	-5	OBL	Nt P-Forb	
PANICLED ASTER					
ASTUMB	9 Aster umbellatus	-3	FACW	Nt P-Forb	
FLAT-TOP ASTER					
BARVUL	0 BARBAREA VULGARIS	0	FAC	Ad B-Forb	
YELLOW ROCKET					
BIDCER	5 Bidens cernua	-5	OBL	Nt A-Forb	
NODDING BUR MARIGOLD					
BIDFRO	1 Bidens frondosa	-3	FACW	Nt A-Forb	
COMMON BEGGAR'S TICKS					
BOECYC	2 Boehmeria cylindrica	-5	OBL	Nt P-Forb	
FALSE NETTLE					
BROINE	0 BROMUS INERMIS	5	UPL	Ad P-Grass	
HUNGARIAN BROME					
CALCAN	3 Calamagrostis canadensis	-5	OBL	Nt P-Grass	
BLUE JOINT GRASS					
CXBEBB	6 Carex bebbii	-5	OBL	Nt P-Sedge	
BEBB'S OVAL 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					
CHEGLB	8 Chelone glabra	-5	OBL	Nt P-Forb	
TURTLEHEAD					
CICINT	0 CICHORIUM INTYBUS	5	UPL	Ad P-Forb	
CHICORY					
CIRARV	0 CIRSIUM ARVENSE	5	UPL	Ad P-Forb	
FIELD THISTLE					
CONSEP	1 Convolvulus sepium	0	FAC	Nt P-Forb	
HEDGE BINDWEED					
CORRAC	1 Cornus racemosa	-2	FACW-	Nt Shrub	
GRAY DOGWOOD					
CORVAR	0 CORONILLA VARIA	5	UPL	Ad P-Forb	
CROWN VETCH					
CUSGRO	4 Cuscuta gronovii	-5	[OBL]	Nt A-Forb	
COMMON DODDER					
CYPESC	0 Cyperus esculentus	-1	[FAC+]	Nt P-Sedge	
FIELD NUT SEDGE					
DAUCAR	0 DAUCUS CAROTA	5	UPL	Ad B-Forb	
QUEEN ANNE'S LACE					
DIOVIL	7 Dioscorea villosa	1	FAC-	Nt H-Vine	
WILD YAM					
ECHCRU	0 Echinochloa crusgalli	-3	FACW	Nt A-Grass	
BARNYARD GRASS					
ERIANS	0 Erigeron annuus	1	FAC-	Nt B-Forb	
ANNUAL FLEABANE					
ERICAN	0 Erigeron canadensis	1	FAC-	Nt A-Forb	
HORSEWEED					
EUPMAM	4 Eupatorium maculatum	-5	OBL	Nt P-Forb	
SPOTTED JOE PYE WEED					
EUPPER	4 Eupatorium perfoliatum	-4	FACW+	Nt P-Forb	

COMMON BONESET				
EUPPUR	7 Eupatorium purpureum	5	UPL	Nt P-Forb
PURPLE JOE PYE WEED				
EUPMAA	0 Euphorbia maculata	3	FACU	Nt A-Forb
EYEBANE				
GLEHED	0 GLECHOMA HEDERACEA	3	FACU	Ad P-Forb
CREEPING CHARLIE				
HACVIR	0 Hackelia virginiana	1	FAC-	Nt B-Forb
STICKSEED				
HELGRO	2 Helianthus grosseserratus	-2	FACW-	Nt P-Forb
SAWTOOTH SUNFLOWER				
HESMAT	0 HESPERIS MATRONALIS	5	UPL	Ad P-Forb
DAME'S ROCKET				
IMPCAP	3 Impatiens capensis	-3	FACW	Nt A-Forb
ORANGE JEWELWEED				
IMPPAL	6 Impatiens pallida	-1	[FAC+]	Nt A-Forb
YELLOW JEWELWEED				
IPOPUR	0 IPOMOEA PURPUREA	4	FACU-	Ad A-Forb
COMMON MORNING GLORY				
IRIVIS	5 Iris virginica shrevei	-5	OBL	Nt P-Forb
BLUE FLAG				
JUNTEN	0 Juncus tenuis	2	[FACU+]	Nt P-Forb
PATH RUSH				
JUNTOR	4 Juncus torreyi	-3	FACW	Nt P-Forb
TORREY'S RUSH				
LACCAN	2 Lactuca canadensis	2	FACU+	Nt B-Forb
WILD LETTUCE				
LEEORY	4 Leersia oryzoides	-5	OBL	Nt P-Grass
RICE CUT GRASS				
LILMIC	6 Lilium michiganense	-1	FAC+	Nt P-Forb
TURK'S CAP LILY				
LOBSIP	6 Lobelia siphilitica	-4	FACW+	Nt P-Forb
GREAT BLUE LOBELIA				
LOLPER	0 LOLIUM PERENNE	3	FACU	Ad P-Grass
PERENNIAL RYE GRASS				
LONMAA	0 LONICERA MAACKII	5	UPL	Ad Shrub
AMUR HONEYSUCKLE				
LYCAME	5 Lycopus americanus	-5	OBL	Nt P-Forb
COMMON WATER HOREHOUND				
LYTSAL	0 LYTHRUM SALICARIA	-5	OBL	Ad P-Forb
PURPLE LOOSESTRIFE				
MENARV	5 Mentha arvensis villosa	-5	[OBL]	Nt P-Forb
WILD MINT				
MENSPI	0 MENTHA SPICATA	-4	FACW+	Ad P-Forb
SPEARMINT				
MIMRIN	6 Mimulus ringens	-5	OBL	Nt P-Forb
MONKEY FLOWER				
MONFIS	4 Monarda fistulosa	3	FACU	Nt P-Forb
WILD BERGAMOT				
MYOAQU	0 MYOSOTON AQUATICUM	-1	FAC+	Ad P-Forb
WATER CHICKWEED				
OENBIE	0 Oenothera biennis	3	FACU	Nt B-Forb
COMMON EVENING PRIMROSE				
OXASTR	0 Oxalis stricta	5	UPL	Nt P-Forb
COMMON WOOD SORREL				
PANVIR	5 Panicum virgatum	-1	FAC+	Nt P-Grass
SWITCH GRASS				
PARQUI	2 Parthenocissus quinquefolia	1	FAC-	Nt W-Vine
VIRGINIA CREEPER				
PHAARU	0 PHALARIS ARUNDINACEA	-4	FACW+	Ad P-Grass
REED CANARY GRASS				
PHRAUS	1 Phragmites australis	-4	FACW+	Nt P-Grass
COMMON REED				

