ARKANSAS DEPARTMENT OF TRANSPORTATION
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10324 Interstate 30 | P.O. Box 2261 | Little Rock, AR 72203-2261 | Phone: 501.569.2000

INTEROFFICE MEMORANDUM

October 7, 2019

TO: Master Files

FROM: for John Fleming, Division Head, Environmental Division

SUBJECT: Job Number 030497
FAP Number NHPP-0046(50)
Mill & Bodcau Creeks Strs. & Apprs. (S)
Route 82, Sections 1 & 2
Bridge Number 02549 & 02122
Miller & Lafayette Counties
Tier 2 Categorical Exclusion

The Environmental Division reviewed the referenced project and has determined it falls within the definition of a Tier 2 Categorical Exclusion under 23 Code of Federal Regulations, Section 771.117, and the ARDOT/FHWA Memorandum of Agreement on the processing of Categorical Exclusions. A public hearing will not be offered for this project.

The purpose of this project is to replace two bridges on Highway 82 in Miller & Lafayette Counties. Total length of the project is 0.67 mile. The attached figure shows the project location.

The existing roadway consists of two 12' wide paved travel lanes with 8' – 10' wide paved shoulders. Information about the existing and proposed structures are provided in Table 1. Existing right of way width is 120' – 200'.

Proposed improvements to the approaches will include four 12' wide paved travel lanes with 8' wide paved shoulders. The average additional right of way width will be 170' – 200'. Approximately 2.7 acres of additional right of way will be required for this project.

Table 1			
Bridge No.	Stream	Existing Bridge Structures	Proposed Bridge Structures
020549	Mill Creek	123’ x 38’	142’ x 75’
02122	Bodcau Creek	362’ x 44’	360’ x 75’

Design data for this project is as follows:

Design Year	Average Daily Traffic	Percent Trucks	Design Speed
2019	4,000	18	60 mph
2039	5,500	18	60 mph

There are no relocations, environmental justice issues, or prime farmland associated with this project. No impacts to cultural resources are anticipated; concurrence from the State Historic Preservation Officer is attached. Field inspections found no evidence of existing underground storage tanks or hazardous waste deposits. This project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxic concerns.

A screening level noise analysis using the FHWA TNM 2.5 software program to predict existing and future traffic noise levels was completed for the project. One noise sensitive receptor was predicted to experience noise impacts (66 dBA) under future build conditions at Site 1. The noise level increase over existing conditions would be minimal (< 1 dB). No noise sensitive receptors were identified for Site 2. The noise assessment report is attached.

The official species list obtained through US Fish and Wildlife Service’s (USFWS) Information for Planning and Consultation website identifies the following federally listed species as having the potential to occur in the project area: the threatened Piping Plover (*Charadrius melodus*), and the endangered Red-cockaded Woodpecker (*Picoides borealis*). A ‘no effect’ determination was made for all federally listed species due to the lack of suitable habitat in the project area.

At Mill Creek, permanent wetland impacts are estimated at 3.7 acres, while temporary impacts are estimated at less than 0.1 acre; stream impacts are

estimated at 220 feet. At Bodcau Creek, permanent wetland impacts are estimated at 1.0 acre, while temporary impacts are estimated at 0.3 acre; stream impacts are estimated at 200 feet. Construction of the proposed project should be allowed under the terms of a Section 404 Nationwide 23 Permit for Approved Categorical Exclusions. Compensatory wetland mitigation for replacement of the Mill Creek Bridge, in Miller County, will be provided at an approved mitigation bank that services the project area. Compensatory wetland mitigation for replacement of the Bodcau Creek Bridge in Lafayette County, will be provided at the Little Bodcau Mitigation Bank, as it is the only approved mitigation bank that services the area.

Miller County participates in the National Flood Insurance Program. The Mill Creek bridge lies within the Zone A, Special Flood Hazard Area. The final project design will be reviewed to confirm that the design is adequate and that the potential risk to life and property are minimized. Adjacent properties should not be impacted nor have a greater flood risk than existed before construction of the project. None of the encroachments will constitute a substantial floodplain encroachment or risk to property or life."

The checklist of all potential environmental impacts is attached. A public involvement meeting will not be held for this project.

