DRAFT SECTION 4(F) DE MINIMIS EVALUATION

ROUTE:
87TH STREET (FAU-1556) OVER SPRINGBROOK CREEK

ORGANIZATION:
CITY OF NAPERVILLE

COUNTY:
DUPAGE COUNTY
WILL COUNTY

STRUCTURE NUMBER:
EXISTING: 099-3399, PROPOSED: 099-6758

SECTION NUMBER:
19-00174-00-BR

PROJECT NUMBER:
P716(736)

JOB NUMBER:
P-91-043-20

PREPARED FOR:
CITY OF NAPERVILLE
400 S. EAGLE STREET
NAPERVILLE, IL 60540

PREPARED BY:
ENGINEERING RESOURCE ASSOCIATES, INC.
3S701 WEST AVENUE, SUITE 150
WARRENVILLE, IL 60555
630.393.3060

PREPARED ON:
JULY 1ST, 2022

TABLE OF CONTENTS

1. Project Description

a. **Section Number:** 19-00174-00-BR

b. **Job Number:** P-91-043-20

c. **Official Project Name:** 87th Street (FAU-1556) Over Springbrook Creek Bridge Removal and Replacement

d. **Project Location:** City of Naperville, IL – See Exhibit A-1 for the Location Map.

e. **Project Type:** Bridge Replacement

f. **Project Size:** 0.104 miles (550 ft)

g. **NEPA Class of Action:** Federally Approved Categorical Exclusion

h. **NEPA Purpose and Need Summary:** The purpose of the project is to replace the structure carrying 87th Street over Springbrook Creek to safely accommodate vehicular traffic and pedestrians. This bridge is structurally and hydraulically deficient, and the proposed improvements will increase safety while providing the necessary clearance over the proposed design storm to reduce the risk of flood related damage. It will also continue to serve as a protected area for various species and serve as an essential habitat for fostering the growth of vegetation.

i. **Project Status:** On behalf of the City of Naperville, Engineering Resource Associates, Inc. (ERA/ The Consultant) is the engineering consultant currently completing the Phase I preliminary engineering and environmental study. The anticipated Phase I design approval date is Summer 2022 with construction programmed for Spring 2024 (Fall 2023 letting). Funding for all phases of engineering was approved under Federal Funds.

2. Section 4(f) Resources

a. **Resource Type:** Publicly Owned Public Park
b. **Resource Name:** Springbrook Parkway
c. **Official(s) With Jurisdiction (OWJ) Name:** Naperville Park District (NPD)
d. **Description of Role/Significance in the Community:** Springbrook Parkway is a publicly owned public park consisting of open space, grasslands, forested areas, and floodplain (Zone A) associated with Springbrook Creek, which flows through the property. The park encompasses 50 acres in total and is located within the City of Naperville in Will County, Illinois. Springbrook Parkway provides native habitat for various bird species, fish, and crayfish and is primarily used by the public for recreational purposes including trail walking, picnicking, and natural watching. See Exhibit A-4 and Exhibit A-7 for an aerial map of Springbrook Parkway and a delineation of the Section 4(f) resource within the project limits.

3. Description of Intended Section 4(f) Resource Use

a. **Acres to be Taken and/or Impacted:** 0.085-acres out of the total resource area of 50-acres.
b. **Type of Impact:** A temporary easement is the proposed impact shown on Exhibit B-1 and as defined in Table 1; the temporary easement is required for access to construct the proposed improvements and to tie the proposed roadside ditch grades into the existing terrain to satisfy the compensatory requirements of DuPage County, Will County, and IDNR-OWR. Floodplain and Floodway compensatory storage will be provided within the proposed roadside ditches and within the waterway via bank regrading and bridge pier removal. The proposed compensatory storage locations provide the least impact to the Section 4(f) resource and are contained within the existing ROW; however, the temporary easement is necessary to tie into the existing terrain.

Table 1: Summary of Section 4(f) Resource Impacts

Location & Description	Type of Impact in Acres			Total Area (Acres)	Purpose	Negatively Affect Resource Function?
	Temporary Easement	Permanent ROW	Permanent Easement			
PIN 07-01-01-104-010-0000 (Springbrook Parkway)	0.085	0	0	0.085	(1)	No

(1) The purpose of the temporary easement is to access to construct the proposed improvements and to tie the proposed roadside ditch into the existing terrain to meet the compensatory storage requirements. Disturbed areas will be replaced to existing conditions or better as discussed in Section 4 of this report.

c. **Existing Function of Impacted Areas:** This parcel consists of open space containing a portion of Springbrook Creek, trees, grasslands, native vegetation, and a habitat for various bird species and wildlife. There were no Open Space Lands Acquisition and Development (OSLAD), or Land and Water Conservation Funds (LAWCON) used to purchase the subject parcels. See Exhibit C-2 for confirmation from the Illinois Department of Natural Resources (IDNR). The waterway conveys stormwater runoff to The DuPage River. This area also contains wetlands as shown in Exhibit A-2 (see Exhibit A-2 and Exhibit A-6). Several functions include reduction in flood flow rates and infiltration of stormwater, sediment filtration from upland areas thus reducing the impact of urbanization on water quality by filtering and assimilating nutrients discharged from surrounding uplands, providing a habitat for resting, reproducing, and nesting birds, aquatic, and terrestrial animals.

   Since the 87th Street Bridge spans Springbrook Creek, which has hydrologic connection to jurisdictional waterways, the delineated wetland and waterway will likely be considered Waters of the U.S. and will be under the jurisdiction of the U.S. Army Corps. of Engineers Chicago District.

   Photographs of the existing conditions are provided in Appendix E. The subject parcel and impacted area does not contain recreational amenities and is not regularly used by the public. The trail and picnicking amenities associated with Springbrook Parkway are located 0.3 miles south of the impacted area on PIN 07-01-01-104-010-0000.

d. **Relationship of Impacted Areas to Section 4(f) Function and Significance to Resource:** While Springbrook Parkway functions as a publicly owned public park, PIN 07-01-01-104-010-0000 functions primarily as a natural, open space containing the Springbrook Creek as well as its associated floodplain and wetlands (See Exhibits A-2 & A-6). This parcel provides protection to natural resources, native habitat, and foraging areas for wildlife. No recreational amenities are located on this parcel; therefore, these areas will not be impacted.

e. **Resulting Function of Impacted Areas:** The overall functionality of the Springbrook Parkway will not be affected. After the improvements are completed, the impacted Section 4(f) area within the temporary easement will continue to serve as a publicly owned public park and will be restored to function better than the present state. The temporary easement will be used for

construction access to replace the bridge and to tie in the proposed roadside ditch will provide the additional floodway and floodplain compensatory storage volumes required for the project. The impacted area containing vegetation and habitat will be upgraded to a more functional and higher quality through the planting of native vegetation and the creation of essential habitat. Seeding Class 2A and 4A will be applied to restore native grass and turf areas. The impacted area will continue to function as a protective native area. The proposed design will also improve sediment transport within the creek and replace substrate for fish repopulation.

4. Description of Efforts to Avoid, Minimize or Enhance Resource

a. **Avoidance And Minimization Efforts Made and Benefits to Resource:** Since the project consists of a roadway crossing a channel while also spanning a wetland through Springbrook Parkway, abandoning the bridge and closing the creek crossing is not a practicable alternative to avoid impacts to Springbrook Parkway. Impacts to this parcel were minimized by use of retaining walls on each side of the creek. The retaining walls minimize the embankment and keeps the improvement withing the ROW only requiring temporary impacts in front of the wall. Extensive coordination efforts with the City of Naperville, Naperville Park District, and DuPage County were crucial in preparing the preliminary design to minimize and mitigate adverse environmental impacts and ROW takings for compensatory storage.

Several design alternatives were analyzed with varying roadway profile scenarios, three superstructure types, and the incorporation of retaining walls. Ultimately, the City of Naperville selected a single-span IL27 PPC I-Girder superstructure on spill-thru abutments as the preferred design alternative because this design type eliminates the need for a pier in the creek and provides a natural streambed opening under the bridge. Currently, the existing abutment piles are exposed due to scour and there is significant debris and sedimentation beneath and adjacent to the bridge. The proposed alternative contains a single, wider span with a stepped streambed design providing a “low-flow” channel, which will minimize sedimentation under the structure and improve sediment transport through the waterway and minimize the local scour at the abutments by positioning the abutments farther outside of the waterway limits. The bridge design incorporates open cell vegetated articulated block revetment mat used for stabilization of areas adjacent to the bridge while also serving as a functional measure by providing a natural area supporting vegetative growth. Natural material for streambed establishment is proposed at the creek to further improve sediment transport

within the waterway and improve substrate for fish. This alternative provides the most significant, net improvement to the existing environmental resources at Springbrook Parkway. The proposed design shown in **Appendix B** will also bring the structure and roadway up to County and IDOT design standards to ensure safe passage over the structure.

The roadway and bridge elements were designed to meet minimum flood protection standards and minimum roadway design criteria. A retaining wall will be constructed adjacent to the roadway and sidewalk on the north and south sides of the roadway to avoid ROW acquisition from the adjacent residential properties, the Springbrook Prairie Forest Preserve, and the wetland areas. There will be proposed excavating and grading to incorporate roadside ditches along the retaining wall to maintain the existing drainage patterns. The proposed grading along the roadway and retaining walls will be contained within the 87th Street ROW throughout the project limits apart from the temporary easement proposed at the creek on the Springbrook Prairie property.