PHYSUB	0 Physalis subglabrata	5	UPL	Nt P-Forb	
TALL GROUND CHERRY					
PHYAME	1 Phytolacca americana	1	FAC-	Nt P-Forb	
POKEWEED					
PILPUM	5 Pilea pumila	-3	FACW	Nt A-Forb	
CLEARWEED					
PLALAN	0 PLANTAGO LANCEOLATA	0	FAC	Ad P-Forb	
ENGLISH PLANTAIN					
PLAMAJ	0 PLANTAGO MAJOR	-1	FAC+	Ad P-Forb	
COMMON PLANTAIN					
POAPRA	0 POA PRATENSIS	1	FAC-	Ad P-Grass	
KENTUCKY BLUE GRASS					
POLHYR	2 Polygonum hydropiper	-3	FACW	Nt A-Forb	
WATER PEPPER					
POLPEN	0 Polygonum pensylvanicum	-4	FACW+	Nt A-Forb	
PINKWEED					
POLPER	0 POLYGONUM PERSICARIA	1	[FAC-]	Ad A-Forb	
LADY'S THUMB					
POPDEL	2 Populus deltoides	-1	FAC+	Nt Tree	
EASTERN COTTONWOOD					
PYCVIR	5 Pycnanthemum virginianum	-4	FACW+	Nt P-Forb	
COMMON MOUNTAIN MINT					
QUEBIC	6 Quercus bicolor	-4	FACW+	Nt Tree	
SWAMP WHITE OAK					
QUEMAC	5 Quercus macrocarpa	1	FAC-	Nt Tree	BUR
OAK					
QUERUB	7 Quercus rubra	3	FACU	Nt Tree	RED
OAK					
RHACAT	0 RHAMNUS CATHARTICA	3	FACU	Ad Shrub	
COMMON BUCKTHORN					
RIBMIS	5 Ribes missouriense	5	UPL	Nt Shrub	
WILD GOOSEBERRY					
ROSMUL	0 ROSA MULTIFLORA	3	FACU	Ad Shrub	
MULTIFLORA ROSE					
RUBALL	3 Rubus allegheniensis	2	FACU+	Nt Shrub	
COMMON BLACKBERRY					
RUDHIR	1 Rudbeckia hirta	3	FACU	Nt P-Forb	
BLACK-EYED SUSAN					
RUDLAC	5 Rudbeckia laciniata	-4	FACW+	Nt P-Forb	
WILD GOLDEN GLOW					
RUDTRI	3 Rudbeckia triloba	1	FAC-	Nt A-Forb	
BROWN-EYED SUSAN					
SAGLAT	4 Sagittaria latifolia	-5	OBL	Nt P-Forb	
COMMON ARROWHEAD					
SALDIS	2 Salix discolor	-3	FACW	Nt Shrub	
PUSSY WILLOW					
SALINT	1 Salix interior	-5	OBL	Nt Shrub	
SANDBAR WILLOW					
SALNIG	4 Salix nigra	-5	OBL	Nt Tree	
BLACK WILLOW					
SAMCAN	1 Sambucus canadensis	-2	FACW-	Nt Shrub	
ELDERBERRY					
SCIATR	4 Scirpus atrovirens	-5	OBL	Nt P-Sedge	
DARK GREEN RUSH					
SCICYP	6 Scirpus cyperinus	-5	OBL	Nt P-Sedge	
WOOL GRASS					
SCIPUN	5 Scirpus pungens	-5	OBL	Nt P-Sedge	
CHAIRMAKER'S RUSH					
SCIVAC	5 Scirpus validus creber	-5	OBL	Nt P-Sedge	
GREAT BULRUSH					
SETFAB	0 SETARIA FABERI	2	FACU+	Ad A-Grass	
GIANT FOXTAIL					
SETGLA	0 SETARIA GLAUCA	0	FAC	Ad A-Grass	

YELLOW FOXTAIL					
SILPER	5 Silphium perfoliatum	-2	FACW-	Nt P-Forb	CUP
PLANT					
SMIECI	5 Smilax ecirrhata	5	UPL	Nt P-Forb	
UPRIGHT CARRION FLOWER					
SOLDUL	0 SOLANUM DULCAMARA	0	FAC	Ad W-Vine	
BITTERSWEET NIGHTSHADE					
SOLALT	1 Solidago altissima	3	FACU	Nt P-Forb	
TALL GOLDENROD					
SOLGIG	4 Solidago gigantea	-3	FACW	Nt P-Forb	
LATE GOLDENROD					
SOLRIG	4 Solidago rigida	4	FACU-	Nt P-Forb	
STIFF GOLDENROD					
SPAPEC	4 Spartina pectinata	-4	FACW+	Nt P-Grass	
PRAIRIE CORD GRASS					
STAPAH	5 Stachys palustris homotricha	-5	OBL	Nt P-Forb	
WOUNDWORT					
STATET	8 Stachys tenuifolia	-3	[FACW]	Nt P-Forb	
SMOOTH HEDGE NETTLE					
TAROFF	0 TARAXACUM OFFICINALE	3	FACU	Ad P-Forb	
COMMON DANDELION					
TEUCAN	3 Teucrium canadense	-3	FACW	Nt P-Forb	
GERMANDER					
THADAD	5 Thalictrum dasycarpum	-2	FACW-	Nt P-Forb	
PURPLE MEADOW RUE					
TRIREP	0 TRIFOLIUM REPENS	2	FACU+	Ad P-Forb	
WHITE CLOVER					
TYPANG	1 Typha angustifolia	-5	OBL	Nt P-Forb	
NARROW-LEAVED CATTAIL					
TYPLAT	1 Typha latifolia	-5	OBL	Nt P-Forb	
BROAD-LEAVED CATTAIL					
ULMAME	3 Ulmus americana	-2	FACW-	Nt Tree	
AMERICAN ELM					
URTPRO	2 Urtica procera	-1	FAC+	Nt P-Forb	
TALL NETTLE					
VERHAS	4 Verbena hastata	-4	FACW+	Nt P-Forb	
BLUE VERVAIN					
VERURU	5 Verbena urticifolia	5	UPL	Nt P-Forb	
HAIRY WHITE VERVAIN					
VIBOPU	0 VIBURNUM OPULUS	3	[FACU]	Ad Shrub	
EUROPEAN HIGHBUSH CRANBERRY					
VITRIP	2 Vitis riparia	-2	FACW-	Nt W-Vine	
RIVERBANK GRAPE					
ZIZAUR	7 Zizia aurea	-1	FAC+	Nt P-Forb	
GOLDEN ALEXANDERS					

1

WBK

116 West Main Street, Suite 201
St. Charles, Illinois 60174
Phone: 630.443.7755
Fax: 630.443.0533
www.wbkengineering.com

WILLS BURKE KELSEY ASSOCIATES

March 8, 2012

Ms. Anne E. Haaker
Illinois Historic Preservation Agency
Division of Preservation Services
Review and Compliance Section
Old State Capitol Building
Springfield, IL 62701

Subject: LaFox Road over Mill Creek, Campton Hills, Kane County, IL
(WBK Project No. 11-0155)

Dear Ms. Haaker:

On behalf of our client, Kane County Division of Transportation, Wills Burke Kelsey Associates, Ltd. (WBK) is submitting information for IHPA review. The proposed LaFox Road Bridge over Mill Creek and Tributary to Mill Creek project is located south of Campton Hills Road, north of IL Route 38, west of Garfield Road, and east of Beith Road in Campton Hills. The project area is located in the SW ¼ of Section 26 and NW ¼ of Section 35, Township 40N, Range 7E in unincorporated Kane County, Illinois (Latitude: 41.911888° N, Longitude: 88.409377° W).

