

BIOLOGICAL STUDIES TRACKING FORM

NEPA Project Manager	Kirsten McCullough / Erin Faulkner
State or Local Government Project	State
USFWS TAILS #	02EKOK00-2019-SLI-1945
Original IPaC List	10/7/2020
Email used to request IpaC official species list	Biologist@garverusa.com
Last Updated Species List Date	Click here to enter a date.
ROW	2022
Let Date	2027
90 Day Prior to Let IPaC List	Click here to enter a date.
Duration expected	Click here to enter text.
Original Biological Assessment and Waters and Wetlands Report Prepared By:	Garver
Most Recent Field Date:	10/1/2020
Original Report Date:	11/6/2020
USFWS Consultation Submittal:	2/11/2021
USFWS Concurrence:	2/12/2021
Original Tracking Form Prepared by:	Elizabeth Nichols
Original Tracking Form date:	2/12/2021
Update Reason	Click here to enter text.
Updated By Whom:	Click here to enter text.
Amended USFWS Consultation Submittal:	Click here to enter a date.
Amended USFWS Concurrence:	Click here to enter a date.
Tracking Form Updated By Whom:	Click here to enter text.
Tracking Form Updated Date:	Click here to enter a date.
<i>ADD MORE LINES AS NEEDED FOR EACH TIME PROJECT IS UPDATED</i>	

Form Date: November 2020

Project Name from Oracle

I-44/US-75 Interchange Reconstruction From I-244 Through Arkansas River

Project Description

Grade, Drain, Surface and Bridge

Check if any of the following is expected as part of the proposed action

- Work within the OHWM is expected
- Project is OFF-SET alignment
- Project is NEW alignment
- Project involves **NO OFF EXISTING PAVEMENT** work
- Project requires new ROW (permanent &/or temporary)

2. FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Species	Listing Status	IPaC	Effect Determination for IPaC listed species
		Check if Yes	
Red-cockaded Woodpecker	Endangered	<input type="checkbox"/>	Choose an item.
Whooping Crane	Endangered	<input type="checkbox"/>	Choose an item.
Gray Bat	Endangered	<input type="checkbox"/>	Choose an item.
Indiana Bat	Endangered	<input type="checkbox"/>	Choose an item.
Ozark Big-eared Bat	Endangered	<input type="checkbox"/>	Choose an item.
Neosho Mucket	Endangered	<input type="checkbox"/>	Choose an item.
Ouachita Rock Pocketbook	Endangered	<input type="checkbox"/>	Choose an item.
Scaleshell Mussel	Endangered	<input type="checkbox"/>	Choose an item.
Winged Mapleleaf	Endangered	<input type="checkbox"/>	Choose an item.
Harperella	Endangered	<input type="checkbox"/>	Choose an item.
American Burying Beetle	Threatened	<input checked="" type="checkbox"/>	Final Effect Analysis and Determination covered in the BO for the final 4(d) rule
Eastern Black Rail	Threatened	<input type="checkbox"/>	Choose an item.
Piping Plover	Threatened	<input checked="" type="checkbox"/>	May Affect, Not likely to adversely affect
Red Knot	Threatened	<input checked="" type="checkbox"/>	No Effect
Northern Long-eared Bat	Threatened	<input checked="" type="checkbox"/>	Final Effect Analysis and Determination covered in the BO for the final 4(d) rule
Arkansas River Shiner	Threatened	<input type="checkbox"/>	Choose an item.
Leopard Darter	Threatened	<input type="checkbox"/>	Choose an item.
Neosho Madtom	Threatened	<input type="checkbox"/>	Choose an item.
Ozark Cavefish	Threatened	<input type="checkbox"/>	Choose an item.
American Alligator	Threatened	<input type="checkbox"/>	Choose an item.
Rabbitsfoot Mussel	Threatened	<input type="checkbox"/>	Choose an item.
Rattlesnake-master Borer Moth	Candidate	<input type="checkbox"/>	Choose an item.
Whooping Crane Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Arkansas River Shiner Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Leopard Darter Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Neosho Mucket Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Rabbitsfoot Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.

	NEPA Footprint	Construction Footprint
Number of acres within the NEPA Study Footprint & Construction Footprint (if known)	350.5	Click here to enter text.
Number of acres of perennial plant vegetation (ABB habitat) within the NEPA Footprint & Construction Footprint (if known)	82.9	Click here to enter text.
Number of acres of forested/wooded area (Ibat and NLEB habitat) within the NEPA Footprint & Construction Footprint (if known)	74.1	Click here to enter text.

ABB Conservation Lands adjacent	NO
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Bald Eagle Assessment	May impact
Migratory Bird Assessment of Transportation Structures	Migratory birds found nesting on transportation structures
Migratory bird habitat assessment	nesting habitat for migratory birds will be impacted
Birds of Conservation Concern	Listed BCC may be impacted
Interior Least Tern (MBTA)	Known nests will be impacted

<u>Species (choose those that apply)</u>	<u>Seasonal Restriction Period</u>
Bats	April 1 – November 15
Bald Eagle	September 16 – May 31
Migratory Birds: Swallows and Phoebes (NESTS PRESENT)	March 1 – August 31
Migratory Birds: Interior Least Tern	May 1 – August 31

Conservation Commitments

ODOT Commitment: A representative from ODOT Natural Resources Program will need to attend all project development meetings, including the pre-work meeting for the project. It will be the responsibility of the Environmental Project Manager to notify the ODOT Natural Resources Program of any such meetings. All operators, employees, and contractors will be made aware of all environmental commitments, including the following Plan Notes.

ABB Commitment: Minimize habitat loss by reducing the amount of ground disturbance of suitable ABB habitat within the construction footprint to only what is necessary for project construction and document in the monitoring reports to the Service. Following construction, areas of ground disturbance outside of the safety clear zone will be revegetated with native plant species where applicable and practicable. Areas where revegetation with native plant species is not practicable will be revegetated with more traditional plantings such as solid slab sodding.

Tree Removal Minimization Commitment: In order to avoid and minimize adverse impacts to Birds of Conservation Concern and listed bat species, the removal of trees and shrubs shall be restricted to areas within the actual limits of construction, and all aspects of the project (e.g temporary work areas, alignments) will be modified to avoid tree removal, if possible, during the design of the project. Tree removal will be limited to that specified in the project plans provided to contractors.

Species Plan Notes

Non-Compliance: Failure to implement the commitments specified in the Plan Notes can result in non-compliance issues on the project. Work activities may be suspended on the project, for an undetermined duration, while working with regulators to bring the project back into compliance. The contractor will not be compensated for time lost.

Water Quality Conservation: Appropriate Best Management Practices to minimize impacts from storm water discharges and sedimentation in streams, as established by the Oklahoma Department of Environmental Quality, shall be conscientiously implemented throughout the proposed construction periods, in order to minimize any potential impacts to any listed species. The effectiveness of erosion controls shall be maintained for the duration of construction activities. Hazardous materials, chemicals, fuels, lubricating oils, and other such substances shall be stored at least 100 feet outside of the ordinary high water mark (OHWM). Refueling of construction equipment shall also be conducted at least 100 feet from the OHWMs. Sediment and erosion controls shall be installed around staging areas to prohibit discharge of materials from these sites. Construction waste materials and debris shall be stockpiled at

least 25 feet outside of the OHWMs, and these materials shall be removed and disposed of properly following completion of the project. Preventative measure must be taken to prohibit the discharge of contaminants into any surface waters.

American Burying Beetle Note: The American Burying Beetle is a large carrion burying beetle that occurs within the project limits. Artificial lighting may be used during construction for night activities if the equipment specifications outlined in Special Provision 656-5(a-b)19 for ABB are adhered to and measures to minimize use of artificial lighting have been implemented. Carcasses and all food trash shall be removed from the permanent and temporary right-of-way throughout the duration of project activities. Pollution Prevention Requirements as specified by the Oklahoma Department of Environmental Quality General Permit OKR10 for Storm Water Discharges shall be implemented when appropriate. Additionally, all equipment will be fueled, and all fuel and motor vehicle oil will not be stored within areas of native vegetation (ie. outside ABB habitat).

Bat Bridge/Culvert Seasonal Restriction Note: The northern long-eared bat is a listed bat species that occurs within the project's action area. In order to avoid and minimize adverse impacts to listed bat species, bridge/culvert repair, retrofit, maintenance, rehabilitation or demolition shall be permitted only between November 16, and March 31 (when bats are hibernating in caves). If bridge/culvert repair, retrofit, maintenance, rehabilitation or demolition during the active season (between April 1, and November 15) cannot be avoided, the Resident Engineer shall contact the ODOT Biologist to schedule a visual bat bridge inspection, prior to any bridge work. Inspection surveys can only be conducted between May 15, and August 15. If the inspection finds that bats are using the structures, all bridge/culvert repair, retrofit, maintenance, rehabilitation or demolition shall only be permitted between November 16, and March 31 (when bats are hibernating in caves).

Bald Eagle Note: The Bald Eagle nesting season in Oklahoma extends from September 16, through May 31. A Bald Eagle survey was completed for this project in **November 2020**. No nests were observed within the expected impact area. Survey results are valid only for the nesting season in which the survey was performed. If construction activities have begun, but are not completed by September 16, 2021 the Resident Engineer shall contact the ODOT Biologist. The ODOT Biologist shall schedule any additional surveys that may be required as soon as leaves fall off the trees (approximately November 1). Because no nests were observed during the initial survey, and it can take a pair of eagles one to three months to construct a new nest, if construction activities have begun before October 31, 2021 they may continue while additional nest search surveys are conducted after leaf-off. If construction activities have not begun by October 31, 2021 a new nest survey shall be completed by the ODOT Biologist before construction activities can begin. Nest search surveys can only be conducted when leaves are not on the trees typically between December 1st and February 28th. If nests are observed, up to a 660 foot no-work buffer shall be placed around the nest. The exact distance of the buffer zone shall be established by the ODOT Biologist in consultation with US Fish and Wildlife Services. If the buffer cannot be maintained, all clearing, external construction and landscaping activities within the buffer shall be conducted between June 1 and September 15 (outside the nesting season).

Interior Least Tern Note: Interior Least Terns are protected by the federal Migratory Bird Treaty Act. Interior Least Terns are known to nest within and downstream of the Arkansas River adjacent to the project area. The Resident Engineer shall contact the ODOT Biologist to schedule a pre-construction nesting survey during the month of June; surveys are valid for that nesting season only. If construction activities will occur during the active nesting season for this species (May 1 through August 31), a 0.25 mile no-work-zone buffer from the Ordinary High Water Mark of the Arkansas River will be established until the nesting survey can be completed. If the survey finds Interior Least Terns nesting in the area, all work within 0.25 miles of any nesting colonies will be postponed until after September 1 (the end of nesting season) and be completed by April 30, the following year.

Migratory Bird Note: Migratory birds are protected by the federal Migratory Bird Treaty Act. Many birds commonly use bridges and culverts for nesting. The nesting season for most migratory bird species extends from March 1 to August 31. Migratory bird nesting use of the I-44 Arkansas River bridges (NBI:20326 and 20580), US-75 Cherry Creek bridge (NBI:18005), US-75 bridges over W.46th St. (NBI:18254 and 18255), US-75 bridges over W 49th St. (NBI:18267 and 18268), US-75 NB Moose Creek & Skelly Dr. bridge (NBI:15831), US-75 NB Off Ramp over Mooser Creek and Skelly Dr (NBI: 15838), US-75 SB Off Ramp over Mooser Creek and Skelly Dr (NBI:15843) and the S. Olympia Ave Mooser Creek bridge (NBI:11970) was observed. Painting, repair, retrofit, rehabilitation or demolition of the existing bridges and culverts shall be conducted between September 1, and February 28, when migratory bird nests are not occupied. If painting, repair, retrofit, rehabilitation or demolition cannot be completed between September 1 and February 28, the bridges and culverts shall be protected from new nest establishment prior to March 1, by means that do not result in bird death or injury. Options include the exclusion of adult birds from suitable nest sites on or within a structure by the placement of weather-resistant polypropylene netting with 0.25-inch or smaller openings, prior to March 1. Methods other than netting must be pre-approved by the ODOT Biologist.

Although no nests were observed on many of the other structures, and many were not able to be inspected, migratory birds may occupy the structures at any time. The Resident Engineer shall contact the ODOT Biologist if any bird use of these structures is observed. If birds are observed then painting, repair, retrofit, rehabilitation or demolition of the existing bridges and culverts shall be conducted between September 1, and February 28 (when migratory bird nests are not occupied).

Waters and Wetlands Delineation Status

Original delineation

Wetlands and Ponds

Total Number of Sites	Water Body Type	Potential Jurisdiction Status	Acres within the NEPA Footprint
6	Herbaceous Wetland	Likely Jurisdictional	0.69
2	Herbaceous Wetland	Unlikely Jurisdictional	0.26
1	Scrub Shrub Wetland	Likely Jurisdictional	0.01
Total Wetlands			0.96
1	Pond	Unlikely Jurisdictional	0.11

Streams and Drainages

Total Number of sites	Water body name	USGS Designation	Potential Jurisdictional Status	Acres within the NEPA Footprint	Liner Feet within the NEPA Footprint
1	Arkansas River	mapped perennial	Likely Jurisdictional	7.13	388
1	Cherry Creek	mapped perennial	Likely Jurisdictional	0.38	505
1	Mooser Creek	mapped perennial	Likely Jurisdictional	0.77	1,630
Total Likely Jurisdictional				8.28	2,523
5	Tributaries to Mooser Creek	unmapped ephemeral drainages	Likely Jurisdictional	0.091	764
1	Tributary to Cherry Creek	unmapped ephemeral drainages	Likely Jurisdictional	0.01	73

Nichols, Elizabeth

From: Kreisler, Skye E <skye_kreisler@fws.gov>
Sent: Friday, February 12, 2021 1:40 PM
To: Nichols, Elizabeth
Cc: Amber McIntyre; Goins, Cassandra M
Subject: Re: [EXTERNAL] 02EKOK00-2019-SLI-1945_20210211_ODOT Tulsa JP 33788(08)(09)(10)(11)
Consultation Review Package Submittal

Code: 02EKOK00-2019-I-1945

Hello Liz,

The Service has reviewed the consultation package for Oklahoma Department of Transportation's project: **Tulsa JP 33788 (08)(09)(10)(11)** - (project) I-44/US-75 interchange reconstruction.

Based on the information provided, you have determined that the project may affect, and is not likely to adversely affect the federally-listed **piping plover** (*Charadrius melodus*). The Service agrees with that determination. Potential impacts to the **American burying beetle** (*Nicrophorus americanus*) have been addressed using the biological opinion on the 4(d) rule pertaining to that species, and the Service asks that the conservation measures as articulated in the assessment, and in conjunction with the guidelines set forth by the Federal Highway Administration, be implemented and maintained. This concludes the section 7(a)(2) consultation pursuant to the Endangered Species Act of 1973 (Act; 87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) pertaining to the piping plover and the Beetle.

Potential impacts to the federally-listed **northern long-eared bat** (*Myotis septentrionalis*) have been addressed using the biological opinion on the 4(d) rule pertaining to that species, and a response was generated which is valid for one calendar year from the date on that letter. New requests for this letter must be submitted to remain valid within the project's action periods, which as described, has multiple let dates and start dates.

You have further determined that the project will have no effect to the federally-listed **red knot** (*Calidris canutus rufa*). While the **least tern** (*Sterna antillarum*) was delisted under the Act effective February 12, 2021 (86 FR 2564), the Service asks that ODOT implement and maintain appropriate measures in conjunction with guidance set forth by the Federal Highway Administration pertaining to this migratory bird species and other migratory birds.

The online project review response letter signed by the Field Supervisor is now valid, and this project may proceed accordingly. The Service asks that, within 90 days prior to construction, a new species list be obtained to see if any changes have occurred. If changes have occurred, please check with the Field Office to determine if further consultation is needed. If you have any questions, please contact the Oklahoma Ecological Services Field Office.

Sincerely,

Skye Kreisler
Fish and Wildlife Biologist

U.S. Fish and Wildlife Service
Oklahoma Ecological Services Field Office
9014 E 21st Street
Tulsa, OK 74129

(571) 242-7104 Mobile

cc: Kasey Goins, Student Conservation Association Intern - U. S. Fish and Wildlife Service, Oklahoma Ecological Services Field Office

From: Nichols, Elizabeth <elizabeth.nichols@ou.edu>

Sent: Thursday, February 11, 2021 6:04:45 PM

To: OK Project Review, FWS <OKProjectReview@fws.gov>

Cc: Amber McIntyre <amcintyre@odot.org>

Subject: [EXTERNAL] 02EKOK00-2019-SLI-1945_20210211_ODOT Tulsa JP 33788(08)(09)(10(11) Consultation Review Package Submittal

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Elizabeth Nichols
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Oklahoma Department of Transportation
Oklahoma Biological Survey
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August 2015



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Division of Ecological Services
9014 East 21st Street
Tulsa, Oklahoma 74129
918/581-7458 / (FAX) 918/581-7467



Online Project Review Concurrence Letter

To:

Project Name:

'Eqpuwncvkqp'Eqf g<

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Oklahoma Ecological Services Field Office (ESFO) online project review process. By providing this letter in conjunction with your complete project review package, you are certifying that you have accurately completed the online project review process for the referenced project in accordance with all instructions provided, using the best available information to reach your conclusions. Concurrence with “not likely to adversely affect” determinations does not provide any exemption for violations of section 9 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA) or “take” of federally-listed species. The Federal action agency is ultimately responsible for ensuring compliance with the ESA and any take that occurs due to your proposed action would be considered a violation under section 9 of the ESA.

This letter and the enclosed project review package complete the review of your project in accordance with the ESA. This letter also provides information for your project review under the National Environmental Policy Act (National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C.4321-4347, 83 Stat. 852), as amended.

A copy of this letter and the project review package must be emailed to **okprojectreview@fws.gov** for this certification to be valid. This letter and the project review package will be maintained in Service records. **Please allow the Oklahoma ESFO 45 days to review your information. If the Oklahoma ESFO determines that the package is not complete, or that additional coordination is necessary, we will contact your office. If, after 45 days from the date of your email submittal of your project review package, the Oklahoma ESFO has not contacted your office, consider your section 7 consultation complete.**

The proposed action consists of:

Project start and completion dates:

Federal agency or federal program providing a permit, funding, grant, authorization, loan, etc. associated with the proposed project and how that agency is associated with your project:

Federal Agency/Program Point of contact (Name, phone, and email address):

The species conclusions table in the enclosed project review package summarizes your ESA conclusions. These conclusions resulted in “not likely to adversely affect/modify” determinations for listed species and critical habitat in relation to potential effects of your proposed project. We certify that the use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with determinations of “not likely to adversely affect” for listed species and critical habitat reached by proper use of this process. For projects where this particular determination is reached, additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages efforts to avoid or minimize adverse impacts to them from project effects. Some federal agencies have standing policies that grant limited protections to candidate species. Conservation of candidate species now may preclude future needs to federally list them as endangered or threatened, at which point their legal protection would become required. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of listed species or critical habitat becomes available, this determination may be reconsidered. You should re-visit the Service's Information, Planning, and Conservation (IPaC) website at <http://ecos/fws.gov/ipac/> within 90 days of project initiation to ensure species information is correct. If new species or critical habitat is identified, this letter is no longer valid and a new project package should be submitted to the Oklahoma ESFO.

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Oklahoma is available at our website: <<http://www.fws.gov/southwest/es/oklahoma/>>. If you have any questions, please call 918-581-7458 or send an email message to OKProjectReview@fws.gov.

Sincerely,
/s/ Jonna Polk
Field Supervisor
Oklahoma Ecological Services Field Office

Enclosures:

- 1) ENTIRE PROJECT REVIEW
PACKAGE: Species Conclusion Table
IPaC Species List and Action Area map
This letter (Online Concurrence Letter)
(Optional) Additional maps
- 2) Other relevant project data/documents

Determination Key to the American Burying Beetle 4(d) Rule for Federal and Non-Federal Activities

This key will help you determine if your proposed project is excepted from prohibited take of the American burying beetle (ABB), as defined in the 4(d) rule under the Endangered Species Act (Act)(50 CFR 17.47(d), Federal Register Citation 85 FR 65241). If so, you will receive a certification letter from the U.S. Fish and Wildlife Service (Service) indicating that you have followed the Service’s ABB 4(d) key process and that your proposed project is excepted from take prohibitions.

This is an interim key for your use until an online key is available through the Information for Planning and Consultation (IPaC) system. The ABB 4(d) rule provides protections and exceptions for the ABB only. To assess potential impacts to other federally-protected species, please continue the local Ecological Services Field Office process for consultation and technical assistance, which should include the use of IPaC.

Select one: Federal Agency/Federal Nexus No Federal Nexus

Project Name: _____

If this is a federal agency project, or if the project has a federal nexus, fill out federal agency information below:

Federal Agency Name: _____

Point of Contact: _____

Phone # _____ Email _____

If you are a non-federal entity, fill out the information below. This includes non-federal entities that are acting as the delegated authority for a federal agency. If you are the delegated authority, provide federal agency contact information above, as well.

Company Name: _____

Point of Contact: _____

Phone # _____ Email _____

Please follow the steps below and check all appropriate boxes:

Step A - Did the results of your IPaC resource list include the American burying beetle?

Yes – your project is within the *Area of Influence* of the American burying beetle.
Continue to Step B.

No – your project is outside of the species current *Area of Influence*. The Action will have “No Effect” on the ABB. No concurrence or permit from the Service required. Document the IPaC species list in your files. No further consultation with the Service related to the ABB is necessary.

Step B - Will your activity *purposefully take* ABB? For example, are you capturing ABBs for research?

Yes - my activity includes purposefully taking ABBs.

- Intentional take is not excepted under the 4(d) rule. Research that involves handling ABBs does require a permit; if you are conducting research that includes capturing and handling ABBs, you should contact the U.S. Fish and Wildlife Service to apply for a permit.
- Other *purposeful take* (see Definitions below) of ABBs is prohibited. You should contact the U.S. Fish and Wildlife Service for more information. Please contact the Service’s Ecological Services Field Office located nearest the project. Office contact information is provided at the end of this key.

No - my activity does not include purposefully taking of ABBs.
Continue to Step C.

Step C - Is the *action area* of your proposed project wholly located within one of the following Analysis Areas (see map at end of this document).

Yes:

- Southern Plains Analysis Area – Continue to Step D
- Northern Plains Analysis Area – Continue to Step E
- New England Analysis Area – Continue to Step F

No or uncertain (if your project is near the boundary and you are uncertain if the action area is wholly within one of the above Analysis Areas, select this option.

Please contact the closest U.S. Fish and Wildlife Service Ecological Services Field Office for further guidance. Office contact information is provided at the end of this key.

Step D - If you have reached this Step, you have determined that your action area is located wholly within the Southern Plains analysis areas. To narrow your project down further, please answer the following question:

Is the action area wholly located outside of *Conservation Lands* as identified in the 4(d) rule. See map and definitions at end of this document.

Yes - Incidental take (see Definitions below) of ABBs is excepted from prohibitions by the final 4(d) rule in Southern Plains analysis areas outside defined Conservation Areas.

The Action is consistent with activities analyzed in the Service's Programmatic Biological Opinion for the 4(d) rule. The Action may affect the American burying beetle; however, any take that may occur as a result of the Action is not prohibited under the Act, Section 4(d) rule adopted for this species at 50 CFR 17.47(d), Federal Register Citation 85 FR 65241.

****Please fill out the Questionnaire at the end of this key and submit this completed form to the nearest U.S. Fish and Wildlife Service Ecological Services Field Office. The subject line in your email should read "ABB 4d Key Letter Request" ****

The Service will respond by providing you a certification letter indicating that you have followed the Service's ABB 4(d) key process and that your proposed project is excepted from take prohibitions.

No or uncertain - all or portions of the Action Area are, or may be, within a defined Conservation Land.

Based on its location within a defined Conservation Land, incidental take from the proposed project may not be excepted under the 4(d) Rule. Please contact the closest U.S. Fish and Wildlife Service Ecological Services Field Office for further guidance. Office contact information is provided at the end of this key.

Step E - If you have reached this step, you have determined that your action area is wholly located within the Northern Plains analysis areas. To narrow your project down further, please answer the following question(s):

Is your proposed action considered wildlife management conducted by Federal or State government agencies?

Yes - the proposed action is wildlife management conducted by Federal or State government agencies?

The Action is consistent with activities analyzed in the Service's Programmatic Biological Opinion for the 4(d) rule. The Action may affect the American burying

beetle; however, any take that may occur as a result of the Action is not prohibited under the Act, Section 4(d) rule adopted for this species at 50 CFR 17.47(d), Federal Register Citation 85 FR 65241.

**Please fill out the Questionnaire at the end of this key and submit this completed form to the nearest U.S. Fish and Wildlife Service Ecological Services Field Office. The subject line in your email should read “ABB 4d Key Letter Request” **

The Service will respond by providing you a certification letter indicating that you have followed the Service’s ABB 4(d) key process and that your proposed project is excepted from take prohibitions.

No - Continue to Step F

Step F - **If you have reached this step, you have determined that your action area is wholly located within either the Northern Plains or New England analysis areas. To narrow your project down further, please answer the following question(s):**

Does your proposed action meet either following criteria:

- Is the proposed action considered to be normal ranching and grazing activities?
See definitions.

-OR-

- Is the action being led by an employee or agent of the Service or of a State conservation agency that is operating a conservation program pursuant to the terms of a cooperative agreement with the Service in accordance with section 6(c) of the ESA, who is designated by his or her agency for such purposes, may, when acting in the course of his or her official duties, take American burying beetles, provided that, for State conservation agencies, the American burying beetle is covered by an approved cooperative agreement to carry out conservation programs?

Yes - **the action meets one of the two criteria outlines above.**

The Action is consistent with activities analyzed in the Service’s Programmatic Biological Opinion for the 4(d) rule. The Action may affect the American burying beetle; however, any take that may occur as a result of the Action is not prohibited under the Act, Section 4(d) rule adopted for this species at 50 CFR 17.47(d), Federal Register Citation 85 FR 65241.

**Please fill out the Questionnaire at the end of this key and submit this completed form to the nearest U.S. Fish and Wildlife Service Ecological Services Field Office. The subject line in your email should read “ABB 4d Key Letter Request” **

The Service will respond by providing you a certification letter indicating that you have followed the Service's ABB 4(d) key process and that your proposed project is excepted from take prohibitions.

No - the action does not meet either of the criteria above – Continue to Step G

Step G - If you have reached this step, any incidental take that may occur as a result of your project is not excepted by the 4(d) rule. The following question will help to determine if any take associated with your project would be identified as prohibited take, in accordance with the 4(d) rule.

Will the action include soil disturbance of suitable ABB habitat, including but not limited to the use of vehicles or heavy equipment, vegetation removal, use of herbicides, pesticides, other hazardous chemicals that may impact soil or vegetation or otherwise impact ABB habitat?

Yes – Any Incidental take from the proposed project is prohibited take and based on your answers in Steps A-F is not excepted under the 4(d) Rule. Please contact the closest U.S. Fish and Wildlife Service Ecological Services Field Office for further guidance. Office contact information is provided at the end of this key.

No - Any incidental take associated with your proposed project is not prohibited:

The Action is consistent with activities analyzed in the Service's Programmatic Biological Opinion for the 4(d) rule. The Action may affect the American burying beetle; however, any take that may occur as a result of the Action is not prohibited under the Act, Section 4(d) rule adopted for this species at 50 CFR 17.47(d), Federal Register Citation 85 FR 65241.

****Please fill out the Questionnaire at the end of this key and submit this completed form to the nearest U.S. Fish and Wildlife Service Ecological Services Field Office. ****

The Service will respond by providing you a certification letter indicating that you have followed the Service's ABB 4(d) key process and that your proposed project is excepted from take prohibitions.

QUESTIONNAIRE - American Burying Beetle 4(d) Key

1. Please select the activity that best matches your proposed action.

Soil disturbance related to urban expansion or construction of structures

Soil disturbance related to agricultural conversion of ABB habitat to cropland

Soil disturbance related to grazing and ranching practices

Soil disturbance related to prescribed fire

Soil disturbance related to forestry practices

Wind Industry development and turbine operation

Soil disturbance related to oil and gas development

Soil disturbance related to road construction and maintenance

Soil disturbance related to transmission line construction and maintenance

Soil disturbance related to water line infrastructure construction and maintenance

Soil disturbance related to communication infrastructure construction and maintenance

Soil disturbance related to wildlife management.

Other activities with soil disturbance - briefly describe below

2. Estimate the total acres of suitable American burying beetle habitat that may be affected by your proposed project.

Ecological Services Field Office Contact Information

Arkansas Ecological Services Field Office

110 S. Amity Road
Suite 300
Conway, AR 72032
Phone: 501-513 4470
Fax: 501-513 4480

Kansas Ecological Services Field Office

2609 Anderson Avenue
Manhattan, Kansas 66502
Telephone: 785-539-3474
Fax: 785-539-8567

Nebraska Ecological Services Field Office:

9325 South Alda Road
Wood River, NE 68883
Fax:(308) 384-8835
Phone: (308) 382-6468
Email: NebraskaES@fws.gov ← **SEND REQUESTS HERE**

New England Ecological Services Field Office

70 Commercial St., Suite 300
Concord, NH 03301
Phone: (603) 223-2541
Fax: (603) 223-0104

Oklahoma Ecological Services Office

9014 E 21st Street
Tulsa, OK 74129
Phone: 918-581-7458
Email: OKProjectReview@fws.gov ← **SEND REQUESTS HERE**
<http://www.fws.gov/southwest/es/Oklahoma/>

South Dakota Ecological Services Field Office

420 S. Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone (605) 224-8693
FAX 605-224-9974
Email: southdakotafieldoffice@fws.gov

DEFINITIONS - American Burying Beetle 4(d) Key

“Area of Influence” is the area within which any project should consider potential effects to the listed species. The Area of Influence typically encompassed larger areas than simply where the species is known to exist. For example, aquatic species may occur in only one small section of a stream, but work upstream of that area, or within the watershed could result in effects to where the species is located, thus impacting the listed species. Those effects warrant consideration under Section 7 of the Act.

“Conservation Lands” We define “conservation lands” in the Southern Plains analysis areas as lands included within the existing boundaries of Fort Chaffee in Arkansas (approximately 64,000 acres), and McAlester Army Ammunition Plant (approximately 45,000 acres) in Oklahoma, and Camp Gruber/Cherokee Wildlife Management Area (approximately 64,000 acres) in Oklahoma. These areas have defined boundaries and management that is compatible with recovery for the American burying beetle.

“Incidental take” is defined by the Endangered Species Act as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." For example, plowing firebreaks for prescribed burns can kill ABBs in the soil, but the purpose of the activity is not to kill ABBs.

“Ranching and grazing” means activities involved in grazing livestock (e.g., cattle, bison, horse, sheep, goats, or other grazing animals) such as: gathering of livestock; construction and maintenance of fences associated with livestock grazing; installation and maintenance of corrals, loading chutes, and other livestock working facilities; development and maintenance of livestock watering facilities; placement of supplements such as salt blocks for grazing livestock; and, when associated with livestock grazing, the control of noxious weeds, haying, mowing, and prescribed burning. Ranching and grazing does not include any form of farming, conversion of grassland to cropland, or management of cropland.

"Soil disturbance" Soil disturbance means movement or alteration of soil associated with modifying the existing land use. Soil disturbance includes actions such as grading, filling, soil excavating or topsoil stripping. Soil disturbance also includes non-physical alterations such as chemical treatment, including ground or soil sterilizers, and pesticides that would make the habitat unsuitable.

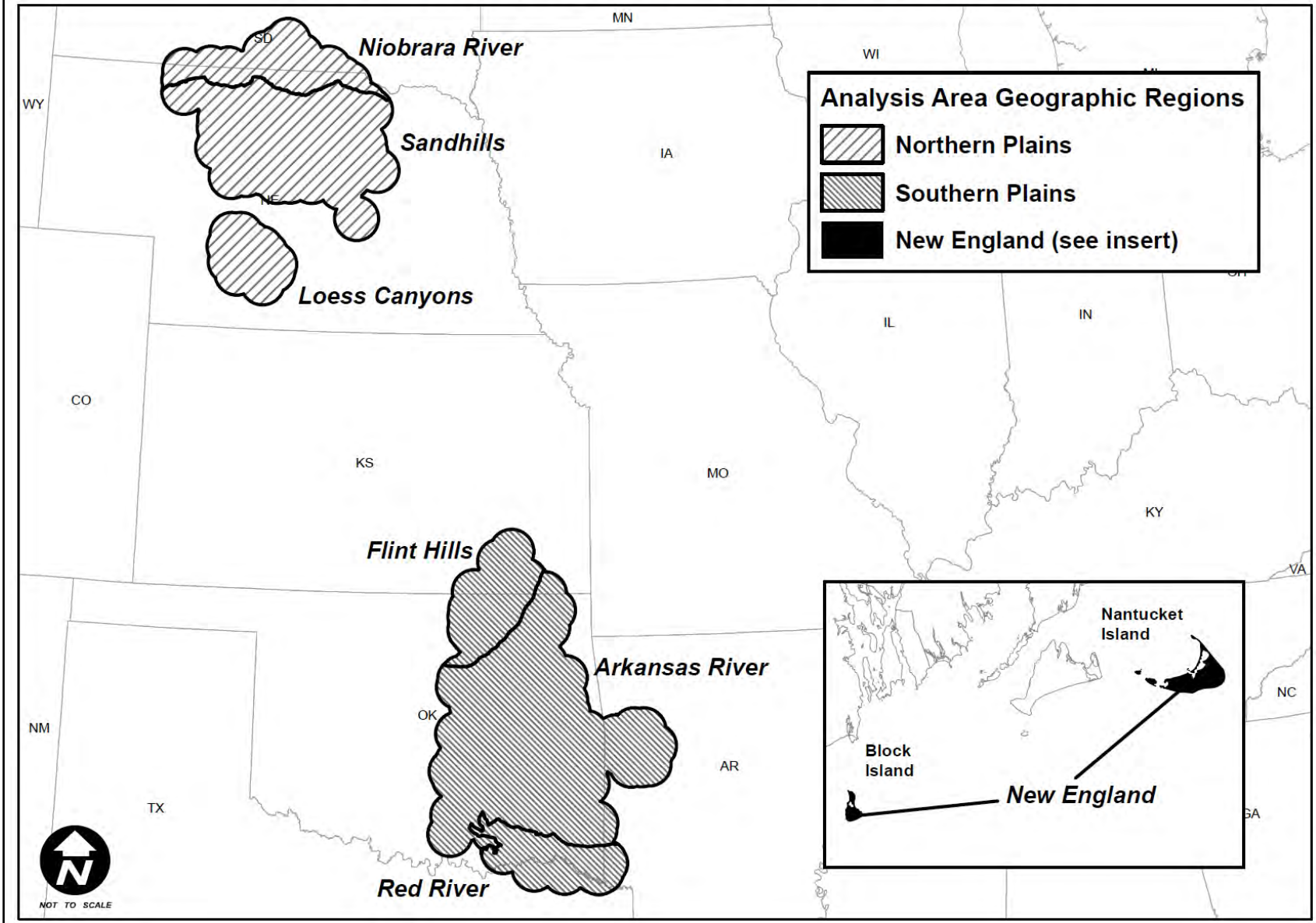
“Suitable Habitat” While the ABB uses a wide variety of habitats, the Service currently believes that areas exhibiting the following characteristics will not be of conservation value to ABBs and will not be credited as mitigation, except as possible buffer credits described below under the *Crediting Method* section. Areas exhibiting these characteristics should be excluded from mitigation lands because they are considered *unfavorable* for use by ABBs based on disturbance regime, vegetation structure, unsuitable soil conditions, and carrion availability:

1. Land that is tilled on a regular basis, planted in monoculture, and does not contain native vegetation.
2. Pasture or grassland that has been maintained through frequent mowing, grazing, or herbicide application at a height of 20 cm (8 inches) or less.
3. Land that has already been developed and no longer exhibits topsoil, leaf litter, or vegetation.
4. Urban areas with maintained lawns, paved surfaces, or roadways.
5. Stockpiled soil without vegetation.
6. Wetlands or permanent waterbodies with standing water or saturated soils. Areas adjacent to wetlands and/or riparian areas are not considered unfavorable for the ABB, as they may be important for ABBs seeking moist soils during dry conditions.

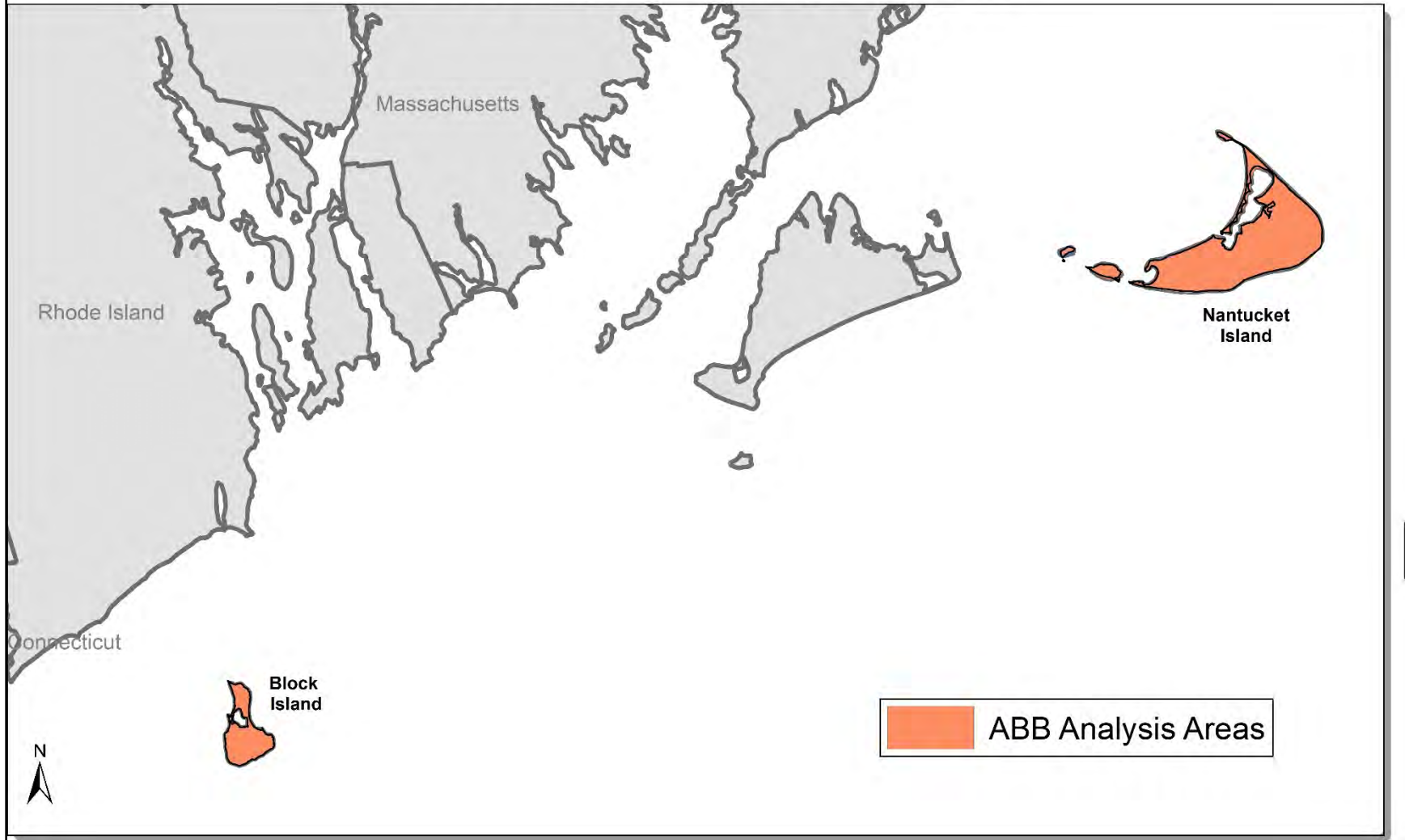
“Take” is defined by the Act as ‘to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect’ any endangered species. Purposeful take is when the reason for the activity or action is to conduct some form of take. For instance, conducting a research project that includes collecting and handling ABBs is a form of purposeful take. Intentionally killing or harming ABBs is also purposeful take and is prohibited.

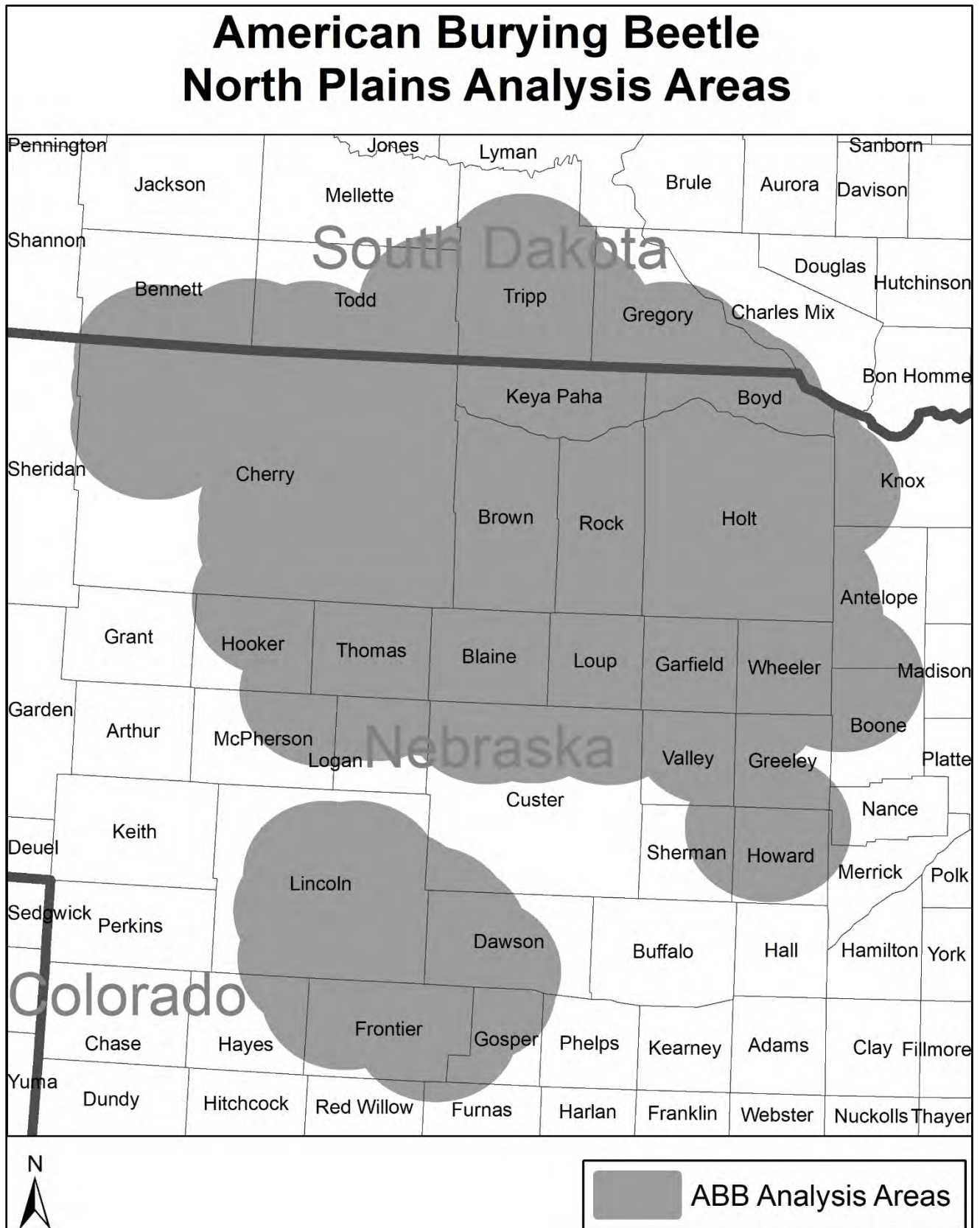
Additional information regarding ABB biology and habitat can be found on the OKESFO webpages at: http://www.fws.gov/southwest/es/Oklahoma/ABB_Add_Info.htm.