Additionally, all permanent wetlands and waters impacts will be mitigated off-site at a wetland bank and all temporary wetlands and waters impacts will be mitigated on-site to a condition better than the present state.

b. Commitments for Mitigation or Enhancement: Project commitments for mitigation of enhancement are described below:

1. Construction documents shall require the highest level of sediment and erosion control measures and the use of clean construction equipment.
2. Restoration of PIN 07-01-01-104-010-0000will include upgrading the existing vegetation and habitat to a more functional and higher quality through restoring the native vegetation.
3. All impacts to wetlands will be mitigated in compliance with the Interagency Wetlands Policy Act of 1989 (IWPA) and the State's Rivers, Lakes, and Streams Act (RLSA).
4. All Impacts to the waters of the U.S. will be mitigated in compliance with the Section 401 and the Clean Water Act (CWA).
5. The USACE Nationwide Permit 14 (Linear Transportation Projects) and Nationwide Permit 33 (Temporary Construction, Access, and Dewatering) will be obtained in Phase II.

c. **Description of the Benefits to the Resource by the Proposed Improvements:** The proposed design provides the following benefits to the Section 4(f) properties:

1. Improves stormwater drainage on upstream properties by removing the hydraulically restrictive bridge and replacing it with a hydraulically adequate structure;
2. Eliminates the need for piers within the creek limits, which reduces debris buildup;
3. Provides a natural creek bottom with a low-flow channel to prevent sedimentation and reduce the likelihood of local scour and streambank scour;
4. Minimizes streambank erosion due to steep slopes and high velocities of the creek through stabilization measures and drainage improvements;
5. Restores the disturbed streambed areas with natural material for streambed establishment in place of riprap to provide a suitable medium for fish habitat;
6. Enhancement of native vegetation in restored areas within the project limits through use of high-quality, native seed mixes; and
7. Creates a functional and higher quality vegetation and habitat on PIN 07-01-01-104-010-0000 by means of restoring the native grass and turf areas.

d. **Statement that the State Historic Preservation Office (IHPA) Was Contacted and Responded That No Historic Properties Will Be Impacted:** On February 18th, 2022, IDOT's qualified Cultural Resources staff made a "No Historic Properties Affected" determination pursuant to Section 106 of the National Historic Preservation Act. See Exhibit C-5 for the Cultural Clearance.

5. Evidence of Opportunity for Public Review and Comment

a. **Type Of Public Availability (Internet Posting, Public Meeting, Mailers):** Exhibits showing the proposed design and the Section 4(f) report were available for public viewing for a 30-day review period online at the City of Naperville's website from {July 8th}, 2022 to {August 6th}, 2022. A copy of the advertisements is shown in Exhibit D-1. The newspaper advertisement for public review and comment on the Section 4(f) impacts was posted in {Daily Herald} on {July 8th}, 2022 and is included in Exhibit D-1.

b. **Date Of Action:** TBD

c. **Summary Of Comments:** The public comment period was from {July 8th}, 2022 to {August 6th}, 2022. A summary of public comments is included in Exhibit D-2.

d. **Notification Of OWJ Of Public Availability and Summary of Comments:** The transmittal to the Naperville Park District for the submittal of the proposed design and Section 4(f) documentation for public review and comment is included in Exhibit C-7. The transmittal to The Naperville Park District for the summary of public comments is provided in Exhibit C-8.

6. Evidence of Coordination with Official(s) with Jurisdiction

a. **Meeting Minutes and Agendas:** Applicable agendas and meeting minutes are provided in Appendix C.
   1. Exhibit C-1 – June 11th, 2021: Meeting Minutes – BCR Review Meeting
   2. Exhibit C-3 – November 12th, 2021: Agenda and Meeting Minutes – Forest Preserve Meeting
   3. Exhibit C-4 – November 24th, 2021: Agenda and Meeting Minutes – Pre-Application Meeting

b. **Correspondence:** Related project correspondence is provided in Appendix C.
   1. Exhibit C-2 – August 5th, 2021: Grant Inquiry
   2. Exhibit C-5 – February 18th, 2022: Cultural Resources – No Historic Properties Affected Clearance

c. **OWJ Written Concurrence with a No Adverse Effect Determination:** The Naperville Park District provided a letter dated and signed on {Month, Day}, 2022 providing concurrence with a de minimis impact determination.

7. Supporting Documentation

a. **Map Of Project Area Indicating Relationship of Project to Resource:** See Exhibit A-1 for the project location map and Exhibit A-4 aerial map depicting the location of the proposed improvements. A Section 4(f) Impact exhibit is provided as Exhibit B-1. The Typical Sections are provided in Exhibit B-2 and the Plan & Profile is provided in Exhibit B-3. The Cultural Clearance is provided in Exhibit C-5.

b. **Public Reviews, Comment and Project Meeting Minutes:** See Appendix C for coordination documentation and see Appendix D for public involvement.

c. Supporting Photographs of Resource: Photographs of the Section 4(f) resources are included in **Appendix E - Photographs**.

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APPENDIX A – PROJECT EXHIBITS

Exhibit A-1	Location Map
Exhibit A-2	NWI Map
Exhibit A-3	DuPage County Wetland Area Map
Exhibit A-4	Aerial Photo
Exhibit A-5	FIRM
Exhibit A-6	Project Site Wetland Delineation Map
Exhibit A-7	Springbrook Parkway Map

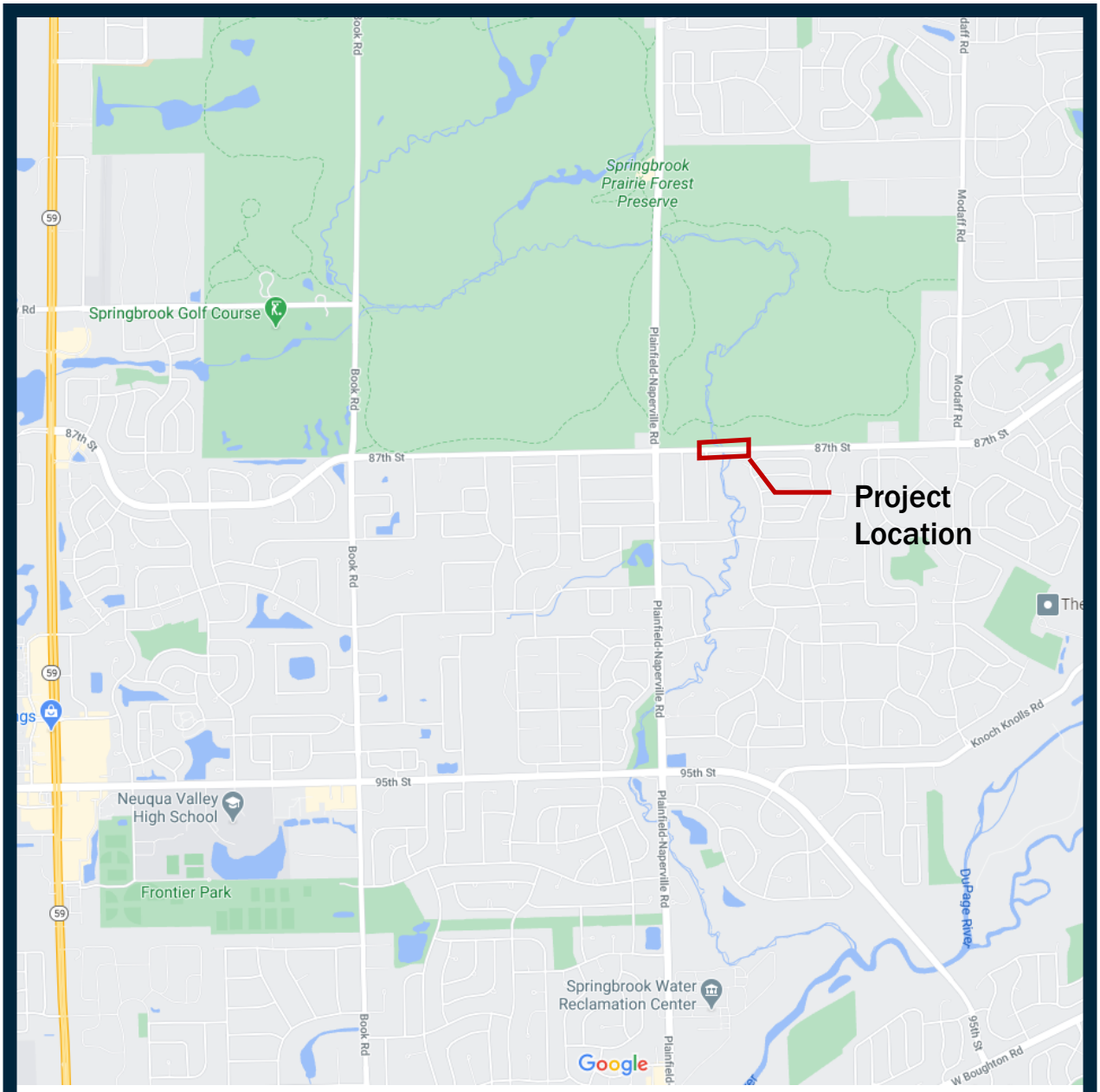

Exhibit A- 1
Location Map
Lat/Long: 41.725848°, -88.163211°

Project Study Location

NORTH

Client:	City of Naperville
Project Name:	87th St Bridge
Section No.	19-00174-00-BR
Project No.	P716(736)
Source :	Google Maps

Not to Scale

Engineering Resource Associates, Inc.
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EXHIBIT A-2

National Wetland Inventory Map

Lat/Long: 41.725848°, -88.163211°

Project Location

NORTH

Client:	City of Naperville
Project Name:	87th St Bridge
Section No.	19-00174-00-BR
Project No.	P716(736)
Source :	USFWS