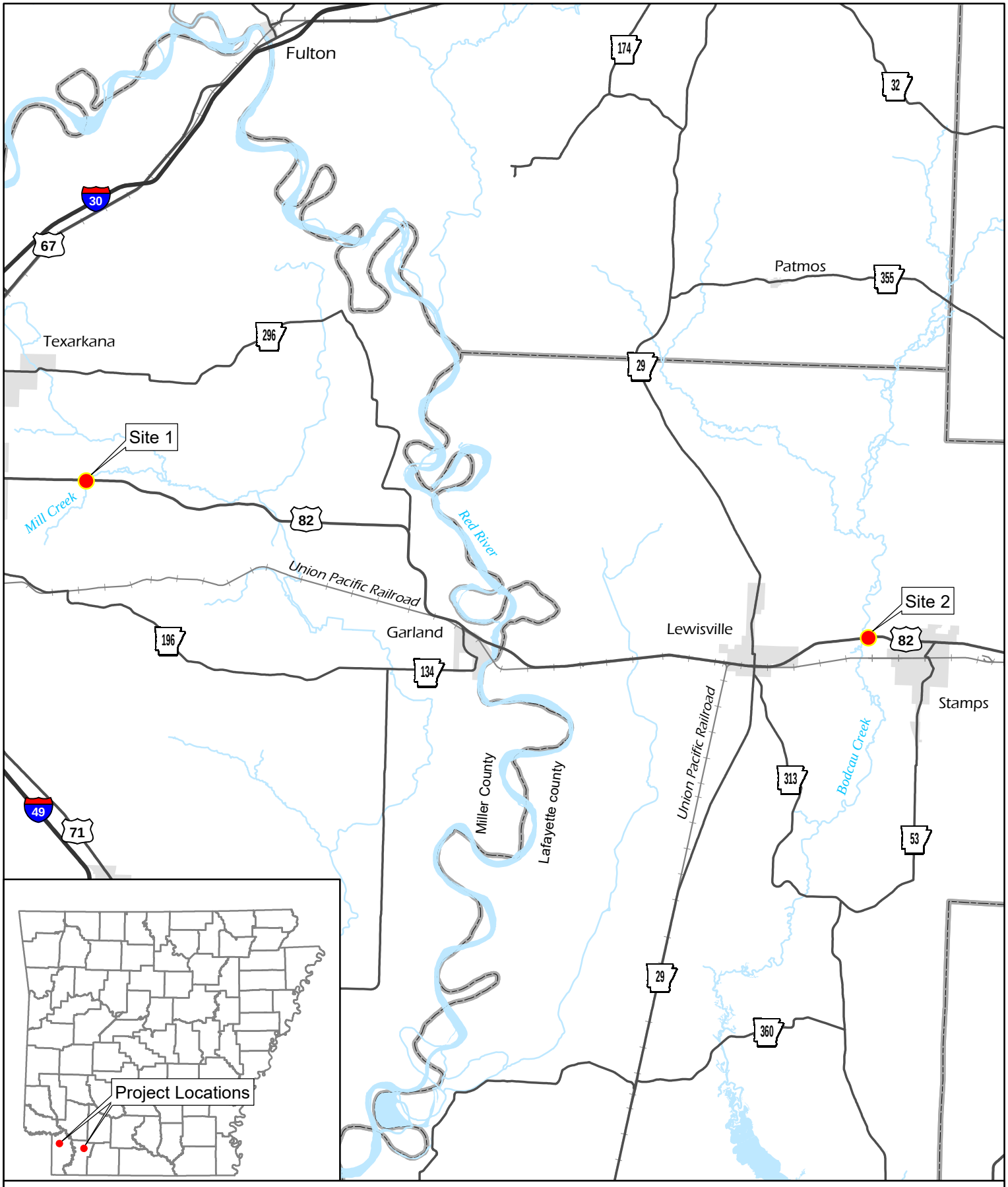
Attachments:
- Project Location Map
- SHPO Clearance
- Screening Level Noise Analysis
- Environmental Study Checklist
- Design Sheet

Approved:

Kevin Thornton
Assistant Chief Engineer-Planning

JF:JB:am

c: Program Management
- Right of Way
- Roadway Design
- District 3
- FHWA



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Miles

ARDOT - Environmental GIS - Dudley
September 24, 2019

Job 030497
Mill & Bodcau Creeks
Strs. & Apprs. (Hwy. 82)
Lafayette & Miller Counties

Project Location

THE DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Secretary
Parks, Heritage & Tourism

Arkansas Arts Council

Arkansas Historic Preservation Program

Arkansas Natural Heritage Commission

Arkansas State Archives

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars Cultural Center

Old State House Museum

ARKANSAS HISTORIC PRESERVATION PROGRAM

1100 North Street
Little Rock, AR 72201

(501) 324-9880
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www.arkansaspreservation.com