American Burying Beetle SSA Analysis Areas

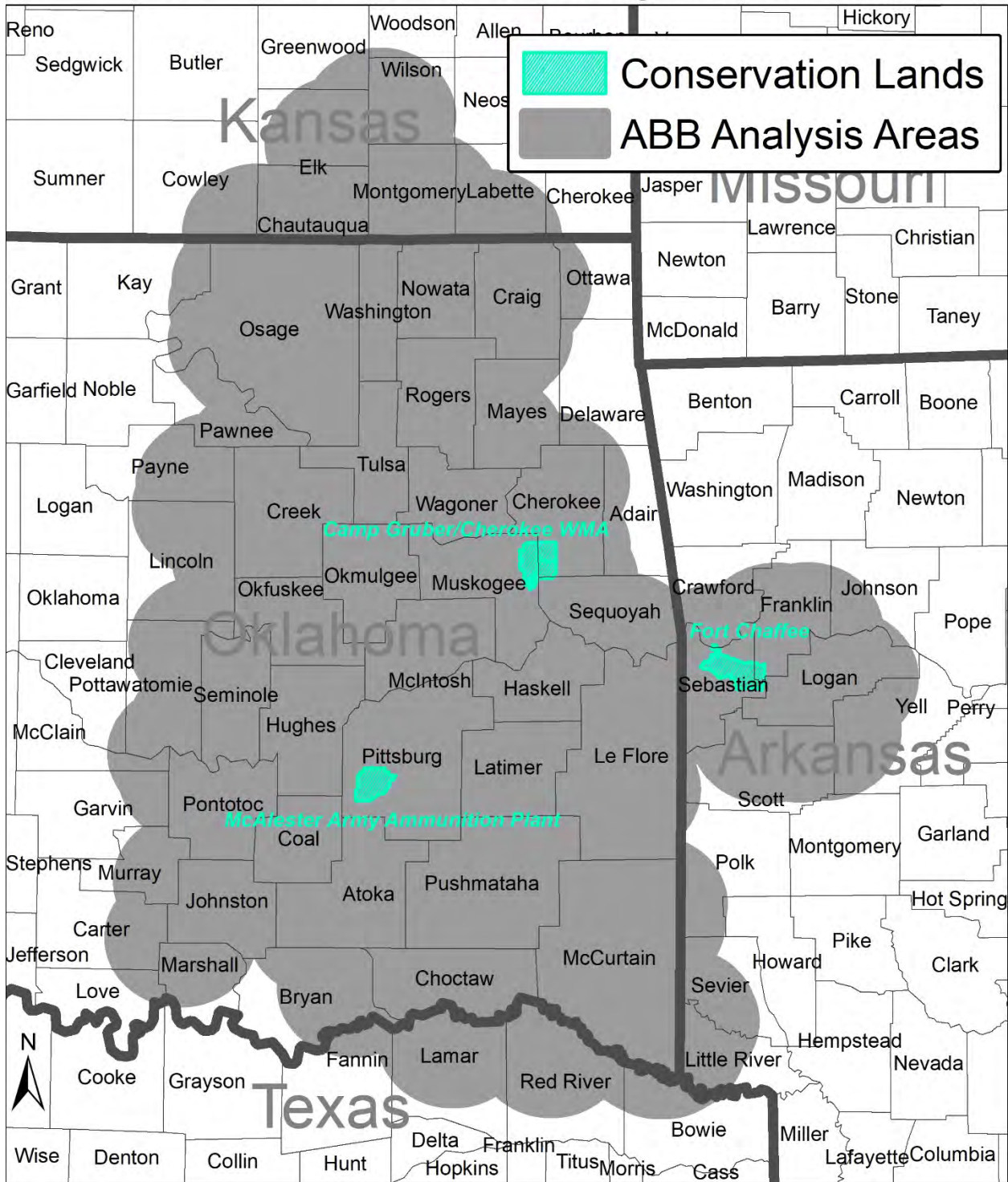


American Burying Beetle New England Analysis Areas





American Burying Beetle Southern Plains Analysis Areas





United States Department of the Interior



FISH AND WILDLIFE SERVICE
Oklahoma Ecological Services Field Office
9014 East 21st Street
Tulsa, OK 74129-1428
Phone: (918) 581-7458 Fax: (918) 581-7467
<http://www.fws.gov/southwest/es/Oklahoma/>

In Reply Refer To:

February 11, 2021

Consultation code: 02EKOK00-2019-TA-1945

Event Code: 02EKOK00-2021-E-02250

Project Name: JP 32728(04) 33788(04)(08)(09)(10) I-44/US-75 Interchange with I-44 Corridor Ultimate Reconstruction

Subject: Verification letter for the 'JP 32728(04) 33788(04)(08)(09)(10) I-44/US-75 Interchange with I-44 Corridor Ultimate Reconstruction' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Elizabeth Nichols:

The U.S. Fish and Wildlife Service (Service) received on February 11, 2021 your effects determination for the 'JP 32728(04) 33788(04)(08)(09)(10) I-44/US-75 Interchange with I-44 Corridor Ultimate Reconstruction' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"^[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not

completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- American Burying Beetle *Nicrophorus americanus* Threatened
- Piping Plover *Charadrius melodus* Threatened
- Red Knot *Calidris canutus rufa* Threatened

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

JP 32728(04) 33788(04)(08)(09)(10) I-44/US-75 Interchange with I-44 Corridor Ultimate Reconstruction

2. Description

The following description was provided for the project 'JP 32728(04) 33788(04)(08)(09)(10) I-44/US-75 Interchange with I-44 Corridor Ultimate Reconstruction':

The existing US-75 roadway has two 12-foot driving lanes in each direction (four lanes total) divided with a 30-foot grass median with two four-foot inside shoulders and two 10-foot outside shoulders. The US-75 roadway has an average annual daily traffic (AADT) volume of 76,555 vehicles per day (vpd), with a future projected AADT of 90,429 vpd. The current and future traffic volumes on US-75 require additional driving lanes to provide an adequate and safe level of service (LOS). There are several vertical curves in the corridor that do not meet design standards and do not allow for adequate sight distance for vehicles to reduce speed at critical moments.

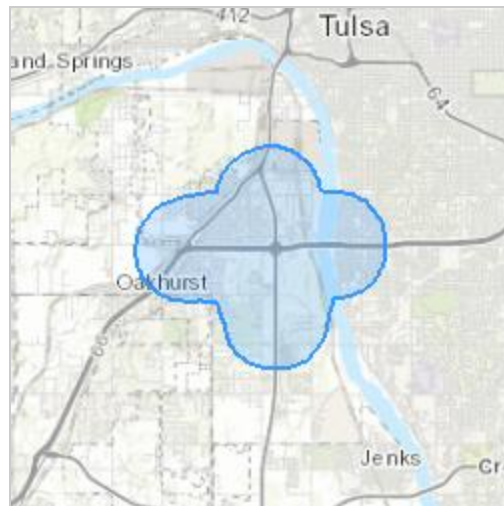
The existing I-44 roadway has two 12-foot driving lanes in each direction (four lanes total) divided with a 30-foot grass median with two four-foot inside shoulders and two 10-foot outside shoulders. This portion of I-44 has a high accident rate, the latest 10-year average number being 4 times the statewide average for similar highways. Rear end collisions account for almost half of the accidents, which is indicative of congested conditions. The I-44 roadway has an AADT of 89,922 vpd, with a future projected AADT of 100,660 vpd. In the I-44 corridor the current and future traffic volumes also require addition driving lanes to provide an adequate and safe LOS. There are 19 existing bridges throughout the corridor study area, including the interchange ramps at US-75. The decks, substructures and superstructures of all bridges have relatively low condition ratings, some with deficient horizontal and vertical curves, and six of the bridges are rated either structurally deficient or functionally obsolete. The purpose of the project is to accommodate existing and future growth and traffic demand, decrease congestion, and improve access and mobility.

The proposed improvement along US-75 will be reconstructing the mainline beginning at the full width pavement section approximately 3,000 feet north of W. 71st Street, extending north through the I-44 interchange 2.0 miles with four 12-foot-wide concrete driving lanes in each direction (eight lanes total) on the existing alignment, widening to the inside with concrete median barrier and 13-foot-wide inside shoulders and 12-foot-wide outside shoulders. Initially, US-75 will be striped for 3 lanes in each direction until such time as the remainder of the corridor is widened to 8 lanes. The US-75 interchange with W. 61st Street will be

modified, and a frontage road will be constructed with two 12-foot driving lanes on the east side of US-75 extending north from W. 61st Street approximately .85-mile intersecting with W. Skelly Drive.

The proposed improvement along I-44 will be to reconstruct the mainline beginning at the junction of I-244, extending east through the US-75 interchange approximately 2.85 miles to just east of the Arkansas River, with three 12-foot-wide concrete driving lanes in each direction (six lanes total) on the existing alignment, widening to the inside with concrete median barrier and 13-foot-wide inside shoulders and 12-foot-wide outside shoulders. In addition, 12-foot wide auxiliary lanes will be constructed on each highway to provide exit or entry lanes to and from interchange ramps. W. Skelly Drive will be reconstructed with two 12-foot-wide driving lanes on an offset alignment to the south to accommodate the additional highway width and new ramp configuration. W. 51st Street will be extended east and constructed across US-75 with a new span bridge over, with two 12-foot driving lanes with curb and gutter and will be constructed on a slight offset alignment to the south from Olympia Avenue to Indiana Avenue to better align with intersections.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.08621266199322,-96.01203035251103,14z>



Determination Key Result

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?
Yes
2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")
No
3. Will your activity purposefully **Take** northern long-eared bats?
No
4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?
Automatically answered
No
5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?
No
 7. Will the action involve Tree Removal?
Yes
-

8. Will the action only remove hazardous trees for the protection of human life or property?

No

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

No

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

74.1

2. If known, estimated acres of forest conversion from April 1 to October 31

74.1

3. If known, estimated acres of forest conversion from June 1 to July 31

74.1

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

**ENDANGERED, THREATENED AND CANDIDATE SPECIES, DESIGNATED
CRITICAL HABITAT, BALD EAGLE AND MIGRATORY BIRD ASSESSMENTS**

For

USFWS TAILS #		02EKOK00-2019-SLI-1945			
Email used to request IPaC official species list			Biologist@garverusa.com		
County	Tulsa	JP Number	33788(08) 33788(09) 33788(10) 33788(11)	Project Number	J3-3788(08) J3-3788(09) J3-3788(10) J3-3788(11)
Road Number	I-44 & US-75	Water Body Name		Arkansas River, Mooser Creek, Cherry Creek and Tributaries to Mooser Creek	
ROW Date	2022	Let Date	WP2&5: 2027 WP3&4: unkn	Project Length	3 Miles Along I-44 2.5 Miles Along US-75
Project General Location		I-44 from I-244 to the Arkansas River, including the I-44/US-75 Interchange in Tulsa, OK			
Project Description & Statement From Oracle		I-44/US-75 Interchange Reconstruction From I-244 Through Arkansas River			

Prepared for:
Oklahoma Department of Transportation
Environmental Programs Division
200 NE 21st Street
Oklahoma City, OK 73105

Prepared by:

Biologist Name	Megan Philips-Schaap
Company/Agency Name	Garver
Address	6450 South Lewis
City, State Zip	Tulsa, OK 74136

Report Date:	November 6, 2020
Field Survey Date	May 9 and June 11, 2019 & September 30 and October 1, 2020
Field Survey Biologist(s)	Megan Philips-Schaap & Lacey Stanley

1. PROJECT OVERVIEW

1.1 Federal Nexus

This biological assessment, prepared by the above named Company/Agency for the Oklahoma Department of Transportation (ODOT), addresses the above named project in compliance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended. Section 7 of the ESA requires that, through consultation with the U.S. Fish and Wildlife Service (Service), federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species or result in the destruction or adverse modification of critical habitat. This assessment evaluates the potential effects of the proposed transportation project on species that are federally listed under the ESA. Specific project design elements are identified that avoid or minimize adverse effects of the proposed project on listed species and designated critical habitat.

1.2. Project Description¹

Grade, Drain, Surface and Bridge

Description of the existing bridge/roadway facility and reason for proposed project

The existing I-44 roadway has two 12-foot driving lanes in each direction (four lanes total) divided by a 30-foot grass median with four-foot inside shoulders and 10-foot outside shoulders. The I-44 roadway has a 2020 average annual daily traffic (AADT) of 58,989 vehicles per day (vpd), with a 20-year projected AADT of 77,430 vpd. This portion of I-44 has a high accident rate, the latest 10-year average number being four times the statewide average for similar highways. Rear end collisions account for almost half of the accidents, which is indicative of congested conditions.

The existing US-75 roadway has two 12-foot driving lanes in each direction (four lanes total) divided with a 30-foot grass median with two four-foot inside shoulders and two 10-foot outside shoulders. The US-75 roadway has a 2020 average annual daily traffic (AADT) volume of 76,555 vehicles per day (vpd), with a 20-year projected AADT of 90,429 vpd. The current and future traffic volumes on US-75 require additional driving lanes to provide an adequate and safe level of service.

Skelly Drive parallels I-44 to the south and serves as a frontage road for the I-44 eastbound on/off ramps. Skelly Drive consists of two 13-foot-wide driving lanes with curb and gutter. There are several vertical curves in the corridor that do not meet design standards and do not allow for adequate sight distance for vehicles to reduce speed at critical moments.

South Olympia Ave. parallels I-44 to the north and transitions from a narrow residential road beginning east of the interchange and consisting of roughly two 9-foot concrete driving lanes with no shoulders, transitioning to two 13-foot driving lanes with curb and gutter that acts as a business and I-44 access road crossing under the Arkansas River bridge.

I-44 bridges include: The existing bridges on I-44 over the Arkansas River (NBIs 20580 and 20326, westbound & eastbound respectively) are 55-foot-wide span bridges with a 52-foot-wide clear roadway. The westbound bridge has a sufficiency rating of 85.6 and the eastbound bridge has a sufficiency rating of 83.6; both are rated as not deficient. The existing bridges on I-44 over

¹ Includes I-44/US-75 Interchange Modifications

Tulsa-Sapulpa railroad (NBIs 20294 and 12827, westbound & eastbound respectively) have different roadway geometrics. The westbound bridge is a 55.1-foot-wide span bridge with a 52-foot-wide clear roadway and has a sufficiency rating of 81.6. The eastbound bridge is a 58.3-foot-wide span bridge with a 61-foot-wide clear roadway and has a sufficiency rating of 80.1. Both are rated as not deficient.

US-75 bridges include (south to north): The existing West 61st Street bridge over US-75 (NBI 16564) is a 33-foot wide bridge with a 28-foot wide clear roadway. This bridge has a sufficiency rating of 87.0 and rated not deficient. The existing US-75 northbound bridge over 49th Street (NBI 18267) is a 52.2-foot-wide bridge with a 50.7-foot-wide clear roadway. This bridge has a sufficiency rating of 93.7 and rated not deficient. The existing US-75 southbound bridge over 49th Street (NBI 18268) is a 45.1-foot-wide bridge with a 43.7-foot-wide clear roadway. This bridge has a sufficiency rating of 80.7 and rated functionally obsolete. The existing US-75 northbound bridge over 46th Street (NBI 18254) is a 39.5-foot-wide bridge with a 38-foot-wide clear roadway. This bridge has a sufficiency rating of 97.8 and rated not deficient. The existing southbound bridge over 46th Street (NBI 18255) is a 40-foot-wide steel span bridge with a 38-foot-wide clear roadway. This bridge has a sufficiency rating of 97.8 and rated not deficient.

Ramp bridges include: The existing bridge that carries northbound US-75 to I-44 eastbound ramp over Mooser Creek and Skelly Drive (NBI 15838) is a 25-foot-wide steel span bridge with a 23-foot-wide clear roadway. The bridge has a sufficiency rating of 92.4 and is rated as not deficient. The existing bridge that carries eastbound I-44 to US-75 southbound ramp over Mooser Creek and Skelly Drive (NBI 15843) is a 25-foot-wide bridge with a 23-foot-wide clear roadway. This bridge has a sufficiency rating or 95.7 and rated not deficient.

The purpose of these projects is to improve traffic operations, expand capacity to meet existing and future traffic volumes and thus improve safety, and meet current roadway and bridge design standards.

Description of **proposed** improvements

Reconstruction of the I-44/US-75 interchange includes 5 work packages / projects. Work Package (WP) 1, JP 33788(04), was studied in 2019 and largely focused on the U-75 bridges over I-44 and over Skelly Rd./Mooser Creek, and I-44 widening from the interchange extending to just west of the Tulsa-Sapulpa railroad; it is currently under construction (studies attached). The remainder of the work packages are being studied together in this report. WP 2, JP 33788(08) generally focuses on US-75 from the interchange south. WP 3, JP 33788(09), largely focuses on widening the Arkansas River bridges and Tulsa-Sapulpa railroad bridges, constructing a US-75 frontage road, and extending Skelly Drv. east to meet the I-44 frontage road. WP 4, JP 33788(10) generally focuses on I-44 from I-244 to the US-75 interchange and reconstructing the western portion of Skelly Drv. WP 5, JP 33788(11) generally focuses on US-75 from the interchange north and reconstruction of S. Olympia Ave. and extending it west under the interchange to W. 51st St.. WP 2 and 5 will be constructed concurrently and together include most of the fly-overs and ramp bridges of the interchange.

Work Project 2

The proposed improvements for WP2 included constructing the ultimate US-75 corridor from north of 71st Street extending north to Mooser Creek. The ultimate US-75 mainline will consist of three lanes in each direction (six lanes total) on the existing alignment, widening to the inside

with 12-foot-wide shoulders and a 26-foot wide open section median. In addition, auxiliary lanes will be constructed to provide exit or entry lanes to and from interchange ramps.

A two-way frontage road will be constructed east of US-75 beginning at West 61st Street extending north to the northbound entrance ramp and the Work Package 3 connection. The frontage road will be a two-lane open section with eight-foot shoulders.

The US-75 and West 61st Street Interchange will be reconstructed. The proposed interchange will include three one-way ramps from West 61st Street and one one-way ramp from the new frontage road. The ramps will be one-lane open section with two-foot inside shoulder and eight-foot outside shoulder. West 61st Street will be reconstructed as a five-lane curbed section with buffered bike lanes and sidewalks along both sides at the new interchange. The existing West 61st Street bridge over US-75 (NBI 16564) will be replaced with Bridge W, a 91-foot-wide span bridge on the existing alignment.

Three ramps will be constructed within the I-44 & US-75 Ultimate Interchange.

- Ramp E1 is the WB I-44 to SB US-75 Ramp and Bridge H. Ramp E1 will be two-lane open section with eight-foot shoulders. Bridge H will be constructed as a 47-foot wide flyover ramp bridge.
- Ramp E2 is the WB I-44 to NB US-75 Ramp and Bridge I. Ramp E2 will be two-lane open section with eight-foot shoulders. Bridge I will be constructed as a 32-foot wide ramp bridge.
- Ramp E6 is the EB I-44 to SB US-75 Ramp and Bridge N. Ramp E6 will be one-lane open section with two-foot inside shoulder and eight-foot outside shoulder. Bridge N will be constructed as a 32-foot wide ramp bridge.

Skelly Drive will be reconstructed from Union Avenue east to US-75 as a two-lane curbed section with a sidewalk along the north and south side of Skelly Drive.

Work Project 5

The proposed improvements for WP5 included constructing the ultimate US-75 corridor from north of I-44 extending north to near 41st Street. The ultimate US-75 mainline will consist of three lanes in each direction (six lanes total) on the existing alignment, widening to the inside with concrete median barrier and 13-foot-wide inside shoulders and 12-foot-wide outside shoulders. In addition, auxiliary lanes will be constructed to provide exit or entry lanes to and from interchange ramps.

Four US-75 bridges will be replaced.

- The existing US-75 NB bridge over West 46th Street (NBI No. 18254) will be replaced with Bridge G1, a 74'-5.5" wide span bridge on the existing alignment.
- The existing US-75 SB bridge over West 46th Street (NBI No. 18255) will be replaced with Bridge G2, an 86'-5.5" wide span bridge on the existing alignment.
- The existing US-75 NB bridge over West 49th Street (NBI No. 18267) will be replaced with Bridge J1, a 74'-5.5" wide span bridge on the existing alignment.
- The existing US-75 SB bridge over West 49th Street (NBI No. 18268) will be replaced with Bridge J2, a 125'-4.5" wide span bridge on the existing alignment, which also carries Ramp E4.

Two new US-75 bridges will be constructed.

- Bridge F1, an 82'-6" wide single span bridge, will be constructed on the existing NB alignment over a new crossing of West 51st Street.
- Bridge F2, a 70'-6" wide single span bridge, will be constructed on the existing SB alignment over a new crossing of West 51st Street.

Ramp Z, the US-75 SB entrance ramp from West 41st Street, will be reconstructed as one-lane open section with two-foot inside shoulder and eight-foot outside shoulder.

West 46th Street and West 49th Street will be reconstructed under Bridges G1 and G2 and Bridges J1, J2, and J3, respectively, as a two-lane curbed section with sidewalk shelves along their north and south sides.

West 51st Street will be reconstructed from east of Union Avenue extending east along a new alignment to east of Indian Avenue a two-lane curbed section with a sidewalk along the north side. The connections to West 51st Street will be reconstructed at Olympia Avenue, Maybelle Avenue, Lawton Avenue, Jackson Avenue, and Indian Avenue as a two-lane curbed section with sidewalk shelves along their east and west sides.

Five ramps will be constructed within the I-44 & US-75 Ultimate Interchange as one-lane open section with two-foot inside shoulder and eight-foot outside shoulder.

- Ramp E2 is the WB I-44 to NB US-75 Ramp.
- Ramp E3 is the SB US-75 to EB I-44 Flyover Ramp and Bridge L.
- Ramp E4 is the SB US-75 to WB I-44 Ramp and Bridge M.
- Ramp E5 is the EB I-44 to NB US-75 Loop Ramp.
- Ramp E8 is the NB US-75 to WB I-44 Flyover Ramp and Bridge P.

Two flyover ramp bridges and two ramp bridges will be constructed within the I-44 & US-75 Ultimate Interchange.

- Bridge L will be constructed as a 32'-0"-foot wide flyover ramp bridge.
- Bridge P will be constructed as a 32'-0"-foot wide flyover ramp bridge.
- Bridge J3 will be constructed as a 32'-0"-foot wide ramp bridge.
- Bridge M will be constructed as 32'-0"-foot wide ramp bridge.

The roadways will remain open during construction and traffic will be adjusted utilizing construction phasing and temporary crossovers or pavement widening as needed.

Work Project 3

The proposed improvements associated with Work Package 3 are primarily to the southeast side of the I-44/US-75 interchange. Improvements include widening of I-44 to eight lanes from approximately 2,650 feet east of US-75 to the bridges over the Arkansas River (Bridges T1 and T2). These two bridges are proposed to be widened and will have varying clear roadway widths. Bridge T1 carries westbound traffic and will be widened to a 69-foot clear roadway, widening to 81 feet near the west bank where an additional auxiliary lane to US-75 will be added. Sixteen piers on Bridge T1 will be widened with one or two additional drill shafts and caps. Bridge T2 carries eastbound traffic and will be widened to a 69-foot clear roadway, widening to 81 feet at the west end to accommodate the additional auxiliary lane from US-75. Sixteen piers on Bridge T2 will be widened with one or two additional drilled shafts and caps. In total, 42 additional

drilled shafts, 72 inches in diameter will be constructed. It is estimated that 35 of these will be constructed within the OHWM of the Arkansas River.

A new I-44 Bridge over Tulsa-Sapulpa Union Railroad (Bridge R) will be constructed. Bridges R-1 and R-2 will each carry 4 lanes of traffic and have a 71-foot wide clear roadway.

At the northbound section of US-75 approaching the I-44 interchange, the roadway will widen to six lanes from approximately 2,100 feet south of I-44 to the south end of the bridge over Mooser Creek (Bridge B [WP1]). The ramp connecting northbound US-75 to eastbound I-44 over Mooser Creek and Skelly Drive (Bridge O) will be constructed. Bridge O will carry two lanes of traffic and have a 38-foot wide clear roadway. None of the proposed Bridge O piers will be within the OHWM of Mooser Creek.

Concerning the surrounding supporting roadways, approximately 0.73 mile of Skelly Drive will be realigned and reconstructed, beginning approximately 400 feet west of US-75 and extending east to the Arkansas River, where it curves under I-44 and becomes E. 51st Street on the north side of the interstate. E. 51st Street will be reconstructed from the Arkansas River west to the Tulsa-Sapulpa Railroad. The US-75 Frontage Road is a new alignment roadway that will be constructed on the east side of the highway from approximately 900 feet north of 61st Street to intersection of Skelly Dr. including Bridge U over Mooser Creek. Bridge U is proposed to be a 30-foot long reinforced concrete box (RCB). Retaining walls are anticipated at the Pepsi Plant South of I-44, retaining walls are expected on the east side of US-75 along Turkey Mountain, US-75 Frontage Road and between the northbound US-75 to eastbound I-44 ramp and Skelly Dr, but no sound walls are anticipated. The roadways will remain open during construction and traffic will be adjusted utilizing construction phasing and temporary crossovers or pavement widening as needed.

Work Project 4

The proposed work in WP 4 consist of improvements to I-44 between I-244 and US-75. The proposed improvement along I-44 will be to reconstruct the mainline (beginning east of I-244 junction to just west of Union Ave.) with three 12-foot-wide concrete driving lanes in each direction (six lanes total) on the existing alignment, widening to the inside with concrete median barrier and 13-foot-wide inside shoulders and 12-foot-wide outside shoulders. Service ramps A and C (33rd W. Ave) will be reconstructed to one 19-foot-wide driving lane with curbs on either side. The following service ramps will be reconstructed to one 15-foot-wide driving lane with one shoulder with carrying widths:

- B - eastbound off ramp to 33rd W. Ave.
- D - eastbound off ramp from 33rd W. Ave.
- G-1 - westbound off-ramp from E. 51st St.
- G-2 eastbound off-ramp to E. 51st St.

In addition, approximately 0.80 mile of Skelly Drive will be reconstructed with two 12-foot-wide driving lanes on an offset alignment to the south to accommodate the additional highway width and new ramp configurations. Partial reconstruction of system ramps E-4 (southbound US-75 to westbound I-44) and E-6 (eastbound I-44 to southbound US-75) is proposed to be similar to service ramps B, D, G-1, and G-2. The roadways will remain open during construction and traffic will be adjusted utilizing construction phasing and temporary crossovers or pavement widening as needed.

Check if any of the following is expected as part of the proposed action

- Work within OHWM is expected
- Project is OFF-SET alignment or NEW alignment
- Project involves **NO OFF EXISTING PAVEMENT** work
- Project requires new ROW (permanent &/or temporary)

1.3. Project Area and Setting

Project Location		Environmental Study Footprint		Ecoregion & Game Type	
<u>Section Range & Township</u>	<u>Lat/Long NAD 83)</u>	<u>Dimensions</u>	<u>Acreage</u>	<u>Level IV Ecoregion (Woods et al. 2005)</u>	<u>Game Type (Duck and Fletcher 1943)</u>
S25-S28 and S33-S36, T19N, R12E; S2 and S3, T18N, R12E	North end (180 feet south of the US-75/W. 41 st St. overpass): 36.103802, -96.009269 South end (0.5-mile north of the US-75/W. 71 st St. overpass): 36.068327, -96.006620 East end (west of Riverside Drive): 36.089949, -95.984828 West end (I-244/I-44 interchange): 36.088449, -96.039041	3.0-mile long segment of I-44 ¹ on existing roadway alignment from I-244/I-44 interchange extending east to the Arkansas River, with widths varying from 35 feet to 225 feet from the existing pavement and from 245 feet to 555 feet at intersections (excluding the I-244 interchange). 2.5-mile long segment of US-75 beginning 3,000 feet north of 71 st Street and extending north to approximately 180 feet south of 41 st Street with widths varying from 40 feet to 475 feet from the existing pavement and from 165 feet to 805 feet at intersections (excluding the I-244 interchange).	350.5	Northern Cross Timbers (29a) of the Cross Timbers	Tallgrass Prairie

Action Area:

The Action Area includes the Environmental Study Footprint plus a 1-mile buffer surrounding the Environmental Study Footprint for the Northern Long-eared Bat travel corridor.

2. FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Species Range and Occurrence Evaluation (Check all that apply)

Species	IPaC ¹	Watershed ²	Water Body ³	Records ⁴
	Check if Yes	Check if YES	Check if Yes	Check if Yes
Red-cockaded Woodpecker	<input type="checkbox"/>			<input type="checkbox"/>
Whooping Crane	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Gray Bat	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Indiana Bat	<input type="checkbox"/>			<input type="checkbox"/>
Ozark Big-eared Bat	<input type="checkbox"/>			<input type="checkbox"/>
Neosho Mucket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ouachita Rock Pocketbook	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scaleshell Mussel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Winged Mapleleaf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
American Burying Beetle	<input checked="" type="checkbox"/>			<input type="checkbox"/>
Harperella	<input type="checkbox"/>			<input type="checkbox"/>
Piping Plover	<input checked="" type="checkbox"/>			<input type="checkbox"/>
Red Knot	<input checked="" type="checkbox"/>			<input type="checkbox"/>
Northern Long-eared Bat	<input checked="" type="checkbox"/>			<input type="checkbox"/>
Arkansas River Shiner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leopard Darter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neosho Madtom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ozark Cavefish	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
American Alligator	<input type="checkbox"/>			<input type="checkbox"/>
Rabbitsfoot Mussel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rattlesnake-master Borer Moth	<input type="checkbox"/>			<input type="checkbox"/>

¹Species is on the Proposed Project's IPaC List

²Action Area is within a watershed associated with occupied water bodies

³Action Area includes an occupied water body

⁴Project site within 5 miles of known records

Designated or Proposed Critical Habitat	Action Area includes Designated Critical Habitat (Check <input type="checkbox"/> if Yes)
Whooping Crane	<input type="checkbox"/>
Arkansas River Shiner	<input type="checkbox"/>
Leopard Darter	<input type="checkbox"/>
Neosho Mucket	<input type="checkbox"/>
Rabbitsfoot	<input type="checkbox"/>

Action area is adjacent to McAlester Army Ammunition Plant or Camp Gruber/Cherokee WMA

All of part of the action area is within the 10 mile **gray bat** priority area (ODOT will check)

All of part of the action area is within the 2 mile **gray bat** priority area (ODOT will check)

IPaC Special Conditions Identified (wind energy projects or cell towers) for **Piping Plovers**

Action area is within what percentage **Whooping Crane** migratory corridor
 Choose an item.

Action area is within 15 miles of Salt Plains NWR, Hackberry Flat, or Foss Reservoir.

Action area is within the historic range of the **Red-cockaded Woodpecker**

Action area is within 10 miles of the McCurtain County Wilderness Area

Action area is within 10 miles of the Pushmataha Wildlife Management Area

3. ENVIRONMENTAL BASELINE

3.1. Ecological Processes and Conditions

Soils (Use Soil Map of Oklahoma by Carter and Gregory 2008)

Soil Class	Cherokee Prairies	
Soil Name	Dennis-Bates-Taloka-Parsons	
Soil Type	Mollisols and Alfisols	
Soil Characteristics	Clayey and loamy, and humus-rich soils on very gentle slopes (3%)	

Climate (Use Woods et al. 2005)

Precipitation	Mean annual inches	34-46
Growing Season	Number of days	195-225
Mean Temperatures	Summer min/max	70°F / 94°F
	Winter min/max	26°F / 49°F

River System

According to the 1956 (photorevised 1967) Sapulpa North, Okla. and the 1952 (photorevised 1967) Jenks, Okla. 7.5 minute United States Geological Survey (USGS) topographic quadrangles, four perennial streams (Arkansas River, Mooser Creek, Cherry Creek and Hager Creek) and ten intermittent streams (four tributaries to Mooser Creek, three tributaries to Hager Creek, two tributaries to Nickel Creek [a perennial stream outside of the Action Area] and one tributary to Cherry Creek) occur within the Action Area.

Land Use and Land Ownership

From Woods et al. 2005	Woodland, grassland, rangeland, pastureland, and limited cropland. The main crops are small grains, grain sorghum, hay, and soybeans. Abandoned farmland is common. Fire suppression and passive land use have allowed the woodland distribution to greatly expand. Extensive, but declining, oil fields occur; associated brine, drilling mud, and petroleum waste products have increased salinity in many streams. Small impoundments are common.
From Field investigation	The 2.5-mile long segment of US-75 mainly consists of dense forested tracts and maintained herbaceous right-of-way (ROW) south of the I-44 interchange, and private residential properties and open maintained ROW north of the interchange. The 3.0-mile long segment of I-44 mainly consists of commercial properties, residential yards, and open maintained ROW both west and east of the interchange. The remainder of the study area is occupied by roadway, waterbodies, a few light industrial properties, and tree-lined fencerows. According to the 1956 (photorevised 1967) Sapulpa North, Okla. and the 1952 (photorevised 1967) Jenks, Okla. 7.5 minute United States Geological Survey (USGS) topographic quadrangles, three perennial streams (Arkansas River, Mooser Creek and Cherry Creek) occur within the study footprint. In addition, six ephemeral streams, eight emergent wetlands, one scrub-shrub wetland, and one pond were identified during the field visit. Field work was conducted May 9, June 11, 2019 and September 31, October 1, 2020.

Terrestrial and Aquatic Community Descriptions (based on field site visit)

Terrestrial community types within the NEPA footprint includes riparian habitat, alluvial terrace (along the Arkansas River), palustrine emergent (PEM) wetland, palustrine scrub-shrub (PSS) wetland, upland wooded habitat, upland herbaceous, and ROW. Vegetation present within the riparian habitat predominately consist of black willow (*Salix nigra*), common hackberry (*Celtis occidentalis*), ash-leaf maple (*Acer negundo*), American elm (*Ulmus americana*), Shumard's oak (*Quercus shumardii*), silk tree (*Albizia julibrissin*), red maple (*Acer rubrum*), eastern red-cedar (*Juniperus virginiana*), eastern poison ivy (*Toxicodendron radicans*), flowering dogwood (*Cornus florida*), horsetail-spike-rush (*Eleocharis equisetoides*), river-bank grape (*Vitis riparia*), Virginia-creeper (*Parthenocissus quinquefolia*), horsebrier (*Smilax rotundifolia*), broad-leaf cattail (*Typha latifolia*), Johnson grass (*Sorghum halepense*), tall false rye grass (*Schedonorus*

arundinaceus), Japanese honeysuckle (*Lonicera japonica*), sticky-willy (*Galium aparine*), and common dandelion (*Taraxacum officinale*). Vegetation present within the alluvial terrace habitat predominately consist of black willow, eastern cottonwood (*Populus deltoides*), slippery elm (*Ulmus rubra*), green ash (*Fraxinus pennsylvanica*), American elm, ash-leaf maple, red mulberry (*Morus rubra*), American pokeweed (*Phytolacca americana*), late-flowering thoroughwort (*Eupatorium serotinum*), blue mistflower (*Conoclinium coelestinum*), Johnson grass, spotted lady's-thumb (*Persicaria maculosa*), bristle grass (*Setaria* sp.), eastern poison ivy, great ragweed (*Ambrosia trifida*), crown grass (*Paspalum* sp.), sedge, (*Cyperus* sp.), wood-oats (*Chasmanthium* sp.), Canadian goldenrod (*Solidago canadensis*), prairie fleabane (*Erigeron strigosus*), coastal sandbur (*Cenchrus spinifex*), Bahia grass (*Paspalum notatum*), golden crownbeard (*Verbesina encelioides*), heart-leaf peppervine (*Ampelopsis cordata*), and grape (*Vitis* sp.). Vegetation present within the PEM and PSS habitats include pecan, common buttonbush (*Cephalanthus occidentalis*), peatree (*Sesbania herbacea*), deciduous holly (*Ilex decidua*), broad-leaf cat-tail, eared redstem (*Ammannia auriculata*), short-bristle horned beak sedge (*Rhynchospora corniculata*), swamp smartweed (*Persicaria hydropiperoides*), creeping primrose-willow (*Ludwigia repens*), Oklahoma sedge (*Carex oklahomensis*), black willow, Plowman's-wort (*Pluchea camphorata*), rough cocklebur (*Xanthium strumarium*), late-flowering thoroughwort, nimbleweed (*Muhlenbergia schreberi*), arrowhead (*Sagittaria* sp.), rice cut grass (*Leersia oryzoides*), and an aster (*Symphyotrichum* sp.). Vegetation present within the upland forest habitat predominately consist of pecan (*Carya illinoensis*), blackjack oak (*Quercus marilandica*), Shumard's oak, redbud (*Cercis canadensis*), ash-leaf maple, sugar-berry (*Celtis laevigata*), eastern red-cedar, Chinese privet (*Ligustrum sinense*), eastern poison ivy, Virginia-creeper, Canada goldenrod, prairie spiderwort (*Tradescantia occidentalis*), bushy bluestem (*Andropogon glomeratus*), swamp smartweed, Japanese honeysuckle, Queen Anne's-lace (*Daucus carota*), sedge (*Carex* sp.), and southern dewberry (*Rubus trivialis*). Vegetation present within the upland herbaceous and ROW habitat include Bermuda grass (*Cynodon dactylon*), Johnson grass, clover (*Trifolium* sp.), vetch (*Vicia* asp.), tall false rye grass, and crown grass.

One aquatic community type within the overall NEPA footprint is the Arkansas River. This perennial feature is over channelized increasing the width of the alluvial terrace. The substrate is primarily sand and aquatic organisms observed includes mussels, frogs, turtles, and crayfish.

According to the closest weather station (Brookside, KOKTULSA32) to the study area, the area received 5.94 inches of rainfall within the two weeks prior to the May 9th field investigation with the majority of the precipitation (3.16 inches) occurring April 30, 2019, which was nine days before the start of the May field investigation. The area received 2.88 inches of rainfall within the two weeks prior to the June 11th field investigation with the majority of the precipitation (1.36 inches) occurring May 29th, which was thirteen days before the start of the June field investigation. Severe storms brought excess rain to the state of Oklahoma during the last two weeks of May causing major flooding across the state and including the study area. The normal rainfall for Tulsa in the month of May (1981-2010) is 5.82 inches; however, the total rainfall for May 2019 was 13.68 inches (Mesonet 2019). The normal annual total rainfall (1981-2010) for Tulsa is 40.87 inches and as of July 1, 2019, Tulsa has received 37.74 inches of rainfall in only six months. This rainfall, combined with large volumes of water released from the Keystone Dam upstream, resulted in the Arkansas River rising to over 18 feet (major flood stage) in Tulsa. Additional field work was required to delineate the Arkansas River due to potential features (e.g., OHWM and wetlands) being submerged during these 2019 floods. Field work was conducted on

September 30 and October 1, 2020. According to the closest weather station, the area received 1.30 inches of rainfall within the two weeks prior to the September 30th field investigation with the majority of the precipitation (1.14 inches) occurring September 22, 2020, which was eight days before the start of the September field investigation.

During the site investigation, multiple structures (e.g., culverts and bridges) were inspected for swallow use and evaluated for their suitability as potential roosting and/or nesting structures. Of the 91 structures within the study area, two exhibited evidence of past swallow use, three exhibited evidence of present use, and five exhibited evidence of past and present use. Twenty-nine (29) structures were unable to be fully inspected due to limited access, safety concerns, or not being identified during the field visit. For a list of structures inspected for swallow use, see section 5.2 *Migratory Bird Assessment*.

3.2 Species Habitat Analysis

- Pedestrian survey of entire NEPA study footprint (including 300-foot work zone buffer in karst areas)
- Bridge/Structure inspected for bat use (Complete the Bridge Inspection Form)

SPECIES	HABITAT	
American Burying Beetle	Number of acres of native perennial plant vegetation (where native perennial vegetation is the dominant vegetation) within the NEPA Environmental Study Footprint (<u>include shapefiles</u>).	82.9
Piping Plover	Sparsely vegetated sandy or gravelly shorelines and islands associated with the major river systems occur within the 0.25 miles of the NEPA Environmental Study Footprint .	<input checked="" type="checkbox"/>
	Salt flats and mudflats associated with reservoirs occur within the 0.25 miles of the NEPA Environmental Study Footprint .	<input type="checkbox"/>
Red Knot	Mudflats associated with reservoirs occur within the 0.25 miles of the NEPA Environmental Study Footprint .	<input type="checkbox"/>
Northern Long-eared Bat	Limestone karsts features occur within 0.5 mile of the NEPA Environmental Study Footprint .	<input type="checkbox"/>
	Live or dead trees/and or snags with a DBH of ≥ 3 inches occur within the NEPA Environmental Study Footprint .	<input checked="" type="checkbox"/>
	10 trees or less with DBH of ≥ 3 inches	<input type="checkbox"/>
	Barns or sheds occur within the NEPA Environmental Study Footprint .	<input checked="" type="checkbox"/>
	Linear treed features such as fencerows, riparian forests, and other wooded corridors occur within 1 mile of the NEPA Environmental Study Footprint . Wooded corridors may be dense or loose aggregates of trees with variable amounts of canopy closure.	<input checked="" type="checkbox"/>

SPECIES HABITAT

Number of acres of forested/wooded area within the **NEPA Environmental Study Footprint** (include shapefiles). Include forests and woodlots, as well as linear features such as fencerows, riparian forests, and other wooded corridors. Wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1000 feet of other forested/wooded habitat.