Not to Scale

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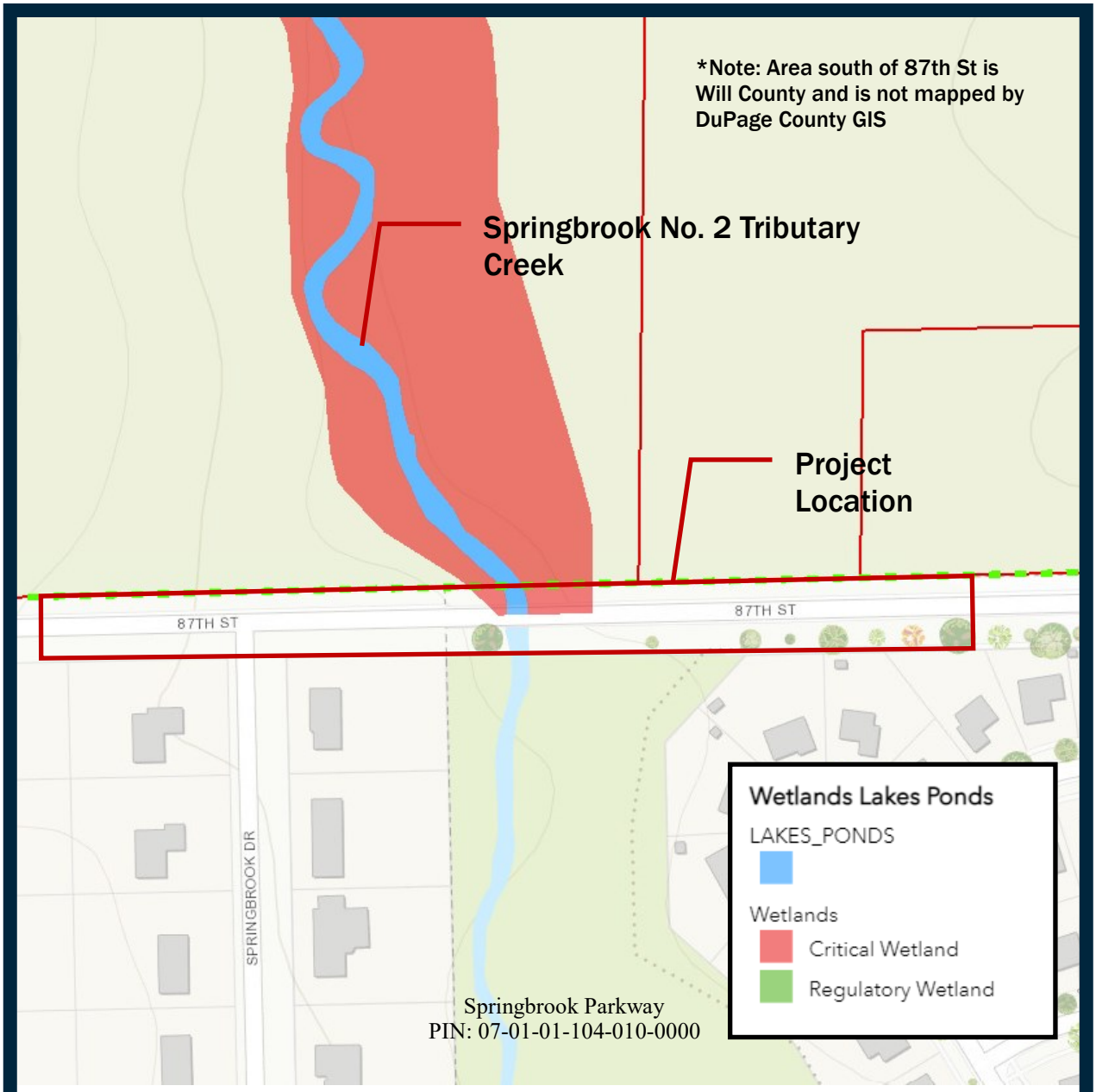

EXHIBIT A-3
DuPage County Wetland Map
Lat/Long: 41.725848°, -88.163211°

Project Location

NORTH

Not to Scale

Client:	City of Naperville
Project Name:	87th St Bridge
Section No.	19-00174-00-BR
Project No.	P716(736)
Source :	DuPage GIS

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Exhibit A-4
Aerial Photo
Lat/Long: 41.725848°, -88.163211°

Project Location

NORTH

Client:	City of Naperville
Project Name:	87th St Bridge
Section No.	19-00174-00-BR
Project No.	P716(736)
Source :	Google Earth

Not to Scale

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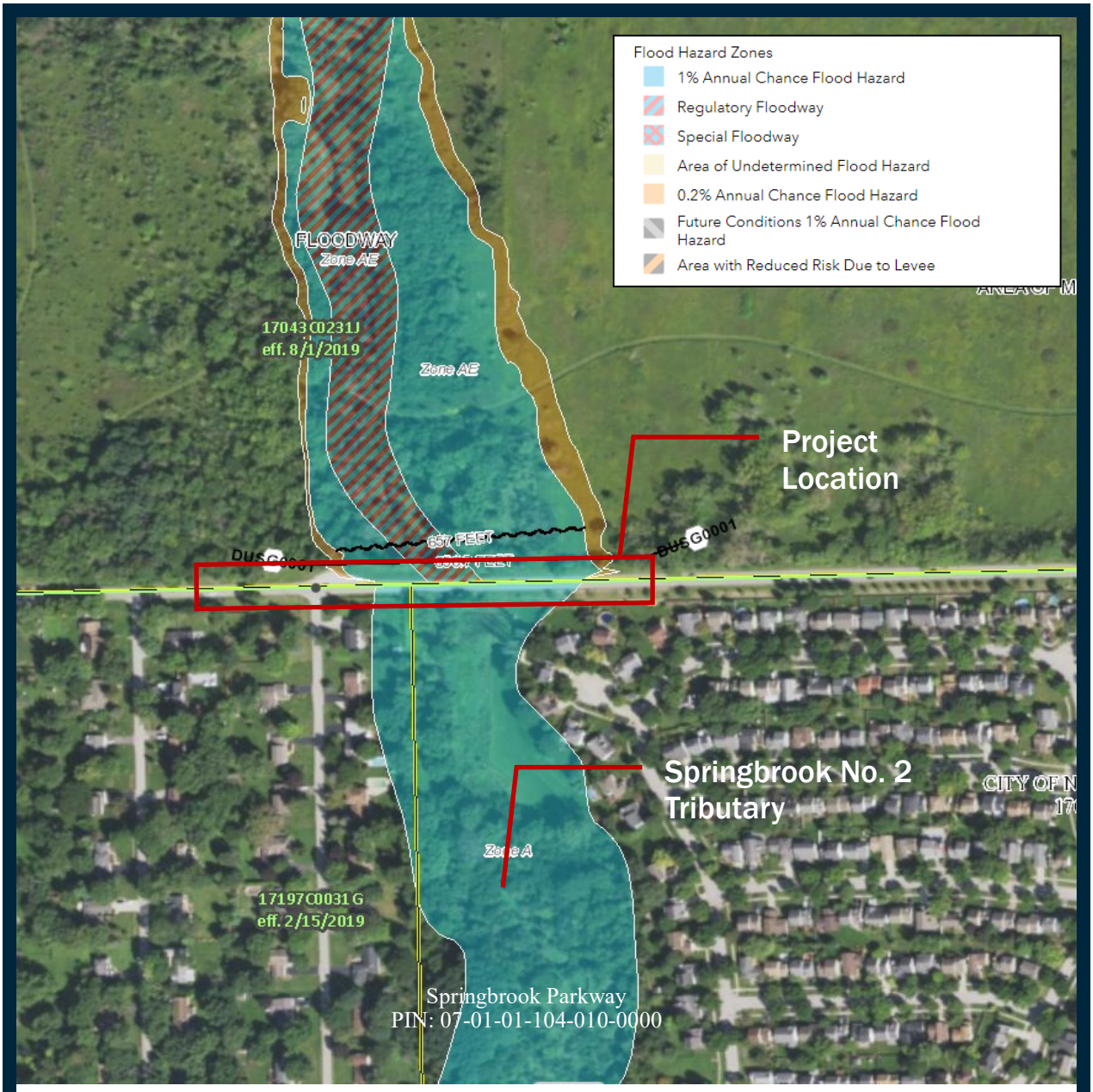

EXHIBIT A-5

Flood Insurance Rate Map

Lat/Long: 41.725848°, -88.163211°

Project Location

NORTH

Client:	City of Naperville
Project Name:	87th St Bridge
Section No.	19-00174-00-BR
Project No.	P716(736)
Source :	FEMA

Not to Scale

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EXHIBIT A-6

Project Site Wetland Delineation Map

Lat/Long: 41.725848°, -88.163211°

- Approximate Wetland Boundary
- Approximate Waters Boundary
- Approximate Offsite Wetland Boundary
- Approximate Offsite Waters Boundary
- Project Location
- Data Point

NORTH

Not to Scale

Client:	City of Naperville
Project Name:	87th St Bridge
Section No.	19-00174-00-BR
Project No.	P716(736)
Source :	Google Earth

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EXHIBIT A-7

Springbrook Parkway Map

Lat/Long: 41.725848°, -88.163211°

Spring Parkway Boundary

Client:	City of Naperville	Project No. P716(736)
Project Name:	87th St Bridge	Source: NPD Website
Section No.	19-00174-00-BR	

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APPENDIX B – PRELIMINARY PLAN EXHIBITS

Exhibit B-1	Section 4(f) Impact Exhibit
Exhibit B-2	Typical Sections
Exhibit B-3	Plan & Profile Sheets

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTION 4(F) IMPACT EXHIBIT
87TH STREET OVER SPRINGBROOK CREEK

SCALE: 1" = 50' | SHEET 1 OF 1 SHEETS | STA. 8+00.00 | TO STA. 20+30.00

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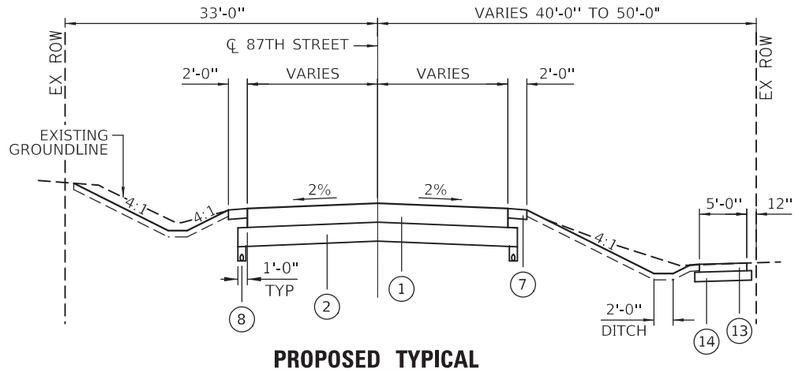

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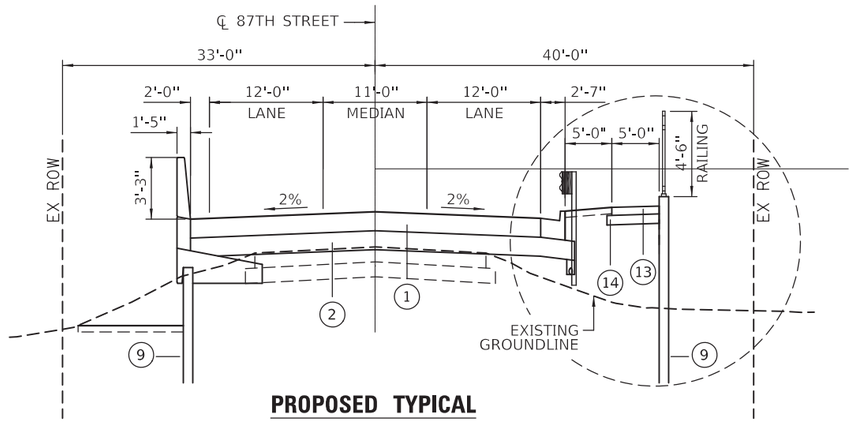
STA 18+00 TO STA 20+00