The project area consists of the Right of Way (ROW) and 50-feet on both sides of the ROW along approximately 2,080 feet of LaFox Road between Campton Hills Road and Illinois Route 38. The project area is about 10 acres in size. Mill Creek and Tributary to Mill Creek run through the site and cross under LaFox Road. There are residences along the west side of LaFox Road near Campton Hills Road to the north and Grand Monde Road to the south. The rest of the project area is partially wooded floodplain of Mill Creek.

The project consists of roadway work and two bridge replacements at Mill Creek and Tributary to Mill Creek. This project is being funded with local funds from the Kane County Division of Transportation. Permits will be required from the following agencies; US Army Corps of Engineers 404 Permit, Kane County Stormwater Permit, Kane DuPage Soil and Water Conservation District Soil Erosion and Sediment Control Review, and IDNR Threatened and Endangered Species Consultation.

Enclosed please find the following documents for your review:

1. U.S.G.S. Quad map (Location Map, Exhibit 1)
2. Aerial Photograph of the project area (LaFox Road over Mill Creek Wetland Survey Exhibit, EXWI)
3. Photographs of the project area (Photographs, IHPA Exhibit)

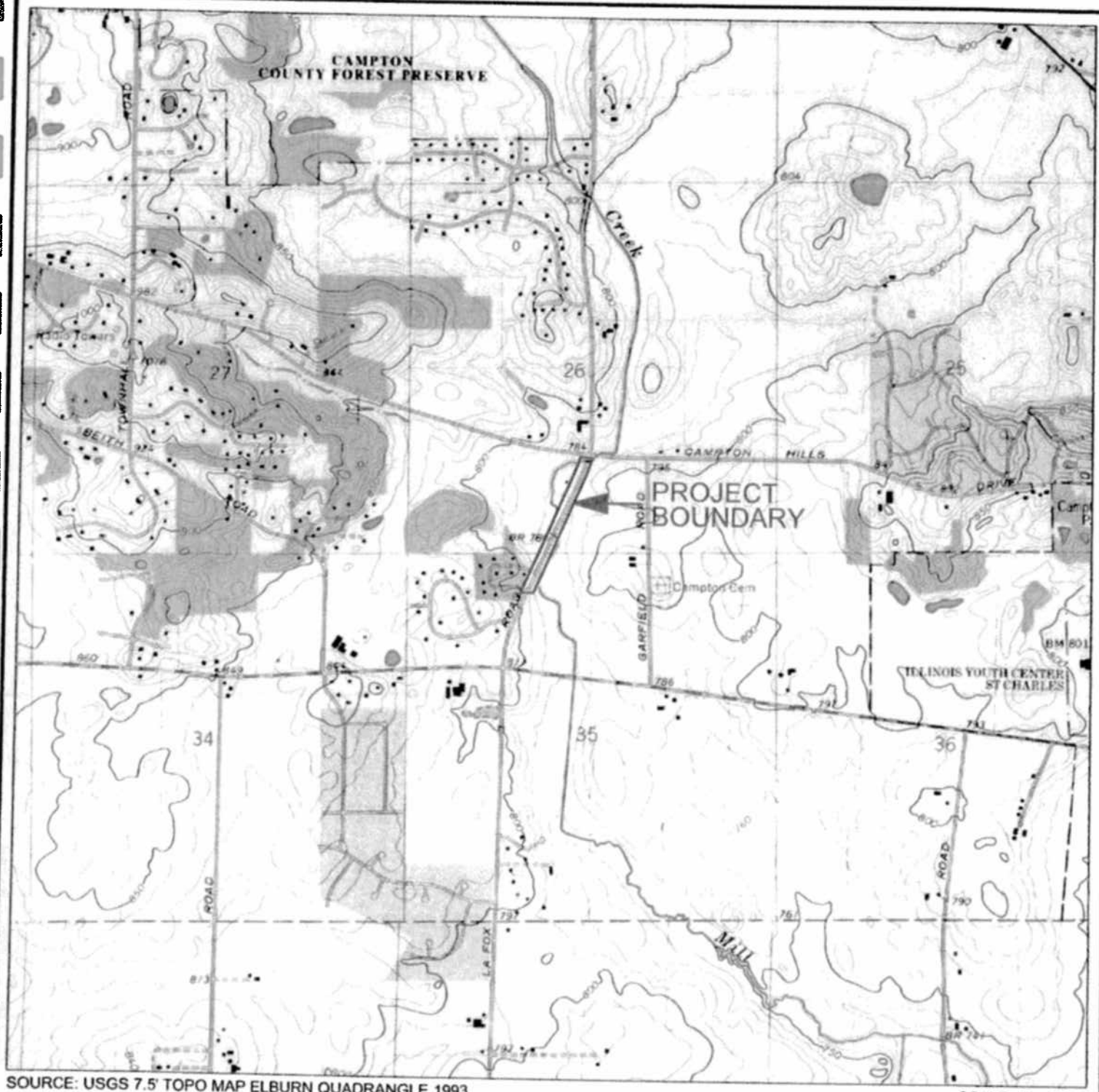
Please contact me if you have any questions or need additional information regarding this project.

Sincerely,

Natalie Paver
Environmental Scientist

c: Mike Zakosek, PE, KDOT

W:\Projects\2011\110155 LaFoxBridge\projectmgt\Permits\IHPA\L.12.0308.110155.IHPA.docx



SOURCE: USGS 7.5' TOPO MAP ELBURN QUADRANGLE 1993

SCALE: 1" = 2000'

PLSS DESCRIPTION- SW 1/4 SECTION 26 & NW 1/4 SECTION 35, TOWNSHIP 40N, RANGE 7E

LATITUDE: 41.9118881° N

LONGITUDE: 88.4063773° W

CLIENT	**KANE COUNTY DIVISION OF TRANSPORTATION** **41W011 BURLINGTON ROAD** **ST. CHARLES, ILLINOIS 60174** **(630) 584-1170**	TITLE	**LAFOX BRIDGE**	DWN. LJL CHKD. PDK JOB# 11-0155	N
	WILLS BURKE KELSEY ASSOCIATES LTD. 116 West Main Street, Suite 201 St. Charles, Illinois 60174 (630) 443-7755		**LOCATION MAP**	DATE 11-11-2011	**EXHIBIT 1**

Photo 1: Culvert over Tributary of Mill Creek

Photo 2: Culvert over Mill Creek

Photo 3: Sheet pile along LaFox Road

CLIENT KANE COUNTY DIVISION OF TRANSPORTATION 41W011 BURLINGTON RD ST. CHARLES, IL 60174 (630) 584-1170	TITLE LAFOX ROAD BRIDGE OVER MILL CREEK	DWN.	NMP	CHKD.	NMP
		JOB# 11-0155			N
WILLS BURKE KELSEY ASSOCIATES, LTD. 116 W. MAIN STREET, SUITE 201 ST. CHARLES, IL 60174 (630) 443-7755	PHOTOGRAPHS				DATE 03-08-12 IHPA EXHIBIT

Illinois Historic
Preservation Agency

FAX (217) 782-8161

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Kane County
Campton Hills
Roadway Work and Bridge Replacements
LaFox Road between Campton Hills Road and South Entrance of Grand Monde Dr.
WBK-11-0155
IHPA Log #022031212

March 28, 2012

RECEIVED
APR 02 2012
Wills Burke Kelsey Associates

Natalie Paver
Wills Burke Kelsey Associates
116 W. Main St., Suite 201
St. Charles, IL 60174

Dear Ms. Paver:

We have reviewed the documentation submitted for the referenced project in accordance with 36 CFR Part 800.4. Based upon the information provided, no historic properties are affected. We, therefore, have no objection to the undertaking proceeding as planned.