74.1

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	61st Street S.	16564	US-75	5/9/2019	1107

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Concrete Continuous Slab Span Bridge	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			Yes	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: The bridge is too tall and over a very busy highway to fully inspect the bridge. A snooper would be sufficient to use and to check the spaces between the bridge deck and the pier caps where bats are likely to roost.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	Olympia Avenue	11970	Mooser Creek	5/9/2019	1234

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Triple cell RCB	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge <input type="checkbox"/> due to inundation or other conditions limiting access to thoroughly inspect interior <input type="checkbox"/> due to conditions limiting access, and explained in the Notes							
NOTES: Historic rainfall/flooding events in May 2019 occurred in the area of this project and prevented full inspections of the bridge. This bridge was fully inspected on 6/11/2019 when the water was lower, and we could access the bridge from underneath.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75 NB to I-44 EB	15838	Mooser Creek & Skelly Drive	6/11/2019	1019

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: The bridge could not be fully inspected due to height. Guardrails could not be inspected due to heavy traffic. A snooper would be useful to access the spaces between the bridge deck and pier caps where bats may be roosting.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75 NB	15831	Mooser Creek & Skelly Drive	6/11/2019	1038

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: The bridge could not be fully inspected due to height. Guardrails could not be inspected due to heavy traffic. A snooper would be useful to access the spaces between the bridge deck and pier caps where bats may be roosting.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75 SB	15832	Mooser Creek & Skelly Drive	6/11/2019	1035

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: The bridge could not be fully inspected due to height. Guardrails could not be inspected due to heavy traffic. A snooper would be useful to access the spaces between the bridge deck and pier caps where bats may be roosting.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	I-44 EB to US-75 SB	15843	Mooser Creek & Skelly Drive	6/11/2019	1044

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: The bridge could not be fully inspected due to height. Guardrails could not be inspected due to heavy traffic. A snooper would be useful to access the spaces between the bridge deck and pier caps where bats may be roosting.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75 SB	15839	I-44	6/11/2019	See Notes

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Concrete Continuous Slab	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	No	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the heavy traffic both on and under the bridge, the cloverleaf interchange with no shoulders, and the safety concerns with crossing US-75 and/or I-44 on foot, the bridge could not be accessed. Therefore, the bridge was not fully inspected. Traffic control and a snooper would be useful to check the spaces between the concrete end walls and the bridge deck as well as in-between the bridge deck and pier caps where bats are likely to roost.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75 NB	15840	I-44	6/11/2019	See Notes

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Concrete Continuous Slab	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	No	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the heavy traffic both on and under the bridge, the cloverleaf interchange with no shoulders, and the safety concerns with crossing US-75 and/or I-44 on foot, the bridge could not be accessed. Therefore, the bridge was not fully inspected. Traffic control and a snooper would be useful to check the spaces between the concrete end walls and the bridge deck as well as in-between the bridge deck and pier caps where bats are likely to roost.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	Skelly Drive	Lat/Long: 36.087495, -96.005981	Drainage Ditch	6/11/2019	1100

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
RCB	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: This RCB structure is angled up 45 degrees and was not able to be accessed and fully inspected. Bats are unlikely to roost in this structure due to the lack of crevices.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	I-44	Lat/Long: 36.087650, -96.004314	Unnamed Tributary to Mooser Creek (OW 2)	6/11/2019	1107

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
RCB	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: This RCB structure makes a sharp turn to the north and was not able to be accessed and fully inspected. Bats are unlikely to roost in this structure due to the lack of crevices.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75 SB	18268	49th Street	6/11/2019	1225

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	Yes	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to safety concerns on the bridge, the guardrails and expansion joints (between the approach asphalt and the deck asphalt) could not be fully inspected. Traffic control on US-75 would be helpful to access the bridge deck and check the guardrails and expansion joints where bats are likely to roost.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75 NB	18267	49th Street	6/11/2019	1230

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	Yes	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to safety concerns on the bridge, the guardrails and expansion joints (between the approach asphalt and the deck asphalt) could not be fully inspected. Traffic control on US-75 would be helpful to access the bridge deck and check the guardrails and expansion joints where bats are likely to roost.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75 SB	18255	46th Street	6/11/2019	1257

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to safety concerns on the bridge, the guardrails and expansion joints (between the approach asphalt and the deck asphalt) could not be fully inspected. Traffic control on US-75 would be helpful to access the bridge deck and check the guardrails and expansion joints where bats are likely to roost.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75 NB	18254	46th Street	6/11/2019	1300

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to safety concerns on the bridge, the guardrails and expansion joints (between the approach asphalt and the deck asphalt) could not be fully inspected. Traffic control on US-75 would be helpful to access the bridge deck and check the guardrails and expansion joints where bats are likely to roost.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	US-75	18005	Cherry Creek	6/11/2019	1337

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Triple cell RCB	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	Yes

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the length of the structure as well as the east section of the RCB is outside of the study footprint, the structure could not be fully inspected.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	I-44 EB	19479	38th Street & TSU Railroad	6/11/2019	1400

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	Yes	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the height of the bridge and safety issues on the bridge deck, the bridge could not be fully inspected. A snooper would be useful to check the spaces between the bridge deck and pier caps where bats are likely to roost. Also, traffic control on I-44 would be helpful to access the bridge deck and check the guardrails and expansion joints where bats are likely to roost.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	I-44 WB	19471	38th Street & TSU Railroad	6/11/2019	1416

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Steel Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	Yes	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the height of the bridge and safety issues on the bridge deck, the bridge could not be fully inspected. A snooper would be useful to check the spaces between the bridge deck and pier caps where bats are likely to roost. Also, traffic control on I-44 would be helpful to access the bridge deck and check the guardrails and expansion joints where bats are likely to roost.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	W. 51st Street	15755	TSU Railroad	6/11/2019	1804

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Concrete Continuous Span	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the height of the bridge, safety issues on the bridge deck and crossing the railroad, the bridge could not be fully inspected. A snooper would be useful to inspect the spaces between the bridge deck and the pier caps as well as the spaces between the concrete end walls and the bridge deck. Traffic control on the bridge deck to check the guardrails and expansion joints would also be helpful.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	I-44 WB	20294	TSU Railroad	6/11/2019	1811

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Concrete Continuous Slab	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			No	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the height of the bridge, safety issues on the bridge deck and crossing the railroad, the bridge could not be fully inspected. A snooper would be useful to inspect the spaces between the bridge deck and the pier caps as well as the spaces between the concrete end walls and the bridge deck. Traffic control on the bridge deck to check the guardrails and expansion joints would also be helpful.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	I-44 EB	12827	TSU Railroad	6/11/2019	1816

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Concrete Continuous Slab	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			Yes	Yes	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the height of the bridge, safety issues on the bridge deck and crossing the railroad, the bridge could not be fully inspected. A snooper would be useful to inspect the spaces between the bridge deck and the pier caps as well as the spaces between the concrete end walls and the bridge deck. Traffic control on the bridge deck to check the guardrails and expansion joints would also be helpful.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	I-44 EB On-Ramp	15769	TSU Railroad	6/11/2019	1822

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Concrete Continuous Slab	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			Yes	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the height of the bridge, safety issues on the bridge deck and crossing the railroad, the bridge could not be fully inspected. A snooper would be useful to inspect the spaces between the bridge deck and the pier caps as well as the spaces between the concrete end walls and the bridge deck. Traffic control on the bridge deck to check the guardrails and expansion joints would also be helpful.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

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BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	Skelly Drive	15763	TSU Railroad	6/11/2019	1826

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long
Concrete Continuous Slab	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Photo Documentation of the above Y/N					Photo Documentation of each of the above Y/N			
	No	No	No			Yes	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the height of the bridge, safety issues on the bridge deck and crossing the railroad, the bridge could not be fully inspected. A snooper would be useful to inspect the spaces between the bridge deck and the pier caps as well as the spaces between the concrete end walls and the bridge deck. Traffic control on the bridge deck to check the guardrails and expansion joints would also be helpful.							

NEPA Bridge & Structure Inspection Form for All Listed Bat Species

If all bridge, culverts and structures are 1,000 feet or more from suitable bat habitat (e.g. an urban or agricultural area without suitable foraging habitat or corridors linking the bridge, culvert or structure to suitable foraging habitat), check this box and **STOP HERE. No assessment required.**

BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	I-44 EB	20326	Arkansas River	6/11/2019	1830

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.						Structure Characteristics: Check all that apply			
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long	
Prestressed Concrete Stringer/Girder	<input type="checkbox"/>	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Photo Documentation of the above Y/N						Photo Documentation of each of the above Y/N				
No						Yes	No	Yes	No	

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the height, extension over a perennial stream and safety on the bridge deck, the bridge could not be fully inspected. A snooper would be useful to inspect the spaces between the bridge deck and the pier caps as well as the spaces between the concrete end walls and the bridge deck. Traffic control on the bridge deck to check the guardrails and expansion joints would also be helpful.							

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BRIDGE INSPECTION: Identify ALL Bridges by NBI # (include RCB bridges)

CULVERT INSPECTION: Identify ALL Culverts ≥ 4 feet in diameter within the Study Area

BARN/SHED INSPECTION: Identify ALL structures within the Study Area that potentially could be removed

Method of Inspection (check all that apply) Visual Ladder Snooper Thermal Acoustic Survey
 Emergence Survey (30 minutes at dusk and 1 hour after dark)

ODOT Project JP Number	County	Road Number/Name	NBI Number	Water Body (or road if over road)	Date & Time of Day of Inspection	
32728(04)	Tulsa	I-44 WB	20580	Arkansas River	6/11/2019	1835

Bridge/Culvert Type/Structure	Bat Indicators: Check all that apply Note: Presence of at least one of these indicators is sufficient evidence that bats are using the structure.					Structure Characteristics: Check all that apply				
	Live or Dead Bats Seen	Guano	Staining	Sounds	Odor	Concrete or stone structure with vertical crevices*	Top sealed expansion joints*	Structure ≥ 4 feet above ground or water	Box structure 5 to 10 feet tall & > 300 feet long	
Prestressed Concrete Stringer/Girder	<input type="checkbox"/>	Number seen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Photo Documentation of the above Y/N				Photo Documentation of each of the above Y/N					
	No	No	No				Yes	No	Yes	No

*vertical cracks, crevices, or joints 0.5 to 1.25 inches wide (cracks may occur along support beams and inner walls, especially below a fillet – a concrete filling between ceiling and vertical beam).

For the bridge/culvert/structure listed above:

Possible Corridors for Netting			Light Levels under the Bridge			Human Disturbance or Traffic under the Bridge			Project Actions Include: check all that apply			
None/poor	Marginal	Excellent	Bright	Low	Cave-like	High	Low	None	Demolish/extend or Below Deck	Surface & Percussive/ Loud	No work above or below	Not known
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Characteristics of the above Bridge/Culvert/Structure and Whether FULLY Inspected during Field Studies (Check all that apply)

BRIDGES (this includes any RCBs with an NBI #)	Present	Inspected	Not Present	CULVERTS (do not include bridge-size culverts)	Present	Inspected	Not Present
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All crevices >12" deep & not sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between concrete or stone end walls and span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All expansion joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BARN/SHED STRUCTURE	Present	Inspected	Not Present
Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crevices, rough surfaces or impactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crevices, rough surfaces or impactions in concrete or stone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spaces between walls, ceiling joists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical surfaces on concrete I- beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked or exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRIDGE/CULVERT/STRUCTURE COULD NOT BE FULLY INSPECTED <input checked="" type="checkbox"/> due to height, traffic, or other conditions limiting access to thoroughly inspect all parts of bridge due to inundation or other conditions limiting access to thoroughly inspect interior due to conditions limiting access, and explained in the Notes							
NOTES: Due to the height, extension over a perennial stream and safety on the bridge deck, the bridge could not be fully inspected. A snooper would be useful to inspect the spaces between the bridge deck and the pier caps as well as the spaces between the concrete end walls and the bridge deck. Traffic control on the bridge deck to check the guardrails and expansion joints would also be helpful.							

4. ANALYSIS OF EFFECTS

4.1 Direct Effects

Species/ Resource	Habitat impacts expected from project activities	<u>Describe specific ACTIONS of the project and the results of those actions on species habitats, including indirect impacts to prey or drinking water, as well as improvements to habitat as a result of specific actions.</u> <u>If habitat within the action area identified above will not be impacted, describe why.</u>
Piping Plover	☒	<p>Field work was conducted on September 30 and October 1, 2020 to delineate the Arkansas River during normal weather conditions. Exposed sandbars that could be potential roosting and loafing habitat for the Piping Plover were observed. Widening of the Arkansas River bridges (NBIs 20580 and 20326) is planned in Work Package 3. Construction activities within or adjacent to the OHWM of the Arkansas River could impact plover habitat, if they were using the river as temporary stopover foraging and loafing habitat during migration. Temporary impacts to the species (due to disturbance) may occur from the associated noise and presence of workers and equipment during construction.</p>
American Burying Beetle	☒	<p>Impacts from construction include vegetation removal, soil disturbance through ground clearing, and use of vehicles and heavy equipment. These actions will result in permanent conversion of some portions of suitable ABB habitat to pavement and/or maintained ROW.</p> <p>Some of the habitat impacts, such as vegetation damage due to construction traffic and additional temporary ROW, are expected to be temporary in nature, as native perennial vegetation will be allowed to regrow. If construction occurs at night during the ABB active season, temporary impacts to the species (due to disturbance) may occur from the associated noise and presence of workers and equipment.</p>
Northern Long-eared Bat	☒	<p>Potential habitat occurs within the study footprint in the form of live and dead trees with a diameter at breast height (DBH) of greater than 3 inches, linear treed fencerows, tree-lined riparian forest corridors of OWs 1-4 and OWs 6, 7 and 9, culverts, barns and sheds along US-75, and multiple bridges that occur within the study footprint as well as within 1 mile of the study footprint. These features provide potential foraging and/or summer roosting sites for the NLEB. This species feeds primarily on moths, flies, leafhoppers, caddisflies, and beetles they capture while flying through the understory of forests. The habitat within the alluvial terrace along the Arkansas River, the dense wooded habitat south of the I-44/US-75 interchange, and the riparian habitat along</p>

		<p>Mooser Creek provides suitable foraging habitat for this species.</p> <p>Project actions may result in direct loss of roosting habitat due to tree clearing required for constructing the proposed E. Frontage Road east of US-75 in excess of 300-ft, as well as constructing Skelly Drive on an offset alignment to the south. Multiple bridges throughout the footprint will be impacted during the construction phase of the project. However, after construction is complete, these structures and remaining trees will continue to provide potential roosting and foraging habitat.</p> <p>Temporary impacts to the species (due to disturbance) may occur during construction from construction activities, and from the associated noise and presence of workers and equipment. However, these disturbance impacts will be short-term since the watercourse, remaining trees, and new/improved bridges will provide potential roosting and foraging habitat after construction is complete.</p>
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4.2 Indirect Effects

Long-term habitat alterations

Species/ Resource	<u>Identify long-term, permanent changes in habitat</u>
Piping Plover	Some siltation could be a potential indirect effect. Stormwater best management practices (BMPs) will be implemented during the widening of the I-44 bridges over the Arkansas River to help prevent sedimentation from traveling downstream. The sandbars provide potential foraging and loafing habitat for the Piping Plover during migration and are located both upstream and downstream from the proposed project. This habitat may be impacted by sedimentation. No long-term habitat alterations are anticipated, as the Arkansas River will continue to provide potential habitat after construction of the bridge is complete.
American Burying Beetle	Long-term habitat alterations include a relatively minor reduction in the amount of overall habitat available to the ABB (from the conversion of potential habitat to roadway or to a maintained state within the proposed right-of-way limits). No other indirect and long-term habitat alterations are expected from the project.
Northern Long-eared Bat	NLEB summer habitat is not limited or in short supply; however, long-term habitat alterations are expected from the removal of a large number of trees within the study footprint that could potentially function as roosting sites.

Indirect land use impacts

Land adjacent to US-75 and south of the interchange may become more developed with residential and/or commercial properties due to increased access to the area and could create additional habitat loss. No other indirect land use impacts are expected.
--

4.3 Interrelated and Interdependent Actions and Activities

The 2002 EA originally included approximately 10 miles of US-75 from SH-67 to I-44 in Tulsa County, Oklahoma. Completed projects within the extent of the original EA include the US-75/W. 71st Street interchange which included pavement for a future 8-lane US-75 facility with four through lanes in each direction, approximately 3,000-feet north and south of 71st Street, and a 76-foot-wide W. 71st Street span bridge over US-75. In 2010, the at-grade US-75 intersection with W. 111th Street was replaced with an interchange and an 80-foot-wide W. 111th Street bridge over US-75. The US-75 bridges over W. 81st Street are scheduled to be replaced in FFY 2022 according to the ODOT 8-year Construction Work Plan.

The construction of the entire I-44/US-75 reconstruction project is split into several work packages to fall within budgetary constraints. Work Packages 2 and 5 are tied and will be constructed simultaneously. A Reevaluation was completed for Work Package 1 in 2020 and the project has been awarded for construction. Work packages 2, 3, 4, and 5 will be authorized with an additional NEPA reevaluation upon completion of proposed ROW plans.

All work packages are needed to achieve the ultimate goal of reconstructing the I-44/US-75 interchange.

USFWS TAILS Number:	02EKOK00-2019-SLI-1945
ODOT Project JP Number:	33788(08)(09)(10)(11)

SPECIES / DESIGNATED CRITICAL HABIT	CONCLUSION		ESA SECTION 7			NOTES AND DOCUMENTATION Check <input checked="" type="checkbox"/> all that apply			
	Species Habitat present within the action area	Project Activities expected to impact habitat	No Effect	May affect, not likely to adversely affect	May affect, Likely to adversely affect	Field Studies	ONHI database / ABB	USFWS occupied waterbodies & watersheds	Whooping Crane Migration Corridor
American Burying Beetle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Project uses the BO for the final 4(d) rule	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Northern long-eared bat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Final Effect Analysis and Determination covered in the Programmatic BA&BO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input checked="" type="checkbox"/>	Project uses the BO for the final 4(d) rule				
Piping Plover	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Red Knot	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CONCLUSIONS

No Effect	Red Knot
May Affect	American Burying Beetle, Northern long-eared bat
May affect, not likely to adversely affect	Piping Plover
May affect, likely to adversely affect	
Appropriate Effect Determination for ABB has been made under the BO for the final 4(d) rule	<input checked="" type="checkbox"/>
Appropriate Effect Determination has been made under the FHWA NLEB/Ibat Programmatic BA & BO	<input type="checkbox"/>
Appropriate Effect Determination for NLEB has been made under the BO for the final 4(d) rule	<input checked="" type="checkbox"/>

RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES

Suitable habitat for the **American Burying Beetle** occurs within the immediate vicinity of the proposed project. In order to minimize adverse impacts to the ABB, the following conservation measures will be implemented:

- a) The areas of suitable habitat will be field mapped.
- b) The amount of ground disturbance to suitable ABB habitat within the construction footprint will be minimized to only what is necessary for project construction.
- c) Following construction, areas of ground disturbance outside of the safety clear zone will be revegetated with native plant species where applicable and practicable. Areas where revegetation with native plant species is not practicable will be revegetated with more traditional planting such as solid slab sodding.
- d) Pollution Prevention Requirements as specified by the Oklahoma Department of Environmental Quality General Permit OKR10 for Storm Water Discharges shall be implemented. Additionally, all equipment will be fueled, and all fuel and motor vehicle oil will be stored outside ABB habitat.
- e) The use of artificial lighting will be minimized. If night construction is necessary, direct light will be shielded to the work area and prevent light from projecting upwards. A special provision will be included in the project contract which outlines approved lighting for use during night work.
- f) Carcasses and trash will continuously be removed from any permanent and temporary construction rights-of-way, throughout the duration of the project.

If **bridge and culvert demolition, repair, retrofit, maintenance or rehabilitation** is to occur during listed bat species' active/maternity season (between April 1 and November 15), ODOT Environmental Programs Division will thoroughly inspect the structures or conduct an acoustic survey of the existing structures to ensure any listed bats are not using the structures, within two years prior to construction. The inspection of the bridge and culverts, and the survey to determine the presence of listed bats potentially using the bridge will be scheduled between May 15 and August 15. If evidence of use by listed bat species is observed, then the bridge demolition, repair, retrofit, maintenance, and/or rehabilitation and culvert extension or removal will be performed between November 16 and March 31. If bridge demolition, repair, retrofit, maintenance, and/or rehabilitation and culvert extension or removal must occur between April 1 and November 15, the ODOT will re-initiate consultation with the USFWS. If bridge inspection and/or

survey is positive, all bridge demolition, repair, retrofit, maintenance, and/or rehabilitation and culvert extension or removal will be limited to the bat’s inactive season.

5. BALD AND GOLDEN EAGLE PROTECTION ACT ASESSMENT

5.1. Bald Eagle Assessment

The Bald Eagle (*Haliaeetus leucocephalus*) is a large predatory bird protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Activities that would disturb eagles are prohibited under the Bald and Golden Eagle Protection Act. “Disturb” means to agitate an eagle to the degree that causes or is likely to (1) cause injury, (2) interfere with breeding, feeding or sheltering behavior, or (3) nest abandonment.

Potential Bald Eagle Habitat Present	w/in NEPA Footprint	w/in 660 ft Buffer of NEPA Footprint	DO NOT LEAVE BLANK
Presence of Cottonwood, Sycamore, Pecan or Pine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Large super canopy tree species [i.e., pecan (<i>Carya illinoensis</i>)] were observed throughout the large forested tracts south of the I-44 interchange and adjacent to US-75. American sycamores (<i>Platanus occidentalis</i>) were observed primarily within riparian areas of stream channels in the NEPA footprint and most likely throughout the 660-foot buffer.
Open foraging areas with large trees	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	The alluvial terraces of the Arkansas River contain large trees within the NEPA Footprint and 660-foot buffer. Bald eagles could potentially use these trees to perch or loaf during hunting activities. These trees are smaller in size likely due to being inundated during periods of heavy rainfall or flooding events.
Distance to closest perennial water body	River or Lake	crosses	The Arkansas River is within the study area and is a large perennial water body that the eastern section of the NEPA Footprint crosses. In addition, Mooser Creek is a perennial stream that crosses the project footprint.
	Stream or Pond	crosses	
Potential Bald Eagle Nests Observed	<input type="checkbox"/>	<input type="checkbox"/>	No potential bald eagle nests were observed during the field investigation.

Potential Bald Eagle Habitat Present	w/in NEPA Footprint	w/in 660 ft Buffer of NEPA Footprint	DO NOT LEAVE BLANK
Bald Eagles Observed in the general vicinity	☒	☒	Two bald eagles (2 adults) were observed soaring within the 660-foot buffer and the NEPA Footprint during the September 30, 2020 field investigation. Both individuals soared in a general north to south direction along the west bank of the Arkansas River and over the bridges.
General Description of Bald Eagle Nesting Habitat and Impact Determination, within the NEPA Footprint and within 660-ft of the NEPA Footprint	Suitable bald eagle habitat occurs along the west side of the Arkansas River within the 660-foot buffer and within the NEPA Footprint. Suitable habitat was also observed along Mooser Creek both west and east of US-75. A small section of potential bald eagle habitat also occurs in the far east section of the 660-foot buffer near the RC park on Union Ave. The Oklahoma Natural Heritage Inventory (ONHI) reported ten (10) occurrences of bald eagles within 5 miles of the NEPA Footprint. Therefore, potential roosting and nesting habitats (approximately 10.3 acres) occur within the NEPA Footprint and the 660-foot buffer.		
Station #s for Buffered Bald Eagle Habitat	51st St. (STA.557+50 to 566+50) US-75 (STA.556+22 to 561+25) Frontage Rd (STA.184+00 to 192+50) Skelly Dr. (STA.570+00 to 603+50; and STA.622+00 to 641+00) Ramp E1 STA.56+00 to 74+00; and STA.84+00 to 90+00) Ramp E6 (STA.165+00 to 90+00) Ramp E3 (STA. 86+00 to 90+00) Ramp E4 (STA. 165+00 to 172+00) Ramp E5 (STA.74+00 to 91+00) Ramp E8 (STA.60+00 to 83+00)		
In order to avoid impacts to Bald Eagles, if Bald Eagles or their habitat are observed during the biological assessment, a survey for eagles and their nests will be conducted within 660 feet of the work zone, during the winter prior to, and within one year of, the start of construction. If a nest is found, appropriate conservation measures based on the National Bald Eagle Management Guidelines will be implemented.			

6. MIGRATORY BIRD TREATY ACT (MBTA) ASSESSMENT

6.1 Structure Assessment

Cliff Swallows (*Petrochelidon pyrrhonota*) and Barn Swallows (*Hirundo rustica*) are small colonial and semi-colonial nesting birds protected by the federal Migratory Bird Treaty Act. Barn Swallows use man-made structures for nesting and live in close association with humans. Both species commonly use bridges and culverts in Oklahoma for nesting. Other migratory birds can also nest on transportation structures.

Identify <u>ALL</u> structures including pipe culverts and whether positive or negative for migratory birds (identify named streams where possible rather than just FS#). Provide shapefiles and map of structures identifying pos/neg swallow structures.	Approx. Number of Cliff Swallow Nests	Approx. Number of Barn Swallow Nests	Approx. Number of Eastern Phoebe Nests
S. Olympia Avenue, Mooser Creek, NBI 11970	None	2 (Past Use)	None
W. 61st Street, US-75, NBI 16564	None	None	None
US-75 SB On-Ramp, Mooser Creek & Skelly Drive, NBI 15843	None	1 (Present Use)	None
US-75 SB, Mooser Creek & Skelly Drive, NBI 15832	None	None	None
US-75 NB, Mooser Creek & Skelly Drive, NBI 15831	None	2 (Past Use)	None
US-75 NB Off-Ramp, Mooser Creek & Skelly Drive, NBI 15838	None	1 (Present Use), 2 Past Use	None
US-75 SB, I-44, NBI 15839*	Unknown	Unknown	Unknown
US-75 NB, I-44, NBI 15840*	Unknown	Unknown	Unknown
US-75 SB, W. 49 th Street, NBI 18268	None	Multiple Past Use, 2 (Present Use)	None
US-75 NB, W. 49 th Street, NBI 18267	None	1 (Present Use), 1 (Past Use)	None
US-75 SB, W. 46 th Street, NBI 18255	None	1 (Present Use), 1 (Past Use)	None
US-75 NB, W. 46 th Street, NBI 18254	None	1 (Present Use)	None
US-75, Cherry Creek, NBI 18005	None	2 (Present Use)	None
I-44 EB, 38 th Street & TSU Railroad, NBI 19479	None	None	None
I-44 WB, 38 th Street & TSU Railroad, NBI 19471	None	None	None
W. 51 st Street, TSU Railroad, NBI 15755	None	None	None
I-44 WB, TSU Railroad, NBI 20294	None	None	None
I-44 EB, TSU Railroad, NBI 12827	None	None	None

Identify <u>ALL</u> structures including pipe culverts and whether positive or negative for migratory birds (identify named streams where possible rather than just FS#). Provide shapefiles and map of structures identifying pos/neg swallow structures.	Approx. Number of Cliff Swallow Nests	Approx. Number of Barn Swallow Nests	Approx. Number of Eastern Phoebe Nests
I-44 EB On-Ramp, TSU Railroad, NBI 15769	None	None	None
Skelly Drive, TSU Railroad, NBI 15763	None	None	None
I-44 WB, Arkansas River, NBI 20580**	Multiple Current and Past Use	Multiple Present and Past Use	Unknown
I-44 EB, Arkansas River, NBI 20326**	Multiple Current and Past Use	Multiple Present and Past Use	Unknown
RCB, Skelly Drive, Lat/Long 36.087206, -96.007368 ¹	Unknown	Unknown	Unknown
RCB, Skelly Drive, Lat/Long 36.087208, -96.005981 ¹	Unknown	Unknown	Unknown
CGMP, R/W Drainage Ditch, Lat/Long 36.086878, -96.005689 ¹	Unknown	Unknown	Unknown
RCB, Skelly Drive, Lat/Long 36.087650, -96.004314	None	None	None
CGMP, Skelly Drive, Lat/Long 36.089324, -95.992420	None	None	None
CGMP, Skelly Drive Pull Off Drive, Lat/Long 36.089384, -95.992868	None	None	None
RCP, Field Drive, Lat/Long 36.075211, -96.005581	None	None	None
RCP, W. 61 st Street, Lat/Long 36.075304, -96.005431	None	None	None
CGMP, Field Drive, Lat/Long 36.075238, -96.004673	None	None	None
RCP, Field Drive, Lat/Long 36.075396, -96.005300	None	None	None
RCP, US-75, Lat/Long 36.075146, -96.006666	None	None	None
Drop Inlet, R/W Drainage Ditch, Lat/Long 36.075415, -96.008132 ¹	Unknown	Unknown	Unknown
Drop Inlet, S. Santa Fe Avenue, Lat/Long 36.075466, -96.008849 ¹	Unknown	Unknown	Unknown
RCB, I-44, Lat/Long 36.077307, -96.006235 ¹	Unknown	Unknown	Unknown
RCB, US-75 NB On-Ramp, Lat/Long 36.076979, -96.006290	None	None	None
RCB, US-75 SB & Off-Ramp, Lat/Long 36.077565, -96.006847	None	None	None
RCB, Lat/Long 36.077790, -96.007251	None	None	None
RCP, US-75 SB Off-Ramp, Lat/Long 36.077091, -96.007029	None	None	None
RCB, US-75 NB On-Ramp, Lat/Long 36.08495, -96.005981*	Unknown	Unknown	Unknown
CGMP, I-44 EB On-Ramp, Lat/Long 36.087966, -96.004893	None	None	None
RCB, I-44, Lat/Long 36.088441, -96.003604 ¹	Unknown	Unknown	Unknown
RCP, Business Drive, Lat/Long 36.088082, -96.003738	None	None	None

Identify <u>ALL</u> structures including pipe culverts and whether positive or negative for migratory birds (identify named streams where possible rather than just FS#). Provide shapefiles and map of structures identifying pos/neg swallow structures.	Approx. Number of Cliff Swallow Nests	Approx. Number of Barn Swallow Nests	Approx. Number of Eastern Phoebe Nests
RCP, I-44 EB Frontage Road, Lat/Long 36.088555, -96.007543*	Unknown	Unknown	Unknown
RCP, US-75 SB, Lat/Long 36.088445, -96.007013*	Unknown	Unknown	Unknown
RCB, US-75 SB Off-Ramp, Lat/Long 36.087514, -96.007352*	Unknown	Unknown	Unknown
CGMP, US-75 NB, Lat/Long 36.088456, -96.006333*	Unknown	Unknown	Unknown
RCB, I-44, Lat/Long 36.088863, -96.006190*	Unknown	Unknown	Unknown
RCB, US-75 SB On-Ramp & Off-Ramps, Lat/Long 36.090351, -96.007523*	Unknown	Unknown	Unknown
RCB, I-44, Lat/Long 36.088884, -96.007203*	Unknown	Unknown	Unknown
RCP, US-75 SB On-Ramp, Lat/Long 36.089294, -96.007852	Unknown	Unknown	Unknown
RCB, W. 49 th Street, Lat/Long 36.092360, -96.007111	None	None	None
Metal Pipe, Pedestrian Walkway, Lat/Long 36.092396, -96.006367	None	None	None
RCP, W. 49 th Street, Lat/Long 36.092358, -96.006293	None	None	None
Drop Inlet, W. 46 th Street, Lat/Long 36.097144, -96.005601 ¹	Unknown	Unknown	Unknown
RCP, Residential Drive, Lat/Long 36.097114, -96.005303	None	None	None
RCP, Residential Drive, Lat/Long 36.097032, -96.004963	None	None	None
CGMP, S. Santa Fe Avenue, Lat/Long 36.097042, -96.008249	None	None	None
RCP, W. 46 th Street, Lat/Long 36.097083, -96.008972	None	None	None
RCP, Church Drive, Lat/Long 36.097055, -96.009548	None	None	None
CGMP, R/W Drainage Ditch, Lat/Long 36.102653, -96.008953	None	None	None
RCP, R/W Drainage Ditch, Lat/Long 36.102964, -96.009300 ¹	Unknown	Unknown	Unknown
RCP, Skelly Drive, Lat/Long 36.088384, -96.036135	None	None	None
RCP, W. 51 st Street, Lat/Long 36.089898, -96.030424	None	None	None
RCP, Residential Drive, Lat/Long 36.089837, -96.030455	None	None	None
RCP, Residential Drive, Lat/Long 36.089443, -96.027397	None	None	None
RCP, Residential Drive, Lat/Long 36.089362, -96.027404	None	None	None
RCP, Residential Drive, Lat/Long 36.089426,	None	None	None

Identify <u>ALL</u> structures including pipe culverts and whether positive or negative for migratory birds (identify named streams where possible rather than just FS#). Provide shapefiles and map of structures identifying pos/neg swallow structures.	Approx. Number of Cliff Swallow Nests	Approx. Number of Barn Swallow Nests	Approx. Number of Eastern Phoebe Nests
-96.027301			
RCP, Residential Drive, Lat/Long 36.089278, -96.027306	None	None	None
RCP, S. 31 st W. Avenue, Lat/Long 36.089181, -96.027345	None	None	None
RCP, Library Parking Lot, Lat/Long 36.089300, -96.017639	None	None	None
RCP, Library Parking Lot, Lat/Long 36.089329, -96.017351	None	None	None
HDPE, R/W Drainage Ditch, Lat/Long 36.089235, -96.017104	None	None	None
RCP, W. 51 st Street, Lat/Long 36.089808, -96.014409	None	None	None
CGMP, Parking Lot, Lat/Long 36.089405, -96.010490	None	None	None
RCB, S. Olympia Avenue, Lat/Long 36.089816, -96.002828	None	None	None
RCP, Residential Drive, Lat/Long 36.089771, -96.002736	None	None	None
RCP, S. Maybelle Avenue, Lat/Long 36.089867, -96.002511	None	None	None
RCP, S. Jackson Avenue, Lat/Long 36.089885, -96.000282	None	None	None
RCP, Business Drive, Lat/Long 36.089899, -95.999149	None	None	None
RCP, S. Indian Avenue, Lat/Long 36.090002, -95.998278	None	None	None
RCB, Business Drive, Lat/Long 36.090342, -95.997149	None	None	None
RCB, Business Drive, Lat/Long 36.090588, -95.996419	None	None	None
RCP, Private Car Lot, Lat/Long 36.090765, -95.996118 ¹	Unknown	Unknown	Unknown
RCP, Skelly Drive, Lat/Long 36.089067, -95.998176 ²	Unknown	Unknown	Unknown
RCP, I-44 EB Off-Ramp, Lat/Long 36.089126, -95.998760 ²	Unknown	Unknown	Unknown
Drop Inlet, US-75 SB Off-Ramp, Lat/Long 36.090399, -96.007317*	Unknown	Unknown	Unknown
RCP, US-75 SB, Lat/Long 36.090718, -96.006818*	Unknown	Unknown	Unknown
RCP, US-75 NB Off-Ramp, Lat/Long 36.090252, -96.006058*	Unknown	Unknown	Unknown
RCP, US-75 NB Off-Ramp, Lat/Long 36.089246,	Unknown	Unknown	Unknown

Identify <u>ALL</u> structures including pipe culverts and whether positive or negative for migratory birds (identify named streams where possible rather than just FS#). Provide shapefiles and map of structures identifying pos/neg swallow structures.	Approx. Number of Cliff Swallow Nests	Approx. Number of Barn Swallow Nests	Approx. Number of Eastern Phoebe Nests
-96.005397*			
Other MB and Nests Observed	None observed		
Based on existing plans, no work on suitable drainage structures will occur	<input type="checkbox"/>		
In order to avoid impacts to migratory birds, if structures are being used by these birds, any activities that may destroy active nests, eggs or birds shall be completed between September 1, and February 28, when nests are not occupied. If seasonal avoidance cannot be accomplished, structures shall be protected from new nest establishment prior to March 1, by means that do not result in death or injury to these birds.			

* The structure could not be accessed due to safety concerns (i.e., traffic, narrow shoulders, etc.).

** The structure could not be accessed due to high water levels of the Arkansas River.

¹ The structure could not be accessed and fully inspected.

² The structure was not identified in the field and not fully inspected.

6.2 Birds of Conservation Concern

<u>Species Identified on IPaC list</u>	<u>Breeding Season</u>
Eastern Whip-poor-will (<i>Antrostomus vociferous</i>)	May 1 to August 20
Harris's Sparrow (<i>Zonotrichia querula</i>)	Breeds elsewhere
Hudsonian Godwit (<i>Limosa haemastica</i>)	April 20 to August 20
Kentucky Warbler (<i>Oporornis formosus</i>)	April 20 to August 20
Lesser Yellowlegs (<i>Tringa flavipes</i>)	Breeds elsewhere
Prothonotary Warbler (<i>Protonotaria citrea</i>)	April 1 to July 31
Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)	May 10 to September 10
Rusty Blackbird (<i>Euphagus carolinus</i>)	Breeds elsewhere
Semipalmated Sandpiper (<i>Calidris pusilla</i>)	Breeds elsewhere
Wood Thrush (<i>Hylocichla mustelina</i>)	May 10 to August 31
The majority of the bird species rely on open woodlands and forest habitat for breeding and/or foraging. Extensive tree removal for the proposed frontage road south of the I-44/US-75 interchange could affect these species.	
In order to avoid impacts to USFWS Birds of Conservation Concern, the removal of trees and shrubs will be restricted to areas within the actual limits of construction, and all aspects of the project (e.g. temporary work areas, alignments) will be modified to avoid tree removal, if possible.	

6.3 Interior Least Tern

Sparsely vegetated islands or sandbars along large rivers, with nearby areas of shallow water, occur within the 0.25 miles of the NEPA Environmental Study Footprint.	<input checked="" type="checkbox"/>
Field work was conducted on September 30 and October 1, 2020 to delineate the Arkansas River during normal weather conditions. Exposed sandbars that could be potential nesting and loafing habitat were observed. Widening of the Arkansas River bridges (NBIs 20580 and 20326) is planned in Work Package 3. Construction activities within or adjacent to the OHWM of the Arkansas River could impact tern nesting and loafing habitat.	
Interior Least Terns are protected under the Migratory Bird Treaty Act. In order to avoid impacts to Interior Least Terns, any activities that may destroy active nests, eggs or birds shall be completed between September 1 and April 30, outside the nesting season. If construction activities will occur during the active nesting season, a 0.25 mile no-work-zone buffer from the Ordinary High Water Mark of the River will be established until the nesting survey can be completed. Any Interior Least Terns nesting in the area must be protected by limiting all work within 0.25 miles of any nesting colonies until after September 1 and be completed by April 30, the following year.	