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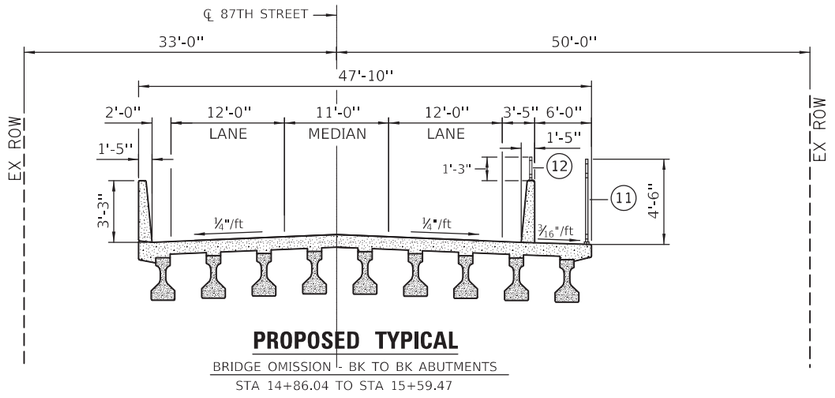
STA 12+50 TO STA 14+58.75 RT



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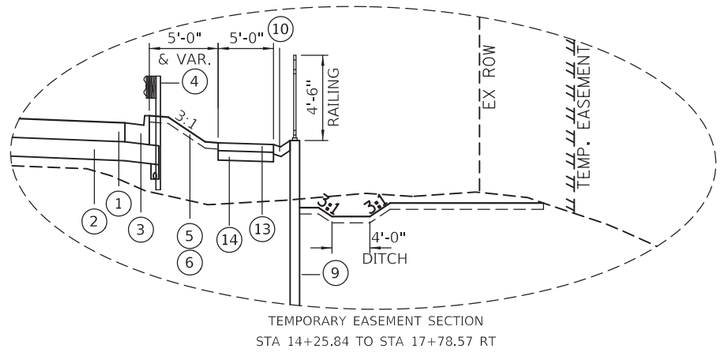

TEMPORARY EASEMENT SECTION
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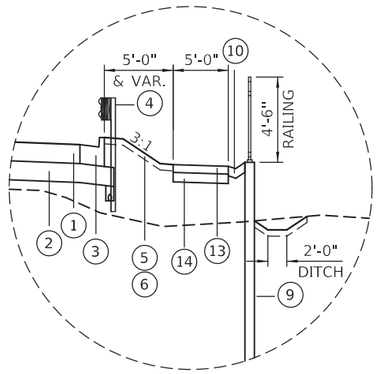
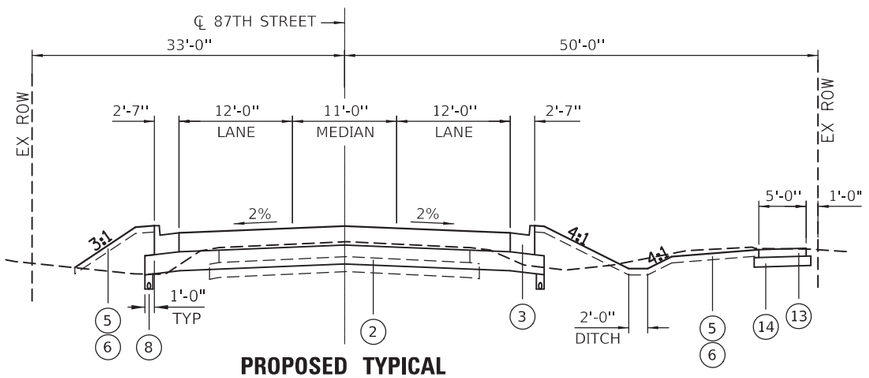


STA 15+90.83 TO STA 16+80.91 RT



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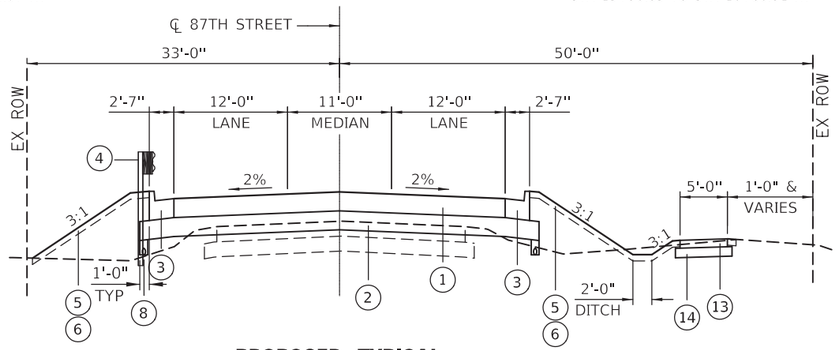

PROPOSED TYPICAL

STA 11+50 TO STA 13+25 RT
STA 17+00 TO STA 18+00 RT

STA STA 16+80.91 TO STA 18+00 RT

PROPOSED LEGEND

1. HOT-MIX ASPHALT PAVEMENT (FULL DEPTH), 9"
   HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL 9.5), 2"
   HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 7"
2. AGGREGATE SUBGRADE IMPROVEMENT, 12"
3. COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
4. STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FT POSTS WITH GUARDRAIL REFLECTORS, TYPE A
5. TOPSOIL EXCAVATION AND PLACEMENT, 6"
6. SEEDING WITH EROSION CONTROL BLANKET, TEMPORARY SEEDING
7. AGGREGATE SHOULDERS, TYPE B
8. PIPE UNDERDRAINS, TYPE 2, 4"
9. RETAINING WALL
10. CONCRETE GUTTER, TYPE B
11. BICYCLE RAILING
12. PARAPET RAILING
13. 5-INCH CONCRETE SIDEWALK
14. AGGREGATE SUBGRADE, TYPE B

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TYPICAL SECTIONS
87TH STREET OVER SPRINGBROOK CREEK

SCALE: | SHEET 2 OF 2 SHEETS | STA. | TO STA.

F.A.U. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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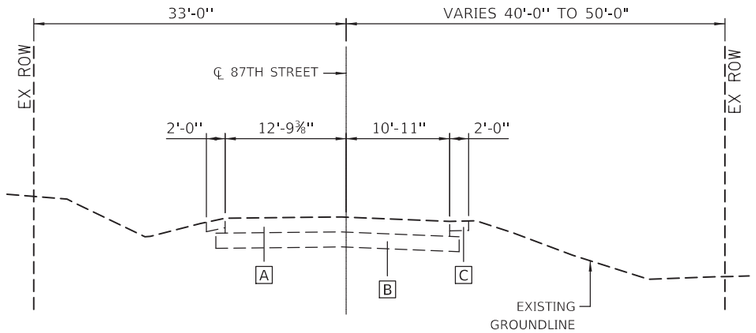

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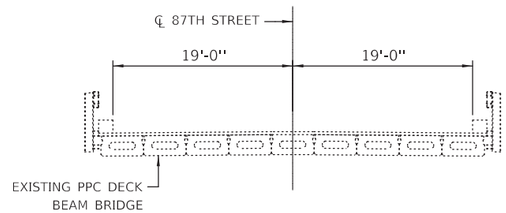

EXISTING TYPICAL

EXISTING LEGEND

A EXISTING HOT-MIX ASPHALT PAVEMENT, 9½"
B EXISTING AGGREGATE SUBBASE, 9½"
C AGGREGATE SHOULDER

ENGINEERING
RESOURCE ASSOCIATES

DRAFT

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	DRAWN - N. MIKOLAJCZYK	REVISED -	
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PLOT DATE = 5/13/2022	DATE - 05.12.2022	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING TYPICAL SECTIONS
87TH STREET OVER SPRINGBROOK CREEK

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.U. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1556	19-00174-00-BR	WILL	STOTS	SSHTS
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

0 20 40 60
SCALE IN FEET

N

SPRINGBROOK PRAIRIE
FOREST PRESERVE
PIN# 0736300002

AGGREGATE SURFACE COURSE, TY B
STA 12+25.6 TO STA 12+74.4

TRAFFIC BARRIER TERMINAL, TY 1, (SPECIAL) TANGENT

STEEL PLATE BEAM GUARDRAIL, TY A, 6' POSTS

TRAFFIC BARRIER TERMINAL, TY 6

RETAINING WALL
(SEE STR PLANS)

COMBINATION CONCRETE CURB
AND GUTTER, TY B-6.24
SUBBASE GRANULAR MATERIAL, TY B, 2"
STA 11+49.7 TO STA 13+50

AGGREGATE SHOULDER, TY B 6"
STA 9+73.4 TO STA 11+49.7

FIELD
ENTRANCE
STA 12+50

EX ROW

EX ROW

PVMT CONNECTOR (HMA)
FOR BRIDGE APPR SLAB

EX SECTION LINE

℄ 87TH STREET

12.0'
12.6'
10.4'
12.0'
11.0'
12.0'
18.8'
4.2'
12.0'

PRECAST CONCRETE FLARED END SECTION, 15"

MATCHLINE STA 14+50

BEGIN IMPROVEMENT
STA 8+85.0

9 10+00 11 12 13 14

100+00 101 102 103 104

EX ROW

+45.7
40.0' RT

+45.7
50.0' RT

TRAFFIC BARRIER TERMINAL,
TY 1, (SPECIAL) TANGENT

EX ROW +25.8
40.0' RT

EX ROW
+25.8
50.0' RT

AGGREGATE SHOULDER, TY B 6"
STA 9+73.4 TO STA 11+62

+79.7
40.0' RT

STEEL PLATE BEAM GUARDRAIL, TY A, 6' POSTS

RETAINING WALL
(SEE STR PLANS)

PIN# 0701011010010000

COMBINATION CONCRETE CURB AND GUTTER, TY B-6.24
SUB GRAN MATL, TY B 2"
STA 11+62.0 TO STA 12+02.0

PIN# 0701011010100000

SPRINGBROOK DRIVE
STA 12+13.5

COMBINATION CONCRETE CURB
AND GUTTER, TY B-6.24
SUB GRAN MATL, TY B 2"
STA 12+25.0 TO STA 14+58.8

PIN# 0701011040010000

PORTLAND CEMENT CONCRETE SIDEWALK 4"
AGGREGATE BASE COURSE, Ty A 4"
STA 12+39.7 TO STA 14+58.9

675 670 665 660 655 650 645 640 635

K = 65
350.00' V.C

666.60

105.00 EL. 664.49

3.93% -1.44%

VPI STA. 12+80.00
ELEVATION 657.55

8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00	13+50	14+00	14+50
	672.71	670.51	668.69	666.60 / 666.60	664.70 / 664.63	662.98 / 662.82	661.33 / 661.39	660.00 / 660.34	659.05 / 659.68	658.36 / 659.40	657.66 / 659.51	657.04 / 660.00