Please retain this letter in your files as evidence of compliance with section 106 of the National Historic Preservation Act of 1966, as amended. This clearance remains in effect for two years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Skeletal Remains Protection Act (20 ILCS 3440).

If you have any further questions, please contact me at 217/785-5027.

Sincerely,

Anne E. Haaker

Anne E. Haaker
Deputy State Historic
Preservation Officer

May 25, 2012

Ms. Kimberly Kubiak
West Section Permits and Enforcements
United States Army Corps of Engineers
Chicago District – Regulatory Branch
111 N Canal Street, Suite 600
Chicago, Illinois 60606-7206

Subject: Request for Regional Permit 3 – Transportation Project, Category II
For the Proposed LaFox Road over Mill Creek Project in Campton Hills, Illinois
USACE Project No. LRC-2012-075, WBK Project No. 11-0155

Dear Ms. Kubiak;

On behalf of our client, Kane County Division of Transportation (KDOT), Wills Burke Kelsey Associates, Ltd. (WBK) is requesting a Regional Permit 3 – Transportation Projects, Category II for the proposed impacts to wetlands and waters of the US for the improvements to LaFox Road over Mill Creek in Campton Hills, Illinois. The project is located on LaFox Road between Illinois Route 38 and Campton Hills Road in the SW ¼ of Section 26 and NW ¼ of Section 35, Township 40N, Range 7E in Kane County. More specifically, the center of the project is located 41.911889°N and 88.406377° W.

The project consists of replacing a culvert in poor condition with a wider culvert and replacing a twin cell reinforced concrete box with a bridge span. This project is funded entirely by local funds. The purpose of the project is to replace structurally obsolete culverts and to improve this section of roadway to meet Illinois Department of Transportation (IDOT) Bureau of Local Roads and Streets minimum geometric design criteria. The bridge hydraulic opening will be designed for the 30-year flood event and provide a minimum one-foot of freeboard to the low point of the bridge structure. It is anticipated that construction will commence in the spring of 2013.

WBK identified one waters of the US (Mill Creek and Mill Creek Tributary), and four (4) wetlands. WBK identified six (6) fens that are partially within the project area, two of which are completed within the project limits. Wetlands 1, 2, and 3 are located within the area identified in the Kane County Advanced Identification Study (ADID) as High Habitat Value Wetlands.

Kane County Division of Transportation (KDOT) is requesting a Regional Permit 3 – Transportation Projects, Category 2 for impacts to wetlands, the Mill Creek Tributary, and Mill Creek for the proposed roadway improvements. The project will require the permanent impacts of 0.198 acres of wetlands and waters. A total of 0.23 acres of temporary impacts to wetlands and waters will be required for construction access and dewatering activities to complete the project. To create the required shoulders and drainage swale, a portion of two small fens will be permanently impacted. KDOT will provide 0.461 acres of mitigation credits through the

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Fax: 630.800.1626

purchase of certified mitigation credits from a mitigation bank within the Fox River Watershed in Kane County.

The Regional Permit Request Application Submittal attached to this request includes the required information to assist you in your review of the project. A copy of the submittal is being sent to IEPA, IDNR, and USFWS for their review concurrently. If you have any questions regarding the information enclosed, please contact me at 630-701-2245 or by email at pverhalen@wbkengineering.com.

Respectfully Submitted;

Patrick VerHalen, CPESC
Project Manager
Resource Management
Kane County Qualified Wetland Review Specialist W-065

Encl.

C: Thad Faught, IEPA
Shawn Cirton, USFWS
Gary Jareb, PE, IDNR
Mike Zakosek, PE, KDOT
Brent Pottorff, WBK

W:\Projects\2011\110155 LaFoxBridge\projectmgt\Permits\USACE\LT.12.0510.USACE RP3II.docx

LaFox Road over Mill Creek

USACE Section 404 Regional Permit Application

Prepared for:

KANE COUNTY DIVISION OF TRANSPORATION
41W111 BURLINGTON ROAD
ST. CHARLES, IL 60175

May 25, 2012

WBK Project Number 11-0155

Patrick VerHalen, CPESC
Kane County Qualified Wetland Review Specialist W-065

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LaFox Road Over Mill Creek
USACE Section 404 Regional Permit 3 Application

Table of Contents

Project Narrative	1-15
Joint Permit Application Adjacent Property Owners	TAB 1
Wetland Assessment Report – dated May 5, 2012 prepared by Wills Burke Kelsey Associates, Ltd.	TAB 2
Agency Consultation Letters Illinois Historic Preservation Agency US Fish and Wildlife Service Illinois Department of Natural Resources	TAB 3
Maintenance and Monitoring Plan – dated May 2012 prepared by Wills Burke Kelsey Associates, Ltd.	TAB 4
Wetland Impacts Exhibit – Dated May 2012 prepared by Christopher B. Burke Engineering West, Ltd.	TAB 5
Compact Disc with submittal documents in PDF Format prepared by Wills Burke Kelsey Associates, Ltd.	TAB 6
Proposed Highway Plans for LaFox Road (C.H.81) over Mill Creek – dated May 4, 2012; 11"x17" Full Size (included only electronically for reference)	TAB 7

PROJECT NARRATIVE

EXECUTIVE SUMMARY

The LaFox Road over Mill Creek Project is located in the Village of Campton Hills on LaFox Road between Route 38 and Campton Hills Road. The project consists of replacing a culvert in poor condition with a wider culvert and replacing a twin cell reinforced concrete box with a bridge span. This project is funded entirely by local funds. The purpose of the project is to replace structurally obsolete culverts and to improve this section of roadway to meet Illinois Department of Transportation (IDOT) Bureau of Local Roads and Streets minimum geometric design criteria. The bridge hydraulic opening will be designed for the 30-year flood event and provide a minimum one-foot of freeboard to the low point of the bridge structure.

Kane County Division of Transportation (KDOT) is requesting a Regional Permit 3 – Transportation Projects, Category 2 for impacts to wetlands, the Mill Creek Tributary, and Mill Creek for the proposed roadway improvements. The project will require the permanent impacts of 0.198 acres of wetlands and waters. A total of 0.20 acres of temporary impacts to wetlands and waters will be required for construction access and dewatering activities to complete the project. To create the required shoulders and drainage swale, a portion of two small fens will be permanently impacted. It is anticipated that construction will commence in the spring of 2013.