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8. FIGURES

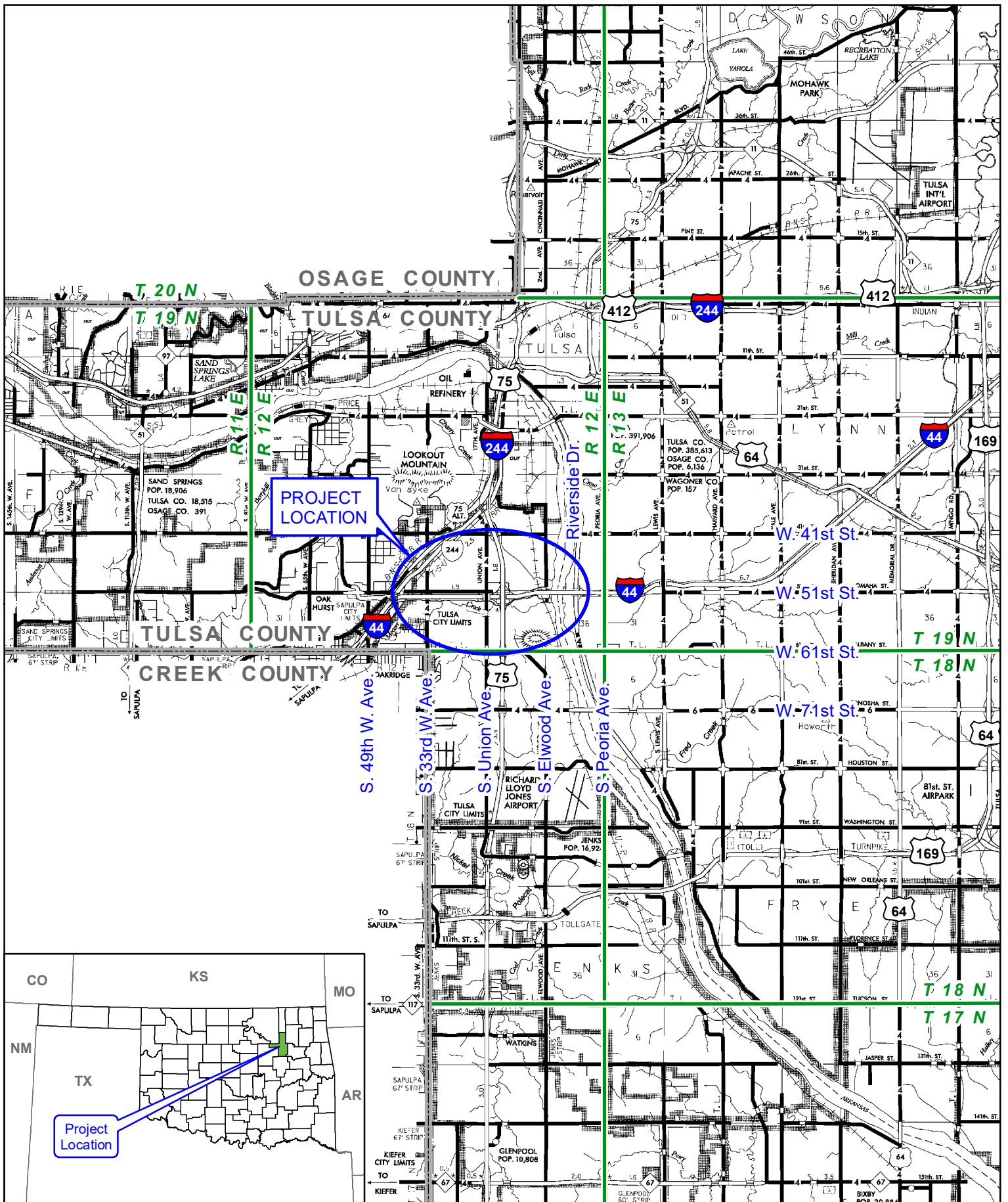
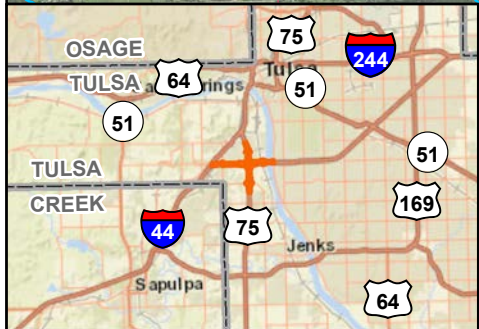
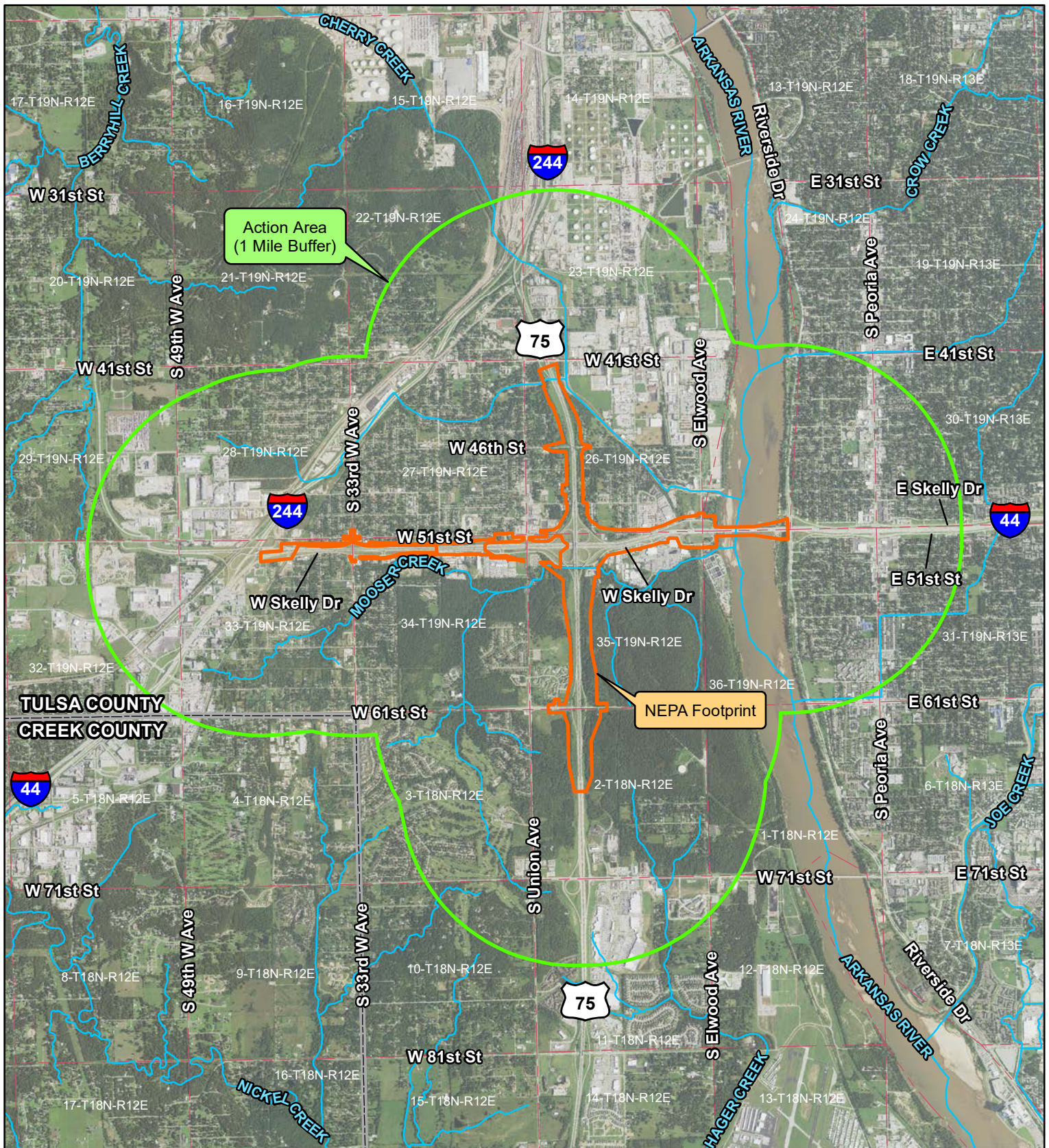


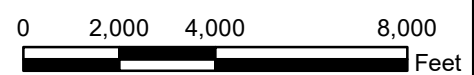
Figure 1 - Project Location Map
 JP 32728(04) I-44/US-75 Interchange
 I-44 from I-244 to the Arkansas River
 Tulsa County, Oklahoma
 Source: ODOT General Highway Map



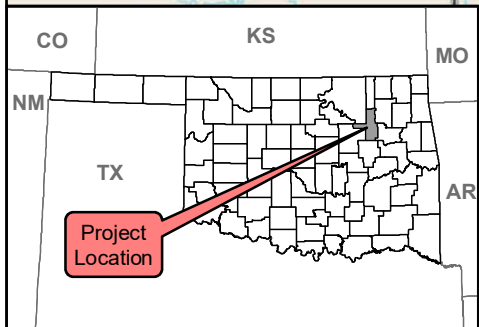
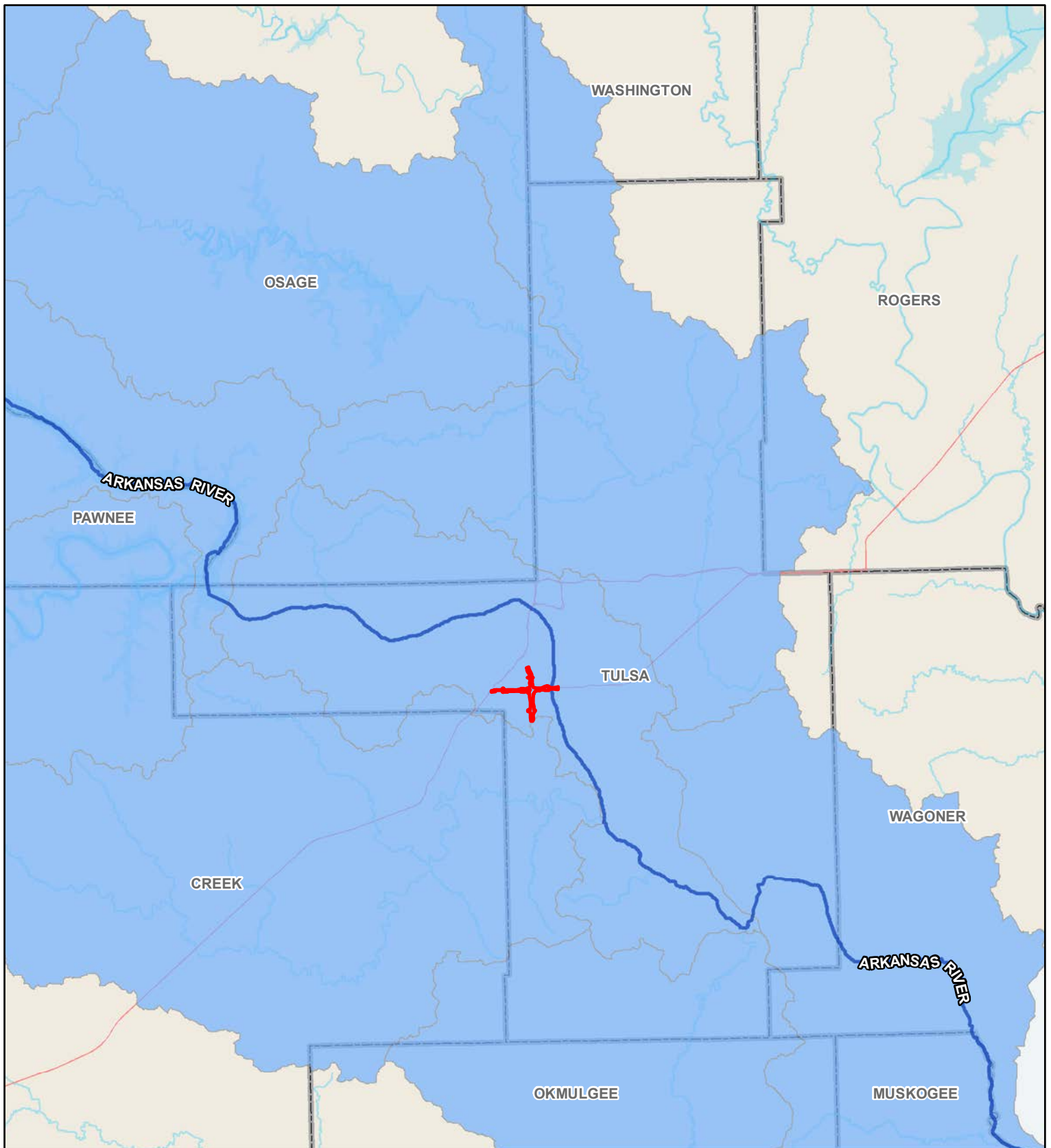
- NEPA Footprint
- County Line
- Section Line
- USGS Stream
- Action Area

Figure 2 - Environmental Study Footprint & Action Area Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



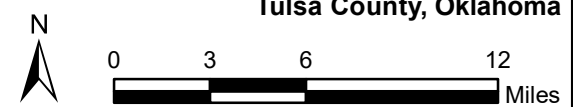
Source: USDA NAIP 2019 Digital Orthophotography



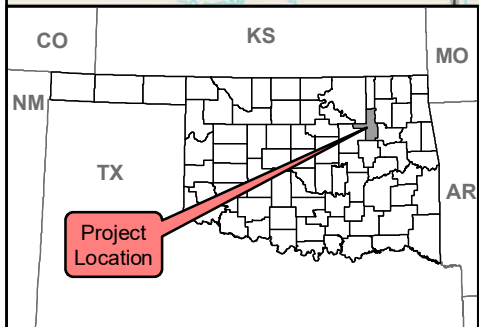
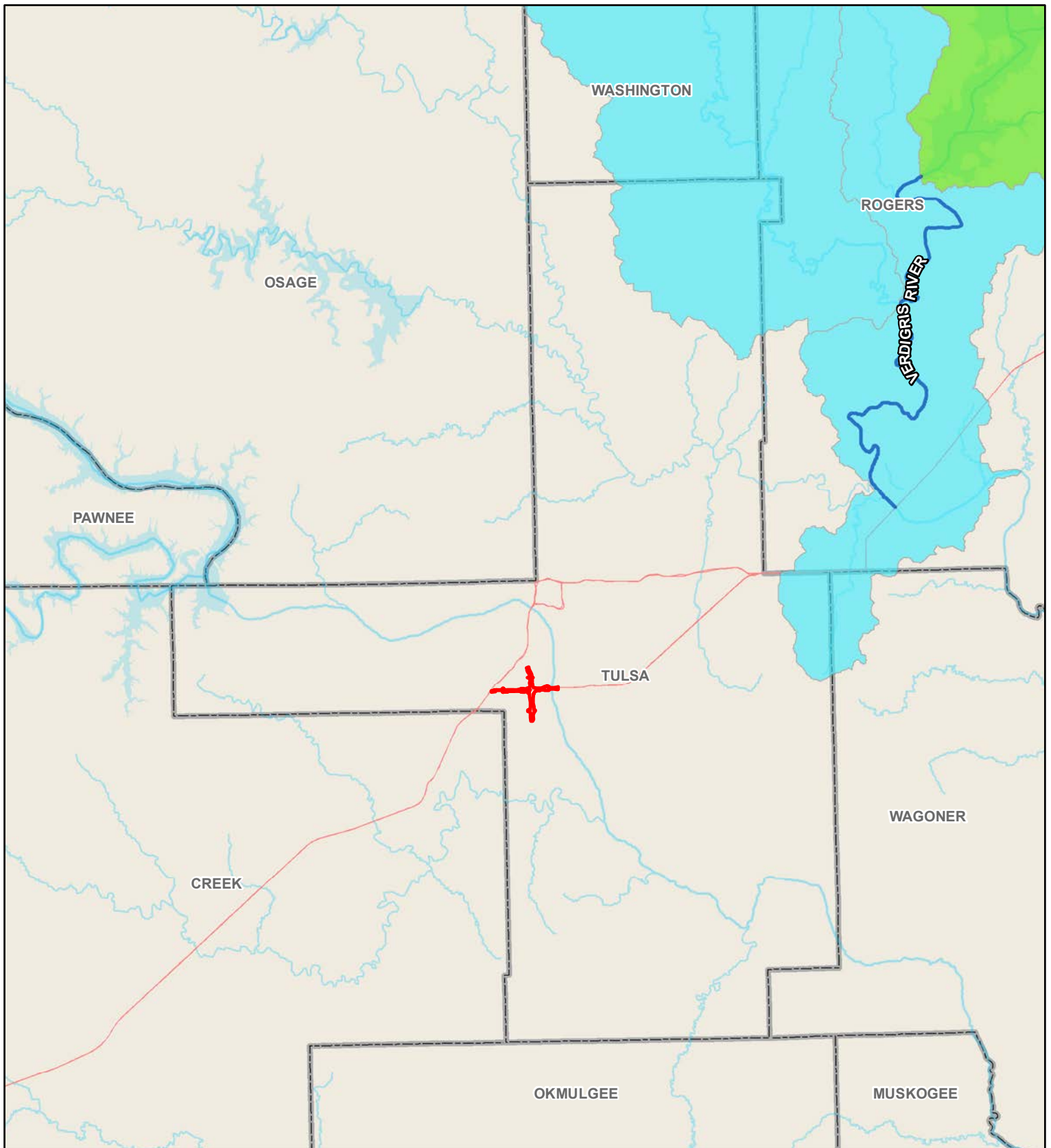
- Project Location
- Interior Least Tern
- Interior Least Tern & Gray Bat
- Occupied Waterbody

Figure 3a - Federally-Listed Aquatic Dependent Species Watersheds

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**

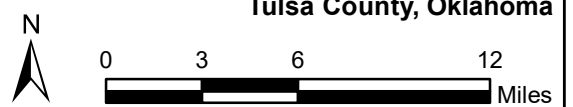


Source: USFWS 11 digit HUC Watersheds

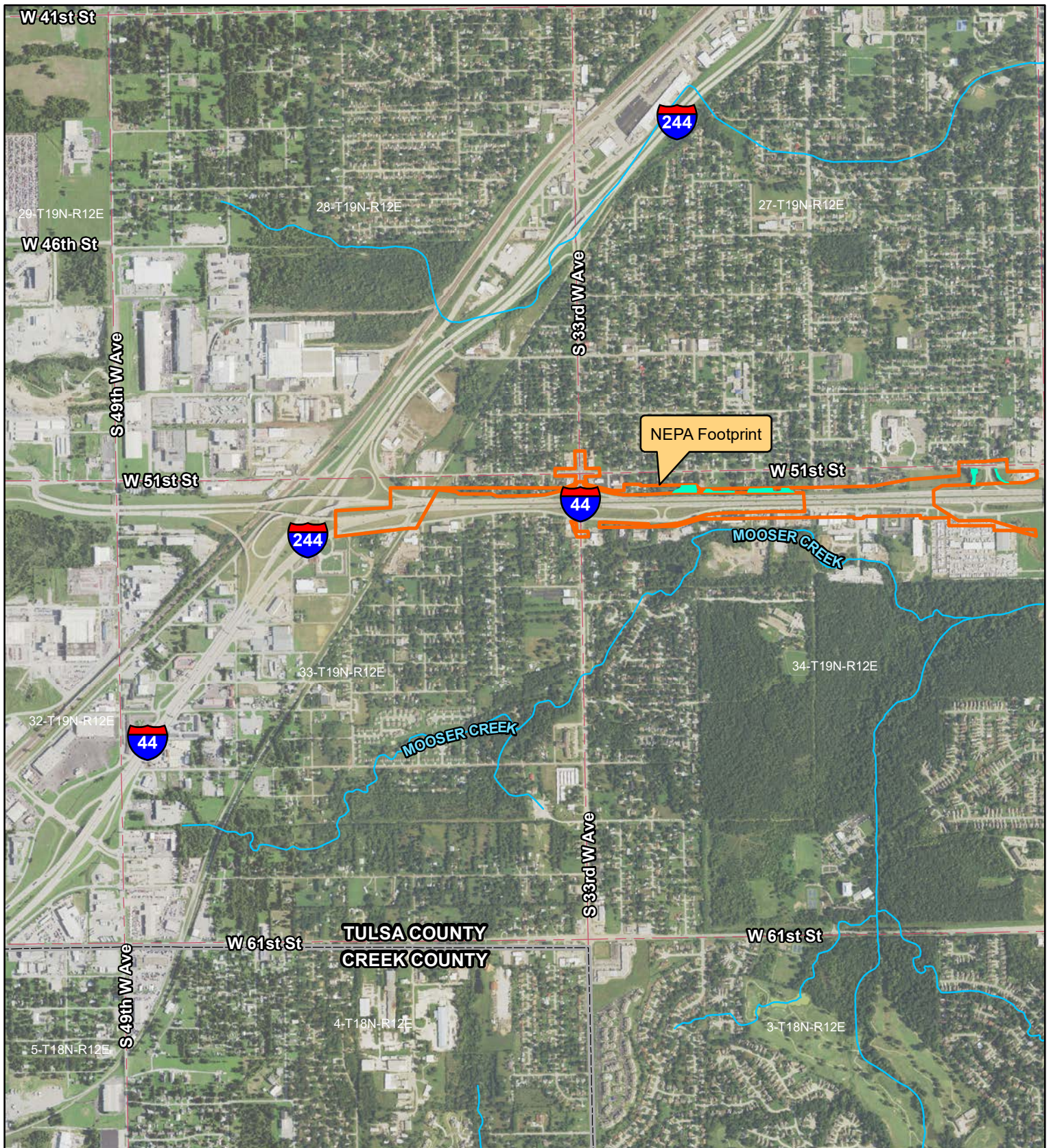


- Project Location
- Neosho Mucket
- Neosho Mucket & Rabbitsfoot
- Occupied Waterbody

Figure 3b - Federal Candidate Aquatic Species Watersheds
 JP 32728(04) I-44/US-75 Interchange I-44 from I-244 to the Arkansas River
 Tulsa County, Oklahoma



Source: USFWS 11 digit HUC Watersheds








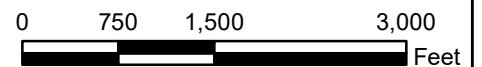
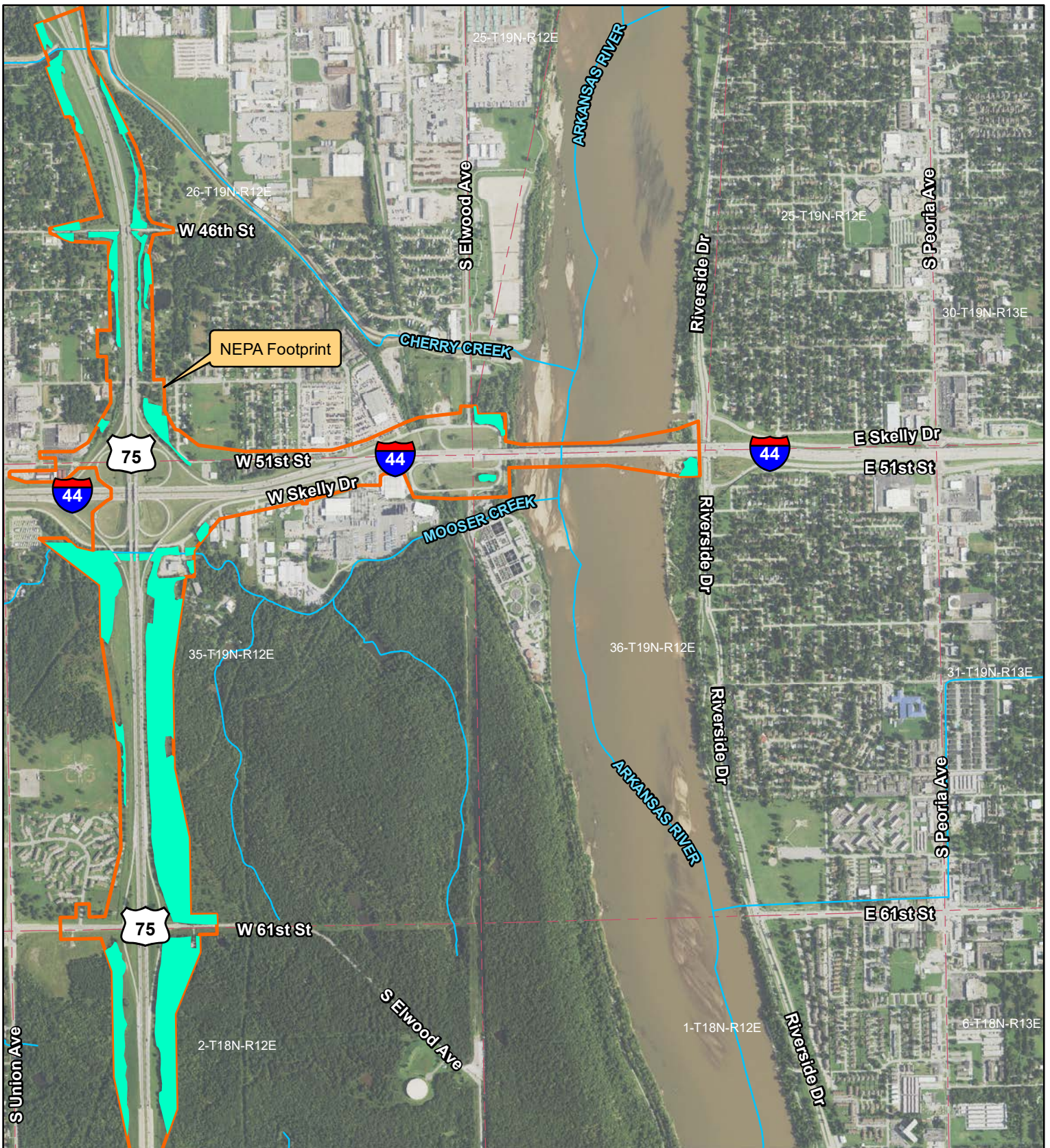
-  NEPA Footprint
-  County Line
-  Section Line
-  USGS Stream
-  Forested/Wooded Habitat

Figure 4a - Northern Long-eared Bat (NLEB) Habitat Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



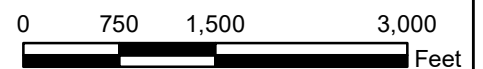
Source: USDA NAIP 2019 Digital Orthophotography



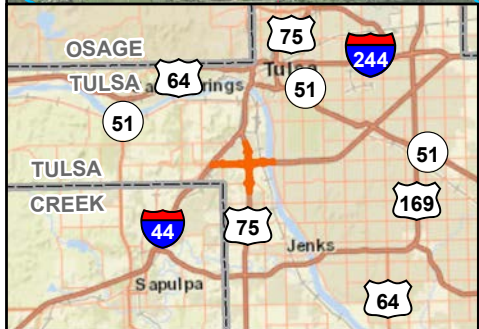
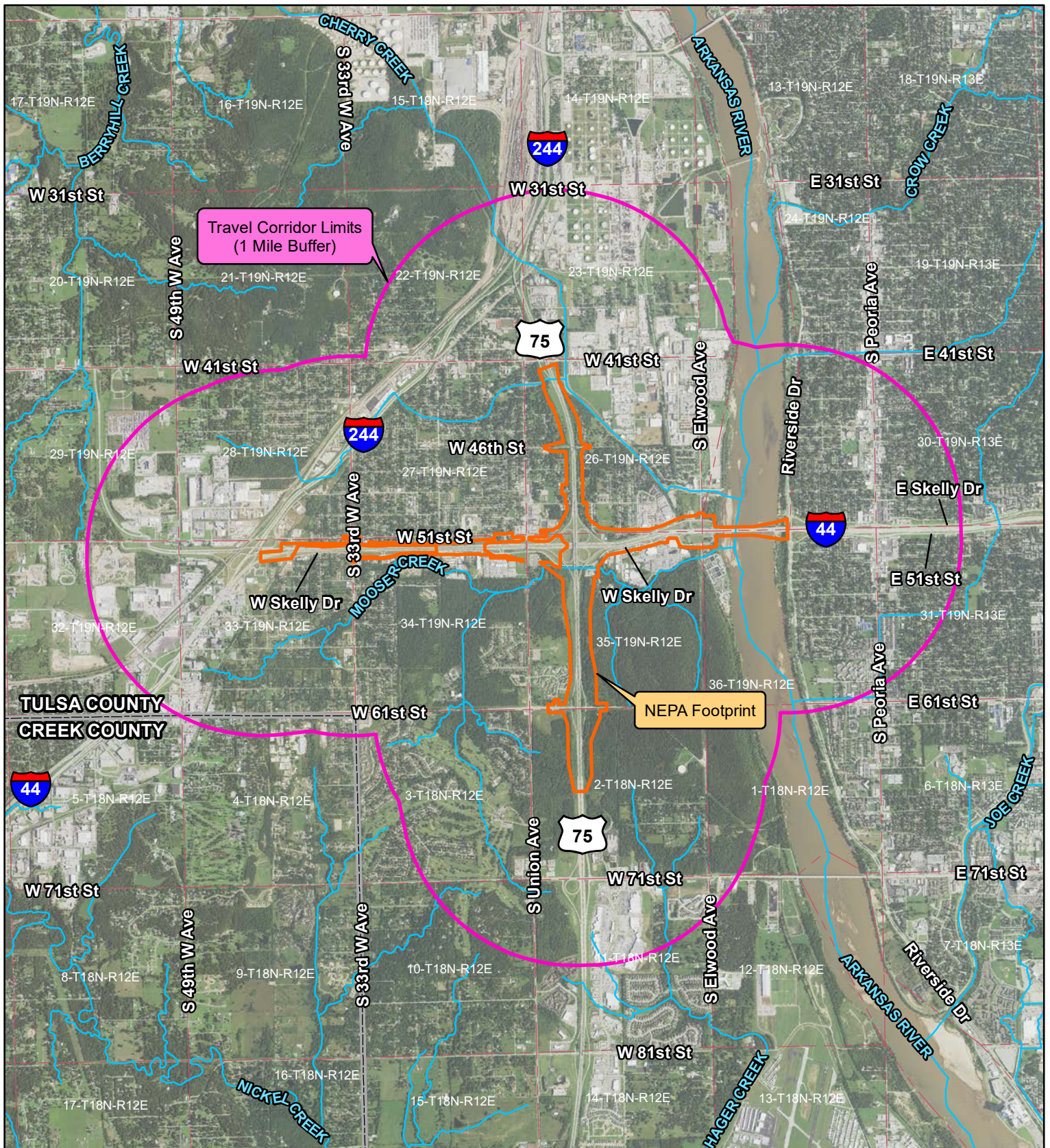
- NEPA Footprint
- County Line
- Section Line
- USGS Stream
- Forested/Wooded Habitat

Figure 4b - Northern Long-eared Bat (NLEB) Habitat Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



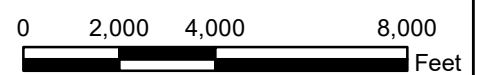
Source: USDA NAIP 2019 Digital Orthophotography



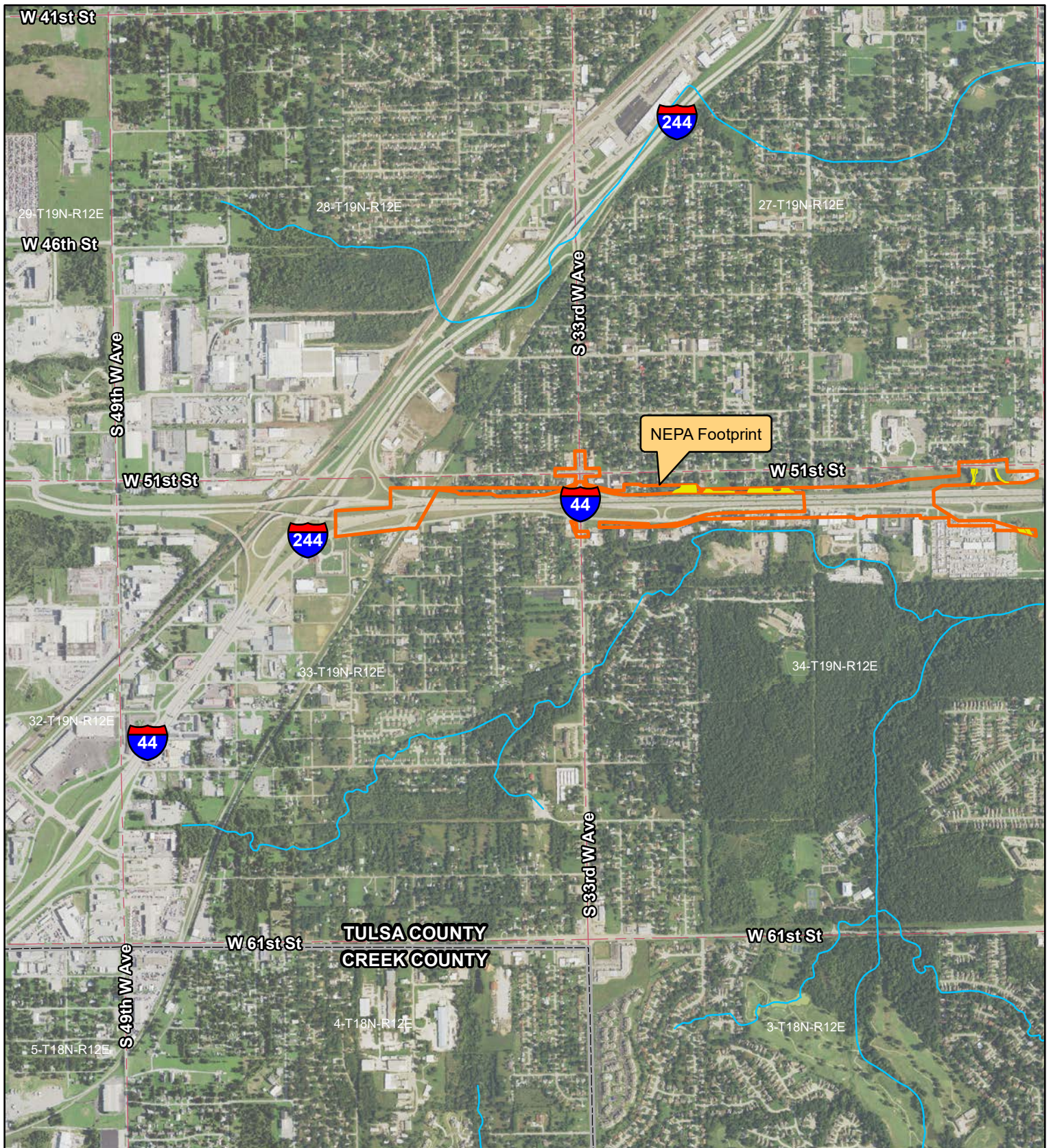
- NEPA Footprint
- County Line
- Section Line
- USGS Stream
- Travel Corridor Limits

Figure 5 - Northern Long-eared Bat (NLEB) Travel Corridor Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Source: USDA NAIP 2019 Digital Orthophotography








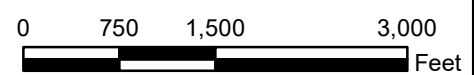
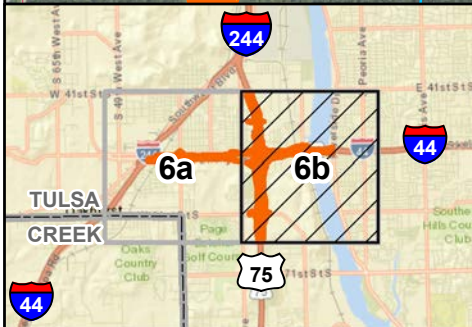
-  NEPA Footprint
-  County Line
-  Section Line
-  USGS Stream
-  ABB Habitat

Figure 6a - American Burying Beetle (ABB) Habitat Delineation Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



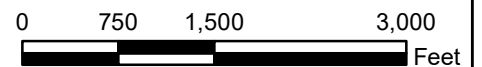
Source: USDA NAIP 2019 Digital Orthophotography



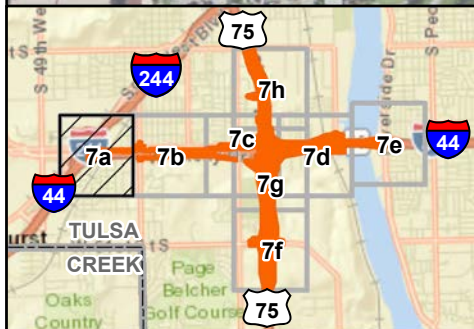
- NEPA Footprint
- County Line
- Section Line
- USGS Stream
- ABB Habitat

Figure 6b - American Burying Beetle (ABB) Habitat Delineation Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



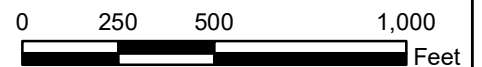
Source: USDA NAIP 2019 Digital Orthophotography



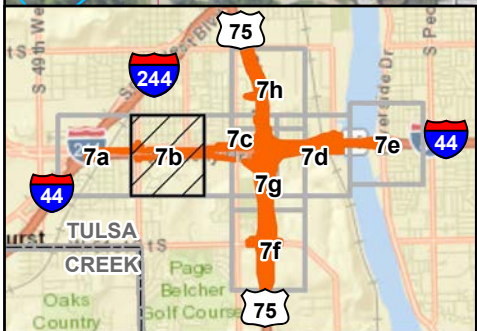
- NEPA Footprint
- County Line
- Section Line
- USGS Stream

Figure 7a - Bridge & Culvert Structures Location Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



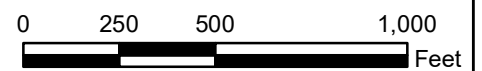
Sources: USDA NAIP 2019 Digital Orthophotography



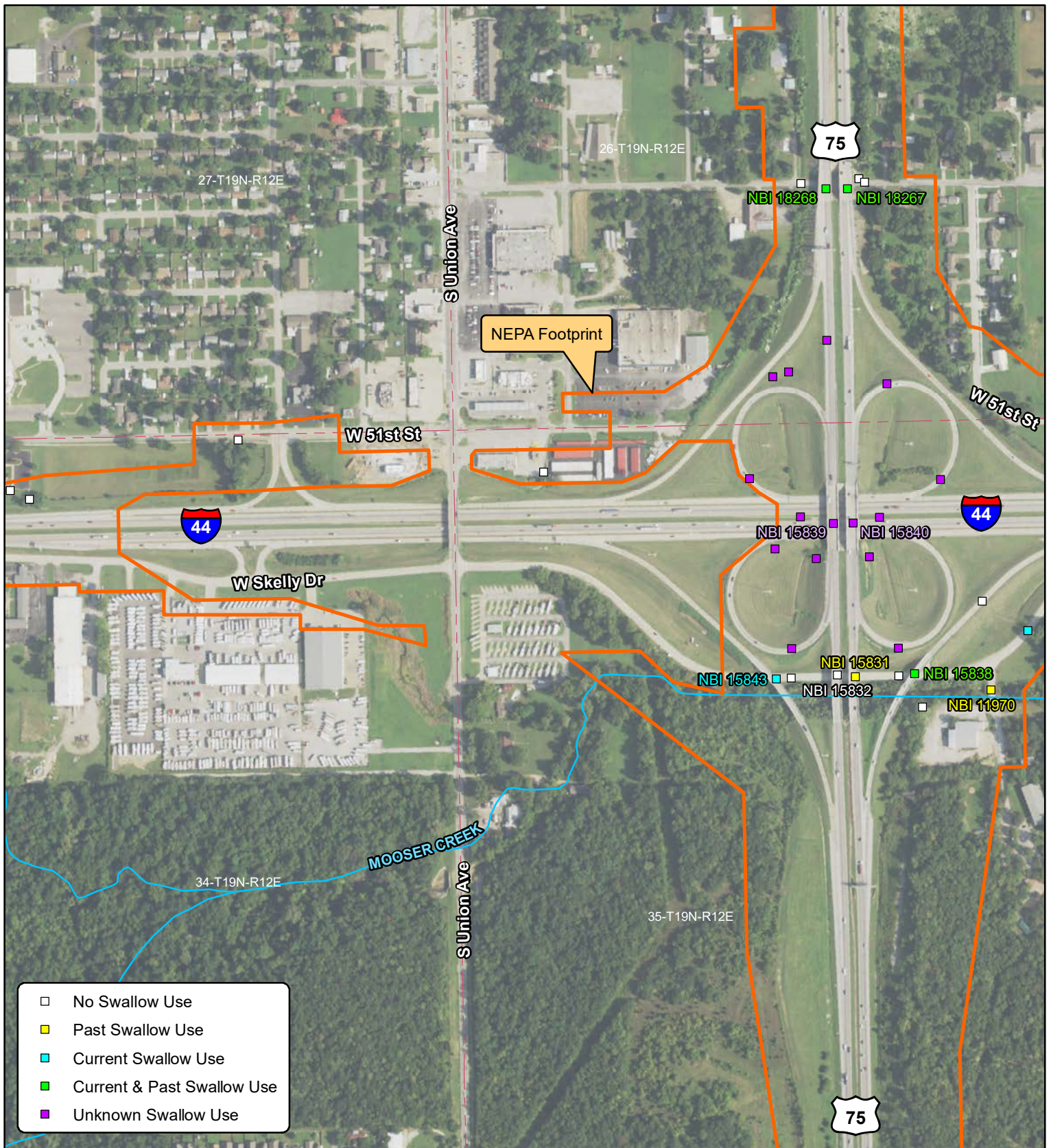
- NEPA Footprint
- County Line
- Section Line
- USGS Stream

Figure 7b - Bridge & Culvert Structures Location Map

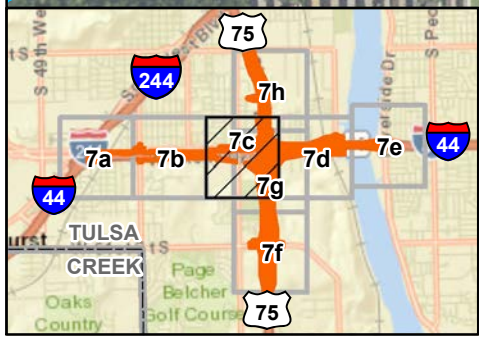
JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Sources: USDA NAIP 2019 Digital Orthophotography



- No Swallow Use
- Past Swallow Use
- Current Swallow Use
- Current & Past Swallow Use
- Unknown Swallow Use



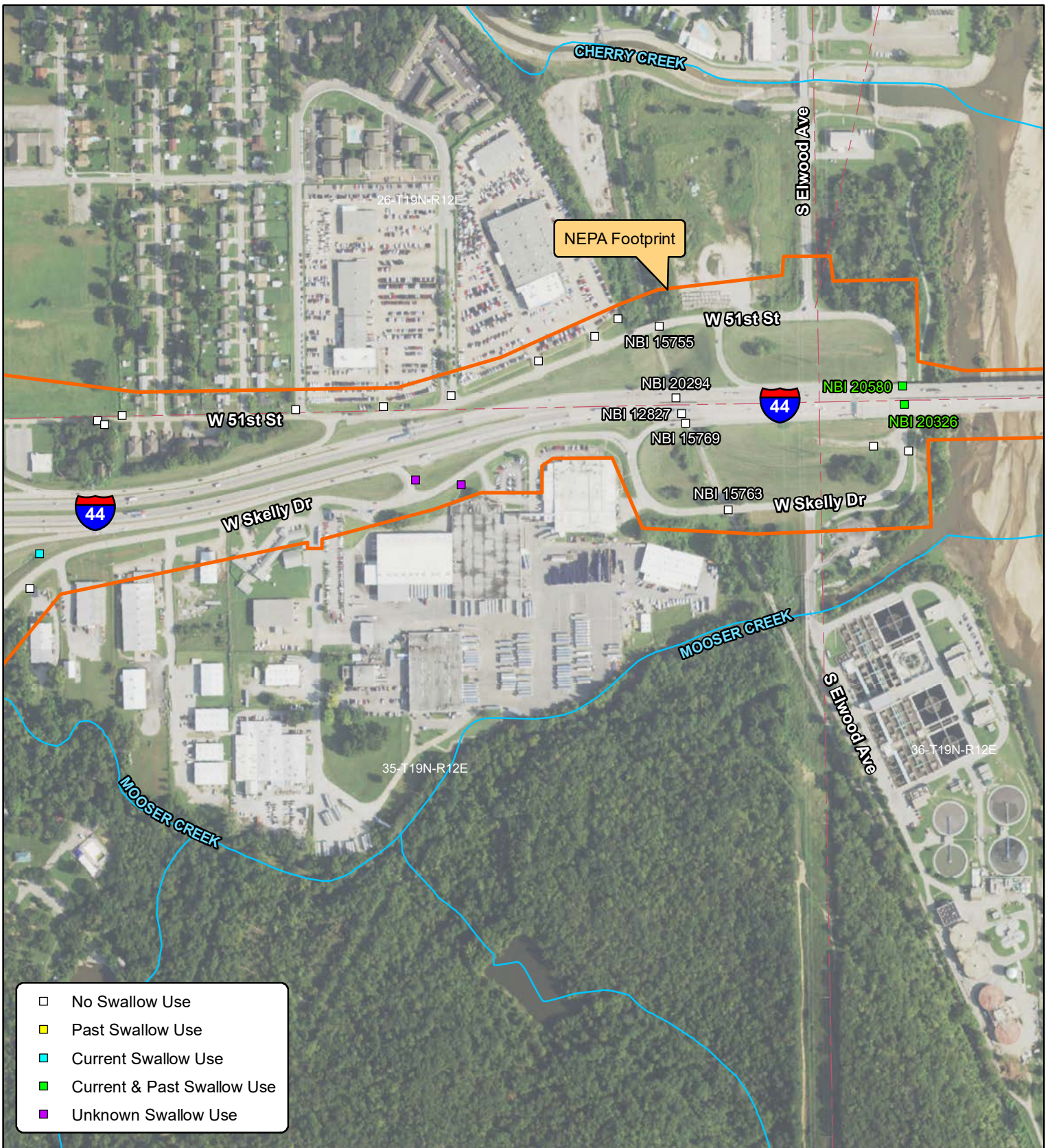
- ▭ NEPA Footprint
- ▭ County Line
- - - Section Line
- USGS Stream

