



MEMORANDUM
Missouri Department of Transportation

DATE: February 25, 2021

TO: Steven Campbell
District Engineer

CC: Randall Glaser
Design Liaison Engineer

FROM: Kristi Bachman
Transportation Project Manager

SUBJECT: Southwest District-Design
I-44, Greene County
Roadway Improvements from Rte. H (Glenstone Ave) to Rte.65 in Springfield
Job No. J8I3044C
Conceptual Study Report

PROJECT PURPOSE AND NEED:

To improve capacity along Interstate 44 by constructing additional lanes in each direction, a six-lane typical section is proposed. Improvements include widening one lane, each direction, and adding concrete barrier and Type A2 shoulder in the existing median from Route H (Glenstone Avenue) to US 65 in Springfield. Resurfacing of existing Interstate 44 lanes will be 1.75" SP125BSM mill and fill. Existing outside shoulder will be used in place. Proposed Project Limits are from Station 1212+00 to 1322+00, a total of 2.083 miles. Log miles are from Interstate 44 eastbound 80.225 - 82.308 (TWID 9) and westbound 210.842-212.925 (TWID 10).

Major Route

Minor Route

DESIGN TRAFFIC

ADT (Const.) 2024 = 49,527
ADT (Design) 2044 = 58,727
DHV = 8.4%
D = 50.4%/49.6%
% Trucks = 28%
Operational (Posted) Speed = 60

CONCEPTUAL COST (\$1,000's)

Right of Way: \$0
Construction: \$8,779

CRASH HISTORY ANALYSIS AND PROPOSED SAFETY ENHANCEMENTS

Crash summary data from 2015-2019 shows 51 westbound crashes and 49 eastbound crashes on this stretch of I-44, including two fatality accidents in 2017. An additional fatal accident occurred in 2020. From the 2015-2019 crash data, four serious injury crashes and 26 minor injury crashes occurred. Crash rates are shown below.

OFFSET	TRAVEL WAY ID	DESIGNATION	TRAVEL WAY NAME	DIRECTION	BEGIN LOG	END LOG	BEGIN DISTRICT	END DISTRICT	BEGIN COUNTY	END COUNTY	COUNTY BEGIN LOG	COUNTY END LOG	BEGIN DESCRIPTION	END DESCRIPTION
	10	IS	44	W	210.729	212.96	6	6	GREENE	GREENE	8.529	10.76	RP US65N TO IS44W W	.091 mile(s) before RP RTHN TO IS44W W

TYPE	2015	2016	2017	2018	2019	TOTAL
FATAL	0	0	2	0	0	2
SUSPECTED SERIOUS INJURY	1	0	0	0	0	1
MINOR INJURY	4	2	3	0	0	9
PROPERTY DAMAGE ONLY	4	6	10	13	6	39
TOTAL	9	8	15	13	6	51
AADT	23067	23349	23746	23770	23135	

1 Year Statewide Rate

TYPE	2015	2016	2017	2018	2019	Rate Level
CRASH RATE	47.91	42.08	77.57	67.16	31.85	
STATE RATE-IS	99.74	97.23	93.67	99.14		ROUTE DESG
STATE RATE-FREEWAY	68.27	67.02	64.06	67.41	0	ROADWAY TYPE

OFFSET	TRAVEL WAY ID	DESIGNATION	TRAVEL WAY NAME	DIRECTION	BEGIN LOG	END LOG	BEGIN DISTRICT	END DISTRICT	BEGIN COUNTY	END COUNTY	COUNTY BEGIN LOG	COUNTY END LOG	BEGIN DESCRIPTION	END DESCRIPTION
	9	IS	44	E	80.189	82.422	6	6	GREENE	GREENE	20.311	22.544	RP IS44E TO LP44E E	RP US65S TO IS44E E

TYPE	2015	2016	2017	2018	2019	TOTAL
FATAL	0	0	0	0	0	0
SUSPECTED SERIOUS INJURY	0	2	0	0	1	3
MINOR INJURY	4	5	1	1	6	17
PROPERTY DAMAGE ONLY	6	7	7	5	4	29
TOTAL	10	14	8	6	11	49
AADT	23120	23670	24073	24097	23530	

