

FINAL PROJECT CONCEPT STATEMENT

U.S. 30 and Corporal Roger Snedden Drive/Quill Ave. Intersection in Boone

NHSX-030-4(119)--3H-08

PIN: 25-08-030-010

Donna Matulac, PE

District 1 Office

October 9, 2024

I. STUDY AREA

A. Project Description

U.S. 30 is a 4-lane roadway with a 55 mph speed limit. There is an existing at-grade intersection at Snedden Drive/Quill Ave. with only stop control on the side roads.

B. Need for Project

This safety improvement project was identified through the U.S. 30 Corridor Study which looked at all intersections on U.S. 30 in Boone County between R18/L Ave west of the Des Moines River to Lincoln Way / X Ave interchange on the east limit of the County. The project at this intersection is being expedited due to the proposed development/production facility which will be occurring in the NE quadrant of U.S. 30 and Snedden Dr.

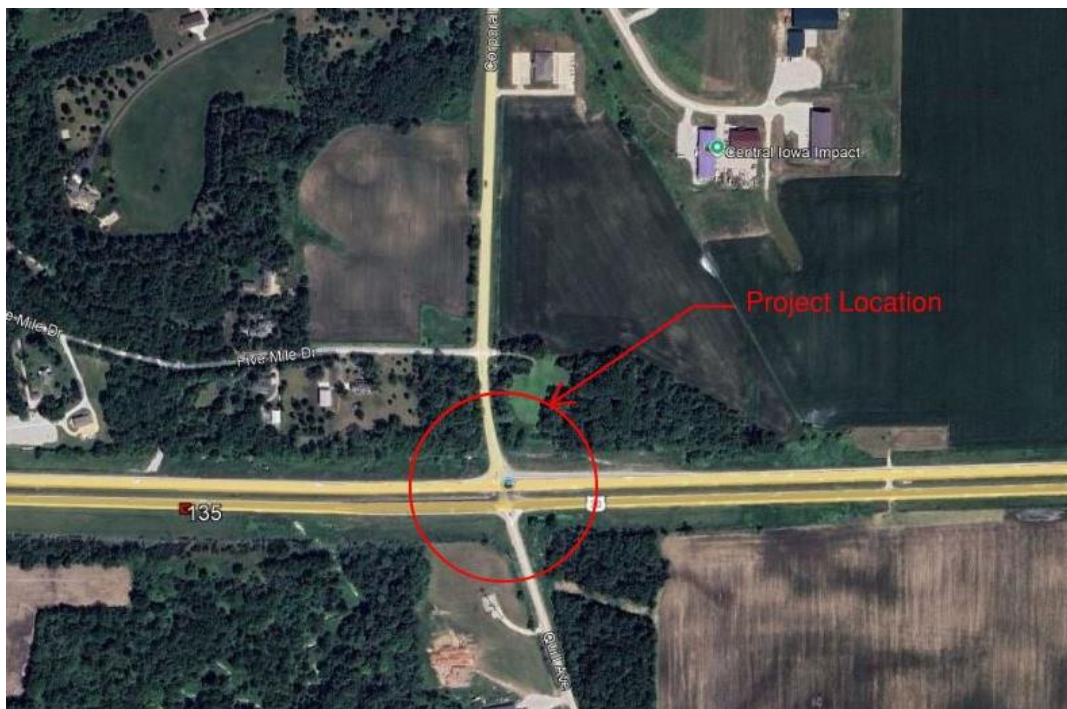


Figure 1: Project Location

C. Traffic Estimates

2023 ADT was 16,400 AADT with 6.37% trucks.

D. Access Control

Access rights are already established by the DOT in this corridor.

E. Crash History

During the five-year study period from 2019 through 2024, to date, there were 24 crashes within the project area. 11 of the 24 crashes were related to failing to yield the right of way either from a stop or making a left turn.

The following is the Potential for Crash Reduction (PCR) information from 2016-2020:

Category: Divided High Speed Partial Stop Control

PCR Level All Crashes: Medium

Category Ranking Divided High Speed Partial Stop Control: 35 out of 1,088

Statewide Ranking Category: 991 out of 115,309

II. PROJECT CONCEPT

A. Feasible Alternatives – See attached exhibit

1. It is proposed to construct a new roundabout at the Snedden Dr./Quill Ave. intersection. The roundabout construction will also require approximately 2,500 ft of US 30 to be reconstructed in order to improve sight distance to this intersection. Traffic will be maintained during construction.