Figure 7c - Bridge & Culvert Structures Location Map

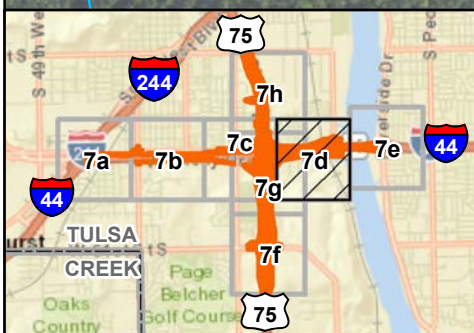
JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Sources: USDA NAIP 2019 Digital Orthophotography



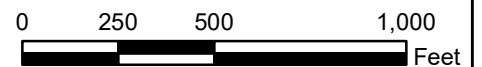
- No Swallow Use
- Past Swallow Use
- Current Swallow Use
- Current & Past Swallow Use
- Unknown Swallow Use



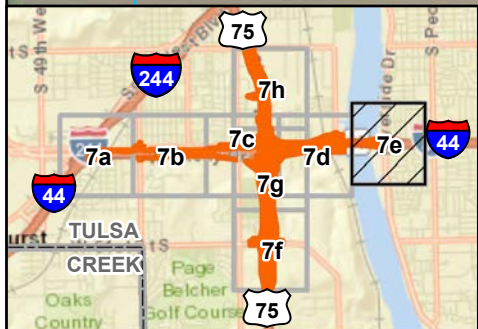
- ▭ NEPA Footprint
- ▭ County Line
- - - Section Line
- USGS Stream

Figure 7d - Bridge & Culvert Structures Location Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Sources: USDA NAIP 2019 Digital Orthophotography







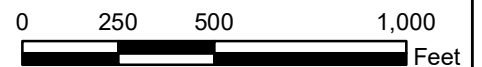
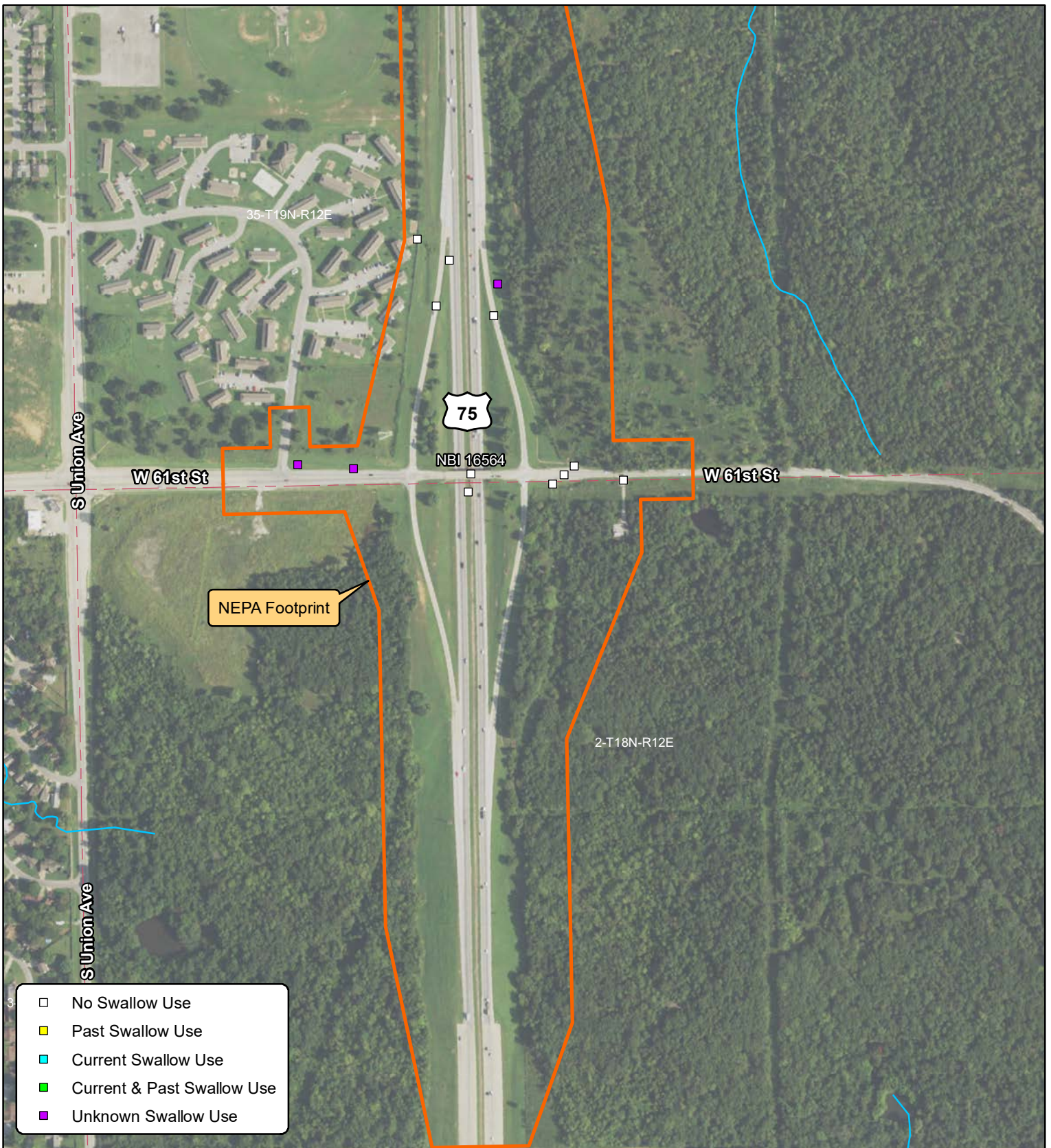
-  NEPA Footprint
-  County Line
-  Section Line
-  USGS Stream

Figure 7e - Bridge & Culvert Structures Location Map

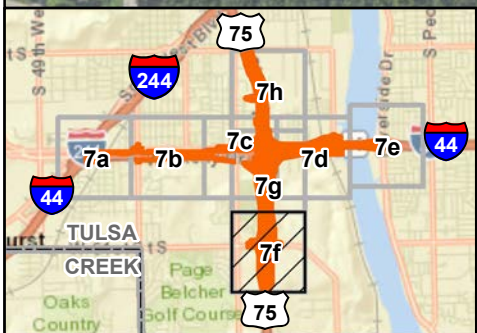
JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Sources: USDA NAIP 2019 Digital Orthophotography



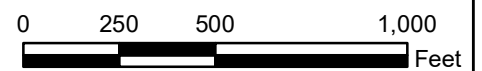
- No Swallow Use
- Past Swallow Use
- Current Swallow Use
- Current & Past Swallow Use
- Unknown Swallow Use



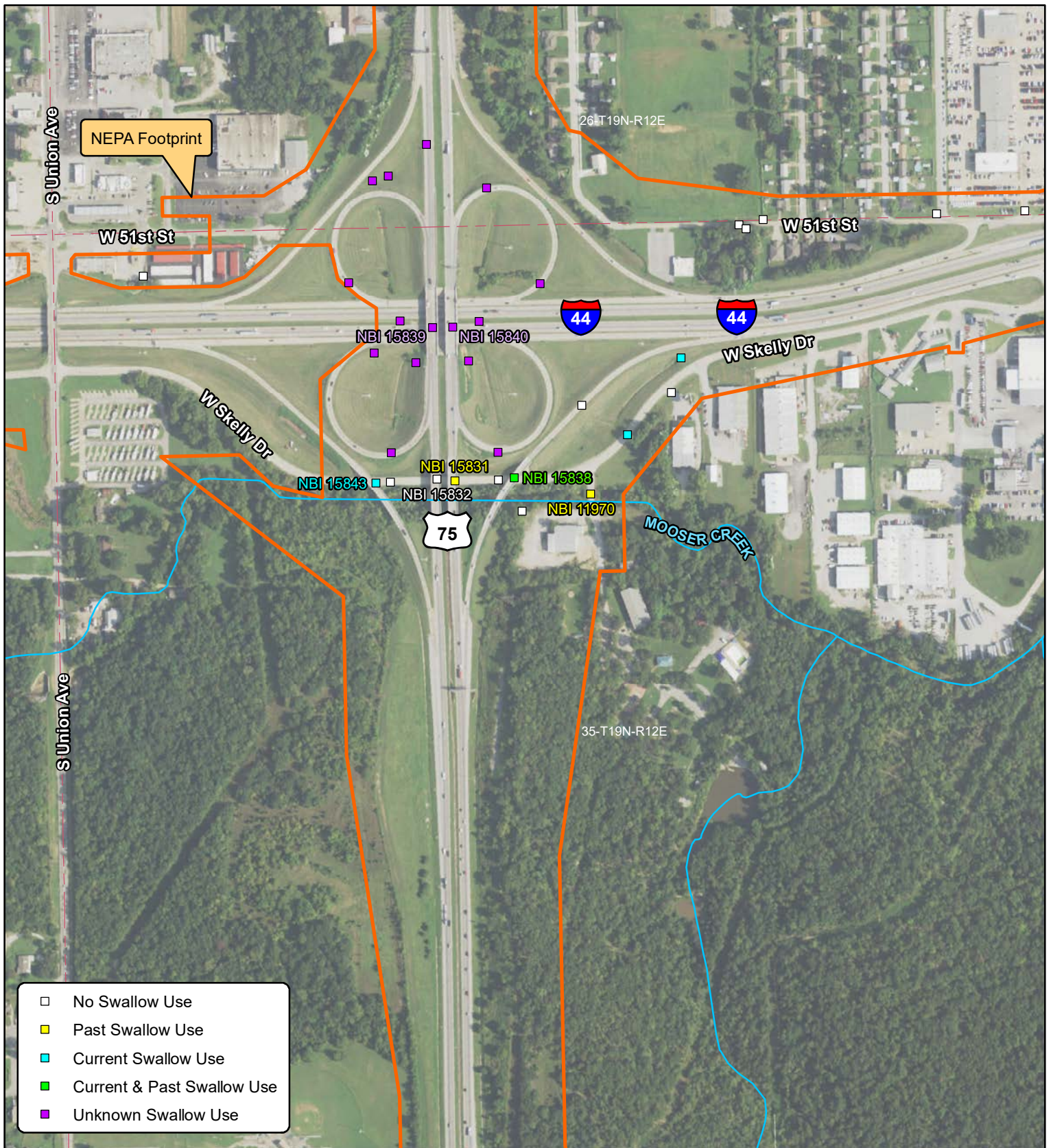
- ▭ NEPA Footprint
- ▭ County Line
- ▭ Section Line
- ▭ USGS Stream

Figure 7f - Bridge & Culvert Structures Location Map

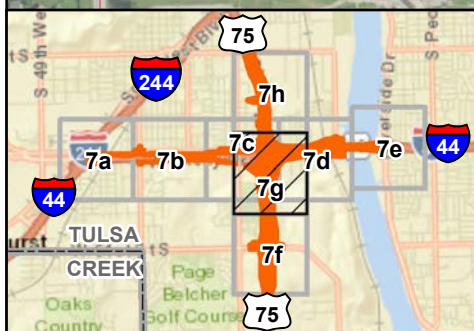
JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Sources: USDA NAIP 2019 Digital Orthophotography



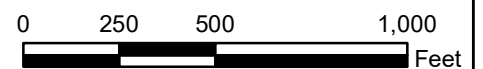
- No Swallow Use
- Past Swallow Use
- Current Swallow Use
- Current & Past Swallow Use
- Unknown Swallow Use



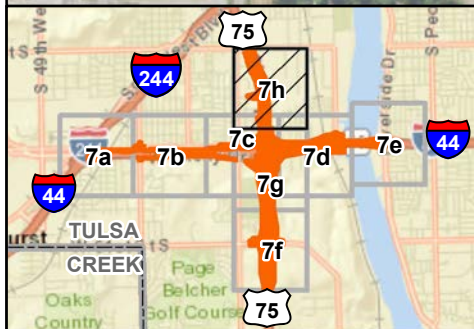
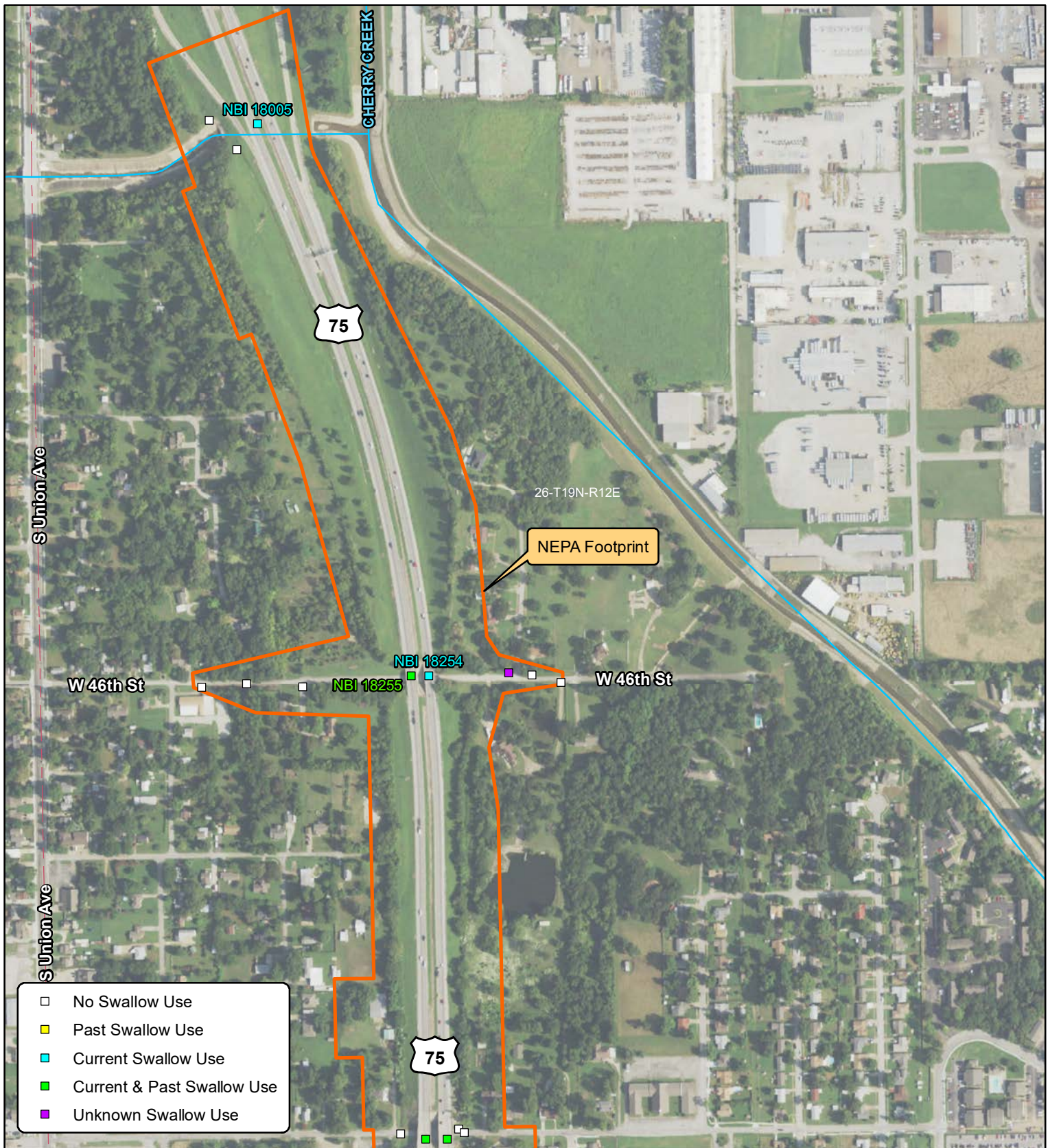
- ▭ NEPA Footprint
- ▭ County Line
- Section Line
- USGS Stream

Figure 7g - Bridge & Culvert Structures Location Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



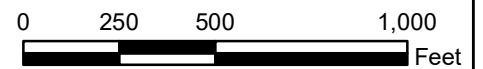
Sources: USDA NAIP 2019 Digital Orthophotography



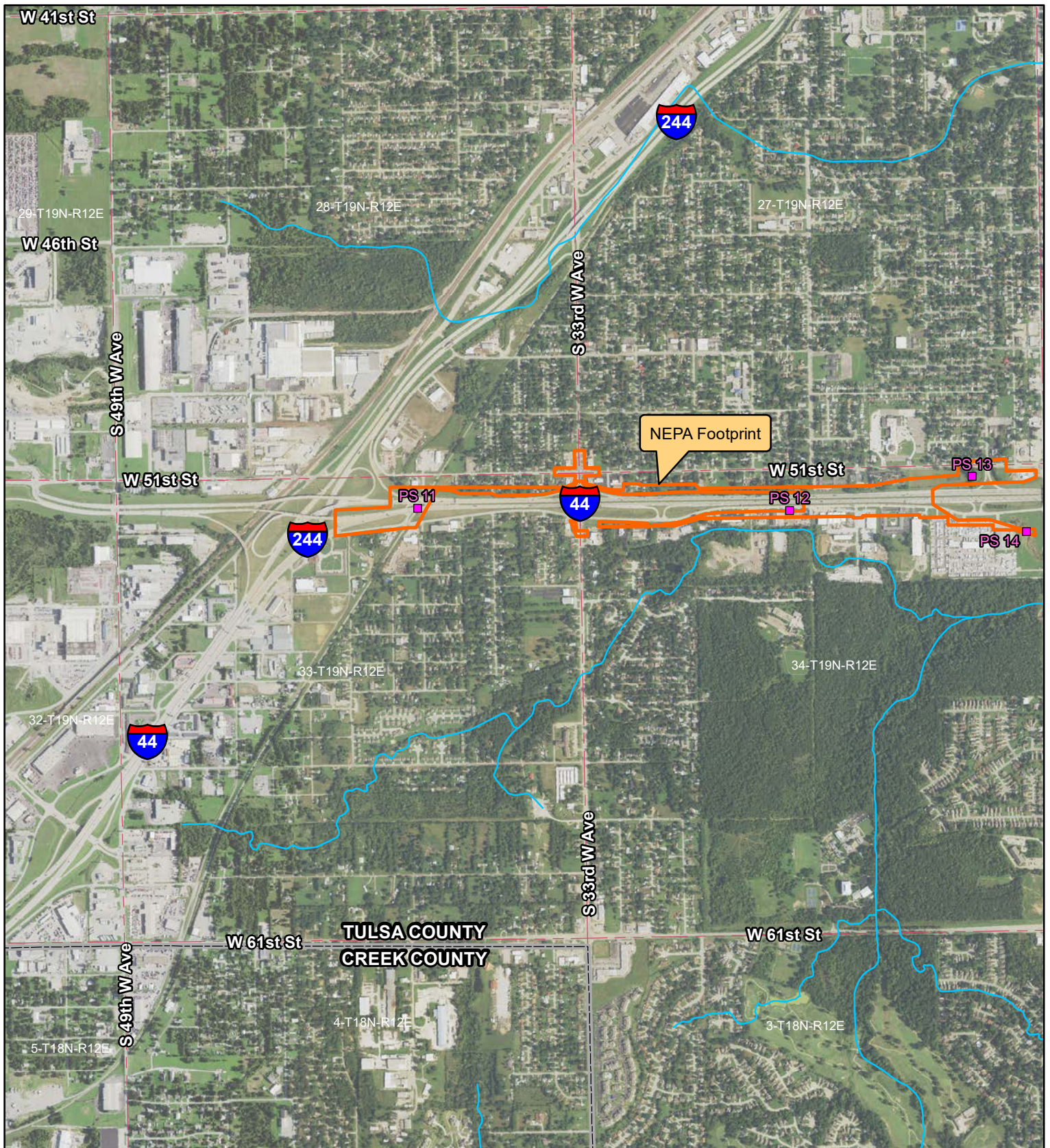
- NEPA Footprint
- County Line
- Section Line
- USGS Stream

Figure 7h - Bridge & Culvert Structures Location Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



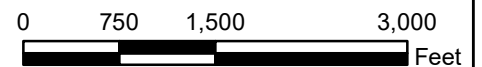
Sources: USDA NAIP 2019 Digital Orthophotography



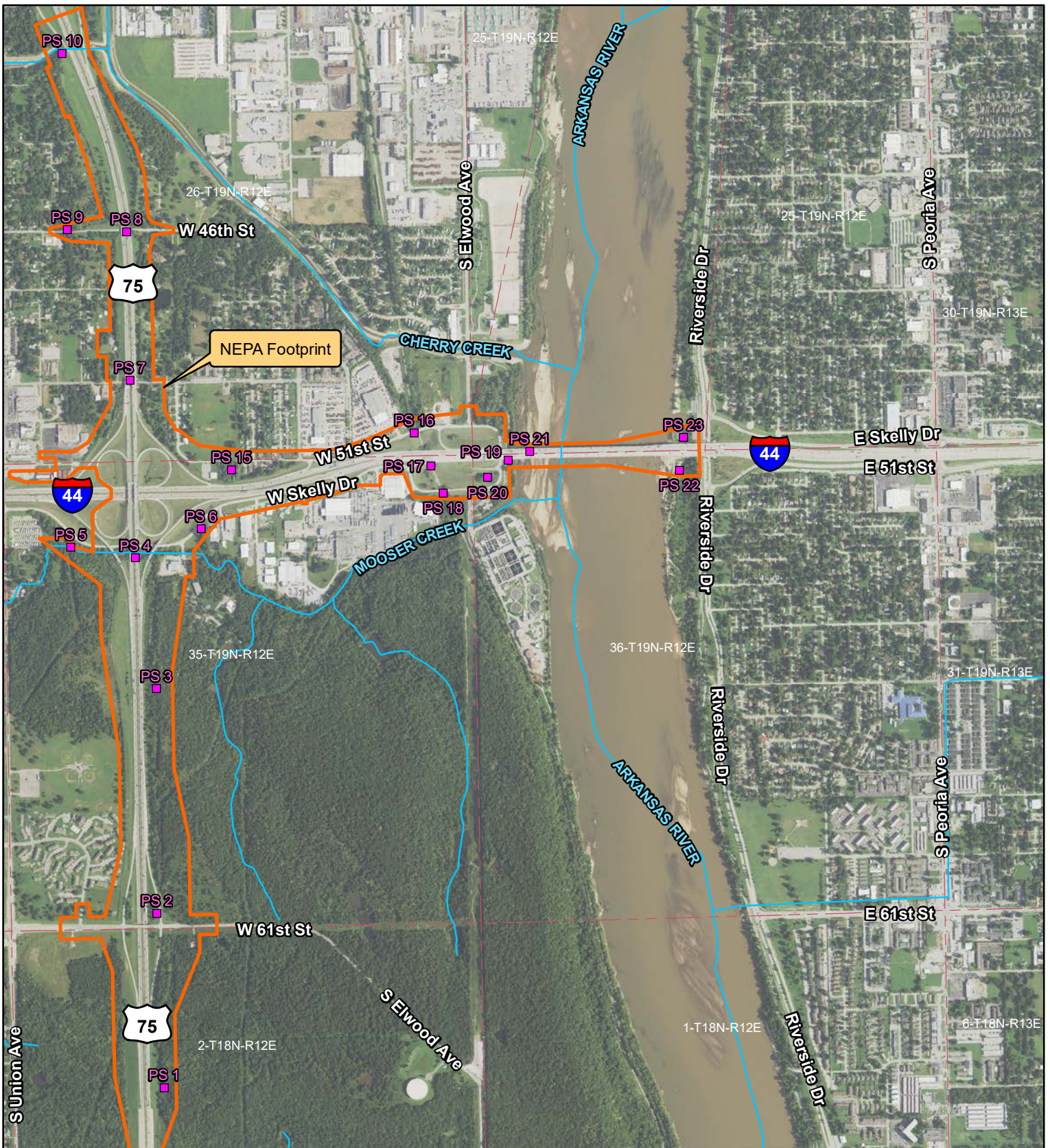
- NEPA Footprint
- County Line
- Section Line
- USGS Stream
- Photo Site (PS)

Figure 8a - Photo Log Location Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



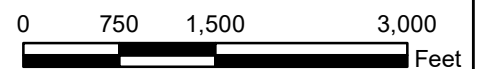
Source: USDA NAIP 2019 Digital Orthophotography



- NEPA Footprint
- County Line
- Section Line
- USGS Stream
- Photo Site (PS)

Figure 8b - Photo Log Location Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



Source: USDA NAIP 2019 Digital Orthophotography



▲ (PS 1): View of wooded habitat along US-75. This is suitable ABB and NLEB habitat. View is to the south.



▲ (PS 2): View of US-75 from the W. 61st Street bridge (NBI 16564). View is to the south.



▲ (PS 2): View of NBI 16564. Bridge was not fully inspected due to height and safety. View is to the west.



▲ (PS 2): View of wooded habitat along US-75. This is suitable ABB and NLEB habitat. View is to the east.



▲ (PS 2): View of W 2, a small PEM wetland in the forested habitat east of US-75. View is to the southeast.



▲ (PS 2): View of W 1, a small PEM wetland in the forested habitat east of US-75. View is to the south.



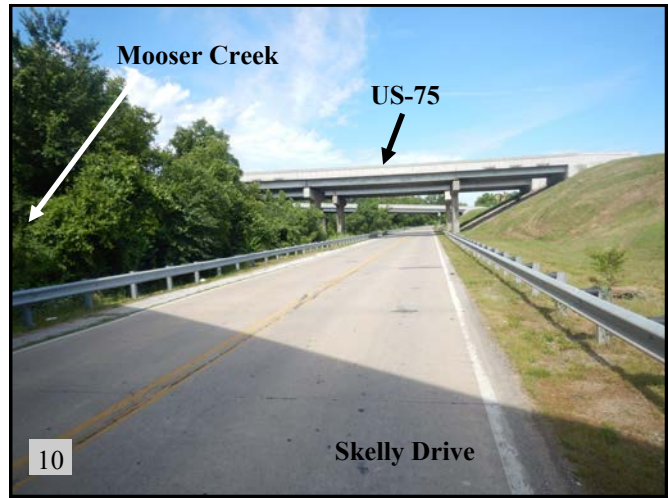
▲(PS 3): View of wooded habitat along US-75. This is suitable ABB and NLEB habitat. View is to the east.



▲(PS 4): View of shallow rocky habitat at Mooser Creek (OW 1). View is upstream to the west.



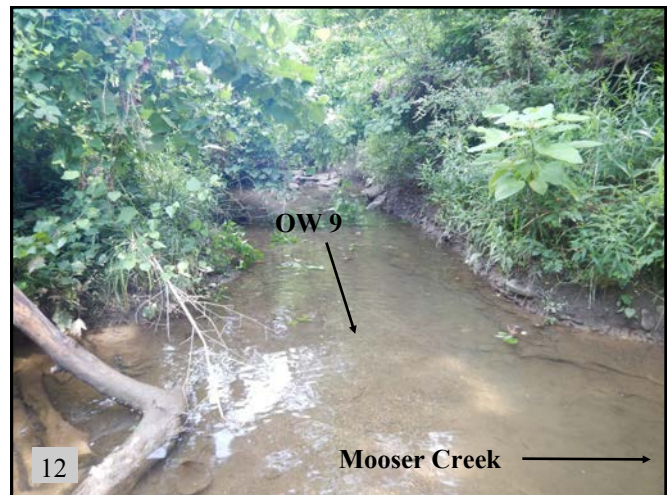
▲(PS 4): View of deep water habitat at Mooser Creek (OW 1). View is downstream to the east.



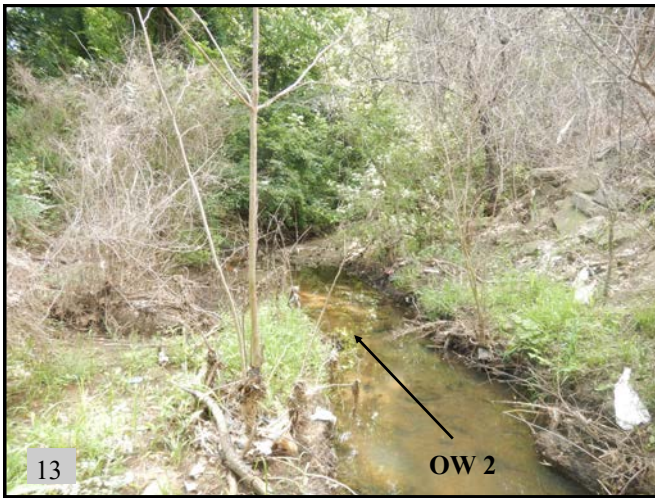
▲(PS 4): View of Skelly Drive located north of Mooser Creek (OW 1). View is to the west.



▲(PS 4): View of OW 3, a tributary to Mooser Creek (OW 1). View is downstream to the north.



▲(PS 5): View of Mooser Creek (OW 1) and OW 9 confluence. View is to the upstream of OW 9, to the north.



▲(PS 6): View of OW 2, an ephemeral tributary to Mooser Creek. View is downstream to the south.



▲(PS 7): View under NBI 18268 over W. 49th St. View is to the south.



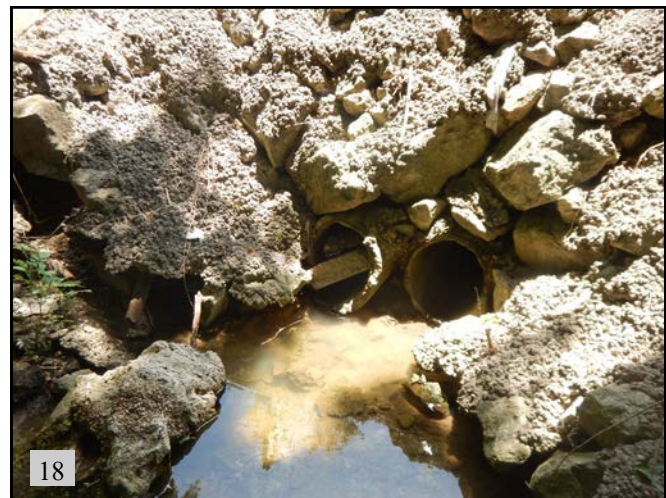
▲(PS 7): View of barn swallow nest (circled) under NBI 18267 over W. 49th St. View is to the south.



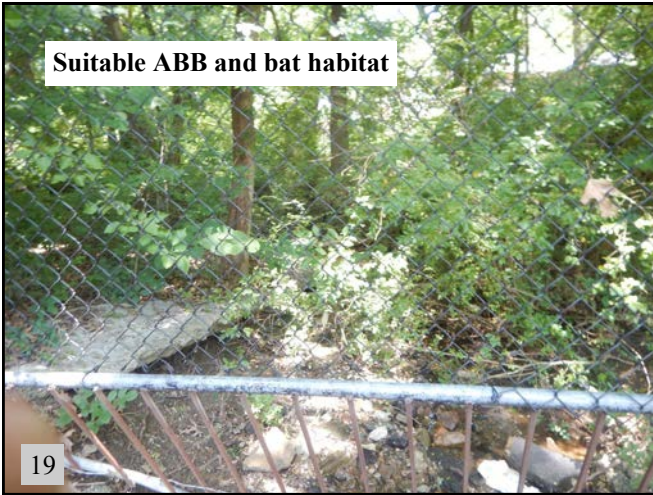
▲(PS 8): View of barn swallow nest (circled) under NBI 18254. View is to the south.



▲(PS 8): View NBI 18255. View is to the south.



▲(PS 9): View of double culverts under W. 46th Street at OW 4. View is upstream to the south.



▲(PS 9): View of habitat along US-75 around OW 4, an ephemeral stream. View is downstream to the north.



▲(PS 10): Triple cell RCB over Cherry Creek (OW 5). View is downstream to the east.



▲(PS 7): Concrete lined Cherry Creek (OW 5). View is upstream to the west.



▲(PS 11): Inspecting bridge for bat and/or migratory bird use. View is to the west.



▲(PS 12): Typical view of I-44. View is to the northeast.



▲(PS 13): View of OW 6 (north segment), an ephemeral stream. View is downstream to the south.



▲ (PS 14): View of OW 6 (south segment) with no riparian habitat. View is upstream to the northwest.



▲ (PS 15): View of the concrete lined channel and stone banks of OW 7. View is downstream to the south.



▲ (PS 16): View of NBI 15755. Bridge could not be fully inspected due to height. View is to the west.



▲ (PS 17): View of NBIs 20294, 12827, and 15769. View is to the southeast.



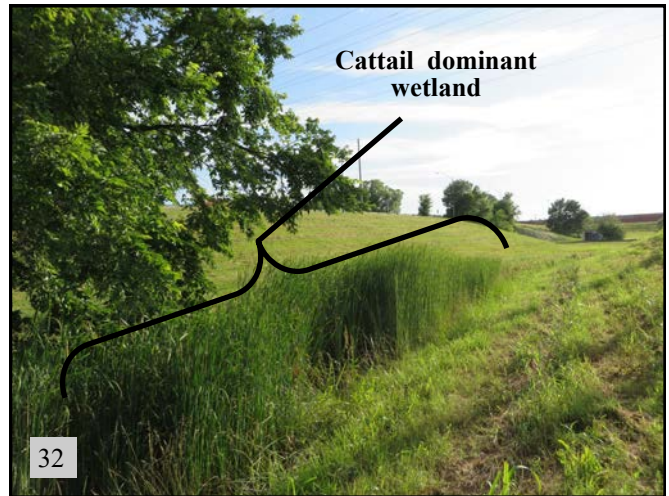
▲ (PS 18): View of NBI 15763. Bridge could not be fully inspected due to height. View is to the southeast.



▲ (PS 19): View of the Arkansas River (OW 8) taken in 2019. View is upstream to the northeast.



▲(PS 19): View of the Arkansas River (OW 8) in 2019. View is to the east.



▲(PS 20): View of W 3, an emergent wetland just west of the Arkansas River. View is to the southwest.



▲(PS 21): View of a PSS wetland (Wetland 4). View is to the north.



▲(PS 21): View of a PEM wetland (Wetland 5). View is to the southeast.



▲(PS 21): View of a PEM wetland (Wetland 6A). View is to the northwest.



▲(PS 21): View of a PEM wetland (Wetland 6B). View is to the northeast.



▲(PS 21): View of the Arkansas River (OW 8) in 2020. View is to the east.



▲(PS 22): View of Wetland 7A, an emergent wetland on the east floodplain terrace of the Arkansas River.



▲(PS 22): View of a PEM wetland (Wetland 7B). View is to the north.



▲(PS 22): View of wooded upland habitat along the east terrace of the Arkansas River. View is to the south.



▲(PS 22): View of the Arkansas River in 2020 (OW 8). View is upstream to the northwest.



▲(PS 23): View of wooded upland habitat along the east terrace of the Arkansas River. View is to the east.



▲ (PS 23): View of open grassland along the east terrace of the Arkansas River. View is to the west.



▲ (PS 23): View of the Arkansas River (OW 8) in 2020. View is downstream to the south.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Oklahoma Ecological Services Field Office
9014 East 21st Street
Tulsa, OK 74129-1428
Phone: (918) 581-7458 Fax: (918) 581-7467
<http://www.fws.gov/southwest/es/Oklahoma/>

In Reply Refer To:

February 11, 2021

Consultation Code: 02EKOK00-2019-SLI-1945

Event Code: 02EKOK00-2021-E-02246

Project Name: I-44 & US-75 Interchange with I-44 Corridor Ultimate Reconstruction

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Non-federal entities conducting activities that may result in take of listed species should consider seeking coverage under section 10 of the ESA, either through development of a Habitat Conservation Plan (HCP) or, by becoming a signatory to the General Conservation Plan (GCP) currently under development for the American burying beetle. Each of these mechanisms provides the means for obtaining a permit and coverage for incidental take of listed species during otherwise lawful activities.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

[http://](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html)

www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit through our Project Review step-wise process <http://www.fws.gov/southwest/es/oklahoma/OKESFO%20Permit%20Home.htm>.

Attachment(s):

- Official Species List
-

- USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Oklahoma Ecological Services Field Office

9014 East 21st Street

Tulsa, OK 74129-1428

(918) 581-7458

Project Summary

Consultation Code: 02EKOK00-2019-SLI-1945

Event Code: 02EKOK00-2021-E-02246

Project Name: I-44 & US-75 Interchange with I-44 Corridor Ultimate Reconstruction

Project Type: TRANSPORTATION

Project Description: The existing US-75 roadway has two 12-foot driving lanes in each direction (four lanes total) divided with a 30-foot grass median with two four-foot inside shoulders and two 10-foot outside shoulders. The US-75 roadway has an average annual daily traffic (AADT) volume of 76,555 vehicles per day (vpd), with a future projected AADT of 90,429 vpd. The current and future traffic volumes on US-75 require additional driving lanes to provide an adequate and safe level of service (LOS). There are several vertical curves in the corridor that do not meet design standards and do not allow for adequate sight distance for vehicles to reduce speed at critical moments.

The existing I-44 roadway has two 12-foot driving lanes in each direction (four lanes total) divided with a 30-foot grass median with two four-foot inside shoulders and two 10-foot outside shoulders. This portion of I-44 has a high accident rate, the latest 10-year average number being 4 times the statewide average for similar highways. Rear end collisions account for almost half of the accidents, which is indicative of congested conditions. The I-44 roadway has an AADT of 89,922 vpd, with a future projected AADT of 100,660 vpd. In the I-44 corridor the current and future traffic volumes also require addition driving lanes to provide an adequate and safe LOS. There are 19 existing bridges throughout the corridor study area, including the interchange ramps at US-75. The decks, substructures and superstructures of all bridges have relatively low condition ratings, some with deficient horizontal and vertical curves, and six of the bridges are rated either structurally deficient or functionally obsolete. The purpose of the project is to accommodate existing and future growth and traffic demand, decrease congestion, and improve access and mobility.

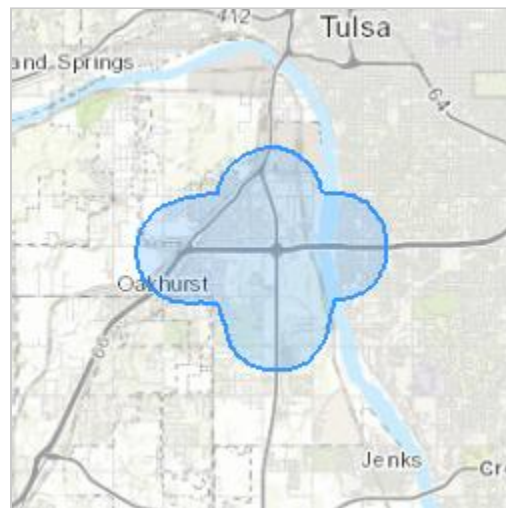
The proposed improvement along US-75 will be reconstructing the mainline beginning at the full width pavement section approximately 3,000 feet north of W. 71st Street, extending north through the I-44 interchange 2.0 miles with four 12-foot-wide concrete driving lanes in each direction (eight lanes total) on the existing alignment, widening to the inside with concrete median barrier and 13-foot-wide inside shoulders and 12-foot-wide outside shoulders. Initially, US-75 will be striped for 3 lanes in each direction until such time as the remainder of the corridor is widened to 8 lanes. The US-75 interchange with W. 61st Street will be modified, and a frontage road will be constructed with two 12-foot

driving lanes on the east side of US-75 extending north from W. 61st Street approximately .85-mile intersecting with W. Skelly Drive.

The proposed improvement along I-44 will be to reconstruct the mainline beginning at the junction of I-244, extending east through the US-75 interchange approximately 2.85 miles to just east of the Arkansas River, with three 12-foot-wide concrete driving lanes in each direction (six lanes total) on the existing alignment, widening to the inside with concrete median barrier and 13-foot-wide inside shoulders and 12-foot-wide outside shoulders. In addition, 12-foot wide auxiliary lanes will be constructed on each highway to provide exit or entry lanes to and from interchange ramps. W. Skelly Drive will be reconstructed with two 12-foot-wide driving lanes on an offset alignment to the south to accommodate the additional highway width and new ramp configuration. W. 51st Street will be extended east and constructed across US-75 with a new span bridge over, with two 12-foot driving lanes with curb and gutter and will be constructed on a slight offset alignment to the south from Olympia Avenue to Indiana Avenue to better align with intersections.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.08621266199322,-96.01203035251103,14z>



Counties: Creek and Tulsa counties, Oklahoma

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot <i>Calidris canutus rufa</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

Insects

NAME	STATUS
American Burying Beetle <i>Nicrophorus americanus</i> Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/66	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Aug 31
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20

NAME	BREEDING SEASON
Harris's Sparrow <i>Zonotrichia querula</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Hudsonian Godwit <i>Limosa haemastica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Semipalmated Sandpiper <i>Calidris pusilla</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of

certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- [PEM1/SS1C](#)
- [PEM1Ah](#)
- [PEM1C](#)
- [PEM1Ch](#)

FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1/SS1A](#)
- [PFO1A](#)
- [PFO1C](#)
- [PSS1A](#)

FRESHWATER POND

- [PUBFh](#)
- [PUBH](#)
- [PUBHh](#)
- [PUBHx](#)
- [PUSA](#)
- [PUSAh](#)
- [PUSAx](#)
- [PUSC](#)
- [PUSCh](#)
- [PUSCx](#)

RIVERINE

- [R2UBH](#)
 - [R2UBHx](#)
 - [R2USC](#)
 - [R4SBC](#)
 - [R5UBF](#)
-

WATERS AND WETLANDS EVALUATION REPORT

For

County	Tulsa	JP Number	33788(08) 33788(09) 33788(10) 33788(11)	Project Number	J3-3788(08) J3-3788(09) J3-3788(10) J3-3788(11)
Road Number	I-44 & US-75	Water Body Name		Arkansas River, Mooser Creek, Cherry Creek and Tributaries to Mooser Creek	
ROW Date	2022	Let Date	WP2&5: 2027 WP3&4: unkn	Project Length	3 Miles Along I-44 2.5 Miles Along US-75
Project General Location		I-44 from I-244 to the Arkansas River, including the I-44/US-75 Interchange in Tulsa, OK			
Project Statement		I-44/US-75 Interchange Reconstruction From I-244 Through Arkansas River			

Prepared for:
Oklahoma Department of Transportation
Environmental Programs Division
200 NE 21st Street
Oklahoma City, OK 73105

Prepared by:

Biologist Name	Megan E. Philips-Schaap and Lacey Stanley
Company/Agency Name	Garver
Address	6450 South Lewis
City, State Zip	Tulsa, OK 74136

Report Date:	July 8, 2019
Revised Report Date:	November 6, 2020
Initial Field Date:	May 9 and June 11, 2019
Additional Field Date:	September 30 and October 1, 2020

PROJECT OVERVIEW

Project Type (Choose one)	Check ✓
Bridge and Approaches or bridge widening/structure extension	
Grade, Drain, Surface and Bridge	✓
Grade, Drain and Surface	
Asphalt Overlay Resurfacing	
Widen and Resurface existing lanes	
Pavement Reconstruction or rehabilitation	
Bridge Rehabilitation	
Safety Improvements (Cable Barrier, Guardrail, signage)	
Intersection Modifications	
Safe Routes to School (Describe)	
Enhancements (Describe)	
Other (I-44/US-75 Interchange Modifications)	✓

Description of the **existing** bridge/roadway

The existing US-75 roadway has two 12-foot driving lanes in each direction (four lanes total) divided with a 30-foot grass median with two four-foot inside shoulders and two 10-foot outside shoulders. The US-75 roadway has an average annual daily traffic (AADT) volume of 76,555 vehicles per day (vpd), with a future projected AADT of 90,429 vpd. The current and future traffic volumes on US-75 require additional driving lanes to provide an adequate and safe level of service (LOS). There are several vertical curves in the corridor that do not meet design standards and do not allow for adequate sight distance for vehicles to reduce speed at critical moments.