PROPOSED PROJECT

The proposed project consists of replacing the single 4-foot by 6.5-foot box culvert (the southern culvert) with a 6-foot by 6-foot box culvert and replacing the double 8-foot by 7-foot culverts (northern culvert) with a 42-foot span bridge over Mill Creek. The project will also include installing sheet pile along the western side of LaFox Road to minimize the impact to wetlands while providing the necessary space for the required shoulders. The culverts under the intersections of Grande Monde Road and LaFox Road will be replaced with larger concrete culverts. The northern part of the intersection of North Grande Monde Road and LaFox Road will be widened to provide the required turning radius and visibility for traffic entering LaFox Road.

WETLANDS/WATERS OF THE US

On August 17, 2011, Wills Burke Kelsey Associates, Ltd. (WBK) completed a field reconnaissance of the LaFox Road site located in unincorporated Kane County, Illinois to determine if there are any on-site wetlands/waters of the US (Tab 2). One (1) waters of the US (Mill Creek and Mill Creek Tributary) and four (4) wetlands were identified at the time of the site visit (Table 1). WBK identified six (6) fens that are partially within the limits of the delineation and one large fen off-site to the west. Two of the identified fens are within the project area. Wetlands 1, 2 and 3 are within the area identified as High-Habitat Value wetlands on the Kane County Advanced Identification Study (ADID).

Under normal conditions, Waters 1 (Mill Creek) is a Relatively Permanent Waterway (RPW) drains into the Fox River. A portion of Waters 1 is directly tributary to Mill Creek within the delineation limits. The Fox River is a Section 10 Navigable Waterway and is regulated by the Chicago District of the USACE under the Rivers and Harbors Act. Wetlands 1-3 directly abut Waters 1 and 2. Wetland 4 drains to Wetland 3 through a culvert under Grande Monde Road. Based on WBK's findings and the current guidelines, the waters and wetlands on-site are likely to be under the jurisdiction of the USACE as Waters 1 and 2 are RPWs that are tributary to the Fox River, a traditional navigable waterway (TNW).

Table 1: Aquatic Resource Table

DELINEATED AREA	SIZE (Ac) (w/in ROW)	Length (LF) (w/in ROW)	Size (Ac) (outside ROW)	Length (LF) (outside ROW)	C-value	FQI
Waters 1	-	139.4	-	895.8	-	-
Wetland 1	0.05	-	1.02	-	3.7	28.3
Wetland 2	0.03	-	0.01	-	2.5	3.5
Wetland 3	0.24	-	1.22	-	3.7	28.3
Wetland 4	0.11	-	0.18	-	3.1	13.0
TOTAL	**0.43**	**139.4**	**2.42**	**895.8**		

THREATENED AND ENDANGERED SPECIES

The Illinois Department of Natural Resources (IDNR) Ecological Compliance Assessment Tool (EcoCAT) indicated that the following protected resources may be located within the vicinity of the project: Campton Hills Park INAI Site, Campton Hills Park Land and Water Reserve, Blanding's Turtle (*Emydoidea blandingii*), and Golden Sedge (*Carex aurea*). The Campton Hills site is not within the project boundary or within the immediate vicinity. WBK staff witnessed signs of Blanding's Turtle reproduction by observing broken eggs on the eastern side of LaFox Road between the Mill Creek Tributary and Mill Creek. No live specimens were observed during field work. No specimens of Golden Sedge were identified by WBK to during field work.

There is only one Federally-listed Threatened or Endangered species identified in Kane County by the US Fish and Wildlife Service (USFWS), Eastern Prairie Fringed Orchid (*Plantanthaera leucophaea*). The project area contains conditions that have been identified as habitat for the Eastern Prairie Fringed Orchid. The site contains high quality wetlands and 14 species on the *Associate Plant Species List for Easter Prairie Fringed Orchid in Northeastern Illinois.* WBK completed field investigations in search of blooming specimen of the orchid from June 26 through July 12, 2011. No signs of the orchid were observed.

PROJECT PURPOSE

The purpose of this project is to replace two functionally obsolete structures which show signs of disrepair. The roadway is classified as a Minor Arterial (Urban) road with an Average Daily Traffic Count of 8,100 vehicles. This portion of the roadway has gravel shoulders of varying width, making it difficult and unsafe for vehicles to stop in cases of emergency. The roadway improvements will provide the necessary roadway and shoulder width, appropriate drainage, and safe visual distances at intersections within the project area.

PROJECT NEED

The wing walls and the head wall culvert over the Mill Creek Tributary (southern culvert) are in poor condition with moderate cracking and mild spalling exposing the reinforcement bars. The channel has mild erosion behind the southeast wing wall and sediment buildup behind the northwest wing wall. The roadway in this section has 1-foot asphalt and 3-foot gravel shoulders on either side of the 24-foot roadway. The headwall and wing walls on each side of the culvert over Mill Creek (northern culvert) are in poor condition with moderate cracking and spalling exposing the reinforcement bars. There is cracking and isolated spalling within the culvert. Due to the accumulation of sediment in the bottom of both culverts, the condition of the culvert floors is not observable. There is sheet pile along the eastern side of LaFox Road to prevent the erosion of the embankment.

AVOIDANCE AND MINIMIZATION OF WETLANDS

With the presence of High Quality Habitat Wetlands and Fens within the Right-of-Way (ROW) for this stretch of LaFox Road, the potential for wetland impacts is high to achieve the necessary road cross section. Based on the predicted traffic and the current design requirements, the roadway will consist of two 12-foot lanes with 8-foot paved shoulders. To match the existing drainage patterns north and south of the project area along LaFox Road, a rural cross section, utilizing drainage swales, is required. To meet the floodway conveyance requirements, the road profile needs to be elevated to provide one-foot of freeboard above the 30-year flood event.

To meet the roadway profile requirements, the embankment on either side of the roadway would need to be expanded. The eastern embankment consists of sheet pile. To reduce the potential impacts required to grade the necessary embankment, sheet pile will be installed along the western embankment. To prevent impacts to the fens on either side of the roadway, holes will be drilled into the sheet pile during installation to maintain the groundwater connection under the roadway. The existing sheet pile already contains the wick drains.

As part of the design process, alternatives were reviewed in relation to replacement of the northern culvert over Mill Creek. To prevent additional constriction of Mill Creek, a bridge will span the creek.

STAGING & SCHEDULING OF PROJECT

To reduce the impact to traffic during construction, the project will be completed in three stages utilizing one-lane signalized traffic control. Stage 1 will consist of placing temporary pavement on both sides of the road, installing the bypass pumps for the Mill Creek Tributary, installing the dewatering system at the downstream end of the tributary, removal of the western lane of traffic and culverts, the installation of the new culvert and bridge, and the installation of the sheet pile and embankment. Stage 2 consists of shifting traffic to the western lane, removing the eastern portion of the roadway and culverts, installing the new culvert and bridge, and replacing the roadway and necessary embankment. Stage 3 consists of the restoration of traffic to two lanes and restoring the disturbed areas with native vegetation appropriate for the hydrologic and vegetative communities to be seeded. A detailed description of the stages of construction is included below.

The project is scheduled to begin Spring 2013 and be completed in one construction season.

CONSTRUCTION NARRATIVE

The project is laid out to be constructed in the following manner. Stage 1 (1A and 1B) and Stage 2 work correspond to work on the west side and the east side of the road (respectively). Stage 3 work be completed with both lanes of traffic open.