An Equal Opportunity Employer

September 10, 2019

Mr. John Fleming
Division Head
Environmental Division
Arkansas State Highway and Transportation Department
P.O. Box 2261
Little Rock, AR 72203-2261

RE: Miller and Lafayette Counties — General
Section 106 Review — FHWA
Miller & Bodcau Creeks Strs. & Apprs. (S)
Route 82, Sections 1 & 2
ARDOT Job Number: 030497
AHPP Tracking Number: 103002.01

Dear Mr. Fleming:

The staff of the Arkansas Historic Preservation Program (AHPP) reviewed the Project Identification Form (PIF) for the above-referenced job. According to your correspondence, the undertaking entails replacing Bridge 02549, east of Texarkana in Miller County and Bridge 02122, west of Stamps in Lafayette County. The bridges are on U.S. Highway 82. Both projects will require a temporary construction easement and Bridge 02549 in Miller County will require additional right-of-way. The two corridors total approximately 1.4 kilometers (.8 mile) with a total area of approximately 8 hectare (19.6 acres).

As noted in the PIF, the AHPP previously concurred that Bridge 02549 in Miller County (AHPP Tracking Number 103002) and Bridge 02122 in Lafayette County (AHPP Tracking Number 100799) are not eligible for inclusion in the National Register of Historic Places (NRHP). The AHPP concurs that Properties 2, 3, 3a, 3b, and 3c are not eligible for the NRHP.

Based on the provided information and the negative results of the field investigation, the AHPP finds **no historic properties affected pursuant to 36 CFR § 800.4(d)(1)** for the proposed undertaking.

Tribes that have expressed an interest in the area include the Caddo Nation (Ms. Tamara Francis), the Delaware Nation (Ms. Nekole Alligood), the Osage Nation (Dr. Andrea Hunter), the Quapaw Nation (Mr. Everett Bandy), the Shawnee Tribe (Ms. Tonya Tipton), and the United Keetoowah Band of Cherokee Indians (Ms. Erin Thompson and Charlotte Wolfe). We recommend consultation in accordance with 36 CFR § 800.2(c)(2).

Thank you for the thorough report and the opportunity to review this undertaking. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Eric Mills of my staff at 501-324-9784 or email eric.mills@arkansas.gov.

Sincerely,

FOR Scott Kaufman
Director, AHPP

cc: Mr. Randall Looney, Federal Highway Administration
Ms. Tamara Francis, Caddo Nation
Ms. Nekole Alligood, Delaware Nation
Dr. Andrea Hunter, Osage Nation
Mr. Everett Bandy, Quapaw Nation
Ms. Tonya Tipton, Shawnee Tribe
Ms. Erin Thompson and Charlotte Wolfe, United Keetoowah Band of Cherokee Indians
Dr. Ann Early, Arkansas Archeological Survey

NOISE ASSESSMENT REPORT

SCREENING LEVEL NOISE ANALYSIS

ARDOT JOB NUMBER 030497

MILL & BODCAU CREEKS STRS. & APPRS. (S)

Fundamentals of Sound and Noise

Noise is defined as unwanted or undesirable sound. The three basic parameters of how noise affects people are summarized below.

Intensity is determined by the level of sound expressed in units of decibels (dB). A 3 dB change in sound level is barely perceptible to most people in a common outdoor setting. However, a 5 dB increase presents a noticeable change and a 10 dB sound level increase is perceived to be twice as loud. Outdoor conversation at normal levels at a distance of 3 feet becomes difficult when the sound level exceeds the mid-60 dBA range.

Frequency is related to the tone or pitch of the sound. The amplification or attenuation of different frequencies of sound to correspond to the way the human ear "hears" these frequencies is referred to as "A-weighting." The A-weighted sound level in decibels is expressed as dBA.

Variation with time occurs because most noise fluctuates from moment to moment. A single level called the equivalent sound level (Leq) is used to compensate for this fluctuation. The Leq is a steady sound level containing the same amount of sound energy as the actual time-varying sound evaluated over the same time period. The L_{eq} averages the louder and quieter moments, but gives more weight to the louder moments.

For highway noise assessment purposes, Leq is typically evaluated over the worst 1-hour period and written as Leq(h). The Leq(h) commonly describes sound levels at locations of outdoor human use and activity, and reflects the conditions that will typically produce the worst traffic noise (e.g., the highest traffic volumes traveling at the highest possible speeds).