The existing I-44 roadway has two 12-foot driving lanes in each direction (four lanes total) divided with a 30-foot grass median with two four-foot inside shoulders and two 10-foot outside shoulders. This portion of I-44 has a high accident rate, the latest 10-year average number being four times the statewide average for similar highways. Rear end collisions account for almost half of the accidents, which is indicative of congested conditions. The I-44 roadway has an AADT of 89,922 vpd, with a future projected AADT of 100,660 vpd. In the I-44 corridor, the current and future traffic volumes also require additional driving lanes to provide an adequate and safe LOS. There are 22 existing bridges throughout the corridor study area, including the interchange ramps at US-75. The decks, substructures, and superstructures of all bridges have relatively low condition ratings, some with deficient horizontal and vertical curves, and five of the bridges are rated either structurally deficient or functionally obsolete.

Description of proposed improvements SPECIFIC TO THIS PROJECT

The Oklahoma Department of Transportation (ODOT) completed an Environmental Assessment (EA) dated June 17, 2002 for US-75 from SH-67 (151st Street) to I-44 in Tulsa County, a distance of approximately 10 miles. The EA evaluated widening of US-75 from four to six or eight lanes (depending on location) and included the reconstruction of the I-44/US-75 interchange as a fully directional interchange with direct connection, flyover ramps. The current project proposes widening of US-75 from four to six lanes between W. 61st Street and W. 41st Street, widening of I-44 from four to six lanes between I-244 and the Arkansas River, and reconstruction of the I-44/US-75 interchange. Therefore, ODOT is performing additional studies to cover the project extents.

The proposed improvement along US-75 will be reconstructing the mainline beginning at the full width pavement section approximately 3,000 feet north of W. 71st Street, extending north through the I-44 interchange 2.0 miles with four 12-foot-wide concrete driving lanes in each direction (eight lanes total) on the existing alignment. The project will widen US-75 to the inside with concrete median barrier and 13-foot-wide inside shoulders and 12-foot-wide outside shoulders. Initially, US-75 will be striped for three lanes in each direction until such time as the remainder of the corridor is widened to eight lanes. The US-75 interchange with W. 61st Street will be reconstructed, and a frontage road will be constructed with two 12-foot driving lanes on the east side of US-75 extending north from W. 61st Street approximately 0.85-mile intersecting with W. Skelly Drive.

The proposed improvement along I-44 will be to reconstruct the mainline beginning at the junction of I-244, extending east through the US-75 interchange approximately 2.85 miles to just east of the Arkansas River, with three 12-foot-wide concrete driving lanes in each direction (six lanes total) on the existing alignment. The project will widen I-44 to the inside with concrete median barrier and 13-foot-wide inside shoulders and 12-foot-wide outside shoulders. In addition, 12-foot wide auxiliary lanes will be constructed on each highway to provide exit or entry lanes to and from interchange ramps. W. Skelly Drive will be reconstructed with two 12-foot-wide driving lanes on an offset alignment to the south to accommodate the additional highway width and new ramp configuration. W. 51st Street will be extended east and constructed over US-75 with a new span bridge that has two 12-foot driving lanes with curb and gutter and will be constructed on a slight offset alignment to the south from Olympia Avenue to Indiana Avenue to better align with intersections.

The project will construct or reconstruct several existing bridges in order to correct structural and/or geometric deficiencies, and to accommodate the widened highways and new interchange. Specific design details will be provided with authorization requests for each work package. The roadways will remain open during construction and traffic will be adjusted utilizing construction phasing and temporary crossovers or pavement widening as needed.

Work Package 1 was let for construction in September 2020. Work Package 2/5 includes improvements to US-75 from approximately 61st Street to 41st Street and includes the majority of the ramp bridges for the I-44/US-75 interchange. Work packages 2 and 5 will be constructed together. Work Package 3 will widen I-44 to eight lanes from approximately 2,650 feet east of

US-75 to the bridge over Arkansas River. The bridges over the Arkansas River are proposed to be widened and a new I-44 Bridge over Tulsa-Sapulpa Union Railroad will be constructed. At the northbound section of US-75 approaching the I-44 interchange, the roadway will widen to six lanes from approximately 2,100 feet south of I-44 to the south end of the bridge over Mooser Creek. The ramp connecting northbound US-75 to eastbound I-44 over Mooser Creek and Skelly Drive will be constructed. In addition, Skelly drive will be extended approximately 400 feet west of US-75 and east to the intersection of the I-44 Access Rd. I-44 access ramps, eastbound on ramp connecting I-44 to Skelly Dr., and westbound off ramp connecting I-44 to 51st St. are needed. The I-44 Access Rd. will be constructed from the intersection of Skelly Dr. to the connection with 51st Street. The US-75 Frontage Road will be constructed from approximately 900 feet north of 61st Street to intersection of Skelly Dr. including Mooser Creek. Regarding structural and non-structural walls, retaining walls are anticipated at the Pepsi Plant South of I-44, retaining walls are expected on the east side of US-75 along Turkey Mountain, US-75 Frontage Road and between the northbound US-75 to eastbound I-44 ramp and Skelly Dr, but no sound walls are anticipated. Work Package 4 will widen I-44 to six lanes from the I-244 junction to just west of Union Ave., reconstruct six service ramps (at 33rd W. Avenue and W. 51st Street) and approximately 0.80 mile of Skelly Drive will be reconstructed with two 12-foot-wide driving lanes on an offset alignment to the south. In addition, partial reconstruction of two system ramps at the west side of the I-44/US-75 interchange is proposed in Work Package 4.

As defined in the EA, the purpose and need of the project is to accommodate existing and future growth and traffic demand, decrease congestion, and improve access and mobility. The EA mentions the geometric design and physical condition of the roadway as contributing to these needs. The same conditions mentioned in the EA of insufficient capacity, substandard vertical and horizontal alignment, and inadequate and functionally obsolete interchanges continue to apply.

Project Environmental Study Footprint

Project Location		Environmental Study Footprint	
Section Range & Township	Lat/Long (NAD 83)	Dimensions	Acreage
S25-S28 and S33-S36, T19N, R12E; S2 and S3, T18N, R12E	North end of project (180 feet south of the US-75/W. 41 st St. overpass): 36.103802, -96.009269	3.0-mile long segment of I-44 ¹ on existing roadway alignment from I-244/I-44 interchange extending east to the Arkansas River, with widths varying from 35 feet to 225 feet from the existing pavement and from 245 feet to 555 feet at intersections (excluding the interchange).	350.5
	South end of project (0.5-mile north of the US-75/W. 71 st St. overpass): 36.068327, -96.006620		
	East end of project (west of Riverside Drive): 36.089949, -95.984828	2.5-mile long segment of US-75 beginning 3,000 feet north of 71 st Street and extending north to approximately 180 feet south of 41 st Street with widths varying from 40 feet to 475 feet from the existing pavement and from 165 feet to 805 feet at intersections (excluding the interchange).	
	West end of project (I-244/I-44 interchange): 36.088449, -96.039041		

¹ The west section of the Environmental Study Footprint along I-44 excludes segments included in projects JP 29693(04) and JP 29694(04).

Environmental Study Footprint Soils (NRCS Soil Survey Map)

Map Unit Name	Percent Slope	Drainage Class	Hydric Rating		Description
			YES	NO	
8	0 to 1	Well drained		√	Choska-Severn-Urban land complex, rarely flooded
11	3 to 12	Well drained		√	Coweta-Uran land-Eram complex
17	0 to 5	Not listed		√	Urban land-Dennis complex
25	1 to 8	Well drained		√	Kamie-Urban land complex
27	0 to 1	Well drained		√	Kiomatia loamy fine sand, frequently flooded
48	0 to 1	Moderately well drained	√		Radley silt loam, frequently flooded

Map Unit Name	Percent Slope	Drainage Class	Hydric Rating		Description
			YES	NO	
54	0 to 1	Somewhat poorly drained	√		Wynona-Urban land complex, occasionally flooded
NBRE	3 to 15	Somewhat poorly drained		√	Niotaze-Bigheart-Rock outcrop complex, very stony
NBUF	3 to 25	Somewhat poorly drained		√	Niotaze-Bigheart-Urban land complex

Environmental Study Footprint General Description and Vegetation Present

The study area is located south of downtown Tulsa in Tulsa County, Oklahoma. The 2.5-mile long segment of US-75 mainly consists of dense forested tracts and maintained herbaceous right-of-way (ROW) south of the I-44 interchange, and private residential properties and open maintained ROW north of the interchange. The 3.0-mile long segment of I-44 mainly consists of commercial properties, residential yards, and open maintained ROW both west and east of the interchange. The remainder of the study area is occupied by roadway, waterbodies, a few light industrial properties, and tree-lined fencerows. According to the 1956 (photorevised 1967) Sapulpa North, Okla. and the 1952 (photorevised 1967) Jenks, Okla. 7.5 minute United States Geological Survey (USGS) topographic quadrangles, three perennial streams (Arkansas River, Mooser Creek, and Cherry Creek) occur within the study footprint. In addition, seven ephemeral streams, nine wetlands, and one pond were identified during the field visit. Field work was conducted May 9 and June 11, 2019. According to the closest weather station (Brookside, KOKTULSA32) to the study area, the area received 5.94 inches of rainfall within the two weeks prior to the May 9th field investigation with the majority of the precipitation (3.16 inches) occurring April 30, 2019, which was nine days before the start of the May field investigation. The area received 2.88 inches of rainfall within the two weeks prior to the June 11th field investigation with the majority of the precipitation (1.36 inches) occurring May 29th, which was 13 days before the start of the June field investigation. Severe storms brought excess rain to the state of Oklahoma during the last two weeks of May causing major flooding across the state and including the study area. The normal rainfall for Tulsa in the month of May (1981-2010) is 5.82 inches; however, the total rainfall for May 2019 was 13.68 inches (Mesonet 2019). The normal annual total rainfall (1981-2010) for Tulsa is 40.87 inches and as of July 1, 2019, Tulsa has received 37.74 inches of rainfall in only six months. This rainfall, combined with large volumes of water released from the Keystone Dam upstream, resulted in the Arkansas River rising to over 18 feet (major flood stage) in Tulsa. Due to high waters, the Arkansas River and its potential associated features (e.g., ordinary high water mark [OHWM] and wetlands) were submerged during these 2019 floods. Additional field work was conducted on September 30 and October 1, 2020 to delineate areas not accessible in 2019. According to the closest weather station, the area received 1.30 inches of rainfall within the two weeks prior to the September 30th field investigation with the majority of the precipitation (1.14 inches) occurring September 22, 2020, which was eight days before the start of the September field investigation.

Terrestrial community types within the NEPA footprint includes riparian habitat, alluvial terrace (along the Arkansas River), palustrine emergent (PEM) wetland, palustrine scrub-shrub (PSS) wetland, upland wooded habitat, upland herbaceous, and ROW. Vegetation present within the riparian habitat predominately consist of black willow (*Salix nigra*), common hackberry (*Celtis occidentalis*), ash-leaf maple (*Acer negundo*), American elm (*Ulmus americana*), Shumard's oak (*Quercus shumardii*), silk tree (*Albizia julibrissin*), red maple (*Acer rubrum*), eastern red-cedar (*Juniperus virginiana*), eastern poison ivy (*Toxicodendron radicans*), flowering dogwood (*Cornus florida*), horsetail-spike-rush (*Eleocharis equisetoides*), river-bank grape (*Vitis riparia*), Virginia-creeper (*Parthenocissus quinquefolia*), horsebrier (*Smilax rotundifolia*), broad-leaf cat-tail (*Typha latifolia*), Johnson grass (*Sorghum halepense*), tall false rye grass (*Schedonorus arundinaceus*), Japanese honeysuckle (*Lonicera japonica*), sticky-willy (*Galium aparine*), and common dandelion (*Taraxacum officinale*). Vegetation present within the alluvial terrace habitat predominately consist of black willow, eastern cottonwood (*Populus deltoides*), slippery elm (*Ulmus rubra*), green ash (*Fraxinus pennsylvanica*), American elm, ash-leaf maple, red mulberry (*Morus rubra*), American pokeweed (*Phytolacca americana*), late-flowering thoroughwort (*Eupatorium serotinum*), blue mistflower (*Conoclinium coelestinum*), Johnson grass, spotted lady's-thumb (*Persicaria maculosa*), bristle grass (*Setaria* sp.), eastern poison ivy, great ragweed (*Ambrosia trifida*), crown grass (*Paspalum* sp.), sedge, (*Cyperus* sp.), wood-oats (*Chasmanthium* sp.), Canadian goldenrod (*Solidago canadensis*), prairie fleabane (*Erigeron strigosus*), coastal sandbur (*Cenchrus spinifex*), Bahia grass (*Paspalum notatum*), golden crownbeard (*Verbesina encelioides*), heart-leaf peppervine (*Ampelopsis cordata*), and grape (*Vitis* sp.). Vegetation present within the PEM and PSS habitats include pecan, common buttonbush (*Cephalanthus occidentalis*), peatree (*Sesbania herbacea*), deciduous holly (*Ilex decidua*), broad-leaf cat-tail, eared redstem (*Ammannia auriculata*), short-bristle horned beak sedge (*Rhynchospora corniculata*), swamp smartweed (*Persicaria hydropiperoides*), creeping primrose-willow (*Ludwigia repens*), Oklahoma sedge (*Carex oklahomensis*), black willow, Plowman's-wort (*Pluchea camphorata*), rough cocklebur (*Xanthium strumarium*), late-flowering thoroughwort, nimbleweed (*Muhlenbergia schreberi*), arrowhead (*Sagittaria* sp.), rice cut grass (*Leersia oryzoides*), and an aster (*Symphyotrichum* sp.). Vegetation present within the upland forest habitat predominately consist of pecan (*Carya illinoensis*), blackjack oak (*Quercus marilandica*), Shumard's oak, redbud (*Cercis canadensis*), ash-leaf maple, sugar-berry (*Celtis laevigata*), eastern red-cedar, Chinese privet (*Ligustrum sinense*), eastern poison ivy, Virginia-creeper, Canada goldenrod, prairie spiderwort (*Tradescantia occidentalis*), bushy bluestem (*Andropogon glomeratus*), swamp smartweed, Japanese honeysuckle, Queen Anne's-lace (*Daucus carota*), sedge (*Carex* sp.), and southern dewberry (*Rubus trivialis*). Vegetation present within the upland herbaceous and ROW habitat include Bermuda grass (*Cynodon dactylon*), Johnson grass, clover (*Trifolium* sp.), vetch (*Vicia* asp.), tall false rye grass, and crown grass.

WATERS AND WETLANDS EVALUATION

Data Sources Reviewed (list)

USGS 7.5 minute Quad	NWI Map	USACE Wetland Regional Supplement	Additional Resources Reviewed
1956 (photorevised 1967) Sapulpa North, Okla. 1952 (photorevised 1967) Jenks, Okla.	1989 Sapulpa North, Okla. 1980 Jenks, Okla.	Midwest Region	Google Earth NRCS Web Soil Survey USDA Plant Database

Wetlands and Ponds Summary Table

Field Sites	Type of Wetland or Pond	Cowardin Classification	Potential Jurisdictional Status	Acres within Environmental Study Footprint
Wetland 1 ¹	Emergent	PEM1G	Not Likely	0.18
Wetland 2 ¹	Emergent	PEM1G	Not Likely	0.08
Wetland 3 ¹	Emergent	PEM1F	Likely	0.04
Wetland 4	Scrub-Shrub	PSS6Jh	Likely	0.01
Wetland 5	Emergent	PEM1J	Likely	0.01
Wetland 6A	Emergent	PEM1J	Likely	0.57
Wetland 6B	Emergent	PEM1J	Likely	0.02
Wetland 7A	Emergent	PEM1J	Likely	0.03
Wetland 7B	Emergent	PEM1J	Likely	0.02
Pond 1 ¹	Man-made	PUB3Hx	Not Likely	0.11

¹Feature was delineated during the initial field investigation in 2019 when the flood event occurred.

Streams and Drainages Summary Table

Field Sites	Stream Name	USGS Mapped Status	Potential Jurisdictional Status	Acres within Environmental Study Footprint	Linear Feet within Environmental Study Footprint
OW 1 ²	Mooser Creek	Perennial	Likely	0.77	1,630
OW 2 ^{1, 2}	Tributary to Mooser Creek	Ephemeral	Likely	0.01	86
OW 3 ^{1, 2}	Tributary to Mooser Creek	Ephemeral	Likely	0.001	7
OW 4 ^{1, 2}	Tributary to Cherry Creek	Ephemeral	Likely	0.01	73
OW 5 ¹	Cherry Creek	Perennial	Likely	0.38	505
OW 6 ^{1, 2}	Tributary to Mooser Creek	Ephemeral	Likely	0.03	258
OW 7 ^{1, 2}	Tributary to Mooser Creek	Ephemeral	Likely	0.03	271
OW 8	Arkansas River	Perennial	Likely	7.13	388
OW 9 ^{1, 2}	Tributary to Mooser Creek	Ephemeral	Likely	0.02	142

¹ Feature was delineated during the initial field investigation in 2019 when the flood event occurred.

² Stream is not a USGS-mapped feature; therefore, the status was determined during the field investigation.

Streams and other linear aquatic features

OW 1 – Mooser Creek, a USGS-mapped perennial stream was observed as perennial during the field investigation. An estimated total of 1,630 linear feet (0.77 acre) of OW 1 occurs within the study footprint where it flows west to east through the study area and is a direct tributary to the Arkansas River. The stream velocity was high due to recent rain and flood events that recently occurred at the study area (see section *Environmental Study Footprint General Description and Vegetation Present*). The OHWM of OW 1 was observed between five to 30 feet wide with an estimated depth of 10 inches to two feet. The majority of OW 1's streambanks were gradually sloping with a good root system, and the streambank erosion potential is low. Within the study area, a wooded riparian zone of approximately 30 to 55 feet in width is present along the north bank of Mooser Creek. A wooded riparian zone of approximately 80 to > 100 feet in width is present along the south bank. The stream substrate was primarily clay and cobble and the water was clear amber in color. During the field investigation, a riffle, run, roots/root wads, undercut banks, rock ledges, algae on rocks and drift material were observed. Aquatic organisms observed

include frogs, tadpoles, fish and crayfish. Dominant riparian plant species observed include black willow, ash-leaf maple, silk tree, American elm, green ash, American sycamore (*Platanus occidentalis*), deciduous holly, eastern poison ivy, horsebrier, river-bank grape, Virginia-creeper, trumpet-creeper (*Campsis radicans*) and peppervine. This feature is likely subject to regulation by the USACE as it is a USGS-mapped perennial stream and a direct tributary to the Arkansas River.

OW 2 – An unnamed tributary to Mooser Creek, was observed as ephemeral during the field investigation. An estimated total of 86 linear feet (0.01 acre) of OW 2 occurs within the study footprint where it flows north to south in the study area and is a direct tributary to Mooser Creek. The OHWM of OW 2 was observed between four to 10 feet wide with an estimated depth of 0.5 inch to 12 inches. The streambanks were gradually sloping and well vegetated (primarily by trees), and the streambank erosion potential is low. Within the study area, a wooded riparian zone of approximately 70 feet in width is present along the west bank of OW 2. A wooded riparian zone of approximately 65 to > 100 feet in width is present along the east bank. The stream substrate was primarily clay and the water was clear dark brown in color. During the field investigation, a run, roots/root wads, undercut banks, rock ledges and drift material were observed. Aquatic organisms observed were frogs. Dominant riparian plant species observed include black willow, Shumard's oak, Virginia wild rye (*Elymus virginicus*), Johnson grass, eastern poison ivy, horsebrier and peppervine. This feature is likely subject to regulation by the USACE due to its offsite hydrologic connection to Mooser Creek, a USGS-mapped perennial stream.

OW 3 – An unnamed tributary to Mooser Creek, was observed as ephemeral during the field investigation. The majority of OW 3 is a concrete lined ditch paralleling the southbound lanes of US-75 and assumed to drain upland habitat. The substrate of OW 3 transitions to large concrete riprap, boulders, and rock as it continues to flow downhill and approach the forested riparian habitat of Mooser Creek. A small section of OW 3 is considered within the jurisdictional limits (i.e., from the confluence of Mooser Creek to the point at which the feature begins to go up hill) where it resides within the elevation of the ordinary high water mark of Mooser Creek. An estimated total of 7 linear feet (0.001 acre) of OW 3 occurs within the study footprint where it flows south to north in the study area and is a direct tributary to Mooser Creek. The OHWM of OW 3 was observed as five feet wide with an estimated depth of one inch. The streambanks were gradually sloping and well vegetated, and the streambank erosion potential is low. Within the study area, a wooded riparian zone of > 100 feet in width is present along both banks. The stream substrate was primarily cobble and the water was clear tan in color. During the field investigation, a run, roots/root wads, rock ledges and drift material were observed. There were no aquatic organisms observed. Dominant riparian plant species observed include black willow, Shumard's oak, ash-leaf maple, redbud, Virginia wild rye and eastern poison ivy. This feature is likely subject to regulation by the USACE due to its hydrologic connection to Mooser Creek, a USGS-mapped perennial stream.

OW 4 – An unnamed tributary to Cherry Creek, was observed as ephemeral during the field investigation. An estimated total of 73 linear feet (0.01 acre) of OW 4 occurs within the study footprint where it flows south to north in the study area. OW 4 crosses W. 46th Street; however, the feature only exhibits OHWM characteristics on the north side of W. 46th Street and the south side is completely blocked by household furniture and debris. The OHWM of OW 4 was observed between two to four feet wide with an estimated depth of four to 10 inches. The streambanks were

short and well vegetated (primarily by trees), and the streambank erosion potential is low. Within the study area, a wooded riparian zone of > 100 feet in width is present along both banks. The stream substrate was primarily silt and the water was clear brown in color. During the field investigation, rock ledges, algae on rocks and drift material were observed. No aquatic organisms were observed. Dominant riparian plant species observed include Shumard's oak, common hackberry, American elm, deciduous holly, eastern poison ivy, river-bank grape, and Virginia-creeper. This feature is likely subject to regulation by the USACE due to its hydrologic connection to Cherry Creek, a USGS-mapped perennial stream.

OW 5 – Cherry Creek, a USGS-mapped perennial stream was observed as perennial during the field investigation. The channel and banks for this feature are completely concrete lined within the study area. An estimated total of 505 linear feet (0.38 acre) of OW 5 occurs within the study footprint where it flows west to east in the study area and is a direct tributary to the Arkansas River. The OHWM of OW 5 was observed as 30 feet wide with an estimated depth of four to six inches. The stream banks are concrete so there is no streambank erosion potential. Within the study area, an herbaceous ROW and a > 100-foot-wide wooded upland zone is present at ground level on both sides of Cherry Creek. The water within the channel was clear copper in color and no aquatic organisms were observed. During the field investigation, algae on rocks was observed. This feature is likely subject to regulation by the USACE as it is a USGS-mapped perennial stream and a direct tributary to the Arkansas River. However, due to the extensive existing modifications (i.e., concrete lined) this feature should not require compensatory mitigation.

OW 6 –An unnamed tributary to Mooser Creek, was observed as ephemeral during the field investigation. This feature begins north of I-44, flows south under I-44 and Skelly Drive and under Union Avenue where it then flows directly into Mooser Creek outside of the study area. Due to the shape of the study area, there are two segments of OW 6 (one north of I-44 and one south of I-44). An estimated total of 258 linear feet (0.03 acre) of OW 6 occurs within the study footprint. The OHWM of the north segment of OW 6 was observed to be five feet wide with an estimated depth of six to 12 inches. The OHWM of the south segment of OW 6 was observed between 4 to 7 feet wide with an estimated depth of six inches to 12 inches. The north segments streambanks were gradually sloping with a good root system and well vegetated (predominately by trees), and the streambank erosion potential is low. The streambanks at the south segment were steep with a good root system, and the streambank erosion potential is moderate. A narrow wooded riparian zone of approximately 10 feet in width is present along both banks of the north segment. A wooded riparian zone was absent on both banks of the south segment. The stream substrate was primarily clay and the water was clear amber brown in color. During the field investigation, roots/root wads, undercut banks, algae and drift material were observed at both segments of OW 6. No aquatic organisms were observed. Dominant riparian plant species observed along the north segment include black willow, silk tree, eastern red-cedar, eastern poison ivy, flowering dogwood, horsetail-spike-rush, river-bank grape and Virginia-creeper. Dominant riparian plant species observed along the south segment include red maple, broad-leaf cat-tail, Johnson grass, tall false rye grass, eastern poison ivy, Japanese honeysuckle, sticky-willy, and common dandelion. This feature is likely subject to regulation by the USACE due to its hydrologic connection with Mooser Creek, a USGS-mapped perennial stream.

OW 7 – An unnamed tributary to Mooser Creek, was observed as ephemeral during the field investigation and located north of I-44. An estimated total of 271 linear feet (0.03 acre) of OW 7 occurs within the study footprint where it flows north to south in the study area (potentially into OW 2, located south of I-44). The OHWM of OW 7 was observed between two to 5.5 feet wide with an estimated depth of four to 10 inches. The majority of OW 7 has a concrete/gravel channel bottom with stone lined banks that eliminates erosion potential. Within the study area and adjacent to W. 51st Street, a small wooded riparian zone of approximately 30 feet in width is present along both banks. The riparian area transitions into a more narrow zone with scattered trees, scrub-shrub and vines further downstream. The water was clear dark brown in color. During the field investigation, a riffle and rock ledges were observed. No aquatic organisms were observed. Dominant riparian plant species observed include American elm, common hackberry, eastern poison ivy, Virginia-creeper, river-bank grape, fringed greenbrier, Bermuda grass and Johnson grass. This feature is likely subject to regulation by the USACE due to its hydrologic connection with Mooser Creek, a USGS-mapped perennial stream.

OW 8 – Arkansas River, a USGS-mapped perennial stream was observed as perennial during the field investigation. The stream velocity was moderate and had a general north to south flow. An estimated total of 388 linear feet (7.13 acres) of the Arkansas River occurs within the study footprint. The OHWM of the Arkansas River is between 850 to 1,020 feet wide with an estimated depth between two feet and eight feet. The river has been over channelized, increasing the width of the alluvial terrace. The streambanks were sandy with limited vegetation (primarily trees and scrub-shrub), and the streambank erosion potential is moderate. The primary stream substrate is sand, and the water was clear amber in color. During the field investigation, a riffle, pools, wetlands, runs, undercut banks, roots/root wads, and drift material were observed. Aquatic organisms observed includes mussels, frogs, turtles, and crayfish. This feature is likely subject to regulation by the USACE as it is a USGS-mapped perennial stream.

OW 9 – An unnamed tributary to Mooser Creek, was observed as an ephemeral stream during the field investigation. OW 9 is located east of Union Avenue and south of Skelly Drive and flows southeast within the study boundary directly into Mooser Creek. An estimated total of 142 linear feet (0.02 acre) of OW 9 occurs within the study footprint. The OHWM of OW 9 was observed as four feet with a depth between 10 to 18 inches. The majority of the streambanks were steep and partially vegetated with grasses, shrubs, and trees, therefore, the streambank erosion potential is low. A narrow wooded riparian zone of approximately 10 feet in width is present along west bank and approximately 75 feet on the east bank of OW 9. The stream substrate was primarily clay and the water was clear brown in color. During the field investigation, undercut banks, roots/root wads and drift material were observed. No aquatic organisms were observed during the field investigation. Dominant riparian plant species observed include black willow, box elder, American elm, Cherokee sedge (*Carex cherokeensis*), and eastern poison ivy. This feature is likely subject to regulation by the USACE due to its hydrologic connection to Mooser Creek, a USGS-mapped perennial stream.

Wetlands and ponds

Wetland 1 – This wetland is not illustrated on the 1989 Sapulpa North, Okla. NWI map, but would be classified as a PEM1G (Palustrine, Emergent, Persistent, Intermittently Exposed Wetland). Wetland 1 is located in the forested habitat northeast of the US-75/W. 61st Street overpass and near the south end of the study area. The study area was saturated due to recent rain and flood events that recently occurred at the study area (see section *Environmental Study Footprint General Description and Vegetation Present*). Wetland 1 was observed as an emergent wetland with surface water, high water table, saturated soils, water-stained leaves, geomorphic position, the FAC-neutral test, and hydric soils with a redox dark surface indicator. Vegetation observed includes pecan, nimbleweed, Oklahoma sedge, swamp smartweed, creeping primrose-willow, fringed greenbrier (*Smilax bona-nox*), an aster, and an arrowhead. Approximately 0.18 acre occurs within the footprint. This feature is not likely subject to regulation by the USACE due to it being isolated and has no hydrologic connection to any surrounding aquatic features besides Wetland 2.

Wetland 2 – This wetland is not illustrated on the 1989 Sapulpa North, Okla. NWI map but would be classified as a PEM1G (Palustrine, Emergent, Persistent, Intermittently Exposed Wetland) and is located directly north of Wetland 1. The area was very saturated due to recent rain events that occurred at the study area (see section *Environmental Study Footprint General Description and Vegetation Present*). Wetland 2 was observed as an emergent wetland with surface water, high water table, saturated soils, geomorphic position, the FAC-neutral test, and hydric soils with a depleted dark surface indicator. Vegetation observed includes rice cut grass, perennial rye grass (*Lolium perenne*), fringed greenbrier, and a sedge. Approximately 0.08 acre occurs within the footprint. This feature is not likely subject to regulation by the USACE due to it being isolated and has no hydrologic connection to any surrounding aquatic features besides Wetland 1.

Wetland 3 – This wetland is not illustrated on the 1980 Jenks, Okla. NWI map but would be classified as a PEM1F (Palustrine, Emergent, Persistent, Semipermanently Flooded Wetland) and is located near the west bank of the Arkansas River within the south section of the I-44 Access Road loop. The area was very saturated due to recent rain events that occurred at the study area (see section *Environmental Study Footprint General Description and Vegetation Present*). Water from Wetland 3 drains into the Arkansas River (OW 8). Wetland 3 was observed as an emergent wetland with surface water, saturated soils, algal mats, geomorphic position, the FAC-neutral test, and hydric soils with a redox depression indicator. Vegetation observed includes broad-leaf cat-tail, swamp smartweed and Oklahoma sedge. Approximately 0.04 acre occurs within the footprint. This feature is likely subject to regulation by the USACE due to its hydrologic connection to the Arkansas River, a USGS-mapped perennial stream.

Wetland 4 – This wetland is not illustrated on the 1980 Jenks, Okla. NWI map but would be classified as a PSS6Jh (Palustrine, Scrub-Shrub, Deciduous, Intermittently Flooded, Diked/Impounded Wetland) and is located within the alluvial terrace on the west bank of the Arkansas River. Wetland 4 was observed as a scrub-shrub wetland with geomorphic position, the FAC-neutral test, and assumed hydric soils based on the regional supplement (see Data Forms). Vegetation observed includes black willow, Plowman's-wort, swamp smartweed, rough cocklebur, late-flowering thoroughwort, and Johnson grass. Approximately 0.01 acre occurs within the footprint. This feature is likely subject to regulation by the USACE due to its hydrologic

connection to the Arkansas River, a USGS-mapped perennial stream.

Wetland 5 – This wetland is not illustrated on the 1980 Jenks, Okla. NWI map but would be classified as a PEM1J (Palustrine, Emergent, Persistent, Intermittently Flooded Wetland) and is located within the alluvial terrace on the west bank of the Arkansas River. Wetland 5 was observed as an emergent wetland with saturated soils, algal mats, geomorphic position, the FAC-neutral test, and hydric soils based on the regional supplement (see Data Forms). Vegetation observed includes swamp smartweed, Plowman's-wort, eared redstem, short-bristle horned beak sedge, and broad-leaf cat-tail. Approximately 0.01 acre occurs within the footprint. This feature is likely subject to regulation by the USACE due to its hydrologic connection to the Arkansas River, a USGS-mapped perennial stream.

Wetland 6A – This wetland is not illustrated on the 1980 Jenks, Okla. NWI map but would be classified as a PEM1J (Palustrine, Emergent, Persistent, Intermittently Flooded Wetland) and is located within the alluvial terrace on the west bank of the Arkansas River. Wetland 6A was observed as an emergent wetland with saturated soils, geomorphic position, the FAC-neutral test, and hydric soils based on the regional supplement (see Data Forms). Vegetation observed includes common buttonbush, peatree, eared redstem, swamp smartweed, short-bristle horned beak sedge, Plowman's-wort, and an aster. Approximately 0.57 acre occurs within the footprint. This feature is likely subject to regulation by the USACE due to its hydrologic connection to the Arkansas River, a USGS-mapped perennial stream.

Wetland 6B – This wetland is not illustrated on the 1980 Jenks, Okla. NWI map but would be classified as a PEM1J (Palustrine, Emergent, Persistent, Intermittently Flooded Wetland) and is located within the alluvial terrace on the west bank of the Arkansas River. Wetland 6B was observed as an emergent wetland with saturated soils, geomorphic position, the FAC-neutral test, and hydric soils based on the regional supplement (see Data Forms). Vegetation observed includes peatree, eared redstem, swamp smartweed, short-bristle horned beak sedge, Plowman's-wort, and an aster. Approximately 0.02 acre occurs within the footprint. This feature is likely subject to regulation by the USACE due to its hydrologic connection to the Arkansas River, a USGS-mapped perennial stream.

Wetland 7A – This wetland is not illustrated on the 1980 Jenks, Okla. NWI map but would be classified as a PEM1J (Palustrine, Emergent, Persistent, Intermittently Flooded Wetland) and is located within the alluvial terrace on the east bank of the Arkansas River. Wetland 7A was observed as an emergent wetland with geomorphic position, the FAC-neutral test, stunted vegetation, and hydric soils based on the regional supplement (see Data Forms). Vegetation observed includes swamp smartweed, short-bristle horned beak sedge, eared redstem, and Plowman's-wort. Approximately 0.03 acre occurs within the footprint. This feature is likely subject to regulation by the USACE due to its hydrologic connection to the Arkansas River, a USGS-mapped perennial stream.

Wetland 7B – This wetland is not illustrated on the 1980 Jenks, Okla. NWI map but would be classified as a PEM1J (Palustrine, Emergent, Persistent, Intermittently Flooded Wetland) and is located within the alluvial terrace on the east bank of the Arkansas River. Wetland 7B was observed as an emergent wetland with geomorphic position, stunted vegetation, the FAC-neutral

test, and hydric soils based on the regional supplement (see Data Forms). Vegetation observed includes swamp smartweed, Plowman's-wort, late-flowering thoroughwort, short-bristle horned beak sedge, rough cocklebur, and yellowdicks (*Helenium amarum*). Approximately 0.02 acre occurs within the footprint. This feature is likely subject to regulation by the USACE due to its hydrologic connection to the Arkansas River, a USGS-mapped perennial stream.

Pond 1 – This pond is not illustrated on the 1989 Sapulpa North Okla. NWI map but would be classified as a PUB3Hx (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded, Excavated Wetland). This feature is likely a man-made pond located approximately 130 feet east of the US-75 northbound lanes. Approximately 0.11 acre occurs within the footprint. No hydrologic connection between Pond 1 and any surrounding aquatic resources was observed during the site visit. Therefore, this feature is not likely subject to regulation by the USACE due to it being an isolated feature.