Stage 1A:

- Provide temporary erosion controls
- Place the temporary pavement along both sides of the road
- Construct aggregate wedge shoulder
- Construct storm sewers under S. Grande Monde and N. Grande Monde Roads
- Construct inlet slope box and cast-in-place end section on the existing culvert pipe
- Install temporary sheet piling for cofferdam for the culvert over the Mill Creek Tributary

Stage 1B:

- Provide temporary and permanent erosion control measures
- Place temporary bridge traffic signals, concrete barrier wall, and attenuators
- Shift traffic to single lane
- Construct temporary sheet piling, coffer dams, temporary bypass and pumping operations, and discharge treatment system

- Remove single cell culvert over Mill Creek Tributary and double cell culvert over Mill Creek
- Remove pavement to the centerline of the road
- Construct new single cell culvert and bridge over creeks
- Install sheet piling, embankments, subgrade, and aggregate base course
- Construct Hot-Mix Asphalt (HMA) pavement and shoulders
- Place steel plate beam guard rail and end treatments
- Restore disturbed areas which are ready for final stabilization

Stage 2

- Provide temporary and permanent erosion control measures
- Shift traffic to western lane for construction on eastern half of roadway
- Relocate temporary concrete barrier wall and attenuators
- Construction temporary sheet piling, cofferdams, temporary bypass and pumping operations, and discharge treatment system for Stage 2
- Remove single cell culvert over Mill Creek Tributary and double cell culvert over Mill Creek
- Remove pavement to the centerline of the road
- Construct new single cell culvert and bridge over creeks
- Install sheet piling, embankments, subgrade, and aggregate base course
- Construct Hot-Mix Asphalt (HMA) pavement and shoulders
- Place steel plate beam guard rail and end treatments
- Restore disturbed areas which are ready for final stabilization

Stage 3

- Remove Stage 2 lane shift and traffic control measures
- Open traffic to both lanes and North Grande Monde Road
- Place temporary traffic markings on roadway
- Remove temporary sheet piling, cofferdams, temporary bypass and pumping operations, and discharge treatment system
- Place surface pavement and any additional base or binder courses
- Place final markings and signage
- Provide topsoil, seeding, and permanent erosion control measures on remaining stabilized areas

ADJACENT LANDOWNERS NAMES AND ADDRESSES

Adjacent landowner addresses are provided with the Joint Application Form in Tab 1 of this Permit Submittal and in the electronic version of the submittal in Tab 6.

MITIGATION FOR WETLAND IMPACTS

To mitigate for the permanent impacts caused by this project KDOT will purchase certified mitigation credits within the Fox River Watershed within Kane County. KDOT

will purchase certified mitigation credits at a ratio of 3:1 for impacts to the high quality wetlands and fens and at a ratio of 1:1 for impacts to the wetlands. For 0.189 acres of permanent impacts to wetlands and waters of the US, KDOT will provide 0.451 acres of mitigation credits. The contractor will be required to restore all temporary impact required to complete the construction of this project. An exhibit illustrating the location of the wetland impacts is included in Tab 5.

Table 2: Waters of the US Impacts

Resource Name	Size On-Site (ac) (within ROW)	Temporary Impacts (ac)	Permanent Impacts (ac)	Mitigation Ratio Provided	Mitigation Provided (ac)
Wetland 1	0.1587	0.1172	0.0415	3:1	0.1245
Fen	0.0230	0.0215	0.0015	3:1	0.0045
Wetland 2	0.0205	0.0000	0.0000	3:1	0.0000
Wetland 3	0.0775	0.0385	0.0505	3:1	0.1515
Fen	0.0350	0.0100	0.0235	3:1	0.0705
Wetland 4	0.8280	0.0066	0.0447	1:1	0.0447
Fen	0.0350	0.0208	0.0142	3:1	0.0426
Waters 1	0.0355	0.0130	0.0225	1:1	0.0225
Wetland Impacts	1.1202	0.1753	0.1592		0.3432
Fen Impacts	0.0930	0.0523	0.0392		0.1176
TOTAL	**1.2132**	**0.2276**	**0.1984**		**0.4608**

BEST MANAGEMENT PRACTICES

The Best Management Practices (BMPs) utilized in this project where chosen to minimize long-term impacts to the aquatic resources within and adjacent to the project. To prevent greater impacts to the wetlands on the western side of the road, sheet pile will be installed to structurally support the embankment needed to provide the required roadway cross section and profile. Holes will be drilled into the sheet pile to act as wick drains and maintain the groundwater connection under LaFox Road. The double cell culvert is being replaced with a bridge span to increase the flood conveyance. The single culvert that is being replaced across the Mill Creek Tributary will be two feet wider than the existing culvert. The bottom of the culvert will be buried approximately 12-inches below the channel bottom, and lined with stone. The bottom of the culvert will be approximately three-feet below the normal water level.

To filter stormwater runoff from the roadway, vegetated swales will be constructed in areas that will not be supported by sheet pile. On the east side of the road, permanent rock checks will be placed at the surface grade in the swale draining to the creek to prevent erosion during storm events. The created swale will have a slope of approximately 7% and could be eroded during heavy rainfall events. The rock checks will be placed during construction and remain after the project is completed. Additional stormwater detention and infiltration structures were not considered due to the lack of available area.

SOIL EROSION AND SEDIMENT CONTROL

The Soil Erosion and Sediment Control (SESC) measures for this project will include bypass pumping with energy dissipation pads, water treatment system for pump discharges, temporary cofferdams, perimeter erosion barriers, temporary inlet protection, check dams (rock and coir logs), and staged construction. The water treatment system is designed to utilize flocculent logs, jute netting, and corrugated pipe to remove the sediment from the water being pumped from the work area.

Exact details of the SESC measures will be provided by the contractor prior to construction and will be at least as restrictive as the Illinois Urban Manual (latest edition) and the provided Stormwater Pollution Prevention Plan (SWPPP).

Compliance with the Kane-DuPage Soil and Water Conservation District (KDSWCD) requirements will be achieved, including the placement of KDSWCD standard notes on the plan set.

MAINTENANCE AND MONITORING PLAN

A Maintenance and Monitoring Plan outlining the requirements for monitoring and maintaining the site for a period of 3 years is included in Tab 4.

PERMIT REQUIREMENTS – REGIONAL PERMIT 3-TRANSPORTATION PROJECTS

RP3 authorizes the construction or replacement of public transportation project, including roads, bridges, runways and taxiways, and railroads. Authorization under RP3 is subject to the following requirements which shall be addressed in writing and submitted with notification:

a. The impact to waters of the US shall not exceed 0.25 acres for any single crossing. For projects that involve multiple crossings of waters of the US, the cumulative impact cannot exceed 1.0 acre. For purposed of this RP only, a single crossing is defined as an act or instance of crossing over, or an activity that facilitates transportation from one side to the other.

The crossings over the Mill Creek Tributary and Mill Creek impact a total of 0.023 acres. The total wetland and waters of the US permanent impacts total 0.198 acres.

b. For projects that impact greater than 0.10 acres of waters of the US, the permittee is required to provide compensatory mitigation.