Estimated Project Cost

PCC Pavement	\$ 1,950,000
Granular Subbase	\$ 441,000
Paved Shoulder, HMA, 8"	\$ 378,000
Special Backfill	\$ 157,000
Earth Shoulder Construction	\$ 17,000
Excavation, Class 10, Roadway and Borrow	\$150,000
Subdrain, longitudinal	\$ 60,000
Culverts and Aprons, Concrete	\$ 210,000
Topsoil, Strip Salvage and Spread	\$ 90,000
Traffic Control – 10%	\$345,300
Mobilization – 10%	\$345,300
Contingency – 30%	\$1,243,000
Right-of-Way	\$200,000
Total Estimated Project Costs	\$5,586,000

B. Detour Analysis

US 30 will remain open to traffic with one lane of traffic open in each direction at all times. Depending on the staging configuration, Snedden Drive may need to be detoured. If this is needed, a detour agreement will be initiated with the affected local agency (either the City of Boone and/or Boone County).

C. Construction Sequence

It is anticipated that all work on this project will be awarded to one prime contractor. The Design Bureau will design the roundabout and all associated roadway items and the Bridges and Structures Bureau will design any needed drainage structures.

The Snedden Drive roundabout is anticipated to be constructed concurrently with the planned roundabout at Marshall St. that is just to the west of Snedden Drive. The staging of the two roundabouts will need to be coordinated due to the close proximity of the projects. It is anticipated the projects will include the need for median crossovers on US 30 for staging.

D. ADA Accommodations

There are no ADA facilities within the limits of this projects, and no new facilities will be added with this project.

E. Special Considerations

This will be a traffic critical project.

No railroads exist within the limits of this project.

Right of Way will be required for this project.

Tree clearing will be required with this project. A separate tree clearing project may be needed to ensure any tree clearing is completed from October 1 through March 31.

F. Program Status

This project will be listed, using NR funds, in the 2026-2030 Iowa Transportation Improvement Program, with \$5,500,000 programmed in FY 2027.

G. Project Schedule - Proposed:

Task Name	Description	Finish
D00	Pre-Design Concept	10/18/2024
T01	Existing ROW, Property and Sections Lines in CADD	11/15/2024
		11/22/2024
TE0	Desktop Review	
U00	Preliminary Utility Review	11/22/2024
W00	Preliminary Wetland Review	11/22/2024
D01	Survey Plan and Photogrammetry (DTM)	12/20/2024
D02	Design Field Exam	12/20/2024
D03	Plans for Preliminary Bridge	01/17/2025
B02	Drainage Design and Miscellaneous Layout to Office of Design	01/24/2025
H00	Cultural Resources Assessment	01/24/2025

H06	SHPO-State Historic Preservation Officer	01/24/2025
S02	Identification of Soils Related ROW Issues	02/07/2025
NE10	PCE	02/14/2025
D05	Plans to Right Of Way	03/14/2025
F03	Final Regulated Materials Review	04/18/2025
U02	Project Notification to Utilities	04/18/2025
R01	Right Of Way Layout	06/06/2025
R00	Plot Plans and Summary Sheets to District	06/06/2025
P09	Public Information Meeting (PIM)	08/06/2025
T02	Acquisition Plats and Legal Descriptions	10/03/2025
U03	1 st Plan Submittal to Utilities	10/03/2025
R02	Right Of Way Appraisal	01/09/2026
R03	Right Of Way Negotiation	04/10/2026
S03	Soils Design Complete	06/05/2026
U04	2nd Plan Submittal to Utilities	07/09/2026
R04	Right Of Way Acquisition	10/09/2026
R10	ROW Clearance	10/09/2026
DM5	Design Methods Turn-In	12/01/2026
U10	Utility Clearance	01/05/2027
D08	Final Grad and Pave Plans	01/05/2027
L03	Letting-Combination Grade and Pave	03/16/2027

Cc: T. Gustafson
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 D. L. Newell
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 M. E. Ross
 C. C. Poole
 D. Stokes
 M. Collins
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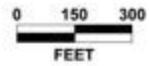
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S SNYDER
& ASSOCIATES

IOWA
DOT



US 30 Corridor Plan

Boone County, Iowa

Roundabout Alternative (Story to Snedden)

Exhibit 8

03/24/2023