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE — SURVEYED, PLOTTED, PROFILES CHECKED, B.M. NOTED, STRUCTURE NO'S/TYP'S CHK'D, BY, DATE

DRAFT

MODEL: Default
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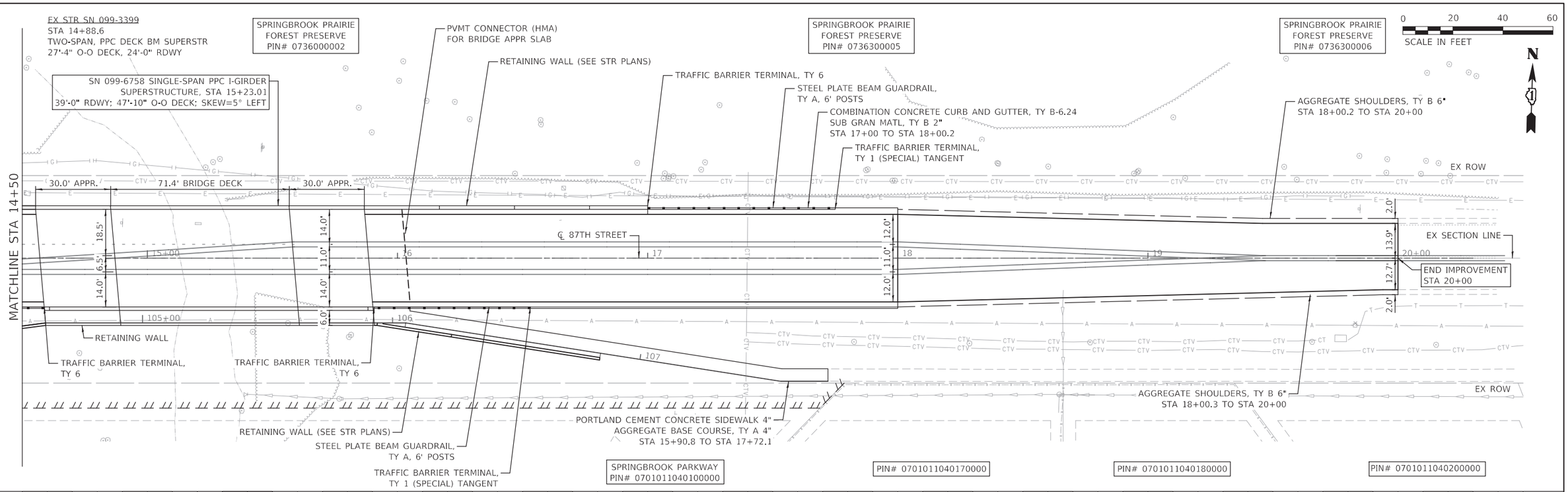
USER NAME = nmikolajczyk	DESIGNED - N. MIKOLAJCZYK	REVISED -
	DRAWN - N. MIKOLAJCZYK	REVISED -
PLOT SCALE = 40.000 ' / in.	CHECKED - M. LANGE	REVISED -
PLOT DATE = 5/12/2022	DATE - 05.11.2022	REVISED -

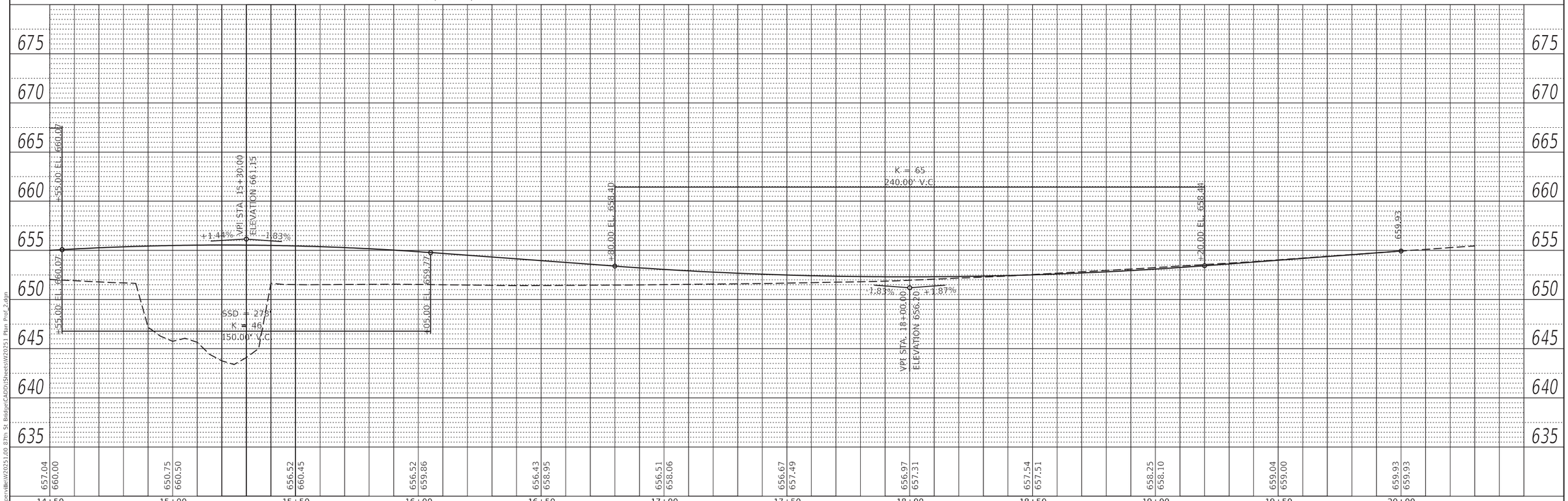
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
87TH ST OVER SPRINGBROOK CREEK

SCALE: 1:20H 1:5V | SHEET 1 OF 2 SHEETS | STA. 8+50 TO STA. 14+50

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1556	19-00174-00-BR	DUPAGE	2	1
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			





PLAN — SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME / NOTE BOOK / NO. / BY / DATE

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NO/TA'NS CHK'D / NOTE BOOK / NO. / BY / DATE

DRAFT

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USER NAME = nmikolajczyk	DESIGNED - N. MIKOLAJCZYK	REVISED -
	DRAWN - N. MIKOLAJCZYK	REVISED -
PLOT SCALE = 40.000 ' / in.	CHECKED - M. LANGE	REVISED -
PLOT DATE = 5/12/2022	DATE - 05.11.2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
87TH ST OVER SPRINGBROOK CREEK

SCALE: 1:20H 1:5V | SHEET 2 OF 2 SHEETS | STA. 14+50 TO STA. 20+00

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1556	19-00174-00-BR	DUPAGE	2	2
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

ENGINEERING RESOURCE ASSOCIATES

APPENDIX C – COORDINATION

Exhibit C-1	Meeting Minutes – BCR Review Meeting (06/11/2021)
Exhibit C-2	Agenda and Meeting Minutes – Coordination with Forest Preserve (11/12/2021)
Exhibit C-3	Agenda and Meeting Minutes – Pre-Application Meeting (11/24/2021)
Exhibit C-4	NHPA Cultural Clearance (02/22/2022)
Exhibit C-5	Agenda & Meeting Minutes NPD Coordination Meeting (X/X/2022)
Exhibit C-6	Section 4(f) Report to NPD
Exhibit C-7	Transmittal – Section 4(f) Public Comment Period
Exhibit C-8	OWJ Letter of Concurrence – (X/X/2022)

PROJECT: 87th Street over Springbrook Creek (Section No. 19-00174-00-BR)
SUBJECT: BCR Review Meeting
DATE: June 11th, 2021 at 11:00 AM
LOCATION: Teams Conference Call
FROM: Kristina Kolodziejczyk, ERA

ATTENDEES:

Name	Entity	Phone
Andy Hynes	City of Naperville	630-548-2958
Philip Tartaglia	City of Naperville	630-305-5203
Melissa Lange	Engineering Resource Associates (ERA)	630-393-3060
Natalia Mikolajczyk	Engineering Resource Associates (ERA)	630-393-3060
Kristina Kolodziejczyk	Engineering Resource Associates (ERA)	630-393-3060

MEETING MINUTES

A. BCR Overview

The meeting commenced with ERA providing a description of each of the proposed alternatives and indicated all three of the bridges are designed with a 5 degree skew to better fit the creek alignment.

Alternative 1 is a 54'-0" single-span 21" PPC Deck Beam superstructure with a 5" concrete wearing surface. This design does not contain piers within the waterway, which allows for an open channel environment. The bridge is also centered on the creek to minimize scour at the abutments. While Alternative 1 is the cheapest option to construct, PPC Deck beam superstructures generally have a shorter life span compared to other superstructure types and require frequent maintenance.

Alternative 2 is ERA's recommended design and features a 70'-0" single-span IL27 PPC I-Girder superstructure with a reinforced concrete slab centered on the creek. This type of bridge can extend over larger spans allowing the abutments to be placed farther outside the channel limits to minimize scour at the abutments. The larger span also allows the proposed streambed design to include a low-flow channel with "steps" to minimize sedimentation under the structure. This alternative requires the highest profile raise due to the superstructure depth, however, the bridge has a longer life-span and requires less maintenance compared to PPC Deck Beam superstructures.

Alternative 3 is a two-span 17" PCC Deck Beam superstructure (each span is 40'-0") with a 5" concrete wearing surface. This alternative was analyzed because of the low-profile depth to minimize ROW and wetland impacts. The creek is contained within span 1 to eliminate the pier in the center of the waterway to improve hydraulic efficiency. Span 2 serves as an overflow area for larger storms and area for compensatory storage. Alternative 3 is the most costly option to construct and will likely have a shorter life span compared to other superstructure types while also requiring frequent maintenance. This alternative also features a pier within the waterway.

The City expressed concern over the possibility of extensive grading being required to accommodate the streambed cross section shown on the BCR exhibit for Alternative 3. ERA noted the proposed

grading is not yet completed, however, proposed grading could be limited to the approximate bridge footprint with a minor accommodations made for the overflow span within the ROW.

ERA considered PPC Deck Beam superstructures due to their low profile and low construction cost. IDOT generally likes to see PPC Deck beams listed in the BCR as a low construction cost option. PPC I-Girders were considered because the new girders can span longer distances and are cost effective compared to steel options. The recent modification to the flanges also makes it easier to maintain with very little repair work required to the beams during a deck replacement. A galvanized steel structure could have been analyzed as an alternative, but generally steel is not recommended in the creek environment due to corrosion issues. A post-tensioned slab superstructure was not reviewed due to the desire to eliminate the center pier in the creek to improve the hydraulic efficiency of the creek. A slab superstructure was also not considered due to limited span lengths also requiring a pier within the waterway and the need for a full superstructure replacement in the future as opposed to a deck replacement for other structure types.