The project requires a total of 0.198 acres of permanent impact. KDOT will purchase 0.461 acres of certified mitigation credits to off-set the impacts.

c. Projects that impact no more than 0.5 acres of waters of the US and do not impact high-quality aquatic resources will be processed under Category I.

The project will impact high-quality aquatic resources; this project will be processed under Category II.

d. Project that impact over 0.5 acres up to 1.0 acres of waters of the US, impact a high-quality aquatic resource, or cross a Section 10 Waterway, will be processed under Category II.

The project requires permanently impact 0.198 acres of wetlands and waters of the US. A total of 0.176 acres of impact will be to high-quality aquatic resource. The project will be processed under Category II.

e. The discharge shall be limited to the minimum width necessary to complete the authorized work.

The discharge of fill material has been designed so that the impacts are kept to a minimum. Temporary impacts within the ROW will be necessary to gain access to the work areas along the roadway.

f. Crossings of waterways and wetlands shall be culverted, bridged, or otherwise designed to prevent the restriction of high water flows. They shall be designed so as not to impede low water flows or the safe passage of fish and aquatic organisms. Additional conditions may be required for streams determined to be a high quality fisheries resource such as designing the bottom of the culvert to include "roughness" to reduce flow velocities. "Roughness" can include cemented-in stone, baffles, or the placement of rock along the bottom of the culvert and/or along the culvert wall. Embedding the culvert to a depth greater than 12-inches may also be required.
   1. An alternatives analysis shall be prepared for perennial stream crossings where a culvert is proposed. The analysis shall document why the use of an arch-span, bottomless culvert, or bridging would not be a practicable alternative. If a multi-barrel pipe culvert is proposed, document why a single box-culvert system cannot be used.

2. For culverts, the upstream and downstream invert shall be embedded 6-12 inches below the streambed elevation. This will allow the natural substrate to colonize the structure's bottom, encourage fish movement, and maintain the existing channel slope. Culvert slope should match adjacent elevations. The width of the base flow culvert shall be approximately equal to the average channel width to promote the safe passage of fish and other aquatic organisms. Culvert(s) shall not permanently widen/constrict the channel or reduce/increase stream depth. Multiple pipe culverts may not be used to receive base flows.

The double cell culvert will be replaced with a bridge span. The single culvert over the Mill Creek Tributary will be replaced with a two-foot wider culvert. This culvert will be constructed so that its bottom is 12-inches below grade with 12-inches of riprap stone to provide the required "roughness".

g. The permittee shall clearly label the construction drawings to include existing and proposed grading contours, all structures associated with the installation of the crossing such as wing walls, rock and concrete protection measures, existing and proposed utility lines, outfalls, and associated structures. A detailed narrative shall accompany the construction plans and describe all work to be performed as indicated on the plans.

A copy of the construction drawings is included in Tab 7 of this permit submittal. A narrative describing the proposed work in included above.

h. All in-stream work, such as the installation of cofferdams or water diversion devices, the removal of accumulated sediments, and any demolition work, shall be clearly labeled on the construction drawings and explained in detail in the project narrative.

A copy of the construction drawings is included in Tab 7 of this permit submittal. A dewatering plan is included within the plan set to illustrate the requirements of the dewatering components necessary to keep the work area dry. These components are also included in the erosion and sediment control plans. A narrative describing the proposed work in included above.

i. If dewatering of the site is required in order to perform work in waterways, the site shall be dewatered for work in the dry and dewatering shall be temporary only. No in-stream work will be authorized unless soil erosion and sediment control measures are deemed acceptable by the District.

A copy of the construction drawings is included in Tab 7 of this permit submittal. A dewatering plan is included within the plan set to illustrate the requirements of the dewatering components necessary to keep the work area dry. These components are

also included in the erosion and sediment control plans. A narrative describing the proposed work in included above.

j. All temporary construction activities shall adhere to the requirements of items c through I of Regional Permit 7 (Temporary Construction Activities) and shall be addressed in writing and submitted with the notification.

Items c through i of Regional Permit 7 – Temporary Construction Activities are addressed below for this specific project.

k. This permit shall not be used to authorize structural bank stabilization methods such as retaining walls, gabion baskets, riprap, etc., other than those structures necessary to assure the integrity of the stream and stream bank immediately adjacent to the crossing.

Bank stabilization is not proposed as part of this project other than the stabilization required in and adjacent to the structures. Riprap will be used to prevent head cutting and erosion of the culvert and bridge abutments.

l. The permittee shall establish and maintain a protective upland buffer composed of native plans (or other appropriate vegetation approved by the District) within the right-of-way adjacent to all waters of the US.

The upland areas between the sheet pile and wetlands that are being disturbed during construction activities will be seeded with native vegetation.

m. The project shall employ permanent Best Management Practices (BMPs) to protect water quality, preserve natural hydrology, and minimize the overall impacts of the project on aquatic resources. BMPs shall be considered at the earliest planning stages of the project.

The applicant shall design the project to include the avoidance of natural resource features such as floodplains, stream, lakes, significant wildlife areas, wetlands, and drainage ways. To the greatest extent possible, the activity should be designed such that surface water does not directly discharge into waters of the US.

BMPs may be used independently or in concert to achieve the required water quality enhancement and resource protection. Water should be infiltrated or detained and treated prior to discharging into waters of the US. Possible BMPs include, but are not limited to: native vegetated swales, bioswales, rain gardens, filter strips, infiltration trenches, naturalized detention basins, and permeable pavement.

A written narrative shall be included with the notification which describes how the water quality protection practices were selected for the project site. The narrative shall thoroughly describe the BMPs that will be utilized. A management and monitoring plan will be required on a case-by-case basis and shall include performance standards such as the BMPs ability to function as designed, percent coverage of vegetation, stabilization of soils, and corrective measures to bring areas into compliance.

A narrative describing the BMPs used in this project is included above.

n. This permit specifically excludes discharges into jurisdictional areas for the construction associated with building pads or equipment storage areas.

This project does not include the construction of building pads or equipment areas.

o. For a project site adjacent to a conservation area, the permittee shall request a letter from the organization responsible for management of the area. The response letter should identify recommended measures to protect the area from impacts that may occur as a result of the development. A copy of the request and any response received from the organization shall be submitted to the District with the notification.

Coordination with the Garfield Heritage Society and the Campton Historic Agricultural Lands, Inc. trusts has not yet begun. This coordination will begin once the Plat of Highway is complete. Copies of the correspondence with these trusts will be forwarded to the USACE for their records, including the final acceptance of the project.

p. This permit cannot be used to authorize the installation of road crossing associated with residential, commercial, or institutional developments.

The road crossings that will be constructed as part of this project are not part of a residential, commercial, or institutional development.

PERMIT REQUIREMENTS – REGIONAL PERMIT 7-TEMPORARY CONSTRUCTION ACTIVITIES

c. Fill shall be composed of non-erodible materials and be constructed to withstand expected high flows.

The fill material that will be placed within the stream channels to provide erosion protection will consist of riprap – class A4. The riprap is proposed for the energy dissipation pads at the pump discharge sites.

d. Low ground-pressure equipment is recommended for work in wetlands. However, after careful consideration, if the District accepts a proposal to use

heavy equipment to accomplish the work, the placement of timber mats or other protective measures shall be utilized.