Noise Impact and Abatement Criteria

Traffic noise impacts are determined by comparing design year Leq(h) values to: (1) a set of Noise Abatement Criteria (NAC) for different land use categories; and (2) existing Leq(h) values. A noise impact occurs when design year (future build) levels approach, meet, or exceed the NAC value or when a substantial increase in noise occurs. "Approach" is defined as a level within 1 dBA of the NAC value, and a substantial increase is defined as 10 dBA or greater than existing noise levels. For screening level noise analysis (screening analysis) purposes, the

ARDOT *Policy on Highway Traffic Noise Abatement* requires determining noise levels within 4 decibels of the NAC.

A *noise sensitive receptor* (receptor) is defined as a representative location of a noise sensitive area for various land uses. Most receptors associated with highway traffic noise analysis are categorized as NAC Activity Category B (residential) and C (e.g., parks, hospitals, schools, places of worship). Since the NAC for Activity Categories B and C is 67 dBA, noise impacts would occur at the approach level of 66 dBA. The screening analysis threshold would be 63 dBA.

Consideration of noise abatement measures is required when the NAC value is approached or exceeded, or when a substantial increase is predicted. Noise barriers (e.g., walls or berms) are the most common noise abatement measures.

Screening Level Noise Analysis

A screening analysis may be performed for projects that are unlikely to cause noise impacts and/or where noise abatement measures are likely to be unfeasible for acoustical or engineering reasons. Factors common to these types of projects include low traffic volumes, slower speeds, the presence of few or no receptors, and the need for roadway access points (e.g., driveways, Main Street scenarios, etc.).

Screening analysis results represent a worst-case scenario with higher sound levels than would be expected in detailed modeling, and may be used to determine the need for detailed analysis if noise impacts are likely and the placement of noise barriers is feasible. It may also be used for projects that lack receptors in order to assess impacts on undeveloped or developing land.

The FHWA Traffic Noise Model Version 2.5 (TNM) software program is used to predict existing and future Leq(h) traffic noise levels. The TNM straight line model uses the existing year and design year traffic and roadway information. Receivers (discrete points modeled in the TNM program) are incrementally placed away from the roadway centerline to determine the distances to which noise impacts and noise levels within 4 dBA of the NAC extend. The model assumes that the roadway and receivers were located at the same elevation with no intervening barriers such as topography or dense vegetation.

Project Evaluation and Screening Analysis Results

Few receptors exist along Highway 82, which has relatively low traffic volumes. Noise barriers would likely not be feasible for engineering reasons because

established land uses require driveways and intersecting roadways. A screening analysis was therefore considered appropriate for this project.

TNM modeling was completed using the existing year 2019 and design year 2039 (future build) traffic and roadway information. Receivers were incrementally extended from the centerline of Highway 82 to a maximum distance of 400 feet. The distances correlating to the 66 dBA noise impact level for existing and future build conditions and the 63 dBA screening analysis threshold for future build conditions were determined. The tenth value was used for rounding the decibel levels (e.g., 63.3 dBA reported as 63 dBA). The model calculation tables and input data are attached. The predicted noise impact and screening analysis distances (buffers) are shown on the attached figures and summarized below.

One Site 1 receptor (a residence) was identified within the predicted noise impact distance under future build conditions (approximately 200 feet from the centerline). The future build centerline will be slightly offset to the south of the existing centerline, as indicated by cross hatching on the figures. No receptors were identified within the predicted screening analysis threshold distance under future build conditions (approximately 250 feet from the centerline). No substantial increases (≥10 dBA) were predicted. No Site 2 receptors were identified. A detailed noise analysis is not necessary for this project.

Project construction operations typically increase noise levels. These increases would be temporary and have minimal effects on land uses and activities in the project area.

Information for Local Officials

The ARDOT encourages local communities and developers to practice noise compatibility planning. As presented in **Table 1**, noise level predictions for future build conditions were made at distances of 150, 250, 300, and 400 feet. Exterior areas of Activity B and C land uses would be impacted within a distance of approximately 150 feet from the centerline of Highway 82. These predictions do not represent noise levels at every location at a particular distance back from the roadway. Noise levels will vary with changes in terrain and other site conditions.

Table 1. Noise Levels for Compatibility Planning

Distance (ft)*	Leq(h), dBA**
150	66
250	63
300	61
400	57

* Perpendicular to centerline of Highway 82

** Rounded to tenth value

Table 2 presents the NAC. This information is included to inform local officials and planners of anticipated noise levels so that future development will be compatible. In compliance with federal guidelines, a copy of this screening analysis will be transmitted to the Texarkana Metropolitan Planning Organization for land use planning purposes.