1 Year Statewide Rate

TYPE	2015	2016	2017	2018	2019	Rate Level
CRASH RATE	53.07	72.57	40.77	30.55	57.36	
STATE RATE-IS	99.74	97.23	93.67	99.14		ROUTE DESG
STATE RATE-FREEWAY	68.27	67.02	64.06	67.41	0	ROADWAY TYPE

UTILITIES IMPACTS

I-44 is a reimbursable route for DTI/LightCore/CenturyLink/Lumen. If there are any impacts to the fiber, then MoDOT is 100% responsible to mitigate those impacts. The fiber is in the median through most of the Springfield metro area. By closing the median, we will need to relocate the fiber back towards the R/W line. Conceptually, we are looking at going to the south side since most connections are on the south side. Pulling the fiber out of the median starting at an existing pullbox west of Glenstone and extending east to the pop house in the SE quad of I44/US65. The estimate for moving this fiber from the existing median is \$966k. No other utilities impacts are anticipated with the project.

- Master Agreement:
- Project Specific Agreement:

MULTIMODAL IMPACTS

Interstate 44 is part of the Tier 1 highway freight network with 28% trucks. Improving Interstate 44 to six-lanes will improve safety by reducing congestion and improving reliability on the interstate system.

- RAILROAD: No railroad located in the project limits.
 - Existing Agreement N/A
 - Job Special Provision N/A

- AIRPORTS:

- FAA Criteria Tool

The closest airport is Downtown Airport at 2546 East Division, in Springfield and is 1.8 miles south of project limits. Memo for height and shielding exemptions is filed in eProjects.

ENVIRONMENTAL SUMMARY

No new right of way will be required for this project. Conceptual RES received June 2020, RES#2020-05-01028, SW, 8I3044C, IS 44, Greene, Location/Conceptual.

This project will have land disturbance greater than one acre. Non-maintenance work performed on the existing facility to provide increased number of through lanes of travel.

Project is within TS4 area. Permanent BMP's must be considered to detain and/or treat new stormwater from the project to the maximum extent practicable. Cultural resources impact, public land impact and NEPA classification are pending design detail. A Programmatic Categorial Exclusion (PCE) NEPA classification is anticipated.

○ ENVIRONMENTAL CLASSIFICATION:

- CE Pending
- CE2
- Public Hearing/Public Meeting:
- Noise Assessment: N/A
- Section 4(f): N/A
- Section 6(f): N/A
- Threatened and Endangered Species: No effect
- 404 Permit: N/A
- 408 Permit: N/A
- Section 106: Pending
- Floodplain Management (No Rise Cert.): N/A
- Water Quality: Pending plan development
- Hazardous Material: Cleared 05/07/2020
- FEMA Buyout: N/A
- Other:

BIKE AND PEDESTRIAN FACILITIES

- Existing Facilities? No existing bike and pedestrian facilities along I-44 from Route H (Glenstone Avenue) to US 65
- Determination of Responsibility: MoDOT Yes No
- Transition Plan Facility? None
- Proposed Scope: None

ROADSIDE SAFETY

- Existing Guardrail or Guard cable? Existing guard cable and guardrail in the median will be removed. New six-lane improvements include a median barrier.
- Updating Guardrail or Guard Cable? (Non-standard, MASH, LON, etc.)
- Clear Zone

ESTIMATED PROJECT DELIVERY SCHEDULE MILESTONES

- Approved Conceptual Study Report: January 2021

- Approved Preliminary Plan: TBD
- Public Hearing:
- Commission Design Approval:
- Approved Right of Way Plans: N/A
- Plans, Specifications and Estimate: TBD
- Letting Date: FY2024

Transportation Project Manager

Design Liaison Engineer's Comments and Recommendation: _____

Attachments (Include any known design exceptions for concurrent review and approval)

Approved by:

Steven Campbell, P.E.
District Engineer
February 25, 2021

cc: Construction and Materials Division
Traffic Division