B. Roadway Profiles

Overall, all three alternatives require approximately 3-ft of profile raise to accommodate 1-ft of clearance over the 30-year design storm. The large profile raise is required because the existing bridge is a hydraulic restriction due to the 30-year design storm elevation rising above the bottom of the superstructure.

ERA examined several proposed profiles with vertical curves located on and off the bridge. The recommended profile raises feature a vertical curve over the center of the bridge to promote better drainage over the structure, to contain major fill areas within the immediate area of the bridge footprint and to tie into the existing roadway near the Springbrook Drive intersection with minimal elevation changes.

C. Right-of-Way (ROW) & Retaining Walls

Each of the three alternatives also includes retaining walls on the north and south sides of the roadway. This is recommended to avoid ROW takings and to limit the impacts to the wetlands as well as reduce the fill in the floodplain. ROW acquisition or temporary easement from one residential parcel (10S701 Springbrook Drive) is anticipated on the southwest side of the project to grade out and construct a roadside drainage ditch. If ROW cannot be obtained from this property, then ERA will extend the southwest wall instead of grading out.

To eliminate ROW acquisition on the north side and minimize environmental impacts within the DuPage County Forest Preserve area, ERA recommended construction of two retaining walls at the edge of the north shoulders with moment slabs.

ERA noted thee is likely a cost savings by using retaining walls to avoid wetland impacts for this project. The cost sharing agreement for retaining walls is 80% of the cost is covered by IDOT with the City being responsible for the remaining 20% of the cost. IDOT does not cover any wetland mitigation or banking fees so the City would be responsible for 100% of the cost.

D. Other

The City noted they have had several issues with their PPC deck beam structures and questioned if IDOT will deem one of the PPC deck beam structures (Alternative 1 & 3) as a more appropriate replacement structure. ERA indicated IDOT typically likes to see a PPC deck beam as one of the

considered alternatives because of its low construction cost, however, ERA does not anticipate any resistance from IDOT on the recommended alternative (Alternative 2 – PPC I-Girder). In the past for similar projects, ERA has cited the recommended structure is the client's preferred alternative due to the longevity of the structure, ease of maintenance and the reoccurring maintenance issues with PPC deck beam superstructures.

The City questioned why the existing deck geometry on the Master Structure Report is rated a 2. ERA noted this rating is primarily based on Average Daily Traffic (ADT) and clear roadway width over the structure. Due to the high ADT, narrow lanes and lack of shoulders on 87th Street, the low deck geometry rating is a large factor driving the decrease in the sufficiency rating each year. The rating criteria for the Deck Geometry is Item 68 in *Illinois Highway Information System Structure Information and Procedure Manual* and has been attached for review.

Based on the BCR existing conditions inspection conducted in March 2021, ERA alerted the City to a large scour hole at the southeast corner of the east abutment. The City has since filled the scour hole as a temporary stabilization repair and questioned if the repair should be noted or shown in the report. ERA indicated the scour hole prior to temporary stabilization is documented in the report. The regularly scheduled inspection for this structure is due in November 2021 and ERA anticipates the substructure rating will drop by one. ERA recommends additional stabilization measures be considered by the City such as dumping riprap at the abutments. The City questioned if this maintenance work will require a permit. ERA indicated a follow up conversation would occur after the meeting with permitting staff to confirm permitting requirements.

Permitting Follow Up: ERA confirmed the following permits will be required for this emergency work:

1. ***USACE*** *– Regional Permit 9 – Maintenance*
2. ***DuPage County*** *– Per a phone conversation with County staff, ERA or the City should send an email to Clayton with a brief description of the critical nature and need to perform the emergency repairs (scour countermeasures in the floodplain at the abutments). Then the City would be allowed to proceed with the work and DuPage would coordinate and issue an after-the-fact permit for the work without penalty. They would likely request additional information such as the existing survey and wetland delineation to issue the permit. The County does not want to hinder the City's ability to save critical infrastructure. This will likely be authorized under General Certification for Shoreline or Stream Bank stabilization Measures; and*
3. ***IDNR-OWR*** *– Per a phone conversation with Heather (permitting engineer), ERA or the City should fill out the Joint Application and email it to Bill Boyd with a summary of the emergency situation and what work the City is going to take to repair it and then they would work with the City on it. This will likely be authorized under the Regional Permit No 3 (streambank/shoreline stabilization section). When I read RP3 it seems like this project absolutely qualifies.*
4. ***Will County*** *– Per a phone conversation with County staff, if the work is not in unincorporated Will County then a submittal is not required. The emergency work is not located within unincorporated Will County, therefore, no permit submittal is required.*

E. Recommended Alternative

ERA recommends Alternative 2 (a single-span IL27 PPC I-Girder superstructure with a reinforced concrete slab) for the proposed structure replacement. The City concurs with the recommendation and approves the BCR for a submission to IDOT.

F. Next Steps

ERA to submit the BCR to IDOT

ERA to begin work on proposed hydraulic model, PBDHR and TS&L

ERA to begin work on ESR and WIE

Attachments
Item 68 – Deck Geometry Rating Criteria

ITEM DESCRIPTION

The overall rating for deck geometry includes two evaluations:

(a) The curb-to-curb or face-to-face of rail bridge width using Table 2A, B, C or D,

and

(b) The minimum vertical clearance over the bridge roadway using Table 2E.

The lower of the codes obtained from these tables is used.

The curb-to-curb or face-to-face of rail dimension is taken from Bridge Roadway Width (Item 51). Minimum Vertical Clearance Over Bridge Roadway (Item53A/B) is used to evaluate the vertical clearance.

The values provided in the tables are for rating purposes only. Current design standards must be used for structure design or rehabilitation.

History is retained for this item based on each Inspection Date (Item 90). Daily calculated values are not retained.

CODING INSTRUCTIONS

DO NOT ENTER

Table 2A & 2B. Rating by Comparison of ADT (Item 29) and Bridge Roadway Width (Item 51)

Table 2A							Table 2B	
Deck Geometry Code	Bridge Roadway Width 2 Lanes, 2-Way Traffic; Also 1 Lane Bridges Not Designated as Ramps (Key Route Appurtenance not "4")						Bridge Roadway Width 1 Lane, 2-Way Traffic	
	AADT						AADT	
	0 - 100	101 - 400	401 - 1000	1001 - 2000	2001 - 5000	> 5000	0 - 100	> 100
9	> 32	> 36	> 40	> 44	---	---	---	---
8	= 32	= 36	= 40	= 44	> 44	---	> 15'-11"	---
7	>= 28	>= 32	>= 36	>= 40	= 44	> 44	>= 15	---
6	>= 24	>= 28	>= 30	>= 34	>= 40	= 44	>= 14	---
5	>= 20	>= 24	>= 26	>= 28	>= 34	>= 38	>= 13	---
4	>= 18	>= 20	>= 22	>= 24	>= 28	>= 32*	>= 12	---
3	>= 16	>= 18	>= 20	>= 22	>= 26	>= 30**	>= 11	>= 15'-11"
2	< 16	< 18	< 20	< 22	< 26	< 30**	< 11	>= 15'-11"
0	Bridge Closed							

* Use 28 as the Bridge Roadway Width for structures longer than 200 feet.
** Use 26 as the Bridge Roadway Width for structures longer than 200 feet.

NOTES:

- Use the lower appraisal code for values between those listed in the table
- Dimensions are in feet
- For 3 or more undivided lanes of 2-way traffic, use Table 2C, “Other Multilane Divided Facilities”
- Use Table 2A, not Table 2B, for code 9 and for codes 8 through 4 inclusive when the AADT > 100 – Single lane bridges less than 16 feet wide carrying 2-way traffic are always appraised at 3 or below if they carry more than an AADT of 100

Table 2C & 2D. Rating by Comparison of Number of Lanes (Item 28) and Bridge Roadway Width (Item 51)

Table 2C					Table 2D	
Deck Geometry Code	Bridge Roadway Width 2 or More Lanes Each Direction				Bridge Roadway Width 1-Way Traffic	
	Interstate and Other Divided Freeways		Other Multilane Divided Facilities		Ramps Only	
	2 Lanes	3 or More Lanes	2 Lanes	3 or More Lanes	1 Lane	2 or More Lanes
9	> 42	> 12N+24	> 42	> 12N+18	> 26	> 12N+12
8	= 42	= 12N+24	= 42	= 12N+18	= 26	= 12N+12
7	>= 40	>= 12N+20	>= 38	>= 12N+15	>= 24	>= 12N+10
6	>= 38	>= 12N+16	>= 36	>= 12N+12	>= 22	>= 12N+8
5	>= 36	>= 12N+14	>= 33	>= 11N+10	>= 20	>= 12N+6
4	>= 34 (29)*	>= 11N+12 (11N+7)*	>= 30	>= 11N+6	>= 18	>= 12N+4
3	>= 33 (28)*	>= 11N+11 (11N+6)*	>= 27	>= 11N+5	>= 16	>= 12N+2
2	< 33 (28)*	>= 11N+11 (11N+6)*	< 27	< 11N+5	< 16	< 12N+2
0	Bridge Closed					

* Use value in parentheses for bridges longer than 200 feet.