Table 2. Noise Abatement Criteria (NAC)

Activity Category	$L_{eq(h)}$ dBA	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B*	67	Exterior	Residential properties.
C*	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio stations, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structure, radio studios, recording studios, schools, and television studios.
E*	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D, or F.
F	–––	–––	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	–––	–––	Undeveloped lands that are not permitted.

* Includes undeveloped lands permitted for this activity category.

ARDOT
M.Pearson

24 September 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Job 030497
RUN: Existing 2019 Site 1
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
25	1	1	0.0	74.9	66	74.9	10	Snd Lvl	74.9	0.0	8	-8.0
50	2	1	0.0	71.4	66	71.4	10	Snd Lvl	71.4	0.0	8	-8.0
75	3	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0
100	4	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
125	5	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
150	6	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
175	7	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
200	9	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
225	10	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0
250	11	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0
275	12	1	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0
300	13	1	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0
325	14	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0
350	15	1	0.0	56.8	66	56.8	10	----	56.8	0.0	8	-8.0
400	16	1	0.0	55.3	66	55.3	10	----	55.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	15	0.0	0.0	0.0
All Impacted	5	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

ARDOT
M.Pearson

24 September 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Job 030497
RUN: Proposed 2039 Site 1
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
40	1	1	0.0	73.2	66	73.2	10	Snd Lvl	73.2	0.0	8	-8.0
50	2	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0
75	3	1	0.0	69.9	66	69.9	10	Snd Lvl	69.9	0.0	8	-8.0
100	4	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0
125	5	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
150	6	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
175	7	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
200	9	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
225	10	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
250	11	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
275	12	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
300	13	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0
325	14	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
350	15	1	0.0	58.9	66	58.9	10	----	58.9	0.0	8	-8.0
400	16	1	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	15	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

ARDOT
M.Pearson

24 September 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Job 030497
RUN: Existing 2019 Site 2
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
25	1	1	0.0	74.9	66	74.9	10	Snd Lvl	74.9	0.0	8	-8.0
50	2	1	0.0	71.4	66	71.4	10	Snd Lvl	71.4	0.0	8	-8.0
75	3	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0
100	4	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
125	5	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
150	6	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
175	7	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
200	9	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
225	10	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0
250	11	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
275	12	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
300	13	1	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0
325	14	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
350	15	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0
400	16	1	0.0	55.6	66	55.6	10	----	55.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	15	0.0	0.0	0.0
All Impacted	5	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

ARDOT
M.Pearson

24 September 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Job 030497
RUN: Proposed 2039 Site 2
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
40	1	1	0.0	73.2	66	73.2	10	Snd Lvl	73.2	0.0	8	-8.0
50	2	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0
75	3	1	0.0	69.9	66	69.9	10	Snd Lvl	69.9	0.0	8	-8.0
100	4	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0
125	5	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
150	6	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
175	7	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
200	9	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
225	10	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
250	11	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
275	12	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
300	13	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0
325	14	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
350	15	1	0.0	58.9	66	58.9	10	----	58.9	0.0	8	-8.0
400	16	1	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	15	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

NOISE DATA WORKSHEET

Job No: 030497

Job Name: Mill & Bodcau Creeks Strs. & Apprs.

Roadway Reference: Route 82 Site 1

County: Lafayette & Miller

Design Year: 2039

Year(s) To Be Modeled: 2019 | 2039

Roadway Cross-Sections:

	2 12'	lanes; 2 8' shoulders	total 40' wide
2019			

Note: DHV = (ADT)(K)
DDHV = (ADT)(K)(D)
K - Percent of ADT occuring in design hour
D - Directional Distribution

Operating Speed: 60 **Kfactor** 11%

Traffic Data:

YEAR	ADT	%TRUCK	DHV	CARS	MT	HT	CARS/2	MT/2	HT/2
					10%	90%			
				0	0	0	0	0	0
2019	4,900	18%	539	442	10	87	221	5	44

NOISE DATA WORKSHEET

Job No: 030497

Job Name: Mill & Bodcau Creeks Strs. & Apprs.