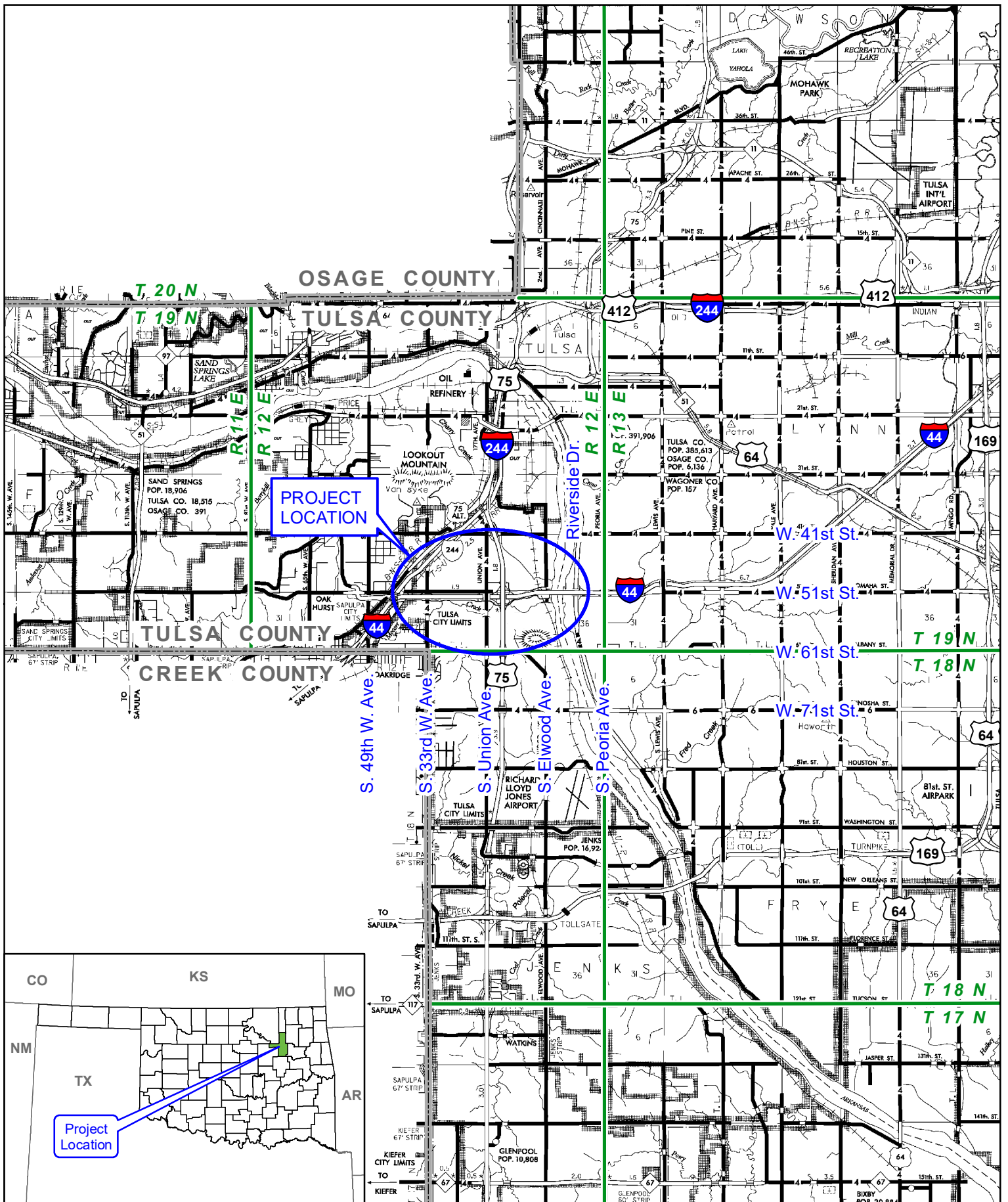
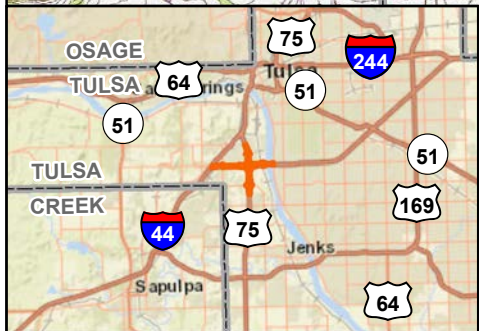
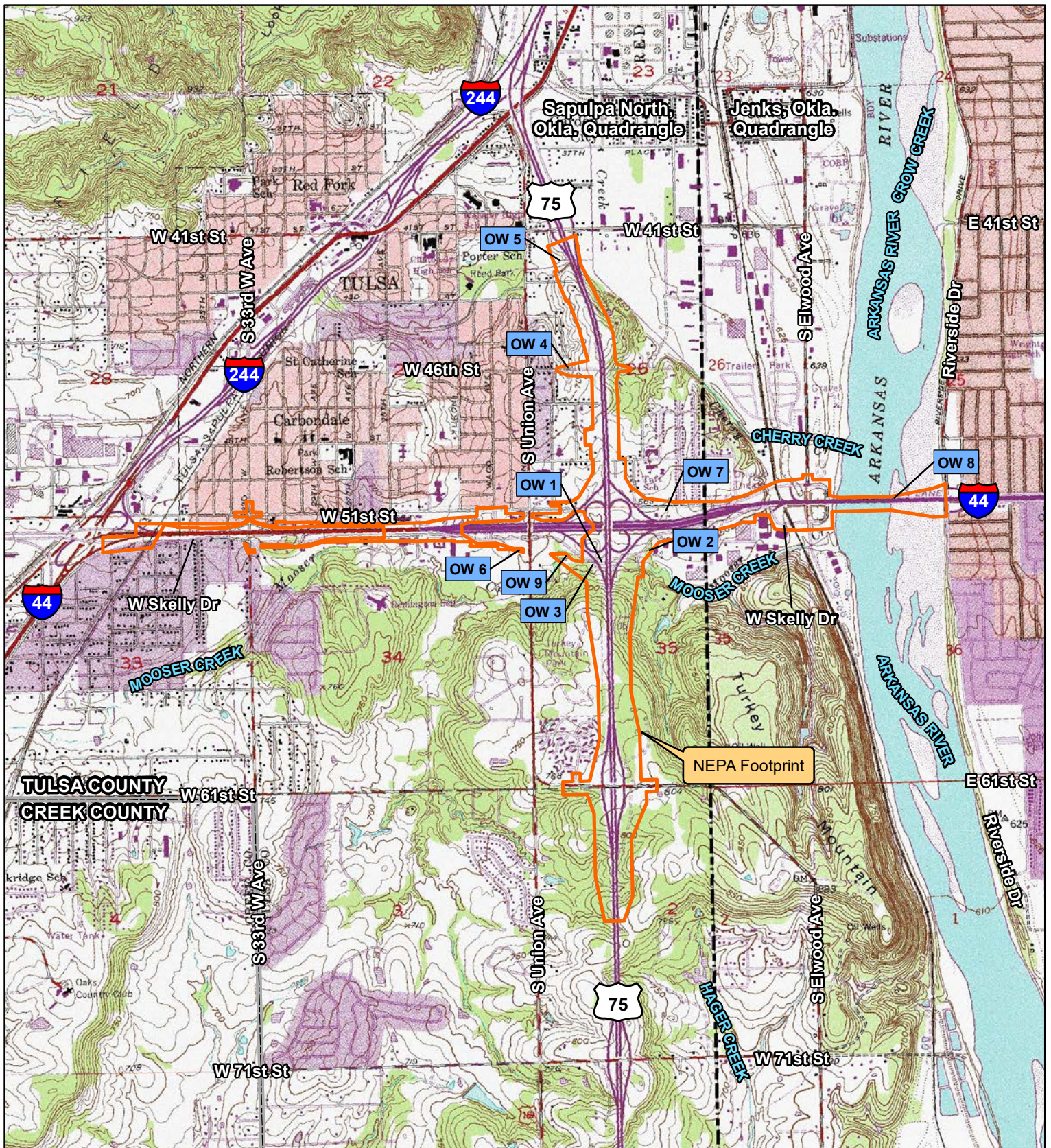


Figure 1 - Project Location Map
 JP 32728(04) I-44/US-75 Interchange
 I-44 from I-244 to the Arkansas River
 Tulsa County, Oklahoma

Source: ODOT General Highway Map

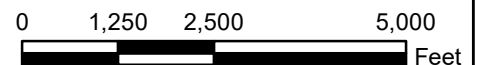




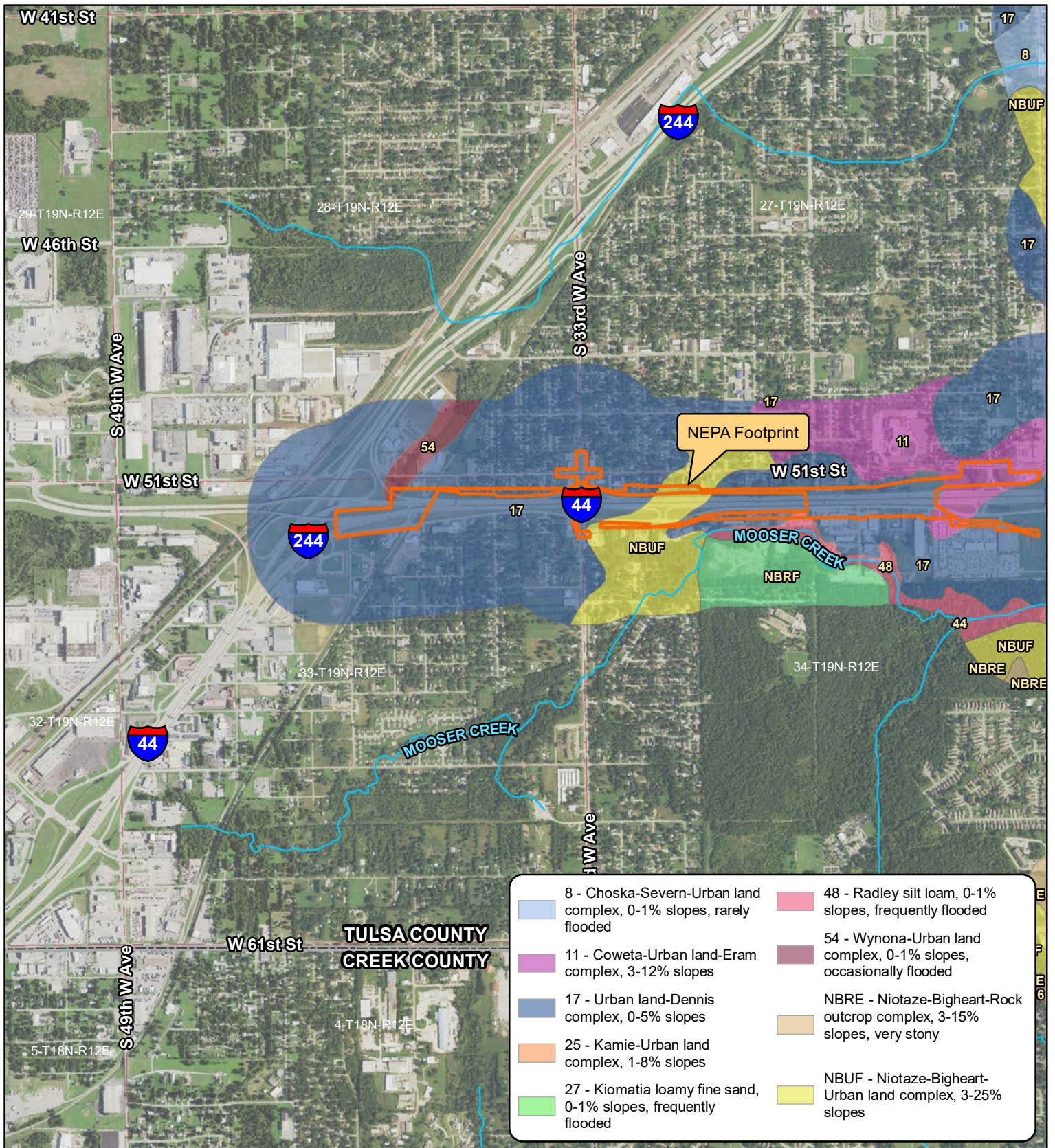
- NEPA Footprint
- County Line
- Quadrangle Boundary

Figure 2 - USGS 7.5 Minute Topographic Map

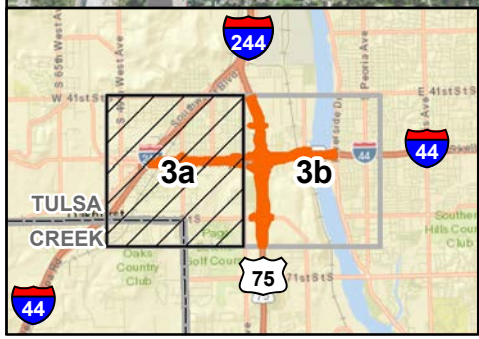
JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Source: 1956 (photorevised 1983) Sapulpa North, Okla. Quadrangle;
1952 (photorevised 1982) Jenks, Okla. Quadrangle



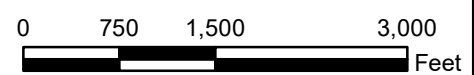
8 - Choska-Severn-Urban land complex, 0-1% slopes, rarely flooded	48 - Radley silt loam, 0-1% slopes, frequently flooded
11 - Coweta-Urban land-Eram complex, 3-12% slopes	54 - Wynona-Urban land complex, 0-1% slopes, occasionally flooded
17 - Urban land-Dennis complex, 0-5% slopes	NBRE - Niotaze-Bigheart-Rock outcrop complex, 3-15% slopes, very stony
25 - Kamie-Urban land complex, 1-8% slopes	NBUF - Niotaze-Bigheart-Urban land complex, 3-25% slopes
27 - Kiomatia loamy fine sand, 0-1% slopes, frequently flooded	



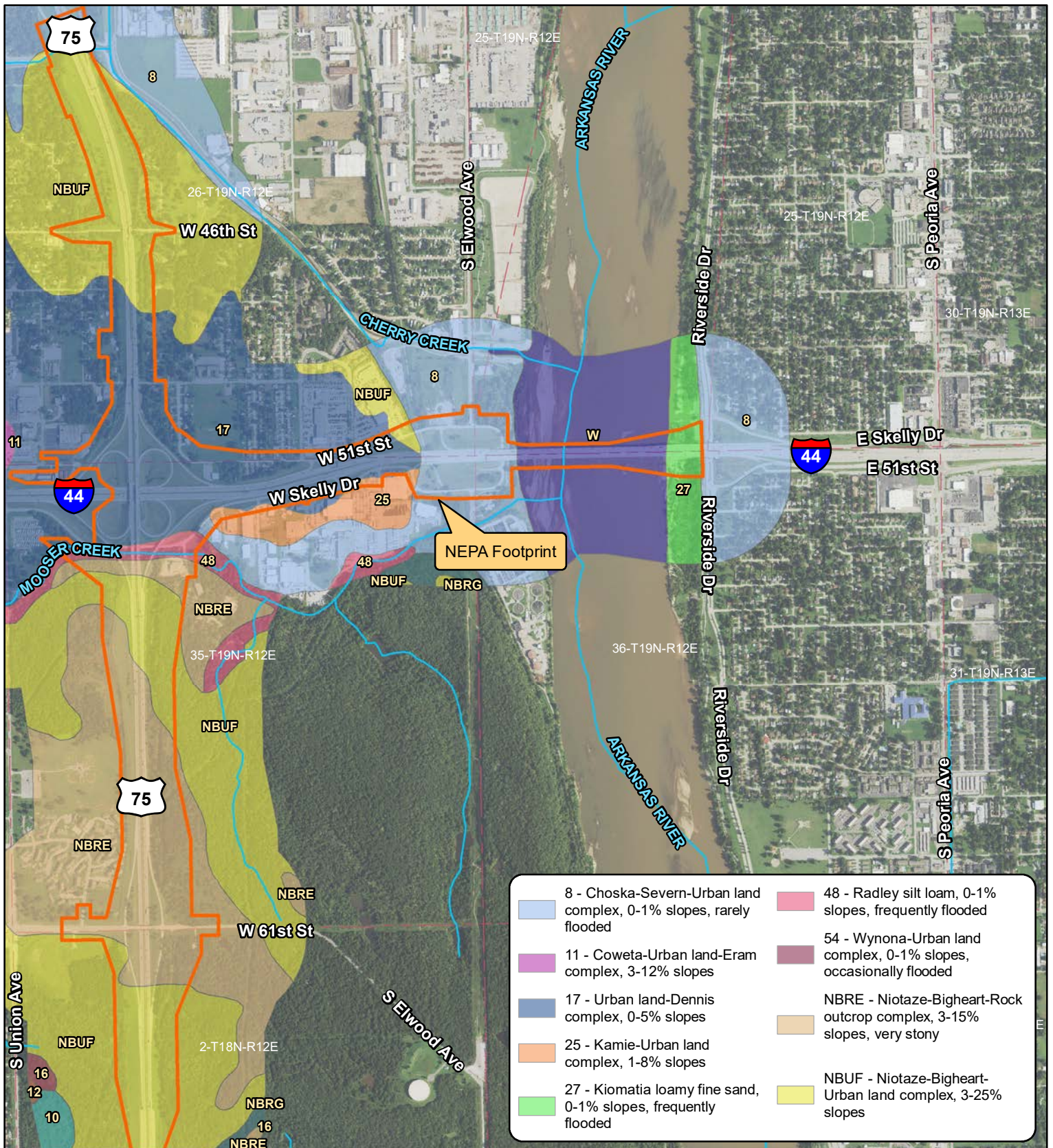
- NEPA Footprint
- County Line
- Section Line
- USGS Stream

Figure 3a - NRCS Soil Survey Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



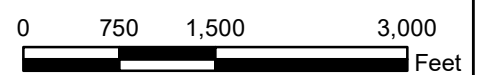
Sources: USDA NAIP 2019 Digital Orthophotography
USDA-NRCS 2018 Soil Survey Geographic Database (SSURGO)



- NEPA Footprint
- County Line
- Section Line
- USGS Stream

Figure 3b - NRCS Soil Survey Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



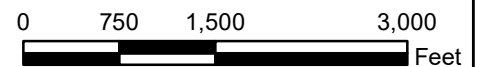
Sources: USDA NAIP 2019 Digital Orthophotography
USDA-NRCS 2018 Soil Survey Geographic Database (SSURGO)



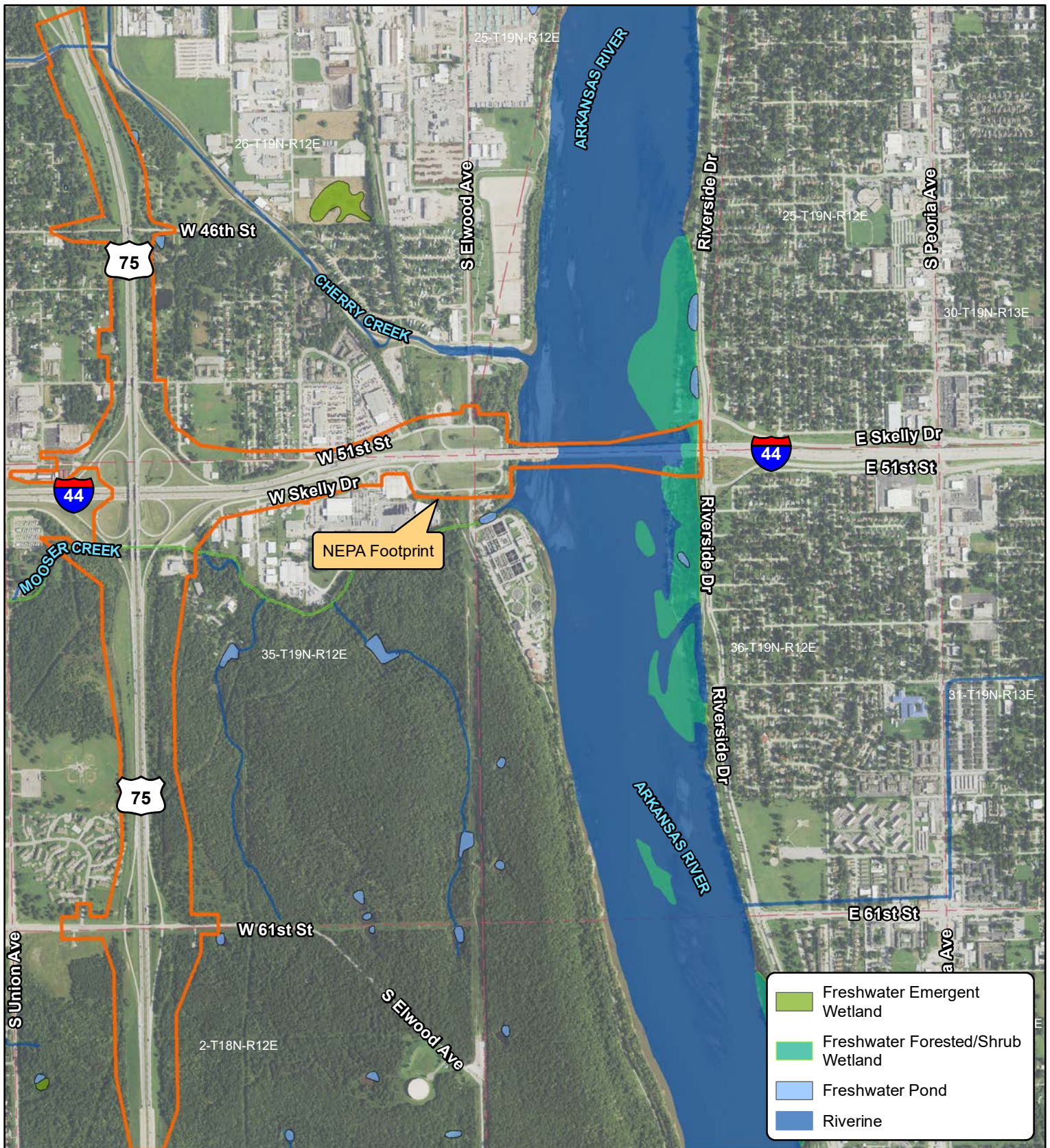
- NEPA Footprint
- County Line
- Section Line

Figure 4a - USFWS National Wetland Inventory (NWI) Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



Sources: USDA NAIP 2019 Digital Orthophotography
USFWS NWI 2018 Wetland Mapper Data






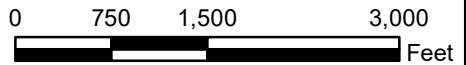
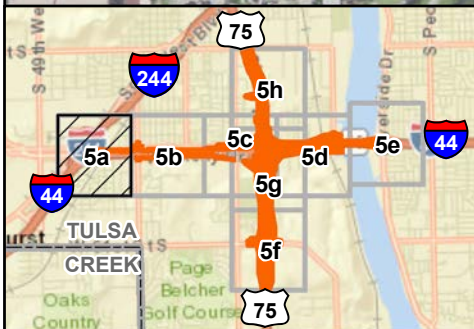
-  NEPA Footprint
-  County Line
-  Section Line

Figure 4b - USFWS National Wetland Inventory (NWI) Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Sources: USDA NAIP 2019 Digital Orthophotography
USFWS NWI 2018 Wetland Mapper Data











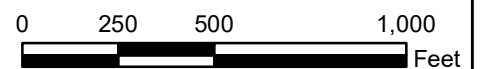
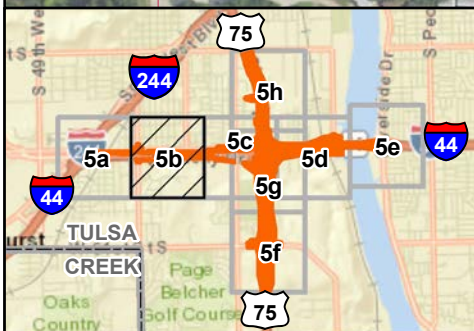
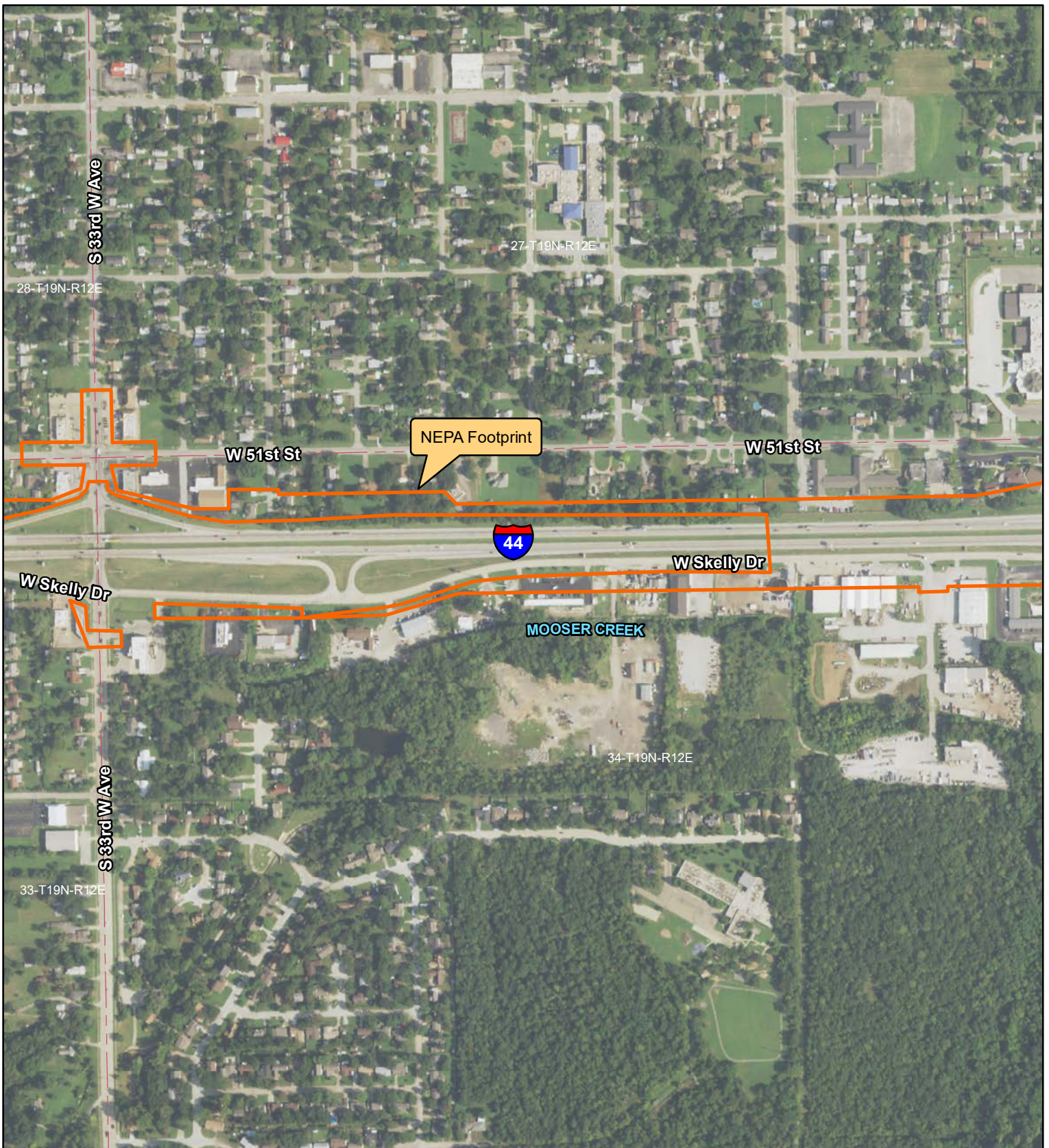
-  NEPA Footprint
-  County Line
-  Section Line
-  Data Point (DP)
-  Stream OHWM
-  Pond
-  PEM Wetland
-  PSS Wetland

Figure 5a - Aquatic Resources Site Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



Sources: USDA NAIP 2019 Digital Orthophotography











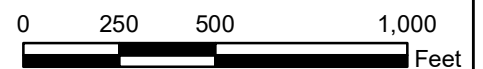
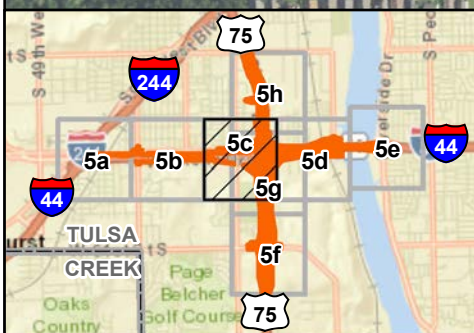
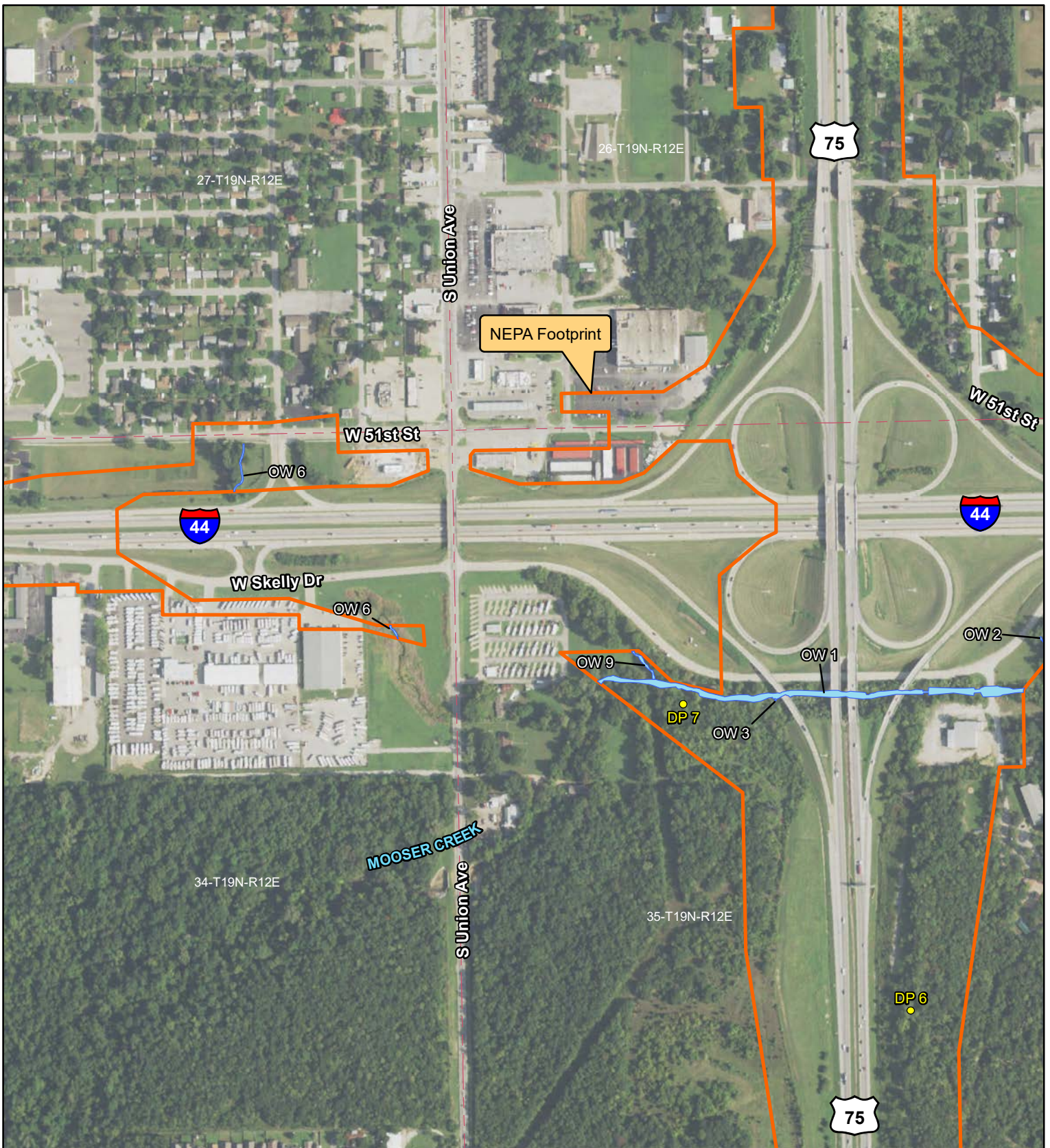
- | | | | |
|---|-----------------|---|-------------|
|  | NEPA Footprint |  | Stream OHWM |
|  | County Line |  | Pond |
|  | Section Line |  | PEM Wetland |
|  | Data Point (DP) |  | PSS Wetland |

Figure 5b - Aquatic Resources Site Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



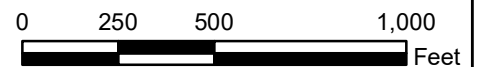
Sources: USDA NAIP 2019 Digital Orthophotography



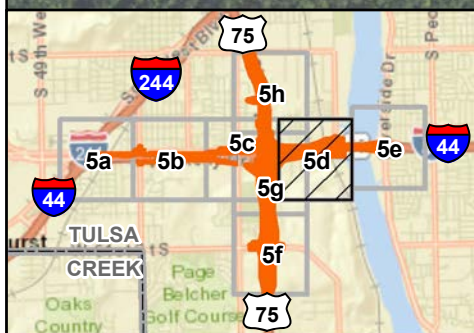
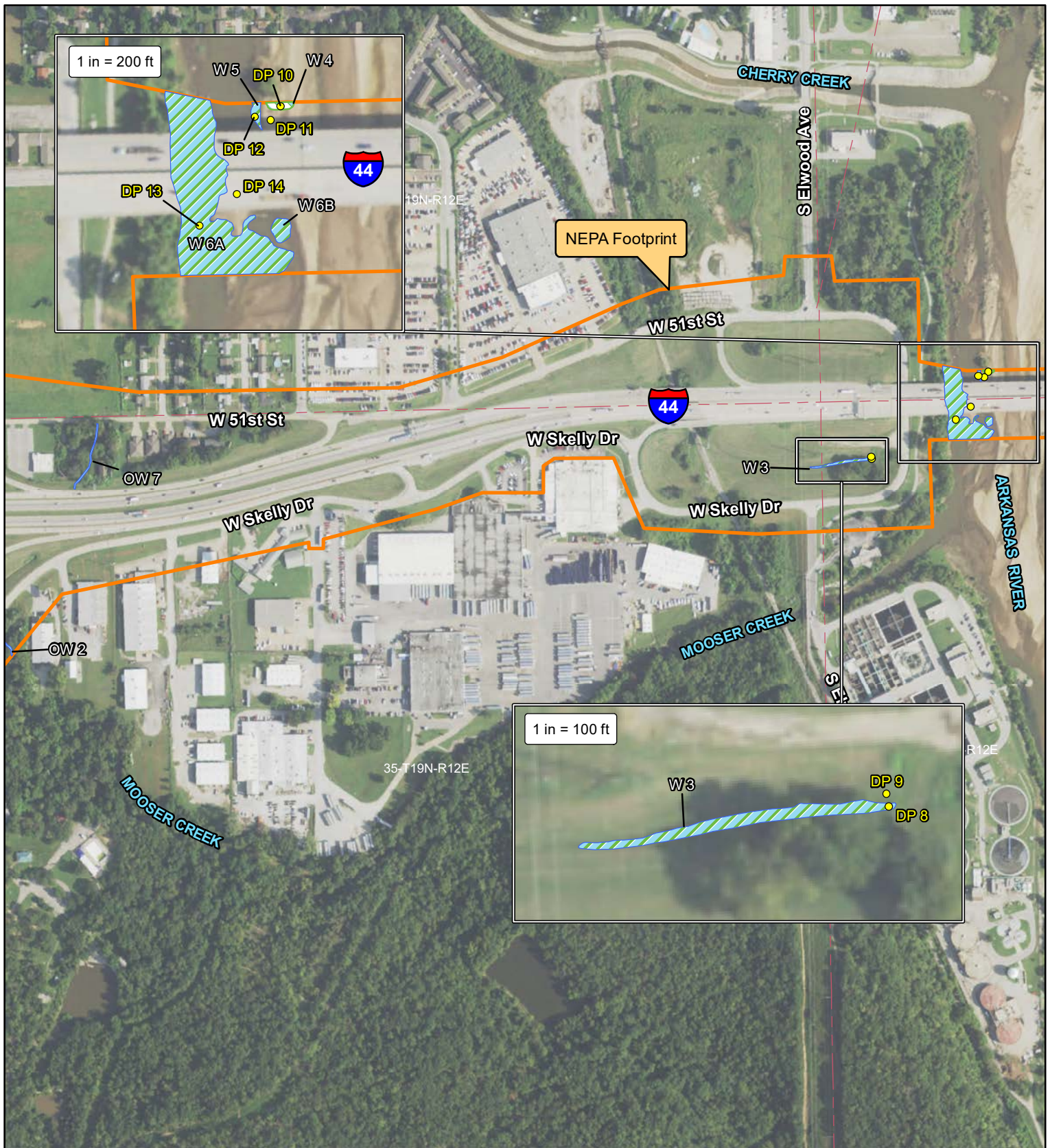
- NEPA Footprint
- County Line
- Section Line
- Data Point (DP)
- Stream OHWM
- Pond
- PEM Wetland
- PSS Wetland

Figure 5c - Aquatic Resources Site Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Sources: USDA NAIP 2019 Digital Orthophotography







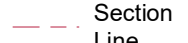

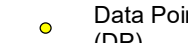

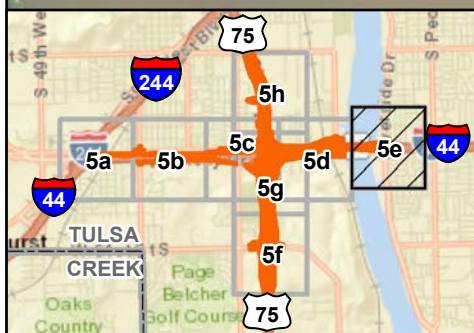
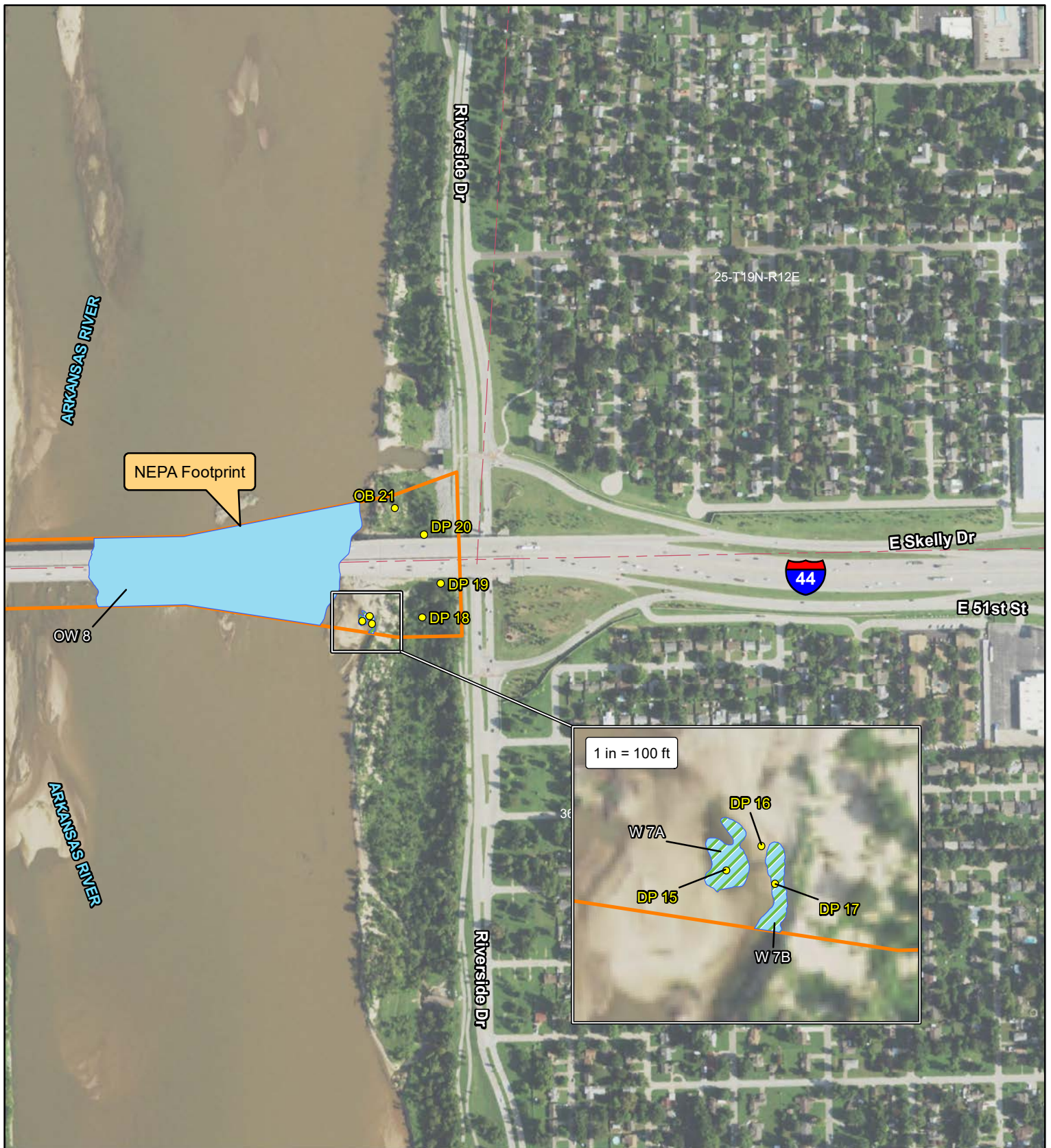
- | | | | |
|---|-----------------|---|-------------|
|  | NEPA Footprint |  | Stream OHWM |
|  | County Line |  | Pond |
|  | Section Line |  | PEM Wetland |
|  | Data Point (DP) |  | PSS Wetland |

Figure 5d - Aquatic Resources Site Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



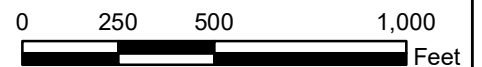
Sources: USDA NAIP 2019 Digital Orthophotography



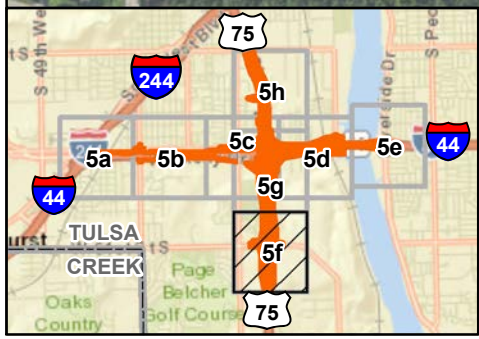
- | | |
|-----------------|-------------|
| NEPA Footprint | Stream OHWM |
| County Line | Pond |
| Section Line | PEM Wetland |
| Data Point (DP) | PSS Wetland |

Figure 5e - Aquatic Resources Site Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



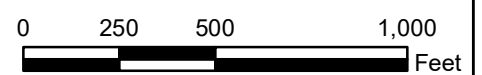
Sources: USDA NAIP 2019 Digital Orthophotography



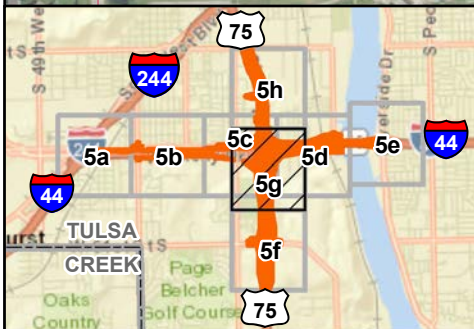
- NEPA Footprint
- County Line
- Section Line
- Data Point (DP)
- Stream OHWM
- Pond
- PEM Wetland
- PSS Wetland

Figure 5f - Aquatic Resources Site Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Sources: USDA NAIP 2019 Digital Orthophotography











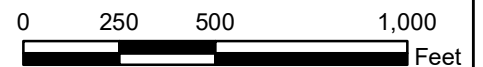
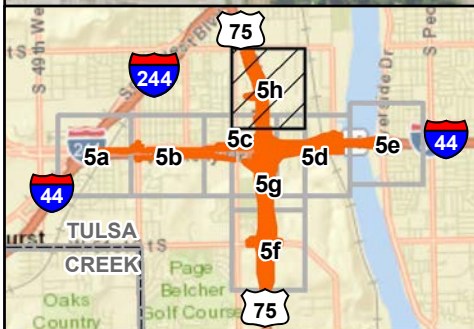
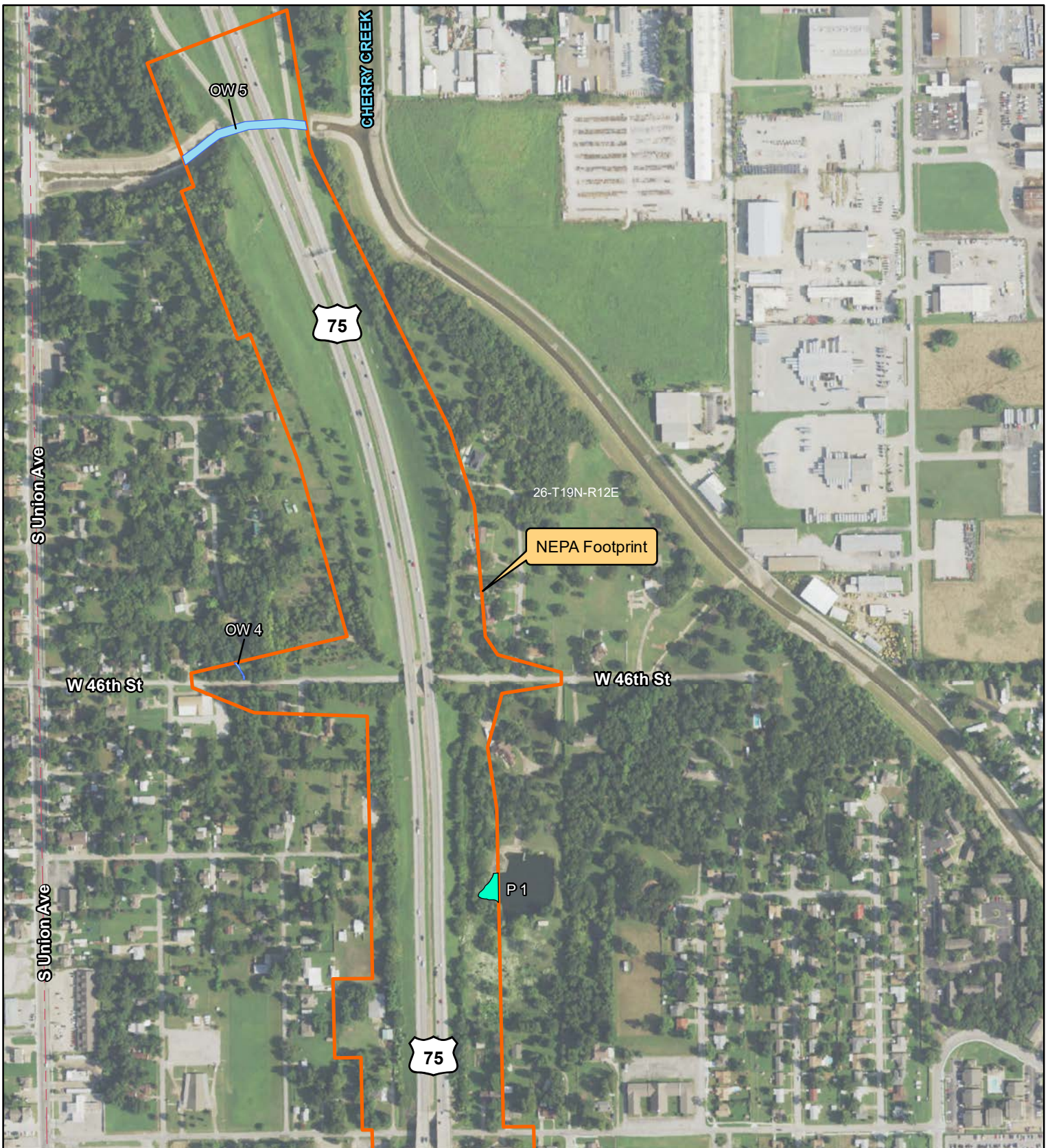
- | | | | |
|---|-----------------|---|-------------|
|  | NEPA Footprint |  | Stream OHHM |
|  | County Line |  | Pond |
|  | Section Line |  | PEM Wetland |
|  | Data Point (DP) |  | PSS Wetland |

Figure 5g - Aquatic Resources Site Map

JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma



Sources: USDA NAIP 2019 Digital Orthophotography











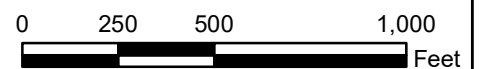
- | | | | |
|---|-----------------|---|-------------|
|  | NEPA Footprint |  | Stream OHWM |
|  | County Line |  | Pond |
|  | Section Line |  | PEM Wetland |
|  | Data Point (DP) |  | PSS Wetland |

Figure 5h - Aquatic Resources Site Map

**JP 32728(04) I-44/US-75 Interchange
I-44 from I-244 to the Arkansas River
Tulsa County, Oklahoma**



Sources: USDA NAIP 2019 Digital Orthophotography



▲ (PS 1): View of wooded habitat along US-75. This is suitable ABB and NLEB habitat. View is to the south.