The project has been designed to minimize the use of heavy equipment within wetlands that are likely to be saturated during construction. If it is determined that additional protection is required, KDOT will request that the contractor utilize timber mats or other protective measures.

e. All materials used for temporary construction activities shall be moved to an upland area immediately following completion of the construction activity.

The contractor will be required to move all materials used for temporary construction activities to upland areas immediately following completion of the construction activity.

f. The permittee is required to restore the construction area to pre-construction conditions including grading to original contours and revegetating disturbed areas with appropriate native vegetation immediately upon completion of the project. A restoration plan shall be submitted with the notification. A 1-foot contour topographic map of the project area may be required on a case-by-case basis.

All areas which are to be impacted during construction activities, including temporary and permanent wetland impacts, are to be restored by the contractor in a similar manner. Native vegetation mixes have been specified for most of the areas along the ROW.

g. This permit does not authorize the use of earthen cofferdams or other practices that would result in a release of sediment into waters of the US. Cofferdams shall be constructed of non-erodible materials only. Acceptable practices included, but are not limited to: pre-fabricated rigid cofferdams, sheet piling, inflatable bladders, sandbags, and fabric lined basins.

Earthen cofferdams or easily erodible practices are not proposed in the plan. The contractor will be required to use practices consisting of materials that are not easily erodible.

h. For projects that require installation and operation of a coffer dam, the coffer dam method and a detailed construction sequence shall be specified in the project narrative, and clearly labeled on the construction plans.

The contractor will be required to provide designs for sheet pile or A-frame style cofferdam for dewatering and bypass pumping needs.

i. The following requirements will be adhered to for any project requiring in-stream work and shall be incorporated into the soil erosion and sediment control plans.

1) Work in the waterway should be timed to take place during low or no-flow conditions. Low flow conditions are at or below the normal water elevation.

The following note has been included in the plans to limit the contractor from working in flowing water: "NO WORK SHALL BE PERFORMED IN FLOWING WATER. WORK IN AND NEAR THE CRITICAL AREAS SHOULD BE ISOLATED FROM CONCENTRATED FLOWS OR STREAM FLOW. ONCE WORK IN THIS AREA BEGINS, PRIORITY SHALL BE GIVEN TO THE COMPLETION OF THE WORK AND FINAL STABILIZATION OF ALL DISTURBED AREAS."

2) Water shall be isolated from the in-stream work area using a cofferdam constructed of non-erodible materials (steel sheets, aqua barriers, rep rap and geotextile liner, etc.). Earthen cofferdams are no permissible.

At this time, steel sheet piles and/or A-frame cofferdams are proposed for separating the site form flowing water. The contractor will be required to provide designs for sheet pile or A-frame style cofferdam for dewatering and bypass pumping needs

3) The coffer dam must be constructed from the upland area and no equipment may enter the water at any time. If the installation of the cofferdam cannot be completed from the shore and access is needed to reach the area to be coffered, other measures, such as the construction of a causeway, will be necessary to ensure that equipment does not enter the water. Once the cofferdam is in place and the isolated area is dewatered, equipment may enter the coffered area to perform the required work.

Due to the narrow, linear nature of the site, installation of the cofferdams will likely be completed from the roadway or along the shore. If it is necessary for the contractor to enter the water to install the cofferdams, a causeway constructed of non-erodible materials will be used.

4) If bypass pumping is necessary, the intake hose shall be placed on a stable surface or floated to prevent sediment from entering the hose. The bypass discharge shall be placed on a non-erodible, energy dissipating surface prior to rejoining the stream flow and shall not cause erosion. Filtering of bypass water is not necessary unless the bypass water has become sediment-laden as a result of the current construction activities.

The contractor will be required to place the intake hose in sump pits to prevent sediment-laden water from being discharged into stream flow. Energy dissipation pads will be utilized to prevent discharge from eroding the banks of the streams.

5) During dewatering of the coffered work area, all sediment-laden water must be filtered to remove sediment. Possible options for sediment removal include baffle systems, anionic polymer systems, dewatering bags, or other appropriate methods. Water shall have sediment removed prior to being re-introduced to the downstream waterway. A stabilized conveyance from the dewatering device to the waterway must be identified in the plan. Discharge water shall not result in a visually identifiable degradation of water clarity.

A discharge treatment system consisting of flocculent logs, jute netting, and corrugated pipe is proposed to remove sediment from the water being discharged into the Mill Creek Tributary. The contractor will be responsible for providing the details of the discharge treatment system.

6) The portion of the side slope that is above the observed water elevation shall be stabilized as specified in the plans prior to accepting flows. The substrate and toe of slope that has been disturbed due to construction activities shall be restored to proposed or pre-construction conditions and fully stabilized prior to accepting flows.

The disturbed areas of the project will be restored with native vegetation after the completion of the dewatering operations.

AUTHORIZATIONS REQUIRED BY OTHER AGENCIES

UNITED STATES FISH AND WILDLIFE SERVICE

Consultation with the USFWS has been initiated for compliance with the Endangered Species Act (16 U.S.C.1531 et. seq.). The consultation was completed by WBK on March 12, 2012. WBK determined that the site contains the potential habitat for the Eastern Prairie Fringed Orchid. WBK conducted field investigations in search of the Eastern Prairie Fringed Orchid on June 26 through July 12, 2011. Potential orchid habitat is available within and adjacent to the project area. At the time of the site visits, no sign of the orchid was found. Based on the current conditions of the site during field investigations, the project area is not likely to support the Eastern Prairie Fringed Orchid. It is determined that the project will have no likely effect on any Federally-listed threatened, endangered, or candidate species. A copy of the correspondence is included in Tab 3.

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Consultation with the IDNR via the EcoCAT program has been initiated for compliance with the Endangered Species Protection and Natural Areas Preservation Act (Part 1075) and Wetland Review (Part 1090). The consultation indicated that the following protected resources may be located within the vicinity of the project: Campton Hills Park INAI Site,

Campton Hills Park Land and Water Reserve, Blanding's Turtle (*Emydoidea blandingii*), and Golden Sedge (*Carex aurea*). The Campton Hills site is not within the project boundary or within the immediate vicinity. WBK staff witnessed signs of Blanding's Turtle reproduction by observing broken eggs on the eastern side of LaFox Road between the Mill Creek Tributary and Mill Creek. No live specimens were observed during field work. No specimens of Golden Sedge were identified by WBK to during field work. An Incidental Take Permit may be required prior to the start of construction. A copy of the correspondence is included in Tab 3.

ILLINOIS HISTORIC PRESERVATION AGENCY

Section 106 consultation with the IHPA has been completed. A letter from IHPA was received on April 2, 2012 indicating that there are no likely impacts to any known or potentially known historically significant artifacts with this project. A copy of the correspondence is included in Tab 3.

KANE-DUPAGE SOIL AND WATER CONSERVATION DISTRICT

Consultation with the KDSWCD is being initiated concurrently with this submittal. Approval from the KDSWCD regarding the SESC plans will be provided upon receipt. A copy of all correspondence with the KDSWCD will be forwarded as sent or received.

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