Roadway Reference: Route 82 - Site 1

County: Lafayette & Miller

Design Year: 2039

Year(s) To Be Modeled: 2019 | 2039

Roadway Cross-Sections:

2 12'	lanes; 2 8' shoulders	59' wide
2039		

Note: DHV = (ADT)(K)
DDHV = (ADT)(K)(D)
K - Percent of ADT occuring in design hour
D - Directional Distribution

Operating Speed: 60 **Kfactor** 11%

Traffic Data:

YEAR	ADT	%TRUCK	DHV	CARS	MT	HT	CARS/2	MT/2	HT/2
					10%	90%			
				0	0	0	0	0	0
2039	5,500	18%	605	496	11	98	248	5	49

NOISE DATA WORKSHEET

Job No: 030497

Job Name: Mill & Bodcau Creeks Strs. & Apprs.

Roadway Reference: Route 82 Site 2

County: Lafayette & Miller

Design Year: 2039

Year(s) To Be Modeled: 2019 | 2039

Roadway Cross-Sections:

2 12'	lanes; 2 10' shoulders	total 44' wide
2019	(existing)	

Note: DHV = (ADT)(K)
DDHV = (ADT)(K)(D)
K - Percent of ADT occuring in design hour
D - Directional Distribution

Operating Speed: 60 **Kfactor** 11%

Traffic Data:

YEAR	ADT	%TRUCK	DHV	CARS	MT	HT	CARS/2	MT/2	HT/2
					10%	90%			
				0	0	0	0	0	0
2019	4,900	18%	539	442	10	87	221	5	44

NOISE DATA WORKSHEET

Job No: 030497

Job Name: Mill & Bodcau Creeks Strs. & Apprs.

Roadway Reference: Route 82 - Site 2

County: Lafayette & Miller

Design Year: 2039

Year(s) To Be Modeled: 2019 | 2039

Roadway Cross-Sections:

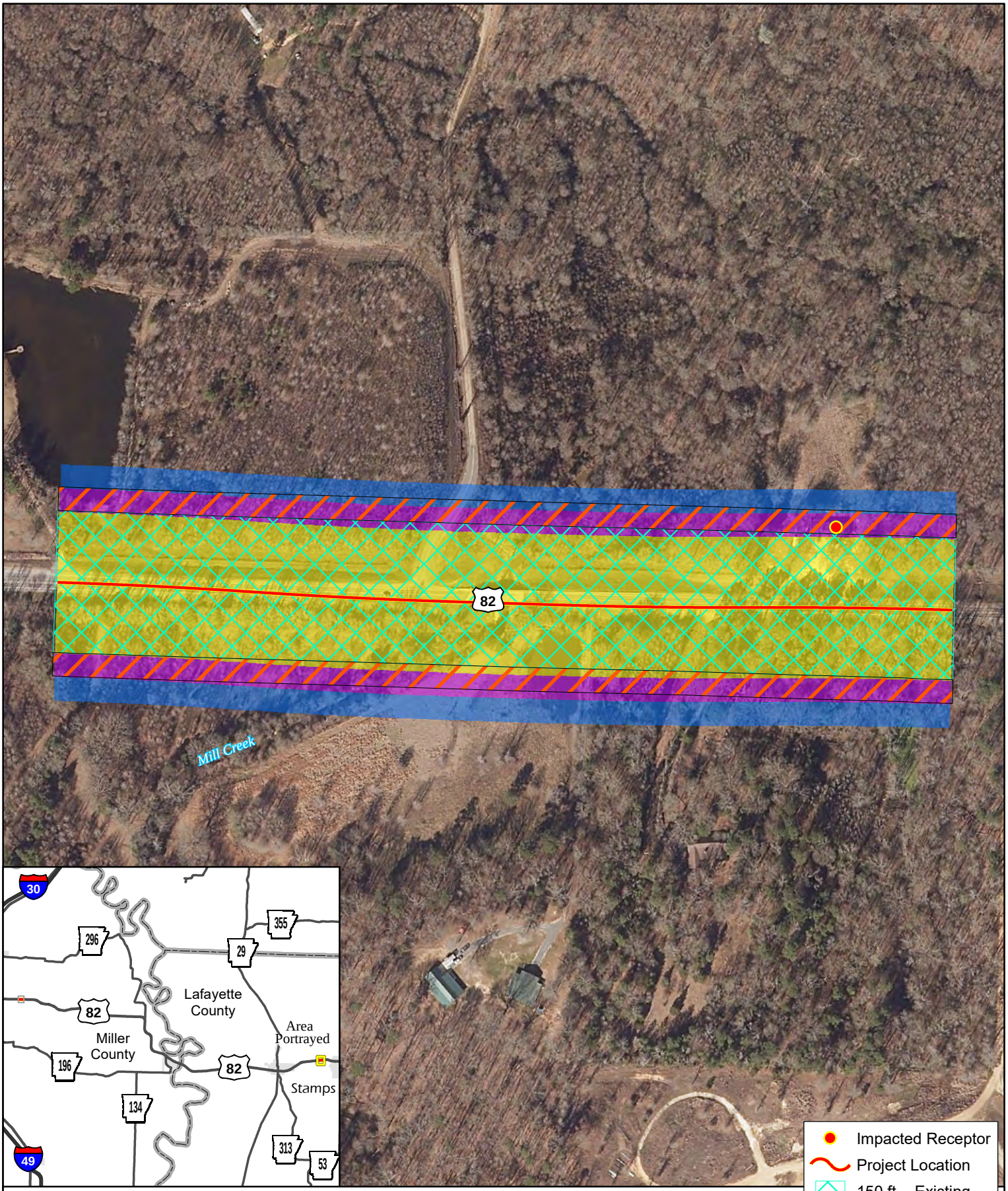
	4 12'	lanes; 2 8' shoulders	59' wide
2039			