NOTES:

- Use the lower appraisal code for values between those listed in the table
- Dimensions are in feet
- Use Table 2C, “Other Multilane Divided Facilities”, for 3 or more undivided lanes of 2-way traffic
- N = Number of Lanes of Traffic

Table 2E. Rating by Comparison of Minimum Vertical Clearance over Bridge Roadway (Item 53) and Functional Classification (Item 26)

Table 2E			
Deck Geometry Code	Minimum Vertical Clearance		
	Functional Classification for Route On Structure		
	Interstate and Other Freeway (FC = 1 & 2)	Other Principal and Minor Arterials (FC = 2, 3, 4)	Major and Minor Collectors and Locals (FC = 5, 6, 7)
	All Routes - Except as Noted for Urban Areas		
9	> 17'-0"	> 16'-6"	> 16'-6"
8	= 17'-0"	= 16'-6"	= 16'-6"
7	>= 16'-9"	>= 15'-6"	>= 15'-6"
6	>= 16'-6"	>= 14'-6"	>= 14'-6"
5	>= 15'-9"	>= 14'-3"	>= 14'-3"
4	>= 15'-0"	>= 14'-0"	>= 14'-0"
3	Vertical clearance less than value in rating code of 4 and requiring corrective action. (See Item 75A)		
2	Vertical clearance less than value in rating code of 4 and requiring replacement. (See Item 75A)		
0	Bridge Closed		

NOTE: Use the lower appraisal code for values between those listed in the table

ENGINEERING RESOURCE ASSOCIATES

November 12, 2021 at 10:00AM

87th Street over Springbrook Creek
City of Naperville TED Group
Section No. 19-00174-00-BR
Coordination Meeting with Forest Preserve District of DuPage County

AGENDA

A. Introduction of Team Members

B. Discussion of Bridge and Roadway Improvements

C. Review of preliminary cross sections

D. Discussion of impacts to the Forest Preserve

WARRENVILLE
3S701 WEST AVENUE, SUITE 150
WARRENVILLE, IL 60555
P 630.393.3060

CHICAGO
10 SOUTH RIVERSIDE PLAZA, SUITE 875
CHICAGO, IL 60606
P 312.474.7841

CHAMPAIGN
2416 GALEN DRIVE
CHAMPAIGN, IL 61821
P 217.351.6268

WWW.ERACONSULTANTS.COM

PROJECT: 87th Street over Springbrook Creek
SUBJECT: Coordination Meeting with Forest Preserve District of DuPage County
DATE: November 12th, 2021
LOCATION: Virtual Zoom Conference Call
FROM: Kristina Kolodziejczyk, ERA

ATTENDEES:

Name	Entity	Phone
Brock Lovelace	Forest Preserve District of DuPage County (FPDDC)	630-933-7234
Philip Tartaglia	City of Naperville	630-305-5203
Andy Hynes	City of Naperville	630-548-2958
Melissa Lange	Engineering Resource Associates (ERA)	630-393-3060
Natalia Mikolajczyk	Engineering Resource Associates (ERA)	630-393-3060
Erin Pande	Engineering Resource Associates (ERA)	630-393-3060
Kristina Kolodziejczyk	Engineering Resource Associates (ERA)	630-393-3060

MEETING MINUTES

A. Introductions

B. Discussion of Bridge and Roadway Improvements

The existing bridge consists of two-span PPC Deck Beam bridge with clear roadway width of 25'-0", which includes (2) 12-ft lanes. The bridge is scheduled for replacement since the PPC Deck beams are deteriorated and substructure has some significant scour. Additionally, the bridge is also a hydraulic restriction. The existing ROW from centerline of roadway north to the Forest Preserve Property is a constant 33-ft throughout the project limits.

The preferred cross section consists of a 39'-0" clear roadway width across the structure, which includes (2) 12-ft through lanes, (1) 11-ft left turn lane and (2) 2-ft gutters to tie into the B-6.24 CC&G. Improvements also include a sidewalk on the southside extending west past Springbrook Drive and tying into the existing sidewalk to the east. The roadway is being raised to provide a minimum of 1'-0" of clearance above the 30-year design storm. A variance will be obtained from IDOT for the freeboard requirement since the design cannot accommodate the 3'-0" of freeboard within the floodplain limits. There is no history of the roadway overtopping in the project vicinity.

The proposed streambed cross sections at the bridge provides a natural creek bottom with a low flow channel sloping up towards a flat embankment, which will convey higher storms. The creek bottom then slopes up again to the abutments. This was done to match the existing conditions with the two-span structure. ERA is aware that the Forest Preserve has mapped critical wetlands upstream of the bridge. The channel cross sections were established so there would not be any impacts to the upstream wetlands.

Since the bridge is being raised to meet the hydraulic clearance, ERA is proposing retaining walls along the north side east and west of the structure to limit fill in the floodplain and minimize impacts to

wetlands and the FPDDC property, which is an Illinois Natural Areas Inventory (INAI) site and Illinois Nature Preserve Commission (INPC) site.

The project is currently scheduled for construction during the Summer of 2024.

C. Review of Preliminary Cross Sections

ERA walked through the preliminary cross sections for the project.

Existing ROW

FPDDC noted their GIS maps show their property line starting ~18-ft north of the existing bridge face. ERA noted this is consistent with what is shown in the project plans. FPDDC also noted there are utility easements on their property at this location that are excluded from the limits of the INAI and INPC site per GIS maps. FPDDC will forward ROW documentation for their property to ERA.

Compensatory Storage

The project is required to provide compensatory storage at a ratio of 1.5:1 for DuPage County. The current, preliminary design grades up to the existing ROW and provides less than the required storage volume.

D. Discussion of Impacts to the Forest Preserve Property

The proposed design impacts to the FPDDC property due to the roadway profile raise through use of retaining walls.

Entrance Adjacent to FPDDC Property

On the north side of the roadway at the intersection of 87th Street with Springbrook Drive there is an existing aggregate driveway used by USGS for access to a stream gauge attached to the bridge. ERA has begun coordination with USGS for the project and will confirm the frequency of staff's use of the driveway. FPDDC will confirm if their staff use this driveway. The proposed design replaces the driveway at its current location within the existing ROW, however, the proposed slope (~15%) is steeper than the maximum allowable slope of 8% per IDOT standards.

FPDDC suggested moving the location of the proposed driveway farther west to meet the slope requirements. FPDDC's preference is to keep the driveway within the existing ROW and eliminate the need to extend onto FPDDC property.

Wetlands

The proposed design will not impact the mapped, critical wetlands north of the bridge on FPDDC property. Minor impacts are anticipated at the bridge within existing ROW.

ERA noted wetland impacts in DuPage County (north of the roadway) likely need to be double mitigated. DuPage County does not permit banking outside of the County limits and there are no USACE approved banks within the County, therefore, fee-in-lieu of mitigation will likely also be required.

FPDDC noted they do not have a preference on the location of a wetland mitigation bank should it be required for the project.

ROW Request on FPDDC Property

ERA requests approximately a 10-foot easement throughout the project limits on FPDDC property to flatten the driveway slope and provide drainage ditches adjacent to the retaining walls for compensatory storage.

Design Considerations

FPDDC indicated their Natural Resource staff will likely suggest the use of material for streambed establishment (large boulders with fines) in place of riprap at the creek to provide a natural streambed. ERA noted this design element could be incorporated into the proposed design but would need to be sized to withstand the significant scour issues occurring at the structure. Riprap or articulated block will likely be required at the abutments as scour countermeasures.

FPDDC noted temporary easements are provided on their property at a cost of $26,000/acre and any tree removals will also incur a removal fee per tree.

Section 4(f) Report

A report will be prepared if temporary easements are obtained on FPDDC property. ERA will prepare the report for City review and approval prior to sending to FPDDC for concurrence. A public review and comment period would follow concurrence from FPDDC.

E. Next Steps

a) FPDDC to forward ROW documentation for their property to ERA
b) ERA and FPDDC to confirm the frequency of FPDDC and USGS staff use of the north driveway
c) ERA to replace proposed riprap with streambed material for establishment
d) ERA to prepare a Section 4(f) report if temporary easements are required on FPDDC property

ENGINEERING RESOURCE ASSOCIATES

November 24, 2021 at 1:30 PM

87th Street over Springbrook Creek
City of Naperville TED Group
Section No. 19-00174-00-BR
Pre-Application with DuPage County and USACE

AGENDA

A. ERA PowerPoint discussion of Bridge and Roadway Improvements

B. Discussion of permit review and jurisdiction

C. Next Steps

to the north and Will County to the south. Additionally, the project is bordered by the Springbrook Prairie Forest Preserve owned by the Forest Preserve District of DuPage County (FPDDC). This property is also considered an Illinois Natural Area Inventory (INAI) site and Illinois Nature Preserve Commission (INPC) site. Along the southern project border is residential homes and Springbrook Parkway owned by Naperville Park District (NPD).

87th St. is a Major Collector with a current ADT (2019) of 8,350 supporting 2-12-ft lanes. The existing bridge (SN 099-3399) consists of two-span PPC Deck Beam bridge with clear roadway width of 25'-0", which includes (2) 12-ft lanes. The bridge is scheduled for replacement since the bridge was constructed in 1961 and has outlived its service life, the structure is functionally obsolete and there are significant scour issues at the abutments. The PPC deck beams are also deteriorated with minor section loss of the beams. The existing structure has as sufficiency rating of 47.7 Additionally, the bridge is also a hydraulic restriction.

The proposed structure (SN 099-6758) was designed for a future ADT (2050) of 11,500 supporting 2-12-ft. lanes, 1-11-ft. turn lane serving Springbrook Drive and an on-structure sidewalk. The bridge consists of a single-span, PCC I-Girder superstructure on a 5 degree skew and supported on spill-thru concrete abutments and steel piles. A natural streambed and low-flow channel for the 2-year design storm will be provided through the limits of the new structure. Stage construction will be utilized to maintain one lane of traffic for emergency vehicles. Improvements also include a 5-ft. sidewalk on the southside of the roadway extending west past Springbrook Drive and tying into the existing sidewalk to the east. Additionally, the roadway profile will be raised and retaining walls will be used to limit additional roadway embankment, floodplain and floodway fill, and minimize impact to the FPDDC and NPD properties.

The project is currently at the end of Phase I engineering and is scheduled for construction during the Summer of 2023.

Wetlands & Waters

The National Wetlands Inventory map shows Freshwater Emergent Wetland and Riverine located north and south of the roadway. Per the DuPage County wetland map, Critical Wetlands are located north of the roadway within DuPage County. ERA performed a delineation during the growing months of 2021, which has not yet been confirmed by DuPage County.

ERA anticipates the project will fall under Regional Permit #3 or Nationwide Permit #14 if permitted after 3/18/2022. A DuPage County Stormwater Management Permit will also be required. Additionally, reviews by Kane-DuPage SWCD and Will-South Cook SWCD are anticipated. ERA will be obtaining clearances from IDNR and USDWS through IDOT biological clearances generated from the Environmental Survey Request (ESR).

Mitigation Ratios

USACE, IDOT and Will County require impacts to be mitigated at a ratio of 1.5:1 in a USACE certified bank. DuPage County requires impacts be mitigated at a ratio of 3:1 for Critical Wetlands in a USACE certified bank within DuPage County. Because there are no certified USACE banks within DuPage County, the project will likely need to double mitigate (pay DuPage County fee-in-lieu of costs and pay for wetlands credits in a USACE bank).