▲ (PS 2): View of US-75 from the W. 61st Street bridge (NBI 16564). View is to the south.



▲ (PS 2): View of NBI 16564. Bridge was not fully inspected due to height and safety. View is to the west.



▲ (PS 2): View of wooded habitat along US-75. This is suitable ABB and NLEB habitat. View is to the east.



▲ (PS 2): View of W 2, a small PEM wetland in the forested habitat east of US-75. View is to the southeast.



▲ (PS 2): View of W 1, a small PEM wetland in the forested habitat east of US-75. View is to the south.



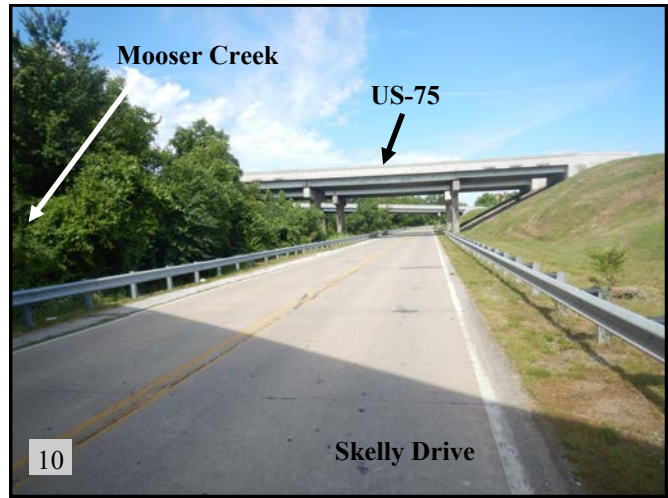
▲(PS 3): View of wooded habitat along US-75. This is suitable ABB and NLEB habitat. View is to the east.



▲(PS 4): View of shallow rocky habitat at Mooser Creek (OW 1). View is upstream to the west.



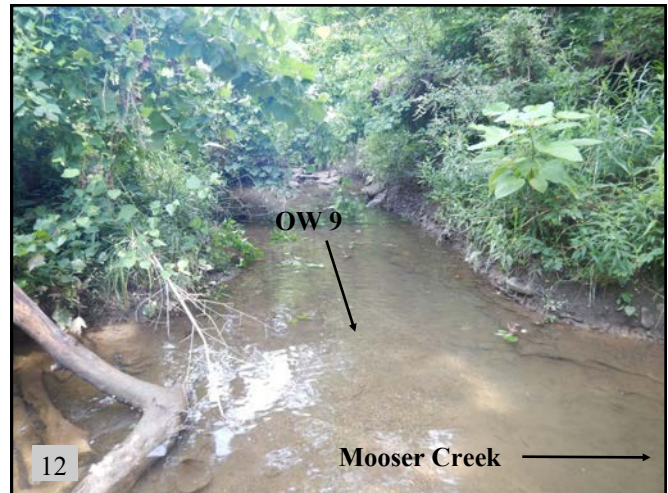
▲(PS 4): View of deep water habitat at Mooser Creek (OW 1). View is downstream to the east.



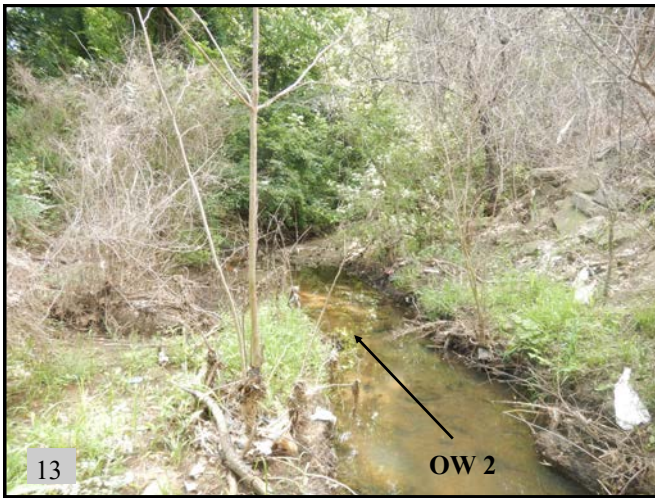
▲(PS 4): View of Skelly Drive located north of Mooser Creek (OW 1). View is to the west.



▲(PS 4): View of OW 3, a tributary to Mooser Creek (OW 1). View is downstream to the north.



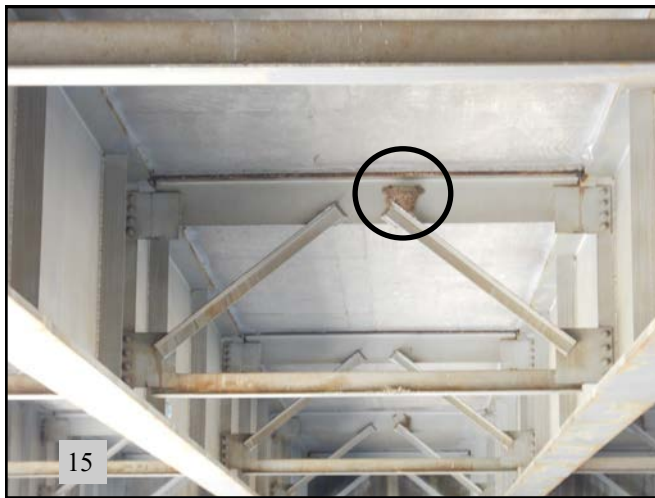
▲(PS 5): View of Mooser Creek (OW 1) and OW 9 confluence. View is to the upstream of OW 9, to the north.



▲(PS 6): View of OW 2, an ephemeral tributary to Mooser Creek. View is downstream to the south.



▲(PS 7): View under NBI 18268 over W. 49th St. View is to the south.



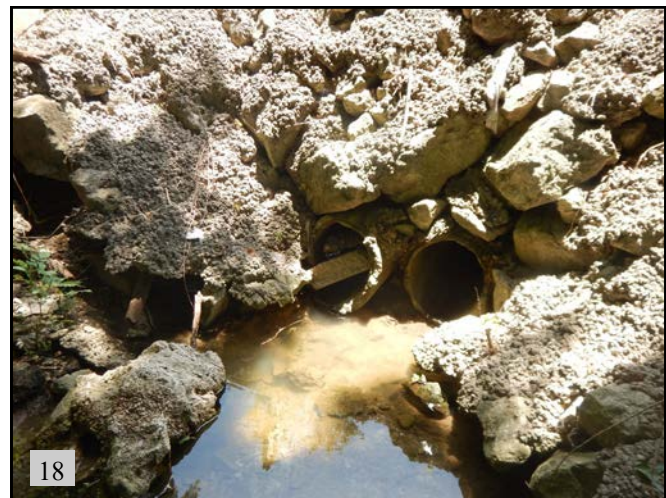
▲(PS 7): View of barn swallow nest (circled) under NBI 18267 over W. 49th St. View is to the south.



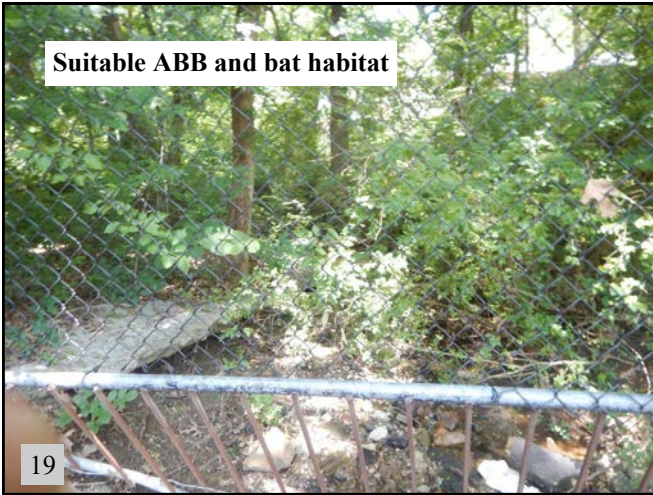
▲(PS 8): View of barn swallow nest (circled) under NBI 18254. View is to the south.



▲(PS 8): View NBI 18255. View is to the south.



▲(PS 9): View of double culverts under W. 46th Street at OW 4. View is upstream to the south.



▲(PS 9): View of habitat along US-75 around OW 4, an ephemeral stream. View is downstream to the north.



▲(PS 10): Triple cell RCB over Cherry Creek (OW 5). View is downstream to the east.



▲(PS 7): Concrete lined Cherry Creek (OW 5). View is upstream to the west.



▲(PS 11): Inspecting bridge for bat and/or migratory bird use. View is to the west.



▲(PS 12): Typical view of I-44. View is to the northeast.



▲(PS 13): View of OW 6 (north segment), an ephemeral stream. View is downstream to the south.



▲ (PS 14): View of OW 6 (south segment) with no riparian habitat. View is upstream to the northwest.



▲ (PS 15): View of the concrete lined channel and stone banks of OW 7. View is downstream to the south.



▲ (PS 16): View of NBI 15755. Bridge could not be fully inspected due to height. View is to the west.



▲ (PS 17): View of NBIs 20294, 12827, and 15769. View is to the southeast.



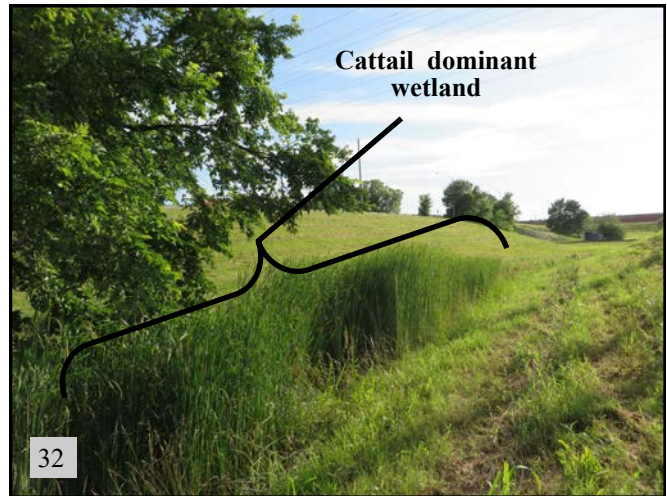
▲ (PS 18): View of NBI 15763. Bridge could not be fully inspected due to height. View is to the southeast.



▲ (PS 19): View of the Arkansas River (OW 8) taken in 2019. View is upstream to the northeast.



▲(PS 19): View of the Arkansas River (OW 8) in 2019. View is to the east.



▲(PS 20): View of W 3, an emergent wetland just west of the Arkansas River. View is to the southwest.



▲(PS 21): View of a PSS wetland (Wetland 4). View is to the north.



▲(PS 21): View of a PEM wetland (Wetland 5). View is to the southeast.



▲(PS 21): View of a PEM wetland (Wetland 6A). View is to the northwest.



▲(PS 21): View of a PEM wetland (Wetland 6B). View is to the northeast.



▲(PS 21): View of the Arkansas River (OW 8) in 2020. View is to the east.



▲(PS 22): View of Wetland 7A, an emergent wetland on the east floodplain terrace of the Arkansas River.



▲(PS 22): View of a PEM wetland (Wetland 7B). View is to the north.



▲(PS 22): View of wooded upland habitat along the east terrace of the Arkansas River. View is to the south.



▲(PS 22): View of the Arkansas River in 2020 (OW 8). View is upstream to the northwest.



▲(PS 23): View of wooded upland habitat along the east terrace of the Arkansas River. View is to the east.



▲ (PS 23): View of open grassland along the east terrace of the Arkansas River. View is to the west.



▲ (PS 23): View of the Arkansas River (OW 8) in 2020. View is downstream to the south.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: JP 32728(04) - I-44/US-75 City/County: Tulsa Sampling Date: 5/9/2019
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 1
 Investigator(s): Megan Philips-Schaap and Lacey Stanley Section, Township, Range: Sec 2, T18N, R12E
 Landform (hillslope, terrace, etc.): forested Local relief (concave, convex, none): convex
 Slope (%): 3-5% Lat: 36.070456 Long: -96.005833 Datum: NAD83
 Soil Map Unit Name: NBUF - Niotaze-Bigheart-Urban land complex, 3 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology. The survey area is currently experiencing exceptionally wet conditions.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Pecan (Carya illinoensis)</u>	35	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>56%</u> (A/B)
2. <u>Shumard's oak (Quercus shumardii)</u>	20	Yes	FACW	
3. _____				
4. _____				
5. _____				
<u>55</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Shumard's oak (Quercus shumardii)</u>	15	Yes	FACW	
2. <u>Redbud (Cercis canadensis)</u>	15	Yes	FACU	
3. <u>Sugar-berry (Celtis laevigata)</u>	10	No	FACW	
4. <u>Pecan (Carya illinoensis)</u>	10	No	FACW	
5. <u>Eastern red-cedar (Juniperus virginiana)</u>	2	No	FACU	
<u>52</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Eastern poison ivy (Toxicodendron radicans)</u>	25	Yes	FAC	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Virginia-creeper (Parthenocissus quinquefolia)</u>	15	Yes	FACU	
3. <u>Chinese privet (Ligustrum sinense)</u>	15	Yes	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>55</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Virginia-creeper (Parthenocissus quinquefolia)</u>	5	Yes	FACU	
2. <u>Eastern poison ivy (Toxicodendron radicans)</u>	5	Yes	FAC	
<u>10</u> = Total Cover				

Hydrophytic Vegetation Present? Yes No _____

Remarks: (Include photo numbers here or on a separate sheet.)
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: DP 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 2/2	-	-	-	-	-	clay loam	
1-6	10YR 4/2	-	-	-	-	-	clay loam	
6-14	10YR 5/4	-	-	-	-	-	clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p>___ Histosol (A1)</p> <p>___ Histic Epipedon (A2)</p> <p>___ Black Histic (A3)</p> <p>___ Hydrogen Sulfide (A4)</p> <p>___ Stratified Layers (A5)</p> <p>___ 2 cm Muck (A10)</p> <p>___ Depleted Below Dark Surface (A11)</p> <p>___ Thick Dark Surface (A12)</p> <p>___ Sandy Mucky Mineral (S1)</p> <p>___ 5 cm Mucky Peat or Peat (S3)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p>___ Sandy Gleyed Matrix (S4)</p> <p>___ Sandy Redox (S5)</p> <p>___ Stripped Matrix (S6)</p> <p>___ Loamy Mucky Mineral (F1)</p> <p>___ Loamy Gleyed Matrix (F2)</p> <p>___ Depleted Matrix (F3)</p> <p>___ Redox Dark Surface (F6)</p> <p>___ Depleted Dark Surface (F7)</p> <p>___ Redox Depressions (F8)</p> <p>___ Coast Prairie Redox (A16)</p> <p>___ Dark Surface (S7)</p> <p>___ Iron-Manganese Masses (F12)</p> <p>___ Very Shallow Dark Surface (TF12)</p> <p>___ Other (Explain in Remarks)</p>
--	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

No positive indication of hydric soils was observed.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
___ Surface Water (A1)	___ Water-Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Drainage Patterns (B10)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Dry-Season Water Table (C2)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Crayfish Burrows (C8)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Saturation Visible on Aerial Imagery (C9)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Stunted or Stressed Plants (D1)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Geomorphic Position (D2)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ FAC-Neutral Test (D5)
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)	
___ Sparsely Vegetated Concave Surface (B8)	___ Other (Explain in Remarks)	

<p>Field Observations:</p> <p>Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ > 14"</p> <p>Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ > 14"</p>	<p>Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: JP 32728(04) - I-44/US-75 City/County: Tulsa Sampling Date: 5/9/2019
Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 2
Investigator(s): Megan Philips-Schaap and Lacey Stanley Section, Township, Range: Sec 2, T18N, R12E
Landform (hillslope, terrace, etc.): forested Local relief (concave, convex, none): none
Slope (%): 0% Lat: 36.073228 Long: -96.005463 Datum: NAD83
Soil Map Unit Name: NBUF - Niotaze-Bigheart-Urban land complex, 3 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No [X] (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No [X]
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes [X] No
Hydric Soil Present? Yes No [X]
Wetland Hydrology Present? Yes [X] No
Is the Sampled Area within a Wetland? Yes No [X]
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils. The survey area is currently experiencing exceptionally wet conditions.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1. None observed
2.
3.
4.
5. = Total Cover
Sapling/Shrub Stratum (Plot size:)
1. None observed
2.
3.
4.
5. = Total Cover
Herb Stratum (Plot size: 5')
1. Sedge (Carex sp.)* 25 Yes FACW
2. Sand spike-rush (Eleocharis montevidensis) 15 Yes FACW
3. Eastern poison ivy (Toxicodendron radicans) 5 No FAC
4. Japanese honeysuckle (Lonicera japonica) 5 No FACU
5.
6.
7.
8.
9.
10. = Total Cover
Woody Vine Stratum (Plot size:)
1. None observed
2. = Total Cover
Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: (A)
Total Number of Dominant Species Across All Strata: (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =
Hydrophytic Vegetation Indicators:
[X] 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is >50%
3 - Prevalence Index is <=3.0^1
4 - Morphological Adaptations^1 (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation^1 (Explain)
^1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Hydrophytic Vegetation Present? Yes [X] No

SOIL

Sampling Point: DP 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/2	100	-	-	-	-	sandy clay	
6-14	10YR 5/4	99	5Y 5/8	1	C	M	sandy clay	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					² Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed):								
Type: _____								
Depth (inches): _____						Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>		
Remarks: No positive indication of hydric soils was observed.								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>4-8"</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>surface</u>
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>surface</u>
Wetland Hydrology Present?		Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).			

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: JP 32728(04) - I-44/US-75 City/County: Tulsa Sampling Date: 5/9/2019
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 3
 Investigator(s): Megan Philips-Schaap and Lacey Stanley Section, Township, Range: Sec 35, T19N, R12E
 Landform (hillslope, terrace, etc.): forested Local relief (concave, convex, none): concave
 Slope (%): 0-1% Lat: 36.076073 Long: -96.005401 Datum: NAD83
 Soil Map Unit Name: NBRE-Niotaze-Bigheart-Rock outcrop complex, 3-15 percent slopes, very stony NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and hydric soils. The survey area is currently experiencing exceptionally wet conditions.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Blackjack oak (Quercus marilandica)*</u>	10	Yes	UPL	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>8</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>38%</u> (A/B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>10</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Chinese privet (Ligustrum sinense)</u>	15	Yes	FACU	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
<u>15</u> = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Canada goldenrod (Solidago canadensis)</u>	25	Yes	FACU	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Sedge (Carex sp.)**</u>	20	Yes	FACW	<input type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Bushy bluestem (Andropogon glomeratus)</u>	10	Yes	FACW	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. <u>Swamp smartweed (Persicaria hydropiperoides)</u>	10	Yes	OBL	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Japanese honeysuckle (Lonicera japonica)</u>	10	Yes	FACU	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. <u>Eastern poison ivy (Toxicodendron radicans)</u>	5	No	FAC	
7. <u>Queen Anne's-lace (Daucus carota)</u>	5	No	UPL	
8. <u>Unknown forb</u>	5	No	-	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>90</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u>Southern dewberry (Rubus trivialis)</u>	5	Yes	FACU	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
<u>5</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier). *Plant species does not have a wetland indicator according to NRCS, assume upland. **171 species of Carex are listed in the USACE 2018 Regional Wetland Plant List. 71% have a FACW (n=47) or OBL (n=75) indicator status.				

SOIL

Sampling Point: DP 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100	-	-	-	-	sandy clay	
2-10	10YR 3/1	99	5Y 5/8	1	C	PL	sandy clay	
10-18	10YR 4/2	100	-	-	-	-	sandy clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:
No positive indication of hydric soils was observed.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>16"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u> (includes capillary fringe)	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: JP 32728(04) - I-44/US-75 City/County: Tulsa Sampling Date: 5/9/2019
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 4
 Investigator(s): Megan Philips-Schaap and Lacey Stanley Section, Township, Range: Sec 35, T19N, R12E
 Landform (hillslope, terrace, etc.): forested Local relief (concave, convex, none): concave
 Slope (%): 1-2% Lat: 36.076333 Long: -96.005527 Datum: NAD83
 Soil Map Unit Name: NBRE-Niotaze-Bigheart-Rock outcrop complex, 3-15 percent slopes, very stony NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria (Wetland 1). The survey area is currently experiencing exceptionally wet conditions.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Pecan (Carya illinoensis)</u>	5	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
<u>5</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____) 1. <u>None observed</u> 2. _____ 3. _____ 4. _____ 5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>) 1. <u>Nimblewill (Muhlenbergia schreberi)</u> 2. <u>Oklahoma sedge (Carex oklahomensis)</u> 3. <u>Swamp smartweed (Persicaria hydropiperoides)</u> 4. <u>Creeping primrose-willow (Ludwigia repens)</u> 5. <u>Aster sp.*</u> 6. <u>Sagittaria sp.**</u> 7. <u>Fringed greenbrier (Smilax bona-nox)</u> 8. _____ 9. _____ 10. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. <u>None observed</u> 2. _____				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). *19 species of Symphyotrichum are listed in the 2018 Regional Wetland Plant List. 84% have a FAC or wetter indicator status. ** 10 species of Sagittaria are listed in the USACE 2018 Regional Wetland Plant List. 100% have a OBL indicator status.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

SOIL

Sampling Point: DP 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	75	5Y 4/6	15	C	M	sandy clay	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: JP 32728(04) - I-44/US-75 City/County: Tulsa Sampling Date: 5/9/2019
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 5
 Investigator(s): Megan Philips-Schaap and Lacey Stanley Section, Township, Range: Sec 35, T19N, R12E
 Landform (hillslope, terrace, etc.): forested Local relief (concave, convex, none): concave
 Slope (%): 1-2% Lat: 36.076665 Long: -96.005688 Datum: NAD83
 Soil Map Unit Name: NBRE-Niotaze-Bigheart-Rock outcrop complex, 3-15 percent slopes, very stony NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria (Wetland 2). The survey area is currently experiencing exceptionally wet conditions.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>None observed</i>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 15')				
1. <i>Deciduous holly (Ilex decidua)</i>	2	Yes	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: 5')				
1. <i>Rice cut grass (Leersia oryzoides)</i>	25	Yes	OBL	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <i>Sedge (Carex sp.)*</i>	15	Yes	FACW	
3. <i>Perennial rye grass (Lolium perenne)</i>	2	No	FACU	
4. <i>Fringed greenbrier (Smilax bona-nox)</i>	2	No	FACU	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation). *171 species of Carex are listed in the USACE 2018 Regional Wetland Plant List. 71% have a FACW (n=47) or OBL (n=75) indicator status.				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: JP 32728(04) - I-44/US-75 City/County: Tulsa Sampling Date: 5/9/2019
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 6
 Investigator(s): Megan Philips-Schaap and Lacey Stanley Section, Township, Range: Sec 35, T19N, R12E
 Landform (hillslope, terrace, etc.): forested Local relief (concave, convex, none): concave
 Slope (%): 1-2% Lat: 36.083712 Long: -96.005905 Datum: NAD83
 Soil Map Unit Name: NBUF - Niotaze-Bigheart-Urban land complex, 3 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and hydric soils. The survey area is currently experiencing exceptionally wet conditions.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Post oak (Quercus stellata)</i>	40	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
2. <i>Green ash (Fraxinus pennsylvanica)</i>	10	No	FACW	
3. <i>Common hackberry (Celtis occidentalis)</i>	5	No	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>55</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <i>Shumard's oak (Quercus shumardii)</i>	10	Yes	FACW	
2. <i>Post oak (Quercus stellata)</i>	10	Yes	FACU	
3. <i>Slippery elm (Ulmus rubra)</i>	5	No	FAC	
4. <i>Coral-berry (Symphoricarpos orbiculatus)</i>	5	No	FACU	
5. <i>Eastern red-cedar (Juniperus virginiana)</i>	2	No	FACU	
<u>32</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <i>Ash-leaf elm (Acer negundo)</i>	45	Yes	FAC	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <i>Eastern poison ivy (Toxicodendron radicans)</i>	30	Yes	FAC	
3. <i>Chinese privet (Ligustrum sinense)</i>	10	No	FACU	
4. <i>Virginia-creeper (Parthenocissus quinquefolia)</i>	5	No	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <i>Fringed greenbrier (Smilax bona-nox)</i>	2	Yes	FACU	
2. _____	_____	_____	_____	
<u>2</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: JP 32728(04) - I-44/US-75 City/County: Tulsa Sampling Date: 6/11/2019
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 7
 Investigator(s): Megan Philips-Schaap and Lacey Stanley Section, Township, Range: Sec 35, T19N, R12E
 Landform (hillslope, terrace, etc.): forested hillslope Local relief (concave, convex, none): convex
 Slope (%): 5% Lat: 36.086957 Long: -96.008743 Datum: NAD83
 Soil Map Unit Name: 48 - Radley silt loam, 0 to 1 percent, frequently flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Common hackberry (Celtis occidentalis)</i>	40	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71%</u> (A/B)
2. <i>American elm (Ulmus americana)</i>	40	Yes	FACW	
3. _____				
4. _____				
5. _____				
<u>80</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <i>Chinese privet (Ligustrum sinense)</i>	40	Yes	FACU	
2. <i>Common hackberry (Celtis occidentalis)</i>	20	Yes	FAC	
3. _____				
<u>60</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <i>Virginia-creeper (Parthenocissus quinquefolia)</i>	20	Yes	FACU	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <i>Virginia wild rye (Elymus virginicus)</i>	10	Yes	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>30</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <i>River-bank grape (Vitis riparia)</i>	5	Yes	FACW	
2. _____				
<u>5</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).				

SOIL

Sampling Point: DP 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	90	10YR 5/6	10	D	M	clay	
6-14	10YR 3/2	95	10YR 3/6	5	D	M	clay	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					² Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed):								
Type: _____								
Depth (inches): _____						Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>		
Remarks: No positive indication of hydric soils was observed.								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____ > 14"	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____ > 14"	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No positive indication of wetland hydrology was observed.			

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: JP 32728(04) - I-44/US-75 City/County: Tulsa Sampling Date: 6/11/2019
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 8
 Investigator(s): Megan Philips-Schaap and Lacey Stanley Section, Township, Range: Sec 36, T18N, R12E
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
 Slope (%): 2-5% Lat: 36.089244 Long: -95.992910 Datum: NAD83
 Soil Map Unit Name: 8 - Choska-Severn-Urban land complex, 0 to 1 percent slopes, rarely flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria (Wetland 3).	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>None observed</i>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: 5')				
1. <i>Broad-leaf cat-tail (Typha latifolia)</i>	35	Yes	OBL	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <i>Swamp smartweed (Persicaria hydropiperoides)</i>	15	Yes	OBL	
3. <i>Oklahoma sedge (Carex oklahomensis)</i>	10	No	OBL	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
60 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: JP 32728(04) - I-44/US-75 City/County: Tulsa Sampling Date: 6/11/2019
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 9
 Investigator(s): Megan Philips-Schaap and Lacey Stanley Section, Township, Range: Sec 36, T18N, R12E
 Landform (hillslope, terrace, etc.): open ROW Local relief (concave, convex, none): convex
 Slope (%): 0-1% Lat: 36.089271 Long: -95.992916 Datum: NAD83
 Soil Map Unit Name: 8 - Choska-Severn-Urban land complex, 0 to 1 percent slopes, rarely flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and wetland hydrology.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>None observed</i>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____				
5. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <i>None observed</i>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
_____ = Total Cover				Column Totals: _____ (A) _____ (B)
_____ = Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <i>Tall false rye grass (Schedonorus arundinaceus)</i>	65	Yes	FACU	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <i>Bermuda grass (Cynodon dactylon)</i>	30	Yes	FACU	<input type="checkbox"/> 2 - Dominance Test is >50%
3. <i>Johnson grass (Sorghum halepense)</i>	10	No	FACU	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. _____				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <i>None observed</i>				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP 9

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/2	100	-	-	-	-	clay loam	
4-18	10YR 4/2	95	5YR 5/8	5	C	M	clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
---	---	---

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
---	--

Remarks:
A positive indication of hydric soil was observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): >18" Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): >18" (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No positive indication of wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 9/30/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 10
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S25-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave
 Slope (%): 45-50% Lat: 36.090130 Long: -95.991386 Datum: NAD83
 Soil Map Unit Name: W - Water NWI classification: R2USC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. Wetland 4 - PSS	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Black willow (Salix nigra)</u>	5	Yes	OBL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
<u>5</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Black willow (Salix nigra)</u>	30	Yes	OBL	
2. _____				
3. _____				
4. _____				
5. _____				
<u>30</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Plowman's-wort (Pluchea camphorata)</u>	15	Yes	FACW	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Swamp smartweed (Persicaria hydropiperoides)</u>	15	Yes	OBL	
3. <u>Rough cocklebur (Xanthium strumarium)</u>	15	Yes	FAC	
4. <u>Late-flowering thoroughwort (Eupatorium serotinum)</u>	5	No	FAC	
5. <u>Johnson grass (Sorghum halepense)</u>	2	No	FACU	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>52</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <u>None observed</u>				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).				

SOIL

Sampling Point: DP 10

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	2.5Y 7/3	100	-	-	-	-	sand	small light and dark orange mottles

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Coast Prairie Redox (A16)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Per the Problematic Hydric Soils section in the Regional Supplement (page 113): Hydrophytic vegetation and wetland hydrology are present. The landscape position is likely to collect and concentrate water (i.e. concave surface, and active floodplain and low terrace). Soils lack the National Technical Committee for Hydric Soils (NTCHS) hydric soils indicators, but still meets the definition of a hydric soil due to one or more problematic soils situations (i.e., Fluvial Sediments within Floodplains and Seasonally Pondered Soils). +

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____ > 18"
 Saturation Present? Yes No Depth (inches): _____ > 18"
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (at least two secondary indicators).

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 9/30/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 11
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S25-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): convex
 Slope (%): 15% Lat: 36.090074 Long: -95.991439 Datum: NAD83
 Soil Map Unit Name: W - Water NWI classification: R2USC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>None observed</i>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <i>None observed</i>				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <i>None observed</i>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) No vegetation is present at this data point. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).				

SOIL

Sampling Point: DP 11

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	2.5Y 7/3	100	-	-	-	-	sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

No positive indication of hydric soils was observed.
Does not satisfy the requirements in the Problematic Hydric Soils section in the Regional Supplement (page 113).

HYDROLOGY

Wetland Hydrology Indicators:

<p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
---	---

<p>Field Observations:</p> <p>Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ > 18"</p> <p>Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ > 18" (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 9/30/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 12
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S25-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave
 Slope (%): 15-20% Lat: 36.090089 Long: -95.991520 Datum: NAD83
 Soil Map Unit Name: W - Water NWI classification: R2USC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. Wetland 5 - PEM	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>None observed</i>				Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <i>Peatree (Sesbania herbacea)</i>	10	Yes	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <i>Swamp smartweed (Persicaria hydropiperoides)</i>	15	Yes	OBL	
2. <i>Plowman's-wort (Pluechea camphorata)</i>	15	Yes	FACW	
3. <i>Eared redstem (Ammannia auriculata)</i>	15	Yes	OBL	
4. <i>Sht-brist horn bk sedge (Rhynchospora corniculata)</i>	10	No	OBL	
5. <i>Broad-leaf cat-tail (Typha latifolia)</i>	2	No	OBL	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <i>None observed</i>				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 10/01/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 13
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S36-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave
 Slope (%): 30-35% Lat: 36.089640 Long: -95.991814 Datum: NAD83
 Soil Map Unit Name: W - Water NWI classification: R2USC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. Wetland 6A/B - PEM	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>None observed</i>				Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____				Total Number of Dominant Species Across All Strata: _____ (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____				
5. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <i>Common buttonbush (Cephalanthus occidentalis)</i>	5	Yes	OBL	Total % Cover of: _____ Multiply by: _____
2. <i>Peatree (Sesbania herbacea)</i>	5	Yes	FACW	OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
				UPL species _____ x 5 = _____
10 = Total Cover				Column Totals: _____ (A) _____ (B)
Prevalence Index = B/A = _____				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <i>Eared redstem (Ammannia auriculata)</i>	20	Yes	OBL	<input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <i>Swamp smartweed (Persicaria hydropiperoides)</i>	20	Yes	OBL	<input type="checkbox"/> 2 - Dominance Test is >50%
3. <i>Sht-rist horn bk sedge (Rhynchospora corniculata)</i>	15	Yes	OBL	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. <i>Plowman's-wort (Pluechea camphorata)</i>	10	No	FACW	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <i>Aster (Symphyotrichum sp.)*</i>	5	No	FAC	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
70 = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <i>None observed</i>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation). *19 species of Symphyotrichum are listed in the 2018 Regional Wetland Plant List. 84% have a FAC or wetter indicator status.				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 10/01/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 14
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S36-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave
 Slope (%): 30-35% Lat: 36.089769 Long: -95.991620 Datum: NAD83
 Soil Map Unit Name: W - Water NWI classification: R2USC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and hydric soils.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>None observed</i>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) No vegetation is present at this data point location.				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 10/01/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 15
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S36-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave
 Slope (%): 40-45% Lat: 36.089227 Long: -95.986076 Datum: NAD83
 Soil Map Unit Name: 27 - Kiomatia loamy fine sand, 0 to 1 percent slopes, frequently flooded NWI classification: PFO1/SS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. Wetland 7A	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>None observed</i>				Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____				Total Number of Dominant Species Across All Strata: _____ (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____				
5. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. <i>None observed</i>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: 5')				
1. <i>Swamp smartweed (Persicaria hydropiperoides)</i>	20	Yes	OBL	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <i>Sht-brist horn bk sedge (Rhynchospora corniculata)</i>	20	Yes	OBL	
3. <i>Eared redstem (Ammannia auriculata)</i>	20	Yes	OBL	
4. <i>Plowman's-wort (Pluechea camphorata)</i>	20	Yes	FACW	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
80 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <i>None observed</i>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 10/01/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 16
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S36-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave
 Slope (%): 35-40% Lat: 36.089277 Long: -95.985985 Datum: NAD83
 Soil Map Unit Name: 27 - Kiomatia loamy fine sand, 0 to 1 percent slopes, frequently flooded NWI classification: PFO1/SS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and hydric soils.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>None observed</i>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <i>None observed</i>				
2. _____				
_____ = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.) No vegetation is present at this data point location.				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 10/01/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 17
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S36-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave
 Slope (%): 30-35% Lat: 36.089197 Long: -95.985953 Datum: NAD83
 Soil Map Unit Name: 27 - Kiomatia loamy fine sand, 0 to 1 percent slopes, frequently flooded NWI classification: PFO1/SS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. Wetland 7B	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>None observed</i>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____				
5. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. <i>None observed</i>				Prevalence Index worksheet:
2. _____				_____ Total % Cover of: _____ Multiply by: _____
3. _____				OBL species _____ x 1 = _____
4. _____				FACW species _____ x 2 = _____
5. _____				FAC species _____ x 3 = _____
				FACU species _____ x 4 = _____
				UPL species _____ x 5 = _____
_____ = Total Cover				Column Totals: _____ (A) _____ (B)
_____ = Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u>)				
1. <i>Swamp smartweed (Persicaria hydropiperoides)</i>	25	Yes	OBL	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <i>Plowman's-wort (Pluechea camphorata)</i>	20	Yes	FACW	
3. <i>Late-flowering thoroughwort (Eupatorium serotinum)</i>	20	Yes	FAC	
4. <i>Sht-brist horn bk sedge (Rhynchospora corniculata)</i>	10	No	OBL	
5. <i>Rough cocklebur (Xanthium strumarium)</i>	10	No	FAC	
6. <i>Yellowdicks (Helenium amarum)</i>	2	No	FACU	
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <i>None observed</i>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 10/01/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 18
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S36-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave
 Slope (%): 35-40 Lat: 36.089253 Long: -95.985312 Datum: NAD83
 Soil Map Unit Name: 27 - Kiomatia loamy fine sand, 0 to 1 percent slopes, frequently flooded NWI classification: PFO1/SS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Green ash (<i>Fraxinus pennsylvanica</i>)</u>	15	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
2. <u>Ash-leaf maple (<i>Acer negundo</i>)</u>	15	Yes	FAC	
3. <u>American elm (<i>Ulmus americana</i>)</u>	10	Yes	FACW	
4. _____				
5. _____				
<u>40</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Red mulberry (<i>Morus rubra</i>)</u>	15	Yes	FACU	
2. <u>American pokeweed (<i>Phytolacca americana</i>)</u>	5	Yes	FACU	
3. _____				
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Late-flowering thoroughwort (<i>Eupatorium serotinum</i>)</u>	25	Yes	FAC	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Blue mistflower (<i>Conoclinium coelestinum</i>)</u>	15	Yes	FACW	
3. <u>Eastern poison ivy (<i>Toxicodendron radicans</i>)</u>	15	Yes	FAC	
4. <u>Great ragweed (<i>Ambrosia trifida</i>)</u>	15	Yes	FAC	
5. <u>Golden crownbeard (<i>Verbesina encelioides</i>)</u>	10	No	FAC	
6. <u>Johnson grass (<i>Sorghum halepense</i>)</u>	10	No	FACU	
7. <u>Spotted lady's-thumb (<i>Persicaria maculosa</i>)</u>	5	No	FACW	
8. <u>Bristle grass (<i>Setaria sp.</i>)*</u>	5	No	FAC	
9. _____				
10. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Grape (<i>Vitis sp.</i>)**</u>	10	Yes	FAC	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). * 6 species of <i>Setaria</i> are listed in the USACE 2018 Regional Wetland Plant List. 67% have a FAC (N=4) indicator status. ** 7 species of <i>Vitis</i> are listed in the USACE State of OK 2016 Wetland Plant List. 57% have a FAC or wetter indicator status.				



SOIL

Sampling Point: DP 18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 5/3	100	-	-	-	-	sandy clay	
2-6	10YR 3/2	100	-	-	-	-	sandy clay	
6-16	10YR 4/1	100	-	-	-	-	sandy clay	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					² Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			Indicators for Problematic Hydric Soils³: <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed): Type: _____ Depth (inches): _____						Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>		
Remarks: No positive indication of hydric soils was observed.								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): > 16" Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): > 16" (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: A positive indication of wetland hydrology was observed (at least two secondary indicators).			

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 10/01/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 19
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S36-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 36.089606 Long: -95.985063 Datum: NAD83
 Soil Map Unit Name: 27 - Kiomatia loamy fine sand, 0 to 1 percent slopes, frequently flooded NWI classification: PFO1/SS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Ash-leaf maple (<i>Acer negundo</i>)</u>	10	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Green ash (<i>Fraxinus pennsylvanica</i>)</u>	5	Yes	FACW	
3. _____				
4. _____				
5. _____				
<u>15</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Ash-leaf maple (<i>Acer negundo</i>)</u>	5	Yes	FAC	
2. _____				
3. _____				
<u>5</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Crown grass (<i>Paspalum</i>)*</u>	55	Yes	FACW	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Sedge (<i>Cyperus sp.</i>)**</u>	30	Yes	FACW	
3. <u>Heart-leaf peppervine (<i>Ampelopsis cordata</i>)</u>	15	No	FAC	
4. <u>Eastern poison ivy (<i>Toxicodendron radicans</i>)</u>	5	No	FAC	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>105</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Grape (<i>Vitis sp.</i>)***</u>	5	Yes	FAC	
2. _____				
<u>5</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). *13 species of Paspalum are listed in the USACE 2018 Regional Wetland Plant List. 62% have a FACW (N=4) or OBL (N=4) indicator status.** 31 species of Cyperus are listed in the USACE 2018 Regional Wetland Plant List. 61% have a FACW (N=12) or OBL (N=7) indicator status.***7 species of Vitis are listed in the USACE 2018 Regional Wetland Plant List. 57% have a FAC (N=1), FACW (N=2), or OBL (N=1) indicator status.

SOIL

Sampling Point: DP 19

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 3/3	100	-	-	-	-	sandy clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:
 No positive indication of hydric soils was observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:

Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____ > 14"	
Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____ > 14"	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 10/01/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 20
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S25-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave
 Slope (%): 2-5% Lat: 36.090117 Long: -95.985265 Datum: NAD83
 Soil Map Unit Name: 27 - Kiomatia loamy fine sand, 0 to 1 percent slopes, frequently flooded NWI classification: PFO1/SS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Eastern cottonwood (Populus deltoides)</u>	10	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>11</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>73%</u> (A/B)
2. <u>Slippery elm (Ulmus rubra)</u>	10	Yes	FAC	
3. _____				
4. _____				
5. _____				
<u>20</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>35</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				Remarks: (Include photo numbers here or on a separate sheet.) A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). * 3 species of Chasmanthium are listed in the USACE 2018 Regional Wetland Plant List. 67% have a FACW indicator status.
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				
<u>45</u> = Total Cover				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-44/US-75 Interchange (Arkansas River) City/County: Tulsa County Sampling Date: 10/1/2020
 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: OB 21
 Investigator(s): Megan Philips-Schaap Section, Township, Range: S25-T19N-R12E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none
 Slope (%): 0% Lat: 36.090397 Long: -95.985632 Datum: NAD83
 Soil Map Unit Name: 27 - Kiomatia loamy fine sand, 0 to 1 percent slopes, frequently flooded NWI classification: R2USC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Hydrophytic vegetation and hydrology were not observed during the field investigation. Soils were not excavated at this observation point.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Slippery elm (Ulmus rubra)</u>	5	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
<u>5</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Slippery elm (Ulmus rubra)</u>	15	Yes	FAC	
2. _____				
3. _____				
4. _____				
5. _____				
<u>15</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Johnson grass (Sorghum halepense)</u>	45	Yes	FACU	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Coastal sandbur (Cenchrus spinifex)*</u>	30	Yes	UPL	
3. <u>Bahia grass (Paspalum notatum)</u>	15	No	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <u>None observed</u>				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).				

SOIL

Sampling Point: OB 21

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
	Soils were not tested at this observation point.							

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No _____
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Remarks:
Soils were not excavated at this observation point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No positive indication of wetland hydrology was observed.