Note: DHV = (ADT)(K)
DDHV = (ADT)(K)(D)
K - Percent of ADT occuring in design hour
D - Directional Distribution

Operating Speed: 60 **Kfactor** 11%

Traffic Data:

YEAR	ADT	%TRUCK	DHV	CARS	MT	HT	CARS/2	MT/2	HT/2
					10%	90%			
				0	0	0	0	0	0
2039	5,500	18%	605	496	11	98	248	5	49



Job 030497
ARDOT - Environmental GIS - Dudley
September 25, 2019

Figure 1.
Noise Level Distances
Site 1

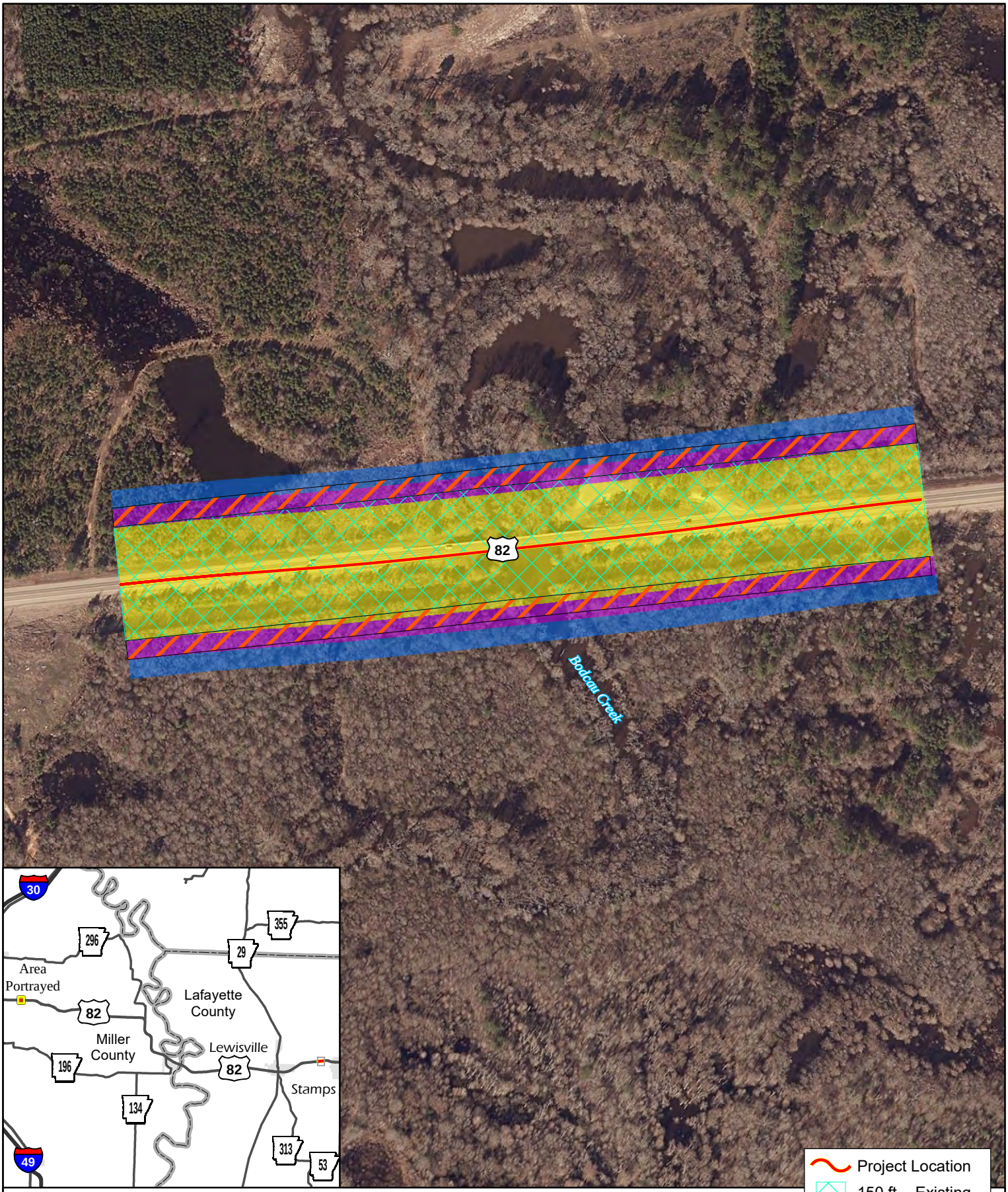


Figure 2.
Noise Level Distances
Site 2

ARDOT ENVIRONMENTAL VERIFICATION CHECKLIST
FOR CONSIDERATION OF POTENTIAL IMPACTS

ARDOT Job Number 030497 **FAP Number** NHPP-0046(50)

Job Title Mill & Bodcau. Creeks Strs. & Apprs. (S)

Environmental Resource	None	Minimal	Major	Comments-required for each item
Air Quality	X			No impacts
Cultural Resources	X			No impacts anticipated
Economic	X			No impacts
Endangered Species	X			No effect determination
Environmental Justice/Title VI	X			No protected populations
Fish and Wildlife		X		Temporary during construction
Floodplains	X			Floodplain SP required
Forest Service Property	X			None in the project area
Hazardous Materials/Landfills	X			None in project area
Land Use	X			Will not be impacted by the project
Migratory Birds		X		Migratory Bird SP
Navigation/Coast Guard	X			No navigable waterways involved
Noise Levels	X			No increase due to project
Prime Farmland	X			No impacts
Protected Waters	X			Vegetated Buffer SP on Bodcau Creek
Public Recreation Lands	X			No impacts
Public Water Supply/WHPA	X			WHP SP for offsite areas
Relocatees	X			No relocations
Section 4(f)/6(f)	X			No 4f/6f resources present
Social	X			No impacts to social environment
Underground Storage Tanks	X			No UST's in project area