Floodplain & Floodway

Because the project sits on the county line, there are two FEMA flood maps for this location. The upstream/northern side in DuPage County is in Zone AE with a designated floodway. The downstream/southern side in Will County is in Zone A with no designated floodway. The floodplain is

ENGINEERING RESOURCE ASSOCIATES

PROJECT: 87th Street over Springbrook Creek; Section No. 19-00174-00-BR
SUBJECT: Pre-Application with DuPage County and USACE
DATE: November 24th, 2021
LOCATION: Virtual Zoom Conference Call
FROM: Kristina Kolodziejczyk, ERA

ATTENDEES:

Name	Entity	Phone
Clayton Heffter	DuPage County	
Dan Jay	Will-South Cook SWCD	
Pat McPartlan	Kane-DuPage SWCD	
Brielle Cummings	USACE – Section 404	312-846-5545
Philip Tartaglia	City of Naperville	630-305-5203
Yifang Lu	City of Naperville	
Andy Hynes	City of Naperville	630-548-2958
Melissa Lange	Engineering Resource Associates (ERA)	630-393-3060
Natalia Mikolajczyk	Engineering Resource Associates (ERA)	630-393-3060
Erin Pande	Engineering Resource Associates (ERA)	630-393-3060
Kristina Kolodziejczyk	Engineering Resource Associates (ERA)	630-393-3060

MEETING MINUTES

A. Introductions

B. PowerPoint Presentation & Discussion of Bridge and Roadway Improvements

The project anticipates coordination with the following stakeholders, agencies and utilities:

- City of Naperville
- Naperville Township
- Wheatland Township
- City of Naperville Fire Department
- Naperville Park District (NPD)
- Illinois Department of Transportation (IDOT) District 1
- IDOT Bureau of Bridges and Structures
- DuPage County DOT
- Illinois Department of Natural Resources (IDNR)
- Will County
- DuPage County
- Kane DuPage Soil & Water Conservation District (KDSWCD)
- Will South Cook Soil & Water Conservation District (WSCSWCD)
- Forest Preserve District of DuPage County (FPDDC)
- The United States Army Corps of Engineers – Chicago District
- Property owners
- Identified utility companies
- Federal Emergency Management Agency (FEMA)
- US Fish & Wildlife

Overview

The project is located 2.2 miles east of the intersection of Route 59 and 87th Street. The bridge carries 87th St. over Springbrook Creek in the City of Naperville. The City of Naperville has present jurisdiction and maintenance of the structure. The county line passes through 87th St. with DuPage County located

about 350-ft wide at the bridge. There are no sensitive flood receptors below the 100-yr existing water surface elevation in the backwater of the bridge.

Historical Observations

There is a USGS stream gage on the upstream face of the bridge and a gage house just west of the bridge which is about 12-ft away from the guardrail. This gage has recorded data from 1993 to present times and has shown the most significant flood events occurred in 96', 13', and 17' when the creek overtopped the roadway. ERA has already begun coordination with USGS regarding possible conflicts during construction.

Significant scour was observed at both existing abutments exposing the steel piles. In the west span there is also a large sedimentation buildup.

Regulatory & Modified Existing Models

ERA obtained the paper copy of the regulatory HEC-2 model from FEMA in May of 2021. The limits of the model are from the downstream end of 87th Street Bridge to Ogden Ave. on to the north. The elevations in the HEC-2 model were converted from NGVD29 to NAVD88, and the discharges, boundary conditions, and Manning's "n" values from the regulatory model were used to create a 1D Modified Existing Model in HEC-RAS. The Modified Existing Model was also developed using site specific topography (survey data) merged with County LiDAR data from 2017 in NAVD 88.

Proposed HEC-RAS Model

Because the project is federally funded, IDOT BLRS manual requirements were used to determine the design storm and clearance requirements. Based on the ADT of the roadway, 1-ft of clearance over the 30-yr design storm is required with 3-ft of freeboard within the floodplain limits. Per IDOT requirements, clearance is required measured from the natural design water surface elevation to the lowest beam elevation on the bridge. Freeboard is measured from the proposed design storm water surface elevation to the lowest edge of pavement elevation within the floodplain.

The ***existing*** structure provides 0-ft of clearance calculated from the ***30-yr natural design storm water surface elevation (WSE)*** to the ***lowest existing beam elevation***. The existing freeboard is 0.6-ft calculated from the ***30-yr existing design storm WSE*** to the ***lowest existing pavement elevation*** within the floodplain.

The ***proposed*** structure will provide 1.1-ft. of clearance calculated from the ***30-yr natural design storm WSE*** to the ***lowest proposed beam elevation***. The proposed freeboard is 1.6-ft. calculated from the ***30-yr proposed design storm WSE*** to the ***lowest proposed pavement elevation*** within the floodplain.

A variance will be obtained from IDOT for the freeboard requirement since the design cannot accommodate the 3'-0" of freeboard requirement within the floodplain limits.

Water Surface Elevations & Velocities

A comparison of the existing and proposed HEC-RAS model outputs show there is a decrease in water surface elevation between the two models and no change in water surface elevation downstream of the bridge. There is a slight increase in velocity between existing and proposed, however, these velocities are all below 8 ft/s which means they are non-erosive and resistance to erosion in vegetated areas. The proposed design will incorporate scour counter measures at the bridge.

Roadway Profile

The preliminary proposed roadway profile for 87th St. was designed to accommodate a minimum of 1-ft. of clearance from the design storm at the bridge. At the highest point of the profile, the road will

be raised approximately 3.8-ft. An increased profile raise beyond what is proposed to accommodate the 3-ft. freeboard requirement is not feasible because of the following reasons:

- A significant amount of additional fill volume in the floodway and buffer would be required to house the roadway embankment, which would also require additional compensatory storage per FEMA and IDNR-OWR requirements.
- Additional ROW acquisition would be required, which would negatively affect the Springbrook Prairie Forest Preserve, Illinois Natural Inventory Area (INAI), and Illinois Nature Preserve Commission (INPC).
- It would negatively affect upstream water surface elevations and the protected environmental area with the increased roadway overtopping elevation.
- Additional intersection modifications would be required at the 87th St. intersection with Springbrook Drive and Ridge Road.

Compensatory Storage

Per DuPage County requirements, compensatory storage north of centerline of the roadway will be provided at a ratio of 1.5:1 incrementally between the 0-10-yr and 10-100-yr frequency elevations. Per Will County requirements, compensatory storage south of centerline of the roadway will be provided at a ratio of 1.25:1 incrementally between the 0-10-yr and 10-100-yr frequency elevations. Compensatory storage within the floodway will also be provided at a ratio of 1:1 per IDNR-OWR requirements.

C. Discussion of Permit Review & Jurisdiction

Wetlands/Waters Permitting

DuPage County confirmed ERA's presentation has accurately outlined permitting requirements for the project within the County limits. USACE confirmed the project should be submitted under the Nationwide Permit if submitted after 3/18/2022.

Floodplain/Floodway Permitting

DuPage County agreed with ERA's presentation of permitting requirements, but noted the compensatory storage must be provided at a ratio of 1.5:1 overall within the County, but can be provided at 1:1 incrementally between the 0-10-yr or 10-100-yr flood frequency, if required.

ERA noted the velocities will increase slightly upstream of the bridge, however, the water surface elevations will decrease upstream of the bridge. DuPage County requested an FPDDC signoff be included in the permit submittal noting their approval of the increased velocities on their property.

ERA noted a separate coordination meeting with IDNR-OWR will be initiated to determine if their review will be delegated to DuPage County.

SWCD Review

Will-South Cook and Kane-DuPage SWCD staff indicated a single review by one agency will be required. SWCD staff will notify ERA and USACE which agency will conduct the review.

D. Next Steps

a) SWCD to notify ERA and USACE which agency will conduct the review during Phase II
b) ERA to initiate coordination meeting with IDNR-OWR

Attachments:

ERA PowerPoint Presentation – 87th St. Bridge Over Springbrook Creek

Illinois Department of Transportation

Memorandum

To:	George Tapas	Attn: William Raffensperger
From:	Jack Elston	By: Brad Koldehoff
Subject:	Cultural Resources - No Historic Properties Affected Clearance	
Date:	February 18, 2022	

DuPage, Will County
FAU 1556, 87th Street
City of Naperville
Sec. 19-00174-00-BR
Seq. 24314

For the above referenced undertaking, IDOT's qualified Cultural Resources staff hereby make a **"No Historic Properties Affected"** finding pursuant to Section 106 of the National Historic Preservation Act.

This finding concludes the Section 106 process in accordance with the stipulations of the Programmatic Agreement Regarding Section 106 Implementation for Federal-Aid Transportation Projects in the State of Illinois, executed March 6, 2018 by FHWA, Illinois SHPO, IDOT and the Advisory Council on Historic Preservation.

No further cultural resources coordination is required for this undertaking, unless design modifications or new information indicate that historic properties may be affected. After coordination with Local Roads any potential site impacts have been avoided. However, if archaeological sites cannot be avoided, then, additional coordination with my office is required.

Brad H. Koldehoff
Cultural Resources Unit Chief
Bureau of Design & Environment

BK:ses

EXHIBIT C-5 AGENDA & MEETING MINUTES

NPD COORDINATION MEETING (X/X/2022)

(PLACEHOLDER – TO BE INSERTED UPON COMPLETION)

EXHIBIT C-6 TRANSMITTAL – SECTION 4(F) REPORT TO NPD

(PLACEHOLDER – TO BE INSERTED UPON COMPLETION)

EXHIBIT C-7 TRANSMITTAL – SECTION 4(F) PUBLIC COMMENTS TO NPD

(PLACEHOLDER – TO BE INSERTED UPON COMPLETION)

EXHIBIT C-8 OWJ LETTER OF CONCURRENCE- NPD (X/X/2022)

(PLACEHOLDER - TO BE INSERTED UPON RECEIPT)

ENGINEERING RESOURCE ASSOCIATES

APPENDIX D – PUBLIC INVOLVEMENT

Exhibit D-1 Advertisement for Public Review & Comment Period

Exhibit D-2 Summary of Public Comments

EXHIBIT D-1 ADVERTISEMENT FOR PUBLIC REVIEW AND COMMENT PERIOD

(PLACEHOLDER – TO BE INSERTED UPON RECEIPT)

EXHIBIT D-2 SUMMARY OF PUBLIC COMMENTS

(PLACEHOLDER – TO BE INSERTED UPON RECEIPT)

APPENDIX E – PHOTOGRAPHS

Exhibit E-1 Photographs of Section 4(f) Resources

Section 4(f): Naperville Park District Site Photographs

Photograph 1: Looking north at the south face of the bridge

Photograph 2: SE bridge corner looking at southern ROW and Naperville Park District land