Visual	X			No changes to visual environment
Streams		X		Impacts 220 feet at Mill Creek; 200 feet at Bodcau Creek
Water Quality		X		Temporary during construction
Wetlands		X		3.8 acres at Mill Creek; 1.3 acres at Bodcau Creek
Wildlife Refuges	X			None in the project area

Section 401 Water Quality Certification Required? No

Short-term Activity Authorization Required? Yes

Section 404 Permit Required? Yes Type NW 23

Remarks:

Signature of Evaluator John Baber Date 9/27/19

Date Sent: August 7, 2019

ROADWAY DESIGN REQUEST

Job Number 030497 FAP No. NHPP-0046(50) County Lafayette & Miller

Job Name Mill & Bodcau Creeks Strs. & Apprs. (S)

Design Engineer Garver Environmental Staff

Brief Project Description Construct two 5-lane structures.

A. Existing Conditions:

Roadway Width: 40'/44' Shoulder Type/Width: 8'/10'(paved)

Number of Lanes and Width: 2-12'/2-12' Existing Right-of-Way: 120'/200'

Sidewalks? N/A Location: Width:

Bike Lanes? N/A Location: Width:

B. Proposed Conditions:

Roadway Width: 59' Shoulder Type/Width: 8'(paved)

Number of Lanes and Width: 4-12' Proposed Right-of-Way: 170'/200'

Sidewalks? N/A Location: Width:

Bike Lanes? N/A Location: Width:

C. Construction Information:
If detour: Where: N/A Length:

D. Design Traffic Data:
2019 ADT: 4900 2039 ADT: 5500 % Trucks: 18
Design Speed: 60 m.p.h.

E. Approximate total length of project: 0.665 mile(s)

F. Justification for proposed improvements: Bridge replacement

G. Total Relocatees: N/A Residences: N/A Businesses: N/A

H. Have you coordinated with any outside agencies (e.g., FHWA, City, County, etc.)? N/A

Agency/Official	Person Contacted	Date